Appendix D

Laboratory Reports, First Quarter 2024

For additional help with the information provided in the laboratory reports, please contact Alison Schaffer, Arcadis Report Lead, at 303.471.3575

ARCADIS

Project: PG&E Topock - PCM

Project No.: 30121866

ASSET Laboratories Work Order:

N063001

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063001

Item	Page
Cover Page	1-6
Analytical Result/QC Summary Reports	7-108
Sample Receiving Items	109-119
List of Analysts	120
Raw Data	
EPA 218.6	121-431
EPA 300.0	432-469
EPA 6010B_Dissolved	470-504
EPA 6020_Dissolved	505-596

February 22, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063001

RE: PG&E Topock - PCM, 30121866

Attention: Dan Bush

Enclosed are the results for sample(s) received on February 08, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 218.6:

Because the results for total dissolved chromium (7.7 ug/L) and hexavalent chromium (0.54 ug/L) for sample N063001-007 (MW-51-Q124) are discrepant,, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Analytical Comments for EPA 300:

Dilution was necessary due to precipitation of sample upon the addition of eluent.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (7.7 ug/L) and hexavalent chromium (0.54 ug/L) for sample N063001-007 (MW-51-Q124) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 7.7 and 7.2 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N063001-001CMS and N063001-001CMSD possibly due to matrix interference. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

ASSET Laboratories

Date: *22-Feb-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30121866
Lab Order: N063001
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063001-001A	MW-21-Q124	Groundwater	2/8/2024 11:16:00 AM	2/8/2024	2/22/2024
N063001-001B	MW-21-Q124	Groundwater	2/8/2024 11:16:00 AM	2/8/2024	2/22/2024
N063001-001C	MW-21-Q124	Groundwater	2/8/2024 11:16:00 AM	2/8/2024	2/22/2024
N063001-002A	MW-21-EB-Q124	Groundwater	2/8/2024 10:48:00 AM	2/8/2024	2/22/2024
N063001-003A	MW-71-035-Q124	Groundwater	2/8/2024 10:23:00 AM	2/8/2024	2/22/2024
N063001-003B	MW-71-035-Q124	Groundwater	2/8/2024 10:23:00 AM	2/8/2024	2/22/2024
N063001-003C	MW-71-035-Q124	Groundwater	2/8/2024 10:23:00 AM	2/8/2024	2/22/2024
N063001-004A	MW-915-Q124	Groundwater	2/8/2024 10:33:00 AM	2/8/2024	2/22/2024
N063001-004B	MW-915-Q124	Groundwater	2/8/2024 10:33:00 AM	2/8/2024	2/22/2024
N063001-004C	MW-915-Q124	Groundwater	2/8/2024 10:33:00 AM	2/8/2024	2/22/2024
N063001-005A	MW-913-Q124	Groundwater	2/8/2024 12:36:00 PM	2/8/2024	2/22/2024
N063001-005B	MW-913-Q124	Groundwater	2/8/2024 12:36:00 PM	2/8/2024	2/22/2024
N063001-005C	MW-913-Q124	Groundwater	2/8/2024 12:36:00 PM	2/8/2024	2/22/2024
N063001-006A	MW-26-Q124	Groundwater	2/8/2024 12:26:00 PM	2/8/2024	2/22/2024
N063001-006B	MW-26-Q124	Groundwater	2/8/2024 12:26:00 PM	2/8/2024	2/22/2024
N063001-006C	MW-26-Q124	Groundwater	2/8/2024 12:26:00 PM	2/8/2024	2/22/2024
N063001-007A	MW-51-Q124	Groundwater	2/8/2024 11:48:00 AM	2/8/2024	2/22/2024
N063001-007B	MW-51-Q124	Groundwater	2/8/2024 11:48:00 AM	2/8/2024	2/22/2024
N063001-007C	MW-51-Q124	Groundwater	2/8/2024 11:48:00 AM	2/8/2024	2/22/2024
N063001-008A	MW-31-060-Q124	Groundwater	2/8/2024 1:18:00 PM	2/8/2024	2/22/2024
N063001-008B	MW-31-060-Q124	Groundwater	2/8/2024 1:18:00 PM	2/8/2024	2/22/2024
N063001-008C	MW-31-060-Q124	Groundwater	2/8/2024 1:18:00 PM	2/8/2024	2/22/2024
N063001-009A	MW-31-135-Q124	Groundwater	2/8/2024 1:55:00 PM	2/8/2024	2/22/2024
N063001-009B	MW-31-135-Q124	Groundwater	2/8/2024 1:55:00 PM	2/8/2024	2/22/2024
N063001-009C	MW-31-135-Q124	Groundwater	2/8/2024 1:55:00 PM	2/8/2024	2/22/2024
N063001-010A	MW-914-Q124	Groundwater	2/8/2024 2:05:00 PM	2/8/2024	2/22/2024
N063001-010B	MW-914-Q124	Groundwater	2/8/2024 2:05:00 PM	2/8/2024	2/22/2024
N063001-010C	MW-914-Q124	Groundwater	2/8/2024 2:05:00 PM	2/8/2024	2/22/2024
N063001-011A	MW-81-043-Q124	Groundwater	2/8/2024 8:51:00 AM	2/8/2024	2/22/2024

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30121866
Lab Order: N063001
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063001-011B	MW-81-043-Q124	Groundwater	2/8/2024 8:51:00 AM	2/8/2024	2/22/2024
N063001-011C	MW-81-043-Q124	Groundwater	2/8/2024 8:51:00 AM	2/8/2024	2/22/2024
N063001-012A	MW-81-098-Q124	Groundwater	2/8/2024 9:23:00 AM	2/8/2024	2/22/2024
N063001-012B	MW-81-098-Q124	Groundwater	2/8/2024 9:23:00 AM	2/8/2024	2/22/2024
N063001-012C	MW-81-098-Q124	Groundwater	2/8/2024 9:23:00 AM	2/8/2024	2/22/2024
N063001-013A	EB-715-Q124	Groundwater	2/8/2024 2:10:00 PM	2/8/2024	2/22/2024
N063001-014A	PT6D-Q124	Groundwater	2/8/2024 1:45:00 PM	2/8/2024	2/22/2024
N063001-014B	PT6D-Q124	Groundwater	2/8/2024 1:45:00 PM	2/8/2024	2/22/2024
N063001-014C	PT6D-Q124	Groundwater	2/8/2024 1:45:00 PM	2/8/2024	2/22/2024
N063001-015A	MW-36-020-Q124	Groundwater	2/8/2024 11:20:00 AM	2/8/2024	2/22/2024
N063001-015B	MW-36-020-Q124	Groundwater	2/8/2024 11:20:00 AM	2/8/2024	2/22/2024
N063001-015C	MW-36-020-Q124	Groundwater	2/8/2024 11:20:00 AM	2/8/2024	2/22/2024
N063001-016A	MW-36-040-Q124	Groundwater	2/8/2024 10:26:00 AM	2/8/2024	2/22/2024
N063001-016B	MW-36-040-Q124	Groundwater	2/8/2024 10:26:00 AM	2/8/2024	2/22/2024
N063001-016C	MW-36-040-Q124	Groundwater	2/8/2024 10:26:00 AM	2/8/2024	2/22/2024
N063001-017A	MW-36-050-Q124	Groundwater	2/8/2024 9:08:00 AM	2/8/2024	2/22/2024
N063001-017B	MW-36-050-Q124	Groundwater	2/8/2024 9:08:00 AM	2/8/2024	2/22/2024
N063001-017C	MW-36-050-Q124	Groundwater	2/8/2024 9:08:00 AM	2/8/2024	2/22/2024
N063001-018A	MW-36-070-Q124	Groundwater	2/8/2024 11:45:00 AM	2/8/2024	2/22/2024
N063001-018B	MW-36-070-Q124	Groundwater	2/8/2024 11:45:00 AM	2/8/2024	2/22/2024
N063001-018C	MW-36-070-Q124	Groundwater	2/8/2024 11:45:00 AM	2/8/2024	2/22/2024
N063001-019A	MW-36-070-EB-Q124	Groundwater	2/8/2024 11:24:00 AM	2/8/2024	2/22/2024
N063001-020A	MW-36-090-Q124	Groundwater	2/8/2024 10:51:00 AM	2/8/2024	2/22/2024
N063001-020B	MW-36-090-Q124	Groundwater	2/8/2024 10:51:00 AM	2/8/2024	2/22/2024
N063001-020C	MW-36-090-Q124	Groundwater	2/8/2024 10:51:00 AM	2/8/2024	2/22/2024
N063001-021A	MW-36-100-Q124	Groundwater	2/8/2024 9:32:00 AM	2/8/2024	2/22/2024
N063001-021B	MW-36-100-Q124	Groundwater	2/8/2024 9:32:00 AM	2/8/2024	2/22/2024
N063001-021C	MW-36-100-Q124	Groundwater	2/8/2024 9:32:00 AM	2/8/2024	2/22/2024
N063001-022A	EB-716-Q124	Groundwater	2/8/2024 2:10:00 PM	2/8/2024	2/22/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-21-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 11:16:00 AM
Lab ID:	N063001-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
EPA 218.6							
RunID: **NV00922-IC7_240209A** QC Batch: **R181381**				PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/9/2024 10:48 AM
DISSOLVED METALS BY ICP-MS							
EPA 3010A **EPA 6020**							
RunID: **NV00922-ICP8_240209D** QC Batch: **106714**				PrepDate:	**2/9/2024**		Analyst: **DJ**
Chromium	ND	0.035	1.0		µg/L	1	2/9/2024 05:45 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-21-EB-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 10:48:00 AM
Lab ID:	N063001-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240209A**	QC Batch: **R181381**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/9/2024 04:14 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-71-035-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 10:23:00 AM
Lab ID:	N063001-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
		EPA 218.6					
RunID: **NV00922-IC7_240212A**	QC Batch: **R181444**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/12/2024 04:26 PM
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240209D**	QC Batch: **106714**			PrepDate:	**2/9/2024**		Analyst: **DJ**
Chromium	ND	0.035	1.0		µg/L	1	2/9/2024 06:08 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-915-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 10:33:00 AM
Lab ID:	N063001-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
		EPA 218.6					
RunID: **NV00922-IC7_240213A**	QC Batch: **R181554**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/13/2024 03:35 PM
DISSOLVED METALS BY ICP-MS							
	EPA 3010A			**EPA 6020**			
RunID: **NV00922-ICP8_240209D**	QC Batch: **106714**			PrepDate:	**2/9/2024**		Analyst: **DJ**
Chromium	ND	0.035	1.0		µg/L	1	2/9/2024 06:27 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-913-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 12:36:00 PM
Lab ID:	N063001-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240209A**	QC Batch: **R181381**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	0.39	0.039	0.20		µg/L	1	2/9/2024 01:24 PM
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240209D**	QC Batch: **106714**			PrepDate:	**2/9/2024**		Analyst: **DJ**
Chromium	ND	0.035	1.0		µg/L	1	2/9/2024 06:32 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-26-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 12:26:00 PM
Lab ID:	N063001-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240209A**	QC Batch: **R181381**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	0.49	0.039	0.20		µg/L	1	2/9/2024 02:02 PM
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240209D**	QC Batch: **106714**			PrepDate:	**2/9/2024**		Analyst: **DJ**
Chromium	ND	0.035	1.0		µg/L	1	2/9/2024 06:36 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-51-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 11:48:00 AM
Lab ID:	N063001-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240209A**	QC Batch: **R181381**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	0.54	0.039	0.20		µg/L	1	2/9/2024 12:22 PM
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240209D**	QC Batch: **106714**			PrepDate:	**2/9/2024**		Analyst: **DJ**
Chromium	7.7	0.035	1.0		µg/L	1	2/9/2024 06:41 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-31-060-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 1:18:00 PM
Lab ID:	N063001-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240209A**	QC Batch: **R181381**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	0.21	0.039	0.20		µg/L	1	2/9/2024 05:58 PM
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240209D**	QC Batch: **106714**			PrepDate:	**2/9/2024**		Analyst: **DJ**
Chromium	ND	0.035	1.0		µg/L	1	2/9/2024 06:46 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-31-135-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 1:55:00 PM
Lab ID:	N063001-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
EPA 218.6							
RunID: **NV00922-IC7_240209A** QC Batch: **R181381** PrepDate: Analyst: **RAB**							
Hexavalent Chromium	12	0.19	1.0		µg/L	5	2/9/2024 01:13 PM
DISSOLVED METALS BY ICP-MS							
EPA 3010A **EPA 6020**							
RunID: **NV00922-ICP8_240209D** QC Batch: **106714** PrepDate: **2/9/2024** Analyst: **DJ**							
Chromium	12	0.035	1.0		µg/L	1	2/9/2024 06:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-914-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 2:05:00 PM
Lab ID:	N063001-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240209A** QC Batch: **R181381**				PrepDate:			Analyst: **RAB**
Hexavalent Chromium	12	0.19	1.0		µg/L	5	2/9/2024 05:11 PM
DISSOLVED METALS BY ICP-MS							
		EPA 3010A	**EPA 6020**				
RunID: **NV00922-ICP8_240209D** QC Batch: **106714**				PrepDate:	**2/9/2024**		Analyst: **DJ**
Chromium	11	0.035	1.0		µg/L	1	2/9/2024 06:55 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-81-043-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 8:51:00 AM
Lab ID:	N063001-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240209A**	QC Batch: **R181381**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	21	0.19	1.0		µg/L	5	2/9/2024 12:03 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-81-098-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 9:23:00 AM
Lab ID:	N063001-012	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240209A**	QC Batch: **R181381**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	1.7	0.039	0.20		µg/L	1	2/9/2024 02:21 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-715-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 2:10:00 PM
Lab ID:	N063001-013	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240209A**	QC Batch: **R181381**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/9/2024 04:33 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT6D-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 1:45:00 PM
Lab ID:	N063001-014	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240209A**	QC Batch: **R181381**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	0.59	0.039	0.20		µg/L	1	2/9/2024 11:17 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-020-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 11:20:00 AM
Lab ID:	N063001-015	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240209A**	QC Batch: **R181381**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/9/2024 02:40 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-040-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 10:26:00 AM
Lab ID:	N063001-016	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240209A**	QC Batch: **R181381**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/9/2024 02:58 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-050-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 9:08:00 AM
Lab ID:	N063001-017	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240209A**	QC Batch: **R181381**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/9/2024 03:17 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-070-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 11:45:00 AM
Lab ID:	N063001-018	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240209A**	QC Batch: **R181381**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/9/2024 03:55 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-070-EB-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 11:24:00 AM
Lab ID:	N063001-019	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240209A**	QC Batch: **R181381**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/9/2024 04:52 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-090-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 10:51:00 AM
Lab ID:	N063001-020	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240212A**	QC Batch: **R181444**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/12/2024 01:55 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-100-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 9:32:00 AM
Lab ID:	N063001-021	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240212A**	QC Batch: **R181444**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	0.81	0.039	0.20		µg/L	1	2/12/2024 10:45 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-716-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 2:10:00 PM
Lab ID:	N063001-022	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240212A**	QC Batch: **R181444**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/12/2024 04:45 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R181381**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **PBW**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683011**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R181381**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **LCSW**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683012**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.809	0.20	5.000	0	96.2	90	110				

Sample ID: **N062966-021AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **ZZZZZZ**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683014**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.084	0.20	1.000	0	108	90	110				

Sample ID: **N063001-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **ZZZZZZ**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683016**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.153	0.20	1.000	0.1277	102	90	110				

Sample ID: **N063001-001AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **ZZZZZZ**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683017**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.166	0.20	1.000	0.1277	104	90	110	1.153	1.16	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063001-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181381**
Client ID: **ZZZZZZ** Batch ID: **R181381** TestNo: **EPA 218.6** Analysis Date: **2/9/2024** SeqNo: **5683022**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	45.628	1.0	25.00	21.50	96.5	90	110				

Sample ID: **N063001-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181381**
Client ID: **ZZZZZZ** Batch ID: **R181381** TestNo: **EPA 218.6** Analysis Date: **2/9/2024** SeqNo: **5683024**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.635	0.20	1.000	0.5440	109	90	110				

Sample ID: **N063001-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181381**
Client ID: **ZZZZZZ** Batch ID: **R181381** TestNo: **EPA 218.6** Analysis Date: **2/9/2024** SeqNo: **5683028**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.465	0.20	1.000	0.3932	107	90	110				

Sample ID: **N063001-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181381**
Client ID: **ZZZZZZ** Batch ID: **R181381** TestNo: **EPA 218.6** Analysis Date: **2/9/2024** SeqNo: **5683032**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.571	0.20	1.000	0.4921	108	90	110				

Sample ID: **N063001-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181381**
Client ID: **ZZZZZZ** Batch ID: **R181381** TestNo: **EPA 218.6** Analysis Date: **2/9/2024** SeqNo: **5683034**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.596	0.20	1.000	1.656	94.1	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063001-015AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **ZZZZZZ**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683036**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.017	0.20	1.000	0	102	90	110				

Sample ID: **N063001-016AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **ZZZZZZ**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683038**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.092	0.20	1.000	0	109	90	110				

Sample ID: **N063001-017AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **ZZZZZZ**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683040**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.041	0.20	1.000	0	104	90	110				

Sample ID: **N063001-018AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **ZZZZZZ**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683044**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.044	0.20	1.000	0	104	90	110				

Sample ID: **N063001-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **ZZZZZZ**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683046**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.022	0.20	1.000	0	102	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063001-013AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181381**
Client ID: **ZZZZZZ** Batch ID: **R181381** TestNo: **EPA 218.6** Analysis Date: **2/9/2024** SeqNo: **5683048**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.124	0.20	1.000	0.05170	107	90	110				

Sample ID: **N063001-019AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181381**
Client ID: **ZZZZZZ** Batch ID: **R181381** TestNo: **EPA 218.6** Analysis Date: **2/9/2024** SeqNo: **5683050**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.055	0.20	1.000	0	105	90	110				

Sample ID: **N063001-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181381**
Client ID: **ZZZZZZ** Batch ID: **R181381** TestNo: **EPA 218.6** Analysis Date: **2/9/2024** SeqNo: **5683052**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	36.490	1.0	25.00	11.57	99.7	90	110				

Sample ID: **N063001-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181381**
Client ID: **ZZZZZZ** Batch ID: **R181381** TestNo: **EPA 218.6** Analysis Date: **2/9/2024** SeqNo: **5683055**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	36.691	1.0	25.00	11.91	99.1	90	110				

Sample ID: **N063001-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181381**
Client ID: **ZZZZZZ** Batch ID: **R181381** TestNo: **EPA 218.6** Analysis Date: **2/9/2024** SeqNo: **5683057**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.221	0.20	1.000	0.2115	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063001-008ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **ZZZZZZ**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683058**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20						0.2115	0	20	

Sample ID: **N063001-014AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **ZZZZZZ**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683060**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.656	0.20	1.000	0.5899	107	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R181444**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **PBW**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686886**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R181444**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **LCSW**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686887**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.915	0.20	5.000	0	98.3	90	110				

Sample ID: **N063012-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686890**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4758.400	100	2500	2174	103	90	110				

Sample ID: **N063012-004AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686891**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4723.900	100	2500	2174	102	90	110	4758	0.728	20	

Sample ID: **N063012-002ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686893**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2080.000	100						2160	3.78	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063012-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686894**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4629.300	100	2500	2160	98.8	90	110				

Sample ID: **N063012-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686898**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.055	0.20	1.000	0	106	90	110				

Sample ID: **N063012-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686900**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.979	0.20	1.000	0	97.9	90	110				

Sample ID: **N063012-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686902**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.946	0.20	1.000	0	94.6	90	110				

Sample ID: **N063012-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686904**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	925.920	20	500.0	435.2	98.2	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063001-020AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686906**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.060	0.20	1.000	0	106	90	110				

Sample ID: **N063010-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686910**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.277	0.20	1.000	0.2887	98.8	90	110				

Sample ID: **N063010-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686912**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.281	0.20	1.000	0.2958	98.5	90	110				

Sample ID: **N063010-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686914**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.435	0.20	1.000	0.4431	99.1	90	110				

Sample ID: **N063012-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686916**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4736.200	100	2500	2231	100	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N062966-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686918**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.977	1.0	5.000	0	99.5	90	110				

Sample ID: **N063001-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686922**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.779	1.0	5.000	0	95.6	90	110				

Sample ID: **N063001-022AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686924**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.053	0.20	1.000	0	105	90	110				

Sample ID: **N063012-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686926**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.039	0.20	1.000	0	104	90	110				

Sample ID: **N063012-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686928**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.059	0.20	1.000	0	106	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063012-010AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686930**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.050	0.20	1.000	0	105	90	110				

Sample ID: **N063012-011AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686934**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.081	0.20	1.000	0	108	90	110				

Sample ID: **N063001-021AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686935**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.788	0.20	1.000	0.8062	98.1	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R181554**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **PBW**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691862**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R181554**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **LCSW**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691863**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.886	0.20	5.000	0	97.7	90	110				

Sample ID: **N063053-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691864**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	501.635	10	250.0	251.0	100	90	110				

Sample ID: **N063053-002ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691866**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	249.360	10						251.0	0.648	20	

Sample ID: **N063053-011AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691868**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.187	0.20	1.000	2.254	93.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063053-011AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181554**
Client ID: **ZZZZZZ** Batch ID: **R181554** TestNo: **EPA 218.6** Analysis Date: **2/13/2024** SeqNo: **5691872**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.170	0.20	1.000	2.254	91.7	90	110	3.187	0.541	20	

Sample ID: **N063053-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181554**
Client ID: **ZZZZZZ** Batch ID: **R181554** TestNo: **EPA 218.6** Analysis Date: **2/13/2024** SeqNo: **5691874**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.641	0.20	1.000	0.6081	103	90	110				

Sample ID: **N063053-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181554**
Client ID: **ZZZZZZ** Batch ID: **R181554** TestNo: **EPA 218.6** Analysis Date: **2/13/2024** SeqNo: **5691876**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.643	0.20	1.000	0.6063	104	90	110				

Sample ID: **N063053-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181554**
Client ID: **ZZZZZZ** Batch ID: **R181554** TestNo: **EPA 218.6** Analysis Date: **2/13/2024** SeqNo: **5691880**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	40.151	1.0	25.00	14.93	101	90	110				

Sample ID: **N063053-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181554**
Client ID: **ZZZZZZ** Batch ID: **R181554** TestNo: **EPA 218.6** Analysis Date: **2/13/2024** SeqNo: **5691882**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	73.337	2.0	50.00	23.32	100	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063053-013AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691884**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	43.231	1.0	25.00	18.76	97.9	90	110				

Sample ID: **N063001-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691886**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.855	1.0	5.000	0	97.1	90	110				

Sample ID: **N063053-009AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691890**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	226.614	4.0	100.0	126.2	100	90	110				

Sample ID: **N063053-010AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691892**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	212.512	4.0	100.0	111.0	101	90	110				

Sample ID: **N063053-014AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691896**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.852	1.0	5.000	0	97.0	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063053-015AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691898**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.835	1.0	5.000	0	96.7	90	110				

Sample ID: **N063053-016AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691900**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.346	1.0	5.000	0	107	90	110				

Sample ID: **N063053-018AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691902**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.435	1.0	5.000	4.306	103	90	110				

Sample ID: **N063053-017AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691906**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.031	0.20	1.000	0	103	90	110				

Sample ID: **N063053-008AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691907**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1023.830	20	500.0	516.9	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063053-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691911**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	513.490	10	250.0	255.4	103	90	110				

Sample ID: **N063053-007AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691913**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	274.880	4.0	100.0	171.1	104	90	110				

Sample ID: **N063053-012AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691915**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	199.116	4.0	100.0	98.73	100	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **MB-106714**	SampType: **MBLK**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/9/2024**	RunNo: **181393**
Client ID: **PBW**	Batch ID: **106714**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/9/2024**	SeqNo: **5684072**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID: **LCS-106714**	SampType: **LCS**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/9/2024**	RunNo: **181393**
Client ID: **LCSW**	Batch ID: **106714**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/9/2024**	SeqNo: **5684073**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	9.827	1.0	10.00	0	98.3	85	115				

Sample ID: **N063001-001CMS**	SampType: **MS**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/9/2024**	RunNo: **181393**
Client ID: **ZZZZZZ**	Batch ID: **106714**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/9/2024**	SeqNo: **5684077**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.375	1.0	10.00	0.7494	96.3	75	125				

Sample ID: **N063001-001CMSD**	SampType: **MSD**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/9/2024**	RunNo: **181393**
Client ID: **ZZZZZZ**	Batch ID: **106714**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/9/2024**	SeqNo: **5684078**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.225	1.0	10.00	0.7494	94.8	75	125	10.38	1.46	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-21-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 11:16:00 AM
Lab ID:	N063001-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240209B**	QC Batch: **R181395**			PrepDate:			Analyst: **RAB**
Sulfate	890	34	50		mg/L	100	2/9/2024 01:37 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240209A**	QC Batch: **R181405**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/9/2024 10:21 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-71-035-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 10:23:00 AM
Lab ID:	N063001-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240209B**	QC Batch: **R181395**			PrepDate:			Analyst: **RAB**
Sulfate	630	34	50		mg/L	100	2/9/2024 03:40 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240209A**	QC Batch: **R181405**			PrepDate:			Analyst: **RAB**
Nitrate as N	1.6	0.24	0.50		mg/L	10	2/9/2024 11:56 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-915-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 10:33:00 AM
Lab ID:	N063001-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240209B**	QC Batch: **R181395**			PrepDate:			Analyst: **RAB**
Sulfate	620	34	50		mg/L	100	2/9/2024 03:55 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240209A**	QC Batch: **R181405**			PrepDate:			Analyst: **RAB**
Nitrate as N	1.7	0.24	0.50		mg/L	10	2/9/2024 12:12 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-913-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 12:36:00 PM
Lab ID:	N063001-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240209B**	QC Batch: **R181395**			PrepDate:			Analyst: **RAB**
Sulfate	320	17	25		mg/L	50	2/9/2024 04:10 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240209A**	QC Batch: **R181405**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/9/2024 02:04 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-26-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 12:26:00 PM
Lab ID:	N063001-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240209B**	QC Batch: **R181395**			PrepDate:			Analyst: **RAB**
Sulfate	310	17	25		mg/L	50	2/9/2024 02:23 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240209A**	QC Batch: **R181405**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/9/2024 11:09 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-51-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 11:48:00 AM
Lab ID:	N063001-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240210A**	QC Batch: **R181402**			PrepDate:			Analyst: **RAB**
Sulfate	55	3.4	5.0		mg/L	10	2/10/2024 03:28 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240209A**	QC Batch: **R181405**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/9/2024 02:20 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-31-060-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 1:18:00 PM
Lab ID:	N063001-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240210A**	QC Batch: **R181402**			PrepDate:			Analyst: **RAB**
Sulfate	44	3.4	5.0		mg/L	10	2/10/2024 03:43 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240209A**	QC Batch: **R181405**			PrepDate:			Analyst: **RAB**
Nitrate as N	1.5	0.24	0.50		mg/L	10	2/9/2024 02:36 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-31-135-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 1:55:00 PM
Lab ID:	N063001-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240209B**	QC Batch: **R181395**			PrepDate:			Analyst: **RAB**
Sulfate	420	17	25		mg/L	50	2/9/2024 04:56 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240209A**	QC Batch: **R181405**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/9/2024 02:52 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-914-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 2:05:00 PM
Lab ID:	N063001-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240209B**	QC Batch: **R181395**			PrepDate:			Analyst: **RAB**
Sulfate	420	17	25		mg/L	50	2/9/2024 05:11 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240209A**	QC Batch: **R181405**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/9/2024 03:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-81-043-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 8:51:00 AM
Lab ID:	N063001-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240209B**	QC Batch: **R181395**			PrepDate:			Analyst: **RAB**
Sulfate	360	17	25		mg/L	50	2/9/2024 05:27 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240209A**	QC Batch: **R181405**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/9/2024 03:23 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-81-098-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 9:23:00 AM
Lab ID:	N063001-012	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240209B**	QC Batch: **R181395**			PrepDate:			Analyst: **RAB**
Sulfate	580	17	25		mg/L	50	2/9/2024 05:42 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240209A**	QC Batch: **R181405**			PrepDate:			Analyst: **RAB**
Nitrate as N	0.85	0.24	0.50		mg/L	10	2/9/2024 04:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT6D-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 1:45:00 PM
Lab ID:	N063001-014	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240209B**	QC Batch: **R181395**			PrepDate:			Analyst: **RAB**
Sulfate	380	17	25		mg/L	50	2/9/2024 06:28 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240209A**	QC Batch: **R181405**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/9/2024 04:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-020-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 11:20:00 AM
Lab ID:	N063001-015	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240209A**	QC Batch: **R181405**			PrepDate:			Analyst: **RAB**
Nitrate as N	0.26	0.048	0.10		mg/L	2	2/9/2024 01:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-040-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 10:26:00 AM
Lab ID:	N063001-016	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240209A**	QC Batch: **R181405**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.048	0.10		mg/L	2	2/9/2024 01:16 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-050-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 9:08:00 AM
Lab ID:	N063001-017	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240209A**	QC Batch: **R181405**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.048	0.10		mg/L	2	2/9/2024 01:32 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-070-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 11:45:00 AM
Lab ID:	N063001-018	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240209A**	QC Batch: **R181405**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.048	0.10		mg/L	2	2/9/2024 01:48 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-090-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 10:51:00 AM
Lab ID:	N063001-020	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240209B**	QC Batch: **R181395**			PrepDate:			Analyst: **RAB**
Sulfate	460	17	25		mg/L	50	2/9/2024 06:43 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240209A**	QC Batch: **R181405**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/9/2024 04:47 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-100-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 9:32:00 AM
Lab ID:	N063001-021	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240209B**	QC Batch: **R181395**			PrepDate:			Analyst: **RAB**
Sulfate	630	34	50		mg/L	100	2/9/2024 06:59 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240209A**	QC Batch: **R181405**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/9/2024 05:03 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **MB-R181395_SO4**	SampType: **MBLK**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **181395**			
Client ID: **PBW**	Batch ID: **R181395**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**			SeqNo: **5684215**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **LCS-R181395_SO4**	SampType: **LCS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **181395**			
Client ID: **LCSW**	Batch ID: **R181395**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**			SeqNo: **5684216**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.998	0.50	4.000	0	100	90	110				

Sample ID: **N063001-001BMS**	SampType: **MS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **181395**			
Client ID: **ZZZZZZ**	Batch ID: **R181395**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**			SeqNo: **5684218**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	1269.690	50	400.0	892.3	94.3	80	120				

Sample ID: **N063001-001BMSD**	SampType: **MSD**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **181395**			
Client ID: **ZZZZZZ**	Batch ID: **R181395**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**			SeqNo: **5684219**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	1270.090	50	400.0	892.3	94.4	80	120	1270	0.0315	20	

Sample ID: **N063001-006BDUP**	SampType: **DUP**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **181395**			
Client ID: **ZZZZZZ**	Batch ID: **R181395**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**			SeqNo: **5684221**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	313.500	25						314.1	0.193	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **N063001-006BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **181395**
Client ID: **ZZZZZZ** Batch ID: **R181395** TestNo: **EPA 300.0** Analysis Date: **2/9/2024** SeqNo: **5684224**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	510.645	25	200.0	314.1	98.3	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **LCS-R181402_SO4** SampType: **LCS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **181402**
Client ID: **LCSW** Batch ID: **R181402** TestNo: **EPA 300.0** Analysis Date: **2/10/2024** SeqNo: **5684928**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.050	0.50	4.000	0	101	90	110				

Sample ID: **MB-R181402_SO4** SampType: **MBLK** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **181402**
Client ID: **PBW** Batch ID: **R181402** TestNo: **EPA 300.0** Analysis Date: **2/10/2024** SeqNo: **5684929**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **N063012-003BDUP** SampType: **DUP** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **181402**
Client ID: **ZZZZZZ** Batch ID: **R181402** TestNo: **EPA 300.0** Analysis Date: **2/10/2024** SeqNo: **5684933**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	369.445	25						372.8	0.907	20	

Sample ID: **N063012-003BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **181402**
Client ID: **ZZZZZZ** Batch ID: **R181402** TestNo: **EPA 300.0** Analysis Date: **2/10/2024** SeqNo: **5684934**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	557.505	25	200.0	372.8	92.3	80	120				

Sample ID: **N063012-003BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **181402**
Client ID: **ZZZZZZ** Batch ID: **R181402** TestNo: **EPA 300.0** Analysis Date: **2/10/2024** SeqNo: **5684935**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	559.950	25	200.0	372.8	93.6	80	120	557.5	0.438	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **LCS-R181402_NO3**	SampType: **LCS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **LCSW**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684906**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.237	0.050	1.250	0	99.0	90	110				

Sample ID: **MB-R181402_NO3**	SampType: **MBLK**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **PBW**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684907**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **N063012-003BMS**	SampType: **MS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **ZZZZZZ**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684917**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	17.149	0.50	12.50	4.871	98.2	80	120				

Sample ID: **N063012-003BMSD**	SampType: **MSD**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **ZZZZZZ**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684918**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	17.194	0.50	12.50	4.871	98.6	80	120	17.15	0.262	20	

Sample ID: **N063012-004BDUP**	SampType: **DUP**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **ZZZZZZ**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684919**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	4.948	0.50						4.977	0.584	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **MB-R181405_NO3**	SampType: **MBLK**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181405**
Client ID: **PBW**	Batch ID: **R181405**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**	SeqNo: **5684949**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **LCS-R181405_NO3**	SampType: **LCS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181405**
Client ID: **LCSW**	Batch ID: **R181405**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**	SeqNo: **5684950**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.275	0.050	1.250	0	102	90	110				

Sample ID: **N063001-001BMS**	SampType: **MS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181405**
Client ID: **ZZZZZZ**	Batch ID: **R181405**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**	SeqNo: **5684952**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.368	0.50	12.50	0	98.9	80	120				

Sample ID: **N063001-001BMSD**	SampType: **MSD**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181405**
Client ID: **ZZZZZZ**	Batch ID: **R181405**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**	SeqNo: **5684953**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.274	0.50	12.50	0	98.2	80	120	12.37	0.763	20	

Sample ID: **N063001-006BDUP**	SampType: **DUP**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181405**
Client ID: **ZZZZZZ**	Batch ID: **R181405**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**	SeqNo: **5684955**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.50						0	0	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **N063001-006BMS** SampType: **MS** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **181405**
Client ID: **ZZZZZZ** Batch ID: **R181405** TestNo: **EPA 300.0** Analysis Date: **2/9/2024** SeqNo: **5684956**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.349	0.50	12.50	0	98.8	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *22-Feb-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-21-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 11:16:00 AM
Lab ID:	N063001-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240209A**	QC Batch: **106713**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Iron	430	13	20		µg/L	1	2/9/2024 03:32 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-71-035-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 10:23:00 AM
Lab ID:	N063001-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240209A**	QC Batch: **106713**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Iron	98	13	20		µg/L	1	2/9/2024 03:55 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *22-Feb-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-915-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 10:33:00 AM
Lab ID:	N063001-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240209A**	QC Batch: **106713**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Iron	95	13	20		µg/L	1	2/9/2024 04:01 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-913-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 12:36:00 PM
Lab ID:	N063001-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240209A**	QC Batch: **106713**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Iron	250	13	20		µg/L	1	2/9/2024 04:13 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-26-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 12:26:00 PM
Lab ID:	N063001-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240209A**	QC Batch: **106713**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Iron	250	13	20		µg/L	1	2/9/2024 04:18 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-51-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 11:48:00 AM
Lab ID:	N063001-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240209A**	QC Batch: **106713**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Iron	310	13	20		µg/L	1	2/9/2024 04:23 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-31-060-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 1:18:00 PM
Lab ID:	N063001-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240209A**	QC Batch: **106713**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	2/9/2024 04:26 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-31-135-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 1:55:00 PM
Lab ID:	N063001-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240209A**	QC Batch: **106713**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Iron	21	13	20		µg/L	1	2/9/2024 04:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-914-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 2:05:00 PM
Lab ID:	N063001-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240209A**	QC Batch: **106713**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	2/9/2024 04:35 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-81-043-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 8:51:00 AM
Lab ID:	N063001-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240209A**	QC Batch: **106713**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	2/9/2024 04:41 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-81-098-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 9:23:00 AM
Lab ID:	N063001-012	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240209A**	QC Batch: **106713**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Iron	38	13	20		µg/L	1	2/9/2024 04:46 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT6D-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 1:45:00 PM
Lab ID:	N063001-014	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240209A**	QC Batch: **106713**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Iron	160	13	20		µg/L	1	2/9/2024 04:52 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-020-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 11:20:00 AM
Lab ID:	N063001-015	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240209A**	QC Batch: **106713**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Iron	120	13	20		µg/L	1	2/9/2024 04:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-040-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 10:26:00 AM
Lab ID:	N063001-016	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240209A**	QC Batch: **106713**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Iron	530	13	20		µg/L	1	2/9/2024 05:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-050-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 9:08:00 AM
Lab ID:	N063001-017	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240209A**	QC Batch: **106713**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Iron	280	13	20		µg/L	1	2/9/2024 05:13 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-070-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 11:45:00 AM
Lab ID:	N063001-018	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240209A**	QC Batch: **106713**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Iron	52	13	20		µg/L	1	2/9/2024 05:18 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-090-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 10:51:00 AM
Lab ID:	N063001-020	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240209A**	QC Batch: **106713**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Iron	60	13	20		µg/L	1	2/9/2024 05:22 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-100-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 9:32:00 AM
Lab ID:	N063001-021	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240209A**	QC Batch: **106713**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Iron	240	13	20		µg/L	1	2/9/2024 05:28 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-106713**	SampType: **MBLK**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/9/2024**	RunNo: **181377**
Client ID: **PBW**	Batch ID: **106713**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/9/2024**	SeqNo: **5682867**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS-106713**	SampType: **LCS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/9/2024**	RunNo: **181377**
Client ID: **LCSW**	Batch ID: **106713**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/9/2024**	SeqNo: **5682868**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	109.597	20	100.0	0	110	85	115				

Sample ID: **N063001-001CMS**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/9/2024**	RunNo: **181377**
Client ID: **ZZZZZZ**	Batch ID: **106713**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/9/2024**	SeqNo: **5682872**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	540.437	20	100.0	430.6	110	75	125				

Sample ID: **N063001-001CMSD**	SampType: **MSD**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/9/2024**	RunNo: **181377**
Client ID: **ZZZZZZ**	Batch ID: **106713**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/9/2024**	SeqNo: **5682873**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	516.573	20	100.0	430.6	86.0	75	125	540.4	4.52	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-21-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 11:16:00 AM
Lab ID:	N063001-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240209C**	QC Batch: **106714**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Arsenic	3.7	0.050	0.10		µg/L	1	2/9/2024 05:45 PM
Barium	63	0.083	1.0		µg/L	1	2/9/2024 05:45 PM
Manganese	440	0.26	5.0		µg/L	10	2/9/2024 08:19 PM
Molybdenum	56	0.12	0.50		µg/L	1	2/9/2024 05:45 PM
Selenium	ND	0.044	0.50		µg/L	1	2/9/2024 05:45 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-71-035-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 10:23:00 AM
Lab ID:	N063001-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240209C**	QC Batch: **106714**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/9/2024 06:08 PM
Barium	52	0.083	1.0		µg/L	1	2/9/2024 06:08 PM
Manganese	100	0.026	0.50		µg/L	1	2/9/2024 06:08 PM
Molybdenum	23	0.12	0.50		µg/L	1	2/9/2024 06:08 PM
Selenium	1.1	0.044	0.50		µg/L	1	2/9/2024 10:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-915-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 10:33:00 AM
Lab ID:	N063001-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240209C**	QC Batch: **106714**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/9/2024 06:27 PM
Barium	52	0.083	1.0		µg/L	1	2/9/2024 06:27 PM
Manganese	100	0.026	0.50		µg/L	1	2/9/2024 06:27 PM
Molybdenum	23	0.12	0.50		µg/L	1	2/9/2024 06:27 PM
Selenium	0.93	0.044	0.50		µg/L	1	2/9/2024 11:02 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *22-Feb-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-913-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 12:36:00 PM
Lab ID:	N063001-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240209C**	QC Batch: **106714**			PrepDate:	**2/9/2024**	Analyst: **DJ**	
Arsenic	0.30	0.050	0.10		µg/L	1	2/9/2024 08:52 PM
Barium	84	0.083	1.0		µg/L	1	2/9/2024 06:32 PM
Manganese	1600	2.6	50		µg/L	100	2/12/2024 05:53 PM
Molybdenum	4.9	0.12	0.50		µg/L	1	2/9/2024 06:32 PM
Selenium	ND	0.044	0.50		µg/L	1	2/9/2024 06:32 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-26-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 12:26:00 PM
Lab ID:	N063001-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240209C**	QC Batch: **106714**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/9/2024 06:36 PM
Barium	86	0.083	1.0		µg/L	1	2/9/2024 06:36 PM
Manganese	1500	0.26	5.0		µg/L	10	2/9/2024 09:01 PM
Molybdenum	4.7	0.12	0.50		µg/L	1	2/9/2024 06:36 PM
Selenium	ND	0.044	0.50		µg/L	1	2/9/2024 06:36 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-51-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 11:48:00 AM
Lab ID:	N063001-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240209C**	QC Batch: **106714**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Arsenic	2.4	0.050	0.10		µg/L	1	2/9/2024 06:41 PM
Barium	84	0.083	1.0		µg/L	1	2/9/2024 06:41 PM
Manganese	350	0.26	5.0		µg/L	10	2/9/2024 09:15 PM
Molybdenum	6.7	0.12	0.50		µg/L	1	2/9/2024 06:41 PM
Selenium	ND	0.044	0.50		µg/L	1	2/9/2024 06:41 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-31-060-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 1:18:00 PM
Lab ID:	N063001-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240209C**	QC Batch: **106714**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Arsenic	1.2	0.050	0.10		µg/L	1	2/9/2024 06:46 PM
Barium	31	0.083	1.0		µg/L	1	2/9/2024 06:46 PM
Manganese	19	0.026	0.50		µg/L	1	2/9/2024 06:46 PM
Molybdenum	9.6	0.12	0.50		µg/L	1	2/9/2024 06:46 PM
Selenium	0.63	0.044	0.50		µg/L	1	2/9/2024 06:46 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-31-135-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 1:55:00 PM
Lab ID:	N063001-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240209C**	QC Batch: **106714**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/9/2024 06:50 PM
Barium	36	0.083	1.0		µg/L	1	2/9/2024 06:50 PM
Manganese	17	0.026	0.50		µg/L	1	2/9/2024 06:50 PM
Molybdenum	22	0.12	0.50		µg/L	1	2/9/2024 06:50 PM
Selenium	ND	0.044	0.50		µg/L	1	2/9/2024 06:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT: ARCADIS U.S., Inc. - California
Client Sample ID: MW-914-Q124
Lab Order: N063001
Project: PG&E Topock - PCM, 30121866
Collection Date: 2/8/2024 2:05:00 PM
Lab ID: N063001-010
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A			**EPA 6020**			
RunID: **NV00922-ICP8_240209C**	QC Batch: **106714**			PrepDate:		**2/9/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/9/2024 06:55 PM
Barium	36	0.083	1.0		µg/L	1	2/9/2024 06:55 PM
Manganese	16	0.026	0.50		µg/L	1	2/9/2024 06:55 PM
Molybdenum	21	0.12	0.50		µg/L	1	2/9/2024 06:55 PM
Selenium	ND	0.044	0.50		µg/L	1	2/9/2024 06:55 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *22-Feb-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-81-043-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 8:51:00 AM
Lab ID:	N063001-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A			**EPA 6020**			
RunID: **NV00922-ICP8_240209C**	QC Batch: **106714**			PrepDate:		**2/9/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/9/2024 07:00 PM
Barium	150	0.083	1.0		µg/L	1	2/9/2024 07:00 PM
Manganese	33	0.026	0.50		µg/L	1	2/9/2024 07:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-81-098-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 9:23:00 AM
Lab ID:	N063001-012	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240209C**	QC Batch: **106714**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/9/2024 07:04 PM
Barium	83	0.083	1.0		µg/L	1	2/9/2024 07:04 PM
Manganese	64	0.026	0.50		µg/L	1	2/9/2024 07:04 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT6D-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 1:45:00 PM
Lab ID:	N063001-014	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240209C**	QC Batch: **106714**			PrepDate:		**2/9/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/9/2024 07:23 PM
Barium	29	0.083	1.0		µg/L	1	2/9/2024 07:23 PM
Manganese	110	0.026	0.50		µg/L	1	2/9/2024 07:23 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-020-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 11:20:00 AM
Lab ID:	N063001-015	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240209C**	QC Batch: **106714**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/9/2024 07:28 PM
Barium	170	0.083	1.0		µg/L	1	2/9/2024 07:28 PM
Manganese	280	0.26	5.0		µg/L	10	2/9/2024 09:24 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-040-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 10:26:00 AM
Lab ID:	N063001-016	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240209C**	QC Batch: **106714**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Arsenic	5.5	0.050	0.10		µg/L	1	2/9/2024 07:32 PM
Barium	66	0.083	1.0		µg/L	1	2/9/2024 07:32 PM
Manganese	170	0.026	0.50		µg/L	1	2/9/2024 07:32 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-050-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 9:08:00 AM
Lab ID:	N063001-017	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240209C**	QC Batch: **106714**			PrepDate:	**2/9/2024**	Analyst: **DJ**	
Arsenic	5.4	0.050	0.10		µg/L	1	2/9/2024 07:37 PM
Barium	42	0.083	1.0		µg/L	1	2/9/2024 07:37 PM
Manganese	180	0.26	5.0		µg/L	10	2/9/2024 09:29 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-070-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 11:45:00 AM
Lab ID:	N063001-018	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240209C**	QC Batch: **106714**			PrepDate:	**2/9/2024**	Analyst: **DJ**	
Arsenic	2.5	0.050	0.10		µg/L	1	2/9/2024 07:42 PM
Barium	46	0.083	1.0		µg/L	1	2/9/2024 07:42 PM
Manganese	320	0.26	5.0		µg/L	10	2/9/2024 09:33 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-090-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 10:51:00 AM
Lab ID:	N063001-020	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240209C**	QC Batch: **106714**			PrepDate:	**2/9/2024**	Analyst: **DJ**	
Arsenic	ND	0.050	0.10		µg/L	1	2/9/2024 07:46 PM
Barium	64	0.083	1.0		µg/L	1	2/9/2024 07:46 PM
Manganese	190	0.26	5.0		µg/L	10	2/9/2024 09:38 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-100-Q124
Lab Order:	N063001		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/8/2024 9:32:00 AM
Lab ID:	N063001-021	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240209C**	QC Batch: **106714**				PrepDate:	**2/9/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/9/2024 07:51 PM
Barium	54	0.083	1.0		µg/L	1	2/9/2024 07:51 PM
Manganese	340	0.26	5.0		µg/L	10	2/9/2024 09:43 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **MB-106714** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/9/2024** RunNo: **181387**
Client ID: **PBW** Batch ID: **106714** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/9/2024** SeqNo: **5683883**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID: **LCS-106714** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/9/2024** RunNo: **181387**
Client ID: **LCSW** Batch ID: **106714** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/9/2024** SeqNo: **5683884**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.343	0.10	10.00	0	103	85	115				
Barium	10.564	1.0	10.00	0	106	85	115				
Manganese	99.214	0.50	100.0	0	99.2	85	115				
Molybdenum	10.345	0.50	10.00	0	103	85	115				
Selenium	9.519	0.50	10.00	0	95.2	85	115				

Sample ID: **N063001-001CMS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/9/2024** RunNo: **181387**
Client ID: **ZZZZZZ** Batch ID: **106714** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/9/2024** SeqNo: **5683888**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	14.690	0.10	10.00	3.747	109	75	125				
Barium	74.890	1.0	10.00	63.04	119	75	125				
Molybdenum	69.016	0.50	10.00	55.78	132	75	125				S
Selenium	10.164	0.50	10.00	0.4321	97.3	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063001-001CMSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/9/2024** RunNo: **181387**
Client ID: **ZZZZZZ** Batch ID: **106714** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/9/2024** SeqNo: **5683889**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	15.194	0.10	10.00	3.747	114	75	125	14.69	3.37	20	
Barium	74.728	1.0	10.00	63.04	117	75	125	74.89	0.216	20	
Molybdenum	68.461	0.50	10.00	55.78	127	75	125	69.02	0.807	20	S
Selenium	10.480	0.50	10.00	0.4321	100	75	125	10.16	3.06	20	

Sample ID: **N063001-001CMS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/9/2024** RunNo: **181387**
Client ID: **ZZZZZZ** Batch ID: **106714** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/9/2024** SeqNo: **5683918**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	493.744	5.0	100.0	439.1	54.7	75	125				S

Sample ID: **N063001-001CMSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/9/2024** RunNo: **181387**
Client ID: **ZZZZZZ** Batch ID: **106714** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/9/2024** SeqNo: **5683919**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	485.509	5.0	100.0	439.1	46.4	75	125	493.7	1.68	20	S

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063001-001C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181387**
Client ID: **ZZZZZZ** Batch ID: **106714** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/9/2024** SeqNo: **5683887**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	14.516	0.10	10.00	3.747	108	80	120				
Barium	73.064	1.0	10.00	63.04	100	80	120				
Molybdenum	66.816	0.50	10.00	55.78	110	80	120				
Selenium	10.239	0.50	10.00	0.4321	98.1	80	120				

Sample ID: **N063001-001C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181387**
Client ID: **ZZZZZZ** Batch ID: **106714** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/9/2024** SeqNo: **5683917**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	1374.545	5.0	1000	439.1	93.5	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SAMPLE RECEIVING ITEMS

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

Page 1 of 1

ARCUS02 C: 2/23/2024 12:00 AM
FOLDER R: 2/8/2024
N063001-023A 1 of 1

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD R
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	Excel EDD / Geotracker / Labspec / Others ✓
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.moore@critigen.com	Address:	RWQCB ✓ / CalTrans / LEVEL III / LEVEL IV / Regulatory
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com P.O.#	Specify: RWQCB
Submitted By: Riggie Tep		Phone: 949-727-1400, ext 200 Fax:	Global ID:
Title: Field Tech	Phone: 916-786-3302 Fax:		Specify State:
Signature: Date: 02/08/24	Sampled By: Riggie Tep		

I hereby authorize ASSET Labs to perform the tests indicated below.

I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for

Signature: Date: 02/08/24

Project Name: PG&E Topock - PCM

Project Number: 30121866

Matrix			
Ground	X	Sediment	
Potable		Soil	
NPDES		Other Solid	
Surface			

1. Chilled ✓
2. Headspace
3. Container Intact ✓
4. Seal Present ✓
5. IR number 3
6. Method of Cooling: 1.7°C ICE

Sample Temp: 1.8°C / 1.9°C

Courier: ASSET

Tracking No.:

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly)	Nitrate, sulfate (EPA 300.0) (1 L poly)	Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Selenium, Molybdenum (500mL poly)	Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOA)	Ammonia as Nitrogen (SM4500NH3D); H2SO4 (1 L poly)	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 (125 mL poly)	Nitrate (EPA 300.0) (1 L poly)	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063001-001	✓ MW-21-Q124	2/8/2024	11:16		X	X	X	X	X					E	3	P	BNS	MSMSD
2	-002	✓ MW-21-EB-Q124	2/8/2024	10:48		X									E	1	P	BNS	
3	-003	✓ MW-71-035-Q124	2/8/2024	10:23		X	X	X	X	X					E	3	P	BNS	
4	-004	✓ MW-915-Q124	2/8/2024	10:33		X	X	X	X	X					E	3	P	BNS	
5	-005	✓ MW-913-Q124	2/8/2024	12:36		X	X	X	X	X					E	3	P	BNS	
6	-006	✓ MW-26-Q124	2/8/2024	12:26		X	X	X	X	X					E	3	P	BNS	
7	-007	✓ MW-51-Q124	2/8/2024	11:48		X	X	X	X	X					E	3	P	BNS	
8	-008	✓ MW-31-060-Q124	2/8/2024	13:18		X	X	X	X	X					E	3	P	BNS	
9	-009	✓ MW-31-135-Q124	2/8/2024	13:55		X	X	X	X	X					E	3	P	BNS	
10	-010	✓ MW-914-Q124	2/8/2024	14:05		X	X	X	X	X					E	3	P	BNS	
11	-011	✓ MW-81-043-Q124	2/8/2024	8:51		X	X	X							E	3	P	BNS	
12	-012	✓ MW-81-098-Q124	2/8/2024	9:23		X	X	X							E	3	P	BNS	
13	-013	✓ EB-715-Q124	2/8/2024	14:10		X									E	1	P	BNS	
14																			

Relinquished by (Signature and Printed Name)	Date/Time	Received by (Signature and Printed Name)	Date/Time
M. Riggie Tep 02/08/24	1750	Michael Manton	2/8/24 1750
Michael Manton 2/8/24	2150	Michael Manton	2/8/24 2150

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [x] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:

H=HCL	N=HNO_3	S=H_2SO_4	C=4°C	
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$		
Others/Specify:	B	(NH4)2SO4/NH4OH		

Container Type:

T=Tube	V=VOA	P=Pint
J=Jar	B=Tedlar	G=Glass
M=Metal	M=Metal	C=Can

White=Laboratory Copy
Yellow=Customer's Copy

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement: Excel EDD; Geotracker; Labspec; Others ✓ (Specify: RWQCB); Global ID:
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	QA/QC: RTNE; RWQCB ✓; CalTrans; LEVEL III; LEVEL IV; Regulatory; Specify State:
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.moore@critigen.com	Address:	Sample Receipt Condition (Y / N): 1. Chilled ✓; 2. Headspace; 3. Container Intact ✓; 4. Seal Present ✓; 5. IR number 3; 6. Method of Cooling: IR
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com P.O.#	Sample Temp: 1.9°C/1.8°C/1.9°C
Submitted By: Riggie Tap	Phone: 916-786-3302 Fax:	Phone: 949-727-1400, ext 200 Fax:	Courier: ASSET
Title: Field Tech			Tracking No.:
Signature: Date: 02/08/24	Sampled By: Riggie Tap	Matrix: Ground X; Sediment; Potable; Soil; NPDES; Other Solid; Surface	
I hereby authorize ASSET Labs to perform the tests indicated below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for		
Project Name: PG&E Topock - PCM	Signature: Date: 02/08/24		
Project Number: 30121866.3Q23GW			

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly)	Nitrate, sulfate (EPA 300.0) (1 L poly)	Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Selenium, Molybdenum (500mL poly)	Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOA)	Ammonia as Nitrogen (SM4500NH3D); H2SO4 (1 L poly)	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 (125 mL poly)	Nitrate (EPA 300.0) (1 L poly)	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063001-014	PT6D-Q124	2/8/2024	13:45		X	X	X							E	3	P	BNS	
2	-015	MW-36-020-Q124	2/8/2024	11:20		X		X						X	E	3	P	BNS	
3	-016	MW-36-040-Q124	2/8/2024	10:26		X		X						X	E	3	P	BNS	
4	-017	MW-36-050-Q124	2/8/2024	9:08		X		X						X	E	3	P	BNS	
5	-018	MW-36-070-Q124	2/8/2024	11:45		X		X						X	E	3	P	BNS	
6	-019	MW-36-070-EB-Q124	2/8/2024	11:24		X									E	1	P	BNS	
7	-020	MW-36-090-Q124	2/8/2024	10:51		X	X	X							E	3	P	BNS	
8	-021	MW-36-100-Q124	2/8/2024	9:32		X	X	X							E	3	P	BNS	
9	-022	EB-716-Q124	2/8/2024	14:10		X									E	1	P	BNS	
10																			
11																			
12																			
13																			
14																			

Relinquished by (Signature and Printed Name):	Date/Time:	Received by (Signature and Printed Name):	Date/Time:
Riggie Tap	02/08/24 1750	Michael Alcantara	2/8/24 1750
Michael Alcantara	2/8/24 2150		
		Michael Alcantara	2/8/24 2150

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [x] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
   Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project value.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:

H=HCl	N=HNO_3	S=H_2SO_4	C=4°C
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$	
Others/Specify:	B	(NH4)2SO4/NH4OH	

Container Type:

T=Tube	V=VOA	P=Pint
J=Jar	B=Tedlar	G=Glass
M=Metal	M=Metal	C=Can

White=Laboratory Copy
Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	2/8/2024	Workorder:	N063001
Rep sample Temp (Deg C):	1.7/1.8/1.9	IR Gun ID:	3

Temp Blank: ☑ Yes ☐ No

Carrier name: ASSET

Last 4 digits of Tracking No.: NA Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By YR YRodriguez 2/9/2024

Reviewed By: for: MBC 02/16/2024

ASSET Laboratories

WORK ORDER Summary

09-Feb-24

WorkOrder: N063001

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30121866 **QC Level:** Level IV **Date Received:** 2/8/2024 9:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063001-001A	MW-21-Q124	2/8/2024 11:16:00 AM	2/23/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☑	☐	WW
N063001-001B			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☑	☐	WW
			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☑	☐	WW
N063001-001C			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☑	☐	WW
			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☑	☐	WW
			2/23/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☑	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☑	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☑	☐	WW
N063001-002A	MW-21-EB-Q124	2/8/2024 10:48:00 AM	2/23/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063001-003A	MW-71-035-Q124	2/8/2024 10:23:00 AM	2/23/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063001-003B			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063001-003C			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063001-004A	MW-915-Q124	2/8/2024 10:33:00 AM	2/23/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063001-004B			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063001-004C			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW

WORK ORDER Summary

09-Feb-24

WorkOrder: N063001

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30121866 **QC Level:** Level IV **Date Received:** 2/8/2024 9:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063001-004C	MW-915-Q124	2/8/2024 10:33:00 AM	2/23/2024	Groundwater	EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063001-005A	MW-913-Q124	2/8/2024 12:36:00 PM	2/23/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063001-005B			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063001-005C			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063001-006A	MW-26-Q124	2/8/2024 12:26:00 PM	2/23/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063001-006B			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063001-006C			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063001-007A	MW-51-Q124	2/8/2024 11:48:00 AM	2/23/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063001-007B			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW

WORK ORDER Summary

09-Feb-24

WorkOrder: N063001

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30121866 **QC Level:** Level IV **Date Received:** 2/8/2024 9:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063001-007C	MW-51-Q124	2/8/2024 11:48:00 AM	2/23/2024	Groundwater	EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063001-008A	MW-31-060-Q124	2/8/2024 1:18:00 PM	2/23/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063001-008B			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063001-008C			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063001-009A	MW-31-135-Q124	2/8/2024 1:55:00 PM	2/23/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063001-009B			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063001-009C			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063001-010A	MW-914-Q124	2/8/2024 2:05:00 PM	2/23/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW

WORK ORDER Summary

09-Feb-24

WorkOrder: N063001

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30121866 **QC Level:** Level IV **Date Received:** 2/8/2024 9:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063001-010B	MW-914-Q124	2/8/2024 2:05:00 PM	2/23/2024	Groundwater	EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063001-010C			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063001-011A	MW-81-043-Q124	2/8/2024 8:51:00 AM	2/23/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063001-011B			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063001-011C			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063001-012A	MW-81-098-Q124	2/8/2024 9:23:00 AM	2/23/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063001-012B			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063001-012C			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063001-013A	EB-715-Q124	2/8/2024 2:10:00 PM	2/23/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW

WORK ORDER Summary

09-Feb-24

WorkOrder: N063001

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30121866 **QC Level:** Level IV **Date Received:** 2/8/2024 9:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063001-014A	PT6D-Q124	2/8/2024 1:45:00 PM	2/23/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063001-014B			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063001-014C			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063001-015A	MW-36-020-Q124	2/8/2024 11:20:00 AM	2/23/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063001-015B			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063001-015C			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063001-016A	MW-36-040-Q124	2/8/2024 10:26:00 AM	2/23/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063001-016B			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063001-016C			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063001-017A	MW-36-050-Q124	2/8/2024 9:08:00 AM	2/23/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063001-017B			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063001-017C			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW

WORK ORDER Summary

09-Feb-24

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Client ID: ARCUS02

Project: PG&E Topock - PCM, 30121866 **QC Level:** Level IV **Date Received:** 2/8/2024 9:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063001-017C	MW-36-050-Q124	2/8/2024 9:08:00 AM	2/23/2024	Groundwater	EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063001-018A	MW-36-070-Q124	2/8/2024 11:45:00 AM	2/23/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063001-018B			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063001-018C			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063001-019A	MW-36-070-EB-Q124	2/8/2024 11:24:00 AM	2/23/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063001-020A	MW-36-090-Q124	2/8/2024 10:51:00 AM	2/23/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063001-020B			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063001-020C			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063001-021A	MW-36-100-Q124	2/8/2024 9:32:00 AM	2/23/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063001-021B			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/23/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063001-021C			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/23/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW

WORK ORDER Summary

09-Feb-24

WorkOrder: N063001

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30121866 **QC Level:** Level IV **Date Received:** 2/8/2024 9:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063001-021C	MW-36-100-Q124	2/8/2024 9:32:00 AM	2/23/2024	Groundwater	EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/23/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063001-022A	EB-716-Q124	2/8/2024 2:10:00 PM	2/23/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063001-023A	FOLDER	2/23/2024	2/23/2024		Folder	Folder	☐	☐	☐	LAB
			2/23/2024		Folder	Level IV Report	☐	☐	☐	LAB
			2/23/2024		Folder	Folder	☐	☐	☐	LAB

List of Analysts

ASSET Laboratories Work Order: N063001

NAME	TEST METHOD
Ria Abes	EPA 218.6
Diane Jetajobe	EPA 300.0, EPA 6010B_Dissolved, EPA 6020_Dissolved

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R181381 ~~R183181~~
ASSET #: N063001

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/9/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?	X			X		
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?		X			X	
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?	X			X		
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

N063001-007A - 0.54 ppb ; N063001-007C (6020) = 7.7 ppb
MS protocol performed. Recovery within criteria.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer: RBA Date: _____

2nd Level Reviewer: RB 02202024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R181444
ASSET #: N063001

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/12/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?	X			X		
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA
RB 02202024
Date: _____

2nd Level Reviewer _____
Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R181554
ASSET #: N063001

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/13/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?	X			X		
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer RB 02202024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063001-005A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 0.3932 * 1$$

$$Cr^{+6}, \mu g/L = 0.3932$$

Reporting results in two significant figures,

$$\mathbf{Cr^{+6}, \mu g/L = 0.39}$$

Reviewed by:

dMRocha 2/25/2024

ANALYSIS RUN LOG

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240209A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/09/24 8:58 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/09/24 9:14 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/09/24 9:23 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/09/24 9:33 AM	Reported
13	MB-R181381	MBLK	1	Hexavalent Chromium	02/09/24 9:42 AM	Reported
14	LCS-R181381	LCS	1	Hexavalent Chromium	02/09/24 9:51 AM	Reported
15	N062966-021A	SAMP	1	Hexavalent Chromium	02/09/24 10:04 AM	Reported
16	N062966-021AMS	MS	1	Hexavalent Chromium	02/09/24 10:14 AM	Reported
17	N063001-001A	SAMP	1	Hexavalent Chromium	02/09/24 10:48 AM	Reported
18	N063001-001AMS	MS	1	Hexavalent Chromium	02/09/24 10:58 AM	Reported
19	N063001-001AMSD	MSD	1	Hexavalent Chromium	02/09/24 11:07 AM	Reported
20	N063001-014A	SAMP	1	Hexavalent Chromium	02/09/24 11:17 AM	Reported
21	N063001-014AMS	MS	1	Hexavalent Chromium	02/09/24 11:26 AM	Not Reported
22	N063001-009A	SAMP	5	Hexavalent Chromium	02/09/24 11:36 AM	Not Reported
23	CCV-2	CCV	1	Hexavalent Chromium	02/09/24 11:44 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/09/24 11:54 AM	Reported
25	N063001-011A	SAMP	5	Hexavalent Chromium	02/09/24 12:03 PM	Reported
26	N063001-011AMS	MS	5	Hexavalent Chromium	02/09/24 12:13 PM	Reported
27	N063001-007A	SAMP	1	Hexavalent Chromium	02/09/24 12:22 PM	Reported
28	N063001-007AMS	MS	1	Hexavalent Chromium	02/09/24 12:32 PM	Reported
29	N063001-003A	SAMP	1	Hexavalent Chromium	02/09/24 12:41 PM	Not Reported
30	N063001-003AMS	MS	1	Hexavalent Chromium	02/09/24 12:51 PM	Not Reported
31	N063001-004A	SAMP	1	Hexavalent Chromium	02/09/24 1:00 PM	Not Reported
32	N063001-009A	SAMP	5	Hexavalent Chromium	02/09/24 1:13 PM	Reported
33	N063001-005A	SAMP	1	Hexavalent Chromium	02/09/24 1:24 PM	Reported
34	N063001-005AMS	MS	1	Hexavalent Chromium	02/09/24 1:33 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/09/24 1:43 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/09/24 1:52 PM	Reported
37	N063001-006A	SAMP	1	Hexavalent Chromium	02/09/24 2:02 PM	Reported
38	N063001-006AMS	MS	1	Hexavalent Chromium	02/09/24 2:11 PM	Reported
39	N063001-012A	SAMP	1	Hexavalent Chromium	02/09/24 2:21 PM	Reported
40	N063001-012AMS	MS	1	Hexavalent Chromium	02/09/24 2:30 PM	Reported
41	N063001-015A	SAMP	1	Hexavalent Chromium	02/09/24 2:40 PM	Reported
42	N063001-015AMS	MS	1	Hexavalent Chromium	02/09/24 2:49 PM	Reported

dMocha 2/25/2024
for RBA

INJECTION LOG: 240209A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063001-016A	SAMP	1	Hexavalent Chromium	02/09/24 2:58 PM	Reported
44	N063001-016AMS	MS	1	Hexavalent Chromium	02/09/24 3:08 PM	Reported
45	N063001-017A	SAMP	1	Hexavalent Chromium	02/09/24 3:17 PM	Reported
46	N063001-017AMS	MS	1	Hexavalent Chromium	02/09/24 3:27 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/09/24 3:36 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/09/24 3:46 PM	Reported
49	N063001-018A	SAMP	1	Hexavalent Chromium	02/09/24 3:55 PM	Reported
50	N063001-018AMS	MS	1	Hexavalent Chromium	02/09/24 4:05 PM	Reported
51	N063001-002A	SAMP	1	Hexavalent Chromium	02/09/24 4:14 PM	Reported
52	N063001-002AMS	MS	1	Hexavalent Chromium	02/09/24 4:23 PM	Reported
53	N063001-013A	SAMP	1	Hexavalent Chromium	02/09/24 4:33 PM	Reported
54	N063001-013AMS	MS	1	Hexavalent Chromium	02/09/24 4:42 PM	Reported
55	N063001-019A	SAMP	1	Hexavalent Chromium	02/09/24 4:52 PM	Reported
56	N063001-019AMS	MS	1	Hexavalent Chromium	02/09/24 5:01 PM	Reported
57	N063001-010A	SAMP	5	Hexavalent Chromium	02/09/24 5:11 PM	Reported
58	N063001-010AMS	MS	5	Hexavalent Chromium	02/09/24 5:20 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/09/24 5:30 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/09/24 5:39 PM	Reported
61	N063001-009AMS	MS	5	Hexavalent Chromium	02/09/24 5:49 PM	Reported
62	N063001-008A	SAMP	1	Hexavalent Chromium	02/09/24 5:58 PM	Reported
63	N063001-008AMS	MS	1	Hexavalent Chromium	02/09/24 6:08 PM	Reported
64	N063001-008ADUP	DUP	1	Hexavalent Chromium	02/09/24 6:17 PM	Reported
65	N063001-008AMSD	MSD	1	Hexavalent Chromium	02/09/24 6:26 PM	Not Reported
66	N063001-004AMS	MS	1	Hexavalent Chromium	02/09/24 6:36 PM	Not Reported
67	N063001-014AMS	MS	1	Hexavalent Chromium	02/09/24 6:45 PM	Reported
68	CCV-6	CCV1	1	Hexavalent Chromium	02/09/24 6:55 PM	Reported
69	CCB-6	CCB	1	Hexavalent Chromium	02/09/24 7:04 PM	Reported
70	BLANK	BLANK	1	Hexavalent Chromium	02/09/24 7:14 PM	Not Reported

dMocha 2/25/2024
for RBA

Injection Log Summary

Sequence Details

Name:	**IC-07_240209A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**10/Feb/24 12:03:51**
No. of Injections:	**73**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/09/2024 08:58	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/09/2024 09:14	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/09/2024 09:23	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/09/2024 09:33	Finished	CCB R240103B
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/09/2024 09:42	Finished	MB R240103B
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/09/2024 09:51	Finished	LCS @5ppb, IWST-231228B
15	N062966-021A,SAMF	1	1000	Unknown		02/09/2024 10:04	Finished	SAMP,10 mL
16	N062966-021AMS,MS	2	1000	Unknown		02/09/2024 10:14	Finished	MS (1ppb), IWST-231228B,10r
17	N063001-001A,SAMF	2	1000	Unknown		02/09/2024 10:48	Finished	SAMP,10 mL
18	N063001-001AMS,MS	3	1000	Unknown		02/09/2024 10:58	Finished	MS (1ppb), IWST-231228B,10r
19	N063001-001AMSD,M	4	1000	Unknown		02/09/2024 11:07	Finished	MSD (1ppb), IWST-231228B,1
20	N063001-014A,SAMF	5	1000	Unknown		02/09/2024 11:17	Finished	SAMP,10 mL
21	N063001-014AMS,MS	6	1000	Unknown		02/09/2024 11:26	Finished	MS (5ppb), IWST-231228B,10r
22	N063001-009A,SAMF	7	1000	Unknown		02/09/2024 11:36	Finished	SAMP,2>10 mL
23	CCV-2,CCV,1,	8	1000	Unknown		02/09/2024 11:44	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	9	1000	Unknown		02/09/2024 11:54	Finished	CCB R240103B
25	N063001-011A,SAMF	10	1000	Unknown		02/09/2024 12:03	Finished	SAMP,2>10 mL
26	N063001-011AMS,MS	11	1000	Unknown		02/09/2024 12:13	Finished	MS (5ppb), IWST-231228B,2>1
27	N063001-007A,SAMF	12	1000	Unknown		02/09/2024 12:22	Finished	SAMP,10 mL
28	N063001-007AMS,MS	13	1000	Unknown		02/09/2024 12:32	Finished	MS (1ppb), IWST-231228B,10r
29	N063001-003A,SAMF	14	1000	Unknown		02/09/2024 12:41	Finished	MS (5ppb), IWST-231228B,10r
30	N063001-003AMS,MS	15	1000	Unknown		02/09/2024 12:51	Finished	SAMP,2>10 mL
31	N063001-004A,SAMF	16	1000	Unknown		02/09/2024 13:00	Finished	MS (5ppb), IWST-231228B,2>1
32	N063001-009A,SAMF	1	1000	Unknown		02/09/2024 13:13	Finished	SAMP,2>10 mL
33	N063001-005A,SAMF	2	1000	Unknown		02/09/2024 13:24	Finished	MS (5ppb), IWST-231228B,2>1
34	N063001-005AMS,MS	3	1000	Unknown		02/09/2024 13:33	Finished	SAMP,2>10 mL
35	CCV-3,CCV,1,	4	1000	Unknown		02/09/2024 13:43	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	5	1000	Unknown		02/09/2024 13:52	Finished	CCB R240103B
37	N063001-006A,SAMF	6	1000	Unknown		02/09/2024 14:02	Finished	SAMP,10 mL
38	N063001-006AMS,MS	7	1000	Unknown		02/09/2024 14:11	Finished	MS (1ppb), IWST-231228B,10r
39	N063001-012A,SAMF	8	1000	Unknown		02/09/2024 14:21	Finished	SAMP,10 mL
40	N063001-012AMS,MS	9	1000	Unknown		02/09/2024 14:30	Finished	MS (1ppb), IWST-231228B,10r
41	N063001-015A,SAMF	10	1000	Unknown		02/09/2024 14:40	Finished	SAMP,10 mL
42	N063001-015AMS,MS	11	1000	Unknown		02/09/2024 14:49	Finished	MS (1ppb), IWST-231228B,10r
43	N063001-016A,SAMF	12	1000	Unknown		02/09/2024 14:58	Finished	SAMP,10 mL
44	N063001-016AMS,MS	13	1000	Unknown		02/09/2024 15:08	Finished	MS (1ppb), IWST-231228B,10r
45	N063001-017A,SAMF	14	1000	Unknown		02/09/2024 15:17	Finished	SAMP,10 mL
46	N063001-017AMS,MS	15	1000	Unknown		02/09/2024 15:27	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	16	1000	Unknown		02/09/2024 15:36	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	17	1000	Unknown		02/09/2024 15:46	Finished	CCB R240103B
49	N063001-018A,SAMF	18	1000	Unknown		02/09/2024 15:55	Finished	SAMP,10 mL
50	N063001-018AMS,MS	19	1000	Unknown		02/09/2024 16:05	Finished	MS (1ppb), IWST-231228B,10r
51	N063001-002A,SAMF	20	1000	Unknown		02/09/2024 16:14	Finished	SAMP,10 mL
52	N063001-002AMS,MS	21	1000	Unknown		02/09/2024 16:23	Finished	MS (1ppb), IWST-231228B,10r
53	N063001-013A,SAMF	22	1000	Unknown		02/09/2024 16:33	Finished	SAMP,10 mL
54	N063001-013AMS,MS	23	1000	Unknown		02/09/2024 16:42	Finished	MS (1ppb), IWST-231228B,10r
55	N063001-019A,SAMF	24	1000	Unknown		02/09/2024 16:52	Finished	SAMP,10 mL
56	N063001-019AMS,MS	25	1000	Unknown		02/09/2024 17:01	Finished	MS (1ppb), IWST-231228B,10r
57	N063001-010A,SAMF	26	1000	Unknown		02/09/2024 17:11	Finished	SAMP,2>10 mL
58	N063001-010AMS,MS	27	1000	Unknown		02/09/2024 17:20	Finished	MS (5ppb), IWST-231228B,2>1
59	CCV-5,CCV,1,	28	1000	Unknown		02/09/2024 17:30	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	29	1000	Unknown		02/09/2024 17:39	Finished	CCB R240103B

61	N063001-009AMS,MS	30	1000	Unknown		02/09/2024 17:49	Finished	MS (5ppb), IWST-231228B,2>1
62	N063001-008A,SAMP	31	1000	Unknown		02/09/2024 17:58	Finished	SAMP,10 mL
63	N063001-008AMS,MS	32	1000	Unknown		02/09/2024 18:08	Finished	MS (1ppb), IWST-231228B,10r
64	N063001-008ADUP,D	33	1000	Unknown		02/09/2024 18:17	Finished	DUP,10 mL
65	N063001-008AMSD,M	34	1000	Unknown		02/09/2024 18:26	Finished	MSD (1ppb), IWST-231228B,1(
66	N063001-004AMS,MS	35	1000	Unknown		02/09/2024 18:36	Finished	SAMP,2>10 mL
67	N063001-014AMS,MS	36	1000	Unknown		02/09/2024 18:45	Finished	MS (1ppb), IWST-231228B,10r
68	CCV-6,CCV1,1,	37	1000	Unknown		02/09/2024 18:55	Finished	CCV @10ppb, IWST-231228A
69	CCB-6,CCB,1,	38	1000	Unknown		02/09/2024 19:04	Finished	CCB R240103B
70	BLANK	39	1000	Unknown		02/09/2024 19:14	Finished	BLANK
71	SHUTDOWN	40	1000	Unknown		02/09/2024 19:23	Finished	
72	Eluent: R240205A	41	1000	Unknown		n.a.	Finished	
73	PCR: R240205B	42	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240212A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/12/24 9:22 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/12/24 9:38 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/12/24 9:47 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/12/24 9:57 AM	Reported
13	MB-R181444	MBLK	1	Hexavalent Chromium	02/12/24 10:06 AM	Reported
14	LCS-R181444	LCS	1	Hexavalent Chromium	02/12/24 10:16 AM	Reported
15	N063001-021A	SAMP	1	Hexavalent Chromium	02/12/24 10:45 AM	Reported
16	N063001-021AMS	MS	1	Hexavalent Chromium	02/12/24 10:57 AM	Not Reported
17	N063012-004A	SAMP	500	Hexavalent Chromium	02/12/24 11:09 AM	Reported
18	N063012-004AMS	MS	500	Hexavalent Chromium	02/12/24 11:18 AM	Reported
19	N063012-004AMSD	MSD	500	Hexavalent Chromium	02/12/24 11:28 AM	Reported
20	N063012-002A	SAMP	500	Hexavalent Chromium	02/12/24 11:50 AM	Reported
21	N063012-002ADUP	DUP	500	Hexavalent Chromium	02/12/24 12:02 PM	Reported
22	N063012-002AMS	MS	500	Hexavalent Chromium	02/12/24 12:11 PM	Reported
23	CCV-2	CCV	1	Hexavalent Chromium	02/12/24 12:21 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/12/24 12:30 PM	Reported
25	N063012-006A	SAMP	1	Hexavalent Chromium	02/12/24 12:40 PM	Reported
26	N063012-006AMS	MS	1	Hexavalent Chromium	02/12/24 12:49 PM	Reported
27	N063012-007A	SAMP	1	Hexavalent Chromium	02/12/24 12:58 PM	Reported
28	N063012-007AMS	MS	1	Hexavalent Chromium	02/12/24 1:08 PM	Reported
29	N063012-009A	SAMP	1	Hexavalent Chromium	02/12/24 1:17 PM	Reported
30	N063012-009AMS	MS	1	Hexavalent Chromium	02/12/24 1:27 PM	Reported
31	N063012-001A	SAMP	100	Hexavalent Chromium	02/12/24 1:36 PM	Reported
32	N063012-001AMS	MS	100	Hexavalent Chromium	02/12/24 1:46 PM	Reported
33	N063001-020A	SAMP	1	Hexavalent Chromium	02/12/24 1:55 PM	Reported
34	N063001-020AMS	MS	1	Hexavalent Chromium	02/12/24 2:05 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/12/24 2:14 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/12/24 2:24 PM	Reported
37	N063010-001A	SAMP	1	Hexavalent Chromium	02/12/24 2:33 PM	Reported
38	N063010-001AMS	MS	1	Hexavalent Chromium	02/12/24 2:43 PM	Reported
39	N063010-002A	SAMP	1	Hexavalent Chromium	02/12/24 2:52 PM	Reported
40	N063010-002AMS	MS	1	Hexavalent Chromium	02/12/24 3:01 PM	Reported
41	N063010-003A	SAMP	1	Hexavalent Chromium	02/12/24 3:11 PM	Reported
42	N063010-003AMS	MS	1	Hexavalent Chromium	02/12/24 3:20 PM	Reported

INJECTION LOG: 240212A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063012-003A	SAMP	500	Hexavalent Chromium	02/12/24 3:30 PM	Reported
44	N063012-003AMS	MS	500	Hexavalent Chromium	02/12/24 3:39 PM	Reported
45	N062966-003A	SAMP	5	Hexavalent Chromium	02/12/24 3:49 PM	Reported
46	N062966-003AMS	MS	5	Hexavalent Chromium	02/12/24 3:58 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/12/24 4:08 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/12/24 4:17 PM	Reported
49	N063001-003A	SAMP	5	Hexavalent Chromium	02/12/24 4:26 PM	Reported
50	N063001-003AMS	MS	5	Hexavalent Chromium	02/12/24 4:36 PM	Reported
51	N063001-022A	SAMP	1	Hexavalent Chromium	02/12/24 4:45 PM	Reported
52	N063001-022AMS	MS	1	Hexavalent Chromium	02/12/24 4:55 PM	Reported
53	N063012-005A	SAMP	1	Hexavalent Chromium	02/12/24 5:04 PM	Reported
54	N063012-005AMS	MS	1	Hexavalent Chromium	02/12/24 5:14 PM	Reported
55	N063012-008A	SAMP	1	Hexavalent Chromium	02/12/24 5:23 PM	Reported
56	N063012-008AMS	MS	1	Hexavalent Chromium	02/12/24 5:33 PM	Reported
57	N063012-010A	SAMP	1	Hexavalent Chromium	02/12/24 5:42 PM	Reported
58	N063012-010AMS	MS	1	Hexavalent Chromium	02/12/24 5:52 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/12/24 6:01 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/12/24 6:14 PM	Reported
61	N063012-011A	SAMP	1	Hexavalent Chromium	02/12/24 6:24 PM	Reported
62	N063012-011AMS	MS	1	Hexavalent Chromium	02/12/24 6:33 PM	Reported
63	N063001-021AMS	MS	1	Hexavalent Chromium	02/12/24 6:43 PM	Reported
64	CCV-6	CCV1	1	Hexavalent Chromium	02/12/24 6:52 PM	Reported
65	CCB-6	CCB	1	Hexavalent Chromium	02/12/24 7:02 PM	Reported
66	BLANK	BLANK	1	Hexavalent Chromium	02/12/24 7:14 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240212A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**12/Feb/24 19:44:39**
No. of Injections:	**69**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/12/2024 09:22	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/12/2024 09:38	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/12/2024 09:47	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/12/2024 09:57	Finished	CCB R240103B
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/12/2024 10:06	Finished	MB R240103B
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/12/2024 10:16	Finished	LCS @5ppb, IWST-231228B
15	N063001-021A,SAMP	1	1000	Unknown		02/12/2024 10:45	Finished	SAMP,10 mL
16	N063001-021AMS,MS	2	1000	Unknown		02/12/2024 10:57	Finished	MS (5ppb), IWST-231228B,10r
17	N063012-004A,SAMP	3	1000	Unknown		02/12/2024 11:09	Finished	SAMP,0.02>10 mL
18	N063012-004AMS,MS	4	1000	Unknown		02/12/2024 11:18	Finished	MS (5ppb), IWST-231228B,0.0
19	N063012-004AMSD,M	5	1000	Unknown		02/12/2024 11:28	Finished	MSD (5ppb), IWST-231228B,0
20	N063012-002A,SAMP	1	1000	Unknown		02/12/2024 11:50	Finished	SAMP,0.02>10 mL
21	N063012-002ADUP,D	2	1000	Unknown		02/12/2024 12:02	Finished	DUP,0.02>10 mL
22	N063012-002AMS,MS	3	1000	Unknown		02/12/2024 12:11	Finished	MS (5ppb), IWST-231228B,0.0
23	CCV-2,CCV,1,	4	1000	Unknown		02/12/2024 12:21	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	5	1000	Unknown		02/12/2024 12:30	Finished	CCB R240103B
25	N063012-006A,SAMP	6	1000	Unknown		02/12/2024 12:40	Finished	SAMP,10 mL
26	N063012-006AMS,MS	7	1000	Unknown		02/12/2024 12:49	Finished	MS (1ppb), IWST-231228B,10r
27	N063012-007A,SAMP	8	1000	Unknown		02/12/2024 12:58	Finished	SAMP,10 mL
28	N063012-007AMS,MS	9	1000	Unknown		02/12/2024 13:08	Finished	MS (1ppb), IWST-231228B,10r
29	N063012-009A,SAMP	10	1000	Unknown		02/12/2024 13:17	Finished	SAMP,10 mL
30	N063012-009AMS,MS	11	1000	Unknown		02/12/2024 13:27	Finished	MS (1ppb), IWST-231228B,10r
31	N063012-001A,SAMP	12	1000	Unknown		02/12/2024 13:36	Finished	SAMP,0.1>10 mL
32	N063012-001AMS,MS	13	1000	Unknown		02/12/2024 13:46	Finished	MS (5ppb), IWST-231228B,0.1
33	N063001-020A,SAMP	14	1000	Unknown		02/12/2024 13:55	Finished	SAMP,10 mL
34	N063001-020AMS,MS	15	1000	Unknown		02/12/2024 14:05	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	16	1000	Unknown		02/12/2024 14:14	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	17	1000	Unknown		02/12/2024 14:24	Finished	CCB R240103B
37	N063010-001A,SAMP	18	1000	Unknown		02/12/2024 14:33	Finished	SAMP,10 mL
38	N063010-001AMS,MS	19	1000	Unknown		02/12/2024 14:43	Finished	MS (1ppb), IWST-231228B,10r
39	N063010-002A,SAMP	20	1000	Unknown		02/12/2024 14:52	Finished	SAMP,10 mL
40	N063010-002AMS,MS	21	1000	Unknown		02/12/2024 15:01	Finished	MS (1ppb), IWST-231228B,10r
41	N063010-003A,SAMP	22	1000	Unknown		02/12/2024 15:11	Finished	SAMP,10 mL
42	N063010-003AMS,MS	23	1000	Unknown		02/12/2024 15:20	Finished	MS (1ppb), IWST-231228B,10r
43	N063012-003A,SAMP	24	1000	Unknown		02/12/2024 15:30	Finished	SAMP,0.02>10 mL
44	N063012-003AMS,MS	25	1000	Unknown		02/12/2024 15:39	Finished	MS (5ppb), IWST-231228B,0.0
45	N062966-003A,SAMP	26	1000	Unknown		02/12/2024 15:49	Finished	SAMP,2>10 mL
46	N062966-003AMS,MS	27	1000	Unknown		02/12/2024 15:58	Finished	MS (1ppb), IWST-231228B,2>1
47	CCV-4,CCV1,1,	28	1000	Unknown		02/12/2024 16:08	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	29	1000	Unknown		02/12/2024 16:17	Finished	CCB R240103B
49	N063001-003A,SAMP	30	1000	Unknown		02/12/2024 16:26	Finished	SAMP,2>10 mL
50	N063001-003AMS,MS	31	1000	Unknown		02/12/2024 16:36	Finished	MS (1ppb), IWST-231228B,2>1
51	N063001-022A,SAMP	32	1000	Unknown		02/12/2024 16:45	Finished	SAMP,10 mL
52	N063001-022AMS,MS	33	1000	Unknown		02/12/2024 16:55	Finished	MS (1ppb), IWST-231228B,10r
53	N063012-005A,SAMP	34	1000	Unknown		02/12/2024 17:04	Finished	SAMP,10 mL
54	N063012-005AMS,MS	35	1000	Unknown		02/12/2024 17:14	Finished	MS (1ppb), IWST-231228B,10r
55	N063012-008A,SAMP	36	1000	Unknown		02/12/2024 17:23	Finished	SAMP,10 mL
56	N063012-008AMS,MS	37	1000	Unknown		02/12/2024 17:33	Finished	MS (1ppb), IWST-231228B,10r
57	N063012-010A,SAMP	38	1000	Unknown		02/12/2024 17:42	Finished	SAMP,10 mL
58	N063012-010AMS,MS	39	1000	Unknown		02/12/2024 17:52	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	40	1000	Unknown		02/12/2024 18:01	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	41	1000	Unknown		02/12/2024 18:14	Finished	CCB R240103B

61	N063012-011A,SAMP	42	1000	Unknown		02/12/2024 18:24	Finished	SAMP,10 mL
62	N063012-011AMS,MS	43	1000	Unknown		02/12/2024 18:33	Finished	MS (1ppb), IWST-231228B,10r
63	N063001-021AMS,MS	44	1000	Unknown		02/12/2024 18:43	Finished	MS (1ppb), IWST-231228B,10r
64	CCV-6,CCV1,1,	45	1000	Unknown		02/12/2024 18:52	Finished	CCV @10ppb, IWST-231228A
65	CCB-6,CCB,1,	46	1000	Unknown		02/12/2024 19:02	Finished	CCB R240103B
66	BLANK	47	1000	Unknown		02/12/2024 19:14	Finished	BLANK
67	SHUTDOWN	48	1000	Unknown		02/12/2024 19:23	Finished	
68	Eluent: R240212A	49	1000	Unknown		n.a.	Finished	
69	PCR: R240212B	50	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240213A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/13/24 9:44 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/13/24 9:59 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/13/24 10:08 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/13/24 10:18 AM	Reported
13	MB-R181554	MBLK	1	Hexavalent Chromium	02/13/24 10:27 AM	Reported
14	LCS-R181554	LCS	1	Hexavalent Chromium	02/13/24 10:36 AM	Reported
15	N063053-009A	SAMP	1	Hexavalent Chromium	02/13/24 10:46 AM	Not Reported
16	N063053-011A	SAMP	20	Hexavalent Chromium	02/13/24 10:55 AM	Not Reported
17	N063053-011AMS	MS	20	Hexavalent Chromium	02/13/24 11:05 AM	Not Reported
18	N063053-002AMS	MS	50	Hexavalent Chromium	02/13/24 11:18 AM	Reported
19	N063053-002A	SAMP	50	Hexavalent Chromium	02/13/24 11:27 AM	Reported
20	N063053-002ADUP	DUP	50	Hexavalent Chromium	02/13/24 11:37 AM	Reported
21	N063053-011A	SAMP	1	Hexavalent Chromium	02/13/24 11:46 AM	Reported
22	N063053-011AMS	MS	1	Hexavalent Chromium	02/13/24 11:56 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/13/24 12:05 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/13/24 12:15 PM	Reported
25	N063053-003A	SAMP	10	Hexavalent Chromium	02/13/24 12:24 PM	Not Reported
26	N063053-003AMS	MS	10	Hexavalent Chromium	02/13/24 12:34 PM	Not Reported
27	N063053-008A	SAMP	100	Hexavalent Chromium	02/13/24 12:43 PM	Reported
28	N063053-011AMSD	MSD	1	Hexavalent Chromium	02/13/24 12:53 PM	Reported
29	N063053-005A	SAMP	1	Hexavalent Chromium	02/13/24 1:02 PM	Reported
30	N063053-005AMS	MS	1	Hexavalent Chromium	02/13/24 1:12 PM	Reported
31	N063053-006A	SAMP	1	Hexavalent Chromium	02/13/24 1:23 PM	Reported
32	N063053-006AMS	MS	1	Hexavalent Chromium	02/13/24 1:32 PM	Reported
33	N063053-007A	SAMP	1	Hexavalent Chromium	02/13/24 1:42 PM	Not Reported
34	N063053-007AMS	MS	1	Hexavalent Chromium	02/13/24 1:51 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/13/24 2:00 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/13/24 2:10 PM	Reported
37	N063053-001A	SAMP	5	Hexavalent Chromium	02/13/24 2:19 PM	Reported
38	N063053-001AMS	MS	5	Hexavalent Chromium	02/13/24 2:29 PM	Reported
39	N063053-004A	SAMP	10	Hexavalent Chromium	02/13/24 2:38 PM	Reported
40	N063053-004AMS	MS	10	Hexavalent Chromium	02/13/24 2:48 PM	Reported
41	N063053-012A	SAMP	5	Hexavalent Chromium	02/13/24 2:57 PM	Not Reported
42	N063053-012AMS	MS	5	Hexavalent Chromium	02/13/24 3:07 PM	Not Reported

INJECTION LOG: 240213A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063053-013A	SAMP	5	Hexavalent Chromium	02/13/24 3:16 PM	Reported
44	N063053-013AMS	MS	5	Hexavalent Chromium	02/13/24 3:26 PM	Reported
45	N063001-004A	SAMP	5	Hexavalent Chromium	02/13/24 3:35 PM	Reported
46	N063001-004AMS	MS	5	Hexavalent Chromium	02/13/24 3:44 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/13/24 3:59 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/13/24 4:11 PM	Reported
49	N063053-009A	SAMP	20	Hexavalent Chromium	02/13/24 4:20 PM	Reported
50	N063053-009AMS	MS	20	Hexavalent Chromium	02/13/24 4:30 PM	Reported
51	N063053-010A	SAMP	20	Hexavalent Chromium	02/13/24 4:39 PM	Reported
52	N063053-010AMS	MS	20	Hexavalent Chromium	02/13/24 4:49 PM	Reported
53	N063053-014A	SAMP	1	Hexavalent Chromium	02/13/24 4:58 PM	Not Reported
54	N063053-014AMS	MS	1	Hexavalent Chromium	02/13/24 5:08 PM	Not Reported
55	N063053-015A	SAMP	1	Hexavalent Chromium	02/13/24 5:17 PM	Not Reported
56	N063053-015AMS	MS	1	Hexavalent Chromium	02/13/24 5:27 PM	Not Reported
57	N063053-016A	SAMP	1	Hexavalent Chromium	02/13/24 5:36 PM	Not Reported
58	N063053-016AMS	MS	1	Hexavalent Chromium	02/13/24 5:46 PM	Not Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/13/24 5:55 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/13/24 6:05 PM	Reported
61	N063053-018A	SAMP	1	Hexavalent Chromium	02/13/24 6:14 PM	Not Reported
62	N063053-018AMS	MS	1	Hexavalent Chromium	02/13/24 6:23 PM	Not Reported
63	N063053-014A	SAMP	5	Hexavalent Chromium	02/13/24 6:33 PM	Reported
64	N063053-014AMS	MS	5	Hexavalent Chromium	02/13/24 6:42 PM	Reported
65	N063053-015A	SAMP	5	Hexavalent Chromium	02/13/24 6:52 PM	Reported
66	N063053-015AMS	MS	5	Hexavalent Chromium	02/13/24 7:01 PM	Reported
67	N063053-016A	SAMP	5	Hexavalent Chromium	02/13/24 7:11 PM	Reported
68	N063053-016AMS	MS	5	Hexavalent Chromium	02/13/24 7:20 PM	Reported
69	N063053-018A	SAMP	5	Hexavalent Chromium	02/13/24 7:30 PM	Reported
70	N063053-018AMS	MS	5	Hexavalent Chromium	02/13/24 7:39 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/13/24 7:49 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/13/24 7:58 PM	Reported
73	N063053-017A	SAMP	1	Hexavalent Chromium	02/13/24 8:08 PM	Reported
74	N063053-017AMS	MS	1	Hexavalent Chromium	02/13/24 8:17 PM	Reported
75	N063053-008AMS	MS	100	Hexavalent Chromium	02/13/24 8:26 PM	Reported
76	N063053-011A	SAMP	5	Hexavalent Chromium	02/13/24 8:36 PM	Not Reported
77	N063053-011AMS	MS	5	Hexavalent Chromium	02/13/24 8:45 PM	Not Reported
78	N063053-011AMSD	MSD	5	Hexavalent Chromium	02/13/24 8:54 PM	Not Reported
79	N062911-003A	SAMP	5	Hexavalent Chromium	02/13/24 9:03 PM	Not Reported
80	N062911-003AMS	MS	5	Hexavalent Chromium	02/13/24 9:13 PM	Not Reported
81	N062911-004A	SAMP	5	Hexavalent Chromium	02/13/24 9:22 PM	Not Reported
82	N062911-004AMS	MS	5	Hexavalent Chromium	02/13/24 9:32 PM	Not Reported
83	CCV-7	CCV	1	Hexavalent Chromium	02/13/24 9:41 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	02/13/24 9:51 PM	Reported

INJECTION LOG: 240213A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063053-003A	SAMP	50	Hexavalent Chromium	02/13/24 10:00 PM	Reported
86	N063053-003AMS	MS	50	Hexavalent Chromium	02/13/24 10:10 PM	Reported
87	N063053-007A	SAMP	20	Hexavalent Chromium	02/13/24 10:19 PM	Reported
88	N063053-007AMS	MS	20	Hexavalent Chromium	02/13/24 10:29 PM	Reported
89	N063053-012A	SAMP	20	Hexavalent Chromium	02/13/24 10:38 PM	Reported
90	N063053-012AMS	MS	20	Hexavalent Chromium	02/13/24 10:47 PM	Reported
91	CCV-8	CCV1	1	Hexavalent Chromium	02/13/24 10:57 PM	Reported
92	CCB-8	CCB	1	Hexavalent Chromium	02/13/24 11:06 PM	Reported
93	BLANK	BLANK	1	Hexavalent Chromium	02/13/24 11:16 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240213A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**13/Feb/24 23:46:39**
No. of Injections:	**96**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/13/2024 09:44	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/13/2024 09:59	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/13/2024 10:08	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/13/2024 10:18	Finished	CCB R240103B
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/13/2024 10:27	Finished	MB R240103B
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/13/2024 10:36	Finished	LCS @5ppb, IWST-231228B
15	N063053-009A,SAMP	7	1000	Unknown		02/13/2024 10:46	Finished	SAMP,10 mL
16	N063053-011A,SAMP	8	1000	Unknown		02/13/2024 10:55	Finished	SAMP,0.5>10 mL
17	N063053-011AMS,MS	9	1000	Unknown		02/13/2024 11:05	Finished	MS (5ppb), IWST-231228B,0.5
18	N063053-002AMS,MS	10	1000	Unknown		02/13/2024 11:18	Finished	MS (5ppb), IWST-231228B,0.2
19	N063053-002A,SAMP	11	1000	Unknown		02/13/2024 11:27	Finished	SAMP,0.02>10 mL
20	N063053-002ADUP,D	12	1000	Unknown		02/13/2024 11:37	Finished	DUP,0.02>10 mL
21	N063053-011A,SAMP	13	1000	Unknown		02/13/2024 11:46	Finished	SAMP,10 mL
22	N063053-011AMS,MS	14	1000	Unknown		02/13/2024 11:56	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	15	1000	Unknown		02/13/2024 12:05	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		02/13/2024 12:15	Finished	CCB R240103B
25	N063053-003A,SAMP	17	1000	Unknown		02/13/2024 12:24	Finished	SAMP,1>10 mL
26	N063053-003AMS,MS	18	1000	Unknown		02/13/2024 12:34	Finished	MS (5ppb), IWST-231228B,1>
27	N063053-008A,SAMP	19	1000	Unknown		02/13/2024 12:43	Finished	SAMP,0.1>10 mL
28	N063053-011AMSD,M	20	1000	Unknown		02/13/2024 12:53	Finished	MSD (1ppb), IWST-231228B,1
29	N063053-005A,SAMP	21	1000	Unknown		02/13/2024 13:02	Finished	SAMP,10 mL
30	N063053-005AMS,MS	22	1000	Unknown		02/13/2024 13:12	Finished	MS (1ppb), IWST-231228B,10r
31	N063053-006A,SAMP	23	1000	Unknown		02/13/2024 13:23	Finished	SAMP,10 mL
32	N063053-006AMS,MS	24	1000	Unknown		02/13/2024 13:32	Finished	MS (1ppb), IWST-231228B,10r
33	N063053-007A,SAMP	25	1000	Unknown		02/13/2024 13:42	Finished	SAMP,10 mL
34	N063053-007AMS,MS	26	1000	Unknown		02/13/2024 13:51	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	27	1000	Unknown		02/13/2024 14:00	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	28	1000	Unknown		02/13/2024 14:10	Finished	CCB R240103B
37	N063053-001A,SAMP	29	1000	Unknown		02/13/2024 14:19	Finished	SAMP,2>10 mL
38	N063053-001AMS,MS	30	1000	Unknown		02/13/2024 14:29	Finished	MS (5ppb), IWST-231228B,2>
39	N063053-004A,SAMP	31	1000	Unknown		02/13/2024 14:38	Finished	SAMP,1>10 mL
40	N063053-004AMS,MS	32	1000	Unknown		02/13/2024 14:48	Finished	MS (5ppb), IWST-231228B,1>
41	N063053-012A,SAMP	33	1000	Unknown		02/13/2024 14:57	Finished	SAMP,2>10 mL
42	N063053-012AMS,MS	34	1000	Unknown		02/13/2024 15:07	Finished	MS (5ppb), IWST-231228B,2>
43	N063053-013A,SAMP	35	1000	Unknown		02/13/2024 15:16	Finished	SAMP,2>10 mL
44	N063053-013AMS,MS	36	1000	Unknown		02/13/2024 15:26	Finished	MS (5ppb), IWST-231228B,2>
45	N063001-004A,SAMP	37	1000	Unknown		02/13/2024 15:35	Finished	SAMP,2>10 mL
46	N063001-004AMS,MS	38	1000	Unknown		02/13/2024 15:44	Finished	MS (1ppb), IWST-231228B,2>
47	CCV-4,CCV1,1,	1	1000	Unknown		02/13/2024 15:59	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	2	1000	Unknown		02/13/2024 16:11	Finished	CCB R240103B
49	N063053-009A,SAMP	3	1000	Unknown		02/13/2024 16:20	Finished	SAMP,0.5>10 mL
50	N063053-009AMS,MS	4	1000	Unknown		02/13/2024 16:30	Finished	MS (5ppb), IWST-231228B,0.5
51	N063053-010A,SAMP	5	1000	Unknown		02/13/2024 16:39	Finished	SAMP,0.5>10 mL
52	N063053-010AMS,MS	6	1000	Unknown		02/13/2024 16:49	Finished	MS (5ppb), IWST-231228B,0.5
53	N063053-014A,SAMP	7	1000	Unknown		02/13/2024 16:58	Finished	SAMP,10 mL
54	N063053-014AMS,MS	8	1000	Unknown		02/13/2024 17:08	Finished	MS (1ppb), IWST-231228B,10r
55	N063053-015A,SAMP	9	1000	Unknown		02/13/2024 17:17	Finished	SAMP,10 mL
56	N063053-015AMS,MS	10	1000	Unknown		02/13/2024 17:27	Finished	MS (1ppb), IWST-231228B,10r
57	N063053-016A,SAMP	11	1000	Unknown		02/13/2024 17:36	Finished	SAMP,10 mL
58	N063053-016AMS,MS	12	1000	Unknown		02/13/2024 17:46	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	13	1000	Unknown		02/13/2024 17:55	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	14	1000	Unknown		02/13/2024 18:05	Finished	CCB R240103B

61	N063053-018A,SAMP	15	1000	Unknown		02/13/2024 18:14	Finished	SAMP,10 mL
62	N063053-018AMS,MS	16	1000	Unknown		02/13/2024 18:23	Finished	MS (1ppb), IWST-231228B,10r
63	N063053-014A,SAMP	17	1000	Unknown		02/13/2024 18:33	Finished	SAMP,2>10 mL
64	N063053-014AMS,MS	18	1000	Unknown		02/13/2024 18:42	Finished	MS (1ppb), IWST-231228B,2>
65	N063053-015A,SAMP	19	1000	Unknown		02/13/2024 18:52	Finished	SAMP,2>10 mL
66	N063053-015AMS,MS	20	1000	Unknown		02/13/2024 19:01	Finished	MS (1ppb), IWST-231228B,2>
67	N063053-016A,SAMP	21	1000	Unknown		02/13/2024 19:11	Finished	SAMP,2>10 mL
68	N063053-016AMS,MS	22	1000	Unknown		02/13/2024 19:20	Finished	MS (1ppb), IWST-231228B,2>
69	N063053-018A,SAMP	23	1000	Unknown		02/13/2024 19:30	Finished	SAMP,2>10 mL
70	N063053-018AMS,MS	24	1000	Unknown		02/13/2024 19:39	Finished	MS (1ppb), IWST-231228B,2>
71	CCV-6,CCV1,1,	25	1000	Unknown		02/13/2024 19:49	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	26	1000	Unknown		02/13/2024 19:58	Finished	CCB R240103B
73	N063053-017A,SAMP	27	1000	Unknown		02/13/2024 20:08	Finished	SAMP,10 mL
74	N063053-017AMS,MS	28	1000	Unknown		02/13/2024 20:17	Finished	MS (1ppb), IWST-231228B,10r
75	N063053-008AMS,MS	29	1000	Unknown		02/13/2024 20:26	Finished	MS (5ppb), IWST-231228B,0.1
76	N063053-011A,SAMP	30	1000	Unknown		02/13/2024 20:36	Finished	SAMP,2>10 mL
77	N063053-011AMS,MS	31	1000	Unknown		02/13/2024 20:45	Finished	MS (1ppb), IWST-231228B,2>
78	N063053-011AMSD,M	32	1000	Unknown		02/13/2024 20:54	Finished	MSD (1ppb), IWST-231228B,2
79	N062911-003A,SAMP	33	1000	Unknown		02/13/2024 21:03	Finished	SAMP,2>10 mL
80	N062911-003AMS,MS	34	1000	Unknown		02/13/2024 21:13	Finished	MS (1ppb), IWST-231228B,2>
81	N062911-004A,SAMP	35	1000	Unknown		02/13/2024 21:22	Finished	SAMP,2>10 mL
82	N062911-004AMS,MS	36	1000	Unknown		02/13/2024 21:32	Finished	MS (1ppb), IWST-231228B,2>
83	CCV-7,CCV,1,	37	1000	Unknown		02/13/2024 21:41	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	38	1000	Unknown		02/13/2024 21:51	Finished	CCB R240103B
85	N063053-003A,SAMP	39	1000	Unknown		02/13/2024 22:00	Finished	SAMP,0.2>10 mL
86	N063053-003AMS,MS	40	1000	Unknown		02/13/2024 22:10	Finished	MS (5ppb), IWST-231228B,0.2
87	N063053-007A,SAMP	41	1000	Unknown		02/13/2024 22:19	Finished	SAMP,0.5>10 mL
88	N063053-007AMS,MS	42	1000	Unknown		02/13/2024 22:29	Finished	MS (5ppb), IWST-231228B,0.5
89	N063053-012A,SAMP	43	1000	Unknown		02/13/2024 22:38	Finished	SAMP,0.5>10 mL
90	N063053-012AMS,MS	44	1000	Unknown		02/13/2024 22:47	Finished	MS (5ppb), IWST-231228B,0.5
91	CCV-8,CCV1,1,	45	1000	Unknown		02/13/2024 22:57	Finished	CCV @10ppb, IWST-231228A
92	CCB-8,CCB,1,	46	1000	Unknown		02/13/2024 23:06	Finished	CCB R240103B
93	BLANK	47	1000	Unknown		02/13/2024 23:16	Finished	BLANK
94	SHUTDOWN	48	1000	Unknown		02/13/2024 23:25	Finished	
95	Eluent: R240212A	49	1000	Unknown		n.a.	Finished	
96	PCR: R240212B	50	1000	Unknown		n.a.	Finished	

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 2/8/24
Time Prepared: 0846H
Prepared By: MA

Reagent ID:
Sulfuric Acid: 14395
Diphenylcarbazide: 15409
NH4OH + NH4SO4 eluent: M240205A
NH4OH + NH4SO4 buffer: M240107A

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MB2964-17	9.24	-	.250 mL	-250 mL		
2)	18A	9.43	-				
3)	19A	9.56	-				
4)	20A	9.53	-				
5)	21A	9.70	-				
6)							
7)							
8)							
9)							
10)							
11)							
12)							
13)							
14)							
15)							

Sample Preparation

Date Prepared: 2/9/24
Time Prepared: 0955H
Prepared By: MA

Reagent ID:
Sulfuric Acid: 14395
Diphenylcarbazide: 15409
NH4OH + NH4SO4 eluent: M240205A
NH4OH + NH4SO4 buffer: M240107A

6N NaOH M231224B

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MB7001-1A	9.48	-	.250 mL	250 mL		
2)	2A	9.69	-				
3)	3A	9.24	-				
4)	4A	9.26	-				
5)	5A	9.47	-				
6)	6A	9.45	-				
7)	7A	9.51	-				
8)	8A	9.00	9.44			14	
9)	9A	9.24	-				
10)	10A	9.28	-				
11)	11A	9.27	-				
12)	12A	9.44					
13)	13A	9.67	-				
14)	14A	9.28	-				
15)	15A	9.32	-				
	16A	9.24	-				

Logbook No. 24

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 2/9/24
Time Prepared: 0855A
Prepared By: MA

Reagent ID:
Sulfuric Acid: 14345
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: N24 02054
NH4OH + NH4SO4 buffer: N24010 7B

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	N067001-17A	9.74	-	250ml	250ml		
2)	18A	9.76	✓				
3)	19A	9.74	-				
4)	20A	9.58	-				
5)	21A	9.56	✓				
6)	22A	9.72	-				
7)							
8)							
9)							
10)							
11)							
12)							
13)							
14)							
15)							

Sample Preparation

Date Prepared: 2/10/24
Time Prepared: 1204H
Prepared By: MA

Reagent ID:
Sulfuric Acid: 14345
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: N24021BA
NH4OH + NH4SO4 buffer: N24010 7B

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	N067010-1A	9.40	-	250ml	250ml		
2)	2A	9.41	✓				
3)	3A	9.39	✓				
4)	N067012-1A	9.30	-				
5)	2A	9.38	-				
6)	3A	9.46	-				
7)	4A	9.45	-				
8)	5A	9.68	-				
9)	6A	9.71	-				
10)	7A	9.74	-				
11)	8A	9.72	-				
12)	9A	9.44	-				
13)	10A	9.70	-				
14)	11A	9.71	-				
15)							

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 2/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0427	0.2063	1.0639	2.1157	3.2270	4.3227	0.9999
Measured, in ug/L	0.1985	0.9592	4.9461	9.8357	15.0023	20.0959	0.9999
Relative Error (%RE)		-4%		-2%			

	Stock	Working
Standard Concentration:	1000000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = { (B - A) / A } * 100
Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places. The exact values are represented in the ICAL summary for calculation purposes.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **ICV**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5683005**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **ZZZZZZ**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5683006**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **CCV**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683008**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.848	0.20	5.000	0	97.0	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **ZZZZZZ**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683009**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.173	0.20	0.2000	0	86.6	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **ZZZZZZ**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.990	0.20	10.00	0	99.9	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **CCV**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683029**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.981	0.20	5.000	0	99.6	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **ZZZZZZ**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683041**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.050	0.20	10.00	0	100	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **CCV**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683053**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.970	0.20	5.000	0	99.4	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **ZZZZZZ**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683061**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.940	0.20	10.00	0	99.4	95	105				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ICV**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5686880**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5686881**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **CCV**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686883**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.811	0.20	5.000	0	96.2	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686884**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.182	0.20	0.2000	0	91.1	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686895**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.053	0.20	10.00	0	101	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **CCV**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686907**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.815	0.20	5.000	0	96.3	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686919**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.016	0.20	10.00	0	100	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **CCV**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686931**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.000	0.20	5.000	0	100	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686936**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.874	0.20	10.00	0	98.7	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ICV**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5691856**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5691857**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCV**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691859**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.014	0.20	5.000	0	100	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691860**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.211	0.20	0.2000	0	106	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691869**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.936	0.20	10.00	0	99.4	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCV**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691877**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.972	0.20	5.000	0	99.4	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691887**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.065	0.20	10.00	0	101	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCV**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691893**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.076	0.20	5.000	0	102	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691903**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.987	0.20	10.00	0	99.9	95	105				

Sample ID: **CCV-7**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCV**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691908**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.079	0.20	5.000	0	102	95	105				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-8** SampType: **CCV1** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181554**
Client ID: **ZZZZZZ** Batch ID: **R181554** TestNo: **EPA 218.6** Analysis Date: **2/13/2024** SeqNo: **5691916**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.100	0.20	10.00	0	101	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **ICB**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5683007**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **CCB**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683010**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **CCB**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **CCB**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683030**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **CCB**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683042**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **CCB**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683054**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181381**
Client ID: **CCB**	Batch ID: **R181381**	TestNo: **EPA 218.6**		Analysis Date: **2/9/2024**	SeqNo: **5683062**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ICB**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5686882**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **CCB**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686885**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **CCB**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686896**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **CCB**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686908**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **CCB**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686920**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **CCB**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686932**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **CCB**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686937**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ICB**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5691858**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCB**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691861**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCB**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691870**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCB**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691878**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCB**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691888**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCB**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691894**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCB**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691904**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-7**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCB**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691909**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-8**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCB**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691917**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/9/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.040	
CCV-3	4.040	
CCV-4	4.040	
CCV-5	4.048	
CCV-6	4.040	

Average	4.041
Actual RT Window	3.961 - 4.121
Applied RT Window	3.841 - 4.241

MB-R181381	N.A.	N.A.
LCS-R181381	4.040	PASS
N062966-021A	N.A.	N.A.
N062966-021AMS	4.048	PASS
N063001-001A	3.881	PASS
N063001-001AMS	3.856	PASS
N063001-001AMSD	3.856	PASS
N063001-014A	3.931	PASS
N063001-014AMS	3.931	PASS
N063001-009A	N.A.	N.A.
N063001-011A	4.015	PASS
N063001-011AMS	4.015	PASS
N063001-007A	4.040	PASS
N063001-007AMS	4.023	PASS
N063001-003A	N.A.	N.A.
N063001-004A	N.A.	N.A.
N063001-009A	4.006	PASS
N063001-005A	3.881	PASS
N063001-005AMS	3.856	PASS
N063001-006A	3.890	PASS
N063001-006AMS	3.873	PASS
N063001-012A	3.856	PASS

Reviewed by:

dMRocha 2/25/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/9/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.040	
CCV-3	4.040	
CCV-4	4.040	
CCV-5	4.048	
CCV-6	4.040	

Average	4.041	
Actual RT Window	3.961 -	4.121
Applied RT Window	3.841 -	4.241

N063001-012AMS	3.848	PASS
N063001-015A	N.A.	N.A.
N063001-015AMS	3.973	PASS
N063001-016A	N.A.	N.A.
N063001-016AMS	4.031	PASS
N063001-017A	N.A.	N.A.
N063001-017AMS	4.031	PASS
N063001-018A	N.A.	N.A.
N063001-018AMS	4.031	PASS
N063001-002A	N.A.	N.A.
N063001-002AMS	4.031	PASS
N063001-013A	4.056	PASS
N063001-013AMS	4.040	PASS
N063001-019A	N.A.	N.A.
N063001-019AMS	4.040	PASS
N063001-010A	4.006	PASS
N063001-010AMS	4.006	PASS
N063001-009AMS	3.998	PASS
N063001-008A	4.048	PASS
N063001-008AMS	4.031	PASS
N063001-008ADUP	N.A.	N.A.
N063001-008AMSD	4.040	PASS

Reviewed by:

dMRocha 2/25/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/9/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.040	
CCV-3	4.040	
CCV-4	4.040	
CCV-5	4.048	
CCV-6	4.040	
Average	4.041	
Actual RT Window	3.961 - 4.121	
Applied RT Window	3.841 - 4.241	
N063001-004AMS	3.815	FAIL
N063001-014AMS	3.931	PASS

Reviewed by:

dMocha 2/25/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/12/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.040	
CCV-3	4.040	
CCV-4	4.040	
CCV-5	4.040	
CCV-6	4.040	

Average	4.040
Actual RT Window	3.960 - 4.120
Applied RT Window	3.840 - 4.240

MB-R181444	N.A.	N.A.
LCS-R181444	4.040	PASS
N063001-021A	3.873	PASS
N063001-021AMS	3.856	PASS
N063012-004A	4.040	PASS
N063012-004AMS	4.040	PASS
N063012-004AMSD	4.040	PASS
N063012-002A	4.048	PASS
N063012-002ADUP	4.040	PASS
N063012-002AMS	4.048	PASS
N063012-006A	N.A.	N.A.
N063012-006AMS	4.031	PASS
N063012-007A	N.A.	N.A.
N063012-007AMS	4.031	PASS
N063012-009A	N.A.	N.A.
N063012-009AMS	3.890	PASS
N063012-001A	4.040	PASS
N063012-001AMS	4.040	PASS
N063001-020A	N.A.	N.A.
N063001-020AMS	3.898	PASS
N063010-001A	3.906	PASS
N063010-001AMS	3.873	PASS

Reviewed by:

dMocha 2/25/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/12/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.040	
CCV-3	4.040	
CCV-4	4.040	
CCV-5	4.040	
CCV-6	4.040	
Average	4.040	
Actual RT Window	3.960 - 4.120	
Applied RT Window	3.840 - 4.240	
N063010-002A	3.856	PASS
N063010-002AMS	3.873	PASS
N063010-003A	3.865	PASS
N063010-003AMS	3.856	PASS
N063012-003A	4.040	PASS
N063012-003AMS	4.048	PASS
N062966-003A	N.A.	N.A.
N062966-003AMS	4.006	PASS
N063001-003A	N.A.	N.A.
N063001-003AMS	4.006	PASS
N063001-022A	N.A.	N.A.
N063001-022AMS	4.040	PASS
N063012-005A	N.A.	N.A.
N063012-005AMS	4.040	PASS
N063012-008A	N.A.	N.A.
N063012-008AMS	4.040	PASS
N063012-010A	N.A.	N.A.
N063012-010AMS	4.040	PASS
N063012-011A	N.A.	N.A.
N063012-011AMS	4.040	PASS
N063001-021AMS	3.856	PASS

Reviewed by:

dMocha 2/25/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/13/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.040	
CCV-3	4.048	
CCV-4	4.048	
CCV-5	4.048	
CCV-6	4.048	
CCV-7	4.048	
CCV-8	4.040	

Average 4.045
Actual RT Window 3.965 - 4.125
Applied RT Window 3.845 - 4.245

MB-R181554	N.A.	N.A.
LCS-R181554	4.040	PASS
N063053-009A	3.865	PASS
N063053-011A	N.A.	N.A.
N063053-011AMS	4.040	PASS
N063053-002AMS	4.040	PASS
N063053-002A	4.040	PASS
N063053-002ADUP	4.048	PASS
N063053-011A	3.848	PASS
N063053-011AMS	3.848	PASS
N063053-003A	4.023	PASS
N063053-003AMS	4.023	PASS
N063053-008A	4.048	PASS
N063053-011AMSD	3.848	PASS
N063053-005A	3.865	PASS
N063053-005AMS	3.856	PASS
N063053-006A	3.856	PASS
N063053-006AMS	3.856	PASS
N063053-007A	3.848	PASS
N063053-007AMS	3.848	PASS

Reviewed by:

dMRocha 2/25/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/13/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.040	
CCV-3	4.048	
CCV-4	4.048	
CCV-5	4.048	
CCV-6	4.048	
CCV-7	4.048	
CCV-8	4.040	
Average	4.045	
Actual RT Window	3.965 - 4.125	
Applied RT Window	3.845 - 4.245	
N063053-001A	4.015	PASS
N063053-001AMS	4.015	PASS
N063053-004A	4.031	PASS
N063053-004AMS	4.031	PASS
N063053-012A	4.040	PASS
N063053-012AMS	4.040	PASS
N063053-013A	3.998	PASS
N063053-013AMS	3.998	PASS
N063001-004A	N.A.	N.A.
N063001-004AMS	4.006	PASS
N063053-009A	4.040	PASS
N063053-009AMS	4.040	PASS
N063053-010A	4.040	PASS
N063053-010AMS	4.040	PASS
N063053-014A	N.A.	N.A.
N063053-014AMS	N.A.	N.A.
N063053-015A	N.A.	N.A.
N063053-015AMS	N.A.	N.A.
N063053-016A	N.A.	N.A.
N063053-016AMS	N.A.	N.A.

Reviewed by:

dMRocha 2/25/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/13/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.040	
CCV-3	4.048	
CCV-4	4.048	
CCV-5	4.048	
CCV-6	4.048	
CCV-7	4.048	
CCV-8	4.040	
Average	4.045	
Actual RT Window	3.965 - 4.125	
Applied RT Window	3.845 - 4.245	
N063053-014A	N.A.	N.A.
N063053-014AMS	3.981	PASS
N063053-015A	N.A.	N.A.
N063053-015AMS	3.956	PASS
N063053-016A	N.A.	N.A.
N063053-016AMS	3.923	PASS
N063053-018A	4.015	PASS
N063053-018AMS	4.015	PASS
N063053-017A	N.A.	N.A.
N063053-017AMS	4.048	PASS
N063053-008AMS	4.048	PASS
N063053-011A	4.023	PASS
N063053-011AMS	4.015	PASS
N063053-011AMSD	4.015	PASS
N062911-003A	N.A.	N.A.
N062911-003AMS	4.006	PASS
N062911-004A	4.006	PASS
N062911-004AMS	4.015	PASS
N063053-003A	4.048	PASS
N063053-003AMS	4.048	PASS

Reviewed by:

dMocha 2/25/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/13/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.040	
CCV-3	4.048	
CCV-4	4.048	
CCV-5	4.048	
CCV-6	4.048	
CCV-7	4.048	
CCV-8	4.040	
Average	4.045	
Actual RT Window	3.965 - 4.125	
Applied RT Window	3.845 - 4.245	
N063053-007A	4.040	PASS
N063053-007AMS	4.040	PASS
N063053-012A	4.048	PASS
N063053-012AMS	4.040	PASS

Reviewed by:

dMocha 2/25/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

Reviewed by:

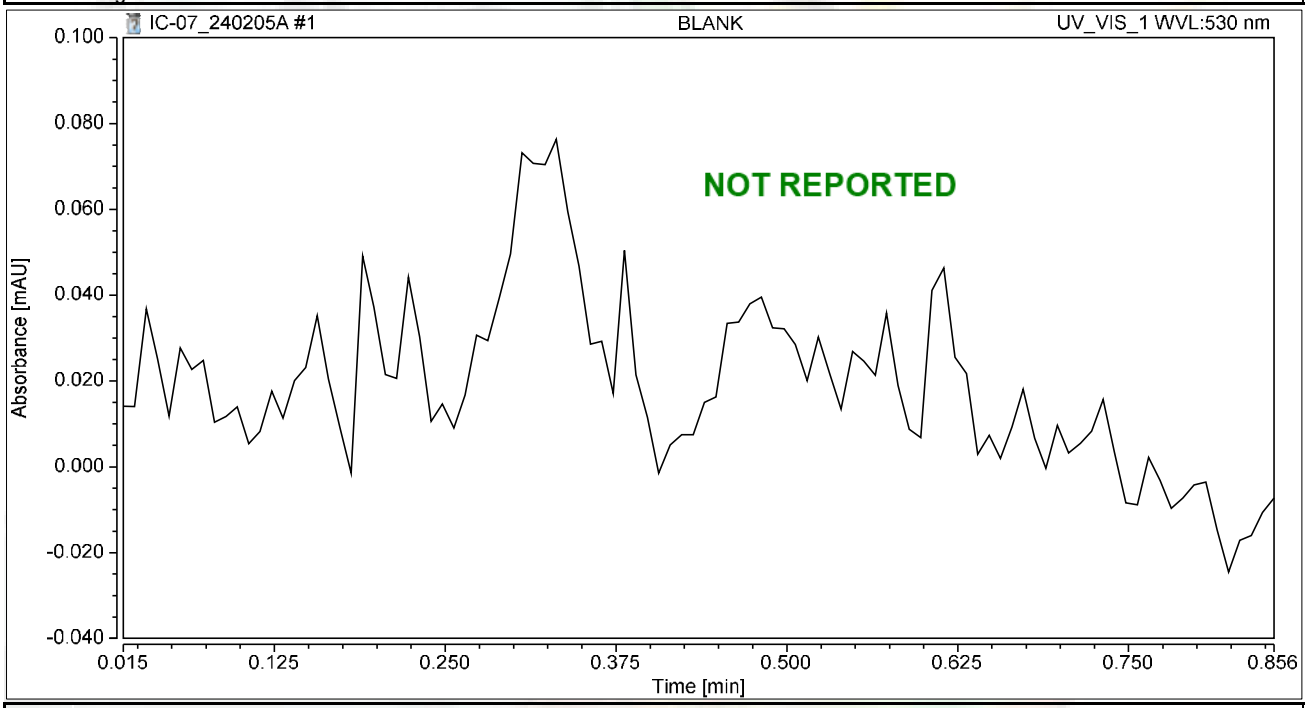
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**0.84**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 11:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

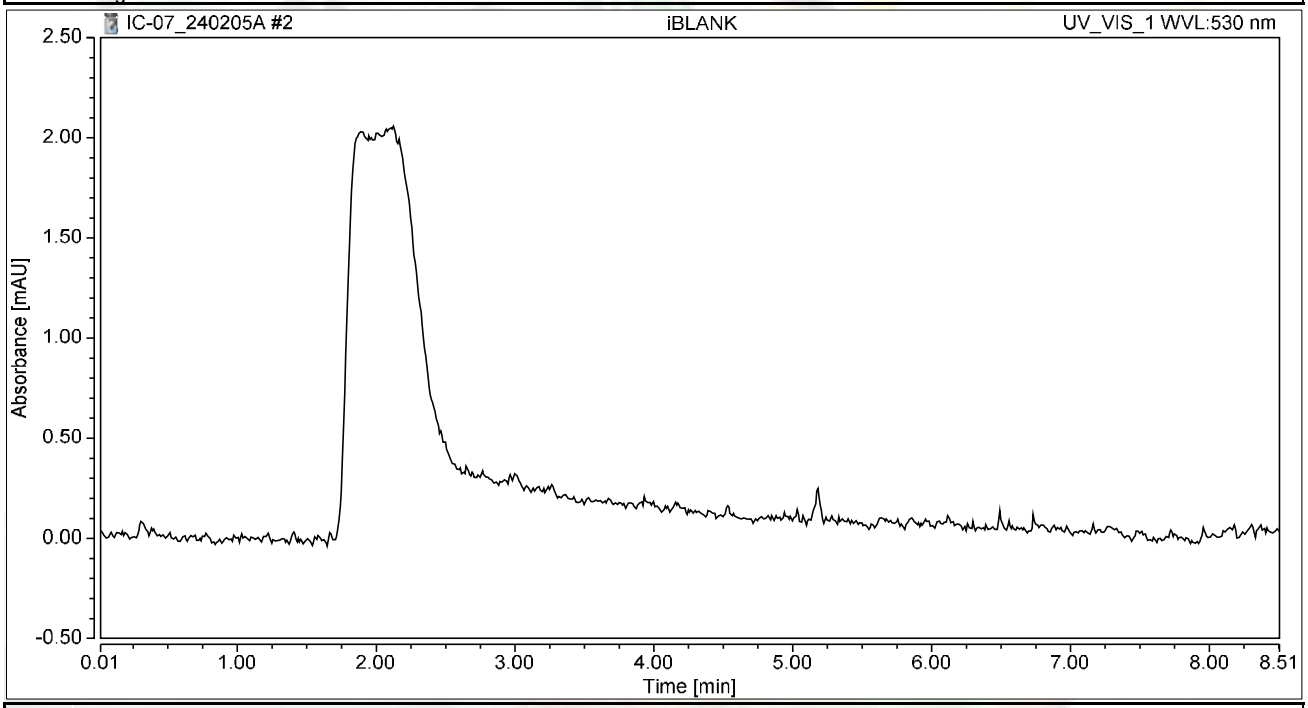
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Reviewed by:

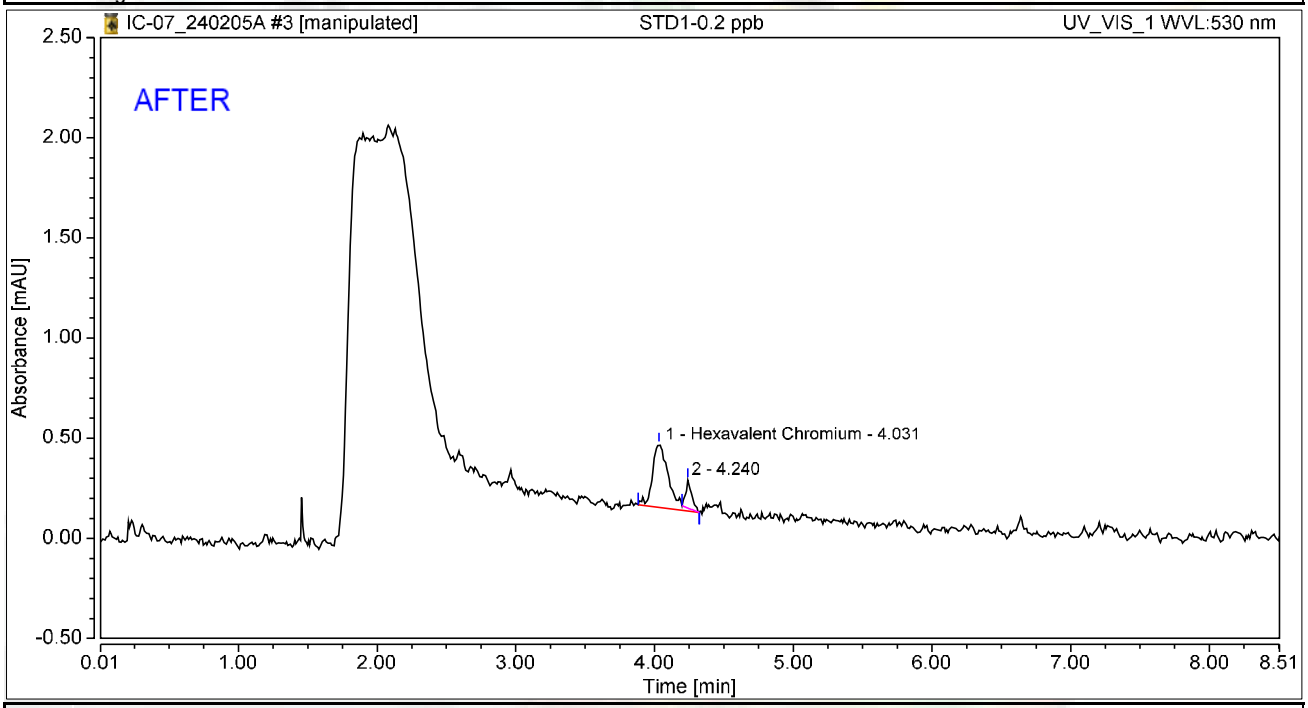
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.043	0.313	85.65	69.19	0.1985
2		4.240	0.007	0.139	14.35	30.81	n.a.
Total:			**0.050**	**0.452**	**100.00**	**100.00**	

Reviewed by:

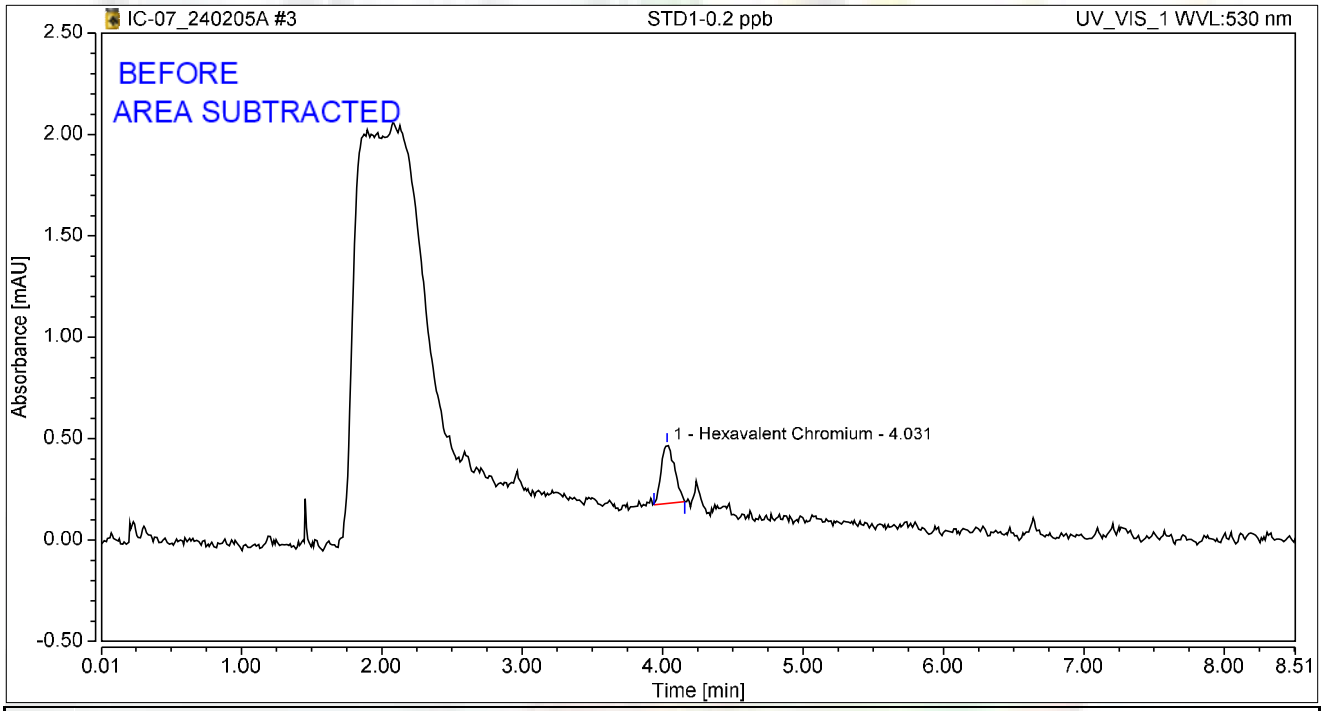
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

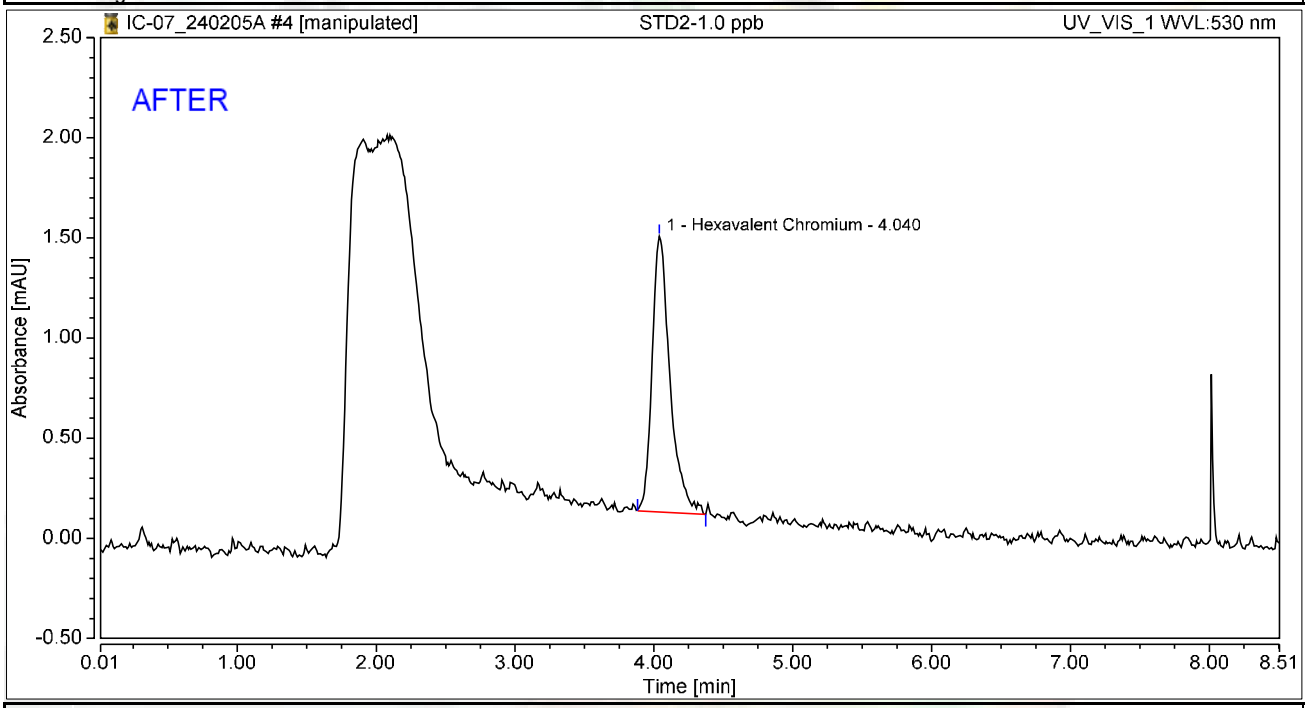
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.032	0.288	100.00	100.00	0.1502
Total:			**0.032**	**0.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.206	1.377	100.00	100.00	0.9592
Total:			**0.206**	**1.377**	**100.00**	**100.00**	

Reviewed by:

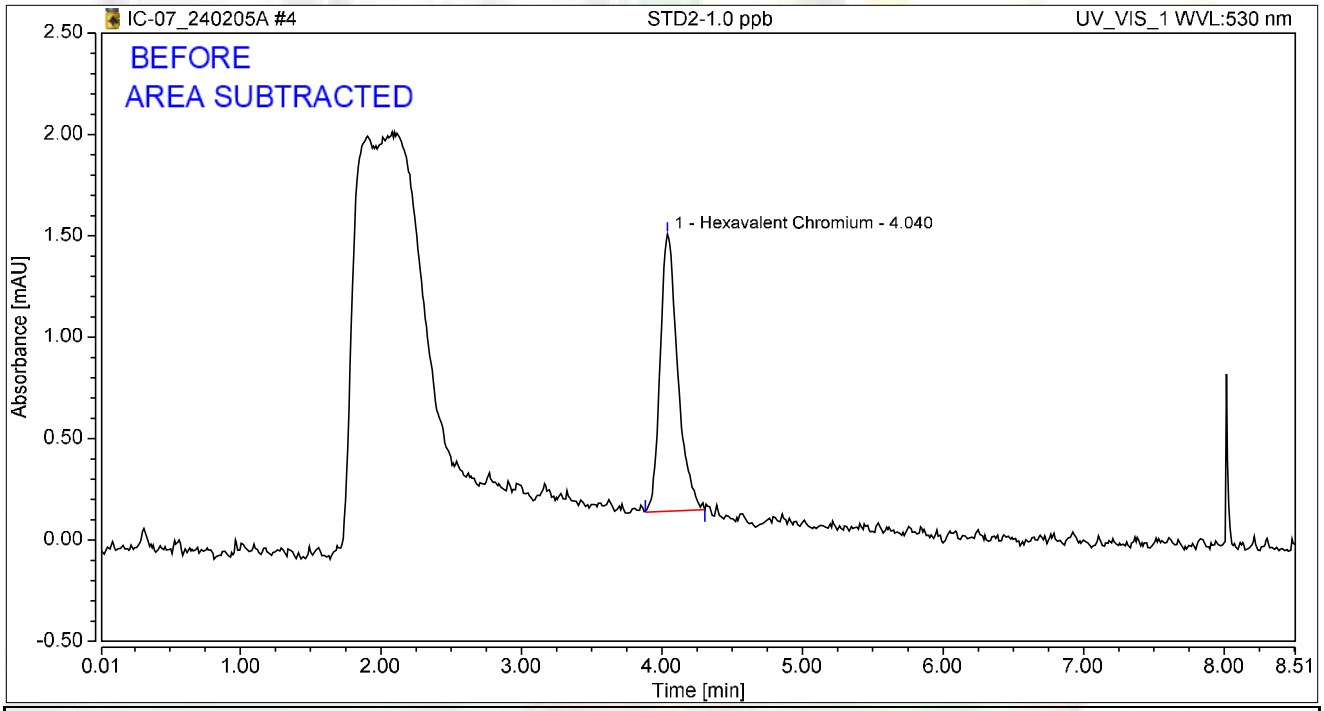
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

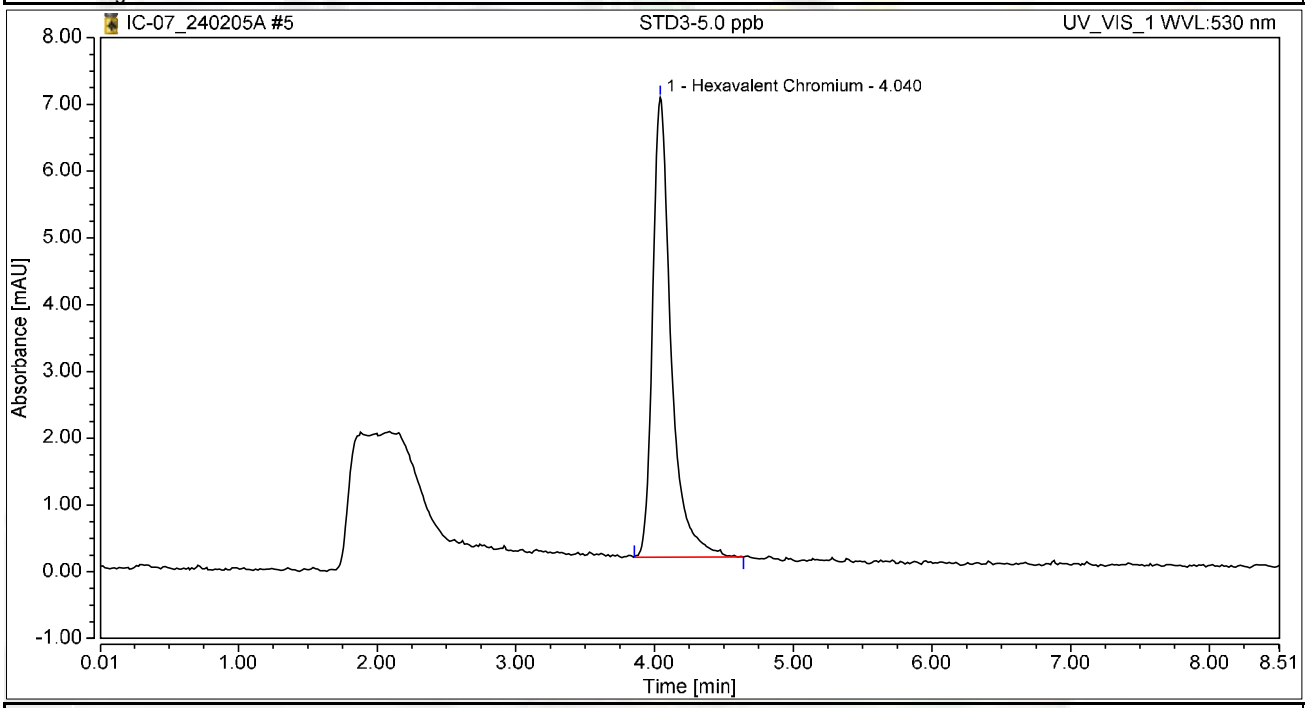
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.198	1.367	100.00	100.00	0.9223
Total:			**0.198**	**1.367**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

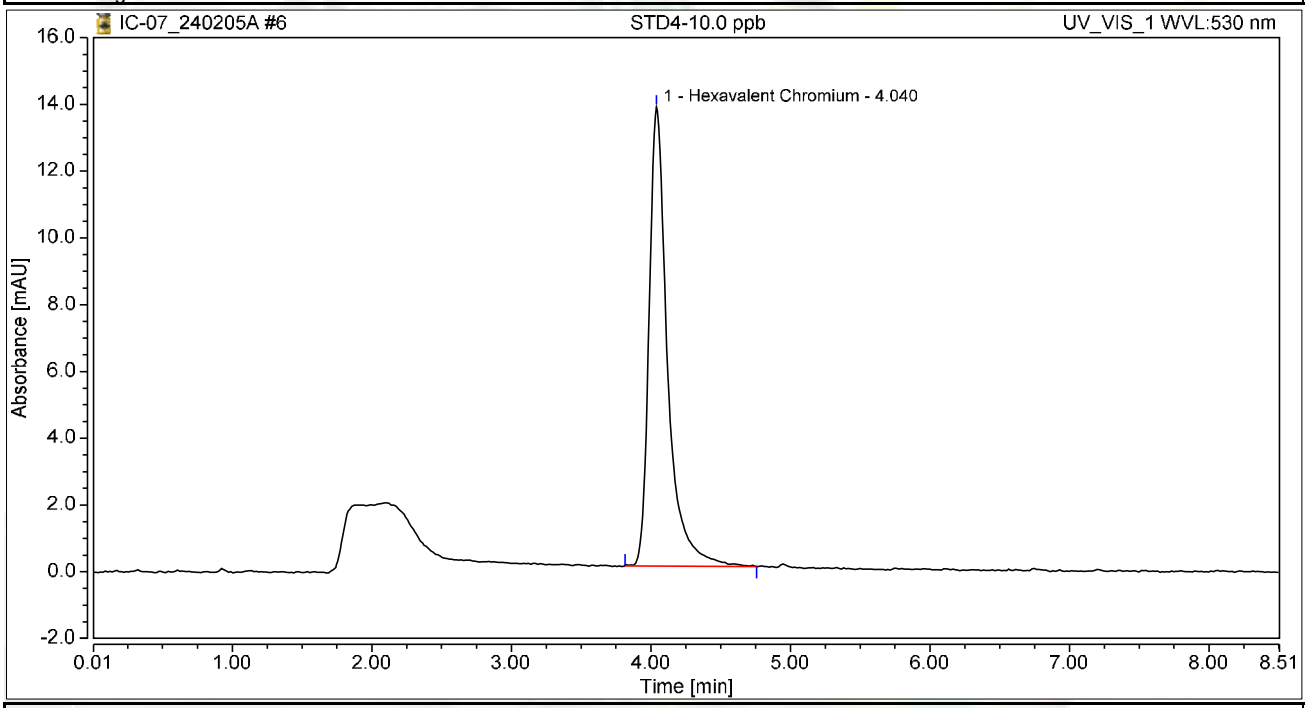
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.064	6.885	100.00	100.00	4.9461
Total:			**1.064**	**6.885**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

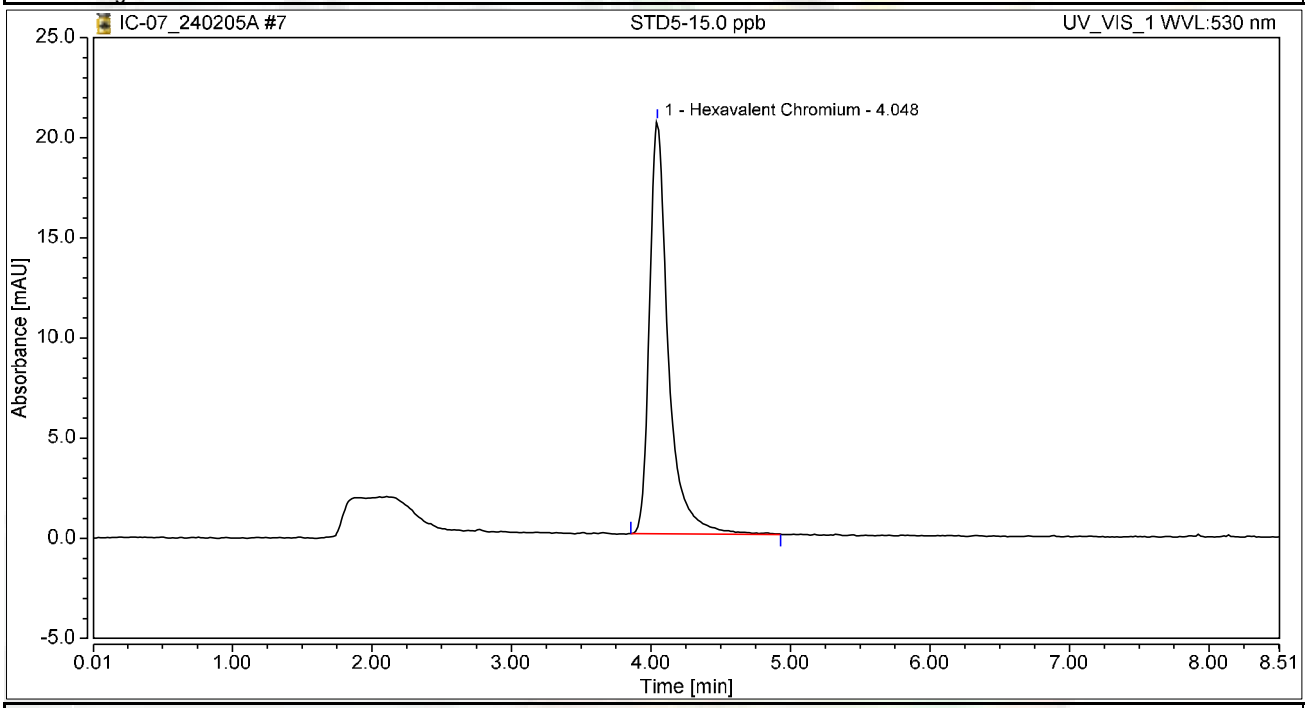
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.116	13.748	100.00	100.00	9.8357
Total:			**2.116**	**13.748**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

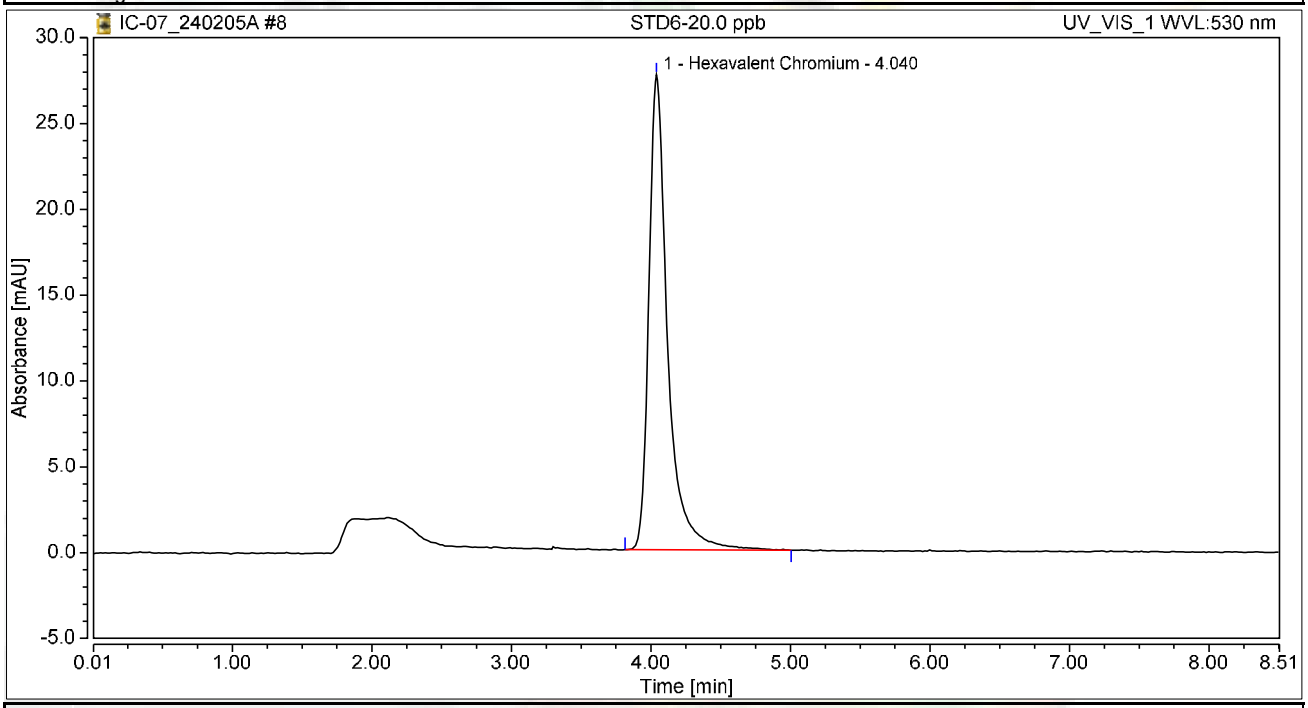
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	3.227	20.605	100.00	100.00	15.0023
Total:			**3.227**	**20.605**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:08**	*Sample Weight:*	**1.0000**

Chromatogram



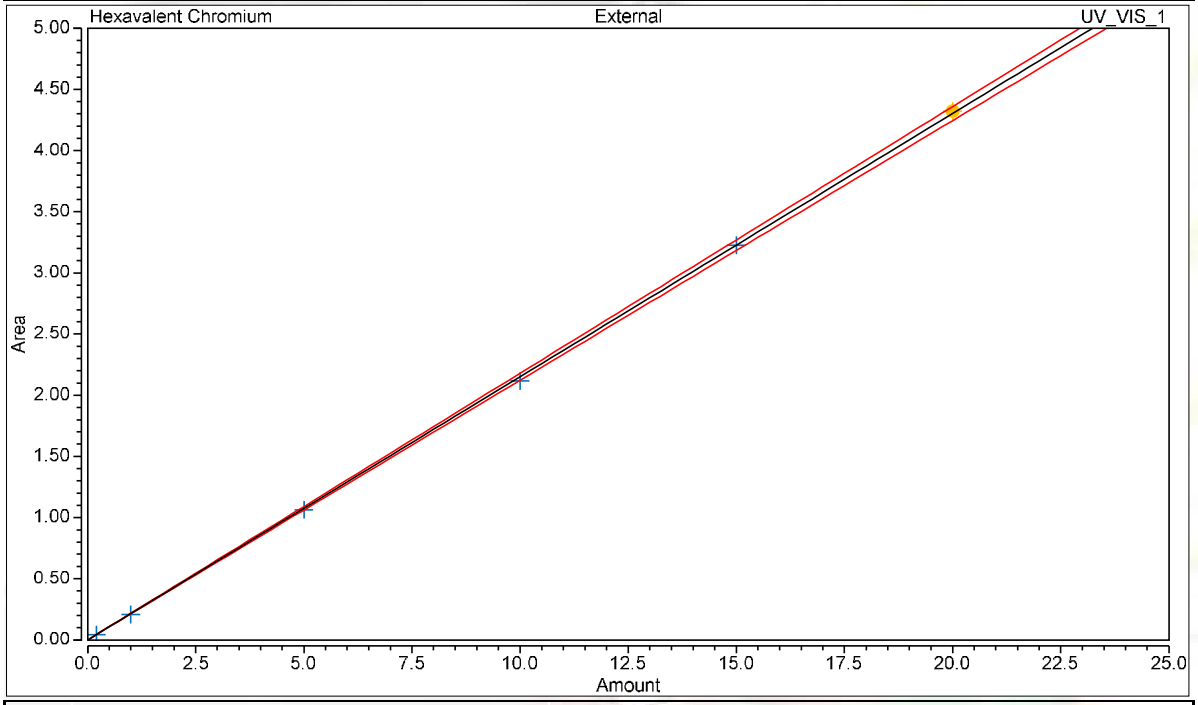
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	4.323	27.676	100.00	100.00	20.0959
Total:			**4.323**	**27.676**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2151
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99987

Calibration Plot — Hexavalent Chromium



Calibration Results — Hexavalent Chromium

No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0427	0.043	0.313
4	STD2-1.0 ppb	02	1.0000	0.2063	0.206	1.377
5	STD3-5.0 ppb	03	5.0000	1.0639	1.064	6.885
6	STD4-10.0 ppb	04	10.0000	2.1157	2.116	13.748
7	STD5-15.0 ppb	05	15.0000	3.2270	3.227	20.605
8	STD6-20.0 ppb	06	20.0000	4.3227	4.323	27.676

Reviewed by:

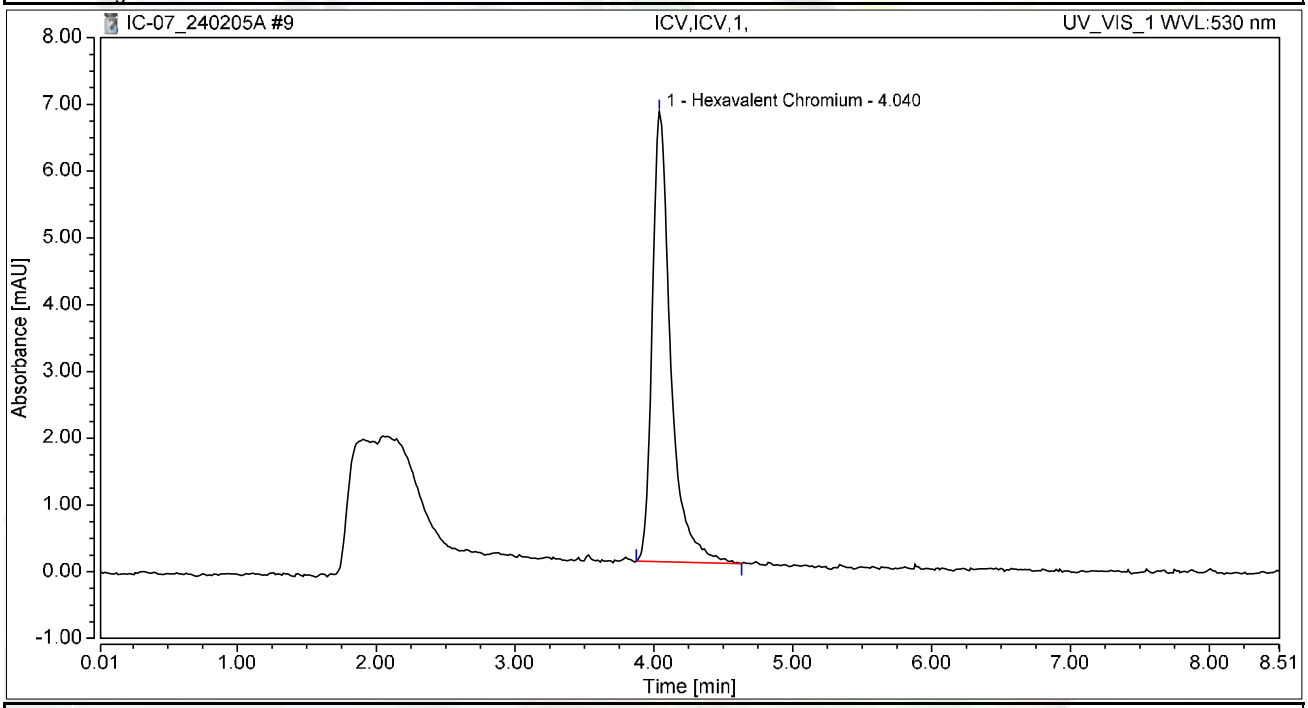
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

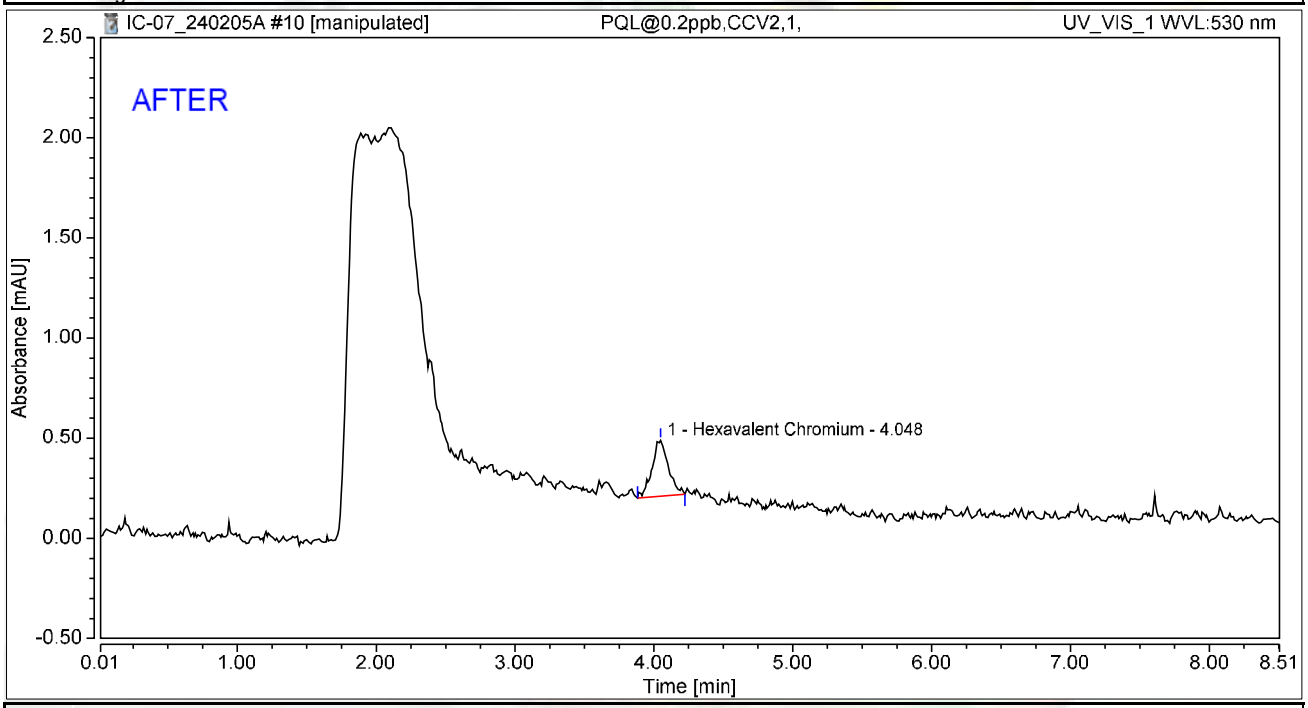
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.040	6.743	100.00	100.00	4.8342
Total:			**1.040**	**6.743**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.039	0.279	100.00	100.00	0.1802
Total:			**0.039**	**0.279**	**100.00**	**100.00**	

Reviewed by:

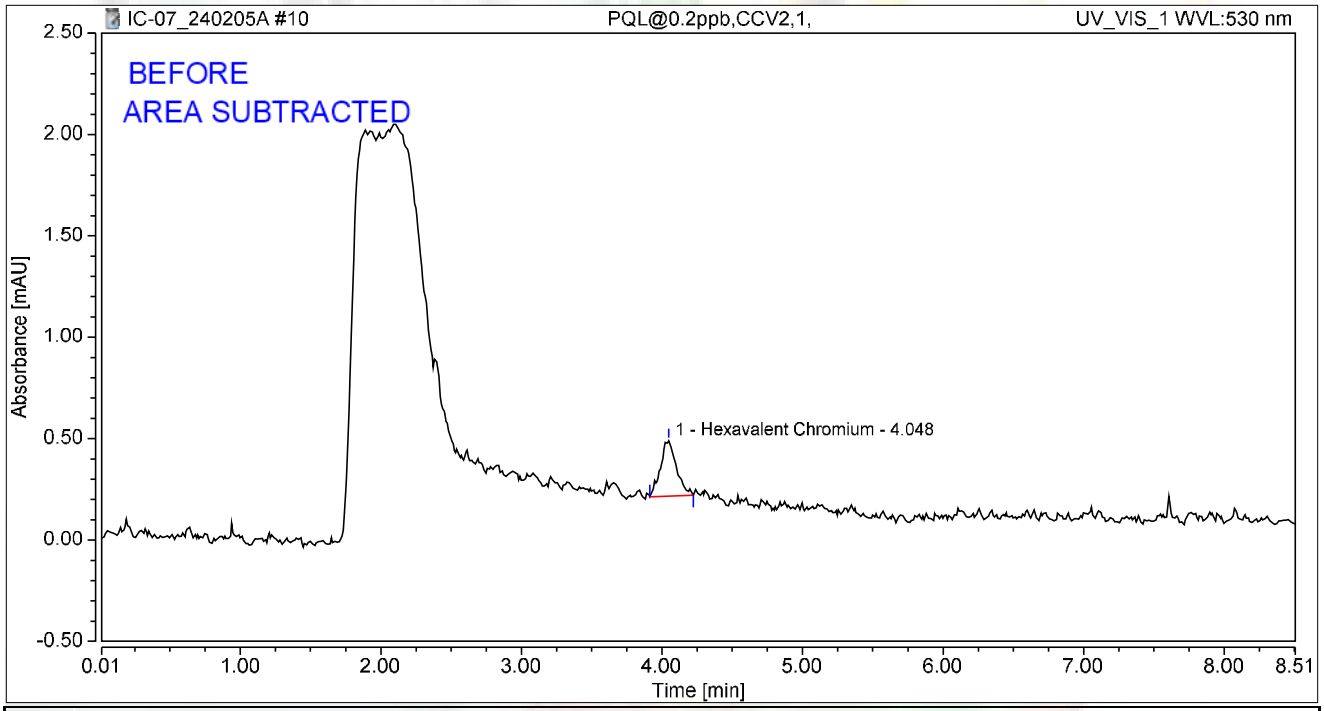
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

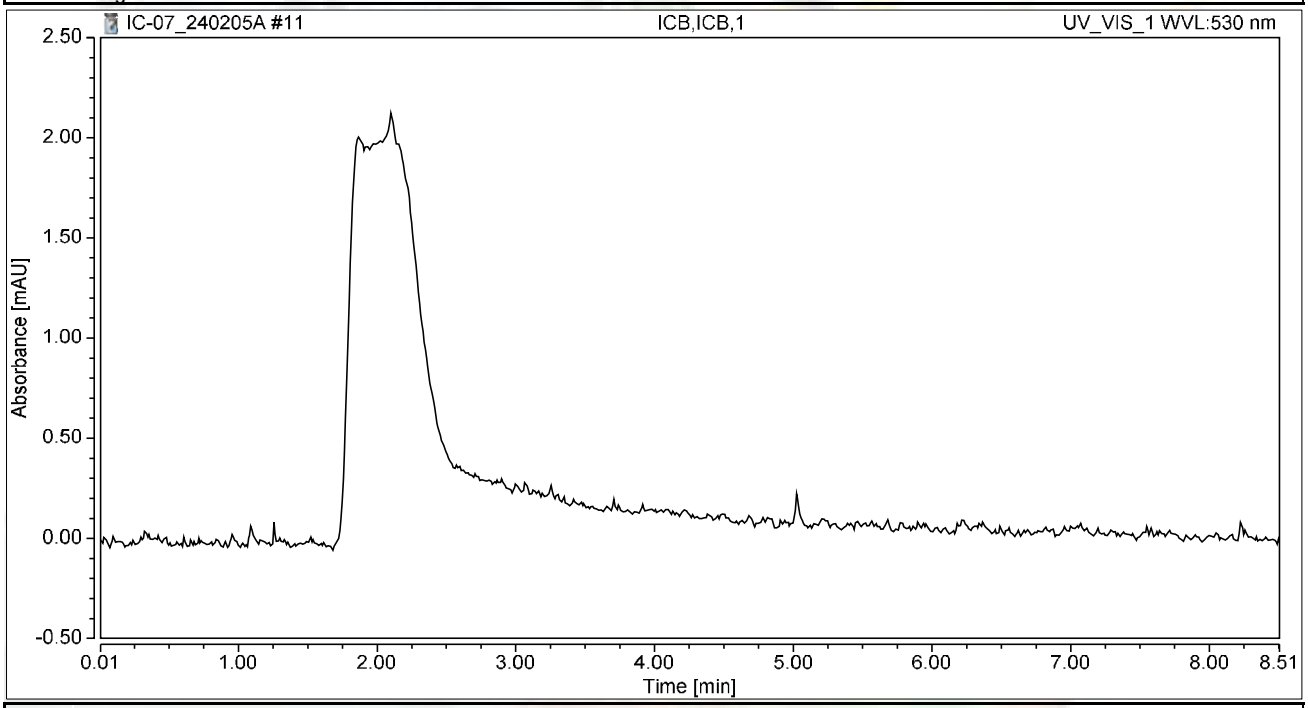
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.036	0.273	100.00	100.00	0.1694
Total:			**0.036**	**0.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

JRB 2/19/2024

RAW DATA

INJECTION LOG: 240209A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/09/24 8:58 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/09/24 9:14 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/09/24 9:23 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/09/24 9:33 AM	Reported
13	MB-R181381	MBLK	1	Hexavalent Chromium	02/09/24 9:42 AM	Reported
14	LCS-R181381	LCS	1	Hexavalent Chromium	02/09/24 9:51 AM	Reported
15	N062966-021A	SAMP	1	Hexavalent Chromium	02/09/24 10:04 AM	Reported
16	N062966-021AMS	MS	1	Hexavalent Chromium	02/09/24 10:14 AM	Reported
17	N063001-001A	SAMP	1	Hexavalent Chromium	02/09/24 10:48 AM	Reported
18	N063001-001AMS	MS	1	Hexavalent Chromium	02/09/24 10:58 AM	Reported
19	N063001-001AMSD	MSD	1	Hexavalent Chromium	02/09/24 11:07 AM	Reported
20	N063001-014A	SAMP	1	Hexavalent Chromium	02/09/24 11:17 AM	Reported
21	N063001-014AMS	MS	1	Hexavalent Chromium	02/09/24 11:26 AM	Not Reported
22	N063001-009A	SAMP	5	Hexavalent Chromium	02/09/24 11:36 AM	Not Reported
23	CCV-2	CCV	1	Hexavalent Chromium	02/09/24 11:44 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/09/24 11:54 AM	Reported
25	N063001-011A	SAMP	5	Hexavalent Chromium	02/09/24 12:03 PM	Reported
26	N063001-011AMS	MS	5	Hexavalent Chromium	02/09/24 12:13 PM	Reported
27	N063001-007A	SAMP	1	Hexavalent Chromium	02/09/24 12:22 PM	Reported
28	N063001-007AMS	MS	1	Hexavalent Chromium	02/09/24 12:32 PM	Reported
29	N063001-003A	SAMP	1	Hexavalent Chromium	02/09/24 12:41 PM	Not Reported
30	N063001-003AMS	MS	1	Hexavalent Chromium	02/09/24 12:51 PM	Not Reported
31	N063001-004A	SAMP	1	Hexavalent Chromium	02/09/24 1:00 PM	Not Reported
32	N063001-009A	SAMP	5	Hexavalent Chromium	02/09/24 1:13 PM	Reported
33	N063001-005A	SAMP	1	Hexavalent Chromium	02/09/24 1:24 PM	Reported
34	N063001-005AMS	MS	1	Hexavalent Chromium	02/09/24 1:33 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/09/24 1:43 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/09/24 1:52 PM	Reported
37	N063001-006A	SAMP	1	Hexavalent Chromium	02/09/24 2:02 PM	Reported
38	N063001-006AMS	MS	1	Hexavalent Chromium	02/09/24 2:11 PM	Reported
39	N063001-012A	SAMP	1	Hexavalent Chromium	02/09/24 2:21 PM	Reported
40	N063001-012AMS	MS	1	Hexavalent Chromium	02/09/24 2:30 PM	Reported
41	N063001-015A	SAMP	1	Hexavalent Chromium	02/09/24 2:40 PM	Reported
42	N063001-015AMS	MS	1	Hexavalent Chromium	02/09/24 2:49 PM	Reported

Reviewed by:

JRB 2/20/2024

dMocha 2/25/2024
for RBA

INJECTION LOG: 240209A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063001-016A	SAMP	1	Hexavalent Chromium	02/09/24 2:58 PM	Reported
44	N063001-016AMS	MS	1	Hexavalent Chromium	02/09/24 3:08 PM	Reported
45	N063001-017A	SAMP	1	Hexavalent Chromium	02/09/24 3:17 PM	Reported
46	N063001-017AMS	MS	1	Hexavalent Chromium	02/09/24 3:27 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/09/24 3:36 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/09/24 3:46 PM	Reported
49	N063001-018A	SAMP	1	Hexavalent Chromium	02/09/24 3:55 PM	Reported
50	N063001-018AMS	MS	1	Hexavalent Chromium	02/09/24 4:05 PM	Reported
51	N063001-002A	SAMP	1	Hexavalent Chromium	02/09/24 4:14 PM	Reported
52	N063001-002AMS	MS	1	Hexavalent Chromium	02/09/24 4:23 PM	Reported
53	N063001-013A	SAMP	1	Hexavalent Chromium	02/09/24 4:33 PM	Reported
54	N063001-013AMS	MS	1	Hexavalent Chromium	02/09/24 4:42 PM	Reported
55	N063001-019A	SAMP	1	Hexavalent Chromium	02/09/24 4:52 PM	Reported
56	N063001-019AMS	MS	1	Hexavalent Chromium	02/09/24 5:01 PM	Reported
57	N063001-010A	SAMP	5	Hexavalent Chromium	02/09/24 5:11 PM	Reported
58	N063001-010AMS	MS	5	Hexavalent Chromium	02/09/24 5:20 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/09/24 5:30 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/09/24 5:39 PM	Reported
61	N063001-009AMS	MS	5	Hexavalent Chromium	02/09/24 5:49 PM	Reported
62	N063001-008A	SAMP	1	Hexavalent Chromium	02/09/24 5:58 PM	Reported
63	N063001-008AMS	MS	1	Hexavalent Chromium	02/09/24 6:08 PM	Reported
64	N063001-008ADUP	DUP	1	Hexavalent Chromium	02/09/24 6:17 PM	Reported
65	N063001-008AMSD	MSD	1	Hexavalent Chromium	02/09/24 6:26 PM	Not Reported
66	N063001-004AMS	MS	1	Hexavalent Chromium	02/09/24 6:36 PM	Not Reported
67	N063001-014AMS	MS	1	Hexavalent Chromium	02/09/24 6:45 PM	Reported
68	CCV-6	CCV1	1	Hexavalent Chromium	02/09/24 6:55 PM	Reported
69	CCB-6	CCB	1	Hexavalent Chromium	02/09/24 7:04 PM	Reported
70	BLANK	BLANK	1	Hexavalent Chromium	02/09/24 7:14 PM	Not Reported

dMocha 2/25/2024
for RBA

Injection Log Summary

Sequence Details

Name:	**IC-07_240209A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**10/Feb/24 12:03:51**
No. of Injections:	**73**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/09/2024 08:58	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/09/2024 09:14	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/09/2024 09:23	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/09/2024 09:33	Finished	CCB R240103B
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/09/2024 09:42	Finished	MB R240103B
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/09/2024 09:51	Finished	LCS @5ppb, IWST-231228B
15	N062966-021A,SAMF	1	1000	Unknown		02/09/2024 10:04	Finished	SAMP,10 mL
16	N062966-021AMS,MS	2	1000	Unknown		02/09/2024 10:14	Finished	MS (1ppb), IWST-231228B,10r
17	N063001-001A,SAMF	2	1000	Unknown		02/09/2024 10:48	Finished	SAMP,10 mL
18	N063001-001AMS,MS	3	1000	Unknown		02/09/2024 10:58	Finished	MS (1ppb), IWST-231228B,10r
19	N063001-001AMSD,M	4	1000	Unknown		02/09/2024 11:07	Finished	MSD (1ppb), IWST-231228B,1(
20	N063001-014A,SAMF	5	1000	Unknown		02/09/2024 11:17	Finished	SAMP,10 mL
21	N063001-014AMS,MS	6	1000	Unknown		02/09/2024 11:26	Finished	MS (5ppb), IWST-231228B,10r
22	N063001-009A,SAMF	7	1000	Unknown		02/09/2024 11:36	Finished	SAMP,2>10 mL
23	CCV-2,CCV,1,	8	1000	Unknown		02/09/2024 11:44	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	9	1000	Unknown		02/09/2024 11:54	Finished	CCB R240103B
25	N063001-011A,SAMF	10	1000	Unknown		02/09/2024 12:03	Finished	SAMP,2>10 mL
26	N063001-011AMS,MS	11	1000	Unknown		02/09/2024 12:13	Finished	MS (5ppb), IWST-231228B,2>1
27	N063001-007A,SAMF	12	1000	Unknown		02/09/2024 12:22	Finished	SAMP,10 mL
28	N063001-007AMS,MS	13	1000	Unknown		02/09/2024 12:32	Finished	MS (1ppb), IWST-231228B,10r
29	N063001-003A,SAMF	14	1000	Unknown		02/09/2024 12:41	Finished	MS (5ppb), IWST-231228B,10r
30	N063001-003AMS,MS	15	1000	Unknown		02/09/2024 12:51	Finished	SAMP,2>10 mL
31	N063001-004A,SAMF	16	1000	Unknown		02/09/2024 13:00	Finished	MS (5ppb), IWST-231228B,2>1
32	N063001-009A,SAMF	1	1000	Unknown		02/09/2024 13:13	Finished	SAMP,2>10 mL
33	N063001-005A,SAMF	2	1000	Unknown		02/09/2024 13:24	Finished	MS (5ppb), IWST-231228B,2>1
34	N063001-005AMS,MS	3	1000	Unknown		02/09/2024 13:33	Finished	SAMP,2>10 mL
35	CCV-3,CCV,1,	4	1000	Unknown		02/09/2024 13:43	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	5	1000	Unknown		02/09/2024 13:52	Finished	CCB R240103B
37	N063001-006A,SAMF	6	1000	Unknown		02/09/2024 14:02	Finished	SAMP,10 mL
38	N063001-006AMS,MS	7	1000	Unknown		02/09/2024 14:11	Finished	MS (1ppb), IWST-231228B,10r
39	N063001-012A,SAMF	8	1000	Unknown		02/09/2024 14:21	Finished	SAMP,10 mL
40	N063001-012AMS,MS	9	1000	Unknown		02/09/2024 14:30	Finished	MS (1ppb), IWST-231228B,10r
41	N063001-015A,SAMF	10	1000	Unknown		02/09/2024 14:40	Finished	SAMP,10 mL
42	N063001-015AMS,MS	11	1000	Unknown		02/09/2024 14:49	Finished	MS (1ppb), IWST-231228B,10r
43	N063001-016A,SAMF	12	1000	Unknown		02/09/2024 14:58	Finished	SAMP,10 mL
44	N063001-016AMS,MS	13	1000	Unknown		02/09/2024 15:08	Finished	MS (1ppb), IWST-231228B,10r
45	N063001-017A,SAMF	14	1000	Unknown		02/09/2024 15:17	Finished	SAMP,10 mL
46	N063001-017AMS,MS	15	1000	Unknown		02/09/2024 15:27	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	16	1000	Unknown		02/09/2024 15:36	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	17	1000	Unknown		02/09/2024 15:46	Finished	CCB R240103B
49	N063001-018A,SAMF	18	1000	Unknown		02/09/2024 15:55	Finished	SAMP,10 mL
50	N063001-018AMS,MS	19	1000	Unknown		02/09/2024 16:05	Finished	MS (1ppb), IWST-231228B,10r
51	N063001-002A,SAMF	20	1000	Unknown		02/09/2024 16:14	Finished	SAMP,10 mL
52	N063001-002AMS,MS	21	1000	Unknown		02/09/2024 16:23	Finished	MS (1ppb), IWST-231228B,10r
53	N063001-013A,SAMF	22	1000	Unknown		02/09/2024 16:33	Finished	SAMP,10 mL
54	N063001-013AMS,MS	23	1000	Unknown		02/09/2024 16:42	Finished	MS (1ppb), IWST-231228B,10r
55	N063001-019A,SAMF	24	1000	Unknown		02/09/2024 16:52	Finished	SAMP,10 mL
56	N063001-019AMS,MS	25	1000	Unknown		02/09/2024 17:01	Finished	MS (1ppb), IWST-231228B,10r
57	N063001-010A,SAMF	26	1000	Unknown		02/09/2024 17:11	Finished	SAMP,2>10 mL
58	N063001-010AMS,MS	27	1000	Unknown		02/09/2024 17:20	Finished	MS (5ppb), IWST-231228B,2>1
59	CCV-5,CCV,1,	28	1000	Unknown		02/09/2024 17:30	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	29	1000	Unknown		02/09/2024 17:39	Finished	CCB R240103B

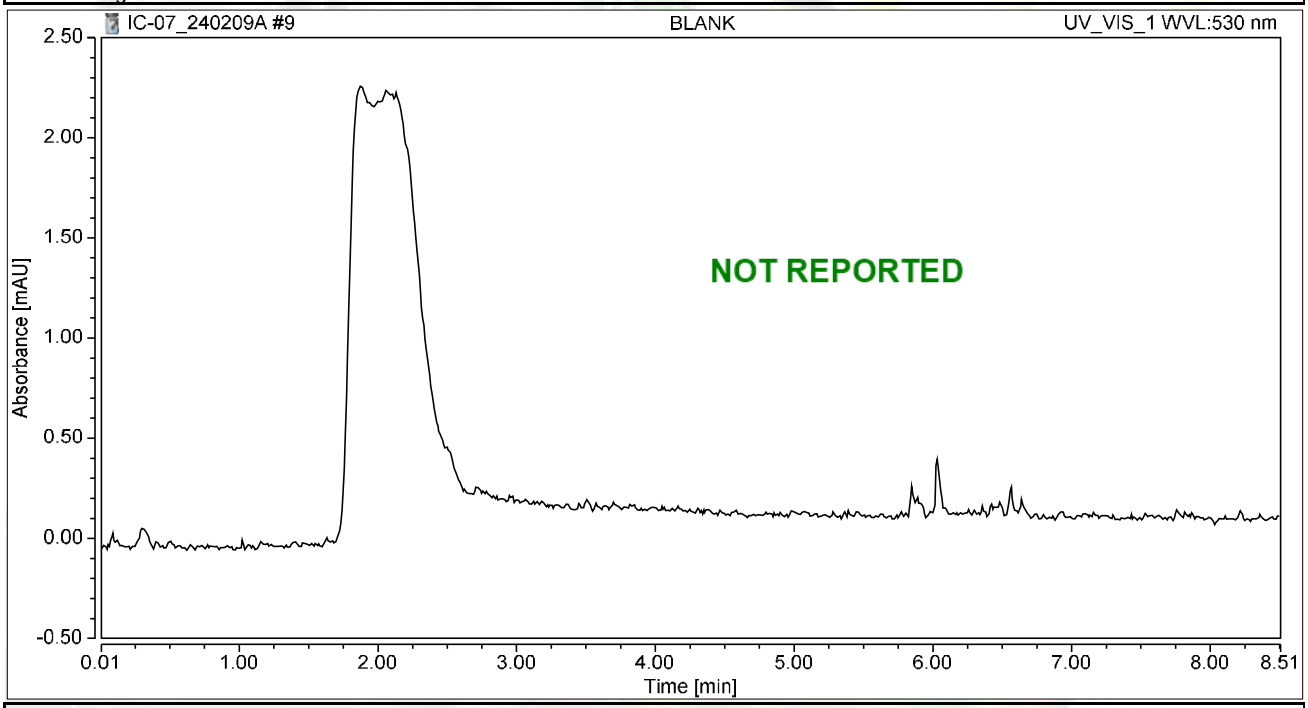
61	N063001-009AMS,MS	30	1000	Unknown		02/09/2024 17:49	Finished	MS (5ppb), IWST-231228B,2>1
62	N063001-008A,SAMP	31	1000	Unknown		02/09/2024 17:58	Finished	SAMP,10 mL
63	N063001-008AMS,MS	32	1000	Unknown		02/09/2024 18:08	Finished	MS (1ppb), IWST-231228B,10r
64	N063001-008ADUP,D	33	1000	Unknown		02/09/2024 18:17	Finished	DUP,10 mL
65	N063001-008AMSD,M	34	1000	Unknown		02/09/2024 18:26	Finished	MSD (1ppb), IWST-231228B,1(
66	N063001-004AMS,MS	35	1000	Unknown		02/09/2024 18:36	Finished	SAMP,2>10 mL
67	N063001-014AMS,MS	36	1000	Unknown		02/09/2024 18:45	Finished	MS (1ppb), IWST-231228B,10r
68	CCV-6,CCV1,1,	37	1000	Unknown		02/09/2024 18:55	Finished	CCV @10ppb, IWST-231228A
69	CCB-6,CCB,1,	38	1000	Unknown		02/09/2024 19:04	Finished	CCB R240103B
70	BLANK	39	1000	Unknown		02/09/2024 19:14	Finished	BLANK
71	SHUTDOWN	40	1000	Unknown		02/09/2024 19:23	Finished	
72	Eluent: R240205A	41	1000	Unknown		n.a.	Finished	
73	PCR: R240205B	42	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 08:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

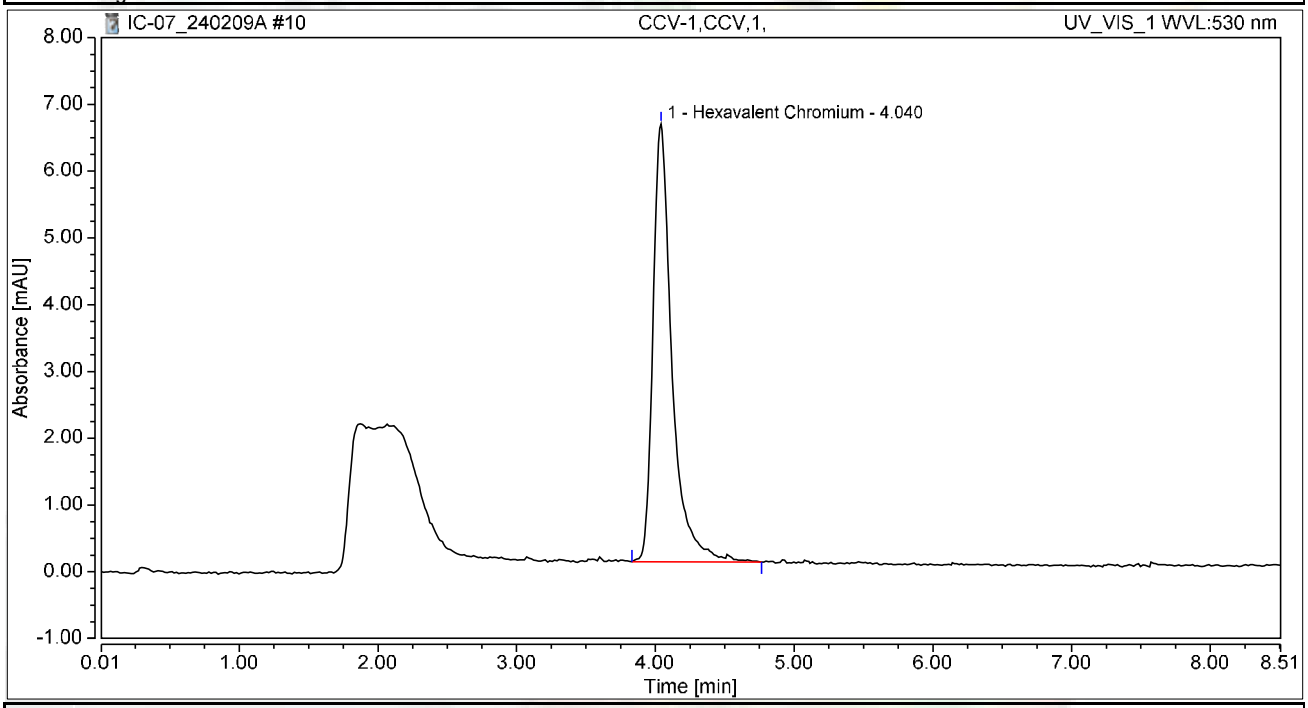
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 09:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.043	6.561	100.00	100.00	4.8483
Total:			**1.043**	**6.561**	**100.00**	**100.00**	

Reviewed by:

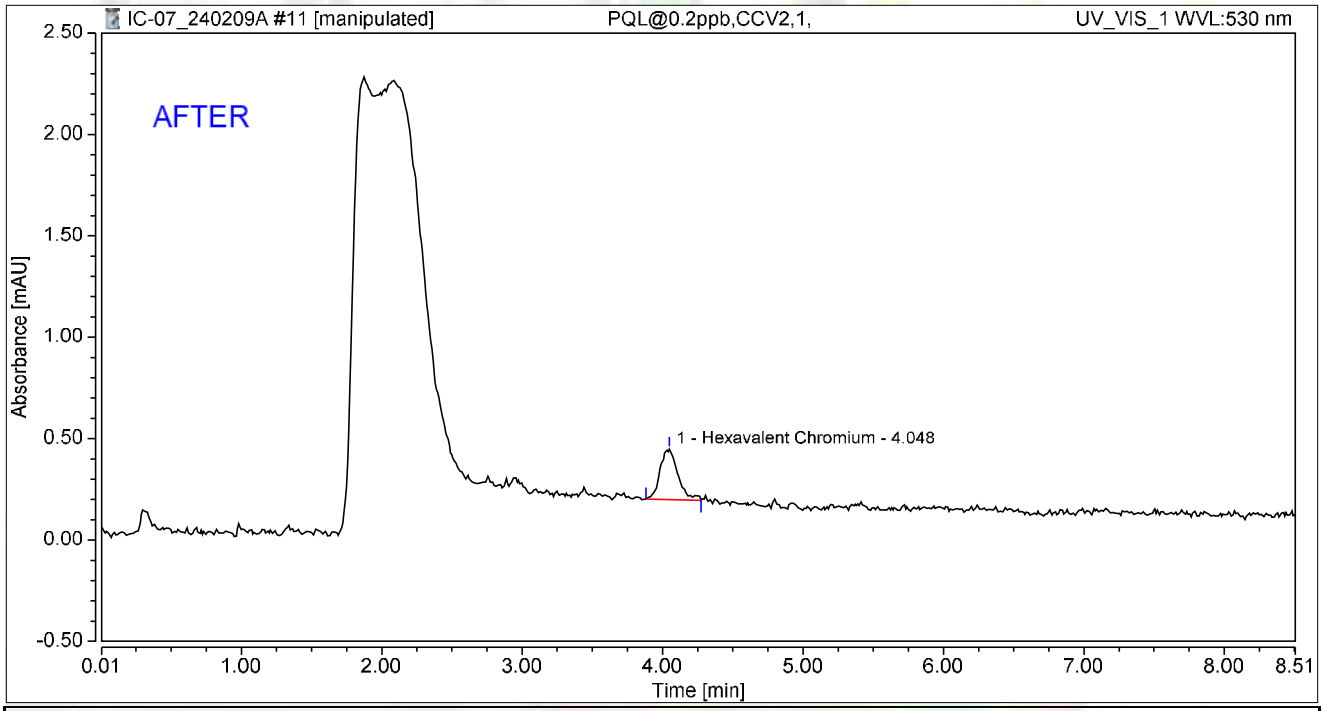
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 09:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

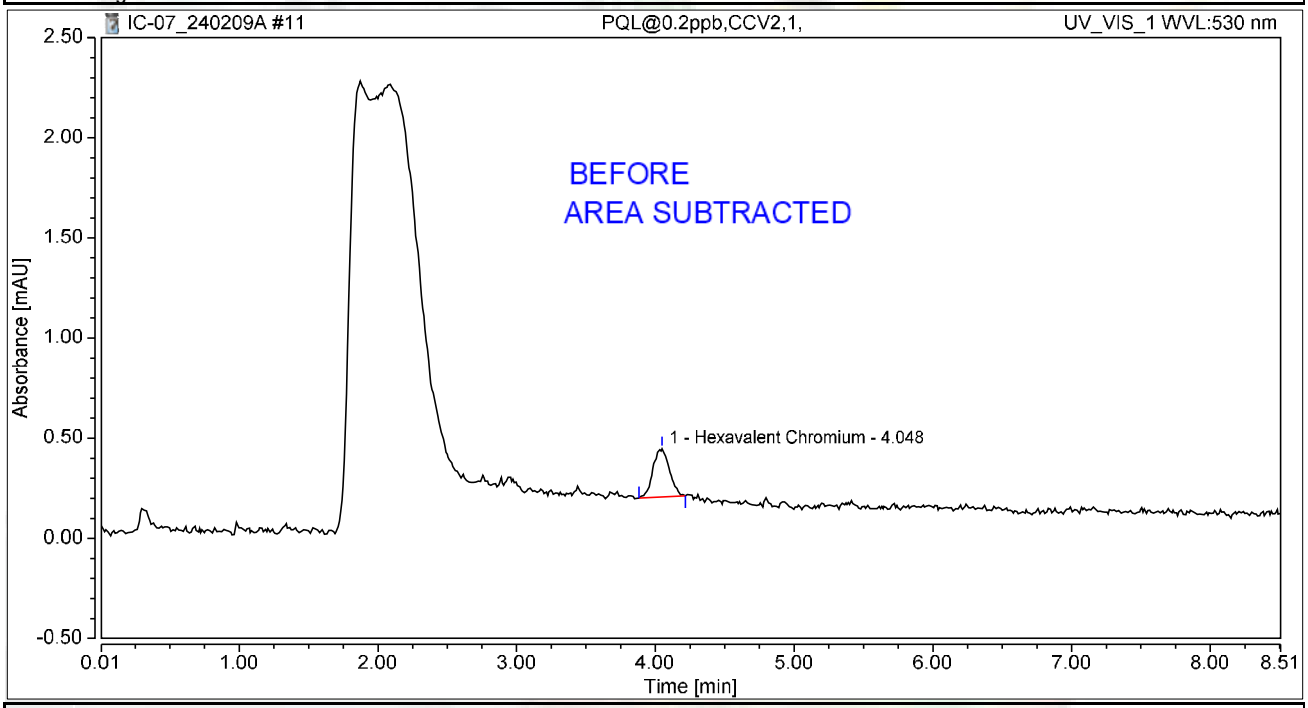
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.037	0.250	100.00	100.00	0.1731
Total:			**0.037**	**0.250**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 09:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

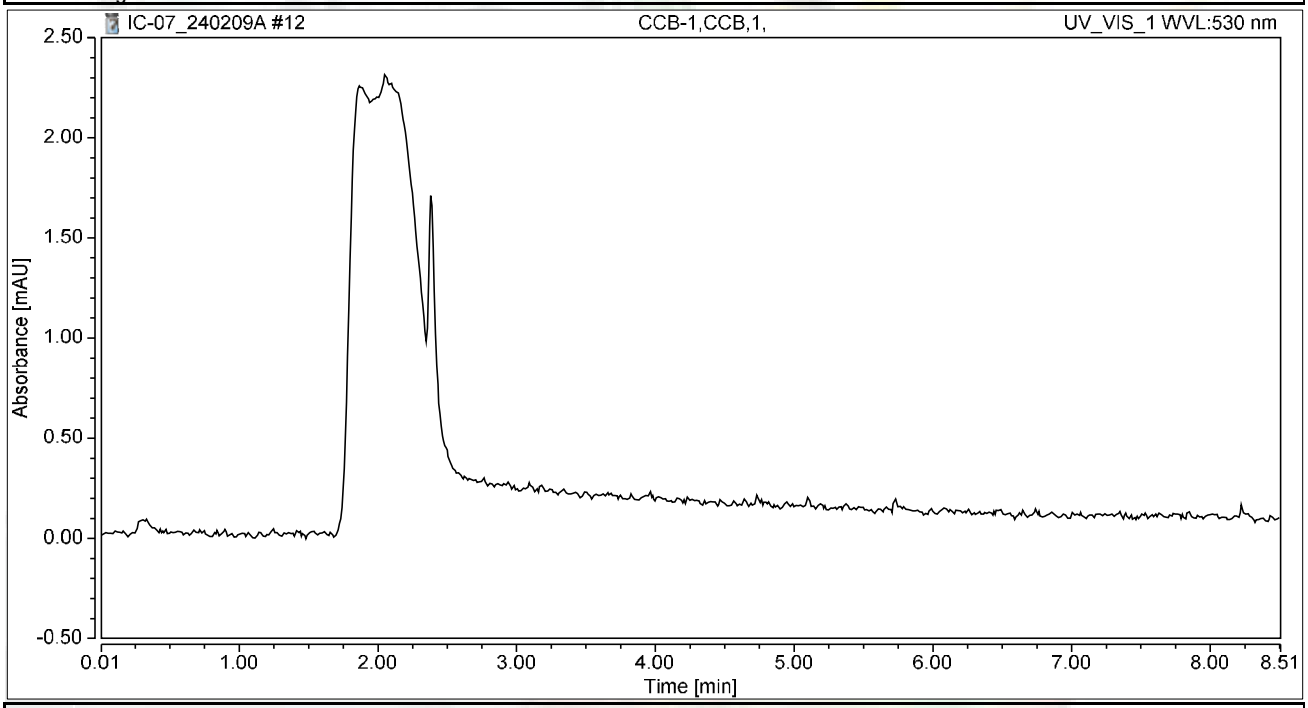
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.033	0.242	100.00	100.00	0.1549
Total:			**0.033**	**0.242**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 09:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

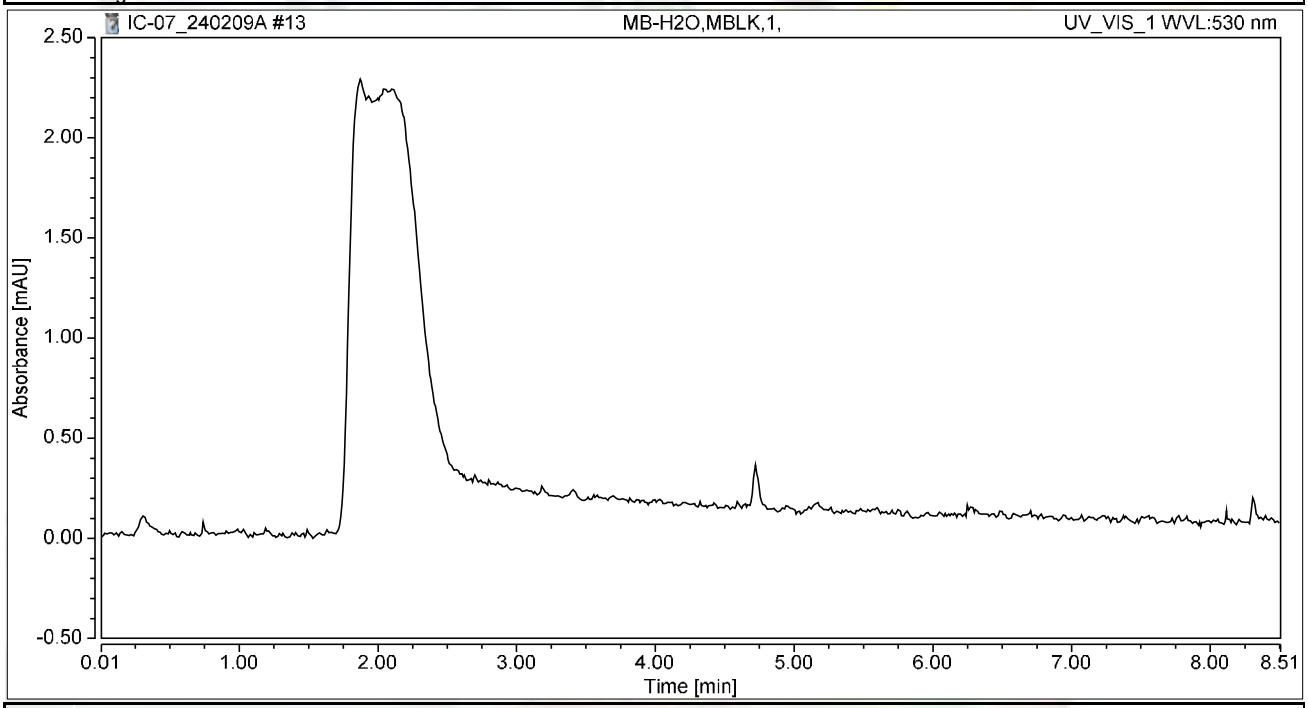
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 09:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

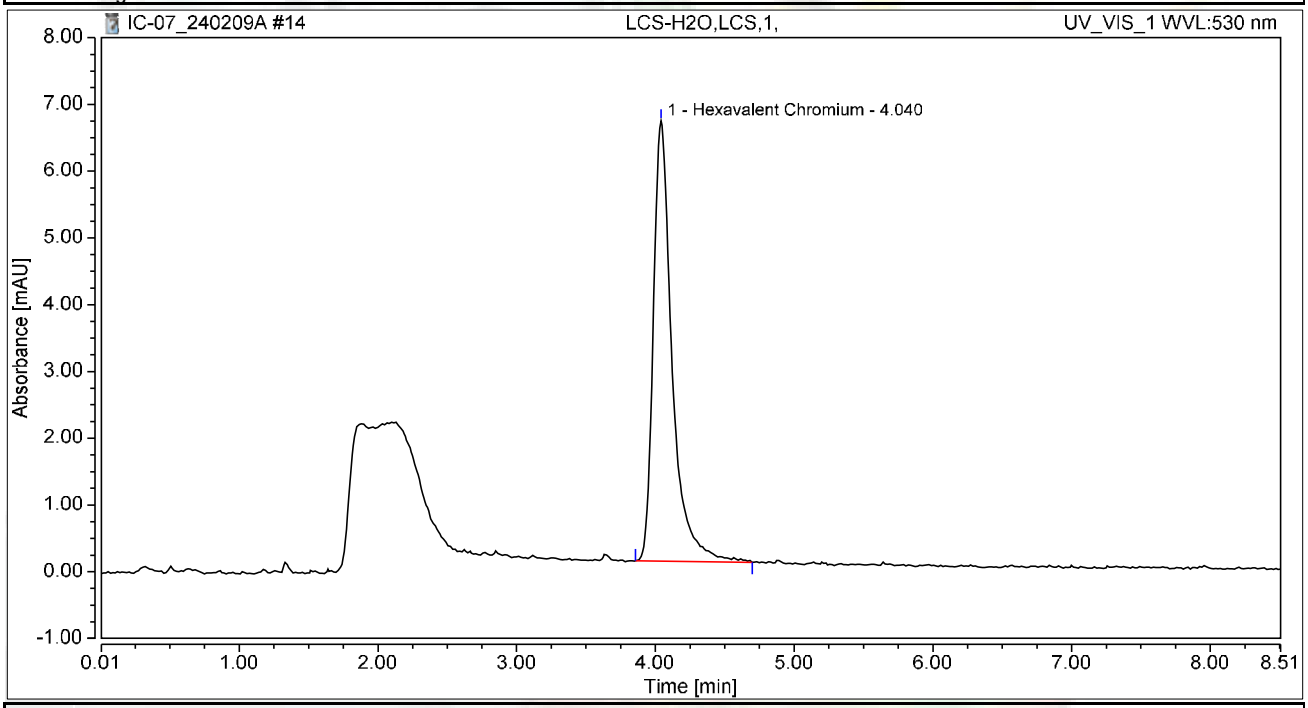
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 09:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

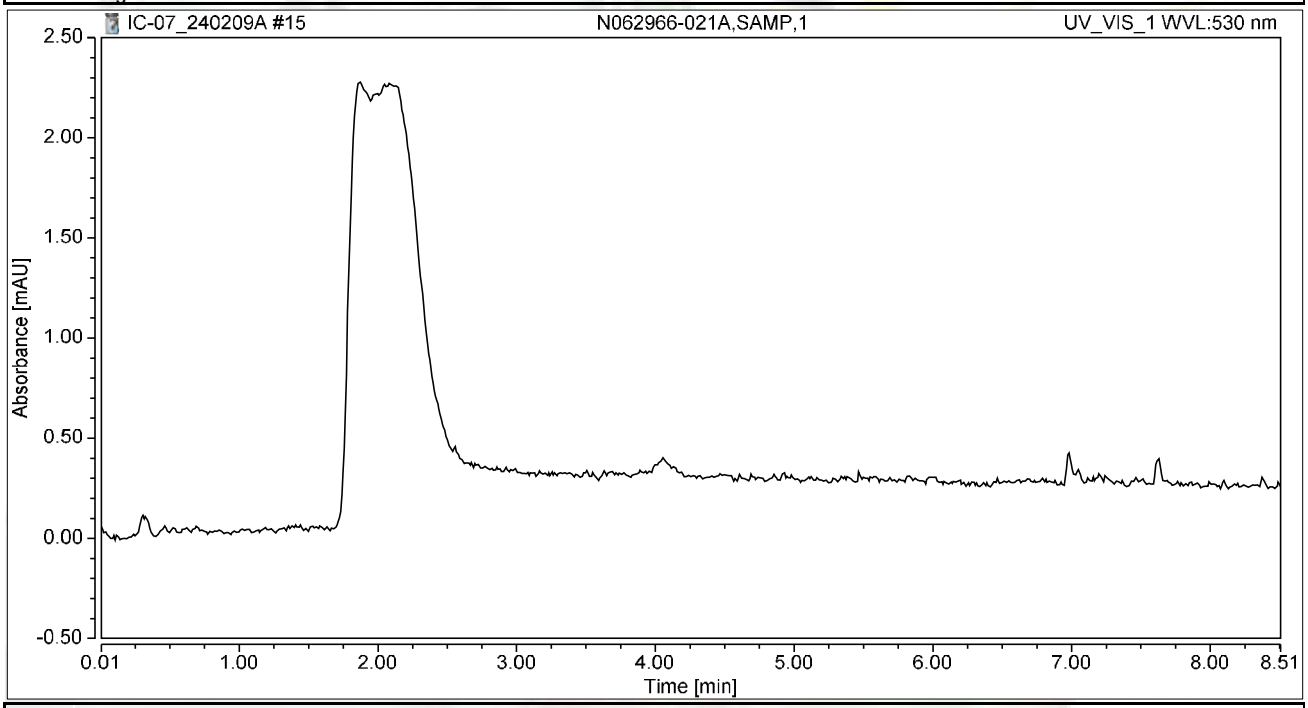
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.034	6.595	100.00	100.00	4.8090
Total:			**1.034**	**6.595**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062966-021A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 10:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

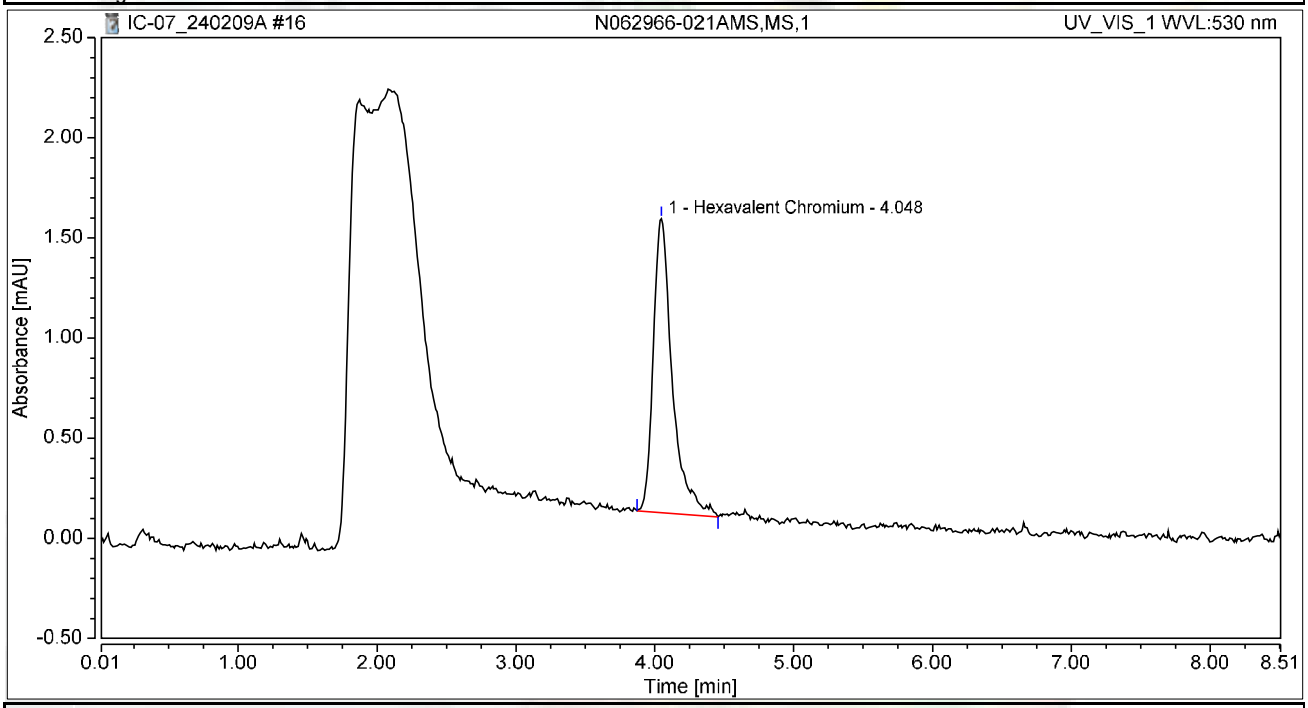
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062966-021AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 10:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

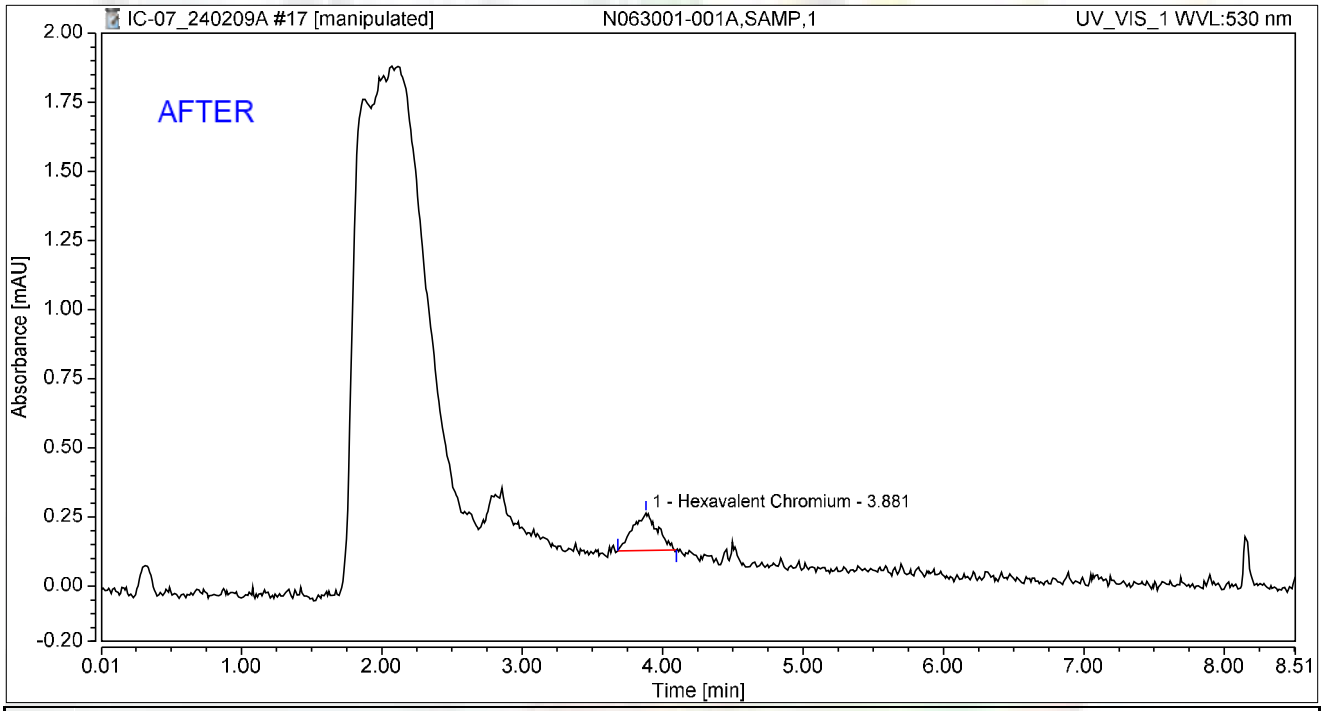
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.233	1.469	100.00	100.00	1.0842
Total:			**0.233**	**1.469**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 10:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.881	0.027	0.136	100.00	100.00	0.1277
Total:			**0.027**	**0.136**	**100.00**	**100.00**	

Reviewed by:

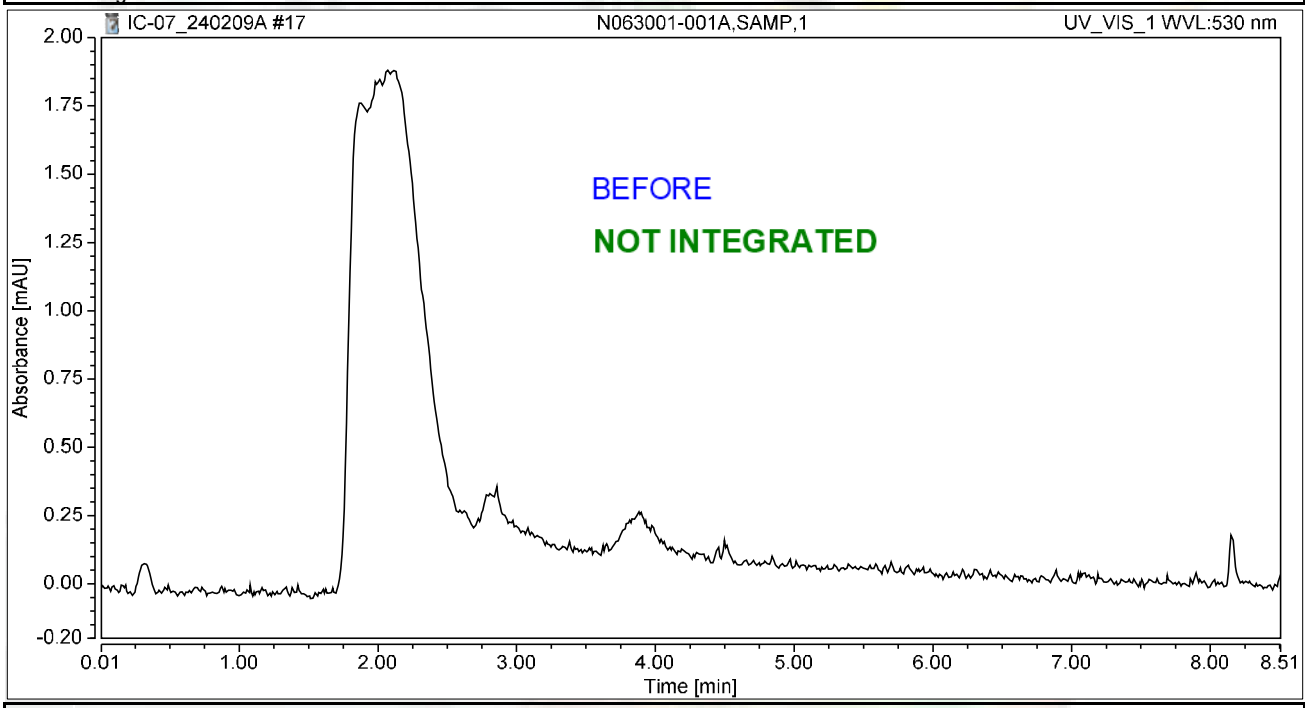
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063001-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 10:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

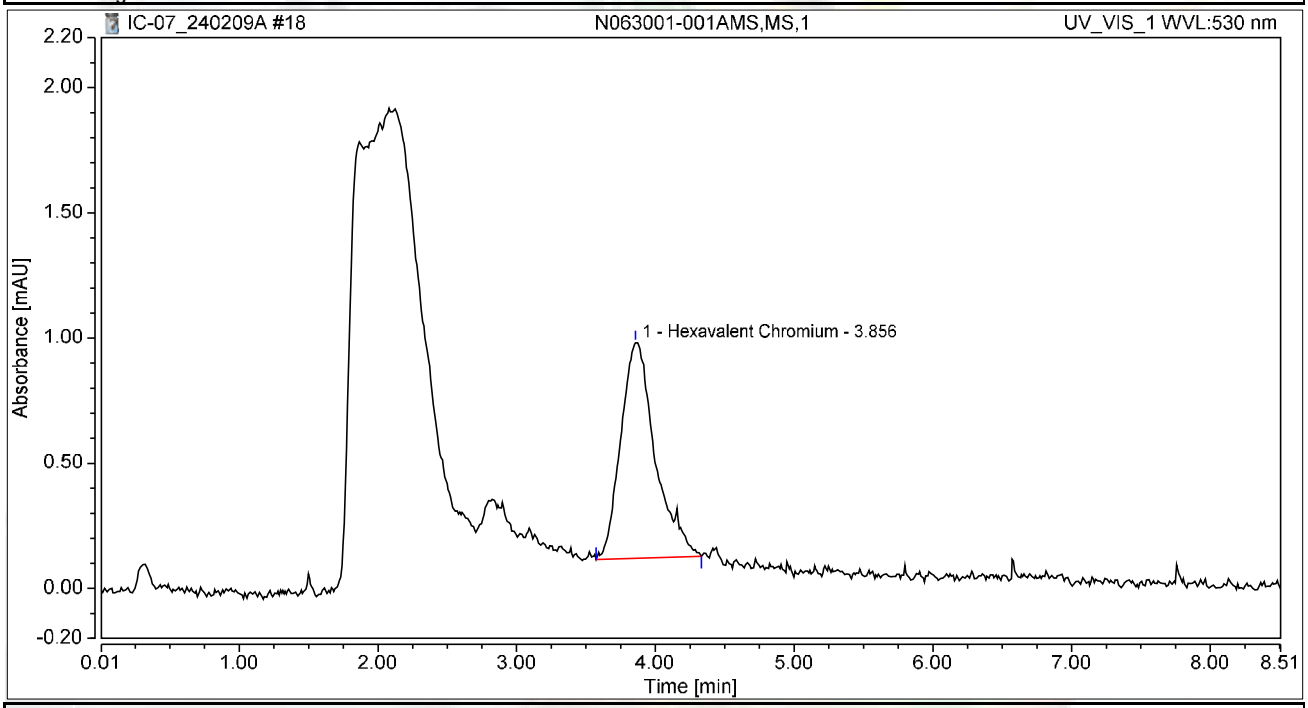
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 10:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

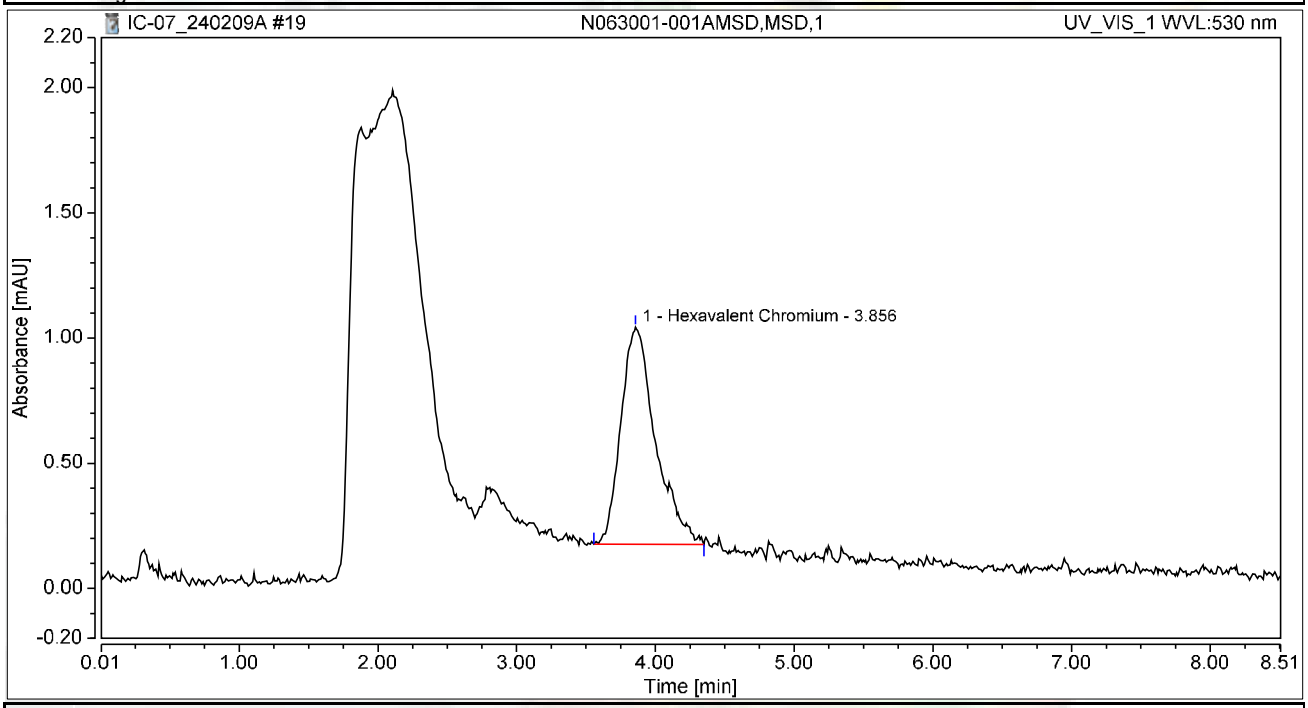
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.248	0.861	100.00	100.00	1.1526
Total:			**0.248**	**0.861**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-001AMSD,MSD,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 11:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

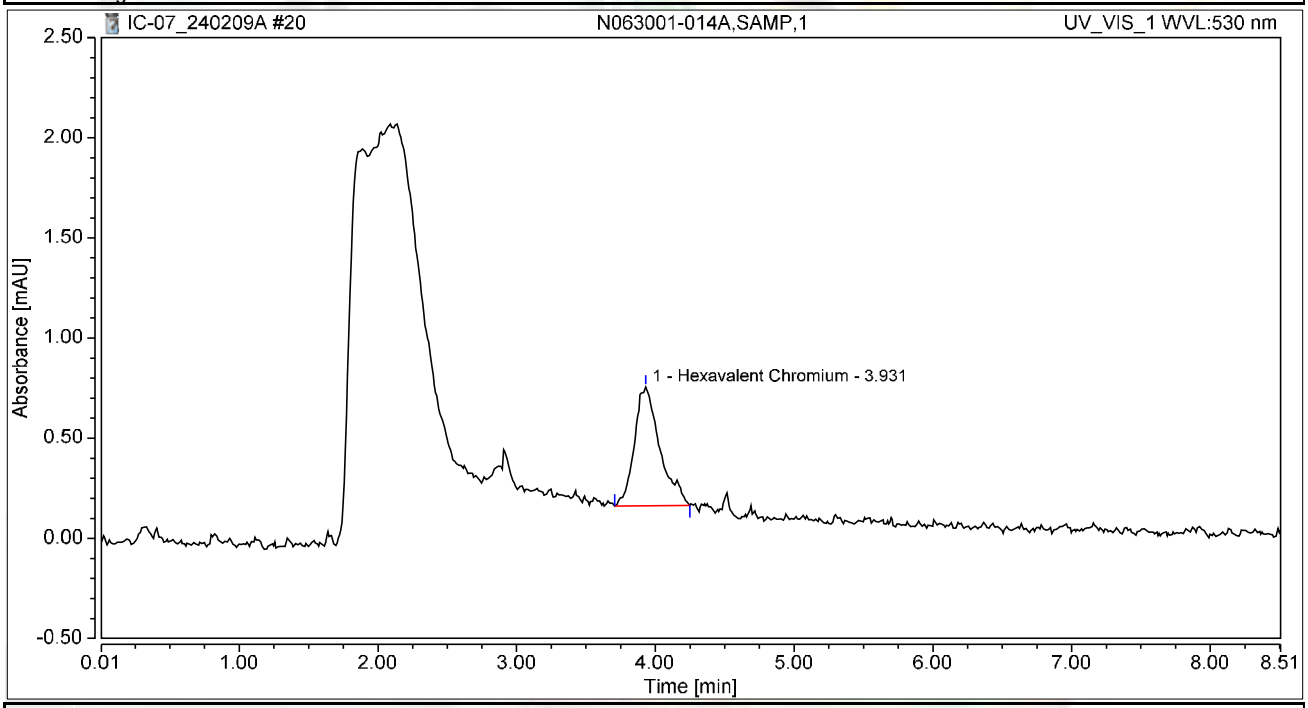
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.251	0.867	100.00	100.00	1.1660
Total:			**0.251**	**0.867**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-014A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 11:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

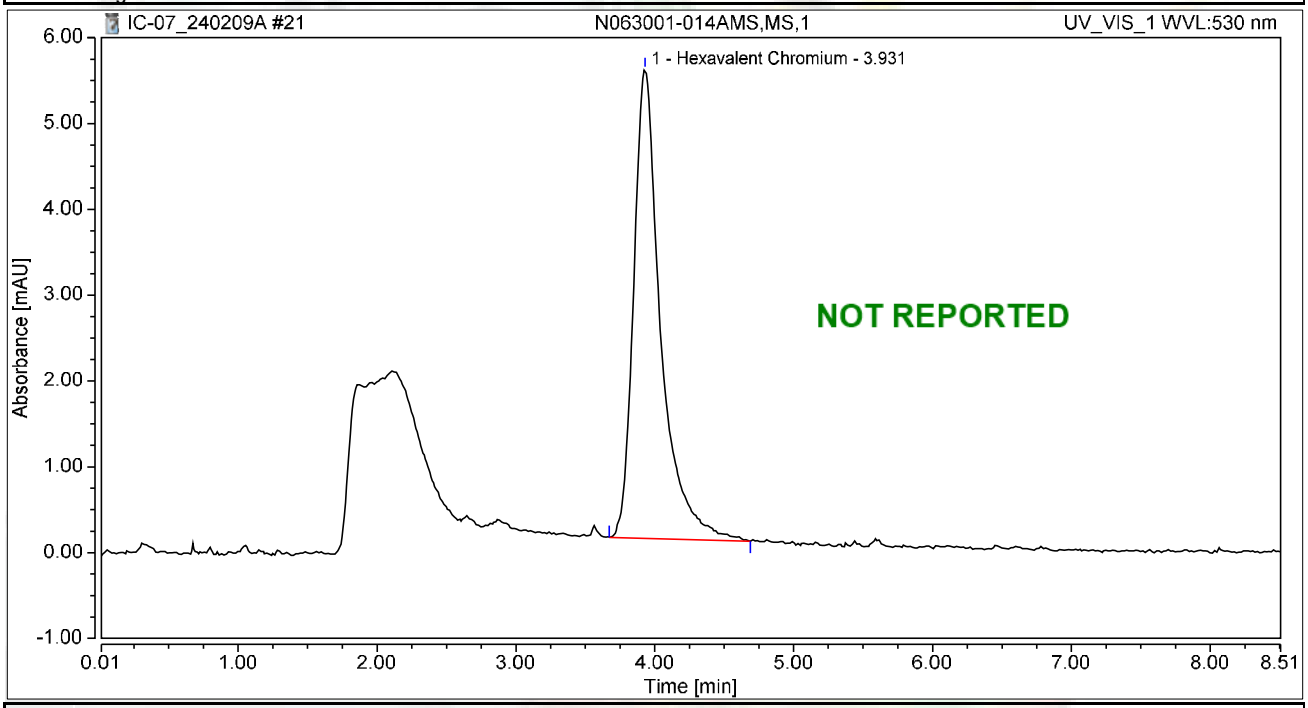
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.931	0.127	0.594	100.00	100.00	0.5899
Total:			**0.127**	**0.594**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-014AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 11:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

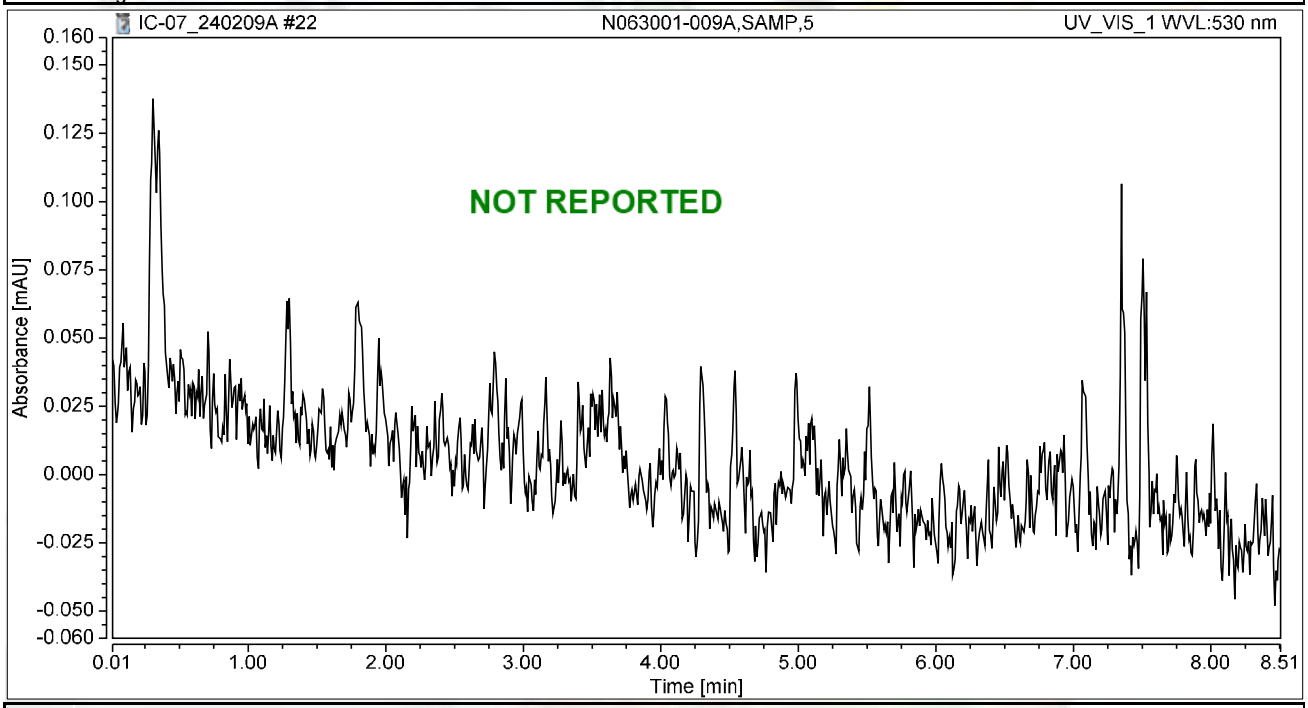
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.931	1.233	5.464	100.00	100.00	5.7327
Total:			**1.233**	**5.464**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-009A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 11:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

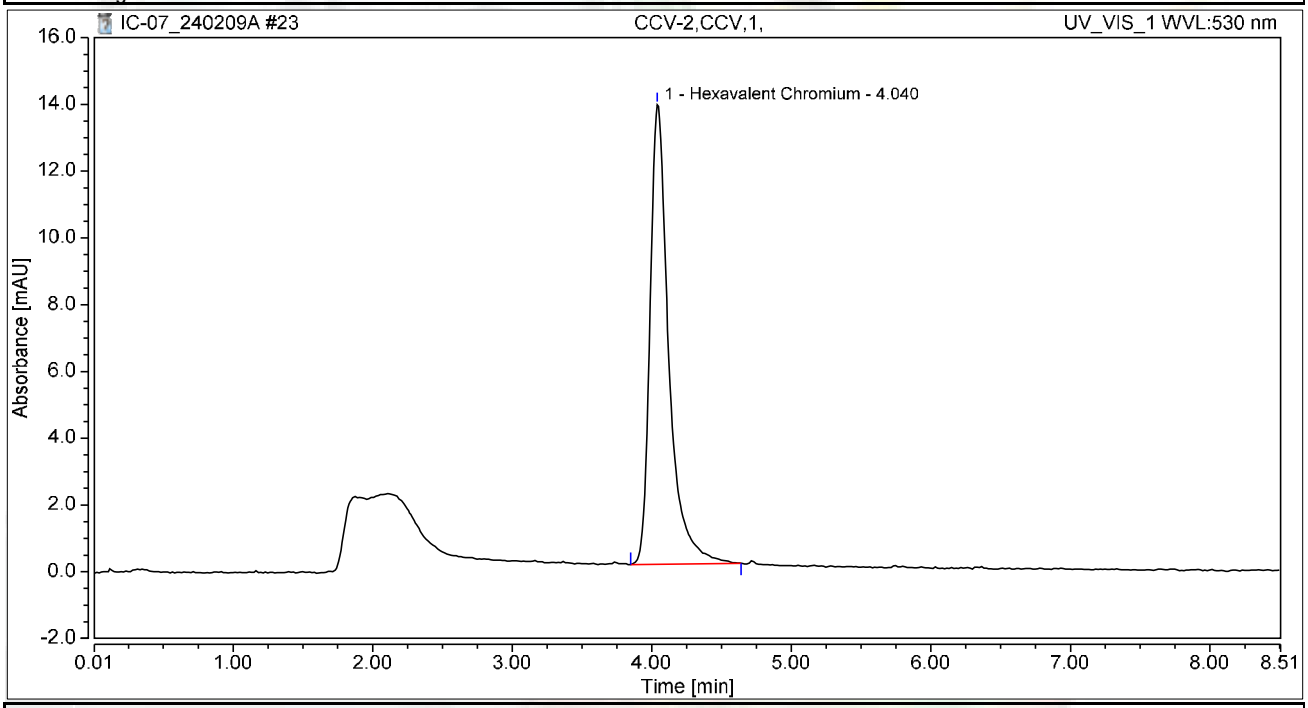
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 11:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

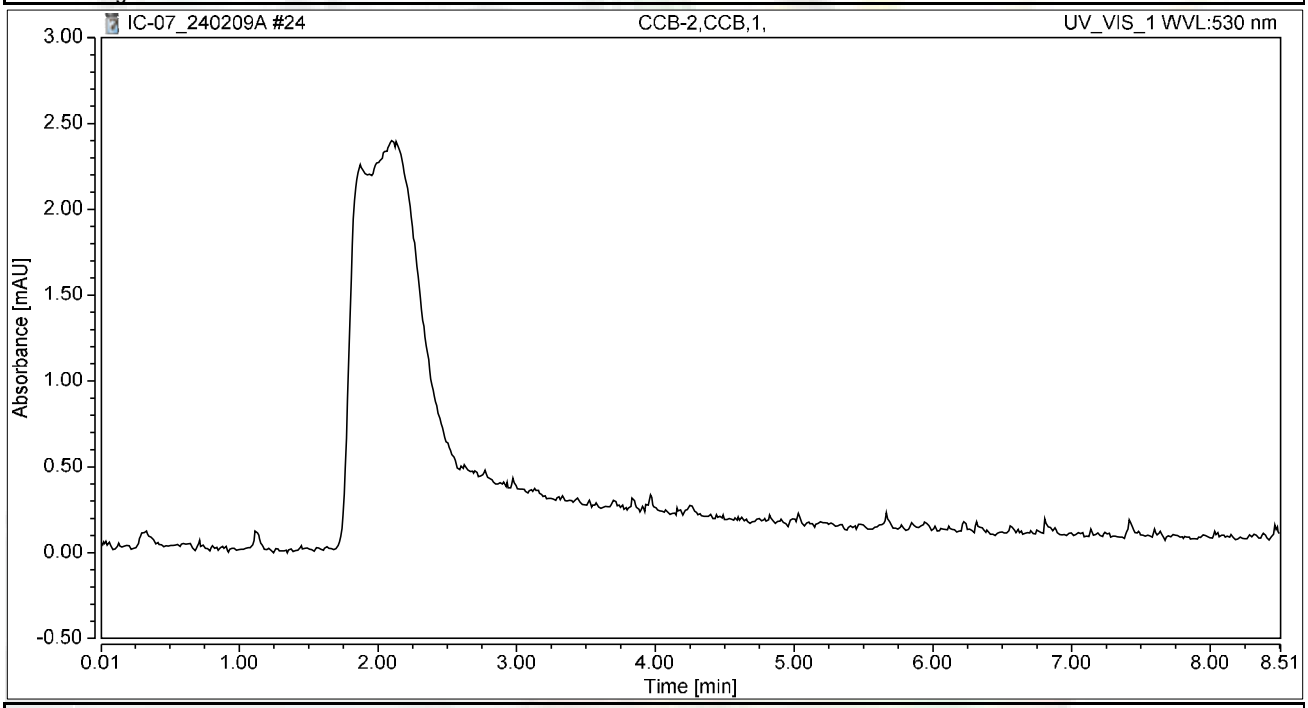
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.149	13.763	100.00	100.00	9.9902
Total:			**2.149**	**13.763**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 11:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

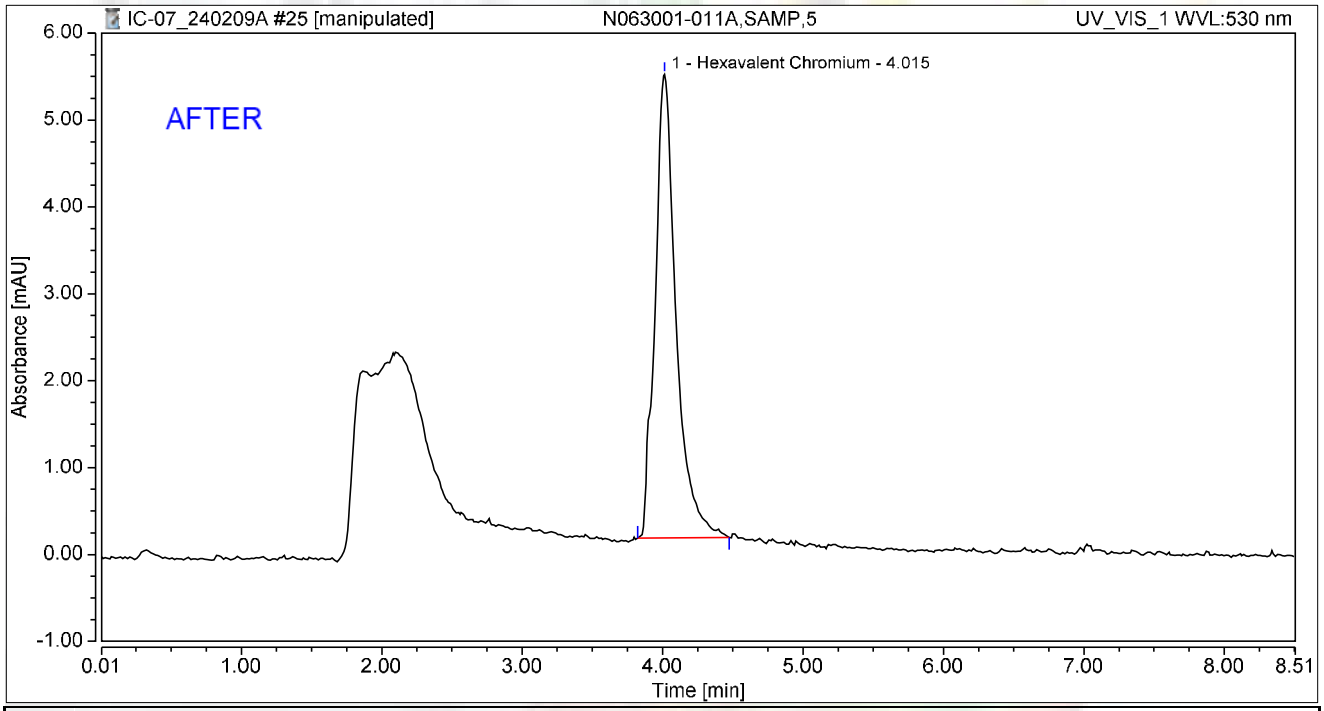
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-011A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 12:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.925	5.334	100.00	100.00	4.2994
Total:			**0.925**	**5.334**	**100.00**	**100.00**	

Reviewed by:

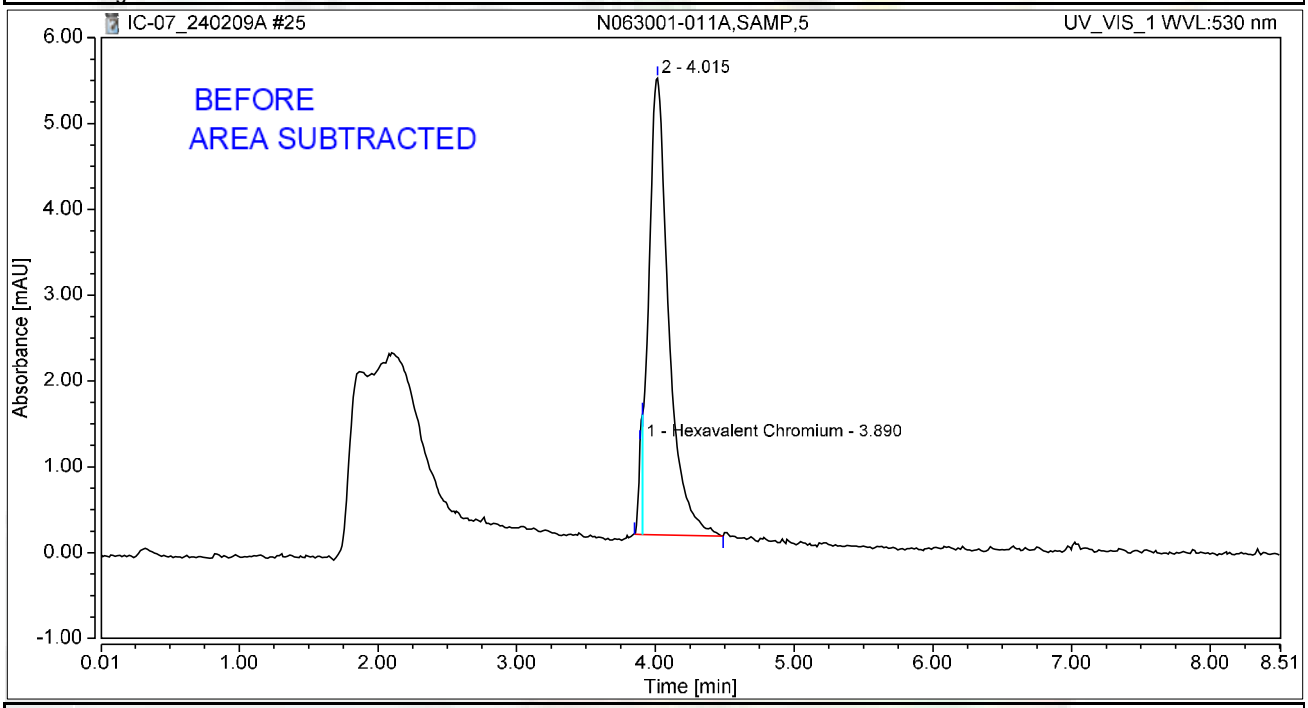
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063001-011A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 12:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

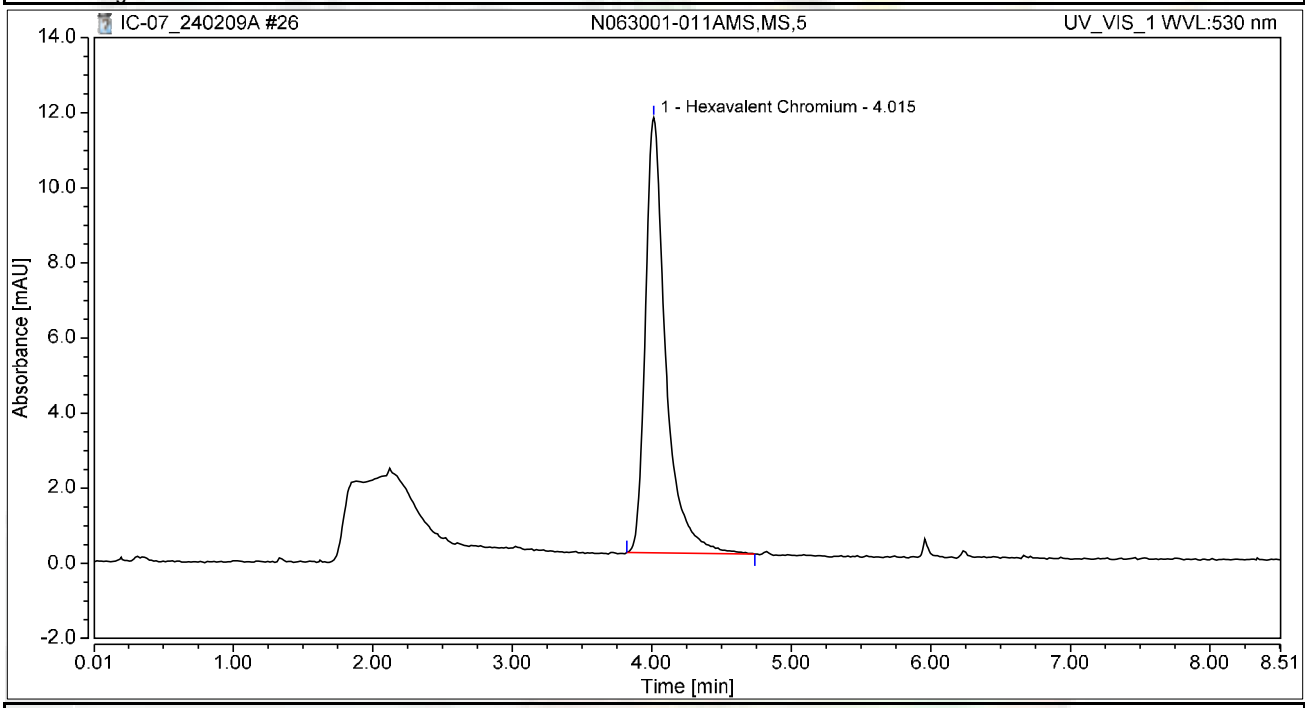
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.890	0.035	1.076	3.79	16.82	0.1619
2		4.015	0.883	5.317	96.21	83.18	n.a.
Total:			**0.918**	**6.393**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-011AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 12:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

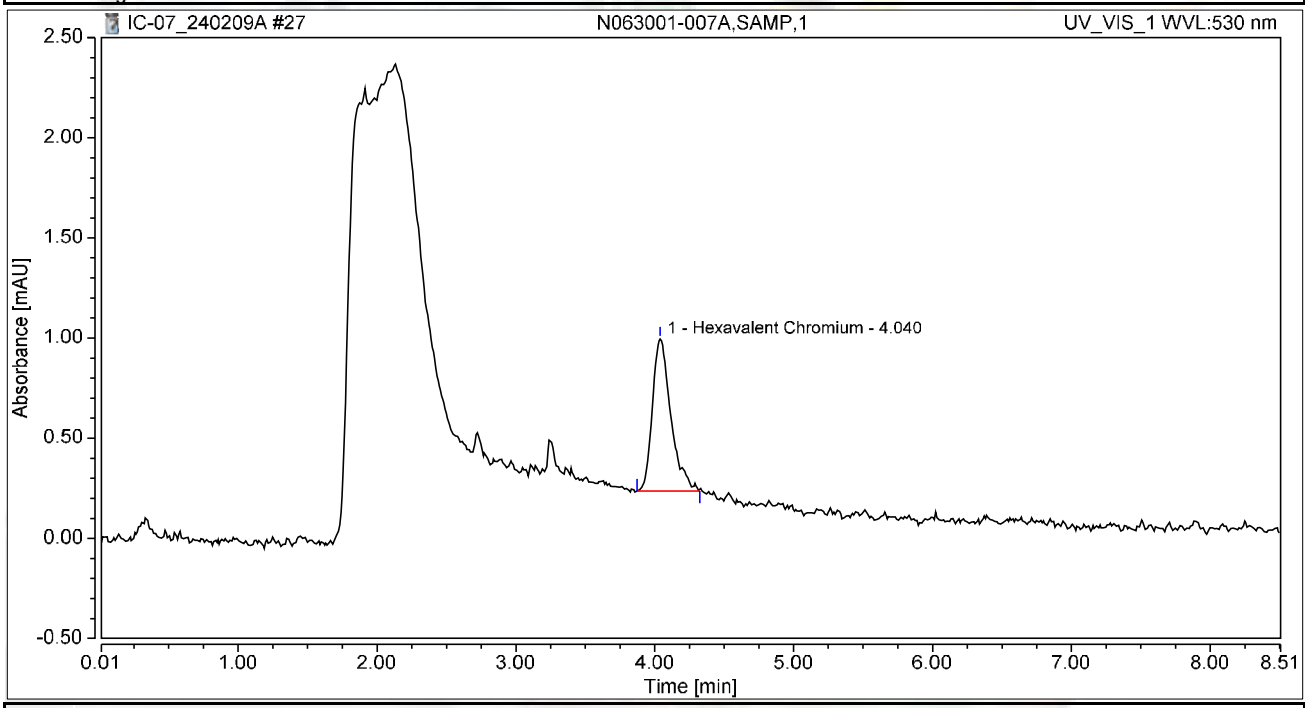
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.963	11.587	100.00	100.00	9.1255
Total:			**1.963**	**11.587**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-007A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 12:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

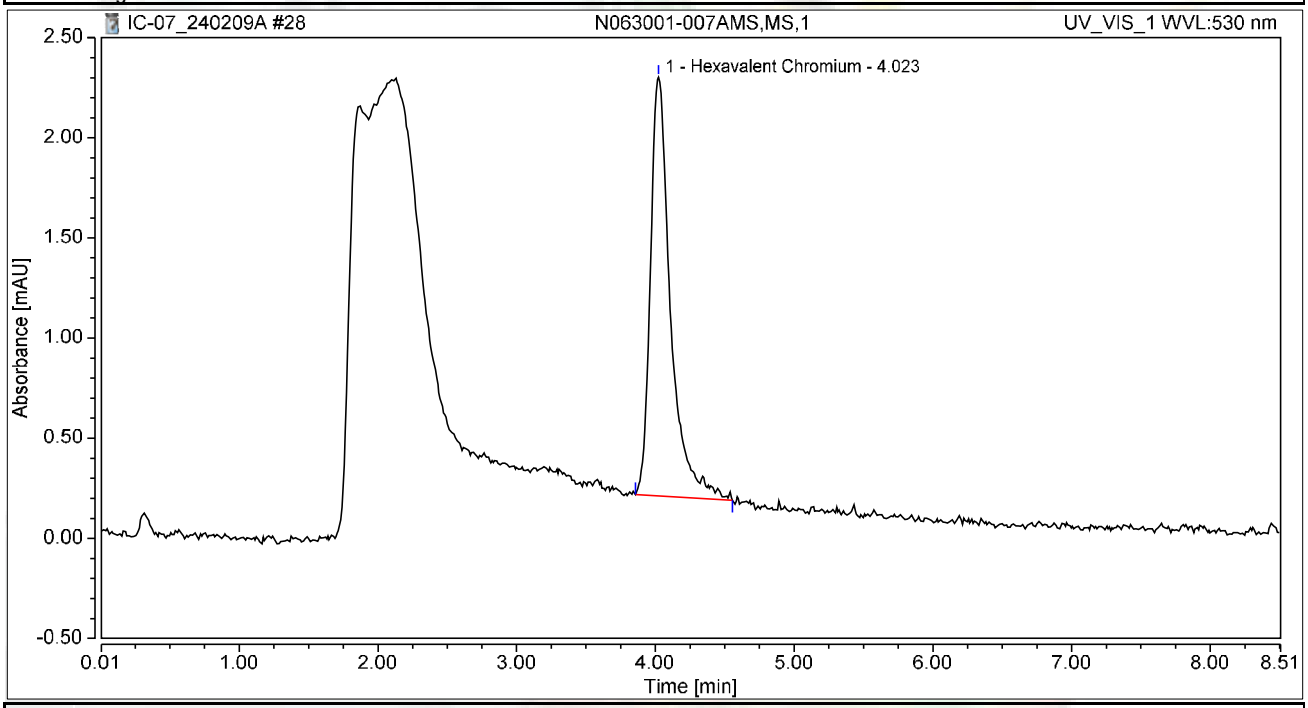
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.117	0.759	100.00	100.00	0.5440
Total:			**0.117**	**0.759**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 12:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

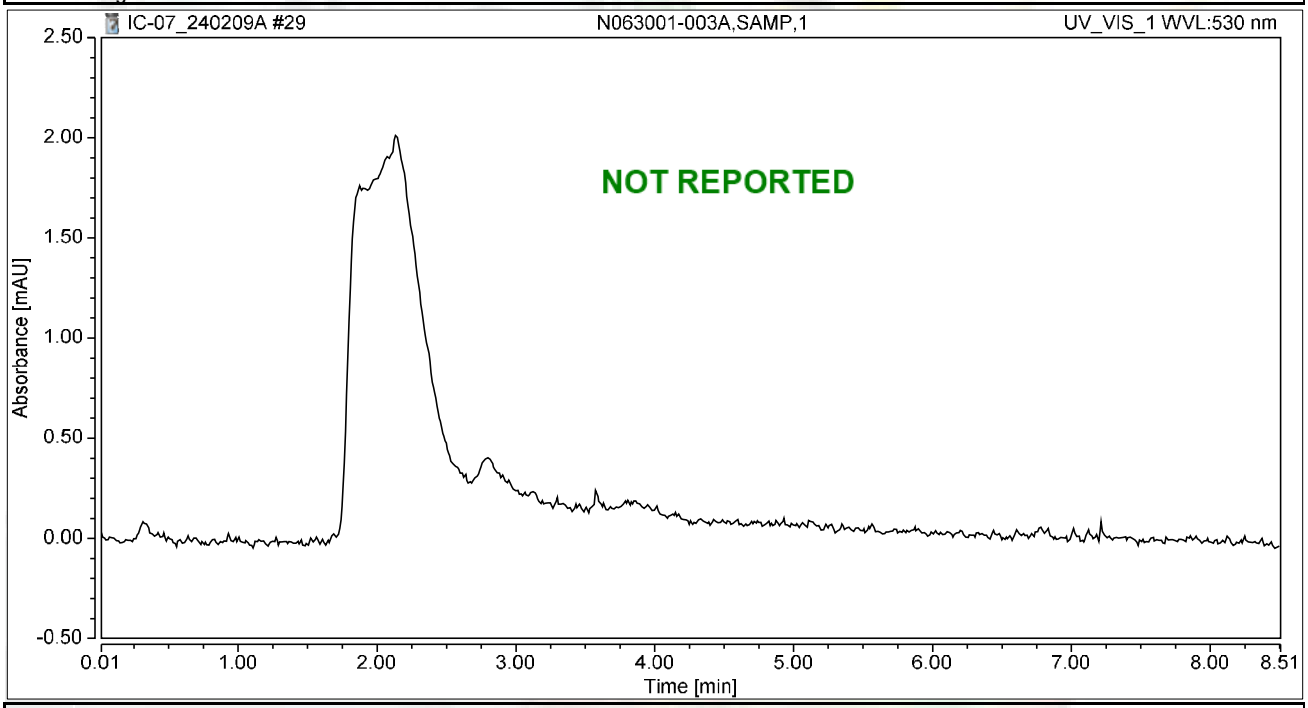
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.352	2.090	100.00	100.00	1.6347
Total:			**0.352**	**2.090**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-003A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 12:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

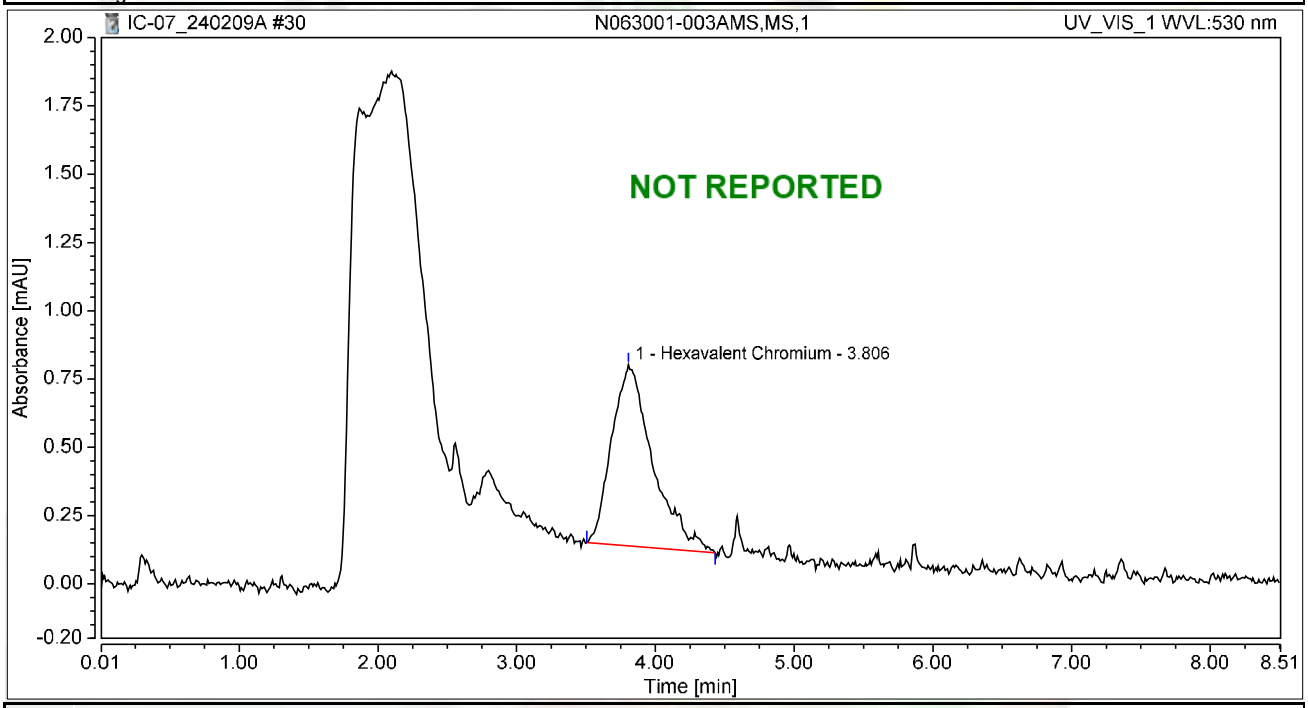
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 12:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

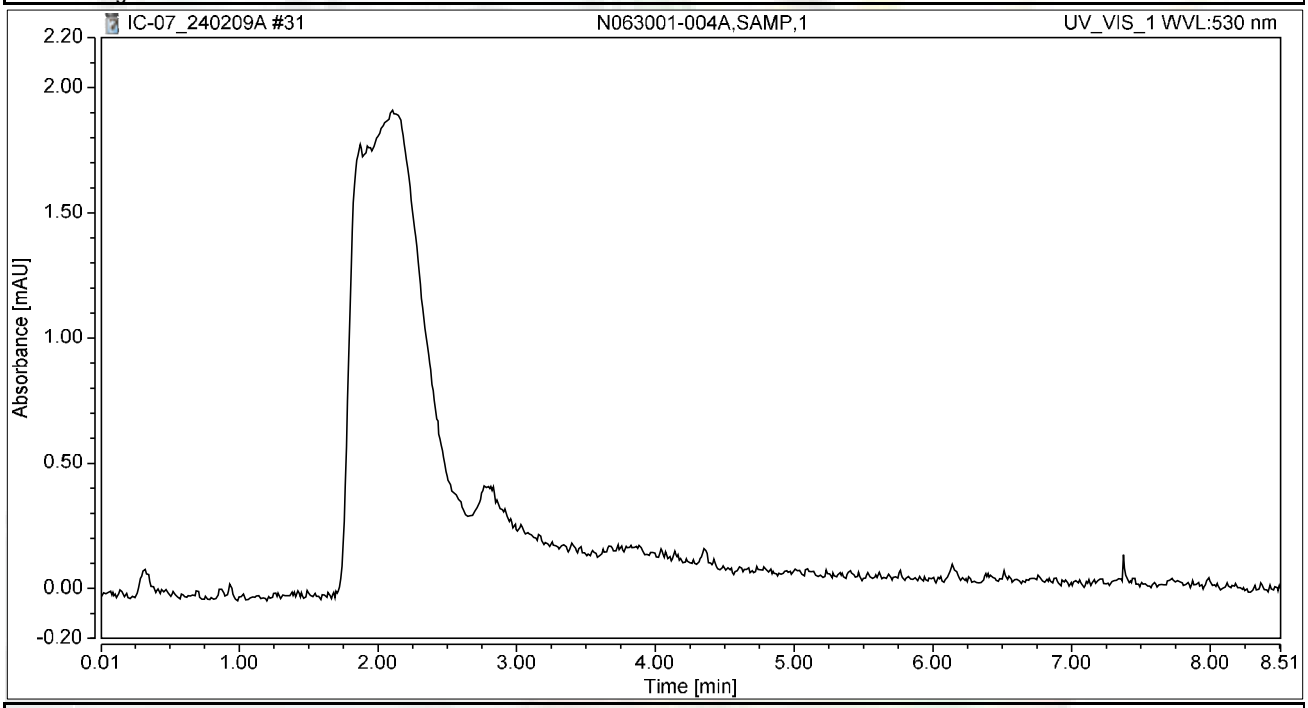
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.806	0.228	0.664	100.00	100.00	1.0605
Total:			**0.228**	**0.664**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 13:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

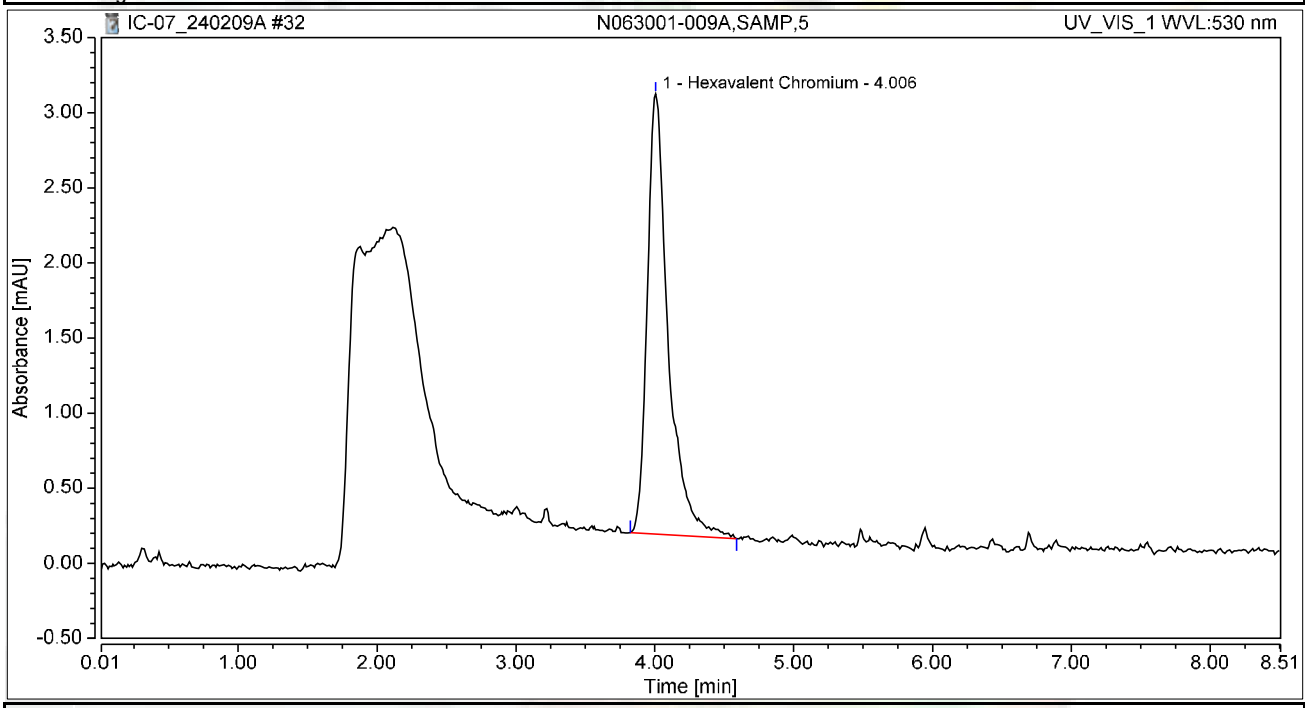
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-009A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 13:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

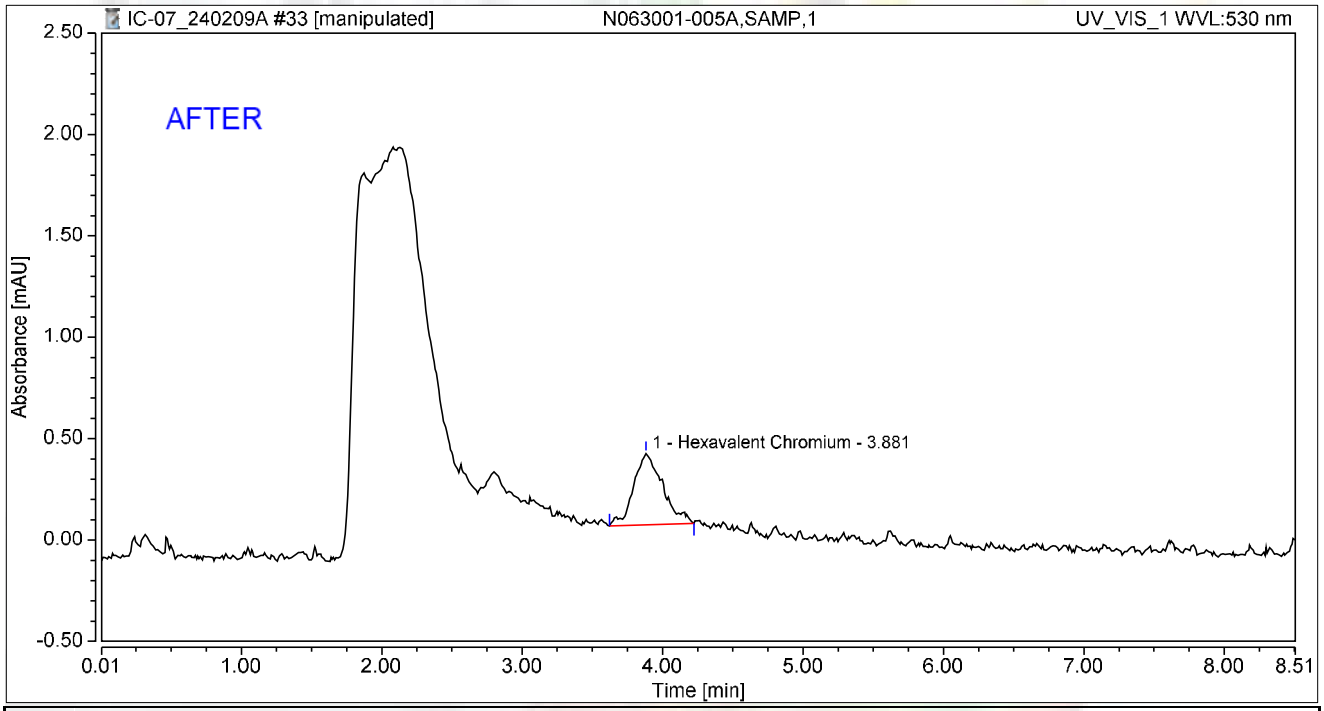
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.512	2.930	100.00	100.00	2.3820
Total:			**0.512**	**2.930**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 13:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.881	0.085	0.352	100.00	100.00	0.3932
Total:			**0.085**	**0.352**	**100.00**	**100.00**	

Reviewed by:

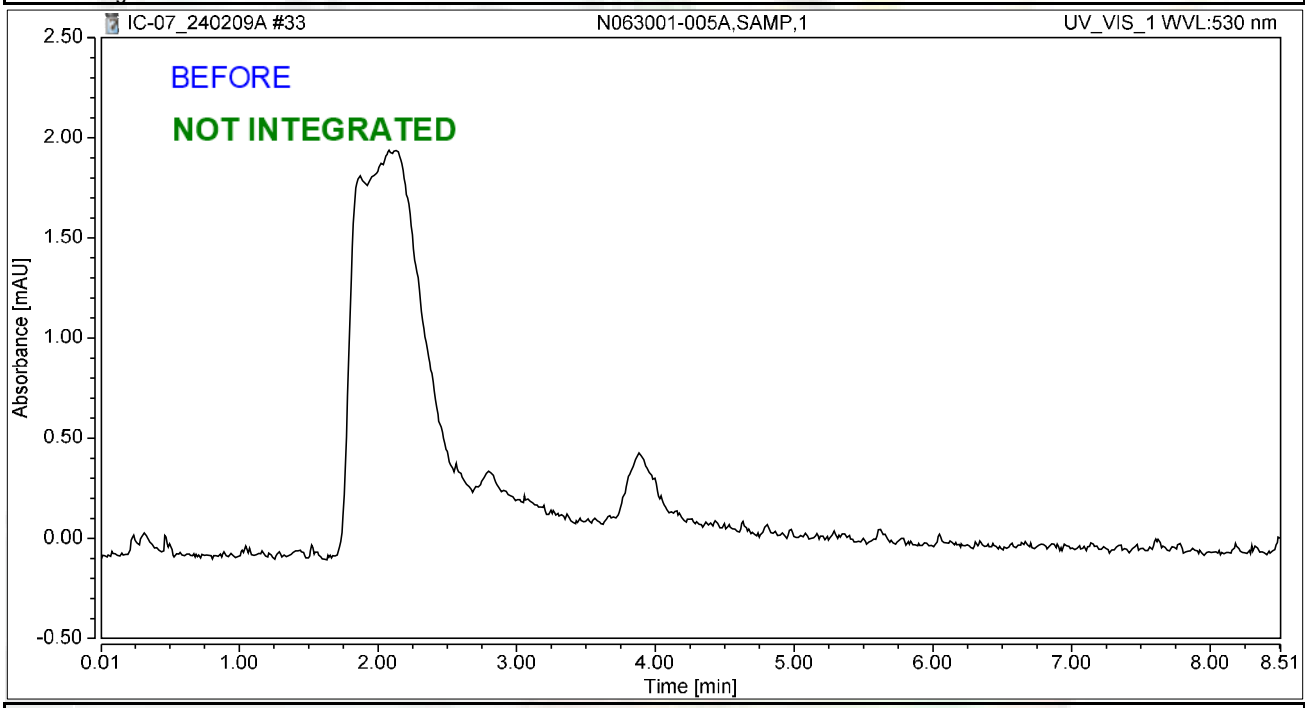
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063001-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 13:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

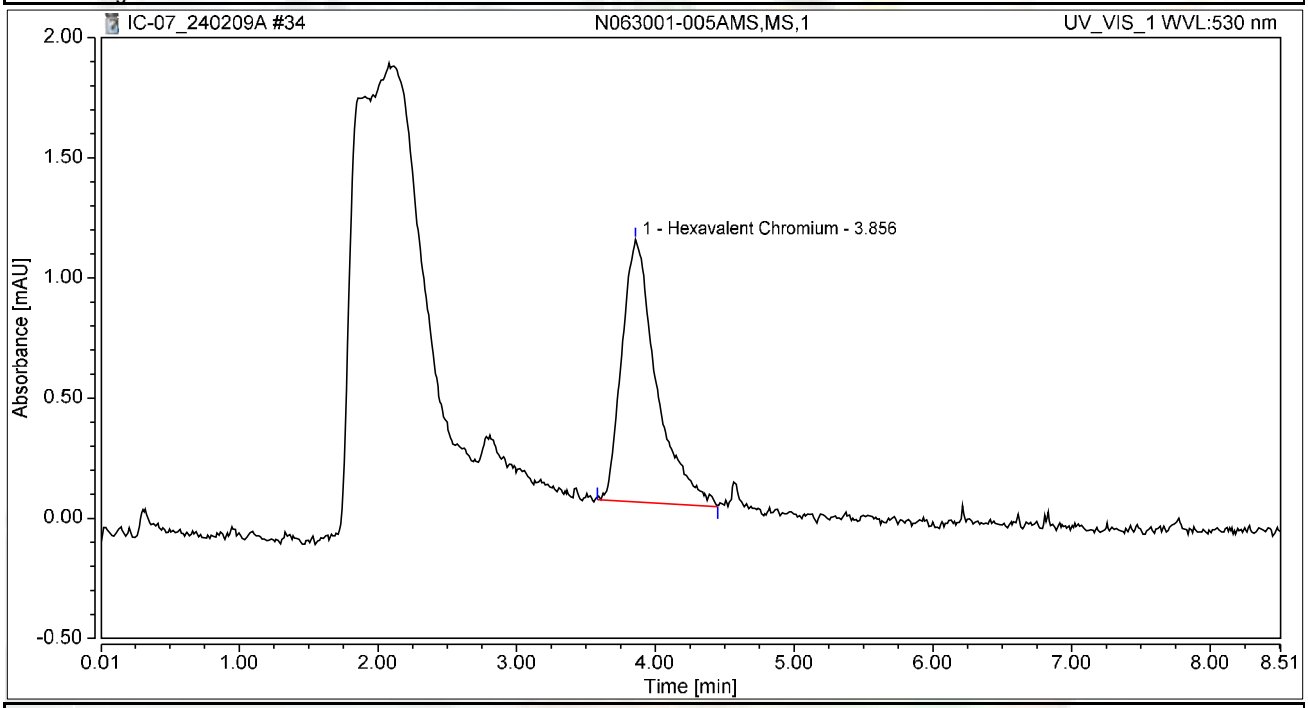
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 13:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

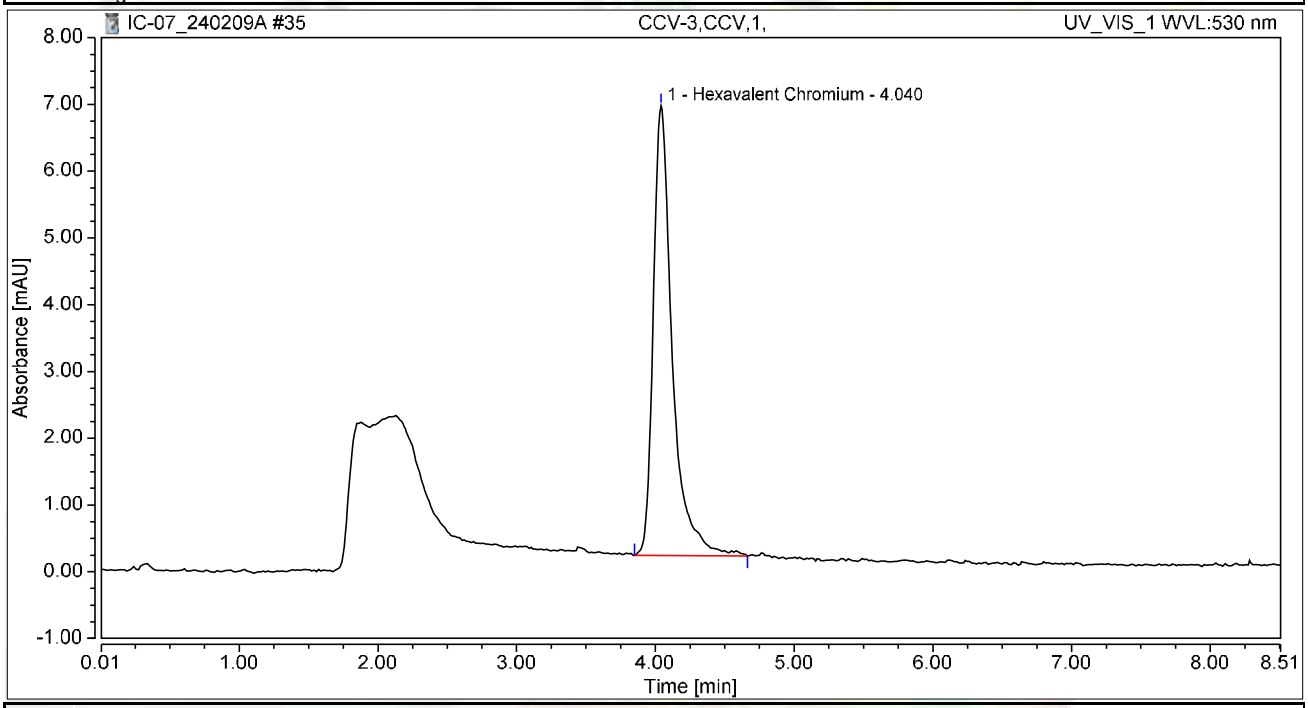
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.315	1.091	100.00	100.00	1.4653
Total:			**0.315**	**1.091**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 13:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

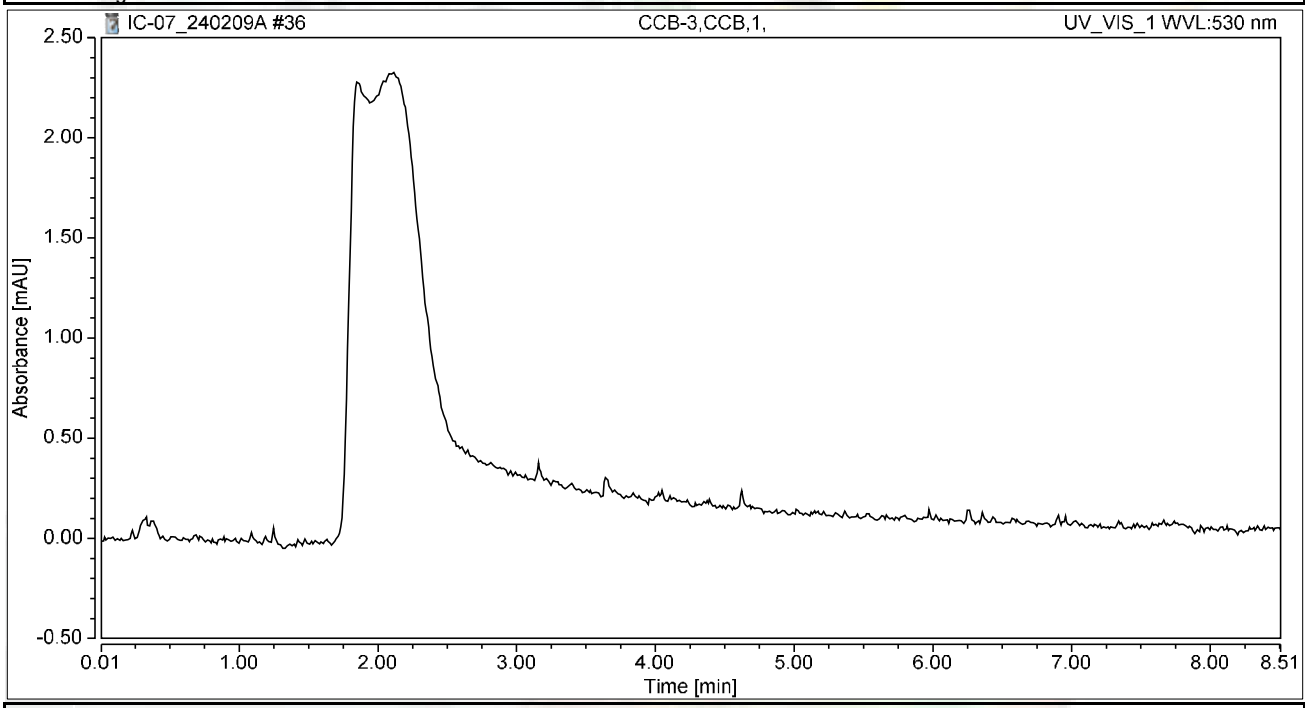
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.071	6.740	100.00	100.00	4.9807
Total:			**1.071**	**6.740**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 13:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

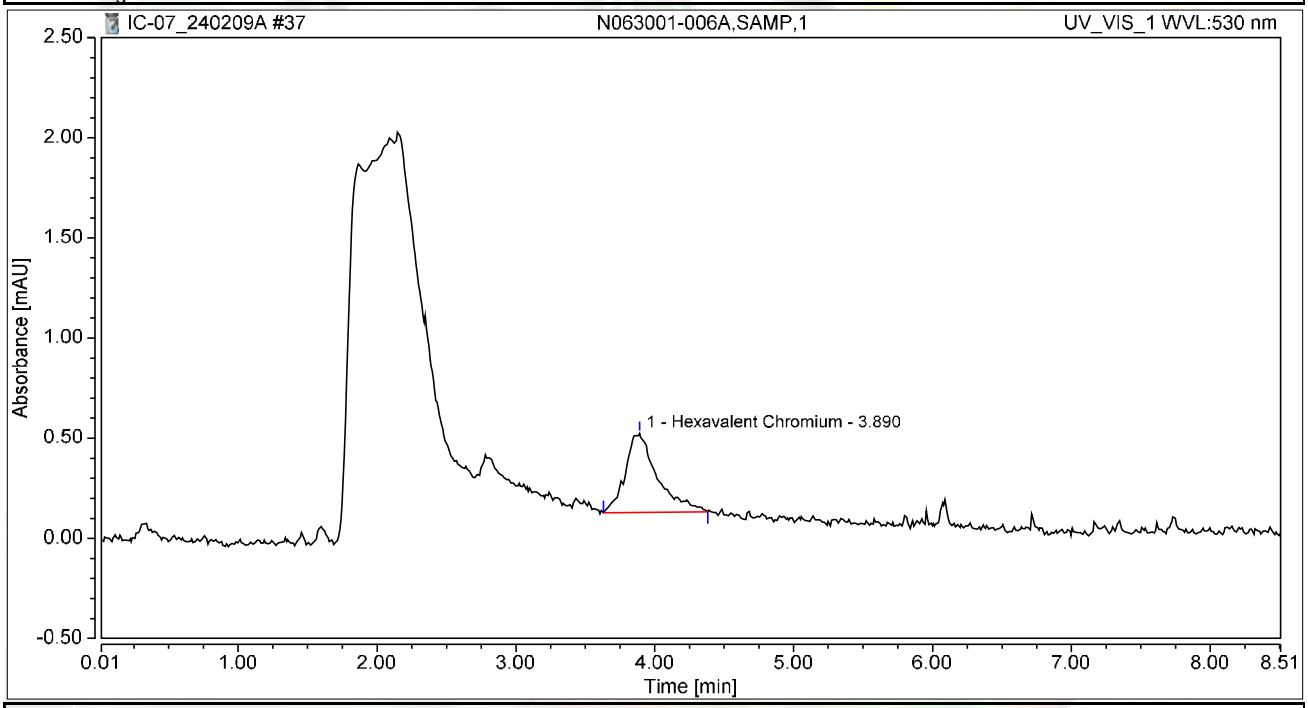
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-006A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 14:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

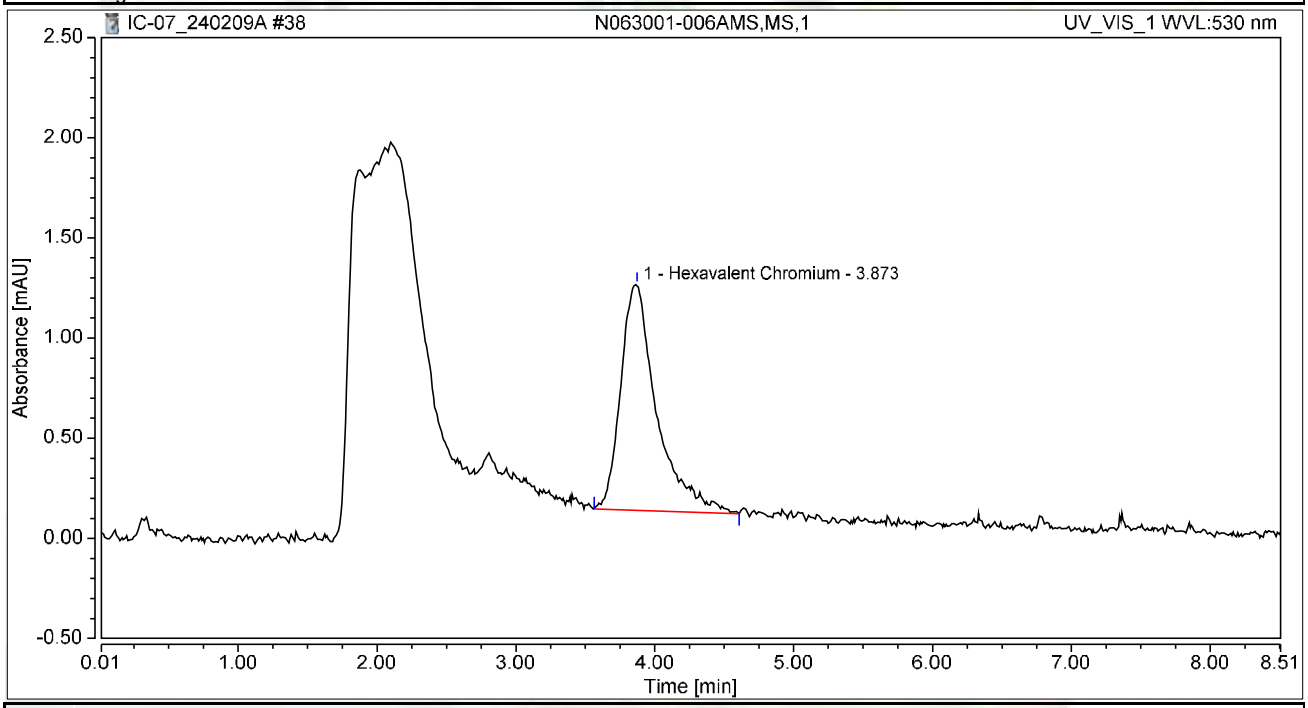
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.890	0.106	0.395	100.00	100.00	0.4921
Total:			**0.106**	**0.395**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-006AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 14:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

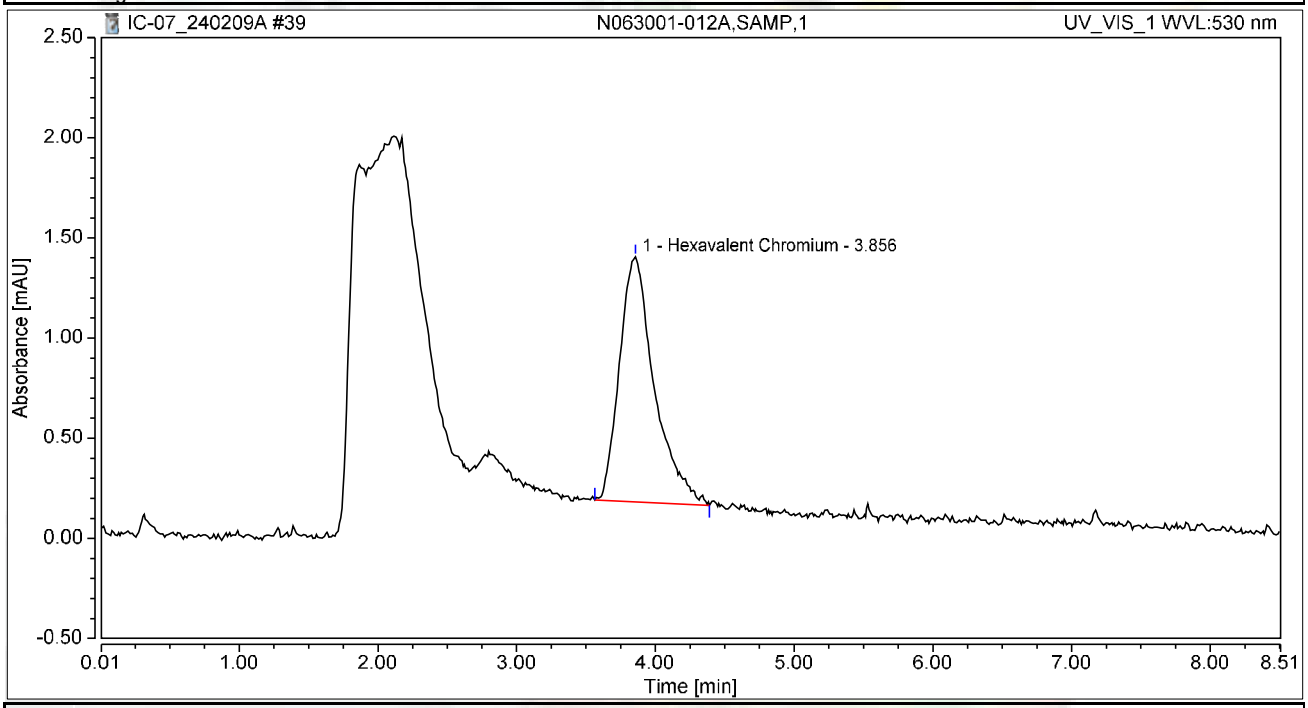
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.873	0.338	1.128	100.00	100.00	1.5711
Total:			**0.338**	**1.128**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-012A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 14:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

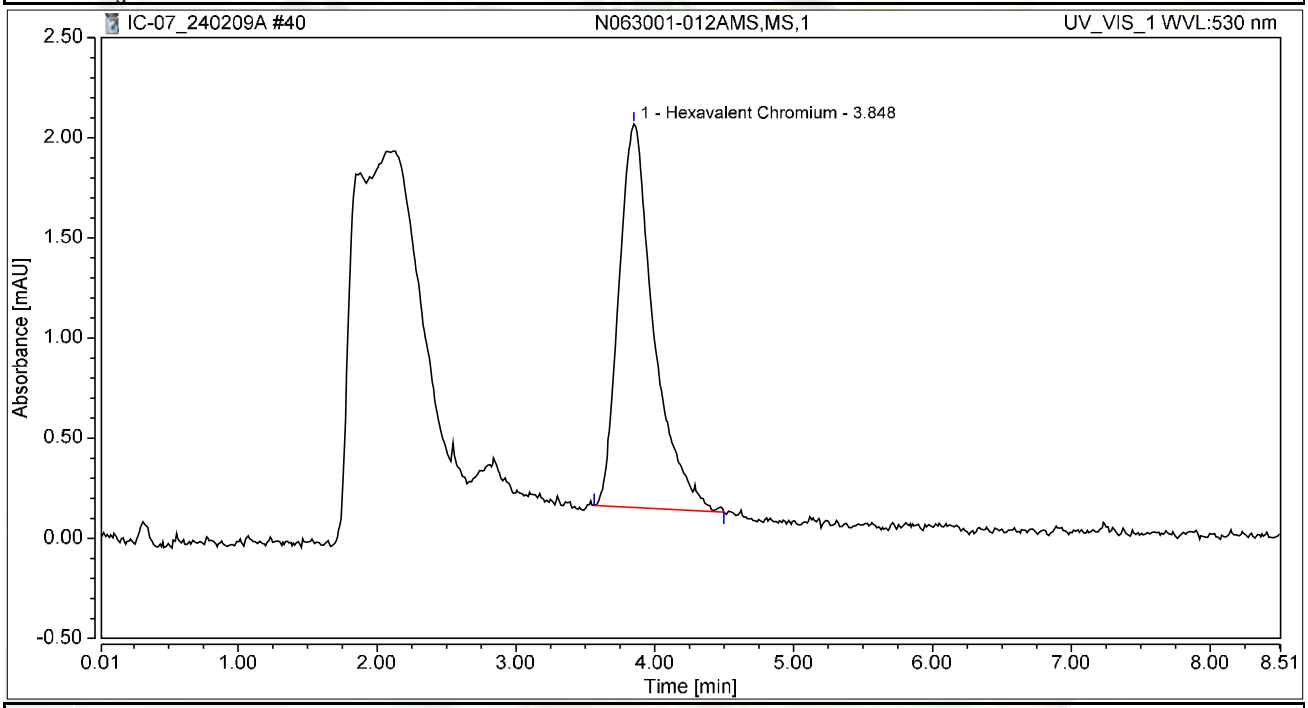
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.356	1.224	100.00	100.00	1.6557
Total:			**0.356**	**1.224**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-012AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 14:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

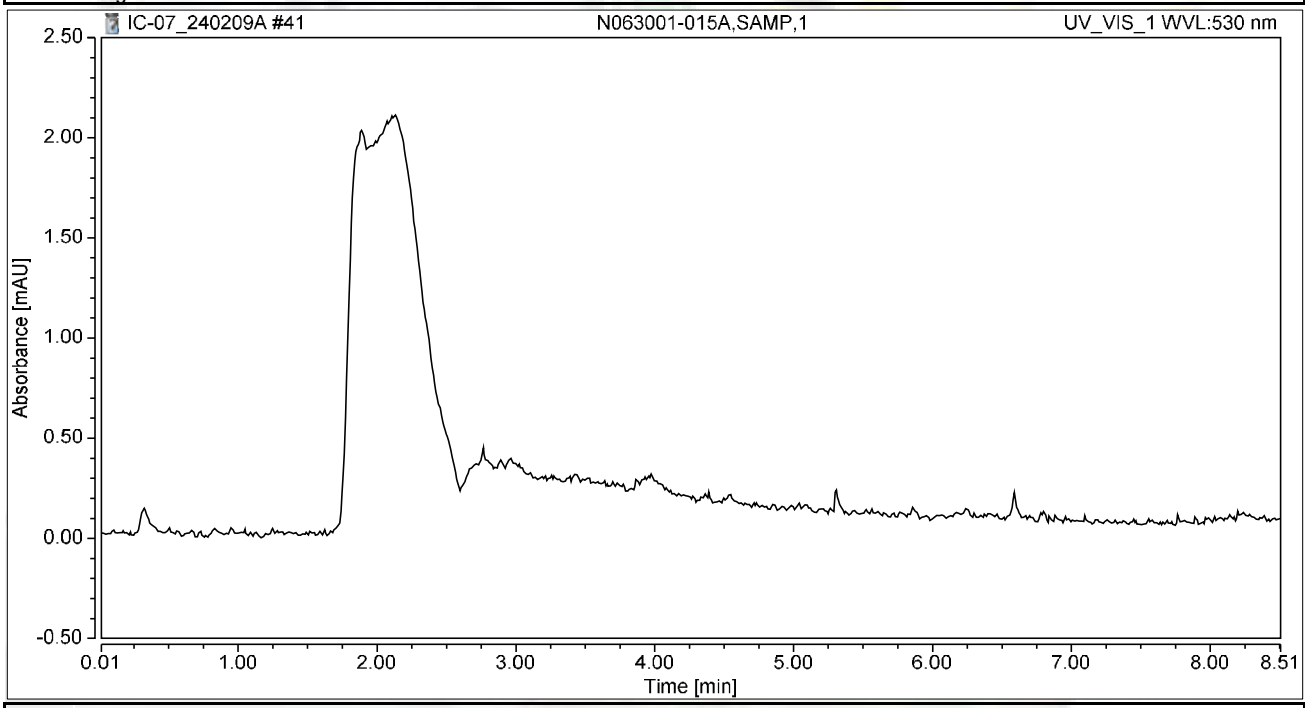
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.848	0.559	1.915	100.00	100.00	2.5964
Total:			**0.559**	**1.915**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-015A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 14:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

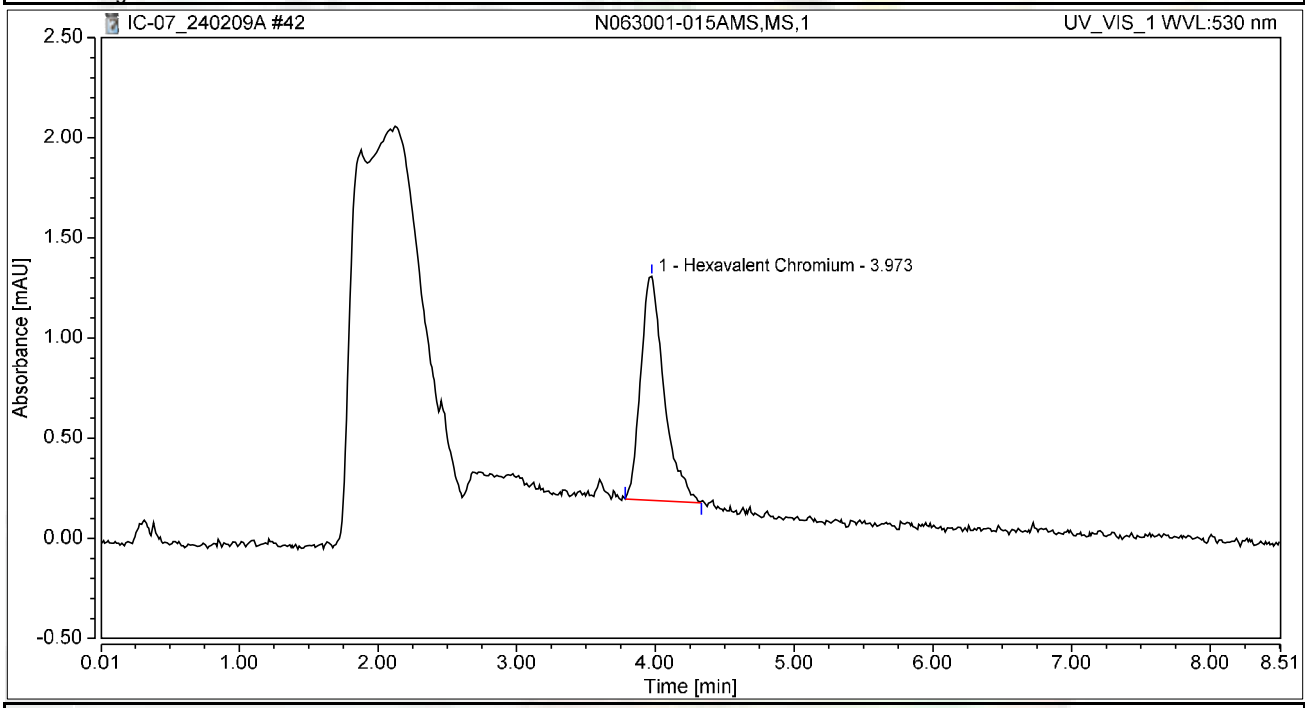
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-015AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 14:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

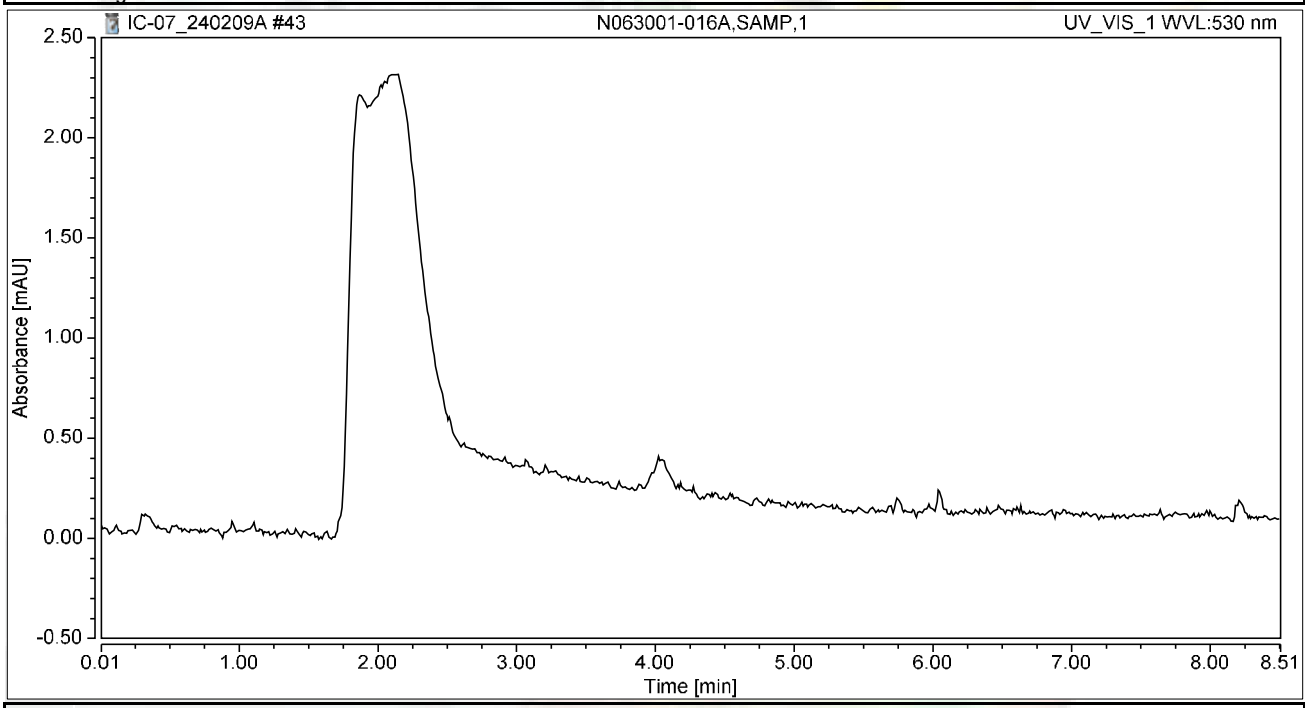
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.219	1.118	100.00	100.00	1.0171
Total:			**0.219**	**1.118**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-016A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 14:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

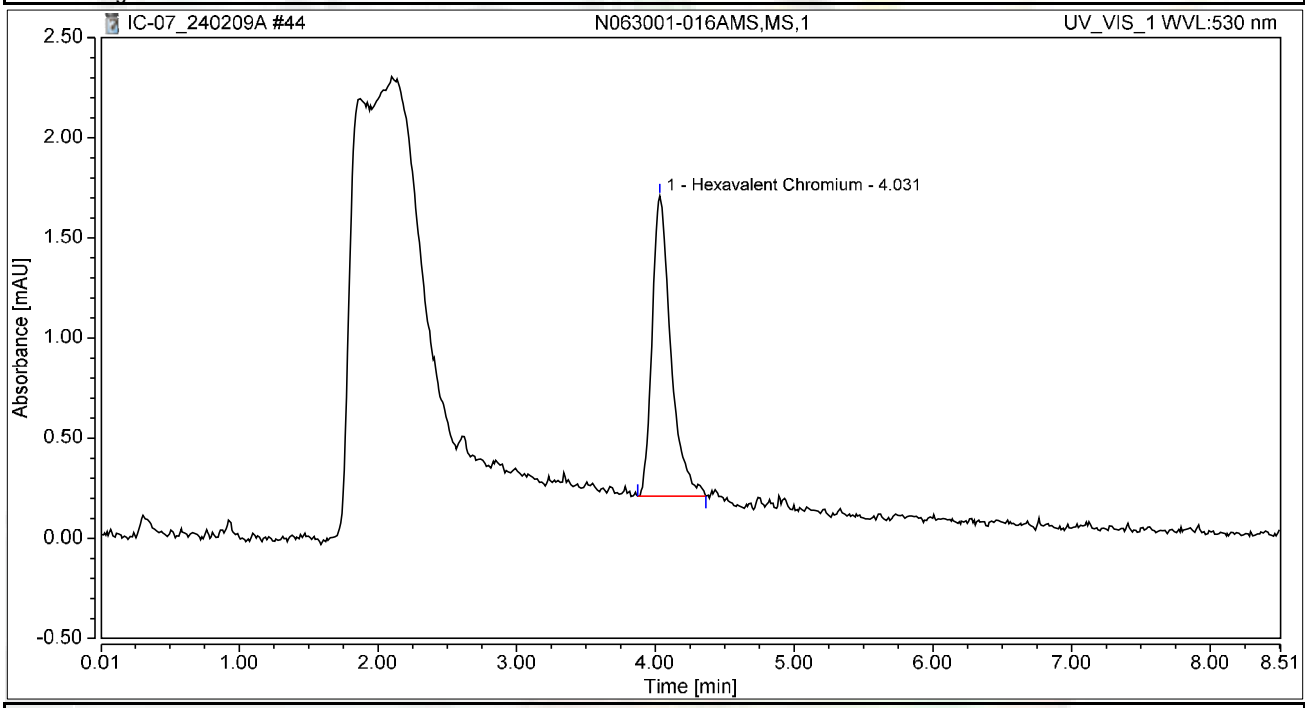
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-016AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 15:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

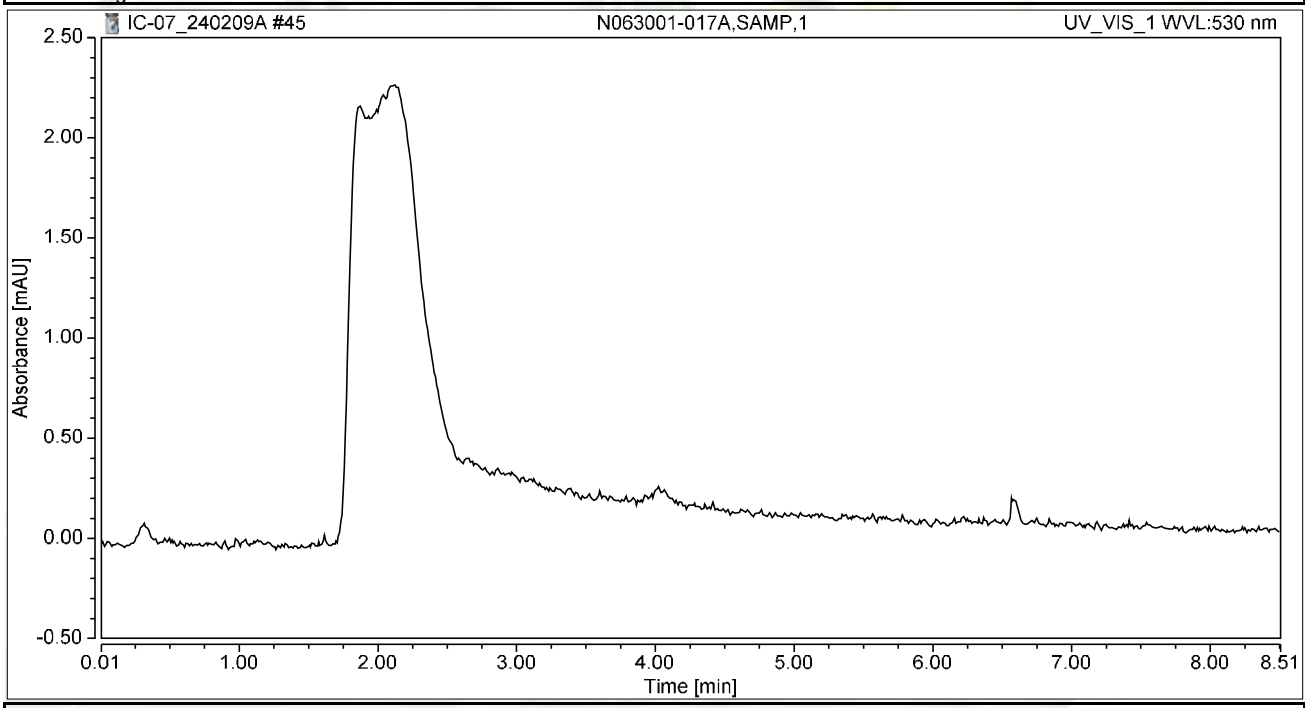
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.235	1.500	100.00	100.00	1.0917
Total:			**0.235**	**1.500**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-017A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 15:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

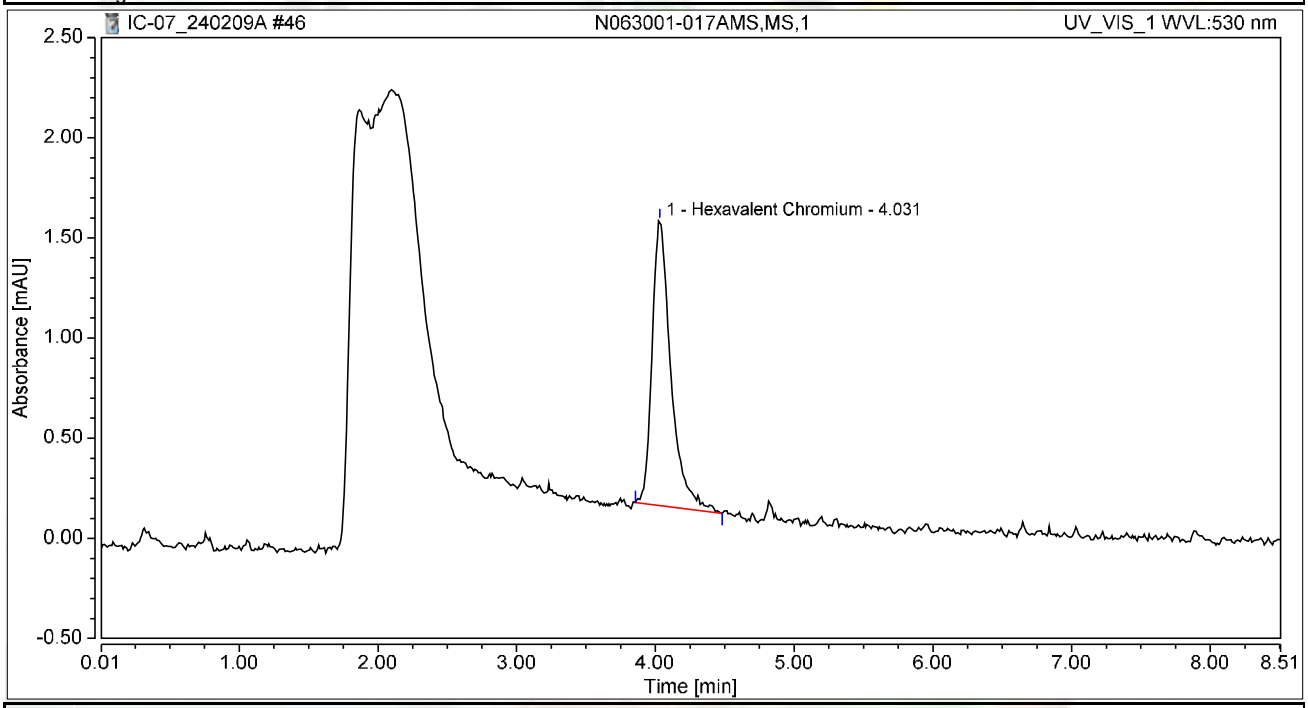
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-017AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 15:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

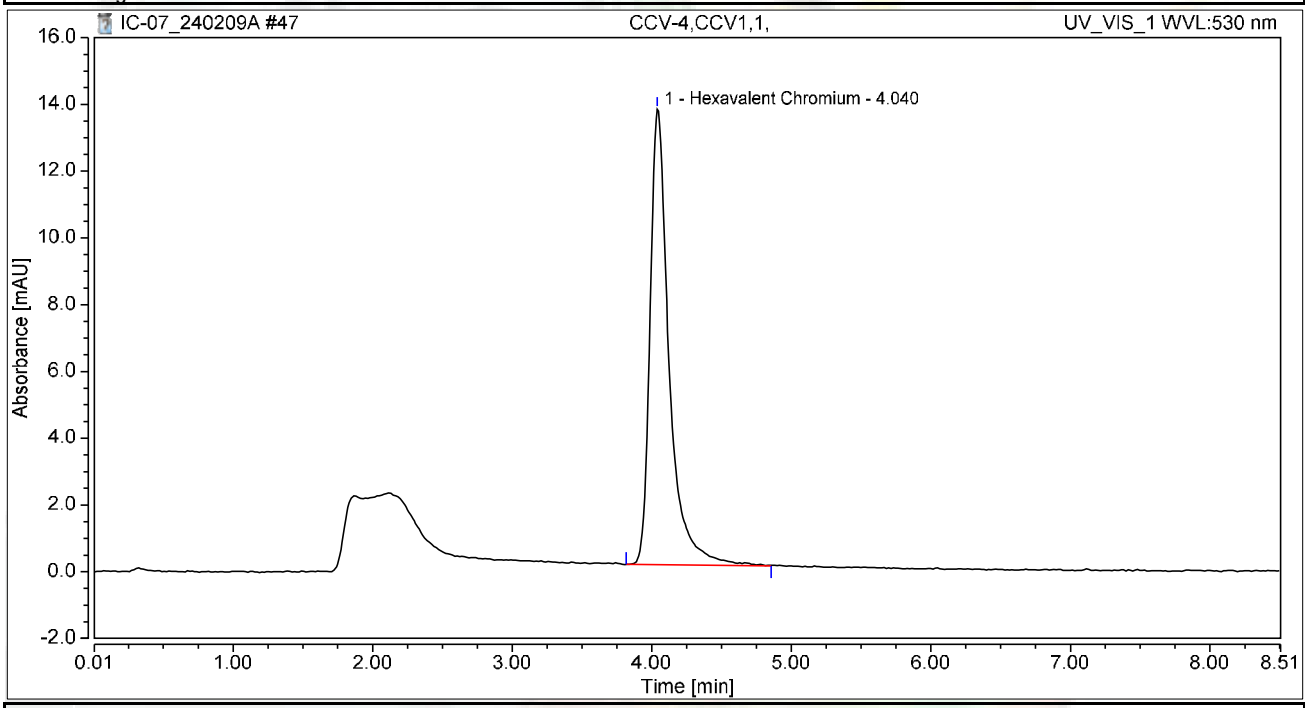
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.224	1.423	100.00	100.00	1.0413
Total:			**0.224**	**1.423**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 15:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

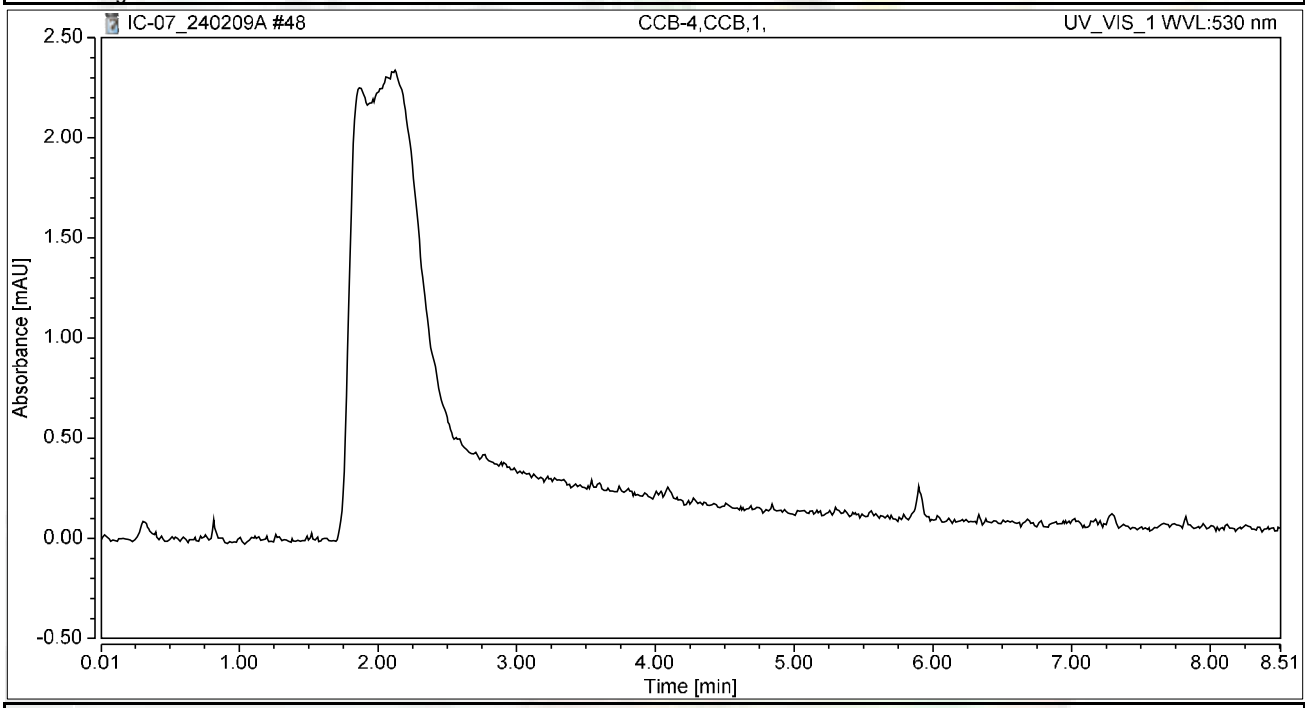
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.162	13.639	100.00	100.00	10.0496
Total:			**2.162**	**13.639**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 15:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

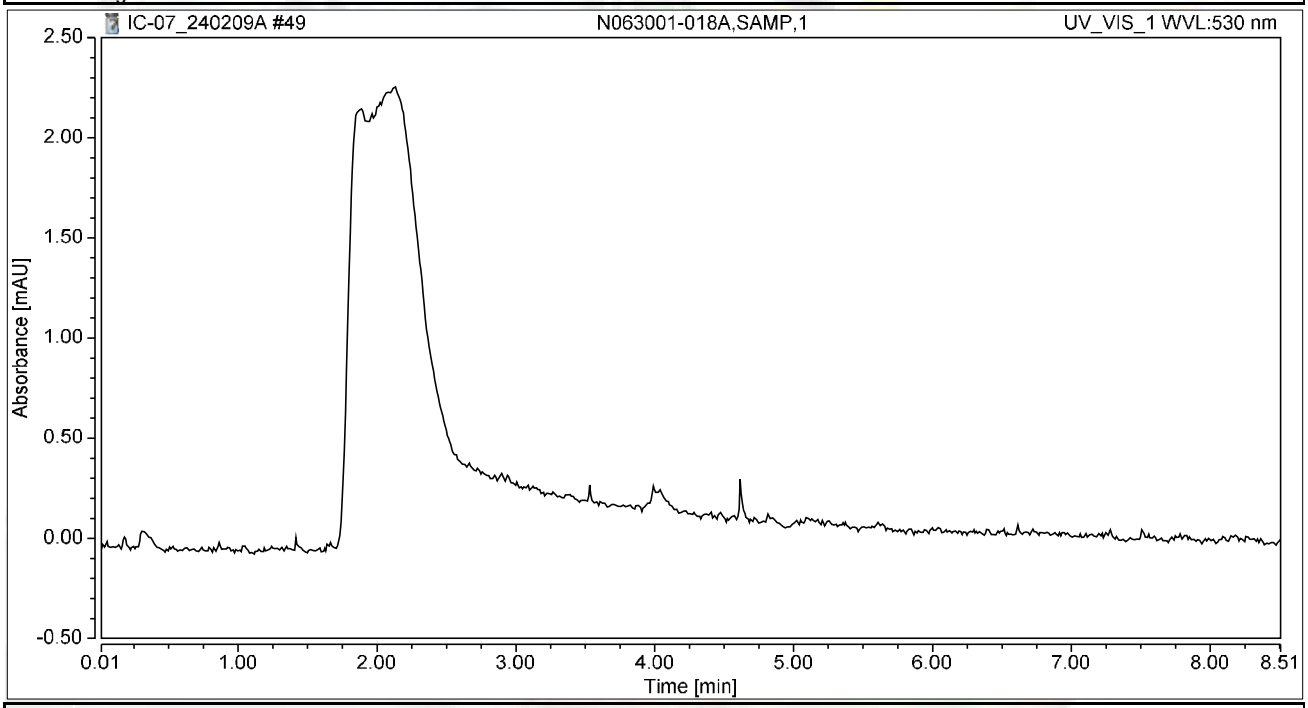
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-018A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 15:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

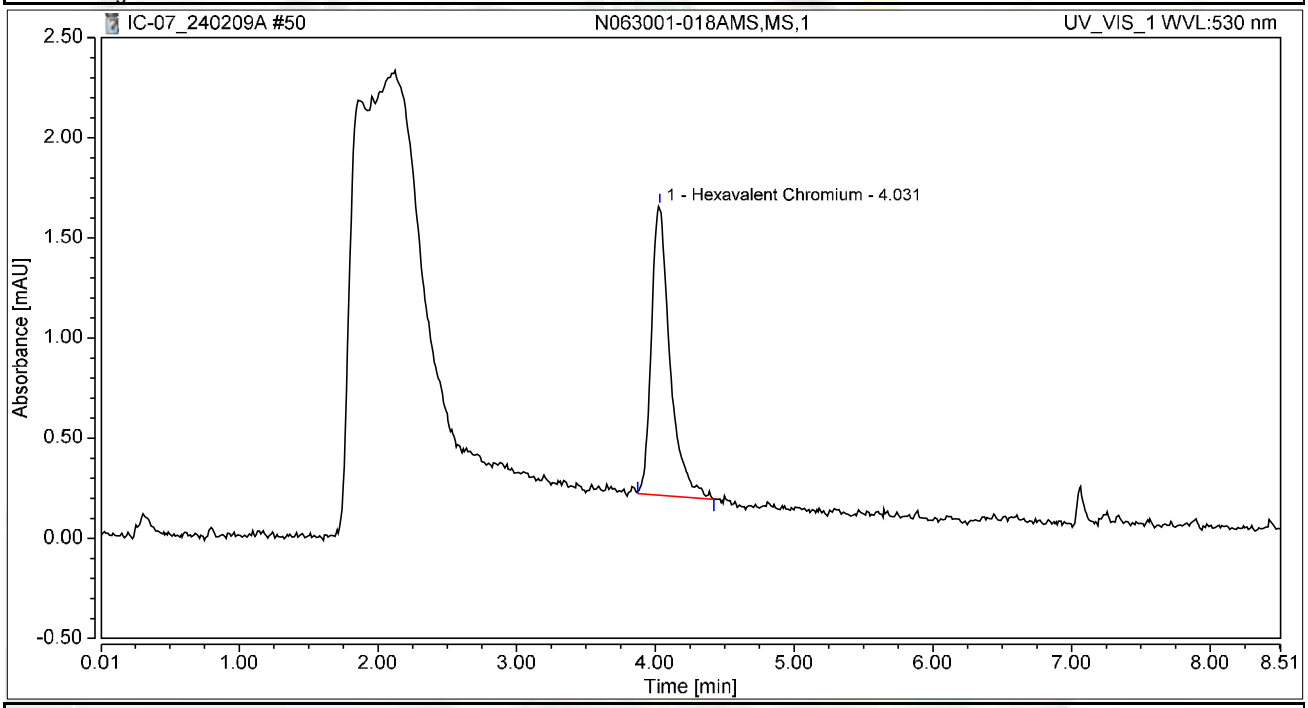
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-018AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 16:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

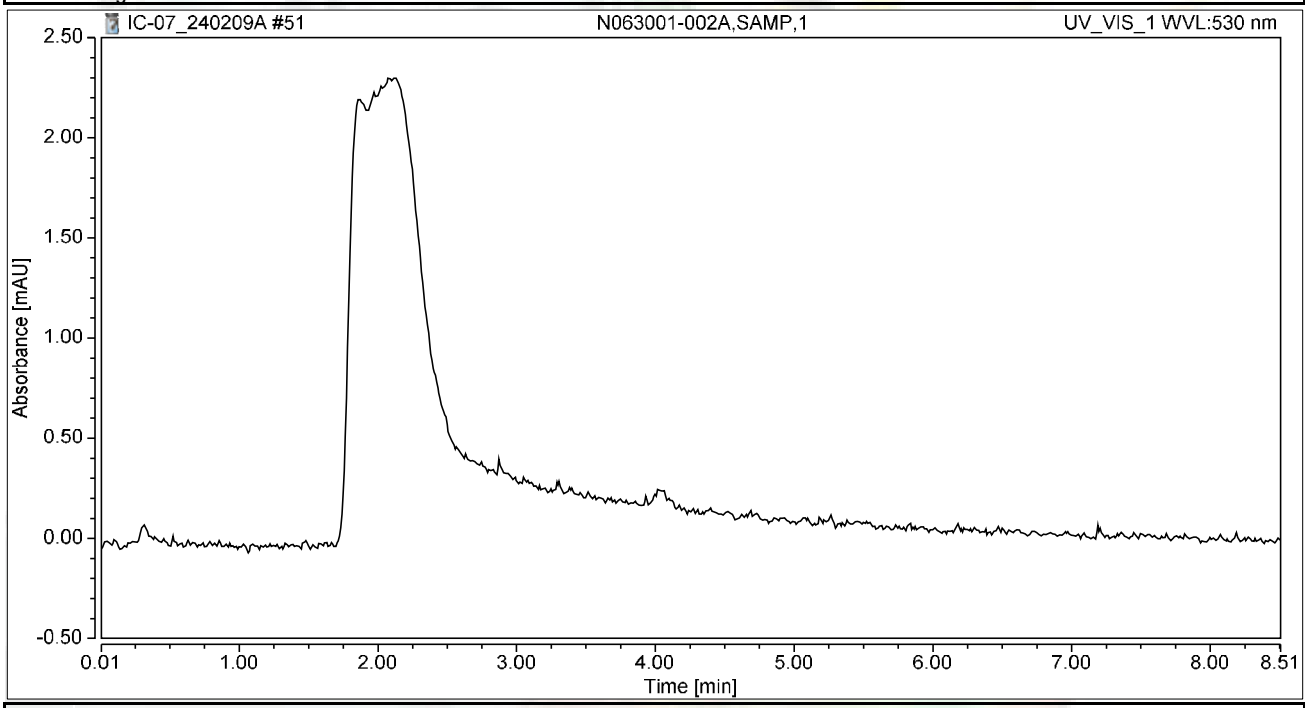
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.225	1.445	100.00	100.00	1.0437
Total:			**0.225**	**1.445**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 16:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

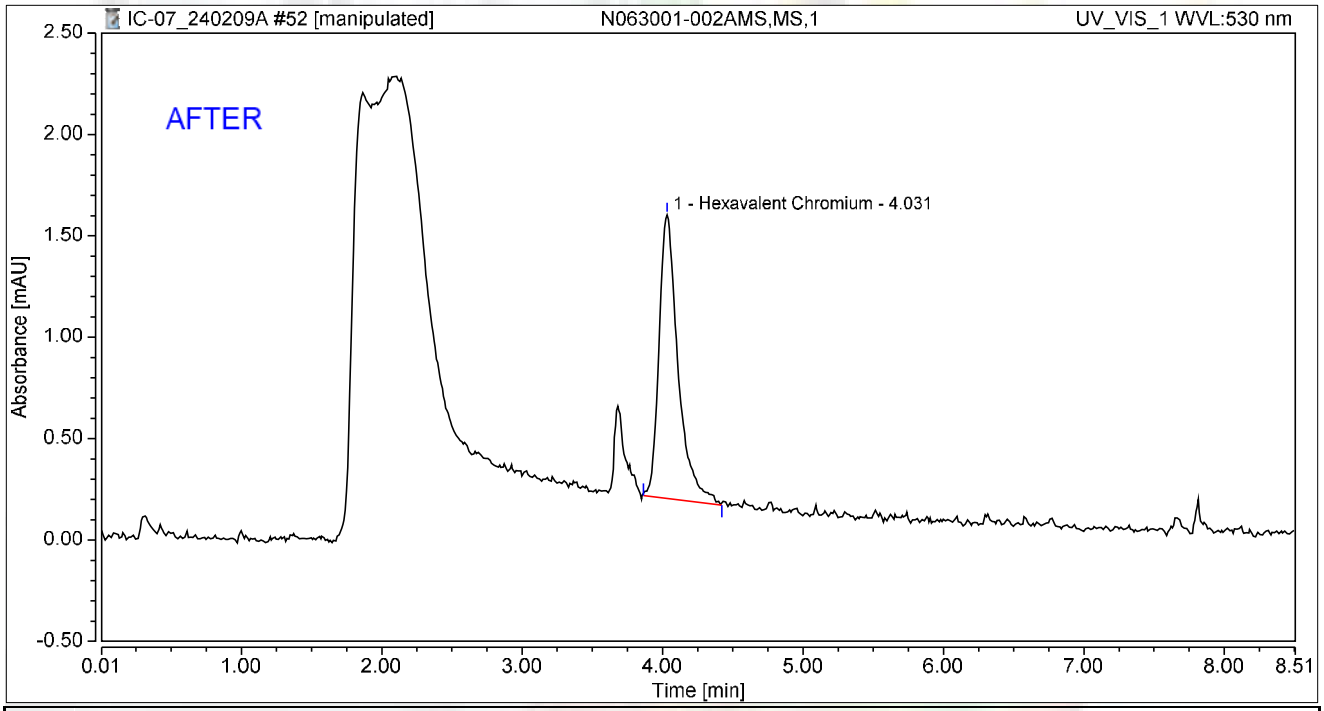
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 16:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.220	1.399	100.00	100.00	1.0221
Total:			**0.220**	**1.399**	**100.00**	**100.00**	

Reviewed by:

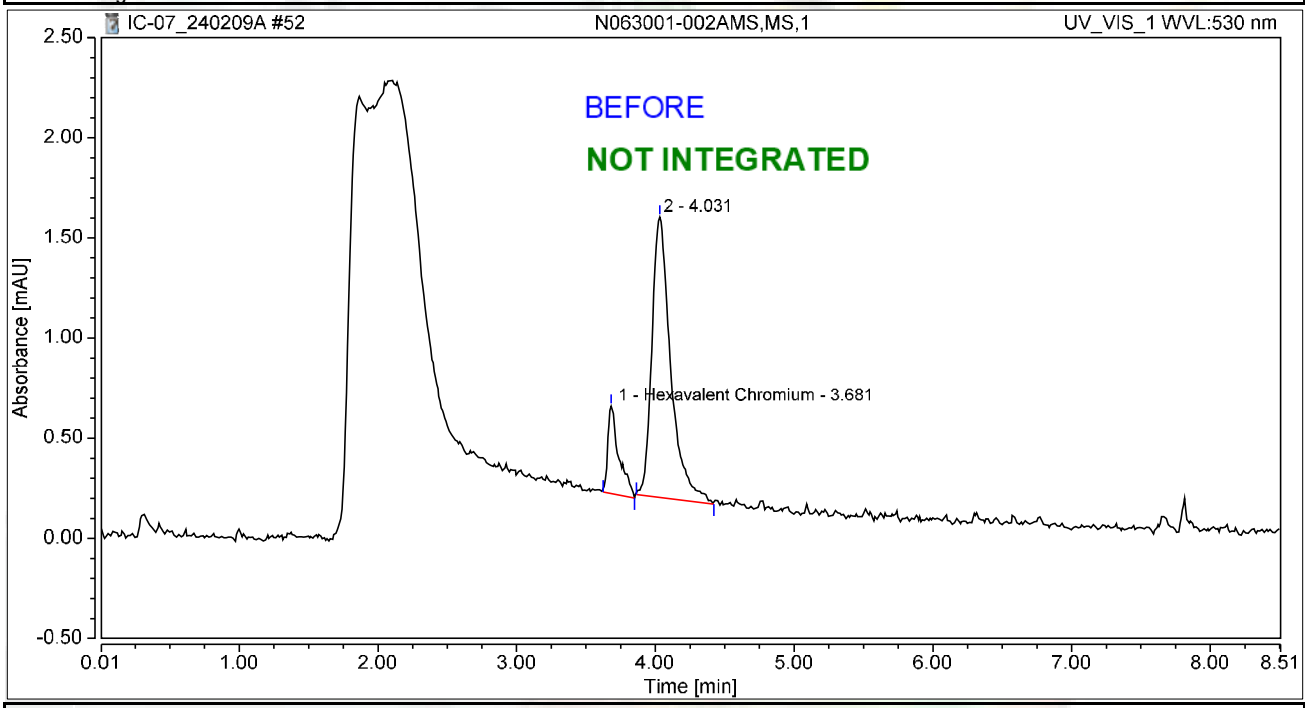
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063001-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 16:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

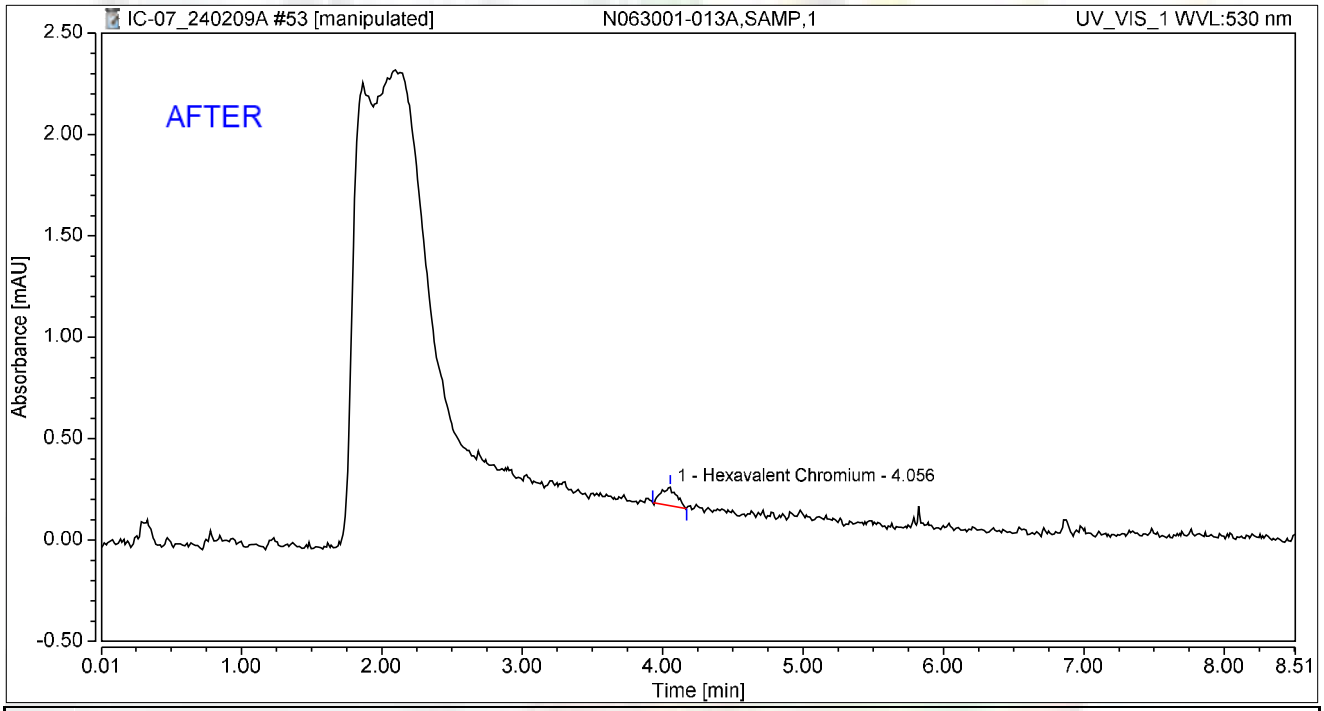
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.681	0.041	0.436	15.62	23.77	0.1892
2		4.031	0.220	1.399	84.38	76.23	n.a.
Total:			**0.261**	**1.835**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-013A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 16:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.011	0.091	100.00	100.00	0.0517
Total:			**0.011**	**0.091**	**100.00**	**100.00**	

Reviewed by:

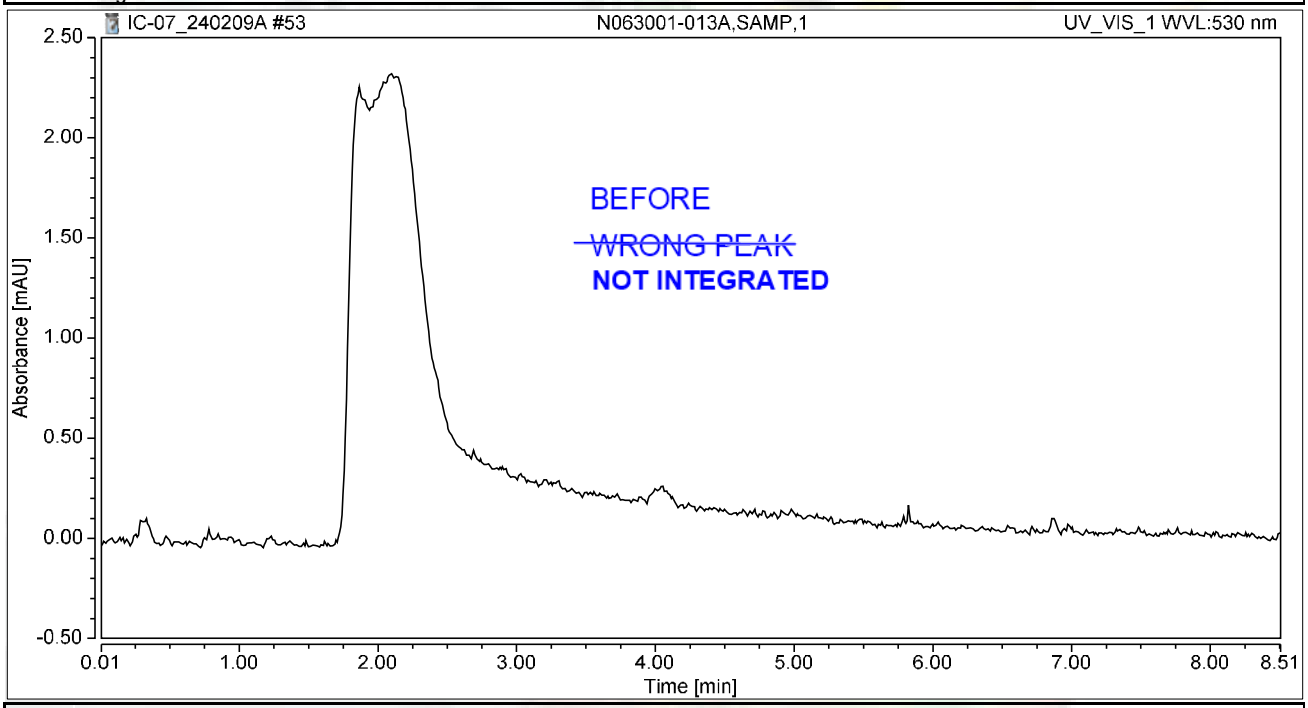
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063001-013A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 16:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

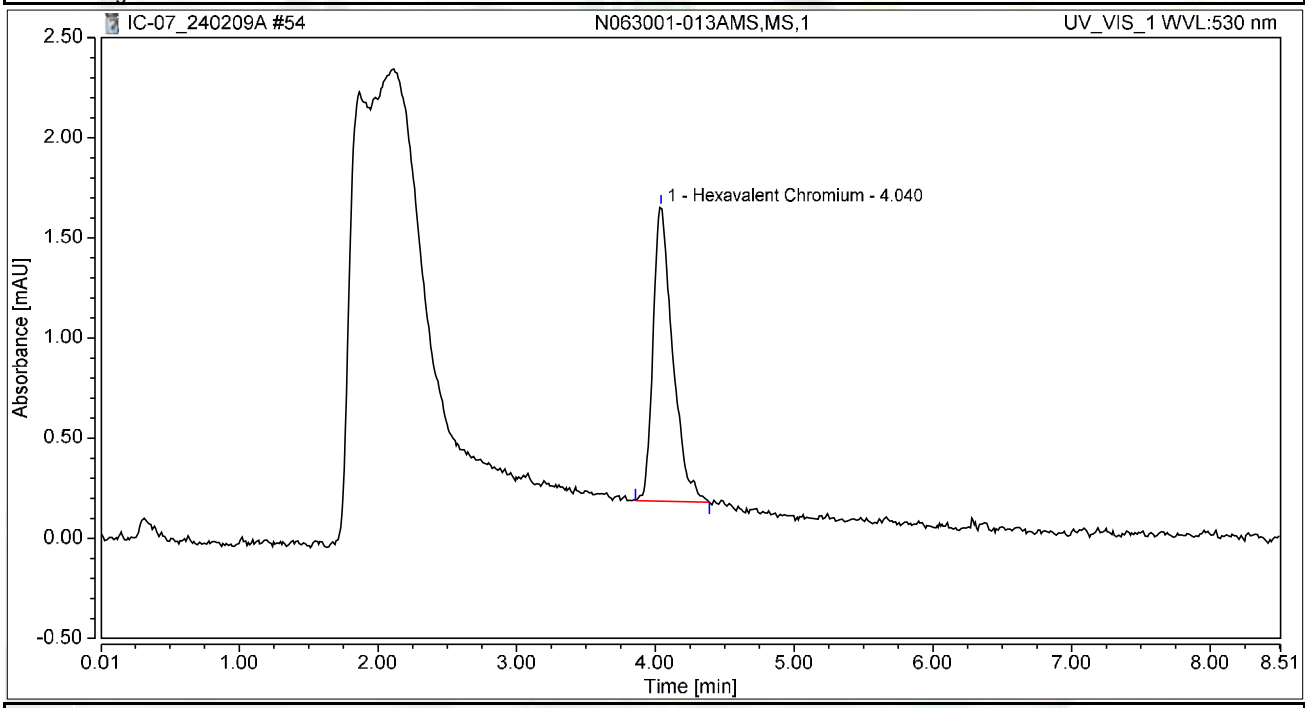
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-013AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 16:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

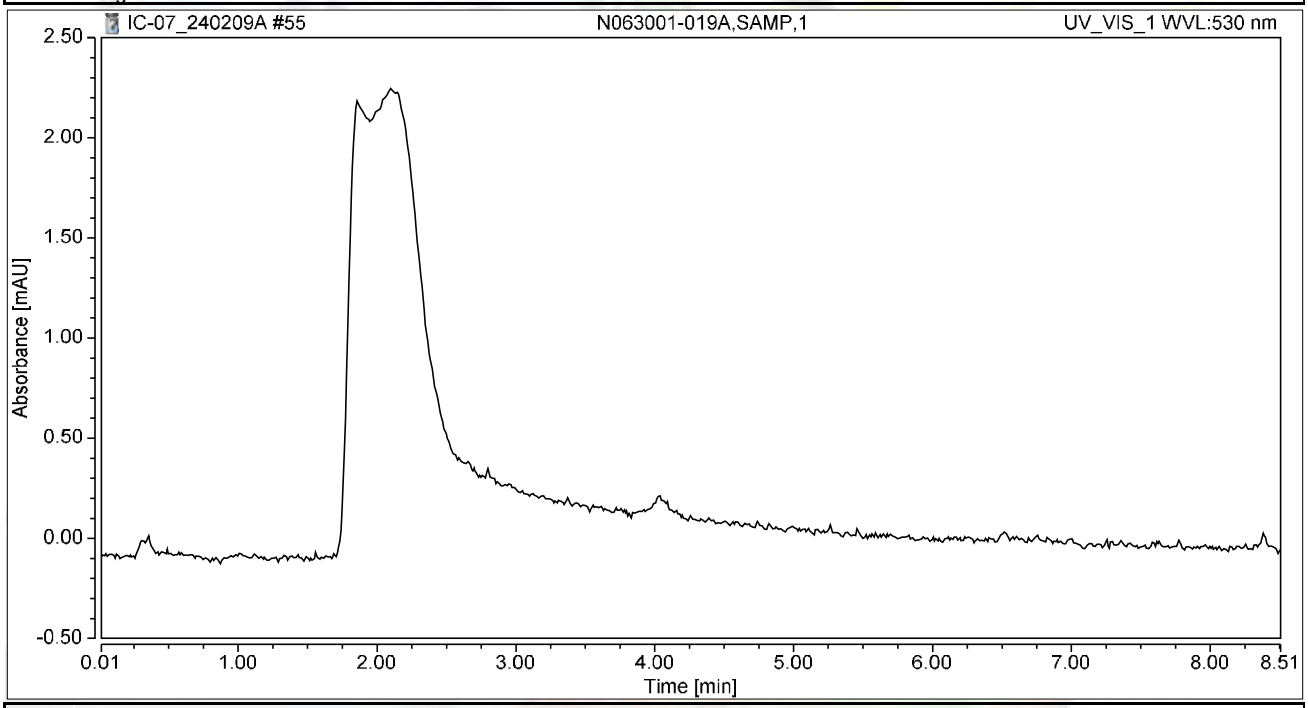
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.242	1.470	100.00	100.00	1.1235
Total:			**0.242**	**1.470**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-019A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 16:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

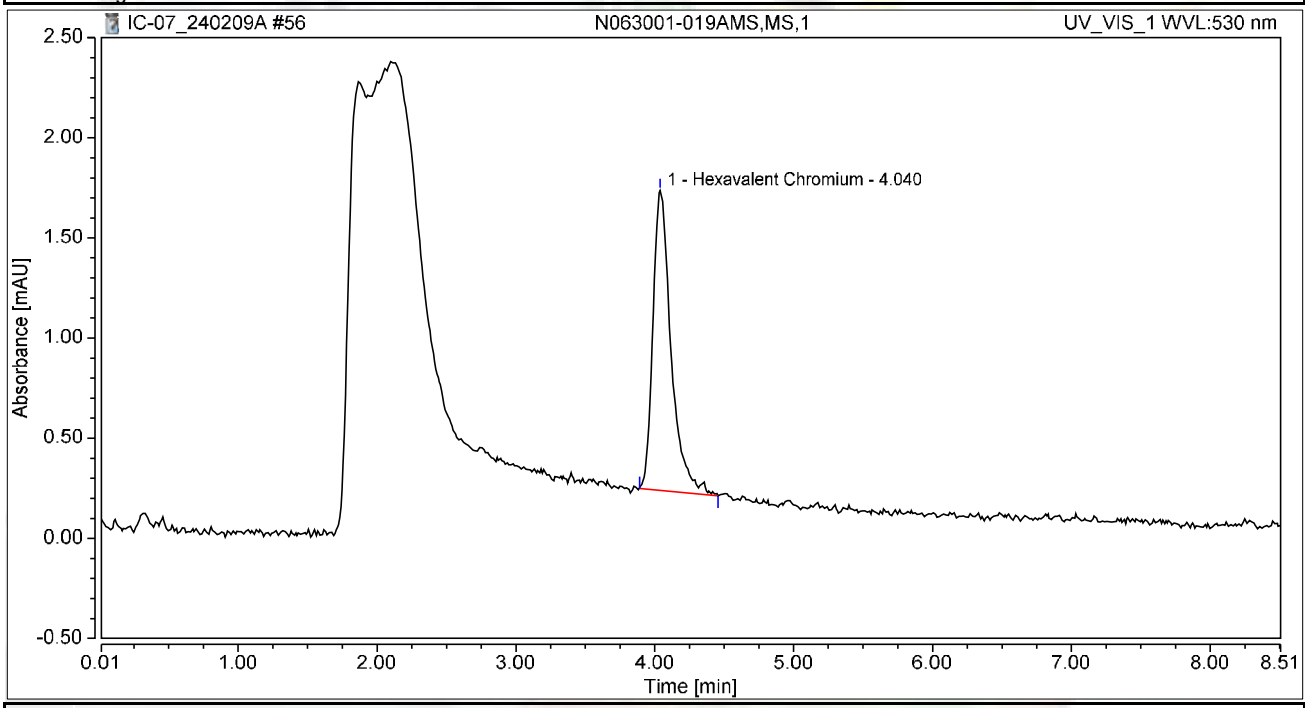
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-019AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 17:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

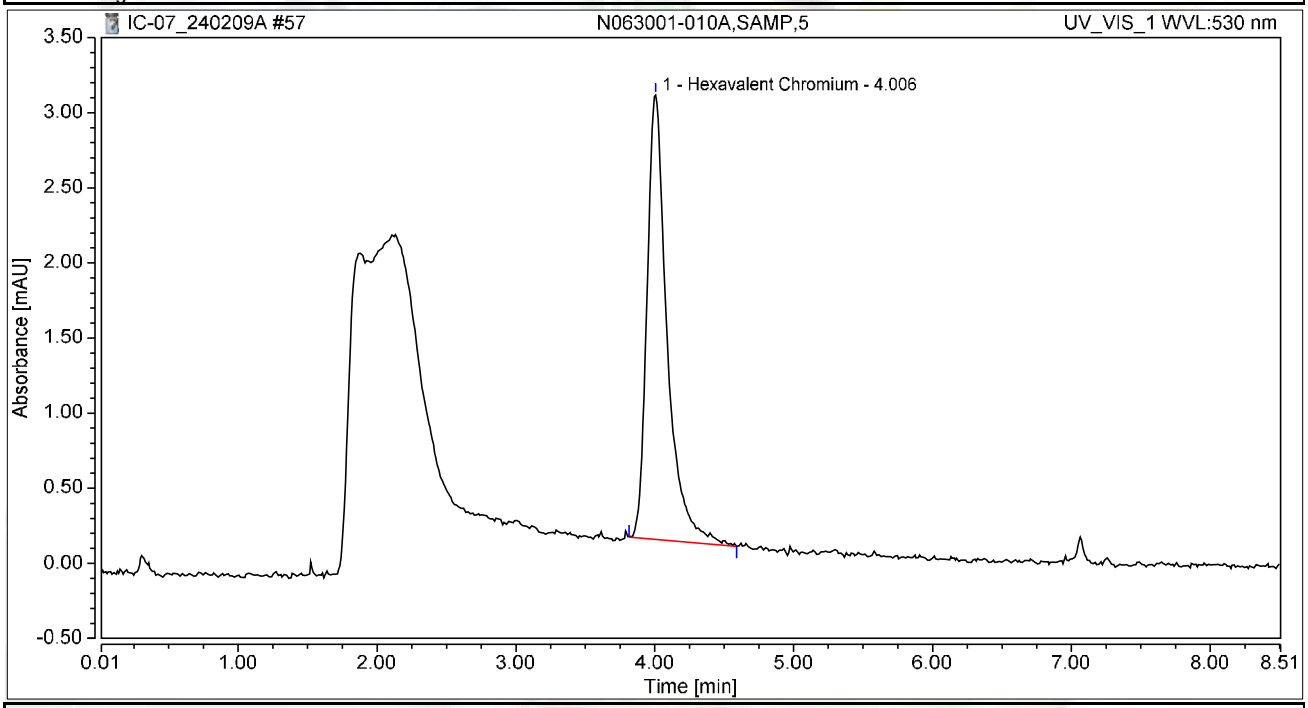
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.227	1.497	100.00	100.00	1.0547
Total:			**0.227**	**1.497**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-010A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 17:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

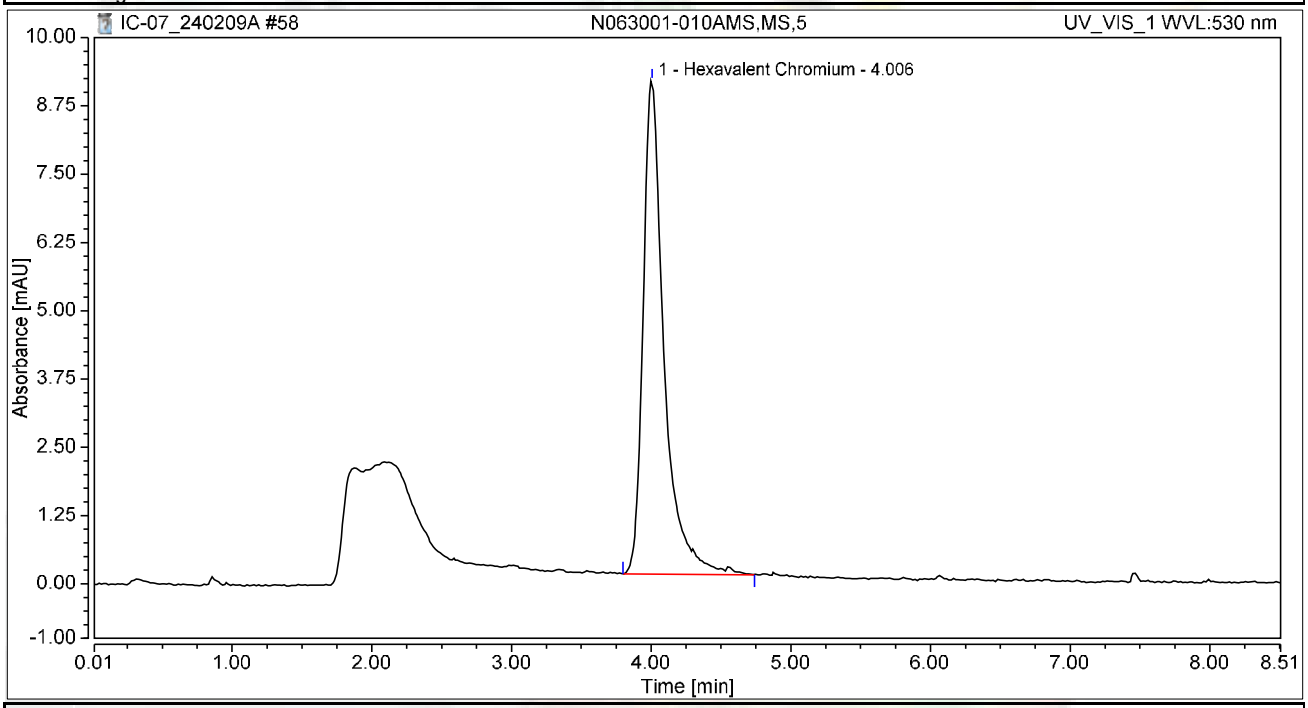
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.498	2.957	100.00	100.00	2.3139
Total:			**0.498**	**2.957**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-010AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 17:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

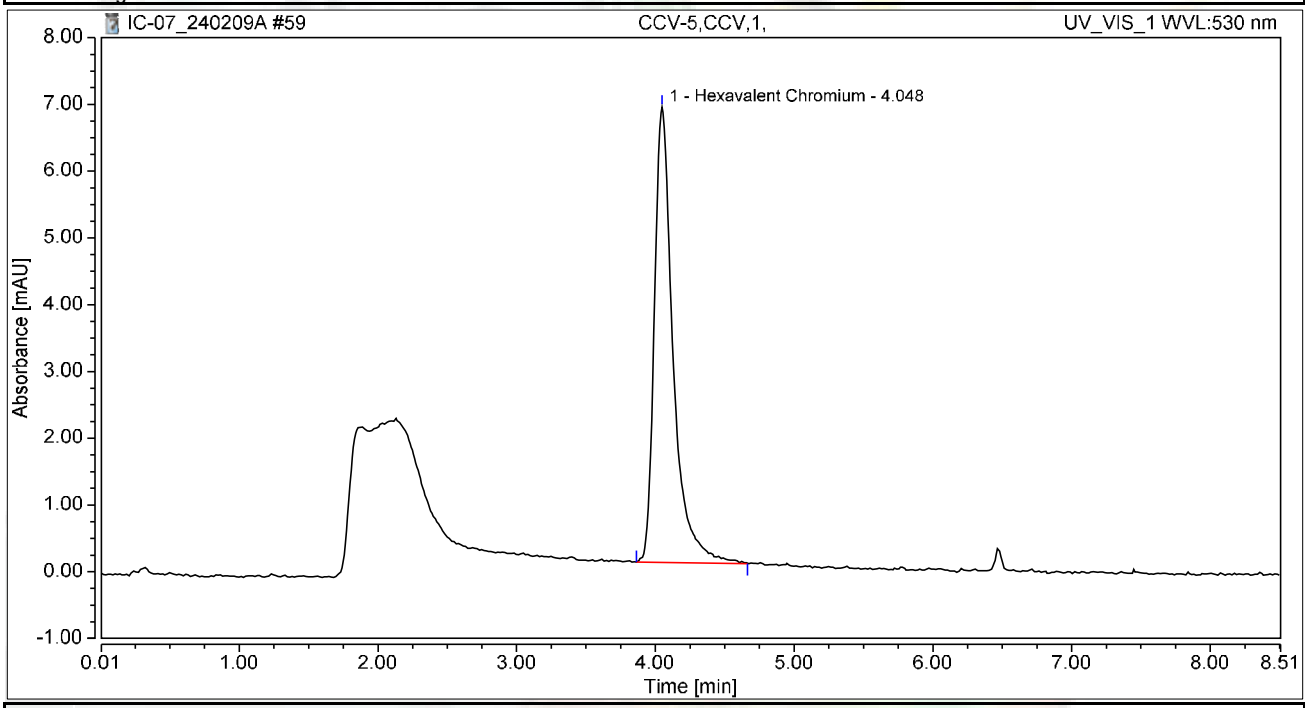
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.570	9.032	100.00	100.00	7.2980
Total:			**1.570**	**9.032**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 17:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

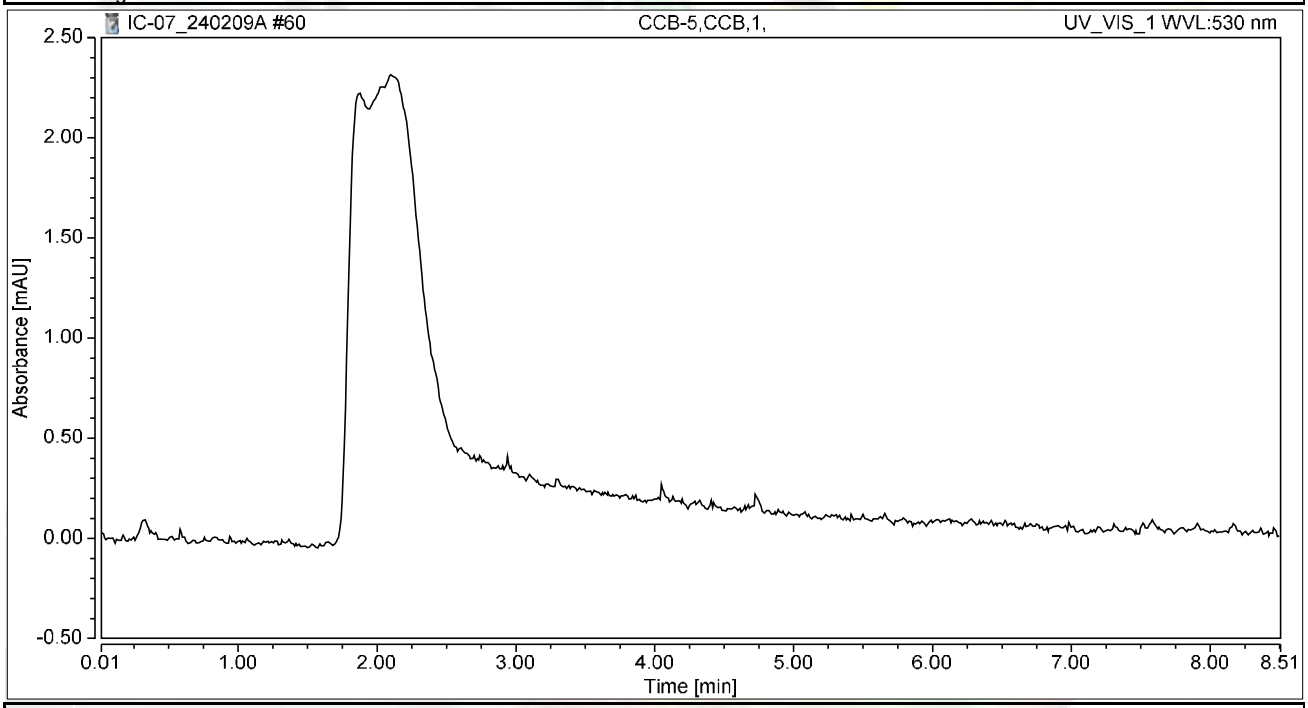
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.069	6.824	100.00	100.00	4.9703
Total:			**1.069**	**6.824**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 17:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

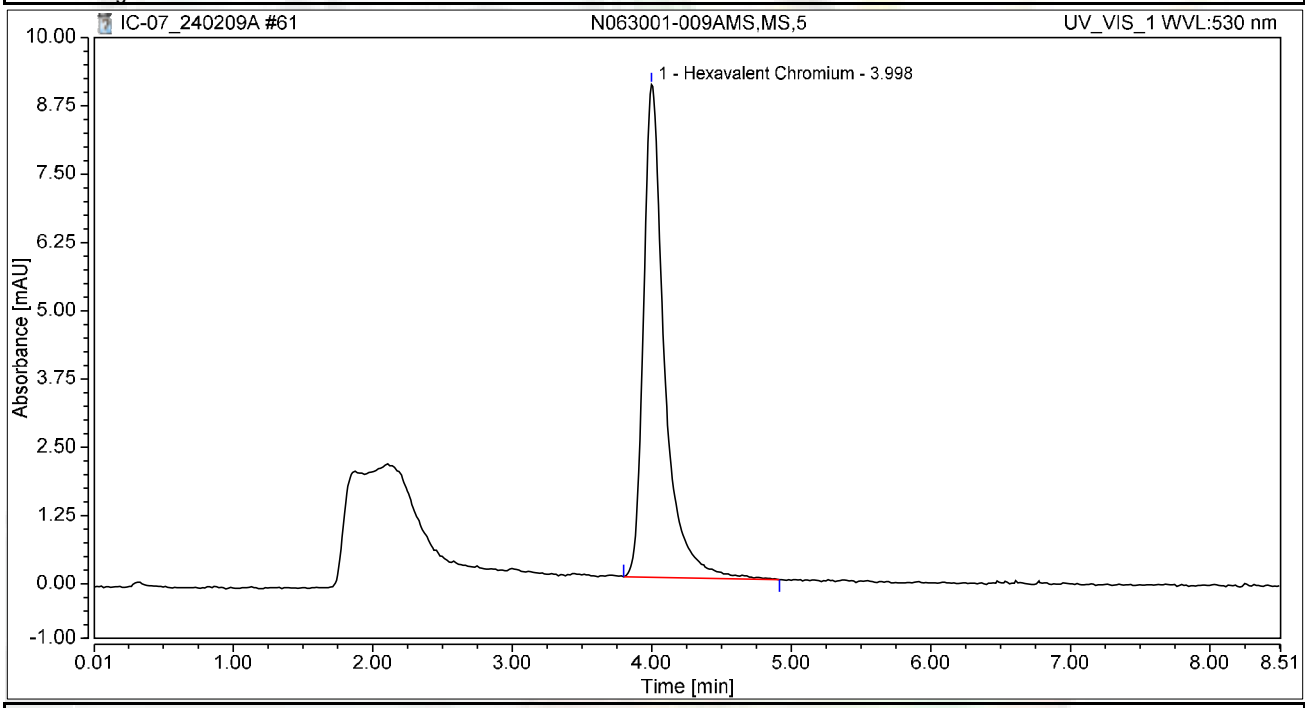
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-009AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 17:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

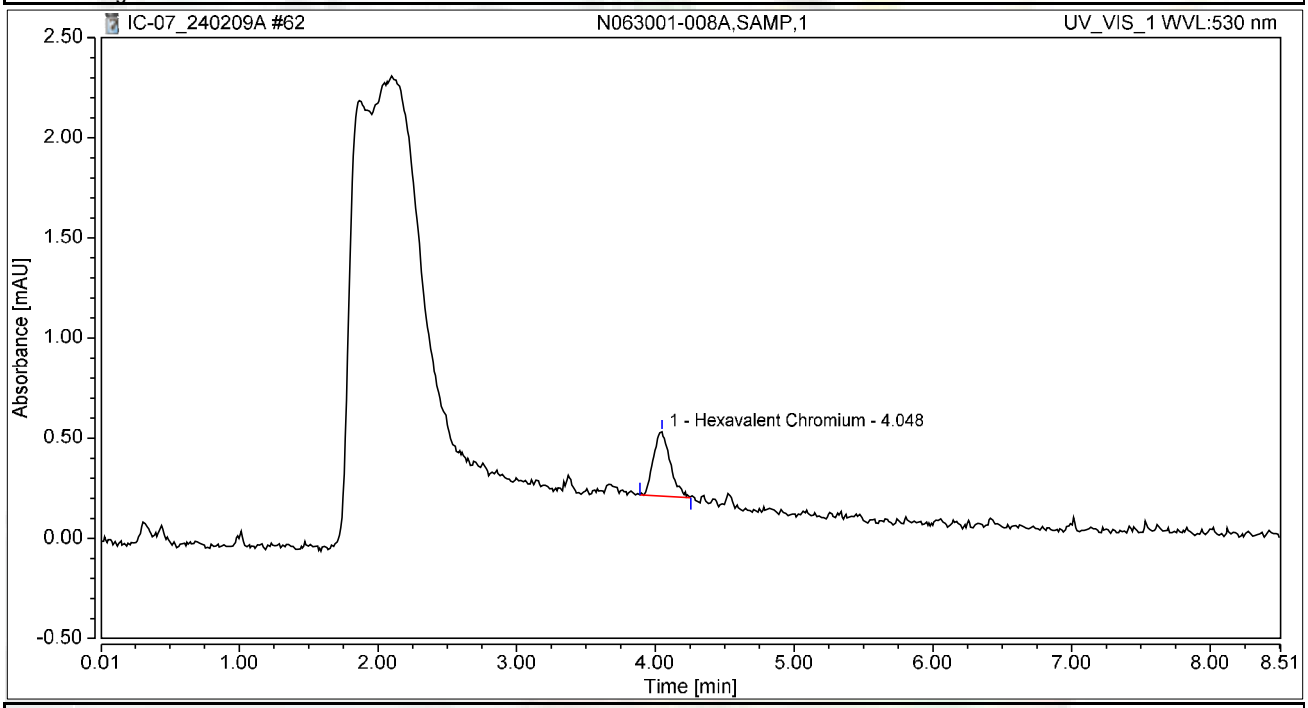
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	1.578	9.021	100.00	100.00	7.3381
Total:			**1.578**	**9.021**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 17:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

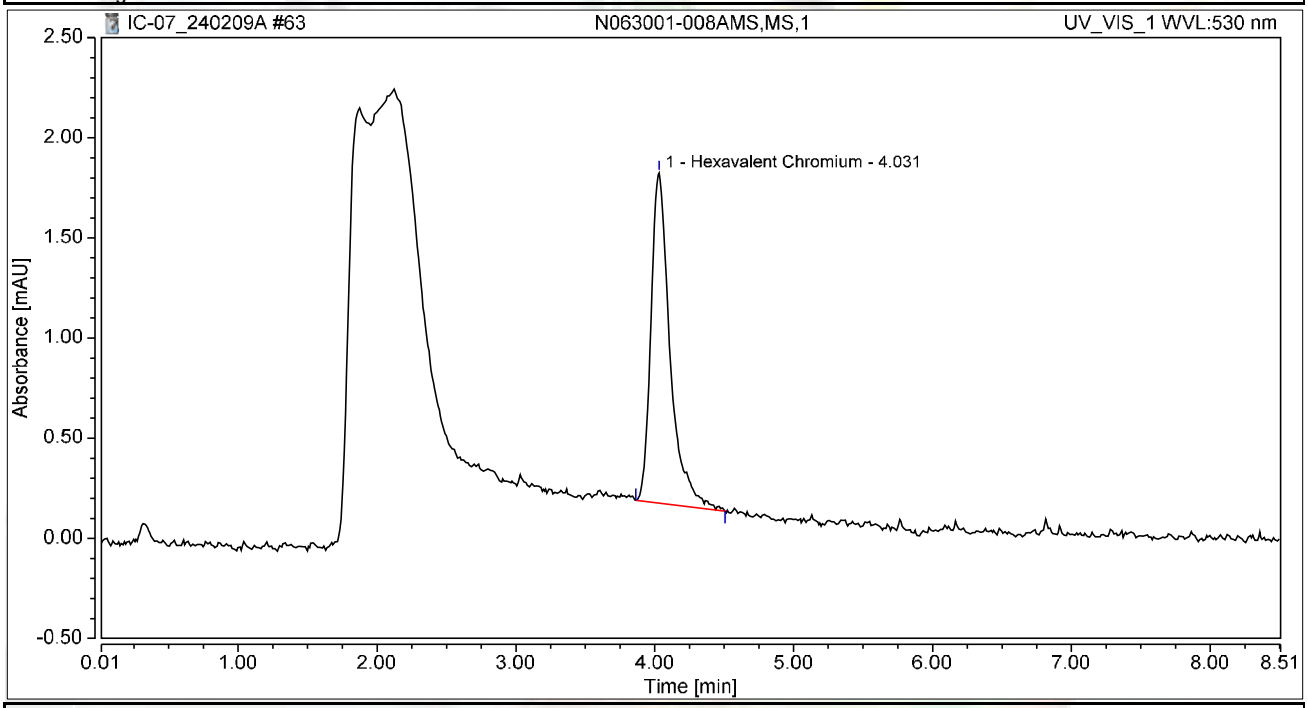
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.045	0.320	100.00	100.00	0.2115
Total:			**0.045**	**0.320**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-008AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 18:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

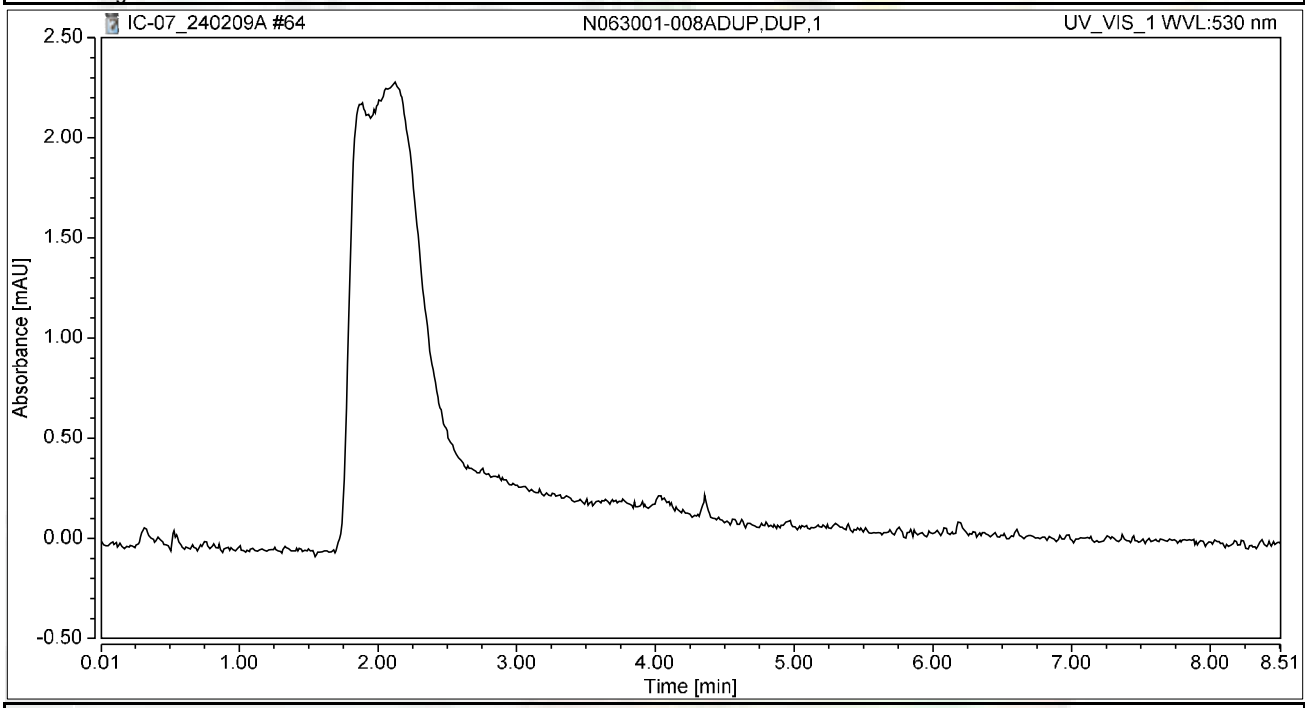
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.263	1.649	100.00	100.00	1.2210
Total:			**0.263**	**1.649**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-008ADUP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 18:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

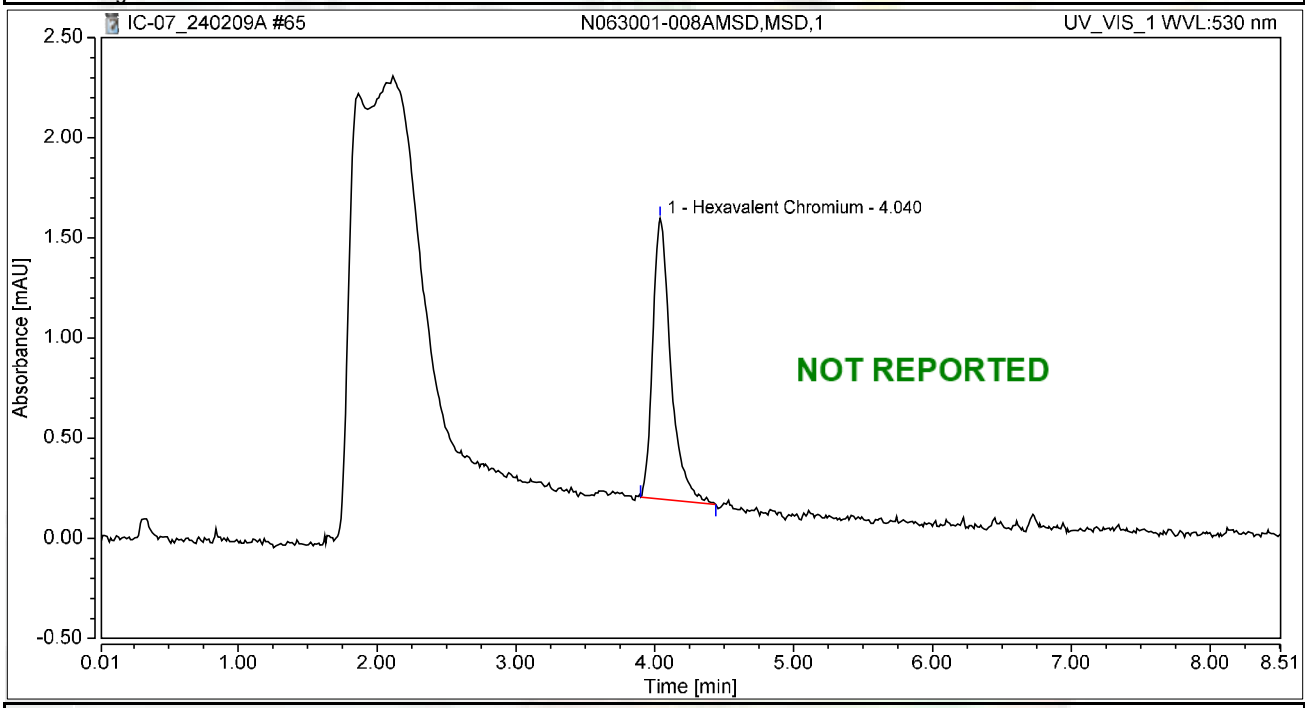
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-008AMSD,MSD,1**	*Run Time (min):*	**8.49**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 18:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

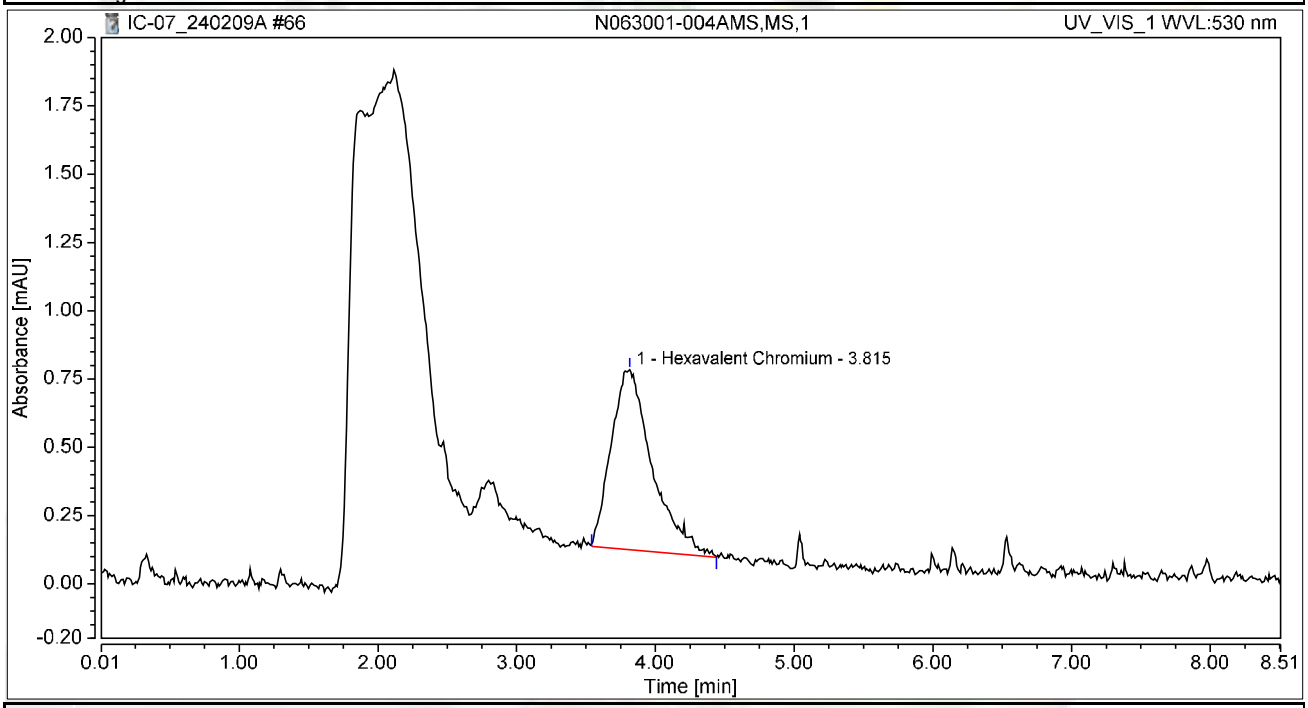
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.211	1.401	100.00	100.00	0.9817
Total:			**0.211**	**1.401**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 18:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

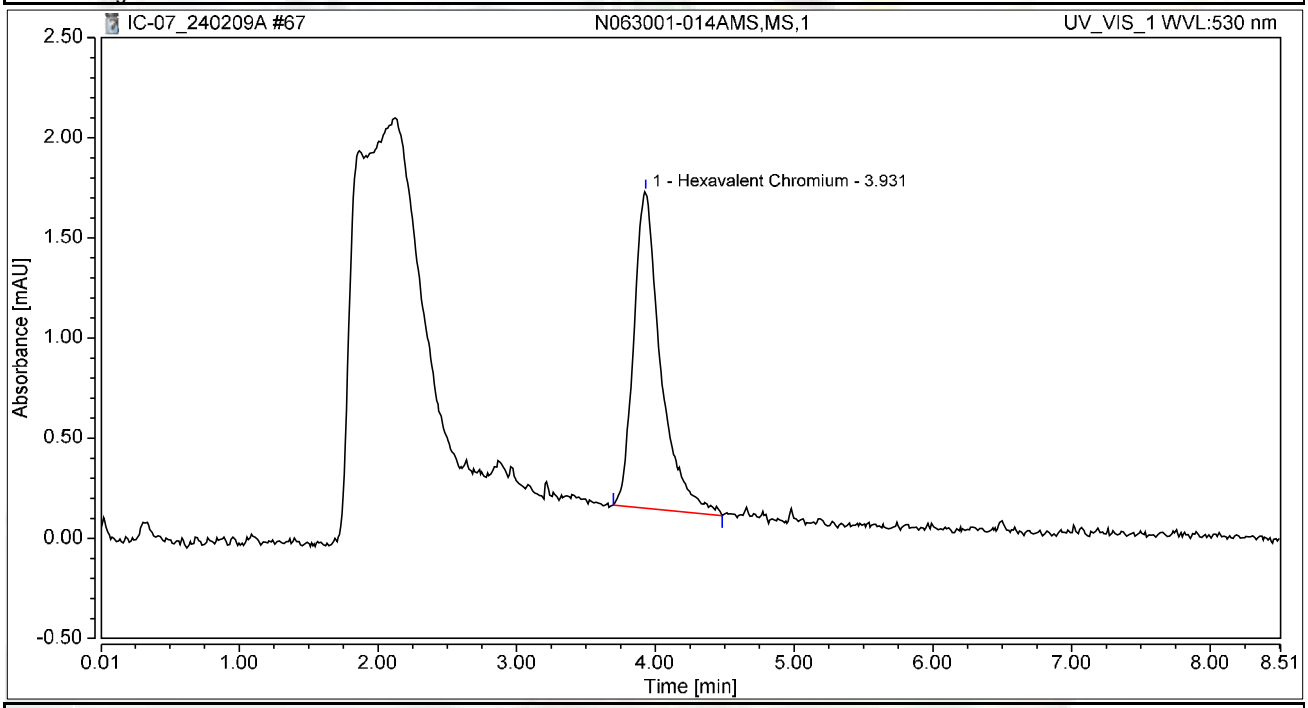
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	0.226	0.659	100.00	100.00	1.0512
Total:			**0.226**	**0.659**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-014AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 18:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

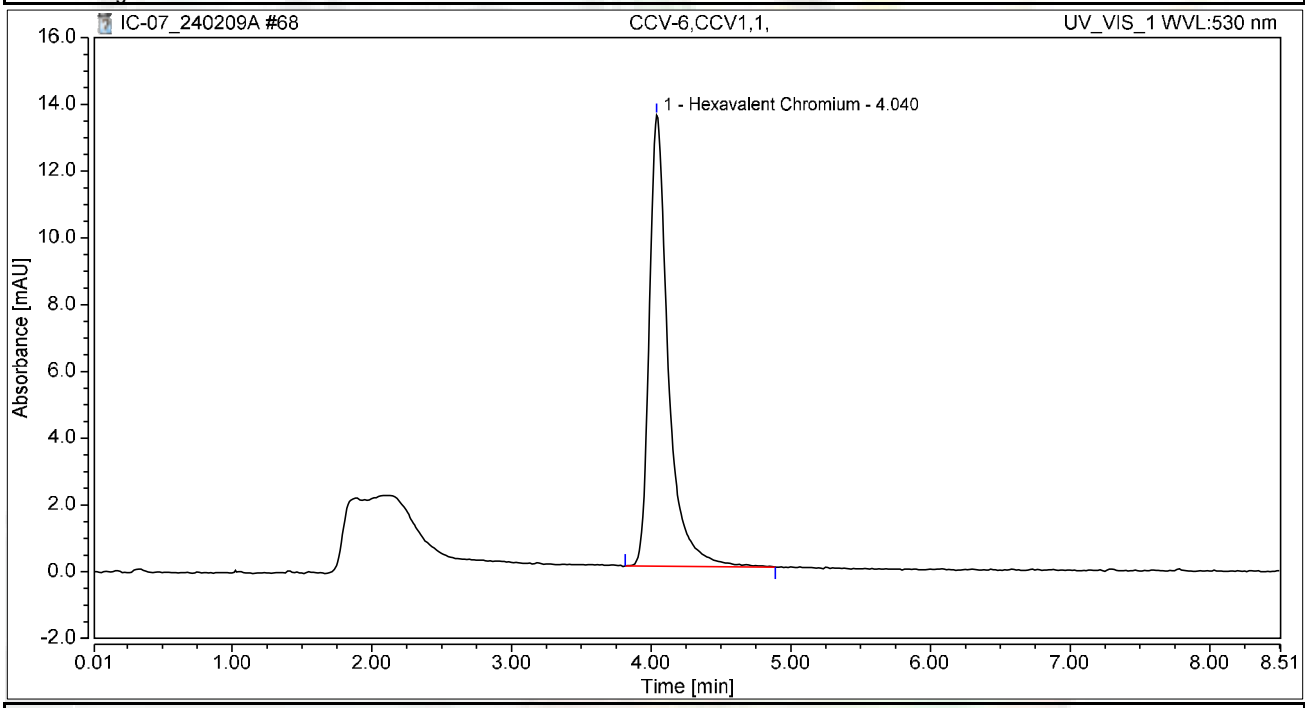
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.931	0.356	1.580	100.00	100.00	1.6562
Total:			**0.356**	**1.580**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 18:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

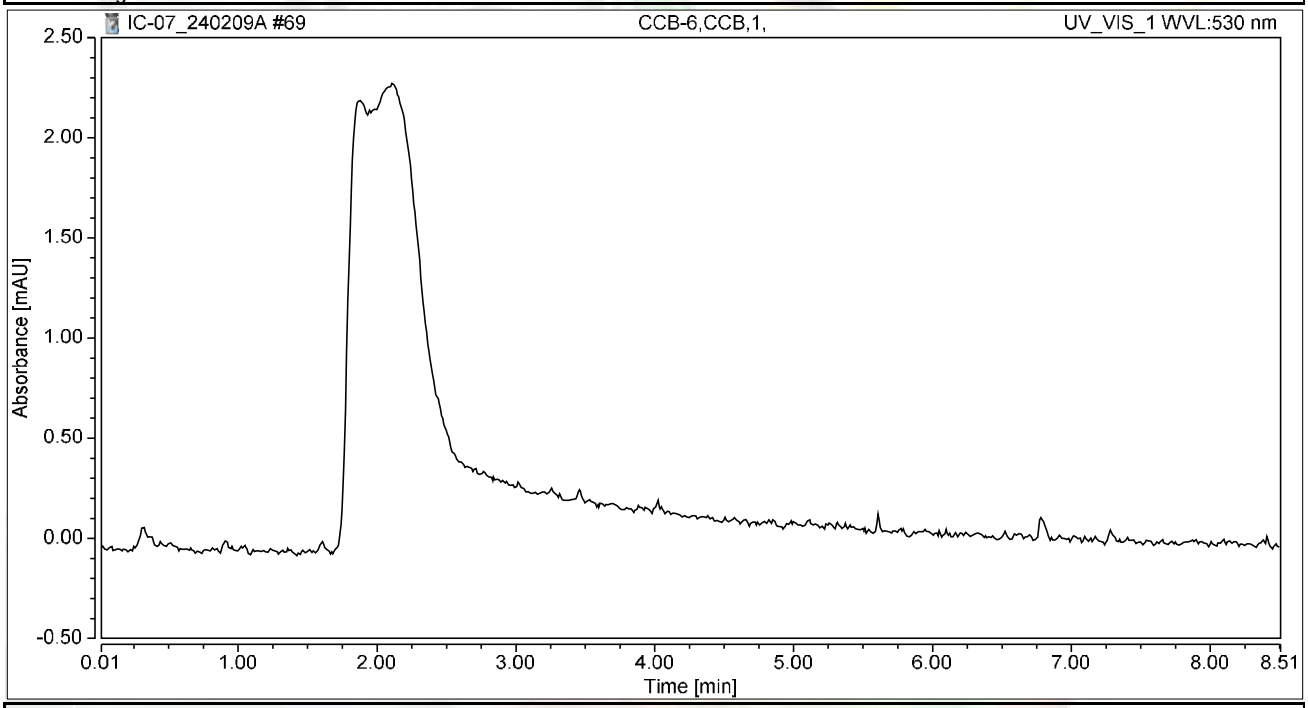
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.138	13.505	100.00	100.00	9.9396
Total:			**2.138**	**13.505**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 19:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

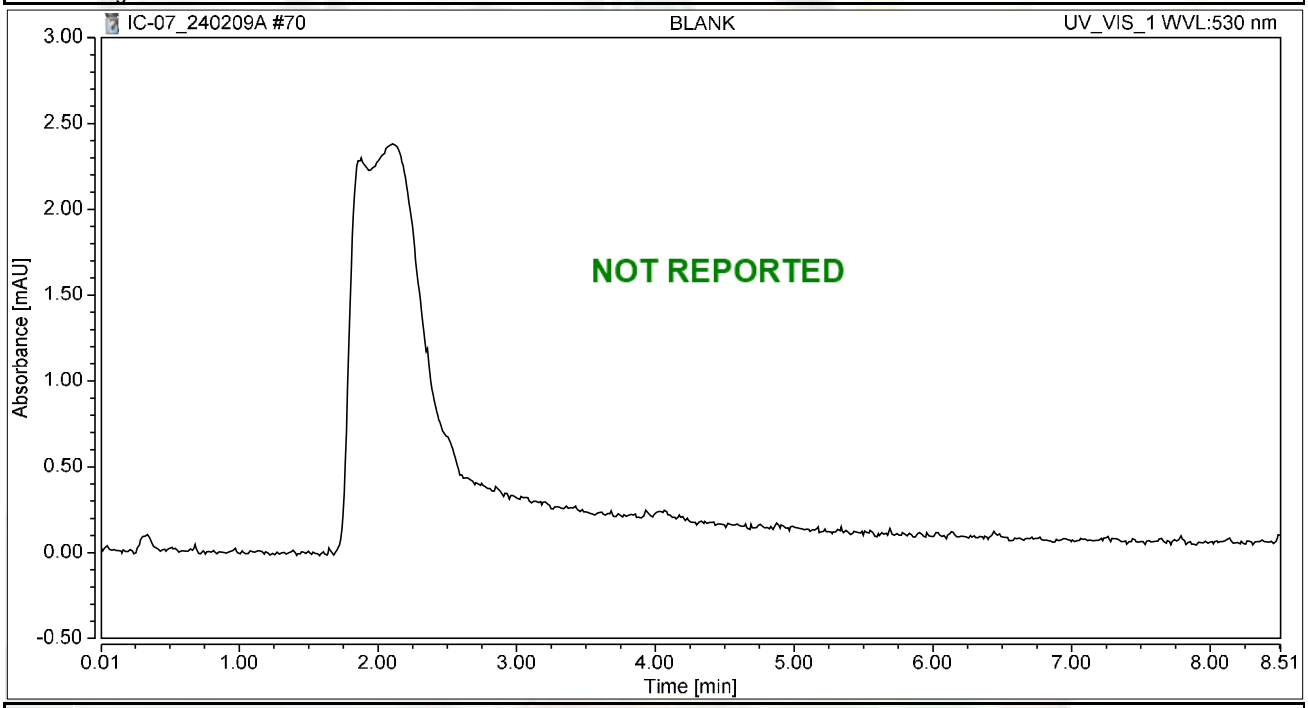
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**09/Feb/24 19:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240212A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/12/24 9:22 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/12/24 9:38 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/12/24 9:47 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/12/24 9:57 AM	Reported
13	MB-R181444	MBLK	1	Hexavalent Chromium	02/12/24 10:06 AM	Reported
14	LCS-R181444	LCS	1	Hexavalent Chromium	02/12/24 10:16 AM	Reported
15	N063001-021A	SAMP	1	Hexavalent Chromium	02/12/24 10:45 AM	Reported
16	N063001-021AMS	MS	1	Hexavalent Chromium	02/12/24 10:57 AM	Not Reported
17	N063012-004A	SAMP	500	Hexavalent Chromium	02/12/24 11:09 AM	Reported
18	N063012-004AMS	MS	500	Hexavalent Chromium	02/12/24 11:18 AM	Reported
19	N063012-004AMSD	MSD	500	Hexavalent Chromium	02/12/24 11:28 AM	Reported
20	N063012-002A	SAMP	500	Hexavalent Chromium	02/12/24 11:50 AM	Reported
21	N063012-002ADUP	DUP	500	Hexavalent Chromium	02/12/24 12:02 PM	Reported
22	N063012-002AMS	MS	500	Hexavalent Chromium	02/12/24 12:11 PM	Reported
23	CCV-2	CCV	1	Hexavalent Chromium	02/12/24 12:21 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/12/24 12:30 PM	Reported
25	N063012-006A	SAMP	1	Hexavalent Chromium	02/12/24 12:40 PM	Reported
26	N063012-006AMS	MS	1	Hexavalent Chromium	02/12/24 12:49 PM	Reported
27	N063012-007A	SAMP	1	Hexavalent Chromium	02/12/24 12:58 PM	Reported
28	N063012-007AMS	MS	1	Hexavalent Chromium	02/12/24 1:08 PM	Reported
29	N063012-009A	SAMP	1	Hexavalent Chromium	02/12/24 1:17 PM	Reported
30	N063012-009AMS	MS	1	Hexavalent Chromium	02/12/24 1:27 PM	Reported
31	N063012-001A	SAMP	100	Hexavalent Chromium	02/12/24 1:36 PM	Reported
32	N063012-001AMS	MS	100	Hexavalent Chromium	02/12/24 1:46 PM	Reported
33	N063001-020A	SAMP	1	Hexavalent Chromium	02/12/24 1:55 PM	Reported
34	N063001-020AMS	MS	1	Hexavalent Chromium	02/12/24 2:05 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/12/24 2:14 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/12/24 2:24 PM	Reported
37	N063010-001A	SAMP	1	Hexavalent Chromium	02/12/24 2:33 PM	Reported
38	N063010-001AMS	MS	1	Hexavalent Chromium	02/12/24 2:43 PM	Reported
39	N063010-002A	SAMP	1	Hexavalent Chromium	02/12/24 2:52 PM	Reported
40	N063010-002AMS	MS	1	Hexavalent Chromium	02/12/24 3:01 PM	Reported
41	N063010-003A	SAMP	1	Hexavalent Chromium	02/12/24 3:11 PM	Reported
42	N063010-003AMS	MS	1	Hexavalent Chromium	02/12/24 3:20 PM	Reported

INJECTION LOG: 240212A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063012-003A	SAMP	500	Hexavalent Chromium	02/12/24 3:30 PM	Reported
44	N063012-003AMS	MS	500	Hexavalent Chromium	02/12/24 3:39 PM	Reported
45	N062966-003A	SAMP	5	Hexavalent Chromium	02/12/24 3:49 PM	Reported
46	N062966-003AMS	MS	5	Hexavalent Chromium	02/12/24 3:58 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/12/24 4:08 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/12/24 4:17 PM	Reported
49	N063001-003A	SAMP	5	Hexavalent Chromium	02/12/24 4:26 PM	Reported
50	N063001-003AMS	MS	5	Hexavalent Chromium	02/12/24 4:36 PM	Reported
51	N063001-022A	SAMP	1	Hexavalent Chromium	02/12/24 4:45 PM	Reported
52	N063001-022AMS	MS	1	Hexavalent Chromium	02/12/24 4:55 PM	Reported
53	N063012-005A	SAMP	1	Hexavalent Chromium	02/12/24 5:04 PM	Reported
54	N063012-005AMS	MS	1	Hexavalent Chromium	02/12/24 5:14 PM	Reported
55	N063012-008A	SAMP	1	Hexavalent Chromium	02/12/24 5:23 PM	Reported
56	N063012-008AMS	MS	1	Hexavalent Chromium	02/12/24 5:33 PM	Reported
57	N063012-010A	SAMP	1	Hexavalent Chromium	02/12/24 5:42 PM	Reported
58	N063012-010AMS	MS	1	Hexavalent Chromium	02/12/24 5:52 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/12/24 6:01 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/12/24 6:14 PM	Reported
61	N063012-011A	SAMP	1	Hexavalent Chromium	02/12/24 6:24 PM	Reported
62	N063012-011AMS	MS	1	Hexavalent Chromium	02/12/24 6:33 PM	Reported
63	N063001-021AMS	MS	1	Hexavalent Chromium	02/12/24 6:43 PM	Reported
64	CCV-6	CCV1	1	Hexavalent Chromium	02/12/24 6:52 PM	Reported
65	CCB-6	CCB	1	Hexavalent Chromium	02/12/24 7:02 PM	Reported
66	BLANK	BLANK	1	Hexavalent Chromium	02/12/24 7:14 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240212A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**12/Feb/24 19:44:39**
No. of Injections:	**69**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/12/2024 09:22	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/12/2024 09:38	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/12/2024 09:47	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/12/2024 09:57	Finished	CCB R240103B
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/12/2024 10:06	Finished	MB R240103B
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/12/2024 10:16	Finished	LCS @5ppb, IWST-231228B
15	N063001-021A,SAMP	1	1000	Unknown		02/12/2024 10:45	Finished	SAMP,10 mL
16	N063001-021AMS,MS	2	1000	Unknown		02/12/2024 10:57	Finished	MS (5ppb), IWST-231228B,10r
17	N063012-004A,SAMP	3	1000	Unknown		02/12/2024 11:09	Finished	SAMP,0.02>10 mL
18	N063012-004AMS,MS	4	1000	Unknown		02/12/2024 11:18	Finished	MS (5ppb), IWST-231228B,0.0
19	N063012-004AMSD,M	5	1000	Unknown		02/12/2024 11:28	Finished	MSD (5ppb), IWST-231228B,0
20	N063012-002A,SAMP	1	1000	Unknown		02/12/2024 11:50	Finished	SAMP,0.02>10 mL
21	N063012-002ADUP,D	2	1000	Unknown		02/12/2024 12:02	Finished	DUP,0.02>10 mL
22	N063012-002AMS,MS	3	1000	Unknown		02/12/2024 12:11	Finished	MS (5ppb), IWST-231228B,0.0
23	CCV-2,CCV,1,	4	1000	Unknown		02/12/2024 12:21	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	5	1000	Unknown		02/12/2024 12:30	Finished	CCB R240103B
25	N063012-006A,SAMP	6	1000	Unknown		02/12/2024 12:40	Finished	SAMP,10 mL
26	N063012-006AMS,MS	7	1000	Unknown		02/12/2024 12:49	Finished	MS (1ppb), IWST-231228B,10r
27	N063012-007A,SAMP	8	1000	Unknown		02/12/2024 12:58	Finished	SAMP,10 mL
28	N063012-007AMS,MS	9	1000	Unknown		02/12/2024 13:08	Finished	MS (1ppb), IWST-231228B,10r
29	N063012-009A,SAMP	10	1000	Unknown		02/12/2024 13:17	Finished	SAMP,10 mL
30	N063012-009AMS,MS	11	1000	Unknown		02/12/2024 13:27	Finished	MS (1ppb), IWST-231228B,10r
31	N063012-001A,SAMP	12	1000	Unknown		02/12/2024 13:36	Finished	SAMP,0.1>10 mL
32	N063012-001AMS,MS	13	1000	Unknown		02/12/2024 13:46	Finished	MS (5ppb), IWST-231228B,0.1
33	N063001-020A,SAMP	14	1000	Unknown		02/12/2024 13:55	Finished	SAMP,10 mL
34	N063001-020AMS,MS	15	1000	Unknown		02/12/2024 14:05	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	16	1000	Unknown		02/12/2024 14:14	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	17	1000	Unknown		02/12/2024 14:24	Finished	CCB R240103B
37	N063010-001A,SAMP	18	1000	Unknown		02/12/2024 14:33	Finished	SAMP,10 mL
38	N063010-001AMS,MS	19	1000	Unknown		02/12/2024 14:43	Finished	MS (1ppb), IWST-231228B,10r
39	N063010-002A,SAMP	20	1000	Unknown		02/12/2024 14:52	Finished	SAMP,10 mL
40	N063010-002AMS,MS	21	1000	Unknown		02/12/2024 15:01	Finished	MS (1ppb), IWST-231228B,10r
41	N063010-003A,SAMP	22	1000	Unknown		02/12/2024 15:11	Finished	SAMP,10 mL
42	N063010-003AMS,MS	23	1000	Unknown		02/12/2024 15:20	Finished	MS (1ppb), IWST-231228B,10r
43	N063012-003A,SAMP	24	1000	Unknown		02/12/2024 15:30	Finished	SAMP,0.02>10 mL
44	N063012-003AMS,MS	25	1000	Unknown		02/12/2024 15:39	Finished	MS (5ppb), IWST-231228B,0.0
45	N062966-003A,SAMP	26	1000	Unknown		02/12/2024 15:49	Finished	SAMP,2>10 mL
46	N062966-003AMS,MS	27	1000	Unknown		02/12/2024 15:58	Finished	MS (1ppb), IWST-231228B,2>1
47	CCV-4,CCV1,1,	28	1000	Unknown		02/12/2024 16:08	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	29	1000	Unknown		02/12/2024 16:17	Finished	CCB R240103B
49	N063001-003A,SAMP	30	1000	Unknown		02/12/2024 16:26	Finished	SAMP,2>10 mL
50	N063001-003AMS,MS	31	1000	Unknown		02/12/2024 16:36	Finished	MS (1ppb), IWST-231228B,2>1
51	N063001-022A,SAMP	32	1000	Unknown		02/12/2024 16:45	Finished	SAMP,10 mL
52	N063001-022AMS,MS	33	1000	Unknown		02/12/2024 16:55	Finished	MS (1ppb), IWST-231228B,10r
53	N063012-005A,SAMP	34	1000	Unknown		02/12/2024 17:04	Finished	SAMP,10 mL
54	N063012-005AMS,MS	35	1000	Unknown		02/12/2024 17:14	Finished	MS (1ppb), IWST-231228B,10r
55	N063012-008A,SAMP	36	1000	Unknown		02/12/2024 17:23	Finished	SAMP,10 mL
56	N063012-008AMS,MS	37	1000	Unknown		02/12/2024 17:33	Finished	MS (1ppb), IWST-231228B,10r
57	N063012-010A,SAMP	38	1000	Unknown		02/12/2024 17:42	Finished	SAMP,10 mL
58	N063012-010AMS,MS	39	1000	Unknown		02/12/2024 17:52	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	40	1000	Unknown		02/12/2024 18:01	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	41	1000	Unknown		02/12/2024 18:14	Finished	CCB R240103B

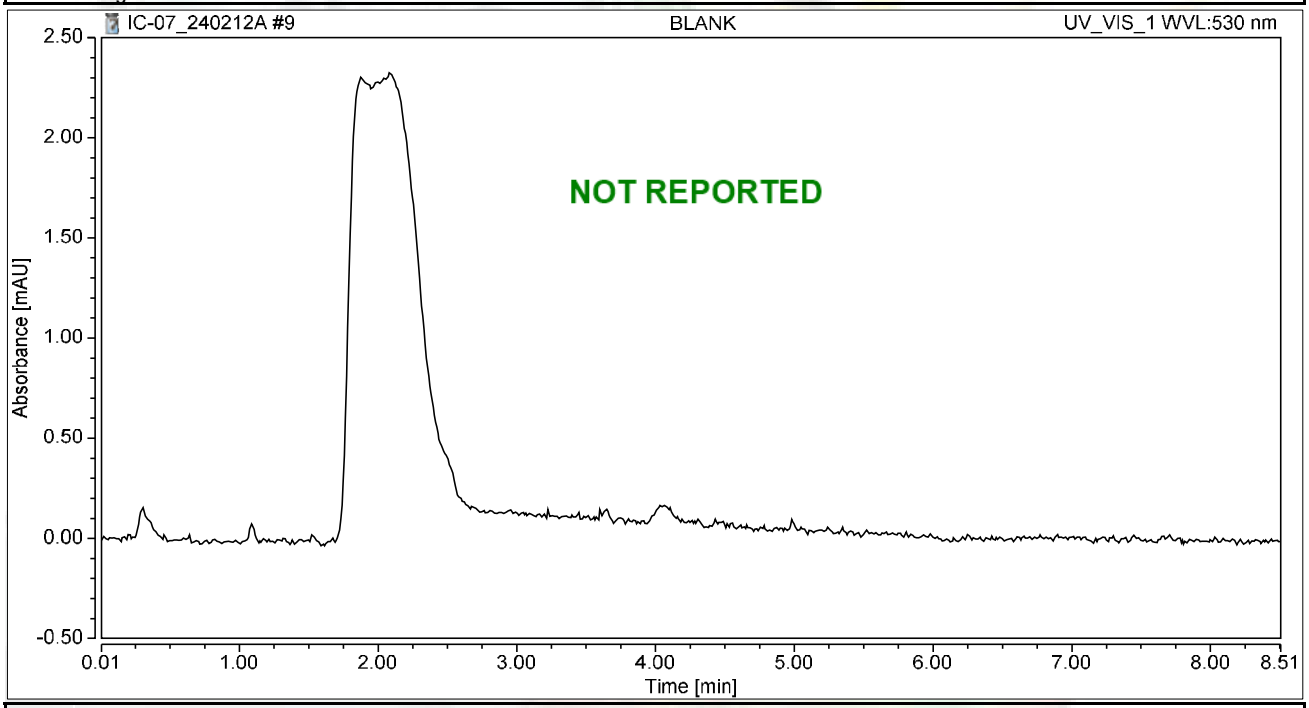
61	N063012-011A,SAMP	42	1000	Unknown		02/12/2024 18:24	Finished	SAMP,10 mL
62	N063012-011AMS,MS	43	1000	Unknown		02/12/2024 18:33	Finished	MS (1ppb), IWST-231228B,10r
63	N063001-021AMS,MS	44	1000	Unknown		02/12/2024 18:43	Finished	MS (1ppb), IWST-231228B,10r
64	CCV-6,CCV1,1,	45	1000	Unknown		02/12/2024 18:52	Finished	CCV @10ppb, IWST-231228A
65	CCB-6,CCB,1,	46	1000	Unknown		02/12/2024 19:02	Finished	CCB R240103B
66	BLANK	47	1000	Unknown		02/12/2024 19:14	Finished	BLANK
67	SHUTDOWN	48	1000	Unknown		02/12/2024 19:23	Finished	
68	Eluent: R240212A	49	1000	Unknown		n.a.	Finished	
69	PCR: R240212B	50	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 09:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

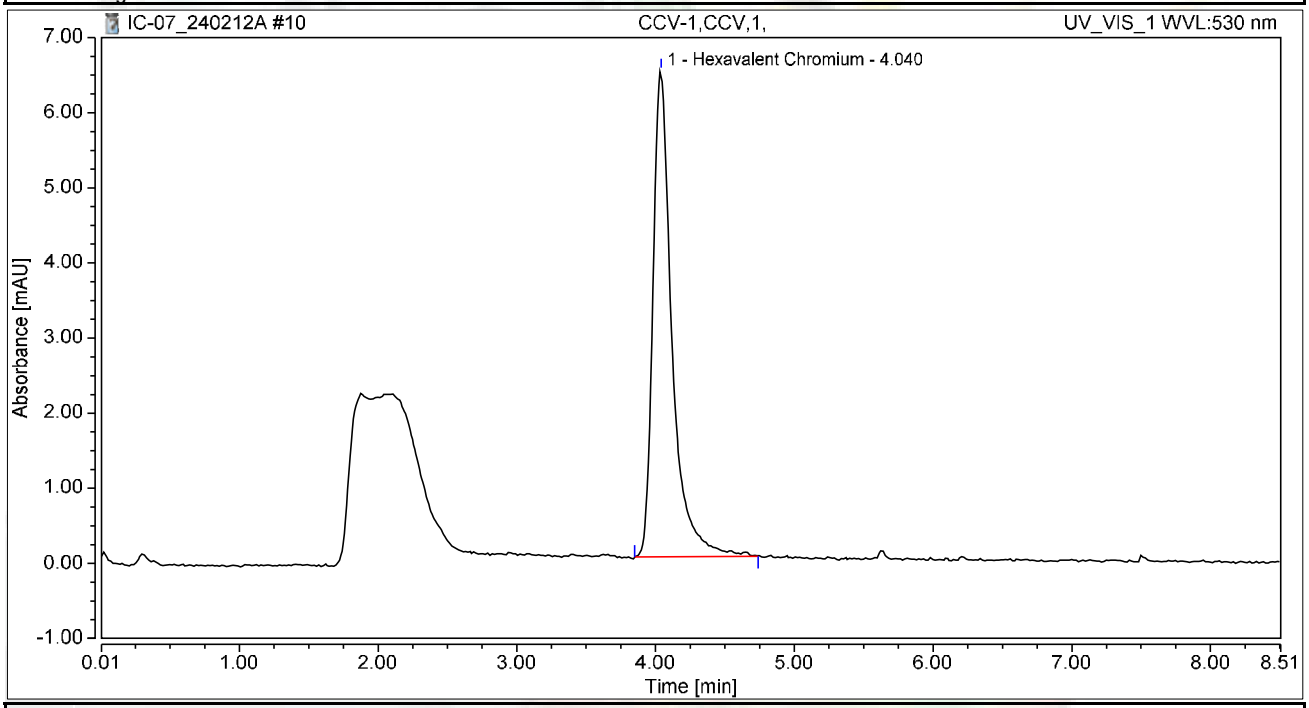
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 09:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.035	6.476	100.00	100.00	4.8109
Total:			**1.035**	**6.476**	**100.00**	**100.00**	

Reviewed by:

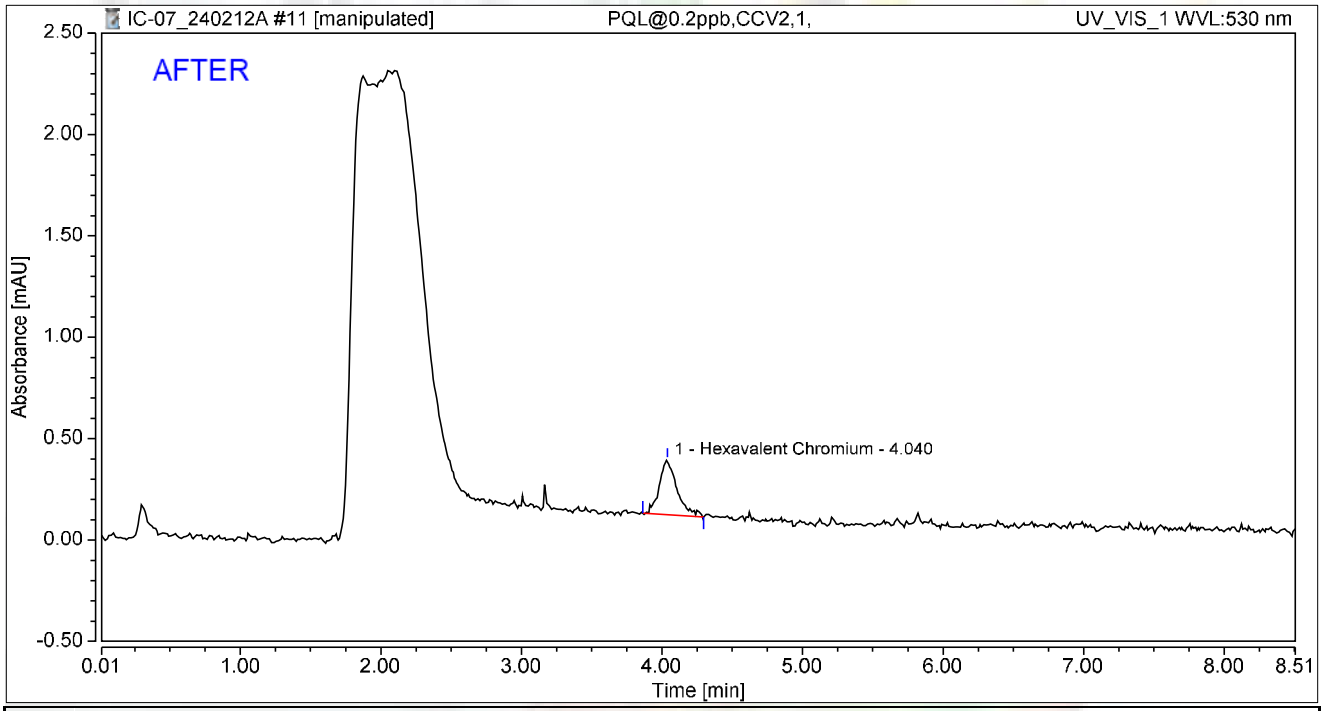
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 09:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.039	0.268	100.00	100.00	0.1822
Total:			**0.039**	**0.268**	**100.00**	**100.00**	

Reviewed by:

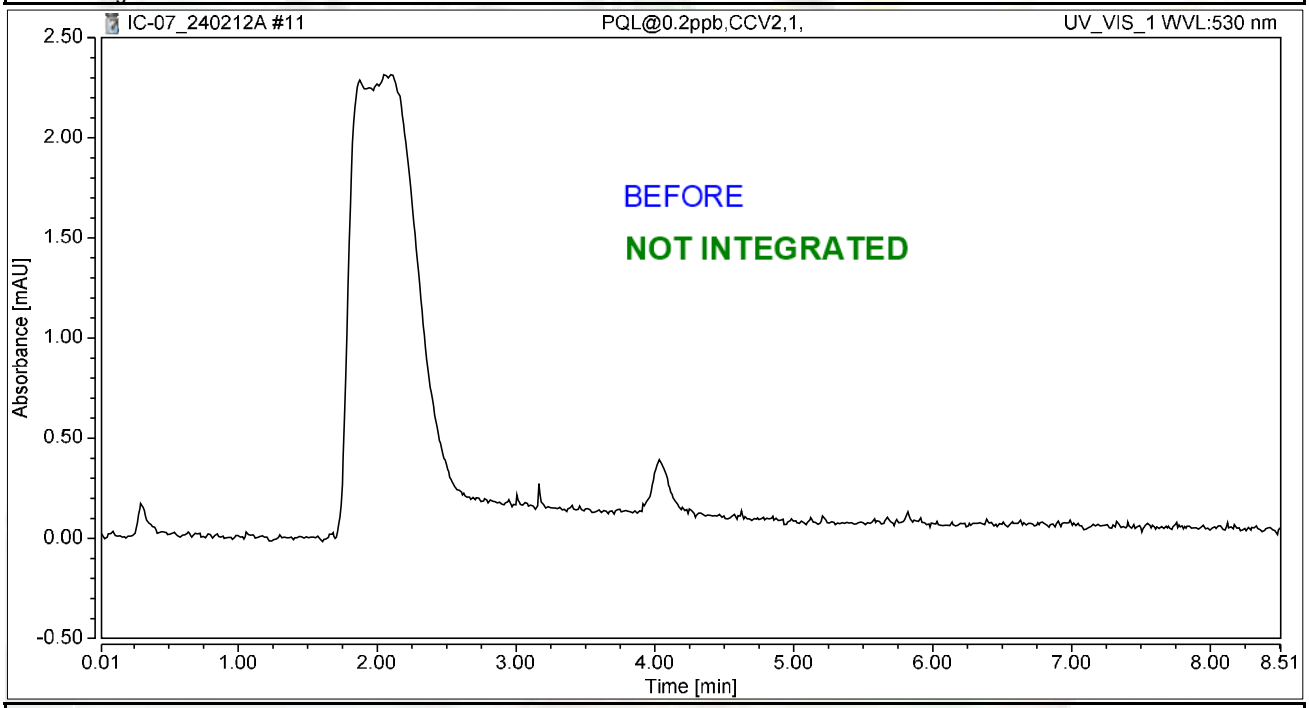
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 09:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

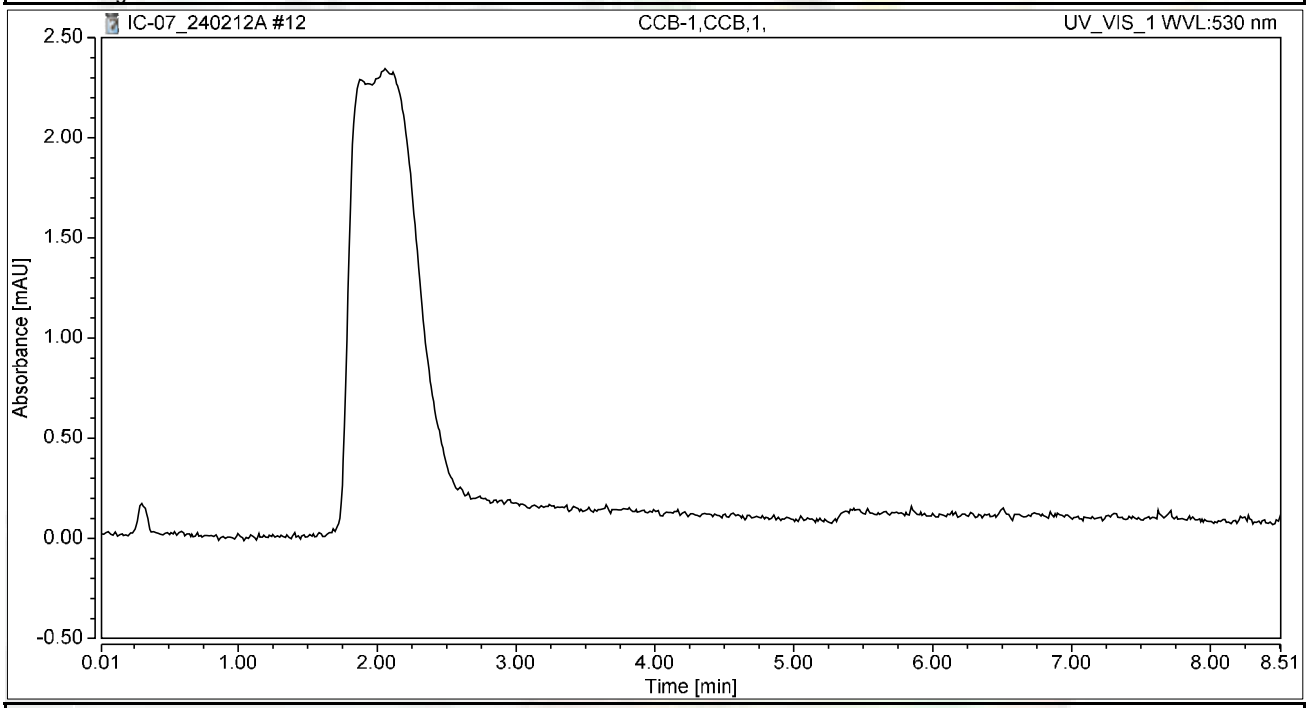
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 09:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

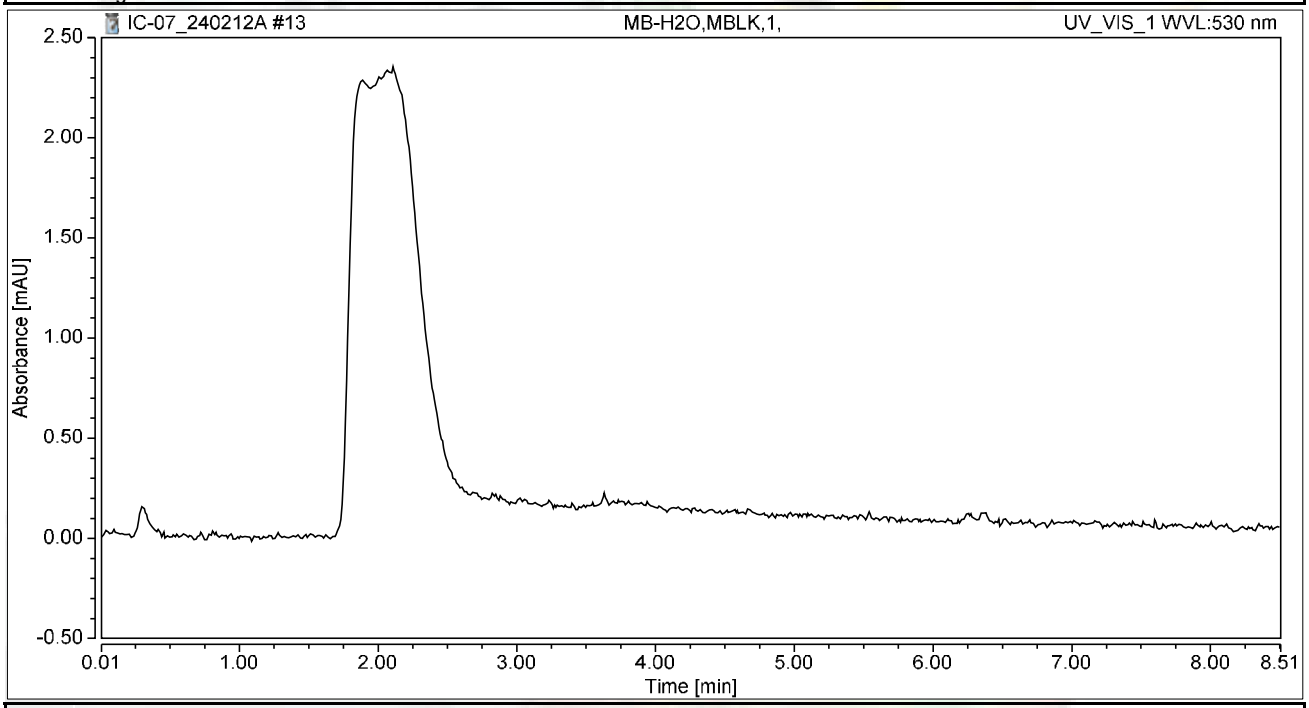
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 10:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

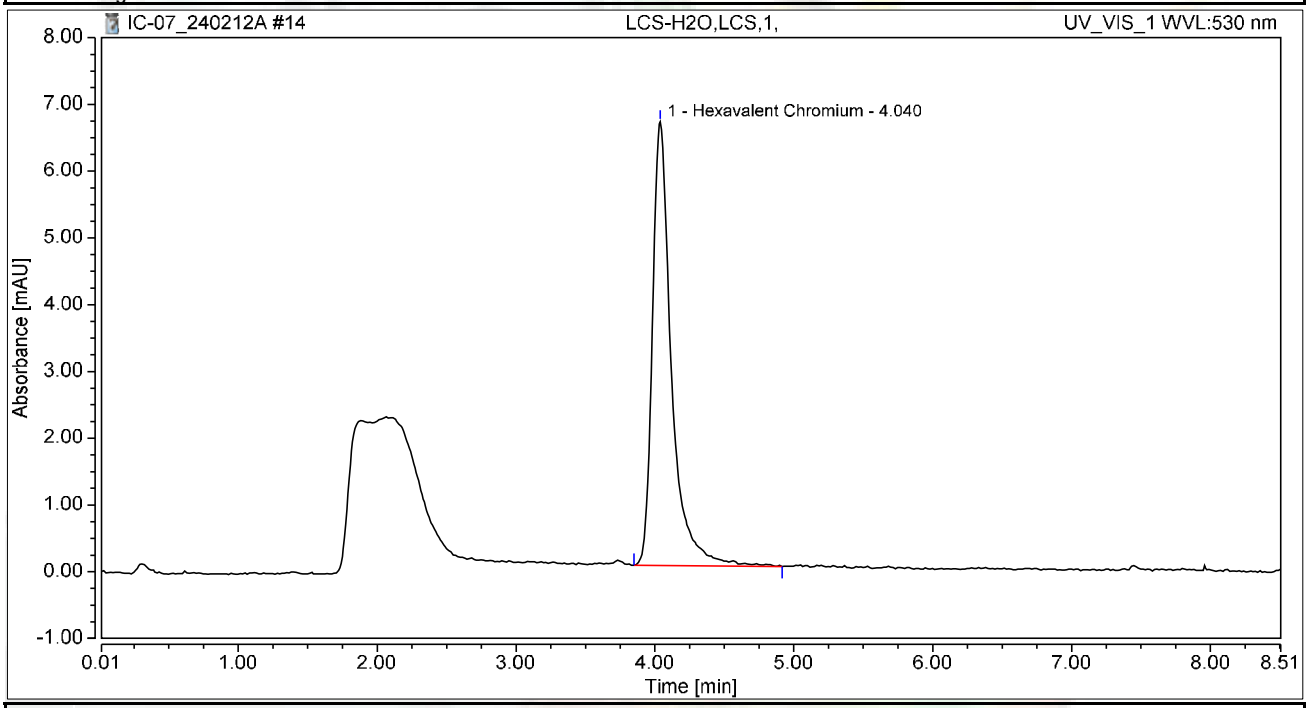
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 10:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

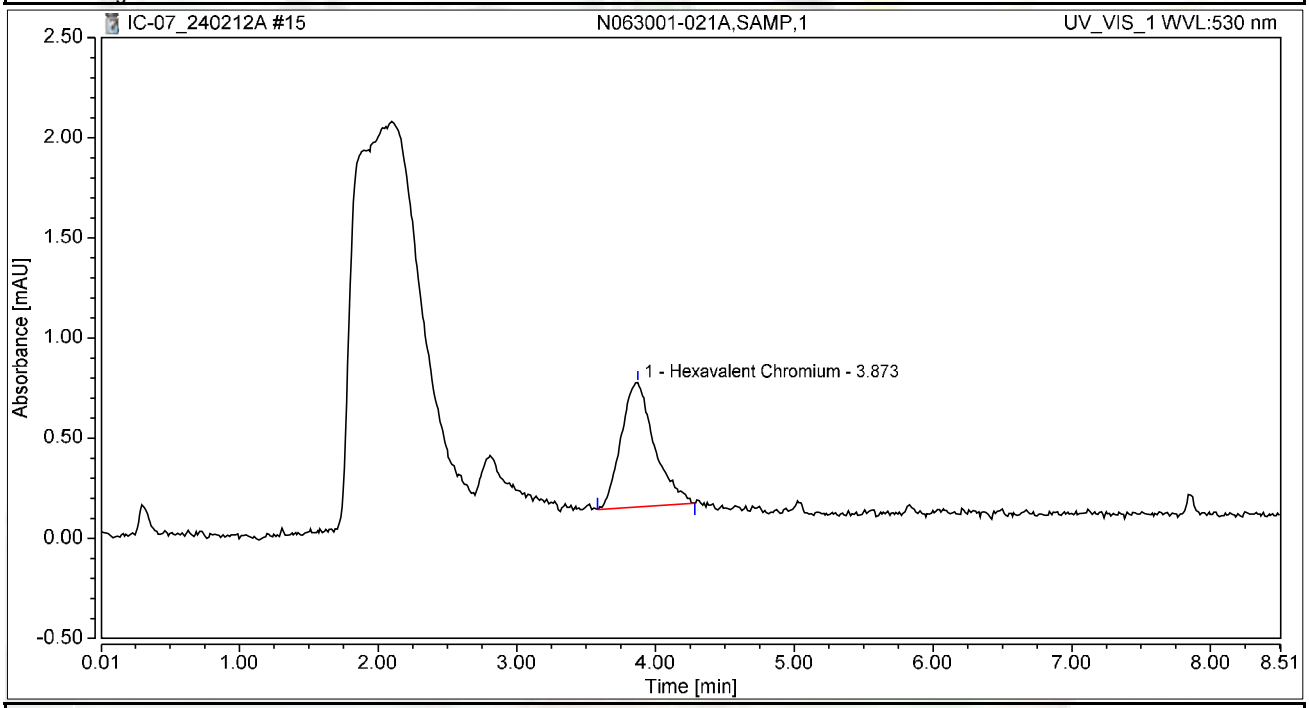
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.057	6.645	100.00	100.00	4.9152
Total:			**1.057**	**6.645**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-021A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 10:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

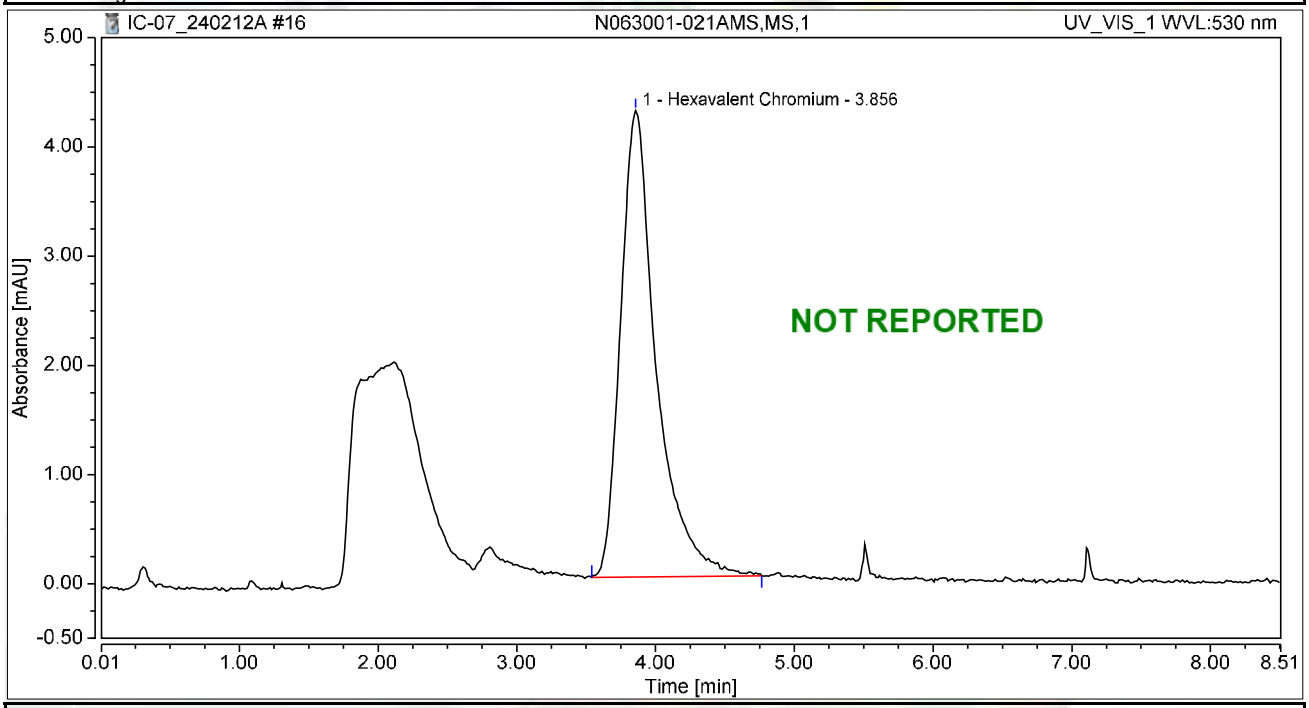
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.873	0.173	0.621	100.00	100.00	0.8062
Total:			**0.173**	**0.621**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-021AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 10:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

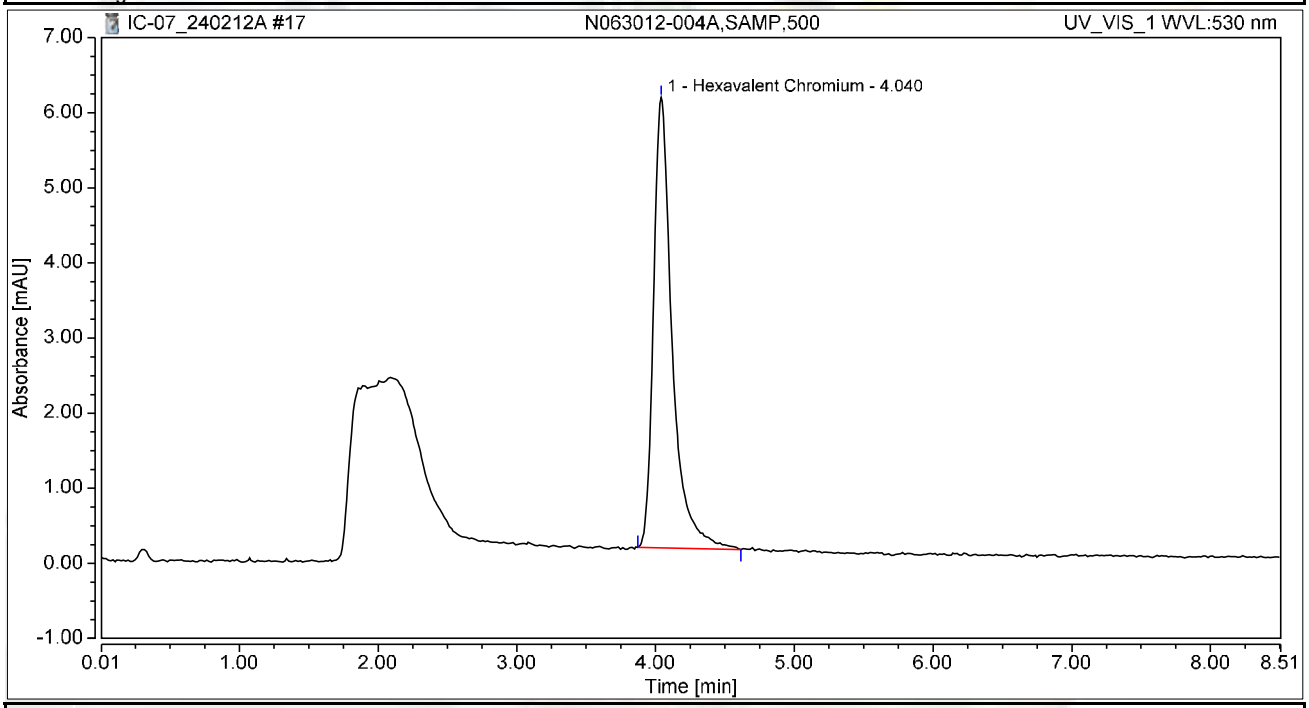
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	1.270	4.267	100.00	100.00	5.9032
Total:			**1.270**	**4.267**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-004A,SAMP,500**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 11:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

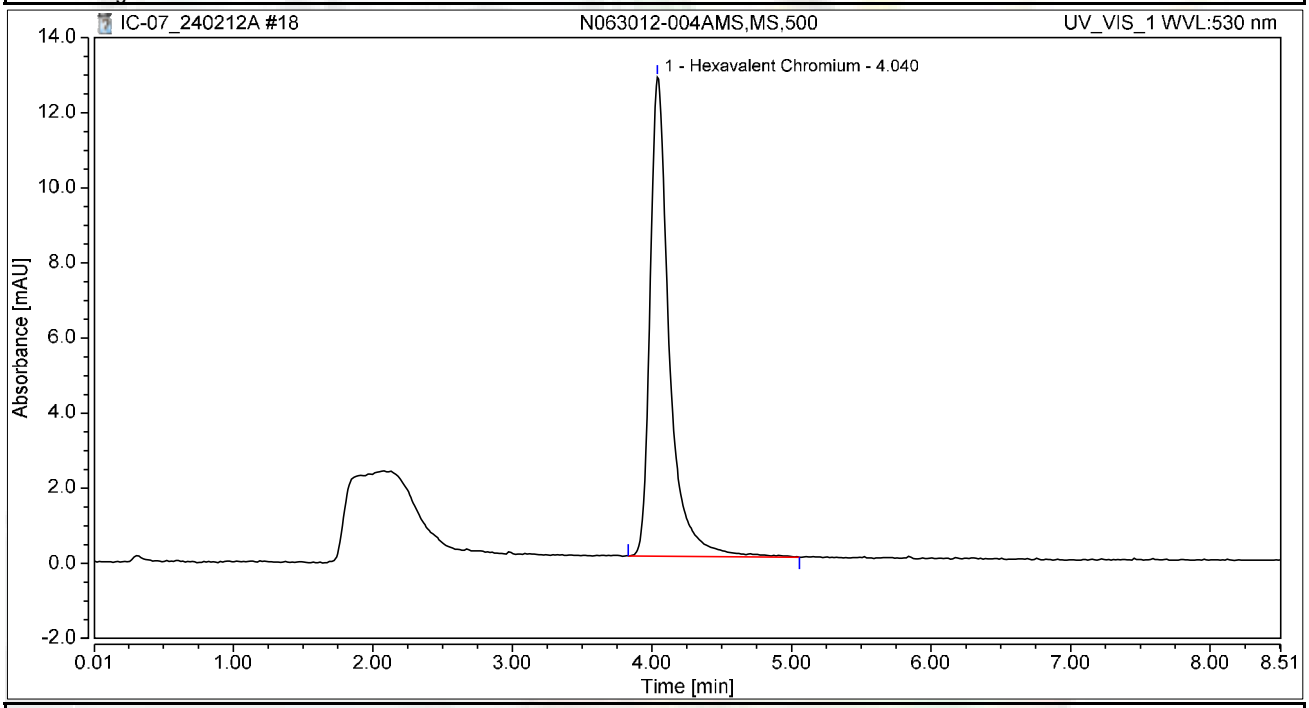
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.935	5.999	100.00	100.00	4.3471
Total:			**0.935**	**5.999**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-004AMS,MS,500**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 11:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

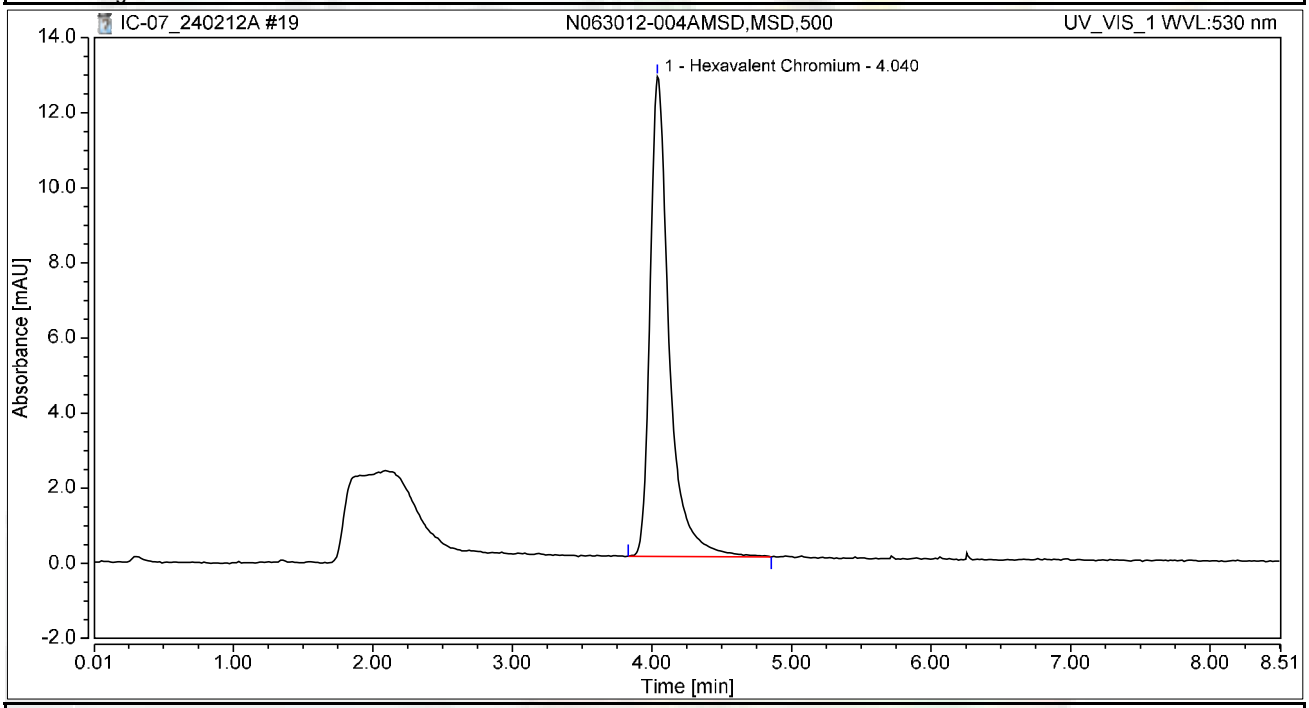
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.047	12.763	100.00	100.00	9.5168
Total:			**2.047**	**12.763**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-004AMSD,MSD,500**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 11:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

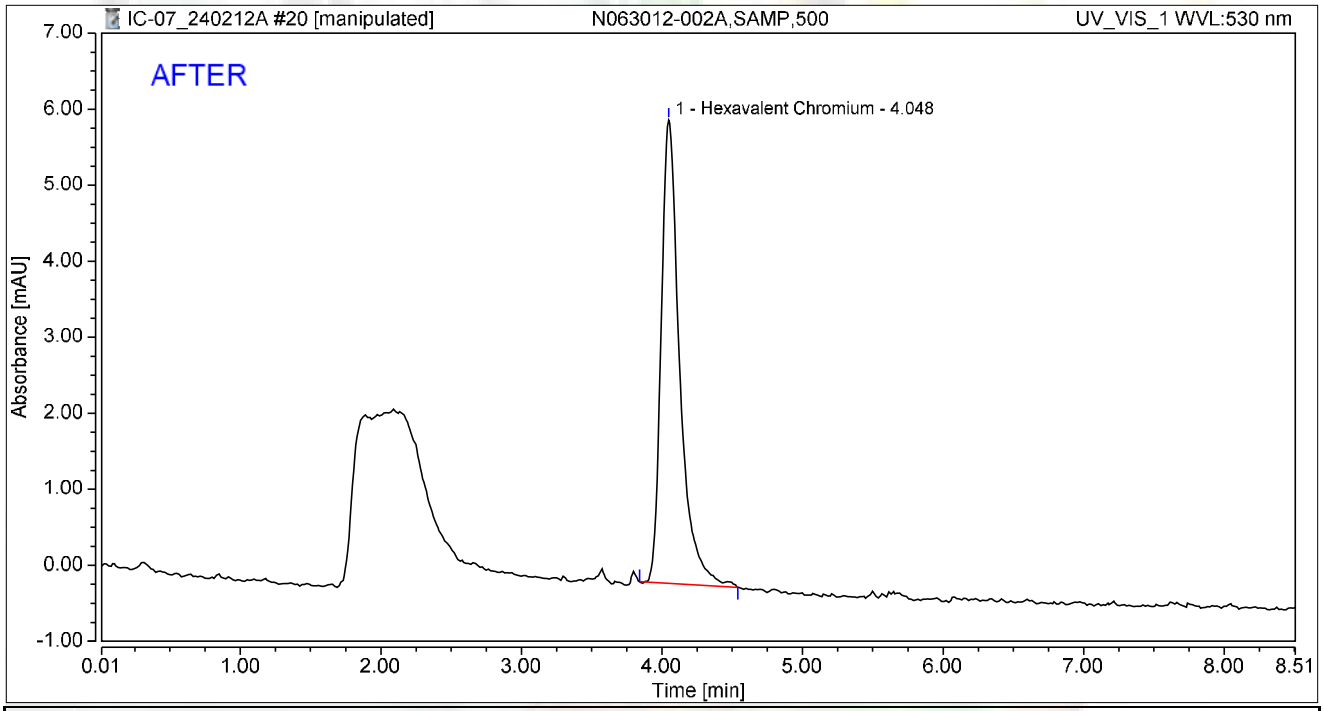
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.032	12.778	100.00	100.00	9.4478
Total:			**2.032**	**12.778**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-002A,SAMP,500**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 11:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.929	6.092	100.00	100.00	4.3202
Total:			**0.929**	**6.092**	**100.00**	**100.00**	

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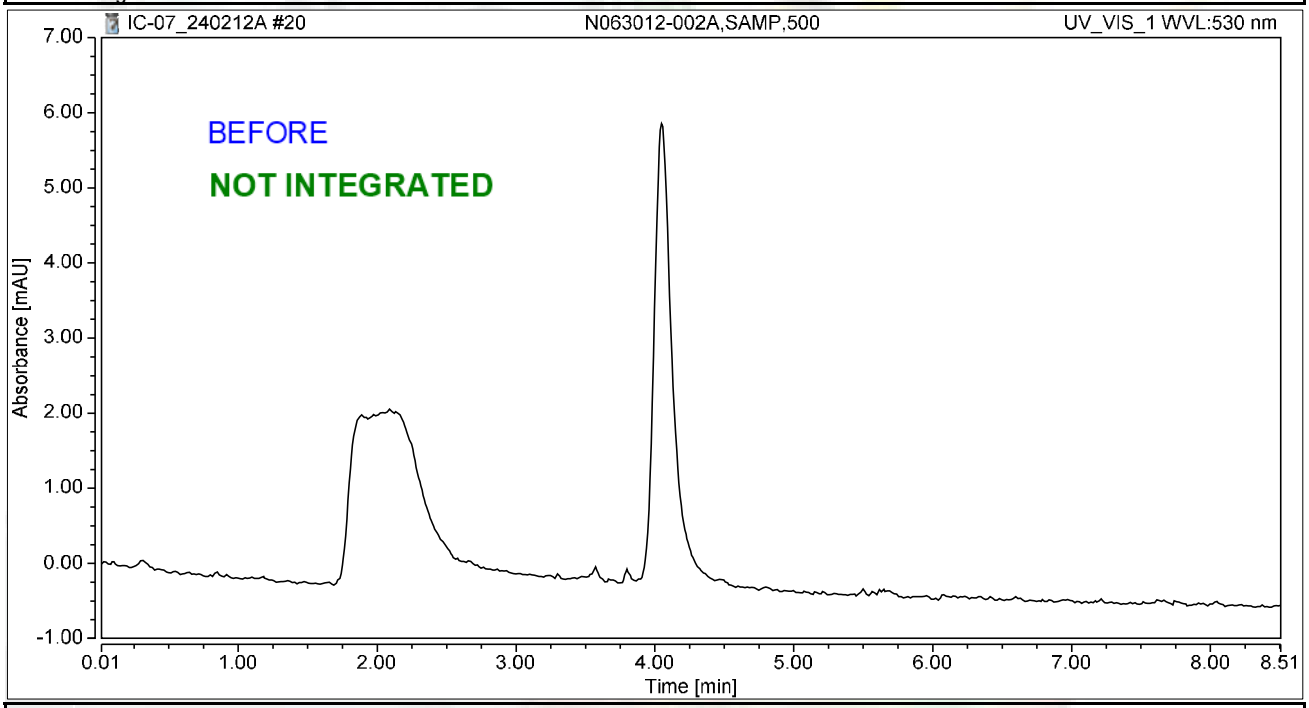
Chromatogram and Results

Injection Details

Injection Name:	**N063012-002A,SAMP,500**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 11:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

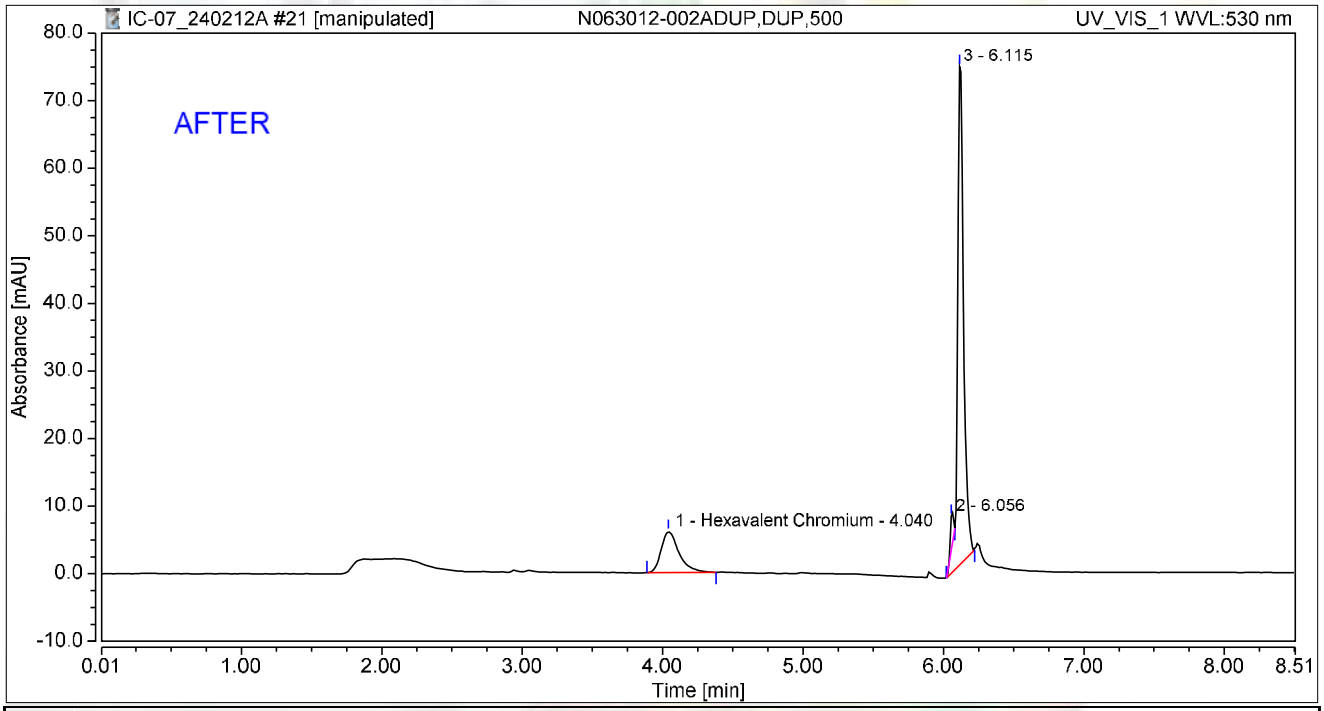
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-002ADUP,DUP,500**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 12:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.895	6.059	19.10	7.15	4.1600
2		6.056	0.116	4.914	2.49	5.80	n.a.
3		6.115	3.675	73.747	78.42	87.05	n.a.
Total:			**4.686**	**84.720**	**100.00**	**100.00**	

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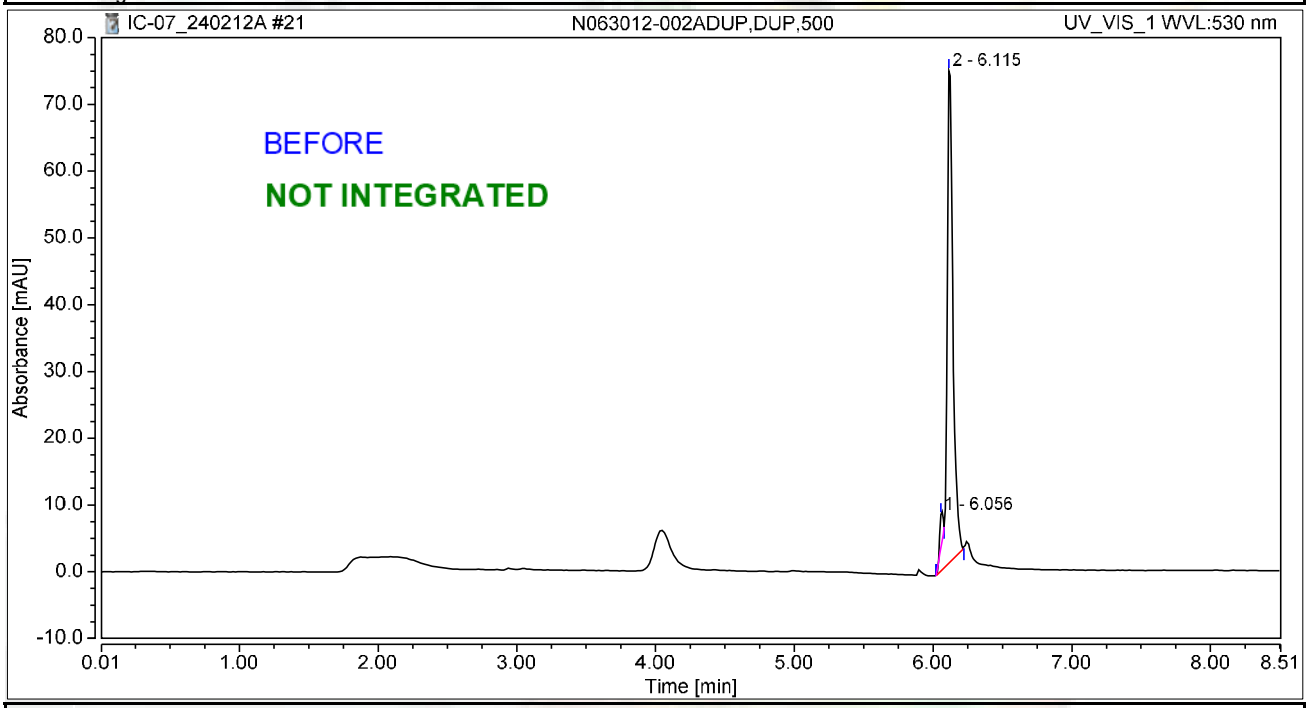
Chromatogram and Results

Injection Details

Injection Name:	**N063012-002ADUP,DUP,500**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 12:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

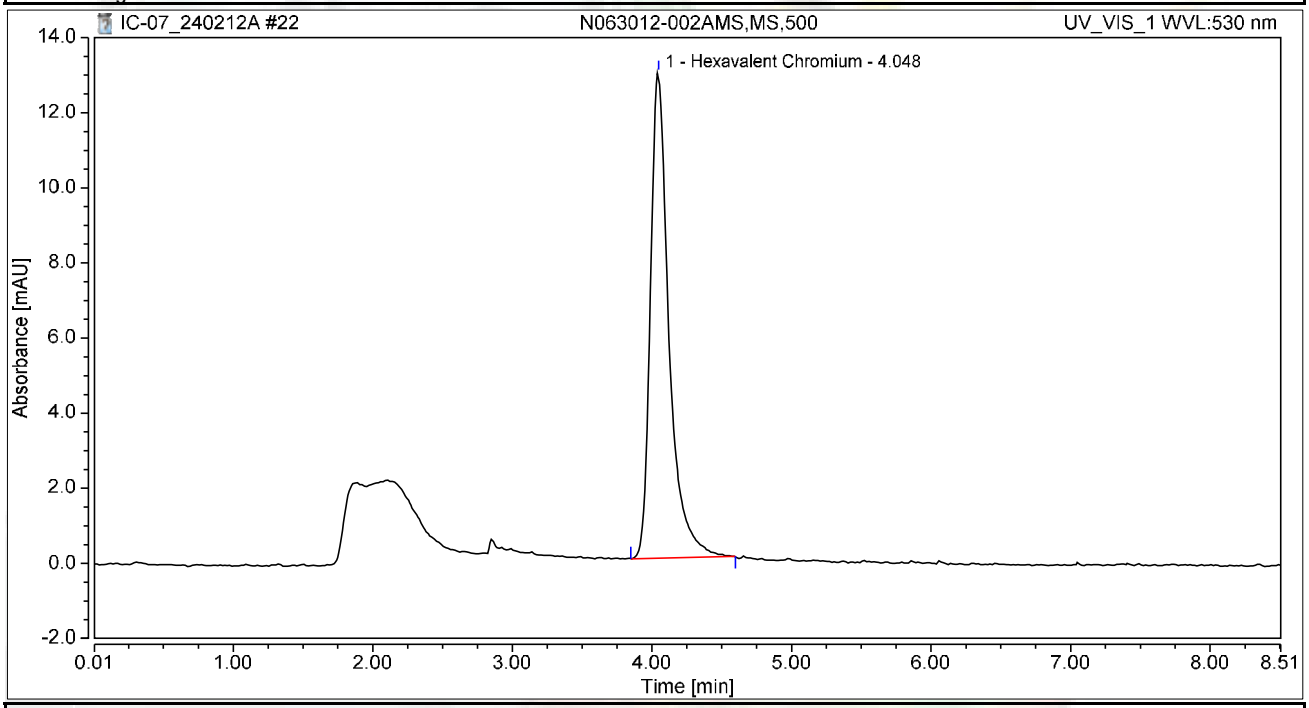
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		6.056	0.116	4.914	3.07	6.25	n.a.
2		6.115	3.675	73.747	96.93	93.75	n.a.
Total:			**3.791**	**78.661**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-002AMS,MS,500**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 12:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

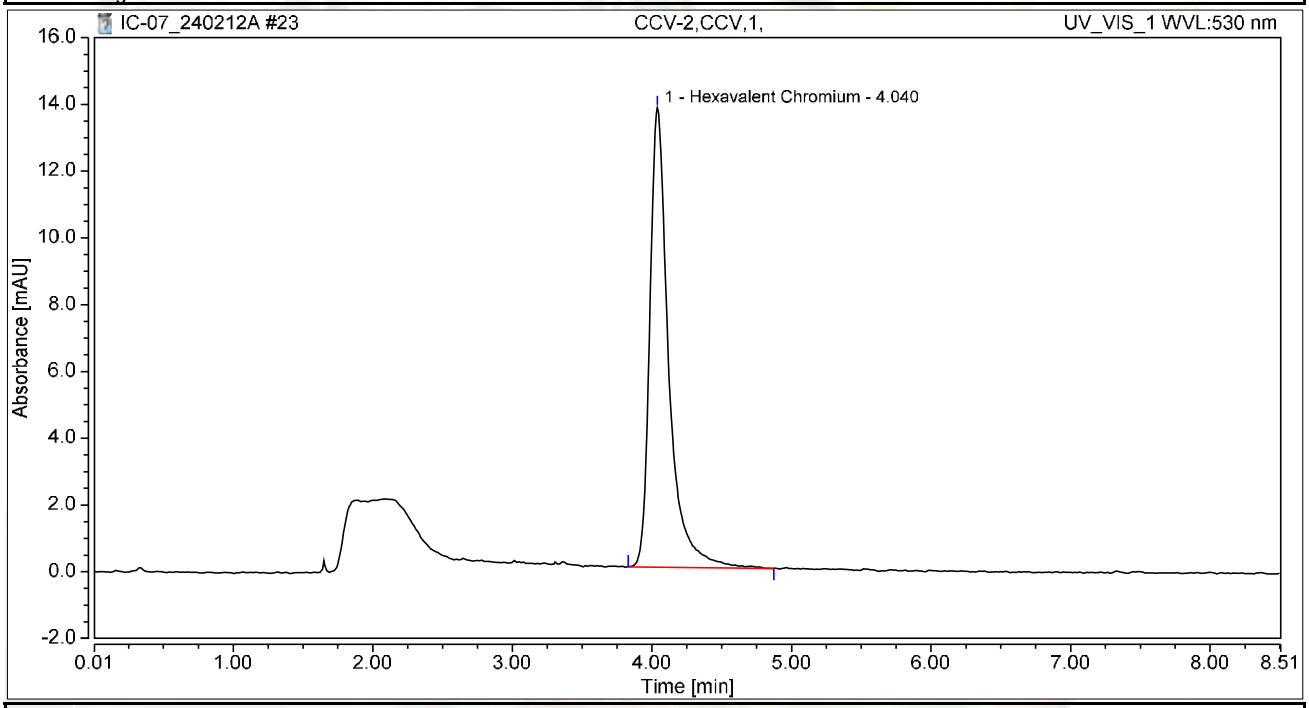
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.992	12.929	100.00	100.00	9.2586
Total:			**1.992**	**12.929**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 12:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

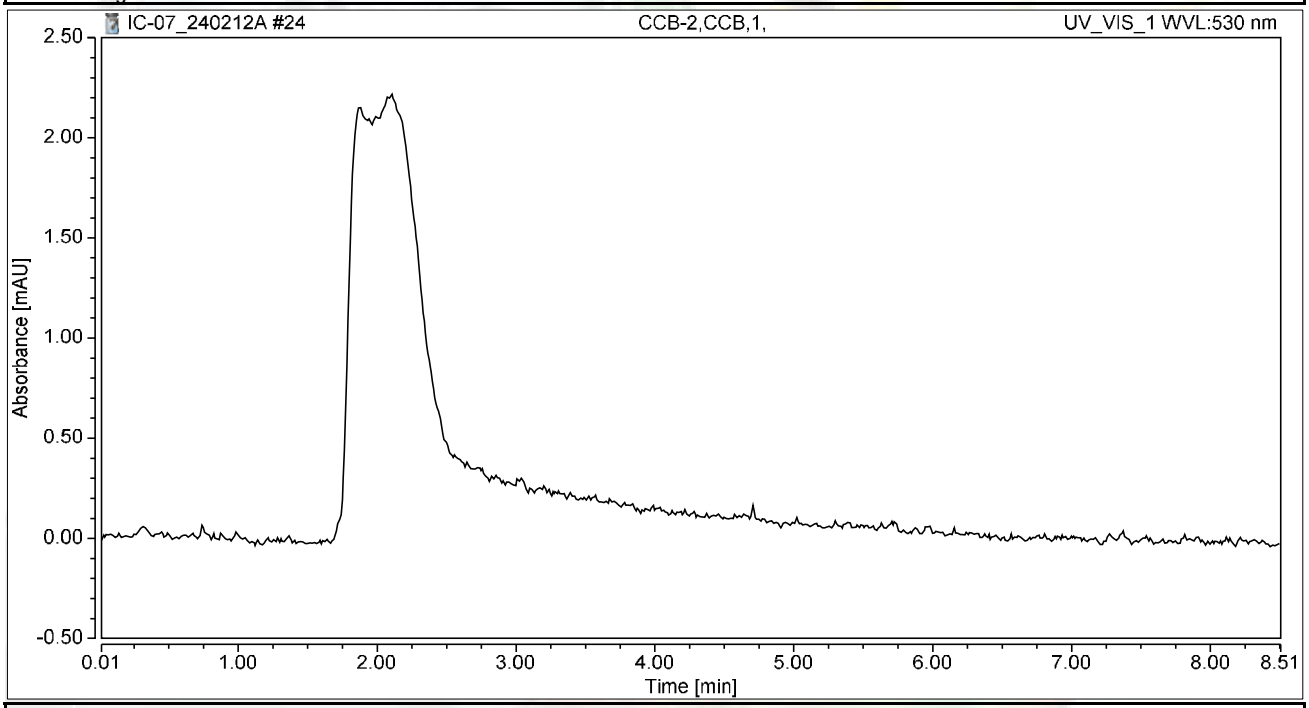
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.162	13.765	100.00	100.00	10.0529
Total:			**2.162**	**13.765**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 12:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

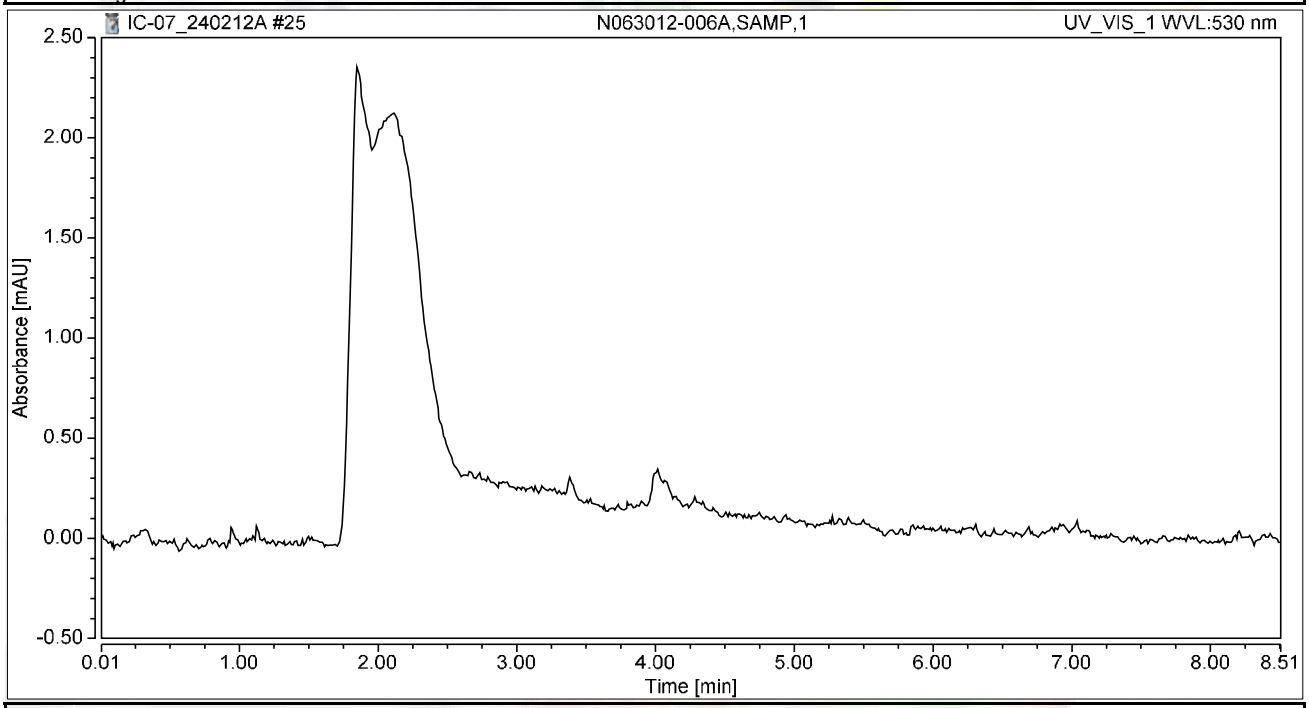
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 12:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

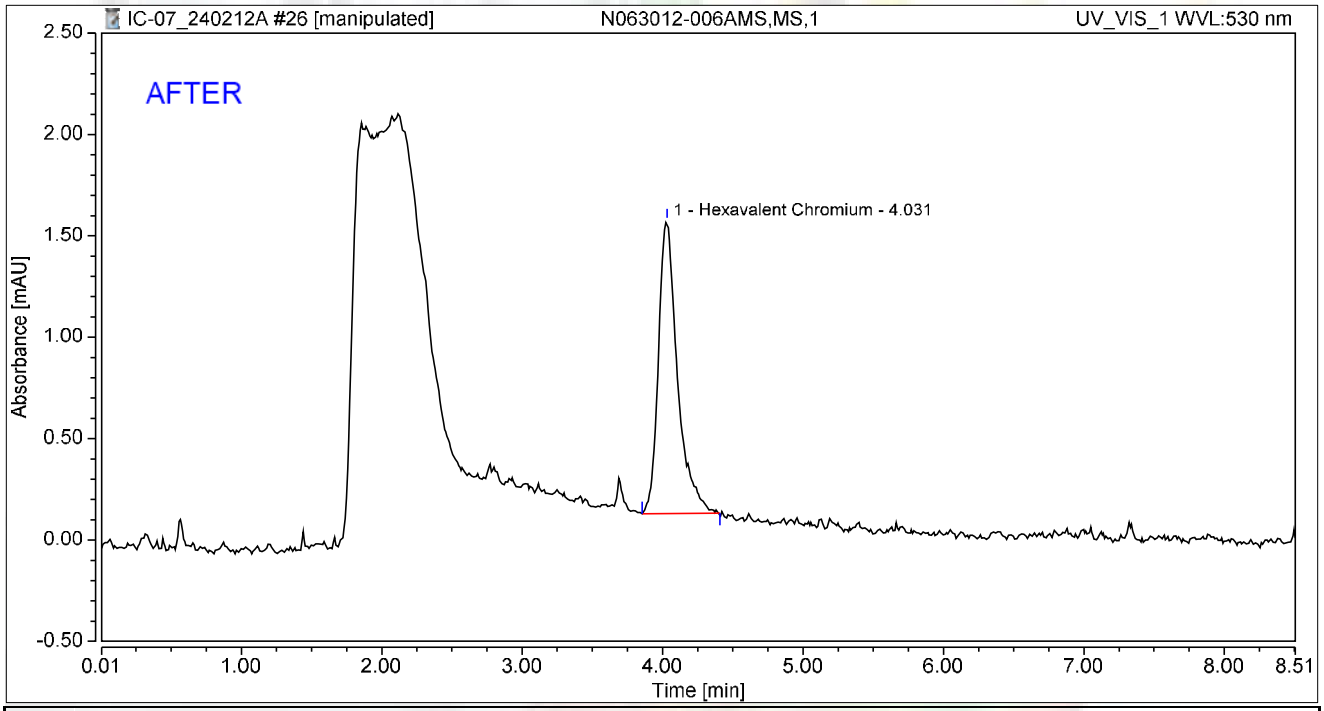
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 12:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.227	1.443	100.00	100.00	1.0554
Total:			**0.227**	**1.443**	**100.00**	**100.00**	

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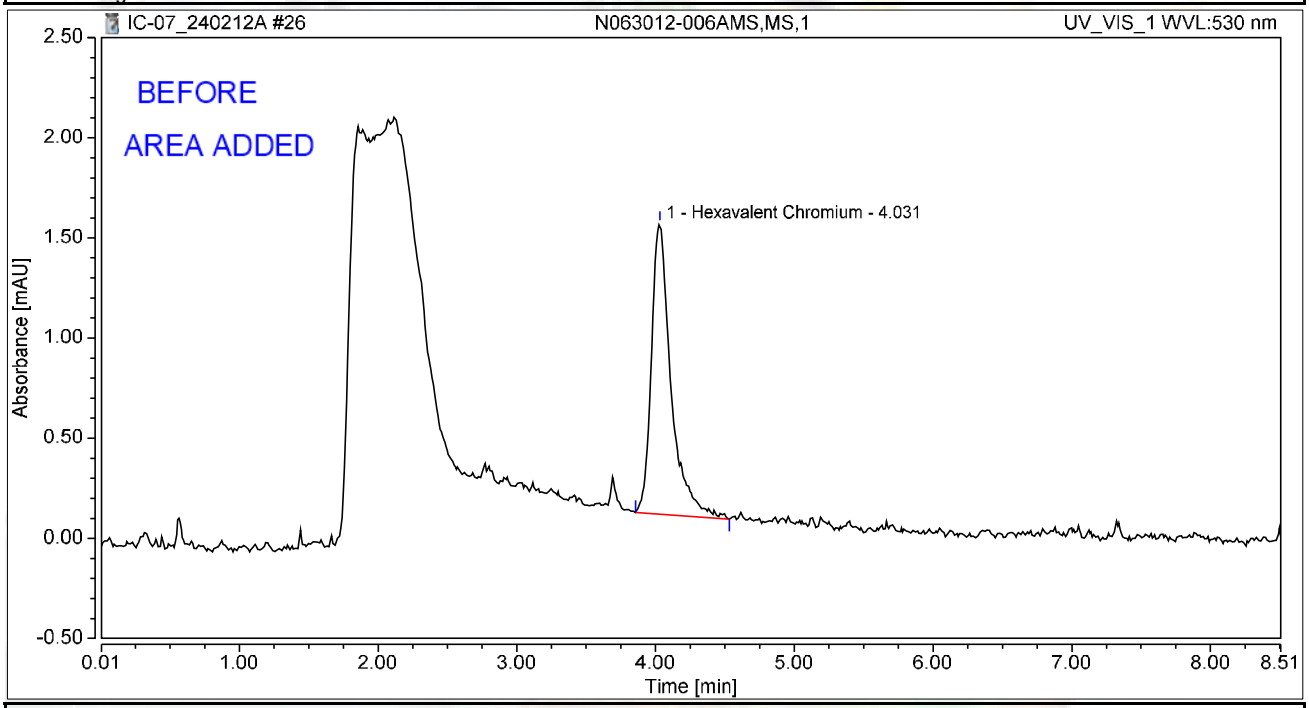
Chromatogram and Results

Injection Details

Injection Name:	**N063012-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 12:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

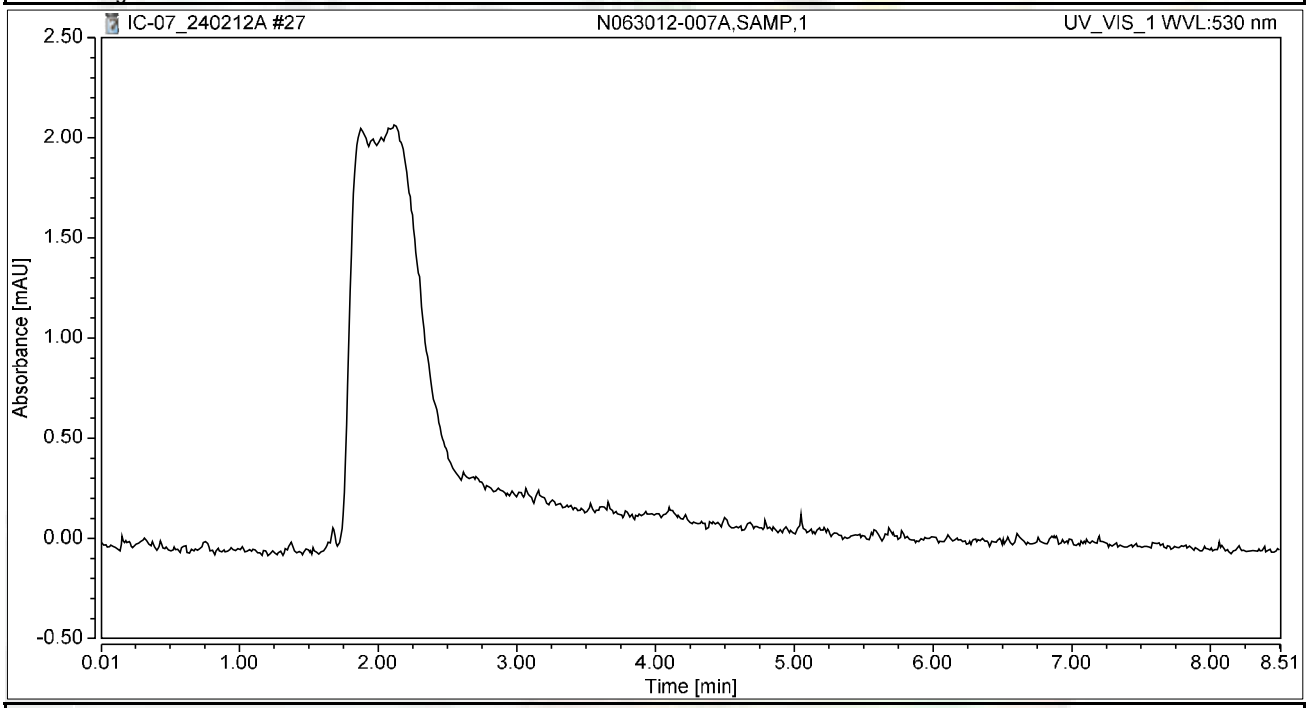
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.238	1.453	100.00	100.00	1.1081
Total:			**0.238**	**1.453**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-007A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 12:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

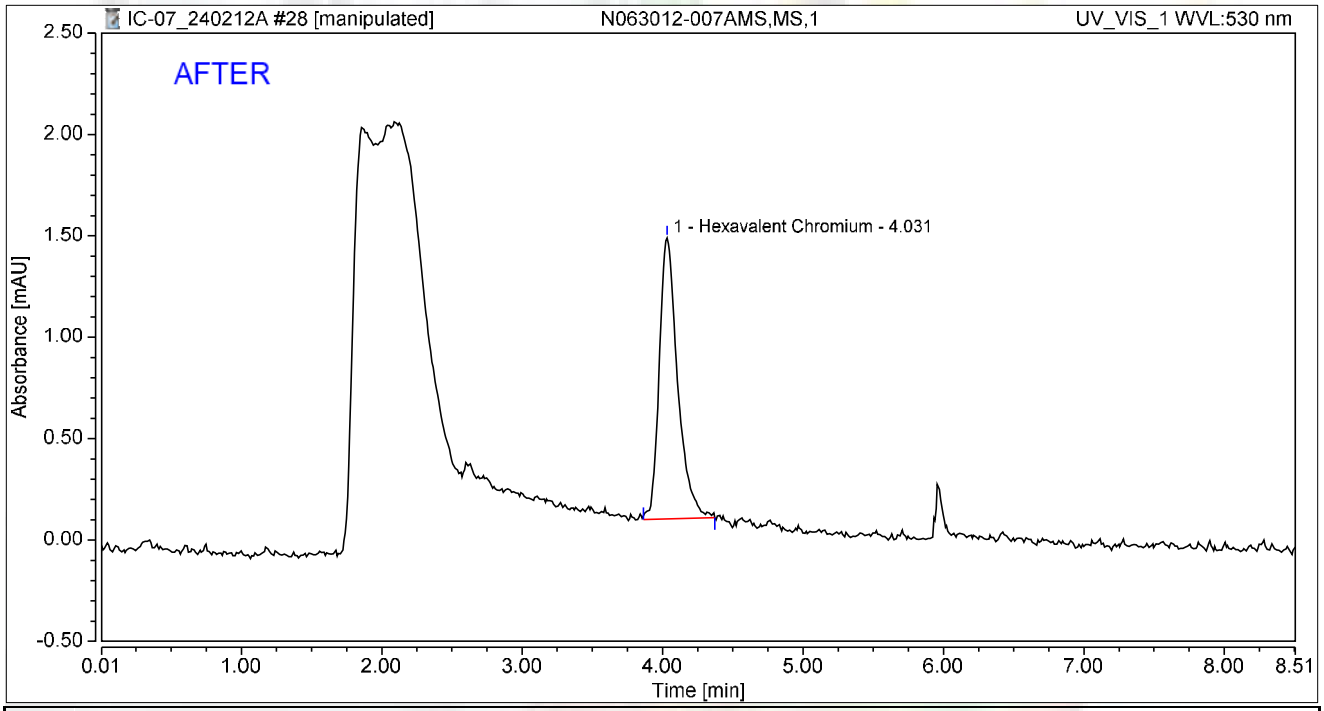
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 13:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

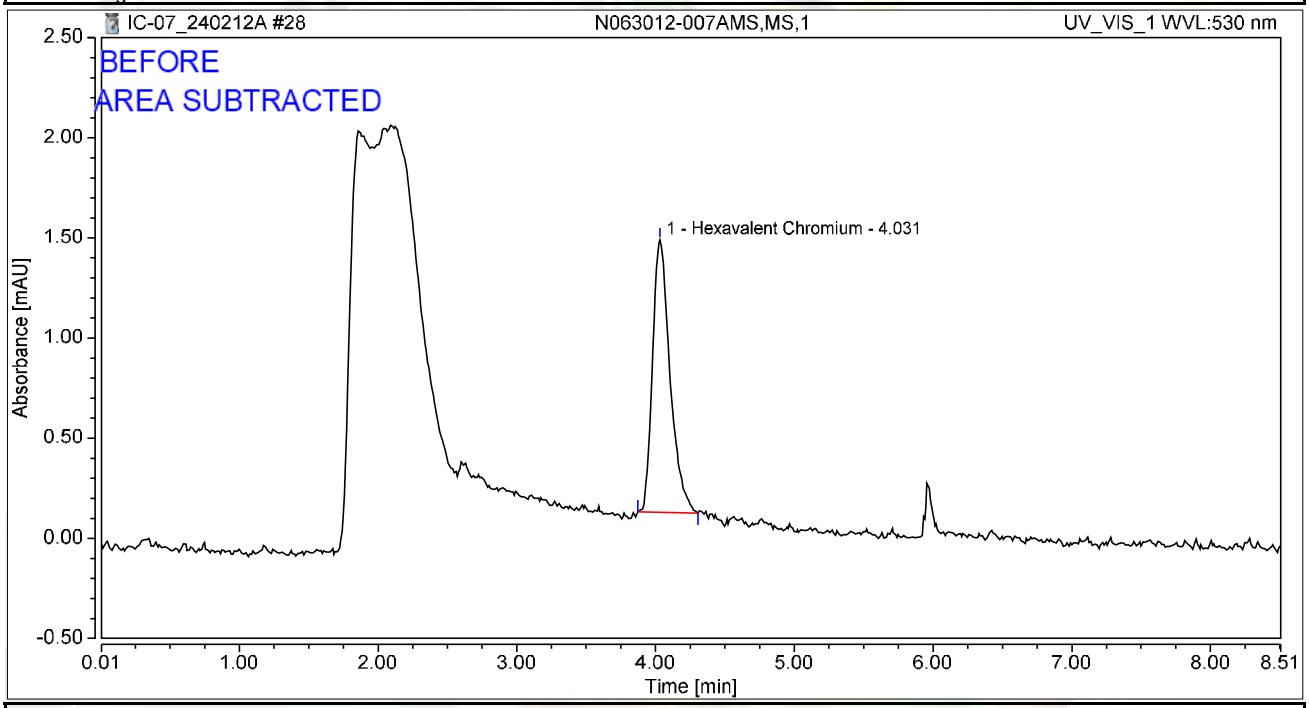
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.211	1.387	100.00	100.00	0.9791
Total:			**0.211**	**1.387**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 13:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

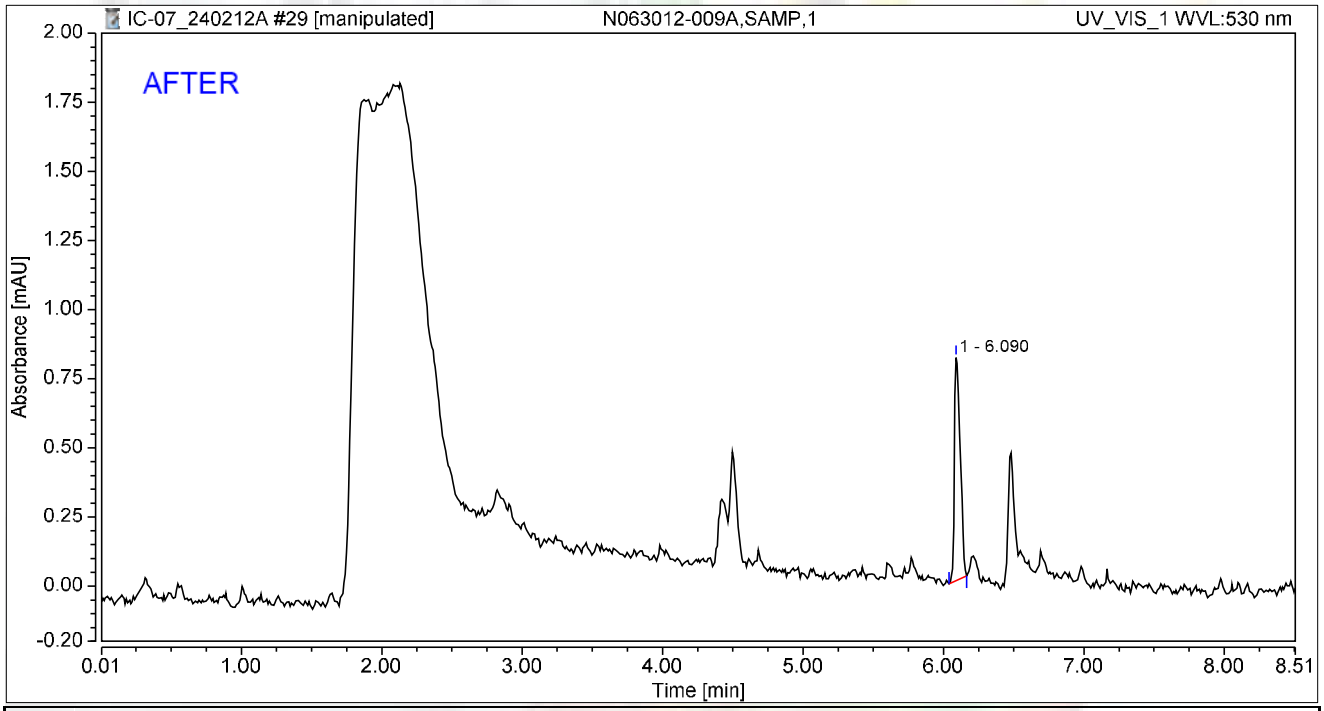
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.198	1.361	100.00	100.00	0.9220
Total:			**0.198**	**1.361**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 13:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		6.090	0.039	0.808	100.00	100.00	n.a.
Total:			**0.039**	**0.808**	**100.00**	**100.00**	

Reviewed by:

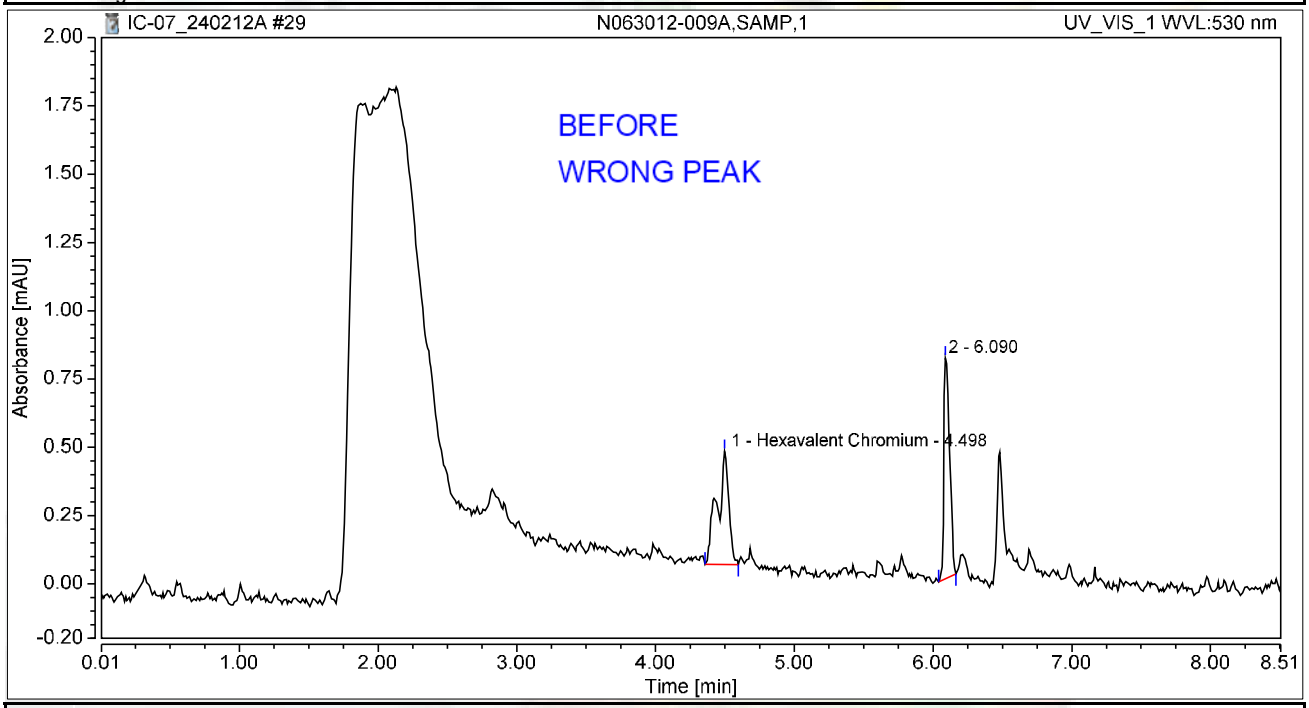
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063012-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 13:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

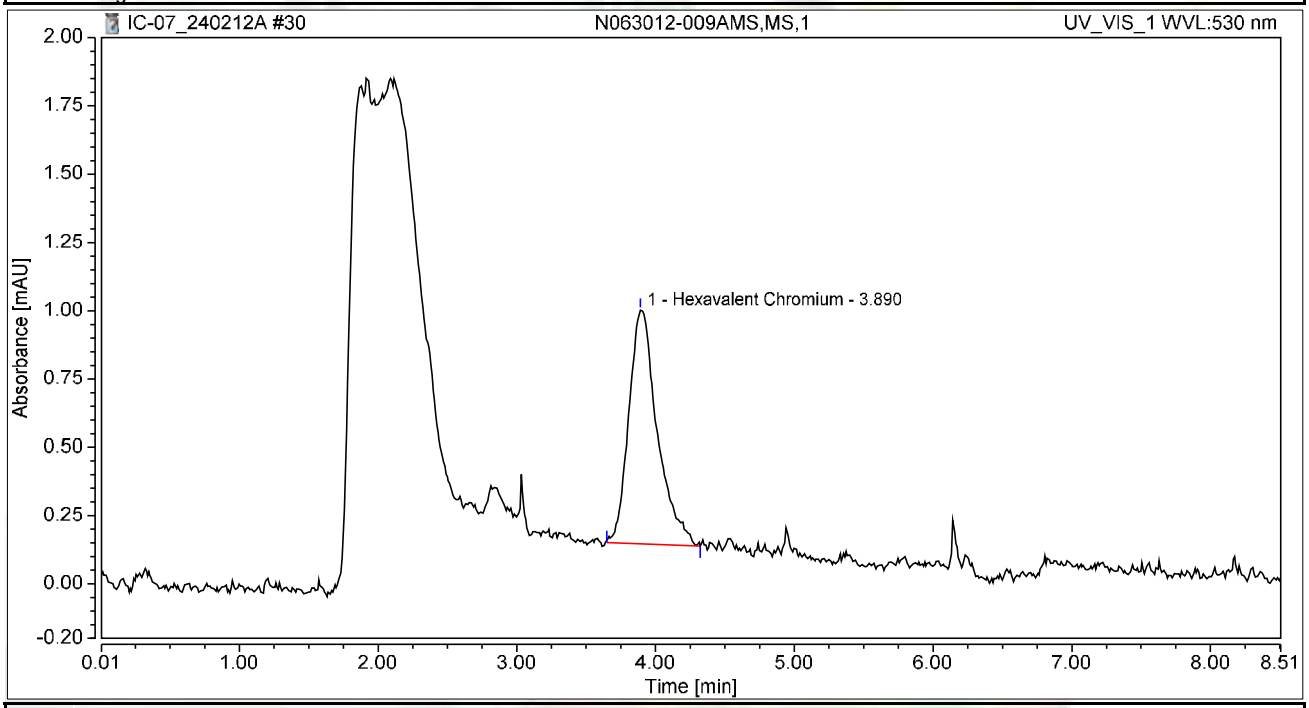
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.498	0.040	0.414	50.99	33.87	0.1877
2		6.090	0.039	0.808	49.01	66.13	n.a.
Total:			**0.079**	**1.222**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 13:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

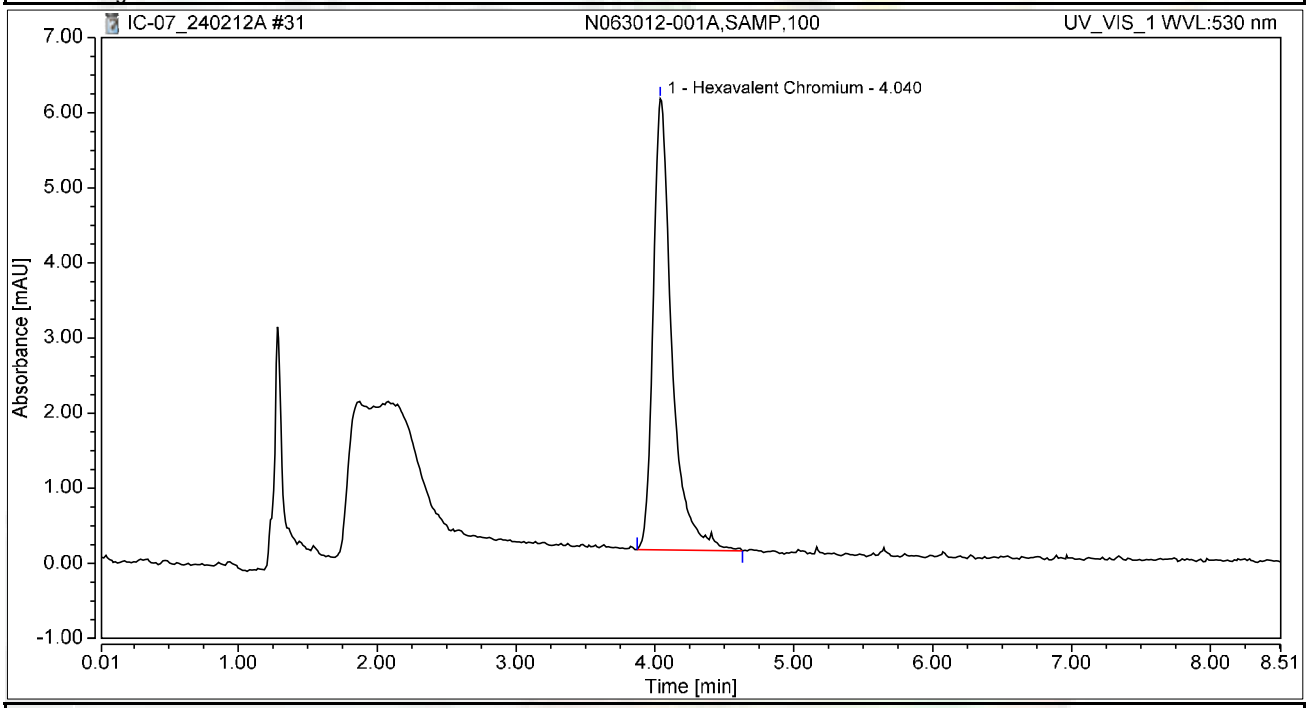
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.890	0.203	0.855	100.00	100.00	0.9458
Total:			**0.203**	**0.855**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-001A,SAMP,100**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 13:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

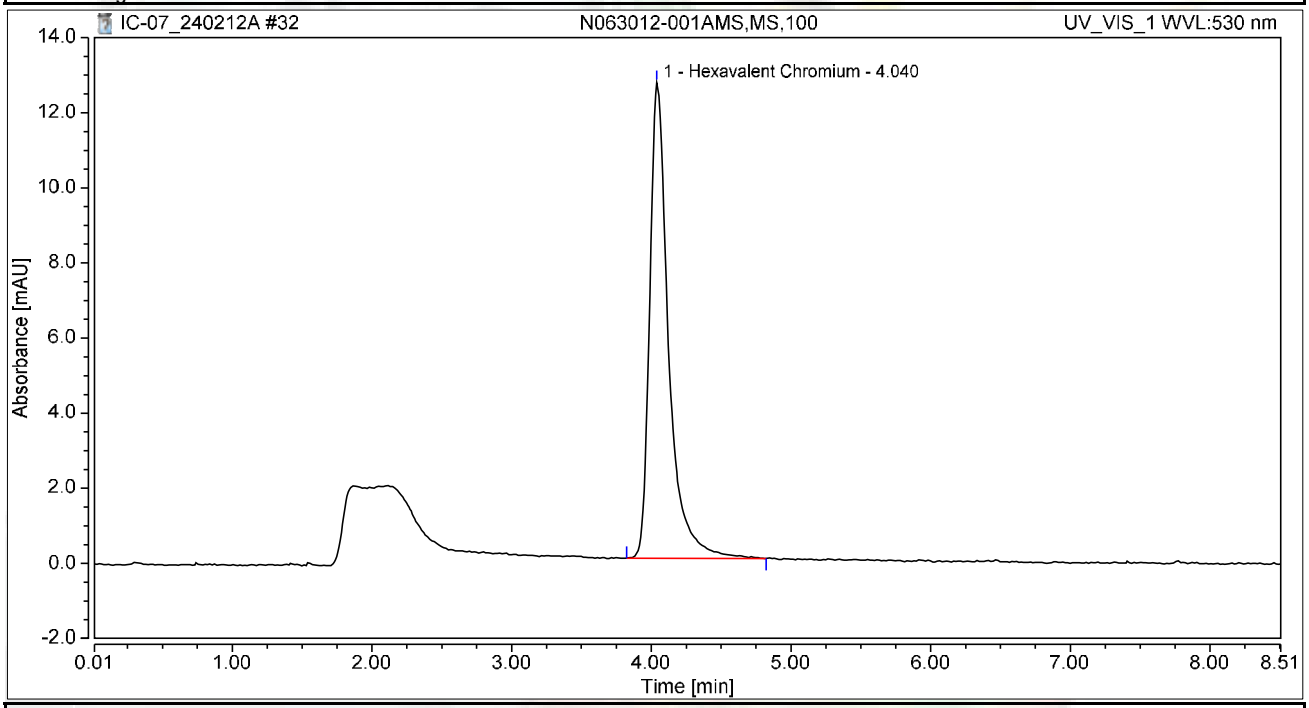
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.936	6.003	100.00	100.00	4.3517
Total:			**0.936**	**6.003**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-001AMS,MS,100**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 13:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

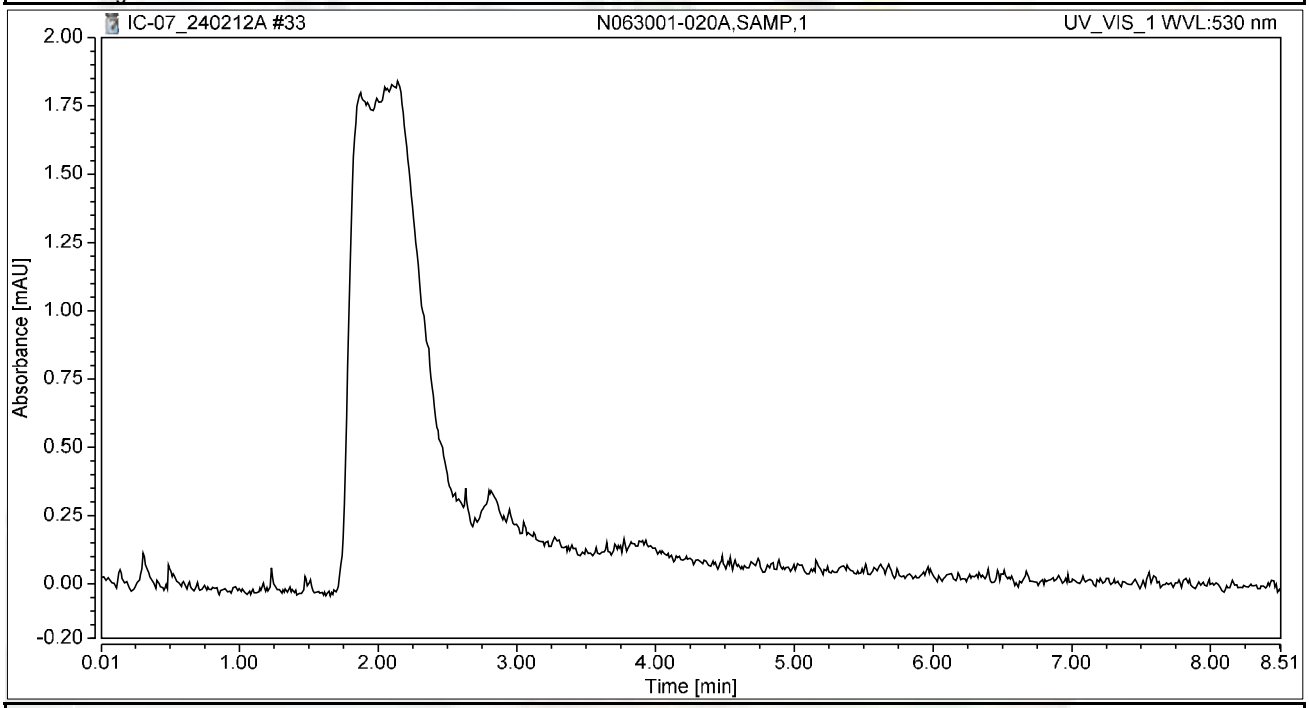
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.992	12.673	100.00	100.00	9.2592
Total:			**1.992**	**12.673**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-020A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 13:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

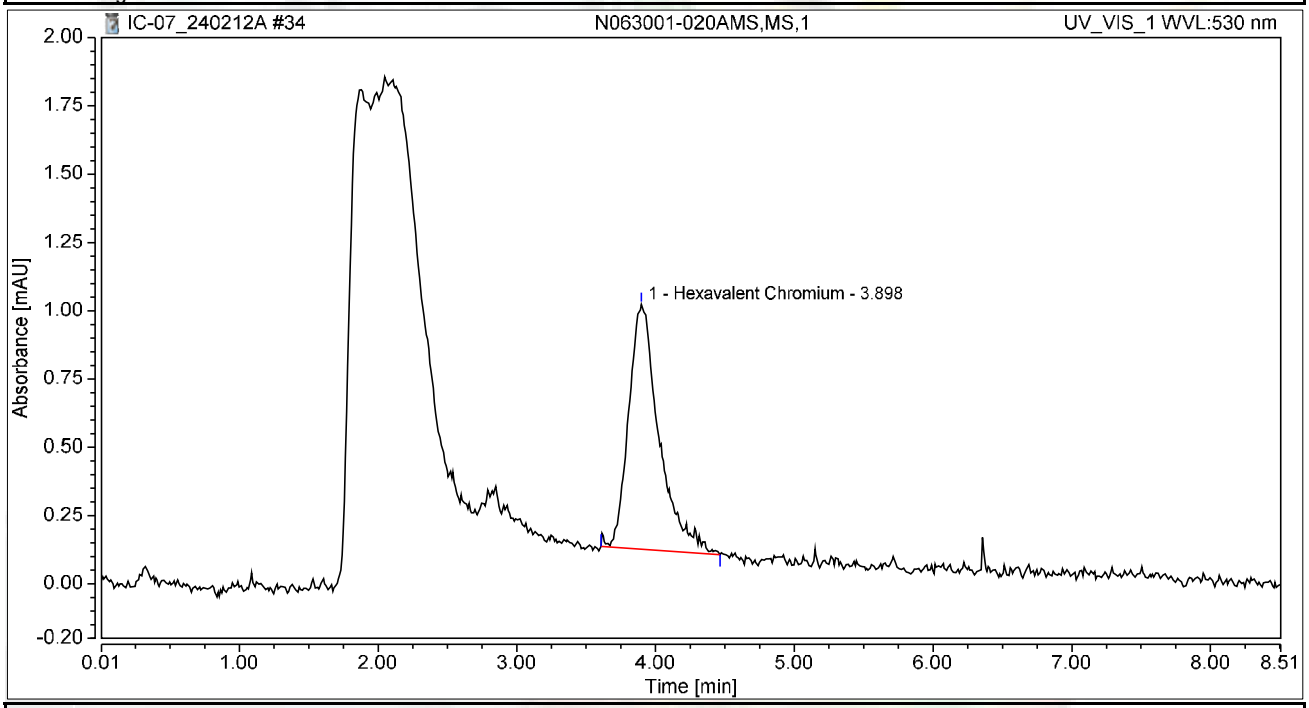
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-020AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 14:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

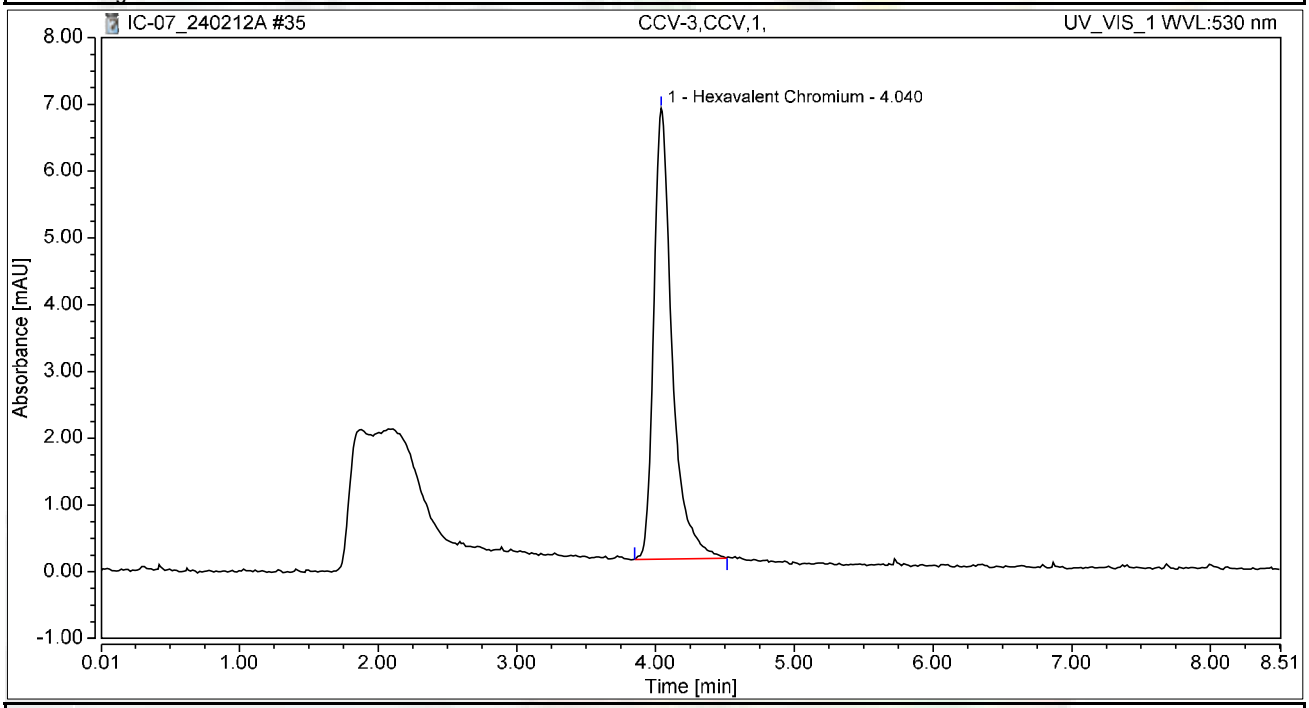
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.898	0.228	0.895	100.00	100.00	1.0597
Total:			**0.228**	**0.895**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 14:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

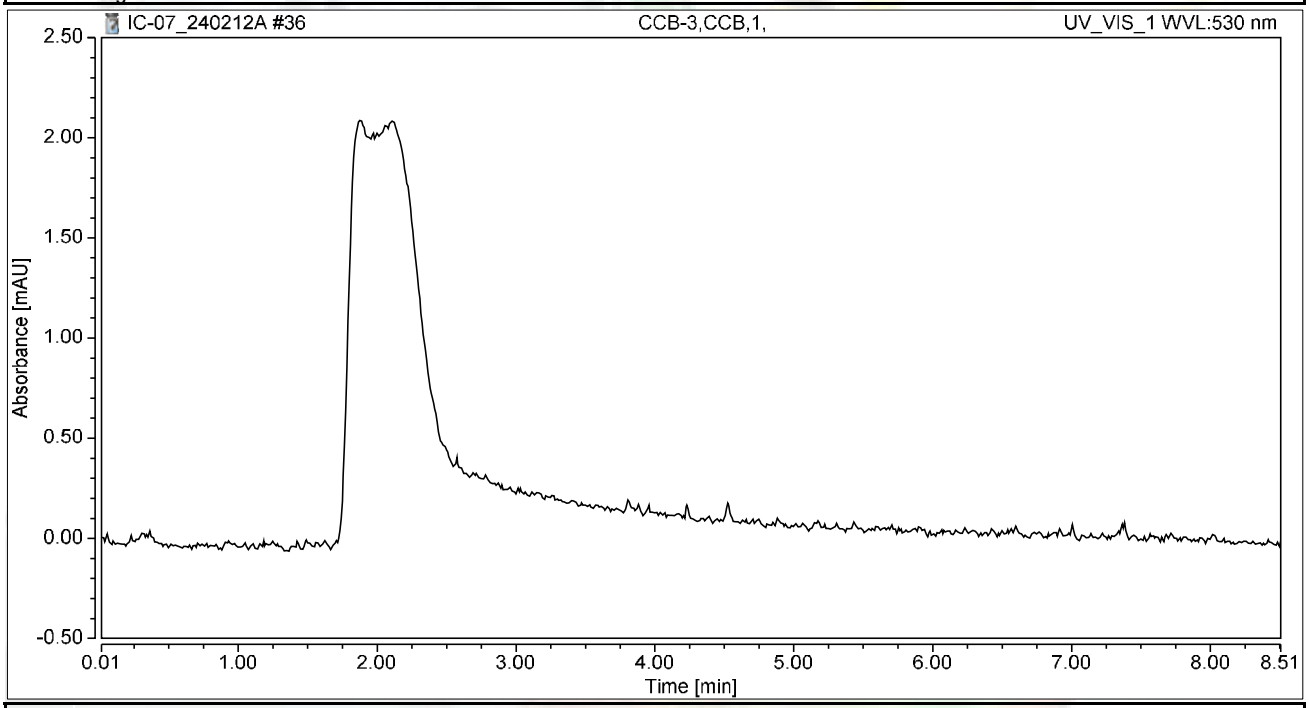
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.036	6.752	100.00	100.00	4.8146
Total:			**1.036**	**6.752**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 14:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

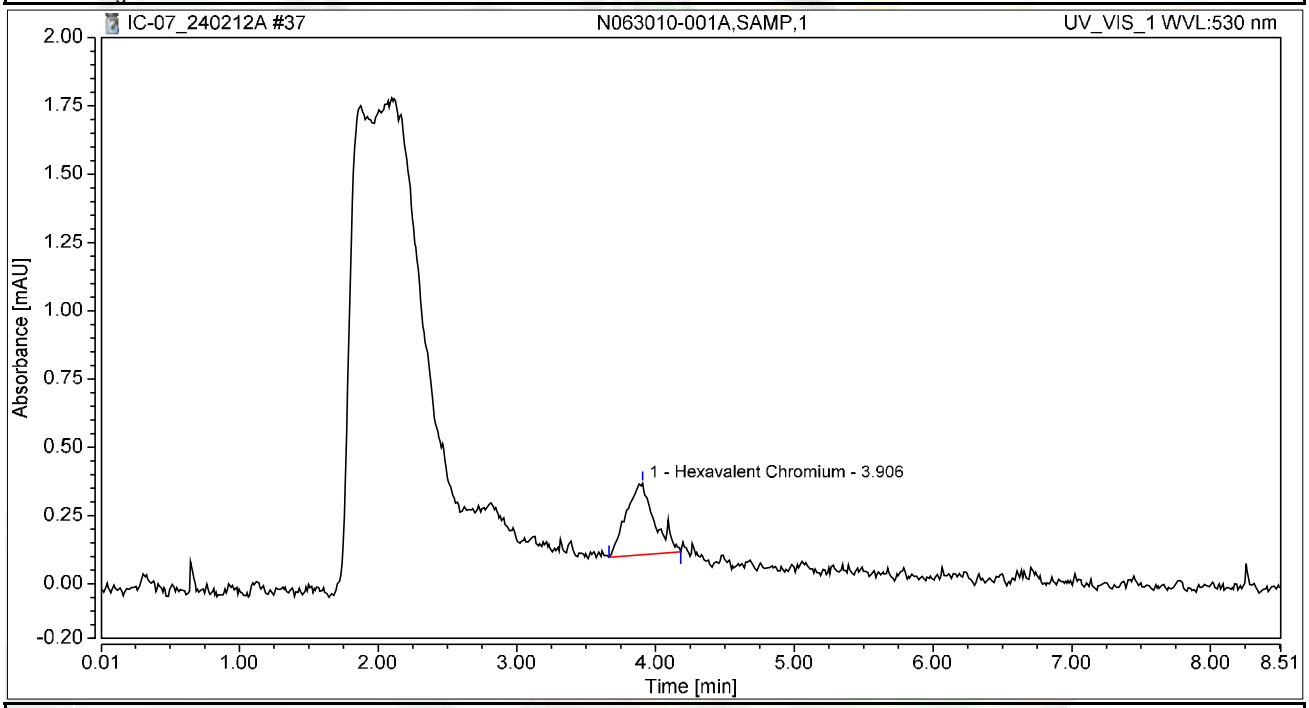
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063010-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 14:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

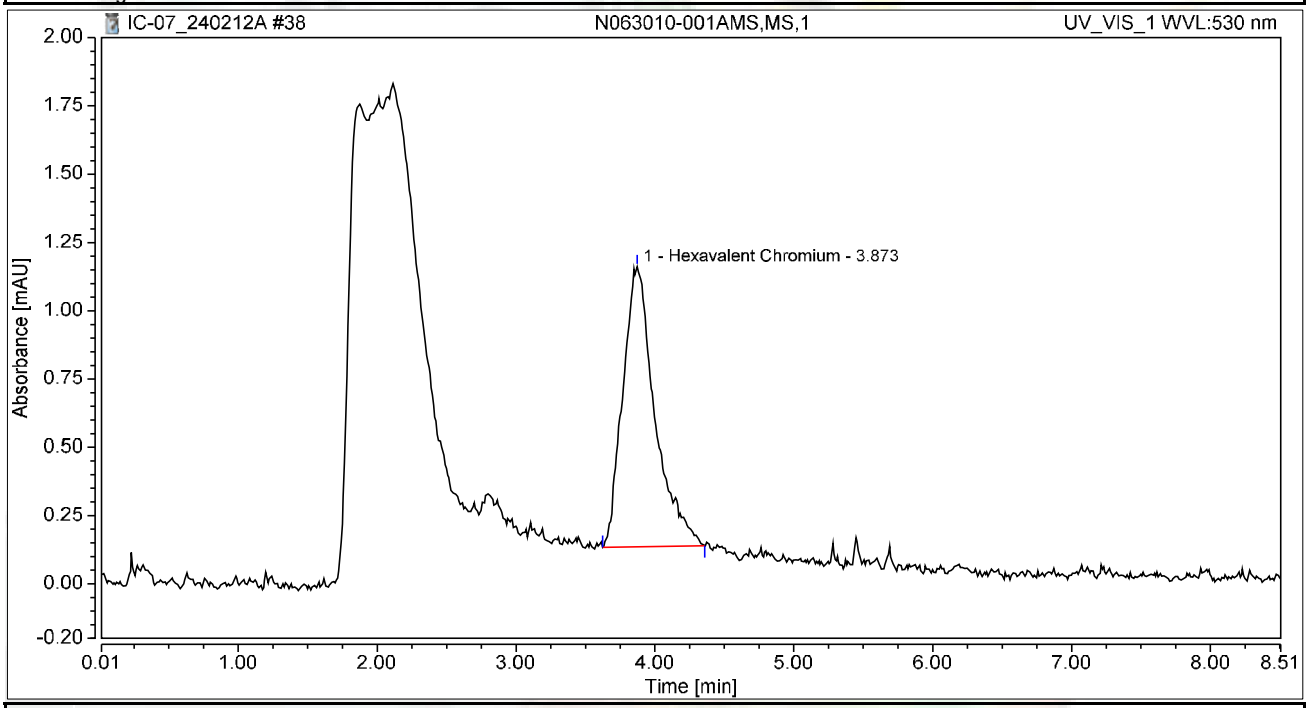
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.906	0.062	0.261	100.00	100.00	0.2887
Total:			**0.062**	**0.261**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063010-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 14:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

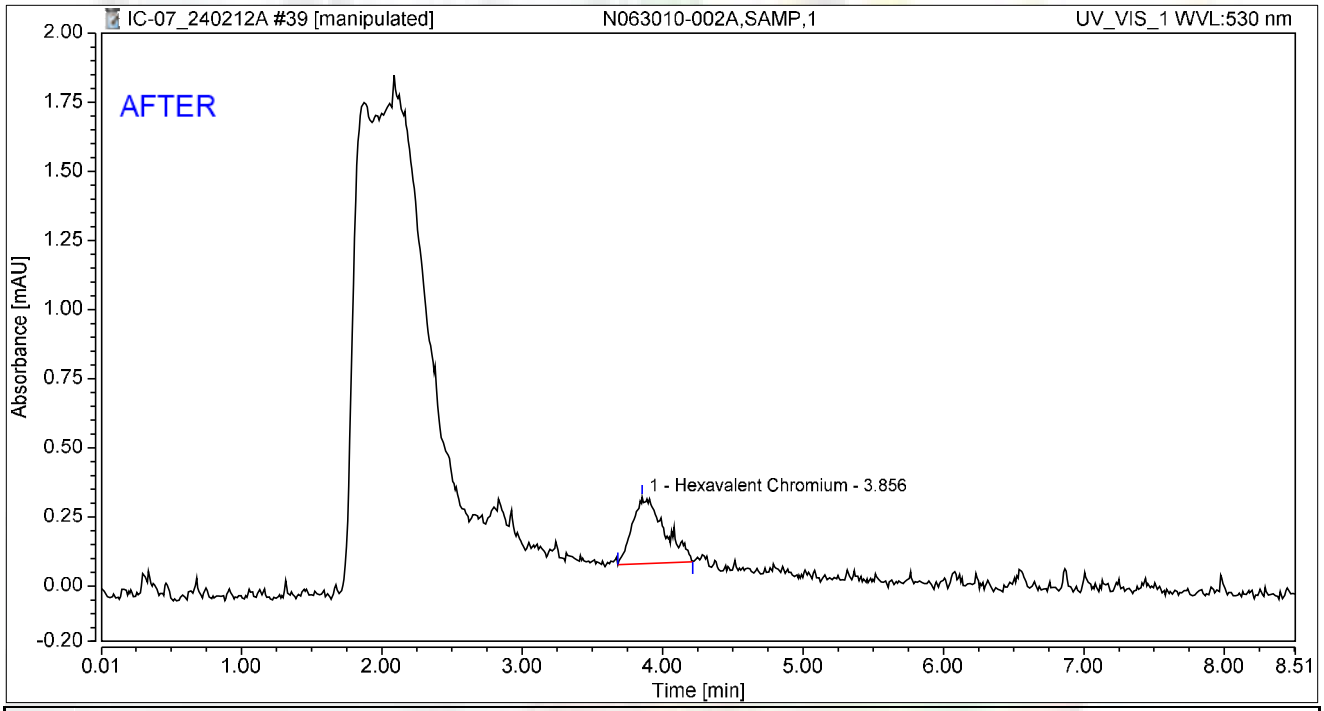
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.873	0.275	1.025	100.00	100.00	1.2765
Total:			**0.275**	**1.025**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063010-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 14:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.064	0.242	100.00	100.00	0.2958
Total:			**0.064**	**0.242**	**100.00**	**100.00**	

Reviewed by:

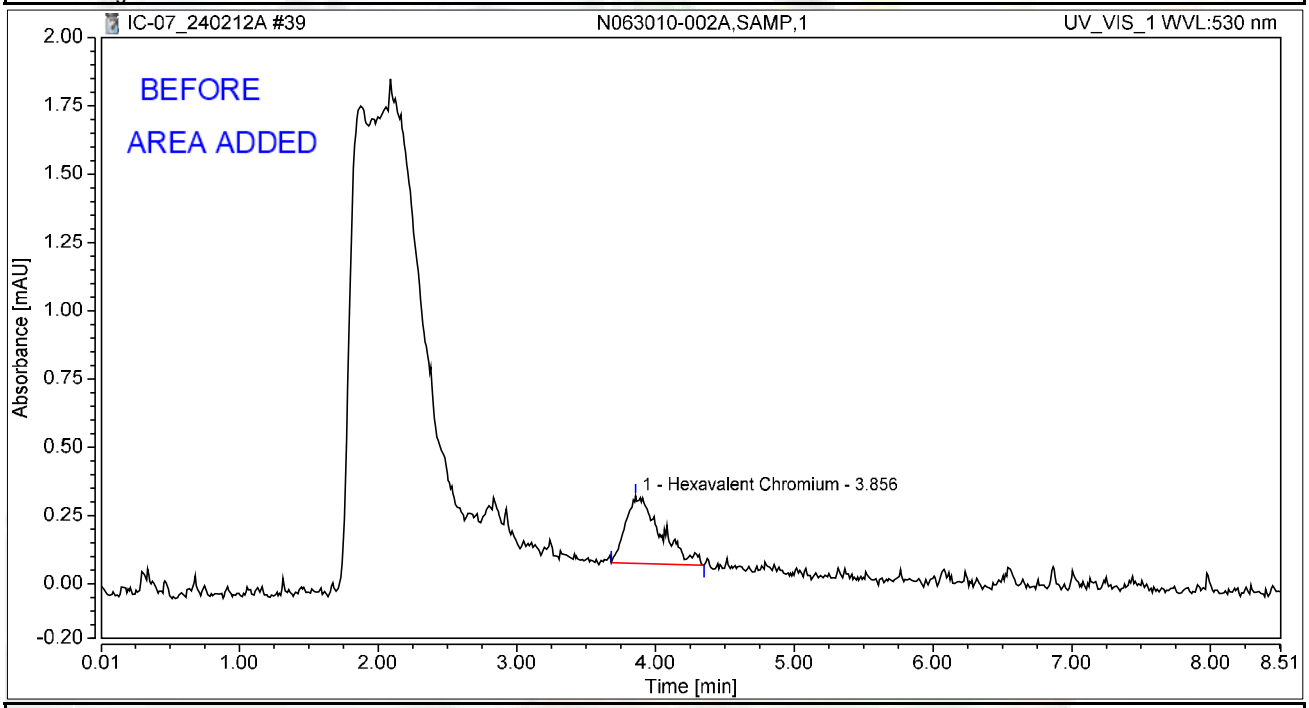
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063010-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 14:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

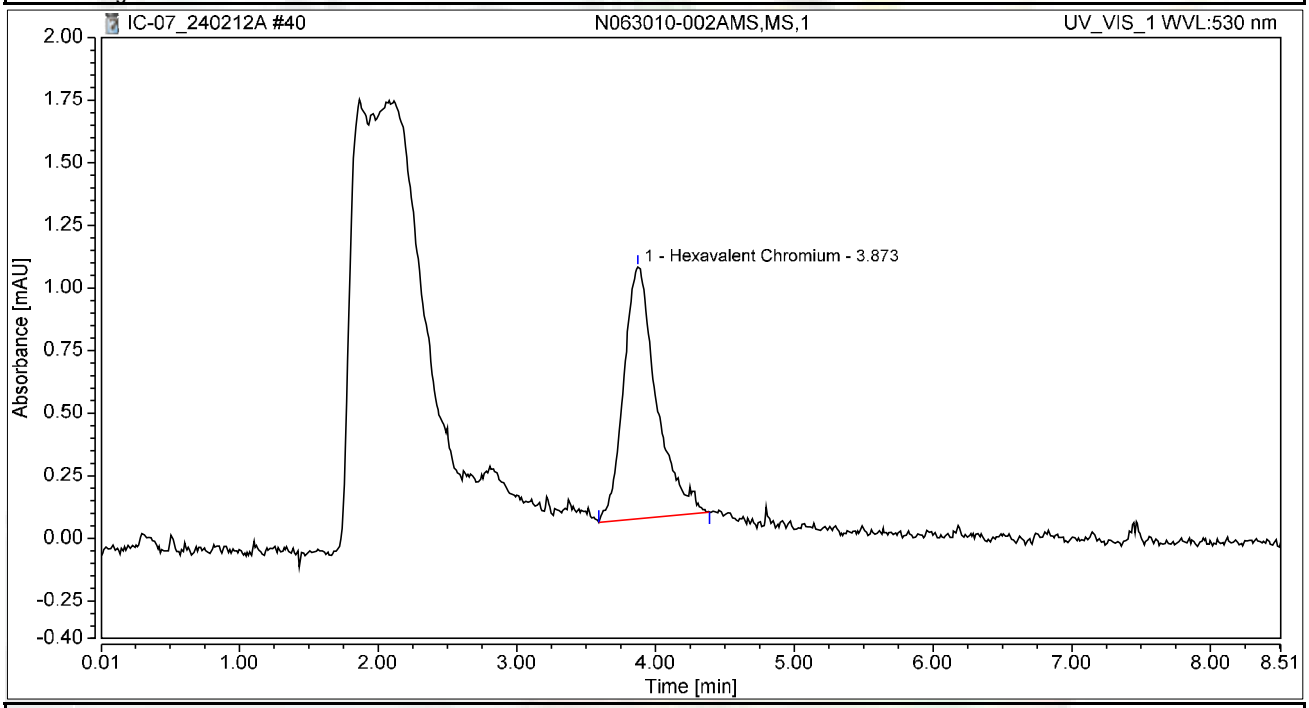
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.072	0.247	100.00	100.00	0.3332
Total:			**0.072**	**0.247**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063010-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 15:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

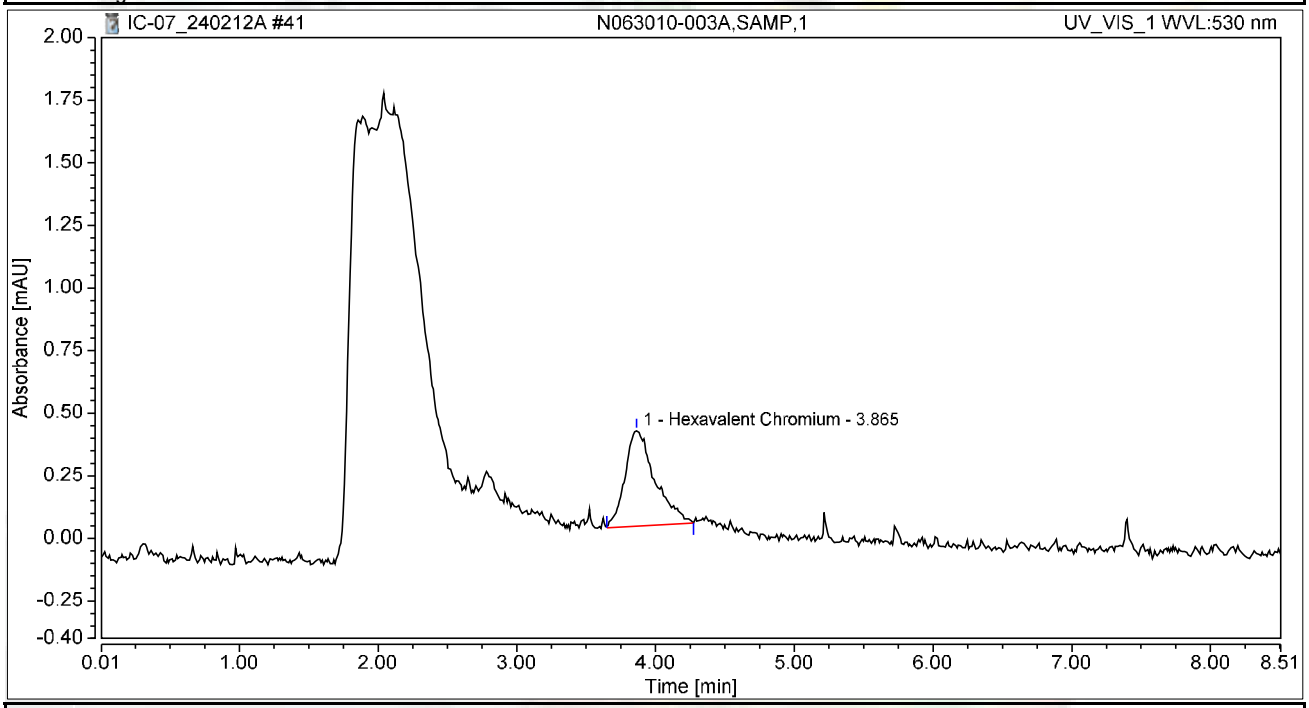
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.873	0.275	1.006	100.00	100.00	1.2808
Total:			**0.275**	**1.006**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063010-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 15:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

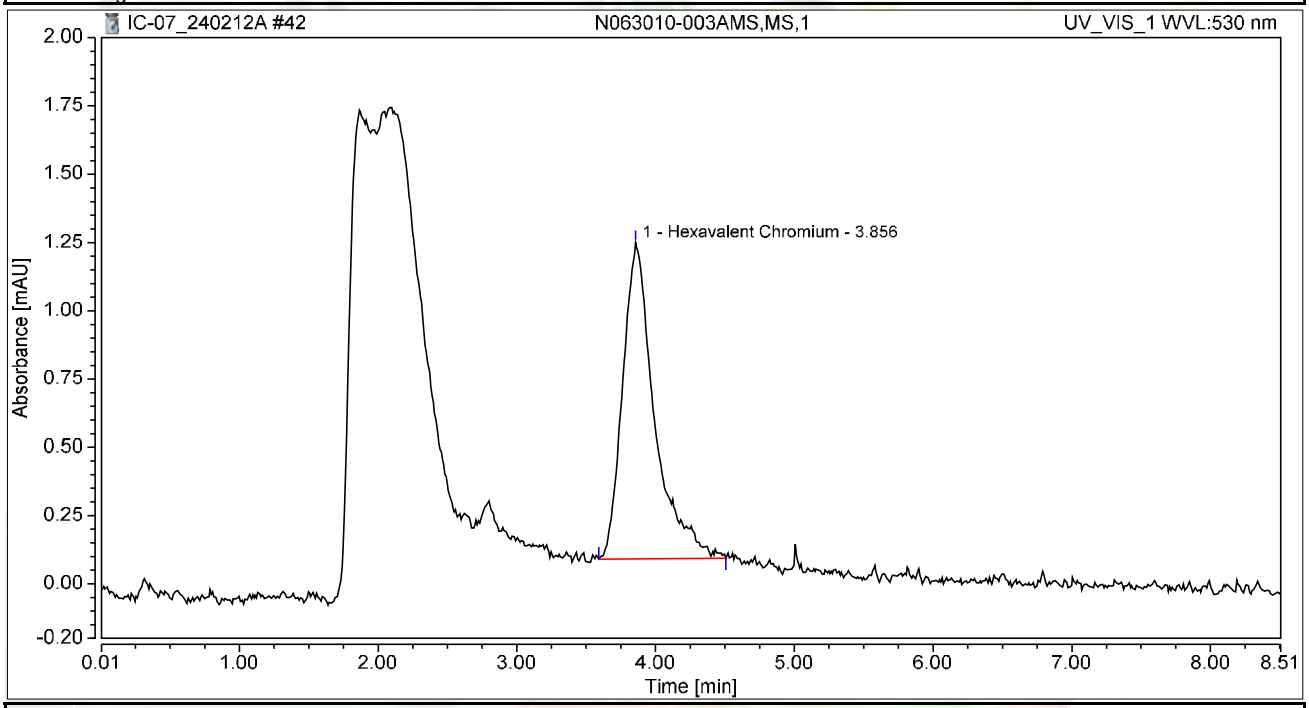
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.865	0.095	0.382	100.00	100.00	0.4431
Total:			**0.095**	**0.382**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063010-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 15:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

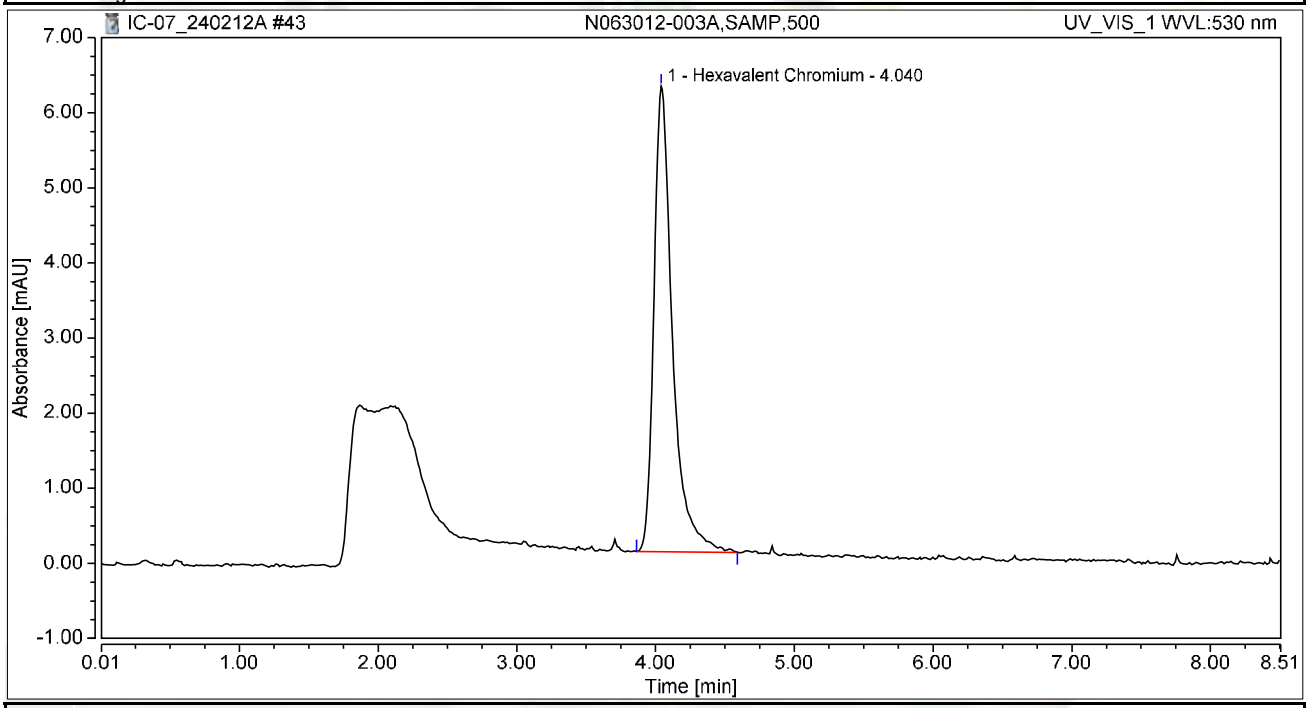
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.309	1.157	100.00	100.00	1.4345
Total:			**0.309**	**1.157**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-003A,SAMP,500**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 15:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

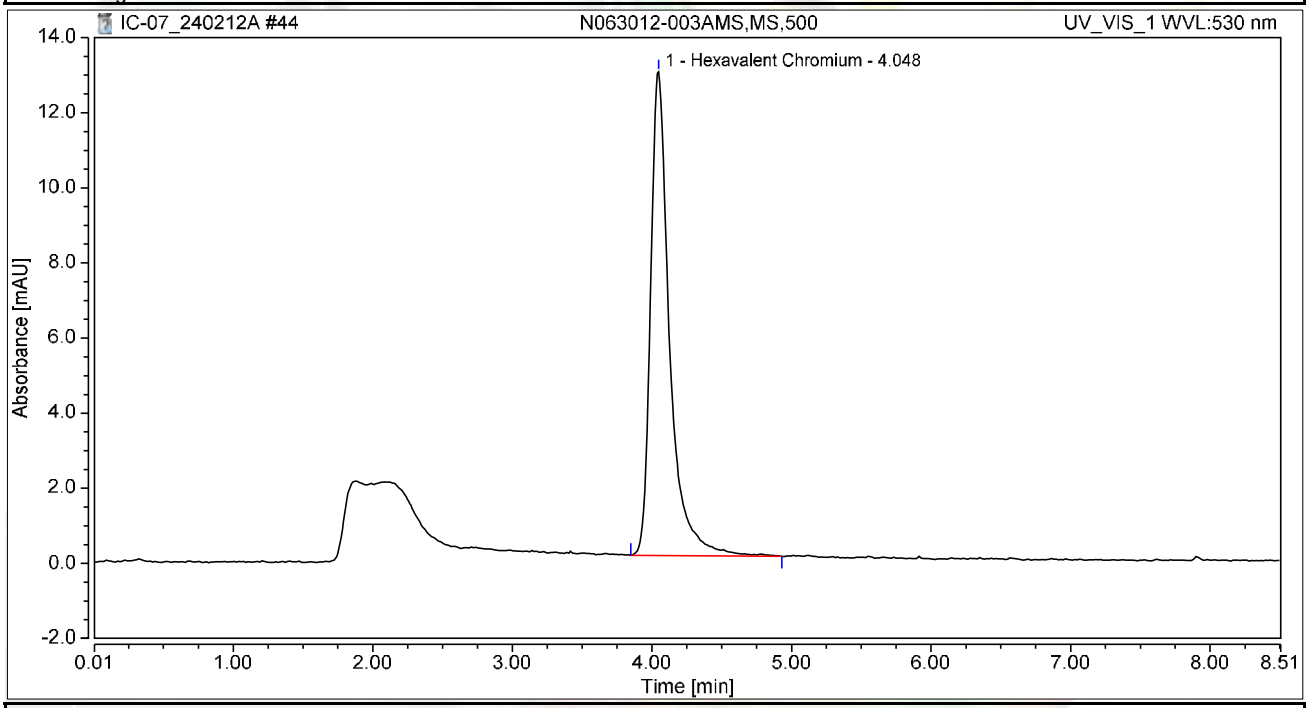
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.960	6.200	100.00	100.00	4.4626
Total:			**0.960**	**6.200**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-003AMS,MS,500**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 15:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

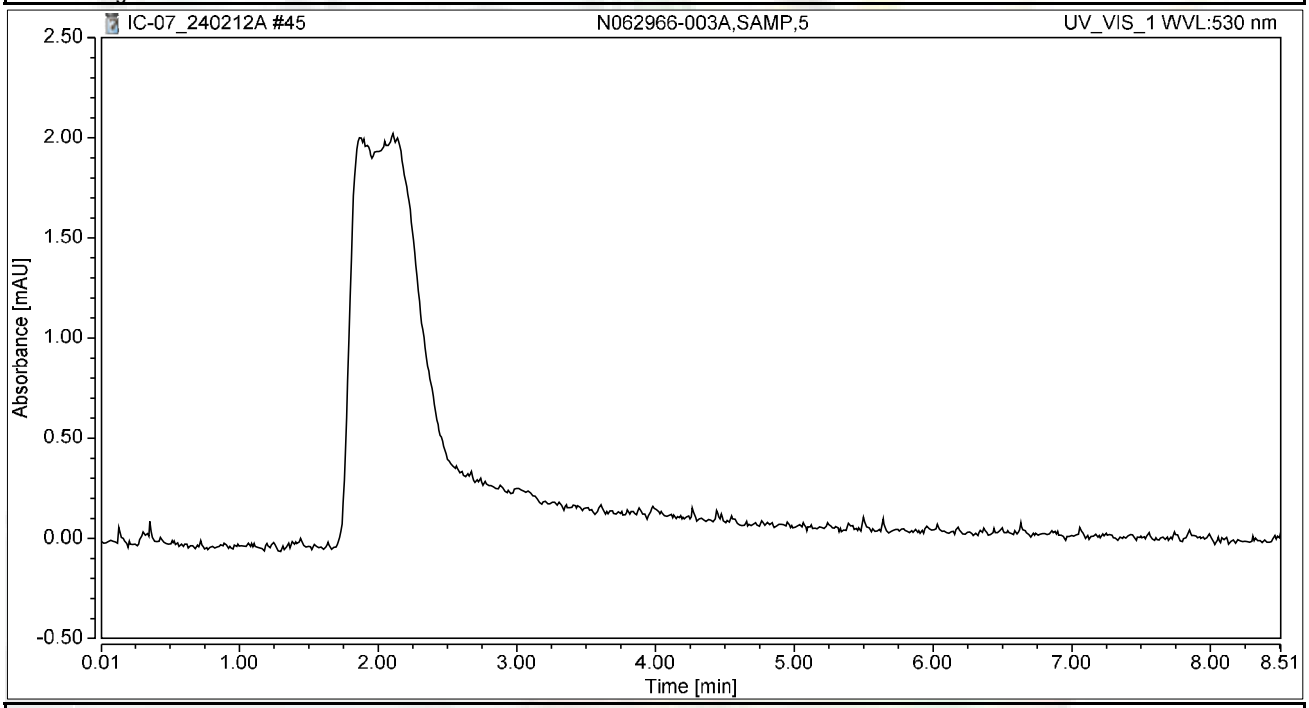
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.038	12.877	100.00	100.00	9.4724
Total:			**2.038**	**12.877**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062966-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 15:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

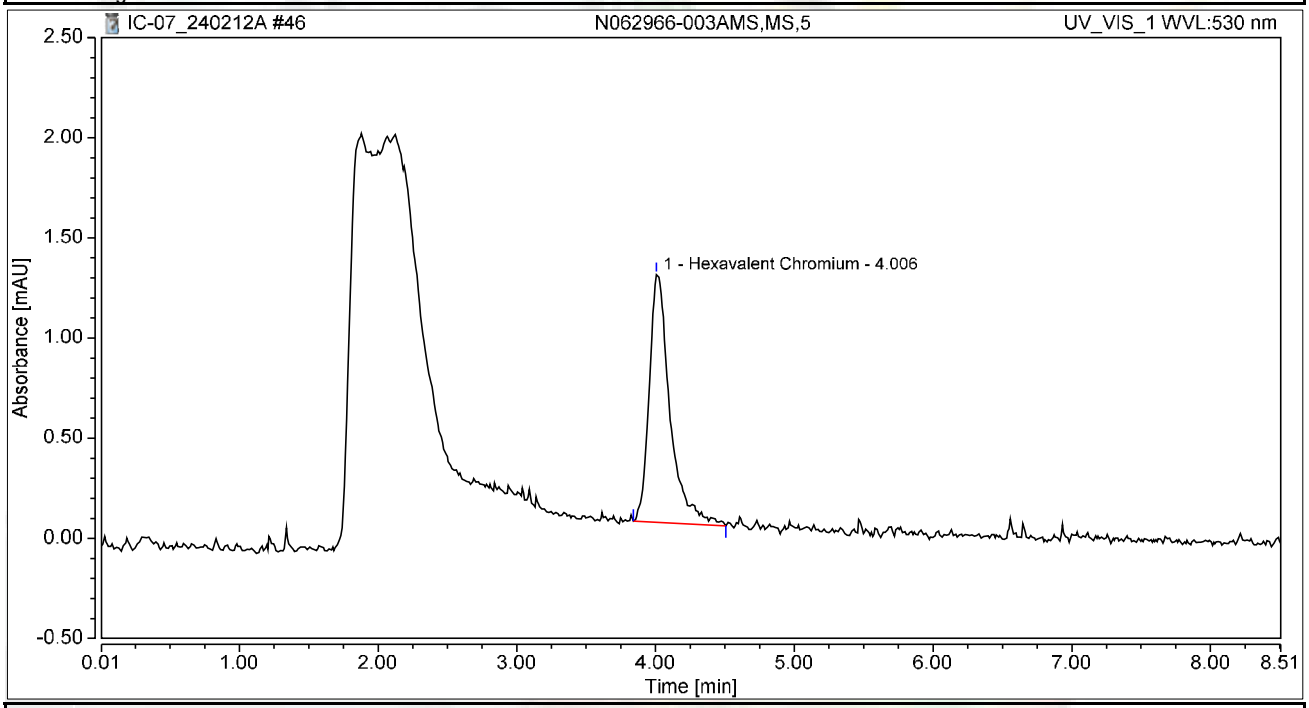
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062966-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 15:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

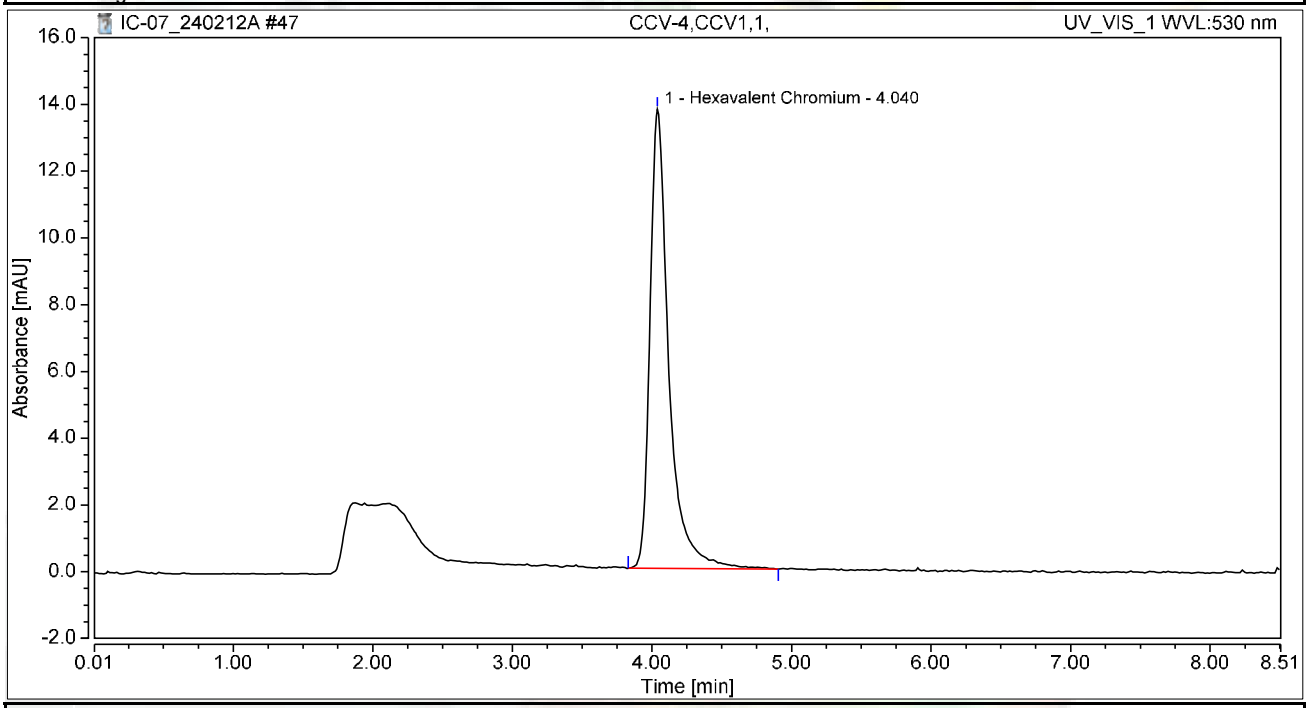
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.214	1.236	100.00	100.00	0.9953
Total:			**0.214**	**1.236**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 16:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

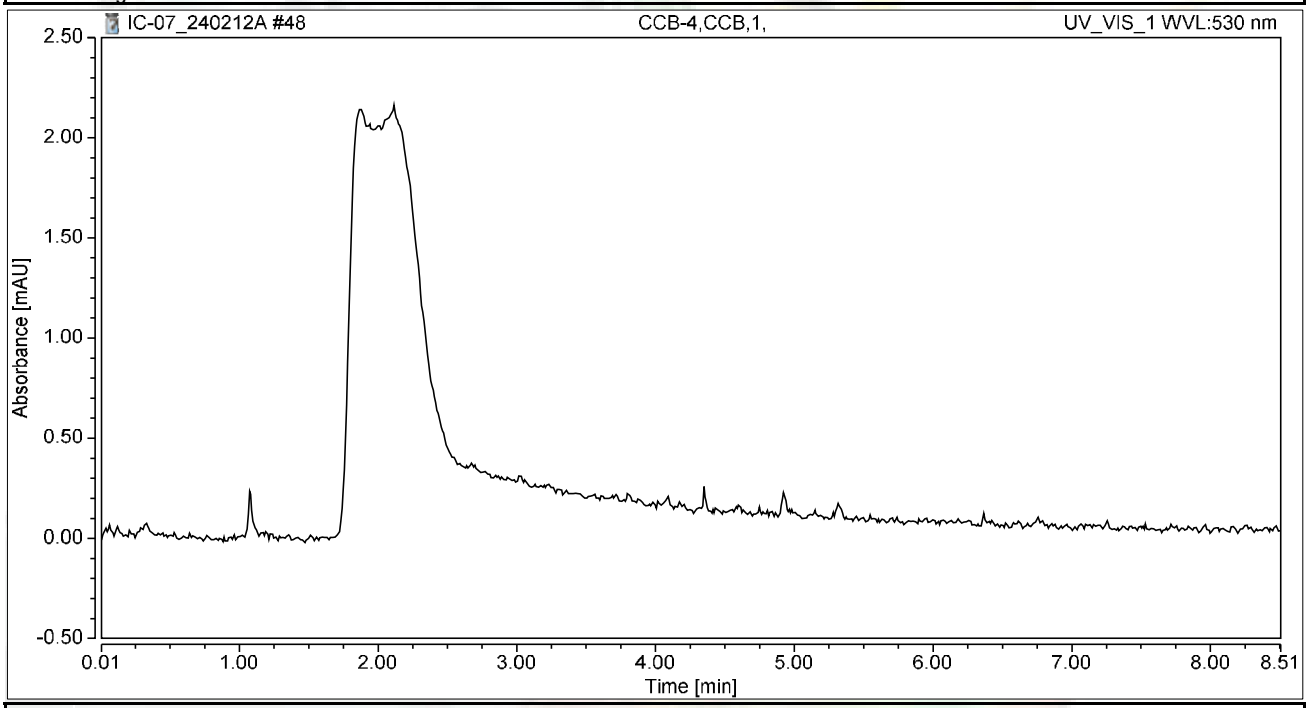
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.154	13.753	100.00	100.00	10.0160
Total:			**2.154**	**13.753**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 16:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

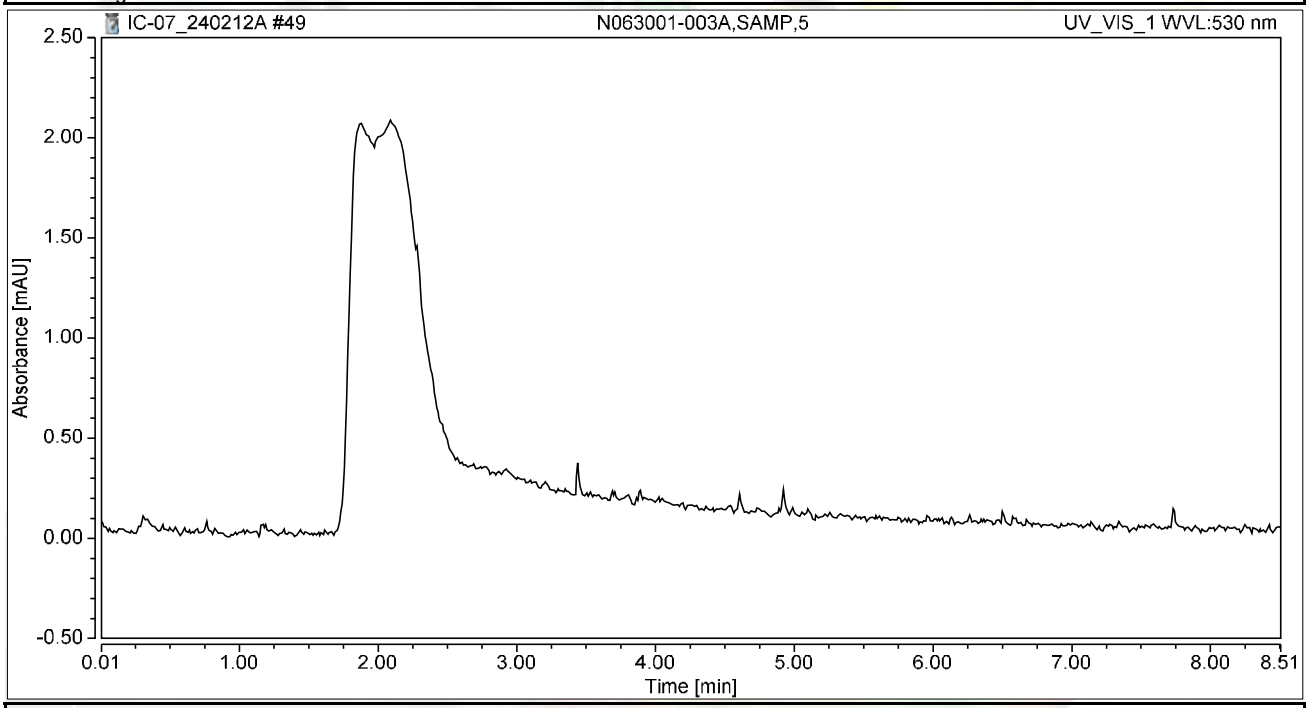
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 16:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

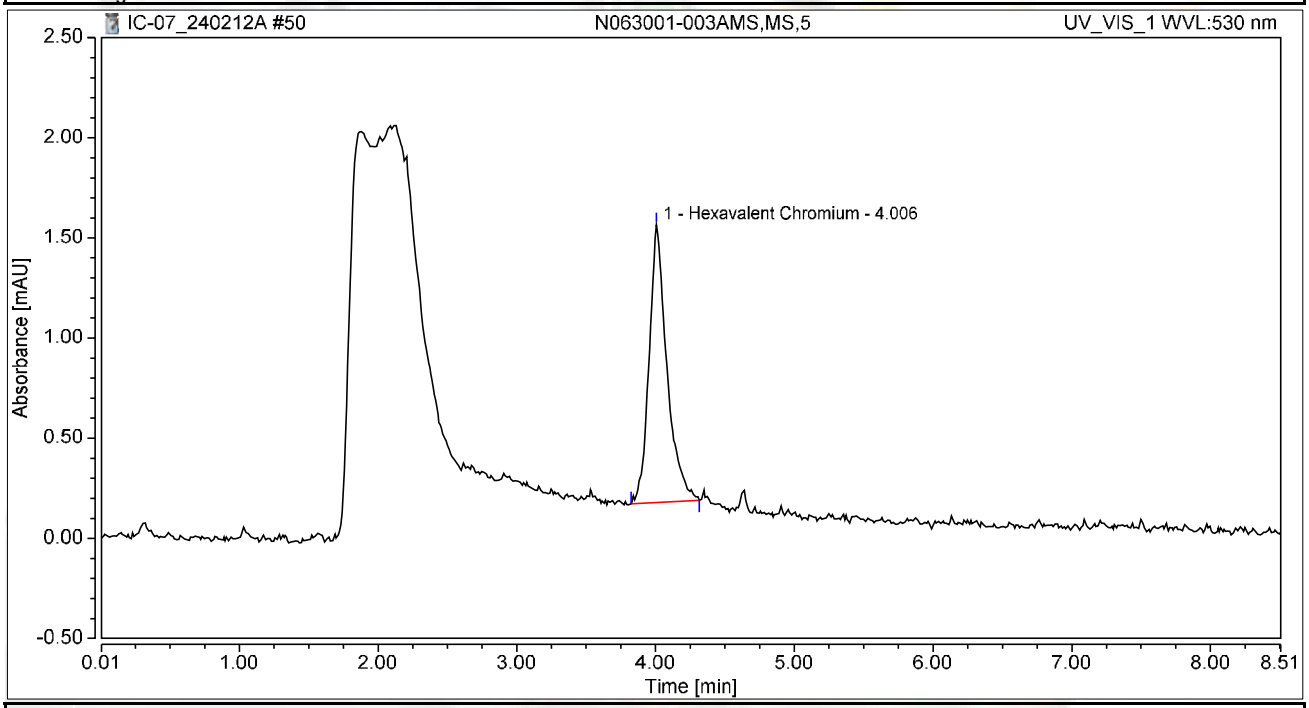
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 16:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

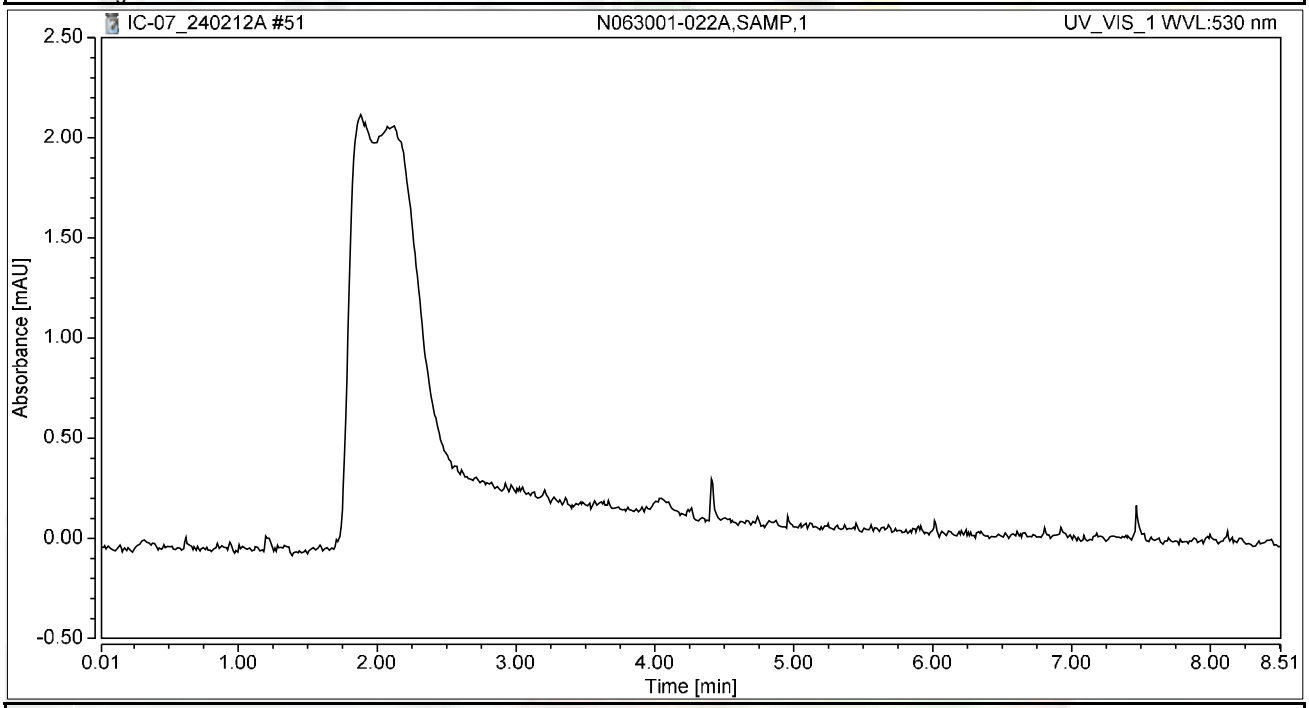
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.206	1.387	100.00	100.00	0.9557
Total:			**0.206**	**1.387**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-022A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 16:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

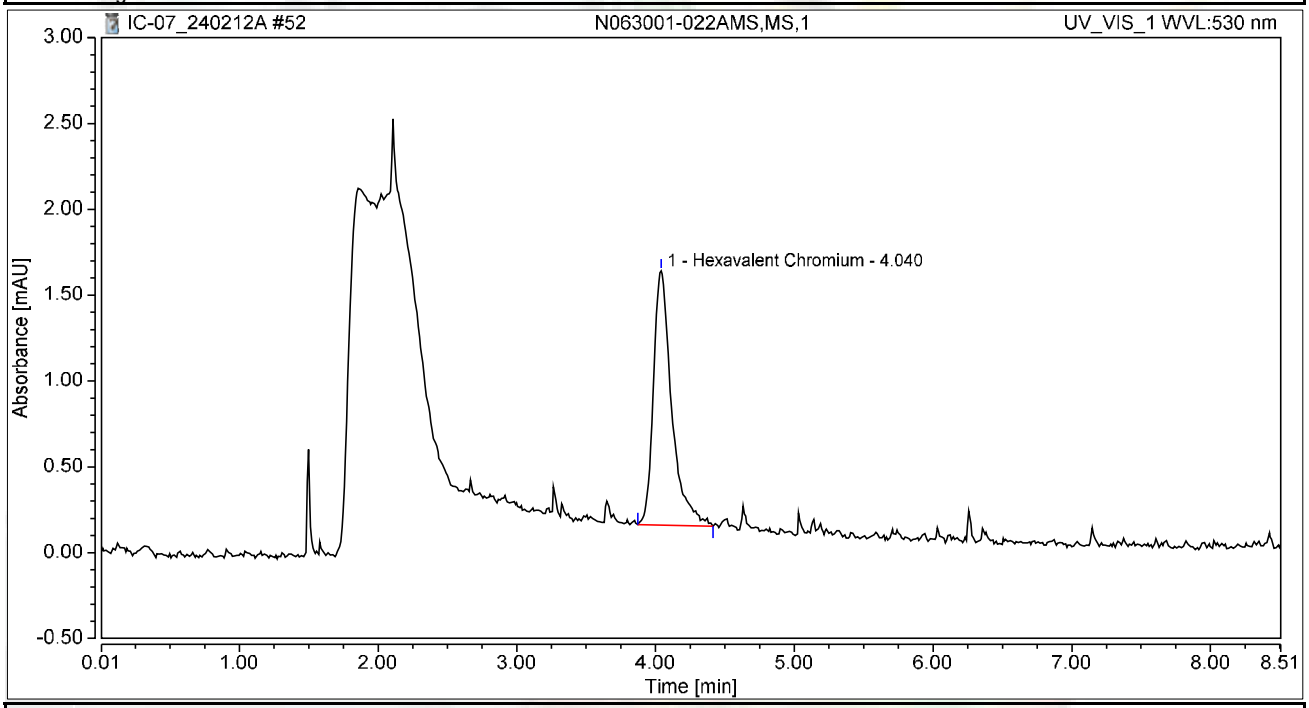
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-022AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 16:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

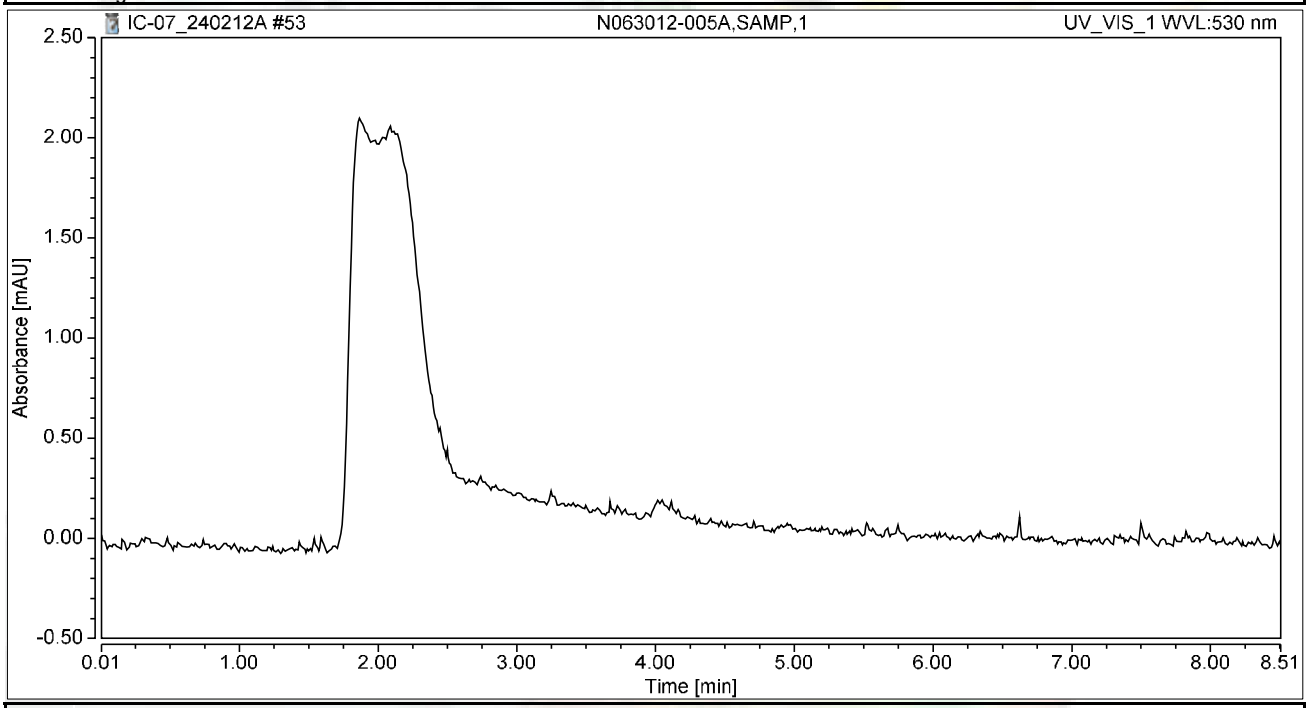
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.226	1.480	100.00	100.00	1.0526
Total:			**0.226**	**1.480**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 17:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

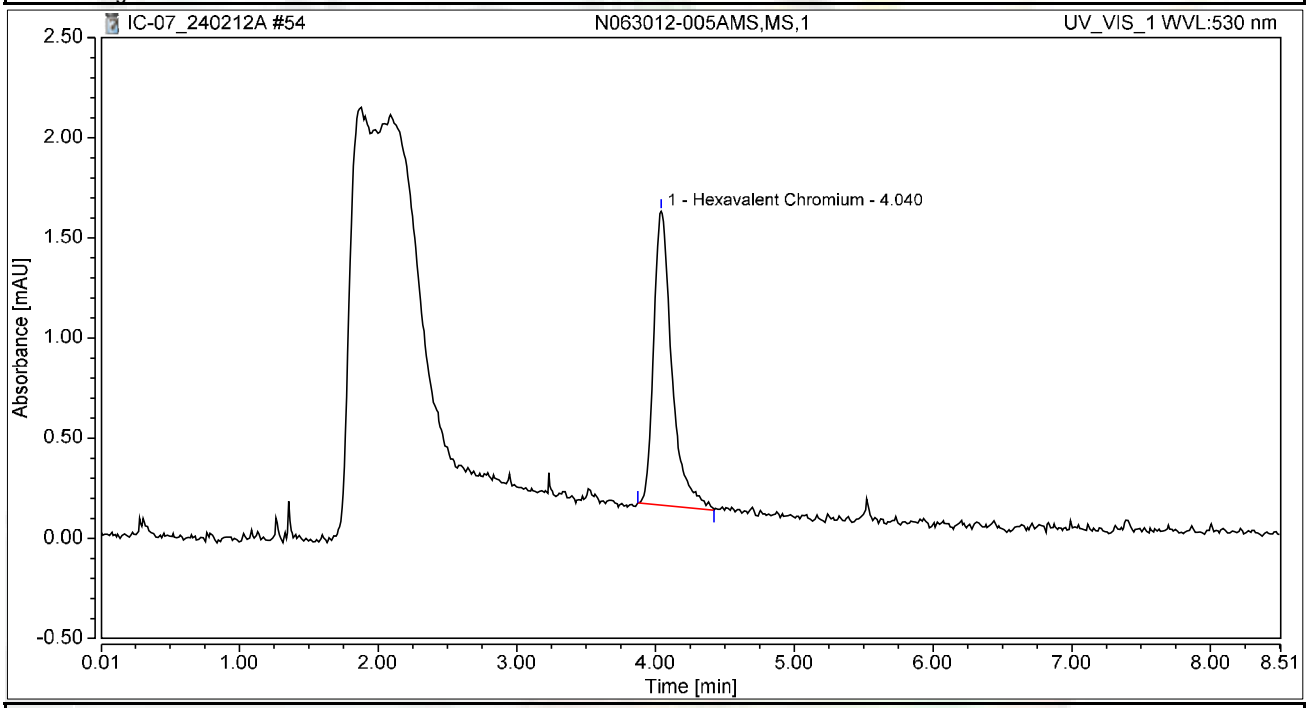
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 17:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

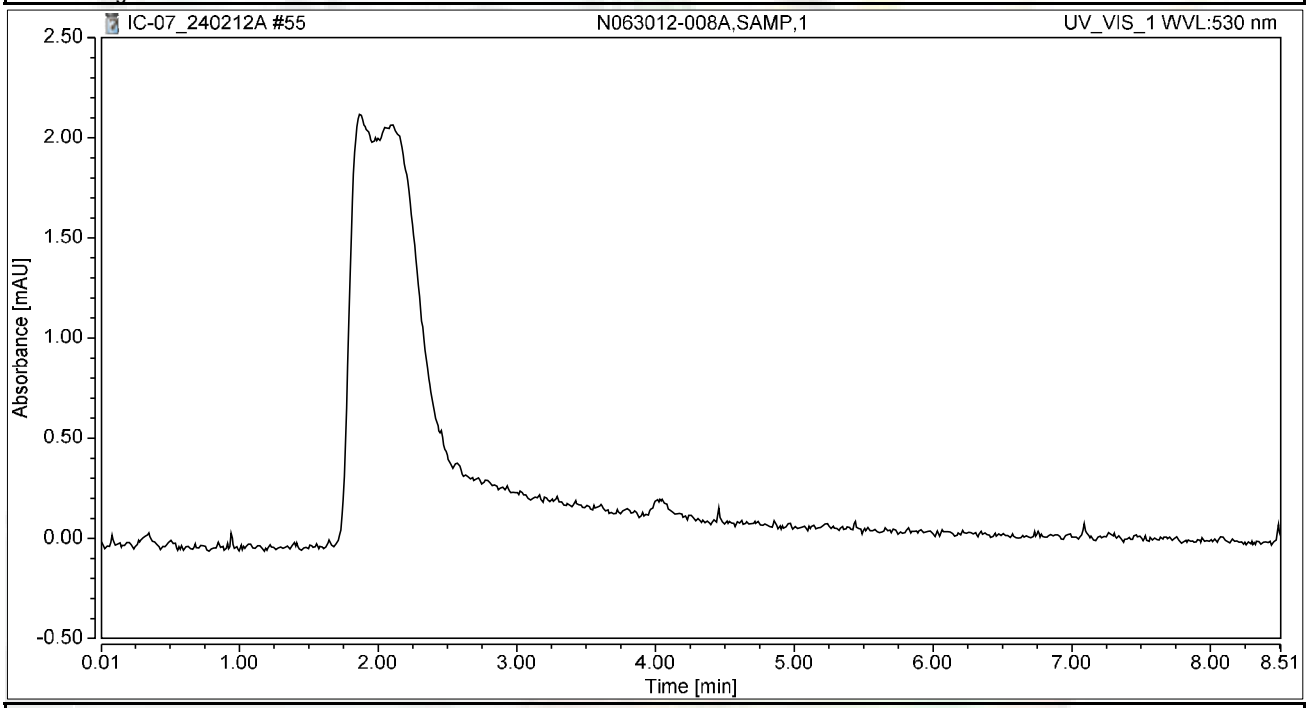
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.224	1.468	100.00	100.00	1.0392
Total:			**0.224**	**1.468**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 17:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

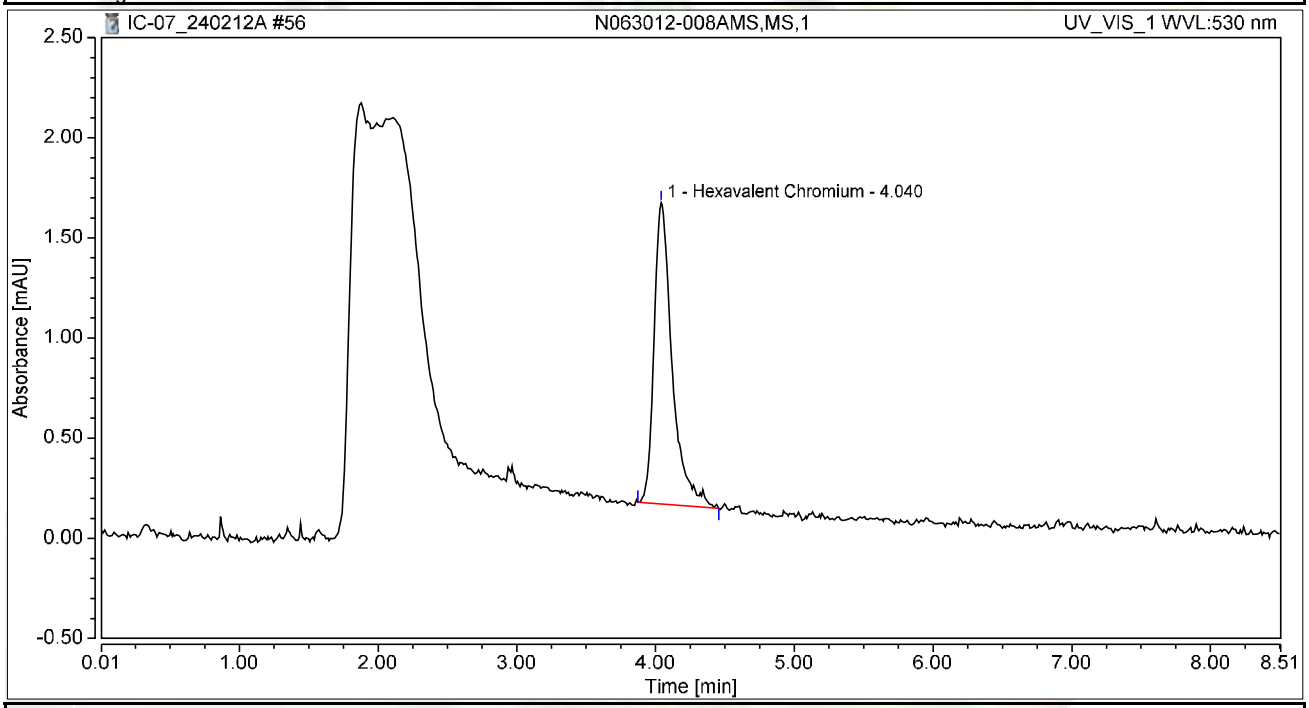
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 17:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

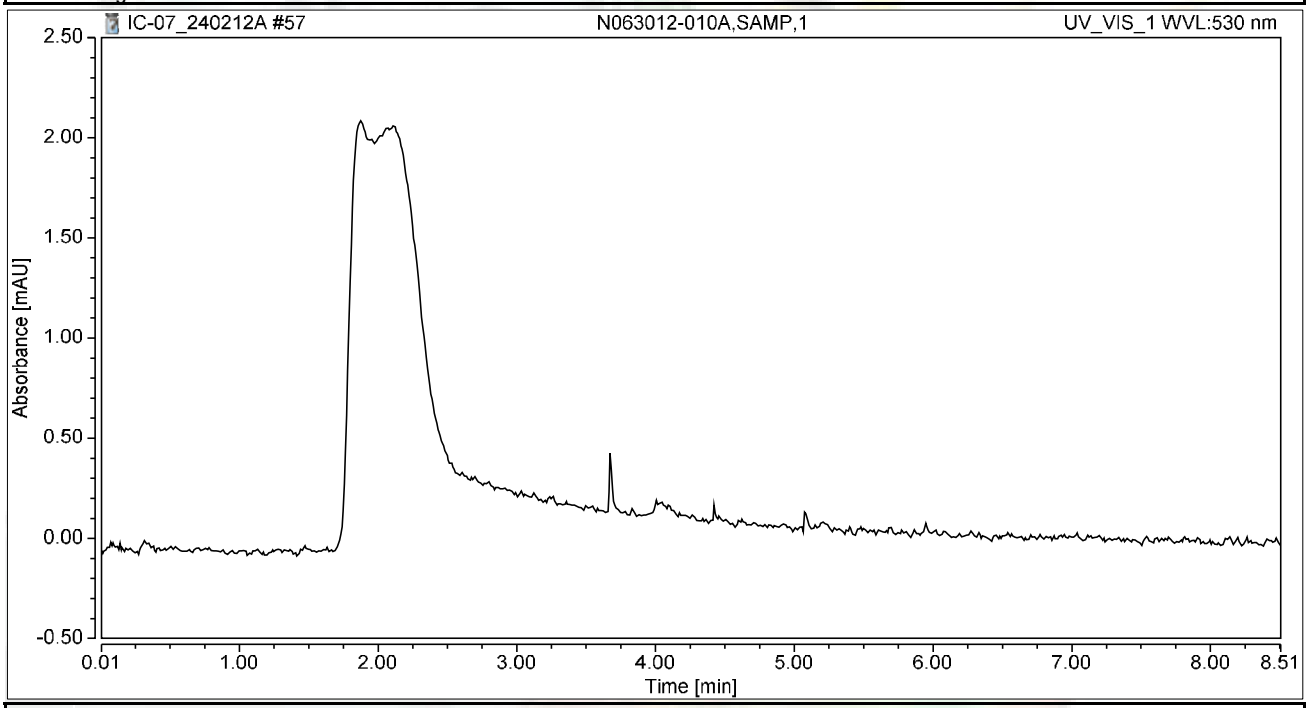
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.228	1.504	100.00	100.00	1.0591
Total:			**0.228**	**1.504**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-010A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 17:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

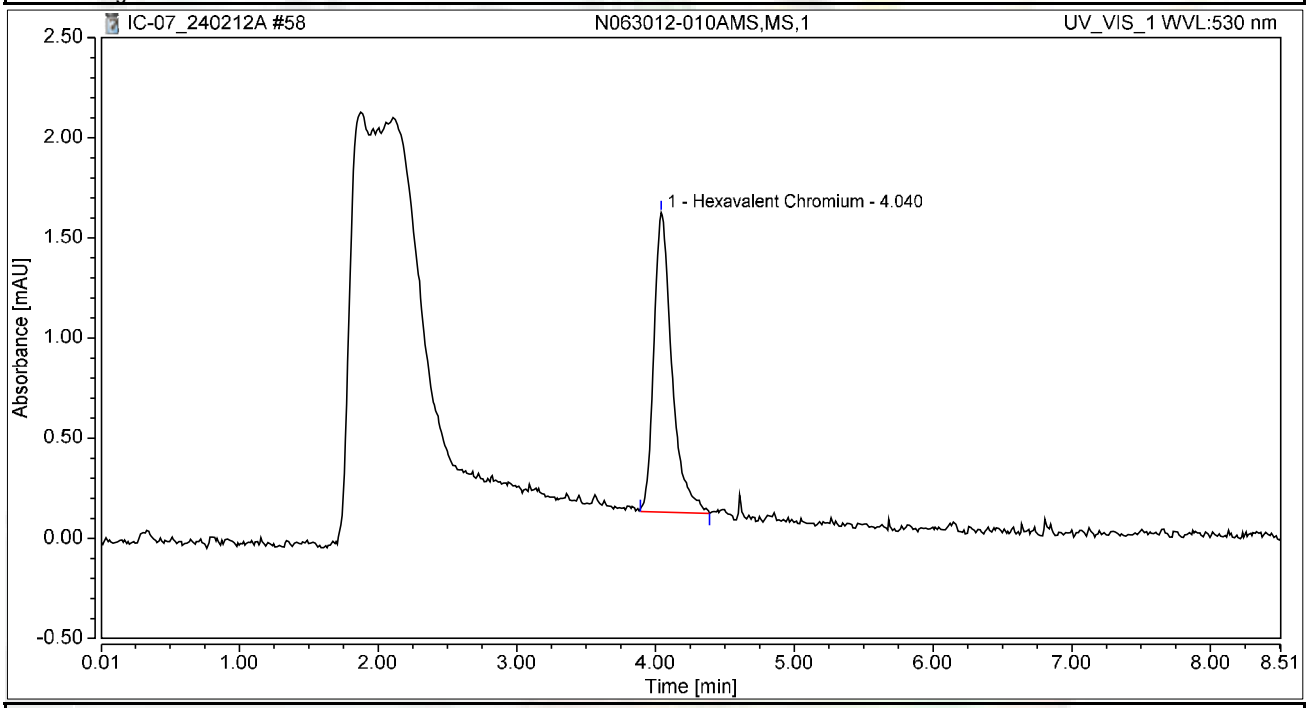
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-010AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 17:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

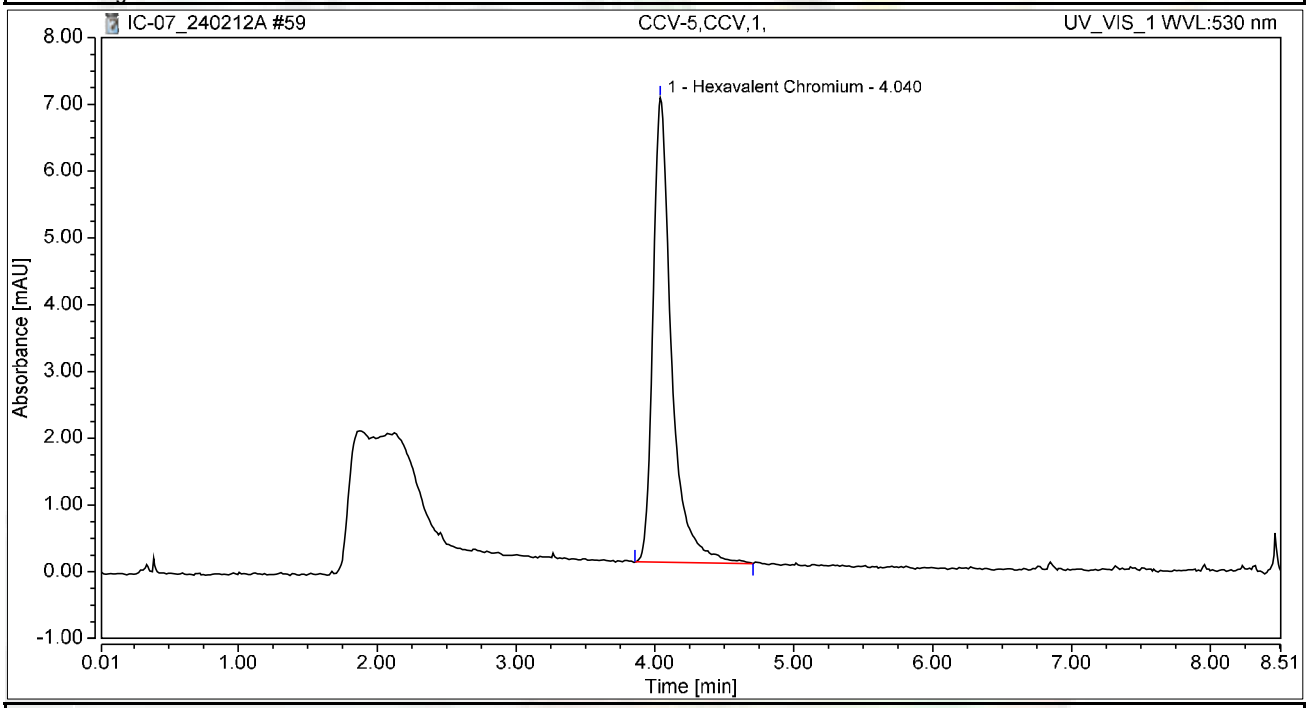
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.226	1.495	100.00	100.00	1.0502
Total:			**0.226**	**1.495**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 18:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

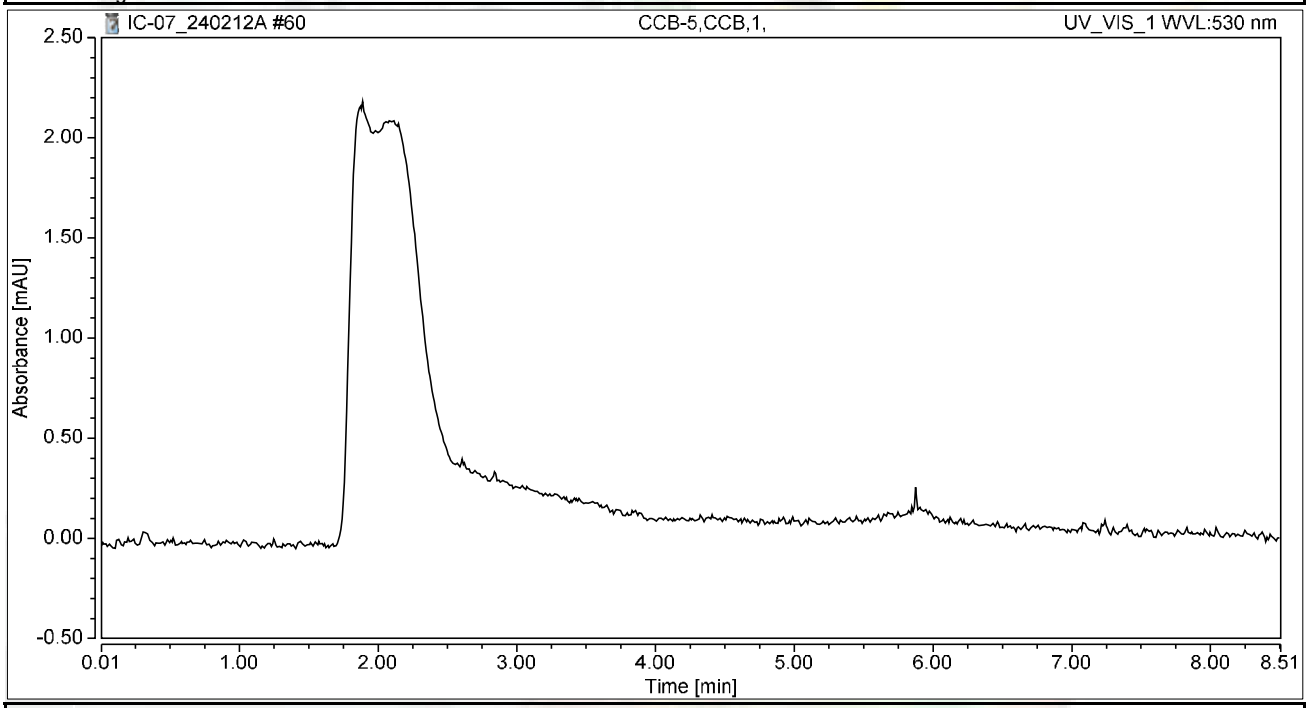
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.076	6.956	100.00	100.00	5.0000
Total:			**1.076**	**6.956**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 18:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

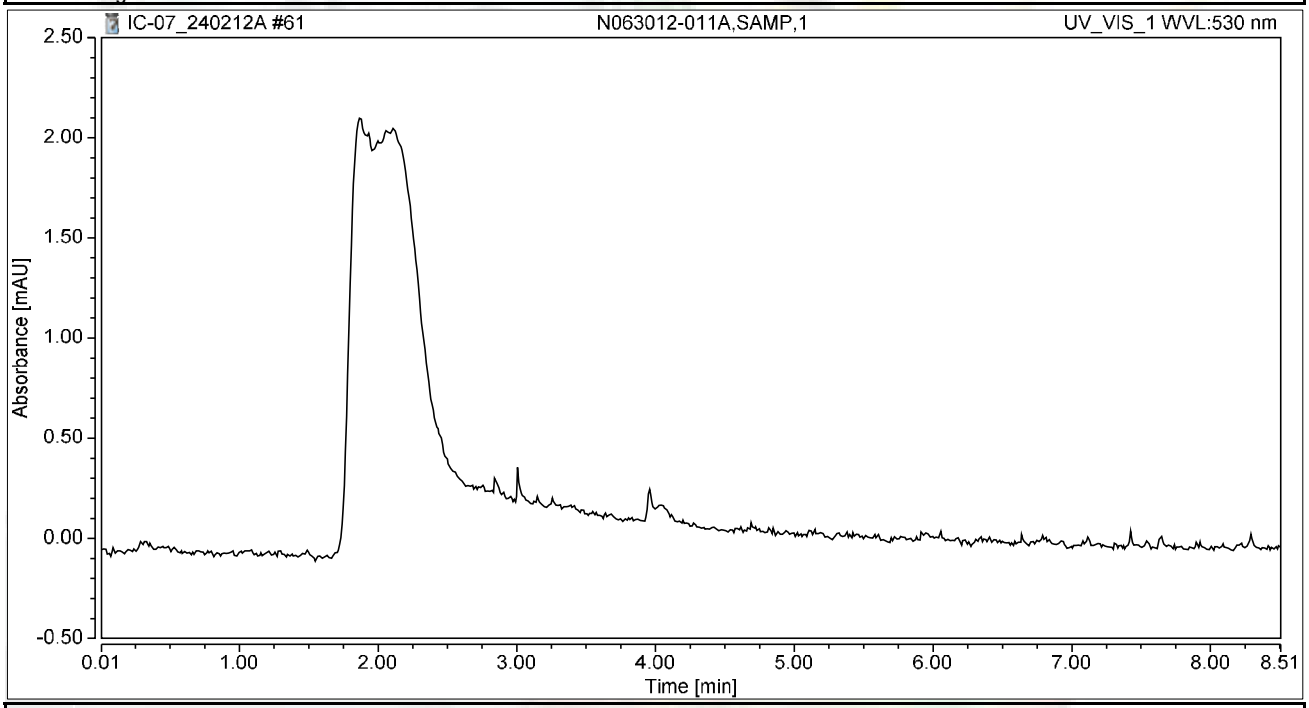
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-011A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 18:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

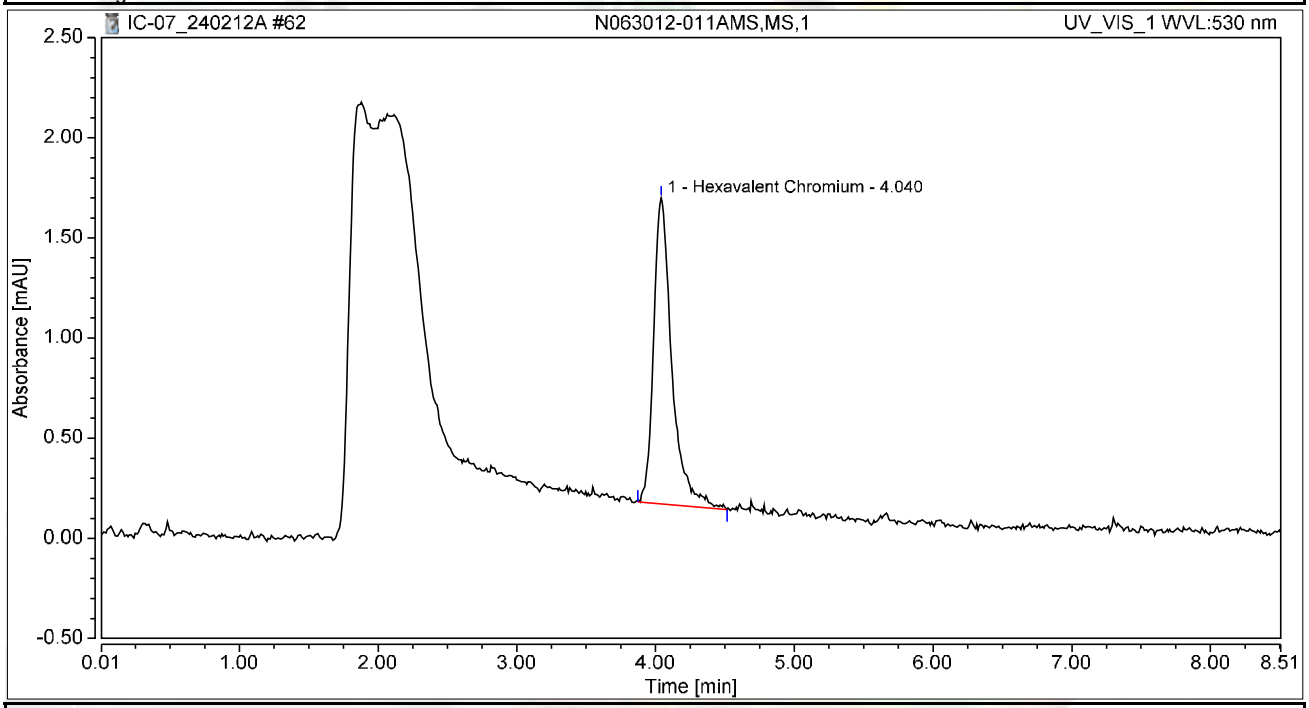
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 18:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

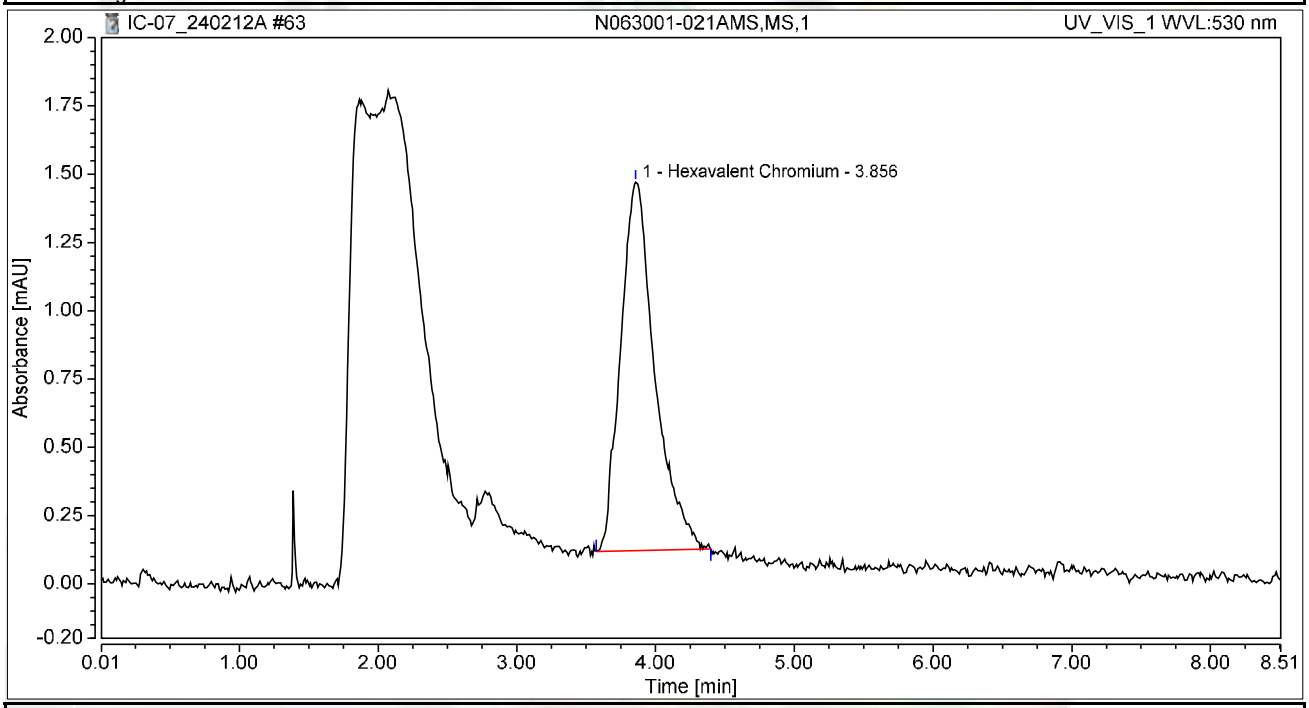
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.233	1.527	100.00	100.00	1.0811
Total:			**0.233**	**1.527**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-021AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**44**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 18:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

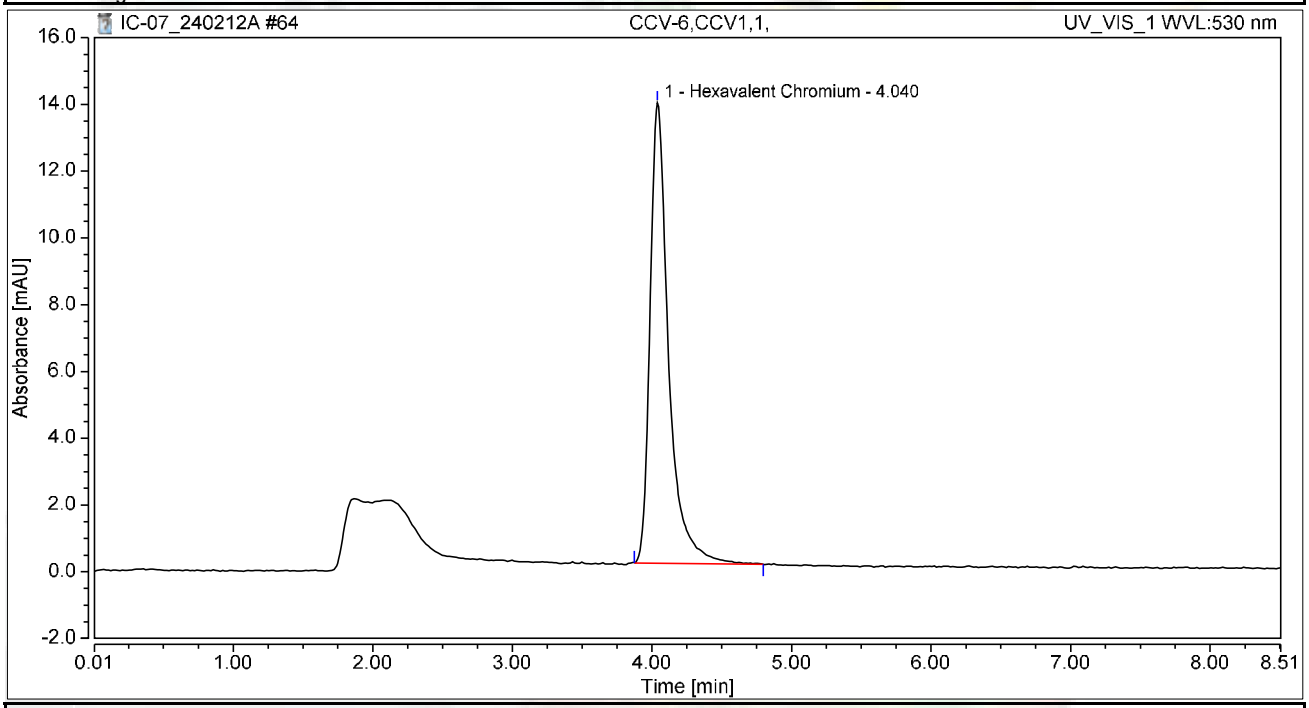
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.384	1.349	100.00	100.00	1.7875
Total:			**0.384**	**1.349**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**45**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 18:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

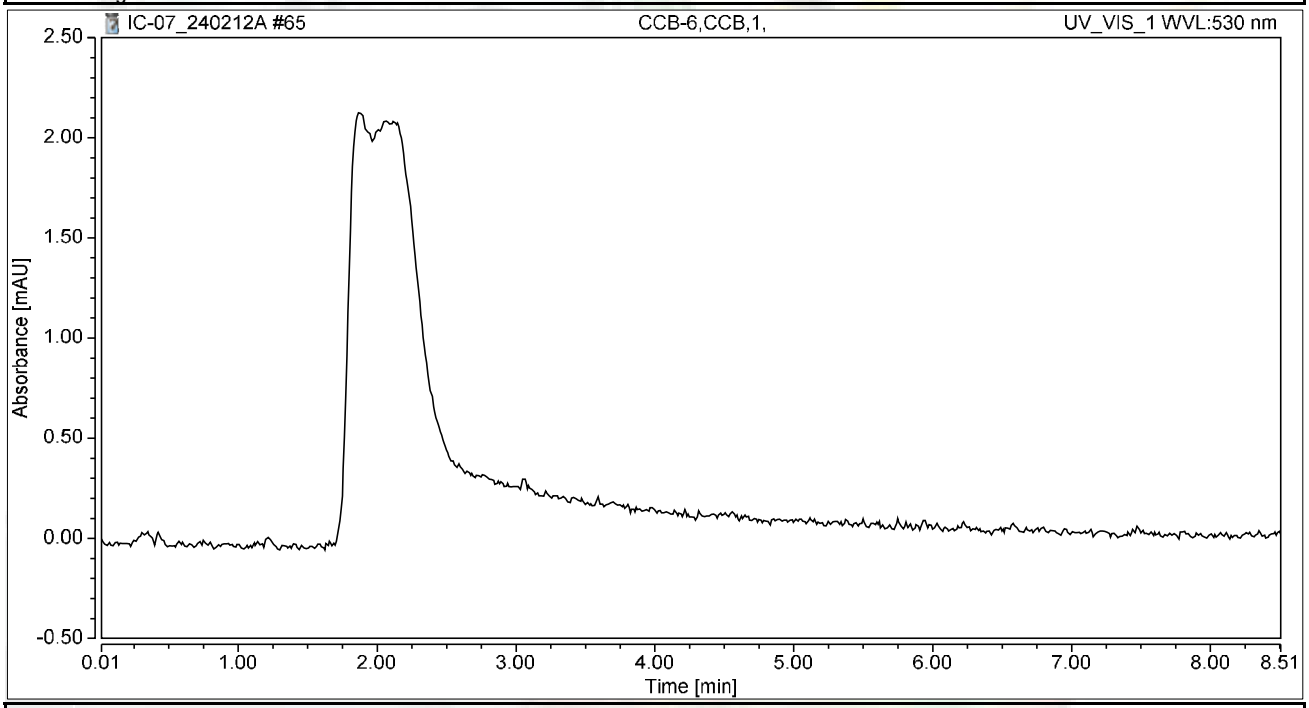
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.124	13.792	100.00	100.00	9.8739
Total:			**2.124**	**13.792**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**46**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 19:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

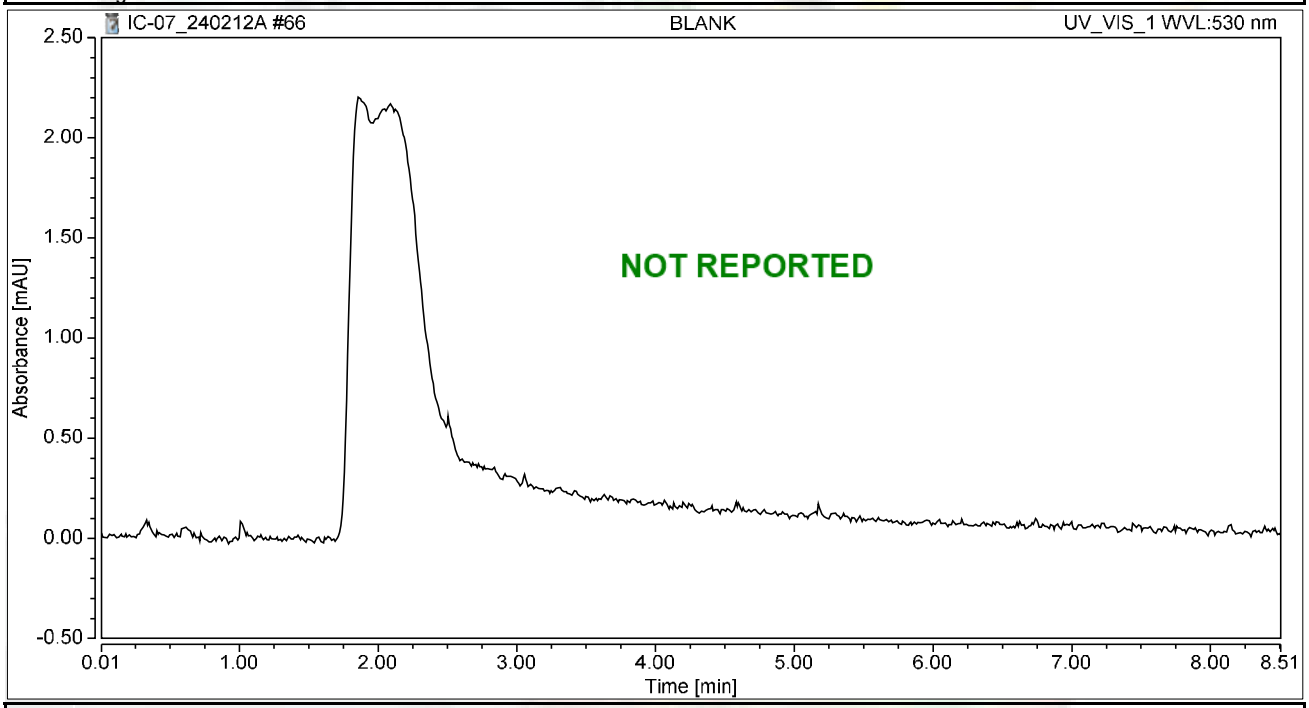
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**47**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 19:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240213A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/13/24 9:44 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/13/24 9:59 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/13/24 10:08 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/13/24 10:18 AM	Reported
13	MB-R181554	MBLK	1	Hexavalent Chromium	02/13/24 10:27 AM	Reported
14	LCS-R181554	LCS	1	Hexavalent Chromium	02/13/24 10:36 AM	Reported
15	N063053-009A	SAMP	1	Hexavalent Chromium	02/13/24 10:46 AM	Not Reported
16	N063053-011A	SAMP	20	Hexavalent Chromium	02/13/24 10:55 AM	Not Reported
17	N063053-011AMS	MS	20	Hexavalent Chromium	02/13/24 11:05 AM	Not Reported
18	N063053-002AMS	MS	50	Hexavalent Chromium	02/13/24 11:18 AM	Reported
19	N063053-002A	SAMP	50	Hexavalent Chromium	02/13/24 11:27 AM	Reported
20	N063053-002ADUP	DUP	50	Hexavalent Chromium	02/13/24 11:37 AM	Reported
21	N063053-011A	SAMP	1	Hexavalent Chromium	02/13/24 11:46 AM	Reported
22	N063053-011AMS	MS	1	Hexavalent Chromium	02/13/24 11:56 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/13/24 12:05 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/13/24 12:15 PM	Reported
25	N063053-003A	SAMP	10	Hexavalent Chromium	02/13/24 12:24 PM	Not Reported
26	N063053-003AMS	MS	10	Hexavalent Chromium	02/13/24 12:34 PM	Not Reported
27	N063053-008A	SAMP	100	Hexavalent Chromium	02/13/24 12:43 PM	Reported
28	N063053-011AMSD	MSD	1	Hexavalent Chromium	02/13/24 12:53 PM	Reported
29	N063053-005A	SAMP	1	Hexavalent Chromium	02/13/24 1:02 PM	Reported
30	N063053-005AMS	MS	1	Hexavalent Chromium	02/13/24 1:12 PM	Reported
31	N063053-006A	SAMP	1	Hexavalent Chromium	02/13/24 1:23 PM	Reported
32	N063053-006AMS	MS	1	Hexavalent Chromium	02/13/24 1:32 PM	Reported
33	N063053-007A	SAMP	1	Hexavalent Chromium	02/13/24 1:42 PM	Not Reported
34	N063053-007AMS	MS	1	Hexavalent Chromium	02/13/24 1:51 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/13/24 2:00 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/13/24 2:10 PM	Reported
37	N063053-001A	SAMP	5	Hexavalent Chromium	02/13/24 2:19 PM	Reported
38	N063053-001AMS	MS	5	Hexavalent Chromium	02/13/24 2:29 PM	Reported
39	N063053-004A	SAMP	10	Hexavalent Chromium	02/13/24 2:38 PM	Reported
40	N063053-004AMS	MS	10	Hexavalent Chromium	02/13/24 2:48 PM	Reported
41	N063053-012A	SAMP	5	Hexavalent Chromium	02/13/24 2:57 PM	Not Reported
42	N063053-012AMS	MS	5	Hexavalent Chromium	02/13/24 3:07 PM	Not Reported

Reviewed by:

JRB 2/20/2024

IC-07 / RBA / 2/15/2024 3:05 PM

INJECTION LOG: 240213A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063053-013A	SAMP	5	Hexavalent Chromium	02/13/24 3:16 PM	Reported
44	N063053-013AMS	MS	5	Hexavalent Chromium	02/13/24 3:26 PM	Reported
45	N063001-004A	SAMP	5	Hexavalent Chromium	02/13/24 3:35 PM	Reported
46	N063001-004AMS	MS	5	Hexavalent Chromium	02/13/24 3:44 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/13/24 3:59 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/13/24 4:11 PM	Reported
49	N063053-009A	SAMP	20	Hexavalent Chromium	02/13/24 4:20 PM	Reported
50	N063053-009AMS	MS	20	Hexavalent Chromium	02/13/24 4:30 PM	Reported
51	N063053-010A	SAMP	20	Hexavalent Chromium	02/13/24 4:39 PM	Reported
52	N063053-010AMS	MS	20	Hexavalent Chromium	02/13/24 4:49 PM	Reported
53	N063053-014A	SAMP	1	Hexavalent Chromium	02/13/24 4:58 PM	Not Reported
54	N063053-014AMS	MS	1	Hexavalent Chromium	02/13/24 5:08 PM	Not Reported
55	N063053-015A	SAMP	1	Hexavalent Chromium	02/13/24 5:17 PM	Not Reported
56	N063053-015AMS	MS	1	Hexavalent Chromium	02/13/24 5:27 PM	Not Reported
57	N063053-016A	SAMP	1	Hexavalent Chromium	02/13/24 5:36 PM	Not Reported
58	N063053-016AMS	MS	1	Hexavalent Chromium	02/13/24 5:46 PM	Not Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/13/24 5:55 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/13/24 6:05 PM	Reported
61	N063053-018A	SAMP	1	Hexavalent Chromium	02/13/24 6:14 PM	Not Reported
62	N063053-018AMS	MS	1	Hexavalent Chromium	02/13/24 6:23 PM	Not Reported
63	N063053-014A	SAMP	5	Hexavalent Chromium	02/13/24 6:33 PM	Reported
64	N063053-014AMS	MS	5	Hexavalent Chromium	02/13/24 6:42 PM	Reported
65	N063053-015A	SAMP	5	Hexavalent Chromium	02/13/24 6:52 PM	Reported
66	N063053-015AMS	MS	5	Hexavalent Chromium	02/13/24 7:01 PM	Reported
67	N063053-016A	SAMP	5	Hexavalent Chromium	02/13/24 7:11 PM	Reported
68	N063053-016AMS	MS	5	Hexavalent Chromium	02/13/24 7:20 PM	Reported
69	N063053-018A	SAMP	5	Hexavalent Chromium	02/13/24 7:30 PM	Reported
70	N063053-018AMS	MS	5	Hexavalent Chromium	02/13/24 7:39 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/13/24 7:49 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/13/24 7:58 PM	Reported
73	N063053-017A	SAMP	1	Hexavalent Chromium	02/13/24 8:08 PM	Reported
74	N063053-017AMS	MS	1	Hexavalent Chromium	02/13/24 8:17 PM	Reported
75	N063053-008AMS	MS	100	Hexavalent Chromium	02/13/24 8:26 PM	Reported
76	N063053-011A	SAMP	5	Hexavalent Chromium	02/13/24 8:36 PM	Not Reported
77	N063053-011AMS	MS	5	Hexavalent Chromium	02/13/24 8:45 PM	Not Reported
78	N063053-011AMSD	MSD	5	Hexavalent Chromium	02/13/24 8:54 PM	Not Reported
79	N062911-003A	SAMP	5	Hexavalent Chromium	02/13/24 9:03 PM	Not Reported
80	N062911-003AMS	MS	5	Hexavalent Chromium	02/13/24 9:13 PM	Not Reported
81	N062911-004A	SAMP	5	Hexavalent Chromium	02/13/24 9:22 PM	Not Reported
82	N062911-004AMS	MS	5	Hexavalent Chromium	02/13/24 9:32 PM	Not Reported
83	CCV-7	CCV	1	Hexavalent Chromium	02/13/24 9:41 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	02/13/24 9:51 PM	Reported

INJECTION LOG: 240213A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063053-003A	SAMP	50	Hexavalent Chromium	02/13/24 10:00 PM	Reported
86	N063053-003AMS	MS	50	Hexavalent Chromium	02/13/24 10:10 PM	Reported
87	N063053-007A	SAMP	20	Hexavalent Chromium	02/13/24 10:19 PM	Reported
88	N063053-007AMS	MS	20	Hexavalent Chromium	02/13/24 10:29 PM	Reported
89	N063053-012A	SAMP	20	Hexavalent Chromium	02/13/24 10:38 PM	Reported
90	N063053-012AMS	MS	20	Hexavalent Chromium	02/13/24 10:47 PM	Reported
91	CCV-8	CCV1	1	Hexavalent Chromium	02/13/24 10:57 PM	Reported
92	CCB-8	CCB	1	Hexavalent Chromium	02/13/24 11:06 PM	Reported
93	BLANK	BLANK	1	Hexavalent Chromium	02/13/24 11:16 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240213A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**13/Feb/24 23:46:39**
No. of Injections:	**96**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/13/2024 09:44	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/13/2024 09:59	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/13/2024 10:08	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/13/2024 10:18	Finished	CCB R240103B
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/13/2024 10:27	Finished	MB R240103B
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/13/2024 10:36	Finished	LCS @5ppb, IWST-231228B
15	N063053-009A,SAMP	7	1000	Unknown		02/13/2024 10:46	Finished	SAMP,10 mL
16	N063053-011A,SAMP	8	1000	Unknown		02/13/2024 10:55	Finished	SAMP,0.5>10 mL
17	N063053-011AMS,MS	9	1000	Unknown		02/13/2024 11:05	Finished	MS (5ppb), IWST-231228B,0.5
18	N063053-002AMS,MS	10	1000	Unknown		02/13/2024 11:18	Finished	MS (5ppb), IWST-231228B,0.2
19	N063053-002A,SAMP	11	1000	Unknown		02/13/2024 11:27	Finished	SAMP,0.02>10 mL
20	N063053-002ADUP,D	12	1000	Unknown		02/13/2024 11:37	Finished	DUP,0.02>10 mL
21	N063053-011A,SAMP	13	1000	Unknown		02/13/2024 11:46	Finished	SAMP,10 mL
22	N063053-011AMS,MS	14	1000	Unknown		02/13/2024 11:56	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	15	1000	Unknown		02/13/2024 12:05	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		02/13/2024 12:15	Finished	CCB R240103B
25	N063053-003A,SAMP	17	1000	Unknown		02/13/2024 12:24	Finished	SAMP,1>10 mL
26	N063053-003AMS,MS	18	1000	Unknown		02/13/2024 12:34	Finished	MS (5ppb), IWST-231228B,1>
27	N063053-008A,SAMP	19	1000	Unknown		02/13/2024 12:43	Finished	SAMP,0.1>10 mL
28	N063053-011AMSD,M	20	1000	Unknown		02/13/2024 12:53	Finished	MSD (1ppb), IWST-231228B,1
29	N063053-005A,SAMP	21	1000	Unknown		02/13/2024 13:02	Finished	SAMP,10 mL
30	N063053-005AMS,MS	22	1000	Unknown		02/13/2024 13:12	Finished	MS (1ppb), IWST-231228B,10r
31	N063053-006A,SAMP	23	1000	Unknown		02/13/2024 13:23	Finished	SAMP,10 mL
32	N063053-006AMS,MS	24	1000	Unknown		02/13/2024 13:32	Finished	MS (1ppb), IWST-231228B,10r
33	N063053-007A,SAMP	25	1000	Unknown		02/13/2024 13:42	Finished	SAMP,10 mL
34	N063053-007AMS,MS	26	1000	Unknown		02/13/2024 13:51	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	27	1000	Unknown		02/13/2024 14:00	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	28	1000	Unknown		02/13/2024 14:10	Finished	CCB R240103B
37	N063053-001A,SAMP	29	1000	Unknown		02/13/2024 14:19	Finished	SAMP,2>10 mL
38	N063053-001AMS,MS	30	1000	Unknown		02/13/2024 14:29	Finished	MS (5ppb), IWST-231228B,2>
39	N063053-004A,SAMP	31	1000	Unknown		02/13/2024 14:38	Finished	SAMP,1>10 mL
40	N063053-004AMS,MS	32	1000	Unknown		02/13/2024 14:48	Finished	MS (5ppb), IWST-231228B,1>
41	N063053-012A,SAMP	33	1000	Unknown		02/13/2024 14:57	Finished	SAMP,2>10 mL
42	N063053-012AMS,MS	34	1000	Unknown		02/13/2024 15:07	Finished	MS (5ppb), IWST-231228B,2>
43	N063053-013A,SAMP	35	1000	Unknown		02/13/2024 15:16	Finished	SAMP,2>10 mL
44	N063053-013AMS,MS	36	1000	Unknown		02/13/2024 15:26	Finished	MS (5ppb), IWST-231228B,2>
45	N063001-004A,SAMP	37	1000	Unknown		02/13/2024 15:35	Finished	SAMP,2>10 mL
46	N063001-004AMS,MS	38	1000	Unknown		02/13/2024 15:44	Finished	MS (1ppb), IWST-231228B,2>
47	CCV-4,CCV1,1,	1	1000	Unknown		02/13/2024 15:59	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	2	1000	Unknown		02/13/2024 16:11	Finished	CCB R240103B
49	N063053-009A,SAMP	3	1000	Unknown		02/13/2024 16:20	Finished	SAMP,0.5>10 mL
50	N063053-009AMS,MS	4	1000	Unknown		02/13/2024 16:30	Finished	MS (5ppb), IWST-231228B,0.5
51	N063053-010A,SAMP	5	1000	Unknown		02/13/2024 16:39	Finished	SAMP,0.5>10 mL
52	N063053-010AMS,MS	6	1000	Unknown		02/13/2024 16:49	Finished	MS (5ppb), IWST-231228B,0.5
53	N063053-014A,SAMP	7	1000	Unknown		02/13/2024 16:58	Finished	SAMP,10 mL
54	N063053-014AMS,MS	8	1000	Unknown		02/13/2024 17:08	Finished	MS (1ppb), IWST-231228B,10r
55	N063053-015A,SAMP	9	1000	Unknown		02/13/2024 17:17	Finished	SAMP,10 mL
56	N063053-015AMS,MS	10	1000	Unknown		02/13/2024 17:27	Finished	MS (1ppb), IWST-231228B,10r
57	N063053-016A,SAMP	11	1000	Unknown		02/13/2024 17:36	Finished	SAMP,10 mL
58	N063053-016AMS,MS	12	1000	Unknown		02/13/2024 17:46	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	13	1000	Unknown		02/13/2024 17:55	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	14	1000	Unknown		02/13/2024 18:05	Finished	CCB R240103B

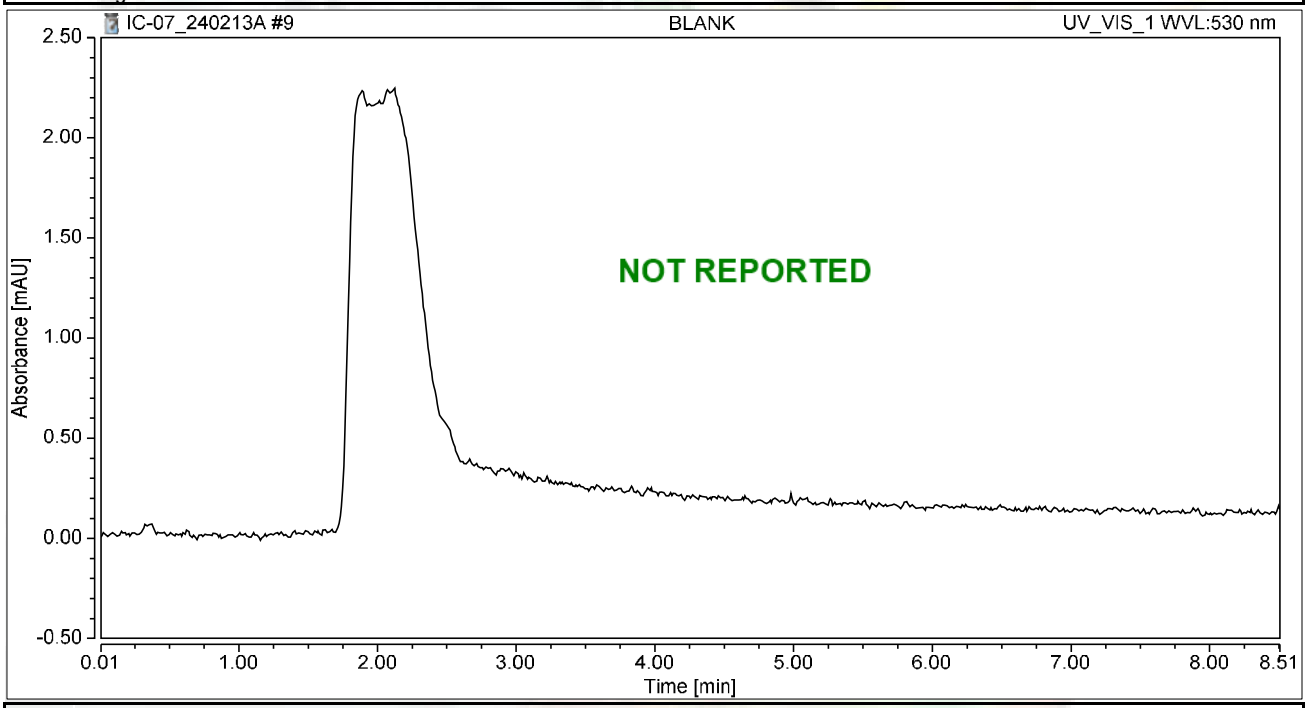
61	N063053-018A,SAMP	15	1000	Unknown		02/13/2024 18:14	Finished	SAMP,10 mL
62	N063053-018AMS,MS	16	1000	Unknown		02/13/2024 18:23	Finished	MS (1ppb), IWST-231228B,10r
63	N063053-014A,SAMP	17	1000	Unknown		02/13/2024 18:33	Finished	SAMP,2>10 mL
64	N063053-014AMS,MS	18	1000	Unknown		02/13/2024 18:42	Finished	MS (1ppb), IWST-231228B,2>
65	N063053-015A,SAMP	19	1000	Unknown		02/13/2024 18:52	Finished	SAMP,2>10 mL
66	N063053-015AMS,MS	20	1000	Unknown		02/13/2024 19:01	Finished	MS (1ppb), IWST-231228B,2>
67	N063053-016A,SAMP	21	1000	Unknown		02/13/2024 19:11	Finished	SAMP,2>10 mL
68	N063053-016AMS,MS	22	1000	Unknown		02/13/2024 19:20	Finished	MS (1ppb), IWST-231228B,2>
69	N063053-018A,SAMP	23	1000	Unknown		02/13/2024 19:30	Finished	SAMP,2>10 mL
70	N063053-018AMS,MS	24	1000	Unknown		02/13/2024 19:39	Finished	MS (1ppb), IWST-231228B,2>
71	CCV-6,CCV1,1,	25	1000	Unknown		02/13/2024 19:49	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	26	1000	Unknown		02/13/2024 19:58	Finished	CCB R240103B
73	N063053-017A,SAMP	27	1000	Unknown		02/13/2024 20:08	Finished	SAMP,10 mL
74	N063053-017AMS,MS	28	1000	Unknown		02/13/2024 20:17	Finished	MS (1ppb), IWST-231228B,10r
75	N063053-008AMS,MS	29	1000	Unknown		02/13/2024 20:26	Finished	MS (5ppb), IWST-231228B,0.1
76	N063053-011A,SAMP	30	1000	Unknown		02/13/2024 20:36	Finished	SAMP,2>10 mL
77	N063053-011AMS,MS	31	1000	Unknown		02/13/2024 20:45	Finished	MS (1ppb), IWST-231228B,2>
78	N063053-011AMSD,M	32	1000	Unknown		02/13/2024 20:54	Finished	MSD (1ppb), IWST-231228B,2
79	N062911-003A,SAMP	33	1000	Unknown		02/13/2024 21:03	Finished	SAMP,2>10 mL
80	N062911-003AMS,MS	34	1000	Unknown		02/13/2024 21:13	Finished	MS (1ppb), IWST-231228B,2>
81	N062911-004A,SAMP	35	1000	Unknown		02/13/2024 21:22	Finished	SAMP,2>10 mL
82	N062911-004AMS,MS	36	1000	Unknown		02/13/2024 21:32	Finished	MS (1ppb), IWST-231228B,2>
83	CCV-7,CCV,1,	37	1000	Unknown		02/13/2024 21:41	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	38	1000	Unknown		02/13/2024 21:51	Finished	CCB R240103B
85	N063053-003A,SAMP	39	1000	Unknown		02/13/2024 22:00	Finished	SAMP,0.2>10 mL
86	N063053-003AMS,MS	40	1000	Unknown		02/13/2024 22:10	Finished	MS (5ppb), IWST-231228B,0.2
87	N063053-007A,SAMP	41	1000	Unknown		02/13/2024 22:19	Finished	SAMP,0.5>10 mL
88	N063053-007AMS,MS	42	1000	Unknown		02/13/2024 22:29	Finished	MS (5ppb), IWST-231228B,0.5
89	N063053-012A,SAMP	43	1000	Unknown		02/13/2024 22:38	Finished	SAMP,0.5>10 mL
90	N063053-012AMS,MS	44	1000	Unknown		02/13/2024 22:47	Finished	MS (5ppb), IWST-231228B,0.5
91	CCV-8,CCV1,1,	45	1000	Unknown		02/13/2024 22:57	Finished	CCV @10ppb, IWST-231228A
92	CCB-8,CCB,1,	46	1000	Unknown		02/13/2024 23:06	Finished	CCB R240103B
93	BLANK	47	1000	Unknown		02/13/2024 23:16	Finished	BLANK
94	SHUTDOWN	48	1000	Unknown		02/13/2024 23:25	Finished	
95	Eluent: R240212A	49	1000	Unknown		n.a.	Finished	
96	PCR: R240212B	50	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 09:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

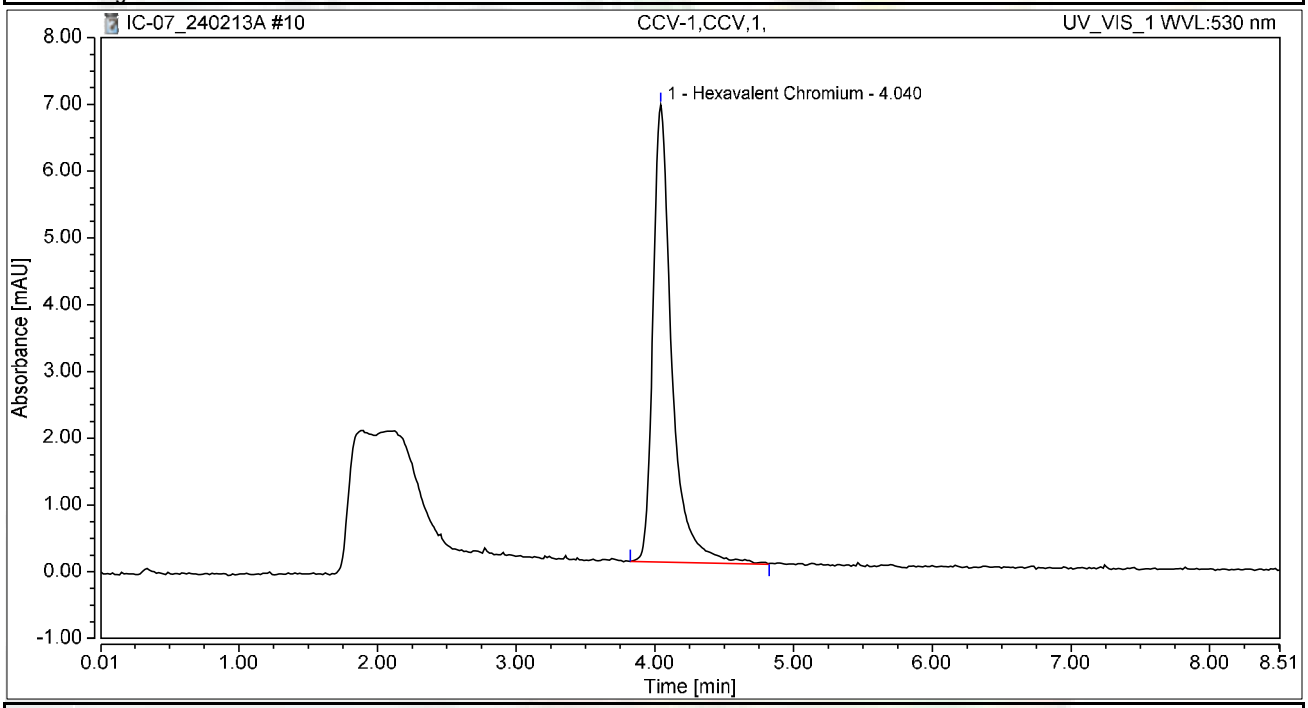
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 09:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.079	6.853	100.00	100.00	5.0144
Total:			**1.079**	**6.853**	**100.00**	**100.00**	

Reviewed by:

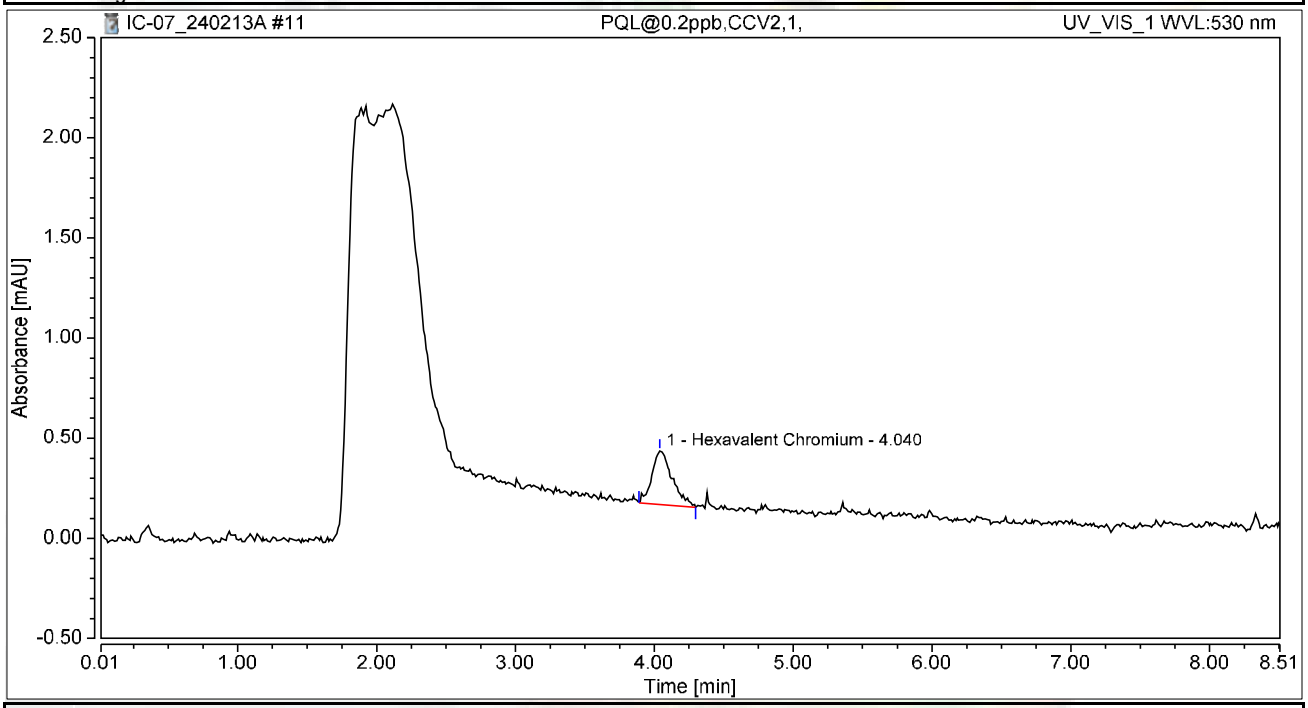
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 10:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

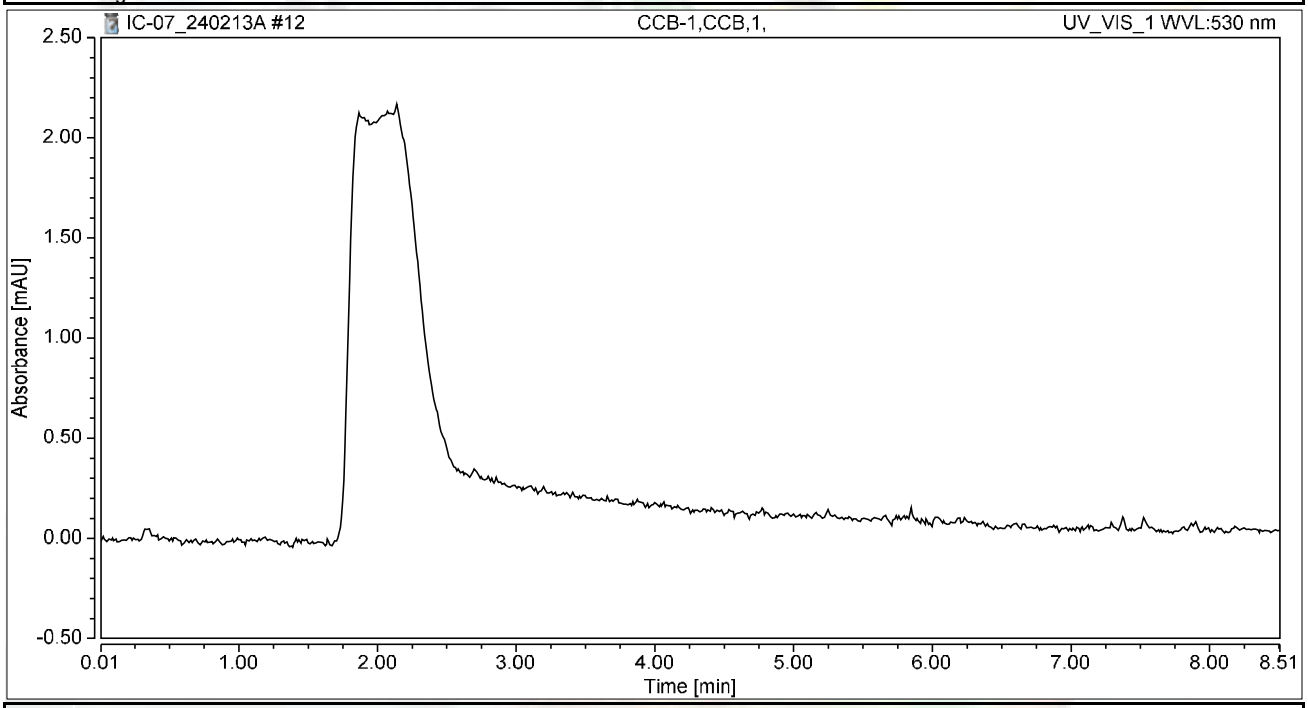
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.045	0.266	100.00	100.00	0.2113
Total:			**0.045**	**0.266**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 10:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

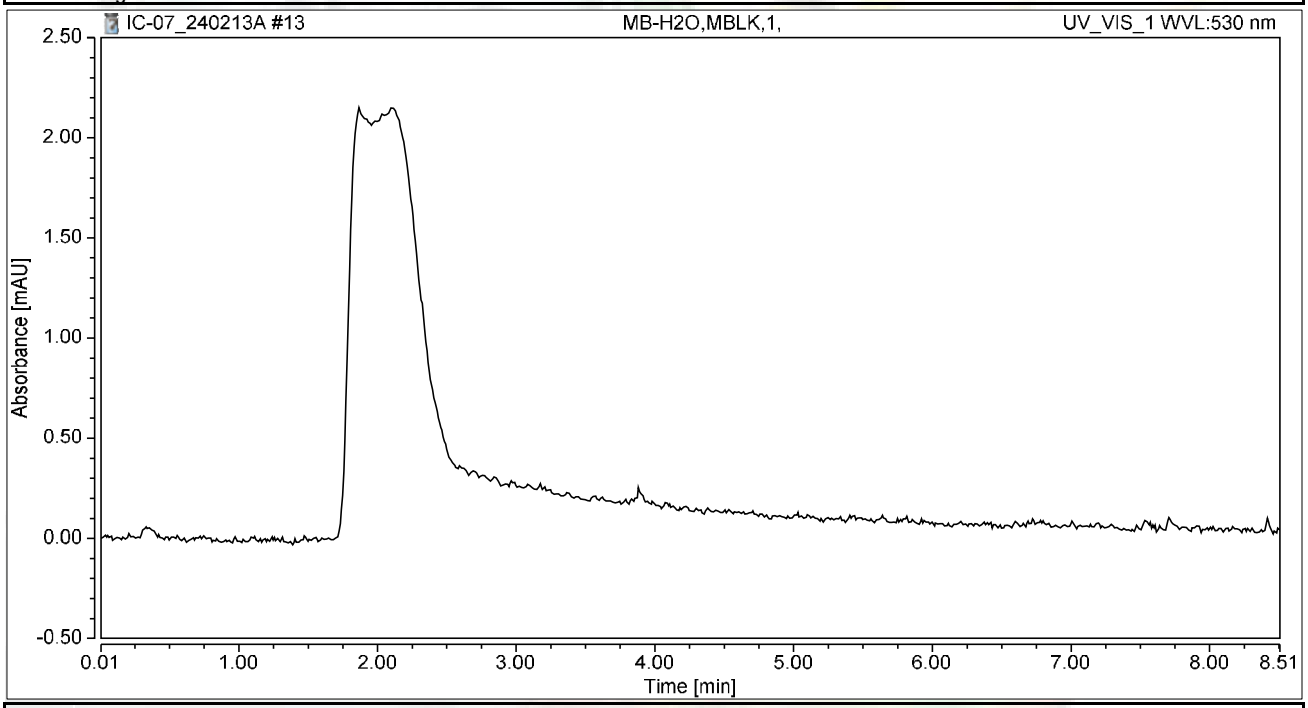
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 10:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

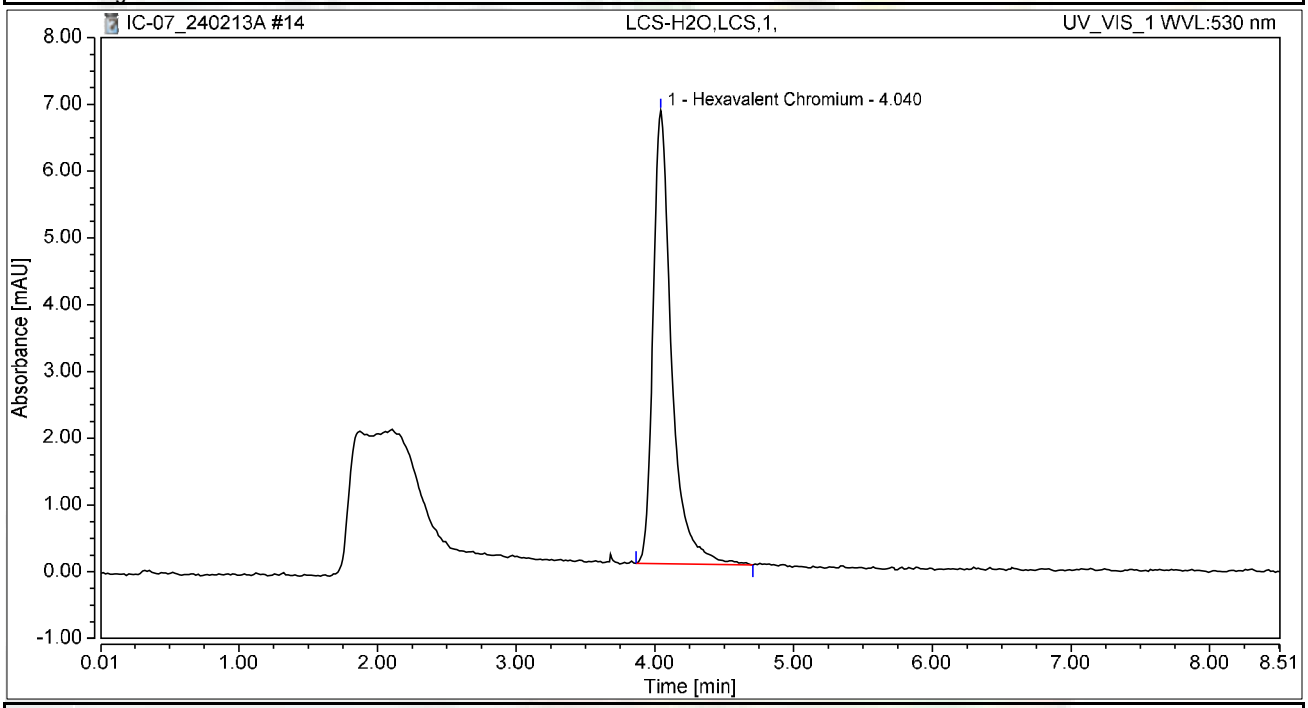
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 10:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

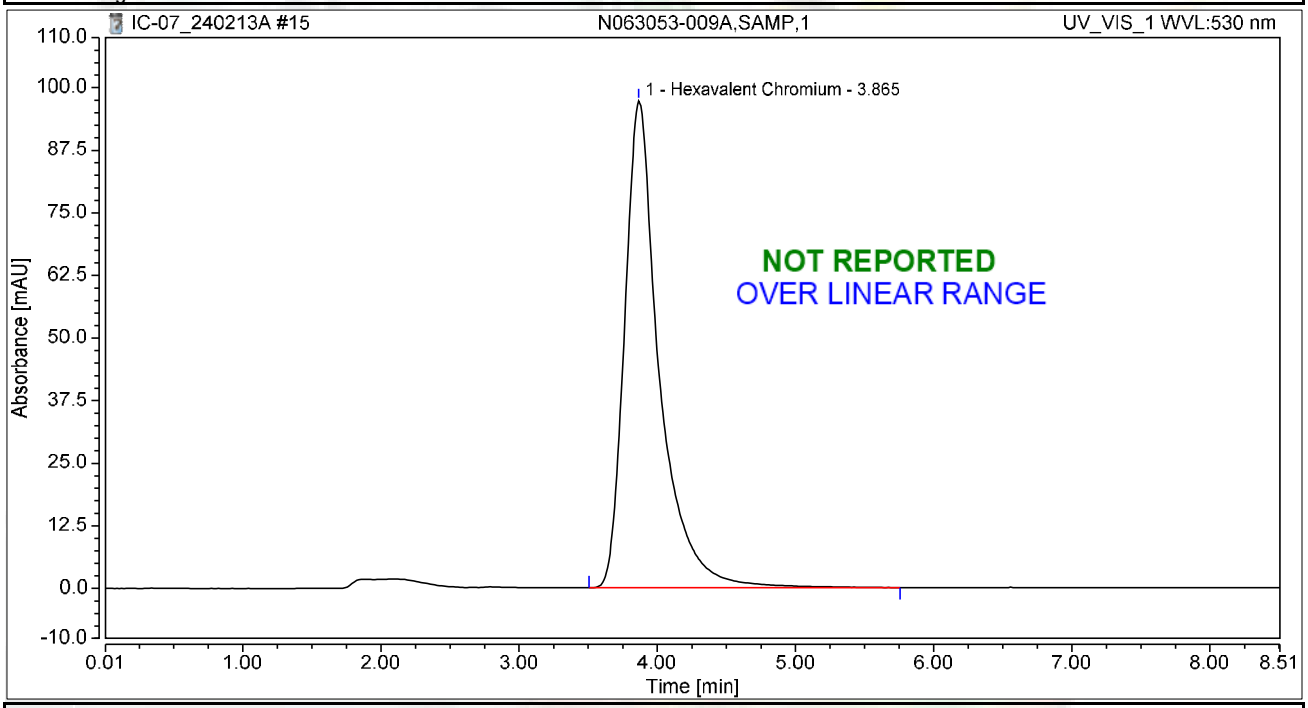
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.051	6.785	100.00	100.00	4.8861
Total:			**1.051**	**6.785**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 10:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

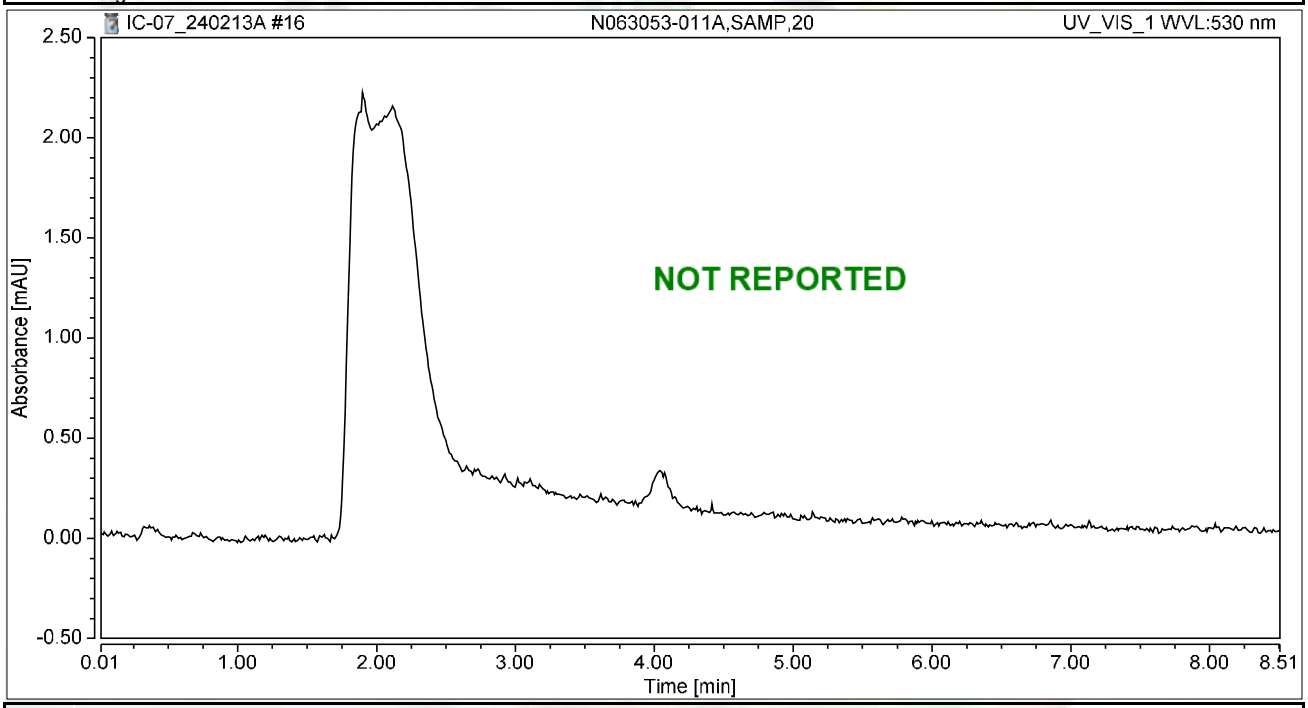
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.865	28.264	97.258	100.00	100.00	131.3960
Total:			**28.264**	**97.258**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011A,SAMP,20**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 10:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

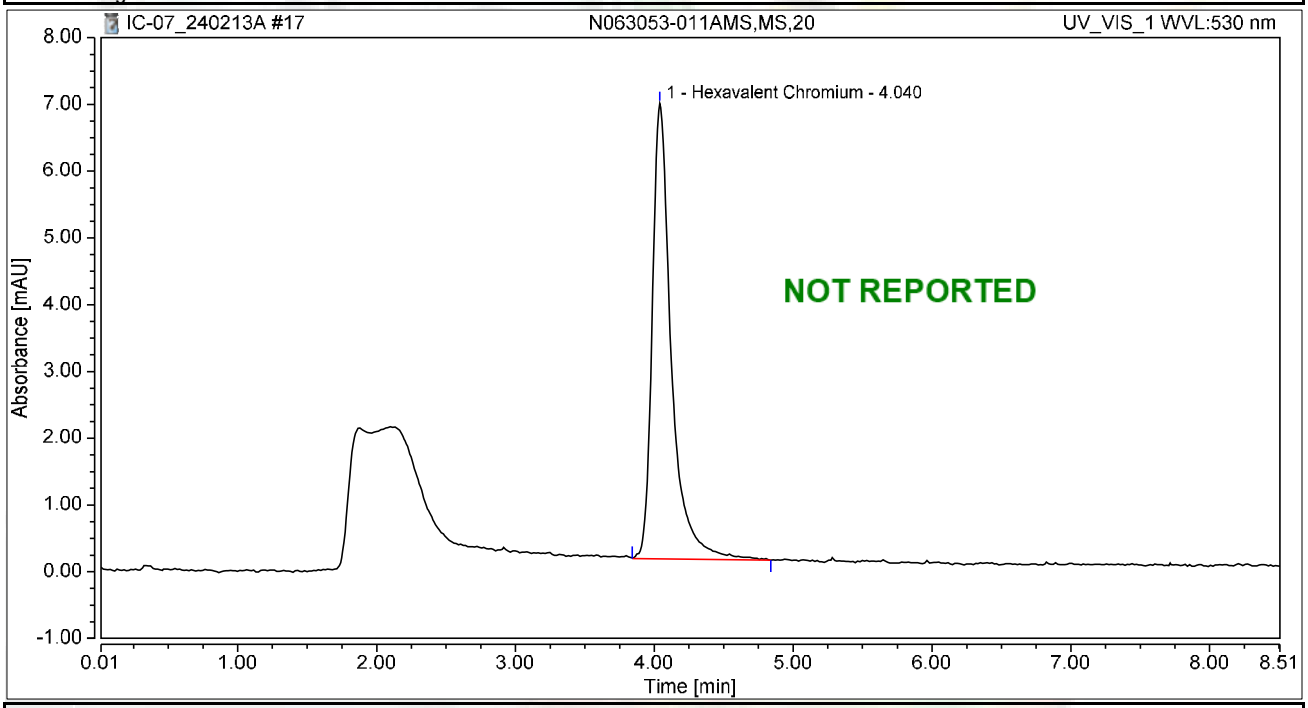
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011AMS,MS,20**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 11:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

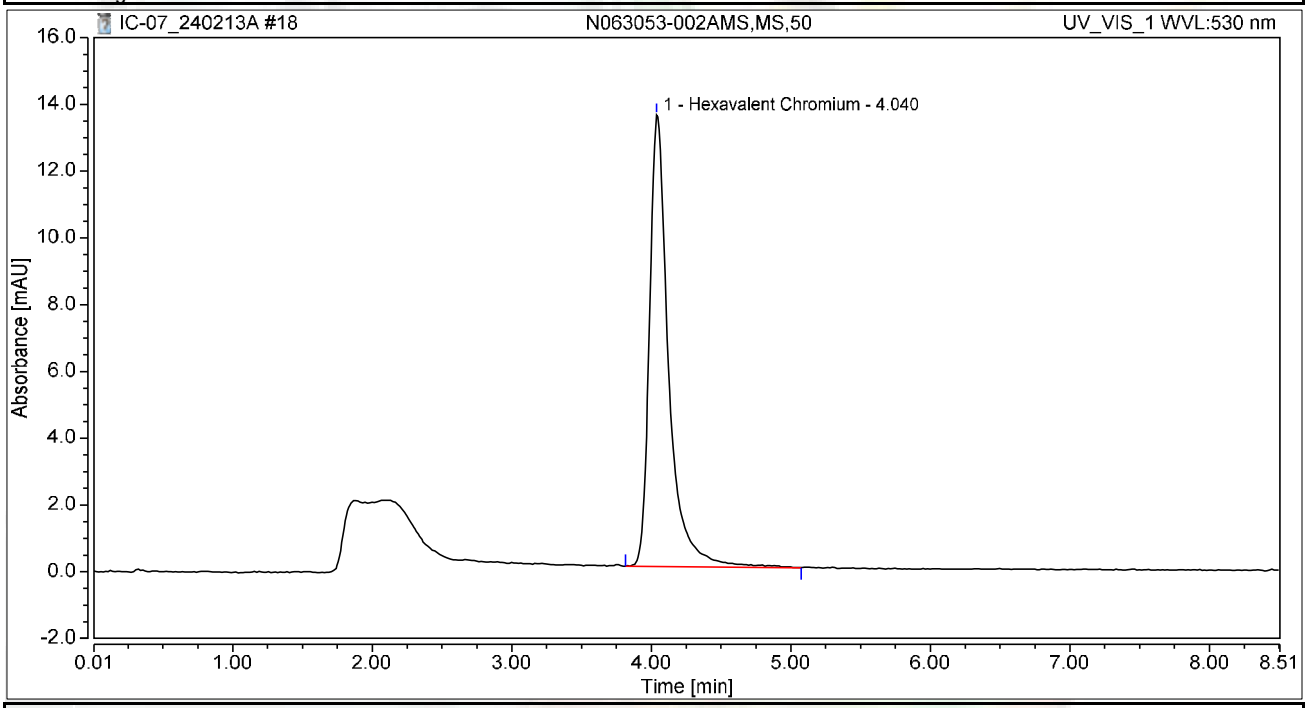
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.091	6.819	100.00	100.00	5.0729
Total:			**1.091**	**6.819**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-002AMS,MS,50**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 11:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

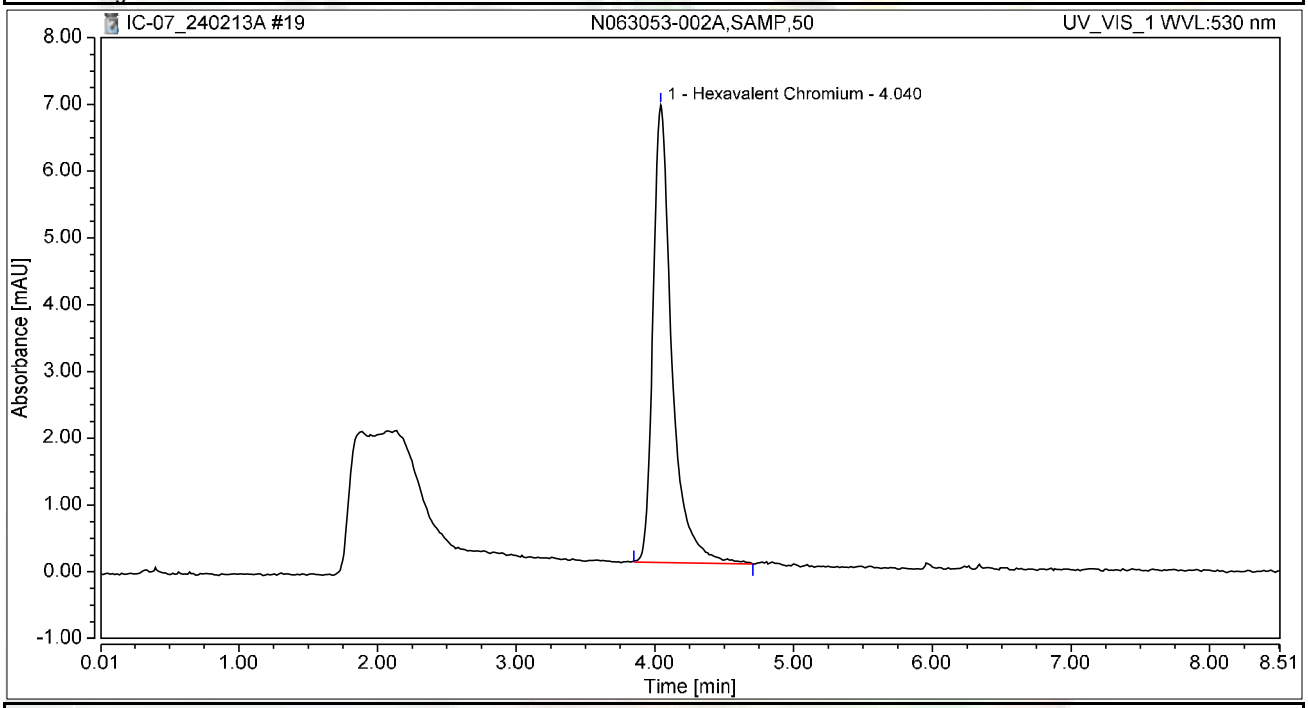
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.158	13.521	100.00	100.00	10.0327
Total:			**2.158**	**13.521**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-002A,SAMP,50**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 11:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

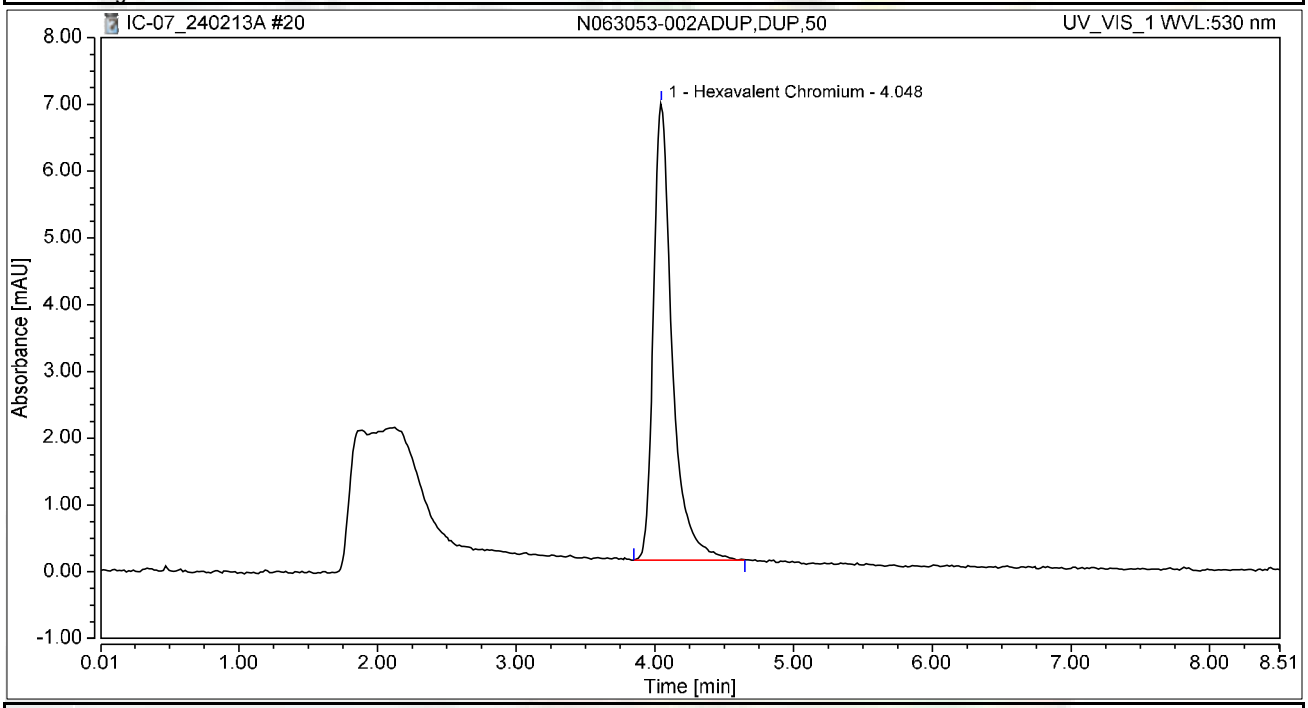
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.080	6.855	100.00	100.00	5.0196
Total:			**1.080**	**6.855**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-002ADUP,DUP,50**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 11:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

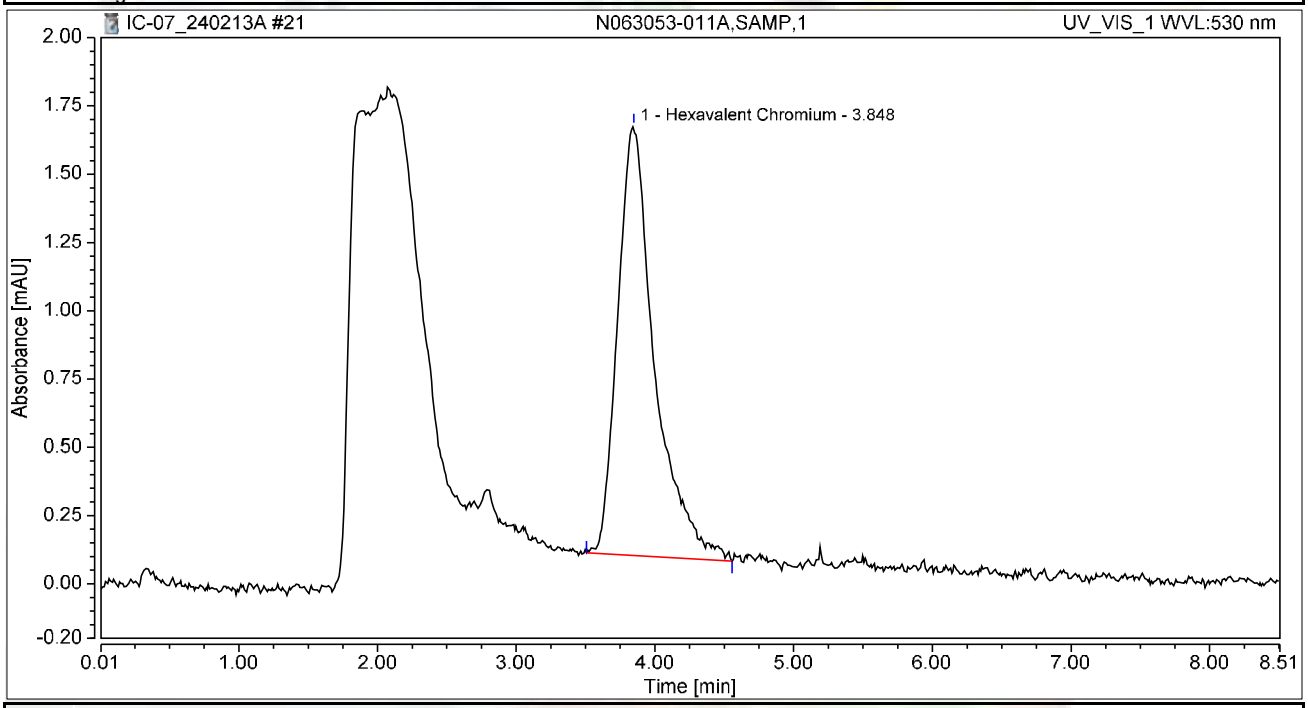
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.073	6.847	100.00	100.00	4.9872
Total:			**1.073**	**6.847**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 11:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

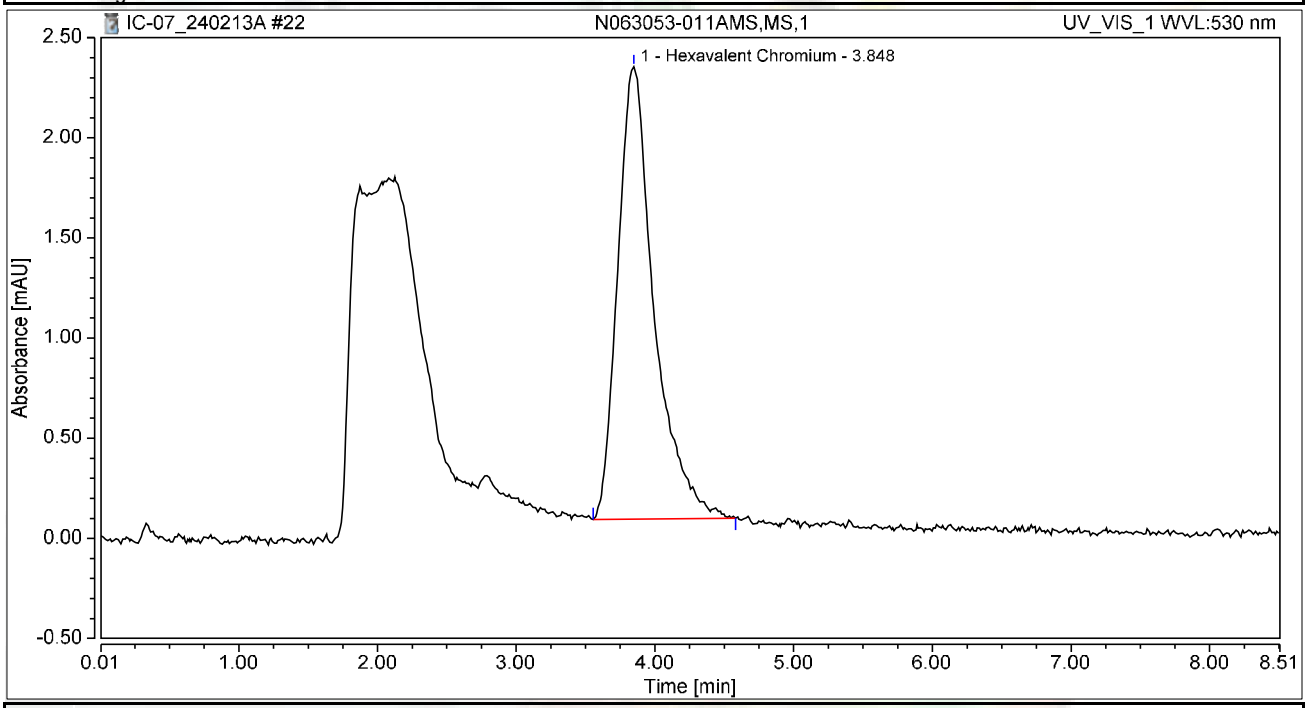
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.848	0.485	1.574	100.00	100.00	2.2535
Total:			**0.485**	**1.574**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 11:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

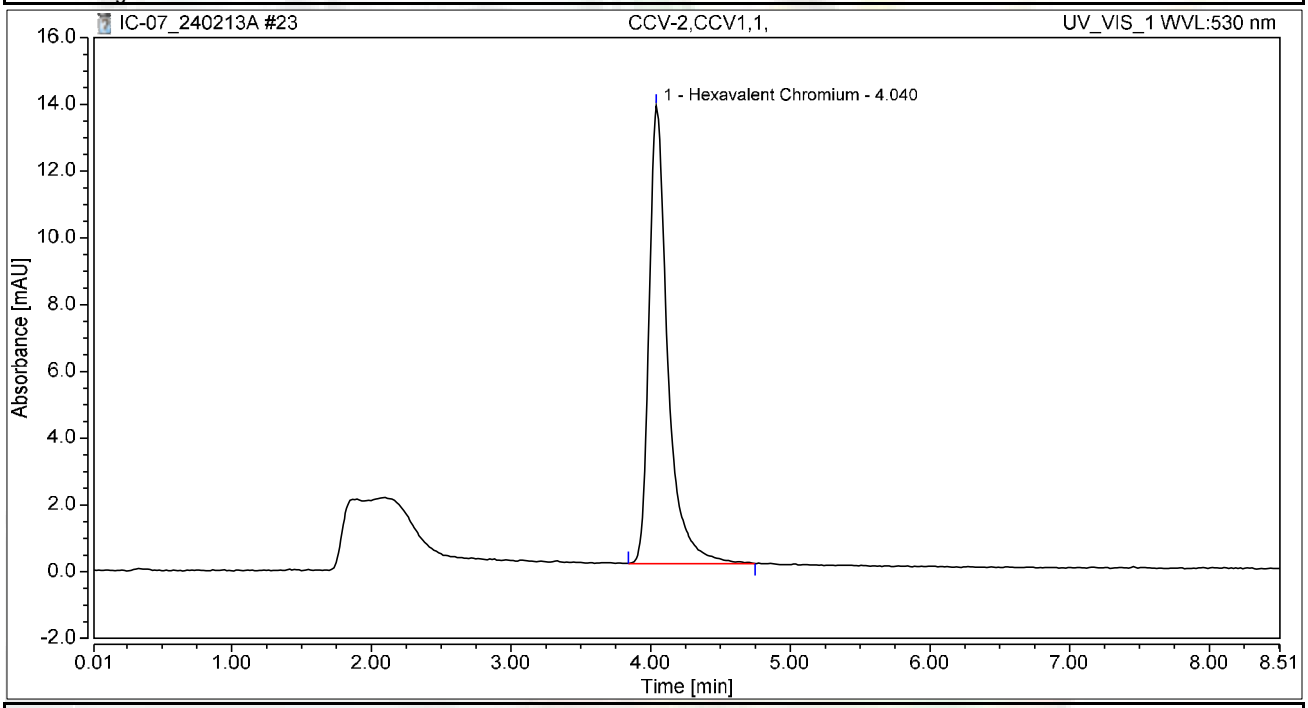
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.848	0.686	2.259	100.00	100.00	3.1873
Total:			**0.686**	**2.259**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 12:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

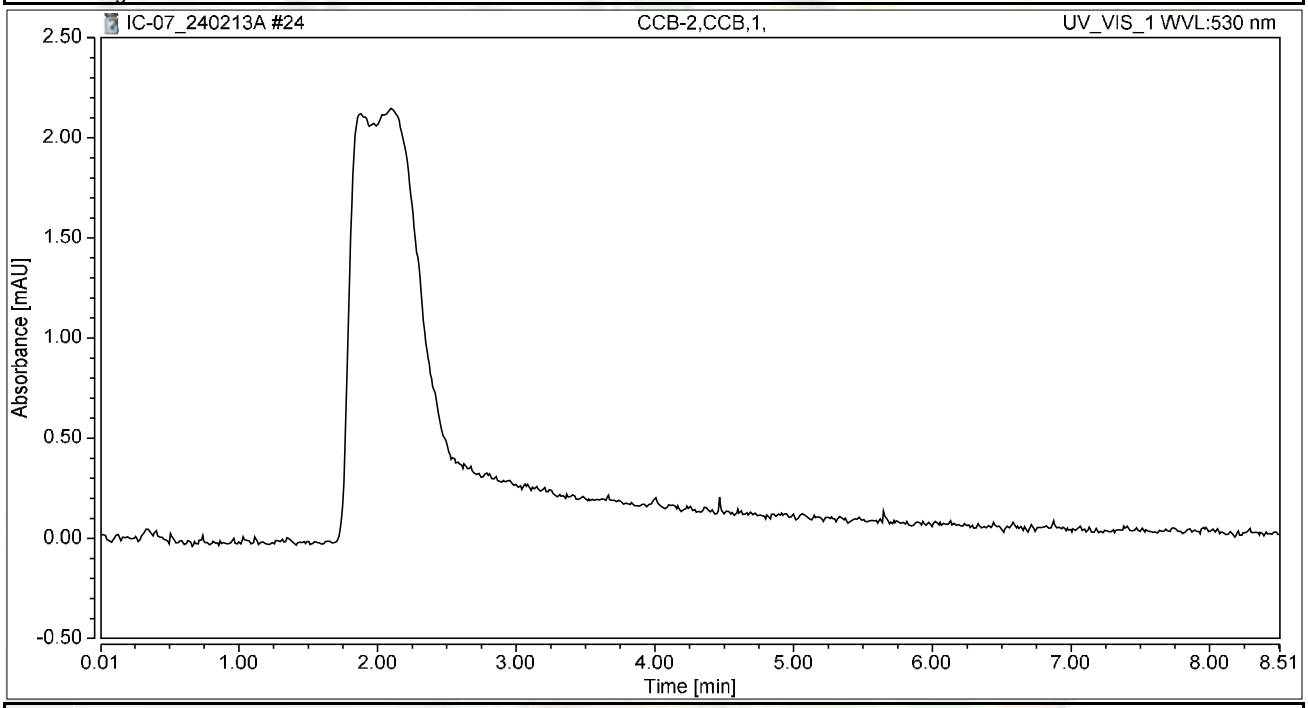
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.137	13.710	100.00	100.00	9.9358
Total:			**2.137**	**13.710**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 12:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

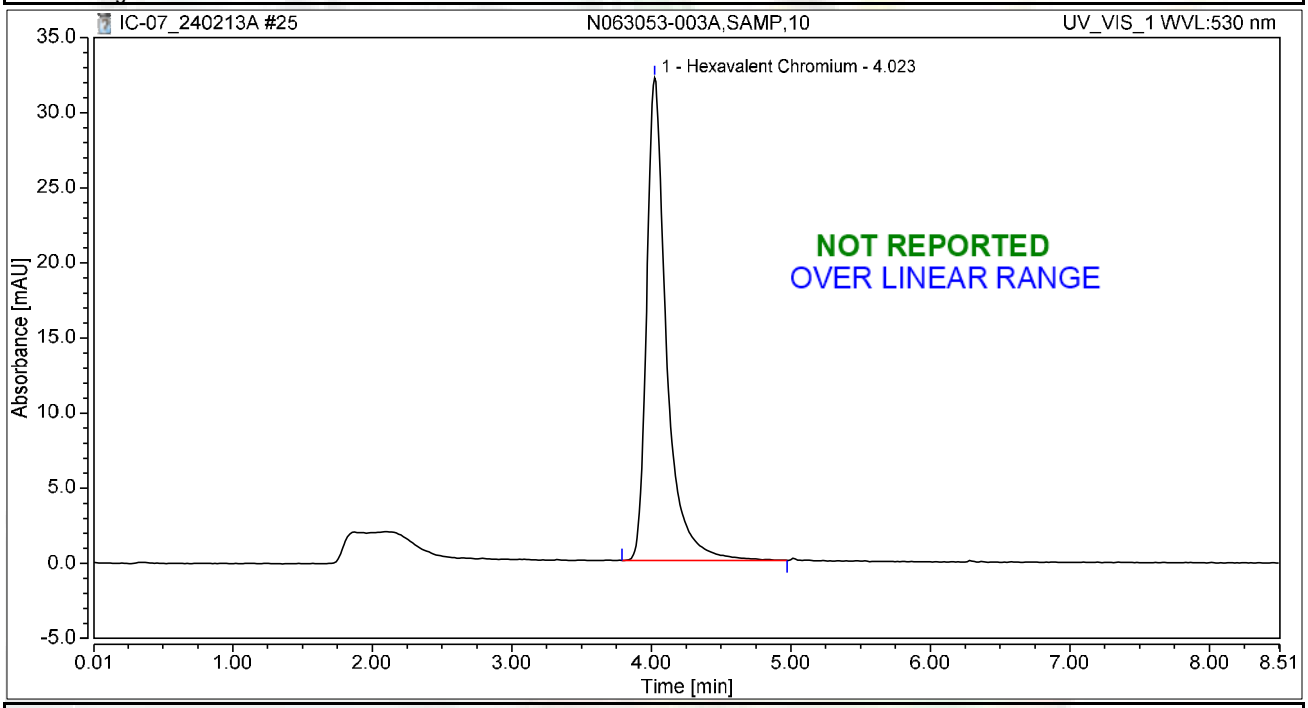
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-003A,SAMP,10**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 12:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

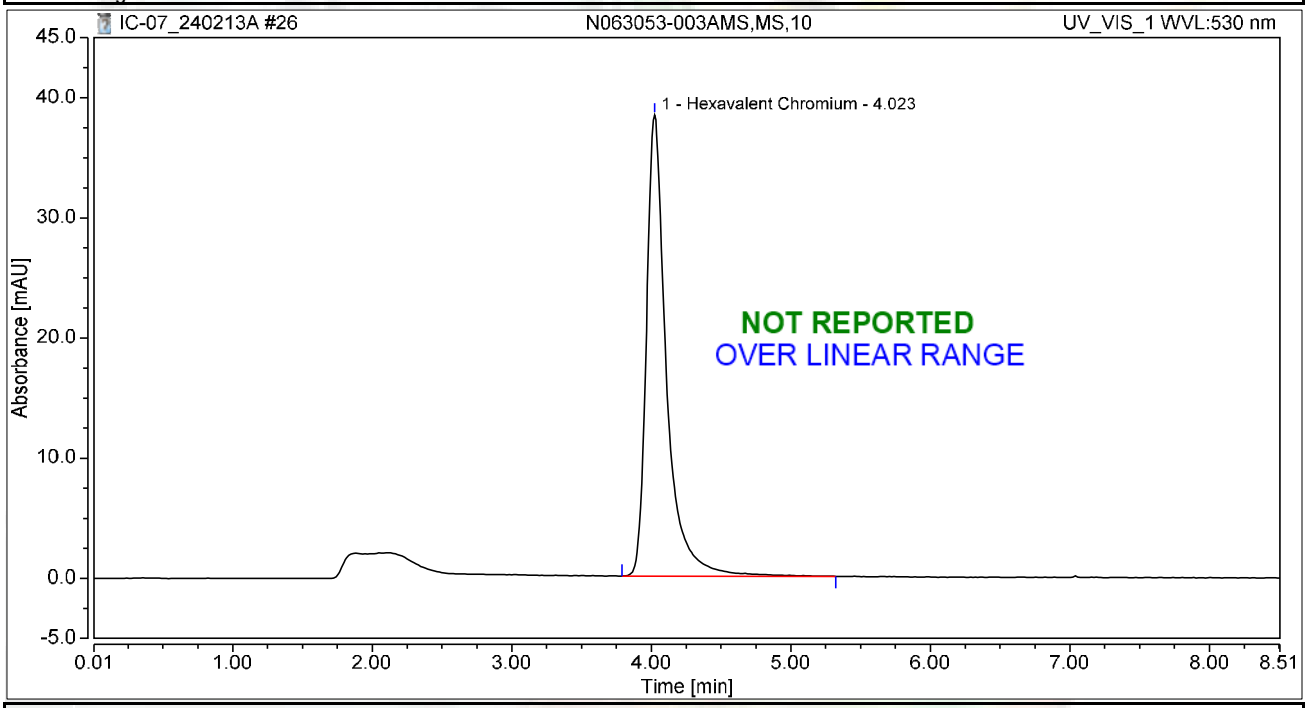
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	5.312	32.138	100.00	100.00	24.6948
Total:			**5.312**	**32.138**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-003AMS,MS,10**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 12:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

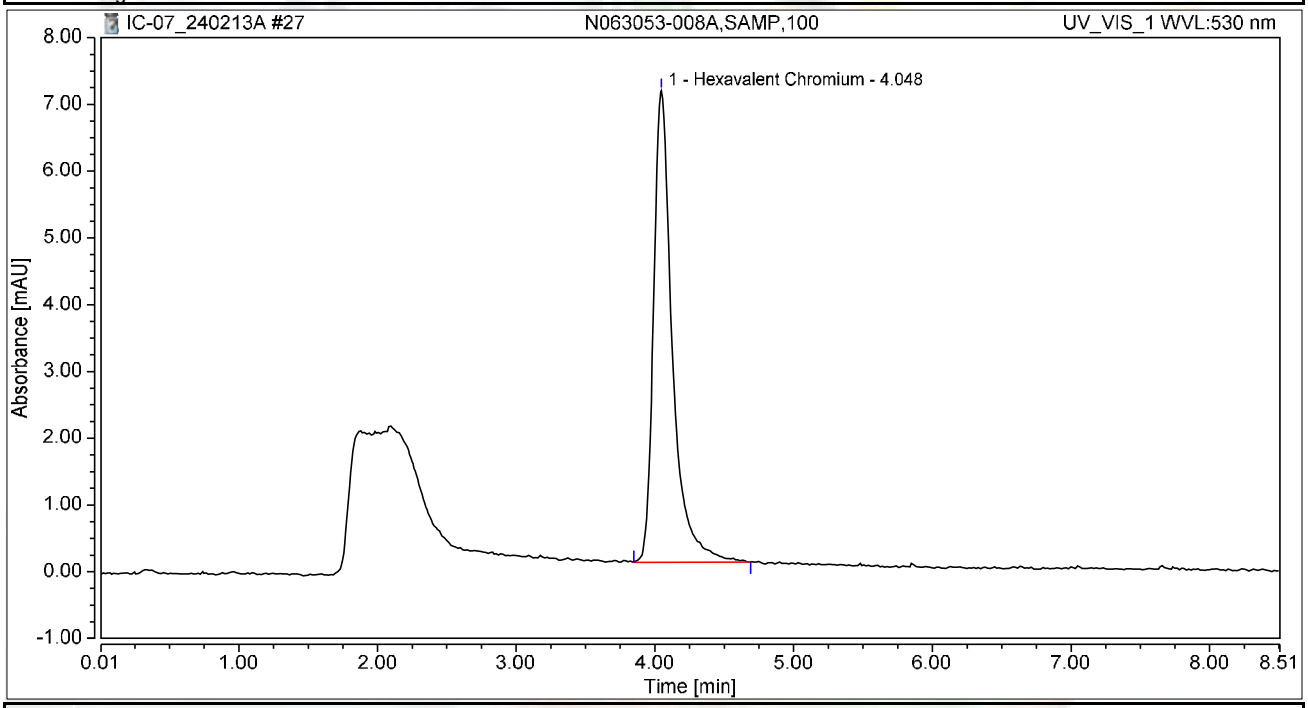
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	6.390	38.368	100.00	100.00	29.7066
Total:			**6.390**	**38.368**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-008A,SAMP,100**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 12:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

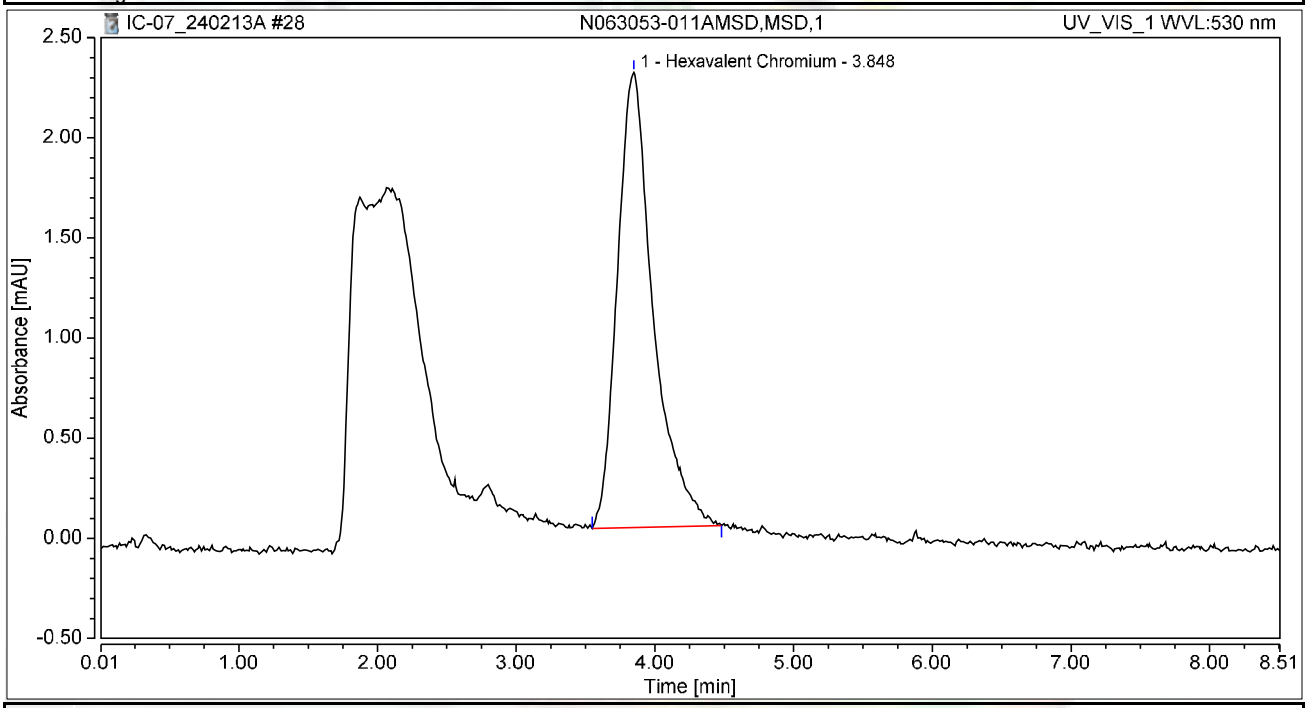
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.112	7.067	100.00	100.00	5.1687
Total:			**1.112**	**7.067**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011AMSD,MSD,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 12:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

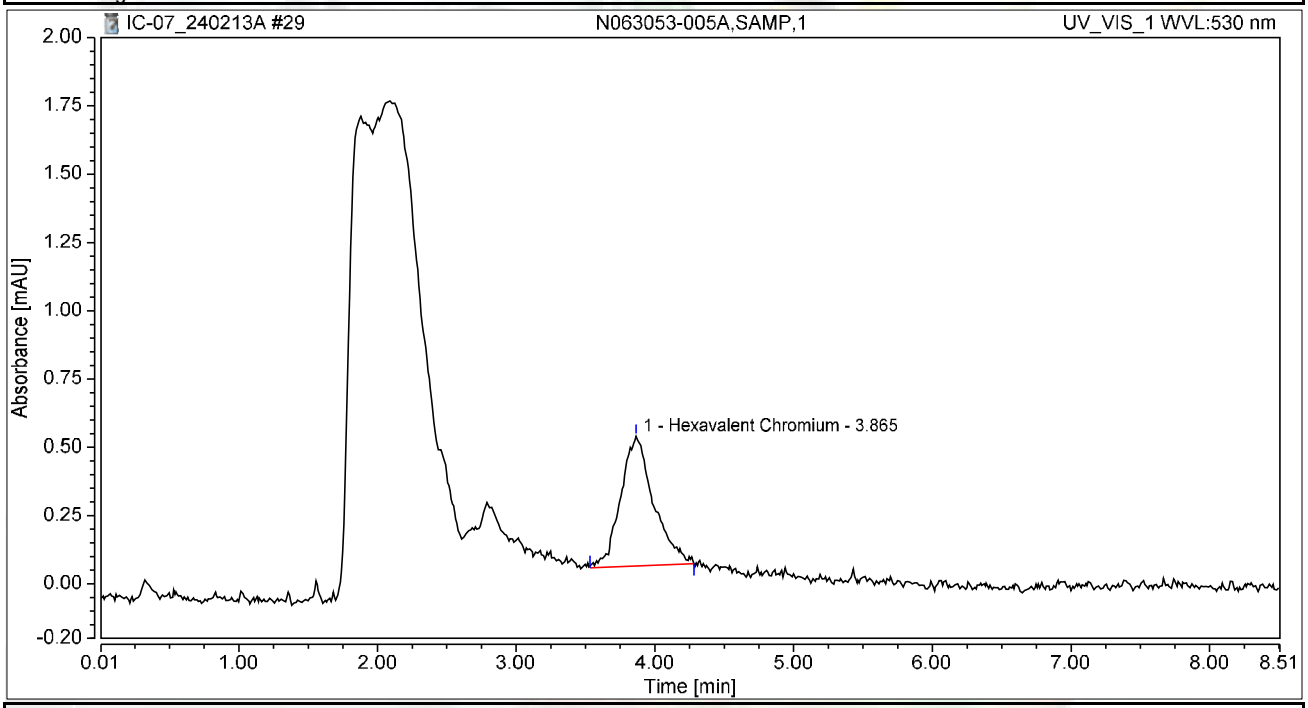
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.848	0.682	2.273	100.00	100.00	3.1701
Total:			**0.682**	**2.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 13:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

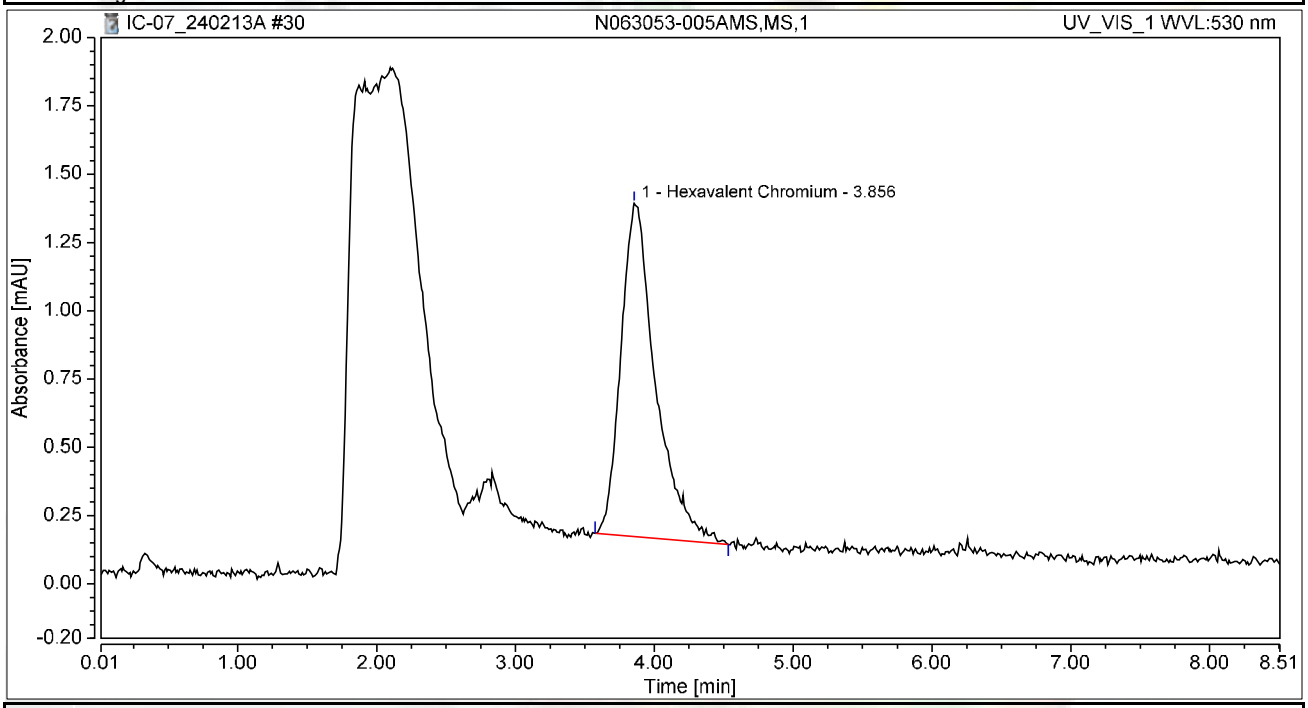
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.865	0.131	0.474	100.00	100.00	0.6081
Total:			**0.131**	**0.474**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-005AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 13:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

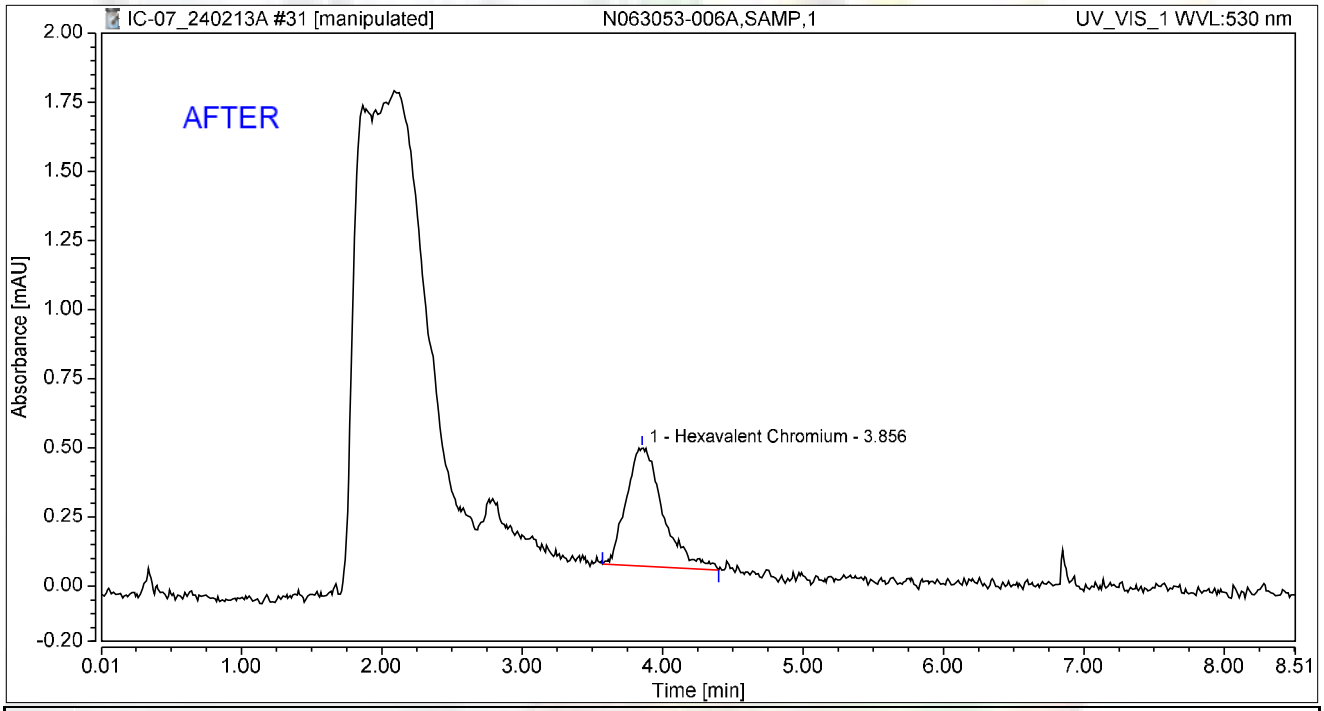
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.353	1.220	100.00	100.00	1.6410
Total:			**0.353**	**1.220**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 13:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.130	0.428	100.00	100.00	0.6063
Total:			**0.130**	**0.428**	**100.00**	**100.00**	

Reviewed by:

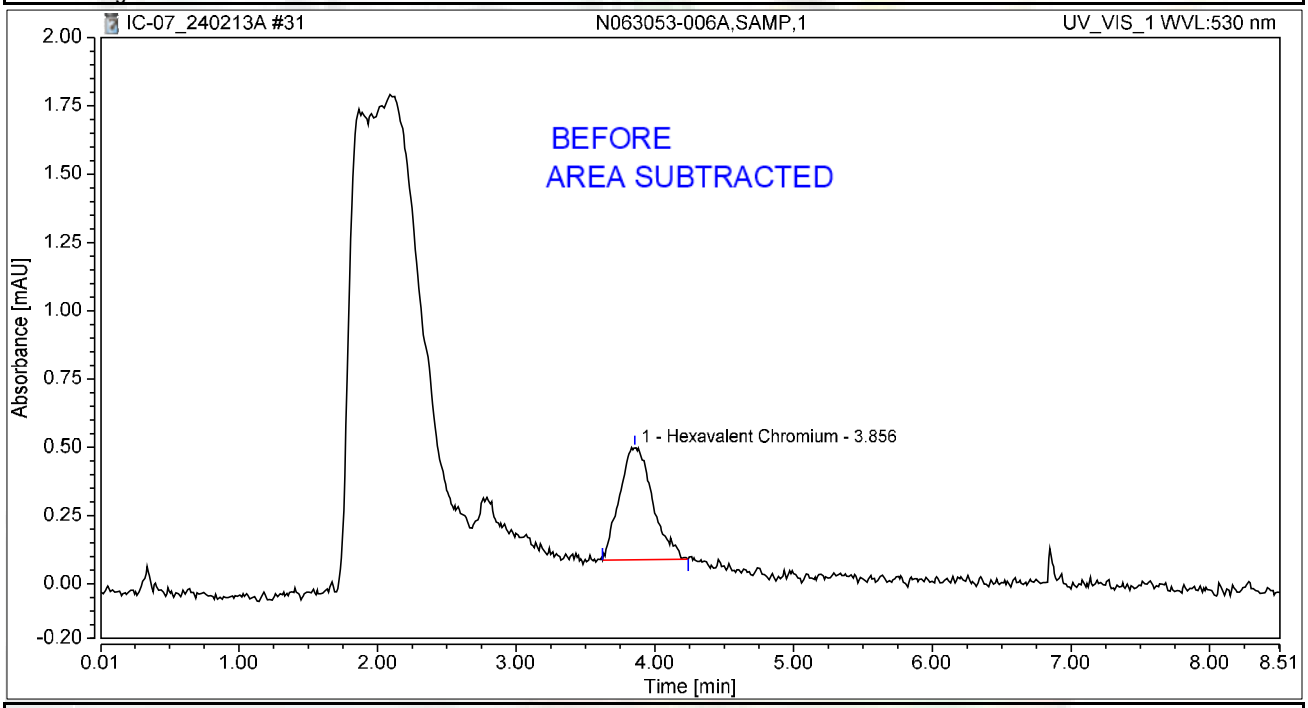
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063053-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 13:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

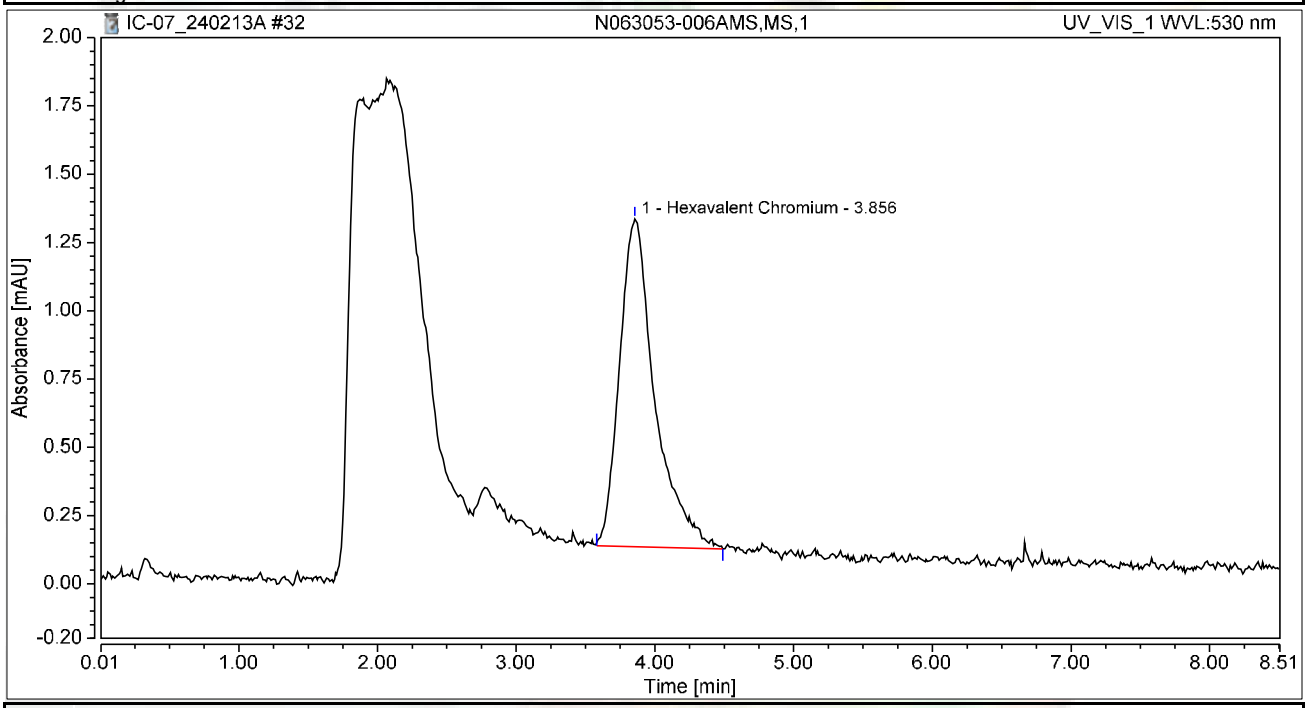
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.114	0.411	100.00	100.00	0.5309
Total:			**0.114**	**0.411**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 13:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

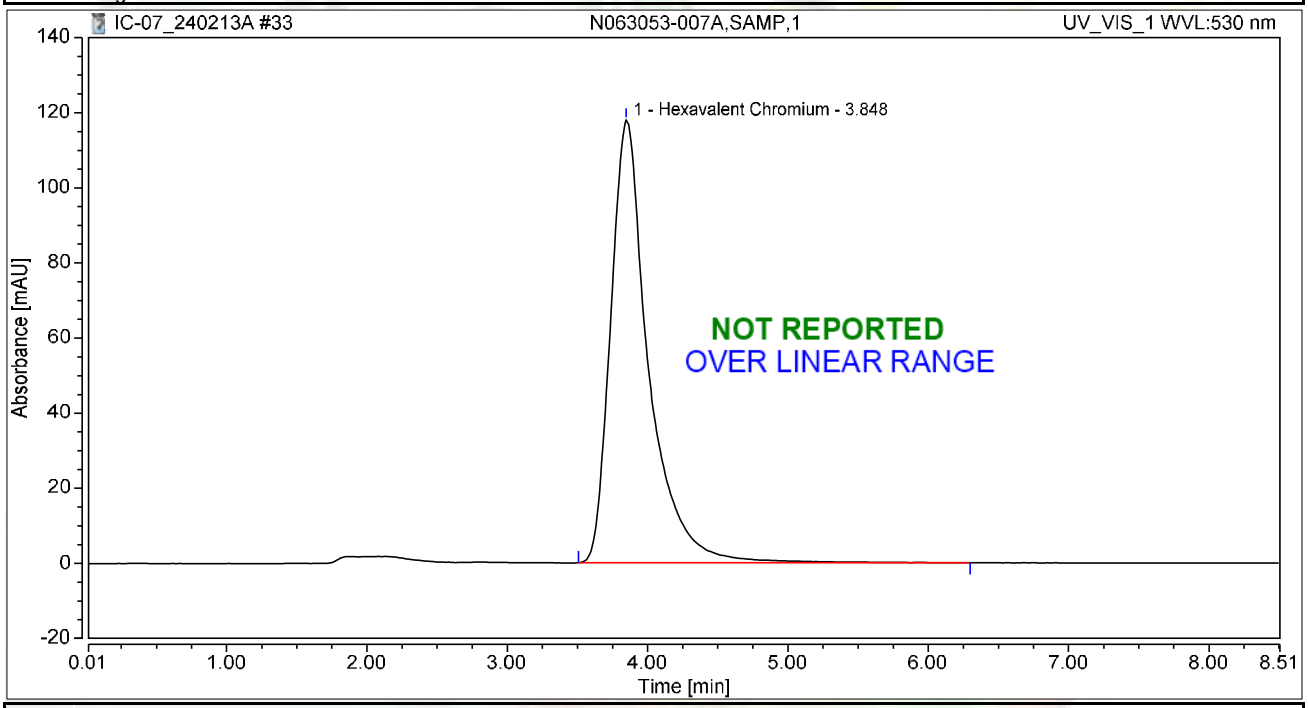
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.353	1.200	100.00	100.00	1.6429
Total:			**0.353**	**1.200**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-007A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 13:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

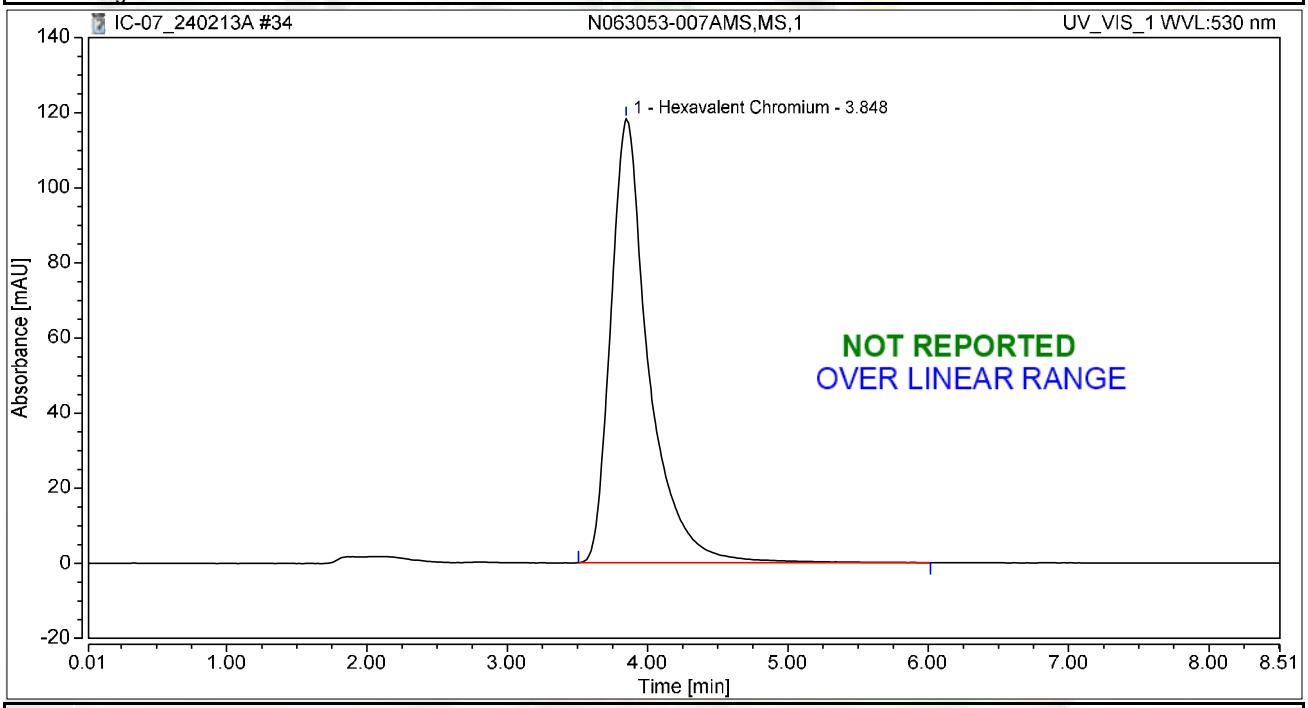
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.848	36.884	117.811	100.00	100.00	171.4735
Total:			**36.884**	**117.811**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-007AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 13:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

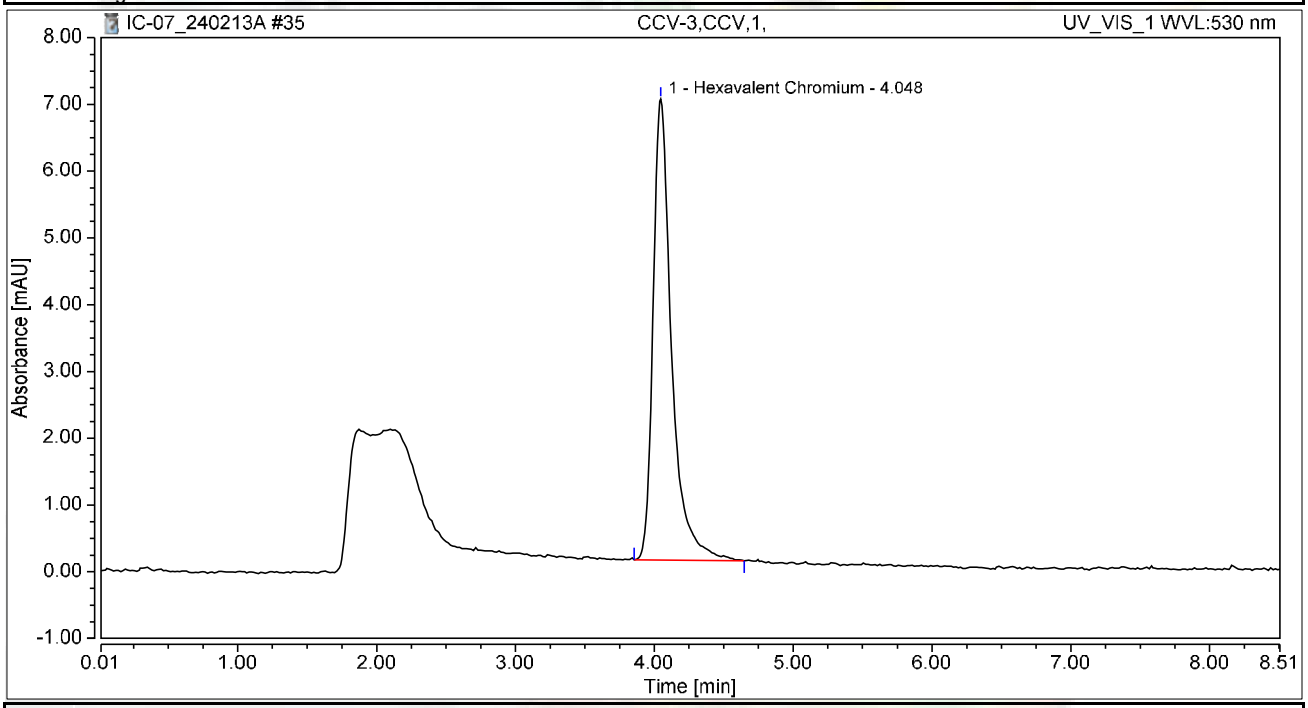
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.848	36.942	118.255	100.00	100.00	171.7426
Total:			**36.942**	**118.255**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 14:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

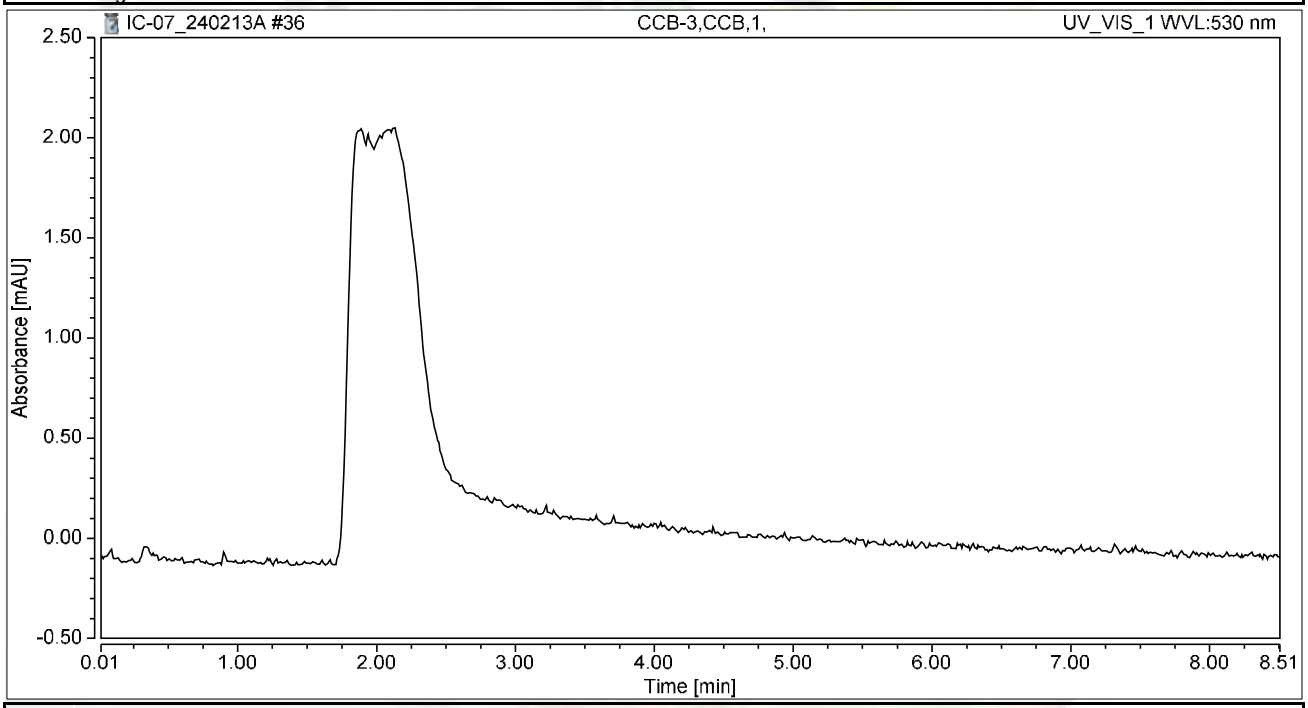
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.069	6.908	100.00	100.00	4.9718
Total:			**1.069**	**6.908**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 14:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

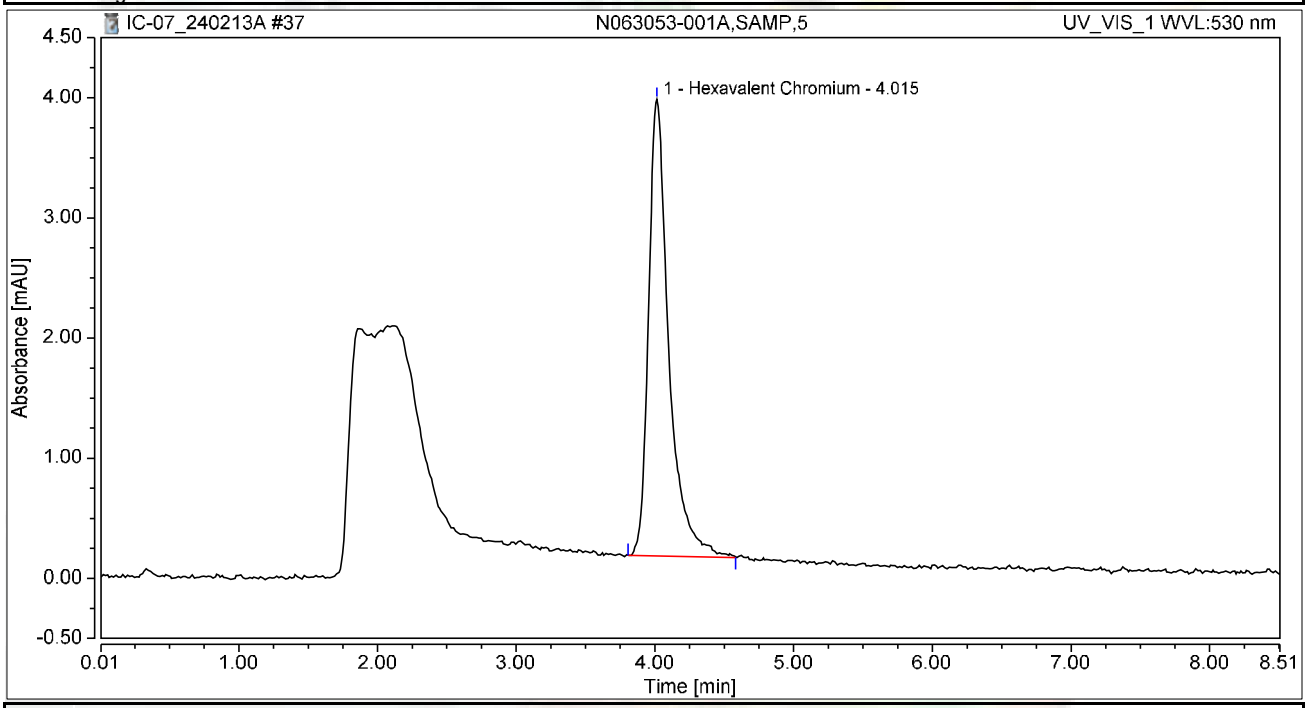
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 14:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

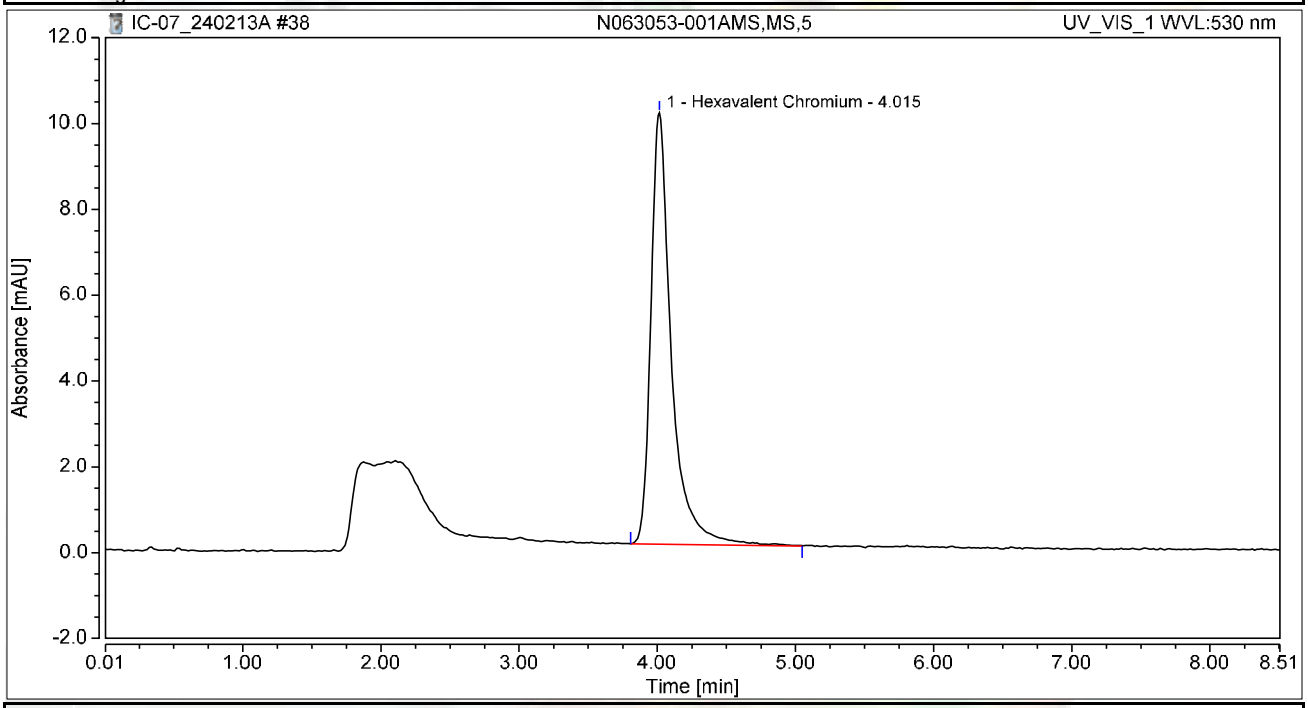
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.642	3.800	100.00	100.00	2.9862
Total:			**0.642**	**3.800**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 14:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

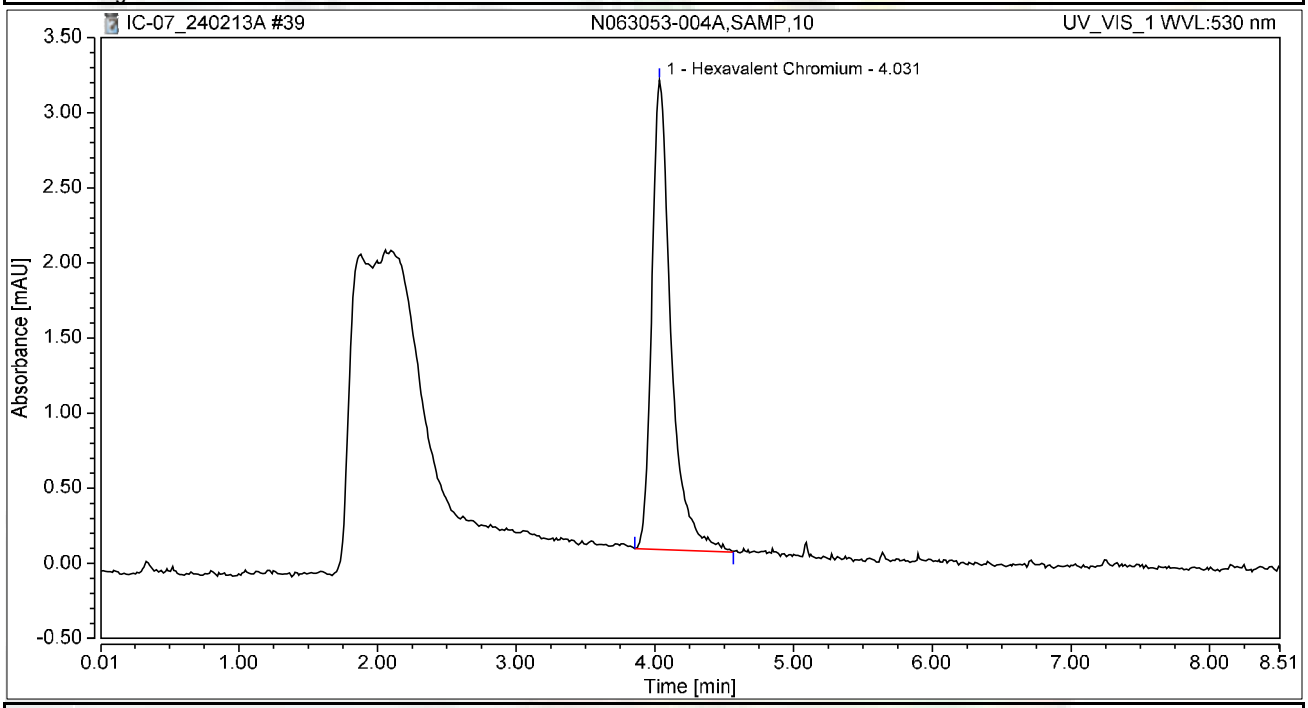
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.727	10.051	100.00	100.00	8.0301
Total:			**1.727**	**10.051**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-004A,SAMP,10**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 14:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

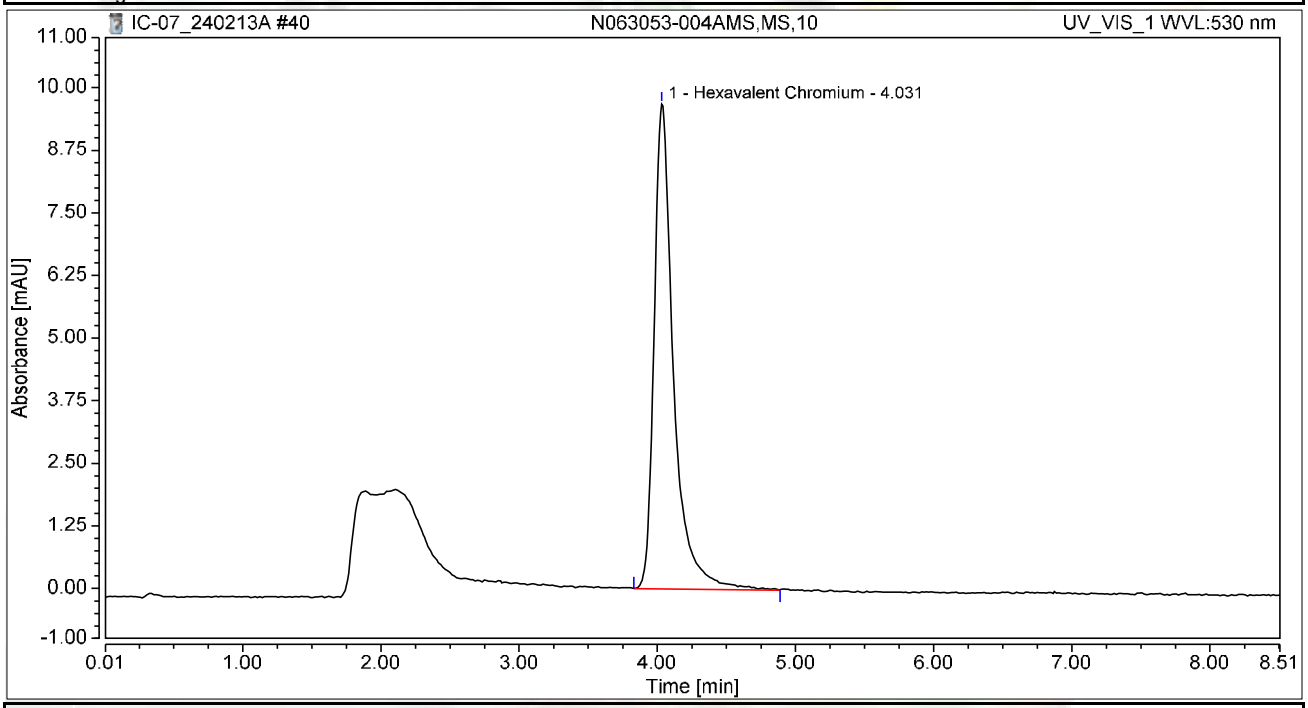
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.502	3.124	100.00	100.00	2.3325
Total:			**0.502**	**3.124**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-004AMS,MS,10**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 14:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

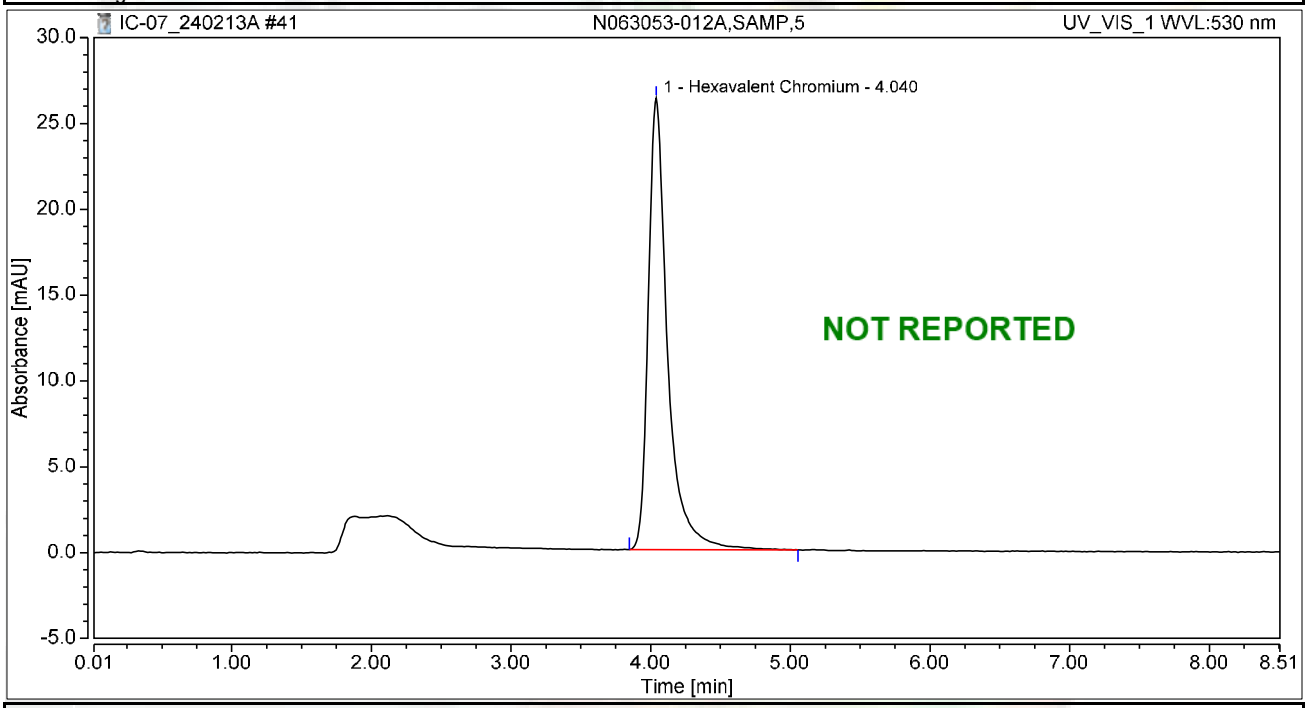
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	1.577	9.685	100.00	100.00	7.3337
Total:			**1.577**	**9.685**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-012A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 14:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

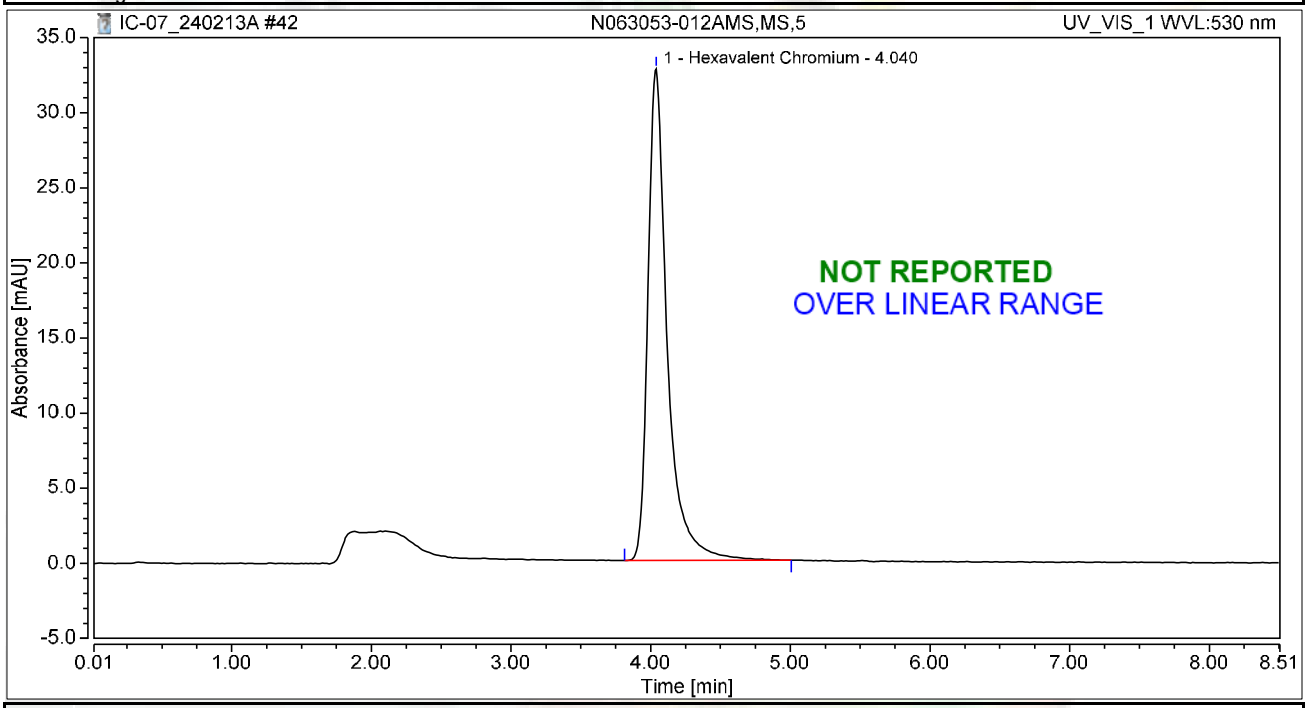
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	4.217	26.306	100.00	100.00	19.6045
Total:			**4.217**	**26.306**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-012AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 15:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

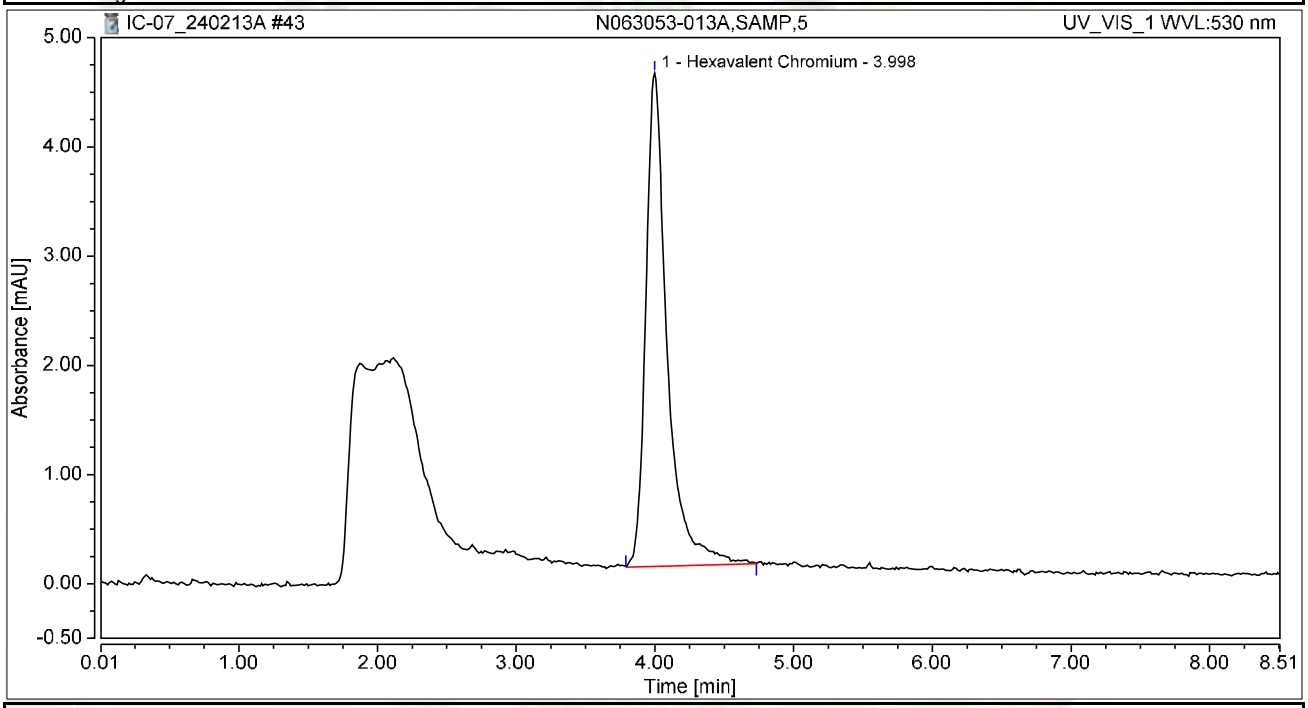
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	5.264	32.739	100.00	100.00	24.4723
Total:			**5.264**	**32.739**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-013A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 15:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

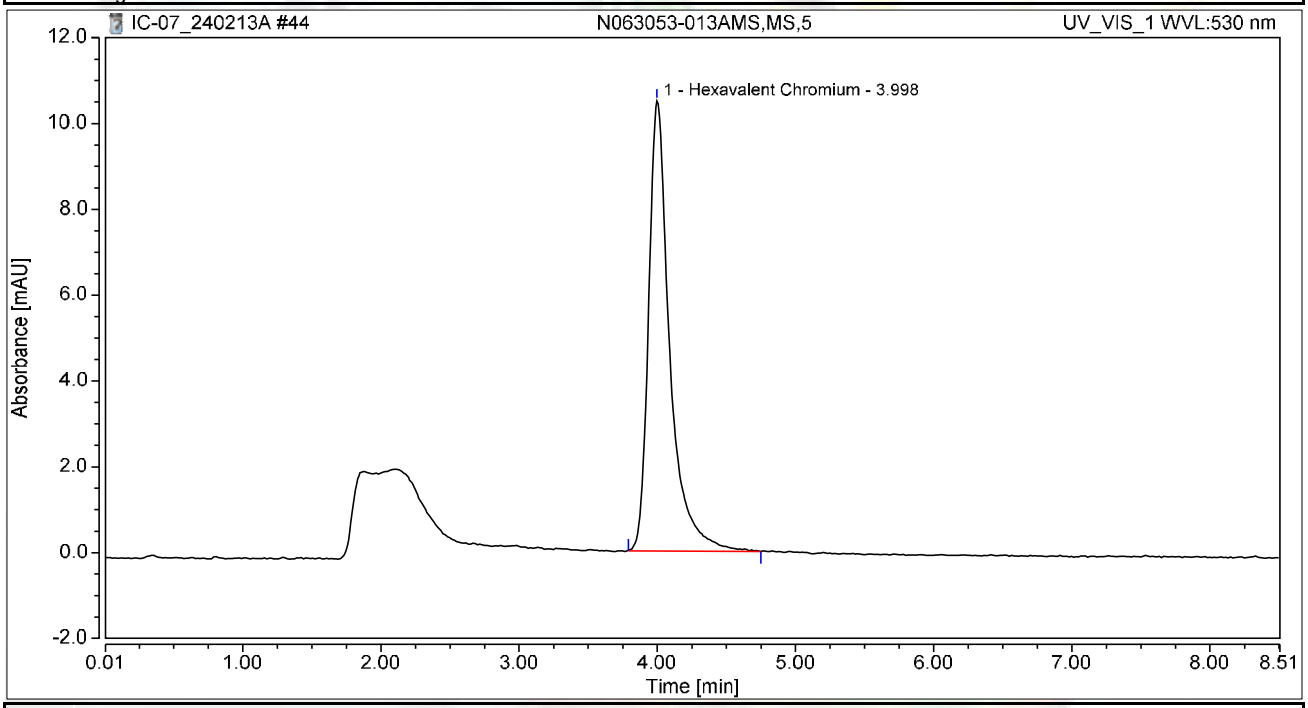
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.807	4.517	100.00	100.00	3.7511
Total:			**0.807**	**4.517**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-013AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 15:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

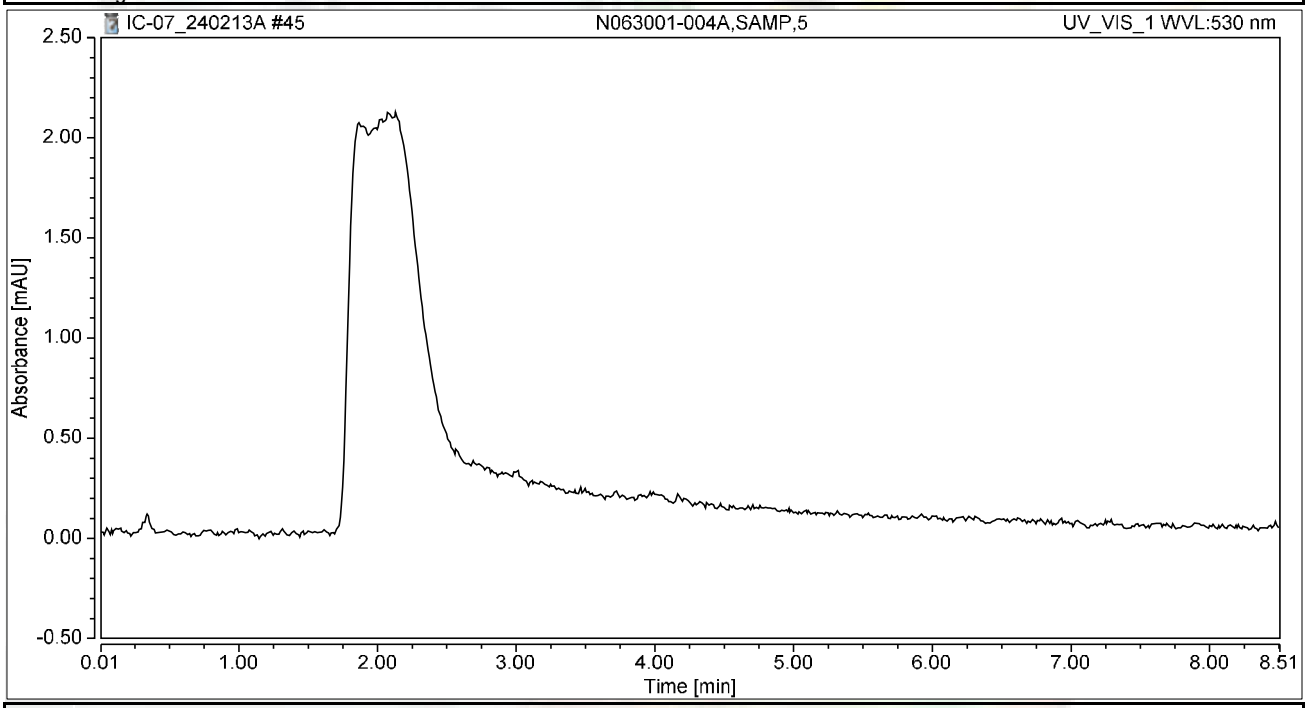
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	1.860	10.487	100.00	100.00	8.6461
Total:			**1.860**	**10.487**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-004A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 15:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

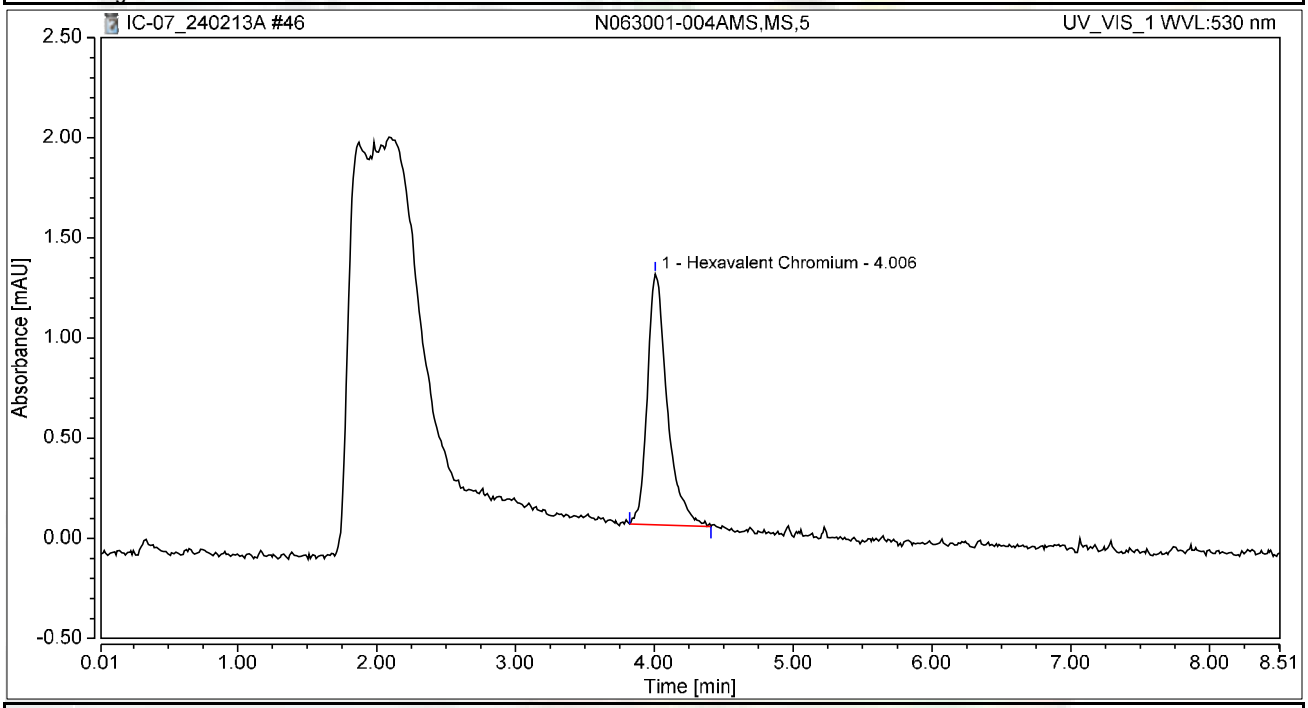
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-004AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 15:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

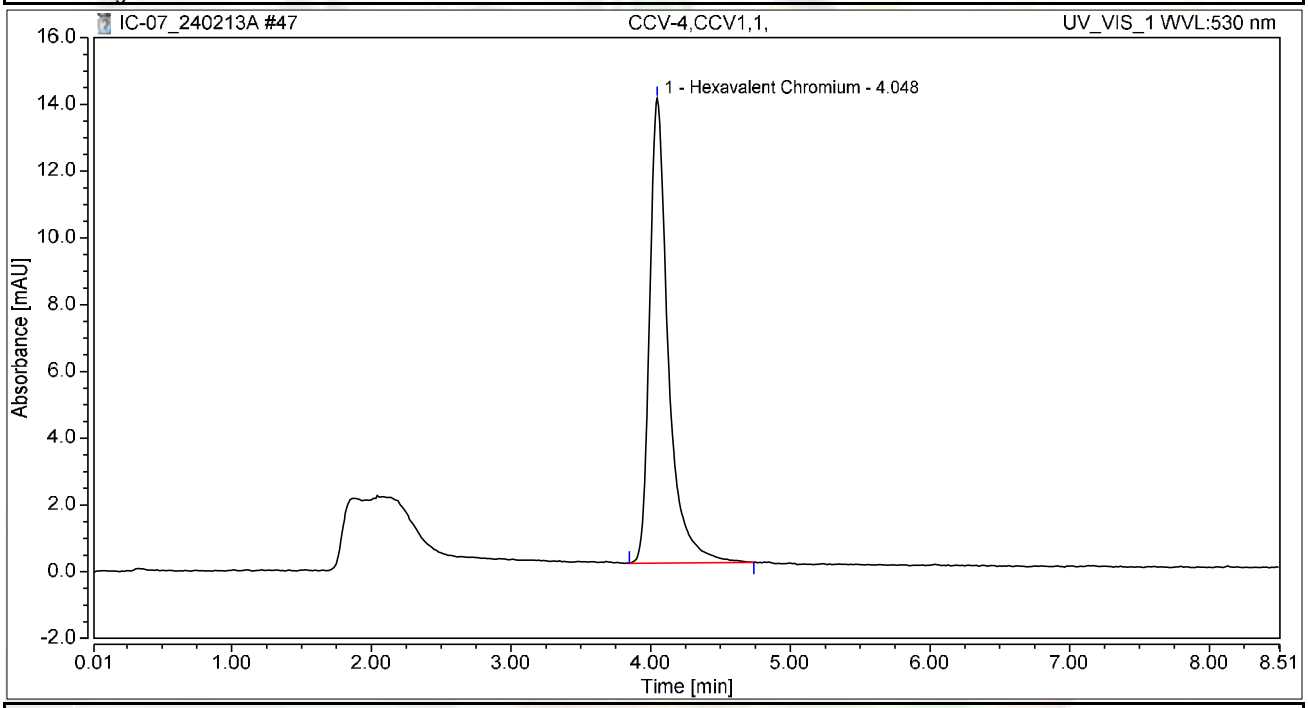
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.209	1.253	100.00	100.00	0.9709
Total:			**0.209**	**1.253**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 15:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

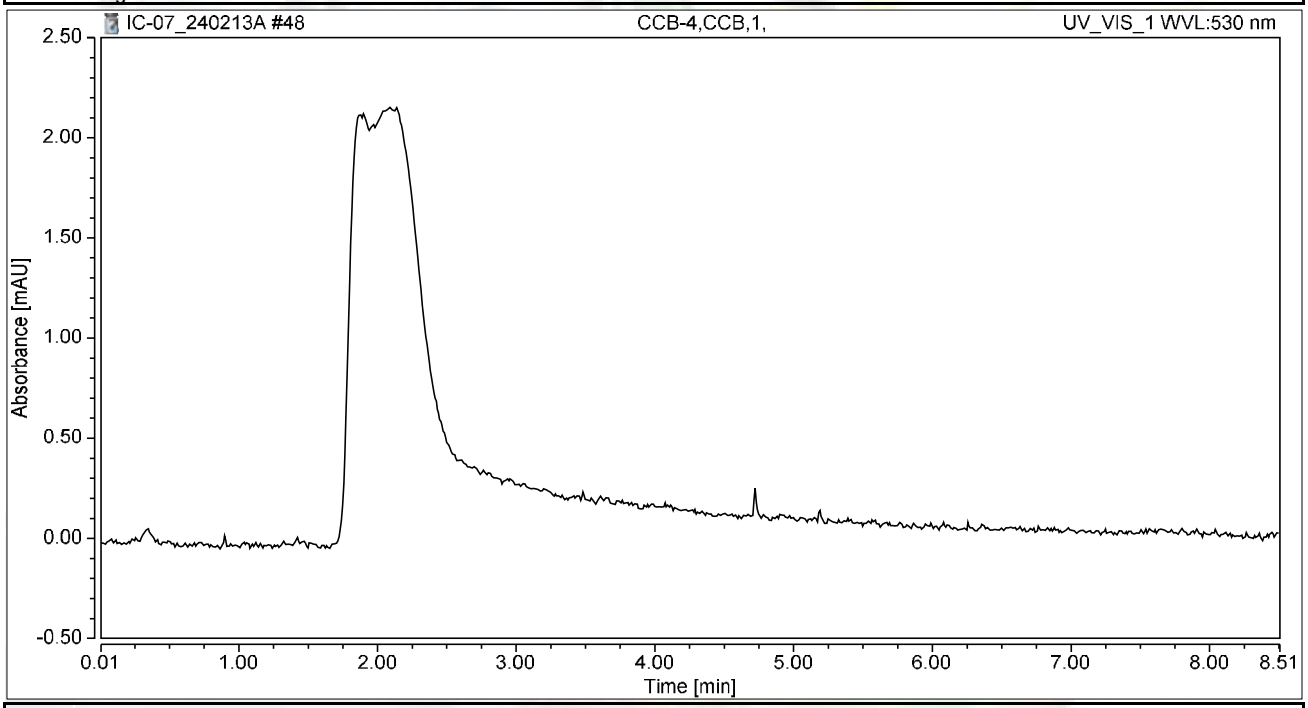
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.165	13.919	100.00	100.00	10.0649
Total:			**2.165**	**13.919**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 16:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

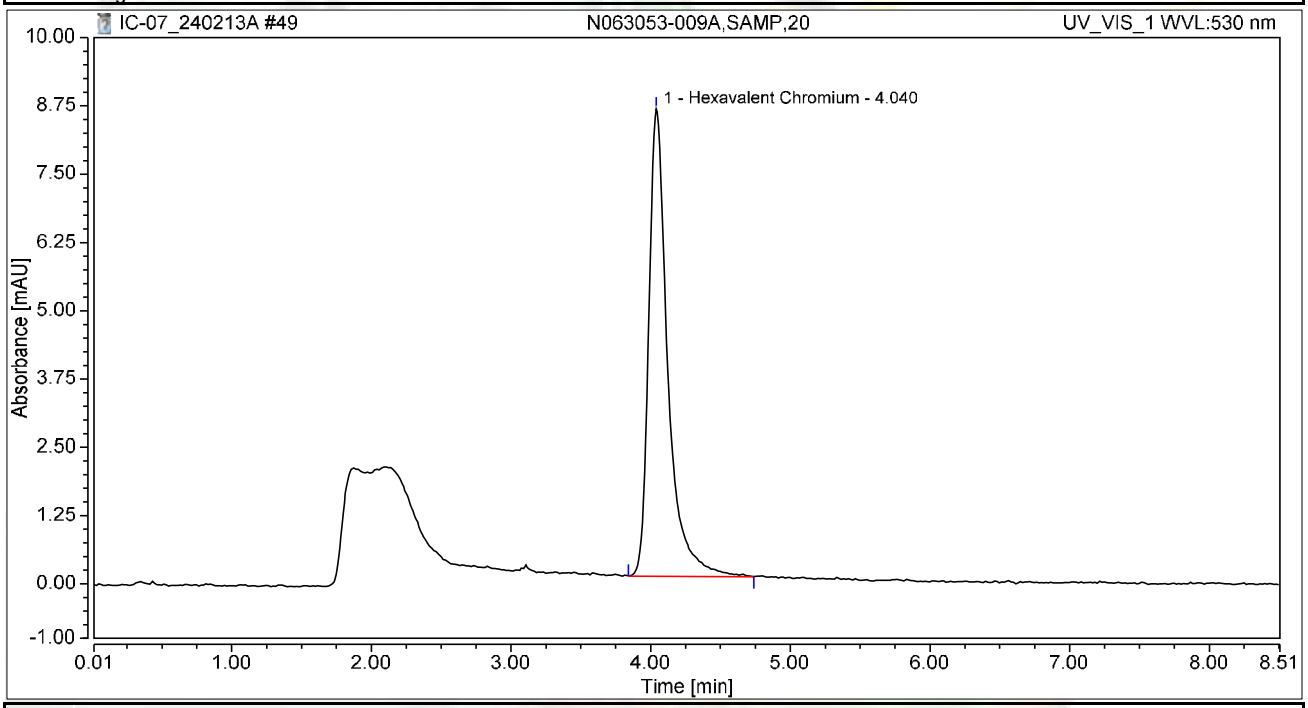
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-009A,SAMP,20**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 16:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

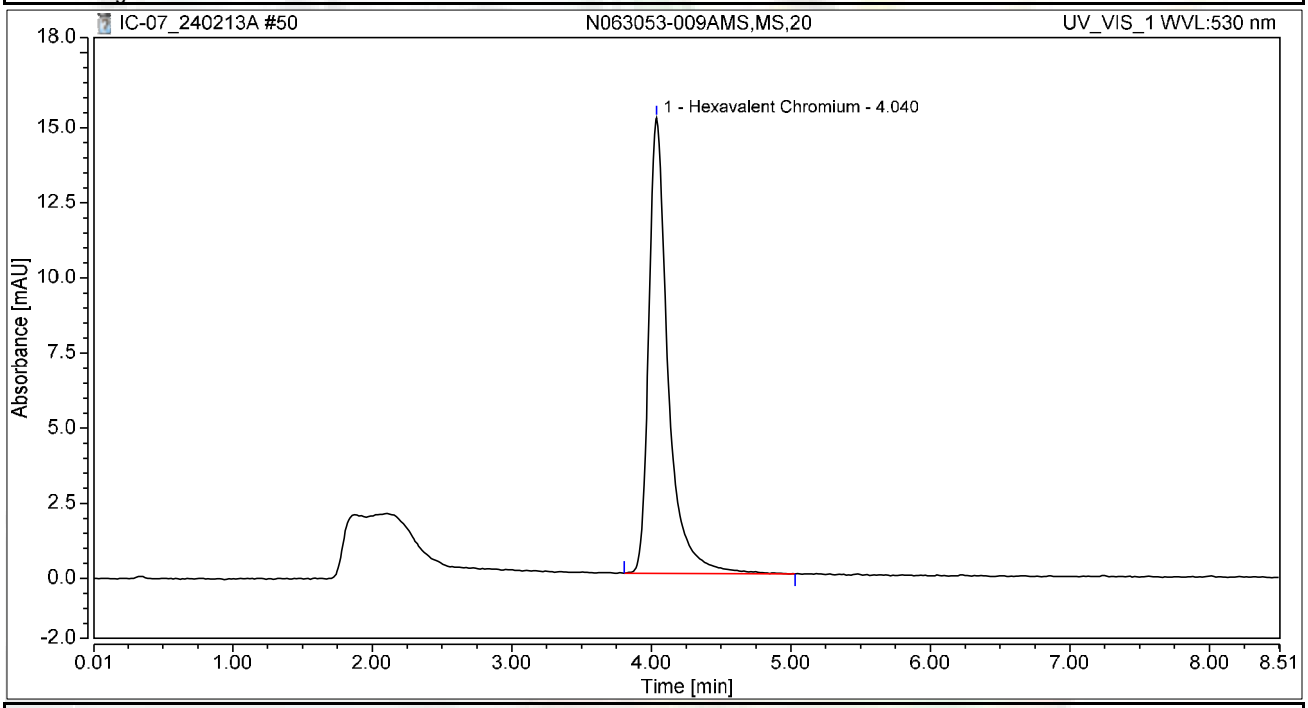
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.357	8.555	100.00	100.00	6.3098
Total:			**1.357**	**8.555**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-009AMS,MS,20**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 16:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

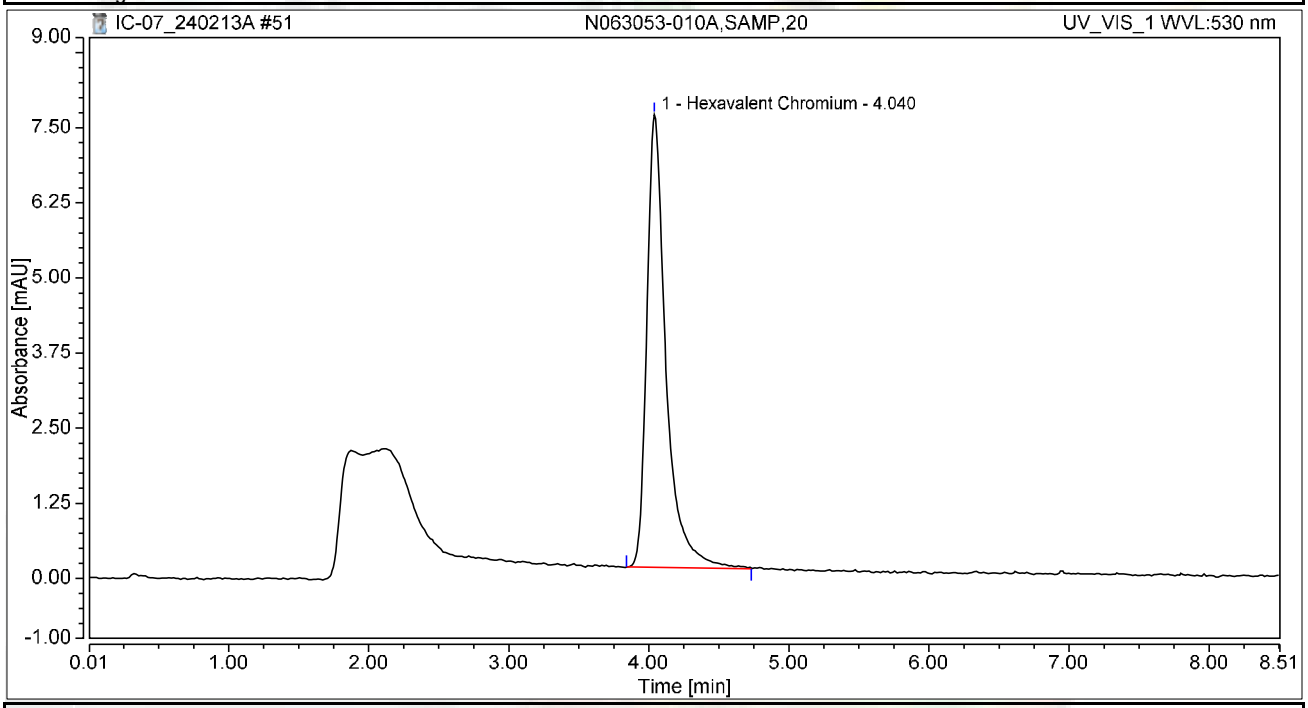
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.437	15.167	100.00	100.00	11.3307
Total:			**2.437**	**15.167**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-010A,SAMP,20**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 16:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

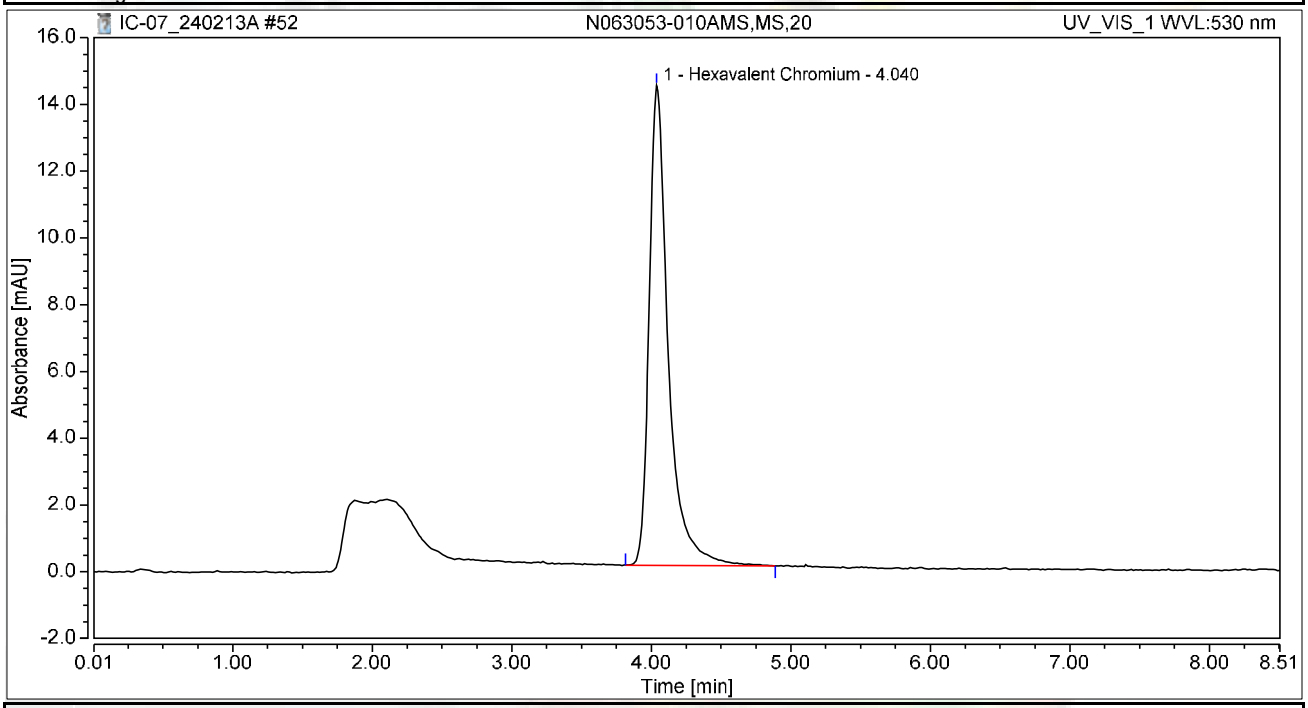
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.194	7.535	100.00	100.00	5.5510
Total:			**1.194**	**7.535**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-010AMS,MS,20**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 16:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

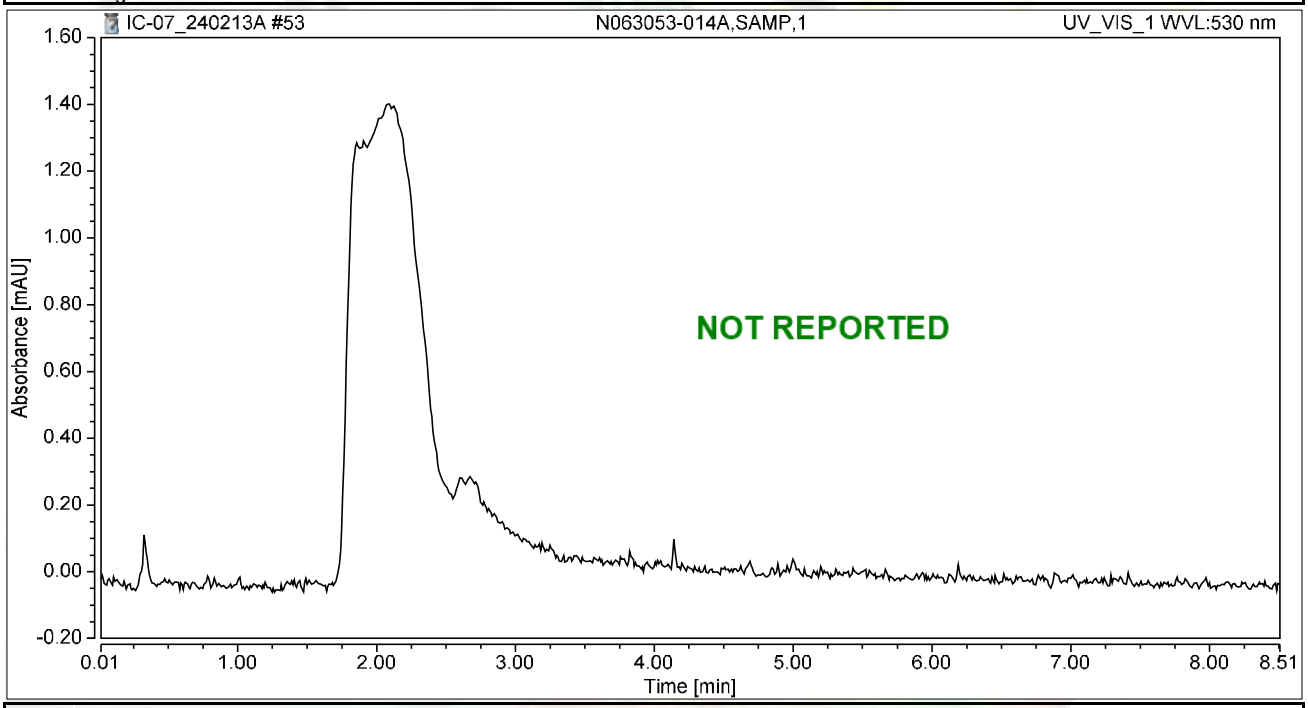
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.286	14.375	100.00	100.00	10.6256
Total:			**2.286**	**14.375**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-014A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 16:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

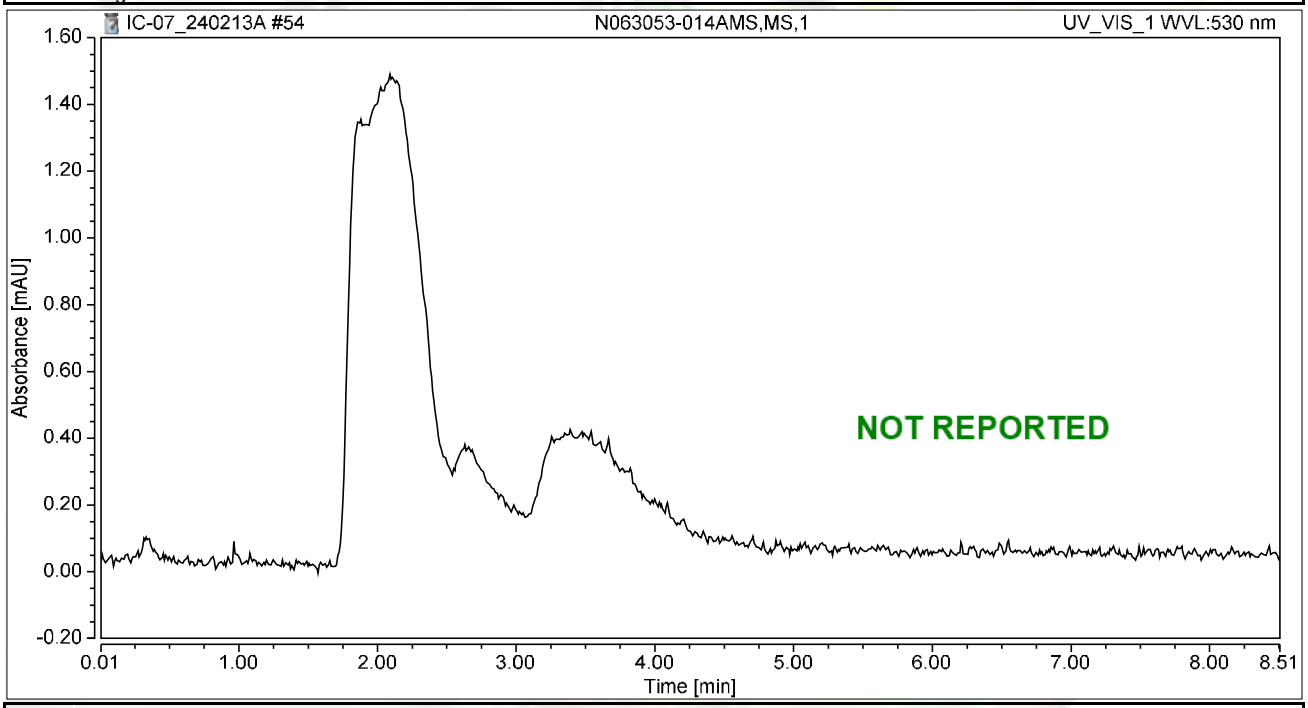
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-014AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 17:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

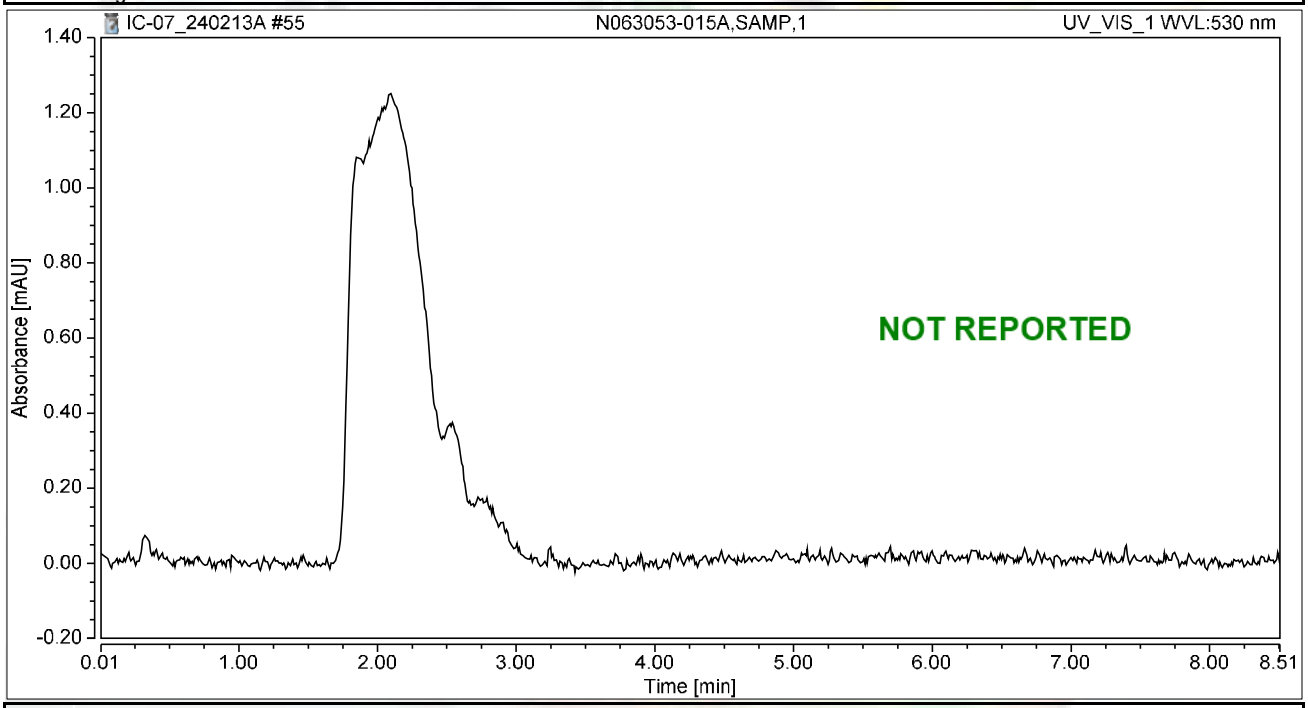
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-015A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 17:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

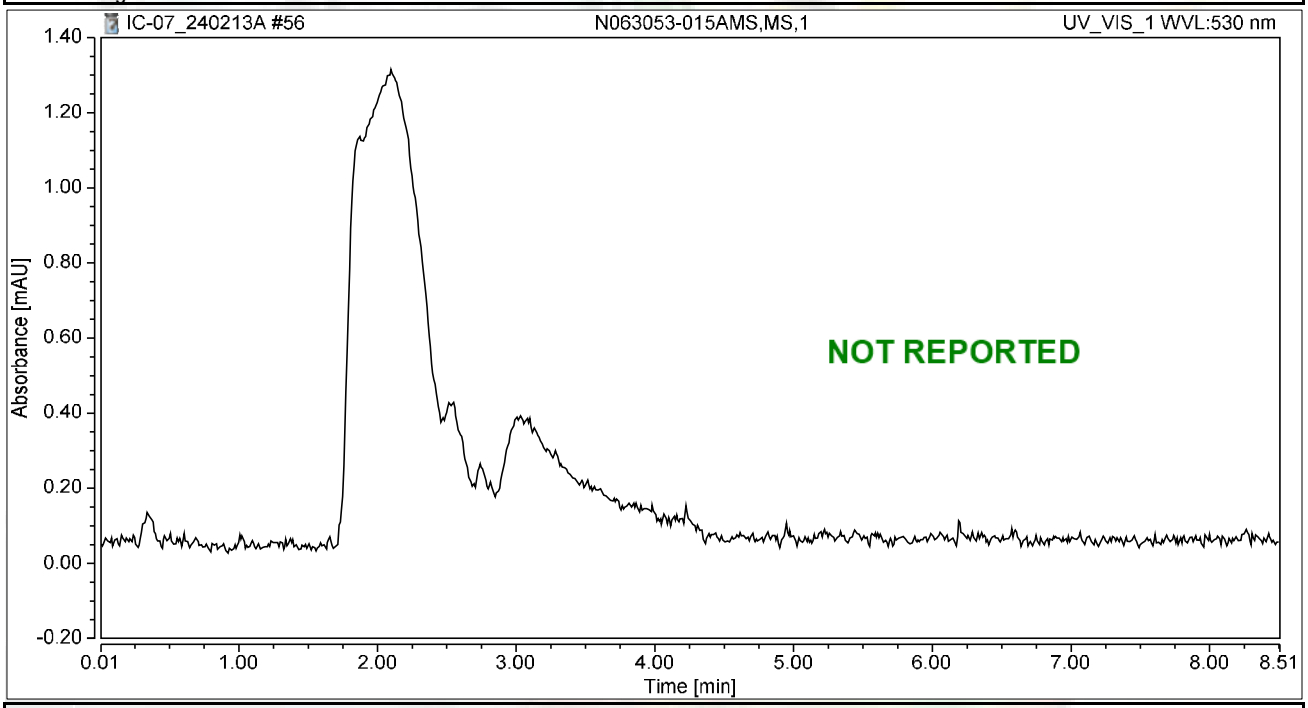
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-015AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 17:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

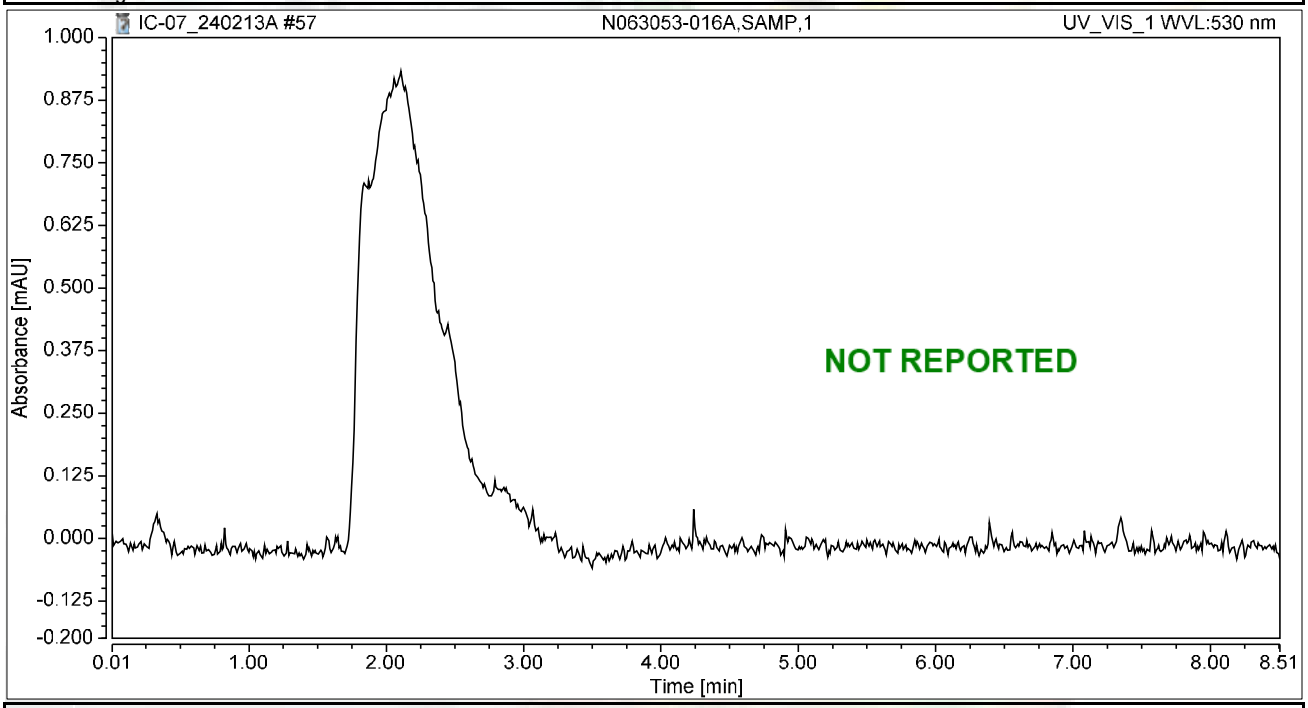
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-016A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 17:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

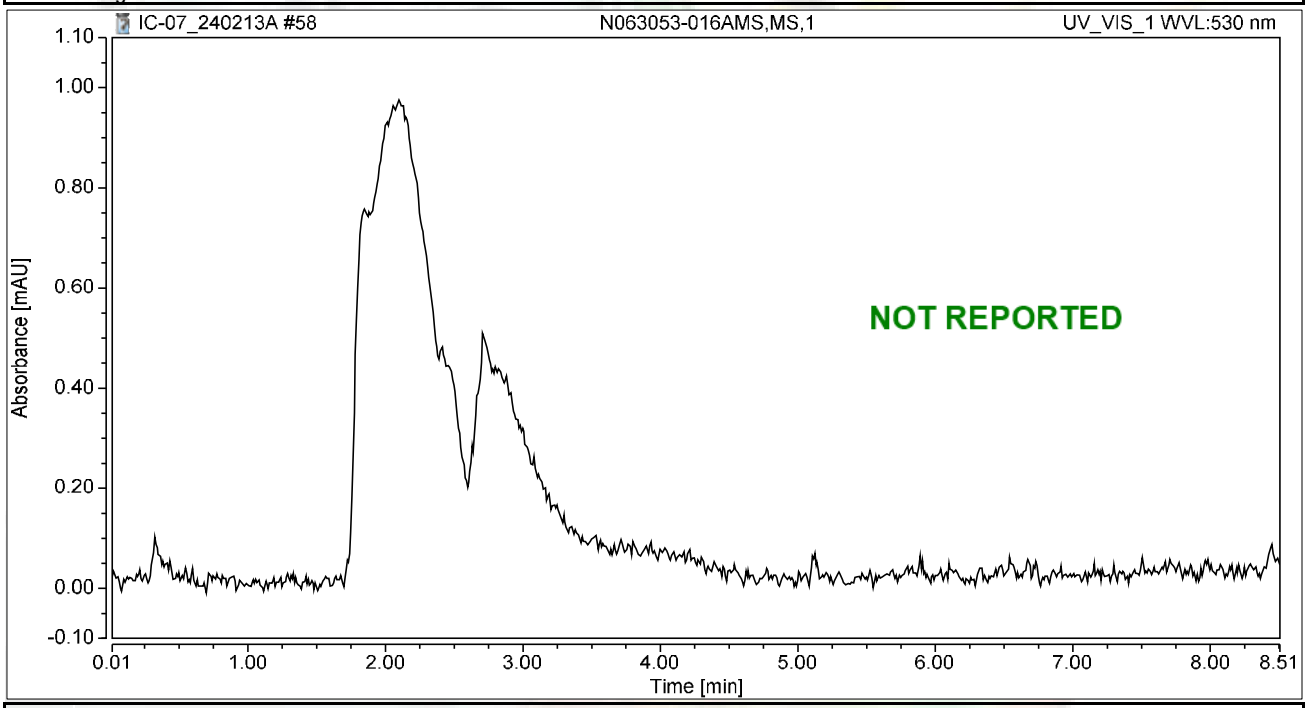
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-016AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 17:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

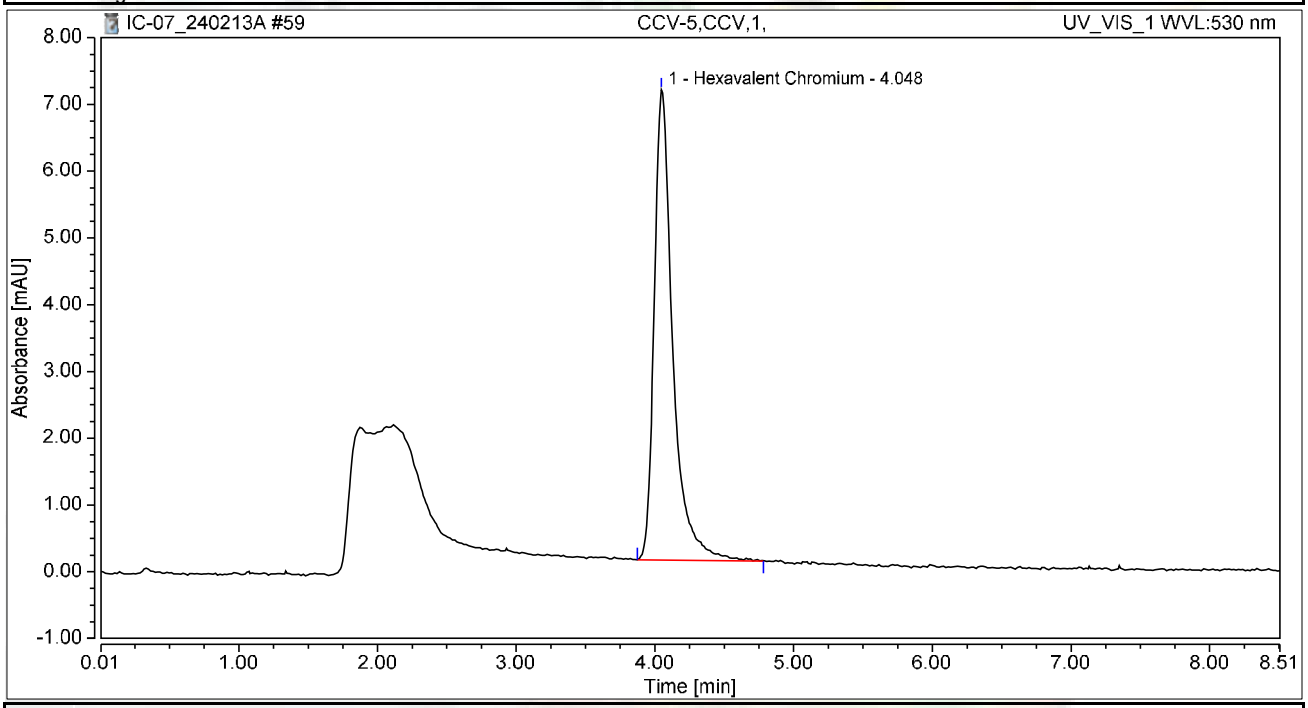
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 17:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

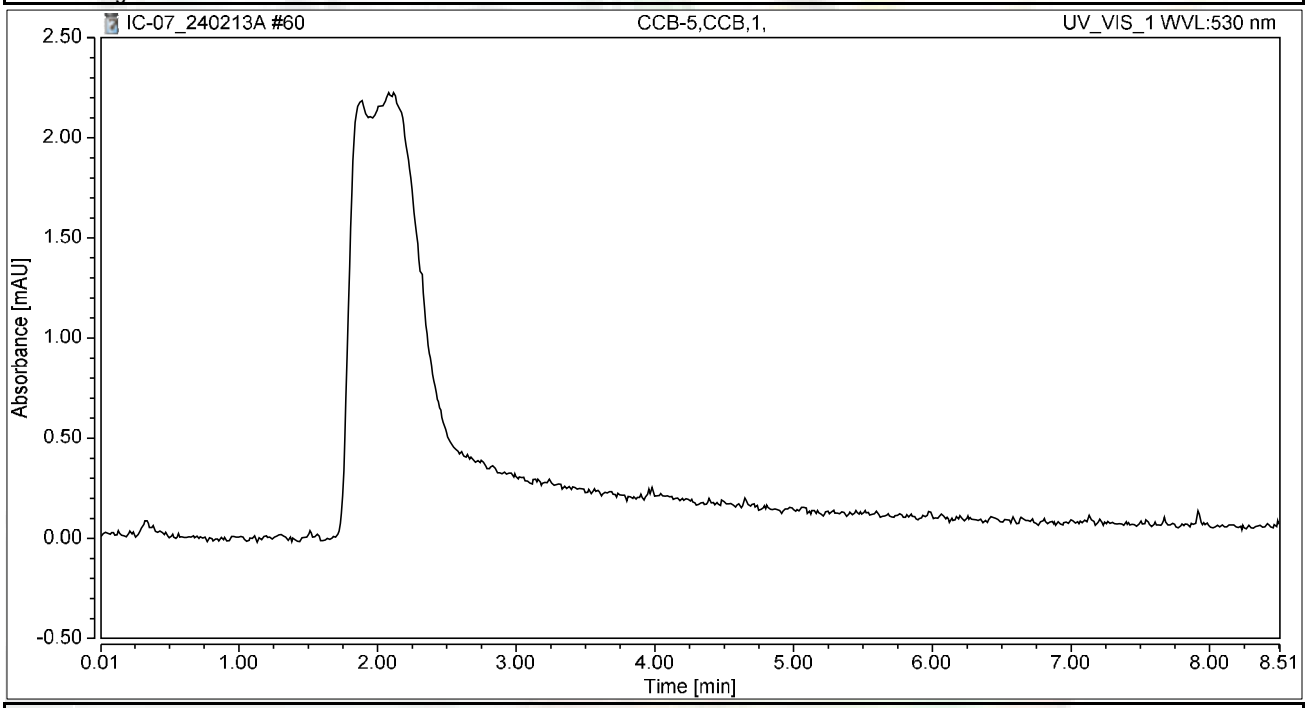
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.092	7.044	100.00	100.00	5.0755
Total:			**1.092**	**7.044**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 18:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

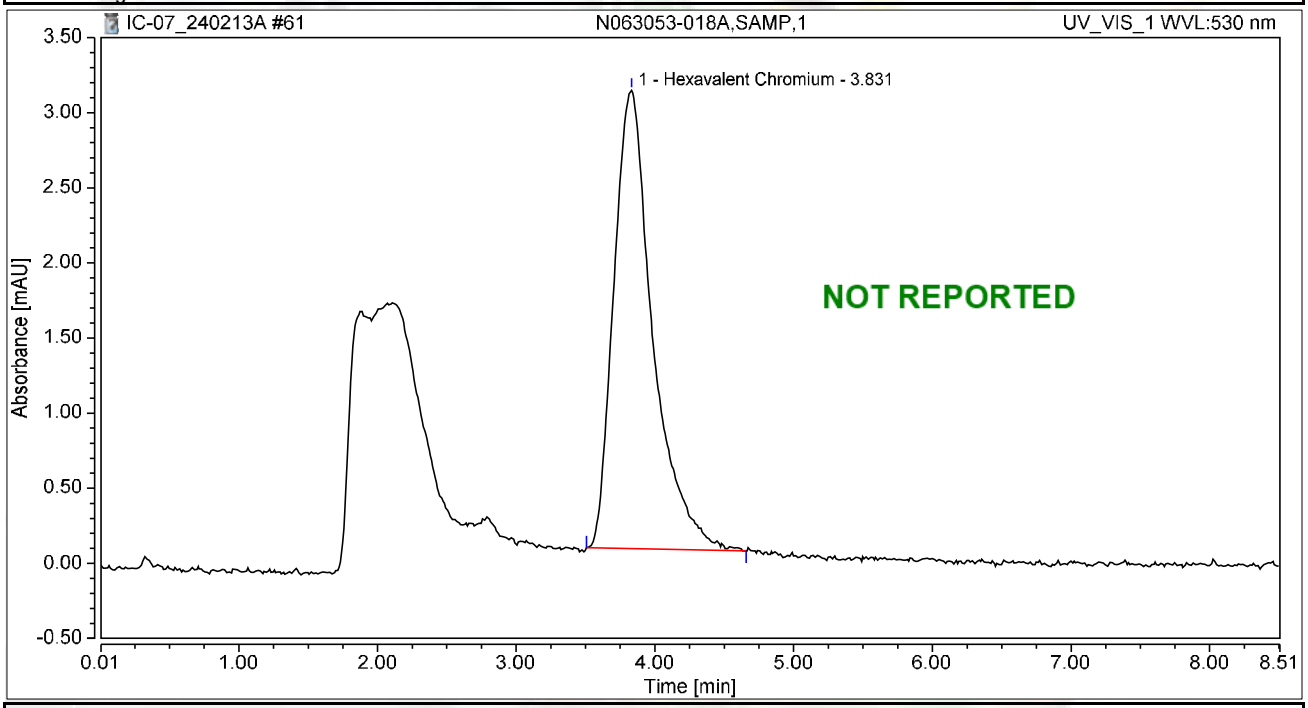
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-018A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 18:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

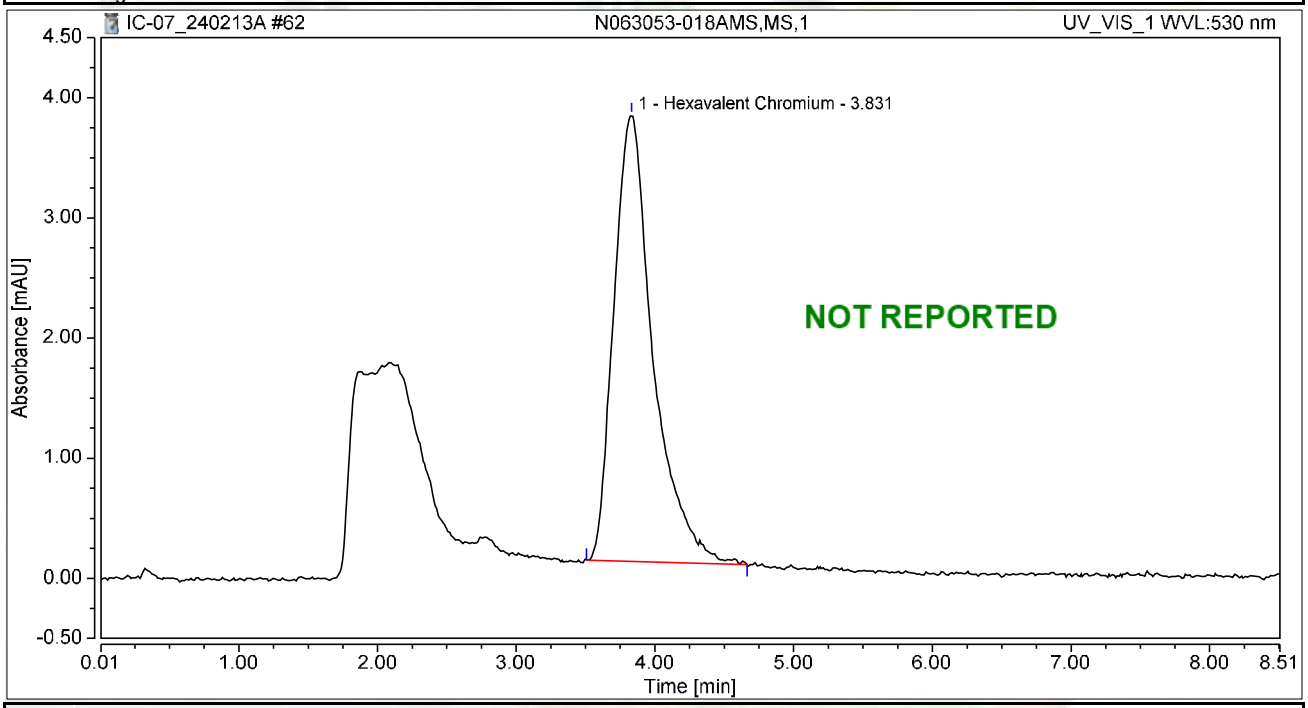
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.831	0.993	3.050	100.00	100.00	4.6144
Total:			**0.993**	**3.050**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-018AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 18:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

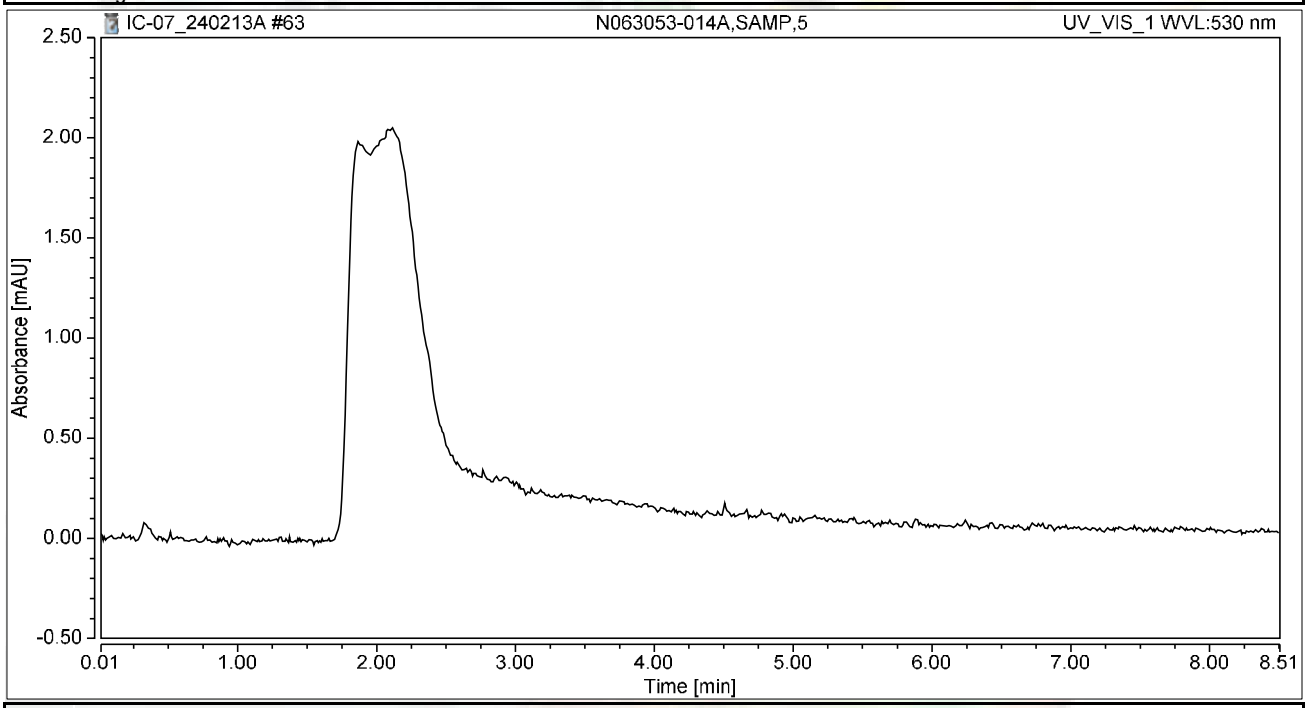
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.831	1.216	3.717	100.00	100.00	5.6528
Total:			**1.216**	**3.717**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-014A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 18:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

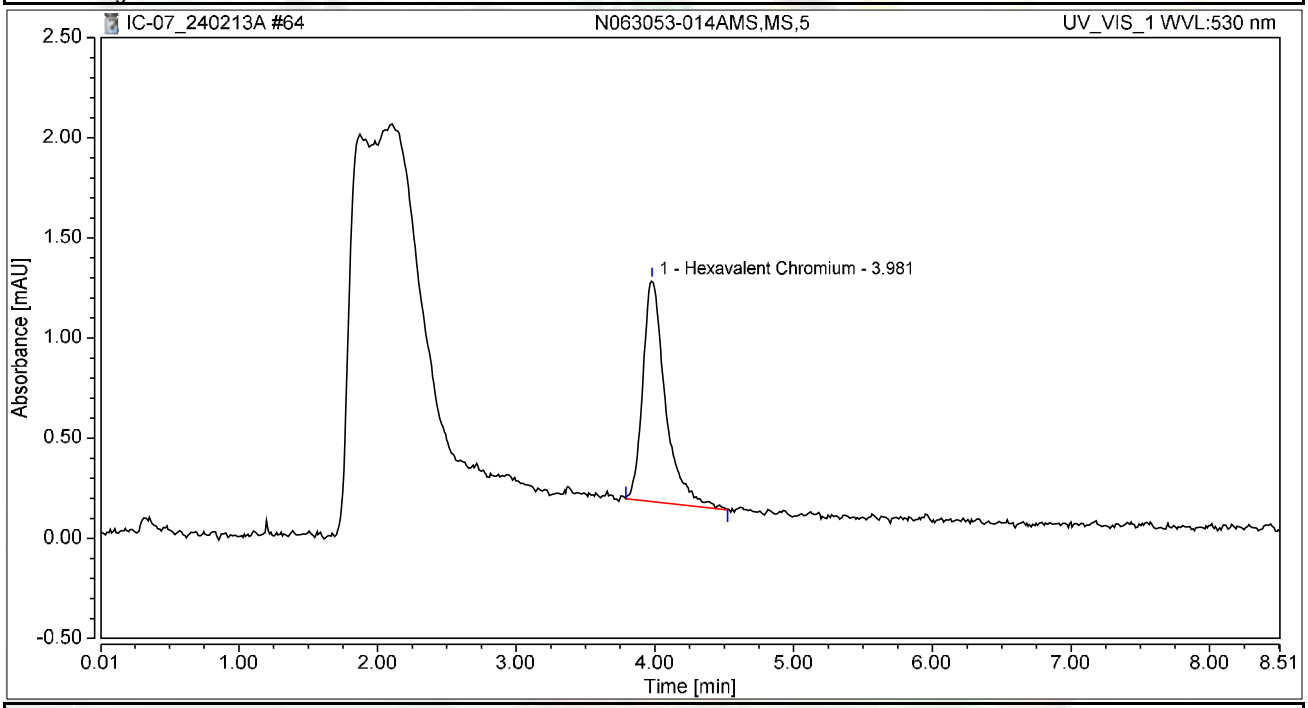
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-014AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 18:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

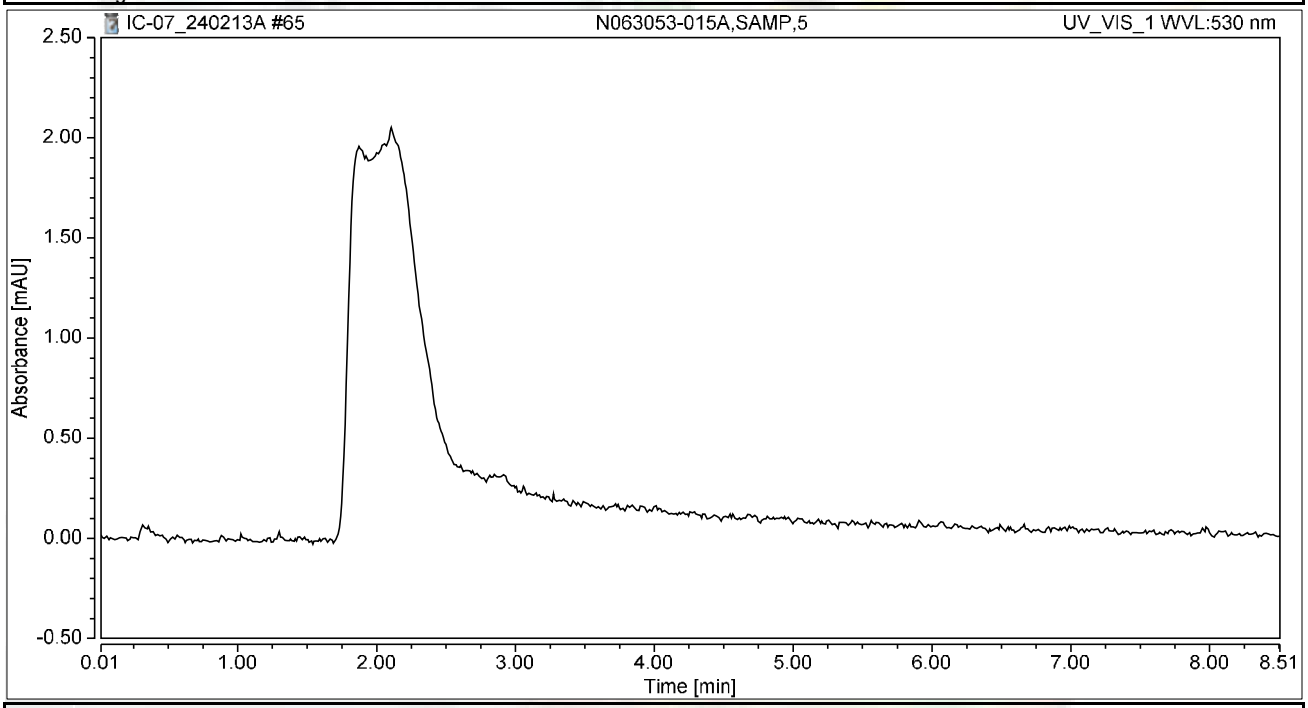
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.209	1.108	100.00	100.00	0.9703
Total:			**0.209**	**1.108**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-015A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 18:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

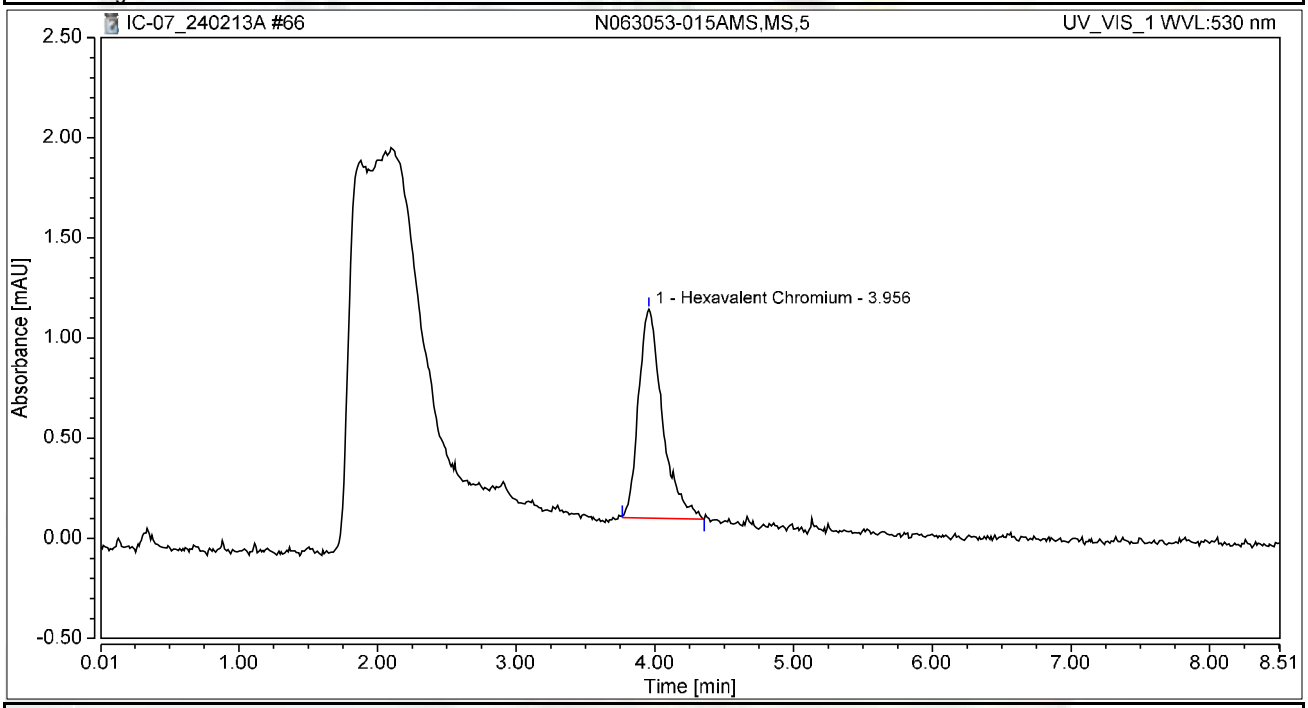
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-015AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 19:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

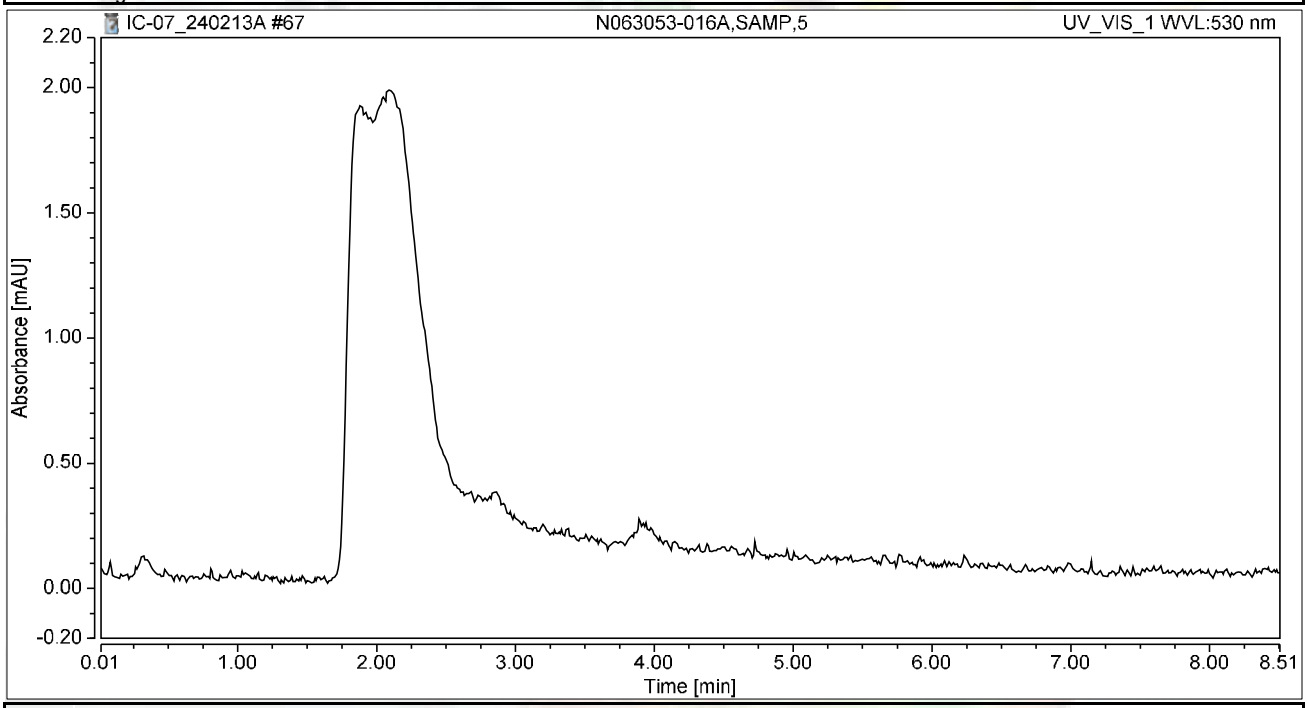
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.208	1.043	100.00	100.00	0.9670
Total:			**0.208**	**1.043**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-016A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 19:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

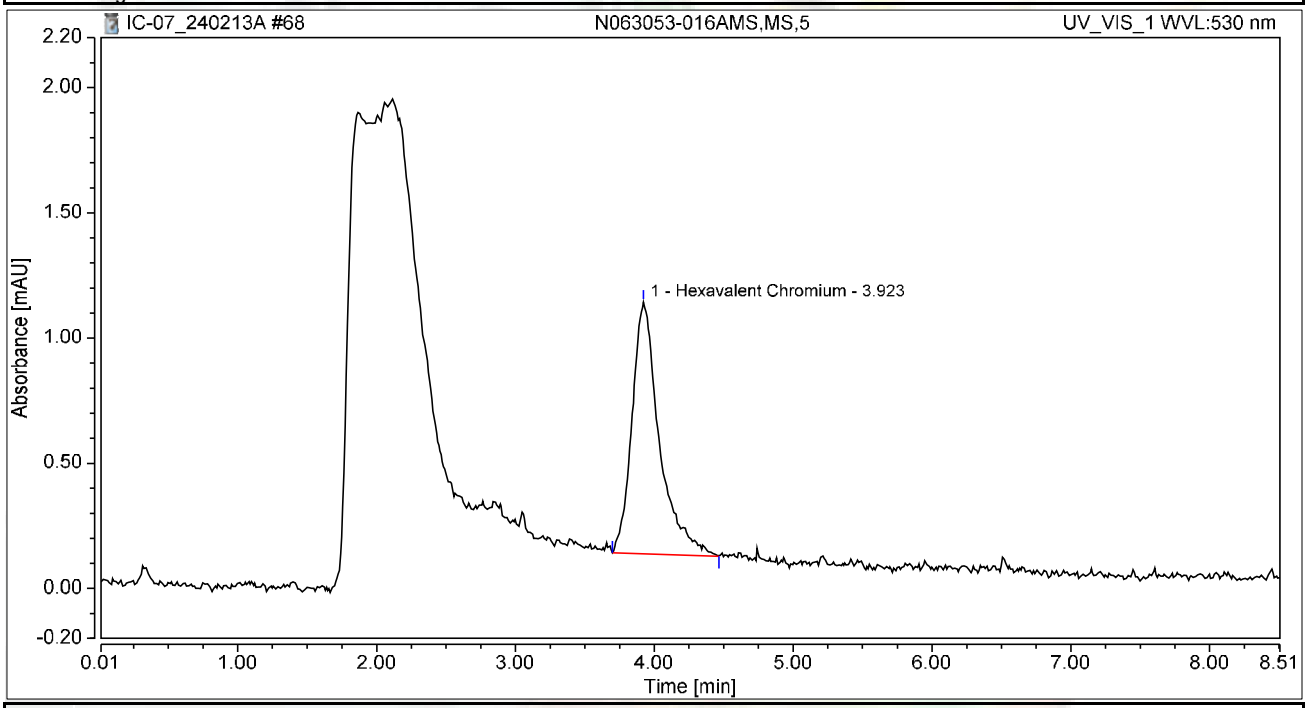
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-016AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 19:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

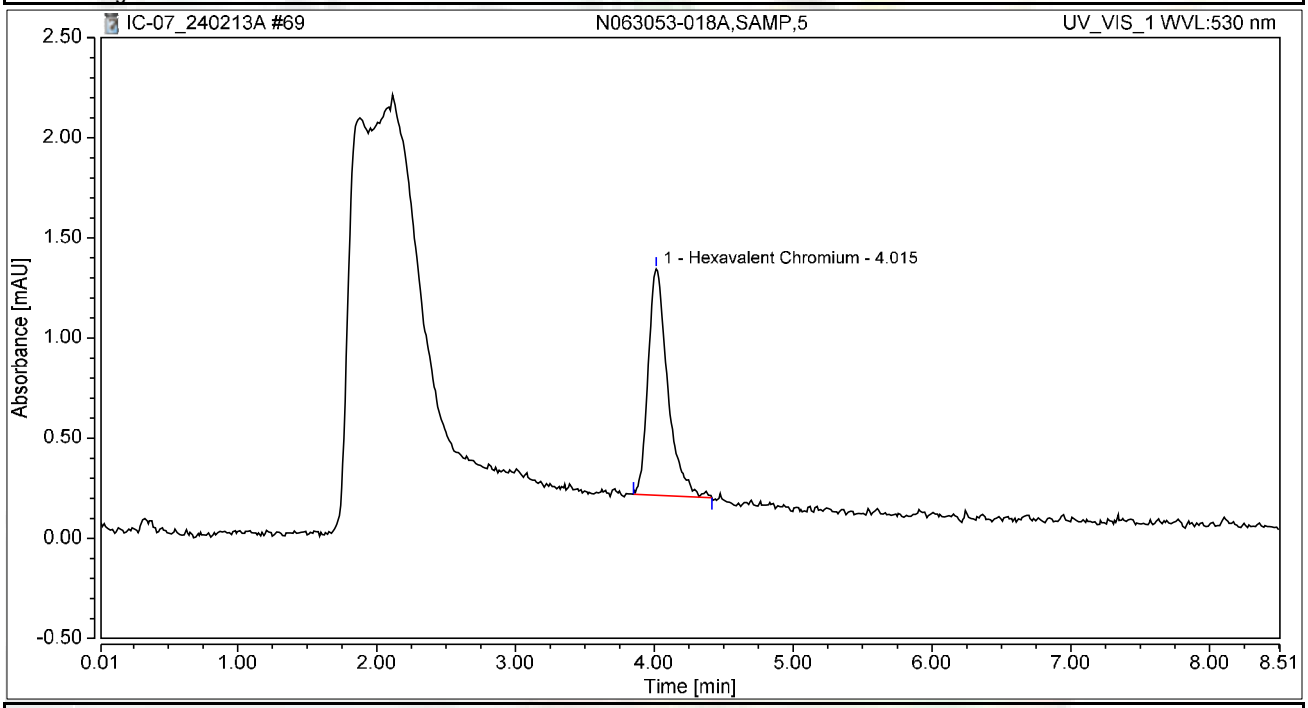
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.230	1.006	100.00	100.00	1.0692
Total:			**0.230**	**1.006**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-018A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 19:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

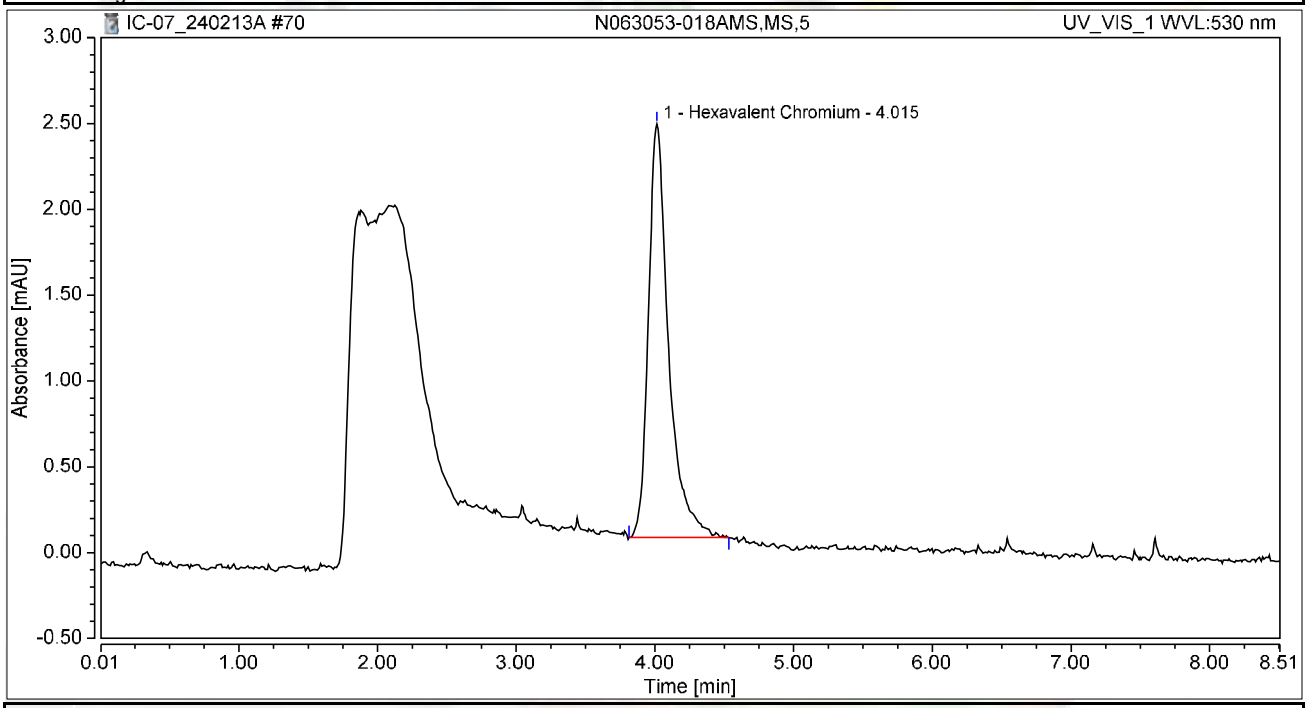
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.185	1.130	100.00	100.00	0.8613
Total:			**0.185**	**1.130**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-018AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 19:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

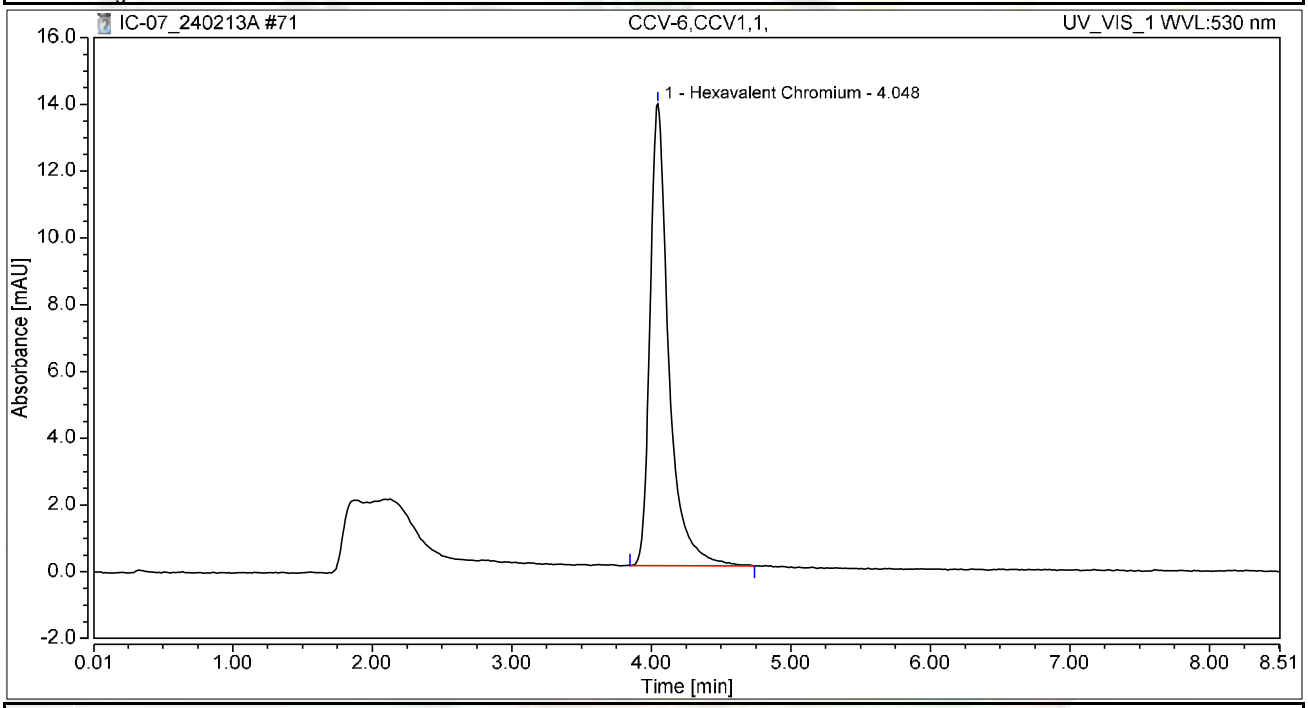
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.406	2.410	100.00	100.00	1.8869
Total:			**0.406**	**2.410**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 19:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

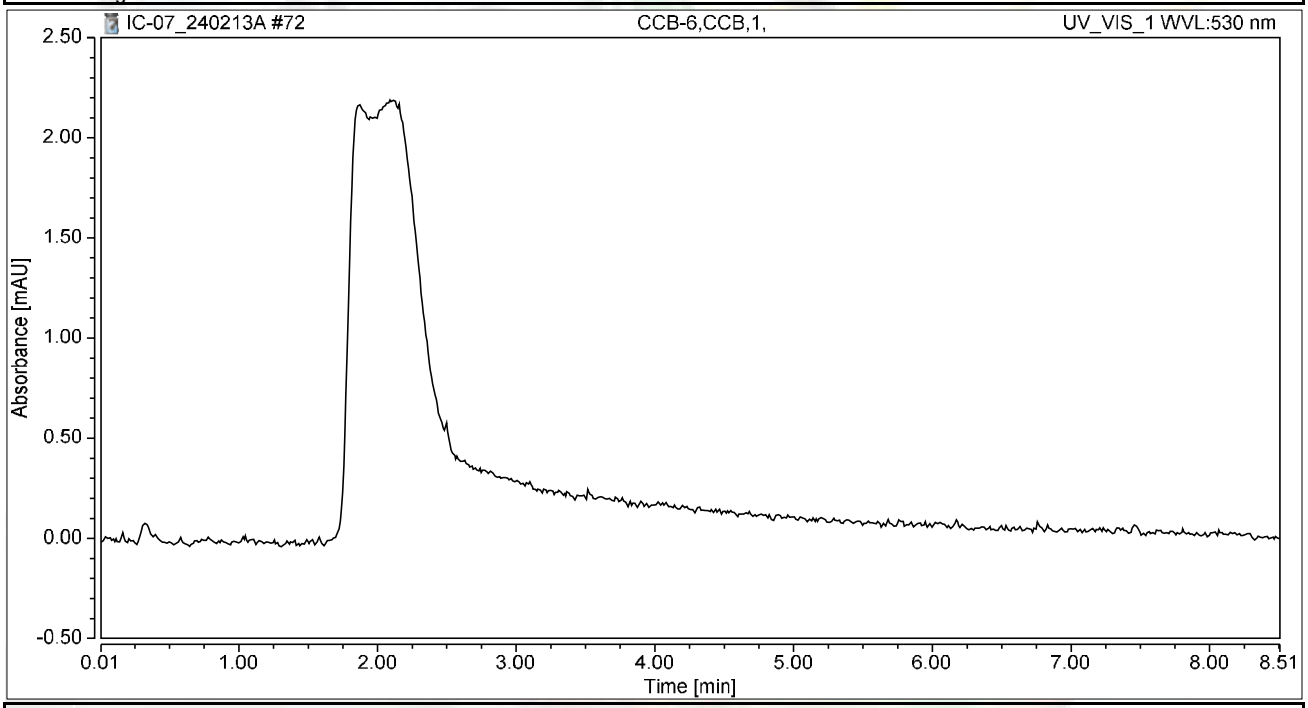
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.148	13.834	100.00	100.00	9.9869
Total:			**2.148**	**13.834**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 19:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

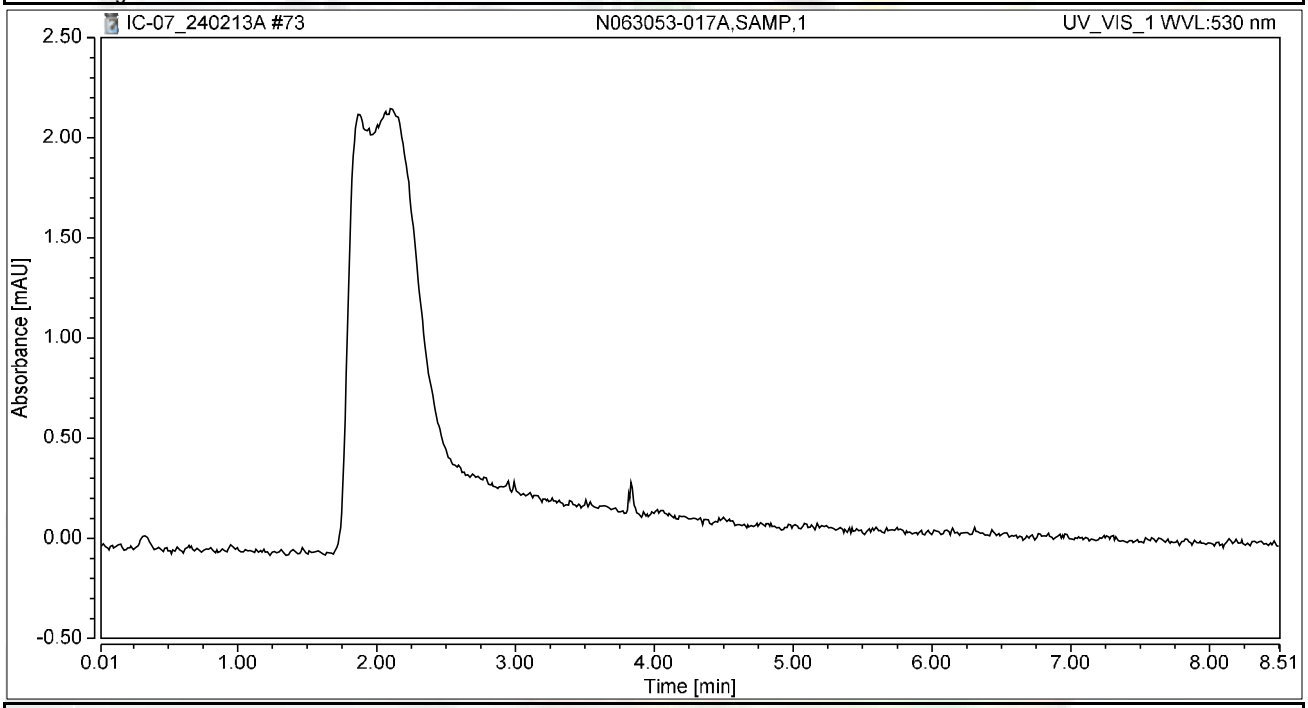
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-017A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 20:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

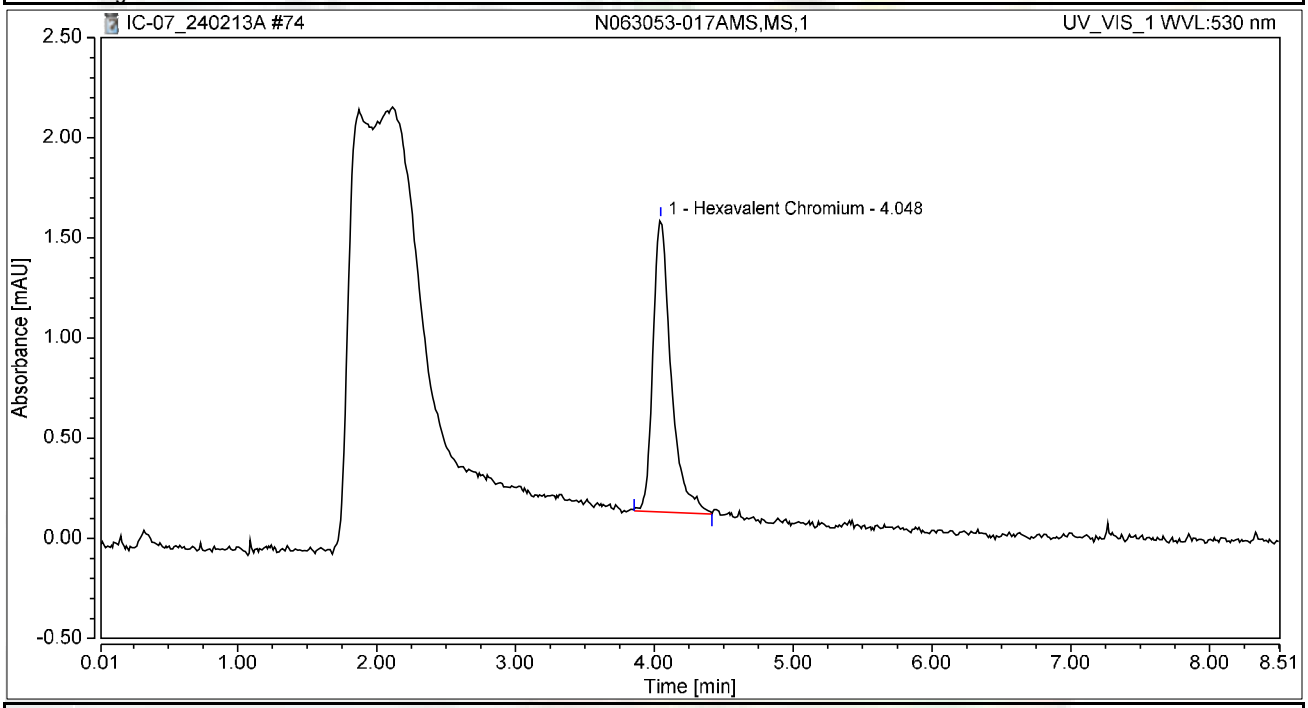
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-017AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 20:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

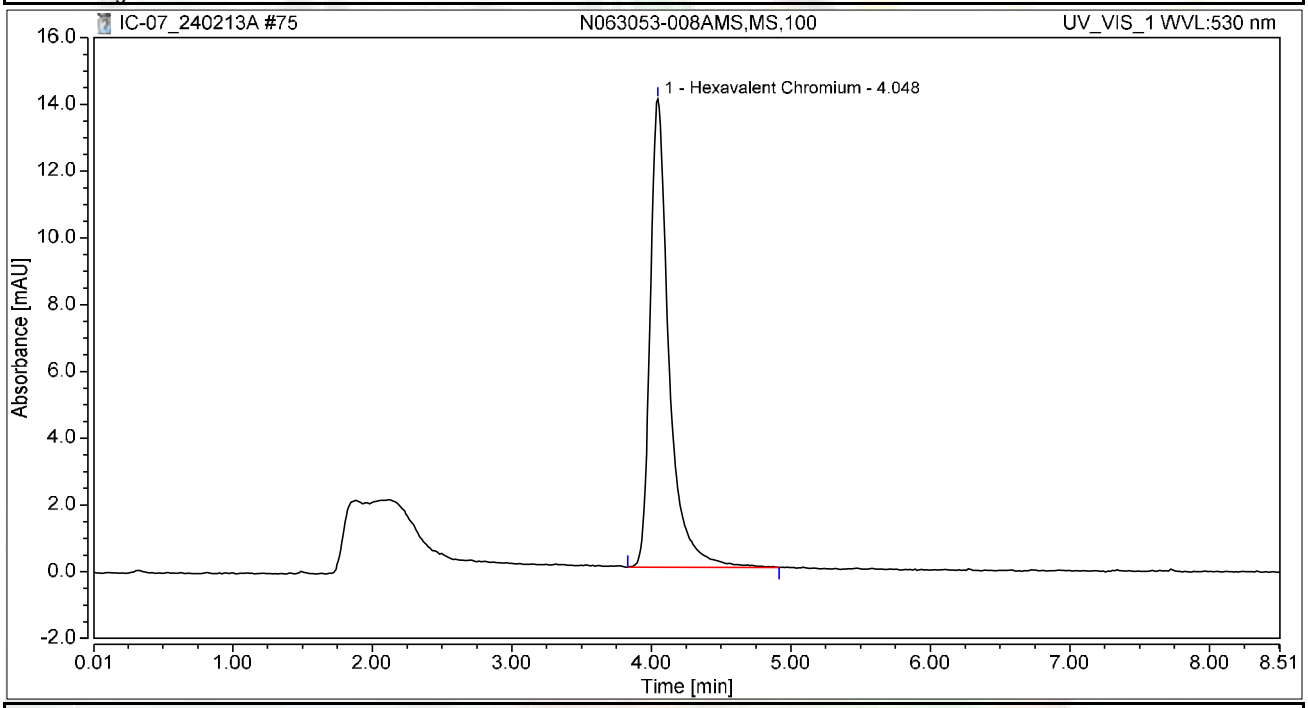
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.222	1.461	100.00	100.00	1.0308
Total:			**0.222**	**1.461**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-008AMS,MS,100**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 20:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

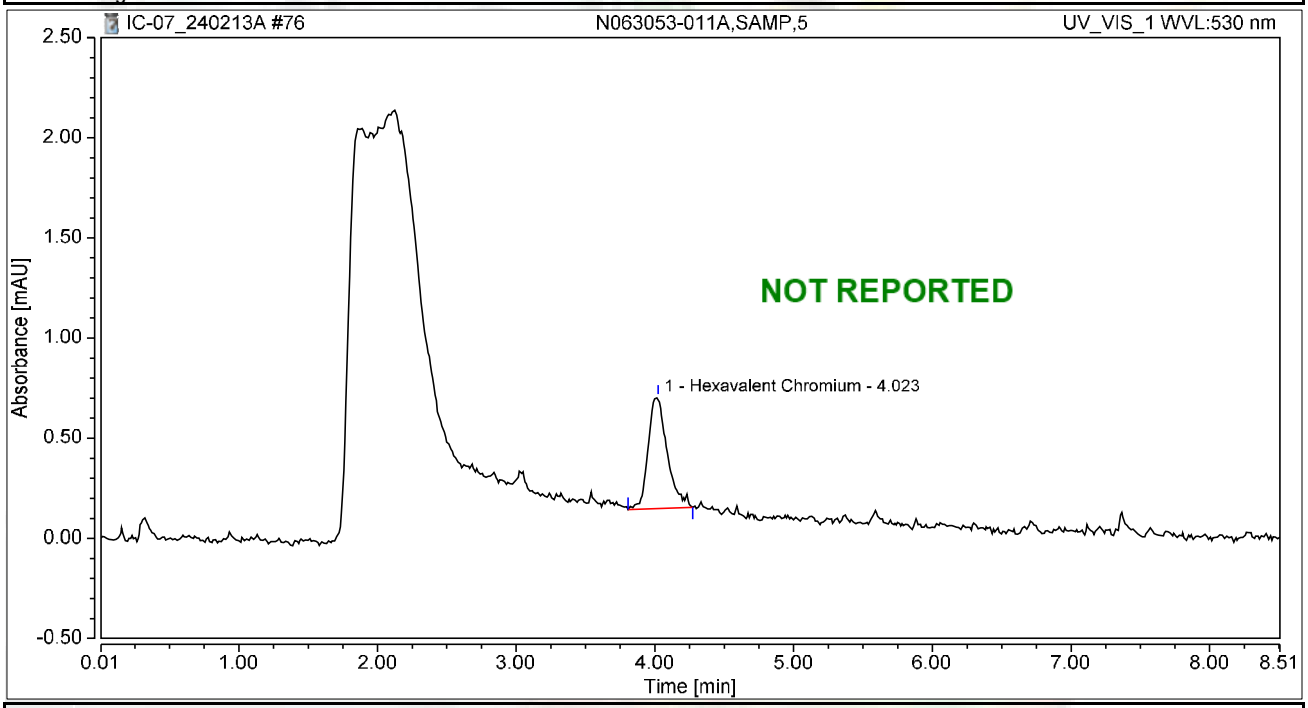
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.202	14.026	100.00	100.00	10.2383
Total:			**2.202**	**14.026**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 20:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

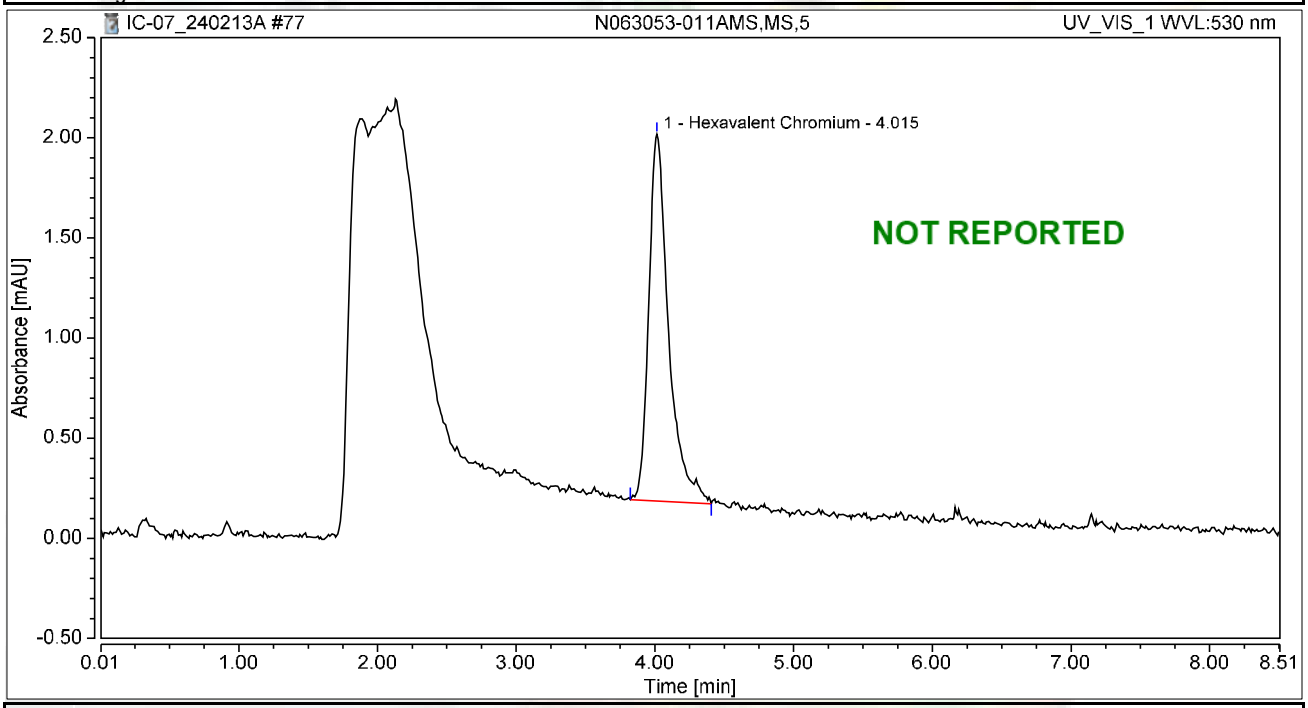
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.089	0.556	100.00	100.00	0.4134
Total:			**0.089**	**0.556**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 20:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

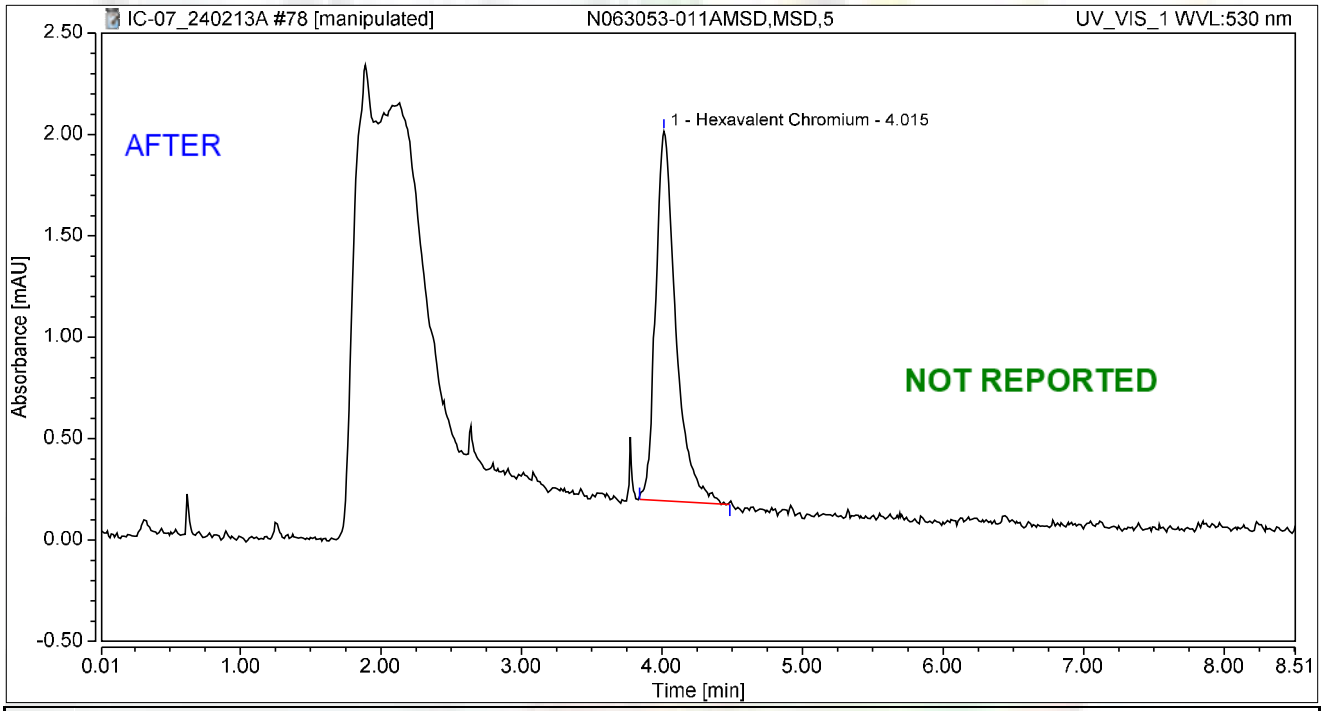
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.303	1.831	100.00	100.00	1.4090
Total:			**0.303**	**1.831**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011AMSD,MSD,5**	*Run Time (min):*	**8.49**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 20:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

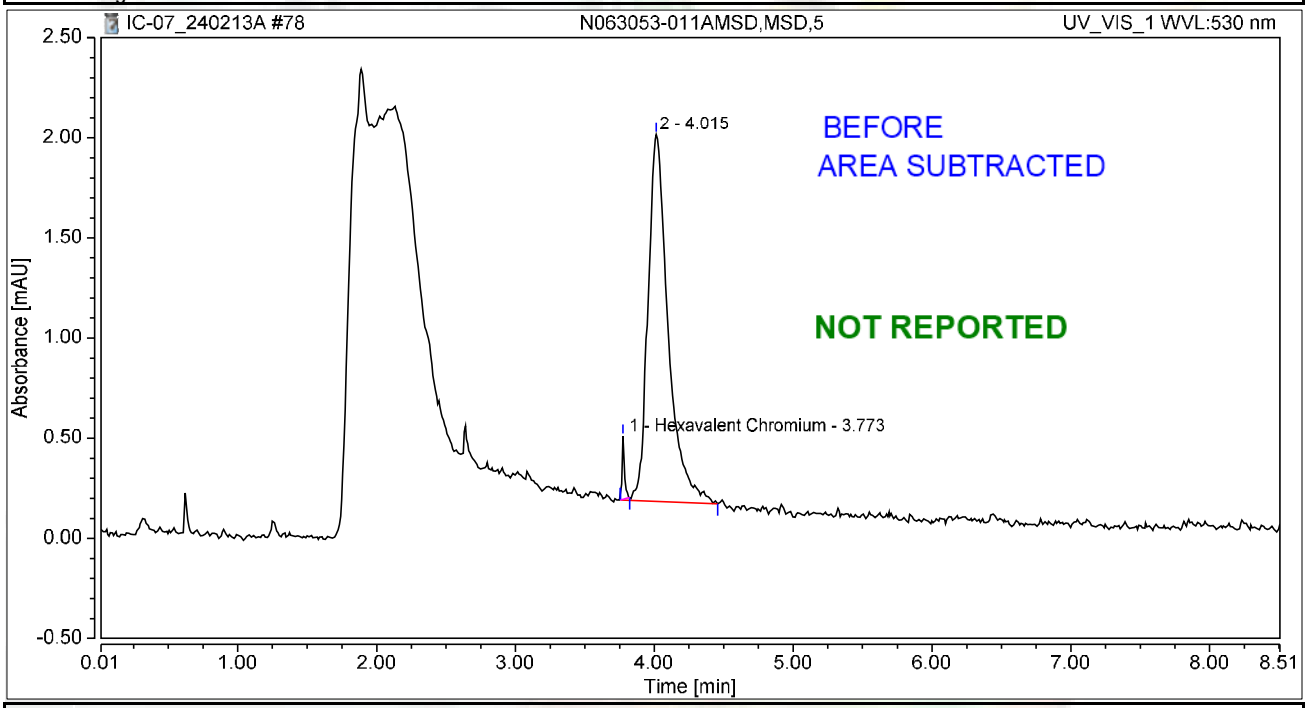
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.304	1.823	100.00	100.00	1.4114
Total:			**0.304**	**1.823**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011AMSD,MSD,5**	*Run Time (min):*	**8.49**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 20:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

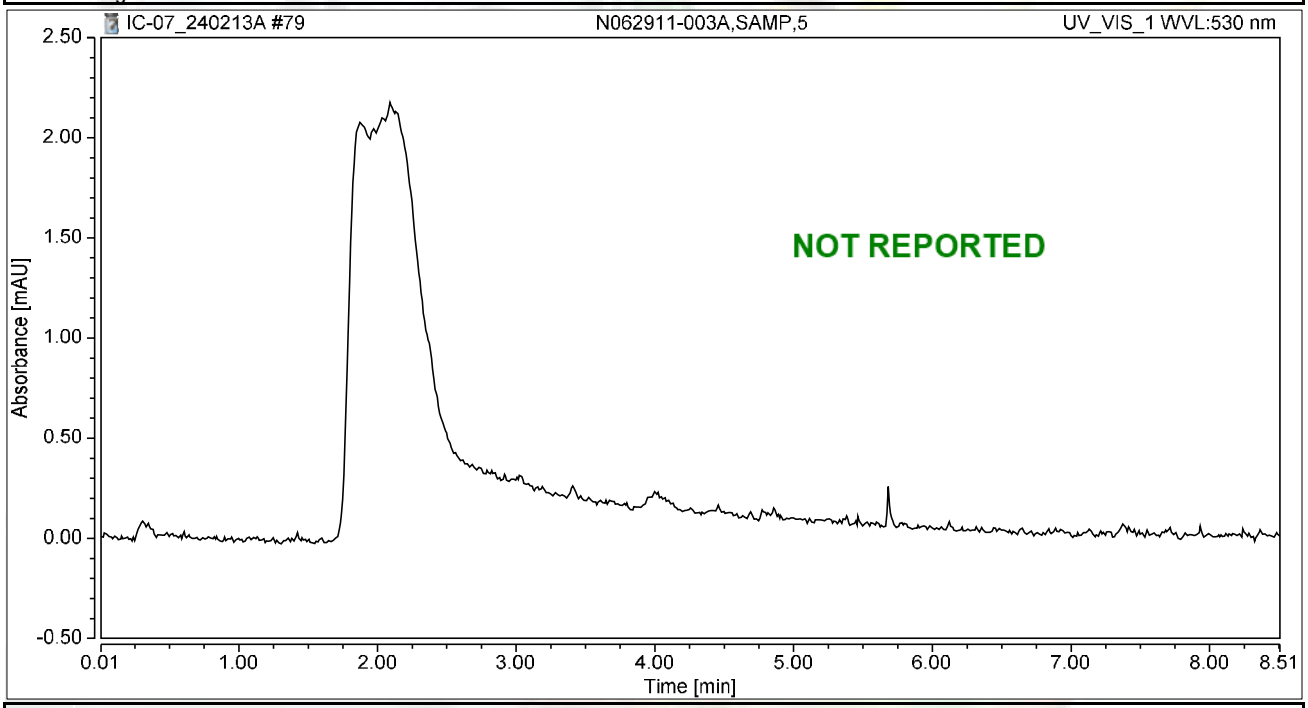
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.773	0.006	0.314	1.96	14.62	0.0286
2		4.015	0.309	1.831	98.04	85.38	n.a.
Total:			**0.315**	**2.145**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062911-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 21:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

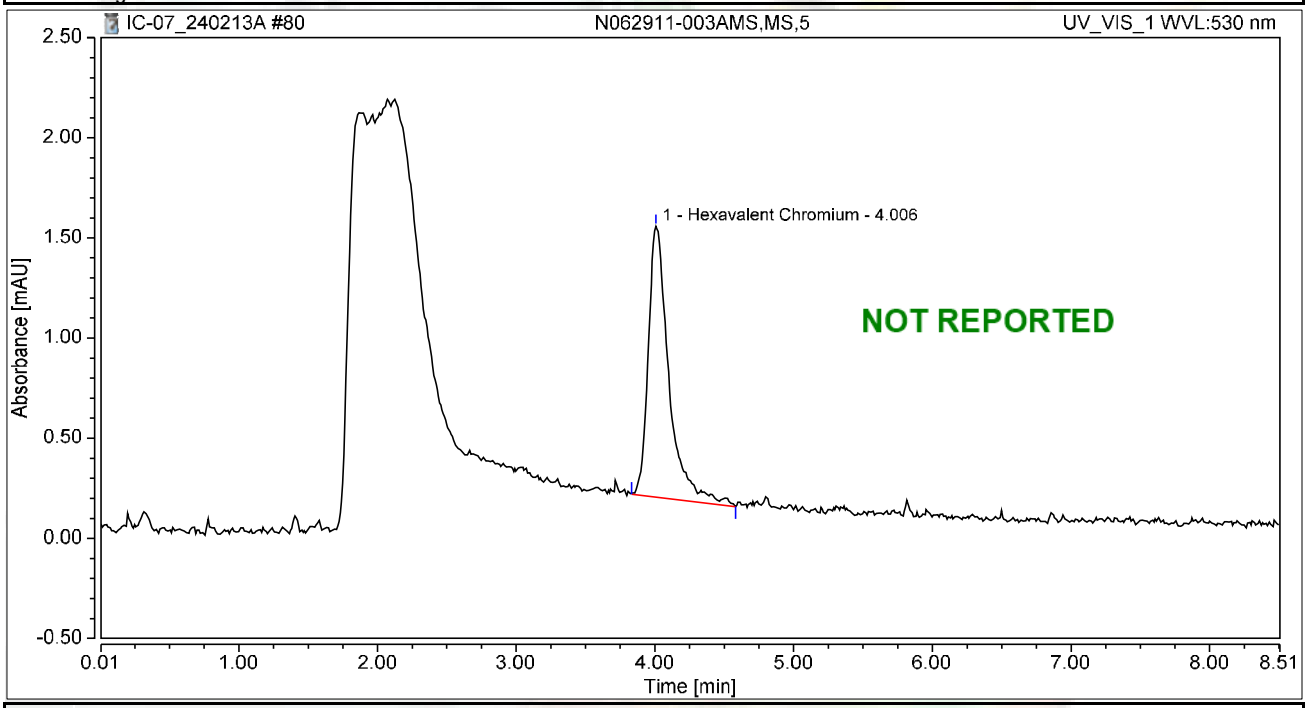
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062911-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 21:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

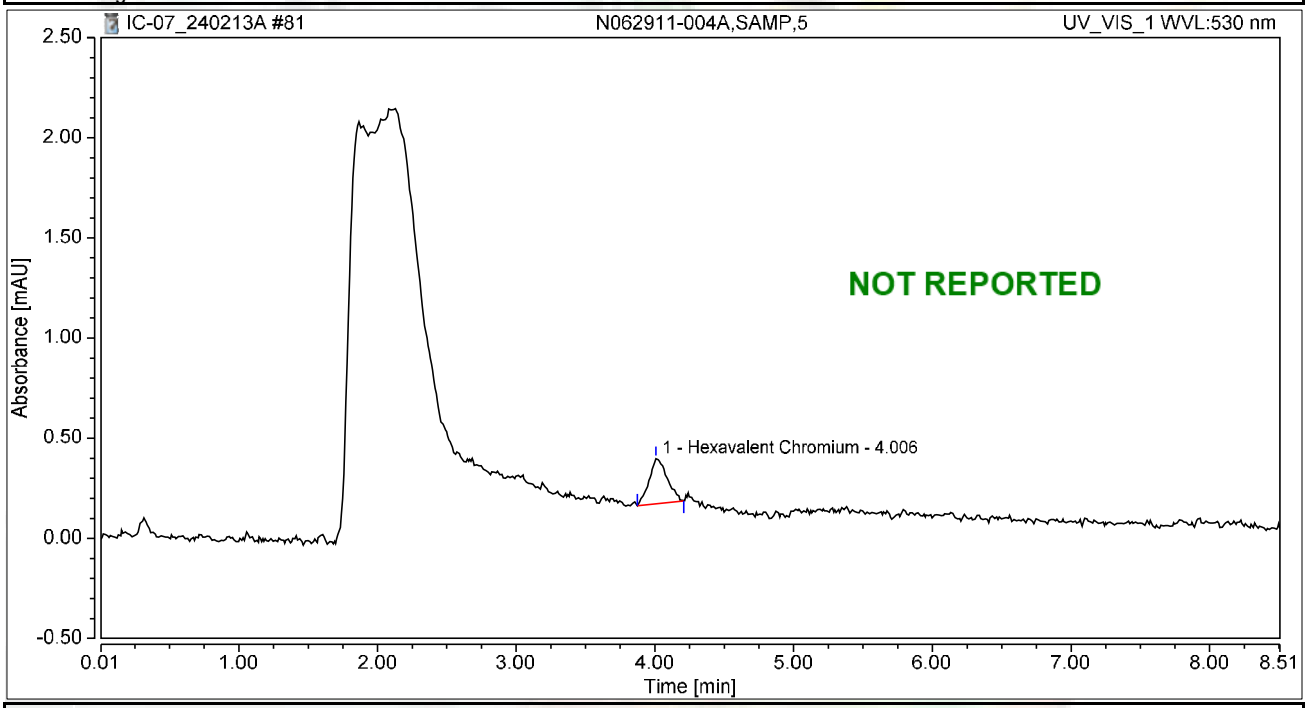
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.232	1.352	100.00	100.00	1.0806
Total:			**0.232**	**1.352**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062911-004A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 21:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

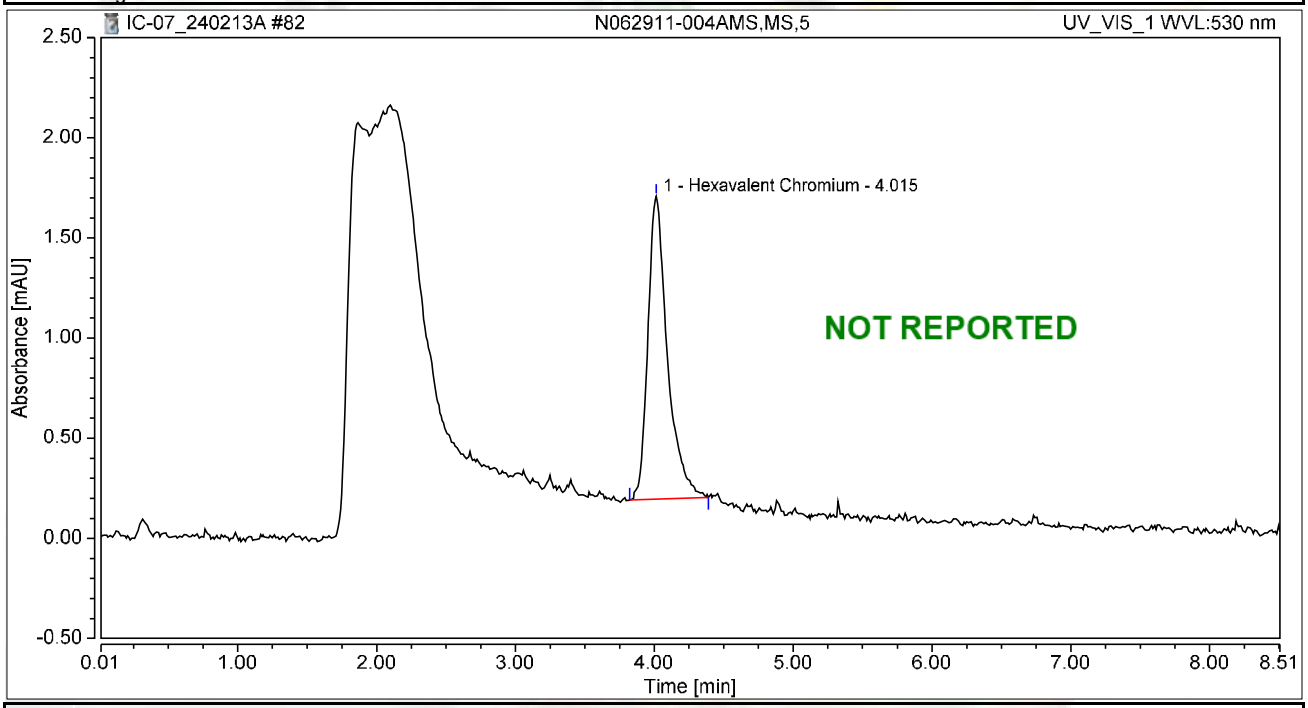
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.034	0.227	100.00	100.00	0.1594
Total:			**0.034**	**0.227**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062911-004AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 21:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

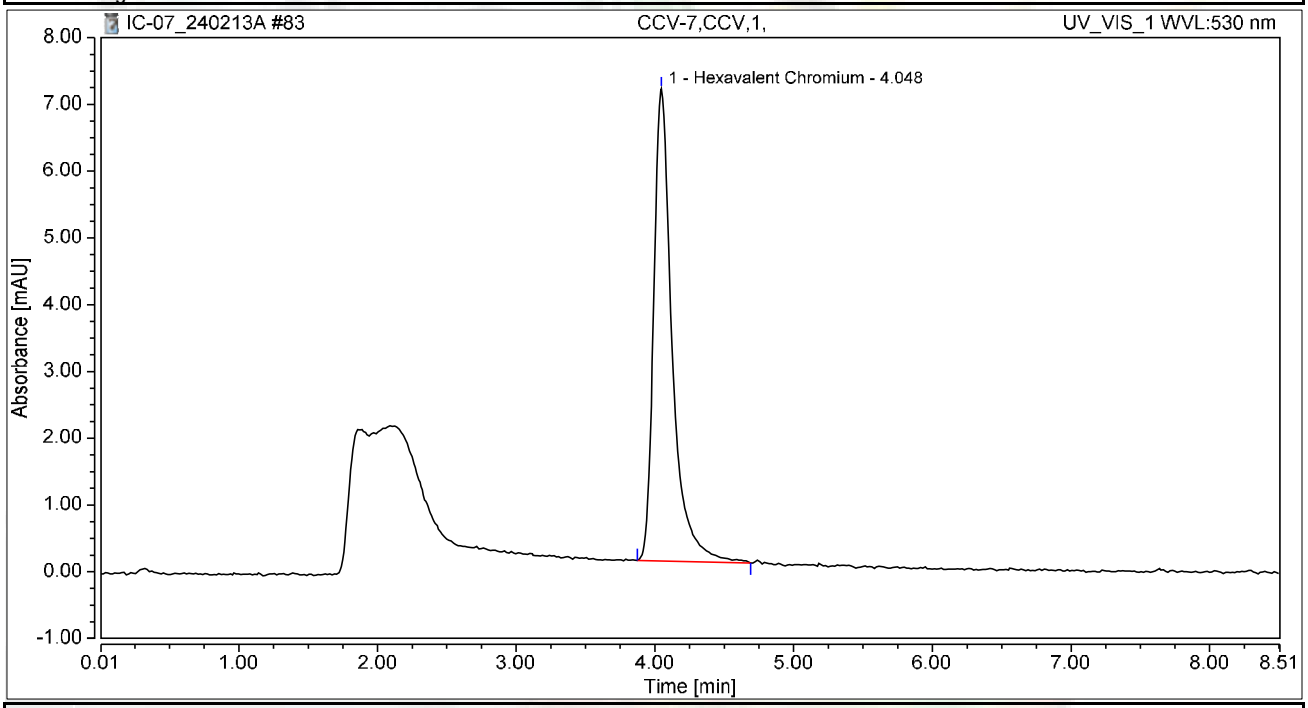
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.247	1.512	100.00	100.00	1.1482
Total:			**0.247**	**1.512**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 21:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

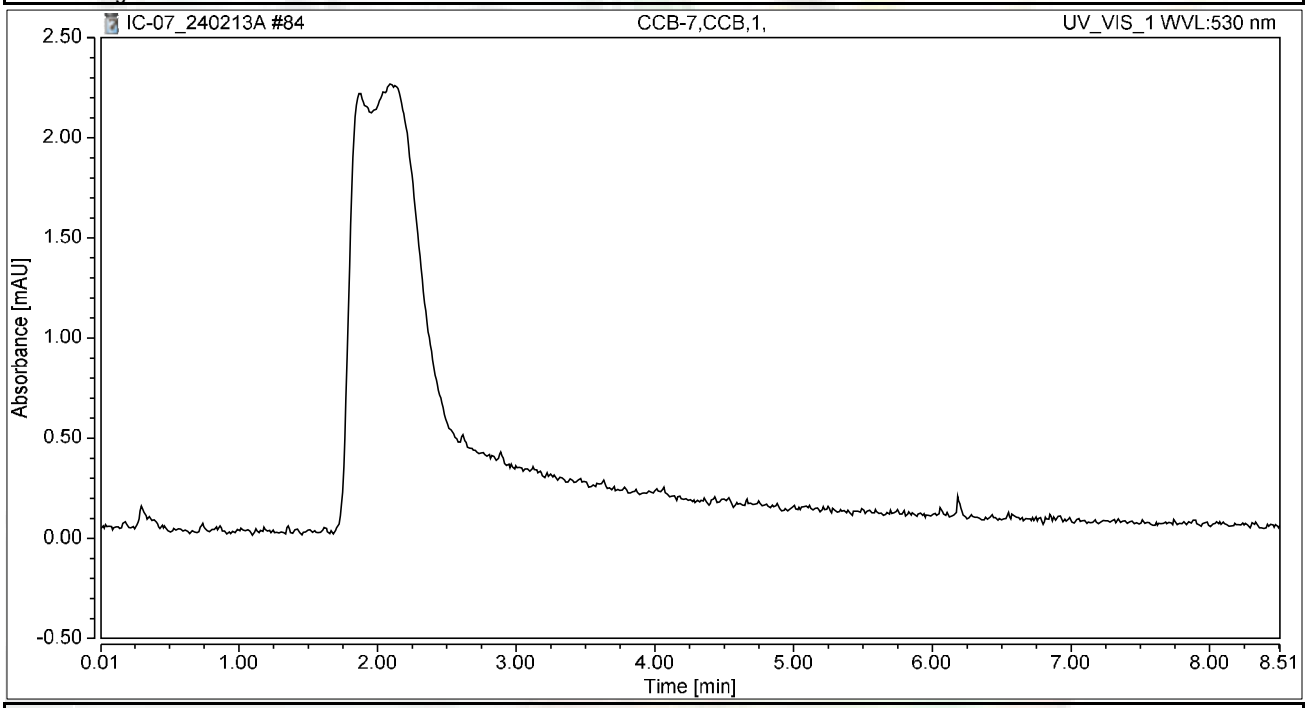
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.092	7.073	100.00	100.00	5.0787
Total:			**1.092**	**7.073**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 21:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

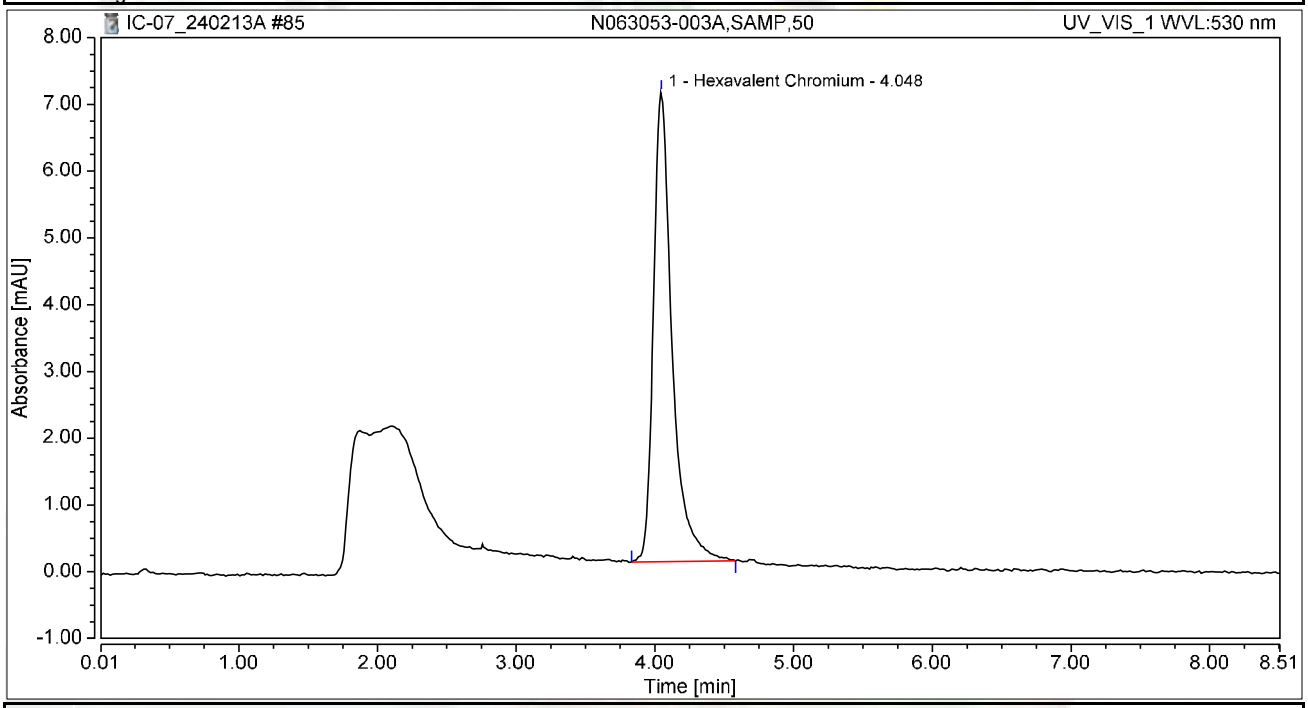
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-003A,SAMP,50**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 22:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

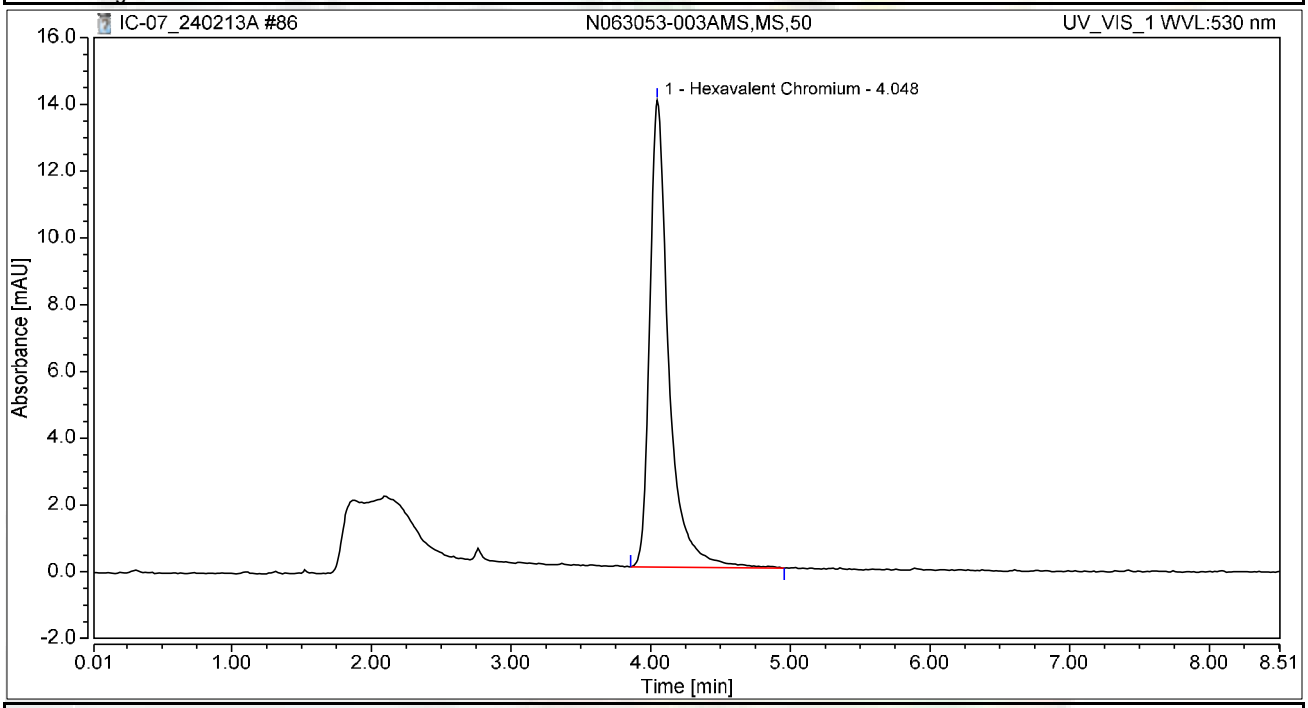
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.099	7.038	100.00	100.00	5.1088
Total:			**1.099**	**7.038**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-003AMS,MS,50**	*Run Time (min):*	**8.49**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 22:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

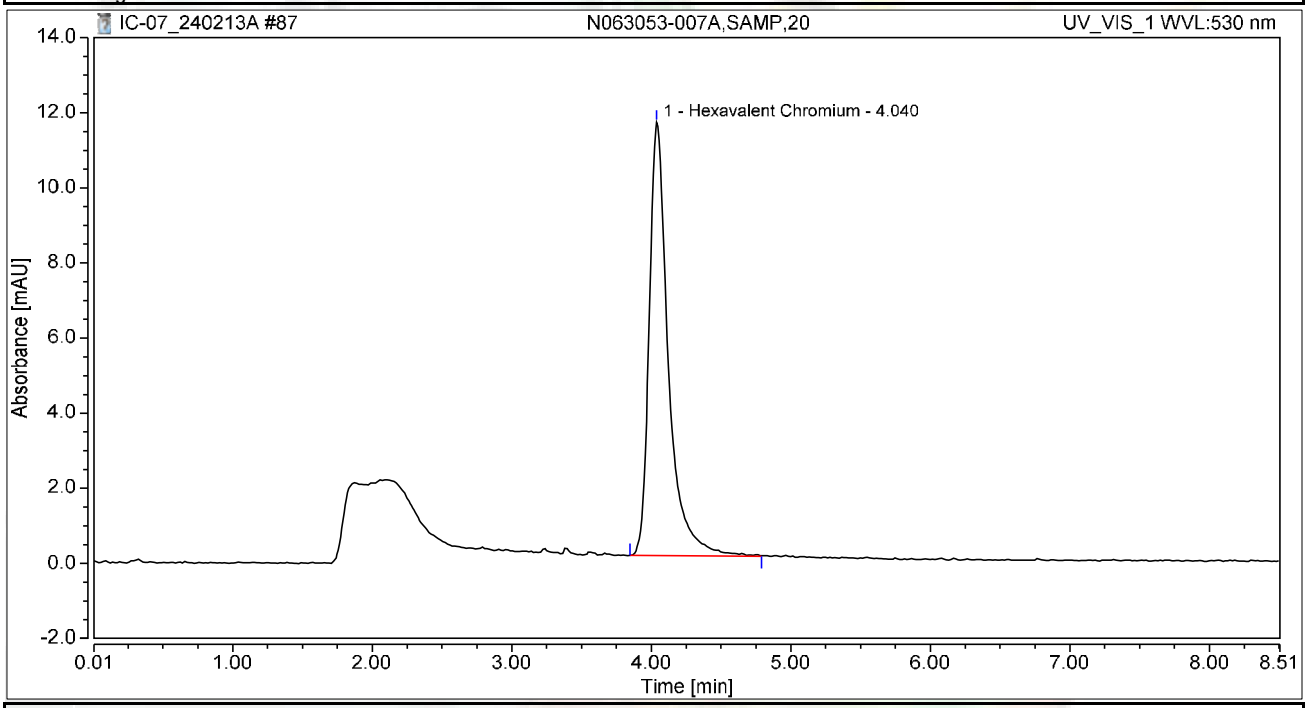
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.209	13.989	100.00	100.00	10.2698
Total:			**2.209**	**13.989**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-007A,SAMP,20**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 22:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

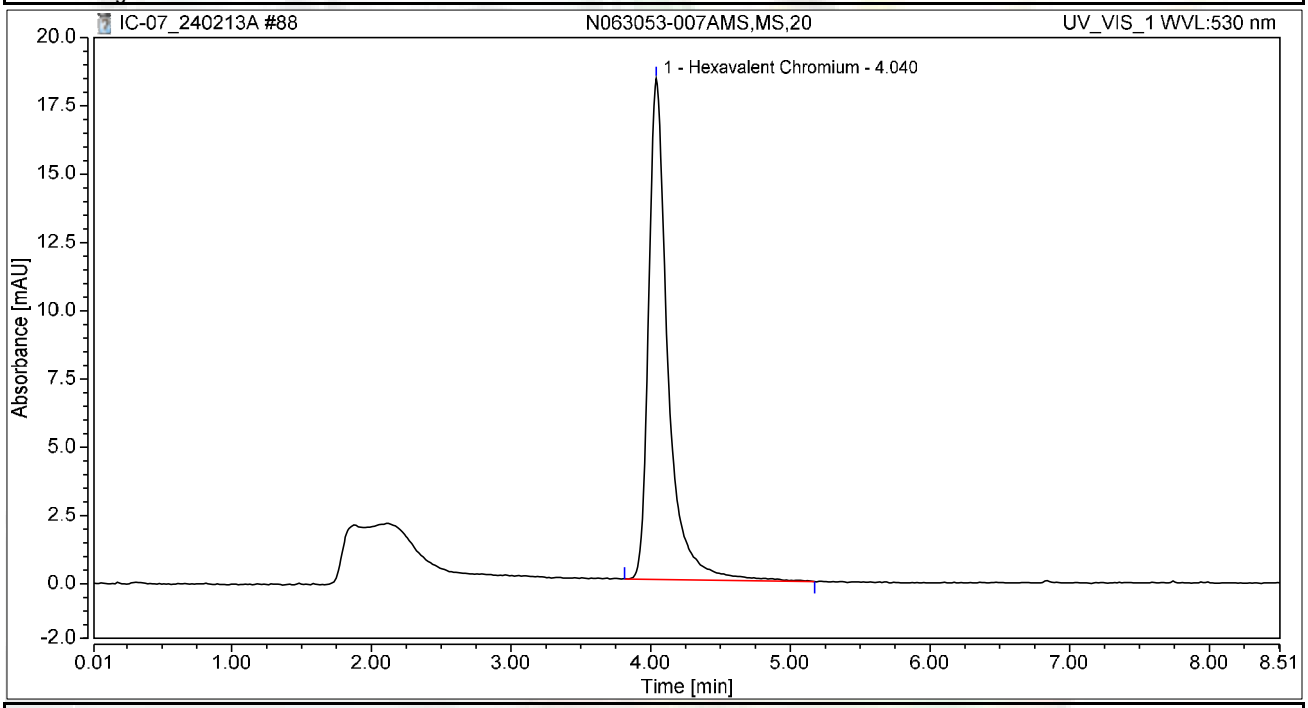
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.840	11.542	100.00	100.00	8.5547
Total:			**1.840**	**11.542**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-007AMS,MS,20**	*Run Time (min):*	**8.49**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 22:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

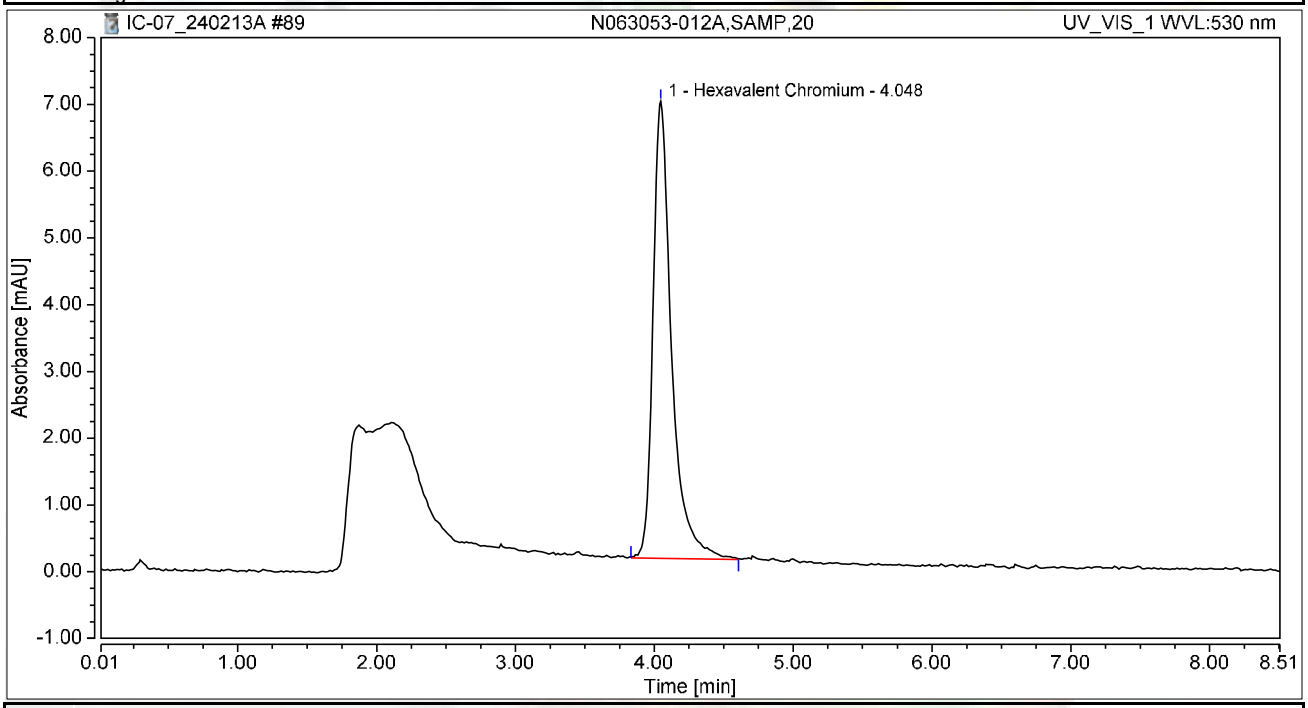
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.956	18.340	100.00	100.00	13.7440
Total:			**2.956**	**18.340**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-012A,SAMP,20**	*Run Time (min):*	**8.49**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 22:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

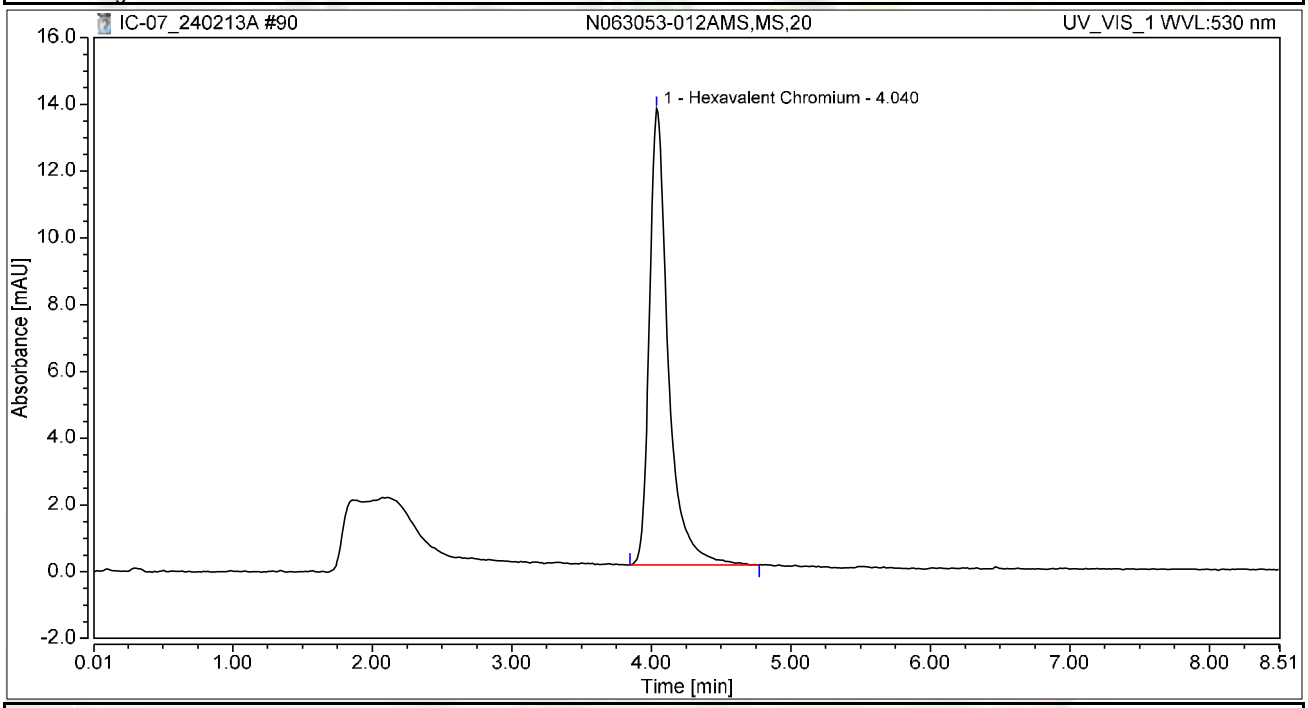
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.062	6.844	100.00	100.00	4.9365
Total:			**1.062**	**6.844**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-012AMS,MS,20**	*Run Time (min):*	**8.50**
Vial Number:	**44**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 22:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

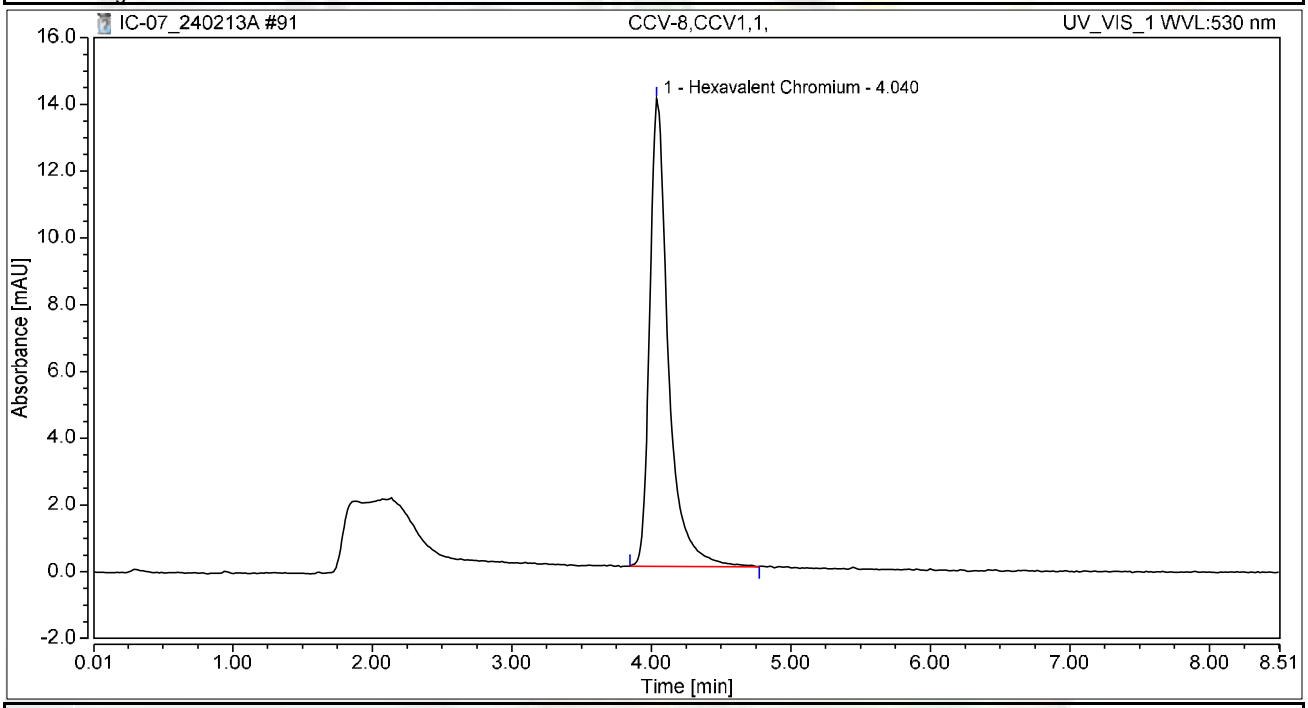
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.142	13.672	100.00	100.00	9.9558
Total:			**2.142**	**13.672**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-8,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**45**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 22:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

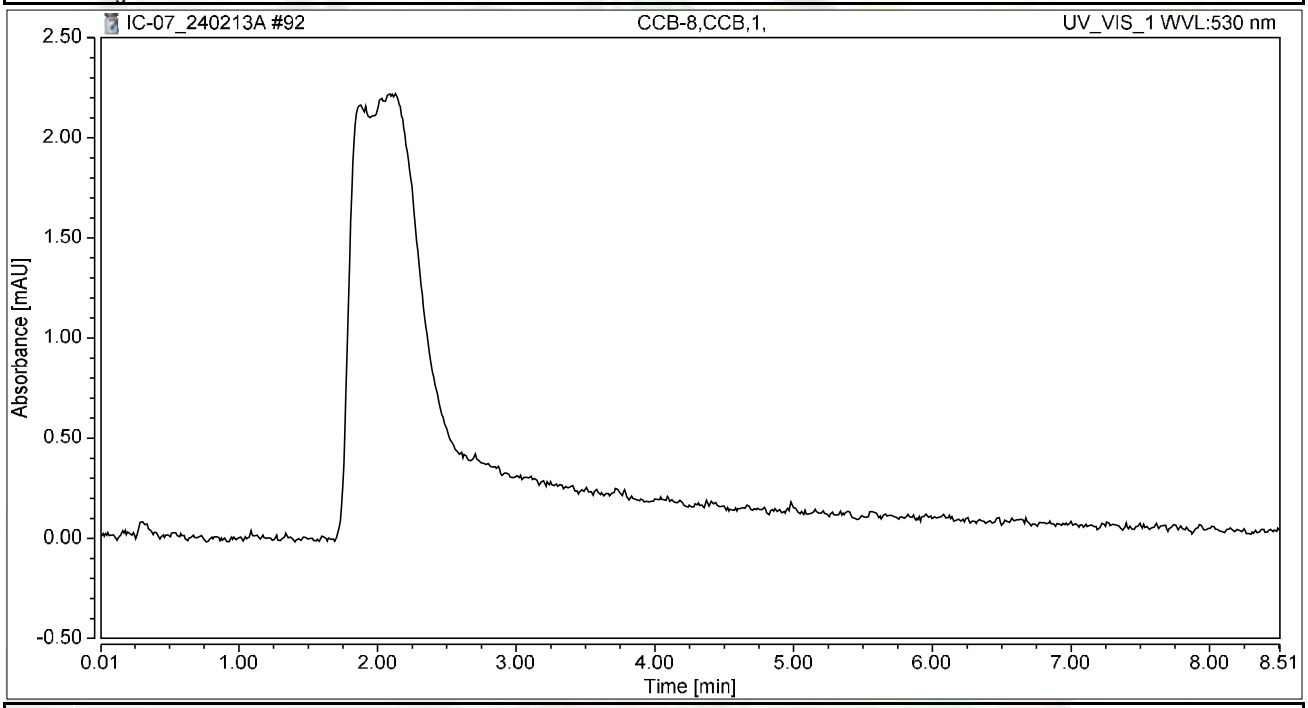
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.173	14.014	100.00	100.00	10.1002
Total:			**2.173**	**14.014**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-8,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**46**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 23:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

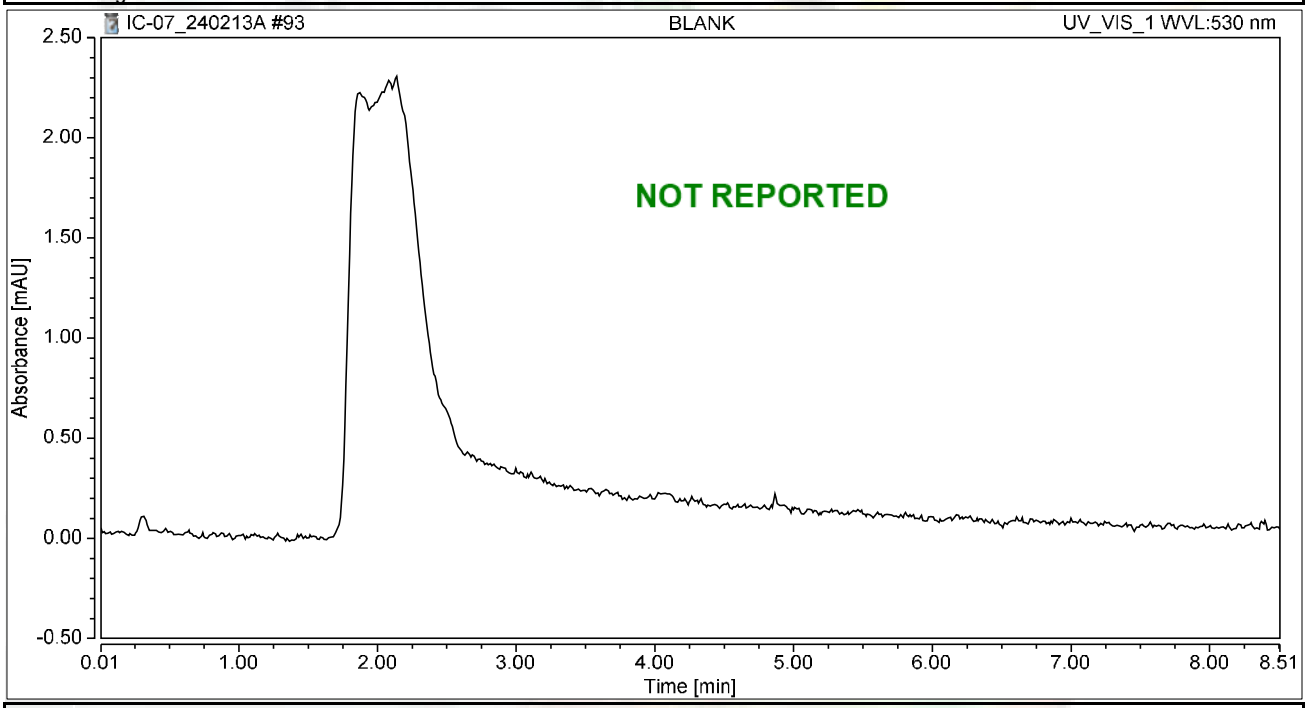
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**47**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 23:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

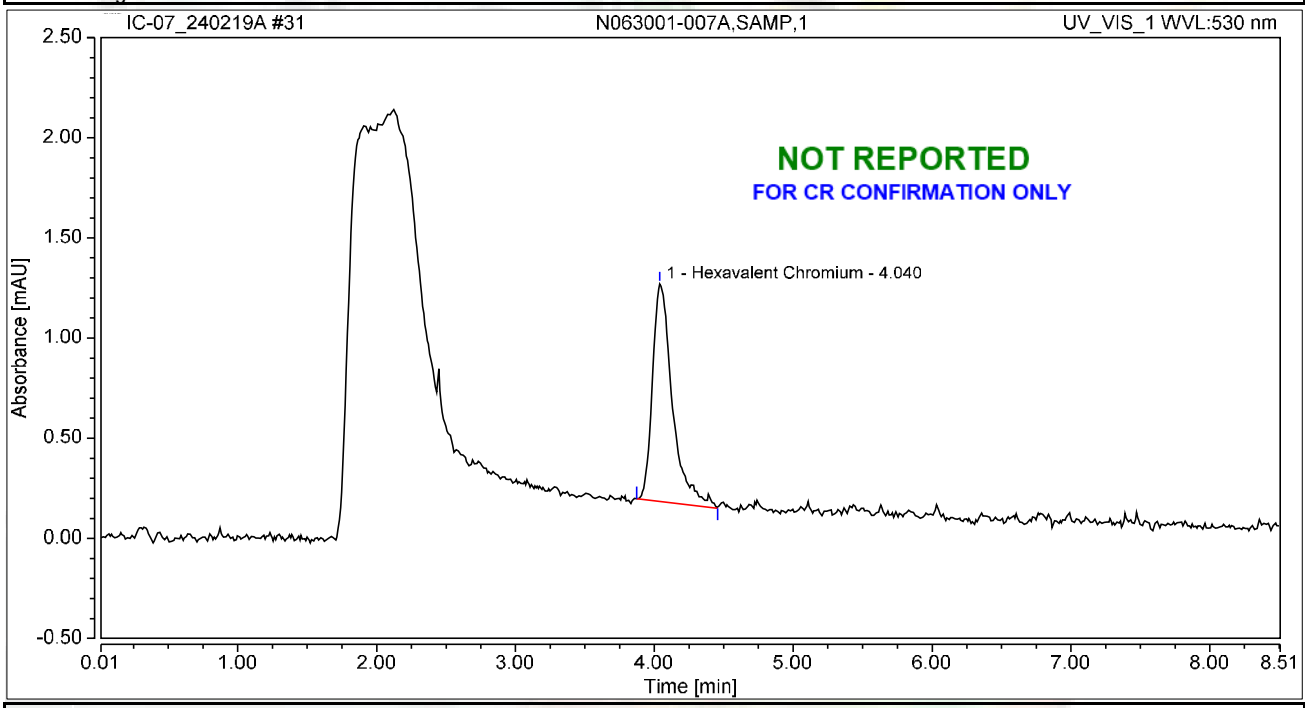
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-007A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 16:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

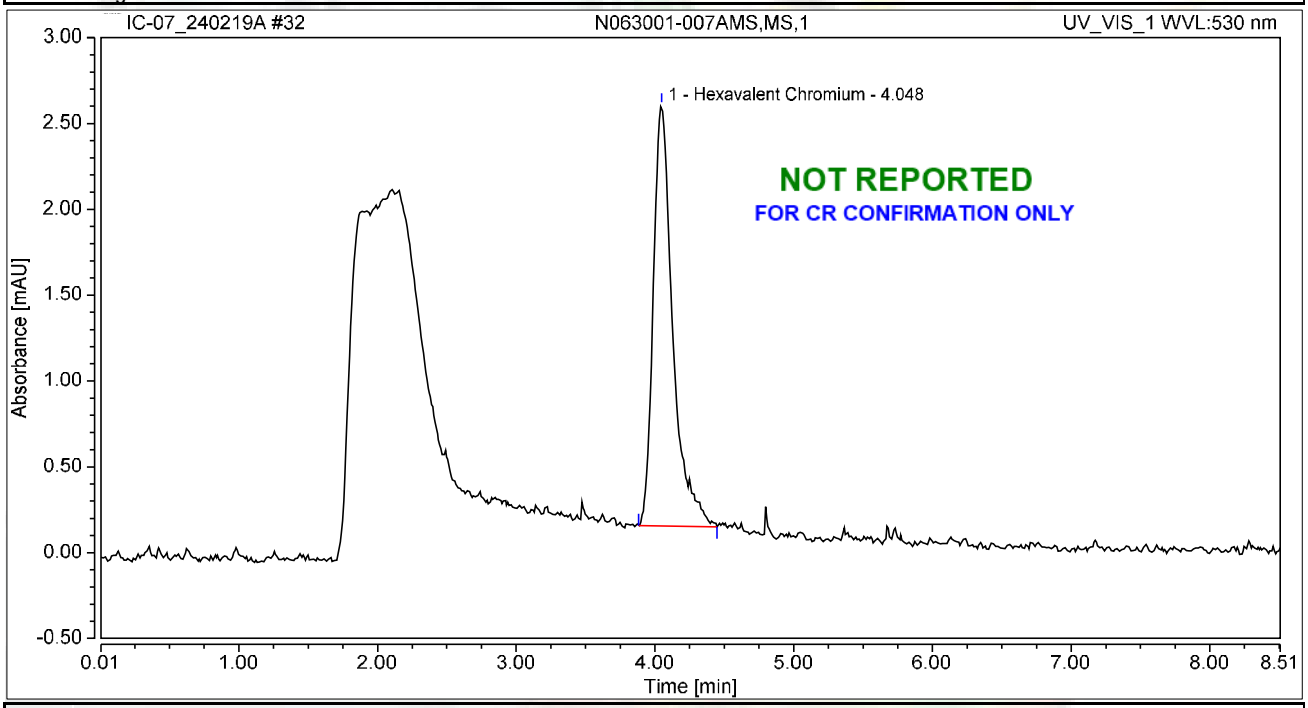
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.182	1.086	100.00	100.00	0.8446
Total:			**0.182**	**1.086**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 17:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.399	2.450	100.00	100.00	1.8547
Total:			**0.399**	**2.450**	**100.00**	**100.00**	

EPA 300.0

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R181395
ASSET #: N063001

Instrument ID: IC-08
Analyst: RBA
Date Analyzed: 2/9/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	x		
2. Matrix / units correct	x		
3. Is QC present and complete?	x		
4. Are analytical results correct? (dilutions,calculations)	x		
5. Is first level review correct and complete?	x		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 2/14/2024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R181402
ASSET #: N063001 / N063012

Instrument ID: IC-08
Analyst: RBA
Date Analyzed: 2/10/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)		X			X	
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

~~Detection of Sulfate in CCB2/3 was >1/2PQL. However, N0063012 samples were >5X the CCB detection.~~

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 2/20/2024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R181405
ASSET #: N063001

Instrument ID: IC-09
Analyst: RBA
Date Analyzed: 2/9/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 2/14/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: GROUNDWATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the orignal sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N063001-003B** concentration in mg/L is calculated as follows:

Nitrate, mg/L = 0.1574 * 10

= 1.574

Reporting result in two significant figures,

Nitrate, mg/L = 1.6

Reviewed by:

dMocha 2/26/2024

ANALYSIS RUN LOG

Sequence: IC-08_240124A
Operator: IC-05
Printed: 1/24/2024 5:54:19 PM

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 25
Created: 1/24/2024 9:39:27 AM by IC-05
Last Update: 1/24/2024 11:49:06 AM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240124	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240124	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240124	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240124	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240124	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240124	Finished
8	ICV,ICV,1	Unknown	9	1000.0	Anions Default	EPA 300_0_240124	Finished
9	ICB,ICB,1	Unknown	10	1000.0	Anions Default	EPA 300_0_240124	Finished
10	MB-H2O,MBLK,1	Unknown	11	1000.0	Anions Default	EPA 300_0_240124	Finished
11	LCS-H2O,LCS,1	Unknown	12	1000.0	Anions Default	EPA 300_0_240124	Finished
12	N062498-007A,SAMP,5	Unknown	13	1000.0	Anions Default	EPA 300_0_240124	Finished
13	N062498-007ADUP,DUP,5	Unknown	14	1000.0	Anions Default	EPA 300_0_240124	Finished
14	N062498-007AMS,MS,5	Unknown	15	1000.0	Anions Default	EPA 300_0_240124	Finished
15	N062498-007AMSD,MSD,5	Unknown	16	1000.0	Anions Default	EPA 300_0_240124	Finished
16	LCS-2,LCS,1	Unknown	17	1000.0	Anions Default	EPA 300_0_240124	Finished
17	MB-2,MBLK,1	Unknown	18	1000.0	Anions Default	EPA 300_0_240124	Finished
18	N062498-007A,SAMP,5	Unknown	19	1000.0	Anions Default	EPA 300_0_240124	Finished
19	N062498-007ADUP,DUP,5	Unknown	20	1000.0	Anions Default	EPA 300_0_240124	Finished
20	CCV-1,CCV,1	Unknown	21	1000.0	Anions Default	EPA 300_0_240124	Finished
21	CCB-1,CCB,1	Unknown	22	1000.0	Anions Default	EPA 300_0_240124	Finished
22	N062498-007AMS,MS,5	Unknown	23	1000.0	Anions Default	EPA 300_0_240124	Finished
23	N062498-007AMSD,MSD,5	Unknown	24	1000.0	Anions Default	EPA 300_0_240124	Finished
24	CCV-2,CCV,1	Unknown	33	1000.0	Anions Default	EPA 300_0_240124	Finished
25	CCB-2,CCB,1	Unknown	34	1000.0	Anions Default	EPA 300_0_240124	Finished

reviewed by: 1/31/2024

Processed by:

Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)

1/24/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 25
Created: 1/24/2024 9:39:27 AM by IC-05
Last Update: 1/24/2024 11:49:06 AM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	1/24/2024 9:41:36 AM	BLANK
2	Std - 0	1/24/2024 9:56:54 AM	IBLANK
3	Std - 1	1/24/2024 10:32:56 AM	STD-LOW
4	Std - 2	1/24/2024 10:48:14 AM	STD
5	Std - 3	1/24/2024 11:03:32 AM	STD
6	Std - 4	1/24/2024 11:18:50 AM	STD
7	Std - 5	1/24/2024 11:34:08 AM	STD-HIGH
8	ICV,ICV,1	1/24/2024 11:49:26 AM	ICV, IWST-240123B
9	ICB,ICB,1	1/24/2024 12:04:44 PM	CCB
10	MB-H2O,MBLK,1	1/24/2024 12:20:02 PM	MB
11	LCS-H2O,LCS,1	1/24/2024 12:35:19 PM	LCS, IWST-240123B
12	N062498-007A,SAMP,5	1/24/2024 12:50:38 PM	SAMP,2>10mL,
13	N062498-007ADUP,DUP,5	1/24/2024 1:05:56 PM	DUP,2>10mL,
14	N062498-007AMS,MS,5	1/24/2024 1:21:14 PM	MS,2>10mL,
15	N062498-007AMSD,MSD,5	1/24/2024 1:36:33 PM	MSD,2>10mL,
16	LCS-2,LCS,1	1/24/2024 1:51:51 PM	LCS, IWST-240123B
17	MB-2,MBLK,1	1/24/2024 2:07:09 PM	MB
18	N062498-007A,SAMP,5	1/24/2024 2:22:27 PM	SAMP,2>10mL,
19	N062498-007ADUP,DUP,5	1/24/2024 2:37:45 PM	DUP,2>10mL,
20	CCV-1,CCV,1	1/24/2024 2:53:03 PM	CCV, IWST-240123A
21	CCB-1,CCB,1	1/24/2024 3:08:21 PM	CCB
22	N062498-007AMS,MS,5	1/24/2024 3:23:40 PM	MS,2>10mL,
23	N062498-007AMSD,MSD,5	1/24/2024 3:38:58 PM	MSD,2>10mL,
24	CCV-2,CCV,1	1/24/2024 3:54:16 PM	CCV, IWST-240123A
25	CCB-2,CCB,1	1/24/2024 4:09:34 PM	CCB

Sequence: IC-08_240209A
Operator: IC-05
Printed: 2/11/2024 5:55:19 PM

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/8/2024 11:14:45 AM by IC-05
Last Update: 2/9/2024 12:49:21 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240124	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240124	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240124	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240124	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240124	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240124	Finished
8	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
9	CCV-1,CCV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
10	CCB-1,CCB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
11	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
12	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
13	N062981-001A,SAMP,1	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
14	N062981-002A,SAMP,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
15	N062981-003A,SAMP,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
16	N062983-001A,SAMP,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
17	N062983-002A,SAMP,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
18	N062988-001A,SAMP,1	Unknown	6	1000.0	Anions Default	EPA 300_0_240124	Finished
19	N062989-001A,SAMP,1	Unknown	7	1000.0	Anions Default	EPA 300_0_240124	Finished
20	N062989-002A,SAMP,1	Unknown	8	1000.0	Anions Default	EPA 300_0_240124	Finished
21	CCV-2,CCV,1	Unknown	9	1000.0	Anions Default	EPA 300_0_240124	Finished
22	CCB-2,CCB,1	Unknown	10	1000.0	Anions Default	EPA 300_0_240124	Finished
23	N062989-001AMS,MS,1	Unknown	11	1000.0	Anions Default	EPA 300_0_240124	Finished
24	N062989-001AMSD,MSD,1	Unknown	12	1000.0	Anions Default	EPA 300_0_240124	Finished
25	N062988-001ADUP,DUP,1	Unknown	13	1000.0	Anions Default	EPA 300_0_240124	Finished
26	MB-2,MBLK,1	Unknown	14	1000.0	Anions Default	EPA 300_0_240124	Finished
27	LCS-2,LCS,1	Unknown	15	1000.0	Anions Default	EPA 300_0_240124	Finished
28	N063001-001B,SAMP,100	Unknown	16	1000.0	Anions Default	EPA 300_0_240124	Finished
29	N063001-001BMS,MS,100	Unknown	17	1000.0	Anions Default	EPA 300_0_240124	Finished
30	N063001-001BMSD,MSD,100	Unknown	18	1000.0	Anions Default	EPA 300_0_240124	Finished
31	N063001-006B,SAMP,50	Unknown	19	1000.0	Anions Default	EPA 300_0_240124	Finished
32	N063001-006BDUP,DUP,50	Unknown	20	1000.0	Anions Default	EPA 300_0_240124	Finished
33	CCV-3,CCV,1	Unknown	21	1000.0	Anions Default	EPA 300_0_240124	Finished
34	CCB-3,CCB,1	Unknown	22	1000.0	Anions Default	EPA 300_0_240124	Finished
35	N063001-006BMS,MS,50	Unknown	23	1000.0	Anions Default	EPA 300_0_240124	Finished
36	N063001-003B,SAMP,100	Unknown	24	1000.0	Anions Default	EPA 300_0_240124	Finished
37	N063001-004B,SAMP,100	Unknown	25	1000.0	Anions Default	EPA 300_0_240124	Finished
38	N063001-005B,SAMP,50	Unknown	26	1000.0	Anions Default	EPA 300_0_240124	Finished
39	N063001-007B,SAMP,50	Unknown	27	1000.0	Anions Default	EPA 300_0_240124	Finished
40	N063001-008B,SAMP,50	Unknown	28	1000.0	Anions Default	EPA 300_0_240124	Finished
41	N063001-009B,SAMP,50	Unknown	29	1000.0	Anions Default	EPA 300_0_240124	Finished

Processed by:

Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)

reviewed by: 2/12/2024

2/11/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/8/2024 11:14:45 AM by IC-05
Last Update: 2/9/2024 12:49:21 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	1/24/2024 9:41:36 AM	BLANK
2	Std - 0	1/24/2024 9:56:54 AM	IBLANK
3	Std - 1	1/24/2024 10:32:56 AM	STD-LOW
4	Std - 2	1/24/2024 10:48:14 AM	STD
5	Std - 3	1/24/2024 11:03:32 AM	STD
6	Std - 4	1/24/2024 11:18:50 AM	STD
7	Std - 5	1/24/2024 11:34:08 AM	STD-HIGH
8	BLANK	2/9/2024 7:47:27 AM	BLANK
9	CCV-1,CCV,1	2/9/2024 8:02:44 AM	CCV, IWST-240208A
10	CCB-1,CCB,1	2/9/2024 8:18:03 AM	CCB
11	MB-H2O,MBLK,1	2/9/2024 8:33:21 AM	MB
12	LCS-H2O,LCS,1	2/9/2024 8:48:39 AM	LCS, IWST-240208B
13	N062981-001A,SAMP,1	2/9/2024 9:48:10 AM	SAMP,10mL,
14	N062981-002A,SAMP,1	2/9/2024 10:03:28 AM	SAMP,10mL,
15	N062981-003A,SAMP,1	2/9/2024 10:18:46 AM	SAMP,10mL,
16	N062983-001A,SAMP,1	2/9/2024 10:34:04 AM	SAMP,10mL,
17	N062983-002A,SAMP,1	2/9/2024 10:49:22 AM	SAMP,10mL,
18	N062988-001A,SAMP,1	2/9/2024 11:04:40 AM	SAMP,10mL,
19	N062989-001A,SAMP,1	2/9/2024 11:19:58 AM	SAMP,10mL,
20	N062989-002A,SAMP,1	2/9/2024 11:35:16 AM	SAMP,10mL,
21	CCV-2,CCV,1	2/9/2024 11:50:34 AM	CCV, IWST-240208A
22	CCB-2,CCB,1	2/9/2024 12:05:53 PM	CCB
23	N062989-001AMS,MS,1	2/9/2024 12:21:11 PM	MS,10mL,
24	N062989-001AMSD,MSD,1	2/9/2024 12:36:30 PM	MSD,10mL,
25	N062988-001ADUP,DUP,1	2/9/2024 12:51:48 PM	DUP,10mL,
26	MB-2,MBLK,1	2/9/2024 1:07:06 PM	MB
27	LCS-2,LCS,1	2/9/2024 1:22:24 PM	LCS, IWST-240208B
28	N063001-001B,SAMP,100	2/9/2024 1:37:43 PM	SAMP,0.1>10mL,
29	N063001-001BMS,MS,100	2/9/2024 1:53:01 PM	MS,0.1>10mL,
30	N063001-001BMSD,MSD,100	2/9/2024 2:08:19 PM	MSD,0.1>10mL,
31	N063001-006B,SAMP,50	2/9/2024 2:23:38 PM	SAMP,0.2>10mL,
32	N063001-006BDUP,DUP,50	2/9/2024 2:38:56 PM	DUP,0.2>10mL,
33	CCV-3,CCV,1	2/9/2024 2:54:13 PM	CCV, IWST-240208A
34	CCB-3,CCB,1	2/9/2024 3:09:31 PM	CCB
35	N063001-006BMS,MS,50	2/9/2024 3:24:49 PM	MS,0.2>10mL,
36	N063001-003B,SAMP,100	2/9/2024 3:40:08 PM	SAMP,0.1>10mL,
37	N063001-004B,SAMP,100	2/9/2024 3:55:26 PM	SAMP,0.1>10mL,
38	N063001-005B,SAMP,50	2/9/2024 4:10:44 PM	SAMP,0.2>10mL,
39	N063001-007B,SAMP,50	2/9/2024 4:26:02 PM	SAMP,0.2>10mL,
40	N063001-008B,SAMP,50	2/9/2024 4:41:20 PM	SAMP,0.2>10mL,
41	N063001-009B,SAMP,50	2/9/2024 4:56:38 PM	SAMP,0.2>10mL,

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/8/2024 11:14:45 AM by IC-05
Last Update: 2/9/2024 12:49:21 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	N063001-010B,SAMP,50	Unknown	30	1000.0	Anions Default	EPA 300_0_240124	Finished
43	N063001-011B,SAMP,50	Unknown	31	1000.0	Anions Default	EPA 300_0_240124	Finished
44	N063001-012B,SAMP,50	Unknown	32	1000.0	Anions Default	EPA 300_0_240124	Finished
45	CCV-4,CCV,1	Unknown	33	1000.0	Anions Default	EPA 300_0_240124	Finished
46	CCB-4,CCB,1	Unknown	34	1000.0	Anions Default	EPA 300_0_240124	Finished
47	N063001-014B,SAMP,50	Unknown	35	1000.0	Anions Default	EPA 300_0_240124	Finished
48	N063001-020B,SAMP,50	Unknown	36	1000.0	Anions Default	EPA 300_0_240124	Finished
49	N063001-021B,SAMP,100	Unknown	37	1000.0	Anions Default	EPA 300_0_240124	Finished
50	N062975-001A,SAMP,200	Unknown	38	1000.0	Anions Default	EPA 300_0_240124	Finished
51	CCV-5,CCV,1	Unknown	39	1000.0	Anions Default	EPA 300_0_240124	Finished
52	CCB-5,CCB,1	Unknown	40	1000.0	Anions Default	EPA 300_0_240124	Finished

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/8/2024 11:14:45 AM by IC-05
Last Update: 2/9/2024 12:49:21 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	N063001-010B,SAMP,50	2/9/2024 5:11:55 PM	SAMP,0.2>10mL,
43	N063001-011B,SAMP,50	2/9/2024 5:27:13 PM	SAMP,0.2>10mL,
44	N063001-012B,SAMP,50	2/9/2024 5:42:31 PM	SAMP,0.2>10mL,
45	CCV-4,CCV,1	2/9/2024 5:57:49 PM	CCV, IWST-240208A
46	CCB-4,CCB,1	2/9/2024 6:13:07 PM	CCB
47	N063001-014B,SAMP,50	2/9/2024 6:28:25 PM	SAMP,0.2>10mL,
48	N063001-020B,SAMP,50	2/9/2024 6:43:42 PM	SAMP,0.2>10mL,
49	N063001-021B,SAMP,100	2/9/2024 6:59:01 PM	SAMP,0.1>10mL,
50	N062975-001A,SAMP,200	2/9/2024 7:14:19 PM	SAMP,0.05>10mL,
51	CCV-5,CCV,1	2/9/2024 7:29:37 PM	CCV, IWST-240208A
52	CCB-5,CCB,1	2/9/2024 7:44:55 PM	CCB

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 38
Created: 2/9/2024 12:49:34 PM by IC-05
Last Update: 2/10/2024 11:53:34 AM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240124	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240124	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240124	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240124	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240124	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240124	Finished
8	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
9	CCV-1,CCV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
10	CCB-1,CCB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
11	CCB-1,CCB,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
12	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
13	MB-H2O,MBLK,1	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
14	N063012-003B,SAMP,10	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
15	N063012-001B,SAMP,20	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
16	N063012-004B,SAMP,10	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
17	N063012-002B,SAMP,10	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
18	N063012-006B,SAMP,5	Unknown	6	1000.0	Anions Default	EPA 300_0_240124	Finished
19	N063012-007B,SAMP,5	Unknown	7	1000.0	Anions Default	EPA 300_0_240124	Finished
20	N063012-009B,SAMP,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240124	Finished
21	CCV-2,CCV,1	Unknown	9	1000.0	Anions Default	EPA 300_0_240124	Finished
22	CCB-2,CCB,1	Unknown	10	1000.0	Anions Default	EPA 300_0_240124	Finished
23	N063012-003BMS,MS,10	Unknown	11	1000.0	Anions Default	EPA 300_0_240124	Finished
24	N063012-003BMSD,MSD,10	Unknown	12	1000.0	Anions Default	EPA 300_0_240124	Finished
25	N063012-004BDUP,DUP,10	Unknown	13	1000.0	Anions Default	EPA 300_0_240124	Finished
26	N063012-003B,SAMP,50	Unknown	14	1000.0	Anions Default	EPA 300_0_240124	Finished
27	N063012-003BDUP,DUP,50	Unknown	15	1000.0	Anions Default	EPA 300_0_240124	Finished
28	N063012-003BMS,MS,50	Unknown	16	1000.0	Anions Default	EPA 300_0_240124	Finished
29	N063012-003BMSD,MSD,50	Unknown	17	1000.0	Anions Default	EPA 300_0_240124	Finished
30	N063001-007B,SAMP,10	Unknown	18	1000.0	Anions Default	EPA 300_0_240124	Finished
31	N063001-008B,SAMP,10	Unknown	19	1000.0	Anions Default	EPA 300_0_240124	Finished
32	N063012-001B,SAMP,50	Unknown	20	1000.0	Anions Default	EPA 300_0_240124	Finished
33	CCV-3,CCV,1	Unknown	21	1000.0	Anions Default	EPA 300_0_240124	Finished
34	CCB-3,CCB,1	Unknown	22	1000.0	Anions Default	EPA 300_0_240124	Finished
35	N063012-002B,SAMP,50	Unknown	23	1000.0	Anions Default	EPA 300_0_240124	Finished
36	N063012-004B,SAMP,100	Unknown	24	1000.0	Anions Default	EPA 300_0_240124	Finished
37	CCV-4,CCV,1	Unknown	25	1000.0	Anions Default	EPA 300_0_240124	Finished
38	CCB-4,CCB,1	Unknown	26	1000.0	Anions Default	EPA 300_0_240124	Finished

reviewed by: 2/12/2024

Processed by:

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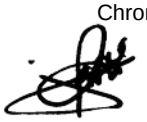

2/11/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 38
Created: 2/9/2024 12:49:34 PM by IC-05
Last Update: 2/10/2024 11:53:34 AM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	1/24/2024 9:41:36 AM	BLANK
2	Std - 0	1/24/2024 9:56:54 AM	IBLANK
3	Std - 1	1/24/2024 10:32:56 AM	STD-LOW
4	Std - 2	1/24/2024 10:48:14 AM	STD
5	Std - 3	1/24/2024 11:03:32 AM	STD
6	Std - 4	1/24/2024 11:18:50 AM	STD
7	Std - 5	1/24/2024 11:34:08 AM	STD-HIGH
8	BLANK	2/10/2024 8:17:23 AM	BLANK
9	CCV-1,CCV,1	2/10/2024 8:32:41 AM	CCV, IWST-240208A
10	CCB-1,CCB,1	2/10/2024 8:47:59 AM	CCB
11	CCB-1,CCB,1	2/10/2024 9:03:18 AM	CCB
12	LCS-H2O,LCS,1	2/10/2024 9:18:35 AM	LCS, IWST-240208B
13	MB-H2O,MBLK,1	2/10/2024 11:00:42 AM	MB
14	N063012-003B,SAMP,10	2/10/2024 11:23:42 AM	SAMP,1>10mL,
15	N063012-001B,SAMP,20	2/10/2024 11:39:00 AM	SAMP,0.5>10mL,
16	N063012-004B,SAMP,10	2/10/2024 11:54:19 AM	SAMP,1>10mL,
17	N063012-002B,SAMP,10	2/10/2024 12:09:36 PM	SAMP,1>10mL,
18	N063012-006B,SAMP,5	2/10/2024 12:24:54 PM	SAMP,2>10mL,
19	N063012-007B,SAMP,5	2/10/2024 12:40:12 PM	SAMP,2>10mL,
20	N063012-009B,SAMP,10	2/10/2024 12:55:30 PM	SAMP,1>10mL,
21	CCV-2,CCV,1	2/10/2024 1:10:47 PM	CCV, IWST-240208A
22	CCB-2,CCB,1	2/10/2024 1:26:05 PM	CCB
23	N063012-003BMS,MS,10	2/10/2024 1:41:23 PM	MS,1>10mL,
24	N063012-003BMSD,MSD,10	2/10/2024 1:56:41 PM	MSD,1>10mL,
25	N063012-004BDUP,DUP,10	2/10/2024 2:11:59 PM	DUP,1>10mL,
26	N063012-003B,SAMP,50	2/10/2024 2:27:17 PM	SAMP,0.2>10mL,
27	N063012-003BDUP,DUP,50	2/10/2024 2:42:36 PM	DUP,0.2>10mL,
28	N063012-003BMS,MS,50	2/10/2024 2:57:55 PM	MS,0.2>10mL,
29	N063012-003BMSD,MSD,50	2/10/2024 3:13:12 PM	MSD,0.2>10mL,
30	N063001-007B,SAMP,10	2/10/2024 3:28:30 PM	SAMP,1>10mL,
31	N063001-008B,SAMP,10	2/10/2024 3:43:48 PM	SAMP,1>10mL,
32	N063012-001B,SAMP,50	2/10/2024 3:59:06 PM	SAMP,0.2>10mL,
33	CCV-3,CCV,1	2/10/2024 4:14:24 PM	CCV, IWST-240208A
34	CCB-3,CCB,1	2/10/2024 4:29:42 PM	CCB
35	N063012-002B,SAMP,50	2/10/2024 4:45:00 PM	SAMP,0.2>10mL,
36	N063012-004B,SAMP,100	2/10/2024 5:00:17 PM	SAMP,0.1>10mL,
37	CCV-4,CCV,1	2/10/2024 5:15:35 PM	CCV, IWST-240208A
38	CCB-4,CCB,1	2/10/2024 5:30:54 PM	CCB

Sequence: IC-09_240123A
Operator: IC-05
Printed: 1/23/2024 9:48:09 PM

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 40
Created: 1/23/2024 10:31:24 AM by IC-05
Last Update: 1/23/2024 3:11:46 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions_Default	EPA 300_0_240123A	Finished
2	Std - 0	Standard	2	1000.0	Anions_Default	EPA 300_0_240123A	Finished
3	Std - 1	Standard	4	1000.0	Anions_Default	EPA 300_0_240123A	Finished
4	Std - 2	Standard	5	1000.0	Anions_Default	EPA 300_0_240123A	Finished
5	Std - 3	Standard	6	1000.0	Anions_Default	EPA 300_0_240123A	Finished
6	Std - 4	Standard	7	1000.0	Anions_Default	EPA 300_0_240123A	Finished
7	Std - 5	Standard	8	1000.0	Anions_Default	EPA 300_0_240123A	Finished
8	ICV,ICV,1	Unknown	9	1000.0	Anions_Default	EPA 300_0_240123A	Finished
9	ICB,ICB,1	Unknown	10	1000.0	Anions_Default	EPA 300_0_240123A	Finished
10	MB-H2O,MBLK,1	Unknown	1	1000.0	Anions_Default	EPA 300_0_240123A	Finished
11	LCS-H2O,LCS,1	Unknown	2	1000.0	Anions_Default	EPA 300_0_240123A	Finished
12	N062306-006A,SAMP,1	Unknown	3	1000.0	Anions_Default	EPA 300_0_240123A	Finished
13	N062306-020A,SAMP,1	Unknown	5	1000.0	Anions_Default	EPA 300_0_240123A	Finished
14	N062306-008A,SAMP,1	Unknown	6	1000.0	Anions_Default	EPA 300_0_240123A	Finished
15	N062306-025A,SAMP,1	Unknown	7	1000.0	Anions_Default	EPA 300_0_240123A	Finished
16	N062306-006A,SAMP,5	Unknown	8	1000.0	Anions_Default	EPA 300_0_240123A	Finished
17	N062306-006A,SAMP,50	Unknown	9	1000.0	Anions_Default	EPA 300_0_240123A	Finished
18	N062306-020A,SAMP,5	Unknown	10	1000.0	Anions_Default	EPA 300_0_240123A	Finished
19	N062306-025ADUP,DUP,1	Unknown	11	1000.0	Anions_Default	EPA 300_0_240123A	Finished
20	CCV-1,CCV,1	Unknown	12	1000.0	Anions_Default	EPA 300_0_240123A	Finished
21	CCB-1,CCB,1	Unknown	13	1000.0	Anions_Default	EPA 300_0_240123A	Finished
22	N062306-008A,SAMP,1	Unknown	14	1000.0	Anions_Default	EPA 300_0_240123A	Finished
23	N062306-008AMS,MS,1	Unknown	15	1000.0	Anions_Default	EPA 300_0_240123A	Finished
24	N062306-008AMSD,MSD,1	Unknown	16	1000.0	Anions_Default	EPA 300_0_240123A	Finished
25	N062306-006ADUP,DUP,5	Unknown	17	1000.0	Anions_Default	EPA 300_0_240123A	Finished
26	N062306-006AMS,MS,5	Unknown	18	1000.0	Anions_Default	EPA 300_0_240123A	Finished
27	N062306-006AMSD,MSD,5	Unknown	19	1000.0	Anions_Default	EPA 300_0_240123A	Finished
28	N062306-006ADUP,DUP,50	Unknown	20	1000.0	Anions_Default	EPA 300_0_240123A	Finished
29	N062306-006AMS,MS,50	Unknown	21	1000.0	Anions_Default	EPA 300_0_240123A	Finished
30	N062306-006AMSD,MSD,50	Unknown	22	1000.0	Anions_Default	EPA 300_0_240123A	Finished
31	N062306-020ADUP,DUP,5	Unknown	23	1000.0	Anions_Default	EPA 300_0_240123A	Finished
32	CCV-2,CCV,1	Unknown	24	1000.0	Anions_Default	EPA 300_0_240123A	Finished
33	CCB-2,CCB,1	Unknown	25	1000.0	Anions_Default	EPA 300_0_240123A	Finished
34	N062306-020AMS,MS,5	Unknown	26	1000.0	Anions_Default	EPA 300_0_240123A	Finished
35	N062306-020AMSD,MSD,5	Unknown	27	1000.0	Anions_Default	EPA 300_0_240123A	Finished
36	N062306-025AMS,MS,1	Unknown	28	1000.0	Anions_Default	EPA 300_0_240123A	Finished
37	N062306-025AMSD,MSD,1	Unknown	29	1000.0	Anions_Default	EPA 300_0_240123A	Finished
38	N062306-008ADUP,DUP,1	Unknown	30	1000.0	Anions_Default	EPA 300_0_240123A	Finished
39	CCV-3,CCV,1	Unknown	31	1000.0	Anions_Default	EPA 300_0_240123A	Finished
40	CCB-3,CCB,1	Unknown	32	1000.0	Anions_Default	EPA 300_0_240123A	Finished

Processed by:
reviewed by: 2/1/2024

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1/23/2024

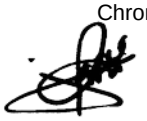
Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 40
Created: 1/23/2024 10:31:24 AM by IC-05
Last Update: 1/23/2024 3:11:46 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	1/23/2024 10:32:41 AM	BLANK
2	Std - 0	1/23/2024 10:48:23 AM	IBLANK
3	Std - 1	1/23/2024 11:04:19 AM	STD-LOW
4	Std - 2	1/23/2024 11:20:16 AM	STD
5	Std - 3	1/23/2024 11:36:11 AM	STD
6	Std - 4	1/23/2024 11:52:07 AM	STD
7	Std - 5	1/23/2024 12:08:03 PM	STD-HIGH
8	ICV,ICV,1	1/23/2024 12:23:59 PM	ICV, IWST-240123B
9	ICB,ICB,1	1/23/2024 12:39:55 PM	CCB
10	MB-H2O,MBLK,1	1/23/2024 1:31:28 PM	MB
11	LCS-H2O,LCS,1	1/23/2024 1:46:47 PM	LCS IWST-240123B
12	N062306-006A,SAMP,1	1/23/2024 2:02:42 PM	SAMP,10mL,
13	N062306-020A,SAMP,1	1/23/2024 2:18:38 PM	SAMP,10mL,
14	N062306-008A,SAMP,1	1/23/2024 2:34:34 PM	SAMP,10mL,
15	N062306-025A,SAMP,1	1/23/2024 2:50:30 PM	SAMP,10mL,
16	N062306-006A,SAMP,5	1/23/2024 3:06:26 PM	SAMP,2>10mL,
17	N062306-006A,SAMP,50	1/23/2024 3:22:22 PM	SAMP,0.2>10mL,
18	N062306-020A,SAMP,5	1/23/2024 3:38:18 PM	SAMP,2>10mL,
19	N062306-025ADUP,DUP,1	1/23/2024 3:54:13 PM	DUP,10mL,
20	CCV-1,CCV,1	1/23/2024 4:10:09 PM	CCV, IWST-240123A
21	CCB-1,CCB,1	1/23/2024 4:26:05 PM	CCB
22	N062306-008A,SAMP,1	1/23/2024 4:42:01 PM	SAMP,10mL,
23	N062306-008AMS,MS,1	1/23/2024 4:57:56 PM	MS,5>10mL,
24	N062306-008AMSD,MSD,1	1/23/2024 5:13:52 PM	MSD,5>10mL,
25	N062306-006ADUP,DUP,5	1/23/2024 5:29:48 PM	DUP,2>10mL,
26	N062306-006AMS,MS,5	1/23/2024 5:45:44 PM	MS,2>10mL,
27	N062306-006AMSD,MSD,5	1/23/2024 6:01:39 PM	MSD,2>10mL,
28	N062306-006ADUP,DUP,50	1/23/2024 6:17:35 PM	DUP,0.2>10mL,
29	N062306-006AMS,MS,50	1/23/2024 6:33:31 PM	MS,0.2>10mL,
30	N062306-006AMSD,MSD,50	1/23/2024 6:49:27 PM	MSD,0.2>10mL,
31	N062306-020ADUP,DUP,5	1/23/2024 7:05:23 PM	DUP,2>10mL,
32	CCV-2,CCV,1	1/23/2024 7:21:19 PM	CCV, IWST-240123A
33	CCB-2,CCB,1	1/23/2024 7:37:15 PM	CCB
34	N062306-020AMS,MS,5	1/23/2024 7:53:11 PM	MS,2>10mL,
35	N062306-020AMSD,MSD,5	1/23/2024 8:09:07 PM	MSD,2>10mL,
36	N062306-025AMS,MS,1	1/23/2024 8:25:03 PM	MS,10mL,
37	N062306-025AMSD,MSD,1	1/23/2024 8:40:59 PM	MSD,10mL,
38	N062306-008ADUP,DUP,1	1/23/2024 8:56:55 PM	DUP,10mL,
39	CCV-3,CCV,1	1/23/2024 9:12:51 PM	CCV, IWST-240123A
40	CCB-3,CCB,1	1/23/2024 9:28:47 PM	CCB

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/8/2024 2:47:47 PM by IC-05
Last Update: 2/9/2024 12:21:14 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions_Default	EPA 300_0_240123A	Finished
2	Std - 0	Standard	2	1000.0	Anions_Default	EPA 300_0_240123A	Finished
3	Std - 1	Standard	4	1000.0	Anions_Default	EPA 300_0_240123A	Finished
4	Std - 2	Standard	5	1000.0	Anions_Default	EPA 300_0_240123A	Finished
5	Std - 3	Standard	6	1000.0	Anions_Default	EPA 300_0_240123A	Finished
6	Std - 4	Standard	7	1000.0	Anions_Default	EPA 300_0_240123A	Finished
7	Std - 5	Standard	8	1000.0	Anions_Default	EPA 300_0_240123A	Finished
8	BLANK	Unknown	1	1000.0	Anions_Default	EPA 300_0_240123A	Finished
9	CCV-1,CCV,1	Unknown	2	1000.0	Anions_Default	EPA 300_0_240123A	Finished
10	CCB-1,CCB,1	Unknown	3	1000.0	Anions_Default	EPA 300_0_240123A	Finished
11	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions_Default	EPA 300_0_240123A	Finished
12	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions_Default	EPA 300_0_240123A	Finished
13	N063001-001B,SAMP,10	Unknown	1	1000.0	Anions_Default	EPA 300_0_240123A	Finished
14	N063001-001BMS,MS,10	Unknown	2	1000.0	Anions_Default	EPA 300_0_240123A	Finished
15	N063001-001BMSD,MSD,10	Unknown	3	1000.0	Anions_Default	EPA 300_0_240123A	Finished
16	N063001-006B,SAMP,10	Unknown	4	1000.0	Anions_Default	EPA 300_0_240123A	Finished
17	N063001-006BDUP,DUP,10	Unknown	5	1000.0	Anions_Default	EPA 300_0_240123A	Finished
18	N063001-006BMS,MS,10	Unknown	6	1000.0	Anions_Default	EPA 300_0_240123A	Finished
19	N063001-003B,SAMP,10	Unknown	8	1000.0	Anions_Default	EPA 300_0_240123A	Finished
20	N063001-004B,SAMP,10	Unknown	9	1000.0	Anions_Default	EPA 300_0_240123A	Finished
21	CCV-2,CCV,1	Unknown	10	1000.0	Anions_Default	EPA 300_0_240123A	Finished
22	CCB-2,CCB,1	Unknown	11	1000.0	Anions_Default	EPA 300_0_240123A	Finished
23	N063001-015B,SAMP,2	Unknown	12	1000.0	Anions_Default	EPA 300_0_240123A	Finished
24	N063001-016B,SAMP,2	Unknown	13	1000.0	Anions_Default	EPA 300_0_240123A	Finished
25	N063001-017B,SAMP,2	Unknown	14	1000.0	Anions_Default	EPA 300_0_240123A	Finished
26	N063001-018B,SAMP,2	Unknown	15	1000.0	Anions_Default	EPA 300_0_240123A	Finished
27	N063001-005B,SAMP,10	Unknown	16	1000.0	Anions_Default	EPA 300_0_240123A	Finished
28	N063001-007B,SAMP,10	Unknown	17	1000.0	Anions_Default	EPA 300_0_240123A	Finished
29	N063001-008B,SAMP,10	Unknown	18	1000.0	Anions_Default	EPA 300_0_240123A	Finished
30	N063001-009B,SAMP,10	Unknown	19	1000.0	Anions_Default	EPA 300_0_240123A	Finished
31	N063001-010B,SAMP,10	Unknown	20	1000.0	Anions_Default	EPA 300_0_240123A	Finished
32	N063001-011B,SAMP,10	Unknown	21	1000.0	Anions_Default	EPA 300_0_240123A	Finished
33	CCV-3,CCV,1	Unknown	22	1000.0	Anions_Default	EPA 300_0_240123A	Finished
34	CCB-3,CCB,1	Unknown	23	1000.0	Anions_Default	EPA 300_0_240123A	Finished
35	N063001-012B,SAMP,10	Unknown	24	1000.0	Anions_Default	EPA 300_0_240123A	Finished
36	N063001-014B,SAMP,10	Unknown	25	1000.0	Anions_Default	EPA 300_0_240123A	Finished
37	N063001-020B,SAMP,10	Unknown	26	1000.0	Anions_Default	EPA 300_0_240123A	Finished
38	N063001-021B,SAMP,10	Unknown	27	1000.0	Anions_Default	EPA 300_0_240123A	Finished
39	N062975-001A,SAMP,50	Unknown	28	1000.0	Anions_Default	EPA 300_0_240123A	Finished
40	N062975-001ADUP,DUP,50	Unknown	29	1000.0	Anions_Default	EPA 300_0_240123A	Finished
41	N062975-001AMS,MS,50	Unknown	30	1000.0	Anions_Default	EPA 300_0_240123A	Finished

Processed by:
Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)



2/12/2024

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/8/2024 2:47:47 PM by IC-05
Last Update: 2/9/2024 12:21:14 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	1/23/2024 10:32:41 AM	BLANK
2	Std - 0	1/23/2024 10:48:23 AM	IBLANK
3	Std - 1	1/23/2024 11:04:19 AM	STD-LOW
4	Std - 2	1/23/2024 11:20:16 AM	STD
5	Std - 3	1/23/2024 11:36:11 AM	STD
6	Std - 4	1/23/2024 11:52:07 AM	STD
7	Std - 5	1/23/2024 12:08:03 PM	STD-HIGH
8	BLANK	2/9/2024 8:52:23 AM	BLANK 240208A
9	CCV-1,CCV,1	2/9/2024 9:07:41 AM	CCV, IWST-~~240131~~A
10	CCB-1,CCB,1	2/9/2024 9:23:37 AM	CCB
11	MB-H2O,MBLK,1	2/9/2024 9:39:33 AM	MB 240208B
12	LCS-H2O,LCS,1	2/9/2024 9:55:28 AM	LCS IWST-~~240131~~B
13	N063001-001B,SAMP,10	2/9/2024 10:21:50 AM	SAMP,1>10mL,
14	N063001-001BMS,MS,10	2/9/2024 10:37:09 AM	MS,1>10mL,
15	N063001-001BMSD,MSD,10	2/9/2024 10:53:05 AM	MSD,1>10mL,
16	N063001-006B,SAMP,10	2/9/2024 11:09:01 AM	SAMP,1>10mL,
17	N063001-006BDUP,DUP,10	2/9/2024 11:24:57 AM	DUP,1>10mL,
18	N063001-006BMS,MS,10	2/9/2024 11:40:52 AM	MS,1>10mL,
19	N063001-003B,SAMP,10	2/9/2024 11:56:48 AM	SAMP,1>10mL,
20	N063001-004B,SAMP,10	2/9/2024 12:12:43 PM	SAMP,1>10mL,240208A
21	CCV-2,CCV,1	2/9/2024 12:28:39 PM	CCV, IWST-~~240131~~A
22	CCB-2,CCB,1	2/9/2024 12:44:35 PM	CCB
23	N063001-015B,SAMP,2	2/9/2024 1:00:31 PM	SAMP,5>10mL,
24	N063001-016B,SAMP,2	2/9/2024 1:16:26 PM	SAMP,5>10mL,
25	N063001-017B,SAMP,2	2/9/2024 1:32:23 PM	SAMP,5>10mL,
26	N063001-018B,SAMP,2	2/9/2024 1:48:18 PM	SAMP,5>10mL,
27	N063001-005B,SAMP,10	2/9/2024 2:04:14 PM	SAMP,1>10mL,
28	N063001-007B,SAMP,10	2/9/2024 2:20:09 PM	SAMP,1>10mL,
29	N063001-008B,SAMP,10	2/9/2024 2:36:05 PM	SAMP,1>10mL,
30	N063001-009B,SAMP,10	2/9/2024 2:52:01 PM	SAMP,1>10mL,
31	N063001-010B,SAMP,10	2/9/2024 3:07:57 PM	SAMP,1>10mL,
32	N063001-011B,SAMP,10	2/9/2024 3:23:52 PM	SAMP,1>10mL,240208A
33	CCV-3,CCV,1	2/9/2024 3:43:29 PM	CCV, IWST-~~240131~~A
34	CCB-3,CCB,1	2/9/2024 3:59:24 PM	CCB
35	N063001-012B,SAMP,10	2/9/2024 4:15:19 PM	SAMP,1>10mL,
36	N063001-014B,SAMP,10	2/9/2024 4:31:44 PM	SAMP,1>10mL,
37	N063001-020B,SAMP,10	2/9/2024 4:47:39 PM	SAMP,1>10mL,
38	N063001-021B,SAMP,10	2/9/2024 5:03:35 PM	SAMP,1>10mL,
39	N062975-001A,SAMP,50	2/9/2024 5:19:31 PM	SAMP,0.2>10mL,
40	N062975-001ADUP,DUP,50	2/9/2024 5:39:11 PM	DUP,0.2>10mL,
41	N062975-001AMS,MS,50	2/9/2024 5:55:06 PM	MS,0.2>10mL,

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/8/2024 2:47:47 PM by IC-05
Last Update: 2/9/2024 12:21:14 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	N062975-001AMSD,MSD,50	Unknown	31	1000.0	Anions_Default	EPA 300_0_240123A	Finished
43	CCV-4,CCV,1	Unknown	32	1000.0	Anions_Default	EPA 300_0_240123A	Finished
44	CCB-4,CCB,1	Unknown	33	1000.0	Anions_Default	EPA 300_0_240123A	Finished

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/8/2024 2:47:47 PM by IC-05
Last Update: 2/9/2024 12:21:14 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	N062975-001AMSD,MSD,50	2/9/2024 6:11:02 PM	MSD,0.2>10mL,240208A
43	CCV-4,CCV,1	2/9/2024 6:26:57 PM	CCV, IWST-240131A
44	CCB-4,CCB,1	2/9/2024 6:45:52 PM	CCB

dMocha 2/26/2024
for RBA

INITIAL CALIBRATION DATA SUMMARY

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-09
Date Calibrated: 1/23/2024

Initial Calibration:

Nitrate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0190	0.0945	0.1921	0.4821	1.0068	1.000
Measured, in mg/L	0.000000	0.066800	0.254200	0.496300	1.215600	2.517200	
Relative Error (%RE)		33.6%		-0.7%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712E

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 1/24/2024

Initial Calibration:

Sulfate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.5	2	4	10	20	R^2
Area,mAU*min	0.0000	0.0468	0.1991	0.4062	1.0440	2.1777	1.000
Measured, in mg/L	0.000000	0.645000	2.037100	3.930800	9.761300	20.125900	
Relative Error (%RE)		29.0%		-1.7%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST~~160817G~~ **230712G**

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

Reviewed by:

dMocha 2/26/2024

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181395**
Client ID: **ICV**	Batch ID: **R181395**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5684211**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.088	0.50	4.000	0	102	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181395**
Client ID: **CCV**	Batch ID: **R181395**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**	SeqNo: **5684213**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.019	0.50	4.000	0	100	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181395**
Client ID: **CCV**	Batch ID: **R181395**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**	SeqNo: **5684222**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.020	0.50	4.000	0	100	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181395**
Client ID: **CCV**	Batch ID: **R181395**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**	SeqNo: **5684234**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.034	0.50	4.000	0	101	90	110				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181395**
Client ID: **CCV**	Batch ID: **R181395**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**	SeqNo: **5684239**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.020	0.50	4.000	0	100	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **ICV**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5684924**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.088	0.50	4.000	0	102	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCV**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684926**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.051	0.50	4.000	0	101	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCV**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684930**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.044	0.50	4.000	0	101	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCV**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684939**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.952	0.50	4.000	0	98.8	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCV**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684943**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.975	0.50	4.000	0	99.4	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181405**
Client ID: **ICV**	Batch ID: **R181405**	TestNo: **EPA 300.0**		Analysis Date: **1/23/2024**	SeqNo: **5684945**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.273	0.050	1.250	0	102	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181405**
Client ID: **CCV**	Batch ID: **R181405**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**	SeqNo: **5684947**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.250	0.050	1.250	0	100	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181405**
Client ID: **CCV**	Batch ID: **R181405**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**	SeqNo: **5684959**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.231	0.050	1.250	0	98.5	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181405**
Client ID: **CCV**	Batch ID: **R181405**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**	SeqNo: **5684971**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.246	0.050	1.250	0	99.7	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181405**
Client ID: **CCV**	Batch ID: **R181405**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**	SeqNo: **5684977**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.224	0.050	1.250	0	97.9	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181395**
Client ID: **ICB**	Batch ID: **R181395**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5684212**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181395**
Client ID: **CCB**	Batch ID: **R181395**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**	SeqNo: **5684214**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181395**
Client ID: **CCB**	Batch ID: **R181395**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**	SeqNo: **5684223**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181395**
Client ID: **CCB**	Batch ID: **R181395**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**	SeqNo: **5684235**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181395**
Client ID: **CCB**	Batch ID: **R181395**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**	SeqNo: **5684240**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **ICB**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5684925**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCB**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684927**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCB**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684931**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCB**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684940**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCB**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684944**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181405**
Client ID: **ICB**	Batch ID: **R181405**	TestNo: **EPA 300.0**		Analysis Date: **1/23/2024**	SeqNo: **5684946**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181405**
Client ID: **CCB**	Batch ID: **R181405**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**	SeqNo: **5684948**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181405**
Client ID: **CCB**	Batch ID: **R181405**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**	SeqNo: **5684960**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181405**
Client ID: **CCB**	Batch ID: **R181405**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**	SeqNo: **5684972**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181405**
Client ID: **CCB**	Batch ID: **R181405**	TestNo: **EPA 300.0**		Analysis Date: **2/9/2024**	SeqNo: **5684978**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-09

Analytical Sequence

Date Analyzed: 2/9/2024

Sample Name		Retention Time	Evaluation
ICV	Nitrate	7.354	
CCV-1	Nitrate	7.257	
CCV-2	Nitrate	7.174	
CCV-3	Nitrate	7.217	
CCV-4	Nitrate	7.241	
	Average	7.222	
	Applied RT Window	7.022 - 7.422	
MB-R181405_NO3	Nitrate	N.A.	N.A.
LCS-R181405_NO3	Nitrate	7.237	PASS
N063001-001B	Nitrate	N.A.	N.A.
N063001-001BMS	Nitrate	7.167	PASS
N063001-001BMSD	Nitrate	7.167	PASS
N063001-006B	Nitrate	N.A.	N.A.
N063001-006BDUP	Nitrate	N.A.	N.A.
N063001-006BMS	Nitrate	7.157	PASS
N063001-003B	Nitrate	7.160	PASS
N063001-004B	Nitrate	7.167	PASS
N063001-015B	Nitrate	7.347	PASS
N063001-016B	Nitrate	7.224	PASS
N063001-017B	Nitrate	N.A.	N.A.
N063001-018B	Nitrate	7.224	PASS
N063001-005B	Nitrate	N.A.	N.A.
N063001-007B	Nitrate	N.A.	N.A.
N063001-008B	Nitrate	7.207	PASS
N063001-009B	Nitrate	7.237	PASS
N063001-010B	Nitrate	7.231	PASS
N063001-011B	Nitrate	7.220	PASS
N063001-012B	Nitrate	7.224	PASS
N063001-014B	Nitrate	N.A.	N.A.
N063001-020B	Nitrate	N.A.	N.A.
N063001-021B	Nitrate	7.244	PASS

Reviewed by:

dMocha 2/26/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/9/2024

Sample Name		Retention Time	Evaluation
ICV	Sulfate	10.334	
CCV-2	Sulfate	10.137	
CCV-3	Sulfate	10.100	
CCV-4	Sulfate	10.137	
CCV-5	Sulfate	10.110	

Average 10.121
Applied RT Window 9.921 - 10.321

MB-R181395_SO4	Sulfate	N.A.	N.A.
LCS-R181395_SO4	Sulfate	10.137	PASS
N063001-001B	Sulfate	10.137	PASS
N063001-001BMS	Sulfate	10.130	PASS
N063001-001BMSD	Sulfate	10.107	PASS
N063001-006B	Sulfate	10.150	PASS
N063001-006BDUP	Sulfate	10.133	PASS
N063001-006BMS	Sulfate	10.107	PASS
N063001-003B	Sulfate	10.113	PASS
N063001-004B	Sulfate	10.103	PASS
N063001-005B	Sulfate	10.143	PASS
N063001-009B	Sulfate	10.100	PASS
N063001-010B	Sulfate	10.097	PASS
N063001-011B	Sulfate	10.004	PASS
N063001-012B	Sulfate	10.090	PASS
N063001-014B	Sulfate	10.097	PASS
N063001-020B	Sulfate	10.083	PASS
N063001-021B	Sulfate	10.124	PASS

Reviewed by:

dMocha 2/26/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/10/2024

Sample Name		Retention Time	Evaluation
ICV	Sulfate	10.334	
CCV-1	Sulfate	10.070	
CCV-2	Sulfate	10.073	
CCV-3	Sulfate	10.124	
CCV-4	Sulfate	10.060	
	Average	10.082	
	Applied RT Window	9.882 - 10.282	
LCS-R181402_SO4	Sulfate	9.960	PASS
MB-R181402_SO4	Sulfate	10.270	PASS
N063012-003BDUP	Sulfate	10.117	PASS
N063012-003BMS	Sulfate	10.107	PASS
N063012-003BMSD	Sulfate	10.093	PASS
N063001-007B	Sulfate	10.080	PASS
N063001-008B	Sulfate	10.064	PASS

Reviewed by:

dMRocha 2/26/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): 10/5/2022, 12/14/2022, 3/22/2023,7/10/2023; 10/3/2023 & 11/14/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: mg/L

Instrument Name: **IC-08 & IC-09**

Datafile IC-08 221005A #24 IC-08 221214A #30 IC-08 230322A #35 IC-08 230710A #13 IC-09 231003A #14 IC-08 231114A #24 IC-09 231114A #19

Analyte	#1	#2	#3	#4	#5	#6	#7	Spike Conc., mg/L	SD	$t_{(n-1)}$ value	MDLs	MDL	PQL
Fluoride	0.100	0.103	0.108	0.118	0.110	0.098	0.126	0.10	0.0101	3.143	**0.0318**	**0.0318**	0.10
Chloride	0.480	0.418	0.472	0.653	0.624	0.587	0.622	0.50	0.0922	3.143	**0.2898**	**0.2898**	0.50
Nitrite	0.068	0.061	0.060	0.071	0.063	0.061	0.070	0.05	0.0047	3.143	**0.0149**	**0.0149**	0.05
Bromide	0.526	0.502	0.509	0.522	0.536	0.527	0.520	0.50	0.0116	3.143	**0.0364**	**0.0364**	0.50
Nitrate	0.073	0.058	0.059	0.073	0.074	0.068	0.073	0.05	0.0068	3.143	**0.0215**	**0.0240**	0.05
Phosphate	0.112	0.096	0.114	0.120	0.130	0.093	0.124	0.10	0.0138	3.143	**0.0433**	**0.0433**	0.10
Sulfate	0.501	0.609	0.638	0.401	0.704	0.620	0.697	0.50	0.1092	3.143	**0.3432**	**0.3432**	0.50

METHOD DETECTION LIMIT (Blanks)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Analyte	MDLb	# of Records
Fluoride	0	63
Chloride	0.1456	80
Nitrite	0.0147	64
Bromide	0	18
Nitrate	0.0240	132
Phosphate	0.0237	34
Sulfate	0.2579	107

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

EPA 6010B
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106713
ASSET #: N063001

Instrument ID: ICP-03
Analyst: DBJ
Date Analyzed: 2/9/2024

Method:

[X] EPA 6010B / 200.7
[ ] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 02212024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in ug/L , in the original sample as follows:

Iron , ug/L = A * DF * PF *CF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL
CF= Conversion Factor from mg/L to ug/L, 1000

For Sample **N063001-001C** , the concentration in ug/L is calculated as follows:

Iron , ug/L = 0.43059 * 1 * (25/25) * 1000

Iron , ug/L = 430.59

Reporting results in two significant figures,

Iron , ug/L = 430

Reviewed by:

dMocha 2/27/2024

% RSD SUMMARY

RSD SUMMARY: 240209A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	Fe	0	2.91	15	PASS
Standard1	ICAL	1	Fe	0.02	1.29	15	PASS
Standard2	ICAL	1	Fe	0.05	0.72	15	PASS
Standard3	ICAL	1	Fe	2	0.22	15	PASS
Standard4	ICAL	1	Fe	5	0.19	15	PASS
Standard5	ICAL	1	Fe	7.5	0.07	15	PASS
Standard6	ICAL	1	Fe	10	0.4	15	PASS
Standard7	ICAL	1	Fe	20	0.06	15	PASS
ICV	ICV	1	Fe	9.96	0.38	15	PASS
ICB	ICB	1	Fe	0	47.15	15	<PQL
LLICV1	CCV1	1	Fe	0.02	1.22	20	PASS
ICSA1	ICSA	1	Fe	15.38	29.66	15	NR!
ICSA1	ICSA	1	Fe	170.42	0.02	15	PASS
ICSAB1	ICSAB	1	Fe	173.31	0.04	15	PASS
RINSE	RINSE	1	Fe	0	56.08	15	<PQL
CCV1	CCV	1	Fe	10.08	0.31	15	PASS
CCB1	CCB	1	Fe	0	59	15	<PQL
CCV2	CCV	1	Fe	10.06	0.03	15	PASS
CCB2	CCB	1	Fe	0	54.15	15	<PQL
CCV3	CCV	1	Fe	10.05	0.08	15	PASS
CCB3	CCB	1	Fe	0	55.59	15	<PQL
ICSA2	ICSA	1	Fe	169.93	0.03	15	PASS
ICSAB2	ICSAB	1	Fe	173.31	0.03	15	PASS
RINSE	RINSE	1	Fe	0	23.48	15	<PQL
MB-106713	MBLK	1	Fe	0	858.04	15	<PQL
LCS-106713	LCS	1	Fe	0.11	0.58	15	PASS
N063001-001C	SAMP	1	Fe	0.43	0.1	15	PASS
N063001-001C	SAMP	5	Fe	0.09	1.18	15	PASS
N063001-001C-PS	PS	1	Fe	0.52	0.37	15	PASS
N063001-001CMS	MS	1	Fe	0.54	0.59	15	PASS
N063001-001CMSD	MSD	1	Fe	0.52	0.14	15	PASS
N063001-003C	SAMP	1	Fe	0.1	0.71	15	PASS
N063001-004C	SAMP	1	Fe	0.1	0.56	15	PASS
CCV4	CCV	1	Fe	10.1	0.33	15	PASS
CCB4	CCB	1	Fe	0	61.49	15	<PQL
N063001-005C	SAMP	1	Fe	0.25	0.37	15	PASS
N063001-006C	SAMP	1	Fe	0.25	0.73	15	PASS
N063001-007C	SAMP	1	Fe	0.31	0.26	15	PASS
N063001-008C	SAMP	1	Fe	0.01	3.8	15	PASS
N063001-009C	SAMP	1	Fe	0.02	4.9	15	PASS
N063001-010C	SAMP	1	Fe	0.01	5.42	15	PASS
N063001-011C	SAMP	1	Fe	0.02	2.81	15	PASS

RSD SUMMARY: 240209A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
N063001-012C	SAMP	1	Fe	0.04	2.34	15	PASS
N063001-014C	SAMP	1	Fe	0.16	0.15	15	PASS
N063001-015C	SAMP	1	Fe	0.12	0.75	15	PASS
CCV5	CCV	1	Fe	10.07	0.15	15	PASS
CCB5	CCB	1	Fe	0	53.83	15	<PQL
N063001-016C	SAMP	1	Fe	0.53	0.15	15	PASS
N063001-017C	SAMP	1	Fe	0.28	0.41	15	PASS
N063001-018C	SAMP	1	Fe	0.05	1.37	15	PASS
N063001-020C	SAMP	1	Fe	0.06	1.84	15	PASS
N063001-021C	SAMP	1	Fe	0.24	0.39	15	PASS
CCV6	CCV	1	Fe	10.1	0.25	15	PASS
CCB6	CCB	1	Fe	0	76.98	15	<PQL
CCV7	CCV	1	Fe	10.11	0.31	15	PASS
CCB7	CCB	1	Fe	0	38.95	15	<PQL
ICSA3	ICSA	1	Fe	169.53	0.03	15	PASS
ICSAB3	ICSAB	1	Fe	172.65	0.03	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240209A

Instrument ID: ICP-03

STANDARD CODE	
Standard1	MWST-240105M, 0.5<50mL
Standard2	MWST-240105N
Standard3	MWST-240105O, 5<50mL
Standard4	MWST-240105O,12.5<50mL
Standard5	MWST-240105O, 15<40mL
Standard6	MWST-240105O, 25<50mL
Standard7	MWST-240105O
ICV	MWST-240105AE
CCV	MWST-240105O, 25<50mL
ICSA/ICSAB	MWST-240105P / MWST-240105Q
Int. Std. (Y)	MWST-240105B
PS Spike	MWST-240105X / Y/ Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	02/09/2024	11:28:16 AM
2	Standard1	ICAL	1	02/09/2024	11:31:58 AM
3	Standard2	ICAL	1	02/09/2024	11:35:42 AM
4	Standard3	ICAL	1	02/09/2024	11:39:26 AM
5	Standard4	ICAL	1	02/09/2024	11:42:40 AM
6	Standard5	ICAL	1	02/09/2024	11:45:55 AM
7	Standard6	ICAL	1	02/09/2024	11:49:07 AM
8	Standard7	ICAL	1	02/09/2024	11:52:20 AM
310	ICV	ICV	1	02/09/2024	11:56:27 AM
1	ICB	ICB	1	02/09/2024	11:59:46 AM
2	LLICV1	CCV1	1	02/09/2024	12:03:28 PM
9	ICSA1	ICSA	1	02/09/2024	12:07:11 PM
9	ICSA1	ICSA	1	02/09/2024	12:11:50 PM
10	ICSAB1	ICSAB	1	02/09/2024	12:16:31 PM
299	RINSE	RINSE	1	02/09/2024	12:26:04 PM
131	MB-106695	MBLK	1	02/09/2024	12:29:52 PM
132	LCS-106695	LCS	1	02/09/2024	12:37:05 PM
133	N062966-001C	SAMP	1	02/09/2024	12:40:50 PM
134	N062966-001C	SAMP	5	02/09/2024	12:45:10 PM
135	N062966-001C-PS	PS	1	02/09/2024	12:49:26 PM
136	N062966-001CMS	MS	1	02/09/2024	12:53:46 PM
137	N062966-001CMSD	MSD	1	02/09/2024	12:58:05 PM
138	N062966-003C	SAMP	1	02/09/2024	01:01:25 PM
139	N062966-005C	SAMP	1	02/09/2024	01:06:25 PM
7	CCV1	CCV	1	02/09/2024	01:11:44 PM
1	CCB1	CCB	1	02/09/2024	01:14:58 PM
140	N062966-006C	SAMP	1	02/09/2024	01:18:40 PM
141	N062966-008C	SAMP	1	02/09/2024	01:23:32 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
142	N062966-009C	SAMP	1	02/09/2024	01:28:53 PM
143	N062966-010C	SAMP	1	02/09/2024	01:33:42 PM
144	N062966-012C	SAMP	1	02/09/2024	01:39:04 PM
145	N062966-013C	SAMP	1	02/09/2024	01:44:34 PM
146	N062966-014C	SAMP	1	02/09/2024	01:50:03 PM
147	N062966-015C	SAMP	1	02/09/2024	01:55:25 PM
148	N062966-016C	SAMP	1	02/09/2024	02:00:55 PM
149	N062966-017C	SAMP	1	02/09/2024	02:06:24 PM
7	CCV2	CCV	1	02/09/2024	02:11:47 PM
1	CCB2	CCB	1	02/09/2024	02:15:01 PM
150	N062966-017C	SAMP	5	02/09/2024	02:18:43 PM
151	N062966-017C-PS	PS	1	02/09/2024	02:23:03 PM
152	N062966-017CMS	MS	1	02/09/2024	02:28:25 PM
153	N062966-017CMSD	MSD	1	02/09/2024	02:33:55 PM
154	N062966-018C	SAMP	1	02/09/2024	02:39:17 PM
155	N062966-019C	SAMP	1	02/09/2024	02:44:47 PM
156	N062966-020C	SAMP	1	02/09/2024	02:50:17 PM
7	CCV3	CCV	1	02/09/2024	02:55:39 PM
1	CCB3	CCB	1	02/09/2024	02:58:57 PM
9	ICSA2	ICSA	1	02/09/2024	03:02:39 PM
10	ICSAB2	ICSAB	1	02/09/2024	03:07:20 PM
299	RINSE	RINSE	1	02/09/2024	03:17:55 PM
157	MB-106713	MBLK	1	02/09/2024	03:21:44 PM
158	LCS-106713	LCS	1	02/09/2024	03:28:29 PM
159	N063001-001C	SAMP	1	02/09/2024	03:32:15 PM
160	N063001-001C	SAMP	5	02/09/2024	03:37:08 PM
161	N063001-001C-PS	PS	1	02/09/2024	03:40:55 PM
162	N063001-001CMS	MS	1	02/09/2024	03:45:48 PM
163	N063001-001CMSD	MSD	1	02/09/2024	03:50:40 PM
164	N063001-003C	SAMP	1	02/09/2024	03:55:32 PM
165	N063001-004C	SAMP	1	02/09/2024	04:01:01 PM
7	CCV4	CCV	1	02/09/2024	04:06:31 PM
1	CCB4	CCB	1	02/09/2024	04:09:45 PM
166	N063001-005C	SAMP	1	02/09/2024	04:13:28 PM
167	N063001-006C	SAMP	1	02/09/2024	04:18:27 PM
168	N063001-007C	SAMP	1	02/09/2024	04:23:28 PM
169	N063001-008C	SAMP	1	02/09/2024	04:26:45 PM
170	N063001-009C	SAMP	1	02/09/2024	04:30:32 PM
171	N063001-010C	SAMP	1	02/09/2024	04:35:54 PM
172	N063001-011C	SAMP	1	02/09/2024	04:41:17 PM
173	N063001-012C	SAMP	1	02/09/2024	04:46:47 PM
174	N063001-014C	SAMP	1	02/09/2024	04:52:17 PM
175	N063001-015C	SAMP	1	02/09/2024	04:57:40 PM
7	CCV5	CCV	1	02/09/2024	05:03:02 PM
1	CCB5	CCB	1	02/09/2024	05:06:15 PM
176	N063001-016C	SAMP	1	02/09/2024	05:09:58 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
177	N063001-017C	SAMP	1	02/09/2024	05:13:17 PM
178	N063001-018C	SAMP	1	02/09/2024	05:18:10 PM
179	N063001-020C	SAMP	1	02/09/2024	05:22:29 PM
180	N063001-021C	SAMP	1	02/09/2024	05:28:00 PM
181	MB-106715	MBLK	1	02/09/2024	05:34:39 PM
182	LCS-106715	LCS	1	02/09/2024	05:38:25 PM
183	N062975-001B	SAMP	1	02/09/2024	05:41:43 PM
184	N062975-001B	SAMP	5	02/09/2024	05:47:13 PM
185	N062975-001B-PS	PS	1	02/09/2024	05:51:33 PM
7	CCV6	CCV	1	02/09/2024	05:56:34 PM
1	CCB6	CCB	1	02/09/2024	05:59:48 PM
186	N062975-001B-MS1	MS	1	02/09/2024	06:03:19 PM
187	N062975-001B-MSD1	MSD	1	02/09/2024	06:07:50 PM
7	CCV7	CCV	1	02/09/2024	06:12:21 PM
1	CCB7	CCB	1	02/09/2024	06:15:36 PM
9	ICSA3	ICSA	1	02/09/2024	06:19:18 PM
10	ICSAB3	ICSAB	1	02/09/2024	06:24:00 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/9/2024 10:04:14 AM**
Prep End Date: **2/9/2024 2:30:00 PM**
Prep Batch **106713** Prep Code:**3010_W_DISS**

Reviewed/ Date: dMocha 2/27/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-02-28**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-106713	Aqueous		25	☐	25	1.000		
MB-106713	Aqueous		25	☐	25	1.000		
N063001-001C	Groundwater	<2	25	☐	25	1.000		
N063001-001CMS	Groundwater	<2	25	☐	25	1.000		
N063001-001CMSD	Groundwater	<2	25	☐	25	1.000		
N063001-003C	Groundwater	<2	25	☐	25	1.000		
N063001-004C	Groundwater	<2	25	☐	25	1.000		
N063001-005C	Groundwater	<2	25	☐	25	1.000		
N063001-006C	Groundwater	<2	25	☐	25	1.000		
N063001-007C	Groundwater	<2	25	☐	25	1.000		
N063001-008C	Groundwater	<2	25	☐	25	1.000		
N063001-009C	Groundwater	<2	25	☐	25	1.000		
N063001-010C	Groundwater	<2	25	☐	25	1.000		
N063001-011C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15257	HYDROCHLORIC ACID
16149	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/9/2024 10:04:14 AM**
Prep End Date: **2/9/2024 2:30:00 PM**
Prep Batch **106713** Prep Code:**3010_W_DISS**

Reviewed/ Date: dMocha 2/27/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-02-28**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063001-012C	Groundwater	<2	25	☐	25	1.000		
N063001-014C	Groundwater	<2	25	☐	25	1.000		
N063001-015C	Groundwater	<2	25	☐	25	1.000		
N063001-016C	Groundwater	<2	25	☐	25	1.000		
N063001-017C	Groundwater	<2	25	☐	25	1.000		
N063001-018C	Groundwater	<2	25	☐	25	1.000		
N063001-020C	Groundwater	<2	25	☐	25	1.000		
N063001-021C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15257	HYDROCHLORIC ACID
16149	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240209A

Instrument ID: ICP-03

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Iron								
CalBlk	02/09/2024	11:28:16 AM	Fe	273.952	111	0.00	mg/L	
Standard1	02/09/2024	11:31:58 AM	Fe	273.952	286	0.02	mg/L	
Standard2	02/09/2024	11:35:42 AM	Fe	273.952	821	0.05	mg/L	
Standard3	02/09/2024	11:39:26 AM	Fe	273.952	28227	2.0	mg/L	
Standard4	02/09/2024	11:42:40 AM	Fe	273.952	69278	5.0	mg/L	
Standard5	02/09/2024	11:45:55 AM	Fe	273.952	103437	7.5	mg/L	
Standard6	02/09/2024	11:49:07 AM	Fe	273.952	134080	10.0	mg/L	
Standard7	02/09/2024	11:52:20 AM	Fe	273.952	268427	20.0	mg/L	0.9999

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181377**
Client ID: **ICV**	Batch ID: **R181377**	TestNo: **EPA 6010B**		Analysis Date: **2/9/2024**	SeqNo: **5682827**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	9958.604	20	10000	0	99.6	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181377**
Client ID: **ZZZZZZ**	Batch ID: **R181377**	TestNo: **EPA 6010B**		Analysis Date: **2/9/2024**	SeqNo: **5682829**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	20.942	20	20.00	0	105	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181377**
Client ID: **CCV**	Batch ID: **R181377**	TestNo: **EPA 6010B**		Analysis Date: **2/9/2024**	SeqNo: **5682842**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10076.370	20	10000	0	101	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181377**
Client ID: **CCV**	Batch ID: **R181377**	TestNo: **EPA 6010B**		Analysis Date: **2/9/2024**	SeqNo: **5682854**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10064.256	20	10000	0	101	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181377**
Client ID: **CCV**	Batch ID: **R181377**	TestNo: **EPA 6010B**		Analysis Date: **2/9/2024**	SeqNo: **5682863**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10050.661	20	10000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181377**
Client ID: **CCV**	Batch ID: **R181377**	TestNo: **EPA 6010B**		Analysis Date: **2/9/2024**	SeqNo: **5682876**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10101.809	20	10000	0	101	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181377**
Client ID: **CCV**	Batch ID: **R181377**	TestNo: **EPA 6010B**		Analysis Date: **2/9/2024**	SeqNo: **5682888**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10069.470	20	10000	0	101	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181377**
Client ID: **CCV**	Batch ID: **R181377**	TestNo: **EPA 6010B**		Analysis Date: **2/9/2024**	SeqNo: **5682900**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10100.347	20	10000	0	101	90	110				

Sample ID **CCV7**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181377**
Client ID: **CCV**	Batch ID: **R181377**	TestNo: **EPA 6010B**		Analysis Date: **2/9/2024**	SeqNo: **5682904**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10104.539	20	10000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID	SampType	TestCode	Units	Prep Date	RunNo
ICB	**ICB**	**6010_WDPG**	**µg/L**		**181377**
Client ID: **ICB**	Batch ID: **R181377**	TestNo: **EPA 6010B**		Analysis Date: **2/9/2024**	SeqNo: **5682828**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.010	20									

Sample ID	SampType	TestCode	Units	Prep Date	RunNo
CCB1	**CCB**	**6010_WDPG**	**µg/L**		**181377**
Client ID: **CCB**	Batch ID: **R181377**	TestNo: **EPA 6010B**		Analysis Date: **2/9/2024**	SeqNo: **5682843**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.797	20									

Sample ID	SampType	TestCode	Units	Prep Date	RunNo
CCB2	**CCB**	**6010_WDPG**	**µg/L**		**181377**
Client ID: **CCB**	Batch ID: **R181377**	TestNo: **EPA 6010B**		Analysis Date: **2/9/2024**	SeqNo: **5682855**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.435	20									

Sample ID	SampType	TestCode	Units	Prep Date	RunNo
CCB3	**CCB**	**6010_WDPG**	**µg/L**		**181377**
Client ID: **CCB**	Batch ID: **R181377**	TestNo: **EPA 6010B**		Analysis Date: **2/9/2024**	SeqNo: **5682864**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.695	20									

Sample ID	SampType	TestCode	Units	Prep Date	RunNo
CCB4	**CCB**	**6010_WDPG**	**µg/L**		**181377**
Client ID: **CCB**	Batch ID: **R181377**	TestNo: **EPA 6010B**		Analysis Date: **2/9/2024**	SeqNo: **5682877**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.708	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID	CCB5	SampType:	CCB	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	181377
Client ID:	CCB	Batch ID:	R181377	TestNo:	EPA 6010B			Analysis Date:	2/9/2024	SeqNo:	5682889

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.428	20									

Sample ID	CCB6	SampType:	CCB	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	181377
Client ID:	CCB	Batch ID:	R181377	TestNo:	EPA 6010B			Analysis Date:	2/9/2024	SeqNo:	5682901

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.755	20									

Sample ID	CCB7	SampType:	CCB	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	181377
Client ID:	CCB	Batch ID:	R181377	TestNo:	EPA 6010B			Analysis Date:	2/9/2024	SeqNo:	5682905

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.219	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181377**
Client ID: **ICSA** Batch ID: **R181377** TestNo: **EPA 6010B** Analysis Date: **2/9/2024** SeqNo: **5682831**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	532447.065	50	500000	0	106	80	120				
Calcium	442717.192	500	500000	0	88.5	80	120				
Iron	170417.362	20	200000	0	85.2	80	120				
Magnesium	445851.418	100	500000	0	89.2	80	120				

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181377**
Client ID: **ICSAB** Batch ID: **R181377** TestNo: **EPA 6010B** Analysis Date: **2/9/2024** SeqNo: **5682832**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	541598.830	50	500000	0	108	80	120				
Calcium	449679.649	500	500000	0	89.9	80	120				
Iron	173311.058	20	200000	0	86.7	80	120				
Magnesium	455777.877	100	500000	0	91.2	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181377**
Client ID: **ICSA** Batch ID: **R181377** TestNo: **EPA 6010B** Analysis Date: **2/9/2024** SeqNo: **5682865**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	555798.829	50	500000	0	111	80	120				
Calcium	441013.423	500	500000	0	88.2	80	120				
Iron	169930.783	20	200000	0	85.0	80	120				
Magnesium	442702.175	100	500000	0	88.5	80	120				

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181377**
Client ID: **ICSAB** Batch ID: **R181377** TestNo: **EPA 6010B** Analysis Date: **2/9/2024** SeqNo: **5682866**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	565706.449	50	500000	0	113	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID	ICSAB2	SampType:	ICSAB	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	181377
Client ID:	ICSAB	Batch ID:	R181377	TestNo:	EPA 6010B			Analysis Date:	2/9/2024	SeqNo:	5682866

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	448924.911	500	500000	0	89.8	80	120				
Iron	173312.632	20	200000	0	86.7	80	120				
Magnesium	453769.290	100	500000	0	90.8	80	120				

Sample ID	ICSA3	SampType:	ICSA	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	181377
Client ID:	ICSA	Batch ID:	R181377	TestNo:	EPA 6010B			Analysis Date:	2/9/2024	SeqNo:	5682906

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	549691.054	50	500000	0	110	80	120				
Calcium	439033.112	500	500000	0	87.8	80	120				
Iron	169528.348	20	200000	0	84.8	80	120				
Magnesium	442435.194	100	500000	0	88.5	80	120				

Sample ID	ICSAB3	SampType:	ICSAB	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	181377
Client ID:	ICSAB	Batch ID:	R181377	TestNo:	EPA 6010B			Analysis Date:	2/9/2024	SeqNo:	5682907

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	564649.425	50	500000	0	113	80	120				
Calcium	446437.756	500	500000	0	89.3	80	120				
Iron	172648.079	20	200000	0	86.3	80	120				
Magnesium	452935.274	100	500000	0	90.6	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240209A

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	1.01	101.13	65-125	PASS
Standard2	ICAL	1	1.01	101.02	65-125	PASS
Standard3	ICAL	1	1.01	101.19	65-125	PASS
Standard4	ICAL	1	1	99.53	65-125	PASS
Standard5	ICAL	1	0.99	98.93	65-125	PASS
Standard6	ICAL	1	0.98	97.64	65-125	PASS
Standard7	ICAL	1	0.96	96.42	65-125	PASS
ICV	ICV	1	0.98	97.69	65-125	PASS
ICB	ICB	1	1.01	100.99	65-125	PASS
LLICV1	CCV1	1	1.02	101.7	65-125	PASS
ICSA1	ICSA	1	0	0.01	65-125	NR!
ICSA1	ICSA	1	0.83	83.36	65-125	PASS
ICSAB1	ICSAB	1	0.82	81.69	65-125	PASS
RINSE	RINSE	1	1.05	105.45	65-125	PASS
CCV1	CCV	1	0.97	97.36	65-125	PASS
CCB1	CCB	1	1.01	100.9	65-125	PASS
CCV2	CCV	1	0.98	97.66	65-125	PASS
CCB2	CCB	1	1.01	100.91	65-125	PASS
CCV3	CCV	1	0.98	97.87	65-125	PASS
CCB3	CCB	1	1.01	100.99	65-125	PASS
ICSA2	ICSA	1	0.82	82.37	65-125	PASS
ICSAB2	ICSAB	1	0.82	82.23	65-125	PASS
RINSE	RINSE	1	1.04	103.92	65-125	PASS
MB-106713	MBLK	1	0.99	99.07	65-125	PASS
LCS-106713	LCS	1	0.97	96.59	65-125	PASS
N063001-001C	SAMP	1	0.74	74.48	65-125	PASS
N063001-001C	SAMP	5	0.87	86.62	65-125	PASS
N063001-001C-PS	PS	1	0.73	72.74	65-125	PASS
N063001-001CMS	MS	1	0.73	73.06	65-125	PASS
N063001-001CMSD	MSD	1	0.76	75.95	65-125	PASS
N063001-003C	SAMP	1	0.75	75.43	65-125	PASS
N063001-004C	SAMP	1	0.75	75.42	65-125	PASS
CCV4	CCV	1	0.97	97.26	65-125	PASS
CCB4	CCB	1	1.01	100.84	65-125	PASS
N063001-005C	SAMP	1	0.76	76.29	65-125	PASS
N063001-006C	SAMP	1	0.76	75.72	65-125	PASS
N063001-007C	SAMP	1	0.93	92.8	65-125	PASS
N063001-008C	SAMP	1	0.95	95.21	65-125	PASS
N063001-009C	SAMP	1	0.74	74.27	65-125	PASS
N063001-010C	SAMP	1	0.74	73.58	65-125	PASS

INTERNAL STANDARD: 240209A

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
N063001-011C	SAMP	1	0.76	76.22	65-125	PASS
N063001-012C	SAMP	1	0.74	74.23	65-125	PASS
N063001-014C	SAMP	1	0.8	79.7	65-125	PASS
N063001-015C	SAMP	1	0.79	79.37	65-125	PASS
CCV5	CCV	1	0.97	96.65	65-125	PASS
CCB5	CCB	1	1	100.28	65-125	PASS
N063001-016C	SAMP	1	0.89	88.52	65-125	PASS
N063001-017C	SAMP	1	0.89	88.86	65-125	PASS
N063001-018C	SAMP	1	0.9	90.26	65-125	PASS
N063001-020C	SAMP	1	0.77	76.75	65-125	PASS
N063001-021C	SAMP	1	0.75	74.56	65-125	PASS
CCV6	CCV	1	0.97	96.71	65-125	PASS
CCB6	CCB	1	1	100.4	65-125	PASS
CCV7	CCV	1	0.97	96.71	65-125	PASS
CCB7	CCB	1	1	100.17	65-125	PASS
ICSA3	ICSA	1	0.81	81.3	65-125	PASS
ICSAB3	ICSAB	1	0.81	81.01	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063001
Test Method: EPA 6010B
Analysis Date: 2/9/2024

Matrix: Groundwater
Batch No.: 106713

Instrument ID: ICP-03
Instrument Description: Perkin Elmer Avio 500Max

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Fe. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063001-001C DT 5x	Iron	Fe	µg/L	468.3564	NA	430.5919	8.77%	10

Reviewed by:

dMocha 2/27/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **N063001-001C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181377**
Client ID: **ZZZZZZ** Batch ID: **106713** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/9/2024** SeqNo: **5682871**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	515.934	20	100.0	430.6	85.3	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

LOD & PQL VERIFICATION

Analytical Method: EPA 6010B
Digestion Method: EPA 3010A
Digestion Date: 5/7/23; 5/8/23; 5/10/23
Analysis Date: 5/7-23/23
Instrument Name: ICP-03
Analyst/Technician: Nancy Sibucao / Diane Jetajobe

Matrix: WATER
Units : ppm

Analyte	MDL	LOD	ACTUAL LOD	PQL	Actual PQL	%REC
Beryllium	0.000076	0.0005	0.00047	0.001	0.00098	98
Boron	0.0086	0.05	0.04899	0.1	0.089	89
Magnesium	0.0057	0.05	0.05152	0.1	0.10	102
Silicon	0.012	0.01	0.01312	0.02	0.023	113
Chromium	0.00051	0.0005	0.00056	0.001	0.0010	102
Manganese	0.00032	0.01	0.00534	0.01	0.011	110
Iron	0.0022	0.01	0.01180	0.02	0.021	106
Cobalt	0.001	0.0013	0.00096	0.0025	0.0025	100
Nickel	0.0034	0.0025	0.00417	0.005	0.0055	110
Copper	0.0042	0.0025	0.00434	0.005	0.0044	87
Zinc	0.0007	0.005	0.00624	0.01	0.011	106
Arsenic	0.0042	0.005	0.00461	0.01	0.010	104
Selenium	0.008	0.005	0.00829	0.01	0.010	102
Molybdenum	0.0013	0.0025	0.00307	0.005	0.0053	106
Silver	0.0024	0.0013	0.00419	0.0025	0.0033	134
Cadmium	0.0016	0.0013	0.00180	0.0025	0.0026	102
Tin	0.0076	0.005	0.00563	0.010	0.0099	99
Antimony	0.0038	0.005	0.00307	0.01	0.0096	96
Barium	0.0002	0.0013	0.00124	0.0025	0.0026	104
Thallium	0.0021	0.0075	0.00656	0.015	0.015	101
Lead	0.0039	0.0025	0.00337	0.005	0.0047	94
Calcium	0.011	0.1	0.11963	0.2	0.23	113
Vanadium	0.00017	0.0013	0.00126	0.0025	0.0025	100
Aluminum	0.0089	0.025	0.02576	0.05	0.048	95
Titanium	0.004	0.005	0.00612	0.01	0.01	101

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

EPA 6020
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106714
ASSET #: N063001

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/9/2024

Method:

[ ] EPA 6010B / 200.7
[X] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.		X			X	
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.	X			X		
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?		X			X	
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?	X			X		
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

% Rec of Mn in N063001-001CMS/MSD failed. However, LCS passed criteria
Mn is OLR in N063001-005C. For dilution
Dilution test for As & Mn failed. However, PS passed criteria.
N063001-007A (first run) = ~~0.54~~ 7.7 ug/L ; confirmation: 7.7 ug/L ; N063001-007C (218.6) = ~~7.7~~ 0.54 ug/L ; confirmation: 7.2 ug/L

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 2/15/2024 Date: _____

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106714
ASSET #: N063001

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/12/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.			X			X
24. LCS compounds within control limits.			X			X
25. MS/MSD, RPD's are within control limits			X			X
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

Mn dilution for N063001-005C

	Yes	No	N/A
1. All assigned sample(s) analyzed	x		
2. Matrix / units correct	x		
3. Does batch meet QC requirements?	x		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	x		
5. Is first level review correct and complete?	x		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 2/21/2024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Groundwater

FORMULA:

Calculate the Barium concentration, in ug/L in the original sample as follows:

Barium , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063001-001C** , the concentration in ug/L is calculated as follows:

Barium , ug/L = 63.0389 * 1 *(25 / 25)

Barium , ug/L = 63.0389

Reporting results in two significant figures,

Barium , ug/L = 63

Reviewed by:

JRB 2/29/2024

% RSD SUMMARY

PERCENT RSD SUMMARY: 240209A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				52 Cr [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	22.929	15	<PQL	0.05	38.679	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.52	14.419	15	PASS	0.43	4.992	15	PASS
Std3-5/50 ppb	ICAL	1	4.73	2.554	15	PASS	4.73	2.735	15	PASS
Std4-10/100 ppb	ICAL	1	9.79	1.41	15	PASS	9.62	2.12	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.83	1.571	15	PASS	19.73	1.53	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.3	1.634	15	PASS	39.45	1.317	15	PASS
Std7-100/1000 ppb	ICAL	1	99.61	0.787	15	PASS	98.69	0.38	15	PASS
Std8-200/2000 ppb	ICAL	1	200.37	0.957	15	PASS	200.82	2.07	15	PASS
ICV	ICV	1	10.27	2.219	15	PASS	10.7	2.848	15	PASS
ICB	ICB	1	0	315.186	15	<PQL	<0.000	N/A	15	<PQL
LLICV1	LLICV	1	1.07	5.567	20	PASS	0.97	3.409	20	PASS
MLCCV	CCV	1	19.89	0.988	15	PASS	20	2.359	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	21.48	1.388	15	PASS	20.79	2.029	15	PASS
CCV1	CCV	1	19.98	0.957	15	PASS	19.53	3.251	15	PASS
CCB1	CCB	1	0	1022.316	15	<PQL	<0.000	N/A	15	<PQL
CCV2	CCV	1	20.28	1.21	15	PASS	19.44	2.608	15	PASS
CCB2	CCB	1	0.01	74.616	15	<PQL	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	21.98	1.306	15	PASS	20.74	0.767	15	PASS
CCV3	CCV	1	20.5	1.622	15	PASS	19.43	0.754	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV4	CCV	1	20.56	1.633	15	PASS	19.48	2.035	15	PASS
CCB4	CCB	1	0	301.407	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	22.12	2.738	15	PASS	20.37	0.795	15	PASS
MB-106714	MBLK	1	0.17	18.424	15	<PQL	0.08	22.617	15	<PQL
MB-106714	MBLK	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
LCS-106714	LCS	1	10.56	1.634	15	PASS	9.83	0.416	15	PASS
N063001-001C	SAMP	1	63.04	0.158	15	PASS	0.75	3.384	15	PASS
N063001-001C	SAMP	5	13.15	4.33	15	PASS	0.1	14.47	15	PASS
N063001-001C-PS	PS	1	73.06	0.784	15	PASS	9.98	1.003	15	PASS
N063001-001CMS	MS	1	74.89	0.9	15	PASS	10.38	1.329	15	PASS
N063001-001CMSD	MSD	1	74.73	0.516	15	PASS	10.22	1.515	15	PASS
N063001-003C	SAMP	1	52.4	2.245	15	PASS	0.08	20.85	15	<PQL
CCV5	CCV	1	20.63	1.316	15	PASS	18.96	2.182	15	PASS
CCB5	CCB	1	0.01	129.461	15	<PQL	<0.000	N/A	15	<PQL
N063001-004C	SAMP	1	52.28	1.087	15	PASS	0.11	11.186	15	PASS
N063001-005C	SAMP	1	83.79	2.407	15	PASS	0.36	3.822	15	PASS
N063001-006C	SAMP	1	85.72	0.999	15	PASS	0.4	6.867	15	PASS

PERCENT RSD SUMMARY: 240209A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				52 Cr [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063001-007C	SAMP	1	83.93	1.074	15	PASS	7.72	0.949	15	PASS
N063001-008C	SAMP	1	31.28	2.6	15	PASS	0.2	10.601	15	PASS
N063001-009C	SAMP	1	36.1	1.442	15	PASS	11.79	1.696	15	PASS
N063001-010C	SAMP	1	35.77	1.523	15	PASS	11.37	1.446	15	PASS
N063001-011C	SAMP	1	151.3	1.705	15	PASS	20.57	3.197	15	PASS
N063001-012C	SAMP	1	82.99	0.732	15	PASS	2.62	1.956	15	PASS
CCV6	CCV	1	20.97	1.661	15	PASS	19.19	2.011	15	PASS
CCB6	CCB	1	0.01	36.677	15	<PQL	<0.000	N/A	15	<PQL
N063001-014C	SAMP	1	28.97	2.052	15	PASS	3.11	1.689	15	PASS
N063001-015C	SAMP	1	170.24	0.339	15	PASS	0.02	44.732	15	<PQL
N063001-016C	SAMP	1	65.61	0.625	15	PASS	<0.000	N/A	15	<PQL
N063001-017C	SAMP	1	41.81	1.406	15	PASS	<0.000	N/A	15	<PQL
N063001-018C	SAMP	1	45.55	0.507	15	PASS	0.13	18.788	15	<PQL
N063001-020C	SAMP	1	63.52	1.484	15	PASS	0.22	11.831	15	PASS
N063001-021C	SAMP	1	54	1.65	15	PASS	1.75	3.551	15	PASS
CCV7	CCV	1	20.51	1.905	15	PASS	19.61	2.149	15	PASS
CCB7	CCB	1	0	276.822	15	<PQL	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	0.01	20.134	15	<PQL	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	22.25	1.543	15	PASS	20.34	0.841	15	PASS
N063001-001C	SAMP	10	8.21	2.548	15	PASS	0.02	48.075	15	<PQL
N063001-001C	SAMP	50	1.23	2.089	15	PASS	<0.000	N/A	15	<PQL
N063001-001C-PS	PS	10	16.7	1.854	15	PASS	10	0.904	15	PASS
N063001-001CMS	MS	10	8.09	3.714	15	PASS	1.02	3.318	15	PASS
N063001-001CMSD	MSD	10	7.7	1.345	15	PASS	1.04	2.745	15	PASS
N063001-003C	SAMP	1	52.31	0.635	15	PASS	0.09	15.42	15	<PQL
N063001-004C	SAMP	1	53.12	0.148	15	PASS	0.12	13.966	15	PASS
N063001-005C	SAMP	1	83.38	0.93	15	PASS	0.34	5.348	15	PASS
N063001-005C	SAMP	10	12.61	0.981	15	PASS	<0.000	N/A	15	<PQL
N063001-006C	SAMP	10	8.81	0.739	15	PASS	<0.000	N/A	15	<PQL
CCV8	CCV	1	20.93	0.39	15	PASS	19.38	2.007	15	PASS
CCB8	CCB	1	0	364.806	15	<PQL	<0.000	N/A	15	<PQL
N063001-007C	SAMP	10	9.85	0.639	15	PASS	0.82	5.065	15	PASS
N063001-011C	SAMP	1	152.26	0.636	15	PASS	20.93	1.228	15	PASS
N063001-015C	SAMP	10	21.69	0.322	15	PASS	<0.000	N/A	15	<PQL
N063001-017C	SAMP	10	6.87	0.55	15	PASS	<0.000	N/A	15	<PQL
N063001-018C	SAMP	10	4.81	1.401	15	PASS	<0.000	N/A	15	<PQL
N063001-020C	SAMP	10	6.9	0.593	15	PASS	<0.000	N/A	15	<PQL
N063001-021C	SAMP	10	5.63	2.021	15	PASS	0.13	7.962	15	PASS
CCV9	CCV	1	20.85	2.545	15	PASS	19.76	0.945	15	PASS
CCB9	CCB	1	0.01	67.541	15	<PQL	<0.000	N/A	15	<PQL
N063001-003C	SAMP	1	52.13	1.414	15	PASS	0.11	38.903	15	<PQL

PERCENT RSD SUMMARY: 240209A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				52 Cr [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063001-004C	SAMP	1	52.66	0.711	15	PASS	0.1	15.785	15	<PQL
N063001-005C	SAMP	1	85.48	0.326	15	PASS	0.33	0.633	15	PASS
N063001-011C	SAMP	1	152.1	1.561	15	PASS	20.88	1.536	15	PASS
N063001-003C	SAMP	1	51.78	1.362	15	PASS	0.09	8.734	15	PASS
N063001-004C	SAMP	1	52.75	0.779	15	PASS	0.09	42.117	15	<PQL
N063001-005C	SAMP	1	84.5	1.103	15	PASS	0.34	7.879	15	PASS
N063001-011C	SAMP	1	153.41	0.375	15	PASS	20.49	2.316	15	PASS
CCV10	CCV	1	21.03	1.151	15	PASS	19.26	1.956	15	PASS
CCB10	CCB	1	0.01	38.636	15	<PQL	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB5	ICSAB	1	22.24	1.008	15	PASS	20.18	1.377	15	PASS
N063001-003C	SAMP	1	52.4	0.868	15	PASS	0.1	8.943	15	PASS
N063001-004C	SAMP	1	53.1	0.692	15	PASS	0.1	26.756	15	<PQL
N063001-005C	SAMP	1	84.63	0.411	15	PASS	0.31	8.702	15	PASS
N063001-011C	SAMP	1	151.22	0.933	15	PASS	20.51	1.173	15	PASS
N063001-003C	SAMP	1	52.29	1.05	15	PASS	0.09	18.884	15	<PQL
N063001-004C	SAMP	1	52.88	0.291	15	PASS	0.09	16.534	15	<PQL
N063001-005C	SAMP	1	85.66	1.729	15	PASS	0.32	6.348	15	PASS
N063001-011C	SAMP	1	155.83	0.775	15	PASS	20.47	0.666	15	PASS
CCV11	CCV	1	21.28	0.71	15	PASS	19.24	1.465	15	PASS
CCB11	CCB	1	0.01	25.988	15	<PQL	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	0.01	121.929	15	<PQL	<0.000	N/A	15	<PQL
ICSAB6	ICSAB	1	22.72	1.867	15	PASS	20.37	1.38	15	PASS

PERCENT RSD SUMMARY: 240209A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]				75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	23.506	15	<PQL	0.1	46.001	15	FAIL
Std2-0.5/5 ppb	ICAL	1	0.44	10.545	15	PASS	0.43	18.569	15	FAIL
Std3-5/50 ppb	ICAL	1	4.69	3.298	15	PASS	4.74	4.569	15	PASS
Std4-10/100 ppb	ICAL	1	9.72	0.864	15	PASS	9.39	5.984	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.05	1.179	15	PASS	20.27	2.047	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.49	1.347	15	PASS	40.1	2.043	15	PASS
Std7-100/1000 ppb	ICAL	1	98.45	1.685	15	PASS	99.13	0.311	15	PASS
Std8-200/2000 ppb	ICAL	1	200.99	2.07	15	PASS	200.42	0.18	15	PASS
ICV	ICV	1	106.4	1.145	15	PASS	10.49	3.218	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	0.04	68.419	15	<PQL
LLICV1	LLICV	1	0.48	2.822	20	PASS	0.1	19.983	20	PASS
MLCCV	CCV	1	19.24	1.418	15	PASS	19.54	2.401	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL	0.01	205.295	15	<PQL
ICSAB1	ICSAB	1	17.09	2.933	15	PASS	22.17	2.54	15	PASS
CCV1	CCV	1	19.05	3.037	15	PASS	20.39	3.782	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL	0.01	88.197	15	<PQL
CCV2	CCV	1	18.98	2.482	15	PASS	19.39	1.364	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	0.03	55.757	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL	0.02	92.664	15	<PQL
ICSAB2	ICSAB	1	16.84	3.169	15	PASS	22.25	3.481	15	PASS
CCV3	CCV	1	19.05	1.465	15	PASS	19.31	2.742	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL	0.03	133.98	15	<PQL
CCV4	CCV	1	19.08	2.062	15	PASS	19.78	0.376	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL	0.02	55.433	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	0.02	69.78	15	<PQL
ICSAB3	ICSAB	1	16.74	0.886	15	PASS	21.23	4.003	15	PASS
MB-106714	MBLK	1	1.53	3.801	15	PASS	0.13	17.348	15	NR!
MB-106714	MBLK	1	<0.000	N/A	15	<PQL	0.01	155.189	15	<PQL
LCS-106714	LCS	1	99.21	1.436	15	PASS	10.34	4.084	15	PASS
N063001-001C	SAMP	1	366.91	2.828	15	PASS	3.75	6.36	15	PASS
N063001-001C	SAMP	5	73.45	1.149	15	PASS	0.89	14.433	15	PASS
N063001-001C-PS	PS	1	446.16	2.785	15	PASS	14.52	3.677	15	PASS
N063001-001CMS	MS	1	467.06	0.388	15	PASS	14.69	3.589	15	PASS
N063001-001CMSD	MSD	1	457.79	0.655	15	PASS	15.19	1.922	15	PASS
N063001-003C	SAMP	1	103.25	1.643	15	PASS	<0.000	N/A	15	<PQL
CCV5	CCV	1	18.51	2.75	15	PASS	19.96	2.129	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	0.02	31.962	15	<PQL
N063001-004C	SAMP	1	101.52	0.582	15	PASS	<0.000	N/A	15	<PQL
N063001-005C	SAMP	1	1466.34	0.053	15	PASS	0.11	247.868	15	NR!
N063001-006C	SAMP	1	1453.4	0.664	15	PASS	0.01	4516.282	15	<PQL

PERCENT RSD SUMMARY: 240209A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]				75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063001-007C	SAMP	1	298.46	0.743	15	PASS	2.38	5.664	15	PASS
N063001-008C	SAMP	1	18.58	2.385	15	PASS	1.24	8.992	15	PASS
N063001-009C	SAMP	1	16.6	2.534	15	PASS	<0.000	N/A	15	<PQL
N063001-010C	SAMP	1	16.14	0.965	15	PASS	<0.000	N/A	15	<PQL
N063001-011C	SAMP	1	32.94	1.219	15	PASS	<0.000	N/A	15	<PQL
N063001-012C	SAMP	1	64.49	1.142	15	PASS	<0.000	N/A	15	<PQL
CCV6	CCV	1	18.65	0.276	15	PASS	19.47	4.047	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL	0.02	70.157	15	<PQL
N063001-014C	SAMP	1	113.77	0.813	15	PASS	<0.000	N/A	15	<PQL
N063001-015C	SAMP	1	220.32	1.394	15	PASS	<0.000	N/A	15	<PQL
N063001-016C	SAMP	1	172.72	1.399	15	PASS	5.49	1.371	15	PASS
N063001-017C	SAMP	1	300.59	2.278	15	PASS	5.37	2.867	15	PASS
N063001-018C	SAMP	1	309.07	0.34	15	PASS	2.47	12.509	15	PASS
N063001-020C	SAMP	1	180.15	0.779	15	PASS	<0.000	N/A	15	<PQL
N063001-021C	SAMP	1	322.6	1.354	15	PASS	<0.000	N/A	15	<PQL
CCV7	CCV	1	19.04	1.671	15	PASS	19.82	2.465	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	0.04	87.88	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL	0.02	151.188	15	<PQL
ICSAB4	ICSAB	1	16.62	1.549	15	PASS	20.67	3.827	15	PASS
N063001-001C	SAMP	10	43.91	1.975	15	PASS	0.6	14.247	15	PASS
N063001-001C	SAMP	50	7.25	1.525	15	PASS	0.1	7.244	15	PASS
N063001-001C-PS	PS	10	137.45	0.981	15	PASS	11.02	3.68	15	PASS
N063001-001CMS	MS	10	49.37	1.329	15	PASS	1.53	5.747	15	PASS
N063001-001CMSD	MSD	10	48.55	2.406	15	PASS	1.57	7.361	15	PASS
N063001-003C	SAMP	1	101.94	2.081	15	PASS	<0.000	N/A	15	<PQL
N063001-004C	SAMP	1	103.32	1.585	15	PASS	<0.000	N/A	15	<PQL
N063001-005C	SAMP	1	1454.31	1.554	15	PASS	0.3	13.65	15	PASS
N063001-005C	SAMP	10	205.69	1.598	15	PASS	0.11	63.218	15	NR!
N063001-006C	SAMP	10	153.33	1.424	15	PASS	0.03	338.262	15	<PQL
CCV8	CCV	1	18.66	2.379	15	PASS	20.02	3.429	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL	0.03	23.756	15	<PQL
N063001-007C	SAMP	10	35.19	3.014	15	PASS	0.28	16.341	15	NR!
N063001-011C	SAMP	1	33.3	1.698	15	PASS	<0.000	N/A	15	<PQL
N063001-015C	SAMP	10	28.45	1.254	15	PASS	<0.000	N/A	15	<PQL
N063001-017C	SAMP	10	18.19	0.993	15	PASS	0.55	10.984	15	PASS
N063001-018C	SAMP	10	31.65	0.24	15	PASS	0.28	24.175	15	NR!
N063001-020C	SAMP	10	18.99	0.916	15	PASS	<0.000	N/A	15	<PQL
N063001-021C	SAMP	10	33.58	0.977	15	PASS	<0.000	N/A	15	<PQL
CCV9	CCV	1	18.92	2.722	15	PASS	19.73	2.633	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL	0.01	154.817	15	<PQL
N063001-003C	SAMP	1	104	0.621	15	PASS	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240209A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]				75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063001-004C	SAMP	1	103.12	0.853	15	PASS	<0.000	N/A	15	<PQL
N063001-005C	SAMP	1	1447.58	0.492	15	PASS	0.15	239.181	15	NR!
N063001-011C	SAMP	1	33.37	2.613	15	PASS	<0.000	N/A	15	<PQL
N063001-003C	SAMP	1	103.09	1.02	15	PASS	<0.000	N/A	15	<PQL
N063001-004C	SAMP	1	101.76	1.521	15	PASS	<0.000	N/A	15	<PQL
N063001-005C	SAMP	1	1462.7	0.669	15	PASS	0.12	124.606	15	NR!
N063001-011C	SAMP	1	32.75	0.333	15	PASS	<0.000	N/A	15	<PQL
CCV10	CCV	1	18.82	2.759	15	PASS	19.55	2.137	15	PASS
CCB10	CCB	1	<0.000	N/A	15	<PQL	0.04	63.097	15	<PQL
ICSA5	ICSA	1	<0.000	N/A	15	<PQL	0.02	104.165	15	<PQL
ICSAB5	ICSAB	1	16.52	0.763	15	PASS	20.99	1.776	15	PASS
N063001-003C	SAMP	1	103.12	1.245	15	PASS	<0.000	N/A	15	<PQL
N063001-004C	SAMP	1	102.89	0.651	15	PASS	<0.000	N/A	15	<PQL
N063001-005C	SAMP	1	1454.6	2.261	15	PASS	0.3	78.544	15	NR!
N063001-011C	SAMP	1	33	1.611	15	PASS	<0.000	N/A	15	<PQL
N063001-003C	SAMP	1	103.87	1.151	15	PASS	<0.000	N/A	15	<PQL
N063001-004C	SAMP	1	102.85	0.709	15	PASS	<0.000	N/A	15	<PQL
N063001-005C	SAMP	1	1443.51	0.876	15	PASS	<0.000	N/A	15	<PQL
N063001-011C	SAMP	1	32.92	0.359	15	PASS	<0.000	N/A	15	<PQL
CCV11	CCV	1	18.83	1.687	15	PASS	19.49	2.029	15	PASS
CCB11	CCB	1	<0.000	N/A	15	<PQL	0.04	29.091	15	<PQL
ICSA6	ICSA	1	<0.000	N/A	15	<PQL	0.01	90.181	15	<PQL
ICSAB6	ICSAB	1	16.84	1.993	15	PASS	21.23	1.306	15	PASS

PERCENT RSD SUMMARY: 240209A

Instrument ID: ICPMS-03

Sample Name	Type	DF	78 Se [1]				95 Mo [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.11	40.021	15	<PQL	0.08	7.056	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.52	17.047	15	FAIL	0.42	3.638	15	PASS
Std3-5/50 ppb	ICAL	1	4.75	1.144	15	PASS	4.68	2.932	15	PASS
Std4-10/100 ppb	ICAL	1	9.88	6.861	15	PASS	9.49	1.442	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.49	5.692	15	PASS	20.41	1.135	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.72	2.052	15	PASS	38.93	1.316	15	PASS
Std7-100/1000 ppb	ICAL	1	99.05	1.858	15	PASS	97.63	1.134	15	PASS
Std8-200/2000 ppb	ICAL	1	200.6	2.376	15	PASS	201.39	0.37	15	PASS
ICV	ICV	1	10.01	6.029	15	PASS	10.29	0.756	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	0.05	24.513	15	<PQL
LLICV1	LLICV	1	0.41	14.777	20	PASS	0.59	6.087	20	PASS
MLCCV	CCV	1	20.02	4.825	15	PASS	20.2	0.184	15	PASS
ICSA1	ICSA	1	0.02	147.648	15	<PQL	0.05	43.418	15	<PQL
ICSAB1	ICSAB	1	20.18	3.806	15	PASS	22.57	1.159	15	PASS
CCV1	CCV	1	18.91	1.524	15	PASS	20.04	2.695	15	PASS
CCB1	CCB	1	0.03	106.581	15	<PQL	0.04	14.068	15	PASS
CCV2	CCV	1	20.14	4.665	15	PASS	20.11	0.958	15	PASS
CCB2	CCB	1	0.01	152.675	15	<PQL	0.04	6.937	15	PASS
ICSA2	ICSA	1	0.01	182.63	15	<PQL	0.01	47.75	15	<PQL
ICSAB2	ICSAB	1	19.64	1.433	15	PASS	22.7	1.776	15	PASS
CCV3	CCV	1	19.48	1.001	15	PASS	20.56	0.763	15	PASS
CCB3	CCB	1	0.02	60.592	15	<PQL	0.05	12.195	15	PASS
CCV4	CCV	1	19.35	3.341	15	PASS	20.26	1.473	15	PASS
CCB4	CCB	1	0.01	270.624	15	<PQL	0.05	6.938	15	PASS
ICSA3	ICSA	1	0.01	191.908	15	<PQL	0.02	55.364	15	<PQL
ICSAB3	ICSAB	1	20.54	3.332	15	PASS	22.95	0.395	15	PASS
MB-106714	MBLK	1	0.15	28.805	15	<PQL	0.21	16.193	15	<PQL
MB-106714	MBLK	1	0.02	119.189	15	<PQL	0.01	47.471	15	<PQL
LCS-106714	LCS	1	9.52	3.255	15	PASS	10.34	1.531	15	PASS
N063001-001C	SAMP	1	0.43	25.17	15	<PQL	55.78	0.746	15	PASS
N063001-001C	SAMP	5	0.05	57.795	15	<PQL	10.91	0.169	15	PASS
N063001-001C-PS	PS	1	10.24	2.752	15	PASS	66.82	0.119	15	PASS
N063001-001CMS	MS	1	10.16	5.665	15	PASS	69.02	2.157	15	PASS
N063001-001CMSD	MSD	1	10.48	2.385	15	PASS	68.46	1.421	15	PASS
N063001-003C	SAMP	1	0.8	18.302	15	NR!	23.16	0.663	15	PASS
CCV5	CCV	1	19.84	3.087	15	PASS	20.37	0.523	15	PASS
CCB5	CCB	1	0.02	156.354	15	<PQL	0.05	23.939	15	<PQL
N063001-004C	SAMP	1	0.9	25.551	15	NR!	23.05	1.17	15	PASS
N063001-005C	SAMP	1	0.03	110.265	15	<PQL	4.87	1.063	15	PASS
N063001-006C	SAMP	1	0.04	59.611	15	<PQL	4.68	1.366	15	PASS

PERCENT RSD SUMMARY: 240209A

Instrument ID: ICPMS-03

Sample Name	Type	DF	78 Se [1]				95 Mo [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063001-007C	SAMP	1	0.26	25.175	15	<PQL	6.68	1.08	15	PASS
N063001-008C	SAMP	1	0.63	6.162	15	PASS	9.56	1.773	15	PASS
N063001-009C	SAMP	1	0.18	55.452	15	<PQL	22.12	1.672	15	PASS
N063001-010C	SAMP	1	0.16	31.779	15	<PQL	21.4	2.285	15	PASS
N063001-011C	SAMP	1	0.79	33.663	15	NR!	12.24	0.539	15	PASS
N063001-012C	SAMP	1	0.5	14.153	15	PASS	4.82	2.42	15	PASS
CCV6	CCV	1	20.49	1.494	15	PASS	20.46	0.677	15	PASS
CCB6	CCB	1	0.01	3.906	15	PASS	0.03	44.776	15	<PQL
N063001-014C	SAMP	1	0.04	58.108	15	<PQL	8.51	2.287	15	PASS
N063001-015C	SAMP	1	0.34	7.187	15	PASS	22.78	2.386	15	PASS
N063001-016C	SAMP	1	0.02	112.181	15	<PQL	4.31	3.69	15	PASS
N063001-017C	SAMP	1	0.04	2.595	15	PASS	4.44	0.766	15	PASS
N063001-018C	SAMP	1	0.03	42.612	15	<PQL	4.86	2.599	15	PASS
N063001-020C	SAMP	1	0.03	144.085	15	<PQL	10.19	3.317	15	PASS
N063001-021C	SAMP	1	0.03	54.285	15	<PQL	17.9	1.115	15	PASS
CCV7	CCV	1	19.09	2.955	15	PASS	20.37	1.432	15	PASS
CCB7	CCB	1	0.03	157.945	15	<PQL	0.03	27.501	15	<PQL
ICSA4	ICSA	1	0.01	181.003	15	<PQL	0	107.94	15	<PQL
ICSAB4	ICSAB	1	21.04	4.505	15	PASS	22.72	1.239	15	PASS
N063001-001C	SAMP	10	0.12	21.885	15	<PQL	6.3	2.837	15	PASS
N063001-001C	SAMP	50	0.04	0.39	15	PASS	0.98	2.196	15	PASS
N063001-001C-PS	PS	10	10.44	3.384	15	PASS	16.3	1.005	15	PASS
N063001-001CMS	MS	10	1.15	9.63	15	PASS	6.84	1.13	15	PASS
N063001-001CMSD	MSD	10	1.01	6.121	15	PASS	6.61	0.431	15	PASS
N063001-003C	SAMP	1	1.02	27.394	15	NR!	23.3	1.862	15	PASS
N063001-004C	SAMP	1	1.03	22.233	15	NR!	23.36	1.131	15	PASS
N063001-005C	SAMP	1	0.01	149.523	15	<PQL	4.71	0.298	15	PASS
N063001-005C	SAMP	10	0	17885.633	15	<PQL	0.63	8.865	15	PASS
N063001-006C	SAMP	10	<0.000	N/A	15	<PQL	0.48	8.377	15	PASS
CCV8	CCV	1	18.85	3.111	15	PASS	20.33	1.962	15	PASS
CCB8	CCB	1	0.01	152.504	15	<PQL	0.03	56.82	15	<PQL
N063001-007C	SAMP	10	0.04	59.394	15	<PQL	0.7	9.066	15	PASS
N063001-011C	SAMP	1	0.65	24.737	15	NR!	12.44	1.592	15	PASS
N063001-015C	SAMP	10	0.06	64.058	15	<PQL	2.6	1.909	15	PASS
N063001-017C	SAMP	10	0.01	336.788	15	<PQL	0.42	7.531	15	PASS
N063001-018C	SAMP	10	<0.000	N/A	15	<PQL	0.48	8.779	15	PASS
N063001-020C	SAMP	10	<0.000	N/A	15	<PQL	1.04	7.783	15	PASS
N063001-021C	SAMP	10	0.02	145.472	15	<PQL	1.7	3.428	15	PASS
CCV9	CCV	1	19.79	2.123	15	PASS	20.17	0.611	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL	0.04	12.669	15	PASS
N063001-003C	SAMP	1	0.82	34.167	15	NR!	22.94	0.866	15	PASS

PERCENT RSD SUMMARY: 240209A

Instrument ID: ICPMS-03

Sample Name	Type	DF	78 Se [1]				95 Mo [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063001-004C	SAMP	1	0.88	17.832	15	NR!	23.02	0.362	15	PASS
N063001-005C	SAMP	1	0.01	148.086	15	<PQL	4.66	2.836	15	PASS
N063001-011C	SAMP	1	0.89	9.001	15	PASS	12.42	1.911	15	PASS
N063001-003C	SAMP	1	0.99	36.361	15	NR!	22.72	0.885	15	PASS
N063001-004C	SAMP	1	0.93	7.909	15	PASS	23.36	1.245	15	PASS
N063001-005C	SAMP	1	0.07	37.604	15	<PQL	4.7	1.249	15	PASS
N063001-011C	SAMP	1	0.86	5.912	15	PASS	12.4	2.023	15	PASS
CCV10	CCV	1	20.03	7.156	15	PASS	20.58	1.776	15	PASS
CCB10	CCB	1	0.01	151.662	15	<PQL	0.04	27.016	15	<PQL
ICSA5	ICSA	1	0.03	43.225	15	<PQL	0.02	66.93	15	<PQL
ICSAB5	ICSAB	1	20.44	3.208	15	PASS	22.66	0.576	15	PASS
N063001-003C	SAMP	1	1.1	12.152	15	PASS	23.02	2.844	15	PASS
N063001-004C	SAMP	1	0.93	9.326	15	PASS	23.16	1.065	15	PASS
N063001-005C	SAMP	1	0.06	22.621	15	<PQL	4.64	1.294	15	PASS
N063001-011C	SAMP	1	0.87	5.054	15	PASS	12.62	1.867	15	PASS
N063001-003C	SAMP	1	1.12	31.616	15	NR!	22.51	0.457	15	PASS
N063001-004C	SAMP	1	0.95	16.61	15	NR!	23.51	0.323	15	PASS
N063001-005C	SAMP	1	0.06	47.474	15	<PQL	4.75	3.249	15	PASS
N063001-011C	SAMP	1	0.84	25.935	15	NR!	12.49	0.89	15	PASS
CCV11	CCV	1	20.07	1.278	15	PASS	20.68	1.37	15	PASS
CCB11	CCB	1	0.01	182.925	15	<PQL	0.03	14.937	15	PASS
ICSA6	ICSA	1	<0.000	N/A	15	<PQL	0.01	93.988	15	<PQL
ICSAB6	ICSAB	1	19.78	3.611	15	PASS	22.6	0.643	15	PASS

PERCENT RSD SUMMARY: 240212A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0.19	9.662	15	PASS
Std1-0.1/1 ppb	ICAL	1	0.13	10.556	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.5	3.925	15	PASS
Std3-5/50 ppb	ICAL	1	4.88	3.981	15	PASS
Std4-10/100 ppb	ICAL	1	9.84	0.785	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.41	2.798	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	40.08	2.062	15	PASS
Std7-100/1000 ppb	ICAL	1	98.51	0.608	15	PASS
Std8-200/2000 ppb	ICAL	1	200.8	1.732	15	PASS
ICV	ICV	1	102.02	0.261	15	PASS
ICB	ICB	1	0.19	8.892	15	PASS
LLICV1	LLICV	1	0.55	11.967	20	PASS
MLCCV	CCV	1	19.82	1.753	15	PASS
ICSA1	ICSA	1	0.18	7.17	15	PASS
ICSAB1	ICSAB	1	16.32	2.606	15	PASS
LLICV1	LLICV	1	0.57	3.188	20	PASS
CCV1	CCV	1	19.56	2.559	15	PASS
CCB1	CCB	1	0.18	10.531	15	PASS
CCV2	CCV	1	19.5	0.642	15	PASS
CCB2	CCB	1	0.17	11.053	15	PASS
ICSA2	ICSA	1	0.19	13.673	15	PASS
ICSAB2	ICSAB	1	16.46	2.231	15	PASS
N063001-005C	SAMP	100	15.6	0.48	15	PASS
CCV3	CCV	1	19.38	1.097	15	PASS
CCB3	CCB	1	0.19	9.093	15	PASS
CCV4	CCV	1	19.6	0.534	15	PASS
CCB4	CCB	1	0.22	4.398	15	PASS
CCV5	CCV	1	19.66	2.192	15	PASS
CCB5	CCB	1	0.17	15.479	15	<PQL
ICSA3	ICSA	1	0.17	6.146	15	PASS
ICSAB3	ICSAB	1	16.58	2.327	15	PASS
CCV6	CCV	1	19.34	2.897	15	PASS
CCB6	CCB	1	0.18	3.896	15	PASS
ICSA4	ICSA	1	0.17	3.29	15	PASS
ICSAB4	ICSAB	1	16.16	3.848	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240209A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0209001.d	RINSE	ICAL	1	02/09/24 12:20 PM
A0209002.d	Cal Blk	IBLK	1	02/09/24 12:25 PM
A0209003.d	Std1-0.1/1 ppb	ICAL	1	02/09/24 12:30 PM
A0209004.d	Std2-0.5/5 ppb	ICAL	1	02/09/24 12:34 PM
A0209005.d	Std3-5/50 ppb	ICAL	1	02/09/24 12:39 PM
A0209006.d	Std4-10/100 ppb	ICAL	1	02/09/24 12:44 PM
A0209007.d	Std5-4.0/20/200 ppb	ICAL	1	02/09/24 12:49 PM
A0209008.d	Std6-8.0/40/400 ppb	ICAL	1	02/09/24 12:54 PM
A0209009.d	Std7-100/1000 ppb	ICAL	1	02/09/24 12:58 PM
A0209010.d	Std8-200/2000 ppb	ICAL	1	02/09/24 1:10 PM
A0209011.d	ICV	ICV	1	02/09/24 1:27 PM
A0209012.d	ICB	ICB	1	02/09/24 1:32 PM
A0209013.d	LLICV1	LLICV	1	02/09/24 1:36 PM
A0209014.d	MLCCV	CCV	1	02/09/24 1:41 PM
A0209015.d	ICSA1	ICSA	1	02/09/24 1:46 PM
A0209016.d	ICSAB1	ICSAB	1	02/09/24 1:50 PM
A0209017.d	MB-106716	MBLK	1	02/09/24 2:11 PM
A0209018.d	LCS-106716	LCS	1	02/09/24 2:16 PM
A0209019.d	N062975-001B	SAMP	1	02/09/24 2:21 PM
A0209020.d	N062975-001B	SAMP	5	02/09/24 2:25 PM
A0209021.d	N062975-001B-PS	PS	1	02/09/24 2:30 PM
A0209022.d	N062975-001B-MS	MS	1	02/09/24 2:35 PM
A0209023.d	N062975-001B-MSD	MSD	1	02/09/24 2:39 PM
A0209024.d	RINSE	ICAL	1	02/09/24 2:44 PM
A0209025.d	CCV1	CCV	1	02/09/24 2:49 PM
A0209026.d	CCB1	CCB	1	02/09/24 2:53 PM
A0209027.d	N062975-001B	SAMP	100	02/09/24 2:58 PM
A0209028.d	N062975-001B	SAMP	500	02/09/24 3:02 PM
A0209029.d	N062975-001B-PS	PS	100	02/09/24 3:07 PM
A0209030.d	N062975-001B-MS	MS	100	02/09/24 3:12 PM
A0209031.d	N062975-001B-MSD	MSD	100	02/09/24 3:16 PM
A0209032.d	CCV2	CCV	1	02/09/24 3:21 PM
A0209033.d	CCB2	CCB	1	02/09/24 3:26 PM
A0209034.d	ICSA2	ICSA	1	02/09/24 3:30 PM
A0209035.d	ICSAB2	ICSAB	1	02/09/24 3:35 PM
A0209036.d	LCS-106696	LCS	1	02/09/24 3:40 PM
A0209037.d	N062966-001C	SAMP	10	02/09/24 3:44 PM
A0209038.d	N062966-001C	SAMP	50	02/09/24 3:49 PM
A0209039.d	N062966-001C-PS	PS	10	02/09/24 3:54 PM
A0209040.d	N062966-001CMS	MS	10	02/09/24 3:58 PM
A0209041.d	N062966-001CMSD	MSD	10	02/09/24 4:03 PM
A0209042.d	N062966-006C	SAMP	10	02/09/24 4:07 PM

INJECTION LOG: 240209A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0209043.d	N062966-009C	SAMP	10	02/09/24 4:12 PM
A0209044.d	N062966-012C	SAMP	10	02/09/24 4:17 PM
A0209045.d	N062966-013C	SAMP	10	02/09/24 4:21 PM
A0209046.d	CCV3	CCV	1	02/09/24 4:26 PM
A0209047.d	CCB3	CCB	1	02/09/24 4:31 PM
A0209048.d	N062966-014C	SAMP	10	02/09/24 4:35 PM
A0209049.d	N062966-017C	SAMP	10	02/09/24 4:40 PM
A0209050.d	N062966-017C	SAMP	50	02/09/24 4:45 PM
A0209051.d	N062966-017C-PS	PS	10	02/09/24 4:49 PM
A0209052.d	N062966-017CMS	MS	10	02/09/24 4:54 PM
A0209053.d	N062966-017CMSD	MSD	10	02/09/24 4:59 PM
A0209054.d	N062966-019C	SAMP	10	02/09/24 5:03 PM
A0209055.d	N062966-020C	SAMP	10	02/09/24 5:08 PM
A0209056.d	CCV4	CCV	1	02/09/24 5:12 PM
A0209057.d	CCB4	CCB	1	02/09/24 5:17 PM
A0209058.d	ICSA3	ICSA	1	02/09/24 5:22 PM
A0209059.d	ICSAB3	ICSAB	1	02/09/24 5:26 PM
A0209060.d	MB-106714	MBLK	1	02/09/24 5:31 PM
A0209061.d	MB-106714	MBLK	1	02/09/24 5:36 PM
A0209062.d	LCS-106714	LCS	1	02/09/24 5:40 PM
A0209063.d	N063001-001C	SAMP	1	02/09/24 5:45 PM
A0209064.d	N063001-001C	SAMP	5	02/09/24 5:50 PM
A0209065.d	N063001-001C-PS	PS	1	02/09/24 5:55 PM
A0209066.d	N063001-001CMS	MS	1	02/09/24 5:59 PM
A0209067.d	N063001-001CMSD	MSD	1	02/09/24 6:04 PM
A0209068.d	N063001-003C	SAMP	1	02/09/24 6:08 PM
A0209069.d	RINSE	ICAL	1	02/09/24 6:13 PM
A0209070.d	CCV5	CCV	1	02/09/24 6:18 PM
A0209071.d	CCB5	CCB	1	02/09/24 6:22 PM
A0209072.d	N063001-004C	SAMP	1	02/09/24 6:27 PM
A0209073.d	N063001-005C	SAMP	1	02/09/24 6:32 PM
A0209074.d	N063001-006C	SAMP	1	02/09/24 6:36 PM
A0209075.d	N063001-007C	SAMP	1	02/09/24 6:41 PM
A0209076.d	N063001-008C	SAMP	1	02/09/24 6:46 PM
A0209077.d	N063001-009C	SAMP	1	02/09/24 6:50 PM
A0209078.d	N063001-010C	SAMP	1	02/09/24 6:55 PM
A0209079.d	N063001-011C	SAMP	1	02/09/24 7:00 PM
A0209080.d	N063001-012C	SAMP	1	02/09/24 7:04 PM
A0209081.d	RINSE	ICAL	1	02/09/24 7:09 PM
A0209082.d	CCV6	CCV	1	02/09/24 7:14 PM
A0209083.d	CCB6	CCB	1	02/09/24 7:18 PM
A0209084.d	N063001-014C	SAMP	1	02/09/24 7:23 PM

INJECTION LOG: 240209A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0209085.d	N063001-015C	SAMP	1	02/09/24 7:28 PM
A0209086.d	N063001-016C	SAMP	1	02/09/24 7:32 PM
A0209087.d	N063001-017C	SAMP	1	02/09/24 7:37 PM
A0209088.d	N063001-018C	SAMP	1	02/09/24 7:42 PM
A0209089.d	N063001-020C	SAMP	1	02/09/24 7:46 PM
A0209090.d	N063001-021C	SAMP	1	02/09/24 7:51 PM
A0209091.d	RINSE	ICAL	1	02/09/24 7:56 PM
A0209092.d	CCV7	CCV	1	02/09/24 8:00 PM
A0209093.d	CCB7	CCB	1	02/09/24 8:05 PM
A0209094.d	ICSA4	ICSA	1	02/09/24 8:09 PM
A0209095.d	ICSAB4	ICSAB	1	02/09/24 8:14 PM
A0209096.d	N063001-001C	SAMP	10	02/09/24 8:19 PM
A0209097.d	N063001-001C	SAMP	50	02/09/24 8:24 PM
A0209098.d	N063001-001C-PS	PS	10	02/09/24 8:28 PM
A0209099.d	N063001-001CMS	MS	10	02/09/24 8:33 PM
A0209100.d	N063001-001CMSD	MSD	10	02/09/24 8:37 PM
A0209101.d	N063001-003C	SAMP	1	02/09/24 8:42 PM
A0209102.d	N063001-004C	SAMP	1	02/09/24 8:47 PM
A0209103.d	N063001-005C	SAMP	1	02/09/24 8:52 PM
A0209104.d	N063001-005C	SAMP	10	02/09/24 8:56 PM
A0209105.d	N063001-006C	SAMP	10	02/09/24 9:01 PM
A0209106.d	CCV8	CCV	1	02/09/24 9:05 PM
A0209107.d	CCB8	CCB	1	02/09/24 9:10 PM
A0209108.d	N063001-007C	SAMP	10	02/09/24 9:15 PM
A0209109.d	N063001-011C	SAMP	1	02/09/24 9:19 PM
A0209110.d	N063001-015C	SAMP	10	02/09/24 9:24 PM
A0209111.d	N063001-017C	SAMP	10	02/09/24 9:29 PM
A0209112.d	N063001-018C	SAMP	10	02/09/24 9:33 PM
A0209113.d	N063001-020C	SAMP	10	02/09/24 9:38 PM
A0209114.d	N063001-021C	SAMP	10	02/09/24 9:43 PM
A0209115.d	CCV9	CCV	1	02/09/24 9:47 PM
A0209116.d	CCB9	CCB	1	02/09/24 9:52 PM
A0209117.d	N063001-003C	SAMP	1	02/09/24 9:57 PM
A0209118.d	N063001-004C	SAMP	1	02/09/24 10:01 PM
A0209119.d	N063001-005C	SAMP	1	02/09/24 10:06 PM
A0209120.d	N063001-011C	SAMP	1	02/09/24 10:11 PM
A0209121.d	N063001-003C	SAMP	1	02/09/24 10:15 PM
A0209122.d	N063001-004C	SAMP	1	02/09/24 10:20 PM
A0209123.d	N063001-005C	SAMP	1	02/09/24 10:25 PM
A0209124.d	N063001-011C	SAMP	1	02/09/24 10:29 PM
A0209125.d	RINSE	ICAL	1	02/09/24 10:34 PM
A0209126.d	CCV10	CCV	1	02/09/24 10:39 PM

INJECTION LOG: 240209A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0209127.d	CCB10	CCB	1	02/09/24 10:43 PM
A0209128.d	ICSA5	ICSA	1	02/09/24 10:48 PM
A0209129.d	ICSAB5	ICSAB	1	02/09/24 10:53 PM
A0209130.d	N063001-003C	SAMP	1	02/09/24 10:57 PM
A0209131.d	N063001-004C	SAMP	1	02/09/24 11:02 PM
A0209132.d	N063001-005C	SAMP	1	02/09/24 11:07 PM
A0209133.d	N063001-011C	SAMP	1	02/09/24 11:11 PM
A0209134.d	N063001-003C	SAMP	1	02/09/24 11:16 PM
A0209135.d	N063001-004C	SAMP	1	02/09/24 11:21 PM
A0209136.d	N063001-005C	SAMP	1	02/09/24 11:25 PM
A0209137.d	N063001-011C	SAMP	1	02/09/24 11:30 PM
A0209138.d	RINSE	ICAL	1	02/09/24 11:35 PM
A0209139.d	CCV11	CCV	1	02/09/24 11:39 PM
A0209140.d	CCB11	CCB	1	02/09/24 11:44 PM
A0209141.d	ICSA6	ICSA	1	02/09/24 11:49 PM
A0209142.d	ICSAB6	ICSAB	1	02/09/24 11:53 PM
A0209143.d	RINSE	ICAL	1	02/09/24 11:58 PM
A0209144.d	RINSE	ICAL	1	02/10/24 12:02 AM
A0209145.d	RINSE	ICAL	1	02/10/24 12:07 AM
A0209146.d	RINSE	ICAL	1	02/10/24 12:12 AM
A0209147.d	RINSE	ICAL	1	02/10/24 12:16 AM

INJECTION LOG: 240212A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0212001.d	RINSE	ICAL	1	02/12/24 2:46 PM
A0212002.d	RINSE	ICAL	1	02/12/24 2:50 PM
A0212003.d	Cal Blk	IBLK	1	02/12/24 2:55 PM
A0212004.d	Std1-0.1/1 ppb	ICAL	1	02/12/24 3:00 PM
A0212005.d	Std2-0.5/5 ppb	ICAL	1	02/12/24 3:04 PM
A0212006.d	Std3-5/50 ppb	ICAL	1	02/12/24 3:09 PM
A0212007.d	Std4-10/100 ppb	ICAL	1	02/12/24 3:14 PM
A0212008.d	Std5-4.0/20/200 ppb	ICAL	1	02/12/24 3:19 PM
A0212009.d	Std6-8.0/40/400 ppb	ICAL	1	02/12/24 3:23 PM
A0212010.d	Std7-100/1000 ppb	ICAL	1	02/12/24 3:28 PM
A0212011.d	Std8-200/2000 ppb	ICAL	1	02/12/24 3:33 PM
A0212012.d	ICV	ICV	1	02/12/24 3:43 PM
A0212013.d	ICB	ICB	1	02/12/24 3:48 PM
A0212014.d	LLICV1	LLICV	1	02/12/24 3:53 PM
A0212015.d	MLCCV	CCV	1	02/12/24 4:07 PM
A0212016.d	ICSA1	ICSA	1	02/12/24 4:12 PM
A0212017.d	ICSAB1	ICSAB	1	02/12/24 4:16 PM
A0212018.d	LLICV1	LLICV	1	02/12/24 4:21 PM
A0212019.d	N062966-014C	SAMP	1	02/12/24 4:27 PM
A0212020.d	N062966-017C	SAMP	1	02/12/24 4:31 PM
A0212021.d	N062966-017C	SAMP	1	02/12/24 4:36 PM
A0212022.d	CCV1	CCV	1	02/12/24 4:44 PM
A0212023.d	CCB1	CCB	1	02/12/24 4:49 PM
A0212024.d	MB-106716	MBLK	1	02/12/24 4:53 PM
A0212025.d	LCS-106716	LCS	1	02/12/24 4:58 PM
A0212026.d	N062975-001B	SAMP	1	02/12/24 5:03 PM
A0212027.d	N062975-001B	SAMP	5	02/12/24 5:07 PM
A0212028.d	N062975-001B-PS	PS	1	02/12/24 5:12 PM
A0212029.d	N062975-001B-MS	MS	1	02/12/24 5:17 PM
A0212030.d	N062975-001B-MSD	MSD	1	02/12/24 5:21 PM
A0212031.d	RINSE	ICAL	1	02/12/24 5:26 PM
A0212032.d	CCV2	CCV	1	02/12/24 5:30 PM
A0212033.d	CCB2	CCB	1	02/12/24 5:35 PM
A0212034.d	ICSA2	ICSA	1	02/12/24 5:40 PM
A0212035.d	ICSAB2	ICSAB	1	02/12/24 5:44 PM
A0212036.d	N063001-005C	SAMP	100	02/12/24 5:53 PM
A0212037.d	MB-106751	MBLK	1	02/12/24 5:58 PM
A0212038.d	LCS-106751	LCS	1	02/12/24 6:03 PM
A0212039.d	N063010-001B	SAMP	1	02/12/24 6:07 PM
A0212040.d	N063010-001B	SAMP	10	02/12/24 6:12 PM
A0212041.d	N063010-002B	SAMP	1	02/12/24 6:16 PM
A0212042.d	N063010-002B	SAMP	10	02/12/24 6:21 PM

INJECTION LOG: 240212A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0212043.d	N063010-003B	SAMP	1	02/12/24 6:26 PM
A0212044.d	N063010-003B	SAMP	10	02/12/24 6:31 PM
A0212045.d	CCV3	CCV	1	02/12/24 6:35 PM
A0212046.d	CCB3	CCB	1	02/12/24 6:40 PM
A0212047.d	N063012-001C	SAMP	1	02/12/24 6:44 PM
A0212048.d	N063012-001C	SAMP	5	02/12/24 6:49 PM
A0212049.d	N063012-001C-PS	PS	1	02/12/24 6:54 PM
A0212050.d	N063012-001C-MS	MS	1	02/12/24 6:58 PM
A0212051.d	N063012-001C-MSD	MSD	1	02/12/24 7:03 PM
A0212052.d	N063012-002C	SAMP	1	02/12/24 7:08 PM
A0212053.d	N063012-003C	SAMP	1	02/12/24 7:12 PM
A0212054.d	N063012-004C	SAMP	1	02/12/24 7:17 PM
A0212055.d	N063012-006C	SAMP	1	02/12/24 7:22 PM
A0212056.d	RINSE	ICAL	1	02/12/24 7:26 PM
A0212057.d	CCV4	CCV	1	02/12/24 7:31 PM
A0212058.d	CCB4	CCB	1	02/12/24 7:36 PM
A0212059.d	N063012-007C	SAMP	1	02/12/24 7:40 PM
A0212060.d	N063012-009C	SAMP	1	02/12/24 7:45 PM
A0212061.d	N063010-001B	SAMP	100	02/12/24 7:50 PM
A0212062.d	N063010-002B	SAMP	100	02/12/24 7:54 PM
A0212063.d	N063010-003B	SAMP	100	02/12/24 7:59 PM
A0212064.d	RINSE	ICAL	1	02/12/24 8:04 PM
A0212065.d	CCV5	CCV	1	02/12/24 8:08 PM
A0212066.d	CCB5	CCB	1	02/12/24 8:13 PM
A0212067.d	ICSA3	ICSA	1	02/12/24 8:17 PM
A0212068.d	ICSAB3	ICSAB	1	02/12/24 8:22 PM
A0212069.d	MB-106752	MBLK	1	02/12/24 8:27 PM
A0212070.d	LCS-106752	LCS	1	02/12/24 8:32 PM
A0212071.d	N063010-001C	SAMP	1	02/12/24 8:36 PM
A0212072.d	N063010-002C	SAMP	1	02/12/24 8:41 PM
A0212073.d	N063010-002C	SAMP	5	02/12/24 8:45 PM
A0212074.d	N063010-002C-PS	PS	1	02/12/24 8:50 PM
A0212075.d	N063010-002C-MS	MS	1	02/12/24 8:55 PM
A0212076.d	N063010-002C-MSD	MSD	1	02/12/24 9:00 PM
A0212077.d	N063010-003C	SAMP	1	02/12/24 9:04 PM
A0212078.d	RINSE	ICAL	1	02/12/24 9:09 PM
A0212079.d	CCV6	CCV	1	02/12/24 9:13 PM
A0212080.d	CCB6	CCB	1	02/12/24 9:18 PM
A0212081.d	ICSA4	ICSA	1	02/12/24 9:23 PM
A0212082.d	ICSAB4	ICSAB	1	02/12/24 9:27 PM
A0212083.d	RINSE	ICAL	1	02/12/24 9:32 PM
A0212084.d	RINSE	ICAL	1	02/12/24 9:37 PM

INJECTION LOG: 240212A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0212085.d	RINSE	ICAL	1	02/12/24 9:41 PM
A0212086.d	RINSE	ICAL	1	02/12/24 9:46 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/9/2024 10:05:09 AM**
Prep End Date: **2/9/2024 2:00:00 PM**
Prep Batch **106714** Prep Code:**3010_W_MSDISS_TPK**

Reviewed/ Date: JRB 2/29/2024
Initials/ Date: for
Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-02-28**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-106714	Aqueous		25	☐	25	1.000		
MB-106714	Aqueous		25	☐	25	1.000		
N063001-001C	Groundwater	<2	25	☐	25	1.000		
N063001-001CMS	Groundwater	<2	25	☐	25	1.000		
N063001-001CMSD	Groundwater	<2	25	☐	25	1.000		
N063001-003C	Groundwater	<2	25	☐	25	1.000		
N063001-004C	Groundwater	<2	25	☐	25	1.000		
N063001-005C	Groundwater	<2	25	☐	25	1.000		
N063001-006C	Groundwater	<2	25	☐	25	1.000		
N063001-007C	Groundwater	<2	25	☐	25	1.000		
N063001-008C	Groundwater	<2	25	☐	25	1.000		
N063001-009C	Groundwater	<2	25	☐	25	1.000		
N063001-010C	Groundwater	<2	25	☐	25	1.000		
N063001-011C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

ASSET Laboratories

PREP BATCH REPORT

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Reviewed/ Date: JRB 2/29/2024
Initials/ Date: for
Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-02-28**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063001-012C	Groundwater	<2	25	☐	25	1.000		
N063001-014C	Groundwater	<2	25	☐	25	1.000		
N063001-015C	Groundwater	<2	25	☐	25	1.000		
N063001-016C	Groundwater	<2	25	☐	25	1.000		
N063001-017C	Groundwater	<2	25	☐	25	1.000		
N063001-018C	Groundwater	<2	25	☐	25	1.000		
N063001-020C	Groundwater	<2	25	☐	25	1.000		
N063001-021C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240208A2.b
Acq. Date-Time	2024-02-09 12:08:03
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

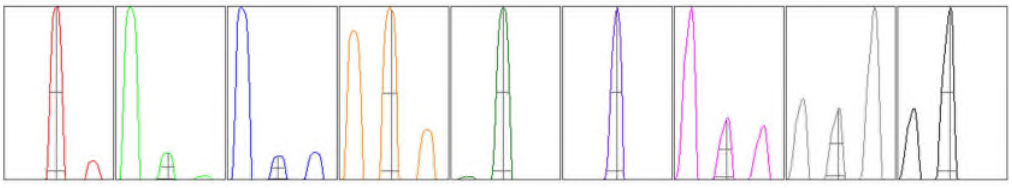
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	4561	45606.44	500.00		3.218	5.000
24	10.00	14207	142074.85	500.00		3.767	5.000
25	10.00	1906	19062.64	500.00		4.155	5.000
26	10.00	2222	22215.46	500.00		4.473	5.000
59	10.00	22795	227947.95	500.00		3.002	5.000
115	10.00	28345	283447.67	500.00		2.912	5.000
206	10.00	5403	54032.48	500.00		2.811	5.000
207	10.00	4627	46270.54	500.00		2.455	5.000
208	10.00	11211	112111.13	500.00		2.394	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.558 %
Doubly Charged	70 / 140 0.804 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	4337.81	8.95	8.90 - 9.10	
24	13928.54	23.95	23.90 - 24.10	
25	1875.33	24.90	24.90 - 25.10	
26	2141.41	25.95	25.90 - 26.10	
59	21751.60	58.95	58.90 - 59.10	
115	26748.12	115.00	114.90 - 115.10	
206	5153.34	205.95	205.90 - 206.10	
207	4613.81	206.95	206.90 - 207.10	
208	11314.12	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.35	0.484	0.900	
24	0.38	0.486	0.900	
25	0.38	0.495	0.900	
26	0.40	0.494	0.900	
59	0.37	0.522	0.900	
115	0.33	0.470	0.900	
206	0.36	0.533	0.900	
207	0.35	0.540	0.900	
208	0.35	0.533	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.2 mm	Torch V	1.2 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2518 V	Pulse HV	1593 V

[H2]

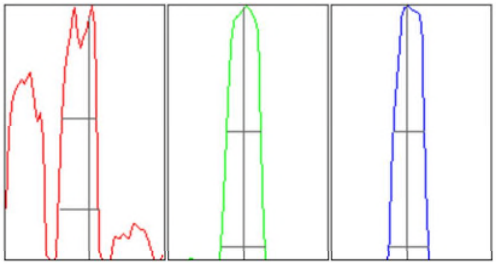
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		120	1198.84			10.113	
59		1549	15487.01			3.414	
115		21977	219773.98			2.346	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.414 %
Doubly Charged	70 / 140 0.261 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	134.01	26.10	25.90 - 26.10	
59	1606.33	58.95	58.90 - 59.10	
115	23127.12	114.95	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.66	0.755	0.900	
59	0.65	0.824	0.900	
115	0.59	0.737	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0002	QP Bias	-15.0 V
Mass Offset	124	Axis Offset	-0.03		

Hardware Settings

Torch

Torch H	1.2 mm	Torch V	1.2 mm		

EM

Discriminator	4.5 mV	Analog HV	2518 V	Pulse HV	1593 V

[He]

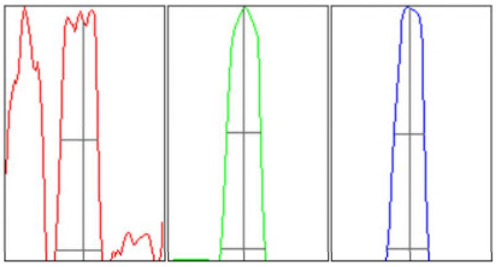
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		56	564.81			16.094	
59		4814	48143.95			2.665	
115		3820	38195.27			2.484	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.158 %
Doubly Charged	70 / 140 1.086 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	52.75	26.00	25.90 - 26.10	
59	4921.18	58.95	58.90 - 59.10	
115	3872.57	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.71	0.868	0.900	
59	0.64	0.822	0.900	
115	0.58	0.766	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0002	QP Bias	-13.0 V
Mass Offset	124	Axis Offset	-0.03		

Hardware Settings

Torch

Torch H	1.2 mm	Torch V	1.2 mm

EM

Discriminator	4.5 mV	Analog HV	2518 V	Pulse HV	1593 V

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240210B.b
Acq. Date-Time	2024-02-12 12:25:54
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

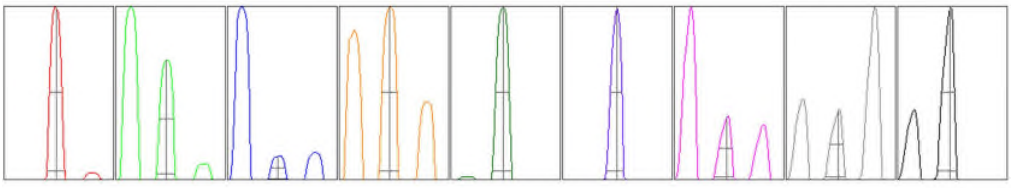
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	9079	90794.13	500.00		2.117	5.000
24	10.00	24990	249904.28	500.00		1.640	5.000
25	10.00	3316	33158.34	500.00		2.480	5.000
26	10.00	3853	38527.63	500.00		2.645	5.000
59	10.00	35311	353109.28	500.00		1.636	5.000
115	10.00	29667	296666.64	500.00		1.795	5.000
206	10.00	6500	64998.18	500.00		2.485	5.000
207	10.00	5417	54169.42	500.00		2.493	5.000
208	10.00	13364	133635.89	500.00		2.015	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.503 %
Doubly Charged	70 / 140 1.227 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	9236.14	8.95	8.90 - 9.10	
24	25669.34	23.90	23.90 - 24.10	
25	3370.18	24.90	24.90 - 25.10	
26	3966.49	25.90	25.90 - 26.10	
59	35321.58	58.95	58.90 - 59.10	
115	30169.65	115.00	114.90 - 115.10	
206	6277.42	205.95	205.90 - 206.10	
207	5505.14	206.95	206.90 - 207.10	
208	13877.48	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.35	0.485	0.900	
24	0.40	0.496	0.900	
25	0.40	0.494	0.900	
26	0.41	0.534	0.900	
59	0.38	0.530	0.900	
115	0.33	0.478	0.900	
206	0.36	0.539	0.900	
207	0.36	0.546	0.900	
208	0.36	0.537	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2518 V	Pulse HV	1598 V

[H2]

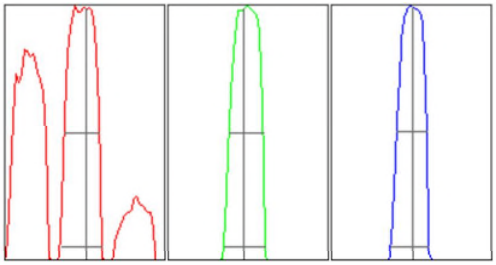
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		231	2306.76			7.456	
59		3650	36503.02			3.439	
115		30352	303518.58			2.531	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.518 %
Doubly Charged	70 / 140 0.420 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	231.77	26.05	25.90 - 26.10	
59	3788.43	58.95	58.90 - 59.10	
115	31813.60	115.05	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.67	0.787	0.900	
59	0.65	0.783	0.900	
115	0.57	0.723	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0000	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm		

EM

Discriminator	4.5 mV	Analog HV	2518 V	Pulse HV	1598 V

[He]

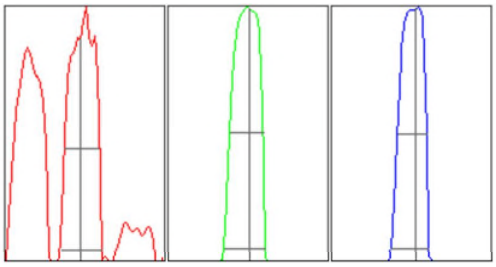
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		94	935.23			10.546	
59		7439	74391.29			2.040	
115		6032	60317.61			2.457	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.205 %
Doubly Charged	70 / 140 1.327 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	93.01	25.95	25.90 - 26.10	
59	7503.94	59.05	58.90 - 59.10	
115	6118.68	115.10	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.67	0.787	0.900	
59	0.64	0.780	0.900	
115	0.56	0.714	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0000	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

EM

Discriminator	4.5 mV	Analog HV	2518 V	Pulse HV	1598 V

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240209A

Instrument ID: ICPMS-03

Analyte	Data File	A0209002.d	A0209003.d	A0209004.d	A0209005.d	A0209006.d	A0209007.d	A0209008.d	A0209009.d	A0209010.d	
	Acq. Date-Time	02/09/2024 12:25 PM	02/09/2024 12:30 PM	02/09/2024 12:34 PM	02/09/2024 12:39 PM	02/09/2024 12:44 PM	02/09/2024 12:49 PM	02/09/2024 12:54 PM	02/09/2024 12:58 PM	02/09/2024 01:10 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	33108.3		33087.1	33208.5	33392.2	32924.6	33401.1	33581.5	34108.1	
55 Mn [2]	CPS	99.9		613.1	5610.8	11590.5	22312	46804.3	117157.3	242788.5	1.0000
52 Cr [2]	CPS	321.1		1310.1	11271.6	22713.3	45622.5	92176.4	231394	477749.2	1.0000
72 Ge (ISTD) [1]	CPS	59588		58015.7	59651.5	59609.2	57218.4	58826.4	60085.2	60920.7	
78 Se [1]	CPS	1.1		81.1	755.6	1570.1	2971.4	6225.7	15855.5	32558	1.0000
72 Ge (ISTD) [2]	CPS	20149.1	20156.9	20477.3	20213.6	20312.6	20113.5	20079	20638.6	20623	
75 As [2]	CPS	2.2	31.1	123.3	1311.1	2607.9	5573.3	11003.4	27955.4	56474.8	1.0000
103 Rh (ISTD) [2]	CPS	525303.4		525172.7	520060.6	520577.4	501186.3	526575.3	529297.8	532101.7	
95 Mo [2]	CPS	16.7		555.6	5900	11963.4	24745.7	49589.6	124961.8	259131.4	0.9999
159 Tb (ISTD) [3]	CPS	1450062.6		1455428.8	1488029.7	1473478.7	1481530.1	1521993.1	1529470.3	1551832.2	
137 Ba [3]	CPS	56.7		1526.8	13609.5	27845.1	56650.1	115271.4	293513.5	599055.3	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION SUMMARY: 240212A

Instrument ID: ICPMS-03

Analyte	Data File	A0212003.d	A0212005.d	A0212006.d	A0212007.d	A0212008.d	A0212009.d	A0212010.d	A0212011.d	
	Acq. Date-Time	02/12/2024 02:55 PM	02/12/2024 03:04 PM	02/12/2024 03:09 PM	02/12/2024 03:14 PM	02/12/2024 03:19 PM	02/12/2024 03:23 PM	02/12/2024 03:28 PM	02/12/2024 03:33 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	41518.2	40389.9	40120.2	40472.3	40249.5	40585.8	40317.4	39961.1	
55 Mn [2]	CPS	285	730.7	7027.6	14303.8	28037.8	58397.2	142607.7	288052.3	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181387**
Client ID: **ICV** Batch ID: **R181387** TestNo: **EPA 6020** Analysis Date: **2/9/2024** SeqNo: **5683834**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.492	0.10	10.00	0	105	90	110				
Barium	10.266	1.0	10.00	0	103	90	110				
Manganese	106.397	0.50	100.0	0	106	90	110				
Molybdenum	10.289	0.50	10.00	0	103	90	110				
Selenium	10.008	0.50	10.00	0	100	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181387**
Client ID: **ZZZZZZ** Batch ID: **R181387** TestNo: **EPA 6020** Analysis Date: **2/9/2024** SeqNo: **5683836**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.101	0.10	0.1000	0	101	80	120				
Barium	1.071	1.0	1.000	0	107	80	120				
Manganese	0.476	0.50	0.5000	0	95.2	80	120				
Molybdenum	0.586	0.50	0.5000	0	117	80	120				
Selenium	0.410	0.50	0.5000	0	81.9	80	120				

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181387**
Client ID: **CCV** Batch ID: **R181387** TestNo: **EPA 6020** Analysis Date: **2/9/2024** SeqNo: **5683837**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.542	0.10	20.00	0	97.7	90	110				
Barium	19.886	1.0	20.00	0	99.4	90	110				
Manganese	19.237	0.50	20.00	0	96.2	90	110				
Molybdenum	20.195	0.50	20.00	0	101	90	110				
Selenium	20.016	0.50	20.00	0	100	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181387**
Client ID: **CCV** Batch ID: **R181387** TestNo: **EPA 6020** Analysis Date: **2/9/2024** SeqNo: **5683847**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.387	0.10	20.00	0	102	90	110				
Barium	19.985	1.0	20.00	0	99.9	90	110				
Manganese	19.049	0.50	20.00	0	95.2	90	110				
Molybdenum	20.040	0.50	20.00	0	100	90	110				
Selenium	18.907	0.50	20.00	0	94.5	90	110				

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181387**
Client ID: **CCV** Batch ID: **R181387** TestNo: **EPA 6020** Analysis Date: **2/9/2024** SeqNo: **5683854**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.389	0.10	20.00	0	96.9	90	110				
Barium	20.278	1.0	20.00	0	101	90	110				
Manganese	18.984	0.50	20.00	0	94.9	90	110				
Molybdenum	20.115	0.50	20.00	0	101	90	110				
Selenium	20.138	0.50	20.00	0	101	90	110				

Sample ID **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181387**
Client ID: **CCV** Batch ID: **R181387** TestNo: **EPA 6020** Analysis Date: **2/9/2024** SeqNo: **5683868**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.307	0.10	20.00	0	96.5	90	110				
Barium	20.496	1.0	20.00	0	102	90	110				
Manganese	19.047	0.50	20.00	0	95.2	90	110				
Molybdenum	20.562	0.50	20.00	0	103	90	110				
Selenium	19.479	0.50	20.00	0	97.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181387**
Client ID: **CCV** Batch ID: **R181387** TestNo: **EPA 6020** Analysis Date: **2/9/2024** SeqNo: **5683878**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.784	0.10	20.00	0	98.9	90	110				
Barium	20.562	1.0	20.00	0	103	90	110				
Manganese	19.077	0.50	20.00	0	95.4	90	110				
Molybdenum	20.258	0.50	20.00	0	101	90	110				
Selenium	19.355	0.50	20.00	0	96.8	90	110				

Sample ID **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181387**
Client ID: **CCV** Batch ID: **R181387** TestNo: **EPA 6020** Analysis Date: **2/9/2024** SeqNo: **5683891**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.964	0.10	20.00	0	99.8	90	110				
Barium	20.627	1.0	20.00	0	103	90	110				
Manganese	18.510	0.50	20.00	0	92.5	90	110				
Molybdenum	20.370	0.50	20.00	0	102	90	110				
Selenium	19.843	0.50	20.00	0	99.2	90	110				

Sample ID **CCV6** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181387**
Client ID: **CCV** Batch ID: **R181387** TestNo: **EPA 6020** Analysis Date: **2/9/2024** SeqNo: **5683902**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.469	0.10	20.00	0	97.3	90	110				
Barium	20.967	1.0	20.00	0	105	90	110				
Manganese	18.652	0.50	20.00	0	93.3	90	110				
Molybdenum	20.458	0.50	20.00	0	102	90	110				
Selenium	20.493	0.50	20.00	0	102	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV7** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181387**
Client ID: **CCV** Batch ID: **R181387** TestNo: **EPA 6020** Analysis Date: **2/9/2024** SeqNo: **5683911**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.822	0.10	20.00	0	99.1	90	110				
Barium	20.509	1.0	20.00	0	103	90	110				
Manganese	19.043	0.50	20.00	0	95.2	90	110				
Molybdenum	20.372	0.50	20.00	0	102	90	110				
Selenium	19.093	0.50	20.00	0	95.5	90	110				

Sample ID **CCV8** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181387**
Client ID: **CCV** Batch ID: **R181387** TestNo: **EPA 6020** Analysis Date: **2/9/2024** SeqNo: **5683925**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.024	0.10	20.00	0	100	90	110				
Barium	20.928	1.0	20.00	0	105	90	110				
Manganese	18.660	0.50	20.00	0	93.3	90	110				
Molybdenum	20.329	0.50	20.00	0	102	90	110				
Selenium	18.849	0.50	20.00	0	94.2	90	110				

Sample ID **CCV9** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181387**
Client ID: **CCV** Batch ID: **R181387** TestNo: **EPA 6020** Analysis Date: **2/9/2024** SeqNo: **5683934**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.732	0.10	20.00	0	98.7	90	110				
Barium	20.852	1.0	20.00	0	104	90	110				
Manganese	18.919	0.50	20.00	0	94.6	90	110				
Molybdenum	20.173	0.50	20.00	0	101	90	110				
Selenium	19.791	0.50	20.00	0	99.0	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV10**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **CCV**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683944**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.551	0.10	20.00	0	97.8	90	110				
Barium	21.034	1.0	20.00	0	105	90	110				
Manganese	18.817	0.50	20.00	0	94.1	90	110				
Molybdenum	20.576	0.50	20.00	0	103	90	110				
Selenium	20.028	0.50	20.00	0	100	90	110				

Sample ID **CCV11**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **CCV**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683956**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.490	0.10	20.00	0	97.5	90	110				
Barium	21.279	1.0	20.00	0	106	90	110				
Manganese	18.825	0.50	20.00	0	94.1	90	110				
Molybdenum	20.678	0.50	20.00	0	103	90	110				
Selenium	20.070	0.50	20.00	0	100	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV**	SampType: **ICV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **ICV**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687169**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.306	0.10	10.00	0	103	90	110				
Barium	9.975	1.0	10.00	0	99.8	90	110				
Manganese	102.017	0.50	100.0	0	102	90	110				
Molybdenum	9.930	0.50	10.00	0	99.3	90	110				
Selenium	9.700	0.50	10.00	0	97.0	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: ***ZZZZZZ***	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687171**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.106	0.10	0.1000	0	106	80	120				
Barium	1.021	1.0	1.000	0	102	80	120				
Manganese	0.547	0.50	0.5000	0	109	80	120				
Molybdenum	0.538	0.50	0.5000	0	108	80	120				
Selenium	0.519	0.50	0.5000	0	104	80	120				

Sample ID **MLCCV**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **CCV**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687172**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.275	0.10	20.00	0	96.4	90	110				
Barium	19.040	1.0	20.00	0	95.2	90	110				
Manganese	19.819	0.50	20.00	0	99.1	90	110				
Molybdenum	19.328	0.50	20.00	0	96.6	90	110				
Selenium	19.237	0.50	20.00	0	96.2	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181460**
Client ID: **CCV** Batch ID: **R181460** TestNo: **EPA 6020** Analysis Date: **2/12/2024** SeqNo: **5687179**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.156	0.10	20.00	0	95.8	90	110				
Barium	19.742	1.0	20.00	0	98.7	90	110				
Manganese	19.559	0.50	20.00	0	97.8	90	110				
Molybdenum	19.400	0.50	20.00	0	97.0	90	110				
Selenium	19.060	0.50	20.00	0	95.3	90	110				

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181460**
Client ID: **CCV** Batch ID: **R181460** TestNo: **EPA 6020** Analysis Date: **2/12/2024** SeqNo: **5687188**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	18.923	0.10	20.00	0	94.6	90	110				
Barium	20.046	1.0	20.00	0	100	90	110				
Manganese	19.500	0.50	20.00	0	97.5	90	110				
Molybdenum	18.973	0.50	20.00	0	94.9	90	110				
Selenium	19.695	0.50	20.00	0	98.5	90	110				

Sample ID **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181460**
Client ID: **CCV** Batch ID: **R181460** TestNo: **EPA 6020** Analysis Date: **2/12/2024** SeqNo: **5687201**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.457	0.10	20.00	0	97.3	90	110				
Barium	20.534	1.0	20.00	0	103	90	110				
Manganese	19.376	0.50	20.00	0	96.9	90	110				
Molybdenum	19.324	0.50	20.00	0	96.6	90	110				
Selenium	18.892	0.50	20.00	0	94.5	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181460**
Client ID: **CCV** Batch ID: **R181460** TestNo: **EPA 6020** Analysis Date: **2/12/2024** SeqNo: **5687212**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.327	0.10	20.00	0	96.6	90	110				
Barium	19.939	1.0	20.00	0	99.7	90	110				
Manganese	19.600	0.50	20.00	0	98.0	90	110				
Molybdenum	19.382	0.50	20.00	0	96.9	90	110				
Selenium	19.421	0.50	20.00	0	97.1	90	110				

Sample ID **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181460**
Client ID: **CCV** Batch ID: **R181460** TestNo: **EPA 6020** Analysis Date: **2/12/2024** SeqNo: **5687219**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.066	0.10	20.00	0	95.3	90	110				
Barium	20.028	1.0	20.00	0	100	90	110				
Manganese	19.659	0.50	20.00	0	98.3	90	110				
Molybdenum	19.235	0.50	20.00	0	96.2	90	110				
Selenium	19.656	0.50	20.00	0	98.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICV	SampType:	ICV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181393
Client ID:	ICV	Batch ID:	R181393	TestNo:	EPA 6020			Analysis Date:	2/9/2024	SeqNo:	5684023

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.696	1.0	10.00	0	107	90	110				

Sample ID	LLICV1	SampType:	CCV1	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181393
Client ID:	ZZZZZZ	Batch ID:	R181393	TestNo:	EPA 6020			Analysis Date:	2/9/2024	SeqNo:	5684025

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.967	1.0	1.000	0	96.7	80	120				

Sample ID	MLCCV	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181393
Client ID:	CCV	Batch ID:	R181393	TestNo:	EPA 6020			Analysis Date:	2/9/2024	SeqNo:	5684026

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.000	1.0	20.00	0	100	90	110				

Sample ID	CCV1	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181393
Client ID:	CCV	Batch ID:	R181393	TestNo:	EPA 6020			Analysis Date:	2/9/2024	SeqNo:	5684036

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.533	1.0	20.00	0	97.7	90	110				

Sample ID	CCV2	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181393
Client ID:	CCV	Batch ID:	R181393	TestNo:	EPA 6020			Analysis Date:	2/9/2024	SeqNo:	5684043

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.436	1.0	20.00	0	97.2	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181393**
Client ID: **CCV**	Batch ID: **R181393**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5684057**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.434	1.0	20.00	0	97.2	90	110				

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181393**
Client ID: **CCV**	Batch ID: **R181393**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5684067**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.475	1.0	20.00	0	97.4	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181393**
Client ID: **CCV**	Batch ID: **R181393**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5684080**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	18.958	1.0	20.00	0	94.8	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181393**
Client ID: **CCV**	Batch ID: **R181393**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5684091**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.188	1.0	20.00	0	95.9	90	110				

Sample ID **CCV7**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181393**
Client ID: **CCV**	Batch ID: **R181393**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5684100**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.607	1.0	20.00	0	98.0	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCV8**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181393**
Client ID: **CCV**	Batch ID: **R181393**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5684114**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.384	1.0	20.00	0	96.9	90	110				

Sample ID **CCV9**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181393**
Client ID: **CCV**	Batch ID: **R181393**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5684123**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.764	1.0	20.00	0	98.8	90	110				

Sample ID **CCV10**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181393**
Client ID: **CCV**	Batch ID: **R181393**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5684133**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.265	1.0	20.00	0	96.3	90	110				

Sample ID **CCV11**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181393**
Client ID: **CCV**	Batch ID: **R181393**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5684145**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.240	1.0	20.00	0	96.2	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB**	SampType: **ICB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **ICB**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683835**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **CCB**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683848**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **CCB**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683855**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **CCB**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683869**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **CCB**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683879**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **CCB**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683892**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **CCB**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683903**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB7**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **CCB**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683912**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB8**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **CCB**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683926**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB9**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **CCB**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683935**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB10**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **CCB**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683945**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB11**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **CCB**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683957**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB**	SampType: **ICB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **ICB**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687170**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.188	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **CCB**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687180**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.176	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **CCB**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687189**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.169	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **CCB**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687202**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.191	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **CCB**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687213**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.218	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **CCB**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687220**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.171	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICB	SampType:	ICB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181393
Client ID:	ICB	Batch ID:	R181393	TestNo:	EPA 6020			Analysis Date:	2/9/2024	SeqNo:	5684024

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB1	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181393
Client ID:	CCB	Batch ID:	R181393	TestNo:	EPA 6020			Analysis Date:	2/9/2024	SeqNo:	5684037

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB2	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181393
Client ID:	CCB	Batch ID:	R181393	TestNo:	EPA 6020			Analysis Date:	2/9/2024	SeqNo:	5684044

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB3	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181393
Client ID:	CCB	Batch ID:	R181393	TestNo:	EPA 6020			Analysis Date:	2/9/2024	SeqNo:	5684058

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB4	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181393
Client ID:	CCB	Batch ID:	R181393	TestNo:	EPA 6020			Analysis Date:	2/9/2024	SeqNo:	5684068

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181393**
Client ID: **CCB**	Batch ID: **R181393**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5684081**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181393**
Client ID: **CCB**	Batch ID: **R181393**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5684092**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB7**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181393**
Client ID: **CCB**	Batch ID: **R181393**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5684101**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB8**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181393**
Client ID: **CCB**	Batch ID: **R181393**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5684115**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB9**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181393**
Client ID: **CCB**	Batch ID: **R181393**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5684124**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCB10**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181393**
Client ID: **CCB**	Batch ID: **R181393**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5684134**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB11**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181393**
Client ID: **CCB**	Batch ID: **R181393**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5684146**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181387**
Client ID: **ICSA** Batch ID: **R181387** TestNo: **EPA 6020** Analysis Date: **2/9/2024** SeqNo: **5683838**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181387**
Client ID: **ICSAB** Batch ID: **R181387** TestNo: **EPA 6020** Analysis Date: **2/9/2024** SeqNo: **5683839**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	22.167	0.10	20.00	0	111	80	120				
Barium	21.475	1.0	20.00	0	107	80	120				
Manganese	17.089	0.50	20.00	0	85.4	80	120				
Molybdenum	22.572	0.50	20.00	0	113	80	120				
Selenium	20.181	0.50	20.00	0	101	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181387**
Client ID: **ICSA** Batch ID: **R181387** TestNo: **EPA 6020** Analysis Date: **2/9/2024** SeqNo: **5683856**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **ICSAB**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683857**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	22.255	0.10	20.00	0	111	80	120				
Barium	21.984	1.0	20.00	0	110	80	120				
Manganese	16.838	0.50	20.00	0	84.2	80	120				
Molybdenum	22.697	0.50	20.00	0	113	80	120				
Selenium	19.638	0.50	20.00	0	98.2	80	120				

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **ICSA**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683880**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **ICSAB**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683881**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	21.232	0.10	20.00	0	106	80	120				
Barium	22.123	1.0	20.00	0	111	80	120				
Manganese	16.742	0.50	20.00	0	83.7	80	120				
Molybdenum	22.945	0.50	20.00	0	115	80	120				
Selenium	20.537	0.50	20.00	0	103	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA4**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **ICSA**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683913**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **ICSAB4**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **ICSAB**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683914**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.674	0.10	20.00	0	103	80	120				
Barium	22.245	1.0	20.00	0	111	80	120				
Manganese	16.621	0.50	20.00	0	83.1	80	120				
Molybdenum	22.719	0.50	20.00	0	114	80	120				
Selenium	21.036	0.50	20.00	0	105	80	120				

Sample ID **ICSA5**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **ICSA**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683946**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSAB5**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **ICSAB**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683947**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.991	0.10	20.00	0	105	80	120				
Barium	22.242	1.0	20.00	0	111	80	120				
Manganese	16.519	0.50	20.00	0	82.6	80	120				
Molybdenum	22.660	0.50	20.00	0	113	80	120				
Selenium	20.440	0.50	20.00	0	102	80	120				

Sample ID **ICSA6**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **ICSA**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683958**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **ICSAB6**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181387**
Client ID: **ICSAB**	Batch ID: **R181387**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5683959**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	21.230	0.10	20.00	0	106	80	120				
Barium	22.721	1.0	20.00	0	114	80	120				
Manganese	16.841	0.50	20.00	0	84.2	80	120				
Molybdenum	22.596	0.50	20.00	0	113	80	120				
Selenium	19.775	0.50	20.00	0	98.9	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **ICSA**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687173**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.175	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **ICSAB1**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **ICSAB**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687174**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	21.138	0.10	20.00	0	106	80	120				
Barium	20.795	1.0	20.00	0	104	80	120				
Manganese	16.320	0.50	20.00	0	81.6	80	120				
Molybdenum	22.470	0.50	20.00	0	112	80	120				
Selenium	20.081	0.50	20.00	0	100	80	120				

Sample ID **ICSA2**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **ICSA**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687190**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.193	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **ICSAB**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687191**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.902	0.10	20.00	0	105	80	120				
Barium	21.629	1.0	20.00	0	108	80	120				
Manganese	16.464	0.50	20.00	0	82.3	80	120				
Molybdenum	22.510	0.50	20.00	0	113	80	120				
Selenium	19.374	0.50	20.00	0	96.9	80	120				

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **ICSA**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687221**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.166	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **ICSAB**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687222**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	21.379	0.10	20.00	0	107	80	120				
Barium	21.287	1.0	20.00	0	106	80	120				
Manganese	16.577	0.50	20.00	0	82.9	80	120				
Molybdenum	22.119	0.50	20.00	0	111	80	120				
Selenium	19.700	0.50	20.00	0	98.5	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICSA1	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181393
Client ID:	ICSA	Batch ID:	R181393	TestNo:	EPA 6020			Analysis Date:	2/9/2024	SeqNo:	5684027

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	ICSAB1	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181393
Client ID:	ICSAB	Batch ID:	R181393	TestNo:	EPA 6020			Analysis Date:	2/9/2024	SeqNo:	5684028

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.786	1.0	20.00	0	104	80	120				

Sample ID	ICSA2	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181393
Client ID:	ICSA	Batch ID:	R181393	TestNo:	EPA 6020			Analysis Date:	2/9/2024	SeqNo:	5684045

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	ICSAB2	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181393
Client ID:	ICSAB	Batch ID:	R181393	TestNo:	EPA 6020			Analysis Date:	2/9/2024	SeqNo:	5684046

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.737	1.0	20.00	0	104	80	120				

Sample ID	ICSA3	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181393
Client ID:	ICSA	Batch ID:	R181393	TestNo:	EPA 6020			Analysis Date:	2/9/2024	SeqNo:	5684069

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICSAB3	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181393
Client ID:	ICSAB	Batch ID:	R181393	TestNo:	EPA 6020			Analysis Date:	2/9/2024	SeqNo:	5684070

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.369	1.0	20.00	0	102	80	120				

Sample ID	ICSA4	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181393
Client ID:	ICSA	Batch ID:	R181393	TestNo:	EPA 6020			Analysis Date:	2/9/2024	SeqNo:	5684102

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	ICSAB4	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181393
Client ID:	ICSAB	Batch ID:	R181393	TestNo:	EPA 6020			Analysis Date:	2/9/2024	SeqNo:	5684103

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.339	1.0	20.00	0	102	80	120				

Sample ID	ICSA5	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181393
Client ID:	ICSA	Batch ID:	R181393	TestNo:	EPA 6020			Analysis Date:	2/9/2024	SeqNo:	5684135

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	ICSAB5	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181393
Client ID:	ICSAB	Batch ID:	R181393	TestNo:	EPA 6020			Analysis Date:	2/9/2024	SeqNo:	5684136

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.180	1.0	20.00	0	101	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICSA6**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181393**
Client ID: **ICSA**	Batch ID: **R181393**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5684147**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **ICSAB6**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181393**
Client ID: **ICSAB**	Batch ID: **R181393**	TestNo: **EPA 6020**		Analysis Date: **2/9/2024**	SeqNo: **5684148**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.373	1.0	20.00	0	102	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240209A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	1450062.6	1450062.6	100	PASS	30-150	33108.3	33108.3	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	1477607.5	1450062.6	101.9	PASS	30-150	33802	33108.3	102.1	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	1455428.8	1450062.6	100.37	PASS	30-150	33087.1	33108.3	99.94	PASS	30-150
Std3-5/50 ppb	ICAL	1	1488029.7	1450062.6	102.62	PASS	30-150	33208.5	33108.3	100.3	PASS	30-150
Std4-10/100 ppb	ICAL	1	1473478.7	1450062.6	101.61	PASS	30-150	33392.2	33108.3	100.86	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	1481530.1	1450062.6	102.17	PASS	30-150	32924.6	33108.3	99.45	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	1521993.1	1450062.6	104.96	PASS	30-150	33401.1	33108.3	100.88	PASS	30-150
Std7-100/1000 ppb	ICAL	1	1529470.3	1450062.6	105.48	PASS	30-150	33581.5	33108.3	101.43	PASS	30-150
Std8-200/2000 ppb	ICAL	1	1551832.2	1450062.6	107.02	PASS	30-150	34108.1	33108.3	103.02	PASS	30-150
ICV	ICV	1	1541913.4	1450062.6	106.33	PASS	30-150	32963.5	33108.3	99.56	PASS	30-150
ICB	ICB	1	1494120.1	1450062.6	103.04	PASS	30-150	31747.9	33108.3	95.89	PASS	30-150
LLICV1	LLICV	1	1520225	1450062.6	104.84	PASS	30-150	32988.1	33108.3	99.64	PASS	30-150
MLCCV	CCV	1	1481341.5	1450062.6	102.16	PASS	30-150	32797.7	33108.3	99.06	PASS	30-150
ICSA1	ICSA	1	1486942.9	1450062.6	102.54	PASS	30-150	33138.4	33108.3	100.09	PASS	30-150
ICSAB1	ICSAB	1	1375767.7	1450062.6	94.88	PASS	30-150	33066	33108.3	99.87	PASS	30-150
CCV1	CCV	1	1499915.4	1450062.6	103.44	PASS	30-150	34612.5	33108.3	104.54	PASS	30-150
CCB1	CCB	1	1487672.6	1450062.6	102.59	PASS	30-150	34536.8	33108.3	104.31	PASS	30-150
CCV2	CCV	1	1483576.9	1450062.6	102.31	PASS	30-150	35799.4	33108.3	108.13	PASS	30-150
CCB2	CCB	1	1481415.9	1450062.6	102.16	PASS	30-150	35192.5	33108.3	106.3	PASS	30-150
ICSA2	ICSA	1	1495506.1	1450062.6	103.13	PASS	30-150	35284.9	33108.3	106.57	PASS	30-150
ICSAB2	ICSAB	1	1360754.8	1450062.6	93.84	PASS	30-150	34737.2	33108.3	104.92	PASS	30-150
CCV3	CCV	1	1489474.2	1450062.6	102.72	PASS	30-150	36510.9	33108.3	110.28	PASS	30-150
CCB3	CCB	1	1491990.9	1450062.6	102.89	PASS	30-150	35980.9	33108.3	108.68	PASS	30-150
CCV4	CCV	1	1493573.1	1450062.6	103	PASS	30-150	36225.9	33108.3	109.42	PASS	30-150
CCB4	CCB	1	1481685.6	1450062.6	102.18	PASS	30-150	35620.1	33108.3	107.59	PASS	30-150
ICSA3	ICSA	1	1510812.6	1450062.6	104.19	PASS	30-150	36073.4	33108.3	108.96	PASS	30-150
ICSAB3	ICSAB	1	1368717.8	1450062.6	94.39	PASS	30-150	35963.1	33108.3	108.62	PASS	30-150
MB-106714	MBLK	1	1433674.1	1450062.6	98.87	PASS	30-150	36548.9	33108.3	110.39	PASS	30-150
MB-106714	MBLK	1	1440638.4	1450062.6	99.35	PASS	30-150	35986.5	33108.3	108.69	PASS	30-150
LCS-106714	LCS	1	1444923.1	1450062.6	99.65	PASS	30-150	35258.3	33108.3	106.49	PASS	30-150
N063001-001C	SAMP	1	1154845.9	1450062.6	79.64	PASS	30-150	29611.8	33108.3	89.44	PASS	30-150
N063001-001C	SAMP	5	1350431.2	1450062.6	93.13	PASS	30-150	32951.4	33108.3	99.53	PASS	30-150
N063001-001C-PS	PS	1	1172094.9	1450062.6	80.83	PASS	30-150	30837.3	33108.3	93.14	PASS	30-150
N063001-001CMS	MS	1	1171140.7	1450062.6	80.76	PASS	30-150	30066	33108.3	90.81	PASS	30-150
N063001-001CMSD	MSD	1	1167909.3	1450062.6	80.54	PASS	30-150	30727.1	33108.3	92.81	PASS	30-150
N063001-003C	SAMP	1	1191616.4	1450062.6	82.18	PASS	30-150	30108.2	33108.3	90.94	PASS	30-150
CCV5	CCV	1	1454063.6	1450062.6	100.28	PASS	30-150	36163.6	33108.3	109.23	PASS	30-150
CCB5	CCB	1	1470096.3	1450062.6	101.38	PASS	30-150	35488.7	33108.3	107.19	PASS	30-150
N063001-004C	SAMP	1	1181707.9	1450062.6	81.49	PASS	30-150	29966.9	33108.3	90.51	PASS	30-150
N063001-005C	SAMP	1	1222884.4	1450062.6	84.33	PASS	30-150	30642.5	33108.3	92.55	PASS	30-150
N063001-006C	SAMP	1	1210133.5	1450062.6	83.45	PASS	30-150	30986.5	33108.3	93.59	PASS	30-150

INTERNAL STANDARD: 240209A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
N063001-007C	SAMP	1	1404125.2	1450062.6	96.83	PASS	30-150	34700.4	33108.3	104.81	PASS	30-150
N063001-008C	SAMP	1	1426743.6	1450062.6	98.39	PASS	30-150	33865.4	33108.3	102.29	PASS	30-150
N063001-009C	SAMP	1	1149720	1450062.6	79.29	PASS	30-150	29457.1	33108.3	88.97	PASS	30-150
N063001-010C	SAMP	1	1155750.3	1450062.6	79.7	PASS	30-150	30595.8	33108.3	92.41	PASS	30-150
N063001-011C	SAMP	1	1205664.4	1450062.6	83.15	PASS	30-150	31042.1	33108.3	93.76	PASS	30-150
N063001-012C	SAMP	1	1188337.5	1450062.6	81.95	PASS	30-150	30307.4	33108.3	91.54	PASS	30-150
CCV6	CCV	1	1442289	1450062.6	99.46	PASS	30-150	36447.5	33108.3	110.09	PASS	30-150
CCB6	CCB	1	1457670.4	1450062.6	100.52	PASS	30-150	36003.2	33108.3	108.74	PASS	30-150
N063001-014C	SAMP	1	1237879.2	1450062.6	85.37	PASS	30-150	30712.6	33108.3	92.76	PASS	30-150
N063001-015C	SAMP	1	1276291.5	1450062.6	88.02	PASS	30-150	31302.6	33108.3	94.55	PASS	30-150
N063001-016C	SAMP	1	1409410.7	1450062.6	97.2	PASS	30-150	32769.8	33108.3	98.98	PASS	30-150
N063001-017C	SAMP	1	1399299.8	1450062.6	96.5	PASS	30-150	31858.2	33108.3	96.22	PASS	30-150
N063001-018C	SAMP	1	1430510.8	1450062.6	98.65	PASS	30-150	31588.8	33108.3	95.41	PASS	30-150
N063001-020C	SAMP	1	1251549.2	1450062.6	86.31	PASS	30-150	29654.1	33108.3	89.57	PASS	30-150
N063001-021C	SAMP	1	1199568	1450062.6	82.73	PASS	30-150	29545	33108.3	89.24	PASS	30-150
CCV7	CCV	1	1466681.8	1450062.6	101.15	PASS	30-150	34894.2	33108.3	105.39	PASS	30-150
CCB7	CCB	1	1467695.6	1450062.6	101.22	PASS	30-150	34569	33108.3	104.41	PASS	30-150
ICSA4	ICSA	1	1495719.5	1450062.6	103.15	PASS	30-150	35073.4	33108.3	105.94	PASS	30-150
ICSAB4	ICSAB	1	1361904.2	1450062.6	93.92	PASS	30-150	33809.7	33108.3	102.12	PASS	30-150
N063001-001C	SAMP	10	1397744.8	1450062.6	96.39	PASS	30-150	31698.9	33108.3	95.74	PASS	30-150
N063001-001C	SAMP	50	1459410.3	1450062.6	100.64	PASS	30-150	32595.1	33108.3	98.45	PASS	30-150
N063001-001C-PS	PS	10	1427541.7	1450062.6	98.45	PASS	30-150	30767.2	33108.3	92.93	PASS	30-150
N063001-001CMS	MS	10	1453132.3	1450062.6	100.21	PASS	30-150	31428.4	33108.3	94.93	PASS	30-150
N063001-001CMSD	MSD	10	1418789.1	1450062.6	97.84	PASS	30-150	31112.3	33108.3	93.97	PASS	30-150
N063001-003C	SAMP	1	1208075.7	1450062.6	83.31	PASS	30-150	29848.9	33108.3	90.16	PASS	30-150
N063001-004C	SAMP	1	1181169.4	1450062.6	81.46	PASS	30-150	29625.1	33108.3	89.48	PASS	30-150
N063001-005C	SAMP	1	1234855	1450062.6	85.16	PASS	30-150	30829.6	33108.3	93.12	PASS	30-150
N063001-005C	SAMP	10	1369949.8	1450062.6	94.48	PASS	30-150	34119.3	33108.3	103.05	PASS	30-150
N063001-006C	SAMP	10	1385017.9	1450062.6	95.51	PASS	30-150	33208.6	33108.3	100.3	PASS	30-150
CCV8	CCV	1	1458014.8	1450062.6	100.55	PASS	30-150	35919.7	33108.3	108.49	PASS	30-150
CCB8	CCB	1	1467277.7	1450062.6	101.19	PASS	30-150	35688.1	33108.3	107.79	PASS	30-150
N063001-007C	SAMP	10	1419579.5	1450062.6	97.9	PASS	30-150	33021.5	33108.3	99.74	PASS	30-150
N063001-011C	SAMP	1	1220180.6	1450062.6	84.15	PASS	30-150	29177.7	33108.3	88.13	PASS	30-150
N063001-015C	SAMP	10	1425756.5	1450062.6	98.32	PASS	30-150	32723.2	33108.3	98.84	PASS	30-150
N063001-017C	SAMP	10	1451558.7	1450062.6	100.1	PASS	30-150	32437	33108.3	97.97	PASS	30-150
N063001-018C	SAMP	10	1453170.4	1450062.6	100.21	PASS	30-150	32477.1	33108.3	98.09	PASS	30-150
N063001-020C	SAMP	10	1409865.7	1450062.6	97.23	PASS	30-150	32650.8	33108.3	98.62	PASS	30-150
N063001-021C	SAMP	10	1413685.8	1450062.6	97.49	PASS	30-150	32343.5	33108.3	97.69	PASS	30-150
CCV9	CCV	1	1484490.1	1450062.6	102.37	PASS	30-150	34972.1	33108.3	105.63	PASS	30-150
CCB9	CCB	1	1468802.3	1450062.6	101.29	PASS	30-150	35012.2	33108.3	105.75	PASS	30-150
N063001-003C	SAMP	1	1179538.6	1450062.6	81.34	PASS	30-150	29055.3	33108.3	87.76	PASS	30-150

INTERNAL STANDARD: 240209A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
N063001-004C	SAMP	1	1178774.9	1450062.6	81.29	PASS	30-150	29345.8	33108.3	88.64	PASS	30-150
N063001-005C	SAMP	1	1201704.6	1450062.6	82.87	PASS	30-150	30710.5	33108.3	92.76	PASS	30-150
N063001-011C	SAMP	1	1188590.8	1450062.6	81.97	PASS	30-150	29925.7	33108.3	90.39	PASS	30-150
N063001-003C	SAMP	1	1188771.4	1450062.6	81.98	PASS	30-150	29452.6	33108.3	88.96	PASS	30-150
N063001-004C	SAMP	1	1173325.6	1450062.6	80.92	PASS	30-150	30106	33108.3	90.93	PASS	30-150
N063001-005C	SAMP	1	1199023.2	1450062.6	82.69	PASS	30-150	30629.2	33108.3	92.51	PASS	30-150
N063001-011C	SAMP	1	1179306.8	1450062.6	81.33	PASS	30-150	30436.6	33108.3	91.93	PASS	30-150
CCV10	CCV	1	1428699.2	1450062.6	98.53	PASS	30-150	35457.6	33108.3	107.1	PASS	30-150
CCB10	CCB	1	1437848.4	1450062.6	99.16	PASS	30-150	34988.8	33108.3	105.68	PASS	30-150
ICSA5	ICSA	1	1457633.2	1450062.6	100.52	PASS	30-150	34644.8	33108.3	104.64	PASS	30-150
ICSAB5	ICSAB	1	1334872.4	1450062.6	92.06	PASS	30-150	33925.5	33108.3	102.47	PASS	30-150
N063001-003C	SAMP	1	1164878.7	1450062.6	80.33	PASS	30-150	28940.6	33108.3	87.41	PASS	30-150
N063001-004C	SAMP	1	1173619.5	1450062.6	80.94	PASS	30-150	29377	33108.3	88.73	PASS	30-150
N063001-005C	SAMP	1	1183876.6	1450062.6	81.64	PASS	30-150	30001.4	33108.3	90.62	PASS	30-150
N063001-011C	SAMP	1	1178718.5	1450062.6	81.29	PASS	30-150	30281.9	33108.3	91.46	PASS	30-150
N063001-003C	SAMP	1	1162720.4	1450062.6	80.18	PASS	30-150	29168.8	33108.3	88.1	PASS	30-150
N063001-004C	SAMP	1	1159393.8	1450062.6	79.95	PASS	30-150	29834.4	33108.3	90.11	PASS	30-150
N063001-005C	SAMP	1	1178302.9	1450062.6	81.26	PASS	30-150	31025.5	33108.3	93.71	PASS	30-150
N063001-011C	SAMP	1	1167821.8	1450062.6	80.54	PASS	30-150	29979.1	33108.3	90.55	PASS	30-150
CCV11	CCV	1	1408420.4	1450062.6	97.13	PASS	30-150	35734.8	33108.3	107.93	PASS	30-150
CCB11	CCB	1	1424916.6	1450062.6	98.27	PASS	30-150	34578	33108.3	104.44	PASS	30-150
ICSA6	ICSA	1	1439183.6	1450062.6	99.25	PASS	30-150	34675.9	33108.3	104.73	PASS	30-150
ICSAB6	ICSAB	1	1296887.5	1450062.6	89.44	PASS	30-150	33843.2	33108.3	102.22	PASS	30-150

INTERNAL STANDARD: 240209A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]					72 Ge (ISTD) [1]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	20149.1	20149.1	100	PASS	30-150	59588	59588	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	20156.9	20149.1	100.04	PASS	30-150	59301.3	59588	99.52	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	20477.3	20149.1	101.63	PASS	30-150	58015.7	59588	97.36	PASS	30-150
Std3-5/50 ppb	ICAL	1	20213.6	20149.1	100.32	PASS	30-150	59651.5	59588	100.11	PASS	30-150
Std4-10/100 ppb	ICAL	1	20312.6	20149.1	100.81	PASS	30-150	59609.2	59588	100.04	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	20113.5	20149.1	99.82	PASS	30-150	57218.4	59588	96.02	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	20079	20149.1	99.65	PASS	30-150	58826.4	59588	98.72	PASS	30-150
Std7-100/1000 ppb	ICAL	1	20638.6	20149.1	102.43	PASS	30-150	60085.2	59588	100.83	PASS	30-150
Std8-200/2000 ppb	ICAL	1	20623	20149.1	102.35	PASS	30-150	60920.7	59588	102.24	PASS	30-150
ICV	ICV	1	20010	20149.1	99.31	PASS	30-150	59342.7	59588	99.59	PASS	30-150
ICB	ICB	1	19665.2	20149.1	97.6	PASS	30-150	57516.2	59588	96.52	PASS	30-150
LLICV1	LLICV	1	20217	20149.1	100.34	PASS	30-150	58068.1	59588	97.45	PASS	30-150
MLCCV	CCV	1	20023.4	20149.1	99.38	PASS	30-150	58675.8	59588	98.47	PASS	30-150
ICSA1	ICSA	1	20041.2	20149.1	99.46	PASS	30-150	59089.5	59588	99.16	PASS	30-150
ICSAB1	ICSAB	1	19040	20149.1	94.5	PASS	30-150	56290.9	59588	94.47	PASS	30-150
CCV1	CCV	1	20502.9	20149.1	101.76	PASS	30-150	60791.3	59588	102.02	PASS	30-150
CCB1	CCB	1	20633	20149.1	102.4	PASS	30-150	62061.5	59588	104.15	PASS	30-150
CCV2	CCV	1	21285	20149.1	105.64	PASS	30-150	62012.5	59588	104.07	PASS	30-150
CCB2	CCB	1	21270.5	20149.1	105.57	PASS	30-150	63049.7	59588	105.81	PASS	30-150
ICSA2	ICSA	1	20751	20149.1	102.99	PASS	30-150	63849.6	59588	107.15	PASS	30-150
ICSAB2	ICSAB	1	20241.4	20149.1	100.46	PASS	30-150	60291.7	59588	101.18	PASS	30-150
CCV3	CCV	1	21757.8	20149.1	107.98	PASS	30-150	64949.4	59588	109	PASS	30-150
CCB3	CCB	1	21322.8	20149.1	105.83	PASS	30-150	65402.3	59588	109.76	PASS	30-150
CCV4	CCV	1	21565.3	20149.1	107.03	PASS	30-150	64118.3	59588	107.6	PASS	30-150
CCB4	CCB	1	21518.6	20149.1	106.8	PASS	30-150	65695.7	59588	110.25	PASS	30-150
ICSA3	ICSA	1	21321.7	20149.1	105.82	PASS	30-150	66254.6	59588	111.19	PASS	30-150
ICSAB3	ICSAB	1	20494	20149.1	101.71	PASS	30-150	61944.5	59588	103.95	PASS	30-150
MB-106714	MBLK	1	21815.7	20149.1	108.27	PASS	30-150	66323.8	59588	111.3	PASS	30-150
MB-106714	MBLK	1	21206	20149.1	105.25	PASS	30-150	66246.8	59588	111.17	PASS	30-150
LCS-106714	LCS	1	20568.5	20149.1	102.08	PASS	30-150	62765.3	59588	105.33	PASS	30-150
N063001-001C	SAMP	1	17413.7	20149.1	86.42	PASS	30-150	49512.4	59588	83.09	PASS	30-150
N063001-001C	SAMP	5	19161.3	20149.1	95.1	PASS	30-150	55753.5	59588	93.56	PASS	30-150
N063001-001C-PS	PS	1	17001.1	20149.1	84.38	PASS	30-150	49792.1	59588	83.56	PASS	30-150
N063001-001CMS	MS	1	17229.1	20149.1	85.51	PASS	30-150	48517.3	59588	81.42	PASS	30-150
N063001-001CMSD	MSD	1	17259.1	20149.1	85.66	PASS	30-150	49386.5	59588	82.88	PASS	30-150
N063001-003C	SAMP	1	17486.1	20149.1	86.78	PASS	30-150	49679.5	59588	83.37	PASS	30-150
CCV5	CCV	1	20788.8	20149.1	103.17	PASS	30-150	62471.9	59588	104.84	PASS	30-150
CCB5	CCB	1	20719.8	20149.1	102.83	PASS	30-150	62196.6	59588	104.38	PASS	30-150
N063001-004C	SAMP	1	17140.1	20149.1	85.07	PASS	30-150	48135	59588	80.78	PASS	30-150
N063001-005C	SAMP	1	17878.7	20149.1	88.73	PASS	30-150	51919.7	59588	87.13	PASS	30-150
N063001-006C	SAMP	1	17943.2	20149.1	89.05	PASS	30-150	51650	59588	86.68	PASS	30-150

INTERNAL STANDARD: 240209A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]					72 Ge (ISTD) [1]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
N063001-007C	SAMP	1	20445	20149.1	101.47	PASS	30-150	60908.4	59588	102.22	PASS	30-150
N063001-008C	SAMP	1	20520.7	20149.1	101.84	PASS	30-150	60078.7	59588	100.82	PASS	30-150
N063001-009C	SAMP	1	16968.8	20149.1	84.22	PASS	30-150	48232	59588	80.94	PASS	30-150
N063001-010C	SAMP	1	17285.8	20149.1	85.79	PASS	30-150	49701.8	59588	83.41	PASS	30-150
N063001-011C	SAMP	1	17540.5	20149.1	87.05	PASS	30-150	49893.5	59588	83.73	PASS	30-150
N063001-012C	SAMP	1	17473.8	20149.1	86.72	PASS	30-150	50079.6	59588	84.04	PASS	30-150
CCV6	CCV	1	20829.9	20149.1	103.38	PASS	30-150	63092.1	59588	105.88	PASS	30-150
CCB6	CCB	1	21098	20149.1	104.71	PASS	30-150	62518.8	59588	104.92	PASS	30-150
N063001-014C	SAMP	1	17701.8	20149.1	87.85	PASS	30-150	50689.3	59588	85.07	PASS	30-150
N063001-015C	SAMP	1	17624	20149.1	87.47	PASS	30-150	51027	59588	85.63	PASS	30-150
N063001-016C	SAMP	1	19084.5	20149.1	94.72	PASS	30-150	55435.7	59588	93.03	PASS	30-150
N063001-017C	SAMP	1	18647.3	20149.1	92.55	PASS	30-150	54591.8	59588	91.62	PASS	30-150
N063001-018C	SAMP	1	18873.1	20149.1	93.67	PASS	30-150	55272.9	59588	92.76	PASS	30-150
N063001-020C	SAMP	1	17104.5	20149.1	84.89	PASS	30-150	49943.7	59588	83.82	PASS	30-150
N063001-021C	SAMP	1	16975.5	20149.1	84.25	PASS	30-150	48451.4	59588	81.31	PASS	30-150
CCV7	CCV	1	20621.9	20149.1	102.35	PASS	30-150	62212	59588	104.4	PASS	30-150
CCB7	CCB	1	20744.3	20149.1	102.95	PASS	30-150	61888.6	59588	103.86	PASS	30-150
ICSA4	ICSA	1	20877.8	20149.1	103.62	PASS	30-150	62675	59588	105.18	PASS	30-150
ICSAB4	ICSAB	1	19727.5	20149.1	97.91	PASS	30-150	56706.6	59588	95.16	PASS	30-150
N063001-001C	SAMP	10	19037.8	20149.1	94.48	PASS	30-150	55600.7	59588	93.31	PASS	30-150
N063001-001C	SAMP	50	19398.2	20149.1	96.27	PASS	30-150	58216.3	59588	97.7	PASS	30-150
N063001-001C-PS	PS	10	18630.6	20149.1	92.46	PASS	30-150	55189.3	59588	92.62	PASS	30-150
N063001-001CMS	MS	10	18557.2	20149.1	92.1	PASS	30-150	54231.8	59588	91.01	PASS	30-150
N063001-001CMSD	MSD	10	18757.5	20149.1	93.09	PASS	30-150	54753.4	59588	91.89	PASS	30-150
N063001-003C	SAMP	1	17225.8	20149.1	85.49	PASS	30-150	48858.2	59588	81.99	PASS	30-150
N063001-004C	SAMP	1	16833.1	20149.1	83.54	PASS	30-150	49168	59588	82.51	PASS	30-150
N063001-005C	SAMP	1	17746.3	20149.1	88.08	PASS	30-150	50892.1	59588	85.41	PASS	30-150
N063001-005C	SAMP	10	19924.4	20149.1	98.88	PASS	30-150	58423.8	59588	98.05	PASS	30-150
N063001-006C	SAMP	10	19744.2	20149.1	97.99	PASS	30-150	58210.8	59588	97.69	PASS	30-150
CCV8	CCV	1	21029.1	20149.1	104.37	PASS	30-150	63127.9	59588	105.94	PASS	30-150
CCB8	CCB	1	21083.6	20149.1	104.64	PASS	30-150	63305.3	59588	106.24	PASS	30-150
N063001-007C	SAMP	10	19861	20149.1	98.57	PASS	30-150	59076	59588	99.14	PASS	30-150
N063001-011C	SAMP	1	16663	20149.1	82.7	PASS	30-150	48302.1	59588	81.06	PASS	30-150
N063001-015C	SAMP	10	19491.7	20149.1	96.74	PASS	30-150	57163.8	59588	95.93	PASS	30-150
N063001-017C	SAMP	10	19328.1	20149.1	95.93	PASS	30-150	58216.4	59588	97.7	PASS	30-150
N063001-018C	SAMP	10	19753.1	20149.1	98.04	PASS	30-150	57573.1	59588	96.62	PASS	30-150
N063001-020C	SAMP	10	19401.5	20149.1	96.29	PASS	30-150	57020	59588	95.69	PASS	30-150
N063001-021C	SAMP	10	19265.8	20149.1	95.62	PASS	30-150	56729	59588	95.2	PASS	30-150
CCV9	CCV	1	20793.2	20149.1	103.2	PASS	30-150	62189.9	59588	104.37	PASS	30-150
CCB9	CCB	1	20680.9	20149.1	102.64	PASS	30-150	62370.5	59588	104.67	PASS	30-150
N063001-003C	SAMP	1	16718.6	20149.1	82.97	PASS	30-150	47975.6	59588	80.51	PASS	30-150

INTERNAL STANDARD: 240209A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]					72 Ge (ISTD) [1]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
N063001-004C	SAMP	1	16708.6	20149.1	82.92	PASS	30-150	48899.4	59588	82.06	PASS	30-150
N063001-005C	SAMP	1	17654	20149.1	87.62	PASS	30-150	50862	59588	85.36	PASS	30-150
N063001-011C	SAMP	1	16878.7	20149.1	83.77	PASS	30-150	49336.2	59588	82.8	PASS	30-150
N063001-003C	SAMP	1	17112.3	20149.1	84.93	PASS	30-150	48738.9	59588	81.79	PASS	30-150
N063001-004C	SAMP	1	16986.6	20149.1	84.3	PASS	30-150	49083.3	59588	82.37	PASS	30-150
N063001-005C	SAMP	1	17888.7	20149.1	88.78	PASS	30-150	52294.3	59588	87.76	PASS	30-150
N063001-011C	SAMP	1	17514.9	20149.1	86.93	PASS	30-150	49421	59588	82.94	PASS	30-150
CCV10	CCV	1	20803.2	20149.1	103.25	PASS	30-150	62243.4	59588	104.46	PASS	30-150
CCB10	CCB	1	20852.2	20149.1	103.49	PASS	30-150	61839.6	59588	103.78	PASS	30-150
ICSA5	ICSA	1	20907.8	20149.1	103.77	PASS	30-150	62257.9	59588	104.48	PASS	30-150
ICSAB5	ICSAB	1	20021.2	20149.1	99.37	PASS	30-150	57664.5	59588	96.77	PASS	30-150
N063001-003C	SAMP	1	16561.7	20149.1	82.2	PASS	30-150	48268.7	59588	81	PASS	30-150
N063001-004C	SAMP	1	16664.1	20149.1	82.7	PASS	30-150	47919.9	59588	80.42	PASS	30-150
N063001-005C	SAMP	1	17784.2	20149.1	88.26	PASS	30-150	51029.2	59588	85.64	PASS	30-150
N063001-011C	SAMP	1	17225.8	20149.1	85.49	PASS	30-150	48984.1	59588	82.2	PASS	30-150
N063001-003C	SAMP	1	16932.1	20149.1	84.03	PASS	30-150	48375.7	59588	81.18	PASS	30-150
N063001-004C	SAMP	1	17063.4	20149.1	84.69	PASS	30-150	48959.6	59588	82.16	PASS	30-150
N063001-005C	SAMP	1	18055.6	20149.1	89.61	PASS	30-150	52549.6	59588	88.19	PASS	30-150
N063001-011C	SAMP	1	16918.8	20149.1	83.97	PASS	30-150	49120.1	59588	82.43	PASS	30-150
CCV11	CCV	1	21095.8	20149.1	104.7	PASS	30-150	62308	59588	104.56	PASS	30-150
CCB11	CCB	1	20720.9	20149.1	102.84	PASS	30-150	63074.3	59588	105.85	PASS	30-150
ICSA6	ICSA	1	20714.3	20149.1	102.81	PASS	30-150	62920.3	59588	105.59	PASS	30-150
ICSAB6	ICSAB	1	19887.7	20149.1	98.7	PASS	30-150	56954.2	59588	95.58	PASS	30-150

INTERNAL STANDARD: 240209A

Instrument ID: ICPMS-03

Sample Name	Type	DF	103 Rh (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	525303.4	525303.4	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	527182.5	525303.4	100.36	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	525172.7	525303.4	99.98	PASS	30-150
Std3-5/50 ppb	ICAL	1	520060.6	525303.4	99	PASS	30-150
Std4-10/100 ppb	ICAL	1	520577.4	525303.4	99.1	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	501186.3	525303.4	95.41	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	526575.3	525303.4	100.24	PASS	30-150
Std7-100/1000 ppb	ICAL	1	529297.8	525303.4	100.76	PASS	30-150
Std8-200/2000 ppb	ICAL	1	532101.7	525303.4	101.29	PASS	30-150
ICV	ICV	1	527165.8	525303.4	100.35	PASS	30-150
ICB	ICB	1	503836.1	525303.4	95.91	PASS	30-150
LLICV1	LLICV	1	522387.2	525303.4	99.44	PASS	30-150
MLCCV	CCV	1	497610.9	525303.4	94.73	PASS	30-150
ICSA1	ICSA	1	519863.4	525303.4	98.96	PASS	30-150
ICSAB1	ICSAB	1	459456.3	525303.4	87.46	PASS	30-150
CCV1	CCV	1	512198	525303.4	97.51	PASS	30-150
CCB1	CCB	1	534298.9	525303.4	101.71	PASS	30-150
CCV2	CCV	1	516985	525303.4	98.42	PASS	30-150
CCB2	CCB	1	531354.5	525303.4	101.15	PASS	30-150
ICSA2	ICSA	1	533957.3	525303.4	101.65	PASS	30-150
ICSAB2	ICSAB	1	477247.9	525303.4	90.85	PASS	30-150
CCV3	CCV	1	525679.2	525303.4	100.07	PASS	30-150
CCB3	CCB	1	543360.1	525303.4	103.44	PASS	30-150
CCV4	CCV	1	525778.7	525303.4	100.09	PASS	30-150
CCB4	CCB	1	540994.7	525303.4	102.99	PASS	30-150
ICSA3	ICSA	1	541843.4	525303.4	103.15	PASS	30-150
ICSAB3	ICSAB	1	482861.1	525303.4	91.92	PASS	30-150
MB-106714	MBLK	1	543605.8	525303.4	103.48	PASS	30-150
MB-106714	MBLK	1	535633.5	525303.4	101.97	PASS	30-150
LCS-106714	LCS	1	522053	525303.4	99.38	PASS	30-150
N063001-001C	SAMP	1	393403.2	525303.4	74.89	PASS	30-150
N063001-001C	SAMP	5	451409.6	525303.4	85.93	PASS	30-150
N063001-001C-PS	PS	1	394267.5	525303.4	75.06	PASS	30-150
N063001-001CMS	MS	1	392987.9	525303.4	74.81	PASS	30-150
N063001-001CMSD	MSD	1	395387.5	525303.4	75.27	PASS	30-150
N063001-003C	SAMP	1	396444.7	525303.4	75.47	PASS	30-150
CCV5	CCV	1	507064.7	525303.4	96.53	PASS	30-150
CCB5	CCB	1	523566.7	525303.4	99.67	PASS	30-150
N063001-004C	SAMP	1	392830	525303.4	74.78	PASS	30-150
N063001-005C	SAMP	1	407693.9	525303.4	77.61	PASS	30-150
N063001-006C	SAMP	1	408574.6	525303.4	77.78	PASS	30-150

INTERNAL STANDARD: 240209A

Instrument ID: ICPMS-03

Sample Name	Type	DF	103 Rh (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
N063001-007C	SAMP	1	487934.9	525303.4	92.89	PASS	30-150
N063001-008C	SAMP	1	487932.3	525303.4	92.89	PASS	30-150
N063001-009C	SAMP	1	385226.1	525303.4	73.33	PASS	30-150
N063001-010C	SAMP	1	399638.9	525303.4	76.08	PASS	30-150
N063001-011C	SAMP	1	403361.8	525303.4	76.79	PASS	30-150
N063001-012C	SAMP	1	393734.1	525303.4	74.95	PASS	30-150
CCV6	CCV	1	509352.7	525303.4	96.96	PASS	30-150
CCB6	CCB	1	526466.5	525303.4	100.22	PASS	30-150
N063001-014C	SAMP	1	410127.4	525303.4	78.07	PASS	30-150
N063001-015C	SAMP	1	413936.3	525303.4	78.8	PASS	30-150
N063001-016C	SAMP	1	464158.4	525303.4	88.36	PASS	30-150
N063001-017C	SAMP	1	449482.2	525303.4	85.57	PASS	30-150
N063001-018C	SAMP	1	458950.8	525303.4	87.37	PASS	30-150
N063001-020C	SAMP	1	400995.6	525303.4	76.34	PASS	30-150
N063001-021C	SAMP	1	393276.2	525303.4	74.87	PASS	30-150
CCV7	CCV	1	503397.3	525303.4	95.83	PASS	30-150
CCB7	CCB	1	519372.4	525303.4	98.87	PASS	30-150
ICSA4	ICSA	1	526642.4	525303.4	100.25	PASS	30-150
ICSAB4	ICSAB	1	459636.3	525303.4	87.5	PASS	30-150
N063001-001C	SAMP	10	462430.2	525303.4	88.03	PASS	30-150
N063001-001C	SAMP	50	485037.4	525303.4	92.33	PASS	30-150
N063001-001C-PS	PS	10	453693	525303.4	86.37	PASS	30-150
N063001-001CMS	MS	10	455919.5	525303.4	86.79	PASS	30-150
N063001-001CMSD	MSD	10	460652.5	525303.4	87.69	PASS	30-150
N063001-003C	SAMP	1	392437.8	525303.4	74.71	PASS	30-150
N063001-004C	SAMP	1	395001.9	525303.4	75.2	PASS	30-150
N063001-005C	SAMP	1	410700.2	525303.4	78.18	PASS	30-150
N063001-005C	SAMP	10	476246.2	525303.4	90.66	PASS	30-150
N063001-006C	SAMP	10	476780.3	525303.4	90.76	PASS	30-150
CCV8	CCV	1	514608.4	525303.4	97.96	PASS	30-150
CCB8	CCB	1	530714.7	525303.4	101.03	PASS	30-150
N063001-007C	SAMP	10	502927.1	525303.4	95.74	PASS	30-150
N063001-011C	SAMP	1	393214.3	525303.4	74.85	PASS	30-150
N063001-015C	SAMP	10	471505	525303.4	89.76	PASS	30-150
N063001-017C	SAMP	10	487858.8	525303.4	92.87	PASS	30-150
N063001-018C	SAMP	10	491568.1	525303.4	93.58	PASS	30-150
N063001-020C	SAMP	10	471057.8	525303.4	89.67	PASS	30-150
N063001-021C	SAMP	10	471190.6	525303.4	89.7	PASS	30-150
CCV9	CCV	1	512345	525303.4	97.53	PASS	30-150
CCB9	CCB	1	529167.6	525303.4	100.74	PASS	30-150
N063001-003C	SAMP	1	389190.3	525303.4	74.09	PASS	30-150

INTERNAL STANDARD: 240209A

Instrument ID: ICPMS-03

Sample Name	Type	DF	103 Rh (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
N063001-004C	SAMP	1	389787.4	525303.4	74.2	PASS	30-150
N063001-005C	SAMP	1	405337.9	525303.4	77.16	PASS	30-150
N063001-011C	SAMP	1	394592.5	525303.4	75.12	PASS	30-150
N063001-003C	SAMP	1	388228.2	525303.4	73.91	PASS	30-150
N063001-004C	SAMP	1	389768.3	525303.4	74.2	PASS	30-150
N063001-005C	SAMP	1	404345.4	525303.4	76.97	PASS	30-150
N063001-011C	SAMP	1	393173	525303.4	74.85	PASS	30-150
CCV10	CCV	1	504836.1	525303.4	96.1	PASS	30-150
CCB10	CCB	1	516980.4	525303.4	98.42	PASS	30-150
ICSA5	ICSA	1	522053.6	525303.4	99.38	PASS	30-150
ICSAB5	ICSAB	1	460546.1	525303.4	87.67	PASS	30-150
N063001-003C	SAMP	1	389389.4	525303.4	74.13	PASS	30-150
N063001-004C	SAMP	1	386179.2	525303.4	73.52	PASS	30-150
N063001-005C	SAMP	1	396955.4	525303.4	75.57	PASS	30-150
N063001-011C	SAMP	1	392657.5	525303.4	74.75	PASS	30-150
N063001-003C	SAMP	1	385624.4	525303.4	73.41	PASS	30-150
N063001-004C	SAMP	1	385776.1	525303.4	73.44	PASS	30-150
N063001-005C	SAMP	1	401532.8	525303.4	76.44	PASS	30-150
N063001-011C	SAMP	1	389990.4	525303.4	74.24	PASS	30-150
CCV11	CCV	1	500806.5	525303.4	95.34	PASS	30-150
CCB11	CCB	1	514819.4	525303.4	98	PASS	30-150
ICSA6	ICSA	1	516710.7	525303.4	98.36	PASS	30-150
ICSAB6	ICSAB	1	455668.4	525303.4	86.74	PASS	30-150

INTERNAL STANDARD: 240212A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	41518.2	41518.2	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	40996.8	41518.2	98.74	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	40389.9	41518.2	97.28	PASS	30-150
Std3-5/50 ppb	ICAL	1	40120.2	41518.2	96.63	PASS	30-150
Std4-10/100 ppb	ICAL	1	40472.3	41518.2	97.48	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	40249.5	41518.2	96.94	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	40585.8	41518.2	97.75	PASS	30-150
Std7-100/1000 ppb	ICAL	1	40317.4	41518.2	97.11	PASS	30-150
Std8-200/2000 ppb	ICAL	1	39961.1	41518.2	96.25	PASS	30-150
ICV	ICV	1	39523.3	41518.2	95.2	PASS	30-150
ICB	ICB	1	39722.7	41518.2	95.68	PASS	30-150
LLICV1	LLICV	1	40138.1	41518.2	96.68	PASS	30-150
MLCCV	CCV	1	39954.3	41518.2	96.23	PASS	30-150
ICSA1	ICSA	1	40174.8	41518.2	96.76	PASS	30-150
ICSAB1	ICSAB	1	40550.2	41518.2	97.67	PASS	30-150
LLICV1	LLICV	1	42702.2	41518.2	102.85	PASS	30-150
CCV1	CCV	1	44231.7	41518.2	106.54	PASS	30-150
CCB1	CCB	1	41640.7	41518.2	100.3	PASS	30-150
CCV2	CCV	1	40984.6	41518.2	98.71	PASS	30-150
CCB2	CCB	1	40388.8	41518.2	97.28	PASS	30-150
ICSA2	ICSA	1	41703	41518.2	100.45	PASS	30-150
ICSAB2	ICSAB	1	41211.8	41518.2	99.26	PASS	30-150
N063001-005C	SAMP	100	43899.9	41518.2	105.74	PASS	30-150
CCV3	CCV	1	42628.6	41518.2	102.67	PASS	30-150
CCB3	CCB	1	41299.8	41518.2	99.47	PASS	30-150
CCV4	CCV	1	38993.2	41518.2	93.92	PASS	30-150
CCB4	CCB	1	37988.7	41518.2	91.5	PASS	30-150
CCV5	CCV	1	37754.8	41518.2	90.94	PASS	30-150
CCB5	CCB	1	37606.7	41518.2	90.58	PASS	30-150
ICSA3	ICSA	1	38160.2	41518.2	91.91	PASS	30-150
ICSAB3	ICSAB	1	36521	41518.2	87.96	PASS	30-150
CCV6	CCV	1	38056.6	41518.2	91.66	PASS	30-150
CCB6	CCB	1	36956.3	41518.2	89.01	PASS	30-150
ICSA4	ICSA	1	37220.3	41518.2	89.65	PASS	30-150
ICSAB4	ICSAB	1	34924.2	41518.2	84.12	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.: N063001
Test Method: EPA 6020
Analysis Date: 2/9,12/2024

Matrix: Groundwater
Batch No.: 106714

Instrument ID: ICPMS-03
Instrument Description: Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Dilution test for As & Mn failed. However, PS passed criteria.
Dilution test is not applicable to Se & Cr. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063001-001C DT 5x	Arsenic	As	µg/L	4.457675	FAIL	3.747001	18.97%	10
N063001-001C DT 5x	Barium	Ba	µg/L	65.76816	PASS	63.03891	4.33%	10
N063001-001C DT 5x	Molybdenum	Mo	µg/L	54.54836	PASS	55.78008	2.21%	10
N063001-001C DT 5x	Selenium	Se	µg/L	0.2284524	NA	0.4321073	47.13%	10
N063001-001C DT 5x	Chromium	Cr	µg/L	0.4934445	NA	0.7493711	34.15%	10
N063001-001C DT 5x	Manganese	Mn	µg/L	362.5841	FAIL	439.0732	17.42%	10

Reviewed by:

JRB 2/29/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	N063001-001C-PS	SampType:	PS	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	181387
Client ID:	ZZZZZZ	Batch ID:	106714	TestNo:	EPA 6020	EPA 3010A		Analysis Date:	2/9/2024	SeqNo:	5683887

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	14.516	0.10	10.00	3.747	108	80	120				
Barium	73.064	1.0	10.00	63.04	100	80	120				
Molybdenum	66.816	0.50	10.00	55.78	110	80	120				
Selenium	10.239	0.50	10.00	0.4321	98.1	80	120				

Sample ID	N063001-001C-PS	SampType:	PS	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	181387
Client ID:	ZZZZZZ	Batch ID:	106714	TestNo:	EPA 6020	EPA 3010A		Analysis Date:	2/9/2024	SeqNo:	5683917

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	1374.545	5.0	1000	439.1	93.5	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063001
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	**N063001-001C-PS**	SampType: **PS**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181393**
Client ID:	**ZZZZZZ**	Batch ID: **106714**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/9/2024**	SeqNo: **5684076**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	9.980	1.0	10.00	0.7494	92.3	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number:	502236
Report Level:	II
Report Date:	02/28/2024

Analytical Report *prepared for:*

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Location: N063002

Authorized for release by:

Quynhgiao Le

Quynhgiao Le, Project Manager
714-7716900
quynhgiao.le@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Sonny Lorenzo
Asset Laboratories
11110 Artersia
Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 502236
Location: N063002
Date Received: 02/13/24

Sample ID	Lab ID	Collected	Matrix
N063002-001A MW-21-Q124	502236-001	02/08/24 11:16	Water
N063002-002A / MW-71-035-Q124	502236-002	02/08/24 10:23	Water
N063002-003A / MW-915-Q124	502236-003	02/08/24 10:33	Water
N063002-004A / MW-913-Q124	502236-004	02/08/24 12:36	Water
N063002-005A / MW-26-Q124	502236-005	02/08/24 12:26	Water
N063002-006A / MW-51-Q124	502236-006	02/08/24 11:48	Water
N063002-007A / MW-31-060-Q124	502236-007	02/08/24 13:18	Water
N063002-008A / MW-31-135-Q124	502236-008	02/08/24 13:55	Water
N063002-009A / MW-914-Q124	502236-009	02/08/24 14:05	Water
N063002-010A / MW-81-043-Q124	502236-010	02/08/24 08:51	Water
N063002-011A / MW-81-098-Q124	502236-011	02/08/24 09:23	Water
N063002-012A / PT6D-Q124	502236-012	02/08/24 13:45	Water
N063002-013A / MW-36-020-Q124	502236-013	02/08/24 11:20	Water
N063002-014A / MW-36-040-Q124	502236-014	02/08/24 10:26	Water
N063002-015A / MW-36-050-Q124	502236-015	02/08/24 09:08	Water
N063002-016A / MW-36-070-Q124	502236-016	02/08/24 11:45	Water
N063002-017A / MW-36-090-Q124	502236-017	02/08/24 10:51	Water
N063002-018A / MW-36-100-Q124	502236-018	02/08/24 09:32	Water

Case Narrative

Asset Laboratories 11110 Artersia Blvd, Suite B Cerritos, CA 90703 Sonny Lorenzo	Lab Job Number: 502236 Location: N063002 Date Received: 02/13/24

This data package contains sample and QC results for eighteen water samples, requested for the above referenced project on 02/13/24. The samples were received cold and intact.

Total Organic Carbon by IR (SM 5310B):

- Level II is also requested.
- No analytical problems were encountered.

502236

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Enthalpy Analytical
931 W. Barkley Ave.
Orange, CA 92868

TEL: (714) 771-6900
FAX: (714) 538-1209
Acct #:

Field Sampler: Riggie Tep

12-Feb-24

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				SM5310B		
N063002-001A / MW-21-Q124	Groundwater	2/8/2024 11:16:00 AM	8OZA	1	(MS/MSD)	
N063002-002A / MW-71-035-Q124	Groundwater	2/8/2024 10:23:00 AM	8OZA	1		
N063002-003A / MW-915-Q124	Groundwater	2/8/2024 10:33:00 AM	8OZA	1		
N063002-004A / MW-913-Q124	Groundwater	2/8/2024 12:36:00 PM	8OZA	1		
N063002-005A / MW-26-Q124	Groundwater	2/8/2024 12:26:00 PM	8OZA	1		
N063002-006A / MW-51-Q124	Groundwater	2/8/2024 11:48:00 AM	8OZA	1		
N063002-007A / MW-31-060-Q124	Groundwater	2/8/2024 1:18:00 PM	8OZA	1		
N063002-008A / MW-31-135-Q124	Groundwater	2/8/2024 1:55:00 PM	8OZA	1		
N063002-009A / MW-914-Q124	Groundwater	2/8/2024 2:05:00 PM	8OZA	1		
N063002-010A / MW-81-043-Q124	Groundwater	2/8/2024 8:51:00 AM	8OZA	1		
N063002-011A / MW-81-098-Q124	Groundwater	2/8/2024 9:23:00 AM	8OZA	1		
N063002-012A / PT6D-Q124	Groundwater	2/8/2024 1:45:00 PM	8OZA	1		
N063002-013A / MW-36-020-Q124	Groundwater	2/8/2024 11:20:00 AM	8OZA	1		
N063002-014A / MW-36-040-Q124	Groundwater	2/8/2024 10:26:00 AM	8OZA	1		
N063002-015A / MW-36-050-Q124	Groundwater	2/8/2024 9:08:00 AM	8OZA	1		
N063002-016A / MW-36-070-Q124	Groundwater	2/8/2024 11:45:00 AM	8OZA	1		
N063002-017A / MW-36-090-Q124	Groundwater	2/8/2024 10:51:00 AM	8OZA	1		
N063002-018A / MW-36-100-Q124	Groundwater	2/8/2024 9:32:00 AM	8OZA	1		

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N63002A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for TOC by SM5310B. EDD requirement Labspec7 edata.

GLS #: 560935044

		Date/Time			Date/Time
Relinquished by:	YRodriguez	2/12/2024 1600	**Received by:**	Dam/Gam	2/13/24
Relinquished by:			**Received by:**		

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Asset Labs Project: N063002

Date Received: 2/13/24 Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 3.7 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☑ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 4.3 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times) PGE's 2/13/24	✓	✓	
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Asset's labels did not match their client's IDs. Labeled based on PGE's IDs instead. (for samples -002 & -003 only)

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____

☑ Email (email sent to/on): QGL / 2/13/24

Project Manager's response:

Completed By: _____ Date: 2/13/24

GLS.

800-322-5555
www.gls-us.com

Ship From
ADVANCED TECHNOLOGY
LABORATORIES, INC.
MARLON CARTIN
3151 W. POST RD.
LAS VEGAS, NV 89118

Tracking #: 560935044

PDS

Ship To
ENHALPY ANALYTICAL
SAMPLE RECEIVING
806 N. BATAVIA
ORANGE, CA 92868

ORANGE

S10219D

COD: $0.00
Weight: 0 lb(s)
Reference:

Delivery Instructions:

3659569

Signature Type: STANDARD

ORC CA927-RD0

Print Date: 2/12/2024 2:16 PM

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.
Step 2: Fold this page in half.
Step 3: Securely attach this label to your package and do not cover the barcode.

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all of the General Logistics Systems US, Inc. (GLS) service terms & conditions including, but not limited to; limits of liability, declared value conditions, and claim procedures which are available on our website at www.gls-us.com.

3.7/1.3°C

ENTHALPY ANALYTICAL

Analysis Results for 502236

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 502236
Location: N063002
Date Received: 02/13/24

Sample ID: N063002-001A MW-21-Q124 **Lab ID:** 502236-001 **Matrix:** Water **Collected:** 02/08/24 11:16

502236-001 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**7.7**		mg/L	1.0	1	333701	02/23/24	02/23/24	EPL

Sample ID: N063002-002A / MW-71-035-Q124 **Lab ID:** 502236-002 **Matrix:** Water **Collected:** 02/08/24 10:23

502236-002 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.6**		mg/L	1.0	1	333701	02/24/24	02/24/24	EPL

Sample ID: N063002-003A / MW-915-Q124 **Lab ID:** 502236-003 **Matrix:** Water **Collected:** 02/08/24 10:33

502236-003 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.8**		mg/L	1.0	1	333701	02/24/24	02/24/24	EPL

Sample ID: N063002-004A / MW-913-Q124 **Lab ID:** 502236-004 **Matrix:** Water **Collected:** 02/08/24 12:36

502236-004 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.8**		mg/L	1.0	1	333701	02/24/24	02/24/24	EPL

Sample ID: N063002-005A / MW-26-Q124 **Lab ID:** 502236-005 **Matrix:** Water **Collected:** 02/08/24 12:26

502236-005 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.6**		mg/L	1.0	1	333701	02/24/24	02/24/24	EPL

Sample ID: N063002-006A / MW-51-Q124 **Lab ID:** 502236-006 **Matrix:** Water **Collected:** 02/08/24 11:48

502236-006 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**14**		mg/L	1.0	1	333701	02/24/24	02/24/24	EPL

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 502236

Sample ID: N063002-007A / MW-31-060-Q124 **Lab ID:** 502236-007 **Collected:** 02/08/24 13:18 **Matrix:** Water

502236-007 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**6.2**		mg/L	1.0	1	333701	02/24/24	02/24/24	EPL

Sample ID: N063002-008A / MW-31-135-Q124 **Lab ID:** 502236-008 **Collected:** 02/08/24 13:55 **Matrix:** Water

502236-008 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.6**		mg/L	1.0	1	333701	02/24/24	02/24/24	EPL

Sample ID: N063002-009A / MW-914-Q124 **Lab ID:** 502236-009 **Collected:** 02/08/24 14:05 **Matrix:** Water

502236-009 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.9**		mg/L	1.0	1	333701	02/24/24	02/24/24	EPL

Sample ID: N063002-010A / MW-81-043-Q124 **Lab ID:** 502236-010 **Collected:** 02/08/24 08:51 **Matrix:** Water

502236-010 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.9**		mg/L	1.0	1	333701	02/24/24	02/24/24	EPL

Sample ID: N063002-011A / MW-81-098-Q124 **Lab ID:** 502236-011 **Collected:** 02/08/24 09:23 **Matrix:** Water

502236-011 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.9**		mg/L	1.0	1	333701	02/24/24	02/24/24	EPL

Sample ID: N063002-012A / PT6D-Q124 **Lab ID:** 502236-012 **Collected:** 02/08/24 13:45 **Matrix:** Water

502236-012 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**3.0**		mg/L	1.0	1	333701	02/24/24	02/24/24	EPL

Sample ID: N063002-013A / MW-36-020-Q124 **Lab ID:** 502236-013 **Collected:** 02/08/24 11:20 **Matrix:** Water

502236-013 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**27**		mg/L	1.0	1	333701	02/24/24	02/24/24	EPL

Results for any subcontracted analyses are not included in this section.

Analysis Results for 502236

Sample ID: N063002-014A / MW-36-040-Q124 **Lab ID:** 502236-014 **Collected:** 02/08/24 10:26
Matrix: Water

502236-014 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.1**		mg/L	1.0	1	333701	02/24/24	02/24/24	EPL

Sample ID: N063002-015A / MW-36-050-Q124 **Lab ID:** 502236-015 **Collected:** 02/08/24 09:08
Matrix: Water

502236-015 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.2**		mg/L	1.0	1	333701	02/24/24	02/24/24	EPL

Sample ID: N063002-016A / MW-36-070-Q124 **Lab ID:** 502236-016 **Collected:** 02/08/24 11:45
Matrix: Water

502236-016 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.0**		mg/L	1.0	1	333701	02/24/24	02/24/24	EPL

Sample ID: N063002-017A / MW-36-090-Q124 **Lab ID:** 502236-017 **Collected:** 02/08/24 10:51
Matrix: Water

502236-017 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.9**		mg/L	1.0	1	333701	02/24/24	02/24/24	EPL

Sample ID: N063002-018A / MW-36-100-Q124 **Lab ID:** 502236-018 **Collected:** 02/08/24 09:32
Matrix: Water

502236-018 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.8**		mg/L	1.0	1	333701	02/24/24	02/24/24	EPL

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type: Blank	**Lab ID: QC1130389**	**Batch: 333701**
Matrix: Water	**Method: SM 5310B**	

QC1130389 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Total Organic Carbon	ND		mg/L	1.0	02/23/24	02/23/24

Type: Lab Control Sample	**Lab ID: QC1130390**	**Batch: 333701**
Matrix: Water	**Method: SM 5310B**	

QC1130390 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Total Organic Carbon	24.53	25.00	mg/L	98%		80-120

Type: Matrix Spike	**Lab ID: QC1130391**	**Batch: 333701**
Matrix (Source ID): Water (502236-001)	**Method: SM 5310B**	

QC1130391 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Total Organic Carbon	32.60	7.728	25.00	mg/L	99%		80-120	1

Type: Matrix Spike Duplicate	**Lab ID: QC1130392**	**Batch: 333701**
Matrix (Source ID): Water (502236-001)	**Method: SM 5310B**	

QC1130392 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Total Organic Carbon	31.74	7.728	25.00	mg/L	96%		80-120	3	20	1

ND Not Detected

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number:	502238
Report Level:	II
Report Date:	02/28/2024

Analytical Report *prepared for:*

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Location: N063011

Authorized for release by:

Quynhgiao Le, Project Manager
714-7716900
quynhgiao.le@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Sonny Lorenzo
Asset Laboratories
11110 Artersia
Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 502238
Location: N063011
Date Received: 02/13/24

Sample ID	Lab ID	Collected	Matrix
N063011-001A/MW-20-070-Q124	502238-001	02/09/24 08:34	Water
N063011-002A/MW-20-100-Q124	502238-002	02/09/24 09:39	Water
N063011-003A/MW-912-Q124	502238-003	02/09/24 09:49	Water
N063011-004A/MW-20-130-Q124	502238-004	02/09/24 09:07	Water
N063011-005A/MW-42-030-Q124	502238-005	02/09/24 09:21	Water
N063011-006A/MW-42-055-Q124	502238-006	02/09/24 08:57	Water
N063011-007A/MW-42-065-Q124	502238-007	02/09/24 08:35	Water

Case Narrative

Asset Laboratories 11110 Artersia Blvd, Suite B Cerritos, CA 90703 Sonny Lorenzo	Lab Job Number: 502238 Location: N063011 Date Received: 02/13/24

This data package contains sample and QC results for seven water samples, requested for the above referenced project on 02/13/24. The samples were received cold and intact.

Total Organic Carbon by IR (SM 5310B):

- Level II is also requested.
- No analytical problems were encountered.

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

502238

QC Level: Level IV

Subcontractor:

Enthalpy Analytical
931 W. Barkley Ave.
Orange, CA 92868

TEL: (714) 771-6900
FAX: (714) 538-1209
Acct #:

Field Sampler: Riggie Tep

12-Feb-24

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				SM5310B		
N063011-001A / MW-20-070-Q124	Groundwater	2/9/2024 8:34:00 AM	8OZA	1		
N063011-002A / MW-20-100-Q124	Groundwater	2/9/2024 9:39:00 AM	8OZA	1		
N063011-003A / MW-912-Q124	Groundwater	2/9/2024 9:49:00 AM	8OZA	1		
N063011-004A / MW-20-130-Q124	Groundwater	2/9/2024 9:07:00 AM	8OZA	1		
N063011-005A / MW-42-030-Q124	Groundwater	2/9/2024 9:21:00 AM	8OZA	1		
N063011-006A / MW-42-055-Q124	Groundwater	2/9/2024 8:57:00 AM	8OZA	1		
N063011-007A / MW-42-065-Q124	Groundwater	2/9/2024 8:35:00 AM	8OZA	1		

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N63011A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for TOC by SM5310B. EDD requirement Labspec7 edata.

GLS #: 560935044

		Date/Time			Date/Time
Relinquished by:	YRodriguez	2/12/2024 1600	**Received by:**		
Relinquished by:			**Received by:**		2/13/24

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Asset Labs Project: N0630l1

Date Received: 2/13/24 Sampler's Name Present: ☒ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☒ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 3.7 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☒ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 1-3 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?		✓	
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____

☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: _____ Date: 2/13/24

ENTHALPY ANALYTICAL

Analysis Results for 502238

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 502238
Location: N063011
Date Received: 02/13/24

Sample ID: N063011-001A/MW-20-070-Q124 **Lab ID:** 502238-001 **Matrix:** Water **Collected:** 02/09/24 08:34

502238-001 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.3**		mg/L	1.0	1	333568	02/22/24	02/22/24	EPL

Sample ID: N063011-002A/MW-20-100-Q124 **Lab ID:** 502238-002 **Matrix:** Water **Collected:** 02/09/24 09:39

502238-002 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.4**		mg/L	1.0	1	333568	02/22/24	02/22/24	EPL

Sample ID: N063011-003A/MW-912-Q124 **Lab ID:** 502238-003 **Matrix:** Water **Collected:** 02/09/24 09:49

502238-003 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.4**		mg/L	1.0	1	333568	02/22/24	02/22/24	EPL

Sample ID: N063011-004A/MW-20-130-Q124 **Lab ID:** 502238-004 **Matrix:** Water **Collected:** 02/09/24 09:07

502238-004 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.7**		mg/L	1.0	1	333568	02/22/24	02/22/24	EPL

Sample ID: N063011-005A/MW-42-030-Q124 **Lab ID:** 502238-005 **Matrix:** Water **Collected:** 02/09/24 09:21

502238-005 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**6.2**		mg/L	1.0	1	333568	02/22/24	02/22/24	EPL

Sample ID: N063011-006A/MW-42-055-Q124 **Lab ID:** 502238-006 **Matrix:** Water **Collected:** 02/09/24 08:57

502238-006 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**3.3**		mg/L	1.0	1	333568	02/22/24	02/22/24	EPL

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 502238

Sample ID:	Lab ID: 502238-007	Collected: 02/09/24 08:35
N063011-007A/MW-42-065-Q124	Matrix: Water	

502238-007 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**4.5**		mg/L	1.0	1	333568	02/22/24	02/22/24	EPL

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type: Blank	**Lab ID: QC1129977**	**Batch: 333568**
Matrix: Water	**Method: SM 5310B**	

QC1129977 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Total Organic Carbon	ND		mg/L	1.0	02/22/24	02/22/24

Type: Lab Control Sample	**Lab ID: QC1129978**	**Batch: 333568**
Matrix: Water	**Method: SM 5310B**	

QC1129978 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Total Organic Carbon	25.00	25.00	mg/L	100%		80-120

Type: Matrix Spike	**Lab ID: QC1129979**	**Batch: 333568**
Matrix (Source ID): Water (502013-004)	**Method: SM 5310B**	

QC1129979 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Total Organic Carbon	29.30	2.170	25.00	mg/L	109%		80-120	1

Type: Matrix Spike Duplicate	**Lab ID: QC1129980**	**Batch: 333568**
Matrix (Source ID): Water (502013-004)	**Method: SM 5310B**	

QC1129980 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Total Organic Carbon	28.05	2.170	25.00	mg/L	104%		80-120	4	20	1

ND Not Detected

ARCADIS

Project: PG&E Topock - PCM

Project No.: 30121866

ASSET Laboratories Work Order:

N063012

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063012

Item	Page
Cover Page	1-5
Analytical Result/QC Summary Reports	6-49
Sample Receiving Items	50-55
List of Analysts	56
Raw Data	
EPA 218.6	57-171
EPA 300.0	172-194
EPA 6010B_Dissolved	195-228
EPA 6020_Dissolved	229-336

February 27, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063012

RE: PG&E Topock - PCM, 30121866

Attention: Dan Bush

Enclosed are the results for sample(s) received on February 09, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30121866
Lab Order: N063012

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 300:

Dilution was necessary due to precipitation of samples upon the addition of eluent.

Analytical Comments for EPA 6020:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Chromium in QC samples N063012-001C-MS and N063012-001C-MSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

ASSET Laboratories

Date: *27-Feb-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30121866
Lab Order: N063012
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063012-001A	MW-20-070-Q124	Groundwater	2/9/2024 8:34:00 AM	2/9/2024	2/27/2024
N063012-001B	MW-20-070-Q124	Groundwater	2/9/2024 8:34:00 AM	2/9/2024	2/27/2024
N063012-001C	MW-20-070-Q124	Groundwater	2/9/2024 8:34:00 AM	2/9/2024	2/27/2024
N063012-002A	MW-20-100-Q124	Groundwater	2/9/2024 9:39:00 AM	2/9/2024	2/27/2024
N063012-002B	MW-20-100-Q124	Groundwater	2/9/2024 9:39:00 AM	2/9/2024	2/27/2024
N063012-002C	MW-20-100-Q124	Groundwater	2/9/2024 9:39:00 AM	2/9/2024	2/27/2024
N063012-003A	MW-912-Q124	Groundwater	2/9/2024 9:49:00 AM	2/9/2024	2/27/2024
N063012-003B	MW-912-Q124	Groundwater	2/9/2024 9:49:00 AM	2/9/2024	2/27/2024
N063012-003C	MW-912-Q124	Groundwater	2/9/2024 9:49:00 AM	2/9/2024	2/27/2024
N063012-004A	MW-20-130-Q124	Groundwater	2/9/2024 9:07:00 AM	2/9/2024	2/27/2024
N063012-004B	MW-20-130-Q124	Groundwater	2/9/2024 9:07:00 AM	2/9/2024	2/27/2024
N063012-004C	MW-20-130-Q124	Groundwater	2/9/2024 9:07:00 AM	2/9/2024	2/27/2024
N063012-005A	EB-717-Q124	Groundwater	2/9/2024 9:55:00 AM	2/9/2024	2/27/2024
N063012-006A	MW-42-030-Q124	Groundwater	2/9/2024 9:21:00 AM	2/9/2024	2/27/2024
N063012-006B	MW-42-030-Q124	Groundwater	2/9/2024 9:21:00 AM	2/9/2024	2/27/2024
N063012-006C	MW-42-030-Q124	Groundwater	2/9/2024 9:21:00 AM	2/9/2024	2/27/2024
N063012-007A	MW-42-055-Q124	Groundwater	2/9/2024 8:57:00 AM	2/9/2024	2/27/2024
N063012-007B	MW-42-055-Q124	Groundwater	2/9/2024 8:57:00 AM	2/9/2024	2/27/2024
N063012-007C	MW-42-055-Q124	Groundwater	2/9/2024 8:57:00 AM	2/9/2024	2/27/2024
N063012-008A	MW-42-055-EB-Q124	Groundwater	2/9/2024 8:34:00 AM	2/9/2024	2/27/2024
N063012-009A	MW-42-065-Q124	Groundwater	2/9/2024 8:35:00 AM	2/9/2024	2/27/2024
N063012-009B	MW-42-065-Q124	Groundwater	2/9/2024 8:35:00 AM	2/9/2024	2/27/2024
N063012-009C	MW-42-065-Q124	Groundwater	2/9/2024 8:35:00 AM	2/9/2024	2/27/2024
N063012-010A	MW-42-065-EB-Q124	Groundwater	2/9/2024 8:11:00 AM	2/9/2024	2/27/2024
N063012-011A	EB-718-Q124	Groundwater	2/9/2024 10:00:00 AM	2/9/2024	2/27/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-070-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 8:34:00 AM
Lab ID:	N063012-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
EPA 218.6							
RunID: **NV00922-IC7_240212A** QC Batch: **R181444** PrepDate: Analyst: **RAB**							
Hexavalent Chromium	440	3.9	20		µg/L	100	2/12/2024 01:36 PM
DISSOLVED METALS BY ICP-MS							
EPA 3010A **EPA 6020**							
RunID: **NV00922-ICP8_240213D** QC Batch: **106751** PrepDate: **2/12/2024** Analyst: **DJ**							
Chromium	450	0.35	10		µg/L	10	2/14/2024 12:08 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-100-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 9:39:00 AM
Lab ID:	N063012-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240212A**	QC Batch: **R181444**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	2200	19	100		µg/L	500	2/12/2024 11:50 AM
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240213D**	QC Batch: **106751**			PrepDate:	**2/12/2024**		Analyst: **DJ**
Chromium	2400	3.5	100		µg/L	100	2/14/2024 12:59 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-912-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 9:49:00 AM
Lab ID:	N063012-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240212A**	QC Batch: **R181444**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	2200	19	100		µg/L	500	2/12/2024 03:30 PM
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240213D**	QC Batch: **106751**			PrepDate:	**2/12/2024**		Analyst: **DJ**
Chromium	2500	3.5	100		µg/L	100	2/14/2024 01:08 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-130-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 9:07:00 AM
Lab ID:	N063012-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240212A**	QC Batch: **R181444**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	2200	19	100		µg/L	500	2/12/2024 11:09 AM
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240213D**	QC Batch: **106751**			PrepDate:	**2/12/2024**		Analyst: **DJ**
Chromium	2400	3.5	100		µg/L	100	2/14/2024 01:27 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-717-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 9:55:00 AM
Lab ID:	N063012-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240212A**	QC Batch: **R181444**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/12/2024 05:04 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-42-030-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 9:21:00 AM
Lab ID:	N063012-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240212A**	QC Batch: **R181444**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/12/2024 12:40 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-42-055-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 8:57:00 AM
Lab ID:	N063012-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240212A**	QC Batch: **R181444**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/12/2024 12:58 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-42-055-EB-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 8:34:00 AM
Lab ID:	N063012-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240212A**	QC Batch: **R181444**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/12/2024 05:23 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-42-065-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 8:35:00 AM
Lab ID:	N063012-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240212A**	QC Batch: **R181444**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/12/2024 01:17 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-42-065-EB-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 8:11:00 AM
Lab ID:	N063012-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240212A**	QC Batch: **R181444**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/12/2024 05:42 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-718-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 10:00:00 AM
Lab ID:	N063012-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240212A**	QC Batch: **R181444**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/12/2024 06:24 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R181444**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **PBW**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686886**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R181444**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **LCSW**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686887**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.915	0.20	5.000	0	98.3	90	110				

Sample ID: **N063012-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686890**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4758.400	100	2500	2174	103	90	110				

Sample ID: **N063012-004AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686891**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4723.900	100	2500	2174	102	90	110	4758	0.728	20	

Sample ID: **N063012-002ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686893**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2080.000	100						2160	3.78	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063012-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686894**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4629.300	100	2500	2160	98.8	90	110				

Sample ID: **N063012-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686898**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.055	0.20	1.000	0	106	90	110				

Sample ID: **N063012-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686900**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.979	0.20	1.000	0	97.9	90	110				

Sample ID: **N063012-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686902**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.946	0.20	1.000	0	94.6	90	110				

Sample ID: **N063012-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686904**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	925.920	20	500.0	435.2	98.2	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063001-020AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686906**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.060	0.20	1.000	0	106	90	110				

Sample ID: **N063010-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686910**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.277	0.20	1.000	0.2887	98.8	90	110				

Sample ID: **N063010-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686912**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.281	0.20	1.000	0.2958	98.5	90	110				

Sample ID: **N063010-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686914**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.435	0.20	1.000	0.4431	99.1	90	110				

Sample ID: **N063012-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181444**
Client ID: **ZZZZZZ** Batch ID: **R181444** TestNo: **EPA 218.6** Analysis Date: **2/12/2024** SeqNo: **5686916**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4736.200	100	2500	2231	100	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N062966-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686918**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.977	1.0	5.000	0	99.5	90	110				

Sample ID: **N063001-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686922**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.779	1.0	5.000	0	95.6	90	110				

Sample ID: **N063001-022AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686924**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.053	0.20	1.000	0	105	90	110				

Sample ID: **N063012-005AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686926**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.039	0.20	1.000	0	104	90	110				

Sample ID: **N063012-008AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686928**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.059	0.20	1.000	0	106	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063012-010AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686930**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.050	0.20	1.000	0	105	90	110				

Sample ID: **N063012-011AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686934**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.081	0.20	1.000	0	108	90	110				

Sample ID: **N063001-021AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686935**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.788	0.20	1.000	0.8062	98.1	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **MB-106751**	SampType: **MBLK**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/12/2024**	RunNo: **181516**
Client ID: **PBW**	Batch ID: **106751**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/13/2024**	SeqNo: **5690091**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID: **LCS-106751**	SampType: **LCS**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/12/2024**	RunNo: **181516**
Client ID: **LCSW**	Batch ID: **106751**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/13/2024**	SeqNo: **5690092**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.103	1.0	10.00	0	101	85	115				

Sample ID: **N063012-001C-MS**	SampType: **MS**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/12/2024**	RunNo: **181516**
Client ID: **ZZZZZZ**	Batch ID: **106751**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/14/2024**	SeqNo: **5690105**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	467.089	10	10.00	451.5	156	75	125				S

Sample ID: **N063012-001C-MSD**	SampType: **MSD**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/12/2024**	RunNo: **181516**
Client ID: **ZZZZZZ**	Batch ID: **106751**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/14/2024**	SeqNo: **5690107**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	453.979	10	10.00	451.5	24.9	75	125	467.1	2.85	20	S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **N063012-001C-PS** SampType: **PS** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **181516**
Client ID: **ZZZZZZ** Batch ID: **106751** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/14/2024** SeqNo: **5690103**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	565.703	10	100.0	451.5	114	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-070-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 8:34:00 AM
Lab ID:	N063012-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240210A** QC Batch: **R181402**				PrepDate:			Analyst: **RAB**
Sulfate	350	17	25		mg/L	50	2/10/2024 03:59 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240210A** QC Batch: **R181402**				PrepDate:			Analyst: **RAB**
Nitrate as N	12	0.48	1.0		mg/L	20	2/10/2024 11:39 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-100-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 9:39:00 AM
Lab ID:	N063012-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240210A**	QC Batch: **R181402**			PrepDate:			Analyst: **RAB**
Sulfate	360	17	25		mg/L	50	2/10/2024 04:45 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240210A**	QC Batch: **R181402**			PrepDate:			Analyst: **RAB**
Nitrate as N	5.0	0.24	0.50		mg/L	10	2/10/2024 12:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-912-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 9:49:00 AM
Lab ID:	N063012-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240210A**	QC Batch: **R181402**			PrepDate:			Analyst: **RAB**
Sulfate	370	17	25		mg/L	50	2/10/2024 02:27 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240210A**	QC Batch: **R181402**			PrepDate:			Analyst: **RAB**
Nitrate as N	4.9	0.24	0.50		mg/L	10	2/10/2024 11:23 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-130-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 9:07:00 AM
Lab ID:	N063012-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240210A**	QC Batch: **R181402**			PrepDate:			Analyst: **RAB**
Sulfate	700	34	50		mg/L	100	2/10/2024 05:00 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240210A**	QC Batch: **R181402**			PrepDate:			Analyst: **RAB**
Nitrate as N	5.0	0.24	0.50		mg/L	10	2/10/2024 11:54 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-42-030-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 9:21:00 AM
Lab ID:	N063012-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240210A**	QC Batch: **R181402**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.12	0.25		mg/L	5	2/10/2024 12:24 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-42-055-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 8:57:00 AM
Lab ID:	N063012-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240210A**	QC Batch: **R181402**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.12	0.25		mg/L	5	2/10/2024 12:40 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-42-065-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 8:35:00 AM
Lab ID:	N063012-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240210A**	QC Batch: **R181402**			PrepDate:			Analyst: **RAB**
Nitrate as N	8.5	0.24	0.50		mg/L	10	2/10/2024 12:55 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **LCS-R181402_SO4**	SampType: **LCS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **LCSW**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684928**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.050	0.50	4.000	0	101	90	110				

Sample ID: **MB-R181402_SO4**	SampType: **MBLK**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **PBW**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684929**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **N063012-003BDUP**	SampType: **DUP**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **ZZZZZZ**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684933**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	369.445	25						372.8	0.907	20	

Sample ID: **N063012-003BMS**	SampType: **MS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **ZZZZZZ**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684934**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	557.505	25	200.0	372.8	92.3	80	120				

Sample ID: **N063012-003BMSD**	SampType: **MSD**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **ZZZZZZ**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684935**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	559.950	25	200.0	372.8	93.6	80	120	557.5	0.438	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **LCS-R181402_NO3**	SampType: **LCS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **LCSW**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684906**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.237	0.050	1.250	0	99.0	90	110				

Sample ID: **MB-R181402_NO3**	SampType: **MBLK**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **PBW**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684907**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **N063012-003BMS**	SampType: **MS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **ZZZZZZ**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684917**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	17.149	0.50	12.50	4.871	98.2	80	120				

Sample ID: **N063012-003BMSD**	SampType: **MSD**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **ZZZZZZ**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684918**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	17.194	0.50	12.50	4.871	98.6	80	120	17.15	0.262	20	

Sample ID: **N063012-004BDUP**	SampType: **DUP**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **ZZZZZZ**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684919**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	4.948	0.50						4.977	0.584	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-070-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 8:34:00 AM
Lab ID:	N063012-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240214A**	QC Batch: **106753**				PrepDate:	**2/12/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	2/14/2024 11:23 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-100-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 9:39:00 AM
Lab ID:	N063012-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240214A**	QC Batch: **106753**				PrepDate:	**2/12/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	2/14/2024 11:28 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-912-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 9:49:00 AM
Lab ID:	N063012-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240214A**	QC Batch: **106753**				PrepDate:	**2/12/2024**	Analyst: **DJ**
Iron	24	13	20		µg/L	1	2/14/2024 12:01 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-130-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 9:07:00 AM
Lab ID:	N063012-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240214A**	QC Batch: **106753**				PrepDate:	**2/12/2024**	Analyst: **DJ**
Iron	27	13	20		µg/L	1	2/14/2024 12:06 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-42-030-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 9:21:00 AM
Lab ID:	N063012-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240214A**	QC Batch: **106753**				PrepDate:	**2/12/2024**	Analyst: **DJ**
Iron	430	13	20		µg/L	1	2/14/2024 12:12 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-42-055-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 8:57:00 AM
Lab ID:	N063012-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240214A**	QC Batch: **106753**				PrepDate:	**2/12/2024**	Analyst: **DJ**
Iron	370	13	20		µg/L	1	2/14/2024 12:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-42-065-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 8:35:00 AM
Lab ID:	N063012-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240214A**	QC Batch: **106753**				PrepDate:	**2/12/2024**	Analyst: **DJ**
Iron	43	13	20		µg/L	1	2/14/2024 12:18 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-106753**	SampType: **MBLK**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/12/2024**	RunNo: **181521**
Client ID: **PBW**	Batch ID: **106753**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/14/2024**	SeqNo: **5690344**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS-106753**	SampType: **LCS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/12/2024**	RunNo: **181521**
Client ID: **LCSW**	Batch ID: **106753**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/14/2024**	SeqNo: **5690345**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	98.860	20	100.0	0	98.9	85	115				

Sample ID: **N063012-002C-MS**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/12/2024**	RunNo: **181521**
Client ID: **ZZZZZZ**	Batch ID: **106753**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/14/2024**	SeqNo: **5690355**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	141.133	20	100.0	18.13	123	75	125				

Sample ID: **N063012-002C-MSD**	SampType: **MSD**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/12/2024**	RunNo: **181521**
Client ID: **ZZZZZZ**	Batch ID: **106753**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/14/2024**	SeqNo: **5690356**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	117.844	20	100.0	18.13	99.7	75	125	141.1	18.0	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-070-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 8:34:00 AM
Lab ID:	N063012-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A			**EPA 6020**			
RunID: **NV00922-ICP8_240212B**	QC Batch: **106751**			PrepDate:		**2/12/2024**	Analyst: **DJ**
Arsenic	1.3	0.050	0.10		µg/L	1	2/12/2024 06:44 PM
Barium	29	0.083	1.0		µg/L	1	2/12/2024 06:44 PM
Manganese	ND	0.026	0.50		µg/L	1	2/12/2024 06:44 PM
Molybdenum	19	0.12	0.50		µg/L	1	2/12/2024 06:44 PM
Selenium	8.8	0.044	0.50		µg/L	1	2/12/2024 06:44 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-100-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 9:39:00 AM
Lab ID:	N063012-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240214B**	QC Batch: **106751**				PrepDate:	**2/12/2024**	Analyst: **DJ**
Arsenic	0.36	0.050	0.10		µg/L	1	2/14/2024 08:41 PM
Barium	40	0.083	1.0		µg/L	1	2/12/2024 07:08 PM
Manganese	ND	0.026	0.50		µg/L	1	2/12/2024 07:08 PM
Molybdenum	5.8	0.12	0.50		µg/L	1	2/12/2024 07:08 PM
Selenium	6.2	0.044	0.50		µg/L	1	2/12/2024 07:08 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-912-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 9:49:00 AM
Lab ID:	N063012-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240212B**	QC Batch: **106751**				PrepDate:	**2/12/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/12/2024 07:12 PM
Barium	40	0.083	1.0		µg/L	1	2/12/2024 07:12 PM
Manganese	ND	0.026	0.50		µg/L	1	2/12/2024 07:12 PM
Molybdenum	5.8	0.12	0.50		µg/L	1	2/12/2024 07:12 PM
Selenium	6.2	0.044	0.50		µg/L	1	2/12/2024 07:12 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-130-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 9:07:00 AM
Lab ID:	N063012-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240212B**	QC Batch: **106751**				PrepDate:	**2/12/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/12/2024 07:17 PM
Barium	26	0.083	1.0		µg/L	1	2/12/2024 07:17 PM
Manganese	ND	0.026	0.50		µg/L	1	2/12/2024 07:17 PM
Molybdenum	9.7	0.12	0.50		µg/L	1	2/12/2024 07:17 PM
Selenium	21	0.044	0.50		µg/L	1	2/12/2024 07:17 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-42-030-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 9:21:00 AM
Lab ID:	N063012-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240214B**	QC Batch: **106751**				PrepDate:	**2/12/2024**	Analyst: **DJ**
Arsenic	0.95	0.050	0.10		µg/L	1	2/14/2024 08:36 PM
Barium	140	0.083	1.0		µg/L	1	2/12/2024 07:22 PM
Manganese	85	0.026	0.50		µg/L	1	2/12/2024 07:22 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-42-055-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 8:57:00 AM
Lab ID:	N063012-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240212B**	QC Batch: **106751**			PrepDate:		**2/12/2024**	Analyst: **DJ**
Arsenic	15	0.050	0.10		µg/L	1	2/12/2024 07:40 PM
Barium	170	0.083	1.0		µg/L	1	2/12/2024 07:40 PM
Manganese	320	0.26	5.0		µg/L	10	2/14/2024 01:45 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-42-065-Q124
Lab Order:	N063012		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/9/2024 8:35:00 AM
Lab ID:	N063012-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240212B**	QC Batch: **106751**			PrepDate:		**2/12/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/12/2024 07:45 PM
Barium	79	0.083	1.0		µg/L	1	2/12/2024 07:45 PM
Manganese	2500	2.6	50		µg/L	100	2/14/2024 08:59 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **MB-106751** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/12/2024** RunNo: **181460**
Client ID: **PBW** Batch ID: **106751** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/12/2024** SeqNo: **5687193**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.043	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID: **LCS-106751** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/12/2024** RunNo: **181460**
Client ID: **LCSW** Batch ID: **106751** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/12/2024** SeqNo: **5687194**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.018	0.10	10.00	0	100	85	115				
Barium	10.128	1.0	10.00	0	101	85	115				
Manganese	97.164	0.50	100.0	0	97.2	85	115				
Molybdenum	9.865	0.50	10.00	0	98.7	85	115				
Selenium	9.383	0.50	10.00	0	93.8	85	115				

Sample ID: **N063012-001C-MS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/12/2024** RunNo: **181460**
Client ID: **ZZZZZZ** Batch ID: **106751** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/12/2024** SeqNo: **5687206**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.557	0.10	10.00	1.256	103	75	125				
Barium	38.769	1.0	10.00	28.79	99.8	75	125				
Manganese	91.200	0.50	100.0	0	91.2	75	125				
Molybdenum	30.574	0.50	10.00	19.38	112	75	125				
Selenium	18.270	0.50	10.00	8.796	94.7	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063012-001C-MSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/12/2024** RunNo: **181460**
Client ID: **ZZZZZZ** Batch ID: **106751** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/12/2024** SeqNo: **5687207**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.138	0.10	10.00	1.256	98.8	75	125	11.56	3.69	20	
Barium	39.173	1.0	10.00	28.79	104	75	125	38.77	1.04	20	
Manganese	91.194	0.50	100.0	0	91.2	75	125	91.20	0.00623	20	
Molybdenum	30.494	0.50	10.00	19.38	111	75	125	30.57	0.262	20	
Selenium	18.444	0.50	10.00	8.796	96.5	75	125	18.27	0.946	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

SAMPLE RECEIVING ITEMS

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes		EDD Requirement		QA/QC		Sample Receipt Condition	Y	N
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:		Excel EDD		RTNE		1. Chilled	✓	
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.moore@critigen.com	Address:		Geotracker		RWQCB	✓	2. Headspace		
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com	P.O.#	Labspec		CalTrans		3. Container Intact	✓	
Submitted By: Ryan Top		Phone: 949-727-1400, ext 200	Fax:	Others	✓	LEVEL III		4. Seal Present	✓	
Title: Field Tech	Phone: 916-786-3302 Fax:			Specify: RWQCB		LEVEL IV		5. IR number	3	
Signature: Date: 02/9/24	Sampled By: Ryan Top			Global ID:		Regulatory		6. Method of Cooling: ICE		
I hereby authorize ASSET Labs to perform the tests indicated below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for					Specify State:		Sample Temp: 1.7 °C		
Project Name: PG&E Topock - PCM	Signature: Date: 02/09/24							Courier: ASSET		
Project Number: 30121866								Tracking No.:		

Matrix: Ground X | Sediment | Potable | Soil | NPDES | Other Solid | Surface

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly)	Nitrate, sulfate (EPA 300.0) (1 L poly)	Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Selenium, Molybdenum (500mL poly)	Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOA)	Ammonia as Nitrogen (SM4500NH3D); H2SO4 (1 L poly)	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 (125 mL poly)	Nitrate (EPA 300.0) (1 L poly)	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063012-001	MW-20-070-Q124	2/9/2024	8:34		X	X	X	X	X					E	3	P	BNS	
2	-002	MW-20-100-Q124	2/9/2024	9:39		X	X	X	X	X					E	3	P	BNS	
3	-003	MW-912-Q124	2/9/2024	9:49		X	X	X	X	X					E	3	P	BNS	
4	-004	MW-20-130-Q124	2/9/2024	9:07		X	X	X	X	X					E	3	P	BNS	
5	-005	EB-717-Q124	2/9/2024	9:55		X									E	1	P	BNS	
6	-006	MW-42-030-Q124	2/9/2024	9:21		X		X						X	E	3	P	BNS	
7	-007	MW-42-055-Q124	2/9/2024	8:57		X		X						X	E	3	P	BNS	
8	-008	MW-42-055-EB-Q124	2/9/2024	8:34		X									E	1	P	BNS	
9	-009	MW-42-065-Q124	2/9/2024	8:35		X		X						X	E	3	P	BNS	
10	-010	MW-42-065-EB-Q124	2/9/2024	8:11		X									E	1	P	BNS	
11	-011	EB-718-Q124	2/9/2024	10:00		X									E	1	P	BNS	
12																			
13																			
14																			

Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:
M. Ryan Top	02/09/24 1200	Michael Mentone	2/9/24 1215
Michael Mentone	2/9/24 2305	Michael Mentone	2/9/24 2305
Michael Mentone	2/9/24	Michael Mentone	2/9/24

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:				Container Type:		
H=HCL	N=HNO_3	S=H_2SO_4	C=4°C	T=Tube	V=VOA	P=Pint
Z=$Zn(AC)_2$	O=NaOH	T=$Na_2S_2O_3$		J=Jar	B=Tedlar	G=Glass
Others/Specify:	B (NH4)2SO4/NH4OH			M=Metal	M=Metal	C=Can

White=Laboratory Copy
Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	2/9/2024	Workorder:	N063012
Rep sample Temp (Deg C):	1.9	IR Gun ID:	3
Temp Blank:	☑ Yes ☐ No		
Carrier name:	ASSET		
Last 4 digits of Tracking No.:	NA	Packing Material Used:	None
Cooling process:	☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None		

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By YR YRodriguez 2/12/2024

Reviewed By: for: MBC 02/12/2024

ASSET Laboratories

WORK ORDER Summary

12-Feb-24

WorkOrder: N063012

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30121866 **QC Level:** Level IV **Date Received:** 2/9/2024 11:05 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063012-001A	MW-20-070-Q124	2/9/2024 8:34:00 AM	2/26/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063012-001B			2/26/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/26/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063012-001C			2/26/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/26/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/26/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/26/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			2/26/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063012-002A	MW-20-100-Q124	2/9/2024 9:39:00 AM	2/26/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063012-002B			2/26/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/26/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063012-002C			2/26/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/26/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/26/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/26/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			2/26/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063012-003A	MW-912-Q124	2/9/2024 9:49:00 AM	2/26/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063012-003B			2/26/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/26/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063012-003C			2/26/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/26/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/26/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW

WORK ORDER Summary

12-Feb-24

WorkOrder: N063012

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30121866 **QC Level:** Level IV **Date Received:** 2/9/2024 11:05 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063012-003C	MW-912-Q124	2/9/2024 9:49:00 AM	2/26/2024	Groundwater	EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			2/26/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063012-004A	MW-20-130-Q124	2/9/2024 9:07:00 AM	2/26/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063012-004B			2/26/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/26/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063012-004C			2/26/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/26/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/26/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/26/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			2/26/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063012-005A	EB-717-Q124	2/9/2024 9:55:00 AM	2/26/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063012-006A	MW-42-030-Q124	2/9/2024 9:21:00 AM	2/26/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063012-006B			2/26/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063012-006C			2/26/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/26/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/26/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/26/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063012-007A	MW-42-055-Q124	2/9/2024 8:57:00 AM	2/26/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063012-007B			2/26/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063012-007C			2/26/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/26/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/26/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW

WORK ORDER Summary

12-Feb-24

WorkOrder: N063012

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30121866 **QC Level:** Level IV **Date Received:** 2/9/2024 11:05 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063012-007C	MW-42-055-Q124	2/9/2024 8:57:00 AM	2/26/2024	Groundwater	EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063012-008A	MW-42-055-EB-Q124	2/9/2024 8:34:00 AM	2/26/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063012-009A	MW-42-065-Q124	2/9/2024 8:35:00 AM	2/26/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063012-009B			2/26/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063012-009C			2/26/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/26/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/26/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/26/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063012-010A	MW-42-065-EB-Q124	2/9/2024 8:11:00 AM	2/26/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063012-011A	EB-718-Q124	2/9/2024 10:00:00 AM	2/26/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063012-012A	FOLDER	2/26/2024	2/26/2024		Folder	Folder	☐	☐	☐	LAB
			2/26/2024		Folder	Level IV Report	☐	☐	☐	LAB
			2/26/2024		Folder	Folder	☐	☐	☐	LAB

List of Analysts

ASSET Laboratories Work Order: N063012

NAME	TEST METHOD
Ria Abes	EPA 218.6, EPA 300.0
Diane Jetajobe	EPA 6010B_Dissolved, EPA 6020_Dissolved

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R181444
ASSET #: N063012

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/12/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?	X			X		
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?	X			X		
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer RB 02202024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063012-001A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 4.3517 * 100$$

$$Cr^{+6}, \mu g/L = 435.1700$$

Reporting results in two significant figures,

$$\mathbf{Cr^{+6}, \mu g/L = 440}$$

Reviewed by:

dMocha 2/27/2024

ANALYSIS RUN LOG

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240212A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/12/24 9:22 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/12/24 9:38 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/12/24 9:47 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/12/24 9:57 AM	Reported
13	MB-R181444	MBLK	1	Hexavalent Chromium	02/12/24 10:06 AM	Reported
14	LCS-R181444	LCS	1	Hexavalent Chromium	02/12/24 10:16 AM	Reported
15	N063001-021A	SAMP	1	Hexavalent Chromium	02/12/24 10:45 AM	Reported
16	N063001-021AMS	MS	1	Hexavalent Chromium	02/12/24 10:57 AM	Not Reported
17	N063012-004A	SAMP	500	Hexavalent Chromium	02/12/24 11:09 AM	Reported
18	N063012-004AMS	MS	500	Hexavalent Chromium	02/12/24 11:18 AM	Reported
19	N063012-004AMSD	MSD	500	Hexavalent Chromium	02/12/24 11:28 AM	Reported
20	N063012-002A	SAMP	500	Hexavalent Chromium	02/12/24 11:50 AM	Reported
21	N063012-002ADUP	DUP	500	Hexavalent Chromium	02/12/24 12:02 PM	Reported
22	N063012-002AMS	MS	500	Hexavalent Chromium	02/12/24 12:11 PM	Reported
23	CCV-2	CCV	1	Hexavalent Chromium	02/12/24 12:21 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/12/24 12:30 PM	Reported
25	N063012-006A	SAMP	1	Hexavalent Chromium	02/12/24 12:40 PM	Reported
26	N063012-006AMS	MS	1	Hexavalent Chromium	02/12/24 12:49 PM	Reported
27	N063012-007A	SAMP	1	Hexavalent Chromium	02/12/24 12:58 PM	Reported
28	N063012-007AMS	MS	1	Hexavalent Chromium	02/12/24 1:08 PM	Reported
29	N063012-009A	SAMP	1	Hexavalent Chromium	02/12/24 1:17 PM	Reported
30	N063012-009AMS	MS	1	Hexavalent Chromium	02/12/24 1:27 PM	Reported
31	N063012-001A	SAMP	100	Hexavalent Chromium	02/12/24 1:36 PM	Reported
32	N063012-001AMS	MS	100	Hexavalent Chromium	02/12/24 1:46 PM	Reported
33	N063001-020A	SAMP	1	Hexavalent Chromium	02/12/24 1:55 PM	Reported
34	N063001-020AMS	MS	1	Hexavalent Chromium	02/12/24 2:05 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/12/24 2:14 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/12/24 2:24 PM	Reported
37	N063010-001A	SAMP	1	Hexavalent Chromium	02/12/24 2:33 PM	Reported
38	N063010-001AMS	MS	1	Hexavalent Chromium	02/12/24 2:43 PM	Reported
39	N063010-002A	SAMP	1	Hexavalent Chromium	02/12/24 2:52 PM	Reported
40	N063010-002AMS	MS	1	Hexavalent Chromium	02/12/24 3:01 PM	Reported
41	N063010-003A	SAMP	1	Hexavalent Chromium	02/12/24 3:11 PM	Reported
42	N063010-003AMS	MS	1	Hexavalent Chromium	02/12/24 3:20 PM	Reported

INJECTION LOG: 240212A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063012-003A	SAMP	500	Hexavalent Chromium	02/12/24 3:30 PM	Reported
44	N063012-003AMS	MS	500	Hexavalent Chromium	02/12/24 3:39 PM	Reported
45	N062966-003A	SAMP	5	Hexavalent Chromium	02/12/24 3:49 PM	Reported
46	N062966-003AMS	MS	5	Hexavalent Chromium	02/12/24 3:58 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/12/24 4:08 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/12/24 4:17 PM	Reported
49	N063001-003A	SAMP	5	Hexavalent Chromium	02/12/24 4:26 PM	Reported
50	N063001-003AMS	MS	5	Hexavalent Chromium	02/12/24 4:36 PM	Reported
51	N063001-022A	SAMP	1	Hexavalent Chromium	02/12/24 4:45 PM	Reported
52	N063001-022AMS	MS	1	Hexavalent Chromium	02/12/24 4:55 PM	Reported
53	N063012-005A	SAMP	1	Hexavalent Chromium	02/12/24 5:04 PM	Reported
54	N063012-005AMS	MS	1	Hexavalent Chromium	02/12/24 5:14 PM	Reported
55	N063012-008A	SAMP	1	Hexavalent Chromium	02/12/24 5:23 PM	Reported
56	N063012-008AMS	MS	1	Hexavalent Chromium	02/12/24 5:33 PM	Reported
57	N063012-010A	SAMP	1	Hexavalent Chromium	02/12/24 5:42 PM	Reported
58	N063012-010AMS	MS	1	Hexavalent Chromium	02/12/24 5:52 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/12/24 6:01 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/12/24 6:14 PM	Reported
61	N063012-011A	SAMP	1	Hexavalent Chromium	02/12/24 6:24 PM	Reported
62	N063012-011AMS	MS	1	Hexavalent Chromium	02/12/24 6:33 PM	Reported
63	N063001-021AMS	MS	1	Hexavalent Chromium	02/12/24 6:43 PM	Reported
64	CCV-6	CCV1	1	Hexavalent Chromium	02/12/24 6:52 PM	Reported
65	CCB-6	CCB	1	Hexavalent Chromium	02/12/24 7:02 PM	Reported
66	BLANK	BLANK	1	Hexavalent Chromium	02/12/24 7:14 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240212A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**12/Feb/24 19:44:39**
No. of Injections:	**69**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/12/2024 09:22	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/12/2024 09:38	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/12/2024 09:47	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/12/2024 09:57	Finished	CCB R240103B
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/12/2024 10:06	Finished	MB R240103B
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/12/2024 10:16	Finished	LCS @5ppb, IWST-231228B
15	N063001-021A,SAMP	1	1000	Unknown		02/12/2024 10:45	Finished	SAMP,10 mL
16	N063001-021AMS,MS	2	1000	Unknown		02/12/2024 10:57	Finished	MS (5ppb), IWST-231228B,10r
17	N063012-004A,SAMP	3	1000	Unknown		02/12/2024 11:09	Finished	SAMP,0.02>10 mL
18	N063012-004AMS,MS	4	1000	Unknown		02/12/2024 11:18	Finished	MS (5ppb), IWST-231228B,0.0
19	N063012-004AMSD,M	5	1000	Unknown		02/12/2024 11:28	Finished	MSD (5ppb), IWST-231228B,0
20	N063012-002A,SAMP	1	1000	Unknown		02/12/2024 11:50	Finished	SAMP,0.02>10 mL
21	N063012-002ADUP,D	2	1000	Unknown		02/12/2024 12:02	Finished	DUP,0.02>10 mL
22	N063012-002AMS,MS	3	1000	Unknown		02/12/2024 12:11	Finished	MS (5ppb), IWST-231228B,0.0
23	CCV-2,CCV,1,	4	1000	Unknown		02/12/2024 12:21	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	5	1000	Unknown		02/12/2024 12:30	Finished	CCB R240103B
25	N063012-006A,SAMP	6	1000	Unknown		02/12/2024 12:40	Finished	SAMP,10 mL
26	N063012-006AMS,MS	7	1000	Unknown		02/12/2024 12:49	Finished	MS (1ppb), IWST-231228B,10r
27	N063012-007A,SAMP	8	1000	Unknown		02/12/2024 12:58	Finished	SAMP,10 mL
28	N063012-007AMS,MS	9	1000	Unknown		02/12/2024 13:08	Finished	MS (1ppb), IWST-231228B,10r
29	N063012-009A,SAMP	10	1000	Unknown		02/12/2024 13:17	Finished	SAMP,10 mL
30	N063012-009AMS,MS	11	1000	Unknown		02/12/2024 13:27	Finished	MS (1ppb), IWST-231228B,10r
31	N063012-001A,SAMP	12	1000	Unknown		02/12/2024 13:36	Finished	SAMP,0.1>10 mL
32	N063012-001AMS,MS	13	1000	Unknown		02/12/2024 13:46	Finished	MS (5ppb), IWST-231228B,0.1
33	N063001-020A,SAMP	14	1000	Unknown		02/12/2024 13:55	Finished	SAMP,10 mL
34	N063001-020AMS,MS	15	1000	Unknown		02/12/2024 14:05	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	16	1000	Unknown		02/12/2024 14:14	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	17	1000	Unknown		02/12/2024 14:24	Finished	CCB R240103B
37	N063010-001A,SAMP	18	1000	Unknown		02/12/2024 14:33	Finished	SAMP,10 mL
38	N063010-001AMS,MS	19	1000	Unknown		02/12/2024 14:43	Finished	MS (1ppb), IWST-231228B,10r
39	N063010-002A,SAMP	20	1000	Unknown		02/12/2024 14:52	Finished	SAMP,10 mL
40	N063010-002AMS,MS	21	1000	Unknown		02/12/2024 15:01	Finished	MS (1ppb), IWST-231228B,10r
41	N063010-003A,SAMP	22	1000	Unknown		02/12/2024 15:11	Finished	SAMP,10 mL
42	N063010-003AMS,MS	23	1000	Unknown		02/12/2024 15:20	Finished	MS (1ppb), IWST-231228B,10r
43	N063012-003A,SAMP	24	1000	Unknown		02/12/2024 15:30	Finished	SAMP,0.02>10 mL
44	N063012-003AMS,MS	25	1000	Unknown		02/12/2024 15:39	Finished	MS (5ppb), IWST-231228B,0.0
45	N062966-003A,SAMP	26	1000	Unknown		02/12/2024 15:49	Finished	SAMP,2>10 mL
46	N062966-003AMS,MS	27	1000	Unknown		02/12/2024 15:58	Finished	MS (1ppb), IWST-231228B,2>1
47	CCV-4,CCV1,1,	28	1000	Unknown		02/12/2024 16:08	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	29	1000	Unknown		02/12/2024 16:17	Finished	CCB R240103B
49	N063001-003A,SAMP	30	1000	Unknown		02/12/2024 16:26	Finished	SAMP,2>10 mL
50	N063001-003AMS,MS	31	1000	Unknown		02/12/2024 16:36	Finished	MS (1ppb), IWST-231228B,2>1
51	N063001-022A,SAMP	32	1000	Unknown		02/12/2024 16:45	Finished	SAMP,10 mL
52	N063001-022AMS,MS	33	1000	Unknown		02/12/2024 16:55	Finished	MS (1ppb), IWST-231228B,10r
53	N063012-005A,SAMP	34	1000	Unknown		02/12/2024 17:04	Finished	SAMP,10 mL
54	N063012-005AMS,MS	35	1000	Unknown		02/12/2024 17:14	Finished	MS (1ppb), IWST-231228B,10r
55	N063012-008A,SAMP	36	1000	Unknown		02/12/2024 17:23	Finished	SAMP,10 mL
56	N063012-008AMS,MS	37	1000	Unknown		02/12/2024 17:33	Finished	MS (1ppb), IWST-231228B,10r
57	N063012-010A,SAMP	38	1000	Unknown		02/12/2024 17:42	Finished	SAMP,10 mL
58	N063012-010AMS,MS	39	1000	Unknown		02/12/2024 17:52	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	40	1000	Unknown		02/12/2024 18:01	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	41	1000	Unknown		02/12/2024 18:14	Finished	CCB R240103B

61	N063012-011A,SAMP	42	1000	Unknown		02/12/2024 18:24	Finished	SAMP,10 mL
62	N063012-011AMS,MS	43	1000	Unknown		02/12/2024 18:33	Finished	MS (1ppb), IWST-231228B,10r
63	N063001-021AMS,MS	44	1000	Unknown		02/12/2024 18:43	Finished	MS (1ppb), IWST-231228B,10r
64	CCV-6,CCV1,1,	45	1000	Unknown		02/12/2024 18:52	Finished	CCV @10ppb, IWST-231228A
65	CCB-6,CCB,1,	46	1000	Unknown		02/12/2024 19:02	Finished	CCB R240103B
66	BLANK	47	1000	Unknown		02/12/2024 19:14	Finished	BLANK
67	SHUTDOWN	48	1000	Unknown		02/12/2024 19:23	Finished	
68	Eluent: R240212A	49	1000	Unknown		n.a.	Finished	
69	PCR: R240212B	50	1000	Unknown		n.a.	Finished	

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 2/9/24
Time Prepared: 0855A
Prepared By: MA

Reagent ID:
Sulfuric Acid: 14445
Diphenylcarbazide: 15409
NH4OH + NH4SO4 eluent: M24 02054
NH4OH + NH4SO4 buffer: M24010 7B

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	N067001-17A	9.74	-	250ml	250ml		
2)	18A	9.76	-				
3)	19A	9.74	-				
4)	20A	9.58	-				
5)	21A	9.56	-				
6)	22A	9.72	-				
7)							
8)							
9)							
10)							
11)							
12)							
13)							
14)							
15)							

Sample Preparation

Date Prepared: 2/10/24
Time Prepared: 1204H
Prepared By: MA

Reagent ID:
Sulfuric Acid: 14445
Diphenylcarbazide: 15409
NH4OH + NH4SO4 eluent: M24021BA
NH4OH + NH4SO4 buffer: M24010 7B

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	N067010-1A	9.40	-	250ml	250ml		
2)	2A	9.41	-				
3)	3A	9.39	-				
4)	N067012-1A	9.30	-				
5)	2A	9.38	-				
6)	3A	9.46	-				
7)	4A	9.45	-				
8)	5A	9.68	-				
9)	6A	9.71	-				
10)	7A	9.74	-				
11)	8A	9.72	-				
12)	9A	9.44	-				
13)	10A	9.70	-				
14)	11A	9.71	-				
15)							

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 2/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0427	0.2063	1.0639	2.1157	3.2270	4.3227	0.9999
Measured, in ug/L	0.1985	0.9592	4.9461	9.8357	15.0023	20.0959	0.9999
Relative Error (%RE)		-4%		-2%			

	Stock	Working
Standard Concentration:	1000000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = { (B - A) / A } * 100
Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places. The exact values are represented in the ICAL summary for calculation purposes.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ICV**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5686880**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5686881**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **CCV**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686883**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.811	0.20	5.000	0	96.2	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686884**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.182	0.20	0.2000	0	91.1	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686895**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.053	0.20	10.00	0	101	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **CCV**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686907**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.815	0.20	5.000	0	96.3	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686919**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.016	0.20	10.00	0	100	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **CCV**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686931**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.000	0.20	5.000	0	100	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ZZZZZZ**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686936**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.874	0.20	10.00	0	98.7	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **ICB**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5686882**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **CCB**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686885**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **CCB**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686896**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **CCB**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686908**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **CCB**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686920**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **CCB**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686932**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181444**
Client ID: **CCB**	Batch ID: **R181444**	TestNo: **EPA 218.6**		Analysis Date: **2/12/2024**	SeqNo: **5686937**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/12/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.040	
CCV-3	4.040	
CCV-4	4.040	
CCV-5	4.040	
CCV-6	4.040	

Average	4.040
Actual RT Window	3.960 - 4.120
Applied RT Window	3.840 - 4.240

MB-R181444	N.A.	N.A.
LCS-R181444	4.040	PASS
N063001-021A	3.873	PASS
N063001-021AMS	3.856	PASS
N063012-004A	4.040	PASS
N063012-004AMS	4.040	PASS
N063012-004AMSD	4.040	PASS
N063012-002A	4.048	PASS
N063012-002ADUP	4.040	PASS
N063012-002AMS	4.048	PASS
N063012-006A	N.A.	N.A.
N063012-006AMS	4.031	PASS
N063012-007A	N.A.	N.A.
N063012-007AMS	4.031	PASS
N063012-009A	N.A.	N.A.
N063012-009AMS	3.890	PASS
N063012-001A	4.040	PASS
N063012-001AMS	4.040	PASS
N063001-020A	N.A.	N.A.
N063001-020AMS	3.898	PASS
N063010-001A	3.906	PASS
N063010-001AMS	3.873	PASS

Reviewed by:

dlRocha 2/27/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/12/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.040	
CCV-3	4.040	
CCV-4	4.040	
CCV-5	4.040	
CCV-6	4.040	
Average	4.040	
Actual RT Window	3.960 - 4.120	
Applied RT Window	3.840 - 4.240	
N063010-002A	3.856	PASS
N063010-002AMS	3.873	PASS
N063010-003A	3.865	PASS
N063010-003AMS	3.856	PASS
N063012-003A	4.040	PASS
N063012-003AMS	4.048	PASS
N062966-003A	N.A.	N.A.
N062966-003AMS	4.006	PASS
N063001-003A	N.A.	N.A.
N063001-003AMS	4.006	PASS
N063001-022A	N.A.	N.A.
N063001-022AMS	4.040	PASS
N063012-005A	N.A.	N.A.
N063012-005AMS	4.040	PASS
N063012-008A	N.A.	N.A.
N063012-008AMS	4.040	PASS
N063012-010A	N.A.	N.A.
N063012-010AMS	4.040	PASS
N063012-011A	N.A.	N.A.
N063012-011AMS	4.040	PASS
N063001-021AMS	3.856	PASS

Reviewed by:

dMocha 2/27/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

Reviewed by:

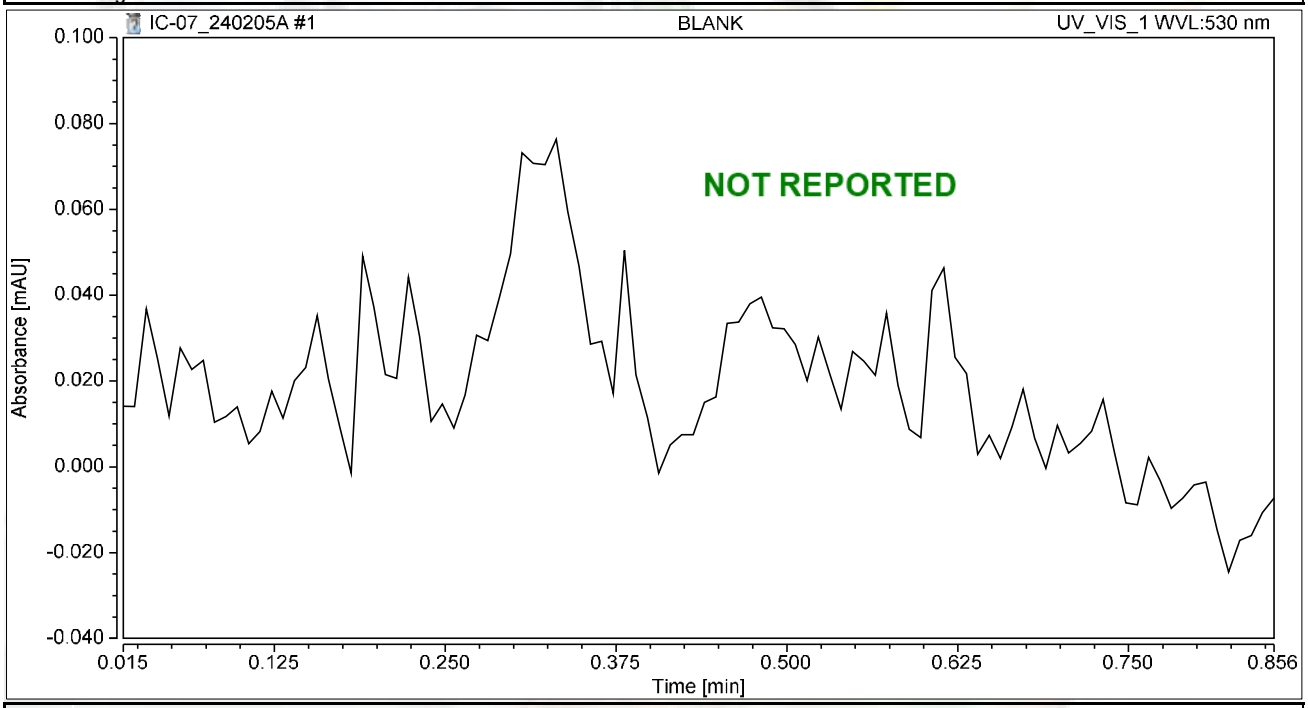
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**0.84**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 11:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

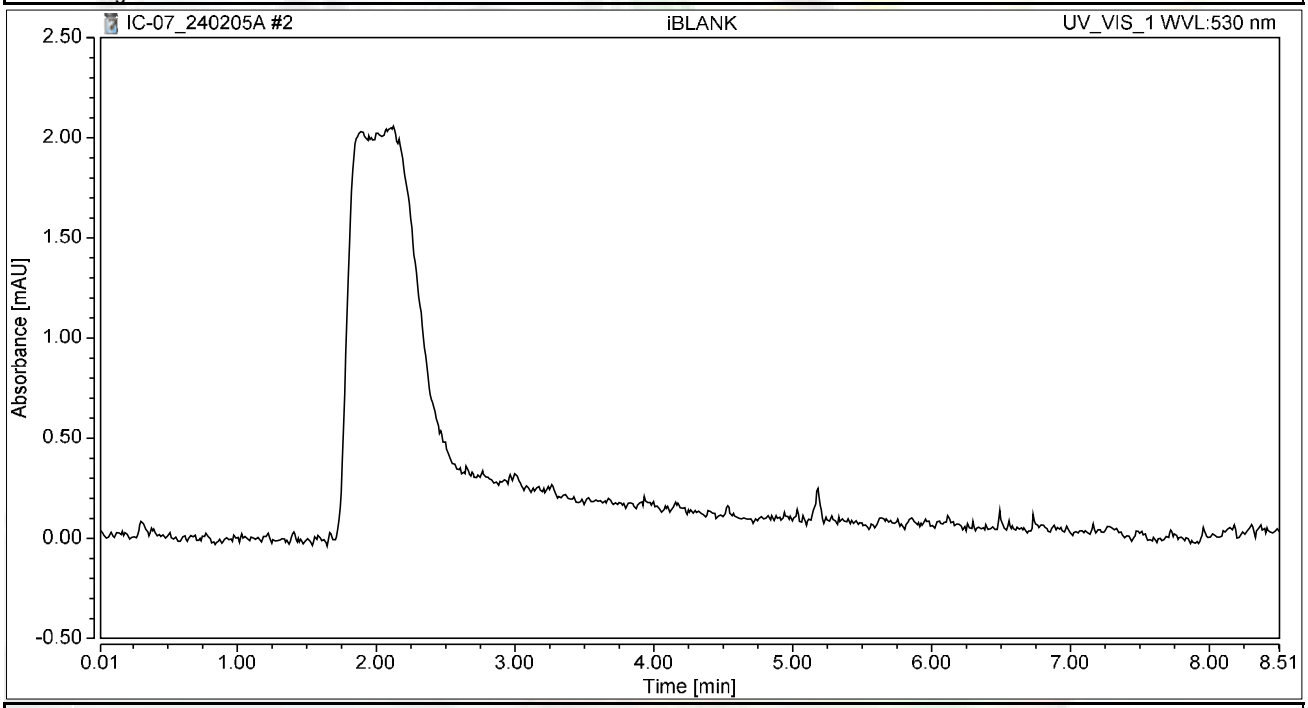
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Reviewed by:

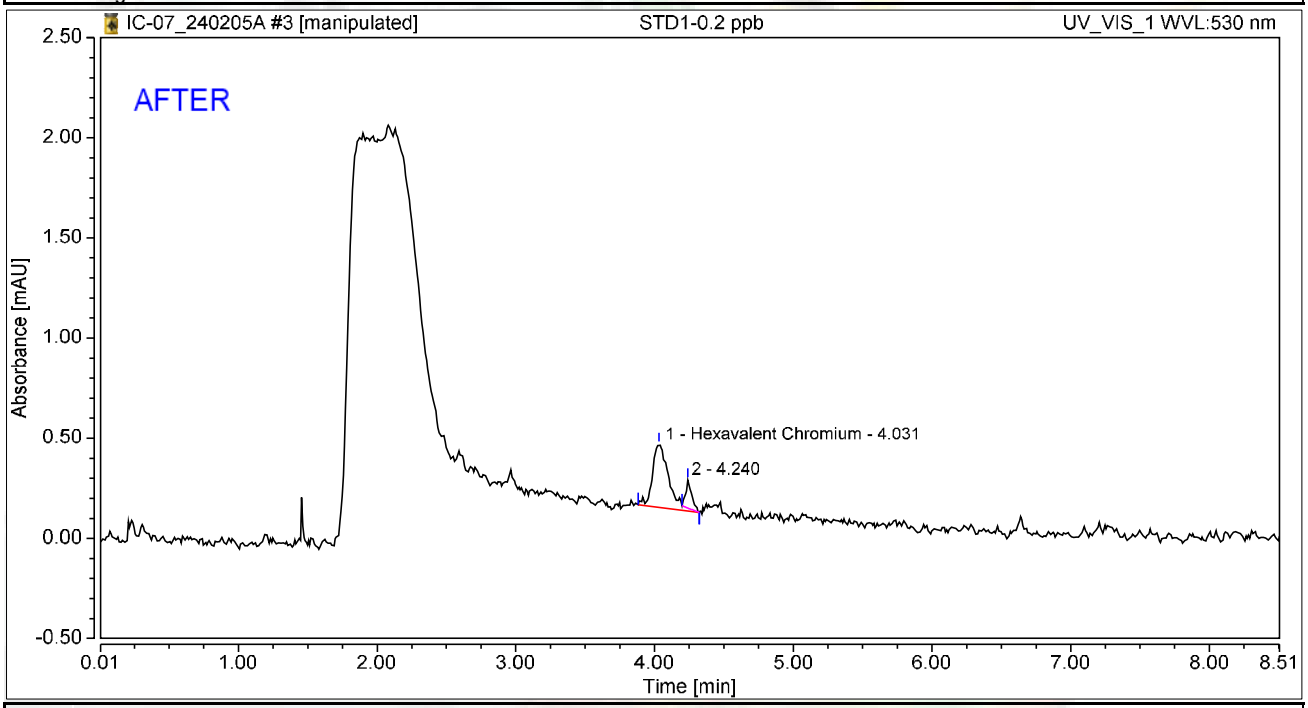
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.043	0.313	85.65	69.19	0.1985
2		4.240	0.007	0.139	14.35	30.81	n.a.
Total:			**0.050**	**0.452**	**100.00**	**100.00**	

Reviewed by:

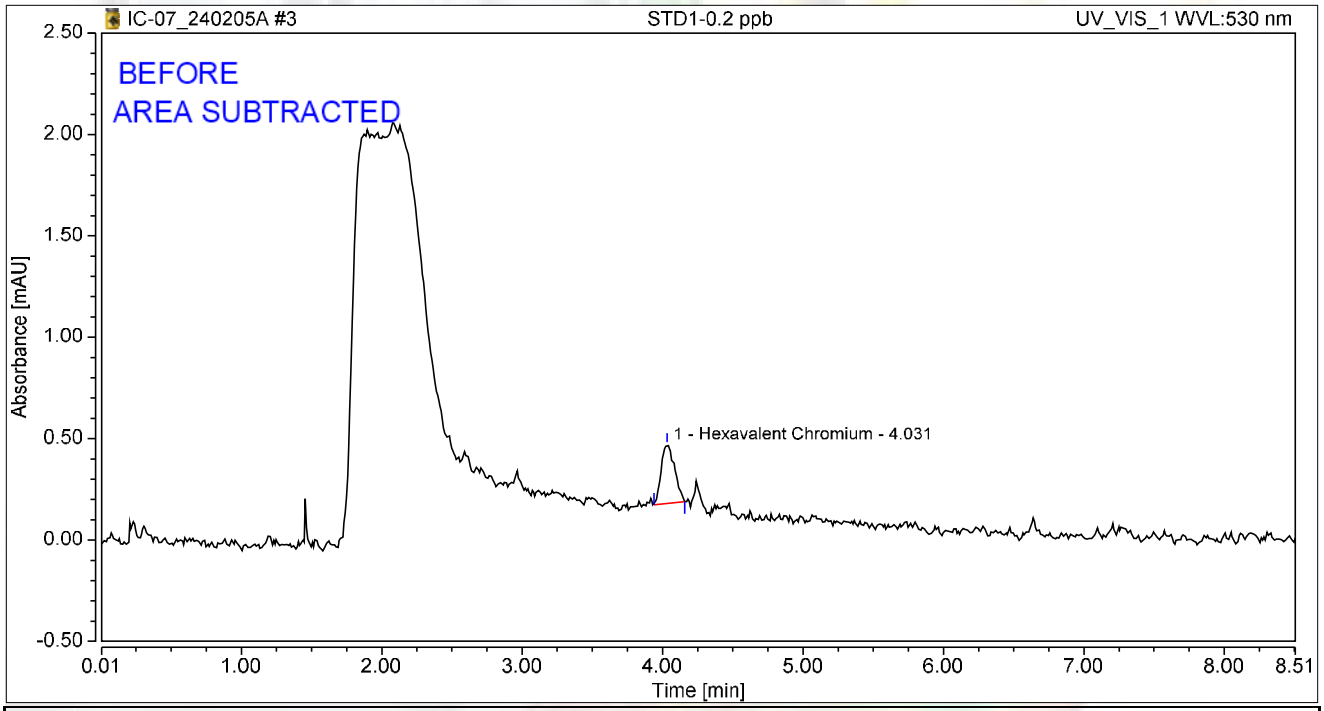
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

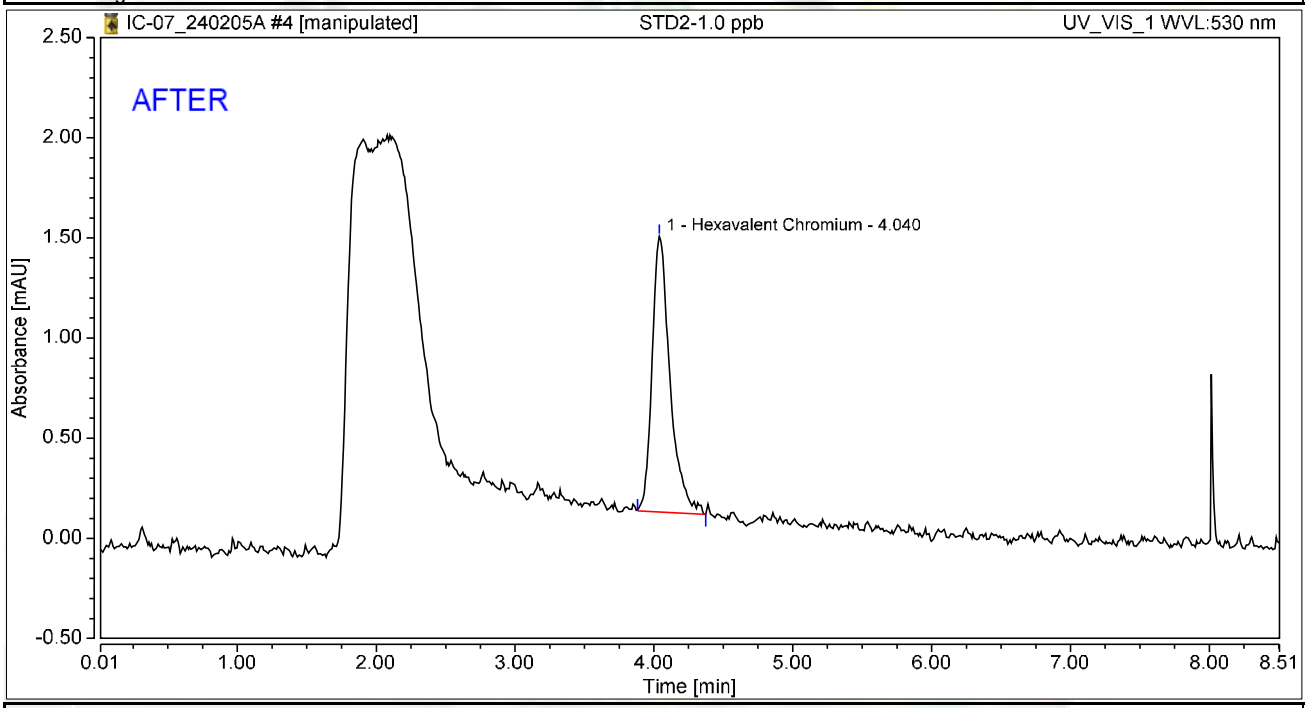
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.032	0.288	100.00	100.00	0.1502
Total:			**0.032**	**0.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.206	1.377	100.00	100.00	0.9592
Total:			**0.206**	**1.377**	**100.00**	**100.00**	

Reviewed by:

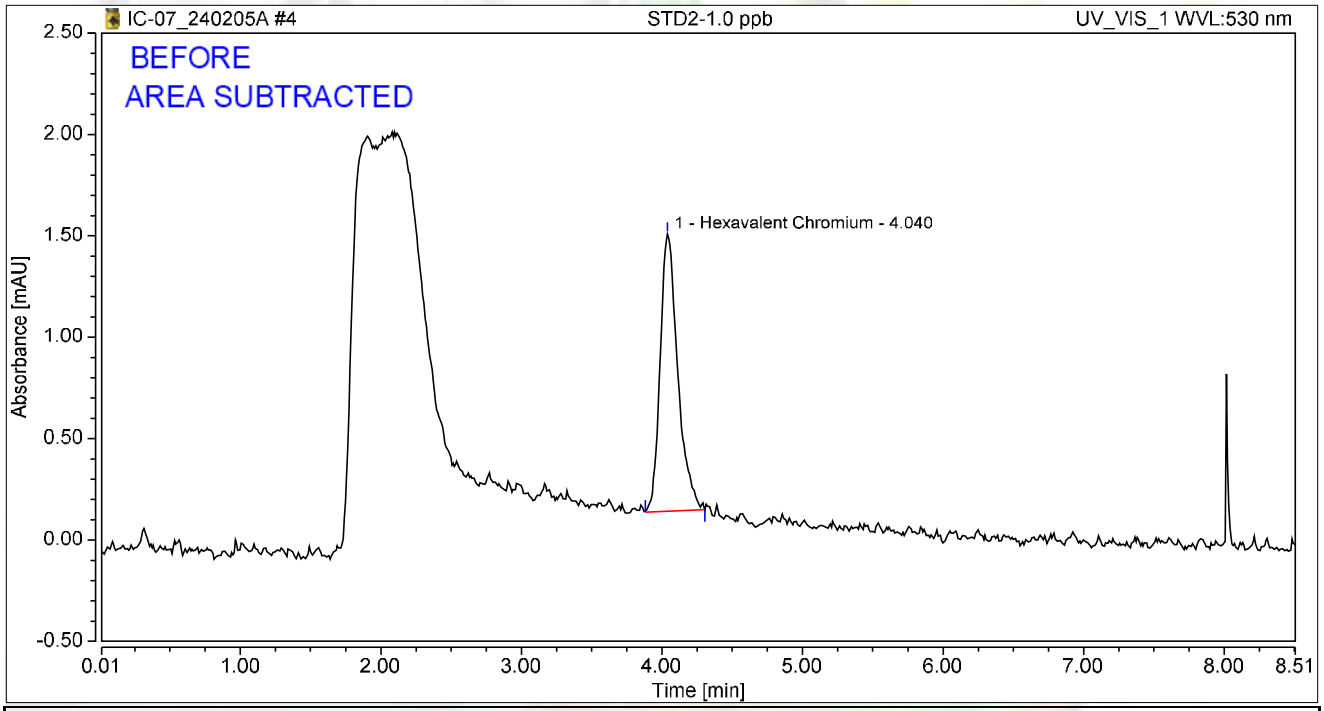
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

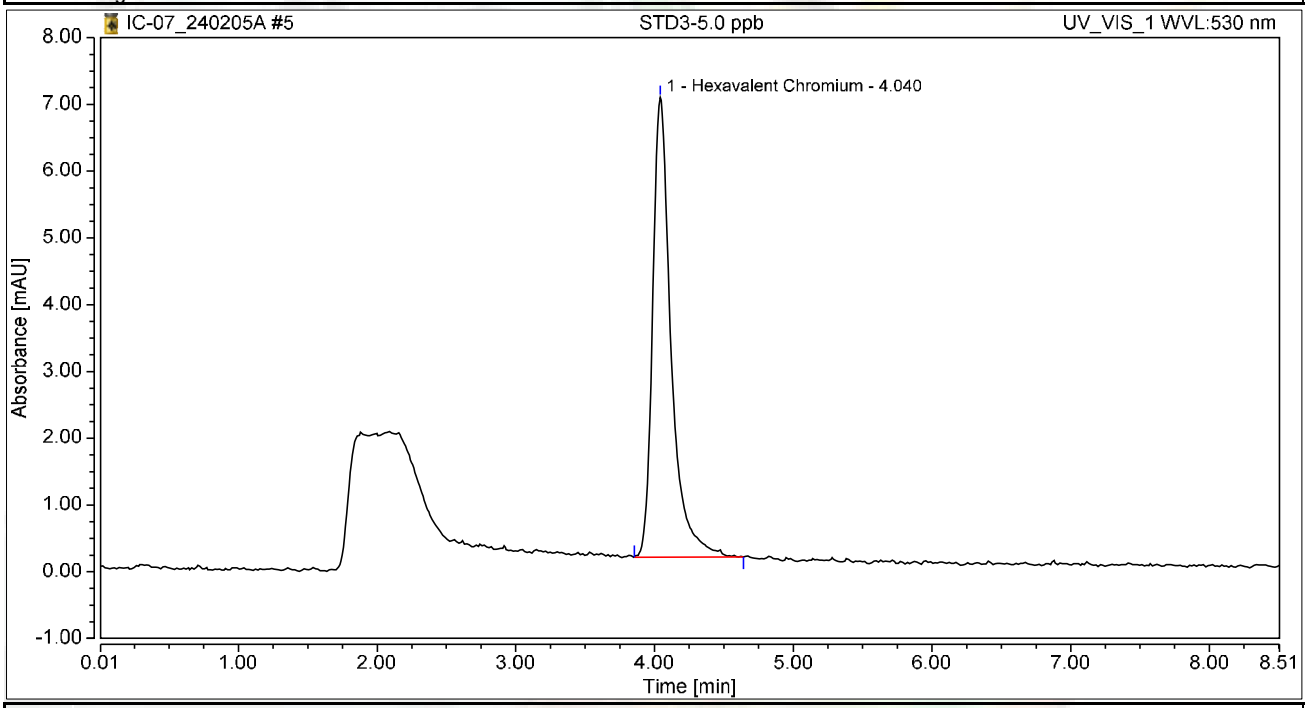
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.198	1.367	100.00	100.00	0.9223
Total:			**0.198**	**1.367**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

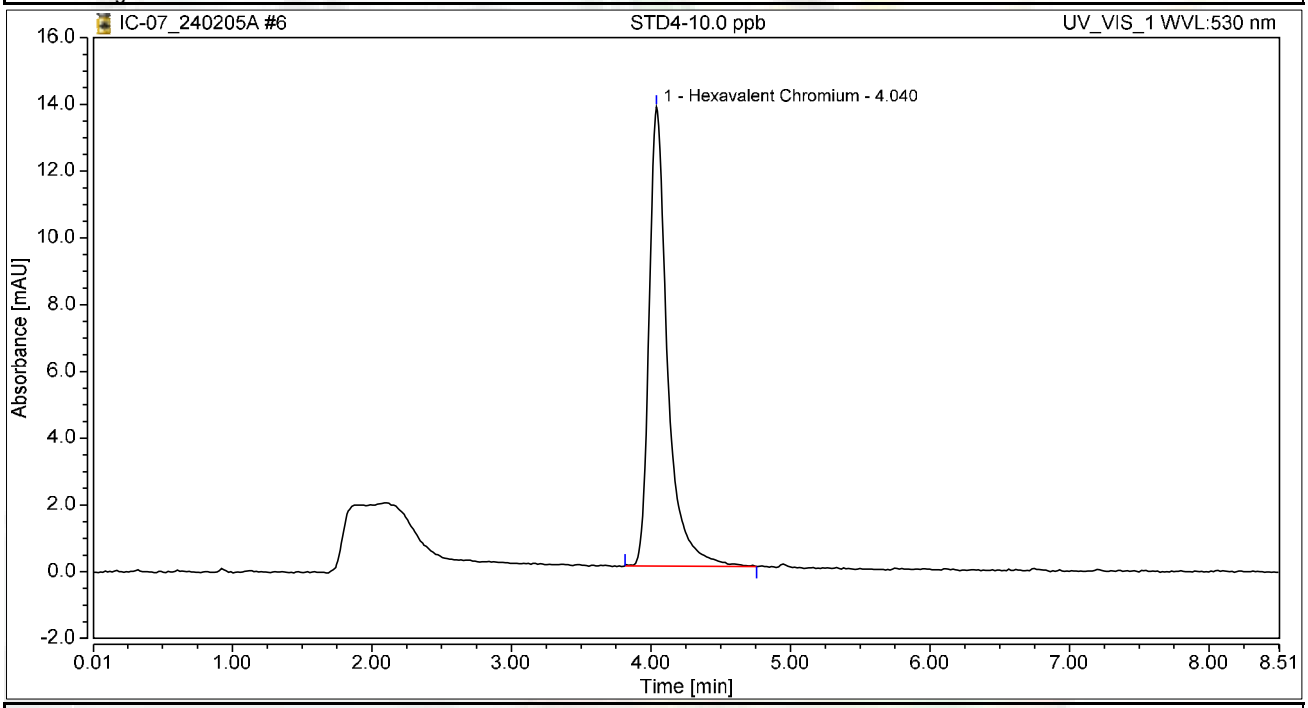
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.064	6.885	100.00	100.00	4.9461
Total:			**1.064**	**6.885**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

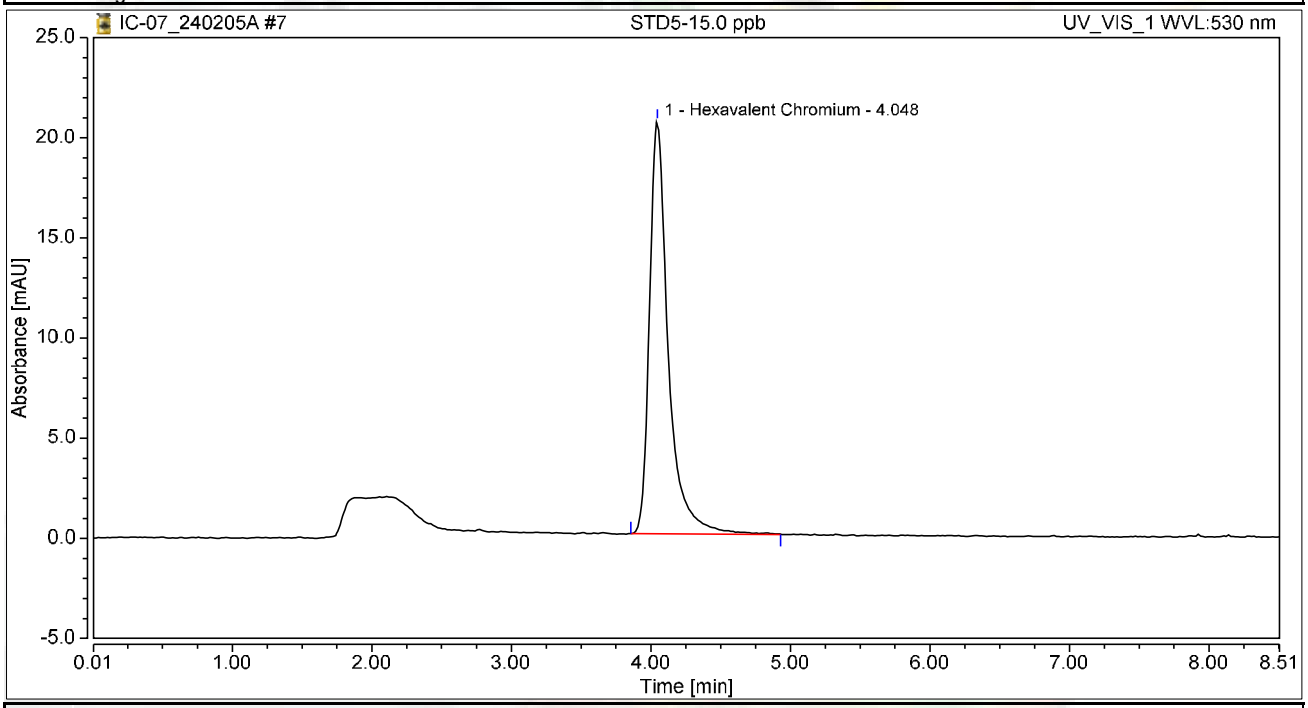
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.116	13.748	100.00	100.00	9.8357
Total:			**2.116**	**13.748**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

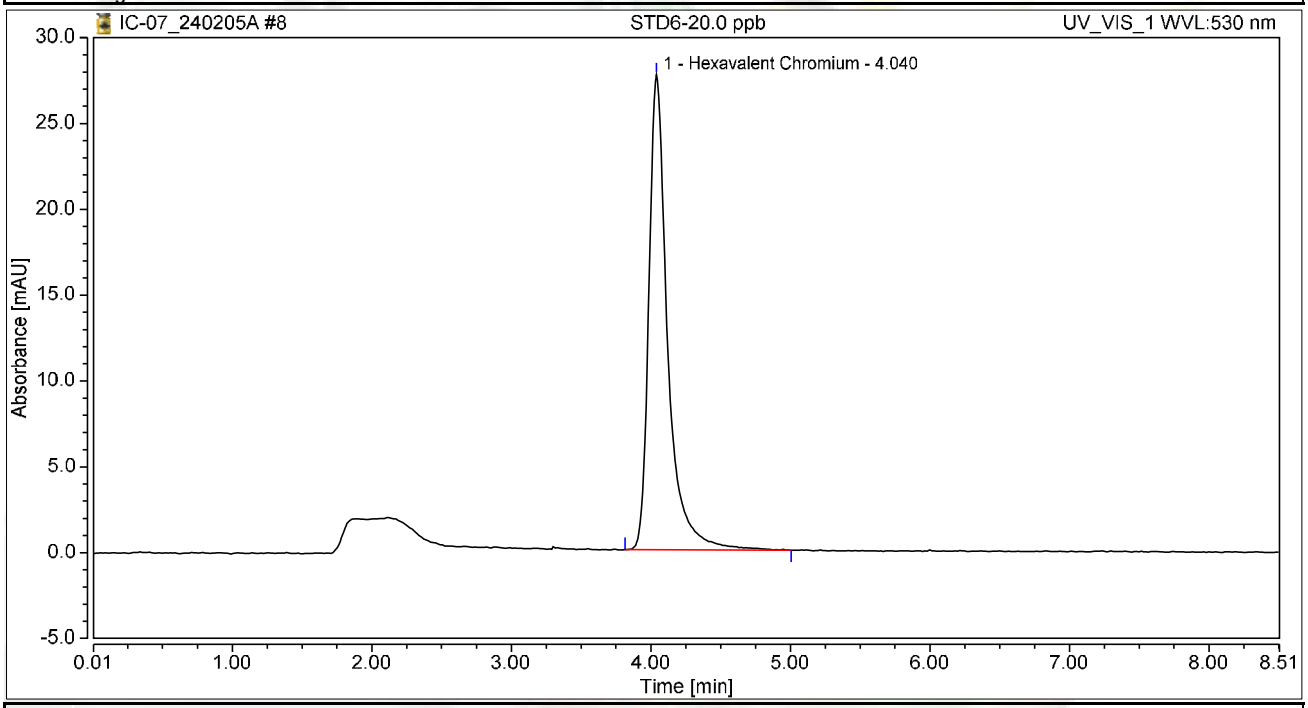
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	3.227	20.605	100.00	100.00	15.0023
Total:			**3.227**	**20.605**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:08**	*Sample Weight:*	**1.0000**

Chromatogram



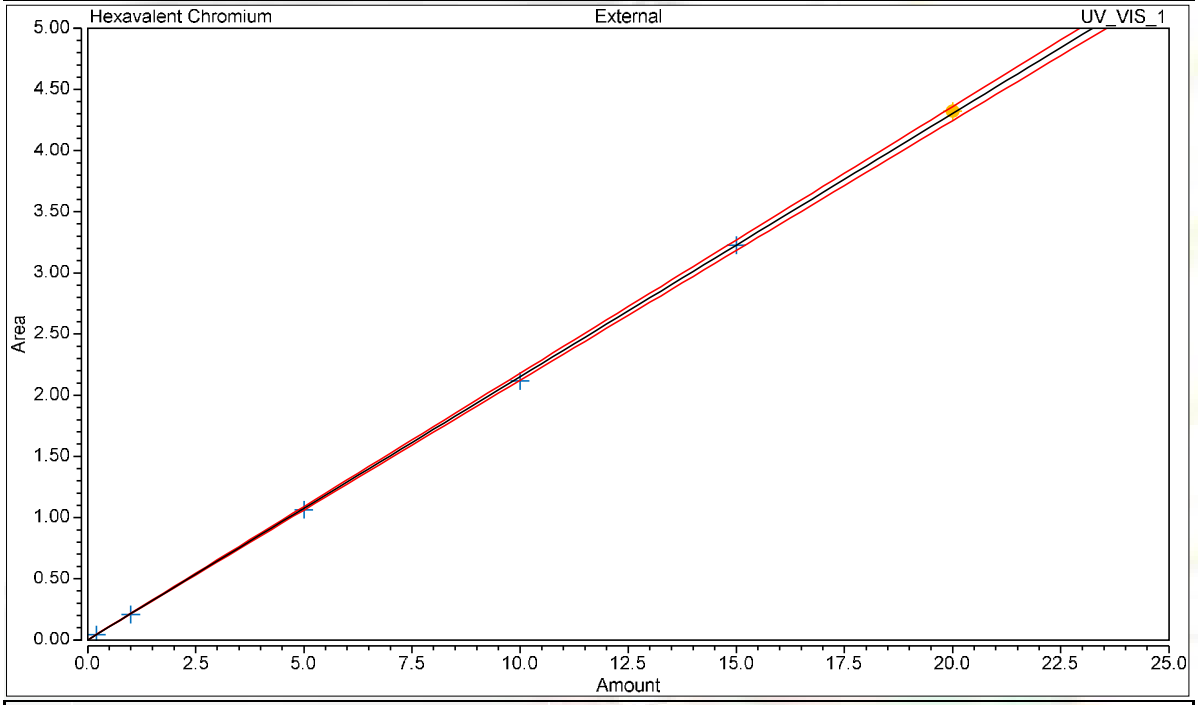
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	4.323	27.676	100.00	100.00	20.0959
Total:			**4.323**	**27.676**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2151
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99987

Calibration Plot Hexavalent Chromium



Calibration Results Hexavalent Chromium

No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0427	0.043	0.313
4	STD2-1.0 ppb	02	1.0000	0.2063	0.206	1.377
5	STD3-5.0 ppb	03	5.0000	1.0639	1.064	6.885
6	STD4-10.0 ppb	04	10.0000	2.1157	2.116	13.748
7	STD5-15.0 ppb	05	15.0000	3.2270	3.227	20.605
8	STD6-20.0 ppb	06	20.0000	4.3227	4.323	27.676

Reviewed by:

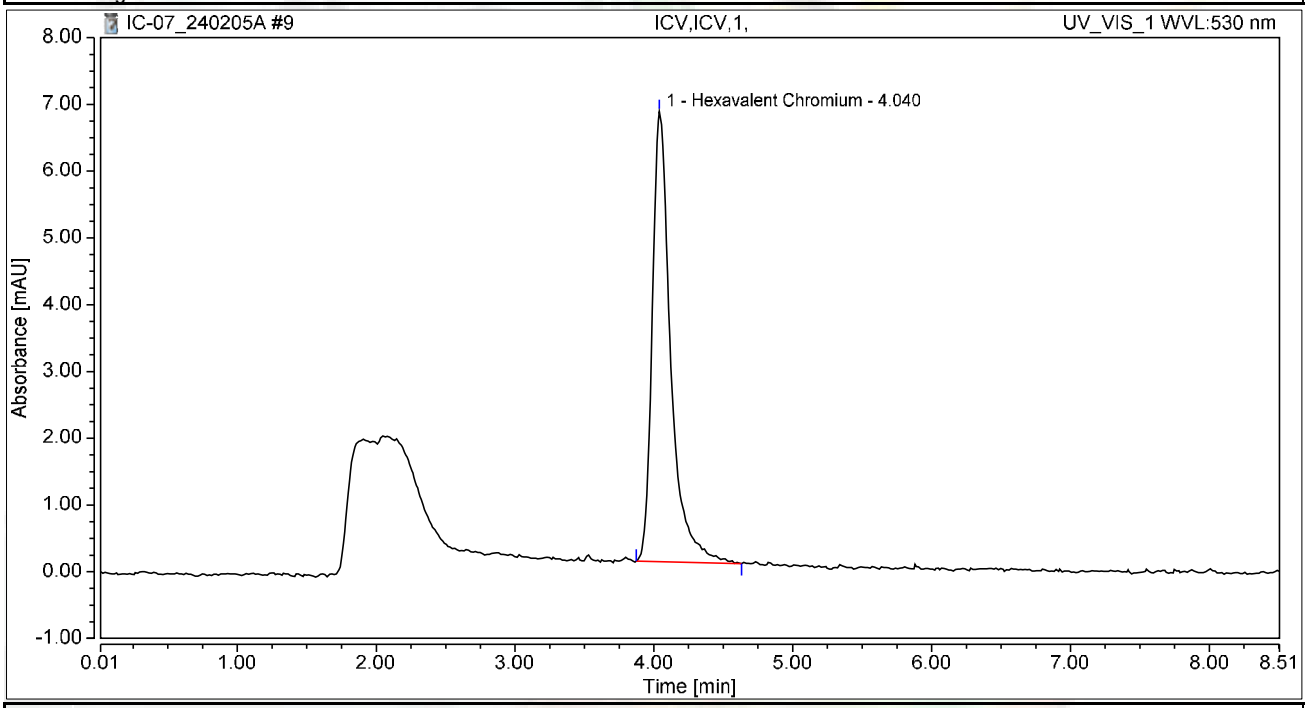
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

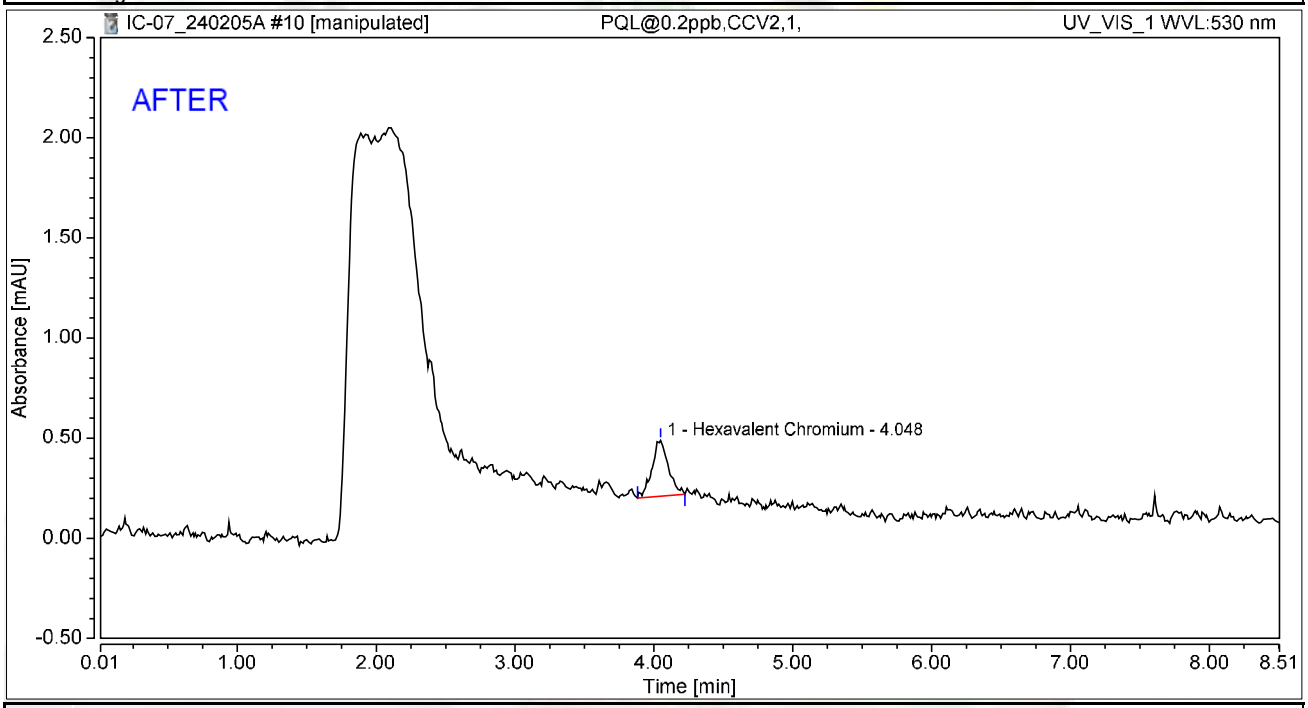
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.040	6.743	100.00	100.00	4.8342
Total:			**1.040**	**6.743**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.039	0.279	100.00	100.00	0.1802
Total:			**0.039**	**0.279**	**100.00**	**100.00**	

Reviewed by:

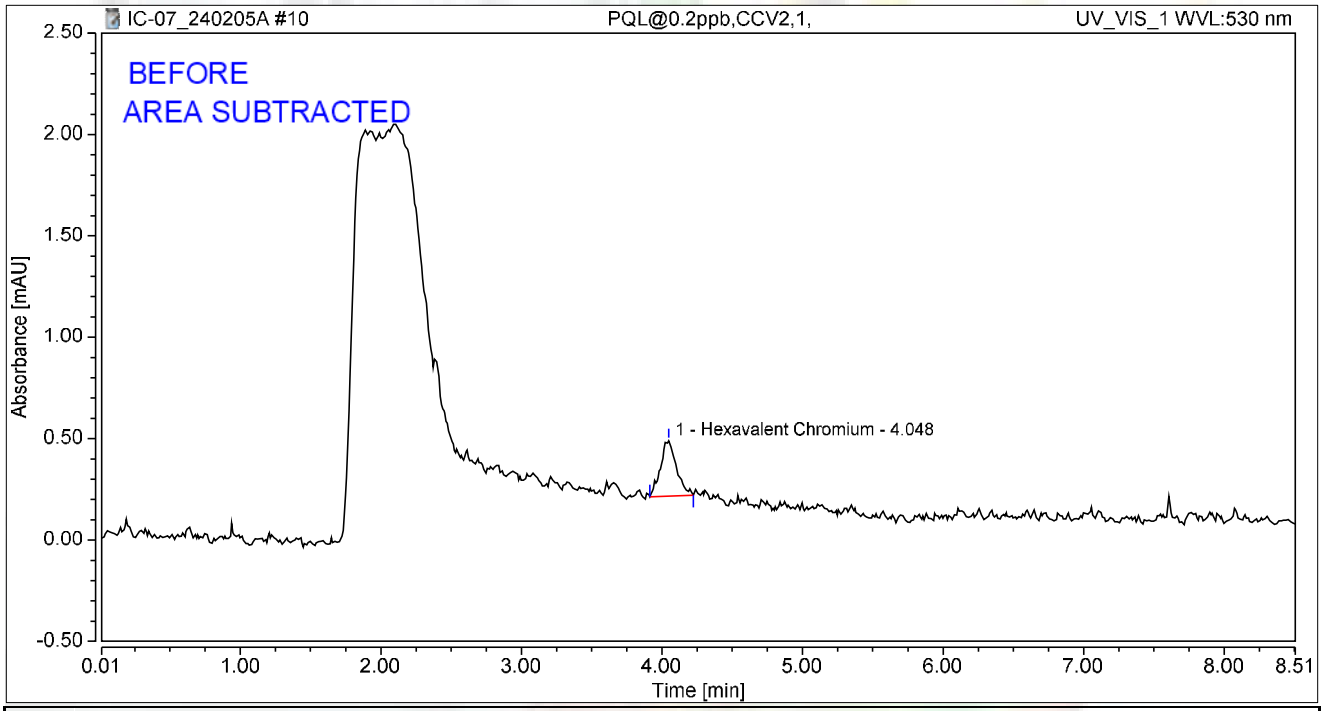
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

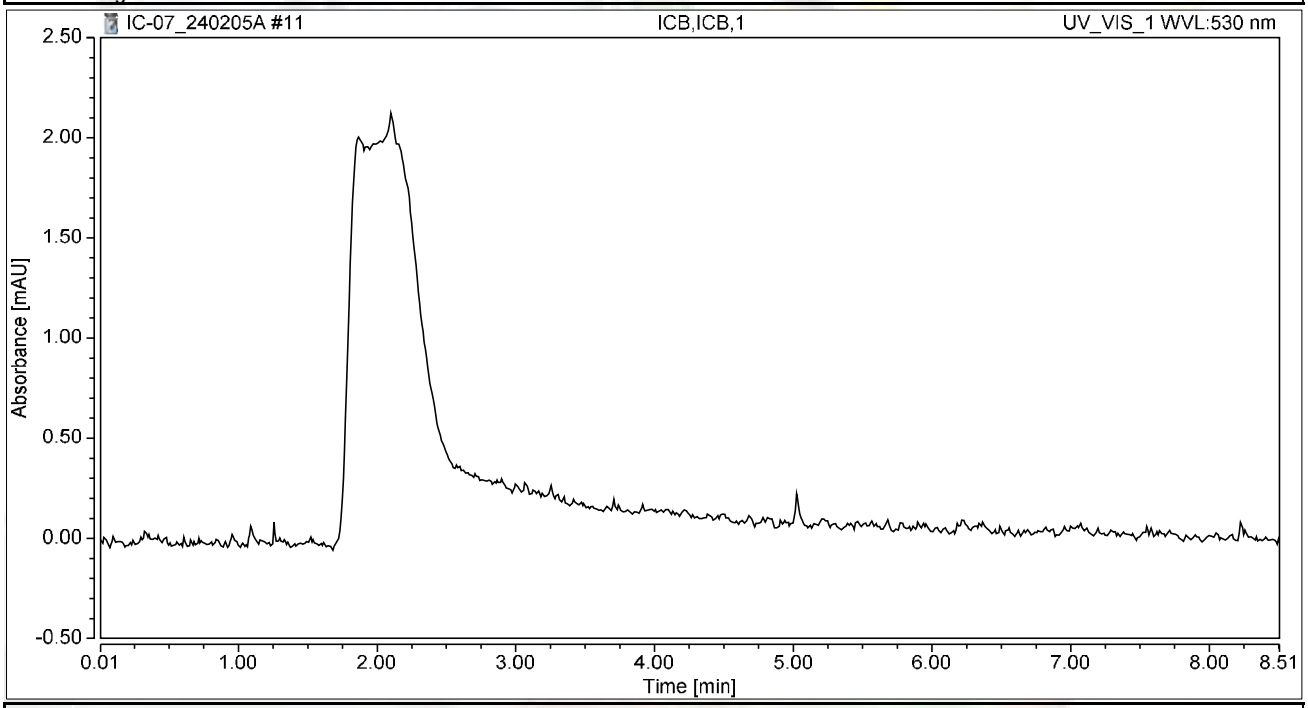
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.036	0.273	100.00	100.00	0.1694
Total:			**0.036**	**0.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

JRB 2/19/2024

RAW DATA

INJECTION LOG: 240212A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/12/24 9:22 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/12/24 9:38 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/12/24 9:47 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/12/24 9:57 AM	Reported
13	MB-R181444	MBLK	1	Hexavalent Chromium	02/12/24 10:06 AM	Reported
14	LCS-R181444	LCS	1	Hexavalent Chromium	02/12/24 10:16 AM	Reported
15	N063001-021A	SAMP	1	Hexavalent Chromium	02/12/24 10:45 AM	Reported
16	N063001-021AMS	MS	1	Hexavalent Chromium	02/12/24 10:57 AM	Not Reported
17	N063012-004A	SAMP	500	Hexavalent Chromium	02/12/24 11:09 AM	Reported
18	N063012-004AMS	MS	500	Hexavalent Chromium	02/12/24 11:18 AM	Reported
19	N063012-004AMSD	MSD	500	Hexavalent Chromium	02/12/24 11:28 AM	Reported
20	N063012-002A	SAMP	500	Hexavalent Chromium	02/12/24 11:50 AM	Reported
21	N063012-002ADUP	DUP	500	Hexavalent Chromium	02/12/24 12:02 PM	Reported
22	N063012-002AMS	MS	500	Hexavalent Chromium	02/12/24 12:11 PM	Reported
23	CCV-2	CCV	1	Hexavalent Chromium	02/12/24 12:21 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/12/24 12:30 PM	Reported
25	N063012-006A	SAMP	1	Hexavalent Chromium	02/12/24 12:40 PM	Reported
26	N063012-006AMS	MS	1	Hexavalent Chromium	02/12/24 12:49 PM	Reported
27	N063012-007A	SAMP	1	Hexavalent Chromium	02/12/24 12:58 PM	Reported
28	N063012-007AMS	MS	1	Hexavalent Chromium	02/12/24 1:08 PM	Reported
29	N063012-009A	SAMP	1	Hexavalent Chromium	02/12/24 1:17 PM	Reported
30	N063012-009AMS	MS	1	Hexavalent Chromium	02/12/24 1:27 PM	Reported
31	N063012-001A	SAMP	100	Hexavalent Chromium	02/12/24 1:36 PM	Reported
32	N063012-001AMS	MS	100	Hexavalent Chromium	02/12/24 1:46 PM	Reported
33	N063001-020A	SAMP	1	Hexavalent Chromium	02/12/24 1:55 PM	Reported
34	N063001-020AMS	MS	1	Hexavalent Chromium	02/12/24 2:05 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/12/24 2:14 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/12/24 2:24 PM	Reported
37	N063010-001A	SAMP	1	Hexavalent Chromium	02/12/24 2:33 PM	Reported
38	N063010-001AMS	MS	1	Hexavalent Chromium	02/12/24 2:43 PM	Reported
39	N063010-002A	SAMP	1	Hexavalent Chromium	02/12/24 2:52 PM	Reported
40	N063010-002AMS	MS	1	Hexavalent Chromium	02/12/24 3:01 PM	Reported
41	N063010-003A	SAMP	1	Hexavalent Chromium	02/12/24 3:11 PM	Reported
42	N063010-003AMS	MS	1	Hexavalent Chromium	02/12/24 3:20 PM	Reported

INJECTION LOG: 240212A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063012-003A	SAMP	500	Hexavalent Chromium	02/12/24 3:30 PM	Reported
44	N063012-003AMS	MS	500	Hexavalent Chromium	02/12/24 3:39 PM	Reported
45	N062966-003A	SAMP	5	Hexavalent Chromium	02/12/24 3:49 PM	Reported
46	N062966-003AMS	MS	5	Hexavalent Chromium	02/12/24 3:58 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/12/24 4:08 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/12/24 4:17 PM	Reported
49	N063001-003A	SAMP	5	Hexavalent Chromium	02/12/24 4:26 PM	Reported
50	N063001-003AMS	MS	5	Hexavalent Chromium	02/12/24 4:36 PM	Reported
51	N063001-022A	SAMP	1	Hexavalent Chromium	02/12/24 4:45 PM	Reported
52	N063001-022AMS	MS	1	Hexavalent Chromium	02/12/24 4:55 PM	Reported
53	N063012-005A	SAMP	1	Hexavalent Chromium	02/12/24 5:04 PM	Reported
54	N063012-005AMS	MS	1	Hexavalent Chromium	02/12/24 5:14 PM	Reported
55	N063012-008A	SAMP	1	Hexavalent Chromium	02/12/24 5:23 PM	Reported
56	N063012-008AMS	MS	1	Hexavalent Chromium	02/12/24 5:33 PM	Reported
57	N063012-010A	SAMP	1	Hexavalent Chromium	02/12/24 5:42 PM	Reported
58	N063012-010AMS	MS	1	Hexavalent Chromium	02/12/24 5:52 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/12/24 6:01 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/12/24 6:14 PM	Reported
61	N063012-011A	SAMP	1	Hexavalent Chromium	02/12/24 6:24 PM	Reported
62	N063012-011AMS	MS	1	Hexavalent Chromium	02/12/24 6:33 PM	Reported
63	N063001-021AMS	MS	1	Hexavalent Chromium	02/12/24 6:43 PM	Reported
64	CCV-6	CCV1	1	Hexavalent Chromium	02/12/24 6:52 PM	Reported
65	CCB-6	CCB	1	Hexavalent Chromium	02/12/24 7:02 PM	Reported
66	BLANK	BLANK	1	Hexavalent Chromium	02/12/24 7:14 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240212A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**12/Feb/24 19:44:39**
No. of Injections:	**69**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/12/2024 09:22	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/12/2024 09:38	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/12/2024 09:47	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/12/2024 09:57	Finished	CCB R240103B
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/12/2024 10:06	Finished	MB R240103B
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/12/2024 10:16	Finished	LCS @5ppb, IWST-231228B
15	N063001-021A,SAMP	1	1000	Unknown		02/12/2024 10:45	Finished	SAMP,10 mL
16	N063001-021AMS,MS	2	1000	Unknown		02/12/2024 10:57	Finished	MS (5ppb), IWST-231228B,10r
17	N063012-004A,SAMP	3	1000	Unknown		02/12/2024 11:09	Finished	SAMP,0.02>10 mL
18	N063012-004AMS,MS	4	1000	Unknown		02/12/2024 11:18	Finished	MS (5ppb), IWST-231228B,0.0
19	N063012-004AMSD,M	5	1000	Unknown		02/12/2024 11:28	Finished	MSD (5ppb), IWST-231228B,0
20	N063012-002A,SAMP	1	1000	Unknown		02/12/2024 11:50	Finished	SAMP,0.02>10 mL
21	N063012-002ADUP,D	2	1000	Unknown		02/12/2024 12:02	Finished	DUP,0.02>10 mL
22	N063012-002AMS,MS	3	1000	Unknown		02/12/2024 12:11	Finished	MS (5ppb), IWST-231228B,0.0
23	CCV-2,CCV,1,	4	1000	Unknown		02/12/2024 12:21	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	5	1000	Unknown		02/12/2024 12:30	Finished	CCB R240103B
25	N063012-006A,SAMP	6	1000	Unknown		02/12/2024 12:40	Finished	SAMP,10 mL
26	N063012-006AMS,MS	7	1000	Unknown		02/12/2024 12:49	Finished	MS (1ppb), IWST-231228B,10r
27	N063012-007A,SAMP	8	1000	Unknown		02/12/2024 12:58	Finished	SAMP,10 mL
28	N063012-007AMS,MS	9	1000	Unknown		02/12/2024 13:08	Finished	MS (1ppb), IWST-231228B,10r
29	N063012-009A,SAMP	10	1000	Unknown		02/12/2024 13:17	Finished	SAMP,10 mL
30	N063012-009AMS,MS	11	1000	Unknown		02/12/2024 13:27	Finished	MS (1ppb), IWST-231228B,10r
31	N063012-001A,SAMP	12	1000	Unknown		02/12/2024 13:36	Finished	SAMP,0.1>10 mL
32	N063012-001AMS,MS	13	1000	Unknown		02/12/2024 13:46	Finished	MS (5ppb), IWST-231228B,0.1
33	N063001-020A,SAMP	14	1000	Unknown		02/12/2024 13:55	Finished	SAMP,10 mL
34	N063001-020AMS,MS	15	1000	Unknown		02/12/2024 14:05	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	16	1000	Unknown		02/12/2024 14:14	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	17	1000	Unknown		02/12/2024 14:24	Finished	CCB R240103B
37	N063010-001A,SAMP	18	1000	Unknown		02/12/2024 14:33	Finished	SAMP,10 mL
38	N063010-001AMS,MS	19	1000	Unknown		02/12/2024 14:43	Finished	MS (1ppb), IWST-231228B,10r
39	N063010-002A,SAMP	20	1000	Unknown		02/12/2024 14:52	Finished	SAMP,10 mL
40	N063010-002AMS,MS	21	1000	Unknown		02/12/2024 15:01	Finished	MS (1ppb), IWST-231228B,10r
41	N063010-003A,SAMP	22	1000	Unknown		02/12/2024 15:11	Finished	SAMP,10 mL
42	N063010-003AMS,MS	23	1000	Unknown		02/12/2024 15:20	Finished	MS (1ppb), IWST-231228B,10r
43	N063012-003A,SAMP	24	1000	Unknown		02/12/2024 15:30	Finished	SAMP,0.02>10 mL
44	N063012-003AMS,MS	25	1000	Unknown		02/12/2024 15:39	Finished	MS (5ppb), IWST-231228B,0.0
45	N062966-003A,SAMP	26	1000	Unknown		02/12/2024 15:49	Finished	SAMP,2>10 mL
46	N062966-003AMS,MS	27	1000	Unknown		02/12/2024 15:58	Finished	MS (1ppb), IWST-231228B,2>1
47	CCV-4,CCV1,1,	28	1000	Unknown		02/12/2024 16:08	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	29	1000	Unknown		02/12/2024 16:17	Finished	CCB R240103B
49	N063001-003A,SAMP	30	1000	Unknown		02/12/2024 16:26	Finished	SAMP,2>10 mL
50	N063001-003AMS,MS	31	1000	Unknown		02/12/2024 16:36	Finished	MS (1ppb), IWST-231228B,2>1
51	N063001-022A,SAMP	32	1000	Unknown		02/12/2024 16:45	Finished	SAMP,10 mL
52	N063001-022AMS,MS	33	1000	Unknown		02/12/2024 16:55	Finished	MS (1ppb), IWST-231228B,10r
53	N063012-005A,SAMP	34	1000	Unknown		02/12/2024 17:04	Finished	SAMP,10 mL
54	N063012-005AMS,MS	35	1000	Unknown		02/12/2024 17:14	Finished	MS (1ppb), IWST-231228B,10r
55	N063012-008A,SAMP	36	1000	Unknown		02/12/2024 17:23	Finished	SAMP,10 mL
56	N063012-008AMS,MS	37	1000	Unknown		02/12/2024 17:33	Finished	MS (1ppb), IWST-231228B,10r
57	N063012-010A,SAMP	38	1000	Unknown		02/12/2024 17:42	Finished	SAMP,10 mL
58	N063012-010AMS,MS	39	1000	Unknown		02/12/2024 17:52	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	40	1000	Unknown		02/12/2024 18:01	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	41	1000	Unknown		02/12/2024 18:14	Finished	CCB R240103B

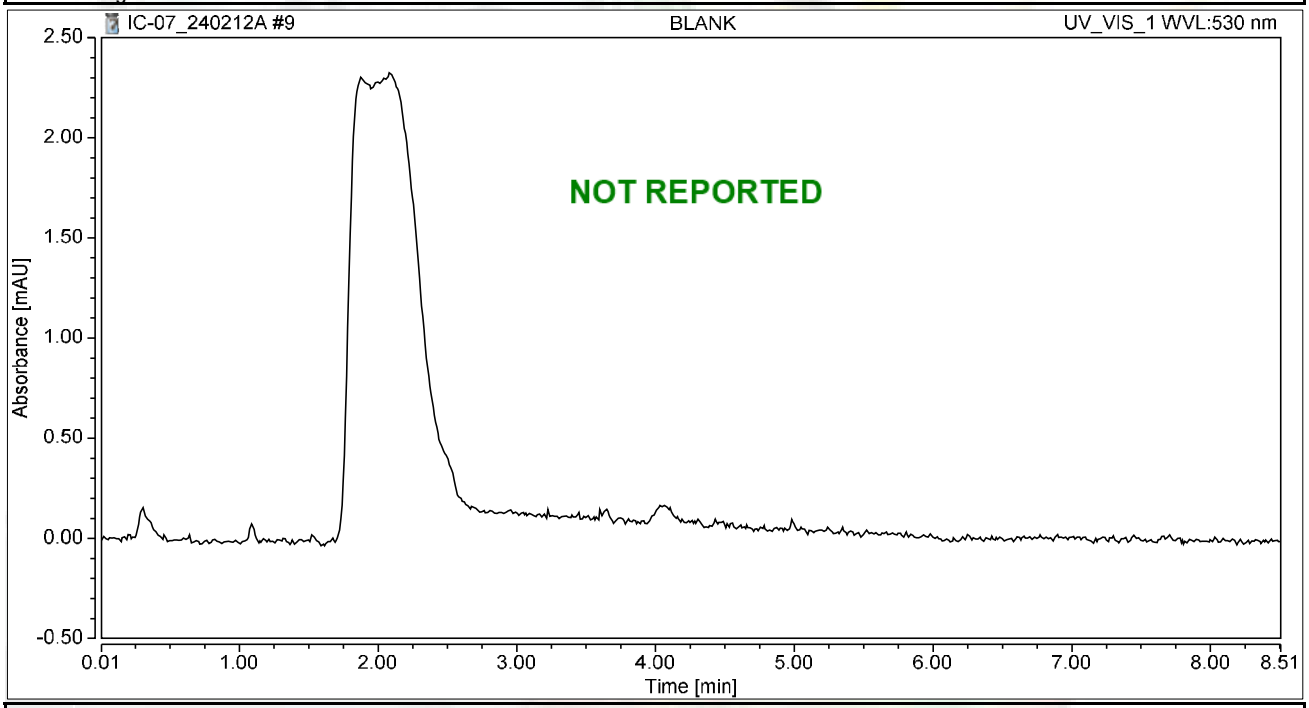
61	N063012-011A,SAMP	42	1000	Unknown		02/12/2024 18:24	Finished	SAMP,10 mL
62	N063012-011AMS,MS	43	1000	Unknown		02/12/2024 18:33	Finished	MS (1ppb), IWST-231228B,10r
63	N063001-021AMS,MS	44	1000	Unknown		02/12/2024 18:43	Finished	MS (1ppb), IWST-231228B,10r
64	CCV-6,CCV1,1,	45	1000	Unknown		02/12/2024 18:52	Finished	CCV @10ppb, IWST-231228A
65	CCB-6,CCB,1,	46	1000	Unknown		02/12/2024 19:02	Finished	CCB R240103B
66	BLANK	47	1000	Unknown		02/12/2024 19:14	Finished	BLANK
67	SHUTDOWN	48	1000	Unknown		02/12/2024 19:23	Finished	
68	Eluent: R240212A	49	1000	Unknown		n.a.	Finished	
69	PCR: R240212B	50	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 09:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

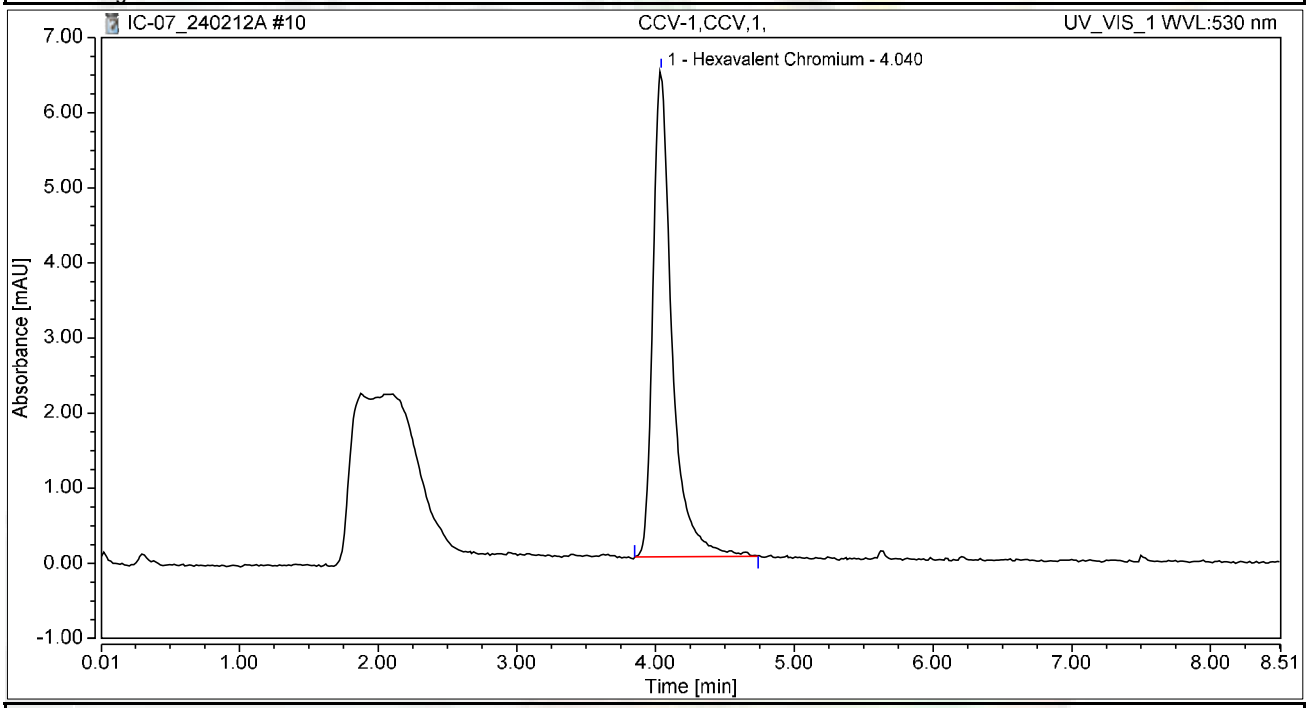
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 09:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.035	6.476	100.00	100.00	4.8109
Total:			**1.035**	**6.476**	**100.00**	**100.00**	

Reviewed by:

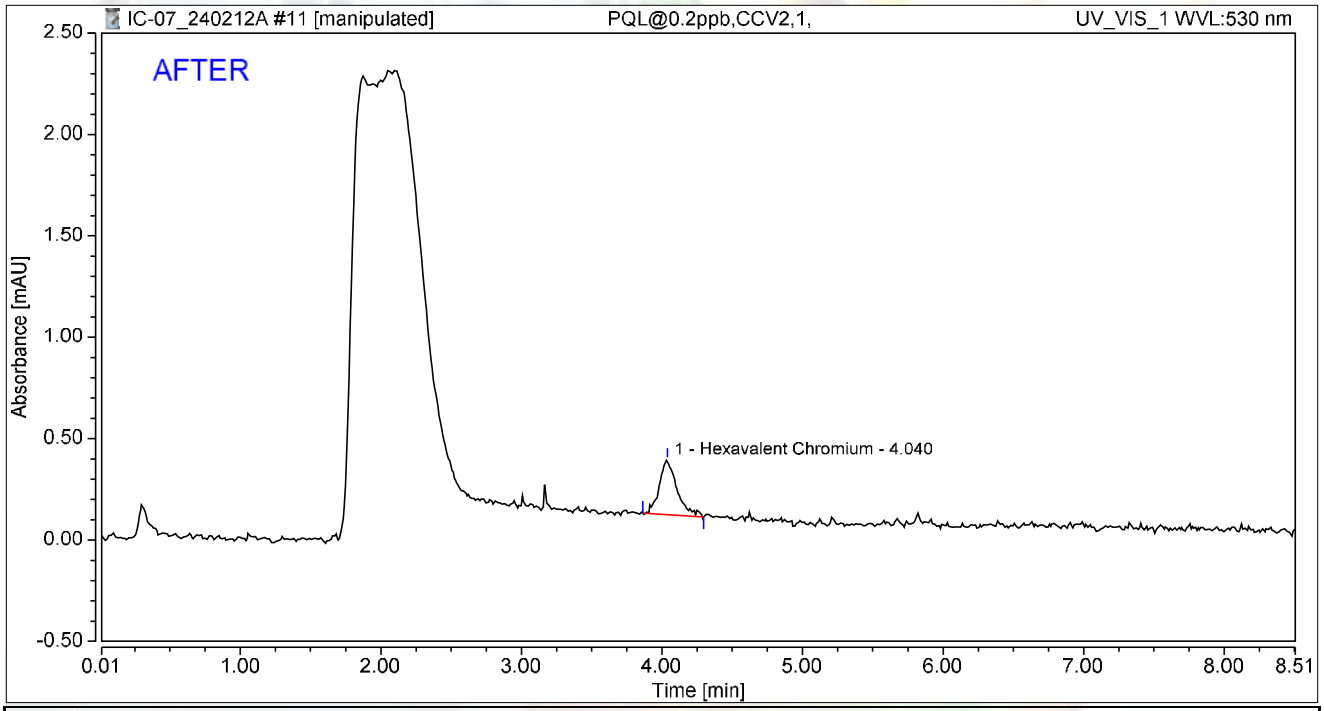
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 09:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.039	0.268	100.00	100.00	0.1822
Total:			**0.039**	**0.268**	**100.00**	**100.00**	

Reviewed by:

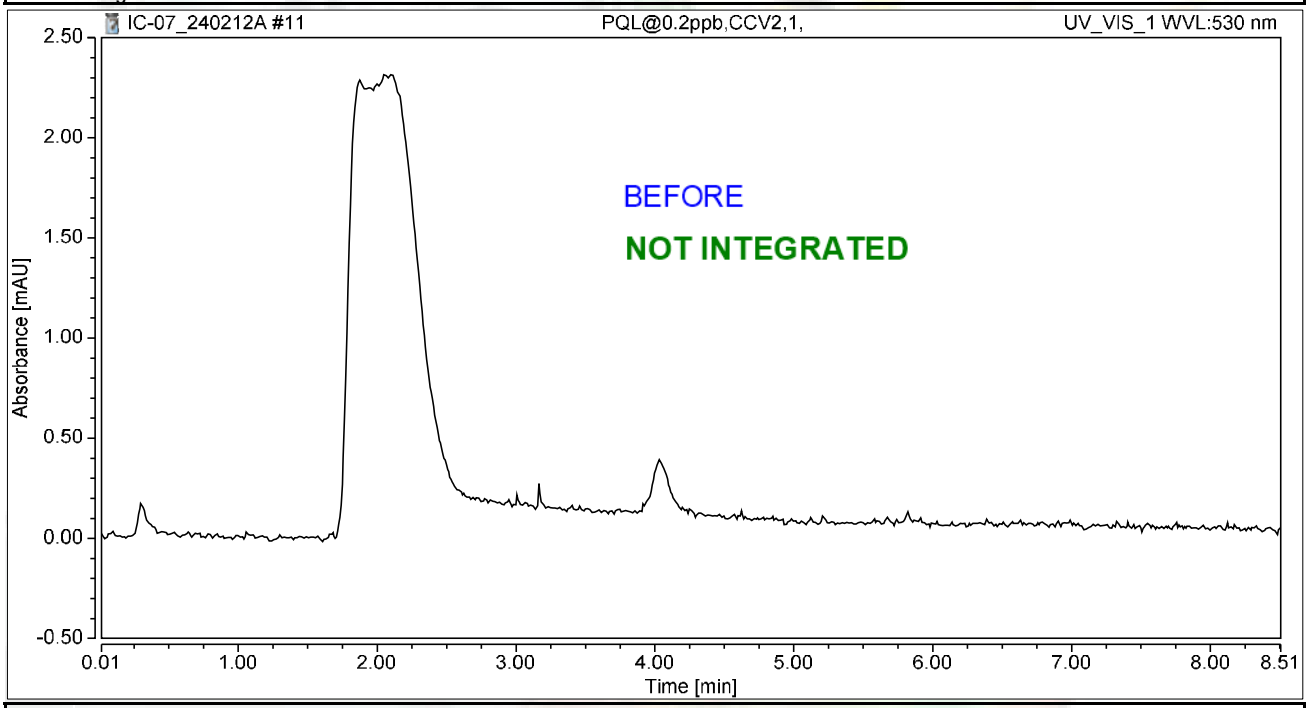
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 09:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

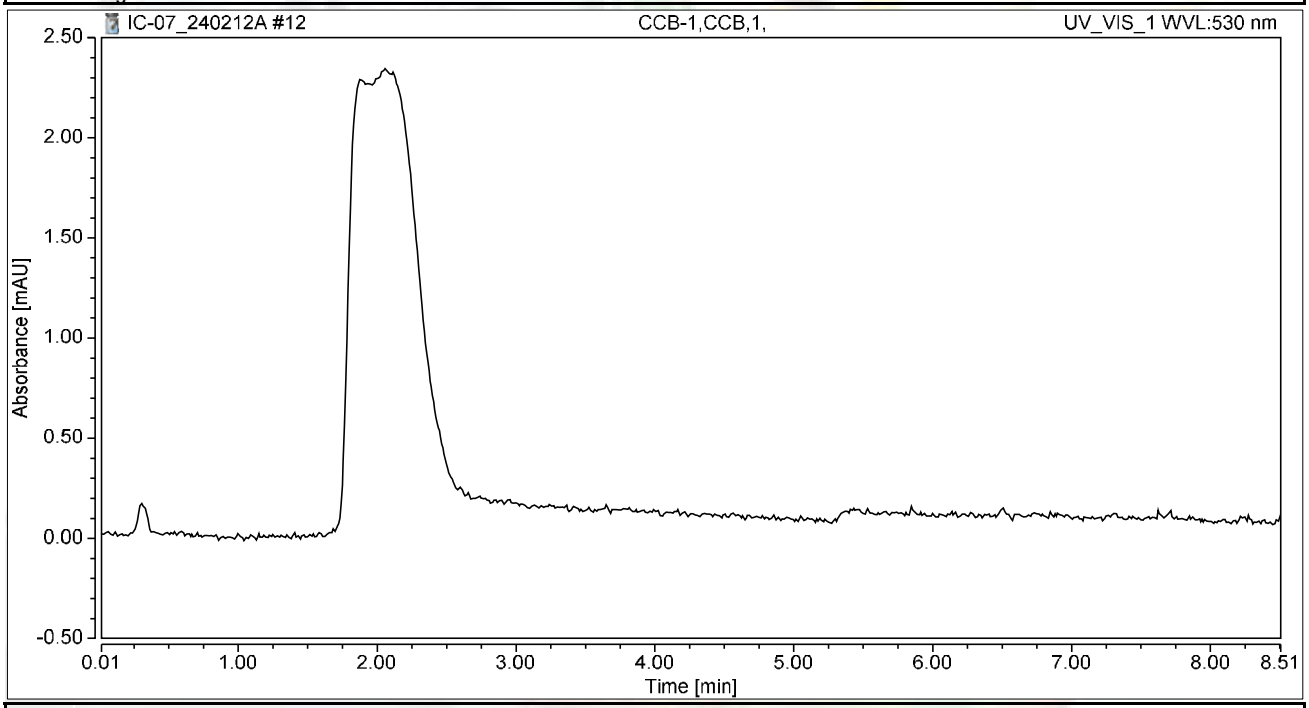
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 09:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

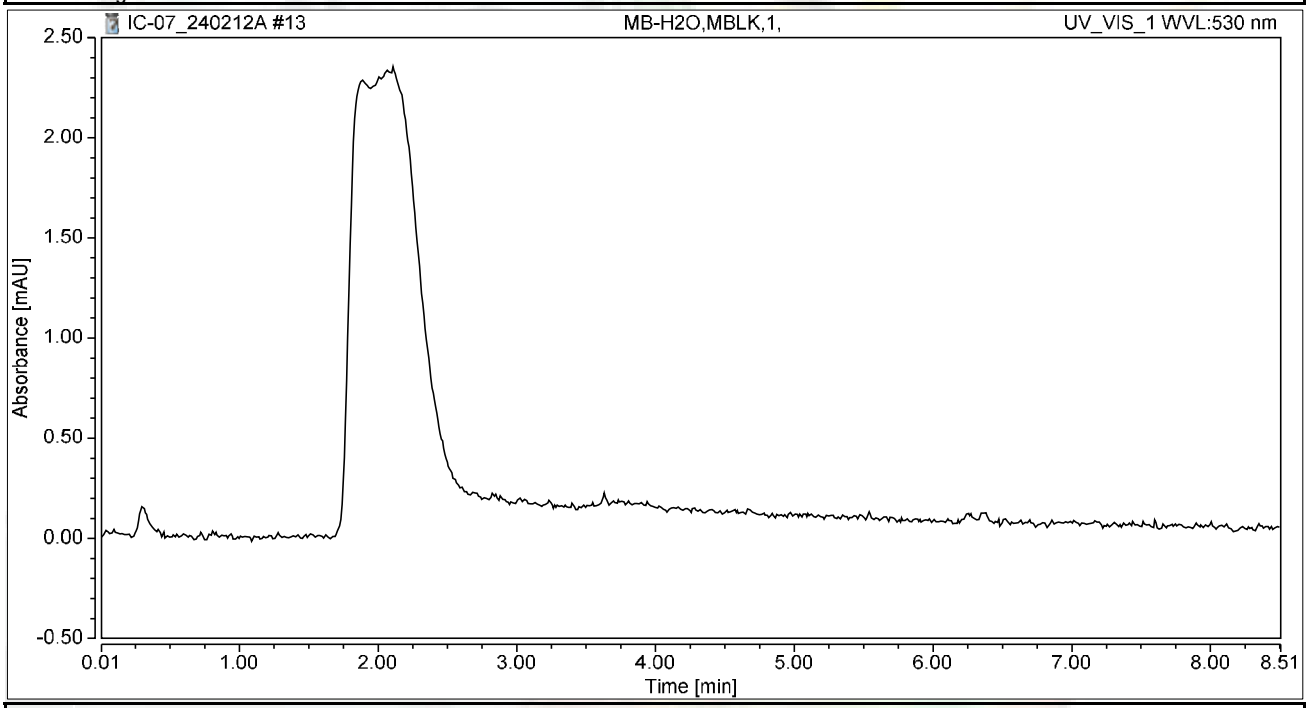
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 10:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

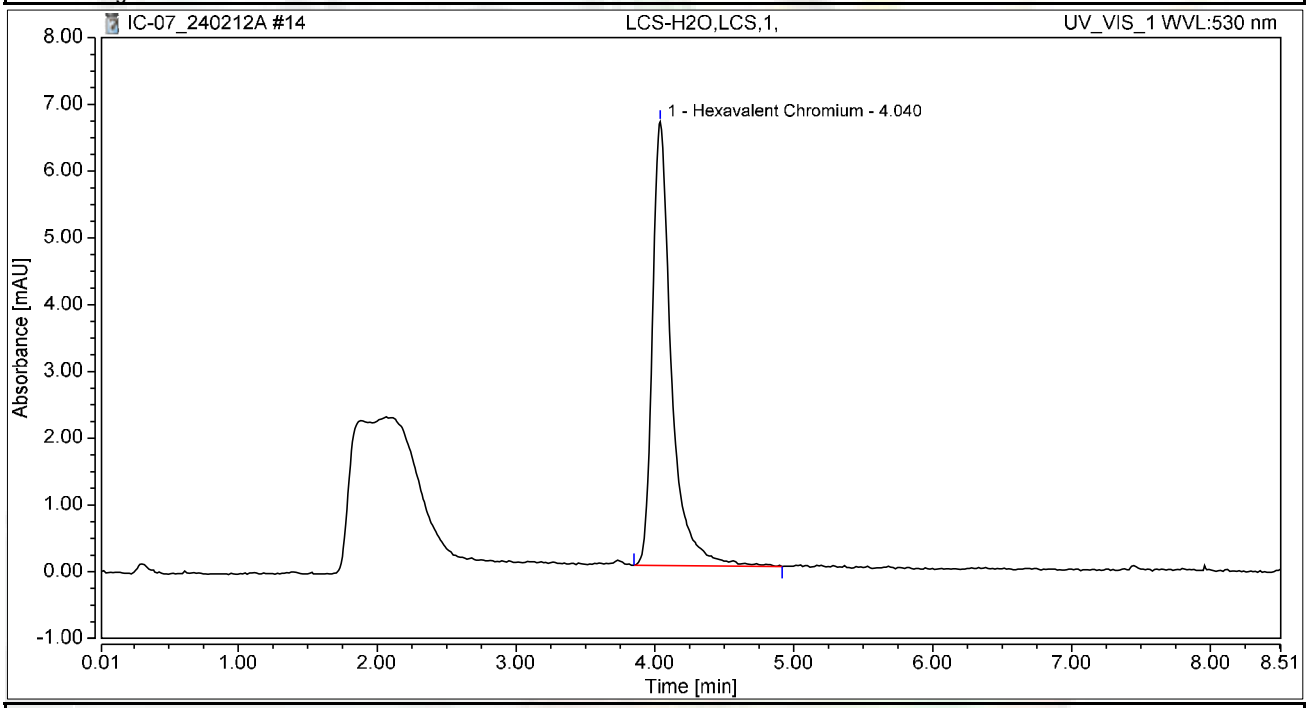
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 10:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

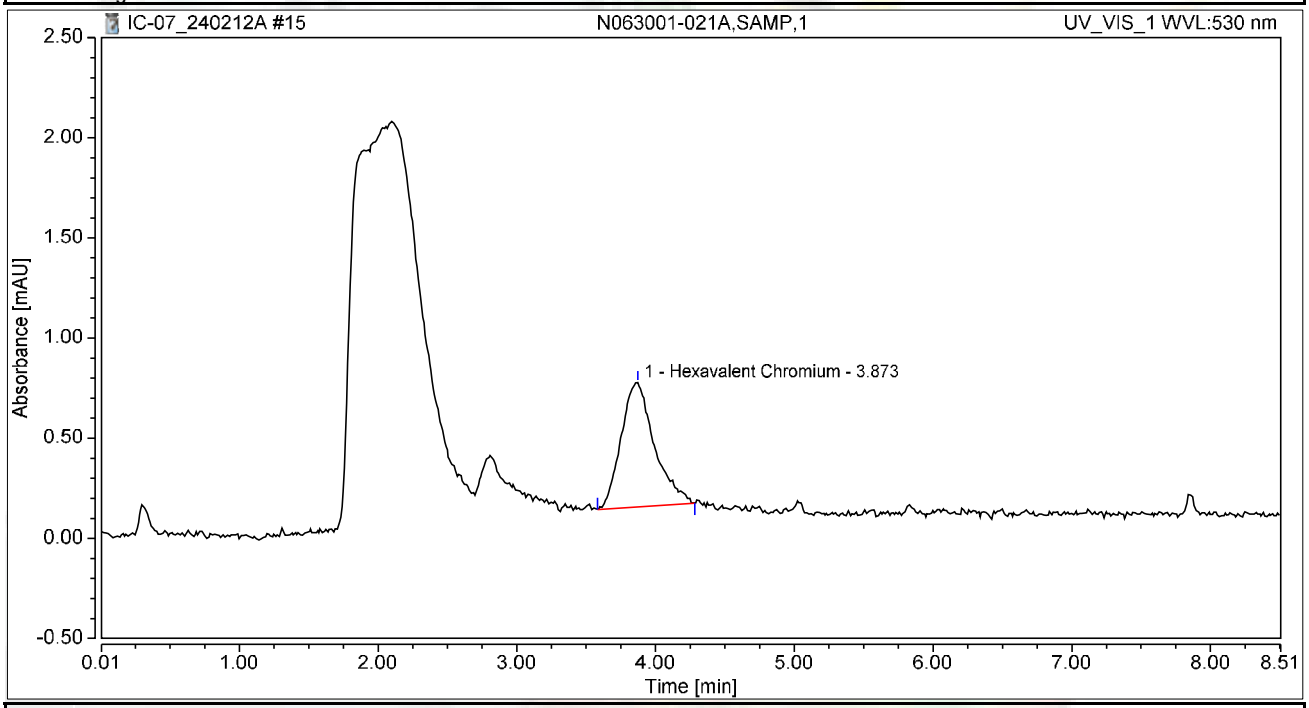
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.057	6.645	100.00	100.00	4.9152
Total:			**1.057**	**6.645**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-021A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 10:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

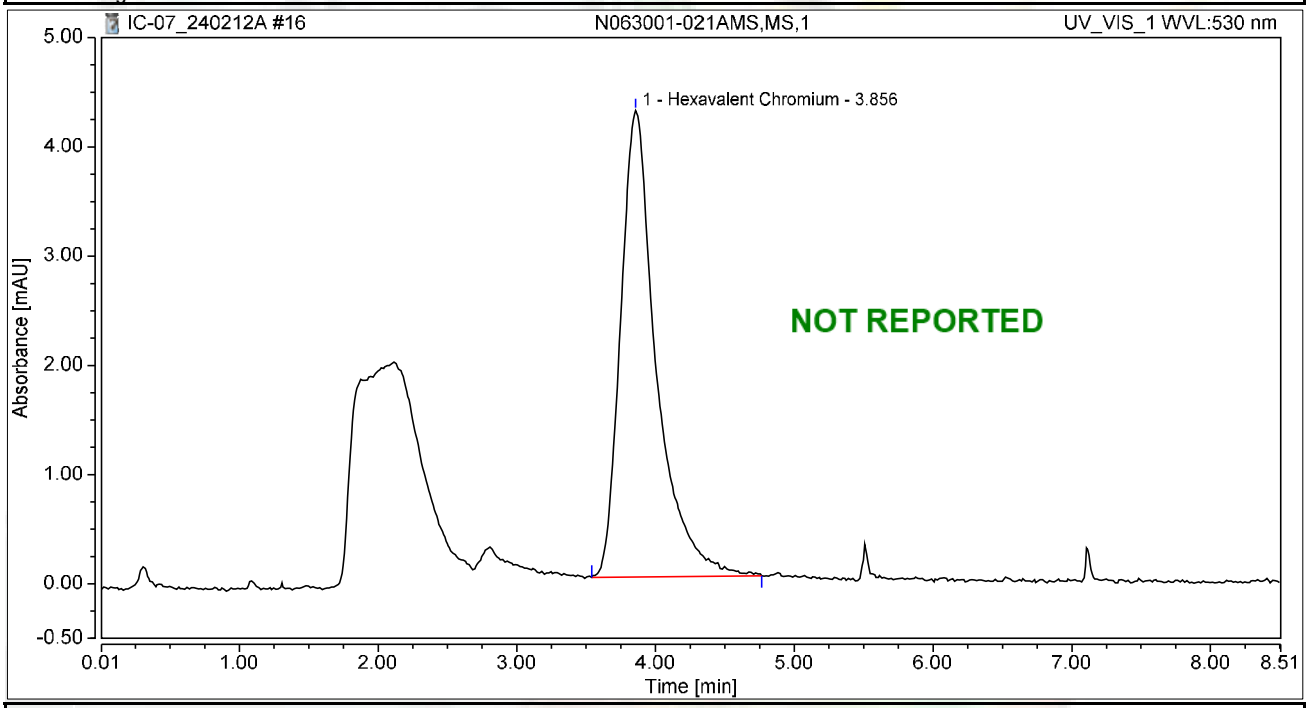
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.873	0.173	0.621	100.00	100.00	0.8062
Total:			**0.173**	**0.621**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-021AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 10:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

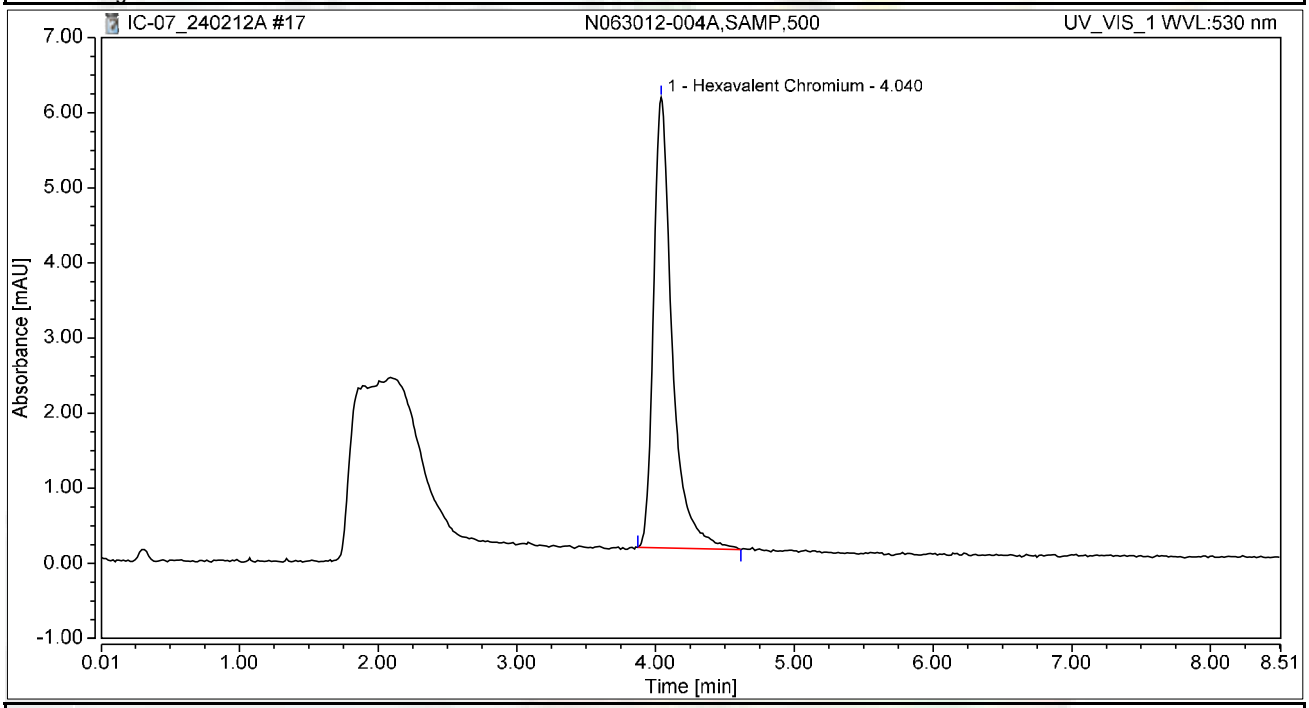
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	1.270	4.267	100.00	100.00	5.9032
Total:			**1.270**	**4.267**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-004A,SAMP,500**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 11:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

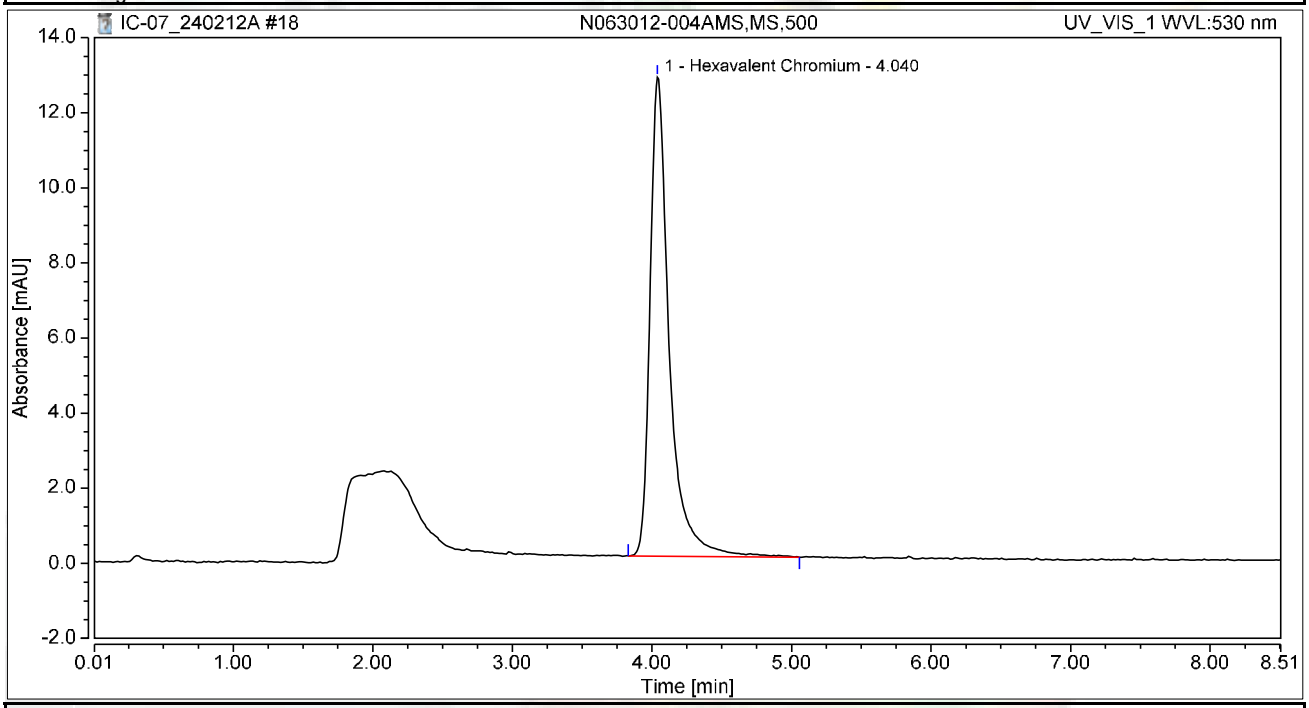
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.935	5.999	100.00	100.00	4.3471
Total:			**0.935**	**5.999**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-004AMS,MS,500**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 11:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

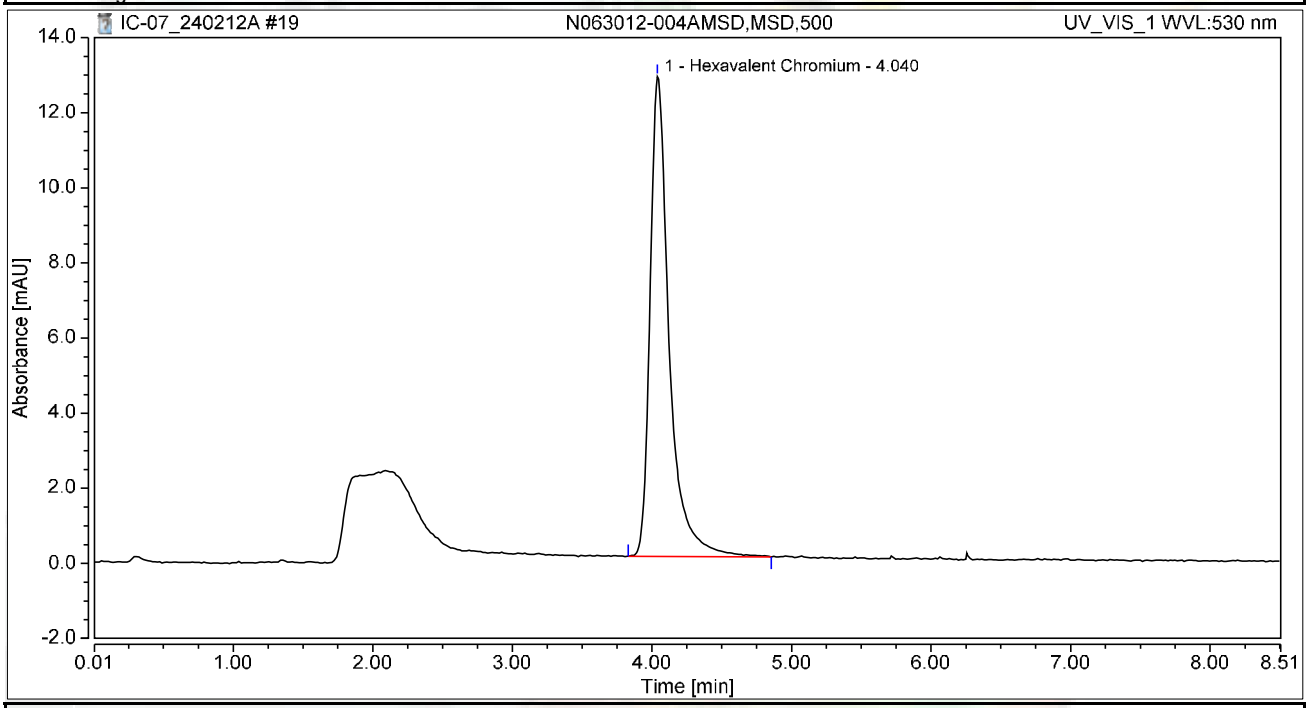
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.047	12.763	100.00	100.00	9.5168
Total:			**2.047**	**12.763**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-004AMSD,MSD,500**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 11:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

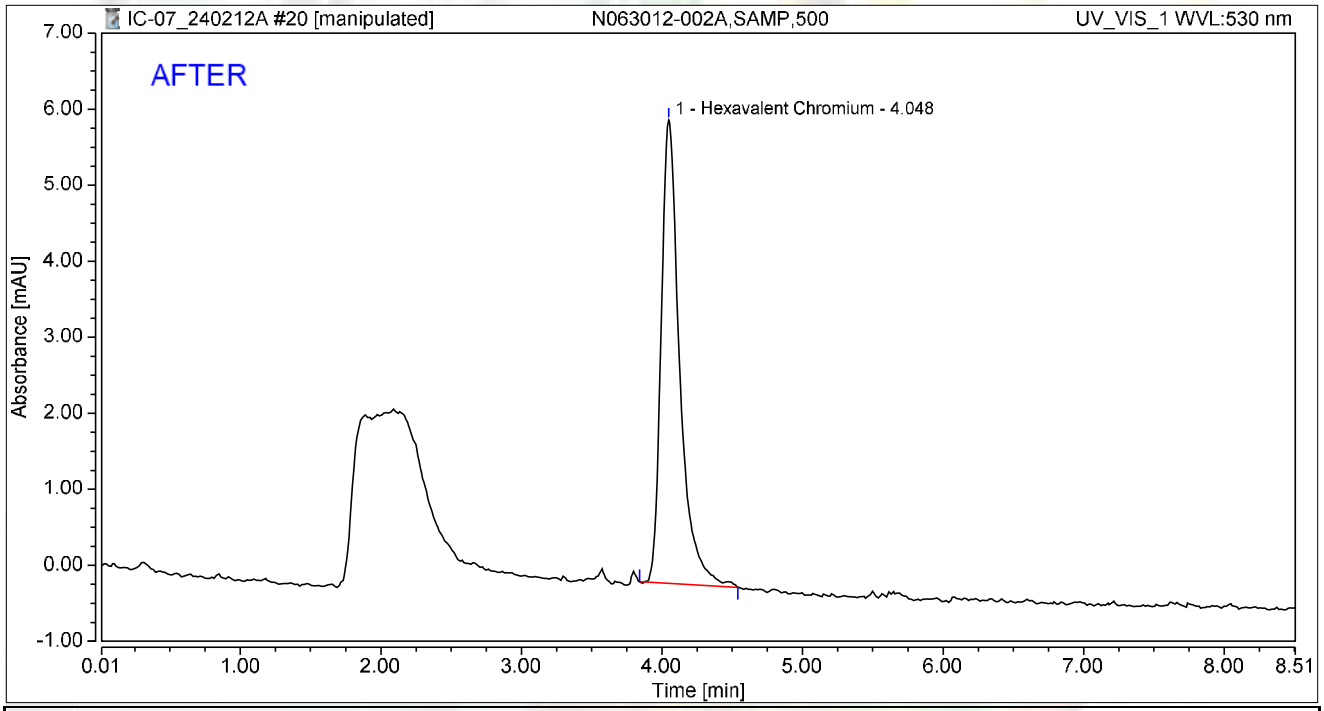
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.032	12.778	100.00	100.00	9.4478
Total:			**2.032**	**12.778**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-002A,SAMP,500**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 11:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.929	6.092	100.00	100.00	4.3202
Total:			**0.929**	**6.092**	**100.00**	**100.00**	

Reviewed by:

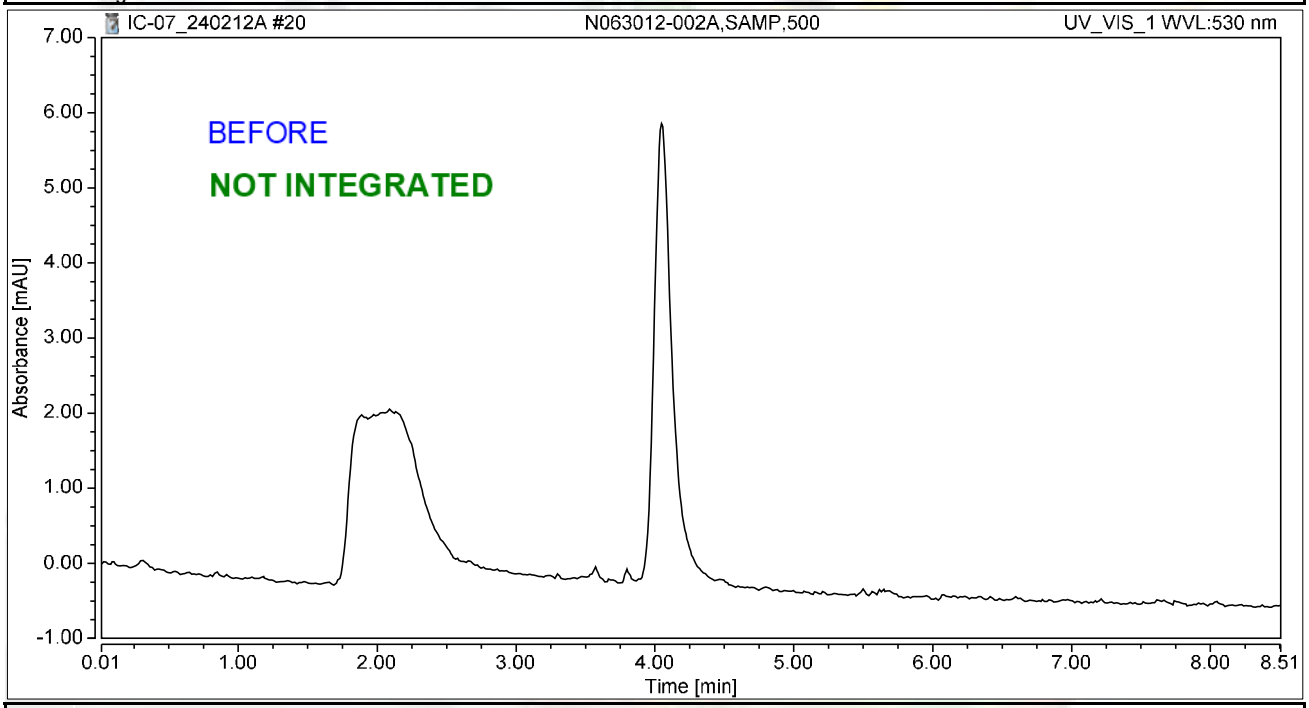
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063012-002A,SAMP,500**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 11:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

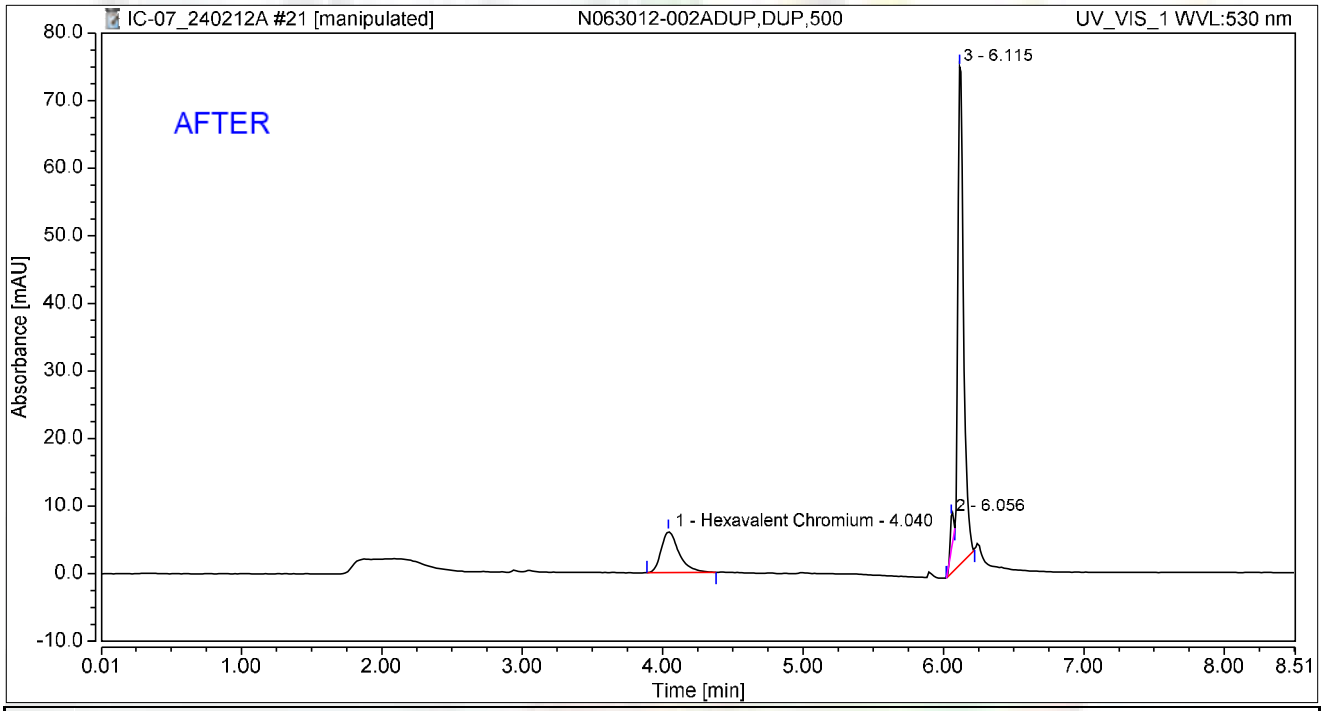
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-002ADUP,DUP,500**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 12:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.895	6.059	19.10	7.15	4.1600
2		6.056	0.116	4.914	2.49	5.80	n.a.
3		6.115	3.675	73.747	78.42	87.05	n.a.
Total:			**4.686**	**84.720**	**100.00**	**100.00**	

Reviewed by:

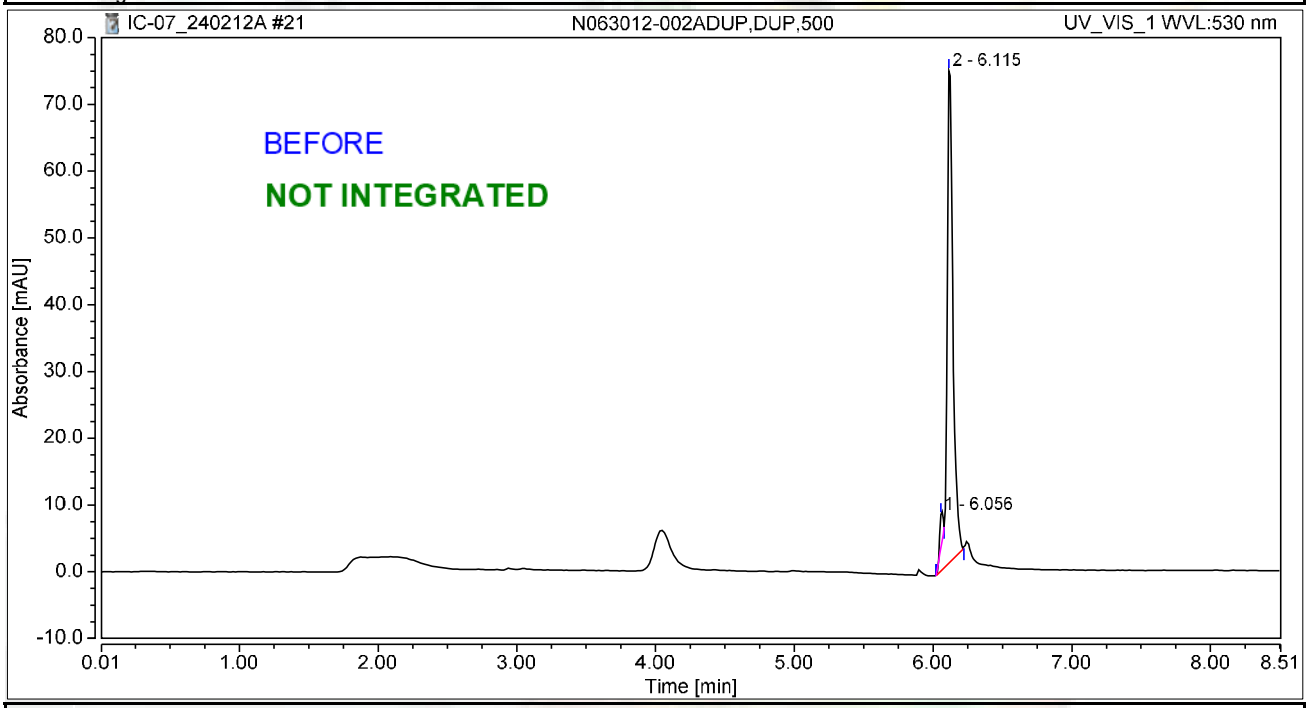
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063012-002ADUP,DUP,500**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 12:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

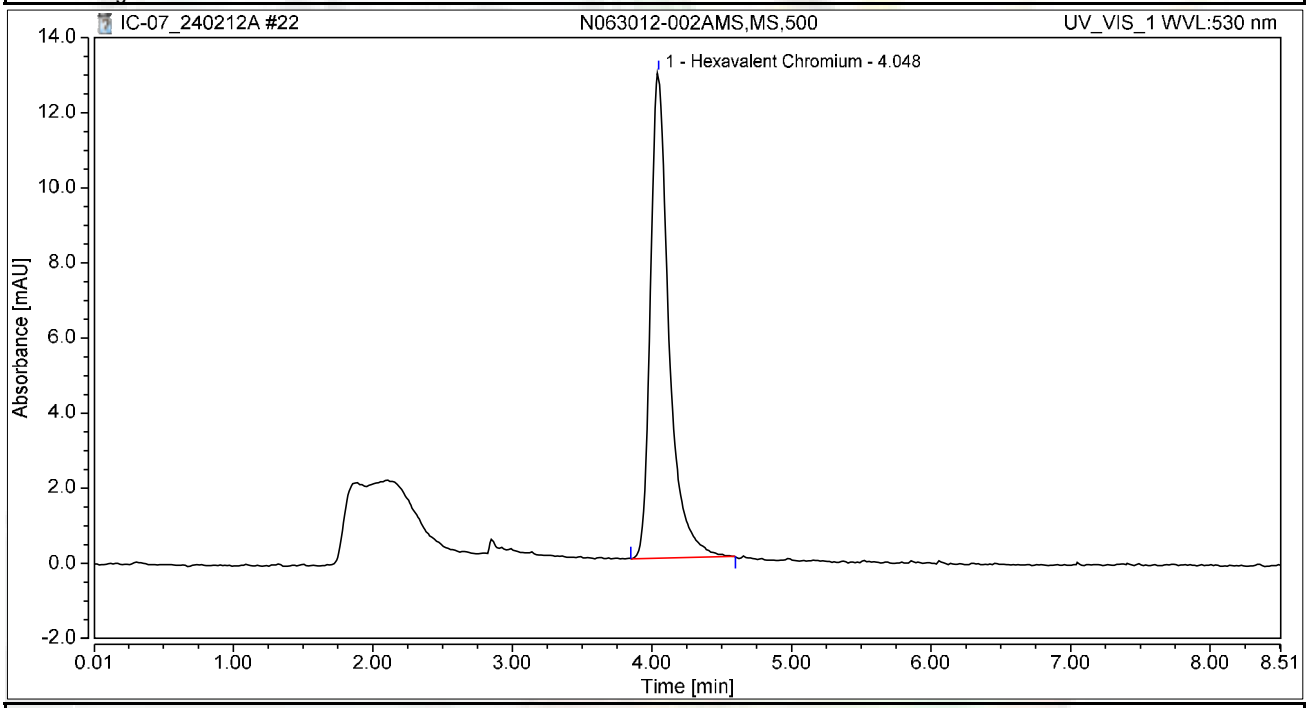
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		6.056	0.116	4.914	3.07	6.25	n.a.
2		6.115	3.675	73.747	96.93	93.75	n.a.
Total:			**3.791**	**78.661**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-002AMS,MS,500**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 12:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

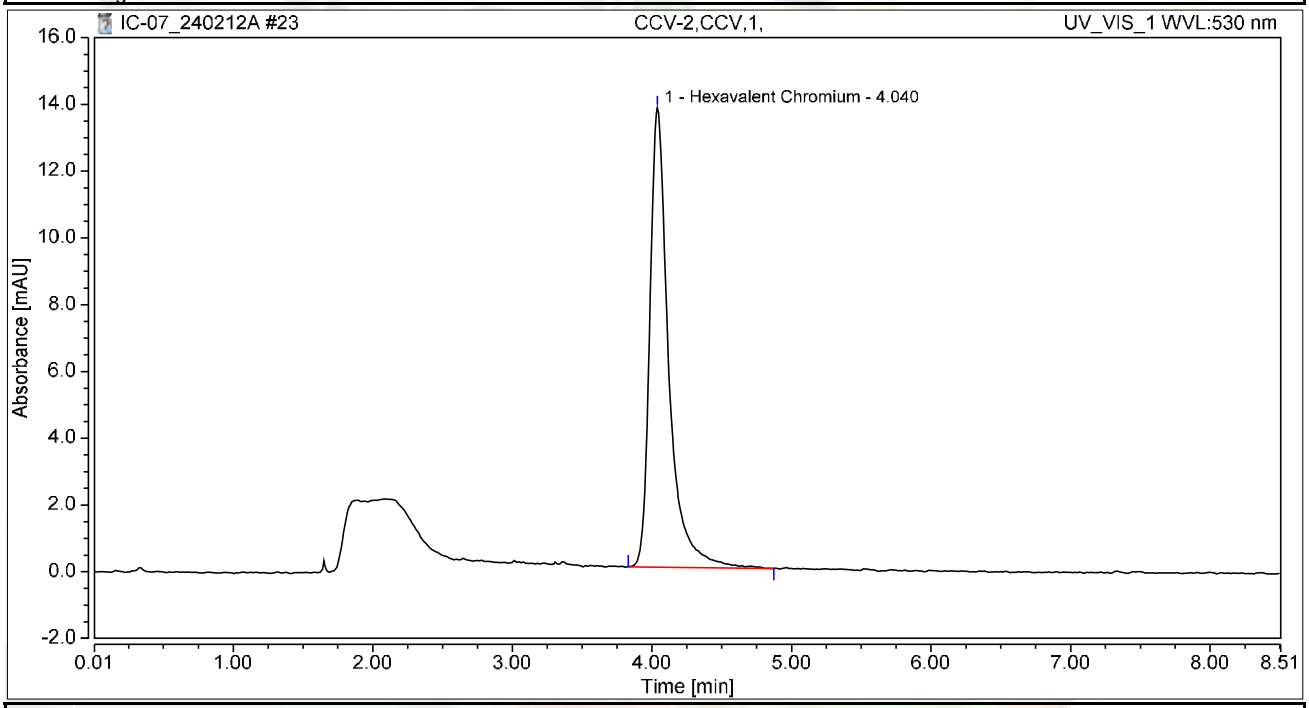
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.992	12.929	100.00	100.00	9.2586
Total:			**1.992**	**12.929**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 12:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

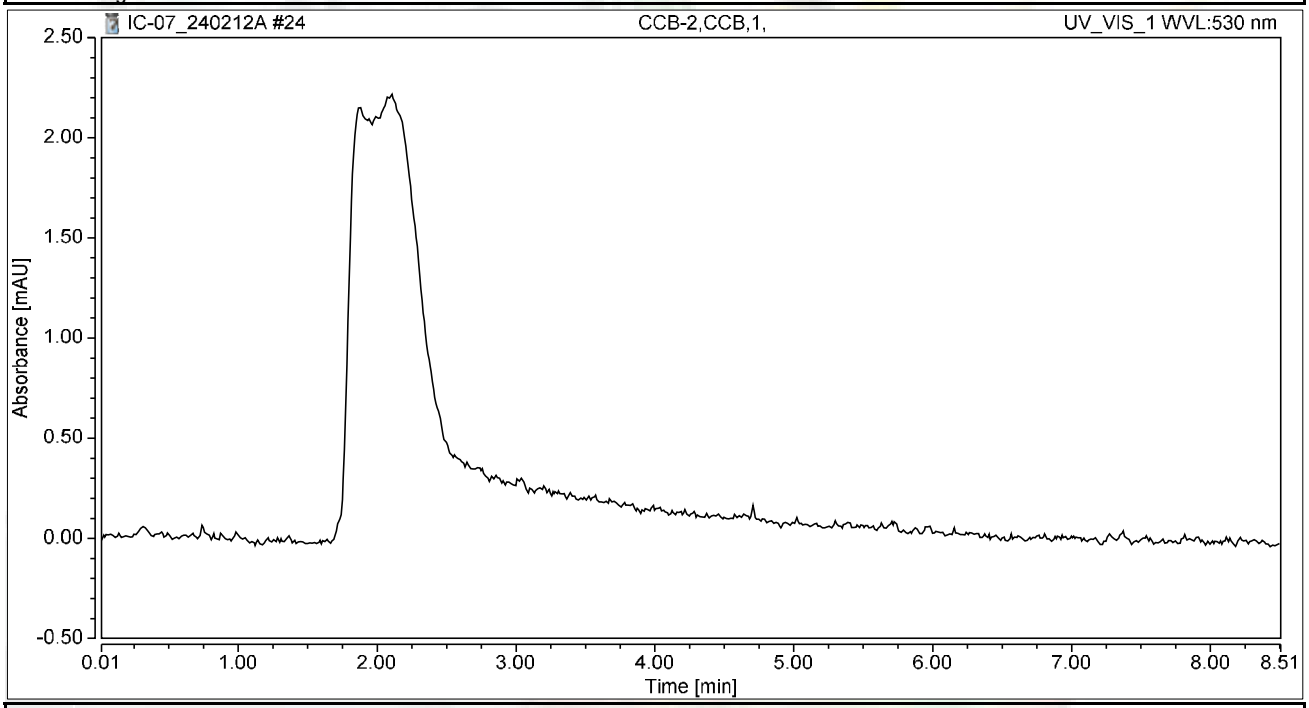
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.162	13.765	100.00	100.00	10.0529
Total:			**2.162**	**13.765**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 12:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

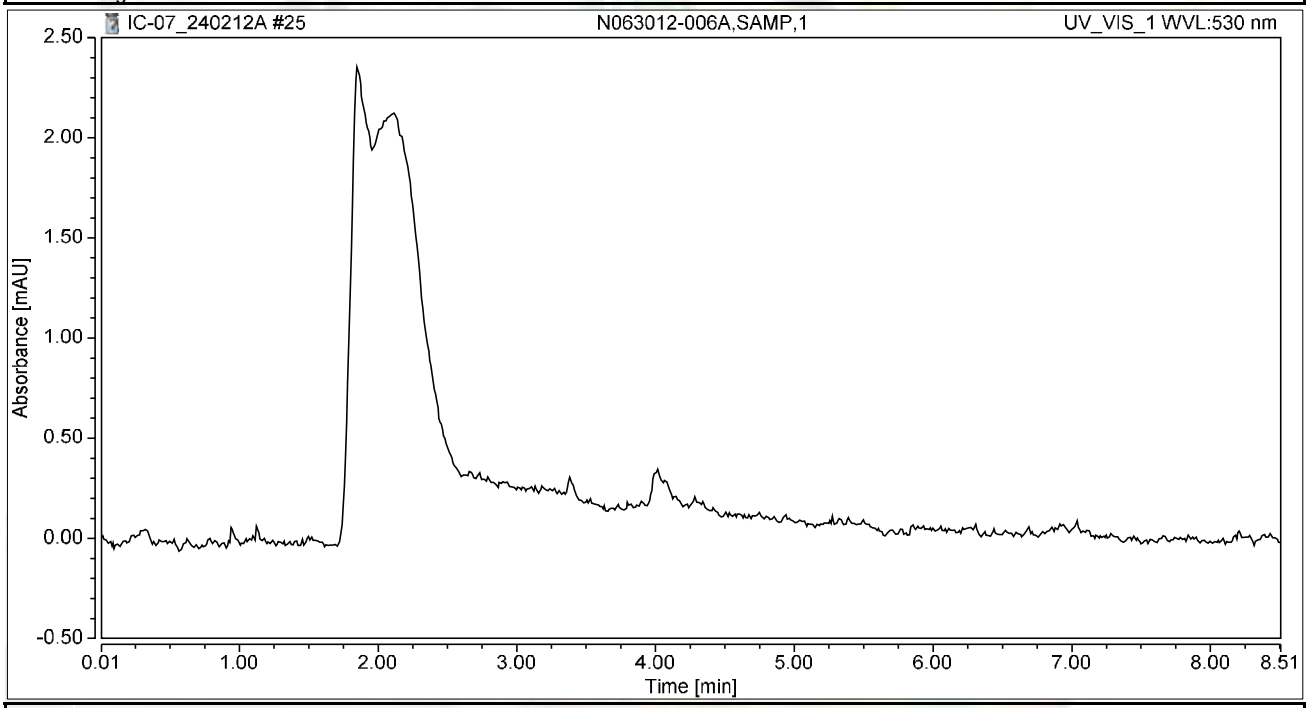
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 12:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

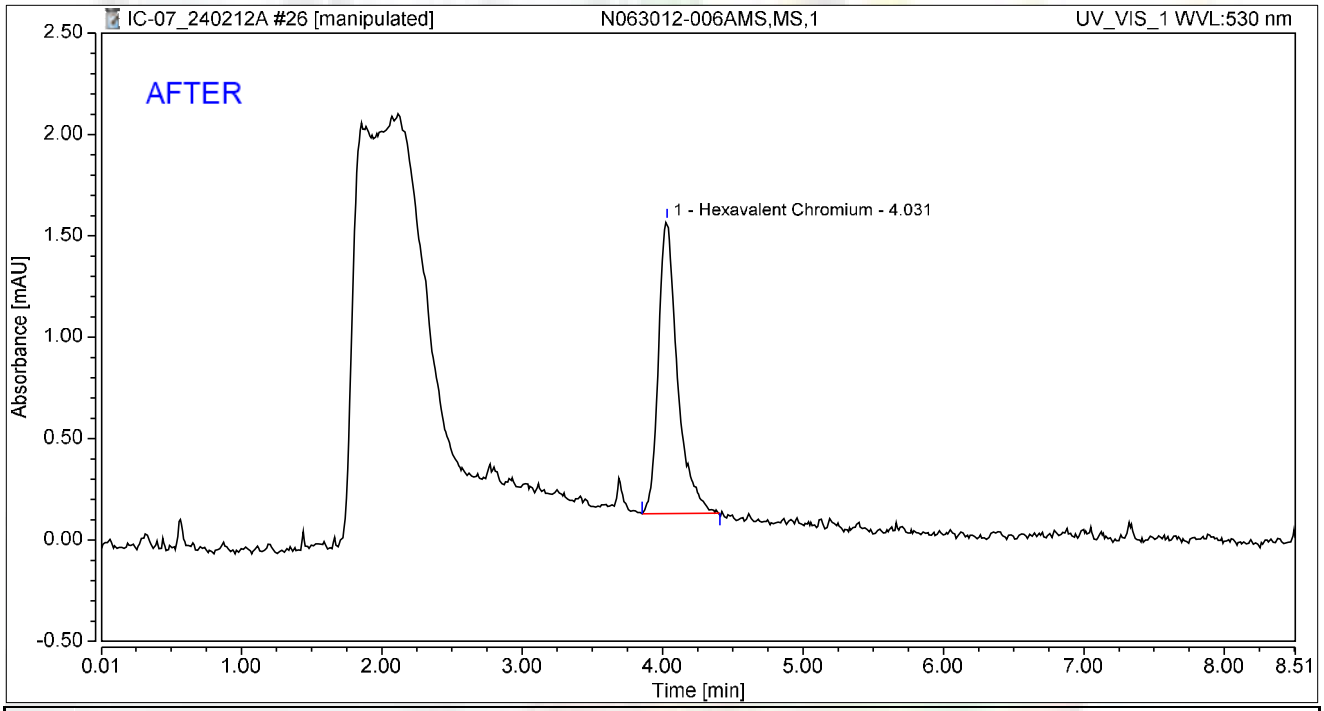
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 12:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.227	1.443	100.00	100.00	1.0554
Total:			**0.227**	**1.443**	**100.00**	**100.00**	

Reviewed by:

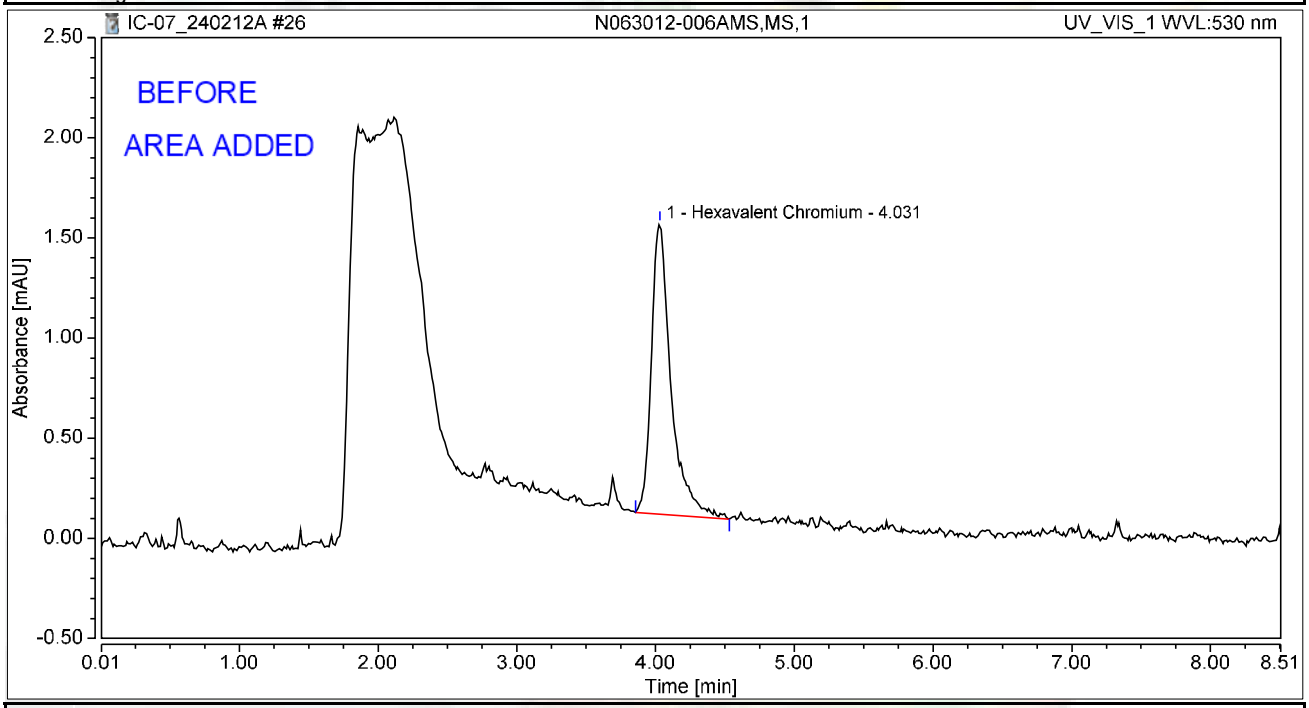
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063012-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 12:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

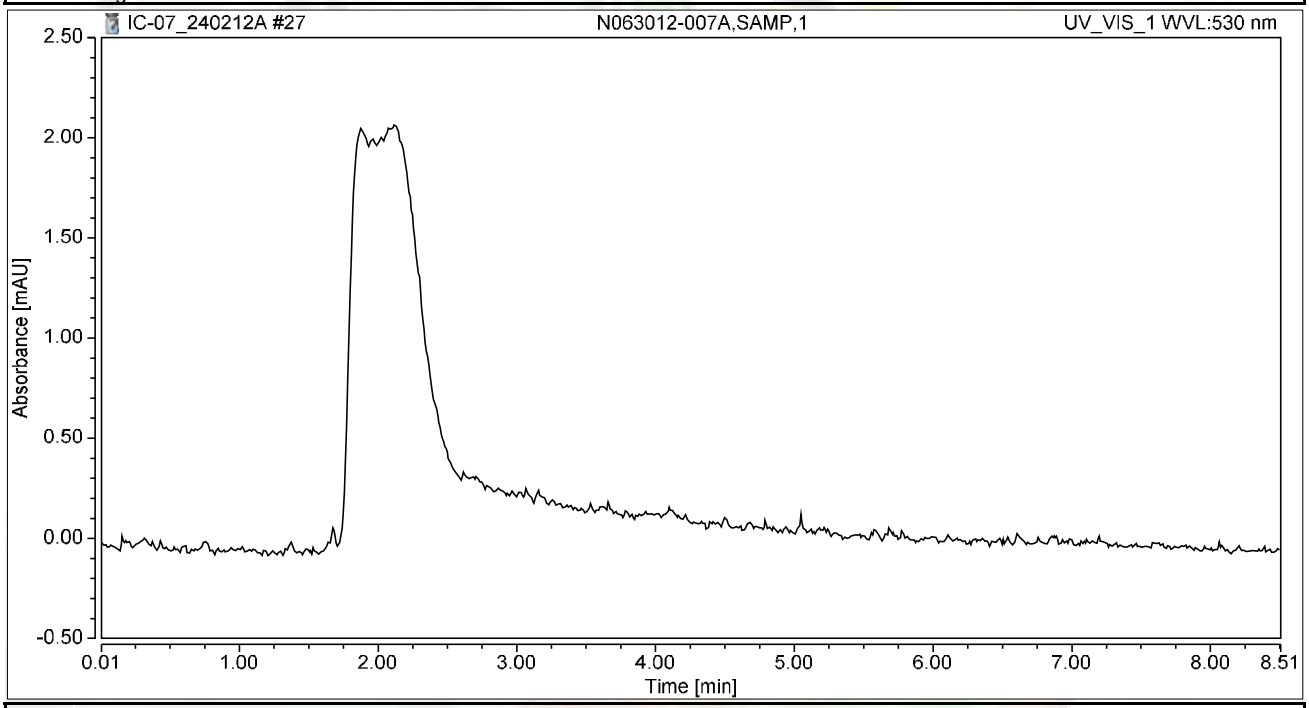
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.238	1.453	100.00	100.00	1.1081
Total:			**0.238**	**1.453**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-007A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 12:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

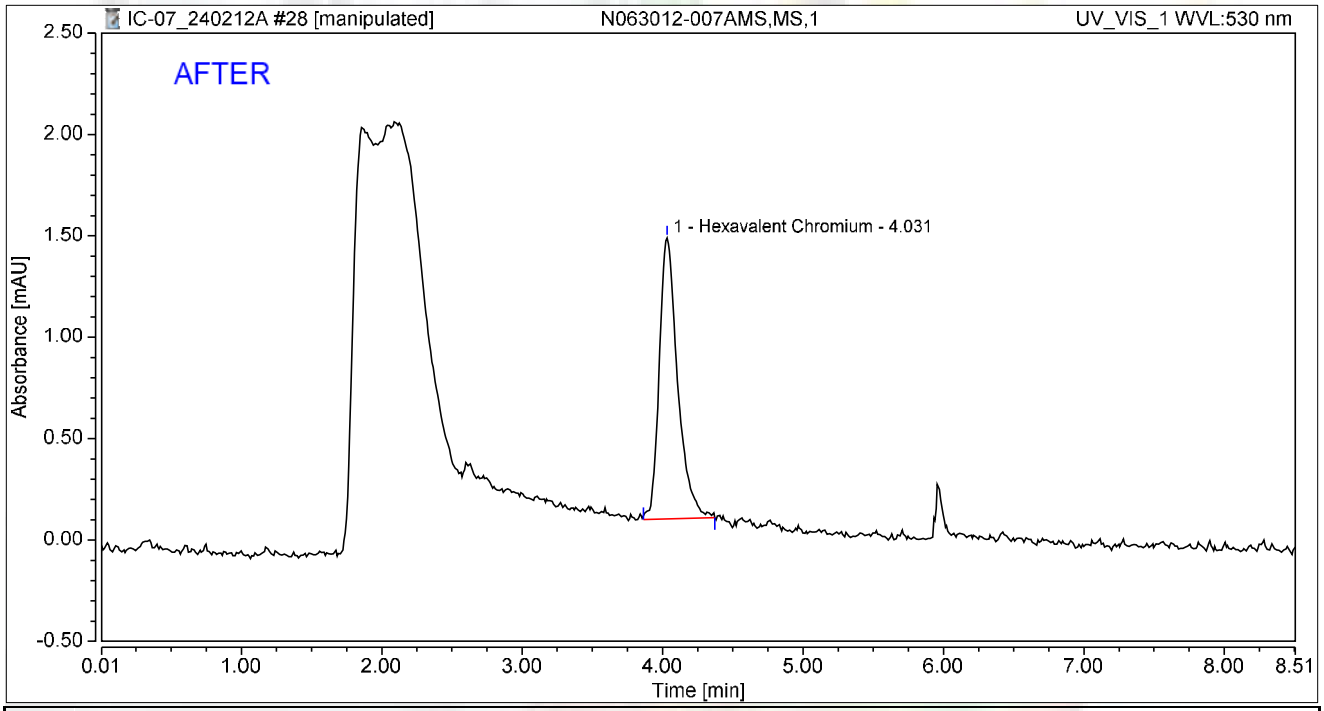
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 13:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

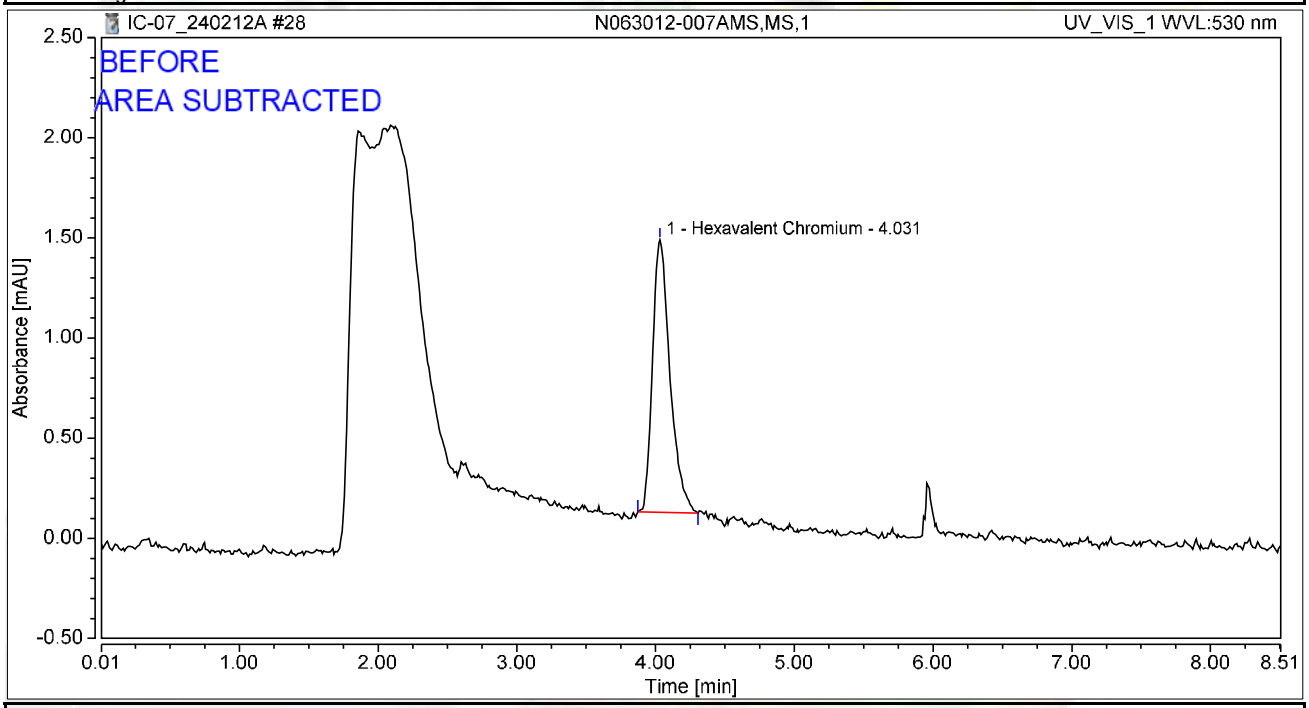
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.211	1.387	100.00	100.00	0.9791
Total:			**0.211**	**1.387**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 13:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

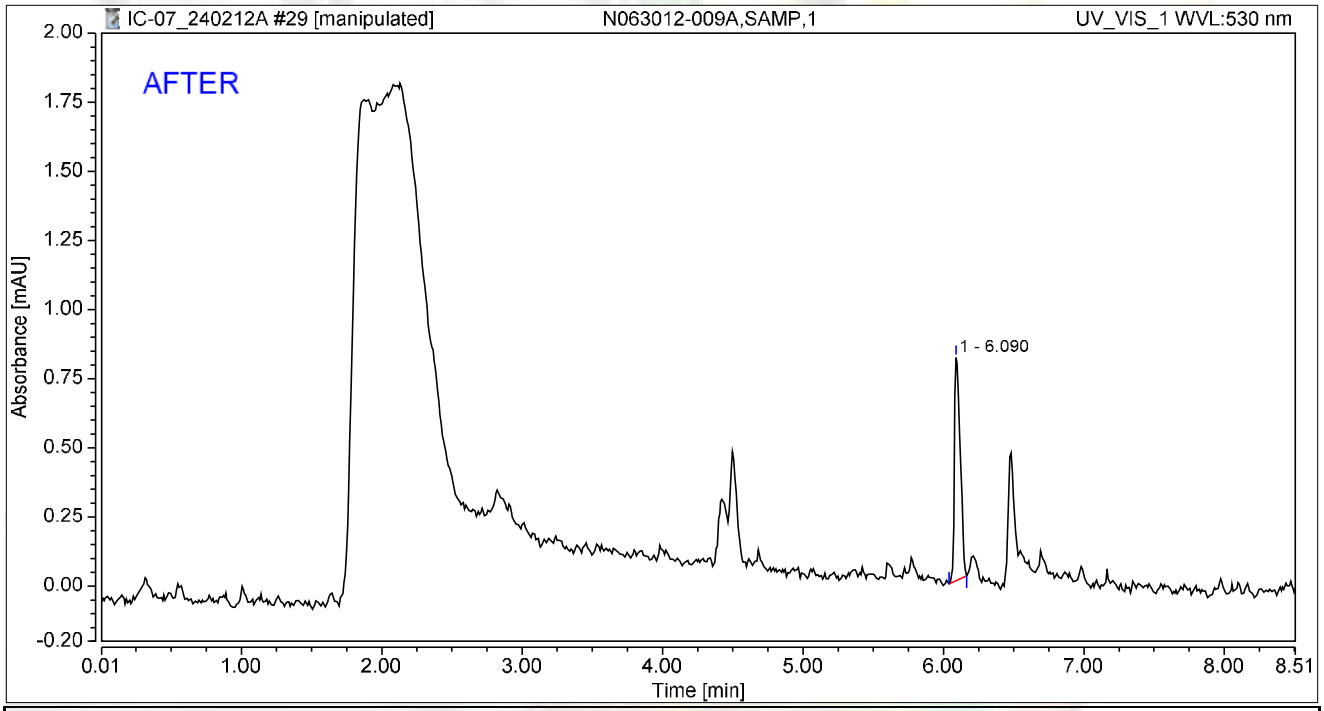
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.198	1.361	100.00	100.00	0.9220
Total:			**0.198**	**1.361**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 13:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		6.090	0.039	0.808	100.00	100.00	n.a.
Total:			**0.039**	**0.808**	**100.00**	**100.00**	

Reviewed by:

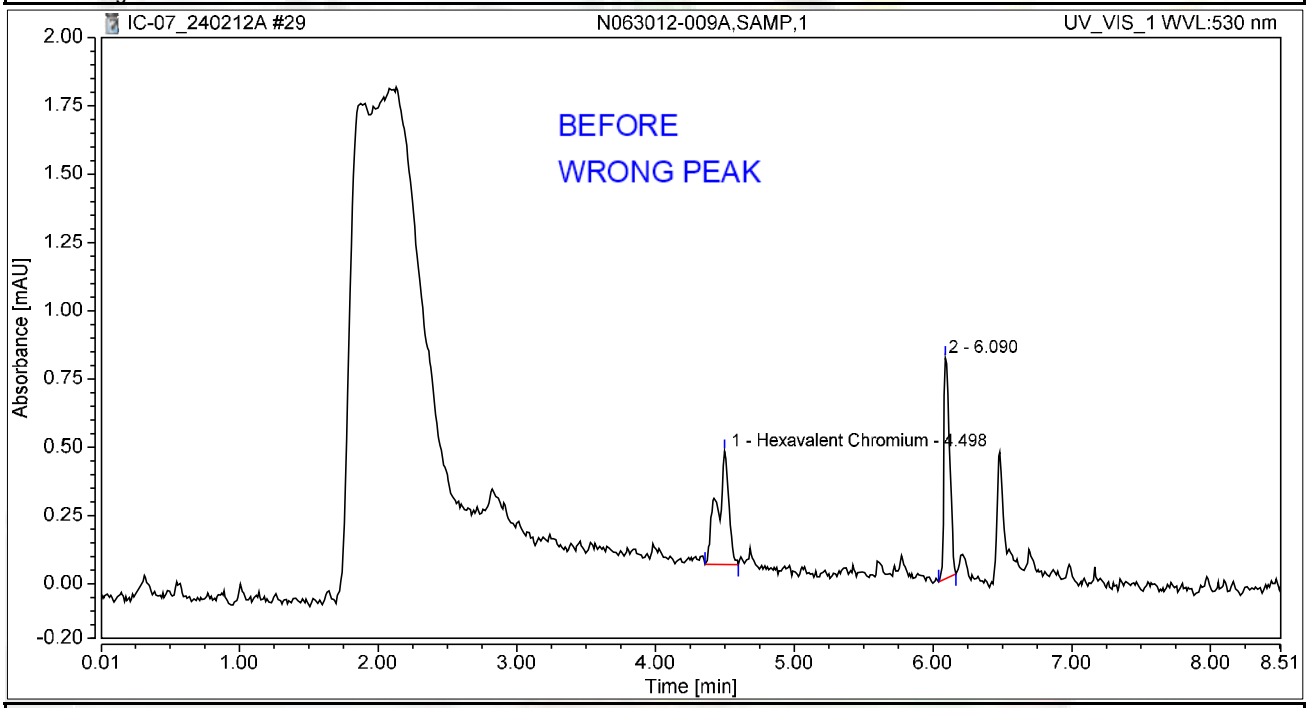
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063012-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 13:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

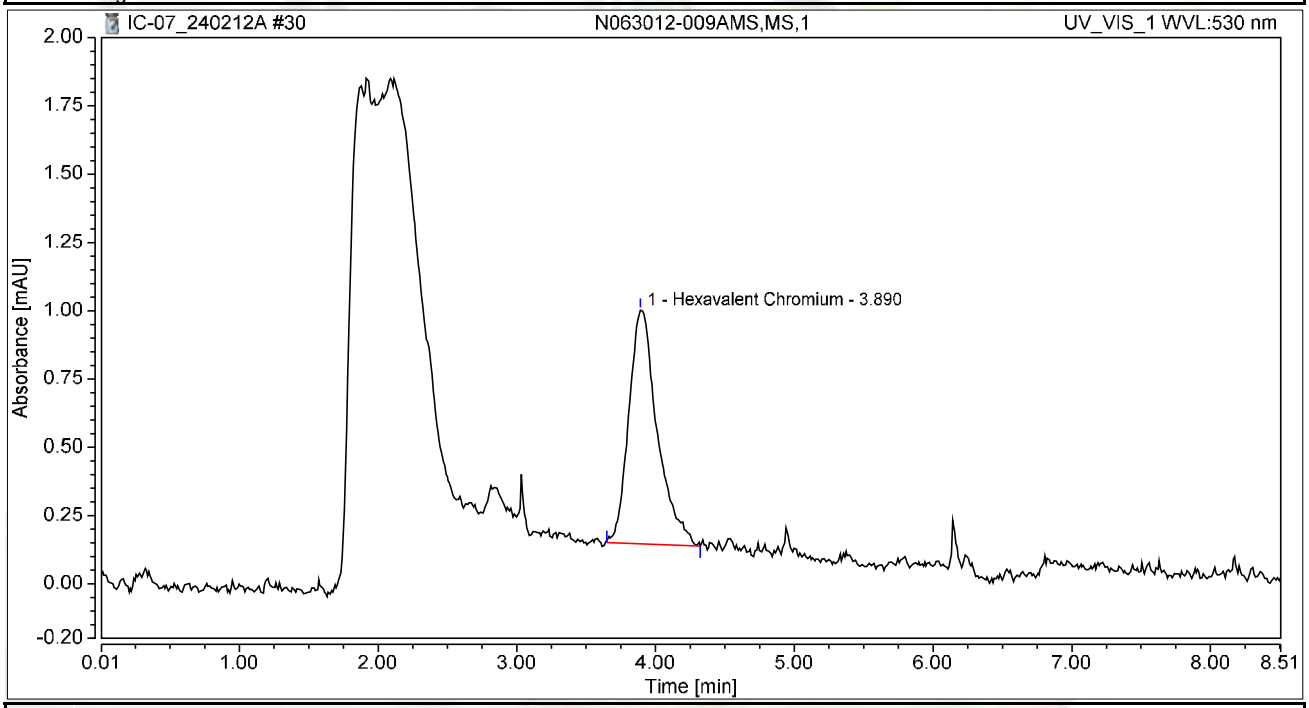
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.498	0.040	0.414	50.99	33.87	0.1877
2		6.090	0.039	0.808	49.01	66.13	n.a.
Total:			**0.079**	**1.222**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 13:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

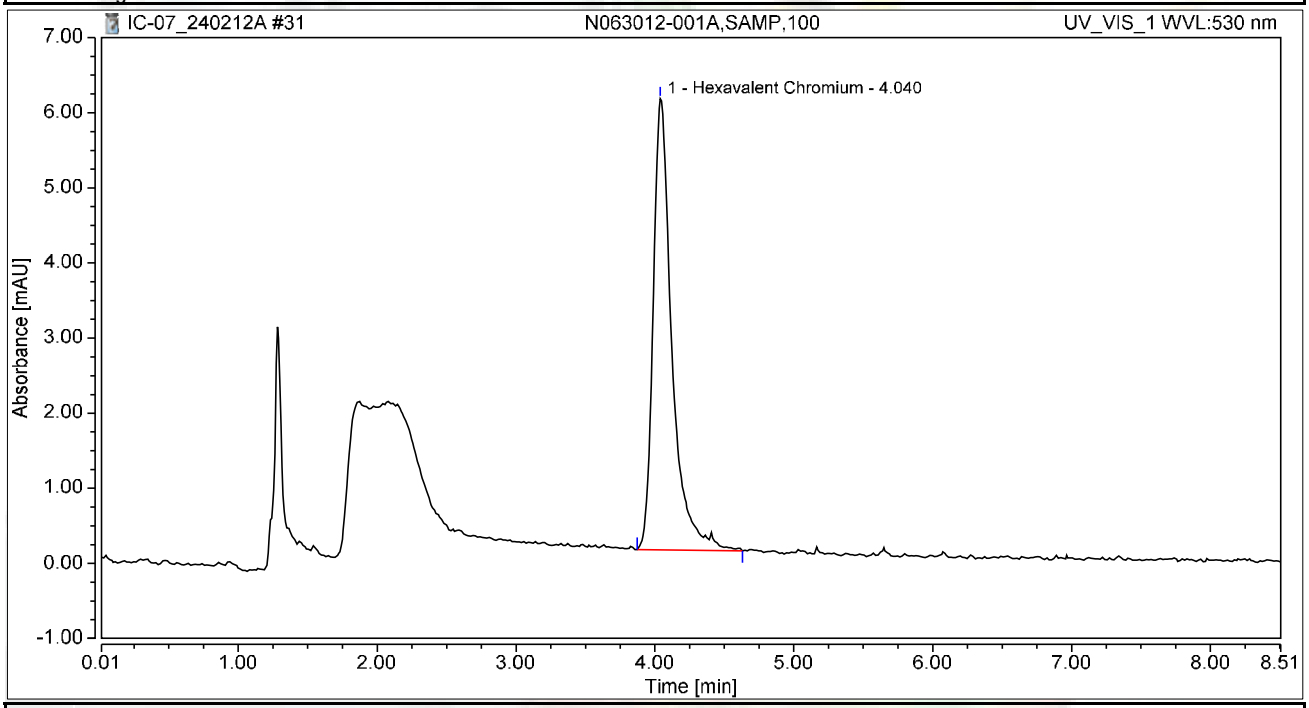
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.890	0.203	0.855	100.00	100.00	0.9458
Total:			**0.203**	**0.855**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-001A,SAMP,100**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 13:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

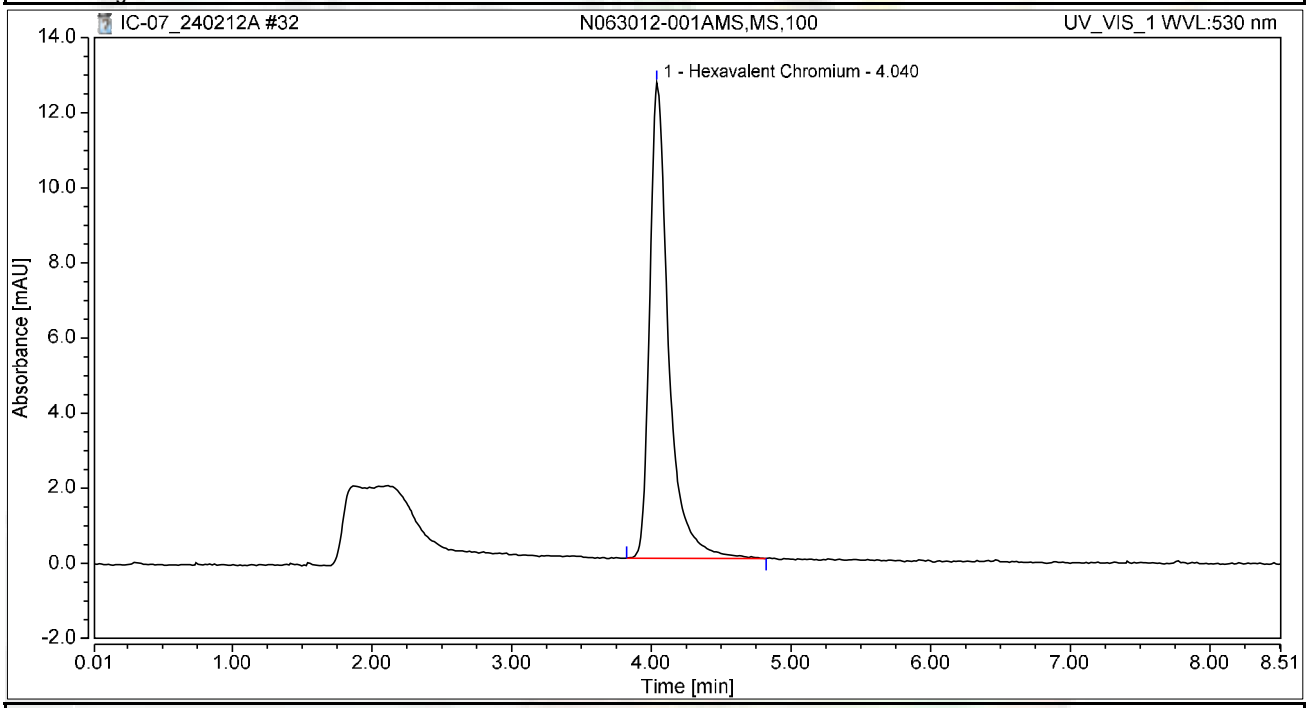
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.936	6.003	100.00	100.00	4.3517
Total:			**0.936**	**6.003**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-001AMS,MS,100**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 13:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

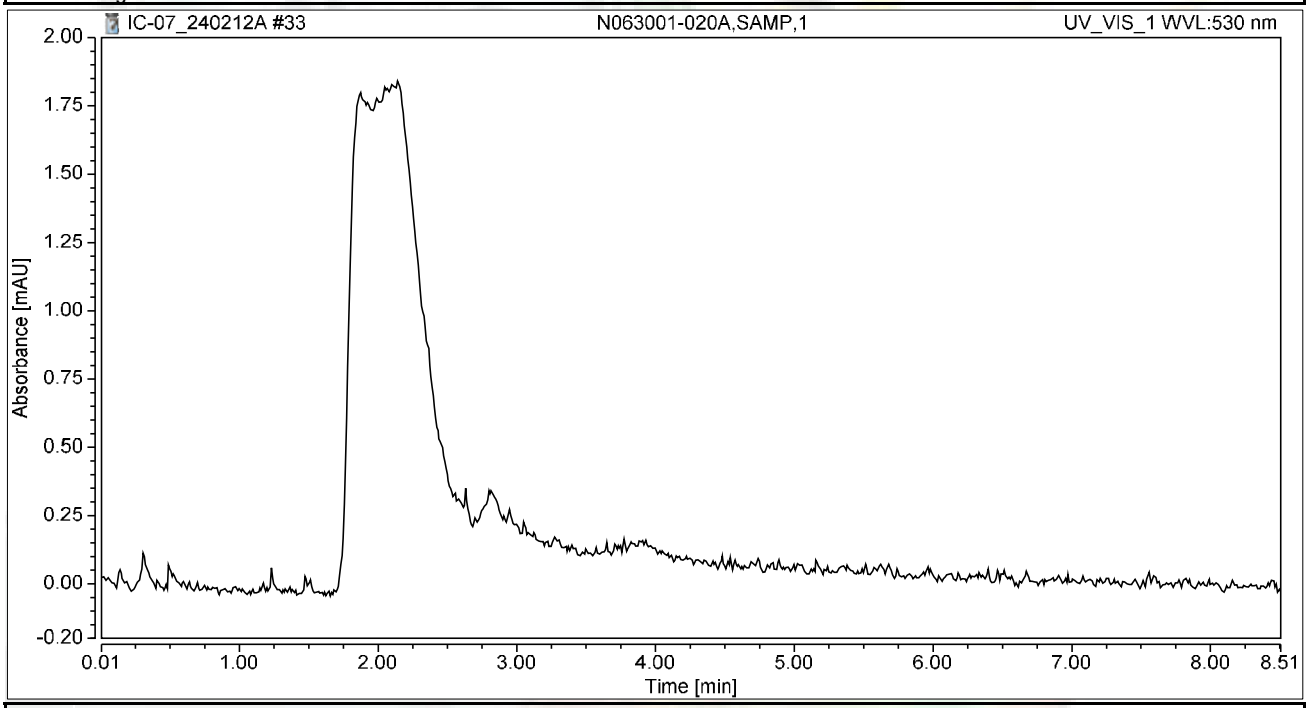
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.992	12.673	100.00	100.00	9.2592
Total:			**1.992**	**12.673**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-020A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 13:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

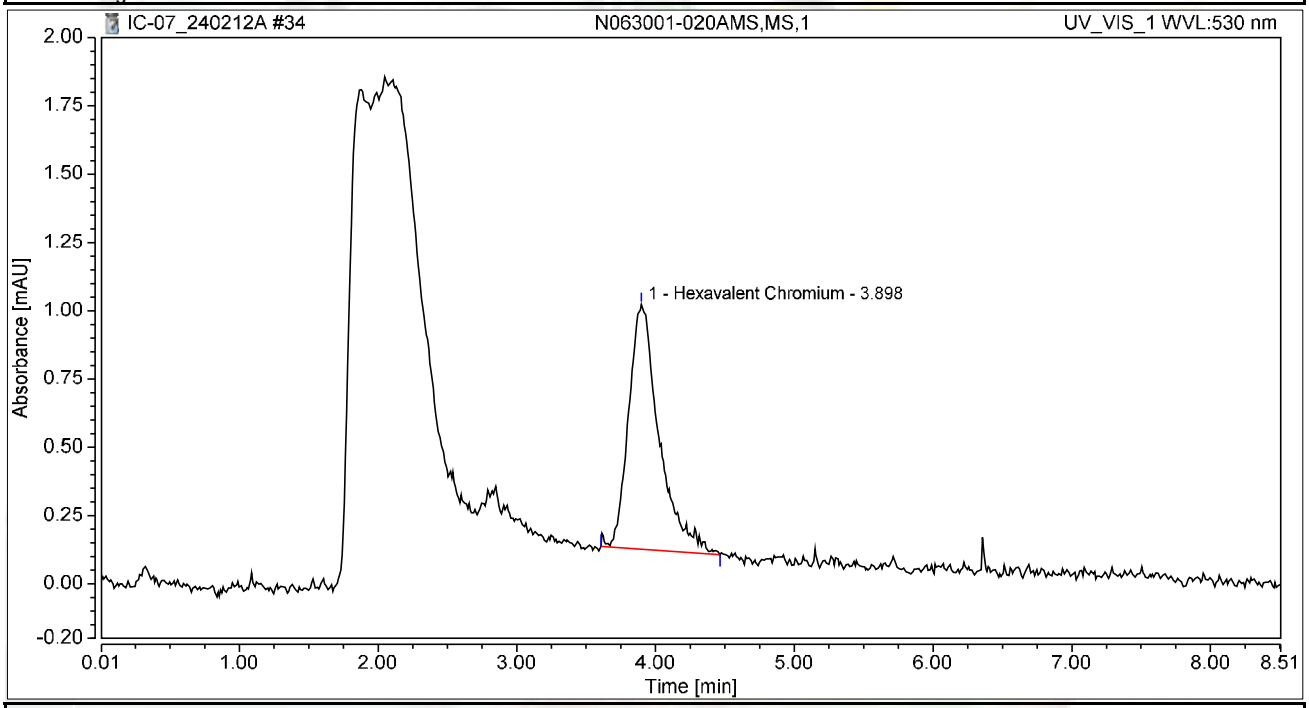
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-020AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 14:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

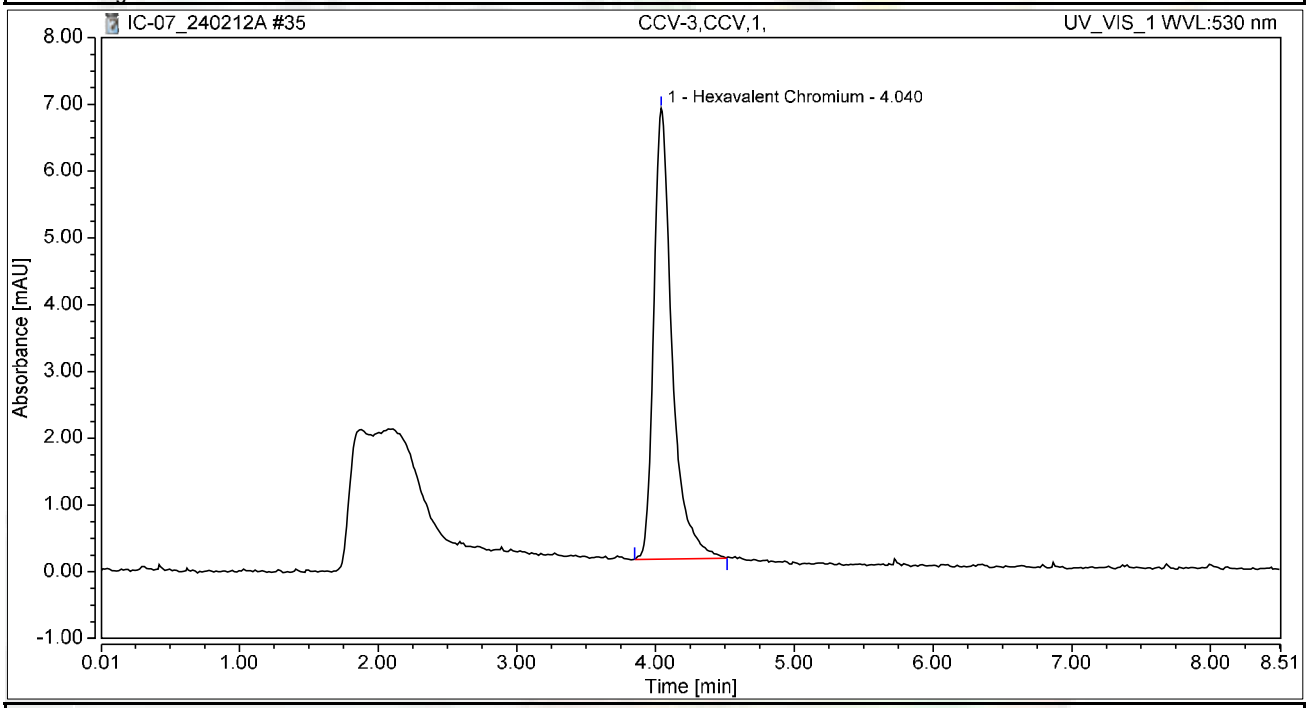
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.898	0.228	0.895	100.00	100.00	1.0597
Total:			**0.228**	**0.895**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 14:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

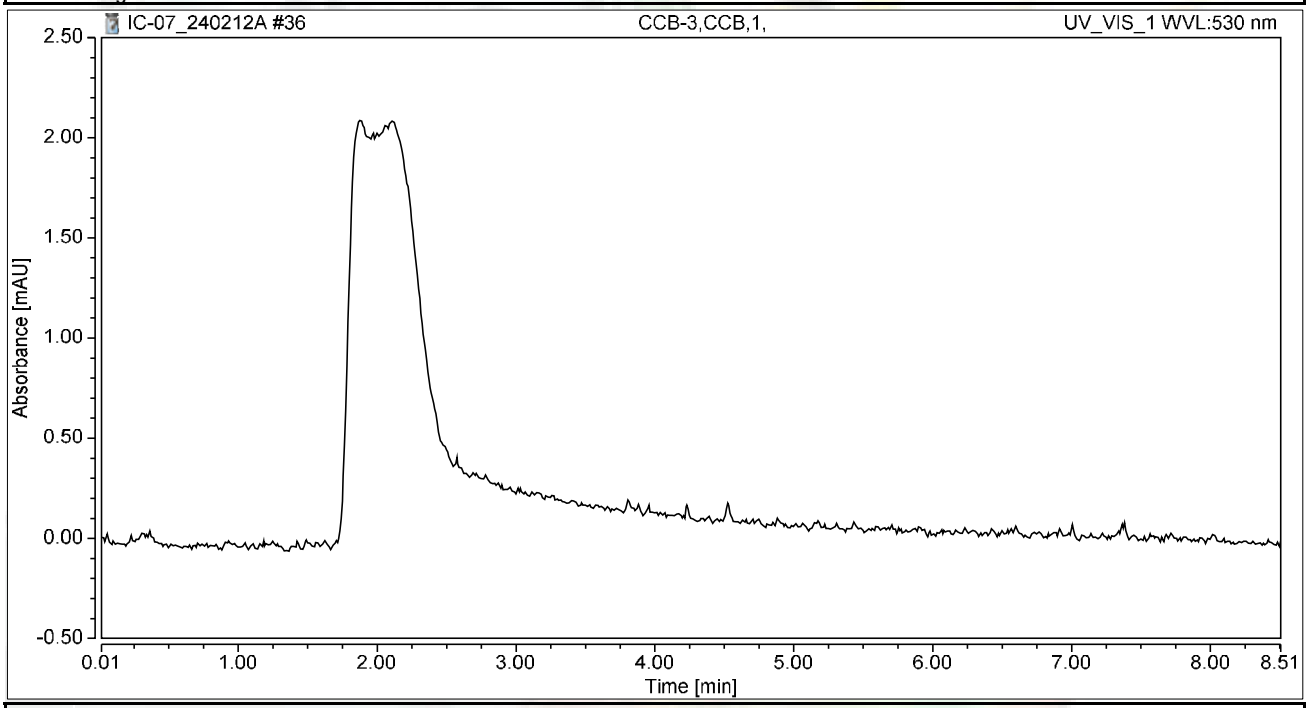
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.036	6.752	100.00	100.00	4.8146
Total:			**1.036**	**6.752**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 14:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

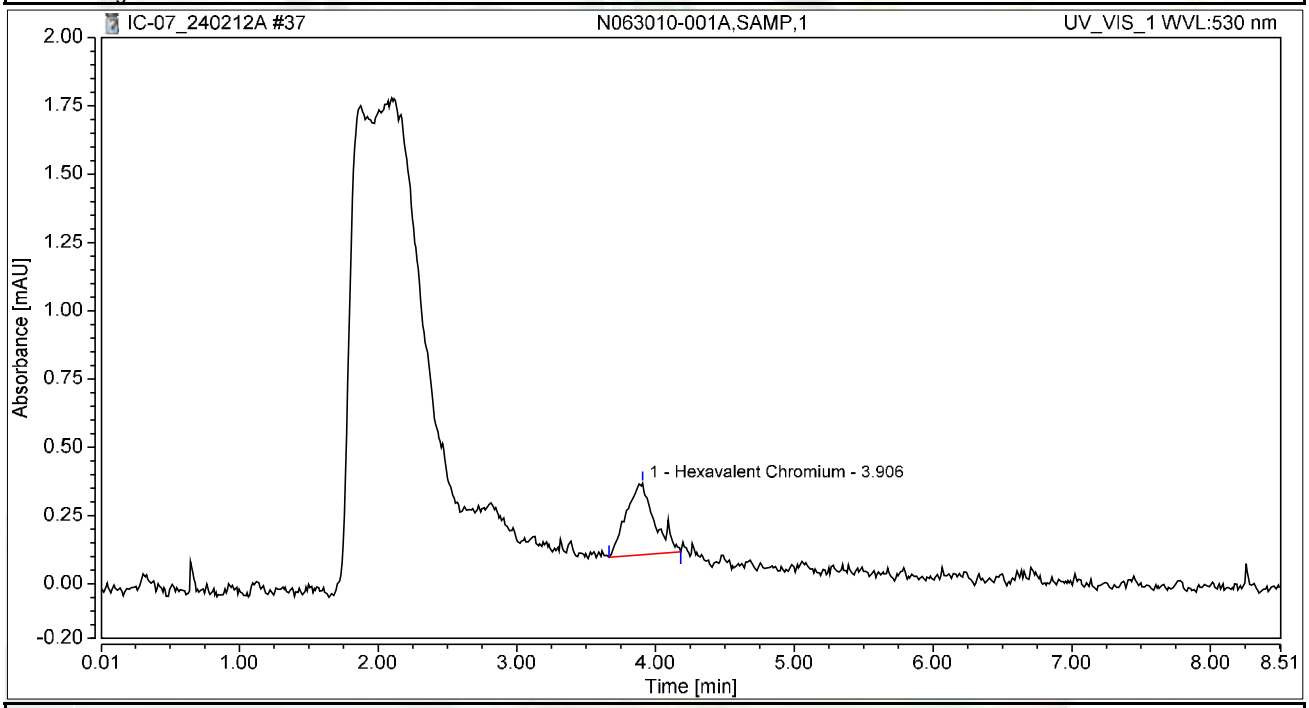
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063010-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 14:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

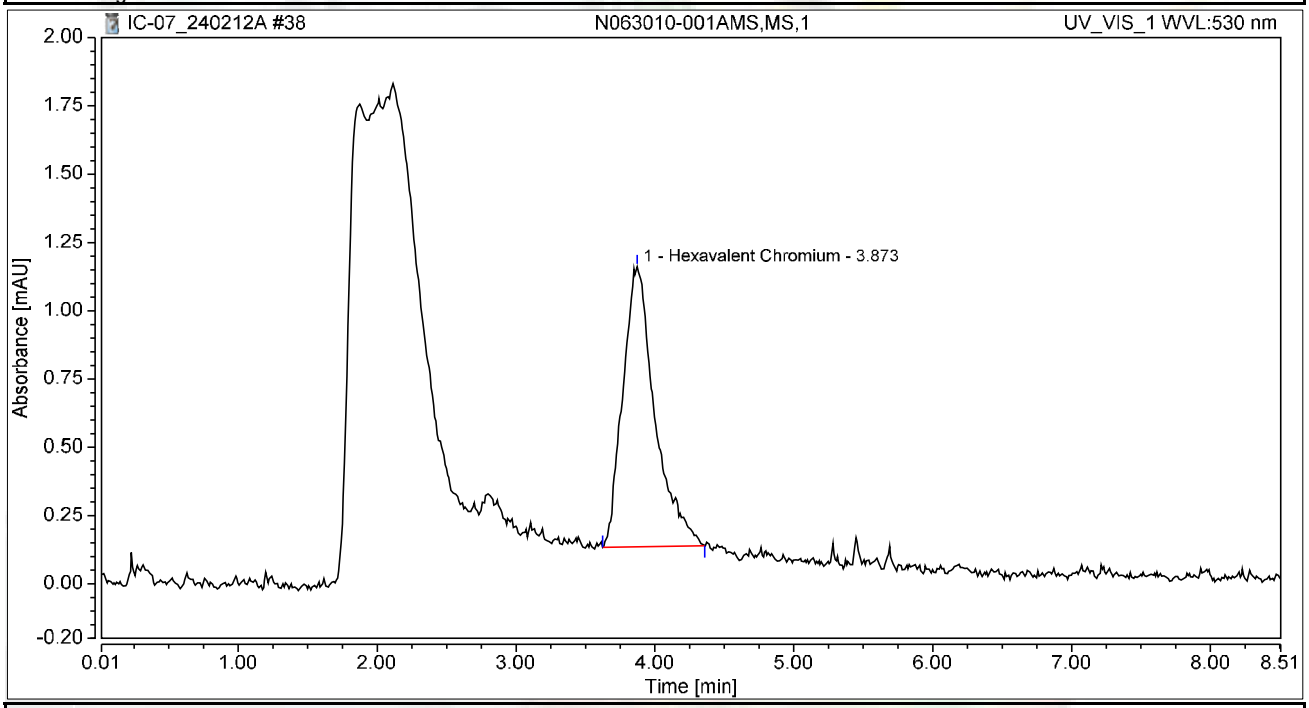
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.906	0.062	0.261	100.00	100.00	0.2887
Total:			**0.062**	**0.261**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063010-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 14:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

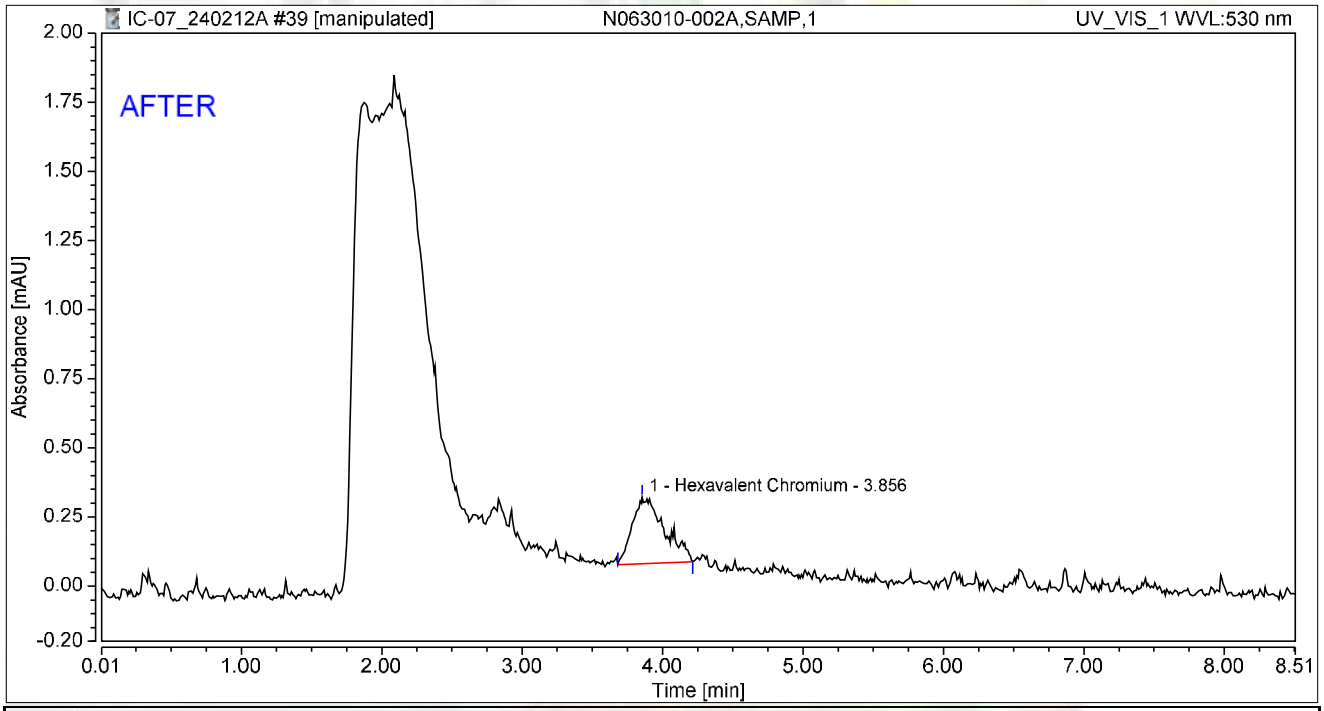
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.873	0.275	1.025	100.00	100.00	1.2765
Total:			**0.275**	**1.025**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063010-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 14:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.064	0.242	100.00	100.00	0.2958
Total:			**0.064**	**0.242**	**100.00**	**100.00**	

Reviewed by:

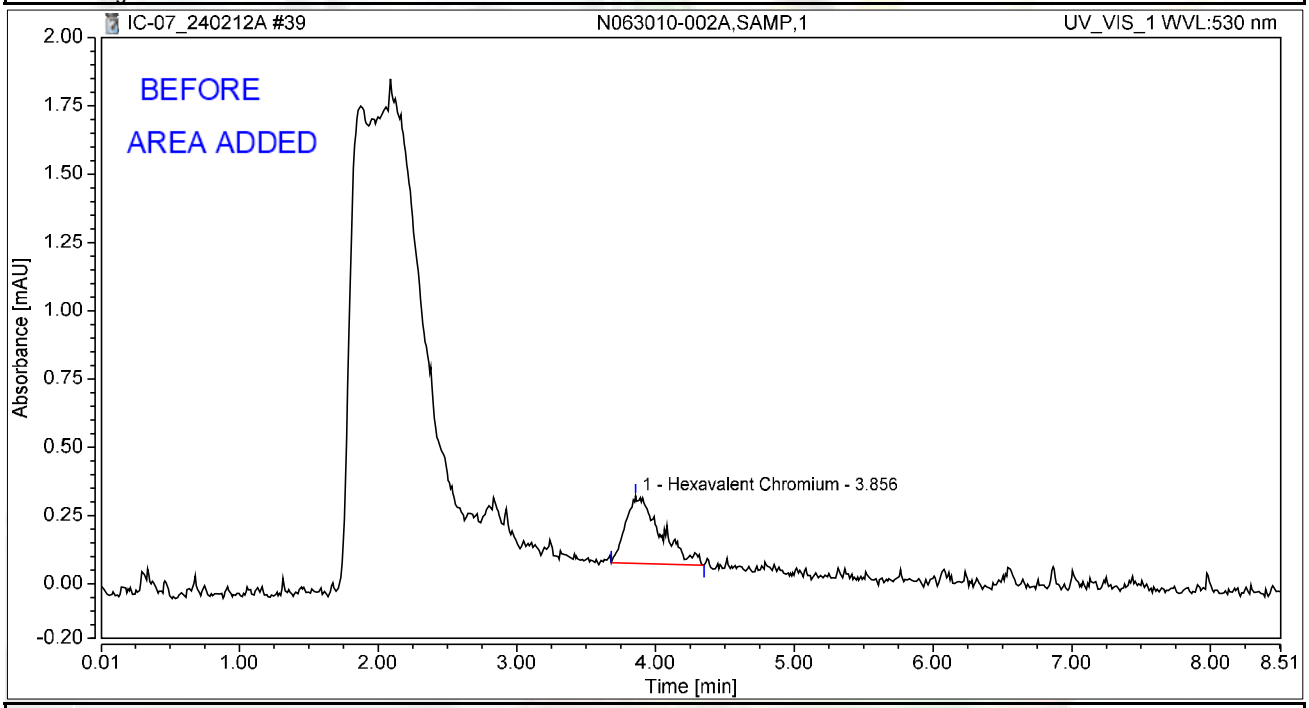
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063010-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 14:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

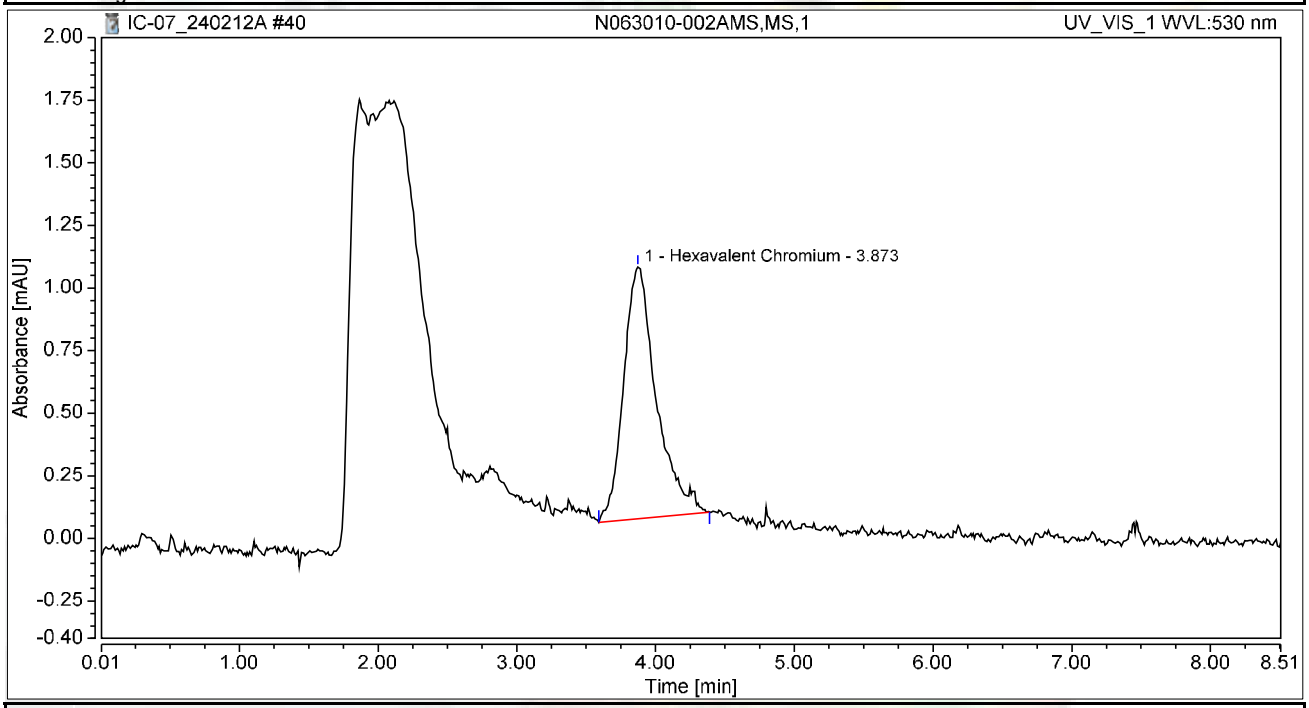
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.072	0.247	100.00	100.00	0.3332
Total:			**0.072**	**0.247**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063010-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 15:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

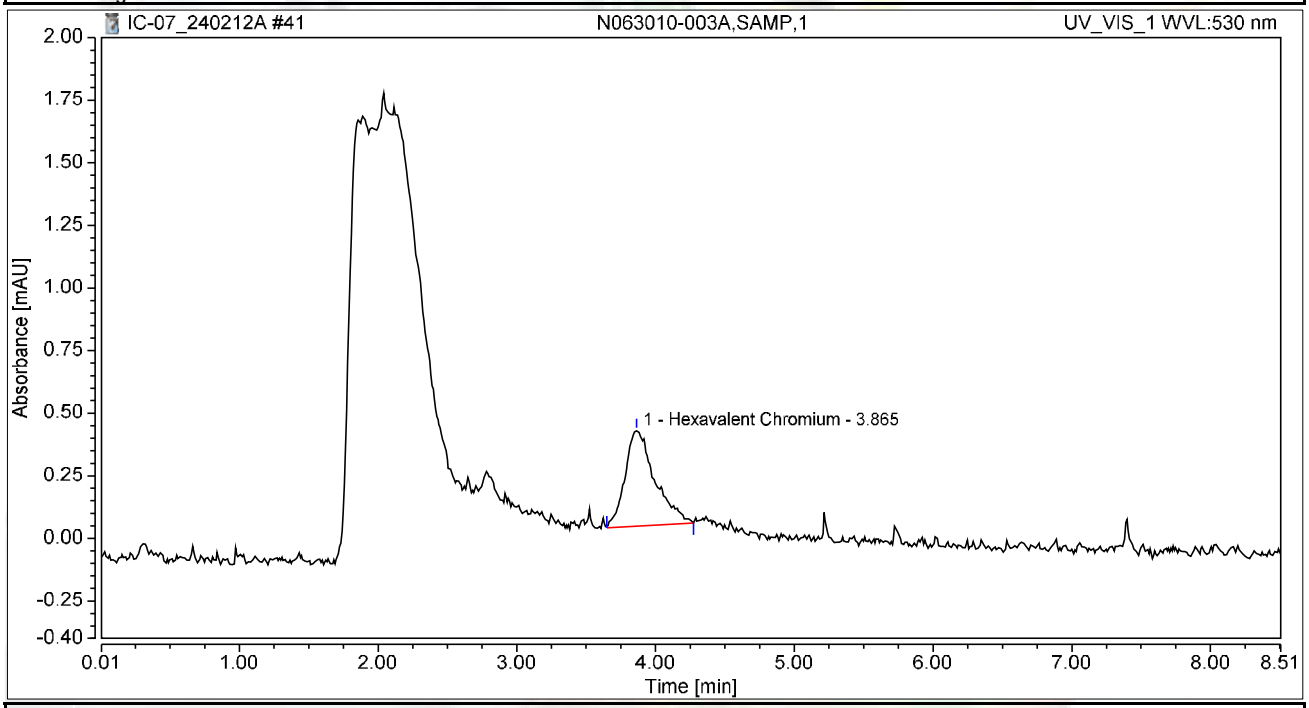
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.873	0.275	1.006	100.00	100.00	1.2808
Total:			**0.275**	**1.006**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063010-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 15:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

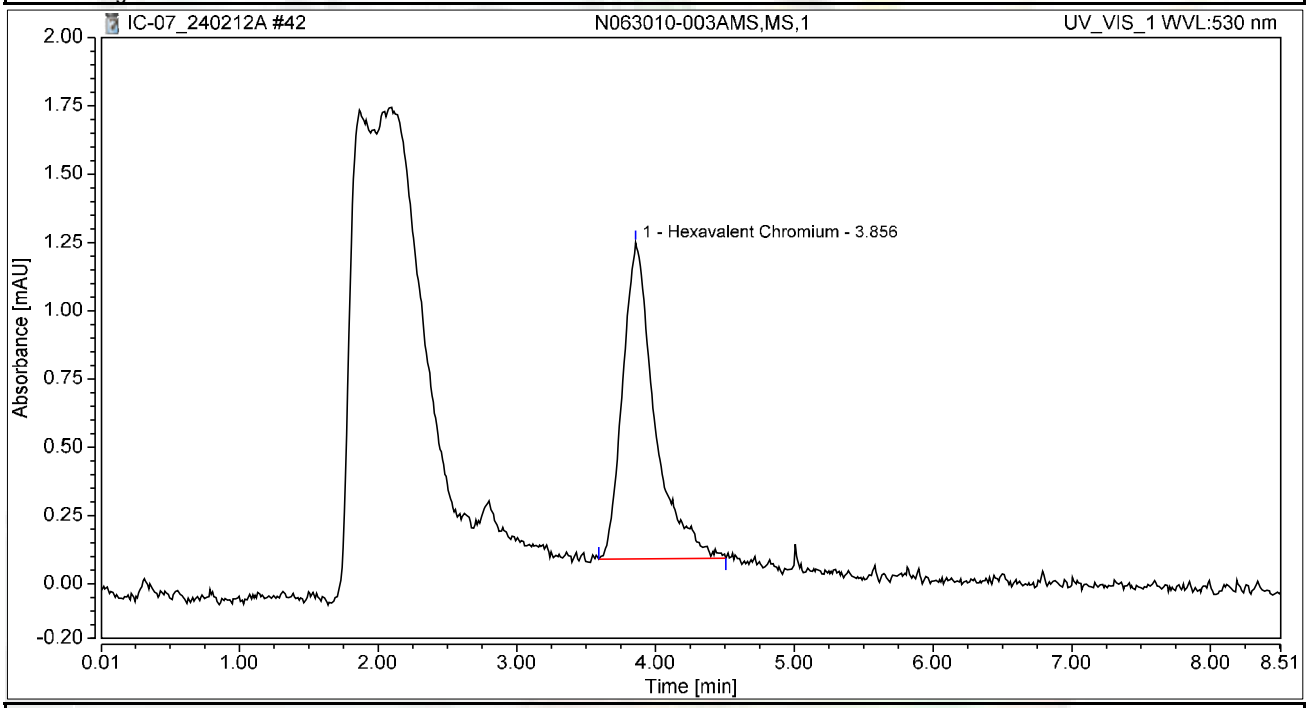
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.865	0.095	0.382	100.00	100.00	0.4431
Total:			**0.095**	**0.382**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063010-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 15:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

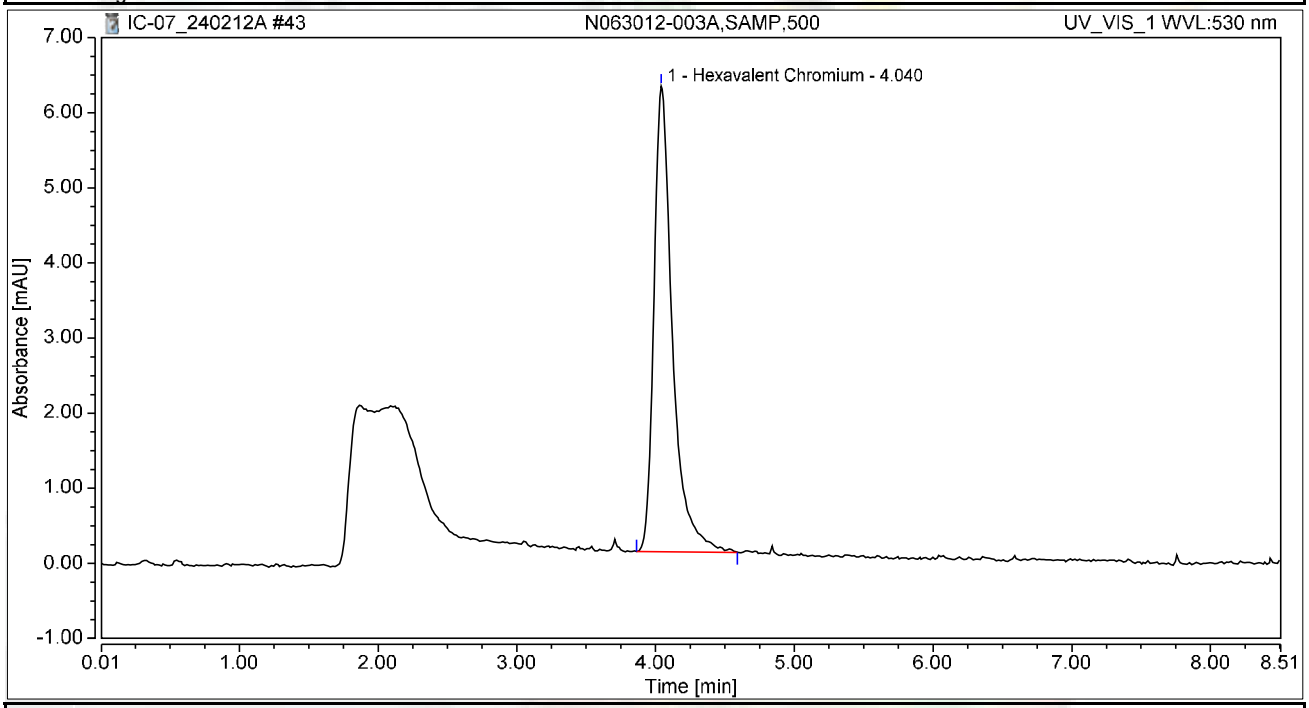
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.309	1.157	100.00	100.00	1.4345
Total:			**0.309**	**1.157**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-003A,SAMP,500**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 15:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

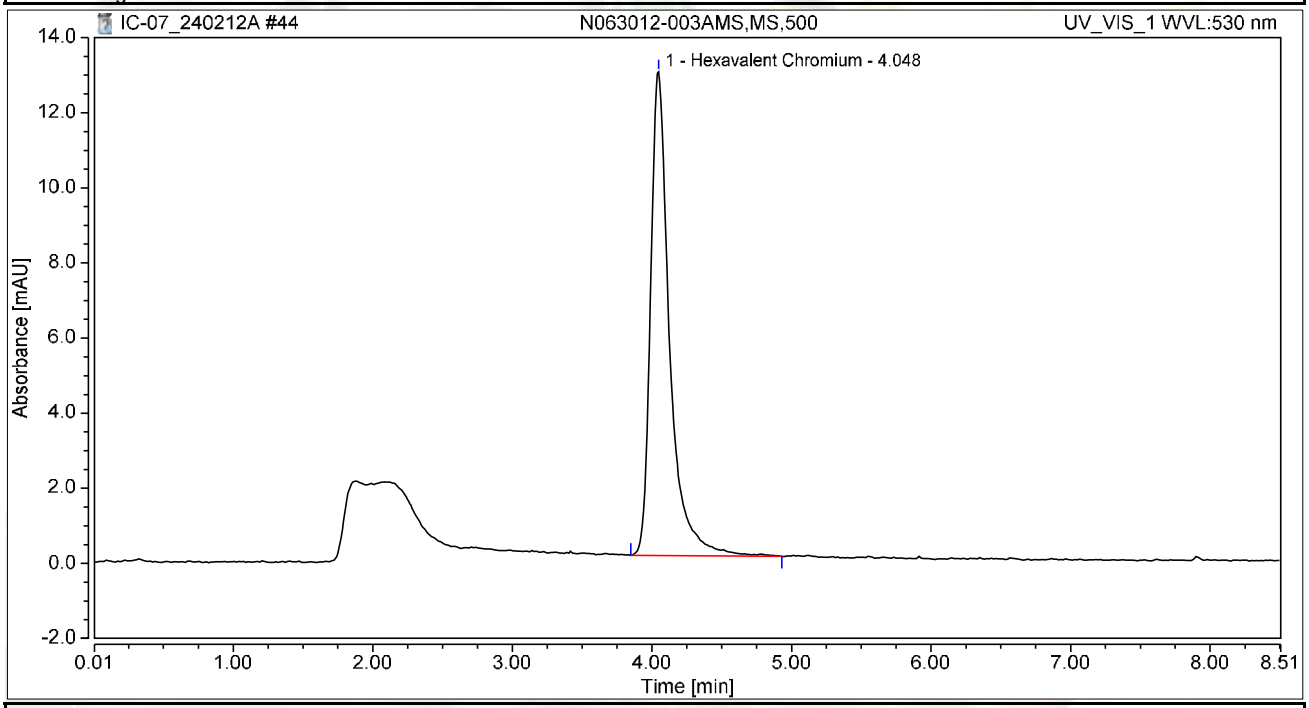
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.960	6.200	100.00	100.00	4.4626
Total:			**0.960**	**6.200**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-003AMS,MS,500**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 15:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

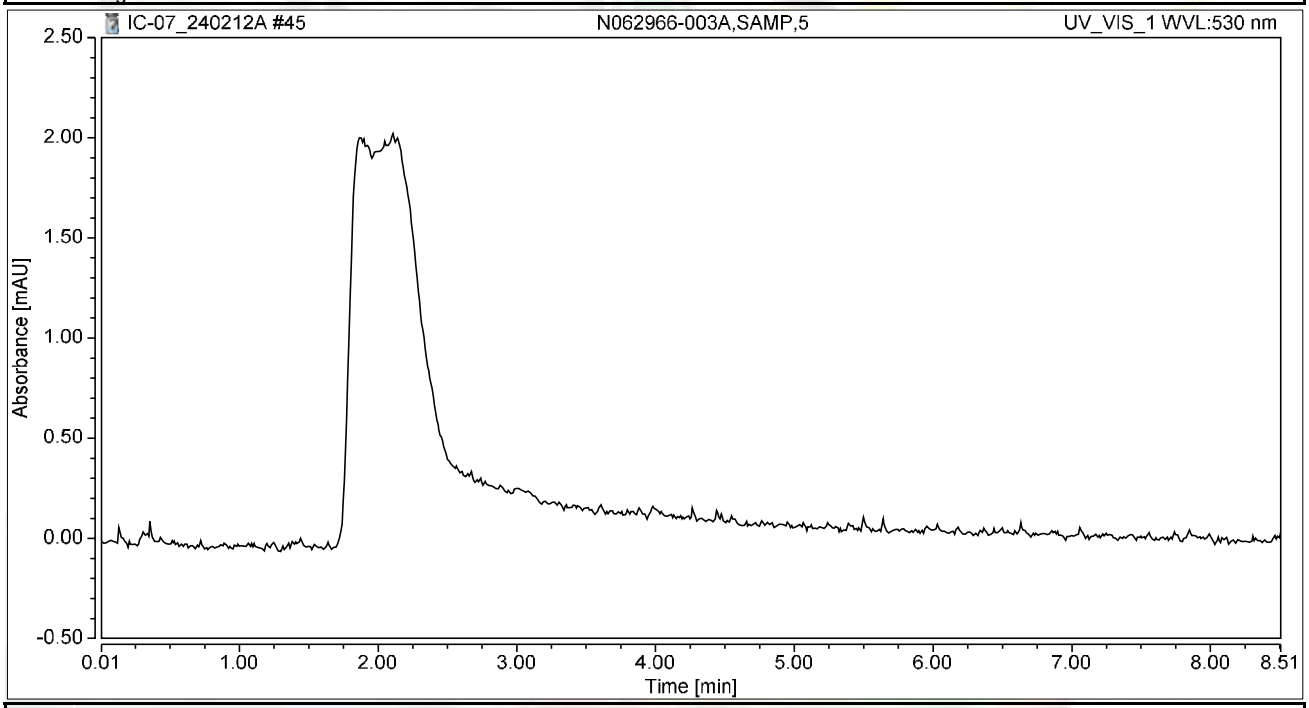
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.038	12.877	100.00	100.00	9.4724
Total:			**2.038**	**12.877**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062966-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 15:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

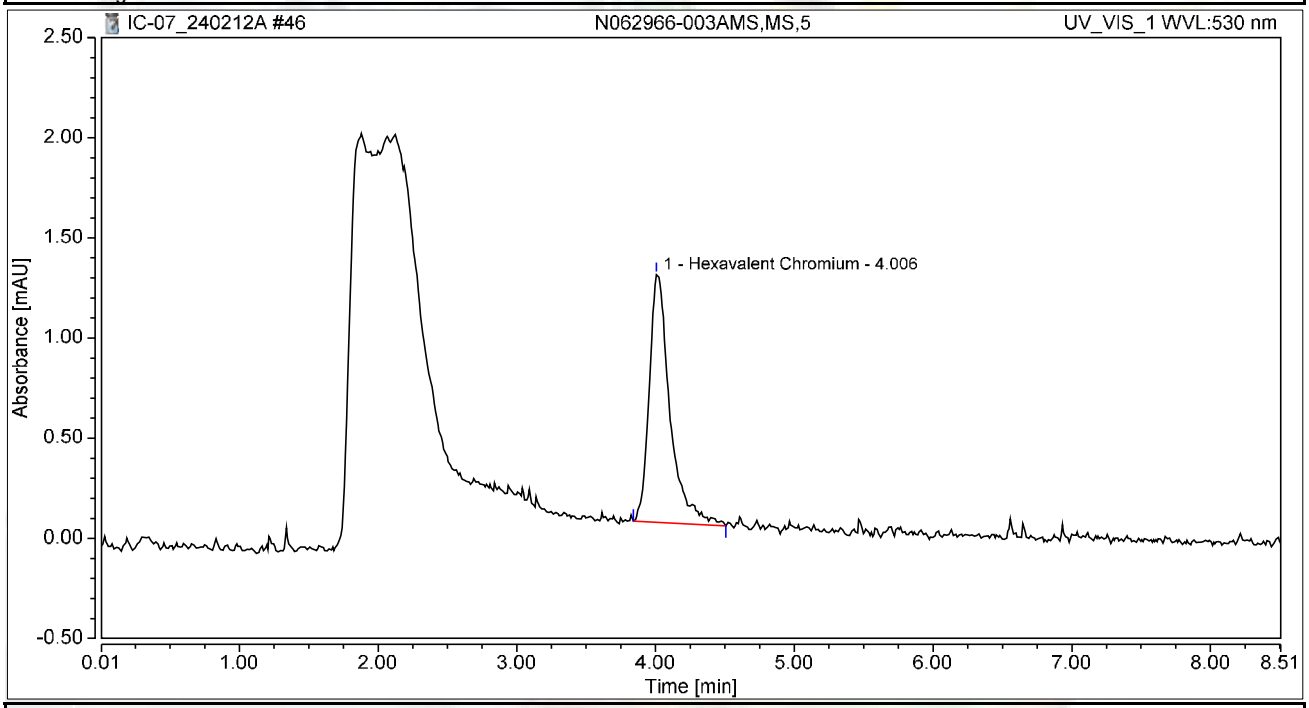
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062966-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 15:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

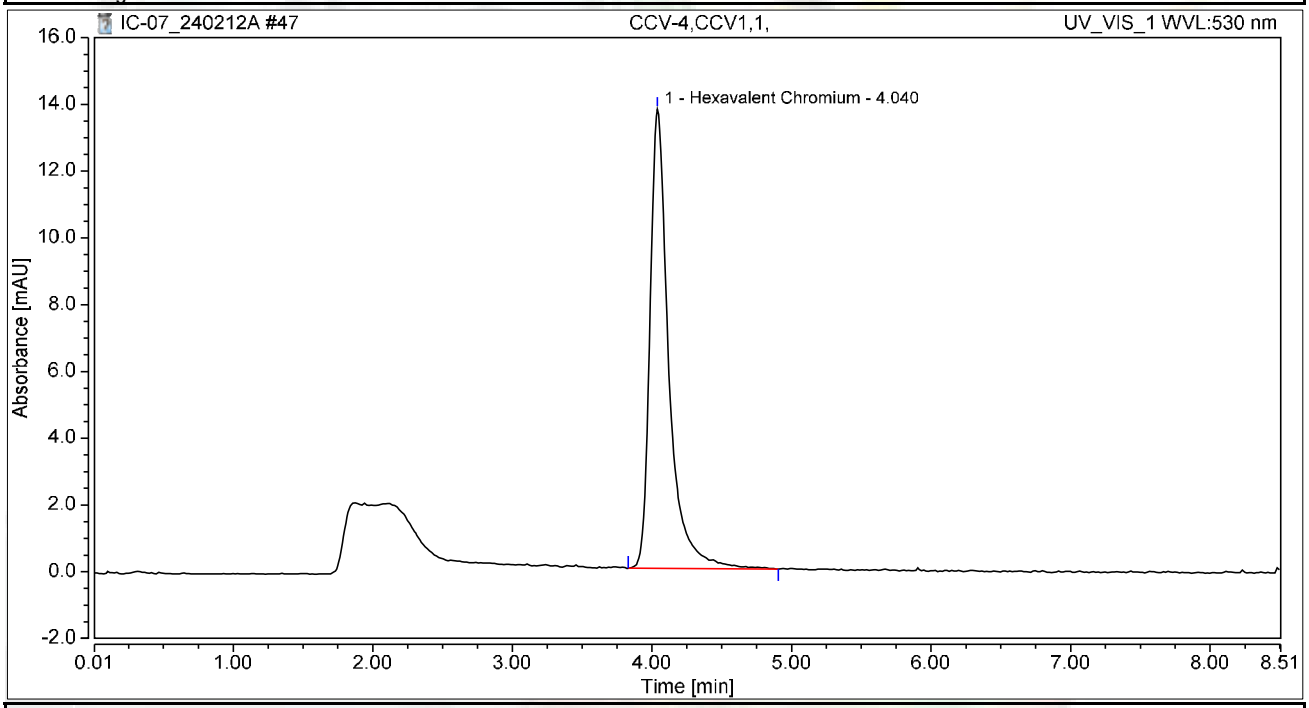
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.214	1.236	100.00	100.00	0.9953
Total:			**0.214**	**1.236**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 16:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

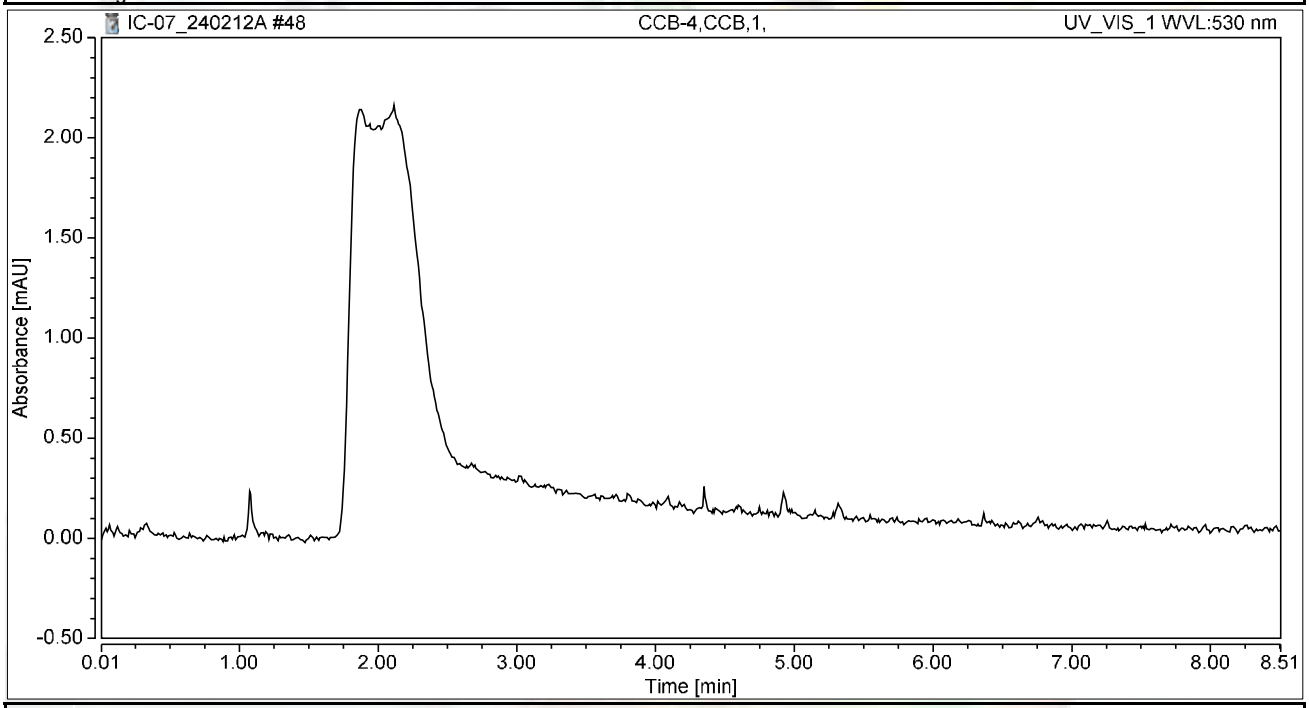
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.154	13.753	100.00	100.00	10.0160
Total:			**2.154**	**13.753**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 16:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

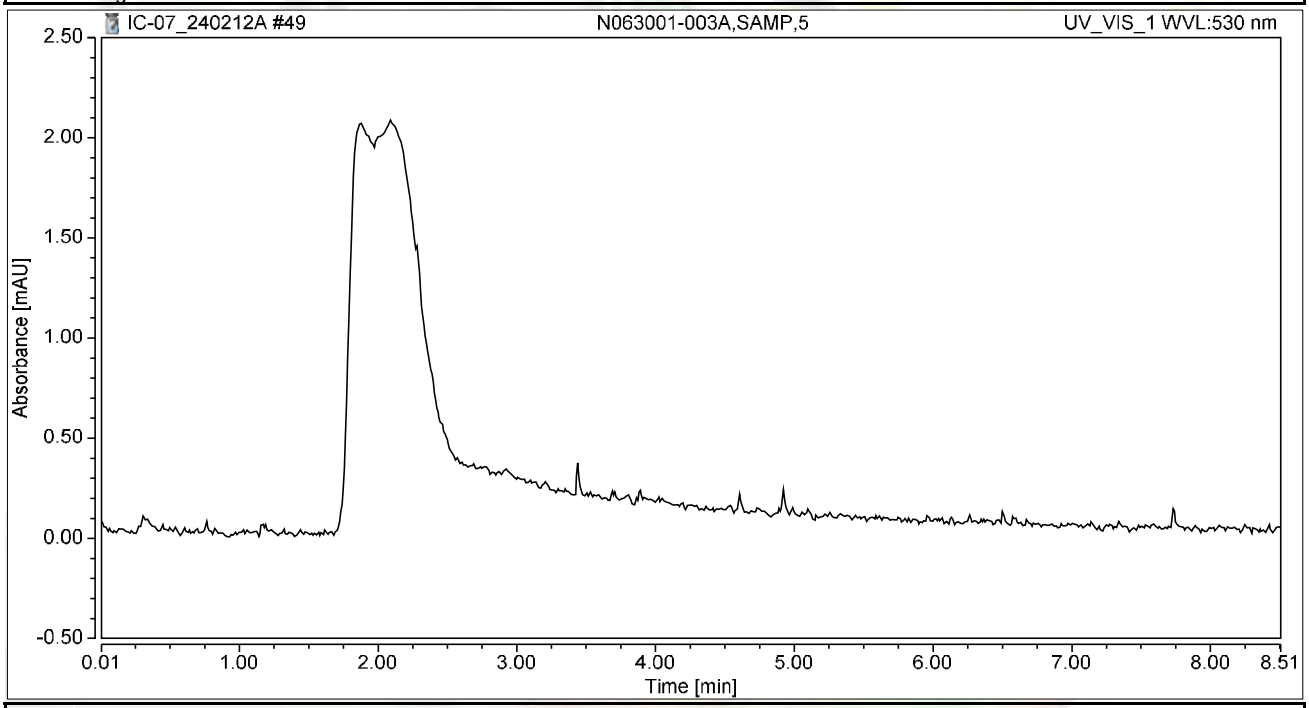
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 16:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

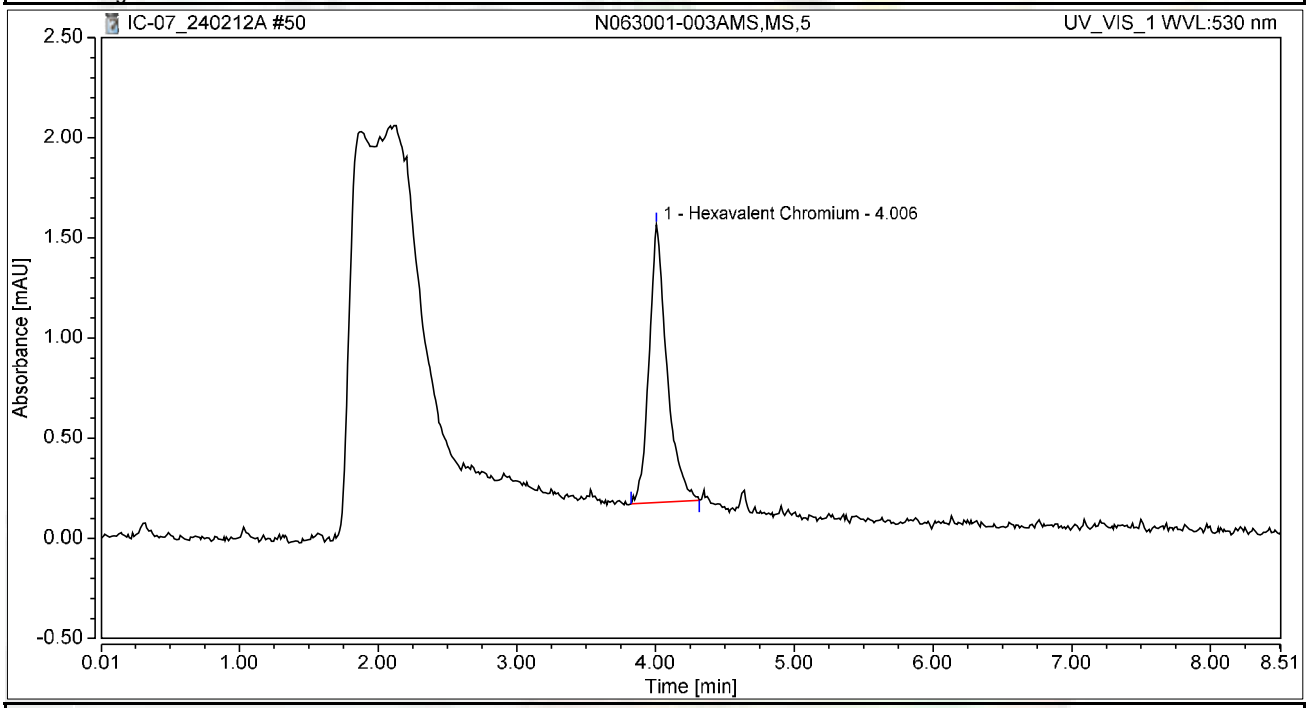
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 16:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

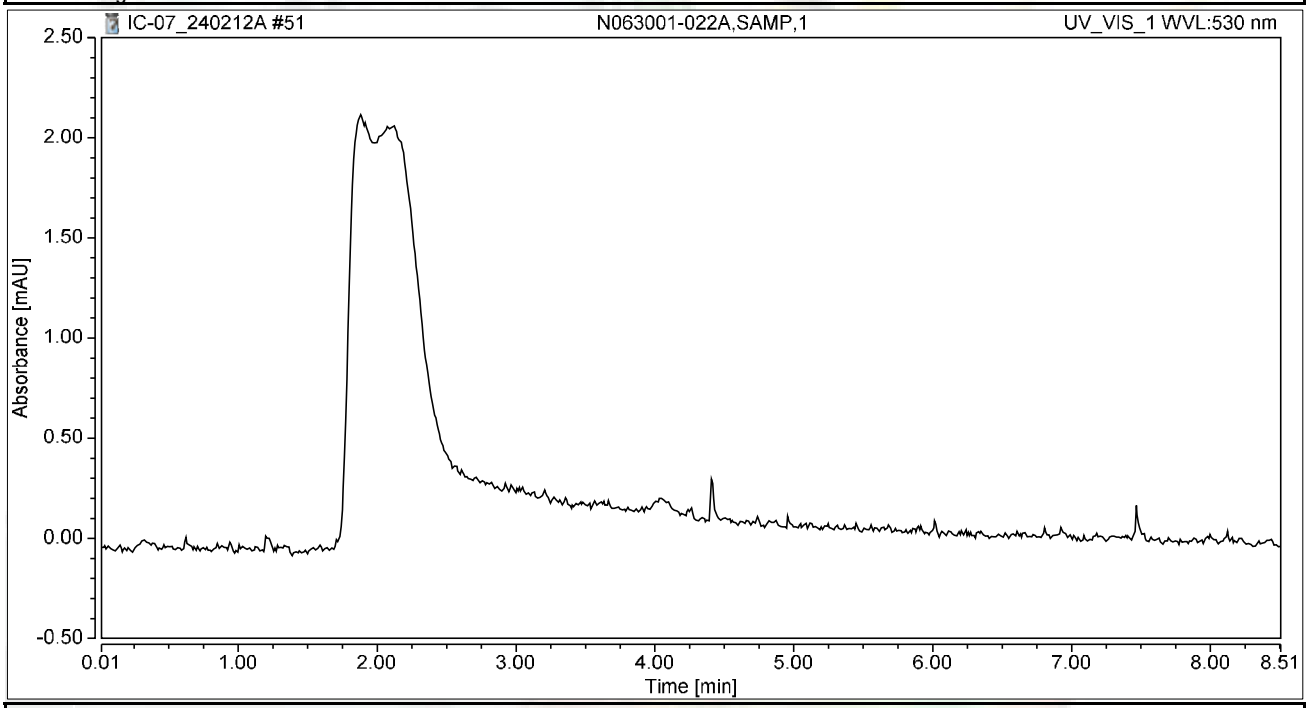
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.206	1.387	100.00	100.00	0.9557
Total:			**0.206**	**1.387**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-022A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 16:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

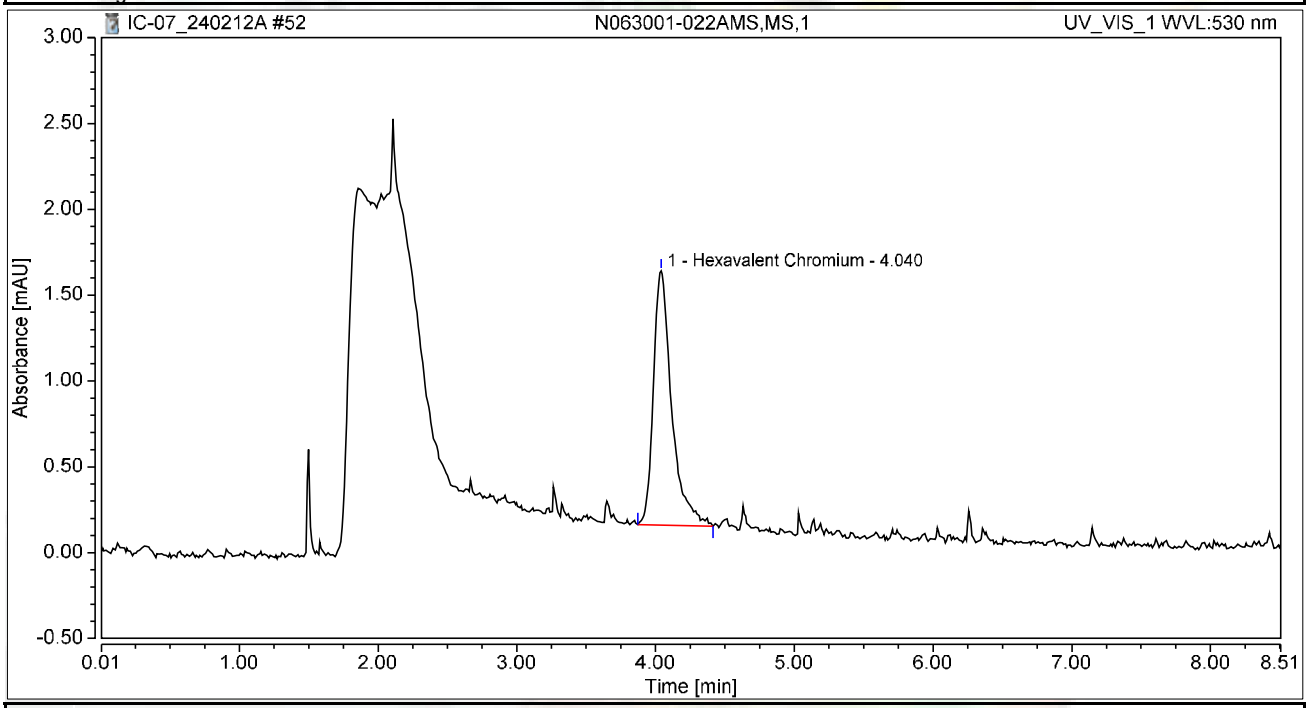
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-022AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 16:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

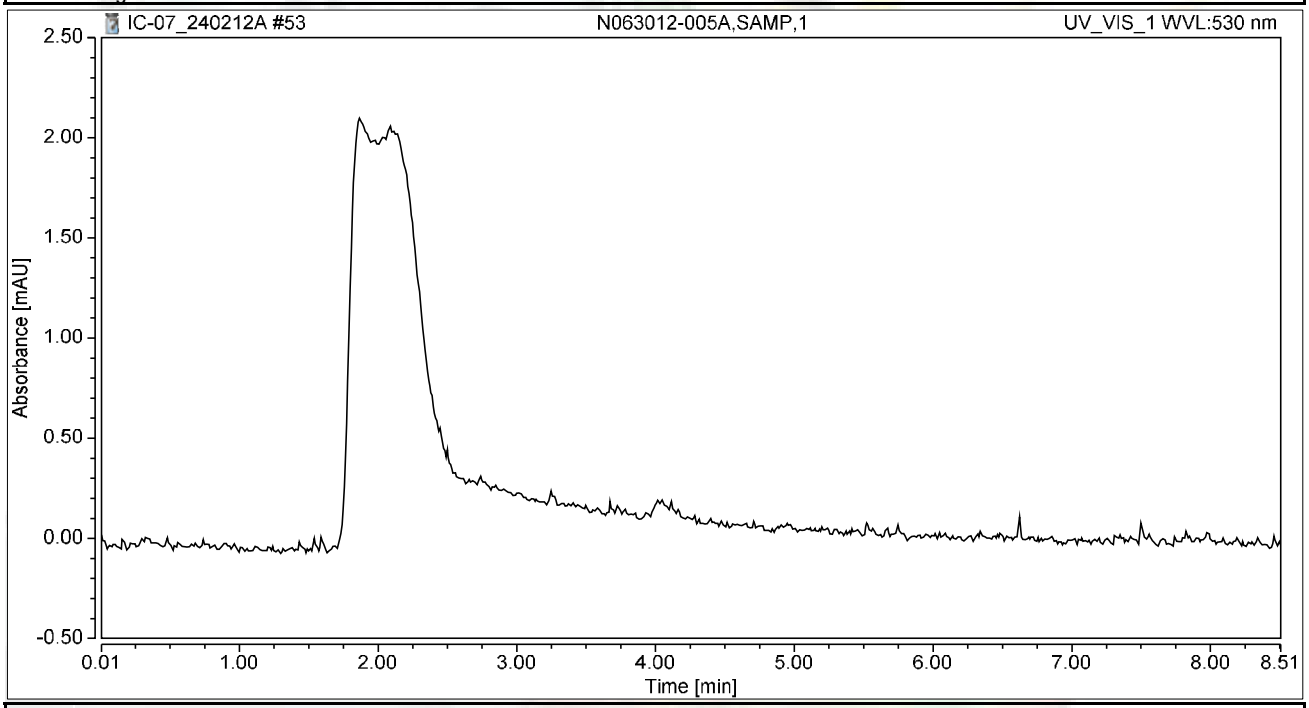
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.226	1.480	100.00	100.00	1.0526
Total:			**0.226**	**1.480**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 17:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

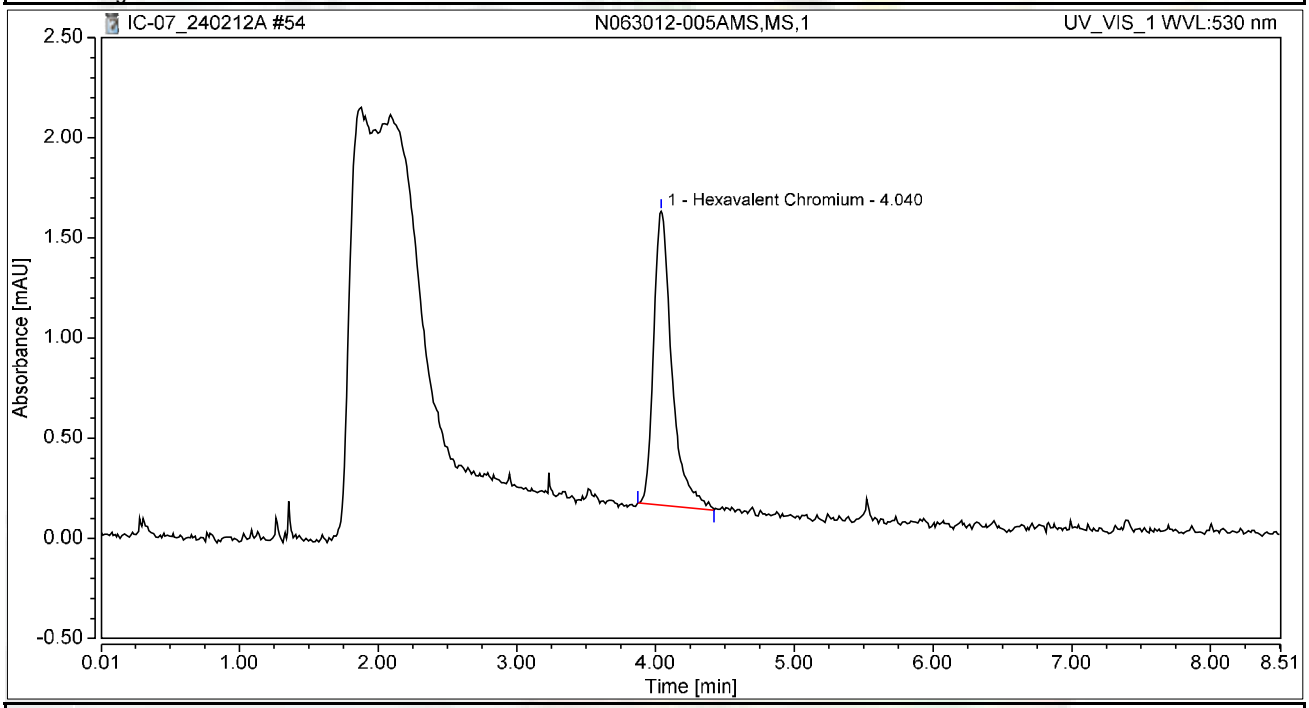
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 17:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

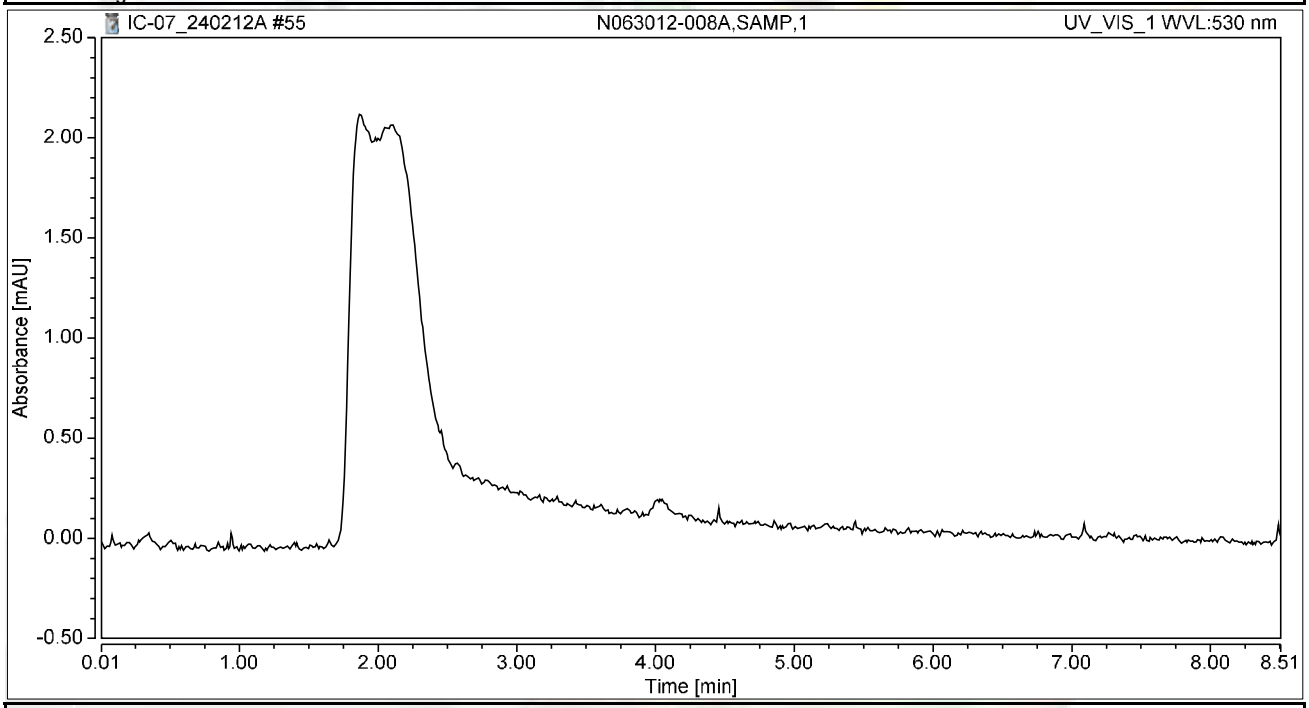
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.224	1.468	100.00	100.00	1.0392
Total:			**0.224**	**1.468**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 17:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

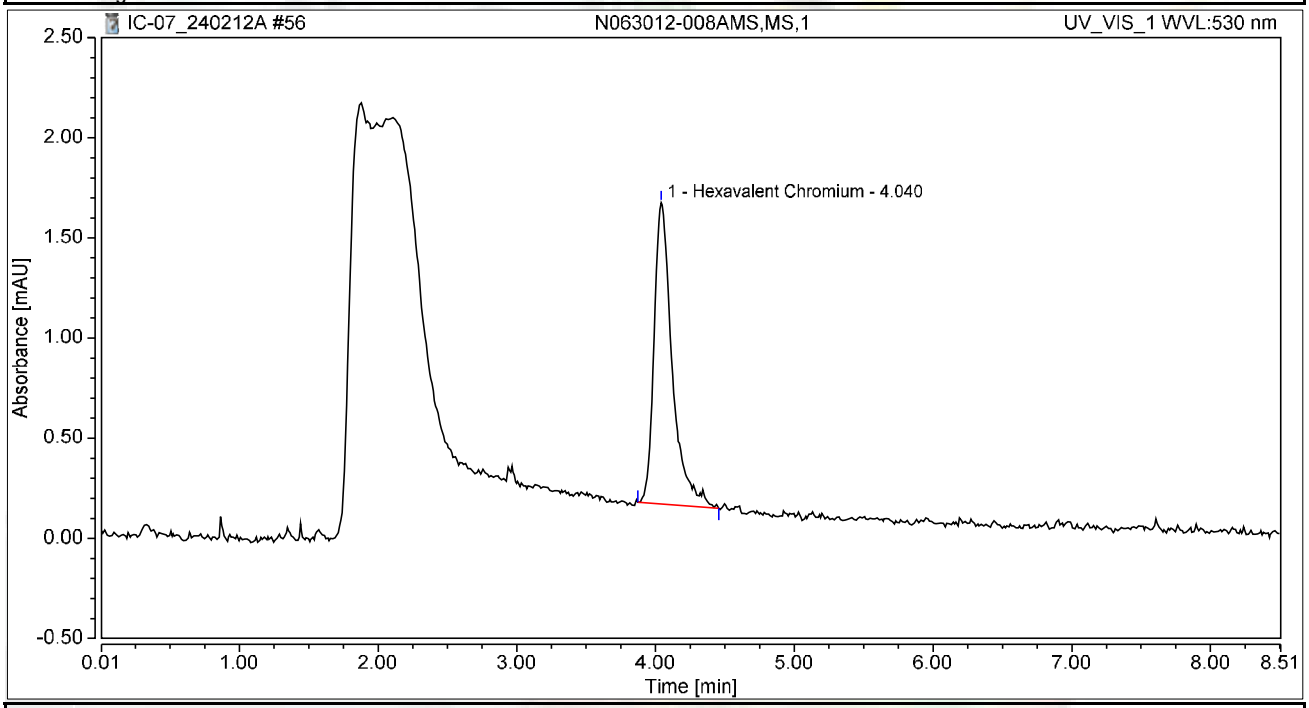
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 17:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

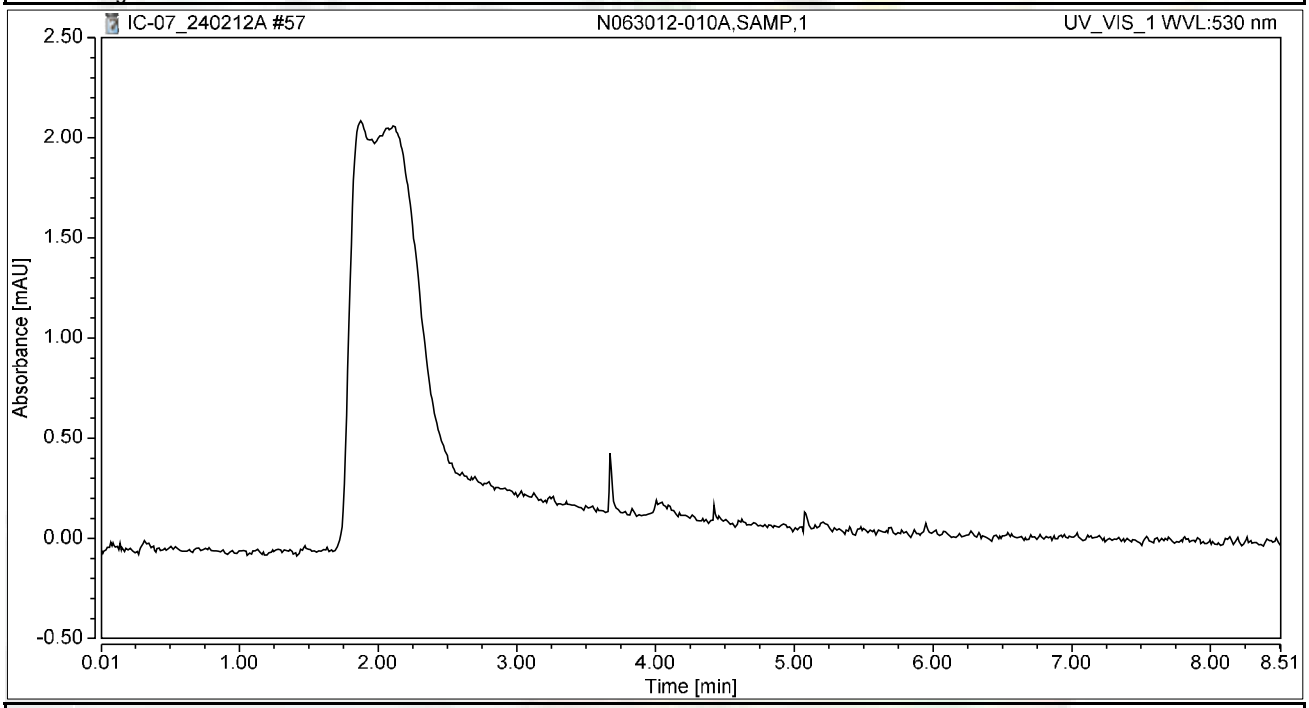
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.228	1.504	100.00	100.00	1.0591
Total:			**0.228**	**1.504**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-010A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 17:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

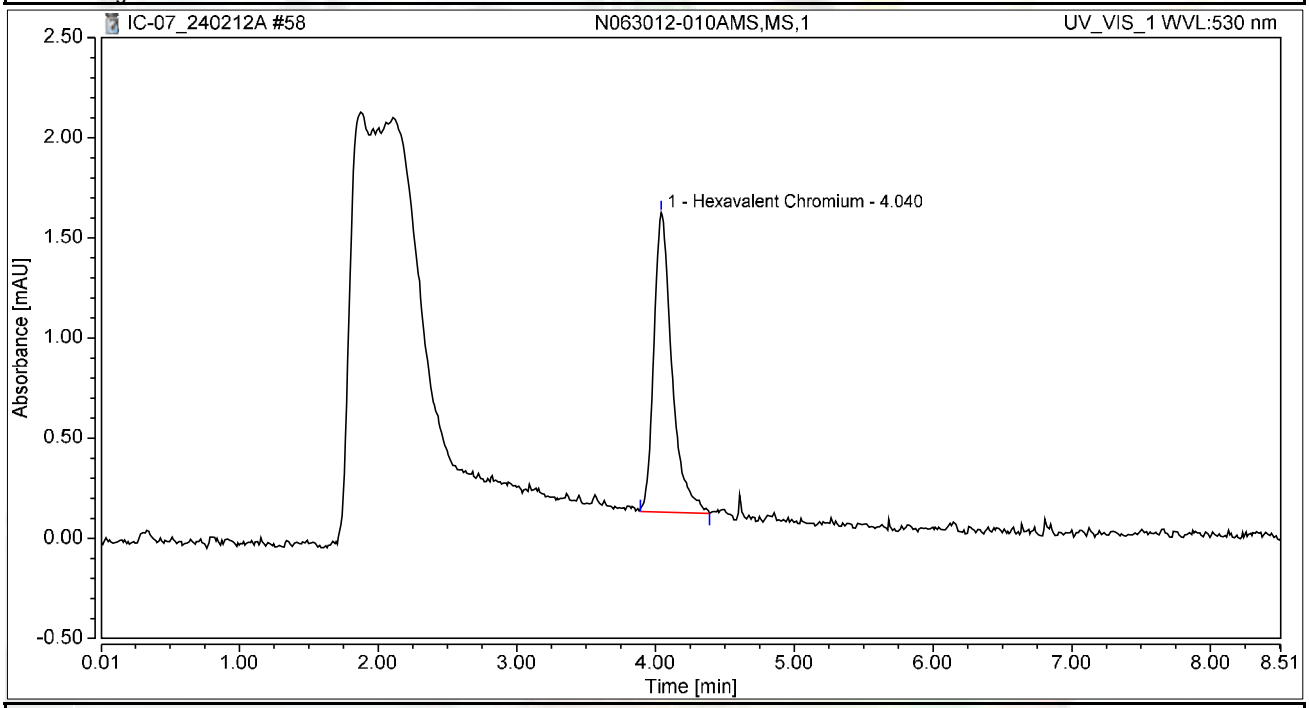
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-010AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 17:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

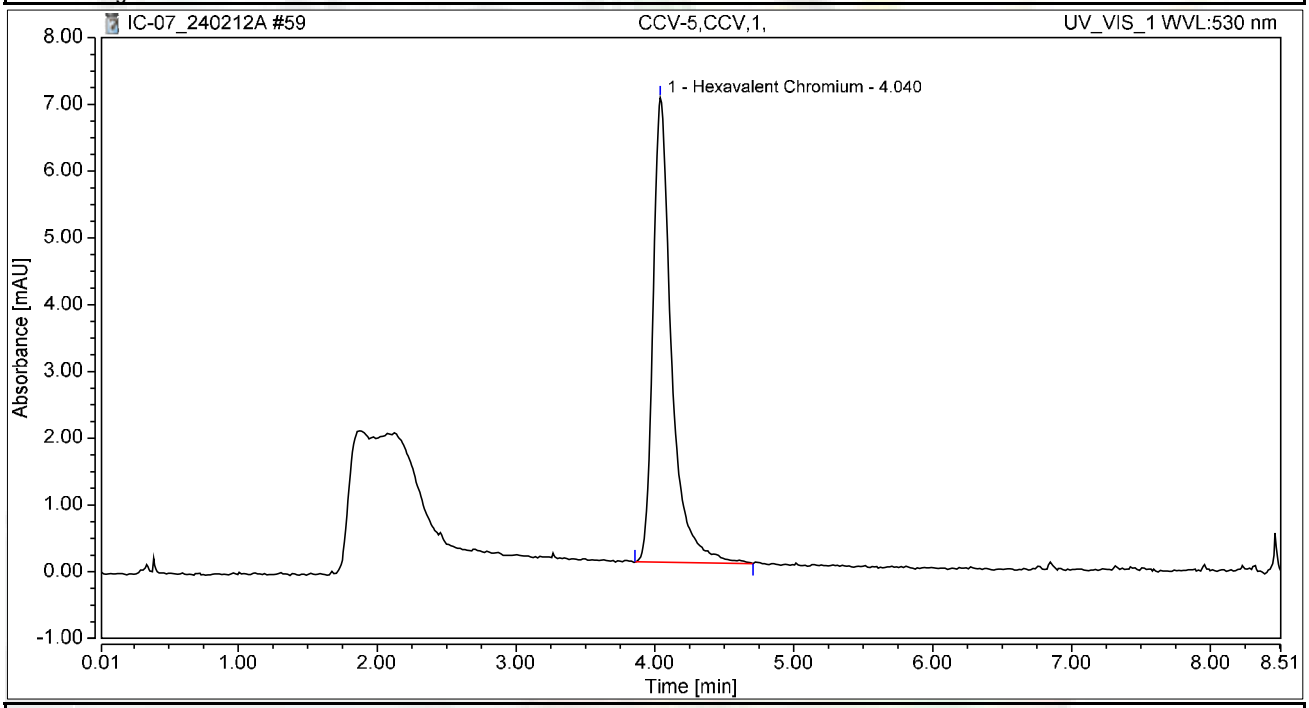
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.226	1.495	100.00	100.00	1.0502
Total:			**0.226**	**1.495**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 18:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

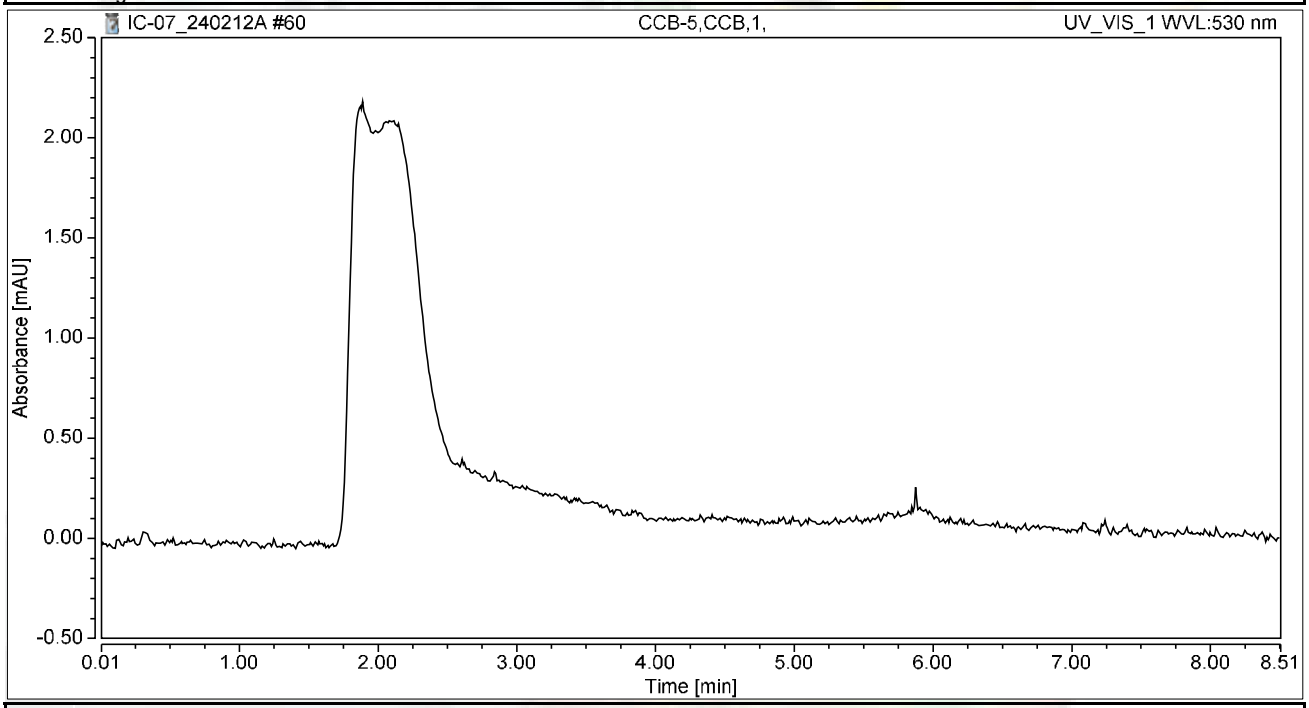
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.076	6.956	100.00	100.00	5.0000
Total:			**1.076**	**6.956**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 18:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

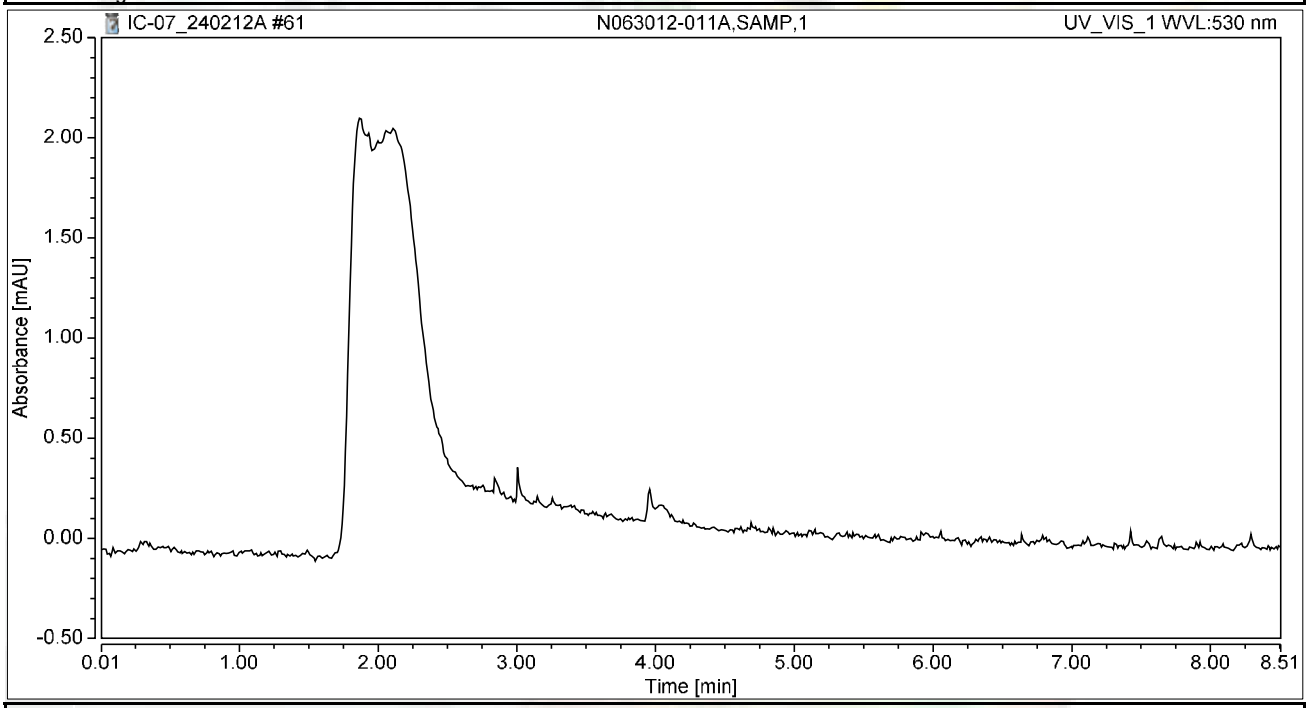
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-011A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 18:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

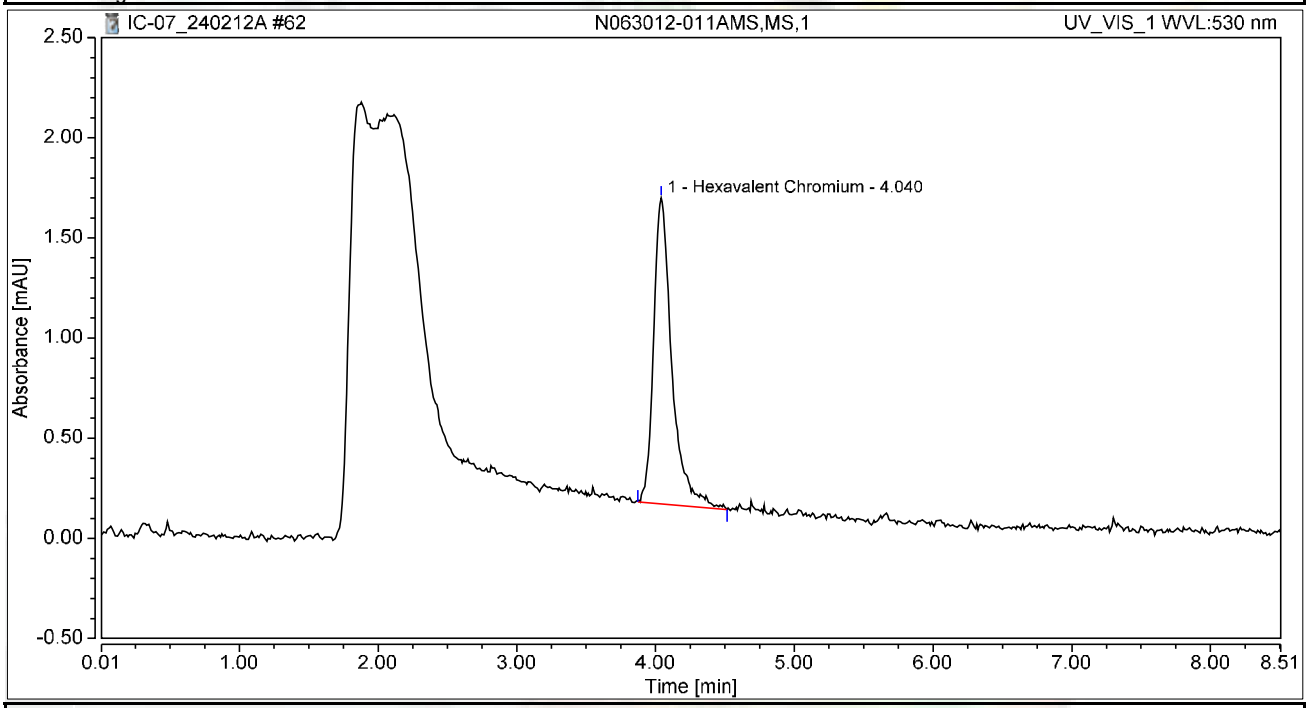
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063012-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 18:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

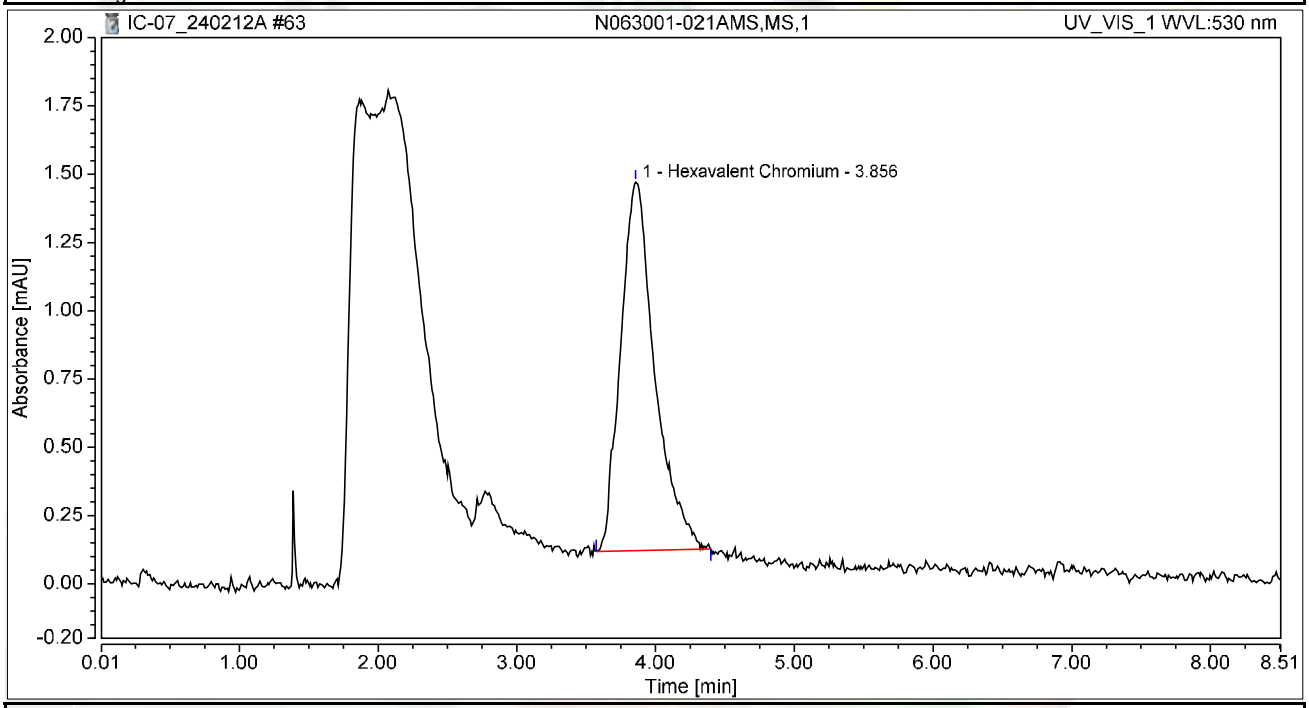
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.233	1.527	100.00	100.00	1.0811
Total:			**0.233**	**1.527**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-021AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**44**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 18:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

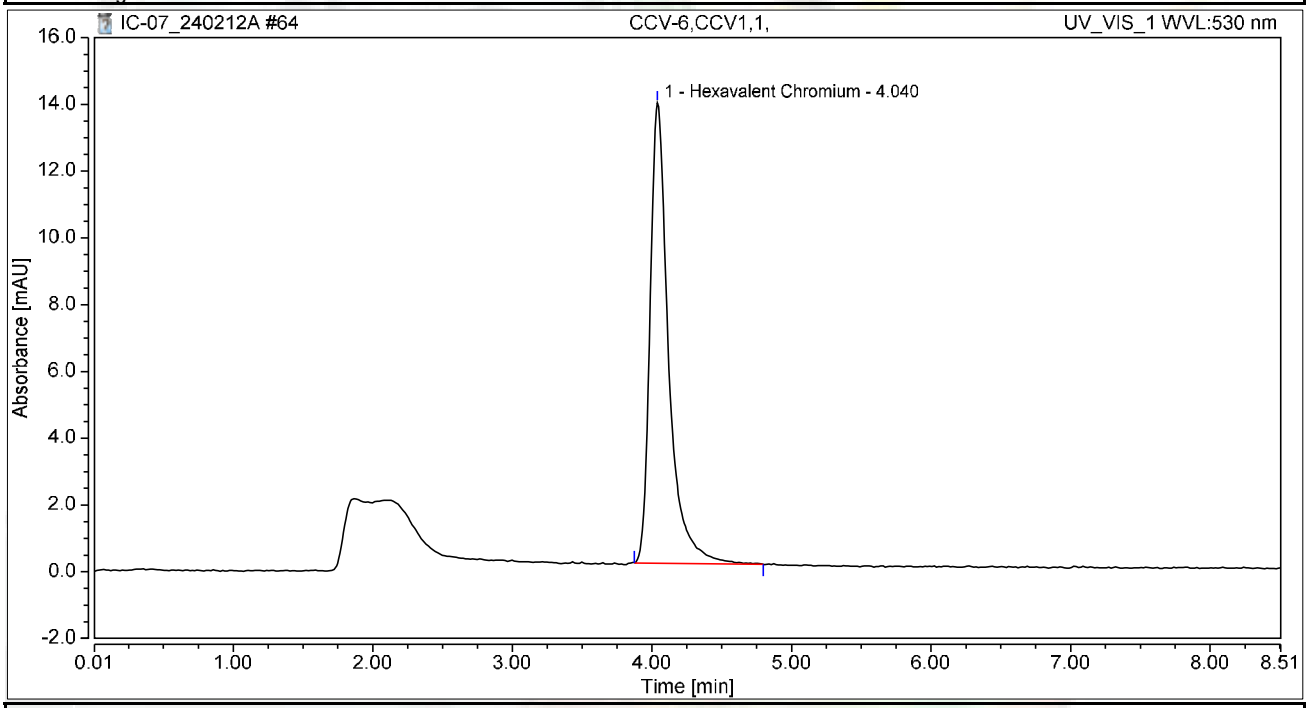
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.384	1.349	100.00	100.00	1.7875
Total:			**0.384**	**1.349**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**45**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 18:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

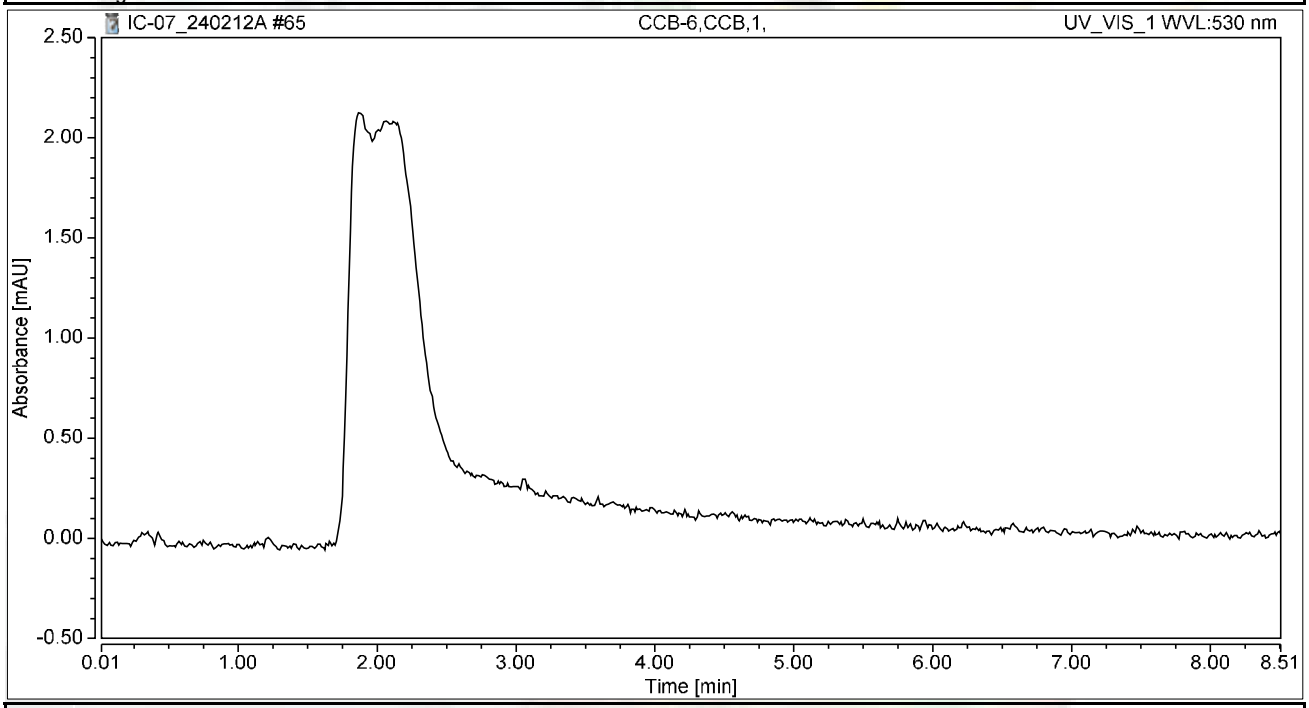
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.124	13.792	100.00	100.00	9.8739
Total:			**2.124**	**13.792**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**46**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 19:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

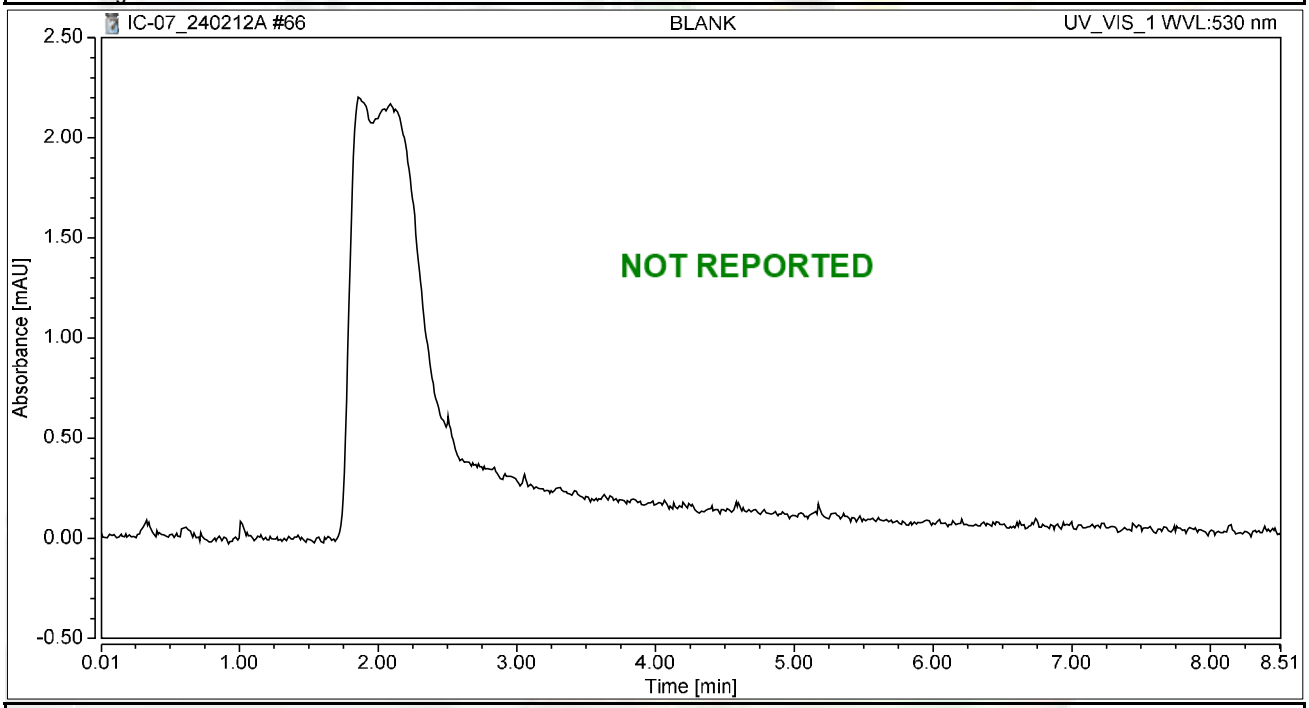
2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**47**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Feb/24 19:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

EPA 300.0

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R181402
ASSET #: N063001 / N063012

Instrument ID: IC-08
Analyst: RBA
Date Analyzed: 2/10/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)		X			X	
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

Detection of Sulfate in CCB2/3 was >1/2PQL. However, N0063012 samples were >5X the CCB detection.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 2/20/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: GROUNDWATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the orignal sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N063012-001B** concentration in mg/L is calculated as follows:

Nitrate, mg/L = 0.5876 * 20

= 11.752

Reporting result in two significant figures,

Nitrate, mg/L = 12

Reviewed by:

dMocha 2/27/2024

ANALYSIS RUN LOG

Sequence: IC-08_240124A
Operator: IC-05
Printed: 1/24/2024 5:54:19 PM

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 25
Created: 1/24/2024 9:39:27 AM by IC-05
Last Update: 1/24/2024 11:49:06 AM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240124	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240124	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240124	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240124	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240124	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240124	Finished
8	ICV,ICV,1	Unknown	9	1000.0	Anions Default	EPA 300_0_240124	Finished
9	ICB,ICB,1	Unknown	10	1000.0	Anions Default	EPA 300_0_240124	Finished
10	MB-H2O,MBLK,1	Unknown	11	1000.0	Anions Default	EPA 300_0_240124	Finished
11	LCS-H2O,LCS,1	Unknown	12	1000.0	Anions Default	EPA 300_0_240124	Finished
12	N062498-007A,SAMP,5	Unknown	13	1000.0	Anions Default	EPA 300_0_240124	Finished
13	N062498-007ADUP,DUP,5	Unknown	14	1000.0	Anions Default	EPA 300_0_240124	Finished
14	N062498-007AMS,MS,5	Unknown	15	1000.0	Anions Default	EPA 300_0_240124	Finished
15	N062498-007AMSD,MSD,5	Unknown	16	1000.0	Anions Default	EPA 300_0_240124	Finished
16	LCS-2,LCS,1	Unknown	17	1000.0	Anions Default	EPA 300_0_240124	Finished
17	MB-2,MBLK,1	Unknown	18	1000.0	Anions Default	EPA 300_0_240124	Finished
18	N062498-007A,SAMP,5	Unknown	19	1000.0	Anions Default	EPA 300_0_240124	Finished
19	N062498-007ADUP,DUP,5	Unknown	20	1000.0	Anions Default	EPA 300_0_240124	Finished
20	CCV-1,CCV,1	Unknown	21	1000.0	Anions Default	EPA 300_0_240124	Finished
21	CCB-1,CCB,1	Unknown	22	1000.0	Anions Default	EPA 300_0_240124	Finished
22	N062498-007AMS,MS,5	Unknown	23	1000.0	Anions Default	EPA 300_0_240124	Finished
23	N062498-007AMSD,MSD,5	Unknown	24	1000.0	Anions Default	EPA 300_0_240124	Finished
24	CCV-2,CCV,1	Unknown	33	1000.0	Anions Default	EPA 300_0_240124	Finished
25	CCB-2,CCB,1	Unknown	34	1000.0	Anions Default	EPA 300_0_240124	Finished

reviewed by: 1/31/2024

Processed by:
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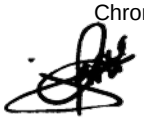
1/24/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 25
Created: 1/24/2024 9:39:27 AM by IC-05
Last Update: 1/24/2024 11:49:06 AM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	1/24/2024 9:41:36 AM	BLANK
2	Std - 0	1/24/2024 9:56:54 AM	IBLANK
3	Std - 1	1/24/2024 10:32:56 AM	STD-LOW
4	Std - 2	1/24/2024 10:48:14 AM	STD
5	Std - 3	1/24/2024 11:03:32 AM	STD
6	Std - 4	1/24/2024 11:18:50 AM	STD
7	Std - 5	1/24/2024 11:34:08 AM	STD-HIGH
8	ICV,ICV,1	1/24/2024 11:49:26 AM	ICV, IWST-240123B
9	ICB,ICB,1	1/24/2024 12:04:44 PM	CCB
10	MB-H2O,MBLK,1	1/24/2024 12:20:02 PM	MB
11	LCS-H2O,LCS,1	1/24/2024 12:35:19 PM	LCS, IWST-240123B
12	N062498-007A,SAMP,5	1/24/2024 12:50:38 PM	SAMP,2>10mL,
13	N062498-007ADUP,DUP,5	1/24/2024 1:05:56 PM	DUP,2>10mL,
14	N062498-007AMS,MS,5	1/24/2024 1:21:14 PM	MS,2>10mL,
15	N062498-007AMSD,MSD,5	1/24/2024 1:36:33 PM	MSD,2>10mL,
16	LCS-2,LCS,1	1/24/2024 1:51:51 PM	LCS, IWST-240123B
17	MB-2,MBLK,1	1/24/2024 2:07:09 PM	MB
18	N062498-007A,SAMP,5	1/24/2024 2:22:27 PM	SAMP,2>10mL,
19	N062498-007ADUP,DUP,5	1/24/2024 2:37:45 PM	DUP,2>10mL,
20	CCV-1,CCV,1	1/24/2024 2:53:03 PM	CCV, IWST-240123A
21	CCB-1,CCB,1	1/24/2024 3:08:21 PM	CCB
22	N062498-007AMS,MS,5	1/24/2024 3:23:40 PM	MS,2>10mL,
23	N062498-007AMSD,MSD,5	1/24/2024 3:38:58 PM	MSD,2>10mL,
24	CCV-2,CCV,1	1/24/2024 3:54:16 PM	CCV, IWST-240123A
25	CCB-2,CCB,1	1/24/2024 4:09:34 PM	CCB

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 38
Created: 2/9/2024 12:49:34 PM by IC-05
Last Update: 2/10/2024 11:53:34 AM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240124	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240124	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240124	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240124	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240124	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240124	Finished
8	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
9	CCV-1,CCV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
10	CCB-1,CCB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
11	CCB-1,CCB,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
12	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
13	MB-H2O,MBLK,1	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
14	N063012-003B,SAMP,10	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
15	N063012-001B,SAMP,20	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
16	N063012-004B,SAMP,10	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
17	N063012-002B,SAMP,10	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
18	N063012-006B,SAMP,5	Unknown	6	1000.0	Anions Default	EPA 300_0_240124	Finished
19	N063012-007B,SAMP,5	Unknown	7	1000.0	Anions Default	EPA 300_0_240124	Finished
20	N063012-009B,SAMP,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240124	Finished
21	CCV-2,CCV,1	Unknown	9	1000.0	Anions Default	EPA 300_0_240124	Finished
22	CCB-2,CCB,1	Unknown	10	1000.0	Anions Default	EPA 300_0_240124	Finished
23	N063012-003BMS,MS,10	Unknown	11	1000.0	Anions Default	EPA 300_0_240124	Finished
24	N063012-003BMSD,MSD,10	Unknown	12	1000.0	Anions Default	EPA 300_0_240124	Finished
25	N063012-004BDUP,DUP,10	Unknown	13	1000.0	Anions Default	EPA 300_0_240124	Finished
26	N063012-003B,SAMP,50	Unknown	14	1000.0	Anions Default	EPA 300_0_240124	Finished
27	N063012-003BDUP,DUP,50	Unknown	15	1000.0	Anions Default	EPA 300_0_240124	Finished
28	N063012-003BMS,MS,50	Unknown	16	1000.0	Anions Default	EPA 300_0_240124	Finished
29	N063012-003BMSD,MSD,50	Unknown	17	1000.0	Anions Default	EPA 300_0_240124	Finished
30	N063001-007B,SAMP,10	Unknown	18	1000.0	Anions Default	EPA 300_0_240124	Finished
31	N063001-008B,SAMP,10	Unknown	19	1000.0	Anions Default	EPA 300_0_240124	Finished
32	N063012-001B,SAMP,50	Unknown	20	1000.0	Anions Default	EPA 300_0_240124	Finished
33	CCV-3,CCV,1	Unknown	21	1000.0	Anions Default	EPA 300_0_240124	Finished
34	CCB-3,CCB,1	Unknown	22	1000.0	Anions Default	EPA 300_0_240124	Finished
35	N063012-002B,SAMP,50	Unknown	23	1000.0	Anions Default	EPA 300_0_240124	Finished
36	N063012-004B,SAMP,100	Unknown	24	1000.0	Anions Default	EPA 300_0_240124	Finished
37	CCV-4,CCV,1	Unknown	25	1000.0	Anions Default	EPA 300_0_240124	Finished
38	CCB-4,CCB,1	Unknown	26	1000.0	Anions Default	EPA 300_0_240124	Finished

reviewed by: 2/12/2024

Processed by:

Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)

2/11/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 38
Created: 2/9/2024 12:49:34 PM by IC-05
Last Update: 2/10/2024 11:53:34 AM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	1/24/2024 9:41:36 AM	BLANK
2	Std - 0	1/24/2024 9:56:54 AM	IBLANK
3	Std - 1	1/24/2024 10:32:56 AM	STD-LOW
4	Std - 2	1/24/2024 10:48:14 AM	STD
5	Std - 3	1/24/2024 11:03:32 AM	STD
6	Std - 4	1/24/2024 11:18:50 AM	STD
7	Std - 5	1/24/2024 11:34:08 AM	STD-HIGH
8	BLANK	2/10/2024 8:17:23 AM	BLANK
9	CCV-1,CCV,1	2/10/2024 8:32:41 AM	CCV, IWST-240208A
10	CCB-1,CCB,1	2/10/2024 8:47:59 AM	CCB
11	CCB-1,CCB,1	2/10/2024 9:03:18 AM	CCB
12	LCS-H2O,LCS,1	2/10/2024 9:18:35 AM	LCS, IWST-240208B
13	MB-H2O,MBLK,1	2/10/2024 11:00:42 AM	MB
14	N063012-003B,SAMP,10	2/10/2024 11:23:42 AM	SAMP,1>10mL,
15	N063012-001B,SAMP,20	2/10/2024 11:39:00 AM	SAMP,0.5>10mL,
16	N063012-004B,SAMP,10	2/10/2024 11:54:19 AM	SAMP,1>10mL,
17	N063012-002B,SAMP,10	2/10/2024 12:09:36 PM	SAMP,1>10mL,
18	N063012-006B,SAMP,5	2/10/2024 12:24:54 PM	SAMP,2>10mL,
19	N063012-007B,SAMP,5	2/10/2024 12:40:12 PM	SAMP,2>10mL,
20	N063012-009B,SAMP,10	2/10/2024 12:55:30 PM	SAMP,1>10mL,
21	CCV-2,CCV,1	2/10/2024 1:10:47 PM	CCV, IWST-240208A
22	CCB-2,CCB,1	2/10/2024 1:26:05 PM	CCB
23	N063012-003BMS,MS,10	2/10/2024 1:41:23 PM	MS,1>10mL,
24	N063012-003BMSD,MSD,10	2/10/2024 1:56:41 PM	MSD,1>10mL,
25	N063012-004BDUP,DUP,10	2/10/2024 2:11:59 PM	DUP,1>10mL,
26	N063012-003B,SAMP,50	2/10/2024 2:27:17 PM	SAMP,0.2>10mL,
27	N063012-003BDUP,DUP,50	2/10/2024 2:42:36 PM	DUP,0.2>10mL,
28	N063012-003BMS,MS,50	2/10/2024 2:57:55 PM	MS,0.2>10mL,
29	N063012-003BMSD,MSD,50	2/10/2024 3:13:12 PM	MSD,0.2>10mL,
30	N063001-007B,SAMP,10	2/10/2024 3:28:30 PM	SAMP,1>10mL,
31	N063001-008B,SAMP,10	2/10/2024 3:43:48 PM	SAMP,1>10mL,
32	N063012-001B,SAMP,50	2/10/2024 3:59:06 PM	SAMP,0.2>10mL,
33	CCV-3,CCV,1	2/10/2024 4:14:24 PM	CCV, IWST-240208A
34	CCB-3,CCB,1	2/10/2024 4:29:42 PM	CCB
35	N063012-002B,SAMP,50	2/10/2024 4:45:00 PM	SAMP,0.2>10mL,
36	N063012-004B,SAMP,100	2/10/2024 5:00:17 PM	SAMP,0.1>10mL,
37	CCV-4,CCV,1	2/10/2024 5:15:35 PM	CCV, IWST-240208A
38	CCB-4,CCB,1	2/10/2024 5:30:54 PM	CCB

INITIAL CALIBRATION DATA SUMMARY

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 1/24/2024

Initial Calibration:

Nitrate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0159	0.0804	0.1690	0.4238	0.8850	1.000
Measured, in mg/L	0.000000	0.067900	0.249500	0.499300	1.217000	2.516400	
Relative Error (%RE)		35.8%		-0.1%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712E

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 1/24/2024

Initial Calibration:

Sulfate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.5	2	4	10	20	R^2
Area,mAU*min	0.0000	0.0468	0.1991	0.4062	1.0440	2.1777	1.000
Measured, in mg/L	0.000000	0.645000	2.037100	3.930800	9.761300	20.125900	
Relative Error (%RE)		29.0%		-1.7%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712G

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **ICV**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5684924**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.088	0.50	4.000	0	102	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCV**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684926**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.051	0.50	4.000	0	101	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCV**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684930**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.044	0.50	4.000	0	101	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCV**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684939**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.952	0.50	4.000	0	98.8	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCV**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684943**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.975	0.50	4.000	0	99.4	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **ICV**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5684902**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.226	0.050	1.250	0	98.1	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCV**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684904**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.238	0.050	1.250	0	99.0	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCV**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684915**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.229	0.050	1.250	0	98.3	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCV**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684920**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.225	0.050	1.250	0	98.0	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCV**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684922**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.224	0.050	1.250	0	97.9	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **ICB**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5684925**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCB**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684927**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCB**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684931**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCB**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684940**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCB**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684944**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **ICB**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5684903**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCB**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684905**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCB**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684916**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCB**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684921**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181402**
Client ID: **CCB**	Batch ID: **R181402**	TestNo: **EPA 300.0**		Analysis Date: **2/10/2024**	SeqNo: **5684923**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/10/2024

Sample Name		Retention Time	Evaluation
ICV	Nitrate	6.727	
CCV-1	Nitrate	6.624	
CCV-2	Nitrate	6.630	
CCV-3	Nitrate	6.694	
CCV-4	Nitrate	6.630	
	Average	6.645	
	Applied RT Window	6.445 - 6.845	
LCS-R181402_NO3	Nitrate	6.514	PASS
MB-R181402_NO3	Nitrate	N.A.	N.A.
N063012-003B	Nitrate	6.590	PASS
N063012-001B	Nitrate	6.663	PASS
N063012-004B	Nitrate	6.630	PASS
N063012-002B	Nitrate	6.530	PASS
N063012-006B	Nitrate	N.A.	N.A.
N063012-007B	Nitrate	N.A.	N.A.
N063012-009B	Nitrate	6.620	PASS
N063012-003BMS	Nitrate	6.664	PASS
N063012-003BMSD	Nitrate	6.640	PASS
N063012-004BDUP	Nitrate	6.624	PASS

Reviewed by:

dMocha 2/27/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/10/2024

Sample Name		Retention Time	Evaluation
ICV	Sulfate	10.334	
CCV-1	Sulfate	10.070	
CCV-2	Sulfate	10.073	
CCV-3	Sulfate	10.124	
CCV-4	Sulfate	10.060	
	Average	10.082	
	Applied RT Window	9.882 - 10.282	
LCS-R181402_SO4	Sulfate	9.960	PASS
MB-R181402_SO4	Sulfate	10.270	PASS
N063012-003B	Sulfate	10.047	PASS
N063012-003BDUP	Sulfate	10.117	PASS
N063012-003BMS	Sulfate	10.107	PASS
N063012-003BMSD	Sulfate	10.093	PASS
N063012-001B	Sulfate	10.094	PASS
N063012-002B	Sulfate	10.067	PASS
N063012-004B	Sulfate	10.073	PASS

Reviewed by:

dMocha 2/27/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): 10/5/2022, 12/14/2022, 3/22/2023,7/10/2023; 10/3/2023 & 11/14/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: mg/L

Instrument Name: **IC-08 & IC-09**

Datafile IC-08 221005A #24 IC-08 221214A #30 IC-08 230322A #35 IC-08 230710A #13 IC-09 231003A #14 IC-08 231114A #24 IC-09 231114A #19

Analyte	#1	#2	#3	#4	#5	#6	#7	Spike Conc., mg/L	SD	$t_{(n-1)}$ value	MDLs	MDL	PQL
Fluoride	0.100	0.103	0.108	0.118	0.110	0.098	0.126	0.10	0.0101	3.143	**0.0318**	**0.0318**	0.10
Chloride	0.480	0.418	0.472	0.653	0.624	0.587	0.622	0.50	0.0922	3.143	**0.2898**	**0.2898**	0.50
Nitrite	0.068	0.061	0.060	0.071	0.063	0.061	0.070	0.05	0.0047	3.143	**0.0149**	**0.0149**	0.05
Bromide	0.526	0.502	0.509	0.522	0.536	0.527	0.520	0.50	0.0116	3.143	**0.0364**	**0.0364**	0.50
Nitrate	0.073	0.058	0.059	0.073	0.074	0.068	0.073	0.05	0.0068	3.143	**0.0215**	**0.0240**	0.05
Phosphate	0.112	0.096	0.114	0.120	0.130	0.093	0.124	0.10	0.0138	3.143	**0.0433**	**0.0433**	0.10
Sulfate	0.501	0.609	0.638	0.401	0.704	0.620	0.697	0.50	0.1092	3.143	**0.3432**	**0.3432**	0.50

METHOD DETECTION LIMIT (Blanks)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Analyte	MDLb	# of Records
Fluoride	0	63
Chloride	0.1456	80
Nitrite	0.0147	64
Bromide	0	18
Nitrate	0.0240	132
Phosphate	0.0237	34
Sulfate	0.2579	107

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

EPA 6010B
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106753
ASSET #: N063012

Instrument ID: ICP-03
Analyst: DBJ
Date Analyzed: 2/14/2024

Method:

[X] EPA 6010B / 200.7
[ ] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 02222024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in ug/L , in the original sample as follows:

Iron , ug/L = A * DF * PF *CF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL
CF= Conversion Factor from mg/L to ug/L, 1000

For Sample **N063012-003C** , the concentration in ug/L is calculated as follows:

Iron , ug/L = 0.02404 * 1 * (25/25) * 1000

Iron , ug/L = 24.04

Reporting results in two significant figures,

Iron , ug/L = 24

Reviewed by:

dMocha 2/27/2024

% RSD SUMMARY

RSD SUMMARY: 240214A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	Fe	0	3.9	15	PASS
Standard1	ICAL	1	Fe	0.02	3.7	15	PASS
Standard2	ICAL	1	Fe	0.05	1.32	15	PASS
Standard3	ICAL	1	Fe	2	0.2	15	PASS
Standard4	ICAL	1	Fe	5	0.22	15	PASS
Standard5	ICAL	1	Fe	7.5	0.29	15	PASS
Standard6	ICAL	1	Fe	10	0.37	15	PASS
Standard7	ICAL	1	Fe	20	0.06	15	PASS
ICV	ICV	1	Fe	10.14	0.22	15	PASS
ICB	ICB	1	Fe	0	76.32	15	<PQL
LLICV1	CCV1	1	Fe	0.02	1.68	20	PASS
ICSA1	ICSA	1	Fe	169.02	0.01	15	PASS
ICSAB1	ICSAB	1	Fe	172.07	0.02	15	PASS
RINSE	RINSE	1	Fe	0.02	32.11	15	<PQL
MB-106753	MBLK	1	Fe	0	20.95	15	<PQL
LCS-106753	LCS	1	Fe	0.1	0.93	15	PASS
N063010-001B	SAMP	1	Fe	2.14	0.5	15	PASS
N063010-002B	SAMP	1	Fe	1.65	0.34	15	PASS
N063010-003B	SAMP	1	Fe	0.71	0.16	15	PASS
N063012-001C	SAMP	1	Fe	0.01	6.42	15	PASS
N063012-002C	SAMP	1	Fe	0.02	5.01	15	PASS
N063012-002C	SAMP	5	Fe	0	18.11	15	<PQL
N063012-002C-PS	PS	1	Fe	0.11	0.94	15	PASS
CCV1	CCV	1	Fe	10.13	0.27	15	PASS
CCB1	CCB	1	Fe	0	92.39	15	<PQL
N063012-002C-MS	MS	1	Fe	0.14	0.57	15	PASS
N063012-002C-MSD	MSD	1	Fe	0.12	0.73	15	PASS
N063012-003C	SAMP	1	Fe	0.02	4.09	15	PASS
N063012-004C	SAMP	1	Fe	0.03	2.94	15	PASS
N063012-006C	SAMP	1	Fe	0.43	0.41	15	PASS
N063012-007C	SAMP	1	Fe	0.37	0.38	15	PASS
N063012-009C	SAMP	1	Fe	0.04	0.76	15	PASS
CCV2	CCV	1	Fe	10.09	0.39	15	PASS
CCB2	CCB	1	Fe	0	62.18	15	<PQL
CCV3	CCV	1	Fe	10.09	0.22	15	PASS
CCB3	CCB	1	Fe	0	38.25	15	<PQL
ICSA2	ICSA	1	Fe	169.41	0.05	15	PASS
ICSAB2	ICSAB	1	Fe	172.58	0.02	15	PASS
RINSE	RINSE	1	Fe	0.02	27.96	15	<PQL
CCV4	CCV	1	Fe	10.17	0.39	15	PASS
CCB4	CCB	1	Fe	0	71.34	15	<PQL
CCV5	CCV	1	Fe	10.17	0.27	15	PASS

RSD SUMMARY: 240214A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CCB5	CCB	1	Fe	0	36.55	15	<PQL
ICSA3	ICSA	1	Fe	170.2	0.08	15	PASS
ICSAB3	ICSAB	1	Fe	173.4	0.02	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240214A

Instrument ID: ICP-03

STANDARD CODE	
Standard1	MWST-240105M, 0.5<50mL
Standard2	MWST-240105N
Standard3	MWST-240105O, 5<50mL
Standard4	MWST-240105O,12.5<50mL
Standard5	MWST-240105O, 15<40mL
Standard6	MWST-240105O, 25<50mL
Standard7	MWST-240105O
ICV	MWST-240105AE
CCV	MWST-240105O, 25<50mL
ICSA/ICSAB	MWST-240105P / MWST-240105Q
Int. Std. (Y)	MWST-240105B
PS Spike	MWST-240105X / Y/ Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	02/14/2024	09:34:54 AM
2	Standard1	ICAL	1	02/14/2024	09:38:36 AM
3	Standard2	ICAL	1	02/14/2024	09:42:19 AM
4	Standard3	ICAL	1	02/14/2024	09:46:02 AM
5	Standard4	ICAL	1	02/14/2024	09:49:16 AM
6	Standard5	ICAL	1	02/14/2024	09:52:30 AM
7	Standard6	ICAL	1	02/14/2024	09:55:44 AM
8	Standard7	ICAL	1	02/14/2024	09:58:57 AM
310	ICV	ICV	1	02/14/2024	10:07:18 AM
1	ICB	ICB	1	02/14/2024	10:10:38 AM
2	LLICV1	CCV1	1	02/14/2024	10:14:21 AM
9	ICSA1	ICSA	1	02/14/2024	10:18:04 AM
10	ICSAB1	ICSAB	1	02/14/2024	10:22:45 AM
299	RINSE	RINSE	1	02/14/2024	10:27:51 AM
71	MB-106753	MBLK	1	02/14/2024	10:58:41 AM
72	LCS-106753	LCS	1	02/14/2024	11:04:38 AM
73	N063010-001B	SAMP	1	02/14/2024	11:08:23 AM
74	N063010-002B	SAMP	1	02/14/2024	11:13:22 AM
75	N063010-003B	SAMP	1	02/14/2024	11:18:20 AM
76	N063012-001C	SAMP	1	02/14/2024	11:23:19 AM
77	N063012-002C	SAMP	1	02/14/2024	11:28:37 AM
78	N063012-002C	SAMP	5	02/14/2024	11:33:57 AM
79	N063012-002C-PS	PS	1	02/14/2024	11:38:13 AM
7	CCV1	CCV	1	02/14/2024	11:43:33 AM
1	CCB1	CCB	1	02/14/2024	11:46:47 AM
80	N063012-002C-MS	MS	1	02/14/2024	11:50:30 AM
81	N063012-002C-MSD	MSD	1	02/14/2024	11:55:51 AM
82	N063012-003C	SAMP	1	02/14/2024	12:01:13 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
83	N063012-004C	SAMP	1	02/14/2024	12:06:34 PM
84	N063012-006C	SAMP	1	02/14/2024	12:12:03 PM
85	N063012-007C	SAMP	1	02/14/2024	12:15:20 PM
86	N063012-009C	SAMP	1	02/14/2024	12:18:40 PM
87	MB-106783	MBLK	1	02/14/2024	12:24:01 PM
88	LCS-106783	LCS	1	02/14/2024	12:28:15 PM
89	N063053-001C	SAMP	1	02/14/2024	12:32:00 PM
7	CCV2	CCV	1	02/14/2024	12:37:21 PM
1	CCB2	CCB	1	02/14/2024	12:40:35 PM
90	N063053-002C	SAMP	1	02/14/2024	12:44:17 PM
91	N063053-003C	SAMP	1	02/14/2024	12:49:38 PM
92	N063053-004C	SAMP	1	02/14/2024	12:54:59 PM
93	N063053-005C	SAMP	1	02/14/2024	01:00:20 PM
94	N063053-006C	SAMP	1	02/14/2024	01:05:41 PM
95	N063053-007C	SAMP	1	02/14/2024	01:11:02 PM
96	N063053-008C	SAMP	1	02/14/2024	01:16:23 PM
97	N063053-009C	SAMP	1	02/14/2024	01:21:52 PM
98	N063053-010C	SAMP	1	02/14/2024	01:26:50 PM
99	N063053-011C	SAMP	1	02/14/2024	01:32:20 PM
7	CCV3	CCV	1	02/14/2024	01:37:48 PM
1	CCB3	CCB	1	02/14/2024	01:41:02 PM
9	ICSA2	ICSA	1	02/14/2024	01:44:45 PM
10	ICSAB2	ICSAB	1	02/14/2024	01:49:26 PM
299	RINSE	RINSE	1	02/14/2024	01:54:08 PM
100	N063053-011C	SAMP	5	02/14/2024	01:57:56 PM
101	N063053-011C-PS	PS	1	02/14/2024	02:02:14 PM
102	N063053-011CMS	MS	1	02/14/2024	02:07:43 PM
103	N063053-011CMSD	MSD	1	02/14/2024	02:13:12 PM
104	N063053-018B	SAMP	1	02/14/2024	02:18:42 PM
105	MB-106786	MBLK	1	02/14/2024	02:24:03 PM
106	LCS-106786	LCS	1	02/14/2024	02:27:47 PM
107	N063053-001D	SAMP	1	02/14/2024	02:31:34 PM
108	N063053-001D	SAMP	5	02/14/2024	02:36:55 PM
7	CCV4	CCV	1	02/14/2024	02:41:12 PM
1	CCB4	CCB	1	02/14/2024	02:44:26 PM
109	N063053-001D-PS	PS	1	02/14/2024	02:48:09 PM
110	N063053-001D-MS	MS	1	02/14/2024	02:53:30 PM
111	N063053-001D-MSD	MSD	1	02/14/2024	02:58:59 PM
112	N063053-002D	SAMP	1	02/14/2024	03:04:21 PM
113	N063053-003D	SAMP	1	02/14/2024	03:09:42 PM
114	N063053-004D	SAMP	1	02/14/2024	03:15:03 PM
115	N063053-008D	SAMP	1	02/14/2024	03:20:25 PM
116	N063053-018C	SAMP	1	02/14/2024	03:25:55 PM
7	CCV5	CCV	1	02/14/2024	03:31:16 PM
1	CCB5	CCB	1	02/14/2024	03:34:29 PM
9	ICSA3	ICSA	1	02/14/2024	03:38:12 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
10	ICSAB3	ICSAB	1	02/14/2024	03:42:52 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/12/2024 11:32:56 AM**
Prep End Date: **2/12/2024 3:30:00 PM**
Prep Batch **106753** Prep Code:**3010_W_DISS**

Reviewed/ Date: dMocha 2/27/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-02-29**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-106753	Aqueous		25	☐	25	1.000		
MB-106753	Aqueous		25	☐	25	1.000		
N063010-001B	Water	<2	25	☐	25	1.000		
N063010-002B	Water	<2	25	☐	25	1.000		
N063010-003B	Water	<2	25	☐	25	1.000		
N063012-001C	Groundwater	<2	25	☐	25	1.000		
N063012-002C	Groundwater	<2	25	☐	25	1.000		
N063012-002C-MS	Groundwater	<2	25	☐	25	1.000		
N063012-002C-MSD	Groundwater	<2	25	☐	25	1.000		
N063012-003C	Groundwater	<2	25	☐	25	1.000		
N063012-004C	Groundwater	<2	25	☐	25	1.000		
N063012-006C	Groundwater	<2	25	☐	25	1.000		
N063012-007C	Groundwater	<2	25	☐	25	1.000		
N063012-009C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15257	HYDROCHLORIC ACID
16149	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240214A

Instrument ID: ICP-03

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Iron								
CalBlk	02/14/2024	09:34:54 AM	Fe	273.952	106	0.00	mg/L	
Standard1	02/14/2024	09:38:36 AM	Fe	273.952	228	0.02	mg/L	
Standard2	02/14/2024	09:42:19 AM	Fe	273.952	696	0.05	mg/L	
Standard3	02/14/2024	09:46:02 AM	Fe	273.952	24349	2.0	mg/L	
Standard4	02/14/2024	09:49:16 AM	Fe	273.952	60371	5.0	mg/L	
Standard5	02/14/2024	09:52:30 AM	Fe	273.952	88651	7.5	mg/L	
Standard6	02/14/2024	09:55:44 AM	Fe	273.952	115628	10.0	mg/L	
Standard7	02/14/2024	09:58:57 AM	Fe	273.952	226568	20.0	mg/L	0.9998

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **ICV**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690339**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10144.742	20	10000	0	101	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **ZZZZZZ**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690341**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	20.723	20	20.00	0	104	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **CCV**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690353**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10125.874	20	10000	0	101	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **CCV**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690365**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10086.935	20	10000	0	101	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **CCV**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690377**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10093.581	20	10000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **CCV**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690390**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10166.827	20	10000	0	102	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **CCV**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690400**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10172.162	20	10000	0	102	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **ICB**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690340**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.692	20									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **CCB**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690354**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.976	20									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **CCB**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690366**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.826	20									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **CCB**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690378**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.888	20									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **CCB**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690391**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.726	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **CCB**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690401**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.114	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181521**
Client ID: **ICSA** Batch ID: **R181521** TestNo: **EPA 6010B** Analysis Date: **2/14/2024** SeqNo: **5690342**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	555090.151	50	500000	0	111	80	120				
Calcium	449216.196	500	500000	0	89.8	80	120				
Iron	169021.033	20	200000	0	84.5	80	120				
Magnesium	449011.207	100	500000	0	89.8	80	120				

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181521**
Client ID: **ICSAB** Batch ID: **R181521** TestNo: **EPA 6010B** Analysis Date: **2/14/2024** SeqNo: **5690343**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	558020.144	50	500000	0	112	80	120				
Calcium	453655.699	500	500000	0	90.7	80	120				
Iron	172065.284	20	200000	0	86.0	80	120				
Magnesium	453165.857	100	500000	0	90.6	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181521**
Client ID: **ICSA** Batch ID: **R181521** TestNo: **EPA 6010B** Analysis Date: **2/14/2024** SeqNo: **5690379**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	551756.177	50	500000	0	110	80	120				
Calcium	450602.596	500	500000	0	90.1	80	120				
Iron	169409.323	20	200000	0	84.7	80	120				
Magnesium	449624.890	100	500000	0	89.9	80	120				

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181521**
Client ID: **ICSAB** Batch ID: **R181521** TestNo: **EPA 6010B** Analysis Date: **2/14/2024** SeqNo: **5690380**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	557905.414	50	500000	0	112	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **ICSAB**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690380**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	454768.447	500	500000	0	91.0	80	120				
Iron	172575.850	20	200000	0	86.3	80	120				
Magnesium	454069.860	100	500000	0	90.8	80	120				

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **ICSA**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690402**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	547504.422	50	500000	0	110	80	120				
Calcium	451497.569	500	500000	0	90.3	80	120				
Iron	170201.392	20	200000	0	85.1	80	120				
Magnesium	450447.528	100	500000	0	90.1	80	120				

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **ICSAB**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690403**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	550651.610	50	500000	0	110	80	120				
Calcium	455854.139	500	500000	0	91.2	80	120				
Iron	173396.942	20	200000	0	86.7	80	120				
Magnesium	454995.749	100	500000	0	91.0	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240214A

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	0.98	98.09	65-125	PASS
Standard2	ICAL	1	1	99.87	65-125	PASS
Standard3	ICAL	1	1	100.48	65-125	PASS
Standard4	ICAL	1	0.99	98.88	65-125	PASS
Standard5	ICAL	1	0.99	98.63	65-125	PASS
Standard6	ICAL	1	0.97	97.2	65-125	PASS
Standard7	ICAL	1	0.96	95.73	65-125	PASS
ICV	ICV	1	0.97	96.78	65-125	PASS
ICB	ICB	1	0.99	98.93	65-125	PASS
LLICV1	CCV1	1	0.98	98.1	65-125	PASS
ICSA1	ICSA	1	0.85	84.51	65-125	PASS
ICSAB1	ICSAB	1	0.82	82.18	65-125	PASS
RINSE	RINSE	1	1.07	107	65-125	PASS
MB-106753	MBLK	1	0.98	97.82	65-125	PASS
LCS-106753	LCS	1	0.93	93.31	65-125	PASS
N063010-001B	SAMP	1	0.76	76.25	65-125	PASS
N063010-002B	SAMP	1	0.75	75.25	65-125	PASS
N063010-003B	SAMP	1	0.74	73.77	65-125	PASS
N063012-001C	SAMP	1	0.84	83.98	65-125	PASS
N063012-002C	SAMP	1	0.81	80.68	65-125	PASS
N063012-002C	SAMP	5	0.91	90.7	65-125	PASS
N063012-002C-PS	PS	1	0.79	78.64	65-125	PASS
CCV1	CCV	1	0.97	96.7	65-125	PASS
CCB1	CCB	1	0.99	98.93	65-125	PASS
N063012-002C-MS	MS	1	0.82	82.05	65-125	PASS
N063012-002C-MSD	MSD	1	0.8	79.92	65-125	PASS
N063012-003C	SAMP	1	0.81	80.89	65-125	PASS
N063012-004C	SAMP	1	0.74	73.57	65-125	PASS
N063012-006C	SAMP	1	0.87	87.31	65-125	PASS
N063012-007C	SAMP	1	0.88	87.62	65-125	PASS
N063012-009C	SAMP	1	0.75	75.14	65-125	PASS
CCV2	CCV	1	0.96	96.39	65-125	PASS
CCB2	CCB	1	0.99	98.69	65-125	PASS
CCV3	CCV	1	0.98	97.68	65-125	PASS
CCB3	CCB	1	1	99.94	65-125	PASS
ICSA2	ICSA	1	0.85	85.13	65-125	PASS
ICSAB2	ICSAB	1	0.83	82.84	65-125	PASS
RINSE	RINSE	1	1.05	105.33	65-125	PASS
CCV4	CCV	1	0.98	98.4	65-125	PASS
CCB4	CCB	1	1.01	100.69	65-125	PASS

INTERNAL STANDARD: 240214A

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CCV5	CCV	1	0.99	98.79	65-125	PASS
CCB5	CCB	1	1.01	101.41	65-125	PASS
ICSA3	ICSA	1	0.87	86.55	65-125	PASS
ICSAB3	ICSAB	1	0.84	84.01	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063012
Test Method: EPA 6010B
Analysis Date: 2/14/2024

Matrix: Groundwater
Batch No.: 106753

Instrument ID: ICP-03
Instrument Description: Perkin Elmer Avio 500Max

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Fe. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063012-002C DT 5x	Iron	Fe	µg/L	0	NA	18.13414	100.00%	10

Reviewed by:

dlRocha 2/27/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **N063012-002C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181521**
Client ID: **ZZZZZZ** Batch ID: **106753** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/14/2024** SeqNo: **5690352**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	113.090	20	100.0	18.13	95.0	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

LOD & PQL VERIFICATION

Analytical Method: EPA 6010B
Digestion Method: EPA 3010A
Digestion Date: 5/7/23; 5/8/23; 5/10/23
Analysis Date: 5/7-23/23
Instrument Name: ICP-03
Analyst/Technician: Nancy Sibucao / Diane Jetajobe

Matrix: WATER
Units : ppm

Analyte	MDL	LOD	ACTUAL LOD	PQL	Actual PQL	%REC
Beryllium	0.000076	0.0005	0.00047	0.001	0.00098	98
Boron	0.0086	0.05	0.04899	0.1	0.089	89
Magnesium	0.0057	0.05	0.05152	0.1	0.10	102
Silicon	0.012	0.01	0.01312	0.02	0.023	113
Chromium	0.00051	0.0005	0.00056	0.001	0.0010	102
Manganese	0.00032	0.01	0.00534	0.01	0.011	110
Iron	0.0022	0.01	0.01180	0.02	0.021	106
Cobalt	0.001	0.0013	0.00096	0.0025	0.0025	100
Nickel	0.0034	0.0025	0.00417	0.005	0.0055	110
Copper	0.0042	0.0025	0.00434	0.005	0.0044	87
Zinc	0.0007	0.005	0.00624	0.01	0.011	106
Arsenic	0.0042	0.005	0.00461	0.01	0.010	104
Selenium	0.008	0.005	0.00829	0.01	0.010	102
Molybdenum	0.0013	0.0025	0.00307	0.005	0.0053	106
Silver	0.0024	0.0013	0.00419	0.0025	0.0033	134
Cadmium	0.0016	0.0013	0.00180	0.0025	0.0026	102
Tin	0.0076	0.005	0.00563	0.010	0.0099	99
Antimony	0.0038	0.005	0.00307	0.01	0.0096	96
Barium	0.0002	0.0013	0.00124	0.0025	0.0026	104
Thallium	0.0021	0.0075	0.00656	0.015	0.015	101
Lead	0.0039	0.0025	0.00337	0.005	0.0047	94
Calcium	0.011	0.1	0.11963	0.2	0.23	113
Vanadium	0.00017	0.0013	0.00126	0.0025	0.0025	100
Aluminum	0.0089	0.025	0.02576	0.05	0.048	95
Titanium	0.004	0.005	0.00612	0.01	0.01	101

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

EPA 6020
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106751
ASSET #: N063012

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/12/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.		X			X	
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)		X			X	
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

% RSD of As and Se in LLICV failed. However, % rec passed criteria
% RSD of As in N063012-002C/006C, failed. For re run
Mn is OLR in N063012-007C/009C. For dilution
Cr is OLR in N063012-001C-PS/MS/ MSD/002C/003C/004C. For dilution.

	Yes	No	N/A
1. All assigned sample(s) analyzed	x		
2. Matrix / units correct	x		
3. Does batch meet QC requirements?	x		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	x		
5. Is first level review correct and complete?	x		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 2/27/2024 Date: _____

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106751
ASSET #: N063012

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/13/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

Mn and Cr dilution
As re run for N063012-002C/006C
% Rec of Cr in N063012-001C-MS/MSD failed. However, LCS passed criteria
% RSD of As in N063012-002C/006C failed. For re run

	Yes	No	N/A
1. All assigned sample(s) analyzed	x		
2. Matrix / units correct	x		
3. Does batch meet QC requirements?	x		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	x		
5. Is first level review correct and complete?	x		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 2/27/2024 Date: _____

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106751
ASSET #: N063012

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/14/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.			X			X
24. LCS compounds within control limits.			X			X
25. MS/MSD, RPD's are within control limits			X			X
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

As/Mn rerun.

	Yes	No	N/A
1. All assigned sample(s) analyzed	x		
2. Matrix / units correct	x		
3. Does batch meet QC requirements?	x		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	x		
5. Is first level review correct and complete?	x		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 2/27/2024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Groundwater

FORMULA:

Calculate the Chromium concentration, in ug/L , in the original sample as follows:

Chromium , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063012-001C** , the concentration in ug/L is calculated as follows:

Chromium , ug/L = 45.1489 * 10 *(25 / 25)

Chromium , ug/L = 451.489

Reporting results in two significant figures,

Chromium , ug/L = 450

Reviewed by:

JRB 3/14/2024

% RSD SUMMARY

PERCENT RSD SUMMARY: 240212A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				52 Cr [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0.96	3.447	15	PASS
Std1-0.1/1 ppb	ICAL	1	0.07	43.482	15	<PQL	0.19	10.369	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.48	5.468	15	PASS	0.56	4.816	15	PASS
Std3-5/50 ppb	ICAL	1	4.84	1.436	15	PASS	5.05	4.001	15	PASS
Std4-10/100 ppb	ICAL	1	9.74	1.086	15	PASS	9.96	1.496	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.64	2.233	15	PASS	19.56	1.986	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.14	1.035	15	PASS	39.84	1.374	15	PASS
Std7-100/1000 ppb	ICAL	1	98.69	0.051	15	PASS	98.53	0.931	15	PASS
Std8-200/2000 ppb	ICAL	1	200.88	1.032	15	PASS	200.81	2.176	15	PASS
ICV	ICV	1	9.98	3.054	15	PASS	10.39	2.038	15	PASS
ICB	ICB	1	0.02	82.398	15	<PQL	0.95	0.827	15	PASS
LLICV1	LLICV	1	1.02	2.393	20	PASS	1.11	1.205	20	PASS
MLCCV	CCV	1	19.04	1.648	15	PASS	19.84	0.902	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL	0.98	2.196	15	PASS
ICSAB1	ICSAB	1	20.79	1.444	15	PASS	20	0.838	15	PASS
LLICV1	LLICV	1	1.04	8.652	20	PASS	1.15	4.63	20	PASS
CCV1	CCV	1	19.74	1.296	15	PASS	19.48	0.099	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL	0.96	0.972	15	PASS
CCV2	CCV	1	20.05	1.57	15	PASS	19.35	1.056	15	PASS
CCB2	CCB	1	0	608.974	15	<PQL	0.95	0.15	15	PASS
ICSA2	ICSA	1	0.03	55.737	15	<PQL	0.94	2.852	15	PASS
ICSAB2	ICSAB	1	21.63	3.744	15	PASS	20.27	1.372	15	PASS
MB-106751	MBLK	1	<0.000	N/A	15	<PQL	0.09	7.828	15	PASS
LCS-106751	LCS	1	10.13	1.193	15	PASS	9.64	0.666	15	PASS
N063010-001B	SAMP	1	24.08	1.911	15	PASS	39.53	1.425	15	PASS
N063010-001B	SAMP	10	2.49	1.903	15	PASS	4.34	2.043	15	PASS
N063010-002B	SAMP	1	21.79	1.168	15	PASS	16.6	1.913	15	PASS
N063010-002B	SAMP	10	2.29	2.175	15	PASS	1.7	1.407	15	PASS
N063010-003B	SAMP	1	19.04	2.13	15	PASS	9.6	2.335	15	PASS
N063010-003B	SAMP	10	2.25	5.833	15	PASS	1.11	0.855	15	PASS
CCV3	CCV	1	20.53	0.809	15	PASS	19.22	1.031	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL	0.93	0.313	15	PASS
N063012-001C	SAMP	1	28.79	0.441	15	PASS	419.83	0.657	15	PASS
N063012-001C	SAMP	5	6.06	1.431	15	PASS	90.86	0.524	15	PASS
N063012-001C-PS	PS	1	39.23	1.457	15	PASS	439.46	0.472	15	PASS
N063012-001C-MS	MS	1	38.77	1.667	15	PASS	434.46	0.81	15	PASS
N063012-001C-MSD	MSD	1	39.17	0.492	15	PASS	438.33	1.679	15	PASS
N063012-002C	SAMP	1	39.69	0.357	15	PASS	2200.83	0.296	15	PASS
N063012-003C	SAMP	1	40.12	0.961	15	PASS	2223.82	0.832	15	PASS
N063012-004C	SAMP	1	25.6	0.654	15	PASS	2058.24	1.026	15	PASS
N063012-006C	SAMP	1	142.3	1.12	15	PASS	0.43	4.225	15	PASS

PERCENT RSD SUMMARY: 240212A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				52 Cr [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCV4	CCV	1	19.94	2.009	15	PASS	19.94	1.183	15	PASS
CCB4	CCB	1	0.01	48.082	15	<PQL	1.02	2.982	15	PASS
N063012-007C	SAMP	1	169.75	0.452	15	PASS	0.28	3.185	15	PASS
N063012-009C	SAMP	1	79.43	0.963	15	PASS	0.23	5.544	15	PASS
N063010-001B	SAMP	100	0.19	19.191	15	<PQL	0.52	4.256	15	PASS
N063010-002B	SAMP	100	0.19	21.607	15	<PQL	0.28	9.733	15	PASS
N063010-003B	SAMP	100	0.13	17.207	15	<PQL	0.2	16.15	15	<PQL
CCV5	CCV	1	20.03	1.837	15	PASS	20.22	0.746	15	PASS
CCB5	CCB	1	0	4490.836	15	<PQL	0.99	1.315	15	PASS
ICSA3	ICSA	1	0.03	46.577	15	<PQL	0.97	0.598	15	PASS
ICSAB3	ICSAB	1	21.29	3.282	15	PASS	21.24	1.269	15	PASS
CCV6	CCV	1	20.62	0.813	15	PASS	20.05	2.563	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL	0.99	6.229	15	PASS
ICSA4	ICSA	1	0.04	28.938	15	<PQL	0.98	2.132	15	PASS
ICSAB4	ICSAB	1	20.92	1.091	15	PASS	20.93	1.564	15	PASS

PERCENT RSD SUMMARY: 240212A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]				75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0.19	9.662	15	PASS	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.13	10.556	15	PASS	0.11	25.857	15	FAIL
Std2-0.5/5 ppb	ICAL	1	0.5	3.925	15	PASS	0.48	15.713	15	FAIL
Std3-5/50 ppb	ICAL	1	4.88	3.981	15	PASS	5	2.004	15	PASS
Std4-10/100 ppb	ICAL	1	9.84	0.785	15	PASS	9.74	1.491	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.41	2.798	15	PASS	19.59	2.936	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	40.08	2.062	15	PASS	40.36	1.041	15	PASS
Std7-100/1000 ppb	ICAL	1	98.51	0.608	15	PASS	99.94	1.29	15	PASS
Std8-200/2000 ppb	ICAL	1	200.8	1.732	15	PASS	200.01	0.436	15	PASS
ICV	ICV	1	102.02	0.261	15	PASS	10.31	0.665	15	PASS
ICB	ICB	1	0.19	8.892	15	PASS	0.02	101.889	15	<PQL
LLICV1	LLICV	1	0.55	11.967	20	PASS	0.11	41.327	20	NR!
MLCCV	CCV	1	19.82	1.753	15	PASS	19.27	2.953	15	PASS
ICSA1	ICSA	1	0.18	7.17	15	PASS	0.02	51.597	15	<PQL
ICSAB1	ICSAB	1	16.32	2.606	15	PASS	21.14	0.449	15	PASS
LLICV1	LLICV	1	0.57	3.188	20	PASS	0.12	34.053	20	NR!
CCV1	CCV	1	19.56	2.559	15	PASS	19.16	1.477	15	PASS
CCB1	CCB	1	0.18	10.531	15	PASS	0.01	266.052	15	<PQL
CCV2	CCV	1	19.5	0.642	15	PASS	18.92	2.711	15	PASS
CCB2	CCB	1	0.17	11.053	15	PASS	0.03	67.857	15	<PQL
ICSA2	ICSA	1	0.19	13.673	15	PASS	0.01	395.524	15	<PQL
ICSAB2	ICSAB	1	16.46	2.231	15	PASS	20.9	4.098	15	PASS
MB-106751	MBLK	1	0.04	21.506	15	<PQL	<0.000	N/A	15	<PQL
LCS-106751	LCS	1	97.16	2.021	15	PASS	10.02	3.348	15	PASS
N063010-001B	SAMP	1	2156.65	0.704	15	PASS	2.57	9.093	15	PASS
N063010-001B	SAMP	10	237.32	1.678	15	PASS	0.23	41.911	15	NR!
N063010-002B	SAMP	1	2068.34	1.081	15	PASS	0.89	46.78	15	NR!
N063010-002B	SAMP	10	217.7	0.641	15	PASS	0.11	51.601	15	NR!
N063010-003B	SAMP	1	1757.87	0.995	15	PASS	3.08	11.076	15	PASS
N063010-003B	SAMP	10	203.64	1.261	15	PASS	0.35	25.254	15	NR!
CCV3	CCV	1	19.38	1.097	15	PASS	19.46	1.397	15	PASS
CCB3	CCB	1	0.19	9.093	15	PASS	<0.000	N/A	15	<PQL
N063012-001C	SAMP	1	0.01	405.128	15	<PQL	1.26	12.479	15	PASS
N063012-001C	SAMP	5	0.05	97.557	15	<PQL	0.24	14.172	15	PASS
N063012-001C-PS	PS	1	90.82	1.408	15	PASS	10.62	2.187	15	PASS
N063012-001C-MS	MS	1	91.2	1.231	15	PASS	11.56	4.35	15	PASS
N063012-001C-MSD	MSD	1	91.19	0.441	15	PASS	11.14	2.988	15	PASS
N063012-002C	SAMP	1	<0.000		15	<PQL	0.16	63.588	15	NR!
N063012-003C	SAMP	1	<0.000		15	<PQL	0.08	16.665	15	<PQL
N063012-004C	SAMP	1	<0.000		15	<PQL	<0.000	N/A	15	<PQL
N063012-006C	SAMP	1	84.56	1.287	15	PASS	0.94	20.618	15	NR!

PERCENT RSD SUMMARY: 240212A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]				75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCV4	CCV	1	19.6	0.534	15	PASS	19.33	2.874	15	PASS
CCB4	CCB	1	0.22	4.398	15	PASS	0	121.523	15	<PQL
N063012-007C	SAMP	1	269.62	0.58	15	PASS	14.78	3.774	15	PASS
N063012-009C	SAMP	1	2238.98	1.956	15	PASS	<0.000	N/A	15	<PQL
N063010-001B	SAMP	100	21.37	1.862	15	PASS	0.03	126.896	15	<PQL
N063010-002B	SAMP	100	21.63	0.89	15	PASS	<0.000	N/A	15	<PQL
N063010-003B	SAMP	100	16.45	4.535	15	PASS	0.03	30.153	15	<PQL
CCV5	CCV	1	19.66	2.192	15	PASS	19.07	1.853	15	PASS
CCB5	CCB	1	0.17	15.479	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	0.17	6.146	15	PASS	0.01	125.292	15	<PQL
ICSAB3	ICSAB	1	16.58	2.327	15	PASS	21.38	3.079	15	PASS
CCV6	CCV	1	19.34	2.897	15	PASS	19.15	4.112	15	PASS
CCB6	CCB	1	0.18	3.896	15	PASS	0.02	145.354	15	<PQL
ICSA4	ICSA	1	0.17	3.29	15	PASS	0	385.121	15	<PQL
ICSAB4	ICSAB	1	16.16	3.848	15	PASS	20.97	1.577	15	PASS

PERCENT RSD SUMMARY: 240212A

Instrument ID: ICPMS-03

Sample Name	Type	DF	78 Se [1]				95 Mo [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.08	97.756	15	<PQL	0.09	15.608	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.51	10.178	15	PASS	0.41	20.078	15	<PQL
Std3-5/50 ppb	ICAL	1	4.9	5.115	15	PASS	4.72	1.403	15	PASS
Std4-10/100 ppb	ICAL	1	9.68	3.331	15	PASS	9.56	2.567	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.98	3.182	15	PASS	19.29	0.779	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.83	3.841	15	PASS	39.41	0.485	15	PASS
Std7-100/1000 ppb	ICAL	1	98.15	1.211	15	PASS	98.2	0.24	15	PASS
Std8-200/2000 ppb	ICAL	1	200.98	1.128	15	PASS	201.12	0.251	15	PASS
ICV	ICV	1	9.7	4.492	15	PASS	9.93	2.378	15	PASS
ICB	ICB	1	0.04	48.542	15	<PQL	0.06	32.599	15	<PQL
LLICV1	LLICV	1	0.52	17.347	20	PASS	0.54	6.847	20	PASS
MLCCV	CCV	1	19.24	2.335	15	PASS	19.33	0.48	15	PASS
ICSA1	ICSA	1	0.01	171.877	15	<PQL	0.03	24.54	15	<PQL
ICSAB1	ICSAB	1	20.08	2.643	15	PASS	22.47	1.761	15	PASS
LLICV1	LLICV	1	0.54	21.88	20	NR!	0.54	8.584	20	PASS
CCV1	CCV	1	19.06	4.743	15	PASS	19.4	1.355	15	PASS
CCB1	CCB	1	0.02	45.002	15	<PQL	0.04	32.258	15	<PQL
CCV2	CCV	1	19.7	3.234	15	PASS	18.97	0.286	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	0.03	30.448	15	<PQL
ICSA2	ICSA	1	0	200.456	15	<PQL	0	181.813	15	<PQL
ICSAB2	ICSAB	1	19.37	1.982	15	PASS	22.51	2.111	15	PASS
MB-106751	MBLK	1	<0.000	N/A	15	<PQL	0.01	109.834	15	<PQL
LCS-106751	LCS	1	9.38	5.019	15	PASS	9.87	1.464	15	PASS
N063010-001B	SAMP	1	1.05	14.994	15	PASS	10.3	0.563	15	PASS
N063010-001B	SAMP	10	0.11	25.368	15	<PQL	1.03	1.24	15	PASS
N063010-002B	SAMP	1	0.86	22.59	15	NR!	4.19	0.503	15	PASS
N063010-002B	SAMP	10	0.09	55.213	15	<PQL	0.39	5.687	15	PASS
N063010-003B	SAMP	1	0.58	12.962	15	PASS	6.65	0.907	15	PASS
N063010-003B	SAMP	10	0.08	35.643	15	<PQL	0.7	4.82	15	PASS
CCV3	CCV	1	18.89	2.875	15	PASS	19.32	1.259	15	PASS
CCB3	CCB	1	0.03	69.116	15	<PQL	0.03	56.199	15	<PQL
N063012-001C	SAMP	1	8.8	7.969	15	PASS	19.38	2.381	15	PASS
N063012-001C	SAMP	5	1.9	9.074	15	PASS	3.95	2.944	15	PASS
N063012-001C-PS	PS	1	18.44	0.933	15	PASS	30.72	1.477	15	PASS
N063012-001C-MS	MS	1	18.27	2.429	15	PASS	30.57	1.363	15	PASS
N063012-001C-MSD	MSD	1	18.44	6.275	15	PASS	30.49	1.219	15	PASS
N063012-002C	SAMP	1	6.18	4.811	15	PASS	5.75	2.491	15	PASS
N063012-003C	SAMP	1	6.22	5.736	15	PASS	5.78	1.727	15	PASS
N063012-004C	SAMP	1	20.73	1.609	15	PASS	9.67	0.252	15	PASS
N063012-006C	SAMP	1	0.11	16.085	15	<PQL	7.12	2.219	15	PASS

PERCENT RSD SUMMARY: 240212A

Instrument ID: ICPMS-03

Sample Name	Type	DF	78 Se [1]				95 Mo [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCV4	CCV	1	19.42	4.18	15	PASS	19.38	0.478	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL	0.04	41.85	15	<PQL
N063012-007C	SAMP	1	0.03	35.578	15	<PQL	4.9	4.451	15	PASS
N063012-009C	SAMP	1	20.15	5.094	15	PASS	24.56	1.409	15	PASS
N063010-001B	SAMP	100	0.01	305.024	15	<PQL	0.11	7.079	15	PASS
N063010-002B	SAMP	100	<0.000	N/A	15	<PQL	0.04	10.938	15	PASS
N063010-003B	SAMP	100	0.01	145.651	15	<PQL	0.05	14.251	15	PASS
CCV5	CCV	1	19.66	1.222	15	PASS	19.23	2.238	15	PASS
CCB5	CCB	1	0	1180.372	15	<PQL	0.03	64.779	15	<PQL
ICSA3	ICSA	1	0	1467.919	15	<PQL	0.01	90.262	15	<PQL
ICSAB3	ICSAB	1	19.7	6.705	15	PASS	22.12	0.328	15	PASS
CCV6	CCV	1	20.41	1.146	15	PASS	19.06	0.768	15	PASS
CCB6	CCB	1	0	787.87	15	<PQL	0.04	22.878	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL	0.01	178.502	15	<PQL
ICSAB4	ICSAB	1	19.91	4.268	15	PASS	21.86	1.516	15	PASS

PERCENT RSD SUMMARY: 240213B

Instrument ID: ICPMS-03

Sample Name	Type	DF	52 Cr [2]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.11	5.198	15	PASS	0.09	8.802	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.46	0.761	15	PASS	0.47	6.382	15	PASS
Std3-5/50 ppb	ICAL	1	4.73	0.933	15	PASS	4.74	0.409	15	PASS
Std4-10/100 ppb	ICAL	1	9.84	2.095	15	PASS	9.9	0.589	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.31	2.302	15	PASS	19.47	2.341	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.37	0.544	15	PASS	39.62	1.292	15	PASS
Std7-100/1000 ppb	ICAL	1	99.88	0.686	15	PASS	100.18	1.133	15	PASS
Std8-200/2000 ppb	ICAL	1	200.27	1.404	15	PASS	200.05	1.323	15	PASS
ICV	ICV	1	10.27	0.788	15	PASS	102.07	0.614	15	PASS
ICB	ICB	1	0.01	187.233	15	<PQL	<0.000	N/A	15	<PQL
LLICV1	LLICV	1	1	7.239	20	PASS	0.54	6.845	20	PASS
LLICV1	LLICV	1	1.03	2.462	20	PASS	0.51	8.278	20	PASS
MLCCV	CCV	1	19.24	0.565	15	PASS	19.7	1.36	15	PASS
ICSA1	ICSA	1	0.01	108.014	15	<PQL	0	169.861	15	<PQL
ICSAB1	ICSAB	1	20.51	0.903	15	PASS	20.69	0.296	15	PASS
CCV1	CCV	1	19.34	2.9	15	PASS	19.54	1.731	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.61	0.356	15	PASS	20.68	1.214	15	PASS
CCV2	CCV	1	19.4	1.012	15	PASS	19.27	0.69	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	0	345.778	15	<PQL
CCV3	CCV	1	19.21	0.529	15	PASS	19.38	0.833	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV4	CCV	1	19.45	1.167	15	PASS	19.63	0.59	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	0	105.388	15	<PQL
ICSAB3	ICSAB	1	20.46	1.055	15	PASS	20.58	2.338	15	PASS
CCV5	CCV	1	19.37	2.915	15	PASS	19.42	2.17	15	PASS
CCB5	CCB	1	0.01	69.943	15	<PQL	<0.000	N/A	15	<PQL
CCV6	CCV	1	19.1	1.188	15	PASS	18.93	0.327	15	PASS
CCB6	CCB	1	0	268.744	15	<PQL	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL	0	208.062	15	<PQL
ICSAB4	ICSAB	1	20.31	0.754	15	PASS	20.38	0.584	15	PASS
MB-106751	MBLK	1	0	264.986	15	<PQL	0.01	59.5	15	<PQL
LCS-106751	LCS	1	10.1	1.922	15	PASS	101.16	0.957	15	PASS
N063010-001B	SAMP	100	0.44	5.726	15	PASS	22.48	0.312	15	PASS
N063010-002B	SAMP	100	0.17	4.857	15	PASS	22.58	0.429	15	PASS
N063010-003B	SAMP	100	0.07	31.826	15	<PQL	16.99	1.358	15	PASS
N063012-001C	SAMP	1	440.36	0.76	15	PASS	0.16	33.869	15	<PQL
N063012-001C	SAMP	5	88.09	1.05	15	PASS	0.01	201.329	15	<PQL

PERCENT RSD SUMMARY: 240213B

Instrument ID: ICPMS-03

Sample Name	Type	DF	52 Cr [2]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063012-001C	SAMP	10	45.15	1.568	15	PASS	0.03	42.121	15	<PQL
N063012-001C	SAMP	50	9.22	2.187	15	PASS	0.01	151.996	15	<PQL
CCV7	CCV	1	19.55	1.351	15	PASS	19.69	0.907	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	0.01	30.168	15	<PQL
N063012-001C-PS	PS	1	455.17	1.447	15	PASS	95.36	0.441	15	PASS
N063012-001C-PS	PS	10	56.57	1.188	15	PASS	100.32	1.976	15	PASS
N063012-001C-MS	MS	1	458.76	0.506	15	PASS	95.36	1.17	15	PASS
N063012-001C-MS	MS	10	46.71	1.32	15	PASS	9.82	2.003	15	PASS
N063012-001C-MSD	MSD	1	459.04	0.737	15	PASS	96.63	1.347	15	PASS
N063012-001C-MSD	MSD	10	45.4	0.689	15	PASS	9.56	1.312	15	PASS
N063012-002C	SAMP	1	2284.05	0.969	15	PASS	<0.000	N/A	15	<PQL
N063012-002C	SAMP	100	24.44	0.794	15	PASS	<0.000	N/A	15	<PQL
N063012-003C	SAMP	1	2309.16	0.596	15	PASS	<0.000	N/A	15	<PQL
N063012-003C	SAMP	100	24.7	0.972	15	PASS	0.03	75.499	15	<PQL
CCV8	CCV	1	19.44	0.81	15	PASS	19.32	1.944	15	PASS
CCB8	CCB	1	0.02	92.912	15	<PQL	0	488.455	15	<PQL
N063012-004C	SAMP	1	2173.7	0.299	15	PASS	<0.000	N/A	15	<PQL
N063012-004C	SAMP	100	23.72	2.197	15	PASS	0.03	50.747	15	<PQL
N063012-006C	SAMP	1	0.25	7.338	15	PASS	89.72	1.636	15	PASS
N063012-006C	SAMP	100	0.02	60.503	15	<PQL	0.96	7.344	15	PASS
N063012-007C	SAMP	1	0.16	10.045	15	PASS	282.54	1.543	15	PASS
N063012-007C	SAMP	10	0.02	64.688	15	<PQL	31.62	0.96	15	PASS
N063012-009C	SAMP	1	0.13	4.204	15	PASS	2361.24	1.489	15	PASS
N063012-009C	SAMP	10	0.01	188.97	15	<PQL	242.64	1.251	15	PASS
CCV9	CCV	1	19.56	1.566	15	PASS	19.72	1.349	15	PASS
CCB9	CCB	1	0.01	165.972	15	<PQL	0.01	113.533	15	<PQL
ICSA5	ICSA	1	<0.000	N/A	15	<PQL	0.01	99.93	15	<PQL
ICSAB5	ICSAB	1	20.51	2.014	15	PASS	20.63	0.782	15	PASS
CCV10	CCV	1	19.17	3.077	15	PASS	19.43	2.657	15	PASS
CCB10	CCB	1	0	802.591	15	<PQL	0	1019.336	15	<PQL
CCV11	CCV	1	19.16	2.153	15	PASS	19.42	2.69	15	PASS
CCB11	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	<0.000	N/A	15	<PQL	0	236.334	15	<PQL
ICSAB6	ICSAB	1	20.12	1.865	15	PASS	20.6	0.883	15	PASS

PERCENT RSD SUMMARY: 240213B

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	18.708	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.49	2.527	15	PASS
Std3-5/50 ppb	ICAL	1	4.85	2.263	15	PASS
Std4-10/100 ppb	ICAL	1	9.88	1.014	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.75	1.109	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.25	1.587	15	PASS
Std7-100/1000 ppb	ICAL	1	102.24	2.977	15	PASS
Std8-200/2000 ppb	ICAL	1	199.06	1.5	15	PASS
ICV	ICV	1	10.69	4.042	15	PASS
ICB	ICB	1	0.01	148.515	15	<PQL
LLICV1	LLICV	1	0.14	18.379	20	PASS
LLICV1	LLICV	1	0.1	43.715	20	NR!
MLCCV	CCV	1	19.53	2.45	15	PASS
ICSA1	ICSA	1	0	2918.345	15	<PQL
ICSAB1	ICSAB	1	21.03	7.409	15	PASS
CCV1	CCV	1	20.06	1.146	15	PASS
CCB1	CCB	1	0	189.51	15	<PQL
ICSA2	ICSA	1	0.03	138.716	15	<PQL
ICSAB2	ICSAB	1	20.27	1.124	15	PASS
CCV2	CCV	1	20.28	4.107	15	PASS
CCB2	CCB	1	0	430.4	15	<PQL
CCV3	CCV	1	19.52	2.911	15	PASS
CCB3	CCB	1	0.01	207.841	15	<PQL
CCV4	CCV	1	19.98	6.684	15	PASS
CCB4	CCB	1	0.02	104.568	15	<PQL
ICSA3	ICSA	1	0.01	157.652	15	<PQL
ICSAB3	ICSAB	1	20.54	3.575	15	PASS
CCV5	CCV	1	19.61	4.27	15	PASS
CCB5	CCB	1	0.01	172.427	15	<PQL
CCV6	CCV	1	19.46	0.833	15	PASS
CCB6	CCB	1	0.02	64.897	15	<PQL
ICSA4	ICSA	1	0	447.239	15	<PQL
ICSAB4	ICSAB	1	20.3	2.556	15	PASS
MB-106751	MBLK	1	0.02	70.048	15	<PQL
LCS-106751	LCS	1	10.26	1.875	15	PASS
N063010-001B	SAMP	100	0.02	56.301	15	<PQL
N063010-002B	SAMP	100	0	987.3	15	<PQL
N063010-003B	SAMP	100	0.03	61.095	15	<PQL
N063012-001C	SAMP	1	1.28	13.594	15	PASS
N063012-001C	SAMP	5	0.2	24.385	15	NR!

PERCENT RSD SUMMARY: 240213B

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
N063012-001C	SAMP	10	0.19	26.765	15	NR!
N063012-001C	SAMP	50	0.03	169.176	15	<PQL
CCV7	CCV	1	19.37	2.126	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL
N063012-001C-PS	PS	1	11.81	1.309	15	PASS
N063012-001C-PS	PS	10	10.38	5.027	15	PASS
N063012-001C-MS	MS	1	11.83	5.844	15	PASS
N063012-001C-MS	MS	10	1.26	6.765	15	PASS
N063012-001C-MSD	MSD	1	11.44	2.522	15	PASS
N063012-001C-MSD	MSD	10	1.22	9.692	15	PASS
N063012-002C	SAMP	1	0.38	28.362	15	NR!
N063012-002C	SAMP	100	0.02	99.304	15	<PQL
N063012-003C	SAMP	1	0.3	33.52	15	NR!
N063012-003C	SAMP	100	0.01	245.266	15	<PQL
CCV8	CCV	1	19.49	3.261	15	PASS
CCB8	CCB	1	0.01	298.463	15	<PQL
N063012-004C	SAMP	1	<0.000	N/A	15	<PQL
N063012-004C	SAMP	100	0.01	45.083	15	<PQL
N063012-006C	SAMP	1	0.97	18.218	15	NR!
N063012-006C	SAMP	100	0.02	136.482	15	<PQL
N063012-007C	SAMP	1	15.24	0.759	15	PASS
N063012-007C	SAMP	10	1.63	9.701	15	PASS
N063012-009C	SAMP	1	<0.000	N/A	15	<PQL
N063012-009C	SAMP	10	<0.000	N/A	15	<PQL
CCV9	CCV	1	19.91	1.188	15	PASS
CCB9	CCB	1	0.01	115.655	15	<PQL
ICSA5	ICSA	1	0.01	176.129	15	<PQL
ICSAB5	ICSAB	1	20.61	2.797	15	PASS
CCV10	CCV	1	19.21	3.688	15	PASS
CCB10	CCB	1	0.01	319.65	15	<PQL
CCV11	CCV	1	19.05	3.62	15	PASS
CCB11	CCB	1	0.01	285.105	15	<PQL
ICSA6	ICSA	1	0	474.069	15	<PQL
ICSAB6	ICSAB	1	20.51	1.657	15	PASS

PERCENT RSD SUMMARY: 240214A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]				75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.1	15.5	15	<PQL	0.11	79.777	15	FAIL
Std2-0.5/5 ppb	ICAL	1	0.45	6.985	15	PASS	0.55	7.987	15	PASS
Std3-5/50 ppb	ICAL	1	4.87	3.438	15	PASS	4.67	1.843	15	PASS
Std4-10/100 ppb	ICAL	1	10.06	2.032	15	PASS	9.9	6.433	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.28	3.46	15	PASS	19.98	2.068	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.74	2.983	15	PASS	39.98	1.998	15	PASS
Std7-100/1000 ppb	ICAL	1	99.15	1.159	15	PASS	97.93	0.514	15	PASS
Std8-200/2000 ppb	ICAL	1	200.55	0.134	15	PASS	201.06	0.937	15	PASS
ICV	ICV	1	105.07	1.502	15	PASS	10.34	2.71	15	PASS
ICB	ICB	1	0	233.007	15	<PQL	<0.000	N/A	15	<PQL
LLICV1	CCV1	1	0.52	8.736	20	PASS	0.12	49.547	20	FAIL
MLCCV	CCV	1	19.65	1.055	15	PASS	19.67	1.945	15	PASS
ICSA1	ICSA	1	0	3261.897	15	<PQL	0.01	90.277	15	<PQL
ICSAB1	ICSAB	1	20.72	0.717	15	PASS	20.27	2.674	15	PASS
CCV1	CCV	1	19.56	1.494	15	PASS	20.03	2.047	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL	0.01	293.345	15	<PQL
CCV2	CCV	1	19.93	0.8	15	PASS	20.27	2.122	15	PASS
CCB2	CCB	1	0.01	152.152	15	<PQL	0.02	145.144	15	<PQL
CCV3	CCV	1	19.98	1.802	15	PASS	19.42	2.417	15	PASS
CCB3	CCB	1	0	242.818	15	<PQL	0.02	121.54	15	<PQL
ICSA2	ICSA	1	0	91.278	15	<PQL	0	469.473	15	<PQL
ICSAB2	ICSAB	1	20.59	1.822	15	PASS	20.59	0.296	15	PASS
CCV4	CCV	1	19.56	2.832	15	PASS	19.47	3.119	15	PASS
CCB4	CCB	1	0.01	139.109	15	<PQL	0	3459.257	15	<PQL
CCV5	CCV	1	20.03	1.722	15	PASS	19.72	2.401	15	PASS
CCB5	CCB	1	0.01	55.454	15	<PQL	<0.000	N/A	15	<PQL
CCV6	CCV	1	19.82	1.339	15	PASS	20.3	0.491	15	PASS
CCB6	CCB	1	0	398.056	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	0.01	97.694	15	<PQL	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.54	2.136	15	PASS	20.62	1.516	15	PASS
CCV7	CCV	1	19.56	2.846	15	PASS	19.33	1.027	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	0	63110.089	15	<PQL
N063012-002C	SAMP	1	<0.000	N/A	15	<PQL	0.24	74.552	15	NR!
N063012-006C	SAMP	1	89.11	1.972	15	PASS	0.98	22.644	15	NR!
N063012-002C	SAMP	1	<0.000	N/A	15	<PQL	0.24	58.91	15	NR!
N063012-006C	SAMP	1	90.34	1.458	15	PASS	0.95	12.465	15	PASS
N063012-002C	SAMP	1	<0.000	N/A	15	<PQL	0.36	8.008	15	PASS
N063012-006C	SAMP	1	90.81	1.061	15	PASS	1.11	20.564	15	NR!
N063012-002C	SAMP	1	<0.000	N/A	15	<PQL	0.25	47.162	15	NR!
N063012-006C	SAMP	1	89.02	0.873	15	PASS	0.98	6.531	15	PASS

PERCENT RSD SUMMARY: 240214A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]				75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063012-009C	SAMP	100	25.15	0.7	15	PASS	<0.000	N/A	15	<PQL
CCV8	CCV	1	19.45	1.199	15	PASS	19.93	1.072	15	PASS
CCB8	CCB	1	0	432.685	15	<PQL	0.01	601.699	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.53	1.772	15	PASS	20.95	5.925	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240212A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0212001.d	RINSE	ICAL	1	02/12/24 2:46 PM
A0212002.d	RINSE	ICAL	1	02/12/24 2:50 PM
A0212003.d	Cal Blk	IBLK	1	02/12/24 2:55 PM
A0212004.d	Std1-0.1/1 ppb	ICAL	1	02/12/24 3:00 PM
A0212005.d	Std2-0.5/5 ppb	ICAL	1	02/12/24 3:04 PM
A0212006.d	Std3-5/50 ppb	ICAL	1	02/12/24 3:09 PM
A0212007.d	Std4-10/100 ppb	ICAL	1	02/12/24 3:14 PM
A0212008.d	Std5-4.0/20/200 ppb	ICAL	1	02/12/24 3:19 PM
A0212009.d	Std6-8.0/40/400 ppb	ICAL	1	02/12/24 3:23 PM
A0212010.d	Std7-100/1000 ppb	ICAL	1	02/12/24 3:28 PM
A0212011.d	Std8-200/2000 ppb	ICAL	1	02/12/24 3:33 PM
A0212012.d	ICV	ICV	1	02/12/24 3:43 PM
A0212013.d	ICB	ICB	1	02/12/24 3:48 PM
A0212014.d	LLICV1	LLICV	1	02/12/24 3:53 PM
A0212015.d	MLCCV	CCV	1	02/12/24 4:07 PM
A0212016.d	ICSA1	ICSA	1	02/12/24 4:12 PM
A0212017.d	ICSAB1	ICSAB	1	02/12/24 4:16 PM
A0212018.d	LLICV1	LLICV	1	02/12/24 4:21 PM
A0212019.d	N062966-014C	SAMP	1	02/12/24 4:27 PM
A0212020.d	N062966-017C	SAMP	1	02/12/24 4:31 PM
A0212021.d	N062966-017C	SAMP	1	02/12/24 4:36 PM
A0212022.d	CCV1	CCV	1	02/12/24 4:44 PM
A0212023.d	CCB1	CCB	1	02/12/24 4:49 PM
A0212024.d	MB-106716	MBLK	1	02/12/24 4:53 PM
A0212025.d	LCS-106716	LCS	1	02/12/24 4:58 PM
A0212026.d	N062975-001B	SAMP	1	02/12/24 5:03 PM
A0212027.d	N062975-001B	SAMP	5	02/12/24 5:07 PM
A0212028.d	N062975-001B-PS	PS	1	02/12/24 5:12 PM
A0212029.d	N062975-001B-MS	MS	1	02/12/24 5:17 PM
A0212030.d	N062975-001B-MSD	MSD	1	02/12/24 5:21 PM
A0212031.d	RINSE	ICAL	1	02/12/24 5:26 PM
A0212032.d	CCV2	CCV	1	02/12/24 5:30 PM
A0212033.d	CCB2	CCB	1	02/12/24 5:35 PM
A0212034.d	ICSA2	ICSA	1	02/12/24 5:40 PM
A0212035.d	ICSAB2	ICSAB	1	02/12/24 5:44 PM
A0212036.d	N063001-005C	SAMP	100	02/12/24 5:53 PM
A0212037.d	MB-106751	MBLK	1	02/12/24 5:58 PM
A0212038.d	LCS-106751	LCS	1	02/12/24 6:03 PM
A0212039.d	N063010-001B	SAMP	1	02/12/24 6:07 PM
A0212040.d	N063010-001B	SAMP	10	02/12/24 6:12 PM
A0212041.d	N063010-002B	SAMP	1	02/12/24 6:16 PM
A0212042.d	N063010-002B	SAMP	10	02/12/24 6:21 PM

INJECTION LOG: 240212A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0212043.d	N063010-003B	SAMP	1	02/12/24 6:26 PM
A0212044.d	N063010-003B	SAMP	10	02/12/24 6:31 PM
A0212045.d	CCV3	CCV	1	02/12/24 6:35 PM
A0212046.d	CCB3	CCB	1	02/12/24 6:40 PM
A0212047.d	N063012-001C	SAMP	1	02/12/24 6:44 PM
A0212048.d	N063012-001C	SAMP	5	02/12/24 6:49 PM
A0212049.d	N063012-001C-PS	PS	1	02/12/24 6:54 PM
A0212050.d	N063012-001C-MS	MS	1	02/12/24 6:58 PM
A0212051.d	N063012-001C-MSD	MSD	1	02/12/24 7:03 PM
A0212052.d	N063012-002C	SAMP	1	02/12/24 7:08 PM
A0212053.d	N063012-003C	SAMP	1	02/12/24 7:12 PM
A0212054.d	N063012-004C	SAMP	1	02/12/24 7:17 PM
A0212055.d	N063012-006C	SAMP	1	02/12/24 7:22 PM
A0212056.d	RINSE	ICAL	1	02/12/24 7:26 PM
A0212057.d	CCV4	CCV	1	02/12/24 7:31 PM
A0212058.d	CCB4	CCB	1	02/12/24 7:36 PM
A0212059.d	N063012-007C	SAMP	1	02/12/24 7:40 PM
A0212060.d	N063012-009C	SAMP	1	02/12/24 7:45 PM
A0212061.d	N063010-001B	SAMP	100	02/12/24 7:50 PM
A0212062.d	N063010-002B	SAMP	100	02/12/24 7:54 PM
A0212063.d	N063010-003B	SAMP	100	02/12/24 7:59 PM
A0212064.d	RINSE	ICAL	1	02/12/24 8:04 PM
A0212065.d	CCV5	CCV	1	02/12/24 8:08 PM
A0212066.d	CCB5	CCB	1	02/12/24 8:13 PM
A0212067.d	ICSA3	ICSA	1	02/12/24 8:17 PM
A0212068.d	ICSAB3	ICSAB	1	02/12/24 8:22 PM
A0212069.d	MB-106752	MBLK	1	02/12/24 8:27 PM
A0212070.d	LCS-106752	LCS	1	02/12/24 8:32 PM
A0212071.d	N063010-001C	SAMP	1	02/12/24 8:36 PM
A0212072.d	N063010-002C	SAMP	1	02/12/24 8:41 PM
A0212073.d	N063010-002C	SAMP	5	02/12/24 8:45 PM
A0212074.d	N063010-002C-PS	PS	1	02/12/24 8:50 PM
A0212075.d	N063010-002C-MS	MS	1	02/12/24 8:55 PM
A0212076.d	N063010-002C-MSD	MSD	1	02/12/24 9:00 PM
A0212077.d	N063010-003C	SAMP	1	02/12/24 9:04 PM
A0212078.d	RINSE	ICAL	1	02/12/24 9:09 PM
A0212079.d	CCV6	CCV	1	02/12/24 9:13 PM
A0212080.d	CCB6	CCB	1	02/12/24 9:18 PM
A0212081.d	ICSA4	ICSA	1	02/12/24 9:23 PM
A0212082.d	ICSAB4	ICSAB	1	02/12/24 9:27 PM
A0212083.d	RINSE	ICAL	1	02/12/24 9:32 PM
A0212084.d	RINSE	ICAL	1	02/12/24 9:37 PM

INJECTION LOG: 240212A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0212085.d	RINSE	ICAL	1	02/12/24 9:41 PM
A0212086.d	RINSE	ICAL	1	02/12/24 9:46 PM

INJECTION LOG: 240213B

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
B0212001.d	RINSE	ICAL	1	02/13/24 3:55 PM
B0212002.d	RINSE	ICAL	1	02/13/24 3:59 PM
B0212003.d	Cal Blk	IBLK	1	02/13/24 4:04 PM
B0212004.d	Std1-0.1/1 ppb	ICAL	1	02/13/24 4:09 PM
B0212005.d	Std2-0.5/5 ppb	ICAL	1	02/13/24 4:13 PM
B0212006.d	Std3-5/50 ppb	ICAL	1	02/13/24 4:18 PM
B0212007.d	Std4-10/100 ppb	ICAL	1	02/13/24 4:23 PM
B0212008.d	Std5-4.0/20/200 ppb	ICAL	1	02/13/24 4:28 PM
B0212009.d	Std6-8.0/40/400 ppb	ICAL	1	02/13/24 4:32 PM
B0212010.d	Std7-100/1000 ppb	ICAL	1	02/13/24 4:37 PM
B0212011.d	Std8-200/2000 ppb	ICAL	1	02/13/24 4:42 PM
B0212012.d	ICV	ICV	1	02/13/24 4:58 PM
B0212013.d	ICB	ICB	1	02/13/24 5:02 PM
B0212014.d	LLICV1	LLICV	1	02/13/24 5:07 PM
B0212015.d	LLICV1	LLICV	1	02/13/24 5:24 PM
B0212016.d	MLCCV	CCV	1	02/13/24 5:28 PM
B0212017.d	ICSA1	ICSA	1	02/13/24 5:33 PM
B0212018.d	ICSAB1	ICSAB	1	02/13/24 5:37 PM
B0212019.d	MB-106792	MBLK	1	02/13/24 5:42 PM
B0212020.d	LCS-106792	LCS	1	02/13/24 5:47 PM
B0212021.d	N063032-001A	SAMP	1	02/13/24 5:51 PM
B0212022.d	N063032-001A	SAMP	5	02/13/24 5:56 PM
B0212023.d	N063032-001A-PS	PS	1	02/13/24 6:01 PM
B0212024.d	N063032-001A-MS	MS	1	02/13/24 6:05 PM
B0212025.d	N063032-001A-MSD	MSD	1	02/13/24 6:10 PM
B0212026.d	N063033-001A	SAMP	1	02/13/24 6:15 PM
B0212027.d	N063034-001A	SAMP	1	02/13/24 6:19 PM
B0212028.d	CCV1	CCV	1	02/13/24 6:24 PM
B0212029.d	CCB1	CCB	1	02/13/24 6:29 PM
B0212030.d	ICSA2	ICSA	1	02/13/24 6:33 PM
B0212031.d	ICSAB2	ICSAB	1	02/13/24 6:38 PM
B0212032.d	MB-106750	MBLK	1	02/13/24 6:42 PM
B0212033.d	LCS-106750	LCS	1	02/13/24 6:47 PM
B0212034.d	N062980-001B	SAMP	1	02/13/24 6:52 PM
B0212035.d	N062980-001B	SAMP	5	02/13/24 6:56 PM
B0212036.d	N062980-001B-PS	PS	1	02/13/24 7:01 PM
B0212037.d	N062980-001B-MS	MS	1	02/13/24 7:06 PM
B0212038.d	N062980-001B-MSD	MSD	1	02/13/24 7:10 PM
B0212039.d	N063004-001A	SAMP	1	02/13/24 7:15 PM
B0212040.d	N063004-002A	SAMP	1	02/13/24 7:20 PM
B0212041.d	RINSE	ICAL	1	02/13/24 7:24 PM
B0212042.d	CCV2	CCV	1	02/13/24 7:29 PM

INJECTION LOG: 240213B

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
B0212043.d	CCB2	CCB	1	02/13/24 7:34 PM
B0212044.d	N063004-003A	SAMP	1	02/13/24 7:38 PM
B0212045.d	N062980-001B	SAMP	25	02/13/24 7:43 PM
B0212046.d	N062980-001B-PS	PS	5	02/13/24 7:47 PM
B0212047.d	N062980-001B-MS	MS	5	02/13/24 7:52 PM
B0212048.d	N062980-001B-MSD	MSD	5	02/13/24 7:57 PM
B0212049.d	N063004-001A	SAMP	5	02/13/24 8:01 PM
B0212050.d	N063004-002A	SAMP	5	02/13/24 8:06 PM
B0212051.d	N063004-002A	SAMP	25	02/13/24 8:11 PM
B0212052.d	N063004-003A	SAMP	5	02/13/24 8:15 PM
B0212053.d	RINSE	ICAL	1	02/13/24 8:20 PM
B0212054.d	CCV3	CCV	1	02/13/24 8:24 PM
B0212055.d	CCB3	CCB	1	02/13/24 8:29 PM
B0212056.d	MB-106800	MBLK	1	02/13/24 8:34 PM
B0212057.d	LCS-106800	LCS	1	02/13/24 8:39 PM
B0212058.d	N063074-001A	SAMP	1	02/13/24 8:43 PM
B0212059.d	N063074-001A	SAMP	5	02/13/24 8:48 PM
B0212060.d	N063074-001A-PS	PS	1	02/13/24 8:53 PM
B0212061.d	N063074-001A-MS	MS	1	02/13/24 8:57 PM
B0212062.d	N063074-001A-MSD	MSD	1	02/13/24 9:02 PM
B0212063.d	N063074-002A	SAMP	1	02/13/24 9:07 PM
B0212064.d	RINSE	ICAL	1	02/13/24 9:11 PM
B0212065.d	CCV4	CCV	1	02/13/24 9:16 PM
B0212066.d	CCB4	CCB	1	02/13/24 9:20 PM
B0212067.d	ICSA3	ICSA	1	02/13/24 9:25 PM
B0212068.d	ICSAB3	ICSAB	1	02/13/24 9:30 PM
B0212069.d	MB-106782	MBLK	1	02/13/24 9:34 PM
B0212070.d	LCS-106782	LCS	1	02/13/24 9:39 PM
B0212071.d	N063053-001C	SAMP	1	02/13/24 9:44 PM
B0212072.d	N063053-002C	SAMP	1	02/13/24 9:48 PM
B0212073.d	N063053-003C	SAMP	1	02/13/24 9:53 PM
B0212074.d	N063053-004C	SAMP	1	02/13/24 9:57 PM
B0212075.d	N063053-005C	SAMP	1	02/13/24 10:02 PM
B0212076.d	N063053-006C	SAMP	1	02/13/24 10:07 PM
B0212077.d	N063053-007C	SAMP	1	02/13/24 10:11 PM
B0212078.d	RINSE	ICAL	1	02/13/24 10:16 PM
B0212079.d	CCV5	CCV	1	02/13/24 10:21 PM
B0212080.d	CCB5	CCB	1	02/13/24 10:25 PM
B0212081.d	N063053-008C	SAMP	1	02/13/24 10:30 PM
B0212082.d	N063053-009C	SAMP	1	02/13/24 10:35 PM
B0212083.d	N063053-010C	SAMP	1	02/13/24 10:39 PM
B0212084.d	N063053-011C	SAMP	1	02/13/24 10:44 PM

INJECTION LOG: 240213B

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
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B0212086.d	N063053-011C-PS	PS	1	02/13/24 10:53 PM
B0212087.d	N063053-011CMS	MS	1	02/13/24 10:58 PM
B0212088.d	N063053-011CMSD	MSD	1	02/13/24 11:02 PM
B0212089.d	N063053-018B	SAMP	1	02/13/24 11:07 PM
B0212090.d	RINSE	ICAL	1	02/13/24 11:12 PM
B0212091.d	CCV6	CCV	1	02/13/24 11:16 PM
B0212092.d	CCB6	CCB	1	02/13/24 11:21 PM
B0212093.d	ICSA4	ICSA	1	02/13/24 11:26 PM
B0212094.d	ICSAB4	ICSAB	1	02/13/24 11:30 PM
B0212095.d	MB-106751	MBLK	1	02/13/24 11:35 PM
B0212096.d	LCS-106751	LCS	1	02/13/24 11:40 PM
B0212097.d	N063010-001B	SAMP	100	02/13/24 11:44 PM
B0212098.d	N063010-002B	SAMP	100	02/13/24 11:49 PM
B0212099.d	N063010-003B	SAMP	100	02/13/24 11:54 PM
B0212100.d	N063012-001C	SAMP	1	02/13/24 11:58 PM
B0212101.d	N063012-001C	SAMP	5	02/14/24 12:03 AM
B0212102.d	N063012-001C	SAMP	10	02/14/24 12:08 AM
B0212103.d	N063012-001C	SAMP	50	02/14/24 12:12 AM
B0212104.d	CCV7	CCV	1	02/14/24 12:17 AM
B0212105.d	CCB7	CCB	1	02/14/24 12:22 AM
B0212106.d	N063012-001C-PS	PS	1	02/14/24 12:26 AM
B0212107.d	N063012-001C-PS	PS	10	02/14/24 12:31 AM
B0212108.d	N063012-001C-MS	MS	1	02/14/24 12:36 AM
B0212109.d	N063012-001C-MS	MS	10	02/14/24 12:40 AM
B0212110.d	N063012-001C-MSD	MSD	1	02/14/24 12:45 AM
B0212111.d	N063012-001C-MSD	MSD	10	02/14/24 12:50 AM
B0212112.d	N063012-002C	SAMP	1	02/14/24 12:54 AM
B0212113.d	N063012-002C	SAMP	100	02/14/24 12:59 AM
B0212114.d	N063012-003C	SAMP	1	02/14/24 1:03 AM
B0212115.d	N063012-003C	SAMP	100	02/14/24 1:08 AM
B0212116.d	CCV8	CCV	1	02/14/24 1:13 AM
B0212117.d	CCB8	CCB	1	02/14/24 1:17 AM
B0212118.d	N063012-004C	SAMP	1	02/14/24 1:22 AM
B0212119.d	N063012-004C	SAMP	100	02/14/24 1:27 AM
B0212120.d	N063012-006C	SAMP	1	02/14/24 1:31 AM
B0212121.d	N063012-006C	SAMP	100	02/14/24 1:36 AM
B0212122.d	N063012-007C	SAMP	1	02/14/24 1:41 AM
B0212123.d	N063012-007C	SAMP	10	02/14/24 1:45 AM
B0212124.d	N063012-009C	SAMP	1	02/14/24 1:50 AM
B0212125.d	N063012-009C	SAMP	10	02/14/24 1:55 AM
B0212126.d	RINSE	ICAL	1	02/14/24 1:59 AM

INJECTION LOG: 240213B

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
B0212127.d	CCV9	CCV	1	02/14/24 2:04 AM
B0212128.d	CCB9	CCB	1	02/14/24 2:08 AM
B0212129.d	ICSA5	ICSA	1	02/14/24 2:13 AM
B0212130.d	ICSAB5	ICSAB	1	02/14/24 2:18 AM
B0212131.d	MB-106752	MBLK	1	02/14/24 2:22 AM
B0212132.d	LCS-106752	LCS	1	02/14/24 2:27 AM
B0212133.d	N063010-001C	SAMP	1	02/14/24 2:32 AM
B0212134.d	N063010-002C	SAMP	1	02/14/24 2:36 AM
B0212135.d	N063010-002C	SAMP	5	02/14/24 2:41 AM
B0212136.d	N063010-002C-PS	PS	1	02/14/24 2:46 AM
B0212137.d	N063010-002C-MS	MS	1	02/14/24 2:50 AM
B0212138.d	N063010-002C-MSD	MSD	1	02/14/24 2:55 AM
B0212139.d	N063010-003C	SAMP	1	02/14/24 3:00 AM
B0212140.d	RINSE	ICAL	1	02/14/24 3:04 AM
B0212141.d	CCV10	CCV	1	02/14/24 3:09 AM
B0212142.d	CCB10	CCB	1	02/14/24 3:14 AM
B0212143.d	N062911-003A	SAMP	1	02/14/24 3:18 AM
B0212144.d	N062911-003C	SAMP	1	02/14/24 3:23 AM
B0212145.d	N062911-004A	SAMP	1	02/14/24 3:28 AM
B0212146.d	N062911-004C	SAMP	1	02/14/24 3:32 AM
B0212147.d	RINSE	ICAL	1	02/14/24 3:37 AM
B0212148.d	CCV11	CCV	1	02/14/24 3:42 AM
B0212149.d	CCB11	CCB	1	02/14/24 3:46 AM
B0212150.d	ICSA6	ICSA	1	02/14/24 3:51 AM
B0212151.d	ICSAB6	ICSAB	1	02/14/24 3:56 AM
B0212152.d	RINSE	ICAL	1	02/14/24 4:00 AM
B0212153.d	RINSE	ICAL	1	02/14/24 4:05 AM
B0212154.d	RINSE	ICAL	1	02/14/24 4:09 AM
B0212155.d	RINSE	ICAL	1	02/14/24 4:14 AM

INJECTION LOG: 240214A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0214001.d	RINSE	ICAL	1	02/14/24 12:55 PM
A0214002.d	RINSE	ICAL	1	02/14/24 12:59 PM
A0214003.d	Cal Blk	IBLK	1	02/14/24 1:04 PM
A0214004.d	Std1-0.1/1 ppb	ICAL	1	02/14/24 1:09 PM
A0214005.d	Std2-0.5/5 ppb	ICAL	1	02/14/24 1:13 PM
A0214006.d	Std3-5/50 ppb	ICAL	1	02/14/24 1:18 PM
A0214007.d	Std4-10/100 ppb	ICAL	1	02/14/24 1:23 PM
A0214008.d	Std5-4.0/20/200 ppb	ICAL	1	02/14/24 1:28 PM
A0214009.d	Std6-8.0/40/400 ppb	ICAL	1	02/14/24 1:32 PM
A0214010.d	Std7-100/1000 ppb	ICAL	1	02/14/24 1:37 PM
A0214011.d	Std8-200/2000 ppb	ICAL	1	02/14/24 1:42 PM
A0214012.d	ICV	ICV	1	02/14/24 1:53 PM
A0214013.d	ICB	ICB	1	02/14/24 1:57 PM
A0214014.d	LLICV1	CCV1	1	02/14/24 2:02 PM
A0214015.d	MLCCV	CCV	1	02/14/24 2:07 PM
A0214016.d	ICSA1	ICSA	1	02/14/24 2:11 PM
A0214017.d	ICSAB1	ICSAB	1	02/14/24 2:16 PM
A0214018.d	MB-106801	MBLK	1	02/14/24 2:28 PM
A0214019.d	LCS-106801	LCS	1	02/14/24 2:32 PM
A0214020.d	N062947-001A	SAMP	1	02/14/24 2:37 PM
A0214021.d	N062947-001A	SAMP	5	02/14/24 2:42 PM
A0214022.d	N062947-001A	SAMP	10	02/14/24 2:47 PM
A0214023.d	N062947-001A	SAMP	50	02/14/24 2:51 PM
A0214024.d	N062947-001A-PS	PS	1	02/14/24 2:56 PM
A0214025.d	N062947-001A-PS	PS	10	02/14/24 3:00 PM
A0214026.d	N062947-001A-MS	MS	1	02/14/24 3:05 PM
A0214027.d	N062947-001A-MS	MS	10	02/14/24 3:10 PM
A0214028.d	CCV1	CCV	1	02/14/24 3:14 PM
A0214029.d	CCB1	CCB	1	02/14/24 3:19 PM
A0214030.d	N062947-001A-MSD	MSD	1	02/14/24 3:24 PM
A0214031.d	N062947-001A-MSD	MSD	10	02/14/24 3:28 PM
A0214032.d	N062947-002A	SAMP	1	02/14/24 3:33 PM
A0214033.d	N062947-003A	SAMP	1	02/14/24 3:38 PM
A0214034.d	N062947-004A	SAMP	1	02/14/24 3:42 PM
A0214035.d	N062947-004A	SAMP	10	02/14/24 3:47 PM
A0214036.d	N062947-005A	SAMP	1	02/14/24 3:52 PM
A0214037.d	N062947-006A	SAMP	1	02/14/24 3:56 PM
A0214038.d	N062947-007A	SAMP	1	02/14/24 4:01 PM
A0214039.d	N062947-007A	SAMP	100	02/14/24 4:06 PM
A0214040.d	CCV2	CCV	1	02/14/24 4:10 PM
A0214041.d	CCB2	CCB	1	02/14/24 4:15 PM
A0214042.d	N062947-008A	SAMP	1	02/14/24 4:20 PM

INJECTION LOG: 240214A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
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A0214044.d	N062947-010A	SAMP	1	02/14/24 4:29 PM
A0214045.d	N062947-010A	SAMP	10	02/14/24 4:34 PM
A0214046.d	N062947-011A	SAMP	1	02/14/24 4:38 PM
A0214047.d	N062947-012A	SAMP	1	02/14/24 4:43 PM
A0214048.d	N062947-013A	SAMP	1	02/14/24 4:48 PM
A0214049.d	N062947-013A	SAMP	10	02/14/24 4:52 PM
A0214050.d	N062947-014A	SAMP	1	02/14/24 4:57 PM
A0214051.d	N062947-015A	SAMP	1	02/14/24 5:02 PM
A0214052.d	CCV3	CCV	1	02/14/24 5:06 PM
A0214053.d	CCB3	CCB	1	02/14/24 5:11 PM
A0214054.d	ICSA2	ICSA	1	02/14/24 5:16 PM
A0214055.d	ICSAB2	ICSAB	1	02/14/24 5:20 PM
A0214056.d	N062947-016A	SAMP	1	02/14/24 5:25 PM
A0214057.d	N062947-016A	SAMP	10	02/14/24 5:29 PM
A0214058.d	N062947-017A	SAMP	1	02/14/24 5:34 PM
A0214059.d	N062947-017A	SAMP	10	02/14/24 5:39 PM
A0214060.d	N062947-018A	SAMP	1	02/14/24 5:44 PM
A0214061.d	N062947-022A	SAMP	1	02/14/24 5:48 PM
A0214062.d	N062947-022A	SAMP	10	02/14/24 5:53 PM
A0214063.d	N062947-023A	SAMP	1	02/14/24 5:57 PM
A0214064.d	CCV4	CCV	1	02/14/24 6:02 PM
A0214065.d	CCB4	CCB	1	02/14/24 6:07 PM
A0214066.d	MB-106802	MBLK	1	02/14/24 6:11 PM
A0214067.d	LCS-106802	LCS	1	02/14/24 6:16 PM
A0214068.d	N062947-024A	SAMP	1	02/14/24 6:21 PM
A0214069.d	N062947-024A	SAMP	5	02/14/24 6:25 PM
A0214070.d	N062947-024A-PS	PS	1	02/14/24 6:30 PM
A0214071.d	N062947-024A-MS	MS	1	02/14/24 6:35 PM
A0214072.d	N062947-024A-MSD	MSD	1	02/14/24 6:39 PM
A0214073.d	N063063-005A	SAMP	1	02/14/24 6:44 PM
A0214074.d	N063063-010A	SAMP	1	02/14/24 6:49 PM
A0214075.d	N063063-015A	SAMP	1	02/14/24 6:53 PM
A0214076.d	CCV5	CCV	1	02/14/24 6:58 PM
A0214077.d	CCB5	CCB	1	02/14/24 7:03 PM
A0214078.d	N063063-020A	SAMP	1	02/14/24 7:07 PM
A0214079.d	N063063-025A	SAMP	1	02/14/24 7:12 PM
A0214080.d	CCV6	CCV	1	02/14/24 7:17 PM
A0214081.d	CCB6	CCB	1	02/14/24 7:21 PM
A0214082.d	ICSA3	ICSA	1	02/14/24 7:26 PM
A0214083.d	ICSAB3	ICSAB	1	02/14/24 7:31 PM
A0214084.d	N063053-005C	SAMP	10	02/14/24 7:35 PM

INJECTION LOG: 240214A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0214085.d	N063053-006C	SAMP	10	02/14/24 7:40 PM
A0214086.d	N063053-011C	SAMP	10	02/14/24 7:45 PM
A0214087.d	N063053-011C	SAMP	50	02/14/24 7:49 PM
A0214088.d	N063053-011C-PS	PS	10	02/14/24 7:54 PM
A0214089.d	N063053-011CMS	MS	10	02/14/24 7:59 PM
A0214090.d	N063053-011CMSD	MSD	10	02/14/24 8:03 PM
A0214091.d	N063053-018B	SAMP	10	02/14/24 8:08 PM
A0214092.d	CCV7	CCV	1	02/14/24 8:13 PM
A0214093.d	CCB7	CCB	1	02/14/24 8:17 PM
A0214094.d	N063012-002C	SAMP	1	02/14/24 8:22 PM
A0214095.d	N063012-006C	SAMP	1	02/14/24 8:27 PM
A0214096.d	N063012-002C	SAMP	1	02/14/24 8:31 PM
A0214097.d	N063012-006C	SAMP	1	02/14/24 8:36 PM
A0214098.d	N063012-002C	SAMP	1	02/14/24 8:41 PM
A0214099.d	N063012-006C	SAMP	1	02/14/24 8:45 PM
A0214100.d	N063012-002C	SAMP	1	02/14/24 8:50 PM
A0214101.d	N063012-006C	SAMP	1	02/14/24 8:55 PM
A0214102.d	N063012-009C	SAMP	100	02/14/24 8:59 PM
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A0214105.d	CCB8	CCB	1	02/14/24 9:13 PM
A0214106.d	ICSA4	ICSA	1	02/14/24 9:18 PM
A0214107.d	ICSAB4	ICSAB	1	02/14/24 9:22 PM
A0214108.d	RINSE	ICAL	1	02/14/24 9:27 PM
A0214109.d	RINSE	ICAL	1	02/14/24 9:32 PM
A0214110.d	RINSE	ICAL	1	02/14/24 9:36 PM
A0214111.d	RINSE	ICAL	1	02/14/24 9:41 PM
A0214112.d	RINSE	ICAL	1	02/14/24 9:46 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/12/2024 11:31:43 AM**
Prep End Date: **2/12/2024 3:30:00 PM**
Prep Batch **106751** Prep Code: **3010_W_MSDISS_TPK**

Reviewed/ Date: JRB 3/14/2024
Initials/ Date: for
Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-02-29**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-106751	Aqueous		25	☐	25	1.000		
MB-106751	Aqueous		25	☐	25	1.000		
N063010-001B	Water	<2	25	☐	25	1.000		
N063010-002B	Water	<2	25	☐	25	1.000		
N063010-003B	Water	<2	25	☐	25	1.000		
N063012-001C	Groundwater	<2	25	☐	25	1.000		
N063012-001C-MS	Groundwater	<2	25	☐	25	1.000		
N063012-001C-MSD	Groundwater	<2	25	☐	25	1.000		
N063012-002C	Groundwater	<2	25	☐	25	1.000		
N063012-003C	Groundwater	<2	25	☐	25	1.000		
N063012-004C	Groundwater	<2	25	☐	25	1.000		
N063012-006C	Groundwater	<2	25	☐	25	1.000		
N063012-007C	Groundwater	<2	25	☐	25	1.000		
N063012-009C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240210B.b
Acq. Date-Time	2024-02-12 12:25:54
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

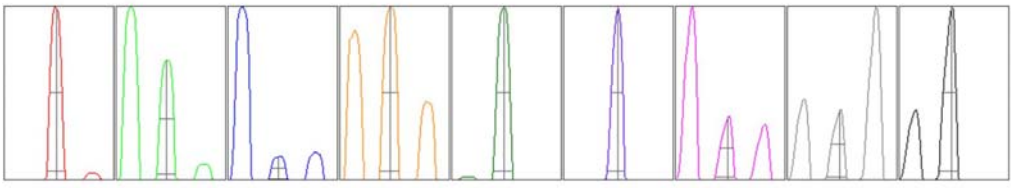
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	9079	90794.13	500.00		2.117	5.000
24	10.00	24990	249904.28	500.00		1.640	5.000
25	10.00	3316	33158.34	500.00		2.480	5.000
26	10.00	3853	38527.63	500.00		2.645	5.000
59	10.00	35311	353109.28	500.00		1.636	5.000
115	10.00	29667	296666.64	500.00		1.795	5.000
206	10.00	6500	64998.18	500.00		2.485	5.000
207	10.00	5417	54169.42	500.00		2.493	5.000
208	10.00	13364	133635.89	500.00		2.015	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.503 %
Doubly Charged	70 / 140 1.227 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	9236.14	8.95	8.90 - 9.10	
24	25669.34	23.90	23.90 - 24.10	
25	3370.18	24.90	24.90 - 25.10	
26	3966.49	25.90	25.90 - 26.10	
59	35321.58	58.95	58.90 - 59.10	
115	30169.65	115.00	114.90 - 115.10	
206	6277.42	205.95	205.90 - 206.10	
207	5505.14	206.95	206.90 - 207.10	
208	13877.48	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.35	0.485	0.900	
24	0.40	0.496	0.900	
25	0.40	0.494	0.900	
26	0.41	0.534	0.900	
59	0.38	0.530	0.900	
115	0.33	0.478	0.900	
206	0.36	0.539	0.900	
207	0.36	0.546	0.900	
208	0.36	0.537	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2518 V	Pulse HV	1598 V

[H2]

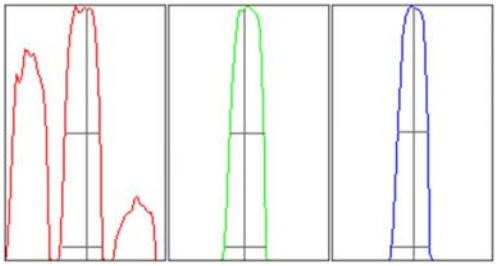
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		231	2306.76			7.456	
59		3650	36503.02			3.439	
115		30352	303518.58			2.531	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.518 %
Doubly Charged	70 / 140 0.420 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	231.77	26.05	25.90 - 26.10	
59	3788.43	58.95	58.90 - 59.10	
115	31813.60	115.05	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.67	0.787	0.900	
59	0.65	0.783	0.900	
115	0.57	0.723	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0000	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm		

EM

Discriminator	4.5 mV	Analog HV	2518 V	Pulse HV	1598 V

[He]

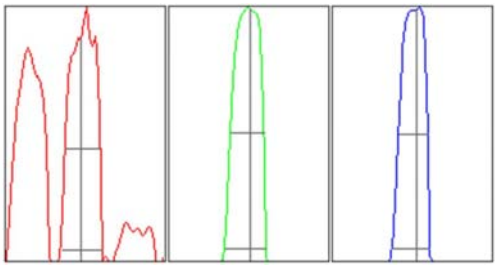
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		94	935.23			10.546	
59		7439	74391.29			2.040	
115		6032	60317.61			2.457	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.205 %
Doubly Charged	70 / 140 1.327 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	93.01	25.95	25.90 - 26.10	
59	7503.94	59.05	58.90 - 59.10	
115	6118.68	115.10	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.67	0.787	0.900	
59	0.64	0.780	0.900	
115	0.56	0.714	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0000	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

EM

Discriminator	4.5 mV	Analog HV	2518 V	Pulse HV	1598 V

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240212A1.b
Acq. Date-Time	2024-02-13 13:18:10
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

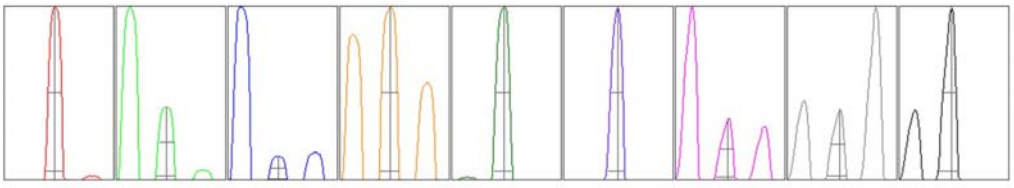
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	8245	82449.38	500.00		2.712	5.000
24	10.00	25758	257582.44	500.00		3.293	5.000
25	10.00	3427	34266.76	500.00		3.815	5.000
26	10.00	3969	39685.69	500.00		3.251	5.000
59	10.00	38046	380464.54	500.00		3.267	5.000
115	10.00	42132	421315.70	500.00		2.641	5.000
206	10.00	8142	81420.90	500.00		2.452	5.000
207	10.00	6668	66680.07	500.00		2.574	5.000
208	10.00	16728	167275.23	500.00		2.870	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.592 %
Doubly Charged	70 / 140 0.930 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	8361.45	8.90	8.90 - 9.10	
24	25534.12	23.90	23.90 - 24.10	
25	3364.93	24.90	24.90 - 25.10	
26	3979.79	25.90	25.90 - 26.10	
59	36714.77	58.95	58.90 - 59.10	
115	40987.75	115.00	114.90 - 115.10	
206	7798.97	205.95	205.90 - 206.10	
207	6952.99	206.95	206.90 - 207.10	
208	17303.30	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.38	0.489	0.900	
24	0.43	0.539	0.900	
25	0.42	0.527	0.900	
26	0.44	0.541	0.900	
59	0.40	0.537	0.900	
115	0.35	0.490	0.900	
206	0.37	0.548	0.900	
207	0.37	0.565	0.900	
208	0.36	0.567	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2520 V	Pulse HV	1597 V

[H2]

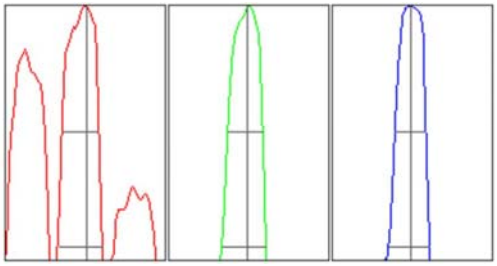
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		222	2220.54			6.768	
59		2795	27951.66			3.033	
115		34954	349535.75			2.621	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.483 %
Doubly Charged	70 / 140 0.313 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	239.52	26.05	25.90 - 26.10	
59	2999.30	59.00	58.90 - 59.10	
115	36764.79	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.70	0.833	0.900	
59	0.66	0.825	0.900	
115	0.59	0.769	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	0.9998	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm		

EM

Discriminator	4.5 mV	Analog HV	2520 V	Pulse HV	1597 V

[He]

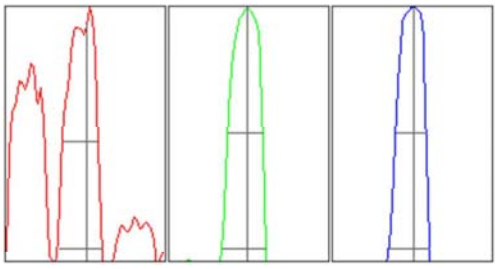
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		98	980.83			11.500	
59		7994	79937.51			2.040	
115		6316	63162.00			2.613	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.201 %
Doubly Charged	70 / 140 1.234 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	100.26	26.05	25.90 - 26.10	
59	8186.64	59.00	58.90 - 59.10	
115	6423.35	115.05	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.68	0.832	0.900	
59	0.66	0.824	0.900	
115	0.58	0.764	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	0.9998	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

EM

Discriminator	4.5 mV	Analog HV	2520 V	Pulse HV	1597 V

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240213B.b
Acq. Date-Time	2024-02-14 11:17:09
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

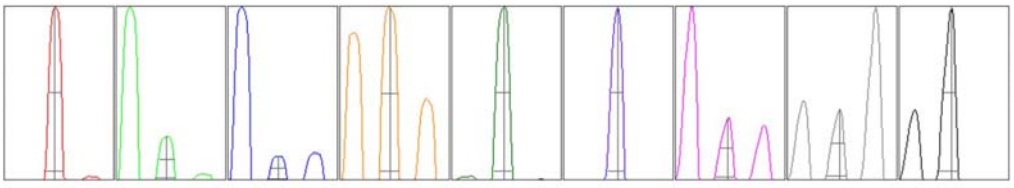
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	6829	68286.33	500.00		3.270	5.000
24	10.00	21059	210594.52	500.00		3.590	5.000
25	10.00	2827	28273.39	500.00		3.737	5.000
26	10.00	3257	32566.27	500.00		4.393	5.000
59	10.00	33240	332400.18	500.00		3.021	5.000
115	10.00	40433	404331.56	500.00		3.210	5.000
206	10.00	7813	78128.40	500.00		2.429	5.000
207	10.00	6399	63989.58	500.00		3.045	5.000
208	10.00	16051	160507.18	500.00		2.528	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.652 %
Doubly Charged	70 / 140 0.853 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	6715.21	8.90	8.90 - 9.10	
24	20772.34	23.90	23.90 - 24.10	
25	2715.49	24.90	24.90 - 25.10	
26	3170.03	25.90	25.90 - 26.10	
59	31889.32	58.95	58.90 - 59.10	
115	39201.75	115.00	114.90 - 115.10	
206	7536.57	205.95	205.90 - 206.10	
207	6725.64	206.95	206.90 - 207.10	
208	16650.23	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.488	0.900	
24	0.42	0.537	0.900	
25	0.42	0.516	0.900	
26	0.44	0.540	0.900	
59	0.40	0.536	0.900	
115	0.35	0.490	0.900	
206	0.37	0.553	0.900	
207	0.36	0.570	0.900	
208	0.36	0.567	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2523 V	Pulse HV	1599 V

[H2]

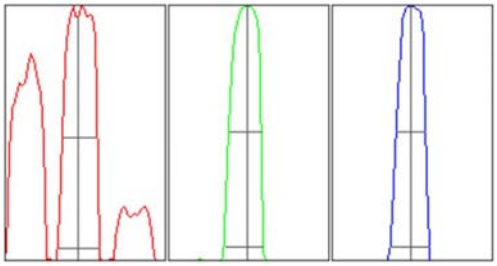
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		181	1807.10			7.840	
59		2317	23165.53			4.084	
115		31872	318720.09			2.612	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.516 %
Doubly Charged	70 / 140 0.279 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	183.52	25.90	25.90 - 26.10	
59	2403.58	59.00	58.90 - 59.10	
115	33115.73	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.67	0.784	0.900	
59	0.62	0.741	0.900	
115	0.56	0.735	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0001	QP Bias	-15.0 V
Mass Offset	126	Axis Offset	-0.01		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm		

EM

Discriminator	4.5 mV	Analog HV	2523 V	Pulse HV	1599 V

[He]

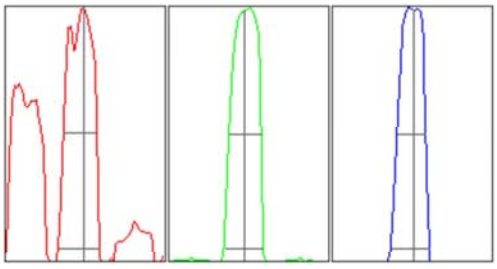
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		84	835.82			11.359	
59		7016	70161.18			2.114	
115		5649	56492.44			2.264	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.197 %
Doubly Charged	70 / 140 1.107 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	92.01	26.00	25.90 - 26.10	
59	6985.39	58.95	58.90 - 59.10	
115	5652.17	115.05	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.64	0.778	0.900	
59	0.61	0.740	0.900	
115	0.55	0.732	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0001	QP Bias	-13.0 V
Mass Offset	126	Axis Offset	-0.01		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

EM

Discriminator	4.5 mV	Analog HV	2523 V	Pulse HV	1599 V

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240212A

Instrument ID: ICPMS-03

Analyte	Data File	A0212003.d	A0212004.d	A0212005.d	A0212006.d	A0212007.d	A0212008.d	A0212009.d	A0212010.d	A0212011.d	
	Acq. Date-Time	02/12/2024 02:55 PM	02/12/2024 03:00 PM	02/12/2024 03:04 PM	02/12/2024 03:09 PM	02/12/2024 03:14 PM	02/12/2024 03:19 PM	02/12/2024 03:23 PM	02/12/2024 03:28 PM	02/12/2024 03:33 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	41518.2		40389.9	40120.2	40472.3	40249.5	40585.8	40317.4	39961.1	
55 Mn [2]	CPS	285		730.7	7027.6	14303.8	28037.8	58397.2	142607.7	288052.3	1.0000
52 Cr [2]	CPS	2761.4		1555.6	13971.5	27834.5	54332.9	111640.4	274285	553923.8	1.0000
72 Ge (ISTD) [1]	CPS	75214.1		74856.9	74562.2	72967.3	73858	73502	73827.9	72611.4	
78 Se [1]	CPS	3.3		105.6	977.8	1886.8	3941.6	7811.9	19337	38936.4	0.9999
72 Ge (ISTD) [2]	CPS	22668	22264.1	21995.9	21953.6	22064.9	21981.4	21868	21938.1	22100.5	
75 As [2]	CPS	7.7	43.3	161.1	1616.7	3158	6323.3	12945.9	32153	64816.4	1.0000
103 Rh (ISTD) [2]	CPS	569048.5		562953.8	564439.5	562115.2	559280.4	558182	562481.1	560037	
95 Mo [2]	CPS	37.8		622.2	6723.7	13531.3	27122.9	55257.9	138706.6	282802.1	0.9999
159 Tb (ISTD) [3]	CPS	1429968.2		1428431.5	1425919.8	1448363.6	1436496.1	1461909	1445595.9	1443723.6	
137 Ba [3]	CPS	116.7		1536.8	14360.1	29214.3	58285.6	118112.4	294270	598050.3	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION SUMMARY: 240213B

Instrument ID: ICPMS-03

Analyte	Data File	B0212003.d	B0212004.d	B0212005.d	B0212006.d	B0212007.d	B0212008.d	B0212009.d	B0212010.d	B0212011.d	
	Acq. Date-Time	02/13/2024 04:04 PM	02/13/2024 04:09 PM	02/13/2024 04:13 PM	02/13/2024 04:18 PM	02/13/2024 04:23 PM	02/13/2024 04:28 PM	02/13/2024 04:32 PM	02/13/2024 04:37 PM	02/13/2024 04:42 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	43000.7		42724.4	42874.9	42417	42667.7	42568.5	42198.7	42415.9	
55 Mn [2]	CPS	33.1		721.8	7054	14549.3	28739.9	58320.1	146157.1	293287.6	1.0000
52 Cr [2]	CPS	251.1		1581.2	13968.1	28486.6	55957.1	113632.2	285374.3	574821.1	1.0000
72 Ge (ISTD) [2]	CPS	25142.6	25284	24816.6	24805.5	24884.5	24590.7	25089.2	24572.9	25298.5	
75 As [2]	CPS	4.4	36.6	168.9	1626.7	3320.2	6557.8	13290.7	33901	67953.3	0.9999

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION SUMMARY: 240214A

Instrument ID: ICPMS-03

Analyte	Data File	A0214003.d	A0214004.d	A0214005.d	A0214006.d	A0214007.d	A0214008.d	A0214009.d	A0214010.d	A0214011.d	
	Acq. Date-Time	02/14/2024 01:04 PM	02/14/2024 01:09 PM	02/14/2024 01:13 PM	02/14/2024 01:18 PM	02/14/2024 01:23 PM	02/14/2024 01:28 PM	02/14/2024 01:32 PM	02/14/2024 01:37 PM	02/14/2024 01:42 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	36825		37198	37387.3	36866.1	37191.3	37189.1	37287.1	36798.3	
55 Mn [2]	CPS	33.2		619.6	6379.8	12953.3	25019.1	51520	128835.7	257145.2	1.0000
72 Ge (ISTD) [2]	CPS	22196.2	22127.2	22008.2	22086.1	22385.4	21895.8	22298.5	22537.8	22073.8	
75 As [2]	CPS	5.5	38.9	171.1	1417.8	3040.2	5997.6	12213.2	30236.1	60791.2	0.9999

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181460**
Client ID: **ICV** Batch ID: **R181460** TestNo: **EPA 6020** Analysis Date: **2/12/2024** SeqNo: **5687169**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.306	0.10	10.00	0	103	90	110				
Barium	9.975	1.0	10.00	0	99.8	90	110				
Manganese	102.017	0.50	100.0	0	102	90	110				
Molybdenum	9.930	0.50	10.00	0	99.3	90	110				
Selenium	9.700	0.50	10.00	0	97.0	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181460**
Client ID: **ZZZZZZ** Batch ID: **R181460** TestNo: **EPA 6020** Analysis Date: **2/12/2024** SeqNo: **5687171**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.106	0.10	0.1000	0	106	80	120				
Barium	1.021	1.0	1.000	0	102	80	120				
Manganese	0.547	0.50	0.5000	0	109	80	120				
Molybdenum	0.538	0.50	0.5000	0	108	80	120				
Selenium	0.519	0.50	0.5000	0	104	80	120				

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181460**
Client ID: **CCV** Batch ID: **R181460** TestNo: **EPA 6020** Analysis Date: **2/12/2024** SeqNo: **5687172**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.275	0.10	20.00	0	96.4	90	110				
Barium	19.040	1.0	20.00	0	95.2	90	110				
Manganese	19.819	0.50	20.00	0	99.1	90	110				
Molybdenum	19.328	0.50	20.00	0	96.6	90	110				
Selenium	19.237	0.50	20.00	0	96.2	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **CCV**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687212**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.327	0.10	20.00	0	96.6	90	110				
Barium	19.939	1.0	20.00	0	99.7	90	110				
Manganese	19.600	0.50	20.00	0	98.0	90	110				
Molybdenum	19.382	0.50	20.00	0	96.9	90	110				
Selenium	19.421	0.50	20.00	0	97.1	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **CCV**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687219**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.066	0.10	20.00	0	95.3	90	110				
Barium	20.028	1.0	20.00	0	100	90	110				
Manganese	19.659	0.50	20.00	0	98.3	90	110				
Molybdenum	19.235	0.50	20.00	0	96.2	90	110				
Selenium	19.656	0.50	20.00	0	98.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181460**
Client ID: **CCV** Batch ID: **R181460** TestNo: **EPA 6020** Analysis Date: **2/12/2024** SeqNo: **5687179**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.156	0.10	20.00	0	95.8	90	110				
Barium	19.742	1.0	20.00	0	98.7	90	110				
Manganese	19.559	0.50	20.00	0	97.8	90	110				
Molybdenum	19.400	0.50	20.00	0	97.0	90	110				
Selenium	19.060	0.50	20.00	0	95.3	90	110				

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181460**
Client ID: **CCV** Batch ID: **R181460** TestNo: **EPA 6020** Analysis Date: **2/12/2024** SeqNo: **5687188**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	18.923	0.10	20.00	0	94.6	90	110				
Barium	20.046	1.0	20.00	0	100	90	110				
Manganese	19.500	0.50	20.00	0	97.5	90	110				
Molybdenum	18.973	0.50	20.00	0	94.9	90	110				
Selenium	19.695	0.50	20.00	0	98.5	90	110				

Sample ID **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181460**
Client ID: **CCV** Batch ID: **R181460** TestNo: **EPA 6020** Analysis Date: **2/12/2024** SeqNo: **5687201**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.457	0.10	20.00	0	97.3	90	110				
Barium	20.534	1.0	20.00	0	103	90	110				
Manganese	19.376	0.50	20.00	0	96.9	90	110				
Molybdenum	19.324	0.50	20.00	0	96.6	90	110				
Selenium	18.892	0.50	20.00	0	94.5	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV**	SampType: **ICV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **ICV**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689847**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.695	0.10	10.00	0	107	90	110				
Barium	10.054	1.0	10.00	0	101	90	110				
Manganese	102.072	0.50	100.0	0	102	90	110				
Molybdenum	10.153	0.50	10.00	0	102	90	110				
Selenium	10.406	0.50	10.00	0	104	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **ZZZZZZ**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689849**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	1.094	1.0	1.000	0	109	80	120				
Manganese	0.539	0.50	0.5000	0	108	80	120				
Molybdenum	0.489	0.50	0.5000	0	97.7	80	120				
Selenium	0.547	0.50	0.5000	0	109	80	120				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **ZZZZZZ**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689850**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.101	0.10	0.1000	0	101	80	120				

Sample ID **MLCCV**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **CCV**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689851**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.530	0.10	20.00	0	97.6	90	110				
Barium	19.062	1.0	20.00	0	95.3	90	110				
Manganese	19.704	0.50	20.00	0	98.5	90	110				
Molybdenum	19.129	0.50	20.00	0	95.6	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689851**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	19.673	0.50	20.00	0	98.4	90	110				

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689863**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.059	0.10	20.00	0	100	90	110				
Barium	19.205	1.0	20.00	0	96.0	90	110				
Manganese	19.543	0.50	20.00	0	97.7	90	110				
Molybdenum	19.178	0.50	20.00	0	95.9	90	110				
Selenium	19.119	0.50	20.00	0	95.6	90	110				

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689876**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.282	0.10	20.00	0	101	90	110				
Barium	19.418	1.0	20.00	0	97.1	90	110				
Manganese	19.269	0.50	20.00	0	96.3	90	110				
Molybdenum	19.324	0.50	20.00	0	96.6	90	110				
Selenium	20.863	0.50	20.00	0	104	90	110				

Sample ID **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689887**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.521	0.10	20.00	0	97.6	90	110				
Barium	19.121	1.0	20.00	0	95.6	90	110				
Manganese	19.380	0.50	20.00	0	96.9	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689887**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	19.067	0.50	20.00	0	95.3	90	110				
Selenium	20.047	0.50	20.00	0	100	90	110				

Sample ID **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689897**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.983	0.10	20.00	0	99.9	90	110				
Barium	19.281	1.0	20.00	0	96.4	90	110				
Manganese	19.626	0.50	20.00	0	98.1	90	110				
Molybdenum	19.224	0.50	20.00	0	96.1	90	110				
Selenium	19.276	0.50	20.00	0	96.4	90	110				

Sample ID **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689910**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.610	0.10	20.00	0	98.0	90	110				
Barium	19.925	1.0	20.00	0	99.6	90	110				
Manganese	19.415	0.50	20.00	0	97.1	90	110				
Molybdenum	19.732	0.50	20.00	0	98.7	90	110				
Selenium	19.648	0.50	20.00	0	98.2	90	110				

Sample ID **CCV6** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689921**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.465	0.10	20.00	0	97.3	90	110				
Barium	20.010	1.0	20.00	0	100	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV6** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689921**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	18.927	0.50	20.00	0	94.6	90	110				
Molybdenum	19.161	0.50	20.00	0	95.8	90	110				
Selenium	18.658	0.50	20.00	0	93.3	90	110				

Sample ID **CCV7** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/14/2024** SeqNo: **5689934**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.374	0.10	20.00	0	96.9	90	110				
Barium	19.861	1.0	20.00	0	99.3	90	110				
Manganese	19.690	0.50	20.00	0	98.4	90	110				
Molybdenum	19.254	0.50	20.00	0	96.3	90	110				
Selenium	19.455	0.50	20.00	0	97.3	90	110				

Sample ID **CCV8** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/14/2024** SeqNo: **5689946**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.493	0.10	20.00	0	97.5	90	110				
Barium	19.415	1.0	20.00	0	97.1	90	110				
Manganese	19.320	0.50	20.00	0	96.6	90	110				
Molybdenum	19.016	0.50	20.00	0	95.1	90	110				
Selenium	19.781	0.50	20.00	0	98.9	90	110				

Sample ID **CCV9** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/14/2024** SeqNo: **5689956**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.908	0.10	20.00	0	99.5	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV9**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **CCV**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5689956**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.772	1.0	20.00	0	98.9	90	110				
Manganese	19.722	0.50	20.00	0	98.6	90	110				
Molybdenum	19.200	0.50	20.00	0	96.0	90	110				
Selenium	19.986	0.50	20.00	0	99.9	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV**	SampType: **ICV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **ICV**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692227**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.342	0.10	10.00	0	103	90	110				
Manganese	105.069	0.50	100.0	0	105	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **ZZZZZZ**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692229**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.116	0.10	0.1000	0	116	80	120				
Manganese	0.521	0.50	0.5000	0	104	80	120				

Sample ID **MLCCV**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCV**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692230**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.668	0.10	20.00	0	98.3	90	110				
Manganese	19.648	0.50	20.00	0	98.2	90	110				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCV**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692243**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.029	0.10	20.00	0	100	90	110				
Manganese	19.565	0.50	20.00	0	97.8	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCV**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692255**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.272	0.10	20.00	0	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCV**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692255**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.927	0.50	20.00	0	99.6	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCV**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692267**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.420	0.10	20.00	0	97.1	90	110				
Manganese	19.977	0.50	20.00	0	99.9	90	110				

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCV**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692279**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.466	0.10	20.00	0	97.3	90	110				
Manganese	19.557	0.50	20.00	0	97.8	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCV**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692291**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.723	0.10	20.00	0	98.6	90	110				
Manganese	20.030	0.50	20.00	0	100	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCV**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692295**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.296	0.10	20.00	0	101	90	110				
Manganese	19.818	0.50	20.00	0	99.1	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV7**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCV**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692307**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.332	0.10	20.00	0	96.7	90	110				
Manganese	19.564	0.50	20.00	0	97.8	90	110				

Sample ID **CCV8**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCV**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692318**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.925	0.10	20.00	0	99.6	90	110				
Manganese	19.451	0.50	20.00	0	97.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICV**	SampType: **ICV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **ICV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690013**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.267	1.0	10.00	0	103	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **ZZZZZZ**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690015**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.996	1.0	1.000	0	99.6	80	120				

Sample ID **MLCCV**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690017**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.243	1.0	20.00	0	96.2	90	110				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690029**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.336	1.0	20.00	0	96.7	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690042**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.402	1.0	20.00	0	97.0	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690053**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.214	1.0	20.00	0	96.1	90	110				

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690063**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.450	1.0	20.00	0	97.2	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690076**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.370	1.0	20.00	0	96.8	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690087**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.100	1.0	20.00	0	95.5	90	110				

Sample ID **CCV7**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5690100**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.550	1.0	20.00	0	97.7	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCV8**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5690112**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.436	1.0	20.00	0	97.2	90	110				

Sample ID **CCV9**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5690122**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.559	1.0	20.00	0	97.8	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB**	SampType: **ICB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **ICB**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687170**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.188	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **CCB**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687180**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.176	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **CCB**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687189**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.169	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB3** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181460**
Client ID: **CCB** Batch ID: **R181460** TestNo: **EPA 6020** Analysis Date: **2/12/2024** SeqNo: **5687202**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.191	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB4** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181460**
Client ID: **CCB** Batch ID: **R181460** TestNo: **EPA 6020** Analysis Date: **2/12/2024** SeqNo: **5687213**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.218	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB5** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181460**
Client ID: **CCB** Batch ID: **R181460** TestNo: **EPA 6020** Analysis Date: **2/12/2024** SeqNo: **5687220**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.171	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB**	SampType: **ICB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **ICB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689848**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **CCB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689864**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **CCB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689877**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB3** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCB** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689888**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB4** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCB** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689898**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB5** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCB** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689911**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **CCB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689922**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB7**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **CCB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5689935**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB8**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **CCB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5689947**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB9**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **CCB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5689957**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB**	SampType: **ICB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **ICB**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692228**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCB**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692244**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCB**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692256**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCB**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692268**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCB**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692280**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCB**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692280**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCB**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692292**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCB**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692296**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **CCB7**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCB**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692308**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **CCB8**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCB**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692319**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICB**	SampType: **ICB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **ICB**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690014**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCB**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690030**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCB**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690043**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCB**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690054**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCB**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690064**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	CCB5	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181516
Client ID:	CCB	Batch ID:	R181516	TestNo:	EPA 6020			Analysis Date:	2/13/2024	SeqNo:	5690077

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB6	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181516
Client ID:	CCB	Batch ID:	R181516	TestNo:	EPA 6020			Analysis Date:	2/13/2024	SeqNo:	5690088

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB7	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181516
Client ID:	CCB	Batch ID:	R181516	TestNo:	EPA 6020			Analysis Date:	2/14/2024	SeqNo:	5690101

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB8	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181516
Client ID:	CCB	Batch ID:	R181516	TestNo:	EPA 6020			Analysis Date:	2/14/2024	SeqNo:	5690113

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB9	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181516
Client ID:	CCB	Batch ID:	R181516	TestNo:	EPA 6020			Analysis Date:	2/14/2024	SeqNo:	5690123

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **ICSA**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687173**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.175	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **ICSAB1**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **ICSAB**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687174**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	21.138	0.10	20.00	0	106	80	120				
Barium	20.795	1.0	20.00	0	104	80	120				
Manganese	16.320	0.50	20.00	0	81.6	80	120				
Molybdenum	22.470	0.50	20.00	0	112	80	120				
Selenium	20.081	0.50	20.00	0	100	80	120				

Sample ID **ICSA2**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181460**
Client ID: **ICSA**	Batch ID: **R181460**	TestNo: **EPA 6020**		Analysis Date: **2/12/2024**	SeqNo: **5687190**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.193	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	ICSAB2	SampType:	ICSAB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	181460
Client ID:	ICSAB	Batch ID:	R181460	TestNo:	EPA 6020			Analysis Date:	2/12/2024	SeqNo:	5687191

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.902	0.10	20.00	0	105	80	120				
Barium	21.629	1.0	20.00	0	108	80	120				
Manganese	16.464	0.50	20.00	0	82.3	80	120				
Molybdenum	22.510	0.50	20.00	0	113	80	120				
Selenium	19.374	0.50	20.00	0	96.9	80	120				

Sample ID	ICSA3	SampType:	ICSA	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	181460
Client ID:	ICSA	Batch ID:	R181460	TestNo:	EPA 6020			Analysis Date:	2/12/2024	SeqNo:	5687221

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.166	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID	ICSAB3	SampType:	ICSAB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	181460
Client ID:	ICSAB	Batch ID:	R181460	TestNo:	EPA 6020			Analysis Date:	2/12/2024	SeqNo:	5687222

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	21.379	0.10	20.00	0	107	80	120				
Barium	21.287	1.0	20.00	0	106	80	120				
Manganese	16.577	0.50	20.00	0	82.9	80	120				
Molybdenum	22.119	0.50	20.00	0	111	80	120				
Selenium	19.700	0.50	20.00	0	98.5	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **ICSA** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689852**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **ICSAB** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689853**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	21.027	0.10	20.00	0	105	80	120				
Barium	20.173	1.0	20.00	0	101	80	120				
Manganese	20.695	0.50	20.00	0	103	80	120				
Molybdenum	20.274	0.50	20.00	0	101	80	120				
Selenium	20.731	0.50	20.00	0	104	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **ICSA** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689865**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	ICSAB2	SampType:	ICSAB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	181512
Client ID:	ICSAB	Batch ID:	R181512	TestNo:	EPA 6020			Analysis Date:	2/13/2024	SeqNo:	5689866

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.271	0.10	20.00	0	101	80	120				
Barium	20.366	1.0	20.00	0	102	80	120				
Manganese	20.680	0.50	20.00	0	103	80	120				
Molybdenum	20.038	0.50	20.00	0	100	80	120				
Selenium	20.659	0.50	20.00	0	103	80	120				

Sample ID	ICSA3	SampType:	ICSA	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	181512
Client ID:	ICSA	Batch ID:	R181512	TestNo:	EPA 6020			Analysis Date:	2/13/2024	SeqNo:	5689899

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID	ICSAB3	SampType:	ICSAB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	181512
Client ID:	ICSAB	Batch ID:	R181512	TestNo:	EPA 6020			Analysis Date:	2/13/2024	SeqNo:	5689900

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.539	0.10	20.00	0	103	80	120				
Barium	20.464	1.0	20.00	0	102	80	120				
Manganese	20.581	0.50	20.00	0	103	80	120				
Molybdenum	20.000	0.50	20.00	0	100	80	120				
Selenium	20.330	0.50	20.00	0	102	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA4**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **ICSA**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689923**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **ICSAB4**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **ICSAB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689924**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.303	0.10	20.00	0	102	80	120				
Barium	21.357	1.0	20.00	0	107	80	120				
Manganese	20.375	0.50	20.00	0	102	80	120				
Molybdenum	19.944	0.50	20.00	0	99.7	80	120				
Selenium	20.021	0.50	20.00	0	100	80	120				

Sample ID **ICSA5**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **ICSA**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5689958**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSAB5**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **ICSAB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5689959**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.615	0.10	20.00	0	103	80	120				
Barium	20.362	1.0	20.00	0	102	80	120				
Manganese	20.626	0.50	20.00	0	103	80	120				
Molybdenum	20.379	0.50	20.00	0	102	80	120				
Selenium	20.635	0.50	20.00	0	103	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **ICSA**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692231**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **ICSAB1**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **ICSAB**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692232**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.269	0.10	20.00	0	101	80	120				
Manganese	20.723	0.50	20.00	0	104	80	120				

Sample ID **ICSA2**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **ICSA**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692269**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **ICSAB**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692270**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.586	0.10	20.00	0	103	80	120				
Manganese	20.594	0.50	20.00	0	103	80	120				

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **ICSA**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692297**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **ICSA**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692297**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **ICSAB**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692298**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.615	0.10	20.00	0	103	80	120				
Manganese	20.545	0.50	20.00	0	103	80	120				

Sample ID **ICSA4**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **ICSA**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692320**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **ICSAB4**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **ICSAB**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692321**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.954	0.10	20.00	0	105	80	120				
Manganese	20.529	0.50	20.00	0	103	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICSA1	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181516
Client ID:	ICSA	Batch ID:	R181516	TestNo:	EPA 6020			Analysis Date:	2/13/2024	SeqNo:	5690018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	ICSA2	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181516
Client ID:	ICSA	Batch ID:	R181516	TestNo:	EPA 6020			Analysis Date:	2/13/2024	SeqNo:	5690031

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	ICSAB2	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181516
Client ID:	ICSAB	Batch ID:	R181516	TestNo:	EPA 6020			Analysis Date:	2/13/2024	SeqNo:	5690032

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.611	1.0	20.00	0	103	80	120				

Sample ID	ICSA3	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181516
Client ID:	ICSA	Batch ID:	R181516	TestNo:	EPA 6020			Analysis Date:	2/13/2024	SeqNo:	5690065

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	ICSAB3	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181516
Client ID:	ICSAB	Batch ID:	R181516	TestNo:	EPA 6020			Analysis Date:	2/13/2024	SeqNo:	5690066

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.456	1.0	20.00	0	102	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICSA4**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **ICSA**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690089**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **ICSAB4**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **ICSAB**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690090**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.309	1.0	20.00	0	102	80	120				

Sample ID **ICSA5**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **ICSA**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5690124**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **ICSAB5**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **ICSAB**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5690125**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.511	1.0	20.00	0	103	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240212A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	1429968.2	1429968.2	100	PASS	30-150	41518.2	41518.2	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	1441469.1	1429968.2	100.8	PASS	30-150	40996.8	41518.2	98.74	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	1428431.5	1429968.2	99.89	PASS	30-150	40389.9	41518.2	97.28	PASS	30-150
Std3-5/50 ppb	ICAL	1	1425919.8	1429968.2	99.72	PASS	30-150	40120.2	41518.2	96.63	PASS	30-150
Std4-10/100 ppb	ICAL	1	1448363.6	1429968.2	101.29	PASS	30-150	40472.3	41518.2	97.48	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	1436496.1	1429968.2	100.46	PASS	30-150	40249.5	41518.2	96.94	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	1461909	1429968.2	102.23	PASS	30-150	40585.8	41518.2	97.75	PASS	30-150
Std7-100/1000 ppb	ICAL	1	1445595.9	1429968.2	101.09	PASS	30-150	40317.4	41518.2	97.11	PASS	30-150
Std8-200/2000 ppb	ICAL	1	1443723.6	1429968.2	100.96	PASS	30-150	39961.1	41518.2	96.25	PASS	30-150
ICV	ICV	1	1446130.7	1429968.2	101.13	PASS	30-150	39523.3	41518.2	95.2	PASS	30-150
ICB	ICB	1	1436486.9	1429968.2	100.46	PASS	30-150	39722.7	41518.2	95.68	PASS	30-150
LLICV1	LLICV	1	1427243.1	1429968.2	99.81	PASS	30-150	40138.1	41518.2	96.68	PASS	30-150
MLCCV	CCV	1	1462747	1429968.2	102.29	PASS	30-150	39954.3	41518.2	96.23	PASS	30-150
ICSA1	ICSA	1	1449307.1	1429968.2	101.35	PASS	30-150	40174.8	41518.2	96.76	PASS	30-150
ICSAB1	ICSAB	1	1306469.3	1429968.2	91.36	PASS	30-150	40550.2	41518.2	97.67	PASS	30-150
LLICV1	LLICV	1	1417505.8	1429968.2	99.13	PASS	30-150	42702.2	41518.2	102.85	PASS	30-150
CCV1	CCV	1	1532446.9	1429968.2	107.17	PASS	30-150	44231.7	41518.2	106.54	PASS	30-150
CCB1	CCB	1	1460010.9	1429968.2	102.1	PASS	30-150	41640.7	41518.2	100.3	PASS	30-150
CCV2	CCV	1	1515551.4	1429968.2	105.98	PASS	30-150	40984.6	41518.2	98.71	PASS	30-150
CCB2	CCB	1	1494288.3	1429968.2	104.5	PASS	30-150	40388.8	41518.2	97.28	PASS	30-150
ICSA2	ICSA	1	1511802.1	1429968.2	105.72	PASS	30-150	41703	41518.2	100.45	PASS	30-150
ICSAB2	ICSAB	1	1314772.6	1429968.2	91.94	PASS	30-150	41211.8	41518.2	99.26	PASS	30-150
MB-106751	MBLK	1	1430601.1	1429968.2	100.04	PASS	30-150	43908.6	41518.2	105.76	PASS	30-150
LCS-106751	LCS	1	1452399.6	1429968.2	101.57	PASS	30-150	41910.2	41518.2	100.94	PASS	30-150
N063010-001B	SAMP	1	1190063.6	1429968.2	83.22	PASS	30-150	36231.4	41518.2	87.27	PASS	30-150
N063010-001B	SAMP	10	1405858.9	1429968.2	98.31	PASS	30-150	41215.2	41518.2	99.27	PASS	30-150
N063010-002B	SAMP	1	1209825.3	1429968.2	84.61	PASS	30-150	36722.5	41518.2	88.45	PASS	30-150
N063010-002B	SAMP	10	1420791.8	1429968.2	99.36	PASS	30-150	41622.8	41518.2	100.25	PASS	30-150
N063010-003B	SAMP	1	1181512.8	1429968.2	82.63	PASS	30-150	35643.5	41518.2	85.85	PASS	30-150
N063010-003B	SAMP	10	1397114.1	1429968.2	97.7	PASS	30-150	40976.8	41518.2	98.7	PASS	30-150
CCV3	CCV	1	1429303.9	1429968.2	99.95	PASS	30-150	42628.6	41518.2	102.67	PASS	30-150
CCB3	CCB	1	1441462.3	1429968.2	100.8	PASS	30-150	41299.8	41518.2	99.47	PASS	30-150
N063012-001C	SAMP	1	1360849.8	1429968.2	95.17	PASS	30-150	38897.4	41518.2	93.69	PASS	30-150
N063012-001C	SAMP	5	1458236.8	1429968.2	101.98	PASS	30-150	40053.5	41518.2	96.47	PASS	30-150
N063012-001C-PS	PS	1	1335830.8	1429968.2	93.42	PASS	30-150	38121.2	41518.2	91.82	PASS	30-150
N063012-001C-MS	MS	1	1333593.9	1429968.2	93.26	PASS	30-150	37910.7	41518.2	91.31	PASS	30-150
N063012-001C-MSD	MSD	1	1333515.4	1429968.2	93.25	PASS	30-150	37320.5	41518.2	89.89	PASS	30-150
N063012-002C	SAMP	1	1309331.8	1429968.2	91.56	PASS	30-150	36120.1	41518.2	87	PASS	30-150
N063012-003C	SAMP	1	1320435.3	1429968.2	92.34	PASS	30-150	36431.9	41518.2	87.75	PASS	30-150
N063012-004C	SAMP	1	1139408.3	1429968.2	79.68	PASS	30-150	35153.6	41518.2	84.67	PASS	30-150
N063012-006C	SAMP	1	1347349.5	1429968.2	94.22	PASS	30-150	37528.8	41518.2	90.39	PASS	30-150

INTERNAL STANDARD: 240212A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
CCV4	CCV	1	1429718.6	1429968.2	99.98	PASS	30-150	38993.2	41518.2	93.92	PASS	30-150
CCB4	CCB	1	1442344.4	1429968.2	100.87	PASS	30-150	37988.7	41518.2	91.5	PASS	30-150
N063012-007C	SAMP	1	1392606.2	1429968.2	97.39	PASS	30-150	35162.5	41518.2	84.69	PASS	30-150
N063012-009C	SAMP	1	1173628.2	1429968.2	82.07	PASS	30-150	34245.1	41518.2	82.48	PASS	30-150
N063010-001B	SAMP	100	1447061.9	1429968.2	101.2	PASS	30-150	39420.9	41518.2	94.95	PASS	30-150
N063010-002B	SAMP	100	1434052.3	1429968.2	100.29	PASS	30-150	38078.8	41518.2	91.72	PASS	30-150
N063010-003B	SAMP	100	1445643.6	1429968.2	101.1	PASS	30-150	38403	41518.2	92.5	PASS	30-150
CCV5	CCV	1	1469465.7	1429968.2	102.76	PASS	30-150	37754.8	41518.2	90.94	PASS	30-150
CCB5	CCB	1	1462889.6	1429968.2	102.3	PASS	30-150	37606.7	41518.2	90.58	PASS	30-150
ICSA3	ICSA	1	1473952.1	1429968.2	103.08	PASS	30-150	38160.2	41518.2	91.91	PASS	30-150
ICSAB3	ICSAB	1	1331406.2	1429968.2	93.11	PASS	30-150	36521	41518.2	87.96	PASS	30-150
CCV6	CCV	1	1408624.3	1429968.2	98.51	PASS	30-150	38056.6	41518.2	91.66	PASS	30-150
CCB6	CCB	1	1403172	1429968.2	98.13	PASS	30-150	36956.3	41518.2	89.01	PASS	30-150
ICSA4	ICSA	1	1433499.6	1429968.2	100.25	PASS	30-150	37220.3	41518.2	89.65	PASS	30-150
ICSAB4	ICSAB	1	1319129	1429968.2	92.25	PASS	30-150	34924.2	41518.2	84.12	PASS	30-150

INTERNAL STANDARD: 240212A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]					72 Ge (ISTD) [1]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	22668	22668	100	PASS	30-150	75214.1	75214.1	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	22264.1	22668	98.22	PASS	30-150	74014.1	75214.1	98.4	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	21995.9	22668	97.04	PASS	30-150	74856.9	75214.1	99.53	PASS	30-150
Std3-5/50 ppb	ICAL	1	21953.6	22668	96.85	PASS	30-150	74562.2	75214.1	99.13	PASS	30-150
Std4-10/100 ppb	ICAL	1	22064.9	22668	97.34	PASS	30-150	72967.3	75214.1	97.01	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	21981.4	22668	96.97	PASS	30-150	73858	75214.1	98.2	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	21868	22668	96.47	PASS	30-150	73502	75214.1	97.72	PASS	30-150
Std7-100/1000 ppb	ICAL	1	21938.1	22668	96.78	PASS	30-150	73827.9	75214.1	98.16	PASS	30-150
Std8-200/2000 ppb	ICAL	1	22100.5	22668	97.5	PASS	30-150	72611.4	75214.1	96.54	PASS	30-150
ICV	ICV	1	21968.1	22668	96.91	PASS	30-150	73212.9	75214.1	97.34	PASS	30-150
ICB	ICB	1	21334	22668	94.12	PASS	30-150	73726.3	75214.1	98.02	PASS	30-150
LLICV1	LLICV	1	21625.4	22668	95.4	PASS	30-150	72208.4	75214.1	96	PASS	30-150
MLCCV	CCV	1	21860.2	22668	96.44	PASS	30-150	74077.7	75214.1	98.49	PASS	30-150
ICSA1	ICSA	1	21895.8	22668	96.59	PASS	30-150	74248.6	75214.1	98.72	PASS	30-150
ICSAB1	ICSAB	1	21152.6	22668	93.31	PASS	30-150	69437.7	75214.1	92.32	PASS	30-150
LLICV1	LLICV	1	23084.1	22668	101.84	PASS	30-150	78666.8	75214.1	104.59	PASS	30-150
CCV1	CCV	1	24753.2	22668	109.2	PASS	30-150	82813.7	75214.1	110.1	PASS	30-150
CCB1	CCB	1	23216.5	22668	102.42	PASS	30-150	77433.2	75214.1	102.95	PASS	30-150
CCV2	CCV	1	23287.7	22668	102.73	PASS	30-150	75878.1	75214.1	100.88	PASS	30-150
CCB2	CCB	1	23078.5	22668	101.81	PASS	30-150	76204.2	75214.1	101.32	PASS	30-150
ICSA2	ICSA	1	23972	22668	105.75	PASS	30-150	78557.5	75214.1	104.45	PASS	30-150
ICSAB2	ICSAB	1	23061.8	22668	101.74	PASS	30-150	73780.9	75214.1	98.1	PASS	30-150
MB-106751	MBLK	1	24777.7	22668	109.31	PASS	30-150	82928.7	75214.1	110.26	PASS	30-150
LCS-106751	LCS	1	23934.2	22668	105.59	PASS	30-150	79531	75214.1	105.74	PASS	30-150
N063010-001B	SAMP	1	19671.8	22668	86.78	PASS	30-150	61865.1	75214.1	82.25	PASS	30-150
N063010-001B	SAMP	10	23107.4	22668	101.94	PASS	30-150	77892	75214.1	103.56	PASS	30-150
N063010-002B	SAMP	1	19930	22668	87.92	PASS	30-150	63918.6	75214.1	84.98	PASS	30-150
N063010-002B	SAMP	10	23599.3	22668	104.11	PASS	30-150	75623.8	75214.1	100.54	PASS	30-150
N063010-003B	SAMP	1	19564	22668	86.31	PASS	30-150	61838.5	75214.1	82.22	PASS	30-150
N063010-003B	SAMP	10	23047.4	22668	101.67	PASS	30-150	75630.4	75214.1	100.55	PASS	30-150
CCV3	CCV	1	23859.6	22668	105.26	PASS	30-150	79844.9	75214.1	106.16	PASS	30-150
CCB3	CCB	1	23052.9	22668	101.7	PASS	30-150	77527.2	75214.1	103.08	PASS	30-150
N063012-001C	SAMP	1	21953.6	22668	96.85	PASS	30-150	70845.8	75214.1	94.19	PASS	30-150
N063012-001C	SAMP	5	23249.9	22668	102.57	PASS	30-150	75657.3	75214.1	100.59	PASS	30-150
N063012-001C-PS	PS	1	21655.5	22668	95.53	PASS	30-150	68364.3	75214.1	90.89	PASS	30-150
N063012-001C-MS	MS	1	21194.9	22668	93.5	PASS	30-150	67147.1	75214.1	89.27	PASS	30-150
N063012-001C-MSD	MSD	1	20709.8	22668	91.36	PASS	30-150	65101	75214.1	86.55	PASS	30-150
N063012-002C	SAMP	1	20341.5	22668	89.74	PASS	30-150	64802.1	75214.1	86.16	PASS	30-150
N063012-003C	SAMP	1	20500.6	22668	90.44	PASS	30-150	63984.5	75214.1	85.07	PASS	30-150
N063012-004C	SAMP	1	19016.6	22668	83.89	PASS	30-150	57382.4	75214.1	76.29	PASS	30-150
N063012-006C	SAMP	1	21293.9	22668	93.94	PASS	30-150	66775.6	75214.1	88.78	PASS	30-150

INTERNAL STANDARD: 240212A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]					72 Ge (ISTD) [1]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
CCV4	CCV	1	22248.5	22668	98.15	PASS	30-150	70013.4	75214.1	93.09	PASS	30-150
CCB4	CCB	1	21486.3	22668	94.79	PASS	30-150	70283.6	75214.1	93.44	PASS	30-150
N063012-007C	SAMP	1	20001.1	22668	88.23	PASS	30-150	62808.8	75214.1	83.51	PASS	30-150
N063012-009C	SAMP	1	18751.9	22668	82.72	PASS	30-150	56599.6	75214.1	75.25	PASS	30-150
N063010-001B	SAMP	100	22686.9	22668	100.08	PASS	30-150	71716.2	75214.1	95.35	PASS	30-150
N063010-002B	SAMP	100	21994.8	22668	97.03	PASS	30-150	71167.2	75214.1	94.62	PASS	30-150
N063010-003B	SAMP	100	21864.7	22668	96.46	PASS	30-150	69693.2	75214.1	92.66	PASS	30-150
CCV5	CCV	1	21508.6	22668	94.89	PASS	30-150	68526.2	75214.1	91.11	PASS	30-150
CCB5	CCB	1	21424	22668	94.51	PASS	30-150	68852	75214.1	91.54	PASS	30-150
ICSA3	ICSA	1	22011.5	22668	97.1	PASS	30-150	70341.5	75214.1	93.52	PASS	30-150
ICSAB3	ICSAB	1	20667.5	22668	91.17	PASS	30-150	64276.8	75214.1	85.46	PASS	30-150
CCV6	CCV	1	21715.5	22668	95.8	PASS	30-150	67294.2	75214.1	89.47	PASS	30-150
CCB6	CCB	1	20995.7	22668	92.62	PASS	30-150	65871.9	75214.1	87.58	PASS	30-150
ICSA4	ICSA	1	21103.6	22668	93.1	PASS	30-150	66924	75214.1	88.98	PASS	30-150
ICSAB4	ICSAB	1	19541.7	22668	86.21	PASS	30-150	60345.1	75214.1	80.23	PASS	30-150

INTERNAL STANDARD: 240212A

Instrument ID: ICPMS-03

Sample Name	Type	DF	103 Rh (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	569048.5	569048.5	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	570596.9	569048.5	100.27	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	562953.8	569048.5	98.93	PASS	30-150
Std3-5/50 ppb	ICAL	1	564439.5	569048.5	99.19	PASS	30-150
Std4-10/100 ppb	ICAL	1	562115.2	569048.5	98.78	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	559280.4	569048.5	98.28	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	558182	569048.5	98.09	PASS	30-150
Std7-100/1000 ppb	ICAL	1	562481.1	569048.5	98.85	PASS	30-150
Std8-200/2000 ppb	ICAL	1	560037	569048.5	98.42	PASS	30-150
ICV	ICV	1	560541.9	569048.5	98.51	PASS	30-150
ICB	ICB	1	555682.3	569048.5	97.65	PASS	30-150
LLICV1	LLICV	1	556146	569048.5	97.73	PASS	30-150
MLCCV	CCV	1	556679.2	569048.5	97.83	PASS	30-150
ICSA1	ICSA	1	568378.8	569048.5	99.88	PASS	30-150
ICSAB1	ICSAB	1	502218.3	569048.5	88.26	PASS	30-150
LLICV1	LLICV	1	583855.9	569048.5	102.6	PASS	30-150
CCV1	CCV	1	604305.5	569048.5	106.2	PASS	30-150
CCB1	CCB	1	577845.6	569048.5	101.55	PASS	30-150
CCV2	CCV	1	579162	569048.5	101.78	PASS	30-150
CCB2	CCB	1	573877.1	569048.5	100.85	PASS	30-150
ICSA2	ICSA	1	590834.7	569048.5	103.83	PASS	30-150
ICSAB2	ICSAB	1	509955.2	569048.5	89.62	PASS	30-150
MB-106751	MBLK	1	599849.7	569048.5	105.41	PASS	30-150
LCS-106751	LCS	1	578518.2	569048.5	101.66	PASS	30-150
N063010-001B	SAMP	1	437636.9	569048.5	76.91	PASS	30-150
N063010-001B	SAMP	10	543033.5	569048.5	95.43	PASS	30-150
N063010-002B	SAMP	1	443915.7	569048.5	78.01	PASS	30-150
N063010-002B	SAMP	10	542649.4	569048.5	95.36	PASS	30-150
N063010-003B	SAMP	1	437191.8	569048.5	76.83	PASS	30-150
N063010-003B	SAMP	10	534647.4	569048.5	93.95	PASS	30-150
CCV3	CCV	1	580232.7	569048.5	101.97	PASS	30-150
CCB3	CCB	1	583890.1	569048.5	102.61	PASS	30-150
N063012-001C	SAMP	1	503407.5	569048.5	88.46	PASS	30-150
N063012-001C	SAMP	5	542217.5	569048.5	95.28	PASS	30-150
N063012-001C-PS	PS	1	488149.6	569048.5	85.78	PASS	30-150
N063012-001C-MS	MS	1	485227.4	569048.5	85.27	PASS	30-150
N063012-001C-MSD	MSD	1	483807.2	569048.5	85.02	PASS	30-150
N063012-002C	SAMP	1	467579.1	569048.5	82.17	PASS	30-150
N063012-003C	SAMP	1	468014.4	569048.5	82.25	PASS	30-150
N063012-004C	SAMP	1	428552.9	569048.5	75.31	PASS	30-150
N063012-006C	SAMP	1	493804.5	569048.5	86.78	PASS	30-150

INTERNAL STANDARD: 240212A

Instrument ID: ICPMS-03

Sample Name	Type	DF	103 Rh (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
CCV4	CCV	1	555464.5	569048.5	97.61	PASS	30-150
CCB4	CCB	1	549229.9	569048.5	96.52	PASS	30-150
N063012-007C	SAMP	1	479408.5	569048.5	84.25	PASS	30-150
N063012-009C	SAMP	1	424550.9	569048.5	74.61	PASS	30-150
N063010-001B	SAMP	100	549848.7	569048.5	96.63	PASS	30-150
N063010-002B	SAMP	100	543403.2	569048.5	95.49	PASS	30-150
N063010-003B	SAMP	100	542811.5	569048.5	95.39	PASS	30-150
CCV5	CCV	1	548450.9	569048.5	96.38	PASS	30-150
CCB5	CCB	1	545016.6	569048.5	95.78	PASS	30-150
ICSA3	ICSA	1	554423.7	569048.5	97.43	PASS	30-150
ICSAB3	ICSAB	1	488663.7	569048.5	85.87	PASS	30-150
CCV6	CCV	1	531674.2	569048.5	93.43	PASS	30-150
CCB6	CCB	1	524944.9	569048.5	92.25	PASS	30-150
ICSA4	ICSA	1	533659.7	569048.5	93.78	PASS	30-150
ICSAB4	ICSAB	1	463107	569048.5	81.38	PASS	30-150

INTERNAL STANDARD: 240213B

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]					72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	43000.7	43000.7	100	PASS	30-150	25142.6	25142.6	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	42906.1	43000.7	99.78	PASS	30-150	25284	25142.6	100.56	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	42724.4	43000.7	99.36	PASS	30-150	24816.6	25142.6	98.7	PASS	30-150
Std3-5/50 ppb	ICAL	1	42874.9	43000.7	99.71	PASS	30-150	24805.5	25142.6	98.66	PASS	30-150
Std4-10/100 ppb	ICAL	1	42417	43000.7	98.64	PASS	30-150	24884.5	25142.6	98.97	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	42667.7	43000.7	99.23	PASS	30-150	24590.7	25142.6	97.8	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	42568.5	43000.7	98.99	PASS	30-150	25089.2	25142.6	99.79	PASS	30-150
Std7-100/1000 ppb	ICAL	1	42198.7	43000.7	98.13	PASS	30-150	24572.9	25142.6	97.73	PASS	30-150
Std8-200/2000 ppb	ICAL	1	42415.9	43000.7	98.64	PASS	30-150	25298.5	25142.6	100.62	PASS	30-150
ICV	ICV	1	42752.4	43000.7	99.42	PASS	30-150	24848.9	25142.6	98.83	PASS	30-150
ICB	ICB	1	42845.9	43000.7	99.64	PASS	30-150	25183.8	25142.6	100.16	PASS	30-150
LLICV1	LLICV	1	42956.2	43000.7	99.9	PASS	30-150	24972.4	25142.6	99.32	PASS	30-150
LLICV1	LLICV	1	43066.5	43000.7	100.15	PASS	30-150	25121.5	25142.6	99.92	PASS	30-150
MLCCV	CCV	1	43554.5	43000.7	101.29	PASS	30-150	25022.4	25142.6	99.52	PASS	30-150
ICSA1	ICSA	1	42831.4	43000.7	99.61	PASS	30-150	24841.1	25142.6	98.8	PASS	30-150
ICSAB1	ICSAB	1	42589.7	43000.7	99.04	PASS	30-150	24569.6	25142.6	97.72	PASS	30-150
CCV1	CCV	1	44213.8	43000.7	102.82	PASS	30-150	25555.5	25142.6	101.64	PASS	30-150
CCB1	CCB	1	44061.2	43000.7	102.47	PASS	30-150	25577.8	25142.6	101.73	PASS	30-150
ICSA2	ICSA	1	43622.4	43000.7	101.45	PASS	30-150	25567.8	25142.6	101.69	PASS	30-150
ICSAB2	ICSAB	1	43495.3	43000.7	101.15	PASS	30-150	25611.2	25142.6	101.86	PASS	30-150
CCV2	CCV	1	43122.2	43000.7	100.28	PASS	30-150	24976.8	25142.6	99.34	PASS	30-150
CCB2	CCB	1	42492.8	43000.7	98.82	PASS	30-150	25081.4	25142.6	99.76	PASS	30-150
CCV3	CCV	1	43781.6	43000.7	101.82	PASS	30-150	25346.3	25142.6	100.81	PASS	30-150
CCB3	CCB	1	42900.5	43000.7	99.77	PASS	30-150	25319.6	25142.6	100.7	PASS	30-150
CCV4	CCV	1	43717.1	43000.7	101.67	PASS	30-150	25304	25142.6	100.64	PASS	30-150
CCB4	CCB	1	43157.8	43000.7	100.37	PASS	30-150	25238.3	25142.6	100.38	PASS	30-150
ICSA3	ICSA	1	43193.4	43000.7	100.45	PASS	30-150	25512.1	25142.6	101.47	PASS	30-150
ICSAB3	ICSAB	1	43654.7	43000.7	101.52	PASS	30-150	25433.1	25142.6	101.16	PASS	30-150
CCV5	CCV	1	46151.3	43000.7	107.33	PASS	30-150	26702.9	25142.6	106.21	PASS	30-150
CCB5	CCB	1	45949.7	43000.7	106.86	PASS	30-150	26253.3	25142.6	104.42	PASS	30-150
CCV6	CCV	1	46646	43000.7	108.48	PASS	30-150	26226.6	25142.6	104.31	PASS	30-150
CCB6	CCB	1	45106.3	43000.7	104.9	PASS	30-150	26381.3	25142.6	104.93	PASS	30-150
ICSA4	ICSA	1	45061.7	43000.7	104.79	PASS	30-150	25911.6	25142.6	103.06	PASS	30-150
ICSAB4	ICSAB	1	44808.8	43000.7	104.2	PASS	30-150	25750.2	25142.6	102.42	PASS	30-150
MB-106751	MBLK	1	45221.1	43000.7	105.16	PASS	30-150	26009.5	25142.6	103.45	PASS	30-150
LCS-106751	LCS	1	43733.8	43000.7	101.7	PASS	30-150	25300.7	25142.6	100.63	PASS	30-150
N063010-001B	SAMP	100	43506.5	43000.7	101.18	PASS	30-150	25295.1	25142.6	100.61	PASS	30-150
N063010-002B	SAMP	100	42920.6	43000.7	99.81	PASS	30-150	25317.4	25142.6	100.7	PASS	30-150
N063010-003B	SAMP	100	43882	43000.7	102.05	PASS	30-150	25306.3	25142.6	100.65	PASS	30-150
N063012-001C	SAMP	1	41099.3	43000.7	95.58	PASS	30-150	23959.8	25142.6	95.3	PASS	30-150
N063012-001C	SAMP	5	42788	43000.7	99.51	PASS	30-150	24598.5	25142.6	97.84	PASS	30-150

INTERNAL STANDARD: 240213B

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]					72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
N063012-001C	SAMP	10	42869.4	43000.7	99.69	PASS	30-150	24897.8	25142.6	99.03	PASS	30-150
N063012-001C	SAMP	50	43164.4	43000.7	100.38	PASS	30-150	25231.7	25142.6	100.35	PASS	30-150
CCV7	CCV	1	43866.4	43000.7	102.01	PASS	30-150	25454.2	25142.6	101.24	PASS	30-150
CCB7	CCB	1	43253.7	43000.7	100.59	PASS	30-150	25389.8	25142.6	100.98	PASS	30-150
N063012-001C-PS	PS	1	39553.4	43000.7	91.98	PASS	30-150	22949.5	25142.6	91.28	PASS	30-150
N063012-001C-PS	PS	10	41097.1	43000.7	95.57	PASS	30-150	24515	25142.6	97.5	PASS	30-150
N063012-001C-MS	MS	1	39831.8	43000.7	92.63	PASS	30-150	23037.3	25142.6	91.63	PASS	30-150
N063012-001C-MS	MS	10	41996	43000.7	97.66	PASS	30-150	24762.1	25142.6	98.49	PASS	30-150
N063012-001C-MSD	MSD	1	39195.9	43000.7	91.15	PASS	30-150	22913.8	25142.6	91.14	PASS	30-150
N063012-001C-MSD	MSD	10	42017.2	43000.7	97.71	PASS	30-150	24517.3	25142.6	97.51	PASS	30-150
N063012-002C	SAMP	1	38537.6	43000.7	89.62	PASS	30-150	21861.3	25142.6	86.95	PASS	30-150
N063012-002C	SAMP	100	42513.9	43000.7	98.87	PASS	30-150	25020.2	25142.6	99.51	PASS	30-150
N063012-003C	SAMP	1	38940.8	43000.7	90.56	PASS	30-150	22360.9	25142.6	88.94	PASS	30-150
N063012-003C	SAMP	100	42242.2	43000.7	98.24	PASS	30-150	24983.5	25142.6	99.37	PASS	30-150
CCV8	CCV	1	43167.8	43000.7	100.39	PASS	30-150	25077	25142.6	99.74	PASS	30-150
CCB8	CCB	1	42151.9	43000.7	98.03	PASS	30-150	24974.6	25142.6	99.33	PASS	30-150
N063012-004C	SAMP	1	36748.1	43000.7	85.46	PASS	30-150	20987.9	25142.6	83.48	PASS	30-150
N063012-004C	SAMP	100	43286	43000.7	100.66	PASS	30-150	25440.9	25142.6	101.19	PASS	30-150
N063012-006C	SAMP	1	39757.3	43000.7	92.46	PASS	30-150	23204.2	25142.6	92.29	PASS	30-150
N063012-006C	SAMP	100	43057.6	43000.7	100.13	PASS	30-150	25509.9	25142.6	101.46	PASS	30-150
N063012-007C	SAMP	1	39614.6	43000.7	92.13	PASS	30-150	22762.5	25142.6	90.53	PASS	30-150
N063012-007C	SAMP	10	40862.1	43000.7	95.03	PASS	30-150	24327	25142.6	96.76	PASS	30-150
N063012-009C	SAMP	1	37234.8	43000.7	86.59	PASS	30-150	20401.6	25142.6	81.14	PASS	30-150
N063012-009C	SAMP	10	41746.5	43000.7	97.08	PASS	30-150	24231.3	25142.6	96.38	PASS	30-150
CCV9	CCV	1	42783.5	43000.7	99.49	PASS	30-150	24960.2	25142.6	99.27	PASS	30-150
CCB9	CCB	1	42404.8	43000.7	98.61	PASS	30-150	24956.8	25142.6	99.26	PASS	30-150
ICSA5	ICSA	1	42246.6	43000.7	98.25	PASS	30-150	25100.4	25142.6	99.83	PASS	30-150
ICSAB5	ICSAB	1	42167.5	43000.7	98.06	PASS	30-150	24762.1	25142.6	98.49	PASS	30-150
CCV10	CCV	1	43525.5	43000.7	101.22	PASS	30-150	25428.7	25142.6	101.14	PASS	30-150
CCB10	CCB	1	42635.4	43000.7	99.15	PASS	30-150	25038.1	25142.6	99.58	PASS	30-150
CCV11	CCV	1	44510.4	43000.7	103.51	PASS	30-150	25868.2	25142.6	102.89	PASS	30-150
CCB11	CCB	1	43796.1	43000.7	101.85	PASS	30-150	25502.1	25142.6	101.43	PASS	30-150
ICSA6	ICSA	1	43206.8	43000.7	100.48	PASS	30-150	24897.8	25142.6	99.03	PASS	30-150
ICSAB6	ICSAB	1	43326	43000.7	100.76	PASS	30-150	25328.5	25142.6	100.74	PASS	30-150

INTERNAL STANDARD: 240214A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]					72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	36825	36825	100	PASS	30-150	22196.2	22196.2	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	37068.8	36825	100.66	PASS	30-150	22127.2	22196.2	99.69	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	37198	36825	101.01	PASS	30-150	22008.2	22196.2	99.15	PASS	30-150
Std3-5/50 ppb	ICAL	1	37387.3	36825	101.53	PASS	30-150	22086.1	22196.2	99.5	PASS	30-150
Std4-10/100 ppb	ICAL	1	36866.1	36825	100.11	PASS	30-150	22385.4	22196.2	100.85	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	37191.3	36825	100.99	PASS	30-150	21895.8	22196.2	98.65	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	37189.1	36825	100.99	PASS	30-150	22298.5	22196.2	100.46	PASS	30-150
Std7-100/1000 ppb	ICAL	1	37287.1	36825	101.25	PASS	30-150	22537.8	22196.2	101.54	PASS	30-150
Std8-200/2000 ppb	ICAL	1	36798.3	36825	99.93	PASS	30-150	22073.8	22196.2	99.45	PASS	30-150
ICV	ICV	1	36579.9	36825	99.33	PASS	30-150	21948.1	22196.2	98.88	PASS	30-150
ICB	ICB	1	36341.7	36825	98.69	PASS	30-150	22139.5	22196.2	99.74	PASS	30-150
LLICV1	CCV1	1	36556.6	36825	99.27	PASS	30-150	21901.3	22196.2	98.67	PASS	30-150
MLCCV	CCV	1	36745.9	36825	99.79	PASS	30-150	22014.8	22196.2	99.18	PASS	30-150
ICSA1	ICSA	1	36450.8	36825	98.98	PASS	30-150	22153.9	22196.2	99.81	PASS	30-150
ICSAB1	ICSAB	1	36486.5	36825	99.08	PASS	30-150	22083.8	22196.2	99.49	PASS	30-150
CCV1	CCV	1	37222.5	36825	101.08	PASS	30-150	22106.1	22196.2	99.59	PASS	30-150
CCB1	CCB	1	36514.3	36825	99.16	PASS	30-150	21784.6	22196.2	98.15	PASS	30-150
CCV2	CCV	1	35998.7	36825	97.76	PASS	30-150	21775.6	22196.2	98.11	PASS	30-150
CCB2	CCB	1	36013.2	36825	97.8	PASS	30-150	21656.6	22196.2	97.57	PASS	30-150
CCV3	CCV	1	35975.4	36825	97.69	PASS	30-150	21676.6	22196.2	97.66	PASS	30-150
CCB3	CCB	1	35827.2	36825	97.29	PASS	30-150	21851.3	22196.2	98.45	PASS	30-150
ICSA2	ICSA	1	35756	36825	97.1	PASS	30-150	21628.8	22196.2	97.44	PASS	30-150
ICSAB2	ICSAB	1	36574.4	36825	99.32	PASS	30-150	21922.5	22196.2	98.77	PASS	30-150
CCV4	CCV	1	36272.7	36825	98.5	PASS	30-150	22218.4	22196.2	100.1	PASS	30-150
CCB4	CCB	1	36465.3	36825	99.02	PASS	30-150	21811.2	22196.2	98.27	PASS	30-150
CCV5	CCV	1	37231.4	36825	101.1	PASS	30-150	22563.3	22196.2	101.65	PASS	30-150
CCB5	CCB	1	36509.8	36825	99.14	PASS	30-150	21884.6	22196.2	98.6	PASS	30-150
CCV6	CCV	1	37013.1	36825	100.51	PASS	30-150	21879.1	22196.2	98.57	PASS	30-150
CCB6	CCB	1	36955.2	36825	100.35	PASS	30-150	21984.8	22196.2	99.05	PASS	30-150
ICSA3	ICSA	1	37320.5	36825	101.35	PASS	30-150	22611.2	22196.2	101.87	PASS	30-150
ICSAB3	ICSAB	1	37170.2	36825	100.94	PASS	30-150	22455.4	22196.2	101.17	PASS	30-150
CCV7	CCV	1	37793.8	36825	102.63	PASS	30-150	22425.4	22196.2	101.03	PASS	30-150
CCB7	CCB	1	37355	36825	101.44	PASS	30-150	22428.7	22196.2	101.05	PASS	30-150
N063012-002C	SAMP	1	34369.7	36825	93.33	PASS	30-150	20317.1	22196.2	91.53	PASS	30-150
N063012-006C	SAMP	1	35933	36825	97.58	PASS	30-150	21367.3	22196.2	96.27	PASS	30-150
N063012-002C	SAMP	1	34019	36825	92.38	PASS	30-150	19497.2	22196.2	87.84	PASS	30-150
N063012-006C	SAMP	1	34474.4	36825	93.62	PASS	30-150	20585.2	22196.2	92.74	PASS	30-150
N063012-002C	SAMP	1	33476.8	36825	90.91	PASS	30-150	19828.7	22196.2	89.33	PASS	30-150
N063012-006C	SAMP	1	34595.7	36825	93.95	PASS	30-150	20640.8	22196.2	92.99	PASS	30-150
N063012-002C	SAMP	1	34353.1	36825	93.29	PASS	30-150	20395	22196.2	91.89	PASS	30-150
N063012-006C	SAMP	1	35176.9	36825	95.52	PASS	30-150	20855.5	22196.2	93.96	PASS	30-150

INTERNAL STANDARD: 240214A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]					72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
N063012-009C	SAMP	100	36479.7	36825	99.06	PASS	30-150	22158.4	22196.2	99.83	PASS	30-150
CCV8	CCV	1	36410.7	36825	98.87	PASS	30-150	21494.2	22196.2	96.84	PASS	30-150
CCB8	CCB	1	35789.4	36825	97.19	PASS	30-150	21014.6	22196.2	94.68	PASS	30-150
ICSA4	ICSA	1	35381.8	36825	96.08	PASS	30-150	21347.3	22196.2	96.18	PASS	30-150
ICSAB4	ICSAB	1	36284.9	36825	98.53	PASS	30-150	21622.1	22196.2	97.41	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.: N063012
Test Method: EPA 6020
Analysis Date: 2/12, 14/2024

Matrix: Groundwater
Batch No.: 106751

Instrument ID: ICPMS-03
Instrument Description: Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to As, Mn, Se. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063012-001C DT 5x	Arsenic	As	µg/L	1.197633	NA	1.255674	4.62%	10
N063012-001C DT 5x	Barium	Ba	µg/L	30.28418	PASS	28.79229	5.18%	10
N063012-001C DT 5x	Manganese	Mn	µg/L	0.2229124	NA	0		10
N063012-001C DT 5x	Molybdenum	Mo	µg/L	19.75665	PASS	19.38476	1.92%	10
N063012-001C DT 5x	Selenium	Se	µg/L	9.492962	NA	8.795585	7.93%	10
N063012-001C DT 5x	Chromium	Cr	µg/L	461.1684	PASS	451.4889	2.14%	10

Reviewed by:

JRB 3/14/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **N063012-001C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181460**
Client ID: **ZZZZZZ** Batch ID: **106751** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/12/2024** SeqNo: **5687205**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.624	0.10	10.00	1.256	93.7	80	120				
Barium	39.233	1.0	10.00	28.79	104	80	120				
Manganese	90.817	0.50	100.0	0	90.8	80	120				
Molybdenum	30.719	0.50	10.00	19.38	113	80	120				
Selenium	18.442	0.50	10.00	8.796	96.5	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063012
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	**N063012-001C-PS**	SampType: **PS**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID:	**ZZZZZZ**	Batch ID: **106751**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/14/2024**	SeqNo: **5690103**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	565.703	10	100.0	451.5	114	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number:	502405
Report Level:	II
Report Date:	02/28/2024

Analytical Report *prepared for:*

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Location: N063052

Authorized for release by:

Quynhgiao Le

Quynhgiao Le, Project Manager
714-7716900
quynhgiao.le@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Sonny Lorenzo
Asset Laboratories
11110 Artersia
Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 502405
Location: N063052
Date Received: 02/14/24

Sample ID	Lab ID	Collected	Matrix
N063052-001A / IRZ-09-100-Q124	502405-001	02/12/24 11:30	Water
N063052-002A / IRZ-13D-210-Q124	502405-002	02/12/24 11:00	Water
N063052-003A / MW-909-Q124	502405-003	02/12/24 10:45	Water
N063052-004A / IRZ-13S-095-Q124	502405-004	02/12/24 10:30	Water
N063052-005A / IRZ-21-065-Q124	502405-005	02/12/24 10:00	Water
N063052-006A / MW-910-Q124	502405-006	02/12/24 09:45	Water
N063052-007A / IRZ-21-157-Q124	502405-007	02/12/24 09:30	Water
N063052-008A / IRZ-23-143-Q124	502405-008	02/12/24 08:30	Water
N063052-009A / IRZ-25-100-Q124	502405-009	02/12/24 09:15	Water
N063052-010A / MW-911-Q124	502405-010	02/12/24 09:00	Water
N063052-011A / IRZ-25-166-Q124	502405-011	02/12/24 08:45	Water

Case Narrative

Asset Laboratories 11110 Artersia Blvd, Suite B Cerritos, CA 90703 Sonny Lorenzo	Lab Job Number: 502405 Location: N063052 Date Received: 02/14/24

This data package contains sample and QC results for eleven water samples, requested for the above referenced project on 02/14/24. The samples were received cold and intact.

Total Organic Carbon by IR (SM 5310B):

- Level II is also requested.
- No analytical problems were encountered.

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

502409

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Enthalpy Analytical
931 W. Barkley Ave.
Orange, CA 92868

TEL: (714) 771-6900
FAX: (714) 538-1209
Acct #:

Field Sampler: Kevin Ashley

13-Feb-24

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				SM5310B		
N063052-001A / IRZ-09-100-Q124	Groundwater	2/12/2024 11:30:00 AM	8OZA	1		
N063052-002A / IRZ-13D-210-Q124	Groundwater	2/12/2024 11:00:00 AM	8OZA	1		
N063052-003A / MW-909-Q124	Groundwater	2/12/2024 10:45:00 AM	8OZA	1		
N063052-004A / IRZ-13S-095-Q124	Groundwater	2/12/2024 10:30:00 AM	8OZA	1		
N063052-005A / IRZ-21-065-Q124	Groundwater	2/12/2024 10:00:00 AM	8OZA	1		
N063052-006A / MW-910-Q124	Groundwater	2/12/2024 9:45:00 AM	8OZA	1		
N063052-007A / IRZ-21-157-Q124	Groundwater	2/12/2024 9:30:00 AM	8OZA	1		
N063052-008A / IRZ-23-143-Q124	Groundwater	2/12/2024 8:30:00 AM	8OZA	1		
N063052-009A / IRZ-25-100-Q124	Groundwater	2/12/2024 9:15:00 AM	8OZA	1		
N063052-010A / MW-911-Q124	Groundwater	2/12/2024 9:00:00 AM	8OZA	1		
N063052-011A / IRZ-25-166-Q124	Groundwater	2/12/2024 8:45:00 AM	8OZA	1	(MS/MSD)	

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N63052A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for TOC by SM5310B. EDD requirement Labspec7 edata.

GLS #: 560941308

		Date/Time			Date/Time
Relinquished by:	YRodriguez	2/13/2024 1630	**Received by:**		2.14.24 17:30
Relinquished by:		2.14.24 18:14	**Received by:**	Glenn Sylvestrum	2/15/24 09:30

SAMPLE RECEIPT CHECKLIST

Section 1: General Info

Date Received: 2.14.24 Login # 502409 Client: Asset Labs

Section 2: Shipping / Custody

Shipping Info: _____

Are custody seals present? ☑ No ☐ Yes If yes, where? ☐ on cooler, ☐ on samples, ☐ on package

Custody seals intact on arrival? ☐ Yes ☐ No ☐ N/A Date: _____ # of seals _____ ☐ Signature ☐ Initials

Section 3: Condition / Packaging ***Important*: Notify PM if temperature exceeds 6°C or arrive frozen**

Date Opened 2.14.24 By (print)_____ (sign)_____

☐ Samples received on ice directly from the field. Cooling process had begun. (if checked, skip temperatures)

If no cooler: Sample Temp (°C): _____

How many coolers? 1 Temp (°C): #1: 5.7 #2:_____ #3:_____ #4:_____ #5:_____ #6: _____

Temperature measured using ☐ Thermometer ID:_____, or IR Gun # ☑ B ☐ C

Type of ice used : ☑ Wet, ☐ Blue/Gel, ☐ None Temperature blank(s) included? ☐ Yes, ☑ No

Section 4: Containers / Labels / Samples	YES	NO	N/A
Were custody papers dry, filled out properly, and the project identifiable?	✓		
Were Method 5035 sampling containers present? Transferred to freezer @:_____		✓	
Did all containers arrive unbroken/unopened?	✓		
Are there any missing / extra samples?		✓	
Are samples in the appropriate containers for indicated tests?	✓		
Are sample labels present, in good condition and complete?	✓		
Does the container count match the COC?		✓	
Do the sample labels agree with custody papers?	✓		
Was sufficient amount of sample sent for tests requested?	✓*		
Did you change the hold time in LIMS for unpreserved VOAs?			✓
Did you change the hold time in LIMS for preserved terracores?			✓
Are bubbles > 6mm present in VOA samples?			✓
Was the client contacted about this delivery? Contacted:_____ By:_____ Date:_____		✓	

Section 5: Preservatives	YES	NO	N/A
Are the samples appropriately preserved? (if yes, skip the rest of section 5)	✓		
Did any samples / containers require preservation upon receipt?			
Did you document your preservative check in the bench book?			

Preservative added:

☐ H2SO4 lot#_____ added to samples_____ Date/Time_____

☐ HCL lot#_____ added to samples_____ Date/Time_____

☐ HNO3 lot#_____ added to samples_____ Date/Time_____

☐ CrVI Buffer lot#_____ added to samples_____ Date/Time_____

Section 6: Explanations / Comments

-011 is 2 containers, not 1 (limited volume for MS/MSD)

Date Logged 2.14.24 **By (print)** Jodz Peterson **(sign)** _____

Date Labeled 2.14.24 **By (print)** Jodz Peterson **(sign)** _____

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Asset Laboratories Project: N63052A

Date Received: 02/15/24 Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 2.0 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: Southwest Airlines

Section 3

Was the cooler packed with: ☑ Ice ☑ Ice Packs ☑ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 1.3 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✔		
Are sample IDs present?	✔		
Are sampling dates & times present?	✔		
Is a relinquished signature present?	✔		
Are the tests required clearly indicated on the COC?	✔		
Are custody seals present?	✔		
If custody seals are present, were they intact?	✔		
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✔
Did all samples arrive intact? If no, indicate in Section 4 below.	✔		
Did all bottle labels agree with COC? (ID, dates and times)	✔		
Were the samples collected in the correct containers for the required tests?	✔		
Are the containers labeled with the correct preservatives?	✔		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✔
Was a sufficient amount of sample submitted for the requested tests?	✔		

Section 5 Explanations/Comments

502405 * see Berk. cooler sheet *

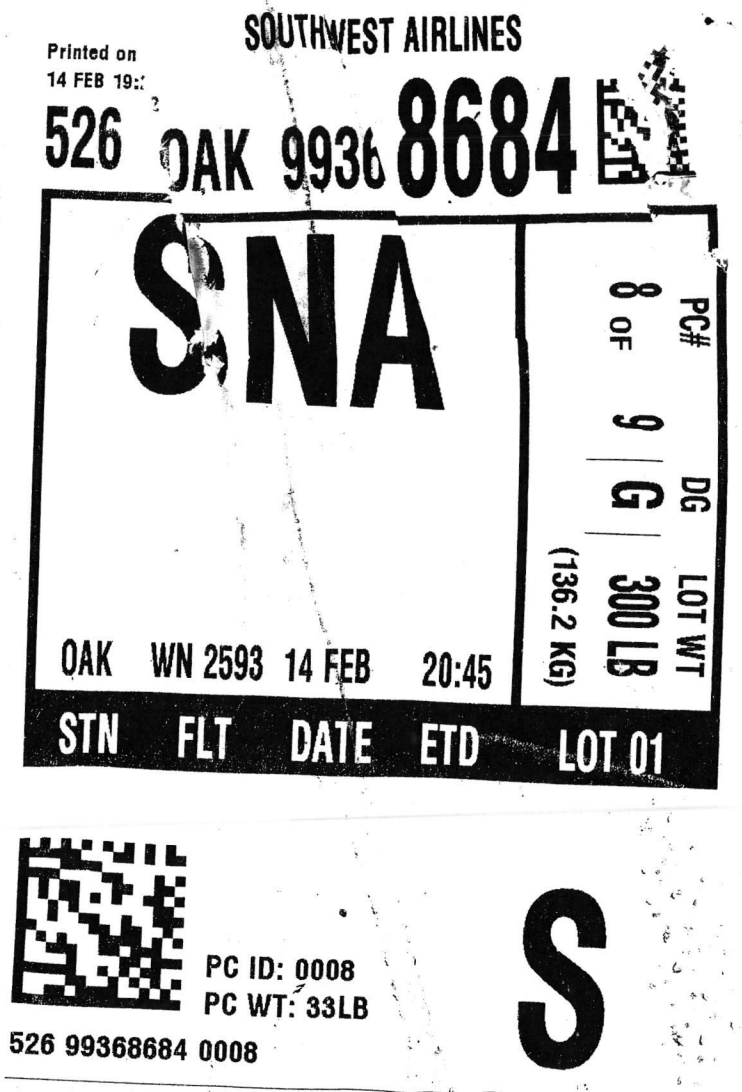
Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____

☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: Olena Syfrig Date: FEB 15 2024


SOUTHWEST AIRLINES
Printed on
14 FEB 19:
526 OAK 9936 8684
SNA
PC# 8 OF 9
DG G
LOT WT 300 LB (136.2 KG)
OAK WN 2593 14 FEB 20:45
STN FLT DATE ETD LOT 01
PC ID: 0008
PC WT: 33LB
526 99368684 0008
S

1.3/2.0

@ 9:30

ENTHALPY ANALYTICAL

Analysis Results for 502405

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 502405
Location: N063052
Date Received: 02/14/24

Sample ID: N063052-001A / IRZ-09-100-Q124 **Lab ID:** 502405-001 **Matrix:** Water **Collected:** 02/12/24 11:30

502405-001 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	ND		mg/L	1.0	1	333700	02/23/24	02/23/24	EPL

Sample ID: N063052-002A / IRZ-13D-210-Q124 **Lab ID:** 502405-002 **Matrix:** Water **Collected:** 02/12/24 11:00

502405-002 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.8**		mg/L	1.0	1	333700	02/23/24	02/23/24	EPL

Sample ID: N063052-003A / MW-909-Q124 **Lab ID:** 502405-003 **Matrix:** Water **Collected:** 02/12/24 10:45

502405-003 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.8**		mg/L	1.0	1	333700	02/23/24	02/23/24	EPL

Sample ID: N063052-004A / IRZ-13S-095-Q124 **Lab ID:** 502405-004 **Matrix:** Water **Collected:** 02/12/24 10:30

502405-004 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.2**		mg/L	1.0	1	333700	02/23/24	02/23/24	EPL

Sample ID: N063052-005A / IRZ-21-065-Q124 **Lab ID:** 502405-005 **Matrix:** Water **Collected:** 02/12/24 10:00

502405-005 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.0**		mg/L	1.0	1	333700	02/23/24	02/23/24	EPL

Sample ID: N063052-006A / MW-910-Q124 **Lab ID:** 502405-006 **Matrix:** Water **Collected:** 02/12/24 09:45

502405-006 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.5**		mg/L	1.0	1	333700	02/23/24	02/23/24	EPL

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 502405

Sample ID:	Lab ID: 502405-007	Collected: 02/12/24 09:30
N063052-007A / IRZ-21-157-Q124	Matrix: Water	

502405-007 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.3**		mg/L	1.0	1	333700	02/23/24	02/23/24	EPL

Sample ID:	Lab ID: 502405-008	Collected: 02/12/24 08:30
N063052-008A / IRZ-23-143-Q124	Matrix: Water	

502405-008 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.4**		mg/L	1.0	1	333700	02/23/24	02/23/24	EPL

Sample ID:	Lab ID: 502405-009	Collected: 02/12/24 09:15
N063052-009A / IRZ-25-100-Q124	Matrix: Water	

502405-009 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**3.0**		mg/L	1.0	1	333700	02/23/24	02/23/24	EPL

Sample ID:	Lab ID: 502405-010	Collected: 02/12/24 09:00
N063052-010A / MW-911-Q124	Matrix: Water	

502405-010 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.1**		mg/L	1.0	1	333700	02/23/24	02/23/24	EPL

Sample ID:	Lab ID: 502405-011	Collected: 02/12/24 08:45
N063052-011A / IRZ-25-166-Q124	Matrix: Water	

502405-011 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.3**		mg/L	1.0	1	333700	02/23/24	02/23/24	EPL

ND Not Detected

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type: Blank **Lab ID: QC1130380** **Batch: 333700**
Matrix: Water **Method: SM 5310B**

QC1130380 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Total Organic Carbon	ND		mg/L	1.0	02/23/24	02/23/24

Type: Lab Control Sample **Lab ID: QC1130381** **Batch: 333700**
Matrix: Water **Method: SM 5310B**

QC1130381 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Total Organic Carbon	24.80	25.00	mg/L	99%		80-120

Type: Matrix Spike **Lab ID: QC1130382** **Batch: 333700**
Matrix (Source ID): Water (502405-011) **Method: SM 5310B**

QC1130382 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Total Organic Carbon	27.36	1.276	25.00	mg/L	104%		80-120	1

Type: Matrix Spike Duplicate **Lab ID: QC1130383** **Batch: 333700**
Matrix (Source ID): Water (502405-011) **Method: SM 5310B**

QC1130383 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Total Organic Carbon	26.98	1.276	25.00	mg/L	103%		80-120	1	20	1

ND Not Detected

ARCADIS

Project: PG&E Topock - PCM

Project No.: 30121866

ASSET Laboratories Work Order:

N063053

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063053

Item	Page
Cover Page	1-7
Analytical Result/QC Summary Reports	8-80
Sample Receiving Items	81-91
List of Analysts	92
Raw Data	
EPA 218.6	93-238
EPA 300.0	239-267
EPA 6010B_Dissolved	268-318
EPA 6010B_Total	319-365
EPA 6020_Dissolved	366-459
EPA 6020_Total	460-500

February 29, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063053

RE: PG&E Topock - PCM, 30121866

Attention: Dan Bush

Enclosed are the results for sample(s) received on February 12, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30121866
Lab Order: N063053

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 218.6:

Dilution was necessary for samples N063053-014, -015 and -016 due to matrix interference. Samples were analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Samples were reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Because the results for total dissolved chromium (2.4 ug/L) and hexavalent chromium (170 ug/L) for sample N063053-007 (IRZ-21-157-Q124) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (190 ug/L) and hexavalent chromium (2.3 ug/L) for sample N063053-011 (IRZ-25-166-Q124) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Analytical Comments for EPA 300:

Dilution was necessary due to sample matrix.

Analytical Comments for EPA 6010B:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Iron in QC samples N063076-002B-MS1 and N063076-002B-MSD1 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Barium and Chromium in QC samples N063053-011CMS and N063053-011CMSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Because the results for total dissolved chromium (2.4 ug/L) and hexavalent chromium (170 ug/L) for sample N063053-007 (IRZ-21-157-Q124) are discrepant,, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 2.3 and 197 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (190 ug/L) and hexavalent chromium (2.3 ug/L) for sample N063053-011 (IRZ-25-166-Q124) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 186 and 2.7 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

ASSET Laboratories

Date: *29-Feb-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30121866
Lab Order: N063053
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063053-001A	IRZ-09-100-Q124	Groundwater	2/12/2024 11:30:00 AM	2/12/2024	2/29/2024
N063053-001B	IRZ-09-100-Q124	Groundwater	2/12/2024 11:30:00 AM	2/12/2024	2/29/2024
N063053-001C	IRZ-09-100-Q124	Groundwater	2/12/2024 11:30:00 AM	2/12/2024	2/29/2024
N063053-001D	IRZ-09-100-Q124	Groundwater	2/12/2024 11:30:00 AM	2/12/2024	2/29/2024
N063053-002A	IRZ-13D-210-Q124	Groundwater	2/12/2024 11:00:00 AM	2/12/2024	2/29/2024
N063053-002B	IRZ-13D-210-Q124	Groundwater	2/12/2024 11:00:00 AM	2/12/2024	2/29/2024
N063053-002C	IRZ-13D-210-Q124	Groundwater	2/12/2024 11:00:00 AM	2/12/2024	2/29/2024
N063053-002D	IRZ-13D-210-Q124	Groundwater	2/12/2024 11:00:00 AM	2/12/2024	2/29/2024
N063053-003A	MW-909-Q124	Groundwater	2/12/2024 10:45:00 AM	2/12/2024	2/29/2024
N063053-003B	MW-909-Q124	Groundwater	2/12/2024 10:45:00 AM	2/12/2024	2/29/2024
N063053-003C	MW-909-Q124	Groundwater	2/12/2024 10:45:00 AM	2/12/2024	2/29/2024
N063053-003D	MW-909-Q124	Groundwater	2/12/2024 10:45:00 AM	2/12/2024	2/29/2024
N063053-004A	IRZ-13S-095-Q124	Groundwater	2/12/2024 10:30:00 AM	2/12/2024	2/29/2024
N063053-004B	IRZ-13S-095-Q124	Groundwater	2/12/2024 10:30:00 AM	2/12/2024	2/29/2024
N063053-004C	IRZ-13S-095-Q124	Groundwater	2/12/2024 10:30:00 AM	2/12/2024	2/29/2024
N063053-004D	IRZ-13S-095-Q124	Groundwater	2/12/2024 10:30:00 AM	2/12/2024	2/29/2024
N063053-005A	IRZ-21-065-Q124	Groundwater	2/12/2024 10:00:00 AM	2/12/2024	2/29/2024
N063053-005B	IRZ-21-065-Q124	Groundwater	2/12/2024 10:00:00 AM	2/12/2024	2/29/2024
N063053-005C	IRZ-21-065-Q124	Groundwater	2/12/2024 10:00:00 AM	2/12/2024	2/29/2024
N063053-006A	MW-910-Q124	Groundwater	2/12/2024 9:45:00 AM	2/12/2024	2/29/2024
N063053-006B	MW-910-Q124	Groundwater	2/12/2024 9:45:00 AM	2/12/2024	2/29/2024
N063053-006C	MW-910-Q124	Groundwater	2/12/2024 9:45:00 AM	2/12/2024	2/29/2024
N063053-007A	IRZ-21-157-Q124	Groundwater	2/12/2024 9:30:00 AM	2/12/2024	2/29/2024
N063053-007B	IRZ-21-157-Q124	Groundwater	2/12/2024 9:30:00 AM	2/12/2024	2/29/2024
N063053-007C	IRZ-21-157-Q124	Groundwater	2/12/2024 9:30:00 AM	2/12/2024	2/29/2024
N063053-008A	IRZ-23-143-Q124	Groundwater	2/12/2024 8:30:00 AM	2/12/2024	2/29/2024
N063053-008B	IRZ-23-143-Q124	Groundwater	2/12/2024 8:30:00 AM	2/12/2024	2/29/2024
N063053-008C	IRZ-23-143-Q124	Groundwater	2/12/2024 8:30:00 AM	2/12/2024	2/29/2024
N063053-008D	IRZ-23-143-Q124	Groundwater	2/12/2024 8:30:00 AM	2/12/2024	2/29/2024

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30121866
Lab Order: N063053
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063053-009A	IRZ-25-100-Q124	Groundwater	2/12/2024 9:15:00 AM	2/12/2024	2/29/2024
N063053-009B	IRZ-25-100-Q124	Groundwater	2/12/2024 9:15:00 AM	2/12/2024	2/29/2024
N063053-009C	IRZ-25-100-Q124	Groundwater	2/12/2024 9:15:00 AM	2/12/2024	2/29/2024
N063053-010A	MW-911-Q124	Groundwater	2/12/2024 9:00:00 AM	2/12/2024	2/29/2024
N063053-010B	MW-911-Q124	Groundwater	2/12/2024 9:00:00 AM	2/12/2024	2/29/2024
N063053-010C	MW-911-Q124	Groundwater	2/12/2024 9:00:00 AM	2/12/2024	2/29/2024
N063053-011A	IRZ-25-166-Q124	Groundwater	2/12/2024 8:45:00 AM	2/12/2024	2/29/2024
N063053-011B	IRZ-25-166-Q124	Groundwater	2/12/2024 8:45:00 AM	2/12/2024	2/29/2024
N063053-011C	IRZ-25-166-Q124	Groundwater	2/12/2024 8:45:00 AM	2/12/2024	2/29/2024
N063053-012A	MW-75-033-Q124	Groundwater	2/12/2024 1:26:00 PM	2/12/2024	2/29/2024
N063053-013A	MW-75-117-Q124	Groundwater	2/12/2024 1:46:00 PM	2/12/2024	2/29/2024
N063053-014A	MW-75-202-Q124	Groundwater	2/12/2024 12:40:00 PM	2/12/2024	2/29/2024
N063053-015A	MW-75-267-Q124	Groundwater	2/12/2024 1:02:00 PM	2/12/2024	2/29/2024
N063053-016A	MW-75-337-Q124	Groundwater	2/12/2024 2:10:00 PM	2/12/2024	2/29/2024
N063053-017A	EB-719-Q124	Groundwater	2/12/2024 2:20:00 PM	2/12/2024	2/29/2024
N063053-018A	PTI-1D-Q124	Groundwater	2/12/2024 8:30:00 AM	2/12/2024	2/29/2024
N063053-018B	PTI-1D-Q124	Groundwater	2/12/2024 8:30:00 AM	2/12/2024	2/29/2024
N063053-018C	PTI-1D-Q124	Groundwater	2/12/2024 8:30:00 AM	2/12/2024	2/29/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-09-100-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 11:30:00 AM
Lab ID:	N063053-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240213A**	QC Batch: **R181554**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	15	0.19	1.0		µg/L	5	2/13/2024 02:19 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-13D-210-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 11:00:00 AM
Lab ID:	N063053-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240213A**	QC Batch: **R181554**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	250	1.9	10		µg/L	50	2/13/2024 11:27 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-909-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 10:45:00 AM
Lab ID:	N063053-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240213A**	QC Batch: **R181554**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	260	1.9	10		µg/L	50	2/13/2024 10:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-13S-095-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 10:30:00 AM
Lab ID:	N063053-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240213A**	QC Batch: **R181554**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	23	0.39	2.0		µg/L	10	2/13/2024 02:38 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-21-065-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 10:00:00 AM
Lab ID:	N063053-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
EPA 218.6							
RunID: **NV00922-IC7_240213A** QC Batch: **R181554** PrepDate: Analyst: **RAB**							
Hexavalent Chromium	0.61	0.039	0.20		µg/L	1	2/13/2024 01:02 PM
DISSOLVED METALS BY ICP-MS							
EPA 3010A **EPA 6020**							
RunID: **NV00922-ICP8_240213D** QC Batch: **106782** PrepDate: **2/13/2024** Analyst: **DJ**							
Chromium	1.2	0.035	1.0		µg/L	1	2/13/2024 10:02 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-910-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 9:45:00 AM
Lab ID:	N063053-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
EPA 218.6							
RunID: **NV00922-IC7_240213A** QC Batch: **R181554** PrepDate: Analyst: **RAB**							
Hexavalent Chromium	0.61	0.039	0.20		µg/L	1	2/13/2024 01:23 PM
DISSOLVED METALS BY ICP-MS							
EPA 3010A **EPA 6020**							
RunID: **NV00922-ICP8_240213D** QC Batch: **106782** PrepDate: **2/13/2024** Analyst: **DJ**							
Chromium	ND	0.035	1.0		µg/L	1	2/13/2024 10:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-21-157-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 9:30:00 AM
Lab ID:	N063053-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
EPA 218.6							
RunID: **NV00922-IC7_240213A** QC Batch: **R181554** PrepDate: Analyst: **RAB**							
Hexavalent Chromium	170	0.77	4.0		µg/L	20	2/13/2024 10:19 PM
DISSOLVED METALS BY ICP-MS							
EPA 3010A **EPA 6020**							
RunID: **NV00922-ICP8_240213D** QC Batch: **106782** PrepDate: **2/13/2024** Analyst: **DJ**							
Chromium	2.4	0.035	1.0		µg/L	1	2/13/2024 10:11 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-23-143-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 8:30:00 AM
Lab ID:	N063053-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240213A**	QC Batch: **R181554**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	520	3.9	20		µg/L	100	2/13/2024 12:43 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-25-100-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 9:15:00 AM
Lab ID:	N063053-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
EPA 218.6							
RunID: **NV00922-IC7_240213A** QC Batch: **R181554** PrepDate: Analyst: **RAB**							
Hexavalent Chromium	130	0.77	4.0		µg/L	20	2/13/2024 04:20 PM
DISSOLVED METALS BY ICP-MS							
EPA 3010A **EPA 6020**							
RunID: **NV00922-ICP8_240213D** QC Batch: **106782** PrepDate: **2/13/2024** Analyst: **DJ**							
Chromium	130	0.035	1.0		µg/L	1	2/13/2024 10:35 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-911-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 9:00:00 AM
Lab ID:	N063053-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
EPA 218.6							
RunID: **NV00922-IC7_240213A** QC Batch: **R181554** PrepDate: Analyst: **RAB**							
Hexavalent Chromium	110	0.77	4.0		µg/L	20	2/13/2024 04:39 PM
DISSOLVED METALS BY ICP-MS							
EPA 3010A **EPA 6020**							
RunID: **NV00922-ICP8_240213D** QC Batch: **106782** PrepDate: **2/13/2024** Analyst: **DJ**							
Chromium	130	0.035	1.0		µg/L	1	2/13/2024 10:39 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-25-166-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 8:45:00 AM
Lab ID:	N063053-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
EPA 218.6							
RunID: **NV00922-IC7_240213A** QC Batch: **R181554** PrepDate: Analyst: **RAB**							
Hexavalent Chromium	2.3	0.039	0.20		µg/L	1	2/13/2024 11:46 AM
DISSOLVED METALS BY ICP-MS							
EPA 3010A **EPA 6020**							
RunID: **NV00922-ICP8_240214C** QC Batch: **106782** PrepDate: **2/13/2024** Analyst: **DJ**							
Chromium	190	0.35	10		µg/L	10	2/14/2024 07:45 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-75-033-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 1:26:00 PM
Lab ID:	N063053-012	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240213A**	QC Batch: **R181554**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	99	0.77	4.0		µg/L	20	2/13/2024 10:38 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-75-117-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 1:46:00 PM
Lab ID:	N063053-013	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240213A**	QC Batch: **R181554**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	19	0.19	1.0		µg/L	5	2/13/2024 03:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-75-202-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 12:40:00 PM
Lab ID:	N063053-014	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240213A**	QC Batch: **R181554**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/13/2024 06:33 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-75-267-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 1:02:00 PM
Lab ID:	N063053-015	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240213A**	QC Batch: **R181554**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/13/2024 06:52 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-75-337-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 2:10:00 PM
Lab ID:	N063053-016	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240213A**	QC Batch: **R181554**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/13/2024 07:11 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-719-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 2:20:00 PM
Lab ID:	N063053-017	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240213A**	QC Batch: **R181554**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/13/2024 08:08 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PTI-1D-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 8:30:00 AM
Lab ID:	N063053-018	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240213A**	QC Batch: **R181554**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	4.3	0.19	1.0		µg/L	5	2/13/2024 07:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R181554**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **PBW**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691862**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R181554**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **LCSW**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691863**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.886	0.20	5.000	0	97.7	90	110				

Sample ID: **N063053-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691864**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	501.635	10	250.0	251.0	100	90	110				

Sample ID: **N063053-002ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691866**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	249.360	10						251.0	0.648	20	

Sample ID: **N063053-011AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691868**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.187	0.20	1.000	2.254	93.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063053-011AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181554**
Client ID: **ZZZZZZ** Batch ID: **R181554** TestNo: **EPA 218.6** Analysis Date: **2/13/2024** SeqNo: **5691872**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.170	0.20	1.000	2.254	91.7	90	110	3.187	0.541	20	

Sample ID: **N063053-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181554**
Client ID: **ZZZZZZ** Batch ID: **R181554** TestNo: **EPA 218.6** Analysis Date: **2/13/2024** SeqNo: **5691874**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.641	0.20	1.000	0.6081	103	90	110				

Sample ID: **N063053-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181554**
Client ID: **ZZZZZZ** Batch ID: **R181554** TestNo: **EPA 218.6** Analysis Date: **2/13/2024** SeqNo: **5691876**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.643	0.20	1.000	0.6063	104	90	110				

Sample ID: **N063053-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181554**
Client ID: **ZZZZZZ** Batch ID: **R181554** TestNo: **EPA 218.6** Analysis Date: **2/13/2024** SeqNo: **5691880**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	40.151	1.0	25.00	14.93	101	90	110				

Sample ID: **N063053-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181554**
Client ID: **ZZZZZZ** Batch ID: **R181554** TestNo: **EPA 218.6** Analysis Date: **2/13/2024** SeqNo: **5691882**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	73.337	2.0	50.00	23.32	100	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063053-013AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691884**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	43.231	1.0	25.00	18.76	97.9	90	110				

Sample ID: **N063001-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691886**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.855	1.0	5.000	0	97.1	90	110				

Sample ID: **N063053-009AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691890**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	226.614	4.0	100.0	126.2	100	90	110				

Sample ID: **N063053-010AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691892**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	212.512	4.0	100.0	111.0	101	90	110				

Sample ID: **N063053-014AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691896**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.852	1.0	5.000	0	97.0	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063053-015AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691898**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.835	1.0	5.000	0	96.7	90	110				

Sample ID: **N063053-016AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691900**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.346	1.0	5.000	0	107	90	110				

Sample ID: **N063053-018AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691902**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.435	1.0	5.000	4.306	103	90	110				

Sample ID: **N063053-017AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691906**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.031	0.20	1.000	0	103	90	110				

Sample ID: **N063053-008AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691907**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1023.830	20	500.0	516.9	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063053-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181554**
Client ID: **ZZZZZZ** Batch ID: **R181554** TestNo: **EPA 218.6** Analysis Date: **2/13/2024** SeqNo: **5691911**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	513.490	10	250.0	255.4	103	90	110				

Sample ID: **N063053-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181554**
Client ID: **ZZZZZZ** Batch ID: **R181554** TestNo: **EPA 218.6** Analysis Date: **2/13/2024** SeqNo: **5691913**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	274.880	4.0	100.0	171.1	104	90	110				

Sample ID: **N063053-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181554**
Client ID: **ZZZZZZ** Batch ID: **R181554** TestNo: **EPA 218.6** Analysis Date: **2/13/2024** SeqNo: **5691915**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	199.116	4.0	100.0	98.73	100	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **MB-106782**	SampType: **MBLK**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/13/2024**	RunNo: **181516**
Client ID: **PBW**	Batch ID: **106782**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/13/2024**	SeqNo: **5690067**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID: **LCS-106782**	SampType: **LCS**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/13/2024**	RunNo: **181516**
Client ID: **LCSW**	Batch ID: **106782**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/13/2024**	SeqNo: **5690068**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	11.067	1.0	10.00	0	111	85	115				

Sample ID: **N063053-011CMS**	SampType: **MS**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/13/2024**	RunNo: **181562**
Client ID: **ZZZZZZ**	Batch ID: **106782**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/14/2024**	SeqNo: **5692400**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	225.922	10	10.00	191.1	348	75	125				S

Sample ID: **N063053-011CMSD**	SampType: **MSD**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/13/2024**	RunNo: **181562**
Client ID: **ZZZZZZ**	Batch ID: **106782**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/14/2024**	SeqNo: **5692401**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	206.242	10	10.00	191.1	151	75	125	225.9	9.11	20	S

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **N063053-011C-PS** SampType: **PS** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **181562**
Client ID: **ZZZZZZ** Batch ID: **106782** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/14/2024** SeqNo: **5692399**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	290.634	10	100.0	191.1	99.5	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-09-100-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 11:30:00 AM
Lab ID:	N063053-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Sulfate	440	17	25		mg/L	50	2/13/2024 05:06 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Nitrate as N	1.3	0.24	0.50		mg/L	10	2/13/2024 11:45 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit	
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified	
	DO	Surrogate Diluted Out			

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-13D-210-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 11:00:00 AM
Lab ID:	N063053-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Sulfate	620	34	50		mg/L	100	2/13/2024 04:51 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Nitrate as N	0.74	0.24	0.50		mg/L	10	2/13/2024 12:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-909-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 10:45:00 AM
Lab ID:	N063053-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Sulfate	610	17	25		mg/L	50	2/13/2024 05:21 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Nitrate as N	0.79	0.24	0.50		mg/L	10	2/13/2024 12:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-13S-095-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 10:30:00 AM
Lab ID:	N063053-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Sulfate	380	17	25		mg/L	50	2/13/2024 05:37 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Nitrate as N	1.6	0.24	0.50		mg/L	10	2/13/2024 01:01 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-21-065-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 10:00:00 AM
Lab ID:	N063053-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Sulfate	370	17	25		mg/L	50	2/13/2024 05:52 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/13/2024 10:59 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-910-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 9:45:00 AM
Lab ID:	N063053-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Sulfate	370	17	25		mg/L	50	2/13/2024 06:07 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/13/2024 11:14 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-21-157-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 9:30:00 AM
Lab ID:	N063053-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Sulfate	350	17	25		mg/L	50	2/13/2024 06:22 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Nitrate as N	0.58	0.24	0.50		mg/L	10	2/13/2024 11:29 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-23-143-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 8:30:00 AM
Lab ID:	N063053-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Sulfate	440	17	25		mg/L	50	2/13/2024 04:05 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Nitrate as N	2.8	0.24	0.50		mg/L	10	2/13/2024 10:25 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-25-100-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 9:15:00 AM
Lab ID:	N063053-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Sulfate	340	17	25		mg/L	50	2/13/2024 07:08 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Nitrate as N	1.1	0.24	0.50		mg/L	10	2/13/2024 01:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-911-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 9:00:00 AM
Lab ID:	N063053-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Sulfate	330	17	25		mg/L	50	2/13/2024 07:24 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Nitrate as N	1.0	0.24	0.50		mg/L	10	2/13/2024 01:32 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-25-166-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 8:45:00 AM
Lab ID:	N063053-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Sulfate	380	17	25		mg/L	50	2/13/2024 02:48 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240213A**	QC Batch: **R181486**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/13/2024 10:41 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **MB-R181486_SO4**	SampType: **MBLK**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **181486**			
Client ID: **PBW**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**			SeqNo: **5688920**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **LCS-R181486_SO4**	SampType: **LCS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **181486**			
Client ID: **LCSW**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**			SeqNo: **5688921**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.936	0.50	4.000	0	98.4	90	110				

Sample ID: **N063053-011BMS**	SampType: **MS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **181486**			
Client ID: **ZZZZZZ**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**			SeqNo: **5688925**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	574.965	25	200.0	381.9	96.5	80	120				

Sample ID: **N063053-011BMSD**	SampType: **MSD**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **181486**			
Client ID: **ZZZZZZ**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**			SeqNo: **5688926**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	578.480	25	200.0	381.9	98.3	80	120	575.0	0.609	20	

Sample ID: **N063053-008BDUP**	SampType: **DUP**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **181486**			
Client ID: **ZZZZZZ**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**			SeqNo: **5688930**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	446.305	25						443.3	0.671	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **N063053-008BMS**	SampType: **MS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:				RunNo: **181486**			
Client ID: **ZZZZZZ**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**				SeqNo: **5688931**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	639.235	25	200.0	443.3	98.0	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **MB-R181486_NO3**	SampType: **MBLK**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **PBW**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**	SeqNo: **5688891**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **LCS-R181486_NO3**	SampType: **LCS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **LCSW**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**	SeqNo: **5688892**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.230	0.050	1.250	0	98.4	90	110				

Sample ID: **N063053-011BMS**	SampType: **MS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **ZZZZZZ**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**	SeqNo: **5688906**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	11.955	0.50	12.50	0	95.6	80	120				

Sample ID: **N063053-011BMSD**	SampType: **MSD**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **ZZZZZZ**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**	SeqNo: **5688907**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	11.969	0.50	12.50	0	95.8	80	120	11.96	0.117	20	

Sample ID: **N063053-008BDUP**	SampType: **DUP**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **ZZZZZZ**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**	SeqNo: **5688908**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	2.812	0.50						2.841	1.03	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **N063053-008BMS** SampType: **MS** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **181486**
Client ID: **ZZZZZZ** Batch ID: **R181486** TestNo: **EPA 300.0** Analysis Date: **2/13/2024** SeqNo: **5688909**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	14.825	0.50	12.50	2.841	95.9	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-09-100-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 11:30:00 AM
Lab ID:	N063053-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240214A**	QC Batch: **106783**			PrepDate:		**2/13/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	2/14/2024 12:32 PM
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240214B**	QC Batch: **106786**			PrepDate:		**2/14/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	2/14/2024 02:31 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-13D-210-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 11:00:00 AM
Lab ID:	N063053-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240216C**	QC Batch: **106859**			PrepDate:		**2/16/2024**	Analyst: **DJ**
Iron	27	13	20		µg/L	1	2/16/2024 04:03 PM
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240216D**	QC Batch: **106860**			PrepDate:		**2/15/2024**	Analyst: **DJ**
Iron	38	13	20		µg/L	1	2/16/2024 05:33 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-909-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 10:45:00 AM
Lab ID:	N063053-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240214A**	QC Batch: **106783**			PrepDate:		**2/13/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	2/14/2024 12:49 PM
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240214B**	QC Batch: **106786**			PrepDate:		**2/14/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	2/14/2024 03:09 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-13S-095-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 10:30:00 AM
Lab ID:	N063053-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240214A**	QC Batch: **106783**			PrepDate:		**2/13/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	2/14/2024 12:54 PM
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240214B**	QC Batch: **106786**			PrepDate:		**2/14/2024**	Analyst: **DJ**
Iron	24	13	20		µg/L	1	2/14/2024 03:15 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-21-065-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 10:00:00 AM
Lab ID:	N063053-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240214A**	QC Batch: **106783**				PrepDate:	**2/13/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	2/14/2024 01:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-910-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 9:45:00 AM
Lab ID:	N063053-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240214A**	QC Batch: **106783**				PrepDate:	**2/13/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	2/14/2024 01:05 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-21-157-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 9:30:00 AM
Lab ID:	N063053-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240214A**	QC Batch: **106783**				PrepDate:	**2/13/2024**	Analyst: **DJ**
Iron	60	13	20		µg/L	1	2/14/2024 01:11 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-23-143-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 8:30:00 AM
Lab ID:	N063053-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240214A**	QC Batch: **106783**			PrepDate:		**2/13/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	2/14/2024 01:16 PM
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240214B**	QC Batch: **106786**			PrepDate:		**2/14/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	2/14/2024 03:20 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-25-100-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 9:15:00 AM
Lab ID:	N063053-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240214A**	QC Batch: **106783**				PrepDate:	**2/13/2024**	Analyst: **DJ**
Iron	330	13	20		µg/L	1	2/14/2024 01:21 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-911-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 9:00:00 AM
Lab ID:	N063053-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240214A**	QC Batch: **106783**				PrepDate:	**2/13/2024**	Analyst: **DJ**
Iron	210	13	20		µg/L	1	2/14/2024 01:26 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-25-166-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 8:45:00 AM
Lab ID:	N063053-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240214A**	QC Batch: **106783**				PrepDate:	**2/13/2024**	Analyst: **DJ**
Iron	34	13	20		µg/L	1	2/14/2024 01:32 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PTI-1D-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 8:30:00 AM
Lab ID:	N063053-018	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240214A**	QC Batch: **106783**			PrepDate:		**2/13/2024**	Analyst: **DJ**
Iron	110	13	20		µg/L	1	2/14/2024 02:18 PM
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240214B**	QC Batch: **106786**			PrepDate:		**2/14/2024**	Analyst: **DJ**
Iron	130	13	20		µg/L	1	2/14/2024 03:25 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-106783**	SampType: **MBLK**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/13/2024**	RunNo: **181521**
Client ID: **PBW**	Batch ID: **106783**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/14/2024**	SeqNo: **5690362**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS-106783**	SampType: **LCS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/13/2024**	RunNo: **181521**
Client ID: **LCSW**	Batch ID: **106783**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/14/2024**	SeqNo: **5690363**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	108.830	20	100.0	0	109	85	115				

Sample ID: **N063053-011CMS**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/13/2024**	RunNo: **181521**
Client ID: **ZZZZZZ**	Batch ID: **106783**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/14/2024**	SeqNo: **5690383**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	128.841	20	100.0	33.67	95.2	75	125				

Sample ID: **N063053-011CMSD**	SampType: **MSD**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/13/2024**	RunNo: **181521**
Client ID: **ZZZZZZ**	Batch ID: **106783**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/14/2024**	SeqNo: **5690384**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	126.462	20	100.0	33.67	92.8	75	125	128.8	1.86	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-106859**	SampType: **MBLK**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/16/2024**	RunNo: **181618**
Client ID: **PBW**	Batch ID: **106859**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5695389**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **N063076-002B-MS1**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/16/2024**	RunNo: **181618**
Client ID: **ZZZZZZ**	Batch ID: **106859**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5695396**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	988.032	20	100.0	933.9	54.1	75	125				S

Sample ID: **N063076-002B-MSD**	SampType: **MSD**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/16/2024**	RunNo: **181618**
Client ID: **ZZZZZZ**	Batch ID: **106859**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5695397**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1002.047	20	100.0	933.9	68.2	75	125	988.0	1.41	20	S

Sample ID: **LCS1-106859**	SampType: **LCS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/16/2024**	RunNo: **181618**
Client ID: **LCSW**	Batch ID: **106859**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5695405**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	90.386	20	100.0	0	90.4	85	115				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID: **MB-106786**	SampType: **MBLK**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date: **2/14/2024**	RunNo: **181524**
Client ID: **PBW**	Batch ID: **106786**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/14/2024**	SeqNo: **5690507**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS-106786**	SampType: **LCS**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date: **2/14/2024**	RunNo: **181524**
Client ID: **LCSW**	Batch ID: **106786**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/14/2024**	SeqNo: **5690508**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	107.377	20	100.0	0	107	85	115				

Sample ID: **N063053-001D-MS**	SampType: **MS**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date: **2/14/2024**	RunNo: **181524**
Client ID: **ZZZZZZ**	Batch ID: **106786**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/14/2024**	SeqNo: **5690514**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	109.381	20	100.0	19.35	90.0	75	125				

Sample ID: **N063053-001D-MSD**	SampType: **MSD**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date: **2/14/2024**	RunNo: **181524**
Client ID: **ZZZZZZ**	Batch ID: **106786**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/14/2024**	SeqNo: **5690515**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	112.269	20	100.0	19.35	92.9	75	125	109.4	2.61	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID: **MB-106860**	SampType: **MBLK**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date: **2/15/2024**	RunNo: **181631**
Client ID: **PBW**	Batch ID: **106860**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5696005**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS-106860**	SampType: **LCS**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date: **2/15/2024**	RunNo: **181631**
Client ID: **LCSW**	Batch ID: **106860**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5696006**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	92.306	20	100.0	0	92.3	85	115				

Sample ID: **N063103-010C-MS**	SampType: **MS**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date: **2/15/2024**	RunNo: **181631**
Client ID: **ZZZZZZ**	Batch ID: **106860**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5696015**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	158.193	20	100.0	43.61	115	75	125				

Sample ID: **N063103-010C-MSD**	SampType: **MSD**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date: **2/15/2024**	RunNo: **181631**
Client ID: **ZZZZZZ**	Batch ID: **106860**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5696016**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	145.393	20	100.0	43.61	102	75	125	158.2	8.43	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N063076-002B-PS**	SampType: **PS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **ZZZZZZ**	Batch ID: **106859**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5695395**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1016.456	20	100.0	933.9	82.6	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-09-100-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 11:30:00 AM
Lab ID:	N063053-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240213C**	QC Batch: **106782**				PrepDate:	**2/13/2024**	Analyst: **DJ**
Manganese	2.5	0.026	0.50		µg/L	1	2/13/2024 09:44 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-13D-210-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 11:00:00 AM
Lab ID:	N063053-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240213C**	QC Batch: **106782**			PrepDate:	**2/13/2024**		Analyst: **DJ**
Manganese	1.2	0.026	0.50		µg/L	1	2/13/2024 09:48 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-909-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 10:45:00 AM
Lab ID:	N063053-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240213C**	QC Batch: **106782**				PrepDate:	**2/13/2024**	Analyst: **DJ**
Manganese	0.54	0.026	0.50		µg/L	1	2/13/2024 09:53 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-13S-095-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 10:30:00 AM
Lab ID:	N063053-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240213C**	QC Batch: **106782**			PrepDate:	**2/13/2024**		Analyst: **DJ**
Manganese	ND	0.026	0.50		µg/L	1	2/13/2024 09:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-21-065-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 10:00:00 AM
Lab ID:	N063053-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240213C**	QC Batch: **106782**				PrepDate:	**2/13/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/13/2024 10:02 PM
Barium	140	0.083	1.0		µg/L	1	2/13/2024 10:02 PM
Manganese	320	0.26	5.0		µg/L	10	2/14/2024 07:35 PM
Molybdenum	15	0.12	0.50		µg/L	1	2/13/2024 10:02 PM
Selenium	ND	0.044	0.50		µg/L	1	2/13/2024 10:02 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-910-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 9:45:00 AM
Lab ID:	N063053-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240213C**	QC Batch: **106782**				PrepDate:	**2/13/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/13/2024 10:07 PM
Barium	150	0.083	1.0		µg/L	1	2/13/2024 10:07 PM
Manganese	500	0.26	5.0		µg/L	10	2/14/2024 07:40 PM
Molybdenum	15	0.12	0.50		µg/L	1	2/13/2024 10:07 PM
Selenium	ND	0.044	0.50		µg/L	1	2/13/2024 10:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-21-157-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 9:30:00 AM
Lab ID:	N063053-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240213C**	QC Batch: **106782**				PrepDate:	**2/13/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/13/2024 10:11 PM
Barium	50	0.083	1.0		µg/L	1	2/13/2024 10:11 PM
Manganese	55	0.026	0.50		µg/L	1	2/13/2024 10:11 PM
Molybdenum	15	0.12	0.50		µg/L	1	2/13/2024 10:11 PM
Selenium	ND	0.044	0.50		µg/L	1	2/13/2024 10:11 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-23-143-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 8:30:00 AM
Lab ID:	N063053-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240213C**	QC Batch: **106782**			PrepDate:	**2/13/2024**		Analyst: **DJ**
Manganese	ND	0.026	0.50		µg/L	1	2/13/2024 10:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	IRZ-25-100-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 9:15:00 AM
Lab ID:	N063053-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240213C**	QC Batch: **106782**			PrepDate:		**2/13/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/13/2024 10:35 PM
Barium	140	0.083	1.0		µg/L	1	2/13/2024 10:35 PM
Manganese	26	0.026	0.50		µg/L	1	2/13/2024 10:35 PM
Molybdenum	9.1	0.12	0.50		µg/L	1	2/13/2024 10:35 PM
Selenium	0.62	0.044	0.50		µg/L	1	2/13/2024 10:35 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-911-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 9:00:00 AM
Lab ID:	N063053-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A			**EPA 6020**			
RunID: **NV00922-ICP8_240213C**	QC Batch: **106782**			PrepDate:		**2/13/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/13/2024 10:39 PM
Barium	140	0.083	1.0		µg/L	1	2/13/2024 10:39 PM
Manganese	19	0.026	0.50		µg/L	1	2/13/2024 10:39 PM
Molybdenum	9.4	0.12	0.50		µg/L	1	2/13/2024 10:39 PM
Selenium	0.63	0.044	0.50		µg/L	1	2/13/2024 10:39 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT: ARCADIS U.S., Inc. - California
Client Sample ID: IRZ-25-166-Q124
Lab Order: N063053
Project: PG&E Topock - PCM, 30121866
Collection Date: 2/12/2024 8:45:00 AM
Lab ID: N063053-011
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A			**EPA 6020**			
RunID: **NV00922-ICP8_240213C**	QC Batch: **106782**			PrepDate:		**2/13/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/13/2024 10:44 PM
Barium	150	0.083	1.0		µg/L	1	2/13/2024 10:44 PM
Manganese	8.2	0.026	0.50		µg/L	1	2/13/2024 10:44 PM
Molybdenum	4.3	0.12	0.50		µg/L	1	2/13/2024 10:44 PM
Selenium	0.81	0.044	0.50		µg/L	1	2/13/2024 10:44 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PTI-1D-Q124
Lab Order:	N063053		
Project:	PG&E Topock - PCM, 30121866	**Collection Date:**	2/12/2024 8:30:00 AM
Lab ID:	N063053-018	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240214B**	QC Batch: **106782**			PrepDate:	**2/13/2024**		Analyst: **DJ**
Manganese	810	0.26	5.0		µg/L	10	2/14/2024 08:08 PM
TOTAL METALS BY ICPMS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240215B**	QC Batch: **106858**			PrepDate:	**2/15/2024**		Analyst: **DJ**
Manganese	820	0.26	5.0		µg/L	10	2/15/2024 08:35 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **MB-106782** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/13/2024** RunNo: **181512**
Client ID: **PBW** Batch ID: **106782** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/13/2024** SeqNo: **5689901**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID: **LCS-106782** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/13/2024** RunNo: **181512**
Client ID: **LCSW** Batch ID: **106782** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/13/2024** SeqNo: **5689902**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.523	0.10	10.00	0	105	85	115				
Barium	10.784	1.0	10.00	0	108	85	115				
Manganese	101.568	0.50	100.0	0	102	85	115				
Molybdenum	10.274	0.50	10.00	0	103	85	115				
Selenium	10.002	0.50	10.00	0	100	85	115				

Sample ID: **N063053-011CMS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/13/2024** RunNo: **181512**
Client ID: **ZZZZZZ** Batch ID: **106782** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/13/2024** SeqNo: **5689918**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	8.059	0.10	10.00	0	80.6	75	125				
Barium	173.449	1.0	10.00	154.8	187	75	125				S
Manganese	103.368	0.50	100.0	8.232	95.1	75	125				
Molybdenum	15.412	0.50	10.00	4.279	111	75	125				
Selenium	10.605	0.50	10.00	0.8128	97.9	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063053-011CMSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/13/2024** RunNo: **181512**
Client ID: **ZZZZZZ** Batch ID: **106782** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/13/2024** SeqNo: **5689919**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	8.164	0.10	10.00	0	81.6	75	125	8.059	1.31	20	
Barium	172.879	1.0	10.00	154.8	181	75	125	173.4	0.329	20	S
Manganese	102.892	0.50	100.0	8.232	94.7	75	125	103.4	0.461	20	
Molybdenum	15.804	0.50	10.00	4.279	115	75	125	15.41	2.51	20	
Selenium	10.551	0.50	10.00	0.8128	97.4	75	125	10.61	0.510	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_TPK

Sample ID: **MB-106858**	SampType: **MBLK**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date: **2/15/2024**	RunNo: **181603**
Client ID: **PBW**	Batch ID: **106858**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/15/2024**	SeqNo: **5693871**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	0.046	0.50									

Sample ID: **LCS-106858**	SampType: **LCS**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date: **2/15/2024**	RunNo: **181603**
Client ID: **LCSW**	Batch ID: **106858**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/15/2024**	SeqNo: **5693872**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	104.035	0.50	100.0	0	104	85	115				

Sample ID: **N063053-018C-MS**	SampType: **MS**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date: **2/15/2024**	RunNo: **181603**
Client ID: **ZZZZZZ**	Batch ID: **106858**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/15/2024**	SeqNo: **5693880**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	905.174	5.0	100.0	821.9	83.3	75	125				

Sample ID: **N063053-018C-MSD**	SampType: **MSD**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date: **2/15/2024**	RunNo: **181603**
Client ID: **ZZZZZZ**	Batch ID: **106858**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/15/2024**	SeqNo: **5693884**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	909.894	5.0	100.0	821.9	88.0	75	125	905.2	0.520	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063053-011C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **ZZZZZZ** Batch ID: **106782** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/13/2024** SeqNo: **5689917**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	7.895	0.10	10.00	0	78.9	80	120				S
Barium	174.029	1.0	10.00	154.8	193	80	120				S
Manganese	102.579	0.50	100.0	8.232	94.3	80	120				
Molybdenum	15.555	0.50	10.00	4.279	113	80	120				
Selenium	10.759	0.50	10.00	0.8128	99.5	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SAMPLE RECEIVING ITEMS

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

CHAIN OF CUSTODY RECORD

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement: Excel EDD; Geotracker; Labspec; Others ✓ (Specify: RWQCB); Global ID:
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	QA/QC: RTNE; RWQCB ✓; CalTrans; LEVEL III; LEVEL IV; Regulatory; Specify State:
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.moore@critigen.com	Address:	Sample Receipt Condition: 1. Chilled Y; 2. Headspace; 3. Container Intact N; 4. Seal Present; 5. IR number 3; 6. Method of Cooling: ICE; Sample Temp: 4.5, 1.4°C
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com P.O.#	Courier: ASSET; Tracking No.:
Submitted By: Kevin A.	Phone: 916-786-3302 Fax:	Phone: 949-727-1400. ext 200 Fax:	
Title: Other Operator	Sampled By: Kevin A.		
Signature: Date: 2/12/24	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may		
I hereby authorize ASSET Labs to perform the tests indicated below	Signature: Date: 2/12/24		
Project Name: PG&E Topock - PCM			
Project Number: 30121866			

Matrix: Ground X; Potable; NPDES; Surface; Sediment; Soil; Other Solid

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly)	Nitrate, sulfate (EPA 300.0) (1 L poly)	Dissolved metals (SW6020) FF; HNO3 Iron, Manganese (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Arsenic, Barium, Molybdenum, Selenium (500mL poly)	Total metals (SW6010) No filter; HNO3 Total Iron (500mL poly)	Total metals (SW6010) No filter; HNO3 Total Iron, Potassium, Sodium, Calcium, magnesium, Manganese (500mL poly)	Nitrite as Nitrogen, bromide, chloride, fluoride (EPA 300) (1 L poly)	Alkalinity, Total as CaCO3 (SM 2320B) (1 L poly)	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063053-001	IRZ-09-100-Q124	2/12/24	1130		X	X	X			X				E	4	P	BNS	
2	-002	IRZ-13D-210-Q124	2/12/24	1100		X	X	X			X				E	4	P	BNS	
3	-003	MW-909-Q124	2/12/24	1045		X	X	X			X				E	4	P	BNS	
4	-004	IRZ-13S-095-Q124	2/12/24	1030		X	X	X			X				E	4	P	BNS	
5	-005	IRZ-21-065-Q124	2/12/24	1000		X	X	X	X	X					E	3	P	BNS	
6	-006	MW-910-Q124	2/12/24	0945		X	X	X	X	X					E	3	P	BNS	
7	-007	IRZ-21-157-Q124	2/12/24	0930		X	X	X							E	3	P	BNS	
8	-008	IRZ-23-143-Q124	2/12/24	0830		X	X	X			X				E	4	P	BNS	
9	-009	IRZ-25-100-Q124	2/12/24	0915		X	X	X	X	X					E	3	P	BNS	
10	-010	MW-911-Q124	2/12/24	0900		X	X	X	X	X					E	3	P	BNS	
11	-011	IRZ-25-166-Q124	2/12/24	0845		X	X	X	X	X					E	3	P	BNS	MSMSD
12																			
13																			
14																			

Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:
Kevin Ardley	2/12/24 1425	MACHINE	2/12/24@1425
Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:
	2/12/24@1650	Chara Clinton	2/12/24 1650
Relinquished by (Signature and Printed Name)	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:

Turn Around Time (TAT)

- A = < 24 Hrs or Same Day TAT
- B = Next Workday
- C = 2 Workdays
- D = 3 Workdays
- X E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms

1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
   Less than 24 Hrs.=200% NextDay=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

White=Laboratory Copy

Preservatives:

H=HCL	N=HNO_3	S=H_2SO_4	C=4°C
Z=$Zn(AC)_2$	O=NaOH	T=$Na_2S_2O_3$	
Others/Specify:	B (NH4)2SO4/NH4OH		

Container Type:

T=Tube	V=VOA	P=Pint
J=Jar	B=Tedlar	G=Glass
M=Metal	M=Metal	C=Can

Yellow=Customer's Copy

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ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement: Excel EDD; Geotracker; Labspec; Others ✓; Specify: RWQCB; Global ID:
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	QA/QC: RTNE; RWQCB ✓; CalTrans; LEVEL III; LEVEL IV; Regulatory; Specify State:
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.meore@critigeo.com	Address:	Sample Receipt Condition: 1. Chilled Y; 2. Headspace; 3. Container Intact Y; 4. Seal Present Y; 5. IR number 3; 6. Method of Cooling: ICE; Sample Temp: 5.8°C
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com P.O.#	
Submitted By: Reggie Tep	Phone: 916-786-3302 Fax:	Phone: 949-727-1400, ext 200 Fax:	
Title: Field Tech			
Signature: Date: 02/12/24	Sampled By: Reggie Tep		
I hereby authorize ASSET Labs to perform the tests indicated below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for		
Project Name: PG&E Topock - PCM	Signature: Date: 02/12/24		
Project Number: 30121866			

Matrix: Ground X; Potable; NPDES; Surface; Sediment; Soil; Other Solid

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	250 mL poly: Cr(VI) FF (E218.6) (NH4)2. SO4, NH4, OH	1 L poly: Nitrate, sulfate (EPA 300.0)	500mL poly: Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese	500mL poly: Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium,	500mL poly: Dissolved metals (SW6020) FF; HNO3 Selenium, Molybdenum	3x40 mL VOA: Total Organic Carbon (SM5310C); H2SO4	1 L poly: Ammonia as Nitrogen (SM4500NH3D); H2SO4	125 mL poly: Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4	1 L poly: Nitrate (EPA 300.0)	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063053-012	MW-75-033-Q124	2/12/2024	1326		X									E	1	P	BNS	
2	-013	MW-75-117-Q124	2/12/2024	1346		X									E	1	P	BNS	
3	-014	MW-75-202-Q124	2/12/2024	1240		X									E	1	P	BNS	
4	-015	MW-75-267-Q124	2/12/2024	1302		X									E	1	P	BNS	
5	-016	MW-75-337-Q124	2/12/2024	1410		X									E	1	P	BNS	
6	-017	EB-719-Q124	2/12/2024	1420		X									E	1	P	BNS	
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			

Courier: ASSET
Tracking No.:

Relinquished by (Signature and Printed Name): Reggie Tep 02/12/24	Date/Time: 1430
Relinquished by (Signature and Printed Name): MB CARTIN	Date/Time: 2/12/24 1430
Relinquished by (Signature and Printed Name): Chara Cintron 2.12.24	Date/Time: 1650
Relinquished by (Signature ..nd Printed Name):	Date/Time:

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
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- [ ] D = 3 Workdays
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TAT Starts at 8 AM the following day if samples received after 3:00PM.

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7. Terms are not 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:

H=HCL	N=HNO_3	S=H_2SO_4	C=4°C
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$	
Others/Specify:	B	(NH4)2SO4/NH4OH	

Container Type:

T=Tube	V=VOA	P=Pint
J=Jar	B=Tedlar	G=Glass
M=Metal	M=Metal	C=Can

Yellow:Customer's Copy

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Page 1 of 1

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement: Excel EDD; Geotracker; Labspec; Others ✓; Specify: RWQCB; Global ID:
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	QA/QC: RTNE; RWQCB ✓; CalTrans; LEVEL III; LEVEL IV; Regulatory; Specify State:
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.moore@critigen.com	Address:	Sample Receipt Condition: 1. Chilled Y; 2. Headspace; 3. Container Intact; 4. Seal Present Y; 5. IR number 3; 6. Method of Cooling: ICE; Sample Temp: 4.5, 1.4°C
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com P.O.#	
Submitted By: Kevin A.	Phone: 916-786-3302 Fax:	Phone: 949-727-1400. ext 200 Fax:	
Title: OTM Operator			
Signature: Date: 2/12/24	Sampled By: MARK [illegible]		

I hereby authorize ASSET Labs to perform the tests indicated below.

I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may

Signature: Date: 2/12/24

Project Name: PG&E Topock - PCM

Project Number: 30121866

Matrix: Ground X; Sediment; Potable; Soil; NPDES; Other Solid; Surface

Courier: ASSET

Tracking No.:

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	250 mL poly: Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH	1 L poly: Nitrite, Nitrate, sulfate (EPA 300.0)	500mL poly: Dissolved metals (SW6020) FF; HNO3 Iron, Manganese	500mL poly: Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium,	500mL poly: Dissolved metals (SW6020) FF; HNO3 Selenium, Molybdenum	3x40 mL VOA: Total Organic Carbon (SM5310C); H2SO4	500mL poly: Total metals (SW6010) No filter; HNO3 Total Iron and manganese	125 mL poly: Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4	1 L poly: Nitrate, sulfate (EPA 300.0)	1 L poly: Nitrate (EPA 300.0)				Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063053-018	PTI-1D-Q124	2/12/24	0930		X		X				X							E	3	P	BNS	
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							
13																							
14																							

Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:
[illegible] Ashley	2/12/24 1425	[illegible]	2/12/24 1425
[illegible]	2/12/24 1650	Chara Clinton	2.12.24 1650
Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:

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Preservatives:

H=HCL	N=HNO_3	S=H_2SO_4	C=4°C
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$	
Others/Specify:	B (NH4)2SO4/NH4OH		

Container Type:

T=Tube	V=VOA	P=Pint
J=Jar	B=Tedlar	G=Glass
M=Metal	M=Metal	C=Can

White=Laboratory Copy

Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	2/12/2024	Workorder:	N063053
Rep sample Temp (Deg C):	4.5/1.4	IR Gun ID:	3

Temp Blank: ☑ Yes ☐ No

Carrier name: ASSET

Last 4 digits of Tracking No.: NA Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By YR YRodriguez 2/13/2024

Reviewed By: for: MBC 02/16/2024

ASSET Laboratories

WORK ORDER Summary

12-Feb-24

WorkOrder: N063053

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30121866 **QC Level:** Level IV **Date Received:** 2/12/2024 4:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063053-001A	IRZ-09-100-Q124	2/12/2024 11:30:00 AM	2/27/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063053-001B			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063053-001C			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063053-001D			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N063053-002A	IRZ-13D-210-Q124	2/12/2024 11:00:00 AM	2/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063053-002B			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063053-002C			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063053-002D			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N063053-003A	MW-909-Q124	2/12/2024 10:45:00 AM	2/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063053-003B			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063053-003C			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW

WORK ORDER Summary

12-Feb-24

WorkOrder: N063053

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30121866 **QC Level:** Level IV **Date Received:** 2/12/2024 4:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063053-003C	MW-909-Q124	2/12/2024 10:45:00 AM	2/27/2024	Groundwater	EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063053-003D			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N063053-004A	IRZ-13S-095-Q124	2/12/2024 10:30:00 AM	2/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063053-004B			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063053-004C			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063053-004D			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N063053-005A	IRZ-21-065-Q124	2/12/2024 10:00:00 AM	2/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063053-005B			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063053-005C			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			2/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW

WORK ORDER Summary

12-Feb-24

WorkOrder: N063053

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30121866 **QC Level:** Level IV **Date Received:** 2/12/2024 4:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063053-006A	MW-910-Q124	2/12/2024 9:45:00 AM	2/27/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063053-006B			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063053-006C			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			2/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063053-007A	IRZ-21-157-Q124	2/12/2024 9:30:00 AM	2/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063053-007B			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063053-007C			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063053-008A	IRZ-23-143-Q124	2/12/2024 8:30:00 AM	2/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063053-008B			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063053-008C			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW

WORK ORDER Summary

12-Feb-24

WorkOrder: N063053

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30121866 **QC Level:** Level IV **Date Received:** 2/12/2024 4:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063053-008D	IRZ-23-143-Q124	2/12/2024 8:30:00 AM	2/27/2024	Groundwater	EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N063053-009A	IRZ-25-100-Q124	2/12/2024 9:15:00 AM	2/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063053-009B			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063053-009C			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			2/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063053-010A	MW-911-Q124	2/12/2024 9:00:00 AM	2/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063053-010B			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063053-010C			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			2/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063053-011A	IRZ-25-166-Q124	2/12/2024 8:45:00 AM	2/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☑	☐	WW
N063053-011B			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☑	☐	WW
			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☑	☐	WW
N063053-011C			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☑	☐	WW

WORK ORDER Summary

12-Feb-24

WorkOrder: N063053

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30121866 **QC Level:** Level IV **Date Received:** 2/12/2024 4:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063053-011C	IRZ-25-166-Q124	2/12/2024 8:45:00 AM	2/27/2024	Groundwater	EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☑	☐	WW
			2/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☑	☐	WW
			2/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☑	☐	WW
			2/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☑	☐	WW
N063053-012A	MW-75-033-Q124	2/12/2024 1:26:00 PM	2/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063053-013A	MW-75-117-Q124	2/12/2024 1:46:00 PM	2/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063053-014A	MW-75-202-Q124	2/12/2024 12:40:00 PM	2/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063053-014B			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063053-014C			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			2/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063053-015A	MW-75-267-Q124	2/12/2024 1:02:00 PM	2/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063053-016A	MW-75-337-Q124	2/12/2024 2:10:00 PM	2/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063053-017A	EB-719-Q124	2/12/2024 2:20:00 PM	2/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063053-018A	PTI-1D-Q124	2/12/2024 8:30:00 AM	2/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063053-018B			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW

WORK ORDER Summary

12-Feb-24

WorkOrder: N063053

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30121866 **QC Level:** Level IV **Date Received:** 2/12/2024 4:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063053-018C	PTI-1D-Q124	2/12/2024 8:30:00 AM	2/27/2024	Groundwater	EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/27/2024		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
			2/27/2024		EPA 6020	TOTAL METALS BY ICPMS	☐	☐	☐	WW
N063053-019A	FOLDER	2/27/2024	2/27/2024		Folder	Folder	☐	☐	☐	LAB
			2/27/2024		Folder	Level IV Report	☐	☐	☐	LAB
			2/27/2024		Folder	Folder	☐	☐	☐	LAB

List of Analysts

ASSET Laboratories Work Order: N063053

NAME	TEST METHOD
Ria Abes	EPA 218.6, EPA 300.0
Diane Jetajobe	EPA 6010B_Dissolved, EPA 6010B_Total, EPA 6020_Dissolved, EPA 6020_Total

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R181554
ASSET #: N063053

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/13/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?	X				X	
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?		X			X	
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?	X			X		
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments: N063053-007A=170 ppb; N063053-007C= 2.4 ppb

N063053-011A = 2.3 ppb ; N063053-011C (6020) = 190 ppb
MS protocol performed. Recovery within criteria.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer: RBA Date: _____

2nd Level Reviewer: RB 02202024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063053-001A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 2.9862 * 5$$

$$Cr^{+6}, \mu g/L = 14.9310$$

Reporting results in two significant figures,

$$\mathbf{Cr^{+6}, \mu g/L = 15}$$

Reviewed by:

dMocha 2/29/2024

ANALYSIS RUN LOG

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240213A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/13/24 9:44 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/13/24 9:59 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/13/24 10:08 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/13/24 10:18 AM	Reported
13	MB-R181554	MBLK	1	Hexavalent Chromium	02/13/24 10:27 AM	Reported
14	LCS-R181554	LCS	1	Hexavalent Chromium	02/13/24 10:36 AM	Reported
15	N063053-009A	SAMP	1	Hexavalent Chromium	02/13/24 10:46 AM	Not Reported
16	N063053-011A	SAMP	20	Hexavalent Chromium	02/13/24 10:55 AM	Not Reported
17	N063053-011AMS	MS	20	Hexavalent Chromium	02/13/24 11:05 AM	Not Reported
18	N063053-002AMS	MS	50	Hexavalent Chromium	02/13/24 11:18 AM	Reported
19	N063053-002A	SAMP	50	Hexavalent Chromium	02/13/24 11:27 AM	Reported
20	N063053-002ADUP	DUP	50	Hexavalent Chromium	02/13/24 11:37 AM	Reported
21	N063053-011A	SAMP	1	Hexavalent Chromium	02/13/24 11:46 AM	Reported
22	N063053-011AMS	MS	1	Hexavalent Chromium	02/13/24 11:56 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/13/24 12:05 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/13/24 12:15 PM	Reported
25	N063053-003A	SAMP	10	Hexavalent Chromium	02/13/24 12:24 PM	Not Reported
26	N063053-003AMS	MS	10	Hexavalent Chromium	02/13/24 12:34 PM	Not Reported
27	N063053-008A	SAMP	100	Hexavalent Chromium	02/13/24 12:43 PM	Reported
28	N063053-011AMSD	MSD	1	Hexavalent Chromium	02/13/24 12:53 PM	Reported
29	N063053-005A	SAMP	1	Hexavalent Chromium	02/13/24 1:02 PM	Reported
30	N063053-005AMS	MS	1	Hexavalent Chromium	02/13/24 1:12 PM	Reported
31	N063053-006A	SAMP	1	Hexavalent Chromium	02/13/24 1:23 PM	Reported
32	N063053-006AMS	MS	1	Hexavalent Chromium	02/13/24 1:32 PM	Reported
33	N063053-007A	SAMP	1	Hexavalent Chromium	02/13/24 1:42 PM	Not Reported
34	N063053-007AMS	MS	1	Hexavalent Chromium	02/13/24 1:51 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/13/24 2:00 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/13/24 2:10 PM	Reported
37	N063053-001A	SAMP	5	Hexavalent Chromium	02/13/24 2:19 PM	Reported
38	N063053-001AMS	MS	5	Hexavalent Chromium	02/13/24 2:29 PM	Reported
39	N063053-004A	SAMP	10	Hexavalent Chromium	02/13/24 2:38 PM	Reported
40	N063053-004AMS	MS	10	Hexavalent Chromium	02/13/24 2:48 PM	Reported
41	N063053-012A	SAMP	5	Hexavalent Chromium	02/13/24 2:57 PM	Not Reported
42	N063053-012AMS	MS	5	Hexavalent Chromium	02/13/24 3:07 PM	Not Reported

INJECTION LOG: 240213A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063053-013A	SAMP	5	Hexavalent Chromium	02/13/24 3:16 PM	Reported
44	N063053-013AMS	MS	5	Hexavalent Chromium	02/13/24 3:26 PM	Reported
45	N063001-004A	SAMP	5	Hexavalent Chromium	02/13/24 3:35 PM	Reported
46	N063001-004AMS	MS	5	Hexavalent Chromium	02/13/24 3:44 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/13/24 3:59 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/13/24 4:11 PM	Reported
49	N063053-009A	SAMP	20	Hexavalent Chromium	02/13/24 4:20 PM	Reported
50	N063053-009AMS	MS	20	Hexavalent Chromium	02/13/24 4:30 PM	Reported
51	N063053-010A	SAMP	20	Hexavalent Chromium	02/13/24 4:39 PM	Reported
52	N063053-010AMS	MS	20	Hexavalent Chromium	02/13/24 4:49 PM	Reported
53	N063053-014A	SAMP	1	Hexavalent Chromium	02/13/24 4:58 PM	Not Reported
54	N063053-014AMS	MS	1	Hexavalent Chromium	02/13/24 5:08 PM	Not Reported
55	N063053-015A	SAMP	1	Hexavalent Chromium	02/13/24 5:17 PM	Not Reported
56	N063053-015AMS	MS	1	Hexavalent Chromium	02/13/24 5:27 PM	Not Reported
57	N063053-016A	SAMP	1	Hexavalent Chromium	02/13/24 5:36 PM	Not Reported
58	N063053-016AMS	MS	1	Hexavalent Chromium	02/13/24 5:46 PM	Not Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/13/24 5:55 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/13/24 6:05 PM	Reported
61	N063053-018A	SAMP	1	Hexavalent Chromium	02/13/24 6:14 PM	Not Reported
62	N063053-018AMS	MS	1	Hexavalent Chromium	02/13/24 6:23 PM	Not Reported
63	N063053-014A	SAMP	5	Hexavalent Chromium	02/13/24 6:33 PM	Reported
64	N063053-014AMS	MS	5	Hexavalent Chromium	02/13/24 6:42 PM	Reported
65	N063053-015A	SAMP	5	Hexavalent Chromium	02/13/24 6:52 PM	Reported
66	N063053-015AMS	MS	5	Hexavalent Chromium	02/13/24 7:01 PM	Reported
67	N063053-016A	SAMP	5	Hexavalent Chromium	02/13/24 7:11 PM	Reported
68	N063053-016AMS	MS	5	Hexavalent Chromium	02/13/24 7:20 PM	Reported
69	N063053-018A	SAMP	5	Hexavalent Chromium	02/13/24 7:30 PM	Reported
70	N063053-018AMS	MS	5	Hexavalent Chromium	02/13/24 7:39 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/13/24 7:49 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/13/24 7:58 PM	Reported
73	N063053-017A	SAMP	1	Hexavalent Chromium	02/13/24 8:08 PM	Reported
74	N063053-017AMS	MS	1	Hexavalent Chromium	02/13/24 8:17 PM	Reported
75	N063053-008AMS	MS	100	Hexavalent Chromium	02/13/24 8:26 PM	Reported
76	N063053-011A	SAMP	5	Hexavalent Chromium	02/13/24 8:36 PM	Not Reported
77	N063053-011AMS	MS	5	Hexavalent Chromium	02/13/24 8:45 PM	Not Reported
78	N063053-011AMSD	MSD	5	Hexavalent Chromium	02/13/24 8:54 PM	Not Reported
79	N062911-003A	SAMP	5	Hexavalent Chromium	02/13/24 9:03 PM	Not Reported
80	N062911-003AMS	MS	5	Hexavalent Chromium	02/13/24 9:13 PM	Not Reported
81	N062911-004A	SAMP	5	Hexavalent Chromium	02/13/24 9:22 PM	Not Reported
82	N062911-004AMS	MS	5	Hexavalent Chromium	02/13/24 9:32 PM	Not Reported
83	CCV-7	CCV	1	Hexavalent Chromium	02/13/24 9:41 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	02/13/24 9:51 PM	Reported

INJECTION LOG: 240213A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063053-003A	SAMP	50	Hexavalent Chromium	02/13/24 10:00 PM	Reported
86	N063053-003AMS	MS	50	Hexavalent Chromium	02/13/24 10:10 PM	Reported
87	N063053-007A	SAMP	20	Hexavalent Chromium	02/13/24 10:19 PM	Reported
88	N063053-007AMS	MS	20	Hexavalent Chromium	02/13/24 10:29 PM	Reported
89	N063053-012A	SAMP	20	Hexavalent Chromium	02/13/24 10:38 PM	Reported
90	N063053-012AMS	MS	20	Hexavalent Chromium	02/13/24 10:47 PM	Reported
91	CCV-8	CCV1	1	Hexavalent Chromium	02/13/24 10:57 PM	Reported
92	CCB-8	CCB	1	Hexavalent Chromium	02/13/24 11:06 PM	Reported
93	BLANK	BLANK	1	Hexavalent Chromium	02/13/24 11:16 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240213A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**13/Feb/24 23:46:39**
No. of Injections:	**96**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/13/2024 09:44	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/13/2024 09:59	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/13/2024 10:08	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/13/2024 10:18	Finished	CCB R240103B
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/13/2024 10:27	Finished	MB R240103B
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/13/2024 10:36	Finished	LCS @5ppb, IWST-231228B
15	N063053-009A,SAMP	7	1000	Unknown		02/13/2024 10:46	Finished	SAMP,10 mL
16	N063053-011A,SAMP	8	1000	Unknown		02/13/2024 10:55	Finished	SAMP,0.5>10 mL
17	N063053-011AMS,MS	9	1000	Unknown		02/13/2024 11:05	Finished	MS (5ppb), IWST-231228B,0.5
18	N063053-002AMS,MS	10	1000	Unknown		02/13/2024 11:18	Finished	MS (5ppb), IWST-231228B,0.2
19	N063053-002A,SAMP	11	1000	Unknown		02/13/2024 11:27	Finished	SAMP,0.02>10 mL
20	N063053-002ADUP,D	12	1000	Unknown		02/13/2024 11:37	Finished	DUP,0.02>10 mL
21	N063053-011A,SAMP	13	1000	Unknown		02/13/2024 11:46	Finished	SAMP,10 mL
22	N063053-011AMS,MS	14	1000	Unknown		02/13/2024 11:56	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	15	1000	Unknown		02/13/2024 12:05	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		02/13/2024 12:15	Finished	CCB R240103B
25	N063053-003A,SAMP	17	1000	Unknown		02/13/2024 12:24	Finished	SAMP,1>10 mL
26	N063053-003AMS,MS	18	1000	Unknown		02/13/2024 12:34	Finished	MS (5ppb), IWST-231228B,1>1
27	N063053-008A,SAMP	19	1000	Unknown		02/13/2024 12:43	Finished	SAMP,0.1>10 mL
28	N063053-011AMSD,M	20	1000	Unknown		02/13/2024 12:53	Finished	MSD (1ppb), IWST-231228B,1(
29	N063053-005A,SAMP	21	1000	Unknown		02/13/2024 13:02	Finished	SAMP,10 mL
30	N063053-005AMS,MS	22	1000	Unknown		02/13/2024 13:12	Finished	MS (1ppb), IWST-231228B,10r
31	N063053-006A,SAMP	23	1000	Unknown		02/13/2024 13:23	Finished	SAMP,10 mL
32	N063053-006AMS,MS	24	1000	Unknown		02/13/2024 13:32	Finished	MS (1ppb), IWST-231228B,10r
33	N063053-007A,SAMP	25	1000	Unknown		02/13/2024 13:42	Finished	SAMP,10 mL
34	N063053-007AMS,MS	26	1000	Unknown		02/13/2024 13:51	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	27	1000	Unknown		02/13/2024 14:00	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	28	1000	Unknown		02/13/2024 14:10	Finished	CCB R240103B
37	N063053-001A,SAMP	29	1000	Unknown		02/13/2024 14:19	Finished	SAMP,2>10 mL
38	N063053-001AMS,MS	30	1000	Unknown		02/13/2024 14:29	Finished	MS (5ppb), IWST-231228B,2>1
39	N063053-004A,SAMP	31	1000	Unknown		02/13/2024 14:38	Finished	SAMP,1>10 mL
40	N063053-004AMS,MS	32	1000	Unknown		02/13/2024 14:48	Finished	MS (5ppb), IWST-231228B,1>1
41	N063053-012A,SAMP	33	1000	Unknown		02/13/2024 14:57	Finished	SAMP,2>10 mL
42	N063053-012AMS,MS	34	1000	Unknown		02/13/2024 15:07	Finished	MS (5ppb), IWST-231228B,2>1
43	N063053-013A,SAMP	35	1000	Unknown		02/13/2024 15:16	Finished	SAMP,2>10 mL
44	N063053-013AMS,MS	36	1000	Unknown		02/13/2024 15:26	Finished	MS (5ppb), IWST-231228B,2>1
45	N063001-004A,SAMP	37	1000	Unknown		02/13/2024 15:35	Finished	SAMP,2>10 mL
46	N063001-004AMS,MS	38	1000	Unknown		02/13/2024 15:44	Finished	MS (1ppb), IWST-231228B,2>1
47	CCV-4,CCV1,1,	1	1000	Unknown		02/13/2024 15:59	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	2	1000	Unknown		02/13/2024 16:11	Finished	CCB R240103B
49	N063053-009A,SAMP	3	1000	Unknown		02/13/2024 16:20	Finished	SAMP,0.5>10 mL
50	N063053-009AMS,MS	4	1000	Unknown		02/13/2024 16:30	Finished	MS (5ppb), IWST-231228B,0.5
51	N063053-010A,SAMP	5	1000	Unknown		02/13/2024 16:39	Finished	SAMP,0.5>10 mL
52	N063053-010AMS,MS	6	1000	Unknown		02/13/2024 16:49	Finished	MS (5ppb), IWST-231228B,0.5
53	N063053-014A,SAMP	7	1000	Unknown		02/13/2024 16:58	Finished	SAMP,10 mL
54	N063053-014AMS,MS	8	1000	Unknown		02/13/2024 17:08	Finished	MS (1ppb), IWST-231228B,10r
55	N063053-015A,SAMP	9	1000	Unknown		02/13/2024 17:17	Finished	SAMP,10 mL
56	N063053-015AMS,MS	10	1000	Unknown		02/13/2024 17:27	Finished	MS (1ppb), IWST-231228B,10r
57	N063053-016A,SAMP	11	1000	Unknown		02/13/2024 17:36	Finished	SAMP,10 mL
58	N063053-016AMS,MS	12	1000	Unknown		02/13/2024 17:46	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	13	1000	Unknown		02/13/2024 17:55	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	14	1000	Unknown		02/13/2024 18:05	Finished	CCB R240103B

61	N063053-018A,SAMP	15	1000	Unknown		02/13/2024 18:14	Finished	SAMP,10 mL
62	N063053-018AMS,MS	16	1000	Unknown		02/13/2024 18:23	Finished	MS (1ppb), IWST-231228B,10r
63	N063053-014A,SAMP	17	1000	Unknown		02/13/2024 18:33	Finished	SAMP,2>10 mL
64	N063053-014AMS,MS	18	1000	Unknown		02/13/2024 18:42	Finished	MS (1ppb), IWST-231228B,2>
65	N063053-015A,SAMP	19	1000	Unknown		02/13/2024 18:52	Finished	SAMP,2>10 mL
66	N063053-015AMS,MS	20	1000	Unknown		02/13/2024 19:01	Finished	MS (1ppb), IWST-231228B,2>
67	N063053-016A,SAMP	21	1000	Unknown		02/13/2024 19:11	Finished	SAMP,2>10 mL
68	N063053-016AMS,MS	22	1000	Unknown		02/13/2024 19:20	Finished	MS (1ppb), IWST-231228B,2>
69	N063053-018A,SAMP	23	1000	Unknown		02/13/2024 19:30	Finished	SAMP,2>10 mL
70	N063053-018AMS,MS	24	1000	Unknown		02/13/2024 19:39	Finished	MS (1ppb), IWST-231228B,2>
71	CCV-6,CCV1,1,	25	1000	Unknown		02/13/2024 19:49	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	26	1000	Unknown		02/13/2024 19:58	Finished	CCB R240103B
73	N063053-017A,SAMP	27	1000	Unknown		02/13/2024 20:08	Finished	SAMP,10 mL
74	N063053-017AMS,MS	28	1000	Unknown		02/13/2024 20:17	Finished	MS (1ppb), IWST-231228B,10r
75	N063053-008AMS,MS	29	1000	Unknown		02/13/2024 20:26	Finished	MS (5ppb), IWST-231228B,0.1
76	N063053-011A,SAMP	30	1000	Unknown		02/13/2024 20:36	Finished	SAMP,2>10 mL
77	N063053-011AMS,MS	31	1000	Unknown		02/13/2024 20:45	Finished	MS (1ppb), IWST-231228B,2>
78	N063053-011AMSD,M	32	1000	Unknown		02/13/2024 20:54	Finished	MSD (1ppb), IWST-231228B,2
79	N062911-003A,SAMP	33	1000	Unknown		02/13/2024 21:03	Finished	SAMP,2>10 mL
80	N062911-003AMS,MS	34	1000	Unknown		02/13/2024 21:13	Finished	MS (1ppb), IWST-231228B,2>
81	N062911-004A,SAMP	35	1000	Unknown		02/13/2024 21:22	Finished	SAMP,2>10 mL
82	N062911-004AMS,MS	36	1000	Unknown		02/13/2024 21:32	Finished	MS (1ppb), IWST-231228B,2>
83	CCV-7,CCV,1,	37	1000	Unknown		02/13/2024 21:41	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	38	1000	Unknown		02/13/2024 21:51	Finished	CCB R240103B
85	N063053-003A,SAMP	39	1000	Unknown		02/13/2024 22:00	Finished	SAMP,0.2>10 mL
86	N063053-003AMS,MS	40	1000	Unknown		02/13/2024 22:10	Finished	MS (5ppb), IWST-231228B,0.2
87	N063053-007A,SAMP	41	1000	Unknown		02/13/2024 22:19	Finished	SAMP,0.5>10 mL
88	N063053-007AMS,MS	42	1000	Unknown		02/13/2024 22:29	Finished	MS (5ppb), IWST-231228B,0.5
89	N063053-012A,SAMP	43	1000	Unknown		02/13/2024 22:38	Finished	SAMP,0.5>10 mL
90	N063053-012AMS,MS	44	1000	Unknown		02/13/2024 22:47	Finished	MS (5ppb), IWST-231228B,0.5
91	CCV-8,CCV1,1,	45	1000	Unknown		02/13/2024 22:57	Finished	CCV @10ppb, IWST-231228A
92	CCB-8,CCB,1,	46	1000	Unknown		02/13/2024 23:06	Finished	CCB R240103B
93	BLANK	47	1000	Unknown		02/13/2024 23:16	Finished	BLANK
94	SHUTDOWN	48	1000	Unknown		02/13/2024 23:25	Finished	
95	Eluent: R240212A	49	1000	Unknown		n.a.	Finished	
96	PCR: R240212B	50	1000	Unknown		n.a.	Finished	

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 2/13/24
Time Prepared: 0930H
Prepared By: MA

Reagent ID:
Sulfuric Acid: 194NS
Diphenylcarbazide: 18909
NH4OH + NH4SO4 eluent: M240212A
NH4OH + NH4SO4 buffer: M240103A

6N NaOH M231128C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	M563057-1A	9.54	-	~250 mL	~250 mL		
2)	2A	9.50	-				
3)	3A	9.42	-				
4)	4A	9.43	-				
5)	5A	9.37	-				
6)	6A	9.46	-				
7)	7A	9.48	-				
8)	8A	9.32	-				
9)	9A	9.00	9.44			+4	
10)	10A	8.90	9.40			+4	
11)	11A	9.38	-				
12)	12A	9.36	-				
13)	13A	9.30	-				
14)	14A	9.14	9.45			+3	
15)	15A	9.10	9.50			+4	
	16A	8.76	9.52			+6	

Sample Preparation

Date Prepared: 2/13/24
Time Prepared: 0930H
Prepared By: MA

Reagent ID:
Sulfuric Acid: 194NS
Diphenylcarbazide: 18909
NH4OH + NH4SO4 eluent: M240212A
NH4OH + NH4SO4 buffer: M240103A

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	M563057-B1	9.70	-	~250 mL	~250 mL		
2)	1B	8.68	9.49	"	"	+6	
3)							
4)				"			
5)							
6)							
7)							
8)							
9)							
10)							
11)							
12)							
13)							
14)							
15)							

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 2/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0427	0.2063	1.0639	2.1157	3.2270	4.3227	0.9999
Measured, in ug/L	0.198500	0.959200	4.946100	9.835700	15.002300	20.095900	
Relative Error (%RE)	-0.8%		-1.1%				

	Stock	Working
Standard Concentration:	1,000,000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ICV**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5691856**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5691857**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCV**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691859**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.014	0.20	5.000	0	100	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691860**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.211	0.20	0.2000	0	106	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691869**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.936	0.20	10.00	0	99.4	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCV**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691877**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.972	0.20	5.000	0	99.4	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691887**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.065	0.20	10.00	0	101	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCV**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691893**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.076	0.20	5.000	0	102	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ZZZZZZ**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691903**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.987	0.20	10.00	0	99.9	95	105				

Sample ID: **CCV-7**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCV**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691908**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.079	0.20	5.000	0	102	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-8** SampType: **CCV1** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181554**
Client ID: **ZZZZZZ** Batch ID: **R181554** TestNo: **EPA 218.6** Analysis Date: **2/13/2024** SeqNo: **5691916**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.100	0.20	10.00	0	101	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **ICB**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5691858**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCB**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691861**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCB**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691870**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCB**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691878**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCB**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691888**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCB**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691894**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCB**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691904**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-7**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCB**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691909**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-8**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181554**
Client ID: **CCB**	Batch ID: **R181554**	TestNo: **EPA 218.6**		Analysis Date: **2/13/2024**	SeqNo: **5691917**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/13/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.040	
CCV-3	4.048	
CCV-4	4.048	
CCV-5	4.048	
CCV-6	4.048	
CCV-7	4.048	
CCV-8	4.040	

Average	4.045
Actual RT Window	3.965 - 4.125
Applied RT Window	3.845 - 4.245

MB-R181554	N.A.	N.A.
LCS-R181554	4.040	PASS
N063053-009A	3.865	PASS
N063053-011A	N.A.	N.A.
N063053-011AMS	4.040	PASS
N063053-002AMS	4.040	PASS
N063053-002A	4.040	PASS
N063053-002ADUP	4.048	PASS
N063053-011A	3.848	PASS
N063053-011AMS	3.848	PASS
N063053-003A	4.023	PASS
N063053-003AMS	4.023	PASS
N063053-008A	4.048	PASS
N063053-011AMSD	3.848	PASS
N063053-005A	3.865	PASS
N063053-005AMS	3.856	PASS
N063053-006A	3.856	PASS
N063053-006AMS	3.856	PASS
N063053-007A	3.848	PASS
N063053-007AMS	3.848	PASS

Reviewed by:

dMocha 2/29/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/13/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.040	
CCV-3	4.048	
CCV-4	4.048	
CCV-5	4.048	
CCV-6	4.048	
CCV-7	4.048	
CCV-8	4.040	
Average	4.045	
Actual RT Window	3.965 - 4.125	
Applied RT Window	3.845 - 4.245	
N063053-001A	4.015	PASS
N063053-001AMS	4.015	PASS
N063053-004A	4.031	PASS
N063053-004AMS	4.031	PASS
N063053-012A	4.040	PASS
N063053-012AMS	4.040	PASS
N063053-013A	3.998	PASS
N063053-013AMS	3.998	PASS
N063001-004A	N.A.	N.A.
N063001-004AMS	4.006	PASS
N063053-009A	4.040	PASS
N063053-009AMS	4.040	PASS
N063053-010A	4.040	PASS
N063053-010AMS	4.040	PASS
N063053-014A	N.A.	N.A.
N063053-014AMS	N.A.	N.A.
N063053-015A	N.A.	N.A.
N063053-015AMS	N.A.	N.A.
N063053-016A	N.A.	N.A.
N063053-016AMS	N.A.	N.A.

Reviewed by:

dMRocha 2/29/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/13/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.040	
CCV-3	4.048	
CCV-4	4.048	
CCV-5	4.048	
CCV-6	4.048	
CCV-7	4.048	
CCV-8	4.040	
Average	4.045	
Actual RT Window	3.965 - 4.125	
Applied RT Window	3.845 - 4.245	
N063053-014A	N.A.	N.A.
N063053-014AMS	3.981	PASS
N063053-015A	N.A.	N.A.
N063053-015AMS	3.956	PASS
N063053-016A	N.A.	N.A.
N063053-016AMS	3.923	PASS
N063053-018A	4.015	PASS
N063053-018AMS	4.015	PASS
N063053-017A	N.A.	N.A.
N063053-017AMS	4.048	PASS
N063053-008AMS	4.048	PASS
N063053-011A	4.023	PASS
N063053-011AMS	4.015	PASS
N063053-011AMSD	4.015	PASS
N062911-003A	N.A.	N.A.
N062911-003AMS	4.006	PASS
N062911-004A	4.006	PASS
N062911-004AMS	4.015	PASS
N063053-003A	4.048	PASS
N063053-003AMS	4.048	PASS

Reviewed by:

dMRocha 2/29/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/13/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.040	
CCV-3	4.048	
CCV-4	4.048	
CCV-5	4.048	
CCV-6	4.048	
CCV-7	4.048	
CCV-8	4.040	
Average	4.045	
Actual RT Window	3.965 - 4.125	
Applied RT Window	3.845 - 4.245	
N063053-007A	4.040	PASS
N063053-007AMS	4.040	PASS
N063053-012A	4.048	PASS
N063053-012AMS	4.040	PASS

Reviewed by:

dlRocha 2/29/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

Reviewed by:

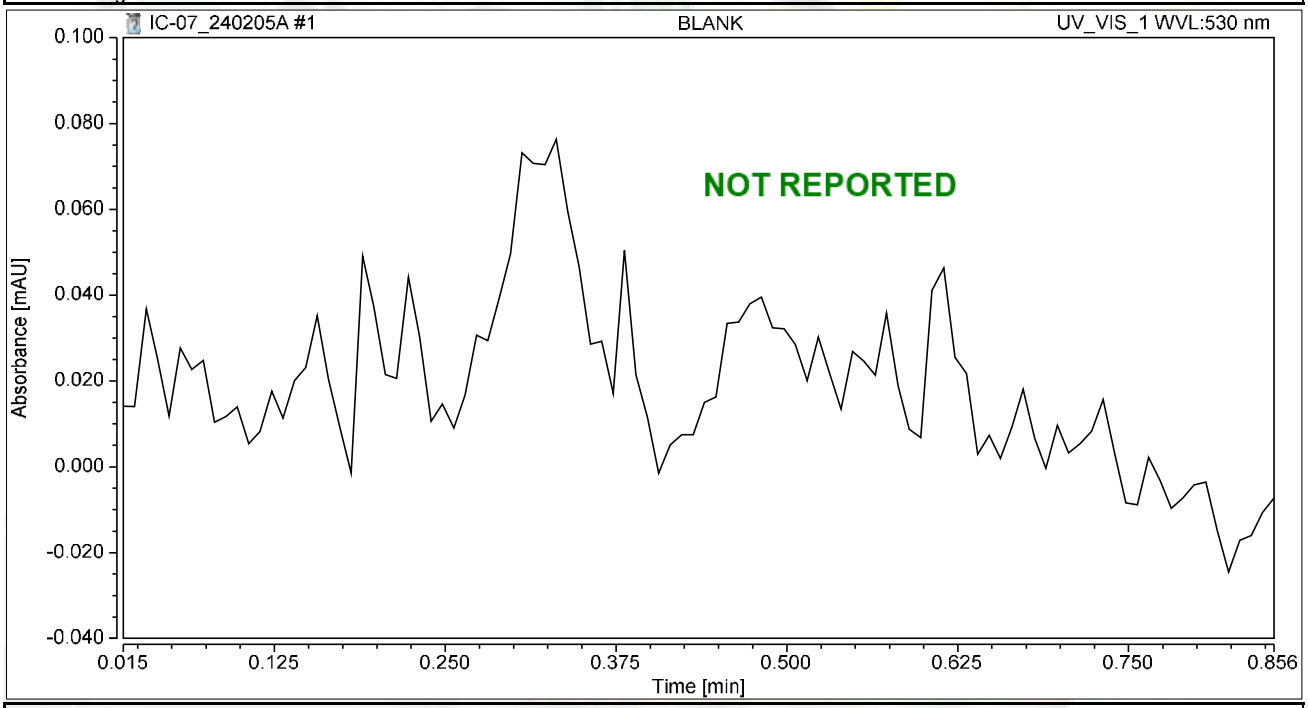
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**0.84**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 11:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

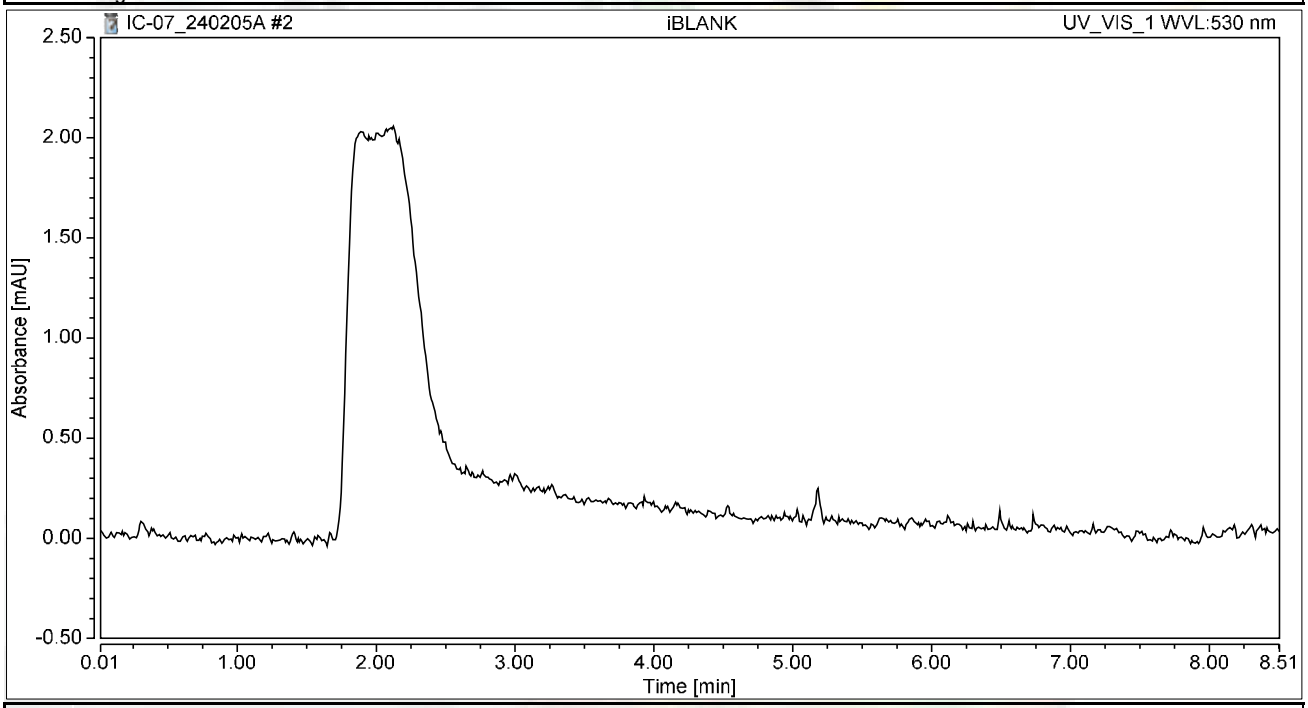
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Reviewed by:

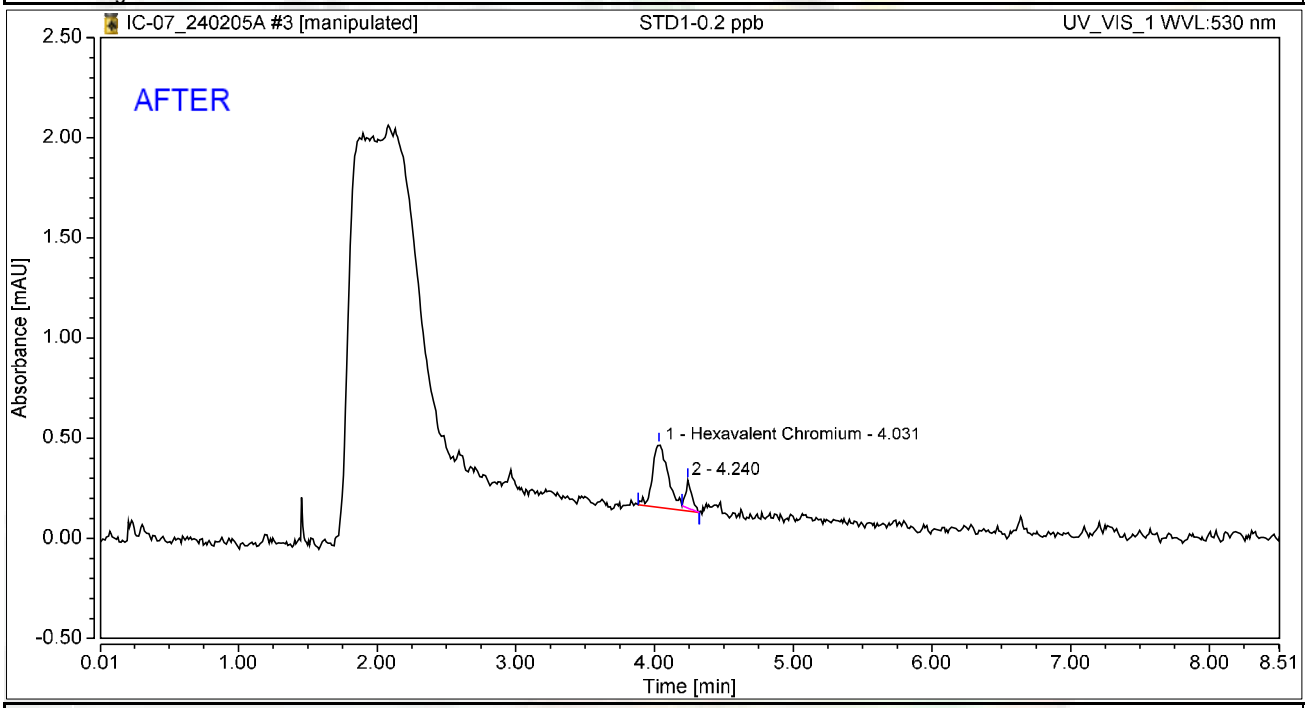
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.043	0.313	85.65	69.19	0.1985
2		4.240	0.007	0.139	14.35	30.81	n.a.
Total:			**0.050**	**0.452**	**100.00**	**100.00**	

Reviewed by:

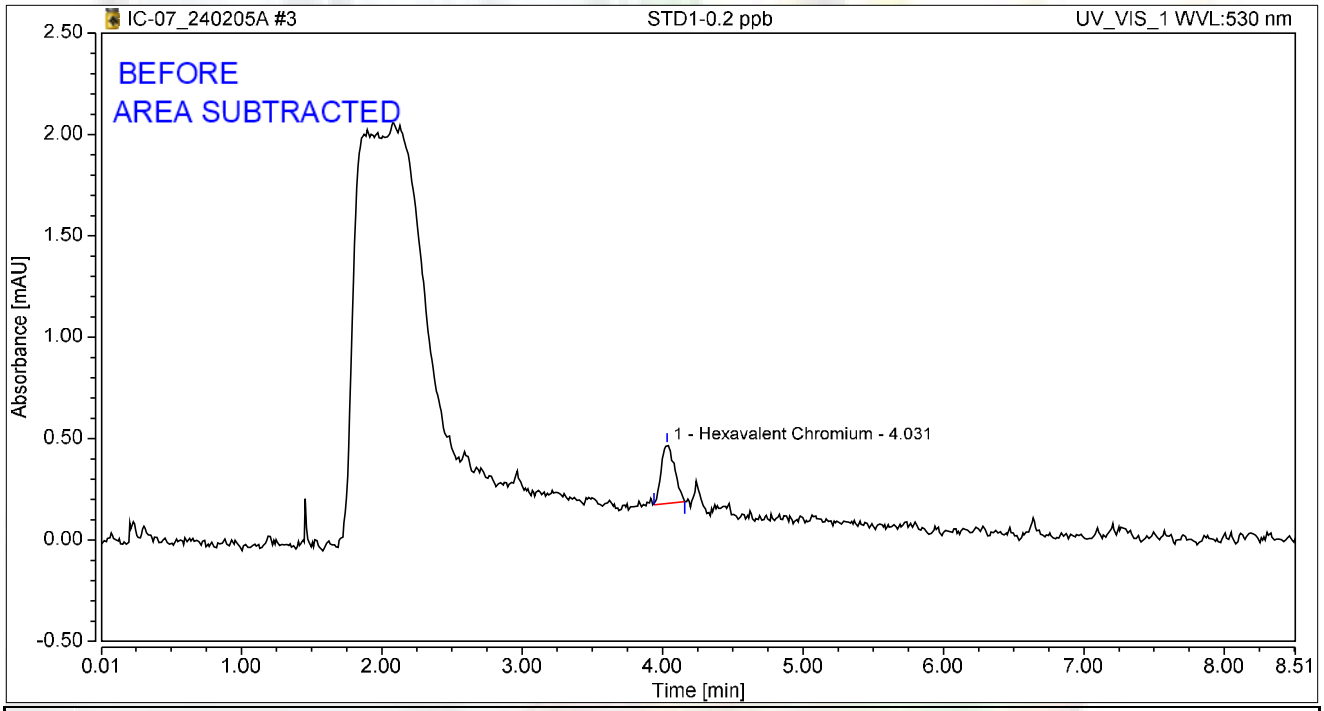
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

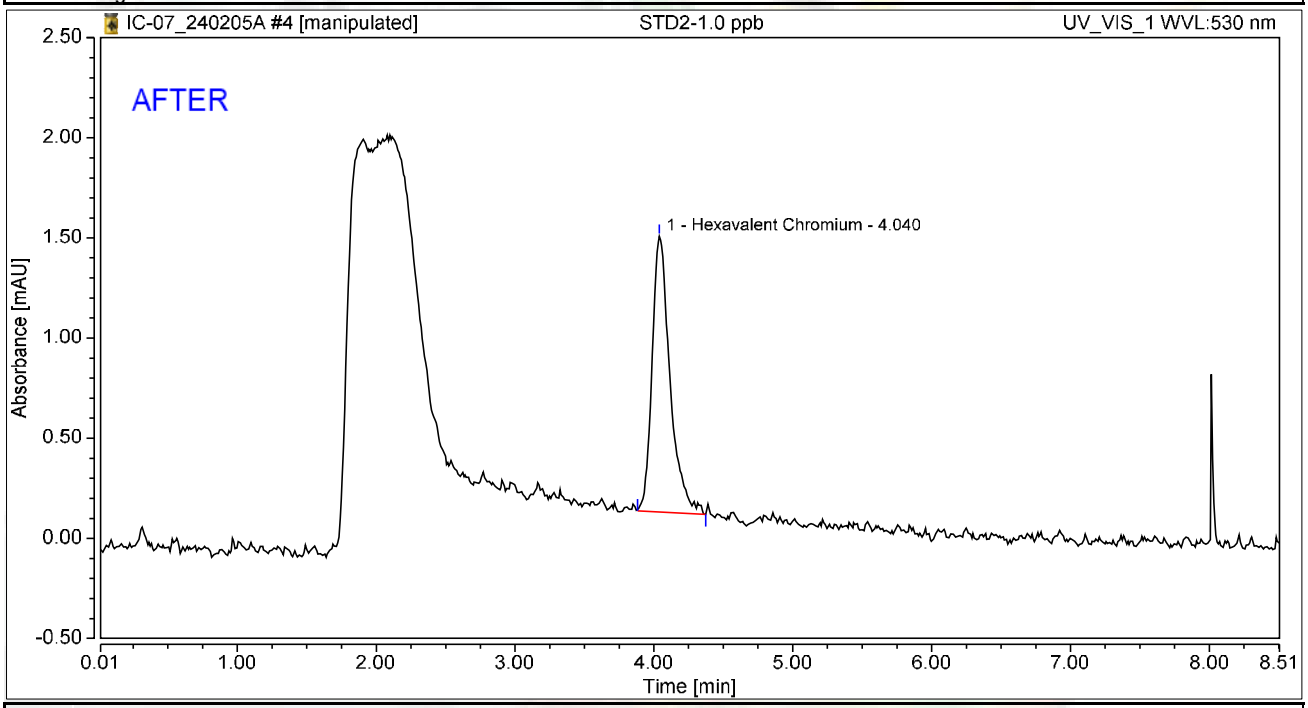
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.032	0.288	100.00	100.00	0.1502
Total:			**0.032**	**0.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.206	1.377	100.00	100.00	0.9592
Total:			**0.206**	**1.377**	**100.00**	**100.00**	

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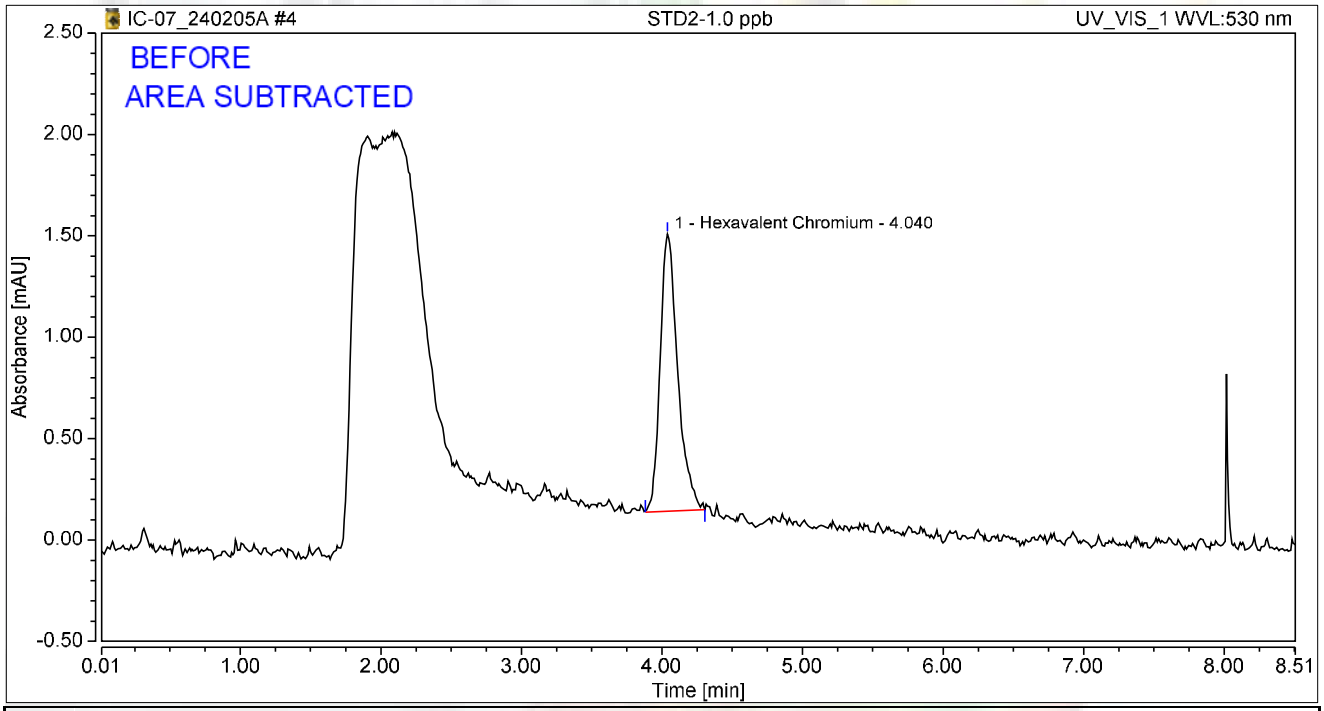
Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

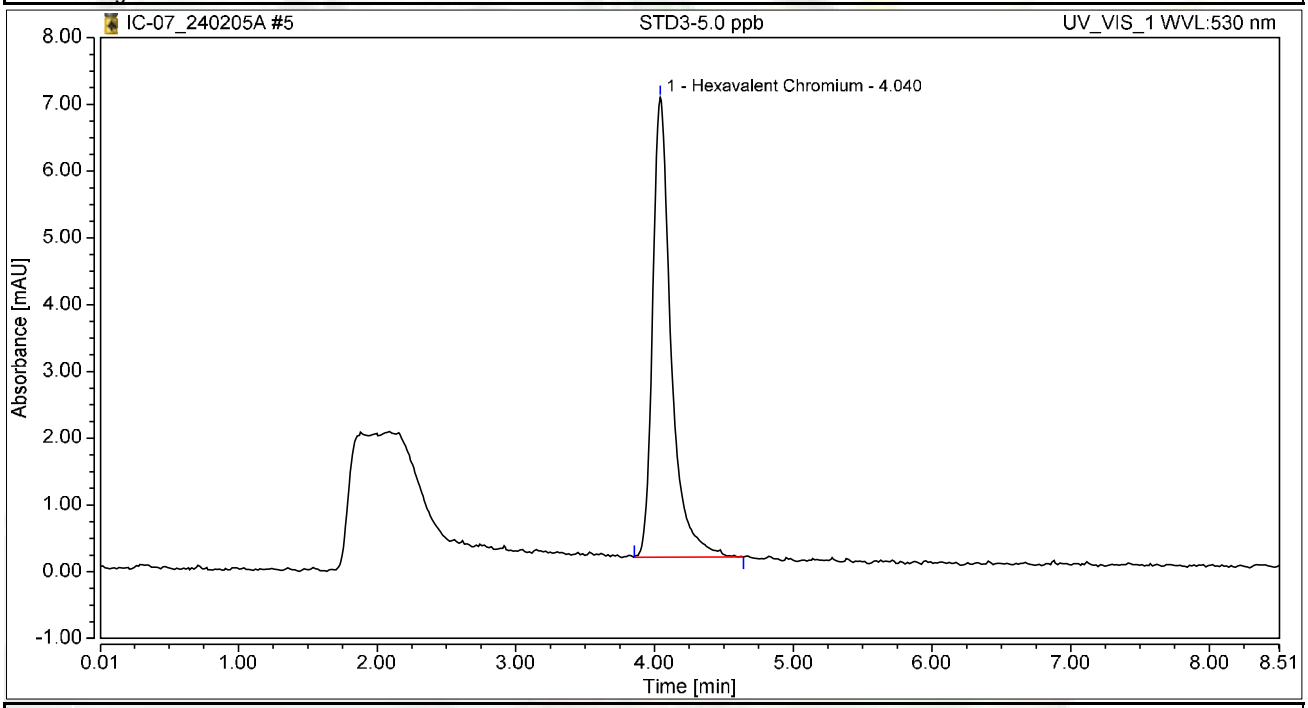
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.198	1.367	100.00	100.00	0.9223
Total:			**0.198**	**1.367**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

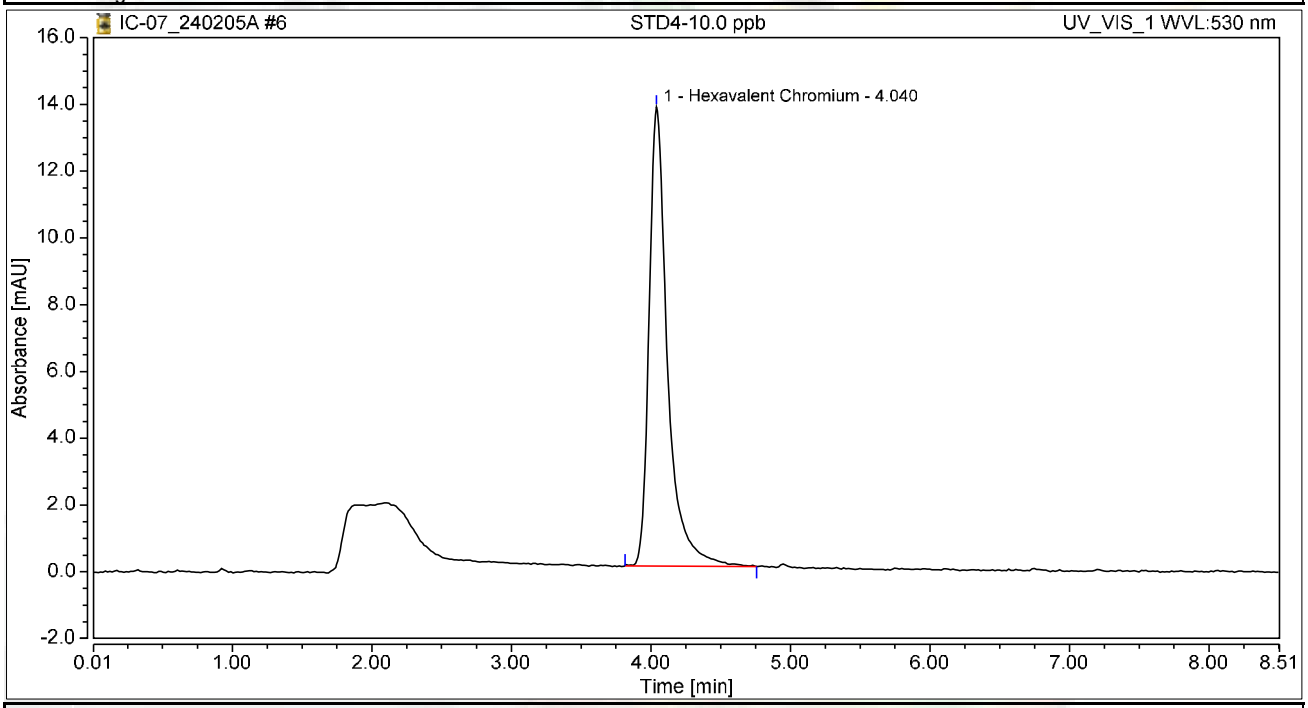
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.064	6.885	100.00	100.00	4.9461
Total:			**1.064**	**6.885**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

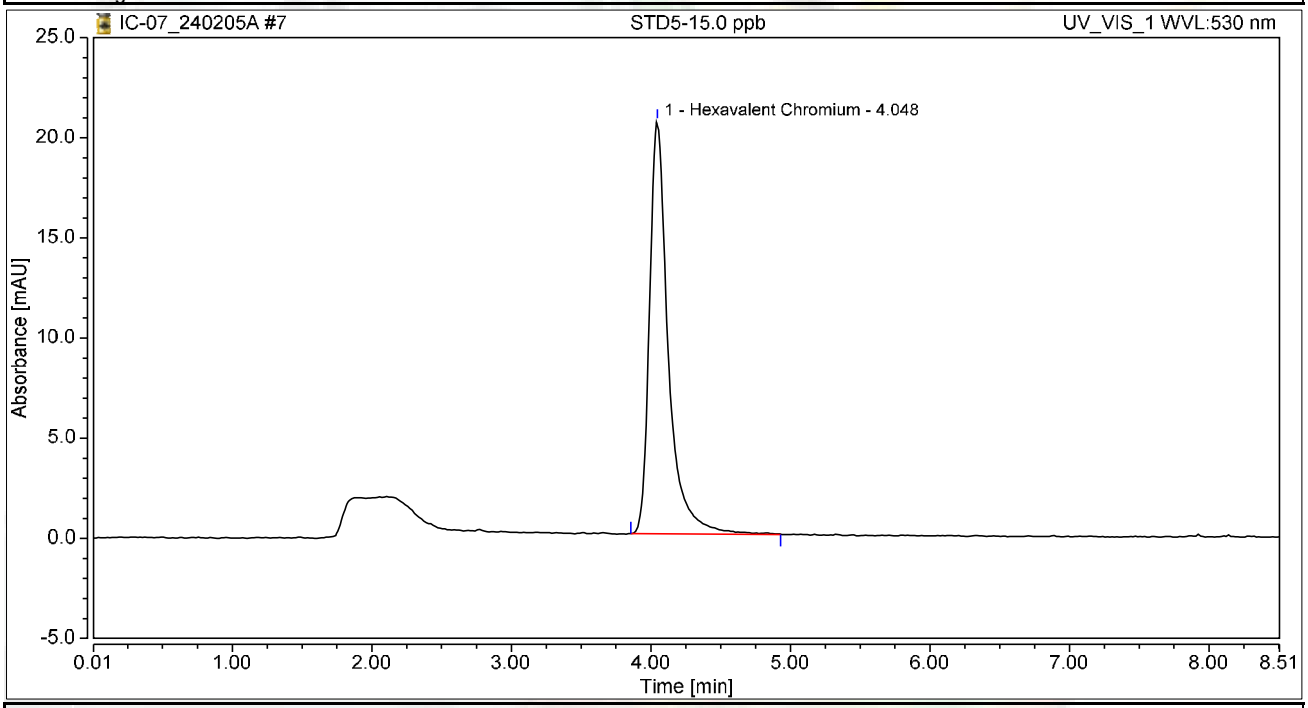
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.116	13.748	100.00	100.00	9.8357
Total:			**2.116**	**13.748**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

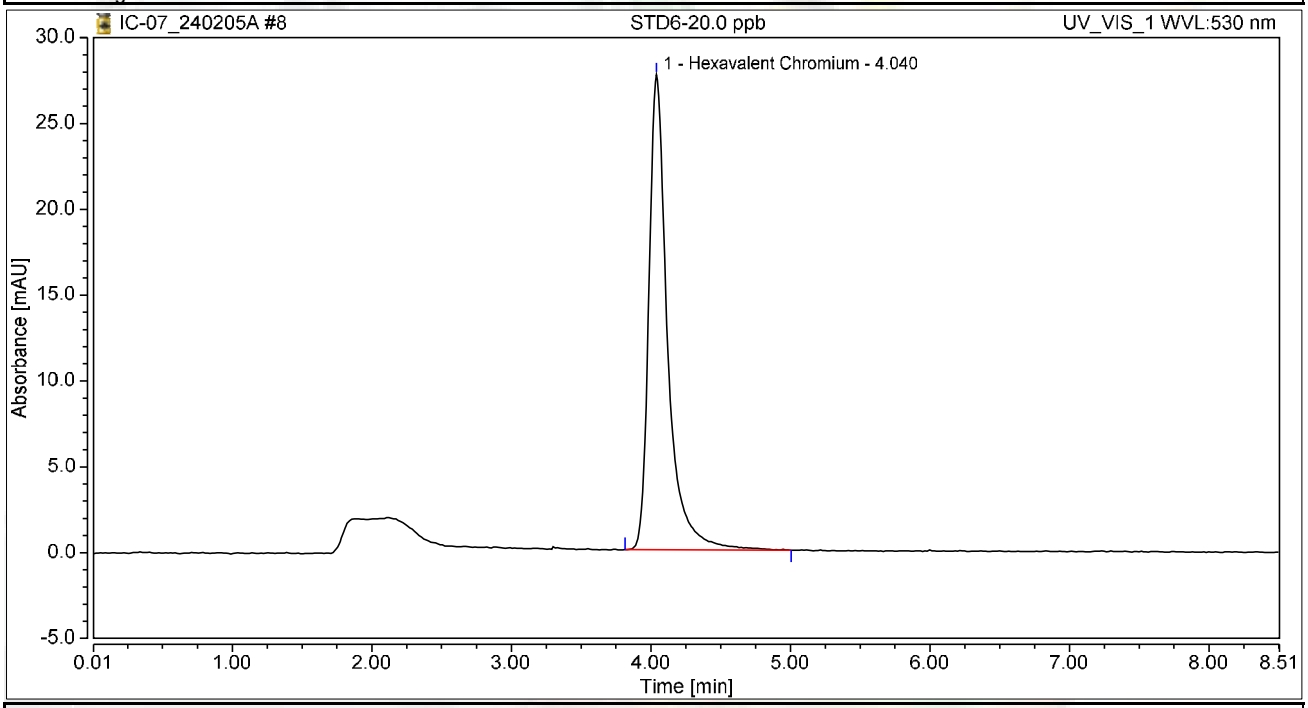
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	3.227	20.605	100.00	100.00	15.0023
Total:			**3.227**	**20.605**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:08**	*Sample Weight:*	**1.0000**

Chromatogram



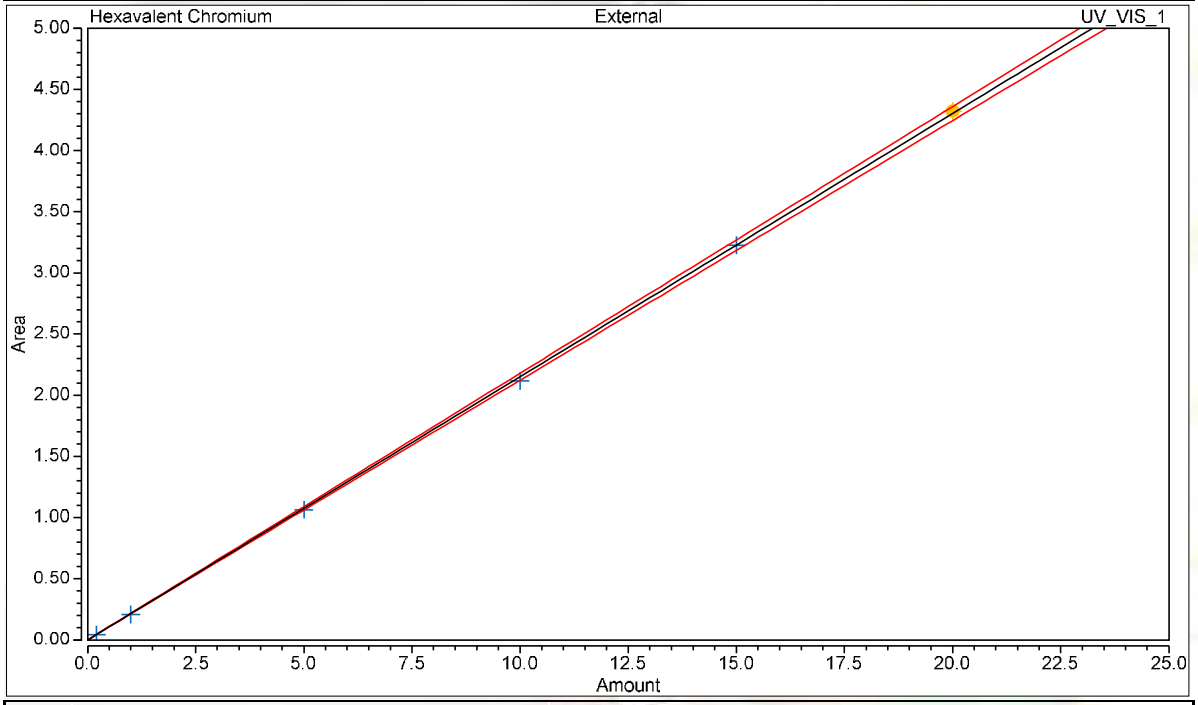
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	4.323	27.676	100.00	100.00	20.0959
Total:			**4.323**	**27.676**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2151
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99987

Calibration Plot Hexavalent Chromium



Calibration Results Hexavalent Chromium

No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0427	0.043	0.313
4	STD2-1.0 ppb	02	1.0000	0.2063	0.206	1.377
5	STD3-5.0 ppb	03	5.0000	1.0639	1.064	6.885
6	STD4-10.0 ppb	04	10.0000	2.1157	2.116	13.748
7	STD5-15.0 ppb	05	15.0000	3.2270	3.227	20.605
8	STD6-20.0 ppb	06	20.0000	4.3227	4.323	27.676

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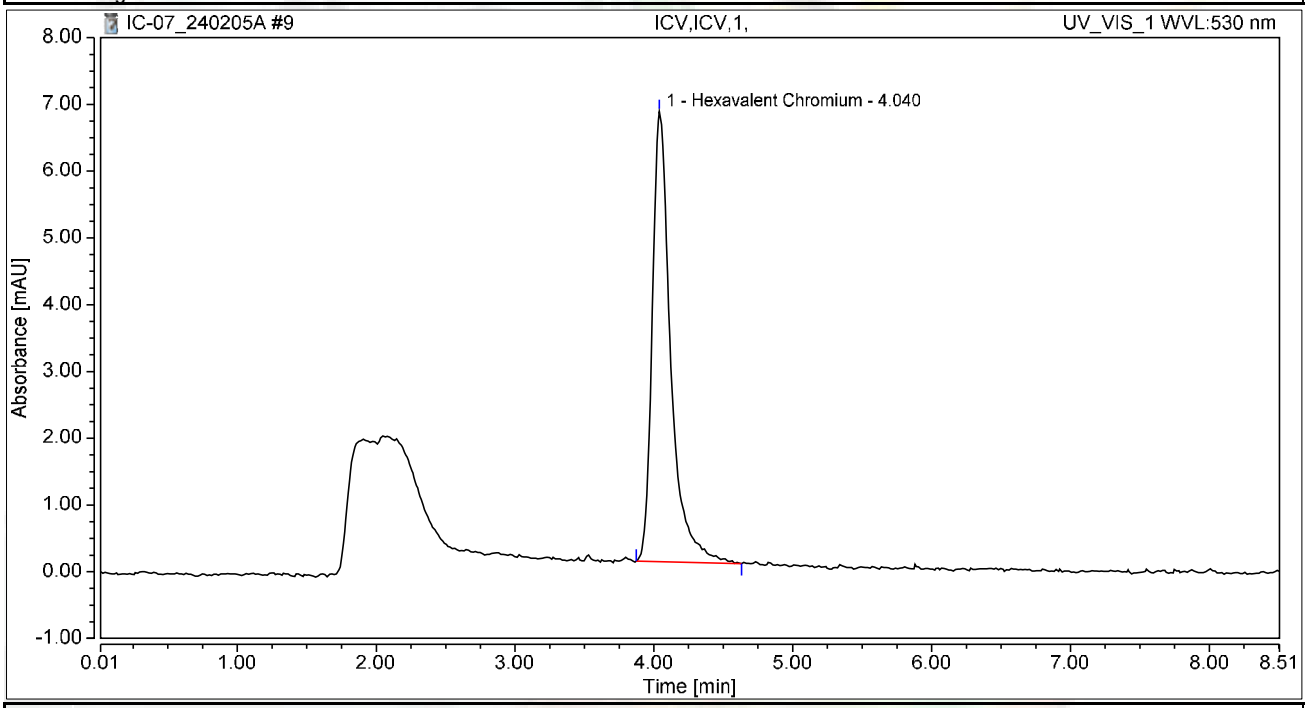
Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

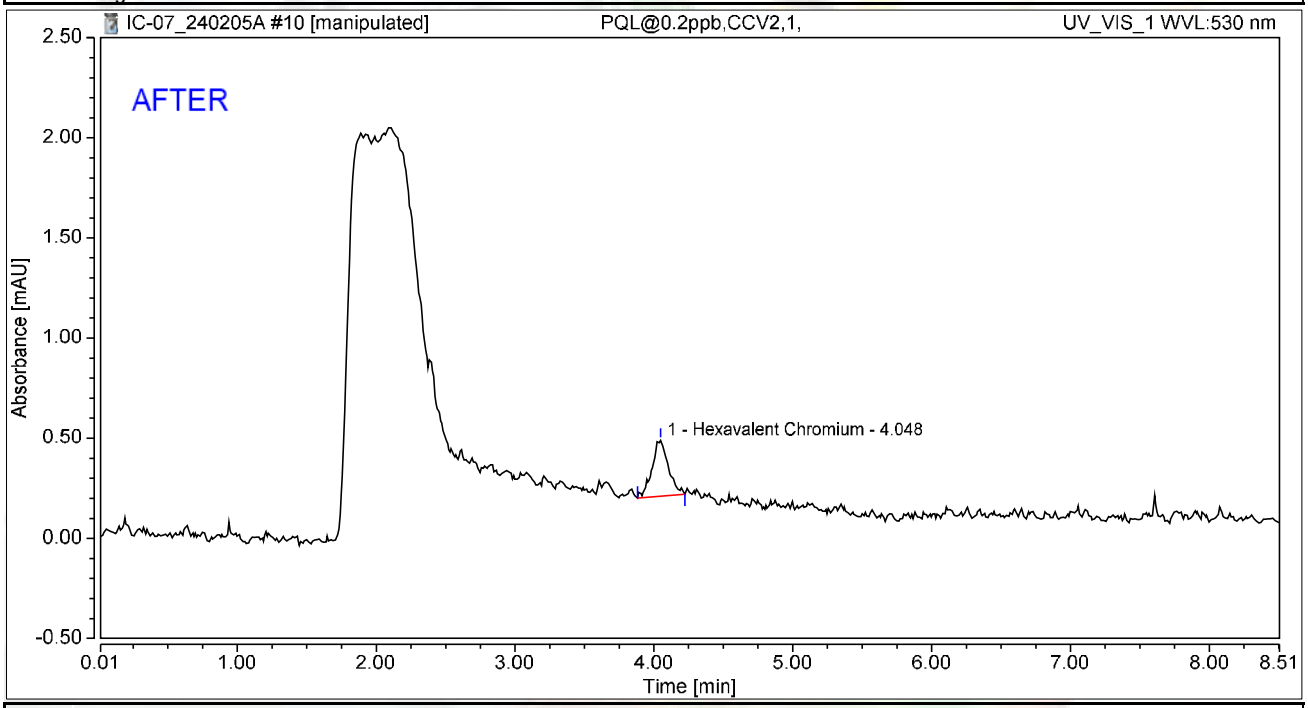
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.040	6.743	100.00	100.00	4.8342
Total:			**1.040**	**6.743**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.039	0.279	100.00	100.00	0.1802
Total:			**0.039**	**0.279**	**100.00**	**100.00**	

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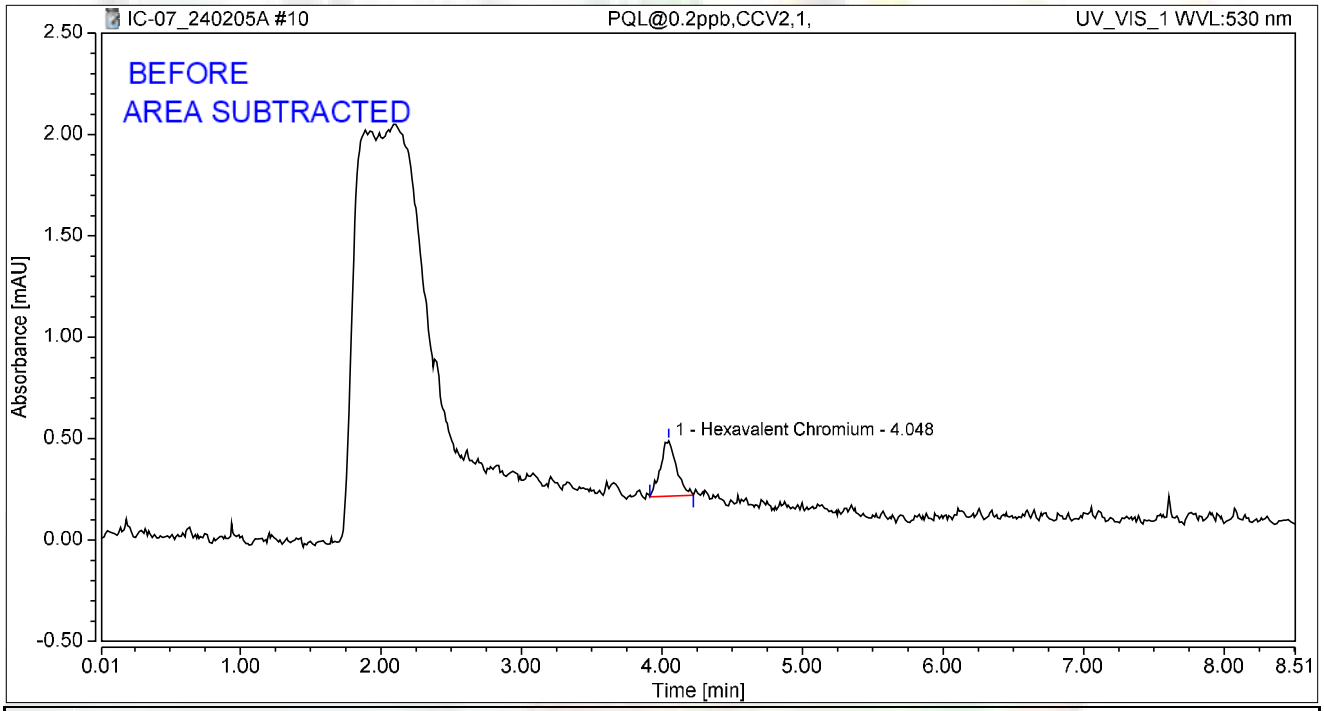
Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

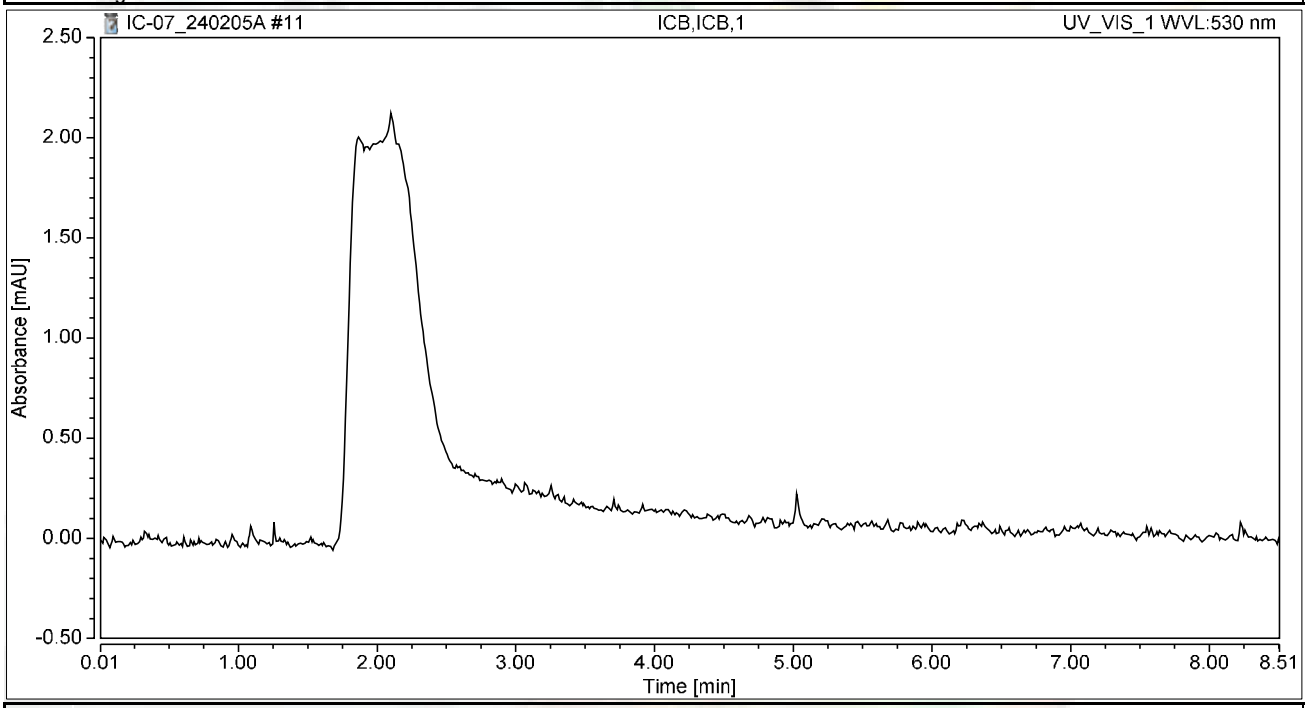
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.036	0.273	100.00	100.00	0.1694
Total:			**0.036**	**0.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

JRB 2/19/2024

RAW DATA

INJECTION LOG: 240213A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/13/24 9:44 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/13/24 9:59 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/13/24 10:08 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/13/24 10:18 AM	Reported
13	MB-R181554	MBLK	1	Hexavalent Chromium	02/13/24 10:27 AM	Reported
14	LCS-R181554	LCS	1	Hexavalent Chromium	02/13/24 10:36 AM	Reported
15	N063053-009A	SAMP	1	Hexavalent Chromium	02/13/24 10:46 AM	Not Reported
16	N063053-011A	SAMP	20	Hexavalent Chromium	02/13/24 10:55 AM	Not Reported
17	N063053-011AMS	MS	20	Hexavalent Chromium	02/13/24 11:05 AM	Not Reported
18	N063053-002AMS	MS	50	Hexavalent Chromium	02/13/24 11:18 AM	Reported
19	N063053-002A	SAMP	50	Hexavalent Chromium	02/13/24 11:27 AM	Reported
20	N063053-002ADUP	DUP	50	Hexavalent Chromium	02/13/24 11:37 AM	Reported
21	N063053-011A	SAMP	1	Hexavalent Chromium	02/13/24 11:46 AM	Reported
22	N063053-011AMS	MS	1	Hexavalent Chromium	02/13/24 11:56 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/13/24 12:05 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/13/24 12:15 PM	Reported
25	N063053-003A	SAMP	10	Hexavalent Chromium	02/13/24 12:24 PM	Not Reported
26	N063053-003AMS	MS	10	Hexavalent Chromium	02/13/24 12:34 PM	Not Reported
27	N063053-008A	SAMP	100	Hexavalent Chromium	02/13/24 12:43 PM	Reported
28	N063053-011AMSD	MSD	1	Hexavalent Chromium	02/13/24 12:53 PM	Reported
29	N063053-005A	SAMP	1	Hexavalent Chromium	02/13/24 1:02 PM	Reported
30	N063053-005AMS	MS	1	Hexavalent Chromium	02/13/24 1:12 PM	Reported
31	N063053-006A	SAMP	1	Hexavalent Chromium	02/13/24 1:23 PM	Reported
32	N063053-006AMS	MS	1	Hexavalent Chromium	02/13/24 1:32 PM	Reported
33	N063053-007A	SAMP	1	Hexavalent Chromium	02/13/24 1:42 PM	Not Reported
34	N063053-007AMS	MS	1	Hexavalent Chromium	02/13/24 1:51 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/13/24 2:00 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/13/24 2:10 PM	Reported
37	N063053-001A	SAMP	5	Hexavalent Chromium	02/13/24 2:19 PM	Reported
38	N063053-001AMS	MS	5	Hexavalent Chromium	02/13/24 2:29 PM	Reported
39	N063053-004A	SAMP	10	Hexavalent Chromium	02/13/24 2:38 PM	Reported
40	N063053-004AMS	MS	10	Hexavalent Chromium	02/13/24 2:48 PM	Reported
41	N063053-012A	SAMP	5	Hexavalent Chromium	02/13/24 2:57 PM	Not Reported
42	N063053-012AMS	MS	5	Hexavalent Chromium	02/13/24 3:07 PM	Not Reported

Reviewed by:

JRB 2/20/2024

INJECTION LOG: 240213A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063053-013A	SAMP	5	Hexavalent Chromium	02/13/24 3:16 PM	Reported
44	N063053-013AMS	MS	5	Hexavalent Chromium	02/13/24 3:26 PM	Reported
45	N063001-004A	SAMP	5	Hexavalent Chromium	02/13/24 3:35 PM	Reported
46	N063001-004AMS	MS	5	Hexavalent Chromium	02/13/24 3:44 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/13/24 3:59 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/13/24 4:11 PM	Reported
49	N063053-009A	SAMP	20	Hexavalent Chromium	02/13/24 4:20 PM	Reported
50	N063053-009AMS	MS	20	Hexavalent Chromium	02/13/24 4:30 PM	Reported
51	N063053-010A	SAMP	20	Hexavalent Chromium	02/13/24 4:39 PM	Reported
52	N063053-010AMS	MS	20	Hexavalent Chromium	02/13/24 4:49 PM	Reported
53	N063053-014A	SAMP	1	Hexavalent Chromium	02/13/24 4:58 PM	Not Reported
54	N063053-014AMS	MS	1	Hexavalent Chromium	02/13/24 5:08 PM	Not Reported
55	N063053-015A	SAMP	1	Hexavalent Chromium	02/13/24 5:17 PM	Not Reported
56	N063053-015AMS	MS	1	Hexavalent Chromium	02/13/24 5:27 PM	Not Reported
57	N063053-016A	SAMP	1	Hexavalent Chromium	02/13/24 5:36 PM	Not Reported
58	N063053-016AMS	MS	1	Hexavalent Chromium	02/13/24 5:46 PM	Not Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/13/24 5:55 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/13/24 6:05 PM	Reported
61	N063053-018A	SAMP	1	Hexavalent Chromium	02/13/24 6:14 PM	Not Reported
62	N063053-018AMS	MS	1	Hexavalent Chromium	02/13/24 6:23 PM	Not Reported
63	N063053-014A	SAMP	5	Hexavalent Chromium	02/13/24 6:33 PM	Reported
64	N063053-014AMS	MS	5	Hexavalent Chromium	02/13/24 6:42 PM	Reported
65	N063053-015A	SAMP	5	Hexavalent Chromium	02/13/24 6:52 PM	Reported
66	N063053-015AMS	MS	5	Hexavalent Chromium	02/13/24 7:01 PM	Reported
67	N063053-016A	SAMP	5	Hexavalent Chromium	02/13/24 7:11 PM	Reported
68	N063053-016AMS	MS	5	Hexavalent Chromium	02/13/24 7:20 PM	Reported
69	N063053-018A	SAMP	5	Hexavalent Chromium	02/13/24 7:30 PM	Reported
70	N063053-018AMS	MS	5	Hexavalent Chromium	02/13/24 7:39 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/13/24 7:49 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/13/24 7:58 PM	Reported
73	N063053-017A	SAMP	1	Hexavalent Chromium	02/13/24 8:08 PM	Reported
74	N063053-017AMS	MS	1	Hexavalent Chromium	02/13/24 8:17 PM	Reported
75	N063053-008AMS	MS	100	Hexavalent Chromium	02/13/24 8:26 PM	Reported
76	N063053-011A	SAMP	5	Hexavalent Chromium	02/13/24 8:36 PM	Not Reported
77	N063053-011AMS	MS	5	Hexavalent Chromium	02/13/24 8:45 PM	Not Reported
78	N063053-011AMSD	MSD	5	Hexavalent Chromium	02/13/24 8:54 PM	Not Reported
79	N062911-003A	SAMP	5	Hexavalent Chromium	02/13/24 9:03 PM	Not Reported
80	N062911-003AMS	MS	5	Hexavalent Chromium	02/13/24 9:13 PM	Not Reported
81	N062911-004A	SAMP	5	Hexavalent Chromium	02/13/24 9:22 PM	Not Reported
82	N062911-004AMS	MS	5	Hexavalent Chromium	02/13/24 9:32 PM	Not Reported
83	CCV-7	CCV	1	Hexavalent Chromium	02/13/24 9:41 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	02/13/24 9:51 PM	Reported

INJECTION LOG: 240213A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063053-003A	SAMP	50	Hexavalent Chromium	02/13/24 10:00 PM	Reported
86	N063053-003AMS	MS	50	Hexavalent Chromium	02/13/24 10:10 PM	Reported
87	N063053-007A	SAMP	20	Hexavalent Chromium	02/13/24 10:19 PM	Reported
88	N063053-007AMS	MS	20	Hexavalent Chromium	02/13/24 10:29 PM	Reported
89	N063053-012A	SAMP	20	Hexavalent Chromium	02/13/24 10:38 PM	Reported
90	N063053-012AMS	MS	20	Hexavalent Chromium	02/13/24 10:47 PM	Reported
91	CCV-8	CCV1	1	Hexavalent Chromium	02/13/24 10:57 PM	Reported
92	CCB-8	CCB	1	Hexavalent Chromium	02/13/24 11:06 PM	Reported
93	BLANK	BLANK	1	Hexavalent Chromium	02/13/24 11:16 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240213A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**13/Feb/24 23:46:39**
No. of Injections:	**96**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/13/2024 09:44	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/13/2024 09:59	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/13/2024 10:08	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/13/2024 10:18	Finished	CCB R240103B
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/13/2024 10:27	Finished	MB R240103B
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/13/2024 10:36	Finished	LCS @5ppb, IWST-231228B
15	N063053-009A,SAMP	7	1000	Unknown		02/13/2024 10:46	Finished	SAMP,10 mL
16	N063053-011A,SAMP	8	1000	Unknown		02/13/2024 10:55	Finished	SAMP,0.5>10 mL
17	N063053-011AMS,MS	9	1000	Unknown		02/13/2024 11:05	Finished	MS (5ppb), IWST-231228B,0.5
18	N063053-002AMS,MS	10	1000	Unknown		02/13/2024 11:18	Finished	MS (5ppb), IWST-231228B,0.2
19	N063053-002A,SAMP	11	1000	Unknown		02/13/2024 11:27	Finished	SAMP,0.02>10 mL
20	N063053-002ADUP,D	12	1000	Unknown		02/13/2024 11:37	Finished	DUP,0.02>10 mL
21	N063053-011A,SAMP	13	1000	Unknown		02/13/2024 11:46	Finished	SAMP,10 mL
22	N063053-011AMS,MS	14	1000	Unknown		02/13/2024 11:56	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	15	1000	Unknown		02/13/2024 12:05	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		02/13/2024 12:15	Finished	CCB R240103B
25	N063053-003A,SAMP	17	1000	Unknown		02/13/2024 12:24	Finished	SAMP,1>10 mL
26	N063053-003AMS,MS	18	1000	Unknown		02/13/2024 12:34	Finished	MS (5ppb), IWST-231228B,1>
27	N063053-008A,SAMP	19	1000	Unknown		02/13/2024 12:43	Finished	SAMP,0.1>10 mL
28	N063053-011AMSD,M	20	1000	Unknown		02/13/2024 12:53	Finished	MSD (1ppb), IWST-231228B,1
29	N063053-005A,SAMP	21	1000	Unknown		02/13/2024 13:02	Finished	SAMP,10 mL
30	N063053-005AMS,MS	22	1000	Unknown		02/13/2024 13:12	Finished	MS (1ppb), IWST-231228B,10r
31	N063053-006A,SAMP	23	1000	Unknown		02/13/2024 13:23	Finished	SAMP,10 mL
32	N063053-006AMS,MS	24	1000	Unknown		02/13/2024 13:32	Finished	MS (1ppb), IWST-231228B,10r
33	N063053-007A,SAMP	25	1000	Unknown		02/13/2024 13:42	Finished	SAMP,10 mL
34	N063053-007AMS,MS	26	1000	Unknown		02/13/2024 13:51	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	27	1000	Unknown		02/13/2024 14:00	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	28	1000	Unknown		02/13/2024 14:10	Finished	CCB R240103B
37	N063053-001A,SAMP	29	1000	Unknown		02/13/2024 14:19	Finished	SAMP,2>10 mL
38	N063053-001AMS,MS	30	1000	Unknown		02/13/2024 14:29	Finished	MS (5ppb), IWST-231228B,2>
39	N063053-004A,SAMP	31	1000	Unknown		02/13/2024 14:38	Finished	SAMP,1>10 mL
40	N063053-004AMS,MS	32	1000	Unknown		02/13/2024 14:48	Finished	MS (5ppb), IWST-231228B,1>
41	N063053-012A,SAMP	33	1000	Unknown		02/13/2024 14:57	Finished	SAMP,2>10 mL
42	N063053-012AMS,MS	34	1000	Unknown		02/13/2024 15:07	Finished	MS (5ppb), IWST-231228B,2>
43	N063053-013A,SAMP	35	1000	Unknown		02/13/2024 15:16	Finished	SAMP,2>10 mL
44	N063053-013AMS,MS	36	1000	Unknown		02/13/2024 15:26	Finished	MS (5ppb), IWST-231228B,2>
45	N063001-004A,SAMP	37	1000	Unknown		02/13/2024 15:35	Finished	SAMP,2>10 mL
46	N063001-004AMS,MS	38	1000	Unknown		02/13/2024 15:44	Finished	MS (1ppb), IWST-231228B,2>
47	CCV-4,CCV1,1,	1	1000	Unknown		02/13/2024 15:59	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	2	1000	Unknown		02/13/2024 16:11	Finished	CCB R240103B
49	N063053-009A,SAMP	3	1000	Unknown		02/13/2024 16:20	Finished	SAMP,0.5>10 mL
50	N063053-009AMS,MS	4	1000	Unknown		02/13/2024 16:30	Finished	MS (5ppb), IWST-231228B,0.5
51	N063053-010A,SAMP	5	1000	Unknown		02/13/2024 16:39	Finished	SAMP,0.5>10 mL
52	N063053-010AMS,MS	6	1000	Unknown		02/13/2024 16:49	Finished	MS (5ppb), IWST-231228B,0.5
53	N063053-014A,SAMP	7	1000	Unknown		02/13/2024 16:58	Finished	SAMP,10 mL
54	N063053-014AMS,MS	8	1000	Unknown		02/13/2024 17:08	Finished	MS (1ppb), IWST-231228B,10r
55	N063053-015A,SAMP	9	1000	Unknown		02/13/2024 17:17	Finished	SAMP,10 mL
56	N063053-015AMS,MS	10	1000	Unknown		02/13/2024 17:27	Finished	MS (1ppb), IWST-231228B,10r
57	N063053-016A,SAMP	11	1000	Unknown		02/13/2024 17:36	Finished	SAMP,10 mL
58	N063053-016AMS,MS	12	1000	Unknown		02/13/2024 17:46	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	13	1000	Unknown		02/13/2024 17:55	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	14	1000	Unknown		02/13/2024 18:05	Finished	CCB R240103B

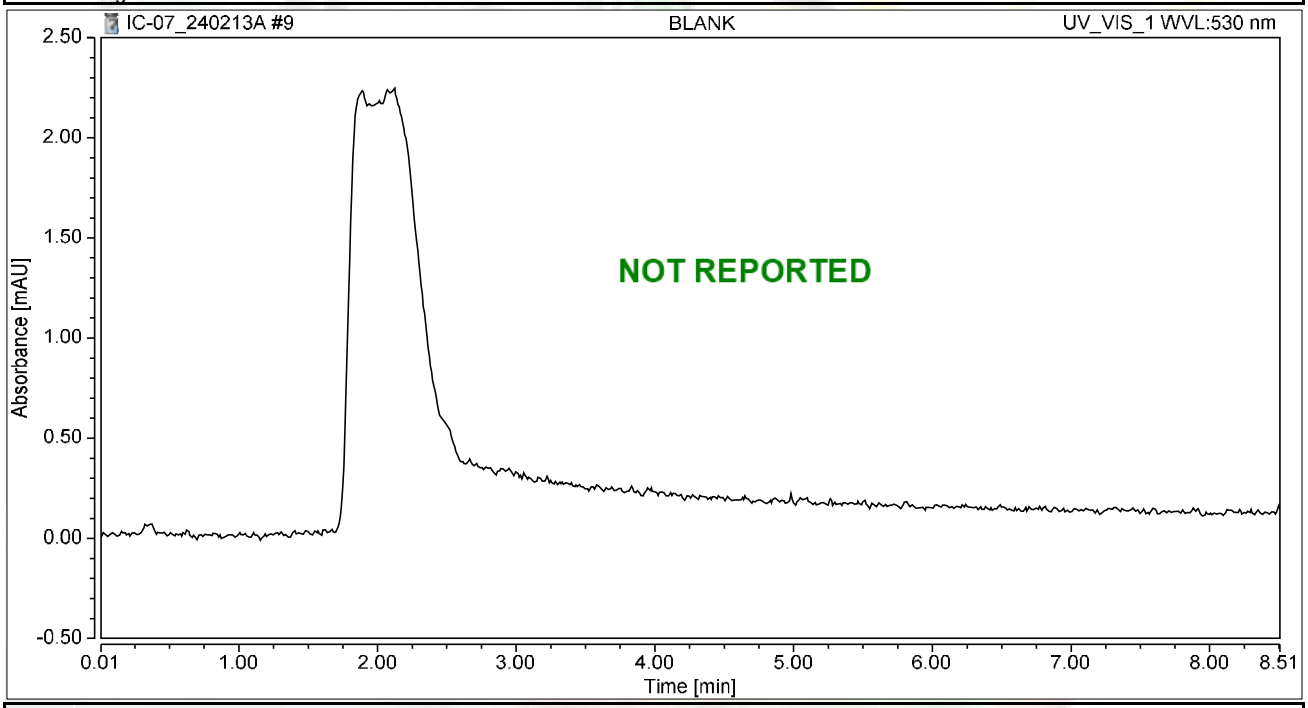
61	N063053-018A,SAMP	15	1000	Unknown		02/13/2024 18:14	Finished	SAMP,10 mL
62	N063053-018AMS,MS	16	1000	Unknown		02/13/2024 18:23	Finished	MS (1ppb), IWST-231228B,10r
63	N063053-014A,SAMP	17	1000	Unknown		02/13/2024 18:33	Finished	SAMP,2>10 mL
64	N063053-014AMS,MS	18	1000	Unknown		02/13/2024 18:42	Finished	MS (1ppb), IWST-231228B,2>
65	N063053-015A,SAMP	19	1000	Unknown		02/13/2024 18:52	Finished	SAMP,2>10 mL
66	N063053-015AMS,MS	20	1000	Unknown		02/13/2024 19:01	Finished	MS (1ppb), IWST-231228B,2>
67	N063053-016A,SAMP	21	1000	Unknown		02/13/2024 19:11	Finished	SAMP,2>10 mL
68	N063053-016AMS,MS	22	1000	Unknown		02/13/2024 19:20	Finished	MS (1ppb), IWST-231228B,2>
69	N063053-018A,SAMP	23	1000	Unknown		02/13/2024 19:30	Finished	SAMP,2>10 mL
70	N063053-018AMS,MS	24	1000	Unknown		02/13/2024 19:39	Finished	MS (1ppb), IWST-231228B,2>
71	CCV-6,CCV1,1,	25	1000	Unknown		02/13/2024 19:49	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	26	1000	Unknown		02/13/2024 19:58	Finished	CCB R240103B
73	N063053-017A,SAMP	27	1000	Unknown		02/13/2024 20:08	Finished	SAMP,10 mL
74	N063053-017AMS,MS	28	1000	Unknown		02/13/2024 20:17	Finished	MS (1ppb), IWST-231228B,10r
75	N063053-008AMS,MS	29	1000	Unknown		02/13/2024 20:26	Finished	MS (5ppb), IWST-231228B,0.1
76	N063053-011A,SAMP	30	1000	Unknown		02/13/2024 20:36	Finished	SAMP,2>10 mL
77	N063053-011AMS,MS	31	1000	Unknown		02/13/2024 20:45	Finished	MS (1ppb), IWST-231228B,2>
78	N063053-011AMSD,M	32	1000	Unknown		02/13/2024 20:54	Finished	MSD (1ppb), IWST-231228B,2
79	N062911-003A,SAMP	33	1000	Unknown		02/13/2024 21:03	Finished	SAMP,2>10 mL
80	N062911-003AMS,MS	34	1000	Unknown		02/13/2024 21:13	Finished	MS (1ppb), IWST-231228B,2>
81	N062911-004A,SAMP	35	1000	Unknown		02/13/2024 21:22	Finished	SAMP,2>10 mL
82	N062911-004AMS,MS	36	1000	Unknown		02/13/2024 21:32	Finished	MS (1ppb), IWST-231228B,2>
83	CCV-7,CCV,1,	37	1000	Unknown		02/13/2024 21:41	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	38	1000	Unknown		02/13/2024 21:51	Finished	CCB R240103B
85	N063053-003A,SAMP	39	1000	Unknown		02/13/2024 22:00	Finished	SAMP,0.2>10 mL
86	N063053-003AMS,MS	40	1000	Unknown		02/13/2024 22:10	Finished	MS (5ppb), IWST-231228B,0.2
87	N063053-007A,SAMP	41	1000	Unknown		02/13/2024 22:19	Finished	SAMP,0.5>10 mL
88	N063053-007AMS,MS	42	1000	Unknown		02/13/2024 22:29	Finished	MS (5ppb), IWST-231228B,0.5
89	N063053-012A,SAMP	43	1000	Unknown		02/13/2024 22:38	Finished	SAMP,0.5>10 mL
90	N063053-012AMS,MS	44	1000	Unknown		02/13/2024 22:47	Finished	MS (5ppb), IWST-231228B,0.5
91	CCV-8,CCV1,1,	45	1000	Unknown		02/13/2024 22:57	Finished	CCV @10ppb, IWST-231228A
92	CCB-8,CCB,1,	46	1000	Unknown		02/13/2024 23:06	Finished	CCB R240103B
93	BLANK	47	1000	Unknown		02/13/2024 23:16	Finished	BLANK
94	SHUTDOWN	48	1000	Unknown		02/13/2024 23:25	Finished	
95	Eluent: R240212A	49	1000	Unknown		n.a.	Finished	
96	PCR: R240212B	50	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 09:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

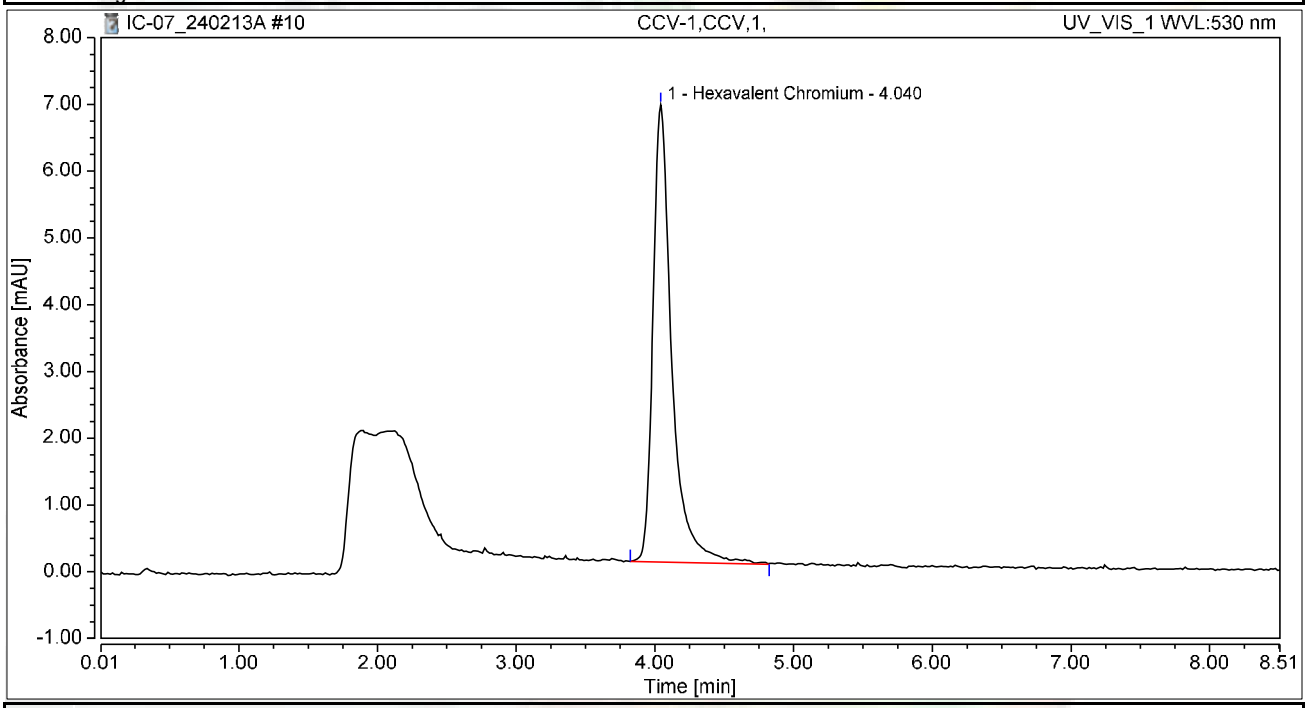
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 09:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.079	6.853	100.00	100.00	5.0144
Total:			**1.079**	**6.853**	**100.00**	**100.00**	

Reviewed by:

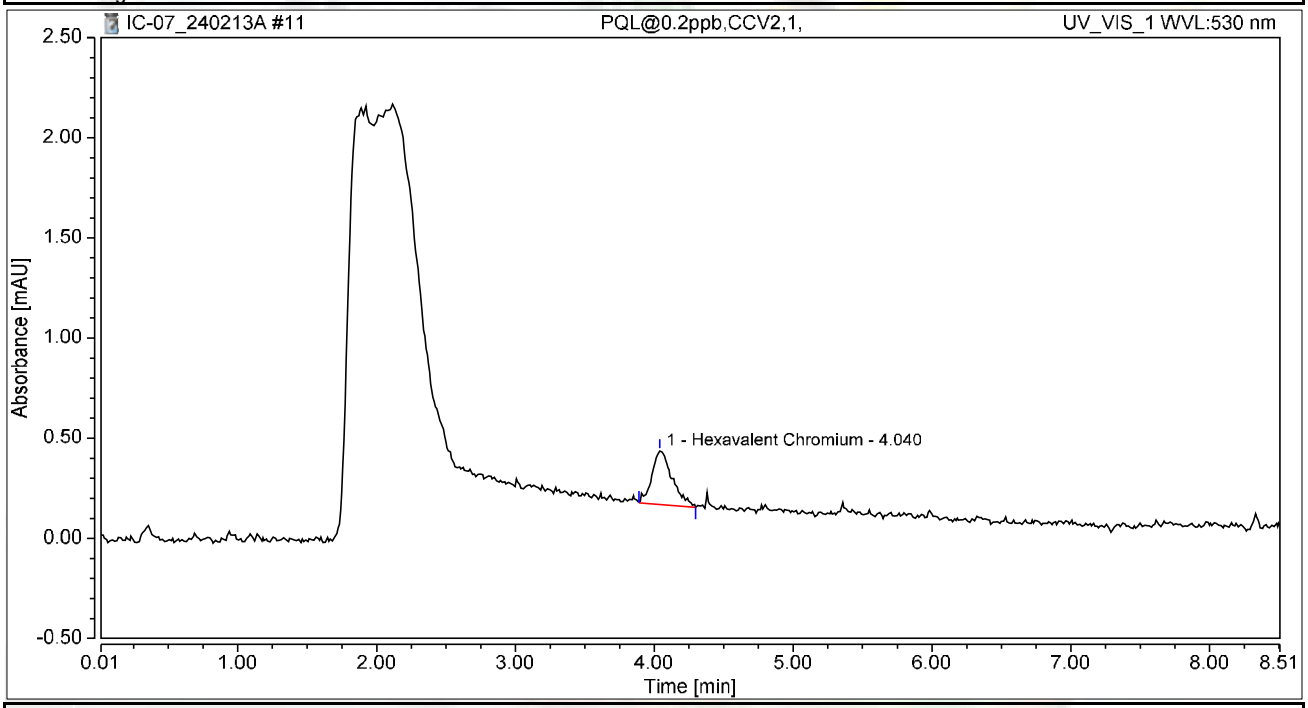
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 10:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

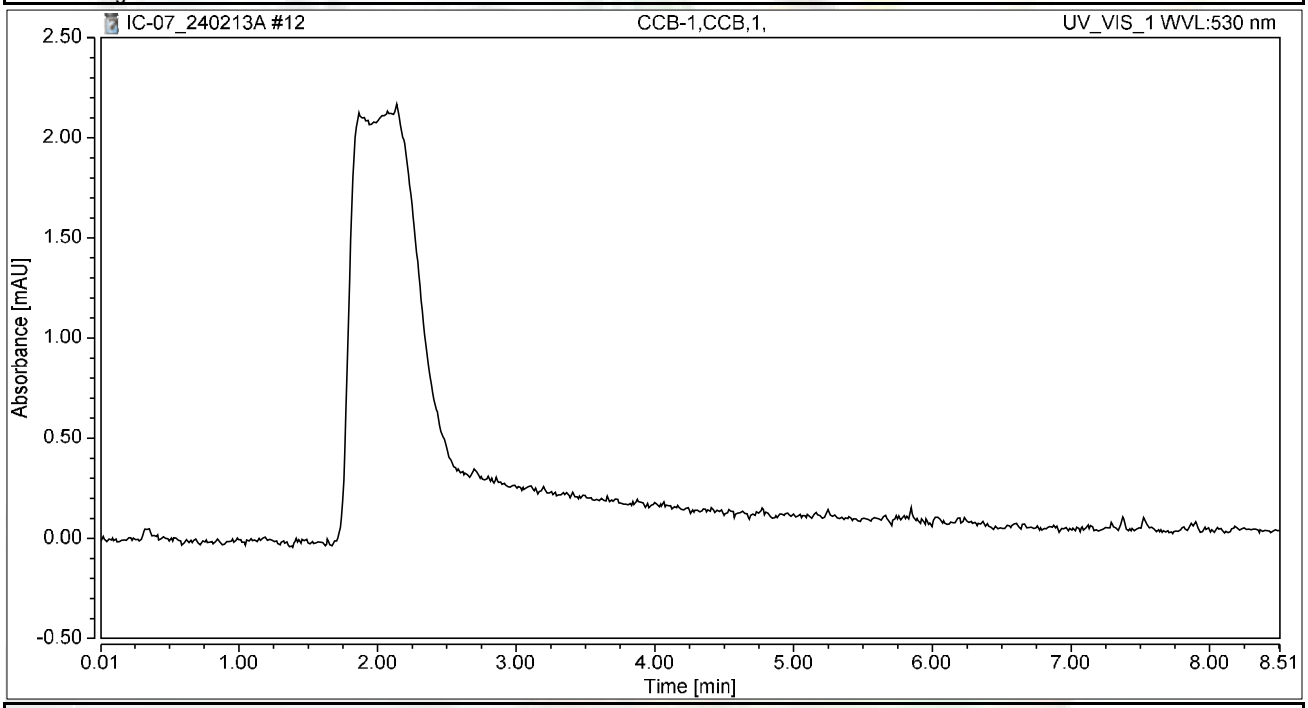
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.045	0.266	100.00	100.00	0.2113
Total:			**0.045**	**0.266**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 10:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

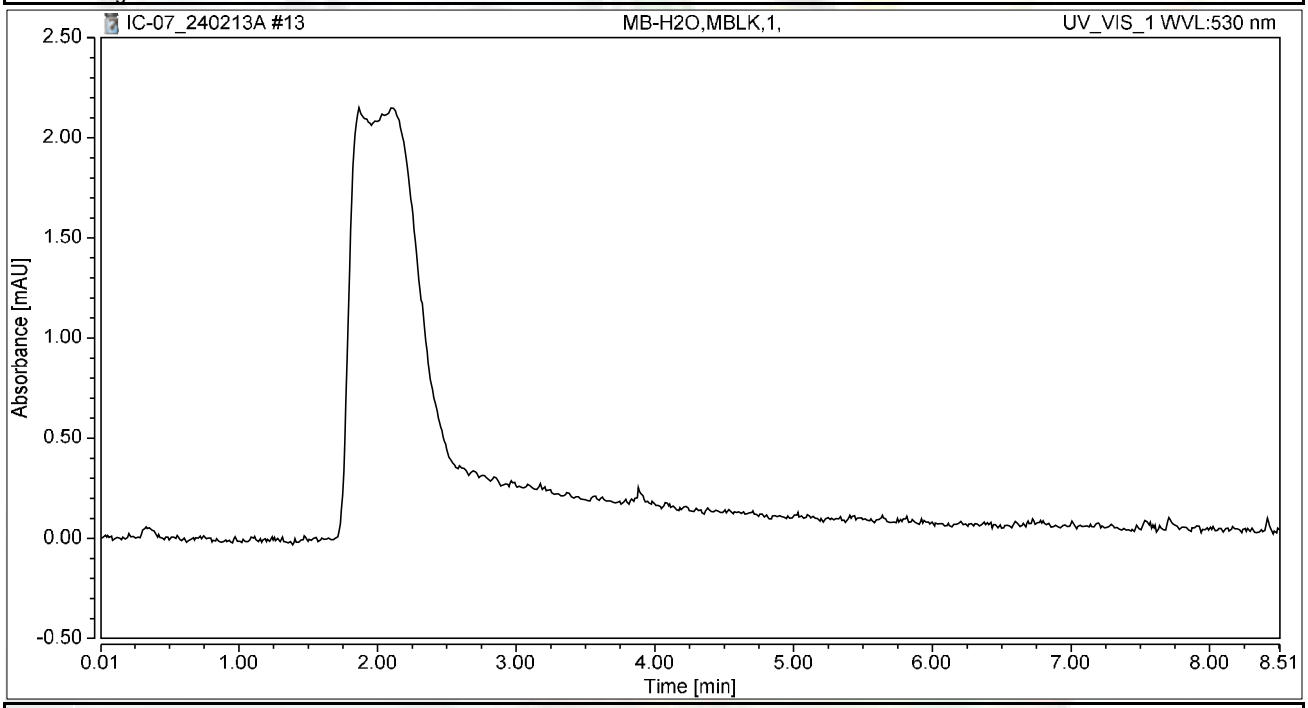
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 10:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

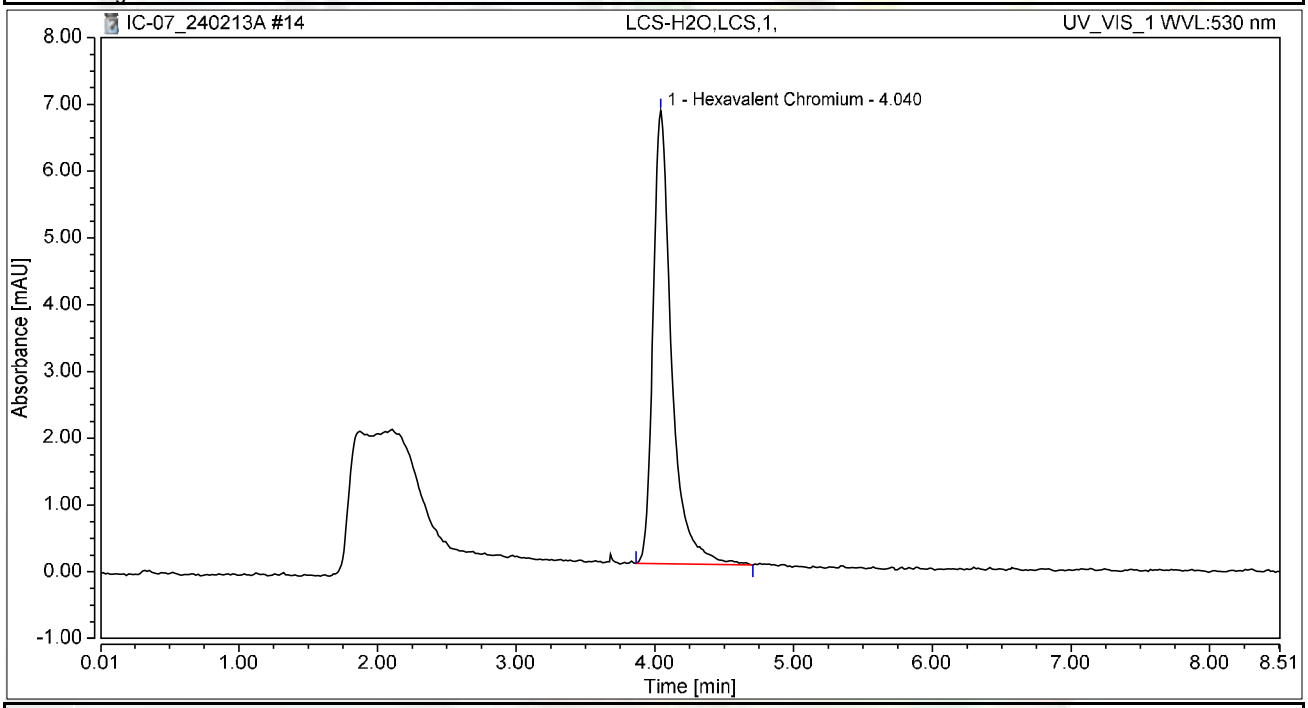
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 10:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

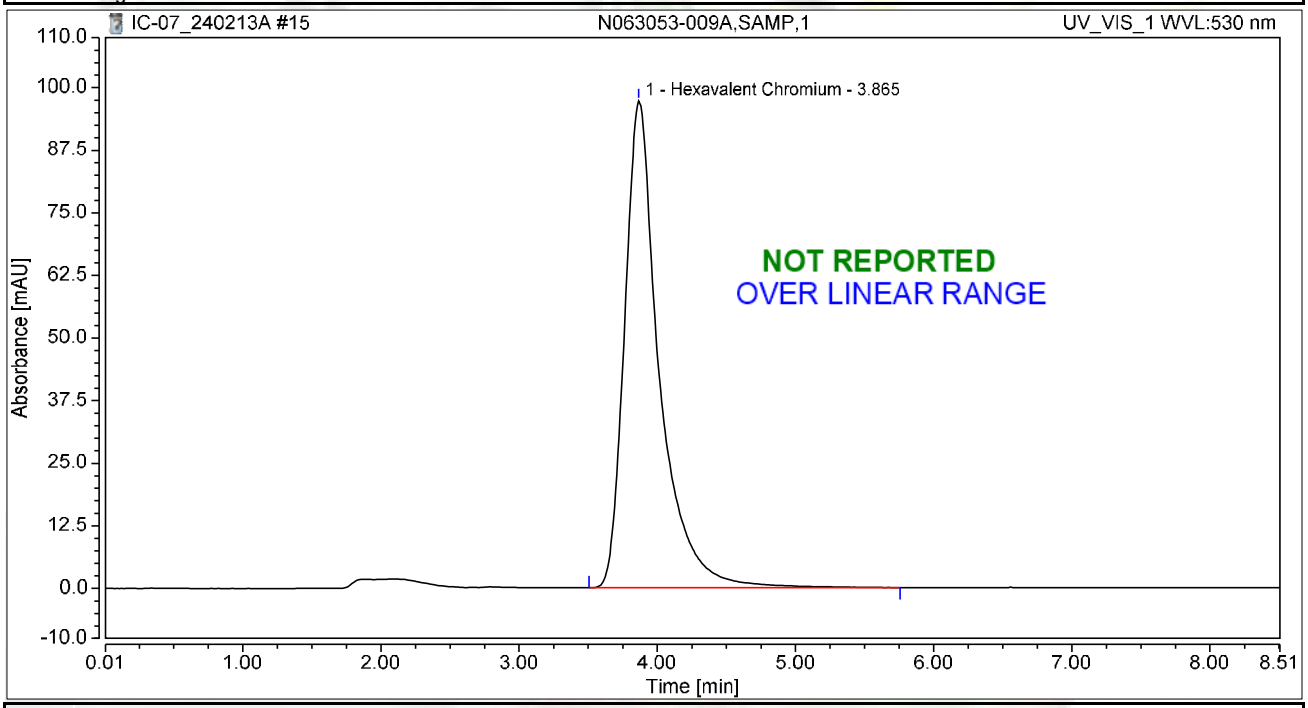
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.051	6.785	100.00	100.00	4.8861
Total:			**1.051**	**6.785**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 10:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

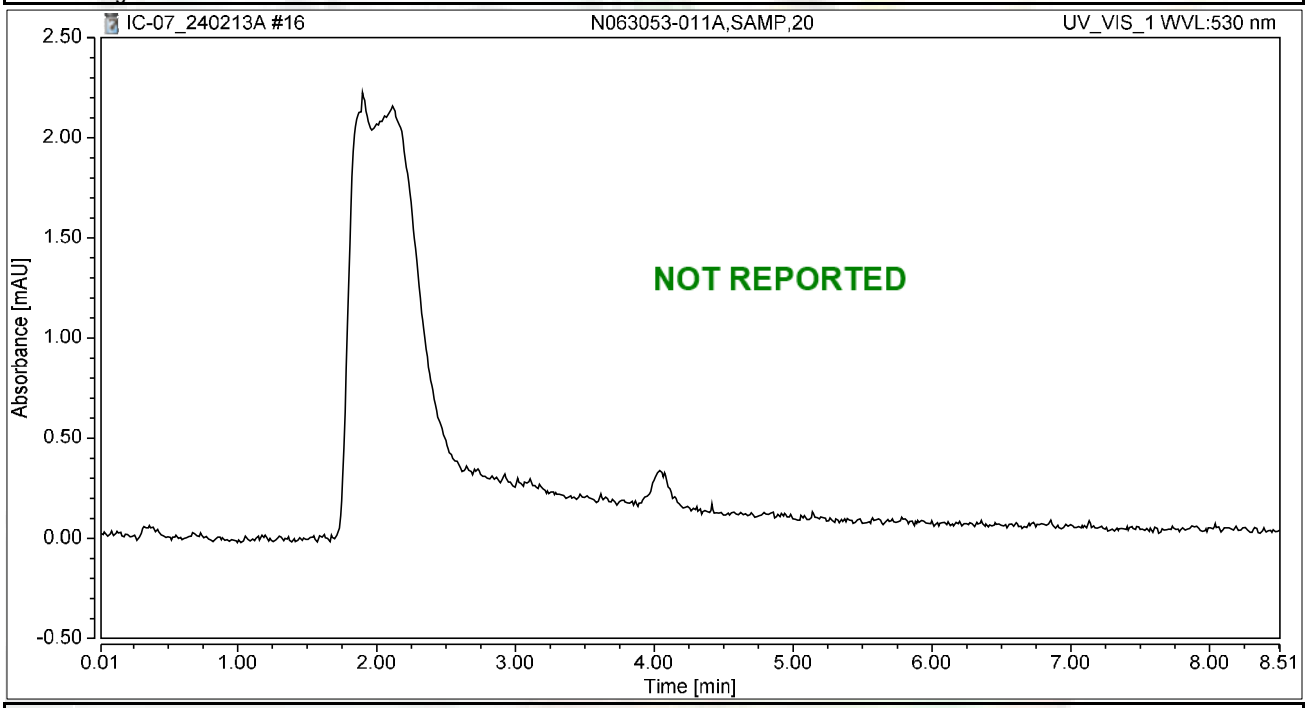
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.865	28.264	97.258	100.00	100.00	131.3960
Total:			**28.264**	**97.258**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011A,SAMP,20**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 10:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

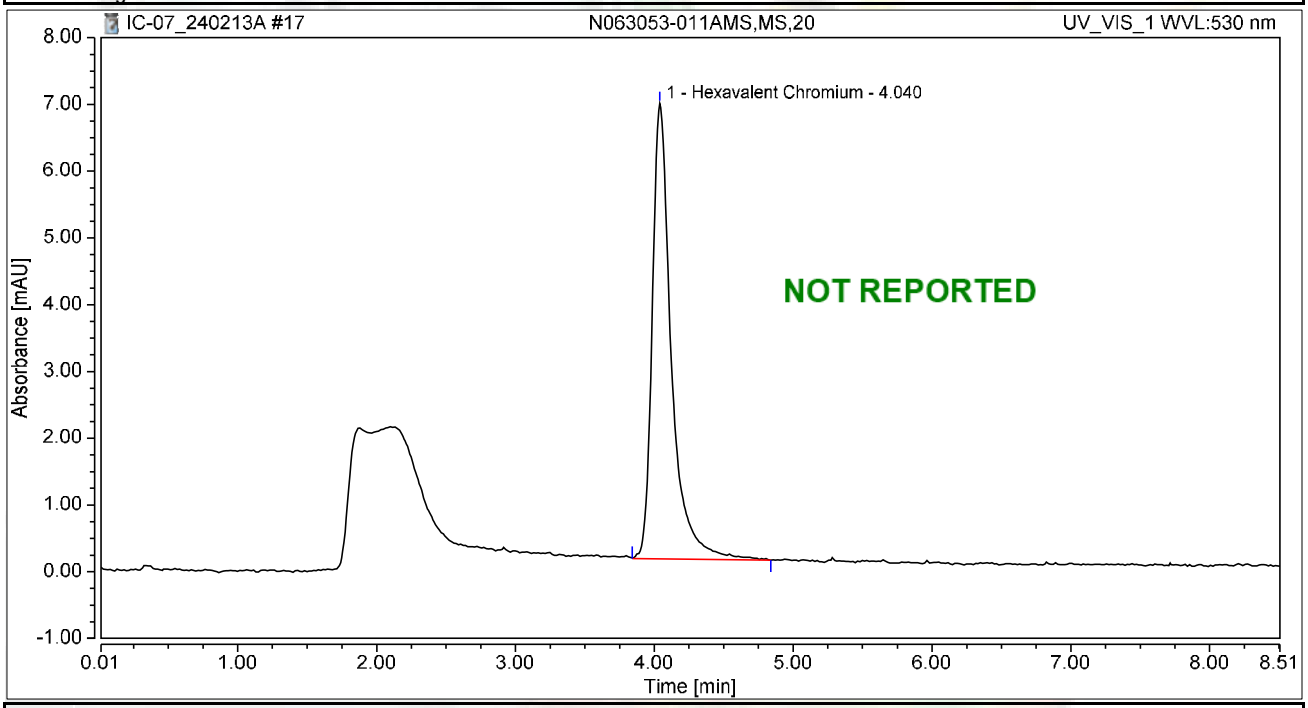
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011AMS,MS,20**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 11:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

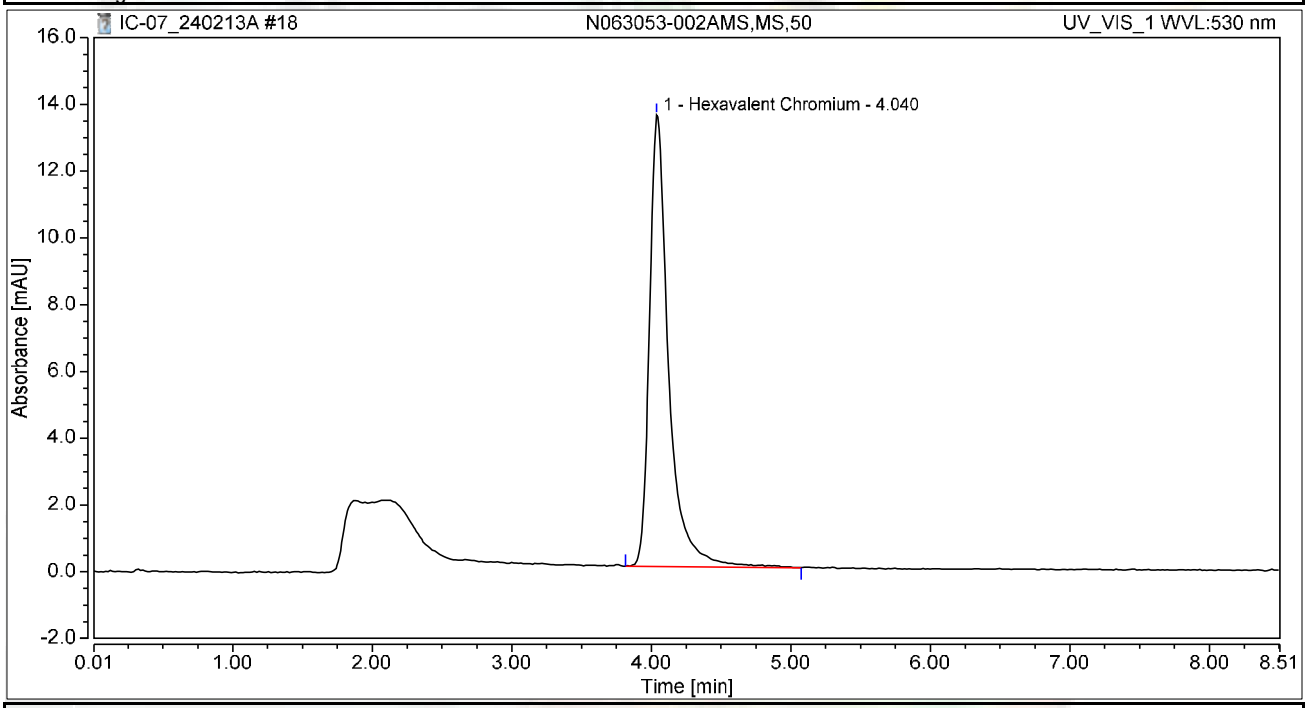
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.091	6.819	100.00	100.00	5.0729
Total:			**1.091**	**6.819**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-002AMS,MS,50**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 11:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

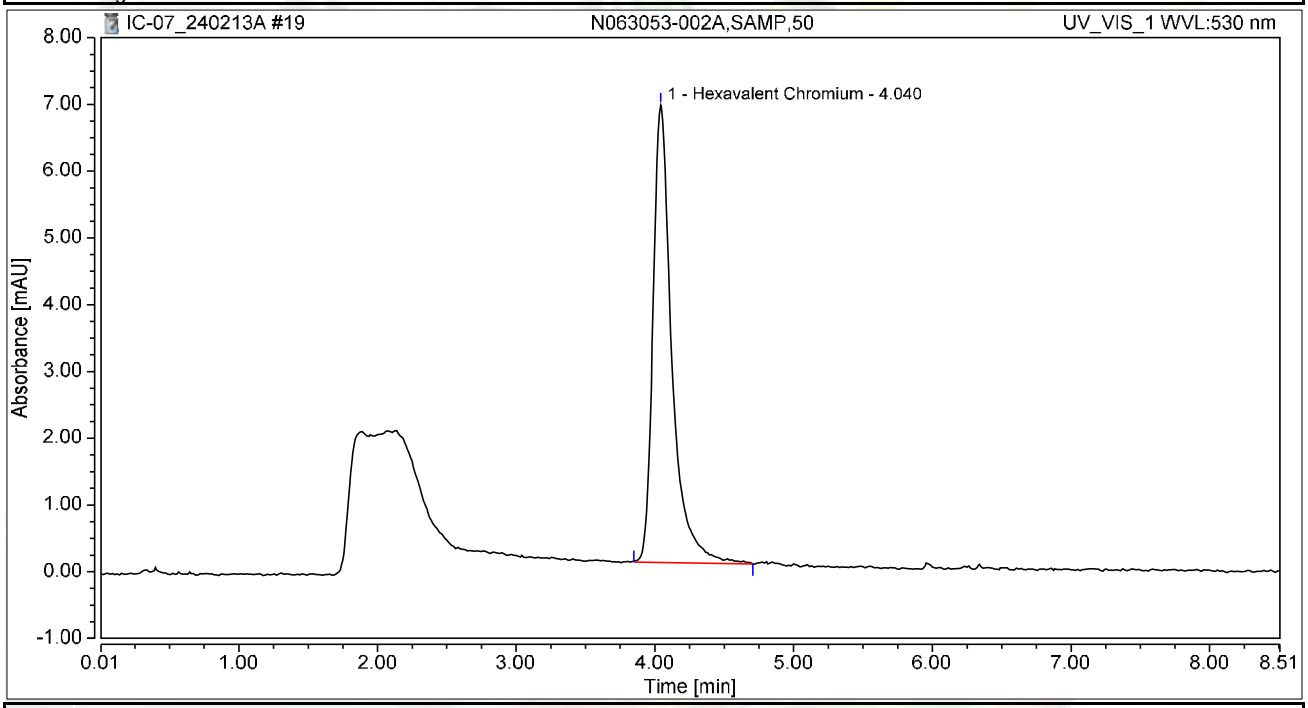
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.158	13.521	100.00	100.00	10.0327
Total:			**2.158**	**13.521**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-002A,SAMP,50**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 11:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

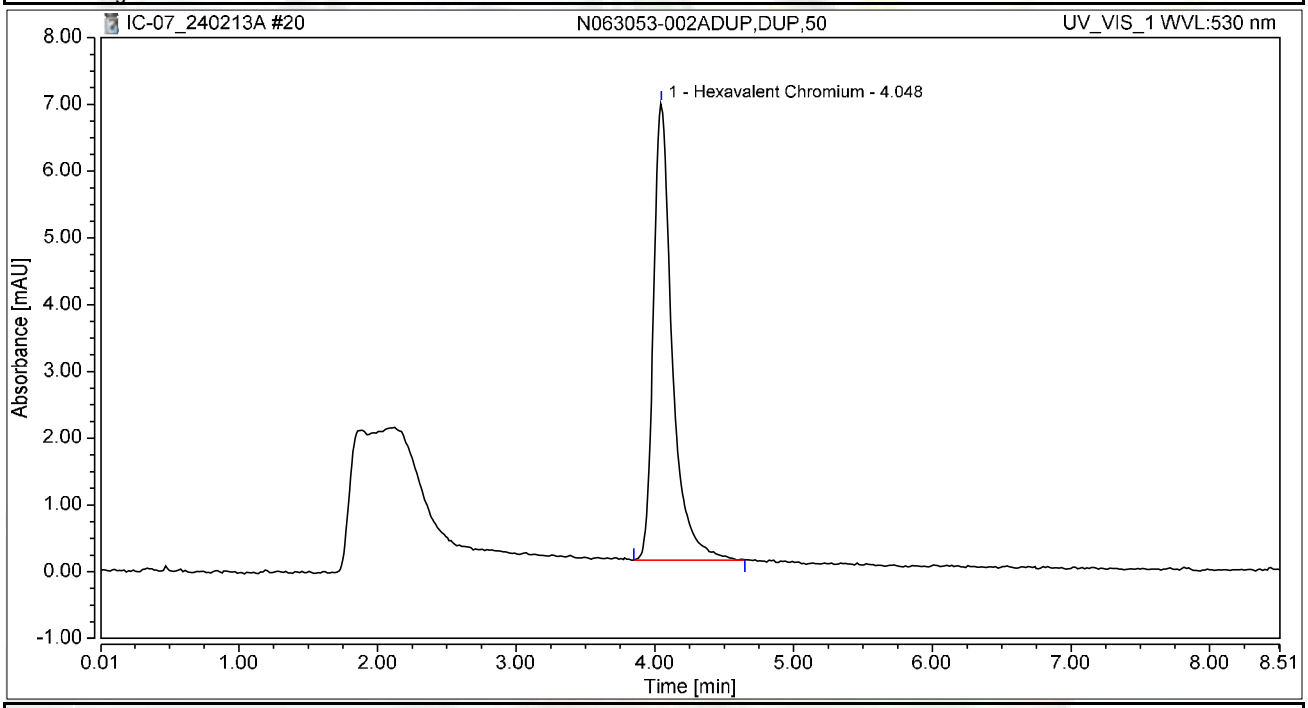
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.080	6.855	100.00	100.00	5.0196
Total:			**1.080**	**6.855**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-002ADUP,DUP,50**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 11:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

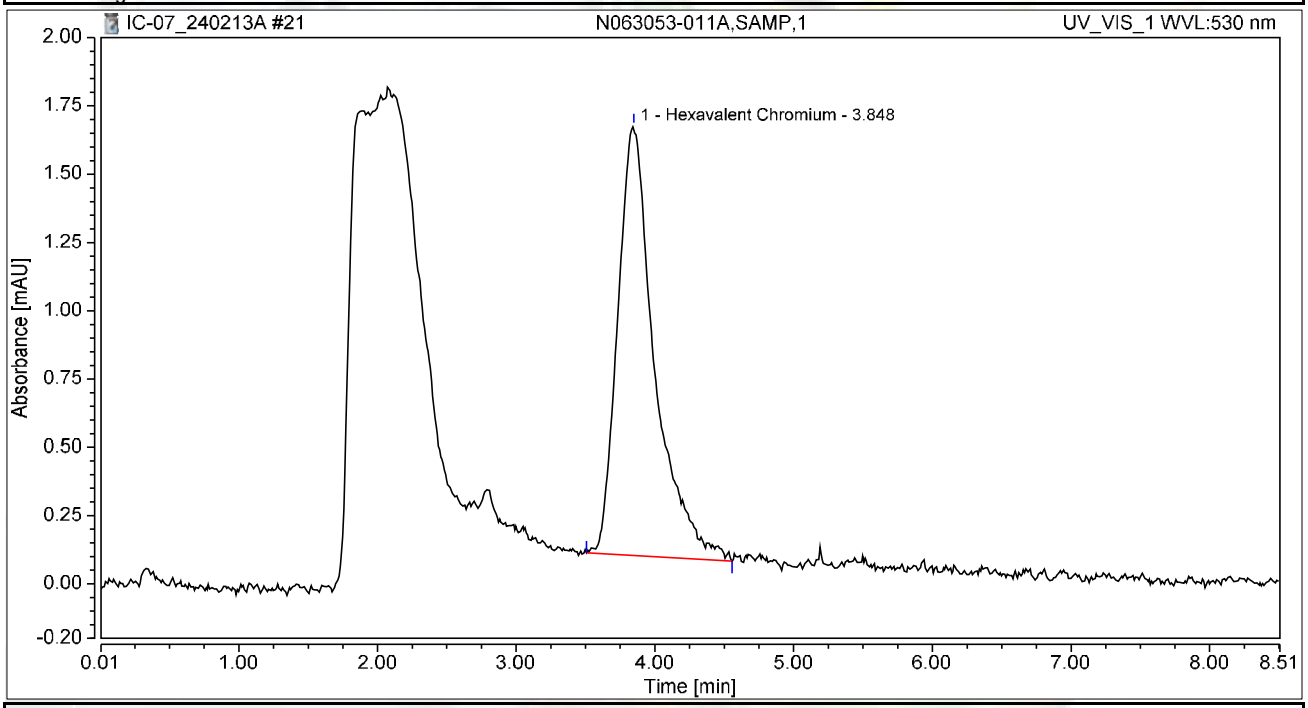
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.073	6.847	100.00	100.00	4.9872
Total:			**1.073**	**6.847**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 11:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

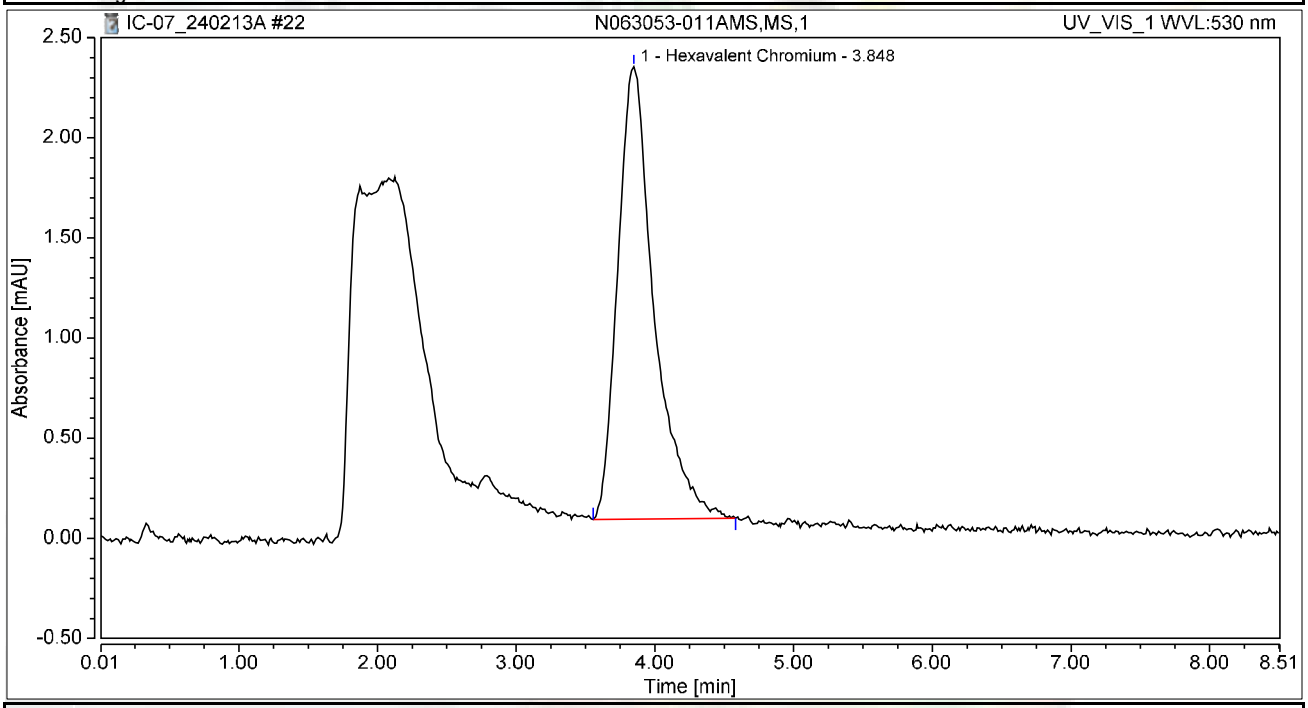
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.848	0.485	1.574	100.00	100.00	2.2535
Total:			**0.485**	**1.574**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 11:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

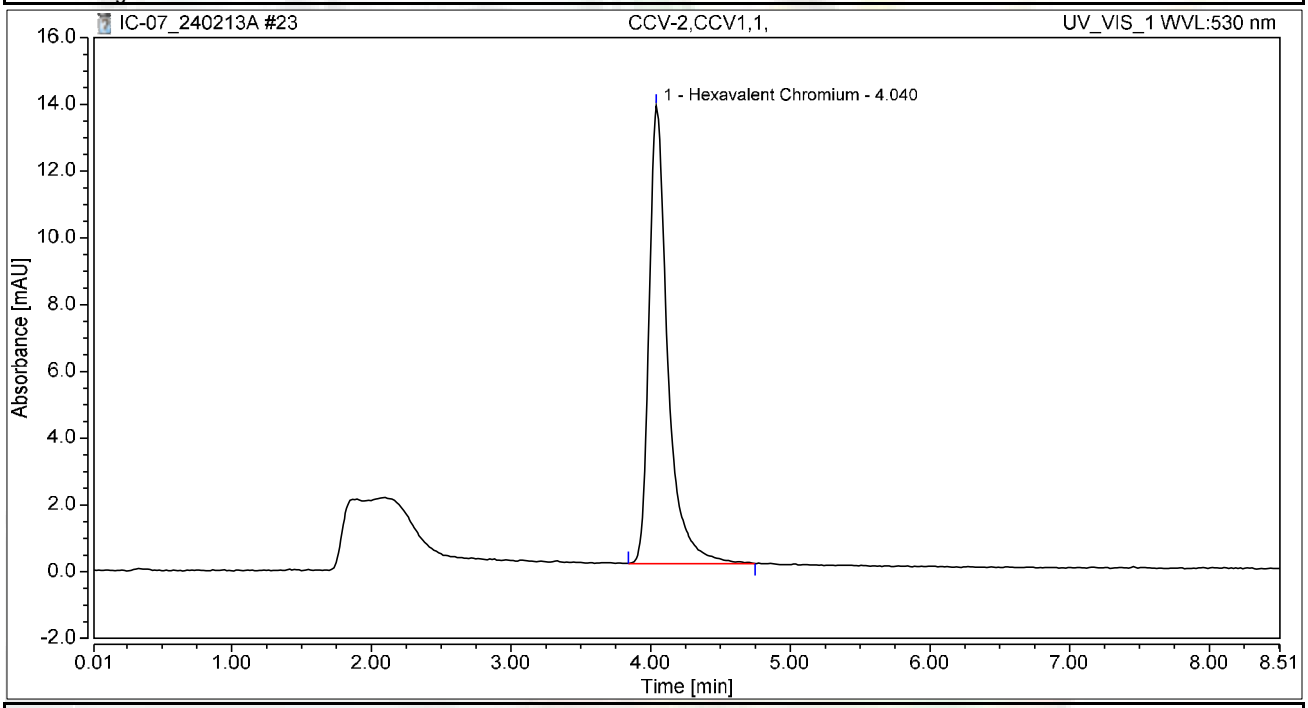
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.848	0.686	2.259	100.00	100.00	3.1873
Total:			**0.686**	**2.259**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 12:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

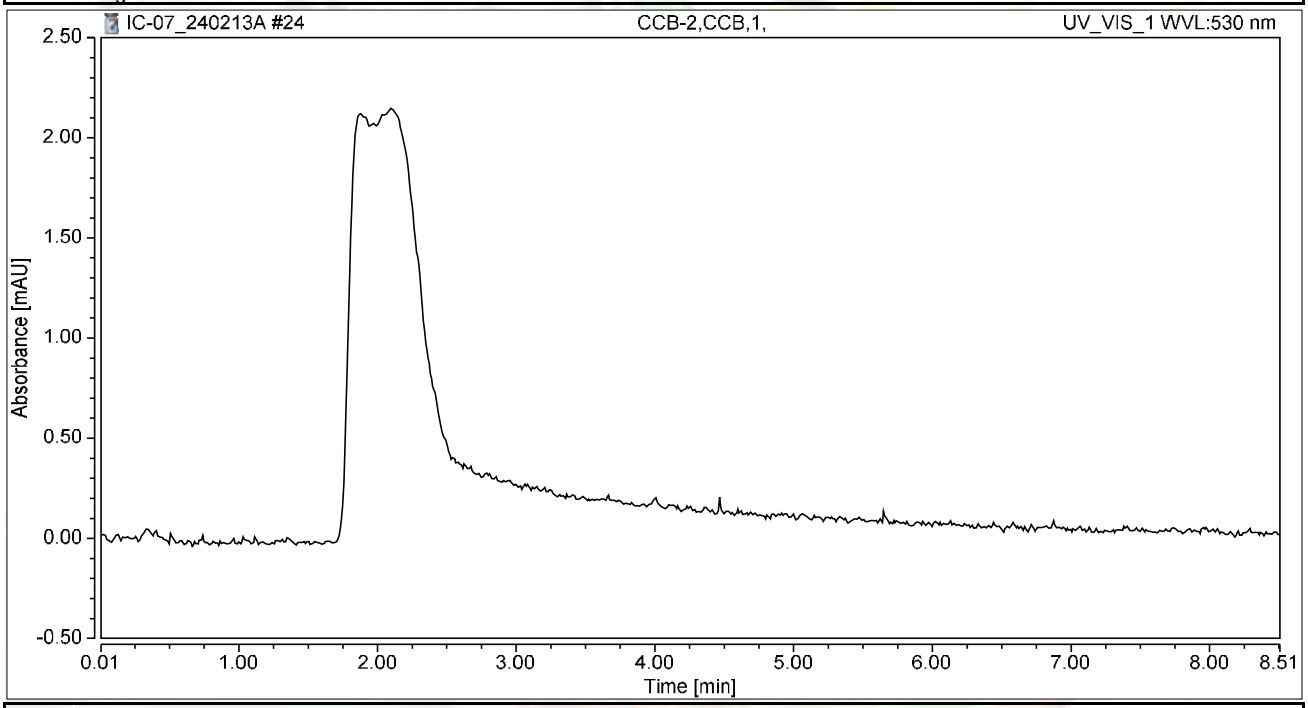
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.137	13.710	100.00	100.00	9.9358
Total:			**2.137**	**13.710**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 12:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

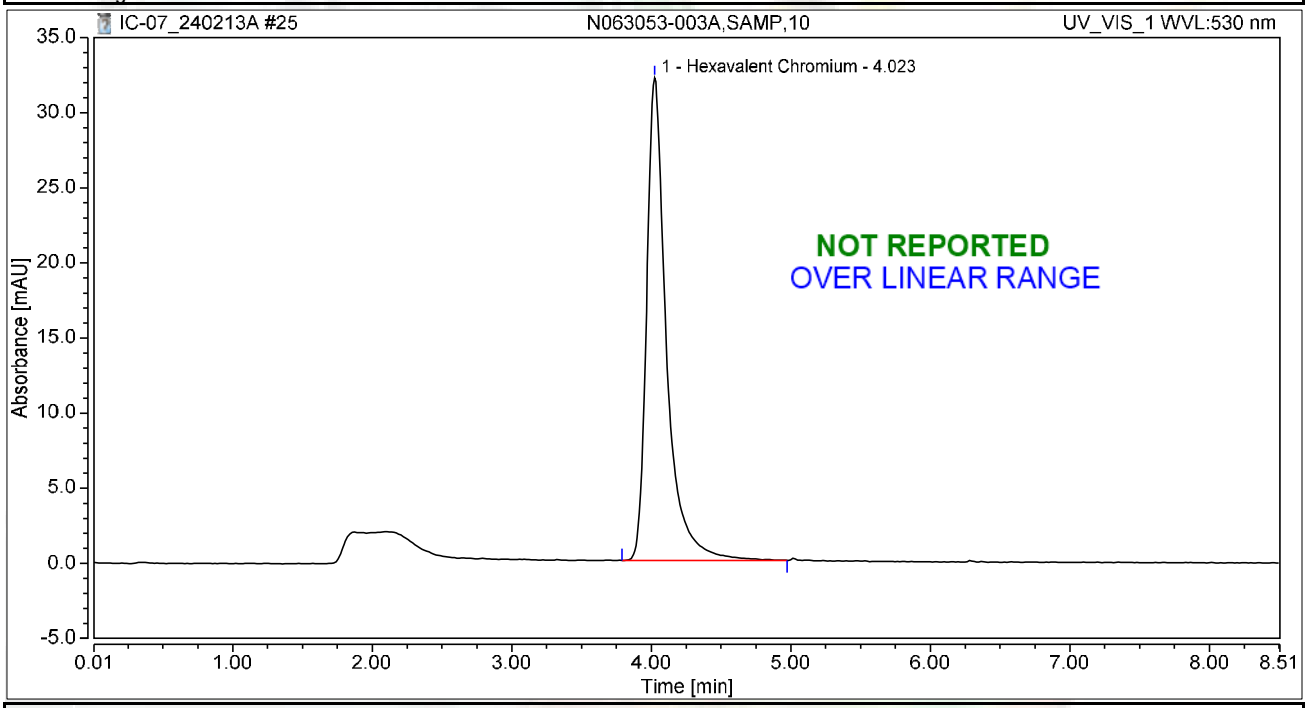
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-003A,SAMP,10**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 12:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

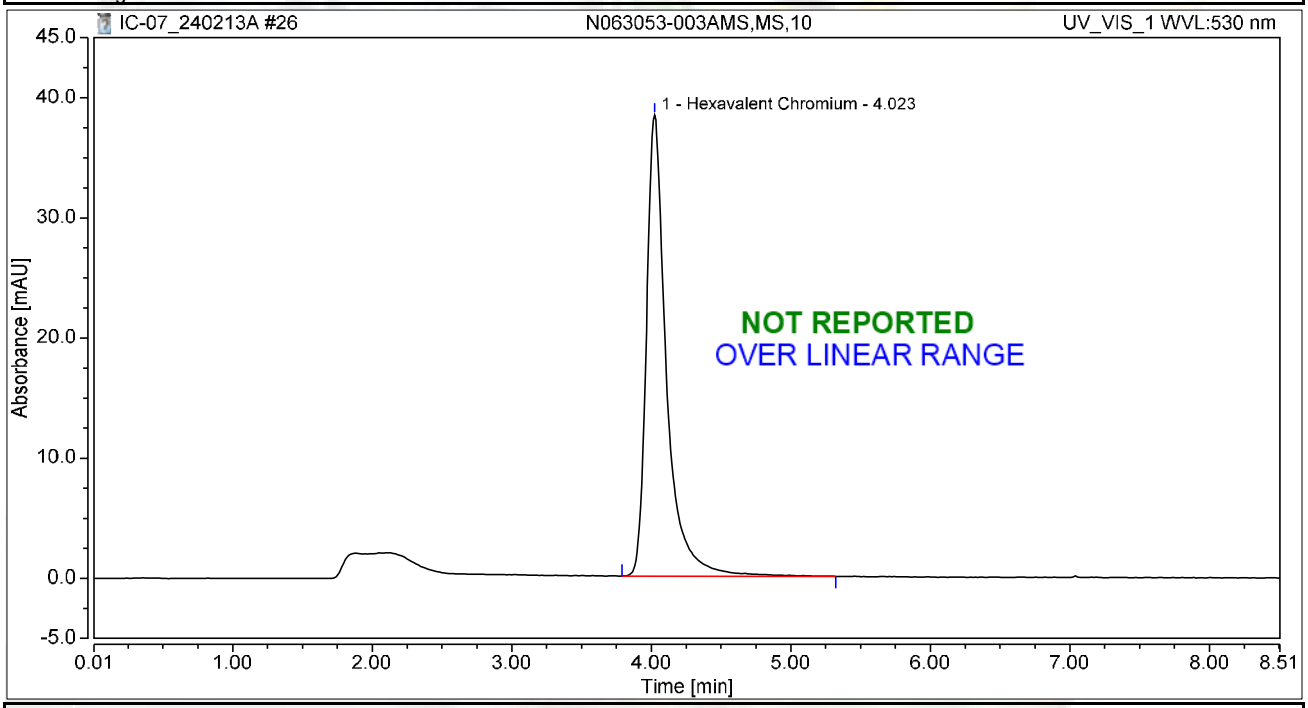
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	5.312	32.138	100.00	100.00	24.6948
Total:			**5.312**	**32.138**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-003AMS,MS,10**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 12:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

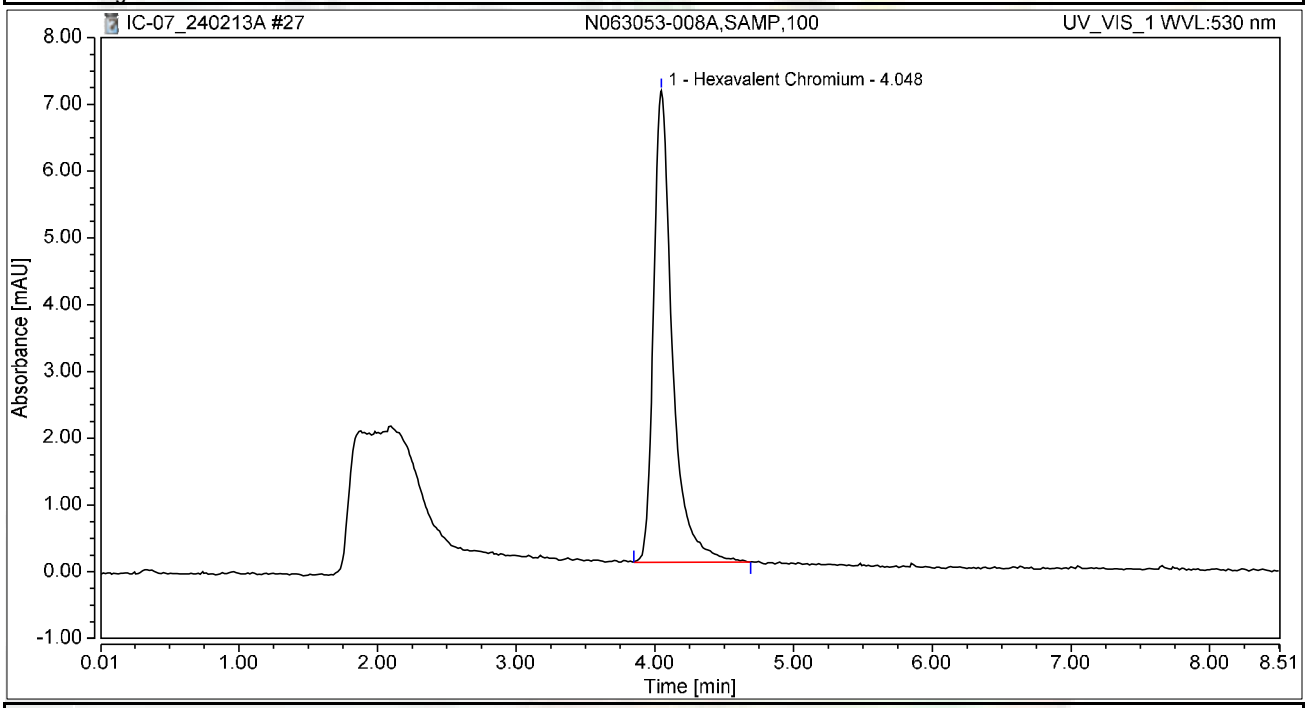
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	6.390	38.368	100.00	100.00	29.7066
Total:			**6.390**	**38.368**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-008A,SAMP,100**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 12:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

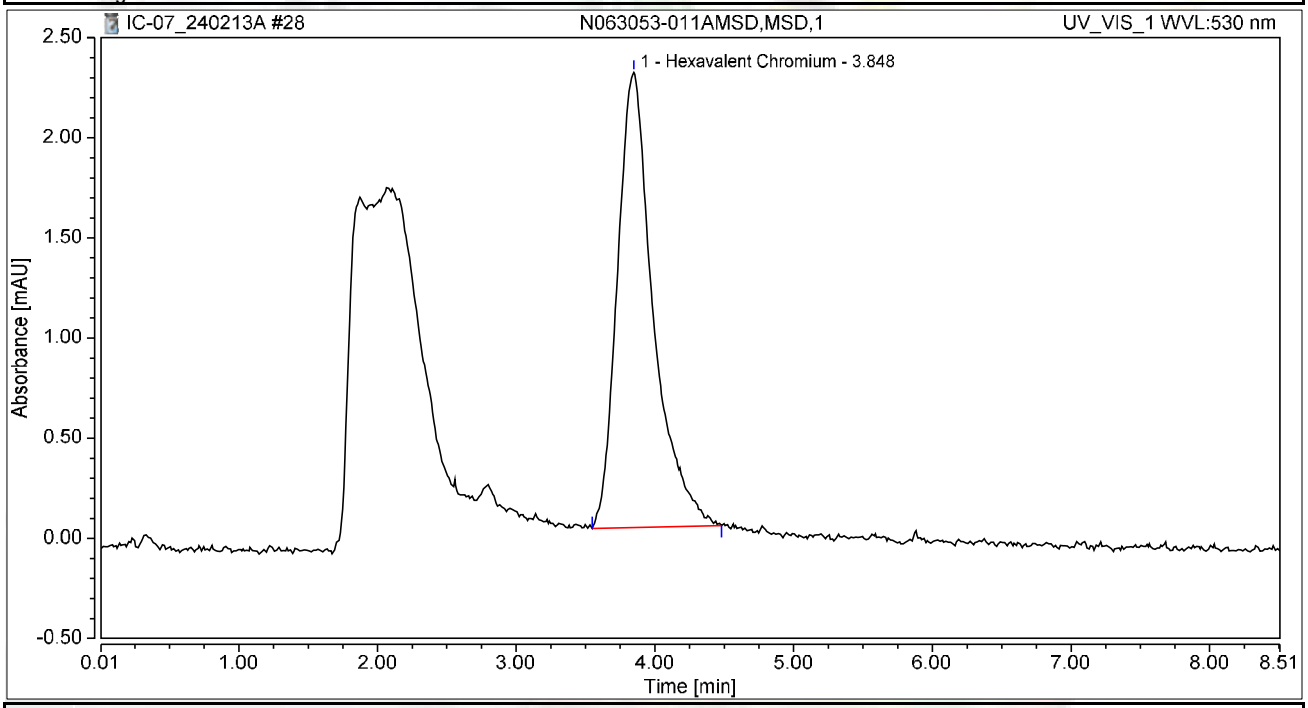
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.112	7.067	100.00	100.00	5.1687
Total:			**1.112**	**7.067**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011AMSD,MSD,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 12:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

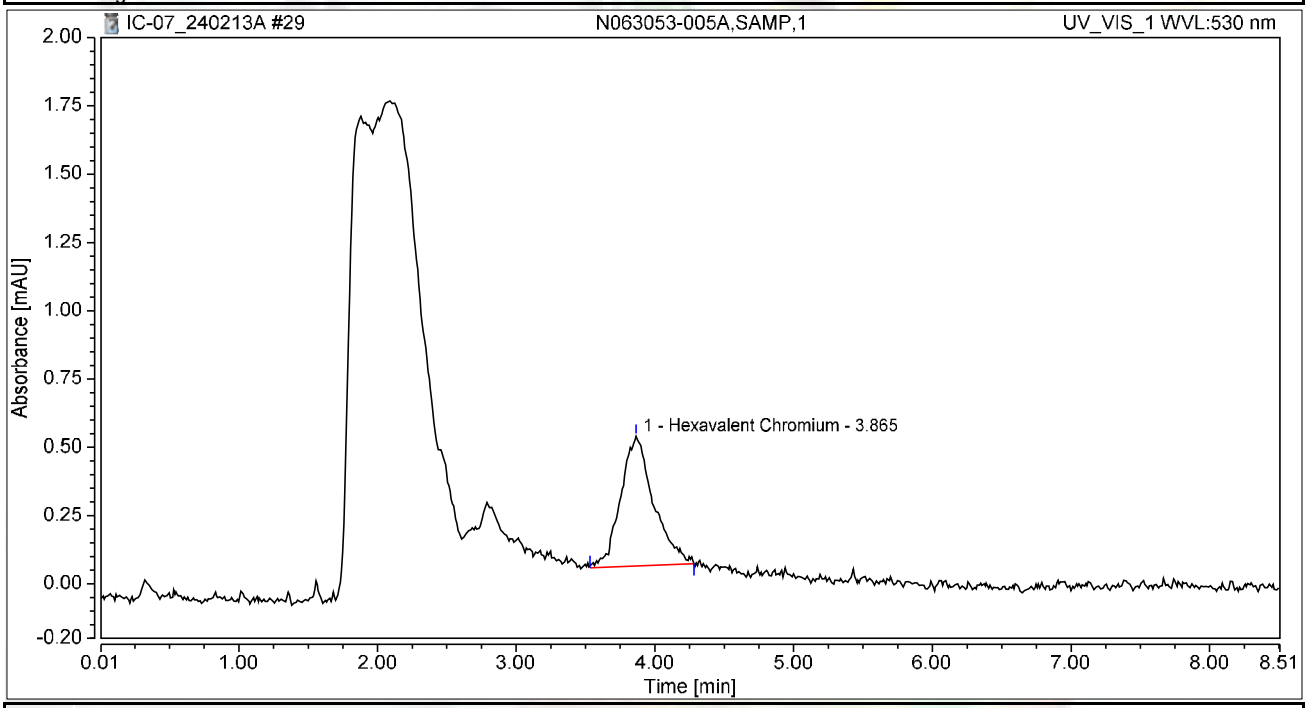
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.848	0.682	2.273	100.00	100.00	3.1701
Total:			**0.682**	**2.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 13:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

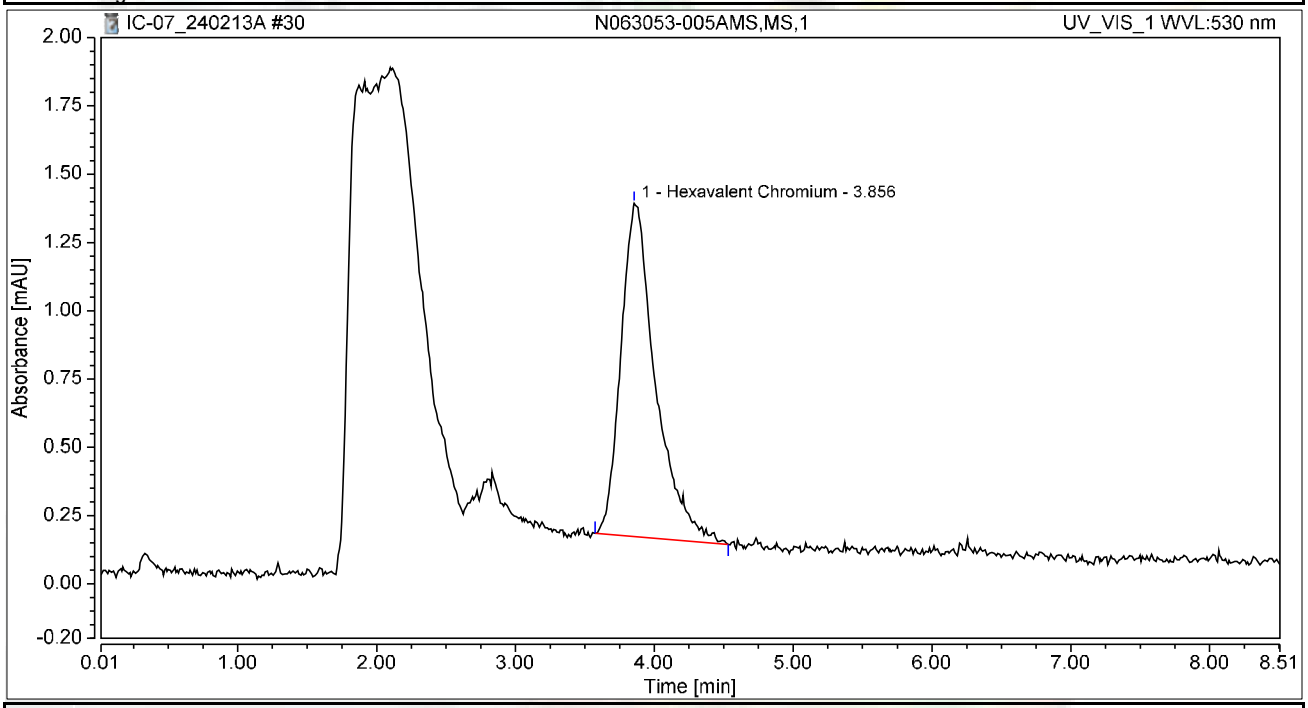
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.865	0.131	0.474	100.00	100.00	0.6081
Total:			**0.131**	**0.474**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-005AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 13:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

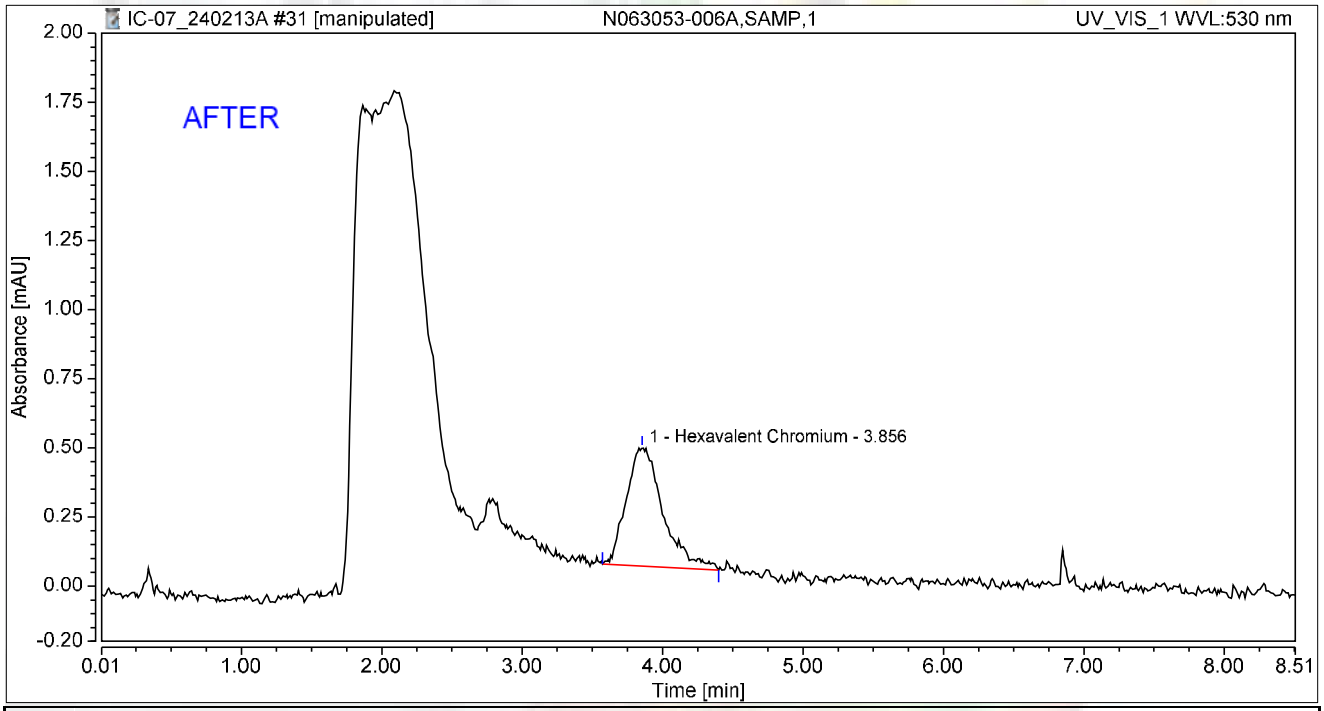
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.353	1.220	100.00	100.00	1.6410
Total:			**0.353**	**1.220**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 13:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.130	0.428	100.00	100.00	0.6063
Total:			**0.130**	**0.428**	**100.00**	**100.00**	

Reviewed by:

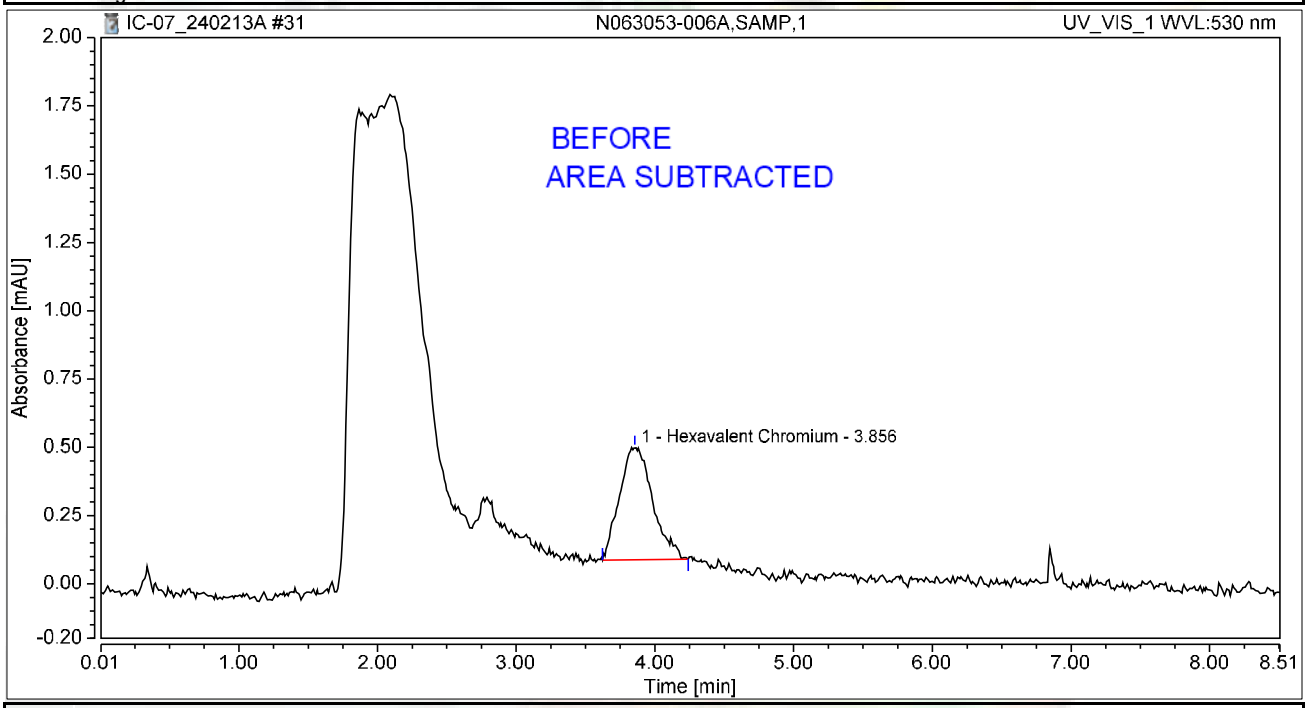
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063053-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 13:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

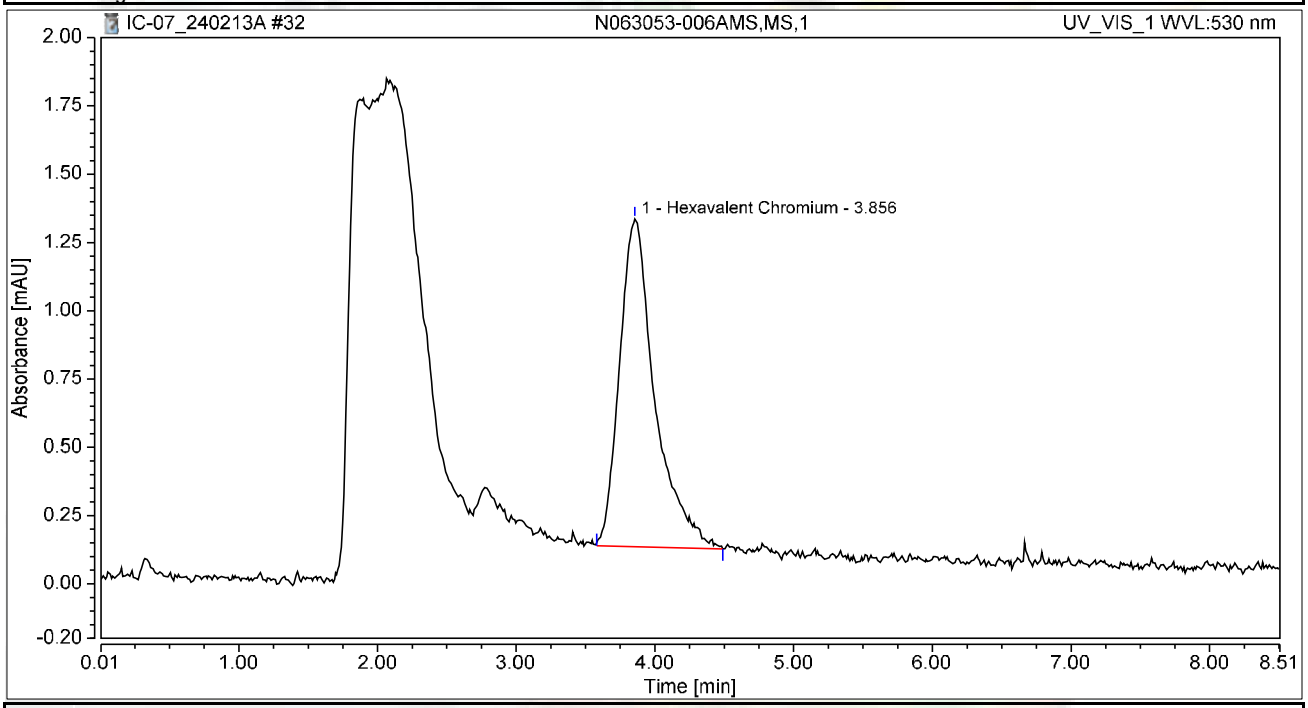
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.114	0.411	100.00	100.00	0.5309
Total:			**0.114**	**0.411**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 13:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

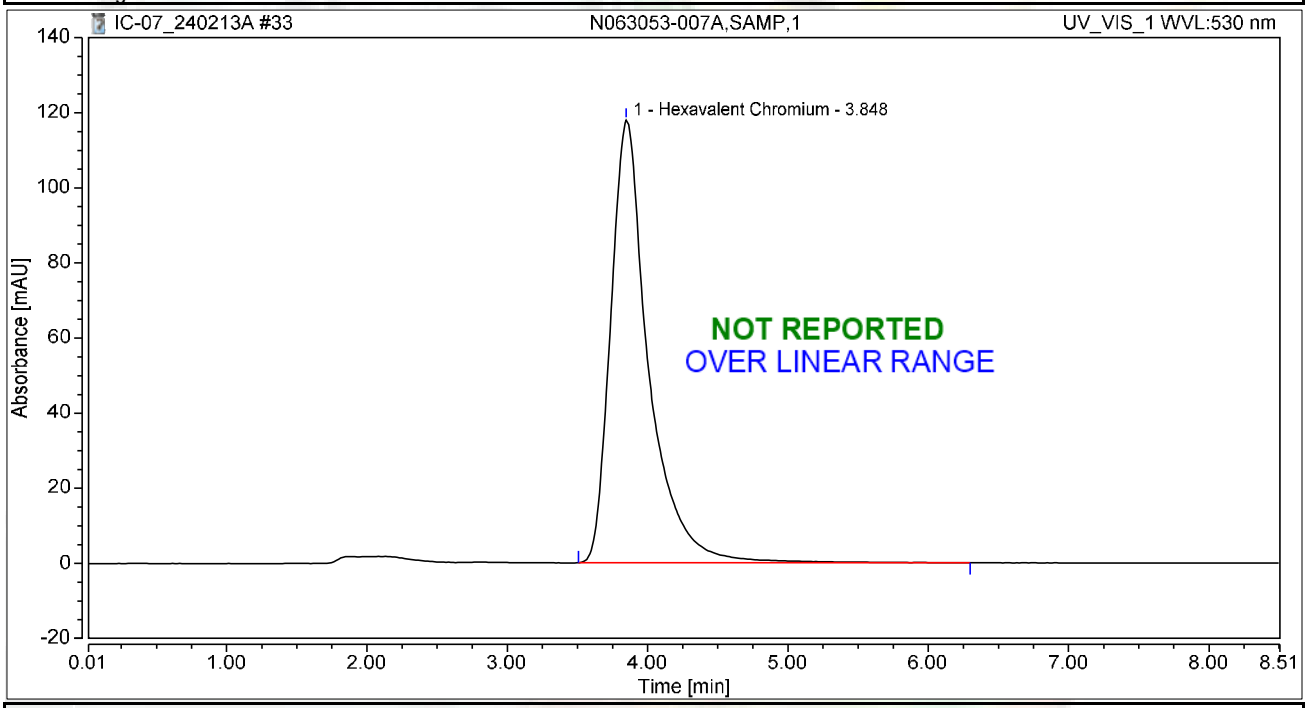
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.353	1.200	100.00	100.00	1.6429
Total:			**0.353**	**1.200**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-007A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 13:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

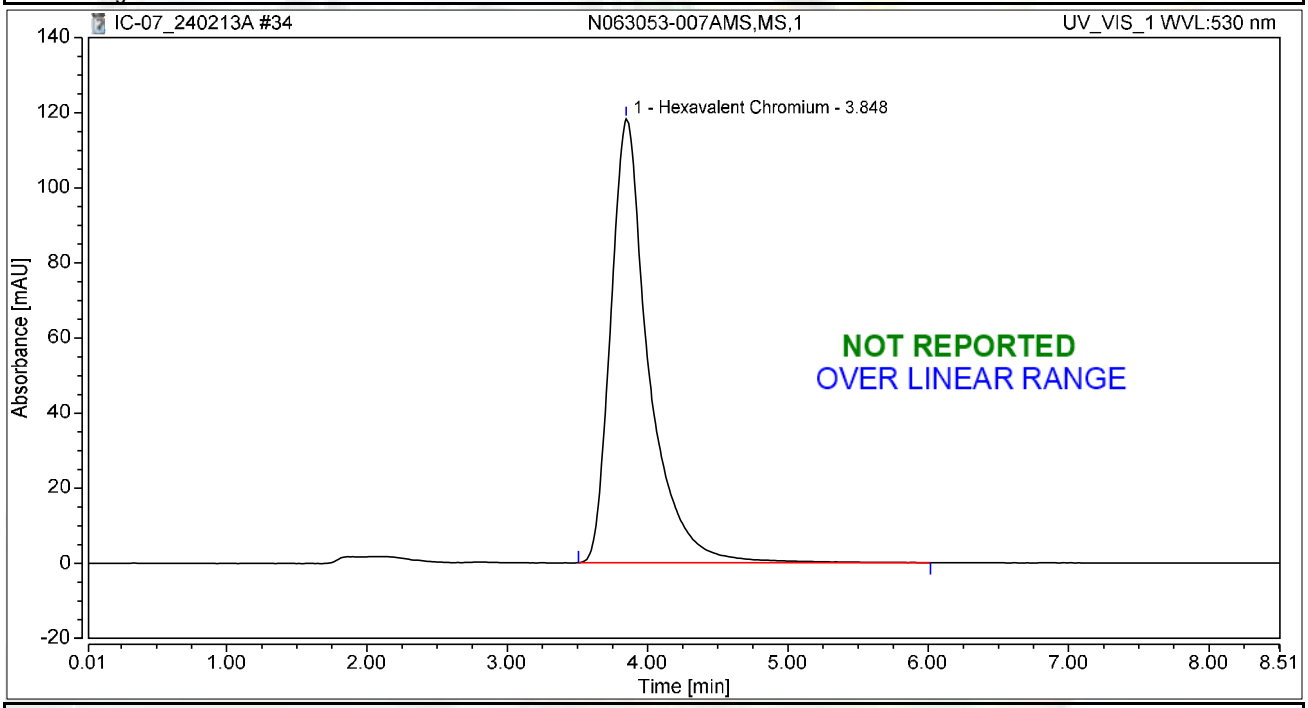
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.848	36.884	117.811	100.00	100.00	171.4735
Total:			**36.884**	**117.811**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-007AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 13:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

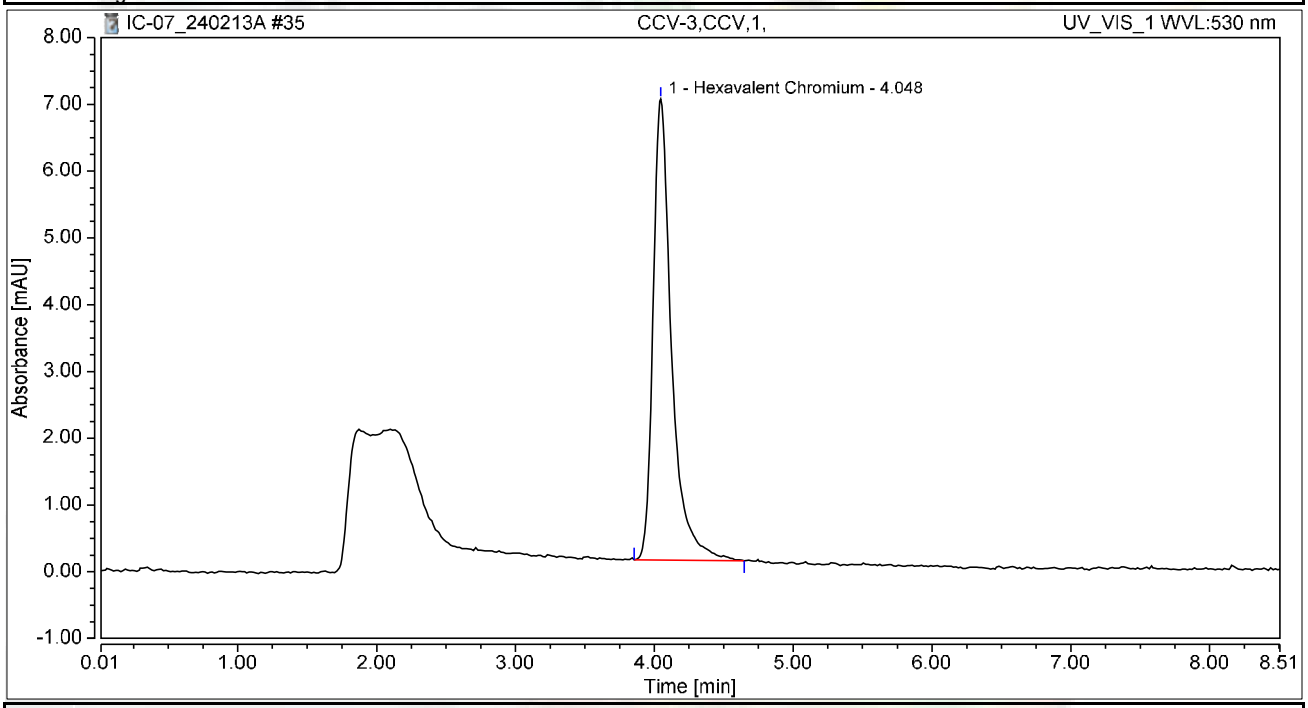
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.848	36.942	118.255	100.00	100.00	171.7426
Total:			**36.942**	**118.255**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 14:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

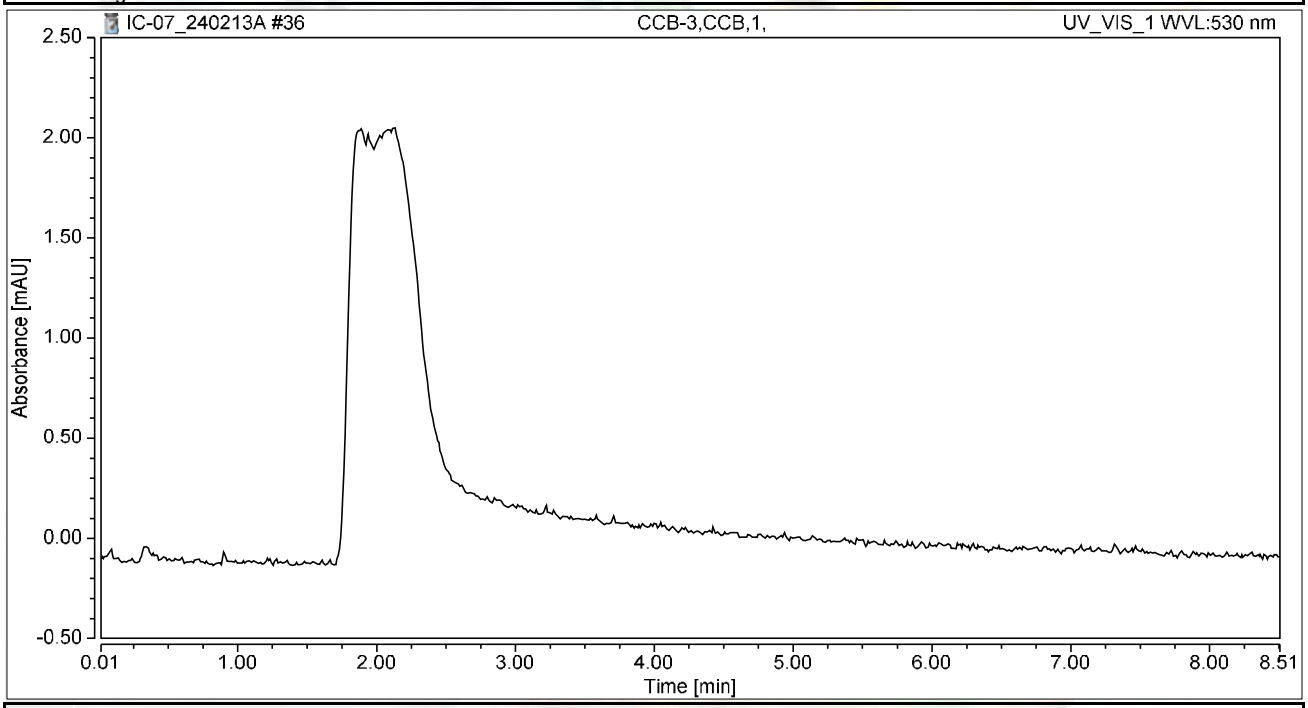
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.069	6.908	100.00	100.00	4.9718
Total:			**1.069**	**6.908**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 14:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

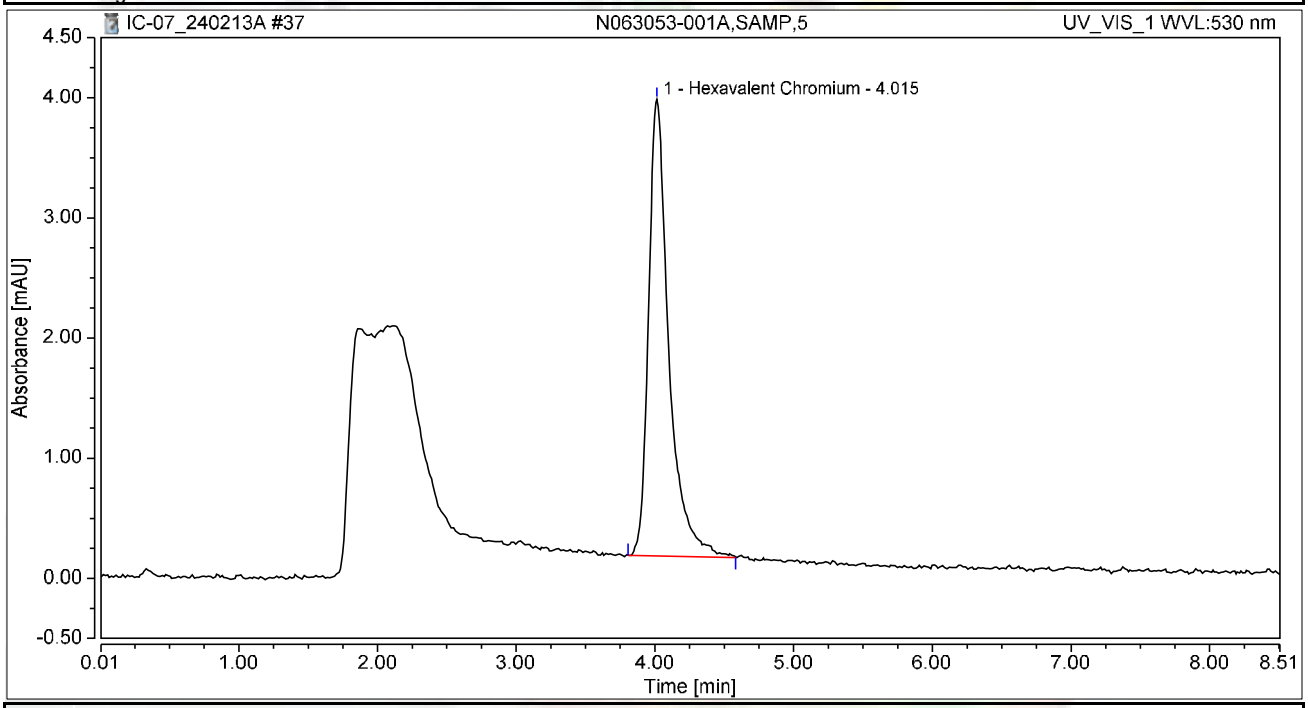
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 14:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

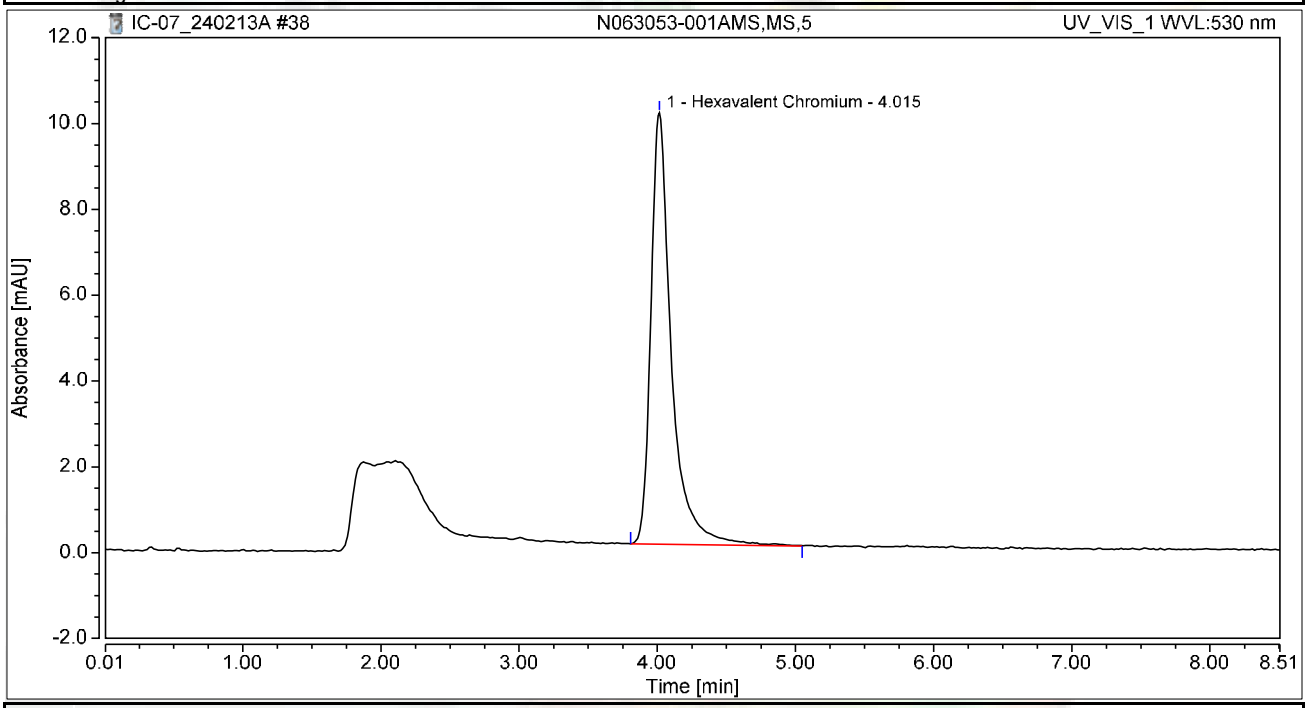
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.642	3.800	100.00	100.00	2.9862
Total:			**0.642**	**3.800**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 14:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

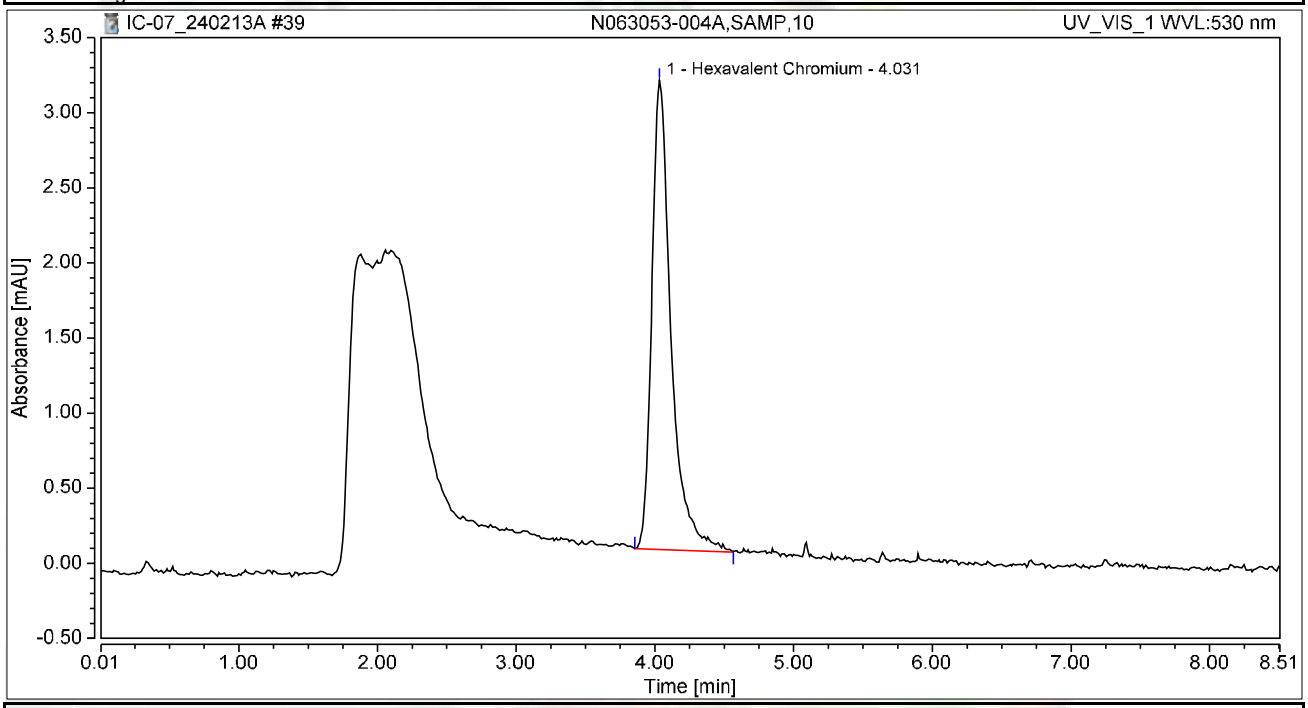
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.727	10.051	100.00	100.00	8.0301
Total:			**1.727**	**10.051**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-004A,SAMP,10**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 14:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

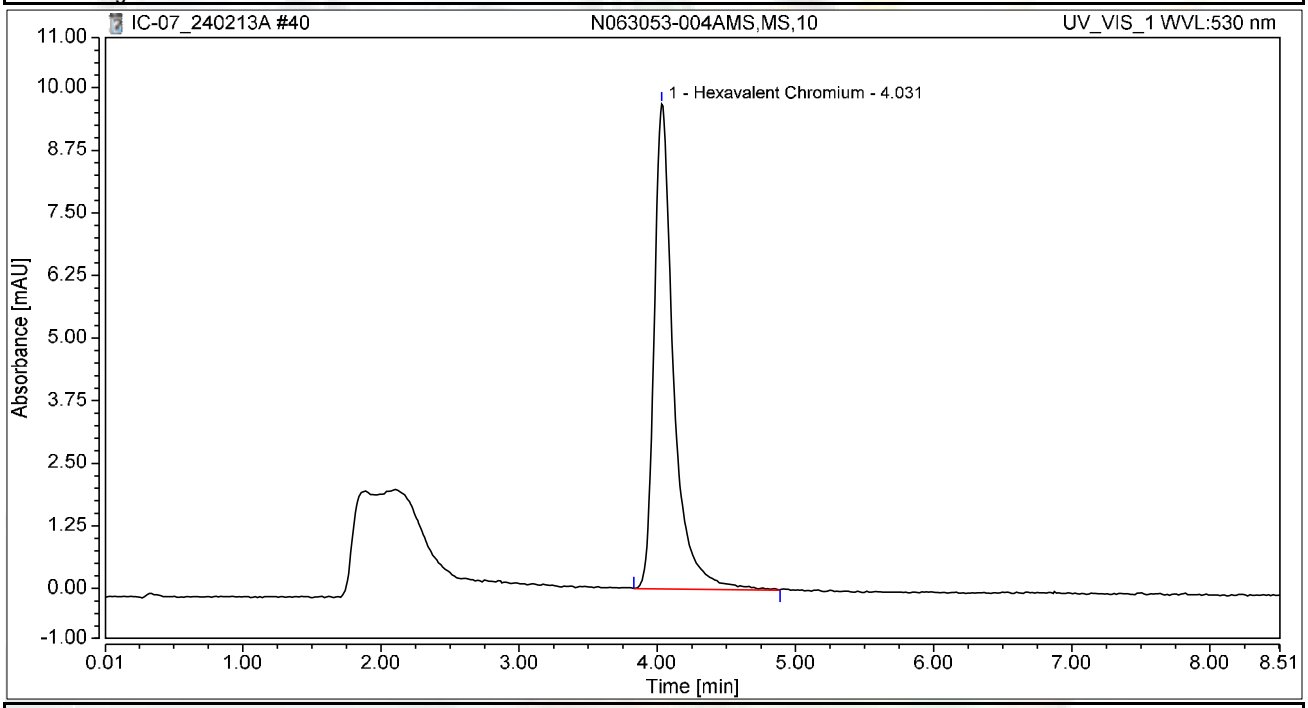
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.502	3.124	100.00	100.00	2.3325
Total:			**0.502**	**3.124**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-004AMS,MS,10**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 14:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

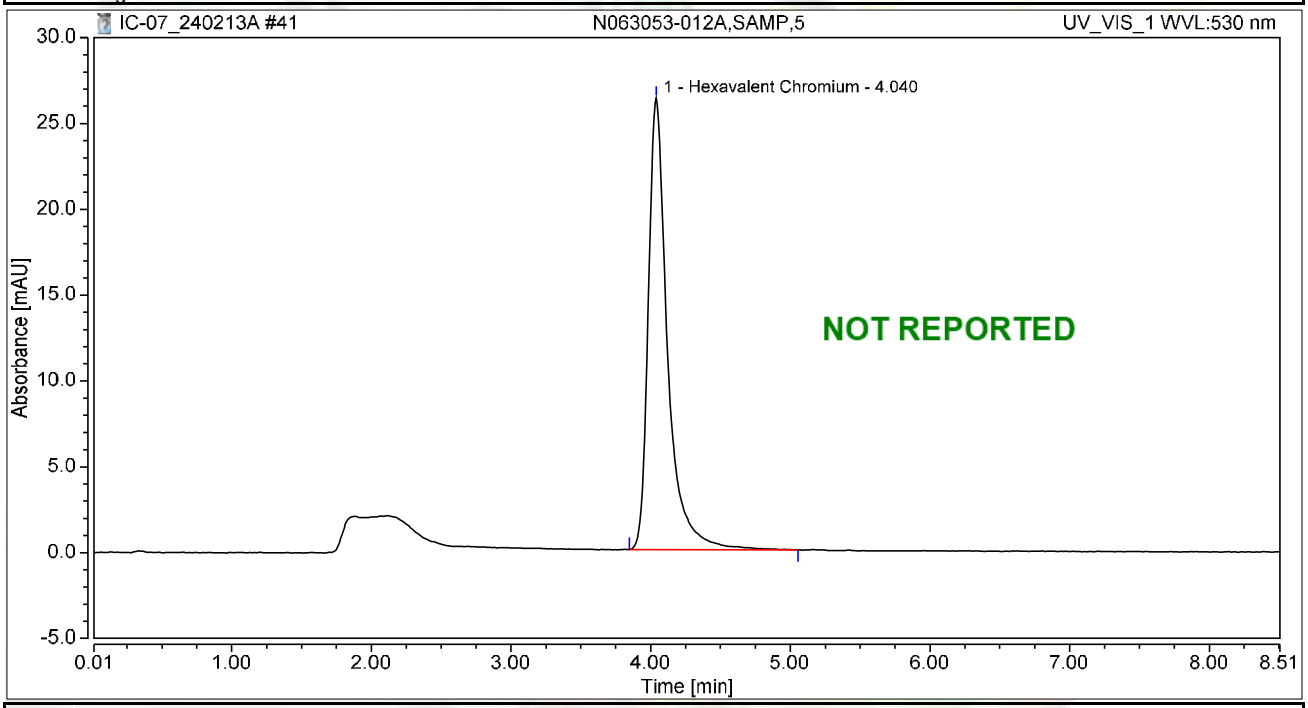
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	1.577	9.685	100.00	100.00	7.3337
Total:			**1.577**	**9.685**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-012A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 14:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

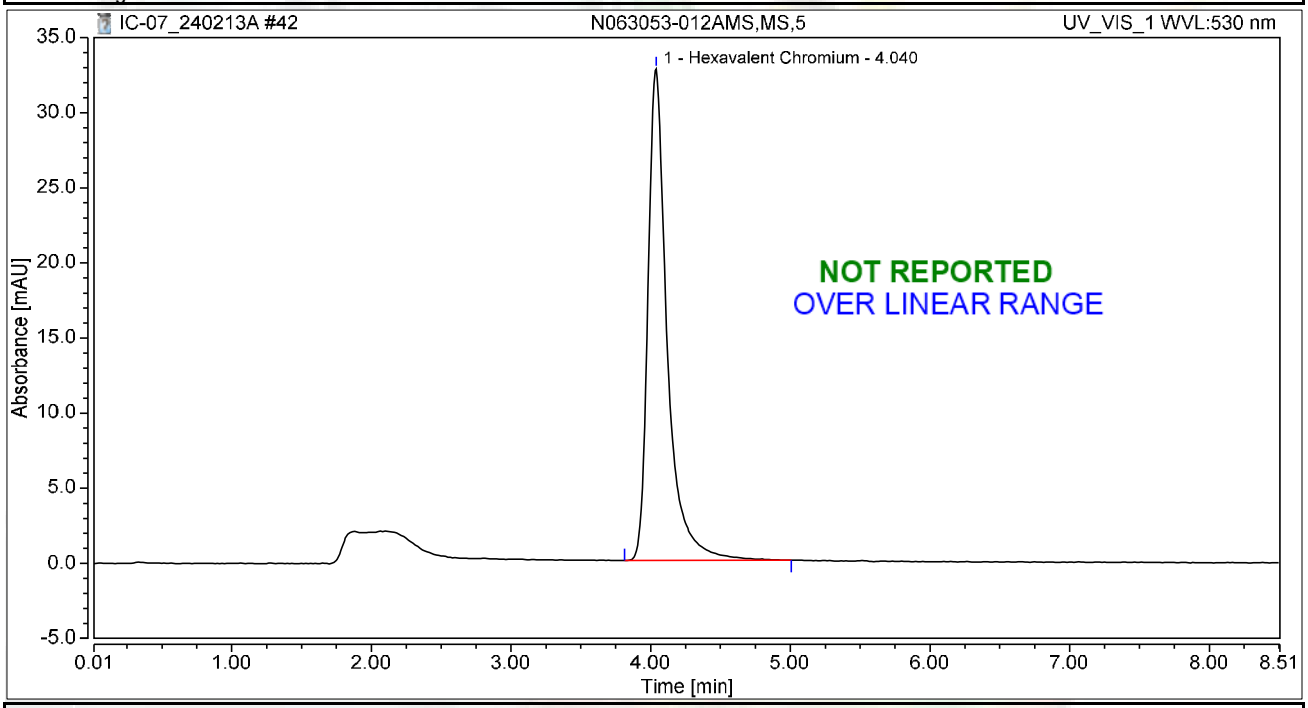
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	4.217	26.306	100.00	100.00	19.6045
Total:			**4.217**	**26.306**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-012AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 15:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

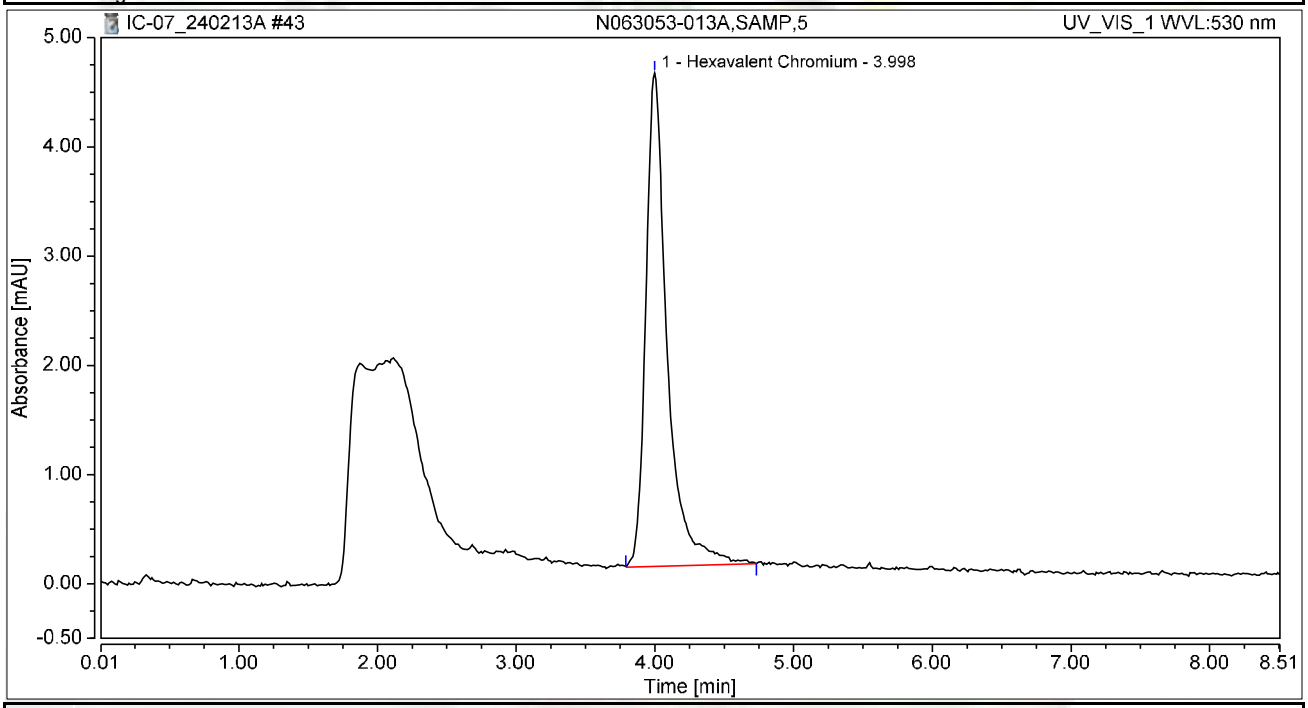
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	5.264	32.739	100.00	100.00	24.4723
Total:			**5.264**	**32.739**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-013A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 15:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

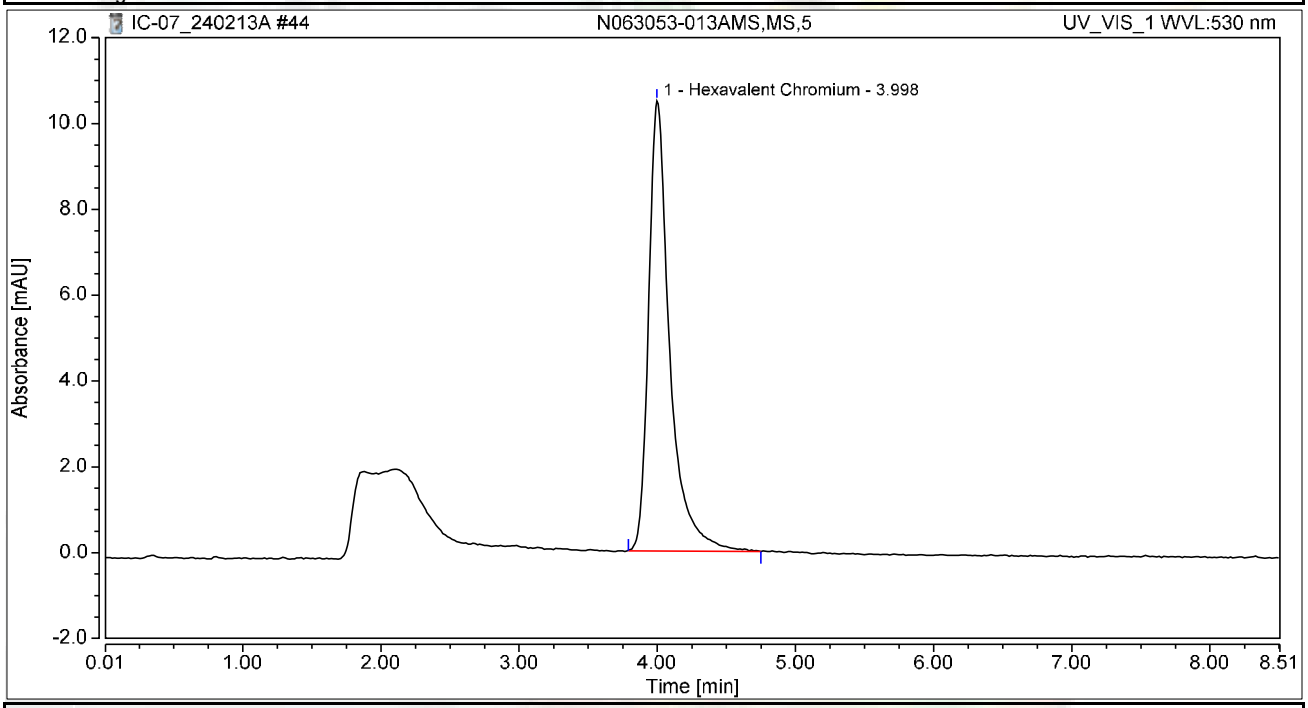
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.807	4.517	100.00	100.00	3.7511
Total:			**0.807**	**4.517**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-013AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 15:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

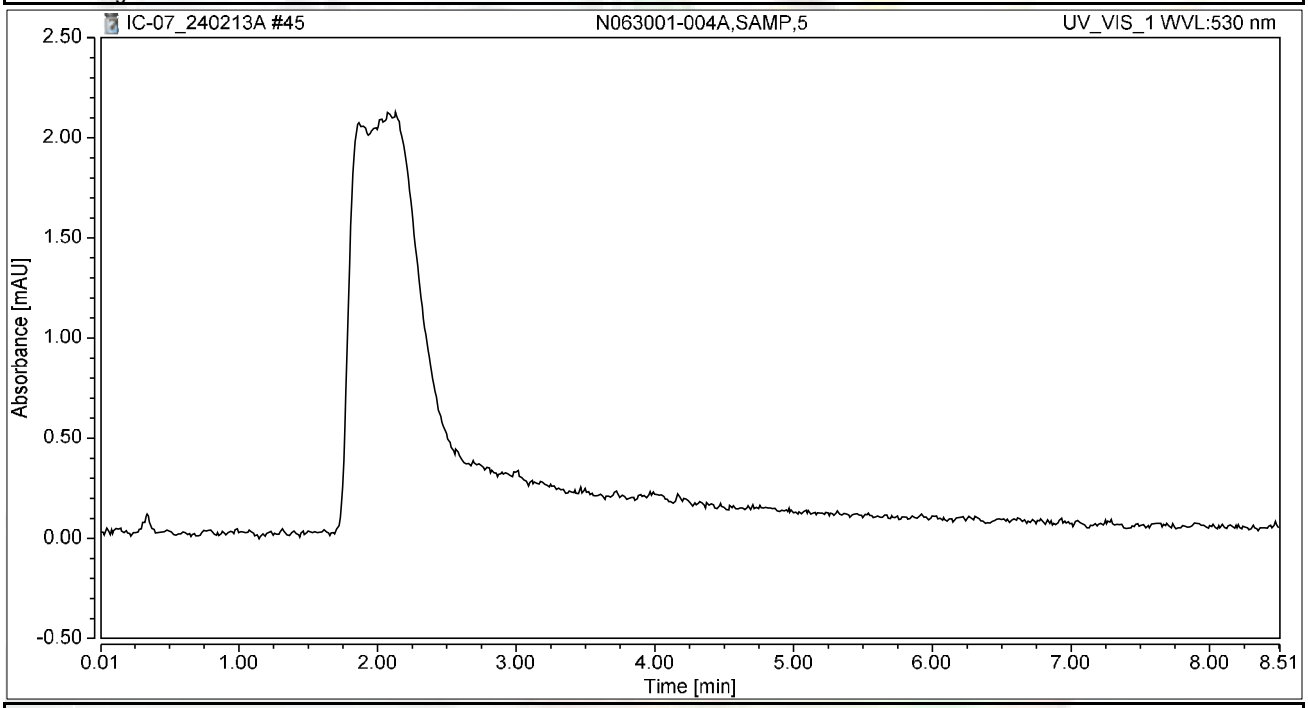
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	1.860	10.487	100.00	100.00	8.6461
Total:			**1.860**	**10.487**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-004A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 15:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

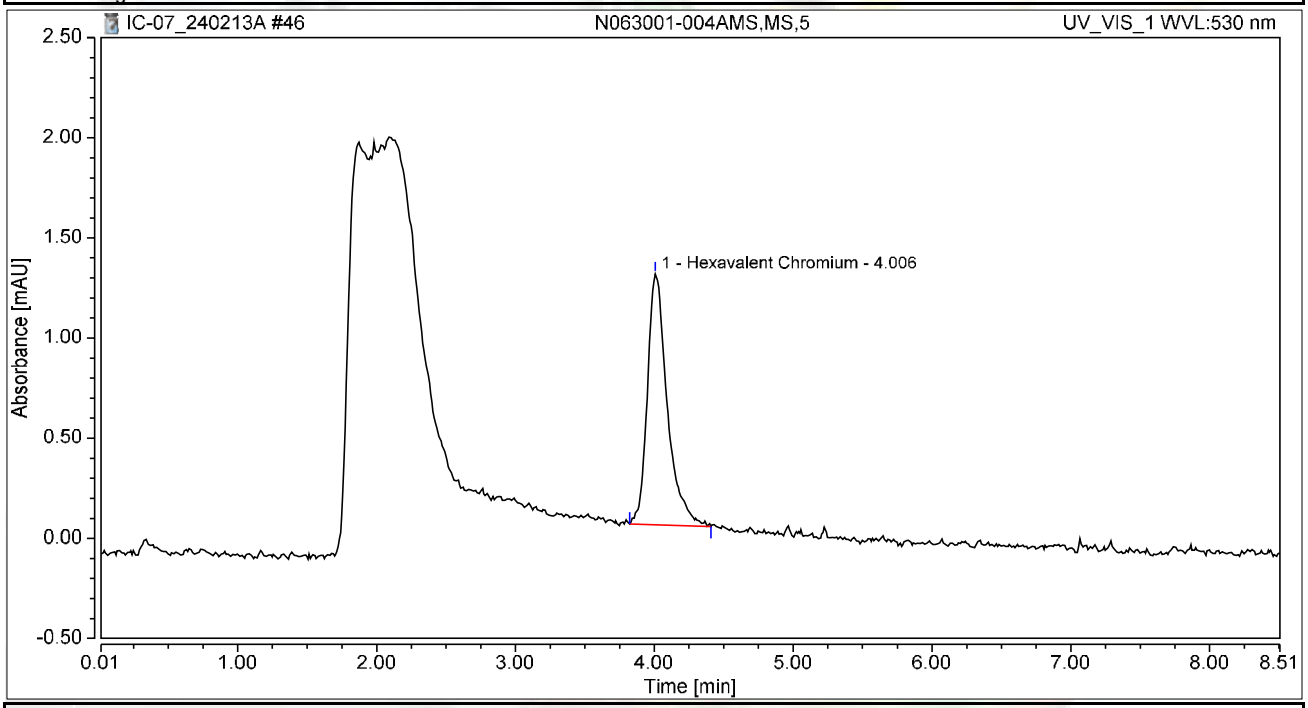
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-004AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 15:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

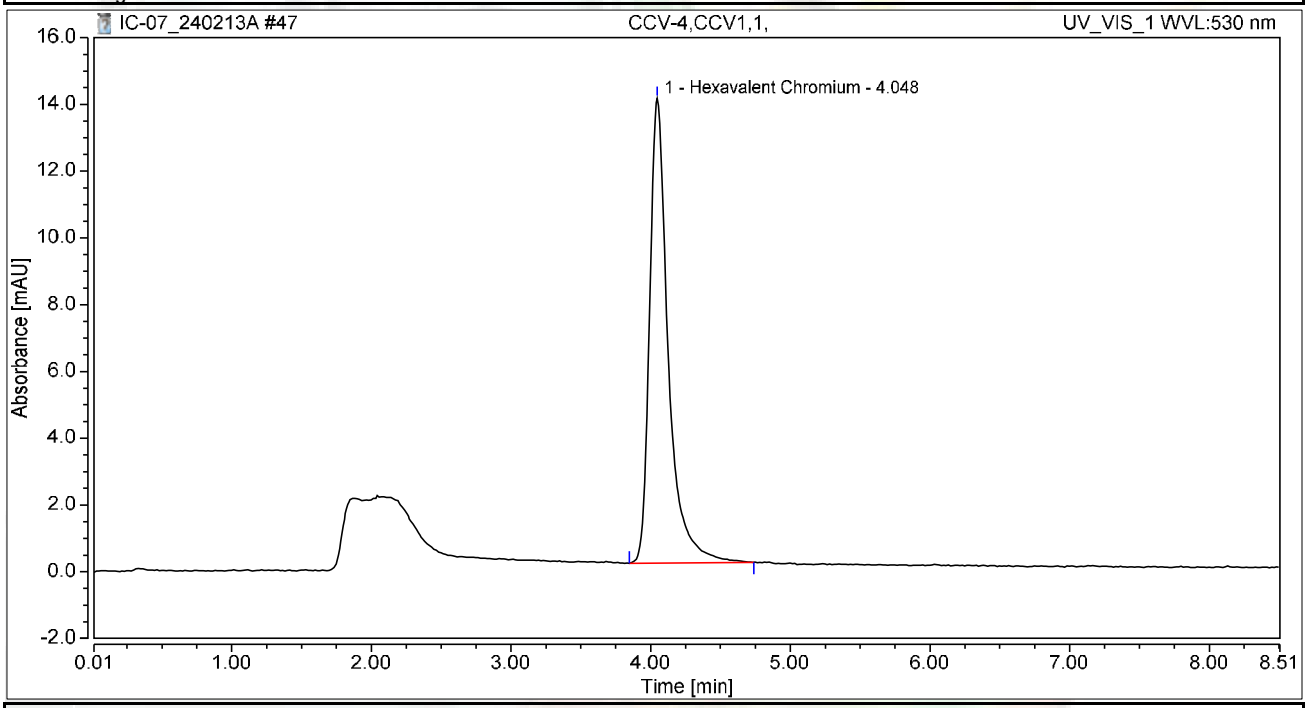
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.209	1.253	100.00	100.00	0.9709
Total:			**0.209**	**1.253**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 15:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

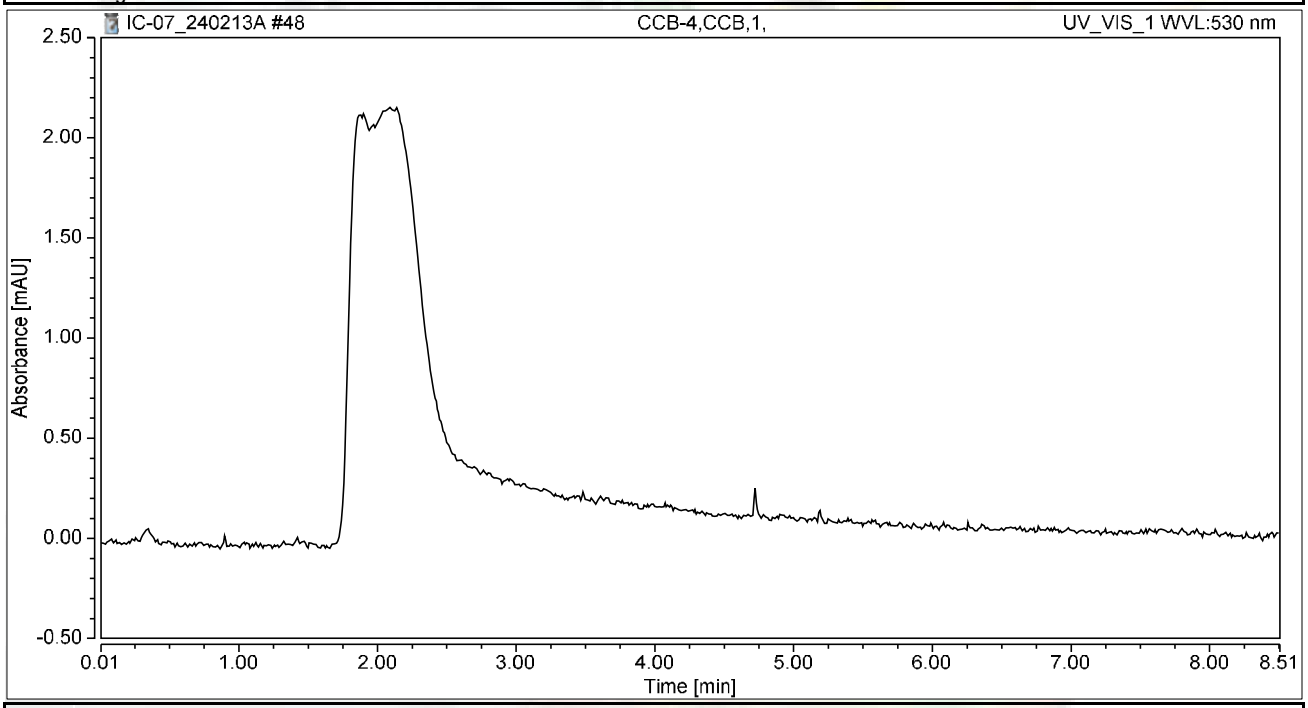
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.165	13.919	100.00	100.00	10.0649
Total:			**2.165**	**13.919**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 16:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

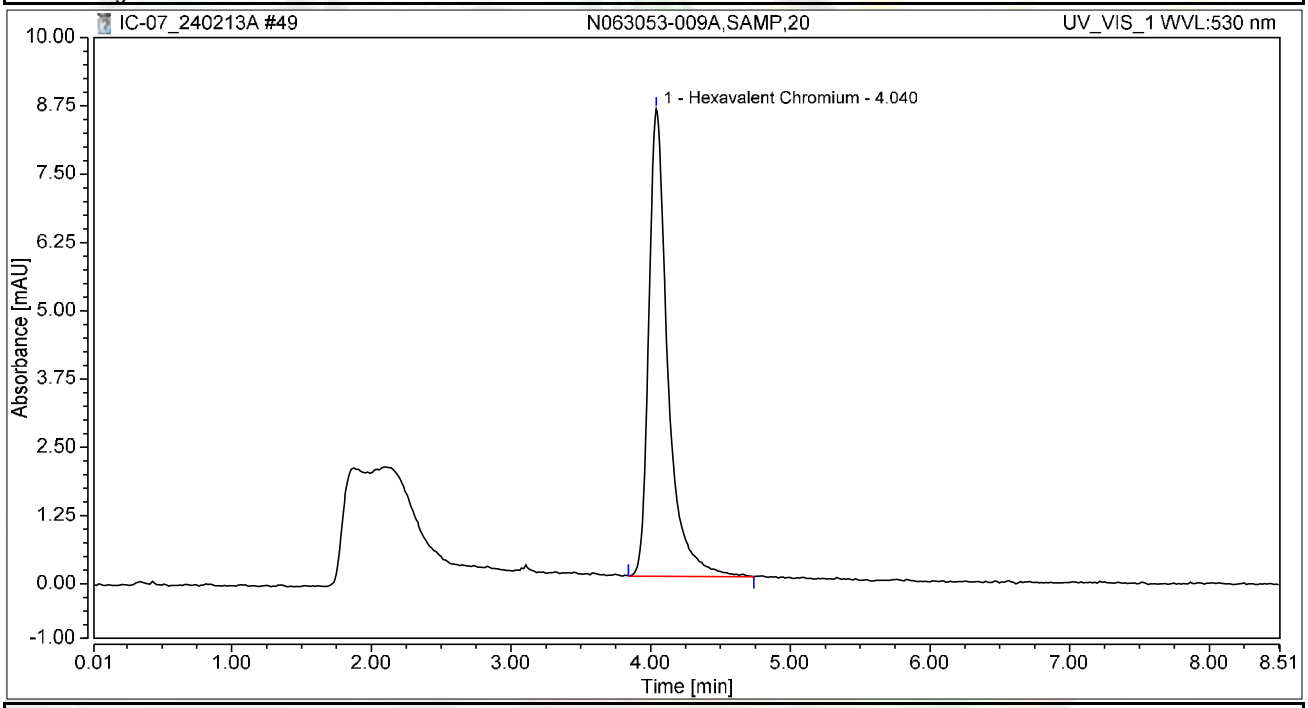
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-009A,SAMP,20**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 16:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

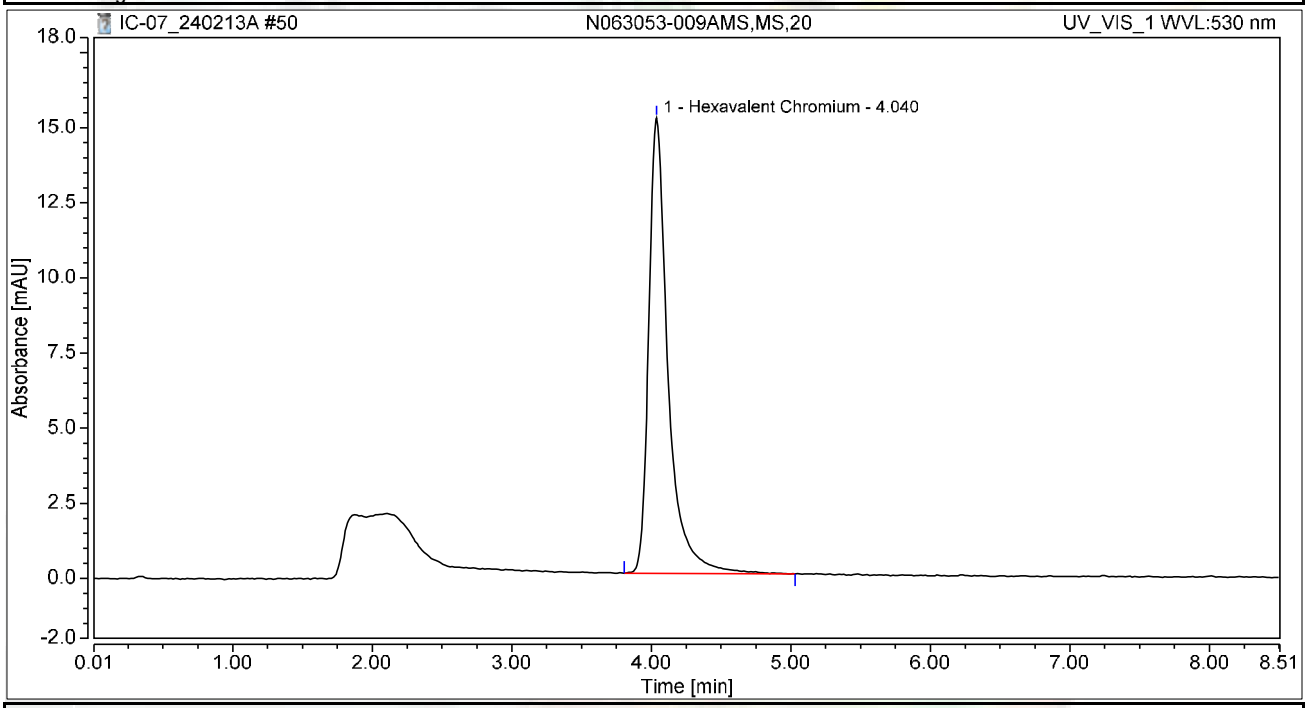
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.357	8.555	100.00	100.00	6.3098
Total:			**1.357**	**8.555**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-009AMS,MS,20**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 16:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

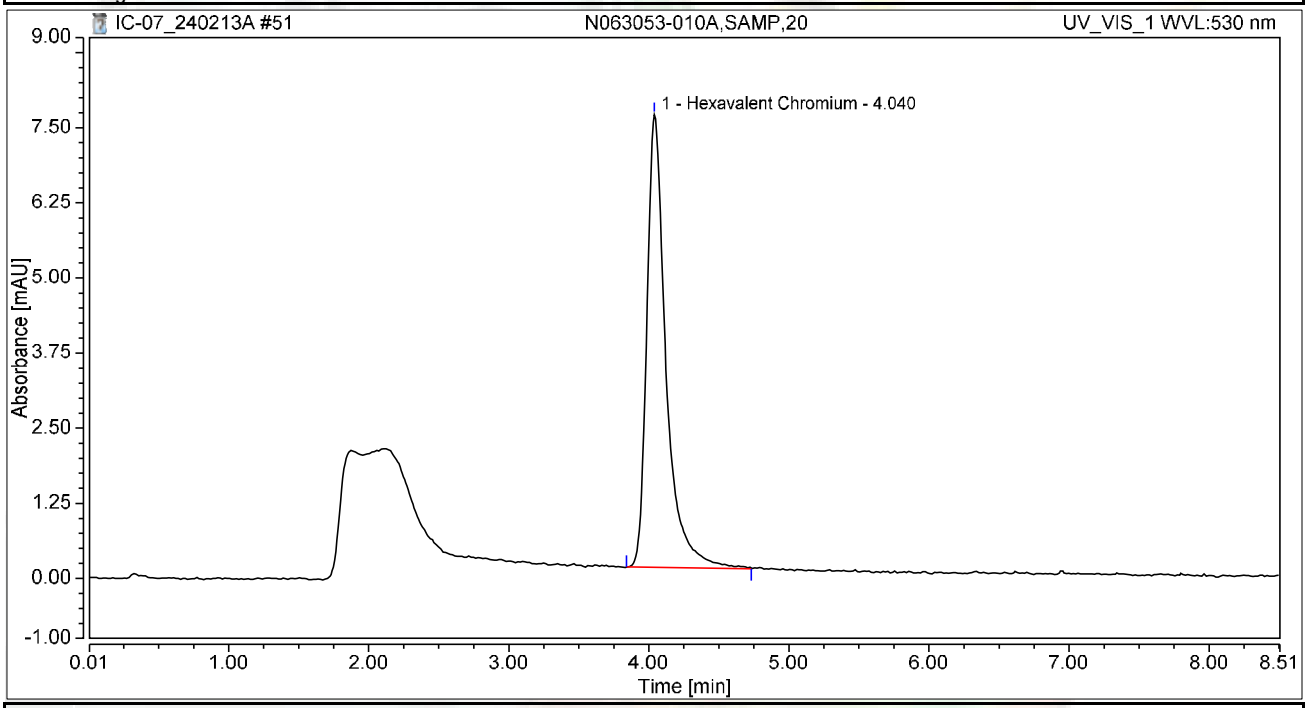
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.437	15.167	100.00	100.00	11.3307
Total:			**2.437**	**15.167**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-010A,SAMP,20**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 16:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

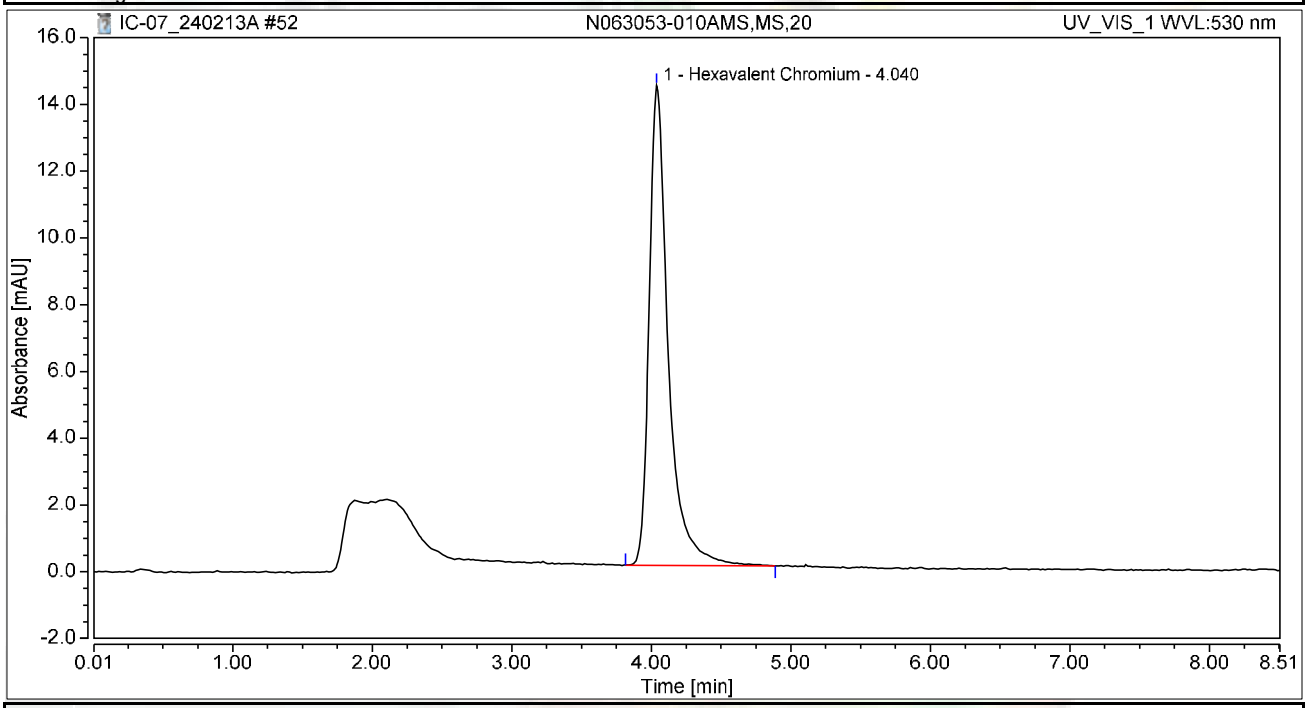
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.194	7.535	100.00	100.00	5.5510
Total:			**1.194**	**7.535**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-010AMS,MS,20**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 16:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

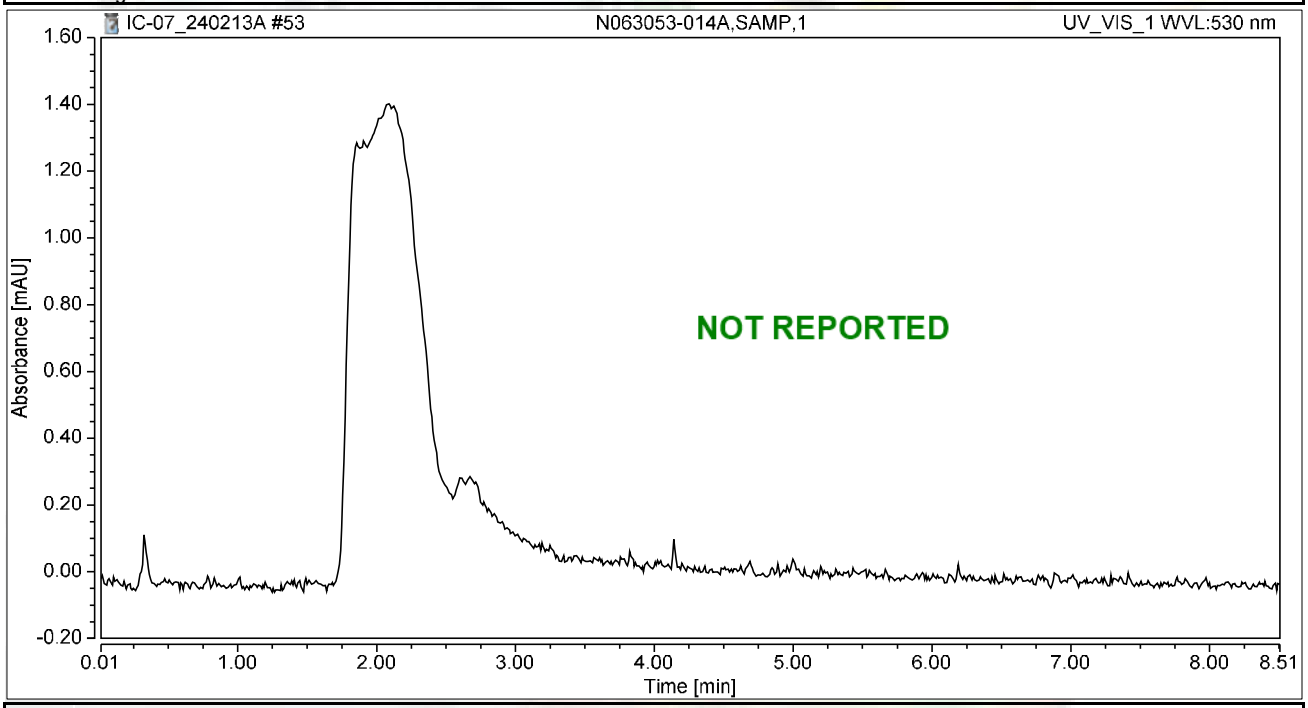
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.286	14.375	100.00	100.00	10.6256
Total:			**2.286**	**14.375**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-014A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 16:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

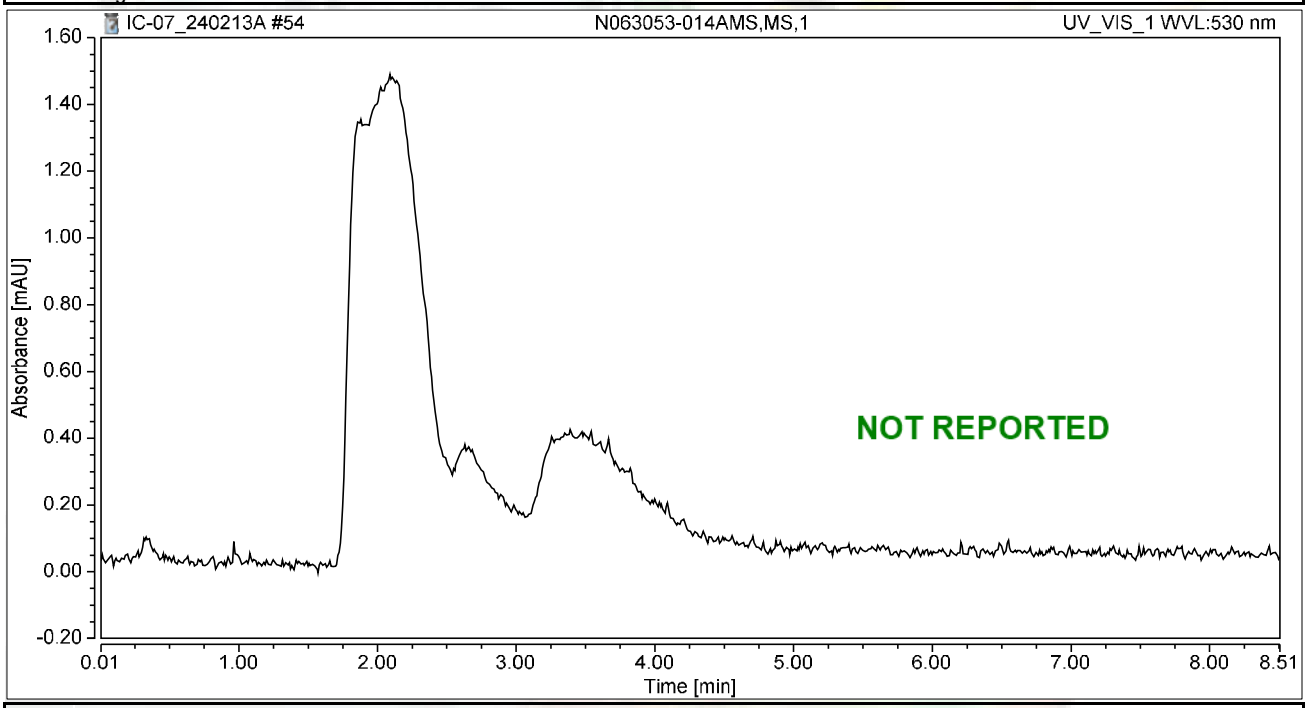
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-014AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 17:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

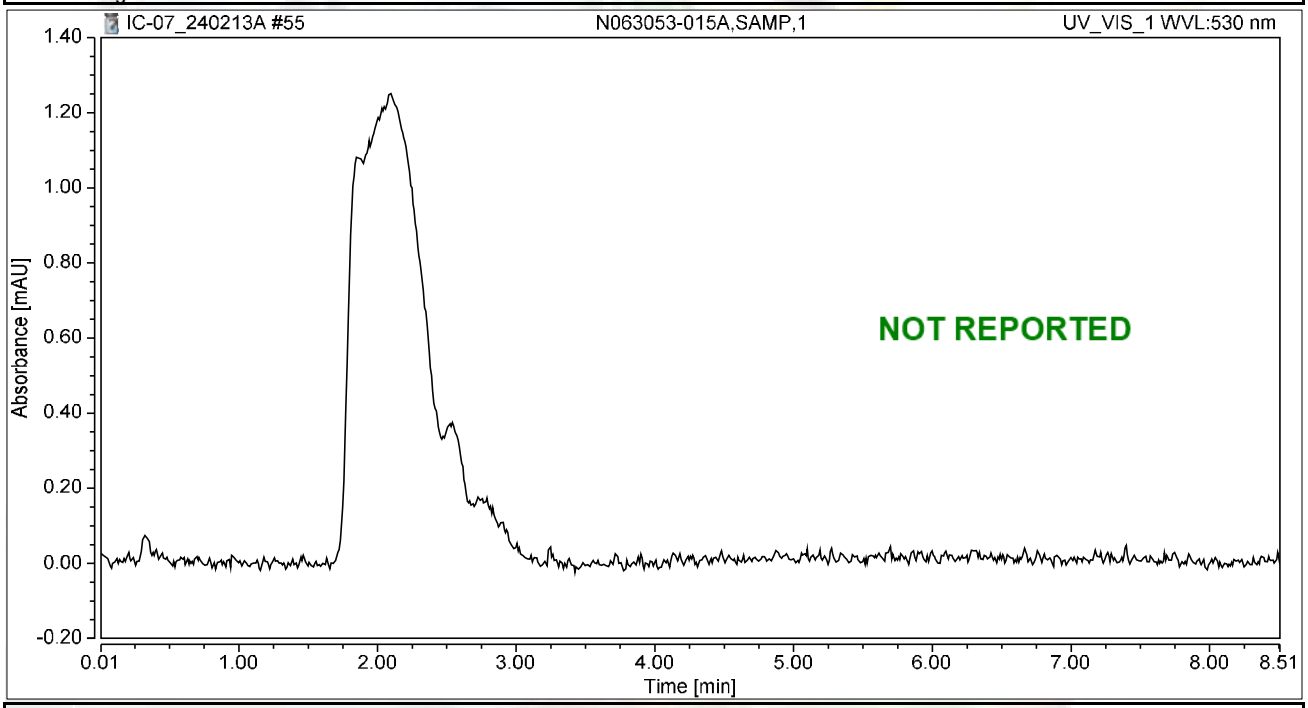
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-015A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 17:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

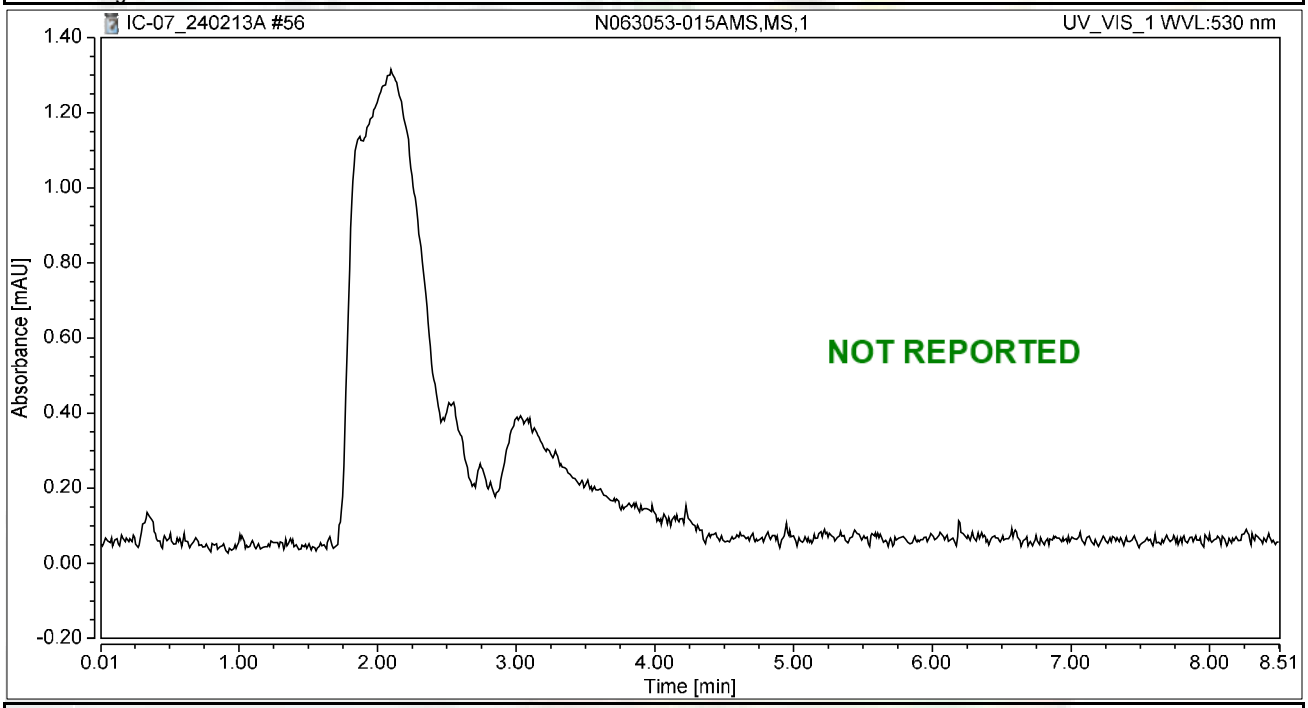
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-015AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 17:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

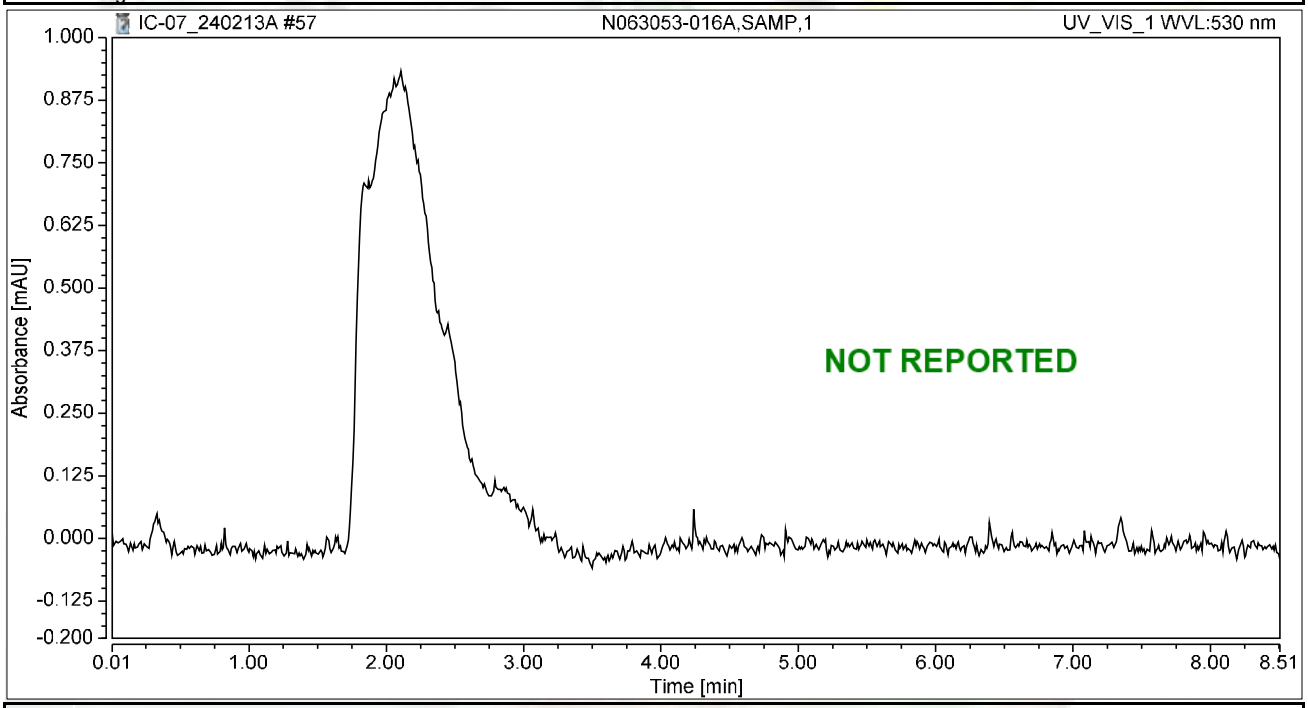
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-016A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 17:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

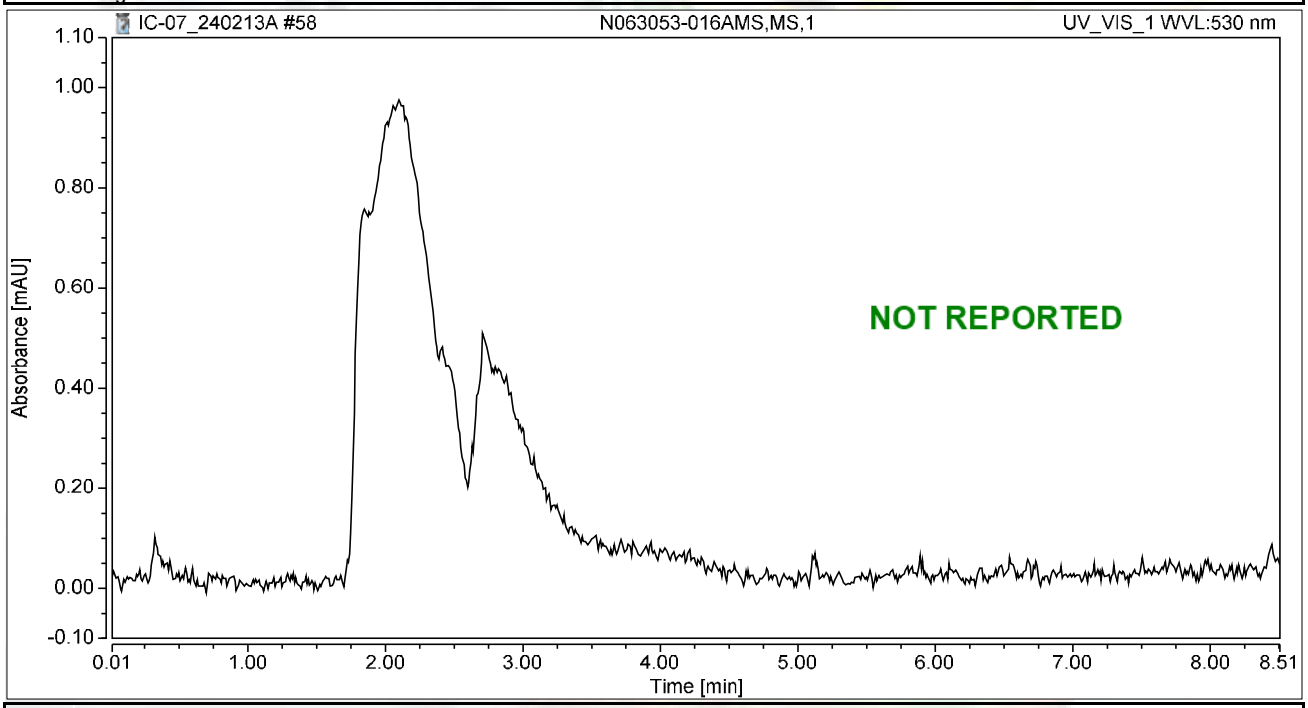
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-016AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 17:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

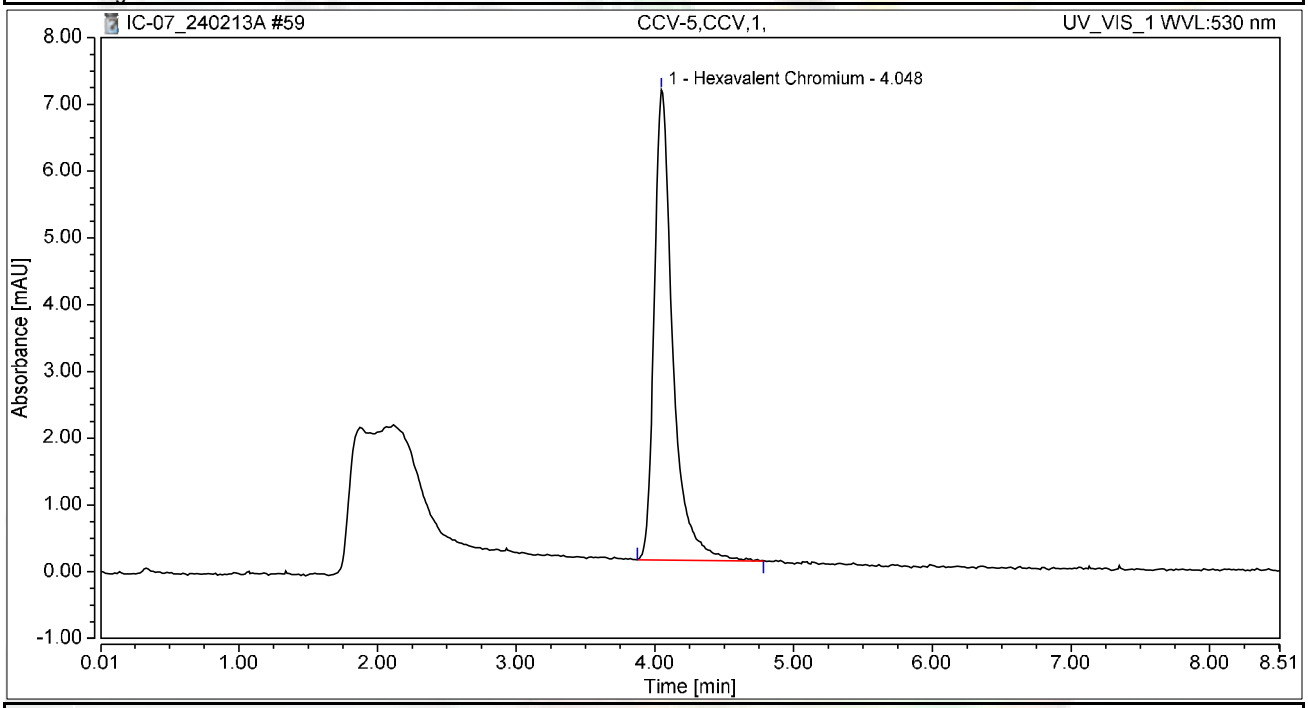
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 17:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

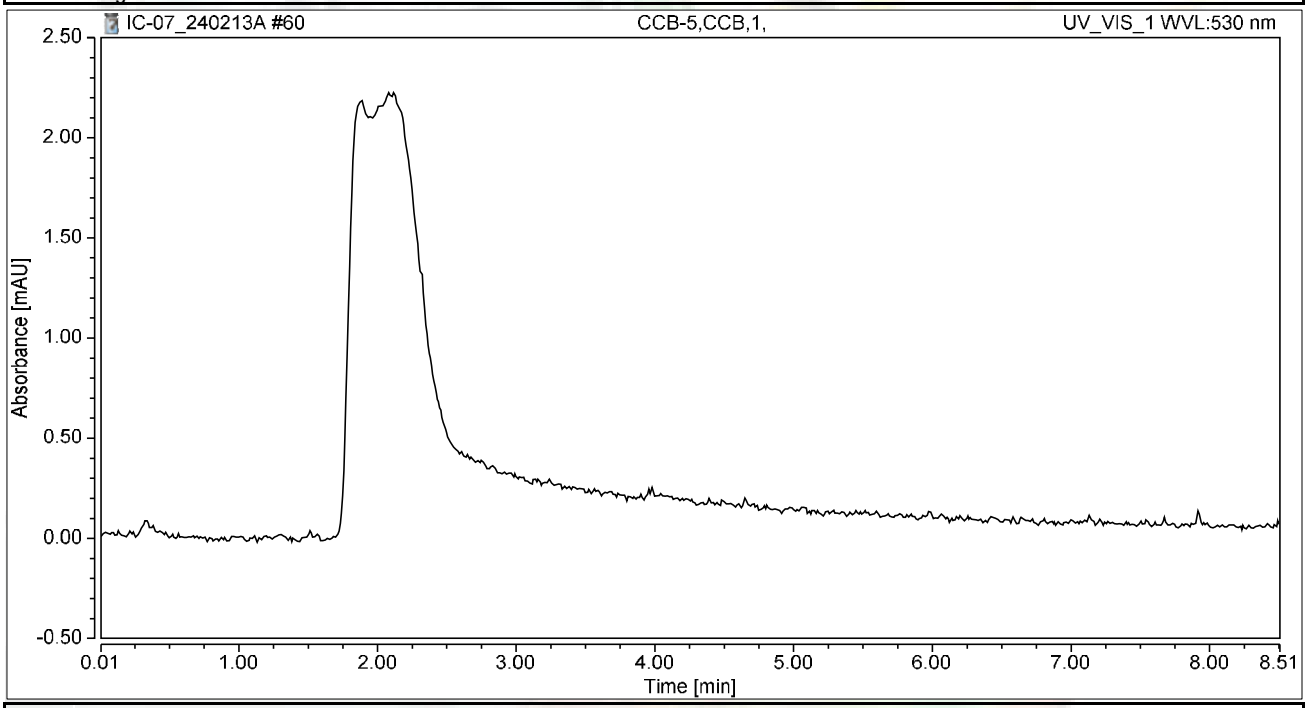
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.092	7.044	100.00	100.00	5.0755
Total:			**1.092**	**7.044**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 18:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

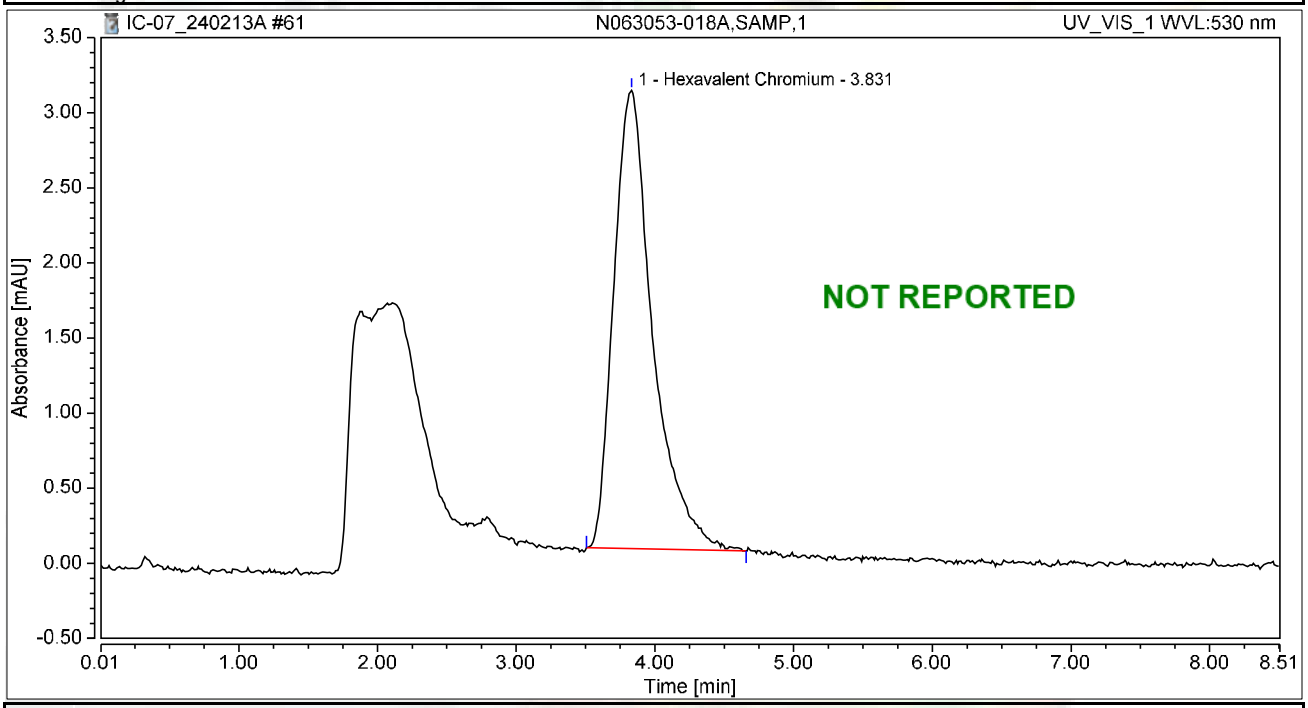
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-018A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 18:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

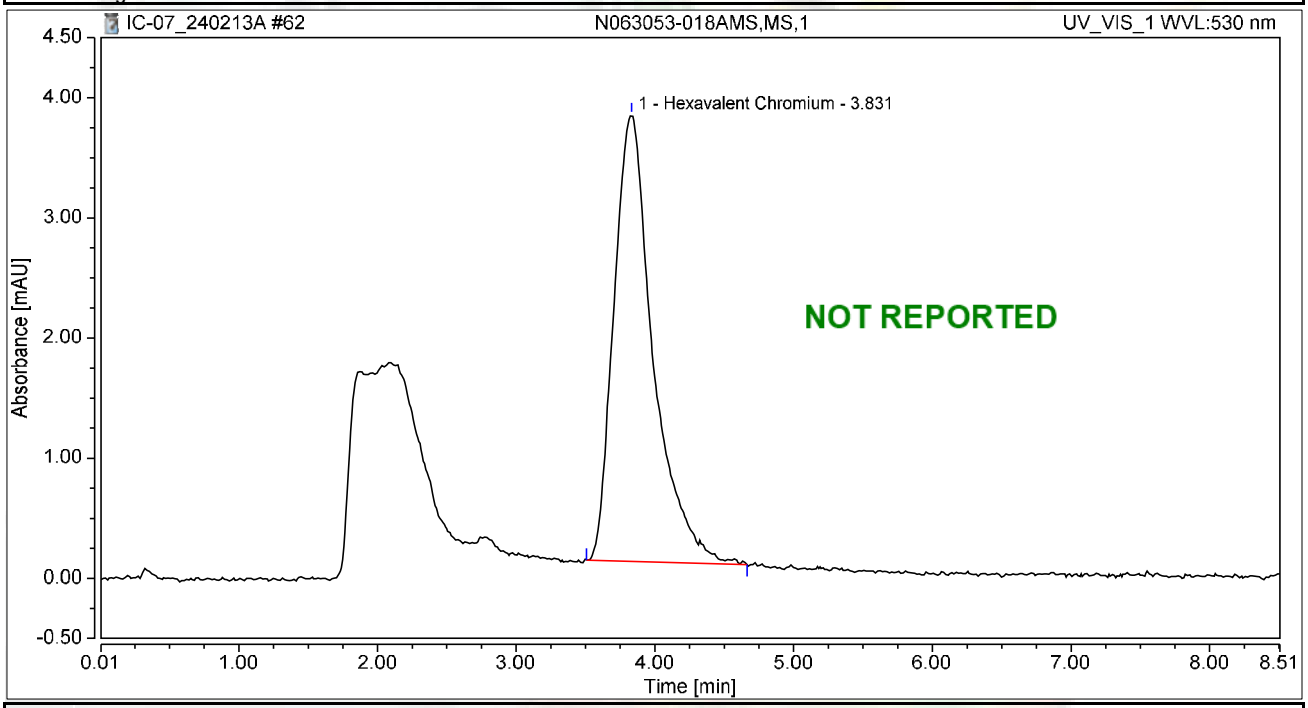
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.831	0.993	3.050	100.00	100.00	4.6144
Total:			**0.993**	**3.050**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-018AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 18:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

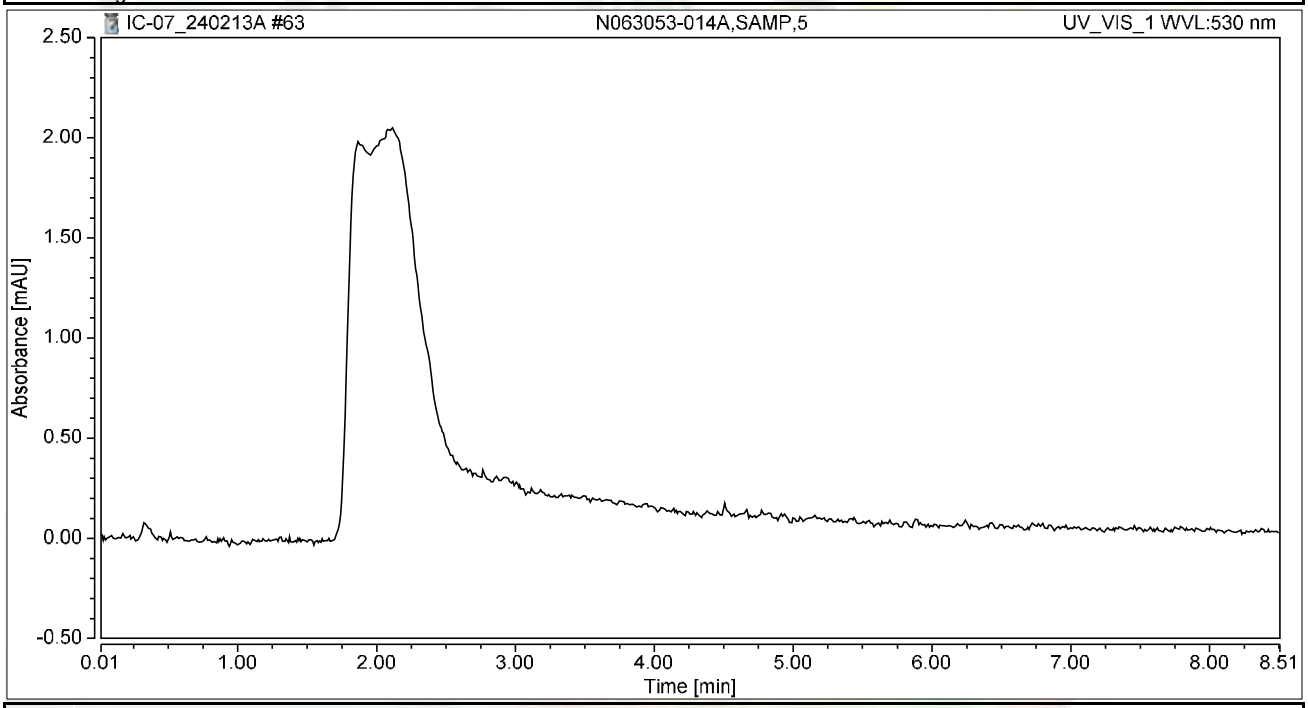
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.831	1.216	3.717	100.00	100.00	5.6528
Total:			**1.216**	**3.717**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-014A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 18:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

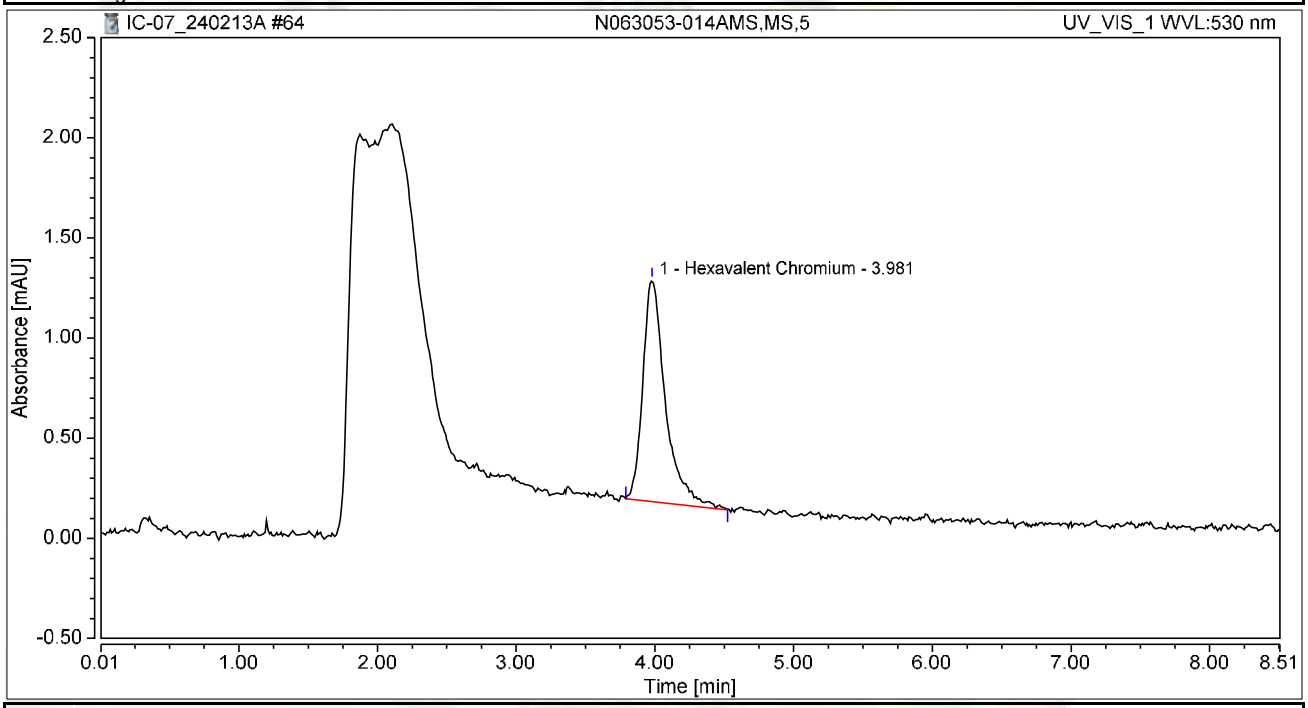
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-014AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 18:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

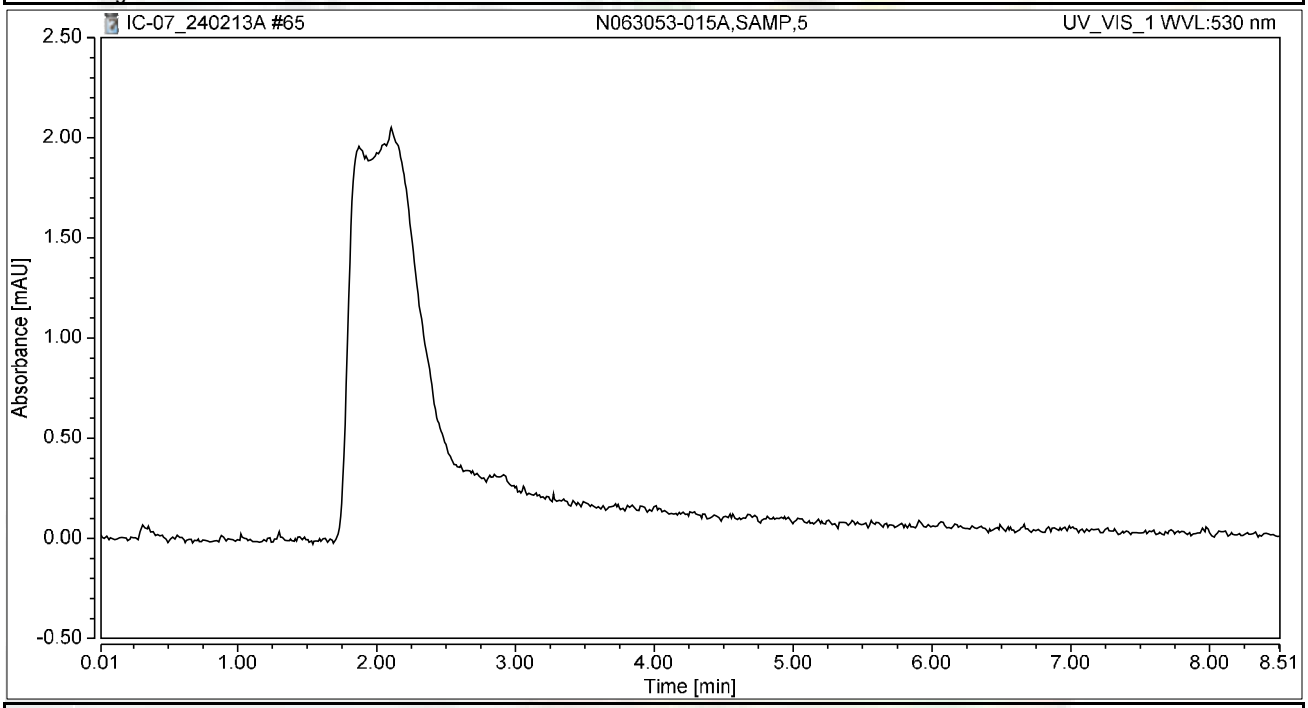
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.209	1.108	100.00	100.00	0.9703
Total:			**0.209**	**1.108**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-015A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 18:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

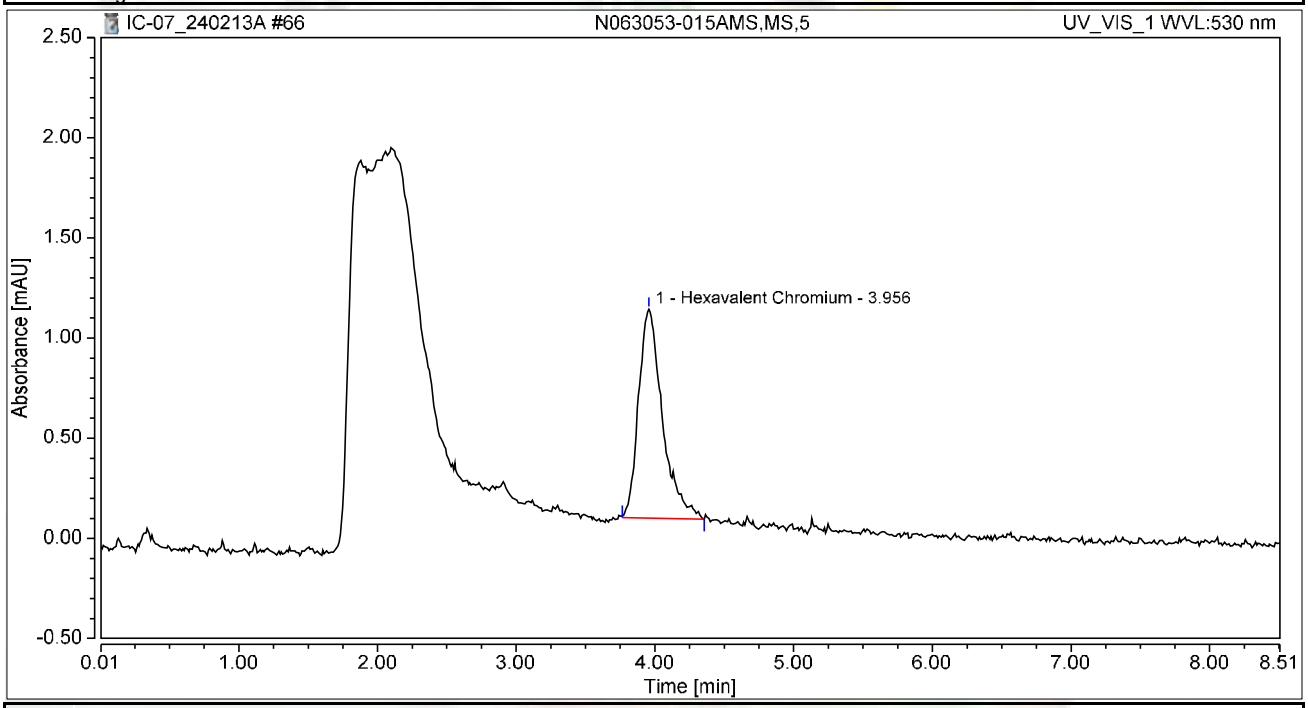
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-015AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 19:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

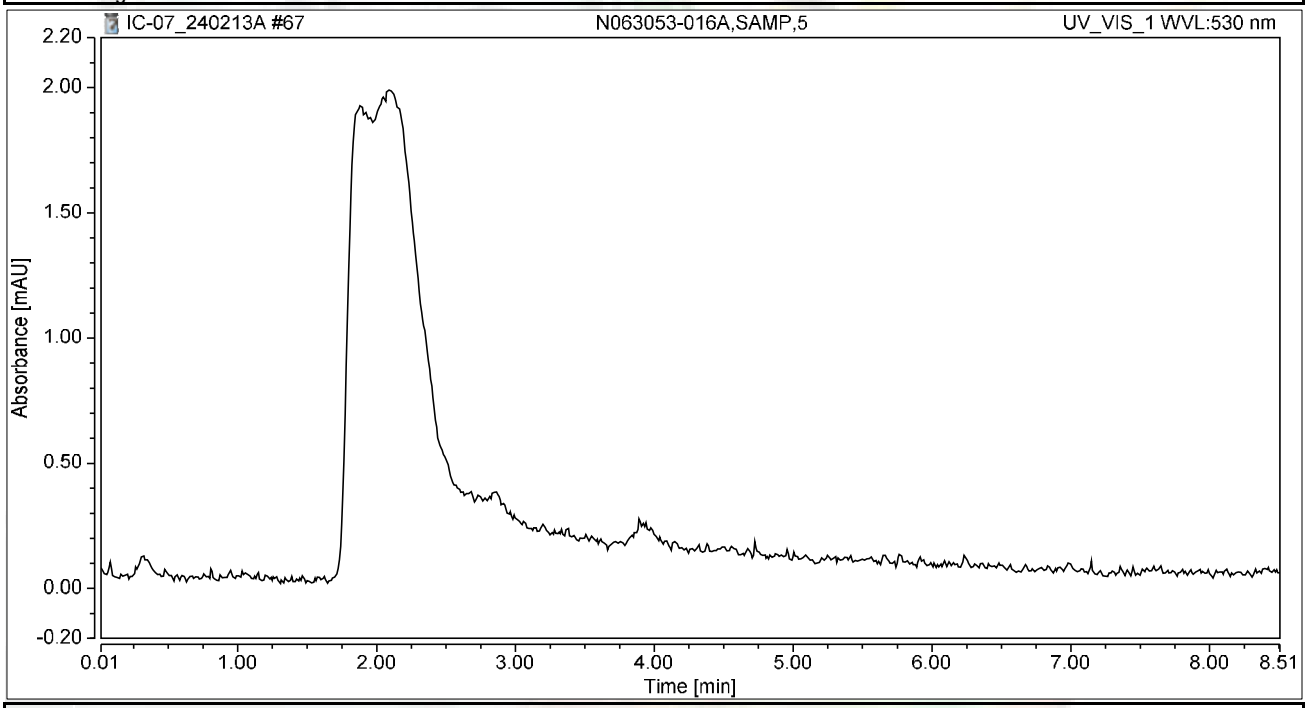
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.208	1.043	100.00	100.00	0.9670
Total:			**0.208**	**1.043**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-016A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 19:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

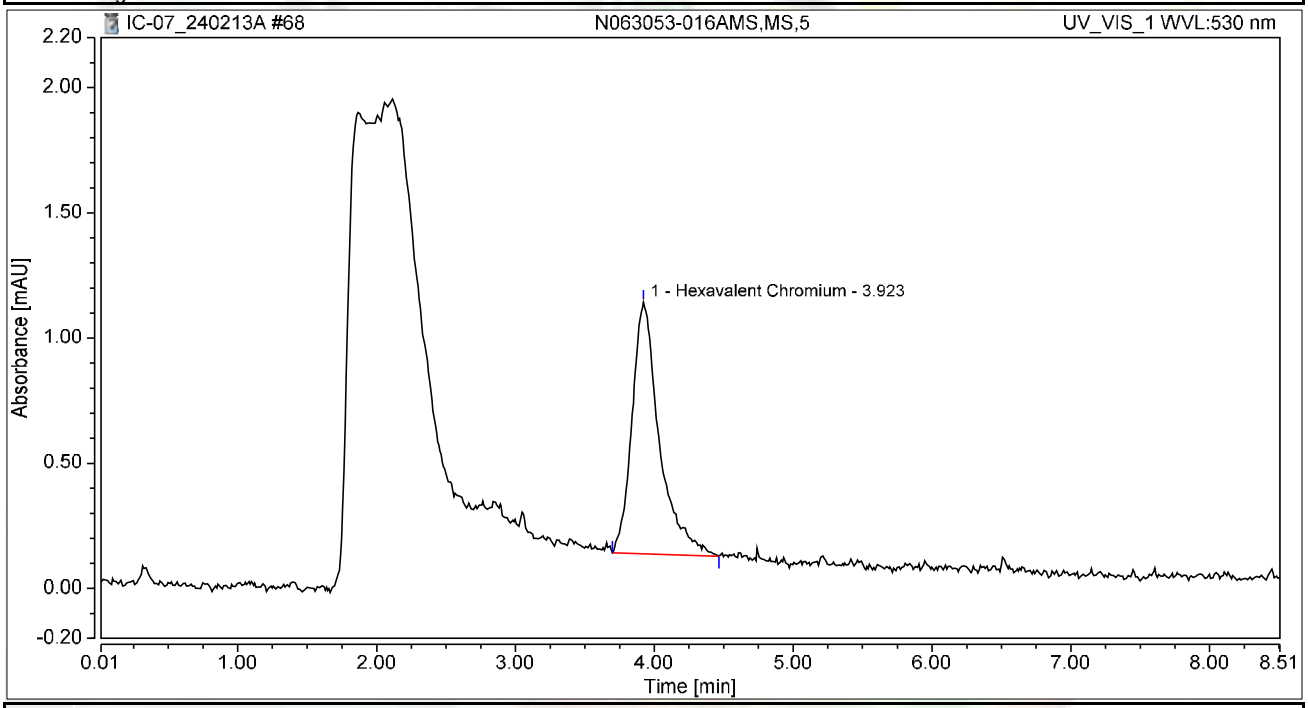
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-016AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 19:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

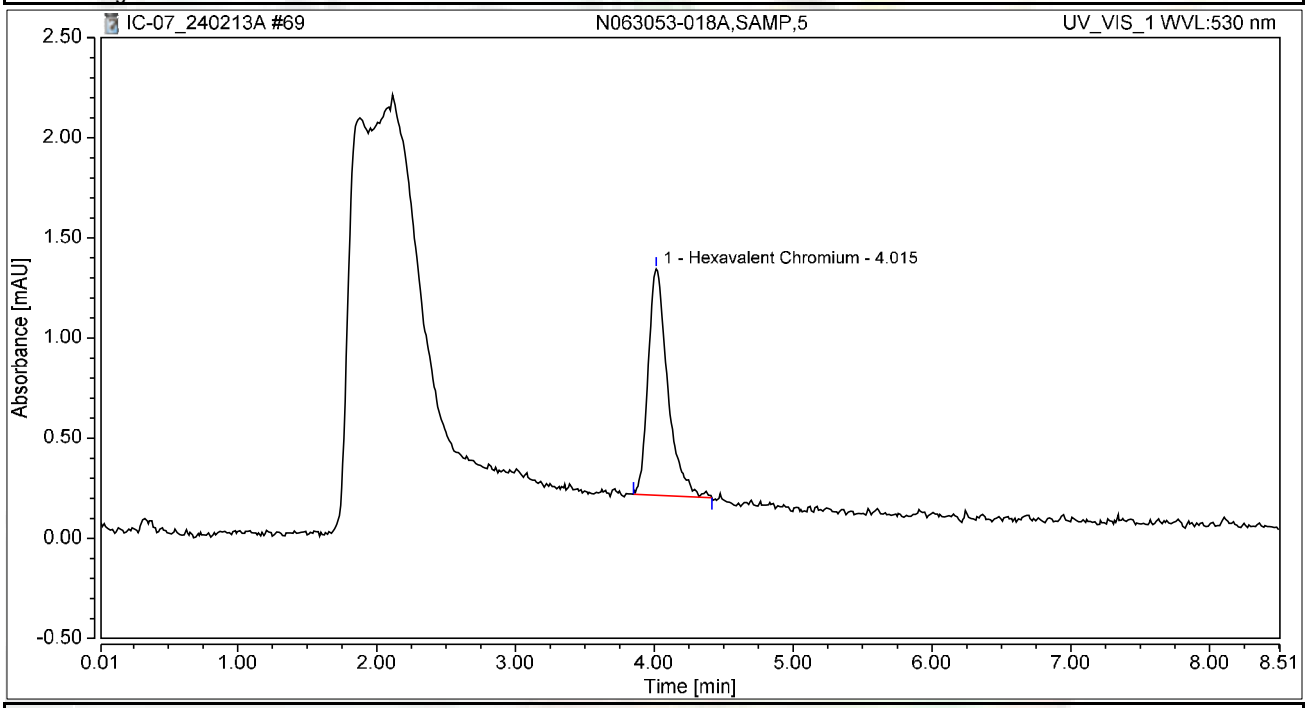
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.230	1.006	100.00	100.00	1.0692
Total:			**0.230**	**1.006**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-018A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 19:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

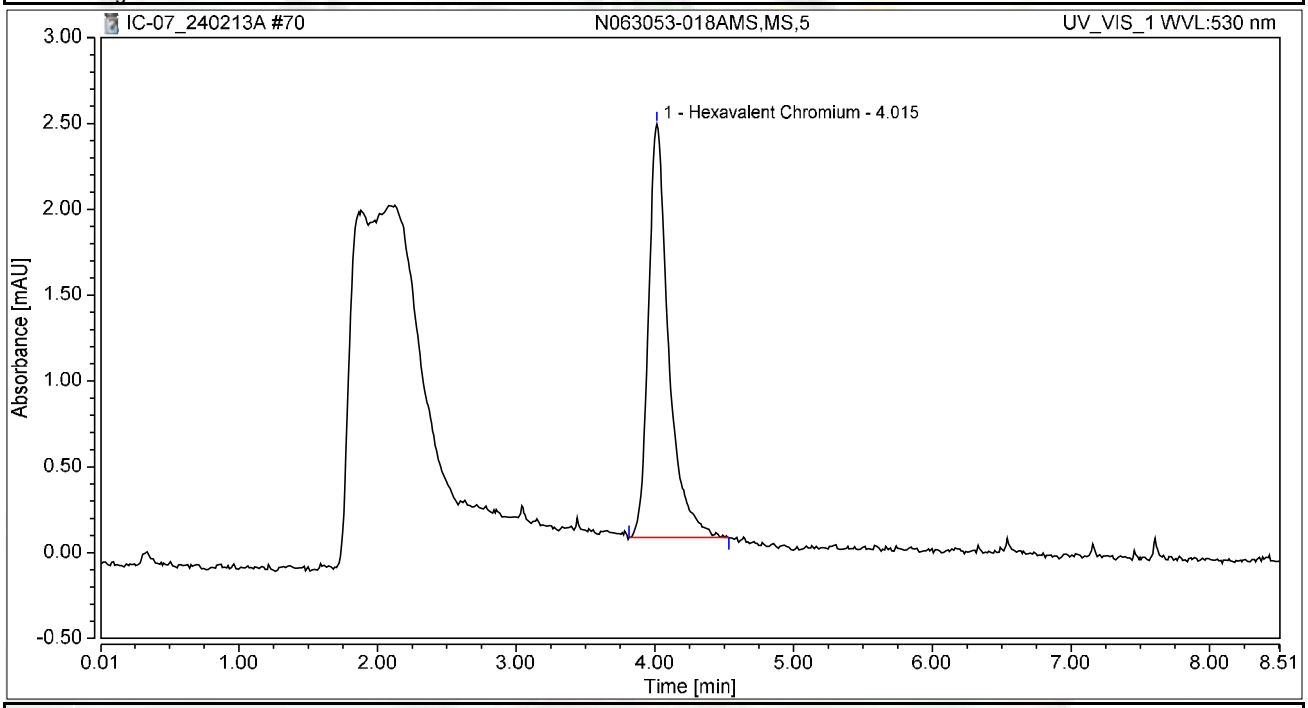
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.185	1.130	100.00	100.00	0.8613
Total:			**0.185**	**1.130**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-018AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 19:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

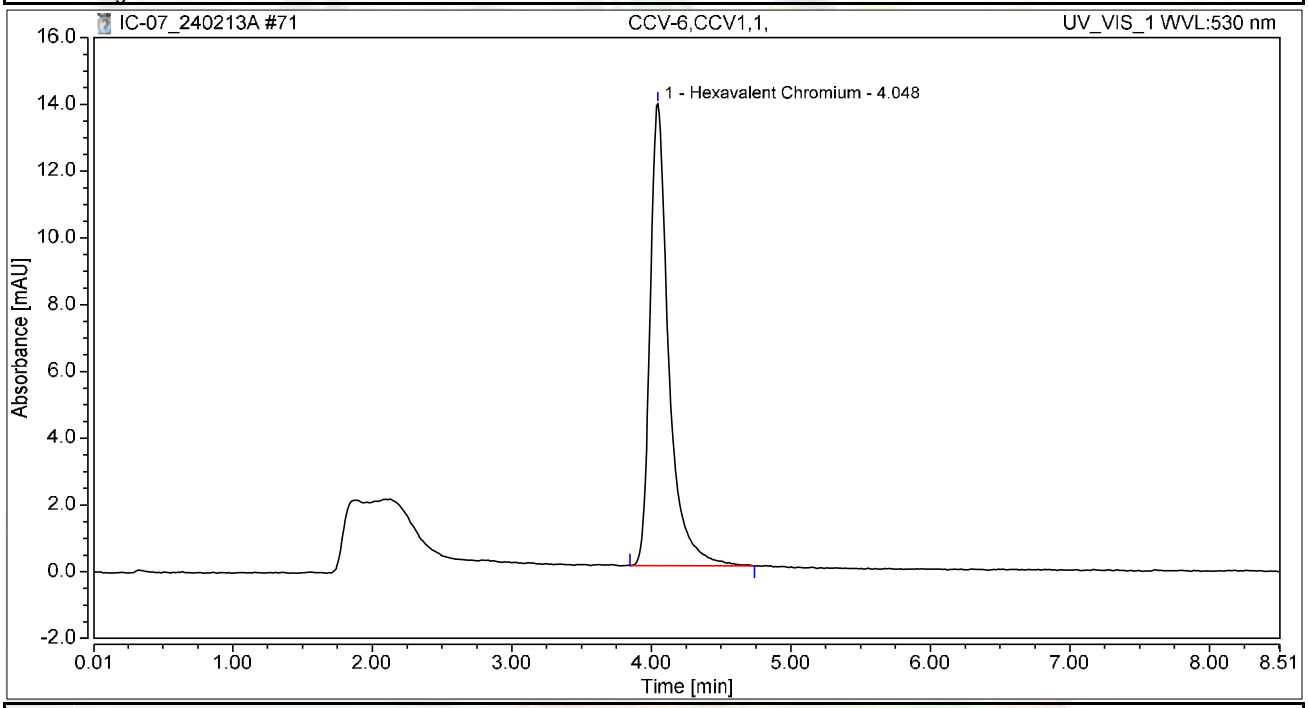
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.406	2.410	100.00	100.00	1.8869
Total:			**0.406**	**2.410**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 19:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

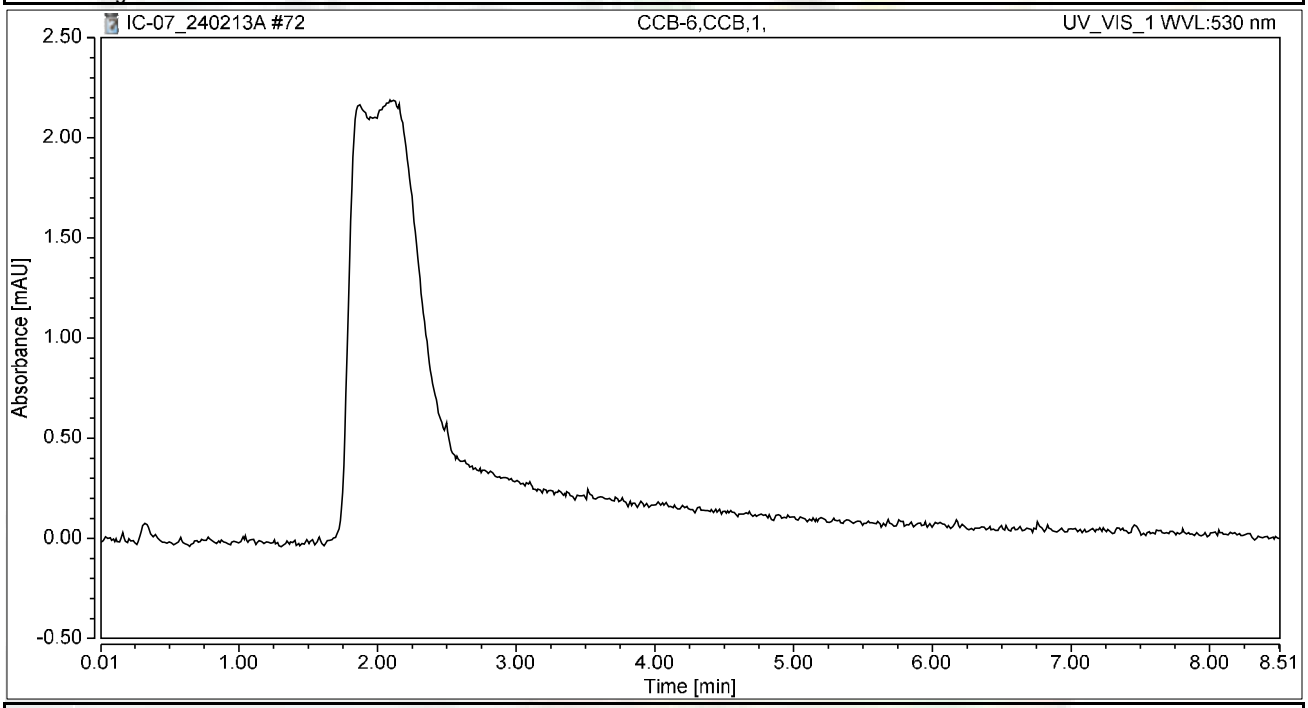
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.148	13.834	100.00	100.00	9.9869
Total:			**2.148**	**13.834**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 19:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

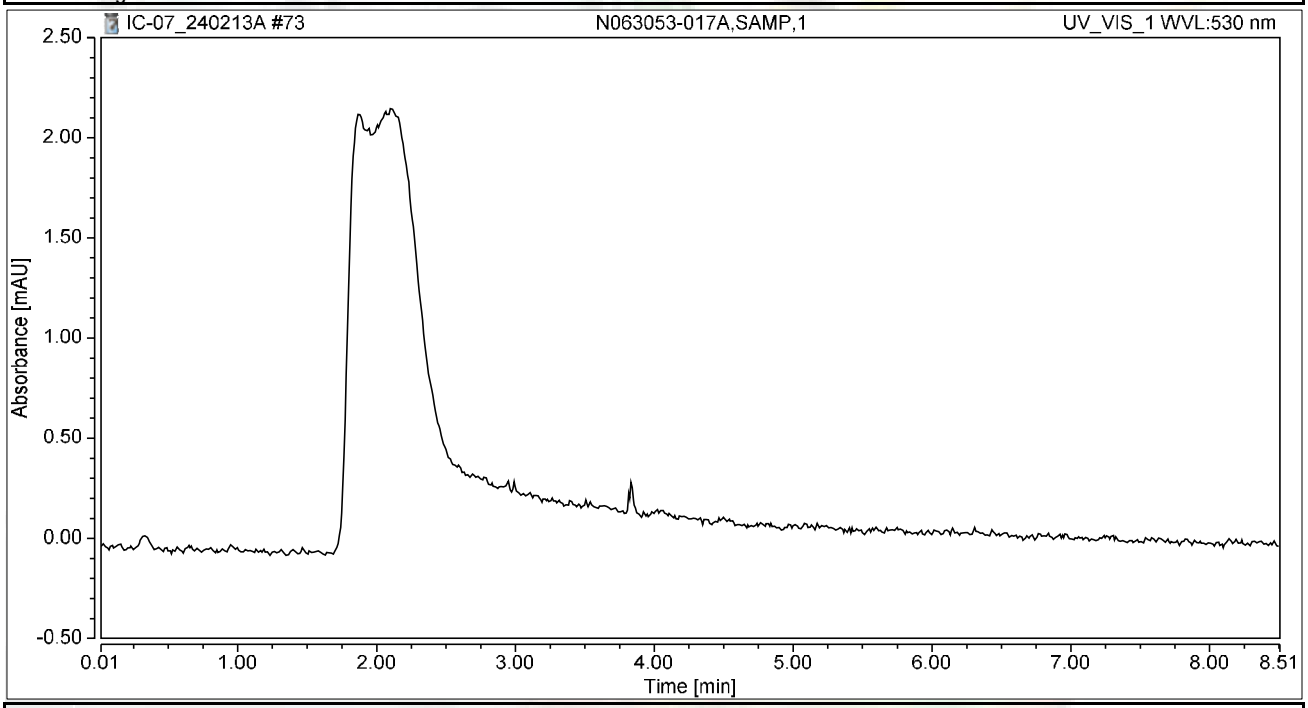
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-017A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 20:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

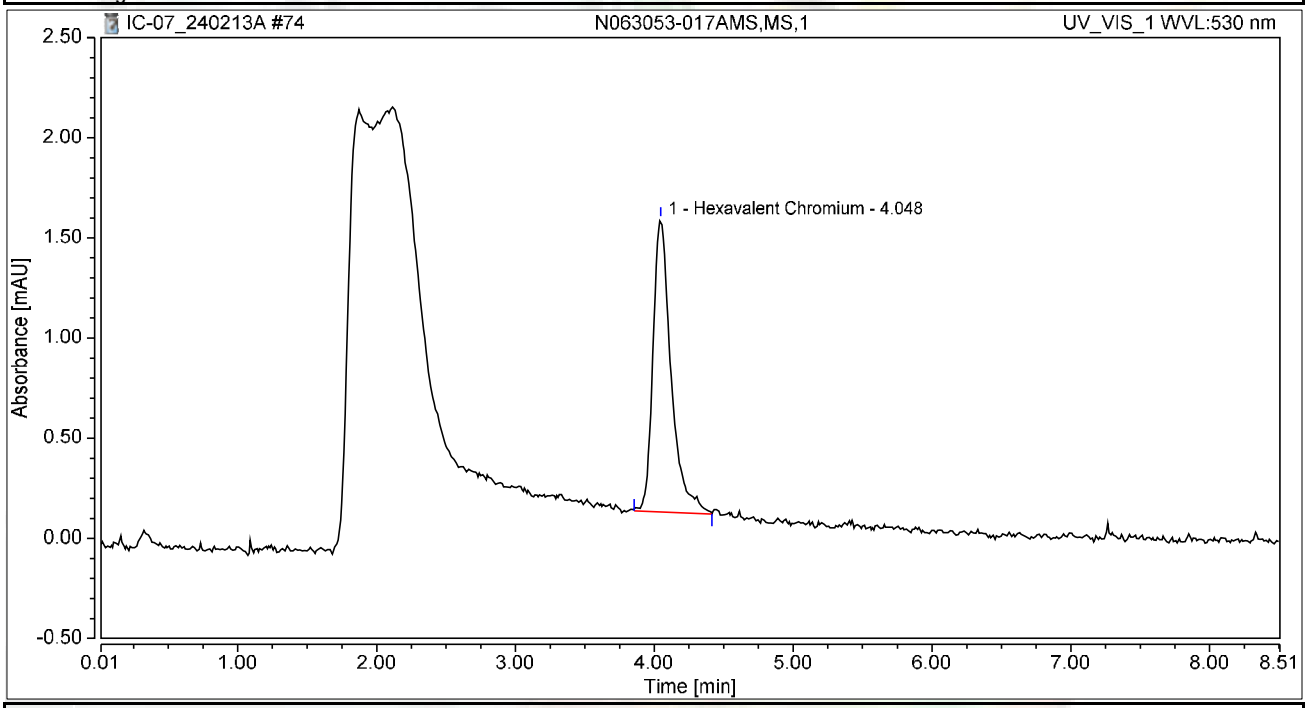
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-017AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 20:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

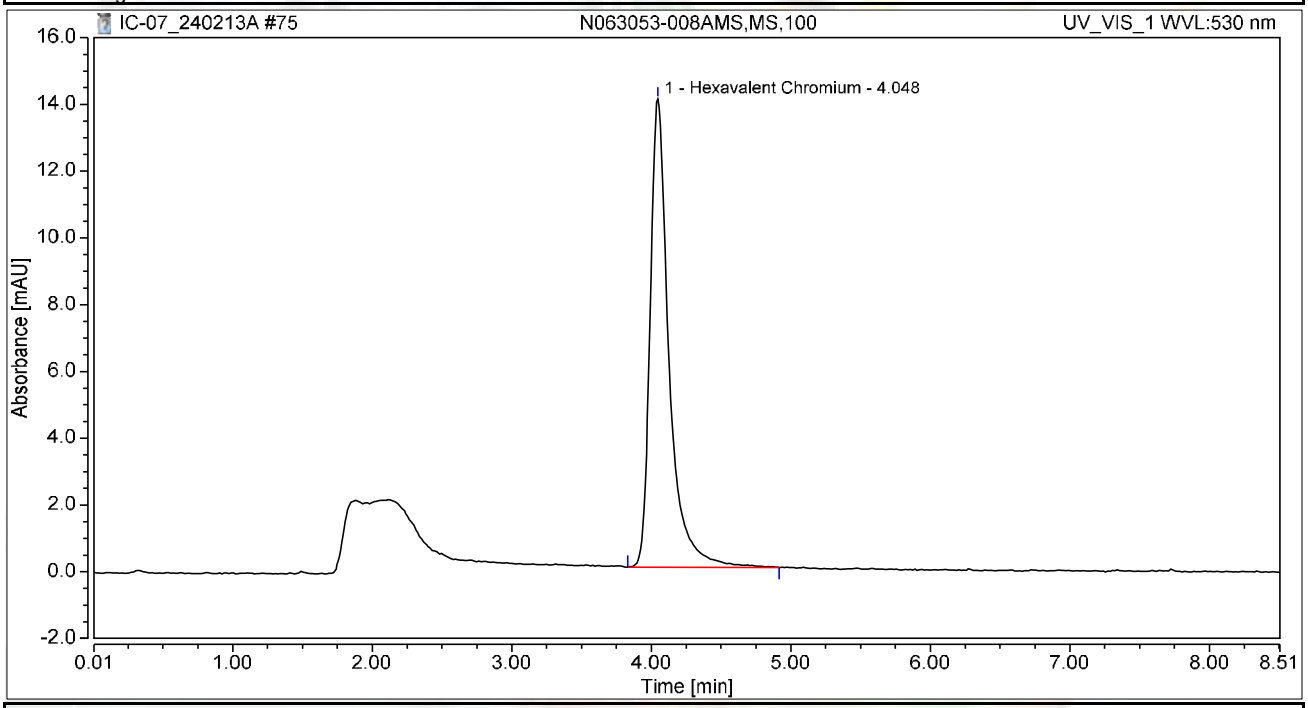
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.222	1.461	100.00	100.00	1.0308
Total:			**0.222**	**1.461**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-008AMS,MS,100**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 20:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

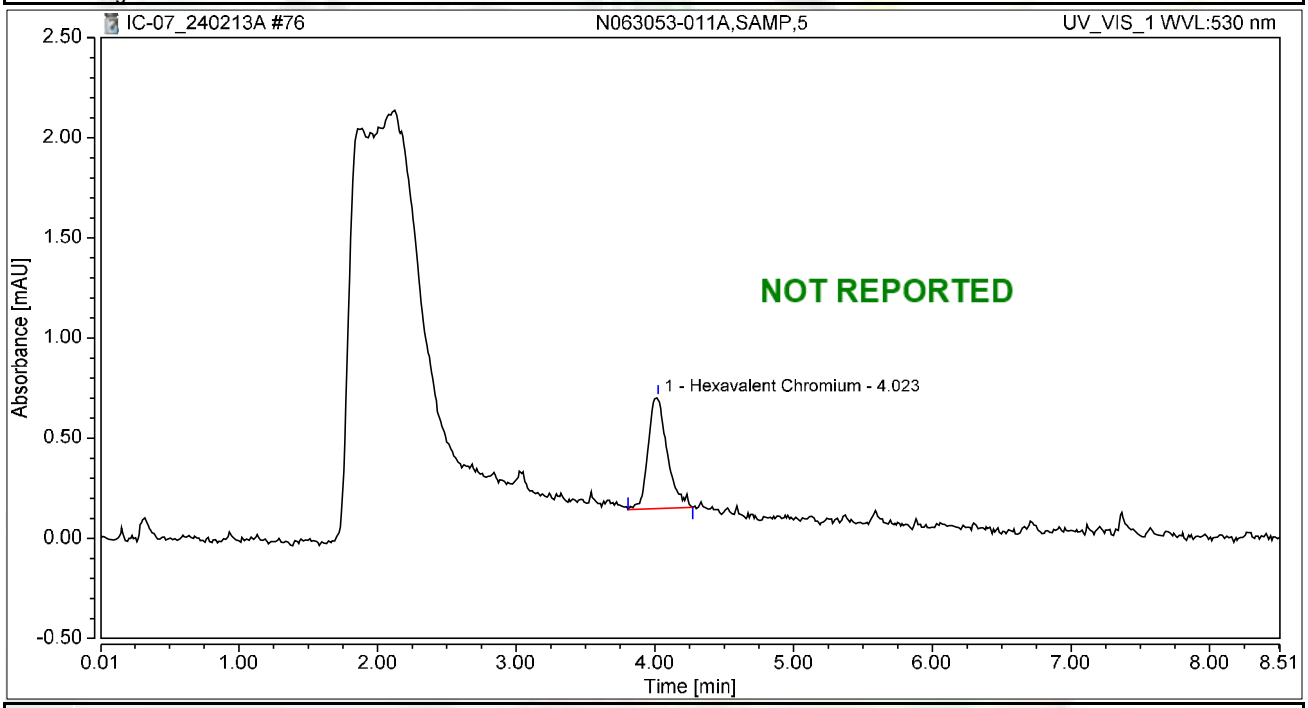
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.202	14.026	100.00	100.00	10.2383
Total:			**2.202**	**14.026**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 20:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

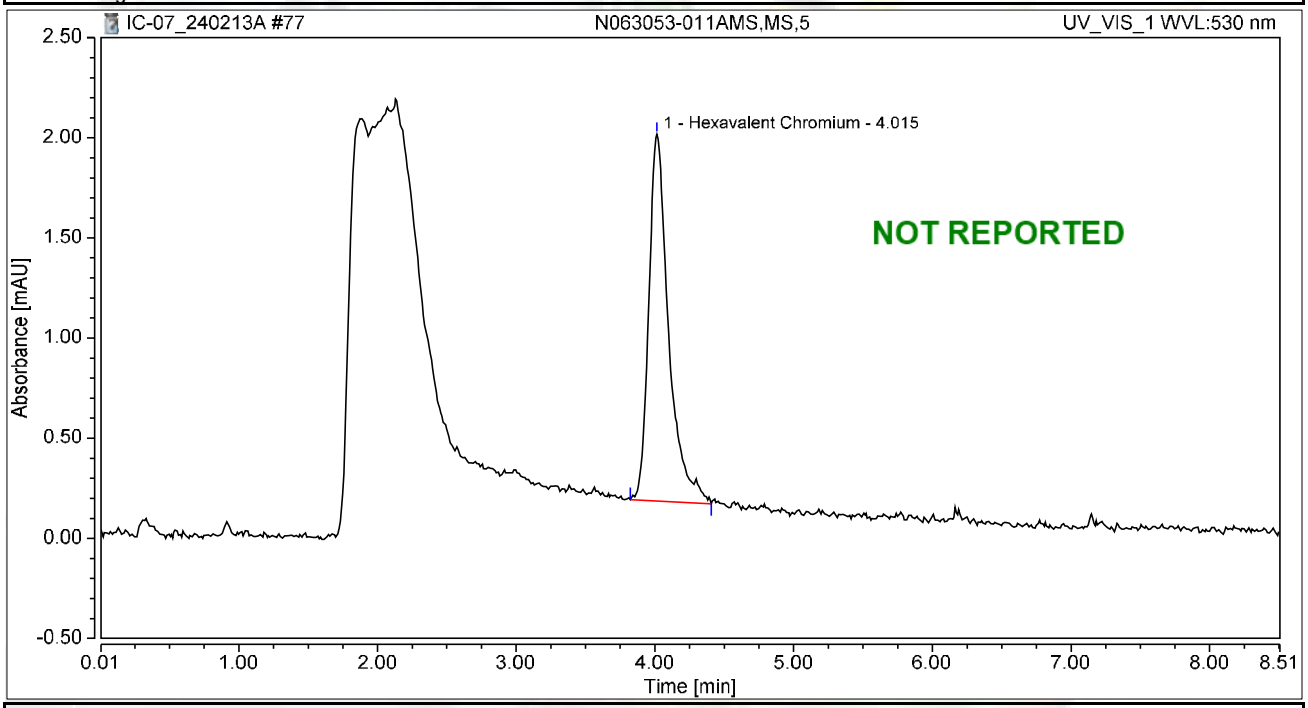
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.089	0.556	100.00	100.00	0.4134
Total:			**0.089**	**0.556**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 20:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

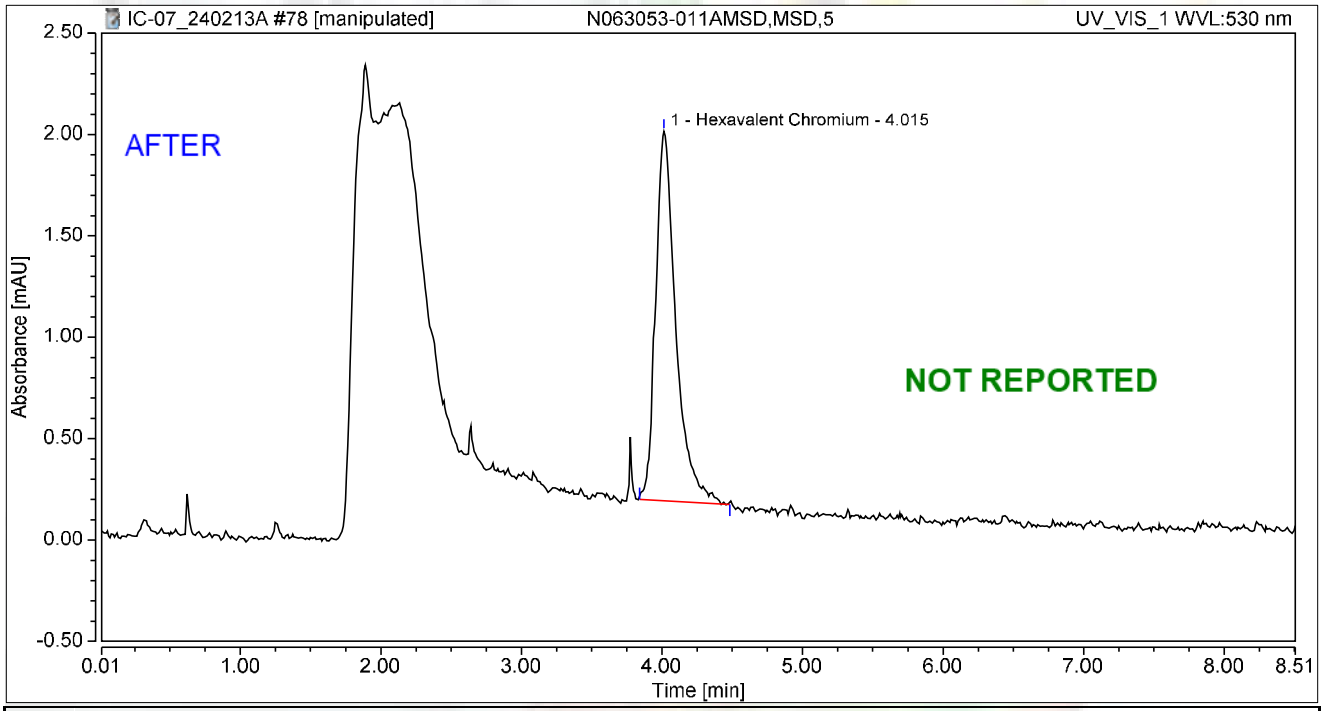
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.303	1.831	100.00	100.00	1.4090
Total:			**0.303**	**1.831**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011AMSD,MSD,5**	*Run Time (min):*	**8.49**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 20:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

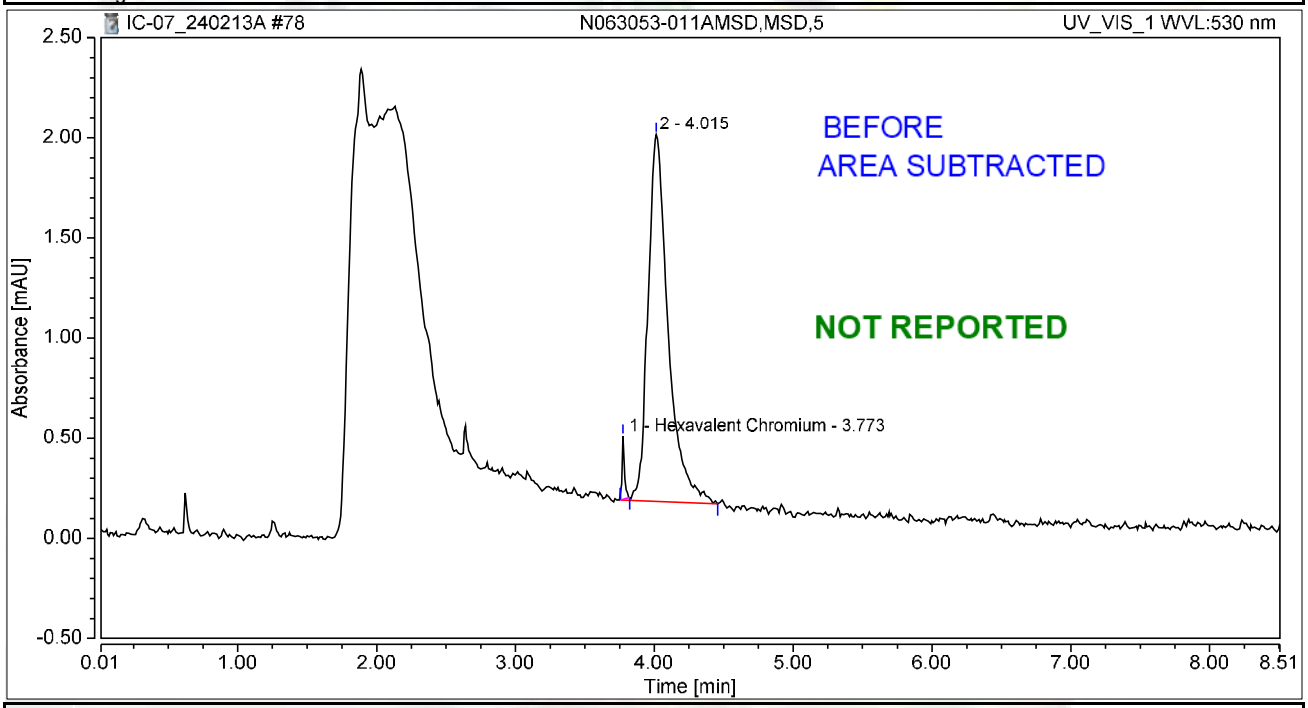
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.304	1.823	100.00	100.00	1.4114
Total:			**0.304**	**1.823**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011AMSD,MSD,5**	*Run Time (min):*	**8.49**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 20:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

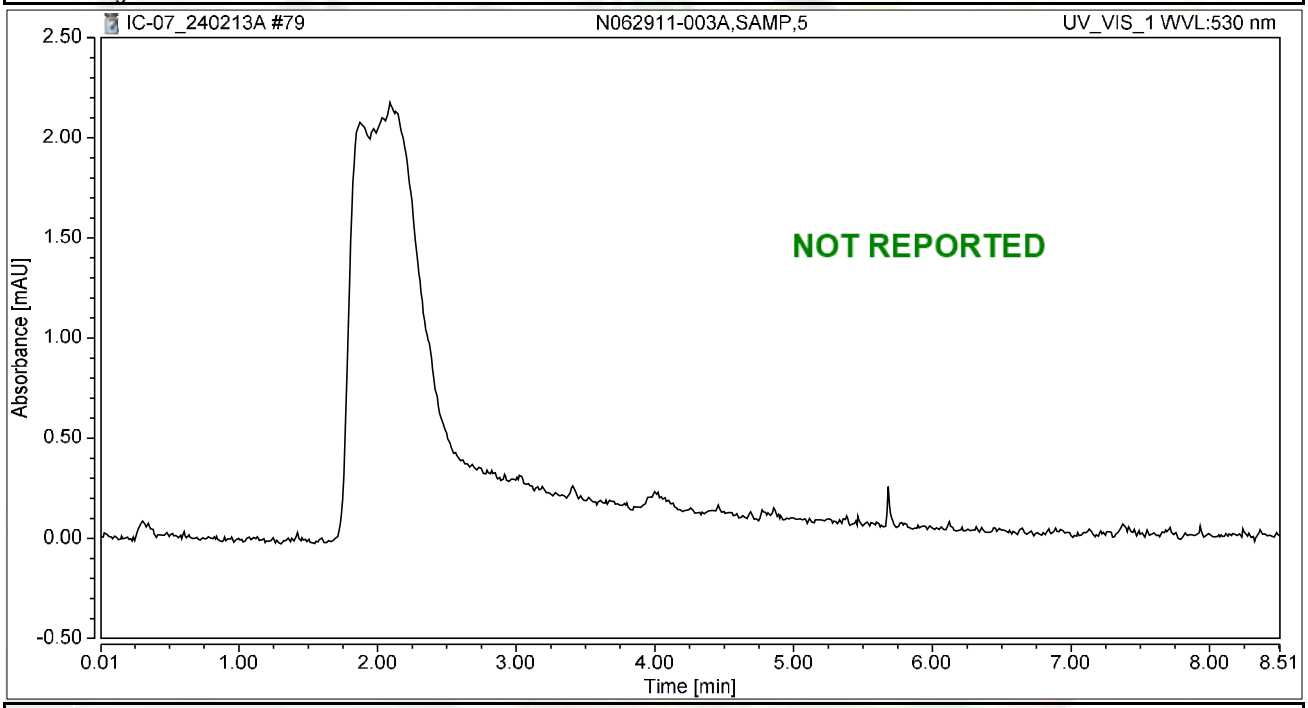
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.773	0.006	0.314	1.96	14.62	0.0286
2		4.015	0.309	1.831	98.04	85.38	n.a.
Total:			**0.315**	**2.145**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062911-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 21:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

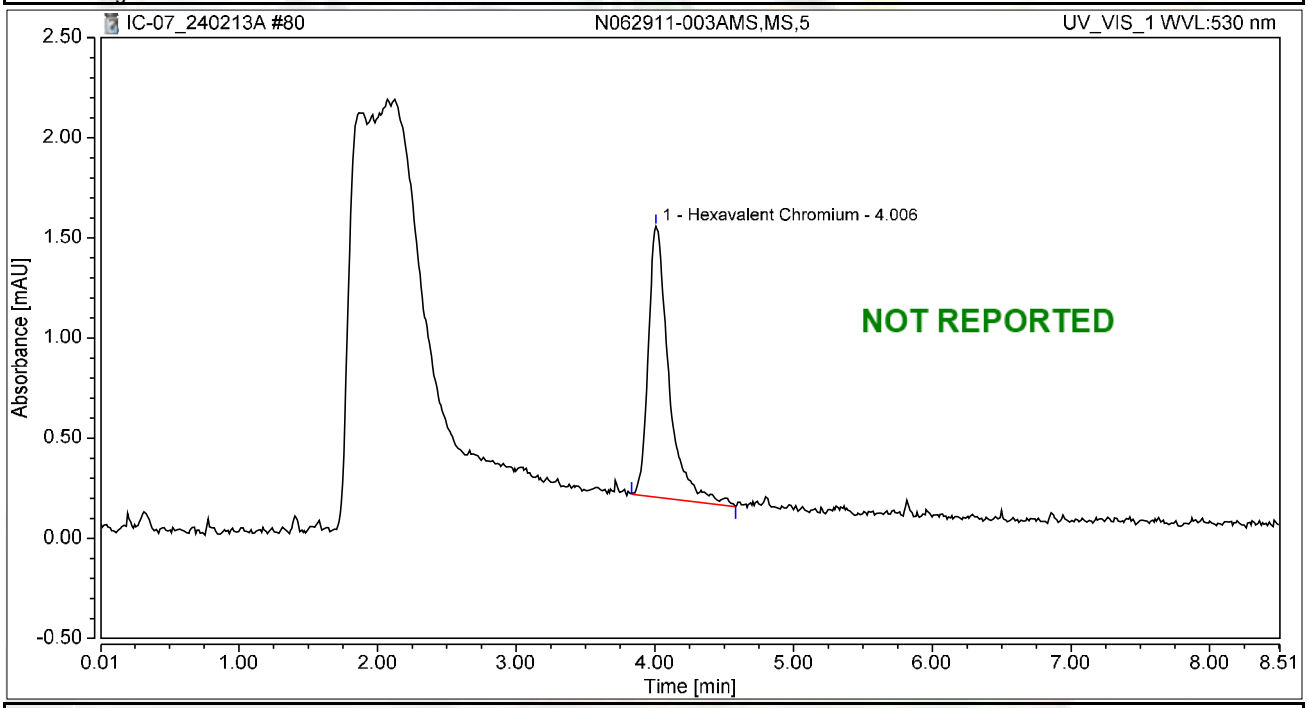
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062911-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 21:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

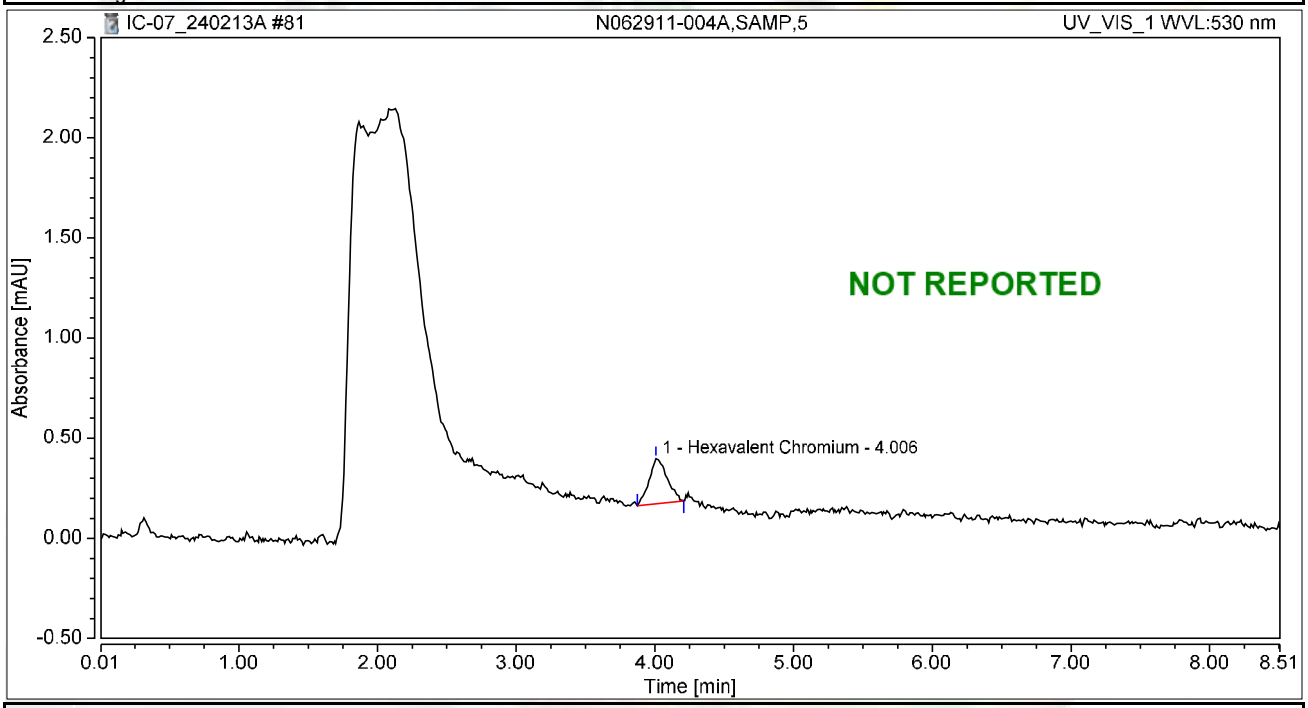
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.232	1.352	100.00	100.00	1.0806
Total:			**0.232**	**1.352**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062911-004A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 21:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

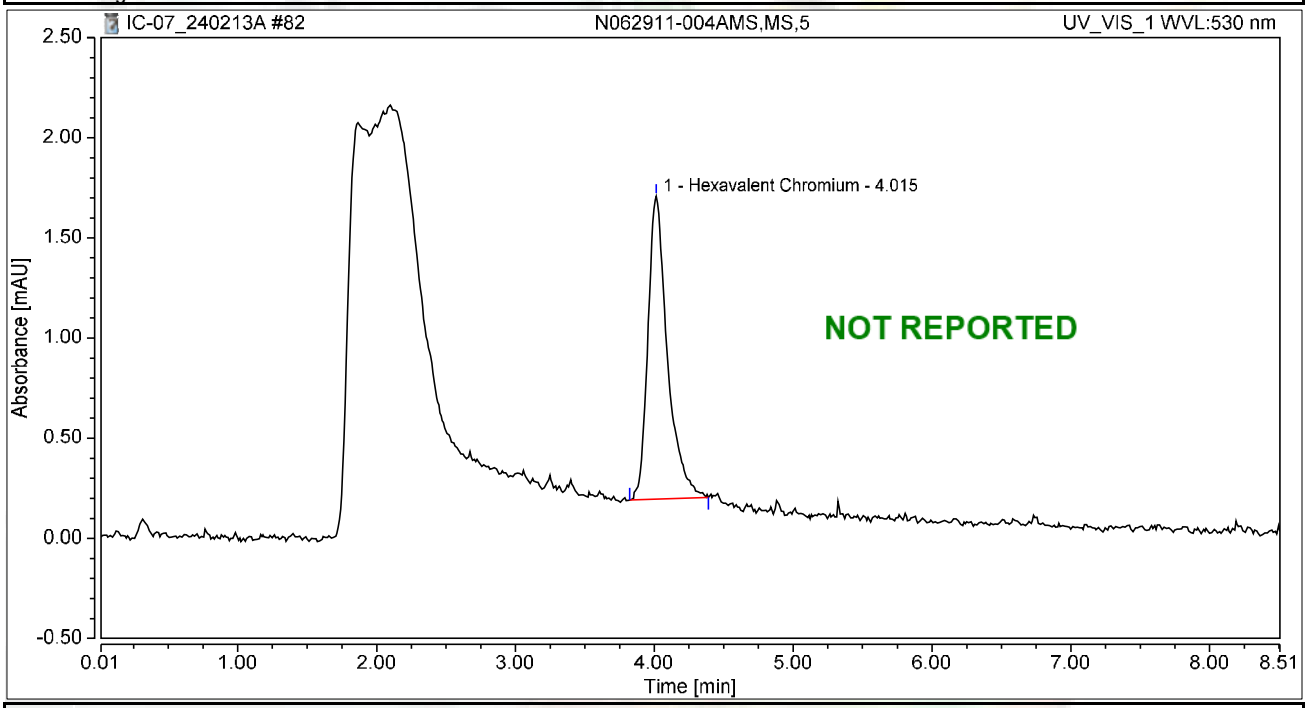
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.034	0.227	100.00	100.00	0.1594
Total:			**0.034**	**0.227**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062911-004AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 21:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

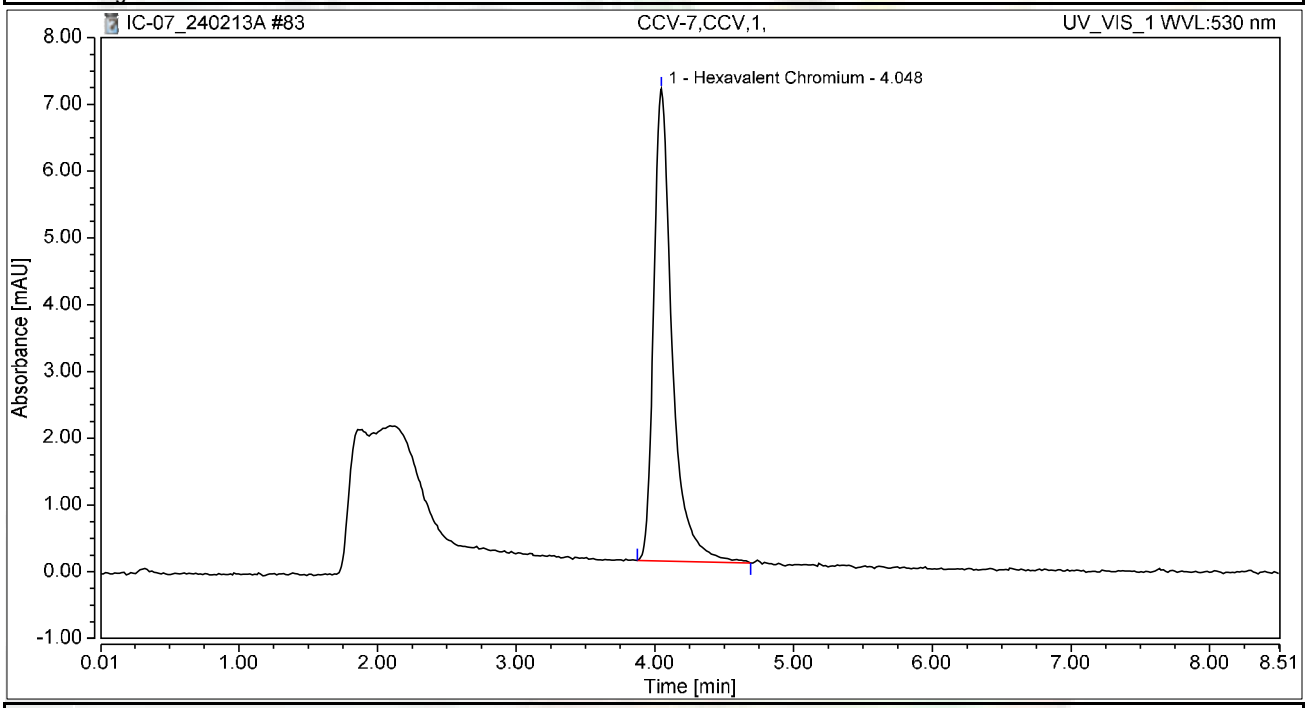
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.247	1.512	100.00	100.00	1.1482
Total:			**0.247**	**1.512**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 21:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

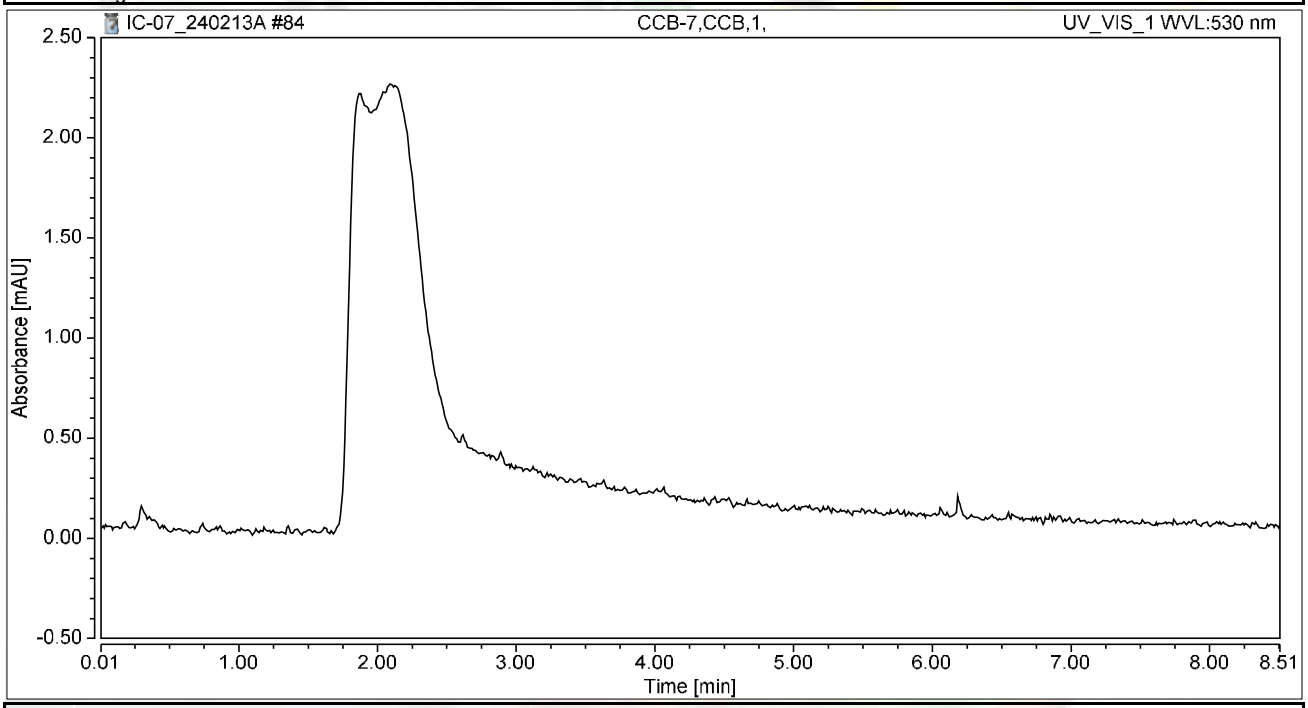
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.092	7.073	100.00	100.00	5.0787
Total:			**1.092**	**7.073**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 21:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

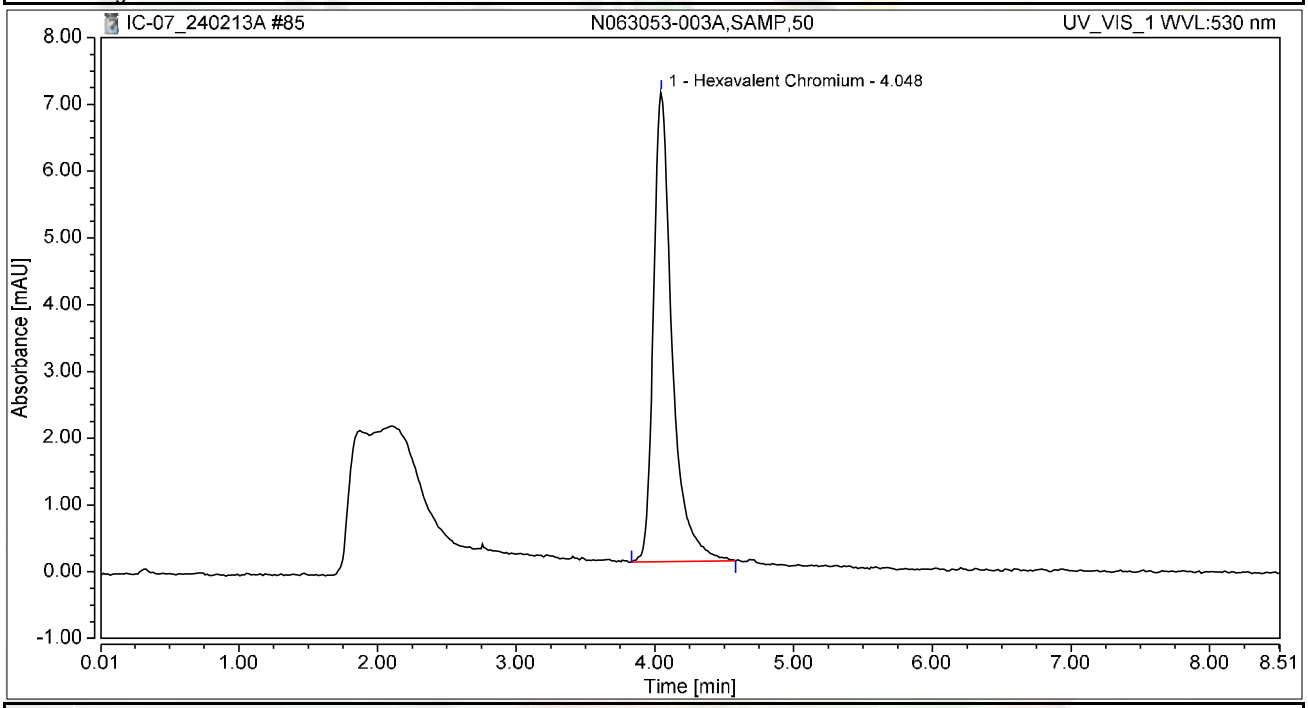
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-003A,SAMP,50**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 22:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

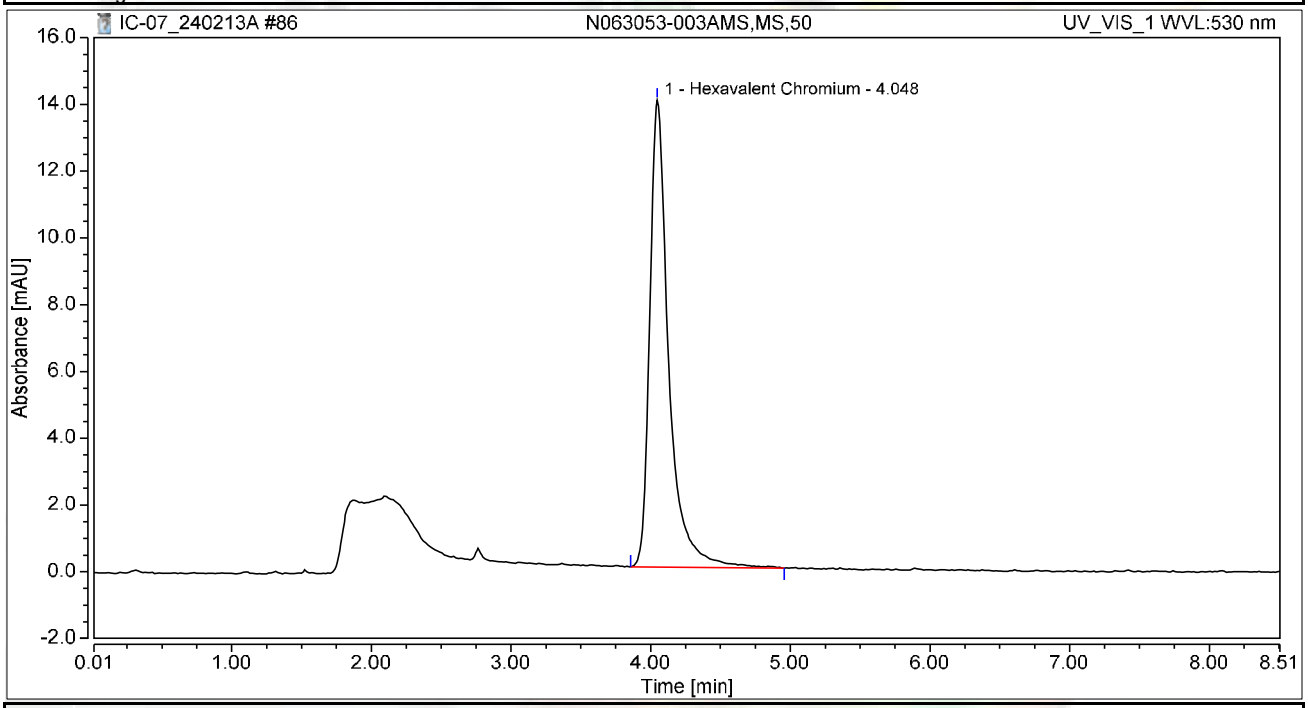
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.099	7.038	100.00	100.00	5.1088
Total:			**1.099**	**7.038**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-003AMS,MS,50**	*Run Time (min):*	**8.49**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 22:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

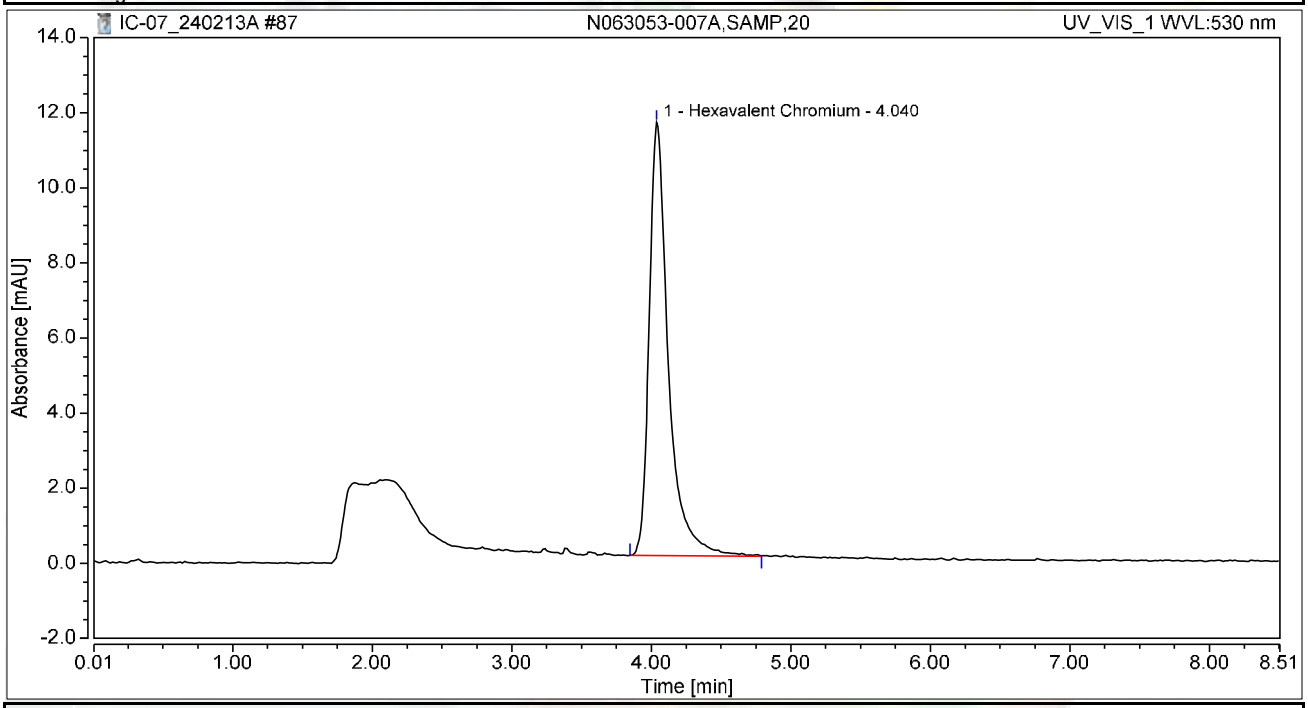
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.209	13.989	100.00	100.00	10.2698
Total:			**2.209**	**13.989**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-007A,SAMP,20**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 22:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

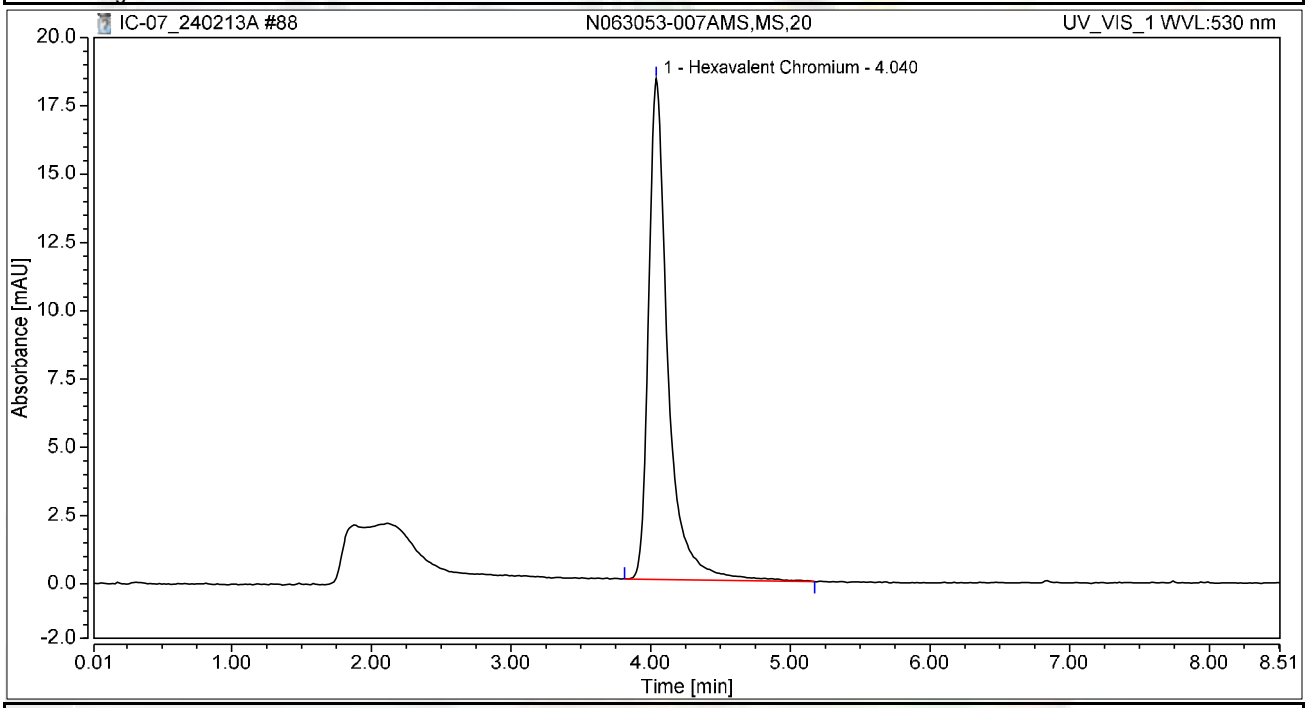
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.840	11.542	100.00	100.00	8.5547
Total:			**1.840**	**11.542**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-007AMS,MS,20**	*Run Time (min):*	**8.49**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 22:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

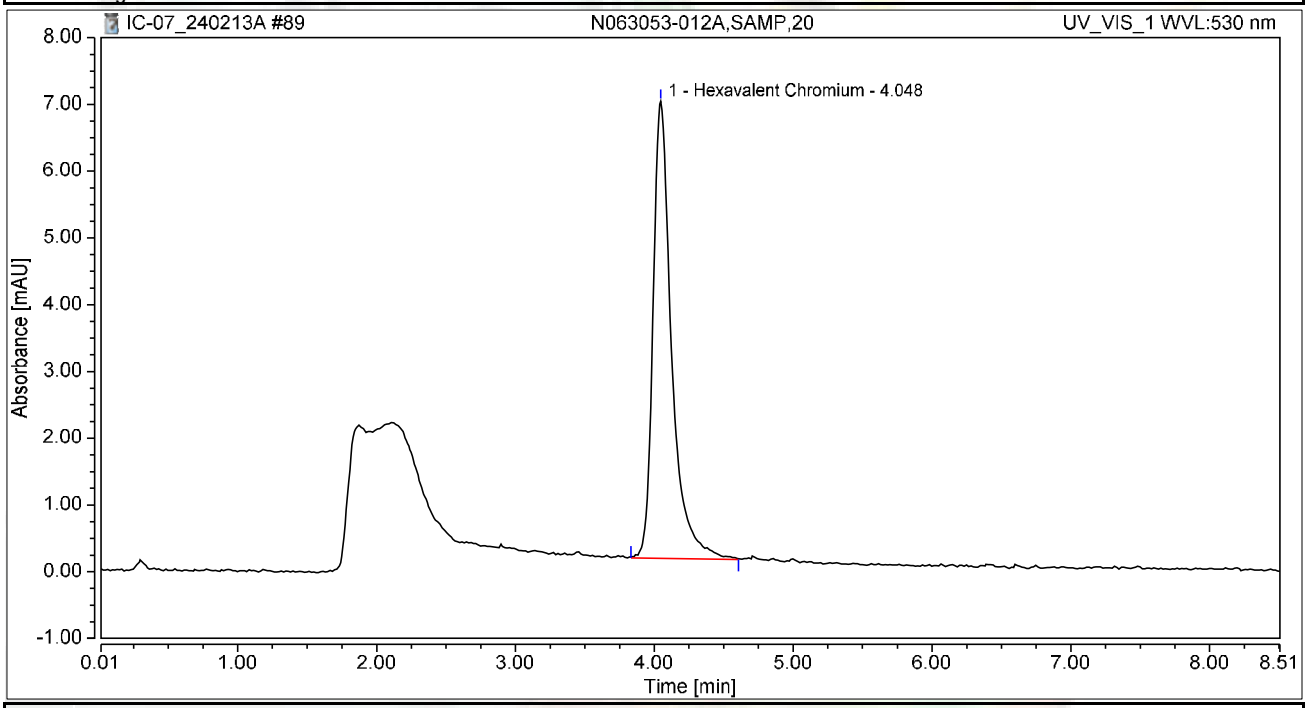
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.956	18.340	100.00	100.00	13.7440
Total:			**2.956**	**18.340**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-012A,SAMP,20**	*Run Time (min):*	**8.49**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 22:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

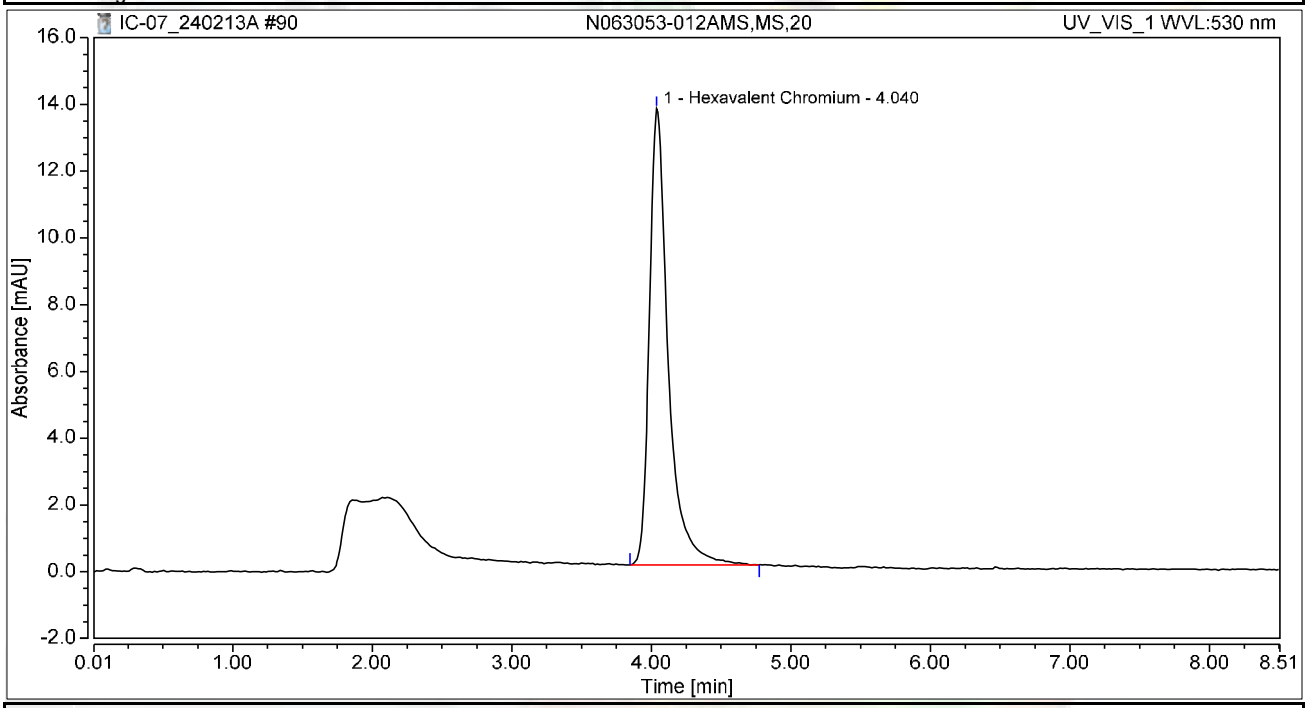
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.062	6.844	100.00	100.00	4.9365
Total:			**1.062**	**6.844**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-012AMS,MS,20**	*Run Time (min):*	**8.50**
Vial Number:	**44**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 22:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

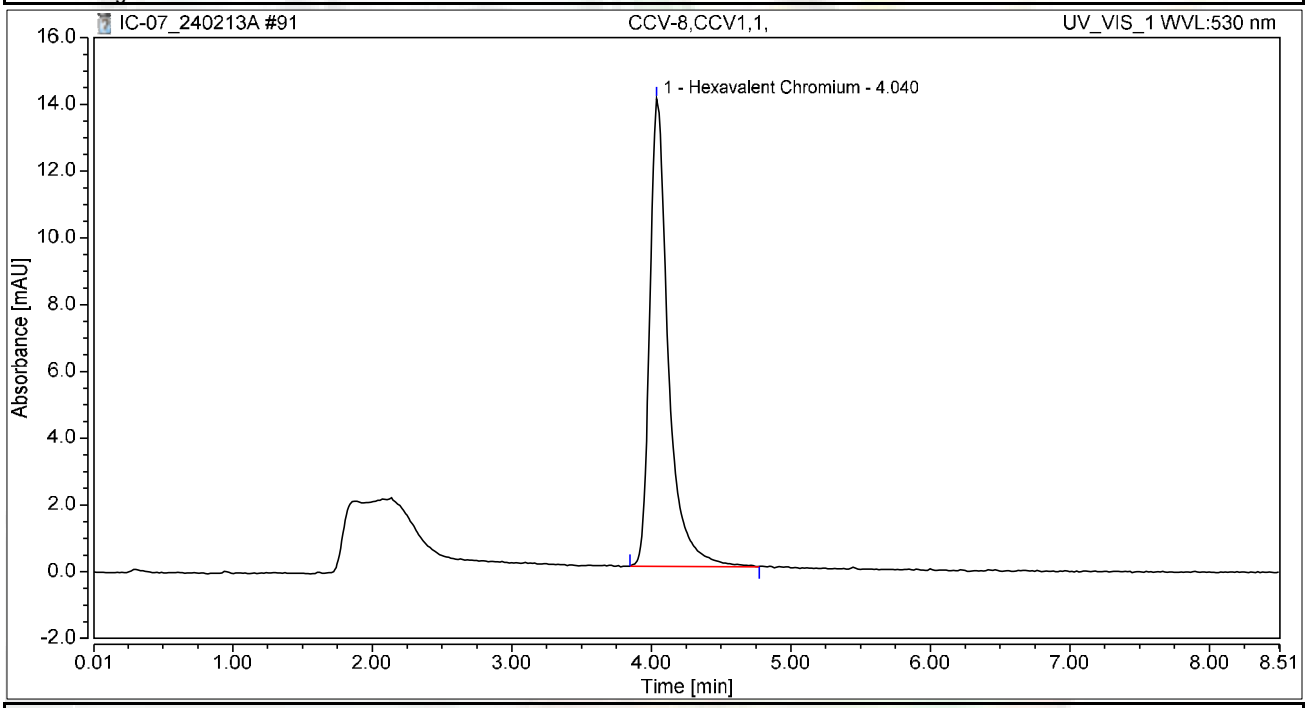
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.142	13.672	100.00	100.00	9.9558
Total:			**2.142**	**13.672**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-8,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**45**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 22:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

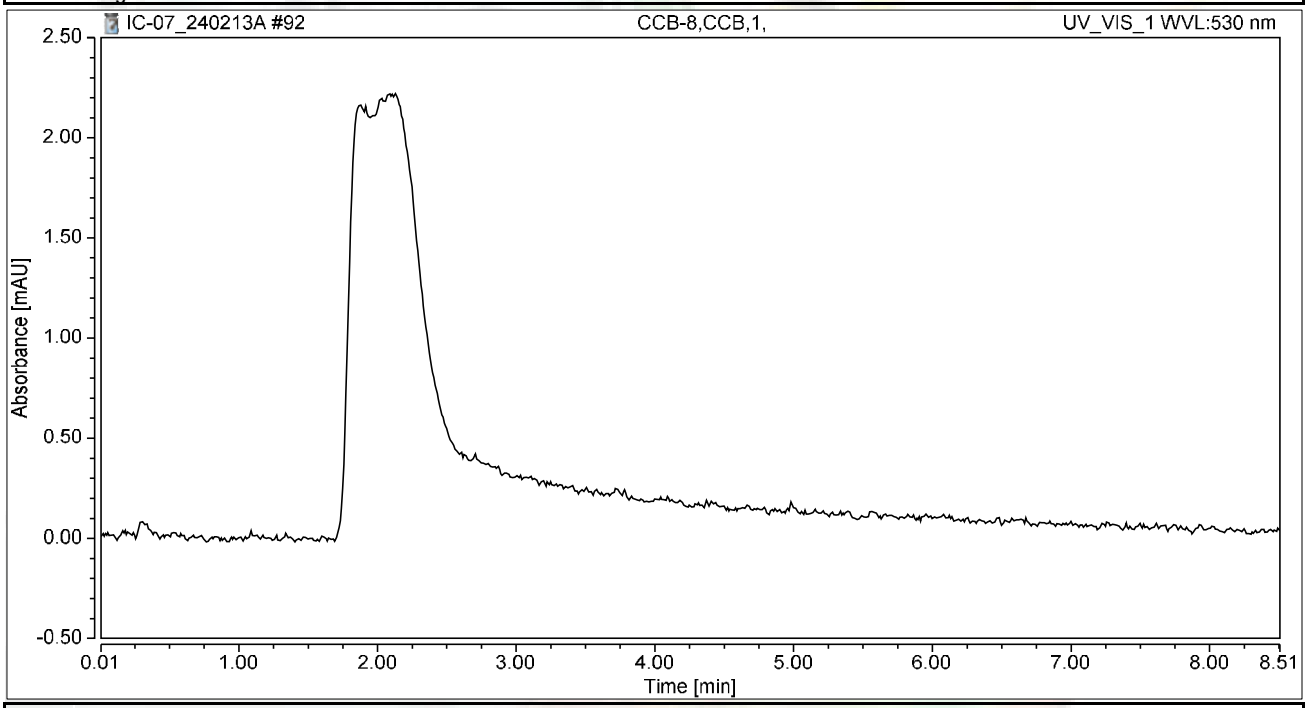
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.173	14.014	100.00	100.00	10.1002
Total:			**2.173**	**14.014**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-8,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**46**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 23:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

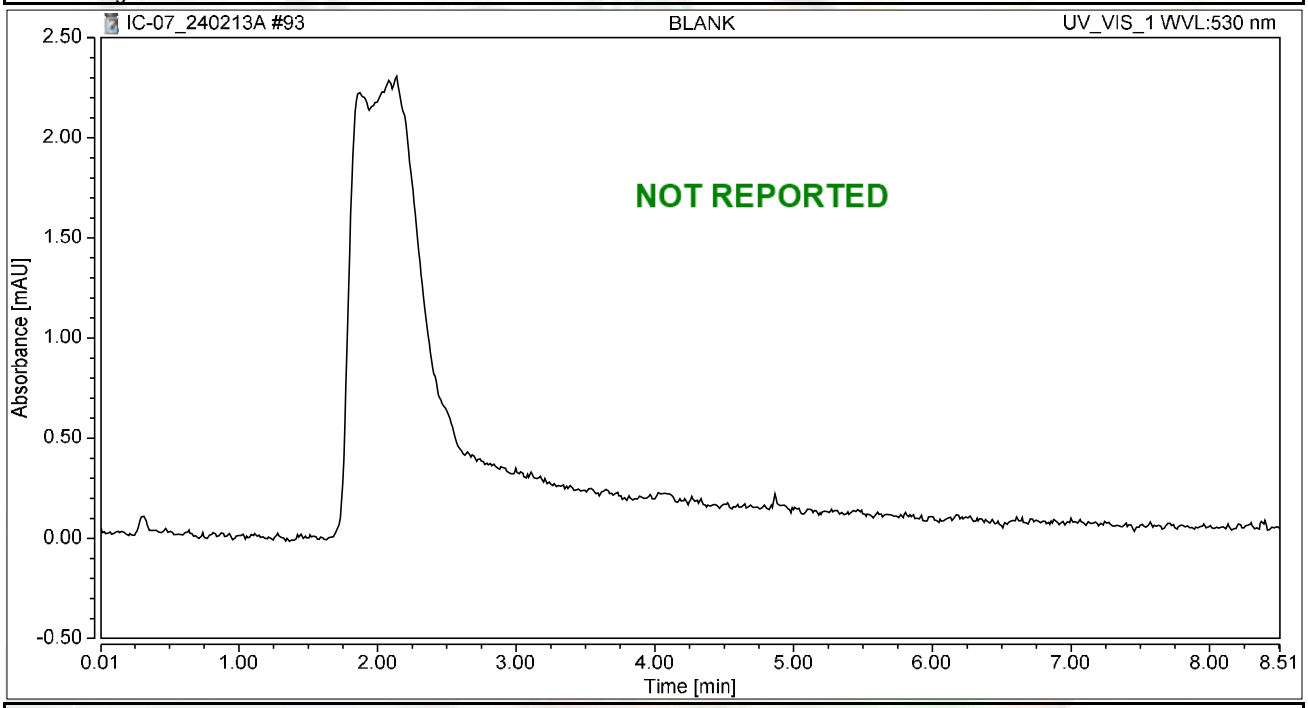
JRB 2/20/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**47**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Feb/24 23:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

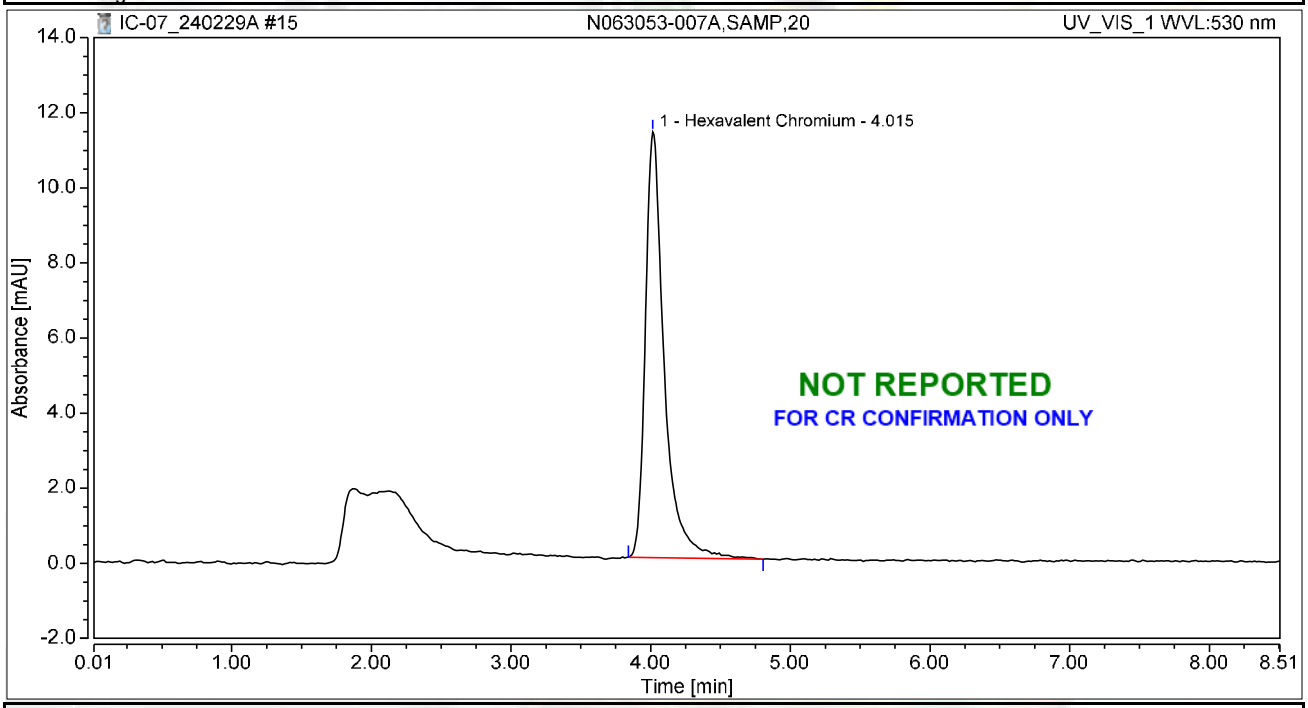
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-007A,SAMP,20**	*Run Time (min):*	**8.49**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 11:06**	*Sample Weight:*	**1.0000**

Chromatogram



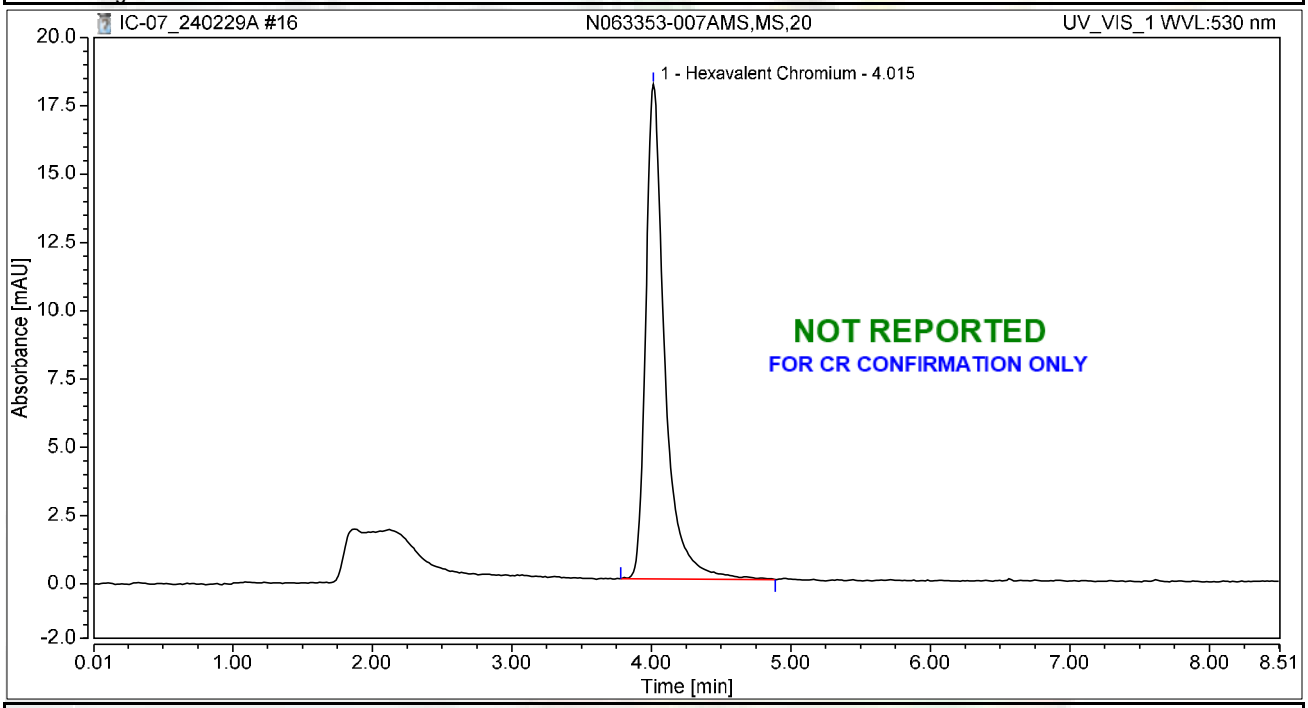
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.778	11.340	100.00	100.00	8.2674
Total:			**1.778**	**11.340**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details	N063053		
Injection Name:	~~N063353~~-007AMS,MS,20	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 11:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	2.870	18.113	100.00	100.00	13.3436
Total:			**2.870**	**18.113**	**100.00**	**100.00**	

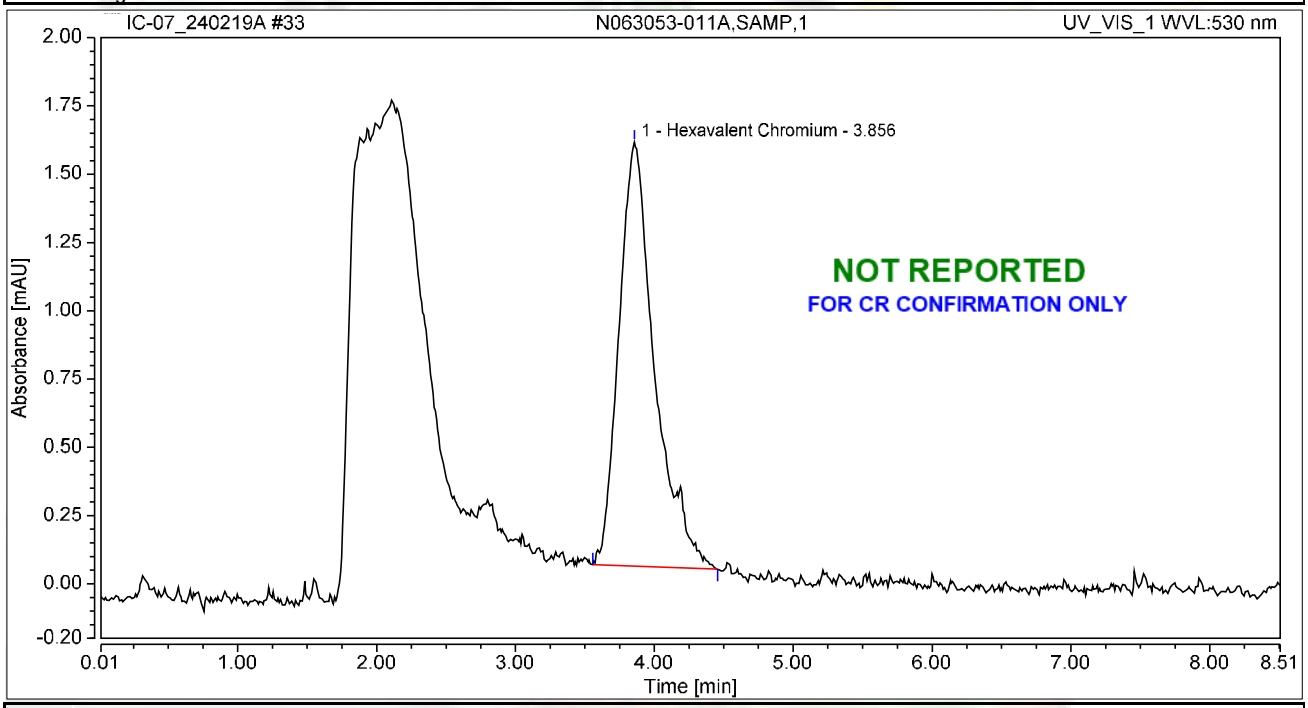
dMocha 2/29/2024
for RBA

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 17:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

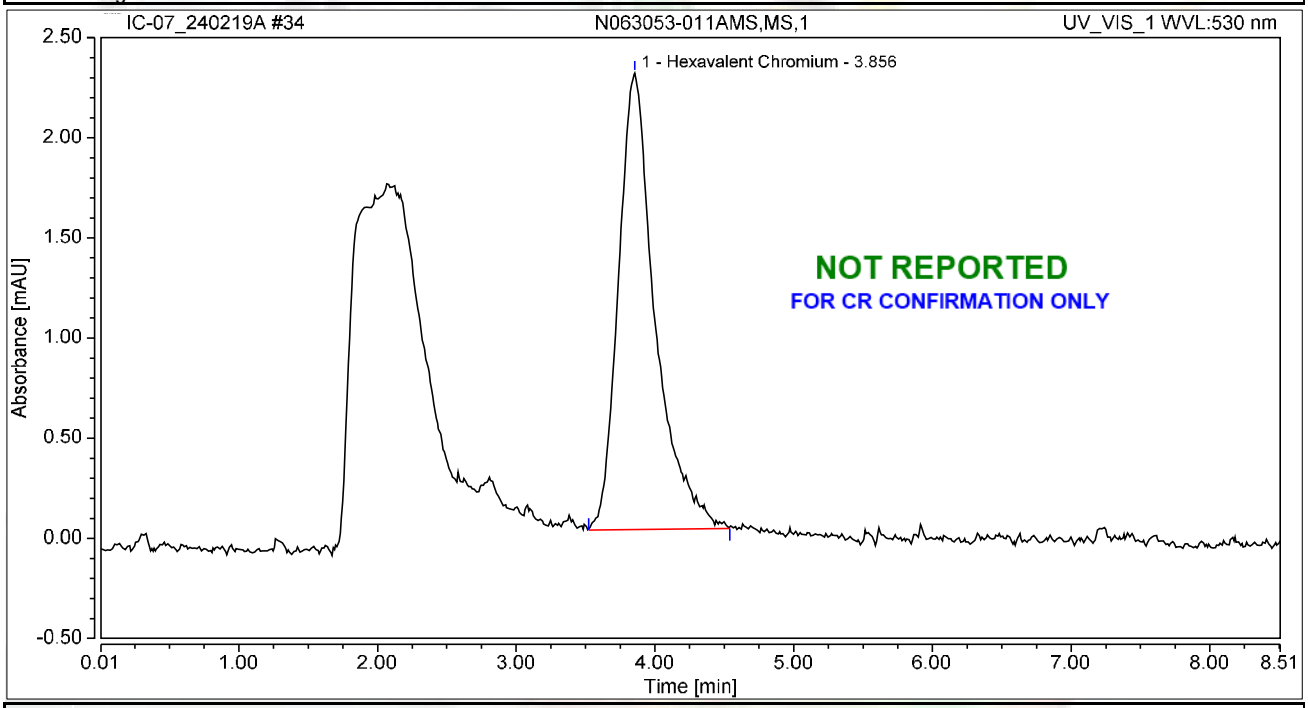
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.462	1.553	100.00	100.00	2.1496
Total:			**0.462**	**1.553**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 17:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.698	2.280	100.00	100.00	3.2452
Total:			**0.698**	**2.280**	**100.00**	**100.00**	

EPA 300.0

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R181486
ASSET #: N063053

Instrument ID: IC-08
Analyst: RBA
Date Analyzed: 2/13/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)		X			X	
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

Detection of Sulfate in CCB2 was >1/2PQL. However, N063053 samples were >5X the CCB detection.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 2/20/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: GROUNDWATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the orignal sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N063053-001B** concentration in mg/L is calculated as follows:

Nitrate, mg/L = 0.1314 * 10

= 1.314

Reporting result in two significant figures,

Nitrate, mg/L = 1.3

Reviewed by:

dMocha 3/4/2024

ANALYSIS RUN LOG

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 25
Created: 1/24/2024 9:39:27 AM by IC-05
Last Update: 1/24/2024 11:49:06 AM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240124	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240124	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240124	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240124	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240124	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240124	Finished
8	ICV,ICV,1	Unknown	9	1000.0	Anions Default	EPA 300_0_240124	Finished
9	ICB,ICB,1	Unknown	10	1000.0	Anions Default	EPA 300_0_240124	Finished
10	MB-H2O,MBLK,1	Unknown	11	1000.0	Anions Default	EPA 300_0_240124	Finished
11	LCS-H2O,LCS,1	Unknown	12	1000.0	Anions Default	EPA 300_0_240124	Finished
12	N062498-007A,SAMP,5	Unknown	13	1000.0	Anions Default	EPA 300_0_240124	Finished
13	N062498-007ADUP,DUP,5	Unknown	14	1000.0	Anions Default	EPA 300_0_240124	Finished
14	N062498-007AMS,MS,5	Unknown	15	1000.0	Anions Default	EPA 300_0_240124	Finished
15	N062498-007AMSD,MSD,5	Unknown	16	1000.0	Anions Default	EPA 300_0_240124	Finished
16	LCS-2,LCS,1	Unknown	17	1000.0	Anions Default	EPA 300_0_240124	Finished
17	MB-2,MBLK,1	Unknown	18	1000.0	Anions Default	EPA 300_0_240124	Finished
18	N062498-007A,SAMP,5	Unknown	19	1000.0	Anions Default	EPA 300_0_240124	Finished
19	N062498-007ADUP,DUP,5	Unknown	20	1000.0	Anions Default	EPA 300_0_240124	Finished
20	CCV-1,CCV,1	Unknown	21	1000.0	Anions Default	EPA 300_0_240124	Finished
21	CCB-1,CCB,1	Unknown	22	1000.0	Anions Default	EPA 300_0_240124	Finished
22	N062498-007AMS,MS,5	Unknown	23	1000.0	Anions Default	EPA 300_0_240124	Finished
23	N062498-007AMSD,MSD,5	Unknown	24	1000.0	Anions Default	EPA 300_0_240124	Finished
24	CCV-2,CCV,1	Unknown	33	1000.0	Anions Default	EPA 300_0_240124	Finished
25	CCB-2,CCB,1	Unknown	34	1000.0	Anions Default	EPA 300_0_240124	Finished

reviewed by: 1/31/2024

Processed by:
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1/24/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 25
Created: 1/24/2024 9:39:27 AM by IC-05
Last Update: 1/24/2024 11:49:06 AM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	1/24/2024 9:41:36 AM	BLANK
2	Std - 0	1/24/2024 9:56:54 AM	IBLANK
3	Std - 1	1/24/2024 10:32:56 AM	STD-LOW
4	Std - 2	1/24/2024 10:48:14 AM	STD
5	Std - 3	1/24/2024 11:03:32 AM	STD
6	Std - 4	1/24/2024 11:18:50 AM	STD
7	Std - 5	1/24/2024 11:34:08 AM	STD-HIGH
8	ICV,ICV,1	1/24/2024 11:49:26 AM	ICV, IWST-240123B
9	ICB,ICB,1	1/24/2024 12:04:44 PM	CCB
10	MB-H2O,MBLK,1	1/24/2024 12:20:02 PM	MB
11	LCS-H2O,LCS,1	1/24/2024 12:35:19 PM	LCS, IWST-240123B
12	N062498-007A,SAMP,5	1/24/2024 12:50:38 PM	SAMP,2>10mL,
13	N062498-007ADUP,DUP,5	1/24/2024 1:05:56 PM	DUP,2>10mL,
14	N062498-007AMS,MS,5	1/24/2024 1:21:14 PM	MS,2>10mL,
15	N062498-007AMSD,MSD,5	1/24/2024 1:36:33 PM	MSD,2>10mL,
16	LCS-2,LCS,1	1/24/2024 1:51:51 PM	LCS, IWST-240123B
17	MB-2,MBLK,1	1/24/2024 2:07:09 PM	MB
18	N062498-007A,SAMP,5	1/24/2024 2:22:27 PM	SAMP,2>10mL,
19	N062498-007ADUP,DUP,5	1/24/2024 2:37:45 PM	DUP,2>10mL,
20	CCV-1,CCV,1	1/24/2024 2:53:03 PM	CCV, IWST-240123A
21	CCB-1,CCB,1	1/24/2024 3:08:21 PM	CCB
22	N062498-007AMS,MS,5	1/24/2024 3:23:40 PM	MS,2>10mL,
23	N062498-007AMSD,MSD,5	1/24/2024 3:38:58 PM	MSD,2>10mL,
24	CCV-2,CCV,1	1/24/2024 3:54:16 PM	CCV, IWST-240123A
25	CCB-2,CCB,1	1/24/2024 4:09:34 PM	CCB

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 55
Created: 2/13/2024 8:48:46 AM by IC-05
Last Update: 2/13/2024 7:21:55 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240124	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240124	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240124	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240124	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240124	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240124	Finished
8	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
9	CCV-1,CCV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
10	CCB-1,CCB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
11	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
12	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
13	N063053-008B,SAMP,10	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
14	N063053-011B,SAMP,10	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
15	N063053-005B,SAMP,10	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
16	N063053-006B,SAMP,10	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
17	N063053-007B,SAMP,10	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
18	N063053-001B,SAMP,10	Unknown	6	1000.0	Anions Default	EPA 300_0_240124	Finished
19	N063053-002B,SAMP,10	Unknown	7	1000.0	Anions Default	EPA 300_0_240124	Finished
20	N063053-003B,SAMP,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240124	Finished
21	CCV-2,CCV,1	Unknown	9	1000.0	Anions Default	EPA 300_0_240124	Finished
22	CCB-2,CCB,1	Unknown	10	1000.0	Anions Default	EPA 300_0_240124	Finished
23	N063053-004B,SAMP,10	Unknown	11	1000.0	Anions Default	EPA 300_0_240124	Finished
24	N063053-009B,SAMP,10	Unknown	12	1000.0	Anions Default	EPA 300_0_240124	Finished
25	N063053-010B,SAMP,10	Unknown	13	1000.0	Anions Default	EPA 300_0_240124	Finished
26	N063053-011BMS,MS,10	Unknown	14	1000.0	Anions Default	EPA 300_0_240124	Finished
27	N063053-011BMSD,MSD,10	Unknown	15	1000.0	Anions Default	EPA 300_0_240124	Finished
28	N063053-008BDUP,DUP,10	Unknown	16	1000.0	Anions Default	EPA 300_0_240124	Finished
29	N063053-008BMS,MS,10	Unknown	17	1000.0	Anions Default	EPA 300_0_240124	Finished
30	N063053-011B,SAMP,50	Unknown	18	1000.0	Anions Default	EPA 300_0_240124	Finished
31	N063053-011BMS,MS,50	Unknown	19	1000.0	Anions Default	EPA 300_0_240124	Finished
32	N063053-011BMSD,MSD,50	Unknown	20	1000.0	Anions Default	EPA 300_0_240124	Finished
33	CCV-3,CCV,1	Unknown	21	1000.0	Anions Default	EPA 300_0_240124	Finished
34	CCB-3,CCB,1	Unknown	22	1000.0	Anions Default	EPA 300_0_240124	Finished
35	N063053-008B,SAMP,50	Unknown	23	1000.0	Anions Default	EPA 300_0_240124	Finished
36	N063053-008BDUP,DUP,50	Unknown	24	1000.0	Anions Default	EPA 300_0_240124	Finished
37	N063053-008BMS,MS,50	Unknown	25	1000.0	Anions Default	EPA 300_0_240124	Finished
38	N063053-002B,SAMP,100	Unknown	26	1000.0	Anions Default	EPA 300_0_240124	Finished
39	N063053-001B,SAMP,50	Unknown	27	1000.0	Anions Default	EPA 300_0_240124	Finished
40	N063053-003B,SAMP,50	Unknown	28	1000.0	Anions Default	EPA 300_0_240124	Finished
41	N063053-004B,SAMP,50	Unknown	29	1000.0	Anions Default	EPA 300_0_240124	Finished

Processed by:

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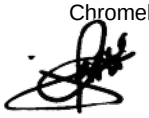

2/13/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 55
Created: 2/13/2024 8:48:46 AM by IC-05
Last Update: 2/13/2024 7:21:55 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	1/24/2024 9:41:36 AM	BLANK
2	Std - 0	1/24/2024 9:56:54 AM	IBLANK
3	Std - 1	1/24/2024 10:32:56 AM	STD-LOW
4	Std - 2	1/24/2024 10:48:14 AM	STD
5	Std - 3	1/24/2024 11:03:32 AM	STD
6	Std - 4	1/24/2024 11:18:50 AM	STD
7	Std - 5	1/24/2024 11:34:08 AM	STD-HIGH
8	BLANK	2/13/2024 8:49:34 AM	BLANK
9	CCV-1,CCV,1	2/13/2024 9:04:53 AM	CCV, IWST-240208A
10	CCB-1,CCB,1	2/13/2024 9:20:10 AM	CCB
11	MB-H2O,MBLK,1	2/13/2024 9:35:28 AM	MB
12	LCS-H2O,LCS,1	2/13/2024 9:50:46 AM	LCS, IWST-240208B
13	N063053-008B,SAMP,10	2/13/2024 10:25:48 AM	SAMP,1>10mL,
14	N063053-011B,SAMP,10	2/13/2024 10:41:06 AM	SAMP,1>10mL,
15	N063053-005B,SAMP,10	2/13/2024 10:59:12 AM	SAMP,1>10mL,
16	N063053-006B,SAMP,10	2/13/2024 11:14:30 AM	SAMP,1>10mL,
17	N063053-007B,SAMP,10	2/13/2024 11:29:47 AM	SAMP,1>10mL,
18	N063053-001B,SAMP,10	2/13/2024 11:45:05 AM	SAMP,1>10mL,
19	N063053-002B,SAMP,10	2/13/2024 12:00:23 PM	SAMP,1>10mL,
20	N063053-003B,SAMP,10	2/13/2024 12:15:42 PM	SAMP,1>10mL,
21	CCV-2,CCV,1	2/13/2024 12:30:59 PM	CCV, IWST-240208A
22	CCB-2,CCB,1	2/13/2024 12:46:17 PM	CCB
23	N063053-004B,SAMP,10	2/13/2024 1:01:35 PM	SAMP,1>10mL,
24	N063053-009B,SAMP,10	2/13/2024 1:16:53 PM	SAMP,1>10mL,
25	N063053-010B,SAMP,10	2/13/2024 1:32:11 PM	MS,1>10mL,
26	N063053-011BMS,MS,10	2/13/2024 1:47:29 PM	MS,1>10mL,
27	N063053-011BMSD,MSD,10	2/13/2024 2:02:48 PM	MSD,1>10mL,
28	N063053-008BDUP,DUP,10	2/13/2024 2:18:06 PM	DUP,1>10mL,
29	N063053-008BMS,MS,10	2/13/2024 2:33:24 PM	MS,1>10mL,
30	N063053-011B,SAMP,50	2/13/2024 2:48:42 PM	SAMP,0.2>10mL,
31	N063053-011BMS,MS,50	2/13/2024 3:04:01 PM	MS,0.2>10mL,
32	N063053-011BMSD,MSD,50	2/13/2024 3:19:19 PM	MSD,0.2>10mL,
33	CCV-3,CCV,1	2/13/2024 3:34:38 PM	CCV, IWST-240208A
34	CCB-3,CCB,1	2/13/2024 3:49:55 PM	CCB
35	N063053-008B,SAMP,50	2/13/2024 4:05:13 PM	SAMP,0.2>10mL,
36	N063053-008BDUP,DUP,50	2/13/2024 4:20:31 PM	DUP,0.2>10mL,
37	N063053-008BMS,MS,50	2/13/2024 4:35:49 PM	MS,0.2>10mL,
38	N063053-002B,SAMP,100	2/13/2024 4:51:07 PM	SAMP,0.1>10mL,
39	N063053-001B,SAMP,50	2/13/2024 5:06:24 PM	SAMP,0.2>10mL,
40	N063053-003B,SAMP,50	2/13/2024 5:21:42 PM	SAMP,0.2>10mL,
41	N063053-004B,SAMP,50	2/13/2024 5:37:00 PM	SAMP,0.2>10mL,

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 55
Created: 2/13/2024 8:48:46 AM by IC-05
Last Update: 2/13/2024 7:21:55 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	N063053-005B,SAMP,50	Unknown	30	1000.0	Anions Default	EPA 300_0_240124	Finished
43	N063053-006B,SAMP,50	Unknown	31	1000.0	Anions Default	EPA 300_0_240124	Finished
44	N063053-007B,SAMP,50	Unknown	32	1000.0	Anions Default	EPA 300_0_240124	Finished
45	CCV-4,CCV,1	Unknown	33	1000.0	Anions Default	EPA 300_0_240124	Finished
46	CCB-4,CCB,1	Unknown	34	1000.0	Anions Default	EPA 300_0_240124	Finished
47	N063053-009B,SAMP,50	Unknown	35	1000.0	Anions Default	EPA 300_0_240124	Finished
48	N063053-010B,SAMP,50	Unknown	36	1000.0	Anions Default	EPA 300_0_240124	Finished
49	N063075-001B,SAMP,5	Unknown	37	1000.0	Anions Default	EPA 300_0_240124	Finished
50	N063075-001BDUP,DUP,5	Unknown	38	1000.0	Anions Default	EPA 300_0_240124	Finished
51	N063075-001BMS,MS,5	Unknown	39	1000.0	Anions Default	EPA 300_0_240124	Finished
52	N063075-001BMSD,MSD,5	Unknown	40	1000.0	Anions Default	EPA 300_0_240124	Finished
53	N063075-003B,SAMP,5	Unknown	41	1000.0	Anions Default	EPA 300_0_240124	Finished
54	CCV-5,CCV,1	Unknown	42	1000.0	Anions Default	EPA 300_0_240124	Finished
55	CCB-5,CCB,1	Unknown	43	1000.0	Anions Default	EPA 300_0_240124	Finished

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 55
Created: 2/13/2024 8:48:46 AM by IC-05
Last Update: 2/13/2024 7:21:55 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	N063053-005B,SAMP,50	2/13/2024 5:52:18 PM	SAMP,0.2>10mL,
43	N063053-006B,SAMP,50	2/13/2024 6:07:36 PM	SAMP,0.2>10mL,
44	N063053-007B,SAMP,50	2/13/2024 6:22:54 PM	SAMP,0.2>10mL,
45	CCV-4,CCV,1	2/13/2024 6:38:12 PM	CCV, IWST-240208A
46	CCB-4,CCB,1	2/13/2024 6:53:31 PM	CCB
47	N063053-009B,SAMP,50	2/13/2024 7:08:49 PM	SAMP,0.2>10mL,
48	N063053-010B,SAMP,50	2/13/2024 7:24:07 PM	SAMP,0.2>10mL,
49	N063075-001B,SAMP,5	2/13/2024 7:39:25 PM	SAMP,2>10mL,
50	N063075-001BDUP,DUP,5	2/13/2024 7:54:42 PM	DUP,2>10mL,
51	N063075-001BMS,MS,5	2/13/2024 8:10:00 PM	MS,2>10mL,
52	N063075-001BMSD,MSD,5	2/13/2024 8:25:18 PM	MSD,2>10mL,
53	N063075-003B,SAMP,5	2/13/2024 8:40:36 PM	SAMP,2>10mL,
54	CCV-5,CCV,1	2/13/2024 8:55:54 PM	CCV, IWST-240208A
55	CCB-5,CCB,1	2/13/2024 9:11:12 PM	CCB

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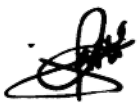


INITIAL CALIBRATION DATA SUMMARY

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 1/24/2024

Initial Calibration:

Nitrate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0159	0.0804	0.1690	0.4238	0.8850	1.000
Measured, in mg/L	0.000000	0.067900	0.249500	0.499300	1.217000	2.516400	
Relative Error (%RE)		35.8%		-0.1%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712E

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 1/24/2024

Initial Calibration:

Sulfate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.5	2	4	10	20	R^2
Area,mAU*min	0.0000	0.0468	0.1991	0.4062	1.0440	2.1777	1.000
Measured, in mg/L	0.000000	0.645000	2.037100	3.930800	9.761300	20.125900	
Relative Error (%RE)		29.0%		-1.7%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712G

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **ICV**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5688916**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.088	0.50	4.000	0	102	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **CCV**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**	SeqNo: **5688918**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.983	0.50	4.000	0	99.6	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **CCV**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**	SeqNo: **5688922**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.930	0.50	4.000	0	98.2	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **CCV**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**	SeqNo: **5688927**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.946	0.50	4.000	0	98.6	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **CCV**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**	SeqNo: **5688939**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.929	0.50	4.000	0	98.2	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **CCV-5** SampType: **CCV** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **181486**
Client ID: **CCV** Batch ID: **R181486** TestNo: **EPA 300.0** Analysis Date: **2/13/2024** SeqNo: **5688943**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.910	0.50	4.000	0	97.7	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **ICV**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5688887**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.226	0.050	1.250	0	98.1	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **CCV**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**	SeqNo: **5688889**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.235	0.050	1.250	0	98.8	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **CCV**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**	SeqNo: **5688901**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.213	0.050	1.250	0	97.0	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **CCV**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**	SeqNo: **5688910**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.212	0.050	1.250	0	97.0	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **CCV**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**	SeqNo: **5688912**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.224	0.050	1.250	0	97.9	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **CCV-5** SampType: **CCV** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **181486**
Client ID: **CCV** Batch ID: **R181486** TestNo: **EPA 300.0** Analysis Date: **2/13/2024** SeqNo: **5688914**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.232	0.050	1.250	0	98.6	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **ICB**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5688917**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **CCB**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**	SeqNo: **5688919**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **CCB**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**	SeqNo: **5688923**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **CCB**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**	SeqNo: **5688928**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **CCB**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**	SeqNo: **5688940**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **CCB-5** SampType: **CCB** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **181486**
Client ID: **CCB** Batch ID: **R181486** TestNo: **EPA 300.0** Analysis Date: **2/13/2024** SeqNo: **5688944**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **ICB**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5688888**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **CCB**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**	SeqNo: **5688890**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **CCB**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**	SeqNo: **5688902**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **CCB**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**	SeqNo: **5688911**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181486**
Client ID: **CCB**	Batch ID: **R181486**	TestNo: **EPA 300.0**		Analysis Date: **2/13/2024**	SeqNo: **5688913**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **CCB-5** SampType: **CCB** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **181486**
Client ID: **CCB** Batch ID: **R181486** TestNo: **EPA 300.0** Analysis Date: **2/13/2024** SeqNo: **5688915**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/13/2024

Sample Name		Retention Time	Evaluation
ICV	Nitrate	6.727	
CCV-1	Nitrate	6.634	
CCV-2	Nitrate	6.590	
CCV-3	Nitrate	6.613	
CCV-4	Nitrate	6.607	
CCV-5	Nitrate	6.657	
	Average	6.620	
	Applied RT Window	6.420 - 6.820	
MB-R181486_NO3	Nitrate	N.A.	N.A.
LCS-R181486_NO3	Nitrate	6.650	PASS
N063053-008B	Nitrate	6.633	PASS
N063053-011B	Nitrate	N.A.	N.A.
N063053-005B	Nitrate	6.614	PASS
N063053-006B	Nitrate	6.640	PASS
N063053-007B	Nitrate	6.650	PASS
N063053-001B	Nitrate	6.633	PASS
N063053-002B	Nitrate	6.627	PASS
N063053-003B	Nitrate	6.577	PASS
N063053-004B	Nitrate	6.594	PASS
N063053-009B	Nitrate	6.620	PASS
N063053-010B	Nitrate	6.577	PASS
N063053-011BMS	Nitrate	6.623	PASS
N063053-011BMSD	Nitrate	6.647	PASS
N063053-008BDUP	Nitrate	6.610	PASS
N063053-008BMS	Nitrate	6.600	PASS

Reviewed by:

dMRocha 3/4/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/13/2024

Sample Name		Retention Time	Evaluation
ICV	Sulfate	10.334	
CCV-1	Sulfate	10.060	
CCV-2	Sulfate	10.040	
CCV-3	Sulfate	10.073	
CCV-4	Sulfate	10.057	
CCV-5	Sulfate	10.110	
	Average	10.068	
	Applied RT Window	9.868 - 10.268	
MB-R181486_SO4	Sulfate	N.A.	N.A.
LCS-R181486_SO4	Sulfate	10.057	PASS
N063053-011B	Sulfate	10.057	PASS
N063053-011BMS	Sulfate	10.100	PASS
N063053-011BMSD	Sulfate	10.090	PASS
N063053-008B	Sulfate	10.067	PASS
N063053-008BDUP	Sulfate	10.084	PASS
N063053-008BMS	Sulfate	10.063	PASS
N063053-002B	Sulfate	10.077	PASS
N063053-001B	Sulfate	10.077	PASS
N063053-003B	Sulfate	10.077	PASS
N063053-004B	Sulfate	10.093	PASS
N063053-005B	Sulfate	10.104	PASS
N063053-006B	Sulfate	10.104	PASS
N063053-007B	Sulfate	10.060	PASS
N063053-009B	Sulfate	10.067	PASS
N063053-010B	Sulfate	10.083	PASS

Reviewed by:

dMocha 3/4/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): 10/5/2022, 12/14/2022, 3/22/2023,7/10/2023; 10/3/2023 & 11/14/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: mg/L

Instrument Name: **IC-08 & IC-09**

Datafile IC-08 221005A #24 IC-08 221214A #30 IC-08 230322A #35 IC-08 230710A #13 IC-09 231003A #14 IC-08 231114A #24 IC-09 231114A #19

Analyte	#1	#2	#3	#4	#5	#6	#7	Spike Conc., mg/L	SD	$t_{(n-1)}$ value	MDLs	MDL	PQL
Fluoride	0.100	0.103	0.108	0.118	0.110	0.098	0.126	0.10	0.0101	3.143	**0.0318**	**0.0318**	0.10
Chloride	0.480	0.418	0.472	0.653	0.624	0.587	0.622	0.50	0.0922	3.143	**0.2898**	**0.2898**	0.50
Nitrite	0.068	0.061	0.060	0.071	0.063	0.061	0.070	0.05	0.0047	3.143	**0.0149**	**0.0149**	0.05
Bromide	0.526	0.502	0.509	0.522	0.536	0.527	0.520	0.50	0.0116	3.143	**0.0364**	**0.0364**	0.50
Nitrate	0.073	0.058	0.059	0.073	0.074	0.068	0.073	0.05	0.0068	3.143	**0.0215**	**0.0240**	0.05
Phosphate	0.112	0.096	0.114	0.120	0.130	0.093	0.124	0.10	0.0138	3.143	**0.0433**	**0.0433**	0.10
Sulfate	0.501	0.609	0.638	0.401	0.704	0.620	0.697	0.50	0.1092	3.143	**0.3432**	**0.3432**	0.50

METHOD DETECTION LIMIT (Blanks)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Analyte	MDLb	# of Records
Fluoride	0	63
Chloride	0.1456	80
Nitrite	0.0147	64
Bromide	0	18
Nitrate	0.0240	132
Phosphate	0.0237	34
Sulfate	0.2579	107

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

EPA 6010B
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106783
ASSET #: N063053

Instrument ID: ICP-03
Analyst: DBJ
Date Analyzed: 2/14/2024

Method: DISSOLVED

[X] EPA 6010B / 200.7
[ ] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?		X			X	
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

Concentration of N063053-002C is greater than N063053-002D. For confirmation

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 02222024 Date: _____

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106859
ASSET #: N063053

Instrument ID: ICP-03
Analyst: DBJ
Date Analyzed: 2/16/2024

Method: DISSOLVED

- [X] EPA 6010B / 200.7
- [ ] EPA 6020 / 200.8
- [ ] EPA 7470A / 7471A/245.1
- [ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.	X			X		
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?	X			X		
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

%Rec of Fe in N063076-002B-MS1/MSD1 failed, low bias. However, LCS passed criteria.
Fe confirmation.

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 02222024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in ug/L , in the original sample as follows:

Iron , ug/L = A * DF * PF *CF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL
CF= Conversion Factor from mg/L to ug/L, 1000

For Sample **N063053-002C** , the concentration i ug/L is calculated as follows:

Iron , ug/L = 0.02703 * 1 * (25/25) * 1000

Iron , ug/L = 27.03

Reporting results in two significant figures,

Iron , ug/L = 27

Reviewed by:

dRocha 3/5/2024

% RSD SUMMARY

RSD SUMMARY: 240214A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	Fe	0	3.9	15	PASS
Standard1	ICAL	1	Fe	0.02	3.7	15	PASS
Standard2	ICAL	1	Fe	0.05	1.32	15	PASS
Standard3	ICAL	1	Fe	2	0.2	15	PASS
Standard4	ICAL	1	Fe	5	0.22	15	PASS
Standard5	ICAL	1	Fe	7.5	0.29	15	PASS
Standard6	ICAL	1	Fe	10	0.37	15	PASS
Standard7	ICAL	1	Fe	20	0.06	15	PASS
ICV	ICV	1	Fe	10.14	0.22	15	PASS
ICB	ICB	1	Fe	0	76.32	15	<PQL
LLICV1	CCV1	1	Fe	0.02	1.68	20	PASS
ICSA1	ICSA	1	Fe	169.02	0.01	15	PASS
ICSAB1	ICSAB	1	Fe	172.07	0.02	15	PASS
RINSE	RINSE	1	Fe	0.02	32.11	15	<PQL
CCV1	CCV	1	Fe	10.13	0.27	15	PASS
CCB1	CCB	1	Fe	0	92.39	15	<PQL
MB-106783	MBLK	1	Fe	0	332.07	15	<PQL
LCS-106783	LCS	1	Fe	0.11	1.35	15	PASS
N063053-001C	SAMP	1	Fe	0.01	12.73	15	PASS
CCV2	CCV	1	Fe	10.09	0.39	15	PASS
CCB2	CCB	1	Fe	0	62.18	15	<PQL
N063053-002C	SAMP	1	Fe	0.09	1.04	15	PASS
N063053-003C	SAMP	1	Fe	0.01	15.32	15	<PQL
N063053-004C	SAMP	1	Fe	0.02	4.22	15	PASS
N063053-005C	SAMP	1	Fe	0.01	3.22	15	PASS
N063053-006C	SAMP	1	Fe	0.02	8.27	15	PASS
N063053-007C	SAMP	1	Fe	0.06	1.4	15	PASS
N063053-008C	SAMP	1	Fe	0.02	3.11	15	PASS
N063053-009C	SAMP	1	Fe	0.33	0.33	15	PASS
N063053-010C	SAMP	1	Fe	0.21	0.41	15	PASS
N063053-011C	SAMP	1	Fe	0.03	2.75	15	PASS
CCV3	CCV	1	Fe	10.09	0.22	15	PASS
CCB3	CCB	1	Fe	0	38.25	15	<PQL
ICSA2	ICSA	1	Fe	169.41	0.05	15	PASS
ICSAB2	ICSAB	1	Fe	172.58	0.02	15	PASS
RINSE	RINSE	1	Fe	0.02	27.96	15	<PQL
N063053-011C	SAMP	5	Fe	0.01	13.02	15	PASS
N063053-011C-PS	PS	1	Fe	0.13	0.69	15	PASS
N063053-011CMS	MS	1	Fe	0.13	0.41	15	PASS
N063053-011CMSD	MSD	1	Fe	0.13	1.07	15	PASS
N063053-018B	SAMP	1	Fe	0.11	1.21	15	PASS
CCV4	CCV	1	Fe	10.17	0.39	15	PASS

RSD SUMMARY: 240214A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CCB4	CCB	1	Fe	0	71.34	15	<PQL
CCV5	CCV	1	Fe	10.17	0.27	15	PASS
CCB5	CCB	1	Fe	0	36.55	15	<PQL
ICSA3	ICSA	1	Fe	170.2	0.08	15	PASS
ICSAB3	ICSAB	1	Fe	173.4	0.02	15	PASS

RSD SUMMARY: 240216B

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	Fe	0	0.5	15	PASS
Standard1	ICAL	1	Fe	0.02	2.96	15	PASS
Standard2	ICAL	1	Fe	0.05	1.49	15	PASS
Standard3	ICAL	1	Fe	2	0.04	15	PASS
Standard4	ICAL	1	Fe	5	0.08	15	PASS
Standard5	ICAL	1	Fe	7.5	0.03	15	PASS
Standard6	ICAL	1	Fe	10	0.07	15	PASS
Standard7	ICAL	1	Fe	20	0.06	15	PASS
ICV	ICV	1	Fe	10.15	0.13	15	PASS
ICB	ICB	1	Fe	0	16.51	15	<PQL
LLICV1	CCV1	1	Fe	0.02	1.18	20	PASS
ICSA1	ICSA	1	Fe	174.26	0.04	15	PASS
ICSAB1	ICSAB	1	Fe	176.97	0.03	15	PASS
RINSE	RINSE	1	Fe	0	709.47	15	<PQL
CCV1	CCV	1	Fe	10.11	0.04	15	PASS
CCB1	CCB	1	Fe	0	19.82	15	<PQL
MB-106859	MBLK	1	Fe	0	9.87	15	PASS
LCS1-106859	LCS	1	Fe	0.28	0.47	15	PASS
N063053-002C	SAMP	1	Fe	0.03	3.1	15	PASS
N063076-001B	SAMP	1	Fe	0.94	0.17	15	PASS
N063076-002B	SAMP	1	Fe	0.93	0.39	15	PASS
N063076-002B	SAMP	5	Fe	0.2	0.43	15	PASS
N063076-002B-PS	PS	1	Fe	1.02	0.34	15	PASS
N063076-002B-MS1	MS	1	Fe	0.99	0.39	15	PASS
N063076-002B-MSD1	MSD	1	Fe	1	0.48	15	PASS
N063076-003B	SAMP	1	Fe	0.93	0.29	15	PASS
CCV2	CCV	1	Fe	10.12	0.08	15	PASS
CCB2	CCB	1	Fe	-0.01	2.85	15	PASS
N063103-010B	SAMP	1	Fe	0.02	4.25	15	PASS
N063135-001B	SAMP	1	Fe	3.49	0.07	15	PASS
N063135-003B	SAMP	1	Fe	3.03	0.11	15	PASS
N063135-005B	SAMP	1	Fe	1.42	0.31	15	PASS
LCS1-106859	LCS	1	Fe	0.09	0.21	15	PASS
CCV3	CCV	1	Fe	10.11	0.05	15	PASS
CCB3	CCB	1	Fe	-0.01	2.48	15	PASS
ICSA2	ICSA	1	Fe	173.96	0.05	15	PASS
ICSAB2	ICSAB	1	Fe	176.96	0.02	15	PASS
RINSE	RINSE	1	Fe	0.01	90.28	15	<PQL
RINSE	RINSE	1	Fe	0	21.19	15	<PQL
CCV4	CCV	1	Fe	10.1	0.11	15	PASS
CCB4	CCB	1	Fe	-0.01	6.23	15	PASS
RINSE	RINSE	1	Fe	0	30.98	15	<PQL

RSD SUMMARY: 240216B

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CCV5	CCV	1	Fe	10.05	0.2	15	PASS
CCB5	CCB	1	Fe	-0.01	5.1	15	PASS
ICSA3	ICSA	1	Fe	173.9	0.02	15	PASS
ICSAB3	ICSAB	1	Fe	176.31	0.05	15	PASS
ICSA3	ICSA	1	Fe	183.11	0.02	15	PASS
ICSAB3	ICSAB	1	Fe	164.97	0.02	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240214A

Instrument ID: ICP-03

STANDARD CODE	
Standard1	MWST-240105M, 0.5<50mL
Standard2	MWST-240105N
Standard3	MWST-240105O, 5<50mL
Standard4	MWST-240105O,12.5<50mL
Standard5	MWST-240105O, 15<40mL
Standard6	MWST-240105O, 25<50mL
Standard7	MWST-240105O
ICV	MWST-240105AE
CCV	MWST-240105O, 25<50mL
ICSA/ICSAB	MWST-240105P / MWST-240105Q
Int. Std. (Y)	MWST-240105B
PS Spike	MWST-240105X / Y/ Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	02/14/2024	09:34:54 AM
2	Standard1	ICAL	1	02/14/2024	09:38:36 AM
3	Standard2	ICAL	1	02/14/2024	09:42:19 AM
4	Standard3	ICAL	1	02/14/2024	09:46:02 AM
5	Standard4	ICAL	1	02/14/2024	09:49:16 AM
6	Standard5	ICAL	1	02/14/2024	09:52:30 AM
7	Standard6	ICAL	1	02/14/2024	09:55:44 AM
8	Standard7	ICAL	1	02/14/2024	09:58:57 AM
310	ICV	ICV	1	02/14/2024	10:07:18 AM
1	ICB	ICB	1	02/14/2024	10:10:38 AM
2	LLICV1	CCV1	1	02/14/2024	10:14:21 AM
9	ICSA1	ICSA	1	02/14/2024	10:18:04 AM
10	ICSAB1	ICSAB	1	02/14/2024	10:22:45 AM
299	RINSE	RINSE	1	02/14/2024	10:27:51 AM
71	MB-106753	MBLK	1	02/14/2024	10:58:41 AM
72	LCS-106753	LCS	1	02/14/2024	11:04:38 AM
73	N063010-001B	SAMP	1	02/14/2024	11:08:23 AM
74	N063010-002B	SAMP	1	02/14/2024	11:13:22 AM
75	N063010-003B	SAMP	1	02/14/2024	11:18:20 AM
76	N063012-001C	SAMP	1	02/14/2024	11:23:19 AM
77	N063012-002C	SAMP	1	02/14/2024	11:28:37 AM
78	N063012-002C	SAMP	5	02/14/2024	11:33:57 AM
79	N063012-002C-PS	PS	1	02/14/2024	11:38:13 AM
7	CCV1	CCV	1	02/14/2024	11:43:33 AM
1	CCB1	CCB	1	02/14/2024	11:46:47 AM
80	N063012-002C-MS	MS	1	02/14/2024	11:50:30 AM
81	N063012-002C-MSD	MSD	1	02/14/2024	11:55:51 AM
82	N063012-003C	SAMP	1	02/14/2024	12:01:13 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
83	N063012-004C	SAMP	1	02/14/2024	12:06:34 PM
84	N063012-006C	SAMP	1	02/14/2024	12:12:03 PM
85	N063012-007C	SAMP	1	02/14/2024	12:15:20 PM
86	N063012-009C	SAMP	1	02/14/2024	12:18:40 PM
87	MB-106783	MBLK	1	02/14/2024	12:24:01 PM
88	LCS-106783	LCS	1	02/14/2024	12:28:15 PM
89	N063053-001C	SAMP	1	02/14/2024	12:32:00 PM
7	CCV2	CCV	1	02/14/2024	12:37:21 PM
1	CCB2	CCB	1	02/14/2024	12:40:35 PM
90	N063053-002C	SAMP	1	02/14/2024	12:44:17 PM
91	N063053-003C	SAMP	1	02/14/2024	12:49:38 PM
92	N063053-004C	SAMP	1	02/14/2024	12:54:59 PM
93	N063053-005C	SAMP	1	02/14/2024	01:00:20 PM
94	N063053-006C	SAMP	1	02/14/2024	01:05:41 PM
95	N063053-007C	SAMP	1	02/14/2024	01:11:02 PM
96	N063053-008C	SAMP	1	02/14/2024	01:16:23 PM
97	N063053-009C	SAMP	1	02/14/2024	01:21:52 PM
98	N063053-010C	SAMP	1	02/14/2024	01:26:50 PM
99	N063053-011C	SAMP	1	02/14/2024	01:32:20 PM
7	CCV3	CCV	1	02/14/2024	01:37:48 PM
1	CCB3	CCB	1	02/14/2024	01:41:02 PM
9	ICSA2	ICSA	1	02/14/2024	01:44:45 PM
10	ICSAB2	ICSAB	1	02/14/2024	01:49:26 PM
299	RINSE	RINSE	1	02/14/2024	01:54:08 PM
100	N063053-011C	SAMP	5	02/14/2024	01:57:56 PM
101	N063053-011C-PS	PS	1	02/14/2024	02:02:14 PM
102	N063053-011CMS	MS	1	02/14/2024	02:07:43 PM
103	N063053-011CMSD	MSD	1	02/14/2024	02:13:12 PM
104	N063053-018B	SAMP	1	02/14/2024	02:18:42 PM
105	MB-106786	MBLK	1	02/14/2024	02:24:03 PM
106	LCS-106786	LCS	1	02/14/2024	02:27:47 PM
107	N063053-001D	SAMP	1	02/14/2024	02:31:34 PM
108	N063053-001D	SAMP	5	02/14/2024	02:36:55 PM
7	CCV4	CCV	1	02/14/2024	02:41:12 PM
1	CCB4	CCB	1	02/14/2024	02:44:26 PM
109	N063053-001D-PS	PS	1	02/14/2024	02:48:09 PM
110	N063053-001D-MS	MS	1	02/14/2024	02:53:30 PM
111	N063053-001D-MSD	MSD	1	02/14/2024	02:58:59 PM
112	N063053-002D	SAMP	1	02/14/2024	03:04:21 PM
113	N063053-003D	SAMP	1	02/14/2024	03:09:42 PM
114	N063053-004D	SAMP	1	02/14/2024	03:15:03 PM
115	N063053-008D	SAMP	1	02/14/2024	03:20:25 PM
116	N063053-018C	SAMP	1	02/14/2024	03:25:55 PM
7	CCV5	CCV	1	02/14/2024	03:31:16 PM
1	CCB5	CCB	1	02/14/2024	03:34:29 PM
9	ICSA3	ICSA	1	02/14/2024	03:38:12 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
10	ICSAB3	ICSAB	1	02/14/2024	03:42:52 PM

INJECTION LOG: 240216B

Instrument ID: ICP-03

STANDARD CODE	
Standard1	MWST-240105M, 0.5<50mL
Standard2	MWST-240105N
Standard3	MWST-240105O, 5<50mL
Standard4	MWST-240105O,12.5<50mL
Standard5	MWST-240105O, 15<40mL
Standard6	MWST-240105O, 25<50mL
Standard7	MWST-240105O
ICV	MWST-240105AE
CCV	MWST-240105O, 25<50mL
ICSA/ICSAB	MWST-240105P / MWST-240105Q
Int. Std. (Y)	MWST-240105B
PS Spike	MWST-240105X / Y/ Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	02/16/2024	01:42:47 PM
2	Standard1	ICAL	1	02/16/2024	01:47:00 PM
3	Standard2	ICAL	1	02/16/2024	01:51:14 PM
4	Standard3	ICAL	1	02/16/2024	01:55:28 PM
5	Standard4	ICAL	1	02/16/2024	01:59:15 PM
6	Standard5	ICAL	1	02/16/2024	02:04:01 PM
7	Standard6	ICAL	1	02/16/2024	02:08:44 PM
8	Standard7	ICAL	1	02/16/2024	02:12:59 PM
310	ICV	ICV	1	02/16/2024	02:21:05 PM
1	ICB	ICB	1	02/16/2024	02:25:25 PM
2	LLICV1	CCV1	1	02/16/2024	02:29:39 PM
9	ICSA1	ICSA	1	02/16/2024	02:33:52 PM
10	ICSAB1	ICSAB	1	02/16/2024	02:38:55 PM
299	RINSE	RINSE	1	02/16/2024	02:47:49 PM
71	MB-106828	MBLK	1	02/16/2024	02:52:07 PM
72	LCS-106828	LCS	1	02/16/2024	03:07:58 PM
73	N063078-001A	SAMP	5	02/16/2024	03:12:44 PM
74	N063078-002A	SAMP	5	02/16/2024	03:18:05 PM
75	N063078-003A	SAMP	5	02/16/2024	03:21:50 PM
76	N063078-004A	SAMP	5	02/16/2024	03:27:11 PM
77	N063078-005A	SAMP	5	02/16/2024	03:31:25 PM
78	N063078-006A	SAMP	5	02/16/2024	03:35:40 PM
79	N063078-007A	SAMP	5	02/16/2024	03:41:01 PM
7	CCV1	CCV	1	02/16/2024	03:46:17 PM
1	CCB1	CCB	1	02/16/2024	03:50:33 PM
80	MB-106859	MBLK	1	02/16/2024	03:54:47 PM
81	LCS1-106859	LCS	1	02/16/2024	03:59:01 PM
82	N063053-002C	SAMP	1	02/16/2024	04:03:47 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
83	N063076-001B	SAMP	1	02/16/2024	04:09:10 PM
84	N063076-002B	SAMP	1	02/16/2024	04:14:31 PM
85	N063076-002B	SAMP	5	02/16/2024	04:19:52 PM
86	N063076-002B-PS	PS	1	02/16/2024	04:24:08 PM
87	N063076-002B-MS1	MS	1	02/16/2024	04:29:30 PM
88	N063076-002B-MSD1	MSD	1	02/16/2024	04:34:51 PM
89	N063076-003B	SAMP	1	02/16/2024	04:40:13 PM
7	CCV2	CCV	1	02/16/2024	04:45:35 PM
1	CCB2	CCB	1	02/16/2024	04:49:50 PM
90	N063103-010B	SAMP	1	02/16/2024	04:54:04 PM
91	N063135-001B	SAMP	1	02/16/2024	04:58:22 PM
92	N063135-003B	SAMP	1	02/16/2024	05:03:43 PM
93	N063135-005B	SAMP	1	02/16/2024	05:09:06 PM
81	LCS1-106859	LCS	1	02/16/2024	05:20:17 PM
94	MB-106860	MBLK	1	02/16/2024	05:23:59 PM
95	LCS-106860	LCS	1	02/16/2024	05:28:15 PM
96	N063053-002D	SAMP	1	02/16/2024	05:33:01 PM
97	N063103-010C	SAMP	1	02/16/2024	05:38:24 PM
98	N063103-010C	SAMP	5	02/16/2024	05:42:43 PM
7	CCV3	CCV	1	02/16/2024	05:46:57 PM
1	CCB3	CCB	1	02/16/2024	05:51:12 PM
9	ICSA2	ICSA	1	02/16/2024	05:55:25 PM
10	ICSAB2	ICSAB	1	02/16/2024	06:00:28 PM
299	RINSE	RINSE	1	02/16/2024	06:05:32 PM
99	N063103-010C-PS	PS	1	02/16/2024	06:09:51 PM
100	N063103-010C-MS	MS	1	02/16/2024	06:15:10 PM
101	N063103-010C-MSD	MSD	1	02/16/2024	06:20:29 PM
102	N063078-001A	SAMP	1	02/16/2024	06:25:48 PM
103	N063078-002A	SAMP	1	02/16/2024	06:31:18 PM
104	N063078-003A	SAMP	1	02/16/2024	06:36:07 PM
105	N063078-003A-PS	PS	1	02/16/2024	06:41:52 PM
106	N063078-003A-MS	MS	1	02/16/2024	06:47:38 PM
299	RINSE	RINSE	1	02/16/2024	06:53:24 PM
7	CCV4	CCV	1	02/16/2024	06:57:43 PM
1	CCB4	CCB	1	02/16/2024	07:01:57 PM
107	N063078-003A-MSD	MSD	1	02/16/2024	07:06:11 PM
108	N063078-005A	SAMP	1	02/16/2024	07:11:56 PM
109	N063078-006A	SAMP	25	02/16/2024	07:16:12 PM
299	RINSE	RINSE	1	02/16/2024	07:21:27 PM
7	CCV5	CCV	1	02/16/2024	07:25:46 PM
1	CCB5	CCB	1	02/16/2024	07:30:01 PM
9	ICSA3	ICSA	1	02/16/2024	07:34:14 PM
10	ICSAB3	ICSAB	1	02/16/2024	07:39:16 PM
9	ICSA3	ICSA	1	02/16/2024	07:48:45 PM
10	ICSAB3	ICSAB	1	02/16/2024	07:56:23 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/13/2024 10:38:38 AM**
Prep End Date: **2/13/2024 3:00:00 PM**
Prep Batch **106783** Prep Code:**3010_W_DISS**

Reviewed/ Date: dMocha 3/5/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-50**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-106783	Aqueous		25	☐	25	1.000		
MB-106783	Aqueous		25	☐	25	1.000		
N063053-001C	Groundwater	<2	25	☐	25	1.000		
N063053-002C	Groundwater	<2	25	☐	25	1.000		
N063053-003C	Groundwater	<2	25	☐	25	1.000		
N063053-004C	Groundwater	<2	25	☐	25	1.000		
N063053-005C	Groundwater	<2	25	☐	25	1.000		
N063053-006C	Groundwater	<2	25	☐	25	1.000		
N063053-007C	Groundwater	<2	25	☐	25	1.000		
N063053-008C	Groundwater	<2	25	☐	25	1.000		
N063053-009C	Groundwater	<2	25	☐	25	1.000		
N063053-010C	Groundwater	<2	25	☐	25	1.000		
N063053-011C	Groundwater	<2	25	☐	25	1.000		
N063053-011CMS	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15257	HYDROCHLORIC ACID
16149	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/13/2024 10:38:38 AM**
Prep End Date: **2/13/2024 3:00:00 PM**
Prep Batch **106783** Prep Code:**3010_W_DISS**

Reviewed/ Date: dlRocha 3/5/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-50**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063053-011CMSD	Groundwater	<2	25	☐	25	1.000		
N063053-018B	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15257	HYDROCHLORIC ACID
16149	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/16/2024 11:58:48 AM**
Prep End Date: **2/16/2024 3:50:00 PM**
Prep Batch **106859** Prep Code:**3010_W_DISS**

Reviewed/ Date: dMocha 3/5/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-52**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS1-106859	Aqueous		25	☐	25	1.000		
LCS2-106859	Aqueous	<2	25	☐	25	1.000		
MB-106859	Aqueous		25	☐	25	1.000		
N062388-003A	Water		25	☐	25	1.000		
N062388-004A	Water		25	☐	25	1.000		
N063053-002C REDIGEST	Water	<2	25	☐	25	1.000		
N063076-001B	Water	<2	25	☐	25	1.000		
N063076-002B	Water	<2	25	☐	25	1.000		
N063076-002B-MS1	Water	<2	25	☐	25	1.000		
N063076-002B-MSD1	Water	<2	25	☐	25	1.000		
N063076-003B	Water	<2	25	☐	25	1.000		
N063103-010B	Surface Water	<2	25	☐	25	1.000		
N063103-010B-MS2	Surface Water	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15257	HYDROCHLORIC ACID
16149	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MSST-231025E	Sodium	LCS,MS,MSD	0.05
MSST-231025F	Potassium	LCS,MS,MSD	0.05
MSST-231130A	Strontium	LCS,MS,MSD	0.125
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/16/2024 11:58:48 AM**
Prep End Date: **2/16/2024 3:50:00 PM**
Prep Batch **106859** Prep Code:**3010_W_DISS**

Reviewed/ Date: dMocha 3/5/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-52**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063103-010B-MSD2	Surface Water	<2	25	☐	25	1.000		
N063135-001B	Groundwater	<2	25	☐	25	1.000		
N063135-003B	Groundwater	<2	25	☐	25	1.000		
N063135-005B	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15257	HYDROCHLORIC ACID
16149	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MSST-231025E	Sodium	LCS,MS,MSD	0.05
MSST-231025F	Potassium	LCS,MS,MSD	0.05
MSST-231130A	Strontium	LCS,MS,MSD	0.125
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240214A

Instrument ID: ICP-03

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Iron								
CalBlk	02/14/2024	09:34:54 AM	Fe	273.952	106	0.00	mg/L	
Standard1	02/14/2024	09:38:36 AM	Fe	273.952	228	0.02	mg/L	
Standard2	02/14/2024	09:42:19 AM	Fe	273.952	696	0.05	mg/L	
Standard3	02/14/2024	09:46:02 AM	Fe	273.952	24349	2.0	mg/L	
Standard4	02/14/2024	09:49:16 AM	Fe	273.952	60371	5.0	mg/L	
Standard5	02/14/2024	09:52:30 AM	Fe	273.952	88651	7.5	mg/L	
Standard6	02/14/2024	09:55:44 AM	Fe	273.952	115628	10.0	mg/L	
Standard7	02/14/2024	09:58:57 AM	Fe	273.952	226568	20.0	mg/L	0.9998

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION SUMMARY: 240216B

Instrument ID: ICP-03

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Iron								
CalBlk	02/16/2024	01:42:47 PM	Fe	273.952	289	0.00	mg/L	
Standard1	02/16/2024	01:47:00 PM	Fe	273.952	195	0.02	mg/L	
Standard2	02/16/2024	01:51:14 PM	Fe	273.952	562	0.05	mg/L	
Standard3	02/16/2024	01:55:28 PM	Fe	273.952	19694	2.0	mg/L	
Standard4	02/16/2024	01:59:15 PM	Fe	273.952	48803	5.0	mg/L	
Standard5	02/16/2024	02:04:01 PM	Fe	273.952	73118	7.5	mg/L	
Standard6	02/16/2024	02:08:44 PM	Fe	273.952	97032	10.0	mg/L	
Standard7	02/16/2024	02:12:59 PM	Fe	273.952	190646	20.0	mg/L	1.0000

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICV** SampType: **ICV** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181521**
Client ID: **ICV** Batch ID: **R181521** TestNo: **EPA 6010B** Analysis Date: **2/14/2024** SeqNo: **5690339**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10144.742	20	10000	0	101	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181521**
Client ID: **ZZZZZZ** Batch ID: **R181521** TestNo: **EPA 6010B** Analysis Date: **2/14/2024** SeqNo: **5690341**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	20.723	20	20.00	0	104	80	120				

Sample ID **CCV1** SampType: **CCV** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181521**
Client ID: **CCV** Batch ID: **R181521** TestNo: **EPA 6010B** Analysis Date: **2/14/2024** SeqNo: **5690353**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10125.874	20	10000	0	101	90	110				

Sample ID **CCV2** SampType: **CCV** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181521**
Client ID: **CCV** Batch ID: **R181521** TestNo: **EPA 6010B** Analysis Date: **2/14/2024** SeqNo: **5690365**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10086.935	20	10000	0	101	90	110				

Sample ID **CCV3** SampType: **CCV** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181521**
Client ID: **CCV** Batch ID: **R181521** TestNo: **EPA 6010B** Analysis Date: **2/14/2024** SeqNo: **5690377**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10093.581	20	10000	0	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **CCV**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690390**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10166.827	20	10000	0	102	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **CCV**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690400**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10172.162	20	10000	0	102	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **ICV**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695373**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10154.533	20	10000	0	102	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **ZZZZZZ**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695375**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	17.468	20	20.00	0	87.3	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **CCV**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695387**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10109.323	20	10000	0	101	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **CCV**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695399**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10122.519	20	10000	0	101	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **CCV**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695411**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10114.003	20	10000	0	101	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **ICB**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690340**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.692	20									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **CCB**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690354**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.976	20									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **CCB**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690366**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.826	20									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **CCB**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690378**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.888	20									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **CCB**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690391**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.726	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **CCB**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690401**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.114	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **ICB**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695374**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-3.201959	20									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **CCB**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695388**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-3.222568	20									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **CCB**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695400**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-5.932008	20									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **CCB**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695412**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-9.676671	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181521**
Client ID: **ICSA** Batch ID: **R181521** TestNo: **EPA 6010B** Analysis Date: **2/14/2024** SeqNo: **5690342**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	555090.151	50	500000	0	111	80	120				
Calcium	449216.196	500	500000	0	89.8	80	120				
Iron	169021.033	20	200000	0	84.5	80	120				
Magnesium	449011.207	100	500000	0	89.8	80	120				

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181521**
Client ID: **ICSAB** Batch ID: **R181521** TestNo: **EPA 6010B** Analysis Date: **2/14/2024** SeqNo: **5690343**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	558020.144	50	500000	0	112	80	120				
Calcium	453655.699	500	500000	0	90.7	80	120				
Iron	172065.284	20	200000	0	86.0	80	120				
Magnesium	453165.857	100	500000	0	90.6	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181521**
Client ID: **ICSA** Batch ID: **R181521** TestNo: **EPA 6010B** Analysis Date: **2/14/2024** SeqNo: **5690379**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	551756.177	50	500000	0	110	80	120				
Calcium	450602.596	500	500000	0	90.1	80	120				
Iron	169409.323	20	200000	0	84.7	80	120				
Magnesium	449624.890	100	500000	0	89.9	80	120				

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181521**
Client ID: **ICSAB** Batch ID: **R181521** TestNo: **EPA 6010B** Analysis Date: **2/14/2024** SeqNo: **5690380**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	557905.414	50	500000	0	112	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **ICSAB**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690380**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	454768.447	500	500000	0	91.0	80	120				
Iron	172575.850	20	200000	0	86.3	80	120				
Magnesium	454069.860	100	500000	0	90.8	80	120				

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **ICSA**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690402**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	547504.422	50	500000	0	110	80	120				
Calcium	451497.569	500	500000	0	90.3	80	120				
Iron	170201.392	20	200000	0	85.1	80	120				
Magnesium	450447.528	100	500000	0	90.1	80	120				

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181521**
Client ID: **ICSAB**	Batch ID: **R181521**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690403**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	550651.610	50	500000	0	110	80	120				
Calcium	455854.139	500	500000	0	91.2	80	120				
Iron	173396.942	20	200000	0	86.7	80	120				
Magnesium	454995.749	100	500000	0	91.0	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSA1**	SampType: **ICSA**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **ICSA**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695376**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	575871.413	50	500000	0	115	80	120				
Calcium	460764.994	500	500000	0	92.2	80	120				
Iron	174257.620	20	200000	0	87.1	80	120				
Magnesium	453863.156	100	500000	0	90.8	80	120				

Sample ID **ICSAB1**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **ICSAB**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695377**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	576195.263	50	500000	0	115	80	120				
Calcium	464182.194	500	500000	0	92.8	80	120				
Iron	176965.574	20	200000	0	88.5	80	120				
Magnesium	456514.772	100	500000	0	91.3	80	120				

Sample ID **ICSA2**	SampType: **ICSA**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **ICSA**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695413**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	579723.631	50	500000	0	116	80	120				
Calcium	460793.167	500	500000	0	92.2	80	120				
Iron	173957.471	20	200000	0	87.0	80	120				
Magnesium	453133.486	100	500000	0	90.6	80	120				

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **ICSAB**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695414**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	592644.636	50	500000	0	119	80	120				
Calcium	465201.655	500	500000	0	93.0	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **ICSAB**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695414**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	176957.836	20	200000	0	88.5	80	120				
Magnesium	456512.413	100	500000	0	91.3	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240214A

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	0.98	98.09	65-125	PASS
Standard2	ICAL	1	1	99.87	65-125	PASS
Standard3	ICAL	1	1	100.48	65-125	PASS
Standard4	ICAL	1	0.99	98.88	65-125	PASS
Standard5	ICAL	1	0.99	98.63	65-125	PASS
Standard6	ICAL	1	0.97	97.2	65-125	PASS
Standard7	ICAL	1	0.96	95.73	65-125	PASS
ICV	ICV	1	0.97	96.78	65-125	PASS
ICB	ICB	1	0.99	98.93	65-125	PASS
LLICV1	CCV1	1	0.98	98.1	65-125	PASS
ICSA1	ICSA	1	0.85	84.51	65-125	PASS
ICSAB1	ICSAB	1	0.82	82.18	65-125	PASS
RINSE	RINSE	1	1.07	107	65-125	PASS
CCV1	CCV	1	0.97	96.7	65-125	PASS
CCB1	CCB	1	0.99	98.93	65-125	PASS
MB-106783	MBLK	1	0.98	97.96	65-125	PASS
LCS-106783	LCS	1	0.96	95.98	65-125	PASS
N063053-001C	SAMP	1	0.73	73.48	65-125	PASS
CCV2	CCV	1	0.96	96.39	65-125	PASS
CCB2	CCB	1	0.99	98.69	65-125	PASS
N063053-002C	SAMP	1	0.72	71.83	65-125	PASS
N063053-003C	SAMP	1	0.71	71.41	65-125	PASS
N063053-004C	SAMP	1	0.77	77.45	65-125	PASS
N063053-005C	SAMP	1	0.76	76.1	65-125	PASS
N063053-006C	SAMP	1	0.76	75.74	65-125	PASS
N063053-007C	SAMP	1	0.74	74.17	65-125	PASS
N063053-008C	SAMP	1	0.78	77.53	65-125	PASS
N063053-009C	SAMP	1	0.76	76.27	65-125	PASS
N063053-010C	SAMP	1	0.75	75.21	65-125	PASS
N063053-011C	SAMP	1	0.74	74.04	65-125	PASS
CCV3	CCV	1	0.98	97.68	65-125	PASS
CCB3	CCB	1	1	99.94	65-125	PASS
ICSA2	ICSA	1	0.85	85.13	65-125	PASS
ICSAB2	ICSAB	1	0.83	82.84	65-125	PASS
RINSE	RINSE	1	1.05	105.33	65-125	PASS
N063053-011C	SAMP	5	0.87	86.8	65-125	PASS
N063053-011C-PS	PS	1	0.72	72.11	65-125	PASS
N063053-011CMS	MS	1	0.75	74.9	65-125	PASS
N063053-011CMSD	MSD	1	0.73	73.1	65-125	PASS
N063053-018B	SAMP	1	0.76	76.29	65-125	PASS

INTERNAL STANDARD: 240214A

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CCV4	CCV	1	0.98	98.4	65-125	PASS
CCB4	CCB	1	1.01	100.69	65-125	PASS
CCV5	CCV	1	0.99	98.79	65-125	PASS
CCB5	CCB	1	1.01	101.41	65-125	PASS
ICSA3	ICSA	1	0.87	86.55	65-125	PASS
ICSAB3	ICSAB	1	0.84	84.01	65-125	PASS

INTERNAL STANDARD: 240216B

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	1	99.96	65-125	PASS
Standard2	ICAL	1	0.99	99.32	65-125	PASS
Standard3	ICAL	1	1	99.7	65-125	PASS
Standard4	ICAL	1	0.99	98.65	65-125	PASS
Standard5	ICAL	1	0.99	98.8	65-125	PASS
Standard6	ICAL	1	0.99	98.6	65-125	PASS
Standard7	ICAL	1	0.97	97	65-125	PASS
ICV	ICV	1	0.99	99.32	65-125	PASS
ICB	ICB	1	1	100.28	65-125	PASS
LLICV1	CCV1	1	1	100.4	65-125	PASS
ICSA1	ICSA	1	0.86	86.1	65-125	PASS
ICSAB1	ICSAB	1	0.84	84.14	65-125	PASS
RINSE	RINSE	1	1.05	105.27	65-125	PASS
CCV1	CCV	1	0.99	98.87	65-125	PASS
CCB1	CCB	1	1.01	100.81	65-125	PASS
MB-106859	MBLK	1	1.01	100.77	65-125	PASS
LCS1-106859	LCS	1	1	99.9	65-125	PASS
N063053-002C	SAMP	1	0.73	72.85	65-125	PASS
N063076-001B	SAMP	1	0.79	79.06	65-125	PASS
N063076-002B	SAMP	1	0.78	78.14	65-125	PASS
N063076-002B	SAMP	5	0.89	88.78	65-125	PASS
N063076-002B-PS	PS	1	0.76	75.91	65-125	PASS
N063076-002B-MS1	MS	1	0.79	79.2	65-125	PASS
N063076-002B-MSD1	MSD	1	0.79	78.91	65-125	PASS
N063076-003B	SAMP	1	0.76	76.08	65-125	PASS
CCV2	CCV	1	0.99	98.95	65-125	PASS
CCB2	CCB	1	1.01	101.06	65-125	PASS
N063103-010B	SAMP	1	0.91	91.21	65-125	PASS
N063135-001B	SAMP	1	0.86	85.96	65-125	PASS
N063135-003B	SAMP	1	0.72	72.19	65-125	PASS
N063135-005B	SAMP	1	0.68	67.97	65-125	PASS
LCS1-106859	LCS	1	0.95	95.02	65-125	PASS
CCV3	CCV	1	0.99	98.89	65-125	PASS
CCB3	CCB	1	1.01	100.61	65-125	PASS
ICSA2	ICSA	1	0.86	85.68	65-125	PASS
ICSAB2	ICSAB	1	0.83	83.5	65-125	PASS
RINSE	RINSE	1	1.02	101.84	65-125	PASS
RINSE	RINSE	1	1.01	101.36	65-125	PASS
CCV4	CCV	1	0.98	97.52	65-125	PASS
CCB4	CCB	1	0.99	99.05	65-125	PASS

INTERNAL STANDARD: 240216B

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
RINSE	RINSE	1	1.01	101.03	65-125	PASS
CCV5	CCV	1	0.97	97.19	65-125	PASS
CCB5	CCB	1	0.99	98.93	65-125	PASS
ICSA3	ICSA	1	0.85	84.57	65-125	PASS
ICSAB3	ICSAB	1	0.83	82.58	65-125	PASS
ICSA3	ICSA	1	0.82	82.29	65-125	PASS
ICSAB3	ICSAB	1	0.83	82.79	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063053
Test Method: EPA 6010B
Analysis Date: 2/14/2024

Matrix: Groundwater
Batch No.: 106783

Instrument ID: ICP-03
Instrument Description: Perkin Elmer Avio 500Max

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Fe. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063053-011C DT 5x	Iron	Fe	µg/L	0	NA	33.67033	100.00%	10

Reviewed by:

dlRocha 3/5/2024

Note: NA - Not Applicable

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.:	N063053
Test Method:	EPA 6010B
Analysis Date:	2/16/2024
Matrix:	Groundwater
Batch No.:	106859
Instrument ID:	ICP-03
Instrument Description:	Perkin Elmer Avio 500Max

Comments:

Analyzed By: Diane Jetajobe

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063076-002B DT 5x	Iron	Fe	µg/L	979.0598	PASS	933.8934	4.84%	10

Reviewed by:

dMRocha 3/5/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **N063053-011C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181521**
Client ID: **ZZZZZZ** Batch ID: **106783** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/14/2024** SeqNo: **5690382**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	125.567	20	100.0	33.67	91.9	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID	**N063076-002B-PS**	SampType:	**PS**	TestCode:	**6010_WDPG**	Units:	**µg/L**	Prep Date:		RunNo:	**181618**
Client ID:	**ZZZZZZ**	Batch ID:	**106859**	TestNo:	**EPA 6010B**	**EPA 3010A**		Analysis Date:	**2/16/2024**	SeqNo:	**5695395**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1016.456	20	100.0	933.9	82.6	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

LOD & PQL VERIFICATION

Analytical Method: EPA 6010B
Digestion Method: EPA 3010A
Digestion Date: 5/7/23; 5/8/23; 5/10/23
Analysis Date: 5/7-23/23
Instrument Name: ICP-03
Analyst/Technician: Nancy Sibucao / Diane Jetajobe

Matrix: WATER
Units : ppm

Analyte	MDL	LOD	ACTUAL LOD	PQL	Actual PQL	%REC
Beryllium	0.000076	0.0005	0.00047	0.001	0.00098	98
Boron	0.0086	0.05	0.04899	0.1	0.089	89
Magnesium	0.0057	0.05	0.05152	0.1	0.10	102
Silicon	0.012	0.01	0.01312	0.02	0.023	113
Chromium	0.00051	0.0005	0.00056	0.001	0.0010	102
Manganese	0.00032	0.01	0.00534	0.01	0.011	110
Iron	0.0022	0.01	0.01180	0.02	0.021	106
Cobalt	0.001	0.0013	0.00096	0.0025	0.0025	100
Nickel	0.0034	0.0025	0.00417	0.005	0.0055	110
Copper	0.0042	0.0025	0.00434	0.005	0.0044	87
Zinc	0.0007	0.005	0.00624	0.01	0.011	106
Arsenic	0.0042	0.005	0.00461	0.01	0.010	104
Selenium	0.008	0.005	0.00829	0.01	0.010	102
Molybdenum	0.0013	0.0025	0.00307	0.005	0.0053	106
Silver	0.0024	0.0013	0.00419	0.0025	0.0033	134
Cadmium	0.0016	0.0013	0.00180	0.0025	0.0026	102
Tin	0.0076	0.005	0.00563	0.010	0.0099	99
Antimony	0.0038	0.005	0.00307	0.01	0.0096	96
Barium	0.0002	0.0013	0.00124	0.0025	0.0026	104
Thallium	0.0021	0.0075	0.00656	0.015	0.015	101
Lead	0.0039	0.0025	0.00337	0.005	0.0047	94
Calcium	0.011	0.1	0.11963	0.2	0.23	113
Vanadium	0.00017	0.0013	0.00126	0.0025	0.0025	100
Aluminum	0.0089	0.025	0.02576	0.05	0.048	95
Titanium	0.004	0.005	0.00612	0.01	0.01	101

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

EPA 6010B
Total

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106786
ASSET #: N063053

Instrument ID: ICP-03
Analyst: DBJ
Date Analyzed: 2/14/2024

Method: TOTAL

- [X] EPA 6010B / 200.7
- [ ] EPA 6020 / 200.8
- [ ] EPA 7470A / 7471A/245.1
- [ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?		X			X	
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

Concentration of N063053-002C is greater than N063053-002D. For confirmation

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 02222024 Date: _____

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106860
ASSET #: N063053

Instrument ID: ICP-03
Analyst: DBJ
Date Analyzed: 2/16/2024

Method: TOTAL

- [X] EPA 6010B / 200.7
- [ ] EPA 6020 / 200.8
- [ ] EPA 7470A / 7471A/245.1
- [ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.	X			X		
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?	X			X		
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented		X			X	
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

Fe confirmation. (N063053-002D)

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 02222024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in ug/L , in the original sample as follows:

Iron , ug/L = A * DF * PF *CF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL
CF= Conversion Factor from mg/L to ug/L, 1000

For Sample **N063053-002D** , the concentration in ug/L is calculated as follows:

Iron , ug/L = 0.03753 * 1 * (25/25) * 1000

Iron , ug/L = 37.53

Reporting results in two significant figures,

Iron , ug/L = 38

Reviewed by:

dMocha 3/3/2024

% RSD SUMMARY

RSD SUMMARY: 240214A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	Fe	0	3.9	15	PASS
Standard1	ICAL	1	Fe	0.02	3.7	15	PASS
Standard2	ICAL	1	Fe	0.05	1.32	15	PASS
Standard3	ICAL	1	Fe	2	0.2	15	PASS
Standard4	ICAL	1	Fe	5	0.22	15	PASS
Standard5	ICAL	1	Fe	7.5	0.29	15	PASS
Standard6	ICAL	1	Fe	10	0.37	15	PASS
Standard7	ICAL	1	Fe	20	0.06	15	PASS
ICV	ICV	1	Fe	10.14	0.22	15	PASS
ICB	ICB	1	Fe	0	76.32	15	<PQL
LLICV1	CCV1	1	Fe	0.02	1.68	20	PASS
ICSA1	ICSA	1	Fe	169.02	0.01	15	PASS
ICSAB1	ICSAB	1	Fe	172.07	0.02	15	PASS
RINSE	RINSE	1	Fe	0.02	32.11	15	<PQL
CCV1	CCV	1	Fe	10.13	0.27	15	PASS
CCB1	CCB	1	Fe	0	92.39	15	<PQL
CCV2	CCV	1	Fe	10.09	0.39	15	PASS
CCB2	CCB	1	Fe	0	62.18	15	<PQL
CCV3	CCV	1	Fe	10.09	0.22	15	PASS
CCB3	CCB	1	Fe	0	38.25	15	<PQL
ICSA2	ICSA	1	Fe	169.41	0.05	15	PASS
ICSAB2	ICSAB	1	Fe	172.58	0.02	15	PASS
RINSE	RINSE	1	Fe	0.02	27.96	15	<PQL
MB-106786	MBLK	1	Fe	0	169.55	15	<PQL
LCS-106786	LCS	1	Fe	0.11	0.77	15	PASS
N063053-001D	SAMP	1	Fe	0.02	3.51	15	PASS
N063053-001D	SAMP	5	Fe	0	19.34	15	<PQL
CCV4	CCV	1	Fe	10.17	0.39	15	PASS
CCB4	CCB	1	Fe	0	71.34	15	<PQL
N063053-001D-PS	PS	1	Fe	0.11	0.92	15	PASS
N063053-001D-MS	MS	1	Fe	0.11	0.97	15	PASS
N063053-001D-MSD	MSD	1	Fe	0.11	0.96	15	PASS
N063053-002D	SAMP	1	Fe	0.02	1.38	15	PASS
N063053-003D	SAMP	1	Fe	0.01	5.42	15	PASS
N063053-004D	SAMP	1	Fe	0.02	3.82	15	PASS
N063053-008D	SAMP	1	Fe	0.01	2.59	15	PASS
N063053-018C	SAMP	1	Fe	0.13	0.91	15	PASS
CCV5	CCV	1	Fe	10.17	0.27	15	PASS
CCB5	CCB	1	Fe	0	36.55	15	<PQL
ICSA3	ICSA	1	Fe	170.2	0.08	15	PASS
ICSAB3	ICSAB	1	Fe	173.4	0.02	15	PASS

RSD SUMMARY: 240216B

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	Fe	0	0.5	15	PASS
Standard1	ICAL	1	Fe	0.02	2.96	15	PASS
Standard2	ICAL	1	Fe	0.05	1.49	15	PASS
Standard3	ICAL	1	Fe	2	0.04	15	PASS
Standard4	ICAL	1	Fe	5	0.08	15	PASS
Standard5	ICAL	1	Fe	7.5	0.03	15	PASS
Standard6	ICAL	1	Fe	10	0.07	15	PASS
Standard7	ICAL	1	Fe	20	0.06	15	PASS
ICV	ICV	1	Fe	10.15	0.13	15	PASS
ICB	ICB	1	Fe	0	16.51	15	<PQL
LLICV1	CCV1	1	Fe	0.02	1.18	20	PASS
ICSA1	ICSA	1	Fe	174.26	0.04	15	PASS
ICSAB1	ICSAB	1	Fe	176.97	0.03	15	PASS
RINSE	RINSE	1	Fe	0	709.47	15	<PQL
CCV1	CCV	1	Fe	10.11	0.04	15	PASS
CCB1	CCB	1	Fe	0	19.82	15	<PQL
CCV2	CCV	1	Fe	10.12	0.08	15	PASS
CCB2	CCB	1	Fe	-0.01	2.85	15	PASS
MB-106860	MBLK	1	Fe	-0.01	8.74	15	PASS
LCS-106860	LCS	1	Fe	0.09	0.46	15	PASS
N063053-002D	SAMP	1	Fe	0.04	5.69	15	PASS
N063103-010C	SAMP	1	Fe	0.04	1.66	15	PASS
N063103-010C	SAMP	5	Fe	0	12.7	15	PASS
CCV3	CCV	1	Fe	10.11	0.05	15	PASS
CCB3	CCB	1	Fe	-0.01	2.48	15	PASS
ICSA2	ICSA	1	Fe	173.96	0.05	15	PASS
ICSAB2	ICSAB	1	Fe	176.96	0.02	15	PASS
RINSE	RINSE	1	Fe	0.01	90.28	15	<PQL
N063103-010C-PS	PS	1	Fe	0.15	1.43	15	PASS
N063103-010C-MS	MS	1	Fe	0.16	1.94	15	PASS
N063103-010C-MSD	MSD	1	Fe	0.15	0.03	15	PASS
RINSE	RINSE	1	Fe	0	21.19	15	<PQL
CCV4	CCV	1	Fe	10.1	0.11	15	PASS
CCB4	CCB	1	Fe	-0.01	6.23	15	PASS
RINSE	RINSE	1	Fe	0	30.98	15	<PQL
CCV5	CCV	1	Fe	10.05	0.2	15	PASS
CCB5	CCB	1	Fe	-0.01	5.1	15	PASS
ICSA3	ICSA	1	Fe	173.9	0.02	15	PASS
ICSAB3	ICSAB	1	Fe	176.31	0.05	15	PASS
ICSA3	ICSA	1	Fe	183.11	0.02	15	PASS
ICSAB3	ICSAB	1	Fe	164.97	0.02	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240214A

Instrument ID: ICP-03

STANDARD CODE	
Standard1	MWST-240105M, 0.5<50mL
Standard2	MWST-240105N
Standard3	MWST-240105O, 5<50mL
Standard4	MWST-240105O,12.5<50mL
Standard5	MWST-240105O, 15<40mL
Standard6	MWST-240105O, 25<50mL
Standard7	MWST-240105O
ICV	MWST-240105AE
CCV	MWST-240105O, 25<50mL
ICSA/ICSAB	MWST-240105P / MWST-240105Q
Int. Std. (Y)	MWST-240105B
PS Spike	MWST-240105X / Y/ Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	02/14/2024	09:34:54 AM
2	Standard1	ICAL	1	02/14/2024	09:38:36 AM
3	Standard2	ICAL	1	02/14/2024	09:42:19 AM
4	Standard3	ICAL	1	02/14/2024	09:46:02 AM
5	Standard4	ICAL	1	02/14/2024	09:49:16 AM
6	Standard5	ICAL	1	02/14/2024	09:52:30 AM
7	Standard6	ICAL	1	02/14/2024	09:55:44 AM
8	Standard7	ICAL	1	02/14/2024	09:58:57 AM
310	ICV	ICV	1	02/14/2024	10:07:18 AM
1	ICB	ICB	1	02/14/2024	10:10:38 AM
2	LLICV1	CCV1	1	02/14/2024	10:14:21 AM
9	ICSA1	ICSA	1	02/14/2024	10:18:04 AM
10	ICSAB1	ICSAB	1	02/14/2024	10:22:45 AM
299	RINSE	RINSE	1	02/14/2024	10:27:51 AM
71	MB-106753	MBLK	1	02/14/2024	10:58:41 AM
72	LCS-106753	LCS	1	02/14/2024	11:04:38 AM
73	N063010-001B	SAMP	1	02/14/2024	11:08:23 AM
74	N063010-002B	SAMP	1	02/14/2024	11:13:22 AM
75	N063010-003B	SAMP	1	02/14/2024	11:18:20 AM
76	N063012-001C	SAMP	1	02/14/2024	11:23:19 AM
77	N063012-002C	SAMP	1	02/14/2024	11:28:37 AM
78	N063012-002C	SAMP	5	02/14/2024	11:33:57 AM
79	N063012-002C-PS	PS	1	02/14/2024	11:38:13 AM
7	CCV1	CCV	1	02/14/2024	11:43:33 AM
1	CCB1	CCB	1	02/14/2024	11:46:47 AM
80	N063012-002C-MS	MS	1	02/14/2024	11:50:30 AM
81	N063012-002C-MSD	MSD	1	02/14/2024	11:55:51 AM
82	N063012-003C	SAMP	1	02/14/2024	12:01:13 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
83	N063012-004C	SAMP	1	02/14/2024	12:06:34 PM
84	N063012-006C	SAMP	1	02/14/2024	12:12:03 PM
85	N063012-007C	SAMP	1	02/14/2024	12:15:20 PM
86	N063012-009C	SAMP	1	02/14/2024	12:18:40 PM
87	MB-106783	MBLK	1	02/14/2024	12:24:01 PM
88	LCS-106783	LCS	1	02/14/2024	12:28:15 PM
89	N063053-001C	SAMP	1	02/14/2024	12:32:00 PM
7	CCV2	CCV	1	02/14/2024	12:37:21 PM
1	CCB2	CCB	1	02/14/2024	12:40:35 PM
90	N063053-002C	SAMP	1	02/14/2024	12:44:17 PM
91	N063053-003C	SAMP	1	02/14/2024	12:49:38 PM
92	N063053-004C	SAMP	1	02/14/2024	12:54:59 PM
93	N063053-005C	SAMP	1	02/14/2024	01:00:20 PM
94	N063053-006C	SAMP	1	02/14/2024	01:05:41 PM
95	N063053-007C	SAMP	1	02/14/2024	01:11:02 PM
96	N063053-008C	SAMP	1	02/14/2024	01:16:23 PM
97	N063053-009C	SAMP	1	02/14/2024	01:21:52 PM
98	N063053-010C	SAMP	1	02/14/2024	01:26:50 PM
99	N063053-011C	SAMP	1	02/14/2024	01:32:20 PM
7	CCV3	CCV	1	02/14/2024	01:37:48 PM
1	CCB3	CCB	1	02/14/2024	01:41:02 PM
9	ICSA2	ICSA	1	02/14/2024	01:44:45 PM
10	ICSAB2	ICSAB	1	02/14/2024	01:49:26 PM
299	RINSE	RINSE	1	02/14/2024	01:54:08 PM
100	N063053-011C	SAMP	5	02/14/2024	01:57:56 PM
101	N063053-011C-PS	PS	1	02/14/2024	02:02:14 PM
102	N063053-011CMS	MS	1	02/14/2024	02:07:43 PM
103	N063053-011CMSD	MSD	1	02/14/2024	02:13:12 PM
104	N063053-018B	SAMP	1	02/14/2024	02:18:42 PM
105	MB-106786	MBLK	1	02/14/2024	02:24:03 PM
106	LCS-106786	LCS	1	02/14/2024	02:27:47 PM
107	N063053-001D	SAMP	1	02/14/2024	02:31:34 PM
108	N063053-001D	SAMP	5	02/14/2024	02:36:55 PM
7	CCV4	CCV	1	02/14/2024	02:41:12 PM
1	CCB4	CCB	1	02/14/2024	02:44:26 PM
109	N063053-001D-PS	PS	1	02/14/2024	02:48:09 PM
110	N063053-001D-MS	MS	1	02/14/2024	02:53:30 PM
111	N063053-001D-MSD	MSD	1	02/14/2024	02:58:59 PM
112	N063053-002D	SAMP	1	02/14/2024	03:04:21 PM
113	N063053-003D	SAMP	1	02/14/2024	03:09:42 PM
114	N063053-004D	SAMP	1	02/14/2024	03:15:03 PM
115	N063053-008D	SAMP	1	02/14/2024	03:20:25 PM
116	N063053-018C	SAMP	1	02/14/2024	03:25:55 PM
7	CCV5	CCV	1	02/14/2024	03:31:16 PM
1	CCB5	CCB	1	02/14/2024	03:34:29 PM
9	ICSA3	ICSA	1	02/14/2024	03:38:12 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
10	ICSAB3	ICSAB	1	02/14/2024	03:42:52 PM

INJECTION LOG: 240216B

Instrument ID: ICP-03

STANDARD CODE	
Standard1	MWST-240105M, 0.5<50mL
Standard2	MWST-240105N
Standard3	MWST-240105O, 5<50mL
Standard4	MWST-240105O,12.5<50mL
Standard5	MWST-240105O, 15<40mL
Standard6	MWST-240105O, 25<50mL
Standard7	MWST-240105O
ICV	MWST-240105AE
CCV	MWST-240105O, 25<50mL
ICSA/ICSAB	MWST-240105P / MWST-240105Q
Int. Std. (Y)	MWST-240105B
PS Spike	MWST-240105X / Y/ Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	02/16/2024	01:42:47 PM
2	Standard1	ICAL	1	02/16/2024	01:47:00 PM
3	Standard2	ICAL	1	02/16/2024	01:51:14 PM
4	Standard3	ICAL	1	02/16/2024	01:55:28 PM
5	Standard4	ICAL	1	02/16/2024	01:59:15 PM
6	Standard5	ICAL	1	02/16/2024	02:04:01 PM
7	Standard6	ICAL	1	02/16/2024	02:08:44 PM
8	Standard7	ICAL	1	02/16/2024	02:12:59 PM
310	ICV	ICV	1	02/16/2024	02:21:05 PM
1	ICB	ICB	1	02/16/2024	02:25:25 PM
2	LLICV1	CCV1	1	02/16/2024	02:29:39 PM
9	ICSA1	ICSA	1	02/16/2024	02:33:52 PM
10	ICSAB1	ICSAB	1	02/16/2024	02:38:55 PM
299	RINSE	RINSE	1	02/16/2024	02:47:49 PM
71	MB-106828	MBLK	1	02/16/2024	02:52:07 PM
72	LCS-106828	LCS	1	02/16/2024	03:07:58 PM
73	N063078-001A	SAMP	5	02/16/2024	03:12:44 PM
74	N063078-002A	SAMP	5	02/16/2024	03:18:05 PM
75	N063078-003A	SAMP	5	02/16/2024	03:21:50 PM
76	N063078-004A	SAMP	5	02/16/2024	03:27:11 PM
77	N063078-005A	SAMP	5	02/16/2024	03:31:25 PM
78	N063078-006A	SAMP	5	02/16/2024	03:35:40 PM
79	N063078-007A	SAMP	5	02/16/2024	03:41:01 PM
7	CCV1	CCV	1	02/16/2024	03:46:17 PM
1	CCB1	CCB	1	02/16/2024	03:50:33 PM
80	MB-106859	MBLK	1	02/16/2024	03:54:47 PM
81	LCS1-106859	LCS	1	02/16/2024	03:59:01 PM
82	N063053-002C	SAMP	1	02/16/2024	04:03:47 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
83	N063076-001B	SAMP	1	02/16/2024	04:09:10 PM
84	N063076-002B	SAMP	1	02/16/2024	04:14:31 PM
85	N063076-002B	SAMP	5	02/16/2024	04:19:52 PM
86	N063076-002B-PS	PS	1	02/16/2024	04:24:08 PM
87	N063076-002B-MS1	MS	1	02/16/2024	04:29:30 PM
88	N063076-002B-MSD1	MSD	1	02/16/2024	04:34:51 PM
89	N063076-003B	SAMP	1	02/16/2024	04:40:13 PM
7	CCV2	CCV	1	02/16/2024	04:45:35 PM
1	CCB2	CCB	1	02/16/2024	04:49:50 PM
90	N063103-010B	SAMP	1	02/16/2024	04:54:04 PM
91	N063135-001B	SAMP	1	02/16/2024	04:58:22 PM
92	N063135-003B	SAMP	1	02/16/2024	05:03:43 PM
93	N063135-005B	SAMP	1	02/16/2024	05:09:06 PM
81	LCS1-106859	LCS	1	02/16/2024	05:20:17 PM
94	MB-106860	MBLK	1	02/16/2024	05:23:59 PM
95	LCS-106860	LCS	1	02/16/2024	05:28:15 PM
96	N063053-002D	SAMP	1	02/16/2024	05:33:01 PM
97	N063103-010C	SAMP	1	02/16/2024	05:38:24 PM
98	N063103-010C	SAMP	5	02/16/2024	05:42:43 PM
7	CCV3	CCV	1	02/16/2024	05:46:57 PM
1	CCB3	CCB	1	02/16/2024	05:51:12 PM
9	ICSA2	ICSA	1	02/16/2024	05:55:25 PM
10	ICSAB2	ICSAB	1	02/16/2024	06:00:28 PM
299	RINSE	RINSE	1	02/16/2024	06:05:32 PM
99	N063103-010C-PS	PS	1	02/16/2024	06:09:51 PM
100	N063103-010C-MS	MS	1	02/16/2024	06:15:10 PM
101	N063103-010C-MSD	MSD	1	02/16/2024	06:20:29 PM
102	N063078-001A	SAMP	1	02/16/2024	06:25:48 PM
103	N063078-002A	SAMP	1	02/16/2024	06:31:18 PM
104	N063078-003A	SAMP	1	02/16/2024	06:36:07 PM
105	N063078-003A-PS	PS	1	02/16/2024	06:41:52 PM
106	N063078-003A-MS	MS	1	02/16/2024	06:47:38 PM
299	RINSE	RINSE	1	02/16/2024	06:53:24 PM
7	CCV4	CCV	1	02/16/2024	06:57:43 PM
1	CCB4	CCB	1	02/16/2024	07:01:57 PM
107	N063078-003A-MSD	MSD	1	02/16/2024	07:06:11 PM
108	N063078-005A	SAMP	1	02/16/2024	07:11:56 PM
109	N063078-006A	SAMP	25	02/16/2024	07:16:12 PM
299	RINSE	RINSE	1	02/16/2024	07:21:27 PM
7	CCV5	CCV	1	02/16/2024	07:25:46 PM
1	CCB5	CCB	1	02/16/2024	07:30:01 PM
9	ICSA3	ICSA	1	02/16/2024	07:34:14 PM
10	ICSAB3	ICSAB	1	02/16/2024	07:39:16 PM
9	ICSA3	ICSA	1	02/16/2024	07:48:45 PM
10	ICSAB3	ICSAB	1	02/16/2024	07:56:23 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/14/2024 10:00:00 AM**
Prep End Date: **2/14/2024 2:00:00 PM**
Prep Batch **106786** Prep Code:**3010_W**

Reviewed/ Date: dMocha 3/4/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-01-30**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-106786	Aqueous		25	☐	25	1.000		
MB-106786	Aqueous		25	☐	25	1.000		
N063053-001D	Groundwater	<2	25	☐	25	1.000		
N063053-001D-MS	Groundwater	<2	25	☐	25	1.000		
N063053-001D-MSD	Groundwater	<2	25	☐	25	1.000		
N063053-002D	Groundwater	<2	25	☐	25	1.000		
N063053-003D	Groundwater	<2	25	☐	25	1.000		
N063053-004D	Groundwater	<2	25	☐	25	1.000		
N063053-008D	Groundwater	<2	25	☐	25	1.000		
N063053-018C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15257	HYDROCHLORIC ACID
16149	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/15/2024 11:59:04 AM**
Prep End Date: **2/15/2024 4:00:00 PM**
Prep Batch **106860** Prep Code:**3010_W**

Reviewed/ Date: dRocha 3/3/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-52**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-106860	Aqueous		25	☐	25	1.000		
MB-106860	Aqueous		25	☐	25	1.000		
N063053-002D REDIGEST	Groundwater	<2	25	☐	25	1.000		
N063103-010C	Surface Water	<2	25	☐	25	1.000		
N063103-010C-MS	Surface Water	<2	25	☐	25	1.000		
N063103-010C-MSD	Surface Water	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15257	HYDROCHLORIC ACID
16149	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240214A

Instrument ID: ICP-03

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Iron								
CalBlk	02/14/2024	09:34:54 AM	Fe	273.952	106	0.00	mg/L	
Standard1	02/14/2024	09:38:36 AM	Fe	273.952	228	0.02	mg/L	
Standard2	02/14/2024	09:42:19 AM	Fe	273.952	696	0.05	mg/L	
Standard3	02/14/2024	09:46:02 AM	Fe	273.952	24349	2.0	mg/L	
Standard4	02/14/2024	09:49:16 AM	Fe	273.952	60371	5.0	mg/L	
Standard5	02/14/2024	09:52:30 AM	Fe	273.952	88651	7.5	mg/L	
Standard6	02/14/2024	09:55:44 AM	Fe	273.952	115628	10.0	mg/L	
Standard7	02/14/2024	09:58:57 AM	Fe	273.952	226568	20.0	mg/L	0.9998

INITIAL CALIBRATION SUMMARY: 240216B

Instrument ID: ICP-03

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Iron								
CalBlk	02/16/2024	01:42:47 PM	Fe	273.952	289	0.00	mg/L	
Standard1	02/16/2024	01:47:00 PM	Fe	273.952	195	0.02	mg/L	
Standard2	02/16/2024	01:51:14 PM	Fe	273.952	562	0.05	mg/L	
Standard3	02/16/2024	01:55:28 PM	Fe	273.952	19694	2.0	mg/L	
Standard4	02/16/2024	01:59:15 PM	Fe	273.952	48803	5.0	mg/L	
Standard5	02/16/2024	02:04:01 PM	Fe	273.952	73118	7.5	mg/L	
Standard6	02/16/2024	02:08:44 PM	Fe	273.952	97032	10.0	mg/L	
Standard7	02/16/2024	02:12:59 PM	Fe	273.952	190646	20.0	mg/L	1.0000

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181524**
Client ID: **ICV**	Batch ID: **R181524**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690460**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10144.742	20	10000	0	101	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181524**
Client ID: **ZZZZZZ**	Batch ID: **R181524**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690462**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	20.723	20	20.00	0	104	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181524**
Client ID: **CCV**	Batch ID: **R181524**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690474**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10125.874	20	10000	0	101	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181524**
Client ID: **CCV**	Batch ID: **R181524**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690486**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10086.935	20	10000	0	101	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181524**
Client ID: **CCV**	Batch ID: **R181524**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690498**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10093.581	20	10000	0	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181524**
Client ID: **CCV**	Batch ID: **R181524**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690511**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10166.827	20	10000	0	102	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181524**
Client ID: **CCV**	Batch ID: **R181524**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690521**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10172.162	20	10000	0	102	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **ICV**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695972**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10154.533	20	10000	0	102	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **ZZZZZZ**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695974**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	17.468	20	20.00	0	87.3	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **CCV**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695986**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10109.323	20	10000	0	101	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **CCV**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695998**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10122.519	20	10000	0	101	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **CCV**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5696010**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10114.003	20	10000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **CCV**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5696022**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10103.497	20	10000	0	101	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **CCV**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5696027**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10049.358	20	10000	0	100	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181524**
Client ID: **ICB**	Batch ID: **R181524**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690461**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.692	20									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181524**
Client ID: **CCB**	Batch ID: **R181524**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690475**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.976	20									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181524**
Client ID: **CCB**	Batch ID: **R181524**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690487**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.826	20									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181524**
Client ID: **CCB**	Batch ID: **R181524**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690499**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.888	20									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181524**
Client ID: **CCB**	Batch ID: **R181524**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690512**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.726	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181524**
Client ID: **CCB**	Batch ID: **R181524**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690522**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.114	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **ICB**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695973**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-3.201959	20									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **CCB**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695987**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-3.222568	20									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **CCB**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695999**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-5.932008	20									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **CCB**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5696011**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-9.676671	20									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **CCB**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5696023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-9.067326	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **CCB**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5696028**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-9.775852	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6010_WPGE** Units: **µg/L** Prep Date: RunNo: **181524**
Client ID: **ICSA** Batch ID: **R181524** TestNo: **EPA 6010B** Analysis Date: **2/14/2024** SeqNo: **5690463**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	555090.151	50	500000	0	111	80	120				
Calcium	449216.196	500	500000	0	89.8	80	120				
Iron	169021.033	20	200000	0	84.5	80	120				
Magnesium	449011.207	100	500000	0	89.8	80	120				

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6010_WPGE** Units: **µg/L** Prep Date: RunNo: **181524**
Client ID: **ICSAB** Batch ID: **R181524** TestNo: **EPA 6010B** Analysis Date: **2/14/2024** SeqNo: **5690464**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	558020.144	50	500000	0	112	80	120				
Calcium	453655.699	500	500000	0	90.7	80	120				
Iron	172065.284	20	200000	0	86.0	80	120				
Magnesium	453165.857	100	500000	0	90.6	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6010_WPGE** Units: **µg/L** Prep Date: RunNo: **181524**
Client ID: **ICSA** Batch ID: **R181524** TestNo: **EPA 6010B** Analysis Date: **2/14/2024** SeqNo: **5690500**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	551756.177	50	500000	0	110	80	120				
Calcium	450602.596	500	500000	0	90.1	80	120				
Iron	169409.323	20	200000	0	84.7	80	120				
Magnesium	449624.890	100	500000	0	89.9	80	120				

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6010_WPGE** Units: **µg/L** Prep Date: RunNo: **181524**
Client ID: **ICSAB** Batch ID: **R181524** TestNo: **EPA 6010B** Analysis Date: **2/14/2024** SeqNo: **5690501**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	557905.414	50	500000	0	112	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181524**
Client ID: **ICSAB**	Batch ID: **R181524**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690501**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	454768.447	500	500000	0	91.0	80	120				
Iron	172575.850	20	200000	0	86.3	80	120				
Magnesium	454069.860	100	500000	0	90.8	80	120				

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181524**
Client ID: **ICSA**	Batch ID: **R181524**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690523**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	547504.422	50	500000	0	110	80	120				
Calcium	451497.569	500	500000	0	90.3	80	120				
Iron	170201.392	20	200000	0	85.1	80	120				
Magnesium	450447.528	100	500000	0	90.1	80	120				

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181524**
Client ID: **ICSAB**	Batch ID: **R181524**	TestNo: **EPA 6010B**		Analysis Date: **2/14/2024**	SeqNo: **5690524**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	550651.610	50	500000	0	110	80	120				
Calcium	455854.139	500	500000	0	91.2	80	120				
Iron	173396.942	20	200000	0	86.7	80	120				
Magnesium	454995.749	100	500000	0	91.0	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **ICSA1**	SampType: **ICSA**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **ICSA**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695975**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	575871.413	50	500000	0	115	80	120				
Calcium	460764.994	500	500000	0	92.2	80	120				
Iron	174257.620	20	200000	0	87.1	80	120				
Magnesium	453863.156	100	500000	0	90.8	80	120				

Sample ID **ICSAB1**	SampType: **ICSAB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **ICSAB**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695976**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	576195.263	50	500000	0	115	80	120				
Calcium	464182.194	500	500000	0	92.8	80	120				
Iron	176965.574	20	200000	0	88.5	80	120				
Magnesium	456514.772	100	500000	0	91.3	80	120				

Sample ID **ICSA2**	SampType: **ICSA**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **ICSA**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5696012**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	579723.631	50	500000	0	116	80	120				
Calcium	460793.167	500	500000	0	92.2	80	120				
Iron	173957.471	20	200000	0	87.0	80	120				
Magnesium	453133.486	100	500000	0	90.6	80	120				

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **ICSAB**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5696013**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	592644.636	50	500000	0	119	80	120				
Calcium	465201.655	500	500000	0	93.0	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID	ICSAB2	SampType:	ICSAB	TestCode:	6010_WPGE	Units:	µg/L	Prep Date:		RunNo:	181631
Client ID:	ICSAB	Batch ID:	R181631	TestNo:	EPA 6010B			Analysis Date:	2/16/2024	SeqNo:	5696013

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	176957.836	20	200000	0	88.5	80	120				
Magnesium	456512.413	100	500000	0	91.3	80	120				

Sample ID	ICSA3	SampType:	ICSA	TestCode:	6010_WPGE	Units:	µg/L	Prep Date:		RunNo:	181631
Client ID:	ICSA	Batch ID:	R181631	TestNo:	EPA 6010B			Analysis Date:	2/16/2024	SeqNo:	5696031

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	558615.734	50	500000	0	112	80	120				
Calcium	427248.382	500	500000	0	85.4	80	120				
Iron	183110.588	20	200000	0	91.6	80	120				
Magnesium	422820.803	100	500000	0	84.6	80	120				

Sample ID	ICSAB3	SampType:	ICSAB	TestCode:	6010_WPGE	Units:	µg/L	Prep Date:		RunNo:	181631
Client ID:	ICSAB	Batch ID:	R181631	TestNo:	EPA 6010B			Analysis Date:	2/16/2024	SeqNo:	5696032

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	563063.582	50	500000	0	113	80	120				
Calcium	433203.962	500	500000	0	86.6	80	120				
Iron	164967.185	20	200000	0	82.5	80	120				
Magnesium	427531.753	100	500000	0	85.5	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240214A

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	0.98	98.09	65-125	PASS
Standard2	ICAL	1	1	99.87	65-125	PASS
Standard3	ICAL	1	1	100.48	65-125	PASS
Standard4	ICAL	1	0.99	98.88	65-125	PASS
Standard5	ICAL	1	0.99	98.63	65-125	PASS
Standard6	ICAL	1	0.97	97.2	65-125	PASS
Standard7	ICAL	1	0.96	95.73	65-125	PASS
ICV	ICV	1	0.97	96.78	65-125	PASS
ICB	ICB	1	0.99	98.93	65-125	PASS
LLICV1	CCV1	1	0.98	98.1	65-125	PASS
ICSA1	ICSA	1	0.85	84.51	65-125	PASS
ICSAB1	ICSAB	1	0.82	82.18	65-125	PASS
RINSE	RINSE	1	1.07	107	65-125	PASS
CCV1	CCV	1	0.97	96.7	65-125	PASS
CCB1	CCB	1	0.99	98.93	65-125	PASS
CCV2	CCV	1	0.96	96.39	65-125	PASS
CCB2	CCB	1	0.99	98.69	65-125	PASS
CCV3	CCV	1	0.98	97.68	65-125	PASS
CCB3	CCB	1	1	99.94	65-125	PASS
ICSA2	ICSA	1	0.85	85.13	65-125	PASS
ICSAB2	ICSAB	1	0.83	82.84	65-125	PASS
RINSE	RINSE	1	1.05	105.33	65-125	PASS
MB-106786	MBLK	1	0.99	99.1	65-125	PASS
LCS-106786	LCS	1	0.97	96.79	65-125	PASS
N063053-001D	SAMP	1	0.75	75.4	65-125	PASS
N063053-001D	SAMP	5	0.88	88.1	65-125	PASS
CCV4	CCV	1	0.98	98.4	65-125	PASS
CCB4	CCB	1	1.01	100.69	65-125	PASS
N063053-001D-PS	PS	1	0.74	73.76	65-125	PASS
N063053-001D-MS	MS	1	0.76	76.09	65-125	PASS
N063053-001D-MSD	MSD	1	0.76	75.89	65-125	PASS
N063053-002D	SAMP	1	0.73	73.04	65-125	PASS
N063053-003D	SAMP	1	0.72	72.1	65-125	PASS
N063053-004D	SAMP	1	0.78	78.41	65-125	PASS
N063053-008D	SAMP	1	0.77	76.81	65-125	PASS
N063053-018C	SAMP	1	0.75	74.99	65-125	PASS
CCV5	CCV	1	0.99	98.79	65-125	PASS
CCB5	CCB	1	1.01	101.41	65-125	PASS
ICSA3	ICSA	1	0.87	86.55	65-125	PASS
ICSAB3	ICSAB	1	0.84	84.01	65-125	PASS

INTERNAL STANDARD: 240216B

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	1	99.96	65-125	PASS
Standard2	ICAL	1	0.99	99.32	65-125	PASS
Standard3	ICAL	1	1	99.7	65-125	PASS
Standard4	ICAL	1	0.99	98.65	65-125	PASS
Standard5	ICAL	1	0.99	98.8	65-125	PASS
Standard6	ICAL	1	0.99	98.6	65-125	PASS
Standard7	ICAL	1	0.97	97	65-125	PASS
ICV	ICV	1	0.99	99.32	65-125	PASS
ICB	ICB	1	1	100.28	65-125	PASS
LLICV1	CCV1	1	1	100.4	65-125	PASS
ICSA1	ICSA	1	0.86	86.1	65-125	PASS
ICSAB1	ICSAB	1	0.84	84.14	65-125	PASS
RINSE	RINSE	1	1.05	105.27	65-125	PASS
CCV1	CCV	1	0.99	98.87	65-125	PASS
CCB1	CCB	1	1.01	100.81	65-125	PASS
CCV2	CCV	1	0.99	98.95	65-125	PASS
CCB2	CCB	1	1.01	101.06	65-125	PASS
MB-106860	MBLK	1	1	100.23	65-125	PASS
LCS-106860	LCS	1	0.97	96.61	65-125	PASS
N063053-002D	SAMP	1	0.74	73.75	65-125	PASS
N063103-010C	SAMP	1	0.92	92.05	65-125	PASS
N063103-010C	SAMP	5	0.96	96.09	65-125	PASS
CCV3	CCV	1	0.99	98.89	65-125	PASS
CCB3	CCB	1	1.01	100.61	65-125	PASS
ICSA2	ICSA	1	0.86	85.68	65-125	PASS
ICSAB2	ICSAB	1	0.83	83.5	65-125	PASS
RINSE	RINSE	1	1.02	101.84	65-125	PASS
N063103-010C-PS	PS	1	0.88	87.86	65-125	PASS
N063103-010C-MS	MS	1	0.91	91.2	65-125	PASS
N063103-010C-MSD	MSD	1	0.92	92.41	65-125	PASS
RINSE	RINSE	1	1.01	101.36	65-125	PASS
CCV4	CCV	1	0.98	97.52	65-125	PASS
CCB4	CCB	1	0.99	99.05	65-125	PASS
RINSE	RINSE	1	1.01	101.03	65-125	PASS
CCV5	CCV	1	0.97	97.19	65-125	PASS
CCB5	CCB	1	0.99	98.93	65-125	PASS
ICSA3	ICSA	1	0.85	84.57	65-125	PASS
ICSAB3	ICSAB	1	0.83	82.58	65-125	PASS
ICSA3	ICSA	1	0.82	82.29	65-125	PASS
ICSAB3	ICSAB	1	0.83	82.79	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063053
Test Method: EPA 6010B
Analysis Date: 2/14/2024

Matrix: Groundwater
Batch No.: 106786

Instrument ID: ICP-03
Instrument Description: Perkin Elmer Avio 500Max

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Fe. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063053-001D DT 5x	Iron	Fe	µg/L	0	NA	19.3453	100.00%	10

Reviewed by:

dMRocha 3/3/2024

Note: NA - Not Applicable

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063053
Test Method: EPA 6010B
Analysis Date: 2/16/2024

Matrix: Groundwater
Batch No.: 106860

Instrument ID: ICP-03
Instrument Description: Perkin Elmer Avio 500Max

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Fe. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063103-010C DT 5x	Iron	Fe	µg/L	0	NA	43.61008	100.00%	10

Reviewed by:

dMocha 3/3/2024

Note: NA - Not Applicable

02/27/24 23:38

DT_EPA 6010B_N063053_106860

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **N063053-001D-PS** SampType: **PS** TestCode: **6010_WPGE** Units: **µg/L** Prep Date: RunNo: **181524**
Client ID: **ZZZZZZ** Batch ID: **106786** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/14/2024** SeqNo: **5690513**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	112.189	20	100.0	19.35	92.8	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID	N063103-010C-PS	SampType:	PS	TestCode:	6010_WPGE	Units:	µg/L	Prep Date:		RunNo:	181631
Client ID:	ZZZZZZ	Batch ID:	106860	TestNo:	EPA 6010B	EPA 3010A		Analysis Date:	2/16/2024	SeqNo:	5696014

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	145.325	20	100.0	43.61	102	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

LOD & PQL VERIFICATION

Analytical Method: EPA 6010B
Digestion Method: EPA 3010A
Digestion Date: 5/7/23; 5/8/23; 5/10/23
Analysis Date: 5/7-23/23
Instrument Name: ICP-03
Analyst/Technician: Nancy Sibucao / Diane Jetajobe

Matrix: WATER
Units : ppm

Analyte	MDL	LOD	ACTUAL LOD	PQL	Actual PQL	%REC
Beryllium	0.000076	0.0005	0.00047	0.001	0.00098	98
Boron	0.0086	0.05	0.04899	0.1	0.089	89
Magnesium	0.0057	0.05	0.05152	0.1	0.10	102
Silicon	0.012	0.01	0.01312	0.02	0.023	113
Chromium	0.00051	0.0005	0.00056	0.001	0.0010	102
Manganese	0.00032	0.01	0.00534	0.01	0.011	110
Iron	0.0022	0.01	0.01180	0.02	0.021	106
Cobalt	0.001	0.0013	0.00096	0.0025	0.0025	100
Nickel	0.0034	0.0025	0.00417	0.005	0.0055	110
Copper	0.0042	0.0025	0.00434	0.005	0.0044	87
Zinc	0.0007	0.005	0.00624	0.01	0.011	106
Arsenic	0.0042	0.005	0.00461	0.01	0.010	104
Selenium	0.008	0.005	0.00829	0.01	0.010	102
Molybdenum	0.0013	0.0025	0.00307	0.005	0.0053	106
Silver	0.0024	0.0013	0.00419	0.0025	0.0033	134
Cadmium	0.0016	0.0013	0.00180	0.0025	0.0026	102
Tin	0.0076	0.005	0.00563	0.010	0.0099	99
Antimony	0.0038	0.005	0.00307	0.01	0.0096	96
Barium	0.0002	0.0013	0.00124	0.0025	0.0026	104
Thallium	0.0021	0.0075	0.00656	0.015	0.015	101
Lead	0.0039	0.0025	0.00337	0.005	0.0047	94
Calcium	0.011	0.1	0.11963	0.2	0.23	113
Vanadium	0.00017	0.0013	0.00126	0.0025	0.0025	100
Aluminum	0.0089	0.025	0.02576	0.05	0.048	95
Titanium	0.004	0.005	0.00612	0.01	0.01	101

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

EPA 6020
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106782
ASSET #: N063053

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/13/2024

Method: DISSOLVED

[ ] EPA 6010B / 200.7
[X] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.		X			X	
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?		X			X	
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?	X			X		
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?	X			X		
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

% Rec of several analytes in N063053-011C-PS/MS/ MSD failed. However, LCS passed criteria
Mn is OLR in N063053-005C/006C/018B. For dilution
Cr is OLR in N063053-011C- PS/ MS/ MSD. For dilution
N063053-011A (first run) = 2.3 ug/L ; confirmation: 2.3 ug/L ; N063053-011C (218.6) = 190 ug/L ; confirmation: 197 ug/L
N063053-007A (first run) = 170 ug/L ; confirmation: 186 ug/L ; N063053-007C (218.6) = 2.4 ug/L ; confirmation: 2.7 ug/L

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 2/27/2024 Date: _____

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106782
ASSET #: N063053

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/14/2024

Method: DISSOLVED

- [ ] EPA 6010B / 200.7
- [X] EPA 6020 / 200.8
- [ ] EPA 7470A / 7471A/245.1
- [ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?	X			X		
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.			X			X
24. LCS compounds within control limits.			X			X
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

Cr / Mn dilution.
%Rec of Cr in N063053-011CMS/MSD @10X failed, high bias. However, LCS passed criteria.

	Yes	No	N/A
1. All assigned sample(s) analyzed	x		
2. Matrix / units correct	x		
3. Does batch meet QC requirements?	x		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	x		
5. Is first level review correct and complete?	x		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 2/27/2024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Groundwater

FORMULA:

Calculate the Manganese concentration, in ug/L in the original sample as follows:

Manganese , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063053-001C** , the concentration in ug/L is calculated as follows:

Manganese , ug/L = 2.45011 * 1 *(25 / 25)

Manganese , ug/L = 2.45011

Reporting results in two significant figures,

Manganese , ug/L = 2.5

Reviewed by:

JRB 3/12/2024

% RSD SUMMARY

PERCENT RSD SUMMARY: 240213B

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				52 Cr [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	18.143	15	<PQL	0.11	5.198	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.45	5.606	15	PASS	0.46	0.761	15	PASS
Std3-5/50 ppb	ICAL	1	4.88	4.659	15	PASS	4.73	0.933	15	PASS
Std4-10/100 ppb	ICAL	1	9.66	1.653	15	PASS	9.84	2.095	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.01	0.721	15	PASS	19.31	2.302	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.15	0.522	15	PASS	39.37	0.544	15	PASS
Std7-100/1000 ppb	ICAL	1	99.95	0.35	15	PASS	99.88	0.686	15	PASS
Std8-200/2000 ppb	ICAL	1	200.32	0.51	15	PASS	200.27	1.404	15	PASS
ICV	ICV	1	10.05	0.371	15	PASS	10.27	0.788	15	PASS
ICB	ICB	1	0	150.368	15	<PQL	0.01	187.233	15	<PQL
LLICV1	LLICV	1	1.09	7.424	20	PASS	1	7.239	20	PASS
LLICV1	LLICV	1	0.97	4.766	20	PASS	1.03	2.462	20	PASS
MLCCV	CCV	1	19.06	0.771	15	PASS	19.24	0.565	15	PASS
ICSA1	ICSA	1	0	171.117	15	<PQL	0.01	108.014	15	<PQL
ICSAB1	ICSAB	1	20.17	0.481	15	PASS	20.51	0.903	15	PASS
CCV1	CCV	1	19.2	0.567	15	PASS	19.34	2.9	15	PASS
CCB1	CCB	1	0	205.531	15	<PQL	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.37	0.448	15	PASS	20.61	0.356	15	PASS
CCV2	CCV	1	19.42	1.328	15	PASS	19.4	1.012	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV3	CCV	1	19.12	1.703	15	PASS	19.21	0.529	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV4	CCV	1	19.28	0.598	15	PASS	19.45	1.167	15	PASS
CCB4	CCB	1	0	237.579	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.46	0.15	15	PASS	20.46	1.055	15	PASS
MB-106782	MBLK	1	0.03	23.949	15	<PQL	0	4836.447	15	<PQL
LCS-106782	LCS	1	10.78	0.607	15	PASS	11.07	2.316	15	PASS
N063053-001C	SAMP	1	56.12	0.664	15	PASS	14.79	1.81	15	PASS
N063053-002C	SAMP	1	18.99	1.723	15	PASS	236.67	0.702	15	PASS
N063053-003C	SAMP	1	19.32	1.183	15	PASS	243.15	0.672	15	PASS
N063053-004C	SAMP	1	61.46	0.25	15	PASS	24.26	0.682	15	PASS
N063053-005C	SAMP	1	143.18	0.436	15	PASS	1.21	1.491	15	PASS
N063053-006C	SAMP	1	145.54	1.063	15	PASS	0.95	4.364	15	PASS
N063053-007C	SAMP	1	50.11	0.644	15	PASS	2.39	2.786	15	PASS
CCV5	CCV	1	19.93	1.366	15	PASS	19.37	2.915	15	PASS
CCB5	CCB	1	0	41.043	15	<PQL	0.01	69.943	15	<PQL
N063053-008C	SAMP	1	67.25	1.667	15	PASS	488.13	0.966	15	PASS
N063053-009C	SAMP	1	140.53	0.991	15	PASS	127.49	0.973	15	PASS

PERCENT RSD SUMMARY: 240213B

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				52 Cr [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063053-010C	SAMP	1	144.58	0.436	15	PASS	126.8	0.741	15	PASS
N063053-011C	SAMP	1	154.76	1.693	15	PASS	179.31	0.592	15	PASS
N063053-011C	SAMP	5	32.08	0.449	15	PASS	37.84	1.222	15	PASS
N063053-011C-PS	PS	1	174.03	1.766	15	PASS	199.13	2.108	15	PASS
N063053-011CMS	MS	1	173.45	2.19	15	PASS	200.06	0.276	15	PASS
N063053-011CMSD	MSD	1	172.88	1.587	15	PASS	198.13	0.617	15	PASS
N063053-018B	SAMP	1	54.02	0.723	15	PASS	5.05	1.039	15	PASS
CCV6	CCV	1	20.01	1.07	15	PASS	19.1	1.188	15	PASS
CCB6	CCB	1	0	2054.93	15	<PQL	0	268.744	15	<PQL
ICSA4	ICSA	1	0	1315.496	15	<PQL	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	21.36	0.966	15	PASS	20.31	0.754	15	PASS
CCV7	CCV	1	19.86	1.301	15	PASS	19.55	1.351	15	PASS
CCB7	CCB	1	0	84.543	15	<PQL	<0.000	N/A	15	<PQL
CCV8	CCV	1	19.42	1.383	15	PASS	19.44	0.81	15	PASS
CCB8	CCB	1	0	91.967	15	<PQL	0.02	92.912	15	<PQL
CCV9	CCV	1	19.77	2.969	15	PASS	19.56	1.566	15	PASS
CCB9	CCB	1	0.01	48.332	15	<PQL	0.01	165.972	15	<PQL
ICSA5	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB5	ICSAB	1	20.36	1.196	15	PASS	20.51	2.014	15	PASS
CCV10	CCV	1	19.69	2.518	15	PASS	19.17	3.077	15	PASS
CCB10	CCB	1	0	253.216	15	<PQL	0	802.591	15	<PQL
CCV11	CCV	1	19.99	1.035	15	PASS	19.16	2.153	15	PASS
CCB11	CCB	1	0	177.898	15	<PQL	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB6	ICSAB	1	20.97	0.672	15	PASS	20.12	1.865	15	PASS

PERCENT RSD SUMMARY: 240213B

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]				75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	8.802	15	PASS	0.09	18.708	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.47	6.382	15	PASS	0.49	2.527	15	PASS
Std3-5/50 ppb	ICAL	1	4.74	0.409	15	PASS	4.85	2.263	15	PASS
Std4-10/100 ppb	ICAL	1	9.9	0.589	15	PASS	9.88	1.014	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.47	2.341	15	PASS	19.75	1.109	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.62	1.292	15	PASS	39.25	1.587	15	PASS
Std7-100/1000 ppb	ICAL	1	100.18	1.133	15	PASS	102.24	2.977	15	PASS
Std8-200/2000 ppb	ICAL	1	200.05	1.323	15	PASS	199.06	1.5	15	PASS
ICV	ICV	1	102.07	0.614	15	PASS	10.69	4.042	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	0.01	148.515	15	<PQL
LLICV1	LLICV	1	0.54	6.845	20	PASS	0.14	18.379	20	PASS
LLICV1	LLICV	1	0.51	8.278	20	PASS	0.1	43.715	20	NR!
MLCCV	CCV	1	19.7	1.36	15	PASS	19.53	2.45	15	PASS
ICSA1	ICSA	1	0	169.861	15	<PQL	0	2918.345	15	<PQL
ICSAB1	ICSAB	1	20.69	0.296	15	PASS	21.03	7.409	15	PASS
CCV1	CCV	1	19.54	1.731	15	PASS	20.06	1.146	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL	0	189.51	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL	0.03	138.716	15	<PQL
ICSAB2	ICSAB	1	20.68	1.214	15	PASS	20.27	1.124	15	PASS
CCV2	CCV	1	19.27	0.69	15	PASS	20.28	4.107	15	PASS
CCB2	CCB	1	0	345.778	15	<PQL	0	430.4	15	<PQL
CCV3	CCV	1	19.38	0.833	15	PASS	19.52	2.911	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL	0.01	207.841	15	<PQL
CCV4	CCV	1	19.63	0.59	15	PASS	19.98	6.684	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL	0.02	104.568	15	<PQL
ICSA3	ICSA	1	0	105.388	15	<PQL	0.01	157.652	15	<PQL
ICSAB3	ICSAB	1	20.58	2.338	15	PASS	20.54	3.575	15	PASS
MB-106782	MBLK	1	<0.000	N/A	15	<PQL	0.01	8.864	15	PASS
LCS-106782	LCS	1	101.57	0.8	15	PASS	10.52	5.519	15	PASS
N063053-001C	SAMP	1	2.45	4.166	15	PASS	<0.000	N/A	15	<PQL
N063053-002C	SAMP	1	1.24	10.314	15	PASS	<0.000	N/A	15	<PQL
N063053-003C	SAMP	1	0.54	11.52	15	PASS	<0.000	N/A	15	<PQL
N063053-004C	SAMP	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063053-005C	SAMP	1	299.82	0.754	15	PASS	<0.000	N/A	15	<PQL
N063053-006C	SAMP	1	480.7	1.213	15	PASS	<0.000	N/A	15	<PQL
N063053-007C	SAMP	1	55.21	1.552	15	PASS	<0.000	N/A	15	<PQL
CCV5	CCV	1	19.42	2.17	15	PASS	19.61	4.27	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	0.01	172.427	15	<PQL
N063053-008C	SAMP	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063053-009C	SAMP	1	25.89	0.558	15	PASS	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240213B

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]				75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063053-010C	SAMP	1	19.17	2.142	15	PASS	<0.000	N/A	15	<PQL
N063053-011C	SAMP	1	8.23	0.553	15	PASS	<0.000	N/A	15	<PQL
N063053-011C	SAMP	5	1.75	0.92	15	PASS	<0.000	N/A	15	<PQL
N063053-011C-PS	PS	1	102.58	1.806	15	PASS	7.89	2.664	15	PASS
N063053-011CMS	MS	1	103.37	0.549	15	PASS	8.06	1.555	15	PASS
N063053-011CMSD	MSD	1	102.89	0.382	15	PASS	8.16	6.193	15	PASS
N063053-018B	SAMP	1	786.49	0.733	15	PASS	<0.000	N/A	15	<PQL
CCV6	CCV	1	18.93	0.327	15	PASS	19.46	0.833	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL	0.02	64.897	15	<PQL
ICSA4	ICSA	1	0	208.062	15	<PQL	0	447.239	15	<PQL
ICSAB4	ICSAB	1	20.38	0.584	15	PASS	20.3	2.556	15	PASS
CCV7	CCV	1	19.69	0.907	15	PASS	19.37	2.126	15	PASS
CCB7	CCB	1	0.01	30.168	15	<PQL	<0.000	N/A	15	<PQL
CCV8	CCV	1	19.32	1.944	15	PASS	19.49	3.261	15	PASS
CCB8	CCB	1	0	488.455	15	<PQL	0.01	298.463	15	<PQL
CCV9	CCV	1	19.72	1.349	15	PASS	19.91	1.188	15	PASS
CCB9	CCB	1	0.01	113.533	15	<PQL	0.01	115.655	15	<PQL
ICSA5	ICSA	1	0.01	99.93	15	<PQL	0.01	176.129	15	<PQL
ICSAB5	ICSAB	1	20.63	0.782	15	PASS	20.61	2.797	15	PASS
CCV10	CCV	1	19.43	2.657	15	PASS	19.21	3.688	15	PASS
CCB10	CCB	1	0	1019.336	15	<PQL	0.01	319.65	15	<PQL
CCV11	CCV	1	19.42	2.69	15	PASS	19.05	3.62	15	PASS
CCB11	CCB	1	<0.000	N/A	15	<PQL	0.01	285.105	15	<PQL
ICSA6	ICSA	1	0	236.334	15	<PQL	0	474.069	15	<PQL
ICSAB6	ICSAB	1	20.6	0.883	15	PASS	20.51	1.657	15	PASS

PERCENT RSD SUMMARY: 240213B

Instrument ID: ICPMS-03

Sample Name	Type	DF	78 Se [1]				95 Mo [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.08	19.559	15	<PQL	0.08	8.586	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.48	38.918	15	<PQL	0.46	3.766	15	PASS
Std3-5/50 ppb	ICAL	1	4.79	5.074	15	PASS	4.74	2.319	15	PASS
Std4-10/100 ppb	ICAL	1	10.06	5.083	15	PASS	9.27	1.683	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.9	0.419	15	PASS	19.02	0.642	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.82	2.967	15	PASS	38.93	0.207	15	PASS
Std7-100/1000 ppb	ICAL	1	98.93	0.238	15	PASS	98.98	0.821	15	PASS
Std8-200/2000 ppb	ICAL	1	200.58	2.203	15	PASS	200.87	1.154	15	PASS
ICV	ICV	1	10.41	0.192	15	PASS	10.15	1.108	15	PASS
ICB	ICB	1	0.02	43.868	15	<PQL	0.04	31.417	15	<PQL
LLICV1	LLICV	1	0.55	25.74	20	NR!	0.49	11.74	20	PASS
LLICV1	LLICV	1	0.44	13.801	20	PASS	0.52	6.546	20	PASS
MLCCV	CCV	1	19.67	3.406	15	PASS	19.13	0.185	15	PASS
ICSA1	ICSA	1	0	N/A	15	<PQL	0.04	49.259	15	<PQL
ICSAB1	ICSAB	1	20.73	2.873	15	PASS	20.27	1.569	15	PASS
CCV1	CCV	1	19.12	1.714	15	PASS	19.18	0.184	15	PASS
CCB1	CCB	1	0.02	173.205	15	<PQL	0.05	27.295	15	<PQL
ICSA2	ICSA	1	0.01	173.205	15	<PQL	0.02	27.108	15	<PQL
ICSAB2	ICSAB	1	20.66	3.324	15	PASS	20.04	0.162	15	PASS
CCV2	CCV	1	20.86	3.11	15	PASS	19.32	1.112	15	PASS
CCB2	CCB	1	0.01	173.205	15	<PQL	0.02	8.127	15	PASS
CCV3	CCV	1	20.05	3.421	15	PASS	19.07	0.553	15	PASS
CCB3	CCB	1	0.03	69.796	15	<PQL	0.03	24.665	15	<PQL
CCV4	CCV	1	19.28	1.495	15	PASS	19.22	0.511	15	PASS
CCB4	CCB	1	0.01	86.605	15	<PQL	0.04	37.503	15	<PQL
ICSA3	ICSA	1	0.01	173.205	15	<PQL	0.01	43.176	15	<PQL
ICSAB3	ICSAB	1	20.33	4.494	15	PASS	20	0.935	15	PASS
MB-106782	MBLK	1	0.02	100.068	15	<PQL	0.04	20.646	15	<PQL
LCS-106782	LCS	1	10	3.291	15	PASS	10.27	1.694	15	PASS
N063053-001C	SAMP	1	0.66	16.366	15	NR!	16.97	0.147	15	PASS
N063053-002C	SAMP	1	0.27	47.338	15	<PQL	43.34	1.202	15	PASS
N063053-003C	SAMP	1	0.38	14.236	15	PASS	44.49	0.39	15	PASS
N063053-004C	SAMP	1	0.99	27.845	15	NR!	18.87	1.867	15	PASS
N063053-005C	SAMP	1	0.07	69.136	15	<PQL	15.34	0.819	15	PASS
N063053-006C	SAMP	1	0.06	66.393	15	<PQL	14.63	1.71	15	PASS
N063053-007C	SAMP	1	0.06	1.834	15	PASS	15.02	1.378	15	PASS
CCV5	CCV	1	19.65	3.878	15	PASS	19.73	2.122	15	PASS
CCB5	CCB	1	0.02	100.621	15	<PQL	0.05	16.333	15	<PQL
N063053-008C	SAMP	1	4.61	2.635	15	PASS	14.15	0.526	15	PASS
N063053-009C	SAMP	1	0.62	8.161	15	PASS	9.1	2.827	15	PASS

PERCENT RSD SUMMARY: 240213B

Instrument ID: ICPMS-03

Sample Name	Type	DF	78 Se [1]				95 Mo [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063053-010C	SAMP	1	0.63	9.394	15	PASS	9.4	4.709	15	PASS
N063053-011C	SAMP	1	0.81	10.571	15	PASS	4.28	1.881	15	PASS
N063053-011C	SAMP	5	0.11	28.706	15	<PQL	0.83	5.055	15	PASS
N063053-011C-PS	PS	1	10.76	2.501	15	PASS	15.56	0.883	15	PASS
N063053-011CMS	MS	1	10.61	2.494	15	PASS	15.41	0.167	15	PASS
N063053-011CMSD	MSD	1	10.55	2.743	15	PASS	15.8	0.428	15	PASS
N063053-018B	SAMP	1	0.22	33.93	15	<PQL	36.58	1.302	15	PASS
CCV6	CCV	1	18.66	3.205	15	PASS	19.16	0.983	15	PASS
CCB6	CCB	1	0.02	42.065	15	<PQL	0.05	11.222	15	PASS
ICSA4	ICSA	1	0.01	86.605	15	<PQL	0.02	29.125	15	<PQL
ICSAB4	ICSAB	1	20.02	3.974	15	PASS	19.94	0.649	15	PASS
CCV7	CCV	1	19.46	6.03	15	PASS	19.25	0.482	15	PASS
CCB7	CCB	1	0.01	86.603	15	<PQL	0.04	9.811	15	PASS
CCV8	CCV	1	19.78	2.943	15	PASS	19.02	0.501	15	PASS
CCB8	CCB	1	0.02	2.331	15	PASS	0.04	18.535	15	<PQL
CCV9	CCV	1	19.99	3.961	15	PASS	19.2	1.102	15	PASS
CCB9	CCB	1	0.01	173.205	15	<PQL	0.04	21.589	15	<PQL
ICSA5	ICSA	1	0	N/A	15	<PQL	0.01	16.779	15	<PQL
ICSAB5	ICSAB	1	20.64	4.298	15	PASS	20.38	0.72	15	PASS
CCV10	CCV	1	19.42	0.743	15	PASS	19.39	0.83	15	PASS
CCB10	CCB	1	0.03	34.936	15	<PQL	0.03	30.882	15	<PQL
CCV11	CCV	1	19.19	2.01	15	PASS	19.54	1.217	15	PASS
CCB11	CCB	1	0.02	41.337	15	<PQL	0.05	9.879	15	PASS
ICSA6	ICSA	1	0.01	173.205	15	<PQL	0.02	41.181	15	<PQL
ICSAB6	ICSAB	1	20.68	3.96	15	PASS	20.18	1.014	15	PASS

PERCENT RSD SUMMARY: 240214A

Instrument ID: ICPMS-03

Sample Name	Type	DF	52 Cr [2]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.1	11.449	15	PASS	0.1	15.5	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.48	5.654	15	PASS	0.45	6.985	15	PASS
Std3-5/50 ppb	ICAL	1	4.82	3.07	15	PASS	4.87	3.438	15	PASS
Std4-10/100 ppb	ICAL	1	9.83	1.578	15	PASS	10.06	2.032	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.36	0.421	15	PASS	19.28	3.46	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.44	1.183	15	PASS	39.74	2.983	15	PASS
Std7-100/1000 ppb	ICAL	1	98.72	1.601	15	PASS	99.15	1.159	15	PASS
Std8-200/2000 ppb	ICAL	1	200.83	0.367	15	PASS	200.55	0.134	15	PASS
ICV	ICV	1	10.43	0.97	15	PASS	105.07	1.502	15	PASS
ICB	ICB	1	0.01	72.254	15	<PQL	0	233.007	15	<PQL
LLICV1	CCV1	1	1.1	6.985	20	PASS	0.52	8.736	20	PASS
MLCCV	CCV	1	19.74	1.656	15	PASS	19.65	1.055	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL	0	3261.897	15	<PQL
ICSAB1	ICSAB	1	20.98	0.09	15	PASS	20.72	0.717	15	PASS
CCV1	CCV	1	19.65	2.774	15	PASS	19.56	1.494	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.83	1.045	15	PASS	19.93	0.8	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	0.01	152.152	15	<PQL
CCV3	CCV	1	20	0.636	15	PASS	19.98	1.802	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL	0	242.818	15	<PQL
ICSA2	ICSA	1	0.01	120.084	15	<PQL	0	91.278	15	<PQL
ICSAB2	ICSAB	1	20.68	2.12	15	PASS	20.59	1.822	15	PASS
CCV4	CCV	1	19.87	1.391	15	PASS	19.56	2.832	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL	0.01	139.109	15	<PQL
CCV5	CCV	1	19.44	1.144	15	PASS	20.03	1.722	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	0.01	55.454	15	<PQL
CCV6	CCV	1	19.75	2.693	15	PASS	19.82	1.339	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL	0	398.056	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	0.01	97.694	15	<PQL
ICSAB3	ICSAB	1	20.82	1.785	15	PASS	20.54	2.136	15	PASS
N063053-005C	SAMP	10	0.13	21.67	15	<PQL	32.42	2.263	15	PASS
N063053-006C	SAMP	10	0.05	21.806	15	<PQL	50.21	2.863	15	PASS
N063053-011C	SAMP	10	19.11	0.95	15	PASS	0.88	5.509	15	PASS
N063053-011C	SAMP	50	4.09	0.832	15	PASS	0.17	13.97	15	PASS
N063053-011C-PS	PS	10	29.06	0.063	15	PASS	101.29	1.012	15	PASS
N063053-011CMS	MS	10	22.59	1.25	15	PASS	11.82	2.612	15	PASS
N063053-011CMSD	MSD	10	20.62	1.674	15	PASS	10.84	2.312	15	PASS
N063053-018B	SAMP	10	0.54	6.534	15	PASS	80.61	0.669	15	PASS
CCV7	CCV	1	19.6	0.948	15	PASS	19.56	2.846	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240214A

Instrument ID: ICPMS-03

Sample Name	Type	DF	52 Cr [2]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCV8	CCV	1	19.59	1.448	15	PASS	19.45	1.199	15	PASS
CCB8	CCB	1	0.01	162.488	15	<PQL	0	432.685	15	<PQL
ICSA4	ICSA	1	0.02	27.933	15	<PQL	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.34	0.395	15	PASS	20.53	1.772	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240213B

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
B0212001.d	RINSE	ICAL	1	02/13/24 3:55 PM
B0212002.d	RINSE	ICAL	1	02/13/24 3:59 PM
B0212003.d	Cal Blk	IBLK	1	02/13/24 4:04 PM
B0212004.d	Std1-0.1/1 ppb	ICAL	1	02/13/24 4:09 PM
B0212005.d	Std2-0.5/5 ppb	ICAL	1	02/13/24 4:13 PM
B0212006.d	Std3-5/50 ppb	ICAL	1	02/13/24 4:18 PM
B0212007.d	Std4-10/100 ppb	ICAL	1	02/13/24 4:23 PM
B0212008.d	Std5-4.0/20/200 ppb	ICAL	1	02/13/24 4:28 PM
B0212009.d	Std6-8.0/40/400 ppb	ICAL	1	02/13/24 4:32 PM
B0212010.d	Std7-100/1000 ppb	ICAL	1	02/13/24 4:37 PM
B0212011.d	Std8-200/2000 ppb	ICAL	1	02/13/24 4:42 PM
B0212012.d	ICV	ICV	1	02/13/24 4:58 PM
B0212013.d	ICB	ICB	1	02/13/24 5:02 PM
B0212014.d	LLICV1	LLICV	1	02/13/24 5:07 PM
B0212015.d	LLICV1	LLICV	1	02/13/24 5:24 PM
B0212016.d	MLCCV	CCV	1	02/13/24 5:28 PM
B0212017.d	ICSA1	ICSA	1	02/13/24 5:33 PM
B0212018.d	ICSAB1	ICSAB	1	02/13/24 5:37 PM
B0212019.d	MB-106792	MBLK	1	02/13/24 5:42 PM
B0212020.d	LCS-106792	LCS	1	02/13/24 5:47 PM
B0212021.d	N063032-001A	SAMP	1	02/13/24 5:51 PM
B0212022.d	N063032-001A	SAMP	5	02/13/24 5:56 PM
B0212023.d	N063032-001A-PS	PS	1	02/13/24 6:01 PM
B0212024.d	N063032-001A-MS	MS	1	02/13/24 6:05 PM
B0212025.d	N063032-001A-MSD	MSD	1	02/13/24 6:10 PM
B0212026.d	N063033-001A	SAMP	1	02/13/24 6:15 PM
B0212027.d	N063034-001A	SAMP	1	02/13/24 6:19 PM
B0212028.d	CCV1	CCV	1	02/13/24 6:24 PM
B0212029.d	CCB1	CCB	1	02/13/24 6:29 PM
B0212030.d	ICSA2	ICSA	1	02/13/24 6:33 PM
B0212031.d	ICSAB2	ICSAB	1	02/13/24 6:38 PM
B0212032.d	MB-106750	MBLK	1	02/13/24 6:42 PM
B0212033.d	LCS-106750	LCS	1	02/13/24 6:47 PM
B0212034.d	N062980-001B	SAMP	1	02/13/24 6:52 PM
B0212035.d	N062980-001B	SAMP	5	02/13/24 6:56 PM
B0212036.d	N062980-001B-PS	PS	1	02/13/24 7:01 PM
B0212037.d	N062980-001B-MS	MS	1	02/13/24 7:06 PM
B0212038.d	N062980-001B-MSD	MSD	1	02/13/24 7:10 PM
B0212039.d	N063004-001A	SAMP	1	02/13/24 7:15 PM
B0212040.d	N063004-002A	SAMP	1	02/13/24 7:20 PM
B0212041.d	RINSE	ICAL	1	02/13/24 7:24 PM
B0212042.d	CCV2	CCV	1	02/13/24 7:29 PM

INJECTION LOG: 240213B

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
B0212043.d	CCB2	CCB	1	02/13/24 7:34 PM
B0212044.d	N063004-003A	SAMP	1	02/13/24 7:38 PM
B0212045.d	N062980-001B	SAMP	25	02/13/24 7:43 PM
B0212046.d	N062980-001B-PS	PS	5	02/13/24 7:47 PM
B0212047.d	N062980-001B-MS	MS	5	02/13/24 7:52 PM
B0212048.d	N062980-001B-MSD	MSD	5	02/13/24 7:57 PM
B0212049.d	N063004-001A	SAMP	5	02/13/24 8:01 PM
B0212050.d	N063004-002A	SAMP	5	02/13/24 8:06 PM
B0212051.d	N063004-002A	SAMP	25	02/13/24 8:11 PM
B0212052.d	N063004-003A	SAMP	5	02/13/24 8:15 PM
B0212053.d	RINSE	ICAL	1	02/13/24 8:20 PM
B0212054.d	CCV3	CCV	1	02/13/24 8:24 PM
B0212055.d	CCB3	CCB	1	02/13/24 8:29 PM
B0212056.d	MB-106800	MBLK	1	02/13/24 8:34 PM
B0212057.d	LCS-106800	LCS	1	02/13/24 8:39 PM
B0212058.d	N063074-001A	SAMP	1	02/13/24 8:43 PM
B0212059.d	N063074-001A	SAMP	5	02/13/24 8:48 PM
B0212060.d	N063074-001A-PS	PS	1	02/13/24 8:53 PM
B0212061.d	N063074-001A-MS	MS	1	02/13/24 8:57 PM
B0212062.d	N063074-001A-MSD	MSD	1	02/13/24 9:02 PM
B0212063.d	N063074-002A	SAMP	1	02/13/24 9:07 PM
B0212064.d	RINSE	ICAL	1	02/13/24 9:11 PM
B0212065.d	CCV4	CCV	1	02/13/24 9:16 PM
B0212066.d	CCB4	CCB	1	02/13/24 9:20 PM
B0212067.d	ICSA3	ICSA	1	02/13/24 9:25 PM
B0212068.d	ICSAB3	ICSAB	1	02/13/24 9:30 PM
B0212069.d	MB-106782	MBLK	1	02/13/24 9:34 PM
B0212070.d	LCS-106782	LCS	1	02/13/24 9:39 PM
B0212071.d	N063053-001C	SAMP	1	02/13/24 9:44 PM
B0212072.d	N063053-002C	SAMP	1	02/13/24 9:48 PM
B0212073.d	N063053-003C	SAMP	1	02/13/24 9:53 PM
B0212074.d	N063053-004C	SAMP	1	02/13/24 9:57 PM
B0212075.d	N063053-005C	SAMP	1	02/13/24 10:02 PM
B0212076.d	N063053-006C	SAMP	1	02/13/24 10:07 PM
B0212077.d	N063053-007C	SAMP	1	02/13/24 10:11 PM
B0212078.d	RINSE	ICAL	1	02/13/24 10:16 PM
B0212079.d	CCV5	CCV	1	02/13/24 10:21 PM
B0212080.d	CCB5	CCB	1	02/13/24 10:25 PM
B0212081.d	N063053-008C	SAMP	1	02/13/24 10:30 PM
B0212082.d	N063053-009C	SAMP	1	02/13/24 10:35 PM
B0212083.d	N063053-010C	SAMP	1	02/13/24 10:39 PM
B0212084.d	N063053-011C	SAMP	1	02/13/24 10:44 PM

INJECTION LOG: 240213B

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
B0212085.d	N063053-011C	SAMP	5	02/13/24 10:49 PM
B0212086.d	N063053-011C-PS	PS	1	02/13/24 10:53 PM
B0212087.d	N063053-011CMS	MS	1	02/13/24 10:58 PM
B0212088.d	N063053-011CMSD	MSD	1	02/13/24 11:02 PM
B0212089.d	N063053-018B	SAMP	1	02/13/24 11:07 PM
B0212090.d	RINSE	ICAL	1	02/13/24 11:12 PM
B0212091.d	CCV6	CCV	1	02/13/24 11:16 PM
B0212092.d	CCB6	CCB	1	02/13/24 11:21 PM
B0212093.d	ICSA4	ICSA	1	02/13/24 11:26 PM
B0212094.d	ICSAB4	ICSAB	1	02/13/24 11:30 PM
B0212095.d	MB-106751	MBLK	1	02/13/24 11:35 PM
B0212096.d	LCS-106751	LCS	1	02/13/24 11:40 PM
B0212097.d	N063010-001B	SAMP	100	02/13/24 11:44 PM
B0212098.d	N063010-002B	SAMP	100	02/13/24 11:49 PM
B0212099.d	N063010-003B	SAMP	100	02/13/24 11:54 PM
B0212100.d	N063012-001C	SAMP	1	02/13/24 11:58 PM
B0212101.d	N063012-001C	SAMP	5	02/14/24 12:03 AM
B0212102.d	N063012-001C	SAMP	10	02/14/24 12:08 AM
B0212103.d	N063012-001C	SAMP	50	02/14/24 12:12 AM
B0212104.d	CCV7	CCV	1	02/14/24 12:17 AM
B0212105.d	CCB7	CCB	1	02/14/24 12:22 AM
B0212106.d	N063012-001C-PS	PS	1	02/14/24 12:26 AM
B0212107.d	N063012-001C-PS	PS	10	02/14/24 12:31 AM
B0212108.d	N063012-001C-MS	MS	1	02/14/24 12:36 AM
B0212109.d	N063012-001C-MS	MS	10	02/14/24 12:40 AM
B0212110.d	N063012-001C-MSD	MSD	1	02/14/24 12:45 AM
B0212111.d	N063012-001C-MSD	MSD	10	02/14/24 12:50 AM
B0212112.d	N063012-002C	SAMP	1	02/14/24 12:54 AM
B0212113.d	N063012-002C	SAMP	100	02/14/24 12:59 AM
B0212114.d	N063012-003C	SAMP	1	02/14/24 1:03 AM
B0212115.d	N063012-003C	SAMP	100	02/14/24 1:08 AM
B0212116.d	CCV8	CCV	1	02/14/24 1:13 AM
B0212117.d	CCB8	CCB	1	02/14/24 1:17 AM
B0212118.d	N063012-004C	SAMP	1	02/14/24 1:22 AM
B0212119.d	N063012-004C	SAMP	100	02/14/24 1:27 AM
B0212120.d	N063012-006C	SAMP	1	02/14/24 1:31 AM
B0212121.d	N063012-006C	SAMP	100	02/14/24 1:36 AM
B0212122.d	N063012-007C	SAMP	1	02/14/24 1:41 AM
B0212123.d	N063012-007C	SAMP	10	02/14/24 1:45 AM
B0212124.d	N063012-009C	SAMP	1	02/14/24 1:50 AM
B0212125.d	N063012-009C	SAMP	10	02/14/24 1:55 AM
B0212126.d	RINSE	ICAL	1	02/14/24 1:59 AM

INJECTION LOG: 240213B

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
B0212127.d	CCV9	CCV	1	02/14/24 2:04 AM
B0212128.d	CCB9	CCB	1	02/14/24 2:08 AM
B0212129.d	ICSA5	ICSA	1	02/14/24 2:13 AM
B0212130.d	ICSAB5	ICSAB	1	02/14/24 2:18 AM
B0212131.d	MB-106752	MBLK	1	02/14/24 2:22 AM
B0212132.d	LCS-106752	LCS	1	02/14/24 2:27 AM
B0212133.d	N063010-001C	SAMP	1	02/14/24 2:32 AM
B0212134.d	N063010-002C	SAMP	1	02/14/24 2:36 AM
B0212135.d	N063010-002C	SAMP	5	02/14/24 2:41 AM
B0212136.d	N063010-002C-PS	PS	1	02/14/24 2:46 AM
B0212137.d	N063010-002C-MS	MS	1	02/14/24 2:50 AM
B0212138.d	N063010-002C-MSD	MSD	1	02/14/24 2:55 AM
B0212139.d	N063010-003C	SAMP	1	02/14/24 3:00 AM
B0212140.d	RINSE	ICAL	1	02/14/24 3:04 AM
B0212141.d	CCV10	CCV	1	02/14/24 3:09 AM
B0212142.d	CCB10	CCB	1	02/14/24 3:14 AM
B0212143.d	N062911-003A	SAMP	1	02/14/24 3:18 AM
B0212144.d	N062911-003C	SAMP	1	02/14/24 3:23 AM
B0212145.d	N062911-004A	SAMP	1	02/14/24 3:28 AM
B0212146.d	N062911-004C	SAMP	1	02/14/24 3:32 AM
B0212147.d	RINSE	ICAL	1	02/14/24 3:37 AM
B0212148.d	CCV11	CCV	1	02/14/24 3:42 AM
B0212149.d	CCB11	CCB	1	02/14/24 3:46 AM
B0212150.d	ICSA6	ICSA	1	02/14/24 3:51 AM
B0212151.d	ICSAB6	ICSAB	1	02/14/24 3:56 AM
B0212152.d	RINSE	ICAL	1	02/14/24 4:00 AM
B0212153.d	RINSE	ICAL	1	02/14/24 4:05 AM
B0212154.d	RINSE	ICAL	1	02/14/24 4:09 AM
B0212155.d	RINSE	ICAL	1	02/14/24 4:14 AM

INJECTION LOG: 240214A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0214001.d	RINSE	ICAL	1	02/14/24 12:55 PM
A0214002.d	RINSE	ICAL	1	02/14/24 12:59 PM
A0214003.d	Cal Blk	IBLK	1	02/14/24 1:04 PM
A0214004.d	Std1-0.1/1 ppb	ICAL	1	02/14/24 1:09 PM
A0214005.d	Std2-0.5/5 ppb	ICAL	1	02/14/24 1:13 PM
A0214006.d	Std3-5/50 ppb	ICAL	1	02/14/24 1:18 PM
A0214007.d	Std4-10/100 ppb	ICAL	1	02/14/24 1:23 PM
A0214008.d	Std5-4.0/20/200 ppb	ICAL	1	02/14/24 1:28 PM
A0214009.d	Std6-8.0/40/400 ppb	ICAL	1	02/14/24 1:32 PM
A0214010.d	Std7-100/1000 ppb	ICAL	1	02/14/24 1:37 PM
A0214011.d	Std8-200/2000 ppb	ICAL	1	02/14/24 1:42 PM
A0214012.d	ICV	ICV	1	02/14/24 1:53 PM
A0214013.d	ICB	ICB	1	02/14/24 1:57 PM
A0214014.d	LLICV1	CCV1	1	02/14/24 2:02 PM
A0214015.d	MLCCV	CCV	1	02/14/24 2:07 PM
A0214016.d	ICSA1	ICSA	1	02/14/24 2:11 PM
A0214017.d	ICSAB1	ICSAB	1	02/14/24 2:16 PM
A0214018.d	MB-106801	MBLK	1	02/14/24 2:28 PM
A0214019.d	LCS-106801	LCS	1	02/14/24 2:32 PM
A0214020.d	N062947-001A	SAMP	1	02/14/24 2:37 PM
A0214021.d	N062947-001A	SAMP	5	02/14/24 2:42 PM
A0214022.d	N062947-001A	SAMP	10	02/14/24 2:47 PM
A0214023.d	N062947-001A	SAMP	50	02/14/24 2:51 PM
A0214024.d	N062947-001A-PS	PS	1	02/14/24 2:56 PM
A0214025.d	N062947-001A-PS	PS	10	02/14/24 3:00 PM
A0214026.d	N062947-001A-MS	MS	1	02/14/24 3:05 PM
A0214027.d	N062947-001A-MS	MS	10	02/14/24 3:10 PM
A0214028.d	CCV1	CCV	1	02/14/24 3:14 PM
A0214029.d	CCB1	CCB	1	02/14/24 3:19 PM
A0214030.d	N062947-001A-MSD	MSD	1	02/14/24 3:24 PM
A0214031.d	N062947-001A-MSD	MSD	10	02/14/24 3:28 PM
A0214032.d	N062947-002A	SAMP	1	02/14/24 3:33 PM
A0214033.d	N062947-003A	SAMP	1	02/14/24 3:38 PM
A0214034.d	N062947-004A	SAMP	1	02/14/24 3:42 PM
A0214035.d	N062947-004A	SAMP	10	02/14/24 3:47 PM
A0214036.d	N062947-005A	SAMP	1	02/14/24 3:52 PM
A0214037.d	N062947-006A	SAMP	1	02/14/24 3:56 PM
A0214038.d	N062947-007A	SAMP	1	02/14/24 4:01 PM
A0214039.d	N062947-007A	SAMP	100	02/14/24 4:06 PM
A0214040.d	CCV2	CCV	1	02/14/24 4:10 PM
A0214041.d	CCB2	CCB	1	02/14/24 4:15 PM
A0214042.d	N062947-008A	SAMP	1	02/14/24 4:20 PM

INJECTION LOG: 240214A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0214043.d	N062947-009A	SAMP	1	02/14/24 4:24 PM
A0214044.d	N062947-010A	SAMP	1	02/14/24 4:29 PM
A0214045.d	N062947-010A	SAMP	10	02/14/24 4:34 PM
A0214046.d	N062947-011A	SAMP	1	02/14/24 4:38 PM
A0214047.d	N062947-012A	SAMP	1	02/14/24 4:43 PM
A0214048.d	N062947-013A	SAMP	1	02/14/24 4:48 PM
A0214049.d	N062947-013A	SAMP	10	02/14/24 4:52 PM
A0214050.d	N062947-014A	SAMP	1	02/14/24 4:57 PM
A0214051.d	N062947-015A	SAMP	1	02/14/24 5:02 PM
A0214052.d	CCV3	CCV	1	02/14/24 5:06 PM
A0214053.d	CCB3	CCB	1	02/14/24 5:11 PM
A0214054.d	ICSA2	ICSA	1	02/14/24 5:16 PM
A0214055.d	ICSAB2	ICSAB	1	02/14/24 5:20 PM
A0214056.d	N062947-016A	SAMP	1	02/14/24 5:25 PM
A0214057.d	N062947-016A	SAMP	10	02/14/24 5:29 PM
A0214058.d	N062947-017A	SAMP	1	02/14/24 5:34 PM
A0214059.d	N062947-017A	SAMP	10	02/14/24 5:39 PM
A0214060.d	N062947-018A	SAMP	1	02/14/24 5:44 PM
A0214061.d	N062947-022A	SAMP	1	02/14/24 5:48 PM
A0214062.d	N062947-022A	SAMP	10	02/14/24 5:53 PM
A0214063.d	N062947-023A	SAMP	1	02/14/24 5:57 PM
A0214064.d	CCV4	CCV	1	02/14/24 6:02 PM
A0214065.d	CCB4	CCB	1	02/14/24 6:07 PM
A0214066.d	MB-106802	MBLK	1	02/14/24 6:11 PM
A0214067.d	LCS-106802	LCS	1	02/14/24 6:16 PM
A0214068.d	N062947-024A	SAMP	1	02/14/24 6:21 PM
A0214069.d	N062947-024A	SAMP	5	02/14/24 6:25 PM
A0214070.d	N062947-024A-PS	PS	1	02/14/24 6:30 PM
A0214071.d	N062947-024A-MS	MS	1	02/14/24 6:35 PM
A0214072.d	N062947-024A-MSD	MSD	1	02/14/24 6:39 PM
A0214073.d	N063063-005A	SAMP	1	02/14/24 6:44 PM
A0214074.d	N063063-010A	SAMP	1	02/14/24 6:49 PM
A0214075.d	N063063-015A	SAMP	1	02/14/24 6:53 PM
A0214076.d	CCV5	CCV	1	02/14/24 6:58 PM
A0214077.d	CCB5	CCB	1	02/14/24 7:03 PM
A0214078.d	N063063-020A	SAMP	1	02/14/24 7:07 PM
A0214079.d	N063063-025A	SAMP	1	02/14/24 7:12 PM
A0214080.d	CCV6	CCV	1	02/14/24 7:17 PM
A0214081.d	CCB6	CCB	1	02/14/24 7:21 PM
A0214082.d	ICSA3	ICSA	1	02/14/24 7:26 PM
A0214083.d	ICSAB3	ICSAB	1	02/14/24 7:31 PM
A0214084.d	N063053-005C	SAMP	10	02/14/24 7:35 PM

INJECTION LOG: 240214A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0214085.d	N063053-006C	SAMP	10	02/14/24 7:40 PM
A0214086.d	N063053-011C	SAMP	10	02/14/24 7:45 PM
A0214087.d	N063053-011C	SAMP	50	02/14/24 7:49 PM
A0214088.d	N063053-011C-PS	PS	10	02/14/24 7:54 PM
A0214089.d	N063053-011CMS	MS	10	02/14/24 7:59 PM
A0214090.d	N063053-011CMSD	MSD	10	02/14/24 8:03 PM
A0214091.d	N063053-018B	SAMP	10	02/14/24 8:08 PM
A0214092.d	CCV7	CCV	1	02/14/24 8:13 PM
A0214093.d	CCB7	CCB	1	02/14/24 8:17 PM
A0214094.d	N063012-002C	SAMP	1	02/14/24 8:22 PM
A0214095.d	N063012-006C	SAMP	1	02/14/24 8:27 PM
A0214096.d	N063012-002C	SAMP	1	02/14/24 8:31 PM
A0214097.d	N063012-006C	SAMP	1	02/14/24 8:36 PM
A0214098.d	N063012-002C	SAMP	1	02/14/24 8:41 PM
A0214099.d	N063012-006C	SAMP	1	02/14/24 8:45 PM
A0214100.d	N063012-002C	SAMP	1	02/14/24 8:50 PM
A0214101.d	N063012-006C	SAMP	1	02/14/24 8:55 PM
A0214102.d	N063012-009C	SAMP	100	02/14/24 8:59 PM
A0214103.d	RINSE	ICAL	1	02/14/24 9:04 PM
A0214104.d	CCV8	CCV	1	02/14/24 9:09 PM
A0214105.d	CCB8	CCB	1	02/14/24 9:13 PM
A0214106.d	ICSA4	ICSA	1	02/14/24 9:18 PM
A0214107.d	ICSAB4	ICSAB	1	02/14/24 9:22 PM
A0214108.d	RINSE	ICAL	1	02/14/24 9:27 PM
A0214109.d	RINSE	ICAL	1	02/14/24 9:32 PM
A0214110.d	RINSE	ICAL	1	02/14/24 9:36 PM
A0214111.d	RINSE	ICAL	1	02/14/24 9:41 PM
A0214112.d	RINSE	ICAL	1	02/14/24 9:46 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/13/2024 10:38:11 AM**
Prep End Date: **2/13/2024 3:00:00 PM**

Reviewed/ Date: JRB 3/12/2024
Initials/ Date: for

Prep Batch **106782** Prep Code:**3010_W_MSDISS_TPK** Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-50**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-106782	Aqueous		25	☐	25	1.000		
MB-106782	Aqueous		25	☐	25	1.000		
N063053-001C	Groundwater	<2	25	☐	25	1.000		
N063053-002C	Groundwater	<2	25	☐	25	1.000		
N063053-003C	Groundwater	<2	25	☐	25	1.000		
N063053-004C	Groundwater	<2	25	☐	25	1.000		
N063053-005C	Groundwater	<2	25	☐	25	1.000		
N063053-006C	Groundwater	<2	25	☐	25	1.000		
N063053-007C	Groundwater	<2	25	☐	25	1.000		
N063053-008C	Groundwater	<2	25	☐	25	1.000		
N063053-009C	Groundwater	<2	25	☐	25	1.000		
N063053-010C	Groundwater	<2	25	☐	25	1.000		
N063053-011C	Groundwater	<2	25	☐	25	1.000		
N063053-011CMS	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/13/2024 10:38:11 AM**
Prep End Date: **2/13/2024 3:00:00 PM**
Prep Batch **106782** Prep Code:**3010_W_MSDISS_TPK**

Reviewed/ Date: JRB 3/12/2024
Initials/ Date: for
Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-50**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063053-011CMSD	Groundwater	<2	25	☐	25	1.000		
N063053-018B	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240212A1.b
Acq. Date-Time	2024-02-13 13:18:10
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

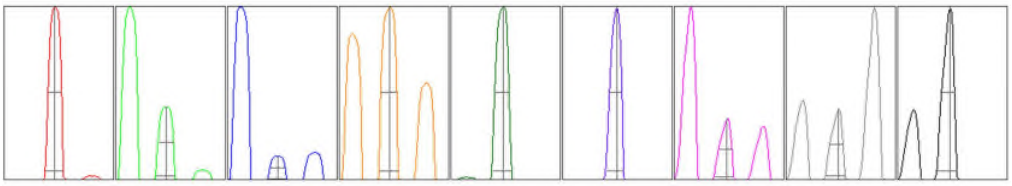
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	8245	82449.38	500.00		2.712	5.000
24	10.00	25758	257582.44	500.00		3.293	5.000
25	10.00	3427	34266.76	500.00		3.815	5.000
26	10.00	3969	39685.69	500.00		3.251	5.000
59	10.00	38046	380464.54	500.00		3.267	5.000
115	10.00	42132	421315.70	500.00		2.641	5.000
206	10.00	8142	81420.90	500.00		2.452	5.000
207	10.00	6668	66680.07	500.00		2.574	5.000
208	10.00	16728	167275.23	500.00		2.870	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.592 %
Doubly Charged	70 / 140 0.930 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	8361.45	8.90	8.90 - 9.10	
24	25534.12	23.90	23.90 - 24.10	
25	3364.93	24.90	24.90 - 25.10	
26	3979.79	25.90	25.90 - 26.10	
59	36714.77	58.95	58.90 - 59.10	
115	40987.75	115.00	114.90 - 115.10	
206	7798.97	205.95	205.90 - 206.10	
207	6952.99	206.95	206.90 - 207.10	
208	17303.30	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.38	0.489	0.900	
24	0.43	0.539	0.900	
25	0.42	0.527	0.900	
26	0.44	0.541	0.900	
59	0.40	0.537	0.900	
115	0.35	0.490	0.900	
206	0.37	0.548	0.900	
207	0.37	0.565	0.900	
208	0.36	0.567	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2520 V	Pulse HV	1597 V

[H2]

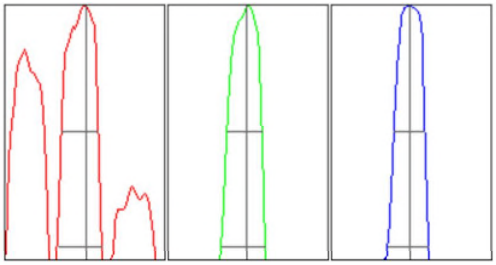
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		222	2220.54			6.768	
59		2795	27951.66			3.033	
115		34954	349535.75			2.621	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.483 %
Doubly Charged	70 / 140 0.313 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	239.52	26.05	25.90 - 26.10	
59	2999.30	59.00	58.90 - 59.10	
115	36764.79	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.70	0.833	0.900	
59	0.66	0.825	0.900	
115	0.59	0.769	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	0.9998	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm		

EM

Discriminator	4.5 mV	Analog HV	2520 V	Pulse HV	1597 V

[He]

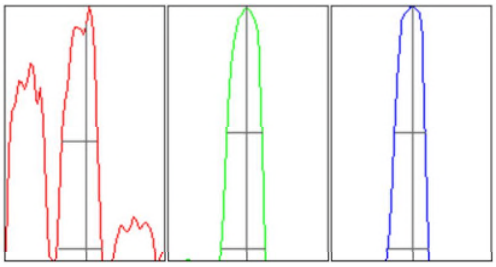
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		98	980.83			11.500	
59		7994	79937.51			2.040	
115		6316	63162.00			2.613	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.201 %
Doubly Charged	70 / 140 1.234 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	100.26	26.05	25.90 - 26.10	
59	8186.64	59.00	58.90 - 59.10	
115	6423.35	115.05	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.68	0.832	0.900	
59	0.66	0.824	0.900	
115	0.58	0.764	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	0.9998	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

EM

Discriminator	4.5 mV	Analog HV	2520 V	Pulse HV	1597 V

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240213B.b
Acq. Date-Time	2024-02-14 11:17:09
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

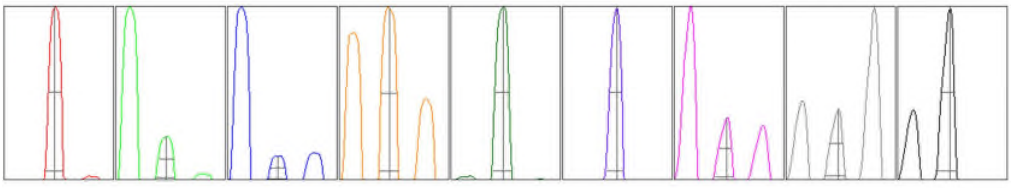
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	6829	68286.33	500.00		3.270	5.000
24	10.00	21059	210594.52	500.00		3.590	5.000
25	10.00	2827	28273.39	500.00		3.737	5.000
26	10.00	3257	32566.27	500.00		4.393	5.000
59	10.00	33240	332400.18	500.00		3.021	5.000
115	10.00	40433	404331.56	500.00		3.210	5.000
206	10.00	7813	78128.40	500.00		2.429	5.000
207	10.00	6399	63989.58	500.00		3.045	5.000
208	10.00	16051	160507.18	500.00		2.528	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.652 %
Doubly Charged	70 / 140 0.853 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	6715.21	8.90	8.90 - 9.10	
24	20772.34	23.90	23.90 - 24.10	
25	2715.49	24.90	24.90 - 25.10	
26	3170.03	25.90	25.90 - 26.10	
59	31889.32	58.95	58.90 - 59.10	
115	39201.75	115.00	114.90 - 115.10	
206	7536.57	205.95	205.90 - 206.10	
207	6725.64	206.95	206.90 - 207.10	
208	16650.23	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.488	0.900	
24	0.42	0.537	0.900	
25	0.42	0.516	0.900	
26	0.44	0.540	0.900	
59	0.40	0.536	0.900	
115	0.35	0.490	0.900	
206	0.37	0.553	0.900	
207	0.36	0.570	0.900	
208	0.36	0.567	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2523 V	Pulse HV	1599 V

[H2]

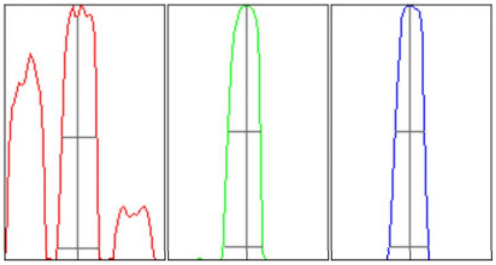
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		181	1807.10			7.840	
59		2317	23165.53			4.084	
115		31872	318720.09			2.612	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.516 %
Doubly Charged	70 / 140 0.279 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	183.52	25.90	25.90 - 26.10	
59	2403.58	59.00	58.90 - 59.10	
115	33115.73	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.67	0.784	0.900	
59	0.62	0.741	0.900	
115	0.56	0.735	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0001	QP Bias	-15.0 V
Mass Offset	126	Axis Offset	-0.01		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm		

EM

Discriminator	4.5 mV	Analog HV	2523 V	Pulse HV	1599 V

[He]

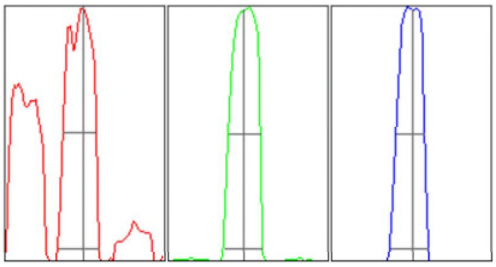
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		84	835.82			11.359	
59		7016	70161.18			2.114	
115		5649	56492.44			2.264	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.197 %
Doubly Charged	70 / 140 1.107 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	92.01	26.00	25.90 - 26.10	
59	6985.39	58.95	58.90 - 59.10	
115	5652.17	115.05	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.64	0.778	0.900	
59	0.61	0.740	0.900	
115	0.55	0.732	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0001	QP Bias	-13.0 V
Mass Offset	126	Axis Offset	-0.01		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

EM

Discriminator	4.5 mV	Analog HV	2523 V	Pulse HV	1599 V

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240213B

Instrument ID: ICPMS-03

Analyte	Data File	B0212003.d	B0212004.d	B0212005.d	B0212006.d	B0212007.d	B0212008.d	B0212009.d	B0212010.d	B0212011.d	
	Acq. Date-Time	02/13/2024 04:04 PM	02/13/2024 04:09 PM	02/13/2024 04:13 PM	02/13/2024 04:18 PM	02/13/2024 04:23 PM	02/13/2024 04:28 PM	02/13/2024 04:32 PM	02/13/2024 04:37 PM	02/13/2024 04:42 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	43000.7		42724.4	42874.9	42417	42667.7	42568.5	42198.7	42415.9	
55 Mn [2]	CPS	33.1		721.8	7054	14549.3	28739.9	58320.1	146157.1	293287.6	1.0000
52 Cr [2]	CPS	251.1		1581.2	13968.1	28486.6	55957.1	113632.2	285374.3	574821.1	1.0000
72 Ge (ISTD) [1]	CPS	79028.6		78175.7	76637.3	78343	77369.6	78673.5	77349.6	78471.6	
78 Se [1]	CPS	0		95.6	937.8	2012.4	3936	8007.6	19559.6	40229.6	1.0000
72 Ge (ISTD) [2]	CPS	25142.6	25284	24816.6	24805.5	24884.5	24590.7	25089.2	24572.9	25298.5	
75 As [2]	CPS	4.4	36.6	168.9	1626.7	3320.2	6557.8	13290.7	33901	67953.3	0.9999
103 Rh (ISTD) [2]	CPS	621548.1		620934.8	617821.7	620608.5	618968.5	618911.6	610090.1	610476.7	
95 Mo [2]	CPS	7.8		701.1	7102.7	13960.5	28567.6	58445.8	146469	297422.5	1.0000
159 Tb (ISTD) [3]	CPS	1810438.2		1777515.2	1775715.9	1799147	1795071.3	1777274	1760036	1769007	
137 Ba [3]	CPS	20		1633.4	17543.5	35166.7	69049.6	140755.1	355879.5	716850.1	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION SUMMARY: 240214A

Instrument ID: ICPMS-03

Analyte	Data File	A0214003.d	A0214005.d	A0214006.d	A0214007.d	A0214008.d	A0214009.d	A0214010.d	A0214011.d	
	Acq. Date-Time	02/14/2024 01:04 PM	02/14/2024 01:13 PM	02/14/2024 01:18 PM	02/14/2024 01:23 PM	02/14/2024 01:28 PM	02/14/2024 01:32 PM	02/14/2024 01:37 PM	02/14/2024 01:42 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	36825	37198	37387.3	36866.1	37191.3	37189.1	37287.1	36798.3	
55 Mn [2]	CPS	33.2	619.6	6379.8	12953.3	25019.1	51520	128835.7	257145.2	1.0000
52 Cr [2]	CPS	238.9	1456.7	12529.2	24934.3	49310.7	100222.4	251145	503970.9	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **ICV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689847**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.695	0.10	10.00	0	107	90	110				
Barium	10.054	1.0	10.00	0	101	90	110				
Manganese	102.072	0.50	100.0	0	102	90	110				
Molybdenum	10.153	0.50	10.00	0	102	90	110				
Selenium	10.406	0.50	10.00	0	104	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **ZZZZZZ** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689849**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	1.094	1.0	1.000	0	109	80	120				
Manganese	0.539	0.50	0.5000	0	108	80	120				
Molybdenum	0.489	0.50	0.5000	0	97.7	80	120				
Selenium	0.547	0.50	0.5000	0	109	80	120				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **ZZZZZZ** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689850**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.101	0.10	0.1000	0	101	80	120				

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689851**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.530	0.10	20.00	0	97.6	90	110				
Barium	19.062	1.0	20.00	0	95.3	90	110				
Manganese	19.704	0.50	20.00	0	98.5	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689851**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	19.129	0.50	20.00	0	95.6	90	110				
Selenium	19.673	0.50	20.00	0	98.4	90	110				

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689863**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.059	0.10	20.00	0	100	90	110				
Barium	19.205	1.0	20.00	0	96.0	90	110				
Manganese	19.543	0.50	20.00	0	97.7	90	110				
Molybdenum	19.178	0.50	20.00	0	95.9	90	110				
Selenium	19.119	0.50	20.00	0	95.6	90	110				

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689876**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.282	0.10	20.00	0	101	90	110				
Barium	19.418	1.0	20.00	0	97.1	90	110				
Manganese	19.269	0.50	20.00	0	96.3	90	110				
Molybdenum	19.324	0.50	20.00	0	96.6	90	110				
Selenium	20.863	0.50	20.00	0	104	90	110				

Sample ID **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689887**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.521	0.10	20.00	0	97.6	90	110				
Barium	19.121	1.0	20.00	0	95.6	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **CCV**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689887**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.380	0.50	20.00	0	96.9	90	110				
Molybdenum	19.067	0.50	20.00	0	95.3	90	110				
Selenium	20.047	0.50	20.00	0	100	90	110				

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **CCV**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689897**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.983	0.10	20.00	0	99.9	90	110				
Barium	19.281	1.0	20.00	0	96.4	90	110				
Manganese	19.626	0.50	20.00	0	98.1	90	110				
Molybdenum	19.224	0.50	20.00	0	96.1	90	110				
Selenium	19.276	0.50	20.00	0	96.4	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **CCV**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689910**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.610	0.10	20.00	0	98.0	90	110				
Barium	19.925	1.0	20.00	0	99.6	90	110				
Manganese	19.415	0.50	20.00	0	97.1	90	110				
Molybdenum	19.732	0.50	20.00	0	98.7	90	110				
Selenium	19.648	0.50	20.00	0	98.2	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **CCV**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689921**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.465	0.10	20.00	0	97.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV6** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689921**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.010	1.0	20.00	0	100	90	110				
Manganese	18.927	0.50	20.00	0	94.6	90	110				
Molybdenum	19.161	0.50	20.00	0	95.8	90	110				
Selenium	18.658	0.50	20.00	0	93.3	90	110				

Sample ID **CCV7** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/14/2024** SeqNo: **5689934**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.374	0.10	20.00	0	96.9	90	110				
Barium	19.861	1.0	20.00	0	99.3	90	110				
Manganese	19.690	0.50	20.00	0	98.4	90	110				
Molybdenum	19.254	0.50	20.00	0	96.3	90	110				
Selenium	19.455	0.50	20.00	0	97.3	90	110				

Sample ID **CCV8** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/14/2024** SeqNo: **5689946**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.493	0.10	20.00	0	97.5	90	110				
Barium	19.415	1.0	20.00	0	97.1	90	110				
Manganese	19.320	0.50	20.00	0	96.6	90	110				
Molybdenum	19.016	0.50	20.00	0	95.1	90	110				
Selenium	19.781	0.50	20.00	0	98.9	90	110				

Sample ID **CCV9** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCV** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/14/2024** SeqNo: **5689956**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV9**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **CCV**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5689956**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.908	0.10	20.00	0	99.5	90	110				
Barium	19.772	1.0	20.00	0	98.9	90	110				
Manganese	19.722	0.50	20.00	0	98.6	90	110				
Molybdenum	19.200	0.50	20.00	0	96.0	90	110				
Selenium	19.986	0.50	20.00	0	99.9	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181560**
Client ID: **ICV** Batch ID: **R181560** TestNo: **EPA 6020** Analysis Date: **2/14/2024** SeqNo: **5692227**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.342	0.10	10.00	0	103	90	110				
Manganese	105.069	0.50	100.0	0	105	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181560**
Client ID: **ZZZZZZ** Batch ID: **R181560** TestNo: **EPA 6020** Analysis Date: **2/14/2024** SeqNo: **5692229**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.116	0.10	0.1000	0	116	80	120				
Manganese	0.521	0.50	0.5000	0	104	80	120				

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181560**
Client ID: **CCV** Batch ID: **R181560** TestNo: **EPA 6020** Analysis Date: **2/14/2024** SeqNo: **5692230**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.668	0.10	20.00	0	98.3	90	110				
Manganese	19.648	0.50	20.00	0	98.2	90	110				

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181560**
Client ID: **CCV** Batch ID: **R181560** TestNo: **EPA 6020** Analysis Date: **2/14/2024** SeqNo: **5692243**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.029	0.10	20.00	0	100	90	110				
Manganese	19.565	0.50	20.00	0	97.8	90	110				

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181560**
Client ID: **CCV** Batch ID: **R181560** TestNo: **EPA 6020** Analysis Date: **2/14/2024** SeqNo: **5692255**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.272	0.10	20.00	0	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181560**
Client ID: **CCV** Batch ID: **R181560** TestNo: **EPA 6020** Analysis Date: **2/14/2024** SeqNo: **5692255**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.927	0.50	20.00	0	99.6	90	110				

Sample ID **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181560**
Client ID: **CCV** Batch ID: **R181560** TestNo: **EPA 6020** Analysis Date: **2/14/2024** SeqNo: **5692267**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.420	0.10	20.00	0	97.1	90	110				
Manganese	19.977	0.50	20.00	0	99.9	90	110				

Sample ID **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181560**
Client ID: **CCV** Batch ID: **R181560** TestNo: **EPA 6020** Analysis Date: **2/14/2024** SeqNo: **5692279**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.466	0.10	20.00	0	97.3	90	110				
Manganese	19.557	0.50	20.00	0	97.8	90	110				

Sample ID **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181560**
Client ID: **CCV** Batch ID: **R181560** TestNo: **EPA 6020** Analysis Date: **2/14/2024** SeqNo: **5692291**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.723	0.10	20.00	0	98.6	90	110				
Manganese	20.030	0.50	20.00	0	100	90	110				

Sample ID **CCV6** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181560**
Client ID: **CCV** Batch ID: **R181560** TestNo: **EPA 6020** Analysis Date: **2/14/2024** SeqNo: **5692295**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.296	0.10	20.00	0	101	90	110				
Manganese	19.818	0.50	20.00	0	99.1	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV7**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCV**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692307**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.332	0.10	20.00	0	96.7	90	110				
Manganese	19.564	0.50	20.00	0	97.8	90	110				

Sample ID **CCV8**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCV**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692318**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.925	0.10	20.00	0	99.6	90	110				
Manganese	19.451	0.50	20.00	0	97.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICV**	SampType: **ICV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **ICV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690013**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.267	1.0	10.00	0	103	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **ZZZZZZ**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690015**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.996	1.0	1.000	0	99.6	80	120				

Sample ID **MLCCV**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690017**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.243	1.0	20.00	0	96.2	90	110				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690029**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.336	1.0	20.00	0	96.7	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690042**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.402	1.0	20.00	0	97.0	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690053**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.214	1.0	20.00	0	96.1	90	110				

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690063**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.450	1.0	20.00	0	97.2	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690076**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.370	1.0	20.00	0	96.8	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690087**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.100	1.0	20.00	0	95.5	90	110				

Sample ID **CCV7**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5690100**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.550	1.0	20.00	0	97.7	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCV8**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5690112**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.436	1.0	20.00	0	97.2	90	110				

Sample ID **CCV9**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCV**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5690122**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.559	1.0	20.00	0	97.8	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICV**	SampType: **ICV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **ICV**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692323**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.428	1.0	10.00	0	104	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **ZZZZZZ**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692325**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	1.096	1.0	1.000	0	110	80	120				

Sample ID **MLCCV**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **CCV**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692326**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.741	1.0	20.00	0	98.7	90	110				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **CCV**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692339**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.654	1.0	20.00	0	98.3	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **CCV**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692351**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.831	1.0	20.00	0	99.2	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **CCV**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692363**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.999	1.0	20.00	0	100	90	110				

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **CCV**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692375**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.871	1.0	20.00	0	99.4	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **CCV**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692387**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.440	1.0	20.00	0	97.2	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **CCV**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692391**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.751	1.0	20.00	0	98.8	90	110				

Sample ID **CCV7**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **CCV**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692403**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.596	1.0	20.00	0	98.0	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCV8**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **CCV**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692414**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.589	1.0	20.00	0	97.9	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB**	SampType: **ICB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **ICB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689848**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **CCB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689864**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **CCB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689877**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **CCB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689888**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **CCB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689898**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **CCB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689911**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **CCB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689922**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB7**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **CCB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5689935**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB8**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **CCB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5689947**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB9** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **CCB** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/14/2024** SeqNo: **5689957**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB**	SampType: **ICB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **ICB**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692228**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCB**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692244**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCB**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692256**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCB**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692268**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **CCB**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692280**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	CCB4	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	181560
Client ID:	CCB	Batch ID:	R181560	TestNo:	EPA 6020			Analysis Date:	2/14/2024	SeqNo:	5692280

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID	CCB5	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	181560
Client ID:	CCB	Batch ID:	R181560	TestNo:	EPA 6020			Analysis Date:	2/14/2024	SeqNo:	5692292

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID	CCB6	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	181560
Client ID:	CCB	Batch ID:	R181560	TestNo:	EPA 6020			Analysis Date:	2/14/2024	SeqNo:	5692296

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID	CCB7	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	181560
Client ID:	CCB	Batch ID:	R181560	TestNo:	EPA 6020			Analysis Date:	2/14/2024	SeqNo:	5692308

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID	CCB8	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	181560
Client ID:	CCB	Batch ID:	R181560	TestNo:	EPA 6020			Analysis Date:	2/14/2024	SeqNo:	5692319

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICB	SampType:	ICB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181516
Client ID:	ICB	Batch ID:	R181516	TestNo:	EPA 6020			Analysis Date:	2/13/2024	SeqNo:	5690014

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB1	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181516
Client ID:	CCB	Batch ID:	R181516	TestNo:	EPA 6020			Analysis Date:	2/13/2024	SeqNo:	5690030

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB2	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181516
Client ID:	CCB	Batch ID:	R181516	TestNo:	EPA 6020			Analysis Date:	2/13/2024	SeqNo:	5690043

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB3	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181516
Client ID:	CCB	Batch ID:	R181516	TestNo:	EPA 6020			Analysis Date:	2/13/2024	SeqNo:	5690054

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB4	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181516
Client ID:	CCB	Batch ID:	R181516	TestNo:	EPA 6020			Analysis Date:	2/13/2024	SeqNo:	5690064

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCB**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690077**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCB**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690088**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB7**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCB**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5690101**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB8**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCB**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5690113**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB9**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **CCB**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5690123**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICB**	SampType: **ICB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **ICB**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692324**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **CCB**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692340**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **CCB**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692352**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **CCB**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692364**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **CCB**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692376**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **CCB**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692388**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **CCB**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692392**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB7**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **CCB**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692404**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB8**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **CCB**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692415**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **ICSA** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689852**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **ICSAB** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689853**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	21.027	0.10	20.00	0	105	80	120				
Barium	20.173	1.0	20.00	0	101	80	120				
Manganese	20.695	0.50	20.00	0	103	80	120				
Molybdenum	20.274	0.50	20.00	0	101	80	120				
Selenium	20.731	0.50	20.00	0	104	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **ICSA** Batch ID: **R181512** TestNo: **EPA 6020** Analysis Date: **2/13/2024** SeqNo: **5689865**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **ICSAB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689866**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.271	0.10	20.00	0	101	80	120				
Barium	20.366	1.0	20.00	0	102	80	120				
Manganese	20.680	0.50	20.00	0	103	80	120				
Molybdenum	20.038	0.50	20.00	0	100	80	120				
Selenium	20.659	0.50	20.00	0	103	80	120				

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **ICSA**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689899**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **ICSAB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689900**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.539	0.10	20.00	0	103	80	120				
Barium	20.464	1.0	20.00	0	102	80	120				
Manganese	20.581	0.50	20.00	0	103	80	120				
Molybdenum	20.000	0.50	20.00	0	100	80	120				
Selenium	20.330	0.50	20.00	0	102	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA4**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **ICSA**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689923**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **ICSAB4**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **ICSAB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5689924**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.303	0.10	20.00	0	102	80	120				
Barium	21.357	1.0	20.00	0	107	80	120				
Manganese	20.375	0.50	20.00	0	102	80	120				
Molybdenum	19.944	0.50	20.00	0	99.7	80	120				
Selenium	20.021	0.50	20.00	0	100	80	120				

Sample ID **ICSA5**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **ICSA**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5689958**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSAB5**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181512**
Client ID: **ICSAB**	Batch ID: **R181512**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5689959**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.615	0.10	20.00	0	103	80	120				
Barium	20.362	1.0	20.00	0	102	80	120				
Manganese	20.626	0.50	20.00	0	103	80	120				
Molybdenum	20.379	0.50	20.00	0	102	80	120				
Selenium	20.635	0.50	20.00	0	103	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **ICSA**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692231**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **ICSAB1**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **ICSAB**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692232**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.269	0.10	20.00	0	101	80	120				
Manganese	20.723	0.50	20.00	0	104	80	120				

Sample ID **ICSA2**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **ICSA**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692269**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **ICSAB**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692270**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.586	0.10	20.00	0	103	80	120				
Manganese	20.594	0.50	20.00	0	103	80	120				

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181560**
Client ID: **ICSA**	Batch ID: **R181560**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692297**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	ICSA3	SampType:	ICSA	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	181560
Client ID:	ICSA	Batch ID:	R181560	TestNo:	EPA 6020			Analysis Date:	2/14/2024	SeqNo:	5692297

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID	ICSAB3	SampType:	ICSAB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	181560
Client ID:	ICSAB	Batch ID:	R181560	TestNo:	EPA 6020			Analysis Date:	2/14/2024	SeqNo:	5692298

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.615	0.10	20.00	0	103	80	120				
Manganese	20.545	0.50	20.00	0	103	80	120				

Sample ID	ICSA4	SampType:	ICSA	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	181560
Client ID:	ICSA	Batch ID:	R181560	TestNo:	EPA 6020			Analysis Date:	2/14/2024	SeqNo:	5692320

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID	ICSAB4	SampType:	ICSAB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	181560
Client ID:	ICSAB	Batch ID:	R181560	TestNo:	EPA 6020			Analysis Date:	2/14/2024	SeqNo:	5692321

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.954	0.10	20.00	0	105	80	120				
Manganese	20.529	0.50	20.00	0	103	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICSA1	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181516
Client ID:	ICSA	Batch ID:	R181516	TestNo:	EPA 6020			Analysis Date:	2/13/2024	SeqNo:	5690018

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	ICSA2	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181516
Client ID:	ICSA	Batch ID:	R181516	TestNo:	EPA 6020			Analysis Date:	2/13/2024	SeqNo:	5690031

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	ICSAB2	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181516
Client ID:	ICSAB	Batch ID:	R181516	TestNo:	EPA 6020			Analysis Date:	2/13/2024	SeqNo:	5690032

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.611	1.0	20.00	0	103	80	120				

Sample ID	ICSA3	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181516
Client ID:	ICSA	Batch ID:	R181516	TestNo:	EPA 6020			Analysis Date:	2/13/2024	SeqNo:	5690065

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	ICSAB3	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	181516
Client ID:	ICSAB	Batch ID:	R181516	TestNo:	EPA 6020			Analysis Date:	2/13/2024	SeqNo:	5690066

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.456	1.0	20.00	0	102	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICSA4**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **ICSA**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690089**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **ICSAB4**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **ICSAB**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/13/2024**	SeqNo: **5690090**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.309	1.0	20.00	0	102	80	120				

Sample ID **ICSA5**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **ICSA**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5690124**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **ICSAB5**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181516**
Client ID: **ICSAB**	Batch ID: **R181516**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5690125**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.511	1.0	20.00	0	103	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICSA1**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **ICSA**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692327**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **ICSAB1**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **ICSAB**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692328**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.982	1.0	20.00	0	105	80	120				

Sample ID **ICSA2**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **ICSA**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692365**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **ICSAB**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692366**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.682	1.0	20.00	0	103	80	120				

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **ICSA**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692393**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **ICSAB**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692394**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.822	1.0	20.00	0	104	80	120				

Sample ID **ICSA4**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **ICSA**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692416**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **ICSAB4**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **181562**
Client ID: **ICSAB**	Batch ID: **R181562**	TestNo: **EPA 6020**		Analysis Date: **2/14/2024**	SeqNo: **5692417**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.342	1.0	20.00	0	102	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240213B

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	1810438.2	1810438.2	100	PASS	30-150	43000.7	43000.7	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	1803423	1810438.2	99.61	PASS	30-150	42906.1	43000.7	99.78	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	1777515.2	1810438.2	98.18	PASS	30-150	42724.4	43000.7	99.36	PASS	30-150
Std3-5/50 ppb	ICAL	1	1775715.9	1810438.2	98.08	PASS	30-150	42874.9	43000.7	99.71	PASS	30-150
Std4-10/100 ppb	ICAL	1	1799147	1810438.2	99.38	PASS	30-150	42417	43000.7	98.64	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	1795071.3	1810438.2	99.15	PASS	30-150	42667.7	43000.7	99.23	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	1777274	1810438.2	98.17	PASS	30-150	42568.5	43000.7	98.99	PASS	30-150
Std7-100/1000 ppb	ICAL	1	1760036	1810438.2	97.22	PASS	30-150	42198.7	43000.7	98.13	PASS	30-150
Std8-200/2000 ppb	ICAL	1	1769007	1810438.2	97.71	PASS	30-150	42415.9	43000.7	98.64	PASS	30-150
ICV	ICV	1	1819302.5	1810438.2	100.49	PASS	30-150	42752.4	43000.7	99.42	PASS	30-150
ICB	ICB	1	1798913.9	1810438.2	99.36	PASS	30-150	42845.9	43000.7	99.64	PASS	30-150
LLICV1	LLICV	1	1781764.3	1810438.2	98.42	PASS	30-150	42956.2	43000.7	99.9	PASS	30-150
LLICV1	LLICV	1	1812509.5	1810438.2	100.11	PASS	30-150	43066.5	43000.7	100.15	PASS	30-150
MLCCV	CCV	1	1810717.9	1810438.2	100.02	PASS	30-150	43554.5	43000.7	101.29	PASS	30-150
ICSA1	ICSA	1	1797700.5	1810438.2	99.3	PASS	30-150	42831.4	43000.7	99.61	PASS	30-150
ICSAB1	ICSAB	1	1793445.7	1810438.2	99.06	PASS	30-150	42589.7	43000.7	99.04	PASS	30-150
CCV1	CCV	1	1886379.3	1810438.2	104.19	PASS	30-150	44213.8	43000.7	102.82	PASS	30-150
CCB1	CCB	1	1875629.2	1810438.2	103.6	PASS	30-150	44061.2	43000.7	102.47	PASS	30-150
ICSA2	ICSA	1	1856986.6	1810438.2	102.57	PASS	30-150	43622.4	43000.7	101.45	PASS	30-150
ICSAB2	ICSAB	1	1842601.4	1810438.2	101.78	PASS	30-150	43495.3	43000.7	101.15	PASS	30-150
CCV2	CCV	1	1849121.6	1810438.2	102.14	PASS	30-150	43122.2	43000.7	100.28	PASS	30-150
CCB2	CCB	1	1824377	1810438.2	100.77	PASS	30-150	42492.8	43000.7	98.82	PASS	30-150
CCV3	CCV	1	1831085.7	1810438.2	101.14	PASS	30-150	43781.6	43000.7	101.82	PASS	30-150
CCB3	CCB	1	1829336.3	1810438.2	101.04	PASS	30-150	42900.5	43000.7	99.77	PASS	30-150
CCV4	CCV	1	1869155.4	1810438.2	103.24	PASS	30-150	43717.1	43000.7	101.67	PASS	30-150
CCB4	CCB	1	1843064.1	1810438.2	101.8	PASS	30-150	43157.8	43000.7	100.37	PASS	30-150
ICSA3	ICSA	1	1827268.5	1810438.2	100.93	PASS	30-150	43193.4	43000.7	100.45	PASS	30-150
ICSAB3	ICSAB	1	1863545.2	1810438.2	102.93	PASS	30-150	43654.7	43000.7	101.52	PASS	30-150
MB-106782	MBLK	1	1861934.3	1810438.2	102.84	PASS	30-150	43096.6	43000.7	100.22	PASS	30-150
LCS-106782	LCS	1	1820477.3	1810438.2	100.55	PASS	30-150	41865.6	43000.7	97.36	PASS	30-150
N063053-001C	SAMP	1	1406328.6	1810438.2	77.68	PASS	30-150	38935.2	43000.7	90.55	PASS	30-150
N063053-002C	SAMP	1	1315897	1810438.2	72.68	PASS	30-150	37400.6	43000.7	86.98	PASS	30-150
N063053-003C	SAMP	1	1323187.4	1810438.2	73.09	PASS	30-150	37375	43000.7	86.92	PASS	30-150
N063053-004C	SAMP	1	1422586.6	1810438.2	78.58	PASS	30-150	38420.8	43000.7	89.35	PASS	30-150
N063053-005C	SAMP	1	1442065.4	1810438.2	79.65	PASS	30-150	39697	43000.7	92.32	PASS	30-150
N063053-006C	SAMP	1	1429007.7	1810438.2	78.93	PASS	30-150	38766	43000.7	90.15	PASS	30-150
N063053-007C	SAMP	1	1477254.6	1810438.2	81.6	PASS	30-150	40425.5	43000.7	94.01	PASS	30-150
CCV5	CCV	1	1796718.9	1810438.2	99.24	PASS	30-150	46151.3	43000.7	107.33	PASS	30-150
CCB5	CCB	1	1781753.5	1810438.2	98.42	PASS	30-150	45949.7	43000.7	106.86	PASS	30-150
N063053-008C	SAMP	1	1484329.8	1810438.2	81.99	PASS	30-150	40174.9	43000.7	93.43	PASS	30-150
N063053-009C	SAMP	1	1438753.3	1810438.2	79.47	PASS	30-150	38761.6	43000.7	90.14	PASS	30-150

INTERNAL STANDARD: 240213B

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
N063053-010C	SAMP	1	1417002.1	1810438.2	78.27	PASS	30-150	38007.6	43000.7	88.39	PASS	30-150
N063053-011C	SAMP	1	1378083.8	1810438.2	76.12	PASS	30-150	37327.2	43000.7	86.81	PASS	30-150
N063053-011C	SAMP	5	1614095.1	1810438.2	89.15	PASS	30-150	41562.7	43000.7	96.66	PASS	30-150
N063053-011C-PS	PS	1	1366609	1810438.2	75.48	PASS	30-150	37045.4	43000.7	86.15	PASS	30-150
N063053-011CMS	MS	1	1354754.7	1810438.2	74.83	PASS	30-150	36855.1	43000.7	85.71	PASS	30-150
N063053-011CMSD	MSD	1	1365636.6	1810438.2	75.43	PASS	30-150	36970.9	43000.7	85.98	PASS	30-150
N063053-018B	SAMP	1	1347601.4	1810438.2	74.44	PASS	30-150	36749.2	43000.7	85.46	PASS	30-150
CCV6	CCV	1	1743840.2	1810438.2	96.32	PASS	30-150	46646	43000.7	108.48	PASS	30-150
CCB6	CCB	1	1745201.6	1810438.2	96.4	PASS	30-150	45106.3	43000.7	104.9	PASS	30-150
ICSA4	ICSA	1	1753545.9	1810438.2	96.86	PASS	30-150	45061.7	43000.7	104.79	PASS	30-150
ICSAB4	ICSAB	1	1763223.6	1810438.2	97.39	PASS	30-150	44808.8	43000.7	104.2	PASS	30-150
CCV7	CCV	1	1793736.6	1810438.2	99.08	PASS	30-150	43866.4	43000.7	102.01	PASS	30-150
CCB7	CCB	1	1803164.8	1810438.2	99.6	PASS	30-150	43253.7	43000.7	100.59	PASS	30-150
CCV8	CCV	1	1837437.5	1810438.2	101.49	PASS	30-150	43167.8	43000.7	100.39	PASS	30-150
CCB8	CCB	1	1825100.3	1810438.2	100.81	PASS	30-150	42151.9	43000.7	98.03	PASS	30-150
CCV9	CCV	1	1785965.1	1810438.2	98.65	PASS	30-150	42783.5	43000.7	99.49	PASS	30-150
CCB9	CCB	1	1799167.4	1810438.2	99.38	PASS	30-150	42404.8	43000.7	98.61	PASS	30-150
ICSA5	ICSA	1	1797227.1	1810438.2	99.27	PASS	30-150	42246.6	43000.7	98.25	PASS	30-150
ICSAB5	ICSAB	1	1817986.6	1810438.2	100.42	PASS	30-150	42167.5	43000.7	98.06	PASS	30-150
CCV10	CCV	1	1773155.5	1810438.2	97.94	PASS	30-150	43525.5	43000.7	101.22	PASS	30-150
CCB10	CCB	1	1779033.1	1810438.2	98.27	PASS	30-150	42635.4	43000.7	99.15	PASS	30-150
CCV11	CCV	1	1745156.6	1810438.2	96.39	PASS	30-150	44510.4	43000.7	103.51	PASS	30-150
CCB11	CCB	1	1741076.2	1810438.2	96.17	PASS	30-150	43796.1	43000.7	101.85	PASS	30-150
ICSA6	ICSA	1	1769943.4	1810438.2	97.76	PASS	30-150	43206.8	43000.7	100.48	PASS	30-150
ICSAB6	ICSAB	1	1783663	1810438.2	98.52	PASS	30-150	43326	43000.7	100.76	PASS	30-150

INTERNAL STANDARD: 240213B

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]					72 Ge (ISTD) [1]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	25142.6	25142.6	100	PASS	30-150	79028.6	79028.6	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	25284	25142.6	100.56	PASS	30-150	77817.4	79028.6	98.47	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	24816.6	25142.6	98.7	PASS	30-150	78175.7	79028.6	98.92	PASS	30-150
Std3-5/50 ppb	ICAL	1	24805.5	25142.6	98.66	PASS	30-150	76637.3	79028.6	96.97	PASS	30-150
Std4-10/100 ppb	ICAL	1	24884.5	25142.6	98.97	PASS	30-150	78343	79028.6	99.13	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	24590.7	25142.6	97.8	PASS	30-150	77369.6	79028.6	97.9	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	25089.2	25142.6	99.79	PASS	30-150	78673.5	79028.6	99.55	PASS	30-150
Std7-100/1000 ppb	ICAL	1	24572.9	25142.6	97.73	PASS	30-150	77349.6	79028.6	97.88	PASS	30-150
Std8-200/2000 ppb	ICAL	1	25298.5	25142.6	100.62	PASS	30-150	78471.6	79028.6	99.3	PASS	30-150
ICV	ICV	1	24848.9	25142.6	98.83	PASS	30-150	79124.6	79028.6	100.12	PASS	30-150
ICB	ICB	1	25183.8	25142.6	100.16	PASS	30-150	79486.4	79028.6	100.58	PASS	30-150
LLICV1	LLICV	1	24972.4	25142.6	99.32	PASS	30-150	78605.3	79028.6	99.46	PASS	30-150
LLICV1	LLICV	1	25121.5	25142.6	99.92	PASS	30-150	80025.5	79028.6	101.26	PASS	30-150
MLCCV	CCV	1	25022.4	25142.6	99.52	PASS	30-150	78733.8	79028.6	99.63	PASS	30-150
ICSA1	ICSA	1	24841.1	25142.6	98.8	PASS	30-150	79657.1	79028.6	100.8	PASS	30-150
ICSAB1	ICSAB	1	24569.6	25142.6	97.72	PASS	30-150	79213.8	79028.6	100.23	PASS	30-150
CCV1	CCV	1	25555.5	25142.6	101.64	PASS	30-150	81326.2	79028.6	102.91	PASS	30-150
CCB1	CCB	1	25577.8	25142.6	101.73	PASS	30-150	80042.5	79028.6	101.28	PASS	30-150
ICSA2	ICSA	1	25567.8	25142.6	101.69	PASS	30-150	80978	79028.6	102.47	PASS	30-150
ICSAB2	ICSAB	1	25611.2	25142.6	101.86	PASS	30-150	81261.7	79028.6	102.83	PASS	30-150
CCV2	CCV	1	24976.8	25142.6	99.34	PASS	30-150	79833.5	79028.6	101.02	PASS	30-150
CCB2	CCB	1	25081.4	25142.6	99.76	PASS	30-150	79804.6	79028.6	100.98	PASS	30-150
CCV3	CCV	1	25346.3	25142.6	100.81	PASS	30-150	81469.3	79028.6	103.09	PASS	30-150
CCB3	CCB	1	25319.6	25142.6	100.7	PASS	30-150	81786.7	79028.6	103.49	PASS	30-150
CCV4	CCV	1	25304	25142.6	100.64	PASS	30-150	82922.1	79028.6	104.93	PASS	30-150
CCB4	CCB	1	25238.3	25142.6	100.38	PASS	30-150	81276.2	79028.6	102.84	PASS	30-150
ICSA3	ICSA	1	25512.1	25142.6	101.47	PASS	30-150	80941.2	79028.6	102.42	PASS	30-150
ICSAB3	ICSAB	1	25433.1	25142.6	101.16	PASS	30-150	81710.3	79028.6	103.39	PASS	30-150
MB-106782	MBLK	1	25360.8	25142.6	100.87	PASS	30-150	80700	79028.6	102.11	PASS	30-150
LCS-106782	LCS	1	24526.2	25142.6	97.55	PASS	30-150	76195.1	79028.6	96.41	PASS	30-150
N063053-001C	SAMP	1	21580.9	25142.6	85.83	PASS	30-150	65915.4	79028.6	83.41	PASS	30-150
N063053-002C	SAMP	1	20565.1	25142.6	81.79	PASS	30-150	61614.3	79028.6	77.96	PASS	30-150
N063053-003C	SAMP	1	20422.8	25142.6	81.23	PASS	30-150	62006.7	79028.6	78.46	PASS	30-150
N063053-004C	SAMP	1	21866.9	25142.6	86.97	PASS	30-150	66342.6	79028.6	83.95	PASS	30-150
N063053-005C	SAMP	1	22220.7	25142.6	88.38	PASS	30-150	64871.1	79028.6	82.09	PASS	30-150
N063053-006C	SAMP	1	21743.4	25142.6	86.48	PASS	30-150	65520.4	79028.6	82.91	PASS	30-150
N063053-007C	SAMP	1	22465.4	25142.6	89.35	PASS	30-150	67482.8	79028.6	85.39	PASS	30-150
CCV5	CCV	1	26702.9	25142.6	106.21	PASS	30-150	84840.8	79028.6	107.35	PASS	30-150
CCB5	CCB	1	26253.3	25142.6	104.42	PASS	30-150	85472.7	79028.6	108.15	PASS	30-150
N063053-008C	SAMP	1	22519.9	25142.6	89.57	PASS	30-150	68218	79028.6	86.32	PASS	30-150
N063053-009C	SAMP	1	21360.6	25142.6	84.96	PASS	30-150	64282.3	79028.6	81.34	PASS	30-150

INTERNAL STANDARD: 240213B

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]					72 Ge (ISTD) [1]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
N063053-010C	SAMP	1	21133.7	25142.6	84.06	PASS	30-150	64173	79028.6	81.2	PASS	30-150
N063053-011C	SAMP	1	20502.9	25142.6	81.55	PASS	30-150	62106.1	79028.6	78.59	PASS	30-150
N063053-011C	SAMP	5	23997.6	25142.6	95.45	PASS	30-150	75804.5	79028.6	95.92	PASS	30-150
N063053-011C-PS	PS	1	20702	25142.6	82.34	PASS	30-150	61303.1	79028.6	77.57	PASS	30-150
N063053-011CMS	MS	1	20344.9	25142.6	80.92	PASS	30-150	61153.6	79028.6	77.38	PASS	30-150
N063053-011CMSD	MSD	1	20703.1	25142.6	82.34	PASS	30-150	62086	79028.6	78.56	PASS	30-150
N063053-018B	SAMP	1	20656.4	25142.6	82.16	PASS	30-150	61266.3	79028.6	77.52	PASS	30-150
CCV6	CCV	1	26226.6	25142.6	104.31	PASS	30-150	86351.8	79028.6	109.27	PASS	30-150
CCB6	CCB	1	26381.3	25142.6	104.93	PASS	30-150	84465.6	79028.6	106.88	PASS	30-150
ICSA4	ICSA	1	25911.6	25142.6	103.06	PASS	30-150	83988.8	79028.6	106.28	PASS	30-150
ICSAB4	ICSAB	1	25750.2	25142.6	102.42	PASS	30-150	83434.9	79028.6	105.58	PASS	30-150
CCV7	CCV	1	25454.2	25142.6	101.24	PASS	30-150	81228.2	79028.6	102.78	PASS	30-150
CCB7	CCB	1	25389.8	25142.6	100.98	PASS	30-150	81472.6	79028.6	103.09	PASS	30-150
CCV8	CCV	1	25077	25142.6	99.74	PASS	30-150	80209.9	79028.6	101.49	PASS	30-150
CCB8	CCB	1	24974.6	25142.6	99.33	PASS	30-150	79909.5	79028.6	101.11	PASS	30-150
CCV9	CCV	1	24960.2	25142.6	99.27	PASS	30-150	79865.9	79028.6	101.06	PASS	30-150
CCB9	CCB	1	24956.8	25142.6	99.26	PASS	30-150	80014.5	79028.6	101.25	PASS	30-150
ICSA5	ICSA	1	25100.4	25142.6	99.83	PASS	30-150	79505.2	79028.6	100.6	PASS	30-150
ICSAB5	ICSAB	1	24762.1	25142.6	98.49	PASS	30-150	78444.7	79028.6	99.26	PASS	30-150
CCV10	CCV	1	25428.7	25142.6	101.14	PASS	30-150	82753.6	79028.6	104.71	PASS	30-150
CCB10	CCB	1	25038.1	25142.6	99.58	PASS	30-150	81451.5	79028.6	103.07	PASS	30-150
CCV11	CCV	1	25868.2	25142.6	102.89	PASS	30-150	82976.9	79028.6	105	PASS	30-150
CCB11	CCB	1	25502.1	25142.6	101.43	PASS	30-150	82762.5	79028.6	104.72	PASS	30-150
ICSA6	ICSA	1	24897.8	25142.6	99.03	PASS	30-150	82361.5	79028.6	104.22	PASS	30-150
ICSAB6	ICSAB	1	25328.5	25142.6	100.74	PASS	30-150	81385.5	79028.6	102.98	PASS	30-150

INTERNAL STANDARD: 240213B

Instrument ID: ICPMS-03

Sample Name	Type	DF	103 Rh (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	621548.1	621548.1	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	623737.7	621548.1	100.35	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	620934.8	621548.1	99.9	PASS	30-150
Std3-5/50 ppb	ICAL	1	617821.7	621548.1	99.4	PASS	30-150
Std4-10/100 ppb	ICAL	1	620608.5	621548.1	99.85	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	618968.5	621548.1	99.58	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	618911.6	621548.1	99.58	PASS	30-150
Std7-100/1000 ppb	ICAL	1	610090.1	621548.1	98.16	PASS	30-150
Std8-200/2000 ppb	ICAL	1	610476.7	621548.1	98.22	PASS	30-150
ICV	ICV	1	615589.2	621548.1	99.04	PASS	30-150
ICB	ICB	1	616674	621548.1	99.22	PASS	30-150
LLICV1	LLICV	1	614534.3	621548.1	98.87	PASS	30-150
LLICV1	LLICV	1	615528.7	621548.1	99.03	PASS	30-150
MLCCV	CCV	1	619849	621548.1	99.73	PASS	30-150
ICSA1	ICSA	1	620260	621548.1	99.79	PASS	30-150
ICSAB1	ICSAB	1	614885.9	621548.1	98.93	PASS	30-150
CCV1	CCV	1	643977.3	621548.1	103.61	PASS	30-150
CCB1	CCB	1	636006	621548.1	102.33	PASS	30-150
ICSA2	ICSA	1	632236.5	621548.1	101.72	PASS	30-150
ICSAB2	ICSAB	1	628166.1	621548.1	101.07	PASS	30-150
CCV2	CCV	1	620309.1	621548.1	99.8	PASS	30-150
CCB2	CCB	1	619205.6	621548.1	99.62	PASS	30-150
CCV3	CCV	1	624291.1	621548.1	100.44	PASS	30-150
CCB3	CCB	1	622114.5	621548.1	100.09	PASS	30-150
CCV4	CCV	1	629086.8	621548.1	101.21	PASS	30-150
CCB4	CCB	1	626950.7	621548.1	100.87	PASS	30-150
ICSA3	ICSA	1	628627.9	621548.1	101.14	PASS	30-150
ICSAB3	ICSAB	1	635968.9	621548.1	102.32	PASS	30-150
MB-106782	MBLK	1	629730.8	621548.1	101.32	PASS	30-150
LCS-106782	LCS	1	607000.6	621548.1	97.66	PASS	30-150
N063053-001C	SAMP	1	478139.4	621548.1	76.93	PASS	30-150
N063053-002C	SAMP	1	446835.1	621548.1	71.89	PASS	30-150
N063053-003C	SAMP	1	449703	621548.1	72.35	PASS	30-150
N063053-004C	SAMP	1	483375.9	621548.1	77.77	PASS	30-150
N063053-005C	SAMP	1	486143.4	621548.1	78.21	PASS	30-150
N063053-006C	SAMP	1	478519.5	621548.1	76.99	PASS	30-150
N063053-007C	SAMP	1	497442.5	621548.1	80.03	PASS	30-150
CCV5	CCV	1	636633.9	621548.1	102.43	PASS	30-150
CCB5	CCB	1	635277	621548.1	102.21	PASS	30-150
N063053-008C	SAMP	1	501120.7	621548.1	80.62	PASS	30-150
N063053-009C	SAMP	1	480455.4	621548.1	77.3	PASS	30-150

INTERNAL STANDARD: 240213B

Instrument ID: ICPMS-03

Sample Name	Type	DF	103 Rh (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
N063053-010C	SAMP	1	468092.8	621548.1	75.31	PASS	30-150
N063053-011C	SAMP	1	462377.9	621548.1	74.39	PASS	30-150
N063053-011C	SAMP	5	545055.2	621548.1	87.69	PASS	30-150
N063053-011C-PS	PS	1	460002.9	621548.1	74.01	PASS	30-150
N063053-011CMS	MS	1	457744.4	621548.1	73.65	PASS	30-150
N063053-011CMSD	MSD	1	455270.3	621548.1	73.25	PASS	30-150
N063053-018B	SAMP	1	460743.2	621548.1	74.13	PASS	30-150
CCV6	CCV	1	638639.5	621548.1	102.75	PASS	30-150
CCB6	CCB	1	633003.2	621548.1	101.84	PASS	30-150
ICSA4	ICSA	1	626998.8	621548.1	100.88	PASS	30-150
ICSAB4	ICSAB	1	629704.2	621548.1	101.31	PASS	30-150
CCV7	CCV	1	628081.1	621548.1	101.05	PASS	30-150
CCB7	CCB	1	621654.4	621548.1	100.02	PASS	30-150
CCV8	CCV	1	621902.2	621548.1	100.06	PASS	30-150
CCB8	CCB	1	614025.7	621548.1	98.79	PASS	30-150
CCV9	CCV	1	621888.1	621548.1	100.06	PASS	30-150
CCB9	CCB	1	616703.2	621548.1	99.22	PASS	30-150
ICSA5	ICSA	1	614017.5	621548.1	98.79	PASS	30-150
ICSAB5	ICSAB	1	612519.2	621548.1	98.55	PASS	30-150
CCV10	CCV	1	610063.1	621548.1	98.15	PASS	30-150
CCB10	CCB	1	614172.6	621548.1	98.81	PASS	30-150
CCV11	CCV	1	618502.6	621548.1	99.51	PASS	30-150
CCB11	CCB	1	615248.8	621548.1	98.99	PASS	30-150
ICSA6	ICSA	1	611353.5	621548.1	98.36	PASS	30-150
ICSAB6	ICSAB	1	613859.7	621548.1	98.76	PASS	30-150

INTERNAL STANDARD: 240214A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	36825	36825	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	37068.8	36825	100.66	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	37198	36825	101.01	PASS	30-150
Std3-5/50 ppb	ICAL	1	37387.3	36825	101.53	PASS	30-150
Std4-10/100 ppb	ICAL	1	36866.1	36825	100.11	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	37191.3	36825	100.99	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	37189.1	36825	100.99	PASS	30-150
Std7-100/1000 ppb	ICAL	1	37287.1	36825	101.25	PASS	30-150
Std8-200/2000 ppb	ICAL	1	36798.3	36825	99.93	PASS	30-150
ICV	ICV	1	36579.9	36825	99.33	PASS	30-150
ICB	ICB	1	36341.7	36825	98.69	PASS	30-150
LLICV1	CCV1	1	36556.6	36825	99.27	PASS	30-150
MLCCV	CCV	1	36745.9	36825	99.79	PASS	30-150
ICSA1	ICSA	1	36450.8	36825	98.98	PASS	30-150
ICSAB1	ICSAB	1	36486.5	36825	99.08	PASS	30-150
CCV1	CCV	1	37222.5	36825	101.08	PASS	30-150
CCB1	CCB	1	36514.3	36825	99.16	PASS	30-150
CCV2	CCV	1	35998.7	36825	97.76	PASS	30-150
CCB2	CCB	1	36013.2	36825	97.8	PASS	30-150
CCV3	CCV	1	35975.4	36825	97.69	PASS	30-150
CCB3	CCB	1	35827.2	36825	97.29	PASS	30-150
ICSA2	ICSA	1	35756	36825	97.1	PASS	30-150
ICSAB2	ICSAB	1	36574.4	36825	99.32	PASS	30-150
CCV4	CCV	1	36272.7	36825	98.5	PASS	30-150
CCB4	CCB	1	36465.3	36825	99.02	PASS	30-150
CCV5	CCV	1	37231.4	36825	101.1	PASS	30-150
CCB5	CCB	1	36509.8	36825	99.14	PASS	30-150
CCV6	CCV	1	37013.1	36825	100.51	PASS	30-150
CCB6	CCB	1	36955.2	36825	100.35	PASS	30-150
ICSA3	ICSA	1	37320.5	36825	101.35	PASS	30-150
ICSAB3	ICSAB	1	37170.2	36825	100.94	PASS	30-150
N063053-005C	SAMP	10	35846.2	36825	97.34	PASS	30-150
N063053-006C	SAMP	10	36522.1	36825	99.18	PASS	30-150
N063053-011C	SAMP	10	36469.7	36825	99.04	PASS	30-150
N063053-011C	SAMP	50	36956.3	36825	100.36	PASS	30-150
N063053-011C-PS	PS	10	35551.1	36825	96.54	PASS	30-150
N063053-011CMS	MS	10	35694.7	36825	96.93	PASS	30-150
N063053-011CMSD	MSD	10	36436.3	36825	98.94	PASS	30-150
N063053-018B	SAMP	10	36438.6	36825	98.95	PASS	30-150
CCV7	CCV	1	37793.8	36825	102.63	PASS	30-150
CCB7	CCB	1	37355	36825	101.44	PASS	30-150

INTERNAL STANDARD: 240214A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
CCV8	CCV	1	36410.7	36825	98.87	PASS	30-150
CCB8	CCB	1	35789.4	36825	97.19	PASS	30-150
ICSA4	ICSA	1	35381.8	36825	96.08	PASS	30-150
ICSAB4	ICSAB	1	36284.9	36825	98.53	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.: N063053
Test Method: EPA 6020
Analysis Date: 2/13/2024

Matrix: Groundwater
Batch No.: ~~106872~~ 106782

Instrument ID: ICPMS-03
Instrument Description: Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to several analytes. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063053-011C DT 5x	Arsenic	As	µg/L	0	NA	0		10
N063053-011C DT 5x	Barium	Ba	µg/L	160.3763	PASS	154.7606	3.63%	10
N063053-011C DT 5x	Manganese	Mn	µg/L	8.731391	NA	8.232095	6.07%	10
N063053-011C DT 5x	Molybdenum	Mo	µg/L	4.141459	NA	4.279194	3.22%	10
N063053-011C DT 5x	Selenium	Se	µg/L	0.5709033	NA	0.8128119	29.76%	10

Reviewed by:

JRB 3/12/2024

Note: NA - Not Applicable

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.: N063053
Test Method: EPA 6020
Analysis Date: 2/14/2024

Matrix: Groundwater
Batch No.: ~~106872~~ 106782

Instrument ID: ICPMS-03
Instrument Description: Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Cr. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063053-011C DT 5x	Chromium	Cr	µg/L	204.4404	NA	191.1356	6.96%	10

Reviewed by:

JRB 3/12/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **N063053-011C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181512**
Client ID: **ZZZZZZ** Batch ID: **106782** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/13/2024** SeqNo: **5689917**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	7.895	0.10	10.00	0	78.9	80	120				S
Barium	174.029	1.0	10.00	154.8	193	80	120				S
Manganese	102.579	0.50	100.0	8.232	94.3	80	120				
Molybdenum	15.555	0.50	10.00	4.279	113	80	120				
Selenium	10.759	0.50	10.00	0.8128	99.5	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	**N063053-011C-PS**	SampType:	**PS**	TestCode:	**6020DIS_CrP**	Units:	**µg/L**	Prep Date:		RunNo:	**181562**
Client ID:	**ZZZZZZ**	Batch ID:	**106782**	TestNo:	**EPA 6020**	**EPA 3010A**		Analysis Date:	**2/14/2024**	SeqNo:	**5692399**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	290.634	10	100.0	191.1	99.5	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

EPA 6020
Total

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106858
ASSET #: N063053

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/15/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 2/27/2024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Groundwater

FORMULA:

Calculate the Manganese concentration, in ug/L in the original sample as follows:

Manganese , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063053-018C** , the concentration in ug/L is calculated as follows:

Manganese , ug/L = 82.1898 * 10 *(25 / 25)

Manganese , ug/L = 821.898

Reporting results in two significant figures,

Manganese , ug/L = 820

Reviewed by:

JRB 3/12/2024

% RSD SUMMARY

240215A

PERCENT RSD SUMMARY: 240115A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	15.92	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.45	6.514	15	PASS
Std3-5/50 ppb	ICAL	1	4.64	1.325	15	PASS
Std4-10/100 ppb	ICAL	1	9.89	1.342	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.36	0.705	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.35	1.443	15	PASS
Std7-100/1000 ppb	ICAL	1	99.13	1.148	15	PASS
Std8-200/2000 ppb	ICAL	1	200.64	1.358	15	PASS
ICV	ICV	1	103.29	0.607	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL
LLICV1	CCV1	1	0.55	13.714	20	PASS
MLCCV	CCV	1	19.76	0.408	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.73	1.711	15	PASS
CCV1	CCV	1	19.82	2.133	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.28	2.52	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL
CCV3	CCV	1	19.34	2.014	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.26	0.749	15	PASS
CCV4	CCV	1	19.33	0.382	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL
CCV5	CCV	1	19.44	1.81	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL
CCV6	CCV	1	19.68	1.013	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.52	1.991	15	PASS
MB-106858	MBLK	1	0.05	15.531	15	<PQL
LCS-106858	LCS	1	104.04	0.78	15	PASS
N063053-018C	SAMP	1	756.09	0.401	15	PASS
N063053-018C	SAMP	5	162.98	2.573	15	PASS
N063053-018C	SAMP	10	82.19	0.981	15	PASS
N063053-018C	SAMP	50	15.66	0.796	15	PASS
N063053-018C-PS	PS	1	849.06	3.091	15	PASS
N063053-018C-PS	PS	10	176.64	0.658	15	PASS
N063053-018C-MS	MS	1	854.07	0.892	15	PASS
N063053-018C-MS	MS	10	90.52	0.492	15	PASS

240215A

PERCENT RSD SUMMARY: ~~240115A~~

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment
CCV7	CCV	1	19.78	0.193	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL
N063053-018C-MSD	MSD	1	861.21	1.694	15	PASS
N063053-018C-MSD	MSD	10	90.99	1.94	15	PASS
N063076-001C	SAMP	1	2069.75	0.991	15	PASS
N063076-002C	SAMP	1	2106.71	1.494	15	PASS
N063076-003C	SAMP	1	2031.98	1.324	15	PASS
CCV8	CCV	1	19.42	1.517	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.25	0.753	15	PASS
CCV9	CCV	1	19.69	2.292	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	<0.000	N/A	15	<PQL
ICSAB5	ICSAB	1	20.84	1.541	15	PASS

ANALYSIS RUN LOG

240215A

INJECTION LOG: ~~240115A~~

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0215001.d	RINSE	ICAL	1	02/15/24 1:22 PM
A0215002.d	RINSE	ICAL	1	02/15/24 1:27 PM
A0215003.d	Cal Blk	IBLK	1	02/15/24 1:32 PM
A0215004.d	Std1-0.1/1 ppb	ICAL	1	02/15/24 1:36 PM
A0215005.d	Std2-0.5/5 ppb	ICAL	1	02/15/24 1:41 PM
A0215006.d	Std3-5/50 ppb	ICAL	1	02/15/24 1:46 PM
A0215007.d	Std4-10/100 ppb	ICAL	1	02/15/24 1:51 PM
A0215008.d	Std5-4.0/20/200 ppb	ICAL	1	02/15/24 1:56 PM
A0215009.d	Std6-8.0/40/400 ppb	ICAL	1	02/15/24 2:00 PM
A0215010.d	Std7-100/1000 ppb	ICAL	1	02/15/24 2:05 PM
A0215011.d	Std8-200/2000 ppb	ICAL	1	02/15/24 2:10 PM
A0215012.d	ICV	ICV	1	02/15/24 2:18 PM
A0215013.d	ICB	ICB	1	02/15/24 2:23 PM
A0215014.d	LLICV1	CCV1	1	02/15/24 2:28 PM
A0215015.d	MLCCV	CCV	1	02/15/24 2:35 PM
A0215016.d	ICSA1	ICSA	1	02/15/24 2:39 PM
A0215017.d	ICSAB1	ICSAB	1	02/15/24 2:44 PM
A0215018.d	MB1-106743	MBLK	1	02/15/24 2:52 PM
A0215019.d	MB2-106743	MBLK	1	02/15/24 2:56 PM
A0215020.d	MB3-106743	MBLK	1	02/15/24 3:01 PM
A0215021.d	LCS-106743	LCS	1	02/15/24 3:06 PM
A0215022.d	MDL 1	SAMP	1	02/15/24 3:10 PM
A0215023.d	MDL 2	SAMP	1	02/15/24 3:15 PM
A0215024.d	MDL 3	SAMP	1	02/15/24 3:20 PM
A0215025.d	CCV1	CCV	1	02/15/24 3:24 PM
A0215026.d	CCB1	CCB	1	02/15/24 3:29 PM
A0215027.d	MB1-106745	MBLK	1	02/15/24 3:33 PM
A0215028.d	MB2-106745	MBLK	1	02/15/24 3:38 PM
A0215029.d	MB3-106745	MBLK	1	02/15/24 3:43 PM
A0215030.d	LCS-106745	LCS	1	02/15/24 3:48 PM
A0215031.d	MDL 1	SAMP	1	02/15/24 3:52 PM
A0215032.d	MDL 2	SAMP	1	02/15/24 3:57 PM
A0215033.d	MDL 3	SAMP	1	02/15/24 4:01 PM
A0215034.d	CCV2	CCV	1	02/15/24 4:06 PM
A0215035.d	CCB2	CCB	1	02/15/24 4:11 PM
A0215036.d	MB1-106787	MBLK	1	02/15/24 4:15 PM
A0215037.d	MB2-106787	MBLK	1	02/15/24 4:20 PM
A0215038.d	MB3-106787	MBLK	1	02/15/24 4:25 PM
A0215039.d	LCS-106787	LCS	1	02/15/24 4:29 PM
A0215040.d	MDL 1	SAMP	1	02/15/24 4:34 PM
A0215041.d	MDL 2	SAMP	1	02/15/24 4:38 PM
A0215042.d	MDL 3	SAMP	1	02/15/24 4:43 PM

240215A

INJECTION LOG: ~~240115A~~

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0215043.d	MDL 1	SAMP	1	02/15/24 4:48 PM
A0215044.d	MDL 2	SAMP	1	02/15/24 4:53 PM
A0215045.d	MDL 3	SAMP	1	02/15/24 4:57 PM
A0215046.d	CCV3	CCV	1	02/15/24 5:02 PM
A0215047.d	CCB3	CCB	1	02/15/24 5:06 PM
A0215048.d	ICSA2	ICSA	1	02/15/24 5:11 PM
A0215049.d	ICSAB2	ICSAB	1	02/15/24 5:16 PM
A0215050.d	MB-106852	MBLK	1	02/15/24 5:20 PM
A0215051.d	LCS-106852	LCS	1	02/15/24 5:25 PM
A0215052.d	N063076-001B	SAMP	1	02/15/24 5:30 PM
A0215053.d	N063076-002B	SAMP	1	02/15/24 5:34 PM
A0215054.d	N063076-003B	SAMP	1	02/15/24 5:39 PM
A0215055.d	N063103-001B	SAMP	1	02/15/24 5:44 PM
A0215056.d	N063103-001B	SAMP	5	02/15/24 5:48 PM
A0215057.d	N063103-001B-PS	PS	1	02/15/24 5:53 PM
A0215058.d	N063103-001B-MS	MS	1	02/15/24 5:57 PM
A0215059.d	RINSE	ICAL	1	02/15/24 6:02 PM
A0215060.d	CCV4	CCV	1	02/15/24 6:07 PM
A0215061.d	CCB4	CCB	1	02/15/24 6:11 PM
A0215062.d	N063103-001B-MSD	MSD	1	02/15/24 6:16 PM
A0215063.d	N063103-002B	SAMP	1	02/15/24 6:21 PM
A0215064.d	N063103-003B	SAMP	1	02/15/24 6:25 PM
A0215065.d	N063103-004B	SAMP	1	02/15/24 6:30 PM
A0215066.d	N063103-005B	SAMP	1	02/15/24 6:35 PM
A0215067.d	N063103-006B	SAMP	1	02/15/24 6:39 PM
A0215068.d	N063103-008B	SAMP	1	02/15/24 6:44 PM
A0215069.d	N063103-009B	SAMP	1	02/15/24 6:48 PM
A0215070.d	N063103-010B	SAMP	1	02/15/24 6:53 PM
A0215071.d	RINSE	ICAL	1	02/15/24 6:58 PM
A0215072.d	CCV5	CCV	1	02/15/24 7:02 PM
A0215073.d	CCB5	CCB	1	02/15/24 7:07 PM
A0215074.d	N063103-011B	SAMP	1	02/15/24 7:12 PM
A0215075.d	N063103-012B	SAMP	1	02/15/24 7:16 PM
A0215076.d	N063103-013B	SAMP	1	02/15/24 7:21 PM
A0215077.d	N063103-014B	SAMP	1	02/15/24 7:25 PM
A0215078.d	N063103-015B	SAMP	1	02/15/24 7:30 PM
A0215079.d	N063103-016B	SAMP	1	02/15/24 7:35 PM
A0215080.d	N063076-001B	SAMP	100	02/15/24 7:39 PM
A0215081.d	N063076-002B	SAMP	100	02/15/24 7:44 PM
A0215082.d	N063076-003B	SAMP	100	02/15/24 7:49 PM
A0215083.d	RINSE	ICAL	1	02/15/24 7:53 PM
A0215084.d	CCV6	CCV	1	02/15/24 7:58 PM

240215A

INJECTION LOG: ~~240115A~~

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0215085.d	CCB6	CCB	1	02/15/24 8:03 PM
A0215086.d	ICSA3	ICSA	1	02/15/24 8:07 PM
A0215087.d	ICSAB3	ICSAB	1	02/15/24 8:12 PM
A0215088.d	MB-106858	MBLK	1	02/15/24 8:17 PM
A0215089.d	LCS-106858	LCS	1	02/15/24 8:21 PM
A0215090.d	N063053-018C	SAMP	1	02/15/24 8:26 PM
A0215091.d	N063053-018C	SAMP	5	02/15/24 8:30 PM
A0215092.d	N063053-018C	SAMP	10	02/15/24 8:35 PM
A0215093.d	N063053-018C	SAMP	50	02/15/24 8:40 PM
A0215094.d	N063053-018C-PS	PS	1	02/15/24 8:44 PM
A0215095.d	N063053-018C-PS	PS	10	02/15/24 8:49 PM
A0215096.d	N063053-018C-MS	MS	1	02/15/24 8:54 PM
A0215097.d	N063053-018C-MS	MS	10	02/15/24 8:58 PM
A0215098.d	CCV7	CCV	1	02/15/24 9:03 PM
A0215099.d	CCB7	CCB	1	02/15/24 9:07 PM
A0215100.d	N063053-018C-MSD	MSD	1	02/15/24 9:12 PM
A0215101.d	N063053-018C-MSD	MSD	10	02/15/24 9:17 PM
A0215102.d	N063076-001C	SAMP	1	02/15/24 9:21 PM
A0215103.d	N063076-002C	SAMP	1	02/15/24 9:26 PM
A0215104.d	N063076-003C	SAMP	1	02/15/24 9:31 PM
A0215105.d	RINSE	ICAL	1	02/15/24 9:35 PM
A0215106.d	CCV8	CCV	1	02/15/24 9:40 PM
A0215107.d	CCB8	CCB	1	02/15/24 9:45 PM
A0215108.d	ICSA4	ICSA	1	02/15/24 9:49 PM
A0215109.d	ICSAB4	ICSAB	1	02/15/24 9:54 PM
A0215110.d	N062736-009A	SAMP	1	02/15/24 9:59 PM
A0215111.d	N062736-009D	SAMP	1	02/15/24 10:03 PM
A0215112.d	RINSE	ICAL	1	02/15/24 10:08 PM
A0215113.d	CCV9	CCV	1	02/15/24 10:12 PM
A0215114.d	CCB9	CCB	1	02/15/24 10:17 PM
A0215115.d	ICSA5	ICSA	1	02/15/24 10:22 PM
A0215116.d	ICSAB5	ICSAB	1	02/15/24 10:26 PM
A0215117.d	RINSE	ICAL	1	02/15/24 10:31 PM
A0215118.d	RINSE	ICAL	1	02/15/24 10:36 PM
A0215119.d	RINSE	ICAL	1	02/15/24 10:40 PM
A0215120.d	RINSE	ICAL	1	02/15/24 10:45 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/15/2024 11:58:11 AM**
Prep End Date: **2/15/2024 4:00:00 PM**
Prep Batch **106858** Prep Code:**3010_W_MS_TPK**

Reviewed/ Date: JRB 3/12/2024
Initials/ Date: for
Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-52**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-106858	Aqueous		25	☐	25	1.000		
MB-106858	Aqueous		25	☐	25	1.000		
N063053-018C	Groundwater	<2	25	☐	25	1.000		
N063053-018C-MS	Groundwater	<2	25	☐	25	1.000		
N063053-018C-MSD	Groundwater	<2	25	☐	25	1.000		
N063076-001C	Water	<2	25	☐	25	1.000		
N063076-002C	Water	<2	25	☐	25	1.000		
N063076-003C	Water	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240214A1.b
Acq. Date-Time	2024-02-15 11:32:36
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

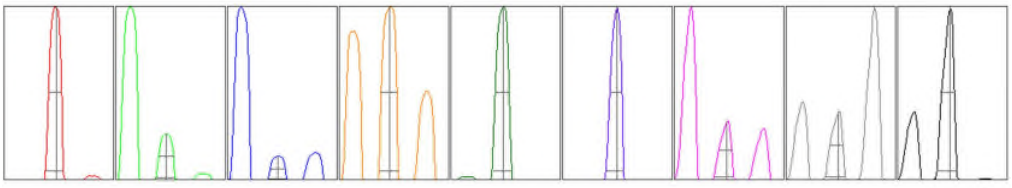
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	4970	49701.73	500.00		3.745	5.000
24	10.00	16184	161838.00	500.00		2.869	5.000
25	10.00	2153	21528.37	500.00		4.180	5.000
26	10.00	2473	24728.51	500.00		3.419	5.000
59	10.00	27523	275233.56	500.00		2.776	5.000
115	10.00	36376	363757.31	500.00		1.856	5.000
206	10.00	7097	70969.45	500.00		2.621	5.000
207	10.00	5886	58860.10	500.00		2.079	5.000
208	10.00	14623	146228.42	500.00		2.533	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.639 %
Doubly Charged	70 / 140 1.261 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	5017.68	8.95	8.90 - 9.10	
24	16648.82	23.90	23.90 - 24.10	
25	2168.45	24.90	24.90 - 25.10	
26	2518.45	25.90	25.90 - 26.10	
59	27264.67	58.95	58.90 - 59.10	
115	35977.84	115.00	114.90 - 115.10	
206	6911.78	205.95	205.90 - 206.10	
207	6073.63	206.95	206.90 - 207.10	
208	15659.72	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.486	0.900	
24	0.41	0.522	0.900	
25	0.41	0.496	0.900	
26	0.43	0.539	0.900	
59	0.39	0.534	0.900	
115	0.34	0.484	0.900	
206	0.37	0.542	0.900	
207	0.37	0.556	0.900	
208	0.36	0.560	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.2 mm	Torch V	1.3 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2523 V	Pulse HV	1604 V

[H2]

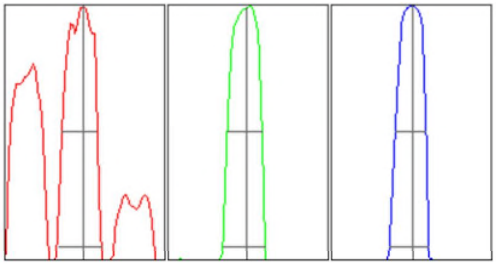
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		154	1536.87			8.465	
59		2049	20491.01			3.024	
115		29075	290746.94			2.503	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.577 %
Doubly Charged	70 / 140 0.293 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	168.26	26.00	25.90 - 26.10	
59	2089.89	59.00	58.90 - 59.10	
115	30418.25	115.05	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.67	0.831	0.900	
59	0.66	0.790	0.900	
115	0.59	0.737	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0001	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.00		

Hardware Settings

Torch

Torch H	1.2 mm	Torch V	1.3 mm		

EM

Discriminator	4.5 mV	Analog HV	2523 V	Pulse HV	1604 V

[He]

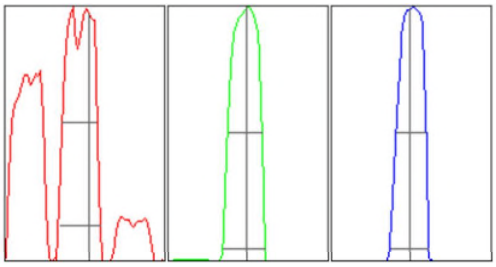
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		71	708.21			12.096	
59		6126	61258.35			2.396	
115		4964	49636.49			2.214	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.223 %
Doubly Charged	70 / 140 1.113 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	72.50	26.10	25.90 - 26.10	
59	6233.87	59.00	58.90 - 59.10	
115	5031.09	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.67	0.795	0.900	
59	0.65	0.790	0.900	
115	0.58	0.735	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0001	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.00		

Hardware Settings

Torch

Torch H	1.2 mm	Torch V	1.3 mm

EM

Discriminator	4.5 mV	Analog HV	2523 V	Pulse HV	1604 V

INITIAL CALIBRATION DATA SUMMARY

240215A

INITIAL CALIBRATION SUMMARY: ~~240115A~~

Instrument ID: ICPMS-03

Analyte	Data File	A0215003.d	A0215005.d	A0215006.d	A0215007.d	A0215008.d	A0215009.d	A0215010.d	A0215011.d	
	Acq. Date-Time	02/15/2024 01:32 PM	02/15/2024 01:41 PM	02/15/2024 01:46 PM	02/15/2024 01:51 PM	02/15/2024 01:56 PM	02/15/2024 02:00 PM	02/15/2024 02:05 PM	02/15/2024 02:10 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	37072.2	36834.9	36892.9	36164.6	35421.9	36147.9	35900.7	35607.9	
55 Mn [2]	CPS	81	660.7	6028.6	12526.6	23930	49561.4	123871.2	248549	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_TPK

Sample ID **ICV**	SampType: **ICV**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **ICV**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693798**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	103.287	0.50	100.0	0	103	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **ZZZZZZ**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693800**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	0.551	0.50	0.5000	0	110	80	120				

Sample ID **MLCCV**	SampType: **CCV**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **CCV**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693801**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.763	0.50	20.00	0	98.8	90	110				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **CCV**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693811**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.818	0.50	20.00	0	99.1	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **CCV**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693820**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.285	0.50	20.00	0	96.4	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_TPK

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **CCV**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693832**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.337	0.50	20.00	0	96.7	90	110				

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **CCV**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693845**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.330	0.50	20.00	0	96.6	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **CCV**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693856**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.438	0.50	20.00	0	97.2	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **CCV**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693867**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.682	0.50	20.00	0	98.4	90	110				

Sample ID **CCV7**	SampType: **CCV**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **CCV**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693881**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.779	0.50	20.00	0	98.9	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_TPK

Sample ID **CCV8**	SampType: **CCV**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **CCV**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693888**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.417	0.50	20.00	0	97.1	90	110				

Sample ID **CCV9**	SampType: **CCV**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **CCV**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693894**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.691	0.50	20.00	0	98.5	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_TPK

Sample ID **ICB**	SampType: **ICB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **ICB**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693799**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **CCB**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693812**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **CCB**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693821**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **CCB**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693833**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **CCB**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693846**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_TPK

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **CCB**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693857**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **CCB**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693868**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB7**	SampType: **CCB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **CCB**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693882**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB8**	SampType: **CCB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **CCB**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693889**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB9**	SampType: **CCB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **CCB**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693895**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_TPK

Sample ID **ICSA1**	SampType: **ICSA**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **ICSA**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693802**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **ICSAB1**	SampType: **ICSAB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **ICSAB**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693803**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	20.731	0.50	20.00	0	104	80	120				

Sample ID **ICSA2**	SampType: **ICSA**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **ICSA**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693834**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **ICSAB**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693835**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	20.255	0.50	20.00	0	101	80	120				

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **181603**
Client ID: **ICSA**	Batch ID: **R181603**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693869**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_TPK

Sample ID	ICSAB3	SampType:	ICSAB	TestCode:	6020_W_TPK	Units:	µg/L	Prep Date:		RunNo:	181603
Client ID:	ICSAB	Batch ID:	R181603	TestNo:	EPA 6020			Analysis Date:	2/15/2024	SeqNo:	5693870

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	20.521	0.50	20.00	0	103	80	120				

Sample ID	ICSA4	SampType:	ICSA	TestCode:	6020_W_TPK	Units:	µg/L	Prep Date:		RunNo:	181603
Client ID:	ICSA	Batch ID:	R181603	TestNo:	EPA 6020			Analysis Date:	2/15/2024	SeqNo:	5693890

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID	ICSAB4	SampType:	ICSAB	TestCode:	6020_W_TPK	Units:	µg/L	Prep Date:		RunNo:	181603
Client ID:	ICSAB	Batch ID:	R181603	TestNo:	EPA 6020			Analysis Date:	2/15/2024	SeqNo:	5693891

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	20.254	0.50	20.00	0	101	80	120				

Sample ID	ICSA5	SampType:	ICSA	TestCode:	6020_W_TPK	Units:	µg/L	Prep Date:		RunNo:	181603
Client ID:	ICSA	Batch ID:	R181603	TestNo:	EPA 6020			Analysis Date:	2/15/2024	SeqNo:	5693896

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID	ICSAB5	SampType:	ICSAB	TestCode:	6020_W_TPK	Units:	µg/L	Prep Date:		RunNo:	181603
Client ID:	ICSAB	Batch ID:	R181603	TestNo:	EPA 6020			Analysis Date:	2/15/2024	SeqNo:	5693897

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	20.842	0.50	20.00	0	104	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

240215A

INTERNAL STANDARD: ~~240115A~~

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	37072.2	37072.2	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	37131.2	37072.2	100.16	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	36834.9	37072.2	99.36	PASS	30-150
Std3-5/50 ppb	ICAL	1	36892.9	37072.2	99.52	PASS	30-150
Std4-10/100 ppb	ICAL	1	36164.6	37072.2	97.55	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	35421.9	37072.2	95.55	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	36147.9	37072.2	97.51	PASS	30-150
Std7-100/1000 ppb	ICAL	1	35900.7	37072.2	96.84	PASS	30-150
Std8-200/2000 ppb	ICAL	1	35607.9	37072.2	96.05	PASS	30-150
ICV	ICV	1	35496.5	37072.2	95.75	PASS	30-150
ICB	ICB	1	34586.9	37072.2	93.3	PASS	30-150
LLICV1	CCV1	1	35112.4	37072.2	94.71	PASS	30-150
MLCCV	CCV	1	35455.3	37072.2	95.64	PASS	30-150
ICSA1	ICSA	1	34751.6	37072.2	93.74	PASS	30-150
ICSAB1	ICSAB	1	35217	37072.2	95	PASS	30-150
CCV1	CCV	1	34461	37072.2	92.96	PASS	30-150
CCB1	CCB	1	34849.6	37072.2	94	PASS	30-150
CCV2	CCV	1	35705.8	37072.2	96.31	PASS	30-150
CCB2	CCB	1	34729.4	37072.2	93.68	PASS	30-150
CCV3	CCV	1	35560	37072.2	95.92	PASS	30-150
CCB3	CCB	1	34846.3	37072.2	94	PASS	30-150
ICSA2	ICSA	1	35243.8	37072.2	95.07	PASS	30-150
ICSAB2	ICSAB	1	35729.3	37072.2	96.38	PASS	30-150
CCV4	CCV	1	35596.7	37072.2	96.02	PASS	30-150
CCB4	CCB	1	34953.1	37072.2	94.28	PASS	30-150
CCV5	CCV	1	35682.5	37072.2	96.25	PASS	30-150
CCB5	CCB	1	34773.9	37072.2	93.8	PASS	30-150
CCV6	CCV	1	35317.3	37072.2	95.27	PASS	30-150
CCB6	CCB	1	34645.8	37072.2	93.45	PASS	30-150
ICSA3	ICSA	1	35538.8	37072.2	95.86	PASS	30-150
ICSAB3	ICSAB	1	35069	37072.2	94.6	PASS	30-150
MB-106858	MBLK	1	34590.2	37072.2	93.3	PASS	30-150
LCS-106858	LCS	1	33601.5	37072.2	90.64	PASS	30-150
N063053-018C	SAMP	1	30484.5	37072.2	82.23	PASS	30-150
N063053-018C	SAMP	5	34061.3	37072.2	91.88	PASS	30-150
N063053-018C	SAMP	10	34645.8	37072.2	93.45	PASS	30-150
N063053-018C	SAMP	50	35454.2	37072.2	95.64	PASS	30-150
N063053-018C-PS	PS	1	30707.1	37072.2	82.83	PASS	30-150
N063053-018C-PS	PS	10	34467.7	37072.2	92.97	PASS	30-150
N063053-018C-MS	MS	1	30462.2	37072.2	82.17	PASS	30-150
N063053-018C-MS	MS	10	35420.8	37072.2	95.55	PASS	30-150

240215A

INTERNAL STANDARD: ~~240115A~~

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
CCV7	CCV	1	37504.2	37072.2	101.17	PASS	30-150
CCB7	CCB	1	35648	37072.2	96.16	PASS	30-150
N063053-018C-MSD	MSD	1	29821	37072.2	80.44	PASS	30-150
N063053-018C-MSD	MSD	10	34524.5	37072.2	93.13	PASS	30-150
N063076-001C	SAMP	1	30536.8	37072.2	82.37	PASS	30-150
N063076-002C	SAMP	1	31311.5	37072.2	84.46	PASS	30-150
N063076-003C	SAMP	1	31425.1	37072.2	84.77	PASS	30-150
CCV8	CCV	1	37475.3	37072.2	101.09	PASS	30-150
CCB8	CCB	1	36863.9	37072.2	99.44	PASS	30-150
ICSA4	ICSA	1	37081.1	37072.2	100.02	PASS	30-150
ICSAB4	ICSAB	1	36896.2	37072.2	99.53	PASS	30-150
CCV9	CCV	1	35536.6	37072.2	95.86	PASS	30-150
CCB9	CCB	1	34797.3	37072.2	93.86	PASS	30-150
ICSA5	ICSA	1	35342.9	37072.2	95.34	PASS	30-150
ICSAB5	ICSAB	1	34845.1	37072.2	93.99	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.: N063053
Test Method: EPA 6020
Analysis Date: 2/15/2024

Matrix: Groundwater
Batch No.: 106858

Instrument ID: ICPMS-02/03
Instrument Description: Agilent 7700/7800

Comments:

Analyzed By: Diane Jetajobe

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063053-018C DT 5x	Manganese	Mn	µg/L	782.8807	PASS	821.8983	4.75%	10

Reviewed by:

JRB 3/12/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063053
Project: PG&E Topock - PCM, 30121866

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_TPK

Sample ID **N063053-018C-PS** SampType: **PS** TestCode: **6020_W_TPK** Units: **µg/L** Prep Date: RunNo: **181603**
Client ID: **ZZZZZZ** Batch ID: **106858** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/15/2024** SeqNo: **5693878**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	1766.441	5.0	1000	821.9	94.5	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

ARCADIS

Project: PG&E Topock - PCM

Project No.: 30211191

ASSET Laboratories Work Order:

N063101

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063101

Item	Page
Cover Page	1-5
Analytical Result/QC Summary Reports	6-12
Sample Receiving Items	13-16
List of Analysts	17
Raw Data	
EPA 218.6	18-138

February 28, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063101

RE: PG&E Topock - PCM, 30211191

Attention: Dan Bush

Enclosed are the results for sample(s) received on February 14, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063101

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

ASSET Laboratories

Date: *28-Feb-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063101
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063101-001A	TW-04-Q124	Groundwater	2/14/2024 2:16:00 PM	2/14/2024	2/28/2024
N063101-002A	EB-722-Q124	Groundwater	2/14/2024 2:30:00 PM	2/14/2024	2/28/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	TW-04-Q124
Lab Order:	N063101		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/14/2024 2:16:00 PM
Lab ID:	N063101-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240215A**	QC Batch: **R181621**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	3.9	0.19	1.0		µg/L	5	2/15/2024 12:59 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-722-Q124
Lab Order:	N063101		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/14/2024 2:30:00 PM
Lab ID:	N063101-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240215A**	QC Batch: **R181621**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/15/2024 01:48 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063101
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R181621**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **PBW**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695663**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R181621**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **LCSW**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695664**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.772	0.20	5.000	0	95.4	90	110				

Sample ID: **N063103-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695666**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.930	0.20	1.000	0	93.0	90	110				

Sample ID: **N063103-001AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695667**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.020	0.20	1.000	0	102	90	110	0.9297	9.27	20	

Sample ID: **N063103-011ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695669**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20						0	0	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063101
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063103-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181621**
Client ID: **ZZZZZZ** Batch ID: **R181621** TestNo: **EPA 218.6** Analysis Date: **2/15/2024** SeqNo: **5695670**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.948	0.20	1.000	0	94.8	90	110				

Sample ID: **N063101-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181621**
Client ID: **ZZZZZZ** Batch ID: **R181621** TestNo: **EPA 218.6** Analysis Date: **2/15/2024** SeqNo: **5695675**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.984	0.20	1.000	0	98.4	90	110				

Sample ID: **N063103-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181621**
Client ID: **ZZZZZZ** Batch ID: **R181621** TestNo: **EPA 218.6** Analysis Date: **2/15/2024** SeqNo: **5695681**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.986	0.20	1.000	0	98.6	90	110				

Sample ID: **N063103-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181621**
Client ID: **ZZZZZZ** Batch ID: **R181621** TestNo: **EPA 218.6** Analysis Date: **2/15/2024** SeqNo: **5695685**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.010	0.20	1.000	0	101	90	110				

Sample ID: **N063103-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181621**
Client ID: **ZZZZZZ** Batch ID: **R181621** TestNo: **EPA 218.6** Analysis Date: **2/15/2024** SeqNo: **5695687**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.934	0.20	1.000	0	93.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063101
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063103-008AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695689**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.951	0.20	1.000	0	95.1	90	110				

Sample ID: **N063103-009AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695691**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.975	0.20	1.000	0	97.4	90	110				

Sample ID: **N063103-010AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695693**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.003	0.20	1.000	0	100	90	110				

Sample ID: **N063103-012AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695697**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.012	0.20	1.000	0	101	90	110				

Sample ID: **N063103-013AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695699**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.999	0.20	1.000	0	99.9	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063101
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063103-014AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181621**
Client ID: **ZZZZZZ** Batch ID: **R181621** TestNo: **EPA 218.6** Analysis Date: **2/15/2024** SeqNo: **5695701**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.968	0.20	1.000	0	96.8	90	110				

Sample ID: **N063103-015AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181621**
Client ID: **ZZZZZZ** Batch ID: **R181621** TestNo: **EPA 218.6** Analysis Date: **2/15/2024** SeqNo: **5695703**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.017	0.20	1.000	0	102	90	110				

Sample ID: **N063103-016AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181621**
Client ID: **ZZZZZZ** Batch ID: **R181621** TestNo: **EPA 218.6** Analysis Date: **2/15/2024** SeqNo: **5695705**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.049	0.20	1.000	0	105	90	110				

Sample ID: **N063103-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181621**
Client ID: **ZZZZZZ** Batch ID: **R181621** TestNo: **EPA 218.6** Analysis Date: **2/15/2024** SeqNo: **5695709**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.051	0.20	1.000	0	105	90	110				

Sample ID: **N063103-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181621**
Client ID: **ZZZZZZ** Batch ID: **R181621** TestNo: **EPA 218.6** Analysis Date: **2/15/2024** SeqNo: **5695711**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.903	0.20	1.000	0	90.3	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063101
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063101-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181621**
Client ID: **ZZZZZZ** Batch ID: **R181621** TestNo: **EPA 218.6** Analysis Date: **2/15/2024** SeqNo: **5695712**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.555	1.0	5.000	3.916	92.8	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SAMPLE RECEIVING ITEMS

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

ARCUS02 C: 2/29/2024 12:00 AM
FOLDER R: 2/14/2024
N063101-003A 1 of 1

Page 1 of 1

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.moore@arcadis.com	Address:	
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivcx.com	P.O.#
Submitted By: Nava Tag		Phone: 949-727-1400, ext 200	Fax:
Title: PM	Phone: 916-786-3302 Fax:		
Signature: Date: 2/14/24	Sampled By: Nava Tag		
Project Name: PG&E Topock - PCM	Signature: Date: 2/14/24		
Project Number: 30211191			

I hereby authorize ASSET Labs to perform the tests indicated below.

I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for

Matrix			
Ground	X	Sediment	
Potable		Soil	
NPDES		Other Solid	
Surface			

Geotracker		RWQCB	✓
Lanspec		CalTrans	
Others	✓	LEVEL III	
Specify: RWQCB		LEVEL IV	
Global ID:		Regulatory	
		Specify State:	

1. Chilled	Y
2. Headspace	
3. Container Intact	Y
4. Seal Present	Y
5. IR number	3
6. Method of Cooling:	ICE
Sample Temp:	1.9 c/f 2.1c
Courier:	ASSET
Tracking No.:	

2/15/24

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 250 mL poly	Nitrite, Nitrate, sulfate (EPA 300.0) 1 L poly	Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese 500mL poly	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, 500mL poly	Dissolved metals (SW6020) FF; HNO3 Selenium, Molybdenum 500mL poly	Total Organic Carbon (SM5310C); H2SO4 3x40 mL VOA	Ammonia as Nitrogen (SM4500NH3D); H2SO4 1 L poly	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 125 mL poly	Nitrate, sulfate (EPA 300.0) 1 L poly	Nitrate (EPA 300.0) 1 L poly					Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063101-001	TW-04-Q124	2/14/2024	14:16		X														E	1	P	BNS	
2	-002	EB-722-Q124	2/14/2024	14:30		X														E	1	P	BNS	
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								
11																								
12																								
13																								
14																								

Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:
Nava Tag	2/14/24 1600	Michael Mcanton	2/14/24 1600
Michael Mcanton	2/14/24 1930	Michael Mcanton	2/14/24 1930

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages. 15% for Level IV Data Packages. Surcharge applied on total project
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology
7. Terms are net 30 days.
8. All reports are submitted by electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis. TAT and Surcharges will vary.

Preservatives:				Container Type:		
H=HCL	N=HNO_3	S=H_2SO_4	C=4°C	T=Tube	V=VOA	P=Pint
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$		J=Jar	B=Tedlar	G=Glass
Others/Specify:	B (NH4)2SO4/NH4OH			M=Metal	M=Metal	C=Can

White=Laboratory Copy Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	2/14/2024	Workorder:	N063101
Rep sample Temp (Deg C):	1.8	IR Gun ID:	3

Temp Blank: ☑ Yes ☐ No

Carrier name: ASSET

Last 4 digits of Tracking No.: NA Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☐	No ☐	NA ☑
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By YR YRodriguez 2/15/2024

Reviewed By: for: MBC 02/15/2024

ASSET Laboratories

WORK ORDER Summary

14-Feb-24

WorkOrder: N063101

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 2/14/2024 7:30 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063101-001A	TW-04-Q124	2/14/2024 2:16:00 PM	2/29/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063101-002A	EB-722-Q124	2/14/2024 2:30:00 PM	2/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063101-003A	FOLDER	2/29/2024	2/29/2024		Folder	Folder	☐	☐	☐	LAB
			2/29/2024		Folder	Level IV Report	☐	☐	☐	LAB
			2/29/2024		Folder	Folder	☐	☐	☐	LAB

List of Analysts

ASSET Laboratories Work Order: N063101

NAME	TEST METHOD
Ria Abes	EPA 218.6

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R181621
ASSET #: N063101

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/15/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer RB 02252024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063101-001A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 0.7831 * 5$$

$$Cr^{+6}, \mu g/L = 3.9155$$

Reporting results in two significant figures,

$$\mathbf{Cr^{+6}, \mu g/L = 3.9}$$

Reviewed by:

dMocha 2/29/2024

ANALYSIS RUN LOG

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240215A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/15/24 10:08 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/15/24 10:23 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/15/24 10:32 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/15/24 10:42 AM	Reported
13	MB-R181621	MBLK	1	Hexavalent Chromium	02/15/24 10:51 AM	Reported
14	LCS-R181621	LCS	1	Hexavalent Chromium	02/15/24 11:01 AM	Reported
15	N063103-001A	SAMP	1	Hexavalent Chromium	02/15/24 11:22 AM	Reported
16	N063103-001AMS	MS	1	Hexavalent Chromium	02/15/24 11:34 AM	Reported
17	N063103-001AMSD	MSD	1	Hexavalent Chromium	02/15/24 11:43 AM	Reported
18	N063103-011A	SAMP	1	Hexavalent Chromium	02/15/24 11:53 AM	Reported
19	N063103-011ADUP	DUP	1	Hexavalent Chromium	02/15/24 12:02 PM	Reported
20	N063103-011AMS	MS	1	Hexavalent Chromium	02/15/24 12:12 PM	Reported
21	N063101-001A	SAMP	1	Hexavalent Chromium	02/15/24 12:21 PM	Not Reported
22	N063101-001AMS	MS	1	Hexavalent Chromium	02/15/24 12:31 PM	Not Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/15/24 12:40 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/15/24 12:49 PM	Reported
25	N063101-001A	SAMP	5	Hexavalent Chromium	02/15/24 12:59 PM	Reported
26	N063101-001AMS	MS	5	Hexavalent Chromium	02/15/24 1:35 PM	Not Reported
27	N063101-002A	SAMP	1	Hexavalent Chromium	02/15/24 1:48 PM	Reported
28	N063101-002AMS	MS	1	Hexavalent Chromium	02/15/24 1:57 PM	Reported
29	N063108-002A	SAMP	1	Hexavalent Chromium	02/15/24 2:07 PM	Reported
30	N063108-002AREP	DUP	1	Hexavalent Chromium	02/15/24 2:16 PM	Reported
31	N063108-001A	SAMP	1	Hexavalent Chromium	02/15/24 2:25 PM	Reported
32	N063108-001AREP	DUP	1	Hexavalent Chromium	02/15/24 2:35 PM	Reported
33	N063103-004A	SAMP	1	Hexavalent Chromium	02/15/24 2:44 PM	Reported
34	N063103-004AMS	MS	1	Hexavalent Chromium	02/15/24 2:54 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/15/24 3:03 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/15/24 3:13 PM	Reported
37	N063103-005A	SAMP	1	Hexavalent Chromium	02/15/24 3:22 PM	Reported
38	N063103-005AMS	MS	1	Hexavalent Chromium	02/15/24 3:32 PM	Reported
39	N063103-006A	SAMP	1	Hexavalent Chromium	02/15/24 3:41 PM	Reported
40	N063103-006AMS	MS	1	Hexavalent Chromium	02/15/24 3:51 PM	Reported
41	N063103-008A	SAMP	1	Hexavalent Chromium	02/15/24 4:00 PM	Reported
42	N063103-008AMS	MS	1	Hexavalent Chromium	02/15/24 4:09 PM	Reported

INJECTION LOG: 240215A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063103-009A	SAMP	1	Hexavalent Chromium	02/15/24 4:19 PM	Reported
44	N063103-009AMS	MS	1	Hexavalent Chromium	02/15/24 4:28 PM	Reported
45	N063103-010A	SAMP	1	Hexavalent Chromium	02/15/24 4:38 PM	Reported
46	N063103-010AMS	MS	1	Hexavalent Chromium	02/15/24 4:47 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/15/24 4:57 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/15/24 5:06 PM	Reported
49	N063103-012A	SAMP	1	Hexavalent Chromium	02/15/24 5:16 PM	Reported
50	N063103-012AMS	MS	1	Hexavalent Chromium	02/15/24 5:25 PM	Reported
51	N063103-013A	SAMP	1	Hexavalent Chromium	02/15/24 5:35 PM	Reported
52	N063103-013AMS	MS	1	Hexavalent Chromium	02/15/24 5:44 PM	Reported
53	N063103-014A	SAMP	1	Hexavalent Chromium	02/15/24 5:53 PM	Reported
54	N063103-014AMS	MS	1	Hexavalent Chromium	02/15/24 6:06 PM	Reported
55	N063103-015A	SAMP	1	Hexavalent Chromium	02/15/24 6:16 PM	Reported
56	N063103-015AMS	MS	1	Hexavalent Chromium	02/15/24 6:25 PM	Reported
57	N063103-016A	SAMP	1	Hexavalent Chromium	02/15/24 6:35 PM	Reported
58	N063103-016AMS	MS	1	Hexavalent Chromium	02/15/24 6:44 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/15/24 6:54 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/15/24 7:03 PM	Reported
61	N062736-009A	SAMP	1	Hexavalent Chromium	02/15/24 7:13 PM	Not Reported
62	N062736-009AMS	MS	1	Hexavalent Chromium	02/15/24 7:22 PM	Not Reported
63	N063103-002A	SAMP	1	Hexavalent Chromium	02/15/24 7:32 PM	Reported
64	N063103-002AMS	MS	1	Hexavalent Chromium	02/15/24 7:41 PM	Reported
65	N063103-003A	SAMP	1	Hexavalent Chromium	02/15/24 7:50 PM	Reported
66	N063103-003AMS	MS	1	Hexavalent Chromium	02/15/24 8:00 PM	Reported
67	N063101-001AMS	MS	5	Hexavalent Chromium	02/15/24 8:09 PM	Reported
68	CCV-6	CCV1	1	Hexavalent Chromium	02/15/24 8:19 PM	Reported
69	CCB-6	CCB	1	Hexavalent Chromium	02/15/24 8:28 PM	Reported
70	BLANK	BLANK	1	Hexavalent Chromium	02/15/24 8:38 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240215A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**17/Feb/24 11:31:18**
No. of Injections:	**73**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/15/2024 10:08	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/15/2024 10:23	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/15/2024 10:32	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/15/2024 10:42	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/15/2024 10:51	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/15/2024 11:01	Finished	LCS @5ppb, IWST-231228B
15	N063103-001A,SAMF	1	1000	Unknown		02/15/2024 11:22	Finished	SAMP,10 mL
16	N063103-001AMS,MS	2	1000	Unknown		02/15/2024 11:34	Finished	MS (1ppb), IWST-231228B,10r
17	N063103-001AMSD,M	3	1000	Unknown		02/15/2024 11:43	Finished	MSD (1ppb), IWST-231228B,1
18	N063103-011A,SAMF	4	1000	Unknown		02/15/2024 11:53	Finished	SAMP,10 mL
19	N063103-011ADUP,D	5	1000	Unknown		02/15/2024 12:02	Finished	DUP,10 mL
20	N063103-011AMS,MS	6	1000	Unknown		02/15/2024 12:12	Finished	MS (1ppb), IWST-231228B,10r
21	N063101-001A,SAMF	7	1000	Unknown		02/15/2024 12:21	Finished	SAMP,10 mL
22	N063101-001AMS,MS	8	1000	Unknown		02/15/2024 12:31	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	9	1000	Unknown		02/15/2024 12:40	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		02/15/2024 12:49	Finished	CCB R240129C
25	N063101-001A,SAMF	11	1000	Unknown		02/15/2024 12:59	Finished	SAMP,2>10 mL
26	N063101-001AMS,MS	1	1000	Unknown		02/15/2024 13:35	Finished	MS (1ppb), IWST-231228B,2>1
27	N063101-002A,SAMF	2	1000	Unknown		02/15/2024 13:48	Finished	SAMP,10 mL
28	N063101-002AMS,MS	3	1000	Unknown		02/15/2024 13:57	Finished	MS (1ppb), IWST-231228B,10r
29	N063108-002A,SAMF	4	1000	Unknown		02/15/2024 14:07	Finished	SAMP,10 mL
30	N063108-002AREP,D	5	1000	Unknown		02/15/2024 14:16	Finished	REP,10 mL
31	N063108-001A,SAMF	6	1000	Unknown		02/15/2024 14:25	Finished	SAMP,10 mL
32	N063108-001AREP,D	7	1000	Unknown		02/15/2024 14:35	Finished	REP,10 mL
33	N063103-004A,SAMF	8	1000	Unknown		02/15/2024 14:44	Finished	SAMP,10 mL
34	N063103-004AMS,MS	9	1000	Unknown		02/15/2024 14:54	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	10	1000	Unknown		02/15/2024 15:03	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	11	1000	Unknown		02/15/2024 15:13	Finished	CCB R240129C
37	N063103-005A,SAMF	12	1000	Unknown		02/15/2024 15:22	Finished	SAMP,10 mL
38	N063103-005AMS,MS	13	1000	Unknown		02/15/2024 15:32	Finished	MS (1ppb), IWST-231228B,10r
39	N063103-006A,SAMF	14	1000	Unknown		02/15/2024 15:41	Finished	SAMP,10 mL
40	N063103-006AMS,MS	15	1000	Unknown		02/15/2024 15:51	Finished	MS (1ppb), IWST-231228B,10r
41	N063103-008A,SAMF	16	1000	Unknown		02/15/2024 16:00	Finished	SAMP,10 mL
42	N063103-008AMS,MS	17	1000	Unknown		02/15/2024 16:09	Finished	MS (1ppb), IWST-231228B,10r
43	N063103-009A,SAMF	18	1000	Unknown		02/15/2024 16:19	Finished	SAMP,10 mL
44	N063103-009AMS,MS	19	1000	Unknown		02/15/2024 16:28	Finished	MS (1ppb), IWST-231228B,10r
45	N063103-010A,SAMF	20	1000	Unknown		02/15/2024 16:38	Finished	SAMP,10 mL
46	N063103-010AMS,MS	21	1000	Unknown		02/15/2024 16:47	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	22	1000	Unknown		02/15/2024 16:57	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	23	1000	Unknown		02/15/2024 17:06	Finished	CCB R240129C
49	N063103-012A,SAMF	24	1000	Unknown		02/15/2024 17:16	Finished	SAMP,10 mL
50	N063103-012AMS,MS	25	1000	Unknown		02/15/2024 17:25	Finished	MS (1ppb), IWST-231228B,10r
51	N063103-013A,SAMF	26	1000	Unknown		02/15/2024 17:35	Finished	SAMP,10 mL
52	N063103-013AMS,MS	27	1000	Unknown		02/15/2024 17:44	Finished	MS (1ppb), IWST-231228B,10r
53	N063103-014A,SAMF	28	1000	Unknown		02/15/2024 17:53	Finished	SAMP,10 mL
54	N063103-014AMS,MS	29	1000	Unknown		02/15/2024 18:06	Finished	MS (1ppb), IWST-231228B,10r
55	N063103-015A,SAMF	30	1000	Unknown		02/15/2024 18:16	Finished	SAMP,10 mL
56	N063103-015AMS,MS	31	1000	Unknown		02/15/2024 18:25	Finished	MS (1ppb), IWST-231228B,10r
57	N063103-016A,SAMF	32	1000	Unknown		02/15/2024 18:35	Finished	SAMP,10 mL
58	N063103-016AMS,MS	33	1000	Unknown		02/15/2024 18:44	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	34	1000	Unknown		02/15/2024 18:54	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	35	1000	Unknown		02/15/2024 19:03	Finished	CCB R240129C

61	N062736-009A,SAMP	36	1000	Unknown		02/15/2024 19:13	Finished	SAMP,10 mL
62	N062736-009AMS,MS	37	1000	Unknown		02/15/2024 19:22	Finished	MS (1ppb), IWST-231228B,10r
63	N063103-002A,SAMP	38	1000	Unknown		02/15/2024 19:32	Finished	SAMP,10 mL
64	N063103-002AMS,MS	39	1000	Unknown		02/15/2024 19:41	Finished	MS (1ppb), IWST-231228B,10r
65	N063103-003A,SAMP	40	1000	Unknown		02/15/2024 19:50	Finished	SAMP,10 mL
66	N063103-003AMS,MS	41	1000	Unknown		02/15/2024 20:00	Finished	MS (1ppb), IWST-231228B,10r
67	N063101-001AMS,MS	42	1000	Unknown		02/15/2024 20:09	Finished	MS (1ppb), IWST-231228B,2>1
68	CCV-6,CCV1,1,	43	1000	Unknown		02/15/2024 20:19	Finished	CCV @10ppb, IWST-231228A
69	CCB-6,CCB,1,	44	1000	Unknown		02/15/2024 20:28	Finished	CCB R240129C
70	BLANK	45	1000	Unknown		02/15/2024 20:38	Finished	BLANK
71	SHUTDOWN	46	1000	Unknown		02/15/2024 20:47	Finished	
72	Eluent: R240215A	47	1000	Unknown		n.a.	Finished	
73	PCR: R240215B	48	1000	Unknown		n.a.	Finished	

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 2/14/24
Time Prepared: 1138H
Prepared By: NA

Reagent ID:
Sulfuric Acid: 14335
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: M240217A
NH4OH + NH4SO4 buffer: M240124C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW67076-1A	9.40	-	~250mL	~250mL		
2)	2A	9.41	-				
3)	3A	9.36	-				
4)	MB-106781	7.55	9.59	~2L	~2L		
5)	MW67009-1A	9.57	9.15			10.2mL AMO2Ac / 100mL DI	TCLP
6)	2A	9.04	9.34				
7)	MW67051-1A	9.11	9.40				
8)	2A	9.13	9.45				
9)							
10)							
11)							
12)							
13)							
14)							
15)							

Sample Preparation

Date Prepared: 2/15/24
Time Prepared: 0958H
Prepared By: NA

Reagent ID:
Sulfuric Acid: 14335
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: M240215A
NH4OH + NH4SO4 buffer: M240124C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW67101-1A	9.31	-	~250mL	250mL		
2)	2A	9.64	-				
3)	MW67100-1A	9.41	-				
4)	2A	9.42	-				
5)	3A	9.40	-				
6)	4A	9.45					
7)	5A	9.33	-				
8)	6A	9.36	-				
9)	8A	9.54	-				
10)	9A	9.47	-				
11)	10A	9.31	-				
12)	11A	9.33	-				
13)	12A	9.46	-				
14)	13A	9.39	-				
15)	14A	9.51	-				
	15A	9.48	-				
	16A	9.44	-				

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 2/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0427	0.2063	1.0639	2.1157	3.2270	4.3227	0.9999
Measured, in ug/L	0.198500	0.959200	4.946100	9.835700	15.002300	20.095900	
Relative Error (%RE)	-0.8%		-1.1%				

	Stock	Working
Standard Concentration:	1,000,000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063101
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **CCV**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695660**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.965	0.20	5.000	0	99.3	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695661**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.175	0.20	0.2000	0	87.2	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695671**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.888	0.20	10.00	0	98.9	95	105				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **CCV**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695682**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.917	0.20	5.000	0	98.3	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695694**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.866	0.20	10.00	0	98.7	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063101
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **CCV**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695706**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.840	0.20	5.000	0	96.8	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695713**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.536	0.20	10.00	0	95.4	95	105				

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ICV**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5695770**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5695771**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063101
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **CCB**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695662**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **CCB**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695672**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **CCB**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695683**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **CCB**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695695**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **CCB**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695707**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063101
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **CCB**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695714**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ICB**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5695772**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/15/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.040	
CCV-3	4.048	
CCV-4	4.048	
CCV-5	4.040	
CCV-6	4.056	
Average	4.045	
Actual RT Window	3.965 - 4.125	
Applied RT Window	3.845 - 4.245	
MB-R181621	N.A.	N.A.
LCS-R181621	4.048	PASS
N063103-001A	N.A.	N.A.
N063103-001AMS	4.031	PASS
N063103-001AMSD	4.040	PASS
N063103-011A	N.A.	N.A.
N063103-011ADUP	N.A.	N.A.
N063103-011AMS	4.031	PASS
N063101-001A	N.A.	N.A.
N063101-001AMS	N.A.	N.A.
N063101-001A	3.973	PASS
N063101-001AMS	3.981	PASS
N063101-002A	N.A.	N.A.
N063101-002AMS	4.048	PASS
N063108-002A	4.031	PASS
N063108-002AREP	4.040	PASS
N063108-001A	N.A.	N.A.
N063108-001AREP	N.A.	N.A.
N063103-004A	N.A.	N.A.
N063103-004AMS	4.040	PASS
N063103-005A	N.A.	N.A.
N063103-005AMS	4.040	PASS

Reviewed by:

dMocha 2/29/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/15/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.040	
CCV-3	4.048	
CCV-4	4.048	
CCV-5	4.040	
CCV-6	4.056	
Average	4.045	
Actual RT Window	3.965 - 4.125	
Applied RT Window	3.845 - 4.245	
N063103-006A	N.A.	N.A.
N063103-006AMS	4.040	PASS
N063103-008A	N.A.	N.A.
N063103-008AMS	4.040	PASS
N063103-009A	N.A.	N.A.
N063103-009AMS	4.031	PASS
N063103-010A	N.A.	N.A.
N063103-010AMS	4.040	PASS
N063103-012A	N.A.	N.A.
N063103-012AMS	4.031	PASS
N063103-013A	N.A.	N.A.
N063103-013AMS	4.040	PASS
N063103-014A	N.A.	N.A.
N063103-014AMS	4.040	PASS
N063103-015A	N.A.	N.A.
N063103-015AMS	4.048	PASS
N063103-016A	N.A.	N.A.
N063103-016AMS	4.040	PASS
N062736-009A	N.A.	N.A.
N062736-009AMS	4.040	PASS
N063103-002A	N.A.	N.A.
N063103-002AMS	4.040	PASS

Reviewed by:

dMocha 2/29/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/15/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.040	
CCV-3	4.048	
CCV-4	4.048	
CCV-5	4.040	
CCV-6	4.056	

Average	4.045	
Actual RT Window	3.965 -	4.125
Applied RT Window	3.845 -	4.245

N063103-003A	N.A.	N.A.
N063103-003AMS	4.048	PASS
N063101-001AMS	3.965	PASS

Reviewed by:

dMRocha 2/29/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

Reviewed by:

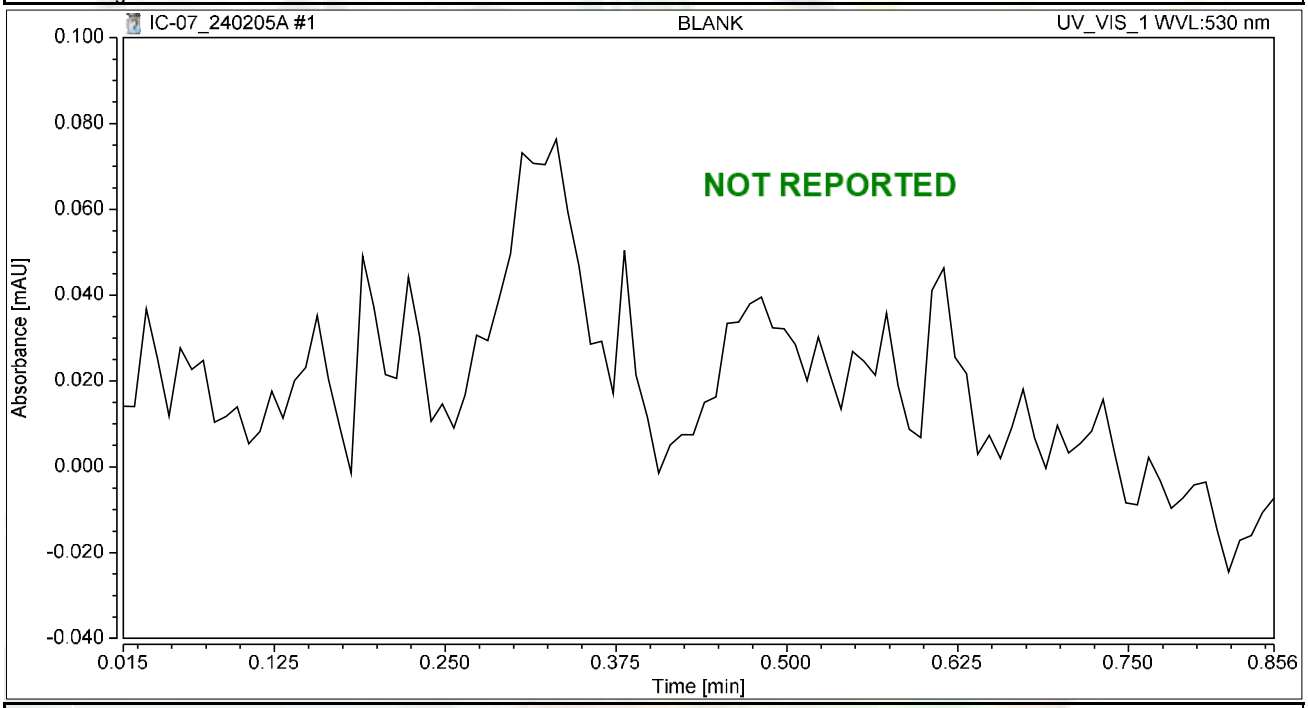
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**0.84**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 11:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

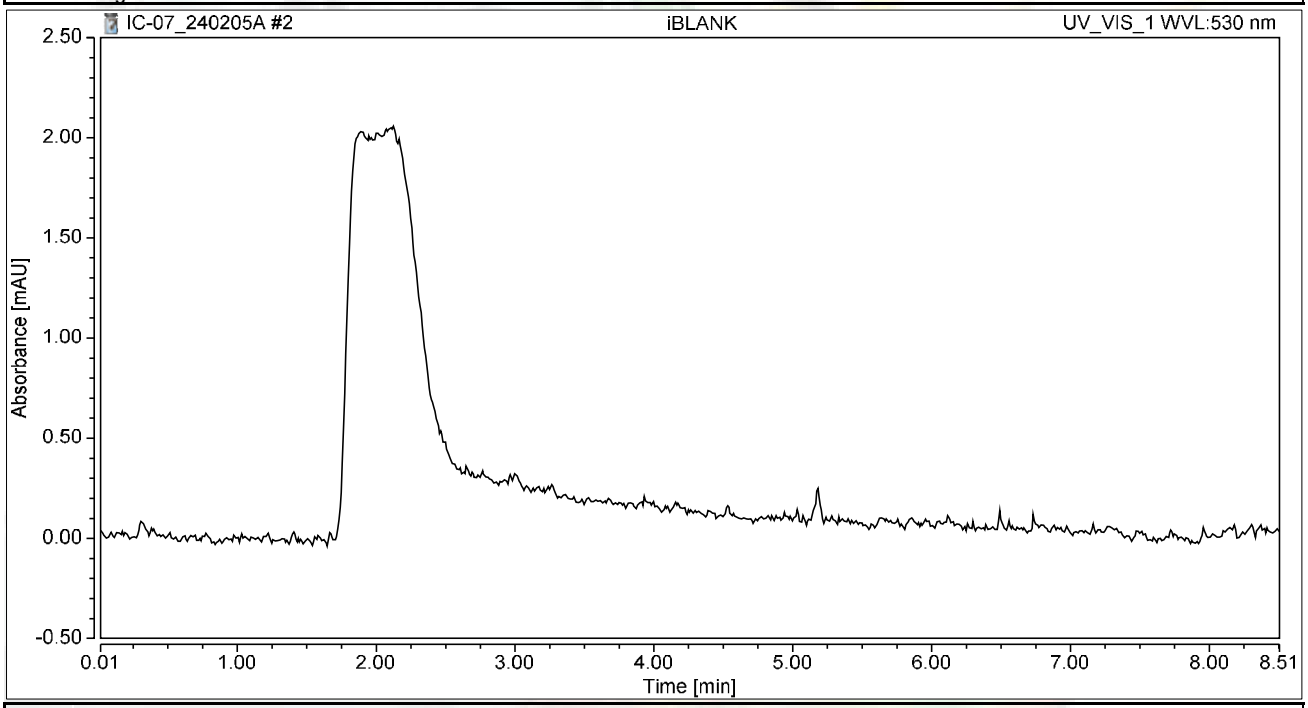
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

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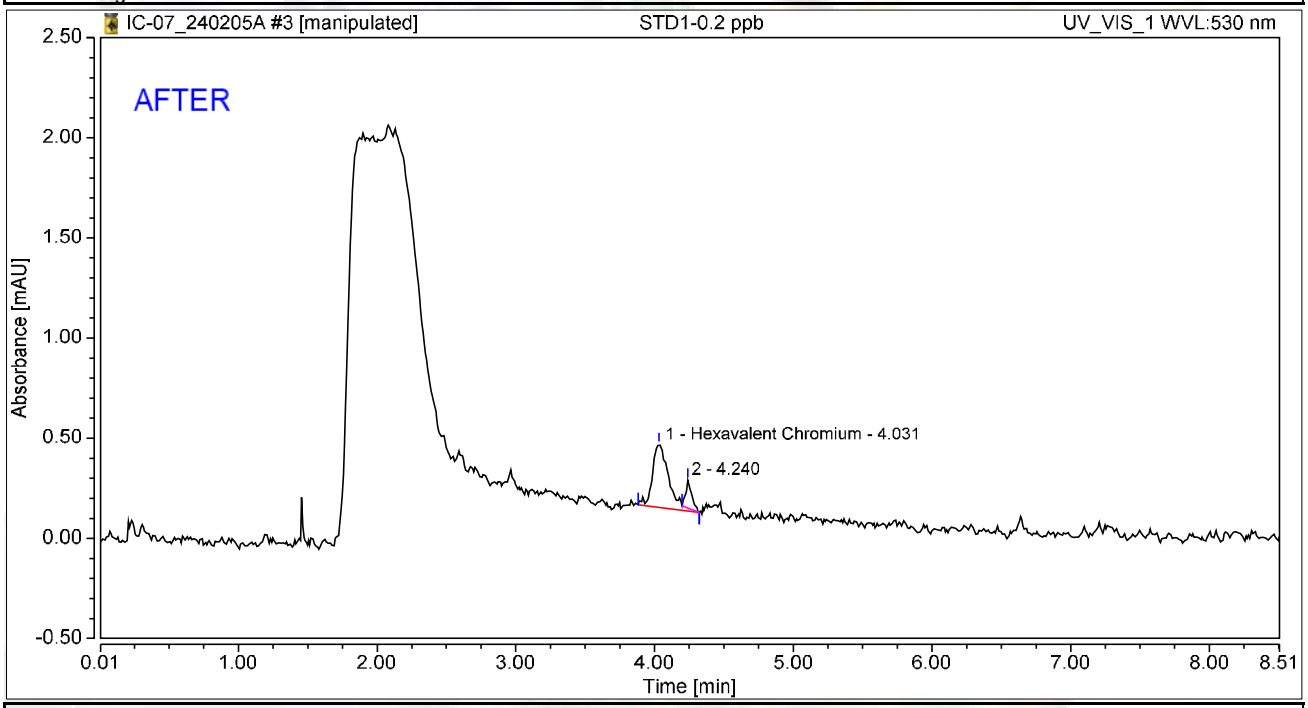
Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.043	0.313	85.65	69.19	0.1985
2		4.240	0.007	0.139	14.35	30.81	n.a.
Total:			**0.050**	**0.452**	**100.00**	**100.00**	

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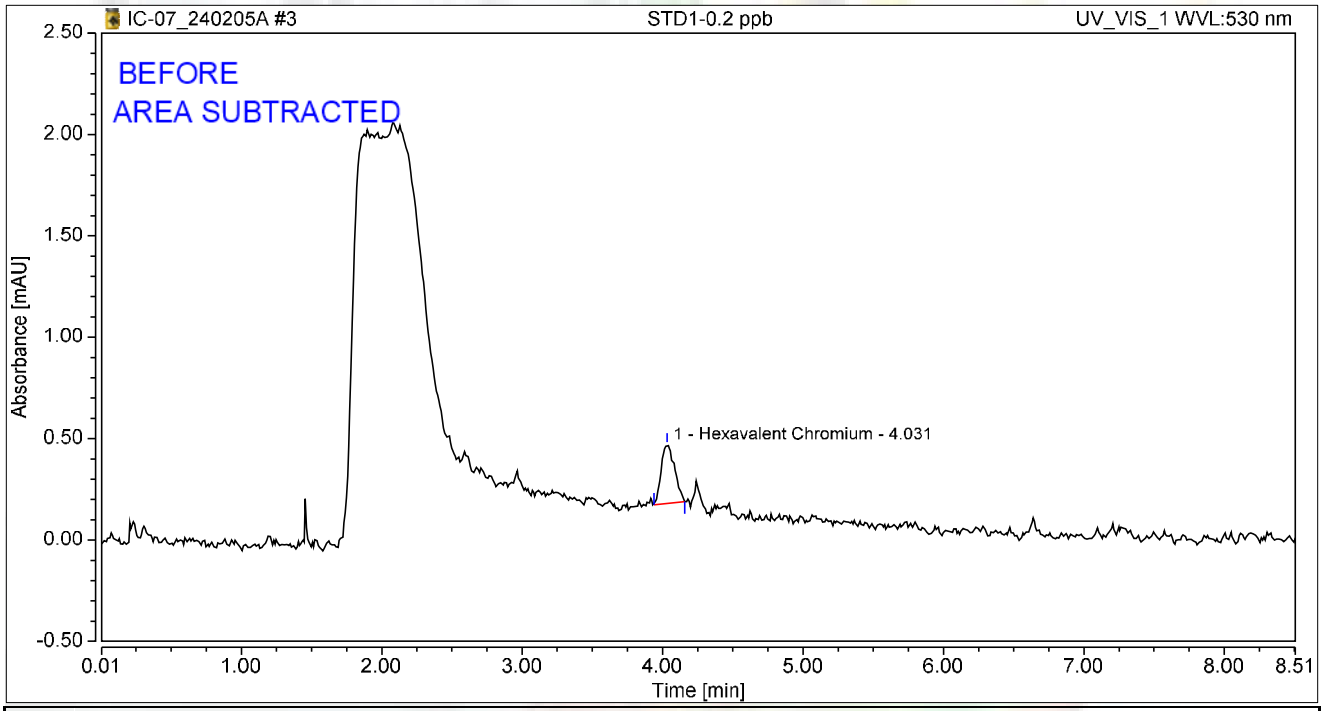
Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

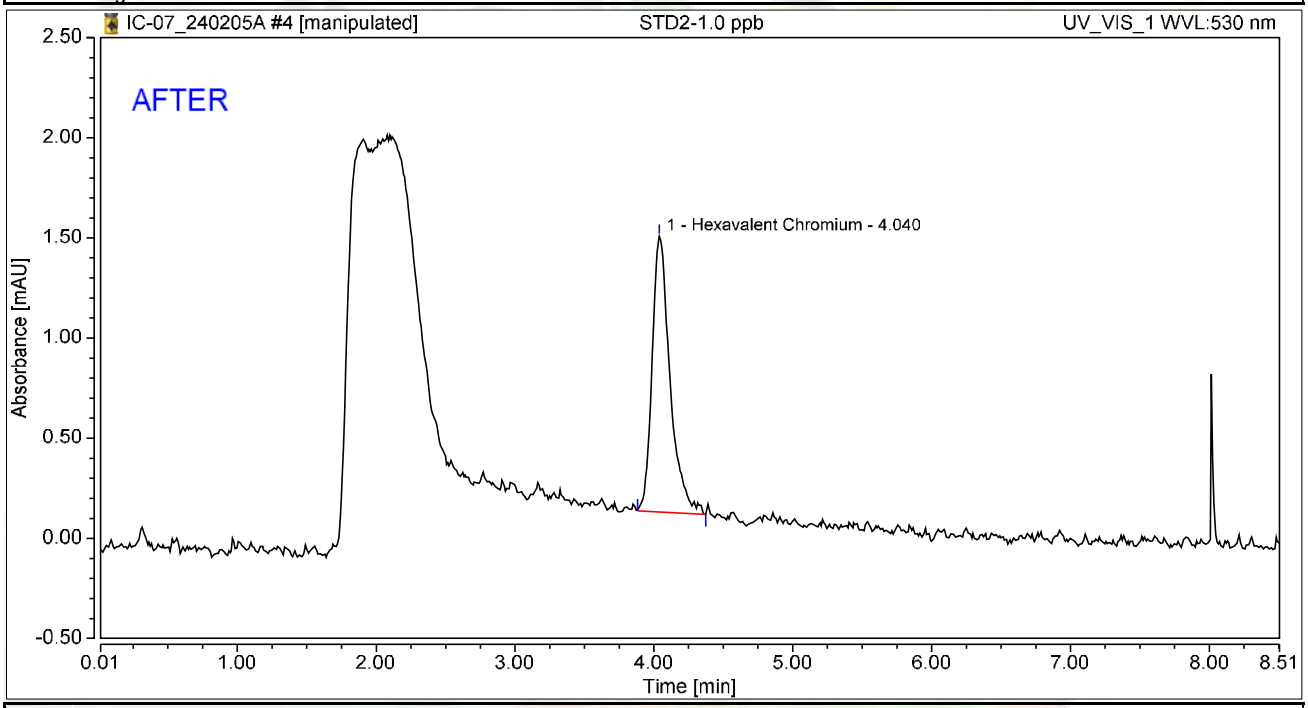
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.032	0.288	100.00	100.00	0.1502
Total:			**0.032**	**0.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.206	1.377	100.00	100.00	0.9592
Total:			**0.206**	**1.377**	**100.00**	**100.00**	

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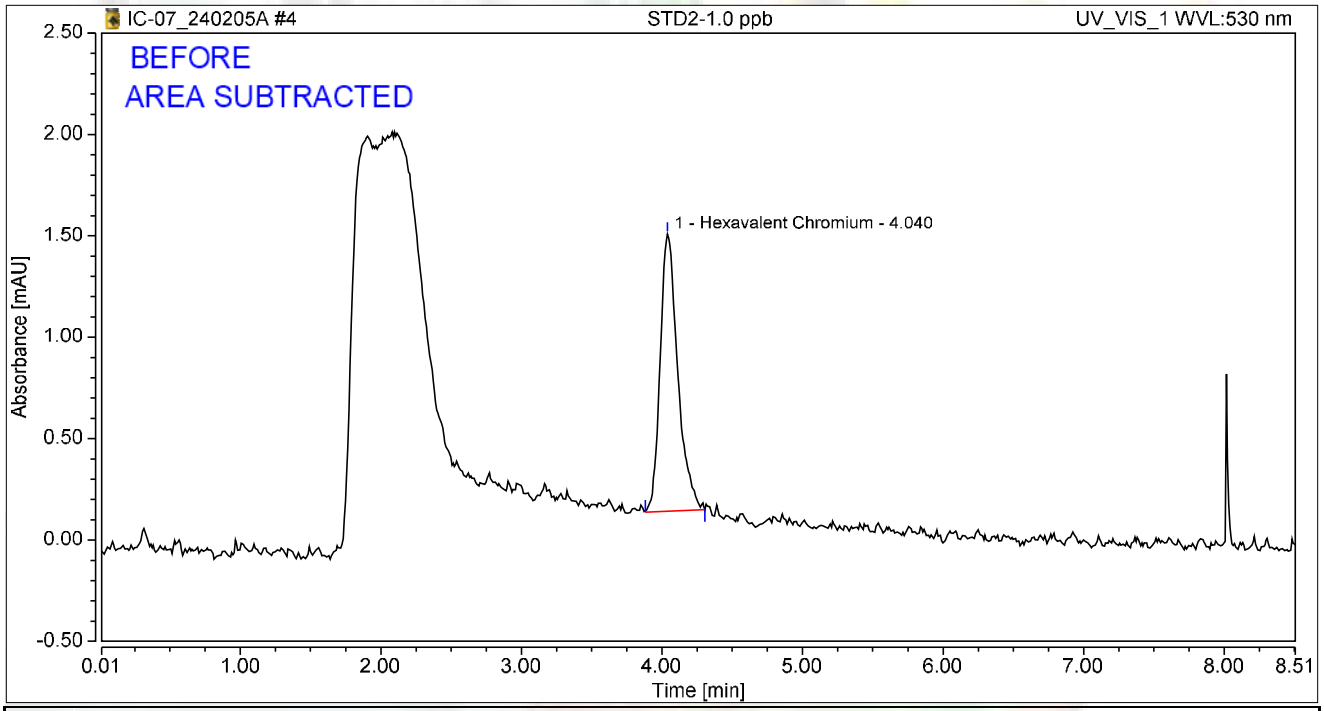
Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

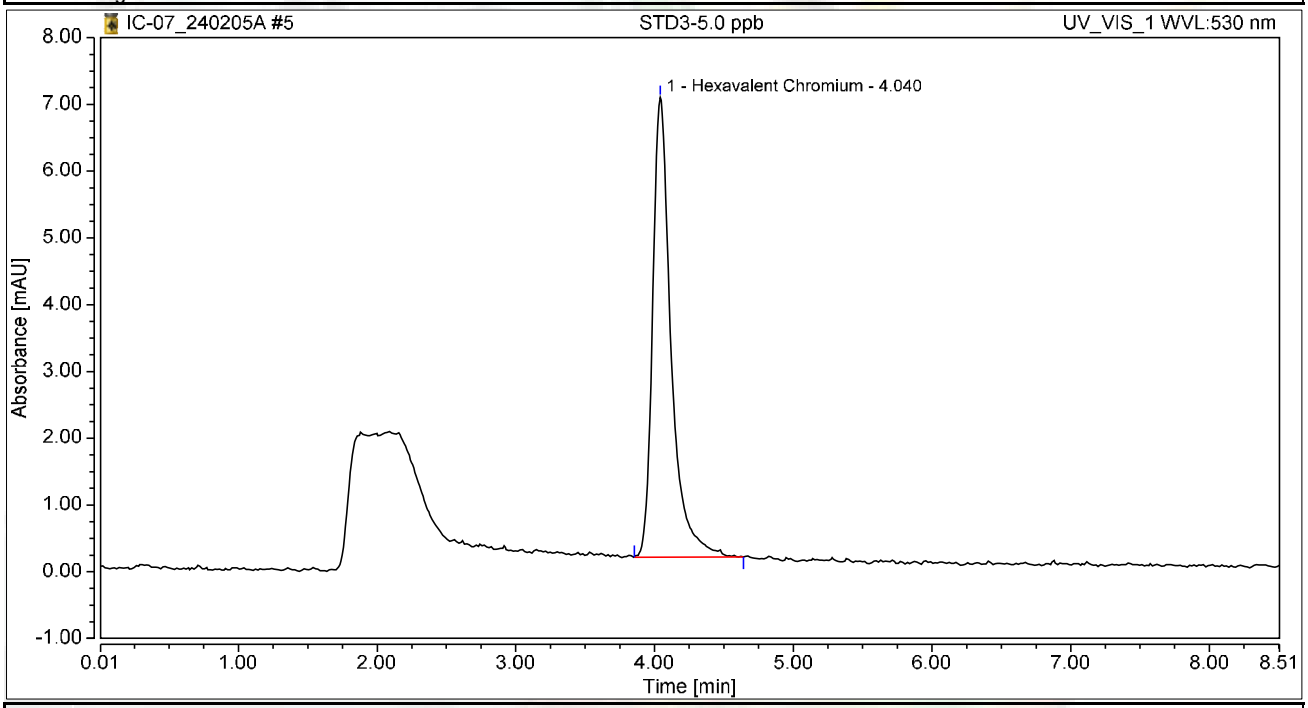
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.198	1.367	100.00	100.00	0.9223
Total:			**0.198**	**1.367**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

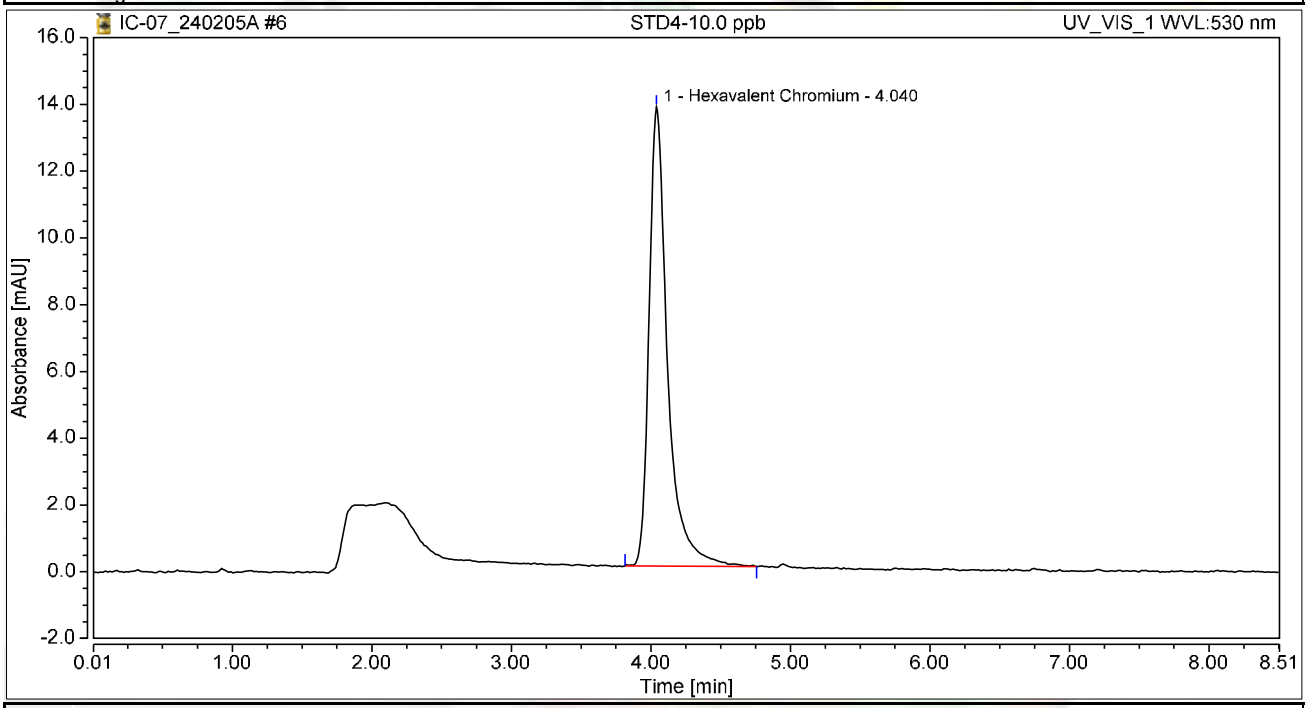
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.064	6.885	100.00	100.00	4.9461
Total:			**1.064**	**6.885**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

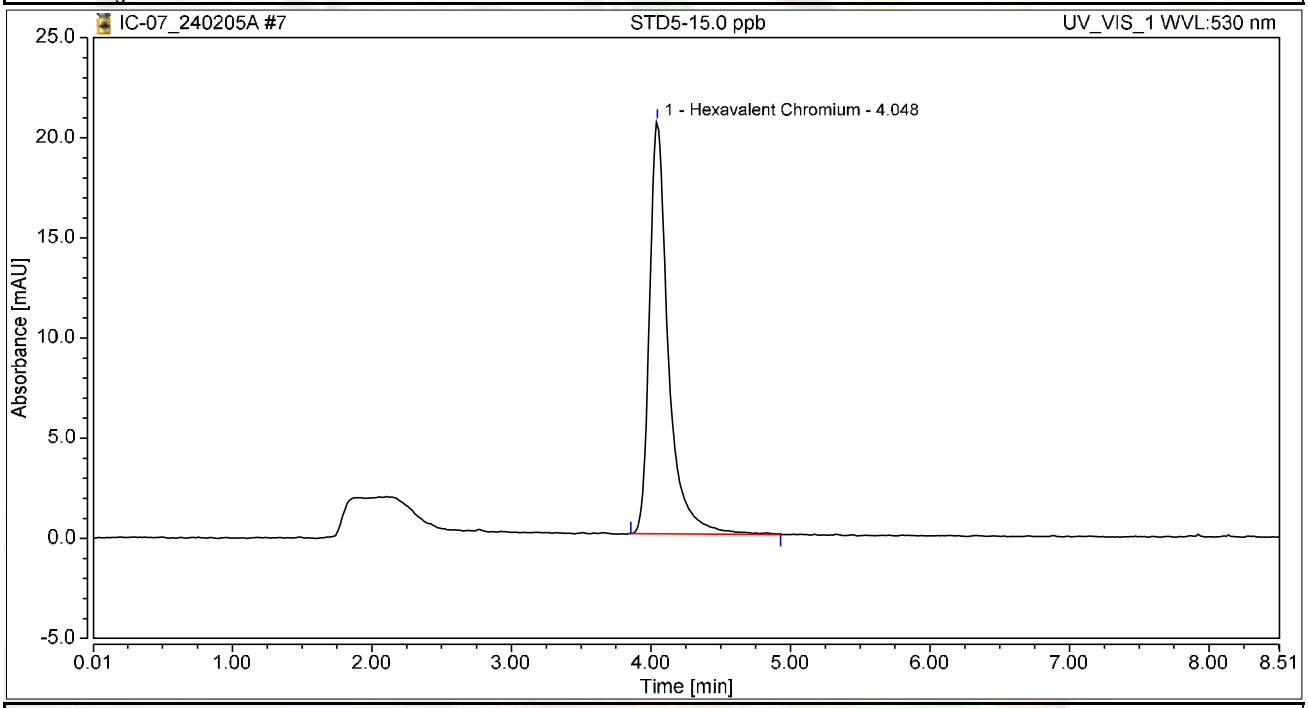
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.116	13.748	100.00	100.00	9.8357
Total:			**2.116**	**13.748**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

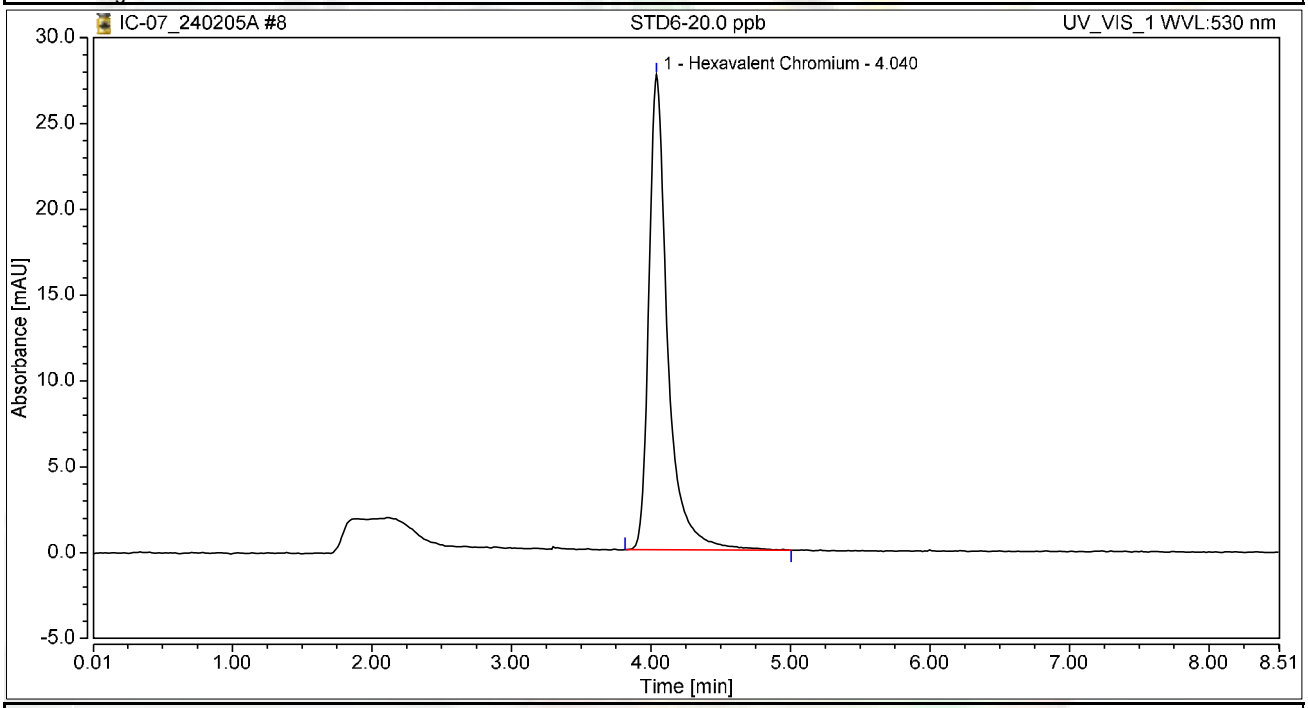
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	3.227	20.605	100.00	100.00	15.0023
Total:			**3.227**	**20.605**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:08**	*Sample Weight:*	**1.0000**

Chromatogram



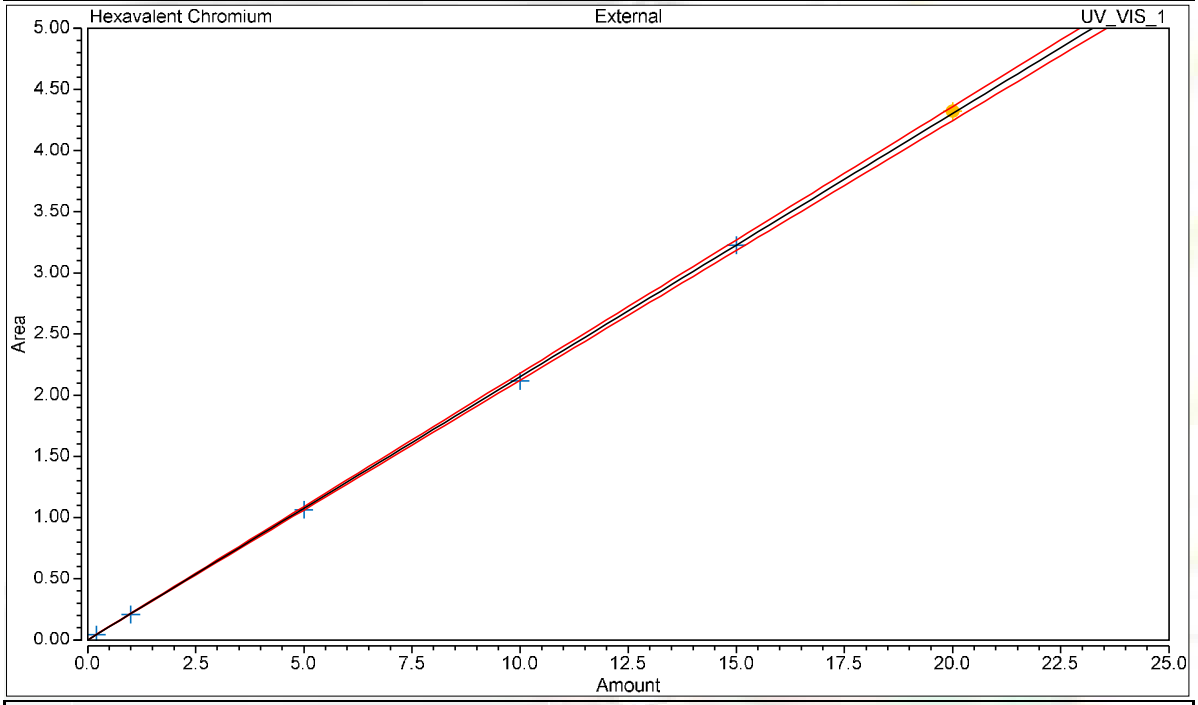
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	4.323	27.676	100.00	100.00	20.0959
Total:			**4.323**	**27.676**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2151
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99987

Calibration Plot — Hexavalent Chromium



Calibration Results — Hexavalent Chromium

No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0427	0.043	0.313
4	STD2-1.0 ppb	02	1.0000	0.2063	0.206	1.377
5	STD3-5.0 ppb	03	5.0000	1.0639	1.064	6.885
6	STD4-10.0 ppb	04	10.0000	2.1157	2.116	13.748
7	STD5-15.0 ppb	05	15.0000	3.2270	3.227	20.605
8	STD6-20.0 ppb	06	20.0000	4.3227	4.323	27.676

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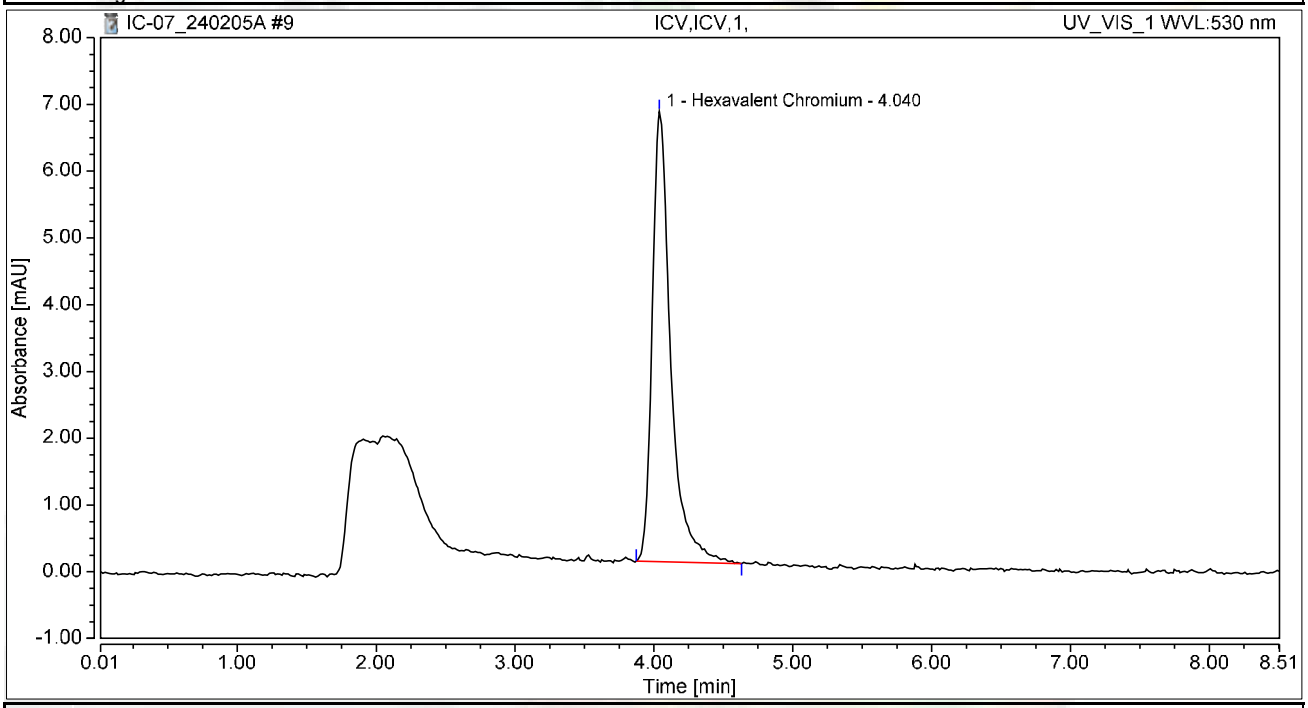
Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

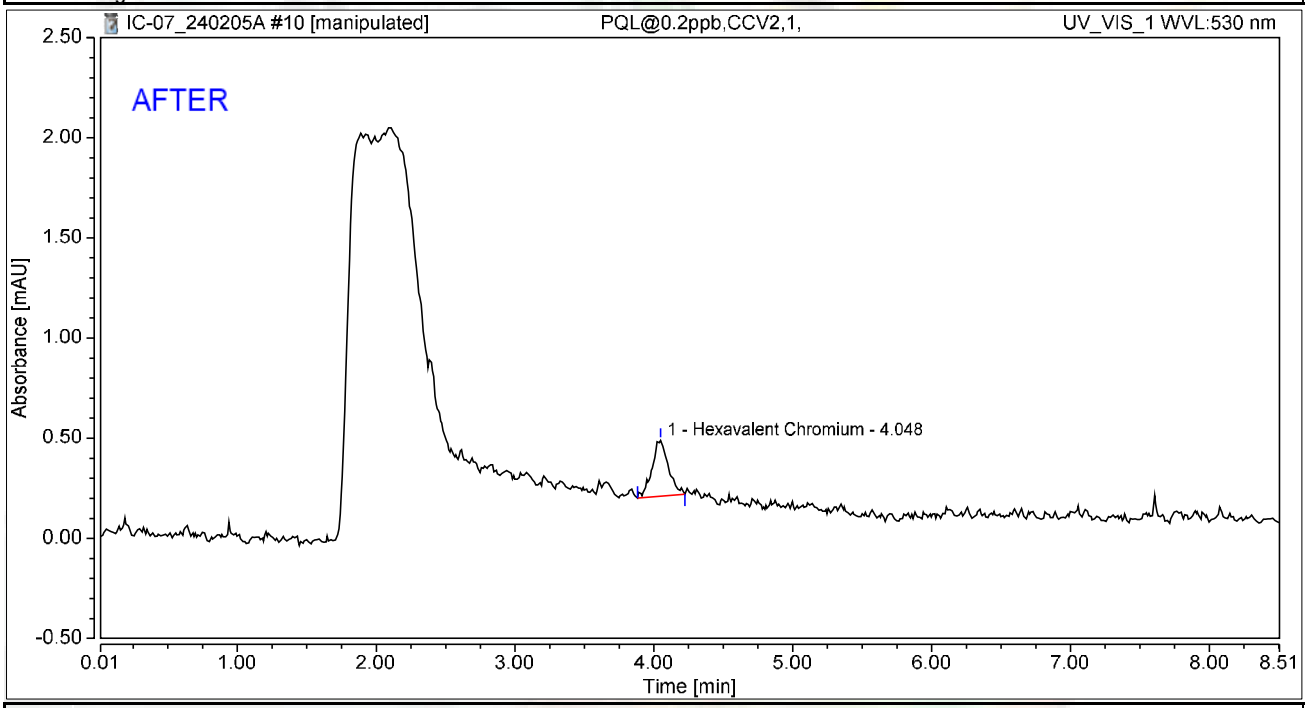
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.040	6.743	100.00	100.00	4.8342
Total:			**1.040**	**6.743**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.039	0.279	100.00	100.00	0.1802
Total:			**0.039**	**0.279**	**100.00**	**100.00**	

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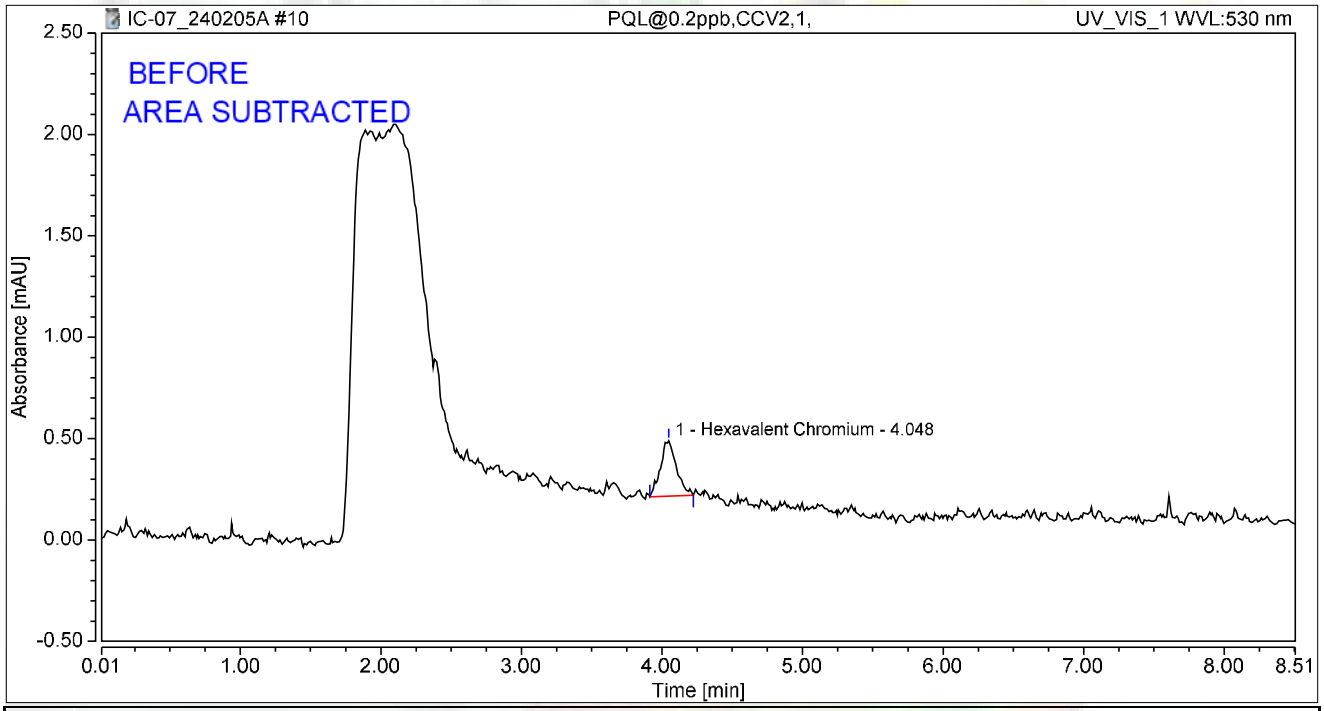
Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

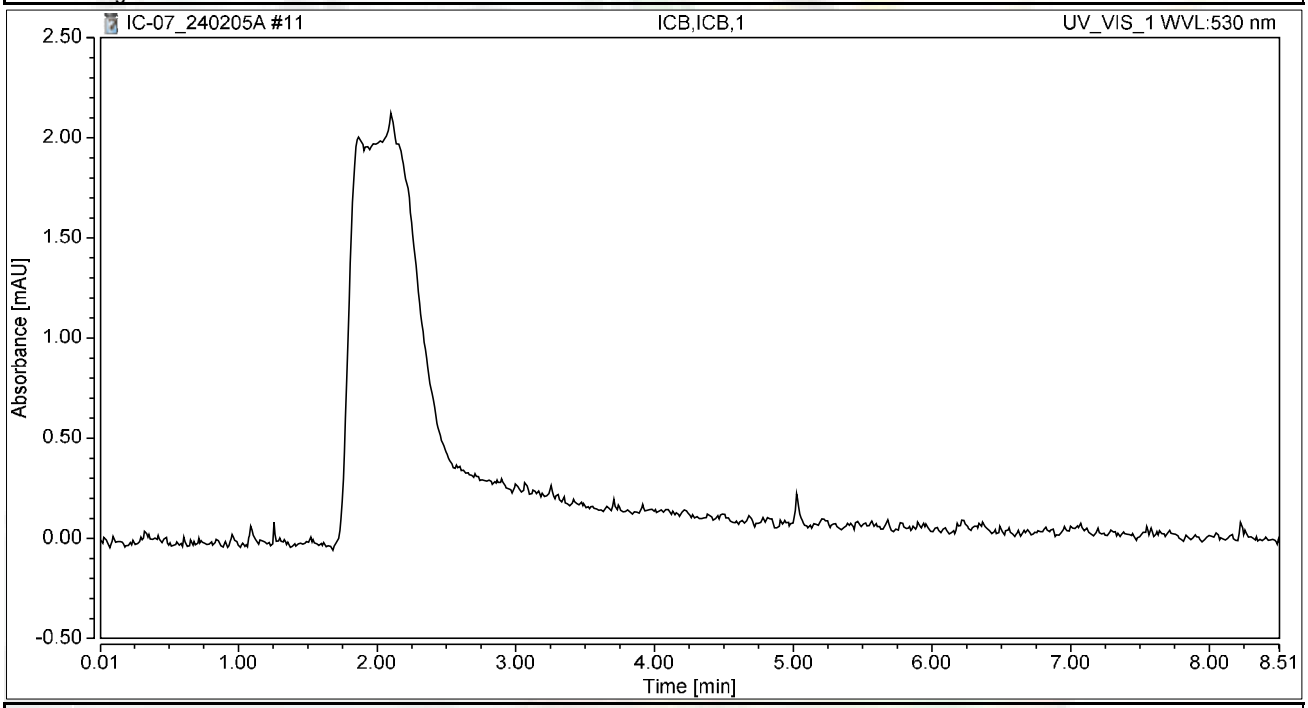
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.036	0.273	100.00	100.00	0.1694
Total:			**0.036**	**0.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

JRB 2/19/2024

RAW DATA

INJECTION LOG: 240215A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/15/24 10:08 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/15/24 10:23 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/15/24 10:32 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/15/24 10:42 AM	Reported
13	MB-R181621	MBLK	1	Hexavalent Chromium	02/15/24 10:51 AM	Reported
14	LCS-R181621	LCS	1	Hexavalent Chromium	02/15/24 11:01 AM	Reported
15	N063103-001A	SAMP	1	Hexavalent Chromium	02/15/24 11:22 AM	Reported
16	N063103-001AMS	MS	1	Hexavalent Chromium	02/15/24 11:34 AM	Reported
17	N063103-001AMSD	MSD	1	Hexavalent Chromium	02/15/24 11:43 AM	Reported
18	N063103-011A	SAMP	1	Hexavalent Chromium	02/15/24 11:53 AM	Reported
19	N063103-011ADUP	DUP	1	Hexavalent Chromium	02/15/24 12:02 PM	Reported
20	N063103-011AMS	MS	1	Hexavalent Chromium	02/15/24 12:12 PM	Reported
21	N063101-001A	SAMP	1	Hexavalent Chromium	02/15/24 12:21 PM	Not Reported
22	N063101-001AMS	MS	1	Hexavalent Chromium	02/15/24 12:31 PM	Not Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/15/24 12:40 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/15/24 12:49 PM	Reported
25	N063101-001A	SAMP	5	Hexavalent Chromium	02/15/24 12:59 PM	Reported
26	N063101-001AMS	MS	5	Hexavalent Chromium	02/15/24 1:35 PM	Not Reported
27	N063101-002A	SAMP	1	Hexavalent Chromium	02/15/24 1:48 PM	Reported
28	N063101-002AMS	MS	1	Hexavalent Chromium	02/15/24 1:57 PM	Reported
29	N063108-002A	SAMP	1	Hexavalent Chromium	02/15/24 2:07 PM	Reported
30	N063108-002AREP	DUP	1	Hexavalent Chromium	02/15/24 2:16 PM	Reported
31	N063108-001A	SAMP	1	Hexavalent Chromium	02/15/24 2:25 PM	Reported
32	N063108-001AREP	DUP	1	Hexavalent Chromium	02/15/24 2:35 PM	Reported
33	N063103-004A	SAMP	1	Hexavalent Chromium	02/15/24 2:44 PM	Reported
34	N063103-004AMS	MS	1	Hexavalent Chromium	02/15/24 2:54 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/15/24 3:03 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/15/24 3:13 PM	Reported
37	N063103-005A	SAMP	1	Hexavalent Chromium	02/15/24 3:22 PM	Reported
38	N063103-005AMS	MS	1	Hexavalent Chromium	02/15/24 3:32 PM	Reported
39	N063103-006A	SAMP	1	Hexavalent Chromium	02/15/24 3:41 PM	Reported
40	N063103-006AMS	MS	1	Hexavalent Chromium	02/15/24 3:51 PM	Reported
41	N063103-008A	SAMP	1	Hexavalent Chromium	02/15/24 4:00 PM	Reported
42	N063103-008AMS	MS	1	Hexavalent Chromium	02/15/24 4:09 PM	Reported

INJECTION LOG: 240215A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063103-009A	SAMP	1	Hexavalent Chromium	02/15/24 4:19 PM	Reported
44	N063103-009AMS	MS	1	Hexavalent Chromium	02/15/24 4:28 PM	Reported
45	N063103-010A	SAMP	1	Hexavalent Chromium	02/15/24 4:38 PM	Reported
46	N063103-010AMS	MS	1	Hexavalent Chromium	02/15/24 4:47 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/15/24 4:57 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/15/24 5:06 PM	Reported
49	N063103-012A	SAMP	1	Hexavalent Chromium	02/15/24 5:16 PM	Reported
50	N063103-012AMS	MS	1	Hexavalent Chromium	02/15/24 5:25 PM	Reported
51	N063103-013A	SAMP	1	Hexavalent Chromium	02/15/24 5:35 PM	Reported
52	N063103-013AMS	MS	1	Hexavalent Chromium	02/15/24 5:44 PM	Reported
53	N063103-014A	SAMP	1	Hexavalent Chromium	02/15/24 5:53 PM	Reported
54	N063103-014AMS	MS	1	Hexavalent Chromium	02/15/24 6:06 PM	Reported
55	N063103-015A	SAMP	1	Hexavalent Chromium	02/15/24 6:16 PM	Reported
56	N063103-015AMS	MS	1	Hexavalent Chromium	02/15/24 6:25 PM	Reported
57	N063103-016A	SAMP	1	Hexavalent Chromium	02/15/24 6:35 PM	Reported
58	N063103-016AMS	MS	1	Hexavalent Chromium	02/15/24 6:44 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/15/24 6:54 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/15/24 7:03 PM	Reported
61	N062736-009A	SAMP	1	Hexavalent Chromium	02/15/24 7:13 PM	Not Reported
62	N062736-009AMS	MS	1	Hexavalent Chromium	02/15/24 7:22 PM	Not Reported
63	N063103-002A	SAMP	1	Hexavalent Chromium	02/15/24 7:32 PM	Reported
64	N063103-002AMS	MS	1	Hexavalent Chromium	02/15/24 7:41 PM	Reported
65	N063103-003A	SAMP	1	Hexavalent Chromium	02/15/24 7:50 PM	Reported
66	N063103-003AMS	MS	1	Hexavalent Chromium	02/15/24 8:00 PM	Reported
67	N063101-001AMS	MS	5	Hexavalent Chromium	02/15/24 8:09 PM	Reported
68	CCV-6	CCV1	1	Hexavalent Chromium	02/15/24 8:19 PM	Reported
69	CCB-6	CCB	1	Hexavalent Chromium	02/15/24 8:28 PM	Reported
70	BLANK	BLANK	1	Hexavalent Chromium	02/15/24 8:38 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240215A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**17/Feb/24 11:31:18**
No. of Injections:	**73**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/15/2024 10:08	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/15/2024 10:23	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/15/2024 10:32	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/15/2024 10:42	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/15/2024 10:51	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/15/2024 11:01	Finished	LCS @5ppb, IWST-231228B
15	N063103-001A,SAMF	1	1000	Unknown		02/15/2024 11:22	Finished	SAMP,10 mL
16	N063103-001AMS,MS	2	1000	Unknown		02/15/2024 11:34	Finished	MS (1ppb), IWST-231228B,10r
17	N063103-001AMSD,M	3	1000	Unknown		02/15/2024 11:43	Finished	MSD (1ppb), IWST-231228B,1(
18	N063103-011A,SAMF	4	1000	Unknown		02/15/2024 11:53	Finished	SAMP,10 mL
19	N063103-011ADUP,D	5	1000	Unknown		02/15/2024 12:02	Finished	DUP,10 mL
20	N063103-011AMS,MS	6	1000	Unknown		02/15/2024 12:12	Finished	MS (1ppb), IWST-231228B,10r
21	N063101-001A,SAMF	7	1000	Unknown		02/15/2024 12:21	Finished	SAMP,10 mL
22	N063101-001AMS,MS	8	1000	Unknown		02/15/2024 12:31	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	9	1000	Unknown		02/15/2024 12:40	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		02/15/2024 12:49	Finished	CCB R240129C
25	N063101-001A,SAMF	11	1000	Unknown		02/15/2024 12:59	Finished	SAMP,2>10 mL
26	N063101-001AMS,MS	1	1000	Unknown		02/15/2024 13:35	Finished	MS (1ppb), IWST-231228B,2>1
27	N063101-002A,SAMF	2	1000	Unknown		02/15/2024 13:48	Finished	SAMP,10 mL
28	N063101-002AMS,MS	3	1000	Unknown		02/15/2024 13:57	Finished	MS (1ppb), IWST-231228B,10r
29	N063108-002A,SAMF	4	1000	Unknown		02/15/2024 14:07	Finished	SAMP,10 mL
30	N063108-002AREP,D	5	1000	Unknown		02/15/2024 14:16	Finished	REP,10 mL
31	N063108-001A,SAMF	6	1000	Unknown		02/15/2024 14:25	Finished	SAMP,10 mL
32	N063108-001AREP,D	7	1000	Unknown		02/15/2024 14:35	Finished	REP,10 mL
33	N063103-004A,SAMF	8	1000	Unknown		02/15/2024 14:44	Finished	SAMP,10 mL
34	N063103-004AMS,MS	9	1000	Unknown		02/15/2024 14:54	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	10	1000	Unknown		02/15/2024 15:03	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	11	1000	Unknown		02/15/2024 15:13	Finished	CCB R240129C
37	N063103-005A,SAMF	12	1000	Unknown		02/15/2024 15:22	Finished	SAMP,10 mL
38	N063103-005AMS,MS	13	1000	Unknown		02/15/2024 15:32	Finished	MS (1ppb), IWST-231228B,10r
39	N063103-006A,SAMF	14	1000	Unknown		02/15/2024 15:41	Finished	SAMP,10 mL
40	N063103-006AMS,MS	15	1000	Unknown		02/15/2024 15:51	Finished	MS (1ppb), IWST-231228B,10r
41	N063103-008A,SAMF	16	1000	Unknown		02/15/2024 16:00	Finished	SAMP,10 mL
42	N063103-008AMS,MS	17	1000	Unknown		02/15/2024 16:09	Finished	MS (1ppb), IWST-231228B,10r
43	N063103-009A,SAMF	18	1000	Unknown		02/15/2024 16:19	Finished	SAMP,10 mL
44	N063103-009AMS,MS	19	1000	Unknown		02/15/2024 16:28	Finished	MS (1ppb), IWST-231228B,10r
45	N063103-010A,SAMF	20	1000	Unknown		02/15/2024 16:38	Finished	SAMP,10 mL
46	N063103-010AMS,MS	21	1000	Unknown		02/15/2024 16:47	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	22	1000	Unknown		02/15/2024 16:57	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	23	1000	Unknown		02/15/2024 17:06	Finished	CCB R240129C
49	N063103-012A,SAMF	24	1000	Unknown		02/15/2024 17:16	Finished	SAMP,10 mL
50	N063103-012AMS,MS	25	1000	Unknown		02/15/2024 17:25	Finished	MS (1ppb), IWST-231228B,10r
51	N063103-013A,SAMF	26	1000	Unknown		02/15/2024 17:35	Finished	SAMP,10 mL
52	N063103-013AMS,MS	27	1000	Unknown		02/15/2024 17:44	Finished	MS (1ppb), IWST-231228B,10r
53	N063103-014A,SAMF	28	1000	Unknown		02/15/2024 17:53	Finished	SAMP,10 mL
54	N063103-014AMS,MS	29	1000	Unknown		02/15/2024 18:06	Finished	MS (1ppb), IWST-231228B,10r
55	N063103-015A,SAMF	30	1000	Unknown		02/15/2024 18:16	Finished	SAMP,10 mL
56	N063103-015AMS,MS	31	1000	Unknown		02/15/2024 18:25	Finished	MS (1ppb), IWST-231228B,10r
57	N063103-016A,SAMF	32	1000	Unknown		02/15/2024 18:35	Finished	SAMP,10 mL
58	N063103-016AMS,MS	33	1000	Unknown		02/15/2024 18:44	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	34	1000	Unknown		02/15/2024 18:54	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	35	1000	Unknown		02/15/2024 19:03	Finished	CCB R240129C

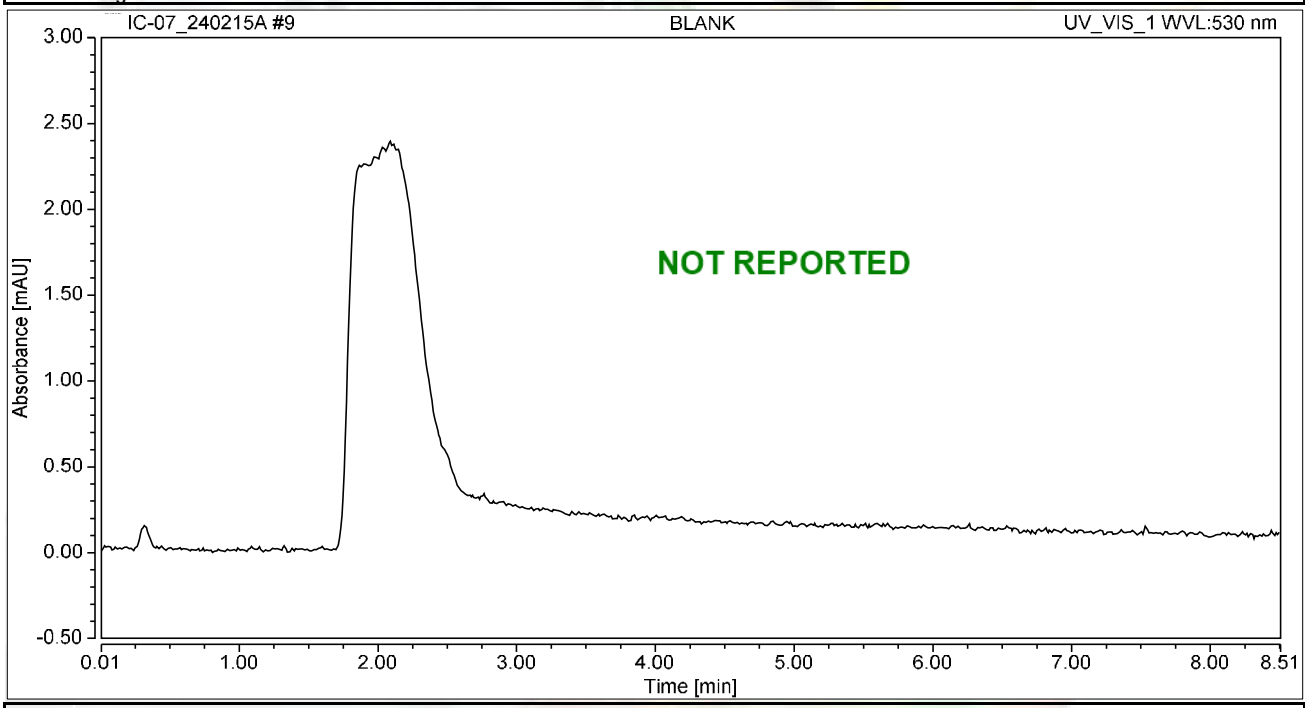
61	N062736-009A,SAMP	36	1000	Unknown		02/15/2024 19:13	Finished	SAMP,10 mL
62	N062736-009AMS,MS	37	1000	Unknown		02/15/2024 19:22	Finished	MS (1ppb), IWST-231228B,10r
63	N063103-002A,SAMP	38	1000	Unknown		02/15/2024 19:32	Finished	SAMP,10 mL
64	N063103-002AMS,MS	39	1000	Unknown		02/15/2024 19:41	Finished	MS (1ppb), IWST-231228B,10r
65	N063103-003A,SAMP	40	1000	Unknown		02/15/2024 19:50	Finished	SAMP,10 mL
66	N063103-003AMS,MS	41	1000	Unknown		02/15/2024 20:00	Finished	MS (1ppb), IWST-231228B,10r
67	N063101-001AMS,MS	42	1000	Unknown		02/15/2024 20:09	Finished	MS (1ppb), IWST-231228B,2>1
68	CCV-6,CCV1,1,	43	1000	Unknown		02/15/2024 20:19	Finished	CCV @10ppb, IWST-231228A
69	CCB-6,CCB,1,	44	1000	Unknown		02/15/2024 20:28	Finished	CCB R240129C
70	BLANK	45	1000	Unknown		02/15/2024 20:38	Finished	BLANK
71	SHUTDOWN	46	1000	Unknown		02/15/2024 20:47	Finished	
72	Eluent: R240215A	47	1000	Unknown		n.a.	Finished	
73	PCR: R240215B	48	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 10:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

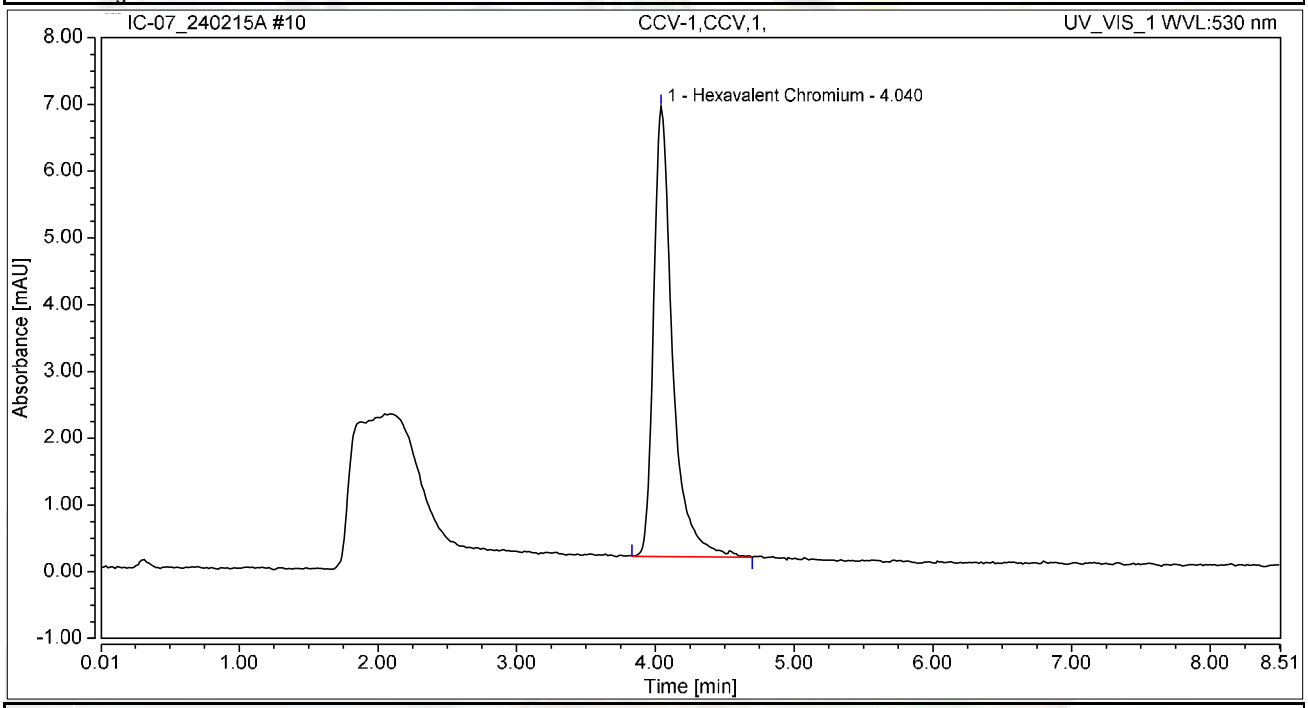
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 10:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

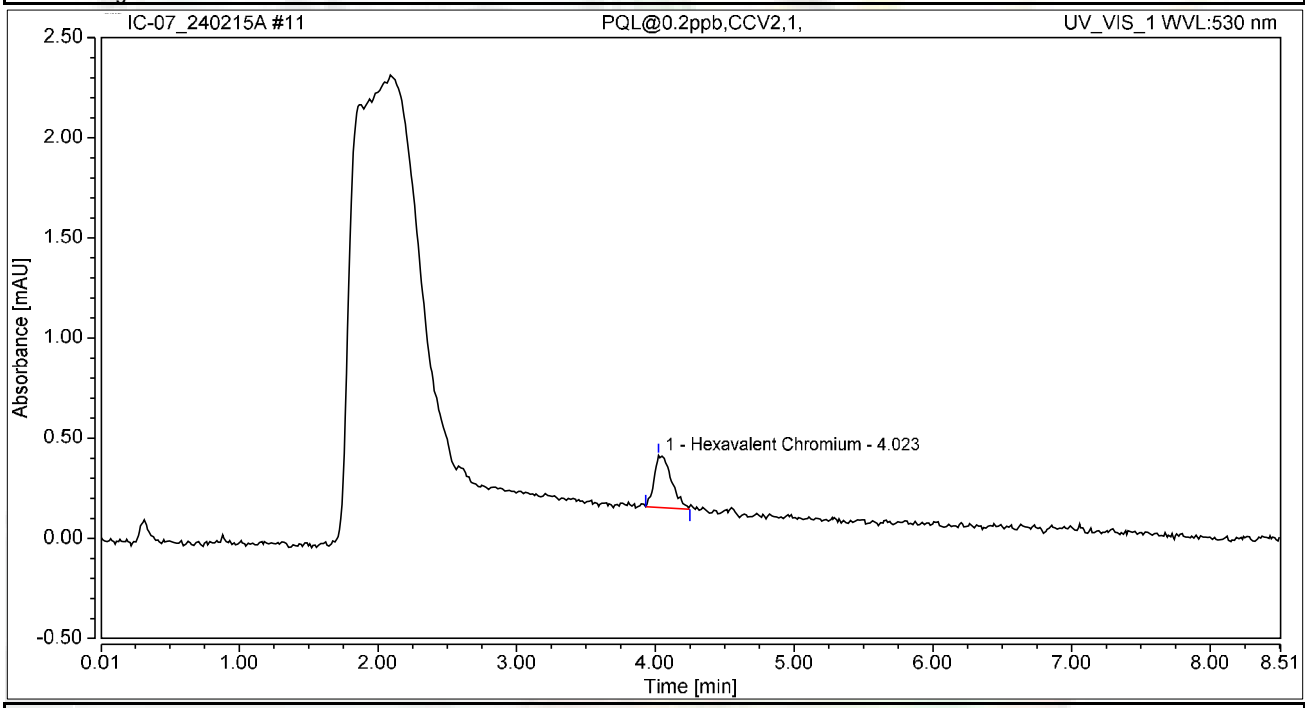
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.068	6.739	100.00	100.00	4.9648
Total:			**1.068**	**6.739**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 10:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

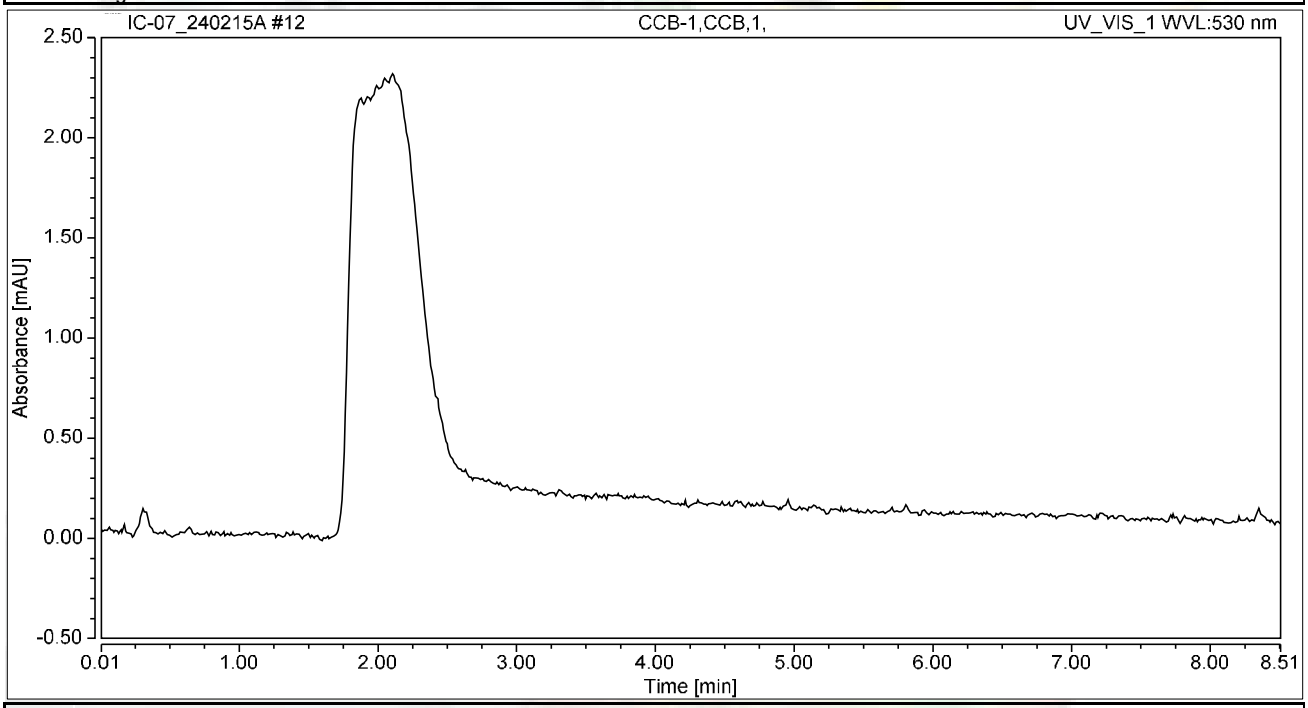
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.038	0.260	100.00	100.00	0.1745
Total:			**0.038**	**0.260**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 10:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

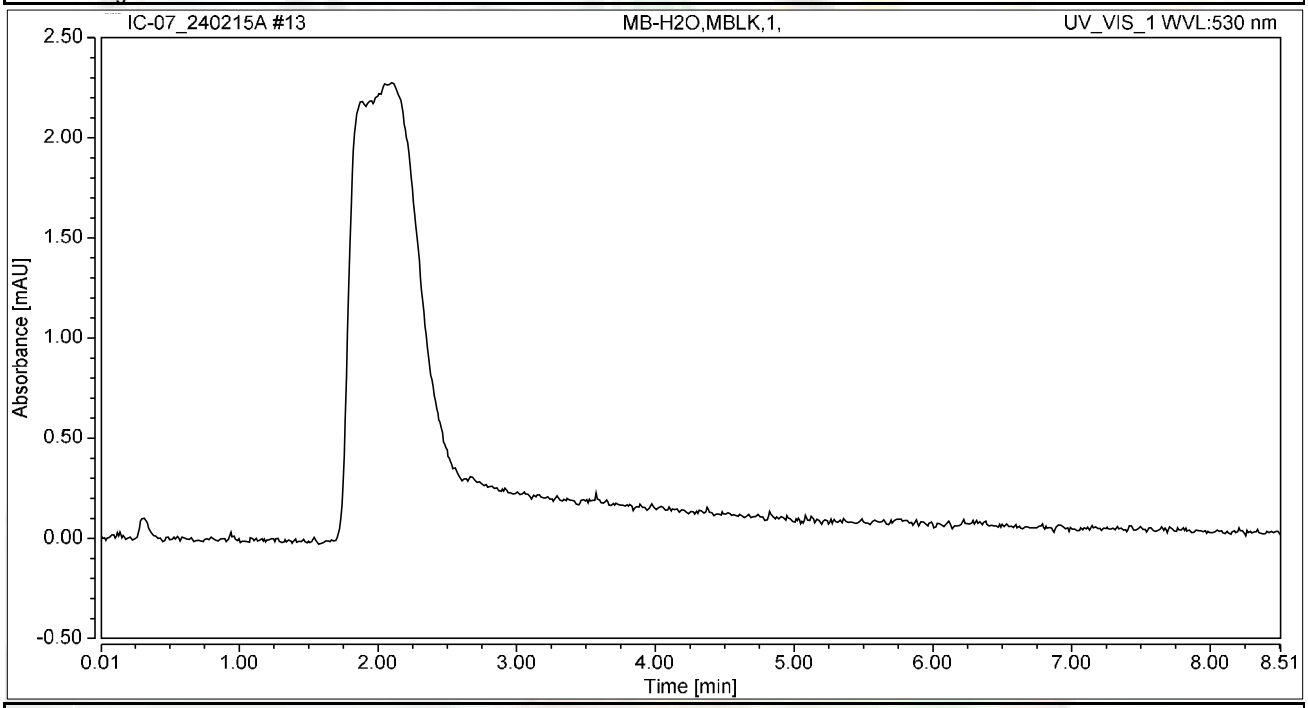
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 10:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

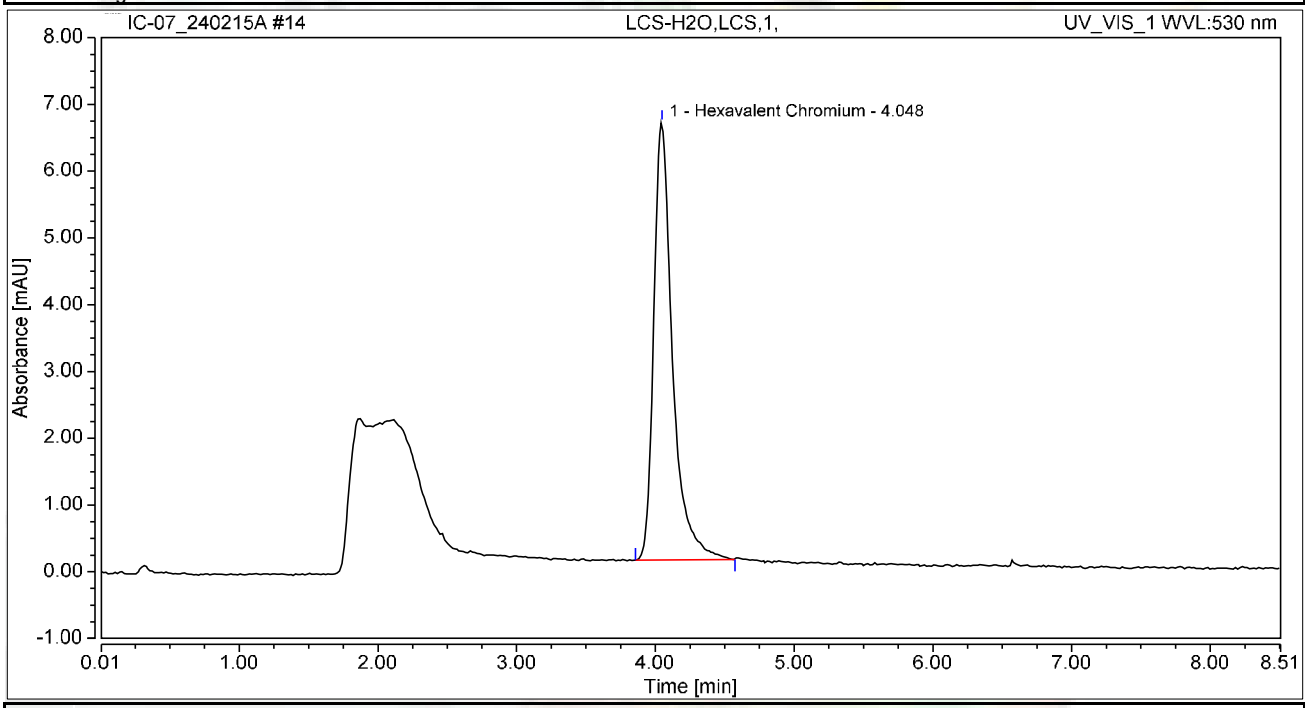
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 11:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

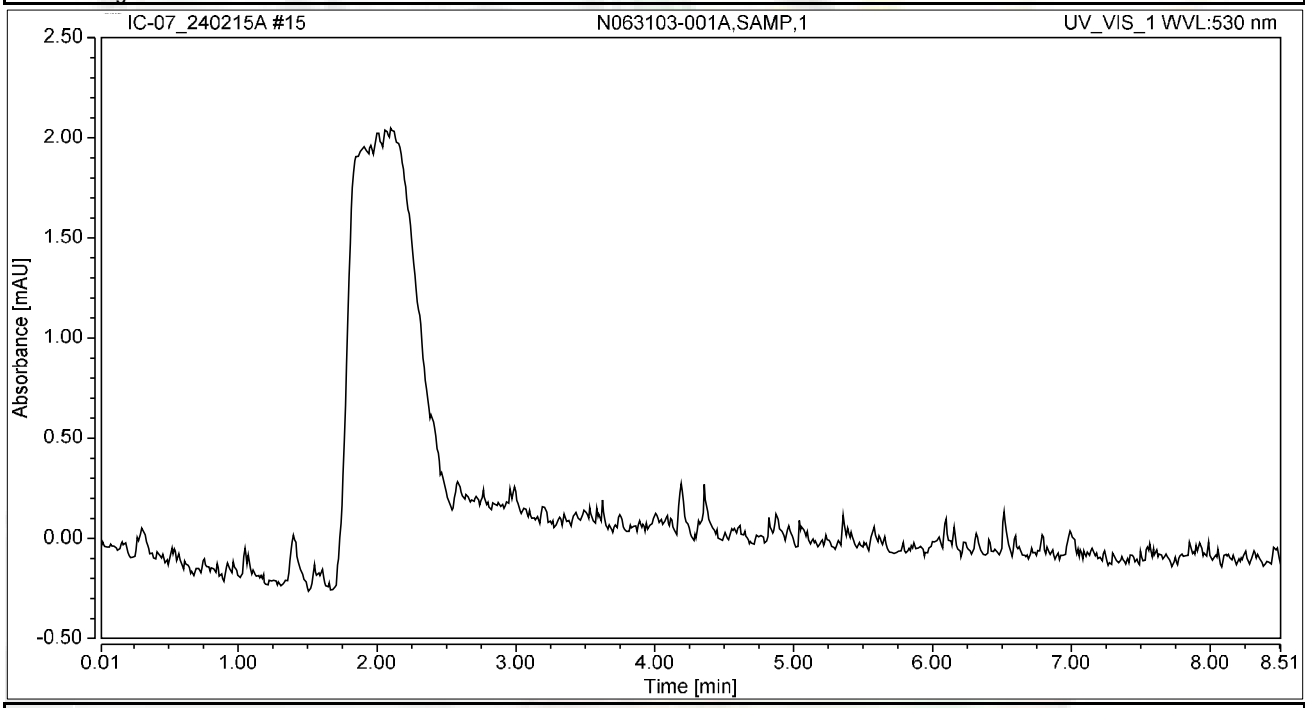
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.026	6.554	100.00	100.00	4.7718
Total:			**1.026**	**6.554**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-001A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 11:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

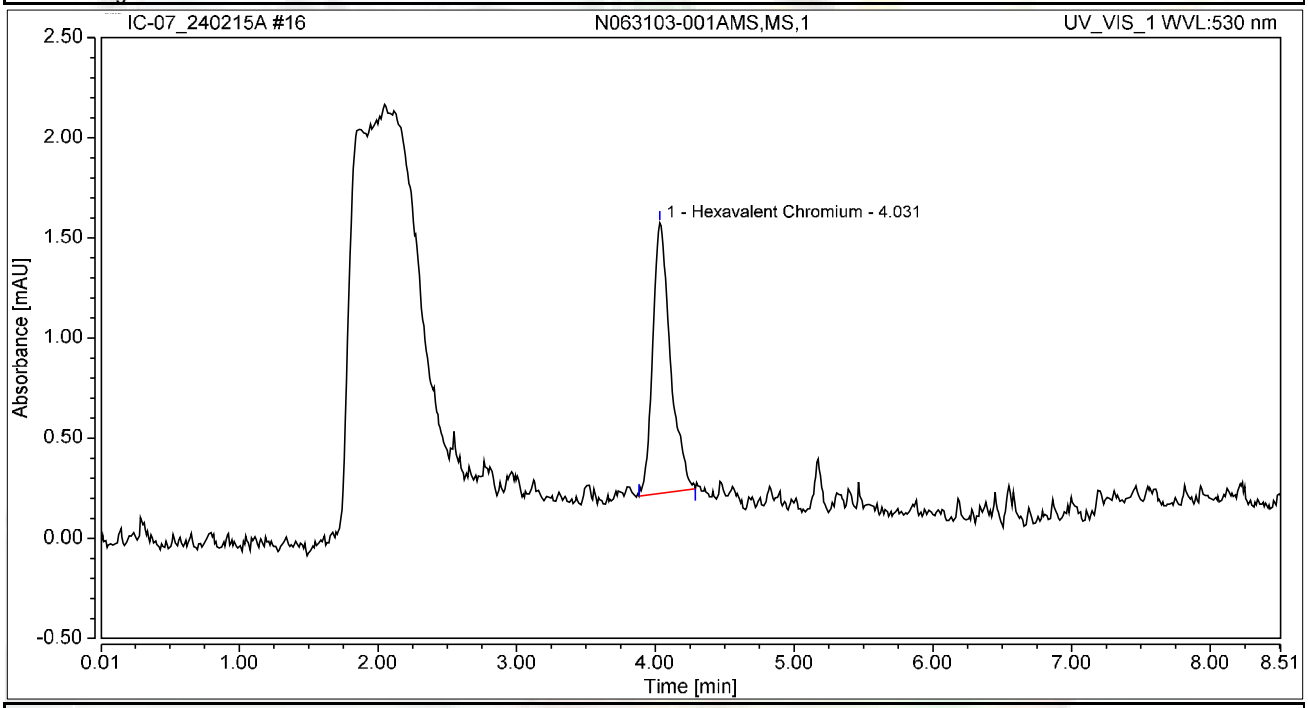
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 11:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

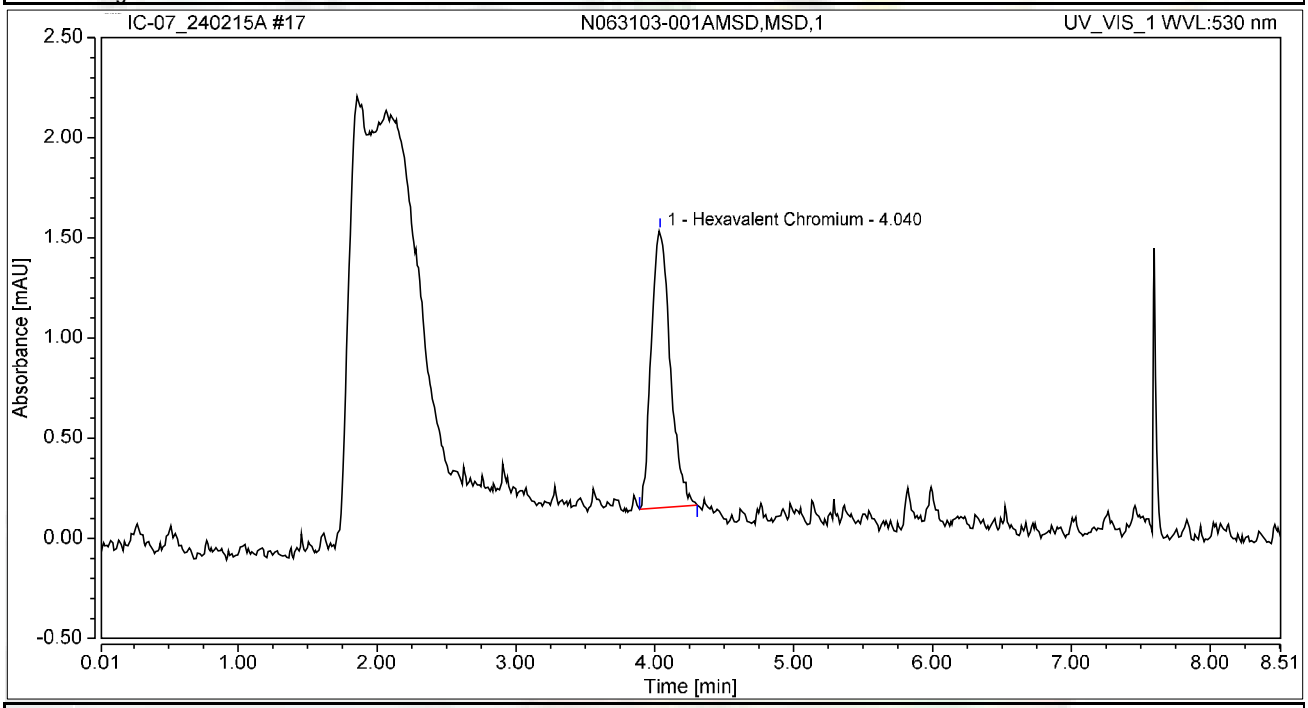
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.200	1.351	100.00	100.00	0.9297
Total:			**0.200**	**1.351**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-001AMSD,MSD,1**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 11:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

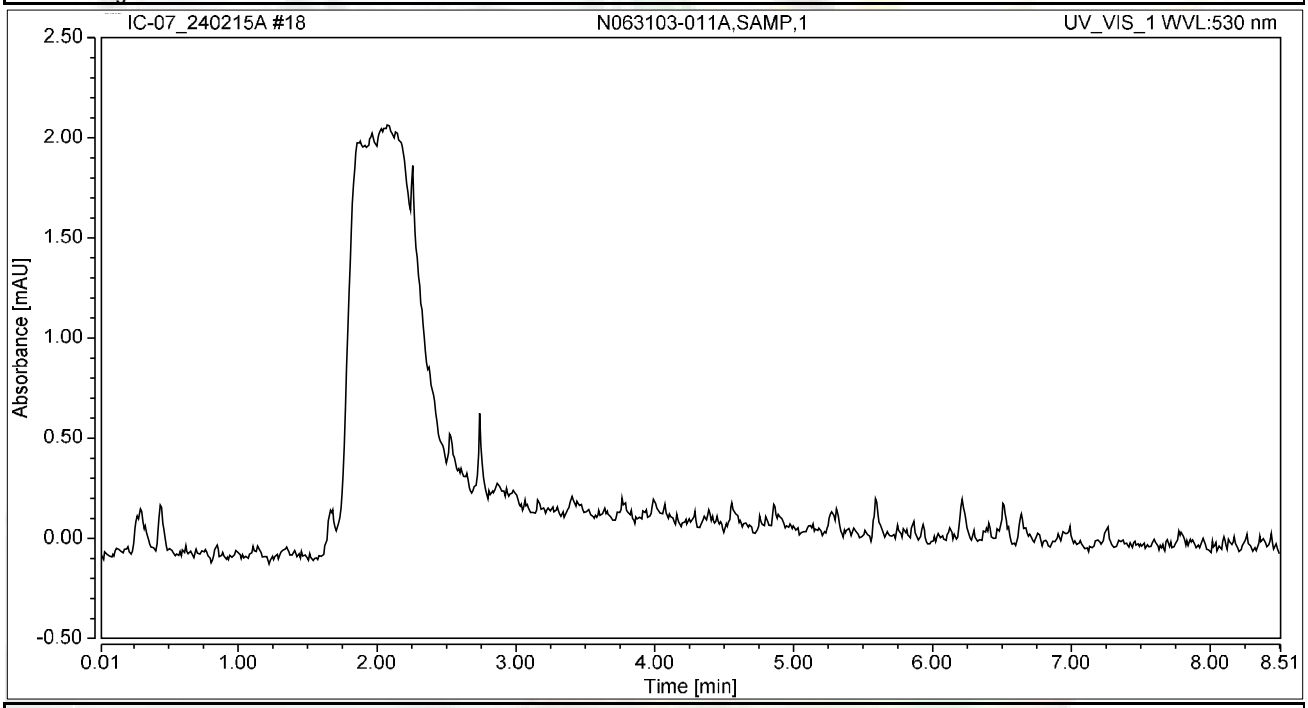
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.219	1.385	100.00	100.00	1.0201
Total:			**0.219**	**1.385**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-011A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 11:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

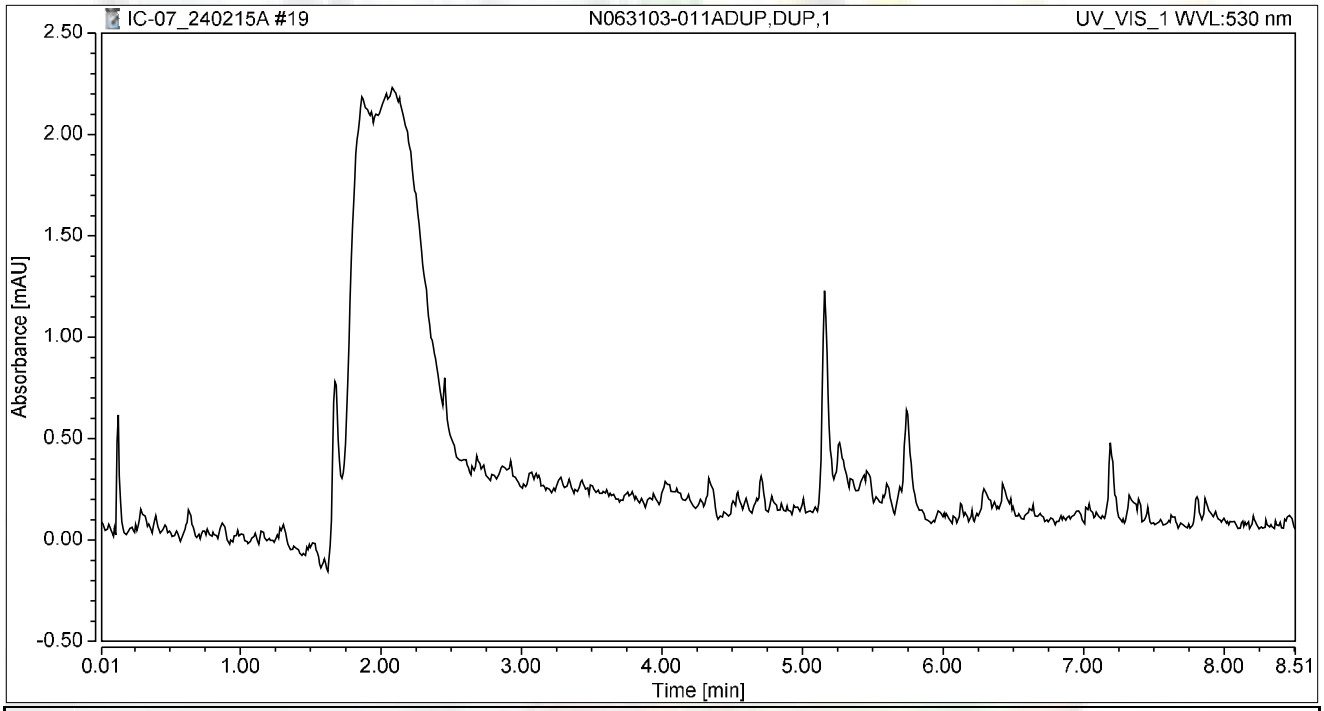
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-011ADUP,DUP,1**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 12:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

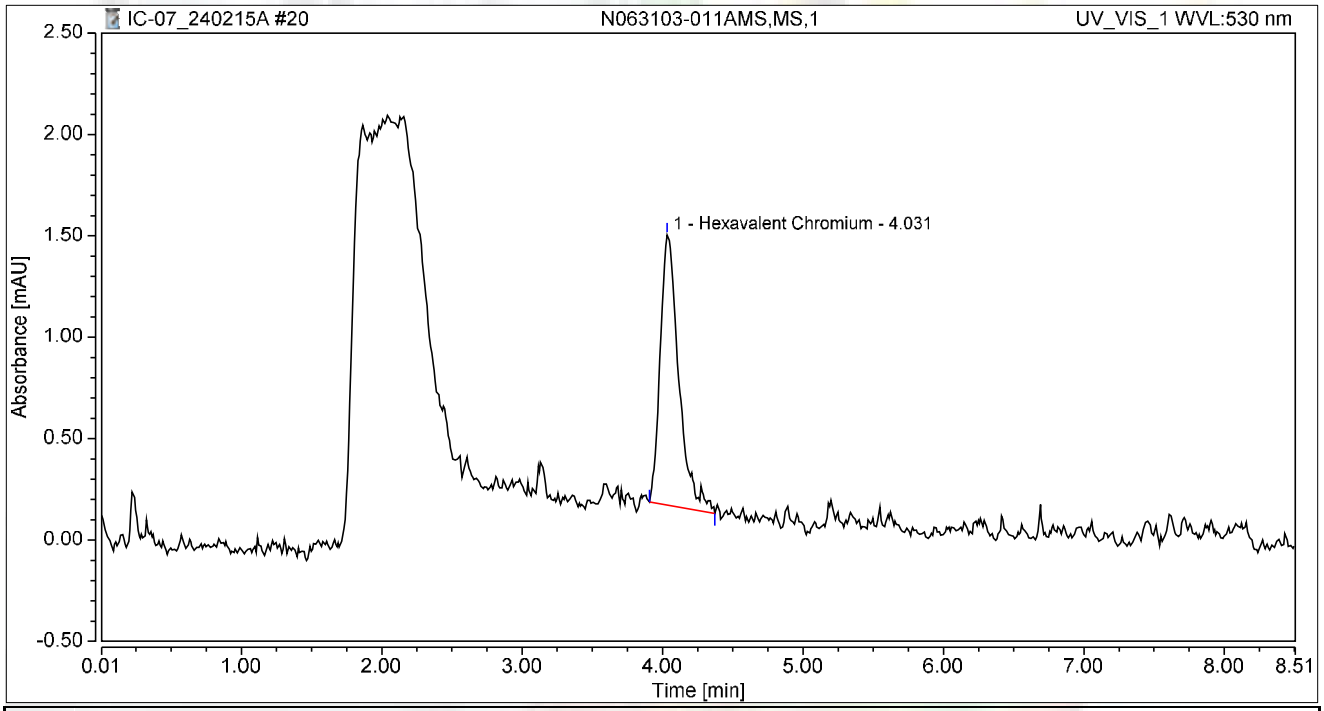
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 12:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

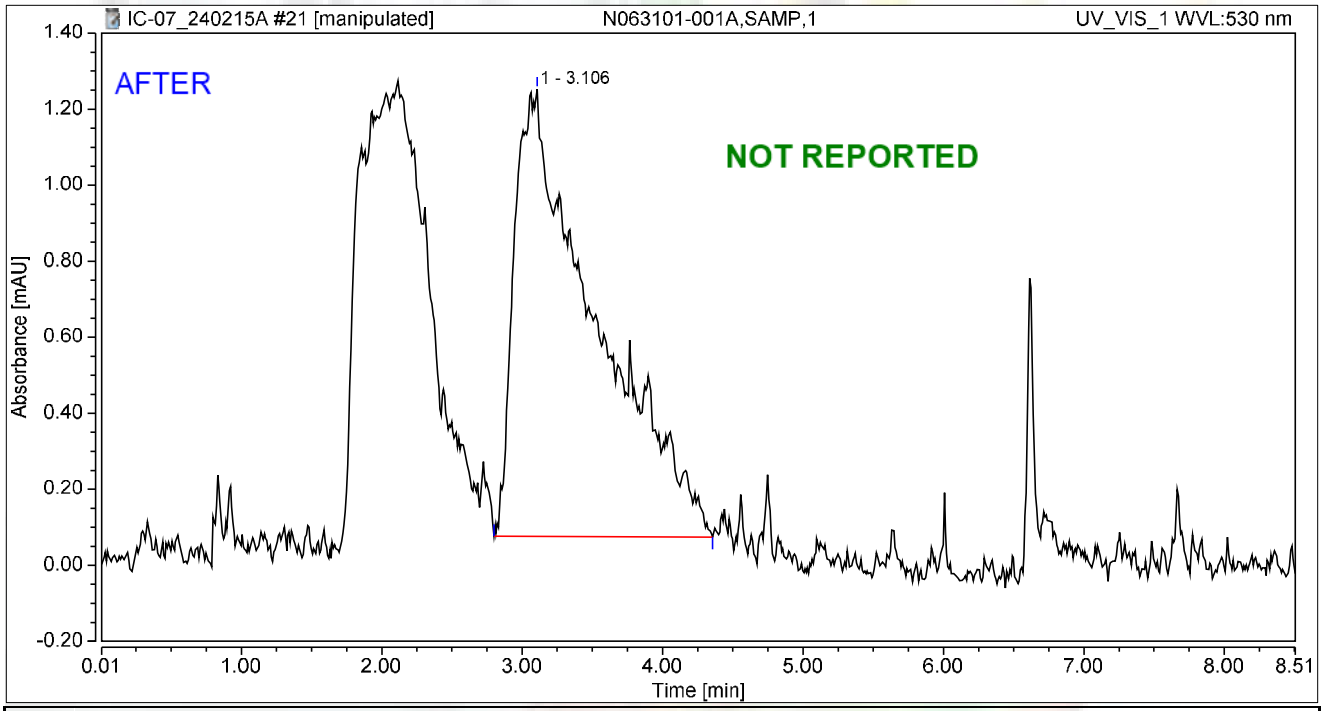
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.204	1.331	100.00	100.00	0.9481
Total:			**0.204**	**1.331**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063101-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 12:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

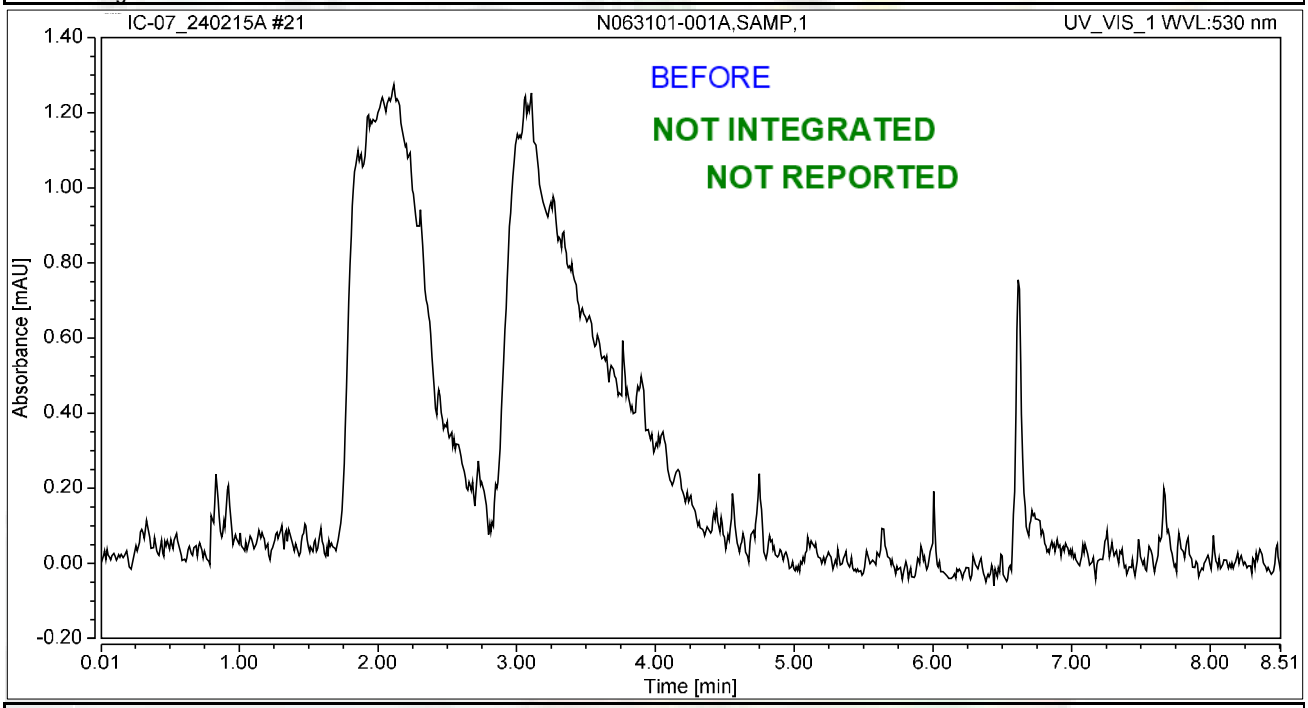
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.106	0.782	1.176	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.782**	**1.176**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063101-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 12:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

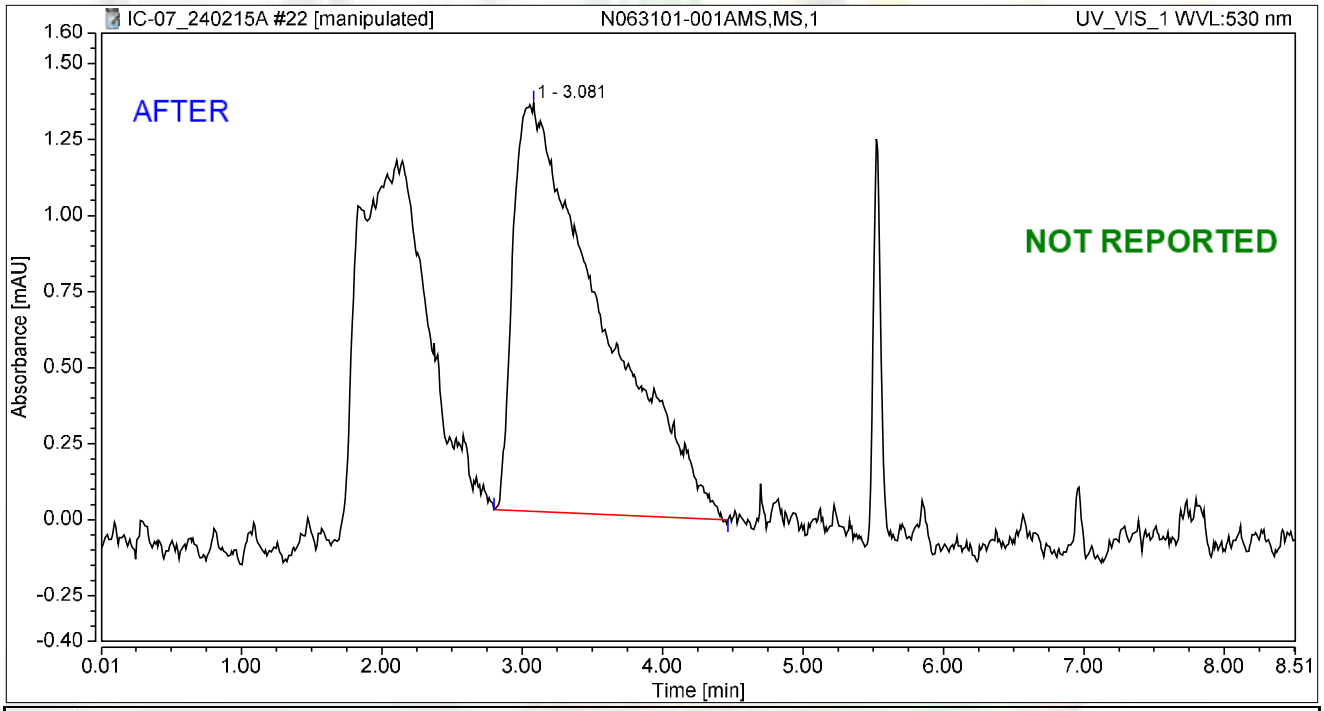
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063101-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 12:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

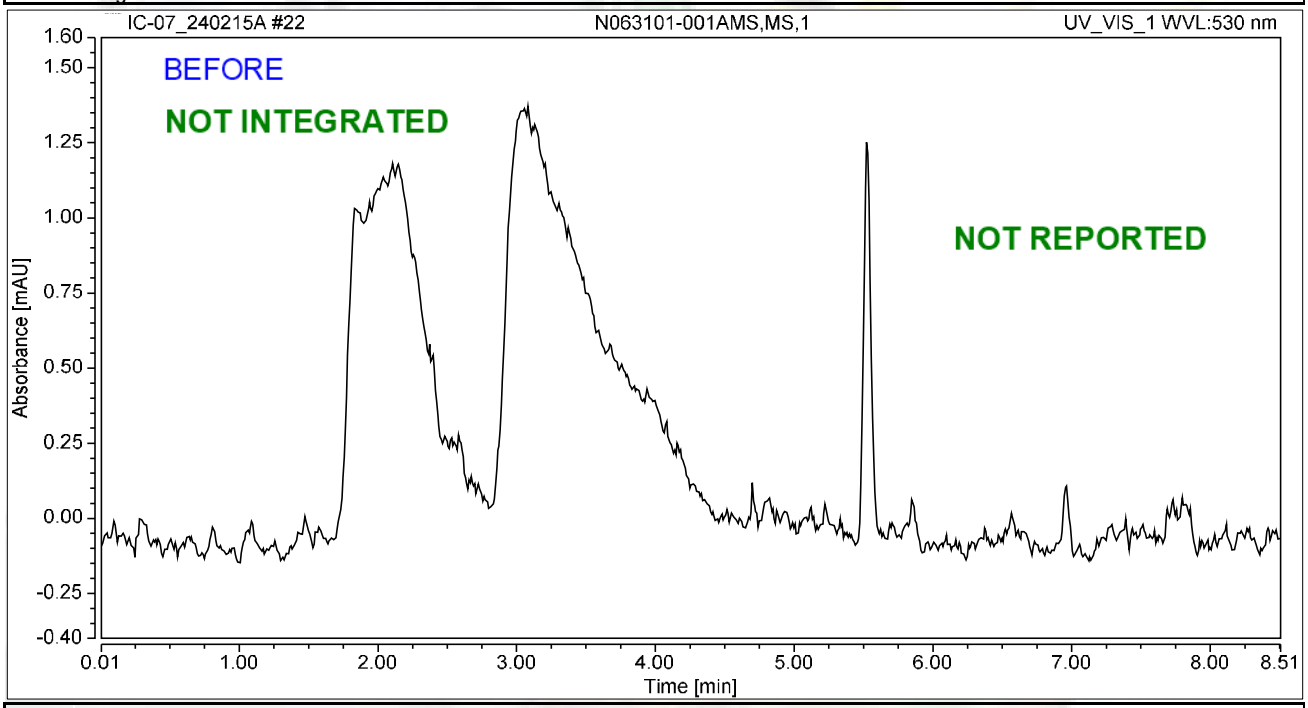
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.081	0.970	1.344	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.970**	**1.344**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063101-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 12:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

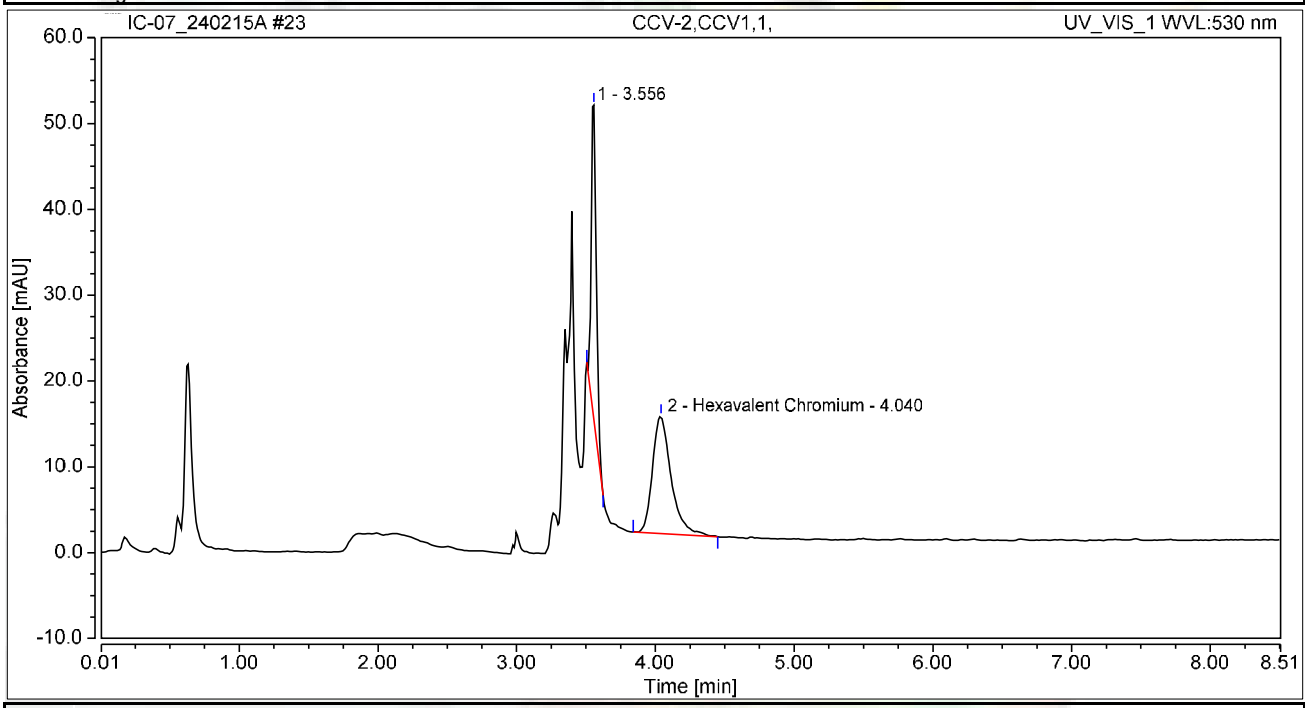
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 12:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

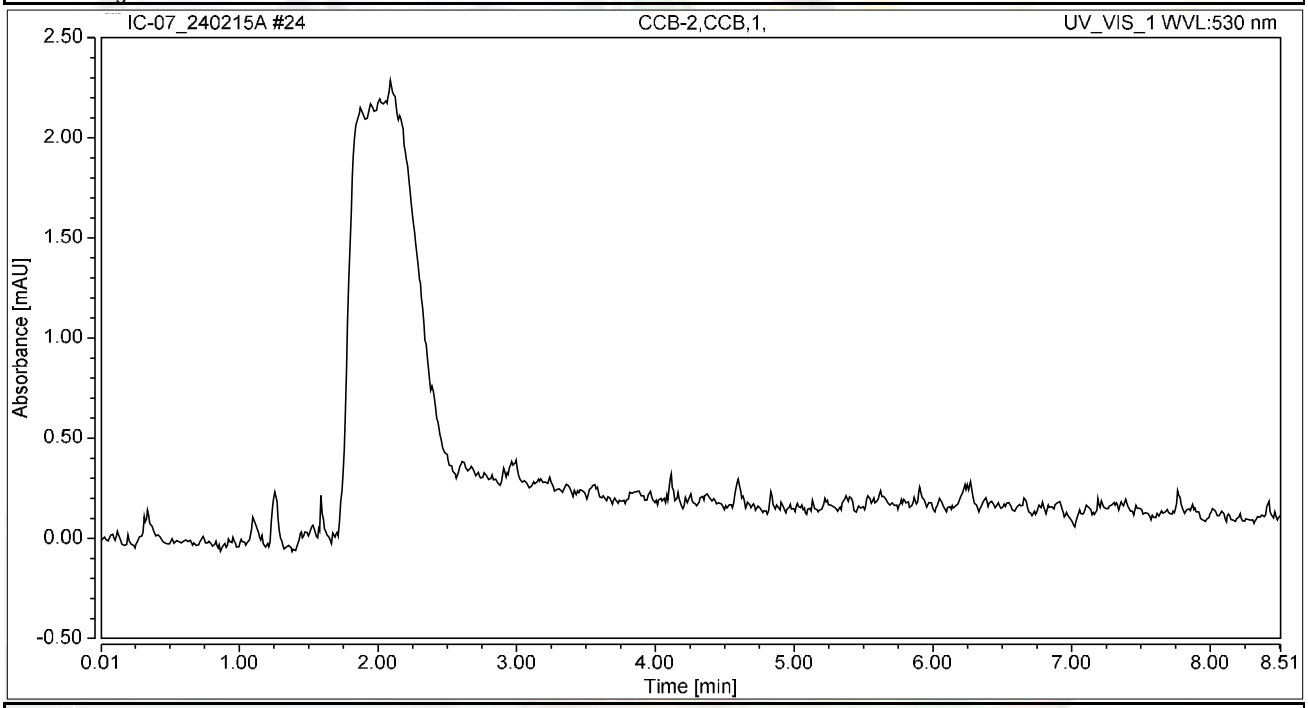
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.556	1.502	36.600	41.39	72.85	n.a.
2	Hexavalent Chromium	4.040	2.127	13.642	58.61	27.15	9.8882
Total:			**3.629**	**50.241**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 12:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

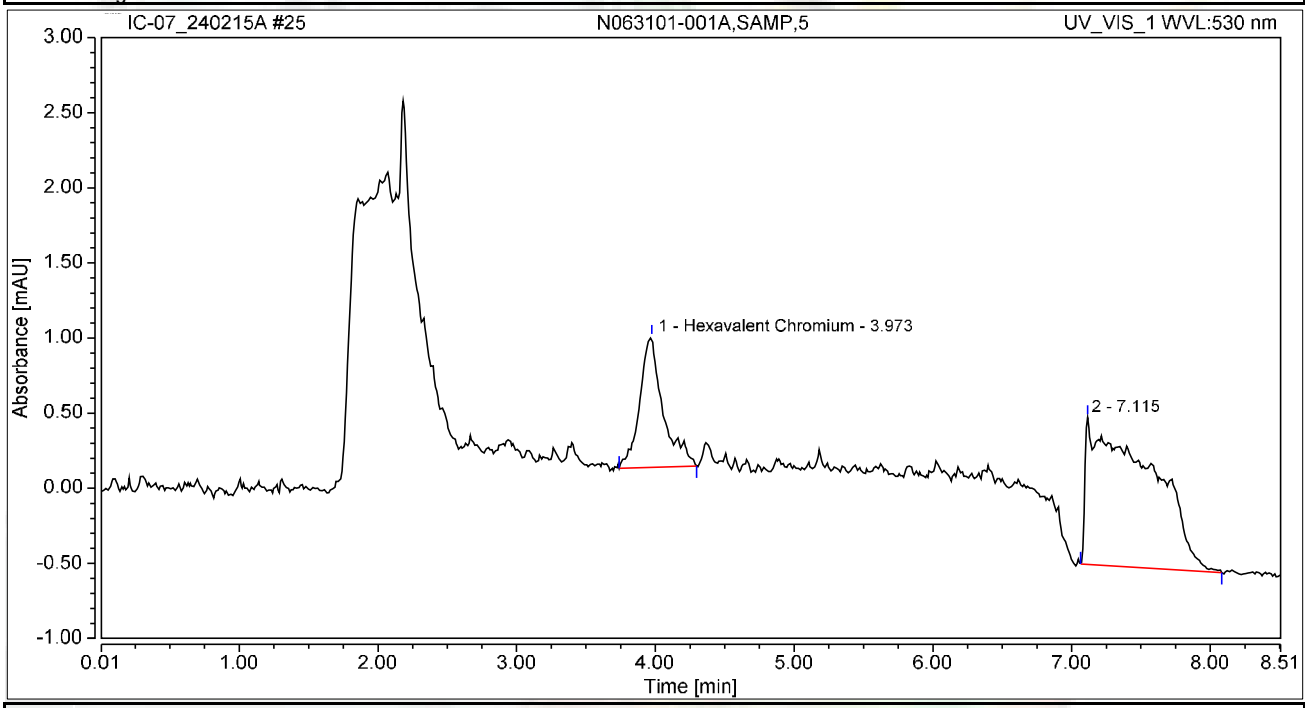
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063101-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 12:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

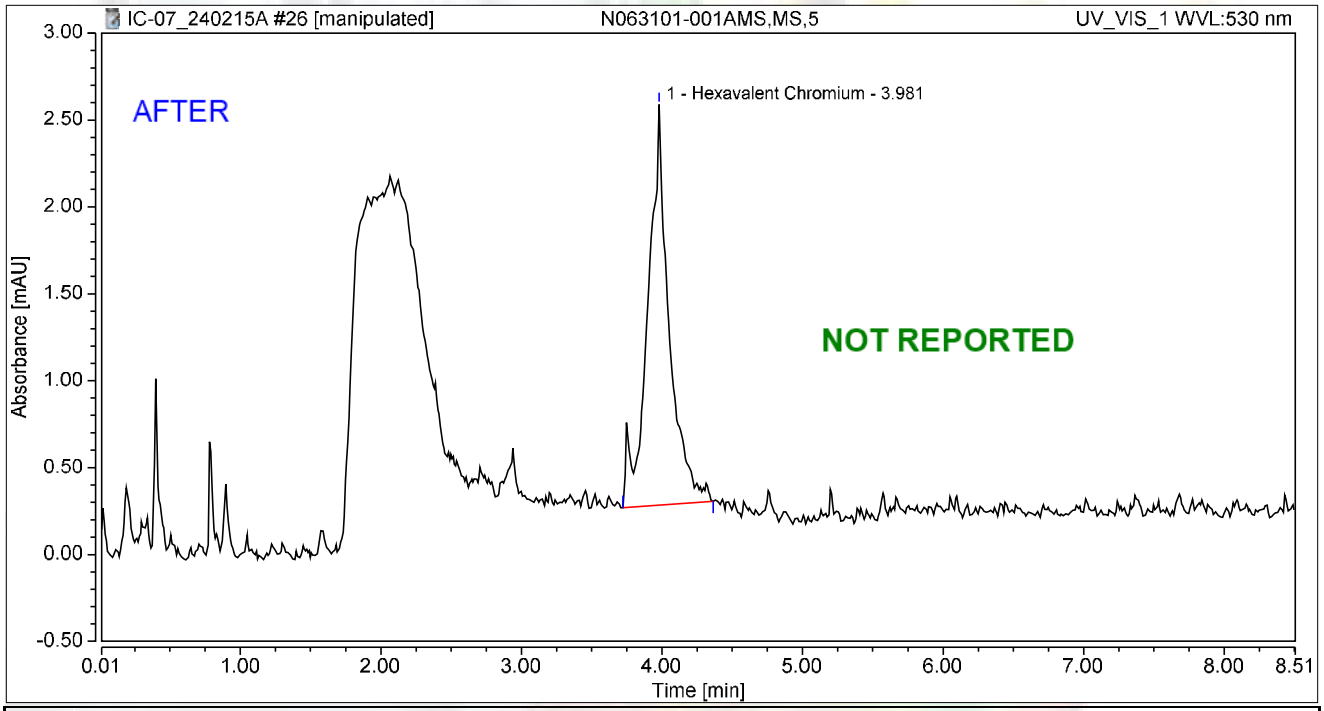
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.168	0.867	24.37	47.00	0.7831
2		7.115	0.523	0.978	75.63	53.00	n.a.
Total:			**0.691**	**1.845**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063101-001AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 13:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

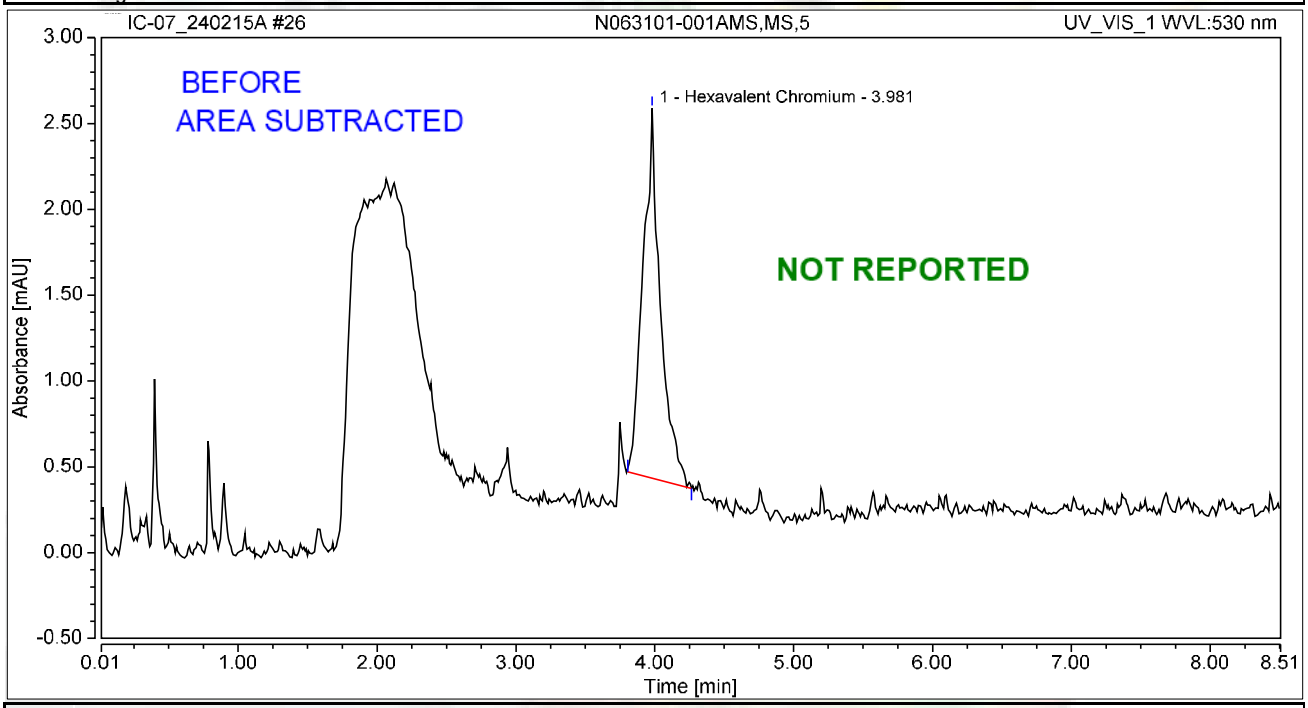
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.403	2.304	100.00	100.00	1.8728
Total:			**0.403**	**2.304**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063101-001AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 13:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

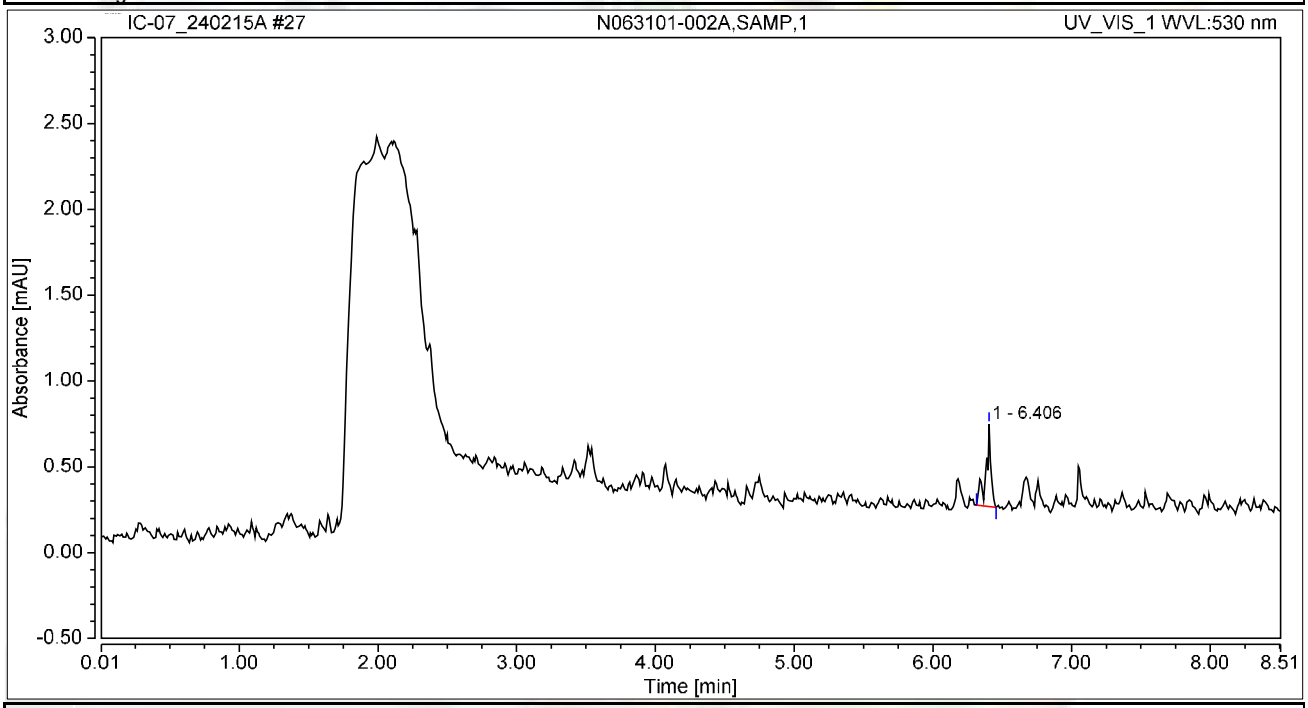
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.314	2.154	100.00	100.00	1.4596
Total:			**0.314**	**2.154**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063101-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 13:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

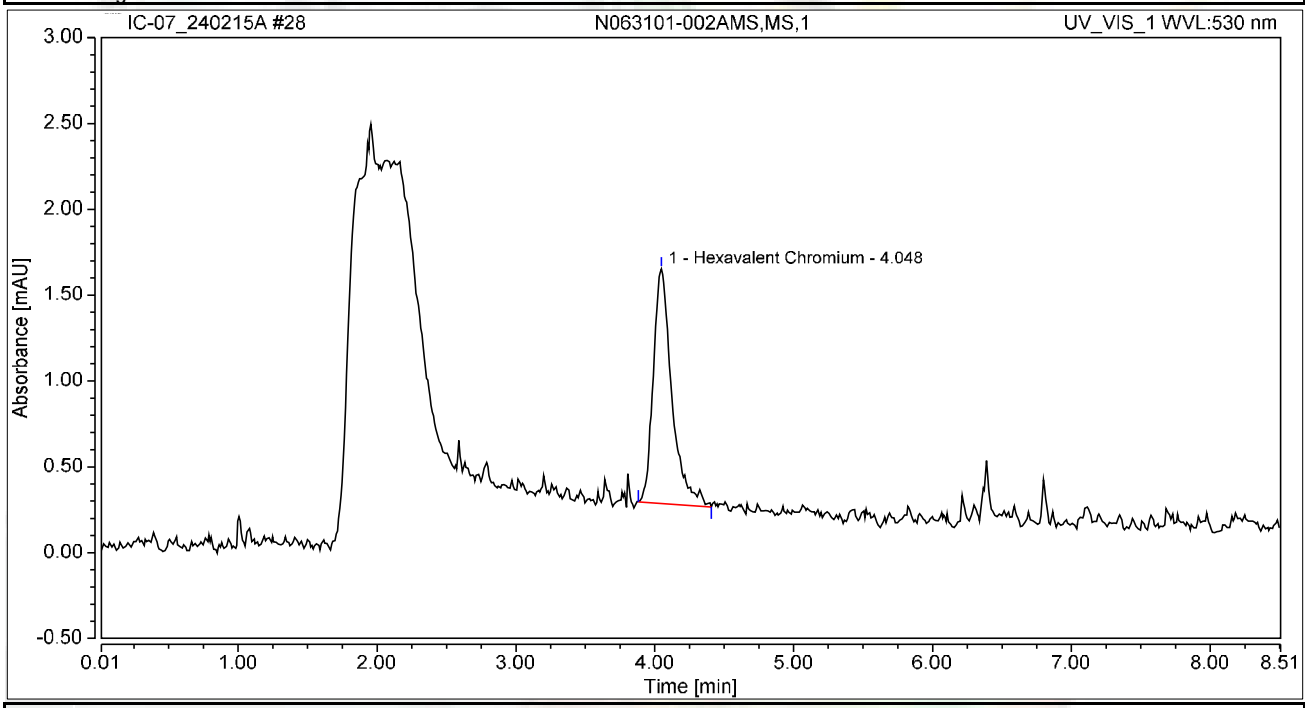
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		6.406	0.019	0.481	100.00	100.00	n.a.
Total:			**0.019**	**0.481**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063101-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 13:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

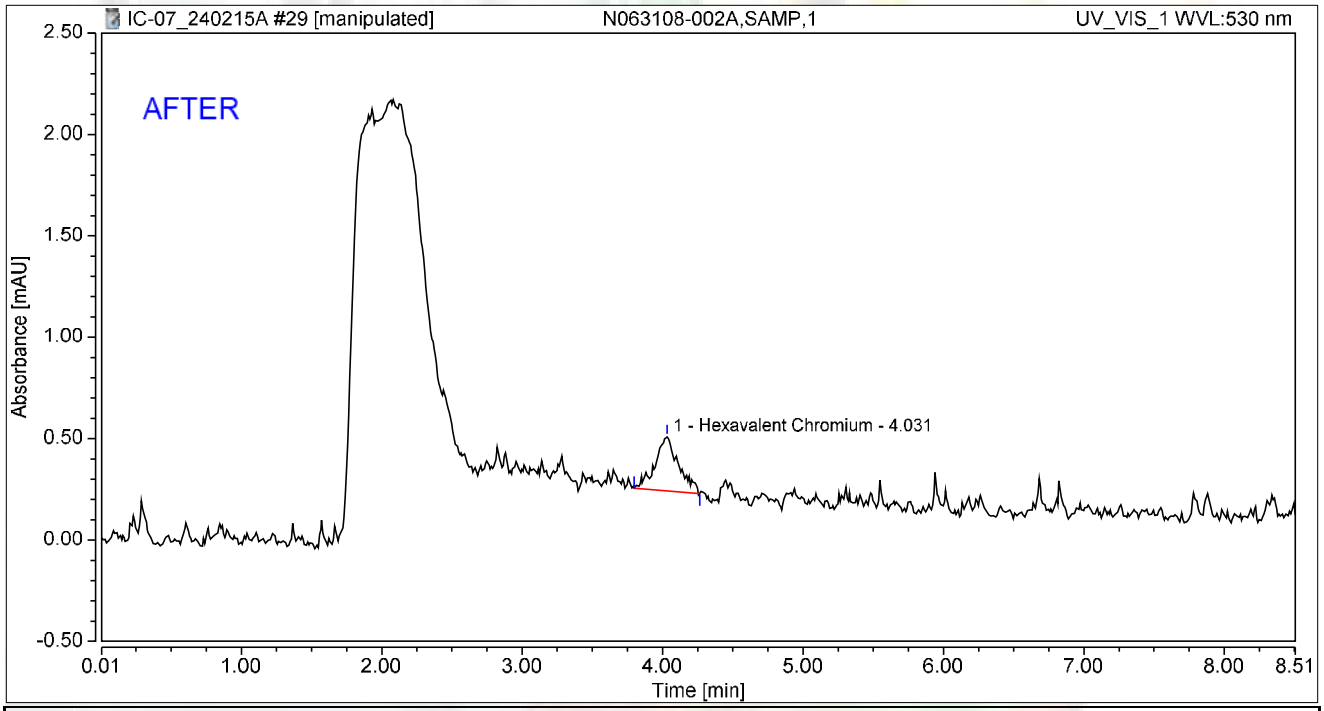
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.212	1.367	100.00	100.00	0.9840
Total:			**0.212**	**1.367**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063108-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 14:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.052	0.268	100.00	100.00	0.2400
Total:			**0.052**	**0.268**	**100.00**	**100.00**	

Reviewed by:

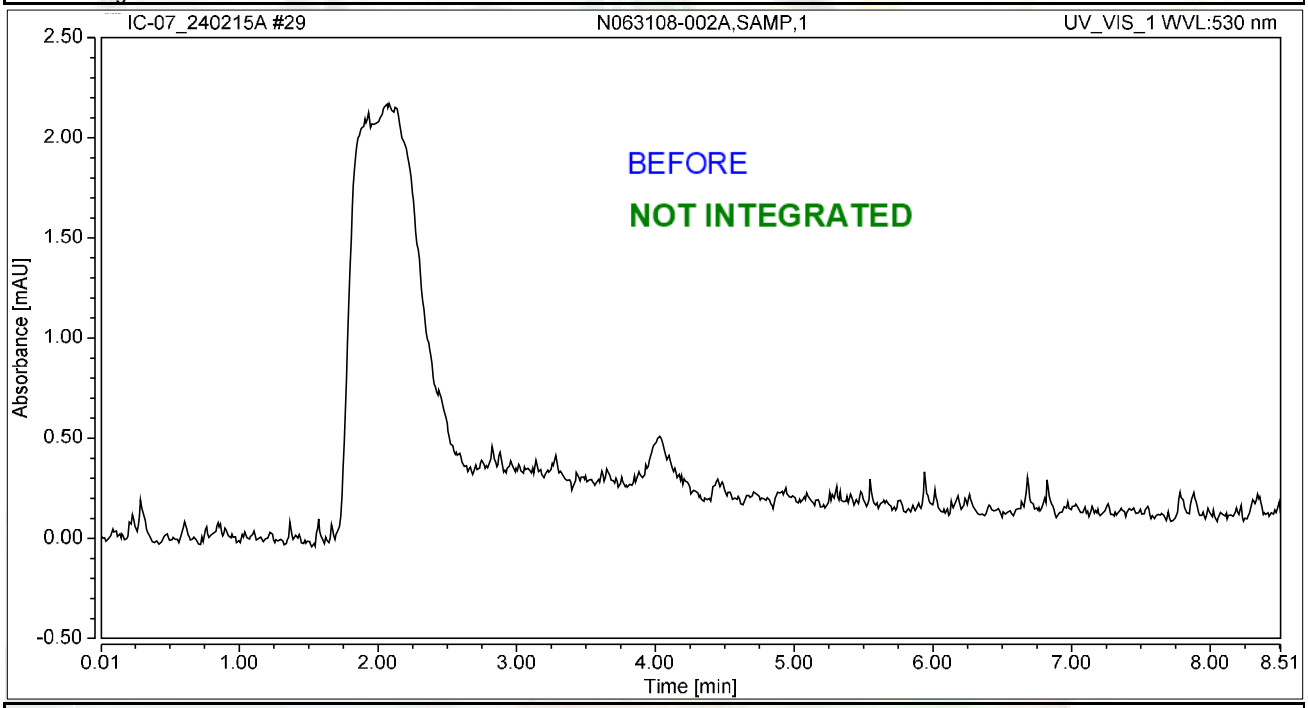
JRB 2/25/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063108-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 14:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

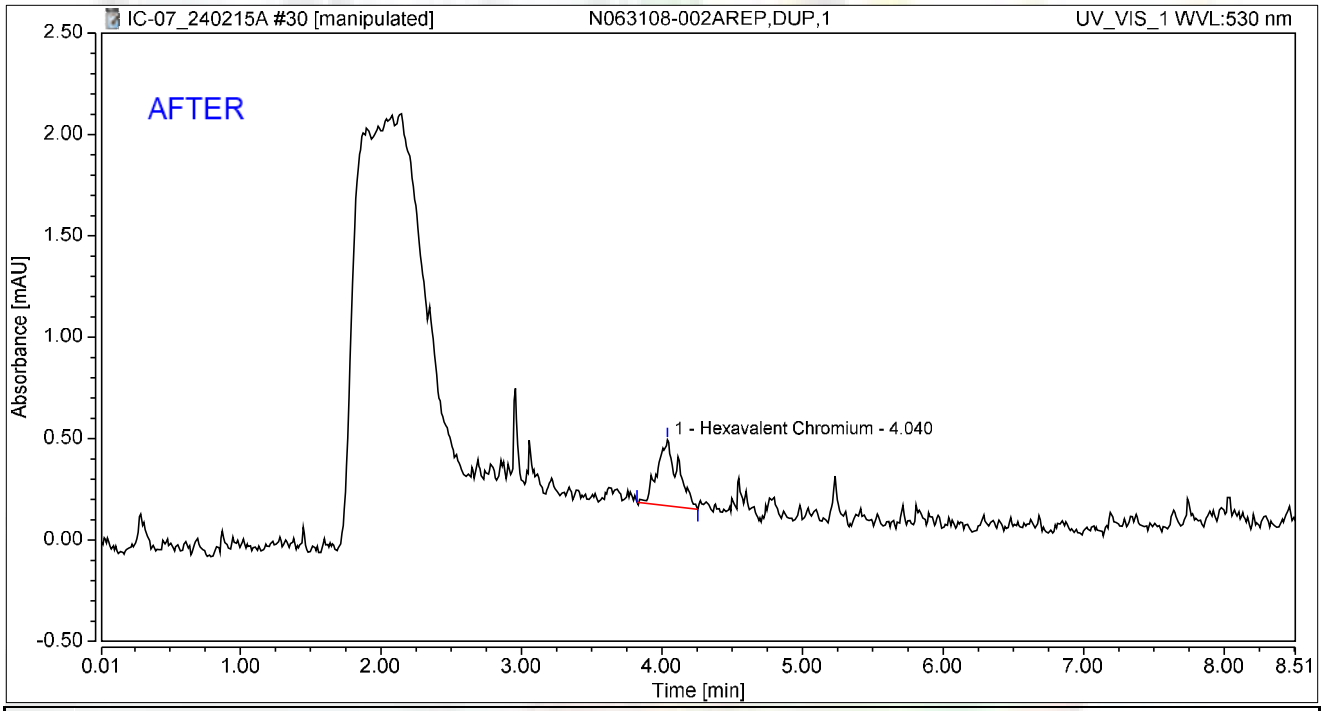
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063108-002AREP,DUP,1**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 14:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.055	0.325	100.00	100.00	0.2569
Total:			**0.055**	**0.325**	**100.00**	**100.00**	

Reviewed by:

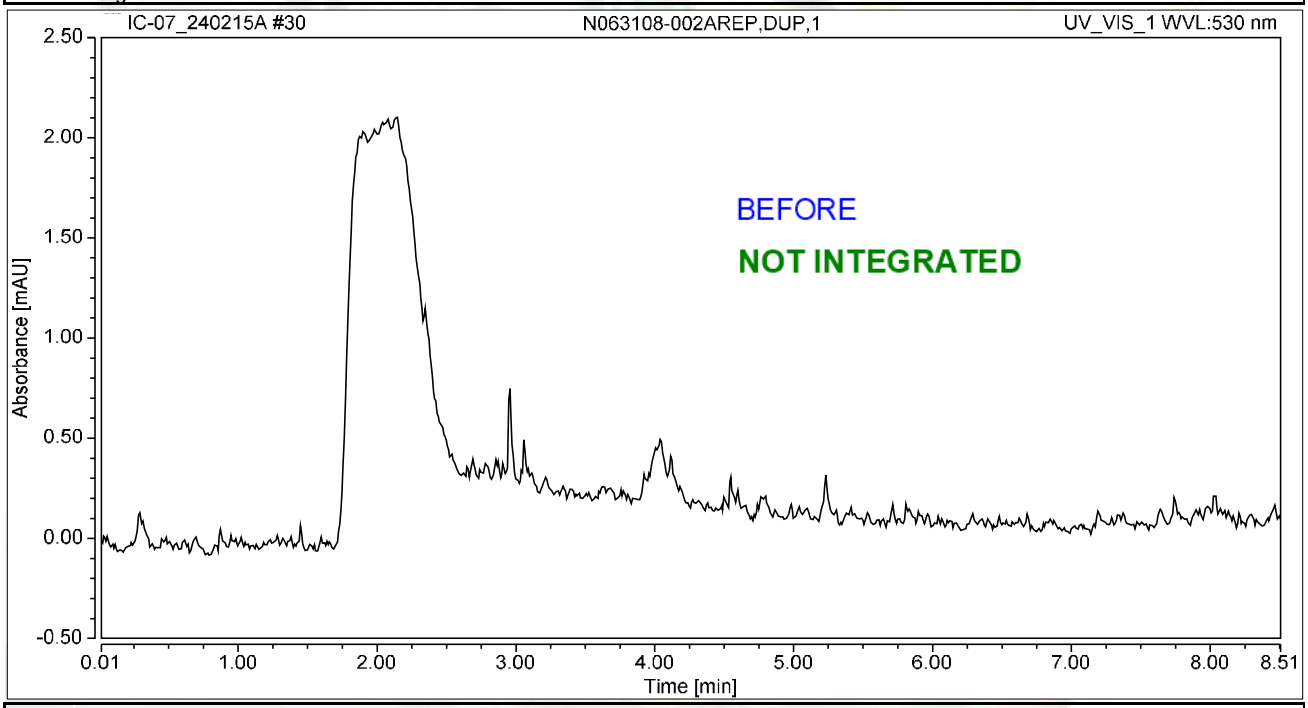
JRB 2/25/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063108-002AREP,DUP,1**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 14:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

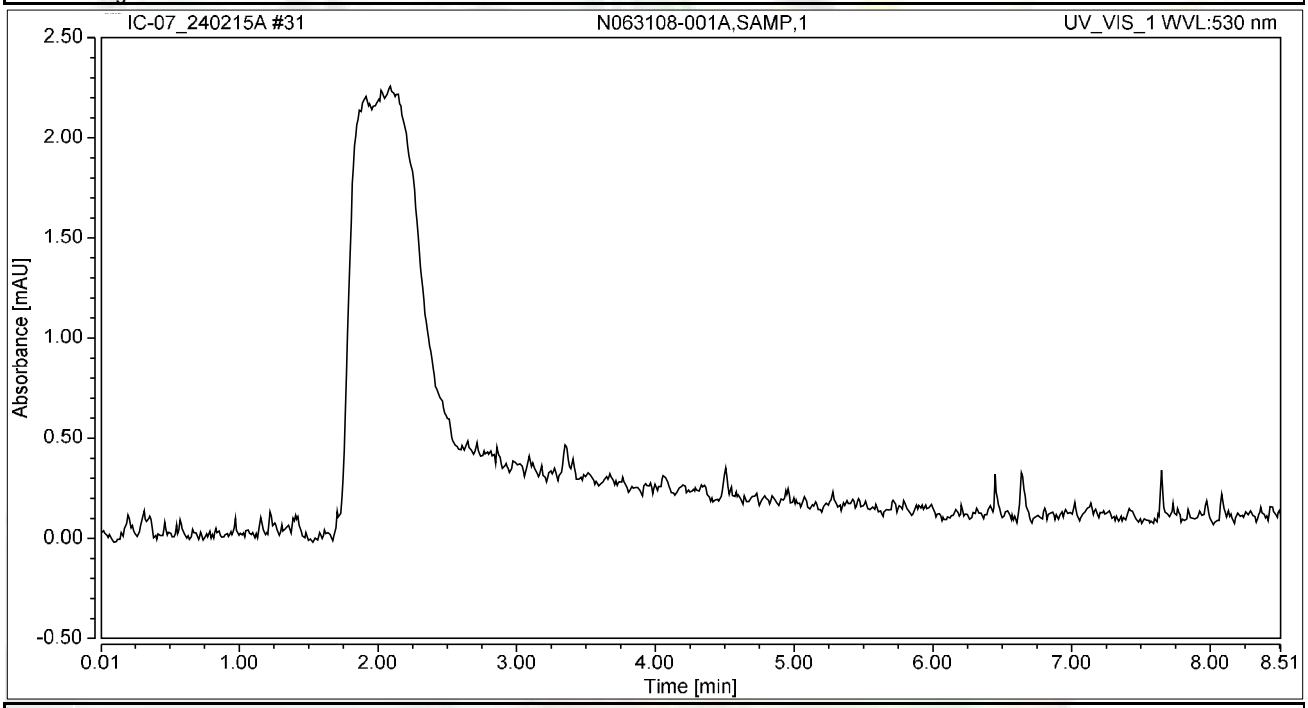
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063108-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 14:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

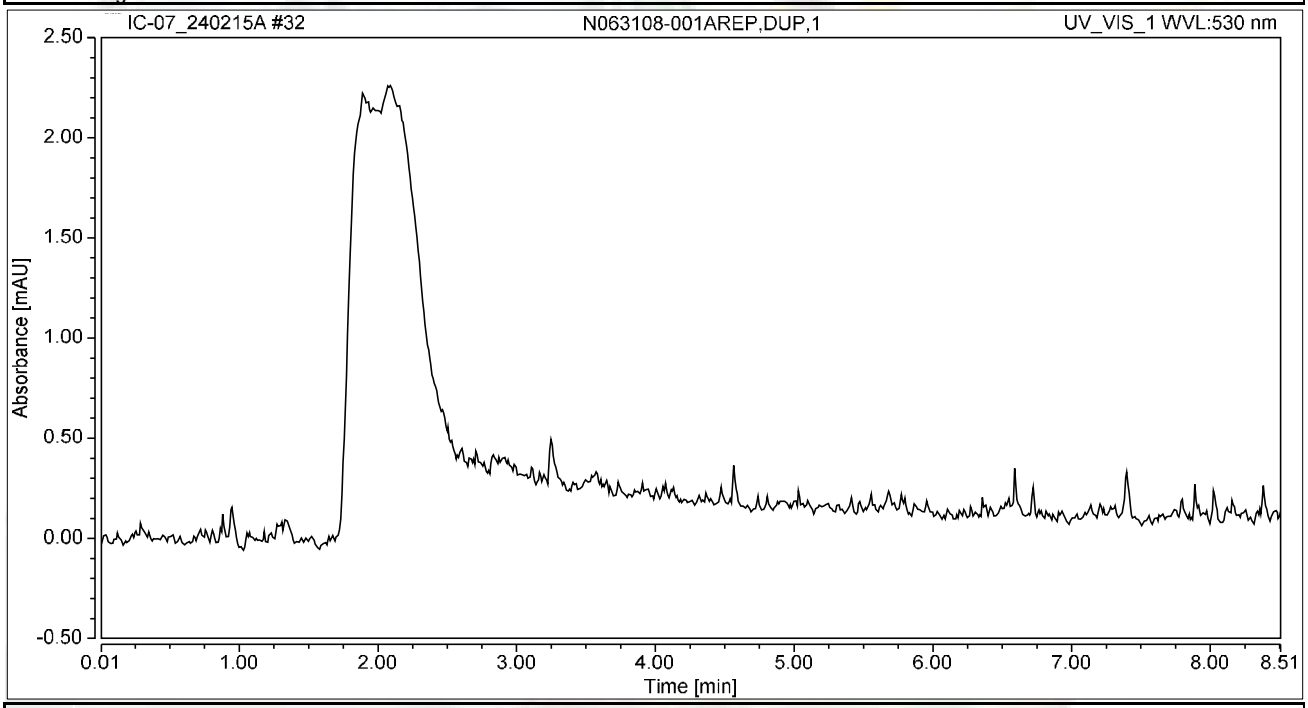
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063108-001AREP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 14:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

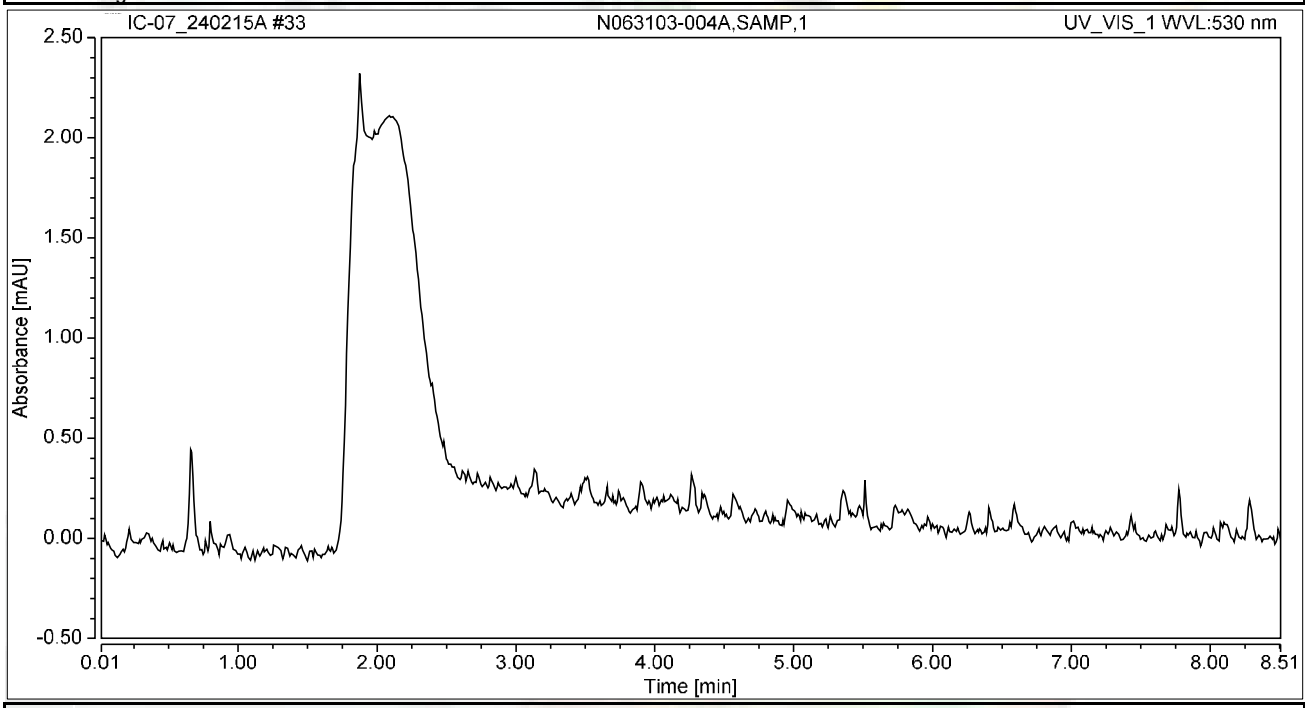
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-004A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 14:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

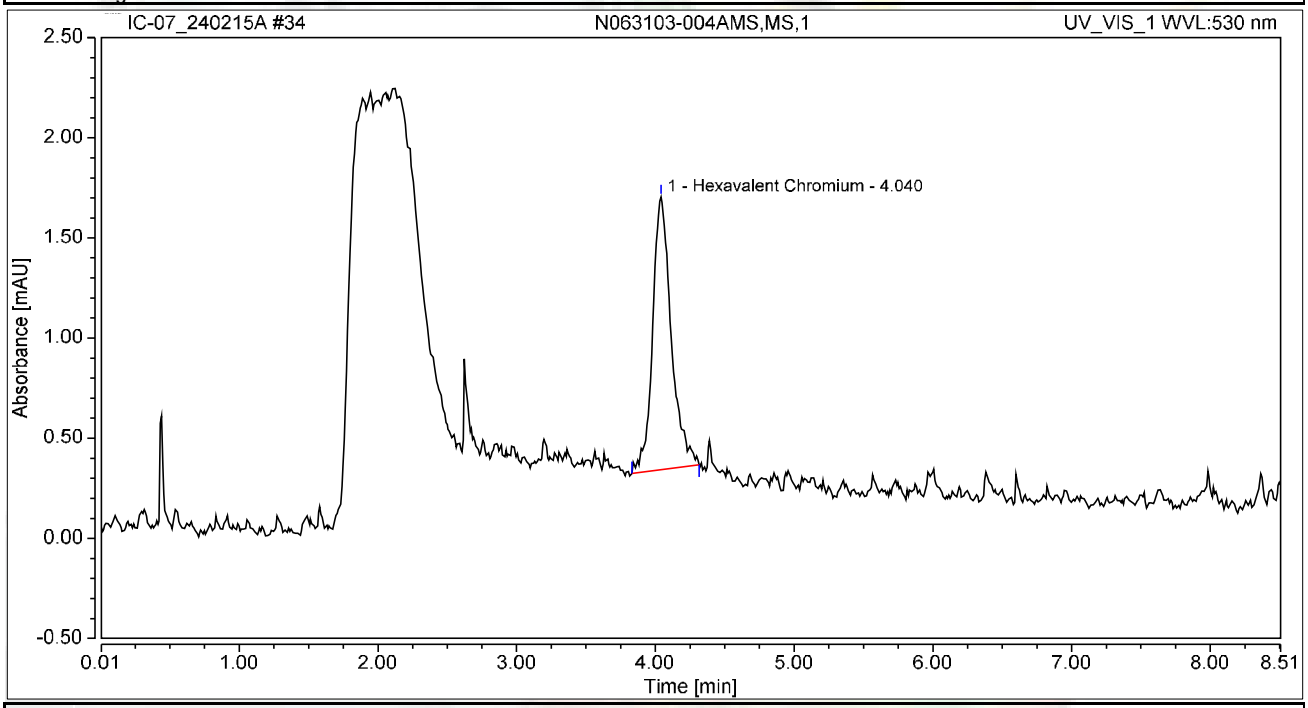
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 14:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

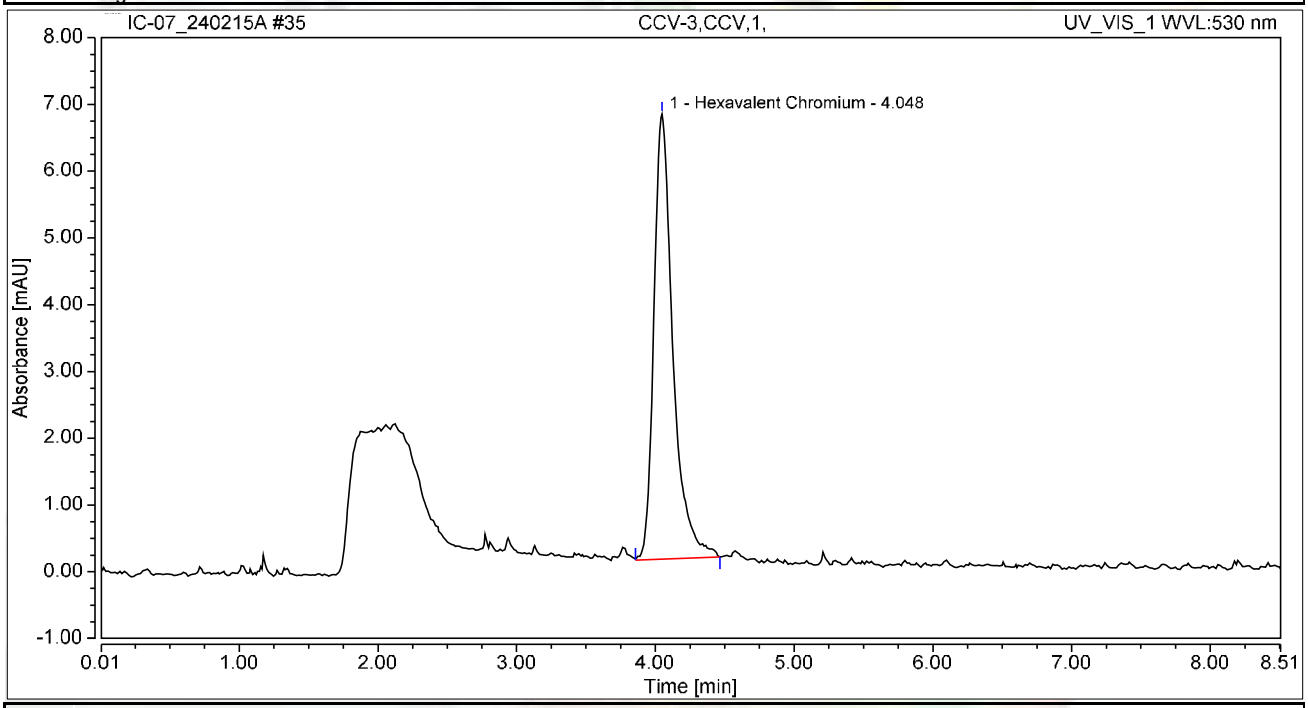
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.212	1.362	100.00	100.00	0.9860
Total:			**0.212**	**1.362**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 15:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

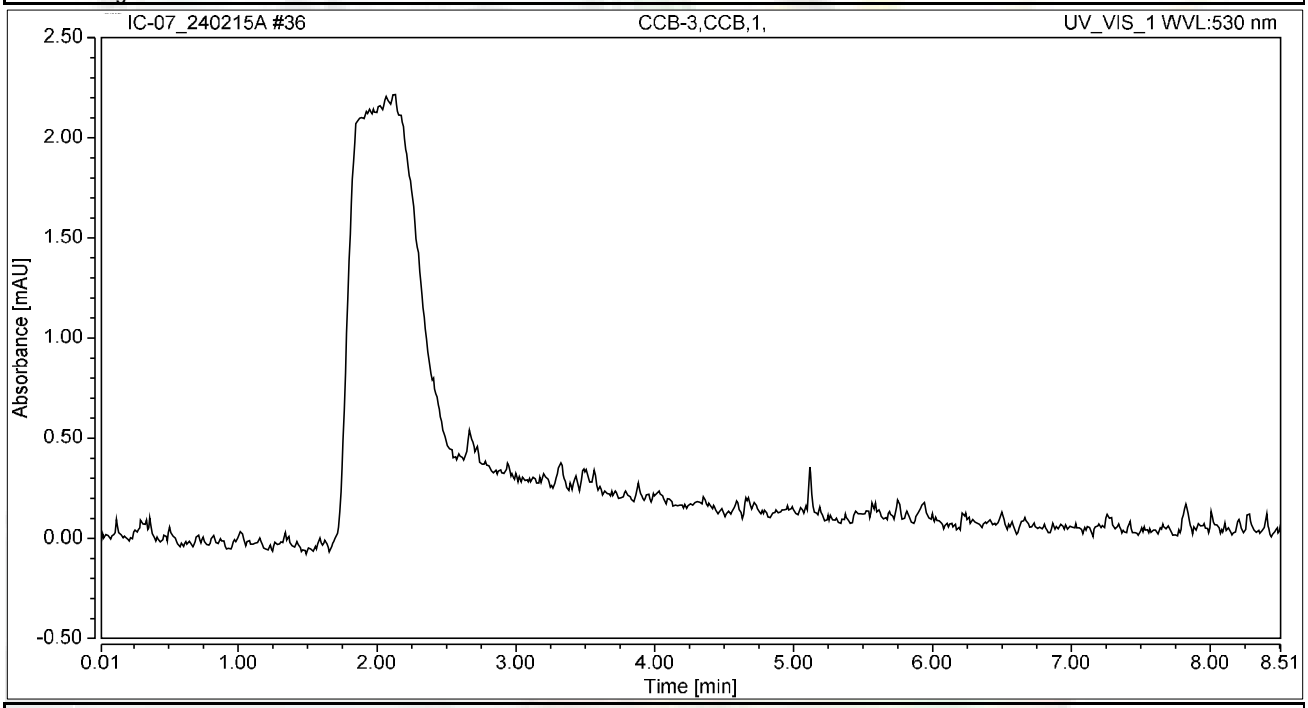
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.058	6.664	100.00	100.00	4.9165
Total:			**1.058**	**6.664**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 15:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

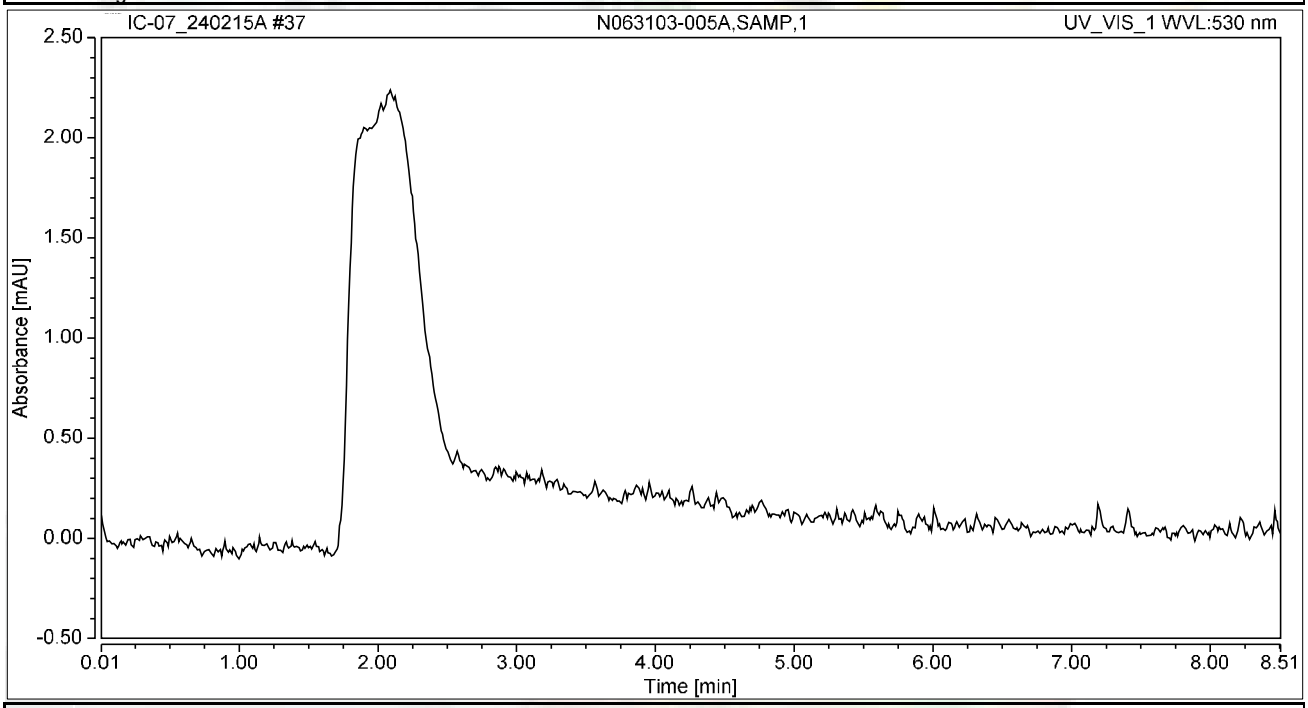
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 15:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

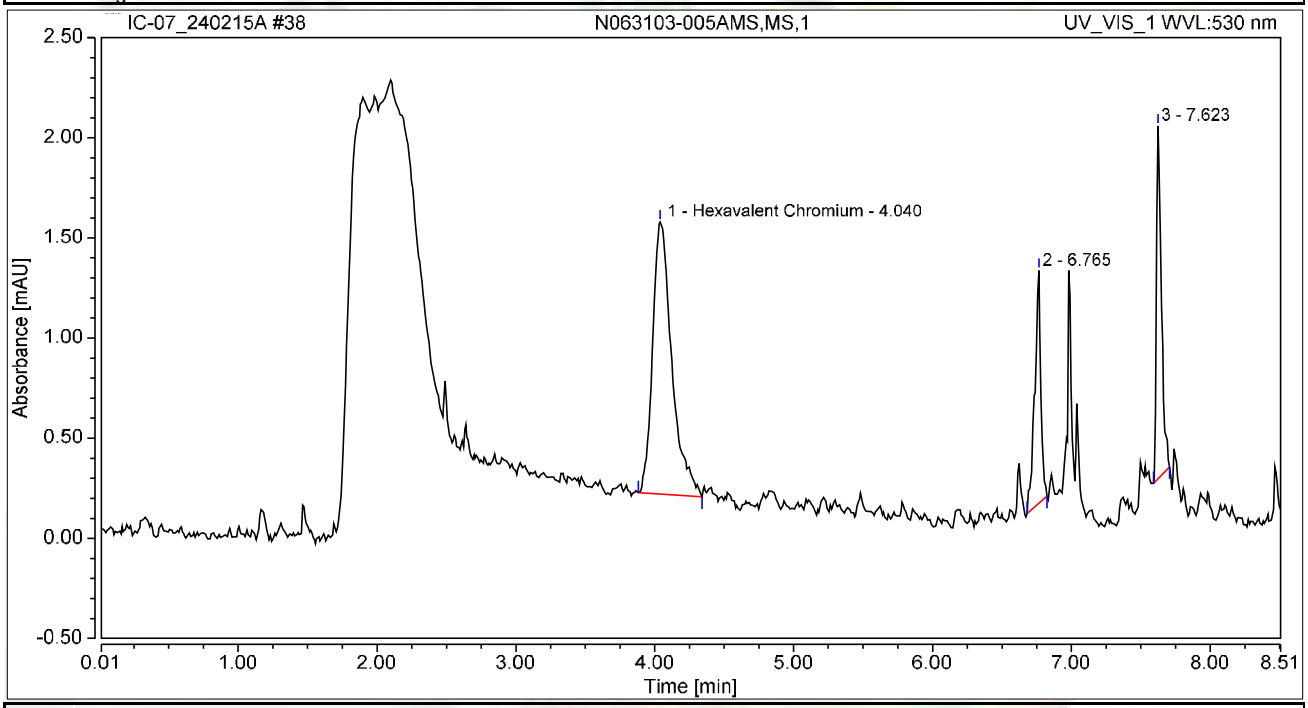
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-005AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 15:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

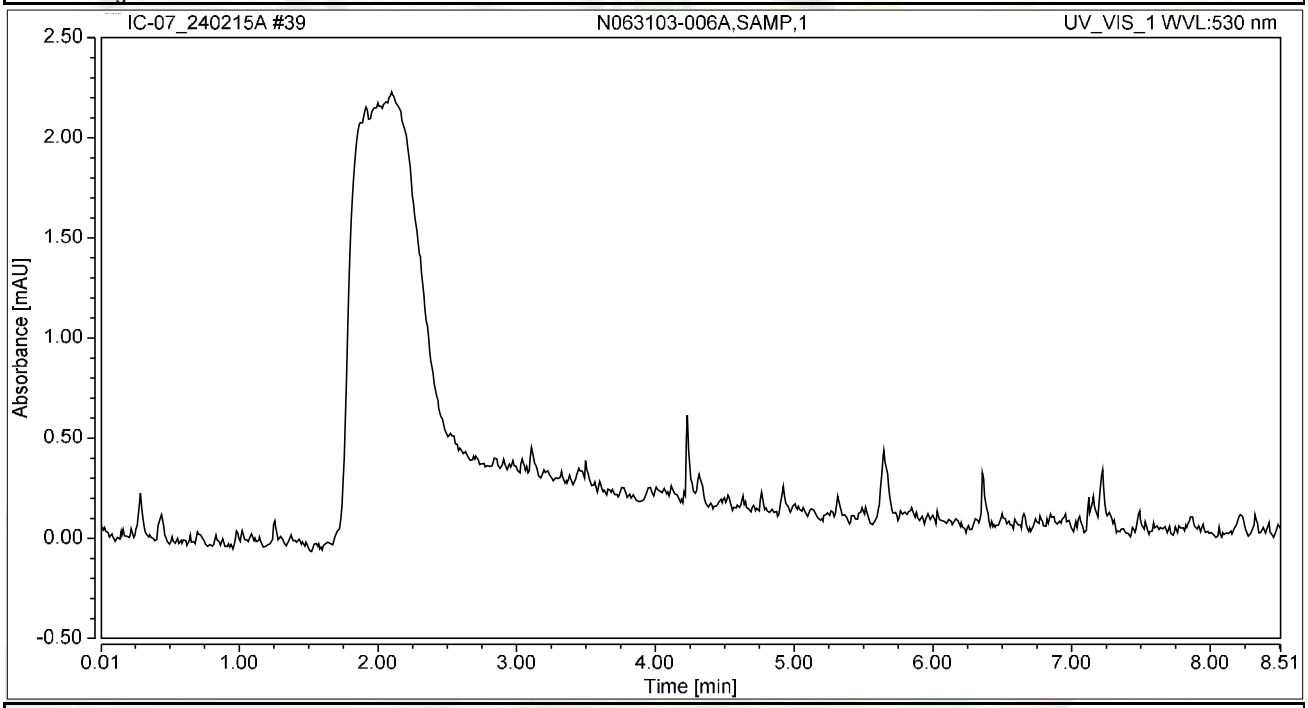
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.217	1.358	62.40	31.73	1.0102
2		6.765	0.059	1.162	17.03	27.15	n.a.
3		7.623	0.072	1.761	20.57	41.12	n.a.
Total:			**0.348**	**4.281**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 15:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

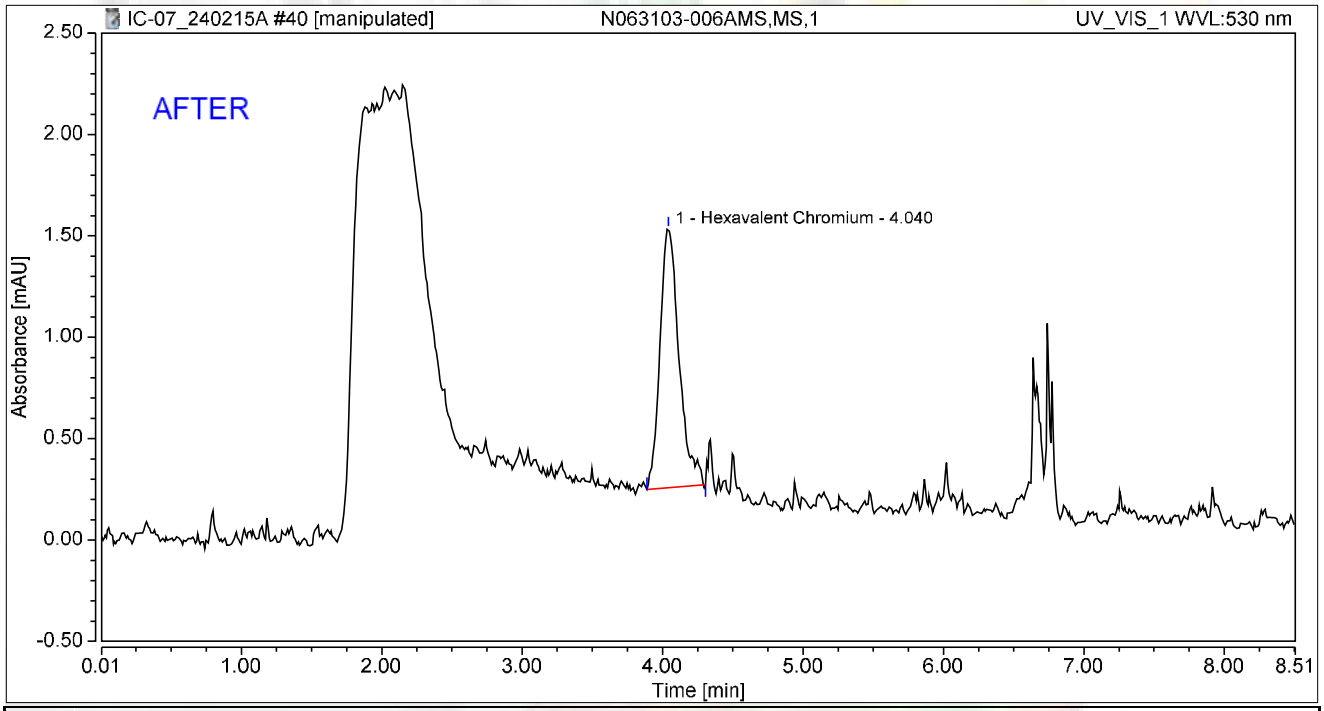
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 15:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.201	1.276	100.00	100.00	0.9340
Total:			**0.201**	**1.276**	**100.00**	**100.00**	

Reviewed by:

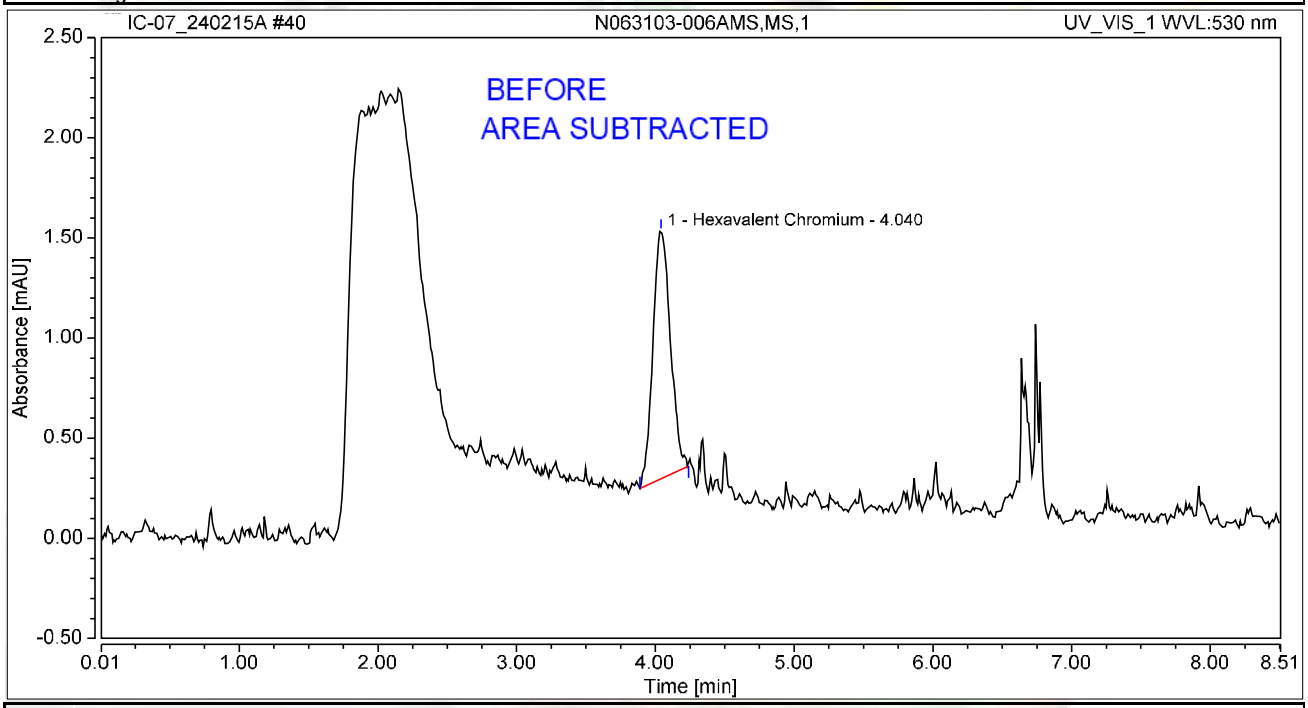
JRB 2/25/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063103-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 15:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

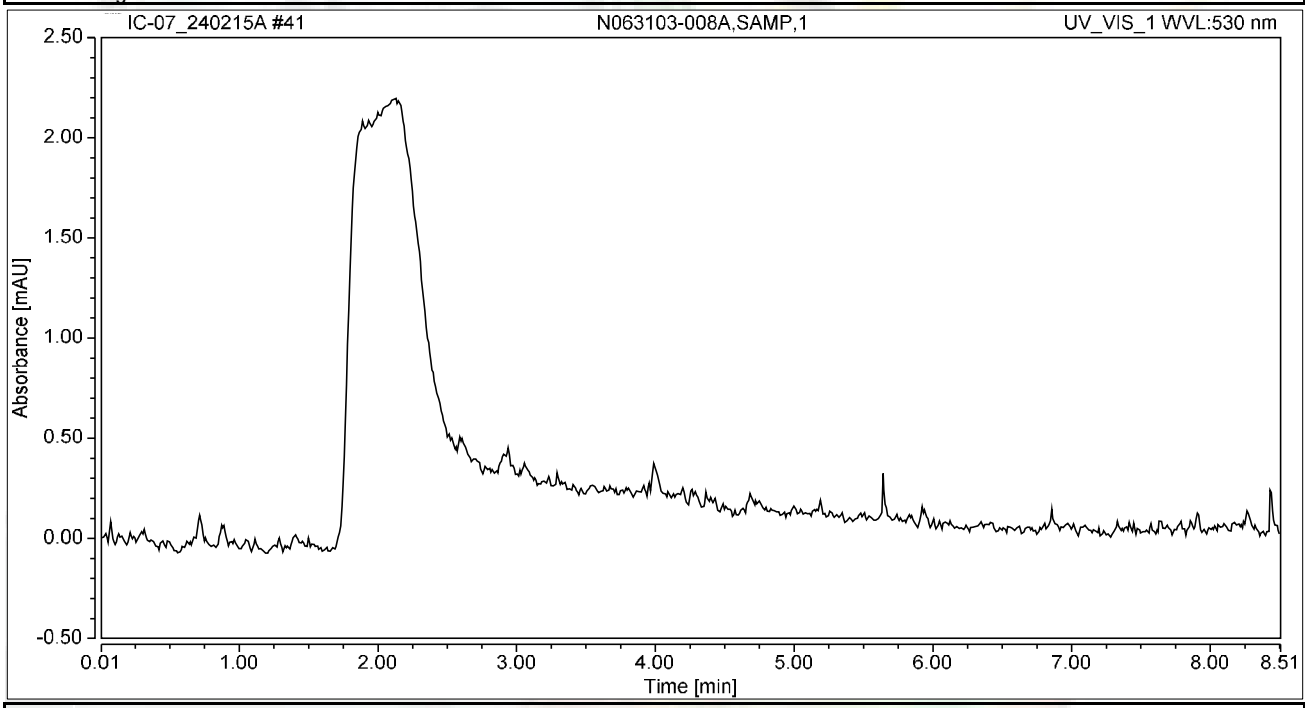
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.181	1.237	100.00	100.00	0.8403
Total:			**0.181**	**1.237**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 16:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

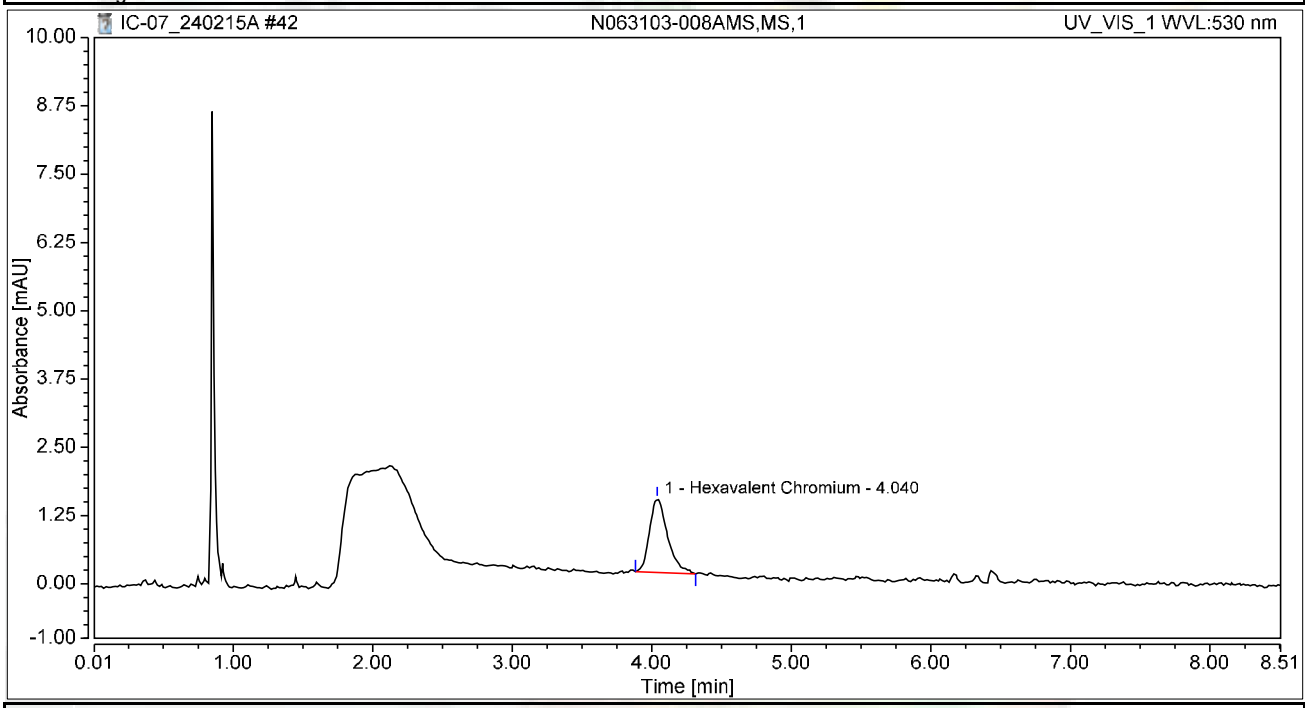
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 16:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

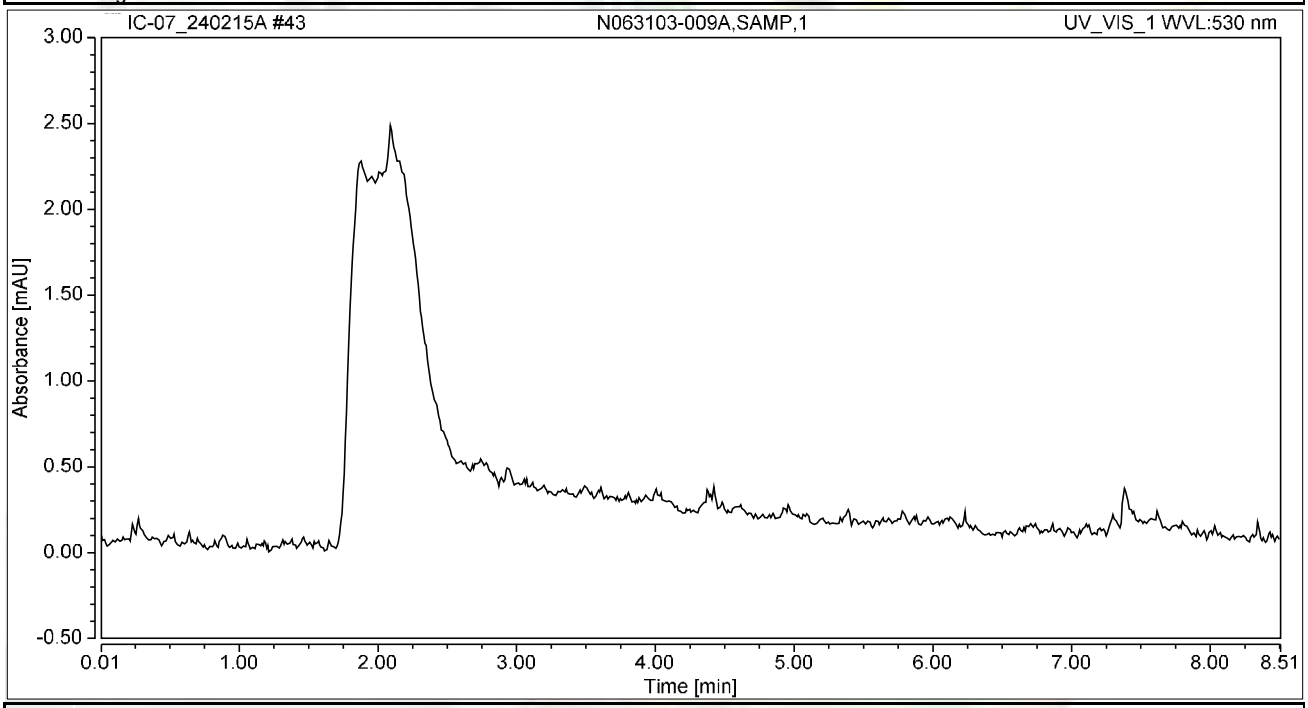
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.205	1.346	100.00	100.00	0.9509
Total:			**0.205**	**1.346**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 16:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

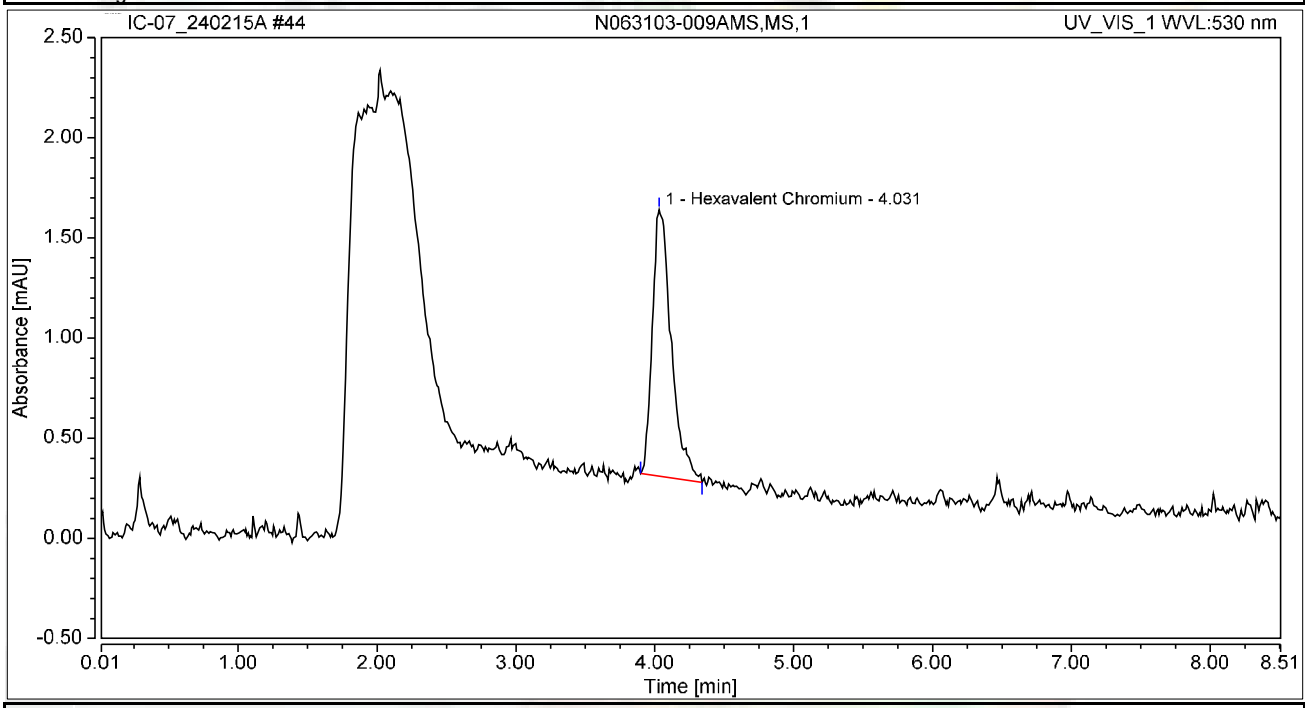
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-009AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 16:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

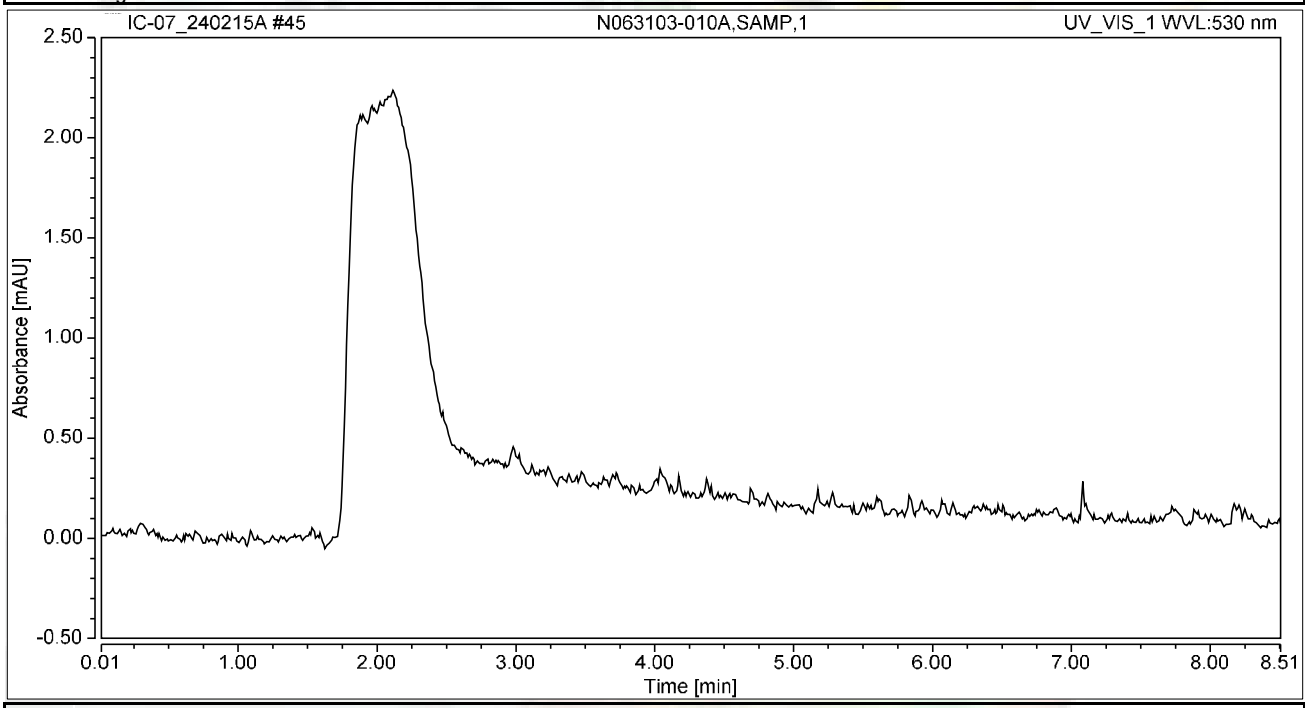
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.210	1.330	100.00	100.00	0.9745
Total:			**0.210**	**1.330**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-010A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 16:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

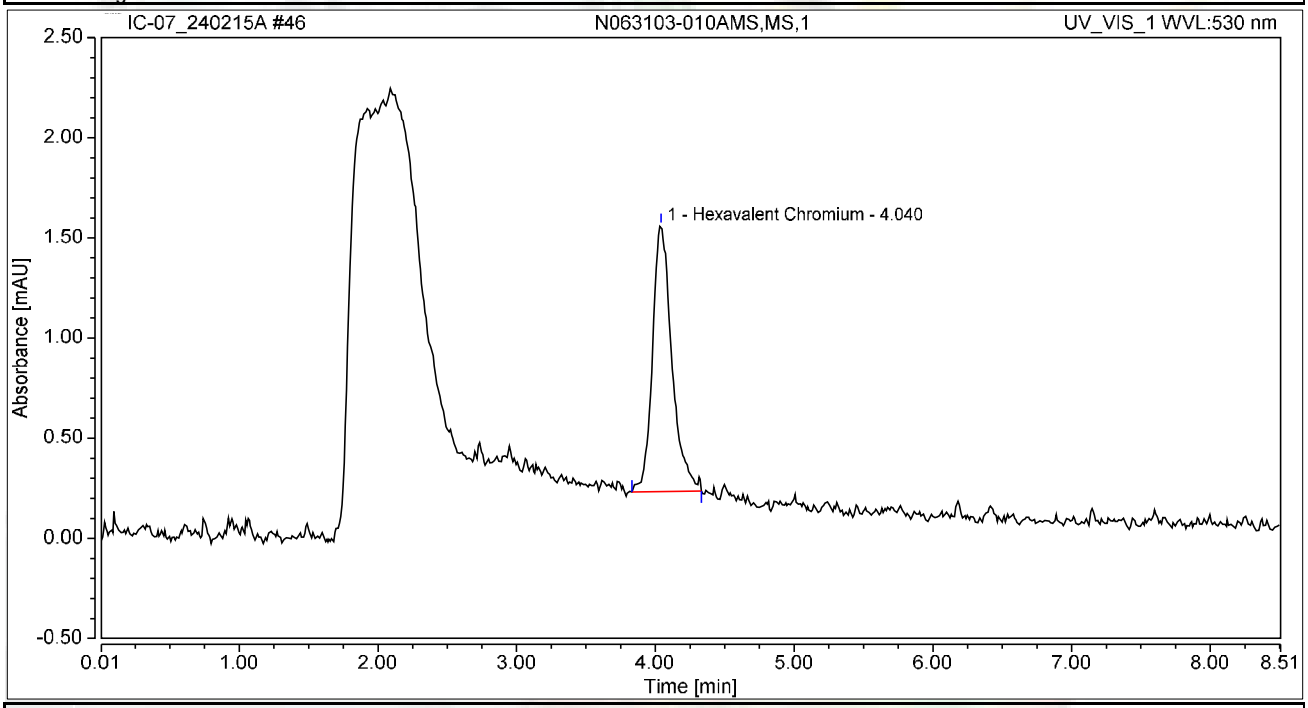
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-010AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 16:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

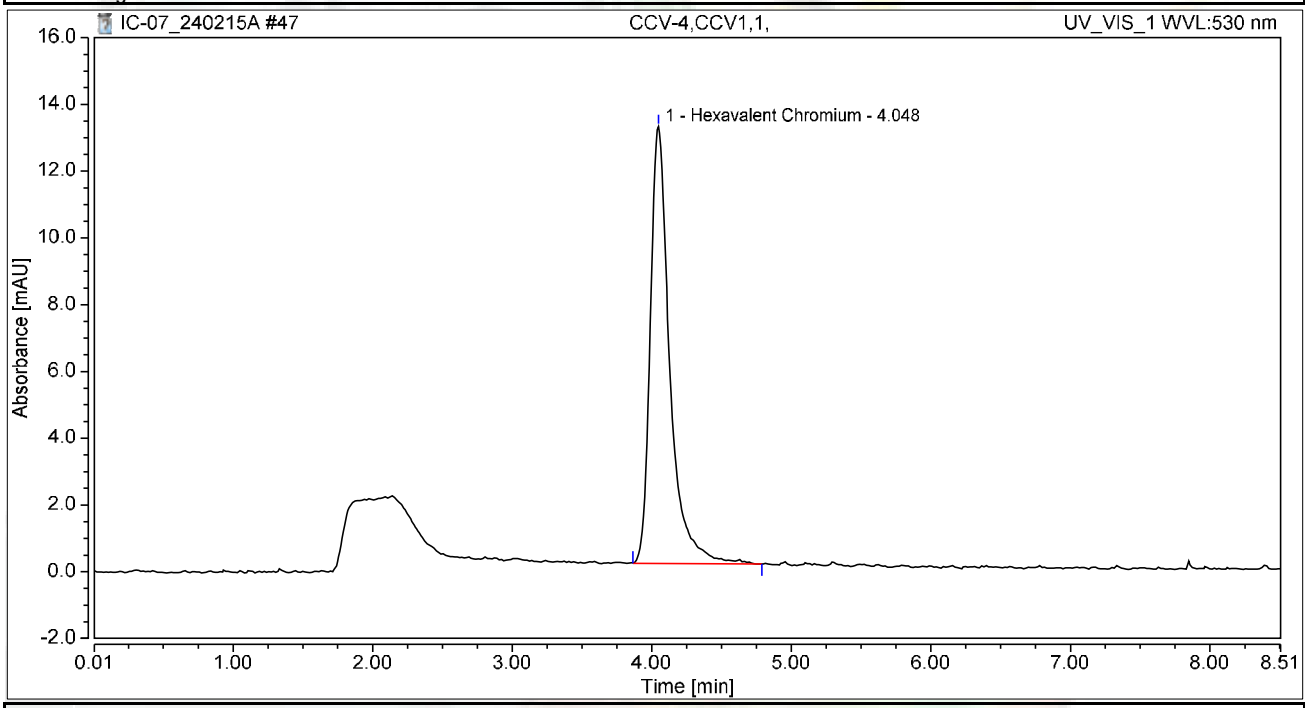
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.216	1.328	100.00	100.00	1.0033
Total:			**0.216**	**1.328**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 16:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

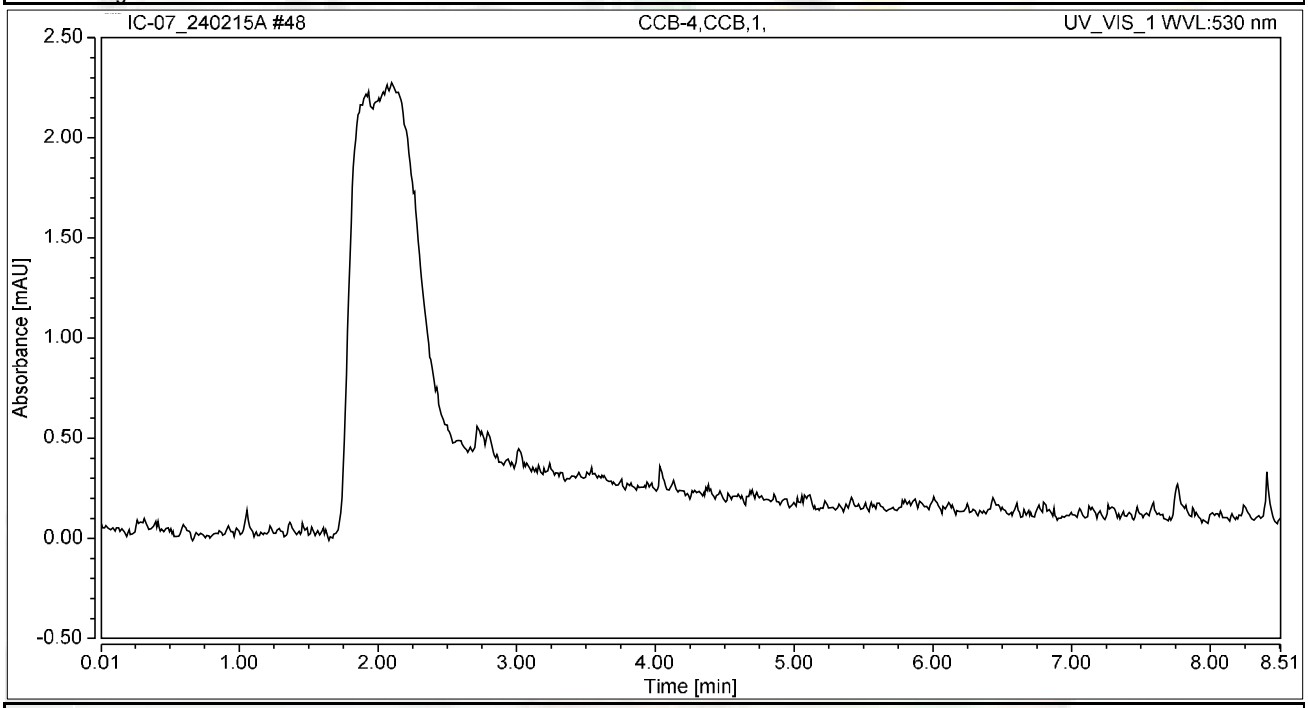
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.122	13.086	100.00	100.00	9.8660
Total:			**2.122**	**13.086**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 17:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

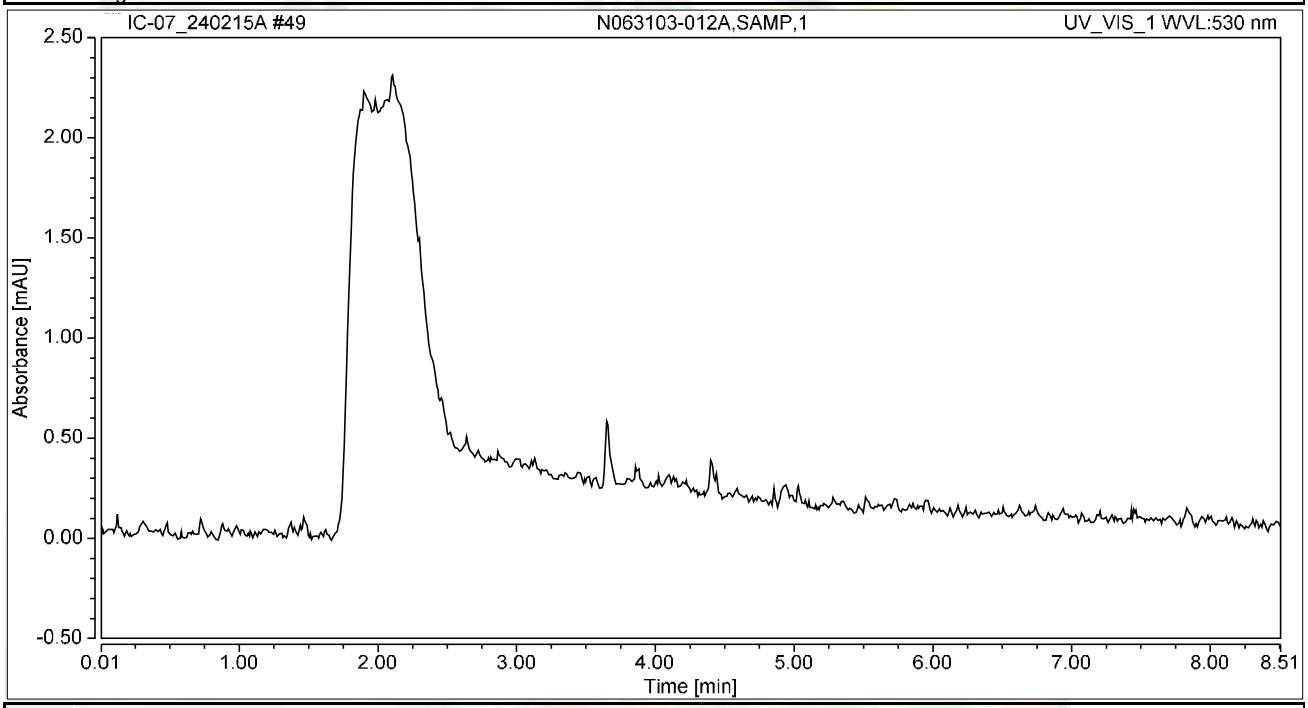
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-012A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 17:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

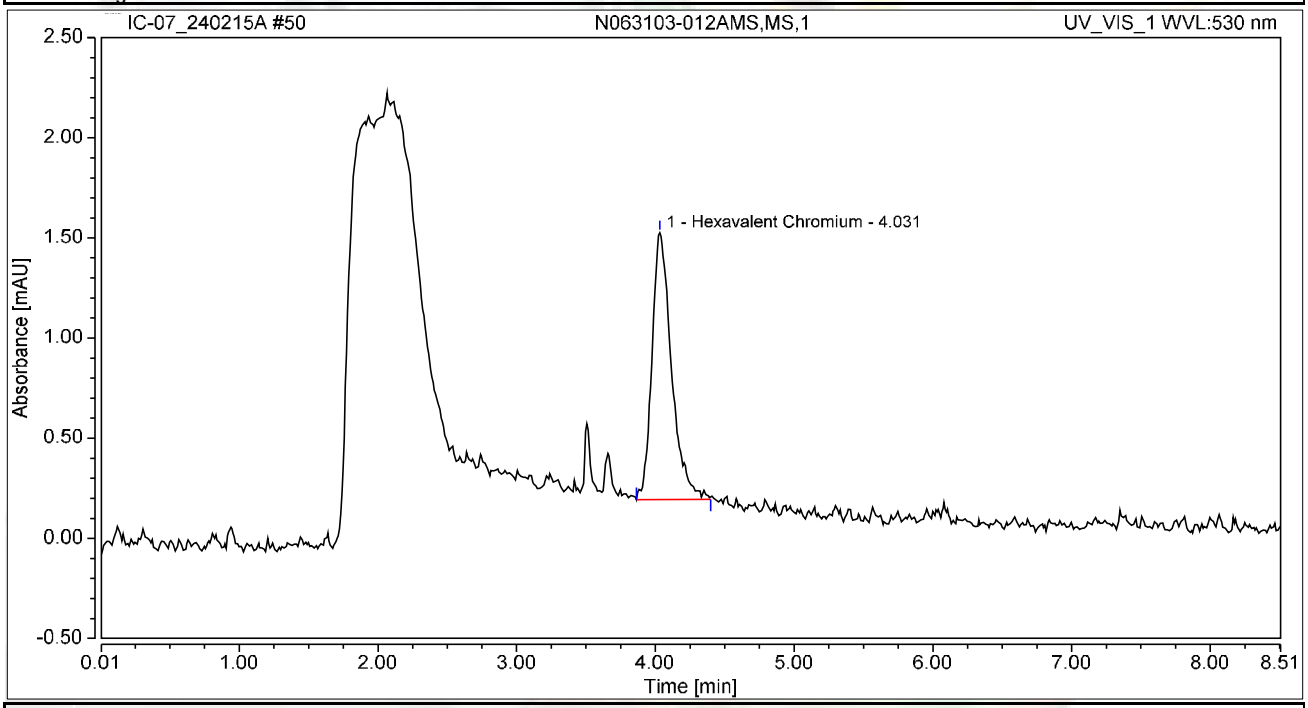
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-012AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 17:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

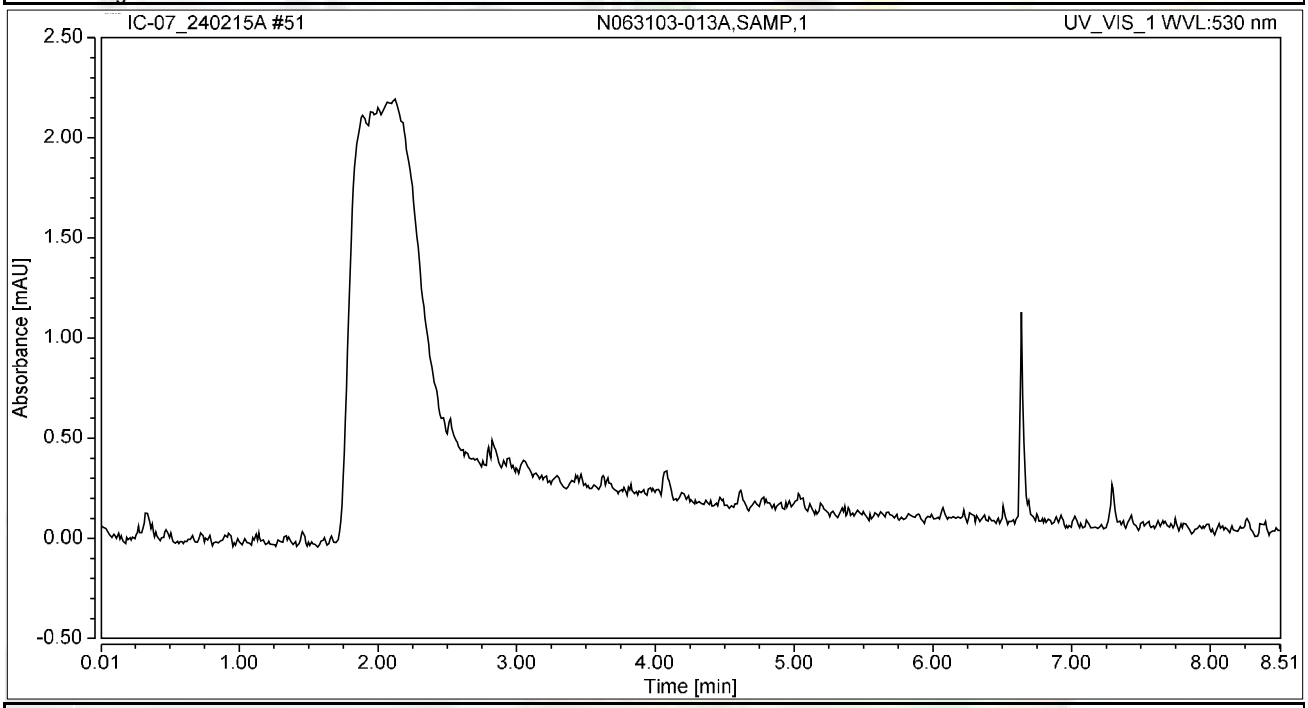
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.218	1.332	100.00	100.00	1.0123
Total:			**0.218**	**1.332**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-013A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 17:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

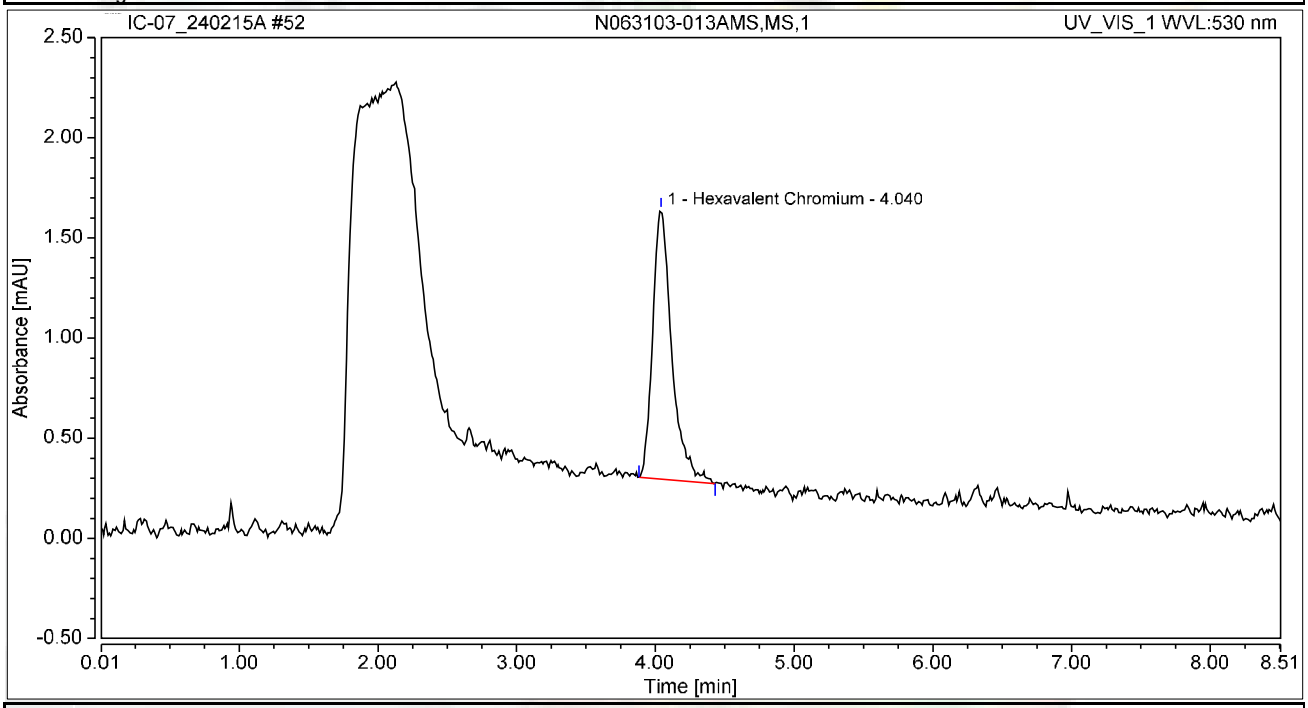
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-013AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 17:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

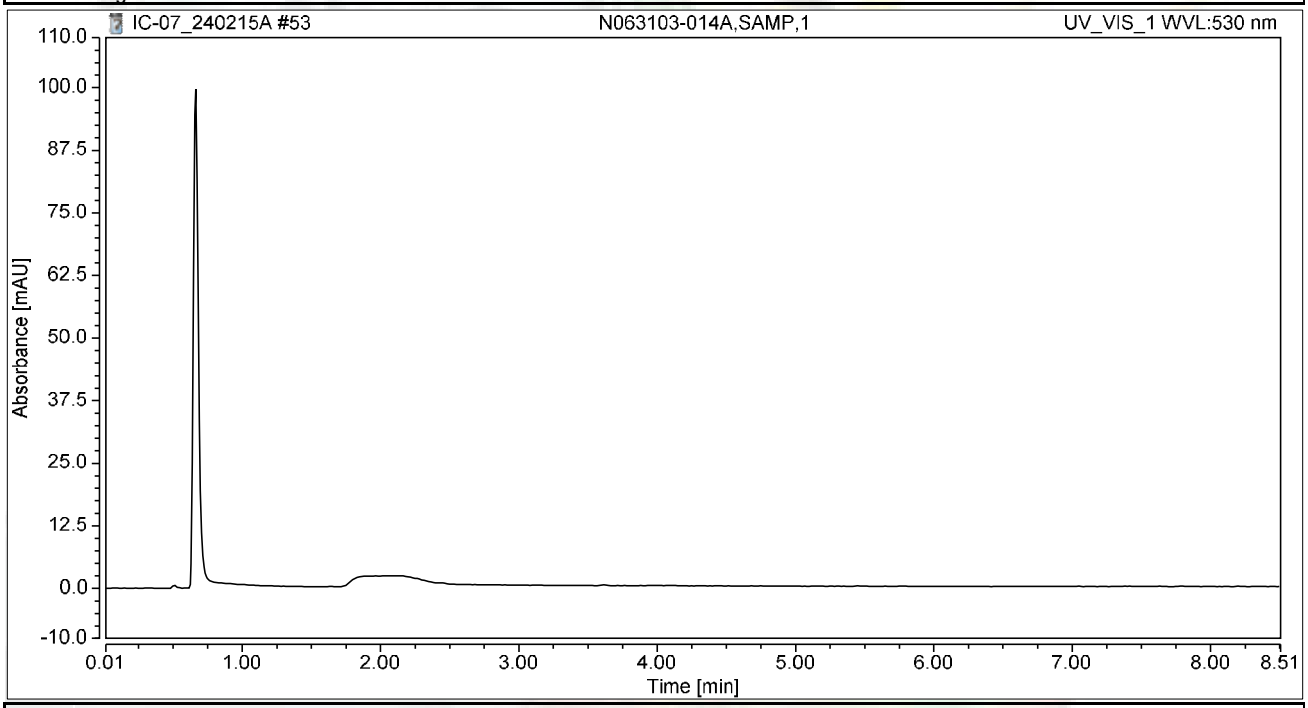
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.215	1.345	100.00	100.00	0.9986
Total:			**0.215**	**1.345**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-014A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 17:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

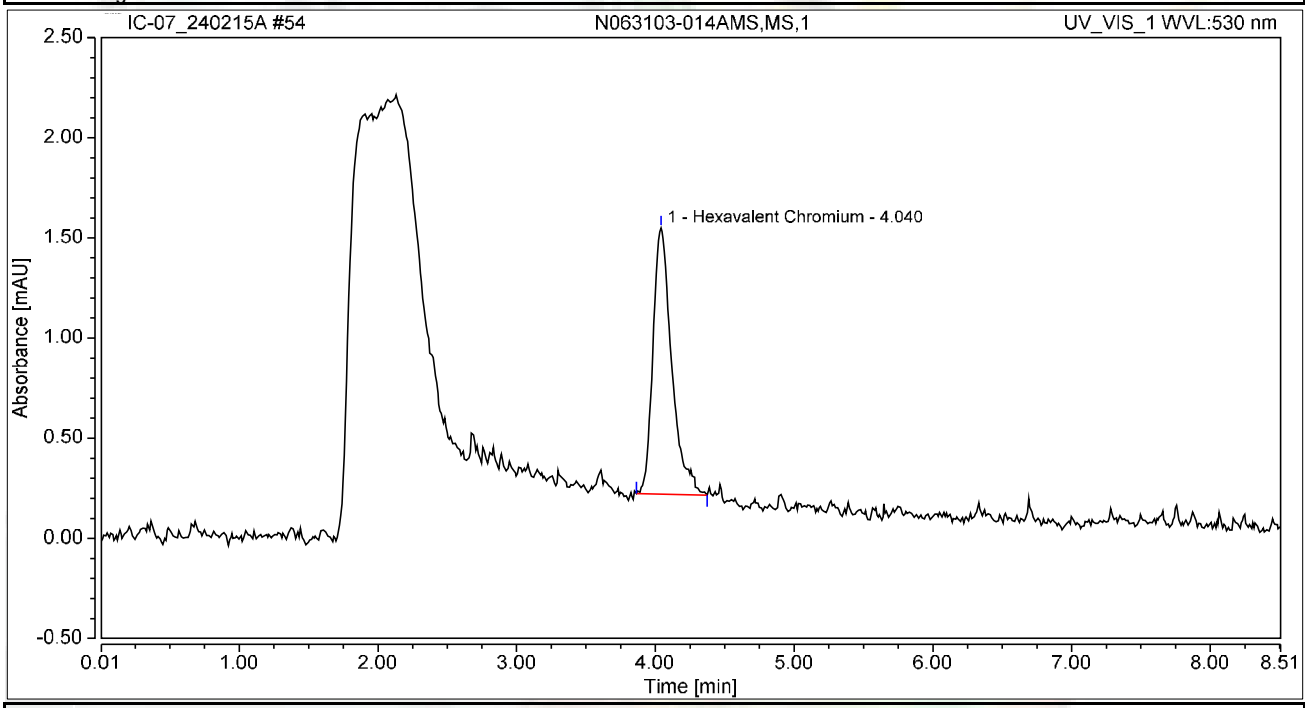
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-014AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 18:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

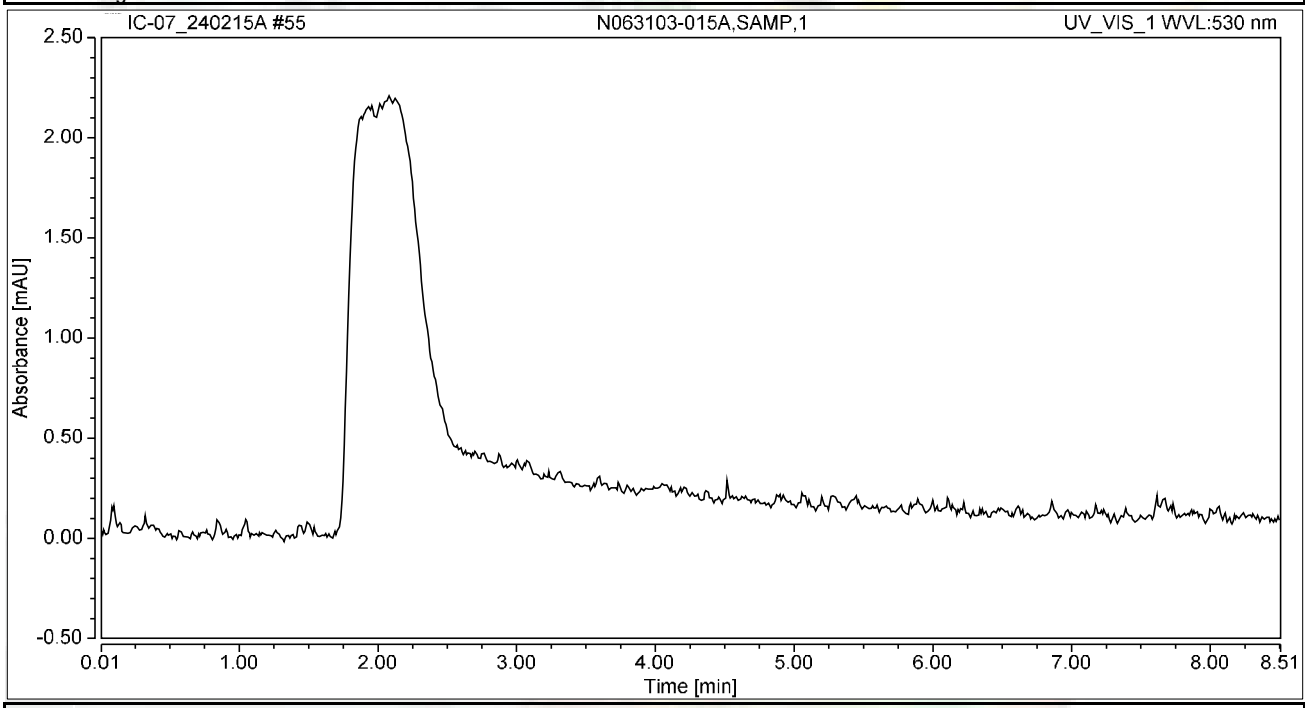
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.208	1.328	100.00	100.00	0.9683
Total:			**0.208**	**1.328**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-015A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 18:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

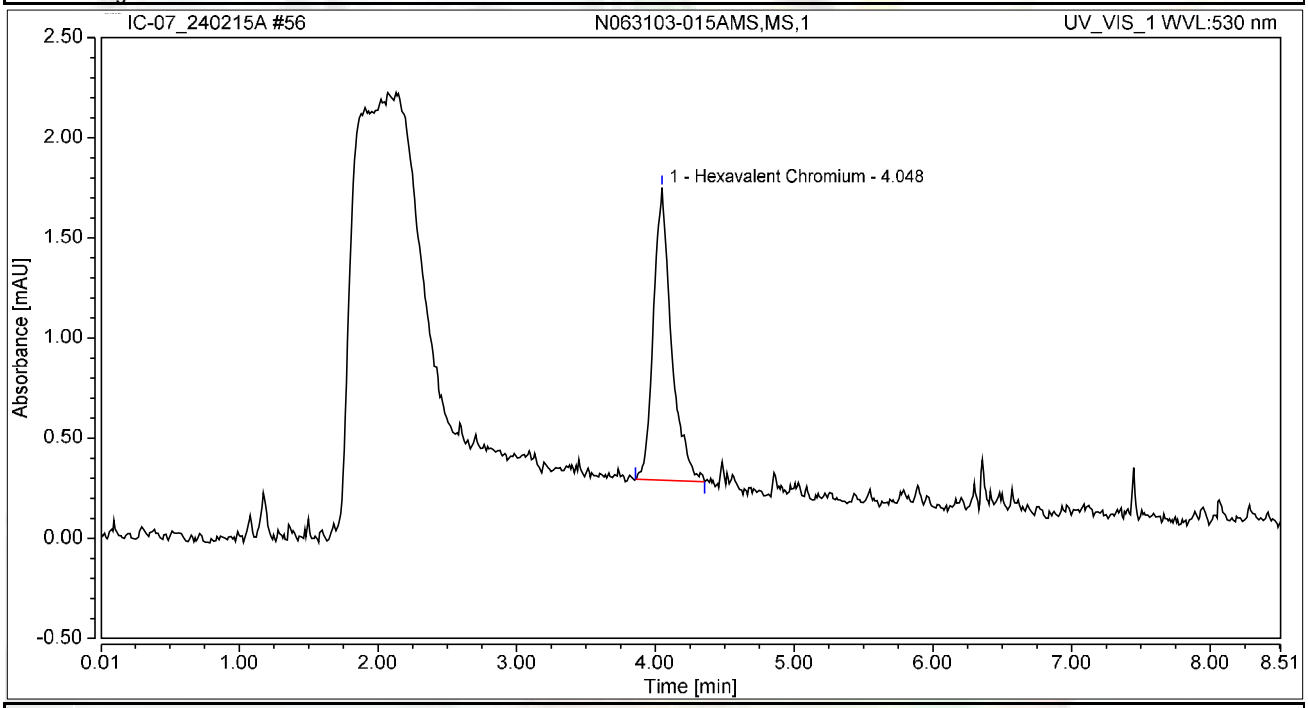
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-015AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 18:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

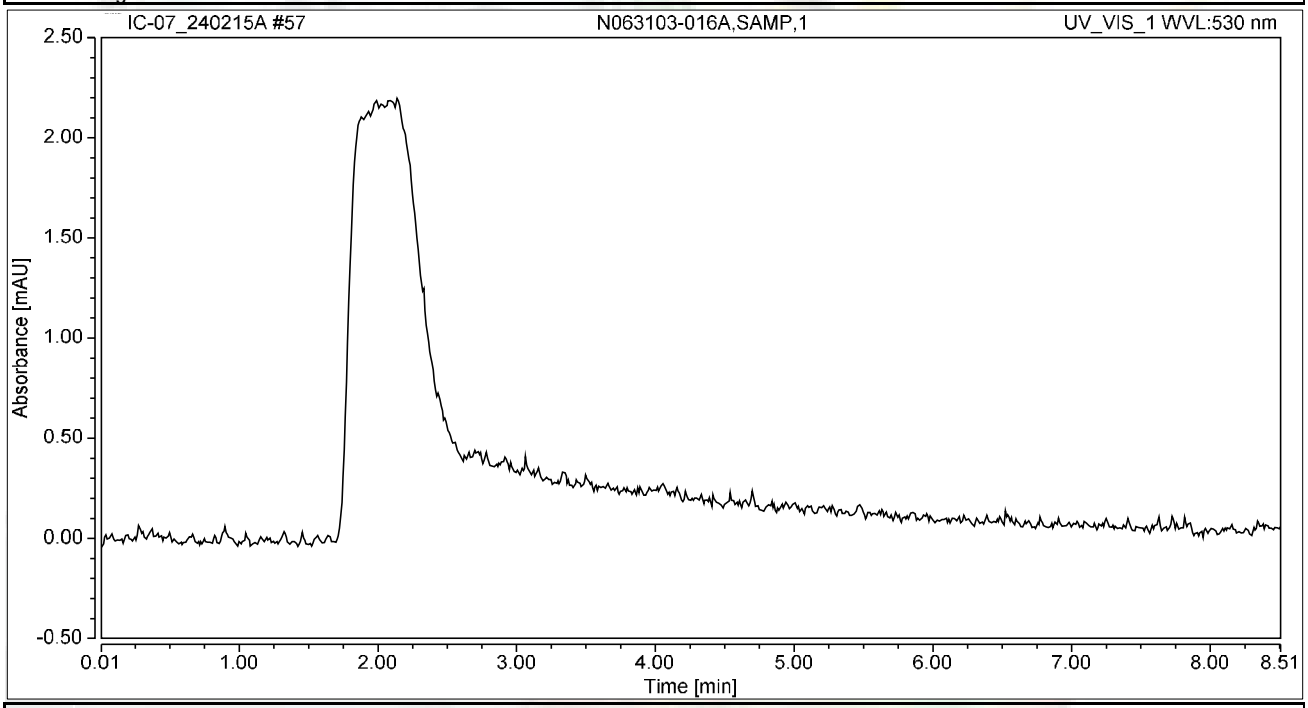
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.219	1.460	100.00	100.00	1.0174
Total:			**0.219**	**1.460**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-016A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 18:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

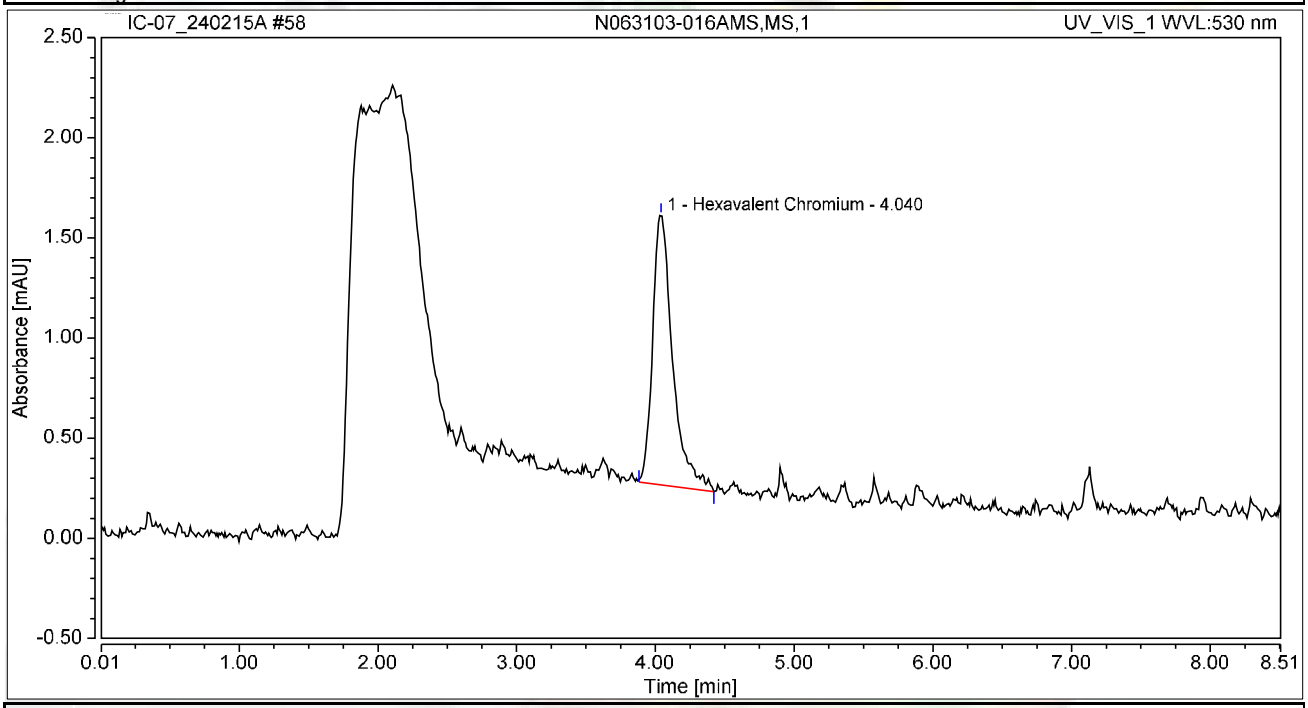
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-016AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 18:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

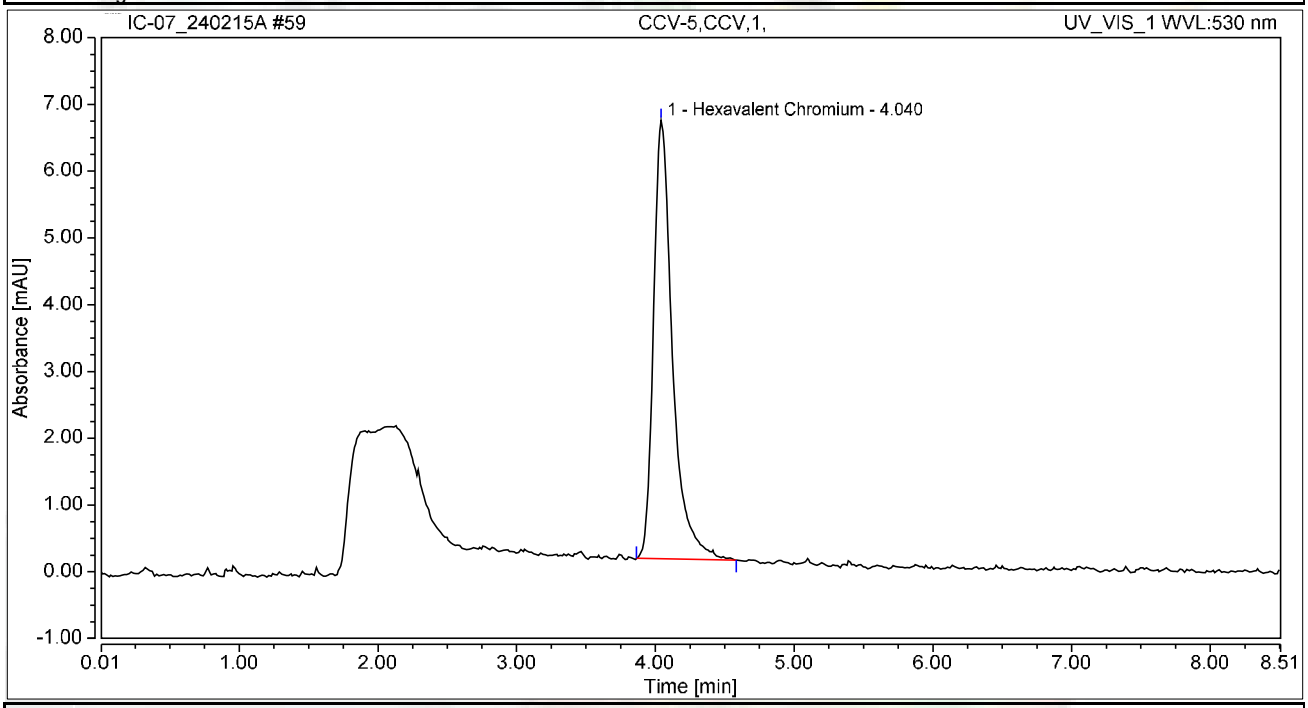
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.226	1.347	100.00	100.00	1.0485
Total:			**0.226**	**1.347**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 18:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

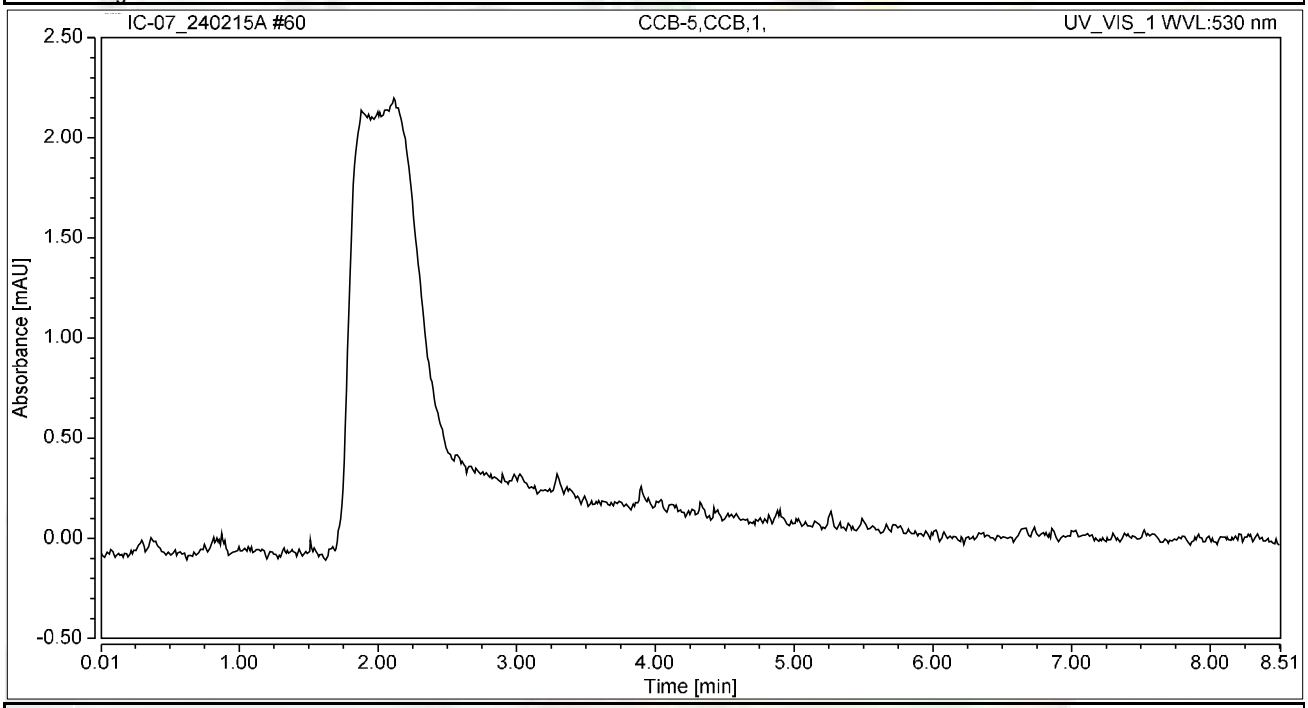
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.041	6.560	100.00	100.00	4.8403
Total:			**1.041**	**6.560**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 19:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

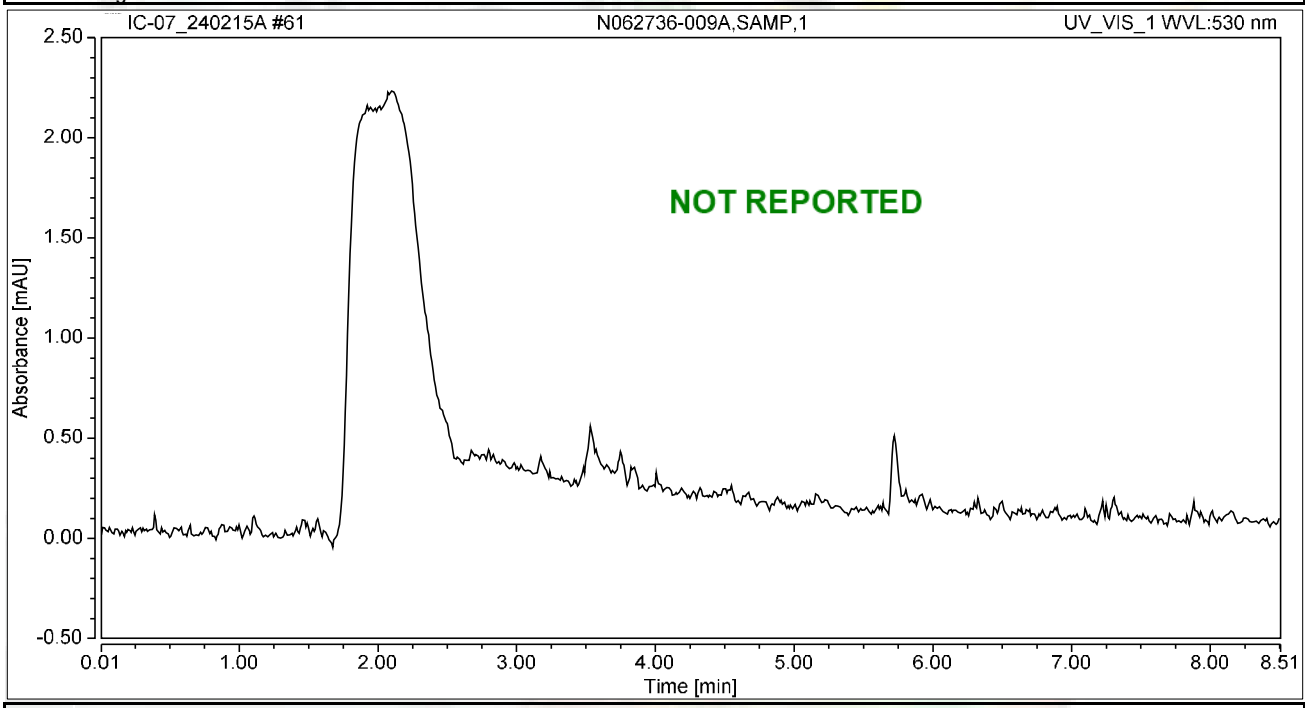
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062736-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 19:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

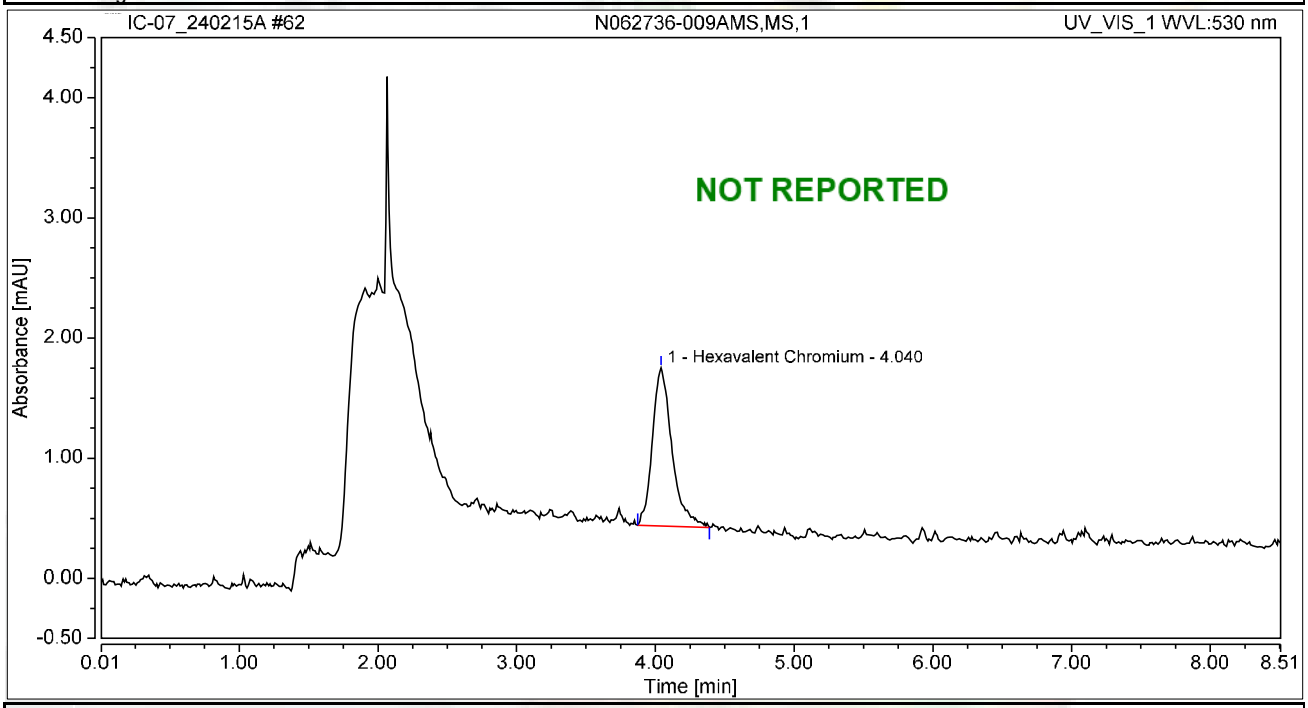
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062736-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 19:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

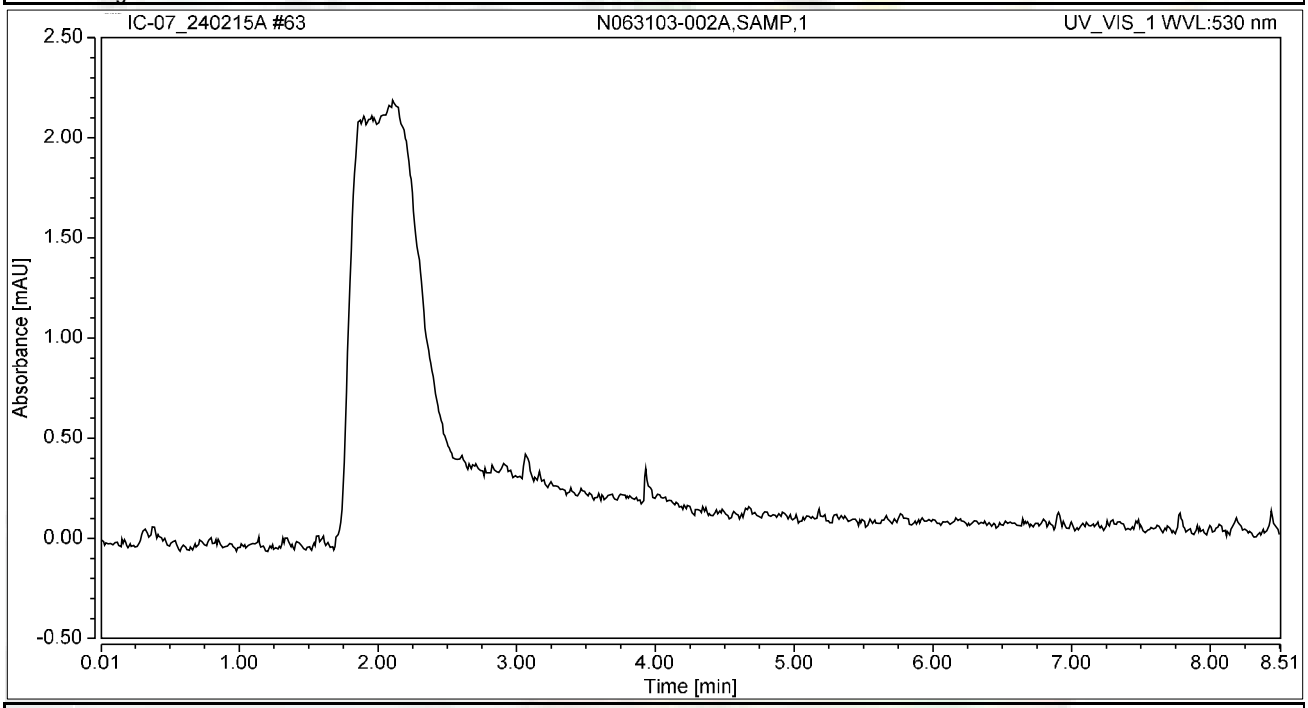
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.215	1.315	100.00	100.00	1.0013
Total:			**0.215**	**1.315**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 19:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

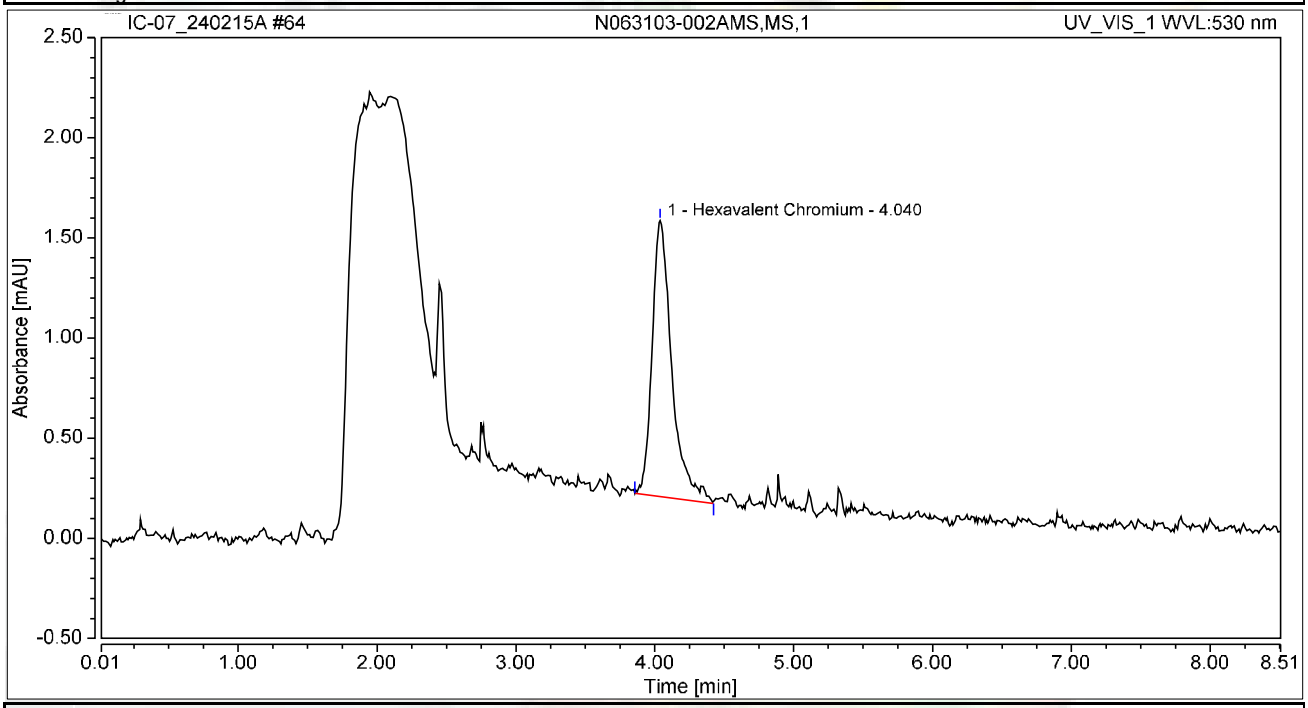
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 19:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

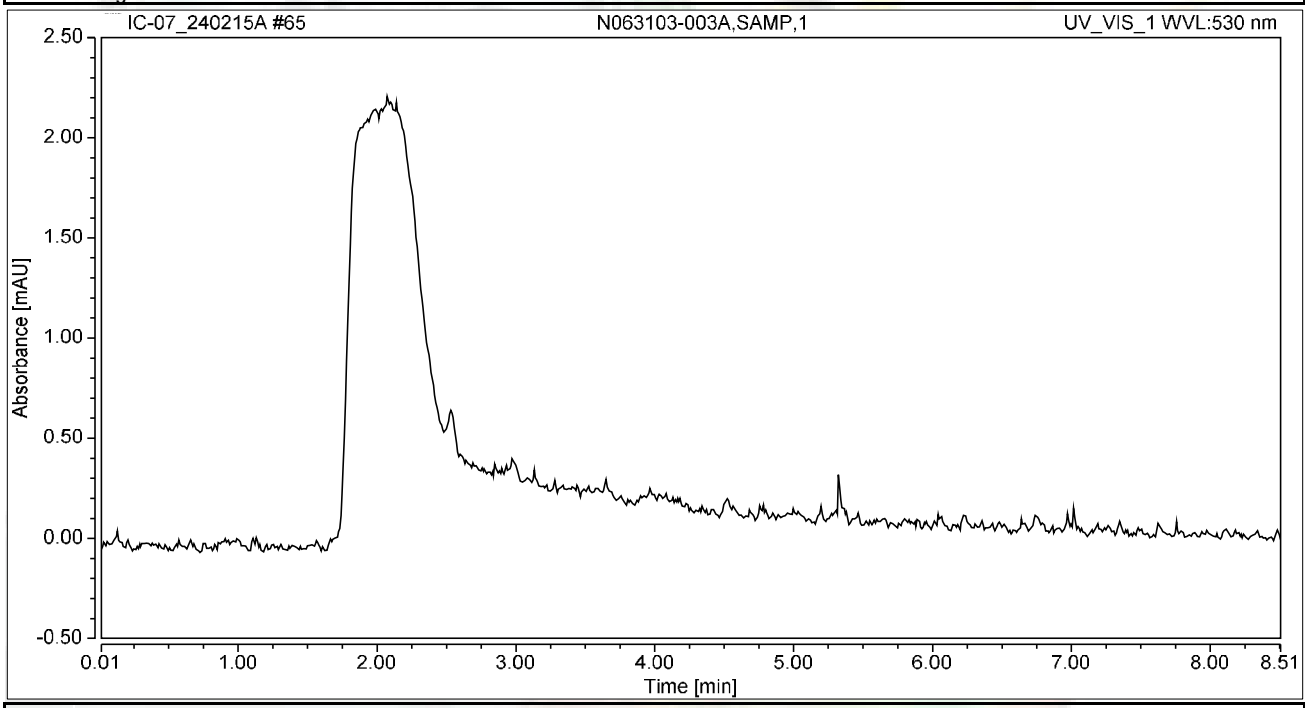
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.226	1.376	100.00	100.00	1.0508
Total:			**0.226**	**1.376**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-003A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 19:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

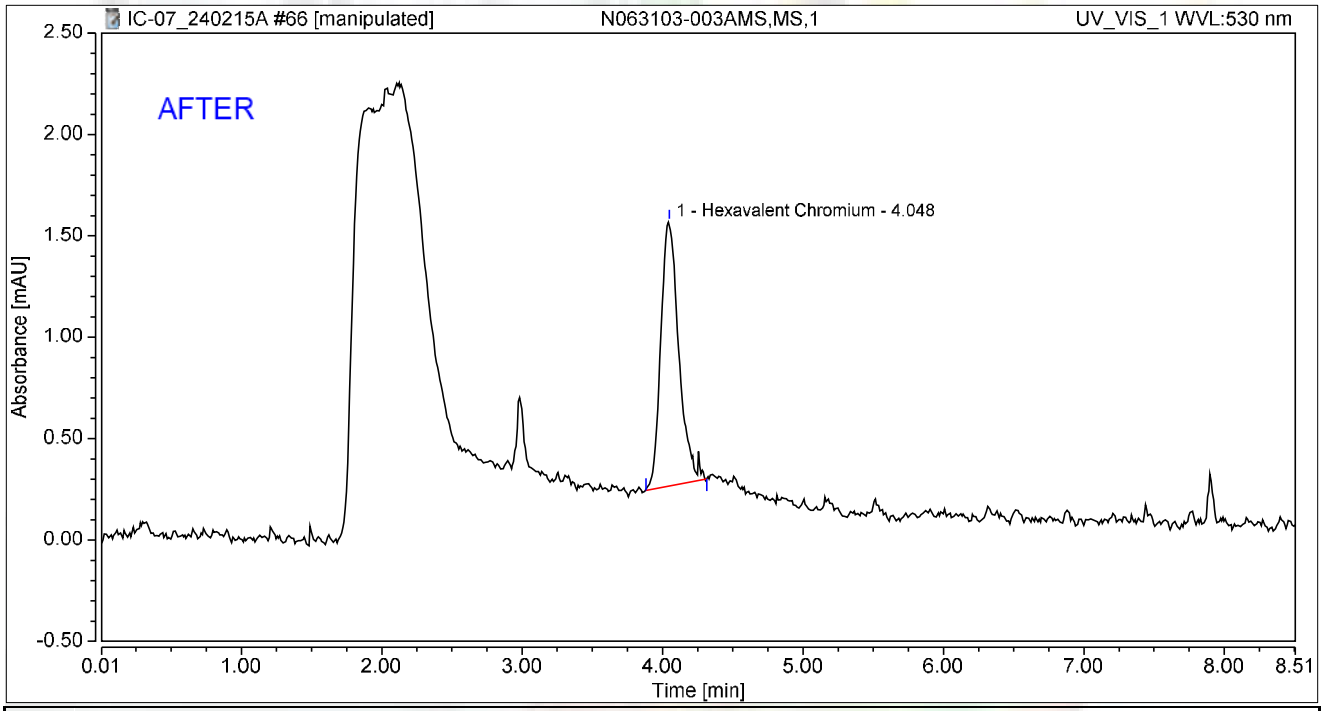
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 20:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.194	1.304	100.00	100.00	0.9032
Total:			**0.194**	**1.304**	**100.00**	**100.00**	

Reviewed by:

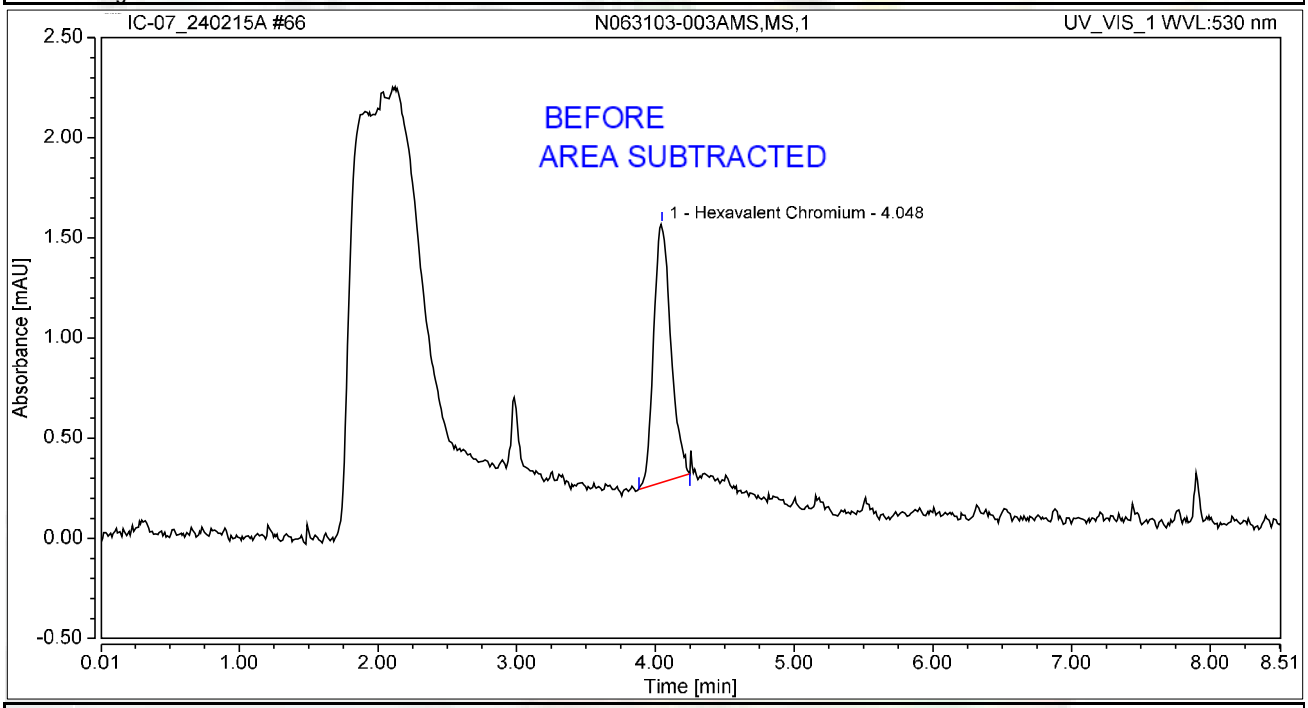
JRB 2/25/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063103-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 20:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

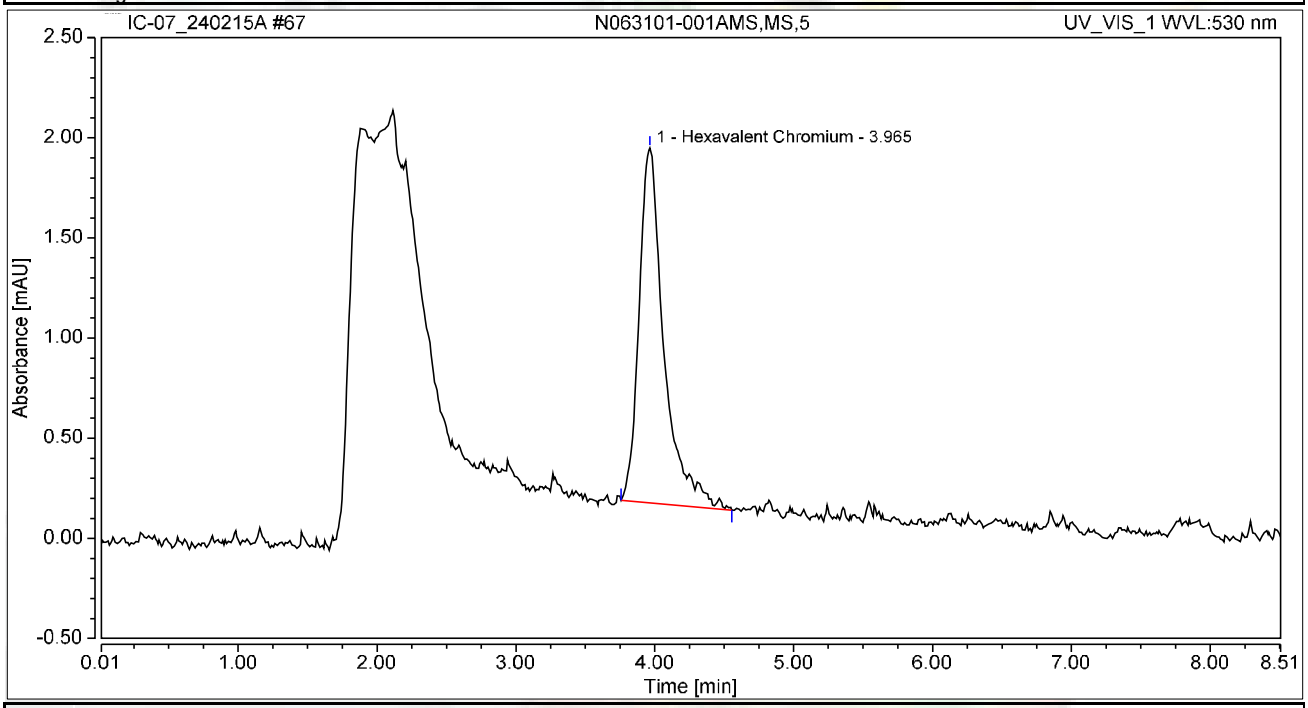
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.186	1.290	100.00	100.00	0.8645
Total:			**0.186**	**1.290**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063101-001AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 20:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

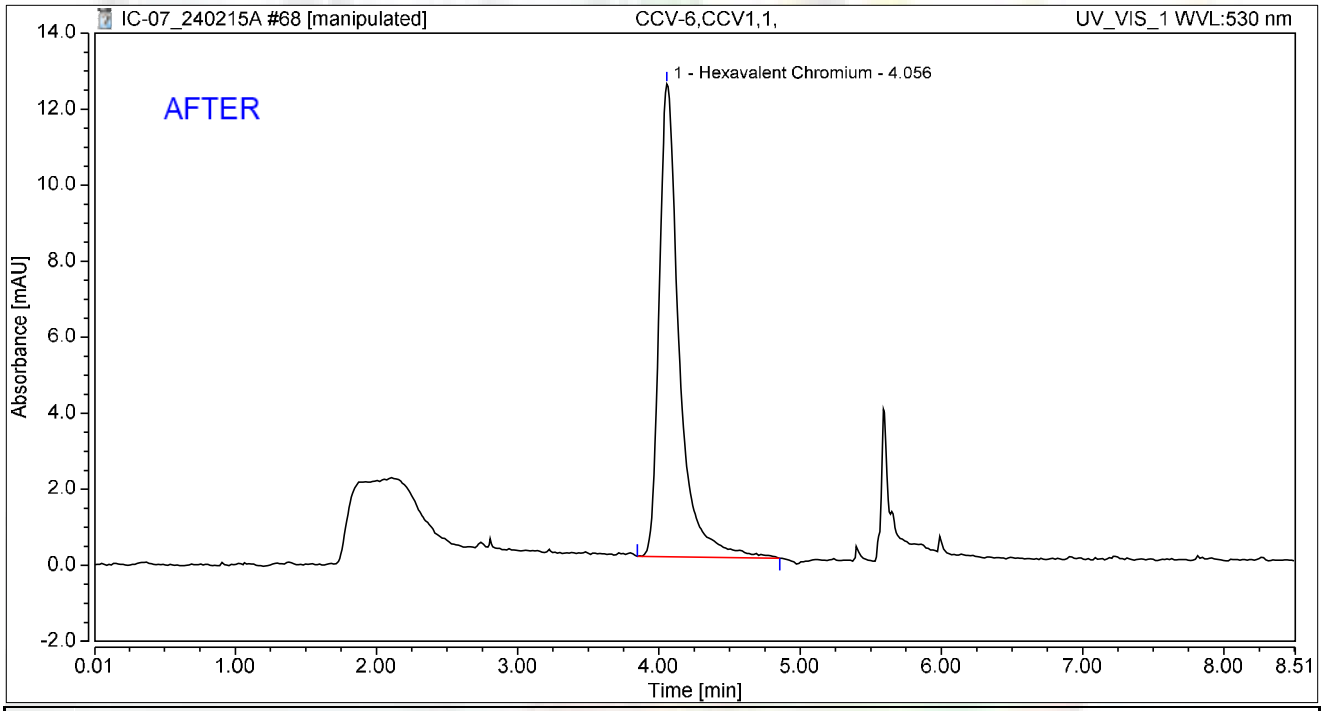
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.368	1.772	100.00	100.00	1.7110
Total:			**0.368**	**1.772**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 20:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	2.051	12.434	100.00	100.00	9.5357
Total:			**2.051**	**12.434**	**100.00**	**100.00**	

Reviewed by:

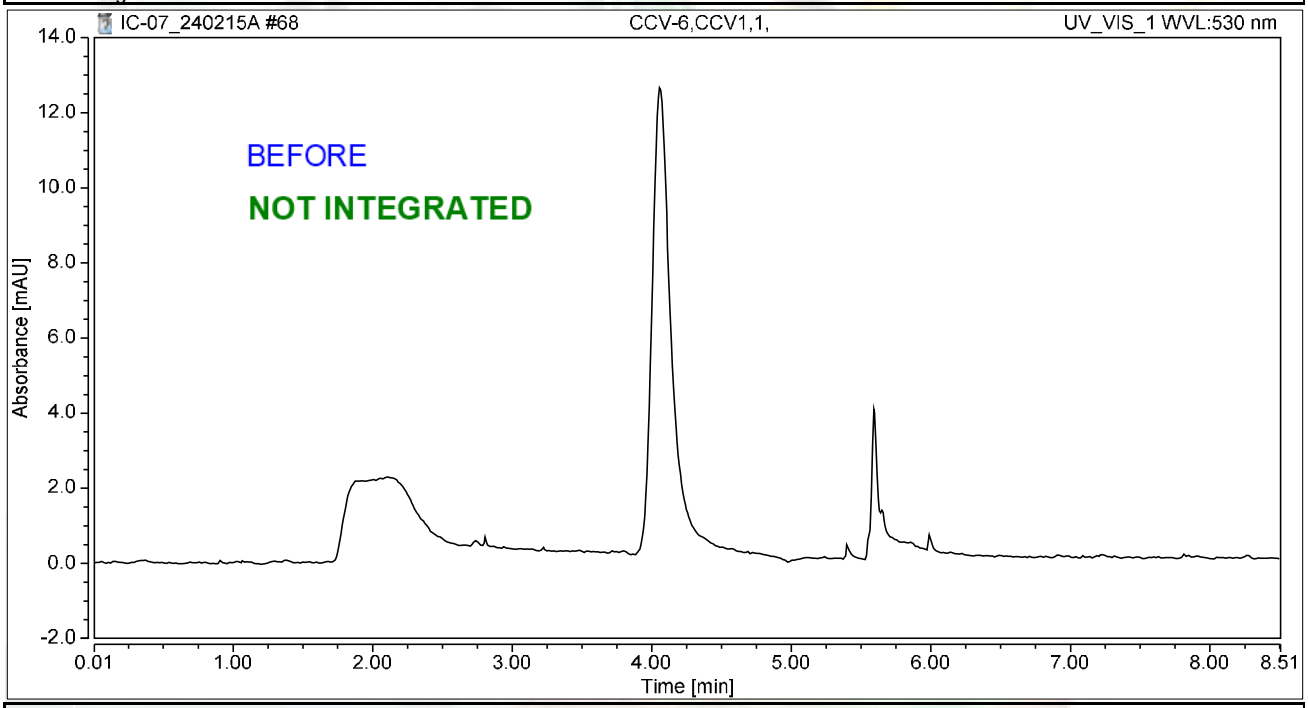
JRB 2/25/2024

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 20:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

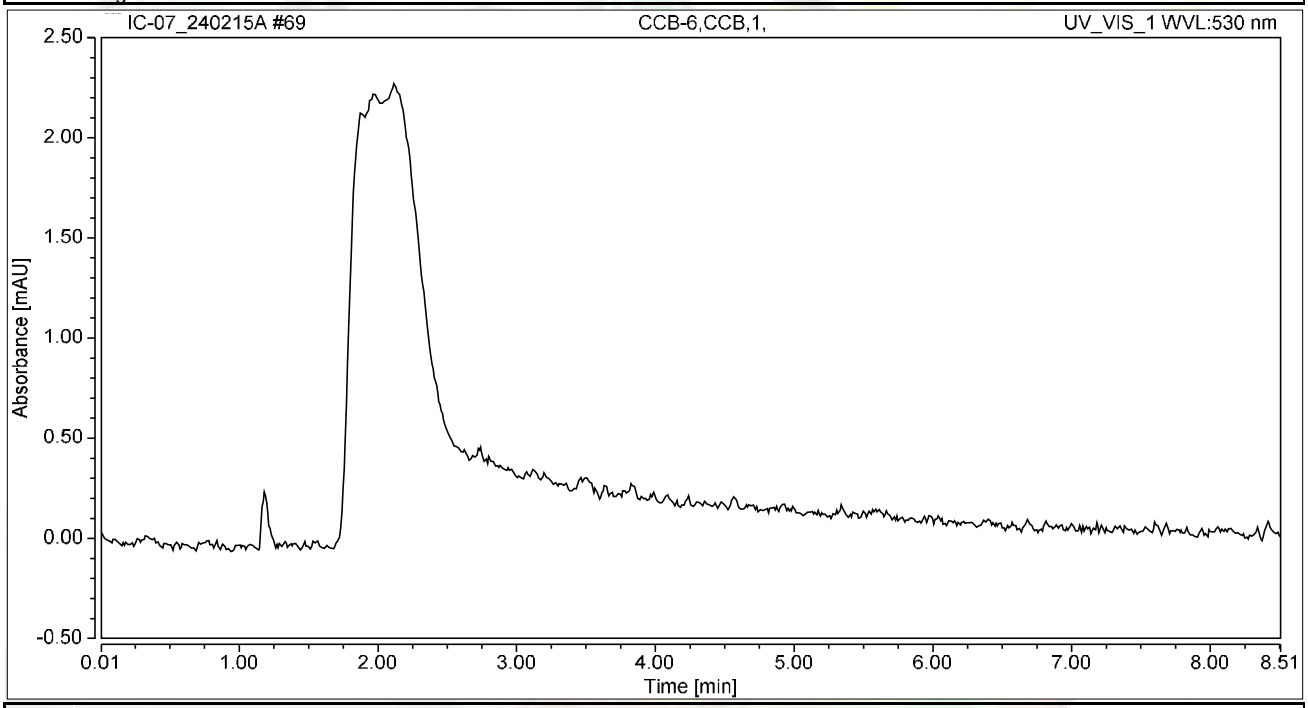
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**44**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 20:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

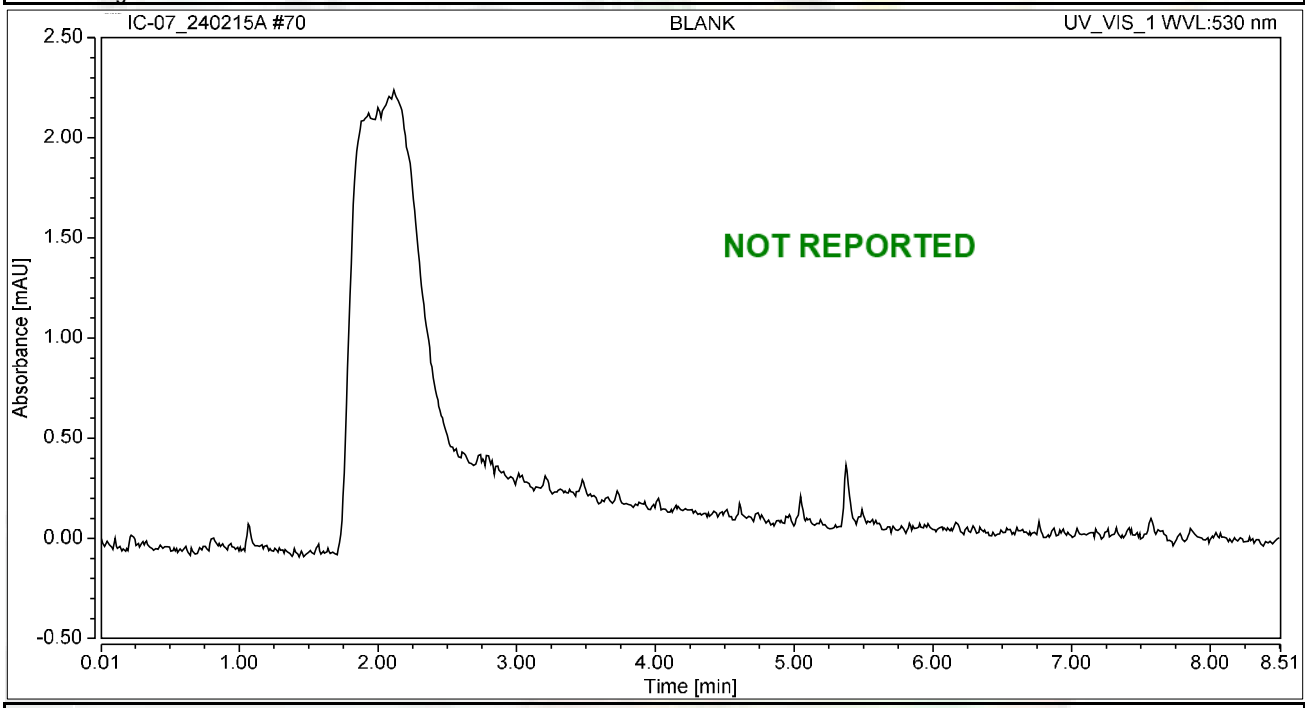
JRB 2/25/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**45**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 20:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

ARCADIS

Project: PG&E Topock - RCM

Project No.: 30211191

ASSET Laboratories Work Order:

N063103

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063103

Item	Page
Cover Page	1-7
Analytical Result/QC Summary Reports	8-61
Sample Receiving Items	62-69
List of Analysts	70
Raw Data	
SM 2540C	71-80
EPA 218.6	81-201
SM 2320 B	202-211
EPA 300.0	212-246
EPA 6010B_Dissolved	247-301
EPA 6010B_Total	302-332
EPA 6020_Dissolved	333-378

March 01, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063103

RE: PG&E Topock - RCM, 30211191

Attention: Dan Bush

Enclosed are the results for sample(s) received on February 14, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - RCM, 30211191
Lab Order: N063103

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Ammonia and Nitrate/Nitrite as Nitrogen were subcontracted to BC Labs - Bakersfield, CA.

Analytical Comments for EPA 6010B:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Iron in QC samples N063076-002B-MS1 and N063076-002B-MSD1 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Sodium in QC samples N063103-010B-MS2 and N063103-010B-MSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Calcium in QC samples N063076-002B-MS1 and N063076-002B-MSD1 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020:

Matrix Spike (MS) is outside recovery criteria for Barium in QC sample N063103-001B-MS since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution

Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

ASSET Laboratories

Date: *01-Mar-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - RCM, 30211191
Lab Order: N063103
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063103-001A	MW-924-Q124	Surface Water	2/14/2024 10:55:00 AM	2/14/2024	3/1/2024
N063103-001B	MW-924-Q124	Surface Water	2/14/2024 10:55:00 AM	2/14/2024	3/1/2024
N063103-002A	C-R22A-D-Q124	Surface Water	2/14/2024 10:00:00 AM	2/14/2024	3/1/2024
N063103-002B	C-R22A-D-Q124	Surface Water	2/14/2024 10:00:00 AM	2/14/2024	3/1/2024
N063103-003A	C-R22A-S-Q124	Surface Water	2/14/2024 10:15:00 AM	2/14/2024	3/1/2024
N063103-003B	C-R22A-S-Q124	Surface Water	2/14/2024 10:15:00 AM	2/14/2024	3/1/2024
N063103-004A	C-R27-D-Q124	Surface Water	2/14/2024 10:45:00 AM	2/14/2024	3/1/2024
N063103-004B	C-R27-D-Q124	Surface Water	2/14/2024 10:45:00 AM	2/14/2024	3/1/2024
N063103-005A	C-R27-S-Q124	Surface Water	2/14/2024 11:05:00 AM	2/14/2024	3/1/2024
N063103-005B	C-R27-S-Q124	Surface Water	2/14/2024 11:05:00 AM	2/14/2024	3/1/2024
N063103-006A	C-TAZ-D-Q124	Surface Water	2/14/2024 8:40:00 AM	2/14/2024	3/1/2024
N063103-006B	C-TAZ-D-Q124	Surface Water	2/14/2024 8:40:00 AM	2/14/2024	3/1/2024
N063103-007A	AmbientBlank-1-Q124	Surface Water	2/14/2024 8:30:00 AM	2/14/2024	3/1/2024
N063103-008A	C-TAZ-S-Q124	Surface Water	2/14/2024 8:50:00 AM	2/14/2024	3/1/2024
N063103-008B	C-TAZ-S-Q124	Surface Water	2/14/2024 8:50:00 AM	2/14/2024	3/1/2024
N063103-009A	MW-922-Q124	Surface Water	2/14/2024 10:35:00 AM	2/14/2024	3/1/2024
N063103-009B	MW-922-Q124	Surface Water	2/14/2024 10:35:00 AM	2/14/2024	3/1/2024
N063103-010A	R63-Q124	Surface Water	2/14/2024 9:45:00 AM	2/14/2024	3/1/2024
N063103-010B	R63-Q124	Surface Water	2/14/2024 9:45:00 AM	2/14/2024	3/1/2024
N063103-010C	R63-Q124	Surface Water	2/14/2024 9:45:00 AM	2/14/2024	3/1/2024
N063103-010D	R63-Q124	Surface Water	2/14/2024 9:45:00 AM	2/14/2024	3/1/2024
N063103-010E	R63-Q124	Surface Water	2/14/2024 9:45:00 AM	2/14/2024	3/1/2024
N063103-010F	R63-Q124	Surface Water	2/14/2024 9:45:00 AM	2/14/2024	3/1/2024
N063103-011A	C-BNS-Q124	Surface Water	2/14/2024 10:25:00 AM	2/14/2024	3/1/2024
N063103-011B	C-BNS-Q124	Surface Water	2/14/2024 10:25:00 AM	2/14/2024	3/1/2024
N063103-012A	C-I-3-D-Q124	Surface Water	2/14/2024 9:15:00 AM	2/14/2024	3/1/2024
N063103-012B	C-I-3-D-Q124	Surface Water	2/14/2024 9:15:00 AM	2/14/2024	3/1/2024
N063103-013A	C-I-3-S-Q124	Surface Water	2/14/2024 9:25:00 AM	2/14/2024	3/1/2024
N063103-013B	C-I-3-S-Q124	Surface Water	2/14/2024 9:25:00 AM	2/14/2024	3/1/2024

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - RCM, 30211191
Lab Order: N063103
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063103-014A	SW1-Q124	Surface Water	2/14/2024 12:30:00 PM	2/14/2024	3/1/2024
N063103-014B	SW1-Q124	Surface Water	2/14/2024 12:30:00 PM	2/14/2024	3/1/2024
N063103-015A	R-28-Q124	Surface Water	2/14/2024 11:20:00 AM	2/14/2024	3/1/2024
N063103-015B	R-28-Q124	Surface Water	2/14/2024 11:20:00 AM	2/14/2024	3/1/2024
N063103-016A	SW2-Q124	Surface Water	2/14/2024 12:15:00 PM	2/14/2024	3/1/2024
N063103-016B	SW2-Q124	Surface Water	2/14/2024 12:15:00 PM	2/14/2024	3/1/2024
N063103-017A	AmbientBlank-2-Q124	Surface Water	2/14/2024 11:30:00 AM	2/14/2024	3/1/2024

CLIENT: ARCADIS U.S., Inc. - California
Client Sample ID: R63-Q124
Lab Order: N063103
Project: PG&E Topock - RCM, 30211191
Collection Date: 2/14/2024 9:45:00 AM
Lab ID: N063103-010
Matrix: SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_240215D**	QC Batch: **106854**				PrepDate:	**2/15/2024**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	670	10	10		mg/L	1	2/15/2024 11:30 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_WPGE

Sample ID: **LCS-106854**	SampType: **LCS**	TestCode: **160.1_2540C**	Units: **mg/L**	Prep Date: **2/15/2024**	RunNo: **182681**
Client ID: **LCSW**	Batch ID: **106854**	TestNo: **SM2540C**		Analysis Date: **2/15/2024**	SeqNo: **5699500**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	978.000	10	1000	0	97.8	80	120				

Sample ID: **MB-106854**	SampType: **MBLK**	TestCode: **160.1_2540C**	Units: **mg/L**	Prep Date: **2/15/2024**	RunNo: **182681**
Client ID: **PBW**	Batch ID: **106854**	TestNo: **SM2540C**		Analysis Date: **2/15/2024**	SeqNo: **5699501**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	ND	10									

Sample ID: **N063078-006BDUP**	SampType: **DUP**	TestCode: **160.1_2540C**	Units: **mg/L**	Prep Date: **2/15/2024**	RunNo: **182681**
Client ID: **ZZZZZZ**	Batch ID: **106854**	TestNo: **SM2540C**		Analysis Date: **2/15/2024**	SeqNo: **5699507**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	84100.000	1000						80700	4.13	5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-924-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 10:55:00 AM
Lab ID:	N063103-001	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240215A**	QC Batch: **R181621**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/15/2024 11:22 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-R22A-D-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 10:00:00 AM
Lab ID:	N063103-002	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240215A**	QC Batch: **R181621**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/15/2024 07:32 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-R22A-S-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 10:15:00 AM
Lab ID:	N063103-003	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240215A**	QC Batch: **R181621**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/15/2024 07:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-R27-D-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 10:45:00 AM
Lab ID:	N063103-004	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240215A**	QC Batch: **R181621**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/15/2024 02:44 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-R27-S-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 11:05:00 AM
Lab ID:	N063103-005	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240215A**	QC Batch: **R181621**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/15/2024 03:22 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-TAZ-D-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 8:40:00 AM
Lab ID:	N063103-006	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240215A**	QC Batch: **R181621**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/15/2024 03:41 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-TAZ-S-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 8:50:00 AM
Lab ID:	N063103-008	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240215A**	QC Batch: **R181621**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/15/2024 04:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-922-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 10:35:00 AM
Lab ID:	N063103-009	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240215A**	QC Batch: **R181621**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/15/2024 04:19 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	R63-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 9:45:00 AM
Lab ID:	N063103-010	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240215A**	QC Batch: **R181621**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/15/2024 04:38 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-BNS-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 10:25:00 AM
Lab ID:	N063103-011	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240215A**	QC Batch: **R181621**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/15/2024 11:53 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-I-3-D-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 9:15:00 AM
Lab ID:	N063103-012	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240215A**	QC Batch: **R181621**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/15/2024 05:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-I-3-S-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 9:25:00 AM
Lab ID:	N063103-013	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240215A**	QC Batch: **R181621**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/15/2024 05:35 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	SW1-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 12:30:00 PM
Lab ID:	N063103-014	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240215A**	QC Batch: **R181621**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/15/2024 05:53 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	R-28-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 11:20:00 AM
Lab ID:	N063103-015	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240215A**	QC Batch: **R181621**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/15/2024 06:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	SW2-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 12:15:00 PM
Lab ID:	N063103-016	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240215A**	QC Batch: **R181621**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/15/2024 06:35 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R181621**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **PBW**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695663**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R181621**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **LCSW**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695664**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.772	0.20	5.000	0	95.4	90	110				

Sample ID: **N063103-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695666**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.930	0.20	1.000	0	93.0	90	110				

Sample ID: **N063103-001AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695667**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.020	0.20	1.000	0	102	90	110	0.9297	9.27	20	

Sample ID: **N063103-011ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695669**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20						0	0	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063103-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181621**
Client ID: **ZZZZZZ** Batch ID: **R181621** TestNo: **EPA 218.6** Analysis Date: **2/15/2024** SeqNo: **5695670**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.948	0.20	1.000	0	94.8	90	110				

Sample ID: **N063101-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181621**
Client ID: **ZZZZZZ** Batch ID: **R181621** TestNo: **EPA 218.6** Analysis Date: **2/15/2024** SeqNo: **5695675**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.984	0.20	1.000	0	98.4	90	110				

Sample ID: **N063103-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181621**
Client ID: **ZZZZZZ** Batch ID: **R181621** TestNo: **EPA 218.6** Analysis Date: **2/15/2024** SeqNo: **5695681**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.986	0.20	1.000	0	98.6	90	110				

Sample ID: **N063103-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181621**
Client ID: **ZZZZZZ** Batch ID: **R181621** TestNo: **EPA 218.6** Analysis Date: **2/15/2024** SeqNo: **5695685**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.010	0.20	1.000	0	101	90	110				

Sample ID: **N063103-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181621**
Client ID: **ZZZZZZ** Batch ID: **R181621** TestNo: **EPA 218.6** Analysis Date: **2/15/2024** SeqNo: **5695687**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.934	0.20	1.000	0	93.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063103-008AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695689**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.951	0.20	1.000	0	95.1	90	110				

Sample ID: **N063103-009AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695691**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.975	0.20	1.000	0	97.4	90	110				

Sample ID: **N063103-010AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695693**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.003	0.20	1.000	0	100	90	110				

Sample ID: **N063103-012AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695697**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.012	0.20	1.000	0	101	90	110				

Sample ID: **N063103-013AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695699**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.999	0.20	1.000	0	99.9	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063103-014AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181621**
Client ID: **ZZZZZZ** Batch ID: **R181621** TestNo: **EPA 218.6** Analysis Date: **2/15/2024** SeqNo: **5695701**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.968	0.20	1.000	0	96.8	90	110				

Sample ID: **N063103-015AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181621**
Client ID: **ZZZZZZ** Batch ID: **R181621** TestNo: **EPA 218.6** Analysis Date: **2/15/2024** SeqNo: **5695703**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.017	0.20	1.000	0	102	90	110				

Sample ID: **N063103-016AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181621**
Client ID: **ZZZZZZ** Batch ID: **R181621** TestNo: **EPA 218.6** Analysis Date: **2/15/2024** SeqNo: **5695705**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.049	0.20	1.000	0	105	90	110				

Sample ID: **N063103-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181621**
Client ID: **ZZZZZZ** Batch ID: **R181621** TestNo: **EPA 218.6** Analysis Date: **2/15/2024** SeqNo: **5695709**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.051	0.20	1.000	0	105	90	110				

Sample ID: **N063103-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181621**
Client ID: **ZZZZZZ** Batch ID: **R181621** TestNo: **EPA 218.6** Analysis Date: **2/15/2024** SeqNo: **5695711**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.903	0.20	1.000	0	90.3	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063101-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**		Prep Date:					RunNo: **181621**		
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**			Analysis Date: **2/15/2024**					SeqNo: **5695712**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Hexavalent Chromium	8.555	1.0	5.000	3.916	92.8	90	110					

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	R63-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 9:45:00 AM
Lab ID:	N063103-010	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_240220A**	QC Batch: **R182689**			PrepDate:			Analyst: **LR**
Alkalinity, Total (As CaCO3)	140	5.0	5.0		mg/L	1	2/20/2024 12:40 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 2320_W_SP

Sample ID: **LCS-R182689**	SampType: **LCS**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:			RunNo: **182689**			
Client ID: **LCSW**	Batch ID: **R182689**	TestNo: **SM 2320 B**		Analysis Date: **2/20/2024**			SeqNo: **5699777**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	94.758	5.0	100.0	0	94.8	85	115				

Sample ID: **MB-R182689**	SampType: **MBLK**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:			RunNo: **182689**			
Client ID: **PBW**	Batch ID: **R182689**	TestNo: **SM 2320 B**		Analysis Date: **2/20/2024**			SeqNo: **5699778**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	ND	5.0									

Sample ID: **N063103-010DDUP**	SampType: **DUP**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:			RunNo: **182689**			
Client ID: **ZZZZZZ**	Batch ID: **R182689**	TestNo: **SM 2320 B**		Analysis Date: **2/20/2024**			SeqNo: **5699780**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	136.089	5.0						135.1	0.743	30	

Sample ID: **N063103-010DMS**	SampType: **MS**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:			RunNo: **182689**			
Client ID: **ZZZZZZ**	Batch ID: **R182689**	TestNo: **SM 2320 B**		Analysis Date: **2/20/2024**			SeqNo: **5699781**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	227.823	5.0	100.0	135.1	92.7	75	125				

Sample ID: **N063103-010DMSD**	SampType: **MSD**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:			RunNo: **182689**			
Client ID: **ZZZZZZ**	Batch ID: **R182689**	TestNo: **SM 2320 B**		Analysis Date: **2/20/2024**			SeqNo: **5699782**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	229.839	5.0	100.0	135.1	94.8	75	125	227.8	0.881	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California **Client Sample ID:** R63-Q124
Lab Order: N063103
Project: PG&E Topock - RCM, 30211191 **Collection Date:** 2/14/2024 9:45:00 AM
Lab ID: N063103-010 **Matrix:** SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240215A** QC Batch: **R181596**				PrepDate:			Analyst: **RAB**
Chloride	110	14	25		mg/L	50	2/15/2024 01:00 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240215A** QC Batch: **R181596**				PrepDate:			Analyst: **RAB**
Fluoride	0.33	0.032	0.10		mg/L	1	2/15/2024 10:27 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240215A** QC Batch: **R181596**				PrepDate:			Analyst: **RAB**
Nitrogen, Nitrite	ND	0.015	0.50		mg/L	1	2/15/2024 10:27 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240215A** QC Batch: **R181596**				PrepDate:			Analyst: **RAB**
Sulfate	250	17	25		mg/L	50	2/15/2024 01:00 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240215A** QC Batch: **R181596**				PrepDate:			Analyst: **RAB**
Nitrate as N	0.51	0.024	0.050		mg/L	1	2/15/2024 10:27 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID: **MB-R181596_CL**	SampType: **MBLK**	TestCode: **300_W_CLP**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **PBW**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696959**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID: **LCS-R181596_CL**	SampType: **LCS**	TestCode: **300_W_CLP**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **LCSW**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696960**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.935	0.50	2.000	0	96.7	90	110				

Sample ID: **N063103-010DMS**	SampType: **MS**	TestCode: **300_W_CLP**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ZZZZZZ**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696964**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	208.560	25	100.0	109.9	98.7	80	120				

Sample ID: **N063103-010DMSD**	SampType: **MSD**	TestCode: **300_W_CLP**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ZZZZZZ**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696965**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	208.955	25	100.0	109.9	99.1	80	120	208.6	0.189	20	

Sample ID: **N063103-010DDUP**	SampType: **DUP**	TestCode: **300_W_CLP**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ZZZZZZ**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696966**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	108.795	25						109.9	0.974	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID: **MB-R181596_F**	SampType: **MBLK**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **PBW**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696945**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Sample ID: **LCS-R181596_F**	SampType: **LCS**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **LCSW**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696946**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.209	0.10	1.250	0	96.7	90	110				

Sample ID: **N063103-010DMS**	SampType: **MS**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ZZZZZZ**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696948**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.603	0.10	1.250	0.3315	102	80	120				

Sample ID: **N063103-010DMSD**	SampType: **MSD**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ZZZZZZ**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696949**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.584	0.10	1.250	0.3315	100	80	120	1.603	1.19	20	

Sample ID: **N063103-010DDUP**	SampType: **DUP**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ZZZZZZ**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696950**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.398	0.10						0.3315	18.3	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_NO2PGE

Sample ID: **MB-R181596_NO2**	SampType: **MBLK**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **PBW**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696973**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	ND	0.50									

Sample ID: **LCS-R181596_NO2**	SampType: **LCS**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **LCSW**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696974**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	1.243	0.50	1.250	0	99.4	90	110				

Sample ID: **N063103-010DMS**	SampType: **MS**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ZZZZZZ**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696976**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	1.047	0.50	1.250	0	83.7	80	120				

Sample ID: **N063103-010DMSD**	SampType: **MSD**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ZZZZZZ**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696977**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	1.050	0.50	1.250	0	84.0	80	120	1.047	0.315	20	

Sample ID: **N063103-010DDUP**	SampType: **DUP**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ZZZZZZ**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696978**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	ND	0.50						0	0	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **MB-R181596_SO4**	SampType: **MBLK**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **PBW**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5697001**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **LCS-R181596_SO4**	SampType: **LCS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **LCSW**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5697002**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.993	0.50	4.000	0	99.8	90	110				

Sample ID: **N063103-010DMS**	SampType: **MS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ZZZZZZ**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5697006**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	438.655	25	200.0	247.6	95.5	80	120				

Sample ID: **N063103-010DMSD**	SampType: **MSD**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ZZZZZZ**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5697007**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	437.650	25	200.0	247.6	95.0	80	120	438.7	0.229	20	

Sample ID: **N063103-010DDUP**	SampType: **DUP**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ZZZZZZ**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5697008**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	244.720	25						247.6	1.16	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **MB-R181596_NO3**	SampType: **MBLK**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **PBW**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696987**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **LCS-R181596_NO3**	SampType: **LCS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **LCSW**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696988**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.230	0.050	1.250	0	98.4	90	110				

Sample ID: **N063103-010DMS**	SampType: **MS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ZZZZZZ**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696990**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.792	0.050	1.250	0.5088	103	80	120				

Sample ID: **N063103-010DMSD**	SampType: **MSD**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ZZZZZZ**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696991**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.699	0.050	1.250	0.5088	95.2	80	120	1.792	5.32	20	

Sample ID: **N063103-010DDUP**	SampType: **DUP**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ZZZZZZ**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696992**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	0.510	0.050						0.5088	0.294	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California **Client Sample ID:** R63-Q124
Lab Order: N063103
Project: PG&E Topock - RCM, 30211191 **Collection Date:** 2/14/2024 9:45:00 AM
Lab ID: N063103-010 **Matrix:** SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240216C**	QC Batch: **106859**			PrepDate:		**2/16/2024**	Analyst: **DJ**
Iron	24	13	20		µg/L	1	2/16/2024 04:54 PM
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240216E**	QC Batch: **106859**			PrepDate:		**2/16/2024**	Analyst: **DJ**
Boron	0.14	0.035	0.10		mg/L	1	2/16/2024 04:54 PM
Calcium	77	0.18	0.50		mg/L	1	2/16/2024 04:54 PM
Potassium	5.2	0.69	2.5		mg/L	5	2/19/2024 02:25 PM
Sodium	100	1.7	2.5		mg/L	5	2/19/2024 02:25 PM
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240216D**	QC Batch: **106860**			PrepDate:		**2/15/2024**	Analyst: **DJ**
Iron	44	13	20		µg/L	1	2/16/2024 05:38 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-106859**	SampType: **MBLK**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/16/2024**	RunNo: **181618**
Client ID: **PBW**	Batch ID: **106859**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5695389**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **N063076-002B-MS1**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/16/2024**	RunNo: **181618**
Client ID: **ZZZZZZ**	Batch ID: **106859**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5695396**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	988.032	20	100.0	933.9	54.1	75	125				S

Sample ID: **N063076-002B-MSD**	SampType: **MSD**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/16/2024**	RunNo: **181618**
Client ID: **ZZZZZZ**	Batch ID: **106859**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5695397**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1002.047	20	100.0	933.9	68.2	75	125	988.0	1.41	20	S

Sample ID: **LCS1-106859**	SampType: **LCS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/16/2024**	RunNo: **181618**
Client ID: **LCSW**	Batch ID: **106859**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5695405**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	90.386	20	100.0	0	90.4	85	115				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID: **MB-106859** SampType: **MBLK** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: **2/16/2024** RunNo: **182663**
Client ID: **PBW** Batch ID: **106859** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/19/2024** SeqNo: **5698788**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	ND	0.50									
Sodium	ND	0.50									

Sample ID: **N063103-010B-MS2** SampType: **MS** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: **2/16/2024** RunNo: **182663**
Client ID: **ZZZZZZ** Batch ID: **106859** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/19/2024** SeqNo: **5698799**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	26.662	2.5	20.00	5.186	107	75	125				
Sodium	130.862	2.5	20.00	102.8	140	75	125				S

Sample ID: **N063103-010B-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: **2/16/2024** RunNo: **182663**
Client ID: **ZZZZZZ** Batch ID: **106859** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/19/2024** SeqNo: **5698803**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	26.561	2.5	20.00	5.186	107	75	125	26.66	0.376	20	
Sodium	130.144	2.5	20.00	102.8	137	75	125	130.9	0.550	20	S

Sample ID: **LCS2-106859** SampType: **LCS** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: **2/16/2024** RunNo: **182663**
Client ID: **LCSW** Batch ID: **106859** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/19/2024** SeqNo: **5698805**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	20.967	0.50	20.00	0	105	85	115				
Sodium	21.003	0.50	20.00	0	105	85	115				

Sample ID: **MB-106859** SampType: **MBLK** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: **2/16/2024** RunNo: **182740**
Client ID: **PBW** Batch ID: **106859** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/16/2024** SeqNo: **5703029**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	ND	0.10									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID: **MB-106859**	SampType: **MBLK**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date: **2/16/2024**	RunNo: **182740**
Client ID: **PBW**	Batch ID: **106859**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5703029**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	ND	0.50									

Sample ID: **LCS1-106859**	SampType: **LCS**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date: **2/16/2024**	RunNo: **182740**
Client ID: **LCSW**	Batch ID: **106859**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5703030**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	4.660	0.10	5.000	0	93.2	85	115				
Calcium	10.190	0.50	10.00	0	102	85	115				

Sample ID: **N063076-002B-MS1**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date: **2/16/2024**	RunNo: **182740**
Client ID: **ZZZZZZ**	Batch ID: **106859**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5703036**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	6.401	0.10	5.000	1.232	103	75	125				
Calcium	277.577	0.50	10.00	278.9	-13.2	75	125				S

Sample ID: **N063076-002B-MSD**	SampType: **MSD**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date: **2/16/2024**	RunNo: **182740**
Client ID: **ZZZZZZ**	Batch ID: **106859**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5703037**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	6.413	0.10	5.000	1.232	104	75	125	6.401	0.187	20	
Calcium	282.588	0.50	10.00	278.9	36.9	75	125	277.6	1.79	20	S

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID: **MB-106860**	SampType: **MBLK**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date: **2/15/2024**	RunNo: **181631**
Client ID: **PBW**	Batch ID: **106860**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5696005**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS-106860**	SampType: **LCS**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date: **2/15/2024**	RunNo: **181631**
Client ID: **LCSW**	Batch ID: **106860**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5696006**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	92.306	20	100.0	0	92.3	85	115				

Sample ID: **N063103-010C-MS**	SampType: **MS**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date: **2/15/2024**	RunNo: **181631**
Client ID: **ZZZZZZ**	Batch ID: **106860**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5696015**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	158.193	20	100.0	43.61	115	75	125				

Sample ID: **N063103-010C-MSD**	SampType: **MSD**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date: **2/15/2024**	RunNo: **181631**
Client ID: **ZZZZZZ**	Batch ID: **106860**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5696016**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	145.393	20	100.0	43.61	102	75	125	158.2	8.43	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N063076-002B-PS**	SampType: **PS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **ZZZZZZ**	Batch ID: **106859**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5695395**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1016.456	20	100.0	933.9	82.6	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID: **N063103-010B-PS**	SampType: **PS**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182663**
Client ID: **ZZZZZZ**	Batch ID: **106859**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/19/2024**	SeqNo: **5698797**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	97.345	2.5	100.0	5.186	92.2	80	120				
Sodium	189.009	2.5	100.0	102.8	86.2	80	120				

Sample ID: **N063076-002B-PS**	SampType: **PS**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182740**
Client ID: **ZZZZZZ**	Batch ID: **106859**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5703035**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	6.515	0.10	5.000	1.232	106	80	120				
Calcium	285.981	0.50	10.00	278.9	70.8	80	120				S

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-924-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 10:55:00 AM
Lab ID:	N063103-001	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240215A**	QC Batch: **106852**			PrepDate:		**2/15/2024**	Analyst: **DJ**
Arsenic	2.3	0.050	0.10		µg/L	1	2/15/2024 05:44 PM
Manganese	1.5	0.026	0.50		µg/L	1	2/15/2024 05:44 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-R22A-D-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 10:00:00 AM
Lab ID:	N063103-002	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240215A**	QC Batch: **106852**			PrepDate:		**2/15/2024**	Analyst: **DJ**
Arsenic	2.3	0.050	0.10		µg/L	1	2/15/2024 06:21 PM
Manganese	1.8	0.026	0.50		µg/L	1	2/15/2024 06:21 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-R22A-S-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 10:15:00 AM
Lab ID:	N063103-003	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240215A**	QC Batch: **106852**			PrepDate:	**2/15/2024**	Analyst: **DJ**	
Arsenic	2.4	0.050	0.10		µg/L	1	2/15/2024 06:25 PM
Manganese	2.7	0.026	0.50		µg/L	1	2/15/2024 06:25 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-R27-D-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 10:45:00 AM
Lab ID:	N063103-004	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240215A**	QC Batch: **106852**				PrepDate:	**2/15/2024**	Analyst: **DJ**
Arsenic	2.4	0.050	0.10		µg/L	1	2/15/2024 06:30 PM
Manganese	1.4	0.026	0.50		µg/L	1	2/15/2024 06:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-R27-S-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 11:05:00 AM
Lab ID:	N063103-005	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240215A**	QC Batch: **106852**			PrepDate:		**2/15/2024**	Analyst: **DJ**
Arsenic	2.3	0.050	0.10		µg/L	1	2/15/2024 06:35 PM
Manganese	1.9	0.026	0.50		µg/L	1	2/15/2024 06:35 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-TAZ-D-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 8:40:00 AM
Lab ID:	N063103-006	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240215A**	QC Batch: **106852**			PrepDate:		**2/15/2024**	Analyst: **DJ**
Arsenic	2.4	0.050	0.10		µg/L	1	2/15/2024 06:39 PM
Manganese	1.1	0.026	0.50		µg/L	1	2/15/2024 06:39 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-TAZ-S-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 8:50:00 AM
Lab ID:	N063103-008	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240215A**	QC Batch: **106852**			PrepDate:		**2/15/2024**	Analyst: **DJ**
Arsenic	2.3	0.050	0.10		µg/L	1	2/15/2024 06:44 PM
Manganese	1.2	0.026	0.50		µg/L	1	2/15/2024 06:44 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-922-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 10:35:00 AM
Lab ID:	N063103-009	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240215A**	QC Batch: **106852**			PrepDate:	**2/15/2024**	Analyst: **DJ**	
Arsenic	2.4	0.050	0.10		µg/L	1	2/15/2024 06:48 PM
Manganese	2.8	0.026	0.50		µg/L	1	2/15/2024 06:48 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	R63-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 9:45:00 AM
Lab ID:	N063103-010	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240215A**	QC Batch: **106852**				PrepDate:	**2/15/2024**	Analyst: **DJ**
Arsenic	2.2	0.050	0.10		µg/L	1	2/15/2024 06:53 PM
Barium	150	0.083	1.0		µg/L	1	2/15/2024 06:53 PM
Manganese	2.3	0.026	0.50		µg/L	1	2/15/2024 06:53 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-BNS-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 10:25:00 AM
Lab ID:	N063103-011	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240215A**	QC Batch: **106852**			PrepDate:	**2/15/2024**		Analyst: **DJ**
Arsenic	2.5	0.050	0.10		µg/L	1	2/15/2024 07:12 PM
Manganese	1.8	0.026	0.50		µg/L	1	2/15/2024 07:12 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-I-3-D-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 9:15:00 AM
Lab ID:	N063103-012	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240215A**	QC Batch: **106852**			PrepDate:	**2/15/2024**		Analyst: **DJ**
Arsenic	2.3	0.050	0.10		µg/L	1	2/15/2024 07:16 PM
Manganese	1.3	0.026	0.50		µg/L	1	2/15/2024 07:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-I-3-S-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 9:25:00 AM
Lab ID:	N063103-013	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240215A**	QC Batch: **106852**			PrepDate:		**2/15/2024**	Analyst: **DJ**
Arsenic	2.2	0.050	0.10		µg/L	1	2/15/2024 07:21 PM
Manganese	1.4	0.026	0.50		µg/L	1	2/15/2024 07:21 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	SW1-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 12:30:00 PM
Lab ID:	N063103-014	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240215A**	QC Batch: **106852**			PrepDate:	**2/15/2024**	Analyst: **DJ**	
Arsenic	2.3	0.050	0.10		µg/L	1	2/15/2024 07:25 PM
Manganese	1.8	0.026	0.50		µg/L	1	2/15/2024 07:25 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	R-28-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 11:20:00 AM
Lab ID:	N063103-015	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240215A**	QC Batch: **106852**			PrepDate:		**2/15/2024**	Analyst: **DJ**
Arsenic	2.2	0.050	0.10		µg/L	1	2/15/2024 07:30 PM
Manganese	2.0	0.026	0.50		µg/L	1	2/15/2024 07:30 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	SW2-Q124
Lab Order:	N063103		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/14/2024 12:15:00 PM
Lab ID:	N063103-016	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240215A**	QC Batch: **106852**				PrepDate:	**2/15/2024**	Analyst: **DJ**
Arsenic	2.5	0.050	0.10		µg/L	1	2/15/2024 07:35 PM
Manganese	2.1	0.026	0.50		µg/L	1	2/15/2024 07:35 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **MB-106852** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/15/2024** RunNo: **181602**
Client ID: **PBW** Batch ID: **106852** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/15/2024** SeqNo: **5693734**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **LCS-106852** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/15/2024** RunNo: **181602**
Client ID: **LCSW** Batch ID: **106852** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/15/2024** SeqNo: **5693735**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.240	0.10	10.00	0	102	85	115				
Barium	10.011	1.0	10.00	0	100	85	115				
Manganese	103.214	0.50	100.0	0	103	85	115				

Sample ID: **N063103-001B-MS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/15/2024** RunNo: **181602**
Client ID: **ZZZZZZ** Batch ID: **106852** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/15/2024** SeqNo: **5693742**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.881	0.10	10.00	2.323	106	75	125				
Barium	162.522	1.0	10.00	149.1	134	75	125				S
Manganese	99.127	0.50	100.0	1.503	97.6	75	125				

Sample ID: **N063103-001B-MSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/15/2024** RunNo: **181602**
Client ID: **ZZZZZZ** Batch ID: **106852** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/15/2024** SeqNo: **5693745**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.905	0.10	10.00	2.323	106	75	125	12.88	0.187	20	
Barium	161.148	1.0	10.00	149.1	121	75	125	162.5	0.849	20	
Manganese	98.681	0.50	100.0	1.503	97.2	75	125	99.13	0.451	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063103-001B-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181602**
Client ID: **ZZZZZZ** Batch ID: **106852** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/15/2024** SeqNo: **5693741**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.797	0.10	10.00	2.323	105	80	120				
Barium	162.451	1.0	10.00	149.1	134	80	120				S
Manganese	116.530	0.50	100.0	1.503	115	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SAMPLE RECEIVING ITEMS

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

CHAIN OF CUSTODY RECORD

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement	QA/QC	Sample Receipt Condition
Address: 1410 Rocky Ridge Dr # 330	Company: Arcadis	Address:	Excel EDD	RTNE	Y N
Address: Roseville, CA 95661	Email: dan.bush@arcadis.com daniel.moore@critigen.com	Address:	Geotracker	RWQCB ✓	1. Chilled ✓
Phone: 916-786-3302 Fax:	Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661	Email to: mbloes@pivox.com P.O.#	Labspec	CalTrans	2. Headspace
Submitted By: Nara Tay		Phone: 949-727-1400, ext 200 Fax:	Others ✓	LEVEL III	3. Container Intact ✓
Title: PM	Phone: 916-786-3302 Fax:		Specify: RWQCB	LEVEL IV	4. Seal Present ✓
Signature: Date: 2/14/24	Sampled By: Nara Tay		Global ID:	Regulatory	5. IR number 3
I hereby authorize ASSET Labs to perform the tests indicated below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for			Specify State:	6. Method of Cooling: ICE
Project Name: PG&E Topock - RCM	Signature: Date: 2/14/24				Sample Temp: 1.8°C / 2.1°C
Project Number: 30211191					Courier: ASSET Tracking No.:

Matrix: Ground; Potable; NPDES; Surface X; Sediment; Soil; Other Solid

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 250 mL poly	Nitrate (EPA 300.0) 1L poly	Dissolved metals (SW6020) FF; HNO3 Arsenic, Manganese 500mL poly	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, 500mL poly	Ammonia as N (SM4500-NH3D); H2SO4 500mL poly	Nitrate, Nitrite, chloride, fluoride, sulfate (EPA 300.0) 1L poly	Alkalinity, Total as CaCO3 (SM2320B) 1L poly	Total Dissolved Solids (SM2540C) 1L poly	Nitrate/Nitrite as Nitrogen (SM4500-NO3); H2SO4 125mL poly	TOC (SM5310C); H2SO4 3x40 mL VOA	Dissolved metals (SW6020) FF; HNO3, Boron, calcium, iron, potassium, sodium, barium. 500mL poly	Total metals, Iron (SW6010); HNO3 500mL poly	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063103-001	MW-924-Q124	2/14/2024	10:55		X		X										E	2	P	BN	
2	-002	C-R22A-D-Q124	2/14/2024	10:00		X		X										E	2	P	BN	
3	-003	C-R22A-S-Q124	2/14/2024	10:15		X		X										E	2	P	BN	
4	-004	C-R27-D-Q124	2/14/2024	10:45		X		X										E	2	P	BN	
5	-005	C-R27-S-Q124	2/14/2024	11:05		X		X										E	2	P	BN	
	-006	C-TAZ-D-Q124	2/14/2024	8:40		X		X										E	2	P	BN	
7	-007	AmbientBlank-1-Q124	2/14/2024	8:30		X		~~X~~										E	2	P	BN	Hold
8	-008	C-TAZ-S-Q124	2/14/2024	8:50		X		X										E	2	P	BN	
9	-009	MW-922-Q124	2/14/2024	10:35		X		X										E	2	P	BN	
10																		E	2	P	BN	
11	-010	R63-Q124	2/14/2024	9:45		X		X		X	X	X	X	X		X	X	E	6	P	BN	
12	-011	C-BNS-Q124	2/14/2024	10:25		X		X										E	2	P	BN	
13	-012	C-I-3-D-Q124	2/14/2024	9:15		X		X										E	2	P	BN	
14	-013	C-I-3-S-Q124	2/14/2024	9:25		X		X										E	2	P	BN	

Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:
Nara Tay	2/14/24 1600	Michael Mcanteon	2/14/24 1600
Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:
Michael Mcanteon	2/14/24 1930	Michael Mcanteon	2/14/24 1930
Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [x] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 5% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:

H=HCL	N=HNO_3	S=H_2SO_4	C=4°C
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$	
Others/Specify:	B (NH4)2SO4/NH4OH		

Container Type:

T=Tube	V=VOA	P=Pint
J=Jar	B=Tedlar	G=Glass
M=Metal	M=Metal	C=Can

White=Laboratory Copy Yellow=Customer's Copy

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

CHAIN OF CUSTODY RECORD

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement	QA/QC	Sample Receipt Condition (Y / N)
Address: 1410 Rocky Ridge Dr # 330	Company: Arcadis	Address:	Excel EDD	RTNE	1. Chilled ✓
Address: Roseville, CA 95661	Email: dan.bush@arcadis.com; daniel.morse@critigen.com	Address:	Geotracker	RWQCB ✓	2. Headspace
Phone: 916-786-3302 Fax:	Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661	Email to: mbloes@pivox.com P.O.#	Labspec	CalTrans	3. Container Intact ✓
Submitted By: Nam Ty		Phone: 949-727-1400, ext 200 Fax:	Others ✓	LEVEL III	4. Seal Present ✓
Title: PM	Phone: 916-786-3302 Fax:		Specify: RWQCB	LEVEL IV	5. IR number 3
Signature: Date: 2/14/24	Sampled By: Nam Ty		Global ID:	Regulatory	6. Method of Cooling: ICE
I hereby authorize ASSET Labs to perform the tests indicated below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for			Specify State:	Sample Temp: 1.8°C | 2.1°C
Project Name: PG&E Topock - RCM	Signature: Date: 2/14/24				Courier: ASSET
Project Number: 30211191					Tracking No.:

Matrix: Ground; Potable; NPDES; Surface (X); Sediment; Soil; Other Solid

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly)	Nitrate (EPA 300.0) (1L poly)	Dissolved metals (SW6020) FF; HNO3 Arsenic, Manganese (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, (500mL poly)	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063103-014	SW1-Q124	2/14/2024	12:30		X		X		E	2	P	BN	
2	-015	R-28-Q124	2/14/2024	11:20		X		X		E	2	P	BN	
3	-016	SW2-Q124	2/14/2024	12:15		X		X		E	2	P	BN	
4	-017	AmbientBlank-2-Q124	2/14/2024	11:30		X		+(D)		E	✓	P	BN	Hold
5														
7														
8														
9														
10														
11														
12														
13														
14														

Relinquished by (Signature and Printed Name): Nam Ty Date/Time: 2/14/24 1600
Relinquished by (Signature and Printed Name): Michael Mcanton Date/Time: 2/14/24 1930
Relinquished by (Signature and Printed Name): Date/Time:

Relinquished by (Signature and Printed Name): Michael Mcanton Date/Time: 2/14/24 1600
Relinquished by (Signature and Printed Name): Michael Mcanton Date/Time: 2/14/24 1930
Relinquished by (Signature and Printed Name): Date/Time:

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [x] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of Final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workday=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:				Container Type:		
H=HCL	N=HNO_3	S=H_2SO_4	C=4°C	T=Tube	V=VOA	P=Pint
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$		J=Jar	B=Tedlar	G=Glass
Others/Specify:	B (NH4)2SO4/NH4OH			M=Metal	M=Metal	C=Can

White=Laboratory Copy
Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	2/14/2024	Workorder:	N063103
Rep sample Temp (Deg C):	1.8/2.1	IR Gun ID:	3

Temp Blank: ☑ Yes ☐ No

Carrier name: ASSET

Last 4 digits of Tracking No.: NA Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By YR YRodriguez 2/15/2024

Reviewed By: for: MBC 02/19/2024

ASSET Laboratories

WORK ORDER Summary

14-Feb-24

WorkOrder: N063103

Client ID: ARCUS02

Project: PG&E Topock - RCM, 30211191 **QC Level:** Level IV **Date Received:** 2/14/2024 7:30 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063103-001A	MW-924-Q124	2/14/2024 10:55:00 AM	2/29/2024	Surface Water	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063103-001B			2/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063103-002A	C-R22A-D-Q124	2/14/2024 10:00:00 AM	2/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063103-002B			2/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063103-003A	C-R22A-S-Q124	2/14/2024 10:15:00 AM	2/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063103-003B			2/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063103-004A	C-R27-D-Q124	2/14/2024 10:45:00 AM	2/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063103-004B			2/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063103-005A	C-R27-S-Q124	2/14/2024 11:05:00 AM	2/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063103-005B			2/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063103-006A	C-TAZ-D-Q124	2/14/2024 8:40:00 AM	2/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063103-006B			2/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063103-007A	AmbientBlank-1-Q124	2/14/2024 8:30:00 AM	2/29/2024		EPA 218.6	Hexavalent Chromium by IC	☑	☐	☐	WW
N063103-008A	C-TAZ-S-Q124	2/14/2024 8:50:00 AM	2/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063103-008B			2/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW

WORK ORDER Summary

14-Feb-24

WorkOrder: N063103

Client ID: ARCUS02

Project: PG&E Topock - RCM, 30211191 **QC Level:** Level IV **Date Received:** 2/14/2024 7:30 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063103-009A	MW-922-Q124	2/14/2024 10:35:00 AM	2/29/2024	Surface Water	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063103-009B			2/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063103-010A	R63-Q124	2/14/2024 9:45:00 AM	2/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063103-010B			2/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/29/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/29/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			2/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			2/29/2024		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N063103-010C			2/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/29/2024		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N063103-010D			2/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			2/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063103-010E			2/29/2024		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			2/29/2024			Total Dissolved Solids Prep	☐	☐	☐	WW
			2/29/2024		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
N063103-010F			2/29/2024		SM4500-NH3C	AMMONIA-N	☐	☐	☑	SUB
N063103-010G			2/29/2024		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB

ASSET Laboratories

WORK ORDER Summary

14-Feb-24

WorkOrder: N063103

Client ID: ARCUS02

Project: PG&E Topock - RCM, 30211191 **QC Level:** Level IV **Date Received:** 2/14/2024 7:30 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063103-011A	C-BNS-Q124	2/14/2024 10:25:00 AM	2/29/2024	Surface Water	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063103-011B			2/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063103-012A	C-I-3-D-Q124	2/14/2024 9:15:00 AM	2/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063103-012B			2/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063103-013A	C-I-3-S-Q124	2/14/2024 9:25:00 AM	2/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063103-013B			2/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063103-014A	SW1-Q124	2/14/2024 12:30:00 PM	2/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063103-014B			2/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063103-015A	R-28-Q124	2/14/2024 11:20:00 AM	2/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063103-015B			2/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063103-016A	SW2-Q124	2/14/2024 12:15:00 PM	2/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063103-016B			2/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			2/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063103-017A	AmbientBlank-2-Q124	2/14/2024 11:30:00 AM	2/29/2024		EPA 218.6	Hexavalent Chromium by IC	☑	☐	☐	WW
N063103-018A	FOLDER	2/29/2024	2/29/2024		Folder	Folder	☐	☐	☐	LAB
			2/29/2024		Folder	Level IV Report	☐	☐	☐	LAB
			2/29/2024		Folder	Folder	☐	☐	☐	LAB

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

Field Sampler: Nara Tep

15-Feb-24

				Requested Tests		
Sample ID	**Matrix**	**Date Collected**	**Bottle Type**	**SM4500-NH3C**	~~**SM4500-NO3F**~~ Nitrate/Nitrite	
N063103-010E / R63-Q124	Surface Water	2/14/2024 9:45:00 AM	8OZP		1	
N063103-010F / R63-Q124	Surface Water	2/14/2024 9:45:00 AM	16OZP	1		

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N63103A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for Nitrate/Nitrite as Nitrogen. EDD requirement Labspec7 edata.
and Ammonia

GLS #: 560957866

		Date/Time			**Date/Time**
Relinquished by:	YRodriguez	2/15/2024 1630	**Received by:**		
Relinquished by:			**Received by:**		

List of Analysts

ASSET Laboratories Work Order: N063103

NAME	TEST METHOD
Lilia Ramit	SM 2540C, SM 2320 B
Ria Abes	EPA 218.6, EPA 300.0
Diane Jetajobe	EPA 6010B_Dissolved, EPA 6010B_Total, EPA 6020_Dissolved

SM 2540C

Wet Chemistry Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106854 **Analyst:** LSR

ASSET #: N063103 **Date Analyzed:** 15-Feb

Method: EPA 160.1

Initial Calibration	1st Level Review Y	N	N/A	2nd Level Review Y	N	N/A
1. ICAL before initial sample analysis or every 24 hrs.			X			X
2. Does correlation coefficient,r, meet criteria ?(r = 0.995)			X			X
3. ICV within ± 15% of expected value.			X			X
Continuing Calibration						
4. CCV after every 10 samples and at the end of analysis sequence.			X			X
5. CCV within ± 15% of expected value.			X			X
6. Calibration blanks run after ICV and CCV?			X			X
7. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)			X			X
Sample Information						
8. All samples are within linear range.			X			X
9. Are all samples analyzed within hold time.	X			X		
QC Items						
10. Method blank values are below 1/2 the reporting limit.	X			X		
11. LCS compounds within control limits.	X			X		
12. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
13. Are Non-Conformances documented			X			X
14. Runlog complete and included in package.	X			X		
15. Spectrophotometer tape included (Spec work only)			X			X
16. Digestion log complete and included in package (if applicable)			X			X
Preliminary Report						
17. Does the raw data match the preliminary report?	X			X		
18. Are analytical results correct?	X			X		
19. Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer LSR Date: 2/21/2024

2nd Level Reviewer JRB 3/1/2024 Date:

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: SM 2540C
TEST NAME: Total Filterable Residue
MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying
B = weight of dish in g
C = volume of sample used in mL

For **N063103-010D,** TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(65.2147- 65.1476)*1000000}{100}$$

= 671 mg/L

Reporting result in two significant figures,

TDS= 670 mg/L

2/21/2024 LSR

Reviewed by:

JRB 3/12/2024

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/15/2024 11:30:57 AM**
Prep End Date: **2/16/2024 1:30:00 PM**
Prep Batch **106854** Prep Code:**160.1_W_PREP**

Reviewed/ Date: JRB 3/12/2024
Initials/ Date: 2/21/2024 LSR
Technician: **Lilia Ramit**

Prep Factor Units: **mL / mL**
Temp. (°C): **180**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-106854	Water		100	☐	100	1.000		
MB-106854	Water		100	☐	100	1.000		
N062498-007A	Wastewater		100	☐	100	1.000		
N063075-001B	Groundwater		50	☐	100	2.000		
N063075-003B	Groundwater		50	☐	100	2.000		
N063078-005B	Water		20	☐	100	5.000		
N063078-006B	Water		1	☐	100	100.000		
N063078-006B-DUP	Water		1	☐	100	100.000		
N063103-010D	Surface Water		100	☐	100	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15937	Glass Fiber Filter, 47mm

Spk ID	Spike Name	SampType	AmtAdd
IWST240122A	1000 ppm NaCl	LCS	100

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/15/2024 11:30:57 AM**
Prep End Date:

Reviewed/ Date: _____

Initials/ Date: 2/21/2024 LSR

Prep Batch **106854** Prep Code: **160.1_W_PREP**

Technician: **Lilia Ramit**

Prep Factor Units: **mL / mL**

Sample ID	Matrix	~~pH~~ End	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-106854	Water	1057240227A	100	☐	100	1.000		
MB-106854	Water		100	☐	100	1.000		
N062498-007A	Wastewater	484	✓100	☐	100	1.000		
N063075-001B	Groundwater	2800	100/50	☐	100	1.000		
N063075-003B	Groundwater	2750	100/50	☐	100	1.000		
N063078-005B	Water	6480	100/20	☐	100	1.000		
N063078-006B	Water	1104150	100/1	☐	100	1.000		
N063078-006B-DUP	Water	1	100/1	☐	100	1.000		
N063103-010D	Surface Water	1058	✓100	☐	100	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

1t937

LOGBOOK DATA, QUANTITATION REPORT and/or SPECTRA

Name of Test: TDS

TSS / TS / TDS Preparation and Runlog

QC Batch No.: 106854

		1	2	3
Date Prepared: 2/15/24	In Oven Date:	2/16/24	2/16/24	
Time Prepared: 1130	Time:	1030	1200	
Prepared By: LR	Temp°C:	178	178	
	Out Oven Date:	2/16/24	2/16/24	
	Time:	1130	1300	
	Temp°C:	178	178	

Date		Sample ID	Sample Vol. (ml)	Crucible + Filter (TSS)	Crucible + Filter+Sample (TSS)	Comments
2/15/24	5	MB - 106854	100	54.0891 54.0893	54.0891 54.0892	
	B	LCS - 106854	100	66.8104 66.8106	66.9082 66.9084	
	E1	N062498-7A	100	74.2142 74.2145	74.2414 74.2417	
	K	N063075-1D	50	60.3776 60.3778	60.4882 60.4885	
	1L	1 3B	50	59.3700 59.3703	59.4813 59.4817	
	12	N063078-5B	20	55.1397 55.1401	55.2588 55.2591	RW 2/16
	B	6B	1	32.2001 32.2004	32.2812 32.2811	
	D	6B DUP	1	33.3984 33.3987	33.4824 33.4828	
	F	N063103-10D	100	65.1474 65.1476	65.2144 65.2147	
					2/21/2024 LSR	
					Reviewed by:	
					JRB 3/12/2024	

65.9991 @ 1330 2/16 LR

Logbook#27

TOTAL DISSOLVED SOLIDS, TDS

TDS, mg/L = (A-B) X 10000*PF

where:
A = weight in grams of dish + residue after drying
B = weight of dish in grams
PF = 100/volume of sample used in mL

Date Finished:	vol of sample (mL)	weight of dish in grams (B)	weight in grams of dish + residue after drying (A)	(A-B)*10000	prep fact (PF)	TDS, mg/L	CONDUCTIVITY	RATIO	Sample Type
2/16/2024									
MB-106854	100	54.0893	54.0892	-1	1	-1			MBLK
LCS-106854	100	66.8106	66.9084	978	1	978			LCS
N062498-007A	100	74.2145	74.2417	272	1	272	484	0.562	SAMP
N063075-001B	50	60.3778	60.4885	1107	2	2214	2800	0.791	SAMP
N063075-003B	50	59.3703	59.4817	1114	2	2228	2750	0.810	SAMP
N063078-005B	20	55.1401	55.2291	890	5	4450	6480	0.687	SAMP
N063078-006B	1	32.2004	32.2811	807	100	80700	110400	0.731	SAMP
N063078-006BDUP	1	33.3987	33.4828	841	100	84100	110400	0.762	DUP
N063103-010D	100	65.1476	65.2147	671	1	671	1058	0.634	SAMP

2/21/2024 LSR

Reviewed by:

JRB 3/12/2024

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R181621
ASSET #: N063103

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/15/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer RB 02252024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Surface Water

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063103-001A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 0.0000 * 1$$

$$Cr^{+6}, \mu g/L = 0.0000$$

Since PQL is 0.2 µg/L,

Cr^{+6} ,µg/L = ND

Reviewed by:

dMocha 3/3/2024

ANALYSIS RUN LOG

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240215A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/15/24 10:08 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/15/24 10:23 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/15/24 10:32 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/15/24 10:42 AM	Reported
13	MB-R181621	MBLK	1	Hexavalent Chromium	02/15/24 10:51 AM	Reported
14	LCS-R181621	LCS	1	Hexavalent Chromium	02/15/24 11:01 AM	Reported
15	N063103-001A	SAMP	1	Hexavalent Chromium	02/15/24 11:22 AM	Reported
16	N063103-001AMS	MS	1	Hexavalent Chromium	02/15/24 11:34 AM	Reported
17	N063103-001AMSD	MSD	1	Hexavalent Chromium	02/15/24 11:43 AM	Reported
18	N063103-011A	SAMP	1	Hexavalent Chromium	02/15/24 11:53 AM	Reported
19	N063103-011ADUP	DUP	1	Hexavalent Chromium	02/15/24 12:02 PM	Reported
20	N063103-011AMS	MS	1	Hexavalent Chromium	02/15/24 12:12 PM	Reported
21	N063101-001A	SAMP	1	Hexavalent Chromium	02/15/24 12:21 PM	Not Reported
22	N063101-001AMS	MS	1	Hexavalent Chromium	02/15/24 12:31 PM	Not Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/15/24 12:40 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/15/24 12:49 PM	Reported
25	N063101-001A	SAMP	5	Hexavalent Chromium	02/15/24 12:59 PM	Reported
26	N063101-001AMS	MS	5	Hexavalent Chromium	02/15/24 1:35 PM	Not Reported
27	N063101-002A	SAMP	1	Hexavalent Chromium	02/15/24 1:48 PM	Reported
28	N063101-002AMS	MS	1	Hexavalent Chromium	02/15/24 1:57 PM	Reported
29	N063108-002A	SAMP	1	Hexavalent Chromium	02/15/24 2:07 PM	Reported
30	N063108-002AREP	DUP	1	Hexavalent Chromium	02/15/24 2:16 PM	Reported
31	N063108-001A	SAMP	1	Hexavalent Chromium	02/15/24 2:25 PM	Reported
32	N063108-001AREP	DUP	1	Hexavalent Chromium	02/15/24 2:35 PM	Reported
33	N063103-004A	SAMP	1	Hexavalent Chromium	02/15/24 2:44 PM	Reported
34	N063103-004AMS	MS	1	Hexavalent Chromium	02/15/24 2:54 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/15/24 3:03 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/15/24 3:13 PM	Reported
37	N063103-005A	SAMP	1	Hexavalent Chromium	02/15/24 3:22 PM	Reported
38	N063103-005AMS	MS	1	Hexavalent Chromium	02/15/24 3:32 PM	Reported
39	N063103-006A	SAMP	1	Hexavalent Chromium	02/15/24 3:41 PM	Reported
40	N063103-006AMS	MS	1	Hexavalent Chromium	02/15/24 3:51 PM	Reported
41	N063103-008A	SAMP	1	Hexavalent Chromium	02/15/24 4:00 PM	Reported
42	N063103-008AMS	MS	1	Hexavalent Chromium	02/15/24 4:09 PM	Reported

INJECTION LOG: 240215A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063103-009A	SAMP	1	Hexavalent Chromium	02/15/24 4:19 PM	Reported
44	N063103-009AMS	MS	1	Hexavalent Chromium	02/15/24 4:28 PM	Reported
45	N063103-010A	SAMP	1	Hexavalent Chromium	02/15/24 4:38 PM	Reported
46	N063103-010AMS	MS	1	Hexavalent Chromium	02/15/24 4:47 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/15/24 4:57 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/15/24 5:06 PM	Reported
49	N063103-012A	SAMP	1	Hexavalent Chromium	02/15/24 5:16 PM	Reported
50	N063103-012AMS	MS	1	Hexavalent Chromium	02/15/24 5:25 PM	Reported
51	N063103-013A	SAMP	1	Hexavalent Chromium	02/15/24 5:35 PM	Reported
52	N063103-013AMS	MS	1	Hexavalent Chromium	02/15/24 5:44 PM	Reported
53	N063103-014A	SAMP	1	Hexavalent Chromium	02/15/24 5:53 PM	Reported
54	N063103-014AMS	MS	1	Hexavalent Chromium	02/15/24 6:06 PM	Reported
55	N063103-015A	SAMP	1	Hexavalent Chromium	02/15/24 6:16 PM	Reported
56	N063103-015AMS	MS	1	Hexavalent Chromium	02/15/24 6:25 PM	Reported
57	N063103-016A	SAMP	1	Hexavalent Chromium	02/15/24 6:35 PM	Reported
58	N063103-016AMS	MS	1	Hexavalent Chromium	02/15/24 6:44 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/15/24 6:54 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/15/24 7:03 PM	Reported
61	N062736-009A	SAMP	1	Hexavalent Chromium	02/15/24 7:13 PM	Not Reported
62	N062736-009AMS	MS	1	Hexavalent Chromium	02/15/24 7:22 PM	Not Reported
63	N063103-002A	SAMP	1	Hexavalent Chromium	02/15/24 7:32 PM	Reported
64	N063103-002AMS	MS	1	Hexavalent Chromium	02/15/24 7:41 PM	Reported
65	N063103-003A	SAMP	1	Hexavalent Chromium	02/15/24 7:50 PM	Reported
66	N063103-003AMS	MS	1	Hexavalent Chromium	02/15/24 8:00 PM	Reported
67	N063101-001AMS	MS	5	Hexavalent Chromium	02/15/24 8:09 PM	Reported
68	CCV-6	CCV1	1	Hexavalent Chromium	02/15/24 8:19 PM	Reported
69	CCB-6	CCB	1	Hexavalent Chromium	02/15/24 8:28 PM	Reported
70	BLANK	BLANK	1	Hexavalent Chromium	02/15/24 8:38 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240215A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**17/Feb/24 11:31:18**
No. of Injections:	**73**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/15/2024 10:08	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/15/2024 10:23	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/15/2024 10:32	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/15/2024 10:42	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/15/2024 10:51	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/15/2024 11:01	Finished	LCS @5ppb, IWST-231228B
15	N063103-001A,SAMF	1	1000	Unknown		02/15/2024 11:22	Finished	SAMP,10 mL
16	N063103-001AMS,MS	2	1000	Unknown		02/15/2024 11:34	Finished	MS (1ppb), IWST-231228B,10r
17	N063103-001AMSD,M	3	1000	Unknown		02/15/2024 11:43	Finished	MSD (1ppb), IWST-231228B,1
18	N063103-011A,SAMF	4	1000	Unknown		02/15/2024 11:53	Finished	SAMP,10 mL
19	N063103-011ADUP,D	5	1000	Unknown		02/15/2024 12:02	Finished	DUP,10 mL
20	N063103-011AMS,MS	6	1000	Unknown		02/15/2024 12:12	Finished	MS (1ppb), IWST-231228B,10r
21	N063101-001A,SAMF	7	1000	Unknown		02/15/2024 12:21	Finished	SAMP,10 mL
22	N063101-001AMS,MS	8	1000	Unknown		02/15/2024 12:31	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	9	1000	Unknown		02/15/2024 12:40	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		02/15/2024 12:49	Finished	CCB R240129C
25	N063101-001A,SAMF	11	1000	Unknown		02/15/2024 12:59	Finished	SAMP,2>10 mL
26	N063101-001AMS,MS	1	1000	Unknown		02/15/2024 13:35	Finished	MS (1ppb), IWST-231228B,2>1
27	N063101-002A,SAMF	2	1000	Unknown		02/15/2024 13:48	Finished	SAMP,10 mL
28	N063101-002AMS,MS	3	1000	Unknown		02/15/2024 13:57	Finished	MS (1ppb), IWST-231228B,10r
29	N063108-002A,SAMF	4	1000	Unknown		02/15/2024 14:07	Finished	SAMP,10 mL
30	N063108-002AREP,D	5	1000	Unknown		02/15/2024 14:16	Finished	REP,10 mL
31	N063108-001A,SAMF	6	1000	Unknown		02/15/2024 14:25	Finished	SAMP,10 mL
32	N063108-001AREP,D	7	1000	Unknown		02/15/2024 14:35	Finished	REP,10 mL
33	N063103-004A,SAMF	8	1000	Unknown		02/15/2024 14:44	Finished	SAMP,10 mL
34	N063103-004AMS,MS	9	1000	Unknown		02/15/2024 14:54	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	10	1000	Unknown		02/15/2024 15:03	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	11	1000	Unknown		02/15/2024 15:13	Finished	CCB R240129C
37	N063103-005A,SAMF	12	1000	Unknown		02/15/2024 15:22	Finished	SAMP,10 mL
38	N063103-005AMS,MS	13	1000	Unknown		02/15/2024 15:32	Finished	MS (1ppb), IWST-231228B,10r
39	N063103-006A,SAMF	14	1000	Unknown		02/15/2024 15:41	Finished	SAMP,10 mL
40	N063103-006AMS,MS	15	1000	Unknown		02/15/2024 15:51	Finished	MS (1ppb), IWST-231228B,10r
41	N063103-008A,SAMF	16	1000	Unknown		02/15/2024 16:00	Finished	SAMP,10 mL
42	N063103-008AMS,MS	17	1000	Unknown		02/15/2024 16:09	Finished	MS (1ppb), IWST-231228B,10r
43	N063103-009A,SAMF	18	1000	Unknown		02/15/2024 16:19	Finished	SAMP,10 mL
44	N063103-009AMS,MS	19	1000	Unknown		02/15/2024 16:28	Finished	MS (1ppb), IWST-231228B,10r
45	N063103-010A,SAMF	20	1000	Unknown		02/15/2024 16:38	Finished	SAMP,10 mL
46	N063103-010AMS,MS	21	1000	Unknown		02/15/2024 16:47	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	22	1000	Unknown		02/15/2024 16:57	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	23	1000	Unknown		02/15/2024 17:06	Finished	CCB R240129C
49	N063103-012A,SAMF	24	1000	Unknown		02/15/2024 17:16	Finished	SAMP,10 mL
50	N063103-012AMS,MS	25	1000	Unknown		02/15/2024 17:25	Finished	MS (1ppb), IWST-231228B,10r
51	N063103-013A,SAMF	26	1000	Unknown		02/15/2024 17:35	Finished	SAMP,10 mL
52	N063103-013AMS,MS	27	1000	Unknown		02/15/2024 17:44	Finished	MS (1ppb), IWST-231228B,10r
53	N063103-014A,SAMF	28	1000	Unknown		02/15/2024 17:53	Finished	SAMP,10 mL
54	N063103-014AMS,MS	29	1000	Unknown		02/15/2024 18:06	Finished	MS (1ppb), IWST-231228B,10r
55	N063103-015A,SAMF	30	1000	Unknown		02/15/2024 18:16	Finished	SAMP,10 mL
56	N063103-015AMS,MS	31	1000	Unknown		02/15/2024 18:25	Finished	MS (1ppb), IWST-231228B,10r
57	N063103-016A,SAMF	32	1000	Unknown		02/15/2024 18:35	Finished	SAMP,10 mL
58	N063103-016AMS,MS	33	1000	Unknown		02/15/2024 18:44	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	34	1000	Unknown		02/15/2024 18:54	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	35	1000	Unknown		02/15/2024 19:03	Finished	CCB R240129C

61	N062736-009A,SAMP	36	1000	Unknown		02/15/2024 19:13	Finished	SAMP,10 mL
62	N062736-009AMS,MS	37	1000	Unknown		02/15/2024 19:22	Finished	MS (1ppb), IWST-231228B,10r
63	N063103-002A,SAMP	38	1000	Unknown		02/15/2024 19:32	Finished	SAMP,10 mL
64	N063103-002AMS,MS	39	1000	Unknown		02/15/2024 19:41	Finished	MS (1ppb), IWST-231228B,10r
65	N063103-003A,SAMP	40	1000	Unknown		02/15/2024 19:50	Finished	SAMP,10 mL
66	N063103-003AMS,MS	41	1000	Unknown		02/15/2024 20:00	Finished	MS (1ppb), IWST-231228B,10r
67	N063101-001AMS,MS	42	1000	Unknown		02/15/2024 20:09	Finished	MS (1ppb), IWST-231228B,2>1
68	CCV-6,CCV1,1,	43	1000	Unknown		02/15/2024 20:19	Finished	CCV @10ppb, IWST-231228A
69	CCB-6,CCB,1,	44	1000	Unknown		02/15/2024 20:28	Finished	CCB R240129C
70	BLANK	45	1000	Unknown		02/15/2024 20:38	Finished	BLANK
71	SHUTDOWN	46	1000	Unknown		02/15/2024 20:47	Finished	
72	Eluent: R240215A	47	1000	Unknown		n.a.	Finished	
73	PCR: R240215B	48	1000	Unknown		n.a.	Finished	

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 2/14/24
Time Prepared: 1138H
Prepared By: NA

Reagent ID:
Sulfuric Acid: 194345
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: M240217A
NH4OH + NH4SO4 buffer: M240124C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW67076-1A	9.40	-	~250mL	~250mL		
2)	2A	9.41	-				
3)	3A	9.36	-				
4)	MB-106781	7.55	9.59	~2L	~2L		
5)	MW67009-1A	9.57	9.15			10.2mL aliquot/100mL DI	TCLP
6)	2A	9.04	9.34				
7)	MW67051-1A	9.11	9.40				
8)	2A	9.13	9.45				
9)							
10)							
11)							
12)							
13)							
14)							
15)							

Sample Preparation

Date Prepared: 2/15/24
Time Prepared: 1095H
Prepared By: NA

Reagent ID:
Sulfuric Acid: 194345
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: M240215A
NH4OH + NH4SO4 buffer: M240124C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW67101-1A	9.31	-	~250mL	250mL		
2)	2A	9.64	-				
3)	MW67100-1A	9.41	-				
4)	2A	9.42	-				
5)	3A	9.40	-				
6)	4A	9.45					
7)	5A	9.33	-				
8)	6A	9.36	-				
9)	8A	9.54	-				
10)	9A	9.47	-				
11)	10A	9.31	-				
12)	11A	9.33	-				
13)	12A	9.46	-				
14)	13A	9.39	-				
15)	14A	9.51	-				
	15A	9.48	-				
	16A	9.44	-				

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 2/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0427	0.2063	1.0639	2.1157	3.2270	4.3227	0.9999
Measured, in ug/L	0.198500	0.959200	4.946100	9.835700	15.002300	20.095900	
Relative Error (%RE)	-0.8%		-1.1%				

	Stock	Working
Standard Concentration:	1,000,000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **CCV**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695660**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.965	0.20	5.000	0	99.3	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695661**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.175	0.20	0.2000	0	87.2	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695671**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.888	0.20	10.00	0	98.9	95	105				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **CCV**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695682**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.917	0.20	5.000	0	98.3	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695694**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.866	0.20	10.00	0	98.7	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **CCV**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695706**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.840	0.20	5.000	0	96.8	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695713**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.536	0.20	10.00	0	95.4	95	105				

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ICV**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5695770**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ZZZZZZ**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5695771**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **CCB**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695662**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **CCB**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695672**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **CCB**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695683**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **CCB**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695695**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **CCB**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695707**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **CCB**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/15/2024**	SeqNo: **5695714**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181621**
Client ID: **ICB**	Batch ID: **R181621**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5695772**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/15/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.040	
CCV-3	4.048	
CCV-4	4.048	
CCV-5	4.040	
CCV-6	4.056	

Average	4.045
Actual RT Window	3.965 - 4.125
Applied RT Window	3.845 - 4.245

MB-R181621	N.A.	N.A.
LCS-R181621	4.048	PASS
N063103-001A	N.A.	N.A.
N063103-001AMS	4.031	PASS
N063103-001AMSD	4.040	PASS
N063103-011A	N.A.	N.A.
N063103-011ADUP	N.A.	N.A.
N063103-011AMS	4.031	PASS
N063101-001A	N.A.	N.A.
N063101-001AMS	N.A.	N.A.
N063101-001A	3.973	PASS
N063101-001AMS	3.981	PASS
N063101-002A	N.A.	N.A.
N063101-002AMS	4.048	PASS
N063108-002A	4.031	PASS
N063108-002AREP	4.040	PASS
N063108-001A	N.A.	N.A.
N063108-001AREP	N.A.	N.A.
N063103-004A	N.A.	N.A.
N063103-004AMS	4.040	PASS
N063103-005A	N.A.	N.A.
N063103-005AMS	4.040	PASS

Reviewed by:

dlRocha 3/3/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/15/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.040	
CCV-3	4.048	
CCV-4	4.048	
CCV-5	4.040	
CCV-6	4.056	

Average	4.045	
Actual RT Window	3.965 -	4.125
Applied RT Window	3.845 -	4.245

N063103-006A	N.A.	N.A.
N063103-006AMS	4.040	PASS
N063103-008A	N.A.	N.A.
N063103-008AMS	4.040	PASS
N063103-009A	N.A.	N.A.
N063103-009AMS	4.031	PASS
N063103-010A	N.A.	N.A.
N063103-010AMS	4.040	PASS
N063103-012A	N.A.	N.A.
N063103-012AMS	4.031	PASS
N063103-013A	N.A.	N.A.
N063103-013AMS	4.040	PASS
N063103-014A	N.A.	N.A.
N063103-014AMS	4.040	PASS
N063103-015A	N.A.	N.A.
N063103-015AMS	4.048	PASS
N063103-016A	N.A.	N.A.
N063103-016AMS	4.040	PASS
N062736-009A	N.A.	N.A.
N062736-009AMS	4.040	PASS
N063103-002A	N.A.	N.A.
N063103-002AMS	4.040	PASS

Reviewed by:

dMocha 3/3/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/15/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.040	
CCV-3	4.048	
CCV-4	4.048	
CCV-5	4.040	
CCV-6	4.056	

Average	4.045	
Actual RT Window	3.965 -	4.125
Applied RT Window	3.845 -	4.245

N063103-003A	N.A.	N.A.
N063103-003AMS	4.048	PASS
N063101-001AMS	3.965	PASS

Reviewed by:

dMocha 3/3/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

Reviewed by:

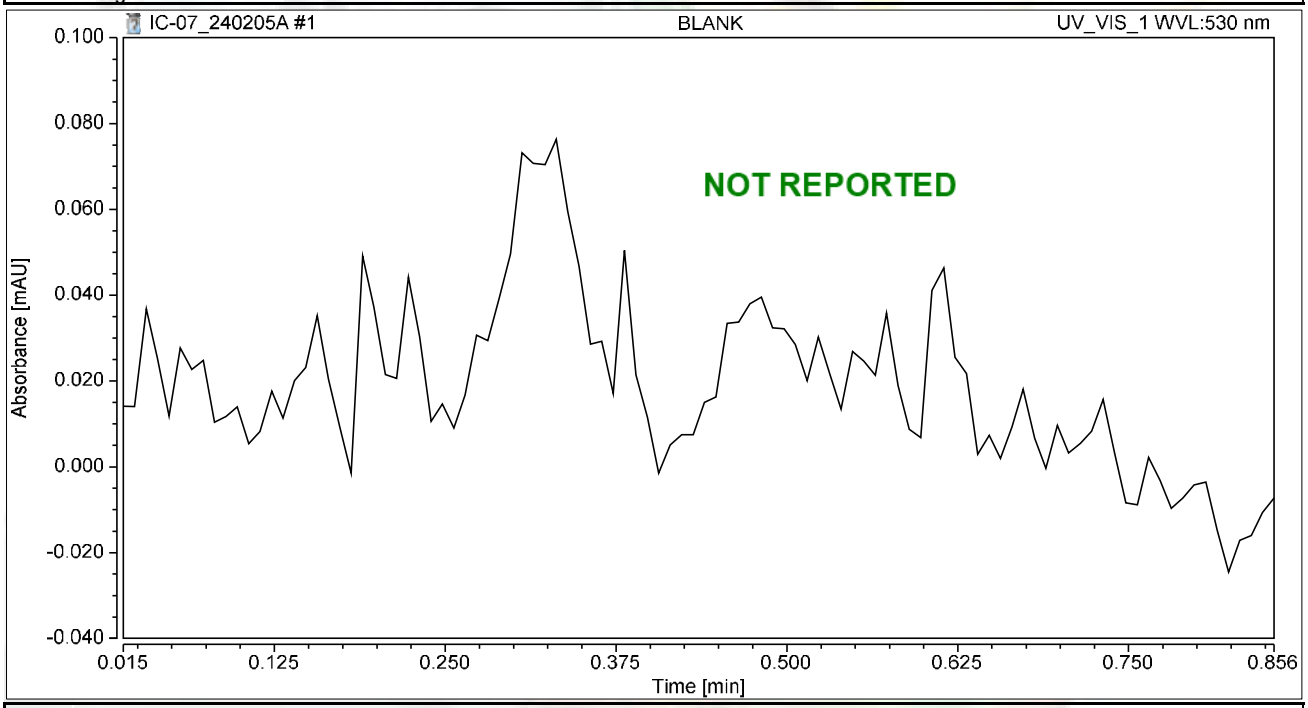
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**0.84**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 11:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

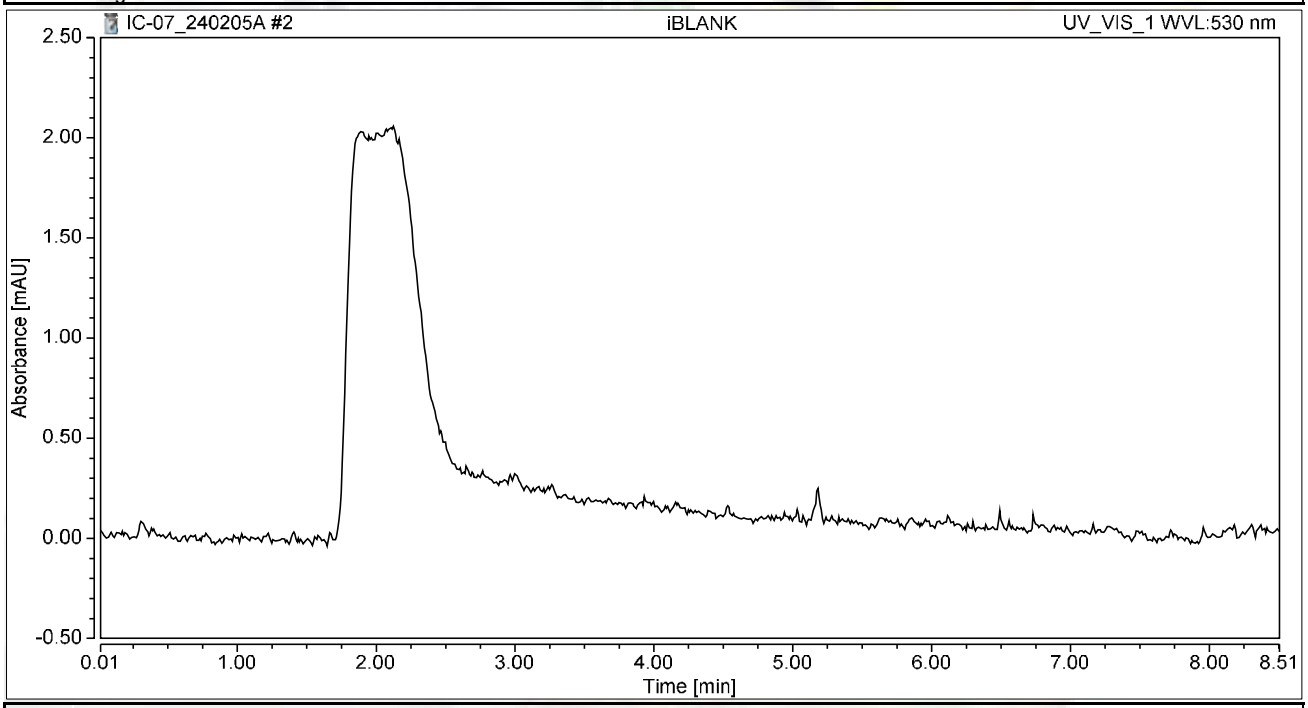
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Reviewed by:

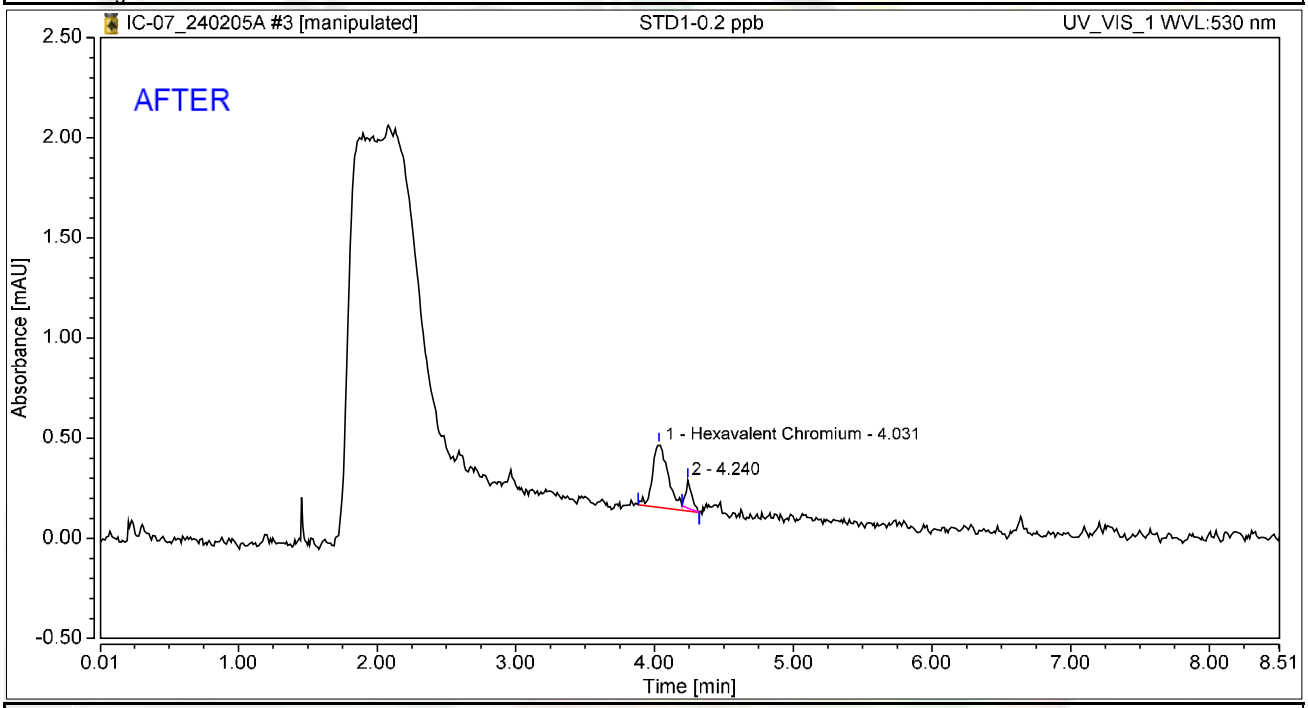
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.043	0.313	85.65	69.19	0.1985
2		4.240	0.007	0.139	14.35	30.81	n.a.
Total:			**0.050**	**0.452**	**100.00**	**100.00**	

Reviewed by:

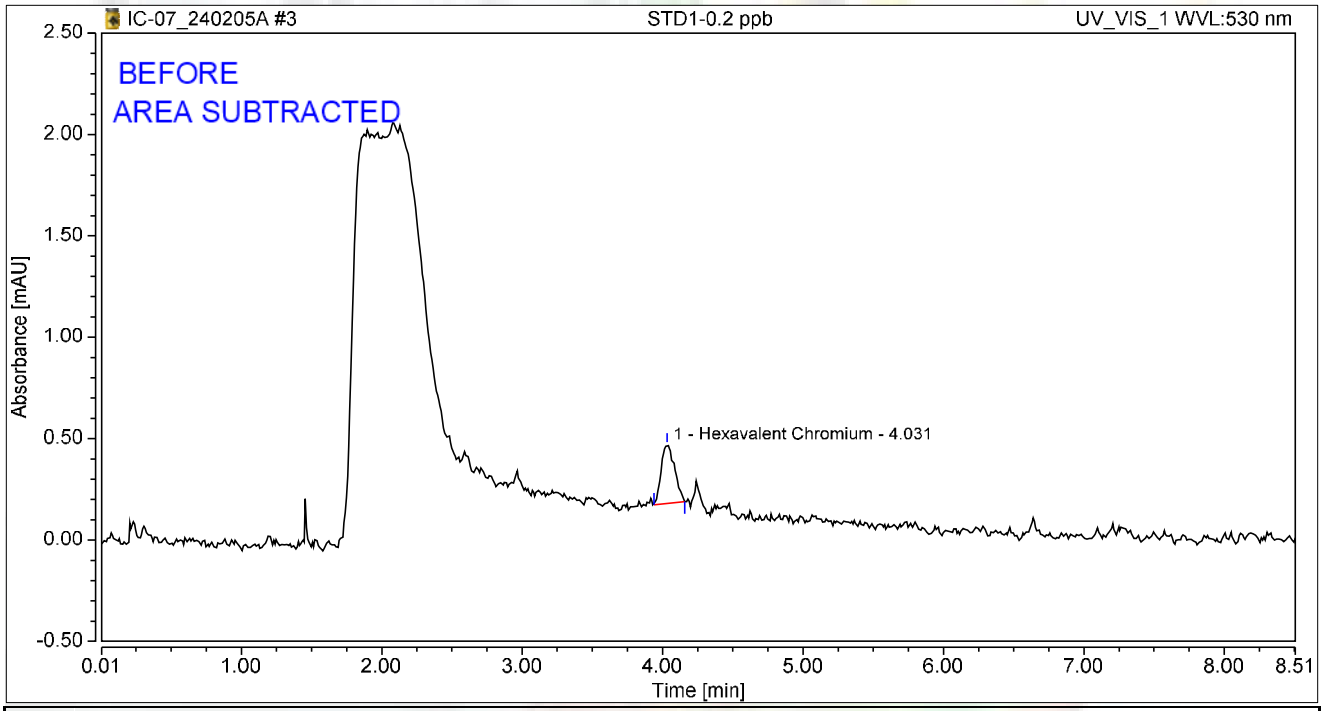
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

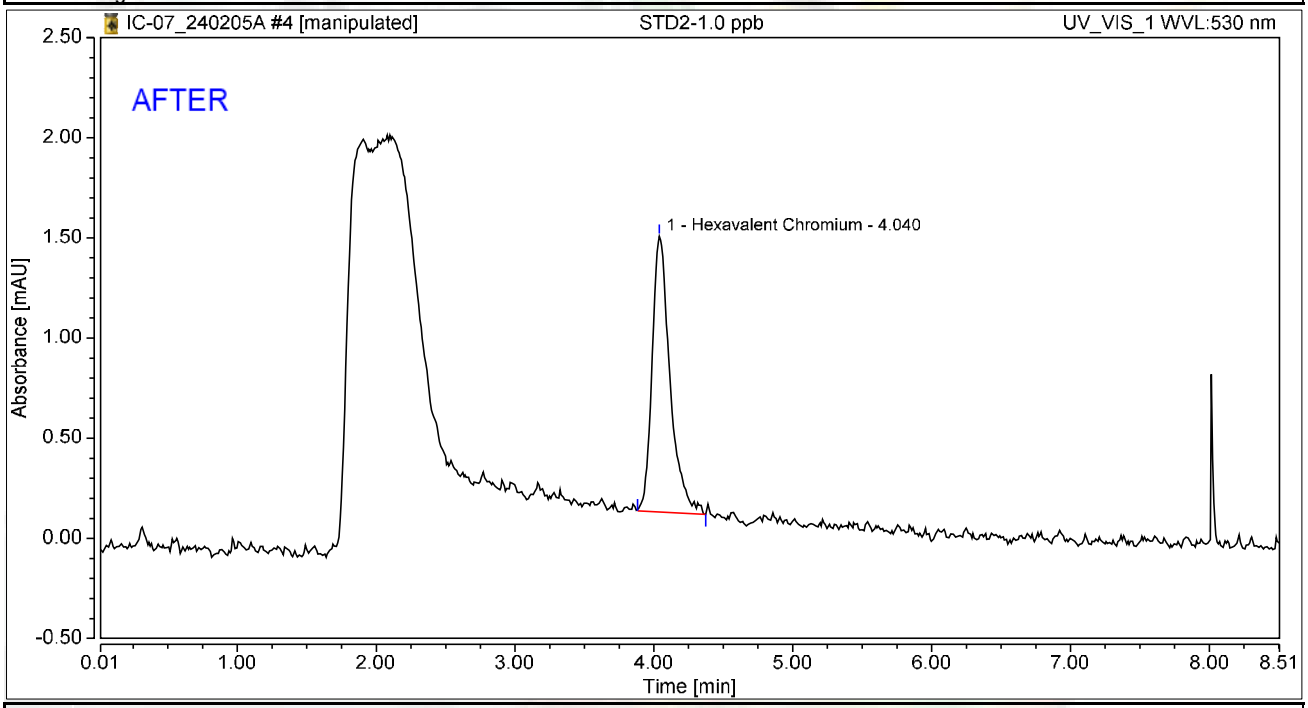
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.032	0.288	100.00	100.00	0.1502
Total:			**0.032**	**0.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.206	1.377	100.00	100.00	0.9592
Total:			**0.206**	**1.377**	**100.00**	**100.00**	

Reviewed by:

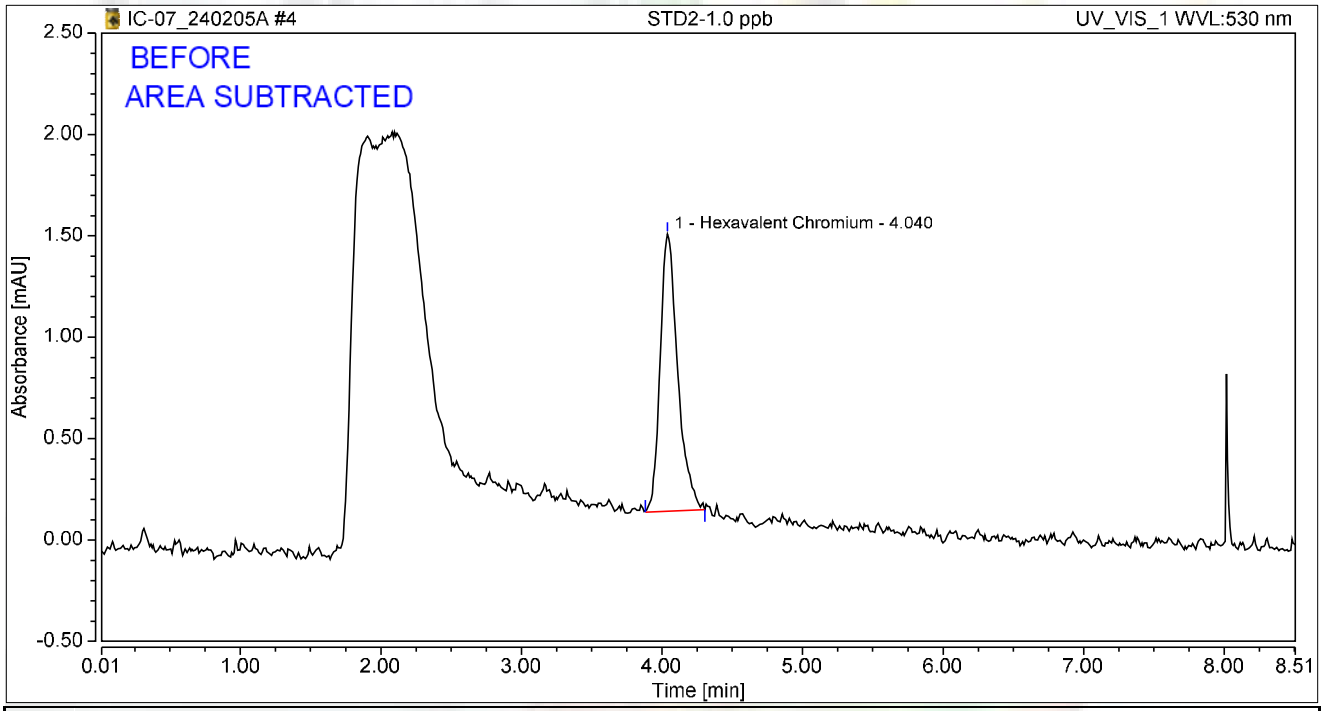
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

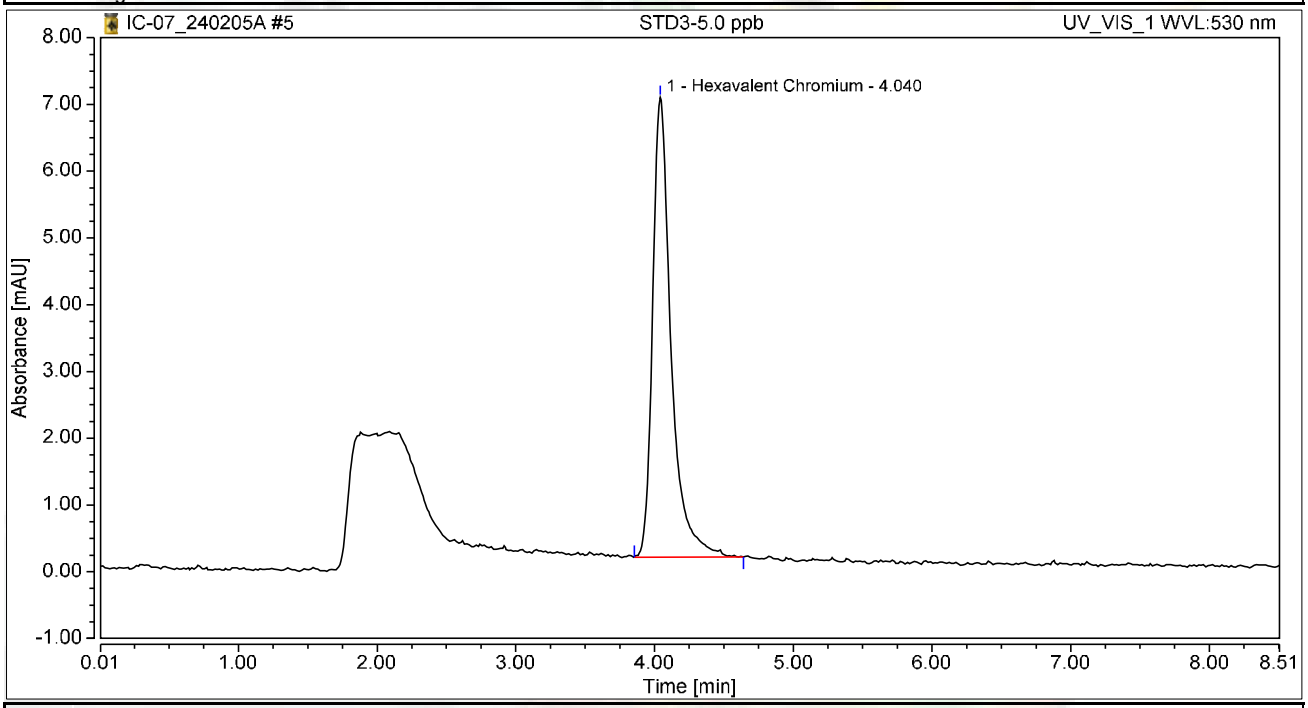
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.198	1.367	100.00	100.00	0.9223
Total:			**0.198**	**1.367**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

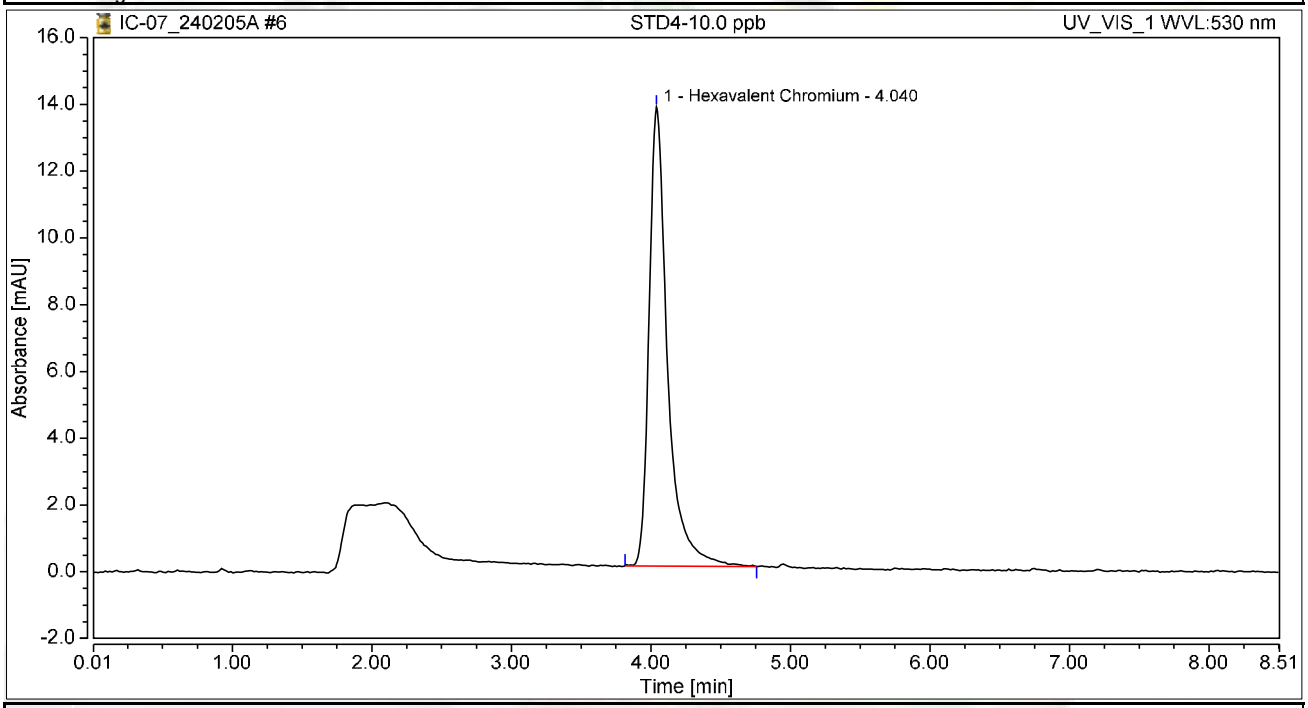
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.064	6.885	100.00	100.00	4.9461
Total:			**1.064**	**6.885**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

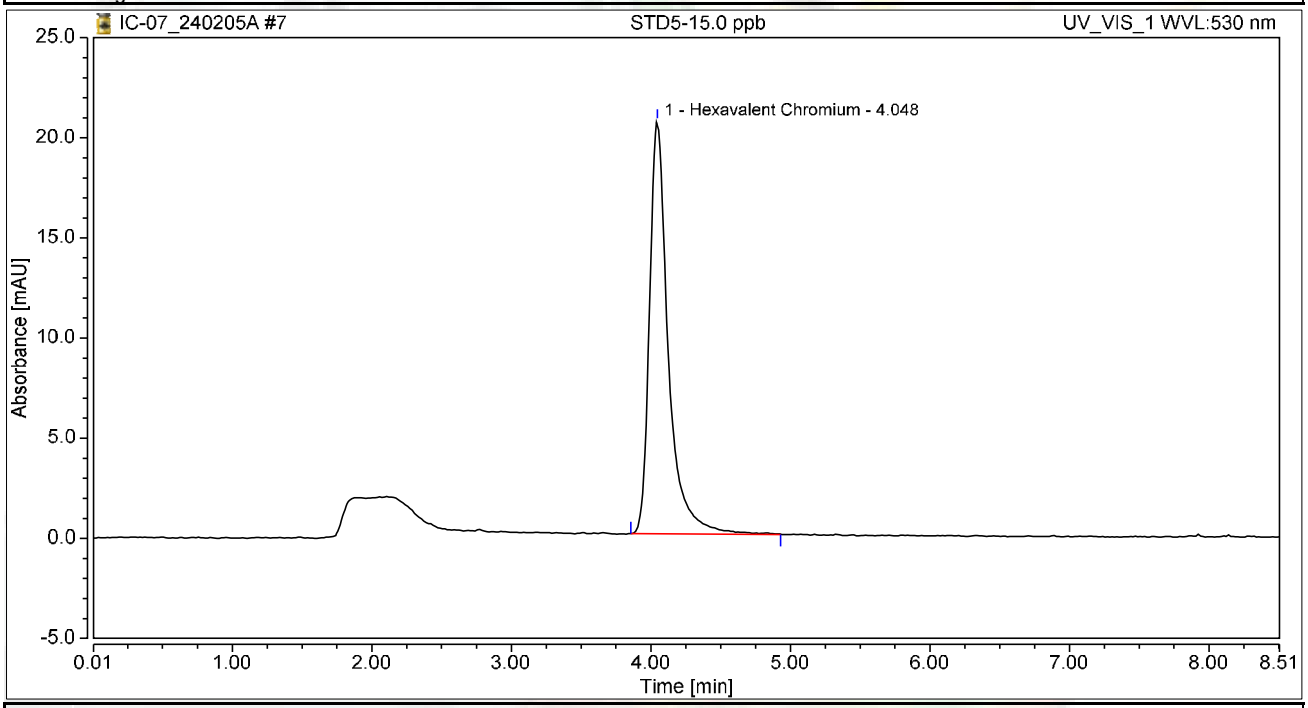
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.116	13.748	100.00	100.00	9.8357
Total:			**2.116**	**13.748**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

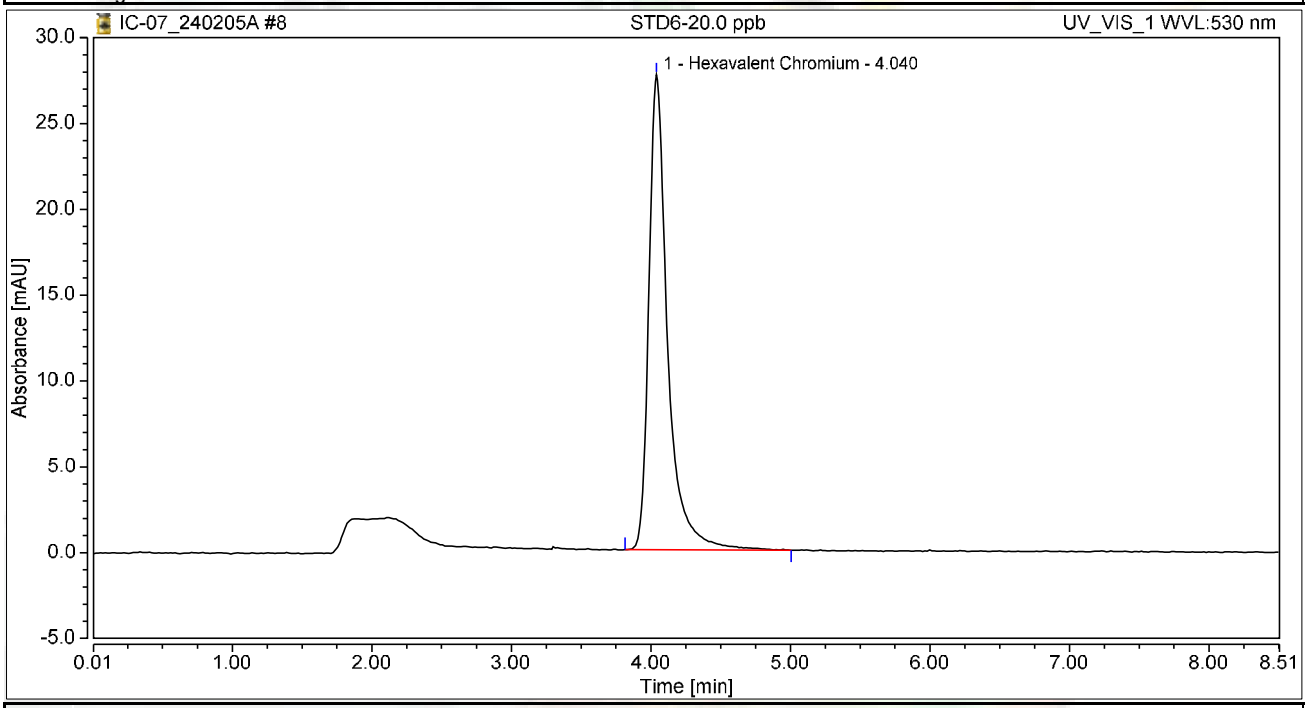
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	3.227	20.605	100.00	100.00	15.0023
Total:			**3.227**	**20.605**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:08**	*Sample Weight:*	**1.0000**

Chromatogram



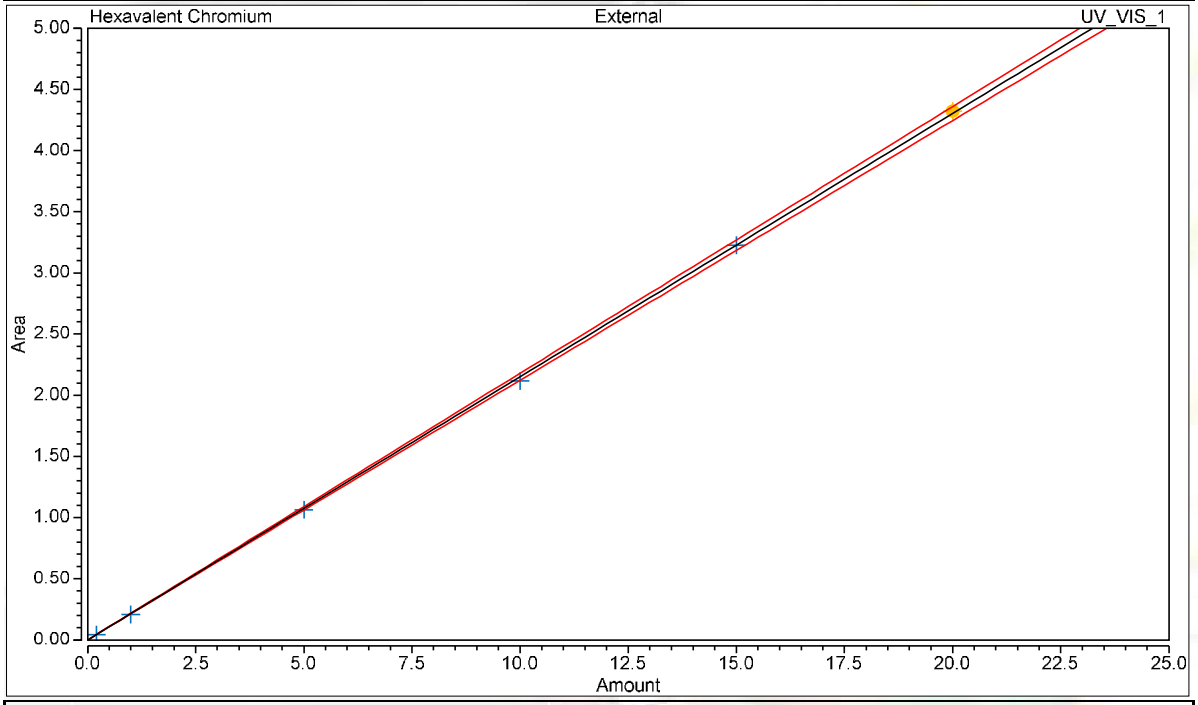
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	4.323	27.676	100.00	100.00	20.0959
Total:			**4.323**	**27.676**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2151
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99987

Calibration Plot — Hexavalent Chromium



Calibration Results — Hexavalent Chromium

No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0427	0.043	0.313
4	STD2-1.0 ppb	02	1.0000	0.2063	0.206	1.377
5	STD3-5.0 ppb	03	5.0000	1.0639	1.064	6.885
6	STD4-10.0 ppb	04	10.0000	2.1157	2.116	13.748
7	STD5-15.0 ppb	05	15.0000	3.2270	3.227	20.605
8	STD6-20.0 ppb	06	20.0000	4.3227	4.323	27.676

Reviewed by:

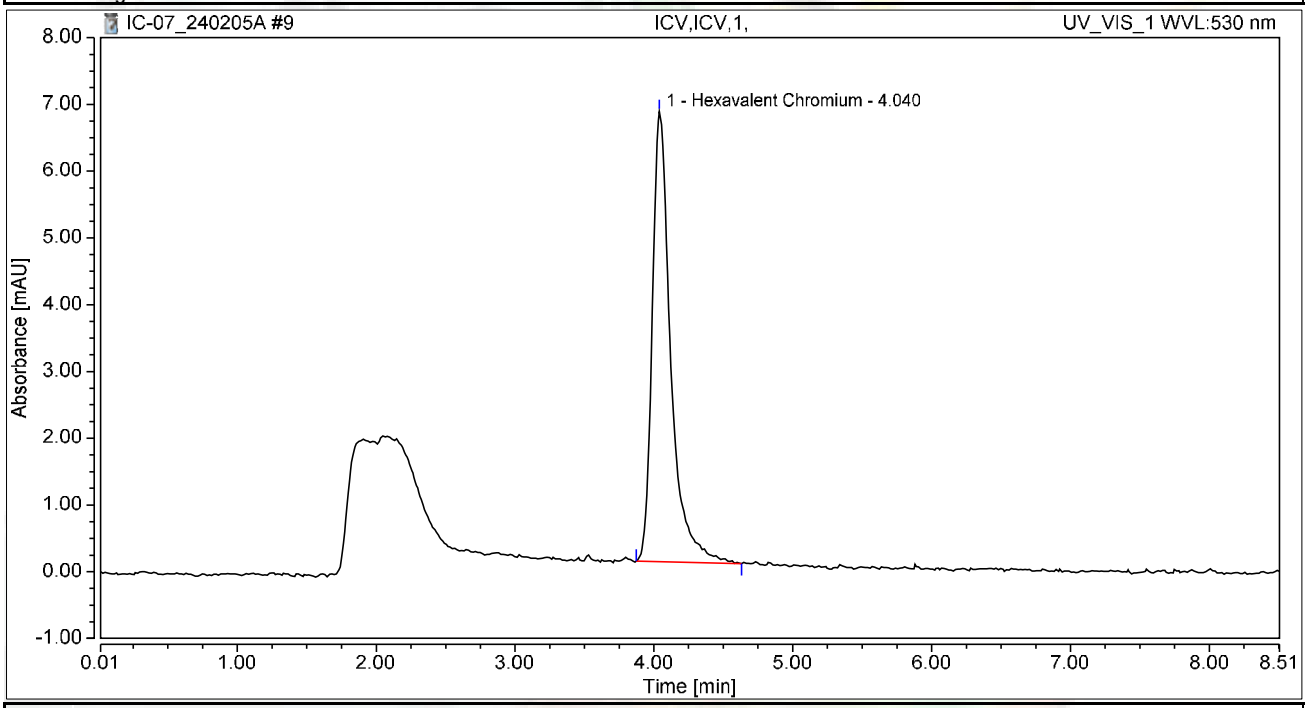
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

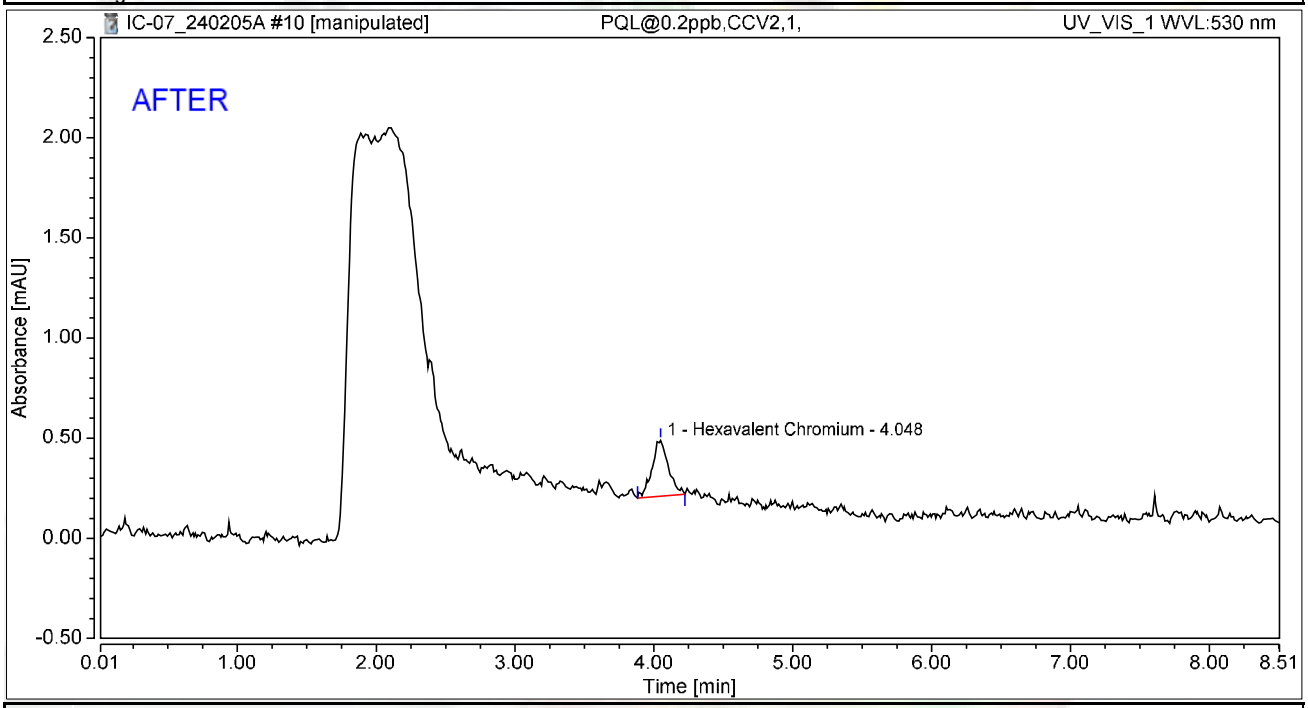
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.040	6.743	100.00	100.00	4.8342
Total:			**1.040**	**6.743**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.039	0.279	100.00	100.00	0.1802
Total:			**0.039**	**0.279**	**100.00**	**100.00**	

Reviewed by:

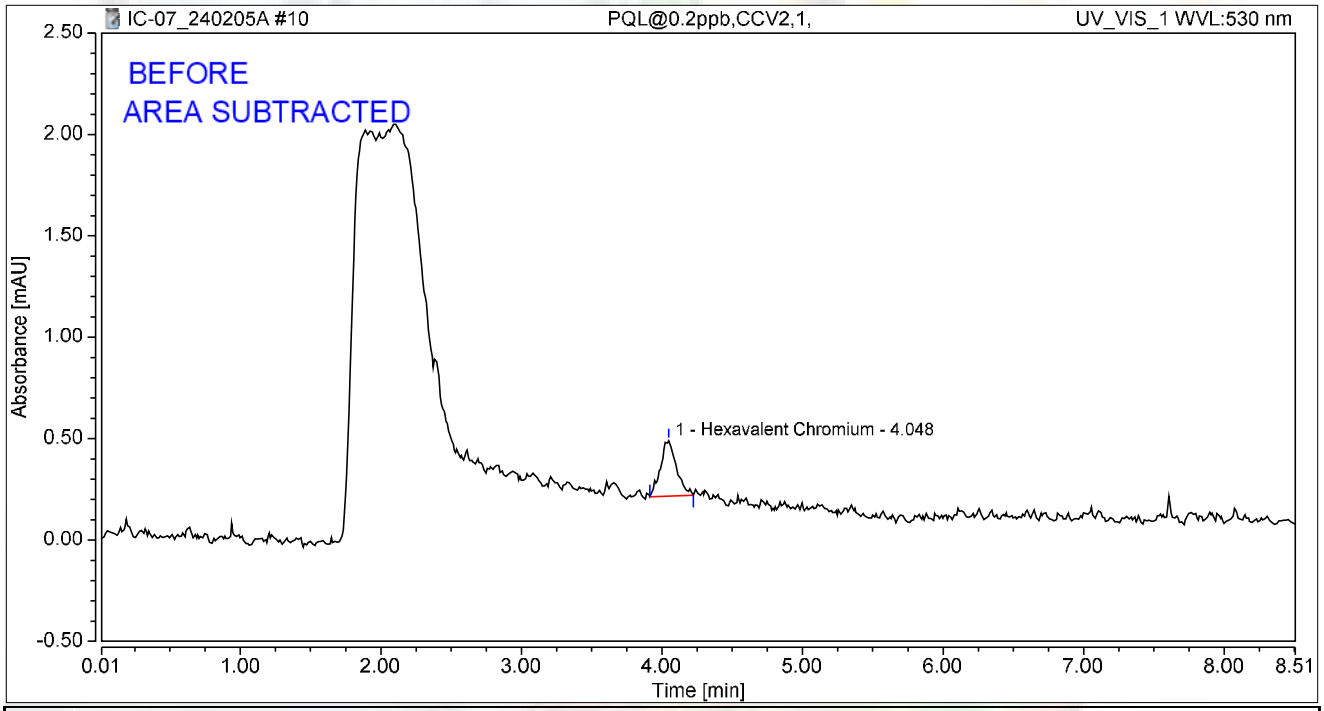
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

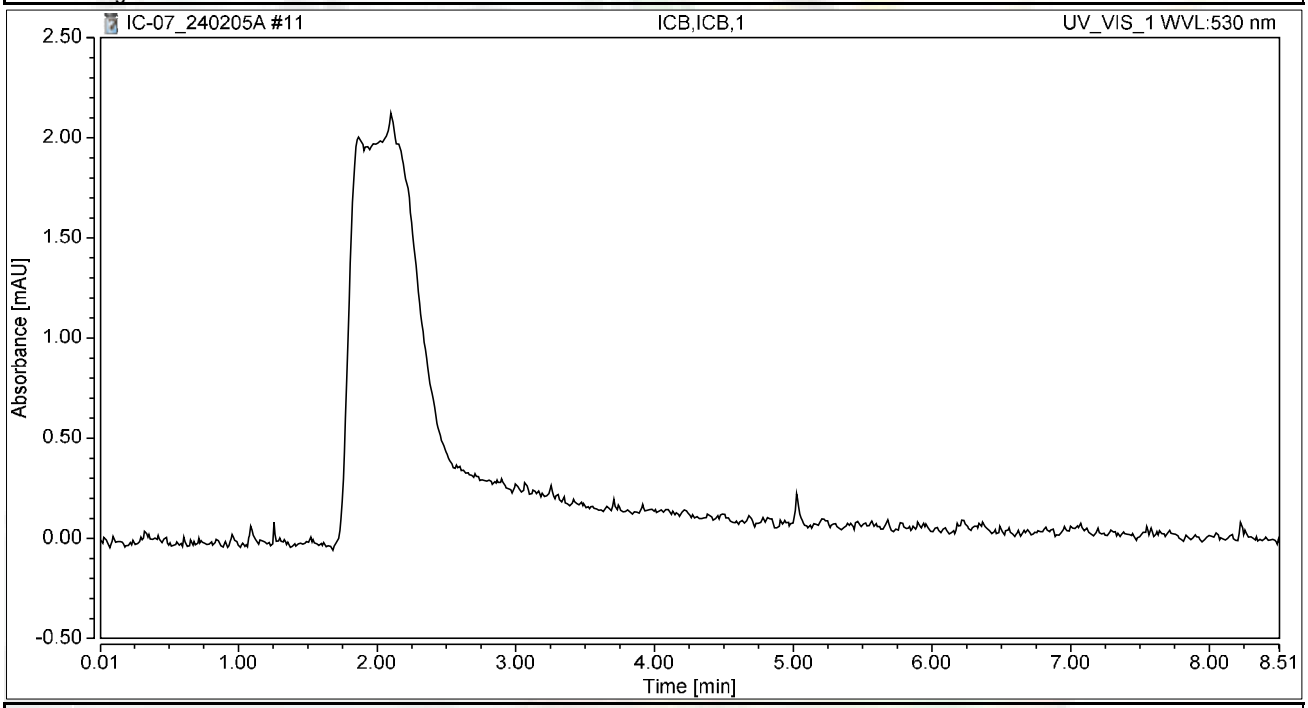
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.036	0.273	100.00	100.00	0.1694
Total:			**0.036**	**0.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

JRB 2/19/2024

RAW DATA

INJECTION LOG: 240215A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/15/24 10:08 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/15/24 10:23 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/15/24 10:32 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/15/24 10:42 AM	Reported
13	MB-R181621	MBLK	1	Hexavalent Chromium	02/15/24 10:51 AM	Reported
14	LCS-R181621	LCS	1	Hexavalent Chromium	02/15/24 11:01 AM	Reported
15	N063103-001A	SAMP	1	Hexavalent Chromium	02/15/24 11:22 AM	Reported
16	N063103-001AMS	MS	1	Hexavalent Chromium	02/15/24 11:34 AM	Reported
17	N063103-001AMSD	MSD	1	Hexavalent Chromium	02/15/24 11:43 AM	Reported
18	N063103-011A	SAMP	1	Hexavalent Chromium	02/15/24 11:53 AM	Reported
19	N063103-011ADUP	DUP	1	Hexavalent Chromium	02/15/24 12:02 PM	Reported
20	N063103-011AMS	MS	1	Hexavalent Chromium	02/15/24 12:12 PM	Reported
21	N063101-001A	SAMP	1	Hexavalent Chromium	02/15/24 12:21 PM	Not Reported
22	N063101-001AMS	MS	1	Hexavalent Chromium	02/15/24 12:31 PM	Not Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/15/24 12:40 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/15/24 12:49 PM	Reported
25	N063101-001A	SAMP	5	Hexavalent Chromium	02/15/24 12:59 PM	Reported
26	N063101-001AMS	MS	5	Hexavalent Chromium	02/15/24 1:35 PM	Not Reported
27	N063101-002A	SAMP	1	Hexavalent Chromium	02/15/24 1:48 PM	Reported
28	N063101-002AMS	MS	1	Hexavalent Chromium	02/15/24 1:57 PM	Reported
29	N063108-002A	SAMP	1	Hexavalent Chromium	02/15/24 2:07 PM	Reported
30	N063108-002AREP	DUP	1	Hexavalent Chromium	02/15/24 2:16 PM	Reported
31	N063108-001A	SAMP	1	Hexavalent Chromium	02/15/24 2:25 PM	Reported
32	N063108-001AREP	DUP	1	Hexavalent Chromium	02/15/24 2:35 PM	Reported
33	N063103-004A	SAMP	1	Hexavalent Chromium	02/15/24 2:44 PM	Reported
34	N063103-004AMS	MS	1	Hexavalent Chromium	02/15/24 2:54 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/15/24 3:03 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/15/24 3:13 PM	Reported
37	N063103-005A	SAMP	1	Hexavalent Chromium	02/15/24 3:22 PM	Reported
38	N063103-005AMS	MS	1	Hexavalent Chromium	02/15/24 3:32 PM	Reported
39	N063103-006A	SAMP	1	Hexavalent Chromium	02/15/24 3:41 PM	Reported
40	N063103-006AMS	MS	1	Hexavalent Chromium	02/15/24 3:51 PM	Reported
41	N063103-008A	SAMP	1	Hexavalent Chromium	02/15/24 4:00 PM	Reported
42	N063103-008AMS	MS	1	Hexavalent Chromium	02/15/24 4:09 PM	Reported

INJECTION LOG: 240215A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063103-009A	SAMP	1	Hexavalent Chromium	02/15/24 4:19 PM	Reported
44	N063103-009AMS	MS	1	Hexavalent Chromium	02/15/24 4:28 PM	Reported
45	N063103-010A	SAMP	1	Hexavalent Chromium	02/15/24 4:38 PM	Reported
46	N063103-010AMS	MS	1	Hexavalent Chromium	02/15/24 4:47 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/15/24 4:57 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/15/24 5:06 PM	Reported
49	N063103-012A	SAMP	1	Hexavalent Chromium	02/15/24 5:16 PM	Reported
50	N063103-012AMS	MS	1	Hexavalent Chromium	02/15/24 5:25 PM	Reported
51	N063103-013A	SAMP	1	Hexavalent Chromium	02/15/24 5:35 PM	Reported
52	N063103-013AMS	MS	1	Hexavalent Chromium	02/15/24 5:44 PM	Reported
53	N063103-014A	SAMP	1	Hexavalent Chromium	02/15/24 5:53 PM	Reported
54	N063103-014AMS	MS	1	Hexavalent Chromium	02/15/24 6:06 PM	Reported
55	N063103-015A	SAMP	1	Hexavalent Chromium	02/15/24 6:16 PM	Reported
56	N063103-015AMS	MS	1	Hexavalent Chromium	02/15/24 6:25 PM	Reported
57	N063103-016A	SAMP	1	Hexavalent Chromium	02/15/24 6:35 PM	Reported
58	N063103-016AMS	MS	1	Hexavalent Chromium	02/15/24 6:44 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/15/24 6:54 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/15/24 7:03 PM	Reported
61	N062736-009A	SAMP	1	Hexavalent Chromium	02/15/24 7:13 PM	Not Reported
62	N062736-009AMS	MS	1	Hexavalent Chromium	02/15/24 7:22 PM	Not Reported
63	N063103-002A	SAMP	1	Hexavalent Chromium	02/15/24 7:32 PM	Reported
64	N063103-002AMS	MS	1	Hexavalent Chromium	02/15/24 7:41 PM	Reported
65	N063103-003A	SAMP	1	Hexavalent Chromium	02/15/24 7:50 PM	Reported
66	N063103-003AMS	MS	1	Hexavalent Chromium	02/15/24 8:00 PM	Reported
67	N063101-001AMS	MS	5	Hexavalent Chromium	02/15/24 8:09 PM	Reported
68	CCV-6	CCV1	1	Hexavalent Chromium	02/15/24 8:19 PM	Reported
69	CCB-6	CCB	1	Hexavalent Chromium	02/15/24 8:28 PM	Reported
70	BLANK	BLANK	1	Hexavalent Chromium	02/15/24 8:38 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240215A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**17/Feb/24 11:31:18**
No. of Injections:	**73**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/15/2024 10:08	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/15/2024 10:23	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/15/2024 10:32	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/15/2024 10:42	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/15/2024 10:51	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/15/2024 11:01	Finished	LCS @5ppb, IWST-231228B
15	N063103-001A,SAMF	1	1000	Unknown		02/15/2024 11:22	Finished	SAMP,10 mL
16	N063103-001AMS,MS	2	1000	Unknown		02/15/2024 11:34	Finished	MS (1ppb), IWST-231228B,10r
17	N063103-001AMSD,M	3	1000	Unknown		02/15/2024 11:43	Finished	MSD (1ppb), IWST-231228B,1(
18	N063103-011A,SAMF	4	1000	Unknown		02/15/2024 11:53	Finished	SAMP,10 mL
19	N063103-011ADUP,D	5	1000	Unknown		02/15/2024 12:02	Finished	DUP,10 mL
20	N063103-011AMS,MS	6	1000	Unknown		02/15/2024 12:12	Finished	MS (1ppb), IWST-231228B,10r
21	N063101-001A,SAMF	7	1000	Unknown		02/15/2024 12:21	Finished	SAMP,10 mL
22	N063101-001AMS,MS	8	1000	Unknown		02/15/2024 12:31	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	9	1000	Unknown		02/15/2024 12:40	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		02/15/2024 12:49	Finished	CCB R240129C
25	N063101-001A,SAMF	11	1000	Unknown		02/15/2024 12:59	Finished	SAMP,2>10 mL
26	N063101-001AMS,MS	1	1000	Unknown		02/15/2024 13:35	Finished	MS (1ppb), IWST-231228B,2>1
27	N063101-002A,SAMF	2	1000	Unknown		02/15/2024 13:48	Finished	SAMP,10 mL
28	N063101-002AMS,MS	3	1000	Unknown		02/15/2024 13:57	Finished	MS (1ppb), IWST-231228B,10r
29	N063108-002A,SAMF	4	1000	Unknown		02/15/2024 14:07	Finished	SAMP,10 mL
30	N063108-002AREP,D	5	1000	Unknown		02/15/2024 14:16	Finished	REP,10 mL
31	N063108-001A,SAMF	6	1000	Unknown		02/15/2024 14:25	Finished	SAMP,10 mL
32	N063108-001AREP,D	7	1000	Unknown		02/15/2024 14:35	Finished	REP,10 mL
33	N063103-004A,SAMF	8	1000	Unknown		02/15/2024 14:44	Finished	SAMP,10 mL
34	N063103-004AMS,MS	9	1000	Unknown		02/15/2024 14:54	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	10	1000	Unknown		02/15/2024 15:03	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	11	1000	Unknown		02/15/2024 15:13	Finished	CCB R240129C
37	N063103-005A,SAMF	12	1000	Unknown		02/15/2024 15:22	Finished	SAMP,10 mL
38	N063103-005AMS,MS	13	1000	Unknown		02/15/2024 15:32	Finished	MS (1ppb), IWST-231228B,10r
39	N063103-006A,SAMF	14	1000	Unknown		02/15/2024 15:41	Finished	SAMP,10 mL
40	N063103-006AMS,MS	15	1000	Unknown		02/15/2024 15:51	Finished	MS (1ppb), IWST-231228B,10r
41	N063103-008A,SAMF	16	1000	Unknown		02/15/2024 16:00	Finished	SAMP,10 mL
42	N063103-008AMS,MS	17	1000	Unknown		02/15/2024 16:09	Finished	MS (1ppb), IWST-231228B,10r
43	N063103-009A,SAMF	18	1000	Unknown		02/15/2024 16:19	Finished	SAMP,10 mL
44	N063103-009AMS,MS	19	1000	Unknown		02/15/2024 16:28	Finished	MS (1ppb), IWST-231228B,10r
45	N063103-010A,SAMF	20	1000	Unknown		02/15/2024 16:38	Finished	SAMP,10 mL
46	N063103-010AMS,MS	21	1000	Unknown		02/15/2024 16:47	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	22	1000	Unknown		02/15/2024 16:57	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	23	1000	Unknown		02/15/2024 17:06	Finished	CCB R240129C
49	N063103-012A,SAMF	24	1000	Unknown		02/15/2024 17:16	Finished	SAMP,10 mL
50	N063103-012AMS,MS	25	1000	Unknown		02/15/2024 17:25	Finished	MS (1ppb), IWST-231228B,10r
51	N063103-013A,SAMF	26	1000	Unknown		02/15/2024 17:35	Finished	SAMP,10 mL
52	N063103-013AMS,MS	27	1000	Unknown		02/15/2024 17:44	Finished	MS (1ppb), IWST-231228B,10r
53	N063103-014A,SAMF	28	1000	Unknown		02/15/2024 17:53	Finished	SAMP,10 mL
54	N063103-014AMS,MS	29	1000	Unknown		02/15/2024 18:06	Finished	MS (1ppb), IWST-231228B,10r
55	N063103-015A,SAMF	30	1000	Unknown		02/15/2024 18:16	Finished	SAMP,10 mL
56	N063103-015AMS,MS	31	1000	Unknown		02/15/2024 18:25	Finished	MS (1ppb), IWST-231228B,10r
57	N063103-016A,SAMF	32	1000	Unknown		02/15/2024 18:35	Finished	SAMP,10 mL
58	N063103-016AMS,MS	33	1000	Unknown		02/15/2024 18:44	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	34	1000	Unknown		02/15/2024 18:54	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	35	1000	Unknown		02/15/2024 19:03	Finished	CCB R240129C

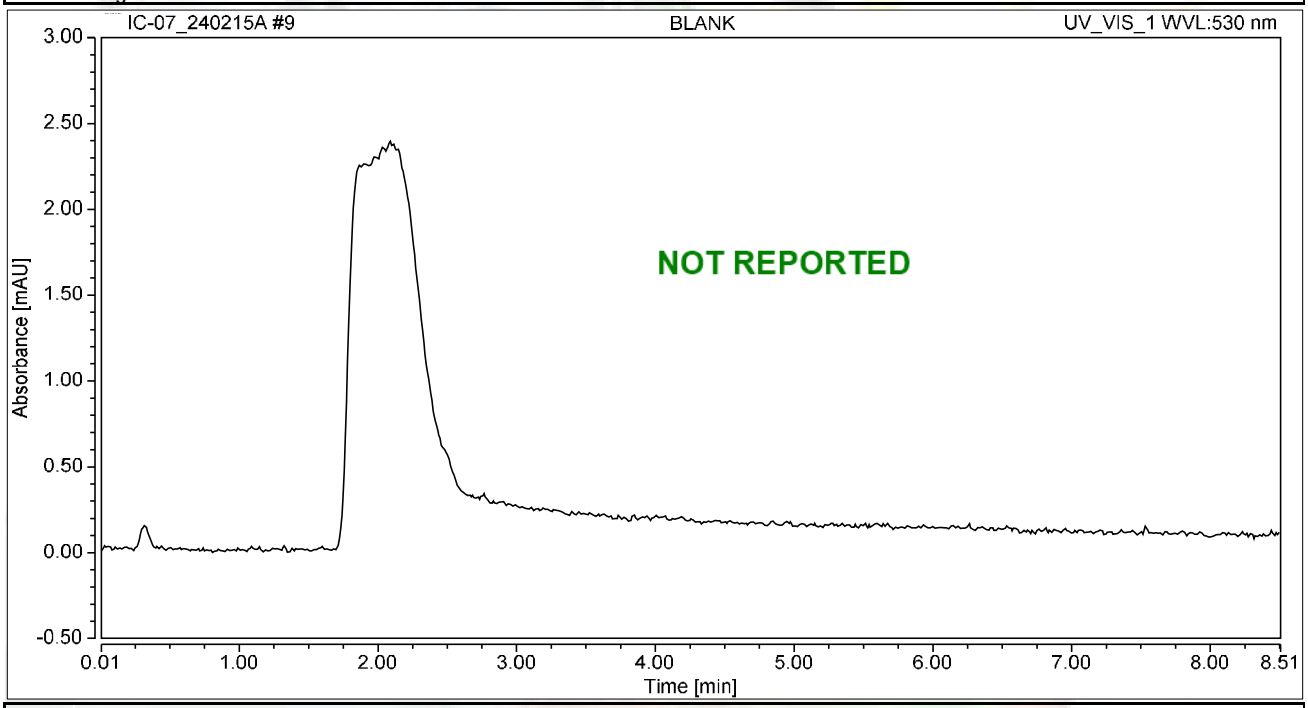
61	N062736-009A,SAMP	36	1000	Unknown		02/15/2024 19:13	Finished	SAMP,10 mL
62	N062736-009AMS,MS	37	1000	Unknown		02/15/2024 19:22	Finished	MS (1ppb), IWST-231228B,10r
63	N063103-002A,SAMP	38	1000	Unknown		02/15/2024 19:32	Finished	SAMP,10 mL
64	N063103-002AMS,MS	39	1000	Unknown		02/15/2024 19:41	Finished	MS (1ppb), IWST-231228B,10r
65	N063103-003A,SAMP	40	1000	Unknown		02/15/2024 19:50	Finished	SAMP,10 mL
66	N063103-003AMS,MS	41	1000	Unknown		02/15/2024 20:00	Finished	MS (1ppb), IWST-231228B,10r
67	N063101-001AMS,MS	42	1000	Unknown		02/15/2024 20:09	Finished	MS (1ppb), IWST-231228B,2>1
68	CCV-6,CCV1,1,	43	1000	Unknown		02/15/2024 20:19	Finished	CCV @10ppb, IWST-231228A
69	CCB-6,CCB,1,	44	1000	Unknown		02/15/2024 20:28	Finished	CCB R240129C
70	BLANK	45	1000	Unknown		02/15/2024 20:38	Finished	BLANK
71	SHUTDOWN	46	1000	Unknown		02/15/2024 20:47	Finished	
72	Eluent: R240215A	47	1000	Unknown		n.a.	Finished	
73	PCR: R240215B	48	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 10:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

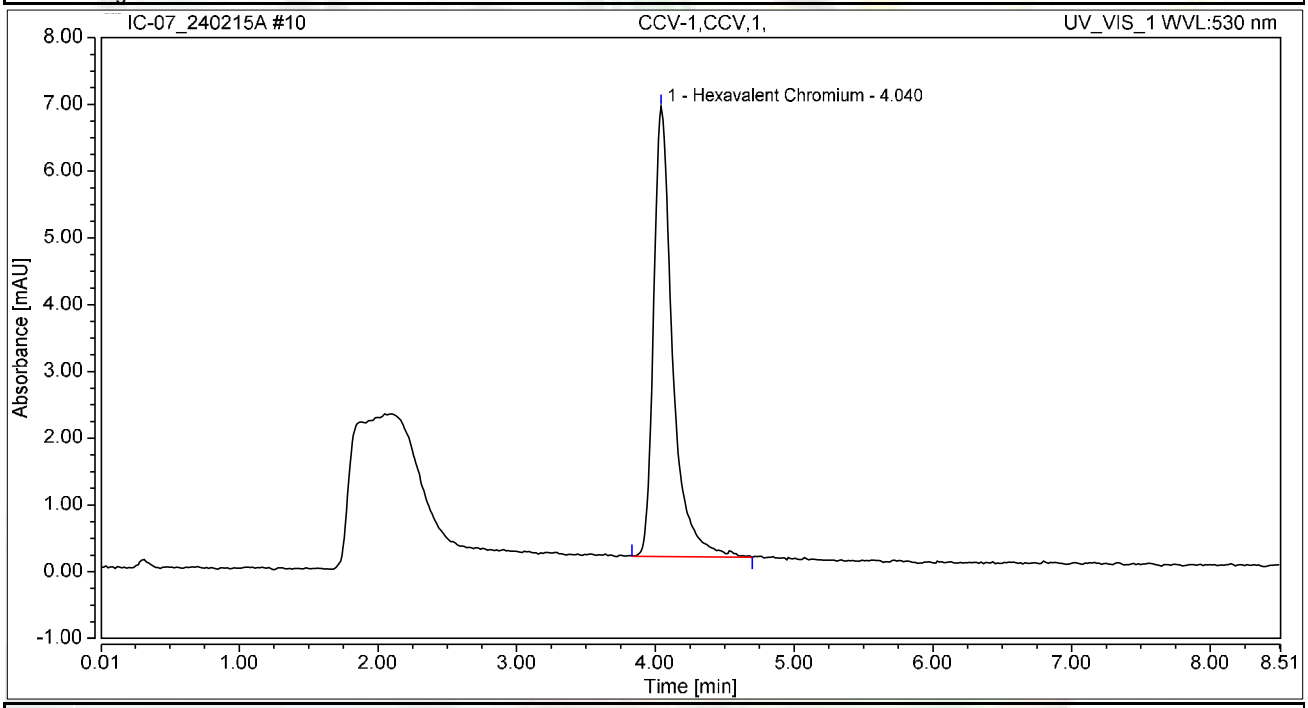
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 10:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

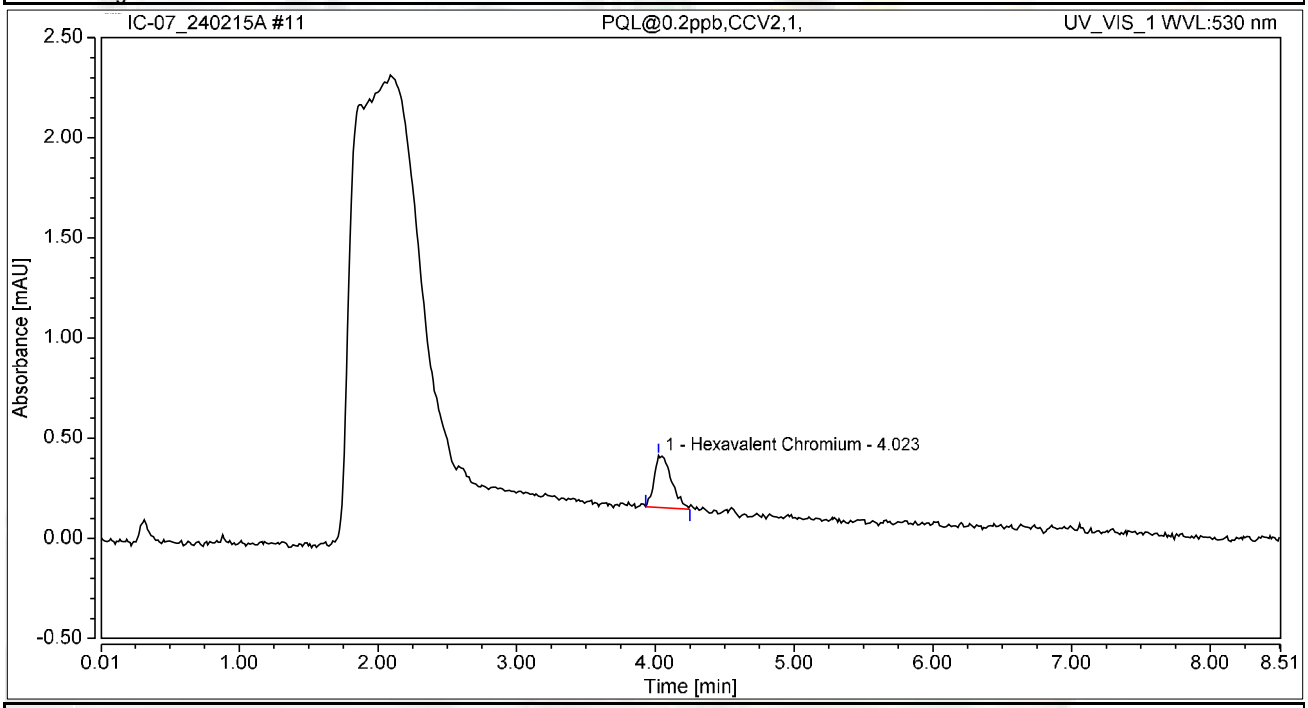
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.068	6.739	100.00	100.00	4.9648
Total:			**1.068**	**6.739**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 10:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

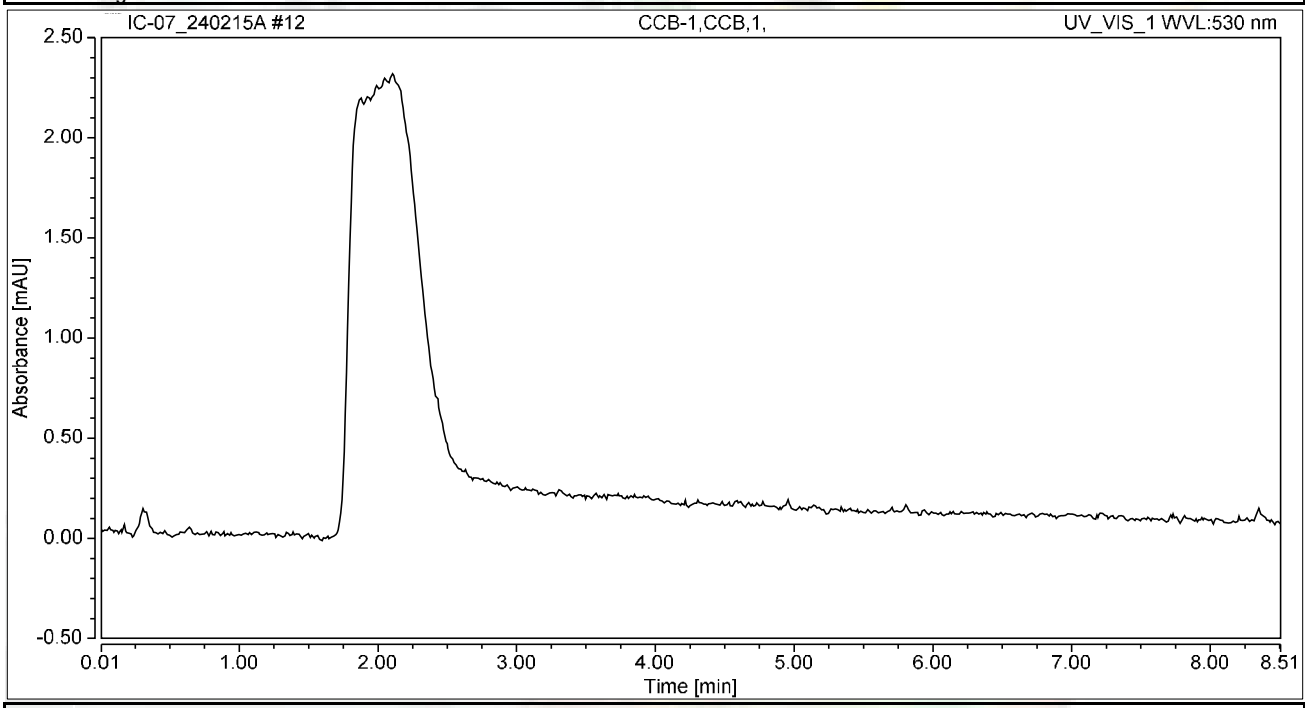
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.038	0.260	100.00	100.00	0.1745
Total:			**0.038**	**0.260**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 10:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

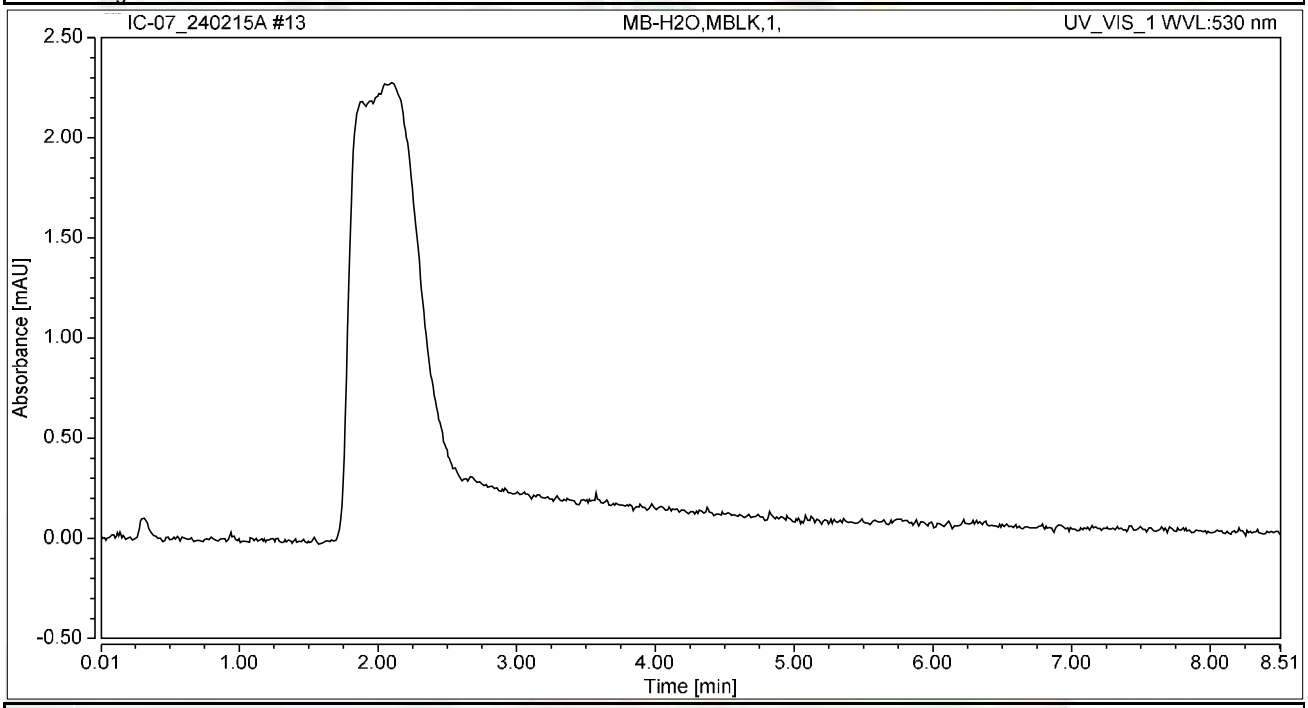
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 10:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

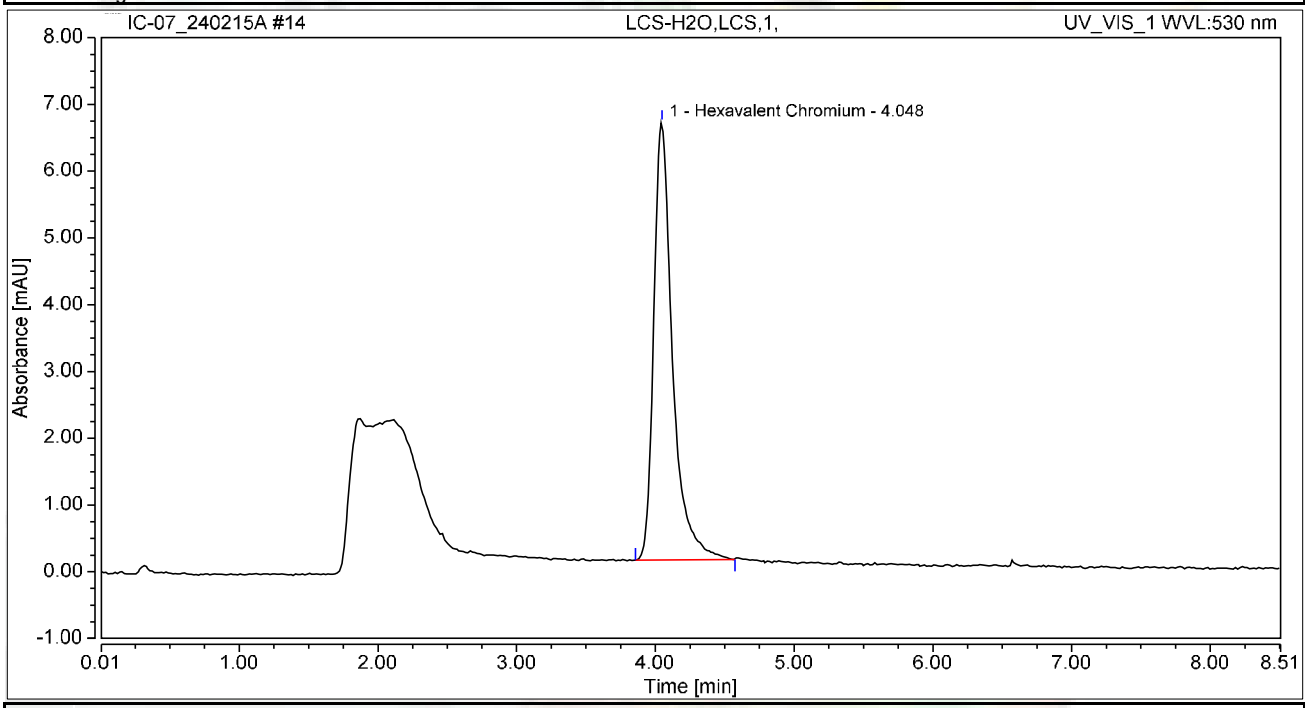
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 11:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

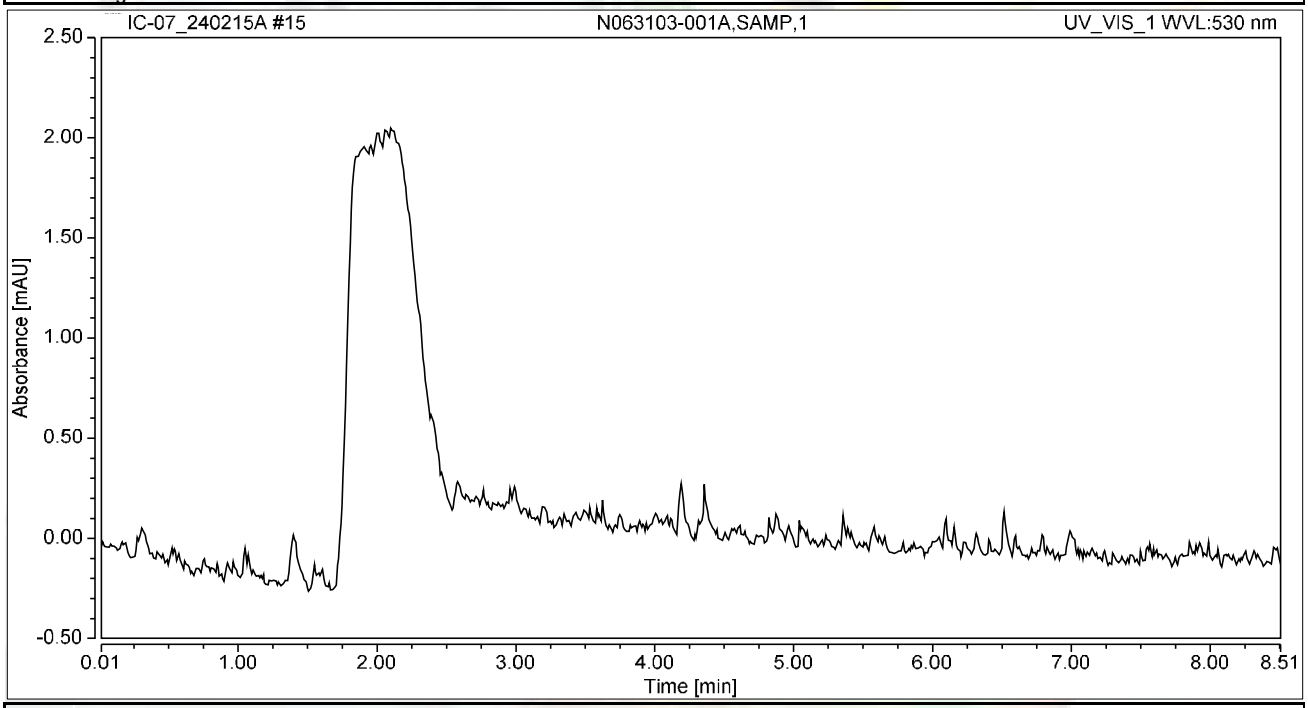
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.026	6.554	100.00	100.00	4.7718
Total:			**1.026**	**6.554**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-001A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 11:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

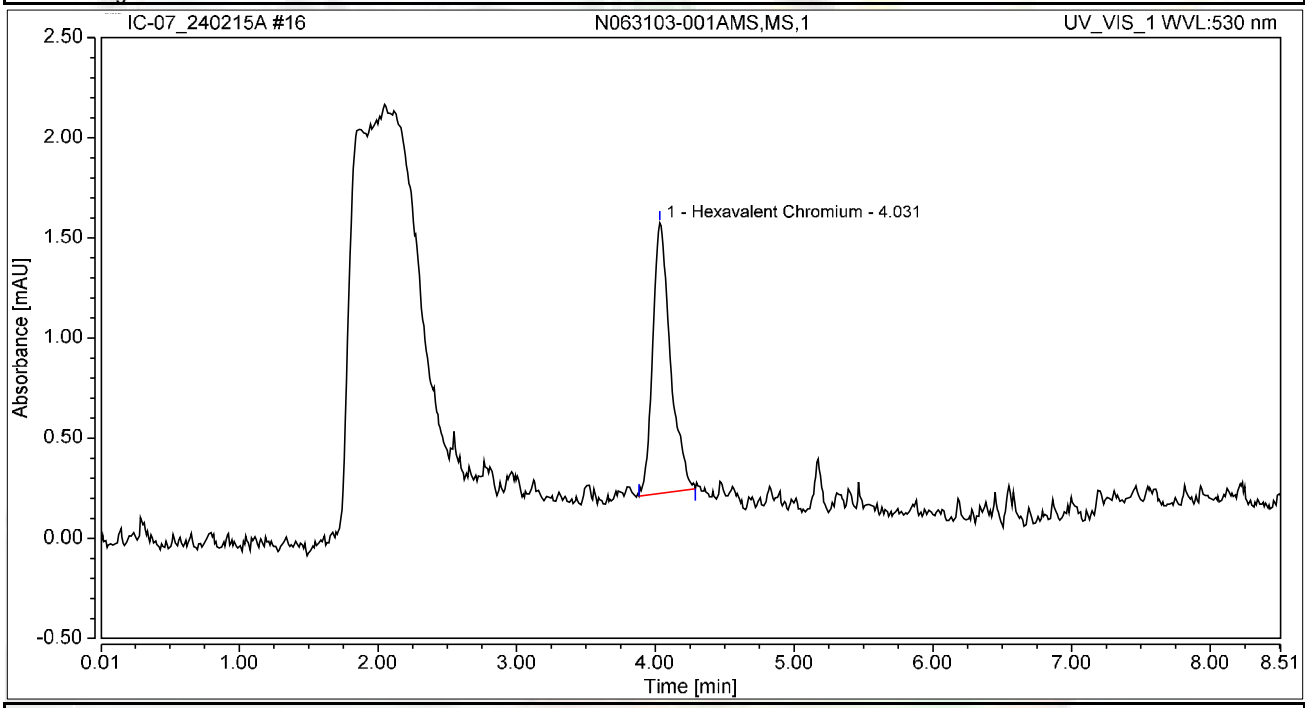
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 11:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

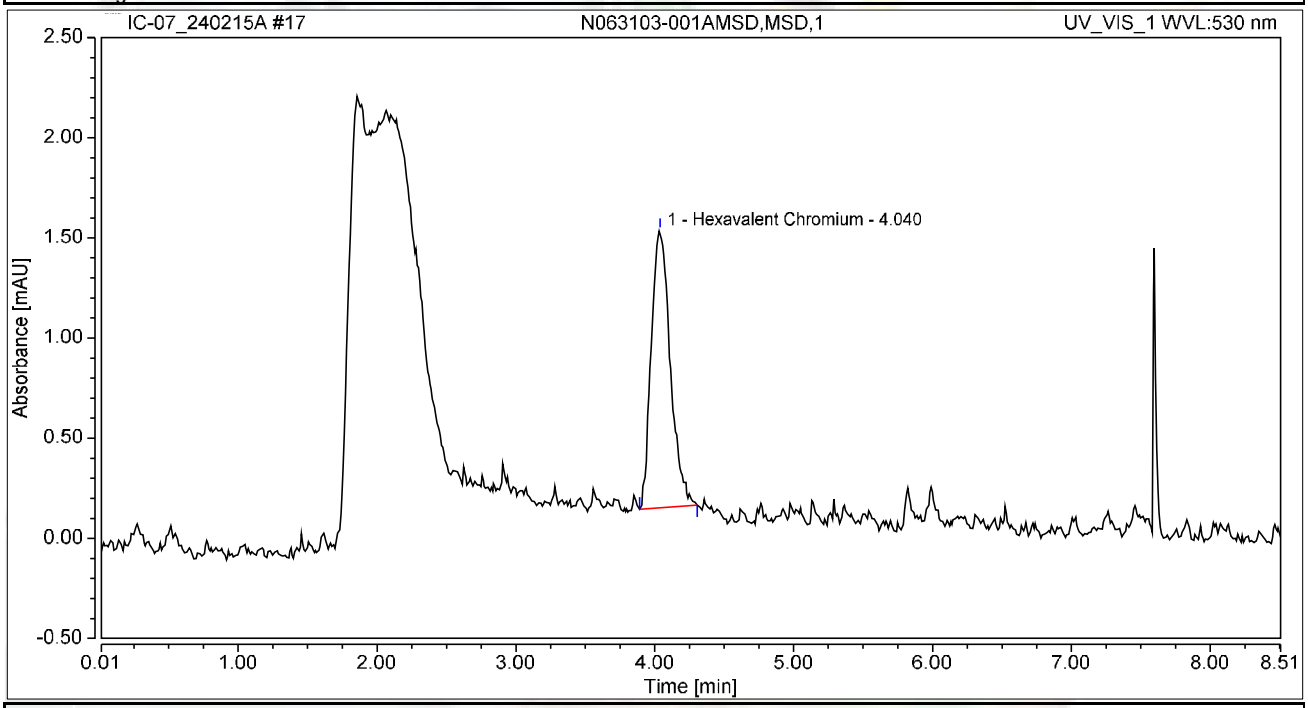
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.200	1.351	100.00	100.00	0.9297
Total:			**0.200**	**1.351**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-001AMSD,MSD,1**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 11:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

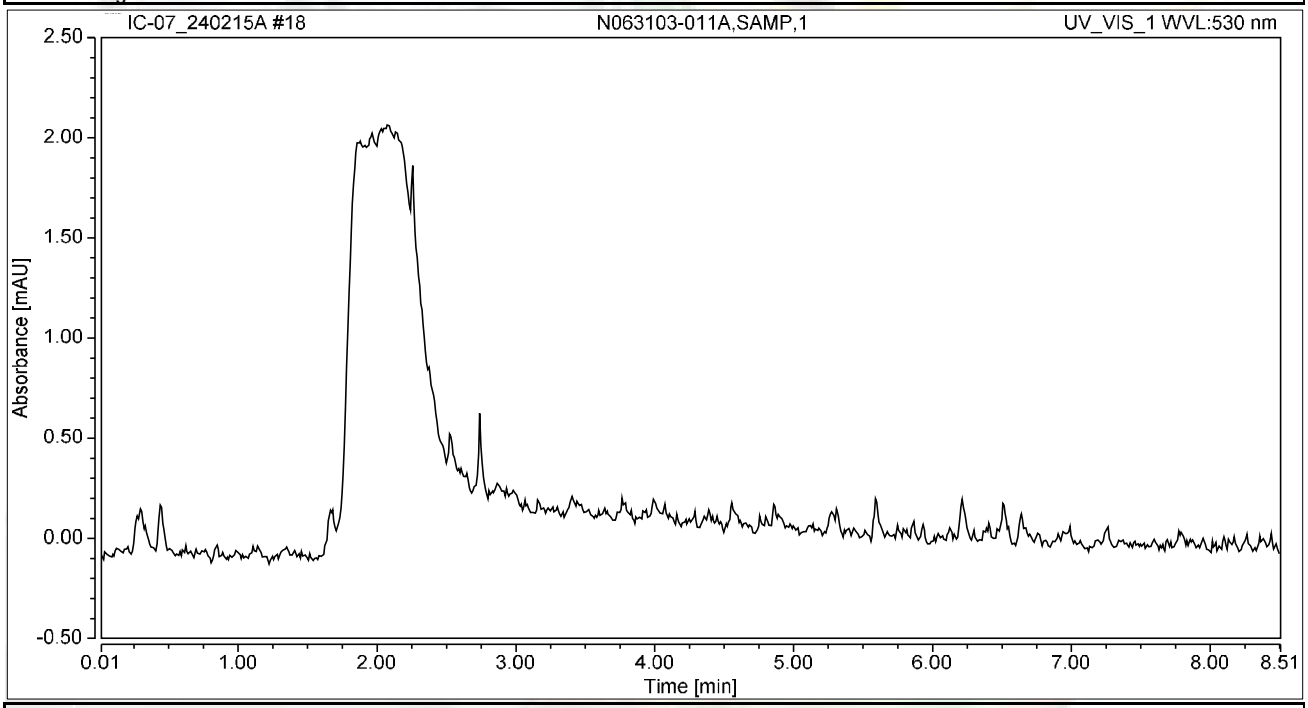
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.219	1.385	100.00	100.00	1.0201
Total:			**0.219**	**1.385**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-011A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 11:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

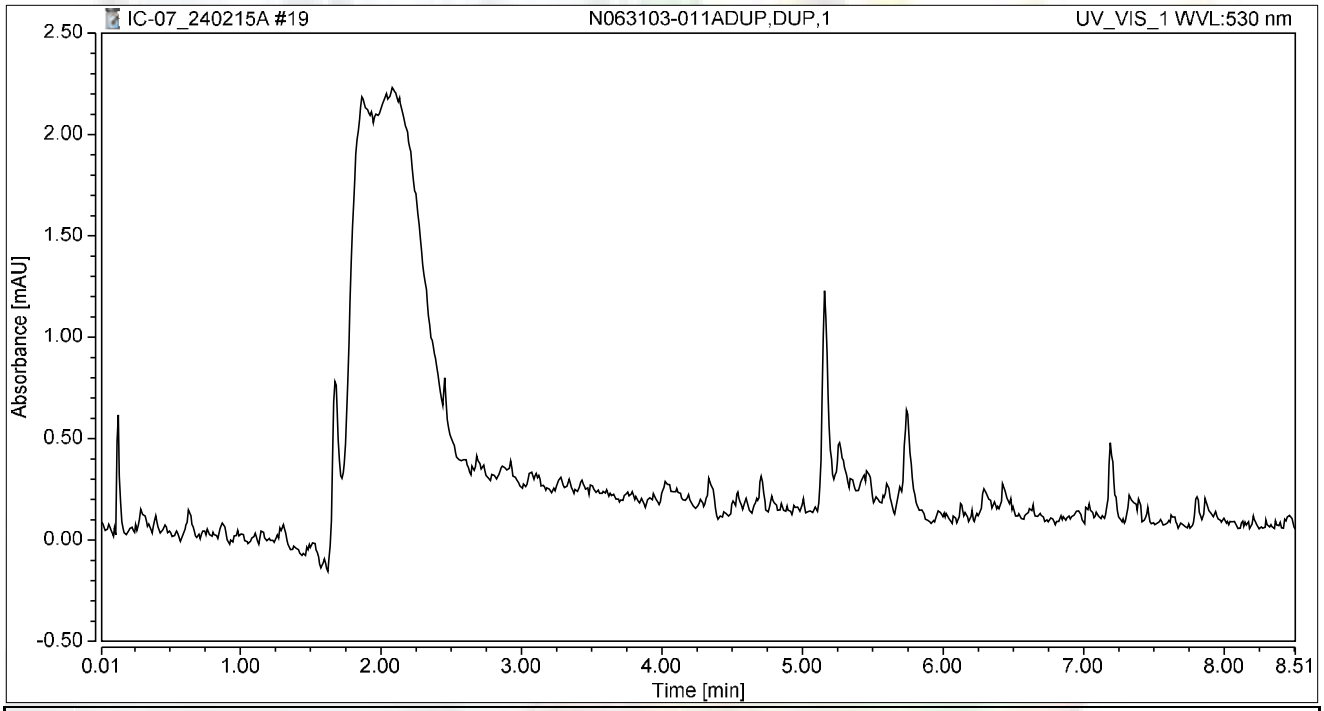
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-011ADUP,DUP,1**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 12:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

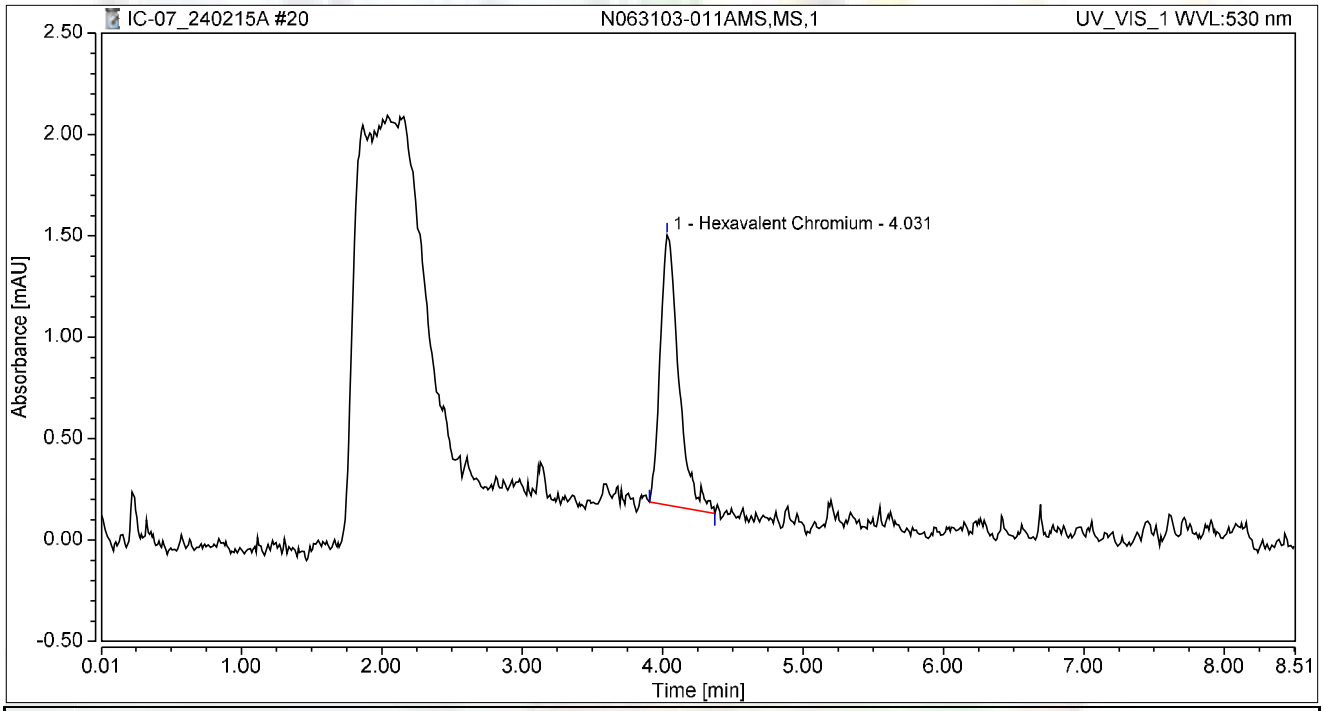
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 12:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

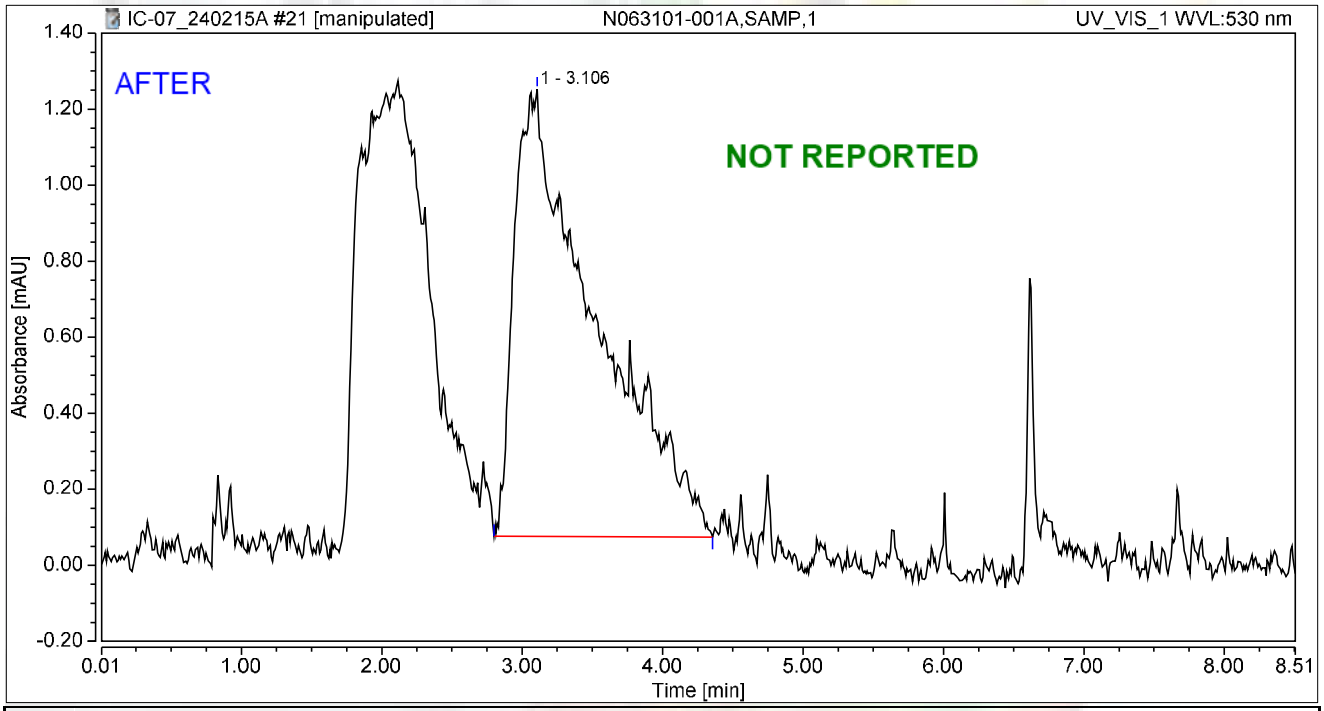
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.204	1.331	100.00	100.00	0.9481
Total:			**0.204**	**1.331**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063101-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 12:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

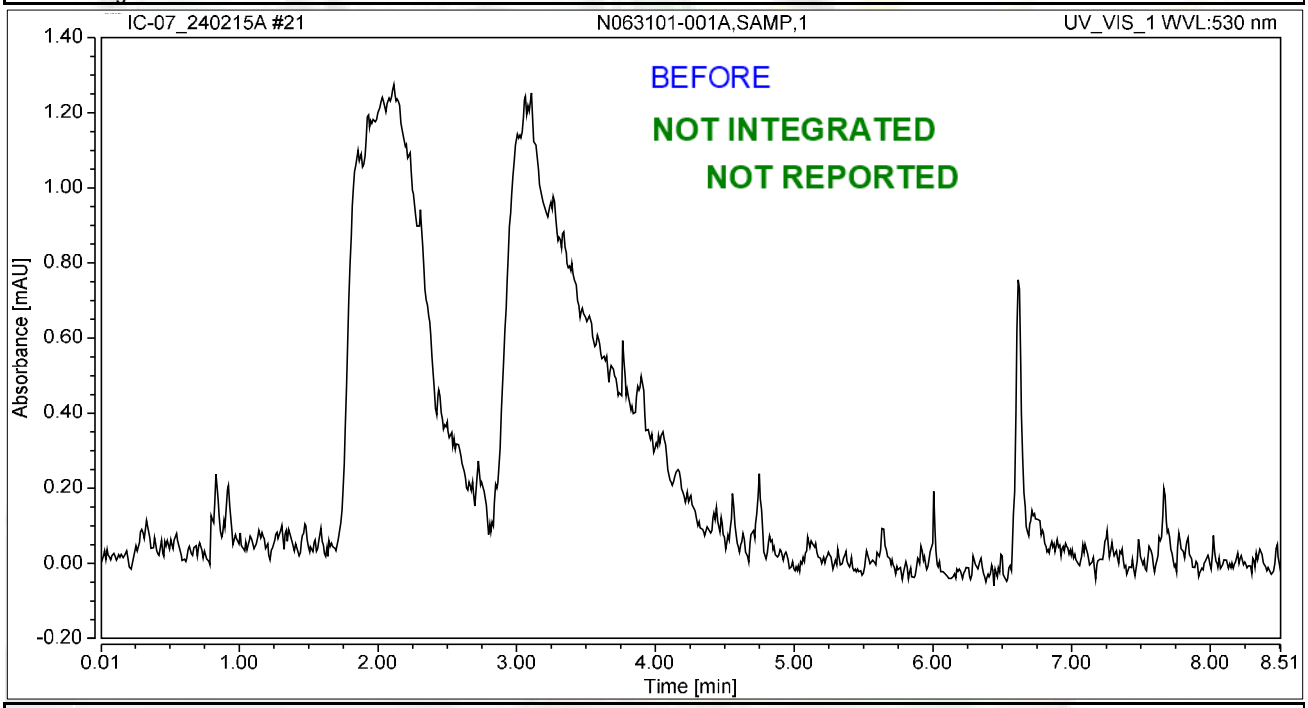
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.106	0.782	1.176	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.782**	**1.176**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063101-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 12:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

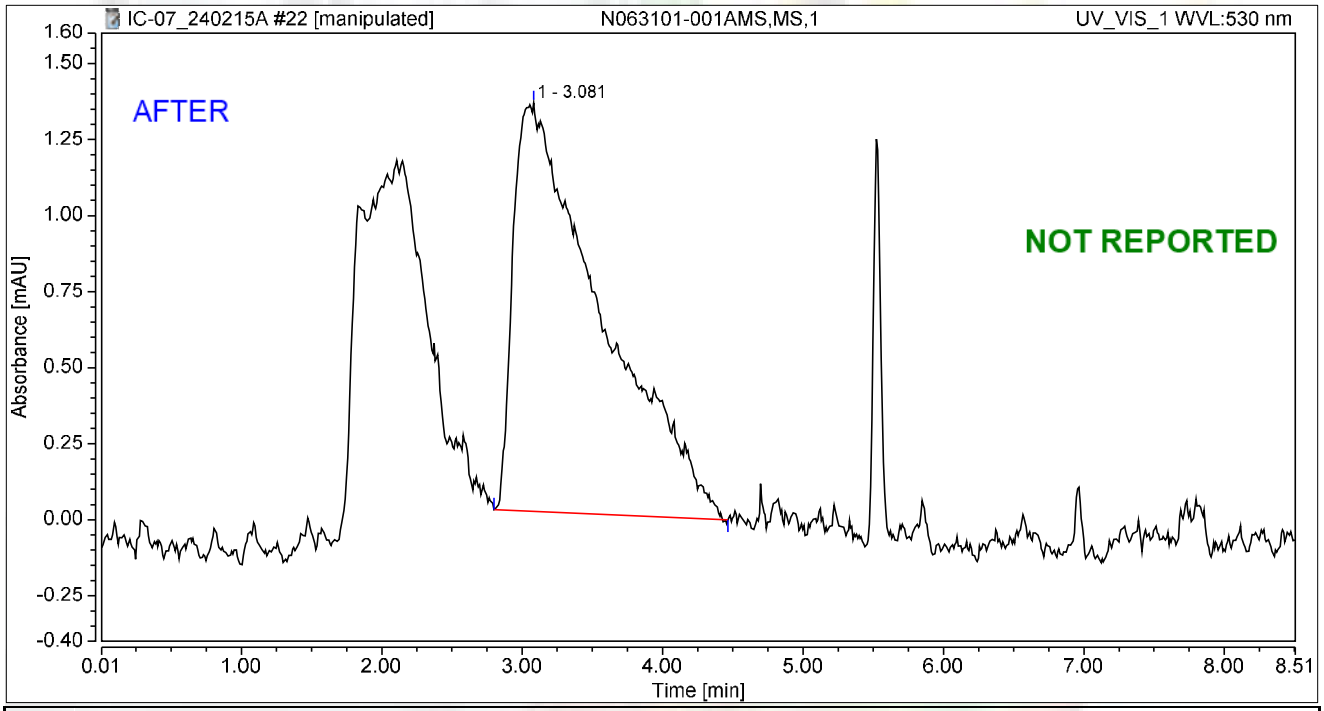
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063101-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 12:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

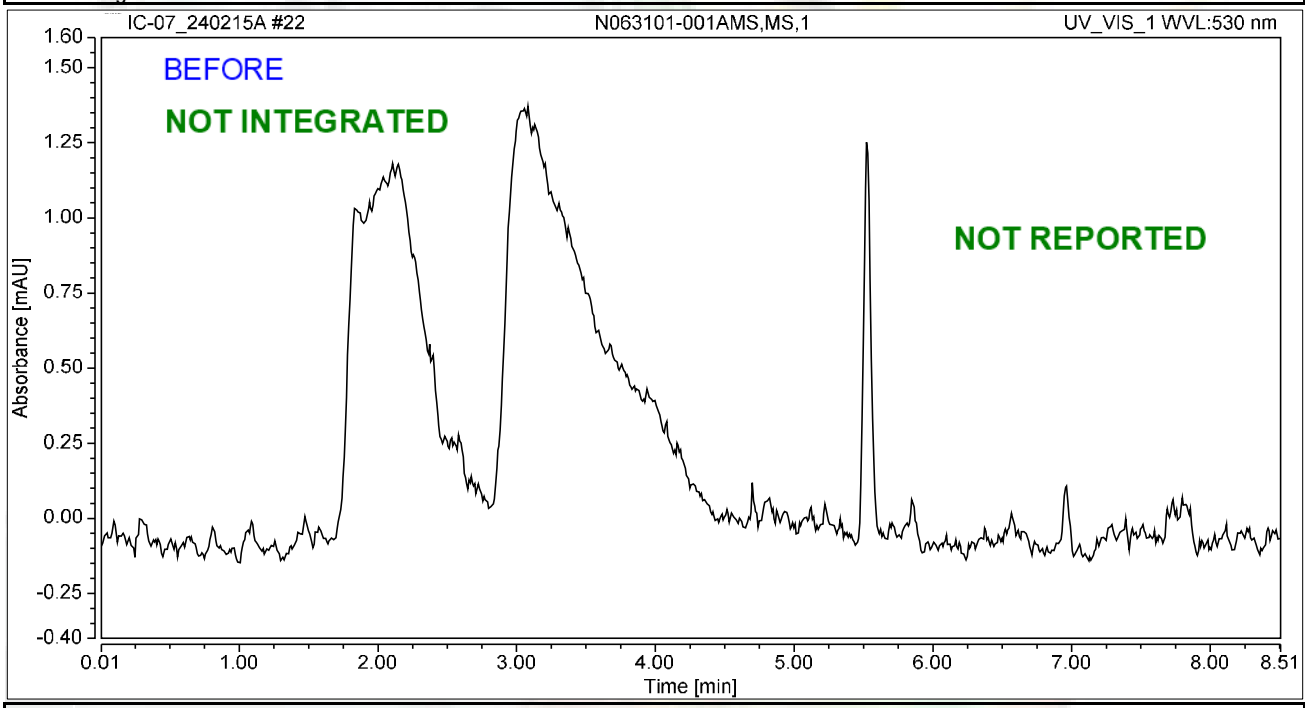
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.081	0.970	1.344	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.970**	**1.344**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063101-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 12:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

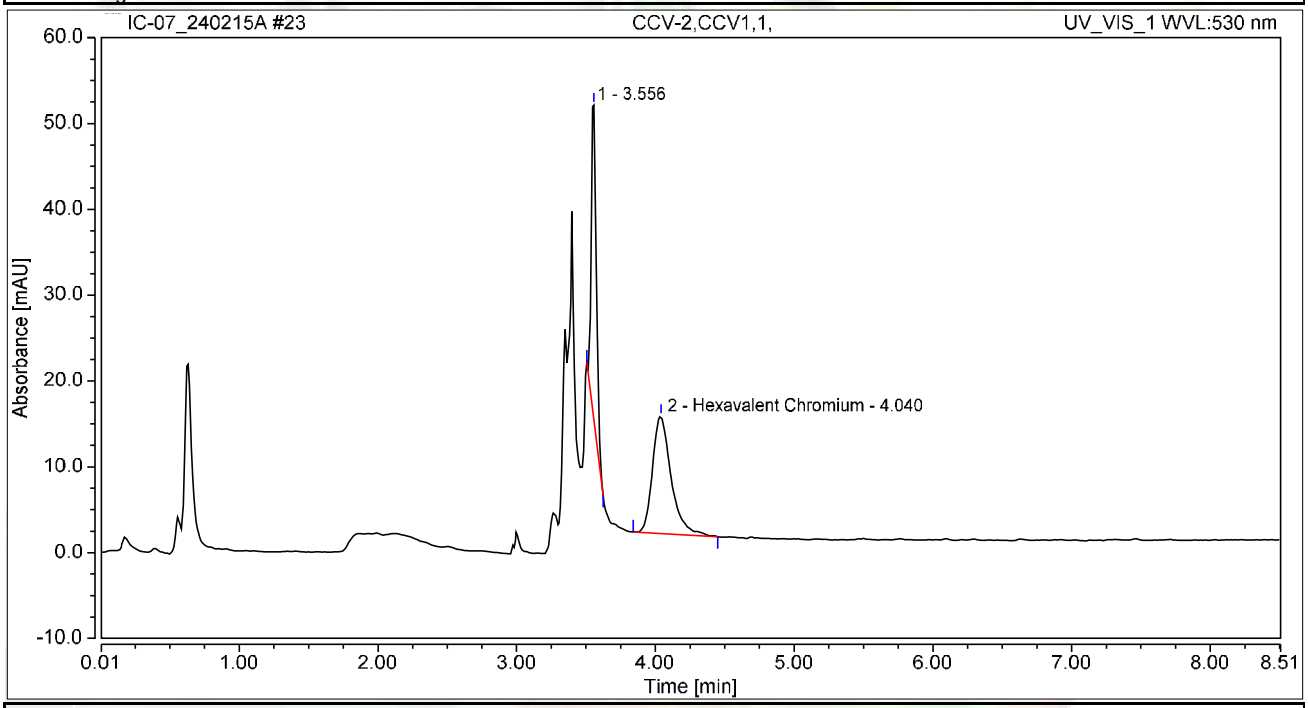
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 12:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

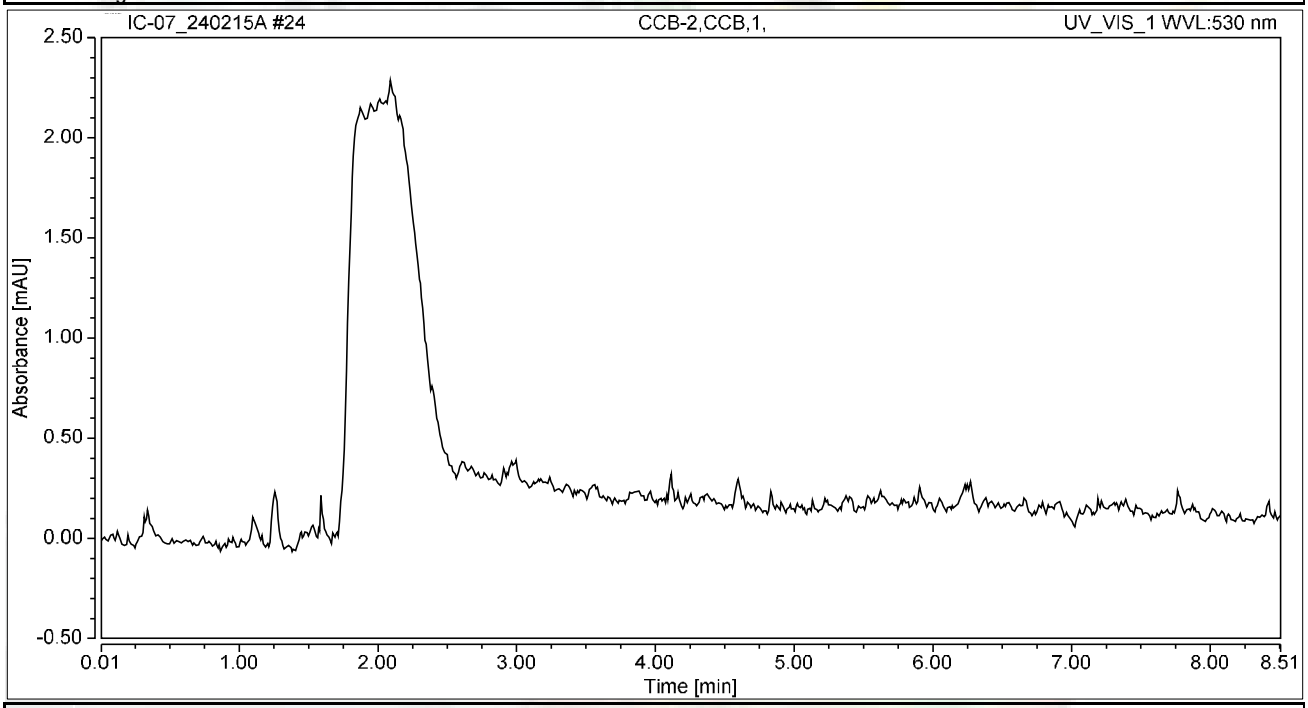
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.556	1.502	36.600	41.39	72.85	n.a.
2	Hexavalent Chromium	4.040	2.127	13.642	58.61	27.15	9.8882
Total:			**3.629**	**50.241**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 12:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

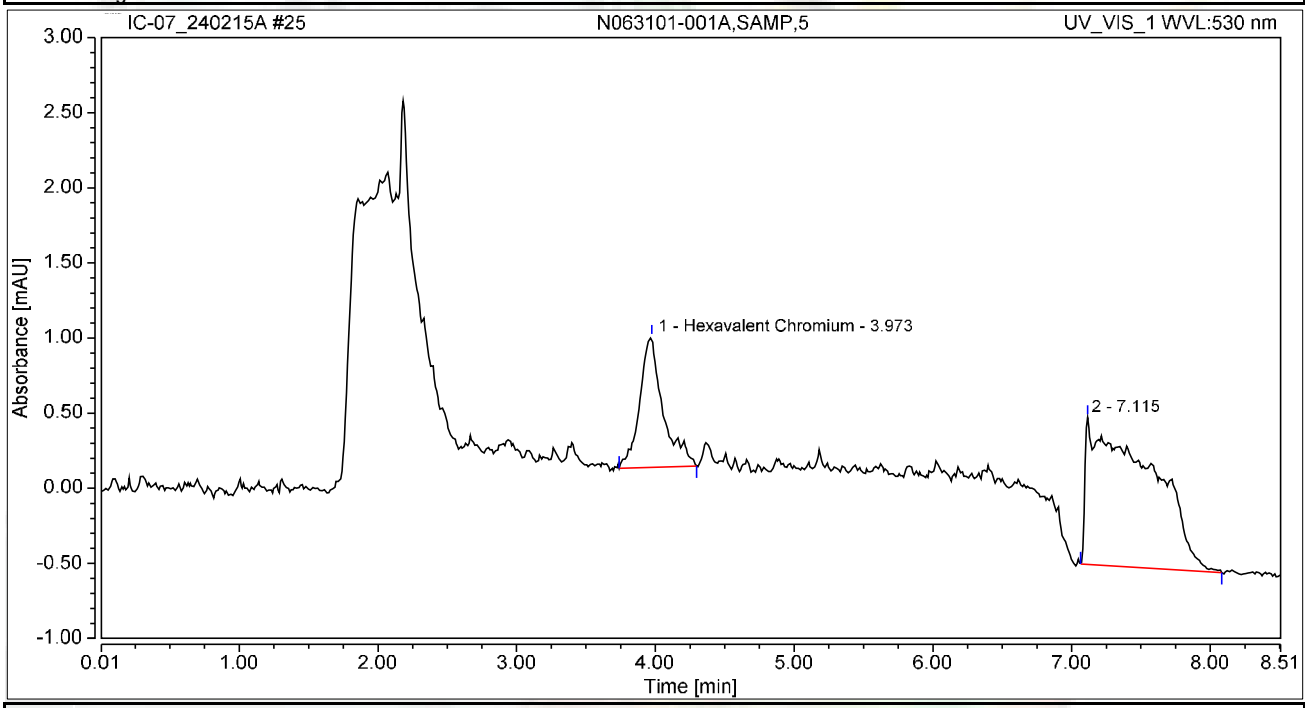
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063101-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 12:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

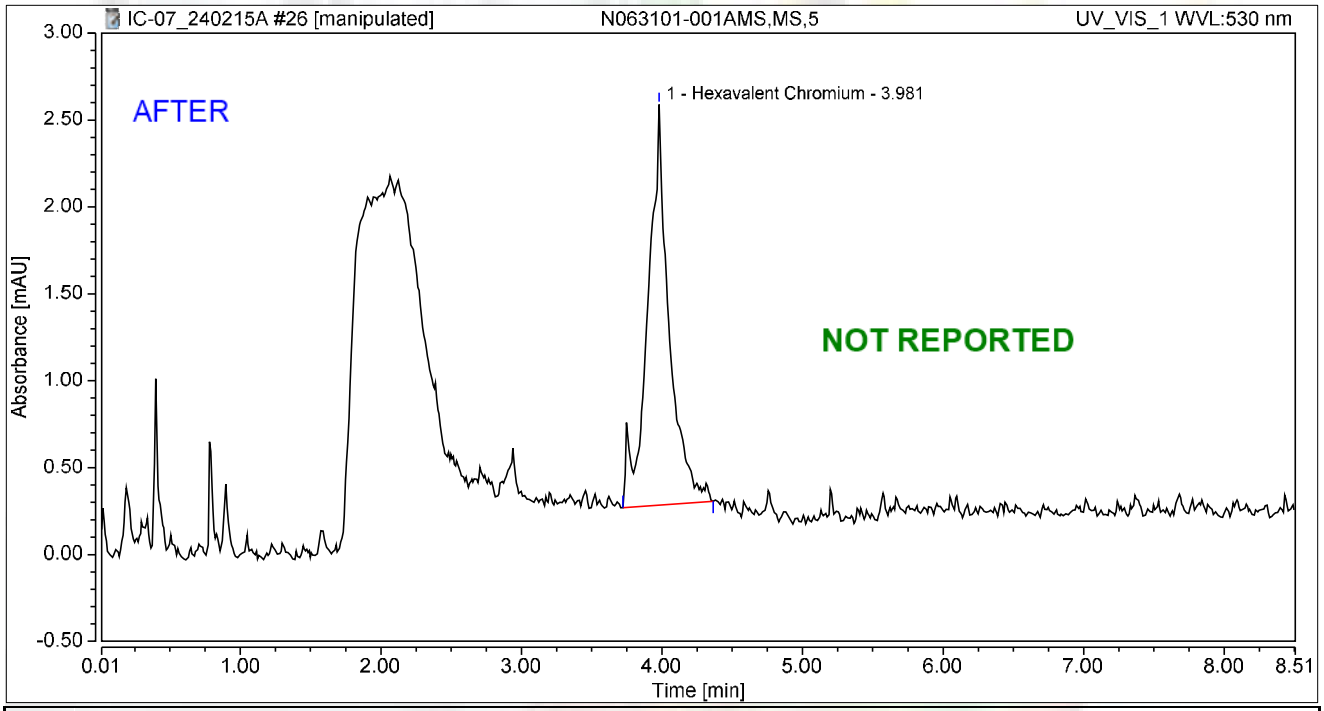
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.168	0.867	24.37	47.00	0.7831
2		7.115	0.523	0.978	75.63	53.00	n.a.
Total:			**0.691**	**1.845**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063101-001AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 13:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

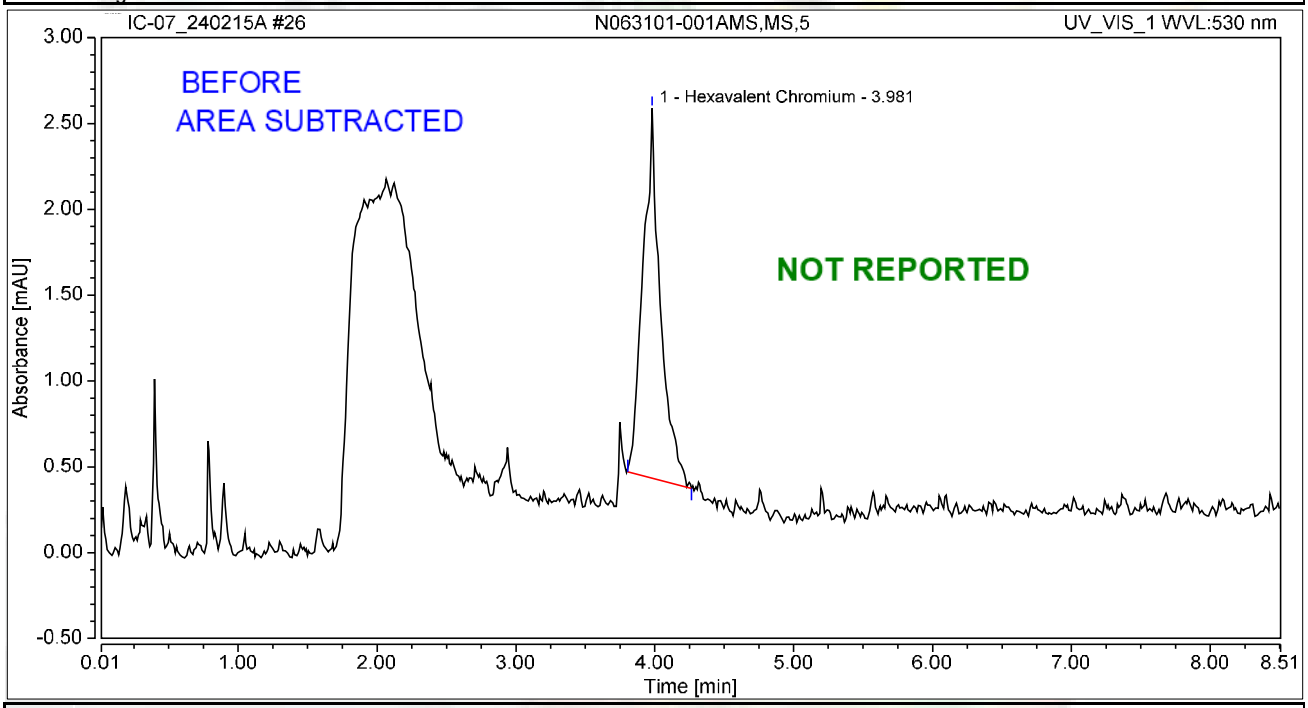
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.403	2.304	100.00	100.00	1.8728
Total:			**0.403**	**2.304**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063101-001AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 13:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

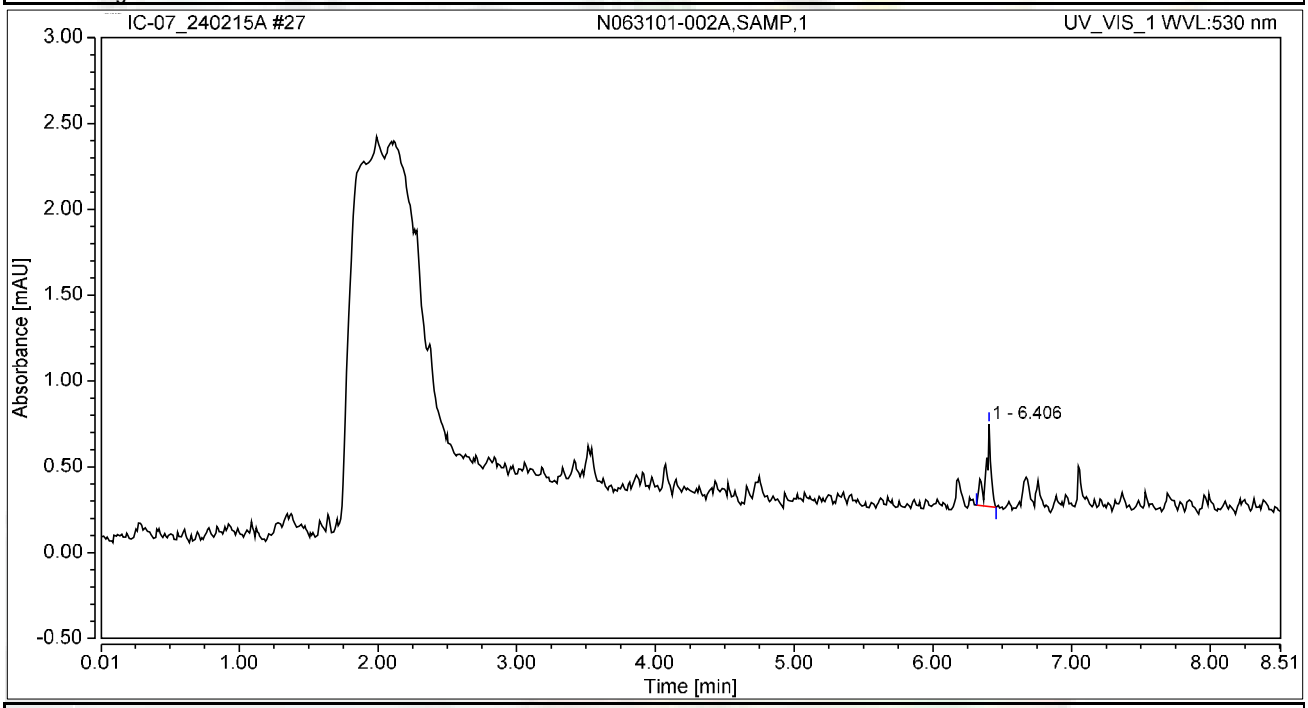
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.314	2.154	100.00	100.00	1.4596
Total:			**0.314**	**2.154**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063101-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 13:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

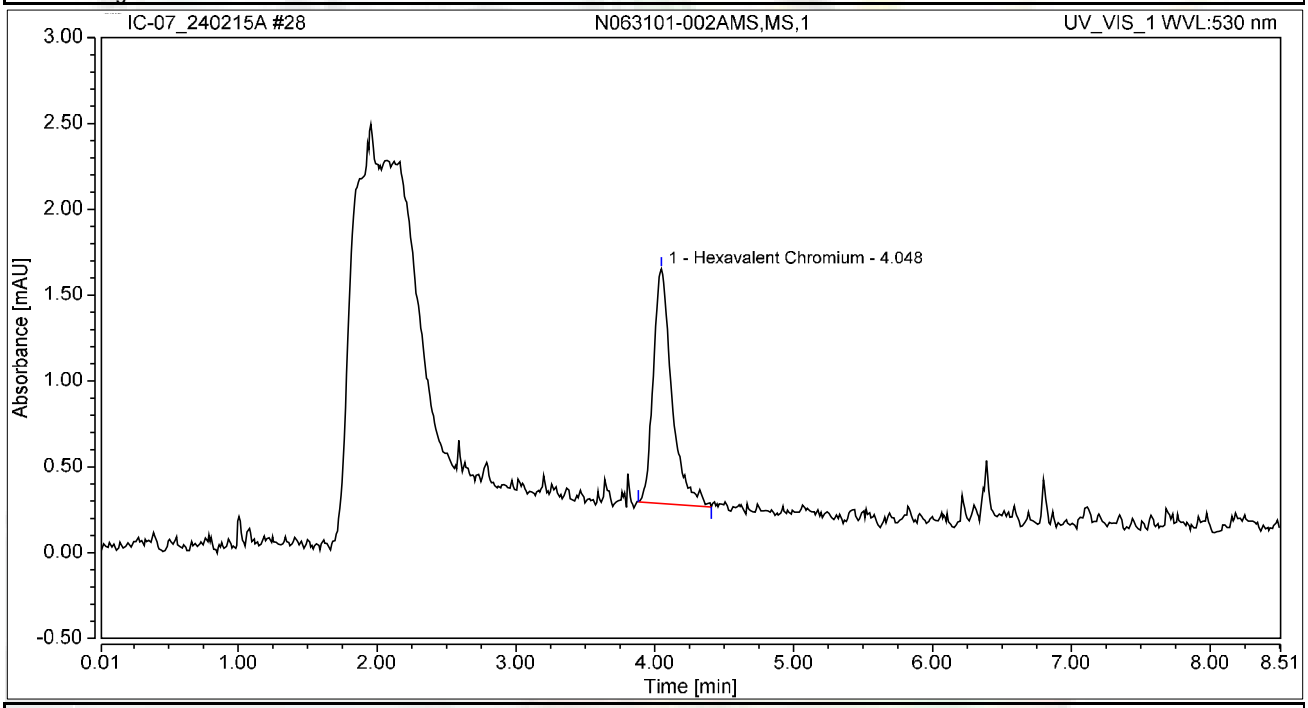
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		6.406	0.019	0.481	100.00	100.00	n.a.
Total:			**0.019**	**0.481**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063101-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 13:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

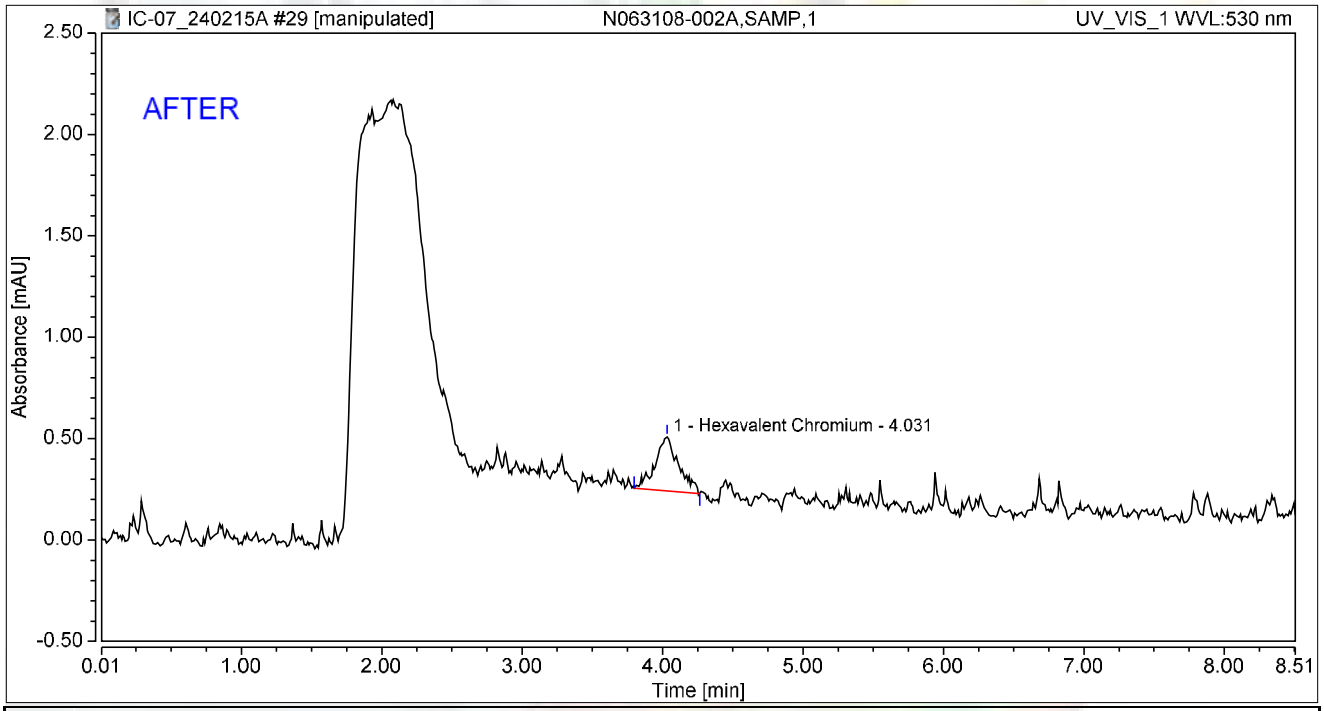
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.212	1.367	100.00	100.00	0.9840
Total:			**0.212**	**1.367**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063108-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 14:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.052	0.268	100.00	100.00	0.2400
Total:			**0.052**	**0.268**	**100.00**	**100.00**	

Reviewed by:

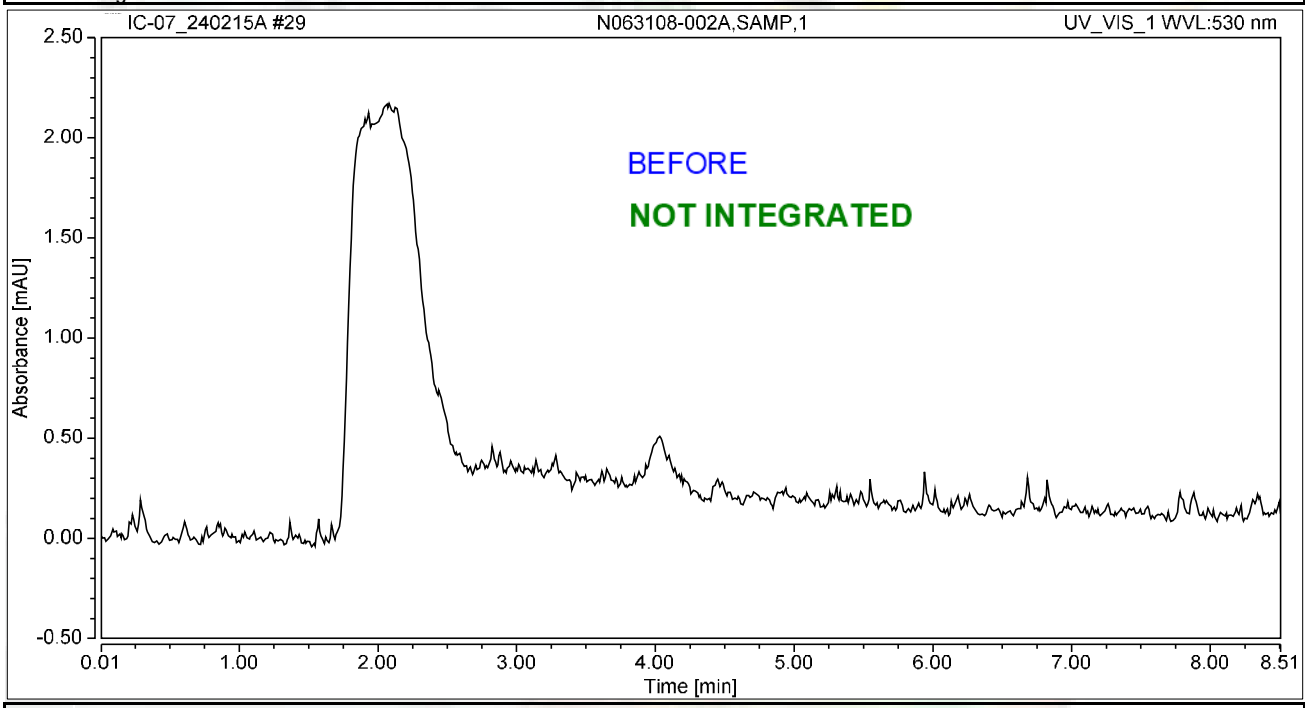
JRB 2/25/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063108-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 14:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

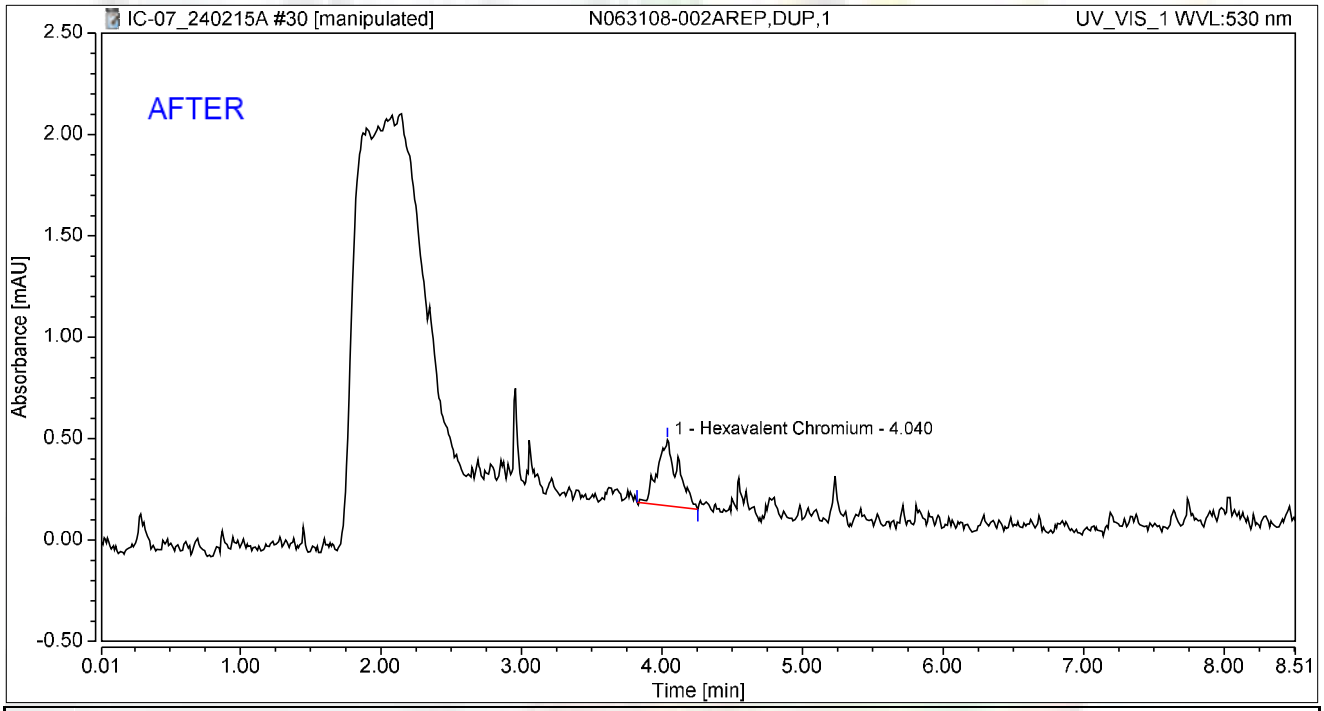
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063108-002AREP,DUP,1**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 14:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.055	0.325	100.00	100.00	0.2569
Total:			**0.055**	**0.325**	**100.00**	**100.00**	

Reviewed by:

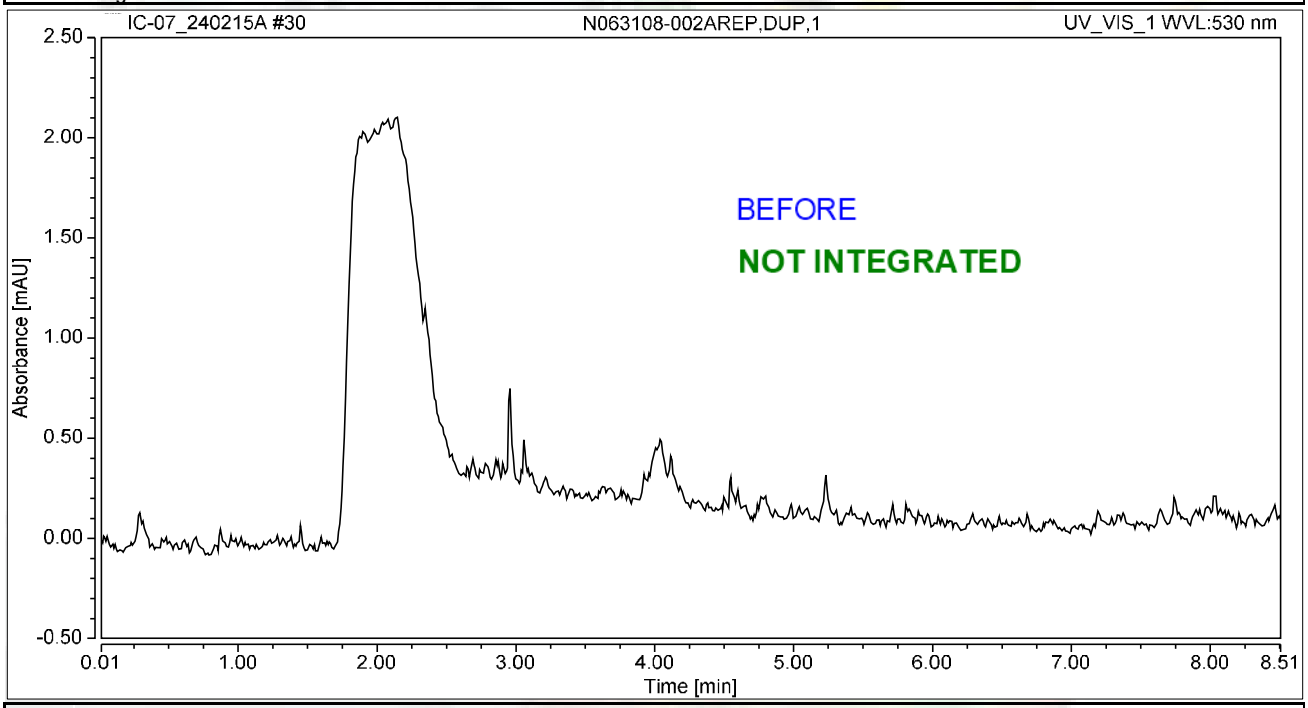
JRB 2/25/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063108-002AREP,DUP,1**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 14:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

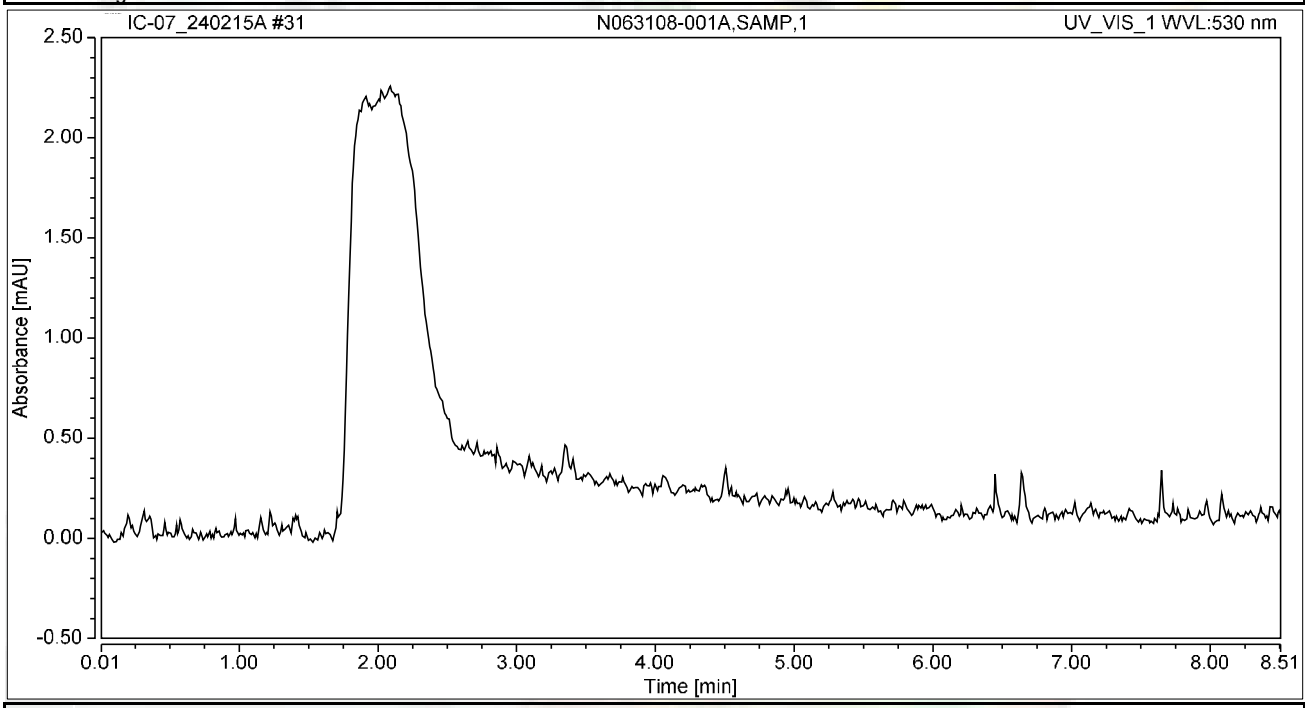
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063108-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 14:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

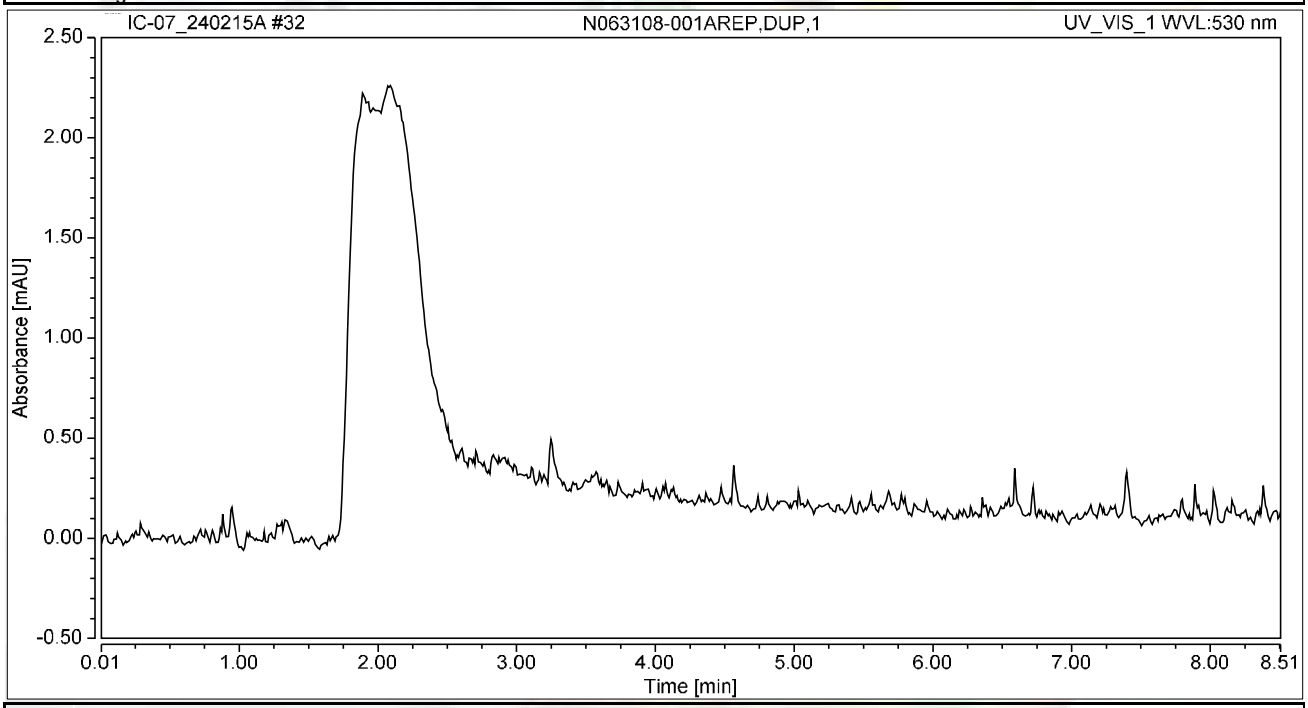
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063108-001AREP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 14:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

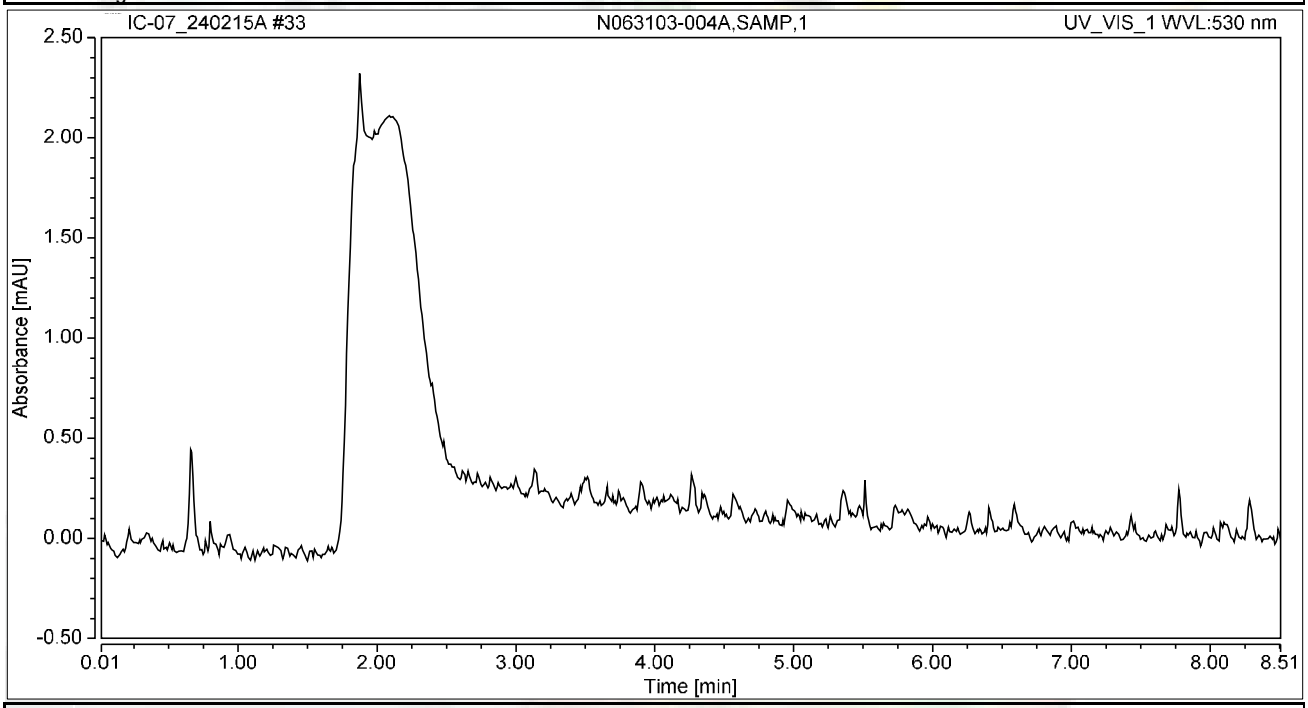
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-004A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 14:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

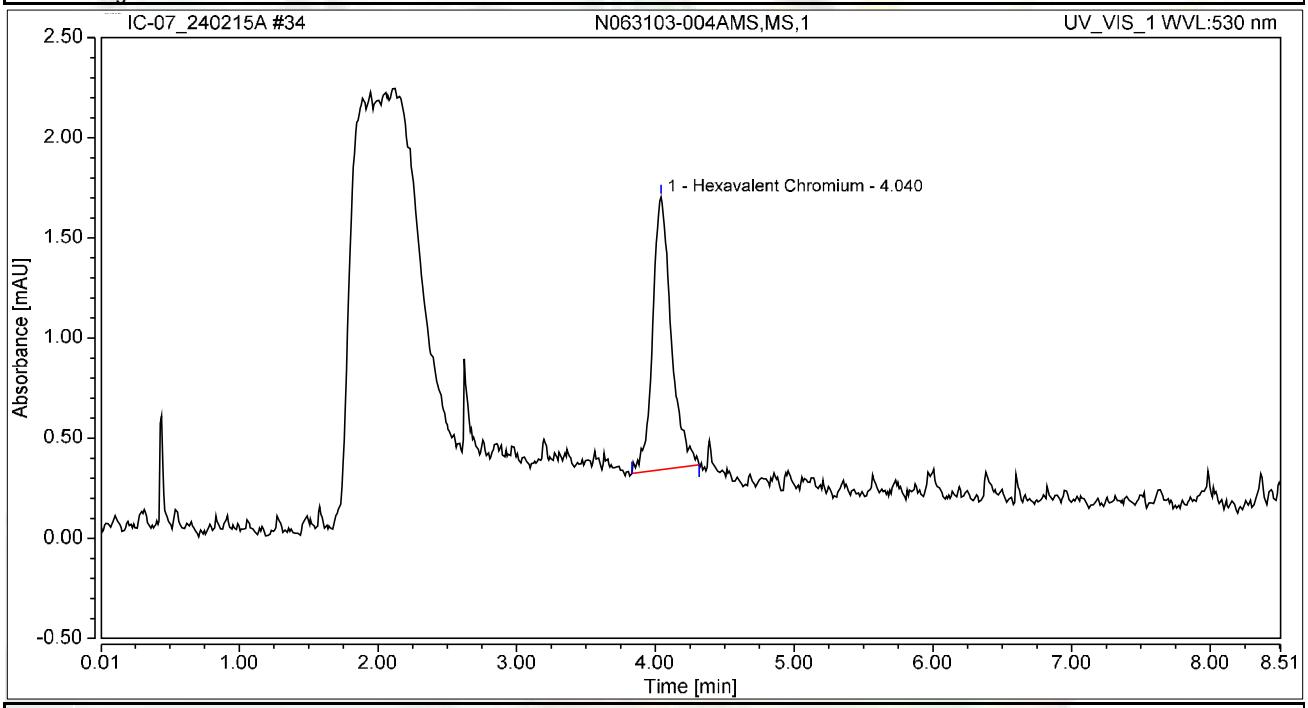
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 14:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

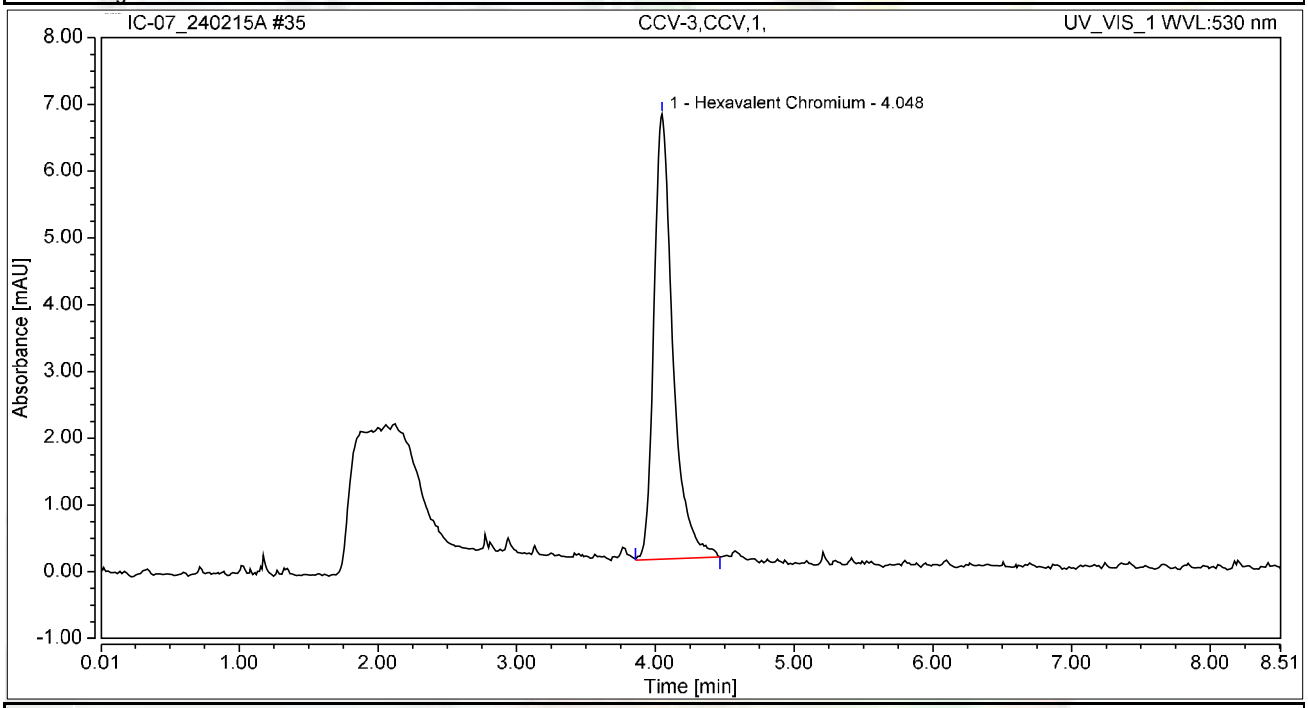
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.212	1.362	100.00	100.00	0.9860
Total:			**0.212**	**1.362**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 15:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

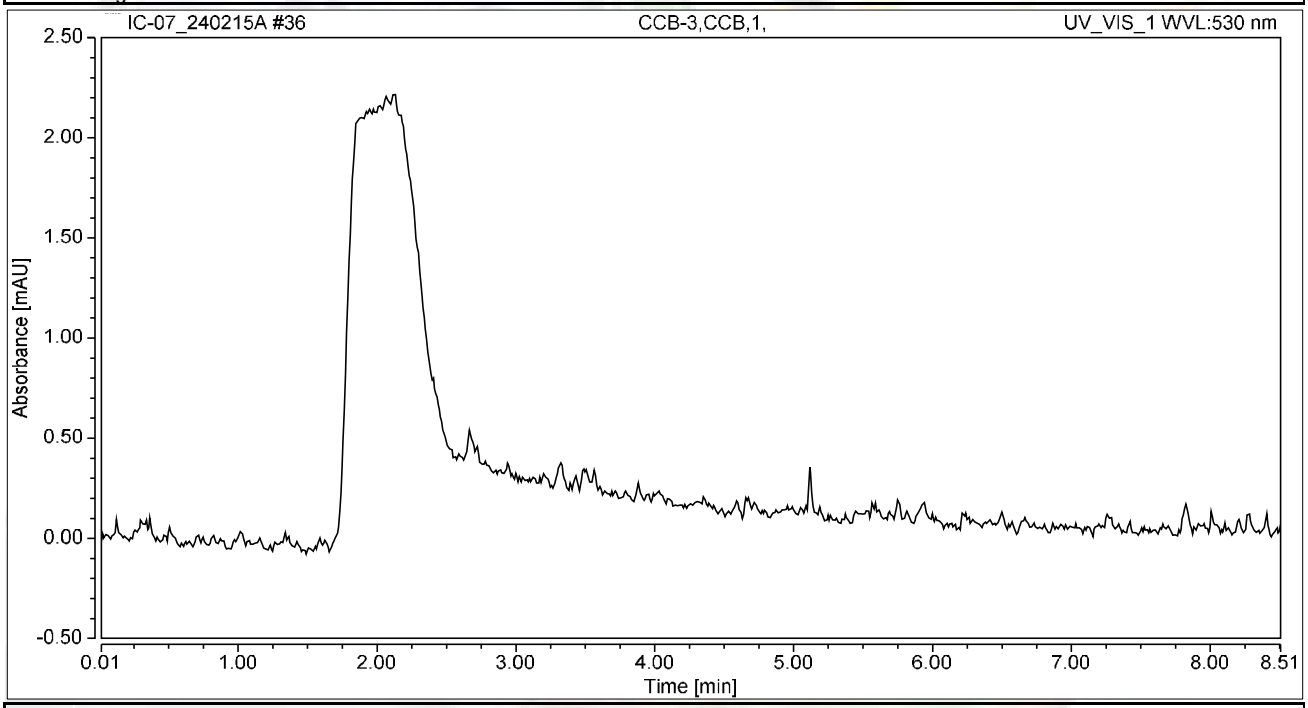
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.058	6.664	100.00	100.00	4.9165
Total:			**1.058**	**6.664**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 15:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

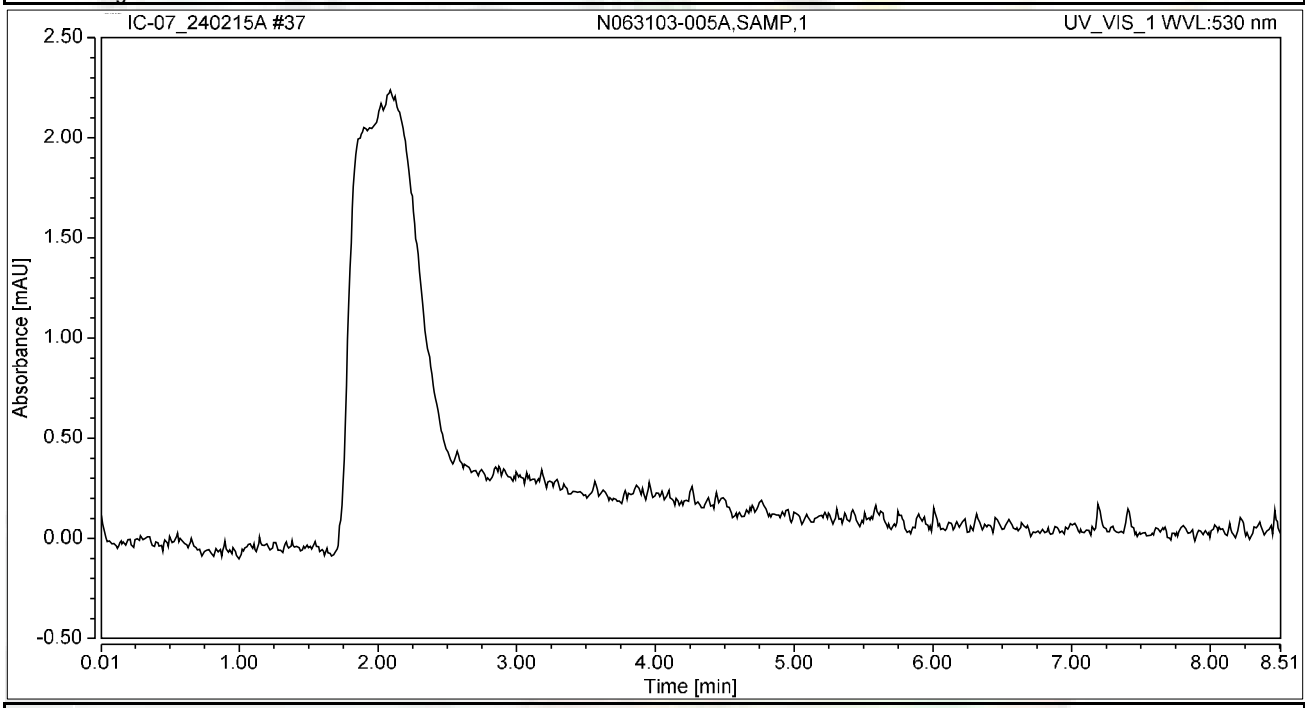
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 15:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

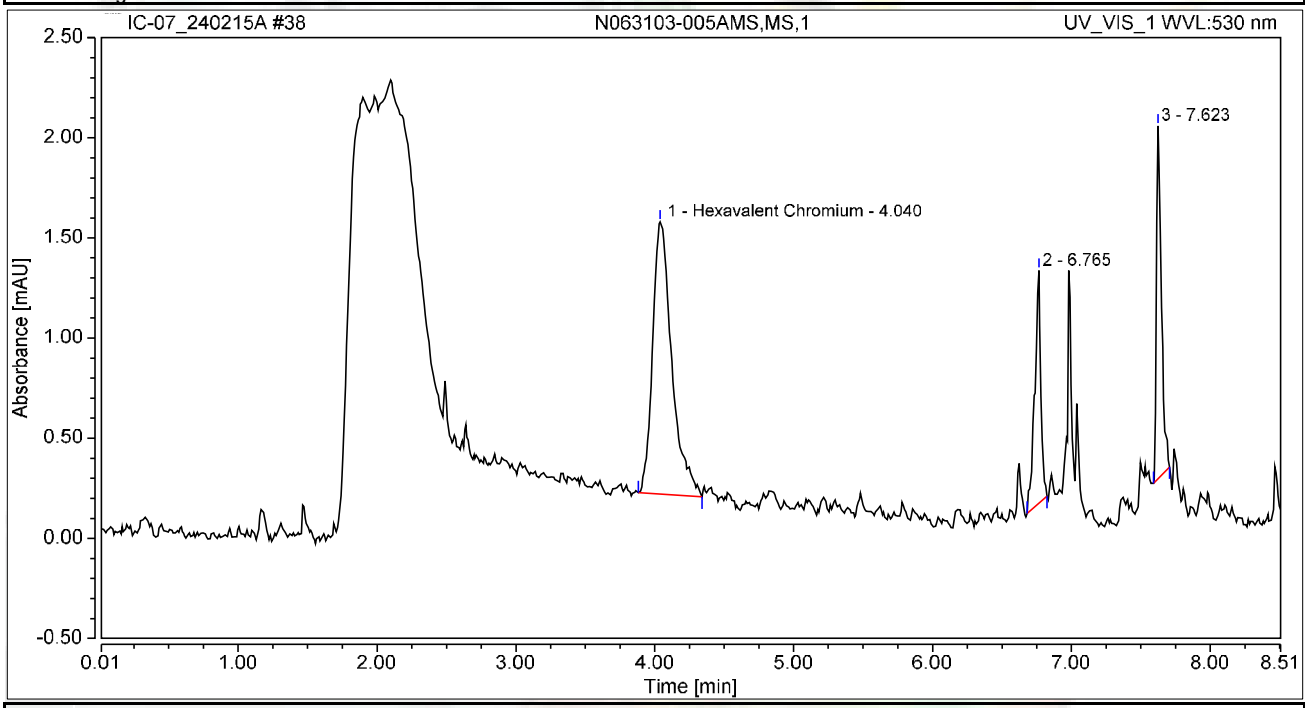
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-005AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 15:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

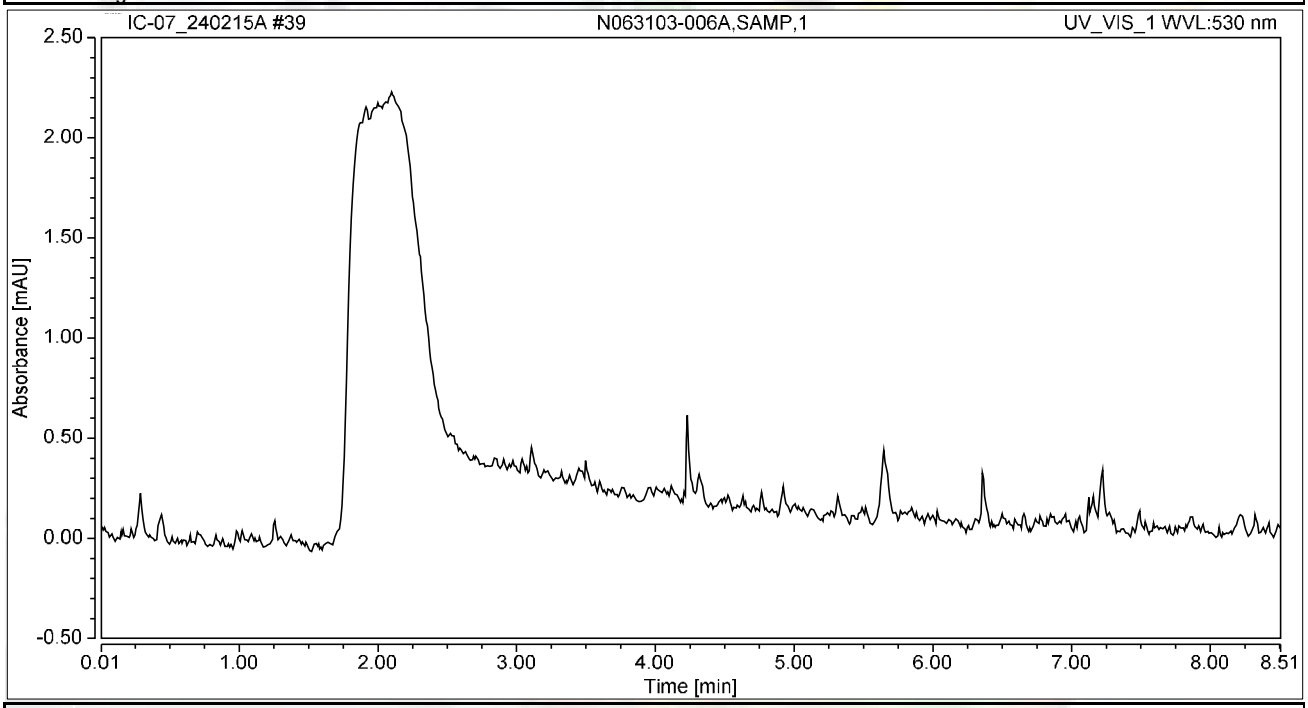
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.217	1.358	62.40	31.73	1.0102
2		6.765	0.059	1.162	17.03	27.15	n.a.
3		7.623	0.072	1.761	20.57	41.12	n.a.
Total:			**0.348**	**4.281**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 15:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

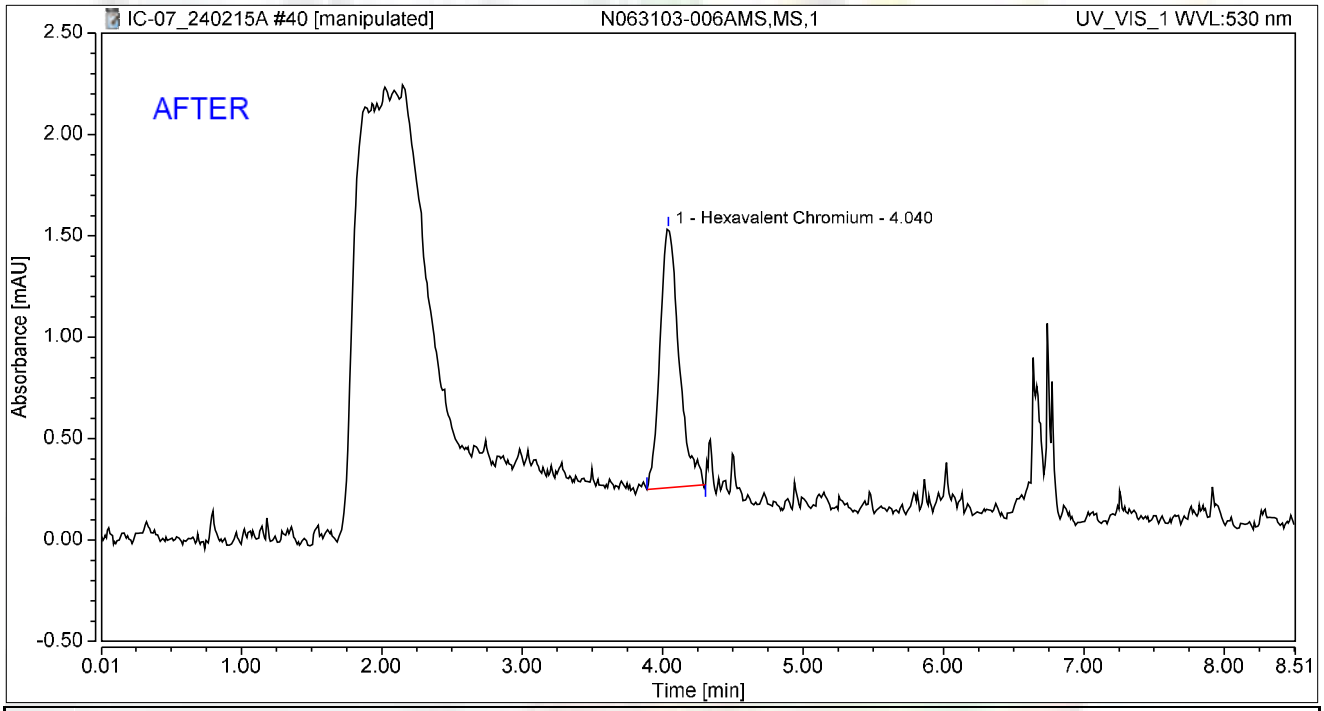
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 15:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.201	1.276	100.00	100.00	0.9340
Total:			**0.201**	**1.276**	**100.00**	**100.00**	

Reviewed by:

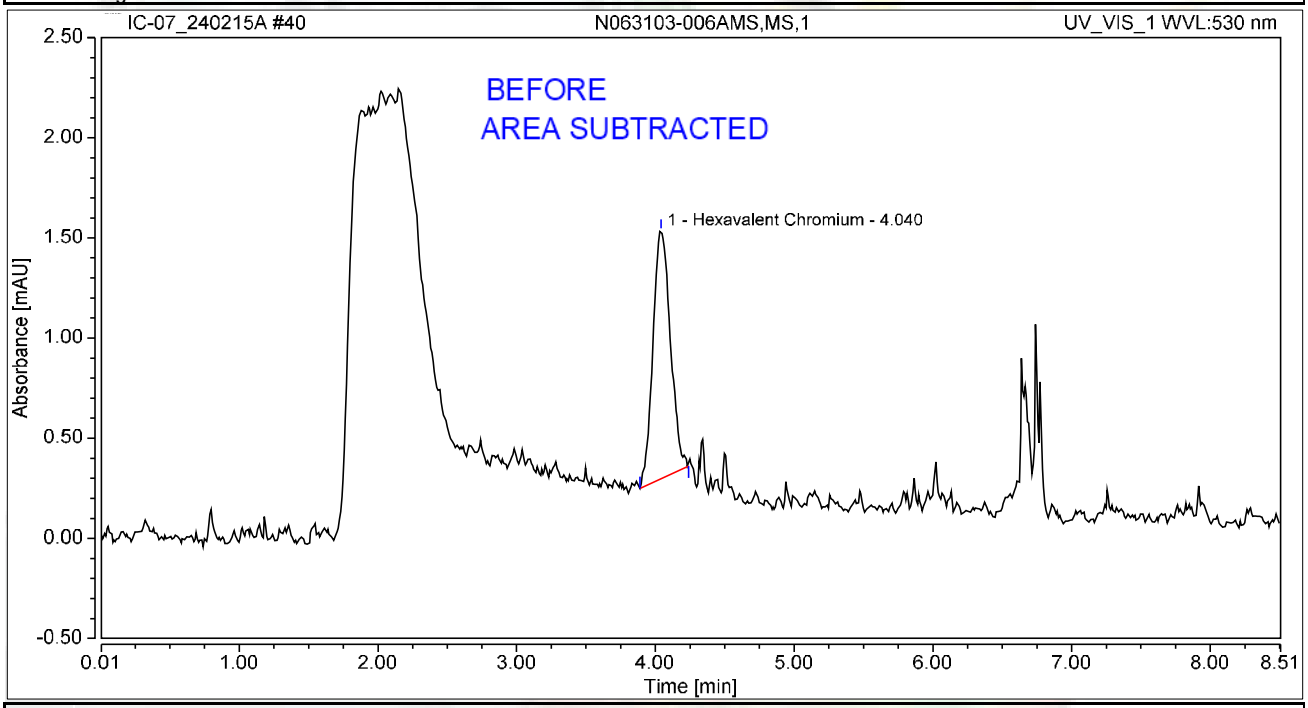
JRB 2/25/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063103-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 15:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

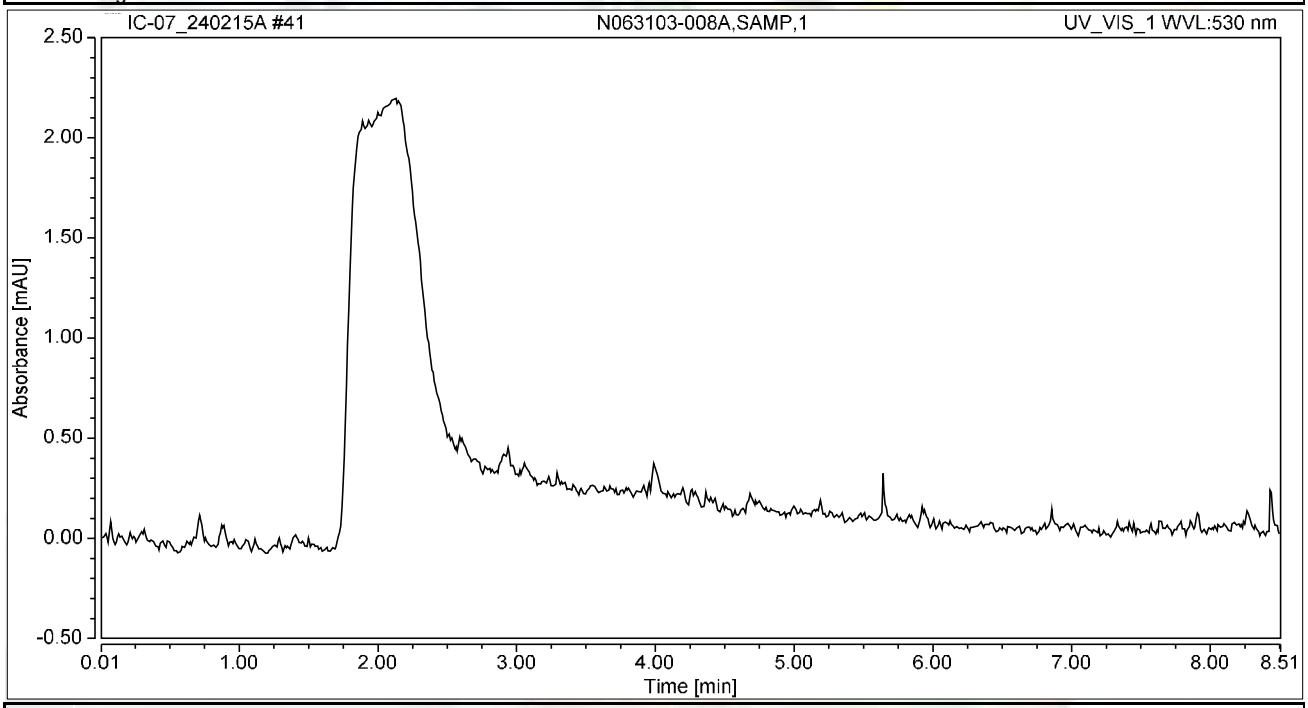
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.181	1.237	100.00	100.00	0.8403
Total:			**0.181**	**1.237**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 16:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

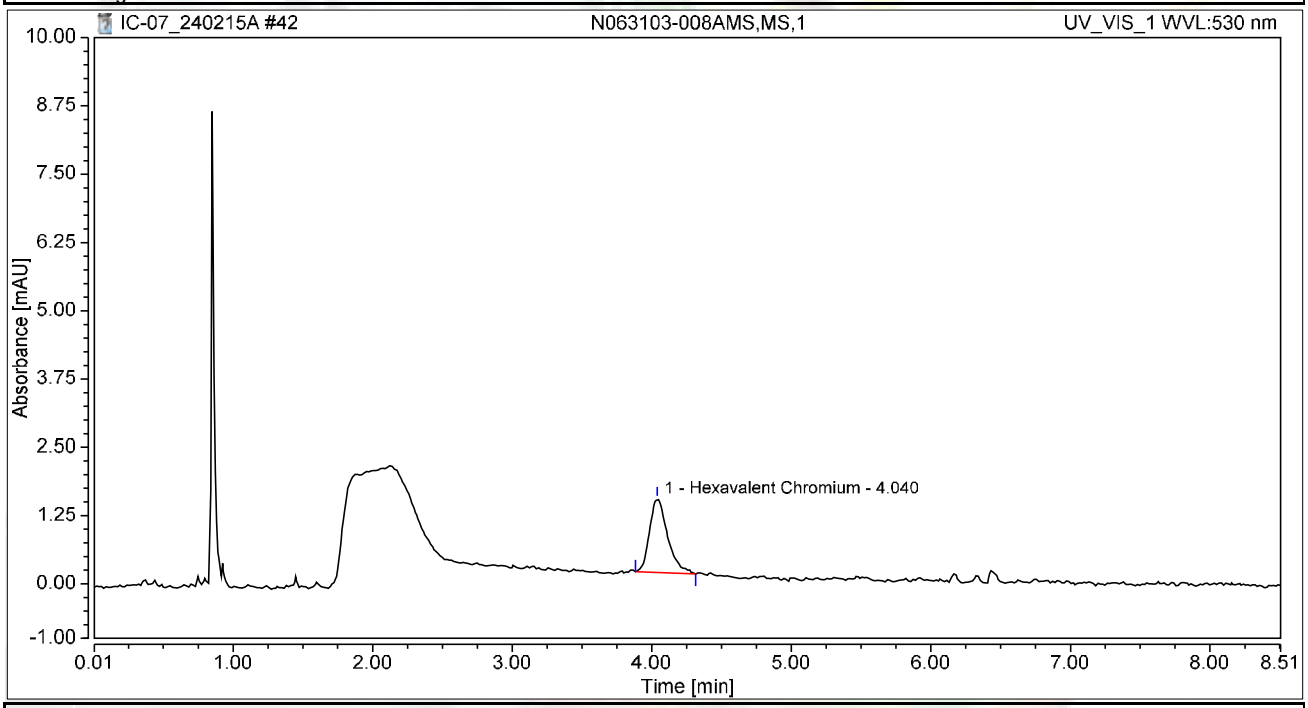
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 16:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

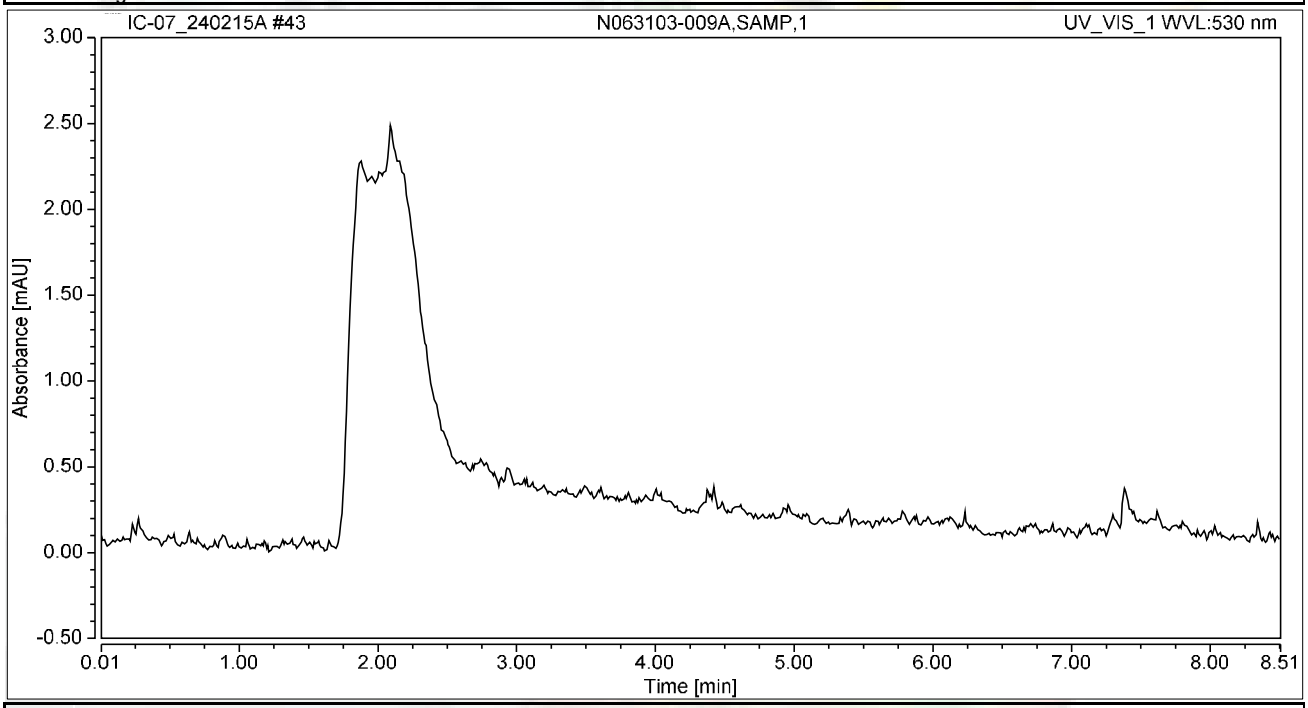
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.205	1.346	100.00	100.00	0.9509
Total:			**0.205**	**1.346**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 16:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

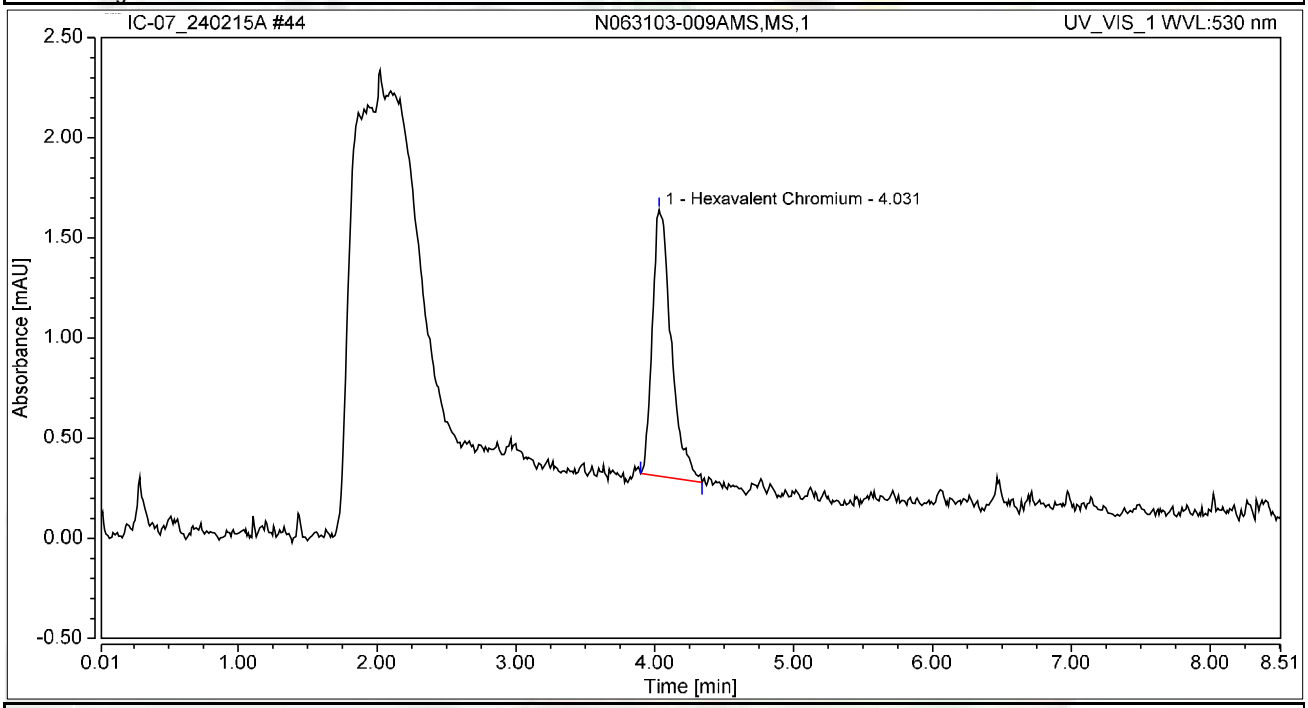
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-009AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 16:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

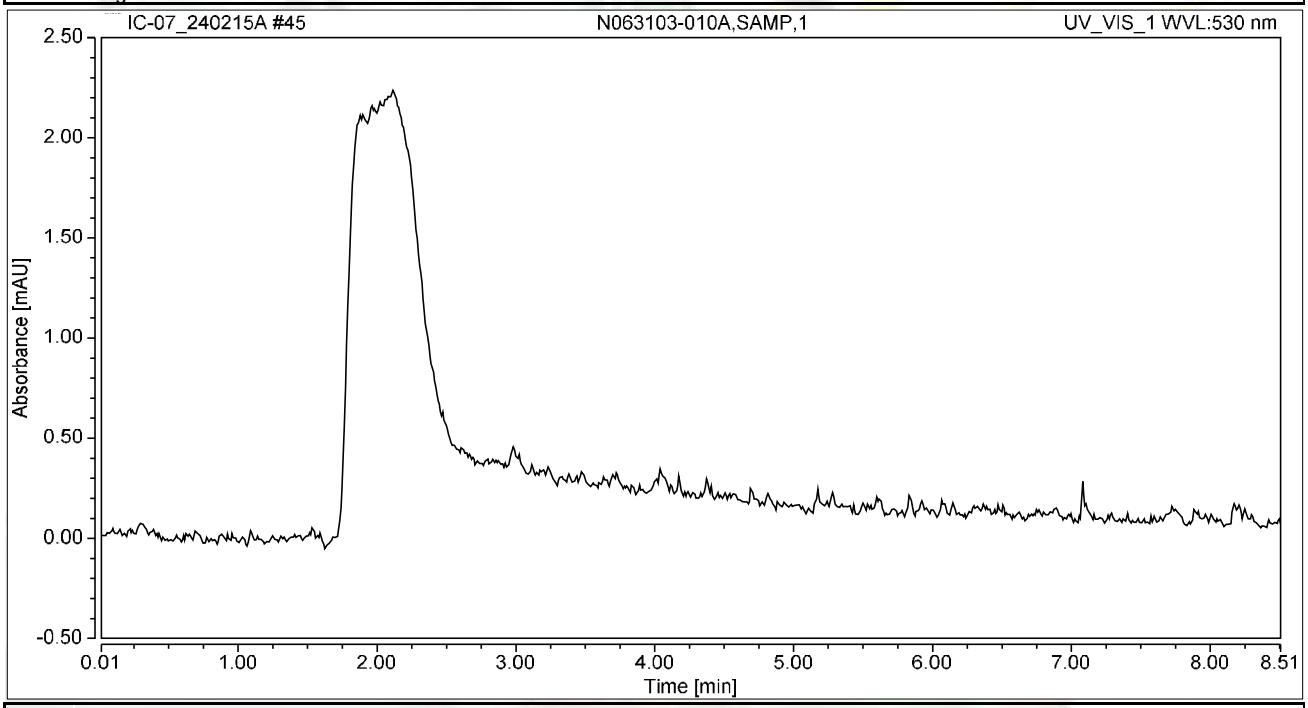
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.210	1.330	100.00	100.00	0.9745
Total:			**0.210**	**1.330**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-010A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 16:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

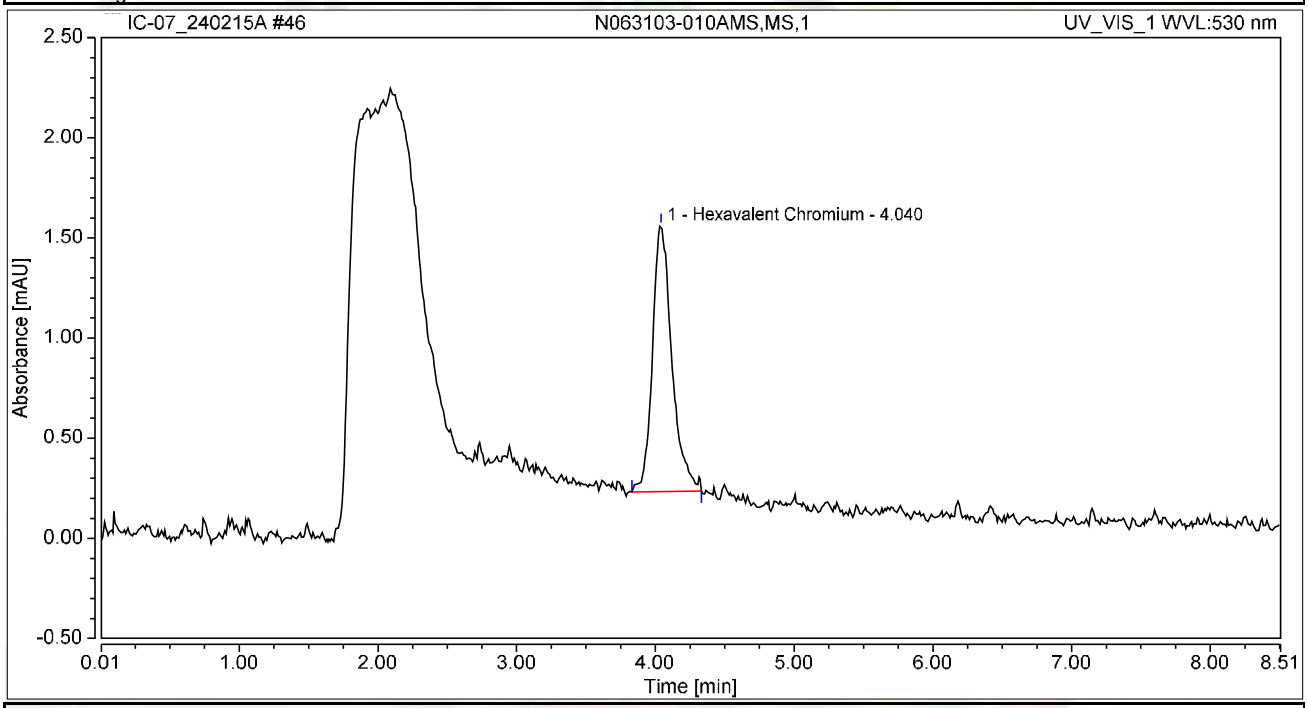
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-010AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 16:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

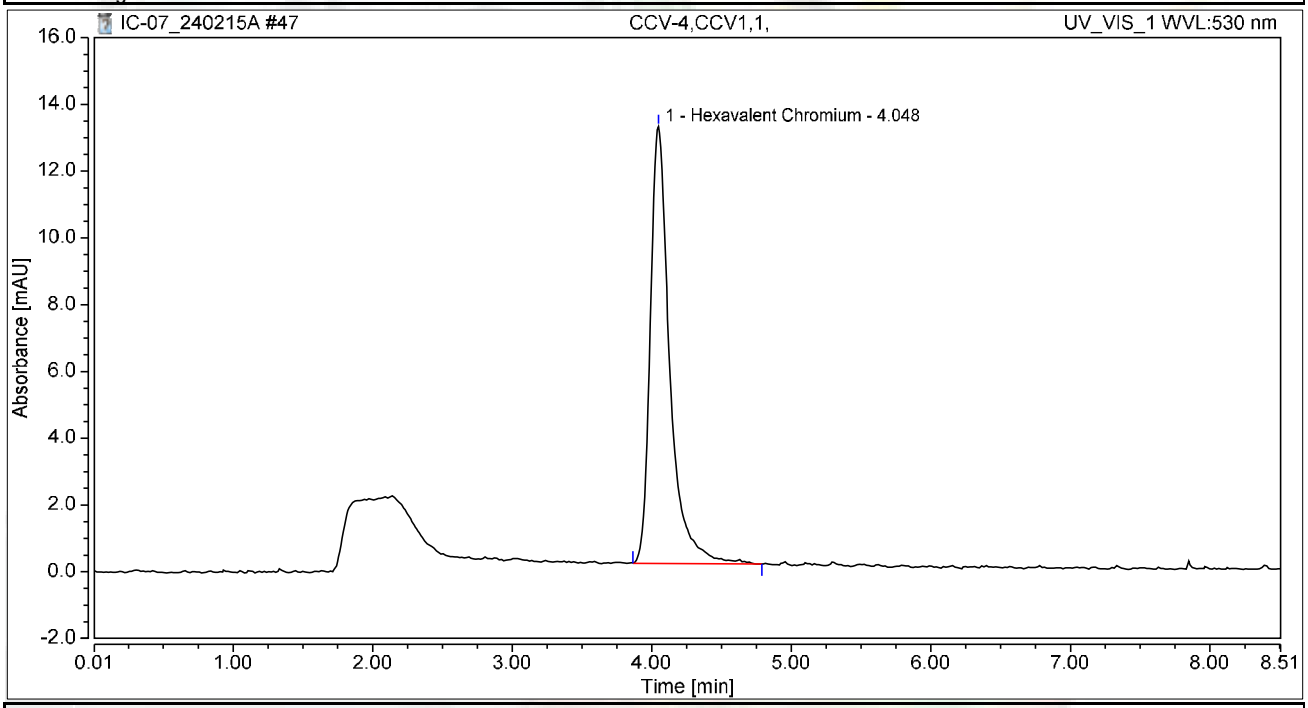
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.216	1.328	100.00	100.00	1.0033
Total:			**0.216**	**1.328**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 16:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

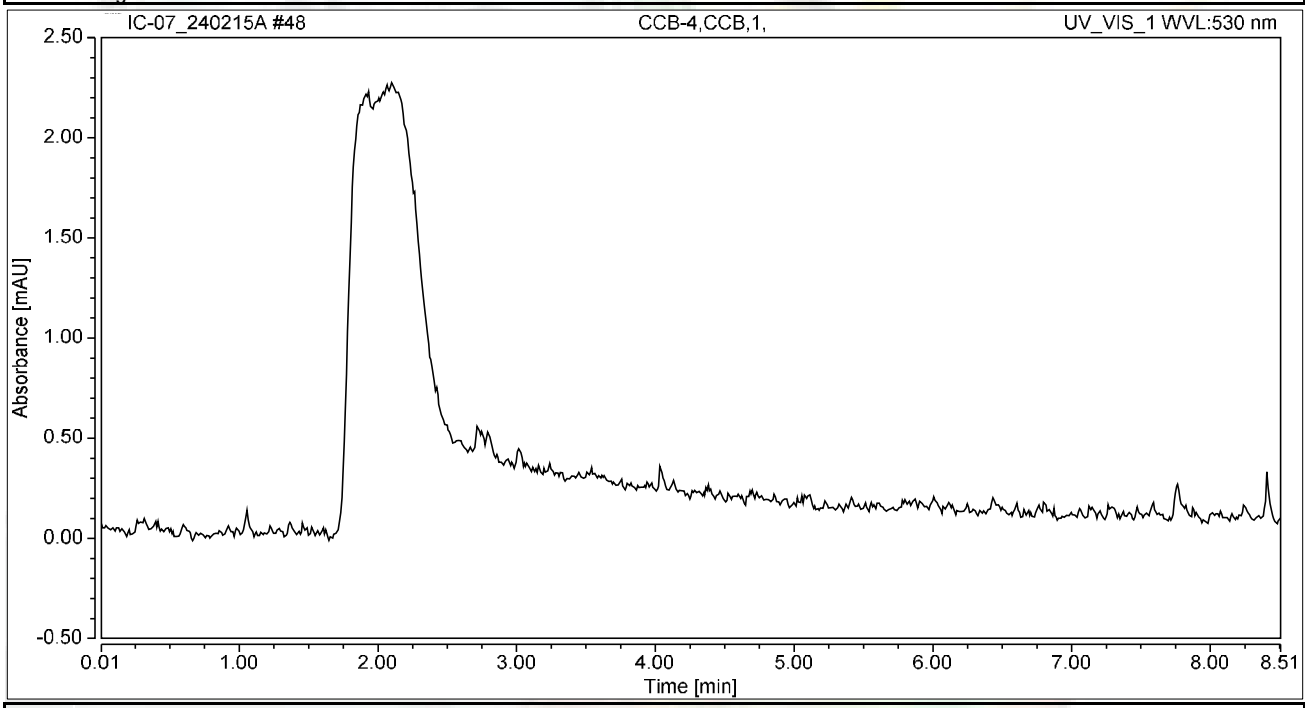
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.122	13.086	100.00	100.00	9.8660
Total:			**2.122**	**13.086**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 17:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

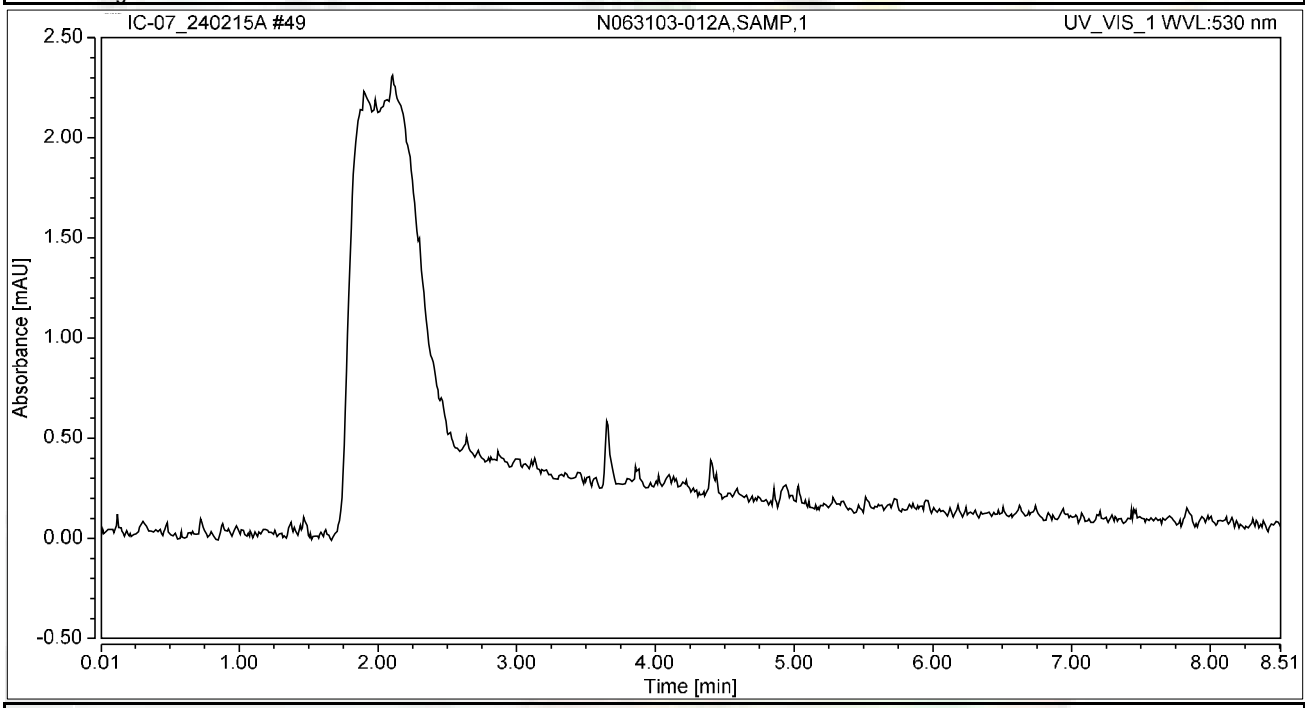
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-012A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 17:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

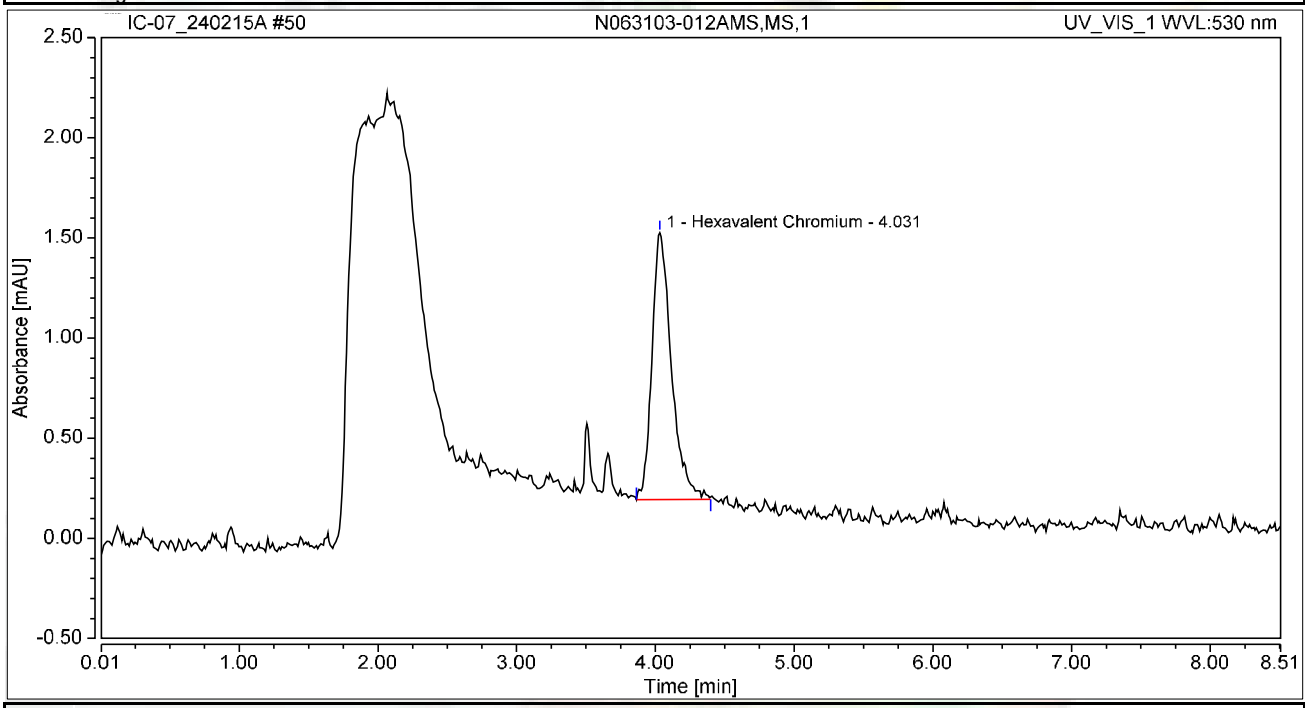
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-012AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 17:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

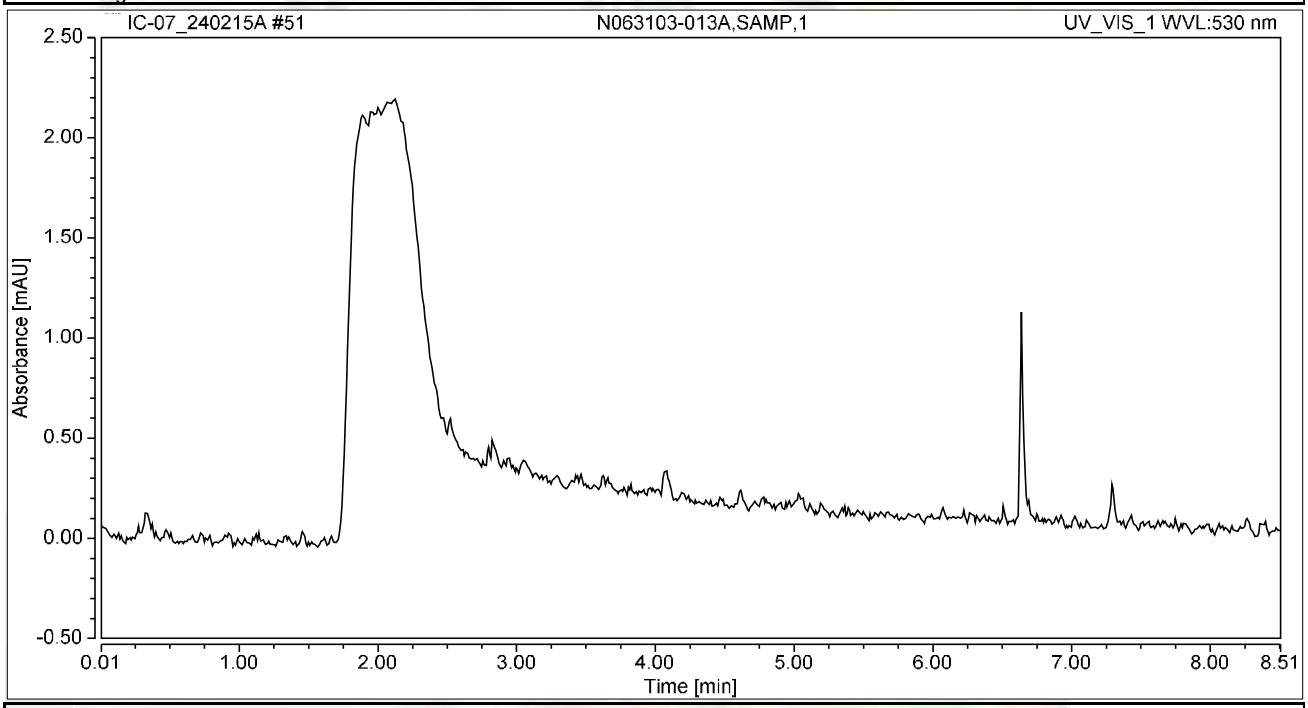
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.218	1.332	100.00	100.00	1.0123
Total:			**0.218**	**1.332**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-013A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 17:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

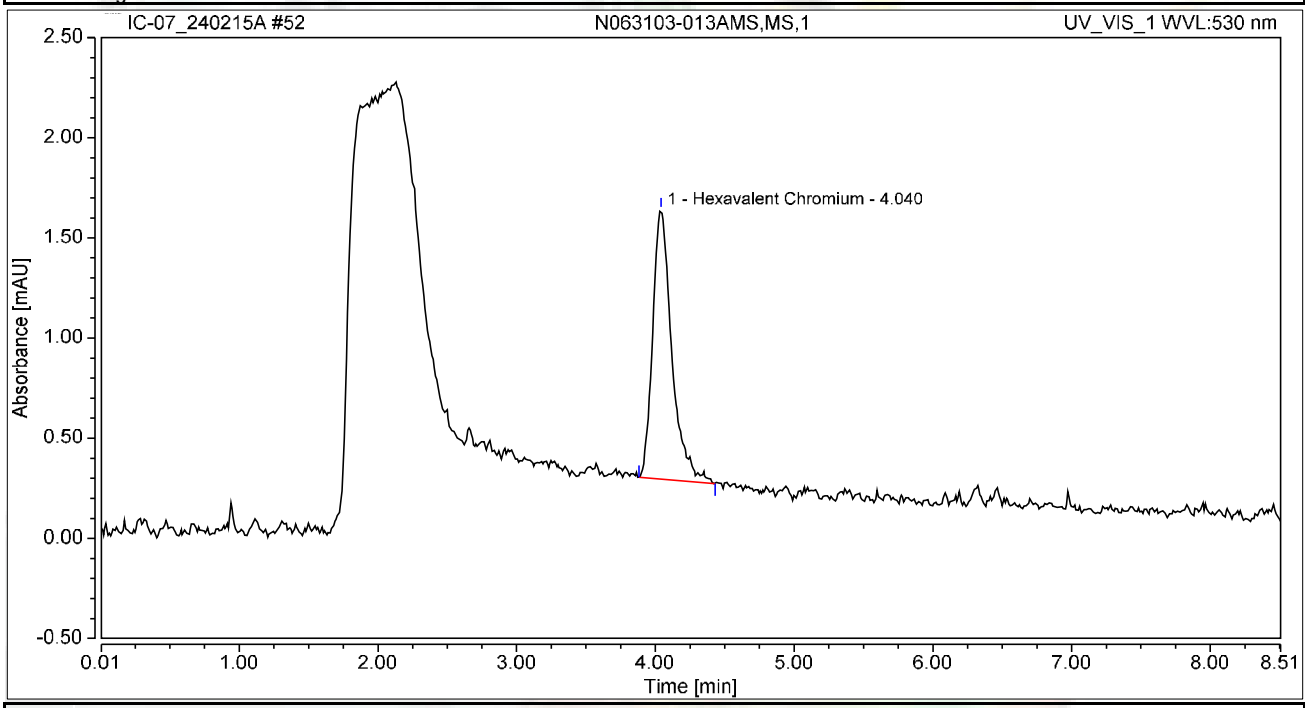
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-013AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 17:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

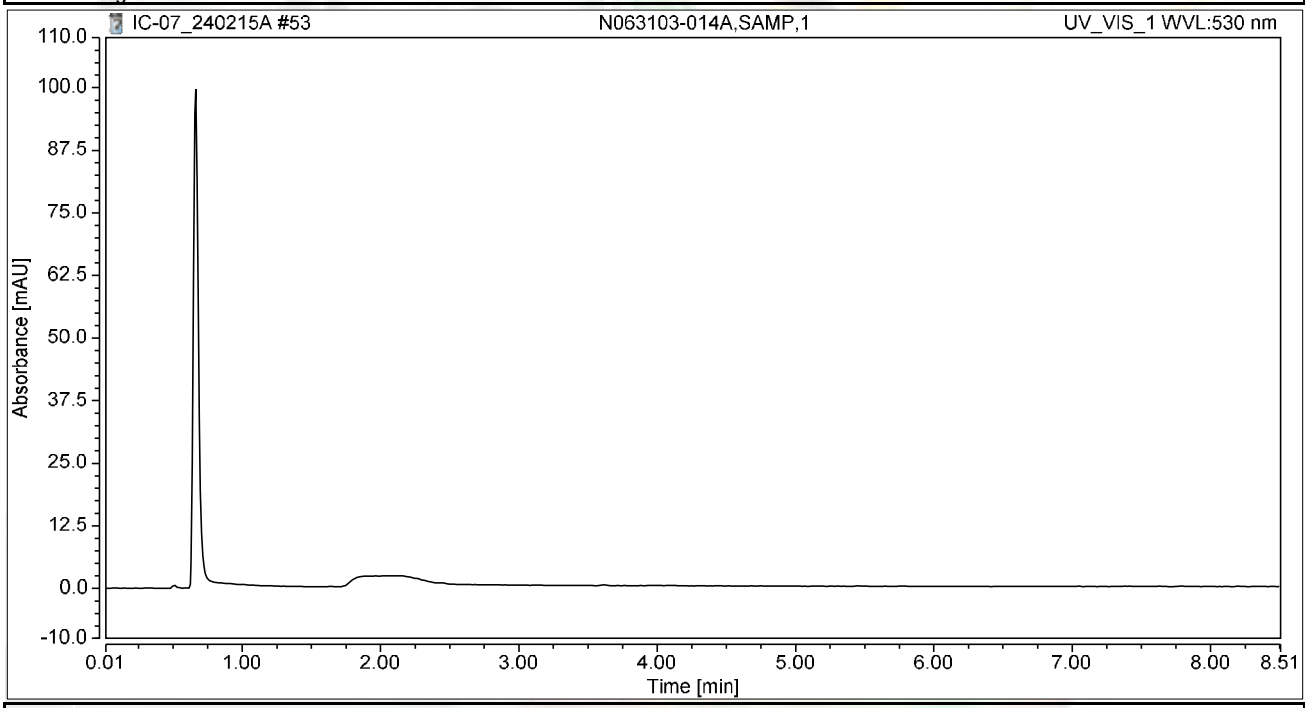
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.215	1.345	100.00	100.00	0.9986
Total:			**0.215**	**1.345**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-014A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 17:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

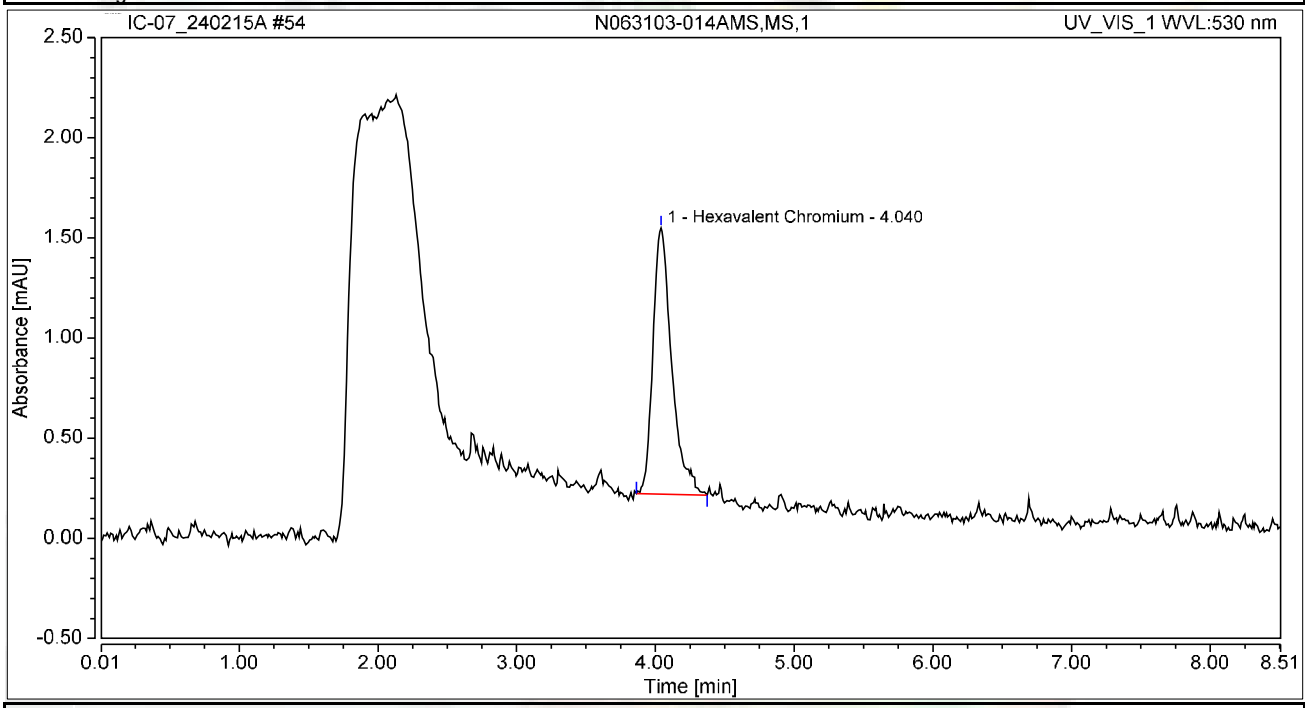
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-014AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 18:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

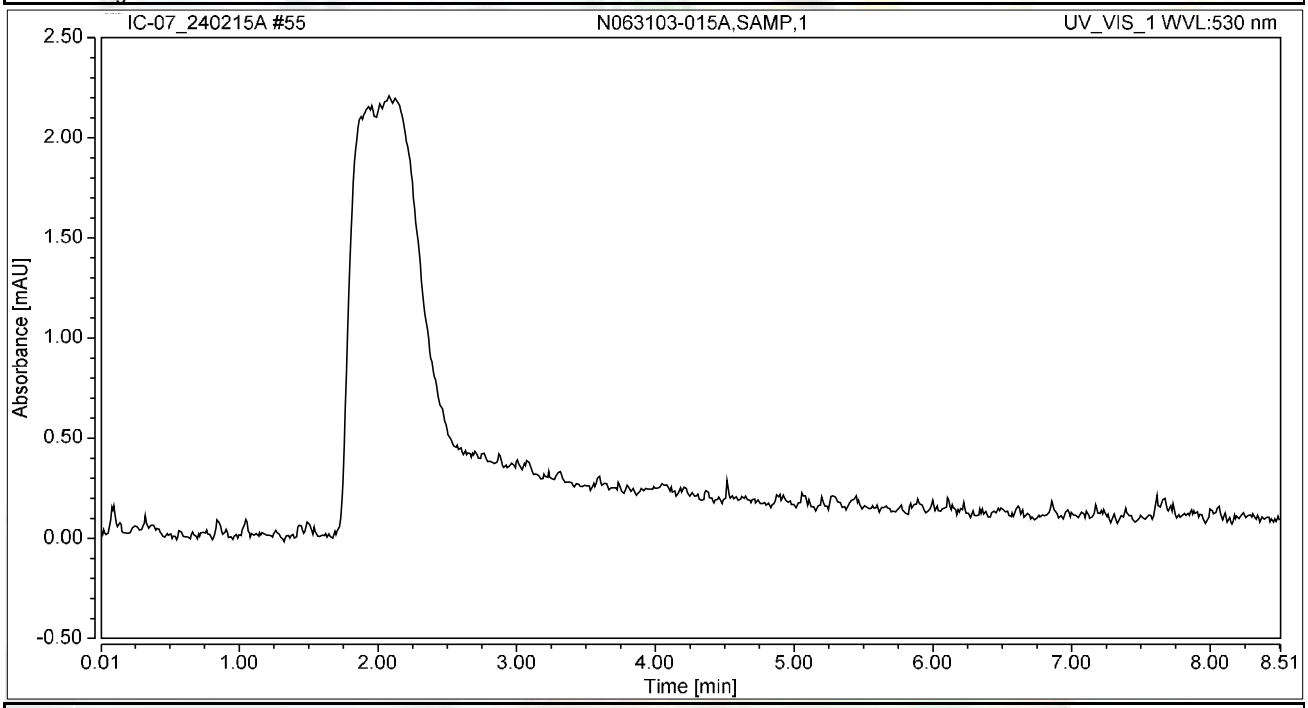
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.208	1.328	100.00	100.00	0.9683
Total:			**0.208**	**1.328**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-015A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 18:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

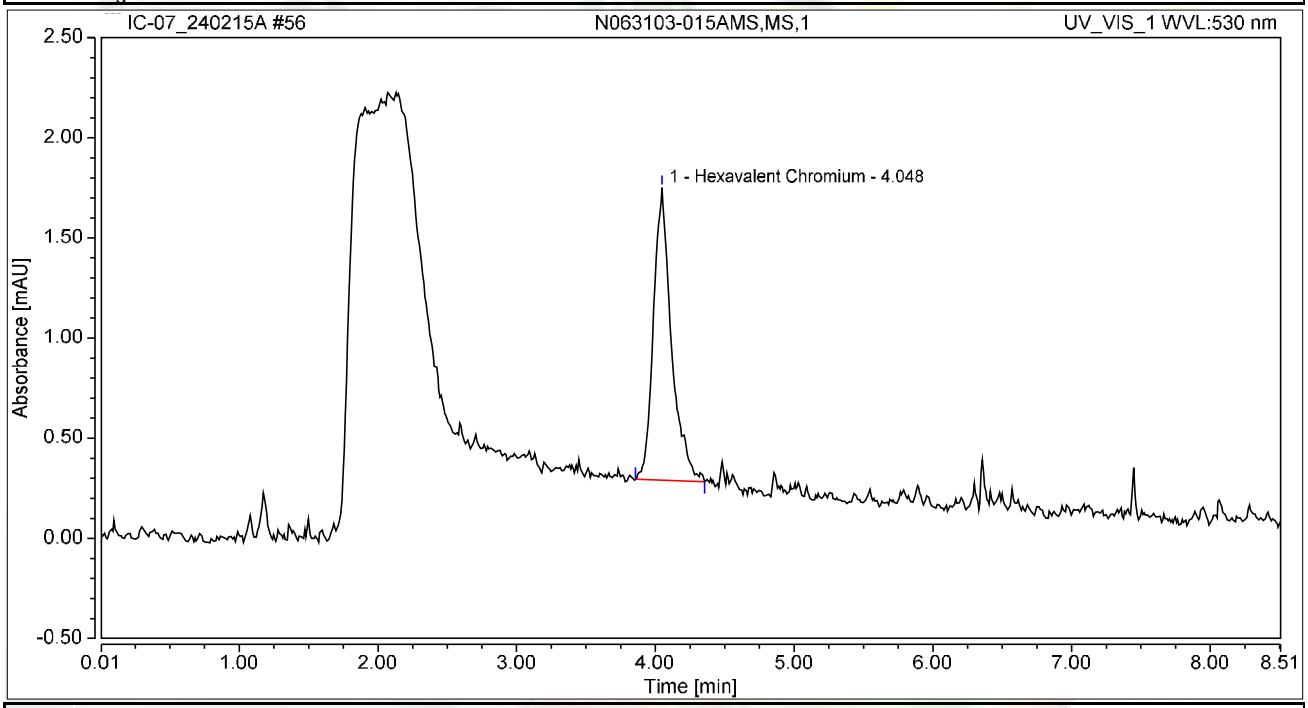
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-015AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 18:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

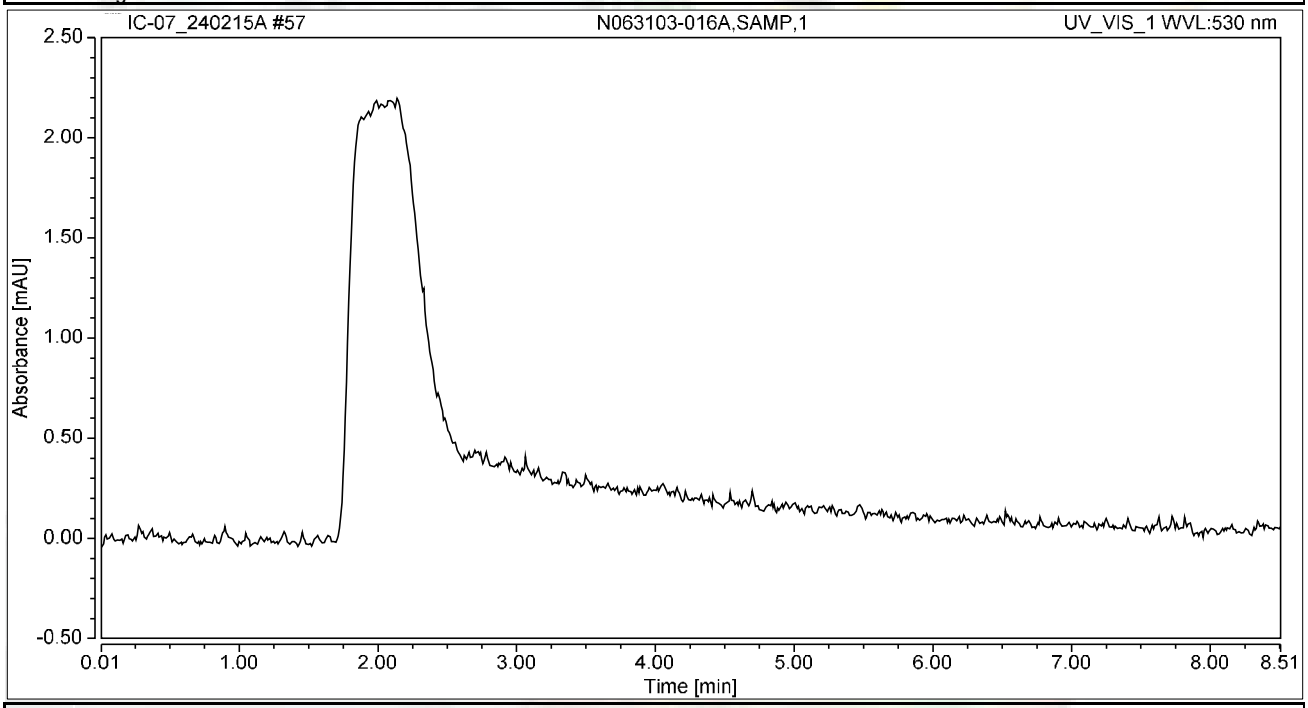
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.219	1.460	100.00	100.00	1.0174
Total:			**0.219**	**1.460**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-016A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 18:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

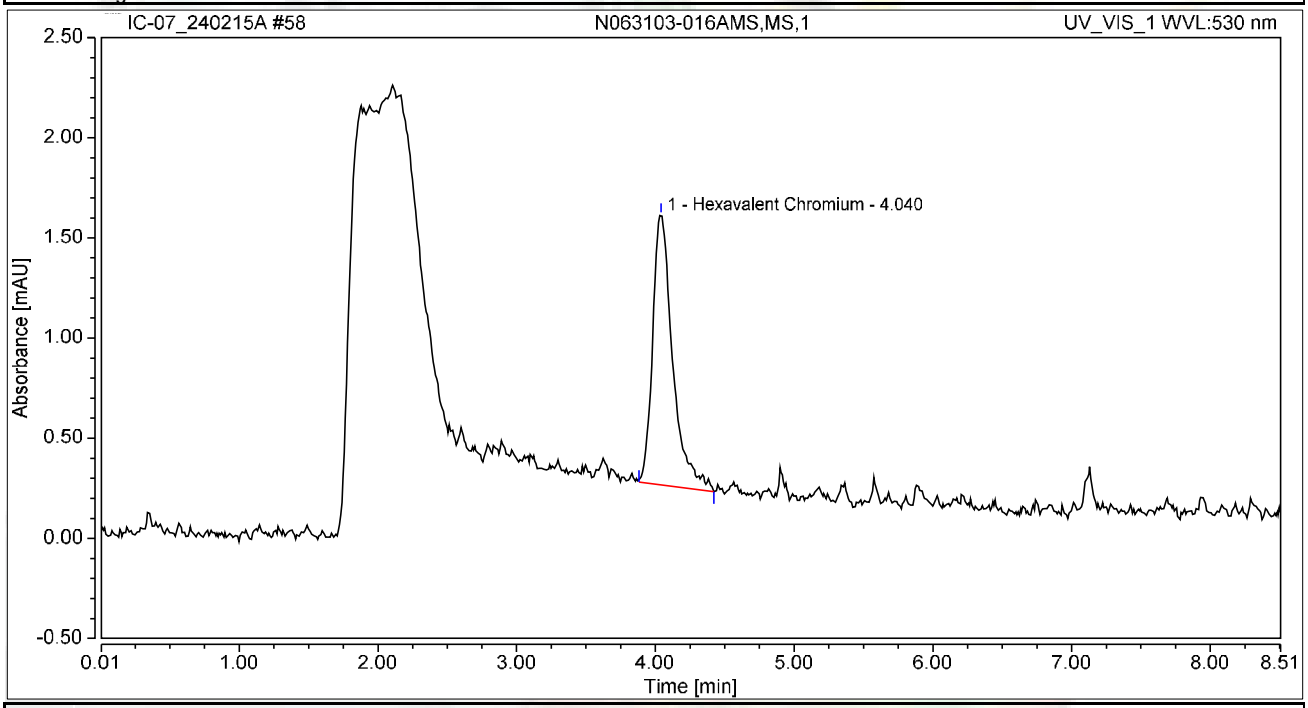
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-016AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 18:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

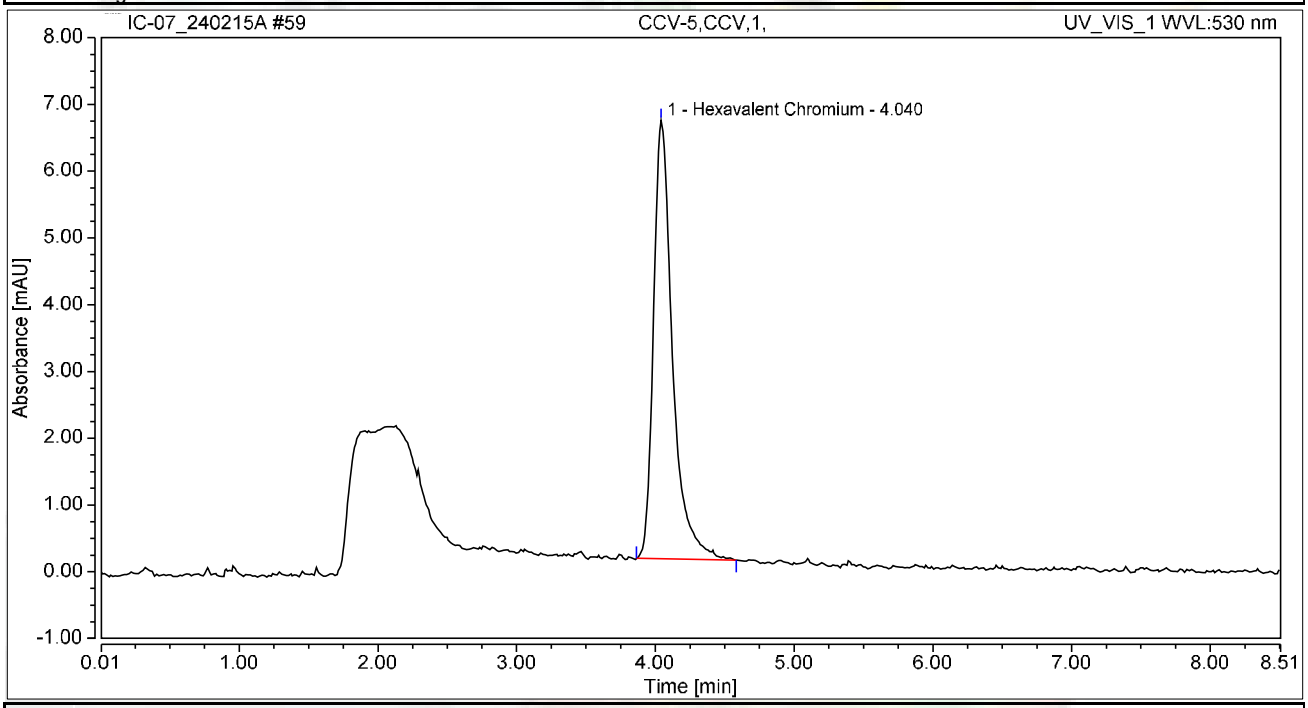
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.226	1.347	100.00	100.00	1.0485
Total:			**0.226**	**1.347**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 18:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

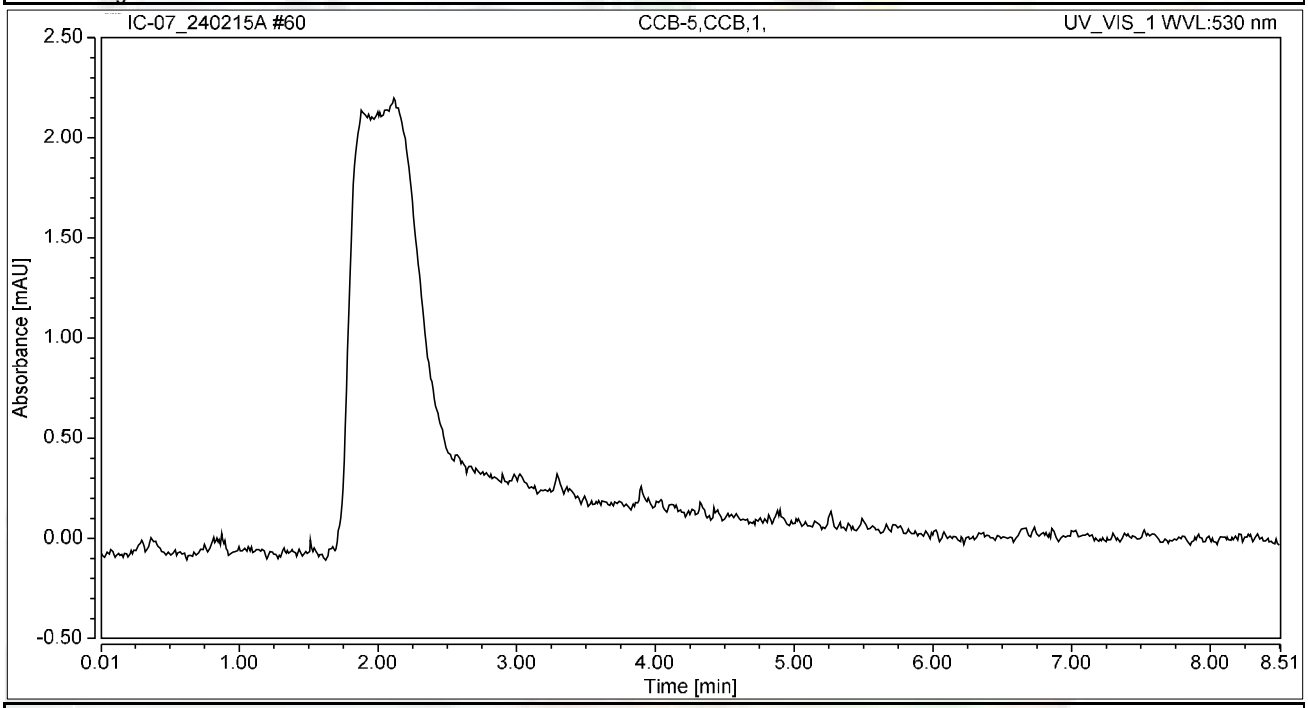
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.041	6.560	100.00	100.00	4.8403
Total:			**1.041**	**6.560**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 19:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

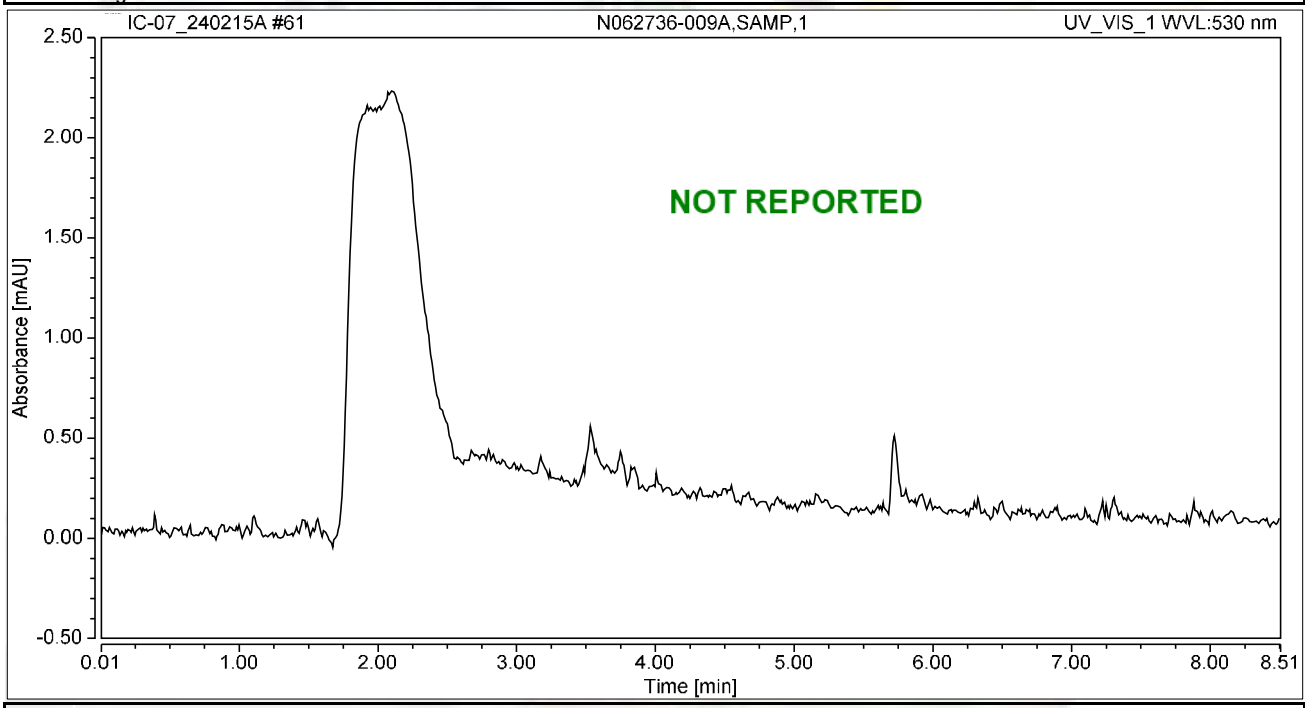
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062736-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 19:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

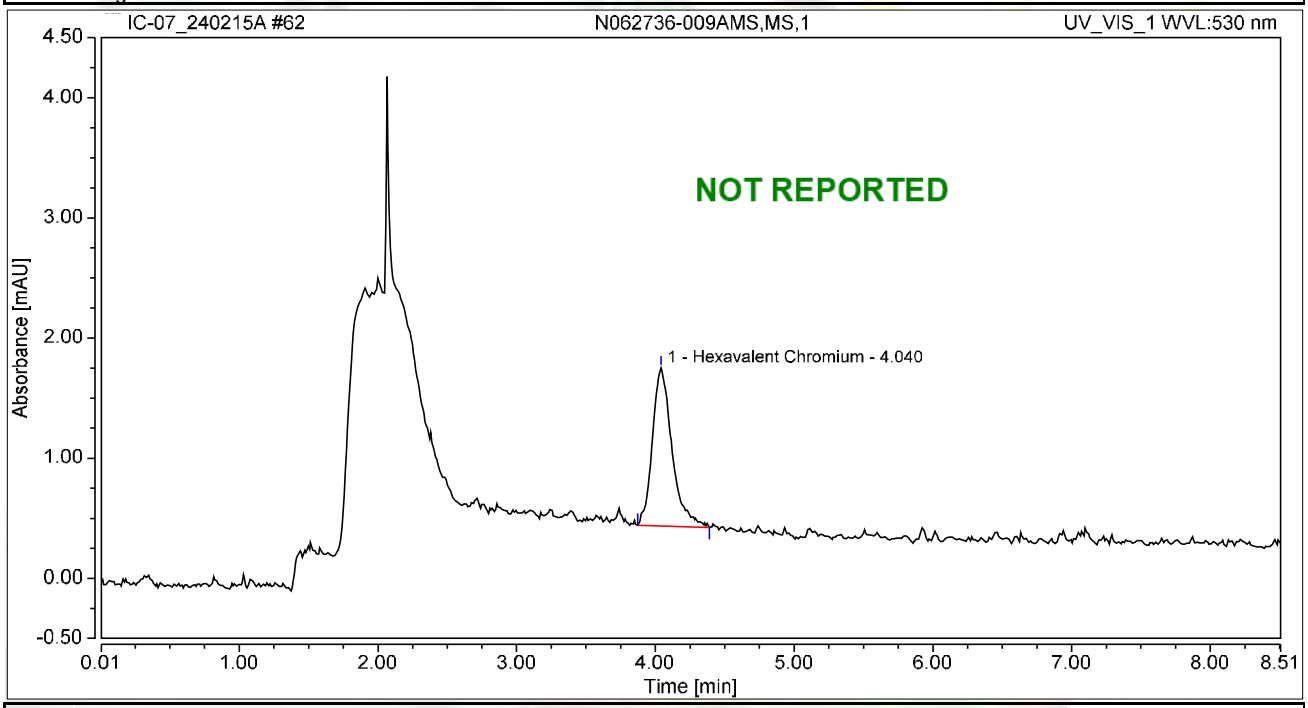
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062736-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 19:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

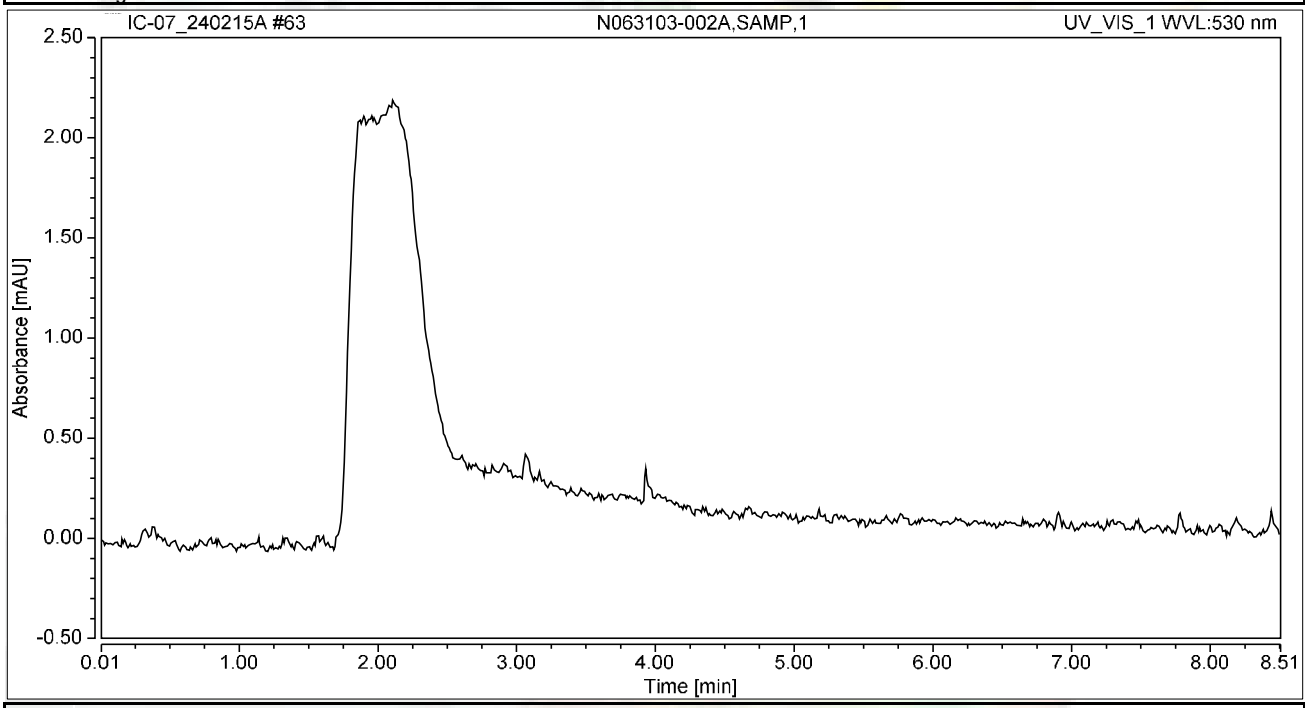
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.215	1.315	100.00	100.00	1.0013
Total:			**0.215**	**1.315**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 19:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

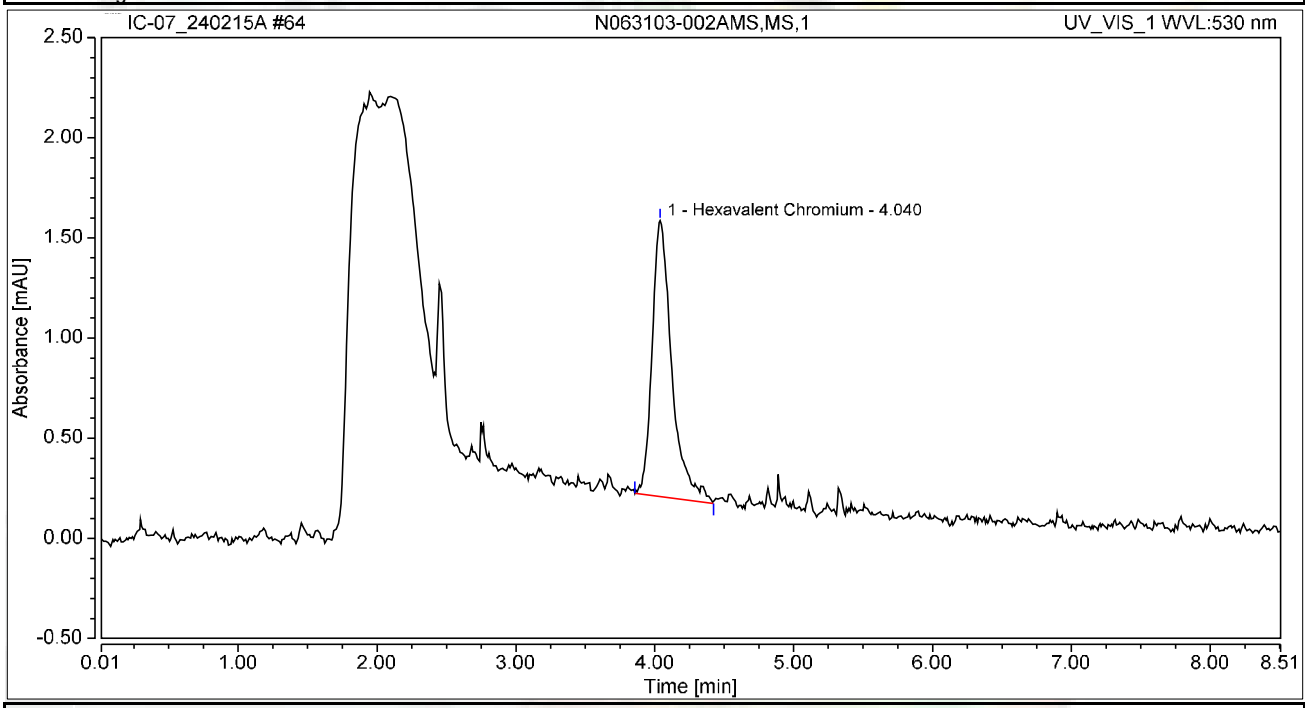
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 19:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

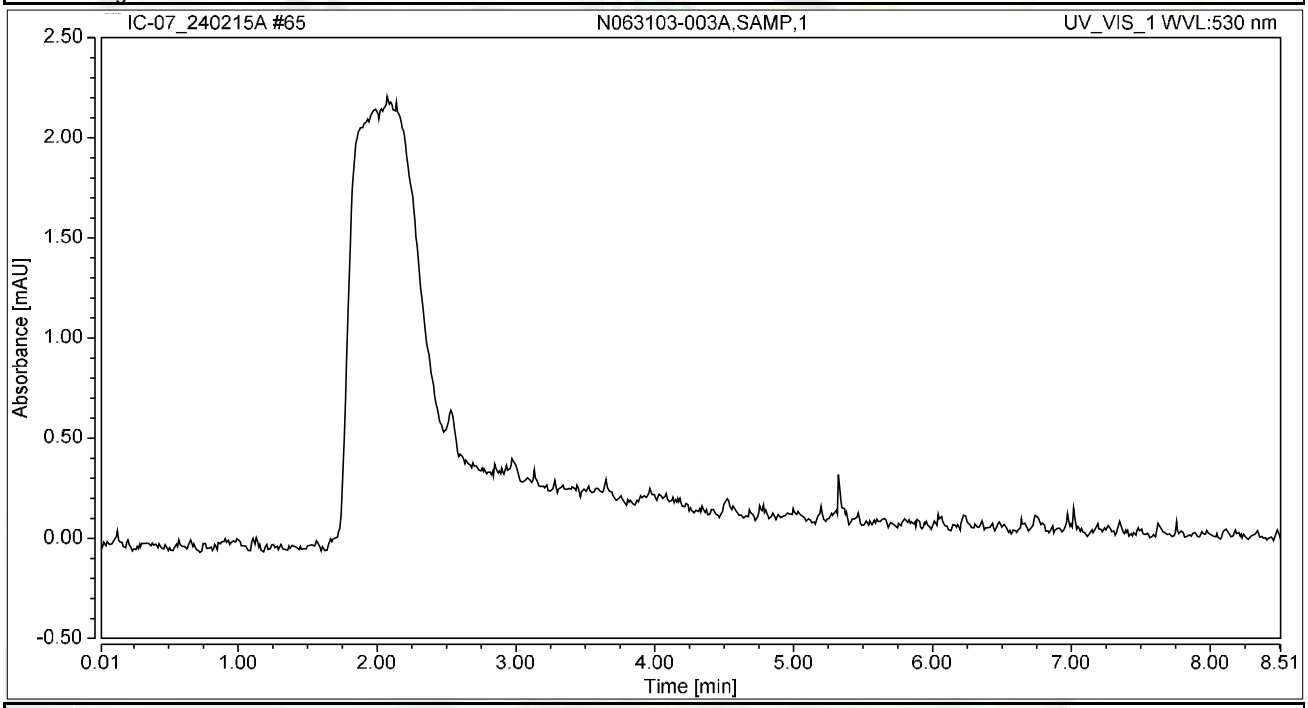
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.226	1.376	100.00	100.00	1.0508
Total:			**0.226**	**1.376**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-003A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 19:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

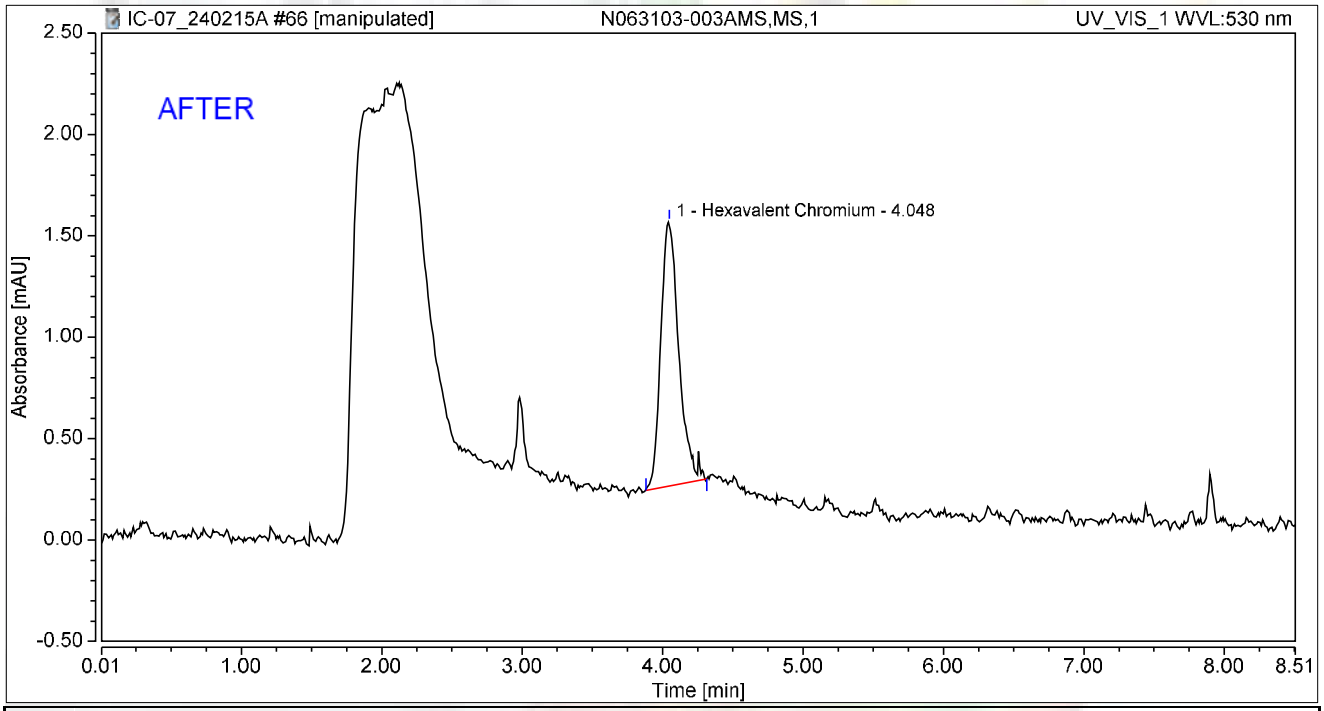
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063103-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 20:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.194	1.304	100.00	100.00	0.9032
Total:			**0.194**	**1.304**	**100.00**	**100.00**	

Reviewed by:

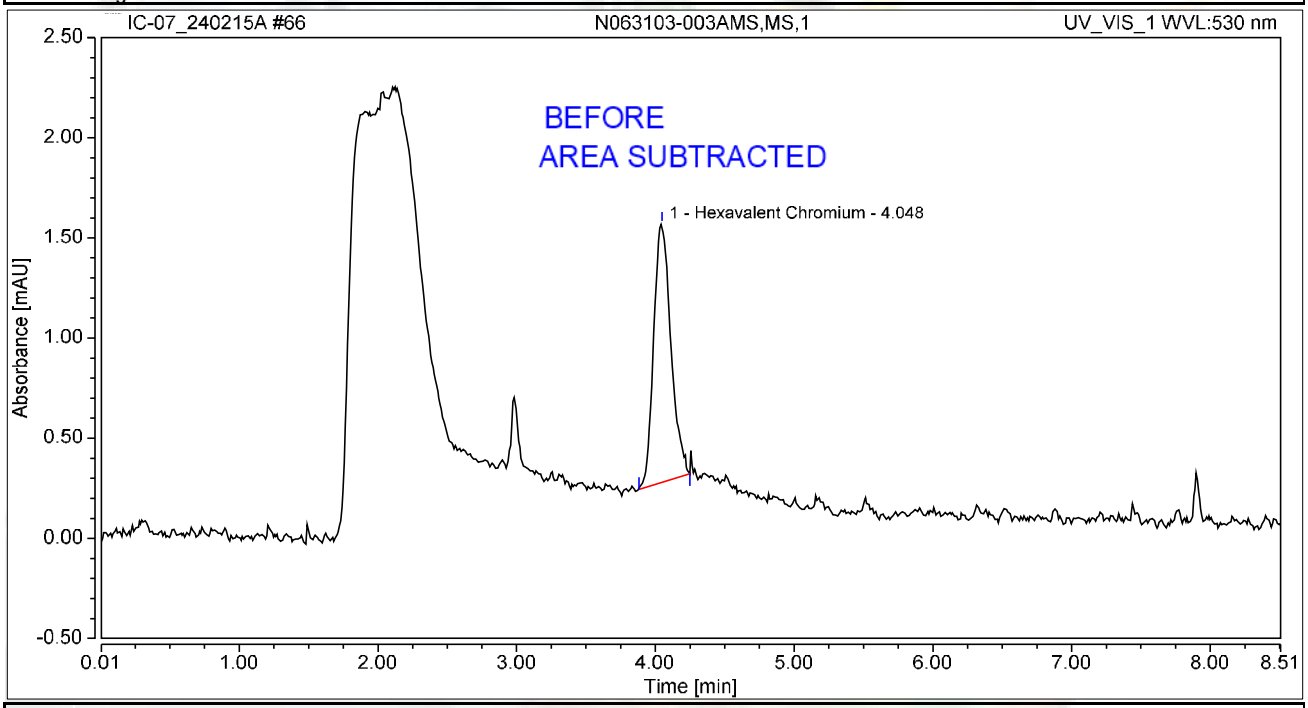
JRB 2/25/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063103-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 20:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

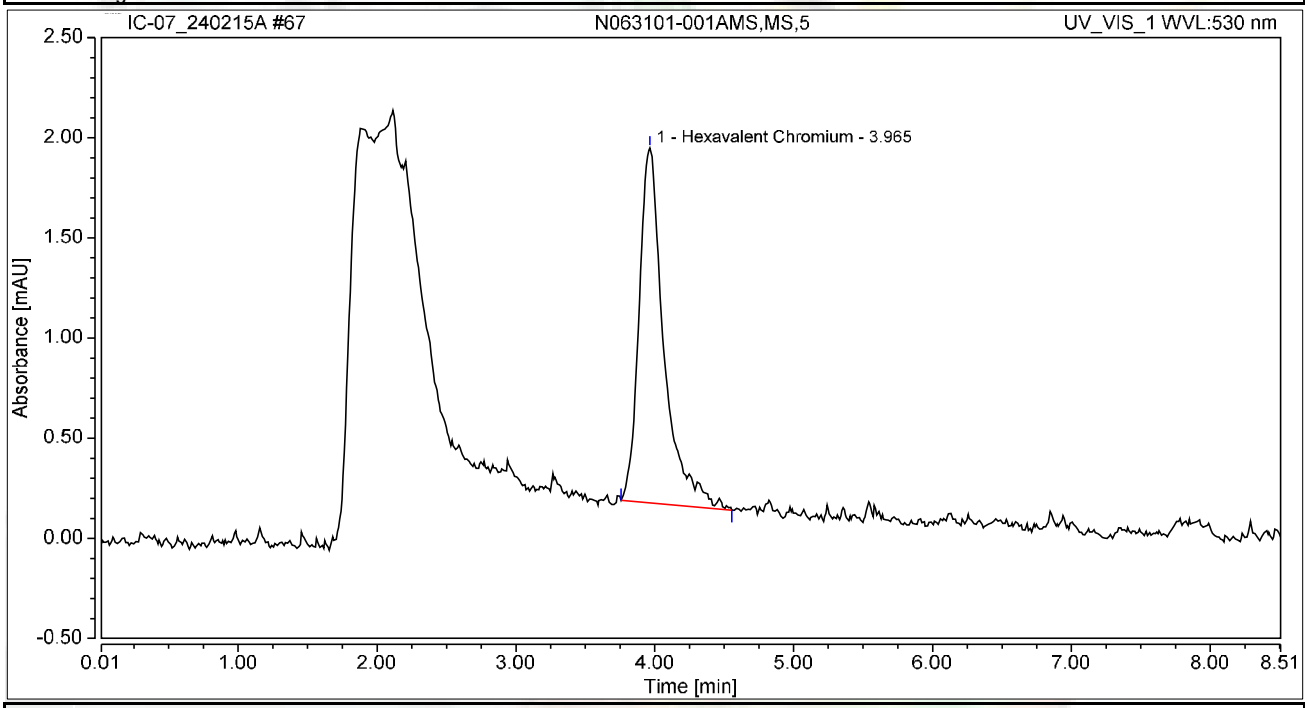
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.186	1.290	100.00	100.00	0.8645
Total:			**0.186**	**1.290**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063101-001AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 20:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

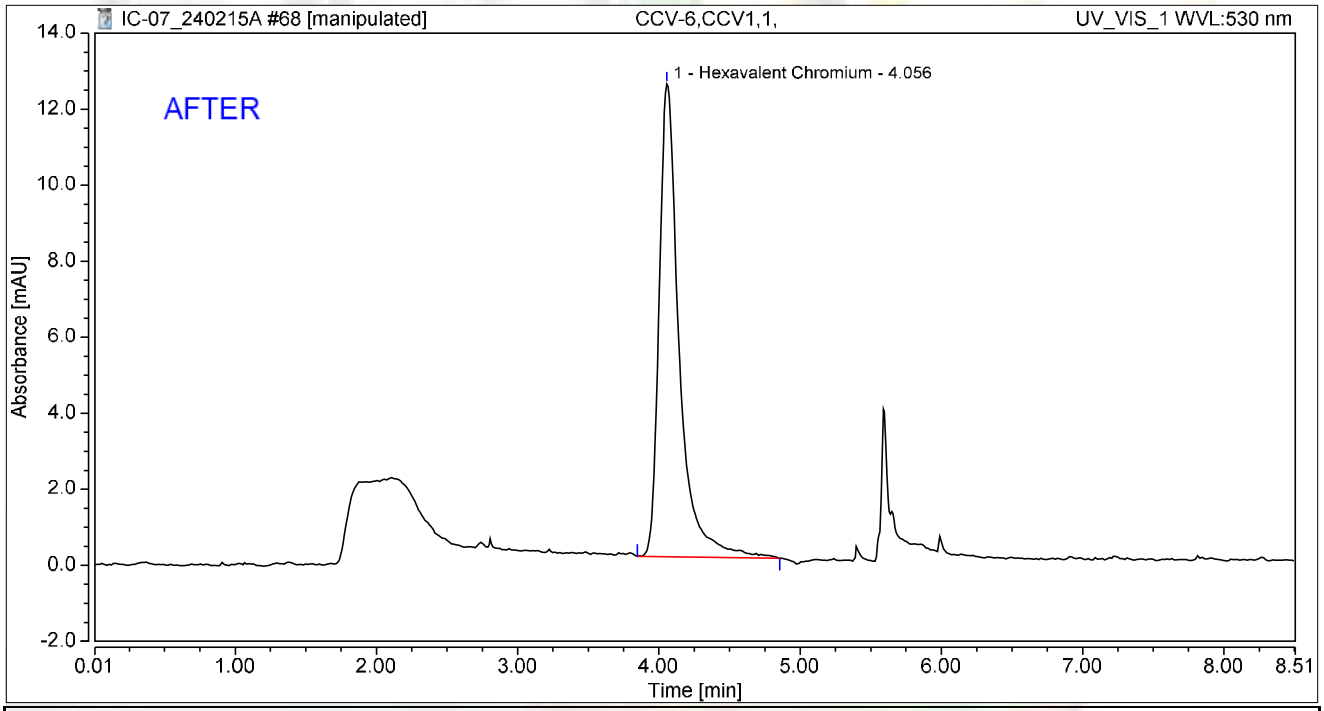
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.368	1.772	100.00	100.00	1.7110
Total:			**0.368**	**1.772**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 20:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	2.051	12.434	100.00	100.00	9.5357
Total:			**2.051**	**12.434**	**100.00**	**100.00**	

Reviewed by:

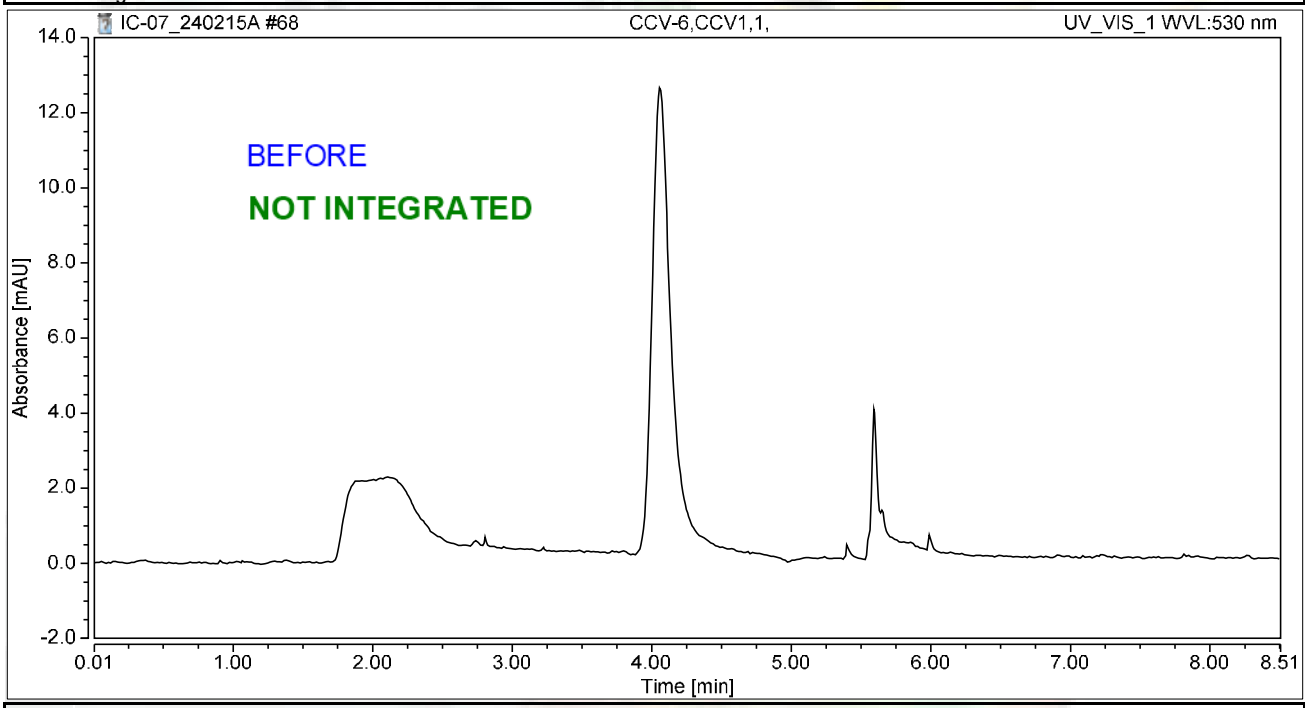
JRB 2/25/2024

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 20:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

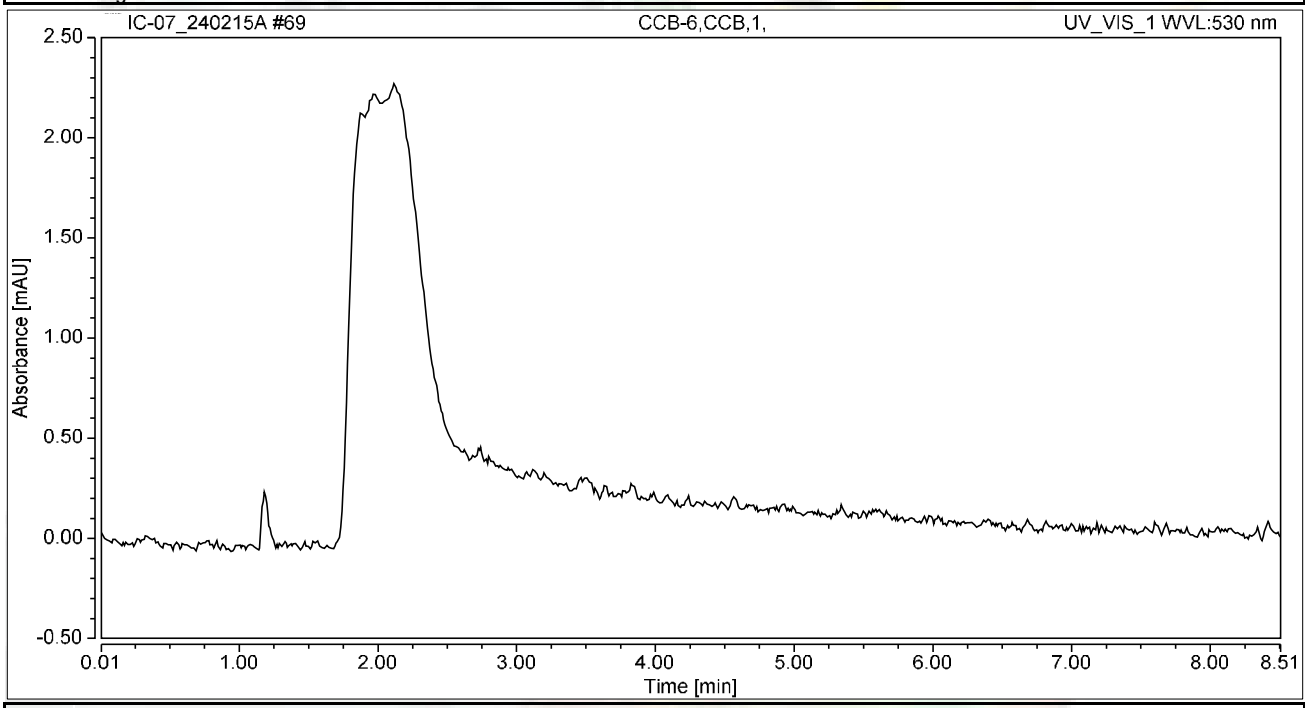
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**44**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 20:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

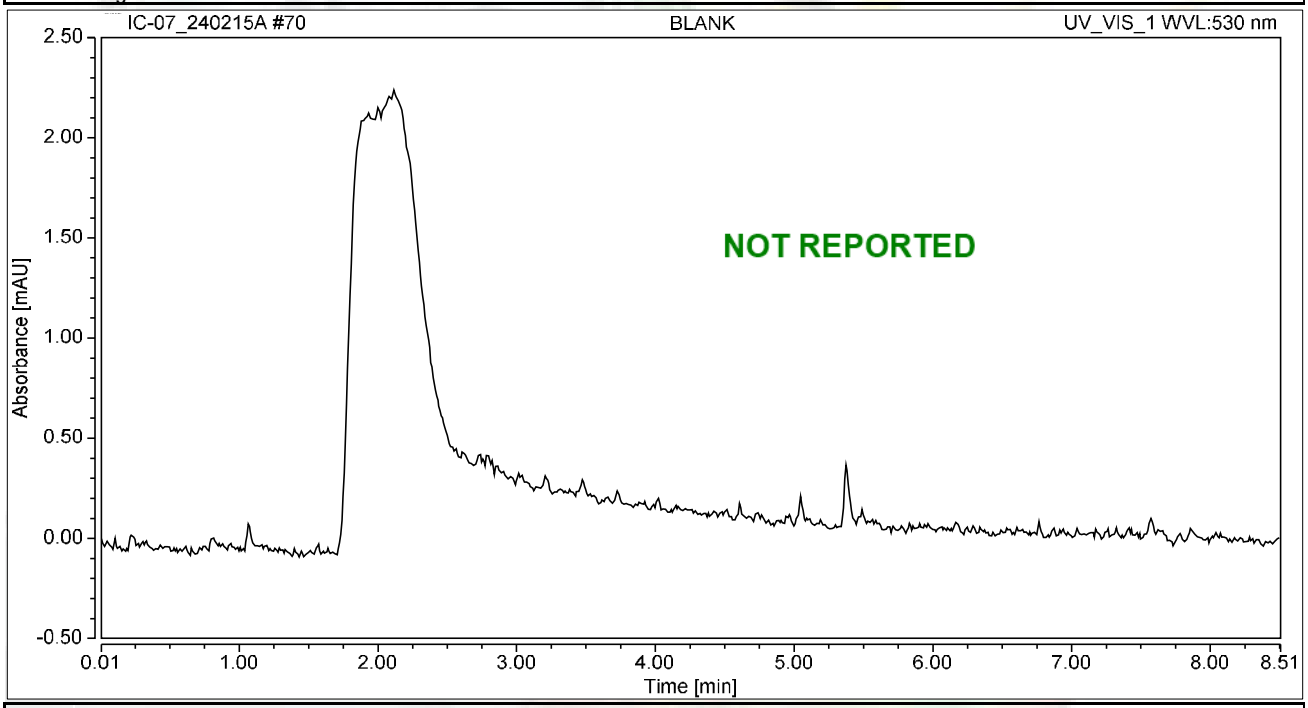
JRB 2/25/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**45**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Feb/24 20:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

SM 2320 B

Wet Chemistry Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: R182689 **Analyst:** LSR

ASSET #: N063103 **Date Analyzed:** 20-Feb

Method: EPA 2320

Initial Calibration	1st Level Review Y	N	N/A	2nd Level Review Y	N	N/A
1. ICAL before initial sample analysis or every 24 hrs.			X			X
2. Does correlation coefficient,r, meet criteria ?(r = 0.995)			X			X
3. ICV within ± 15% of expected value.			X			X
Continuing Calibration						
4. CCV after every 10 samples and at the end of analysis sequence.			X			X
5. CCV within ± 15% of expected value.			X			X
6. Calibration blanks run after ICV and CCV?			X			X
7. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)			X			X
Sample Information						
8. All samples are within linear range.			X			X
9. Are all samples analyzed within hold time.	X			X		
QC Items						
10. Method blank values are below 1/2 the reporting limit.	X			X		
11. LCS compounds within control limits.	X			X		
12. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
13. Are Non-Conformances documented			X			X
14. Runlog complete and included in package.	X			X		
15. Spectrophotometer tape included (Spec work only)			X			X
16. Digestion log complete and included in package (if applicable)			X			X
Preliminary Report						
17. Does the raw data match the preliminary report?	X			X		
18. Are analytical results correct?	X			X		
19. Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer LSR Date: 3/4/2024

2nd Level Reviewer JRB 3/12/2024 Date:

SAMPLE CALCULATION

Sample ID: **N063103-010D @ pH 8.15**

A. Standardization of Sulfuric Acid (titrant):

Normality of acid = (A) (B)/ (53.00) (C)

Where:

A, grams weighed for Na_2CO_3 solution (Na_2CO_3 Standardization Solution)
B, mL Na2CO3 solution taken for titration, and
C, ml of sulfuric acid used to inflection point

Spike Standards

Na_2CO_3 Standardization Solution, ACS Grade (1.00 ml = 2500ug as $CaCO_3$): Dissolve 2.650 grams of Na_2CO_3 in distilled water and dilute to 1 liter.

LCS/MS/MSD Stock $NaHCO_3$, ACS Grade (1.00 ml = 5000 ug as $CaCO_3$): Dissolve 0.8398 grams of $NaHCO_3$ in distilled water and dilute to 1 liter.

Therefore,

Normality of Acid = (2.65 g/L) (5mL) / (53.00) (12.40 mL)

= **0.02016 N**

B. CALCULATION OF ALKALINITY (for a 50 ml sample)

Total Alkalinity (as $CaCO_3$), mg/L = $M_{vol.}$ * N H_2SO_4 * DF * 1000

Where:

$M_{vol.}$ Volume titrant used to reach pH 4.5, ml
N, Normality of H_2SO_4
DF, Dilution Factor = (50 ml) / (Vol. of Sample used)

Therefore,

Total Alkalinity (as $CaCO_3$), mg/L = (6.70 mL) (0.02016 N) (1) * 1000

= 135.0720 mg**/L**

Reporting results in two significant figures,

= **140 mg/L as CaCO3**

Reviewed by:

3/4/2024 LSR

JRB 3/12/2024

C. SPECIATED ALKALINITY:

Phenolphthalein Alkalinity

P alkalinity, mg/L as $CaCO_3$ = $P_{vol.}$ * N H_2SO_4 * DF * 1000

= (0) (0.02016 N) (1) * 1000

= **0 mg/L**

Total Alkalinity

T alkalinity, mg/L as $CaCO_3$ = $M_{vol.}$ * N H_2SO_4 * DF * 1000

= (6.70 mL) (0.02016) (1) * 1000

= 135.0720 **mg/L** as CaCO3

Where:

$P_{vol.}$ - Volume titrant used to reach pH 8.3, ml
$M_{vol.}$ - Volume titrant used to reach pH 4.5, ml
N - Normality of H_2SO_4
DF - Dilution Factor = (50 ml) / (Vol. of Sample used)

Then OH, CO_3, HCO_3 alkalinities as $CaCO_3$ will be calculated as follows:

Result of Titration	**OH Alkalinity as $CaCO_3$**	**CO_3 Alkalinity as $CaCO_3$**	**HCO_3 Alkalinity as $CaCO_3$**
P = 0	0	0	T
P < ½ T	0	2P	T – 2P
P = ½ T	0	2P	0
P > ½ T	2P – T	2(T – P)	0
P = T	T	0	0

Therefore,

OH Alkalinity as $CaCO_3$ = **0**

CO_3 Alkalinity as $CaCO_3$ = 0

HCO_3 Alkalinity as $CaCO_3$ = 135.0720 **mg/L**

Reporting results in two significant figures,

OH Alkalinity as $CaCO_3$ = **0**

CO_3 Alkalinity as $CaCO_3$ = **0**

HCO_3 Alkalinity as $CaCO_3$ = **140 mg/L**

3/4/2024 LSR

LOGBOOK DATA, QUANTITATION REPORT and/or SPECTRA

SAMPLE	PH SAMPLE	AMOUNT	V@8.3	VT TO 4.5	Sample Type
MB-1	5.47	50	0.00	0.050	MBLK
LCS-1	8.59	50	0.10	4.70	LCS
N063103-010D	8.15	50	0.00	6.70	SAMP
N063103-010DDUP	8.17	50	0.00	6.75	DUP
N063103-010DMS	8.33	50	0.00	11.30	MS
N063103-010DMSD	8.33	50	0.00	11.40	MSD

Standardization:		
Spike amt:	**5**	ml
Titrant used:	**12.400**	ml
N H2SO4	**0.02016**	Normal
Date Analyzed:	**2/20/24**	
	12:40	
Analyzed By:	**LSR**	
Sodium Carbonate:	**CINV-220422A**	
Sodium Bicarbonate:	**CINV-210623A**	
Sulfuric Acid:	**R231218A**	

Reviewed by:

JRB 2/28/2024

3/4/2024 LSR

Date Analyzed:	2/20/24		Reagents:					Standardization:					P = 0
Time Started:	12:40 PM			Sodium Carbonate:		CINV-220422A			Spike amt:	5	mL		P < 1/2 T
Analyzed By:	LSR			Hydrochloric Acid:		0			Titrant used:	12.4	mL		P = 1/2 T
				Sulfuric Acid:		R231218A							P > 1/2 T
									N H2SO4	0.02016	N		P = T

Sample ID	Sample Vol/Wt.	Sample pH	Std. Code	Spike Amount	Spike Conc.	Normality, Titrant	Vol. Used to pH 8.3, ml.	Vol. Used pH 8.3 to 4.5, ml.	Total Vol. Used, ml.	DF (50ml/Vsamp.)	P Alkalinity	T Alkalinity	Comments
MB-1	50	5.47				0.02016	0.00	0.05	0.05	1	0.00	1.01	
LCS-1	50	8.59				0.02016	0.10	4.60	4.70	1	2.02	94.76	
N063103-010D	50	8.15				0.02016	0.00	6.70	6.70	1	0.00	135.08	
N063103-010DDU	50	8.17				0.02016	0.00	6.75	6.75	1	0.00	136.09	
N063103-010DMS	50	8.33				0.02016	0.00	11.30	11.30	1	0.00	227.82	
N063103-010DMS	50	8.33				0.02016	0.00	11.40	11.40	1	0.00	229.84	

3/4/2024 LSR

Speciated, Alkalinity as CaCO3

SM 2320B

Date Analyzed:	2/20/24
Time:	12:40 PM
Analyzed By:	LSR

SAMPLE ID	OH	CO3	HCO3	TOTAL	CHECK	COMMENT	REMARKS
MB-1	0.00	0.00	1.01	1.01	1.01		P = 0
LCS-1	0.00	4.03	90.73	94.76	94.76		P < 1/2 T
N063103-010D	0.00	0.00	135.08	135.08	135.08		P = 0
N063103-010DDUP	0.00	0.00	136.09	136.09	136.09		P = 0
N063103-010DMS	0.00	0.00	227.82	227.82	227.82		P = 0
N063103-010DMSD	0.00	0.00	229.84	229.84	229.84		P = 0

Reviewed by:

JRB 2/28/2024

3/4/2024 LSR

Alkalinity Preparation and Runlog

Matrix: H2O

pH meter calibration

Date Extracted: 2/26/24
Time Extracted: 1240
Extracted By: LSR

Date Analyzed: 2/26/24
Time Analyzed: 1240
Analyzed By: LSR

Reagent Lot # / Reagent ID
Sodium Carbonate: CIN-240222A
Hydrochloric Acid: –
Sulfuric Acid: R231218A
Sodium Bicarbonate: CIN-240623A

Formulas:

$P = \frac{\text{(Vol. at pH 8.3) x (N } H_2SO_4\text{) x (50,000)}}{\text{Vol. Sample}}$

$T = \frac{\text{(Vol. at pH 4.5) x (N } H_2SO_4\text{) x (50,000)}}{\text{Vol. Sample}}$

SLOPE: 97.8%
pH 7: 6.97 CIN230424A
4: 3.95 I B
10: 10.04 CIN231204F

Sample ID.	Sample Wt./Vol.	Sample pH	Std Code	Spike Amt Added	Spike Conc.	Norm. Titrant	Vol. At pH = 8.3	Vol. At pH = 4.5	Dilution (F/I)	Calculations	Comments
Standardization #1	50 mL	10.19	IWSTD240208A	5.0 mL	0.05 N	-	-	12.40	50/50	N_{H2SO4} = (2.65 g Na_2CO_3/L) (5mL)	=0.02016 LSR
Standardization #2	50 mL	10.25	"	5.0 mL	0.05 N	-	-	12.40	50/50	(53) (vol. of acid,mL)	
1) MBLK	50mL	5.47	-	-	-	0.02016	0	0.05	50/50		
2) LCS		8.59	IWSTD240214A	1mL	0.05N		0.10	4.70			
3) N063103-10D		8.15	-	-			0	6.70			
4) 10DDUP		8.17	-	-			0	6.75			
5) 10DMS		8.33	IWSTD240214A	1mL	0.05N		0	11.30			
6) 10DMSD		8.33	"	"	"		0	11.40			
7)											
8)											
9)											
10)											
11)											
12)											
13)											
14)											
15)											
16)											
17)											
18)											
19)											
20)											
MS											
MSD											
LCS											

Reviewed by:
JRB 2/28/2024

3/4/2024 LSR

EPA 300.0

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R181596
ASSET #: N063103

Instrument ID: IC-~~03~~ 08
Analyst: RBA
Date Analyzed: 2/15/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)		X			X	
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

Detection of Sulfate in MB/CCB3 was >1/2PQL. However, N063103 samples were >5X the CCB detection.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 2/20/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: ~~GROUNDWATER~~ SURFACE WATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the orignal sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N063103-010D** concentration in mg/L is calculated as follows:

Nitrate, mg/L = 0.5088 * 1

= 0.5088

Reporting result in two significant figures,

Nitrate, mg/L = 0.51

Reviewed by:

dMocha 3/4/2024

ANALYSIS RUN LOG

Sequence: IC-08_240124A
Operator: IC-05
Printed: 1/24/2024 5:54:19 PM

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 25
Created: 1/24/2024 9:39:27 AM by IC-05
Last Update: 1/24/2024 11:49:06 AM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240124	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240124	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240124	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240124	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240124	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240124	Finished
8	ICV,ICV,1	Unknown	9	1000.0	Anions Default	EPA 300_0_240124	Finished
9	ICB,ICB,1	Unknown	10	1000.0	Anions Default	EPA 300_0_240124	Finished
10	MB-H2O,MBLK,1	Unknown	11	1000.0	Anions Default	EPA 300_0_240124	Finished
11	LCS-H2O,LCS,1	Unknown	12	1000.0	Anions Default	EPA 300_0_240124	Finished
12	N062498-007A,SAMP,5	Unknown	13	1000.0	Anions Default	EPA 300_0_240124	Finished
13	N062498-007ADUP,DUP,5	Unknown	14	1000.0	Anions Default	EPA 300_0_240124	Finished
14	N062498-007AMS,MS,5	Unknown	15	1000.0	Anions Default	EPA 300_0_240124	Finished
15	N062498-007AMSD,MSD,5	Unknown	16	1000.0	Anions Default	EPA 300_0_240124	Finished
16	LCS-2,LCS,1	Unknown	17	1000.0	Anions Default	EPA 300_0_240124	Finished
17	MB-2,MBLK,1	Unknown	18	1000.0	Anions Default	EPA 300_0_240124	Finished
18	N062498-007A,SAMP,5	Unknown	19	1000.0	Anions Default	EPA 300_0_240124	Finished
19	N062498-007ADUP,DUP,5	Unknown	20	1000.0	Anions Default	EPA 300_0_240124	Finished
20	CCV-1,CCV,1	Unknown	21	1000.0	Anions Default	EPA 300_0_240124	Finished
21	CCB-1,CCB,1	Unknown	22	1000.0	Anions Default	EPA 300_0_240124	Finished
22	N062498-007AMS,MS,5	Unknown	23	1000.0	Anions Default	EPA 300_0_240124	Finished
23	N062498-007AMSD,MSD,5	Unknown	24	1000.0	Anions Default	EPA 300_0_240124	Finished
24	CCV-2,CCV,1	Unknown	33	1000.0	Anions Default	EPA 300_0_240124	Finished
25	CCB-2,CCB,1	Unknown	34	1000.0	Anions Default	EPA 300_0_240124	Finished

reviewed by: 1/31/2024

Processed by:
Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)

1/24/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 25
Created: 1/24/2024 9:39:27 AM by IC-05
Last Update: 1/24/2024 11:49:06 AM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	1/24/2024 9:41:36 AM	BLANK
2	Std - 0	1/24/2024 9:56:54 AM	IBLANK
3	Std - 1	1/24/2024 10:32:56 AM	STD-LOW
4	Std - 2	1/24/2024 10:48:14 AM	STD
5	Std - 3	1/24/2024 11:03:32 AM	STD
6	Std - 4	1/24/2024 11:18:50 AM	STD
7	Std - 5	1/24/2024 11:34:08 AM	STD-HIGH
8	ICV,ICV,1	1/24/2024 11:49:26 AM	ICV, IWST-240123B
9	ICB,ICB,1	1/24/2024 12:04:44 PM	CCB
10	MB-H2O,MBLK,1	1/24/2024 12:20:02 PM	MB
11	LCS-H2O,LCS,1	1/24/2024 12:35:19 PM	LCS, IWST-240123B
12	N062498-007A,SAMP,5	1/24/2024 12:50:38 PM	SAMP,2>10mL,
13	N062498-007ADUP,DUP,5	1/24/2024 1:05:56 PM	DUP,2>10mL,
14	N062498-007AMS,MS,5	1/24/2024 1:21:14 PM	MS,2>10mL,
15	N062498-007AMSD,MSD,5	1/24/2024 1:36:33 PM	MSD,2>10mL,
16	LCS-2,LCS,1	1/24/2024 1:51:51 PM	LCS, IWST-240123B
17	MB-2,MBLK,1	1/24/2024 2:07:09 PM	MB
18	N062498-007A,SAMP,5	1/24/2024 2:22:27 PM	SAMP,2>10mL,
19	N062498-007ADUP,DUP,5	1/24/2024 2:37:45 PM	DUP,2>10mL,
20	CCV-1,CCV,1	1/24/2024 2:53:03 PM	CCV, IWST-240123A
21	CCB-1,CCB,1	1/24/2024 3:08:21 PM	CCB
22	N062498-007AMS,MS,5	1/24/2024 3:23:40 PM	MS,2>10mL,
23	N062498-007AMSD,MSD,5	1/24/2024 3:38:58 PM	MSD,2>10mL,
24	CCV-2,CCV,1	1/24/2024 3:54:16 PM	CCV, IWST-240123A
25	CCB-2,CCB,1	1/24/2024 4:09:34 PM	CCB

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 31
Created: 2/15/2024 8:29:16 AM by IC-05
Last Update: 2/15/2024 11:43:14 AM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240124	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240124	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240124	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240124	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240124	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240124	Finished
8	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
9	CCV-1,CCV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
10	CCB-1,CCB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
11	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
12	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
13	N063103-010D,SAMP,1	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
14	N063060-001A,SAMP,50	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
15	N063061-001A,SAMP,5	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
16	N063062-001A,SAMP,5	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
17	N063103-010DMS,MS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
18	N063103-010DMSD,MSD,1	Unknown	6	1000.0	Anions Default	EPA 300_0_240124	Finished
19	N063103-010DDUP,DUP,1	Unknown	7	1000.0	Anions Default	EPA 300_0_240124	Finished
20	N063060-001A,SAMP,200	Unknown	8	1000.0	Anions Default	EPA 300_0_240124	Finished
21	CCV-2,CCV,1	Unknown	9	1000.0	Anions Default	EPA 300_0_240124	Finished
22	CCB-2,CCB,1	Unknown	10	1000.0	Anions Default	EPA 300_0_240124	Finished
23	N063103-010D,SAMP,50	Unknown	11	1000.0	Anions Default	EPA 300_0_240124	Finished
24	N063103-010DMS,MS,50	Unknown	12	1000.0	Anions Default	EPA 300_0_240124	Finished
25	N063103-010DMSD,MSD,50	Unknown	13	1000.0	Anions Default	EPA 300_0_240124	Finished
26	N063103-010DDUP,DUP,50	Unknown	14	1000.0	Anions Default	EPA 300_0_240124	Finished
27	N063062-001A,SAMP,1	Unknown	15	1000.0	Anions Default	EPA 300_0_240124	Finished
28	N063061-001A,SAMP,100	Unknown	16	1000.0	Anions Default	EPA 300_0_240124	Finished
29	N063061-001A,SAMP,500	Unknown	17	1000.0	Anions Default	EPA 300_0_240124	Finished
30	CCV-3,CCV,1	Unknown	18	1000.0	Anions Default	EPA 300_0_240124	Finished
31	CCB-3,CCB,1	Unknown	19	1000.0	Anions Default	EPA 300_0_240124	Finished

Processed by:

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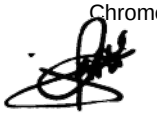


2/18/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 31
Created: 2/15/2024 8:29:16 AM by IC-05
Last Update: 2/15/2024 11:43:14 AM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	1/24/2024 9:41:36 AM	BLANK
2	Std - 0	1/24/2024 9:56:54 AM	IBLANK
3	Std - 1	1/24/2024 10:32:56 AM	STD-LOW
4	Std - 2	1/24/2024 10:48:14 AM	STD
5	Std - 3	1/24/2024 11:03:32 AM	STD
6	Std - 4	1/24/2024 11:18:50 AM	STD
7	Std - 5	1/24/2024 11:34:08 AM	STD-HIGH
8	BLANK	2/15/2024 8:29:44 AM	BLANK
9	CCV-1,CCV,1	2/15/2024 8:45:02 AM	CCV, IWST-240208A
10	CCB-1,CCB,1	2/15/2024 9:00:19 AM	CCB
11	MB-H2O,MBLK,1	2/15/2024 9:15:37 AM	MB
12	LCS-H2O,LCS,1	2/15/2024 9:30:56 AM	LCS, IWST-240208B
13	N063103-010D,SAMP,1	2/15/2024 10:27:42 AM	SAMP,10mL,
14	N063060-001A,SAMP,50	2/15/2024 10:43:00 AM	SAMP,0.2>10mL,
15	N063061-001A,SAMP,5	2/15/2024 10:58:17 AM	SAMP,2>10mL,
16	N063062-001A,SAMP,5	2/15/2024 11:13:35 AM	SAMP,2>10mL,
17	N063103-010DMS,MS,1	2/15/2024 11:28:54 AM	MS,10mL,
18	N063103-010DMSD,MSD,1	2/15/2024 11:44:12 AM	MSD,10mL,
19	N063103-010DDUP,DUP,1	2/15/2024 11:59:30 AM	DUP,10mL,
20	N063060-001A,SAMP,200	2/15/2024 12:14:48 PM	SAMP,0.05>10mL,
21	CCV-2,CCV,1	2/15/2024 12:30:06 PM	CCV, IWST-240208A
22	CCB-2,CCB,1	2/15/2024 12:45:24 PM	CCB
23	N063103-010D,SAMP,50	2/15/2024 1:00:42 PM	SAMP,0.2>10mL,
24	N063103-010DMS,MS,50	2/15/2024 1:15:59 PM	MS,0.2>10mL,
25	N063103-010DMSD,MSD,50	2/15/2024 1:31:17 PM	MSD,0.2>10mL,
26	N063103-010DDUP,DUP,50	2/15/2024 1:46:35 PM	DUP,0.2>10mL,
27	N063062-001A,SAMP,1	2/15/2024 2:01:54 PM	SAMP,10mL,
28	N063061-001A,SAMP,100	2/15/2024 2:17:11 PM	SAMP,0.1>10mL,
29	N063061-001A,SAMP,500	2/15/2024 2:32:30 PM	SAMP,0.02>10mL,
30	CCV-3,CCV,1	2/15/2024 2:47:48 PM	CCV, IWST-240208A
31	CCB-3,CCB,1	2/15/2024 3:03:06 PM	CCB

INITIAL CALIBRATION DATA SUMMARY

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 1/24/2024

Initial Calibration:

Fluoride	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0096	0.0439	0.0882	0.2201	0.4489	1.000
Measured, in mg/L	0.000000	0.059800	0.250700	0.497700	1.233200	2.508600	
Relative Error (%RE)		19.6%		-0.5%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712A

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 1/24/2024

Initial Calibration:

Chloride	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.5	1	2	5	10	R^2
Area,mAU*min	0.0017	0.0636	0.1307	0.2635	0.6779	1.4285	0.999
Measured, in mg/L	0.099800	0.533700	1.003700	1.933500	4.836200	10.093100	
Relative Error (%RE)		6.7%		-3.3%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712B

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 1/24/2024

Initial Calibration:

Nitrite	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0123	0.0692	0.1392	0.3529	0.7231	1.000
Measured, in mg/L	0.000000	0.058400	0.254400	0.495700	1.232400	2.509000	
Relative Error (%RE)		16.8%		-0.9%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712C

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 1/24/2024

Initial Calibration:

Nitrate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0159	0.0804	0.1690	0.4238	0.8850	1.000
Measured, in mg/L	0.000000	0.067900	0.249500	0.499300	1.217000	2.516400	
Relative Error (%RE)		35.8%		-0.1%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712E

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 1/24/2024

Initial Calibration:

Sulfate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.5	2	4	10	20	R^2
Area,mAU*min	0.0000	0.0468	0.1991	0.4062	1.0440	2.1777	1.000
Measured, in mg/L	0.000000	0.645000	2.037100	3.930800	9.761300	20.125900	
Relative Error (%RE)		29.0%		-1.7%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712G

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ICV**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5696955**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.936	0.50	2.000	0	96.8	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCV**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696957**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.996	0.50	2.000	0	99.8	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCV**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696961**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.952	0.50	2.000	0	97.6	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCV**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696967**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.993	0.50	2.000	0	99.6	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID: **ICV** SampType: **ICV** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **181596**
Client ID: **ICV** Batch ID: **R181596** TestNo: **EPA 300.0** Analysis Date: **1/24/2024** SeqNo: **5696941**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.285	0.10	1.250	0	103	90	110				

Sample ID: **CCV-1** SampType: **CCV** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **181596**
Client ID: **CCV** Batch ID: **R181596** TestNo: **EPA 300.0** Analysis Date: **2/15/2024** SeqNo: **5696943**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.209	0.10	1.250	0	96.7	90	110				

Sample ID: **CCV-2** SampType: **CCV** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **181596**
Client ID: **CCV** Batch ID: **R181596** TestNo: **EPA 300.0** Analysis Date: **2/15/2024** SeqNo: **5696951**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.207	0.10	1.250	0	96.5	90	110				

Sample ID: **CCV-3** SampType: **CCV** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **181596**
Client ID: **CCV** Batch ID: **R181596** TestNo: **EPA 300.0** Analysis Date: **2/15/2024** SeqNo: **5696953**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.217	0.10	1.250	0	97.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_NO2PGE

Sample ID: **ICV** SampType: **ICV** TestCode: **300_W_NO2P** Units: **mg/L** Prep Date: RunNo: **181596**
Client ID: **ICV** Batch ID: **R181596** TestNo: **EPA 300.0** Analysis Date: **1/24/2024** SeqNo: **5696969**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	1.277	0.50	1.250	0	102	90	110				

Sample ID: **CCV-1** SampType: **CCV** TestCode: **300_W_NO2P** Units: **mg/L** Prep Date: RunNo: **181596**
Client ID: **CCV** Batch ID: **R181596** TestNo: **EPA 300.0** Analysis Date: **2/15/2024** SeqNo: **5696971**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	1.249	0.50	1.250	0	99.9	90	110				

Sample ID: **CCV-2** SampType: **CCV** TestCode: **300_W_NO2P** Units: **mg/L** Prep Date: RunNo: **181596**
Client ID: **CCV** Batch ID: **R181596** TestNo: **EPA 300.0** Analysis Date: **2/15/2024** SeqNo: **5696979**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	1.233	0.50	1.250	0	98.6	90	110				

Sample ID: **CCV-3** SampType: **CCV** TestCode: **300_W_NO2P** Units: **mg/L** Prep Date: RunNo: **181596**
Client ID: **CCV** Batch ID: **R181596** TestNo: **EPA 300.0** Analysis Date: **2/15/2024** SeqNo: **5696981**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	1.251	0.50	1.250	0	100	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ICV**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5696997**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.088	0.50	4.000	0	102	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCV**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696999**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.968	0.50	4.000	0	99.2	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCV**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5697003**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.999	0.50	4.000	0	100	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCV**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5697009**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.174	0.50	4.000	0	104	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ICV**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5696983**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.226	0.050	1.250	0	98.1	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCV**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696985**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.227	0.050	1.250	0	98.2	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCV**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696993**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.209	0.050	1.250	0	96.7	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCV**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696995**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.229	0.050	1.250	0	98.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ICB**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5696956**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCB**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696958**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCB**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696962**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCB**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696968**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ICB**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5696942**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCB**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696944**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCB**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696952**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCB**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696954**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_NO2PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ICB**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5696970**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	ND	0.50									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCB**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696972**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	ND	0.50									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCB**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696980**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	ND	0.50									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCB**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696982**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ICB**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5696998**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCB**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5697000**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCB**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5697004**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCB**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5697010**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **ICB**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5696984**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCB**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696986**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCB**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696994**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181596**
Client ID: **CCB**	Batch ID: **R181596**	TestNo: **EPA 300.0**		Analysis Date: **2/15/2024**	SeqNo: **5696996**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/15/2024

Sample Name		Retention Time	Evaluation
ICV	Fluoride	3.377	
CCV-1	Fluoride	3.353	
CCV-2	Fluoride	3.393	
CCV-3	Fluoride	3.380	
	Average	3.375	
	Applied RT Window	3.175 - 3.575	
MB-R181596_F	Fluoride	N.A.	N.A.
LCS-R181596_F	Fluoride	3.374	PASS
N063103-010D	Fluoride	3.390	PASS
N063103-010DMS	Fluoride	3.334	PASS
N063103-010DMSD	Fluoride	3.337	PASS
N063103-010DDUP	Fluoride	3.374	PASS

Reviewed by:

dMocha 3/4/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/15/2024

Sample Name		Retention Time	Evaluation
ICV	Chloride	4.497	
CCV-1	Chloride	4.443	
CCV-2	Chloride	4.483	
CCV-3	Chloride	4.473	

Average 4.466

Applied RT Window 4.266 - 4.666

MB-R181596_CL	Chloride	N.A.	N.A.
LCS-R181596_CL	Chloride	4.464	PASS
N063103-010D	Chloride	4.483	PASS
N063103-010DMS	Chloride	4.487	PASS
N063103-010DMSD	Chloride	4.437	PASS
N063103-010DDUP	Chloride	4.477	PASS

Reviewed by:

dMRocha 3/4/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/15/2024

Sample Name		Retention Time	Evaluation
ICV	Nitrite	5.247	
CCV-1	Nitrite	5.170	
CCV-2	Nitrite	5.213	
CCV-3	Nitrite	5.200	
	Average	5.194	
	Applied RT Window	4.994 - 5.394	
MB-R181596_NO2	Nitrite	N.A.	N.A.
LCS-R181596_NO2	Nitrite	5.190	PASS
N063103-010D	Nitrite	N.A.	N.A.
N063103-010DMS	Nitrite	5.157	PASS
N063103-010DMSD	Nitrite	5.160	PASS
N063103-010DDUP	Nitrite	N.A.	N.A.

Reviewed by:

dMRocha 3/4/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/15/2024

Sample Name		Retention Time	Evaluation
ICV	Nitrate	6.727	
CCV-1	Nitrate	6.607	
CCV-2	Nitrate	6.650	
CCV-3	Nitrate	6.637	
	Average	6.631	
	Applied RT Window	6.431 - 6.831	
MB-R181596_NO3	Nitrate	N.A.	N.A.
LCS-R181596_NO3	Nitrate	6.627	PASS
N063103-010D	Nitrate	6.643	PASS
N063103-010DMS	Nitrate	6.594	PASS
N063103-010DMSD	Nitrate	6.593	PASS
N063103-010DDUP	Nitrate	6.637	PASS

Reviewed by:

dMRocha 3/4/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/15/2024

Sample Name		Retention Time	Evaluation
ICV	Sulfate	10.334	
CCV-1	Sulfate	10.070	
CCV-2	Sulfate	10.127	
CCV-3	Sulfate	10.100	
	Average	10.099	
	Applied RT Window	9.899 - 10.299	
MB-R181596_SO4	Sulfate	10.297	PASS
LCS-R181596_SO4	Sulfate	10.110	PASS
N063103-010D	Sulfate	10.107	PASS
N063103-010DMS	Sulfate	10.110	PASS
N063103-010DMSD	Sulfate	10.060	PASS
N063103-010DDUP	Sulfate	10.100	PASS

Reviewed by:

dMRocha 3/4/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): 10/5/2022, 12/14/2022, 3/22/2023,7/10/2023; 10/3/2023 & 11/14/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: mg/L

Instrument Name: **IC-08 & IC-09**

Datafile IC-08 221005A #24 IC-08 221214A #30 IC-08 230322A #35 IC-08 230710A #13 IC-09 231003A #14 IC-08 231114A #24 IC-09 231114A #19

Analyte	#1	#2	#3	#4	#5	#6	#7	Spike Conc., mg/L	SD	$t_{(n-1)}$ value	MDLs	MDL	PQL
Fluoride	0.100	0.103	0.108	0.118	0.110	0.098	0.126	0.10	0.0101	3.143	**0.0318**	**0.0318**	0.10
Chloride	0.480	0.418	0.472	0.653	0.624	0.587	0.622	0.50	0.0922	3.143	**0.2898**	**0.2898**	0.50
Nitrite	0.068	0.061	0.060	0.071	0.063	0.061	0.070	0.05	0.0047	3.143	**0.0149**	**0.0149**	0.05
Bromide	0.526	0.502	0.509	0.522	0.536	0.527	0.520	0.50	0.0116	3.143	**0.0364**	**0.0364**	0.50
Nitrate	0.073	0.058	0.059	0.073	0.074	0.068	0.073	0.05	0.0068	3.143	**0.0215**	**0.0240**	0.05
Phosphate	0.112	0.096	0.114	0.120	0.130	0.093	0.124	0.10	0.0138	3.143	**0.0433**	**0.0433**	0.10
Sulfate	0.501	0.609	0.638	0.401	0.704	0.620	0.697	0.50	0.1092	3.143	**0.3432**	**0.3432**	0.50

METHOD DETECTION LIMIT (Blanks)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Analyte	MDLb	# of Records
Fluoride	0	63
Chloride	0.1456	80
Nitrite	0.0147	64
Bromide	0	18
Nitrate	0.0240	132
Phosphate	0.0237	34
Sulfate	0.2579	107

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

EPA 6010B
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106859
ASSET #: N063103

Instrument ID: ICP-03
Analyst: DBJ
Date Analyzed: 2/16/2024

Method: DISSOLVED

- [X] EPA 6010B / 200.7
- [ ] EPA 6020 / 200.8
- [ ] EPA 7470A / 7471A/245.1
- [ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.	X			X		
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?	X			X		
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

%Rec of Fe/Ca in N063076-002B-MS1/MSD1 and Ca in N063076-002B-PS failed, low bias. However, LCS passed criteria.

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 02292024 Date: _____

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106859
ASSET #: N063103

Instrument ID: ICP-02
Analyst: DBJ
Date Analyzed: 2/19/2024

Method: DISSOLVED

- [X] EPA 6010B / 200.7
- [ ] EPA 6020 / 200.8
- [ ] EPA 7470A / 7471A/245.1
- [ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?	X			X		
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

%Rec of Na in N063103-010B-MS2/MSD @5X failed, high bias. However, LCS passed criteria.

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 02292024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Surface Water

FORMULA:

Calculate the Iron concentration, in ug/L , in the original sample as follows:

Iron , ug/L = A * DF * PF *CF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL
CF= Conversion Factor from mg/L to ug/L, 1000

For Sample **N063103-010B** , the concentration i ug/L is calculated as follows:

Iron , ug/L = 0.02434 * 1 * (25/25) * 1000

Iron , ug/L = 24.34

Reporting results in two significant figures,

Iron , ug/L = 24

Reviewed by:

dMocha 3/4/2024

% RSD SUMMARY

RSD SUMMARY: 240216B

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	B	0	1.34	15	PASS
Standard1	ICAL	1	B	0.1	0.29	15	PASS
Standard3	ICAL	1	B	1	0.11	15	PASS
Standard4	ICAL	1	B	2.5	0.23	15	PASS
Standard5	ICAL	1	B	3.75	0.35	15	PASS
Standard6	ICAL	1	B	5	0.13	15	PASS
Standard7	ICAL	1	B	10	0.14	15	PASS
ICV	ICV	1	B	5.02	0.08	15	PASS
ICB	ICB	1	B	0.01	16.81	15	<PQL
LLICV1	CCV1	1	B	0.1	0.72	20	PASS
ICSA1	ICSA	1	B	-0.01	14.31	15	PASS
ICSAB1	ICSAB	1	B	0.8	0.24	15	PASS
RINSE	RINSE	1	B	0	273.61	15	<PQL
CCV1	CCV	1	B	5.04	0.07	15	PASS
CCB1	CCB	1	B	0.02	14.55	15	PASS
MB-106859	MBLK	1	B	0.01	8.04	15	PASS
LCS1-106859	LCS	1	B	4.66	0.08	15	PASS
N063053-002C	SAMP	1	B	1.43	0.12	15	PASS
N063076-001B	SAMP	1	B	1.22	0.09	15	PASS
N063076-002B	SAMP	1	B	1.23	0.1	15	PASS
N063076-002B	SAMP	5	B	0.25	0.16	15	PASS
N063076-002B-PS	PS	1	B	6.51	0.04	15	PASS
N063076-002B-MS1	MS	1	B	6.4	0.07	15	PASS
N063076-002B-MSD1	MSD	1	B	6.41	0.05	15	PASS
N063076-003B	SAMP	1	B	1.24	0.14	15	PASS
CCV2	CCV	1	B	5	0.08	15	PASS
CCB2	CCB	1	B	0.01	29.69	15	<PQL
N063103-010B	SAMP	1	B	0.14	1.03	15	PASS
N063135-001B	SAMP	1	B	0.18	0.43	15	PASS
N063135-003B	SAMP	1	B	1.41	0.33	15	PASS
N063135-005B	SAMP	1	B	1.95	0.17	15	PASS
LCS1-106859	LCS	1	B	5.14	0.17	15	PASS
CCV3	CCV	1	B	5	0.04	15	PASS
CCB3	CCB	1	B	0	30.97	15	<PQL
ICSA2	ICSA	1	B	-0.01	1.05	15	PASS
ICSAB2	ICSAB	1	B	0.81	0.56	15	PASS
RINSE	RINSE	1	B	0	14.34	15	PASS
RINSE	RINSE	1	B	0.01	19.23	15	<PQL
CCV4	CCV	1	B	4.99	0.07	15	PASS
CCB4	CCB	1	B	0.01	14.63	15	PASS
RINSE	RINSE	1	B	0.01	7.81	15	PASS
CCV5	CCV	1	B	5	0.12	15	PASS

RSD SUMMARY: 240216B

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CCB5	CCB	1	B	0.01	10.69	15	PASS
ICSA3	ICSA	1	B	0	39.26	15	<PQL
ICSAB3	ICSAB	1	B	0.81	0.22	15	PASS
ICSA3	ICSA	1	B	-0.01	25.71	15	<PQL
ICSAB3	ICSAB	1	B	0.81	0.36	15	PASS
CalBlk	IBLK	1	Ca	0	0.18	15	PASS
Standard1	ICAL	1	Ca	0.2	0.94	15	PASS
Standard2	ICAL	1	Ca	1	0.39	15	PASS
Standard3	ICAL	1	Ca	2	0.11	15	PASS
Standard4	ICAL	1	Ca	5	0.15	15	PASS
Standard5	ICAL	1	Ca	7.5	0.14	15	PASS
Standard6	ICAL	1	Ca	10	0.06	15	PASS
Standard7	ICAL	1	Ca	20	0.09	15	PASS
ICV	ICV	1	Ca	10.14	0.09	15	PASS
ICB	ICB	1	Ca	0	69.92	15	<PQL
LLICV1	CCV1	1	Ca	0.21	0.51	20	PASS
ICSA1	ICSA	1	Ca	460.76	0.07	15	PASS
ICSAB1	ICSAB	1	Ca	464.18	0.26	15	PASS
RINSE	RINSE	1	Ca	0.03	4.43	15	PASS
CCV1	CCV	1	Ca	10.12	0.08	15	PASS
CCB1	CCB	1	Ca	0	5.05	15	PASS
MB-106859	MBLK	1	Ca	0	44.51	15	<PQL
LCS1-106859	LCS	1	Ca	10.19	0.16	15	PASS
N063053-002C	SAMP	1	Ca	246.14	0.21	15	PASS
N063076-001B	SAMP	1	Ca	276.29	0.11	15	PASS
N063076-002B	SAMP	1	Ca	278.9	0.15	15	PASS
N063076-002B	SAMP	5	Ca	58.56	0.12	15	PASS
N063076-002B-PS	PS	1	Ca	285.98	0.29	15	PASS
N063076-002B-MS1	MS	1	Ca	277.58	0.07	15	PASS
N063076-002B-MSD1	MSD	1	Ca	282.59	0.04	15	PASS
N063076-003B	SAMP	1	Ca	280.48	0.2	15	PASS
CCV2	CCV	1	Ca	10.16	0.08	15	PASS
CCB2	CCB	1	Ca	0	16.99	15	<PQL
N063103-010B	SAMP	1	Ca	77.34	0.11	15	PASS
N063135-001B	SAMP	1	Ca	176.38	0.18	15	PASS
N063135-003B	SAMP	1	Ca	241.31	0.17	15	PASS
N063135-005B	SAMP	1	Ca	381.91	0.17	15	PASS
LCS1-106859	LCS	1	Ca	10.55	0.15	15	PASS
CCV3	CCV	1	Ca	10.11	0.1	15	PASS
CCB3	CCB	1	Ca	0	24.44	15	<PQL
ICSA2	ICSA	1	Ca	460.79	0.04	15	PASS
ICSAB2	ICSAB	1	Ca	465.2	0.13	15	PASS

RSD SUMMARY: 240216B

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
RINSE	RINSE	1	Ca	0.05	37.08	15	<PQL
RINSE	RINSE	1	Ca	0.13	34.62	15	<PQL
CCV4	CCV	1	Ca	10.08	0.09	15	PASS
CCB4	CCB	1	Ca	0	43.76	15	<PQL
RINSE	RINSE	1	Ca	0.03	5.35	15	PASS
CCV5	CCV	1	Ca	10.06	0.04	15	PASS
CCB5	CCB	1	Ca	0	203.47	15	<PQL
ICSA3	ICSA	1	Ca	459.94	0.23	15	PASS
ICSAB3	ICSAB	1	Ca	462.86	0.06	15	PASS
ICSA3	ICSA	1	Ca	427.25	0.06	15	PASS
ICSAB3	ICSAB	1	Ca	433.2	0.05	15	PASS
CalBlk	IBLK	1	Fe	0	0.5	15	PASS
Standard1	ICAL	1	Fe	0.02	2.96	15	PASS
Standard2	ICAL	1	Fe	0.05	1.49	15	PASS
Standard3	ICAL	1	Fe	2	0.04	15	PASS
Standard4	ICAL	1	Fe	5	0.08	15	PASS
Standard5	ICAL	1	Fe	7.5	0.03	15	PASS
Standard6	ICAL	1	Fe	10	0.07	15	PASS
Standard7	ICAL	1	Fe	20	0.06	15	PASS
ICV	ICV	1	Fe	10.15	0.13	15	PASS
ICB	ICB	1	Fe	0	16.51	15	<PQL
LLICV1	CCV1	1	Fe	0.02	1.18	20	PASS
ICSA1	ICSA	1	Fe	174.26	0.04	15	PASS
ICSAB1	ICSAB	1	Fe	176.97	0.03	15	PASS
RINSE	RINSE	1	Fe	0	709.47	15	<PQL
CCV1	CCV	1	Fe	10.11	0.04	15	PASS
CCB1	CCB	1	Fe	0	19.82	15	<PQL
MB-106859	MBLK	1	Fe	0	9.87	15	PASS
LCS1-106859	LCS	1	Fe	0.28	0.47	15	PASS
N063053-002C	SAMP	1	Fe	0.03	3.1	15	PASS
N063076-001B	SAMP	1	Fe	0.94	0.17	15	PASS
N063076-002B	SAMP	1	Fe	0.93	0.39	15	PASS
N063076-002B	SAMP	5	Fe	0.2	0.43	15	PASS
N063076-002B-PS	PS	1	Fe	1.02	0.34	15	PASS
N063076-002B-MS1	MS	1	Fe	0.99	0.39	15	PASS
N063076-002B-MSD1	MSD	1	Fe	1	0.48	15	PASS
N063076-003B	SAMP	1	Fe	0.93	0.29	15	PASS
CCV2	CCV	1	Fe	10.12	0.08	15	PASS
CCB2	CCB	1	Fe	-0.01	2.85	15	PASS
N063103-010B	SAMP	1	Fe	0.02	4.25	15	PASS
N063135-001B	SAMP	1	Fe	3.49	0.07	15	PASS
N063135-003B	SAMP	1	Fe	3.03	0.11	15	PASS

RSD SUMMARY: 240216B

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
N063135-005B	SAMP	1	Fe	1.42	0.31	15	PASS
LCS1-106859	LCS	1	Fe	0.09	0.21	15	PASS
CCV3	CCV	1	Fe	10.11	0.05	15	PASS
CCB3	CCB	1	Fe	-0.01	2.48	15	PASS
ICSA2	ICSA	1	Fe	173.96	0.05	15	PASS
ICSAB2	ICSAB	1	Fe	176.96	0.02	15	PASS
RINSE	RINSE	1	Fe	0.01	90.28	15	<PQL
RINSE	RINSE	1	Fe	0	21.19	15	<PQL
CCV4	CCV	1	Fe	10.1	0.11	15	PASS
CCB4	CCB	1	Fe	-0.01	6.23	15	PASS
RINSE	RINSE	1	Fe	0	30.98	15	<PQL
CCV5	CCV	1	Fe	10.05	0.2	15	PASS
CCB5	CCB	1	Fe	-0.01	5.1	15	PASS
ICSA3	ICSA	1	Fe	173.9	0.02	15	PASS
ICSAB3	ICSAB	1	Fe	176.31	0.05	15	PASS
ICSA3	ICSA	1	Fe	183.11	0.02	15	PASS
ICSAB3	ICSAB	1	Fe	164.97	0.02	15	PASS

RSD SUMMARY: 240219A

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	K	0	9.15	15	PASS
Standard1	ICAL	1	K	0.1	16.42	15	<PQL
Standard2	ICAL	1	K	1	2.75	15	PASS
Standard3	ICAL	1	K	5	0.98	15	PASS
Standard4	ICAL	1	K	10	0.55	15	PASS
Standard5	ICAL	1	K	20	0.22	15	PASS
Standard6	ICAL	1	K	40	0.03	15	PASS
ICV	ICV	1	K	10.07	0.2	15	PASS
ICB	ICB	1	K	0.01	159.9	15	<PQL
LLICV	CCV	1	K	0.54	4.78	20	PASS
ICSA1	ICSA	1	K	-0.01	379.93	15	<PQL
ICSAB1	ICSAB	1	K	10.03	0.17	15	PASS
MB-106859	MBLK	1	K	0.01	70.27	15	<PQL
CCV1	CCV	1	K	10.07	0.11	15	PASS
CCB1	CCB	1	K	0.02	127.77	15	<PQL
LCS2-106859	LCS	1	K	15.7	27.07	15	NR!
N062388-003A	SAMP	1	K	0.12	3.76	15	PASS
N062388-004A	SAMP	1	K	0.57	4.24	15	PASS
N063103-010B	SAMP	5	K	1.04	0.92	15	PASS
N063103-010B	SAMP	25	K	0.24	7.23	15	PASS
N063103-010B	SAMP	125	K	0.06	13.58	15	PASS
N063103-010B-PS	PS	5	K	19.47	0.2	15	PASS
N063103-010B-PS	PS	25	K	18.77	0.12	15	PASS
N063103-010B-MS2	MS	5	K	5.33	0.25	15	PASS
N063103-010B-MS2	MS	25	K	1.31	2.6	15	PASS
CCV2	CCV	1	K	10.06	0.16	15	PASS
CCB2	CCB	1	K	0.02	37.75	15	<PQL
N063103-010B-MSD2	MSD	5	K	5.31	0.25	15	PASS
N063103-010B-MSD2	MSD	25	K	1.11	1.08	15	PASS
LCS2-106859	LCS	1	K	20.97	0.05	15	PASS
CCV3	CCV	1	K	10.08	0.16	15	PASS
CCB3	CCB	1	K	0.02	23.25	15	<PQL
CCV4	CCV	1	K	10.11	0.21	15	PASS
CCB4	CCB	1	K	0.03	42.07	15	<PQL
ICSA2	ICSA	1	K	0.02	120.49	15	<PQL
ICSAB2	ICSAB	1	K	10.12	0.11	15	PASS
CalBlk	IBLK	1	Na	0	10.08	15	PASS
Standard1	ICAL	1	Na	0.1	4.44	15	PASS
Standard2	ICAL	1	Na	1	1.6	15	PASS
Standard3	ICAL	1	Na	5	0.63	15	PASS
Standard4	ICAL	1	Na	10	0.49	15	PASS
Standard5	ICAL	1	Na	20	0.16	15	PASS

RSD SUMMARY: 240219A

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
Standard6	ICAL	1	Na	40	0.14	15	PASS
ICV	ICV	1	Na	10.12	0.05	15	PASS
ICB	ICB	1	Na	0.01	46.72	15	<PQL
LLICV	CCV	1	Na	0.52	0.47	20	PASS
ICSA1	ICSA	1	Na	-0.01	48.42	15	<PQL
ICSAB1	ICSAB	1	Na	10.09	0.11	15	PASS
MB-106859	MBLK	1	Na	0	38.11	15	<PQL
CCV1	CCV	1	Na	10.1	0.15	15	PASS
CCB1	CCB	1	Na	0	25.77	15	<PQL
LCS2-106859	LCS	1	Na	15.67	27.62	15	NR!
N062388-003A	SAMP	1	Na	0.11	2.57	15	PASS
N062388-004A	SAMP	1	Na	0.56	6.04	15	PASS
N063103-010B	SAMP	5	Na	20.56	0.1	15	PASS
N063103-010B	SAMP	25	Na	4.21	0.13	15	PASS
N063103-010B	SAMP	125	Na	0.89	0.48	15	PASS
N063103-010B-PS	PS	5	Na	37.8	0.04	15	PASS
N063103-010B-PS	PS	25	Na	21.96	0.12	15	PASS
N063103-010B-MS2	MS	5	Na	26.17	0.28	15	PASS
N063103-010B-MS2	MS	25	Na	6.29	2.9	15	PASS
CCV2	CCV	1	Na	10.11	0.07	15	PASS
CCB2	CCB	1	Na	0	433.35	15	<PQL
N063103-010B-MSD2	MSD	5	Na	26.03	0.11	15	PASS
N063103-010B-MSD2	MSD	25	Na	5.33	0.27	15	PASS
LCS2-106859	LCS	1	Na	21	0.07	15	PASS
CCV3	CCV	1	Na	10.13	0.07	15	PASS
CCB3	CCB	1	Na	0	84.21	15	<PQL
CCV4	CCV	1	Na	10.13	0.08	15	PASS
CCB4	CCB	1	Na	0.01	41.86	15	<PQL
ICSA2	ICSA	1	Na	0	210.78	15	<PQL
ICSAB2	ICSAB	1	Na	10.15	0.04	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240216B

Instrument ID: ICP-03

STANDARD CODE	
Standard1	MWST-240105M, 0.5<50mL
Standard2	MWST-240105N
Standard3	MWST-240105O, 5<50mL
Standard4	MWST-240105O,12.5<50mL
Standard5	MWST-240105O, 15<40mL
Standard6	MWST-240105O, 25<50mL
Standard7	MWST-240105O
ICV	MWST-240105AE
CCV	MWST-240105O, 25<50mL
ICSA/ICSAB	MWST-240105P / MWST-240105Q
Int. Std. (Y)	MWST-240105B
PS Spike	MWST-240105X / Y/ Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	02/16/2024	01:42:47 PM
2	Standard1	ICAL	1	02/16/2024	01:47:00 PM
3	Standard2	ICAL	1	02/16/2024	01:51:14 PM
4	Standard3	ICAL	1	02/16/2024	01:55:28 PM
5	Standard4	ICAL	1	02/16/2024	01:59:15 PM
6	Standard5	ICAL	1	02/16/2024	02:04:01 PM
7	Standard6	ICAL	1	02/16/2024	02:08:44 PM
8	Standard7	ICAL	1	02/16/2024	02:12:59 PM
310	ICV	ICV	1	02/16/2024	02:21:05 PM
1	ICB	ICB	1	02/16/2024	02:25:25 PM
2	LLICV1	CCV1	1	02/16/2024	02:29:39 PM
9	ICSA1	ICSA	1	02/16/2024	02:33:52 PM
10	ICSAB1	ICSAB	1	02/16/2024	02:38:55 PM
299	RINSE	RINSE	1	02/16/2024	02:47:49 PM
71	MB-106828	MBLK	1	02/16/2024	02:52:07 PM
72	LCS-106828	LCS	1	02/16/2024	03:07:58 PM
73	N063078-001A	SAMP	5	02/16/2024	03:12:44 PM
74	N063078-002A	SAMP	5	02/16/2024	03:18:05 PM
75	N063078-003A	SAMP	5	02/16/2024	03:21:50 PM
76	N063078-004A	SAMP	5	02/16/2024	03:27:11 PM
77	N063078-005A	SAMP	5	02/16/2024	03:31:25 PM
78	N063078-006A	SAMP	5	02/16/2024	03:35:40 PM
79	N063078-007A	SAMP	5	02/16/2024	03:41:01 PM
7	CCV1	CCV	1	02/16/2024	03:46:17 PM
1	CCB1	CCB	1	02/16/2024	03:50:33 PM
80	MB-106859	MBLK	1	02/16/2024	03:54:47 PM
81	LCS1-106859	LCS	1	02/16/2024	03:59:01 PM
82	N063053-002C	SAMP	1	02/16/2024	04:03:47 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
83	N063076-001B	SAMP	1	02/16/2024	04:09:10 PM
84	N063076-002B	SAMP	1	02/16/2024	04:14:31 PM
85	N063076-002B	SAMP	5	02/16/2024	04:19:52 PM
86	N063076-002B-PS	PS	1	02/16/2024	04:24:08 PM
87	N063076-002B-MS1	MS	1	02/16/2024	04:29:30 PM
88	N063076-002B-MSD1	MSD	1	02/16/2024	04:34:51 PM
89	N063076-003B	SAMP	1	02/16/2024	04:40:13 PM
7	CCV2	CCV	1	02/16/2024	04:45:35 PM
1	CCB2	CCB	1	02/16/2024	04:49:50 PM
90	N063103-010B	SAMP	1	02/16/2024	04:54:04 PM
91	N063135-001B	SAMP	1	02/16/2024	04:58:22 PM
92	N063135-003B	SAMP	1	02/16/2024	05:03:43 PM
93	N063135-005B	SAMP	1	02/16/2024	05:09:06 PM
81	LCS1-106859	LCS	1	02/16/2024	05:20:17 PM
94	MB-106860	MBLK	1	02/16/2024	05:23:59 PM
95	LCS-106860	LCS	1	02/16/2024	05:28:15 PM
96	N063053-002D	SAMP	1	02/16/2024	05:33:01 PM
97	N063103-010C	SAMP	1	02/16/2024	05:38:24 PM
98	N063103-010C	SAMP	5	02/16/2024	05:42:43 PM
7	CCV3	CCV	1	02/16/2024	05:46:57 PM
1	CCB3	CCB	1	02/16/2024	05:51:12 PM
9	ICSA2	ICSA	1	02/16/2024	05:55:25 PM
10	ICSAB2	ICSAB	1	02/16/2024	06:00:28 PM
299	RINSE	RINSE	1	02/16/2024	06:05:32 PM
99	N063103-010C-PS	PS	1	02/16/2024	06:09:51 PM
100	N063103-010C-MS	MS	1	02/16/2024	06:15:10 PM
101	N063103-010C-MSD	MSD	1	02/16/2024	06:20:29 PM
102	N063078-001A	SAMP	1	02/16/2024	06:25:48 PM
103	N063078-002A	SAMP	1	02/16/2024	06:31:18 PM
104	N063078-003A	SAMP	1	02/16/2024	06:36:07 PM
105	N063078-003A-PS	PS	1	02/16/2024	06:41:52 PM
106	N063078-003A-MS	MS	1	02/16/2024	06:47:38 PM
299	RINSE	RINSE	1	02/16/2024	06:53:24 PM
7	CCV4	CCV	1	02/16/2024	06:57:43 PM
1	CCB4	CCB	1	02/16/2024	07:01:57 PM
107	N063078-003A-MSD	MSD	1	02/16/2024	07:06:11 PM
108	N063078-005A	SAMP	1	02/16/2024	07:11:56 PM
109	N063078-006A	SAMP	25	02/16/2024	07:16:12 PM
299	RINSE	RINSE	1	02/16/2024	07:21:27 PM
7	CCV5	CCV	1	02/16/2024	07:25:46 PM
1	CCB5	CCB	1	02/16/2024	07:30:01 PM
9	ICSA3	ICSA	1	02/16/2024	07:34:14 PM
10	ICSAB3	ICSAB	1	02/16/2024	07:39:16 PM
9	ICSA3	ICSA	1	02/16/2024	07:48:45 PM
10	ICSAB3	ICSAB	1	02/16/2024	07:56:23 PM

INJECTION LOG: 240219A

Instrument ID: ICP-02

STANDARD CODE	
Standard1	MWST-240105D, 0.025<50mL
Standard2	MWST-240105D, 0.25<50mL
Standard3	MWST-240105D, 1.25<50mL
Standard4	MWST-240105D, 2.5<50mL
Standard5	MWST-240105D, 5<50mL
Standard6	MWST-240105D, 10<50mL
ICV	MWST-231222A
CCV	MWST-240105D, 2.5<50mL
ICSA/ICSAB	MWST-240105D / MWST-240105E
Int. Std. (Sc):	MWST-240105B
PS Spike	MSST-231025E/231025F/231130A

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	02/19/2024	12:58:32 PM
11	Standard1	ICAL	1	02/19/2024	01:01:58 PM
12	Standard2	ICAL	1	02/19/2024	01:04:51 PM
13	Standard3	ICAL	1	02/19/2024	01:07:45 PM
14	Standard4	ICAL	1	02/19/2024	01:11:10 PM
15	Standard5	ICAL	1	02/19/2024	01:14:37 PM
16	Standard6	ICAL	1	02/19/2024	01:18:04 PM
17	ICV	ICV	1	02/19/2024	01:21:34 PM
1	ICB	ICB	1	02/19/2024	01:25:01 PM
18	LLICV	CCV	1	02/19/2024	01:28:24 PM
19	ICSA1	ICSA	1	02/19/2024	01:31:21 PM
20	ICSAB1	ICSAB	1	02/19/2024	01:34:46 PM
23	MB-106939	MBLK	1	02/19/2024	01:38:13 PM
24	LCS1-106939	LCS	1	02/19/2024	01:41:06 PM
25	N062388-003A	SAMP	1	02/19/2024	01:44:32 PM
26	N062388-004A	SAMP	1	02/19/2024	01:47:26 PM
27	N063156-002A	SAMP	1	02/19/2024	01:50:20 PM
28	N063156-002A	SAMP	5	02/19/2024	01:53:14 PM
29	N063156-002A-PS	PS	1	02/19/2024	01:56:08 PM
30	N063156-002A-MS2	MS	1	02/19/2024	01:59:35 PM
31	N063156-002A-MSD2	MSD	1	02/19/2024	02:03:02 PM
32	MB-106859	MBLK	1	02/19/2024	02:06:30 PM
14	CCV1	CCV	1	02/19/2024	02:09:25 PM
1	CCB1	CCB	1	02/19/2024	02:12:50 PM
33	LCS2-106859	LCS	1	02/19/2024	02:15:44 PM
34	N062388-003A	SAMP	1	02/19/2024	02:19:12 PM
35	N062388-004A	SAMP	1	02/19/2024	02:22:08 PM
36	N063103-010B	SAMP	5	02/19/2024	02:25:02 PM
37	N063103-010B	SAMP	25	02/19/2024	02:29:08 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
38	N063103-010B	SAMP	125	02/19/2024	02:32:02 PM
39	N063103-010B-PS	PS	5	02/19/2024	02:34:56 PM
40	N063103-010B-PS	PS	25	02/19/2024	02:38:23 PM
41	N063103-010B-MS2	MS	5	02/19/2024	02:41:49 PM
42	N063103-010B-MS2	MS	25	02/19/2024	02:44:44 PM
14	CCV2	CCV	1	02/19/2024	02:47:39 PM
1	CCB2	CCB	1	02/19/2024	02:51:06 PM
43	N063103-010B-MSD2	MSD	5	02/19/2024	02:54:30 PM
44	N063103-010B-MSD2	MSD	25	02/19/2024	02:57:26 PM
45	LCS2-106859	LCS	1	02/19/2024	03:00:22 PM
46	MB-106880	MBLK	1	02/19/2024	03:03:51 PM
47	LCS1-106880	LCS	1	02/19/2024	03:06:48 PM
48	N062388-001A	SAMP	1	02/19/2024	03:10:14 PM
49	N062388-002A	SAMP	1	02/19/2024	03:13:07 PM
50	N063123-001A	SAMP	1	02/19/2024	03:16:01 PM
51	N063123-001A	SAMP	5	02/19/2024	03:18:55 PM
52	N063123-001A-PS	PS	1	02/19/2024	03:21:49 PM
14	CCV3	CCV	1	02/19/2024	03:25:15 PM
1	CCB3	CCB	1	02/19/2024	03:28:42 PM
53	N063123-001A-MS2	MS	1	02/19/2024	03:32:38 PM
54	N063123-001A-MSD2	MSD	1	02/19/2024	03:36:06 PM
14	CCV4	CCV	1	02/19/2024	03:39:34 PM
1	CCB4	CCB	1	02/19/2024	03:43:02 PM
19	ICSA2	ICSA	1	02/19/2024	03:45:58 PM
20	ICSAB2	ICSAB	1	02/19/2024	03:48:55 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/16/2024 11:58:48 AM**
Prep End Date: **2/16/2024 3:50:00 PM**
Prep Batch **106859** Prep Code:**3010_W_DISS**

Reviewed/ Date: dMocha 3/4/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-52**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS1-106859	Aqueous		25	☐	25	1.000		
LCS2-106859	Aqueous	<2	25	☐	25	1.000		
MB-106859	Aqueous		25	☐	25	1.000		
N062388-003A	Water		25	☐	25	1.000		
N062388-004A	Water		25	☐	25	1.000		
N063053-002C REDIGEST	Water	<2	25	☐	25	1.000		
N063076-001B	Water	<2	25	☐	25	1.000		
N063076-002B	Water	<2	25	☐	25	1.000		
N063076-002B-MS1	Water	<2	25	☐	25	1.000		
N063076-002B-MSD1	Water	<2	25	☐	25	1.000		
N063076-003B	Water	<2	25	☐	25	1.000		
N063103-010B	Surface Water	<2	25	☐	25	1.000		
N063103-010B-MS2	Surface Water	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15257	HYDROCHLORIC ACID
16149	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MSST-231025E	Sodium	LCS,MS,MSD	0.05
MSST-231025F	Potassium	LCS,MS,MSD	0.05
MSST-231130A	Strontium	LCS,MS,MSD	0.125
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/16/2024 11:58:48 AM**
Prep End Date: **2/16/2024 3:50:00 PM**
Prep Batch **106859** Prep Code:**3010_W_DISS**

Reviewed/ Date: dRocha 3/4/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-52**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063103-010B-MSD2	Surface Water	<2	25	☐	25	1.000		
N063135-001B	Groundwater	<2	25	☐	25	1.000		
N063135-003B	Groundwater	<2	25	☐	25	1.000		
N063135-005B	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15257	HYDROCHLORIC ACID
16149	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MSST-231025E	Sodium	LCS,MS,MSD	0.05
MSST-231025F	Potassium	LCS,MS,MSD	0.05
MSST-231130A	Strontium	LCS,MS,MSD	0.125
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240216B

Instrument ID: ICP-03

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Boron								
CalBlk	02/16/2024	01:42:47 PM	B	249.677	357	0.00	mg/L	
Standard1	02/16/2024	01:47:00 PM	B	249.677	1612	0.1	mg/L	
Standard3	02/16/2024	01:55:28 PM	B	249.677	16605	1.0	mg/L	
Standard4	02/16/2024	01:59:15 PM	B	249.677	41759	2.5	mg/L	
Standard5	02/16/2024	02:04:01 PM	B	249.677	62927	3.75	mg/L	
Standard6	02/16/2024	02:08:44 PM	B	249.677	84065	5.0	mg/L	
Standard7	02/16/2024	02:12:59 PM	B	249.677	168003	10.0	mg/L	1.0000
Calcium								
CalBlk	02/16/2024	01:42:47 PM	Ca	317.933	6848	0.00	mg/L	
Standard1	02/16/2024	01:47:00 PM	Ca	317.933	12359	0.2	mg/L	
Standard2	02/16/2024	01:51:14 PM	Ca	317.933	57750	1.00	mg/L	
Standard3	02/16/2024	01:55:28 PM	Ca	317.933	118718	2.0	mg/L	
Standard4	02/16/2024	01:59:15 PM	Ca	317.933	292071	5.0	mg/L	
Standard5	02/16/2024	02:04:01 PM	Ca	317.933	438717	7.5	mg/L	
Standard6	02/16/2024	02:08:44 PM	Ca	317.933	583460	10.0	mg/L	
Standard7	02/16/2024	02:12:59 PM	Ca	317.933	1153440	20.0	mg/L	1.0000
Iron								
CalBlk	02/16/2024	01:42:47 PM	Fe	273.952	289	0.00	mg/L	
Standard1	02/16/2024	01:47:00 PM	Fe	273.952	195	0.02	mg/L	
Standard2	02/16/2024	01:51:14 PM	Fe	273.952	562	0.05	mg/L	
Standard3	02/16/2024	01:55:28 PM	Fe	273.952	19694	2.0	mg/L	
Standard4	02/16/2024	01:59:15 PM	Fe	273.952	48803	5.0	mg/L	
Standard5	02/16/2024	02:04:01 PM	Fe	273.952	73118	7.5	mg/L	
Standard6	02/16/2024	02:08:44 PM	Fe	273.952	97032	10.0	mg/L	
Standard7	02/16/2024	02:12:59 PM	Fe	273.952	190646	20.0	mg/L	1.0000

INITIAL CALIBRATION SUMMARY: 240219A

Instrument ID: ICP-02

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Sodium								
CalBlk	02/19/2024	12:58:32 PM	Na	589.61	53	0.00	mg/L	
Standard1	02/19/2024	01:01:58 PM	Na	589.61	527	0.1000	mg/L	
Standard2	02/19/2024	01:04:51 PM	Na	589.61	4396	1.000	mg/L	
Standard3	02/19/2024	01:07:45 PM	Na	589.61	23970	5.000	mg/L	
Standard4	02/19/2024	01:11:10 PM	Na	589.61	48066	10.000	mg/L	
Standard5	02/19/2024	01:14:37 PM	Na	589.61	95570	20.000	mg/L	
Standard6	02/19/2024	01:18:04 PM	Na	589.61	190506	40.000	mg/L	1.0000
Potassium								
CalBlk	02/19/2024	12:58:32 PM	K	766.479	-269	0.00	mg/L	
Standard1	02/19/2024	01:01:58 PM	K	766.479	208	0.1000	mg/L	
Standard2	02/19/2024	01:04:51 PM	K	766.479	1574	1.000	mg/L	
Standard3	02/19/2024	01:07:45 PM	K	766.479	8611	5.000	mg/L	
Standard4	02/19/2024	01:11:10 PM	K	766.479	17259	10.000	mg/L	
Standard5	02/19/2024	01:14:37 PM	K	766.479	34551	20.000	mg/L	
Standard6	02/19/2024	01:18:04 PM	K	766.479	68897	40.000	mg/L	1.0000

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **ICV**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695373**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10154.533	20	10000	0	102	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **ZZZZZZ**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695375**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	17.468	20	20.00	0	87.3	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **CCV**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695387**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10109.323	20	10000	0	101	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **CCV**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695399**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10122.519	20	10000	0	101	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **CCV**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695411**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10114.003	20	10000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182663**
Client ID: **ICV**	Batch ID: **R182663**	TestNo: **EPA 6010B**		Analysis Date: **2/19/2024**	SeqNo: **5698774**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.066	0.50	10.00	0	101	90	110				
Sodium	10.122	0.50	10.00	0	101	90	110				

Sample ID **LLICV**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182663**
Client ID: **CCV**	Batch ID: **R182663**	TestNo: **EPA 6010B**		Analysis Date: **2/19/2024**	SeqNo: **5698776**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.535	0.50	0.5000	0	107	90	110				
Sodium	0.516	0.50	0.5000	0	103	90	110				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182663**
Client ID: **CCV**	Batch ID: **R182663**	TestNo: **EPA 6010B**		Analysis Date: **2/19/2024**	SeqNo: **5698789**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.074	0.50	10.00	0	101	90	110				
Sodium	10.101	0.50	10.00	0	101	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182663**
Client ID: **CCV**	Batch ID: **R182663**	TestNo: **EPA 6010B**		Analysis Date: **2/19/2024**	SeqNo: **5698801**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.056	0.50	10.00	0	101	90	110				
Sodium	10.111	0.50	10.00	0	101	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182663**
Client ID: **CCV**	Batch ID: **R182663**	TestNo: **EPA 6010B**		Analysis Date: **2/19/2024**	SeqNo: **5698813**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.081	0.50	10.00	0	101	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182663**
Client ID: **CCV**	Batch ID: **R182663**	TestNo: **EPA 6010B**		Analysis Date: **2/19/2024**	SeqNo: **5698813**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	10.130	0.50	10.00	0	101	90	110				

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182663**
Client ID: **CCV**	Batch ID: **R182663**	TestNo: **EPA 6010B**		Analysis Date: **2/19/2024**	SeqNo: **5698817**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.110	0.50	10.00	0	101	90	110				
Sodium	10.128	0.50	10.00	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **ICV** SampType: **ICV** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182740**
Client ID: **ICV** Batch ID: **R182740** TestNo: **EPA 6010B** Analysis Date: **2/16/2024** SeqNo: **5703013**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5.016	0.10	5.000	0	100	90	110				
Calcium	10.143	0.50	10.00	0	101	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182740**
Client ID: **ZZZZZZ** Batch ID: **R182740** TestNo: **EPA 6010B** Analysis Date: **2/16/2024** SeqNo: **5703015**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.100	0.10	0.1000	0	99.7	80	120				
Calcium	0.215	0.50	0.2000	0	107	80	120				

Sample ID **CCV1** SampType: **CCV** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182740**
Client ID: **CCV** Batch ID: **R182740** TestNo: **EPA 6010B** Analysis Date: **2/16/2024** SeqNo: **5703027**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5.037	0.10	5.000	0	101	90	110				
Calcium	10.116	0.50	10.00	0	101	90	110				

Sample ID **CCV2** SampType: **CCV** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182740**
Client ID: **CCV** Batch ID: **R182740** TestNo: **EPA 6010B** Analysis Date: **2/16/2024** SeqNo: **5703039**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5.005	0.10	5.000	0	100	90	110				
Calcium	10.156	0.50	10.00	0	102	90	110				

Sample ID **CCV3** SampType: **CCV** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182740**
Client ID: **CCV** Batch ID: **R182740** TestNo: **EPA 6010B** Analysis Date: **2/16/2024** SeqNo: **5703051**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	4.999	0.10	5.000	0	100	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182740**
Client ID: **CCV**	Batch ID: **R182740**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5703051**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	10.112	0.50	10.00	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **ICB**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695374**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-3.201959	20									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **CCB**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695388**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-3.222568	20									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **CCB**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695400**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-5.932008	20									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **CCB**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695412**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-9.676671	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182663**
Client ID: **ICB**	Batch ID: **R182663**	TestNo: **EPA 6010B**		Analysis Date: **2/19/2024**	SeqNo: **5698775**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.005	0.50									
Sodium	0.007	0.50									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182663**
Client ID: **CCB**	Batch ID: **R182663**	TestNo: **EPA 6010B**		Analysis Date: **2/19/2024**	SeqNo: **5698790**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.017	0.50									
Sodium	0.004	0.50									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182663**
Client ID: **CCB**	Batch ID: **R182663**	TestNo: **EPA 6010B**		Analysis Date: **2/19/2024**	SeqNo: **5698802**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.020	0.50									
Sodium	0.000978	0.50									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182663**
Client ID: **CCB**	Batch ID: **R182663**	TestNo: **EPA 6010B**		Analysis Date: **2/19/2024**	SeqNo: **5698814**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.020	0.50									
Sodium	0.003	0.50									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182663**
Client ID: **CCB**	Batch ID: **R182663**	TestNo: **EPA 6010B**		Analysis Date: **2/19/2024**	SeqNo: **5698818**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.031	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182663**
Client ID: **CCB**	Batch ID: **R182663**	TestNo: **EPA 6010B**		Analysis Date: **2/19/2024**	SeqNo: **5698818**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	0.006	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID	ICB	SampType:	ICB	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	182740
Client ID:	ICB	Batch ID:	R182740	TestNo:	EPA 6010B			Analysis Date:	2/16/2024	SeqNo:	5703014

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.008	0.10									
Calcium	0.000764	0.50									

Sample ID	CCB1	SampType:	CCB	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	182740
Client ID:	CCB	Batch ID:	R182740	TestNo:	EPA 6010B			Analysis Date:	2/16/2024	SeqNo:	5703028

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.016	0.10									
Calcium	0.003	0.50									

Sample ID	CCB2	SampType:	CCB	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	182740
Client ID:	CCB	Batch ID:	R182740	TestNo:	EPA 6010B			Analysis Date:	2/16/2024	SeqNo:	5703040

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.006	0.10									
Calcium	0.004	0.50									

Sample ID	CCB3	SampType:	CCB	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	182740
Client ID:	CCB	Batch ID:	R182740	TestNo:	EPA 6010B			Analysis Date:	2/16/2024	SeqNo:	5703052

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.004	0.10									
Calcium	0.002	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181618**
Client ID: **ICSA** Batch ID: **R181618** TestNo: **EPA 6010B** Analysis Date: **2/16/2024** SeqNo: **5695376**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	575871.413	50	500000	0	115	80	120				
Calcium	460764.994	500	500000	0	92.2	80	120				
Iron	174257.620	20	200000	0	87.1	80	120				
Magnesium	453863.156	100	500000	0	90.8	80	120				

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181618**
Client ID: **ICSAB** Batch ID: **R181618** TestNo: **EPA 6010B** Analysis Date: **2/16/2024** SeqNo: **5695377**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	576195.263	50	500000	0	115	80	120				
Calcium	464182.194	500	500000	0	92.8	80	120				
Iron	176965.574	20	200000	0	88.5	80	120				
Magnesium	456514.772	100	500000	0	91.3	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181618**
Client ID: **ICSA** Batch ID: **R181618** TestNo: **EPA 6010B** Analysis Date: **2/16/2024** SeqNo: **5695413**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	579723.631	50	500000	0	116	80	120				
Calcium	460793.167	500	500000	0	92.2	80	120				
Iron	173957.471	20	200000	0	87.0	80	120				
Magnesium	453133.486	100	500000	0	90.6	80	120				

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181618**
Client ID: **ICSAB** Batch ID: **R181618** TestNo: **EPA 6010B** Analysis Date: **2/16/2024** SeqNo: **5695414**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	592644.636	50	500000	0	119	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **ICSAB**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695414**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	465201.655	500	500000	0	93.0	80	120				
Iron	176957.836	20	200000	0	88.5	80	120				
Magnesium	456512.413	100	500000	0	91.3	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **ICSA1**	SampType: **ICSA**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182663**
Client ID: **ICSA**	Batch ID: **R182663**	TestNo: **EPA 6010B**		Analysis Date: **2/19/2024**	SeqNo: **5698777**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	-0.007266	0.50									
Sodium	-0.005112	0.50									

Sample ID **ICSAB1**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182663**
Client ID: **ICSAB**	Batch ID: **R182663**	TestNo: **EPA 6010B**		Analysis Date: **2/19/2024**	SeqNo: **5698778**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.032	0.50	10.00	0	100	80	120				
Sodium	10.086	0.50	10.00	0	101	80	120				

Sample ID **ICSA2**	SampType: **ICSA**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182663**
Client ID: **ICSA**	Batch ID: **R182663**	TestNo: **EPA 6010B**		Analysis Date: **2/19/2024**	SeqNo: **5698819**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.015	0.50									
Sodium	-0.002384	0.50									

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182663**
Client ID: **ICSAB**	Batch ID: **R182663**	TestNo: **EPA 6010B**		Analysis Date: **2/19/2024**	SeqNo: **5698820**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.118	0.50	10.00	0	101	80	120				
Sodium	10.148	0.50	10.00	0	101	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **ICSA1**	SampType: **ICSA**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182740**
Client ID: **ICSA**	Batch ID: **R182740**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5703016**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	575.871	0.050	500.0	0	115	80	120				
Boron	-0.007947	0.10									
Calcium	460.765	0.50	500.0	0	92.2	80	120				
Iron	174.258	0.020	200.0	0	87.1	80	120				
Magnesium	453.863	0.10	500.0	0	90.8	80	120				

Sample ID **ICSAB1**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182740**
Client ID: **ICSAB**	Batch ID: **R182740**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5703017**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	576.195	0.050	500.0	0	115	80	120				
Boron	0.803	0.10	1.000	0	80.3	80	120				
Calcium	464.182	0.50	500.0	0	92.8	80	120				
Iron	176.966	0.020	200.0	0	88.5	80	120				
Magnesium	456.515	0.10	500.0	0	91.3	80	120				

Sample ID **ICSA2**	SampType: **ICSA**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182740**
Client ID: **ICSA**	Batch ID: **R182740**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5703053**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	579.724	0.050	500.0	0	116	80	120				
Boron	-0.006135	0.10									
Calcium	460.793	0.50	500.0	0	92.2	80	120				
Iron	173.957	0.020	200.0	0	87.0	80	120				
Magnesium	453.133	0.10	500.0	0	90.6	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182740**
Client ID: **ICSAB**	Batch ID: **R182740**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5703054**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	592.645	0.050	500.0	0	119	80	120				
Boron	0.805	0.10	1.000	0	80.5	80	120				
Calcium	465.202	0.50	500.0	0	93.0	80	120				
Iron	176.958	0.020	200.0	0	88.5	80	120				
Magnesium	456.512	0.10	500.0	0	91.3	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240216B

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	1	99.96	65-125	PASS
Standard2	ICAL	1	0.99	99.32	65-125	PASS
Standard3	ICAL	1	1	99.7	65-125	PASS
Standard4	ICAL	1	0.99	98.65	65-125	PASS
Standard5	ICAL	1	0.99	98.8	65-125	PASS
Standard6	ICAL	1	0.99	98.6	65-125	PASS
Standard7	ICAL	1	0.97	97	65-125	PASS
ICV	ICV	1	0.99	99.32	65-125	PASS
ICB	ICB	1	1	100.28	65-125	PASS
LLICV1	CCV1	1	1	100.4	65-125	PASS
ICSA1	ICSA	1	0.86	86.1	65-125	PASS
ICSAB1	ICSAB	1	0.84	84.14	65-125	PASS
RINSE	RINSE	1	1.05	105.27	65-125	PASS
CCV1	CCV	1	0.99	98.87	65-125	PASS
CCB1	CCB	1	1.01	100.81	65-125	PASS
MB-106859	MBLK	1	1.01	100.77	65-125	PASS
LCS1-106859	LCS	1	1	99.9	65-125	PASS
N063053-002C	SAMP	1	0.73	72.85	65-125	PASS
N063076-001B	SAMP	1	0.79	79.06	65-125	PASS
N063076-002B	SAMP	1	0.78	78.14	65-125	PASS
N063076-002B	SAMP	5	0.89	88.78	65-125	PASS
N063076-002B-PS	PS	1	0.76	75.91	65-125	PASS
N063076-002B-MS1	MS	1	0.79	79.2	65-125	PASS
N063076-002B-MSD1	MSD	1	0.79	78.91	65-125	PASS
N063076-003B	SAMP	1	0.76	76.08	65-125	PASS
CCV2	CCV	1	0.99	98.95	65-125	PASS
CCB2	CCB	1	1.01	101.06	65-125	PASS
N063103-010B	SAMP	1	0.91	91.21	65-125	PASS
N063135-001B	SAMP	1	0.86	85.96	65-125	PASS
N063135-003B	SAMP	1	0.72	72.19	65-125	PASS
N063135-005B	SAMP	1	0.68	67.97	65-125	PASS
LCS1-106859	LCS	1	0.95	95.02	65-125	PASS
CCV3	CCV	1	0.99	98.89	65-125	PASS
CCB3	CCB	1	1.01	100.61	65-125	PASS
ICSA2	ICSA	1	0.86	85.68	65-125	PASS
ICSAB2	ICSAB	1	0.83	83.5	65-125	PASS
RINSE	RINSE	1	1.02	101.84	65-125	PASS
RINSE	RINSE	1	1.01	101.36	65-125	PASS
CCV4	CCV	1	0.98	97.52	65-125	PASS
CCB4	CCB	1	0.99	99.05	65-125	PASS

INTERNAL STANDARD: 240216B

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
RINSE	RINSE	1	1.01	101.03	65-125	PASS
CCV5	CCV	1	0.97	97.19	65-125	PASS
CCB5	CCB	1	0.99	98.93	65-125	PASS
ICSA3	ICSA	1	0.85	84.57	65-125	PASS
ICSAB3	ICSAB	1	0.83	82.58	65-125	PASS
ICSA3	ICSA	1	0.82	82.29	65-125	PASS
ICSAB3	ICSAB	1	0.83	82.79	65-125	PASS

INTERNAL STANDARD: 240219A

Instrument ID: ICP-02

Sample Name	Type	DF	Scandium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	0.98	97.82	65-125	PASS
Standard2	ICAL	1	0.97	96.85	65-125	PASS
Standard3	ICAL	1	0.97	96.88	65-125	PASS
Standard4	ICAL	1	0.97	96.79	65-125	PASS
Standard5	ICAL	1	0.96	95.67	65-125	PASS
Standard6	ICAL	1	0.95	95.2	65-125	PASS
ICV	ICV	1	0.97	96.91	65-125	PASS
ICB	ICB	1	1	100.12	65-125	PASS
LLICV	CCV	1	0.97	96.75	65-125	PASS
ICSA1	ICSA	1	0.98	98.1	65-125	PASS
ICSAB1	ICSAB	1	0.97	96.83	65-125	PASS
MB-106859	MBLK	1	1.01	101.09	65-125	PASS
CCV1	CCV	1	0.97	97.07	65-125	PASS
CCB1	CCB	1	1.03	102.92	65-125	PASS
LCS2-106859	LCS	1	0.96	96.42	65-125	PASS
N062388-003A	SAMP	1	0.99	99.11	65-125	PASS
N062388-004A	SAMP	1	0.91	90.98	65-125	PASS
N063103-010B	SAMP	5	0.97	97.36	65-125	PASS
N063103-010B	SAMP	25	0.97	97.29	65-125	PASS
N063103-010B	SAMP	125	0.99	98.78	65-125	PASS
N063103-010B-PS	PS	5	0.95	95.31	65-125	PASS
N063103-010B-PS	PS	25	0.95	94.94	65-125	PASS
N063103-010B-MS2	MS	5	0.97	96.77	65-125	PASS
N063103-010B-MS2	MS	25	0.97	96.8	65-125	PASS
CCV2	CCV	1	0.97	96.95	65-125	PASS
CCB2	CCB	1	1	100.42	65-125	PASS
N063103-010B-MSD2	MSD	5	0.97	96.88	65-125	PASS
N063103-010B-MSD2	MSD	25	0.97	97.28	65-125	PASS
LCS2-106859	LCS	1	0.96	95.91	65-125	PASS
CCV3	CCV	1	0.97	96.94	65-125	PASS
CCB3	CCB	1	1.03	102.71	65-125	PASS
CCV4	CCV	1	0.96	96	65-125	PASS
CCB4	CCB	1	1.02	102.23	65-125	PASS
ICSA2	ICSA	1	1	100.49	65-125	PASS
ICSAB2	ICSAB	1	0.96	96.24	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063103
Test Method: EPA 6010B
Analysis Date: 2/16/2024

Matrix: Surface Water
Batch No.: 106859

Instrument ID: ICP-03
Instrument Description: Perkin Elmer Avio 500Max

Comments:

Analyzed By: Diane Jetajobe

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063076-002B DT 5x	Iron	Fe	µg/L	979.0598	PASS	933.8934	4.84%	10

Reviewed by:

dMocha 3/4/2024

Note: NA - Not Applicable

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063103
Test Method: EPA 6010B
Analysis Date: 2/19/2024

Matrix: Surface Water
Batch No.: 106859

Instrument ID: ICP-03
Instrument Description: Perkin Elmer Avio 500Max

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to B. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063076-002B DT 5x	Boron	B	mg/L	1.23783	NA	1.23205	0.47%	10
N063076-002B DT 5x	Calcium	Ca	mg/L	292.8245	PASS	278.8972	4.99%	10

Reviewed by:

dMocha 3/4/2024

Note: NA - Not Applicable

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063103
Test Method: EPA 6010B
Analysis Date: 2/19/2024

Matrix: Surface Water
Batch No.: 106859

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima 7300DV

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to K. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063103-010B DT 5x	Potassium	K	mg/L	5.901779	NA	5.186142	13.80%	10
N063103-010B DT 5x	Sodium	Na	mg/L	105.2073	PASS	102.8027	2.34%	10

Reviewed by:

dlRocha 3/4/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID	**N063076-002B-PS**	SampType:	**PS**	TestCode:	**6010_WDPG**	Units:	**µg/L**	Prep Date:		RunNo:	**181618**
Client ID:	**ZZZZZZ**	Batch ID:	**106859**	TestNo:	**EPA 6010B**	**EPA 3010A**		Analysis Date:	**2/16/2024**	SeqNo:	**5695395**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1016.456	20	100.0	933.9	82.6	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID	N063103-010B-PS	SampType:	PS	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	182663
Client ID:	ZZZZZZ	Batch ID:	106859	TestNo:	EPA 6010B	EPA 3010A		Analysis Date:	2/19/2024	SeqNo:	5698797

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	97.345	2.5	100.0	5.186	92.2	80	120				
Sodium	189.009	2.5	100.0	102.8	86.2	80	120				

Sample ID	N063076-002B-PS	SampType:	PS	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	182740
Client ID:	ZZZZZZ	Batch ID:	106859	TestNo:	EPA 6010B	EPA 3010A		Analysis Date:	2/16/2024	SeqNo:	5703035

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	6.515	0.10	5.000	1.232	106	80	120				
Calcium	285.981	0.50	10.00	278.9	70.8	80	120				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

LOD & PQL VERIFICATION

Analytical Method: EPA 6010B
Digestion Method: EPA 3010A
Digestion Date: 5/7/23; 5/8/23; 5/10/23
Analysis Date: 5/7-23/23
Instrument Name: ICP-03
Analyst/Technician: Nancy Sibucao / Diane Jetajobe

Matrix: WATER
Units : ppm

Analyte	MDL	LOD	ACTUAL LOD	PQL	Actual PQL	%REC
Beryllium	0.000076	0.0005	0.00047	0.001	0.00098	98
Boron	0.0086	0.05	0.04899	0.1	0.089	89
Magnesium	0.0057	0.05	0.05152	0.1	0.10	102
Silicon	0.012	0.01	0.01312	0.02	0.023	113
Chromium	0.00051	0.0005	0.00056	0.001	0.0010	102
Manganese	0.00032	0.01	0.00534	0.01	0.011	110
Iron	0.0022	0.01	0.01180	0.02	0.021	106
Cobalt	0.001	0.0013	0.00096	0.0025	0.0025	100
Nickel	0.0034	0.0025	0.00417	0.005	0.0055	110
Copper	0.0042	0.0025	0.00434	0.005	0.0044	87
Zinc	0.0007	0.005	0.00624	0.01	0.011	106
Arsenic	0.0042	0.005	0.00461	0.01	0.010	104
Selenium	0.008	0.005	0.00829	0.01	0.010	102
Molybdenum	0.0013	0.0025	0.00307	0.005	0.0053	106
Silver	0.0024	0.0013	0.00419	0.0025	0.0033	134
Cadmium	0.0016	0.0013	0.00180	0.0025	0.0026	102
Tin	0.0076	0.005	0.00563	0.010	0.0099	99
Antimony	0.0038	0.005	0.00307	0.01	0.0096	96
Barium	0.0002	0.0013	0.00124	0.0025	0.0026	104
Thallium	0.0021	0.0075	0.00656	0.015	0.015	101
Lead	0.0039	0.0025	0.00337	0.005	0.0047	94
Calcium	0.011	0.1	0.11963	0.2	0.23	113
Vanadium	0.00017	0.0013	0.00126	0.0025	0.0025	100
Aluminum	0.0089	0.025	0.02576	0.05	0.048	95
Titanium	0.004	0.005	0.00612	0.01	0.01	101

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

Method Detection Limit

Analytical Method: EPA 6010B / 200.7 **Matrix: Water**

Digestion Method: EPA 3010A 25 mL

Date of Analysis: 6/22,24,30/2021 Units: mg/L

Instrument Name: ICP2

Analysts: DBJ

Analyte	1	2	3	4	5	6	7	SD	Ave	AMT SPIKED	MDLs	PQL
Potassium	0.13348	0.13397	0.12506	0.12108	0.13408	0.09107	0.06999	0.02517	0.11553	0.1000	0.07902	0.5
Sodium	0.09937	0.09005	0.09138	0.12202	0.10604	0.13761	0.13949	0.02087	0.11228	0.1000	0.06553	0.5
Strontium	0.0299	0.02938	0.02907	0.03172	0.03136	0.0304	0.03017	0.00097	0.03029	0.0250	0.00306	0.05

Method Detection Limit - Blank

Start Date: 6/1/2019

End Date 6/30/2021

*Note: MDL value is from Method Blank (MB) results pooled from June 1, 2019 to June 30, 2021.

Analyte	MDLb
Potassium	0.1388
Sodium	0.3400
Strontium	-0.0004

EPA 6010B
Total

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106860
ASSET #: N063103

Instrument ID: ICP-03
Analyst: DBJ
Date Analyzed: 2/16/2024

Method: TOTAL

- [X] EPA 6010B / 200.7
- [ ] EPA 6020 / 200.8
- [ ] EPA 7470A / 7471A/245.1
- [ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.	X			X		
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?	X			X		
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented		X			X	
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 02222024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Surface Water

FORMULA:

Calculate the Iron concentration, in ug/L , in the original sample as follows:

Iron , ug/L = A * DF * PF *CF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL
CF= Conversion Factor from mg/L to ug/L, 1000

For Sample **N063103-010C** , the concentration i ug/L is calculated as follows:

Iron , ug/L = 0.04361 * 1 * (25/25) * 1000

Iron , ug/L = 43.61

Reporting results in two significant figures,

Iron , ug/L = 44

Reviewed by:

dlRocha 3/3/2024

% RSD SUMMARY

RSD SUMMARY: 240216B

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	Fe	0	0.5	15	PASS
Standard1	ICAL	1	Fe	0.02	2.96	15	PASS
Standard2	ICAL	1	Fe	0.05	1.49	15	PASS
Standard3	ICAL	1	Fe	2	0.04	15	PASS
Standard4	ICAL	1	Fe	5	0.08	15	PASS
Standard5	ICAL	1	Fe	7.5	0.03	15	PASS
Standard6	ICAL	1	Fe	10	0.07	15	PASS
Standard7	ICAL	1	Fe	20	0.06	15	PASS
ICV	ICV	1	Fe	10.15	0.13	15	PASS
ICB	ICB	1	Fe	0	16.51	15	<PQL
LLICV1	CCV1	1	Fe	0.02	1.18	20	PASS
ICSA1	ICSA	1	Fe	174.26	0.04	15	PASS
ICSAB1	ICSAB	1	Fe	176.97	0.03	15	PASS
RINSE	RINSE	1	Fe	0	709.47	15	<PQL
CCV1	CCV	1	Fe	10.11	0.04	15	PASS
CCB1	CCB	1	Fe	0	19.82	15	<PQL
CCV2	CCV	1	Fe	10.12	0.08	15	PASS
CCB2	CCB	1	Fe	-0.01	2.85	15	PASS
MB-106860	MBLK	1	Fe	-0.01	8.74	15	PASS
LCS-106860	LCS	1	Fe	0.09	0.46	15	PASS
N063053-002D	SAMP	1	Fe	0.04	5.69	15	PASS
N063103-010C	SAMP	1	Fe	0.04	1.66	15	PASS
N063103-010C	SAMP	5	Fe	0	12.7	15	PASS
CCV3	CCV	1	Fe	10.11	0.05	15	PASS
CCB3	CCB	1	Fe	-0.01	2.48	15	PASS
ICSA2	ICSA	1	Fe	173.96	0.05	15	PASS
ICSAB2	ICSAB	1	Fe	176.96	0.02	15	PASS
RINSE	RINSE	1	Fe	0.01	90.28	15	<PQL
N063103-010C-PS	PS	1	Fe	0.15	1.43	15	PASS
N063103-010C-MS	MS	1	Fe	0.16	1.94	15	PASS
N063103-010C-MSD	MSD	1	Fe	0.15	0.03	15	PASS
RINSE	RINSE	1	Fe	0	21.19	15	<PQL
CCV4	CCV	1	Fe	10.1	0.11	15	PASS
CCB4	CCB	1	Fe	-0.01	6.23	15	PASS
RINSE	RINSE	1	Fe	0	30.98	15	<PQL
CCV5	CCV	1	Fe	10.05	0.2	15	PASS
CCB5	CCB	1	Fe	-0.01	5.1	15	PASS
ICSA3	ICSA	1	Fe	173.9	0.02	15	PASS
ICSAB3	ICSAB	1	Fe	176.31	0.05	15	PASS
ICSA3	ICSA	1	Fe	183.11	0.02	15	PASS
ICSAB3	ICSAB	1	Fe	164.97	0.02	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240216B

Instrument ID: ICP-03

STANDARD CODE	
Standard1	MWST-240105M, 0.5<50mL
Standard2	MWST-240105N
Standard3	MWST-240105O, 5<50mL
Standard4	MWST-240105O,12.5<50mL
Standard5	MWST-240105O, 15<40mL
Standard6	MWST-240105O, 25<50mL
Standard7	MWST-240105O
ICV	MWST-240105AE
CCV	MWST-240105O, 25<50mL
ICSA/ICSAB	MWST-240105P / MWST-240105Q
Int. Std. (Y)	MWST-240105B
PS Spike	MWST-240105X / Y/ Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	02/16/2024	01:42:47 PM
2	Standard1	ICAL	1	02/16/2024	01:47:00 PM
3	Standard2	ICAL	1	02/16/2024	01:51:14 PM
4	Standard3	ICAL	1	02/16/2024	01:55:28 PM
5	Standard4	ICAL	1	02/16/2024	01:59:15 PM
6	Standard5	ICAL	1	02/16/2024	02:04:01 PM
7	Standard6	ICAL	1	02/16/2024	02:08:44 PM
8	Standard7	ICAL	1	02/16/2024	02:12:59 PM
310	ICV	ICV	1	02/16/2024	02:21:05 PM
1	ICB	ICB	1	02/16/2024	02:25:25 PM
2	LLICV1	CCV1	1	02/16/2024	02:29:39 PM
9	ICSA1	ICSA	1	02/16/2024	02:33:52 PM
10	ICSAB1	ICSAB	1	02/16/2024	02:38:55 PM
299	RINSE	RINSE	1	02/16/2024	02:47:49 PM
71	MB-106828	MBLK	1	02/16/2024	02:52:07 PM
72	LCS-106828	LCS	1	02/16/2024	03:07:58 PM
73	N063078-001A	SAMP	5	02/16/2024	03:12:44 PM
74	N063078-002A	SAMP	5	02/16/2024	03:18:05 PM
75	N063078-003A	SAMP	5	02/16/2024	03:21:50 PM
76	N063078-004A	SAMP	5	02/16/2024	03:27:11 PM
77	N063078-005A	SAMP	5	02/16/2024	03:31:25 PM
78	N063078-006A	SAMP	5	02/16/2024	03:35:40 PM
79	N063078-007A	SAMP	5	02/16/2024	03:41:01 PM
7	CCV1	CCV	1	02/16/2024	03:46:17 PM
1	CCB1	CCB	1	02/16/2024	03:50:33 PM
80	MB-106859	MBLK	1	02/16/2024	03:54:47 PM
81	LCS1-106859	LCS	1	02/16/2024	03:59:01 PM
82	N063053-002C	SAMP	1	02/16/2024	04:03:47 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
83	N063076-001B	SAMP	1	02/16/2024	04:09:10 PM
84	N063076-002B	SAMP	1	02/16/2024	04:14:31 PM
85	N063076-002B	SAMP	5	02/16/2024	04:19:52 PM
86	N063076-002B-PS	PS	1	02/16/2024	04:24:08 PM
87	N063076-002B-MS1	MS	1	02/16/2024	04:29:30 PM
88	N063076-002B-MSD1	MSD	1	02/16/2024	04:34:51 PM
89	N063076-003B	SAMP	1	02/16/2024	04:40:13 PM
7	CCV2	CCV	1	02/16/2024	04:45:35 PM
1	CCB2	CCB	1	02/16/2024	04:49:50 PM
90	N063103-010B	SAMP	1	02/16/2024	04:54:04 PM
91	N063135-001B	SAMP	1	02/16/2024	04:58:22 PM
92	N063135-003B	SAMP	1	02/16/2024	05:03:43 PM
93	N063135-005B	SAMP	1	02/16/2024	05:09:06 PM
81	LCS1-106859	LCS	1	02/16/2024	05:20:17 PM
94	MB-106860	MBLK	1	02/16/2024	05:23:59 PM
95	LCS-106860	LCS	1	02/16/2024	05:28:15 PM
96	N063053-002D	SAMP	1	02/16/2024	05:33:01 PM
97	N063103-010C	SAMP	1	02/16/2024	05:38:24 PM
98	N063103-010C	SAMP	5	02/16/2024	05:42:43 PM
7	CCV3	CCV	1	02/16/2024	05:46:57 PM
1	CCB3	CCB	1	02/16/2024	05:51:12 PM
9	ICSA2	ICSA	1	02/16/2024	05:55:25 PM
10	ICSAB2	ICSAB	1	02/16/2024	06:00:28 PM
299	RINSE	RINSE	1	02/16/2024	06:05:32 PM
99	N063103-010C-PS	PS	1	02/16/2024	06:09:51 PM
100	N063103-010C-MS	MS	1	02/16/2024	06:15:10 PM
101	N063103-010C-MSD	MSD	1	02/16/2024	06:20:29 PM
102	N063078-001A	SAMP	1	02/16/2024	06:25:48 PM
103	N063078-002A	SAMP	1	02/16/2024	06:31:18 PM
104	N063078-003A	SAMP	1	02/16/2024	06:36:07 PM
105	N063078-003A-PS	PS	1	02/16/2024	06:41:52 PM
106	N063078-003A-MS	MS	1	02/16/2024	06:47:38 PM
299	RINSE	RINSE	1	02/16/2024	06:53:24 PM
7	CCV4	CCV	1	02/16/2024	06:57:43 PM
1	CCB4	CCB	1	02/16/2024	07:01:57 PM
107	N063078-003A-MSD	MSD	1	02/16/2024	07:06:11 PM
108	N063078-005A	SAMP	1	02/16/2024	07:11:56 PM
109	N063078-006A	SAMP	25	02/16/2024	07:16:12 PM
299	RINSE	RINSE	1	02/16/2024	07:21:27 PM
7	CCV5	CCV	1	02/16/2024	07:25:46 PM
1	CCB5	CCB	1	02/16/2024	07:30:01 PM
9	ICSA3	ICSA	1	02/16/2024	07:34:14 PM
10	ICSAB3	ICSAB	1	02/16/2024	07:39:16 PM
9	ICSA3	ICSA	1	02/16/2024	07:48:45 PM
10	ICSAB3	ICSAB	1	02/16/2024	07:56:23 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/15/2024 11:59:04 AM**
Prep End Date: **2/15/2024 4:00:00 PM**
Prep Batch **106860** Prep Code: **3010_W**

Reviewed/ Date: dMocha 3/3/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-52**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-106860	Aqueous		25	☐	25	1.000		
MB-106860	Aqueous		25	☐	25	1.000		
N063053-002D REDIGEST	Groundwater	<2	25	☐	25	1.000		
N063103-010C	Surface Water	<2	25	☐	25	1.000		
N063103-010C-MS	Surface Water	<2	25	☐	25	1.000		
N063103-010C-MSD	Surface Water	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15257	HYDROCHLORIC ACID
16149	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240216B

Instrument ID: ICP-03

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Iron								
CalBlk	02/16/2024	01:42:47 PM	Fe	273.952	289	0.00	mg/L	
Standard1	02/16/2024	01:47:00 PM	Fe	273.952	195	0.02	mg/L	
Standard2	02/16/2024	01:51:14 PM	Fe	273.952	562	0.05	mg/L	
Standard3	02/16/2024	01:55:28 PM	Fe	273.952	19694	2.0	mg/L	
Standard4	02/16/2024	01:59:15 PM	Fe	273.952	48803	5.0	mg/L	
Standard5	02/16/2024	02:04:01 PM	Fe	273.952	73118	7.5	mg/L	
Standard6	02/16/2024	02:08:44 PM	Fe	273.952	97032	10.0	mg/L	
Standard7	02/16/2024	02:12:59 PM	Fe	273.952	190646	20.0	mg/L	1.0000

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **ICV**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695972**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10154.533	20	10000	0	102	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **ZZZZZZ**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695974**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	17.468	20	20.00	0	87.3	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **CCV**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695986**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10109.323	20	10000	0	101	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **CCV**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695998**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10122.519	20	10000	0	101	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **CCV**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5696010**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10114.003	20	10000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **CCV**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5696022**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10103.497	20	10000	0	101	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **CCV**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5696027**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10049.358	20	10000	0	100	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **ICB**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695973**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-3.201959	20									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **CCB**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695987**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-3.222568	20									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **CCB**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695999**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-5.932008	20									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **CCB**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5696011**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-9.676671	20									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **CCB**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5696023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-9.067326	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **CCB**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5696028**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-9.775852	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **ICSA1**	SampType: **ICSA**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **ICSA**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695975**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	575871.413	50	500000	0	115	80	120				
Calcium	460764.994	500	500000	0	92.2	80	120				
Iron	174257.620	20	200000	0	87.1	80	120				
Magnesium	453863.156	100	500000	0	90.8	80	120				

Sample ID **ICSAB1**	SampType: **ICSAB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **ICSAB**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695976**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	576195.263	50	500000	0	115	80	120				
Calcium	464182.194	500	500000	0	92.8	80	120				
Iron	176965.574	20	200000	0	88.5	80	120				
Magnesium	456514.772	100	500000	0	91.3	80	120				

Sample ID **ICSA2**	SampType: **ICSA**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **ICSA**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5696012**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	579723.631	50	500000	0	116	80	120				
Calcium	460793.167	500	500000	0	92.2	80	120				
Iron	173957.471	20	200000	0	87.0	80	120				
Magnesium	453133.486	100	500000	0	90.6	80	120				

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181631**
Client ID: **ICSAB**	Batch ID: **R181631**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5696013**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	592644.636	50	500000	0	119	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID	ICSAB2	SampType:	ICSAB	TestCode:	6010_WPGE	Units:	µg/L	Prep Date:		RunNo:	181631
Client ID:	ICSAB	Batch ID:	R181631	TestNo:	EPA 6010B			Analysis Date:	2/16/2024	SeqNo:	5696013

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	465201.655	500	500000	0	93.0	80	120				
Iron	176957.836	20	200000	0	88.5	80	120				
Magnesium	456512.413	100	500000	0	91.3	80	120				

Sample ID	ICSA3	SampType:	ICSA	TestCode:	6010_WPGE	Units:	µg/L	Prep Date:		RunNo:	181631
Client ID:	ICSA	Batch ID:	R181631	TestNo:	EPA 6010B			Analysis Date:	2/16/2024	SeqNo:	5696031

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	558615.734	50	500000	0	112	80	120				
Calcium	427248.382	500	500000	0	85.4	80	120				
Iron	183110.588	20	200000	0	91.6	80	120				
Magnesium	422820.803	100	500000	0	84.6	80	120				

Sample ID	ICSAB3	SampType:	ICSAB	TestCode:	6010_WPGE	Units:	µg/L	Prep Date:		RunNo:	181631
Client ID:	ICSAB	Batch ID:	R181631	TestNo:	EPA 6010B			Analysis Date:	2/16/2024	SeqNo:	5696032

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	563063.582	50	500000	0	113	80	120				
Calcium	433203.962	500	500000	0	86.6	80	120				
Iron	164967.185	20	200000	0	82.5	80	120				
Magnesium	427531.753	100	500000	0	85.5	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240216B

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	1	99.96	65-125	PASS
Standard2	ICAL	1	0.99	99.32	65-125	PASS
Standard3	ICAL	1	1	99.7	65-125	PASS
Standard4	ICAL	1	0.99	98.65	65-125	PASS
Standard5	ICAL	1	0.99	98.8	65-125	PASS
Standard6	ICAL	1	0.99	98.6	65-125	PASS
Standard7	ICAL	1	0.97	97	65-125	PASS
ICV	ICV	1	0.99	99.32	65-125	PASS
ICB	ICB	1	1	100.28	65-125	PASS
LLICV1	CCV1	1	1	100.4	65-125	PASS
ICSA1	ICSA	1	0.86	86.1	65-125	PASS
ICSAB1	ICSAB	1	0.84	84.14	65-125	PASS
RINSE	RINSE	1	1.05	105.27	65-125	PASS
CCV1	CCV	1	0.99	98.87	65-125	PASS
CCB1	CCB	1	1.01	100.81	65-125	PASS
CCV2	CCV	1	0.99	98.95	65-125	PASS
CCB2	CCB	1	1.01	101.06	65-125	PASS
MB-106860	MBLK	1	1	100.23	65-125	PASS
LCS-106860	LCS	1	0.97	96.61	65-125	PASS
N063053-002D	SAMP	1	0.74	73.75	65-125	PASS
N063103-010C	SAMP	1	0.92	92.05	65-125	PASS
N063103-010C	SAMP	5	0.96	96.09	65-125	PASS
CCV3	CCV	1	0.99	98.89	65-125	PASS
CCB3	CCB	1	1.01	100.61	65-125	PASS
ICSA2	ICSA	1	0.86	85.68	65-125	PASS
ICSAB2	ICSAB	1	0.83	83.5	65-125	PASS
RINSE	RINSE	1	1.02	101.84	65-125	PASS
N063103-010C-PS	PS	1	0.88	87.86	65-125	PASS
N063103-010C-MS	MS	1	0.91	91.2	65-125	PASS
N063103-010C-MSD	MSD	1	0.92	92.41	65-125	PASS
RINSE	RINSE	1	1.01	101.36	65-125	PASS
CCV4	CCV	1	0.98	97.52	65-125	PASS
CCB4	CCB	1	0.99	99.05	65-125	PASS
RINSE	RINSE	1	1.01	101.03	65-125	PASS
CCV5	CCV	1	0.97	97.19	65-125	PASS
CCB5	CCB	1	0.99	98.93	65-125	PASS
ICSA3	ICSA	1	0.85	84.57	65-125	PASS
ICSAB3	ICSAB	1	0.83	82.58	65-125	PASS
ICSA3	ICSA	1	0.82	82.29	65-125	PASS
ICSAB3	ICSAB	1	0.83	82.79	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063103
Test Method: EPA 6010B
Analysis Date: 2/16/2024

Matrix: Surface Water
Batch No.: 106860

Instrument ID: ICP-03
Instrument Description: Perkin Elmer Avio 500Max

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Fe. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063103-010C DT 5x	Iron	Fe	µg/L	0	NA	43.61008	100.00%	10

Reviewed by:

dMocha 3/3/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **N063103-010C-PS** SampType: **PS** TestCode: **6010_WPGE** Units: **µg/L** Prep Date: RunNo: **181631**
Client ID: **ZZZZZZ** Batch ID: **106860** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/16/2024** SeqNo: **5696014**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	145.325	20	100.0	43.61	102	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

LOD & PQL VERIFICATION

Analytical Method: EPA 6010B
Digestion Method: EPA 3010A
Digestion Date: 5/7/23; 5/8/23; 5/10/23
Analysis Date: 5/7-23/23
Instrument Name: ICP-03
Analyst/Technician: Nancy Sibucao / Diane Jetajobe

Matrix: WATER
Units : ppm

Analyte	MDL	LOD	ACTUAL LOD	PQL	Actual PQL	%REC
Beryllium	0.000076	0.0005	0.00047	0.001	0.00098	98
Boron	0.0086	0.05	0.04899	0.1	0.089	89
Magnesium	0.0057	0.05	0.05152	0.1	0.10	102
Silicon	0.012	0.01	0.01312	0.02	0.023	113
Chromium	0.00051	0.0005	0.00056	0.001	0.0010	102
Manganese	0.00032	0.01	0.00534	0.01	0.011	110
Iron	0.0022	0.01	0.01180	0.02	0.021	106
Cobalt	0.001	0.0013	0.00096	0.0025	0.0025	100
Nickel	0.0034	0.0025	0.00417	0.005	0.0055	110
Copper	0.0042	0.0025	0.00434	0.005	0.0044	87
Zinc	0.0007	0.005	0.00624	0.01	0.011	106
Arsenic	0.0042	0.005	0.00461	0.01	0.010	104
Selenium	0.008	0.005	0.00829	0.01	0.010	102
Molybdenum	0.0013	0.0025	0.00307	0.005	0.0053	106
Silver	0.0024	0.0013	0.00419	0.0025	0.0033	134
Cadmium	0.0016	0.0013	0.00180	0.0025	0.0026	102
Tin	0.0076	0.005	0.00563	0.010	0.0099	99
Antimony	0.0038	0.005	0.00307	0.01	0.0096	96
Barium	0.0002	0.0013	0.00124	0.0025	0.0026	104
Thallium	0.0021	0.0075	0.00656	0.015	0.015	101
Lead	0.0039	0.0025	0.00337	0.005	0.0047	94
Calcium	0.011	0.1	0.11963	0.2	0.23	113
Vanadium	0.00017	0.0013	0.00126	0.0025	0.0025	100
Aluminum	0.0089	0.025	0.02576	0.05	0.048	95
Titanium	0.004	0.005	0.00612	0.01	0.01	101

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

EPA 6020
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106852
ASSET #: N063103

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/15/2024

Method:

[ ] EPA 6010B / 200.7
[X] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.		X			X	
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

%Rec of Ba in N063103-001B-MS/PS failed. However, LCS passed criteria.
Dilution test for Ba failed.

	Yes	No	N/A
1. All assigned sample(s) analyzed	x		
2. Matrix / units correct	x		
3. Does batch meet QC requirements?	x		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	x		
5. Is first level review correct and complete?	x		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 2/27/2024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Surface Water

FORMULA:

Calculate the Arsenic concentration, in ug/L in the original sample as follows:

Arsenic , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063103-001B** , the concentration in ug/L is calculated as follows:

Arsenic , ug/L = 2.32259 * 1 *(25 / 25)

Arsenic , ug/L = 2.32259

Reporting results in two significant figures,

Arsenic , ug/L = 2.3

Reviewed by:

JRB 3/12/2024

% RSD SUMMARY

240215A

PERCENT RSD SUMMARY: ~~240115A~~

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.1	13.586	15	PASS	0.09	15.92	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.48	12.351	15	PASS	0.45	6.514	15	PASS
Std3-5/50 ppb	ICAL	1	4.72	1.264	15	PASS	4.64	1.325	15	PASS
Std4-10/100 ppb	ICAL	1	9.57	2.94	15	PASS	9.89	1.342	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.35	1.651	15	PASS	19.36	0.705	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.51	1.045	15	PASS	39.35	1.443	15	PASS
Std7-100/1000 ppb	ICAL	1	99.41	0.257	15	PASS	99.13	1.148	15	PASS
Std8-200/2000 ppb	ICAL	1	200.49	0.342	15	PASS	200.64	1.358	15	PASS
ICV	ICV	1	10.16	4.111	15	PASS	103.29	0.607	15	PASS
ICB	ICB	1	0	368.683	15	<PQL	<0.000	N/A	15	<PQL
LLICV1	CCV1	1	1.04	1.764	20	PASS	0.55	13.714	20	PASS
MLCCV	CCV	1	19.1	1.157	15	PASS	19.76	0.408	15	PASS
ICSA1	ICSA	1	0	42.449	15	<PQL	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.03	1.707	15	PASS	20.73	1.711	15	PASS
MDL 1	SAMP	1	1.09	0.27	15	PASS	0.53	10.552	15	PASS
MDL 2	SAMP	1	1.11	2.973	15	PASS	0.5	2.39	15	PASS
MDL 3	SAMP	1	1.04	1.918	15	PASS	0.52	14.601	15	PASS
CCV1	CCV	1	19.39	0.636	15	PASS	19.82	2.133	15	PASS
CCB1	CCB	1	0.01	99.959	15	<PQL	<0.000	N/A	15	<PQL
MDL 1	SAMP	1	1.1	9.488	15	PASS	0.56	9.471	15	PASS
MDL 2	SAMP	1	1.07	7.366	15	PASS	0.53	9.054	15	PASS
MDL 3	SAMP	1	1.08	3.321	15	PASS	0.52	7.214	15	PASS
CCV2	CCV	1	19.19	1.977	15	PASS	19.28	2.52	15	PASS
CCB2	CCB	1	0	113.489	15	<PQL	<0.000	N/A	15	<PQL
MDL 1	SAMP	1	1.1	2.868	15	PASS	0.6	14.561	15	PASS
MDL 2	SAMP	1	1.06	5.714	15	PASS	0.5	1.89	15	PASS
MDL 3	SAMP	1	1.09	1.095	15	PASS	0.52	9.138	15	PASS
MDL 1	SAMP	1	2.02	3.936	15	PASS	1.05	3.759	15	PASS
MDL 2	SAMP	1	2.1	6.778	15	PASS	1.06	5.99	15	PASS
MDL 3	SAMP	1	2.12	3.304	15	PASS	1.02	10.758	15	PASS
CCV3	CCV	1	19.41	2.328	15	PASS	19.34	2.014	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.03	0.507	15	PASS	20.26	0.749	15	PASS
MB-106852	MBLK	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
LCS-106852	LCS	1	10.01	1.399	15	PASS	103.21	1.325	15	PASS
N063076-001B	SAMP	1	15.44	1.762	15	PASS	2084.26	0.075	15	PASS
N063076-002B	SAMP	1	16.54	2.238	15	PASS	2095.08	0.654	15	PASS
N063076-003B	SAMP	1	16.05	3.454	15	PASS	2046.04	0.874	15	PASS
N063103-001B	SAMP	1	149.08	0.792	15	PASS	1.5	2.711	15	PASS

Reviewed by:

JRB 3/12/2024

240215A

PERCENT RSD SUMMARY: ~~240115A~~

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063103-001B	SAMP	5	32.98	1.717	15	PASS	0.33	3.561	15	PASS
N063103-001B-PS	PS	1	162.45	0.948	15	PASS	116.53	0.972	15	PASS
N063103-001B-MS	MS	1	162.52	1.266	15	PASS	99.13	1.187	15	PASS
CCV4	CCV	1	19.41	0.513	15	PASS	19.33	0.382	15	PASS
CCB4	CCB	1	0.01	101.464	15	<PQL	<0.000	N/A	15	<PQL
N063103-001B-MSD	MSD	1	161.15	1.033	15	PASS	98.68	0.54	15	PASS
N063103-002B	SAMP	1	150.57	0.166	15	PASS	1.82	7.601	15	PASS
N063103-003B	SAMP	1	151.52	1.777	15	PASS	2.66	8.318	15	PASS
N063103-004B	SAMP	1	149.47	2.067	15	PASS	1.38	7.238	15	PASS
N063103-005B	SAMP	1	153.99	1.889	15	PASS	1.91	3.319	15	PASS
N063103-006B	SAMP	1	150.07	0.252	15	PASS	1.09	4.667	15	PASS
N063103-008B	SAMP	1	151.86	2.718	15	PASS	1.22	5.118	15	PASS
N063103-009B	SAMP	1	153.46	1.028	15	PASS	2.79	5.746	15	PASS
N063103-010B	SAMP	1	150.11	1.697	15	PASS	2.34	3.139	15	PASS
CCV5	CCV	1	19.41	1.243	15	PASS	19.44	1.81	15	PASS
CCB5	CCB	1	0.01	104.232	15	<PQL	<0.000	N/A	15	<PQL
N063103-011B	SAMP	1	148.56	1.573	15	PASS	1.83	4.249	15	PASS
N063103-012B	SAMP	1	149.81	0.848	15	PASS	1.35	2.295	15	PASS
N063103-013B	SAMP	1	151.24	1.381	15	PASS	1.36	5.439	15	PASS
N063103-014B	SAMP	1	150.03	0.159	15	PASS	1.82	2	15	PASS
N063103-015B	SAMP	1	148.23	1.94	15	PASS	2	1.762	15	PASS
N063103-016B	SAMP	1	147.29	1.327	15	PASS	2.12	2.703	15	PASS
N063076-001B	SAMP	100	0.19	12.326	15	PASS	22.74	1.834	15	PASS
N063076-002B	SAMP	100	0.19	16.456	15	<PQL	22.6	1.314	15	PASS
N063076-003B	SAMP	100	0.17	11.246	15	PASS	22.4	1.487	15	PASS
CCV6	CCV	1	19.37	1.028	15	PASS	19.68	1.013	15	PASS
CCB6	CCB	1	0	505.47	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.39	2.258	15	PASS	20.52	1.991	15	PASS
CCV7	CCV	1	20.17	1.119	15	PASS	19.78	0.193	15	PASS
CCB7	CCB	1	0	199.757	15	<PQL	<0.000	N/A	15	<PQL
CCV8	CCV	1	20.29	0.675	15	PASS	19.42	1.517	15	PASS
CCB8	CCB	1	0	325.419	15	<PQL	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.82	0.643	15	PASS	20.25	0.753	15	PASS
CCV9	CCV	1	19.1	0.734	15	PASS	19.69	2.292	15	PASS
CCB9	CCB	1	0	184.77	15	<PQL	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	0	520.953	15	<PQL	<0.000	N/A	15	<PQL
ICSAB5	ICSAB	1	20.28	0.923	15	PASS	20.84	1.541	15	PASS

240215A

PERCENT RSD SUMMARY: ~~240115A~~

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	52.401	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.44	26.495	15	FAIL
Std3-5/50 ppb	ICAL	1	4.89	3.712	15	PASS
Std4-10/100 ppb	ICAL	1	9.44	2.905	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.49	3.489	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.96	2.181	15	PASS
Std7-100/1000 ppb	ICAL	1	98.78	0.548	15	PASS
Std8-200/2000 ppb	ICAL	1	200.7	1.026	15	PASS
ICV	ICV	1	10.42	2.041	15	PASS
ICB	ICB	1	0.01	100.363	15	<PQL
LLICV1	CCV1	1	0.09	42.597	20	<PQL
MLCCV	CCV	1	19.69	0.972	15	PASS
ICSA1	ICSA	1	0.02	111.01	15	<PQL
ICSAB1	ICSAB	1	20.53	3.465	15	PASS
MDL 1	SAMP	1	0.13	29.81	15	NR!
MDL 2	SAMP	1	0.12	22.035	15	NR!
MDL 3	SAMP	1	0.11	41.962	15	NR!
CCV1	CCV	1	19.51	4.261	15	PASS
CCB1	CCB	1	0	315.061	15	<PQL
MDL 1	SAMP	1	0.1	15.631	15	NR!
MDL 2	SAMP	1	0.12	25.239	15	NR!
MDL 3	SAMP	1	0.11	31.11	15	NR!
CCV2	CCV	1	19.59	3.246	15	PASS
CCB2	CCB	1	0	2056.394	15	<PQL
MDL 1	SAMP	1	0.12	43.132	15	NR!
MDL 2	SAMP	1	0.16	6.984	15	PASS
MDL 3	SAMP	1	0.12	32.97	15	NR!
MDL 1	SAMP	1	0.22	11.704	15	PASS
MDL 2	SAMP	1	0.19	13.97	15	PASS
MDL 3	SAMP	1	0.22	39.967	15	NR!
CCV3	CCV	1	19.35	5.939	15	PASS
CCB3	CCB	1	0.02	64.355	15	<PQL
ICSA2	ICSA	1	0.01	193.737	15	<PQL
ICSAB2	ICSAB	1	20.07	2.717	15	PASS
MB-106852	MBLK	1	<0.000	N/A	15	<PQL
LCS-106852	LCS	1	10.24	3.067	15	PASS
N063076-001B	SAMP	1	<0.000	N/A	15	<PQL
N063076-002B	SAMP	1	<0.000	N/A	15	<PQL
N063076-003B	SAMP	1	<0.000	N/A	15	<PQL
N063103-001B	SAMP	1	2.32	7.877	15	PASS

240215A

PERCENT RSD SUMMARY: ~~240115A~~

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
N063103-001B	SAMP	5	0.52	8.101	15	PASS
N063103-001B-PS	PS	1	12.8	4.847	15	PASS
N063103-001B-MS	MS	1	12.88	2.115	15	PASS
CCV4	CCV	1	20.12	0.516	15	PASS
CCB4	CCB	1	0.01	95.32	15	<PQL
N063103-001B-MSD	MSD	1	12.91	5.104	15	PASS
N063103-002B	SAMP	1	2.35	8.874	15	PASS
N063103-003B	SAMP	1	2.39	3.424	15	PASS
N063103-004B	SAMP	1	2.36	12.811	15	PASS
N063103-005B	SAMP	1	2.34	6.23	15	PASS
N063103-006B	SAMP	1	2.37	1.635	15	PASS
N063103-008B	SAMP	1	2.3	8.299	15	PASS
N063103-009B	SAMP	1	2.44	7.477	15	PASS
N063103-010B	SAMP	1	2.2	12.775	15	PASS
CCV5	CCV	1	20.42	2.926	15	PASS
CCB5	CCB	1	0.01	193.882	15	<PQL
N063103-011B	SAMP	1	2.46	2.325	15	PASS
N063103-012B	SAMP	1	2.31	5.616	15	PASS
N063103-013B	SAMP	1	2.2	4.37	15	PASS
N063103-014B	SAMP	1	2.28	9.505	15	PASS
N063103-015B	SAMP	1	2.23	6.573	15	PASS
N063103-016B	SAMP	1	2.5	4.422	15	PASS
N063076-001B	SAMP	100	0	1365.078	15	<PQL
N063076-002B	SAMP	100	<0.000	N/A	15	<PQL
N063076-003B	SAMP	100	<0.000	N/A	15	<PQL
CCV6	CCV	1	19.88	2.181	15	PASS
CCB6	CCB	1	0.02	85.207	15	<PQL
ICSA3	ICSA	1	0.02	129.145	15	<PQL
ICSAB3	ICSAB	1	20.41	1.331	15	PASS
CCV7	CCV	1	19.62	1.388	15	PASS
CCB7	CCB	1	0.01	266.792	15	<PQL
CCV8	CCV	1	19.94	0.442	15	PASS
CCB8	CCB	1	0.01	104.826	15	<PQL
ICSA4	ICSA	1	0.01	100.769	15	<PQL
ICSAB4	ICSAB	1	20.41	0.313	15	PASS
CCV9	CCV	1	19.76	1.231	15	PASS
CCB9	CCB	1	0.02	133.614	15	<PQL
ICSA5	ICSA	1	0	340.584	15	<PQL
ICSAB5	ICSAB	1	20.67	5.354	15	PASS

ANALYSIS RUN LOG

240215A

INJECTION LOG: ~~240115A~~

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0215001.d	RINSE	ICAL	1	02/15/24 1:22 PM
A0215002.d	RINSE	ICAL	1	02/15/24 1:27 PM
A0215003.d	Cal Blk	IBLK	1	02/15/24 1:32 PM
A0215004.d	Std1-0.1/1 ppb	ICAL	1	02/15/24 1:36 PM
A0215005.d	Std2-0.5/5 ppb	ICAL	1	02/15/24 1:41 PM
A0215006.d	Std3-5/50 ppb	ICAL	1	02/15/24 1:46 PM
A0215007.d	Std4-10/100 ppb	ICAL	1	02/15/24 1:51 PM
A0215008.d	Std5-4.0/20/200 ppb	ICAL	1	02/15/24 1:56 PM
A0215009.d	Std6-8.0/40/400 ppb	ICAL	1	02/15/24 2:00 PM
A0215010.d	Std7-100/1000 ppb	ICAL	1	02/15/24 2:05 PM
A0215011.d	Std8-200/2000 ppb	ICAL	1	02/15/24 2:10 PM
A0215012.d	ICV	ICV	1	02/15/24 2:18 PM
A0215013.d	ICB	ICB	1	02/15/24 2:23 PM
A0215014.d	LLICV1	CCV1	1	02/15/24 2:28 PM
A0215015.d	MLCCV	CCV	1	02/15/24 2:35 PM
A0215016.d	ICSA1	ICSA	1	02/15/24 2:39 PM
A0215017.d	ICSAB1	ICSAB	1	02/15/24 2:44 PM
A0215018.d	MB1-106743	MBLK	1	02/15/24 2:52 PM
A0215019.d	MB2-106743	MBLK	1	02/15/24 2:56 PM
A0215020.d	MB3-106743	MBLK	1	02/15/24 3:01 PM
A0215021.d	LCS-106743	LCS	1	02/15/24 3:06 PM
A0215022.d	MDL 1	SAMP	1	02/15/24 3:10 PM
A0215023.d	MDL 2	SAMP	1	02/15/24 3:15 PM
A0215024.d	MDL 3	SAMP	1	02/15/24 3:20 PM
A0215025.d	CCV1	CCV	1	02/15/24 3:24 PM
A0215026.d	CCB1	CCB	1	02/15/24 3:29 PM
A0215027.d	MB1-106745	MBLK	1	02/15/24 3:33 PM
A0215028.d	MB2-106745	MBLK	1	02/15/24 3:38 PM
A0215029.d	MB3-106745	MBLK	1	02/15/24 3:43 PM
A0215030.d	LCS-106745	LCS	1	02/15/24 3:48 PM
A0215031.d	MDL 1	SAMP	1	02/15/24 3:52 PM
A0215032.d	MDL 2	SAMP	1	02/15/24 3:57 PM
A0215033.d	MDL 3	SAMP	1	02/15/24 4:01 PM
A0215034.d	CCV2	CCV	1	02/15/24 4:06 PM
A0215035.d	CCB2	CCB	1	02/15/24 4:11 PM
A0215036.d	MB1-106787	MBLK	1	02/15/24 4:15 PM
A0215037.d	MB2-106787	MBLK	1	02/15/24 4:20 PM
A0215038.d	MB3-106787	MBLK	1	02/15/24 4:25 PM
A0215039.d	LCS-106787	LCS	1	02/15/24 4:29 PM
A0215040.d	MDL 1	SAMP	1	02/15/24 4:34 PM
A0215041.d	MDL 2	SAMP	1	02/15/24 4:38 PM
A0215042.d	MDL 3	SAMP	1	02/15/24 4:43 PM

Reviewed by:

JRB 3/12/2024

240215A

INJECTION LOG: ~~240115A~~

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0215043.d	MDL 1	SAMP	1	02/15/24 4:48 PM
A0215044.d	MDL 2	SAMP	1	02/15/24 4:53 PM
A0215045.d	MDL 3	SAMP	1	02/15/24 4:57 PM
A0215046.d	CCV3	CCV	1	02/15/24 5:02 PM
A0215047.d	CCB3	CCB	1	02/15/24 5:06 PM
A0215048.d	ICSA2	ICSA	1	02/15/24 5:11 PM
A0215049.d	ICSAB2	ICSAB	1	02/15/24 5:16 PM
A0215050.d	MB-106852	MBLK	1	02/15/24 5:20 PM
A0215051.d	LCS-106852	LCS	1	02/15/24 5:25 PM
A0215052.d	N063076-001B	SAMP	1	02/15/24 5:30 PM
A0215053.d	N063076-002B	SAMP	1	02/15/24 5:34 PM
A0215054.d	N063076-003B	SAMP	1	02/15/24 5:39 PM
A0215055.d	N063103-001B	SAMP	1	02/15/24 5:44 PM
A0215056.d	N063103-001B	SAMP	5	02/15/24 5:48 PM
A0215057.d	N063103-001B-PS	PS	1	02/15/24 5:53 PM
A0215058.d	N063103-001B-MS	MS	1	02/15/24 5:57 PM
A0215059.d	RINSE	ICAL	1	02/15/24 6:02 PM
A0215060.d	CCV4	CCV	1	02/15/24 6:07 PM
A0215061.d	CCB4	CCB	1	02/15/24 6:11 PM
A0215062.d	N063103-001B-MSD	MSD	1	02/15/24 6:16 PM
A0215063.d	N063103-002B	SAMP	1	02/15/24 6:21 PM
A0215064.d	N063103-003B	SAMP	1	02/15/24 6:25 PM
A0215065.d	N063103-004B	SAMP	1	02/15/24 6:30 PM
A0215066.d	N063103-005B	SAMP	1	02/15/24 6:35 PM
A0215067.d	N063103-006B	SAMP	1	02/15/24 6:39 PM
A0215068.d	N063103-008B	SAMP	1	02/15/24 6:44 PM
A0215069.d	N063103-009B	SAMP	1	02/15/24 6:48 PM
A0215070.d	N063103-010B	SAMP	1	02/15/24 6:53 PM
A0215071.d	RINSE	ICAL	1	02/15/24 6:58 PM
A0215072.d	CCV5	CCV	1	02/15/24 7:02 PM
A0215073.d	CCB5	CCB	1	02/15/24 7:07 PM
A0215074.d	N063103-011B	SAMP	1	02/15/24 7:12 PM
A0215075.d	N063103-012B	SAMP	1	02/15/24 7:16 PM
A0215076.d	N063103-013B	SAMP	1	02/15/24 7:21 PM
A0215077.d	N063103-014B	SAMP	1	02/15/24 7:25 PM
A0215078.d	N063103-015B	SAMP	1	02/15/24 7:30 PM
A0215079.d	N063103-016B	SAMP	1	02/15/24 7:35 PM
A0215080.d	N063076-001B	SAMP	100	02/15/24 7:39 PM
A0215081.d	N063076-002B	SAMP	100	02/15/24 7:44 PM
A0215082.d	N063076-003B	SAMP	100	02/15/24 7:49 PM
A0215083.d	RINSE	ICAL	1	02/15/24 7:53 PM
A0215084.d	CCV6	CCV	1	02/15/24 7:58 PM

240215A

INJECTION LOG: ~~240115A~~

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0215085.d	CCB6	CCB	1	02/15/24 8:03 PM
A0215086.d	ICSA3	ICSA	1	02/15/24 8:07 PM
A0215087.d	ICSAB3	ICSAB	1	02/15/24 8:12 PM
A0215088.d	MB-106858	MBLK	1	02/15/24 8:17 PM
A0215089.d	LCS-106858	LCS	1	02/15/24 8:21 PM
A0215090.d	N063053-018C	SAMP	1	02/15/24 8:26 PM
A0215091.d	N063053-018C	SAMP	5	02/15/24 8:30 PM
A0215092.d	N063053-018C	SAMP	10	02/15/24 8:35 PM
A0215093.d	N063053-018C	SAMP	50	02/15/24 8:40 PM
A0215094.d	N063053-018C-PS	PS	1	02/15/24 8:44 PM
A0215095.d	N063053-018C-PS	PS	10	02/15/24 8:49 PM
A0215096.d	N063053-018C-MS	MS	1	02/15/24 8:54 PM
A0215097.d	N063053-018C-MS	MS	10	02/15/24 8:58 PM
A0215098.d	CCV7	CCV	1	02/15/24 9:03 PM
A0215099.d	CCB7	CCB	1	02/15/24 9:07 PM
A0215100.d	N063053-018C-MSD	MSD	1	02/15/24 9:12 PM
A0215101.d	N063053-018C-MSD	MSD	10	02/15/24 9:17 PM
A0215102.d	N063076-001C	SAMP	1	02/15/24 9:21 PM
A0215103.d	N063076-002C	SAMP	1	02/15/24 9:26 PM
A0215104.d	N063076-003C	SAMP	1	02/15/24 9:31 PM
A0215105.d	RINSE	ICAL	1	02/15/24 9:35 PM
A0215106.d	CCV8	CCV	1	02/15/24 9:40 PM
A0215107.d	CCB8	CCB	1	02/15/24 9:45 PM
A0215108.d	ICSA4	ICSA	1	02/15/24 9:49 PM
A0215109.d	ICSAB4	ICSAB	1	02/15/24 9:54 PM
A0215110.d	N062736-009A	SAMP	1	02/15/24 9:59 PM
A0215111.d	N062736-009D	SAMP	1	02/15/24 10:03 PM
A0215112.d	RINSE	ICAL	1	02/15/24 10:08 PM
A0215113.d	CCV9	CCV	1	02/15/24 10:12 PM
A0215114.d	CCB9	CCB	1	02/15/24 10:17 PM
A0215115.d	ICSA5	ICSA	1	02/15/24 10:22 PM
A0215116.d	ICSAB5	ICSAB	1	02/15/24 10:26 PM
A0215117.d	RINSE	ICAL	1	02/15/24 10:31 PM
A0215118.d	RINSE	ICAL	1	02/15/24 10:36 PM
A0215119.d	RINSE	ICAL	1	02/15/24 10:40 PM
A0215120.d	RINSE	ICAL	1	02/15/24 10:45 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/15/2024 10:53:29 AM**
Prep End Date: **2/15/2024 3:00:00 PM**
Prep Batch **106852** Prep Code:**3010_W_MSDISS_TPK**

Reviewed/ Date: JRB 3/12/2024
Initials/ Date: for
Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-01-32**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-106852	Aqueous		25	☐	25	1.000		
MB-106852	Aqueous		25	☐	25	1.000		
N063076-001B	Water	<2	25	☐	25	1.000		
N063076-002B	Water	<2	25	☐	25	1.000		
N063076-003B	Water	<2	25	☐	25	1.000		
N063103-001B	Surface Water	<2	25	☐	25	1.000		
N063103-001B-MS	Surface Water	<2	25	☐	25	1.000		
N063103-001B-MSD	Surface Water	<2	25	☐	25	1.000		
N063103-002B	Surface Water	<2	25	☐	25	1.000		
N063103-003B	Surface Water	<2	25	☐	25	1.000		
N063103-004B	Surface Water	<2	25	☐	25	1.000		
N063103-005B	Surface Water	<2	25	☐	25	1.000		
N063103-006B	Surface Water	<2	25	☐	25	1.000		
N063103-008B	Surface Water	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/15/2024 10:53:29 AM**
Prep End Date: **2/15/2024 3:00:00 PM**
Prep Batch **106852** Prep Code:**3010_W_MSDISS_TPK**

Reviewed/ Date: JRB 3/12/2024
Initials/ Date: for
Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-01-32**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063103-009B	Surface Water	<2	25	☐	25	1.000		
N063103-010B	Surface Water	<2	25	☐	25	1.000		
N063103-011B	Surface Water	<2	25	☐	25	1.000		
N063103-012B	Surface Water	<2	25	☐	25	1.000		
N063103-013B	Surface Water	<2	25	☐	25	1.000		
N063103-014B	Surface Water	<2	25	☐	25	1.000		
N063103-015B	Surface Water	<2	25	☐	25	1.000		
N063103-016B	Surface Water	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240214A1.b
Acq. Date-Time	2024-02-15 11:32:36
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

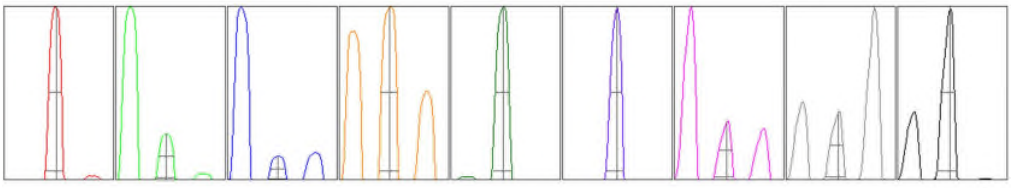
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	4970	49701.73	500.00		3.745	5.000
24	10.00	16184	161838.00	500.00		2.869	5.000
25	10.00	2153	21528.37	500.00		4.180	5.000
26	10.00	2473	24728.51	500.00		3.419	5.000
59	10.00	27523	275233.56	500.00		2.776	5.000
115	10.00	36376	363757.31	500.00		1.856	5.000
206	10.00	7097	70969.45	500.00		2.621	5.000
207	10.00	5886	58860.10	500.00		2.079	5.000
208	10.00	14623	146228.42	500.00		2.533	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.639 %
Doubly Charged	70 / 140 1.261 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	5017.68	8.95	8.90 - 9.10	
24	16648.82	23.90	23.90 - 24.10	
25	2168.45	24.90	24.90 - 25.10	
26	2518.45	25.90	25.90 - 26.10	
59	27264.67	58.95	58.90 - 59.10	
115	35977.84	115.00	114.90 - 115.10	
206	6911.78	205.95	205.90 - 206.10	
207	6073.63	206.95	206.90 - 207.10	
208	15659.72	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.486	0.900	
24	0.41	0.522	0.900	
25	0.41	0.496	0.900	
26	0.43	0.539	0.900	
59	0.39	0.534	0.900	
115	0.34	0.484	0.900	
206	0.37	0.542	0.900	
207	0.37	0.556	0.900	
208	0.36	0.560	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.2 mm	Torch V	1.3 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2523 V	Pulse HV	1604 V

[H2]

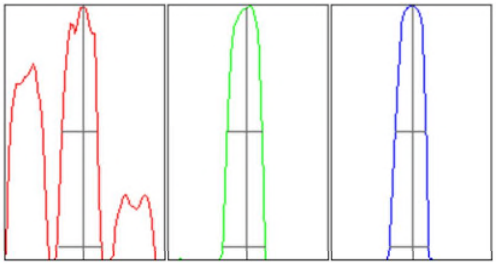
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		154	1536.87			8.465	
59		2049	20491.01			3.024	
115		29075	290746.94			2.503	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.577 %
Doubly Charged	70 / 140 0.293 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	168.26	26.00	25.90 - 26.10	
59	2089.89	59.00	58.90 - 59.10	
115	30418.25	115.05	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.67	0.831	0.900	
59	0.66	0.790	0.900	
115	0.59	0.737	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0001	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.00		

Hardware Settings

Torch

Torch H	1.2 mm	Torch V	1.3 mm		

EM

Discriminator	4.5 mV	Analog HV	2523 V	Pulse HV	1604 V

[He]

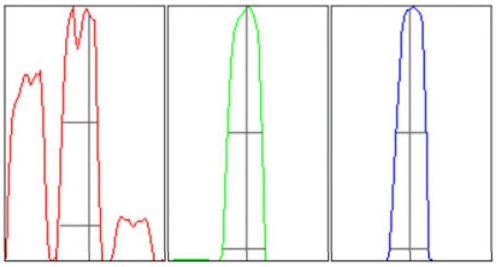
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		71	708.21			12.096	
59		6126	61258.35			2.396	
115		4964	49636.49			2.214	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.223 %
Doubly Charged	70 / 140 1.113 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	72.50	26.10	25.90 - 26.10	
59	6233.87	59.00	58.90 - 59.10	
115	5031.09	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.67	0.795	0.900	
59	0.65	0.790	0.900	
115	0.58	0.735	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0001	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.00		

Hardware Settings

Torch

Torch H	1.2 mm	Torch V	1.3 mm

EM

Discriminator	4.5 mV	Analog HV	2523 V	Pulse HV	1604 V

INITIAL CALIBRATION DATA SUMMARY

240215A

INITIAL CALIBRATION SUMMARY: ~~240115A~~

Instrument ID: ICPMS-03

Analyte	Data File	A0215003.d	A0215004.d	A0215005.d	A0215006.d	A0215007.d	A0215008.d	A0215009.d	A0215010.d	A0215011.d	
	Acq. Date-Time	02/15/2024 01:32 PM	02/15/2024 01:36 PM	02/15/2024 01:41 PM	02/15/2024 01:46 PM	02/15/2024 01:51 PM	02/15/2024 01:56 PM	02/15/2024 02:00 PM	02/15/2024 02:05 PM	02/15/2024 02:10 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	37072.2		36834.9	36892.9	36164.6	35421.9	36147.9	35900.7	35607.9	
55 Mn [2]	CPS	81		660.7	6028.6	12526.6	23930	49561.4	123871.2	248549	1.0000
72 Ge (ISTD) [2]	CPS	21825.7	21898	21627.7	21490.8	21803.4	20802.1	21273.8	21667.7	21358.4	
75 As [2]	CPS	3.3	28.9	132.2	1422.2	2783.5	5477.5	11482.7	28908.2	57883	1.0000
159 Tb (ISTD) [3]	CPS	1488387.6		1488198.4	1485074.6	1502291.5	1444424.7	1482022.7	1499012.8	1508802.2	
137 Ba [3]	CPS	20		1503.4	14533.6	29758.8	57881	121203.8	308434.6	626059.8	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

Reviewed by:

JRB 3/12/2024

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181602**
Client ID: **ICV** Batch ID: **R181602** TestNo: **EPA 6020** Analysis Date: **2/15/2024** SeqNo: **5693696**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.421	0.10	10.00	0	104	90	110				
Barium	10.165	1.0	10.00	0	102	90	110				
Manganese	103.287	0.50	100.0	0	103	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181602**
Client ID: **ZZZZZZ** Batch ID: **R181602** TestNo: **EPA 6020** Analysis Date: **2/15/2024** SeqNo: **5693698**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.087	0.10	0.1000	0	86.8	80	120				
Barium	1.038	1.0	1.000	0	104	80	120				
Manganese	0.551	0.50	0.5000	0	110	80	120				

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181602**
Client ID: **CCV** Batch ID: **R181602** TestNo: **EPA 6020** Analysis Date: **2/15/2024** SeqNo: **5693699**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.694	0.10	20.00	0	98.5	90	110				
Barium	19.095	1.0	20.00	0	95.5	90	110				
Manganese	19.763	0.50	20.00	0	98.8	90	110				

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181602**
Client ID: **CCV** Batch ID: **R181602** TestNo: **EPA 6020** Analysis Date: **2/15/2024** SeqNo: **5693709**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.514	0.10	20.00	0	97.6	90	110				
Barium	19.387	1.0	20.00	0	96.9	90	110				
Manganese	19.818	0.50	20.00	0	99.1	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181602**
Client ID: **CCV** Batch ID: **R181602** TestNo: **EPA 6020** Analysis Date: **2/15/2024** SeqNo: **5693718**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.593	0.10	20.00	0	98.0	90	110				
Barium	19.189	1.0	20.00	0	95.9	90	110				
Manganese	19.285	0.50	20.00	0	96.4	90	110				

Sample ID **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181602**
Client ID: **CCV** Batch ID: **R181602** TestNo: **EPA 6020** Analysis Date: **2/15/2024** SeqNo: **5693730**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.355	0.10	20.00	0	96.8	90	110				
Barium	19.408	1.0	20.00	0	97.0	90	110				
Manganese	19.337	0.50	20.00	0	96.7	90	110				

Sample ID **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181602**
Client ID: **CCV** Batch ID: **R181602** TestNo: **EPA 6020** Analysis Date: **2/15/2024** SeqNo: **5693743**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.119	0.10	20.00	0	101	90	110				
Barium	19.413	1.0	20.00	0	97.1	90	110				
Manganese	19.330	0.50	20.00	0	96.6	90	110				

Sample ID **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181602**
Client ID: **CCV** Batch ID: **R181602** TestNo: **EPA 6020** Analysis Date: **2/15/2024** SeqNo: **5693754**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.423	0.10	20.00	0	102	90	110				
Barium	19.410	1.0	20.00	0	97.0	90	110				
Manganese	19.438	0.50	20.00	0	97.2	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181602**
Client ID: **CCV**	Batch ID: **R181602**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693765**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.883	0.10	20.00	0	99.4	90	110				
Barium	19.371	1.0	20.00	0	96.9	90	110				
Manganese	19.682	0.50	20.00	0	98.4	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB** SampType: **ICB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181602**
Client ID: **ICB** Batch ID: **R181602** TestNo: **EPA 6020** Analysis Date: **2/15/2024** SeqNo: **5693697**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB1** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181602**
Client ID: **CCB** Batch ID: **R181602** TestNo: **EPA 6020** Analysis Date: **2/15/2024** SeqNo: **5693710**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB2** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181602**
Client ID: **CCB** Batch ID: **R181602** TestNo: **EPA 6020** Analysis Date: **2/15/2024** SeqNo: **5693719**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB3** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181602**
Client ID: **CCB** Batch ID: **R181602** TestNo: **EPA 6020** Analysis Date: **2/15/2024** SeqNo: **5693731**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB4** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181602**
Client ID: **CCB** Batch ID: **R181602** TestNo: **EPA 6020** Analysis Date: **2/15/2024** SeqNo: **5693744**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB5** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181602**
Client ID: **CCB** Batch ID: **R181602** TestNo: **EPA 6020** Analysis Date: **2/15/2024** SeqNo: **5693755**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB6** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181602**
Client ID: **CCB** Batch ID: **R181602** TestNo: **EPA 6020** Analysis Date: **2/15/2024** SeqNo: **5693766**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181602**
Client ID: **ICSA** Batch ID: **R181602** TestNo: **EPA 6020** Analysis Date: **2/15/2024** SeqNo: **5693700**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181602**
Client ID: **ICSAB** Batch ID: **R181602** TestNo: **EPA 6020** Analysis Date: **2/15/2024** SeqNo: **5693701**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.533	0.10	20.00	0	103	80	120				
Barium	20.026	1.0	20.00	0	100	80	120				
Manganese	20.731	0.50	20.00	0	104	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181602**
Client ID: **ICSA** Batch ID: **R181602** TestNo: **EPA 6020** Analysis Date: **2/15/2024** SeqNo: **5693732**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181602**
Client ID: **ICSAB** Batch ID: **R181602** TestNo: **EPA 6020** Analysis Date: **2/15/2024** SeqNo: **5693733**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.065	0.10	20.00	0	100	80	120				
Barium	20.028	1.0	20.00	0	100	80	120				
Manganese	20.255	0.50	20.00	0	101	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181602**
Client ID: **ICSA**	Batch ID: **R181602**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693767**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181602**
Client ID: **ICSAB**	Batch ID: **R181602**	TestNo: **EPA 6020**		Analysis Date: **2/15/2024**	SeqNo: **5693768**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.414	0.10	20.00	0	102	80	120				
Barium	20.392	1.0	20.00	0	102	80	120				
Manganese	20.521	0.50	20.00	0	103	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

240215A

INTERNAL STANDARD: ~~240115A~~

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	1488387.6	1488387.6	100	PASS	30-150	37072.2	37072.2	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	1484301.8	1488387.6	99.73	PASS	30-150	37131.2	37072.2	100.16	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	1488198.4	1488387.6	99.99	PASS	30-150	36834.9	37072.2	99.36	PASS	30-150
Std3-5/50 ppb	ICAL	1	1485074.6	1488387.6	99.78	PASS	30-150	36892.9	37072.2	99.52	PASS	30-150
Std4-10/100 ppb	ICAL	1	1502291.5	1488387.6	100.93	PASS	30-150	36164.6	37072.2	97.55	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	1444424.7	1488387.6	97.05	PASS	30-150	35421.9	37072.2	95.55	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	1482022.7	1488387.6	99.57	PASS	30-150	36147.9	37072.2	97.51	PASS	30-150
Std7-100/1000 ppb	ICAL	1	1499012.8	1488387.6	100.71	PASS	30-150	35900.7	37072.2	96.84	PASS	30-150
Std8-200/2000 ppb	ICAL	1	1508802.2	1488387.6	101.37	PASS	30-150	35607.9	37072.2	96.05	PASS	30-150
ICV	ICV	1	1500823.3	1488387.6	100.84	PASS	30-150	35496.5	37072.2	95.75	PASS	30-150
ICB	ICB	1	1493143.6	1488387.6	100.32	PASS	30-150	34586.9	37072.2	93.3	PASS	30-150
LLICV1	CCV1	1	1503406.1	1488387.6	101.01	PASS	30-150	35112.4	37072.2	94.71	PASS	30-150
MLCCV	CCV	1	1506810.2	1488387.6	101.24	PASS	30-150	35455.3	37072.2	95.64	PASS	30-150
ICSA1	ICSA	1	1468271.4	1488387.6	98.65	PASS	30-150	34751.6	37072.2	93.74	PASS	30-150
ICSAB1	ICSAB	1	1479394.6	1488387.6	99.4	PASS	30-150	35217	37072.2	95	PASS	30-150
MDL 1	SAMP	1	1440045	1488387.6	96.75	PASS	30-150	34095.8	37072.2	91.97	PASS	30-150
MDL 2	SAMP	1	1438830.3	1488387.6	96.67	PASS	30-150	34195	37072.2	92.24	PASS	30-150
MDL 3	SAMP	1	1440656.2	1488387.6	96.79	PASS	30-150	34458.8	37072.2	92.95	PASS	30-150
CCV1	CCV	1	1471731.2	1488387.6	98.88	PASS	30-150	34461	37072.2	92.96	PASS	30-150
CCB1	CCB	1	1461864.5	1488387.6	98.22	PASS	30-150	34849.6	37072.2	94	PASS	30-150
MDL 1	SAMP	1	1443983.8	1488387.6	97.02	PASS	30-150	34184.9	37072.2	92.21	PASS	30-150
MDL 2	SAMP	1	1458537.3	1488387.6	97.99	PASS	30-150	34664.8	37072.2	93.51	PASS	30-150
MDL 3	SAMP	1	1457291.8	1488387.6	97.91	PASS	30-150	34373.1	37072.2	92.72	PASS	30-150
CCV2	CCV	1	1501084.5	1488387.6	100.85	PASS	30-150	35705.8	37072.2	96.31	PASS	30-150
CCB2	CCB	1	1465412.5	1488387.6	98.46	PASS	30-150	34729.4	37072.2	93.68	PASS	30-150
MDL 1	SAMP	1	1475508.4	1488387.6	99.13	PASS	30-150	34583.5	37072.2	93.29	PASS	30-150
MDL 2	SAMP	1	1448399.7	1488387.6	97.31	PASS	30-150	34877.4	37072.2	94.08	PASS	30-150
MDL 3	SAMP	1	1461602.7	1488387.6	98.2	PASS	30-150	35034.5	37072.2	94.5	PASS	30-150
MDL 1	SAMP	1	1470905.9	1488387.6	98.83	PASS	30-150	34306.2	37072.2	92.54	PASS	30-150
MDL 2	SAMP	1	1461496.4	1488387.6	98.19	PASS	30-150	34766.1	37072.2	93.78	PASS	30-150
MDL 3	SAMP	1	1471743.9	1488387.6	98.88	PASS	30-150	34534.5	37072.2	93.15	PASS	30-150
CCV3	CCV	1	1510596	1488387.6	101.49	PASS	30-150	35560	37072.2	95.92	PASS	30-150
CCB3	CCB	1	1493250	1488387.6	100.33	PASS	30-150	34846.3	37072.2	94	PASS	30-150
ICSA2	ICSA	1	1508538.7	1488387.6	101.35	PASS	30-150	35243.8	37072.2	95.07	PASS	30-150
ICSAB2	ICSAB	1	1502617.5	1488387.6	100.96	PASS	30-150	35729.3	37072.2	96.38	PASS	30-150
MB-106852	MBLK	1	1476690.4	1488387.6	99.21	PASS	30-150	34773.9	37072.2	93.8	PASS	30-150
LCS-106852	LCS	1	1479243.8	1488387.6	99.39	PASS	30-150	34176	37072.2	92.19	PASS	30-150
N063076-001B	SAMP	1	1232983.6	1488387.6	82.84	PASS	30-150	30824	37072.2	83.15	PASS	30-150
N063076-002B	SAMP	1	1217927	1488387.6	81.83	PASS	30-150	30916.4	37072.2	83.4	PASS	30-150
N063076-003B	SAMP	1	1216495.6	1488387.6	81.73	PASS	30-150	31025.4	37072.2	83.69	PASS	30-150
N063103-001B	SAMP	1	1370260.1	1488387.6	92.06	PASS	30-150	33913.3	37072.2	91.48	PASS	30-150

Reviewed by:

JRB 3/12/2024

240215A

INTERNAL STANDARD: 240115A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
N063103-001B	SAMP	5	1450940	1488387.6	97.48	PASS	30-150	34671.4	37072.2	93.52	PASS	30-150
N063103-001B-PS	PS	1	1410795.4	1488387.6	94.79	PASS	30-150	32667.4	37072.2	88.12	PASS	30-150
N063103-001B-MS	MS	1	1453467.6	1488387.6	97.65	PASS	30-150	32445.9	37072.2	87.52	PASS	30-150
CCV4	CCV	1	1533223.5	1488387.6	103.01	PASS	30-150	35596.7	37072.2	96.02	PASS	30-150
CCB4	CCB	1	1502664.1	1488387.6	100.96	PASS	30-150	34953.1	37072.2	94.28	PASS	30-150
N063103-001B-MSD	MSD	1	1455572.4	1488387.6	97.8	PASS	30-150	32474.8	37072.2	87.6	PASS	30-150
N063103-002B	SAMP	1	1459963.4	1488387.6	98.09	PASS	30-150	32648.5	37072.2	88.07	PASS	30-150
N063103-003B	SAMP	1	1460545.1	1488387.6	98.13	PASS	30-150	32657.4	37072.2	88.09	PASS	30-150
N063103-004B	SAMP	1	1490907.1	1488387.6	100.17	PASS	30-150	32449.3	37072.2	87.53	PASS	30-150
N063103-005B	SAMP	1	1454222.3	1488387.6	97.7	PASS	30-150	31328.2	37072.2	84.51	PASS	30-150
N063103-006B	SAMP	1	1446980.3	1488387.6	97.22	PASS	30-150	31981.7	37072.2	86.27	PASS	30-150
N063103-008B	SAMP	1	1480472.1	1488387.6	99.47	PASS	30-150	31850.3	37072.2	85.91	PASS	30-150
N063103-009B	SAMP	1	1506213.5	1488387.6	101.2	PASS	30-150	32448.2	37072.2	87.53	PASS	30-150
N063103-010B	SAMP	1	1501152.9	1488387.6	100.86	PASS	30-150	31854.7	37072.2	85.93	PASS	30-150
CCV5	CCV	1	1574145.9	1488387.6	105.76	PASS	30-150	35682.5	37072.2	96.25	PASS	30-150
CCB5	CCB	1	1565831.4	1488387.6	105.2	PASS	30-150	34773.9	37072.2	93.8	PASS	30-150
N063103-011B	SAMP	1	1492502.1	1488387.6	100.28	PASS	30-150	32007.3	37072.2	86.34	PASS	30-150
N063103-012B	SAMP	1	1504578.7	1488387.6	101.09	PASS	30-150	32419.2	37072.2	87.45	PASS	30-150
N063103-013B	SAMP	1	1491026.6	1488387.6	100.18	PASS	30-150	32300.1	37072.2	87.13	PASS	30-150
N063103-014B	SAMP	1	1539768.2	1488387.6	103.45	PASS	30-150	33078.2	37072.2	89.23	PASS	30-150
N063103-015B	SAMP	1	1530369.9	1488387.6	102.82	PASS	30-150	32547.2	37072.2	87.79	PASS	30-150
N063103-016B	SAMP	1	1527061.7	1488387.6	102.6	PASS	30-150	32474.9	37072.2	87.6	PASS	30-150
N063076-001B	SAMP	100	1548348.8	1488387.6	104.03	PASS	30-150	33860.9	37072.2	91.34	PASS	30-150
N063076-002B	SAMP	100	1549156.4	1488387.6	104.08	PASS	30-150	34040.1	37072.2	91.82	PASS	30-150
N063076-003B	SAMP	100	1557459.1	1488387.6	104.64	PASS	30-150	33907.7	37072.2	91.46	PASS	30-150
CCV6	CCV	1	1583723.4	1488387.6	106.41	PASS	30-150	35317.3	37072.2	95.27	PASS	30-150
CCB6	CCB	1	1554865.4	1488387.6	104.47	PASS	30-150	34645.8	37072.2	93.45	PASS	30-150
ICSA3	ICSA	1	1557597.6	1488387.6	104.65	PASS	30-150	35538.8	37072.2	95.86	PASS	30-150
ICSAB3	ICSAB	1	1574531.6	1488387.6	105.79	PASS	30-150	35069	37072.2	94.6	PASS	30-150
CCV7	CCV	1	1509547.4	1488387.6	101.42	PASS	30-150	37504.2	37072.2	101.17	PASS	30-150
CCB7	CCB	1	1478075.3	1488387.6	99.31	PASS	30-150	35648	37072.2	96.16	PASS	30-150
CCV8	CCV	1	1514765.1	1488387.6	101.77	PASS	30-150	37475.3	37072.2	101.09	PASS	30-150
CCB8	CCB	1	1500366.5	1488387.6	100.8	PASS	30-150	36863.9	37072.2	99.44	PASS	30-150
ICSA4	ICSA	1	1504699.1	1488387.6	101.1	PASS	30-150	37081.1	37072.2	100.02	PASS	30-150
ICSAB4	ICSAB	1	1535313.3	1488387.6	103.15	PASS	30-150	36896.2	37072.2	99.53	PASS	30-150
CCV9	CCV	1	1581412.2	1488387.6	106.25	PASS	30-150	35536.6	37072.2	95.86	PASS	30-150
CCB9	CCB	1	1556334	1488387.6	104.57	PASS	30-150	34797.3	37072.2	93.86	PASS	30-150
ICSA5	ICSA	1	1564268.2	1488387.6	105.1	PASS	30-150	35342.9	37072.2	95.34	PASS	30-150
ICSAB5	ICSAB	1	1580306.2	1488387.6	106.18	PASS	30-150	34845.1	37072.2	93.99	PASS	30-150

240215A

INTERNAL STANDARD: ~~240115A~~

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	21825.7	21825.7	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	21898	21825.7	100.33	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	21627.7	21825.7	99.09	PASS	30-150
Std3-5/50 ppb	ICAL	1	21490.8	21825.7	98.47	PASS	30-150
Std4-10/100 ppb	ICAL	1	21803.4	21825.7	99.9	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	20802.1	21825.7	95.31	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	21273.8	21825.7	97.47	PASS	30-150
Std7-100/1000 ppb	ICAL	1	21667.7	21825.7	99.28	PASS	30-150
Std8-200/2000 ppb	ICAL	1	21358.4	21825.7	97.86	PASS	30-150
ICV	ICV	1	21223.8	21825.7	97.24	PASS	30-150
ICB	ICB	1	20983.5	21825.7	96.14	PASS	30-150
LLICV1	CCV1	1	21051.3	21825.7	96.45	PASS	30-150
MLCCV	CCV	1	21063.6	21825.7	96.51	PASS	30-150
ICSA1	ICSA	1	21107	21825.7	96.71	PASS	30-150
ICSAB1	ICSAB	1	21141.5	21825.7	96.87	PASS	30-150
MDL 1	SAMP	1	20229.2	21825.7	92.69	PASS	30-150
MDL 2	SAMP	1	20609.7	21825.7	94.43	PASS	30-150
MDL 3	SAMP	1	20352.7	21825.7	93.25	PASS	30-150
CCV1	CCV	1	20844.4	21825.7	95.5	PASS	30-150
CCB1	CCB	1	21078	21825.7	96.57	PASS	30-150
MDL 1	SAMP	1	20924.5	21825.7	95.87	PASS	30-150
MDL 2	SAMP	1	20721	21825.7	94.94	PASS	30-150
MDL 3	SAMP	1	20930.1	21825.7	95.9	PASS	30-150
CCV2	CCV	1	20901.1	21825.7	95.76	PASS	30-150
CCB2	CCB	1	20559.6	21825.7	94.2	PASS	30-150
MDL 1	SAMP	1	20965.7	21825.7	96.06	PASS	30-150
MDL 2	SAMP	1	20761	21825.7	95.12	PASS	30-150
MDL 3	SAMP	1	20821	21825.7	95.4	PASS	30-150
MDL 1	SAMP	1	20819.9	21825.7	95.39	PASS	30-150
MDL 2	SAMP	1	20852.2	21825.7	95.54	PASS	30-150
MDL 3	SAMP	1	20552.9	21825.7	94.17	PASS	30-150
CCV3	CCV	1	21084.7	21825.7	96.6	PASS	30-150
CCB3	CCB	1	21160.4	21825.7	96.95	PASS	30-150
ICSA2	ICSA	1	21043.6	21825.7	96.42	PASS	30-150
ICSAB2	ICSAB	1	21523	21825.7	98.61	PASS	30-150
MB-106852	MBLK	1	20754.3	21825.7	95.09	PASS	30-150
LCS-106852	LCS	1	20394.9	21825.7	93.44	PASS	30-150
N063076-001B	SAMP	1	17548.3	21825.7	80.4	PASS	30-150
N063076-002B	SAMP	1	17602.8	21825.7	80.65	PASS	30-150
N063076-003B	SAMP	1	17835.3	21825.7	81.72	PASS	30-150
N063103-001B	SAMP	1	19663	21825.7	90.09	PASS	30-150

240215A

INTERNAL STANDARD: ~~240115A~~

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
N063103-001B	SAMP	5	20496.2	21825.7	93.91	PASS	30-150
N063103-001B-PS	PS	1	19775.3	21825.7	90.61	PASS	30-150
N063103-001B-MS	MS	1	19724.1	21825.7	90.37	PASS	30-150
CCV4	CCV	1	21232.7	21825.7	97.28	PASS	30-150
CCB4	CCB	1	20741	21825.7	95.03	PASS	30-150
N063103-001B-MSD	MSD	1	19339.2	21825.7	88.61	PASS	30-150
N063103-002B	SAMP	1	19388.2	21825.7	88.83	PASS	30-150
N063103-003B	SAMP	1	19698.6	21825.7	90.25	PASS	30-150
N063103-004B	SAMP	1	19354.8	21825.7	88.68	PASS	30-150
N063103-005B	SAMP	1	19284.7	21825.7	88.36	PASS	30-150
N063103-006B	SAMP	1	19269.1	21825.7	88.29	PASS	30-150
N063103-008B	SAMP	1	19451.6	21825.7	89.12	PASS	30-150
N063103-009B	SAMP	1	19783.1	21825.7	90.64	PASS	30-150
N063103-010B	SAMP	1	19754.2	21825.7	90.51	PASS	30-150
CCV5	CCV	1	21008	21825.7	96.25	PASS	30-150
CCB5	CCB	1	20969	21825.7	96.08	PASS	30-150
N063103-011B	SAMP	1	19088.9	21825.7	87.46	PASS	30-150
N063103-012B	SAMP	1	19758.6	21825.7	90.53	PASS	30-150
N063103-013B	SAMP	1	19585.1	21825.7	89.73	PASS	30-150
N063103-014B	SAMP	1	19644	21825.7	90	PASS	30-150
N063103-015B	SAMP	1	19846.5	21825.7	90.93	PASS	30-150
N063103-016B	SAMP	1	19768.6	21825.7	90.57	PASS	30-150
N063076-001B	SAMP	100	20754.3	21825.7	95.09	PASS	30-150
N063076-002B	SAMP	100	20912.3	21825.7	95.82	PASS	30-150
N063076-003B	SAMP	100	20561.8	21825.7	94.21	PASS	30-150
CCV6	CCV	1	21154.8	21825.7	96.93	PASS	30-150
CCB6	CCB	1	20797.7	21825.7	95.29	PASS	30-150
ICSA3	ICSA	1	20961.2	21825.7	96.04	PASS	30-150
ICSAB3	ICSAB	1	21229.4	21825.7	97.27	PASS	30-150
CCV7	CCV	1	22095	21825.7	101.23	PASS	30-150
CCB7	CCB	1	21441.8	21825.7	98.24	PASS	30-150
CCV8	CCV	1	21985.9	21825.7	100.73	PASS	30-150
CCB8	CCB	1	21768.9	21825.7	99.74	PASS	30-150
ICSA4	ICSA	1	21983.7	21825.7	100.72	PASS	30-150
ICSAB4	ICSAB	1	22000.4	21825.7	100.8	PASS	30-150
CCV9	CCV	1	21293.9	21825.7	97.56	PASS	30-150
CCB9	CCB	1	20876.7	21825.7	95.65	PASS	30-150
ICSA5	ICSA	1	21031.3	21825.7	96.36	PASS	30-150
ICSAB5	ICSAB	1	20895.6	21825.7	95.74	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.: N063103
Test Method: EPA 6020
Analysis Date: 2/16/2024

Matrix: Surface Water
Batch No.: 106852

Instrument ID: ICPMS-03
Instrument Description: Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Dilution test for Ba failed.
Dilution test is not applicable to As & Mn. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063103-001B DT 5x	Arsenic	As	µg/L	2.581558	NA	2.322594	11.15%	10
N063103-001B DT 5x	Barium	Ba	µg/L	164.877	FAIL	149.0772	10.60%	10
N063103-001B DT 5x	Manganese	Mn	µg/L	1.62893	NA	1.50331	8.36%	10

Reviewed by:

JRB 3/12/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063103
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **N063103-001B-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181602**
Client ID: **ZZZZZZ** Batch ID: **106852** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/15/2024** SeqNo: **5693741**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.797	0.10	10.00	2.323	105	80	120				
Barium	162.451	1.0	10.00	149.1	134	80	120				S
Manganese	116.530	0.50	100.0	1.503	115	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number : 502711
Report Level : II
Report Date : 03/05/2024

Analytical Report *prepared for:*

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Location: N063134

Authorized for release by:

Quynhgiao Le, Project Manager
714-7716900
quynhgiao.le@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Sonny Lorenzo
Asset Laboratories
11110 Artersia
Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 502711
Location: N063134
Date Received: 02/20/24

Sample ID	Lab ID	Collected	Matrix
N063134-001A / R63-Q124	502711-001	02/14/24 09:45	Water
N063134-002A / MW-43-025-Q124	502711-002	02/15/24 14:28	Water
N063134-003A / MW-43-075-Q124	502711-003	02/15/24 13:50	Water
N063134-004A / MW-43-090-Q124	502711-004	02/15/24 13:14	Water

Case Narrative

Asset Laboratories 11110 Artersia Blvd, Suite B Cerritos, CA 90703 Sonny Lorenzo	Lab Job Number: 502711 Location: N063134 Date Received: 02/20/24

This data package contains sample and QC results for four water samples, requested for the above referenced project on 02/20/24. The samples were received cold and intact.

Total Organic Carbon by IR (SM 5310B):

- Level II is also requested.
- No analytical problems were encountered.

502711

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Enthalpy Analytical
931 W. Barkley Ave.
Orange, CA 92868

TEL: (714) 771-6900
FAX: (714) 538-1209
Acct #:

Field Sampler: Nara Tep

19-Feb-24

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				SM5310B		
N063134-001A / R63-Q124	Groundwater	2/14/2024 9:45:00 AM	8OZA	1		
N063134-002A / MW-43-025-Q124	Groundwater	2/15/2024 2:28:00 PM	8OZA	1		
N063134-003A / MW-43-075-Q124	Groundwater	2/15/2024 1:50:00 PM	8OZA	1		
N063134-004A / MW-43-090-Q124	Groundwater	2/15/2024 1:14:00 PM	8OZA	1		

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N63134A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for TOC by SM5310B. EDD requirement Labspec7 edata.

GLS #: 560968129

		Date/Time		Date/Time
Relinquished by:	YRodriguez	2/19/2024 1630	**Received by:**	2/20/24 1004
Relinquished by:			**Received by:**	

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: ASSET LABORATORIES Project: N63134S

Date Received: 2/20/24 Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 5.2 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: ~~FedEx~~ GLS

Section 3

Was the cooler packed with: ☑ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 2.0 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____

☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: _____ Date: 2/20/24

GLS.

800-322-5555
www.gls-us.com

Ship From
ADVANCED TECHNOLOGY
LABORATORIES, INC.
MARLON CARTIN
3151 W. POST RD.
LAS VEGAS, NV 89118

Ship To
ENHALPY ANALYTICAL
SAMPLE RECEIVING
806 N. BATAVIA
ORANGE, CA 92868

COD: $0.00
Weight: 0 lb(s)
Reference:

Delivery Instructions:

Signature Type: STANDARD

Tracking #: 560968145

PDS

ORANGE

S10219D

4040226

ORC CA927-RD0

Print Date: 2/19/2024 1:51 PM

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.
Step 2: Fold this page in half.
Step 3: Securely attach this label to your package and do not cover the barcode.

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all of the General Logistics Systems US, Inc. (GLS) service terms & conditions including, but not limited to; limits of liability, declared value conditions, and claim procedures which are available on our website at www.gls-us.com.

ENTHALPY ANALYTICAL

Analysis Results for 502711

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 502711
Location: N063134
Date Received: 02/20/24

Sample ID: **N063134-001A / R63-Q124** | **Lab ID:** **502711-001** | **Matrix:** **Water** | **Collected:** **02/14/24 09:45**

502711-001 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.9**		mg/L	1.0	1	333840	02/25/24	02/25/24	EPL

Sample ID: **N063134-002A / MW-43-025-Q124** | **Lab ID:** **502711-002** | **Matrix:** **Water** | **Collected:** **02/15/24 14:28**

502711-002 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**6.6**		mg/L	1.0	1	333840	02/25/24	02/25/24	EPL

Sample ID: **N063134-003A / MW-43-075-Q124** | **Lab ID:** **502711-003** | **Matrix:** **Water** | **Collected:** **02/15/24 13:50**

502711-003 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**5.0**		mg/L	1.0	1	333840	02/25/24	02/25/24	EPL

Sample ID: **N063134-004A / MW-43-090-Q124** | **Lab ID:** **502711-004** | **Matrix:** **Water** | **Collected:** **02/15/24 13:14**

502711-004 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**4.2**		mg/L	1.0	1	333840	02/25/24	02/25/24	EPL

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type: Blank	**Lab ID: QC1131231**	**Batch: 333840**
Matrix: Water	**Method: SM 5310B**	

QC1131231 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Total Organic Carbon	ND		mg/L	1.0	02/24/24	02/24/24

Type: Lab Control Sample	**Lab ID: QC1131232**	**Batch: 333840**
Matrix: Water	**Method: SM 5310B**	

QC1131232 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Total Organic Carbon	24.07	25.00	mg/L	96%		80-120

Type: Matrix Spike	**Lab ID: QC1131233**	**Batch: 333840**
Matrix (Source ID): Water (502584-002)	**Method: SM 5310B**	

QC1131233 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Total Organic Carbon	31.78	7.477	25.00	mg/L	97%		80-120	1

Type: Matrix Spike Duplicate	**Lab ID: QC1131234**	**Batch: 333840**
Matrix (Source ID): Water (502584-002)	**Method: SM 5310B**	

QC1131234 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Total Organic Carbon	31.71	7.477	25.00	mg/L	97%		80-120	0	20	1

ND Not Detected

ARCADIS

Project: PG&E Topock - PCM

Project No.: 30211191

ASSET Laboratories Work Order:

N063135

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063135

Item	Page
Cover Page	1-5
Analytical Result/QC Summary Reports	6-29
Sample Receiving Items	30-34
List of Analysts	35
Raw Data	
EPA 218.6	36-160
EPA 300.0	161-179
EPA 6010B_Dissolved	180-211
EPA 6020_Dissolved	212-257

March 01, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063135

RE: PG&E Topock - PCM, 30211191

Attention: Dan Bush

Enclosed are the results for sample(s) received on February 15, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063135

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 218.6:

Dilution was necessary for some samples due to matrix interference. Samples were analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Samples were reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Analytical Comments for EPA 300:

Dilution was necessary due to precipitation of samples upon the addition of eluent.

Analytical Comments for EPA 6010B:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Iron in QC samples N063076-002B-MS1 and N063076-002B-MSD1 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

ASSET Laboratories

Date: *01-Mar-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063135
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063135-001A	MW-43-025-Q124	Groundwater	2/15/2024 2:28:00 PM	2/15/2024	3/1/2024
N063135-001B	MW-43-025-Q124	Groundwater	2/15/2024 2:28:00 PM	2/15/2024	3/1/2024
N063135-001C	MW-43-025-Q124	Groundwater	2/15/2024 2:28:00 PM	2/15/2024	3/1/2024
N063135-002A	MW-43-025-EB-Q124	Groundwater	2/15/2024 2:00:00 PM	2/15/2024	3/1/2024
N063135-003A	MW-43-075-Q124	Groundwater	2/15/2024 1:50:00 PM	2/15/2024	3/1/2024
N063135-003B	MW-43-075-Q124	Groundwater	2/15/2024 1:50:00 PM	2/15/2024	3/1/2024
N063135-003C	MW-43-075-Q124	Groundwater	2/15/2024 1:50:00 PM	2/15/2024	3/1/2024
N063135-004A	MW-43-075-EB-Q124	Groundwater	2/15/2024 1:20:00 PM	2/15/2024	3/1/2024
N063135-005A	MW-43-090-Q124	Groundwater	2/15/2024 1:14:00 PM	2/15/2024	3/1/2024
N063135-005B	MW-43-090-Q124	Groundwater	2/15/2024 1:14:00 PM	2/15/2024	3/1/2024
N063135-005C	MW-43-090-Q124	Groundwater	2/15/2024 1:14:00 PM	2/15/2024	3/1/2024
N063135-006A	MW-43-090-EB-Q124	Groundwater	2/15/2024 12:30:00 PM	2/15/2024	3/1/2024
N063135-007A	EB-723-Q124	Groundwater	2/15/2024 2:45:00 PM	2/15/2024	3/1/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-43-025-Q124
Lab Order:	N063135		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/15/2024 2:28:00 PM
Lab ID:	N063135-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240216A**	QC Batch: **R181622**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/16/2024 10:12 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-43-025-EB-Q124
Lab Order:	N063135		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/15/2024 2:00:00 PM
Lab ID:	N063135-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240216A**	QC Batch: **R181622**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/16/2024 07:05 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-43-075-Q124
Lab Order:	N063135		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/15/2024 1:50:00 PM
Lab ID:	N063135-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240216A**	QC Batch: **R181622**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/16/2024 02:18 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-43-075-EB-Q124
Lab Order:	N063135		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/15/2024 1:20:00 PM
Lab ID:	N063135-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240216A**	QC Batch: **R181622**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/16/2024 01:59 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-43-090-Q124
Lab Order:	N063135		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/15/2024 1:14:00 PM
Lab ID:	N063135-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240216A**	QC Batch: **R181622**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/16/2024 02:37 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-43-090-EB-Q124
Lab Order:	N063135		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/15/2024 12:30:00 PM
Lab ID:	N063135-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240216A**	QC Batch: **R181622**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/16/2024 02:56 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-723-Q124
Lab Order:	N063135		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/15/2024 2:45:00 PM
Lab ID:	N063135-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240216A**	QC Batch: **R181622**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/16/2024 12:27 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R181622**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **PBW**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695466**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R181622**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **LCSW**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695467**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.938	0.20	5.000	0	98.8	90	110				

Sample ID: **N063135-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695469**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.960	0.20	1.000	0	96.0	90	110				

Sample ID: **N063135-001ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695479**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20						0	0	20	

Sample ID: **N063135-001AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695480**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.002	0.20	1.000	0	100	90	110	0.9599	4.26	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063135-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695486**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.023	0.20	1.000	0	102	90	110				

Sample ID: **N063135-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695491**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.930	0.20	1.000	0	93.0	90	110				

Sample ID: **N063135-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695493**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.827	1.0	5.000	0	96.5	90	110				

Sample ID: **N063135-005AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695495**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.584	1.0	5.000	0	91.7	90	110				

Sample ID: **N063135-006AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695497**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.993	0.20	1.000	0	99.3	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063136-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181622**
Client ID: **ZZZZZZ** Batch ID: **R181622** TestNo: **EPA 218.6** Analysis Date: **2/16/2024** SeqNo: **5695498**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.969	0.20	1.000	0	96.9	90	110				

Sample ID: **N063136-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181622**
Client ID: **ZZZZZZ** Batch ID: **R181622** TestNo: **EPA 218.6** Analysis Date: **2/16/2024** SeqNo: **5695502**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.027	0.20	1.000	0	103	90	110				

Sample ID: **N063136-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181622**
Client ID: **ZZZZZZ** Batch ID: **R181622** TestNo: **EPA 218.6** Analysis Date: **2/16/2024** SeqNo: **5695504**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.052	0.20	1.000	0	105	90	110				

Sample ID: **N063136-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181622**
Client ID: **ZZZZZZ** Batch ID: **R181622** TestNo: **EPA 218.6** Analysis Date: **2/16/2024** SeqNo: **5695506**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.012	0.20	1.000	0	101	90	110				

Sample ID: **N063136-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181622**
Client ID: **ZZZZZZ** Batch ID: **R181622** TestNo: **EPA 218.6** Analysis Date: **2/16/2024** SeqNo: **5695508**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.999	0.20	1.000	0	99.9	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063136-006AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695510**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.053	0.20	1.000	0	105	90	110				

Sample ID: **N063136-008AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695514**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.000	0.20	1.000	0	100	90	110				

Sample ID: **N063136-009AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695516**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.077	0.20	1.000	0	108	90	110				

Sample ID: **N063136-010AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695518**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.019	0.20	1.000	0	102	90	110				

Sample ID: **N063135-007AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695519**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.025	0.20	1.000	0	102	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-43-025-Q124
Lab Order:	N063135		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/15/2024 2:28:00 PM
Lab ID:	N063135-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240216A**	QC Batch: **R181597**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/16/2024 09:41 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-43-075-Q124
Lab Order:	N063135		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/15/2024 1:50:00 PM
Lab ID:	N063135-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240216A**	QC Batch: **R181597**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/16/2024 09:56 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-43-090-Q124
Lab Order:	N063135		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/15/2024 1:14:00 PM
Lab ID:	N063135-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240216A**	QC Batch: **R181597**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/16/2024 10:11 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **MB-R181597_NO3** SampType: **MBLK** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **181597**
Client ID: **PBW** Batch ID: **R181597** TestNo: **EPA 300.0** Analysis Date: **2/16/2024** SeqNo: **5693579**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **LCS-R181597_NO3** SampType: **LCS** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **181597**
Client ID: **LCSW** Batch ID: **R181597** TestNo: **EPA 300.0** Analysis Date: **2/16/2024** SeqNo: **5693580**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.226	0.050	1.250	0	98.1	90	110				

Sample ID: **N063135-001CDUP** SampType: **DUP** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **181597**
Client ID: **ZZZZZZ** Batch ID: **R181597** TestNo: **EPA 300.0** Analysis Date: **2/16/2024** SeqNo: **5693584**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.50						0.2700	0	20	

Sample ID: **N063135-001CMS** SampType: **MS** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **181597**
Client ID: **ZZZZZZ** Batch ID: **R181597** TestNo: **EPA 300.0** Analysis Date: **2/16/2024** SeqNo: **5693585**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.343	0.50	12.50	0.2700	96.6	80	120				

Sample ID: **N063135-001CMSD** SampType: **MSD** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **181597**
Client ID: **ZZZZZZ** Batch ID: **R181597** TestNo: **EPA 300.0** Analysis Date: **2/16/2024** SeqNo: **5693586**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.219	0.50	12.50	0.2700	95.6	80	120	12.34	1.01	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-43-025-Q124
Lab Order:	N063135		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/15/2024 2:28:00 PM
Lab ID:	N063135-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240216C**	QC Batch: **106859**				PrepDate:	**2/16/2024**	Analyst: **DJ**
Iron	3500	13	20		µg/L	1	2/16/2024 04:58 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-43-075-Q124
Lab Order:	N063135		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/15/2024 1:50:00 PM
Lab ID:	N063135-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240216C**	QC Batch: **106859**				PrepDate:	**2/16/2024**	Analyst: **DJ**
Iron	3000	13	20		µg/L	1	2/16/2024 05:03 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-43-090-Q124
Lab Order:	N063135		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/15/2024 1:14:00 PM
Lab ID:	N063135-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240216C**	QC Batch: **106859**				PrepDate:	**2/16/2024**	Analyst: **DJ**
Iron	1400	13	20		µg/L	1	2/16/2024 05:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-106859**	SampType: **MBLK**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/16/2024**	RunNo: **181618**
Client ID: **PBW**	Batch ID: **106859**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5695389**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **N063076-002B-MS1**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/16/2024**	RunNo: **181618**
Client ID: **ZZZZZZ**	Batch ID: **106859**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5695396**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	988.032	20	100.0	933.9	54.1	75	125				S

Sample ID: **N063076-002B-MSD**	SampType: **MSD**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/16/2024**	RunNo: **181618**
Client ID: **ZZZZZZ**	Batch ID: **106859**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5695397**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1002.047	20	100.0	933.9	68.2	75	125	988.0	1.41	20	S

Sample ID: **LCS1-106859**	SampType: **LCS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/16/2024**	RunNo: **181618**
Client ID: **LCSW**	Batch ID: **106859**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5695405**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	90.386	20	100.0	0	90.4	85	115				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N063076-002B-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181618**
Client ID: **ZZZZZZ** Batch ID: **106859** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/16/2024** SeqNo: **5695395**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1016.456	20	100.0	933.9	82.6	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-43-025-Q124
Lab Order:	N063135		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/15/2024 2:28:00 PM
Lab ID:	N063135-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240216B**	QC Batch: **106888**			PrepDate:	**2/16/2024**	Analyst: **DJ**	
Arsenic	20	0.050	0.10		µg/L	1	2/16/2024 05:11 PM
Barium	84	0.083	1.0		µg/L	1	2/16/2024 05:11 PM
Manganese	420	0.26	5.0		µg/L	10	2/16/2024 07:12 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-43-075-Q124
Lab Order:	N063135		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/15/2024 1:50:00 PM
Lab ID:	N063135-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240216B**	QC Batch: **106888**				PrepDate:	**2/16/2024**	Analyst: **DJ**
Arsenic	6.7	0.050	0.10		µg/L	1	2/16/2024 05:16 PM
Barium	64	0.083	1.0		µg/L	1	2/16/2024 05:16 PM
Manganese	490	0.26	5.0		µg/L	10	2/16/2024 07:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-43-090-Q124
Lab Order:	N063135		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/15/2024 1:14:00 PM
Lab ID:	N063135-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240216B**	QC Batch: **106888**			PrepDate:	**2/16/2024**	Analyst: **DJ**	
Arsenic	ND	0.050	0.10		µg/L	1	2/16/2024 05:20 PM
Barium	59	0.083	1.0		µg/L	1	2/16/2024 05:20 PM
Manganese	620	0.26	5.0		µg/L	10	2/16/2024 07:21 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **MB-106888** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/16/2024** RunNo: **181642**
Client ID: **PBW** Batch ID: **106888** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/16/2024** SeqNo: **5696782**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **LCS-106888** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/16/2024** RunNo: **181642**
Client ID: **LCSW** Batch ID: **106888** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/16/2024** SeqNo: **5696783**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	9.827	0.10	10.00	0	98.3	85	115				
Barium	10.139	1.0	10.00	0	101	85	115				
Manganese	100.862	0.50	100.0	0	101	85	115				

Sample ID: **N063136-001B-MS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/16/2024** RunNo: **181642**
Client ID: **ZZZZZZ** Batch ID: **106888** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/16/2024** SeqNo: **5696790**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.237	0.10	10.00	2.207	100	75	125				
Barium	159.263	1.0	10.00	148.6	106	75	125				
Manganese	103.209	0.50	100.0	1.534	102	75	125				

Sample ID: **N063136-001B-MSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/16/2024** RunNo: **181642**
Client ID: **ZZZZZZ** Batch ID: **106888** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/16/2024** SeqNo: **5696793**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.113	0.10	10.00	2.207	99.1	75	125	12.24	1.02	20	
Barium	159.944	1.0	10.00	148.6	113	75	125	159.3	0.427	20	
Manganese	102.821	0.50	100.0	1.534	101	75	125	103.2	0.376	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

SAMPLE RECEIVING ITEMS

ARCUS02 C: 3/1/2024 12:00 AM
FOLDER R: 2/15/2024
N063135-008A 1 of 1

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes					
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:					
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.mayne@arcadis.com	Address:					
Phone: 916-786-3302 / Fax:	Address: 101 Creeksids Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com	P.O.#				
Submitted By: Nara Tep		Phone: 949-727-1400, ext 200	Fax:				
Title: PM	Phone: 916-786-3302 / Fax:						
Signature: Date: 2/15/24	Sampled By: Nara Tep						
Project Name: PG&E Topock - PCM	Signature: Date: 2/15/24						
Project Number: 30211191							

I hereby authorize ASSET Labs to perform the tests indicated below.

I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for

Matrix: Ground X | Sediment | Potable | Soil | NPDES | Other Solid | Surface

EDD Requirement: Excel EDD | Geotracker | Labspec | Others ✓ | Specify: RWQCB

QA/QC: RTNE | RWQCB ✓ | CalTrans | LEVEL III | LEVEL IV | Regulatory | Specify State:

Sample Receipt Certification

	Y	N
1. Chilled	X	
2. Headspace		
3. Container Intact	X	
4. Seal Present		
5. IR number 3		
6. Method of Cooling: ICE		

Sample Temp: 1.3, 2.9°C

Courier: ASSET

Tracking No.:

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 250 mL poly	Nitrate, sulfate (EPA 300.0) 1 L poly	Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese 500mL poly	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, 500mL poly	Dissolved metals (SW6020) FF; HNO3 Selenium, Molybdenum 500mL poly	Total Organic Carbon (SM5310C); H2SO4 3x40 mL VOA	Ammonia as Nitrogen (SM4500NH3D); H2SO4 1 L poly	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 125 mL poly	Nitrate (EPA 300.0) 1 L poly	Nitrate (EPA 300.0) 1 L poly	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063135-001	MW-43-025-Q124	2/15/2024	14:28		X		X						X		E	3	P	BNS	
2	-002	MW-43-025-EB-Q124	2/15/2024	14:00		X		X						X		E	1	P	BNS	
3	-003	MW-43-075-Q124	2/15/2024	13:50		X		X						X		E	3	P	BNS	
4	-004	MW-43-075-EB-Q124	2/15/2024	13:20		X		X						X		E	1	P	BNS	
5	-005	MW-43-090-Q124	2/15/2024	13:14		X		X						X		E	3	P	BNS	
6	-006	MW-43-090-EB-Q124	2/15/2024	12:30		X		X						X		E	1	P	BNS	
7	-007	EB-723-Q124	2/15/2024	14:45		X										E	1	P	BNS	
8																				
9																				
10																				
11																				
12																				
13																				
14																				

Relinquished by (Signature and Printed Name): Nara Tep 2/15/24 1550 — Date/Time:

Relinquished by (Signature and Printed Name): MBCARTIN 2/15/24 @1550 — Date/Time:

Relinquished by (Signature and Printed Name): REL/REC: MBCARTIN — Date/Time:

Relinquished by (Signature and Printed Name): 2/15/24 @ 1810 — Date/Time:

Relinquished by (Signature and Printed Name): — Date/Time:

Relinquished by (Signature and Printed Name): — Date/Time:

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis.
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3 % of the total project price.
4. Add 10% surcharge for Level III Data Packages. 15% for Level IV Data Packages. Surcharge applied on total project
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:				Container Type:		
H=HCL	N=HNO_3	S=H_2SO_4	C=4°C	T=Tube	V=VOA	P=Pint
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$		J=Jar	B=Tedlar	G=Glass
Others/Specify:	B (NH4)2SO4/NH4OH			M=Metal	M=Metal	C=Can

White=Laboratory Copy

Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	2/15/2024	Workorder:	N063135
Rep sample Temp (Deg C):	1.3/2.9	IR Gun ID:	3

Temp Blank: ☑ Yes ☐ No

Carrier name: ASSET

Last 4 digits of Tracking No.: NA Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By: YRodriguez MBC For: 2/16/2024

Reviewed By: for: MBC 02/20/2024

ASSET Laboratories

WORK ORDER Summary

20-Feb-24

WorkOrder: N063135

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 2/15/2024 6:10 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063135-001A	MW-43-025-Q124	2/15/2024 2:28:00 PM	3/1/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063135-001B			3/1/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/1/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/1/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/1/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063135-001C			3/1/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063135-002A	MW-43-025-EB-Q124	2/15/2024 2:00:00 PM	3/1/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063135-003A	MW-43-075-Q124	2/15/2024 1:50:00 PM	3/1/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063135-003B			3/1/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/1/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/1/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/1/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063135-003C			3/1/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063135-004A	MW-43-075-EB-Q124	2/15/2024 1:20:00 PM	3/1/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063135-005A	MW-43-090-Q124	2/15/2024 1:14:00 PM	3/1/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063135-005B			3/1/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/1/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/1/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/1/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063135-005C			3/1/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063135-006A	MW-43-090-EB-Q124	2/15/2024 12:30:00 PM	3/1/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063135-007A	EB-723-Q124	2/15/2024 2:45:00 PM	3/1/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW

WORK ORDER Summary

20-Feb-24

WorkOrder: N063135

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 2/15/2024 6:10 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063135-008A	FOLDER	3/1/2024	3/1/2024		Folder	Folder	☐	☐	☐	LAB
			3/1/2024		Folder	Level IV Report	☐	☐	☐	LAB
			3/1/2024		Folder	Folder	☐	☐	☐	LAB

List of Analysts

ASSET Laboratories Work Order: N063135

NAME	TEST METHOD
Ria Abes	EPA 218.6, EPA 300.0
Diane Jetajobe	EPA 6010B_Dissolved, EPA 6020_Dissolved

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R181622
ASSET #: N063135

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/16/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments: Dilution was necessary for some samples due to matrix interference.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer RB 02192024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063135-001A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 0.0000 * 1$$

$$Cr^{+6}, \mu g/L = 0.0000$$

Since PQL is 0.2 µg/L,

Cr^{+6} ,µg/L = ND

Reviewed by:

dMocha 3/3/2024

ANALYSIS RUN LOG

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240216A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/16/24 8:51 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/16/24 9:04 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/16/24 9:13 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/16/24 9:23 AM	Reported
13	MB-R181622	MBLK	1	Hexavalent Chromium	02/16/24 9:32 AM	Reported
14	LCS-R181622	LCS	1	Hexavalent Chromium	02/16/24 9:42 AM	Reported
15	N063135-001A	SAMP	1	Hexavalent Chromium	02/16/24 10:12 AM	Reported
16	N063135-001AMS	MS	1	Hexavalent Chromium	02/16/24 10:24 AM	Reported
17	N063135-003A	SAMP	1	Hexavalent Chromium	02/16/24 10:34 AM	Not Reported
18	MB-106779	MBLK	1	Hexavalent Chromium	02/16/24 10:43 AM	Reported
19	N063009-001B	SAMP	1	Hexavalent Chromium	02/16/24 10:53 AM	Reported
20	N063009-001BREP	DUP	1	Hexavalent Chromium	02/16/24 11:02 AM	Not Reported
21	N063009-002B	SAMP	1	Hexavalent Chromium	02/16/24 11:12 AM	Reported
22	N063009-002BREP	DUP	1	Hexavalent Chromium	02/16/24 11:21 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/16/24 11:31 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/16/24 11:40 AM	Reported
25	N063009-001BREP	DUP	1	Hexavalent Chromium	02/16/24 11:50 AM	Reported
26	N063009-001BREP	DUP	1	Hexavalent Chromium	02/16/24 11:59 AM	Not Reported
27	N063135-001ADUP	DUP	1	Hexavalent Chromium	02/16/24 12:09 PM	Reported
28	N063135-001AMSD	MSD	1	Hexavalent Chromium	02/16/24 12:18 PM	Reported
29	N063135-007A	SAMP	1	Hexavalent Chromium	02/16/24 12:27 PM	Reported
30	N063147-001B	SAMP	1	Hexavalent Chromium	02/16/24 12:37 PM	Reported
31	N063147-002B	SAMP	1	Hexavalent Chromium	02/16/24 12:46 PM	Reported
32	N063147-001BREP	DUP	1	Hexavalent Chromium	02/16/24 12:56 PM	Reported
33	N063147-002BREP	DUP	1	Hexavalent Chromium	02/16/24 1:05 PM	Reported
34	N063135-002AMS	MS	1	Hexavalent Chromium	02/16/24 1:15 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/16/24 1:24 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/16/24 1:34 PM	Reported
37	N063136-001A	SAMP	1	Hexavalent Chromium	02/16/24 1:47 PM	Reported
38	N063135-004A	SAMP	1	Hexavalent Chromium	02/16/24 1:59 PM	Reported
39	N063135-004AMS	MS	1	Hexavalent Chromium	02/16/24 2:08 PM	Reported
40	N063135-003A	SAMP	5	Hexavalent Chromium	02/16/24 2:18 PM	Reported
41	N063135-003AMS	MS	5	Hexavalent Chromium	02/16/24 2:27 PM	Reported
42	N063135-005A	SAMP	5	Hexavalent Chromium	02/16/24 2:37 PM	Reported

INJECTION LOG: 240216A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063135-005AMS	MS	5	Hexavalent Chromium	02/16/24 2:46 PM	Reported
44	N063135-006A	SAMP	1	Hexavalent Chromium	02/16/24 2:56 PM	Reported
45	N063135-006AMS	MS	1	Hexavalent Chromium	02/16/24 3:05 PM	Reported
46	N063136-001AMS	MS	1	Hexavalent Chromium	02/16/24 3:15 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/16/24 3:24 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/16/24 3:34 PM	Reported
49	N063136-002A	SAMP	1	Hexavalent Chromium	02/16/24 3:43 PM	Reported
50	N063136-002AMS	MS	1	Hexavalent Chromium	02/16/24 3:52 PM	Reported
51	N063136-003A	SAMP	1	Hexavalent Chromium	02/16/24 4:02 PM	Reported
52	N063136-003AMS	MS	1	Hexavalent Chromium	02/16/24 4:11 PM	Reported
53	N063136-004A	SAMP	1	Hexavalent Chromium	02/16/24 4:21 PM	Reported
54	N063136-004AMS	MS	1	Hexavalent Chromium	02/16/24 4:30 PM	Reported
55	N063136-005A	SAMP	1	Hexavalent Chromium	02/16/24 4:40 PM	Reported
56	N063136-005AMS	MS	1	Hexavalent Chromium	02/16/24 4:49 PM	Reported
57	N063136-006A	SAMP	1	Hexavalent Chromium	02/16/24 4:59 PM	Reported
58	N063136-006AMS	MS	1	Hexavalent Chromium	02/16/24 5:08 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/16/24 5:18 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/16/24 5:27 PM	Reported
61	N063136-008A	SAMP	1	Hexavalent Chromium	02/16/24 5:37 PM	Reported
62	N063136-008AMS	MS	1	Hexavalent Chromium	02/16/24 5:46 PM	Reported
63	N063136-009A	SAMP	1	Hexavalent Chromium	02/16/24 5:55 PM	Reported
64	N063136-009AMS	MS	1	Hexavalent Chromium	02/16/24 6:05 PM	Reported
65	N063136-010A	SAMP	1	Hexavalent Chromium	02/16/24 6:14 PM	Reported
66	N063136-010AMS	MS	1	Hexavalent Chromium	02/16/24 6:24 PM	Reported
67	N063135-007AMS	MS	1	Hexavalent Chromium	02/16/24 6:33 PM	Reported
68	N063135-005A	SAMP	1	Hexavalent Chromium	02/16/24 6:43 PM	Not Reported
69	N063135-005AMS	MS	1	Hexavalent Chromium	02/16/24 6:56 PM	Not Reported
70	N063135-002A	SAMP	1	Hexavalent Chromium	02/16/24 7:05 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/16/24 7:15 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/16/24 7:24 PM	Reported
73	N063135-003AMS	MS	1	Hexavalent Chromium	02/16/24 7:33 PM	Not Reported
74	CCV-7	CCV	1	Hexavalent Chromium	02/16/24 7:43 PM	Reported
75	CCB-7	CCB	1	Hexavalent Chromium	02/16/24 7:52 PM	Reported
76	BLANK	BLANK	1	Hexavalent Chromium	02/16/24 8:02 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240216A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**17/Feb/24 10:32:50**
No. of Injections:	**79**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/16/2024 08:51	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/16/2024 09:04	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/16/2024 09:13	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/16/2024 09:23	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/16/2024 09:32	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/16/2024 09:42	Finished	LCS @5ppb, IWST-231228B
15	N063135-001A,SAMF	1	1000	Unknown		02/16/2024 10:12	Finished	SAMP,10 mL
16	N063135-001AMS,MS	2	1000	Unknown		02/16/2024 10:24	Finished	MS (1ppb), IWST-231228B,10r
17	N063135-003A,SAMF	3	1000	Unknown		02/16/2024 10:34	Finished	SAMP,10 mL
18	MB-106779,MBLK,1,	4	1000	Unknown		02/16/2024 10:43	Finished	MB STLC
19	N063009-001B,SAMF	5	1000	Unknown		02/16/2024 10:53	Finished	SAMP,10 mL
20	N063009-001BREP,D	6	1000	Unknown		02/16/2024 11:02	Finished	REP,10 mL
21	N063009-002B,SAMF	7	1000	Unknown		02/16/2024 11:12	Finished	SAMP,10 mL
22	N063009-002BREP,D	8	1000	Unknown		02/16/2024 11:21	Finished	REP,10 mL
23	CCV-2,CCV1,1,	9	1000	Unknown		02/16/2024 11:31	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		02/16/2024 11:40	Finished	CCB R240129C
25	N063009-001BREP,D	11	1000	Unknown		02/16/2024 11:50	Finished	SAMP,10 mL
26	N063009-001BREP,D	12	1000	Unknown		02/16/2024 11:59	Finished	REP,10 mL
27	N063135-001ADUP,D	13	1000	Unknown		02/16/2024 12:09	Finished	DUP,10 mL
28	N063135-001AMSD,M	14	1000	Unknown		02/16/2024 12:18	Finished	MSD (1ppb), IWST-231228B,1
29	N063135-007A,SAMF	15	1000	Unknown		02/16/2024 12:27	Finished	SAMP,10 mL
30	N063147-001B,SAMF	16	1000	Unknown		02/16/2024 12:37	Finished	SAMP,10 mL
31	N063147-002B,SAMF	17	1000	Unknown		02/16/2024 12:46	Finished	SAMP,10 mL
32	N063147-001BREP,D	18	1000	Unknown		02/16/2024 12:56	Finished	REP,10 mL
33	N063147-002BREP,D	19	1000	Unknown		02/16/2024 13:05	Finished	REP,10 mL
34	N063135-002AMS,MS	20	1000	Unknown		02/16/2024 13:15	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	21	1000	Unknown		02/16/2024 13:24	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	22	1000	Unknown		02/16/2024 13:34	Finished	CCB R240129C
37	N063136-001A,SAMF	1	1000	Unknown		02/16/2024 13:47	Finished	SAMP,10 mL
38	N063135-004A,SAMF	2	1000	Unknown		02/16/2024 13:59	Finished	SAMP,10 mL
39	N063135-004AMS,MS	3	1000	Unknown		02/16/2024 14:08	Finished	MS (1ppb), IWST-231228B,10r
40	N063135-003A,SAMF	4	1000	Unknown		02/16/2024 14:18	Finished	SAMP,2>10 mL
41	N063135-003AMS,MS	5	1000	Unknown		02/16/2024 14:27	Finished	MS (1ppb), IWST-231228B,2>1
42	N063135-005A,SAMF	6	1000	Unknown		02/16/2024 14:37	Finished	SAMP,2>10 mL
43	N063135-005AMS,MS	7	1000	Unknown		02/16/2024 14:46	Finished	MS (1ppb), IWST-231228B,2>1
44	N063135-006A,SAMF	8	1000	Unknown		02/16/2024 14:56	Finished	SAMP,10 mL
45	N063135-006AMS,MS	9	1000	Unknown		02/16/2024 15:05	Finished	MS (1ppb), IWST-231228B,10r
46	N063136-001AMS,MS	10	1000	Unknown		02/16/2024 15:15	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	11	1000	Unknown		02/16/2024 15:24	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	12	1000	Unknown		02/16/2024 15:34	Finished	CCB R240129C
49	N063136-002A,SAMF	13	1000	Unknown		02/16/2024 15:43	Finished	SAMP,10 mL
50	N063136-002AMS,MS	14	1000	Unknown		02/16/2024 15:52	Finished	MS (1ppb), IWST-231228B,10r
51	N063136-003A,SAMF	15	1000	Unknown		02/16/2024 16:02	Finished	SAMP,10 mL
52	N063136-003AMS,MS	16	1000	Unknown		02/16/2024 16:11	Finished	MS (1ppb), IWST-231228B,10r
53	N063136-004A,SAMF	17	1000	Unknown		02/16/2024 16:21	Finished	SAMP,10 mL
54	N063136-004AMS,MS	18	1000	Unknown		02/16/2024 16:30	Finished	MS (1ppb), IWST-231228B,10r
55	N063136-005A,SAMF	19	1000	Unknown		02/16/2024 16:40	Finished	SAMP,10 mL
56	N063136-005AMS,MS	20	1000	Unknown		02/16/2024 16:49	Finished	MS (1ppb), IWST-231228B,10r
57	N063136-006A,SAMF	21	1000	Unknown		02/16/2024 16:59	Finished	SAMP,10 mL
58	N063136-006AMS,MS	22	1000	Unknown		02/16/2024 17:08	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	23	1000	Unknown		02/16/2024 17:18	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	24	1000	Unknown		02/16/2024 17:27	Finished	CCB R240129C

61	N063136-008A,SAMP	25	1000	Unknown		02/16/2024 17:37	Finished	SAMP,10 mL
62	N063136-008AMS,MS	26	1000	Unknown		02/16/2024 17:46	Finished	MS (1ppb), IWST-231228B,10r
63	N063136-009A,SAMP	27	1000	Unknown		02/16/2024 17:55	Finished	SAMP,10 mL
64	N063136-009AMS,MS	28	1000	Unknown		02/16/2024 18:05	Finished	MS (1ppb), IWST-231228B,10r
65	N063136-010A,SAMP	29	1000	Unknown		02/16/2024 18:14	Finished	SAMP,10 mL
66	N063136-010AMS,MS	30	1000	Unknown		02/16/2024 18:24	Finished	MS (1ppb), IWST-231228B,10r
67	N063135-007AMS,MS	31	1000	Unknown		02/16/2024 18:33	Finished	MS (1ppb), IWST-231228B,10r
68	N063135-005A,SAMP	32	1000	Unknown		02/16/2024 18:43	Finished	SAMP,10 mL
69	N063135-005AMS,MS	33	1000	Unknown		02/16/2024 18:56	Finished	MS (1ppb), IWST-231228B,10r
70	N063135-002A,SAMP	34	1000	Unknown		02/16/2024 19:05	Finished	SAMP,10 mL
71	CCV-6,CCV1,1,	35	1000	Unknown		02/16/2024 19:15	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	36	1000	Unknown		02/16/2024 19:24	Finished	CCB R240129C
73	N063135-003AMS,MS	37	1000	Unknown		02/16/2024 19:33	Finished	MS (1ppb), IWST-231228B,10r
74	CCV-7,CCV,1,	38	1000	Unknown		02/16/2024 19:43	Finished	CCV @5ppb, IWST-231228A
75	CCB-7,CCB,1,	39	1000	Unknown		02/16/2024 19:52	Finished	CCB R240129C
76	BLANK	40	1000	Unknown		02/16/2024 20:02	Finished	BLANK
77	SHUTDOWN	41	1000	Unknown		02/16/2024 20:11	Finished	
78	Eluent: R240215A	42	1000	Unknown		n.a.	Finished	
79	PCR: R240215B	43	1000	Unknown		n.a.	Finished	

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 2/16/24
Time Prepared: 0947 H
Prepared By: MA

Reagent ID:
Sulfuric Acid: 14335
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: M240215A
NH4OH + NH4SO4 buffer: M240179C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MB-118175 - 1A	9.33	-	~250mL	~250mL		
2)	2A	9.70	-				
3)	3A	9.30	-				
4)	4A	9.71	-				
5)	5A	9.35	-				
6)	6A	9.68	-				
7)	7A	9.68	-				
8)	MB-118176 - 1A	9.35	-				
9)	2A	9.35	-				
10)	3A	9.35	-				
11)	4A	9.41	-				
12)	5A	9.46	-				
13)	6A	9.47	-				
14)	8A	9.54	-				
15)	9A	9.40	-				
	10A	9.52	-				

Sample Preparation

Date Prepared: 2/16/24
Time Prepared: 0947H
Prepared By: MA

Reagent ID:
Sulfuric Acid: 14335
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: M240215A
NH4OH + NH4SO4 buffer: M240179C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MB-118176 - 11A	9.37	-	~250m	~250m		
2)	12A	9.41	-				
3)	13A	9.38	-				
4)	14A	9.34	-				
5)	MB-106779	7.94	9.55	~50m	~50m	+0.2ml M240215C/10ml	STLC
6)	MB-118179 - 1A	9.33	9.45				
7)	2A	9.37	9.50				
8)							
9)							
10)							
11)							
12)							
13)							
14)							
15)							

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 2/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0427	0.2063	1.0639	2.1157	3.2270	4.3227	0.9999
Measured, in ug/L	0.198500	0.959200	4.946100	9.835700	15.002300	20.095900	
Relative Error (%RE)	-0.8%		-1.1%				

	Stock	Working
Standard Concentration:	1,000,000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30121191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ICV**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5695460**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5695461**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCV**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695463**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.134	0.20	5.000	0	103	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695464**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.20	0.2000	0	110	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695475**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.539	0.20	10.00	0	95.4	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30121191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCV**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695487**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.937	0.20	5.000	0	98.7	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695499**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.030	0.20	10.00	0	100	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCV**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695511**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.940	0.20	5.000	0	98.8	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695521**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.912	0.20	10.00	0	99.1	95	105				

Sample ID: **CCV-7**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCV**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695523**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.905	0.20	5.000	0	98.1	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30121191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ICB**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5695462**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCB**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695465**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCB**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695476**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCB**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695488**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCB**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695500**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30121191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCB**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695512**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCB**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695522**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-7**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCB**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695524**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/16/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.056	
CCV-2	4.065	
CCV-3	4.056	
CCV-4	4.056	
CCV-5	4.056	
CCV-6	4.056	
CCV-7	4.065	

Average	4.059	
Actual RT Window	3.979 -	4.139
Applied RT Window	3.859 -	4.259

MB-R181622	N.A.	N.A.
LCS-R181622	4.056	PASS
N063135-001A	N.A.	N.A.
N063135-001AMS	4.040	PASS
N063135-003A	N.A.	N.A.
MB-106779	N.A.	N.A.
N063009-001B	4.056	PASS
N063009-001BREP	4.023	PASS
N063009-002B	4.056	PASS
N063009-002BREP	4.056	PASS
N063009-001BREP	4.056	PASS
N063135-001ADUP	N.A.	N.A.
N063135-001AMSD	4.040	PASS
N063135-007A	N.A.	N.A.
N063147-001B	4.015	PASS
N063147-002B	N.A.	N.A.
N063147-001BREP	4.006	PASS
N063147-002BREP	N.A.	N.A.
N063135-002AMS	4.056	PASS
N063136-001A	N.A.	N.A.
N063135-004A	N.A.	N.A.

Reviewed by:

dMocha 3/3/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/16/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.056	
CCV-2	4.065	
CCV-3	4.056	
CCV-4	4.056	
CCV-5	4.056	
CCV-6	4.056	
CCV-7	4.065	
Average	4.059	
Actual RT Window	3.979 - 4.139	
Applied RT Window	3.859 - 4.259	
N063135-004AMS	4.056	PASS
N063135-003A	N.A.	N.A.
N063135-003AMS	4.015	PASS
N063135-005A	N.A.	N.A.
N063135-005AMS	3.990	PASS
N063135-006A	N.A.	N.A.
N063135-006AMS	4.056	PASS
N063136-001AMS	4.048	PASS
N063136-002A	N.A.	N.A.
N063136-002AMS	4.048	PASS
N063136-003A	N.A.	N.A.
N063136-003AMS	4.048	PASS
N063136-004A	N.A.	N.A.
N063136-004AMS	4.056	PASS
N063136-005A	N.A.	N.A.
N063136-005AMS	4.048	PASS
N063136-006A	N.A.	N.A.
N063136-006AMS	4.048	PASS
N063136-008A	N.A.	N.A.
N063136-008AMS	4.056	PASS
N063136-009A	N.A.	N.A.

Reviewed by:

dlRocha 3/3/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/16/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.056	
CCV-2	4.065	
CCV-3	4.056	
CCV-4	4.056	
CCV-5	4.056	
CCV-6	4.056	
CCV-7	4.065	

Average	4.059	
Actual RT Window	3.979 -	4.139
Applied RT Window	3.859 -	4.259

N063136-009AMS	4.048	PASS
N063136-010A	N.A.	N.A.
N063136-010AMS	4.048	PASS
N063135-007AMS	4.073	PASS
N063135-005A	N.A.	N.A.
N063135-005AMS	N.A.	N.A.
N063135-002A	N.A.	N.A.

Reviewed by:

dMocha 3/3/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

Reviewed by:

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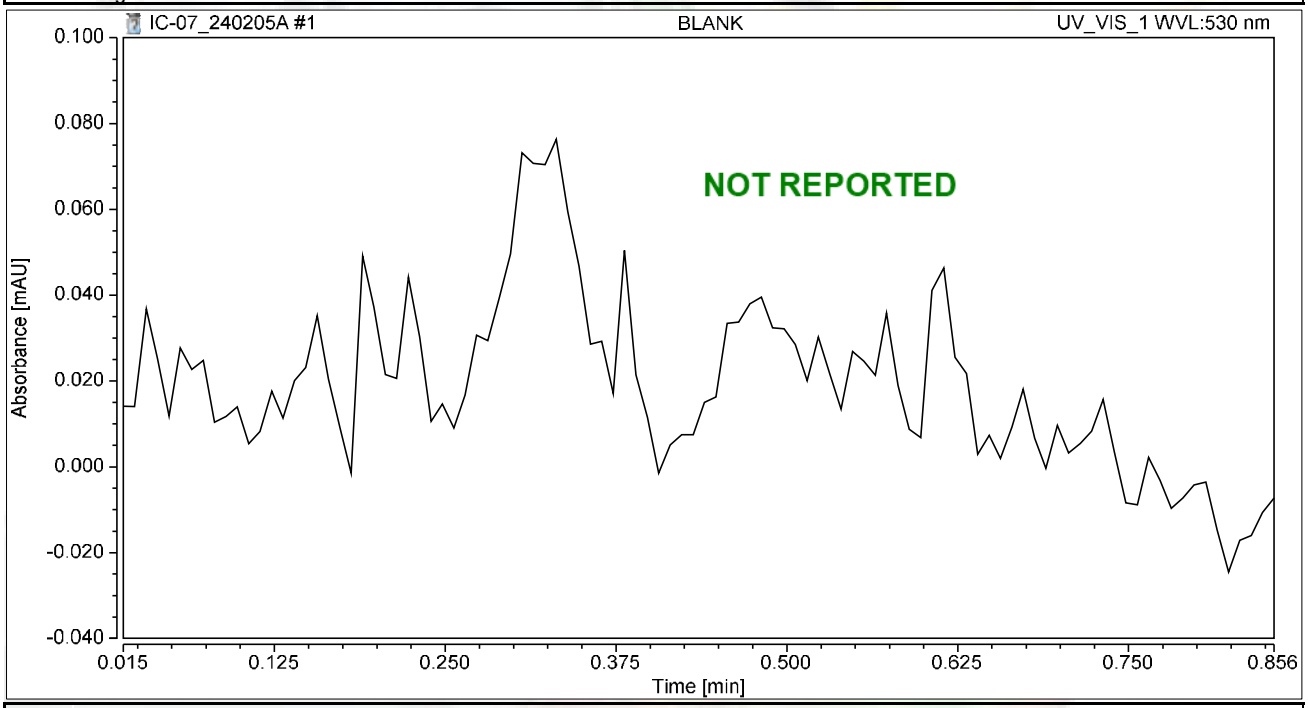
Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**0.84**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 11:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

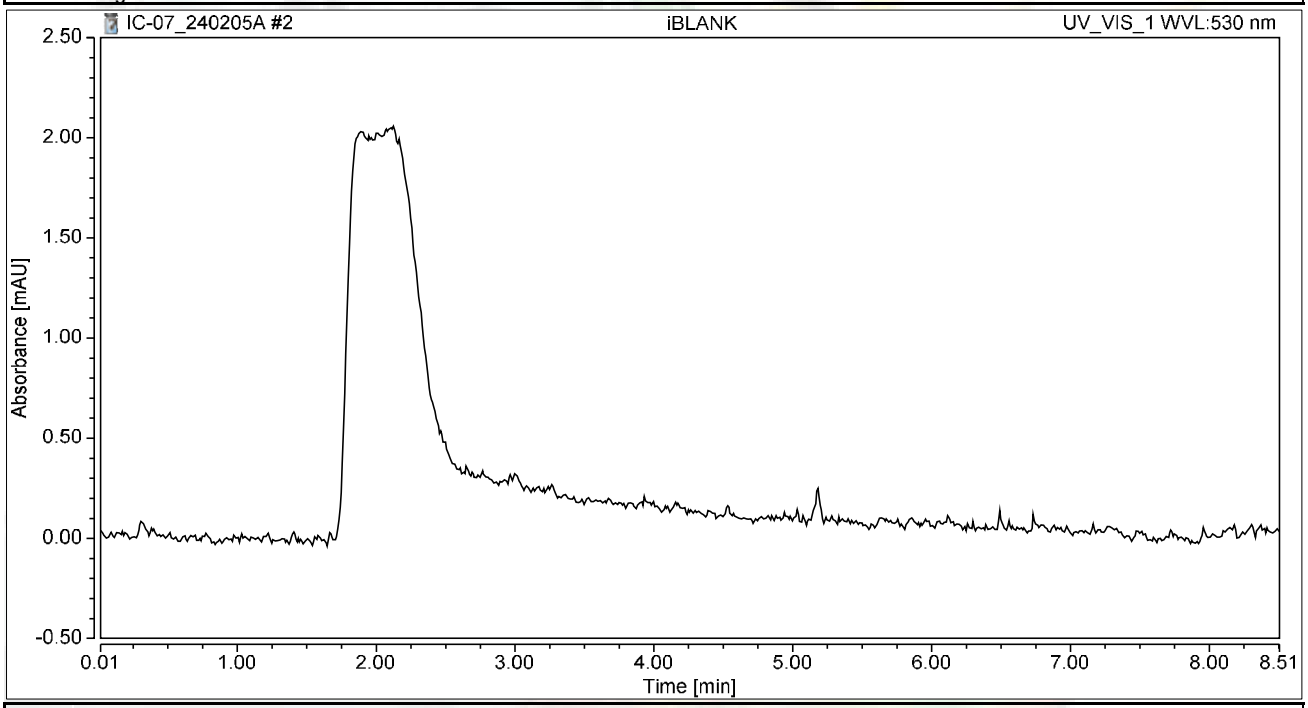
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

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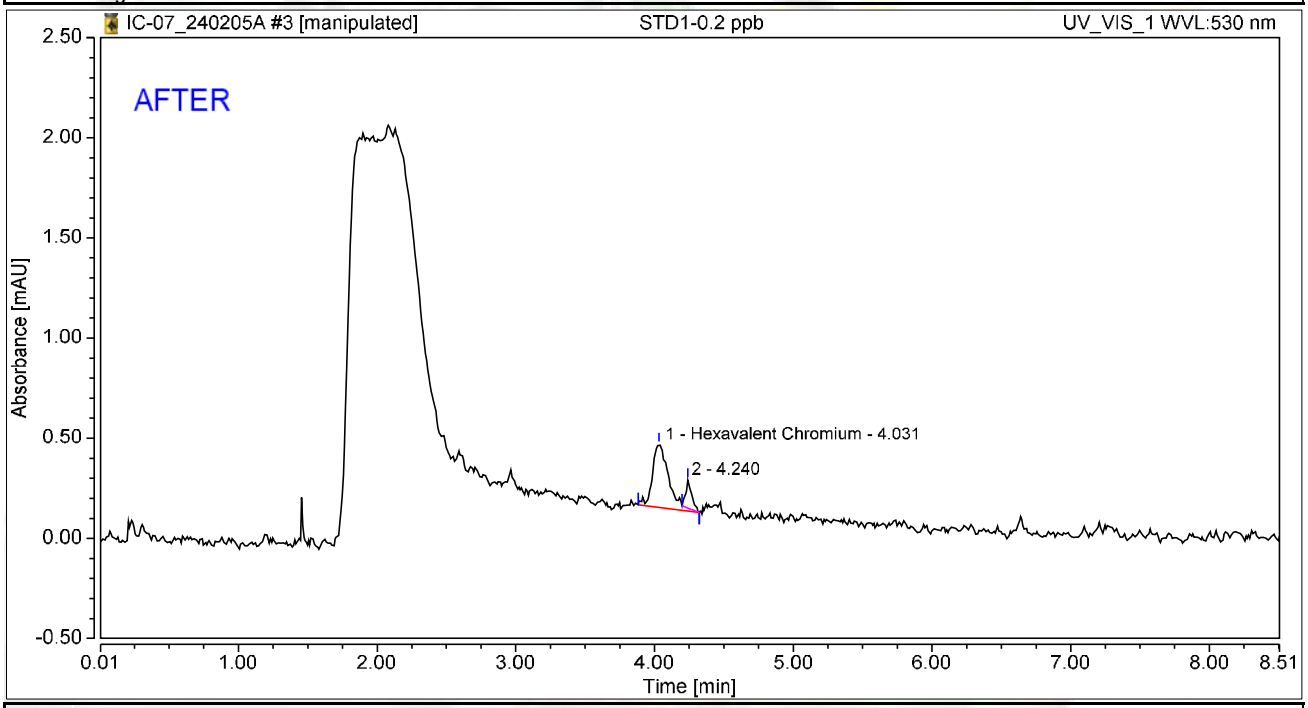
Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.043	0.313	85.65	69.19	0.1985
2		4.240	0.007	0.139	14.35	30.81	n.a.
Total:			**0.050**	**0.452**	**100.00**	**100.00**	

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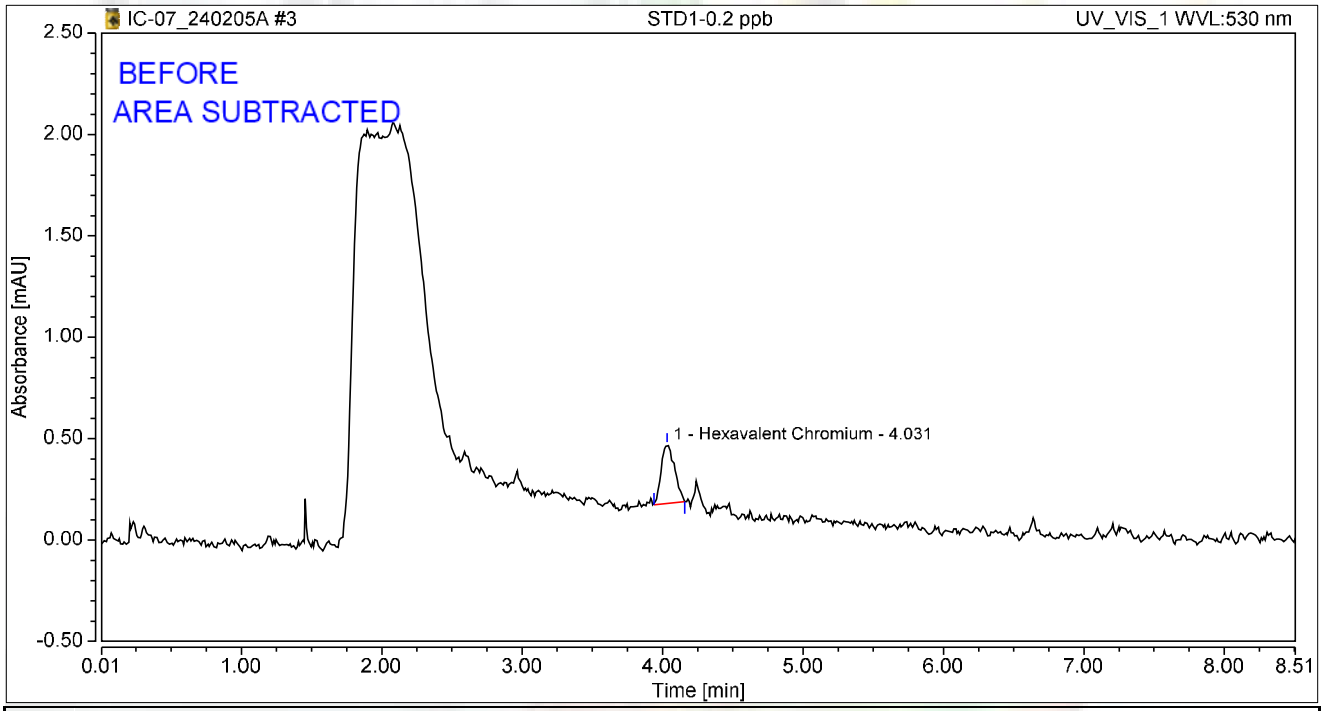
Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

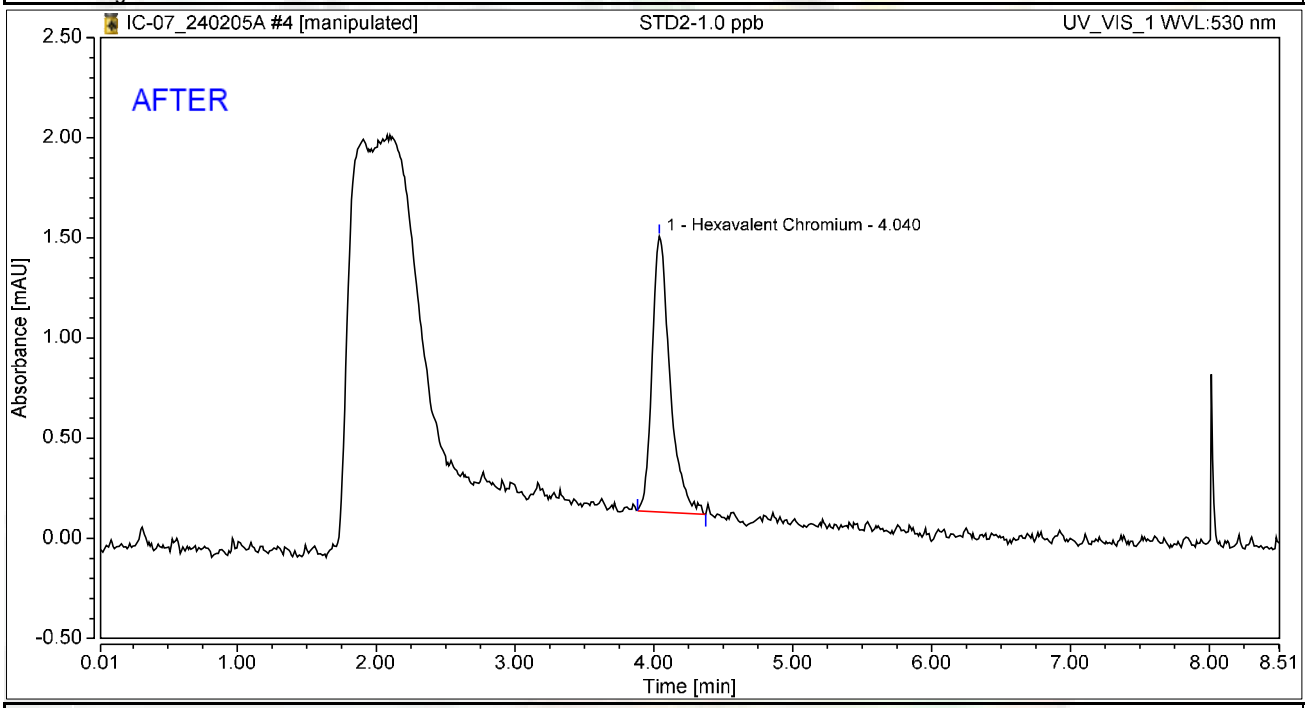
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.032	0.288	100.00	100.00	0.1502
Total:			**0.032**	**0.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.206	1.377	100.00	100.00	0.9592
Total:			**0.206**	**1.377**	**100.00**	**100.00**	

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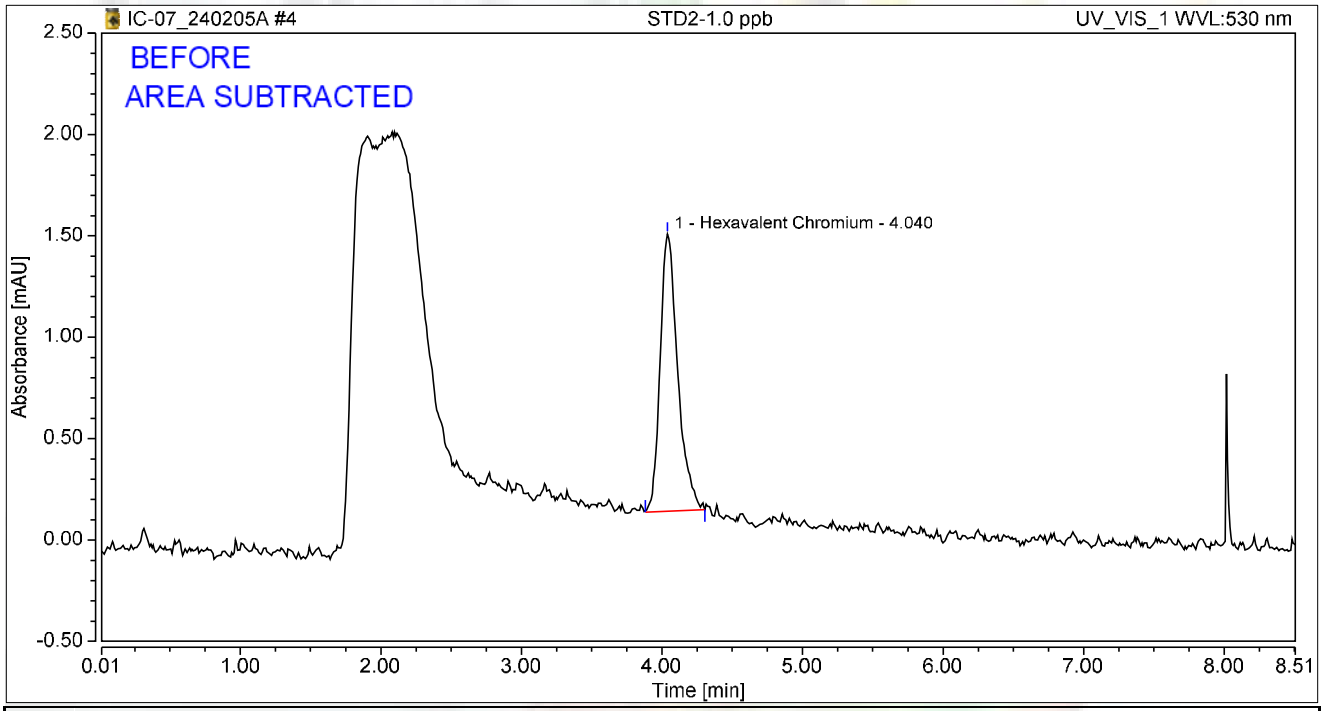
Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

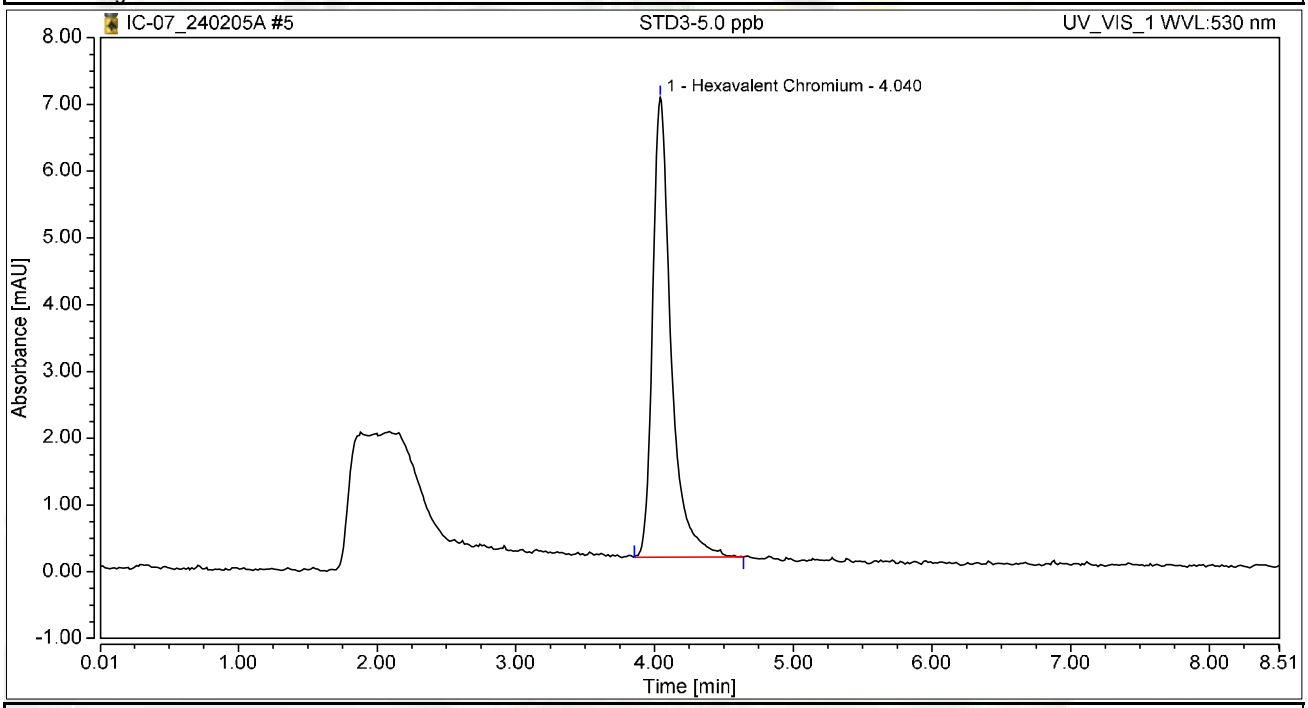
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.198	1.367	100.00	100.00	0.9223
Total:			**0.198**	**1.367**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

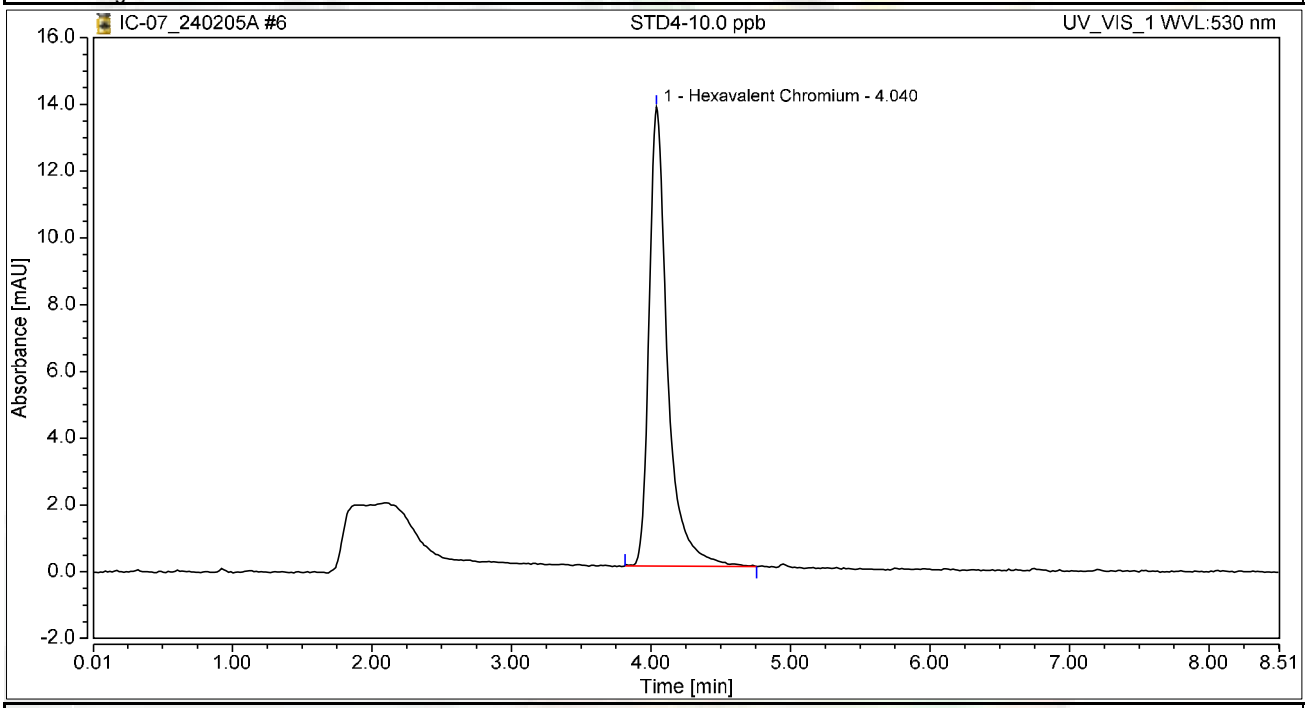
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.064	6.885	100.00	100.00	4.9461
Total:			**1.064**	**6.885**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

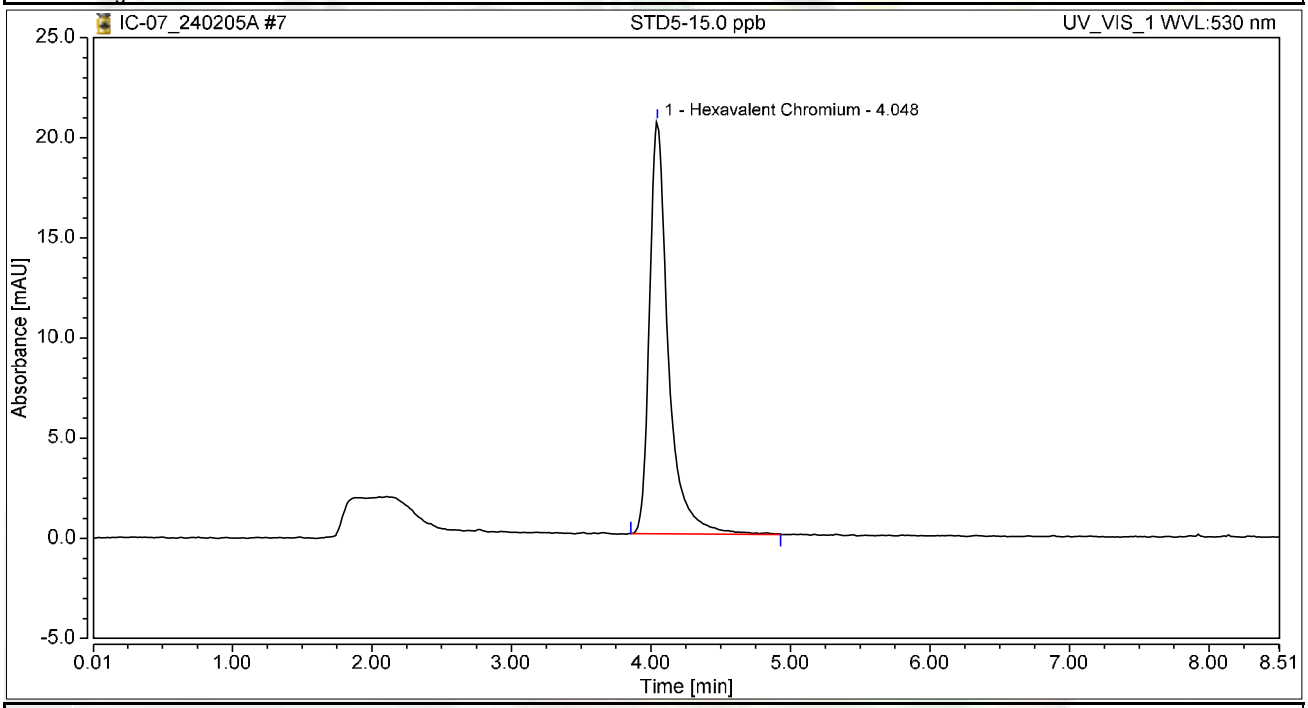
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.116	13.748	100.00	100.00	9.8357
Total:			**2.116**	**13.748**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

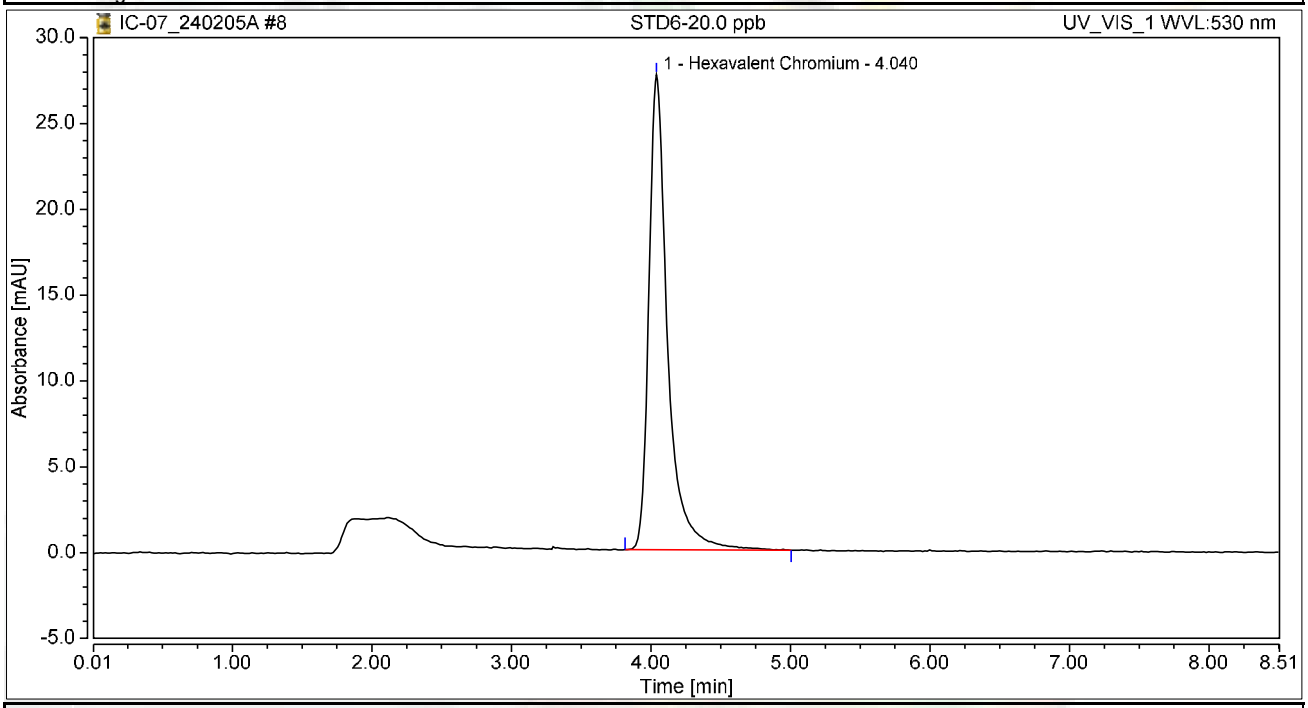
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	3.227	20.605	100.00	100.00	15.0023
Total:			**3.227**	**20.605**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:08**	*Sample Weight:*	**1.0000**

Chromatogram



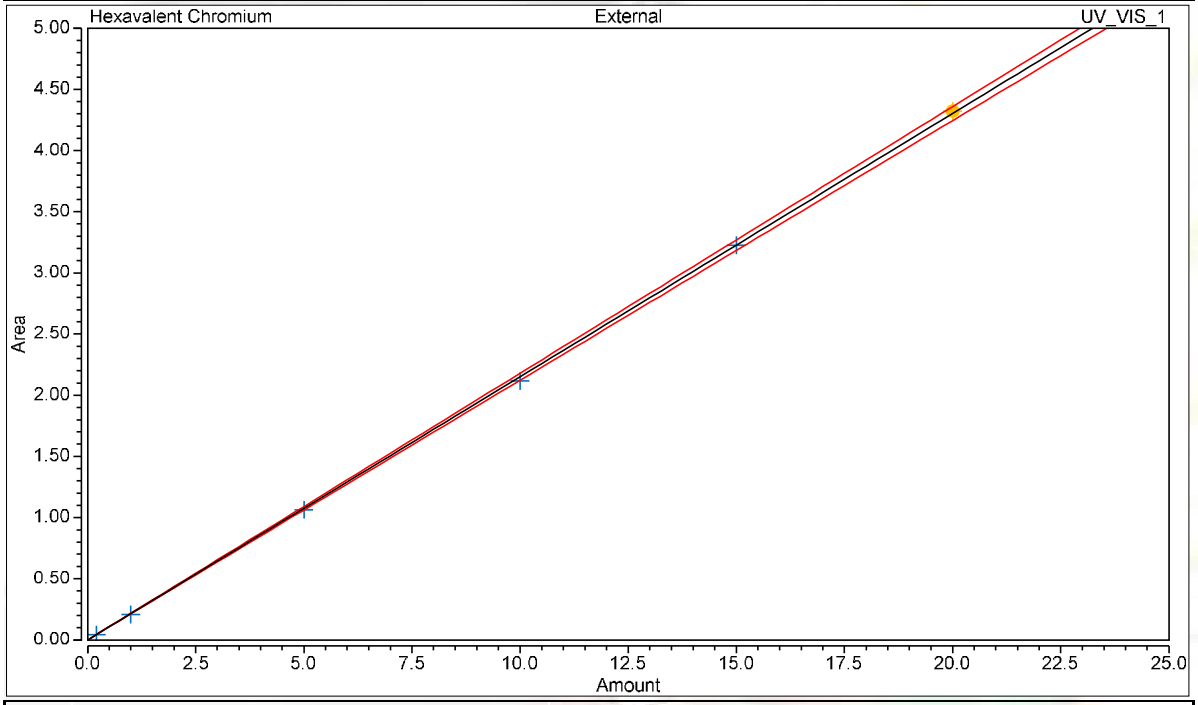
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	4.323	27.676	100.00	100.00	20.0959
Total:			**4.323**	**27.676**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2151
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99987

Calibration Plot Hexavalent Chromium



Calibration Results Hexavalent Chromium

No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0427	0.043	0.313
4	STD2-1.0 ppb	02	1.0000	0.2063	0.206	1.377
5	STD3-5.0 ppb	03	5.0000	1.0639	1.064	6.885
6	STD4-10.0 ppb	04	10.0000	2.1157	2.116	13.748
7	STD5-15.0 ppb	05	15.0000	3.2270	3.227	20.605
8	STD6-20.0 ppb	06	20.0000	4.3227	4.323	27.676

Reviewed by:

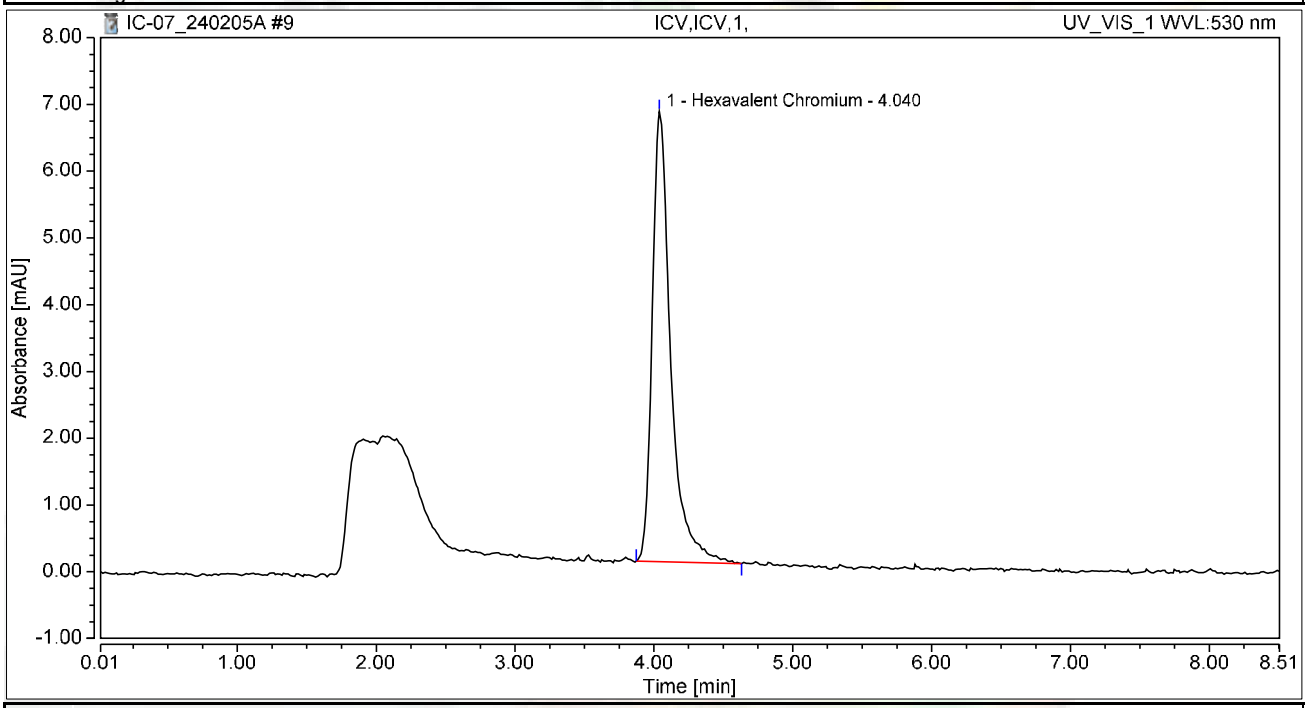
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

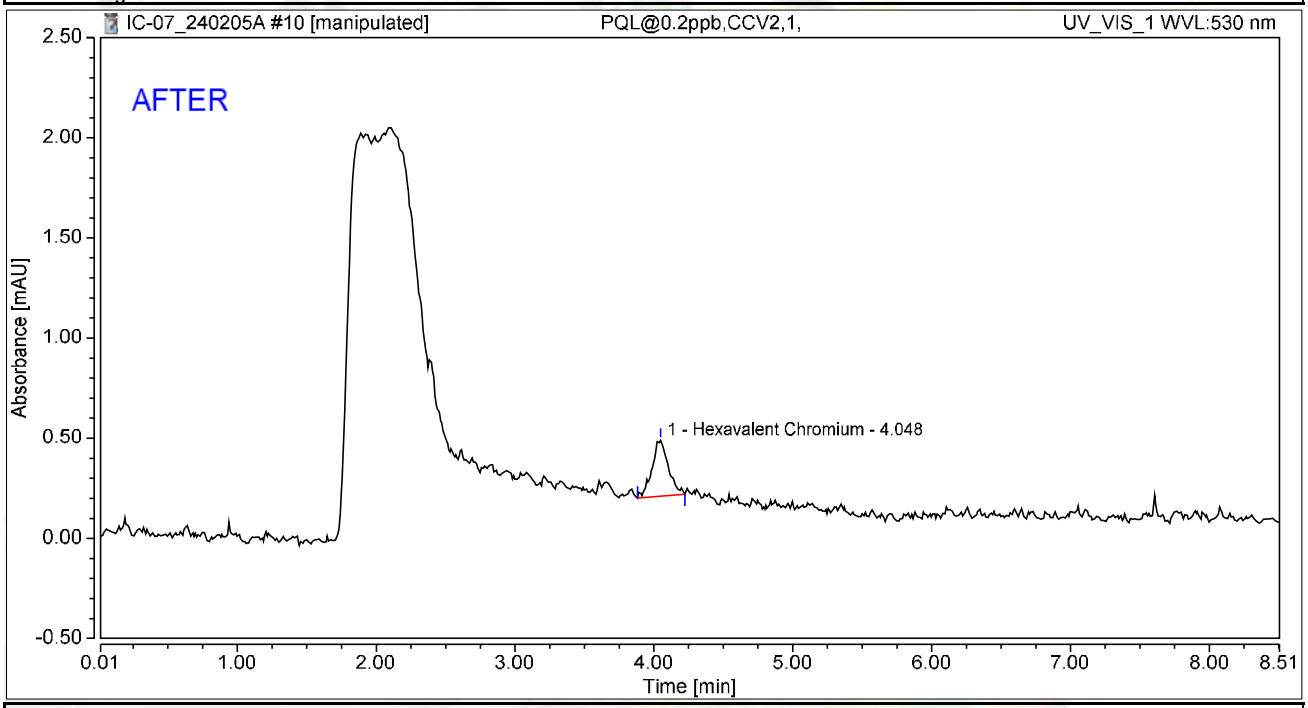
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.040	6.743	100.00	100.00	4.8342
Total:			**1.040**	**6.743**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.039	0.279	100.00	100.00	0.1802
Total:			**0.039**	**0.279**	**100.00**	**100.00**	

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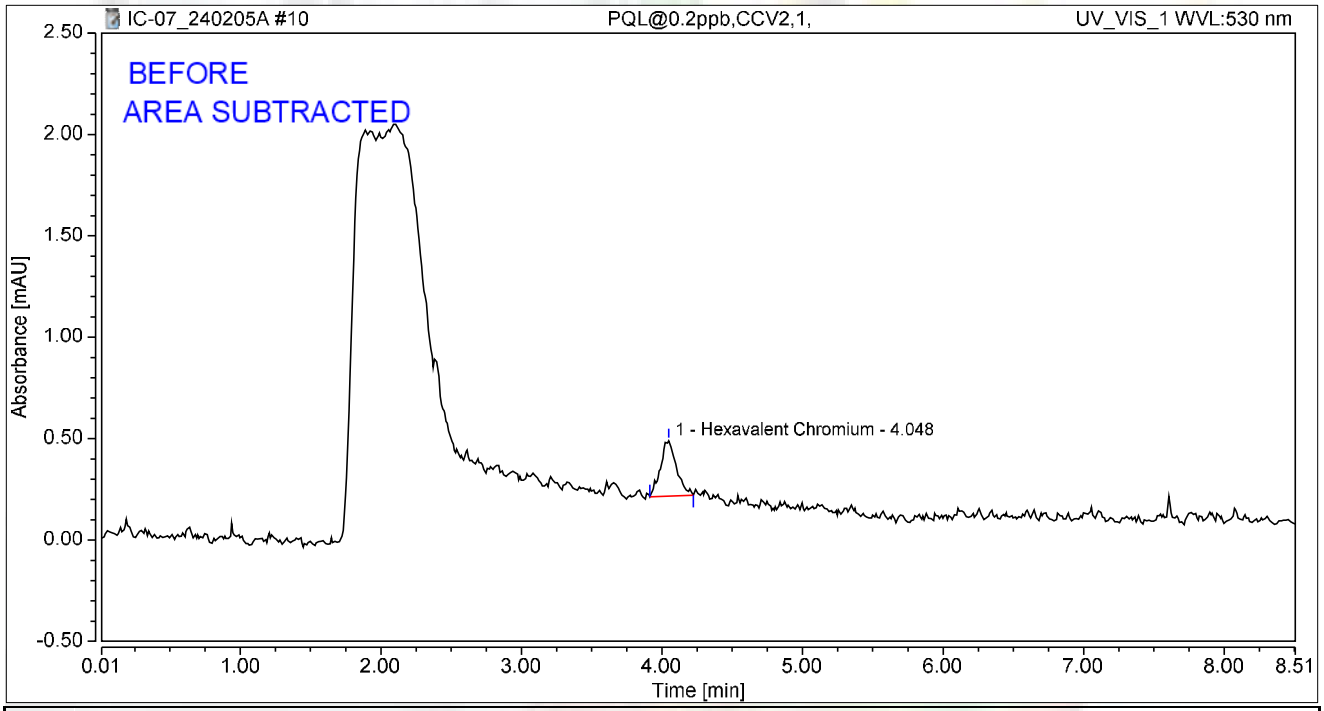
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

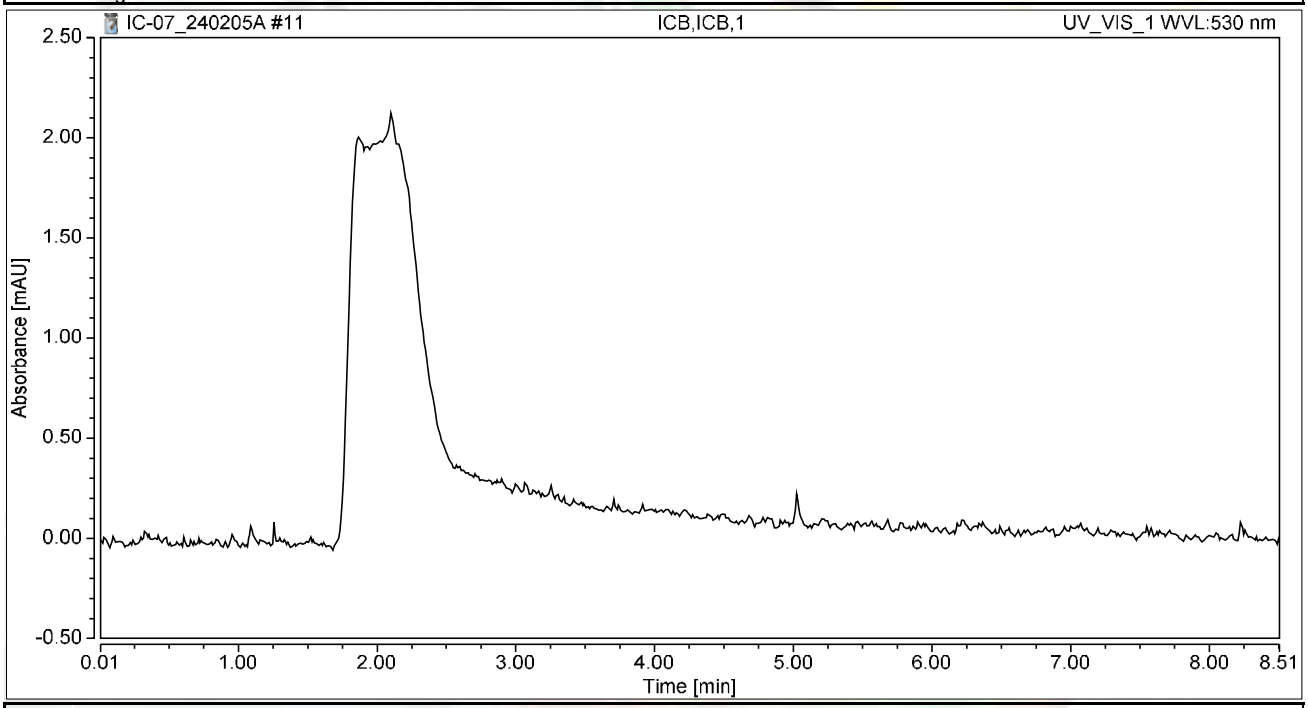
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.036	0.273	100.00	100.00	0.1694
Total:			**0.036**	**0.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

JRB 2/19/2024

RAW DATA

INJECTION LOG: 240216A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/16/24 8:51 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/16/24 9:04 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/16/24 9:13 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/16/24 9:23 AM	Reported
13	MB-R181622	MBLK	1	Hexavalent Chromium	02/16/24 9:32 AM	Reported
14	LCS-R181622	LCS	1	Hexavalent Chromium	02/16/24 9:42 AM	Reported
15	N063135-001A	SAMP	1	Hexavalent Chromium	02/16/24 10:12 AM	Reported
16	N063135-001AMS	MS	1	Hexavalent Chromium	02/16/24 10:24 AM	Reported
17	N063135-003A	SAMP	1	Hexavalent Chromium	02/16/24 10:34 AM	Not Reported
18	MB-106779	MBLK	1	Hexavalent Chromium	02/16/24 10:43 AM	Reported
19	N063009-001B	SAMP	1	Hexavalent Chromium	02/16/24 10:53 AM	Reported
20	N063009-001BREP	DUP	1	Hexavalent Chromium	02/16/24 11:02 AM	Not Reported
21	N063009-002B	SAMP	1	Hexavalent Chromium	02/16/24 11:12 AM	Reported
22	N063009-002BREP	DUP	1	Hexavalent Chromium	02/16/24 11:21 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/16/24 11:31 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/16/24 11:40 AM	Reported
25	N063009-001BREP	DUP	1	Hexavalent Chromium	02/16/24 11:50 AM	Reported
26	N063009-001BREP	DUP	1	Hexavalent Chromium	02/16/24 11:59 AM	Not Reported
27	N063135-001ADUP	DUP	1	Hexavalent Chromium	02/16/24 12:09 PM	Reported
28	N063135-001AMSD	MSD	1	Hexavalent Chromium	02/16/24 12:18 PM	Reported
29	N063135-007A	SAMP	1	Hexavalent Chromium	02/16/24 12:27 PM	Reported
30	N063147-001B	SAMP	1	Hexavalent Chromium	02/16/24 12:37 PM	Reported
31	N063147-002B	SAMP	1	Hexavalent Chromium	02/16/24 12:46 PM	Reported
32	N063147-001BREP	DUP	1	Hexavalent Chromium	02/16/24 12:56 PM	Reported
33	N063147-002BREP	DUP	1	Hexavalent Chromium	02/16/24 1:05 PM	Reported
34	N063135-002AMS	MS	1	Hexavalent Chromium	02/16/24 1:15 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/16/24 1:24 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/16/24 1:34 PM	Reported
37	N063136-001A	SAMP	1	Hexavalent Chromium	02/16/24 1:47 PM	Reported
38	N063135-004A	SAMP	1	Hexavalent Chromium	02/16/24 1:59 PM	Reported
39	N063135-004AMS	MS	1	Hexavalent Chromium	02/16/24 2:08 PM	Reported
40	N063135-003A	SAMP	5	Hexavalent Chromium	02/16/24 2:18 PM	Reported
41	N063135-003AMS	MS	5	Hexavalent Chromium	02/16/24 2:27 PM	Reported
42	N063135-005A	SAMP	5	Hexavalent Chromium	02/16/24 2:37 PM	Reported

INJECTION LOG: 240216A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063135-005AMS	MS	5	Hexavalent Chromium	02/16/24 2:46 PM	Reported
44	N063135-006A	SAMP	1	Hexavalent Chromium	02/16/24 2:56 PM	Reported
45	N063135-006AMS	MS	1	Hexavalent Chromium	02/16/24 3:05 PM	Reported
46	N063136-001AMS	MS	1	Hexavalent Chromium	02/16/24 3:15 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/16/24 3:24 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/16/24 3:34 PM	Reported
49	N063136-002A	SAMP	1	Hexavalent Chromium	02/16/24 3:43 PM	Reported
50	N063136-002AMS	MS	1	Hexavalent Chromium	02/16/24 3:52 PM	Reported
51	N063136-003A	SAMP	1	Hexavalent Chromium	02/16/24 4:02 PM	Reported
52	N063136-003AMS	MS	1	Hexavalent Chromium	02/16/24 4:11 PM	Reported
53	N063136-004A	SAMP	1	Hexavalent Chromium	02/16/24 4:21 PM	Reported
54	N063136-004AMS	MS	1	Hexavalent Chromium	02/16/24 4:30 PM	Reported
55	N063136-005A	SAMP	1	Hexavalent Chromium	02/16/24 4:40 PM	Reported
56	N063136-005AMS	MS	1	Hexavalent Chromium	02/16/24 4:49 PM	Reported
57	N063136-006A	SAMP	1	Hexavalent Chromium	02/16/24 4:59 PM	Reported
58	N063136-006AMS	MS	1	Hexavalent Chromium	02/16/24 5:08 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/16/24 5:18 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/16/24 5:27 PM	Reported
61	N063136-008A	SAMP	1	Hexavalent Chromium	02/16/24 5:37 PM	Reported
62	N063136-008AMS	MS	1	Hexavalent Chromium	02/16/24 5:46 PM	Reported
63	N063136-009A	SAMP	1	Hexavalent Chromium	02/16/24 5:55 PM	Reported
64	N063136-009AMS	MS	1	Hexavalent Chromium	02/16/24 6:05 PM	Reported
65	N063136-010A	SAMP	1	Hexavalent Chromium	02/16/24 6:14 PM	Reported
66	N063136-010AMS	MS	1	Hexavalent Chromium	02/16/24 6:24 PM	Reported
67	N063135-007AMS	MS	1	Hexavalent Chromium	02/16/24 6:33 PM	Reported
68	N063135-005A	SAMP	1	Hexavalent Chromium	02/16/24 6:43 PM	Not Reported
69	N063135-005AMS	MS	1	Hexavalent Chromium	02/16/24 6:56 PM	Not Reported
70	N063135-002A	SAMP	1	Hexavalent Chromium	02/16/24 7:05 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/16/24 7:15 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/16/24 7:24 PM	Reported
73	N063135-003AMS	MS	1	Hexavalent Chromium	02/16/24 7:33 PM	Not Reported
74	CCV-7	CCV	1	Hexavalent Chromium	02/16/24 7:43 PM	Reported
75	CCB-7	CCB	1	Hexavalent Chromium	02/16/24 7:52 PM	Reported
76	BLANK	BLANK	1	Hexavalent Chromium	02/16/24 8:02 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240216A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**17/Feb/24 10:32:50**
No. of Injections:	**79**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/16/2024 08:51	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/16/2024 09:04	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/16/2024 09:13	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/16/2024 09:23	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/16/2024 09:32	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/16/2024 09:42	Finished	LCS @5ppb, IWST-231228B
15	N063135-001A,SAMF	1	1000	Unknown		02/16/2024 10:12	Finished	SAMP,10 mL
16	N063135-001AMS,MS	2	1000	Unknown		02/16/2024 10:24	Finished	MS (1ppb), IWST-231228B,10r
17	N063135-003A,SAMF	3	1000	Unknown		02/16/2024 10:34	Finished	SAMP,10 mL
18	MB-106779,MBLK,1,	4	1000	Unknown		02/16/2024 10:43	Finished	MB STLC
19	N063009-001B,SAMF	5	1000	Unknown		02/16/2024 10:53	Finished	SAMP,10 mL
20	N063009-001BREP,D	6	1000	Unknown		02/16/2024 11:02	Finished	REP,10 mL
21	N063009-002B,SAMF	7	1000	Unknown		02/16/2024 11:12	Finished	SAMP,10 mL
22	N063009-002BREP,D	8	1000	Unknown		02/16/2024 11:21	Finished	REP,10 mL
23	CCV-2,CCV1,1,	9	1000	Unknown		02/16/2024 11:31	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		02/16/2024 11:40	Finished	CCB R240129C
25	N063009-001BREP,D	11	1000	Unknown		02/16/2024 11:50	Finished	SAMP,10 mL
26	N063009-001BREP,D	12	1000	Unknown		02/16/2024 11:59	Finished	REP,10 mL
27	N063135-001ADUP,D	13	1000	Unknown		02/16/2024 12:09	Finished	DUP,10 mL
28	N063135-001AMSD,M	14	1000	Unknown		02/16/2024 12:18	Finished	MSD (1ppb), IWST-231228B,1(
29	N063135-007A,SAMF	15	1000	Unknown		02/16/2024 12:27	Finished	SAMP,10 mL
30	N063147-001B,SAMF	16	1000	Unknown		02/16/2024 12:37	Finished	SAMP,10 mL
31	N063147-002B,SAMF	17	1000	Unknown		02/16/2024 12:46	Finished	SAMP,10 mL
32	N063147-001BREP,D	18	1000	Unknown		02/16/2024 12:56	Finished	REP,10 mL
33	N063147-002BREP,D	19	1000	Unknown		02/16/2024 13:05	Finished	REP,10 mL
34	N063135-002AMS,MS	20	1000	Unknown		02/16/2024 13:15	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	21	1000	Unknown		02/16/2024 13:24	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	22	1000	Unknown		02/16/2024 13:34	Finished	CCB R240129C
37	N063136-001A,SAMF	1	1000	Unknown		02/16/2024 13:47	Finished	SAMP,10 mL
38	N063135-004A,SAMF	2	1000	Unknown		02/16/2024 13:59	Finished	SAMP,10 mL
39	N063135-004AMS,MS	3	1000	Unknown		02/16/2024 14:08	Finished	MS (1ppb), IWST-231228B,10r
40	N063135-003A,SAMF	4	1000	Unknown		02/16/2024 14:18	Finished	SAMP,2>10 mL
41	N063135-003AMS,MS	5	1000	Unknown		02/16/2024 14:27	Finished	MS (1ppb), IWST-231228B,2>1
42	N063135-005A,SAMF	6	1000	Unknown		02/16/2024 14:37	Finished	SAMP,2>10 mL
43	N063135-005AMS,MS	7	1000	Unknown		02/16/2024 14:46	Finished	MS (1ppb), IWST-231228B,2>1
44	N063135-006A,SAMF	8	1000	Unknown		02/16/2024 14:56	Finished	SAMP,10 mL
45	N063135-006AMS,MS	9	1000	Unknown		02/16/2024 15:05	Finished	MS (1ppb), IWST-231228B,10r
46	N063136-001AMS,MS	10	1000	Unknown		02/16/2024 15:15	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	11	1000	Unknown		02/16/2024 15:24	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	12	1000	Unknown		02/16/2024 15:34	Finished	CCB R240129C
49	N063136-002A,SAMF	13	1000	Unknown		02/16/2024 15:43	Finished	SAMP,10 mL
50	N063136-002AMS,MS	14	1000	Unknown		02/16/2024 15:52	Finished	MS (1ppb), IWST-231228B,10r
51	N063136-003A,SAMF	15	1000	Unknown		02/16/2024 16:02	Finished	SAMP,10 mL
52	N063136-003AMS,MS	16	1000	Unknown		02/16/2024 16:11	Finished	MS (1ppb), IWST-231228B,10r
53	N063136-004A,SAMF	17	1000	Unknown		02/16/2024 16:21	Finished	SAMP,10 mL
54	N063136-004AMS,MS	18	1000	Unknown		02/16/2024 16:30	Finished	MS (1ppb), IWST-231228B,10r
55	N063136-005A,SAMF	19	1000	Unknown		02/16/2024 16:40	Finished	SAMP,10 mL
56	N063136-005AMS,MS	20	1000	Unknown		02/16/2024 16:49	Finished	MS (1ppb), IWST-231228B,10r
57	N063136-006A,SAMF	21	1000	Unknown		02/16/2024 16:59	Finished	SAMP,10 mL
58	N063136-006AMS,MS	22	1000	Unknown		02/16/2024 17:08	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	23	1000	Unknown		02/16/2024 17:18	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	24	1000	Unknown		02/16/2024 17:27	Finished	CCB R240129C

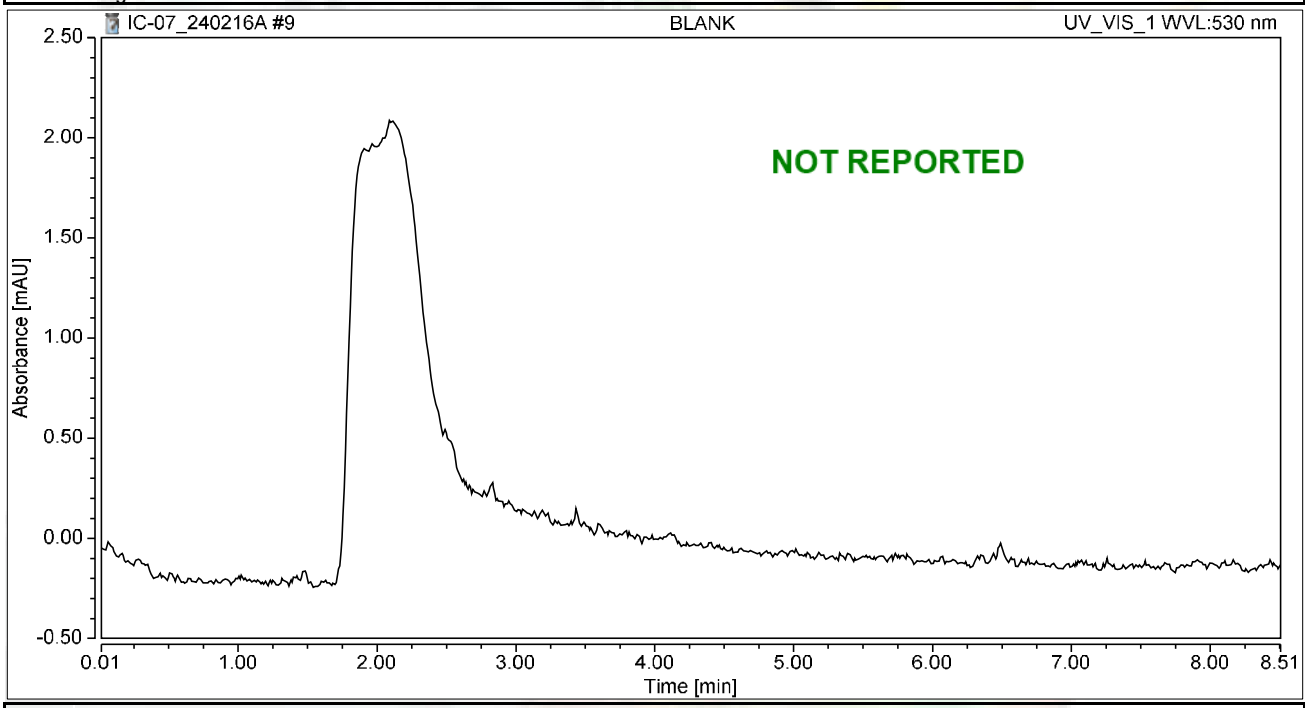
61	N063136-008A,SAMP	25	1000	Unknown		02/16/2024 17:37	Finished	SAMP,10 mL
62	N063136-008AMS,MS	26	1000	Unknown		02/16/2024 17:46	Finished	MS (1ppb), IWST-231228B,10r
63	N063136-009A,SAMP	27	1000	Unknown		02/16/2024 17:55	Finished	SAMP,10 mL
64	N063136-009AMS,MS	28	1000	Unknown		02/16/2024 18:05	Finished	MS (1ppb), IWST-231228B,10r
65	N063136-010A,SAMP	29	1000	Unknown		02/16/2024 18:14	Finished	SAMP,10 mL
66	N063136-010AMS,MS	30	1000	Unknown		02/16/2024 18:24	Finished	MS (1ppb), IWST-231228B,10r
67	N063135-007AMS,MS	31	1000	Unknown		02/16/2024 18:33	Finished	MS (1ppb), IWST-231228B,10r
68	N063135-005A,SAMP	32	1000	Unknown		02/16/2024 18:43	Finished	SAMP,10 mL
69	N063135-005AMS,MS	33	1000	Unknown		02/16/2024 18:56	Finished	MS (1ppb), IWST-231228B,10r
70	N063135-002A,SAMP	34	1000	Unknown		02/16/2024 19:05	Finished	SAMP,10 mL
71	CCV-6,CCV1,1,	35	1000	Unknown		02/16/2024 19:15	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	36	1000	Unknown		02/16/2024 19:24	Finished	CCB R240129C
73	N063135-003AMS,MS	37	1000	Unknown		02/16/2024 19:33	Finished	MS (1ppb), IWST-231228B,10r
74	CCV-7,CCV,1,	38	1000	Unknown		02/16/2024 19:43	Finished	CCV @5ppb, IWST-231228A
75	CCB-7,CCB,1,	39	1000	Unknown		02/16/2024 19:52	Finished	CCB R240129C
76	BLANK	40	1000	Unknown		02/16/2024 20:02	Finished	BLANK
77	SHUTDOWN	41	1000	Unknown		02/16/2024 20:11	Finished	
78	Eluent: R240215A	42	1000	Unknown		n.a.	Finished	
79	PCR: R240215B	43	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 08:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

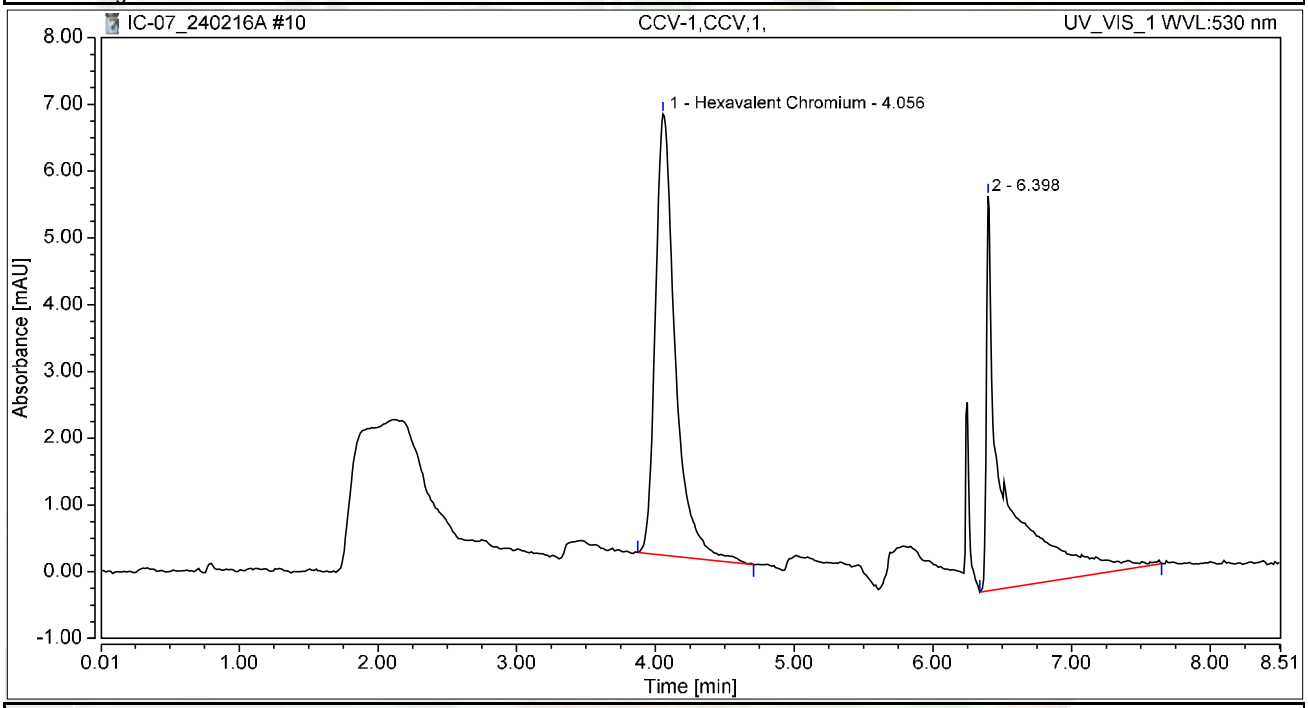
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 09:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.104	6.610	56.83	52.78	5.1341
2		6.398	0.839	5.914	43.17	47.22	n.a.
Total:			**1.943**	**12.524**	**100.00**	**100.00**	

Reviewed by:

JRB 2/19/2024

My first report/Integration

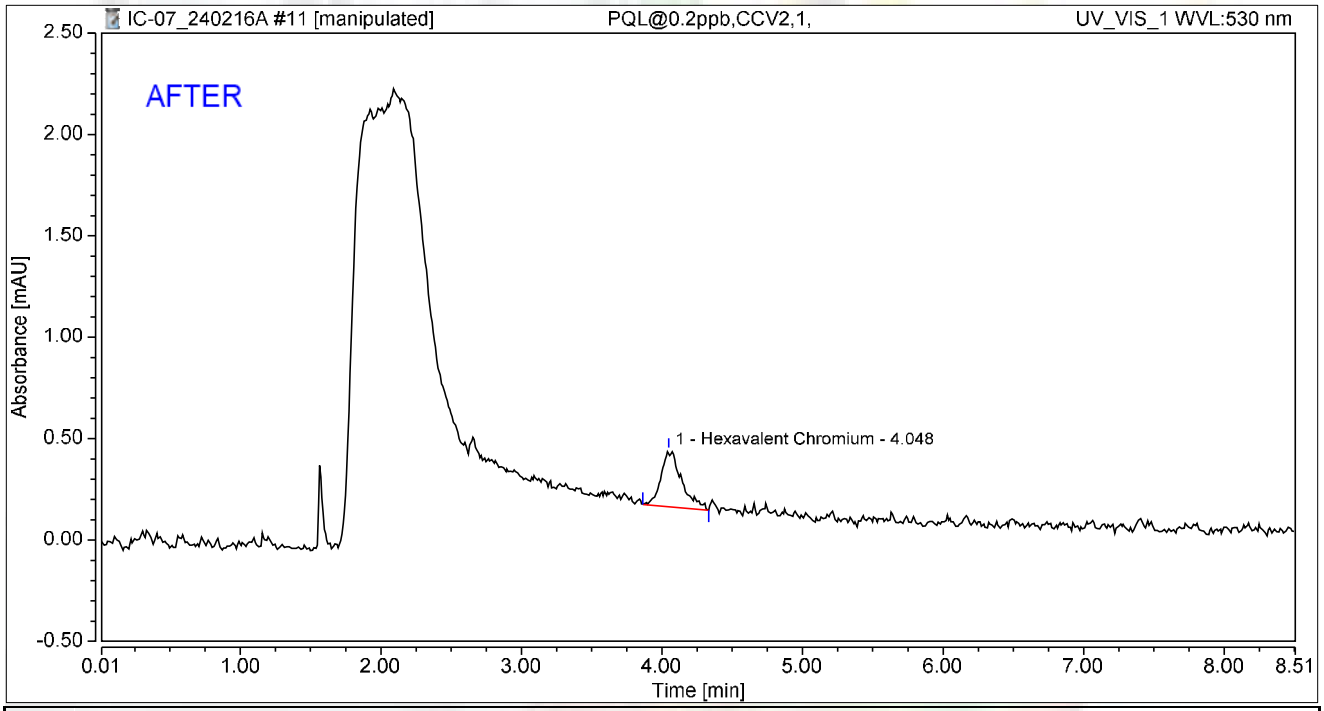
Chromeleon (c) Dionex
Version 7.1.1.1127

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 09:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.047	0.277	100.00	100.00	0.2194
Total:			**0.047**	**0.277**	**100.00**	**100.00**	

Reviewed by:

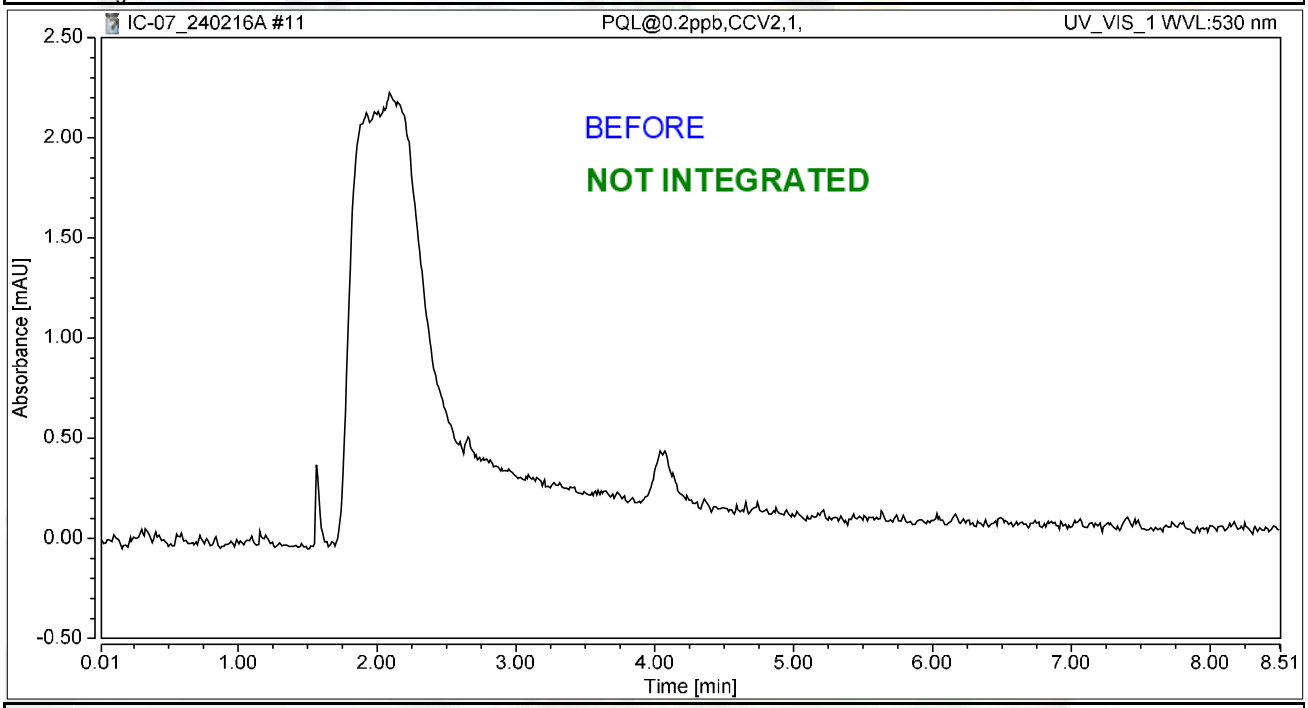
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 09:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

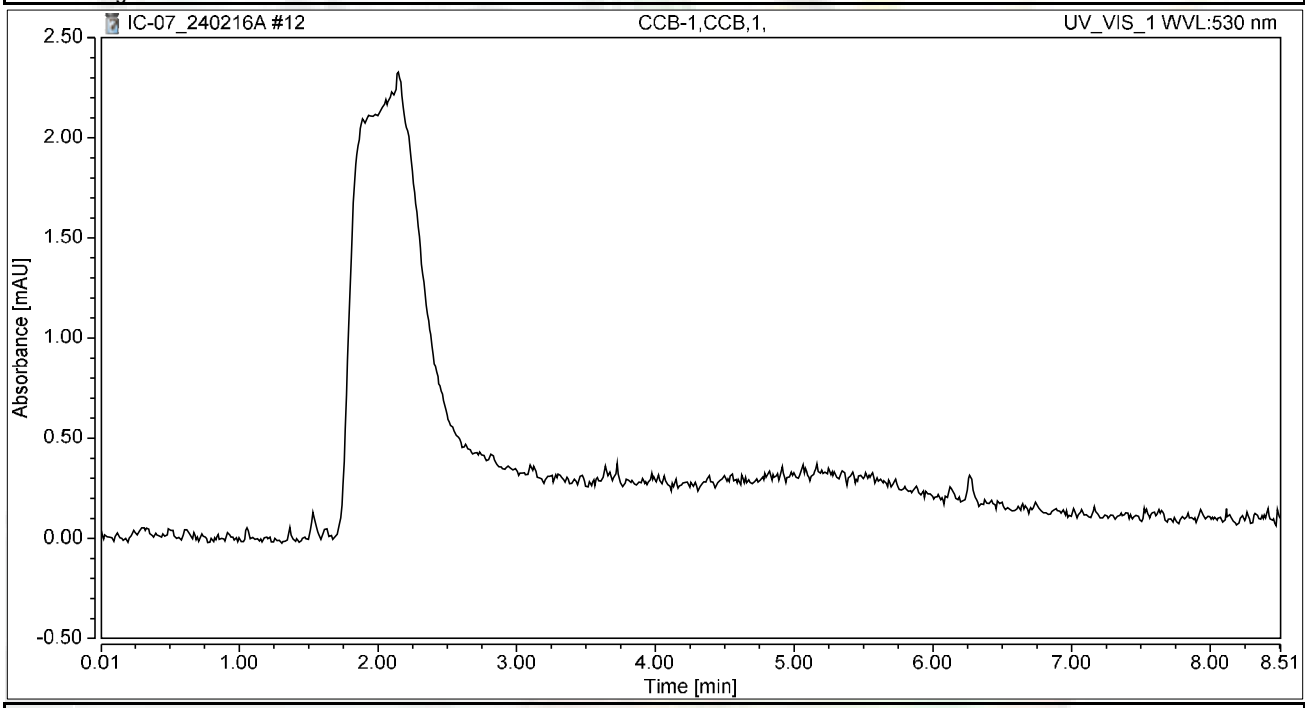
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 09:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

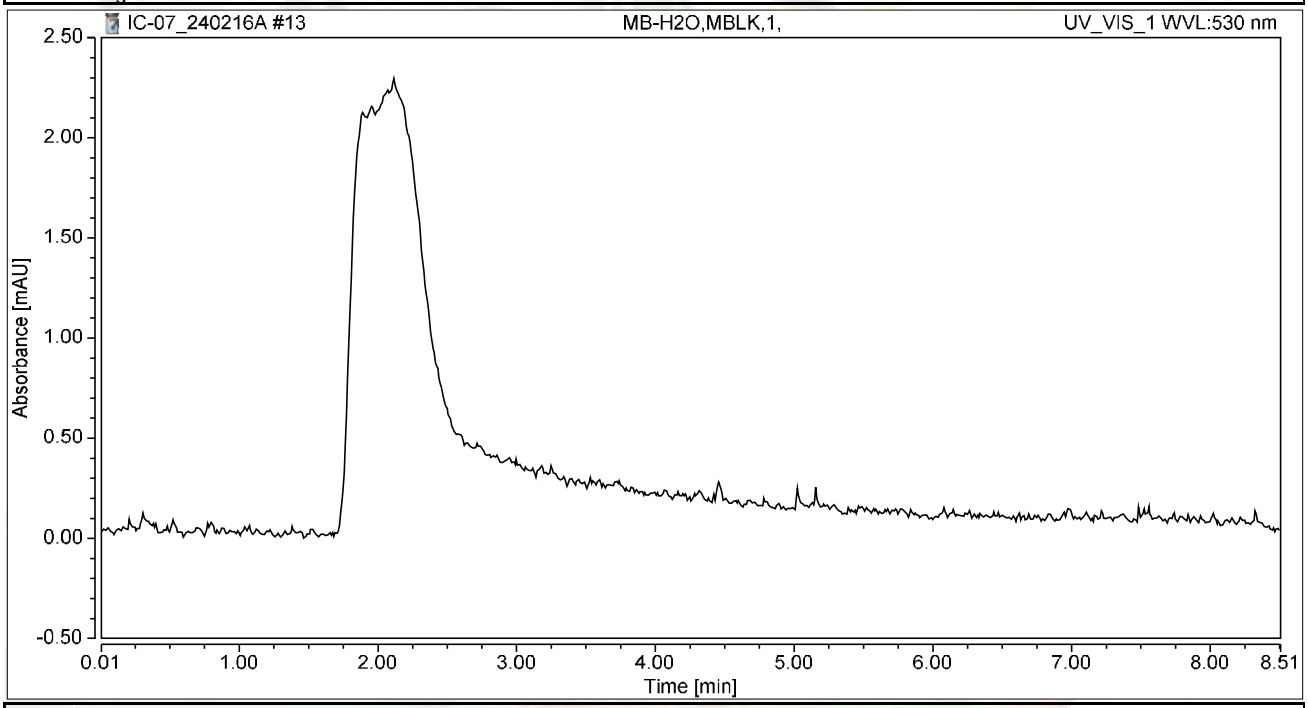
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 09:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

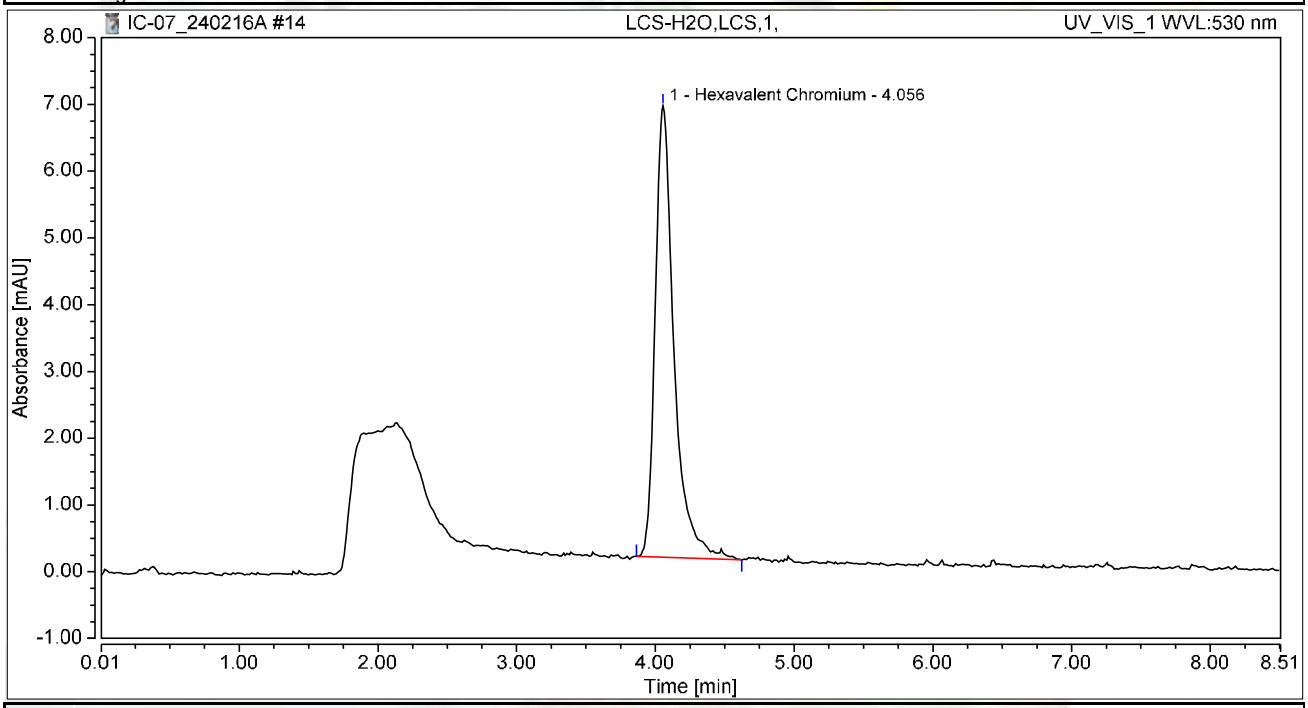
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 09:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

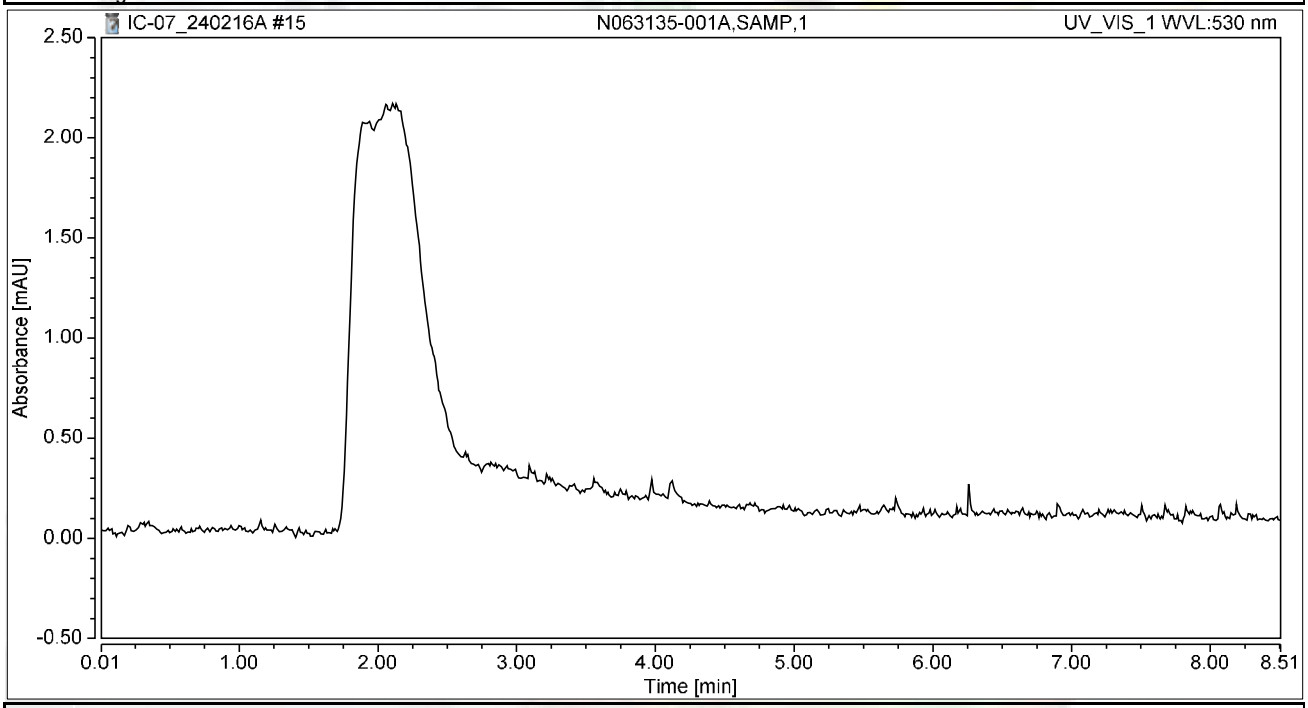
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.062	6.760	100.00	100.00	4.9378
Total:			**1.062**	**6.760**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 10:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

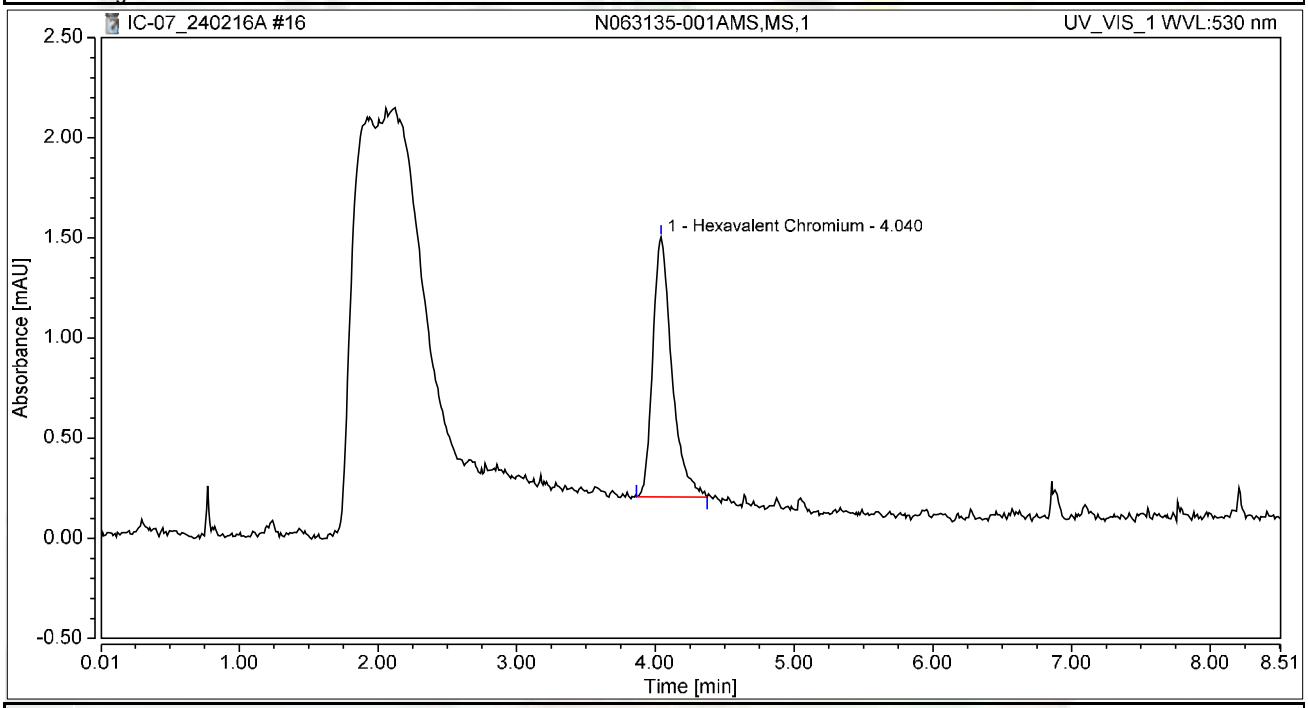
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 10:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

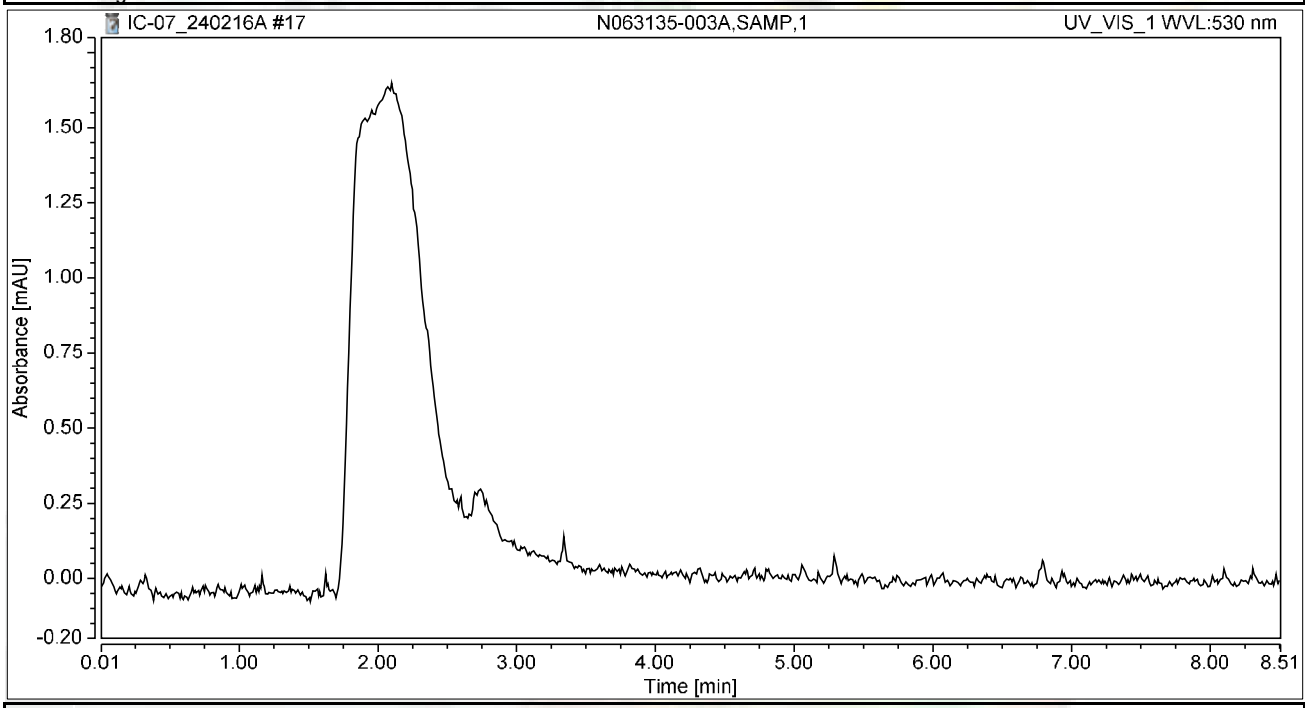
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.206	1.298	100.00	100.00	0.9599
Total:			**0.206**	**1.298**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 10:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

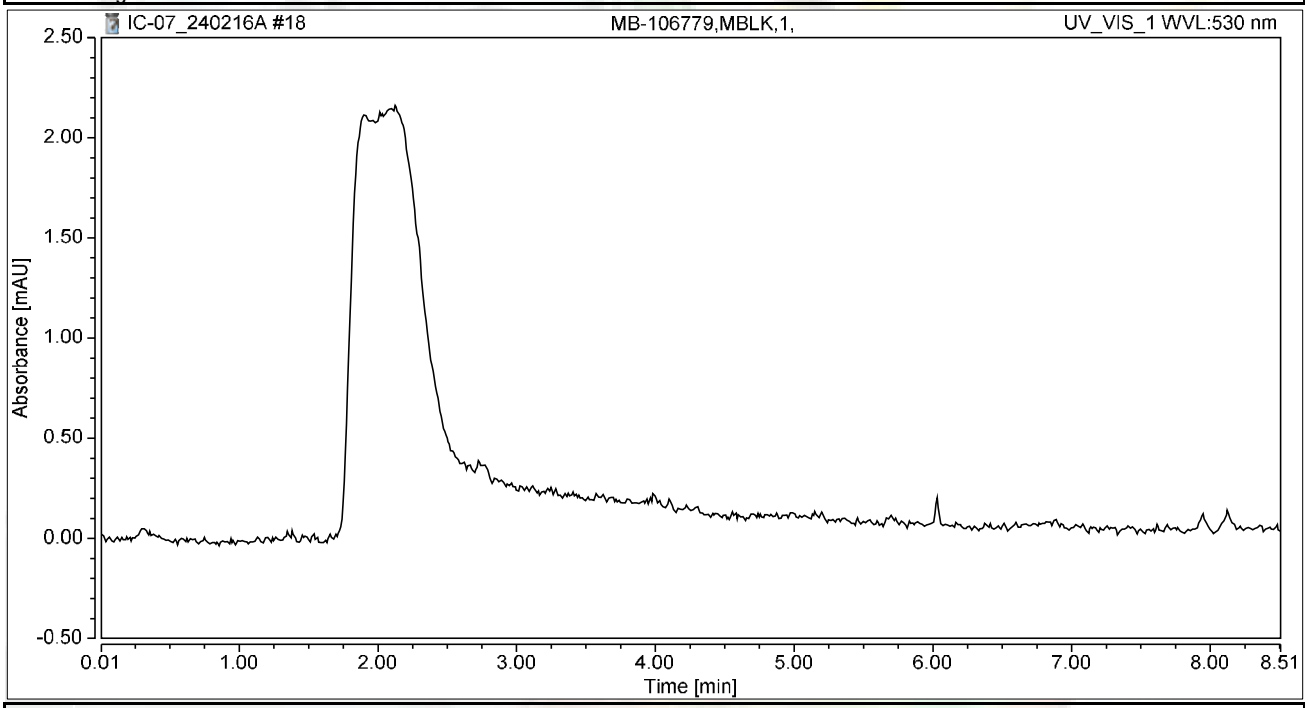
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-106779,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 10:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

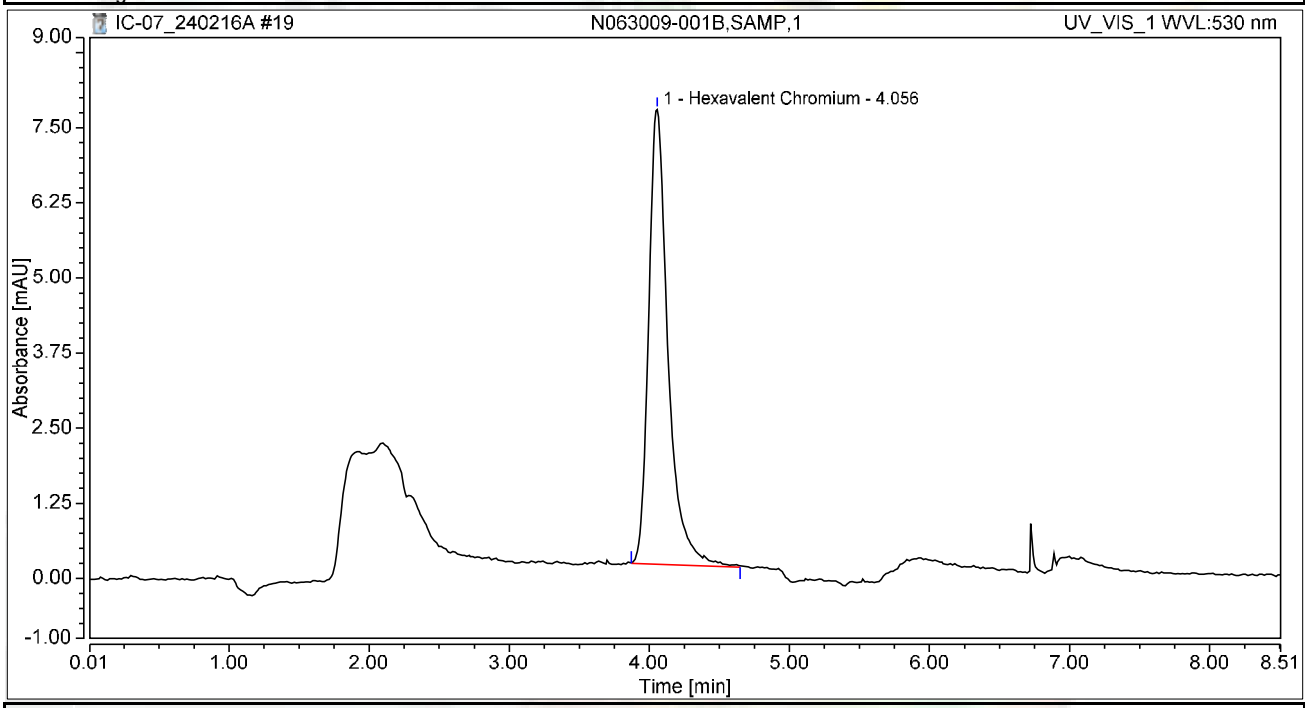
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063009-001B,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 10:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

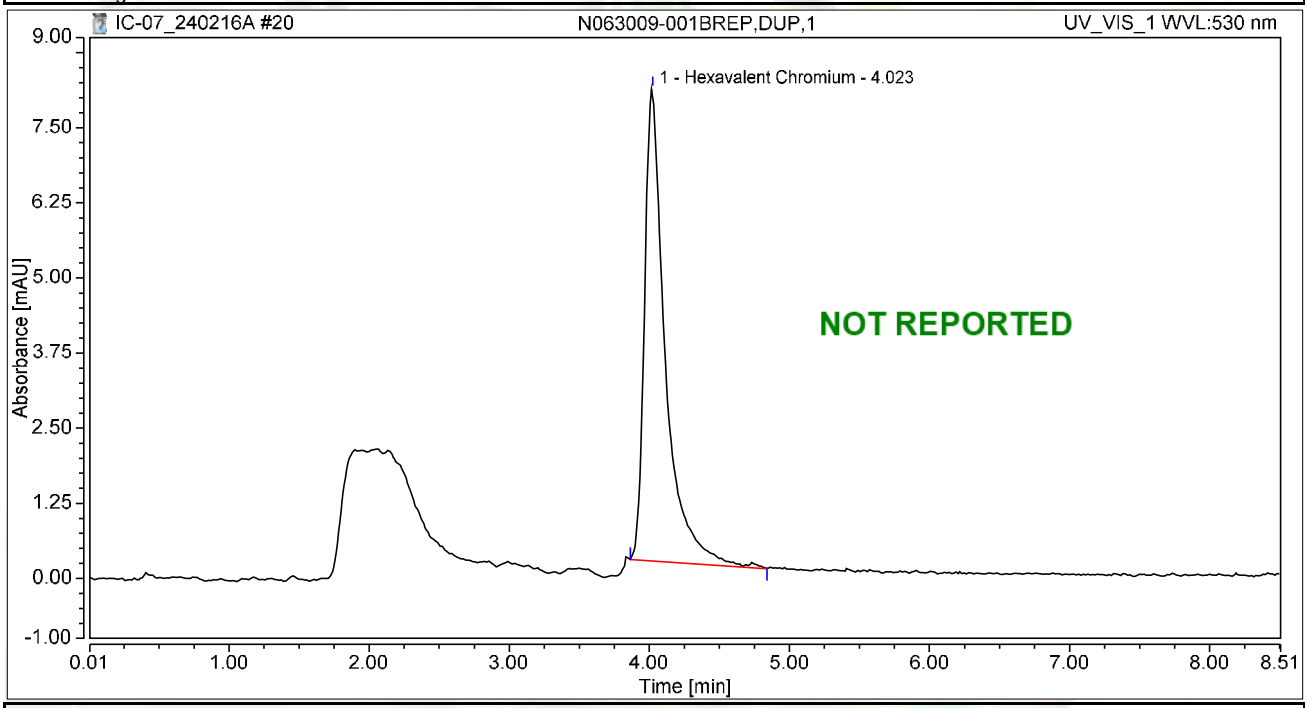
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.218	7.570	100.00	100.00	5.6629
Total:			**1.218**	**7.570**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063009-001BREP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 11:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

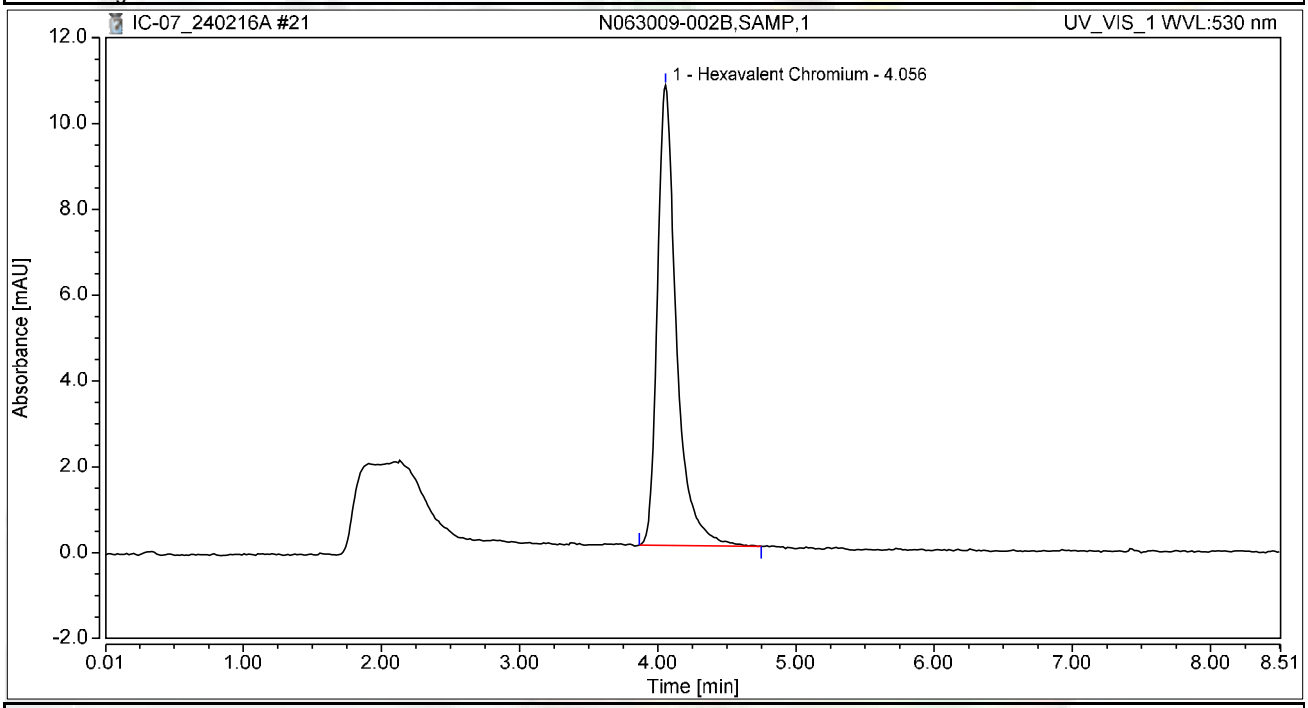
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	1.348	7.862	100.00	100.00	6.2646
Total:			**1.348**	**7.862**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063009-002B,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 11:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

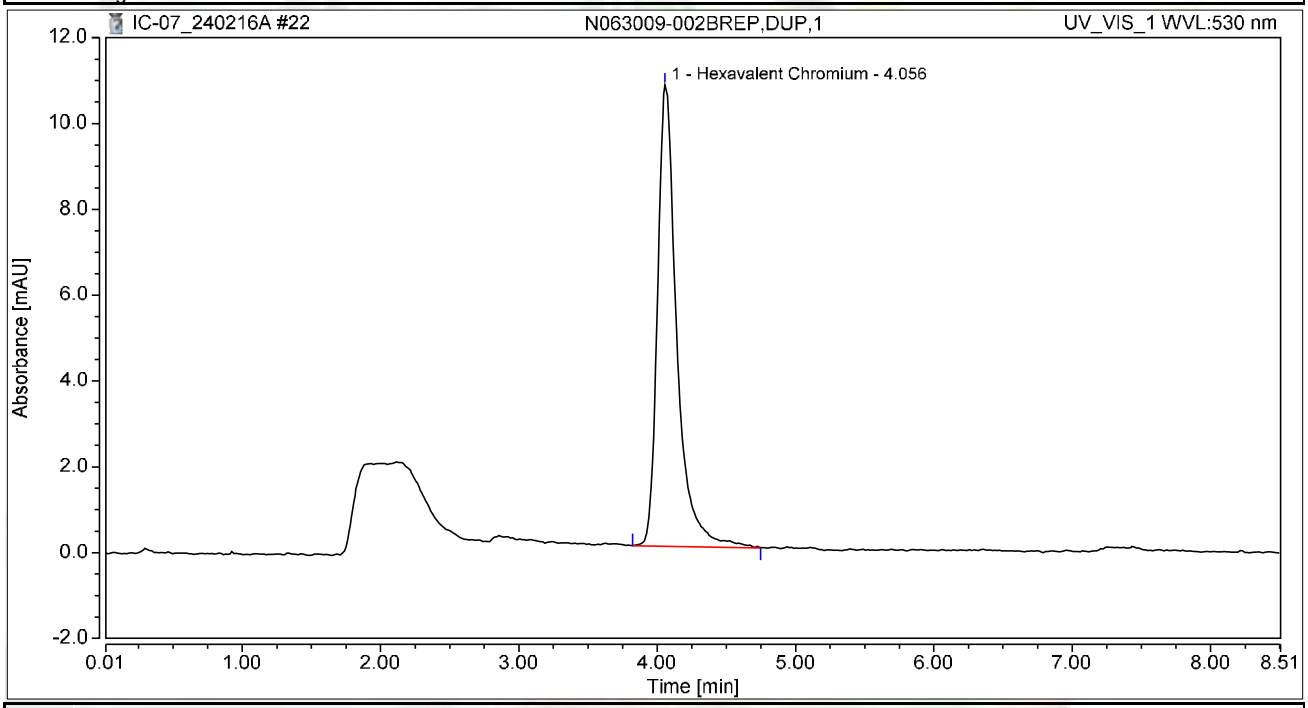
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.714	10.720	100.00	100.00	7.9696
Total:			**1.714**	**10.720**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063009-002BREP,DUP,1**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 11:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

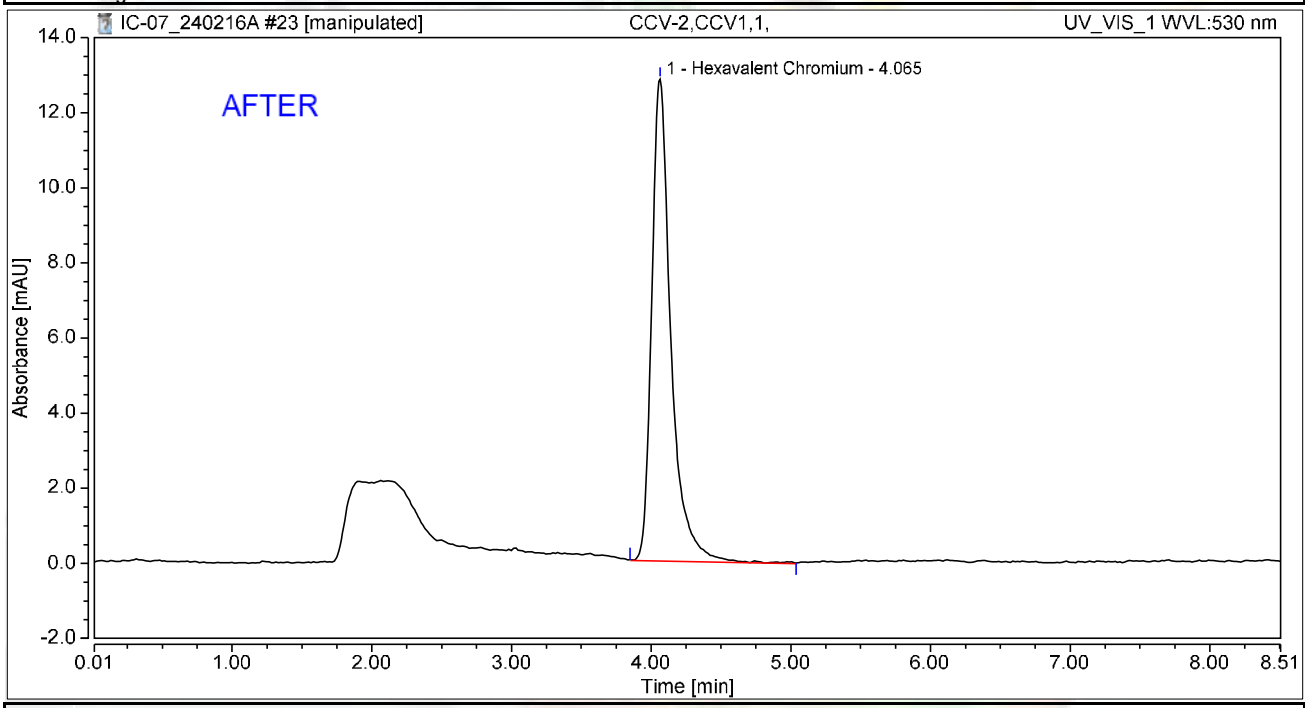
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.734	10.747	100.00	100.00	8.0595
Total:			**1.734**	**10.747**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 11:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	2.052	12.828	100.00	100.00	9.5391
Total:			**2.052**	**12.828**	**100.00**	**100.00**	

Reviewed by:

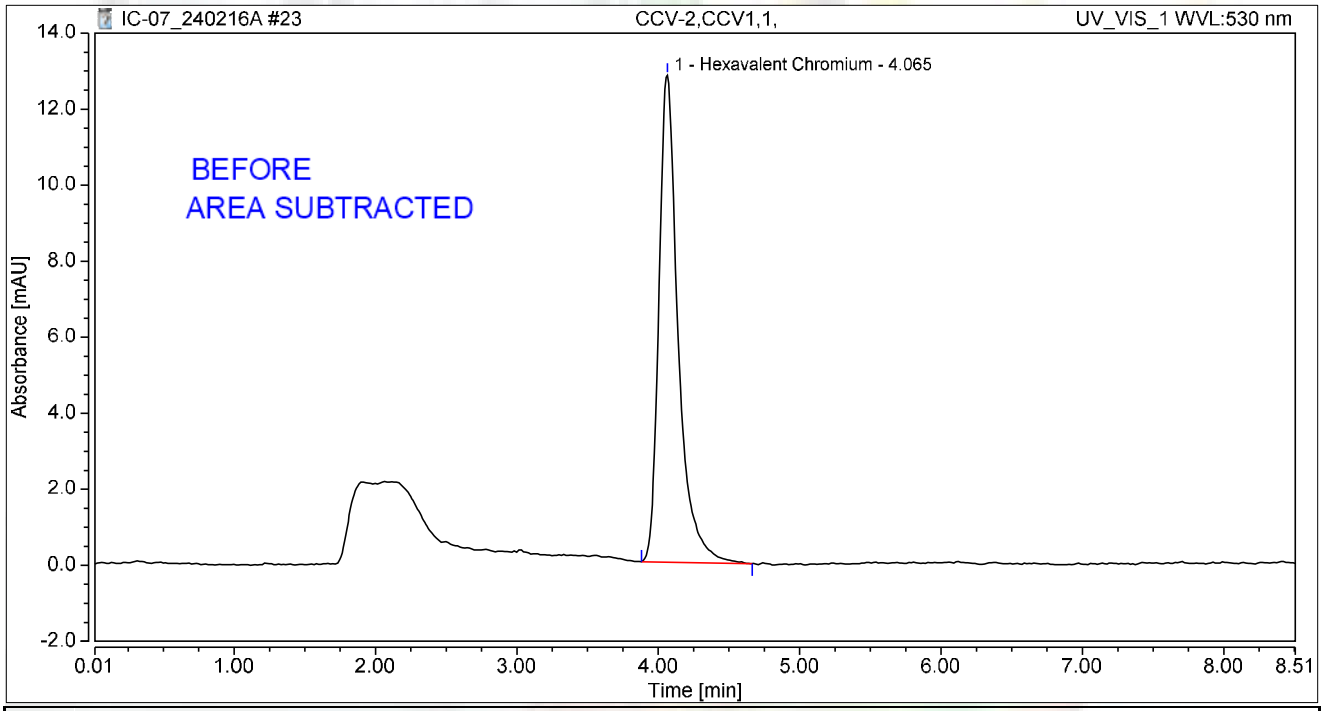
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 11:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

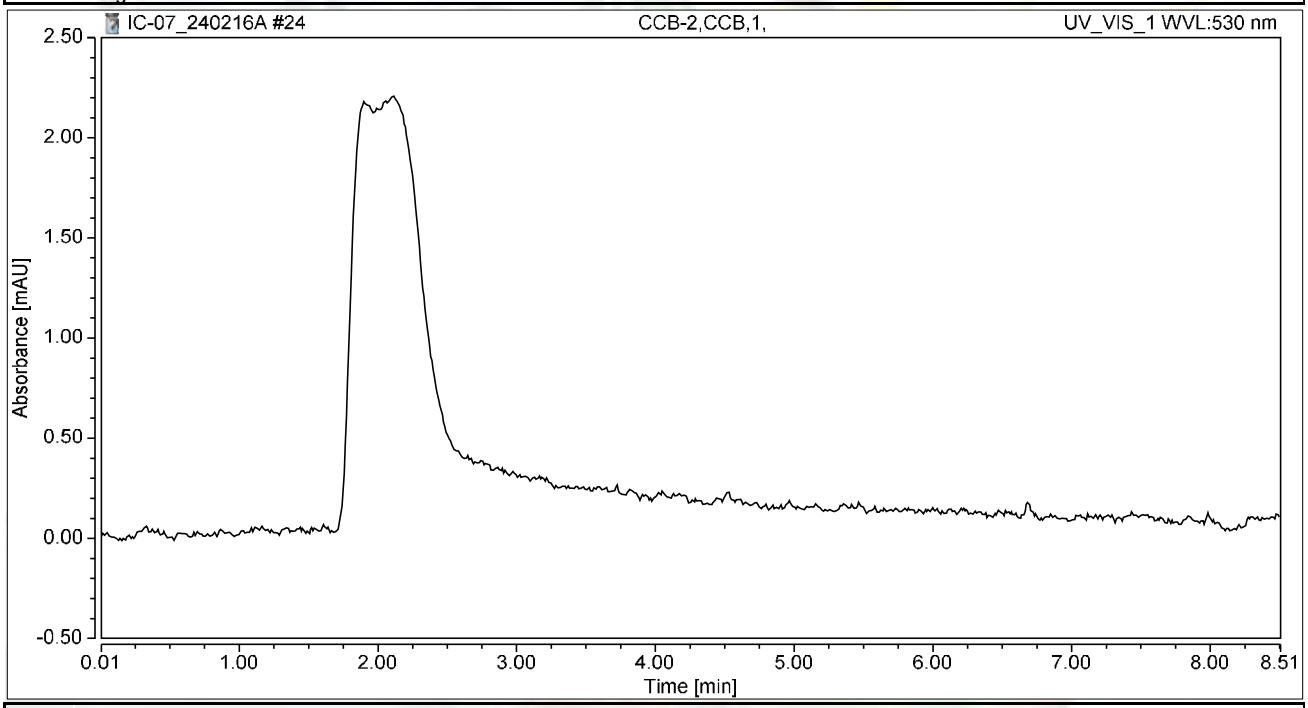
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	2.026	12.808	100.00	100.00	9.4167
Total:			**2.026**	**12.808**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 11:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

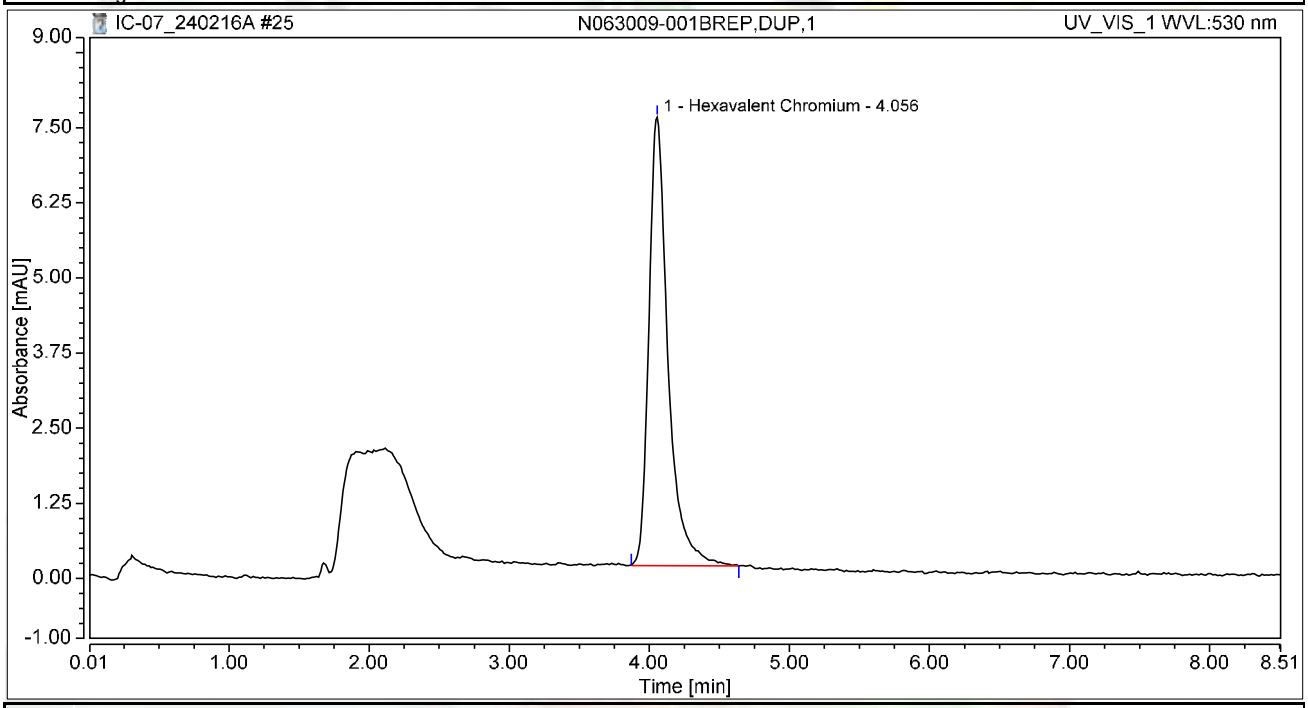
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063009-001BREP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 11:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

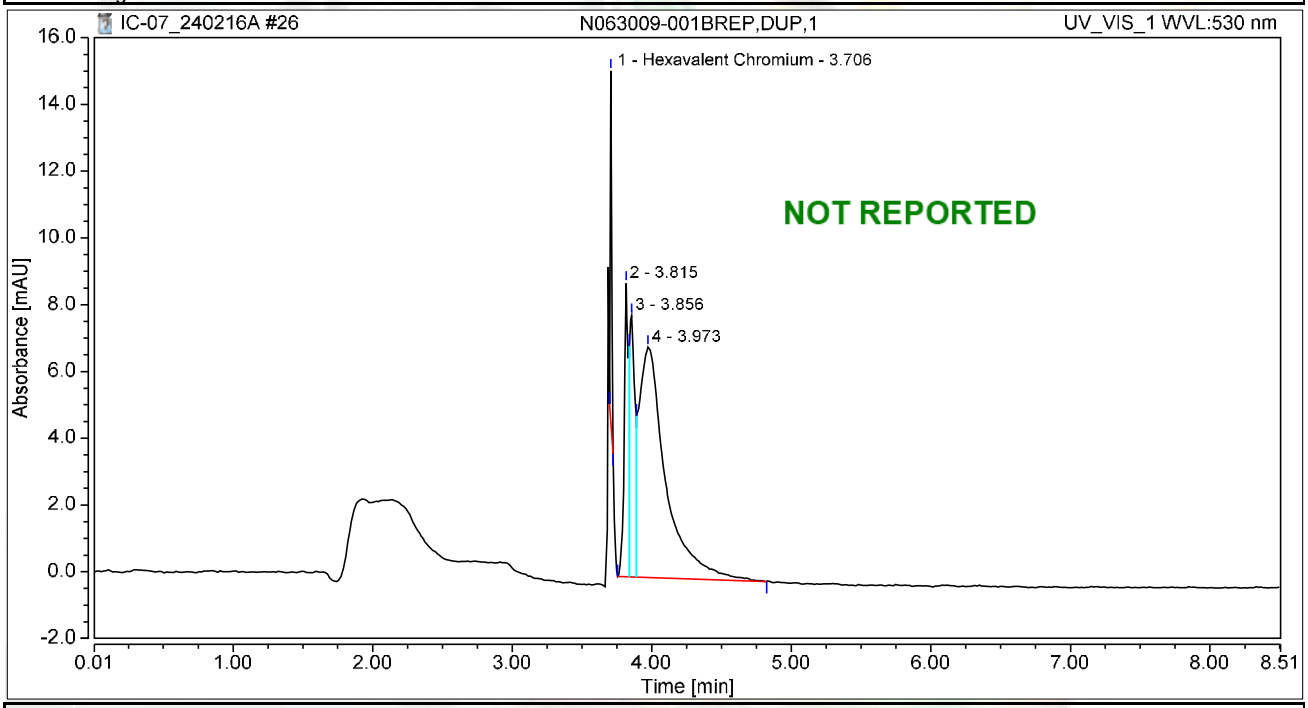
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.185	7.465	100.00	100.00	5.5092
Total:			**1.185**	**7.465**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063009-001BREP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 11:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

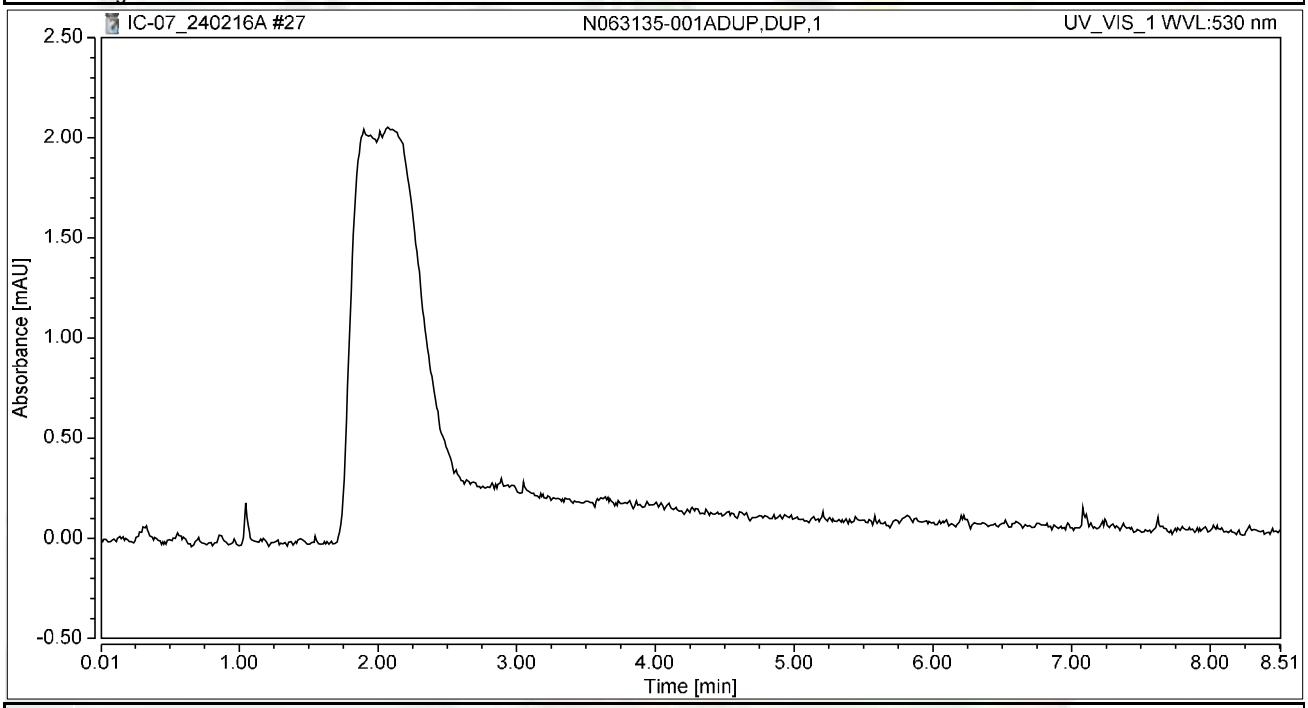
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.706	0.116	10.468	5.08	30.80	0.5397
2		3.815	0.318	8.787	13.94	25.86	n.a.
3		3.856	0.327	7.828	14.31	23.03	n.a.
4		3.973	1.524	6.901	66.67	20.31	n.a.
Total:			**2.286**	**33.984**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-001ADUP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

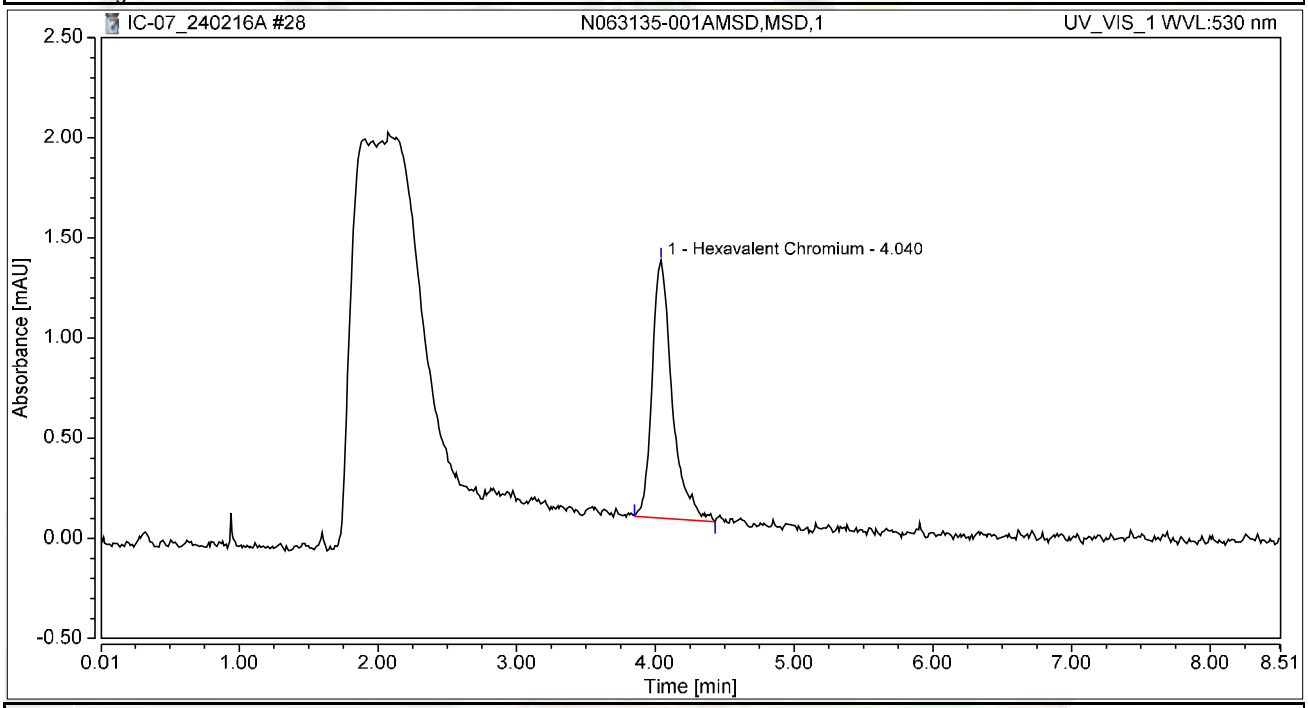
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-001AMSD,MSD,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 12:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

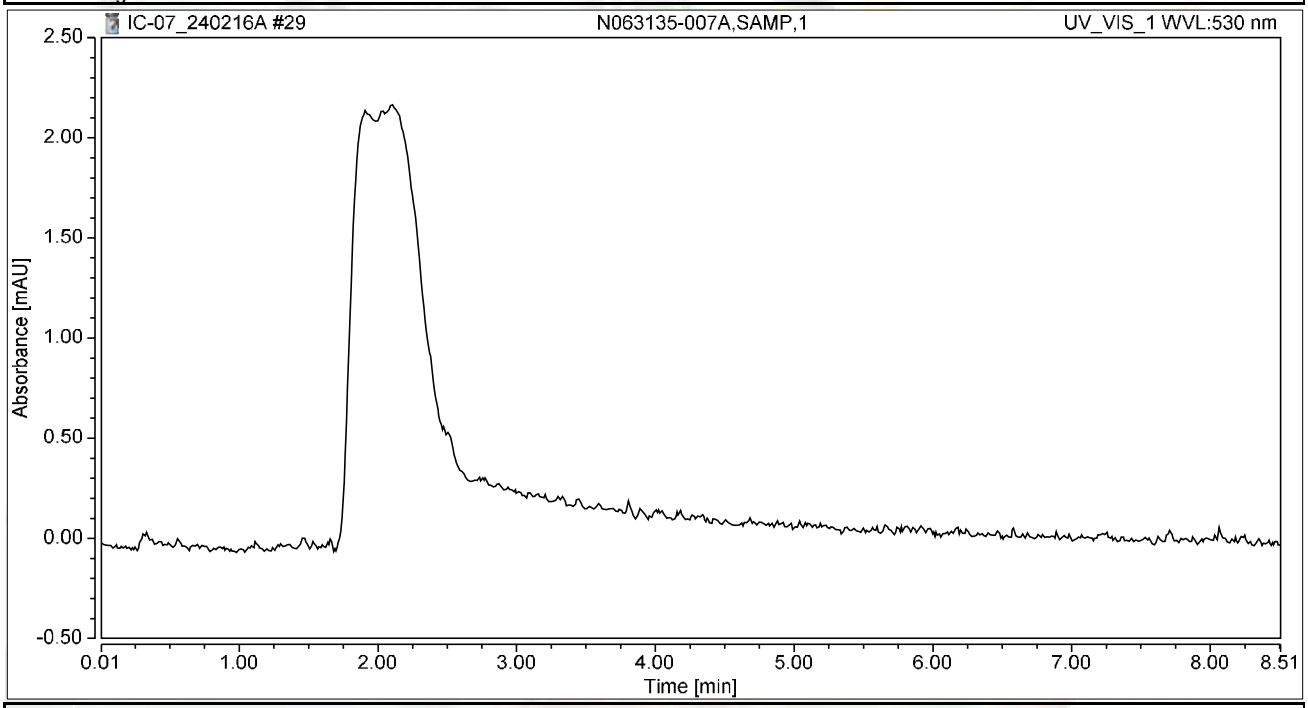
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.215	1.288	100.00	100.00	1.0017
Total:			**0.215**	**1.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-007A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 12:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

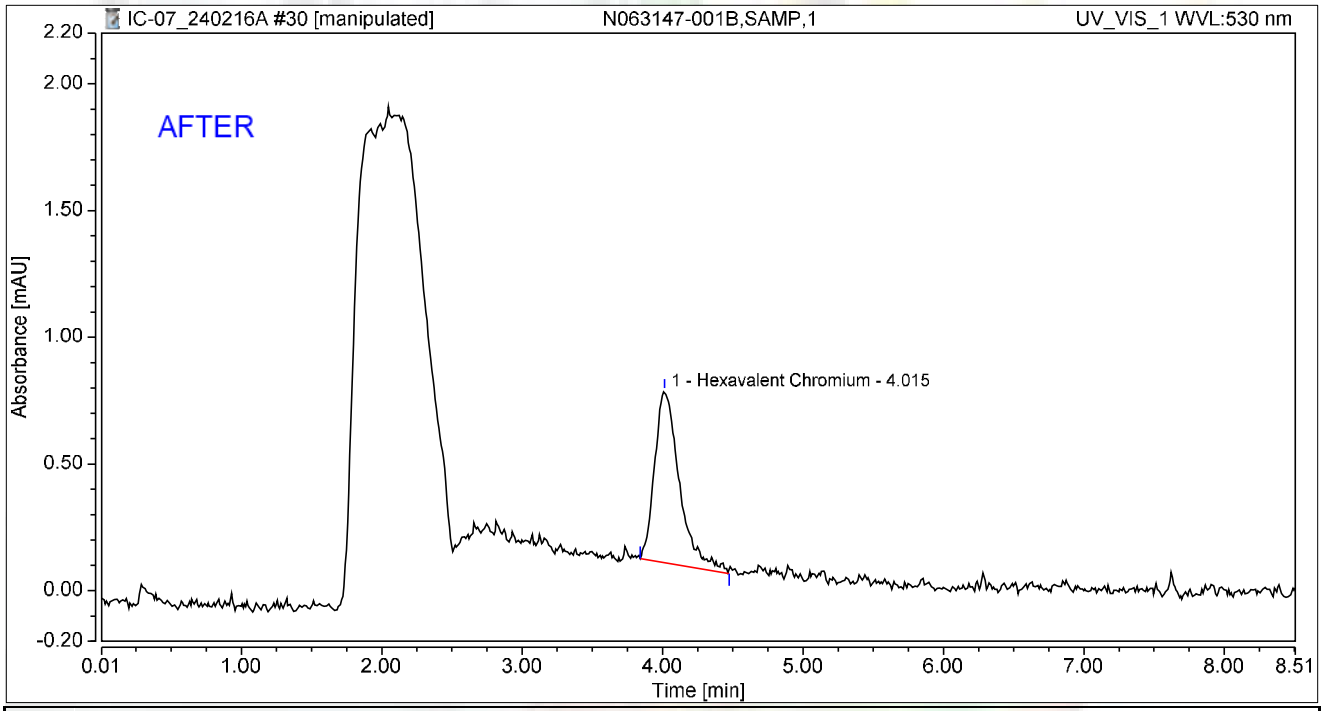
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063147-001B,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 12:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.139	0.677	100.00	100.00	0.6469
Total:			**0.139**	**0.677**	**100.00**	**100.00**	

Reviewed by:

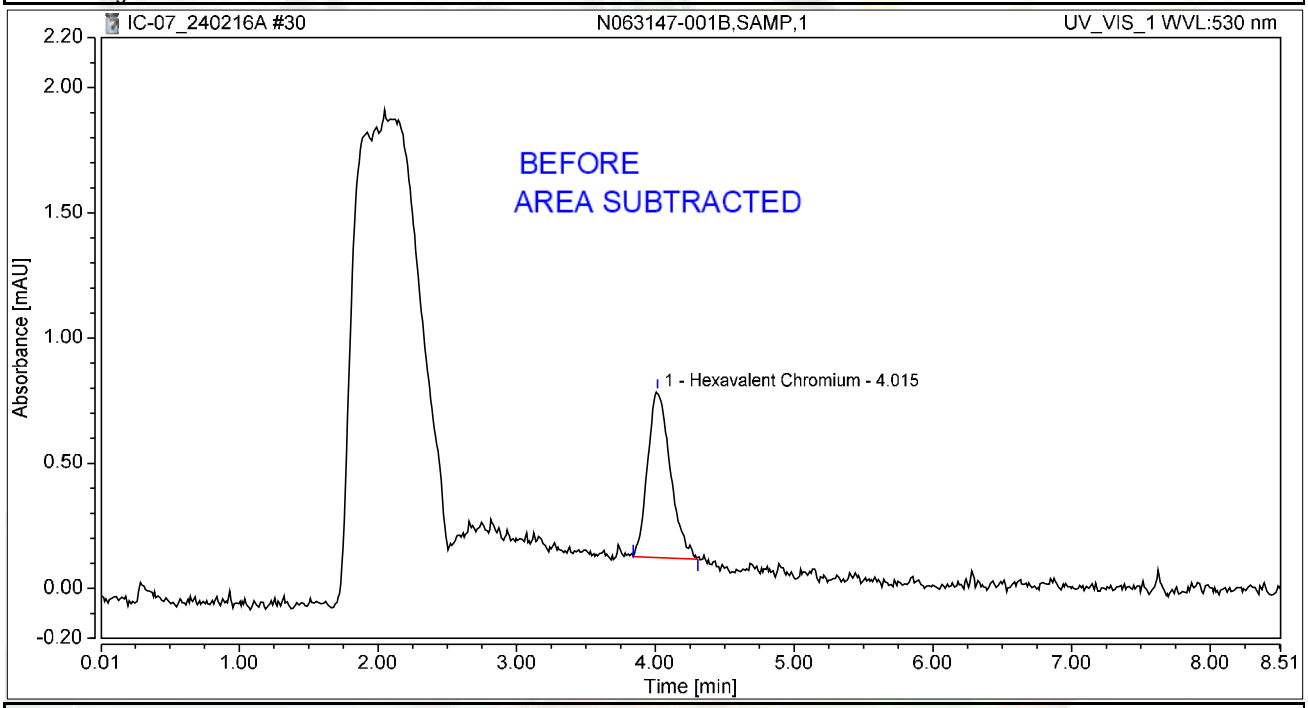
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063147-001B,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 12:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

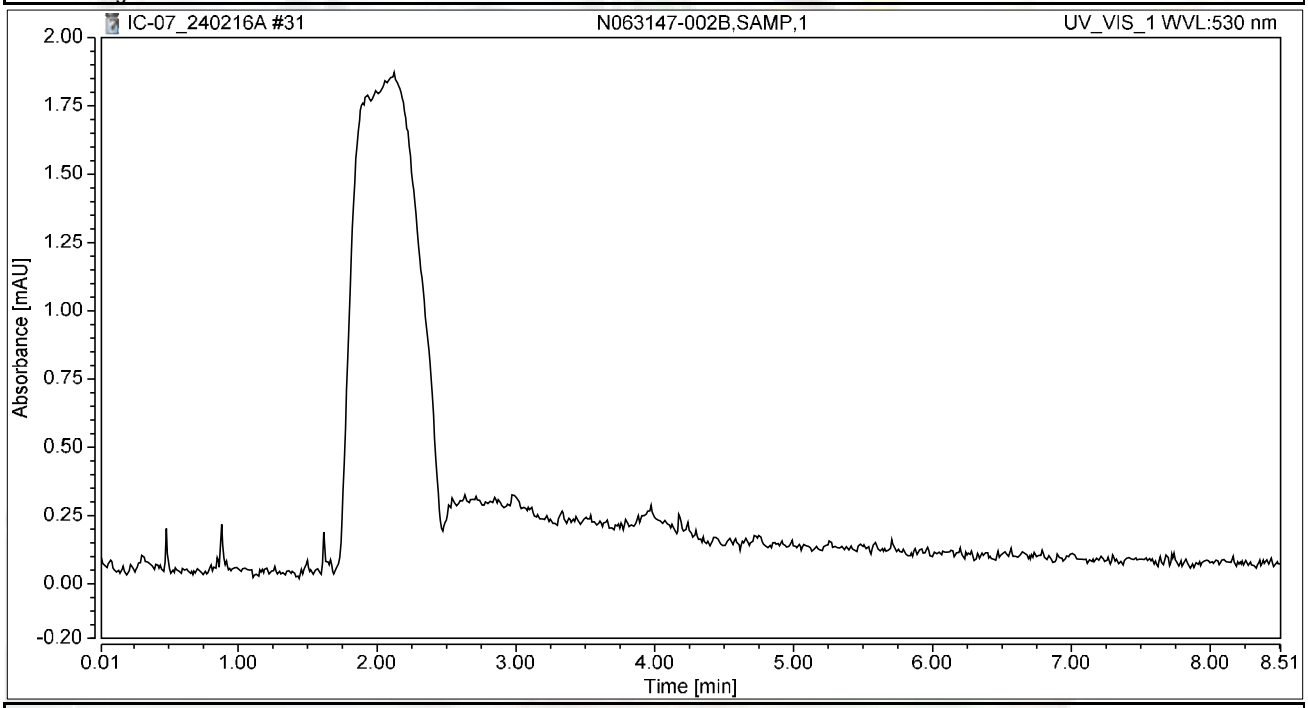
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.126	0.664	100.00	100.00	0.5862
Total:			**0.126**	**0.664**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063147-002B,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 12:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

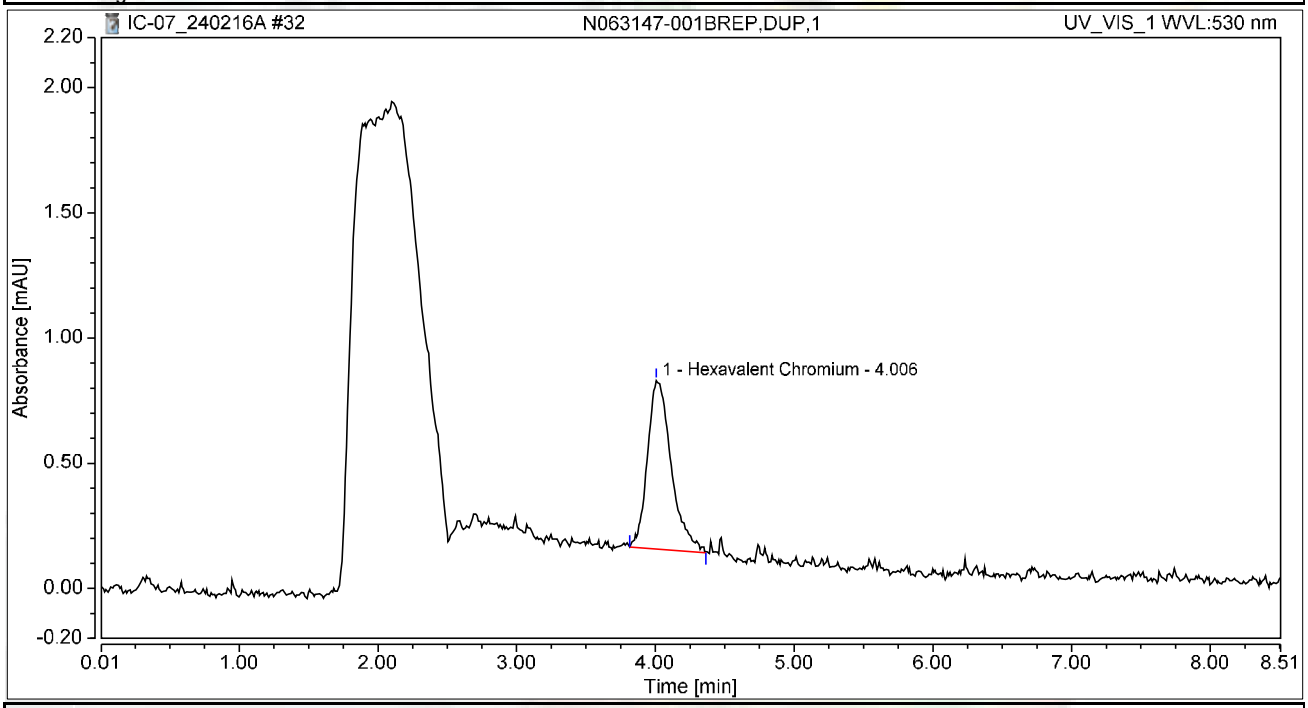
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063147-001BREP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 12:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

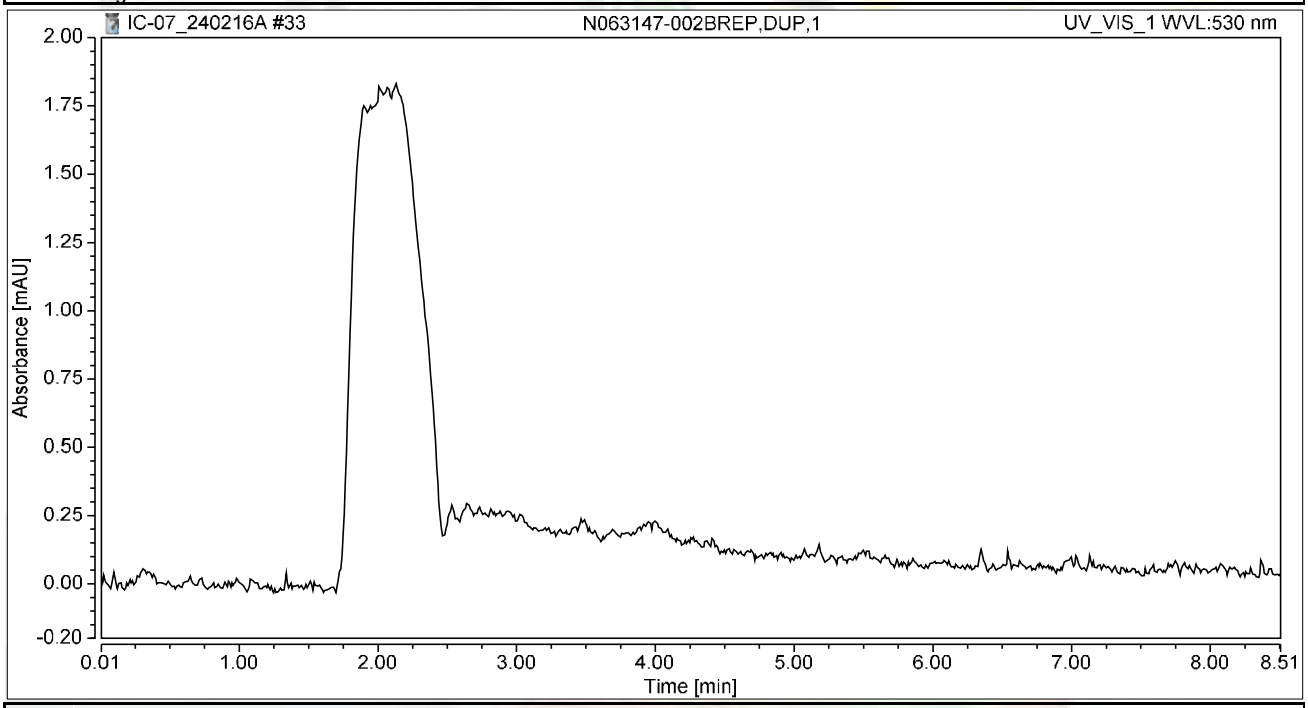
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.134	0.673	100.00	100.00	0.6238
Total:			**0.134**	**0.673**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063147-002BREP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 13:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

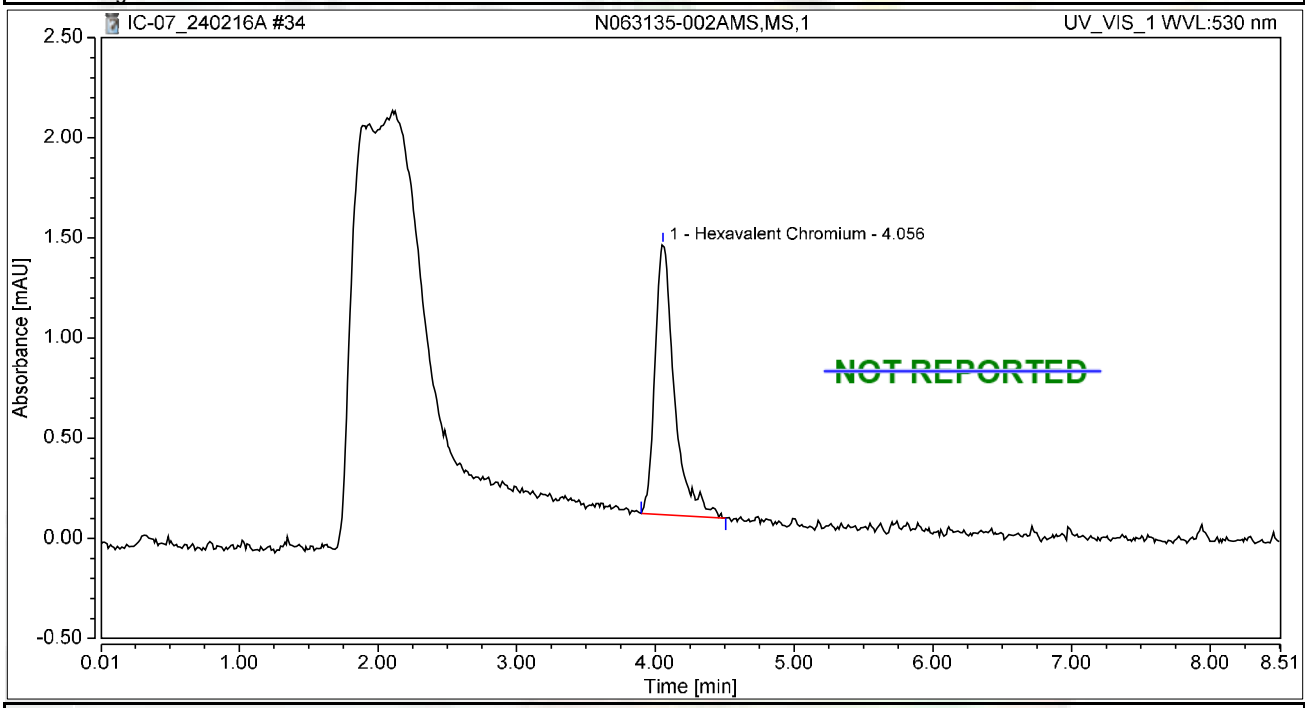
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 13:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

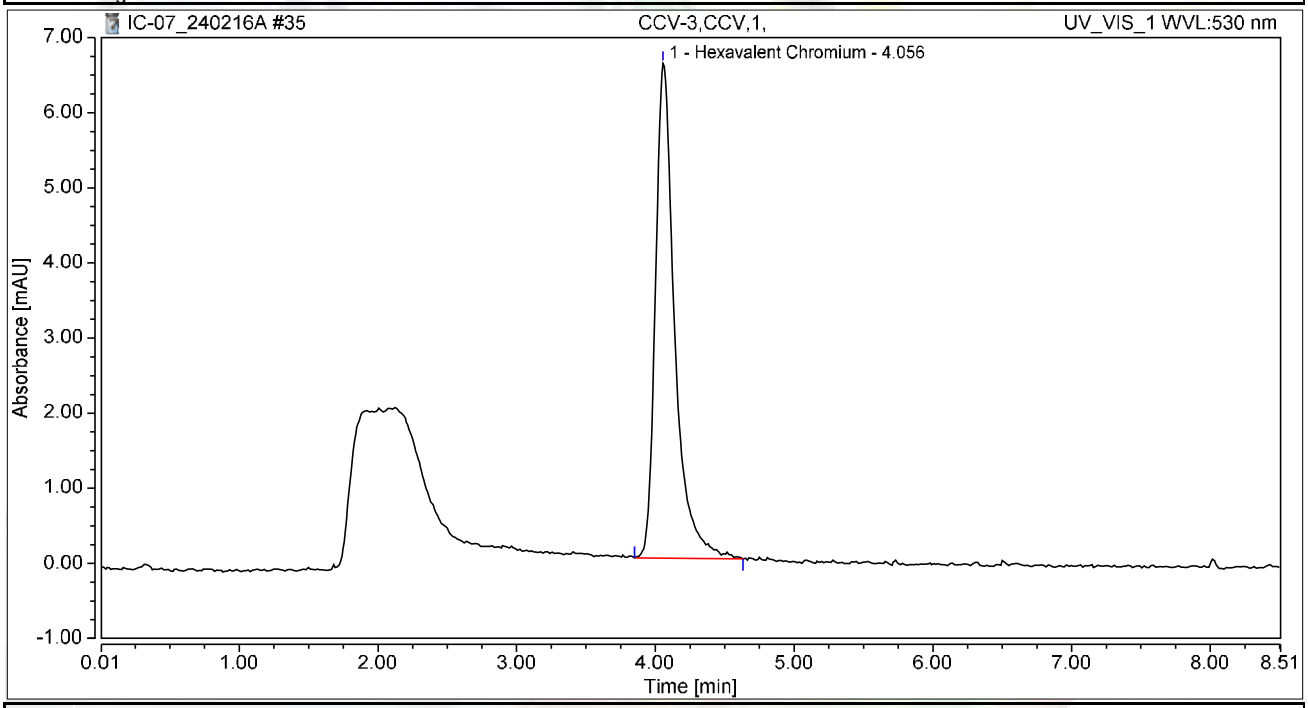
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.220	1.348	100.00	100.00	1.0228
Total:			**0.220**	**1.348**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 13:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

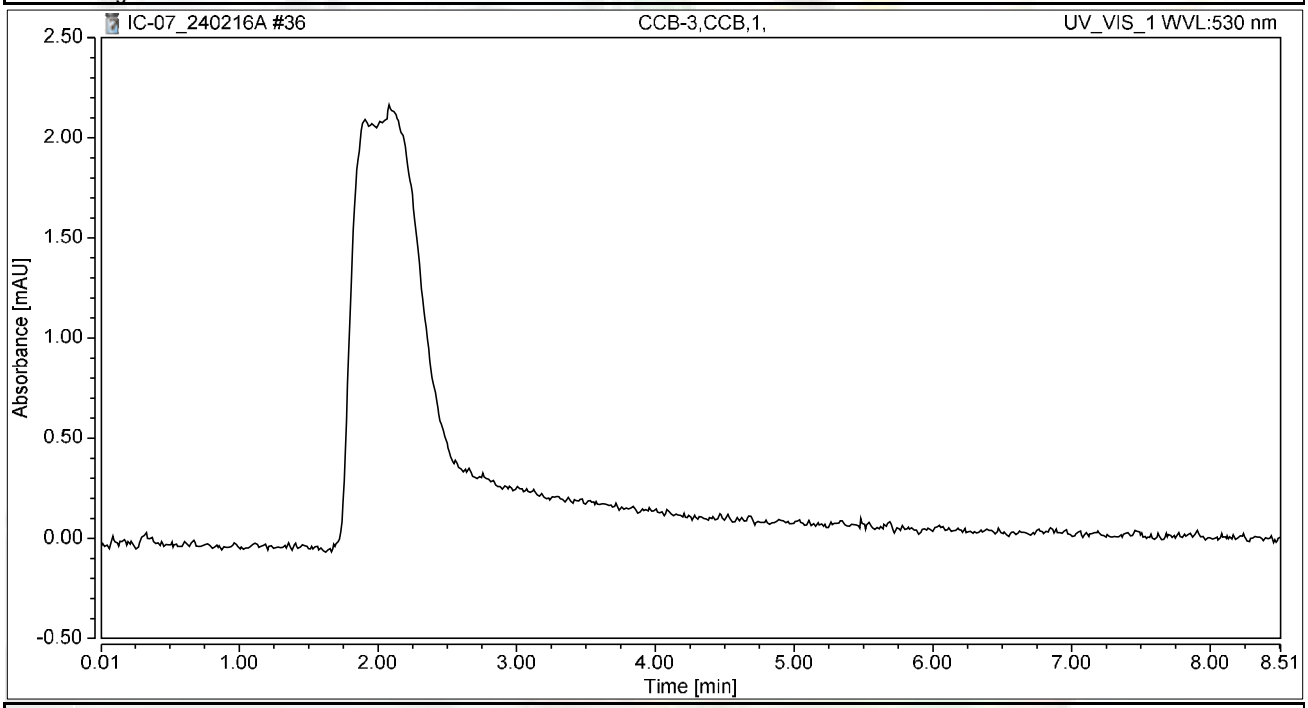
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.062	6.587	100.00	100.00	4.9366
Total:			**1.062**	**6.587**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 13:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

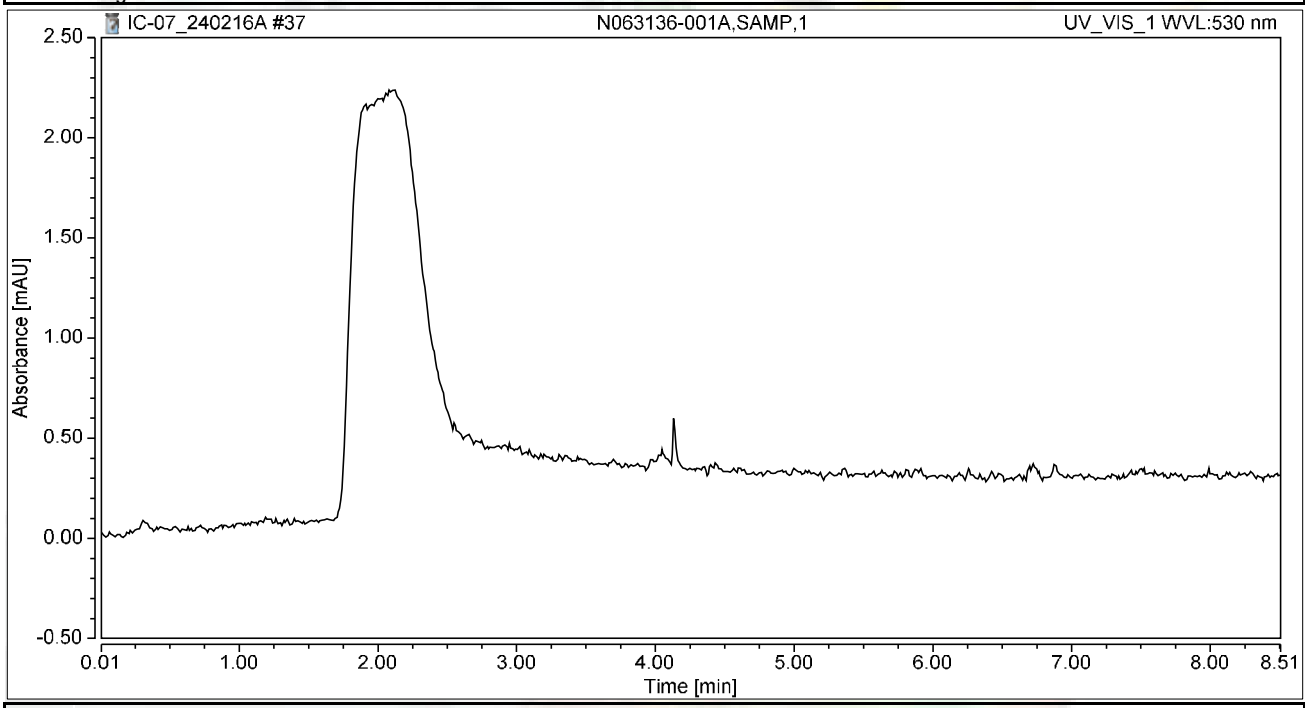
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 13:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

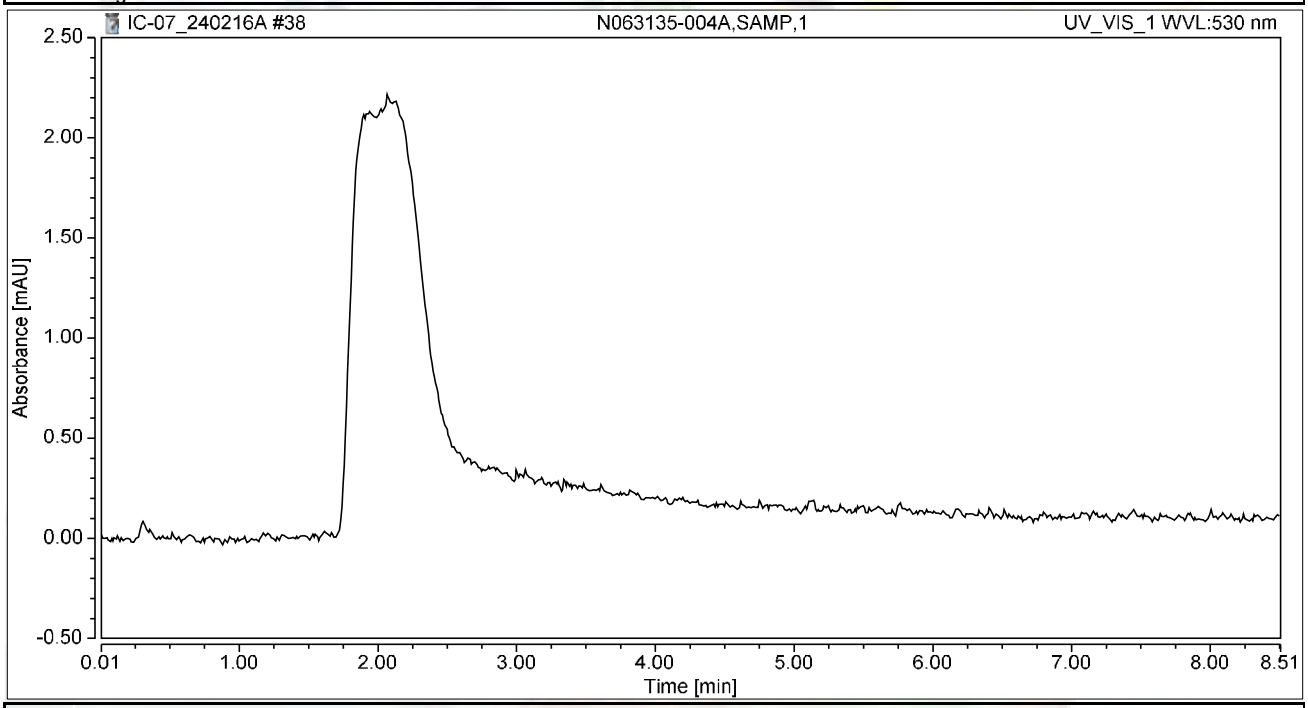
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 13:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

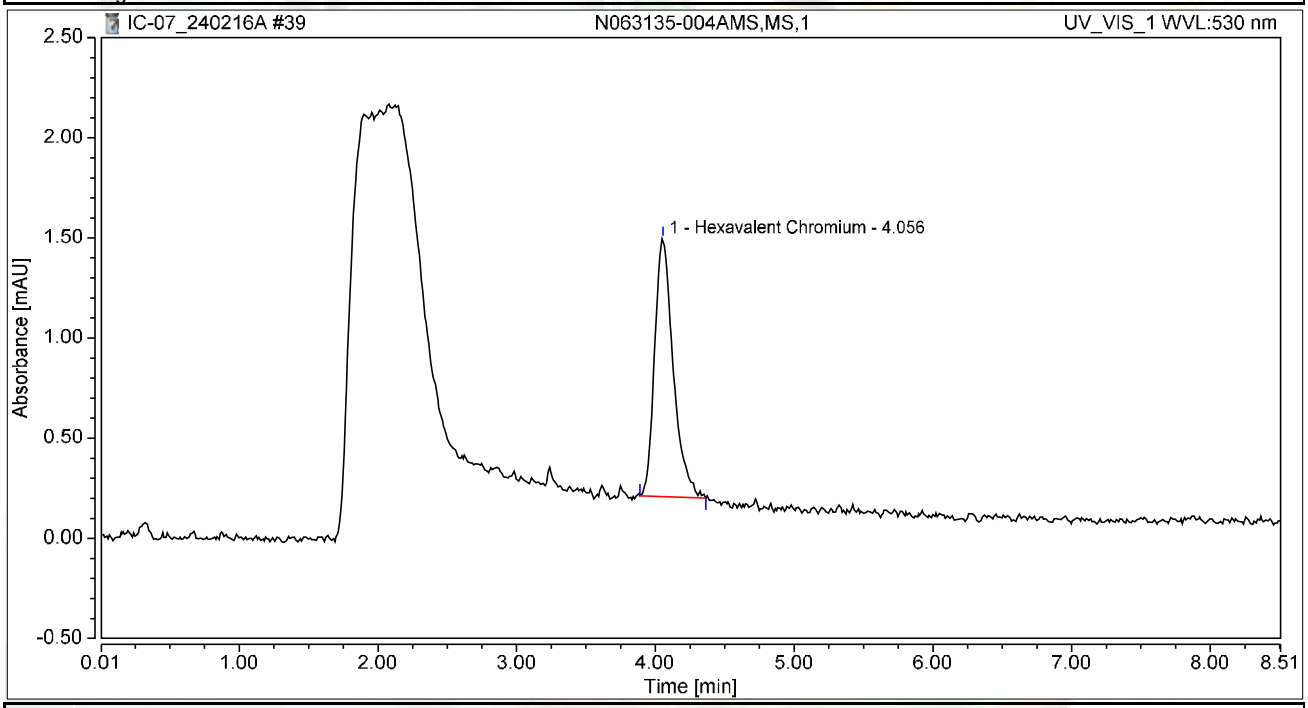
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 14:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

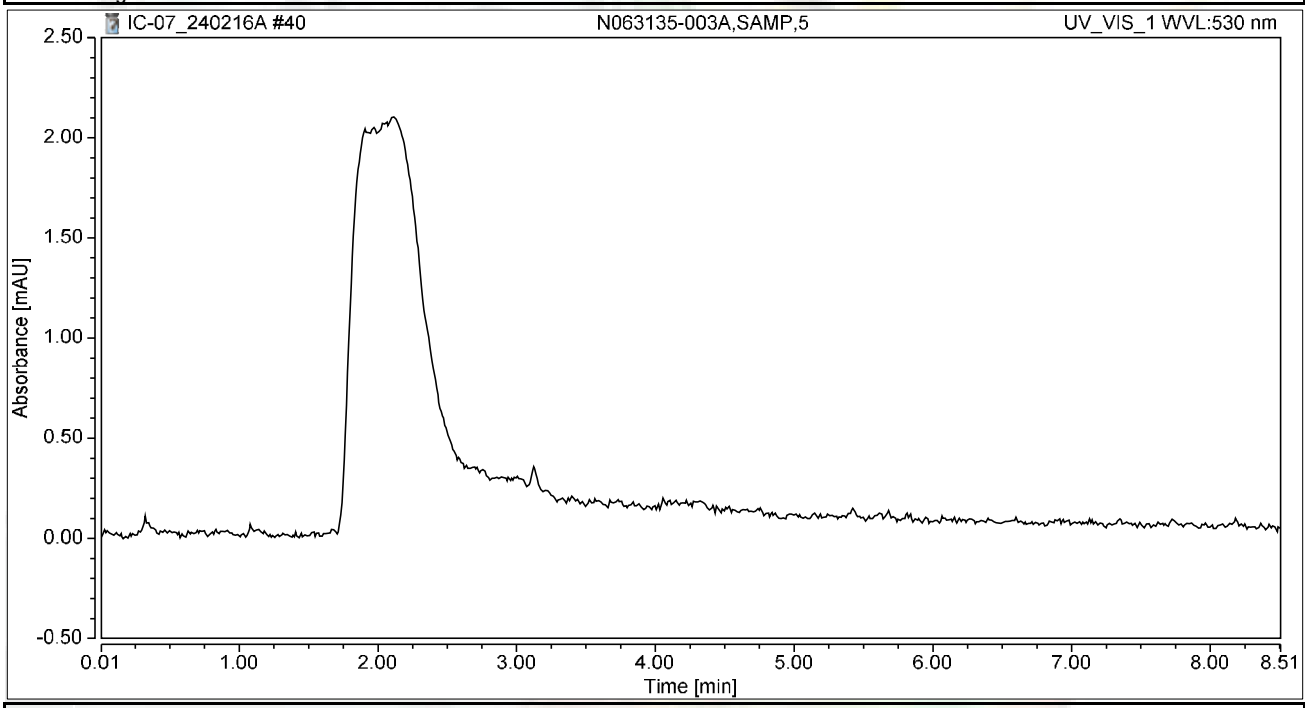
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.200	1.288	100.00	100.00	0.9296
Total:			**0.200**	**1.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 14:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

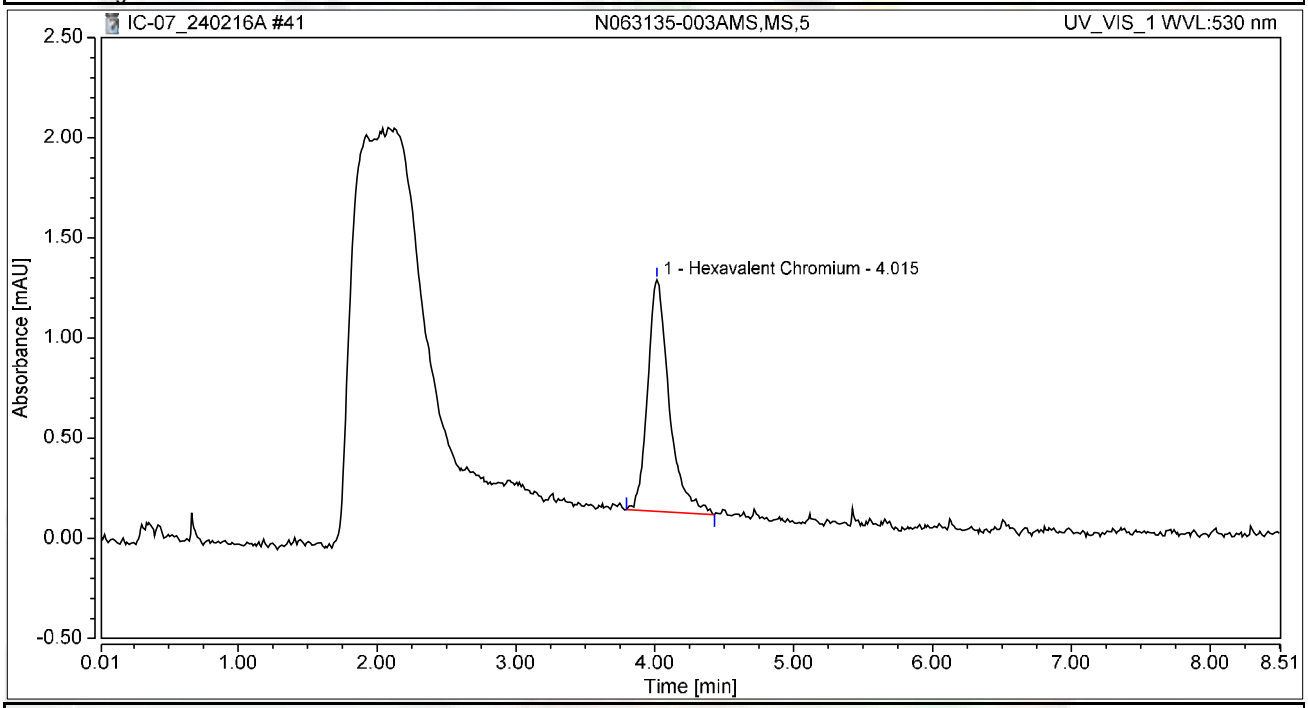
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-003AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 14:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

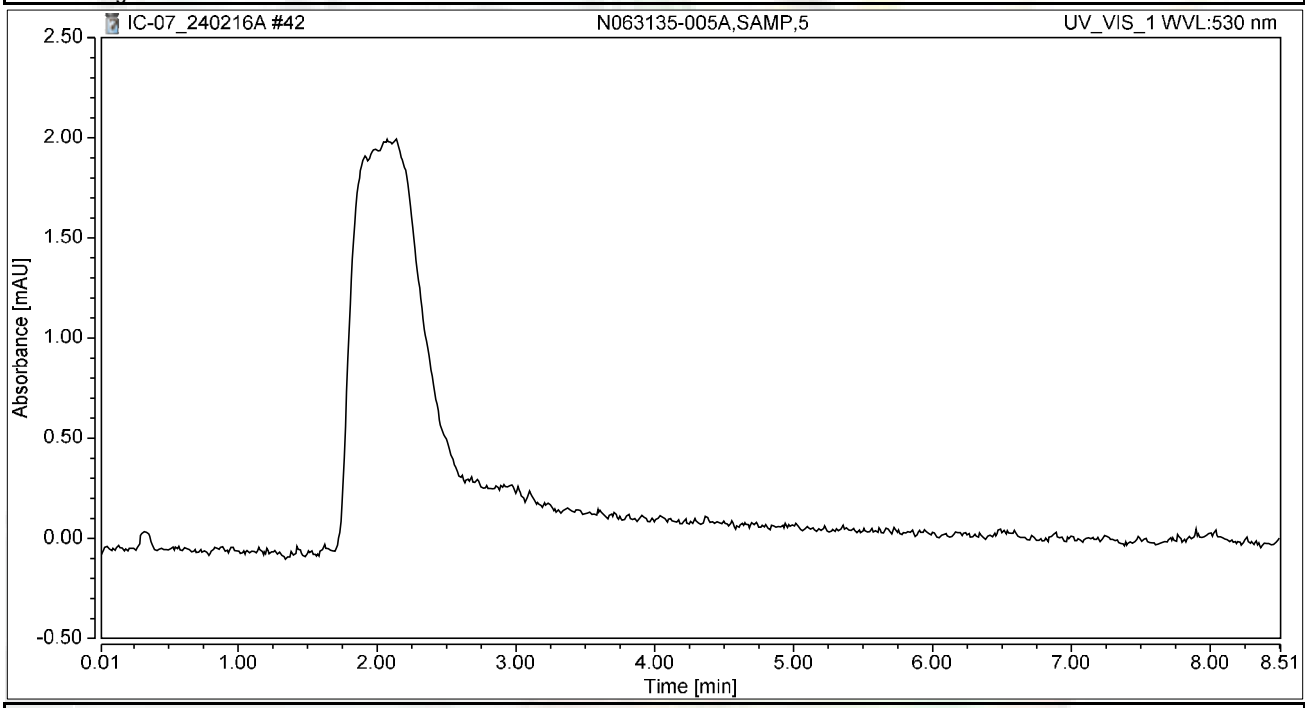
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.208	1.156	100.00	100.00	0.9653
Total:			**0.208**	**1.156**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-005A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 14:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

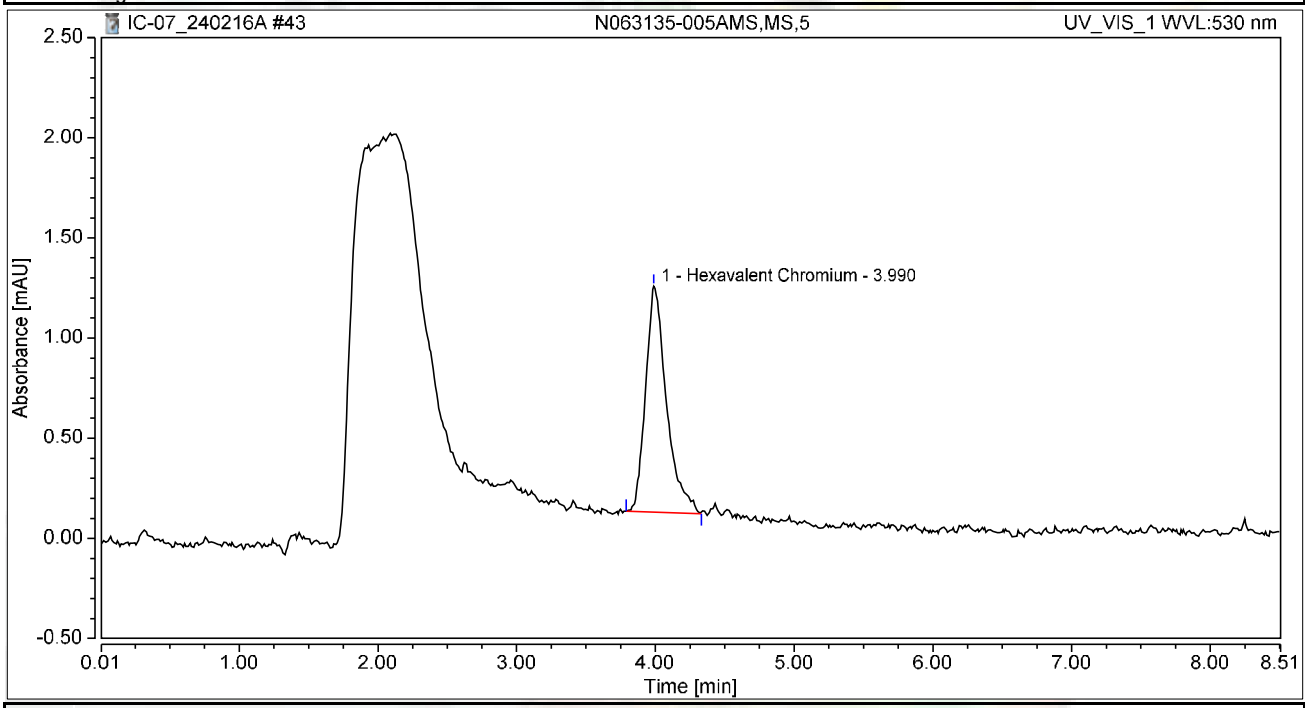
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-005AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 14:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

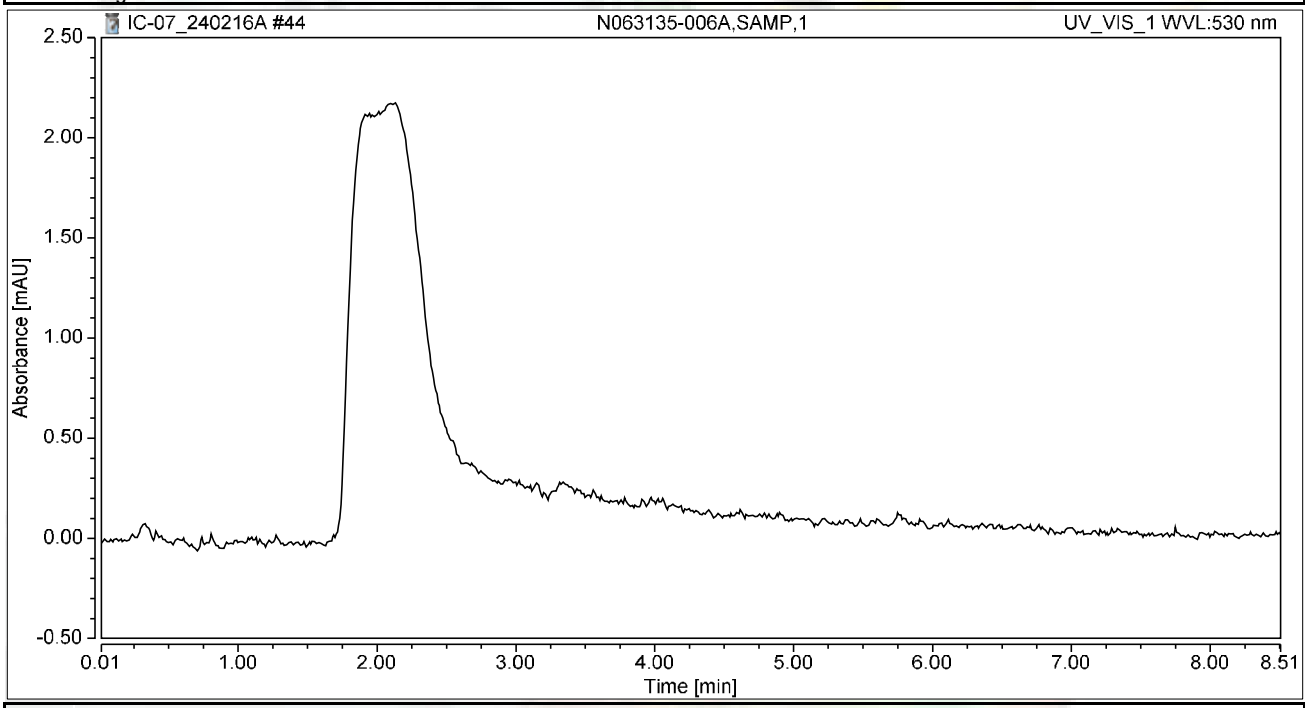
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.197	1.127	100.00	100.00	0.9168
Total:			**0.197**	**1.127**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-006A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 14:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

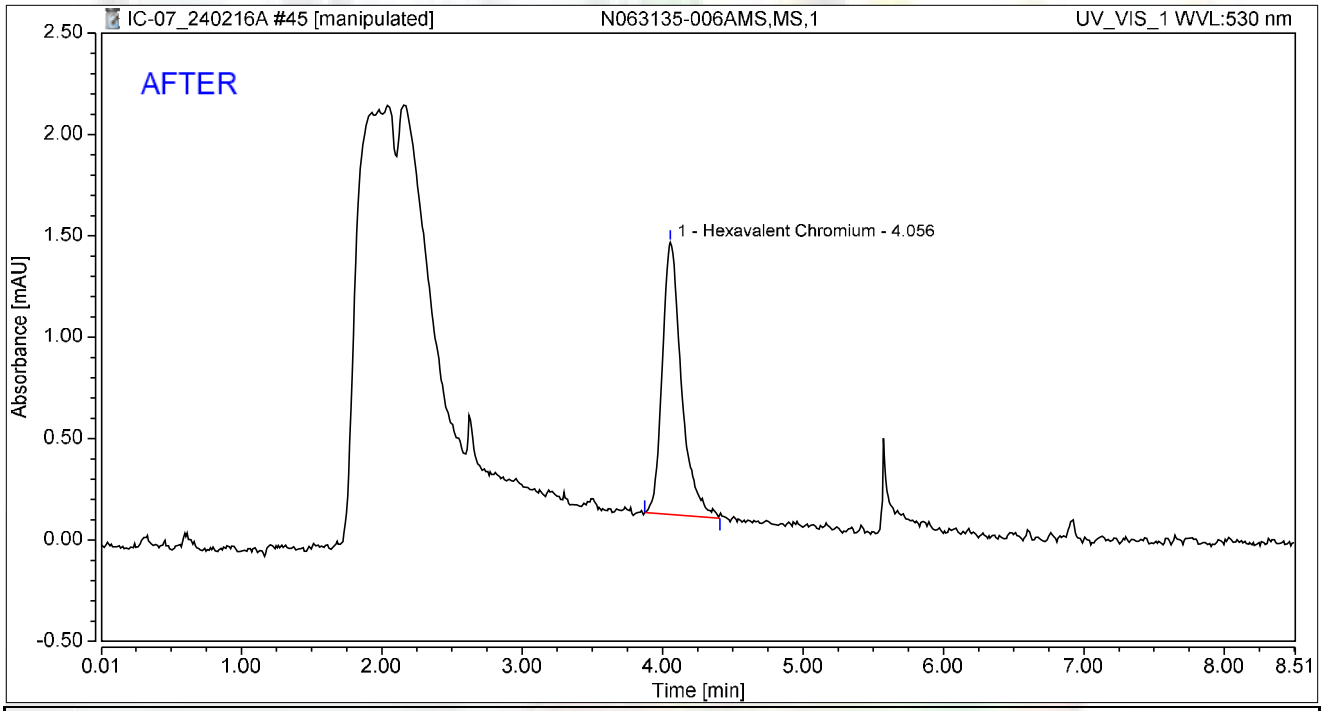
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 15:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.214	1.342	100.00	100.00	0.9926
Total:			**0.214**	**1.342**	**100.00**	**100.00**	

Reviewed by:

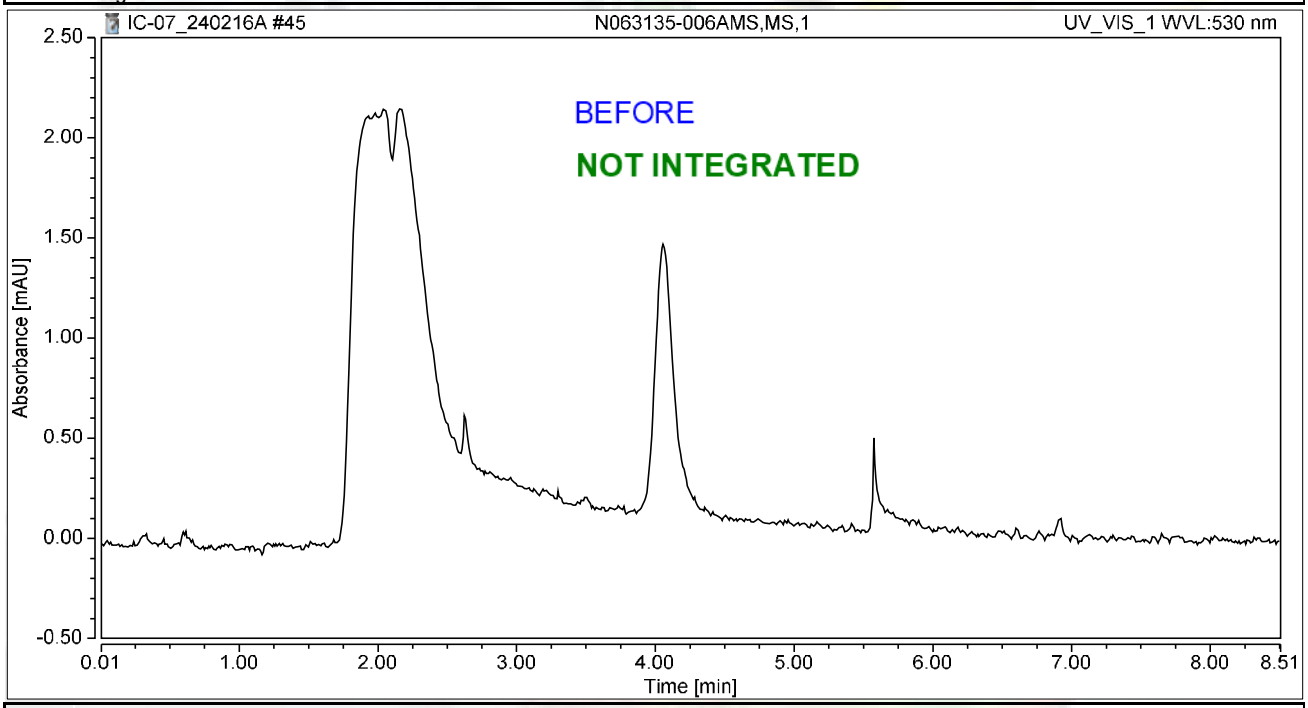
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063135-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 15:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

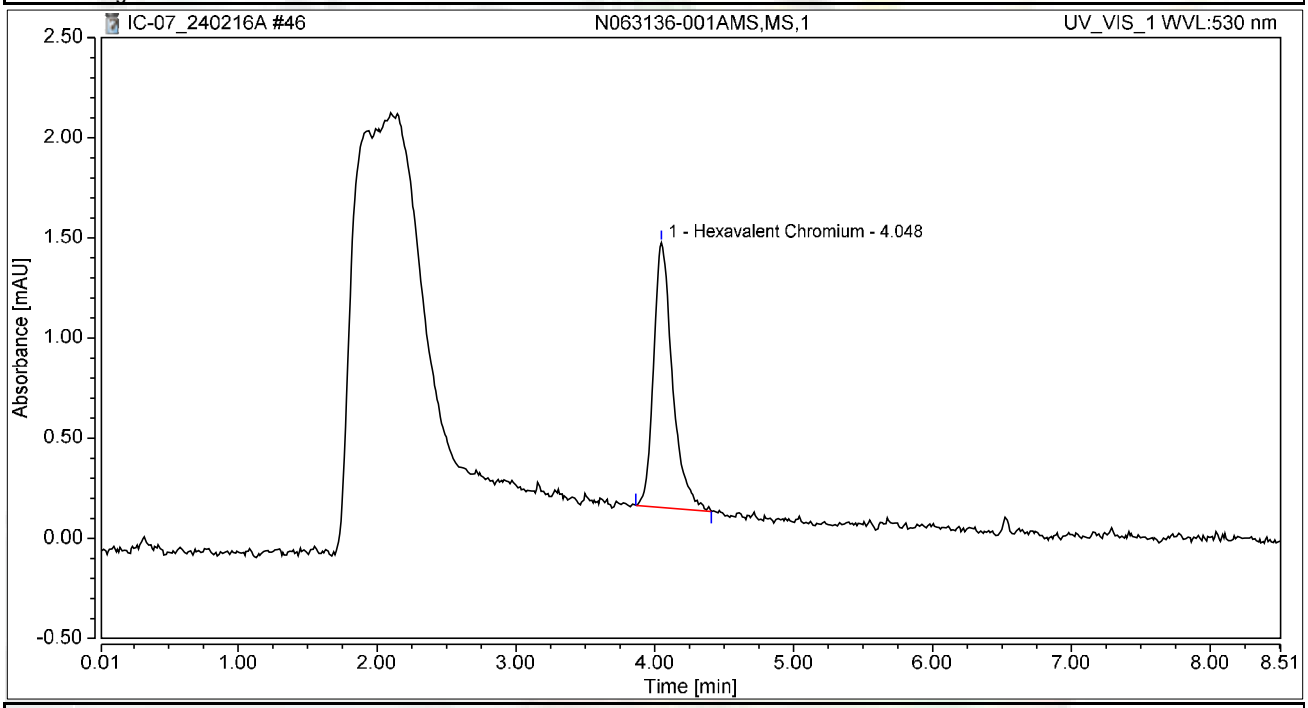
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 15:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

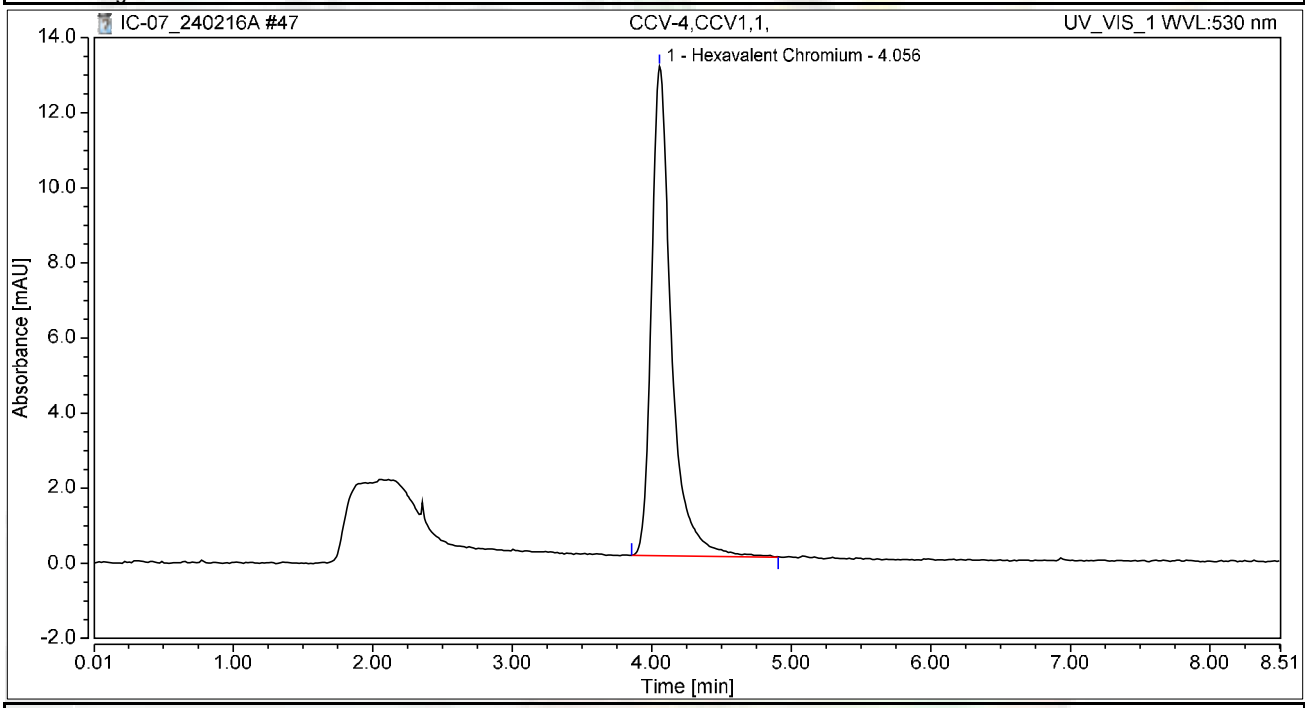
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.208	1.323	100.00	100.00	0.9692
Total:			**0.208**	**1.323**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 15:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

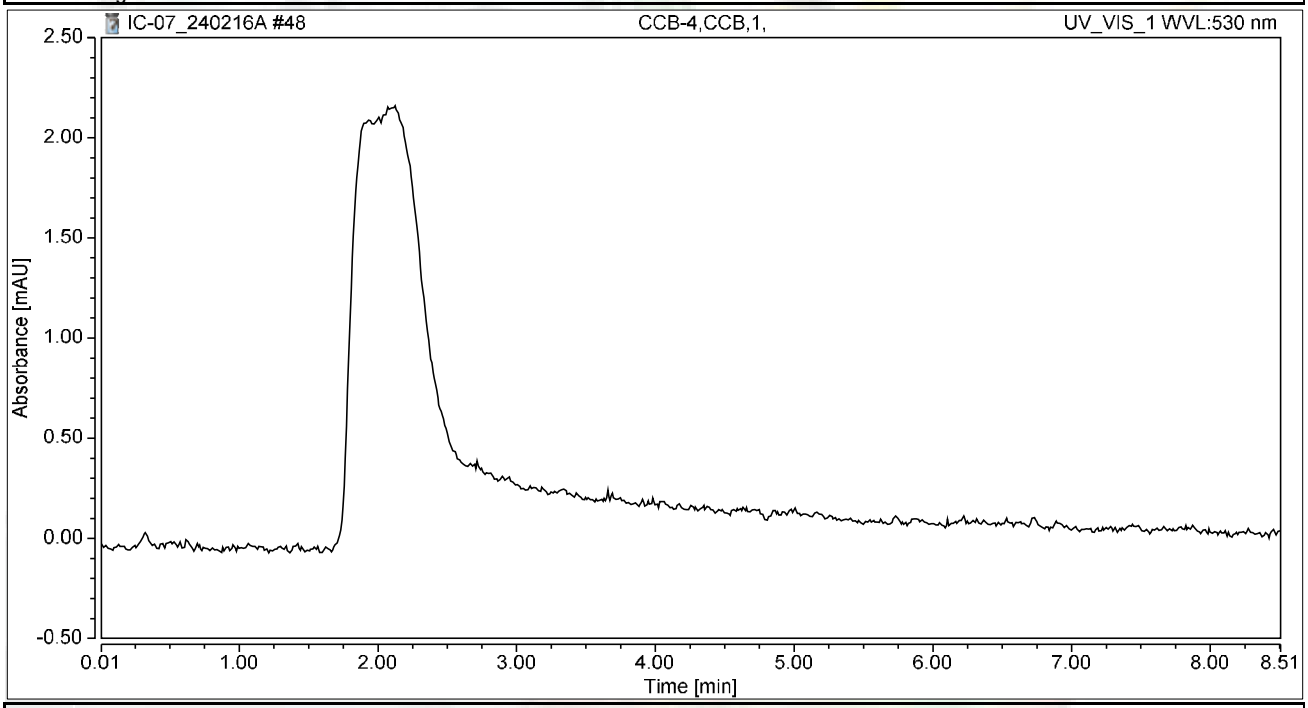
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	2.158	13.026	100.00	100.00	10.0304
Total:			**2.158**	**13.026**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 15:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

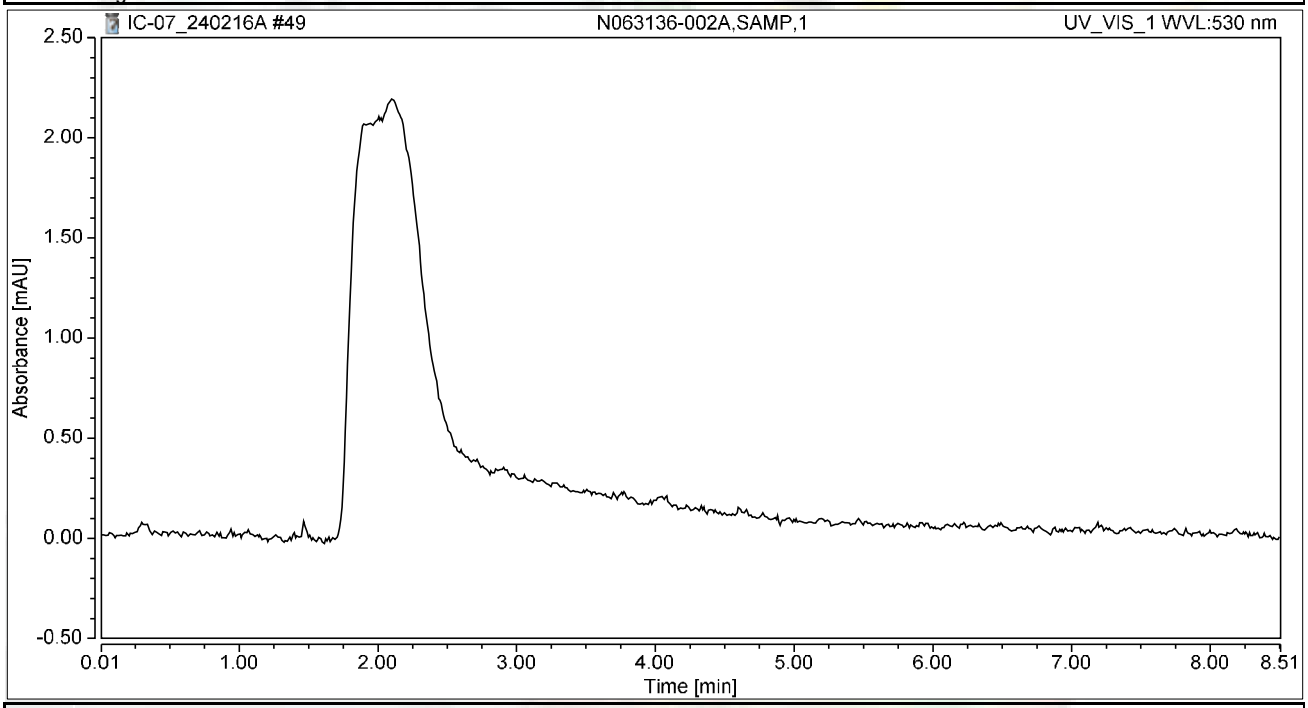
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 15:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

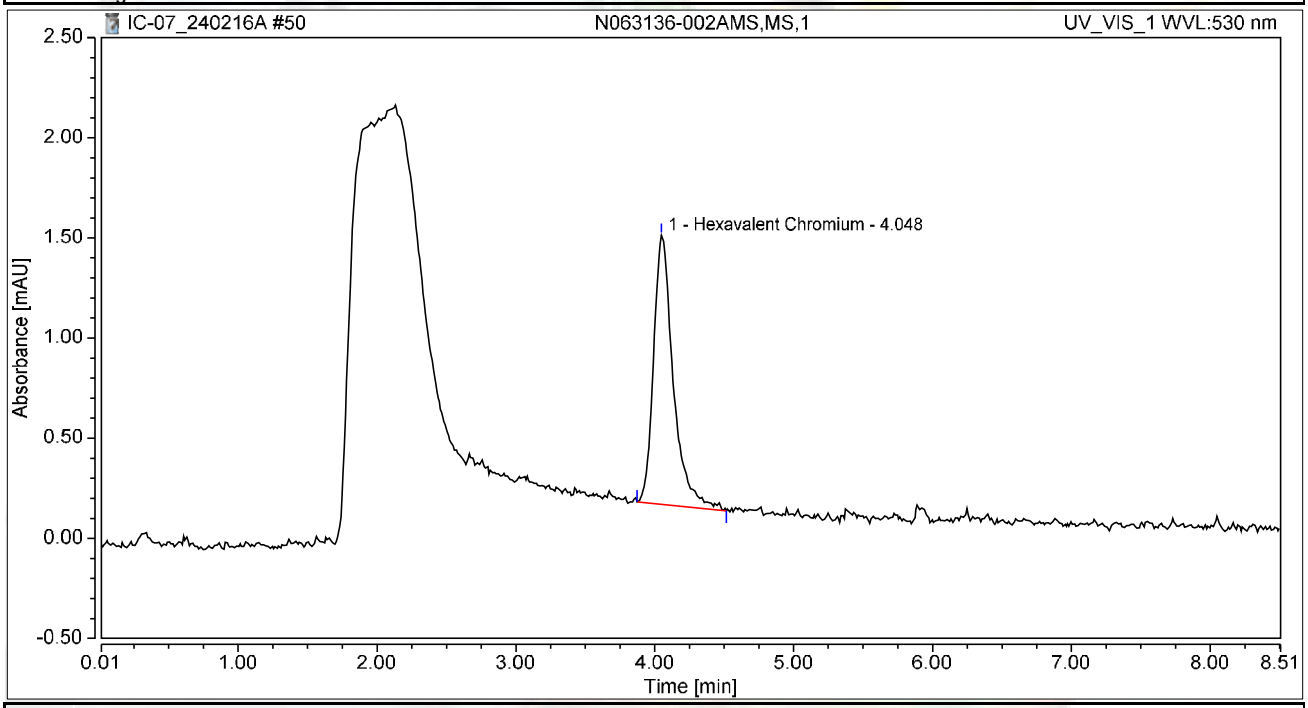
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 15:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

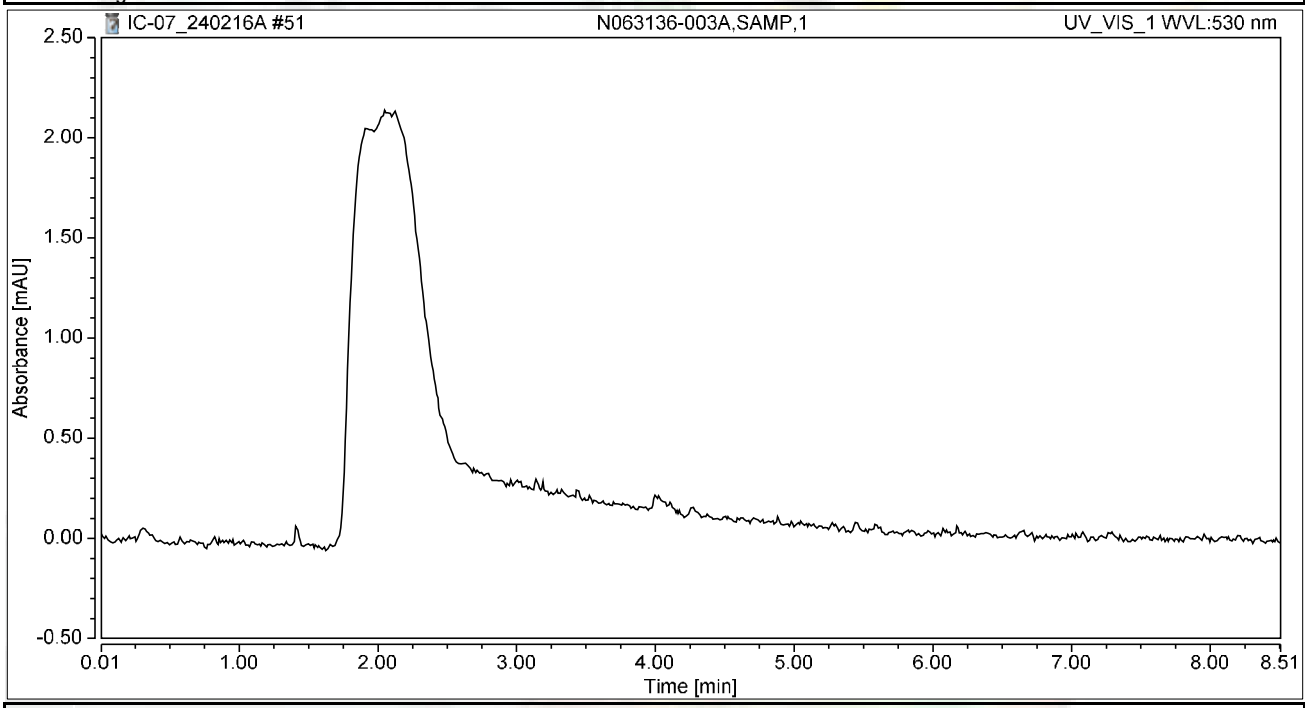
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.221	1.343	100.00	100.00	1.0269
Total:			**0.221**	**1.343**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 16:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

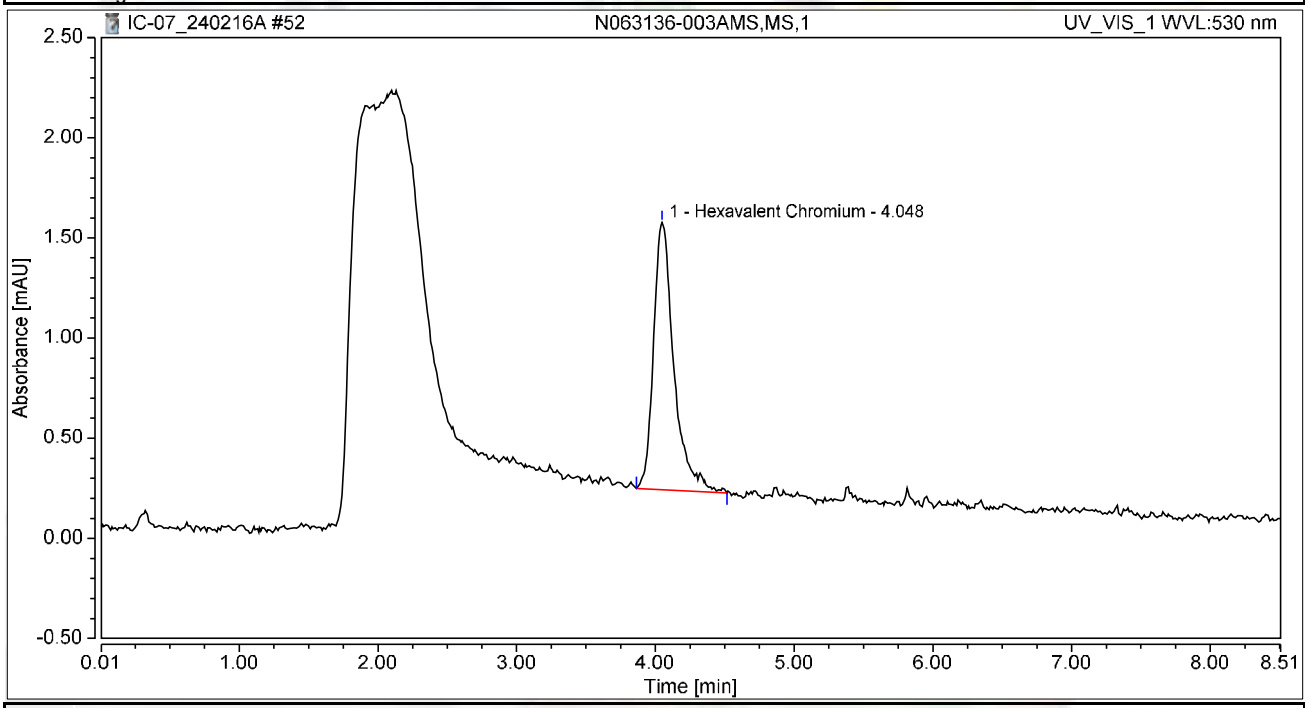
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 16:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

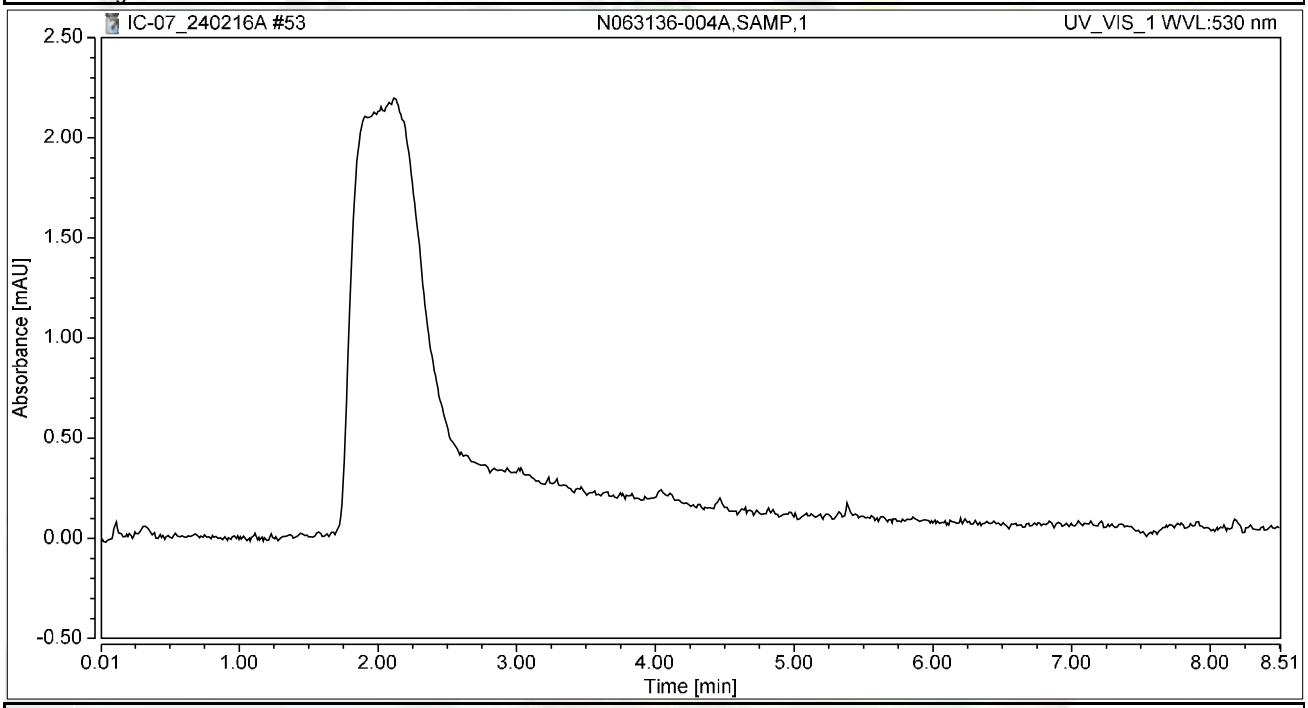
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.226	1.335	100.00	100.00	1.0522
Total:			**0.226**	**1.335**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 16:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

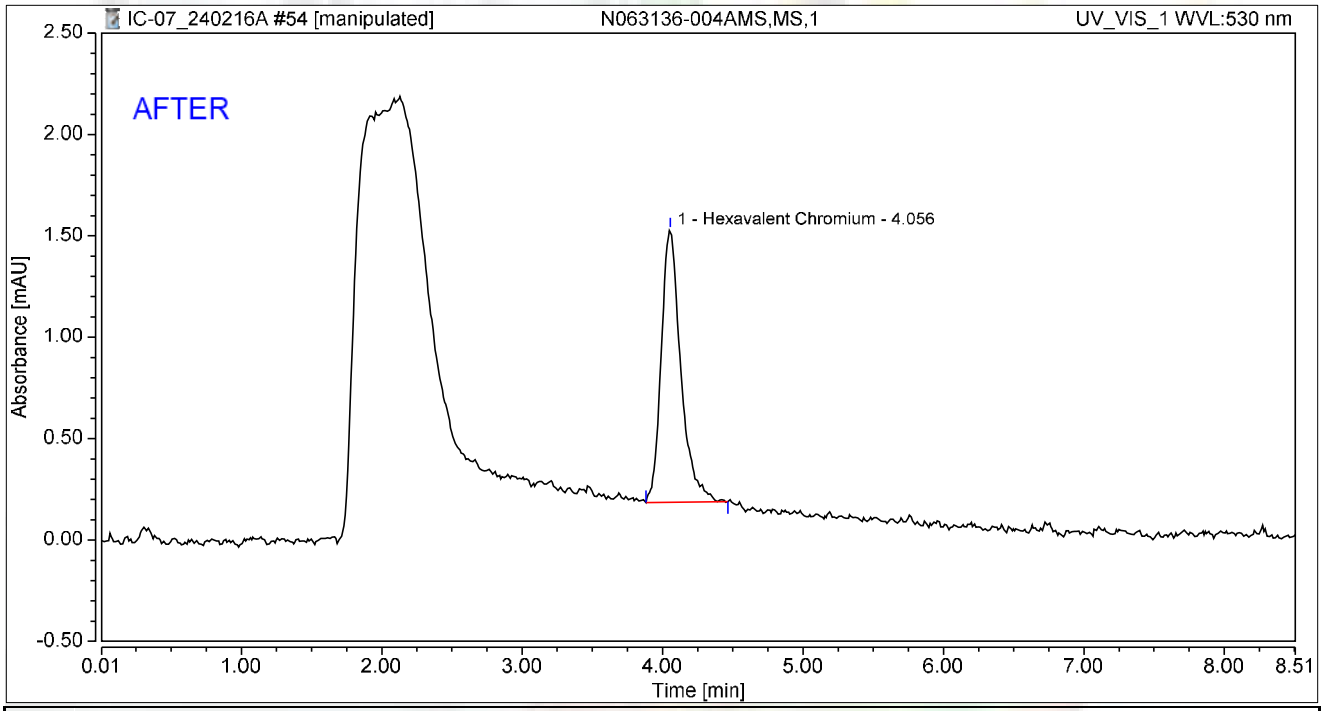
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 16:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.218	1.343	100.00	100.00	1.0120
Total:			**0.218**	**1.343**	**100.00**	**100.00**	

Reviewed by:

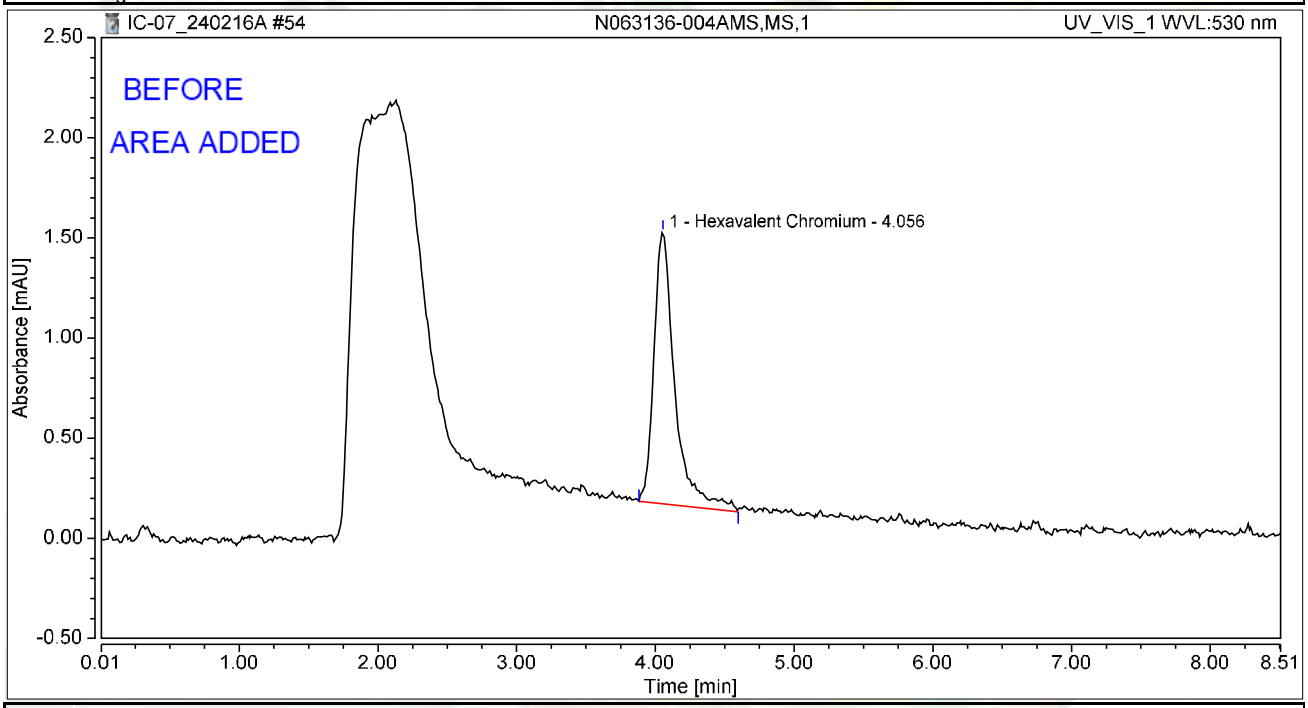
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063136-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 16:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

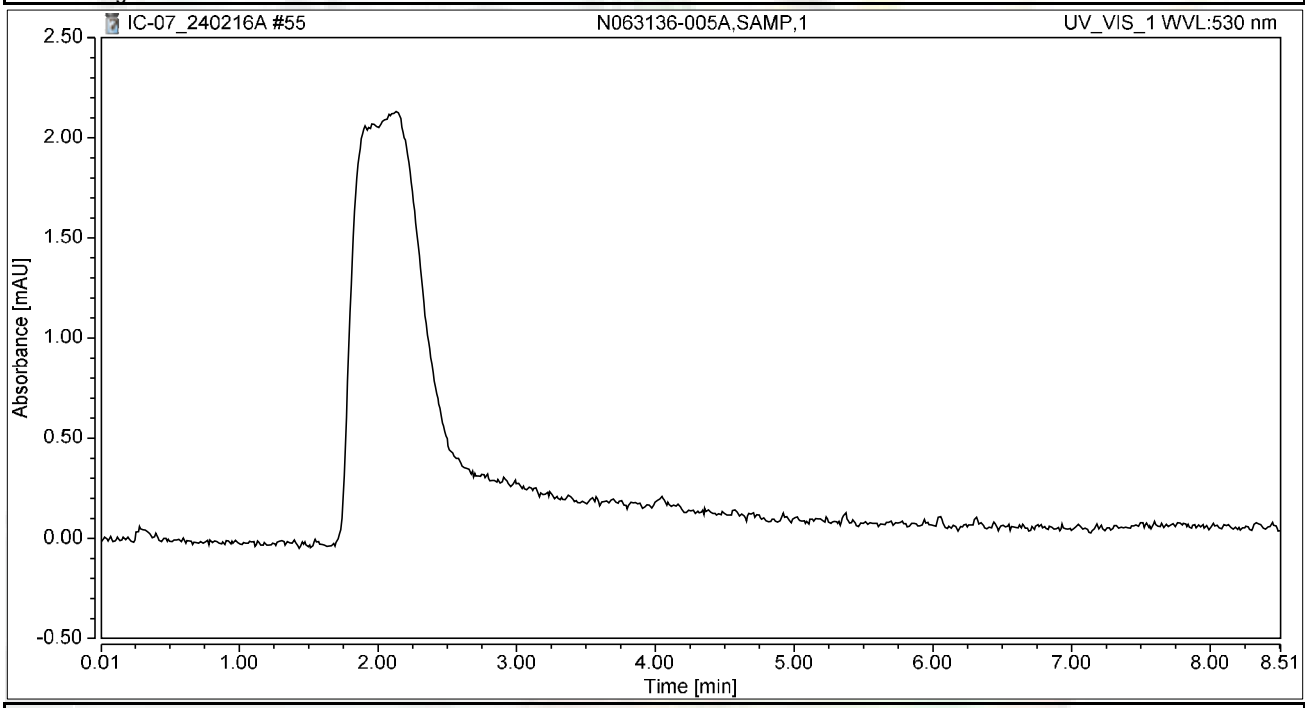
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.237	1.357	100.00	100.00	1.0998
Total:			**0.237**	**1.357**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 16:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

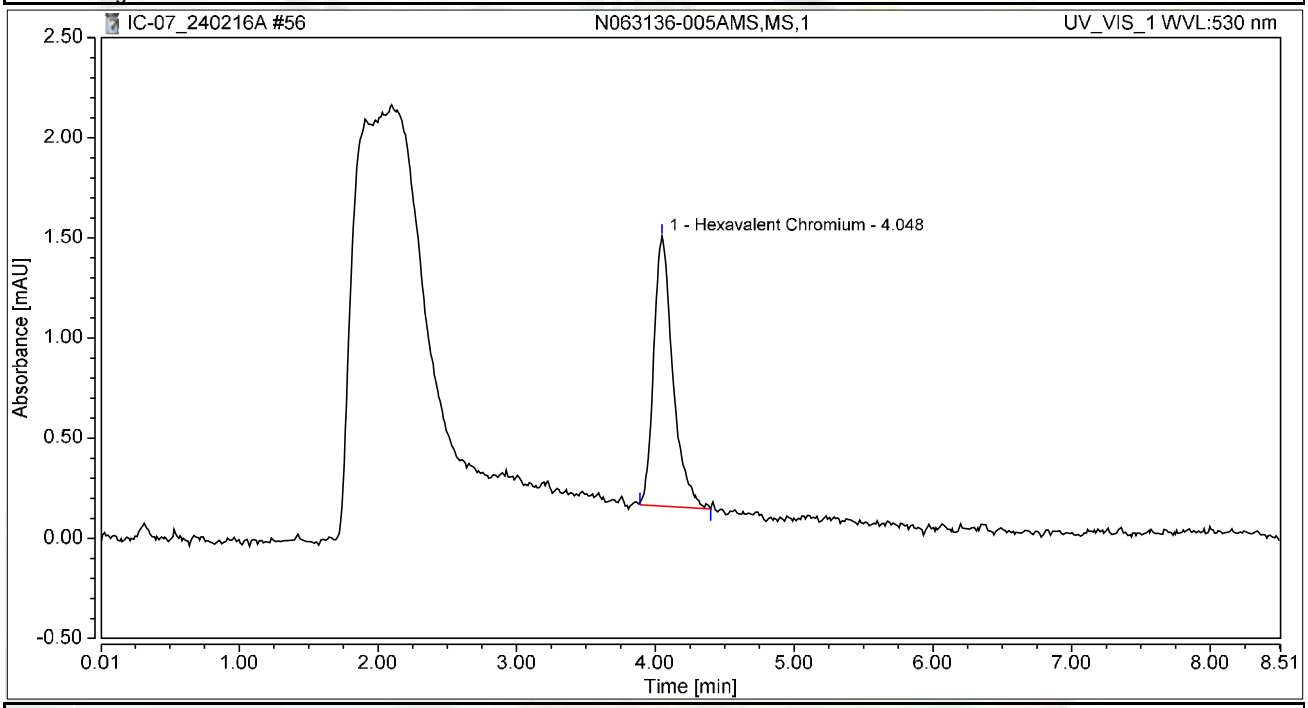
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 16:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

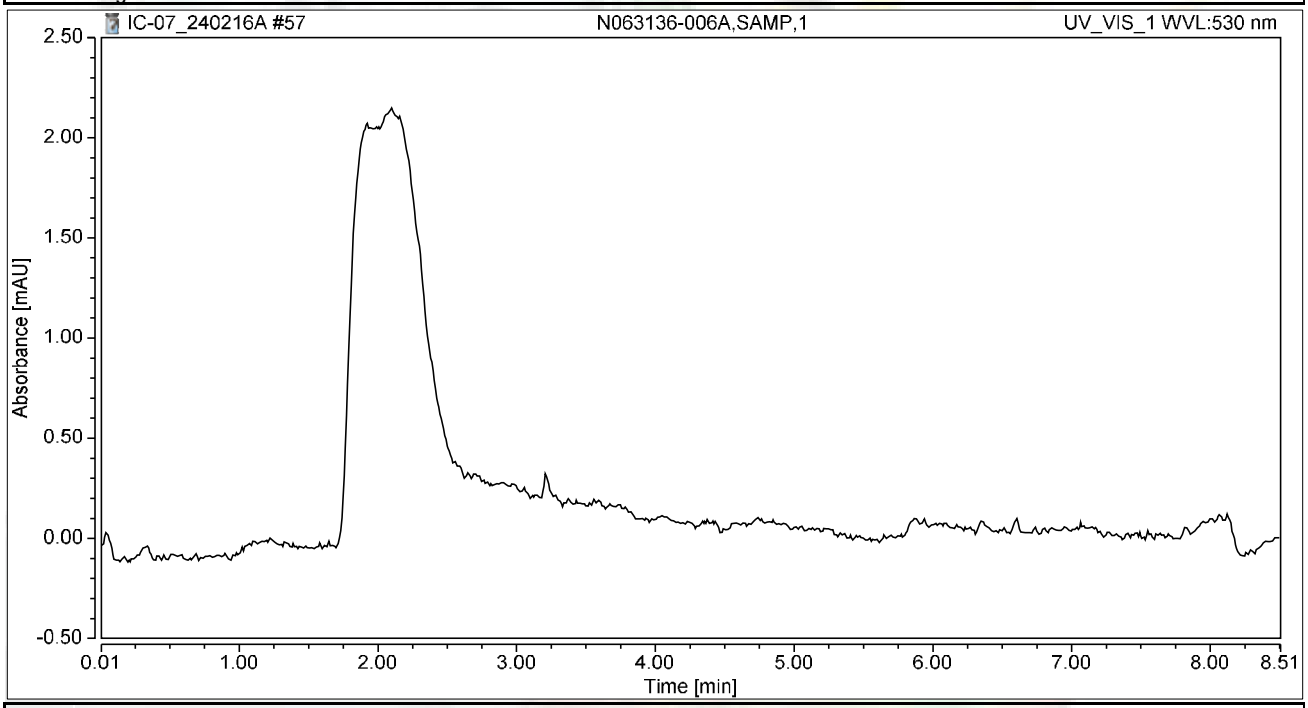
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.215	1.348	100.00	100.00	0.9988
Total:			**0.215**	**1.348**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 16:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

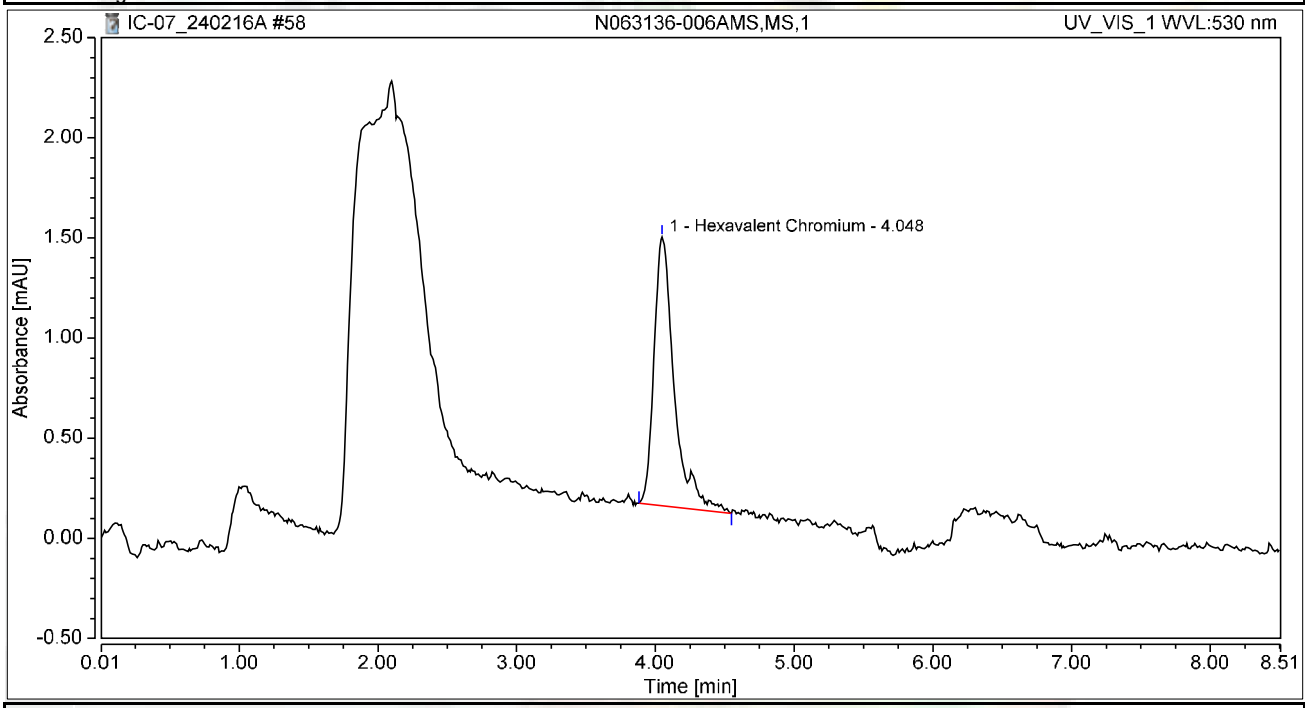
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 17:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

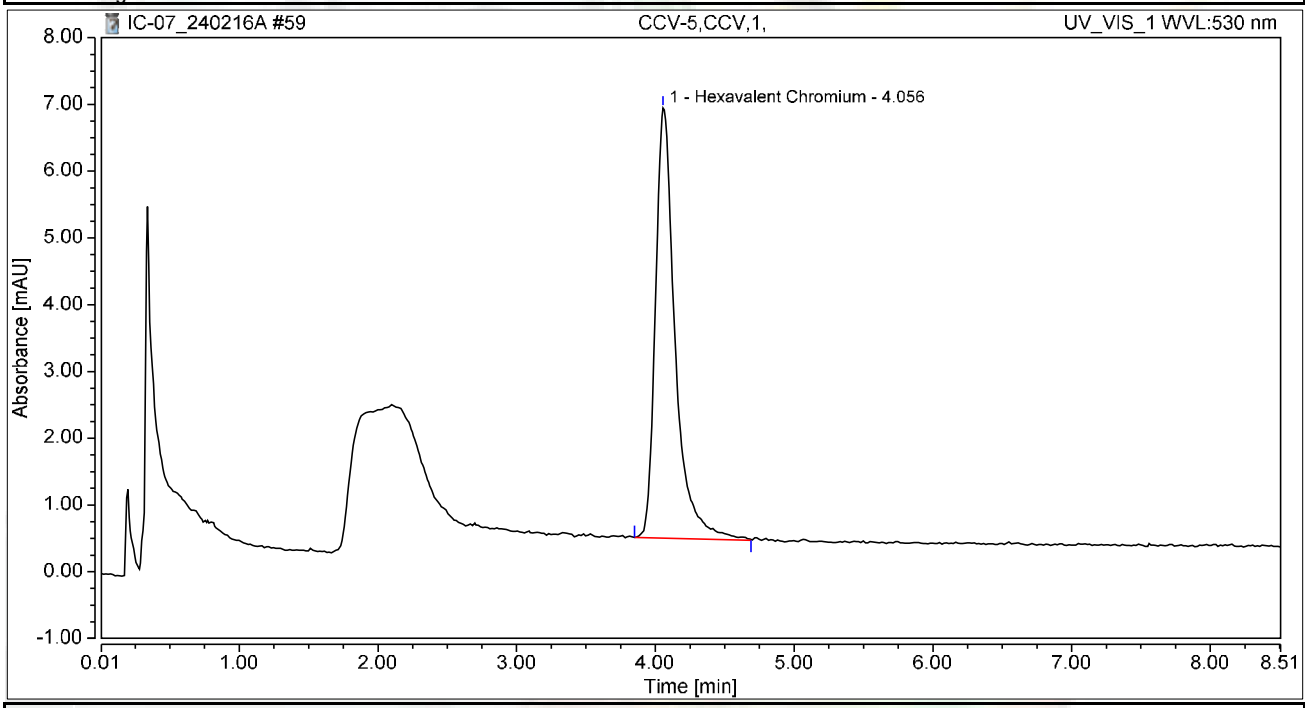
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.226	1.343	100.00	100.00	1.0526
Total:			**0.226**	**1.343**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 17:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

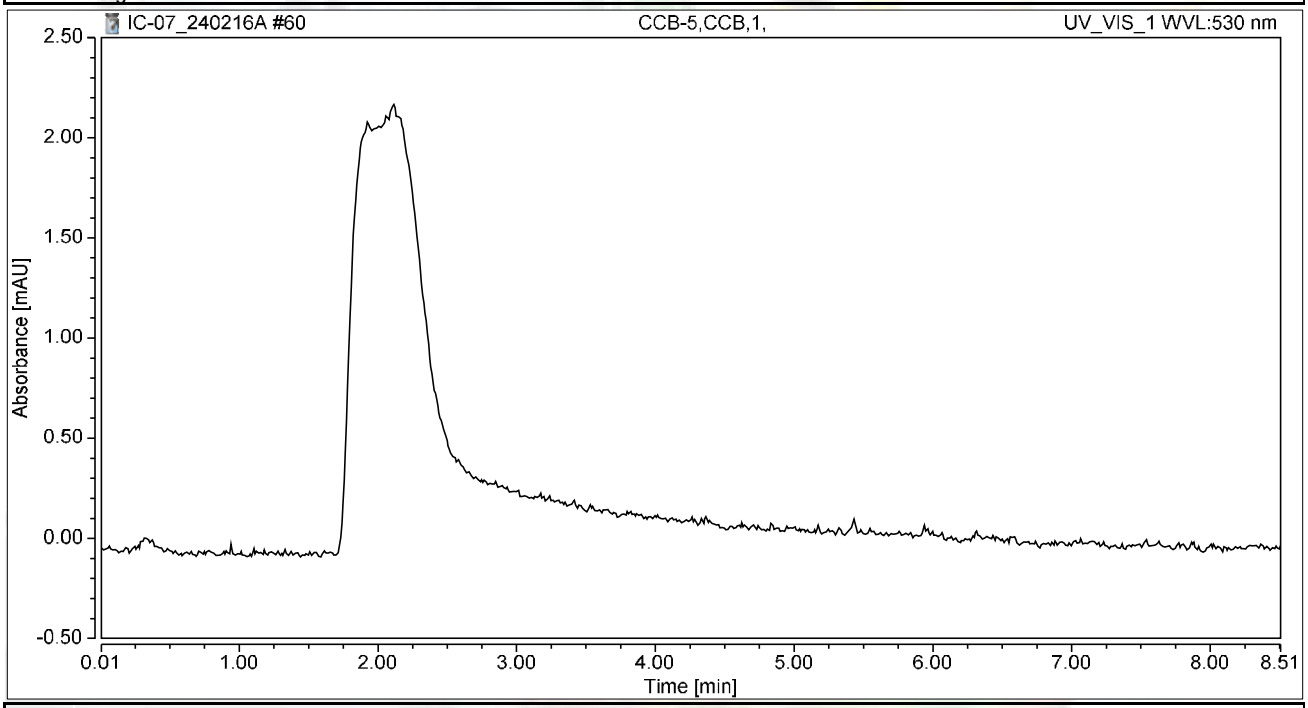
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.063	6.444	100.00	100.00	4.9396
Total:			**1.063**	**6.444**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 17:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

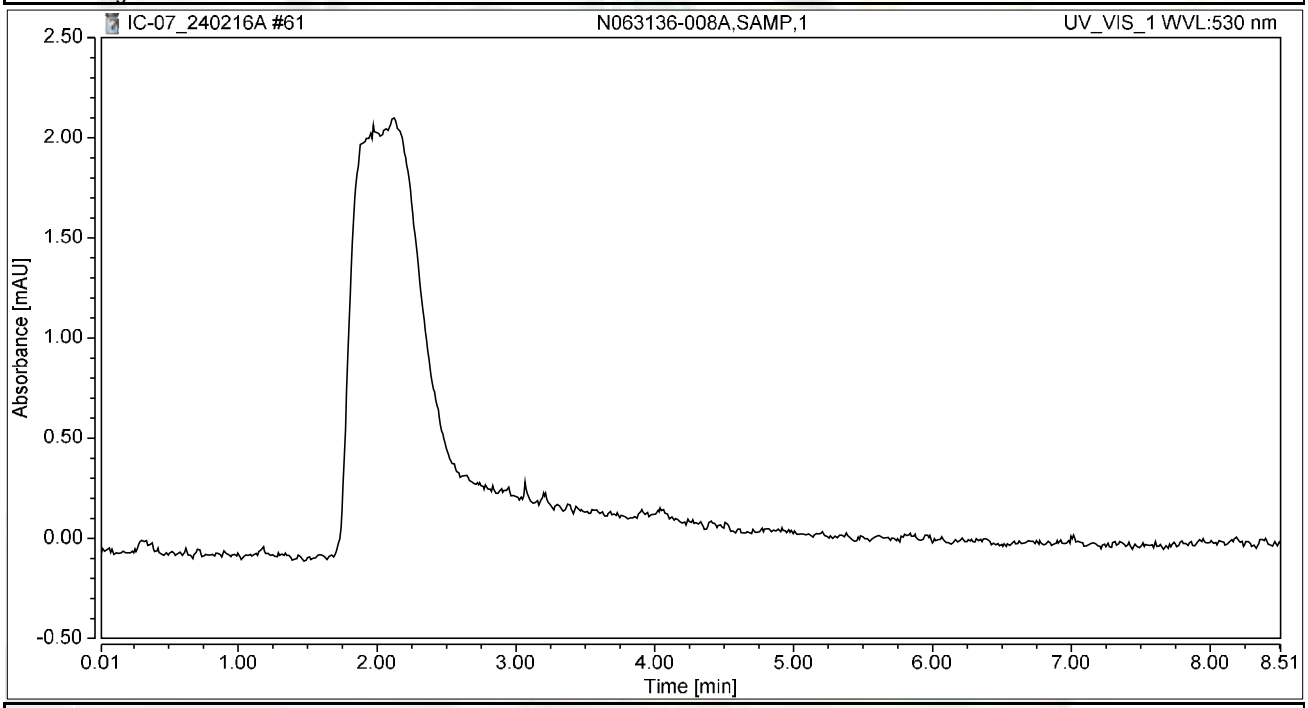
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-008A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 17:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

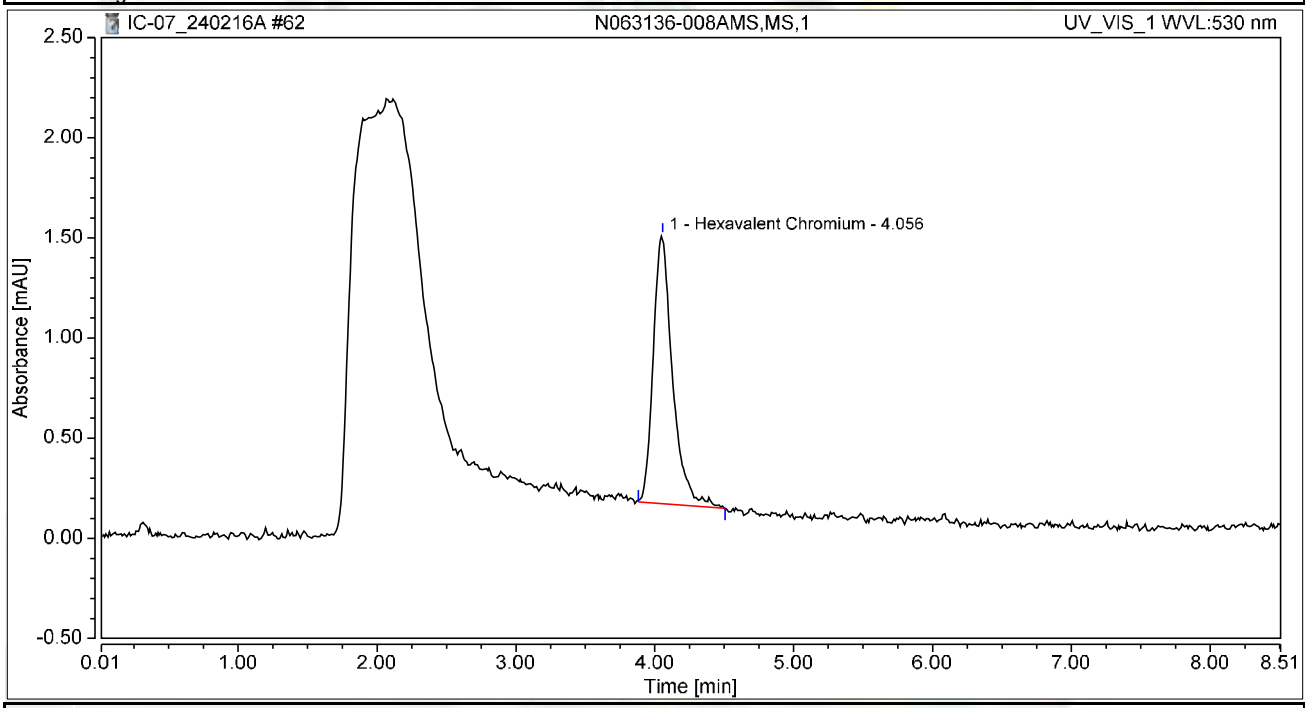
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-008AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 17:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

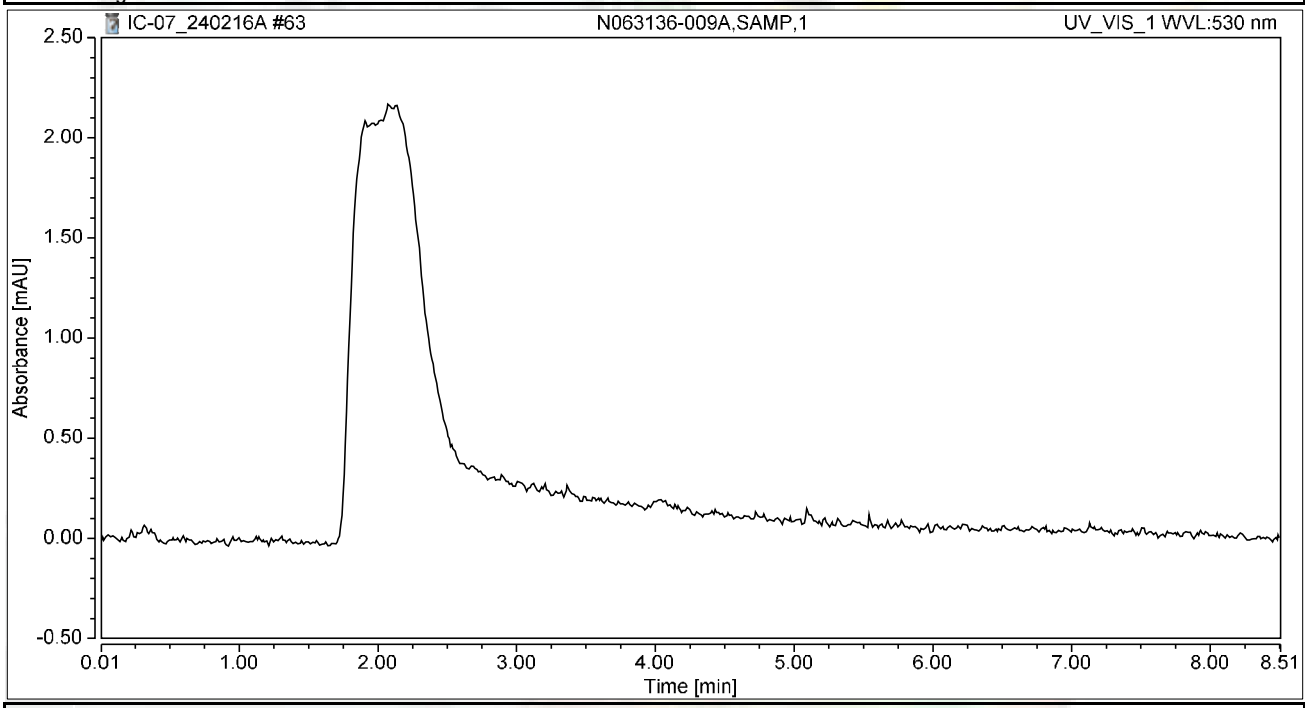
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.215	1.341	100.00	100.00	1.0003
Total:			**0.215**	**1.341**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 17:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

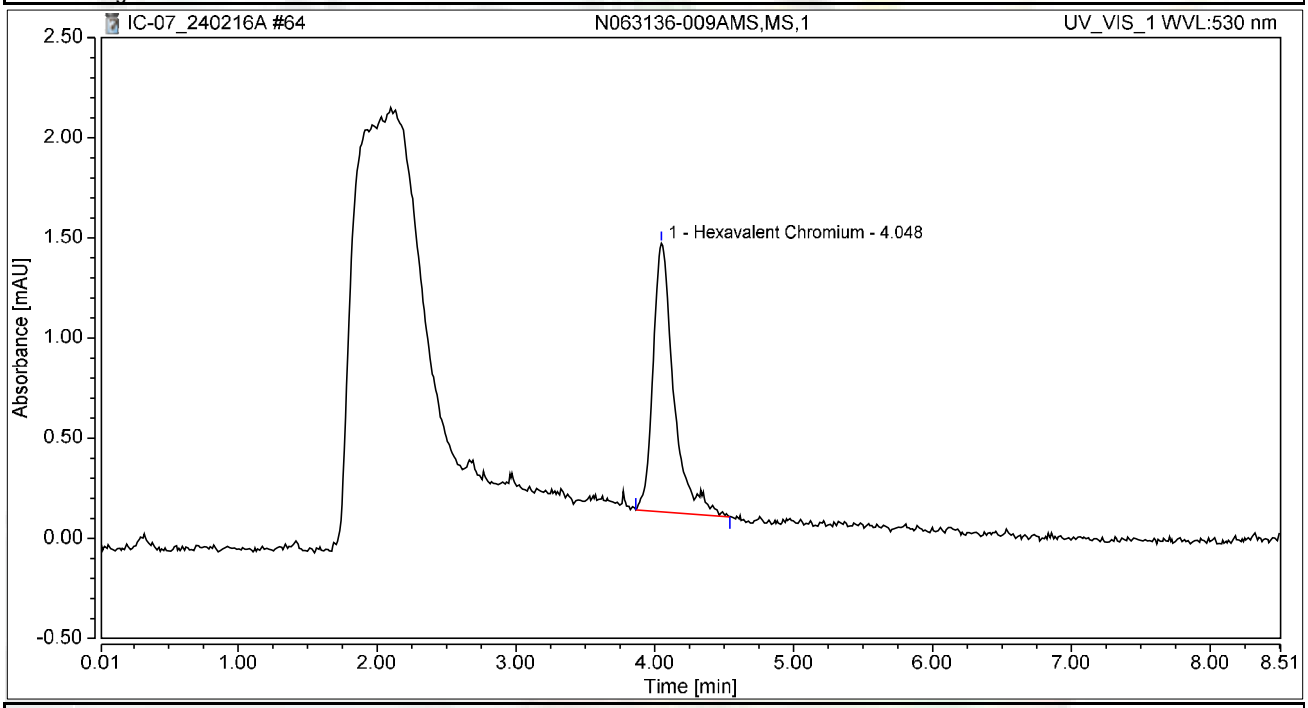
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-009AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 18:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

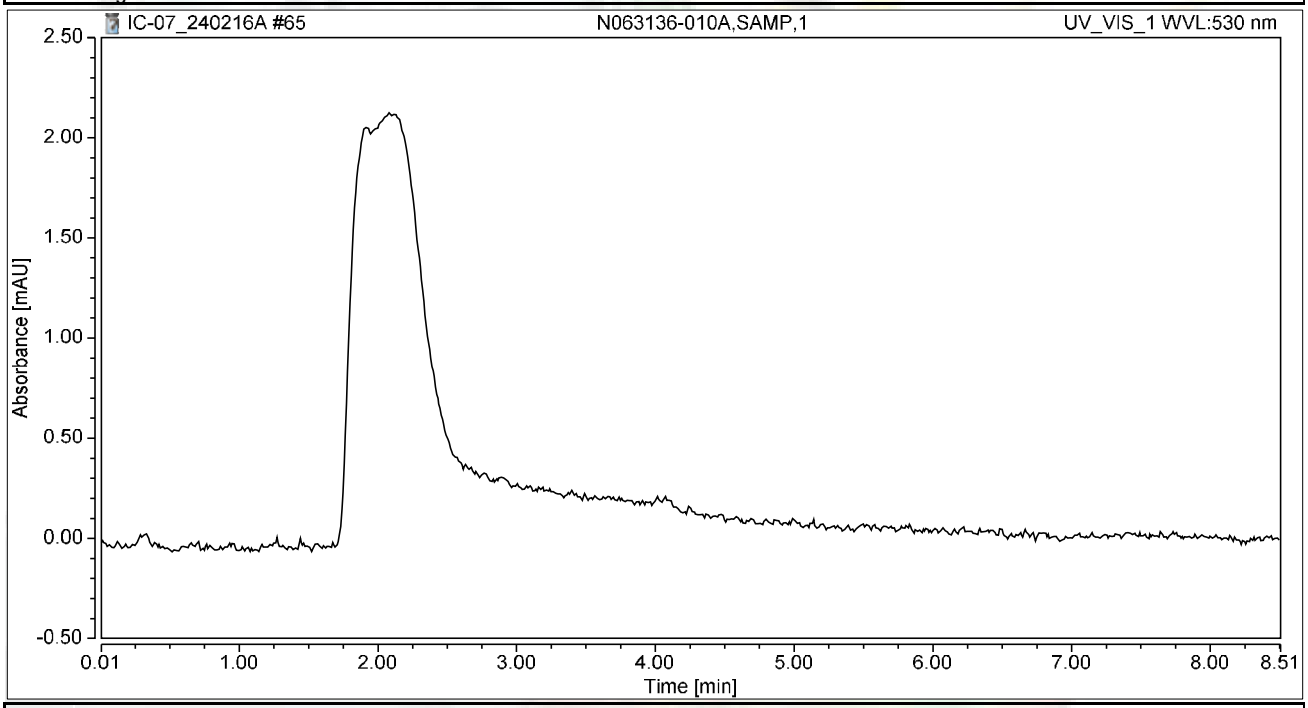
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.232	1.340	100.00	100.00	1.0770
Total:			**0.232**	**1.340**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-010A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 18:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

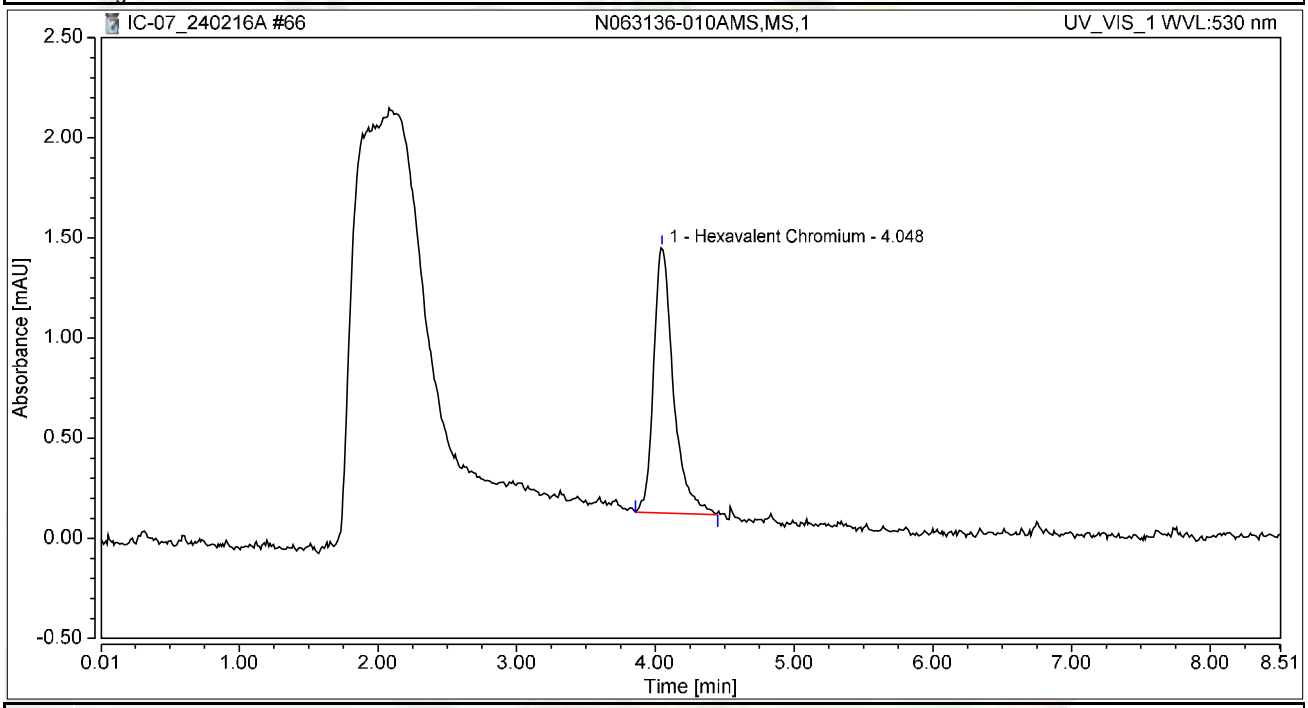
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-010AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 18:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

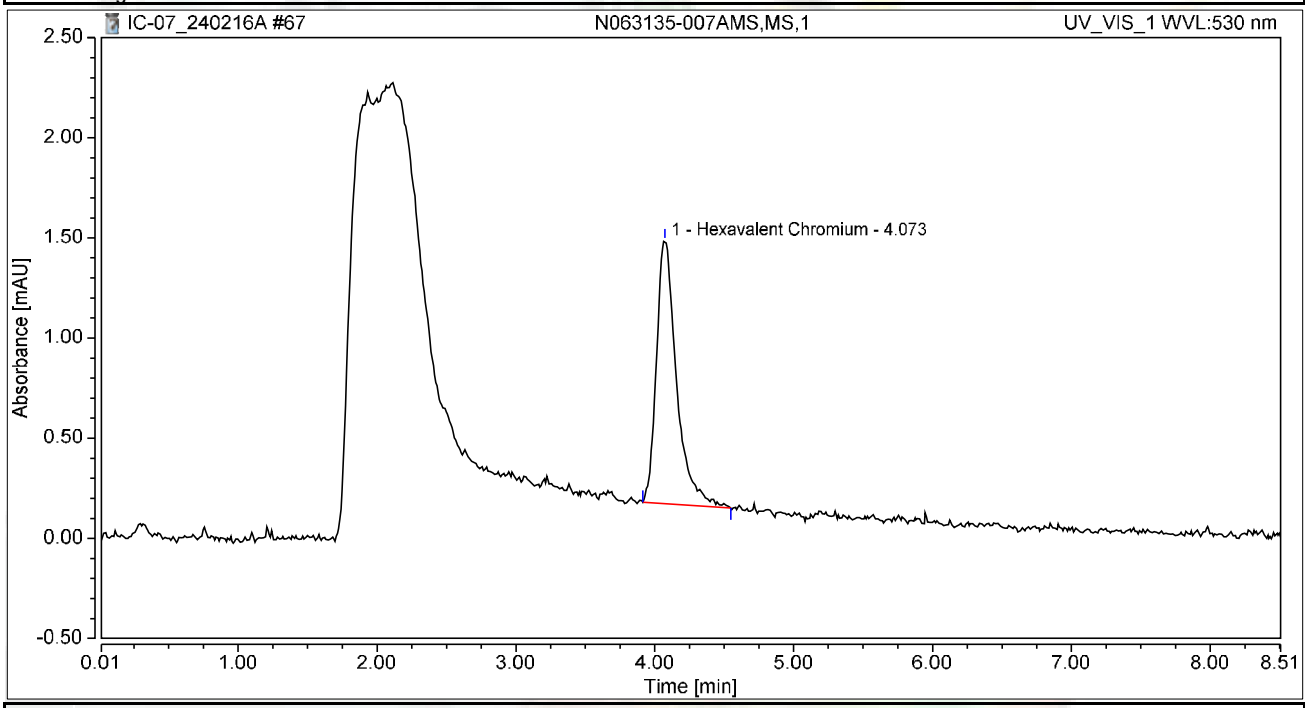
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.219	1.325	100.00	100.00	1.0189
Total:			**0.219**	**1.325**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-007AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 18:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

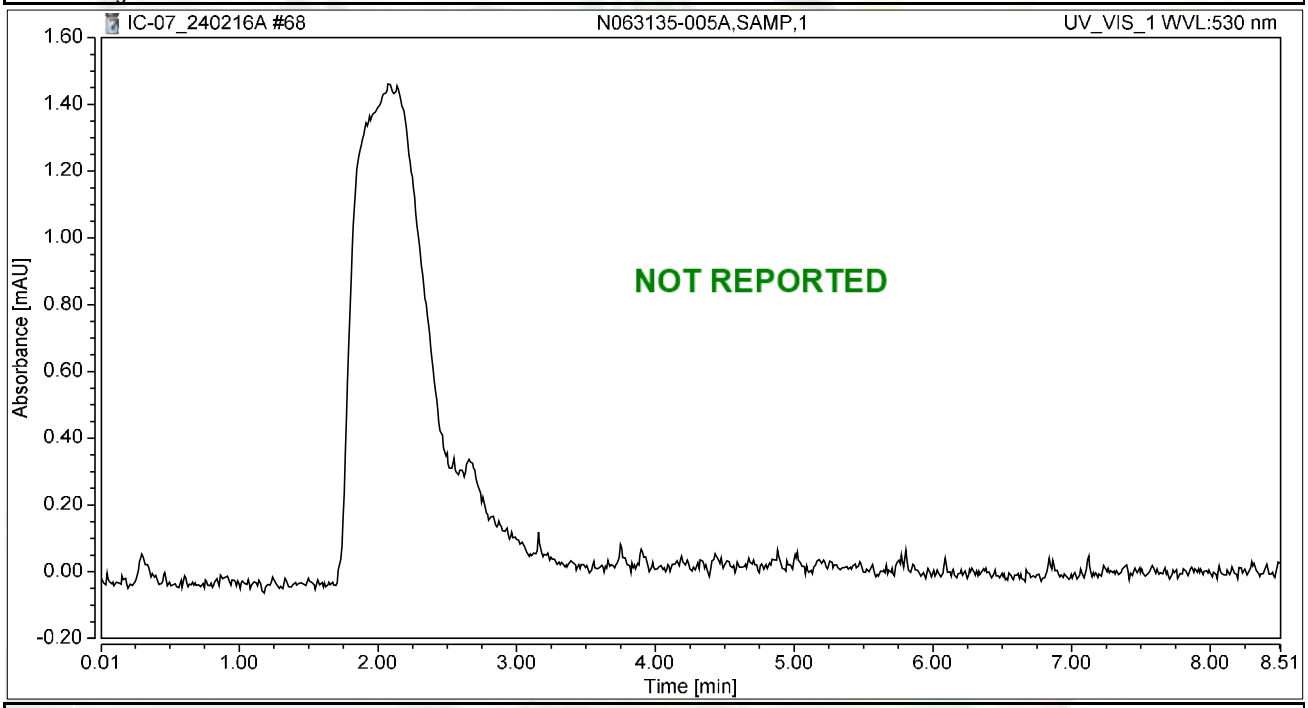
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.073	0.220	1.313	100.00	100.00	1.0246
Total:			**0.220**	**1.313**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 18:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

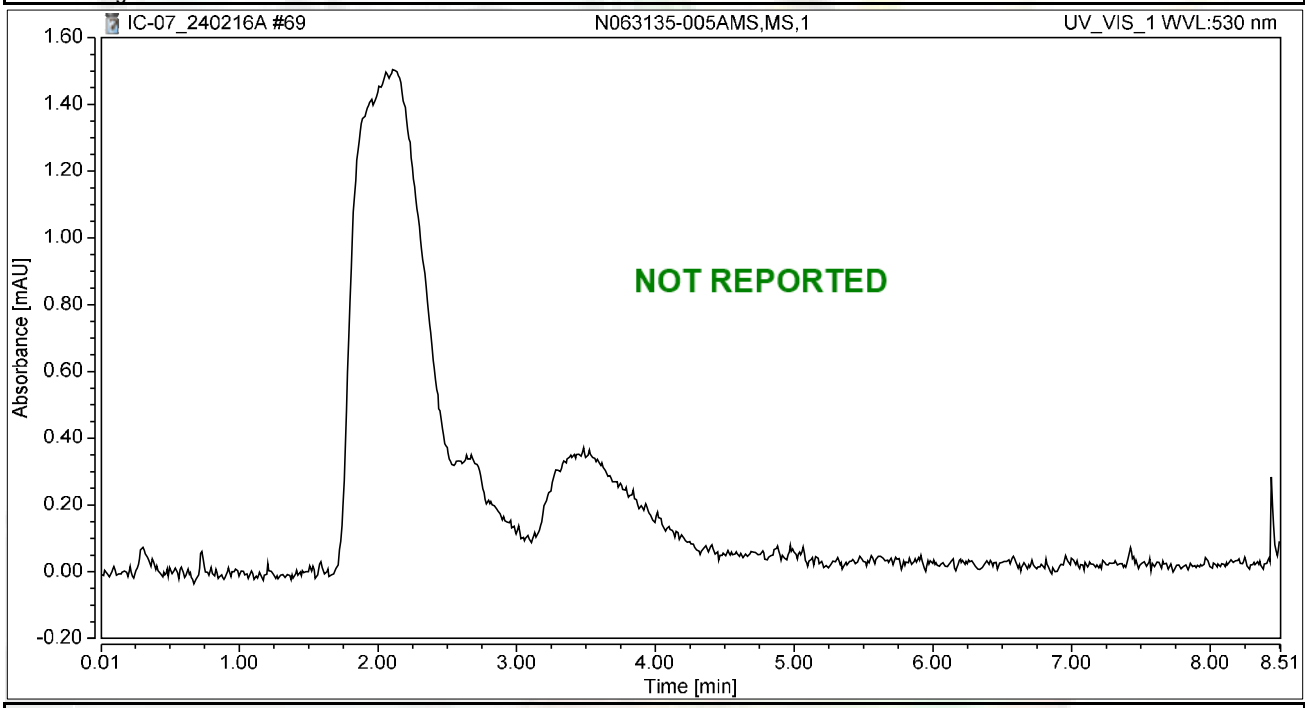
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 18:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

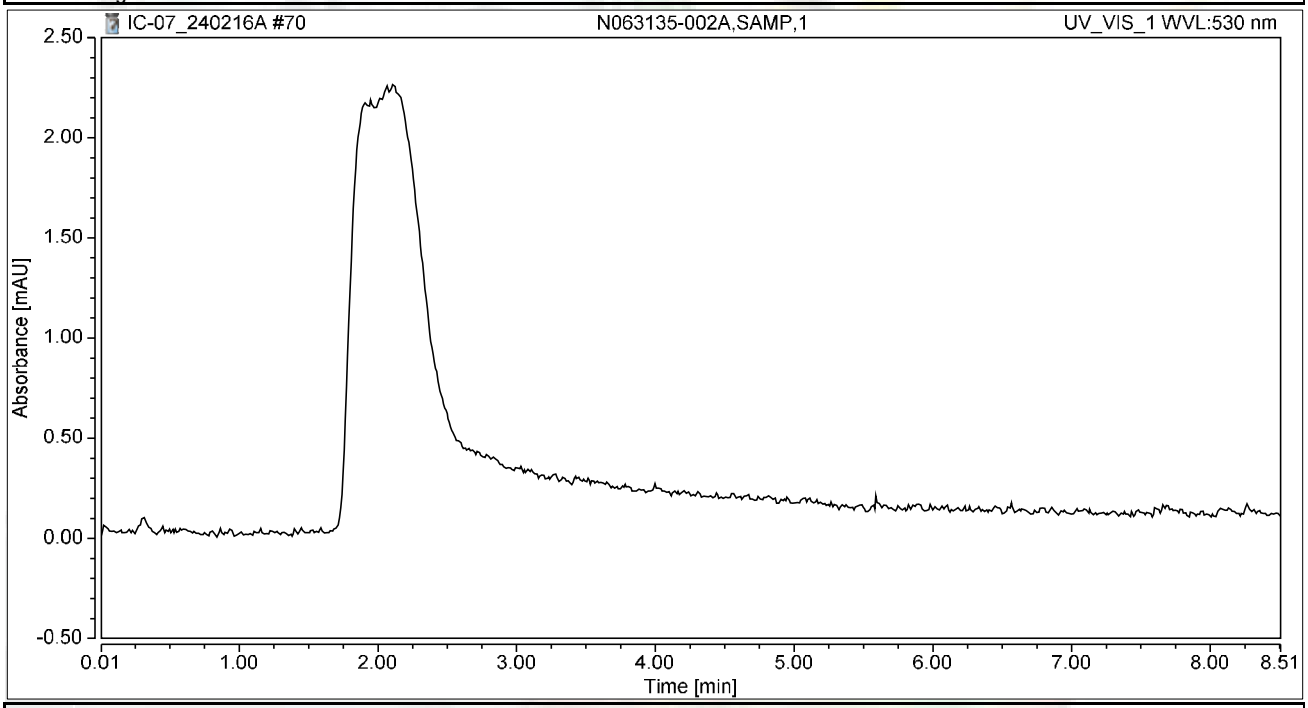
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 19:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

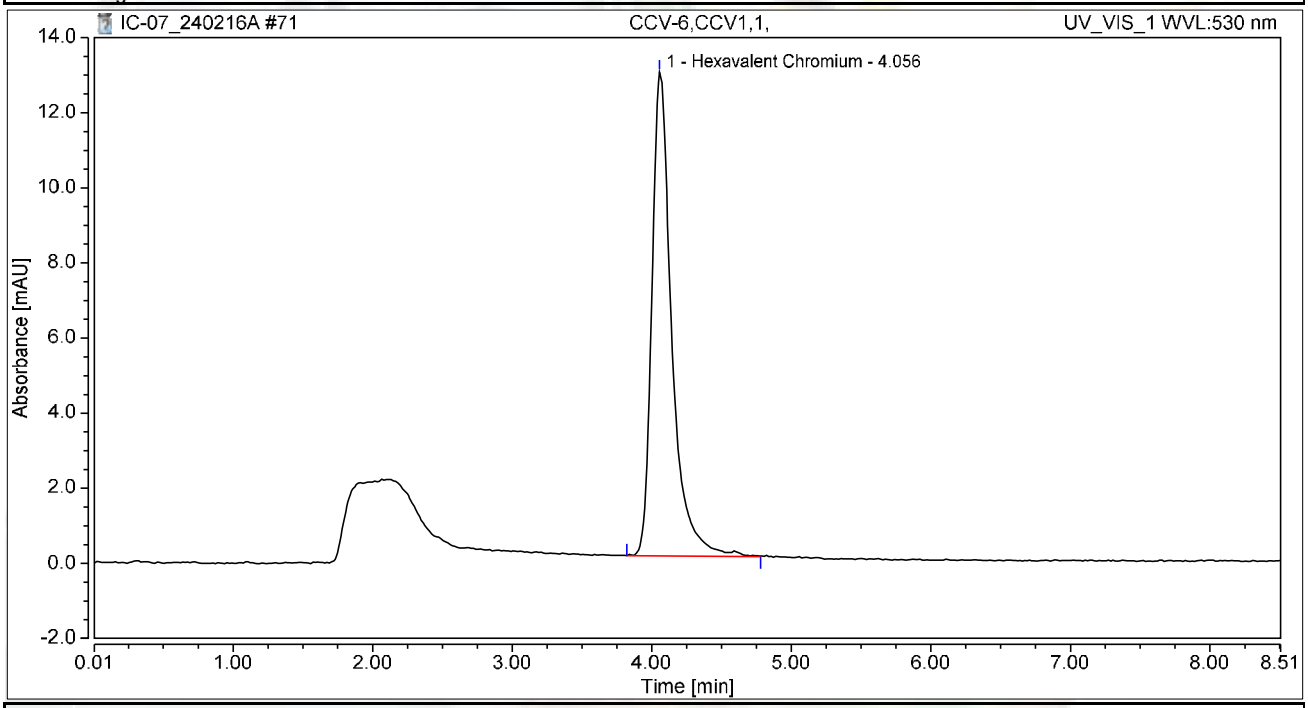
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 19:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

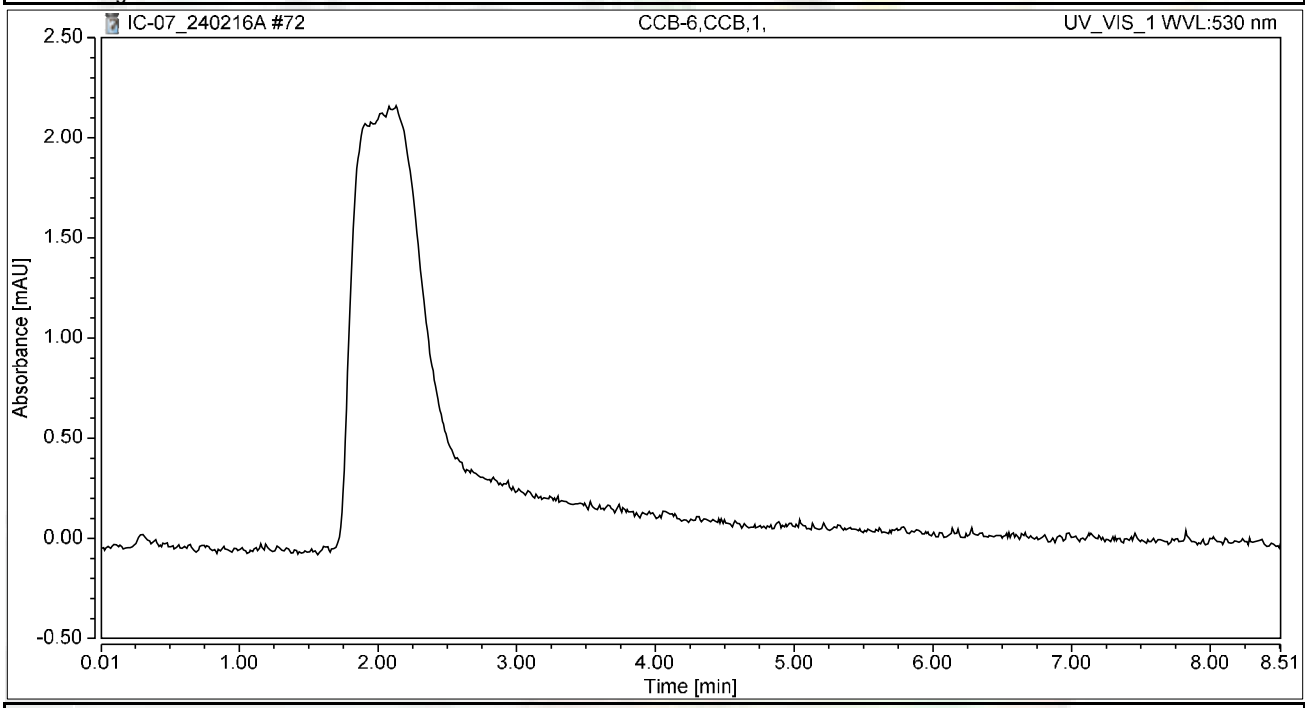
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	2.132	12.881	100.00	100.00	9.9123
Total:			**2.132**	**12.881**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 19:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

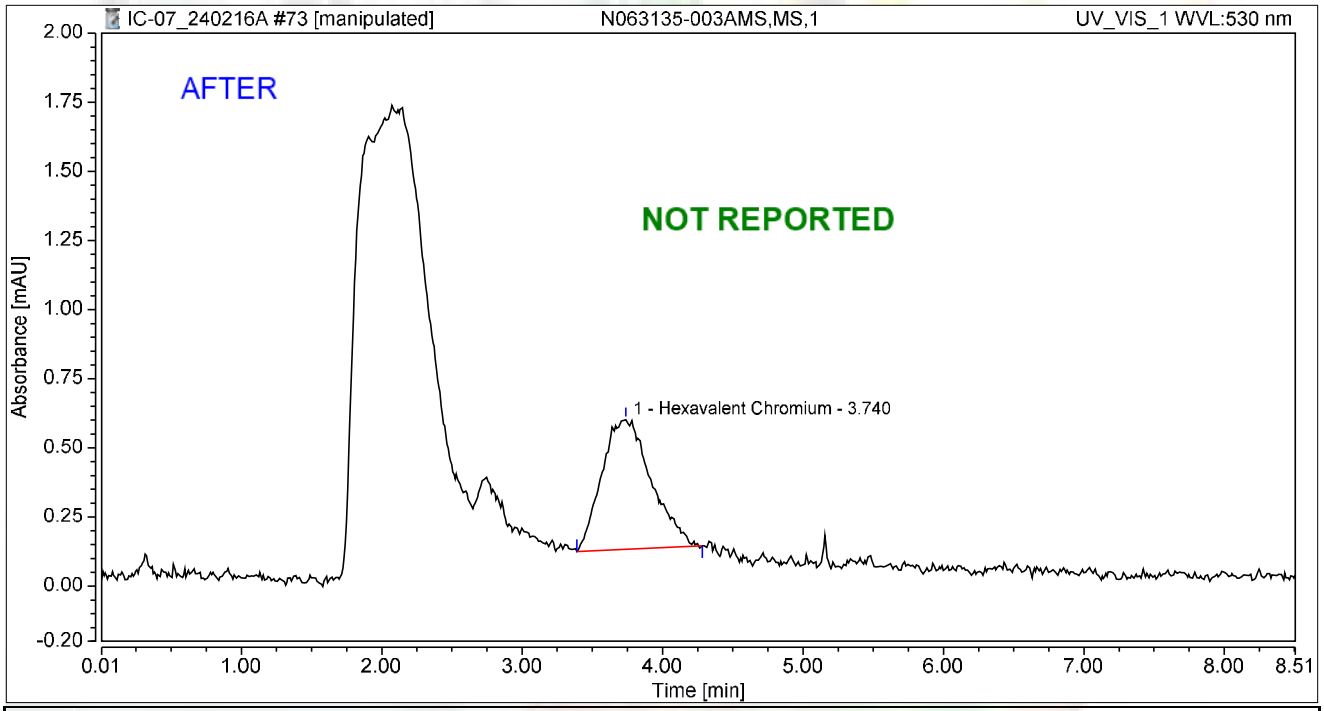
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 19:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

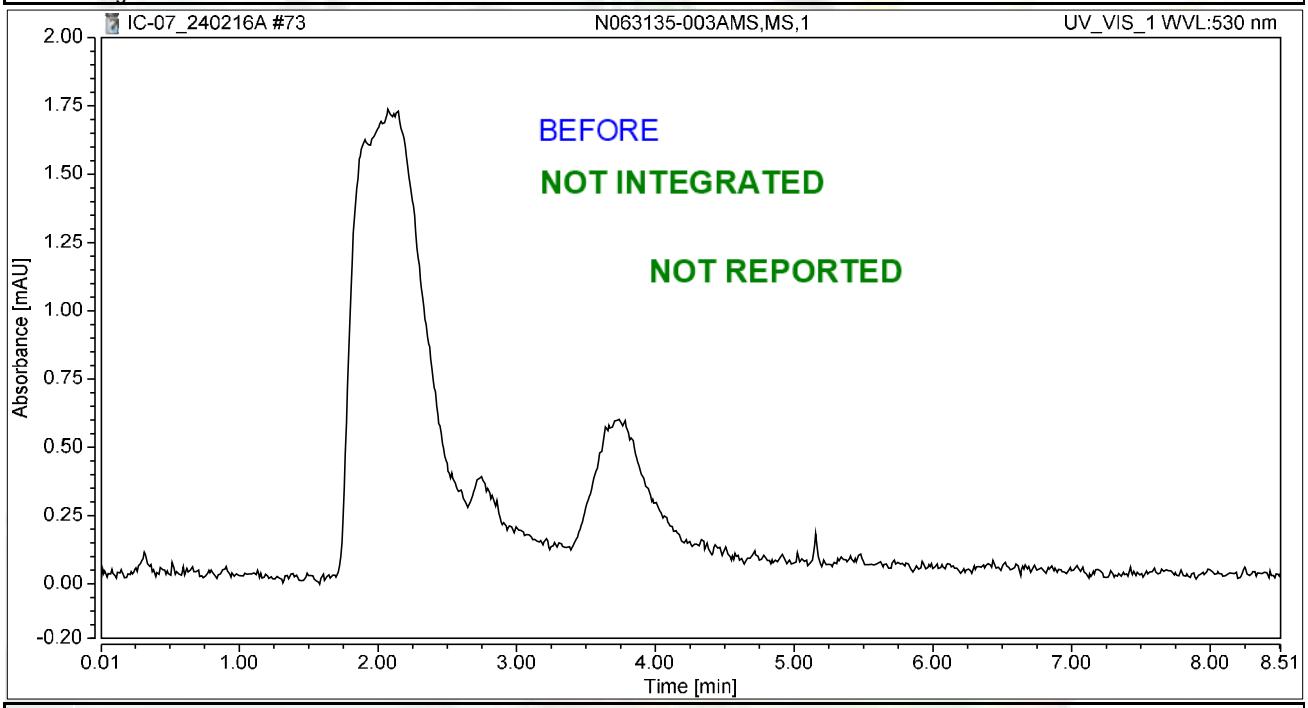
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.740	0.192	0.470	100.00	100.00	0.8920
Total:			**0.192**	**0.470**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 19:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

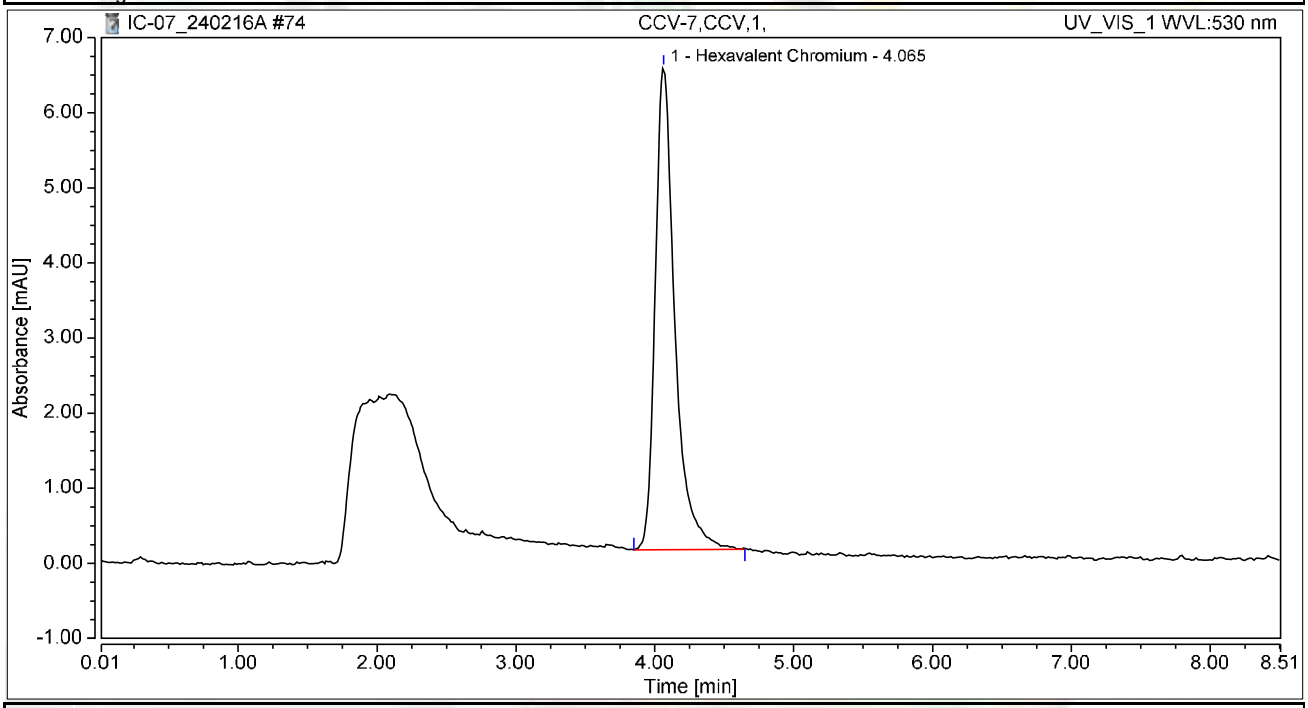
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 19:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

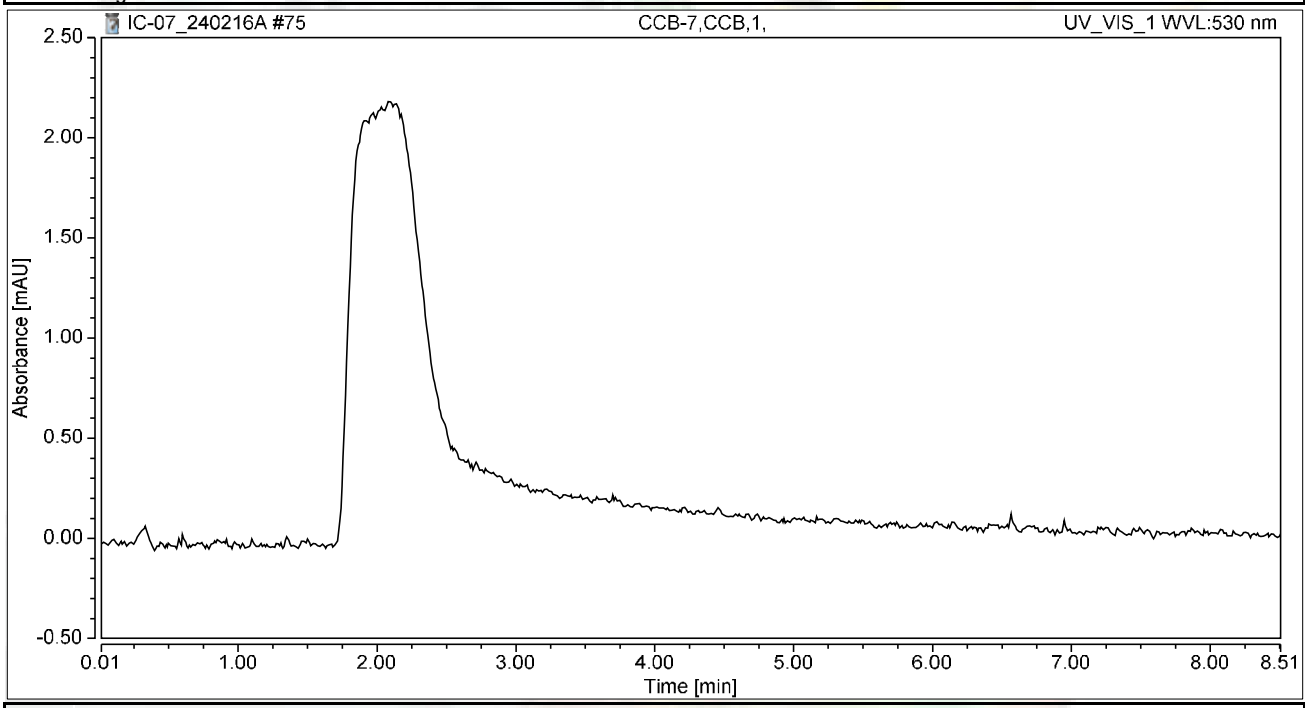
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	1.055	6.425	100.00	100.00	4.9048
Total:			**1.055**	**6.425**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 19:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

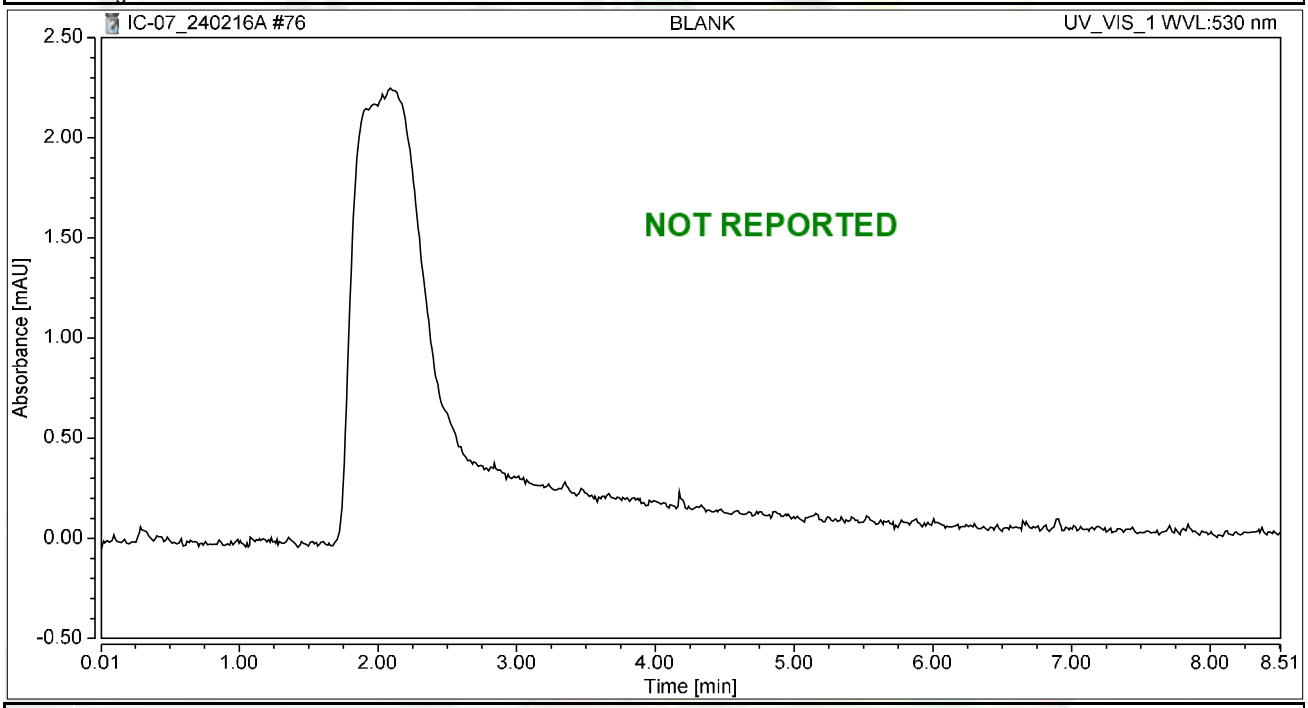
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 20:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

EPA 300.0

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R181597
ASSET #: N063135

Instrument ID: IC-08
Analyst: RBA
Date Analyzed: 2/16/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	x		
2. Matrix / units correct	x		
3. Is QC present and complete?	x		
4. Are analytical results correct? (dilutions,calculations)	x		
5. Is first level review correct and complete?	x		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 2/28/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: GROUNDWATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the orignal sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N063135-001C** concentration in mg/L is calculated as follows:

Nitrate, mg/L = 0.027 * 10

= 0.27

Since PQL is ~~0.05~~ 0.5 mg/L,

Nitrate, mg/L = ND

Reviewed by:

dlRocha 3/4/2024

ANALYSIS RUN LOG

Sequence: IC-08_240124A
Operator: IC-05
Printed: 1/24/2024 5:54:19 PM

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 25
Created: 1/24/2024 9:39:27 AM by IC-05
Last Update: 1/24/2024 11:49:06 AM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240124	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240124	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240124	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240124	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240124	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240124	Finished
8	ICV,ICV,1	Unknown	9	1000.0	Anions Default	EPA 300_0_240124	Finished
9	ICB,ICB,1	Unknown	10	1000.0	Anions Default	EPA 300_0_240124	Finished
10	MB-H2O,MBLK,1	Unknown	11	1000.0	Anions Default	EPA 300_0_240124	Finished
11	LCS-H2O,LCS,1	Unknown	12	1000.0	Anions Default	EPA 300_0_240124	Finished
12	N062498-007A,SAMP,5	Unknown	13	1000.0	Anions Default	EPA 300_0_240124	Finished
13	N062498-007ADUP,DUP,5	Unknown	14	1000.0	Anions Default	EPA 300_0_240124	Finished
14	N062498-007AMS,MS,5	Unknown	15	1000.0	Anions Default	EPA 300_0_240124	Finished
15	N062498-007AMSD,MSD,5	Unknown	16	1000.0	Anions Default	EPA 300_0_240124	Finished
16	LCS-2,LCS,1	Unknown	17	1000.0	Anions Default	EPA 300_0_240124	Finished
17	MB-2,MBLK,1	Unknown	18	1000.0	Anions Default	EPA 300_0_240124	Finished
18	N062498-007A,SAMP,5	Unknown	19	1000.0	Anions Default	EPA 300_0_240124	Finished
19	N062498-007ADUP,DUP,5	Unknown	20	1000.0	Anions Default	EPA 300_0_240124	Finished
20	CCV-1,CCV,1	Unknown	21	1000.0	Anions Default	EPA 300_0_240124	Finished
21	CCB-1,CCB,1	Unknown	22	1000.0	Anions Default	EPA 300_0_240124	Finished
22	N062498-007AMS,MS,5	Unknown	23	1000.0	Anions Default	EPA 300_0_240124	Finished
23	N062498-007AMSD,MSD,5	Unknown	24	1000.0	Anions Default	EPA 300_0_240124	Finished
24	CCV-2,CCV,1	Unknown	33	1000.0	Anions Default	EPA 300_0_240124	Finished
25	CCB-2,CCB,1	Unknown	34	1000.0	Anions Default	EPA 300_0_240124	Finished

reviewed by: 1/31/2024

Processed by:
Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)

1/24/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 25
Created: 1/24/2024 9:39:27 AM by IC-05
Last Update: 1/24/2024 11:49:06 AM by IC-05

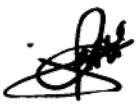
No.	Name	Inj. Date/Time	Comment
1	BLANK	1/24/2024 9:41:36 AM	BLANK
2	Std - 0	1/24/2024 9:56:54 AM	IBLANK
3	Std - 1	1/24/2024 10:32:56 AM	STD-LOW
4	Std - 2	1/24/2024 10:48:14 AM	STD
5	Std - 3	1/24/2024 11:03:32 AM	STD
6	Std - 4	1/24/2024 11:18:50 AM	STD
7	Std - 5	1/24/2024 11:34:08 AM	STD-HIGH
8	ICV,ICV,1	1/24/2024 11:49:26 AM	ICV, IWST-240123B
9	ICB,ICB,1	1/24/2024 12:04:44 PM	CCB
10	MB-H2O,MBLK,1	1/24/2024 12:20:02 PM	MB
11	LCS-H2O,LCS,1	1/24/2024 12:35:19 PM	LCS, IWST-240123B
12	N062498-007A,SAMP,5	1/24/2024 12:50:38 PM	SAMP,2>10mL,
13	N062498-007ADUP,DUP,5	1/24/2024 1:05:56 PM	DUP,2>10mL,
14	N062498-007AMS,MS,5	1/24/2024 1:21:14 PM	MS,2>10mL,
15	N062498-007AMSD,MSD,5	1/24/2024 1:36:33 PM	MSD,2>10mL,
16	LCS-2,LCS,1	1/24/2024 1:51:51 PM	LCS, IWST-240123B
17	MB-2,MBLK,1	1/24/2024 2:07:09 PM	MB
18	N062498-007A,SAMP,5	1/24/2024 2:22:27 PM	SAMP,2>10mL,
19	N062498-007ADUP,DUP,5	1/24/2024 2:37:45 PM	DUP,2>10mL,
20	CCV-1,CCV,1	1/24/2024 2:53:03 PM	CCV, IWST-240123A
21	CCB-1,CCB,1	1/24/2024 3:08:21 PM	CCB
22	N062498-007AMS,MS,5	1/24/2024 3:23:40 PM	MS,2>10mL,
23	N062498-007AMSD,MSD,5	1/24/2024 3:38:58 PM	MSD,2>10mL,
24	CCV-2,CCV,1	1/24/2024 3:54:16 PM	CCV, IWST-240123A
25	CCB-2,CCB,1	1/24/2024 4:09:34 PM	CCB

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 20
Created: 2/15/2024 10:58:10 AM by IC-05
(Modified, not saved)

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240124	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240124	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240124	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240124	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240124	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240124	Finished
8	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
9	CCV-1,CCV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
10	CCB-1,CCB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
11	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
12	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
13	N063135-001C,SAMP,10	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
14	N063135-003C,SAMP,10	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
15	N063135-005C,SAMP,10	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
16	N063135-001CDUP,DUP,10	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
17	N063135-001CMS,MS,10	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
18	N063135-001CMSD,MSD,10	Unknown	6	1000.0	Anions Default	EPA 300_0_240124	Finished
19	CCV-2,CCV,1	Unknown	7	1000.0	Anions Default	EPA 300_0_240124	Finished
20	CCB-2,CCB,1	Unknown	8	1000.0	Anions Default	EPA 300_0_240124	Finished

reviewed by: 2/21/2024

Processed by:



2/18/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
Created: 2/15/2024 10:58:10 AM by IC-05
#Samples: 20
(Modified, not saved)

No.	Name	Inj. Date/Time	Comment
1	BLANK	1/24/2024 9:41:36 AM	BLANK
2	Std - 0	1/24/2024 9:56:54 AM	IBLANK
3	Std - 1	1/24/2024 10:32:56 AM	STD-LOW
4	Std - 2	1/24/2024 10:48:14 AM	STD
5	Std - 3	1/24/2024 11:03:32 AM	STD
6	Std - 4	1/24/2024 11:18:50 AM	STD
7	Std - 5	1/24/2024 11:34:08 AM	STD-HIGH
8	BLANK	2/16/2024 7:23:11 AM	BLANK
9	CCV-1,CCV,1	2/16/2024 7:38:29 AM	CCV, IWST-240216A
10	CCB-1,CCB,1	2/16/2024 7:53:47 AM	CCB
11	MB-H2O,MBLK,1	2/16/2024 8:09:05 AM	MB
12	LCS-H2O,LCS,1	2/16/2024 8:24:23 AM	LCS, IWST-240216B
13	N063135-001C,SAMP,10	2/16/2024 9:41:09 AM	SAMP,1>10mL,
14	N063135-003C,SAMP,10	2/16/2024 9:56:27 AM	SAMP,1>10mL,
15	N063135-005C,SAMP,10	2/16/2024 10:11:45 AM	SAMP,1>10mL,
16	N063135-001CDUP,DUP,10	2/16/2024 10:27:03 AM	DUP,1>10mL,
17	N063135-001CMS,MS,10	2/16/2024 10:42:21 AM	MS,1>10mL,
18	N063135-001CMSD,MSD,10	2/16/2024 10:57:39 AM	MSD,1>10mL,
19	CCV-2,CCV,1	2/16/2024 11:12:58 AM	CCV, IWST-240216A
20	CCB-2,CCB,1	2/16/2024 11:28:16 AM	CCB

INITIAL CALIBRATION DATA SUMMARY

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 1/24/2024

Initial Calibration:

Nitrate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0159	0.0804	0.1690	0.4238	0.8850	1.000
Measured, in mg/L	0.000000	0.067900	0.249500	0.499300	1.217000	2.516400	
Relative Error (%RE)		35.8%		-0.1%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712E

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICV** SampType: **ICV** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **181597**
Client ID: **ICV** Batch ID: **R181597** TestNo: **EPA 300.0** Analysis Date: **1/24/2024** SeqNo: **5693575**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.226	0.050	1.250	0	98.1	90	110				

Sample ID: **CCV-1** SampType: **CCV** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **181597**
Client ID: **CCV** Batch ID: **R181597** TestNo: **EPA 300.0** Analysis Date: **2/16/2024** SeqNo: **5693577**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.216	0.050	1.250	0	97.3	90	110				

Sample ID: **CCV-2** SampType: **CCV** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **181597**
Client ID: **CCV** Batch ID: **R181597** TestNo: **EPA 300.0** Analysis Date: **2/16/2024** SeqNo: **5693587**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.236	0.050	1.250	0	98.9	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181597**
Client ID: **ICB**	Batch ID: **R181597**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5693576**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181597**
Client ID: **CCB**	Batch ID: **R181597**	TestNo: **EPA 300.0**		Analysis Date: **2/16/2024**	SeqNo: **5693578**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **181597**
Client ID: **CCB**	Batch ID: **R181597**	TestNo: **EPA 300.0**		Analysis Date: **2/16/2024**	SeqNo: **5693588**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/16/2024

Sample Name		Retention Time	Evaluation
ICV	Nitrate	6.727	
CCV-1	Nitrate	6.673	
CCV-2	Nitrate	6.560	

Average 6.617
Applied RT Window 6.417 - 6.817

MB-R181597_NO3	Nitrate	N.A.	N.A.
LCS-R181597_NO3	Nitrate	6.700	PASS
N063135-001C	Nitrate	6.620	PASS
N063135-003C	Nitrate	N.A.	N.A.
N063135-005C	Nitrate	N.A.	N.A.
N063135-001CDUP	Nitrate	N.A.	N.A.
N063135-001CMS	Nitrate	6.577	PASS
N063135-001CMSD	Nitrate	6.593	PASS

Reviewed by:

dMRocha 3/4/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): 10/5/2022, 12/14/2022, 3/22/2023,7/10/2023; 10/3/2023 & 11/14/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: mg/L

Instrument Name: **IC-08 & IC-09**

Datafile IC-08 221005A #24 IC-08 221214A #30 IC-08 230322A #35 IC-08 230710A #13 IC-09 231003A #14 IC-08 231114A #24 IC-09 231114A #19

Analyte	#1	#2	#3	#4	#5	#6	#7	Spike Conc., mg/L	SD	$t_{(n-1)}$ value	MDLs	MDL	PQL
Fluoride	0.100	0.103	0.108	0.118	0.110	0.098	0.126	0.10	0.0101	3.143	**0.0318**	**0.0318**	0.10
Chloride	0.480	0.418	0.472	0.653	0.624	0.587	0.622	0.50	0.0922	3.143	**0.2898**	**0.2898**	0.50
Nitrite	0.068	0.061	0.060	0.071	0.063	0.061	0.070	0.05	0.0047	3.143	**0.0149**	**0.0149**	0.05
Bromide	0.526	0.502	0.509	0.522	0.536	0.527	0.520	0.50	0.0116	3.143	**0.0364**	**0.0364**	0.50
Nitrate	0.073	0.058	0.059	0.073	0.074	0.068	0.073	0.05	0.0068	3.143	**0.0215**	**0.0240**	0.05
Phosphate	0.112	0.096	0.114	0.120	0.130	0.093	0.124	0.10	0.0138	3.143	**0.0433**	**0.0433**	0.10
Sulfate	0.501	0.609	0.638	0.401	0.704	0.620	0.697	0.50	0.1092	3.143	**0.3432**	**0.3432**	0.50

METHOD DETECTION LIMIT (Blanks)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Analyte	MDLb	# of Records
Fluoride	0	63
Chloride	0.1456	80
Nitrite	0.0147	64
Bromide	0	18
Nitrate	0.0240	132
Phosphate	0.0237	34
Sulfate	0.2579	107

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

EPA 6010B
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106859
ASSET #: N063135

Instrument ID: ICP-03
Analyst: DBJ
Date Analyzed: 2/16/2024

Method:

[X] EPA 6010B / 200.7
[ ] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.	X			X		
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

%Rec of Fe in N063076-002B-MS1/MSD1 failed, low bias. However, LCS passed criteria.

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 02222024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in ug/L , in the original sample as follows:

Iron , ug/L = A * DF * PF *CF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL
CF= Conversion Factor from mg/L to ug/L, 1000

For Sample **N063135-001B** , the concentration i ug/L is calculated as follows:

Iron , ug/L = 3.48643 * 1 * (25/25) * 1000

Iron , ug/L = 3486.43

Reporting results in two significant figures,

Iron , ug/L = 3500

Reviewed by:

dMocha 3/3/2024

% RSD SUMMARY

RSD SUMMARY: 240216B

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	Fe	0	0.5	15	PASS
Standard1	ICAL	1	Fe	0.02	2.96	15	PASS
Standard2	ICAL	1	Fe	0.05	1.49	15	PASS
Standard3	ICAL	1	Fe	2	0.04	15	PASS
Standard4	ICAL	1	Fe	5	0.08	15	PASS
Standard5	ICAL	1	Fe	7.5	0.03	15	PASS
Standard6	ICAL	1	Fe	10	0.07	15	PASS
Standard7	ICAL	1	Fe	20	0.06	15	PASS
ICV	ICV	1	Fe	10.15	0.13	15	PASS
ICB	ICB	1	Fe	0	16.51	15	<PQL
LLICV1	CCV1	1	Fe	0.02	1.18	20	PASS
ICSA1	ICSA	1	Fe	174.26	0.04	15	PASS
ICSAB1	ICSAB	1	Fe	176.97	0.03	15	PASS
RINSE	RINSE	1	Fe	0	709.47	15	<PQL
CCV1	CCV	1	Fe	10.11	0.04	15	PASS
CCB1	CCB	1	Fe	0	19.82	15	<PQL
MB-106859	MBLK	1	Fe	0	9.87	15	PASS
LCS1-106859	LCS	1	Fe	0.28	0.47	15	PASS
N063053-002C	SAMP	1	Fe	0.03	3.1	15	PASS
N063076-001B	SAMP	1	Fe	0.94	0.17	15	PASS
N063076-002B	SAMP	1	Fe	0.93	0.39	15	PASS
N063076-002B	SAMP	5	Fe	0.2	0.43	15	PASS
N063076-002B-PS	PS	1	Fe	1.02	0.34	15	PASS
N063076-002B-MS1	MS	1	Fe	0.99	0.39	15	PASS
N063076-002B-MSD1	MSD	1	Fe	1	0.48	15	PASS
N063076-003B	SAMP	1	Fe	0.93	0.29	15	PASS
CCV2	CCV	1	Fe	10.12	0.08	15	PASS
CCB2	CCB	1	Fe	-0.01	2.85	15	PASS
N063103-010B	SAMP	1	Fe	0.02	4.25	15	PASS
N063135-001B	SAMP	1	Fe	3.49	0.07	15	PASS
N063135-003B	SAMP	1	Fe	3.03	0.11	15	PASS
N063135-005B	SAMP	1	Fe	1.42	0.31	15	PASS
LCS1-106859	LCS	1	Fe	0.09	0.21	15	PASS
CCV3	CCV	1	Fe	10.11	0.05	15	PASS
CCB3	CCB	1	Fe	-0.01	2.48	15	PASS
ICSA2	ICSA	1	Fe	173.96	0.05	15	PASS
ICSAB2	ICSAB	1	Fe	176.96	0.02	15	PASS
RINSE	RINSE	1	Fe	0.01	90.28	15	<PQL
RINSE	RINSE	1	Fe	0	21.19	15	<PQL
CCV4	CCV	1	Fe	10.1	0.11	15	PASS
CCB4	CCB	1	Fe	-0.01	6.23	15	PASS
RINSE	RINSE	1	Fe	0	30.98	15	<PQL

RSD SUMMARY: 240216B

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CCV5	CCV	1	Fe	10.05	0.2	15	PASS
CCB5	CCB	1	Fe	-0.01	5.1	15	PASS
ICSA3	ICSA	1	Fe	173.9	0.02	15	PASS
ICSAB3	ICSAB	1	Fe	176.31	0.05	15	PASS
ICSA3	ICSA	1	Fe	183.11	0.02	15	PASS
ICSAB3	ICSAB	1	Fe	164.97	0.02	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240216B

Instrument ID: ICP-03

STANDARD CODE	
Standard1	MWST-240105M, 0.5<50mL
Standard2	MWST-240105N
Standard3	MWST-240105O, 5<50mL
Standard4	MWST-240105O,12.5<50mL
Standard5	MWST-240105O, 15<40mL
Standard6	MWST-240105O, 25<50mL
Standard7	MWST-240105O
ICV	MWST-240105AE
CCV	MWST-240105O, 25<50mL
ICSA/ICSAB	MWST-240105P / MWST-240105Q
Int. Std. (Y)	MWST-240105B
PS Spike	MWST-240105X / Y/ Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	02/16/2024	01:42:47 PM
2	Standard1	ICAL	1	02/16/2024	01:47:00 PM
3	Standard2	ICAL	1	02/16/2024	01:51:14 PM
4	Standard3	ICAL	1	02/16/2024	01:55:28 PM
5	Standard4	ICAL	1	02/16/2024	01:59:15 PM
6	Standard5	ICAL	1	02/16/2024	02:04:01 PM
7	Standard6	ICAL	1	02/16/2024	02:08:44 PM
8	Standard7	ICAL	1	02/16/2024	02:12:59 PM
310	ICV	ICV	1	02/16/2024	02:21:05 PM
1	ICB	ICB	1	02/16/2024	02:25:25 PM
2	LLICV1	CCV1	1	02/16/2024	02:29:39 PM
9	ICSA1	ICSA	1	02/16/2024	02:33:52 PM
10	ICSAB1	ICSAB	1	02/16/2024	02:38:55 PM
299	RINSE	RINSE	1	02/16/2024	02:47:49 PM
71	MB-106828	MBLK	1	02/16/2024	02:52:07 PM
72	LCS-106828	LCS	1	02/16/2024	03:07:58 PM
73	N063078-001A	SAMP	5	02/16/2024	03:12:44 PM
74	N063078-002A	SAMP	5	02/16/2024	03:18:05 PM
75	N063078-003A	SAMP	5	02/16/2024	03:21:50 PM
76	N063078-004A	SAMP	5	02/16/2024	03:27:11 PM
77	N063078-005A	SAMP	5	02/16/2024	03:31:25 PM
78	N063078-006A	SAMP	5	02/16/2024	03:35:40 PM
79	N063078-007A	SAMP	5	02/16/2024	03:41:01 PM
7	CCV1	CCV	1	02/16/2024	03:46:17 PM
1	CCB1	CCB	1	02/16/2024	03:50:33 PM
80	MB-106859	MBLK	1	02/16/2024	03:54:47 PM
81	LCS1-106859	LCS	1	02/16/2024	03:59:01 PM
82	N063053-002C	SAMP	1	02/16/2024	04:03:47 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
83	N063076-001B	SAMP	1	02/16/2024	04:09:10 PM
84	N063076-002B	SAMP	1	02/16/2024	04:14:31 PM
85	N063076-002B	SAMP	5	02/16/2024	04:19:52 PM
86	N063076-002B-PS	PS	1	02/16/2024	04:24:08 PM
87	N063076-002B-MS1	MS	1	02/16/2024	04:29:30 PM
88	N063076-002B-MSD1	MSD	1	02/16/2024	04:34:51 PM
89	N063076-003B	SAMP	1	02/16/2024	04:40:13 PM
7	CCV2	CCV	1	02/16/2024	04:45:35 PM
1	CCB2	CCB	1	02/16/2024	04:49:50 PM
90	N063103-010B	SAMP	1	02/16/2024	04:54:04 PM
91	N063135-001B	SAMP	1	02/16/2024	04:58:22 PM
92	N063135-003B	SAMP	1	02/16/2024	05:03:43 PM
93	N063135-005B	SAMP	1	02/16/2024	05:09:06 PM
81	LCS1-106859	LCS	1	02/16/2024	05:20:17 PM
94	MB-106860	MBLK	1	02/16/2024	05:23:59 PM
95	LCS-106860	LCS	1	02/16/2024	05:28:15 PM
96	N063053-002D	SAMP	1	02/16/2024	05:33:01 PM
97	N063103-010C	SAMP	1	02/16/2024	05:38:24 PM
98	N063103-010C	SAMP	5	02/16/2024	05:42:43 PM
7	CCV3	CCV	1	02/16/2024	05:46:57 PM
1	CCB3	CCB	1	02/16/2024	05:51:12 PM
9	ICSA2	ICSA	1	02/16/2024	05:55:25 PM
10	ICSAB2	ICSAB	1	02/16/2024	06:00:28 PM
299	RINSE	RINSE	1	02/16/2024	06:05:32 PM
99	N063103-010C-PS	PS	1	02/16/2024	06:09:51 PM
100	N063103-010C-MS	MS	1	02/16/2024	06:15:10 PM
101	N063103-010C-MSD	MSD	1	02/16/2024	06:20:29 PM
102	N063078-001A	SAMP	1	02/16/2024	06:25:48 PM
103	N063078-002A	SAMP	1	02/16/2024	06:31:18 PM
104	N063078-003A	SAMP	1	02/16/2024	06:36:07 PM
105	N063078-003A-PS	PS	1	02/16/2024	06:41:52 PM
106	N063078-003A-MS	MS	1	02/16/2024	06:47:38 PM
299	RINSE	RINSE	1	02/16/2024	06:53:24 PM
7	CCV4	CCV	1	02/16/2024	06:57:43 PM
1	CCB4	CCB	1	02/16/2024	07:01:57 PM
107	N063078-003A-MSD	MSD	1	02/16/2024	07:06:11 PM
108	N063078-005A	SAMP	1	02/16/2024	07:11:56 PM
109	N063078-006A	SAMP	25	02/16/2024	07:16:12 PM
299	RINSE	RINSE	1	02/16/2024	07:21:27 PM
7	CCV5	CCV	1	02/16/2024	07:25:46 PM
1	CCB5	CCB	1	02/16/2024	07:30:01 PM
9	ICSA3	ICSA	1	02/16/2024	07:34:14 PM
10	ICSAB3	ICSAB	1	02/16/2024	07:39:16 PM
9	ICSA3	ICSA	1	02/16/2024	07:48:45 PM
10	ICSAB3	ICSAB	1	02/16/2024	07:56:23 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/16/2024 11:58:48 AM**
Prep End Date: **2/16/2024 3:50:00 PM**
Prep Batch **106859** Prep Code:**3010_W_DISS**

Reviewed/ Date: dlRocha 3/3/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-52**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS1-106859	Aqueous		25	☐	25	1.000		
LCS2-106859	Aqueous	<2	25	☐	25	1.000		
MB-106859	Aqueous		25	☐	25	1.000		
N062388-003A	Water		25	☐	25	1.000		
N062388-004A	Water		25	☐	25	1.000		
N063053-002C REDIGEST	Water	<2	25	☐	25	1.000		
N063076-001B	Water	<2	25	☐	25	1.000		
N063076-002B	Water	<2	25	☐	25	1.000		
N063076-002B-MS1	Water	<2	25	☐	25	1.000		
N063076-002B-MSD1	Water	<2	25	☐	25	1.000		
N063076-003B	Water	<2	25	☐	25	1.000		
N063103-010B	Surface Water	<2	25	☐	25	1.000		
N063103-010B-MS2	Surface Water	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15257	HYDROCHLORIC ACID
16149	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MSST-231025E	Sodium	LCS,MS,MSD	0.05
MSST-231025F	Potassium	LCS,MS,MSD	0.05
MSST-231130A	Strontium	LCS,MS,MSD	0.125
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/16/2024 11:58:48 AM**
Prep End Date: **2/16/2024 3:50:00 PM**
Prep Batch **106859** Prep Code:**3010_W_DISS**

Reviewed/ Date: dMocha 3/3/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-52**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063103-010B-MSD2	Surface Water	<2	25	☐	25	1.000		
N063135-001B	Groundwater	<2	25	☐	25	1.000		
N063135-003B	Groundwater	<2	25	☐	25	1.000		
N063135-005B	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15257	HYDROCHLORIC ACID
16149	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MSST-231025E	Sodium	LCS,MS,MSD	0.05
MSST-231025F	Potassium	LCS,MS,MSD	0.05
MSST-231130A	Strontium	LCS,MS,MSD	0.125
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240216B

Instrument ID: ICP-03

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Iron								
CalBlk	02/16/2024	01:42:47 PM	Fe	273.952	289	0.00	mg/L	
Standard1	02/16/2024	01:47:00 PM	Fe	273.952	195	0.02	mg/L	
Standard2	02/16/2024	01:51:14 PM	Fe	273.952	562	0.05	mg/L	
Standard3	02/16/2024	01:55:28 PM	Fe	273.952	19694	2.0	mg/L	
Standard4	02/16/2024	01:59:15 PM	Fe	273.952	48803	5.0	mg/L	
Standard5	02/16/2024	02:04:01 PM	Fe	273.952	73118	7.5	mg/L	
Standard6	02/16/2024	02:08:44 PM	Fe	273.952	97032	10.0	mg/L	
Standard7	02/16/2024	02:12:59 PM	Fe	273.952	190646	20.0	mg/L	1.0000

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **ICV**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695373**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10154.533	20	10000	0	102	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **ZZZZZZ**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695375**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	17.468	20	20.00	0	87.3	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **CCV**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695387**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10109.323	20	10000	0	101	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **CCV**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695399**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10122.519	20	10000	0	101	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **CCV**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695411**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10114.003	20	10000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **ICB**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695374**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-3.201959	20									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **CCB**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695388**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-3.222568	20									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **CCB**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695400**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-5.932008	20									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **CCB**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695412**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-9.676671	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181618**
Client ID: **ICSA** Batch ID: **R181618** TestNo: **EPA 6010B** Analysis Date: **2/16/2024** SeqNo: **5695376**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	575871.413	50	500000	0	115	80	120				
Calcium	460764.994	500	500000	0	92.2	80	120				
Iron	174257.620	20	200000	0	87.1	80	120				
Magnesium	453863.156	100	500000	0	90.8	80	120				

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181618**
Client ID: **ICSAB** Batch ID: **R181618** TestNo: **EPA 6010B** Analysis Date: **2/16/2024** SeqNo: **5695377**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	576195.263	50	500000	0	115	80	120				
Calcium	464182.194	500	500000	0	92.8	80	120				
Iron	176965.574	20	200000	0	88.5	80	120				
Magnesium	456514.772	100	500000	0	91.3	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181618**
Client ID: **ICSA** Batch ID: **R181618** TestNo: **EPA 6010B** Analysis Date: **2/16/2024** SeqNo: **5695413**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	579723.631	50	500000	0	116	80	120				
Calcium	460793.167	500	500000	0	92.2	80	120				
Iron	173957.471	20	200000	0	87.0	80	120				
Magnesium	453133.486	100	500000	0	90.6	80	120				

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181618**
Client ID: **ICSAB** Batch ID: **R181618** TestNo: **EPA 6010B** Analysis Date: **2/16/2024** SeqNo: **5695414**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	592644.636	50	500000	0	119	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **181618**
Client ID: **ICSAB**	Batch ID: **R181618**	TestNo: **EPA 6010B**		Analysis Date: **2/16/2024**	SeqNo: **5695414**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	465201.655	500	500000	0	93.0	80	120				
Iron	176957.836	20	200000	0	88.5	80	120				
Magnesium	456512.413	100	500000	0	91.3	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240216B

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	1	99.96	65-125	PASS
Standard2	ICAL	1	0.99	99.32	65-125	PASS
Standard3	ICAL	1	1	99.7	65-125	PASS
Standard4	ICAL	1	0.99	98.65	65-125	PASS
Standard5	ICAL	1	0.99	98.8	65-125	PASS
Standard6	ICAL	1	0.99	98.6	65-125	PASS
Standard7	ICAL	1	0.97	97	65-125	PASS
ICV	ICV	1	0.99	99.32	65-125	PASS
ICB	ICB	1	1	100.28	65-125	PASS
LLICV1	CCV1	1	1	100.4	65-125	PASS
ICSA1	ICSA	1	0.86	86.1	65-125	PASS
ICSAB1	ICSAB	1	0.84	84.14	65-125	PASS
RINSE	RINSE	1	1.05	105.27	65-125	PASS
CCV1	CCV	1	0.99	98.87	65-125	PASS
CCB1	CCB	1	1.01	100.81	65-125	PASS
MB-106859	MBLK	1	1.01	100.77	65-125	PASS
LCS1-106859	LCS	1	1	99.9	65-125	PASS
N063053-002C	SAMP	1	0.73	72.85	65-125	PASS
N063076-001B	SAMP	1	0.79	79.06	65-125	PASS
N063076-002B	SAMP	1	0.78	78.14	65-125	PASS
N063076-002B	SAMP	5	0.89	88.78	65-125	PASS
N063076-002B-PS	PS	1	0.76	75.91	65-125	PASS
N063076-002B-MS1	MS	1	0.79	79.2	65-125	PASS
N063076-002B-MSD1	MSD	1	0.79	78.91	65-125	PASS
N063076-003B	SAMP	1	0.76	76.08	65-125	PASS
CCV2	CCV	1	0.99	98.95	65-125	PASS
CCB2	CCB	1	1.01	101.06	65-125	PASS
N063103-010B	SAMP	1	0.91	91.21	65-125	PASS
N063135-001B	SAMP	1	0.86	85.96	65-125	PASS
N063135-003B	SAMP	1	0.72	72.19	65-125	PASS
N063135-005B	SAMP	1	0.68	67.97	65-125	PASS
LCS1-106859	LCS	1	0.95	95.02	65-125	PASS
CCV3	CCV	1	0.99	98.89	65-125	PASS
CCB3	CCB	1	1.01	100.61	65-125	PASS
ICSA2	ICSA	1	0.86	85.68	65-125	PASS
ICSAB2	ICSAB	1	0.83	83.5	65-125	PASS
RINSE	RINSE	1	1.02	101.84	65-125	PASS
RINSE	RINSE	1	1.01	101.36	65-125	PASS
CCV4	CCV	1	0.98	97.52	65-125	PASS
CCB4	CCB	1	0.99	99.05	65-125	PASS

INTERNAL STANDARD: 240216B

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
RINSE	RINSE	1	1.01	101.03	65-125	PASS
CCV5	CCV	1	0.97	97.19	65-125	PASS
CCB5	CCB	1	0.99	98.93	65-125	PASS
ICSA3	ICSA	1	0.85	84.57	65-125	PASS
ICSAB3	ICSAB	1	0.83	82.58	65-125	PASS
ICSA3	ICSA	1	0.82	82.29	65-125	PASS
ICSAB3	ICSAB	1	0.83	82.79	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063135
Test Method: EPA 6010B
Analysis Date: 2/16/2024

Matrix: Groundwater
Batch No.: 106859

Instrument ID: ICP-03
Instrument Description: Perkin Elmer Avio 500Max

Comments:

Analyzed By: Diane Jetajobe

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063076-002B DT 5x	Iron	Fe	µg/L	979.0598	PASS	933.8934	4.84%	10

Reviewed by:

dMocha 3/3/2024

Note: NA - Not Applicable

02/28/24 21:46

DT_EPA 6010B_N063135_106859

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **N063076-002B-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **181618**
Client ID: **ZZZZZZ** Batch ID: **106859** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/16/2024** SeqNo: **5695395**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1016.456	20	100.0	933.9	82.6	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

LOD & PQL VERIFICATION

Analytical Method: EPA 6010B
Digestion Method: EPA 3010A
Digestion Date: 5/7/23; 5/8/23; 5/10/23
Analysis Date: 5/7-23/23
Instrument Name: ICP-03
Analyst/Technician: Nancy Sibucao / Diane Jetajobe

Matrix: WATER
Units : ppm

Analyte	MDL	LOD	ACTUAL LOD	PQL	Actual PQL	%REC
Beryllium	0.000076	0.0005	0.00047	0.001	0.00098	98
Boron	0.0086	0.05	0.04899	0.1	0.089	89
Magnesium	0.0057	0.05	0.05152	0.1	0.10	102
Silicon	0.012	0.01	0.01312	0.02	0.023	113
Chromium	0.00051	0.0005	0.00056	0.001	0.0010	102
Manganese	0.00032	0.01	0.00534	0.01	0.011	110
Iron	0.0022	0.01	0.01180	0.02	0.021	106
Cobalt	0.001	0.0013	0.00096	0.0025	0.0025	100
Nickel	0.0034	0.0025	0.00417	0.005	0.0055	110
Copper	0.0042	0.0025	0.00434	0.005	0.0044	87
Zinc	0.0007	0.005	0.00624	0.01	0.011	106
Arsenic	0.0042	0.005	0.00461	0.01	0.010	104
Selenium	0.008	0.005	0.00829	0.01	0.010	102
Molybdenum	0.0013	0.0025	0.00307	0.005	0.0053	106
Silver	0.0024	0.0013	0.00419	0.0025	0.0033	134
Cadmium	0.0016	0.0013	0.00180	0.0025	0.0026	102
Tin	0.0076	0.005	0.00563	0.010	0.0099	99
Antimony	0.0038	0.005	0.00307	0.01	0.0096	96
Barium	0.0002	0.0013	0.00124	0.0025	0.0026	104
Thallium	0.0021	0.0075	0.00656	0.015	0.015	101
Lead	0.0039	0.0025	0.00337	0.005	0.0047	94
Calcium	0.011	0.1	0.11963	0.2	0.23	113
Vanadium	0.00017	0.0013	0.00126	0.0025	0.0025	100
Aluminum	0.0089	0.025	0.02576	0.05	0.048	95
Titanium	0.004	0.005	0.00612	0.01	0.01	101

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

EPA 6020
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106888
ASSET #: N063135

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/16/2024

Method:

[ ] EPA 6010B / 200.7
[X] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)		X			X	
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

%Rec of Ba in N063136-001B-PS/MS failed, high bias. However, LCS passed criteria.
% RSD of As in LLICV failed. However, % rec passed criteria

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: —

2nd Level Reviewer LG 2/29/2024 Date:

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Groundwater

FORMULA:

Calculate the Arsenic concentration, in ug/L in the original sample as follows:

Arsenic , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063135-001B** , the concentration in ug/L is calculated as follows:

Arsenic , ug/L = 19.6178 * 1 *(25 / 25)

Arsenic , ug/L = 19.6178

Reporting results in two significant figures,

Arsenic , ug/L = 20

Reviewed by:

JRB 3/12/2024

% RSD SUMMARY

PERCENT RSD SUMMARY: 240216A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	9.639	15	PASS	0.07	8.335	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.46	4.747	15	PASS	0.48	4.091	15	PASS
Std3-5/50 ppb	ICAL	1	4.79	2.25	15	PASS	4.8	2.764	15	PASS
Std4-10/100 ppb	ICAL	1	9.78	2.571	15	PASS	9.49	2.022	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.59	0.54	15	PASS	19.47	1.458	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.44	2.146	15	PASS	39.38	0.956	15	PASS
Std7-100/1000 ppb	ICAL	1	98.14	1.351	15	PASS	99.89	0.878	15	PASS
Std8-200/2000 ppb	ICAL	1	201.1	0.641	15	PASS	200.26	1.076	15	PASS
ICV	ICV	1	9.93	1.623	15	PASS	101.55	1.72	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
LLICV1	CCV1	1	1.08	6.89	20	PASS	0.53	10.612	20	PASS
MLCCV	CCV	1	19.35	0.454	15	PASS	19.44	2.321	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.31	1.375	15	PASS	20.52	0.675	15	PASS
LLICV1	LLICV	1	1	9.411	20	PASS	0.54	4.282	20	PASS
CCV1	CCV	1	19.85	0.709	15	PASS	19.53	1.014	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.79	1.322	15	PASS	19.58	1.281	15	PASS
CCB2	CCB	1	0	420.689	15	<PQL	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.37	0.45	15	PASS	20.64	0.826	15	PASS
CCV3	CCV	1	19.79	0.037	15	PASS	19.4	2.52	15	PASS
CCB3	CCB	1	0	1606.491	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.38	1.373	15	PASS	20.42	0.73	15	PASS
MB-106888	MBLK	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
LCS-106888	LCS	1	10.14	0.794	15	PASS	100.86	0.911	15	PASS
N063135-001B	SAMP	1	84.25	0.935	15	PASS	396.56	1.374	15	PASS
N063135-003B	SAMP	1	64.46	1.185	15	PASS	455.02	0.687	15	PASS
N063135-005B	SAMP	1	58.83	1.764	15	PASS	565.73	1.321	15	PASS
N063136-001B	SAMP	1	148.64	0.134	15	PASS	1.53	7.68	15	PASS
N063136-001B	SAMP	5	31.12	0.987	15	PASS	0.28	8.137	15	PASS
N063136-001B-PS	PS	1	162.49	0.71	15	PASS	97.84	0.93	15	PASS
N063136-001B-MS	MS	1	159.26	0.551	15	PASS	103.21	0.664	15	PASS
CCV4	CCV	1	19.91	0.341	15	PASS	19.37	0.31	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063136-001B-MSD	MSD	1	159.94	0.595	15	PASS	102.82	1.074	15	PASS
N063136-002B	SAMP	1	152.12	0.992	15	PASS	1.48	4.321	15	PASS
N063136-003B	SAMP	1	149.69	1.307	15	PASS	10.7	0.621	15	PASS
N063136-004B	SAMP	1	152.02	0.695	15	PASS	2.8	4.45	15	PASS

PERCENT RSD SUMMARY: 240216A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063136-005B	SAMP	1	148.6	0.631	15	PASS	1.89	6.297	15	PASS
N063136-006B	SAMP	1	150.57	1.193	15	PASS	1.65	2.551	15	PASS
N063136-008B	SAMP	1	149.86	0.717	15	PASS	1.95	6.305	15	PASS
N063136-009B	SAMP	1	149.01	0.799	15	PASS	23.94	2.697	15	PASS
N063136-010B	SAMP	1	147.14	0.53	15	PASS	2.29	4.925	15	PASS
CCV5	CCV	1	19.7	1.056	15	PASS	19.55	1.048	15	PASS
CCB5	CCB	1	0	309.391	15	<PQL	<0.000	N/A	15	<PQL
N063136-011B	SAMP	1	156.64	0.738	15	PASS	2.21	2.569	15	PASS
N063136-012B	SAMP	1	161.1	0.301	15	PASS	68.22	1.073	15	PASS
N063136-013B	SAMP	1	161.32	0.815	15	PASS	72.97	1.018	15	PASS
N063136-014B	SAMP	1	151.6	0.504	15	PASS	2.04	3.859	15	PASS
N063135-001B	SAMP	10	8.81	2.285	15	PASS	42.28	1.469	15	PASS
N063135-003B	SAMP	10	6.79	1.751	15	PASS	49.21	1.154	15	PASS
N063135-005B	SAMP	10	6.22	0.764	15	PASS	61.68	1.389	15	PASS
CCV6	CCV	1	19.97	1.856	15	PASS	19.75	1.362	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.49	1.598	15	PASS	19.92	1.273	15	PASS
CCV7	CCV	1	19.84	1.007	15	PASS	19.57	1.584	15	PASS
CCB7	CCB	1	0.01	109.688	15	<PQL	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB5	ICSAB	1	20.64	0.17	15	PASS	20.24	0.378	15	PASS

PERCENT RSD SUMMARY: 240216A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.05	85.347	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.48	12.174	15	PASS
Std3-5/50 ppb	ICAL	1	4.65	6.362	15	PASS
Std4-10/100 ppb	ICAL	1	9.53	4.608	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.45	1.866	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	38.92	2.757	15	PASS
Std7-100/1000 ppb	ICAL	1	100.2	1.121	15	PASS
Std8-200/2000 ppb	ICAL	1	200.2	1.495	15	PASS
ICV	ICV	1	10.38	0.385	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL
LLICV1	CCV1	1	0.12	49.355	20	FAIL
MLCCV	CCV	1	19.51	2.041	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.24	3.376	15	PASS
LLICV1	LLICV	1	0.08	22.061	20	<PQL
CCV1	CCV	1	19.44	2.894	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.41	1.356	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.29	1.779	15	PASS
CCV3	CCV	1	19.69	1.002	15	PASS
CCB3	CCB	1	0	427.392	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.56	2.854	15	PASS
MB-106888	MBLK	1	0.02	118.791	15	<PQL
LCS-106888	LCS	1	9.83	4.429	15	PASS
N063135-001B	SAMP	1	19.62	2.712	15	PASS
N063135-003B	SAMP	1	6.72	11.054	15	PASS
N063135-005B	SAMP	1	<0.000	N/A	15	<PQL
N063136-001B	SAMP	1	2.21	4.195	15	PASS
N063136-001B	SAMP	5	0.5	17.272	15	NR!
N063136-001B-PS	PS	1	12.44	3.712	15	PASS
N063136-001B-MS	MS	1	12.24	4.858	15	PASS
CCV4	CCV	1	19.49	3.367	15	PASS
CCB4	CCB	1	0.01	227.512	15	<PQL
N063136-001B-MSD	MSD	1	12.11	2.463	15	PASS
N063136-002B	SAMP	1	2.08	1.328	15	PASS
N063136-003B	SAMP	1	2.27	7.444	15	PASS
N063136-004B	SAMP	1	2.31	3.405	15	PASS

PERCENT RSD SUMMARY: 240216A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
N063136-005B	SAMP	1	2.31	4.643	15	PASS
N063136-006B	SAMP	1	2.42	7.986	15	PASS
N063136-008B	SAMP	1	2.38	11.068	15	PASS
N063136-009B	SAMP	1	2.3	6.601	15	PASS
N063136-010B	SAMP	1	2.35	2.035	15	PASS
CCV5	CCV	1	19.35	3.554	15	PASS
CCB5	CCB	1	0	3801.398	15	<PQL
N063136-011B	SAMP	1	2.21	2.157	15	PASS
N063136-012B	SAMP	1	2.2	3.848	15	PASS
N063136-013B	SAMP	1	2.16	7.522	15	PASS
N063136-014B	SAMP	1	2.1	1.894	15	PASS
N063135-001B	SAMP	10	1.95	3.228	15	PASS
N063135-003B	SAMP	10	0.57	28.88	15	NR!
N063135-005B	SAMP	10	<0.000	N/A	15	<PQL
CCV6	CCV	1	19.46	3.998	15	PASS
CCB6	CCB	1	0.01	194.938	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.03	1.529	15	PASS
CCV7	CCV	1	19.44	4.09	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	0	221.729	15	<PQL
ICSAB5	ICSAB	1	19.98	1.907	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240216A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0216001.d	RINSE	ICAL	1	02/16/24 12:08 PM
A0216002.d	RINSE	ICAL	1	02/16/24 12:13 PM
A0216003.d	Cal Blk	IBLK	1	02/16/24 12:18 PM
A0216004.d	Std1-0.1/1 ppb	ICAL	1	02/16/24 12:22 PM
A0216005.d	Std2-0.5/5 ppb	ICAL	1	02/16/24 12:27 PM
A0216006.d	Std3-5/50 ppb	ICAL	1	02/16/24 12:32 PM
A0216007.d	Std4-10/100 ppb	ICAL	1	02/16/24 12:37 PM
A0216008.d	Std5-4.0/20/200 ppb	ICAL	1	02/16/24 12:41 PM
A0216009.d	Std6-8.0/40/400 ppb	ICAL	1	02/16/24 12:46 PM
A0216010.d	Std7-100/1000 ppb	ICAL	1	02/16/24 12:51 PM
A0216011.d	Std8-200/2000 ppb	ICAL	1	02/16/24 12:56 PM
A0216012.d	ICV	ICV	1	02/16/24 1:21 PM
A0216013.d	ICB	ICB	1	02/16/24 1:25 PM
A0216014.d	LLICV1	CCV1	1	02/16/24 1:30 PM
A0216015.d	MLCCV	CCV	1	02/16/24 1:38 PM
A0216016.d	ICSA1	ICSA	1	02/16/24 1:42 PM
A0216017.d	ICSAB1	ICSAB	1	02/16/24 1:47 PM
A0216018.d	LLICV1	LLICV	1	02/16/24 1:52 PM
A0216019.d	MB4-106767	MBLK	1	02/16/24 2:00 PM
A0216020.d	MB5-106767	MBLK	1	02/16/24 2:05 PM
A0216021.d	LCS-106767	LCS	1	02/16/24 2:09 PM
A0216022.d	MDL 4	SAMP	1	02/16/24 2:14 PM
A0216023.d	MDL 5	SAMP	1	02/16/24 2:19 PM
A0216024.d	MB4-106768	MBLK	1	02/16/24 2:23 PM
A0216025.d	MB5-106768	MBLK	1	02/16/24 2:28 PM
A0216026.d	LCS-106768	LCS	1	02/16/24 2:33 PM
A0216027.d	MDL 4	SAMP	1	02/16/24 2:37 PM
A0216028.d	MDL 5	SAMP	1	02/16/24 2:42 PM
A0216029.d	CCV1	CCV	1	02/16/24 2:46 PM
A0216030.d	CCB1	CCB	1	02/16/24 2:51 PM
A0216031.d	MB4-106769	MBLK	1	02/16/24 2:56 PM
A0216032.d	MB5-106769	MBLK	1	02/16/24 3:00 PM
A0216033.d	MB4-106769	MBLK	1	02/16/24 3:05 PM
A0216034.d	MB4-106769	MBLK	1	02/16/24 3:10 PM
A0216035.d	MB5-106769	MBLK	1	02/16/24 3:15 PM
A0216036.d	LCS-106769	LCS	1	02/16/24 3:20 PM
A0216037.d	MDL 4	SAMP	1	02/16/24 3:24 PM
A0216038.d	MDL 5	SAMP	1	02/16/24 3:29 PM
A0216039.d	MDL 4	SAMP	1	02/16/24 3:34 PM
A0216040.d	MDL 5	SAMP	1	02/16/24 3:38 PM
A0216041.d	CCV2	CCV	1	02/16/24 3:43 PM
A0216042.d	CCB2	CCB	1	02/16/24 3:48 PM

INJECTION LOG: 240216A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0216043.d	ICSA2	ICSA	1	02/16/24 3:52 PM
A0216044.d	ICSAB2	ICSAB	1	02/16/24 3:57 PM
A0216045.d	MB-106890	MBLK	1	02/16/24 4:02 PM
A0216046.d	LCS-106890	LCS	1	02/16/24 4:06 PM
A0216047.d	N063127-001A	SAMP	1	02/16/24 4:11 PM
A0216048.d	N063127-001A	SAMP	5	02/16/24 4:15 PM
A0216049.d	N063127-001A-PS	PS	1	02/16/24 4:20 PM
A0216050.d	N063127-001A-MS	MS	1	02/16/24 4:25 PM
A0216051.d	N063127-001A-MSD	MSD	1	02/16/24 4:29 PM
A0216052.d	N063128-001A	SAMP	1	02/16/24 4:34 PM
A0216053.d	N063129-001A	SAMP	1	02/16/24 4:39 PM
A0216054.d	CCV3	CCV	1	02/16/24 4:43 PM
A0216055.d	CCB3	CCB	1	02/16/24 4:48 PM
A0216056.d	ICSA3	ICSA	1	02/16/24 4:53 PM
A0216057.d	ICSAB3	ICSAB	1	02/16/24 4:57 PM
A0216058.d	MB-106888	MBLK	1	02/16/24 5:02 PM
A0216059.d	LCS-106888	LCS	1	02/16/24 5:07 PM
A0216060.d	N063135-001B	SAMP	1	02/16/24 5:11 PM
A0216061.d	N063135-003B	SAMP	1	02/16/24 5:16 PM
A0216062.d	N063135-005B	SAMP	1	02/16/24 5:20 PM
A0216063.d	N063136-001B	SAMP	1	02/16/24 5:25 PM
A0216064.d	N063136-001B	SAMP	5	02/16/24 5:30 PM
A0216065.d	N063136-001B-PS	PS	1	02/16/24 5:34 PM
A0216066.d	N063136-001B-MS	MS	1	02/16/24 5:39 PM
A0216067.d	RINSE	RINSE	1	02/16/24 5:44 PM
A0216068.d	CCV4	CCV	1	02/16/24 5:48 PM
A0216069.d	CCB4	CCB	1	02/16/24 5:53 PM
A0216070.d	N063136-001B-MSD	MSD	1	02/16/24 5:57 PM
A0216071.d	N063136-002B	SAMP	1	02/16/24 6:02 PM
A0216072.d	N063136-003B	SAMP	1	02/16/24 6:07 PM
A0216073.d	N063136-004B	SAMP	1	02/16/24 6:12 PM
A0216074.d	N063136-005B	SAMP	1	02/16/24 6:16 PM
A0216075.d	N063136-006B	SAMP	1	02/16/24 6:21 PM
A0216076.d	N063136-008B	SAMP	1	02/16/24 6:25 PM
A0216077.d	N063136-009B	SAMP	1	02/16/24 6:30 PM
A0216078.d	N063136-010B	SAMP	1	02/16/24 6:35 PM
A0216079.d	RINSE	RINSE	1	02/16/24 6:39 PM
A0216080.d	CCV5	CCV	1	02/16/24 6:44 PM
A0216081.d	CCB5	CCB	1	02/16/24 6:49 PM
A0216082.d	N063136-011B	SAMP	1	02/16/24 6:53 PM
A0216083.d	N063136-012B	SAMP	1	02/16/24 6:58 PM
A0216084.d	N063136-013B	SAMP	1	02/16/24 7:02 PM

INJECTION LOG: 240216A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0216085.d	N063136-014B	SAMP	1	02/16/24 7:07 PM
A0216086.d	N063135-001B	SAMP	10	02/16/24 7:12 PM
A0216087.d	N063135-003B	SAMP	10	02/16/24 7:16 PM
A0216088.d	N063135-005B	SAMP	10	02/16/24 7:21 PM
A0216089.d	RINSE	RINSE	1	02/16/24 7:26 PM
A0216090.d	CCV6	CCV	1	02/16/24 7:30 PM
A0216091.d	CCB6	CCB	1	02/16/24 7:35 PM
A0216092.d	ICSA4	ICSA	1	02/16/24 7:40 PM
A0216093.d	ICSAB4	ICSAB	1	02/16/24 7:44 PM
A0216095.d	MB1-106787	MBLK	1	02/16/24 7:54 PM
A0216096.d	MB2-106787	MBLK	1	02/16/24 7:59 PM
A0216097.d	MB3-106787	MBLK	1	02/16/24 8:04 PM
A0216098.d	LCS-106787	LCS	1	02/16/24 8:08 PM
A0216099.d	MDL 1	SAMP	1	02/16/24 8:13 PM
A0216100.d	MDL 2	SAMP	1	02/16/24 8:18 PM
A0216101.d	MDL 3	SAMP	1	02/16/24 8:22 PM
A0216102.d	MDL 1	SAMP	1	02/16/24 8:27 PM
A0216103.d	MDL 2	SAMP	1	02/16/24 8:32 PM
A0216104.d	MDL 3	SAMP	1	02/16/24 8:36 PM
A0216105.d	CCV7	CCV	1	02/16/24 8:41 PM
A0216106.d	CCB7	CCB	1	02/16/24 8:45 PM
A0216107.d	ICSA5	ICSA	1	02/16/24 8:50 PM
A0216108.d	ICSAB5	ICSAB	1	02/16/24 8:55 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/16/2024 11:07:17 AM**
Prep End Date: **2/16/2024 3:00:00 PM**

Reviewed/ Date: JRB 3/12/2024
Initials/ Date: for

Prep Batch **106888** Prep Code: **3010_W_MSDISS_TPK** Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-53**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-106888	Aqueous		25	☐	25	1.000		
MB-106888	Aqueous		25	☐	25	1.000		
N063135-001B	Groundwater	<2	25	☐	25	1.000		
N063135-003B	Groundwater	<2	25	☐	25	1.000		
N063135-005B	Groundwater	<2	25	☐	25	1.000		
N063136-001B	Surface Water	<2	25	☐	25	1.000		
N063136-001B-MS	Surface Water	<2	25	☐	25	1.000		
N063136-001B-MSD	Surface Water	<2	25	☐	25	1.000		
N063136-002B	Surface Water	<2	25	☐	25	1.000		
N063136-003B	Surface Water	<2	25	☐	25	1.000		
N063136-004B	Surface Water	<2	25	☐	25	1.000		
N063136-005B	Surface Water	<2	25	☐	25	1.000		
N063136-006B	Surface Water	<2	25	☐	25	1.000		
N063136-008B	Surface Water	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/16/2024 11:07:17 AM**
Prep End Date: **2/16/2024 3:00:00 PM**
Prep Batch **106888** Prep Code:**3010_W_MSDISS_TPK**

Reviewed/ Date: JRB 3/12/2024
Initials/ Date: for
Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-53**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063136-009B	Surface Water	<2	25	☐	25	1.000		
N063136-010B	Surface Water	<2	25	☐	25	1.000		
N063136-011B	Surface Water	<2	25	☐	25	1.000		
N063136-012B	Surface Water	<2	25	☐	25	1.000		
N063136-013B	Surface Water	<2	25	☐	25	1.000		
N063136-014B	Surface Water	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240215A.b
Acq. Date-Time	2024-02-16 12:04:42
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

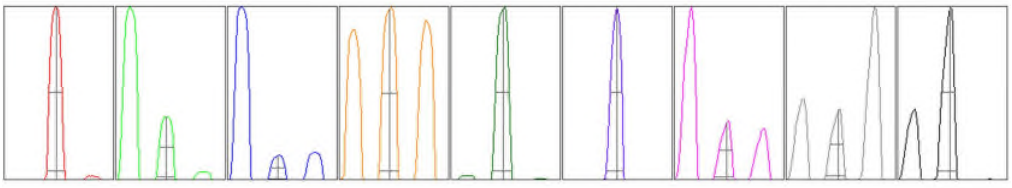
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	5995	59949.07	500.00		2.687	5.000
24	10.00	19419	194190.56	500.00		2.324	5.000
25	10.00	2575	25745.99	500.00		2.795	5.000
26	10.00	2966	29657.14	500.00		3.024	5.000
59	10.00	29892	298918.55	500.00		2.577	5.000
115	10.00	39503	395034.56	500.00		1.897	5.000
206	10.00	7795	77947.24	500.00		2.229	5.000
207	10.00	6504	65039.86	500.00		2.440	5.000
208	10.00	15998	159981.04	500.00		2.186	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.700 %
Doubly Charged	70 / 140 1.698 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	6055.51	8.95	8.90 - 9.10	
24	19772.53	23.90	23.90 - 24.10	
25	2654.65	24.90	24.90 - 25.10	
26	3021.02	25.90	25.90 - 26.10	
59	29544.61	58.95	58.90 - 59.10	
115	38707.90	115.00	114.90 - 115.10	
206	7398.40	205.95	205.90 - 206.10	
207	6556.71	206.95	206.90 - 207.10	
208	16398.83	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.36	0.486	0.900	
24	0.40	0.505	0.900	
25	0.40	0.495	0.900	
26	0.42	0.536	0.900	
59	0.38	0.532	0.900	
115	0.34	0.480	0.900	
206	0.36	0.540	0.900	
207	0.36	0.544	0.900	
208	0.35	0.537	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.1 mm	Torch V	1.3 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2524 V	Pulse HV	1607 V

[H2]

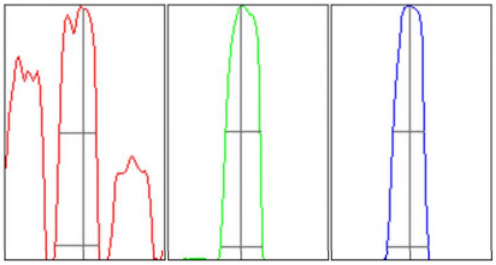
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		170	1702.89			7.650	
59		2113	21125.01			3.072	
115		30720	307203.39			2.719	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.597 %
Doubly Charged	70 / 140 0.325 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	182.77	26.00	25.90 - 26.10	
59	2234.33	58.90	58.90 - 59.10	
115	31954.18	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.70	0.828	0.900	
59	0.65	0.786	0.900	
115	0.59	0.770	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0002	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	-0.04		

Hardware Settings

Torch

Torch H	1.1 mm	Torch V	1.3 mm		

EM

Discriminator	4.5 mV	Analog HV	2524 V	Pulse HV	1607 V

[He]

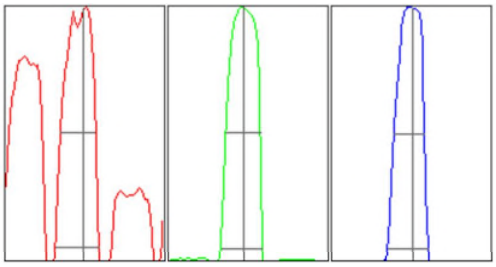
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		78	780.42			12.714	
59		6435	64346.77			2.301	
115		5433	54334.98			2.619	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.241 %
Doubly Charged	70 / 140 1.092 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	79.25	26.00	25.90 - 26.10	
59	6468.51	58.95	58.90 - 59.10	
115	5468.83	115.05	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.66	0.829	0.900	
59	0.65	0.785	0.900	
115	0.58	0.769	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0002	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	-0.04		

Hardware Settings

Torch

Torch H	1.1 mm	Torch V	1.3 mm

EM

Discriminator	4.5 mV	Analog HV	2524 V	Pulse HV	1607 V

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240216A

Instrument ID: ICPMS-03

Analyte	Data File	A0216003.d	A0216004.d	A0216005.d	A0216006.d	A0216007.d	A0216008.d	A0216009.d	A0216010.d	A0216011.d	
	Acq. Date-Time	02/16/2024 12:18 PM	02/16/2024 12:22 PM	02/16/2024 12:27 PM	02/16/2024 12:32 PM	02/16/2024 12:37 PM	02/16/2024 12:41 PM	02/16/2024 12:46 PM	02/16/2024 12:51 PM	02/16/2024 12:56 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	39091.2		39209.2	39002.1	39594.5	38770.4	39258.2	38888.5	38964.2	
55 Mn [2]	CPS	65.3		729.6	6688.7	13359.2	26759.3	54754.6	137493.5	276069.5	1.0000
72 Ge (ISTD) [2]	CPS	23312.2	23881.9	23306.6	23708.3	23504.7	23529.1	23770.6	23578.1	23796.2	
75 As [2]	CPS	6.6	23.3	161.1	1524.5	3089.1	6307.8	12744.7	32533.9	65590.5	1.0000
159 Tb (ISTD) [3]	CPS	1739479.5		1779312.5	1784689.9	1801814.8	1781475.9	1805743.2	1814617	1816251.4	
137 Ba [3]	CPS	73.3		1686.8	17059.7	35116.7	69451.5	141610	354036.2	726094	0.9999

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **ICV** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696737**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.376	0.10	10.00	0	104	90	110				
Barium	9.934	1.0	10.00	0	99.3	90	110				
Manganese	101.548	0.50	100.0	0	102	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **ZZZZZZ** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696739**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.116	0.10	0.1000	0	116	80	120				
Barium	1.081	1.0	1.000	0	108	80	120				
Manganese	0.529	0.50	0.5000	0	106	80	120				

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **CCV** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696740**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.512	0.10	20.00	0	97.6	90	110				
Barium	19.354	1.0	20.00	0	96.8	90	110				
Manganese	19.437	0.50	20.00	0	97.2	90	110				

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **CCV** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696753**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.441	0.10	20.00	0	97.2	90	110				
Barium	19.853	1.0	20.00	0	99.3	90	110				
Manganese	19.528	0.50	20.00	0	97.6	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **CCV** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696765**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.411	0.10	20.00	0	97.1	90	110				
Barium	19.793	1.0	20.00	0	99.0	90	110				
Manganese	19.576	0.50	20.00	0	97.9	90	110				

Sample ID **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **CCV** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696778**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.694	0.10	20.00	0	98.5	90	110				
Barium	19.790	1.0	20.00	0	99.0	90	110				
Manganese	19.396	0.50	20.00	0	97.0	90	110				

Sample ID **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **CCV** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696791**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.488	0.10	20.00	0	97.4	90	110				
Barium	19.911	1.0	20.00	0	99.6	90	110				
Manganese	19.370	0.50	20.00	0	96.8	90	110				

Sample ID **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **CCV** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696802**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.353	0.10	20.00	0	96.8	90	110				
Barium	19.704	1.0	20.00	0	98.5	90	110				
Manganese	19.551	0.50	20.00	0	97.8	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181642**
Client ID: **CCV**	Batch ID: **R181642**	TestNo: **EPA 6020**		Analysis Date: **2/16/2024**	SeqNo: **5696811**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.458	0.10	20.00	0	97.3	90	110				
Barium	19.970	1.0	20.00	0	99.8	90	110				
Manganese	19.754	0.50	20.00	0	98.8	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB** SampType: **ICB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **ICB** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696738**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB1** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **CCB** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696754**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB2** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **CCB** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696766**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB3** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **CCB** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696779**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181642**
Client ID: **CCB**	Batch ID: **R181642**	TestNo: **EPA 6020**		Analysis Date: **2/16/2024**	SeqNo: **5696792**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181642**
Client ID: **CCB**	Batch ID: **R181642**	TestNo: **EPA 6020**		Analysis Date: **2/16/2024**	SeqNo: **5696803**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181642**
Client ID: **CCB**	Batch ID: **R181642**	TestNo: **EPA 6020**		Analysis Date: **2/16/2024**	SeqNo: **5696812**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **ICSA** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696741**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **ICSAB** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696742**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.241	0.10	20.00	0	101	80	120				
Barium	20.308	1.0	20.00	0	102	80	120				
Manganese	20.521	0.50	20.00	0	103	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **ICSA** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696767**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **ICSAB** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696768**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.292	0.10	20.00	0	101	80	120				
Barium	20.366	1.0	20.00	0	102	80	120				
Manganese	20.640	0.50	20.00	0	103	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA3** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **ICSA** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696780**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB3** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **ICSAB** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696781**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.561	0.10	20.00	0	103	80	120				
Barium	20.383	1.0	20.00	0	102	80	120				
Manganese	20.424	0.50	20.00	0	102	80	120				

Sample ID **ICSA4** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **ICSA** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696813**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB4** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **ICSAB** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696814**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.034	0.10	20.00	0	100	80	120				
Barium	20.492	1.0	20.00	0	102	80	120				
Manganese	19.924	0.50	20.00	0	99.6	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240216A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	1739479.5	1739479.5	100	PASS	30-150	39091.2	39091.2	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	1761888.1	1739479.5	101.29	PASS	30-150	39434.2	39091.2	100.88	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	1779312.5	1739479.5	102.29	PASS	30-150	39209.2	39091.2	100.3	PASS	30-150
Std3-5/50 ppb	ICAL	1	1784689.9	1739479.5	102.6	PASS	30-150	39002.1	39091.2	99.77	PASS	30-150
Std4-10/100 ppb	ICAL	1	1801814.8	1739479.5	103.58	PASS	30-150	39594.5	39091.2	101.29	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	1781475.9	1739479.5	102.41	PASS	30-150	38770.4	39091.2	99.18	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	1805743.2	1739479.5	103.81	PASS	30-150	39258.2	39091.2	100.43	PASS	30-150
Std7-100/1000 ppb	ICAL	1	1814617	1739479.5	104.32	PASS	30-150	38888.5	39091.2	99.48	PASS	30-150
Std8-200/2000 ppb	ICAL	1	1816251.4	1739479.5	104.41	PASS	30-150	38964.2	39091.2	99.68	PASS	30-150
ICV	ICV	1	1867314.4	1739479.5	107.35	PASS	30-150	38803.8	39091.2	99.26	PASS	30-150
ICB	ICB	1	1814260.7	1739479.5	104.3	PASS	30-150	38122.3	39091.2	97.52	PASS	30-150
LLICV1	CCV1	1	1827704.2	1739479.5	105.07	PASS	30-150	38112.3	39091.2	97.5	PASS	30-150
MLCCV	CCV	1	1852689.6	1739479.5	106.51	PASS	30-150	38812.8	39091.2	99.29	PASS	30-150
ICSA1	ICSA	1	1804627	1739479.5	103.75	PASS	30-150	37763.7	39091.2	96.6	PASS	30-150
ICSAB1	ICSAB	1	1808812.8	1739479.5	103.99	PASS	30-150	38094.4	39091.2	97.45	PASS	30-150
LLICV1	LLICV	1	1799309.6	1739479.5	103.44	PASS	30-150	37780.4	39091.2	96.65	PASS	30-150
CCV1	CCV	1	1769507.6	1739479.5	101.73	PASS	30-150	37714.7	39091.2	96.48	PASS	30-150
CCB1	CCB	1	1767022.2	1739479.5	101.58	PASS	30-150	37406.2	39091.2	95.69	PASS	30-150
CCV2	CCV	1	1778787.8	1739479.5	102.26	PASS	30-150	38135.7	39091.2	97.56	PASS	30-150
CCB2	CCB	1	1755194.7	1739479.5	100.9	PASS	30-150	37891.7	39091.2	96.93	PASS	30-150
ICSA2	ICSA	1	1780819.1	1739479.5	102.38	PASS	30-150	37847.2	39091.2	96.82	PASS	30-150
ICSAB2	ICSAB	1	1780181	1739479.5	102.34	PASS	30-150	38303.8	39091.2	97.99	PASS	30-150
CCV3	CCV	1	1823647.1	1739479.5	104.84	PASS	30-150	38846.1	39091.2	99.37	PASS	30-150
CCB3	CCB	1	1792610.2	1739479.5	103.05	PASS	30-150	38413	39091.2	98.27	PASS	30-150
ICSA3	ICSA	1	1787344.6	1739479.5	102.75	PASS	30-150	38418.5	39091.2	98.28	PASS	30-150
ICSAB3	ICSAB	1	1807385.9	1739479.5	103.9	PASS	30-150	38377.3	39091.2	98.17	PASS	30-150
MB-106888	MBLK	1	1745119.4	1739479.5	100.32	PASS	30-150	37061	39091.2	94.81	PASS	30-150
LCS-106888	LCS	1	1784122.8	1739479.5	102.57	PASS	30-150	37663.5	39091.2	96.35	PASS	30-150
N063135-001B	SAMP	1	1672074.6	1739479.5	96.12	PASS	30-150	34090.3	39091.2	87.21	PASS	30-150
N063135-003B	SAMP	1	1333187.6	1739479.5	76.64	PASS	30-150	33626	39091.2	86.02	PASS	30-150
N063135-005B	SAMP	1	1183646	1739479.5	68.05	PASS	30-150	31574.3	39091.2	80.77	PASS	30-150
N063136-001B	SAMP	1	1702939.8	1739479.5	97.9	PASS	30-150	38039.9	39091.2	97.31	PASS	30-150
N063136-001B	SAMP	5	1745484.8	1739479.5	100.35	PASS	30-150	38551.1	39091.2	98.62	PASS	30-150
N063136-001B-PS	PS	1	1709945.1	1739479.5	98.3	PASS	30-150	36900.7	39091.2	94.4	PASS	30-150
N063136-001B-MS	MS	1	1715523.1	1739479.5	98.62	PASS	30-150	36693.6	39091.2	93.87	PASS	30-150
CCV4	CCV	1	1806689.1	1739479.5	103.86	PASS	30-150	39419.7	39091.2	100.84	PASS	30-150
CCB4	CCB	1	1779623.6	1739479.5	102.31	PASS	30-150	38198	39091.2	97.72	PASS	30-150
N063136-001B-MSD	MSD	1	1715046	1739479.5	98.6	PASS	30-150	35337.3	39091.2	90.4	PASS	30-150
N063136-002B	SAMP	1	1768713.9	1739479.5	101.68	PASS	30-150	36842.8	39091.2	94.25	PASS	30-150
N063136-003B	SAMP	1	1763698.8	1739479.5	101.39	PASS	30-150	35809.4	39091.2	91.6	PASS	30-150
N063136-004B	SAMP	1	1775884.4	1739479.5	102.09	PASS	30-150	36117.9	39091.2	92.39	PASS	30-150

INTERNAL STANDARD: 240216A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
N063136-005B	SAMP	1	1768615.6	1739479.5	101.67	PASS	30-150	35550	39091.2	90.94	PASS	30-150
N063136-006B	SAMP	1	1770875.8	1739479.5	101.8	PASS	30-150	35222.6	39091.2	90.1	PASS	30-150
N063136-008B	SAMP	1	1755975	1739479.5	100.95	PASS	30-150	35640.1	39091.2	91.17	PASS	30-150
N063136-009B	SAMP	1	1747743.6	1739479.5	100.48	PASS	30-150	35076.7	39091.2	89.73	PASS	30-150
N063136-010B	SAMP	1	1823953	1739479.5	104.86	PASS	30-150	36396.2	39091.2	93.11	PASS	30-150
CCV5	CCV	1	1839246.5	1739479.5	105.74	PASS	30-150	39239.3	39091.2	100.38	PASS	30-150
CCB5	CCB	1	1831229.2	1739479.5	105.27	PASS	30-150	38347.2	39091.2	98.1	PASS	30-150
N063136-011B	SAMP	1	1764671.6	1739479.5	101.45	PASS	30-150	36092.3	39091.2	92.33	PASS	30-150
N063136-012B	SAMP	1	1806278.9	1739479.5	103.84	PASS	30-150	36271.5	39091.2	92.79	PASS	30-150
N063136-013B	SAMP	1	1794869.6	1739479.5	103.18	PASS	30-150	36082.2	39091.2	92.3	PASS	30-150
N063136-014B	SAMP	1	1779959.5	1739479.5	102.33	PASS	30-150	36292.7	39091.2	92.84	PASS	30-150
N063135-001B	SAMP	10	1800339.1	1739479.5	103.5	PASS	30-150	36666.8	39091.2	93.8	PASS	30-150
N063135-003B	SAMP	10	1713243.5	1739479.5	98.49	PASS	30-150	37309.3	39091.2	95.44	PASS	30-150
N063135-005B	SAMP	10	1668951	1739479.5	95.95	PASS	30-150	37108.9	39091.2	94.93	PASS	30-150
CCV6	CCV	1	1857894.8	1739479.5	106.81	PASS	30-150	39856.3	39091.2	101.96	PASS	30-150
CCB6	CCB	1	1824939.6	1739479.5	104.91	PASS	30-150	39171.4	39091.2	100.21	PASS	30-150
ICSA4	ICSA	1	1856855.1	1739479.5	106.75	PASS	30-150	39174.7	39091.2	100.21	PASS	30-150
ICSAB4	ICSAB	1	1867477.8	1739479.5	107.36	PASS	30-150	39636.9	39091.2	101.4	PASS	30-150
CCV7	CCV	1	1858453.6	1739479.5	106.84	PASS	30-150	39661.4	39091.2	101.46	PASS	30-150
CCB7	CCB	1	1859640.4	1739479.5	106.91	PASS	30-150	38695.9	39091.2	98.99	PASS	30-150
ICSA5	ICSA	1	1856035.6	1739479.5	106.7	PASS	30-150	39239.3	39091.2	100.38	PASS	30-150
ICSAB5	ICSAB	1	1873475.3	1739479.5	107.7	PASS	30-150	40015.6	39091.2	102.36	PASS	30-150

INTERNAL STANDARD: 240216A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	23312.2	23312.2	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	23881.9	23312.2	102.44	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	23306.6	23312.2	99.98	PASS	30-150
Std3-5/50 ppb	ICAL	1	23708.3	23312.2	101.7	PASS	30-150
Std4-10/100 ppb	ICAL	1	23504.7	23312.2	100.83	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	23529.1	23312.2	100.93	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	23770.6	23312.2	101.97	PASS	30-150
Std7-100/1000 ppb	ICAL	1	23578.1	23312.2	101.14	PASS	30-150
Std8-200/2000 ppb	ICAL	1	23796.2	23312.2	102.08	PASS	30-150
ICV	ICV	1	22930.5	23312.2	98.36	PASS	30-150
ICB	ICB	1	22778.1	23312.2	97.71	PASS	30-150
LLICV1	CCV1	1	23079.7	23312.2	99	PASS	30-150
MLCCV	CCV	1	23193.1	23312.2	99.49	PASS	30-150
ICSA1	ICSA	1	22860.4	23312.2	98.06	PASS	30-150
ICSAB1	ICSAB	1	22774.8	23312.2	97.69	PASS	30-150
LLICV1	LLICV	1	22814.8	23312.2	97.87	PASS	30-150
CCV1	CCV	1	22612.3	23312.2	97	PASS	30-150
CCB1	CCB	1	22753.6	23312.2	97.6	PASS	30-150
CCV2	CCV	1	23390.1	23312.2	100.33	PASS	30-150
CCB2	CCB	1	22813.7	23312.2	97.86	PASS	30-150
ICSA2	ICSA	1	22931.6	23312.2	98.37	PASS	30-150
ICSAB2	ICSAB	1	23453.5	23312.2	100.61	PASS	30-150
CCV3	CCV	1	23303.3	23312.2	99.96	PASS	30-150
CCB3	CCB	1	23160.9	23312.2	99.35	PASS	30-150
ICSA3	ICSA	1	23352.2	23312.2	100.17	PASS	30-150
ICSAB3	ICSAB	1	23163.1	23312.2	99.36	PASS	30-150
MB-106888	MBLK	1	22835.9	23312.2	97.96	PASS	30-150
LCS-106888	LCS	1	22642.4	23312.2	97.13	PASS	30-150
N063135-001B	SAMP	1	20706.5	23312.2	88.82	PASS	30-150
N063135-003B	SAMP	1	18795.3	23312.2	80.62	PASS	30-150
N063135-005B	SAMP	1	17555	23312.2	75.3	PASS	30-150
N063136-001B	SAMP	1	22660.2	23312.2	97.2	PASS	30-150
N063136-001B	SAMP	5	23292.2	23312.2	99.91	PASS	30-150
N063136-001B-PS	PS	1	22219.6	23312.2	95.31	PASS	30-150
N063136-001B-MS	MS	1	21836.8	23312.2	93.67	PASS	30-150
CCV4	CCV	1	23684.9	23312.2	101.6	PASS	30-150
CCB4	CCB	1	23297.7	23312.2	99.94	PASS	30-150
N063136-001B-MSD	MSD	1	21757.9	23312.2	93.33	PASS	30-150
N063136-002B	SAMP	1	22007	23312.2	94.4	PASS	30-150
N063136-003B	SAMP	1	22241.8	23312.2	95.41	PASS	30-150
N063136-004B	SAMP	1	21840.2	23312.2	93.69	PASS	30-150

INTERNAL STANDARD: 240216A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
N063136-005B	SAMP	1	21722.2	23312.2	93.18	PASS	30-150
N063136-006B	SAMP	1	21691	23312.2	93.05	PASS	30-150
N063136-008B	SAMP	1	21613.2	23312.2	92.71	PASS	30-150
N063136-009B	SAMP	1	21609.8	23312.2	92.7	PASS	30-150
N063136-010B	SAMP	1	22158.4	23312.2	95.05	PASS	30-150
CCV5	CCV	1	24006.5	23312.2	102.98	PASS	30-150
CCB5	CCB	1	23101.9	23312.2	99.1	PASS	30-150
N063136-011B	SAMP	1	21869.1	23312.2	93.81	PASS	30-150
N063136-012B	SAMP	1	21911.4	23312.2	93.99	PASS	30-150
N063136-013B	SAMP	1	22106.1	23312.2	94.83	PASS	30-150
N063136-014B	SAMP	1	22038.2	23312.2	94.54	PASS	30-150
N063135-001B	SAMP	10	22920.5	23312.2	98.32	PASS	30-150
N063135-003B	SAMP	10	21794.5	23312.2	93.49	PASS	30-150
N063135-005B	SAMP	10	22141.7	23312.2	94.98	PASS	30-150
CCV6	CCV	1	24118.9	23312.2	103.46	PASS	30-150
CCB6	CCB	1	23810.7	23312.2	102.14	PASS	30-150
ICSA4	ICSA	1	24064.4	23312.2	103.23	PASS	30-150
ICSAB4	ICSAB	1	23834.1	23312.2	102.24	PASS	30-150
CCV7	CCV	1	24190.1	23312.2	103.77	PASS	30-150
CCB7	CCB	1	24045.5	23312.2	103.15	PASS	30-150
ICSA5	ICSA	1	24058.8	23312.2	103.2	PASS	30-150
ICSAB5	ICSAB	1	24249.1	23312.2	104.02	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.: N063135
Test Method: EPA 6020
Analysis Date: 2/16/2024

Matrix: Groundwater
Batch No.: 106888

Instrument ID: ICPMS-03
Instrument Description: Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to As & Mn. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063136-001B DT 5x	Arsenic	As	µg/L	2.494526	NA	2.206795	13.04%	10
N063136-001B DT 5x	Barium	Ba	µg/L	155.6006	PASS	148.6388	4.68%	10
N063136-001B DT 5x	Manganese	Mn	µg/L	1.412802	NA	1.533521	7.87%	10

Reviewed by:

JRB 3/12/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063135
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **N063136-001B-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **ZZZZZZ** Batch ID: **106888** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/16/2024** SeqNo: **5696789**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.443	0.10	10.00	2.207	102	80	120				
Barium	162.495	1.0	10.00	148.6	139	80	120				S
Manganese	97.836	0.50	100.0	1.534	96.3	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

ARCADIS

Project: PG&E Topock - RCM

Project No.: 30211191

ASSET Laboratories Work Order:

N063136

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063136

Item	Page
Cover Page	1-5
Analytical Result/QC Summary Reports	6-39
Sample Receiving Items	40-44
List of Analysts	45
Raw Data	
EPA 218.6	46-232
EPA 6020_Dissolved	233-274

March 01, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063136

RE: PG&E Topock - RCM, 30211191

Attention: Dan Bush

Enclosed are the results for sample(s) received on February 15, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - RCM, 30211191
Lab Order: N063136

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

ASSET Laboratories

Date: *01-Mar-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - RCM, 30211191
Lab Order: N063136
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063136-001A	C-CON-D-Q124	Surface Water	2/15/2024 9:15:00 AM	2/15/2024	3/1/2024
N063136-001B	C-CON-D-Q124	Surface Water	2/15/2024 9:15:00 AM	2/15/2024	3/1/2024
N063136-002A	MW-923-Q124	Surface Water	2/15/2024 10:00:00 AM	2/15/2024	3/1/2024
N063136-002B	MW-923-Q124	Surface Water	2/15/2024 10:00:00 AM	2/15/2024	3/1/2024
N063136-003A	C-CON-S-Q124	Surface Water	2/15/2024 9:25:00 AM	2/15/2024	3/1/2024
N063136-003B	C-CON-S-Q124	Surface Water	2/15/2024 9:25:00 AM	2/15/2024	3/1/2024
N063136-004A	C-NR1-D-Q124	Surface Water	2/15/2024 9:40:00 AM	2/15/2024	3/1/2024
N063136-004B	C-NR1-D-Q124	Surface Water	2/15/2024 9:40:00 AM	2/15/2024	3/1/2024
N063136-005A	C-NR1-S-Q124	Surface Water	2/15/2024 9:50:00 AM	2/15/2024	3/1/2024
N063136-005B	C-NR1-S-Q124	Surface Water	2/15/2024 9:50:00 AM	2/15/2024	3/1/2024
N063136-006A	C-NR3-D-Q124	Surface Water	2/15/2024 10:10:00 AM	2/15/2024	3/1/2024
N063136-006B	C-NR3-D-Q124	Surface Water	2/15/2024 10:10:00 AM	2/15/2024	3/1/2024
N063136-007A	AmbientBlank-3-Q124	Surface Water	2/15/2024 10:55:00 AM	2/15/2024	3/1/2024
N063136-008A	C-NR3-S-Q124	Surface Water	2/15/2024 10:20:00 AM	2/15/2024	3/1/2024
N063136-008B	C-NR3-S-Q124	Surface Water	2/15/2024 10:20:00 AM	2/15/2024	3/1/2024
N063136-009A	C-NR4-D-Q124	Surface Water	2/15/2024 10:35:00 AM	2/15/2024	3/1/2024
N063136-009B	C-NR4-D-Q124	Surface Water	2/15/2024 10:35:00 AM	2/15/2024	3/1/2024
N063136-010A	C-NR4-S-Q124	Surface Water	2/15/2024 10:45:00 AM	2/15/2024	3/1/2024
N063136-010B	C-NR4-S-Q124	Surface Water	2/15/2024 10:45:00 AM	2/15/2024	3/1/2024
N063136-011A	R-19-Q124	Surface Water	2/15/2024 8:45:00 AM	2/15/2024	3/1/2024
N063136-011B	R-19-Q124	Surface Water	2/15/2024 8:45:00 AM	2/15/2024	3/1/2024
N063136-012A	C-MAR-D-Q124	Surface Water	2/15/2024 8:15:00 AM	2/15/2024	3/1/2024
N063136-012B	C-MAR-D-Q124	Surface Water	2/15/2024 8:15:00 AM	2/15/2024	3/1/2024
N063136-013A	C-MAR-S-Q124	Surface Water	2/15/2024 8:25:00 AM	2/15/2024	3/1/2024
N063136-013B	C-MAR-S-Q124	Surface Water	2/15/2024 8:25:00 AM	2/15/2024	3/1/2024
N063136-014A	RRB-Q124	Surface Water	2/15/2024 9:00:00 AM	2/15/2024	3/1/2024
N063136-014B	RRB-Q124	Surface Water	2/15/2024 9:00:00 AM	2/15/2024	3/1/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-CON-D-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 9:15:00 AM
Lab ID:	N063136-001	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240216A**	QC Batch: **R181622**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/16/2024 01:47 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-923-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 10:00:00 AM
Lab ID:	N063136-002	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240216A**	QC Batch: **R181622**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/16/2024 03:43 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-CON-S-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 9:25:00 AM
Lab ID:	N063136-003	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240216A**	QC Batch: **R181622**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/16/2024 04:02 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-NR1-D-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 9:40:00 AM
Lab ID:	N063136-004	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240216A**	QC Batch: **R181622**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/16/2024 04:21 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-NR1-S-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 9:50:00 AM
Lab ID:	N063136-005	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240216A**	QC Batch: **R181622**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/16/2024 04:40 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-NR3-D-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 10:10:00 AM
Lab ID:	N063136-006	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240216A**	QC Batch: **R181622**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/16/2024 04:59 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-NR3-S-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 10:20:00 AM
Lab ID:	N063136-008	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240216A**	QC Batch: **R181622**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/16/2024 05:37 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-NR4-D-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 10:35:00 AM
Lab ID:	N063136-009	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240216A**	QC Batch: **R181622**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/16/2024 05:55 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-NR4-S-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 10:45:00 AM
Lab ID:	N063136-010	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240216A**	QC Batch: **R181622**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/16/2024 06:14 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *01-Mar-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	R-19-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 8:45:00 AM
Lab ID:	N063136-011	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240217A**	QC Batch: **R182650**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/17/2024 03:08 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-MAR-D-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 8:15:00 AM
Lab ID:	N063136-012	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240217A**	QC Batch: **R182650**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/17/2024 03:27 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-MAR-S-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 8:25:00 AM
Lab ID:	N063136-013	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240217A**	QC Batch: **R182650**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/17/2024 03:46 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	RRB-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 9:00:00 AM
Lab ID:	N063136-014	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240217A**	QC Batch: **R182650**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/17/2024 04:05 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R181622**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **PBW**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695466**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R181622**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **LCSW**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695467**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.938	0.20	5.000	0	98.8	90	110				

Sample ID: **N063135-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695469**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.960	0.20	1.000	0	96.0	90	110				

Sample ID: **N063135-001ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695479**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20						0	0	20	

Sample ID: **N063135-001AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695480**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.002	0.20	1.000	0	100	90	110	0.9599	4.26	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063135-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181622**
Client ID: **ZZZZZZ** Batch ID: **R181622** TestNo: **EPA 218.6** Analysis Date: **2/16/2024** SeqNo: **5695486**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.023	0.20	1.000	0	102	90	110				

Sample ID: **N063135-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181622**
Client ID: **ZZZZZZ** Batch ID: **R181622** TestNo: **EPA 218.6** Analysis Date: **2/16/2024** SeqNo: **5695491**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.930	0.20	1.000	0	93.0	90	110				

Sample ID: **N063135-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181622**
Client ID: **ZZZZZZ** Batch ID: **R181622** TestNo: **EPA 218.6** Analysis Date: **2/16/2024** SeqNo: **5695493**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.827	1.0	5.000	0	96.5	90	110				

Sample ID: **N063135-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181622**
Client ID: **ZZZZZZ** Batch ID: **R181622** TestNo: **EPA 218.6** Analysis Date: **2/16/2024** SeqNo: **5695495**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.584	1.0	5.000	0	91.7	90	110				

Sample ID: **N063135-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181622**
Client ID: **ZZZZZZ** Batch ID: **R181622** TestNo: **EPA 218.6** Analysis Date: **2/16/2024** SeqNo: **5695497**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.993	0.20	1.000	0	99.3	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063136-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181622**
Client ID: **ZZZZZZ** Batch ID: **R181622** TestNo: **EPA 218.6** Analysis Date: **2/16/2024** SeqNo: **5695498**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.969	0.20	1.000	0	96.9	90	110				

Sample ID: **N063136-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181622**
Client ID: **ZZZZZZ** Batch ID: **R181622** TestNo: **EPA 218.6** Analysis Date: **2/16/2024** SeqNo: **5695502**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.027	0.20	1.000	0	103	90	110				

Sample ID: **N063136-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181622**
Client ID: **ZZZZZZ** Batch ID: **R181622** TestNo: **EPA 218.6** Analysis Date: **2/16/2024** SeqNo: **5695504**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.052	0.20	1.000	0	105	90	110				

Sample ID: **N063136-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181622**
Client ID: **ZZZZZZ** Batch ID: **R181622** TestNo: **EPA 218.6** Analysis Date: **2/16/2024** SeqNo: **5695506**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.012	0.20	1.000	0	101	90	110				

Sample ID: **N063136-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181622**
Client ID: **ZZZZZZ** Batch ID: **R181622** TestNo: **EPA 218.6** Analysis Date: **2/16/2024** SeqNo: **5695508**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.999	0.20	1.000	0	99.9	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063136-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181622**
Client ID: **ZZZZZZ** Batch ID: **R181622** TestNo: **EPA 218.6** Analysis Date: **2/16/2024** SeqNo: **5695510**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.053	0.20	1.000	0	105	90	110				

Sample ID: **N063136-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181622**
Client ID: **ZZZZZZ** Batch ID: **R181622** TestNo: **EPA 218.6** Analysis Date: **2/16/2024** SeqNo: **5695514**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.000	0.20	1.000	0	100	90	110				

Sample ID: **N063136-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181622**
Client ID: **ZZZZZZ** Batch ID: **R181622** TestNo: **EPA 218.6** Analysis Date: **2/16/2024** SeqNo: **5695516**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.077	0.20	1.000	0	108	90	110				

Sample ID: **N063136-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181622**
Client ID: **ZZZZZZ** Batch ID: **R181622** TestNo: **EPA 218.6** Analysis Date: **2/16/2024** SeqNo: **5695518**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.019	0.20	1.000	0	102	90	110				

Sample ID: **N063135-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **181622**
Client ID: **ZZZZZZ** Batch ID: **R181622** TestNo: **EPA 218.6** Analysis Date: **2/16/2024** SeqNo: **5695519**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.025	0.20	1.000	0	102	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R182650**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **PBW**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698520**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R182650**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **LCSW**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698521**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.908	0.20	5.000	0	98.2	90	110				

Sample ID: **N063051-001BREP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698524**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.734	0.20						4.755	0.443	20	

Sample ID: **N063051-001BMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698527**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.946	0.20	5.000	4.755	104	90	110				

Sample ID: **N063051-001BMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698531**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.052	0.20	5.000	4.755	106	90	110	9.946	1.06	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063153-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182650**
Client ID: **ZZZZZZ** Batch ID: **R182650** TestNo: **EPA 218.6** Analysis Date: **2/17/2024** SeqNo: **5698533**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	50.229	1.0	25.00	25.06	101	90	110				

Sample ID: **N063153-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182650**
Client ID: **ZZZZZZ** Batch ID: **R182650** TestNo: **EPA 218.6** Analysis Date: **2/17/2024** SeqNo: **5698535**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.029	0.20	1.000	0	103	90	110				

Sample ID: **N063153-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182650**
Client ID: **ZZZZZZ** Batch ID: **R182650** TestNo: **EPA 218.6** Analysis Date: **2/17/2024** SeqNo: **5698539**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.005	0.20	1.000	0	100	90	110				

Sample ID: **N063136-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182650**
Client ID: **ZZZZZZ** Batch ID: **R182650** TestNo: **EPA 218.6** Analysis Date: **2/17/2024** SeqNo: **5698541**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.010	0.20	1.000	0	101	90	110				

Sample ID: **N063136-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182650**
Client ID: **ZZZZZZ** Batch ID: **R182650** TestNo: **EPA 218.6** Analysis Date: **2/17/2024** SeqNo: **5698543**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.018	0.20	1.000	0	102	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063136-013AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698545**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.999	0.20	1.000	0	99.9	90	110				

Sample ID: **N063136-014AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698547**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.016	0.20	1.000	0	102	90	110				

Sample ID: **N063153-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698551**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	42.684	1.0	25.00	17.84	99.4	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-CON-D-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 9:15:00 AM
Lab ID:	N063136-001	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240216B**	QC Batch: **106888**			PrepDate:	**2/16/2024**	Analyst: **DJ**	
Arsenic	2.2	0.050	0.10		µg/L	1	2/16/2024 05:25 PM
Manganese	1.5	0.026	0.50		µg/L	1	2/16/2024 05:25 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-923-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 10:00:00 AM
Lab ID:	N063136-002	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240216B**	QC Batch: **106888**			PrepDate:		**2/16/2024**	Analyst: **DJ**
Arsenic	2.1	0.050	0.10		µg/L	1	2/16/2024 06:02 PM
Manganese	1.5	0.026	0.50		µg/L	1	2/16/2024 06:02 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-CON-S-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 9:25:00 AM
Lab ID:	N063136-003	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240216B**	QC Batch: **106888**			PrepDate:		**2/16/2024**	Analyst: **DJ**
Arsenic	2.3	0.050	0.10		µg/L	1	2/16/2024 06:07 PM
Manganese	11	0.026	0.50		µg/L	1	2/16/2024 06:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-NR1-D-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 9:40:00 AM
Lab ID:	N063136-004	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240216B**	QC Batch: **106888**			PrepDate:		**2/16/2024**	Analyst: **DJ**
Arsenic	2.3	0.050	0.10		µg/L	1	2/16/2024 06:12 PM
Manganese	2.8	0.026	0.50		µg/L	1	2/16/2024 06:12 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-NR1-S-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 9:50:00 AM
Lab ID:	N063136-005	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240216B**	QC Batch: **106888**			PrepDate:		**2/16/2024**	Analyst: **DJ**
Arsenic	2.3	0.050	0.10		µg/L	1	2/16/2024 06:16 PM
Manganese	1.9	0.026	0.50		µg/L	1	2/16/2024 06:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-NR3-D-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 10:10:00 AM
Lab ID:	N063136-006	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240216B**	QC Batch: **106888**			PrepDate:		**2/16/2024**	Analyst: **DJ**
Arsenic	2.4	0.050	0.10		µg/L	1	2/16/2024 06:21 PM
Manganese	1.6	0.026	0.50		µg/L	1	2/16/2024 06:21 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-NR3-S-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 10:20:00 AM
Lab ID:	N063136-008	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240216B**	QC Batch: **106888**			PrepDate:	**2/16/2024**	Analyst: **DJ**	
Arsenic	2.4	0.050	0.10		µg/L	1	2/16/2024 06:25 PM
Manganese	2.0	0.026	0.50		µg/L	1	2/16/2024 06:25 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-NR4-D-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 10:35:00 AM
Lab ID:	N063136-009	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240216B**	QC Batch: **106888**			PrepDate:		**2/16/2024**	Analyst: **DJ**
Arsenic	2.3	0.050	0.10		µg/L	1	2/16/2024 06:30 PM
Manganese	24	0.026	0.50		µg/L	1	2/16/2024 06:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-NR4-S-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 10:45:00 AM
Lab ID:	N063136-010	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240216B**	QC Batch: **106888**			PrepDate:	**2/16/2024**		Analyst: **DJ**
Arsenic	2.3	0.050	0.10		µg/L	1	2/16/2024 06:35 PM
Manganese	2.3	0.026	0.50		µg/L	1	2/16/2024 06:35 PM

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	R-19-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 8:45:00 AM
Lab ID:	N063136-011	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240216B**	QC Batch: **106888**			PrepDate:	**2/16/2024**		Analyst: **DJ**
Arsenic	2.2	0.050	0.10		µg/L	1	2/16/2024 06:53 PM
Manganese	2.2	0.026	0.50		µg/L	1	2/16/2024 06:53 PM

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-MAR-D-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 8:15:00 AM
Lab ID:	N063136-012	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240216B**	QC Batch: **106888**			PrepDate:		**2/16/2024**	Analyst: **DJ**
Arsenic	2.2	0.050	0.10		µg/L	1	2/16/2024 06:58 PM
Manganese	68	0.026	0.50		µg/L	1	2/16/2024 06:58 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	C-MAR-S-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 8:25:00 AM
Lab ID:	N063136-013	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240216B**	QC Batch: **106888**			PrepDate:		**2/16/2024**	Analyst: **DJ**
Arsenic	2.2	0.050	0.10		µg/L	1	2/16/2024 07:02 PM
Manganese	73	0.026	0.50		µg/L	1	2/16/2024 07:02 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	RRB-Q124
Lab Order:	N063136		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/15/2024 9:00:00 AM
Lab ID:	N063136-014	**Matrix:**	SURFACE WATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240216B**	QC Batch: **106888**			PrepDate:	**2/16/2024**		Analyst: **DJ**
Arsenic	2.1	0.050	0.10		µg/L	1	2/16/2024 07:07 PM
Manganese	2.0	0.026	0.50		µg/L	1	2/16/2024 07:07 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **MB-106888**	SampType: **MBLK**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/16/2024**	RunNo: **181642**
Client ID: **PBW**	Batch ID: **106888**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5696782**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID: **LCS-106888**	SampType: **LCS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/16/2024**	RunNo: **181642**
Client ID: **LCSW**	Batch ID: **106888**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5696783**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	9.827	0.10	10.00	0	98.3	85	115				
Manganese	100.862	0.50	100.0	0	101	85	115				

Sample ID: **N063136-001B-MS**	SampType: **MS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/16/2024**	RunNo: **181642**
Client ID: **ZZZZZZ**	Batch ID: **106888**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5696790**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.237	0.10	10.00	2.207	100	75	125				
Manganese	103.209	0.50	100.0	1.534	102	75	125				

Sample ID: **N063136-001B-MSD**	SampType: **MSD**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/16/2024**	RunNo: **181642**
Client ID: **ZZZZZZ**	Batch ID: **106888**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/16/2024**	SeqNo: **5696793**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.113	0.10	10.00	2.207	99.1	75	125	12.24	1.02	20	
Manganese	102.821	0.50	100.0	1.534	101	75	125	103.2	0.376	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

SAMPLE RECEIVING ITEMS

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

ARCUS02 FOLDER C: 3/1/2024 12:00 AM R: 2/15/2024 1 of 1
N063136-015A

Page 1 of 2

| | | |

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	2/15/2024	Workorder:	N063136
Rep sample Temp (Deg C):	1.3/2.9	IR Gun ID:	3

Temp Blank: ☑ Yes ☐ No

Carrier name: ASSET

Last 4 digits of Tracking No.: NA Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

YRodriguez

Checklist Completed By MBC For: 2/16/2024

Reviewed By: for: MBC 02/21/2024

ASSET Laboratories

WORK ORDER Summary

21-Feb-24

WorkOrder: N063136

Client ID: ARCUS02

Project: PG&E Topock - RCM, 30211191 **QC Level:** Level IV **Date Received:** 2/15/2024 6:10 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063136-001A	C-CON-D-Q124	2/15/2024 9:15:00 AM	3/1/2024	Surface Water	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063136-001B			3/1/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/1/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063136-002A	MW-923-Q124	2/15/2024 10:00:00 AM	3/1/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063136-002B			3/1/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/1/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063136-003A	C-CON-S-Q124	2/15/2024 9:25:00 AM	3/1/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063136-003B			3/1/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/1/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063136-004A	C-NR1-D-Q124	2/15/2024 9:40:00 AM	3/1/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063136-004B			3/1/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/1/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063136-005A	C-NR1-S-Q124	2/15/2024 9:50:00 AM	3/1/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063136-005B			3/1/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/1/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063136-006A	C-NR3-D-Q124	2/15/2024 10:10:00 AM	3/1/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063136-006B			3/1/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/1/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063136-007A	AmbientBlank-3-Q124	2/15/2024 10:55:00 AM	3/1/2024		EPA 218.6	Hexavalent Chromium by IC	☑	☐	☐	WW
N063136-008A	C-NR3-S-Q124	2/15/2024 10:20:00 AM	3/1/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063136-008B			3/1/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/1/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW

WORK ORDER Summary

21-Feb-24

WorkOrder: N063136

Client ID: ARCUS02

Project: PG&E Topock - RCM, 30211191 **QC Level:** Level IV **Date Received:** 2/15/2024 6:10 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063136-009A	C-NR4-D-Q124	2/15/2024 10:35:00 AM	3/1/2024	Surface Water	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063136-009B			3/1/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/1/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063136-010A	C-NR4-S-Q124	2/15/2024 10:45:00 AM	3/1/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063136-010B			3/1/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/1/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063136-011A	R-19-Q124	2/15/2024 8:45:00 AM	3/1/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063136-011B			3/1/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/1/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063136-012A	C-MAR-D-Q124	2/15/2024 8:15:00 AM	3/1/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063136-012B			3/1/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/1/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063136-013A	C-MAR-S-Q124	2/15/2024 8:25:00 AM	3/1/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063136-013B			3/1/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/1/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063136-014A	RRB-Q124	2/15/2024 9:00:00 AM	3/1/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063136-014B			3/1/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/1/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063136-015A	FOLDER	3/1/2024	3/1/2024		Folder	Folder	☐	☐	☐	LAB
			3/1/2024		Folder	Level IV Report	☐	☐	☐	LAB
			3/1/2024		Folder	Folder	☐	☐	☐	LAB

List of Analysts

ASSET Laboratories Work Order: N063136

NAME	TEST METHOD
Ria Abes	EPA 218.6
Diane Jetajobe	EPA 6020_Dissolved

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R181622
ASSET #: N063136

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/16/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer: RBA Date: _____

2nd Level Reviewer: RB 02192024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R182650
ASSET #: N063136

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/17/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer RB 02192024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: ~~Groundwater~~ Surface water

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063136-001A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 0.0000 * 1$$

$$Cr^{+6}, \mu g/L = 0.0000$$

Since PQL is 0.2 µg/L,

$$\mathbf{Cr^{+6}, \mu g/L = ND}$$

Reviewed by:

dlRocha 3/3/2024

ANALYSIS RUN LOG

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240216A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/16/24 8:51 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/16/24 9:04 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/16/24 9:13 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/16/24 9:23 AM	Reported
13	MB-R181622	MBLK	1	Hexavalent Chromium	02/16/24 9:32 AM	Reported
14	LCS-R181622	LCS	1	Hexavalent Chromium	02/16/24 9:42 AM	Reported
15	N063135-001A	SAMP	1	Hexavalent Chromium	02/16/24 10:12 AM	Reported
16	N063135-001AMS	MS	1	Hexavalent Chromium	02/16/24 10:24 AM	Reported
17	N063135-003A	SAMP	1	Hexavalent Chromium	02/16/24 10:34 AM	Not Reported
18	MB-106779	MBLK	1	Hexavalent Chromium	02/16/24 10:43 AM	Reported
19	N063009-001B	SAMP	1	Hexavalent Chromium	02/16/24 10:53 AM	Reported
20	N063009-001BREP	DUP	1	Hexavalent Chromium	02/16/24 11:02 AM	Not Reported
21	N063009-002B	SAMP	1	Hexavalent Chromium	02/16/24 11:12 AM	Reported
22	N063009-002BREP	DUP	1	Hexavalent Chromium	02/16/24 11:21 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/16/24 11:31 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/16/24 11:40 AM	Reported
25	N063009-001BREP	DUP	1	Hexavalent Chromium	02/16/24 11:50 AM	Reported
26	N063009-001BREP	DUP	1	Hexavalent Chromium	02/16/24 11:59 AM	Not Reported
27	N063135-001ADUP	DUP	1	Hexavalent Chromium	02/16/24 12:09 PM	Reported
28	N063135-001AMSD	MSD	1	Hexavalent Chromium	02/16/24 12:18 PM	Reported
29	N063135-007A	SAMP	1	Hexavalent Chromium	02/16/24 12:27 PM	Reported
30	N063147-001B	SAMP	1	Hexavalent Chromium	02/16/24 12:37 PM	Reported
31	N063147-002B	SAMP	1	Hexavalent Chromium	02/16/24 12:46 PM	Reported
32	N063147-001BREP	DUP	1	Hexavalent Chromium	02/16/24 12:56 PM	Reported
33	N063147-002BREP	DUP	1	Hexavalent Chromium	02/16/24 1:05 PM	Reported
34	N063135-002AMS	MS	1	Hexavalent Chromium	02/16/24 1:15 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/16/24 1:24 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/16/24 1:34 PM	Reported
37	N063136-001A	SAMP	1	Hexavalent Chromium	02/16/24 1:47 PM	Reported
38	N063135-004A	SAMP	1	Hexavalent Chromium	02/16/24 1:59 PM	Reported
39	N063135-004AMS	MS	1	Hexavalent Chromium	02/16/24 2:08 PM	Reported
40	N063135-003A	SAMP	5	Hexavalent Chromium	02/16/24 2:18 PM	Reported
41	N063135-003AMS	MS	5	Hexavalent Chromium	02/16/24 2:27 PM	Reported
42	N063135-005A	SAMP	5	Hexavalent Chromium	02/16/24 2:37 PM	Reported

INJECTION LOG: 240216A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063135-005AMS	MS	5	Hexavalent Chromium	02/16/24 2:46 PM	Reported
44	N063135-006A	SAMP	1	Hexavalent Chromium	02/16/24 2:56 PM	Reported
45	N063135-006AMS	MS	1	Hexavalent Chromium	02/16/24 3:05 PM	Reported
46	N063136-001AMS	MS	1	Hexavalent Chromium	02/16/24 3:15 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/16/24 3:24 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/16/24 3:34 PM	Reported
49	N063136-002A	SAMP	1	Hexavalent Chromium	02/16/24 3:43 PM	Reported
50	N063136-002AMS	MS	1	Hexavalent Chromium	02/16/24 3:52 PM	Reported
51	N063136-003A	SAMP	1	Hexavalent Chromium	02/16/24 4:02 PM	Reported
52	N063136-003AMS	MS	1	Hexavalent Chromium	02/16/24 4:11 PM	Reported
53	N063136-004A	SAMP	1	Hexavalent Chromium	02/16/24 4:21 PM	Reported
54	N063136-004AMS	MS	1	Hexavalent Chromium	02/16/24 4:30 PM	Reported
55	N063136-005A	SAMP	1	Hexavalent Chromium	02/16/24 4:40 PM	Reported
56	N063136-005AMS	MS	1	Hexavalent Chromium	02/16/24 4:49 PM	Reported
57	N063136-006A	SAMP	1	Hexavalent Chromium	02/16/24 4:59 PM	Reported
58	N063136-006AMS	MS	1	Hexavalent Chromium	02/16/24 5:08 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/16/24 5:18 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/16/24 5:27 PM	Reported
61	N063136-008A	SAMP	1	Hexavalent Chromium	02/16/24 5:37 PM	Reported
62	N063136-008AMS	MS	1	Hexavalent Chromium	02/16/24 5:46 PM	Reported
63	N063136-009A	SAMP	1	Hexavalent Chromium	02/16/24 5:55 PM	Reported
64	N063136-009AMS	MS	1	Hexavalent Chromium	02/16/24 6:05 PM	Reported
65	N063136-010A	SAMP	1	Hexavalent Chromium	02/16/24 6:14 PM	Reported
66	N063136-010AMS	MS	1	Hexavalent Chromium	02/16/24 6:24 PM	Reported
67	N063135-007AMS	MS	1	Hexavalent Chromium	02/16/24 6:33 PM	Reported
68	N063135-005A	SAMP	1	Hexavalent Chromium	02/16/24 6:43 PM	Not Reported
69	N063135-005AMS	MS	1	Hexavalent Chromium	02/16/24 6:56 PM	Not Reported
70	N063135-002A	SAMP	1	Hexavalent Chromium	02/16/24 7:05 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/16/24 7:15 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/16/24 7:24 PM	Reported
73	N063135-003AMS	MS	1	Hexavalent Chromium	02/16/24 7:33 PM	Not Reported
74	CCV-7	CCV	1	Hexavalent Chromium	02/16/24 7:43 PM	Reported
75	CCB-7	CCB	1	Hexavalent Chromium	02/16/24 7:52 PM	Reported
76	BLANK	BLANK	1	Hexavalent Chromium	02/16/24 8:02 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240216A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**17/Feb/24 10:32:50**
No. of Injections:	**79**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/16/2024 08:51	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/16/2024 09:04	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/16/2024 09:13	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/16/2024 09:23	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/16/2024 09:32	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/16/2024 09:42	Finished	LCS @5ppb, IWST-231228B
15	N063135-001A,SAMP	1	1000	Unknown		02/16/2024 10:12	Finished	SAMP,10 mL
16	N063135-001AMS,MS	2	1000	Unknown		02/16/2024 10:24	Finished	MS (1ppb), IWST-231228B,10r
17	N063135-003A,SAMP	3	1000	Unknown		02/16/2024 10:34	Finished	SAMP,10 mL
18	MB-106779,MBLK,1,	4	1000	Unknown		02/16/2024 10:43	Finished	MB STLC
19	N063009-001B,SAMP	5	1000	Unknown		02/16/2024 10:53	Finished	SAMP,10 mL
20	N063009-001BREP,D	6	1000	Unknown		02/16/2024 11:02	Finished	REP,10 mL
21	N063009-002B,SAMP	7	1000	Unknown		02/16/2024 11:12	Finished	SAMP,10 mL
22	N063009-002BREP,D	8	1000	Unknown		02/16/2024 11:21	Finished	REP,10 mL
23	CCV-2,CCV1,1,	9	1000	Unknown		02/16/2024 11:31	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		02/16/2024 11:40	Finished	CCB R240129C
25	N063009-001BREP,D	11	1000	Unknown		02/16/2024 11:50	Finished	SAMP,10 mL
26	N063009-001BREP,D	12	1000	Unknown		02/16/2024 11:59	Finished	REP,10 mL
27	N063135-001ADUP,D	13	1000	Unknown		02/16/2024 12:09	Finished	DUP,10 mL
28	N063135-001AMSD,M	14	1000	Unknown		02/16/2024 12:18	Finished	MSD (1ppb), IWST-231228B,1
29	N063135-007A,SAMP	15	1000	Unknown		02/16/2024 12:27	Finished	SAMP,10 mL
30	N063147-001B,SAMP	16	1000	Unknown		02/16/2024 12:37	Finished	SAMP,10 mL
31	N063147-002B,SAMP	17	1000	Unknown		02/16/2024 12:46	Finished	SAMP,10 mL
32	N063147-001BREP,D	18	1000	Unknown		02/16/2024 12:56	Finished	REP,10 mL
33	N063147-002BREP,D	19	1000	Unknown		02/16/2024 13:05	Finished	REP,10 mL
34	N063135-002AMS,MS	20	1000	Unknown		02/16/2024 13:15	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	21	1000	Unknown		02/16/2024 13:24	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	22	1000	Unknown		02/16/2024 13:34	Finished	CCB R240129C
37	N063136-001A,SAMP	1	1000	Unknown		02/16/2024 13:47	Finished	SAMP,10 mL
38	N063135-004A,SAMP	2	1000	Unknown		02/16/2024 13:59	Finished	SAMP,10 mL
39	N063135-004AMS,MS	3	1000	Unknown		02/16/2024 14:08	Finished	MS (1ppb), IWST-231228B,10r
40	N063135-003A,SAMP	4	1000	Unknown		02/16/2024 14:18	Finished	SAMP,2>10 mL
41	N063135-003AMS,MS	5	1000	Unknown		02/16/2024 14:27	Finished	MS (1ppb), IWST-231228B,2>1
42	N063135-005A,SAMP	6	1000	Unknown		02/16/2024 14:37	Finished	SAMP,2>10 mL
43	N063135-005AMS,MS	7	1000	Unknown		02/16/2024 14:46	Finished	MS (1ppb), IWST-231228B,2>1
44	N063135-006A,SAMP	8	1000	Unknown		02/16/2024 14:56	Finished	SAMP,10 mL
45	N063135-006AMS,MS	9	1000	Unknown		02/16/2024 15:05	Finished	MS (1ppb), IWST-231228B,10r
46	N063136-001AMS,MS	10	1000	Unknown		02/16/2024 15:15	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	11	1000	Unknown		02/16/2024 15:24	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	12	1000	Unknown		02/16/2024 15:34	Finished	CCB R240129C
49	N063136-002A,SAMP	13	1000	Unknown		02/16/2024 15:43	Finished	SAMP,10 mL
50	N063136-002AMS,MS	14	1000	Unknown		02/16/2024 15:52	Finished	MS (1ppb), IWST-231228B,10r
51	N063136-003A,SAMP	15	1000	Unknown		02/16/2024 16:02	Finished	SAMP,10 mL
52	N063136-003AMS,MS	16	1000	Unknown		02/16/2024 16:11	Finished	MS (1ppb), IWST-231228B,10r
53	N063136-004A,SAMP	17	1000	Unknown		02/16/2024 16:21	Finished	SAMP,10 mL
54	N063136-004AMS,MS	18	1000	Unknown		02/16/2024 16:30	Finished	MS (1ppb), IWST-231228B,10r
55	N063136-005A,SAMP	19	1000	Unknown		02/16/2024 16:40	Finished	SAMP,10 mL
56	N063136-005AMS,MS	20	1000	Unknown		02/16/2024 16:49	Finished	MS (1ppb), IWST-231228B,10r
57	N063136-006A,SAMP	21	1000	Unknown		02/16/2024 16:59	Finished	SAMP,10 mL
58	N063136-006AMS,MS	22	1000	Unknown		02/16/2024 17:08	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	23	1000	Unknown		02/16/2024 17:18	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	24	1000	Unknown		02/16/2024 17:27	Finished	CCB R240129C

61	N063136-008A,SAMP	25	1000	Unknown		02/16/2024 17:37	Finished	SAMP,10 mL
62	N063136-008AMS,MS	26	1000	Unknown		02/16/2024 17:46	Finished	MS (1ppb), IWST-231228B,10r
63	N063136-009A,SAMP	27	1000	Unknown		02/16/2024 17:55	Finished	SAMP,10 mL
64	N063136-009AMS,MS	28	1000	Unknown		02/16/2024 18:05	Finished	MS (1ppb), IWST-231228B,10r
65	N063136-010A,SAMP	29	1000	Unknown		02/16/2024 18:14	Finished	SAMP,10 mL
66	N063136-010AMS,MS	30	1000	Unknown		02/16/2024 18:24	Finished	MS (1ppb), IWST-231228B,10r
67	N063135-007AMS,MS	31	1000	Unknown		02/16/2024 18:33	Finished	MS (1ppb), IWST-231228B,10r
68	N063135-005A,SAMP	32	1000	Unknown		02/16/2024 18:43	Finished	SAMP,10 mL
69	N063135-005AMS,MS	33	1000	Unknown		02/16/2024 18:56	Finished	MS (1ppb), IWST-231228B,10r
70	N063135-002A,SAMP	34	1000	Unknown		02/16/2024 19:05	Finished	SAMP,10 mL
71	CCV-6,CCV1,1,	35	1000	Unknown		02/16/2024 19:15	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	36	1000	Unknown		02/16/2024 19:24	Finished	CCB R240129C
73	N063135-003AMS,MS	37	1000	Unknown		02/16/2024 19:33	Finished	MS (1ppb), IWST-231228B,10r
74	CCV-7,CCV,1,	38	1000	Unknown		02/16/2024 19:43	Finished	CCV @5ppb, IWST-231228A
75	CCB-7,CCB,1,	39	1000	Unknown		02/16/2024 19:52	Finished	CCB R240129C
76	BLANK	40	1000	Unknown		02/16/2024 20:02	Finished	BLANK
77	SHUTDOWN	41	1000	Unknown		02/16/2024 20:11	Finished	
78	Eluent: R240215A	42	1000	Unknown		n.a.	Finished	
79	PCR: R240215B	43	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240217A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/17/24 10:30 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/17/24 10:44 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/17/24 10:53 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/17/24 11:03 AM	Reported
13	MB-R182650	MBLK	1	Hexavalent Chromium	02/17/24 11:12 AM	Reported
14	LCS-R182650	LCS	1	Hexavalent Chromium	02/17/24 11:22 AM	Reported
15	MB-106824	MBLK	1	Hexavalent Chromium	02/17/24 11:31 AM	Reported
16	N063051-001B	SAMP	1	Hexavalent Chromium	02/17/24 11:41 AM	Reported
17	N063051-001BREP	DUP	1	Hexavalent Chromium	02/17/24 11:50 AM	Reported
18	N063051-002B	SAMP	1	Hexavalent Chromium	02/17/24 12:00 PM	Reported
19	N063051-002BREP	DUP	1	Hexavalent Chromium	02/17/24 12:09 PM	Reported
20	N063051-001BMS	MS	1	Hexavalent Chromium	02/17/24 12:19 PM	Reported
21	N063051-001BMSD	MSD	1	Hexavalent Chromium	02/17/24 12:28 PM	Not Reported
22	N06153-001A	SAMP	5	Hexavalent Chromium	02/17/24 12:37 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/17/24 12:46 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/17/24 12:56 PM	Reported
25	N063051-001BMSD	MSD	1	Hexavalent Chromium	02/17/24 1:05 PM	Reported
26	N063153-002A	SAMP	5	Hexavalent Chromium	02/17/24 1:14 PM	Reported
27	N063153-002AMS	MS	5	Hexavalent Chromium	02/17/24 1:24 PM	Reported
28	N063153-004A	SAMP	20	Hexavalent Chromium	02/17/24 1:33 PM	Not Reported
29	N063153-004AMS	MS	20	Hexavalent Chromium	02/17/24 1:43 PM	Not Reported
30	N063153-005A	SAMP	50	Hexavalent Chromium	02/17/24 1:52 PM	Not Reported
31	N063153-005AMS	MS	50	Hexavalent Chromium	02/17/24 2:02 PM	Not Reported
32	N063153-003A	SAMP	1	Hexavalent Chromium	02/17/24 2:11 PM	Reported
33	N063153-003AMS	MS	1	Hexavalent Chromium	02/17/24 2:21 PM	Reported
34	N063153-006A	SAMP	1	Hexavalent Chromium	02/17/24 2:30 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/17/24 2:40 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/17/24 2:49 PM	Reported
37	N063153-006AMS	MS	1	Hexavalent Chromium	02/17/24 2:59 PM	Reported
38	N063136-011A	SAMP	1	Hexavalent Chromium	02/17/24 3:08 PM	Reported
39	N063136-011AMS	MS	1	Hexavalent Chromium	02/17/24 3:18 PM	Reported
40	N063136-012A	SAMP	1	Hexavalent Chromium	02/17/24 3:27 PM	Reported
41	N063136-012AMS	MS	1	Hexavalent Chromium	02/17/24 3:36 PM	Reported
42	N063136-013A	SAMP	1	Hexavalent Chromium	02/17/24 3:46 PM	Reported

INJECTION LOG: 240217A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063136-013AMS	MS	1	Hexavalent Chromium	02/17/24 3:55 PM	Reported
44	N063136-014A	SAMP	1	Hexavalent Chromium	02/17/24 4:05 PM	Reported
45	N063136-014AMS	MS	1	Hexavalent Chromium	02/17/24 4:14 PM	Reported
46	N063153-005A	SAMP	1	Hexavalent Chromium	02/17/24 4:24 PM	Not Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/17/24 4:33 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/17/24 4:43 PM	Reported
49	N063153-005AMS	MS	1	Hexavalent Chromium	02/17/24 4:52 PM	Not Reported
50	N063153-005A	SAMP	5	Hexavalent Chromium	02/17/24 5:02 PM	Not Reported
51	N063153-005AMS	MS	5	Hexavalent Chromium	02/17/24 5:11 PM	Not Reported
52	N063153-001AMS	MS	5	Hexavalent Chromium	02/17/24 5:20 PM	Reported
53	CCV-5	CCV	1	Hexavalent Chromium	02/17/24 5:30 PM	Reported
54	CCB-5	CCB	1	Hexavalent Chromium	02/17/24 5:39 PM	Reported
55	BLANK	BLANK	1	Hexavalent Chromium	02/17/24 5:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240217A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**19/Feb/24 11:31:47**
No. of Injections:	**58**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/17/2024 10:30	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/17/2024 10:44	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/17/2024 10:53	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/17/2024 11:03	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/17/2024 11:12	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/17/2024 11:22	Finished	LCS @5ppb, IWST-231228B
15	MB-106824,MBLK,1,	7	1000	Unknown		02/17/2024 11:31	Finished	MB STLC
16	N063051-001B,SAMF	8	1000	Unknown		02/17/2024 11:41	Finished	SAMP,10 mL
17	N063051-001BREP,D	9	1000	Unknown		02/17/2024 11:50	Finished	REP,10 mL
18	N063051-002B,SAMF	10	1000	Unknown		02/17/2024 12:00	Finished	SAMP,10 mL
19	N063051-002BREP,D	11	1000	Unknown		02/17/2024 12:09	Finished	REP,10 mL
20	N063051-001BMS,MS	12	1000	Unknown		02/17/2024 12:19	Finished	MS (1ppb), IWST-231228B,10r
21	N063051-001BMSD,M	13	1000	Unknown		02/17/2024 12:28	Finished	MSD (1ppb), IWST-231228B,1
22	N06153-001A,SAMP,	14	1000	Unknown		02/17/2024 12:37	Finished	SAMP,2>10 mL
23	CCV-2,CCV1,1,	15	1000	Unknown		02/17/2024 12:46	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		02/17/2024 12:56	Finished	CCB R240129C
25	N063051-001BMSD,M	17	1000	Unknown		02/17/2024 13:05	Finished	MSD (1ppb), IWST-231228B,1
26	N063153-002A,SAMF	18	1000	Unknown		02/17/2024 13:14	Finished	SAMP,2>10 mL
27	N063153-002AMS,MS	19	1000	Unknown		02/17/2024 13:24	Finished	MS (5ppb), IWST-231228B,2>
28	N063153-004A,SAMF	20	1000	Unknown		02/17/2024 13:33	Finished	SAMP,0.5>10 mL
29	N063153-004AMS,MS	21	1000	Unknown		02/17/2024 13:43	Finished	MS (5ppb), IWST-231228B,0.5
30	N063153-005A,SAMF	22	1000	Unknown		02/17/2024 13:52	Finished	SAMP,0.2>10 mL
31	N063153-005AMS,MS	23	1000	Unknown		02/17/2024 14:02	Finished	MS (5ppb), IWST-231228B,0.2
32	N063153-003A,SAMF	24	1000	Unknown		02/17/2024 14:11	Finished	SAMP,10 mL
33	N063153-003AMS,MS	25	1000	Unknown		02/17/2024 14:21	Finished	MS (1ppb), IWST-231228B,10r
34	N063153-006A,SAMF	26	1000	Unknown		02/17/2024 14:30	Finished	SAMP,10 mL
35	CCV-3,CCV,1,	27	1000	Unknown		02/17/2024 14:40	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	28	1000	Unknown		02/17/2024 14:49	Finished	CCB R240129C
37	N063153-006AMS,MS	29	1000	Unknown		02/17/2024 14:59	Finished	MS (1ppb), IWST-231228B,10r
38	N063136-011A,SAMF	30	1000	Unknown		02/17/2024 15:08	Finished	SAMP,10 mL
39	N063136-011AMS,MS	31	1000	Unknown		02/17/2024 15:18	Finished	MS (1ppb), IWST-231228B,10r
40	N063136-012A,SAMF	32	1000	Unknown		02/17/2024 15:27	Finished	SAMP,10 mL
41	N063136-012AMS,MS	33	1000	Unknown		02/17/2024 15:36	Finished	MS (1ppb), IWST-231228B,10r
42	N063136-013A,SAMF	34	1000	Unknown		02/17/2024 15:46	Finished	SAMP,10 mL
43	N063136-013AMS,MS	35	1000	Unknown		02/17/2024 15:55	Finished	MS (1ppb), IWST-231228B,10r
44	N063136-014A,SAMF	36	1000	Unknown		02/17/2024 16:05	Finished	SAMP,10 mL
45	N063136-014AMS,MS	37	1000	Unknown		02/17/2024 16:14	Finished	MS (1ppb), IWST-231228B,10r
46	N063153-005A,SAMF	38	1000	Unknown		02/17/2024 16:24	Finished	SAMP,10 mL
47	CCV-4,CCV1,1,	39	1000	Unknown		02/17/2024 16:33	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	40	1000	Unknown		02/17/2024 16:43	Finished	CCB R240129C
49	N063153-005AMS,MS	41	1000	Unknown		02/17/2024 16:52	Finished	MS (1ppb), IWST-231228B,10r
50	N063153-005A,SAMF	42	1000	Unknown		02/17/2024 17:02	Finished	SAMP,2>10 mL
51	N063153-005AMS,MS	43	1000	Unknown		02/17/2024 17:11	Finished	MS (1ppb), IWST-231228B,2>
52	N063153-001AMS,MS	44	1000	Unknown		02/17/2024 17:20	Finished	MS (5ppb), IWST-231228B,2>
53	CCV-5,CCV,1,	45	1000	Unknown		02/17/2024 17:30	Finished	CCV @5ppb, IWST-231228A
54	CCB-5,CCB,1,	46	1000	Unknown		02/17/2024 17:39	Finished	CCB R240129C
55	BLANK	47	1000	Unknown		02/17/2024 17:49	Finished	BLANK
56	SHUTDOWN	48	1000	Unknown		02/17/2024 17:58	Finished	
57	Eluent: R240215A	49	1000	Unknown		n.a.	Finished	
58	PCR: R240215B	50	1000	Unknown		n.a.	Finished	

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 2/16/24
Time Prepared: 0947 H
Prepared By: MA

Reagent ID:
Sulfuric Acid: 14335
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: M240215A
NH4OH + NH4SO4 buffer: M240179C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MB-118175 - 1A	9.33	-	~250mL	~250mL		
2)	2A	9.70	-				
3)	3A	9.30	-				
4)	4A	9.71	-				
5)	5A	9.35	-				
6)	6A	9.68	-				
7)	7A	9.68	-				
8)	MB-118176 - 1A	9.35	-				
9)	2A	9.35	-				
10)	3A	9.35	-				
11)	4A	9.41	-				
12)	5A	9.46	-				
13)	6A	9.47	-				
14)	8A	9.54	-				
15)	9A	9.40	-				
	10A	9.52	-				

Sample Preparation

Date Prepared: 2/16/24
Time Prepared: 0947H
Prepared By: MA

Reagent ID:
Sulfuric Acid: 14335
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: M240215A
NH4OH + NH4SO4 buffer: M240179C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MB-118176 - 11A	9.37	-	~250m	~250m		
2)	12A	9.41	-				
3)	13A	9.38	-				
4)	14A	9.34	-				
5)	MB-106779	7.94	9.55	~50m	~50m	+0.2ml M240215C/10ml	STLC
6)	MB-118179 - 1A	9.33	9.45				
7)	2A	9.37	9.50				
8)							
9)							
10)							
11)							
12)							
13)							
14)							
15)							

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 2/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0427	0.2063	1.0639	2.1157	3.2270	4.3227	0.9999
Measured, in ug/L	0.198500	0.959200	4.946100	9.835700	15.002300	20.095900	
Relative Error (%RE)	-0.8%		-1.1%				

	Stock	Working
Standard Concentration:	1,000,000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ICV**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5695460**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5695461**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCV**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695463**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.134	0.20	5.000	0	103	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695464**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.20	0.2000	0	110	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695475**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.539	0.20	10.00	0	95.4	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCV**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695487**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.937	0.20	5.000	0	98.7	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695499**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.030	0.20	10.00	0	100	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCV**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695511**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.940	0.20	5.000	0	98.8	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ZZZZZZ**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695521**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.912	0.20	10.00	0	99.1	95	105				

Sample ID: **CCV-7**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCV**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695523**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.905	0.20	5.000	0	98.1	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ICV**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5698514**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5698515**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **CCV**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698517**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.901	0.20	5.000	0	98.0	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698518**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.208	0.20	0.2000	0	104	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698529**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.922	0.20	10.00	0	99.2	95	105				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **CCV**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698537**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.924	0.20	5.000	0	98.5	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698549**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.887	0.20	10.00	0	98.9	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **CCV**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698552**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.917	0.20	5.000	0	98.3	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **ICB**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5695462**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCB**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695465**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCB**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695476**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCB**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695488**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCB**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695500**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCB**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695512**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCB**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695522**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-7**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **181622**
Client ID: **CCB**	Batch ID: **R181622**	TestNo: **EPA 218.6**		Analysis Date: **2/16/2024**	SeqNo: **5695524**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ICB**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5698516**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **CCB**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698519**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **CCB**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698530**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **CCB**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698538**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **CCB**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698550**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5** SampType: **CCB** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182650**
Client ID: **CCB** Batch ID: **R182650** TestNo: **EPA 218.6** Analysis Date: **2/17/2024** SeqNo: **5698553**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/16/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.056	
CCV-2	4.065	
CCV-3	4.056	
CCV-4	4.056	
CCV-5	4.056	
CCV-6	4.056	
CCV-7	4.065	

Average	4.059
Actual RT Window	3.979 - 4.139
Applied RT Window	3.859 - 4.259

MB-R181622	N.A.	N.A.
LCS-R181622	4.056	PASS
N063135-001A	N.A.	N.A.
N063135-001AMS	4.040	PASS
N063135-003A	N.A.	N.A.
MB-106779	N.A.	N.A.
N063009-001B	4.056	PASS
N063009-001BREP	4.023	PASS
N063009-002B	4.056	PASS
N063009-002BREP	4.056	PASS
N063009-001BREP	4.056	PASS
N063135-001ADUP	N.A.	N.A.
N063135-001AMSD	4.040	PASS
N063135-007A	N.A.	N.A.
N063147-001B	4.015	PASS
N063147-002B	N.A.	N.A.
N063147-001BREP	4.006	PASS
N063147-002BREP	N.A.	N.A.
N063135-002AMS	4.056	PASS
N063136-001A	N.A.	N.A.
N063135-004A	N.A.	N.A.

Reviewed by:

dMRocha 3/3/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/16/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.056	
CCV-2	4.065	
CCV-3	4.056	
CCV-4	4.056	
CCV-5	4.056	
CCV-6	4.056	
CCV-7	4.065	
Average	4.059	
Actual RT Window	3.979 - 4.139	
Applied RT Window	3.859 - 4.259	
N063135-004AMS	4.056	PASS
N063135-003A	N.A.	N.A.
N063135-003AMS	4.015	PASS
N063135-005A	N.A.	N.A.
N063135-005AMS	3.990	PASS
N063135-006A	N.A.	N.A.
N063135-006AMS	4.056	PASS
N063136-001AMS	4.048	PASS
N063136-002A	N.A.	N.A.
N063136-002AMS	4.048	PASS
N063136-003A	N.A.	N.A.
N063136-003AMS	4.048	PASS
N063136-004A	N.A.	N.A.
N063136-004AMS	4.056	PASS
N063136-005A	N.A.	N.A.
N063136-005AMS	4.048	PASS
N063136-006A	N.A.	N.A.
N063136-006AMS	4.048	PASS
N063136-008A	N.A.	N.A.
N063136-008AMS	4.056	PASS
N063136-009A	N.A.	N.A.

Reviewed by:

dMRocha 3/3/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/16/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.056	
CCV-2	4.065	
CCV-3	4.056	
CCV-4	4.056	
CCV-5	4.056	
CCV-6	4.056	
CCV-7	4.065	
Average	4.059	
Actual RT Window	3.979 - 4.139	
Applied RT Window	3.859 - 4.259	
N063136-009AMS	4.048	PASS
N063136-010A	N.A.	N.A.
N063136-010AMS	4.048	PASS
N063135-007AMS	4.073	PASS
N063135-005A	N.A.	N.A.
N063135-005AMS	N.A.	N.A.
N063135-002A	N.A.	N.A.

Reviewed by:

dlRocha 3/3/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/17/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.056	
CCV-2	4.056	
CCV-3	4.056	
CCV-4	4.065	
CCV-5	4.056	

Average 4.058
Actual RT Window 3.978 - 4.138
Applied RT Window 3.858 - 4.258

MB-R182650	N.A.	N.A.
LCS-R182650	4.056	PASS
MB-106824	N.A.	N.A.
N063051-001B	4.056	PASS
N063051-001BREP	4.056	PASS
N063051-002B	4.056	PASS
N063051-002BREP	4.056	PASS
N063051-001BMS	4.065	PASS
N063051-001BMSD	N.A.	N.A.
N06153-001A	4.031	PASS
N063051-001BMSD	4.065	PASS
N063153-002A	4.015	PASS
N063153-002AMS	4.023	PASS
N063153-004A	4.056	PASS
N063153-004AMS	4.056	PASS
N063153-005A	4.048	PASS
N063153-005AMS	4.056	PASS
N063153-003A	N.A.	N.A.
N063153-003AMS	4.056	PASS
N063153-006A	N.A.	N.A.
N063153-006AMS	4.056	PASS
N063136-011A	N.A.	N.A.
N063136-011AMS	4.048	PASS

Reviewed by:

dMocha 3/3/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/17/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.056	
CCV-2	4.056	
CCV-3	4.056	
CCV-4	4.065	
CCV-5	4.056	
Average	4.058	
Actual RT Window	3.978 - 4.138	
Applied RT Window	3.858 - 4.258	
N063136-012A	N.A.	N.A.
N063136-012AMS	4.048	PASS
N063136-013A	N.A.	N.A.
N063136-013AMS	4.048	PASS
N063136-014A	N.A.	N.A.
N063136-014AMS	4.048	PASS
N063153-005A	N.A.	N.A.
N063153-005AMS	N.A.	N.A.
N063153-005A	3.990	PASS
N063153-005AMS	3.990	PASS
N063153-001AMS	4.040	PASS

Reviewed by:

dMocha 3/3/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

Reviewed by:

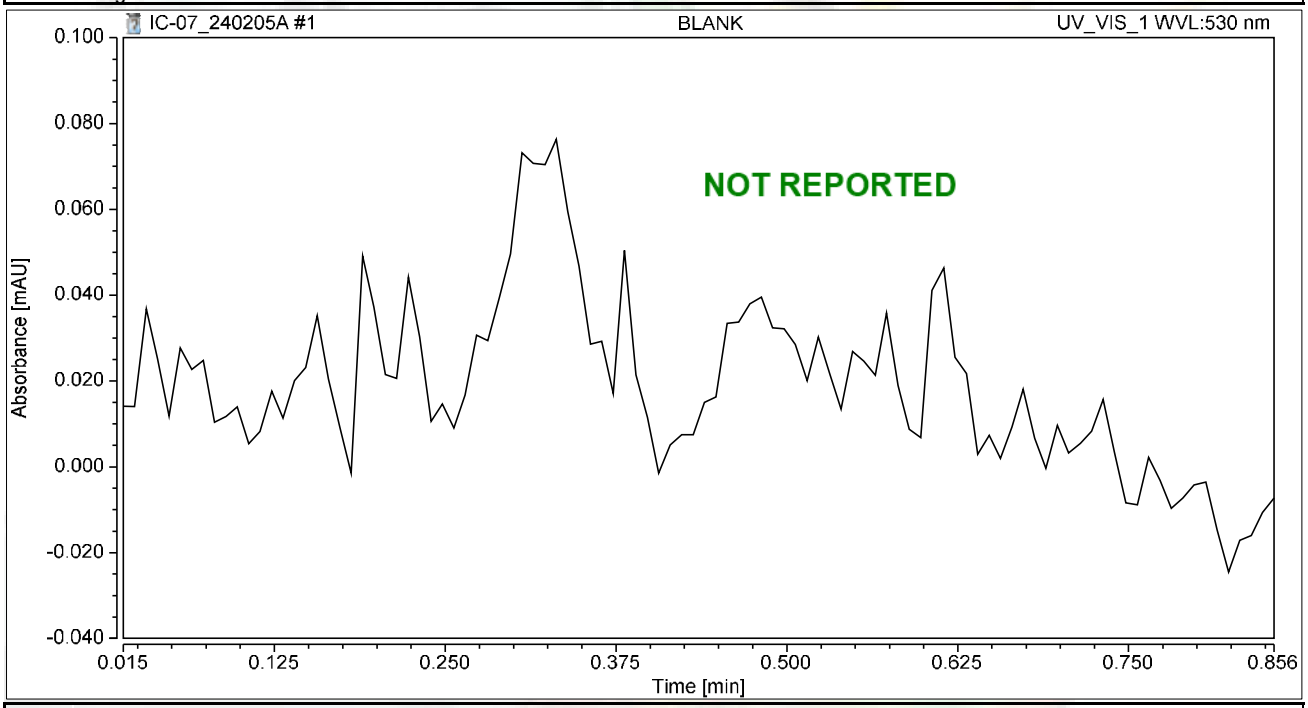
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**0.84**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 11:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

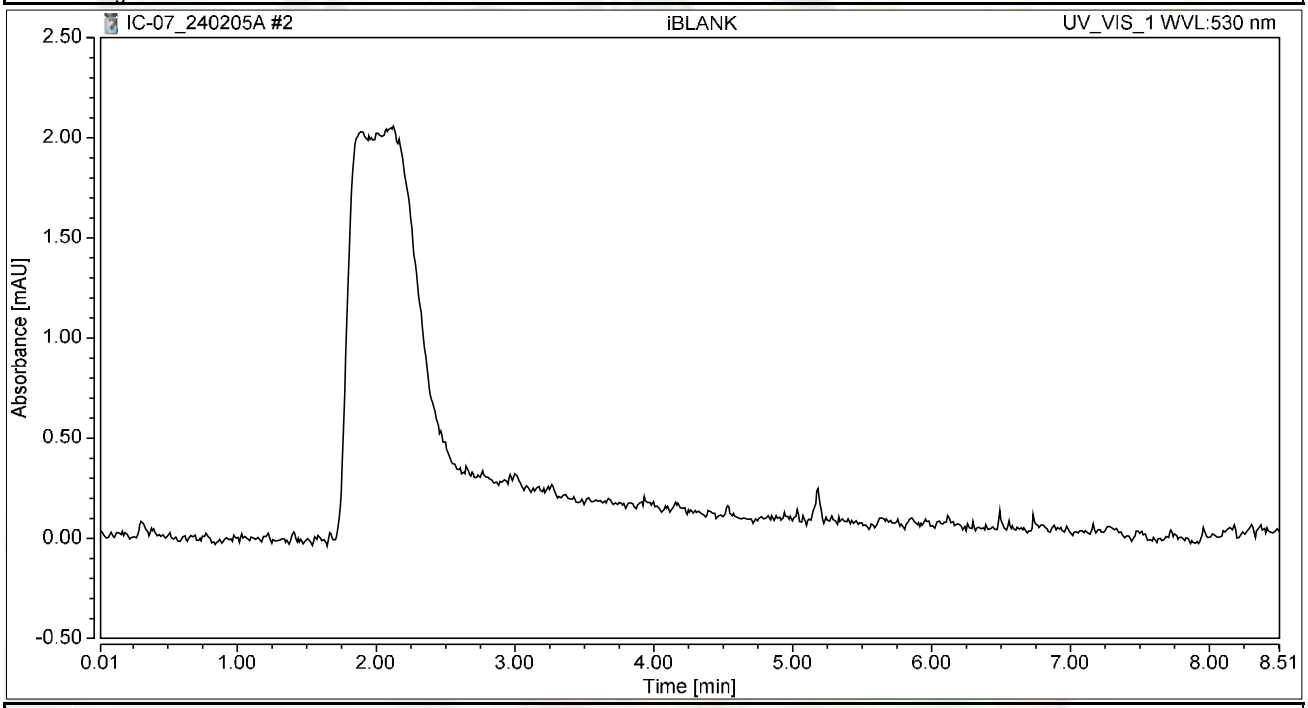
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Reviewed by:

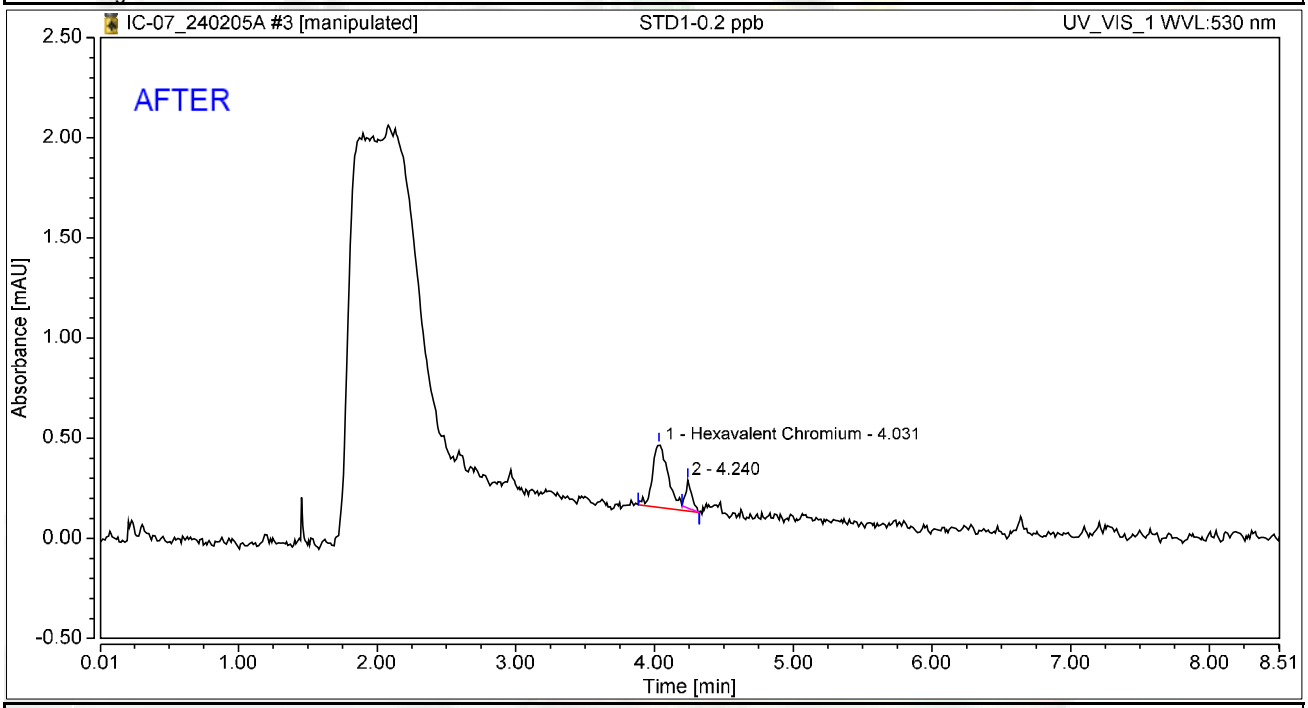
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.043	0.313	85.65	69.19	0.1985
2		4.240	0.007	0.139	14.35	30.81	n.a.
Total:			**0.050**	**0.452**	**100.00**	**100.00**	

Reviewed by:

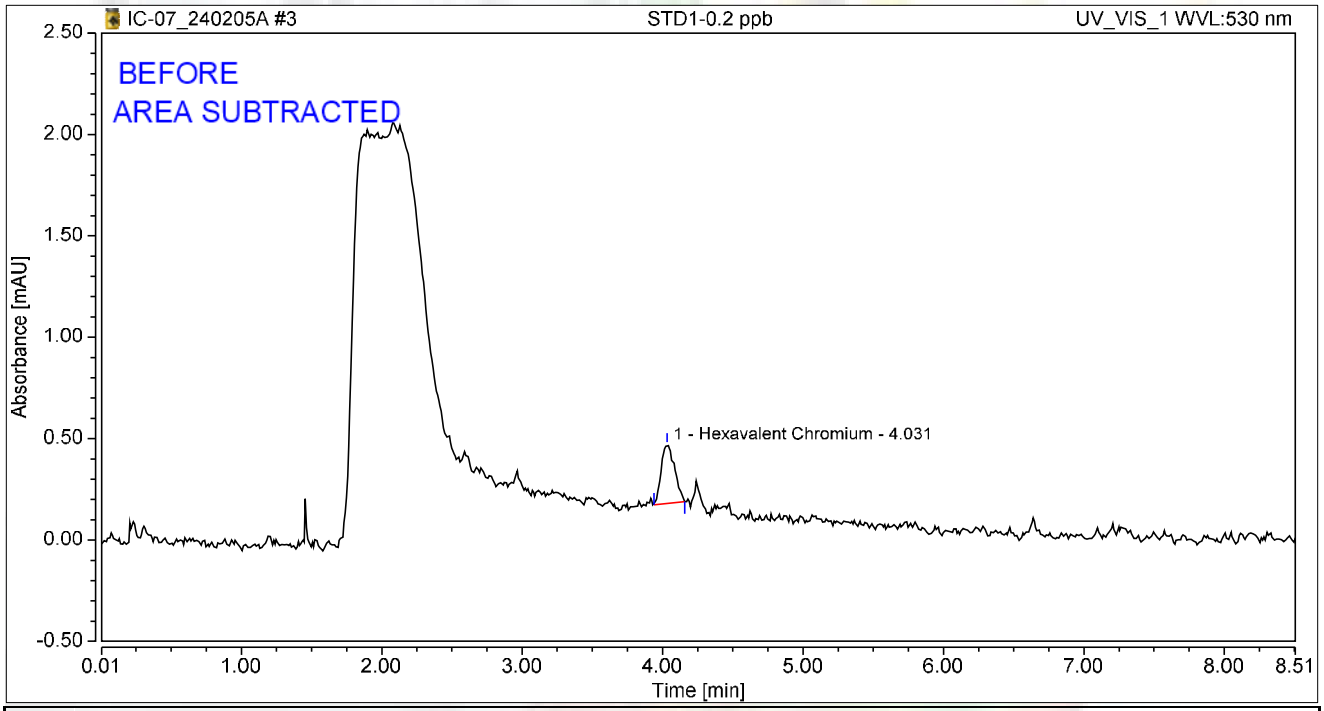
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

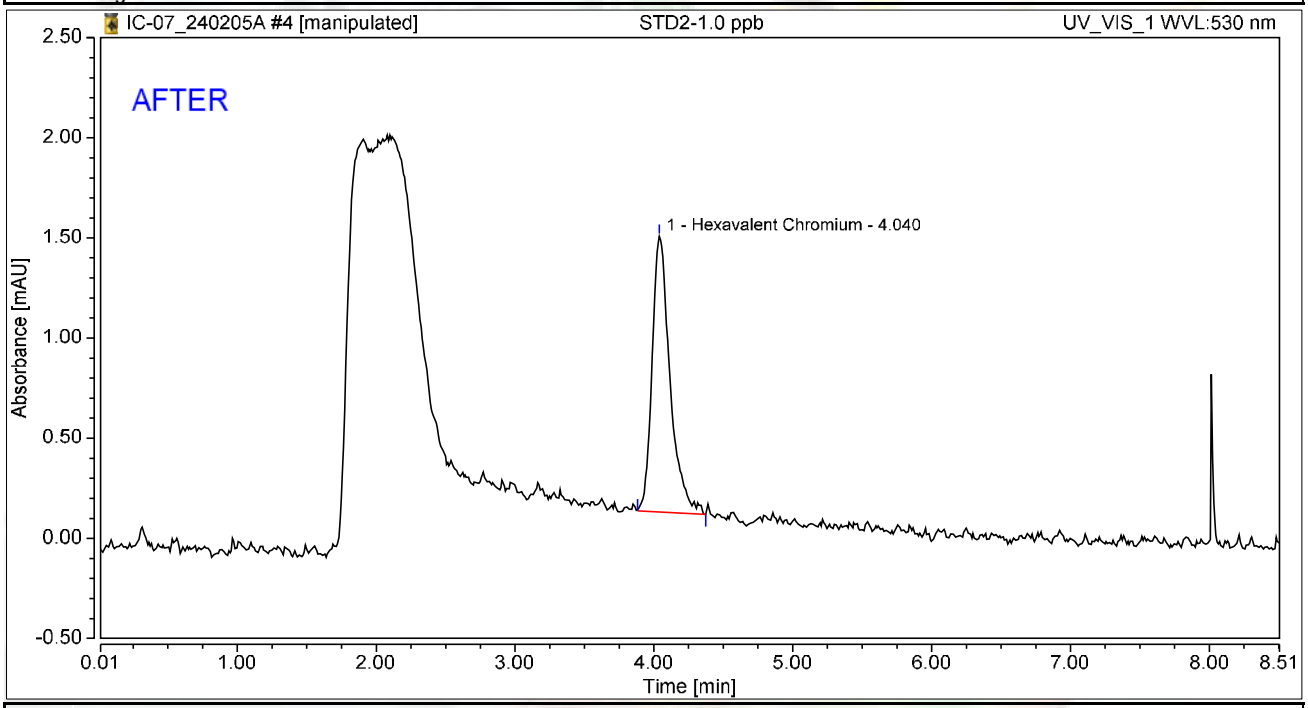
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.032	0.288	100.00	100.00	0.1502
Total:			**0.032**	**0.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.206	1.377	100.00	100.00	0.9592
Total:			**0.206**	**1.377**	**100.00**	**100.00**	

Reviewed by:

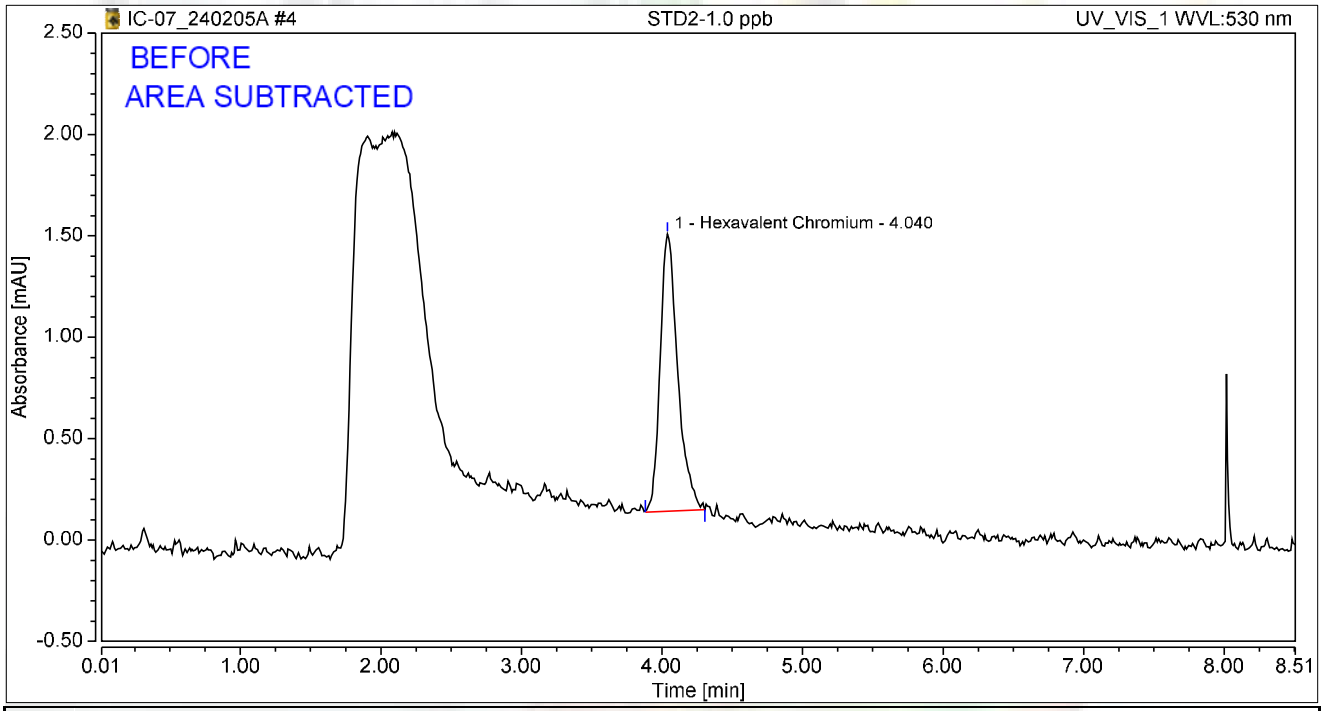
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

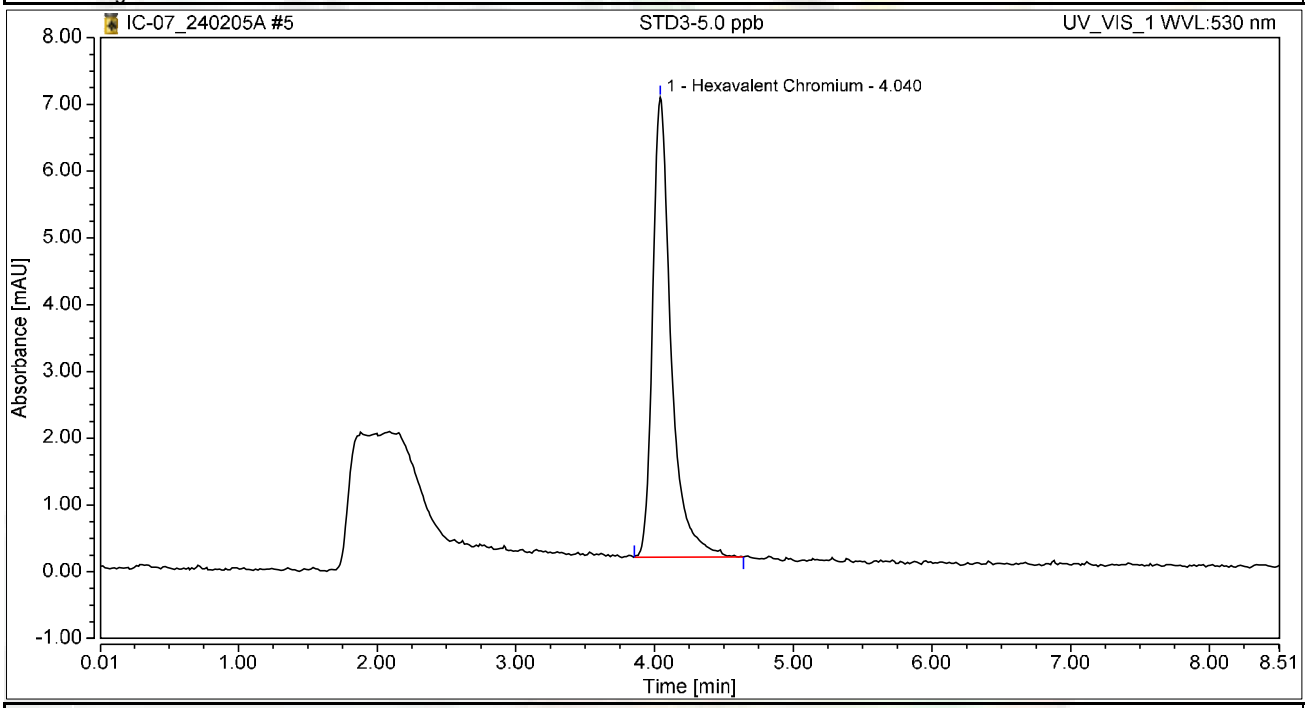
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.198	1.367	100.00	100.00	0.9223
Total:			**0.198**	**1.367**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

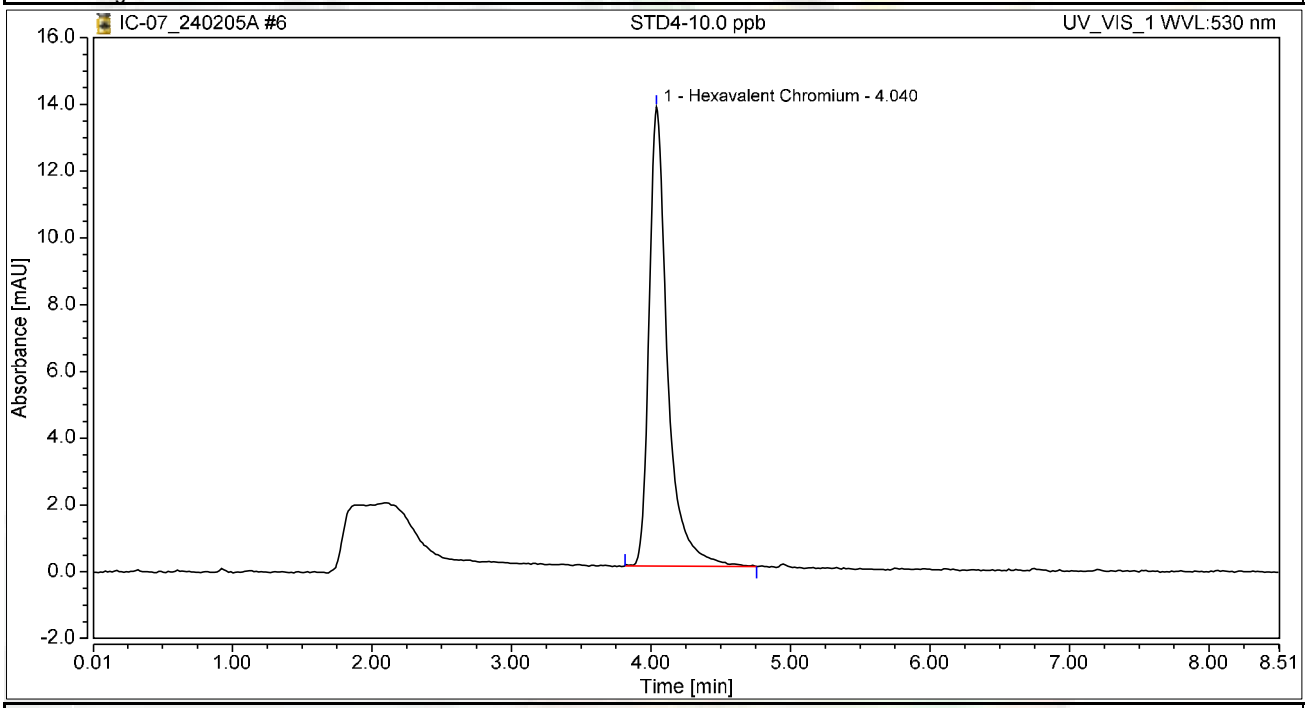
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.064	6.885	100.00	100.00	4.9461
Total:			**1.064**	**6.885**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

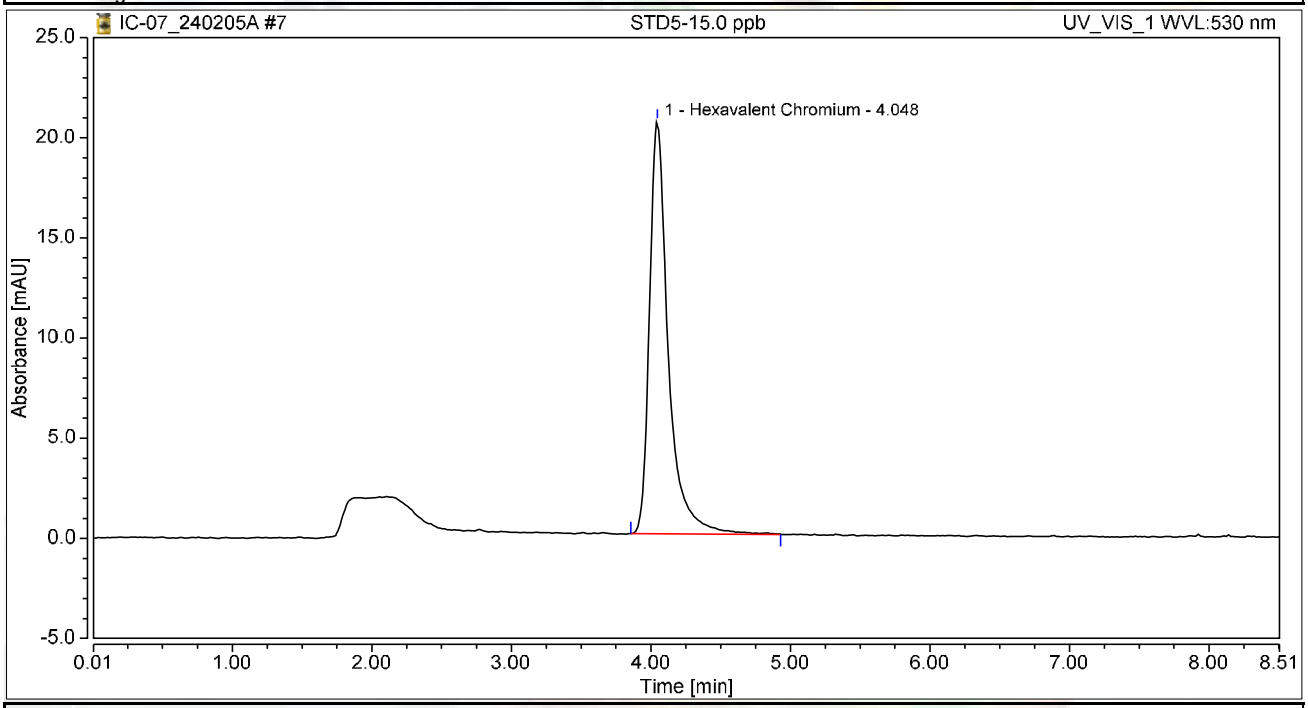
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.116	13.748	100.00	100.00	9.8357
Total:			**2.116**	**13.748**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

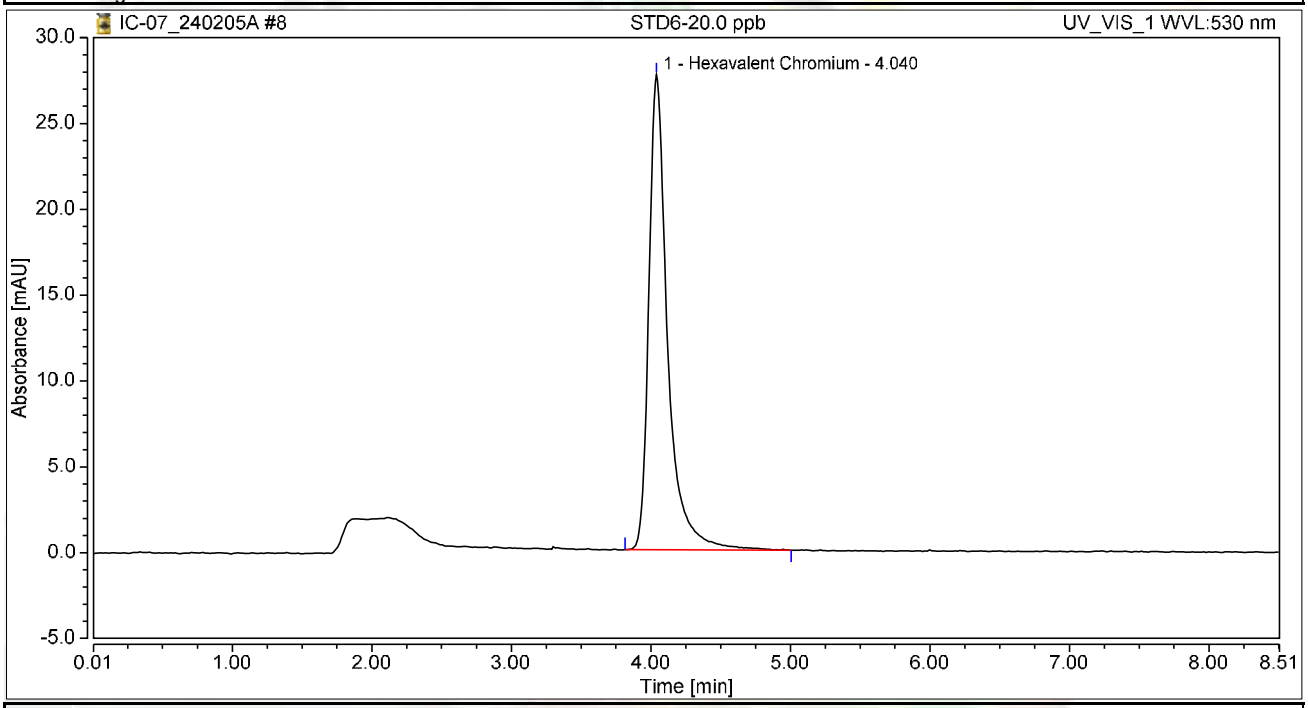
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	3.227	20.605	100.00	100.00	15.0023
Total:			**3.227**	**20.605**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:08**	*Sample Weight:*	**1.0000**

Chromatogram



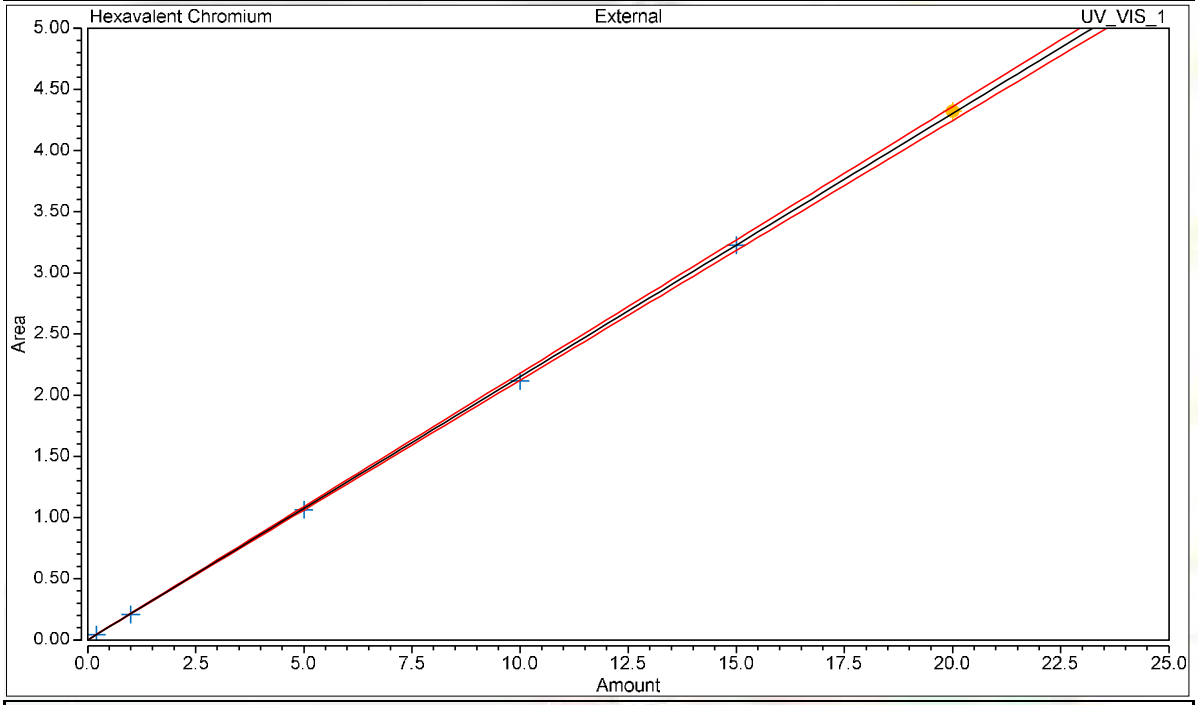
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	4.323	27.676	100.00	100.00	20.0959
Total:			**4.323**	**27.676**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2151
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99987

Calibration Plot Hexavalent Chromium



Calibration Results Hexavalent Chromium

No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0427	0.043	0.313
4	STD2-1.0 ppb	02	1.0000	0.2063	0.206	1.377
5	STD3-5.0 ppb	03	5.0000	1.0639	1.064	6.885
6	STD4-10.0 ppb	04	10.0000	2.1157	2.116	13.748
7	STD5-15.0 ppb	05	15.0000	3.2270	3.227	20.605
8	STD6-20.0 ppb	06	20.0000	4.3227	4.323	27.676

Reviewed by:

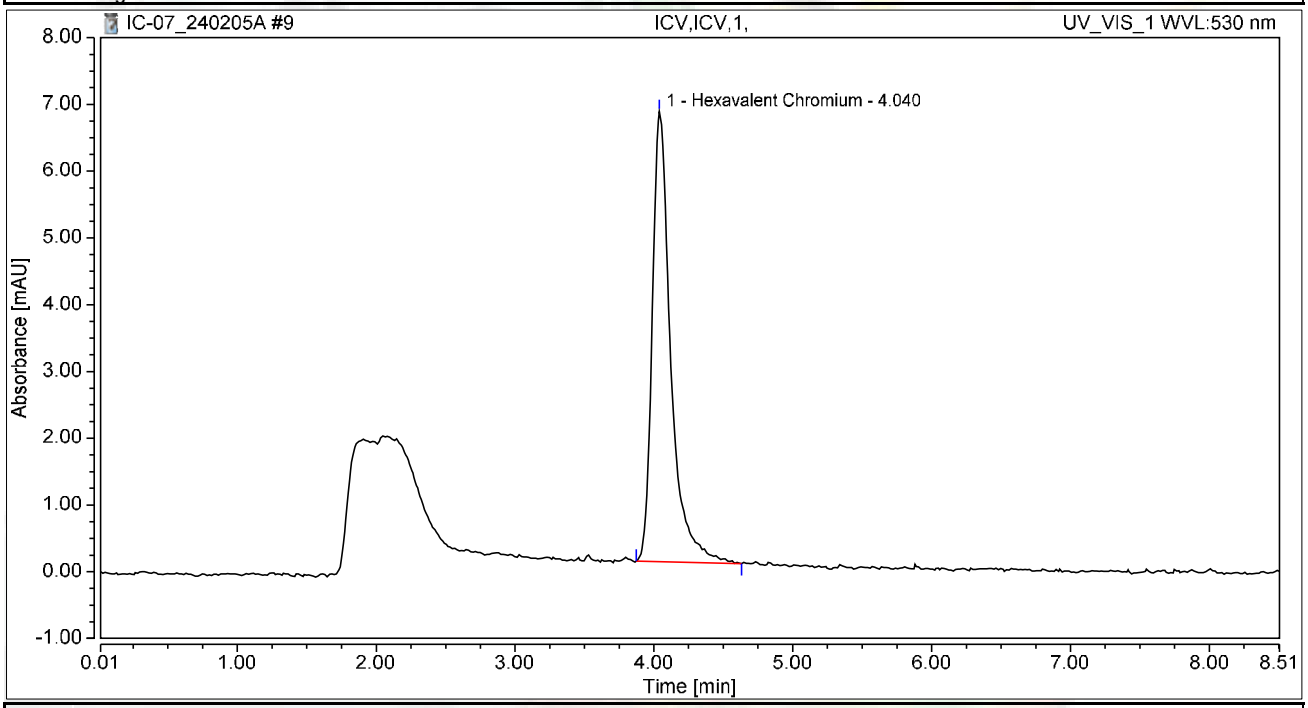
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

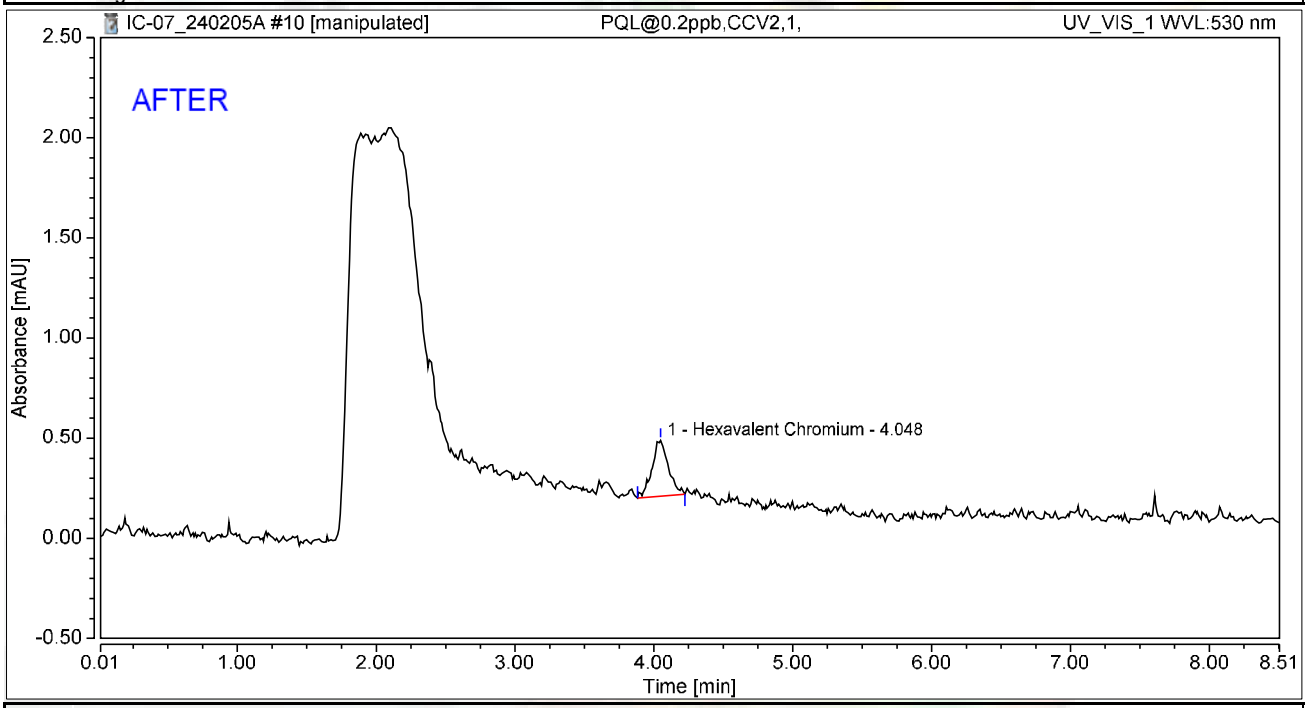
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.040	6.743	100.00	100.00	4.8342
Total:			**1.040**	**6.743**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.039	0.279	100.00	100.00	0.1802
Total:			**0.039**	**0.279**	**100.00**	**100.00**	

Reviewed by:

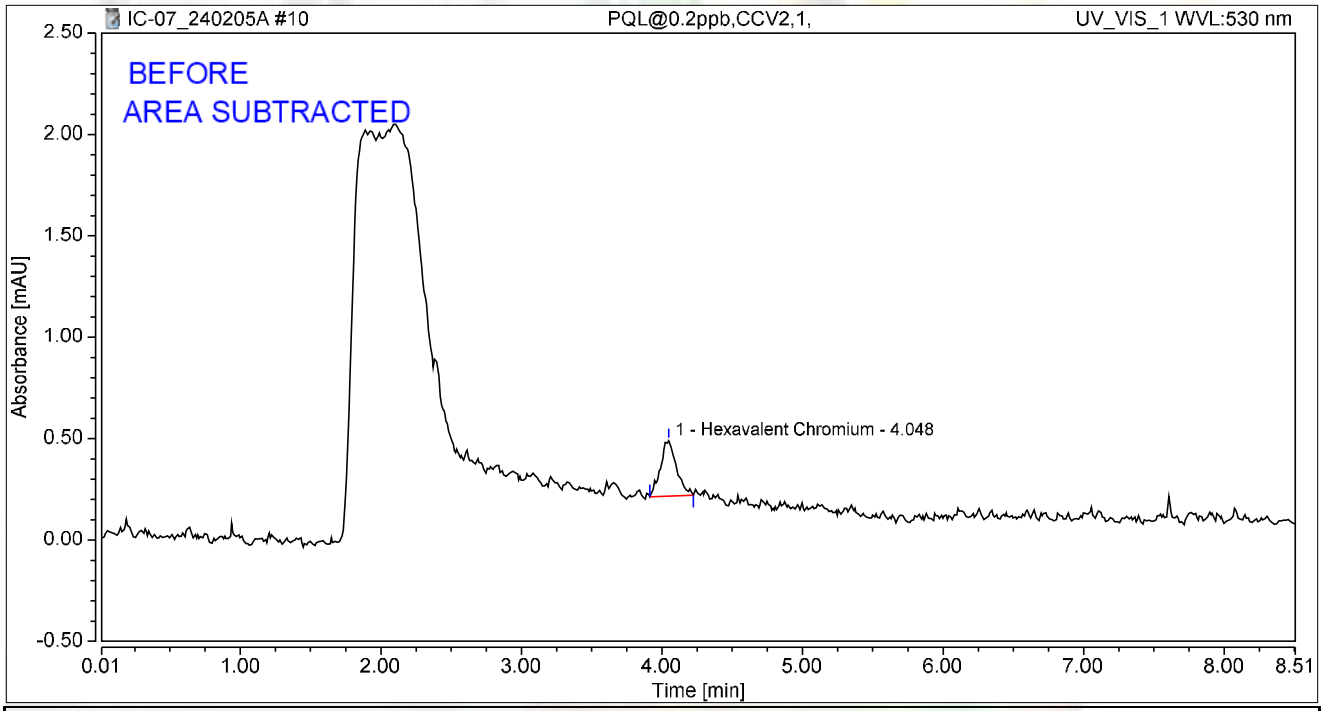
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

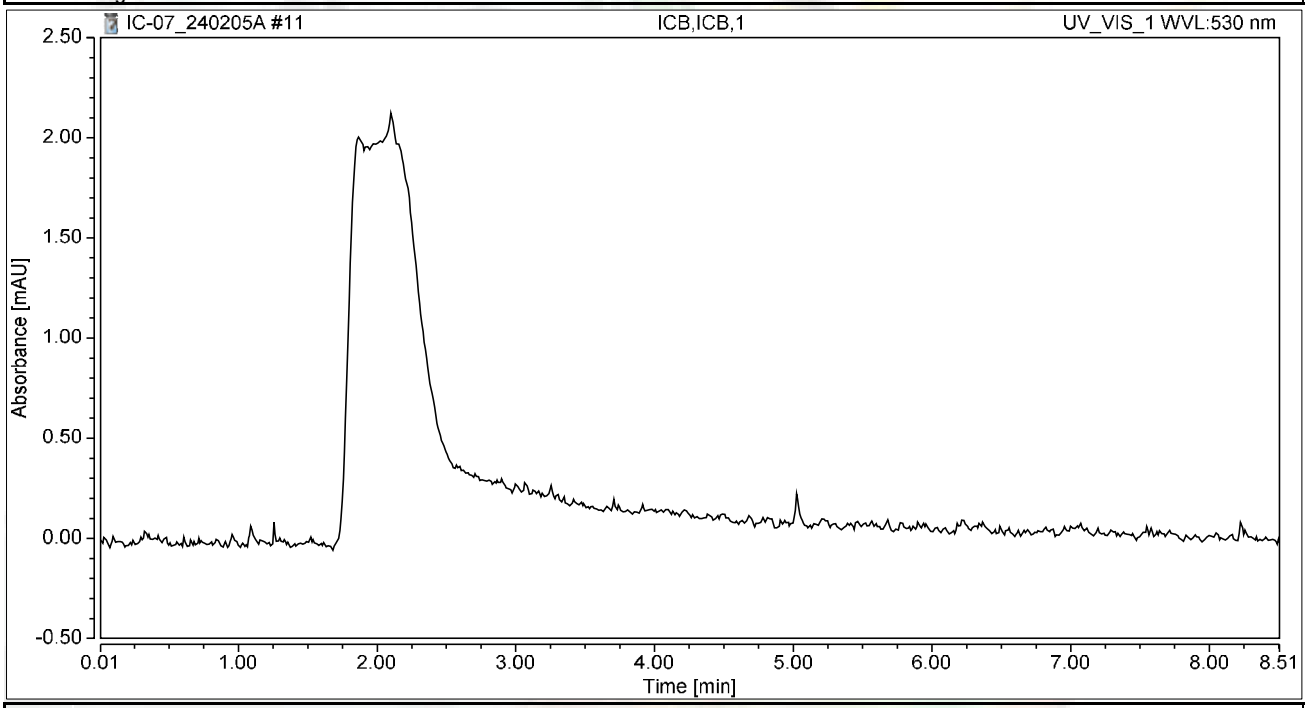
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.036	0.273	100.00	100.00	0.1694
Total:			**0.036**	**0.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

JRB 2/19/2024

RAW DATA

INJECTION LOG: 240216A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/16/24 8:51 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/16/24 9:04 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/16/24 9:13 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/16/24 9:23 AM	Reported
13	MB-R181622	MBLK	1	Hexavalent Chromium	02/16/24 9:32 AM	Reported
14	LCS-R181622	LCS	1	Hexavalent Chromium	02/16/24 9:42 AM	Reported
15	N063135-001A	SAMP	1	Hexavalent Chromium	02/16/24 10:12 AM	Reported
16	N063135-001AMS	MS	1	Hexavalent Chromium	02/16/24 10:24 AM	Reported
17	N063135-003A	SAMP	1	Hexavalent Chromium	02/16/24 10:34 AM	Not Reported
18	MB-106779	MBLK	1	Hexavalent Chromium	02/16/24 10:43 AM	Reported
19	N063009-001B	SAMP	1	Hexavalent Chromium	02/16/24 10:53 AM	Reported
20	N063009-001BREP	DUP	1	Hexavalent Chromium	02/16/24 11:02 AM	Not Reported
21	N063009-002B	SAMP	1	Hexavalent Chromium	02/16/24 11:12 AM	Reported
22	N063009-002BREP	DUP	1	Hexavalent Chromium	02/16/24 11:21 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/16/24 11:31 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/16/24 11:40 AM	Reported
25	N063009-001BREP	DUP	1	Hexavalent Chromium	02/16/24 11:50 AM	Reported
26	N063009-001BREP	DUP	1	Hexavalent Chromium	02/16/24 11:59 AM	Not Reported
27	N063135-001ADUP	DUP	1	Hexavalent Chromium	02/16/24 12:09 PM	Reported
28	N063135-001AMSD	MSD	1	Hexavalent Chromium	02/16/24 12:18 PM	Reported
29	N063135-007A	SAMP	1	Hexavalent Chromium	02/16/24 12:27 PM	Reported
30	N063147-001B	SAMP	1	Hexavalent Chromium	02/16/24 12:37 PM	Reported
31	N063147-002B	SAMP	1	Hexavalent Chromium	02/16/24 12:46 PM	Reported
32	N063147-001BREP	DUP	1	Hexavalent Chromium	02/16/24 12:56 PM	Reported
33	N063147-002BREP	DUP	1	Hexavalent Chromium	02/16/24 1:05 PM	Reported
34	N063135-002AMS	MS	1	Hexavalent Chromium	02/16/24 1:15 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/16/24 1:24 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/16/24 1:34 PM	Reported
37	N063136-001A	SAMP	1	Hexavalent Chromium	02/16/24 1:47 PM	Reported
38	N063135-004A	SAMP	1	Hexavalent Chromium	02/16/24 1:59 PM	Reported
39	N063135-004AMS	MS	1	Hexavalent Chromium	02/16/24 2:08 PM	Reported
40	N063135-003A	SAMP	5	Hexavalent Chromium	02/16/24 2:18 PM	Reported
41	N063135-003AMS	MS	5	Hexavalent Chromium	02/16/24 2:27 PM	Reported
42	N063135-005A	SAMP	5	Hexavalent Chromium	02/16/24 2:37 PM	Reported

INJECTION LOG: 240216A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063135-005AMS	MS	5	Hexavalent Chromium	02/16/24 2:46 PM	Reported
44	N063135-006A	SAMP	1	Hexavalent Chromium	02/16/24 2:56 PM	Reported
45	N063135-006AMS	MS	1	Hexavalent Chromium	02/16/24 3:05 PM	Reported
46	N063136-001AMS	MS	1	Hexavalent Chromium	02/16/24 3:15 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/16/24 3:24 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/16/24 3:34 PM	Reported
49	N063136-002A	SAMP	1	Hexavalent Chromium	02/16/24 3:43 PM	Reported
50	N063136-002AMS	MS	1	Hexavalent Chromium	02/16/24 3:52 PM	Reported
51	N063136-003A	SAMP	1	Hexavalent Chromium	02/16/24 4:02 PM	Reported
52	N063136-003AMS	MS	1	Hexavalent Chromium	02/16/24 4:11 PM	Reported
53	N063136-004A	SAMP	1	Hexavalent Chromium	02/16/24 4:21 PM	Reported
54	N063136-004AMS	MS	1	Hexavalent Chromium	02/16/24 4:30 PM	Reported
55	N063136-005A	SAMP	1	Hexavalent Chromium	02/16/24 4:40 PM	Reported
56	N063136-005AMS	MS	1	Hexavalent Chromium	02/16/24 4:49 PM	Reported
57	N063136-006A	SAMP	1	Hexavalent Chromium	02/16/24 4:59 PM	Reported
58	N063136-006AMS	MS	1	Hexavalent Chromium	02/16/24 5:08 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/16/24 5:18 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/16/24 5:27 PM	Reported
61	N063136-008A	SAMP	1	Hexavalent Chromium	02/16/24 5:37 PM	Reported
62	N063136-008AMS	MS	1	Hexavalent Chromium	02/16/24 5:46 PM	Reported
63	N063136-009A	SAMP	1	Hexavalent Chromium	02/16/24 5:55 PM	Reported
64	N063136-009AMS	MS	1	Hexavalent Chromium	02/16/24 6:05 PM	Reported
65	N063136-010A	SAMP	1	Hexavalent Chromium	02/16/24 6:14 PM	Reported
66	N063136-010AMS	MS	1	Hexavalent Chromium	02/16/24 6:24 PM	Reported
67	N063135-007AMS	MS	1	Hexavalent Chromium	02/16/24 6:33 PM	Reported
68	N063135-005A	SAMP	1	Hexavalent Chromium	02/16/24 6:43 PM	Not Reported
69	N063135-005AMS	MS	1	Hexavalent Chromium	02/16/24 6:56 PM	Not Reported
70	N063135-002A	SAMP	1	Hexavalent Chromium	02/16/24 7:05 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/16/24 7:15 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/16/24 7:24 PM	Reported
73	N063135-003AMS	MS	1	Hexavalent Chromium	02/16/24 7:33 PM	Not Reported
74	CCV-7	CCV	1	Hexavalent Chromium	02/16/24 7:43 PM	Reported
75	CCB-7	CCB	1	Hexavalent Chromium	02/16/24 7:52 PM	Reported
76	BLANK	BLANK	1	Hexavalent Chromium	02/16/24 8:02 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240216A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**17/Feb/24 10:32:50**
No. of Injections:	**79**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/16/2024 08:51	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/16/2024 09:04	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/16/2024 09:13	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/16/2024 09:23	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/16/2024 09:32	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/16/2024 09:42	Finished	LCS @5ppb, IWST-231228B
15	N063135-001A,SAMF	1	1000	Unknown		02/16/2024 10:12	Finished	SAMP,10 mL
16	N063135-001AMS,MS	2	1000	Unknown		02/16/2024 10:24	Finished	MS (1ppb), IWST-231228B,10r
17	N063135-003A,SAMF	3	1000	Unknown		02/16/2024 10:34	Finished	SAMP,10 mL
18	MB-106779,MBLK,1,	4	1000	Unknown		02/16/2024 10:43	Finished	MB STLC
19	N063009-001B,SAMF	5	1000	Unknown		02/16/2024 10:53	Finished	SAMP,10 mL
20	N063009-001BREP,D	6	1000	Unknown		02/16/2024 11:02	Finished	REP,10 mL
21	N063009-002B,SAMF	7	1000	Unknown		02/16/2024 11:12	Finished	SAMP,10 mL
22	N063009-002BREP,D	8	1000	Unknown		02/16/2024 11:21	Finished	REP,10 mL
23	CCV-2,CCV1,1,	9	1000	Unknown		02/16/2024 11:31	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		02/16/2024 11:40	Finished	CCB R240129C
25	N063009-001BREP,D	11	1000	Unknown		02/16/2024 11:50	Finished	SAMP,10 mL
26	N063009-001BREP,D	12	1000	Unknown		02/16/2024 11:59	Finished	REP,10 mL
27	N063135-001ADUP,D	13	1000	Unknown		02/16/2024 12:09	Finished	DUP,10 mL
28	N063135-001AMSD,M	14	1000	Unknown		02/16/2024 12:18	Finished	MSD (1ppb), IWST-231228B,1(
29	N063135-007A,SAMF	15	1000	Unknown		02/16/2024 12:27	Finished	SAMP,10 mL
30	N063147-001B,SAMF	16	1000	Unknown		02/16/2024 12:37	Finished	SAMP,10 mL
31	N063147-002B,SAMF	17	1000	Unknown		02/16/2024 12:46	Finished	SAMP,10 mL
32	N063147-001BREP,D	18	1000	Unknown		02/16/2024 12:56	Finished	REP,10 mL
33	N063147-002BREP,D	19	1000	Unknown		02/16/2024 13:05	Finished	REP,10 mL
34	N063135-002AMS,MS	20	1000	Unknown		02/16/2024 13:15	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	21	1000	Unknown		02/16/2024 13:24	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	22	1000	Unknown		02/16/2024 13:34	Finished	CCB R240129C
37	N063136-001A,SAMF	1	1000	Unknown		02/16/2024 13:47	Finished	SAMP,10 mL
38	N063135-004A,SAMF	2	1000	Unknown		02/16/2024 13:59	Finished	SAMP,10 mL
39	N063135-004AMS,MS	3	1000	Unknown		02/16/2024 14:08	Finished	MS (1ppb), IWST-231228B,10r
40	N063135-003A,SAMF	4	1000	Unknown		02/16/2024 14:18	Finished	SAMP,2>10 mL
41	N063135-003AMS,MS	5	1000	Unknown		02/16/2024 14:27	Finished	MS (1ppb), IWST-231228B,2>1
42	N063135-005A,SAMF	6	1000	Unknown		02/16/2024 14:37	Finished	SAMP,2>10 mL
43	N063135-005AMS,MS	7	1000	Unknown		02/16/2024 14:46	Finished	MS (1ppb), IWST-231228B,2>1
44	N063135-006A,SAMF	8	1000	Unknown		02/16/2024 14:56	Finished	SAMP,10 mL
45	N063135-006AMS,MS	9	1000	Unknown		02/16/2024 15:05	Finished	MS (1ppb), IWST-231228B,10r
46	N063136-001AMS,MS	10	1000	Unknown		02/16/2024 15:15	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	11	1000	Unknown		02/16/2024 15:24	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	12	1000	Unknown		02/16/2024 15:34	Finished	CCB R240129C
49	N063136-002A,SAMF	13	1000	Unknown		02/16/2024 15:43	Finished	SAMP,10 mL
50	N063136-002AMS,MS	14	1000	Unknown		02/16/2024 15:52	Finished	MS (1ppb), IWST-231228B,10r
51	N063136-003A,SAMF	15	1000	Unknown		02/16/2024 16:02	Finished	SAMP,10 mL
52	N063136-003AMS,MS	16	1000	Unknown		02/16/2024 16:11	Finished	MS (1ppb), IWST-231228B,10r
53	N063136-004A,SAMF	17	1000	Unknown		02/16/2024 16:21	Finished	SAMP,10 mL
54	N063136-004AMS,MS	18	1000	Unknown		02/16/2024 16:30	Finished	MS (1ppb), IWST-231228B,10r
55	N063136-005A,SAMF	19	1000	Unknown		02/16/2024 16:40	Finished	SAMP,10 mL
56	N063136-005AMS,MS	20	1000	Unknown		02/16/2024 16:49	Finished	MS (1ppb), IWST-231228B,10r
57	N063136-006A,SAMF	21	1000	Unknown		02/16/2024 16:59	Finished	SAMP,10 mL
58	N063136-006AMS,MS	22	1000	Unknown		02/16/2024 17:08	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	23	1000	Unknown		02/16/2024 17:18	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	24	1000	Unknown		02/16/2024 17:27	Finished	CCB R240129C

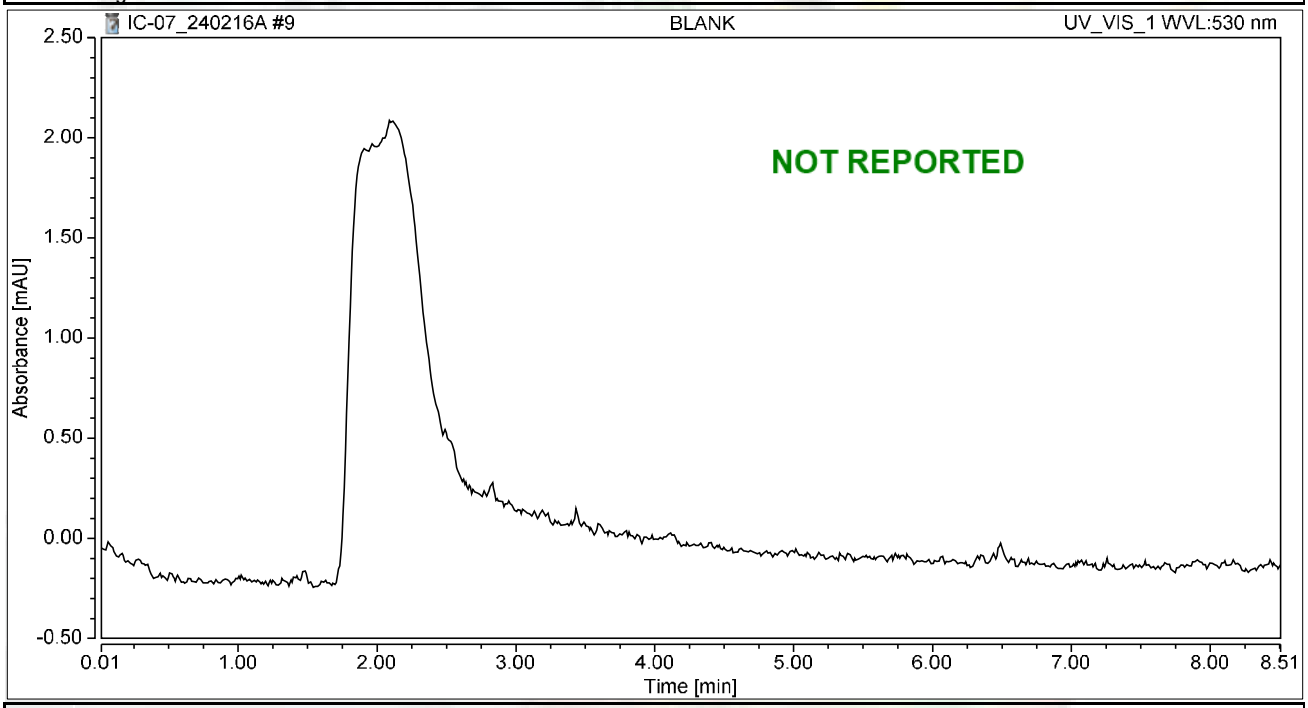
61	N063136-008A,SAMP	25	1000	Unknown		02/16/2024 17:37	Finished	SAMP,10 mL
62	N063136-008AMS,MS	26	1000	Unknown		02/16/2024 17:46	Finished	MS (1ppb), IWST-231228B,10r
63	N063136-009A,SAMP	27	1000	Unknown		02/16/2024 17:55	Finished	SAMP,10 mL
64	N063136-009AMS,MS	28	1000	Unknown		02/16/2024 18:05	Finished	MS (1ppb), IWST-231228B,10r
65	N063136-010A,SAMP	29	1000	Unknown		02/16/2024 18:14	Finished	SAMP,10 mL
66	N063136-010AMS,MS	30	1000	Unknown		02/16/2024 18:24	Finished	MS (1ppb), IWST-231228B,10r
67	N063135-007AMS,MS	31	1000	Unknown		02/16/2024 18:33	Finished	MS (1ppb), IWST-231228B,10r
68	N063135-005A,SAMP	32	1000	Unknown		02/16/2024 18:43	Finished	SAMP,10 mL
69	N063135-005AMS,MS	33	1000	Unknown		02/16/2024 18:56	Finished	MS (1ppb), IWST-231228B,10r
70	N063135-002A,SAMP	34	1000	Unknown		02/16/2024 19:05	Finished	SAMP,10 mL
71	CCV-6,CCV1,1,	35	1000	Unknown		02/16/2024 19:15	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	36	1000	Unknown		02/16/2024 19:24	Finished	CCB R240129C
73	N063135-003AMS,MS	37	1000	Unknown		02/16/2024 19:33	Finished	MS (1ppb), IWST-231228B,10r
74	CCV-7,CCV,1,	38	1000	Unknown		02/16/2024 19:43	Finished	CCV @5ppb, IWST-231228A
75	CCB-7,CCB,1,	39	1000	Unknown		02/16/2024 19:52	Finished	CCB R240129C
76	BLANK	40	1000	Unknown		02/16/2024 20:02	Finished	BLANK
77	SHUTDOWN	41	1000	Unknown		02/16/2024 20:11	Finished	
78	Eluent: R240215A	42	1000	Unknown		n.a.	Finished	
79	PCR: R240215B	43	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 08:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

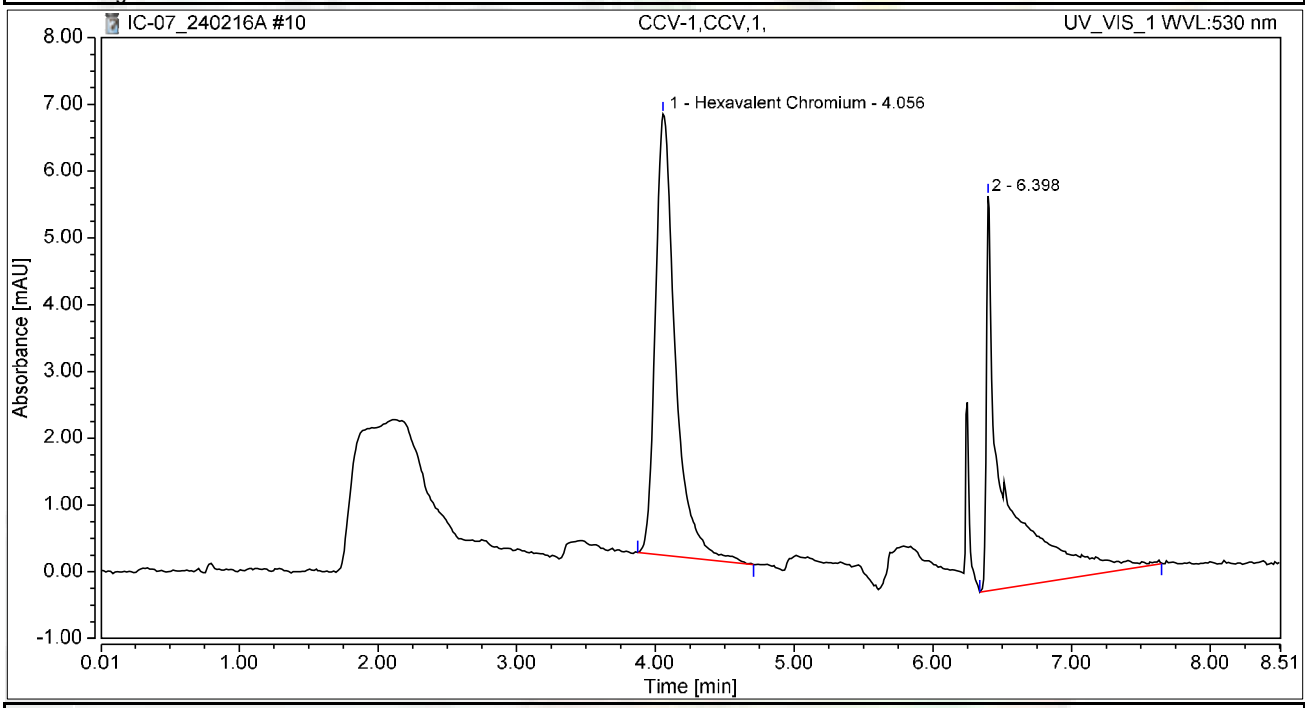
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 09:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.104	6.610	56.83	52.78	5.1341
2		6.398	0.839	5.914	43.17	47.22	n.a.
Total:			**1.943**	**12.524**	**100.00**	**100.00**	

Reviewed by:

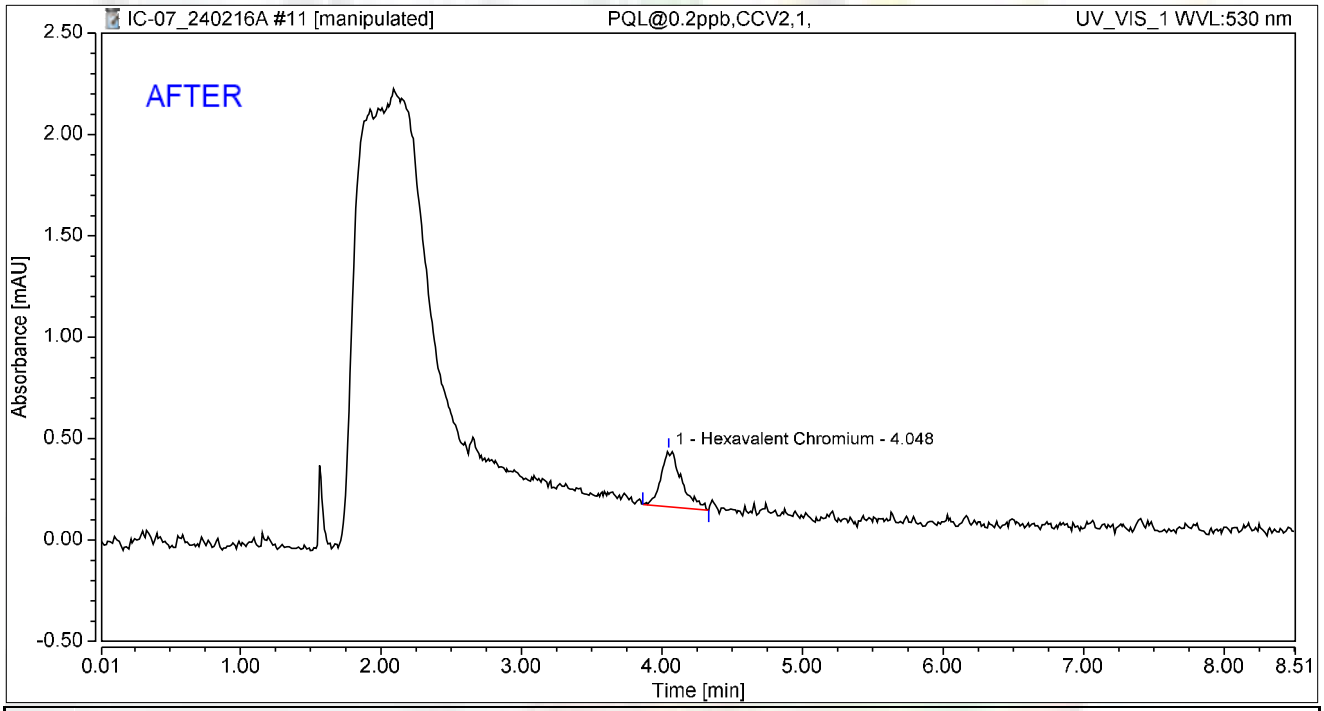
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 09:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.047	0.277	100.00	100.00	0.2194
Total:			**0.047**	**0.277**	**100.00**	**100.00**	

Reviewed by:

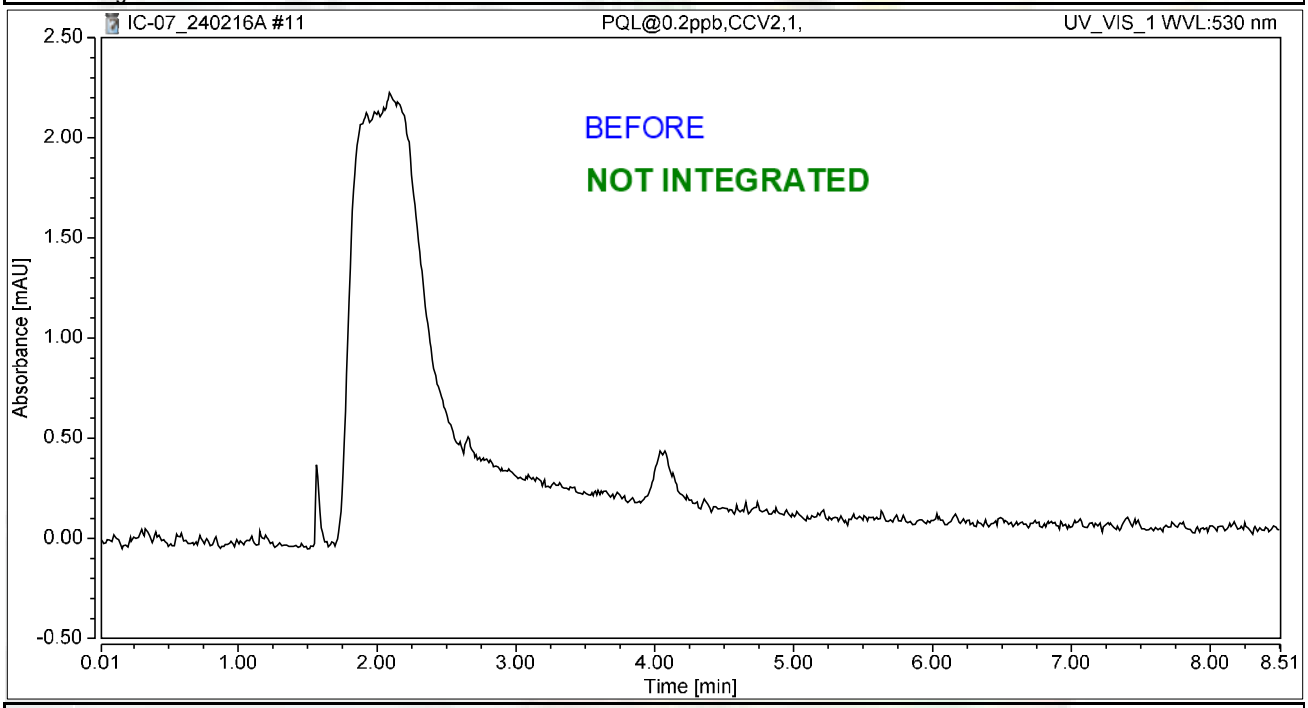
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 09:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

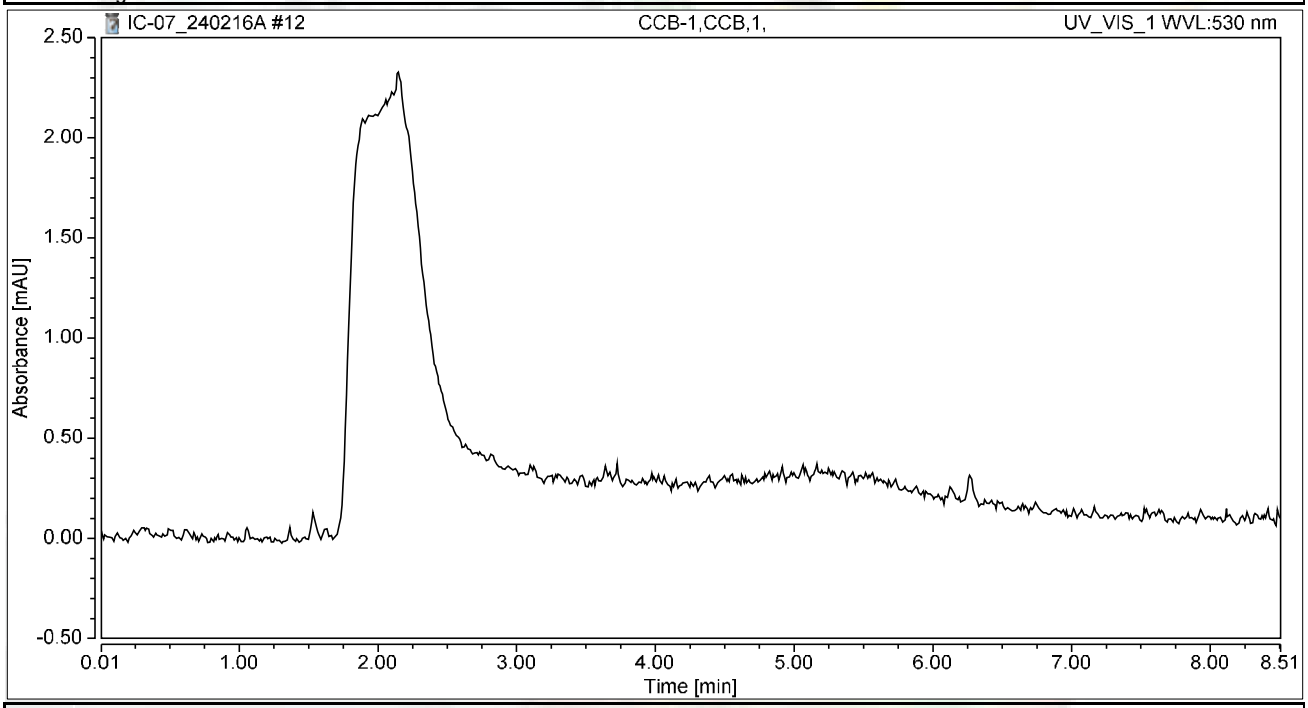
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 09:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

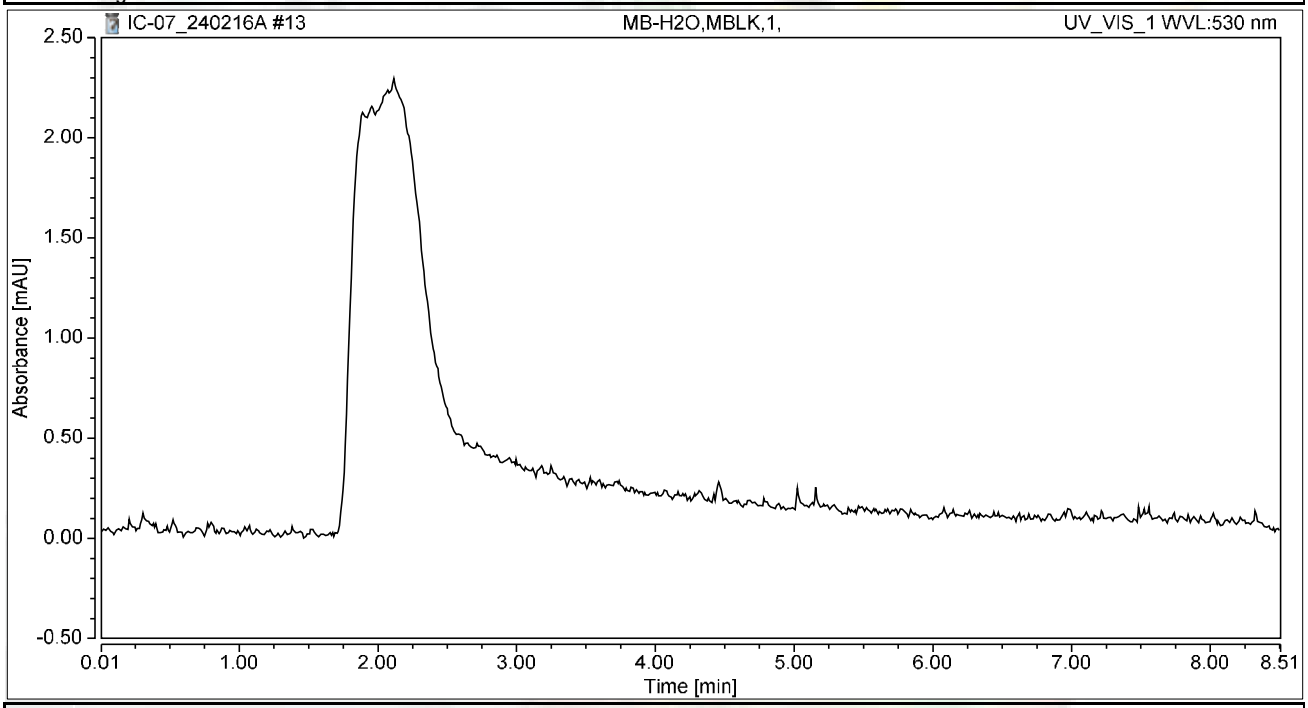
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 09:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

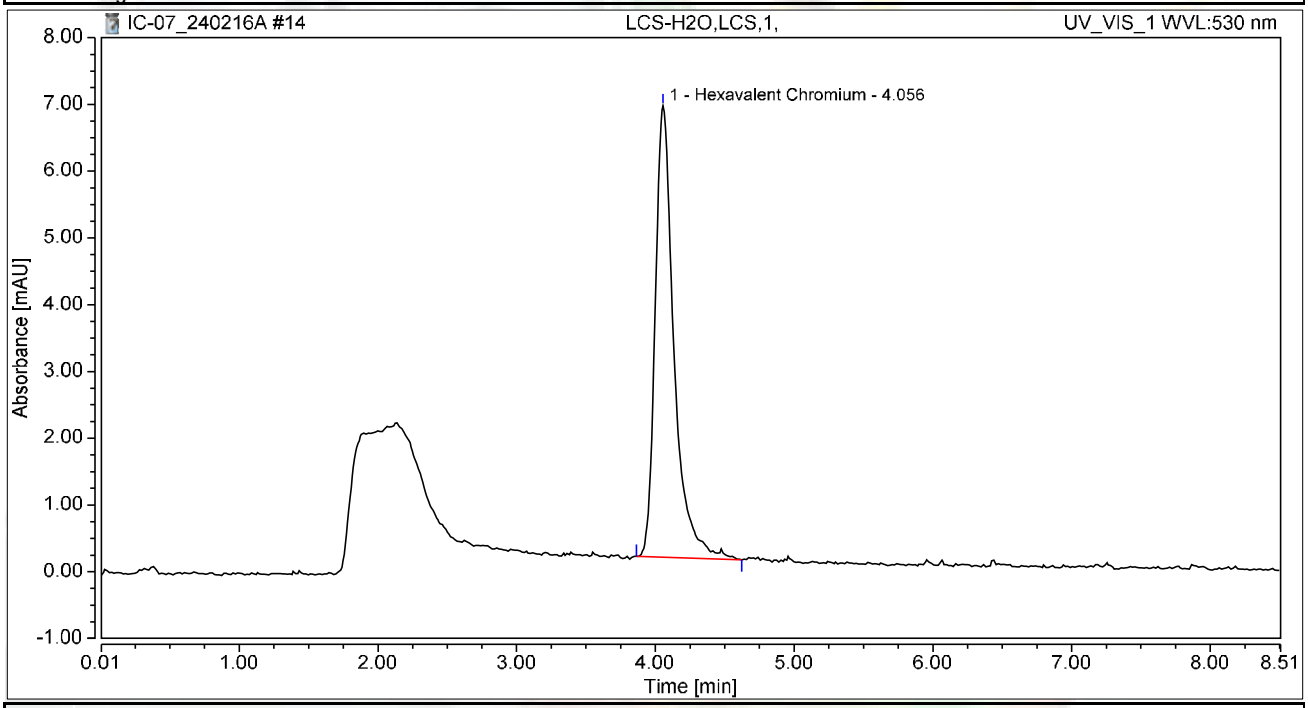
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 09:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

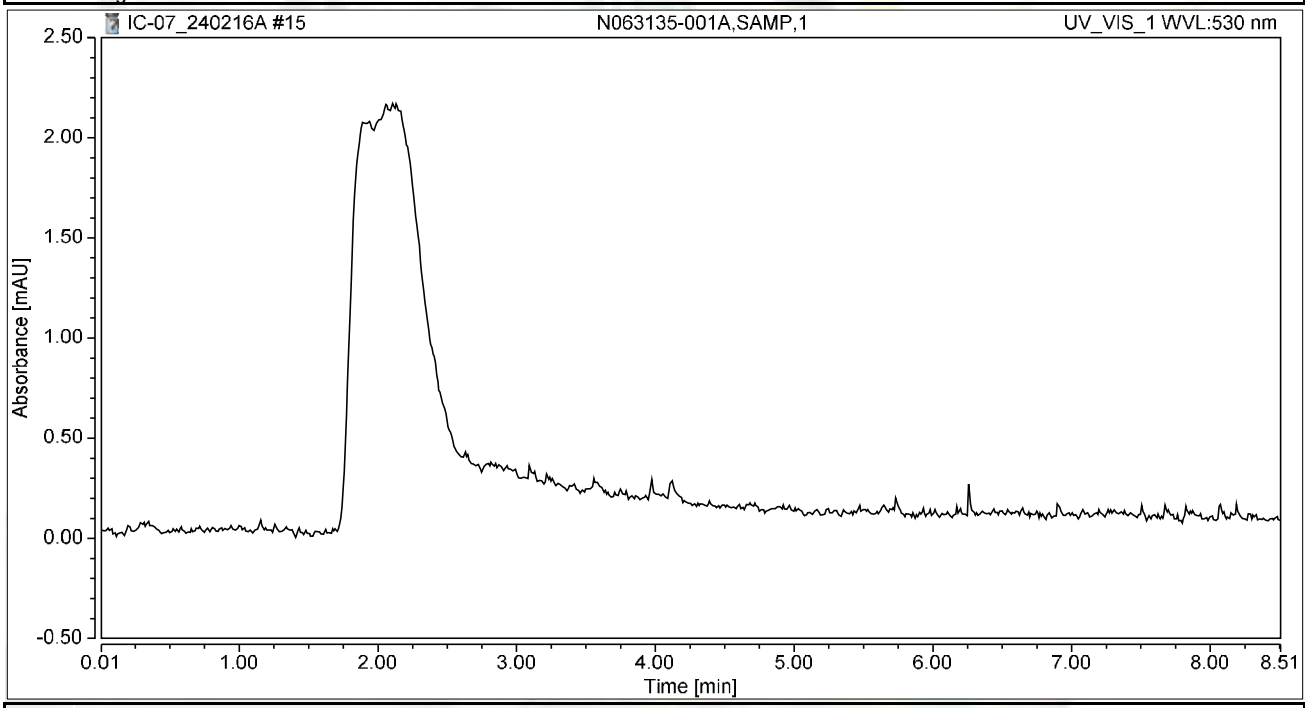
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.062	6.760	100.00	100.00	4.9378
Total:			**1.062**	**6.760**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 10:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

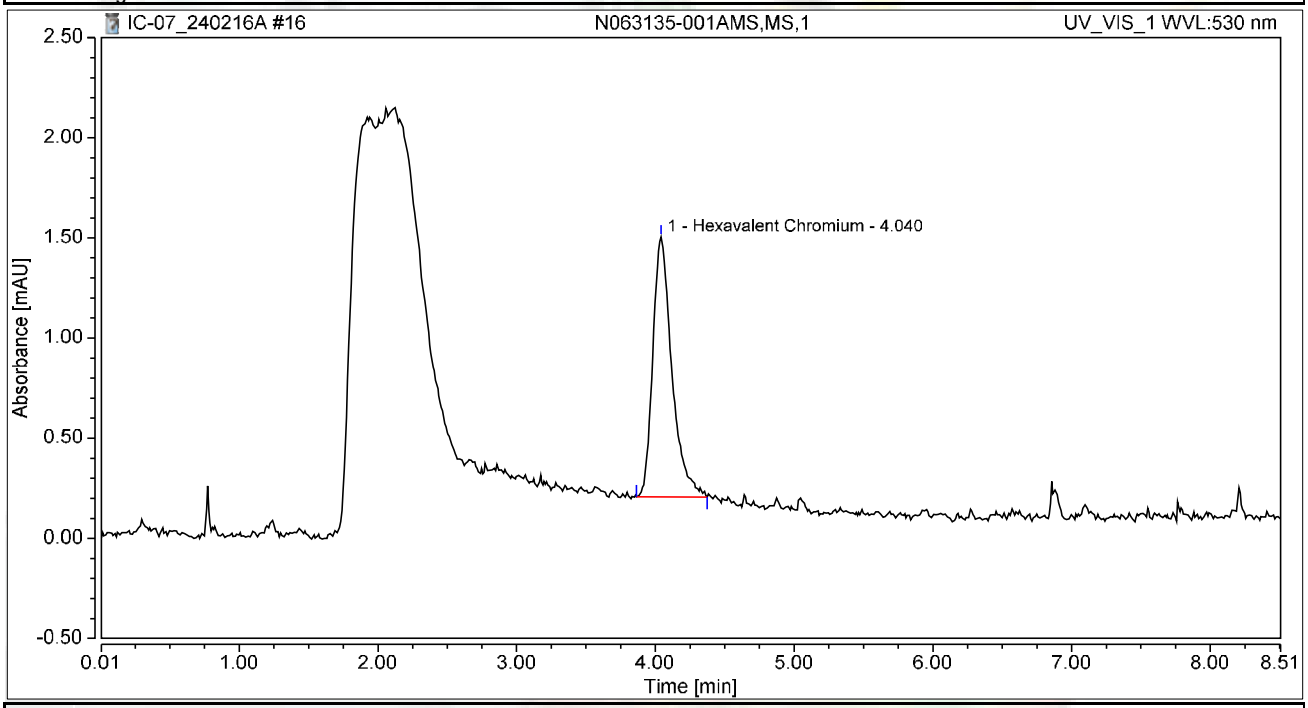
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 10:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

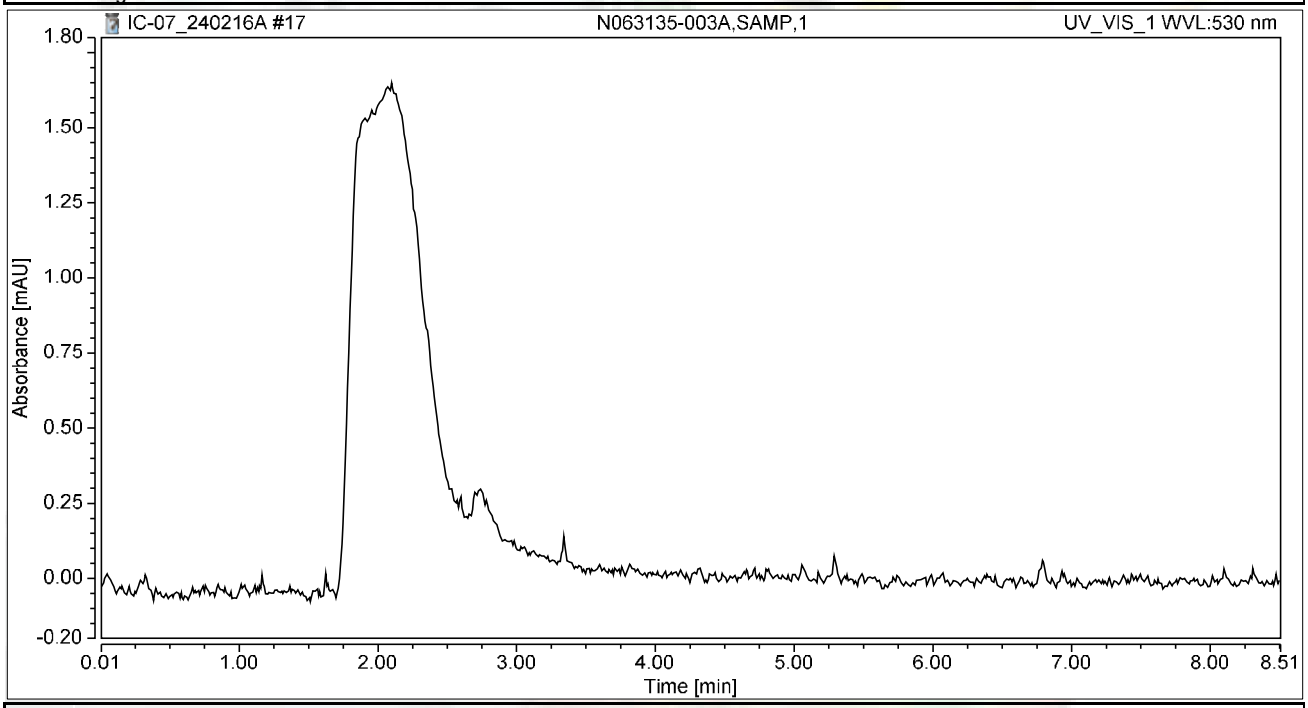
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.206	1.298	100.00	100.00	0.9599
Total:			**0.206**	**1.298**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 10:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

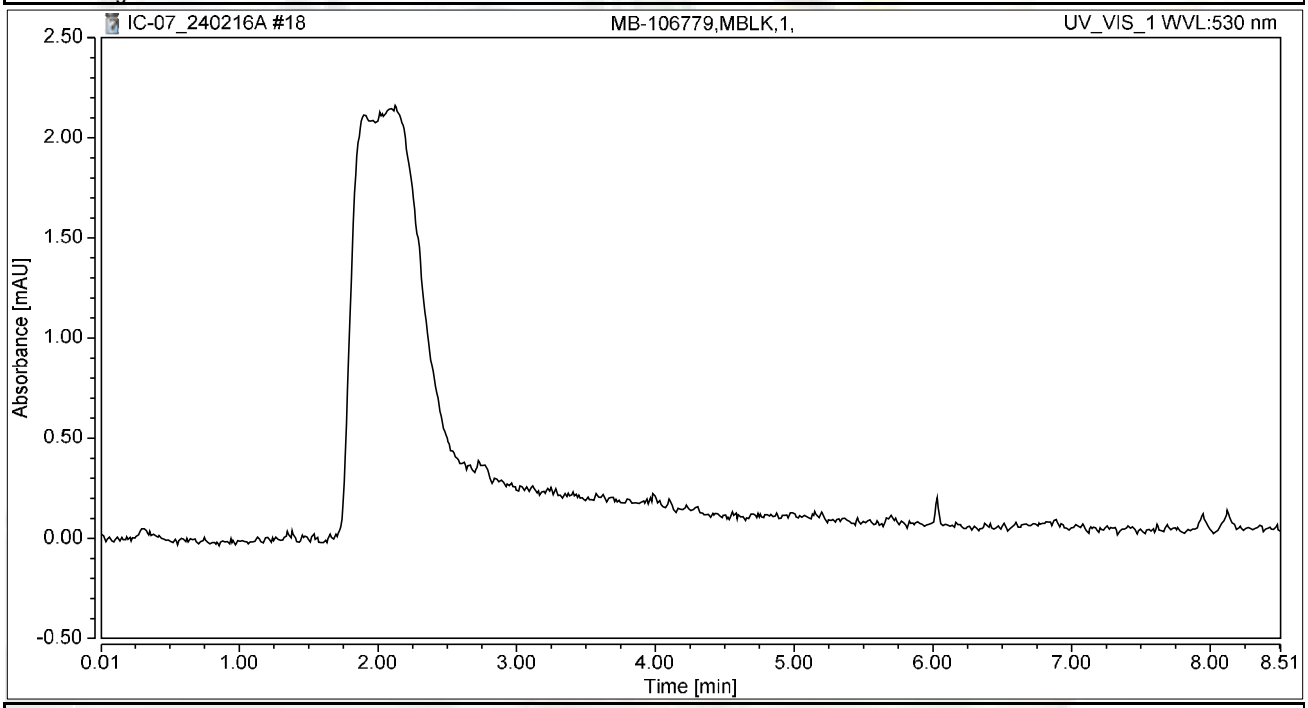
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-106779,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 10:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

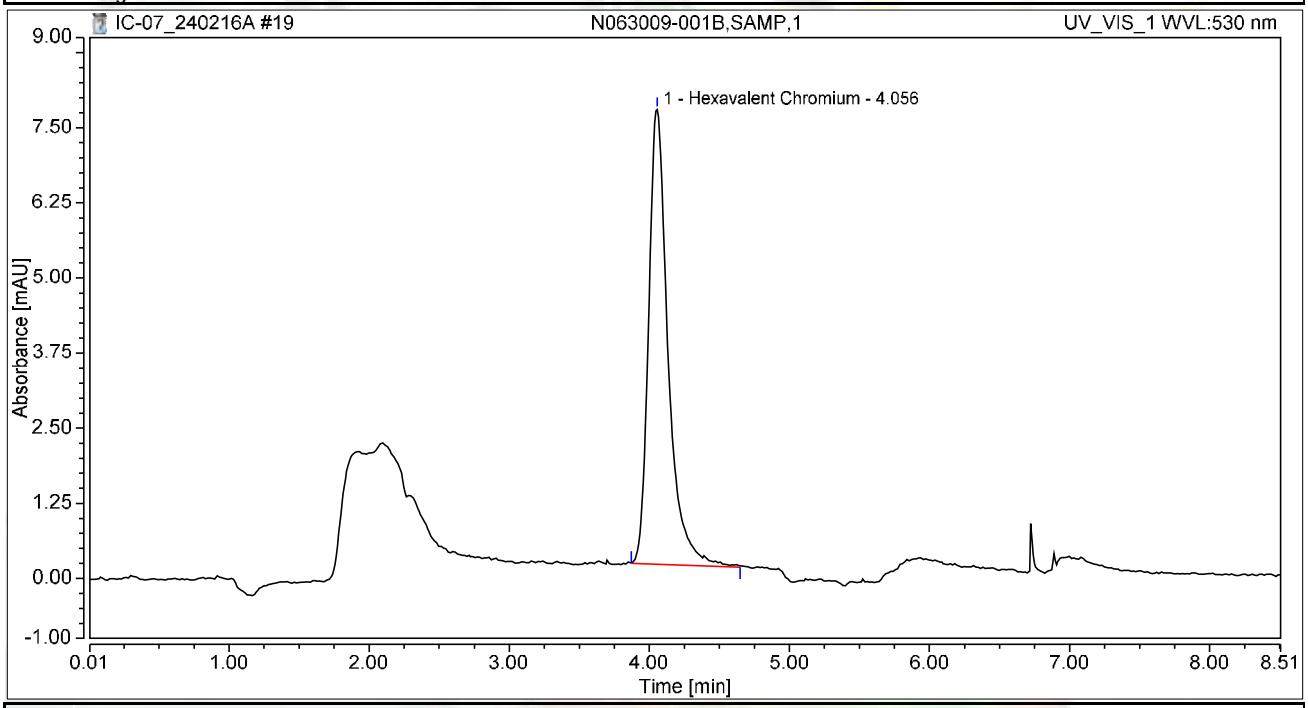
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063009-001B,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 10:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

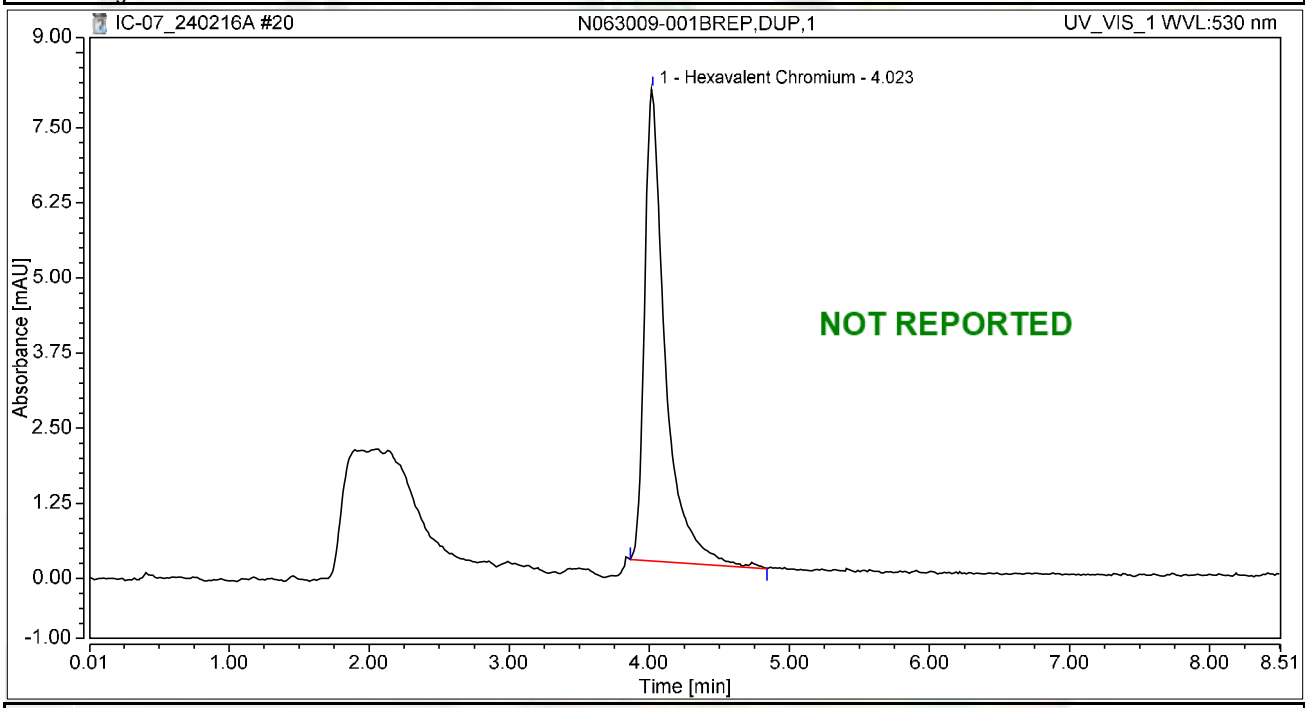
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.218	7.570	100.00	100.00	5.6629
Total:			**1.218**	**7.570**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063009-001BREP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 11:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

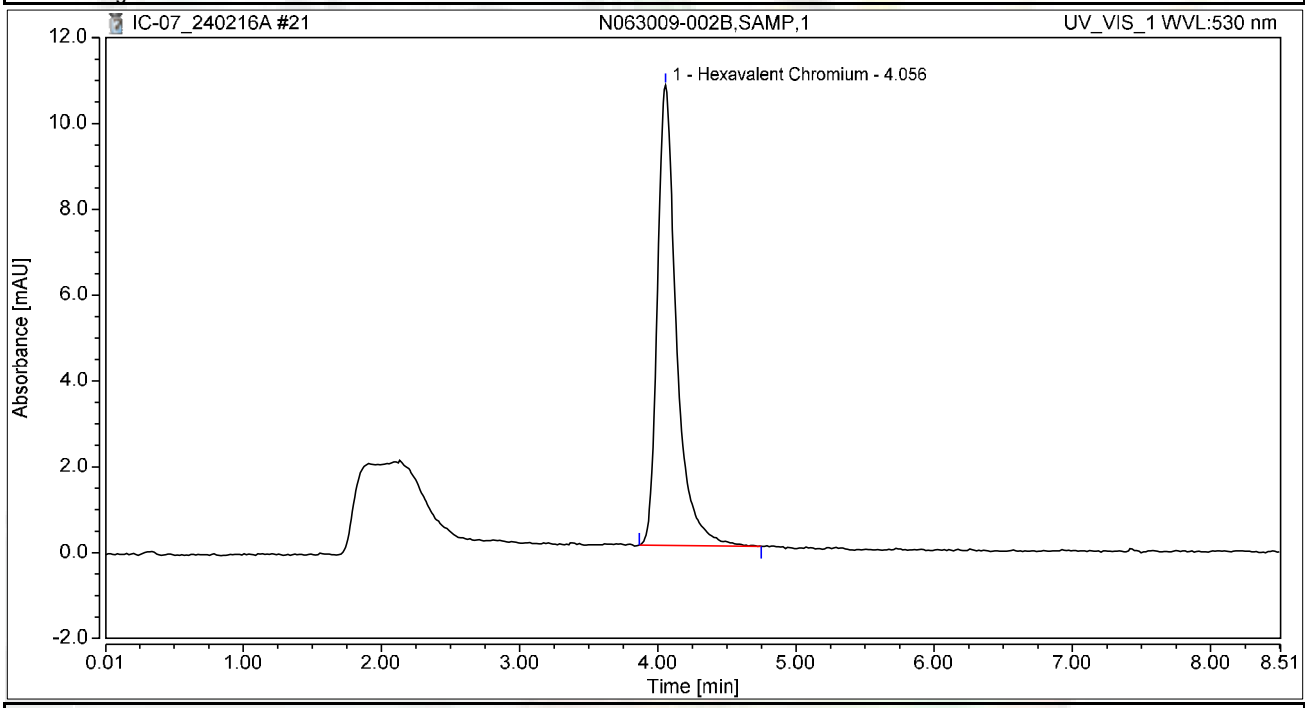
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	1.348	7.862	100.00	100.00	6.2646
Total:			**1.348**	**7.862**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063009-002B,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 11:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

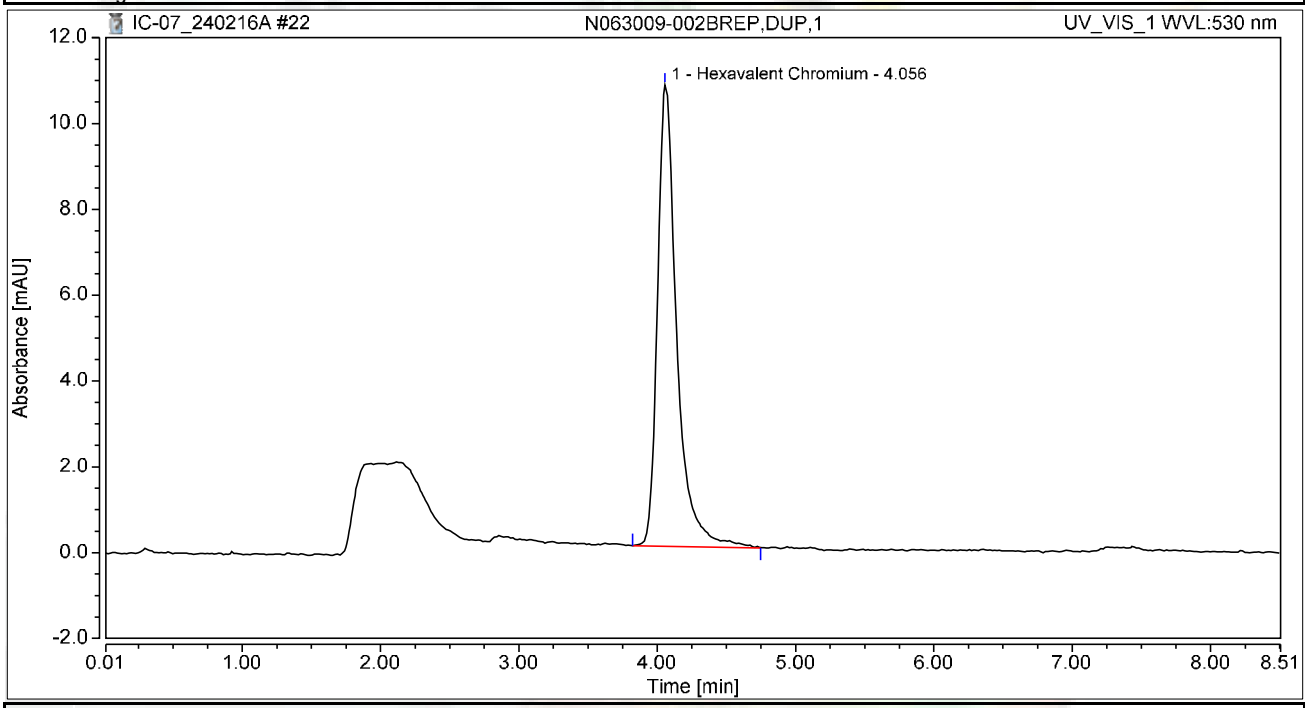
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.714	10.720	100.00	100.00	7.9696
Total:			**1.714**	**10.720**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063009-002BREP,DUP,1**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 11:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

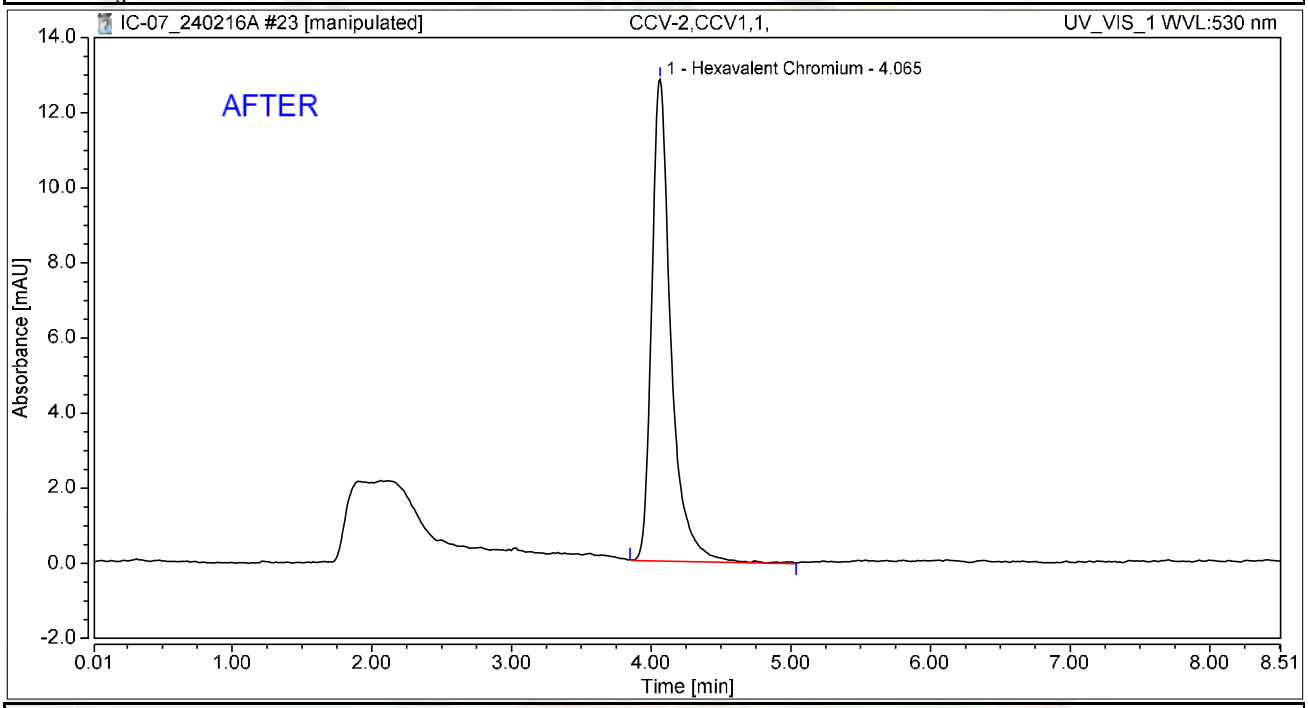
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.734	10.747	100.00	100.00	8.0595
Total:			**1.734**	**10.747**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 11:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	2.052	12.828	100.00	100.00	9.5391
Total:			**2.052**	**12.828**	**100.00**	**100.00**	

Reviewed by:

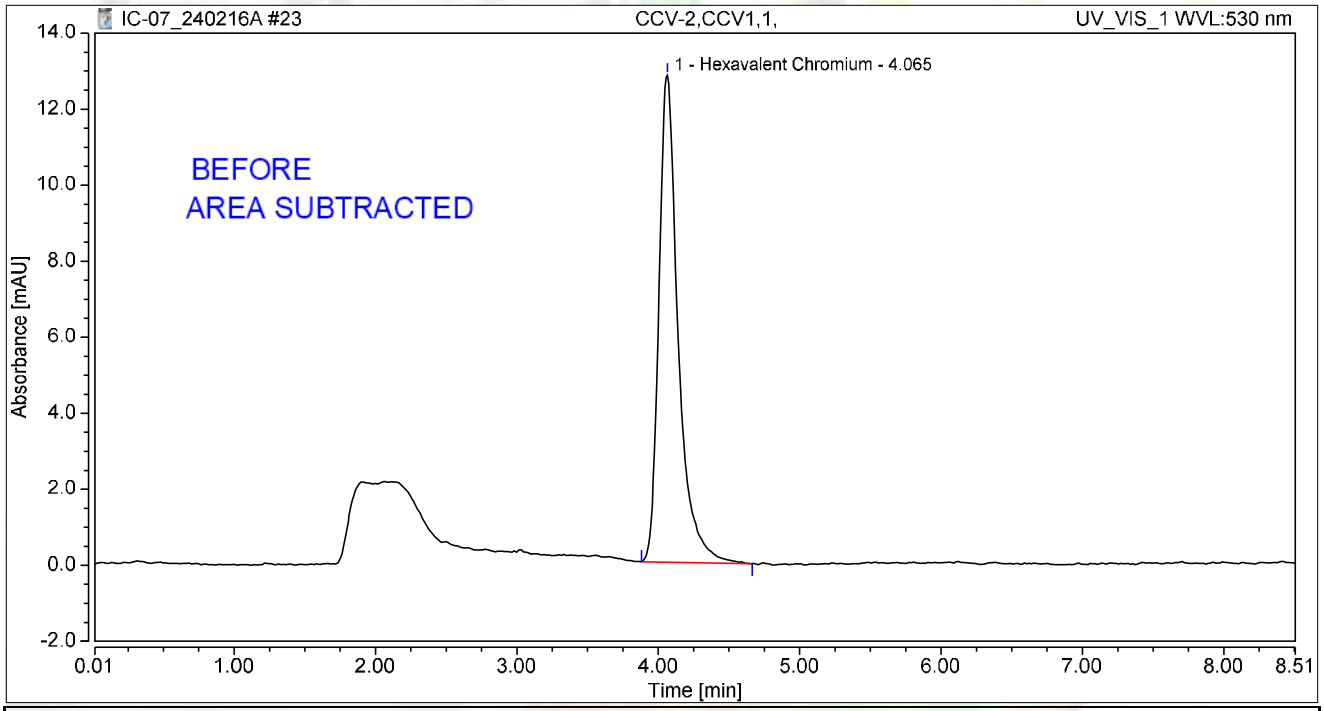
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 11:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

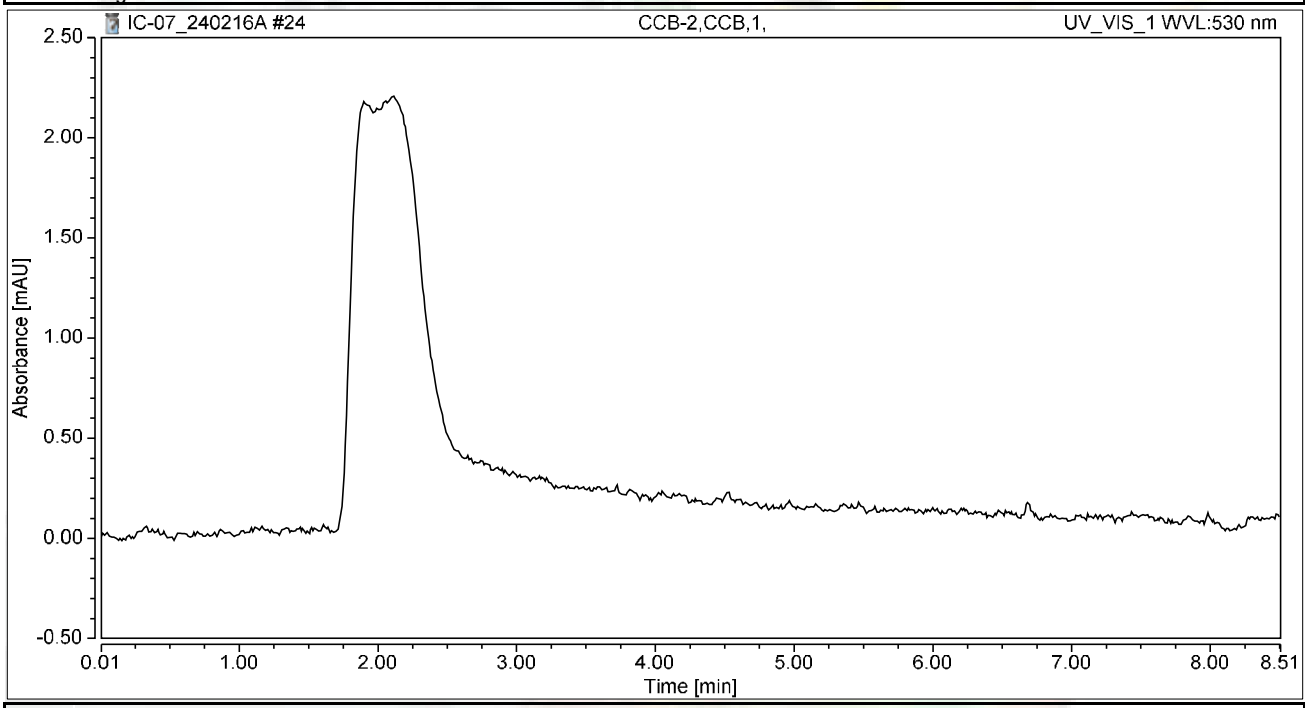
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	2.026	12.808	100.00	100.00	9.4167
Total:			**2.026**	**12.808**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 11:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

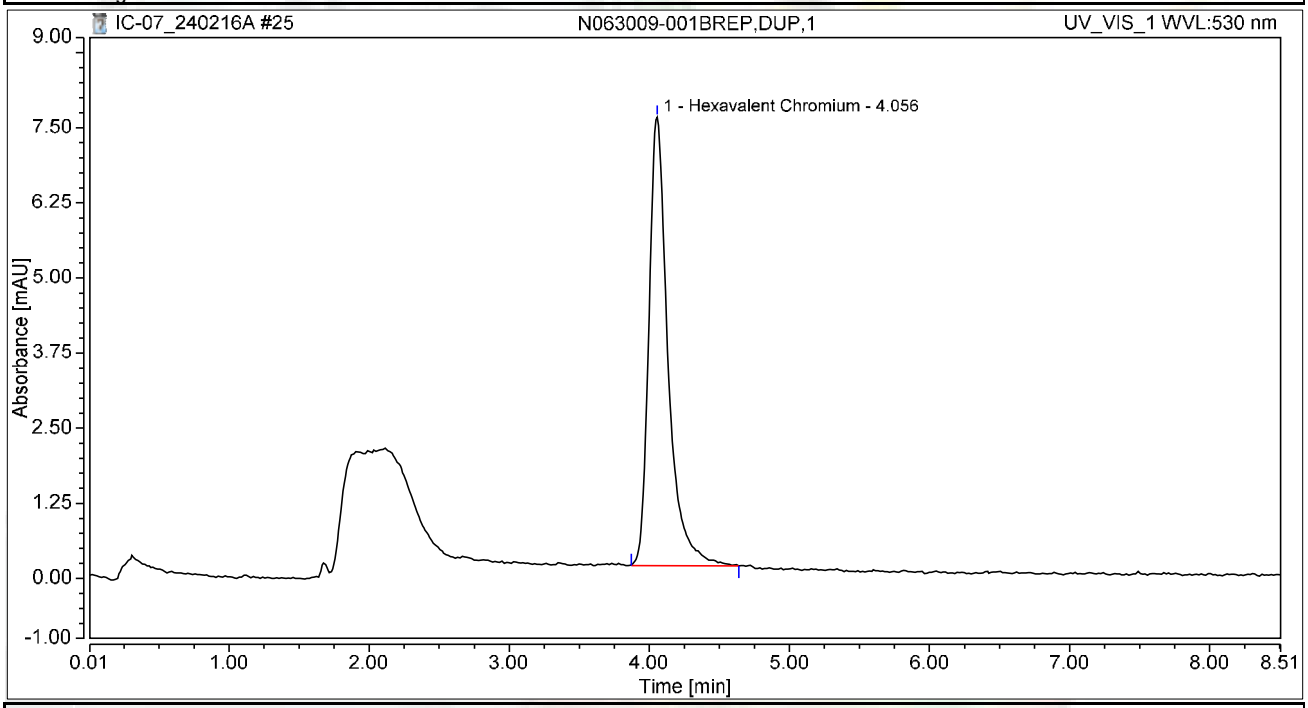
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063009-001BREP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 11:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

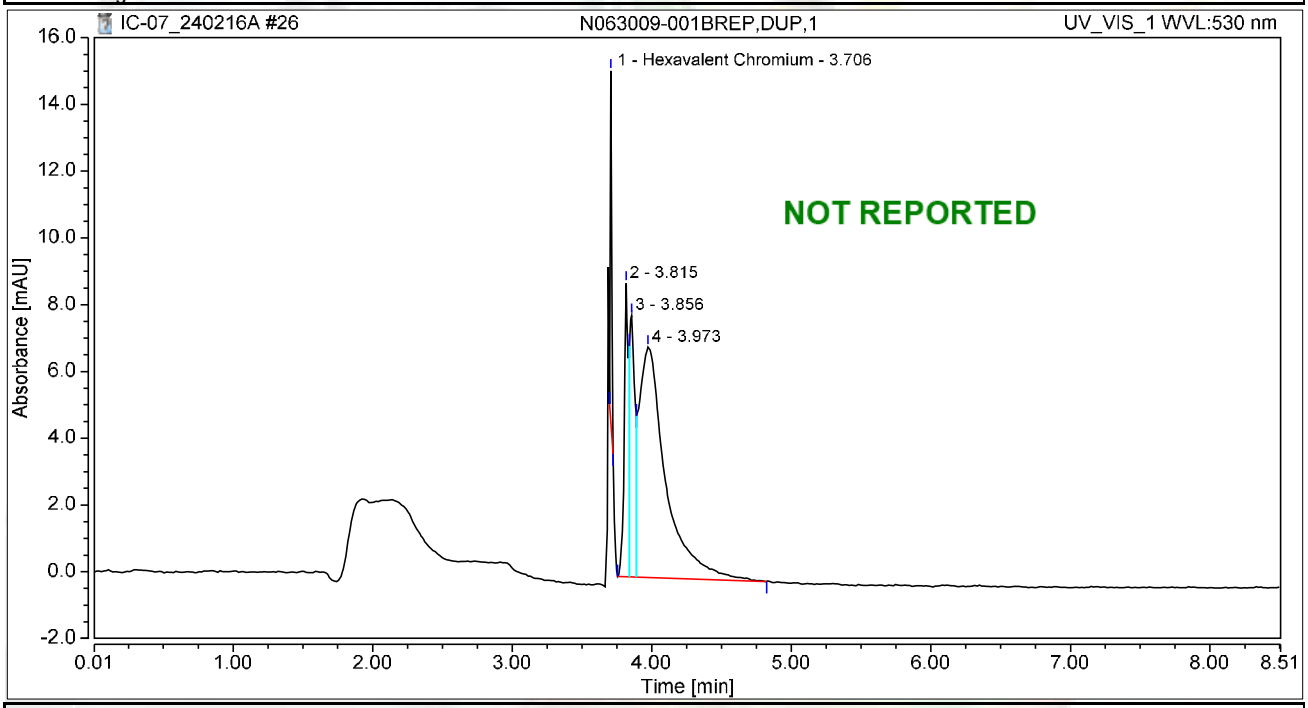
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.185	7.465	100.00	100.00	5.5092
Total:			**1.185**	**7.465**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063009-001BREP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 11:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

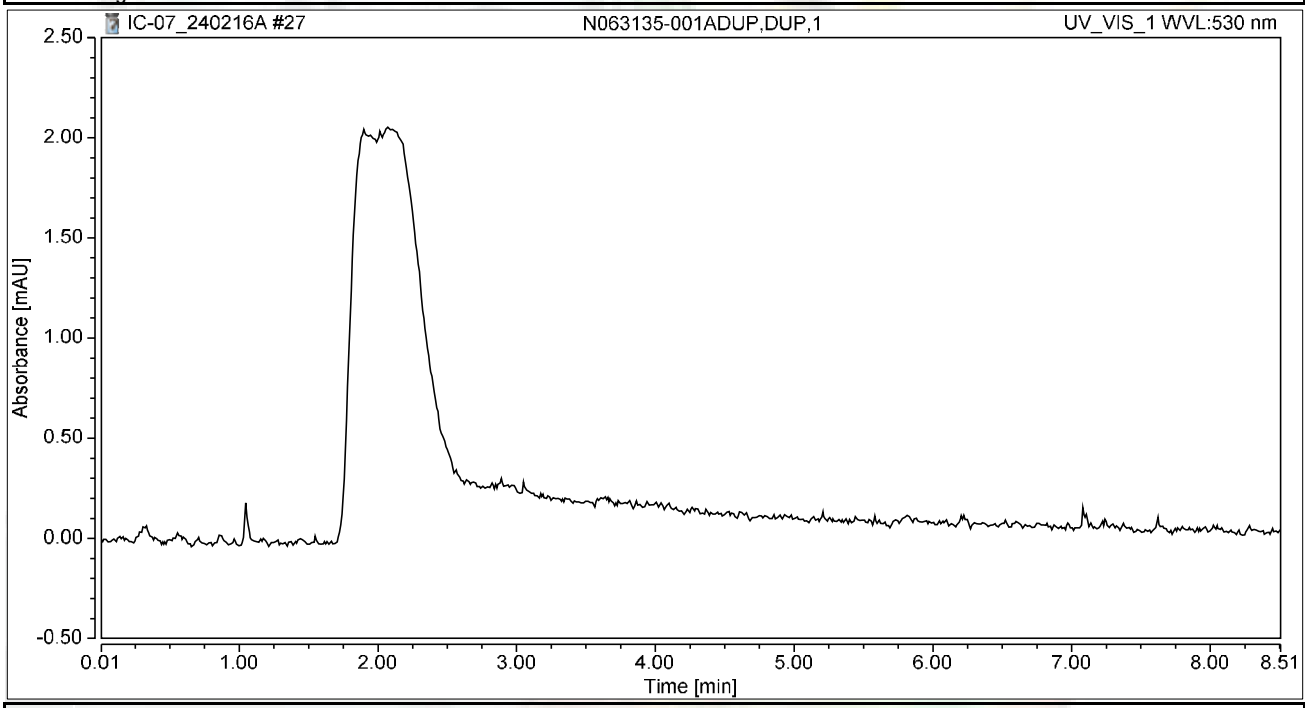
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.706	0.116	10.468	5.08	30.80	0.5397
2		3.815	0.318	8.787	13.94	25.86	n.a.
3		3.856	0.327	7.828	14.31	23.03	n.a.
4		3.973	1.524	6.901	66.67	20.31	n.a.
Total:			**2.286**	**33.984**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-001ADUP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

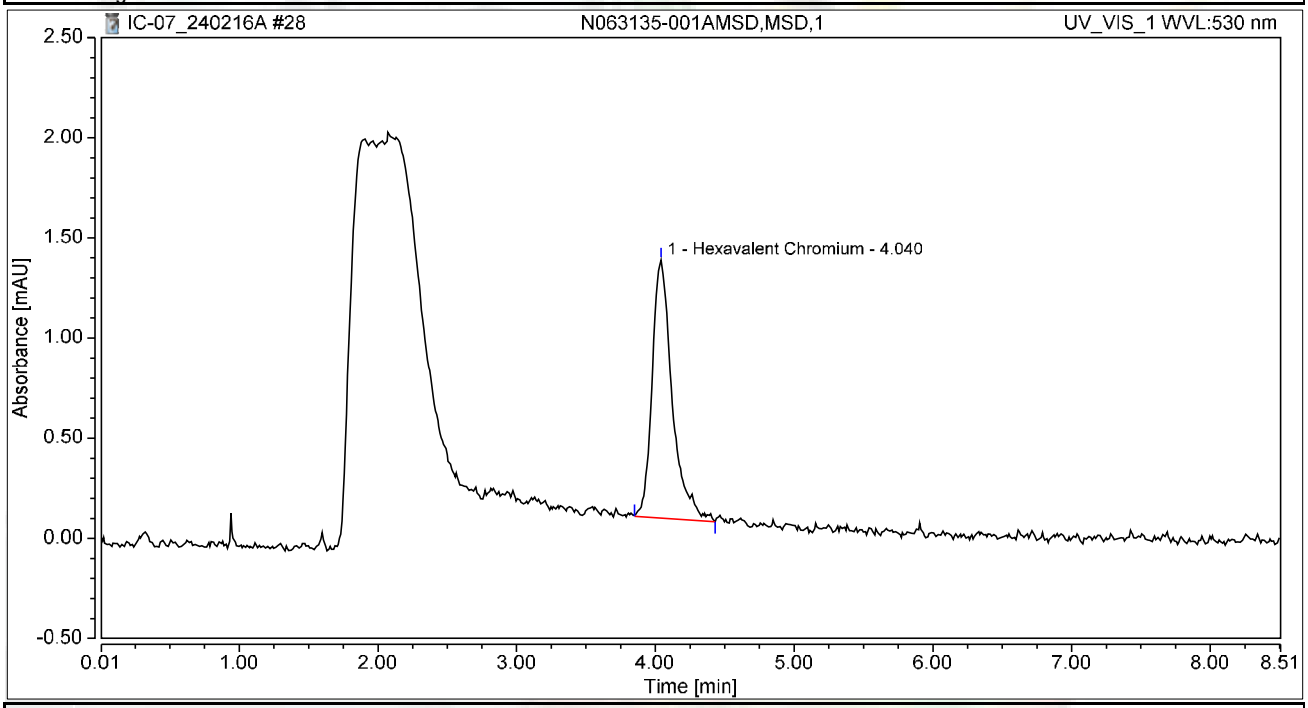
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-001AMSD,MSD,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 12:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

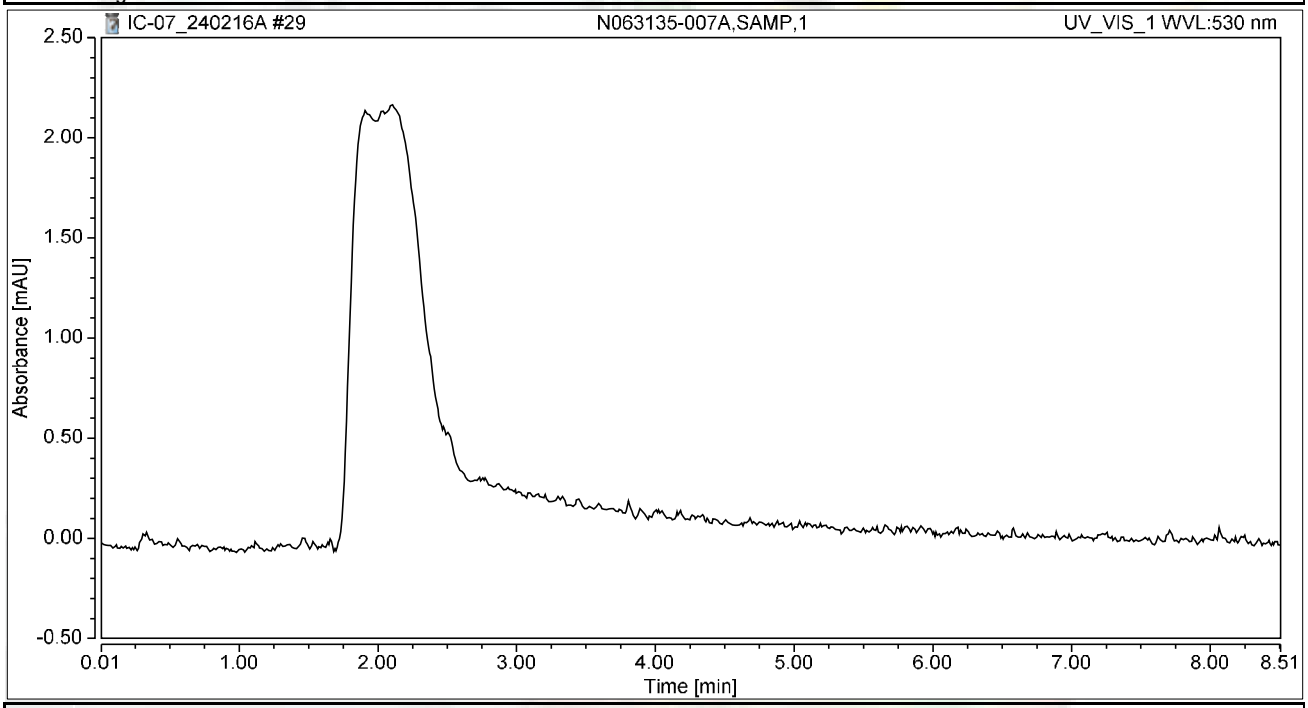
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.215	1.288	100.00	100.00	1.0017
Total:			**0.215**	**1.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-007A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 12:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

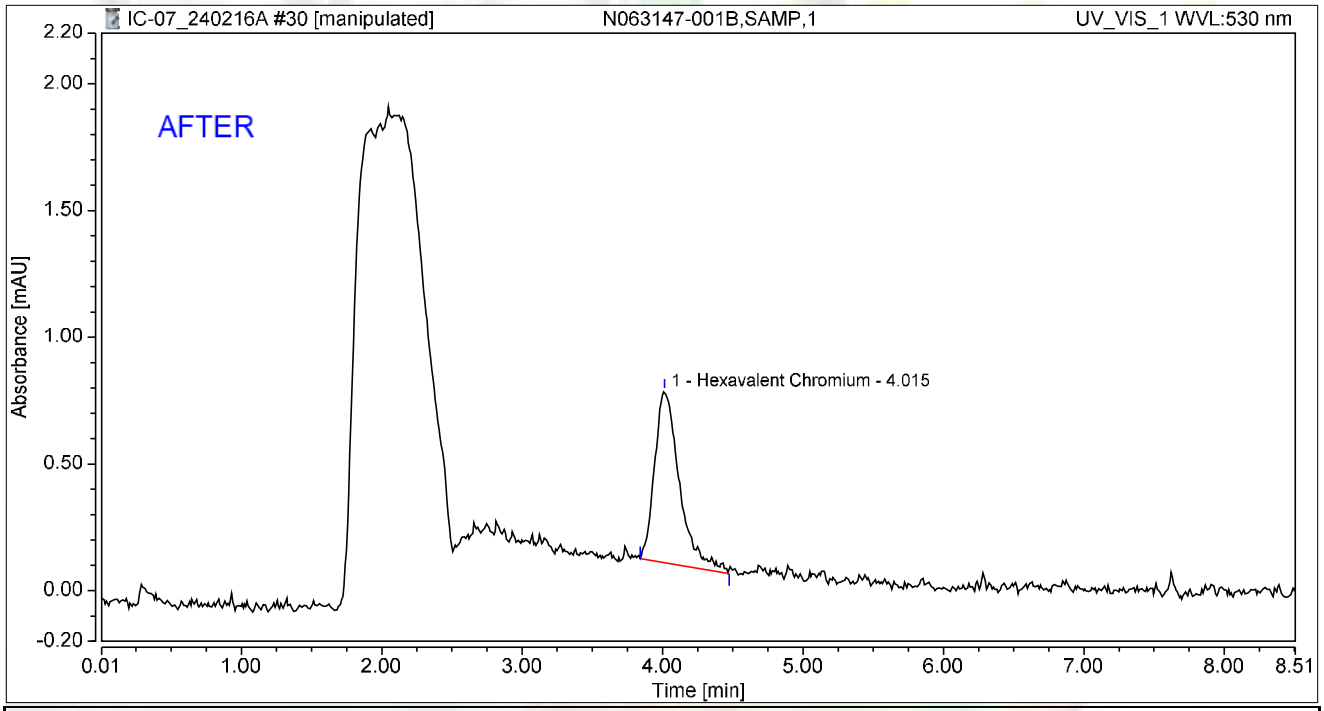
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063147-001B,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 12:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.139	0.677	100.00	100.00	0.6469
Total:			**0.139**	**0.677**	**100.00**	**100.00**	

Reviewed by:

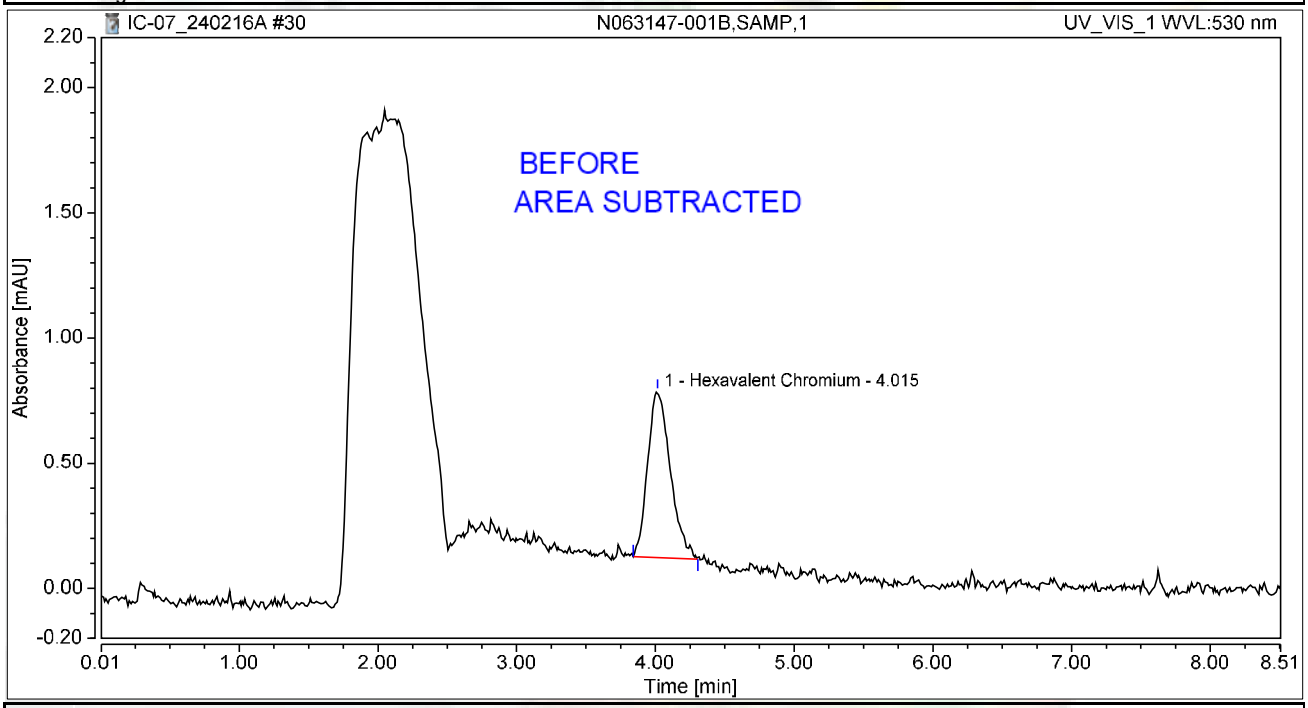
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063147-001B,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 12:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

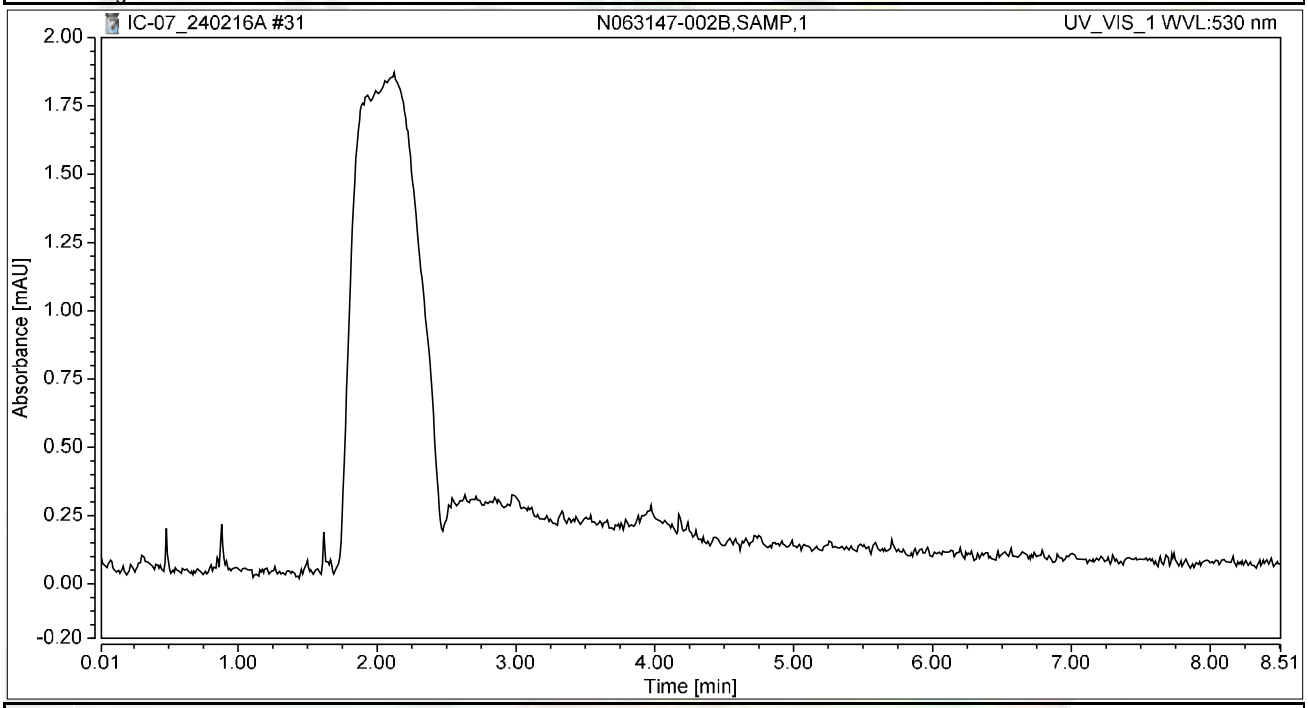
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.126	0.664	100.00	100.00	0.5862
Total:			**0.126**	**0.664**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063147-002B,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 12:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

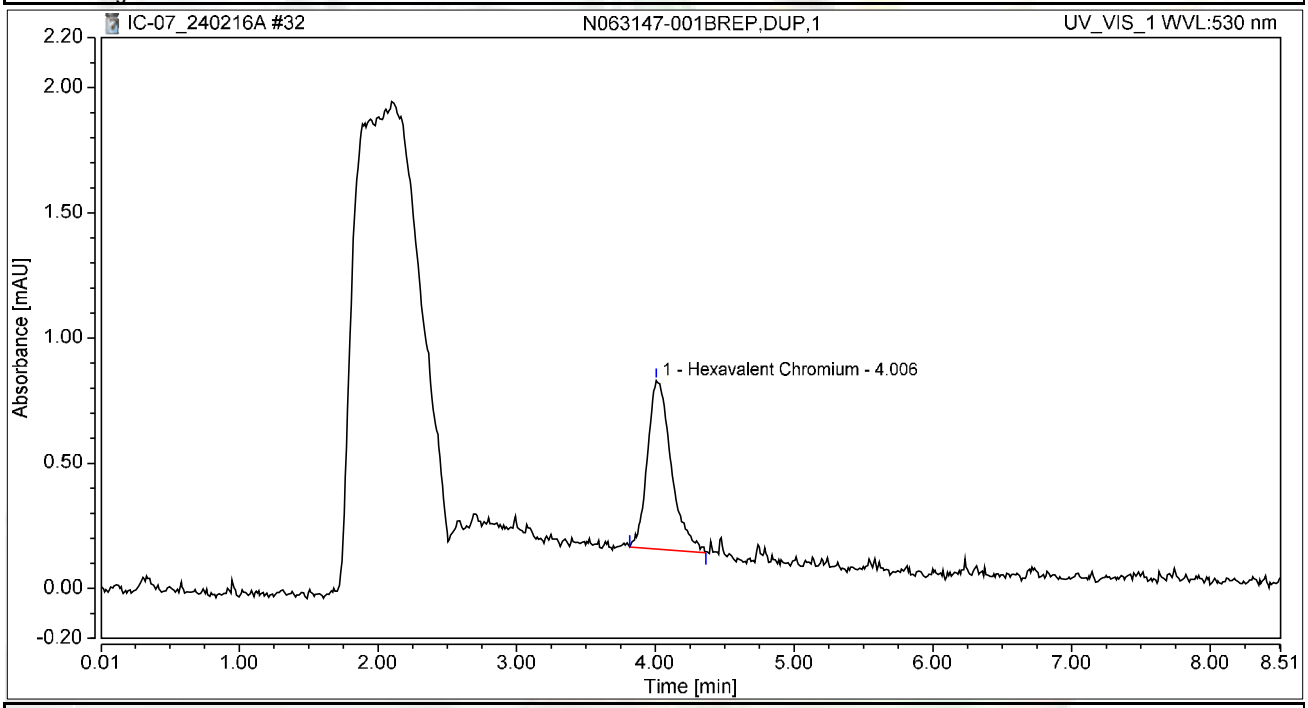
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063147-001BREP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 12:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

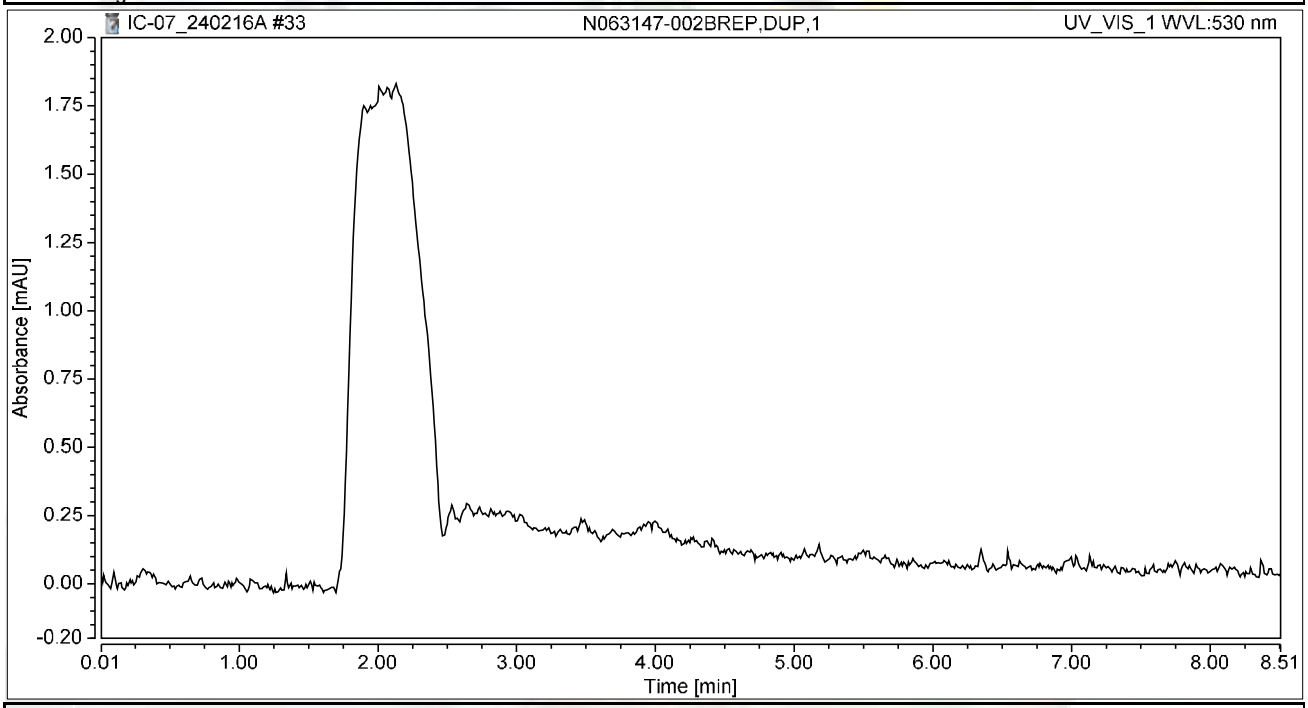
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.134	0.673	100.00	100.00	0.6238
Total:			**0.134**	**0.673**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063147-002BREP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 13:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

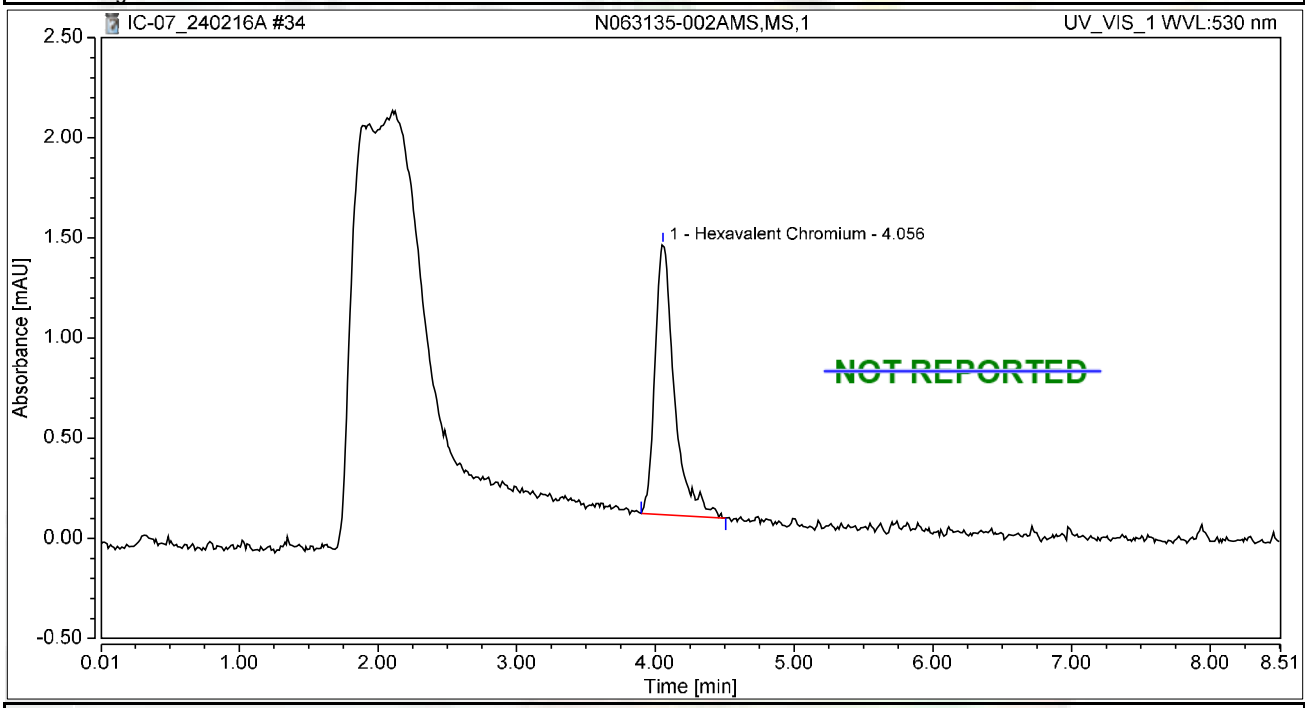
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 13:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

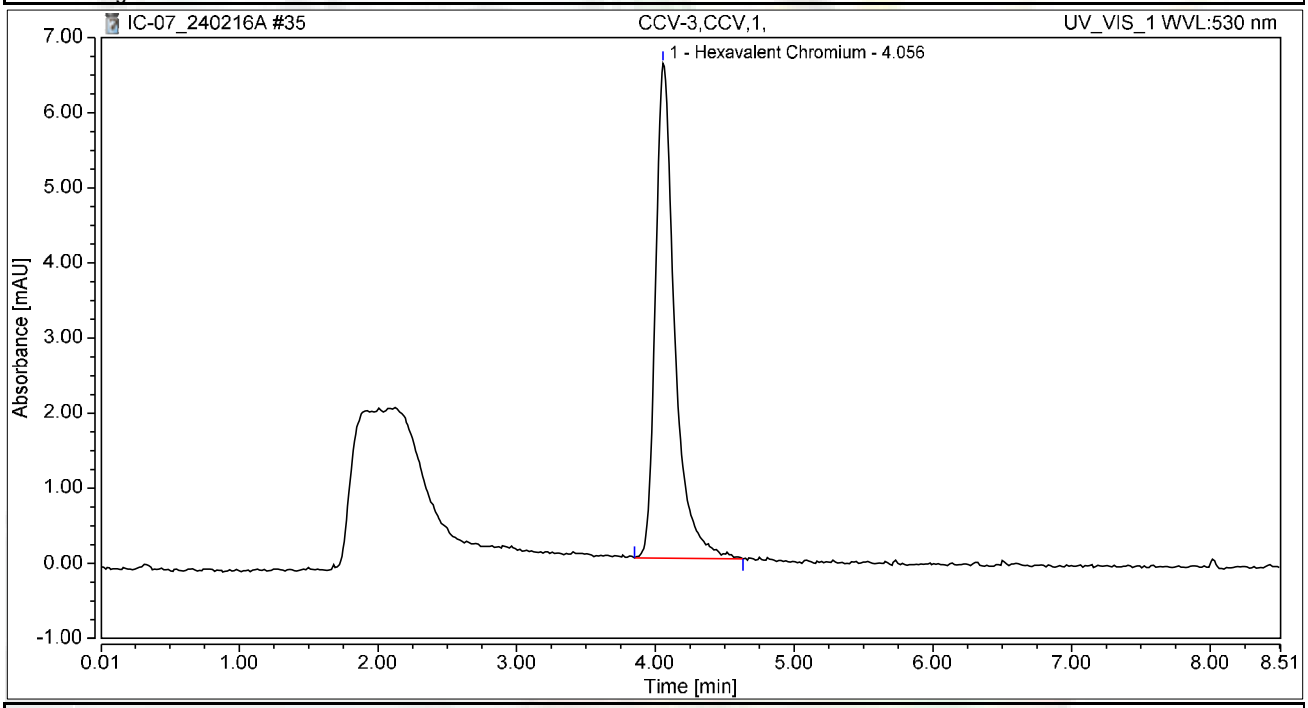
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.220	1.348	100.00	100.00	1.0228
Total:			**0.220**	**1.348**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 13:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

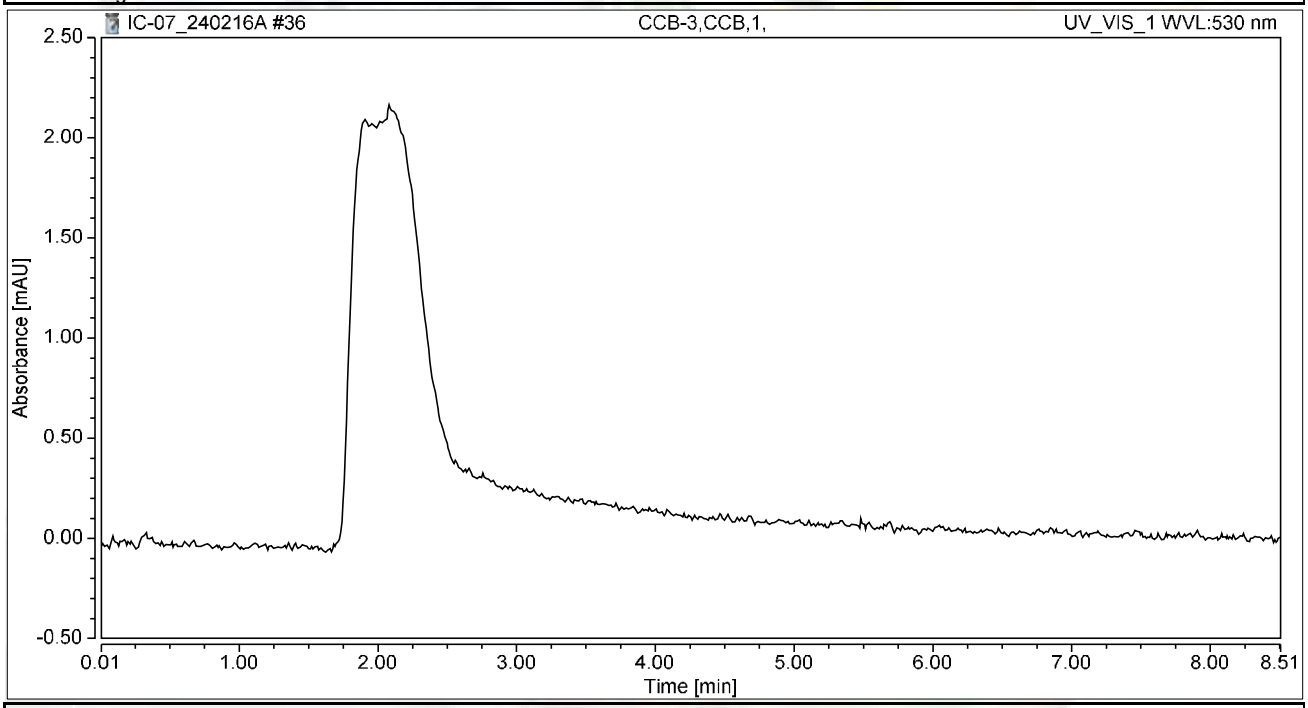
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.062	6.587	100.00	100.00	4.9366
Total:			**1.062**	**6.587**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 13:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

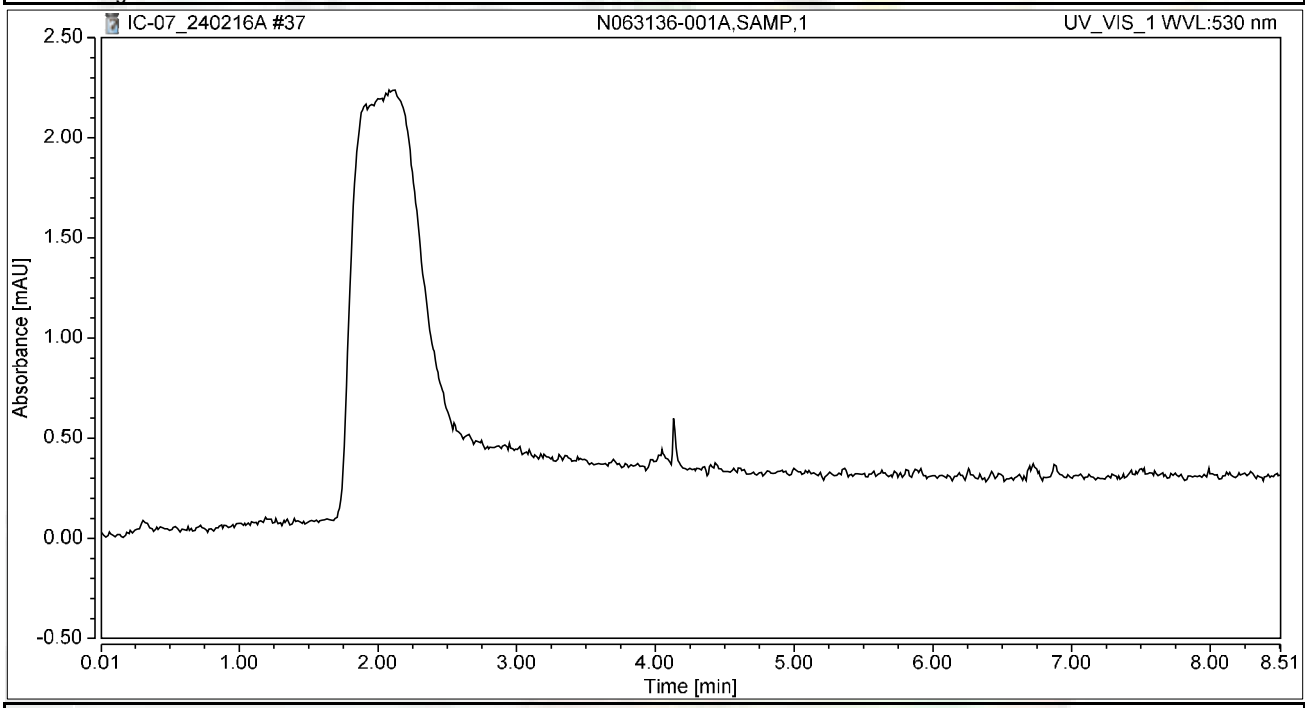
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 13:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

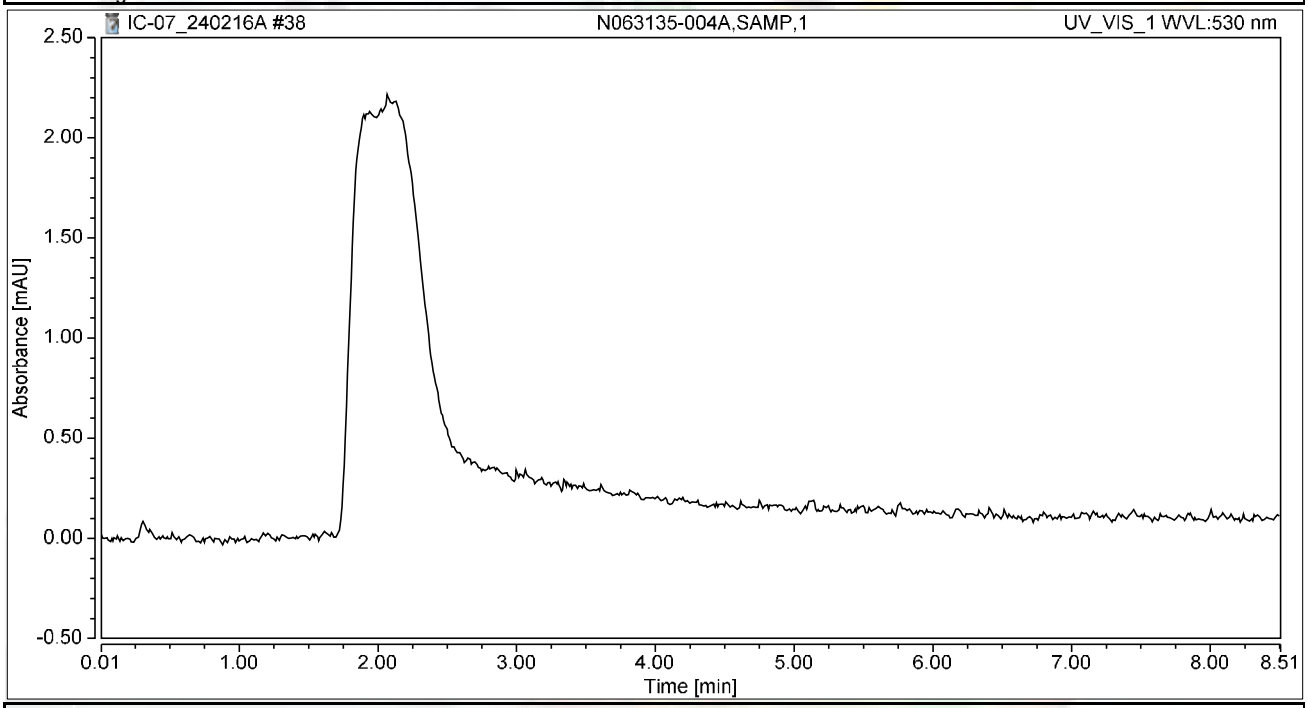
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 13:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

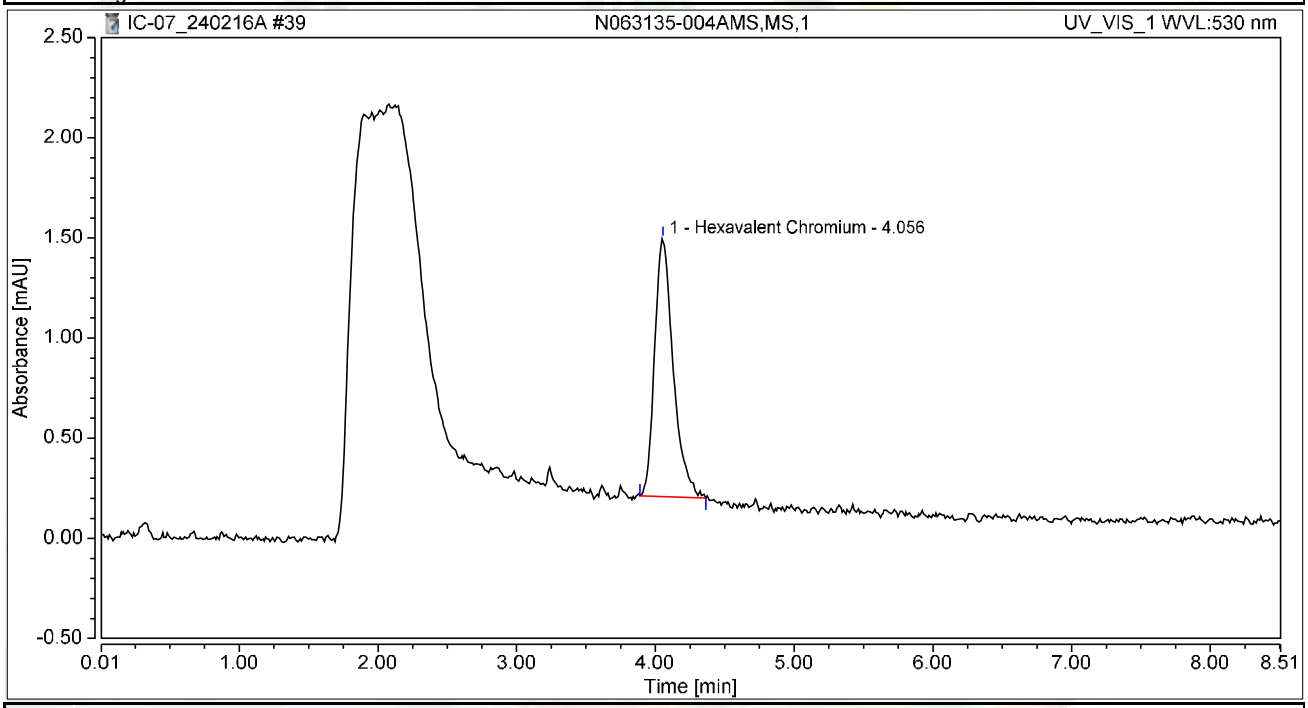
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 14:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

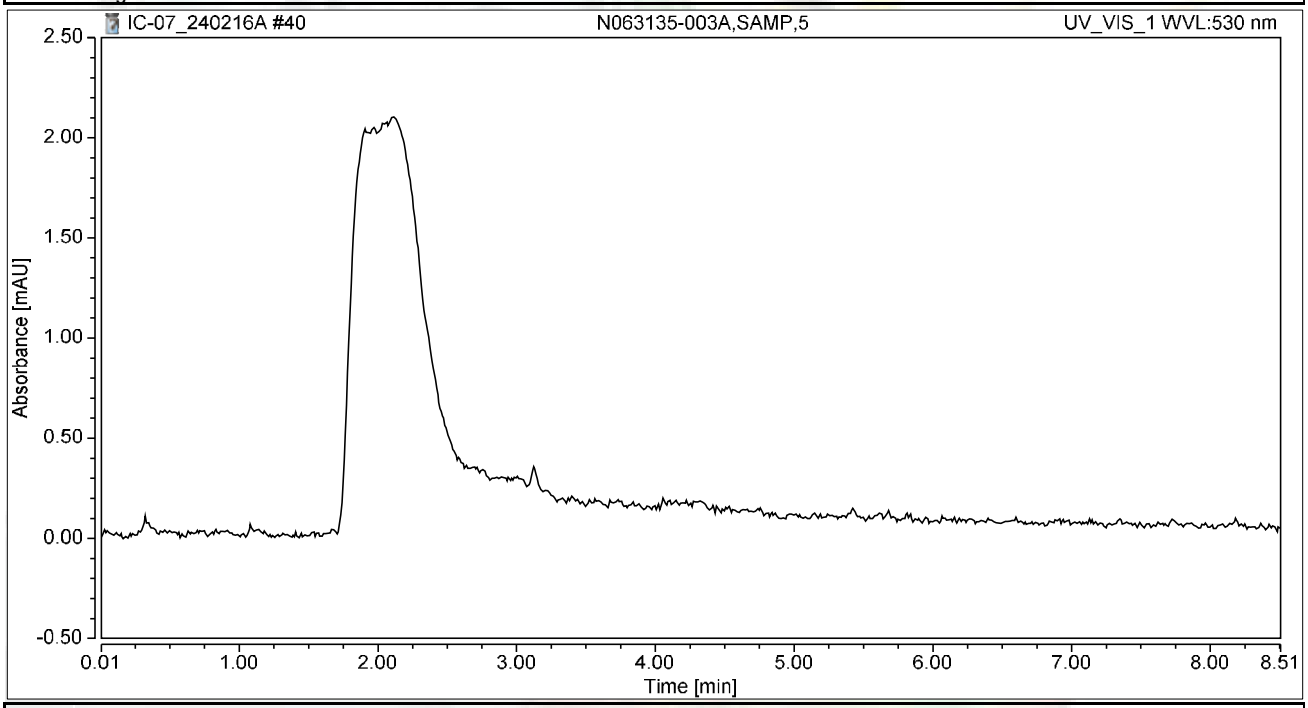
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.200	1.288	100.00	100.00	0.9296
Total:			**0.200**	**1.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 14:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

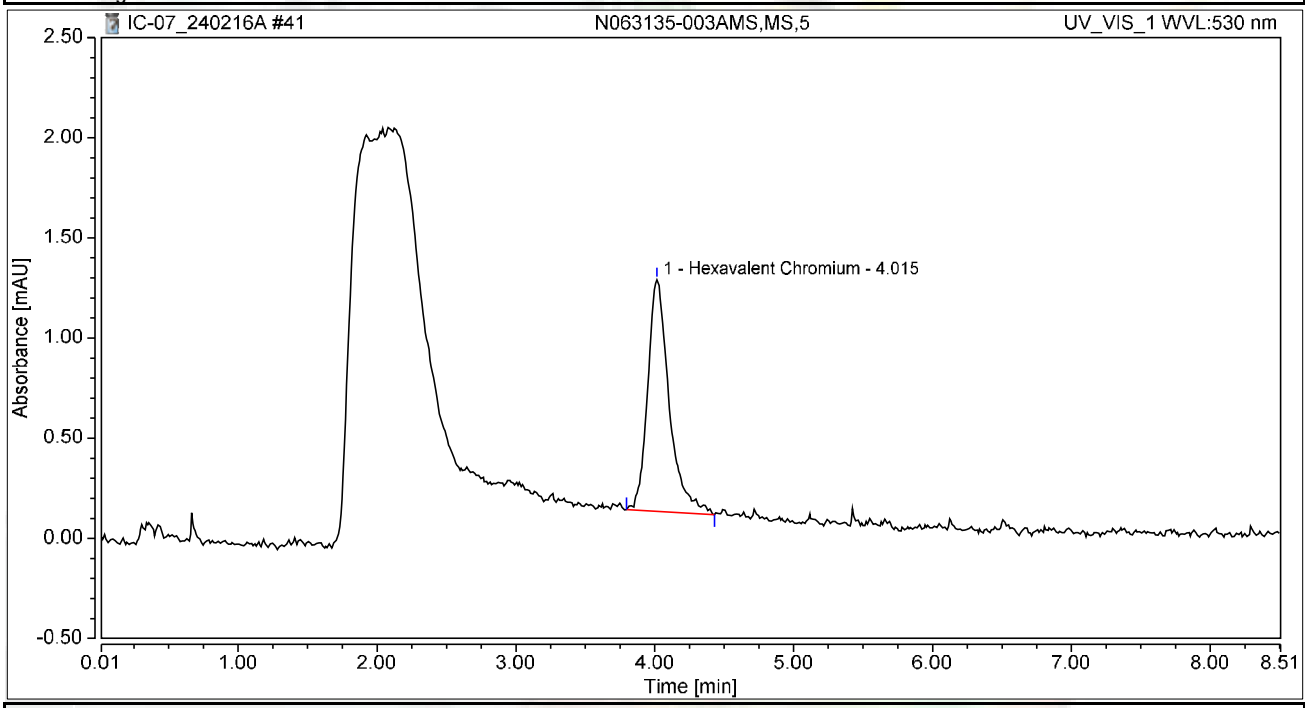
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-003AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 14:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

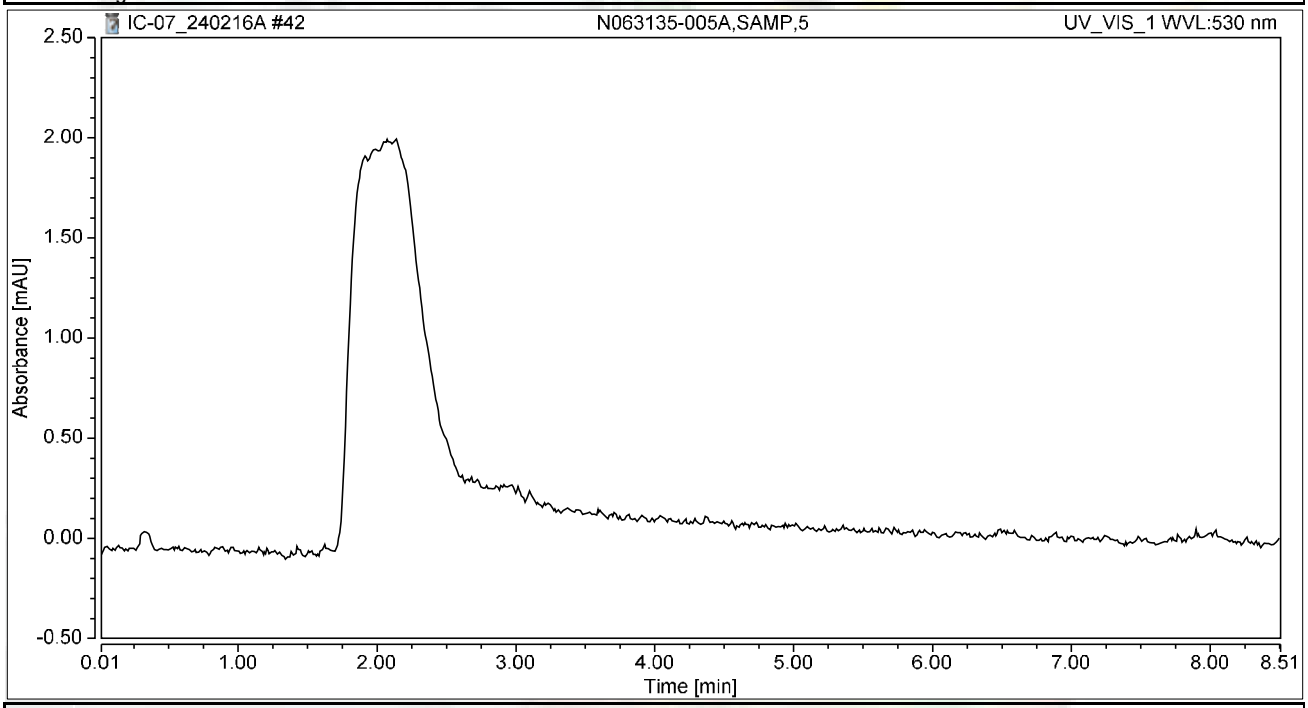
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.208	1.156	100.00	100.00	0.9653
Total:			**0.208**	**1.156**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-005A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 14:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

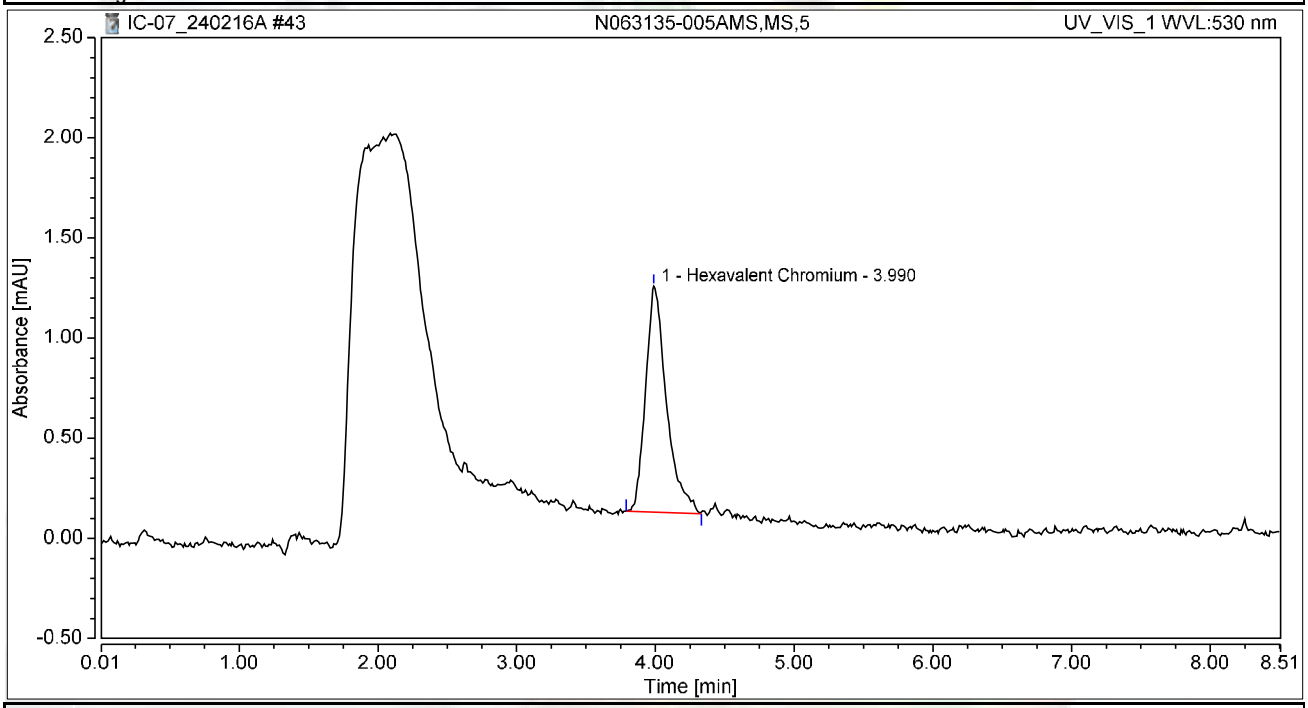
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-005AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 14:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

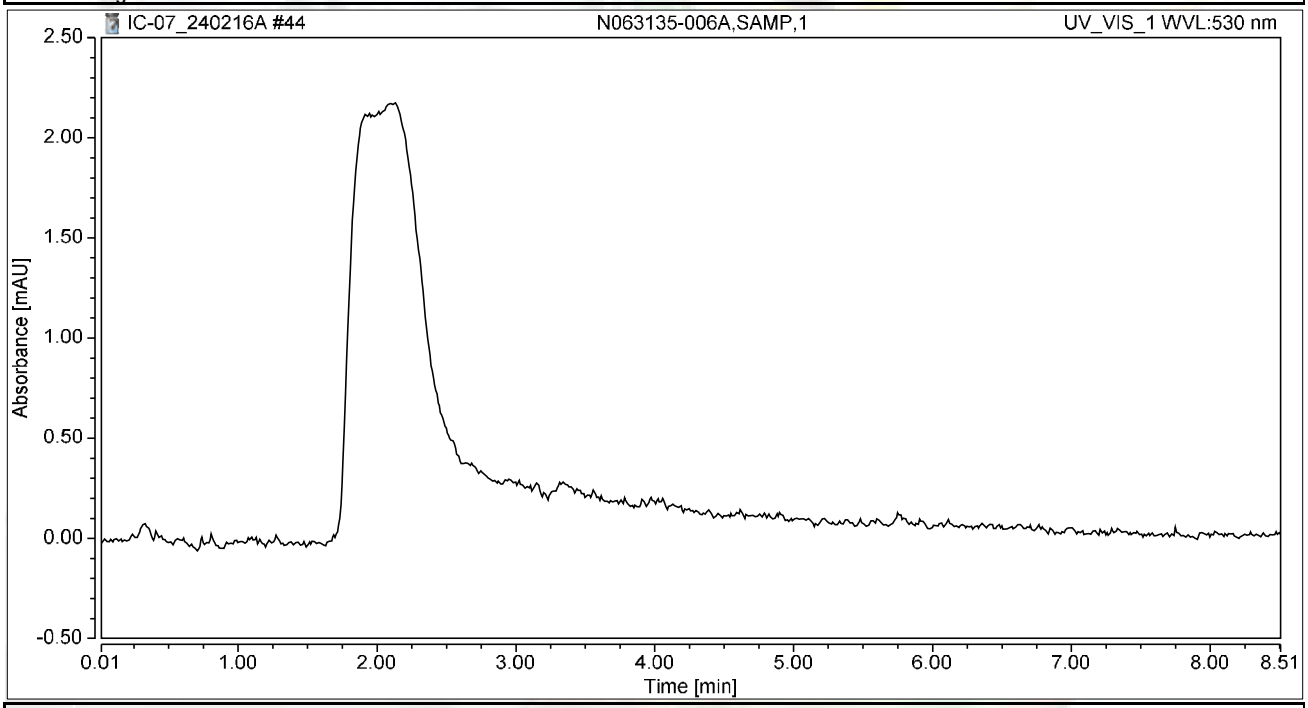
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.197	1.127	100.00	100.00	0.9168
Total:			**0.197**	**1.127**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-006A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 14:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

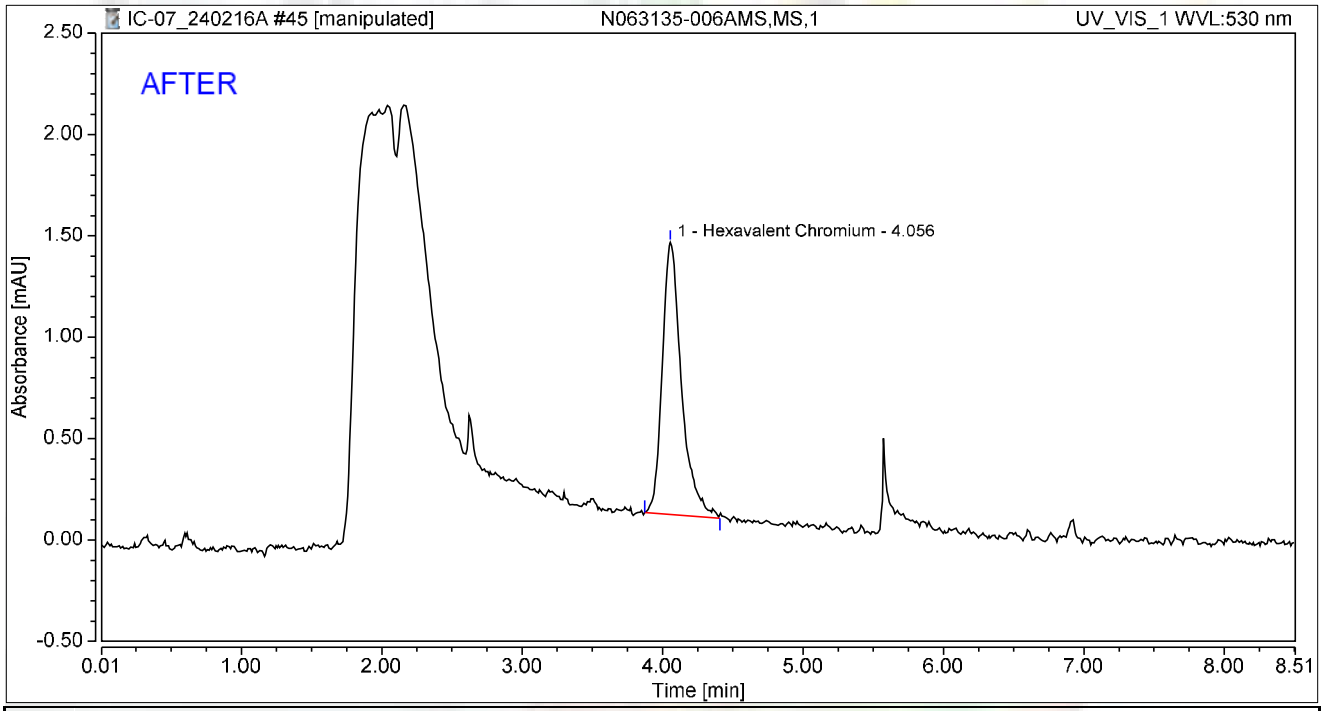
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 15:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.214	1.342	100.00	100.00	0.9926
Total:			**0.214**	**1.342**	**100.00**	**100.00**	

Reviewed by:

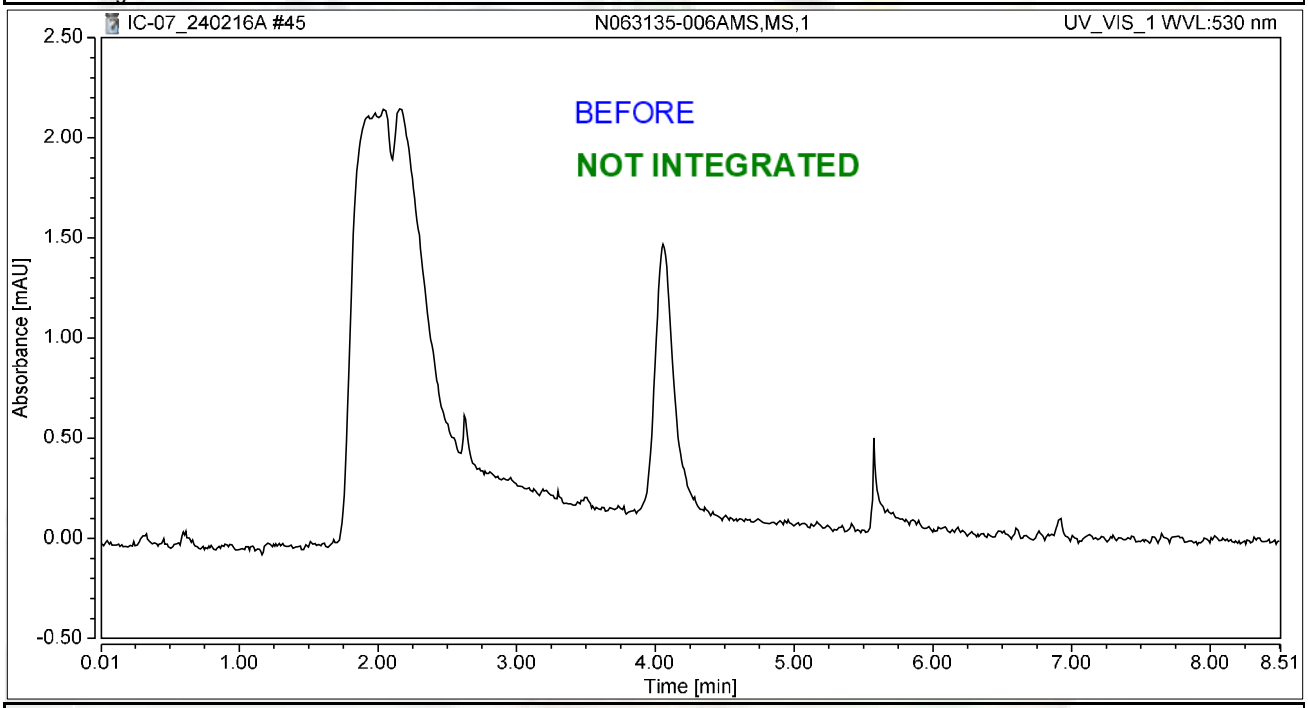
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063135-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 15:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

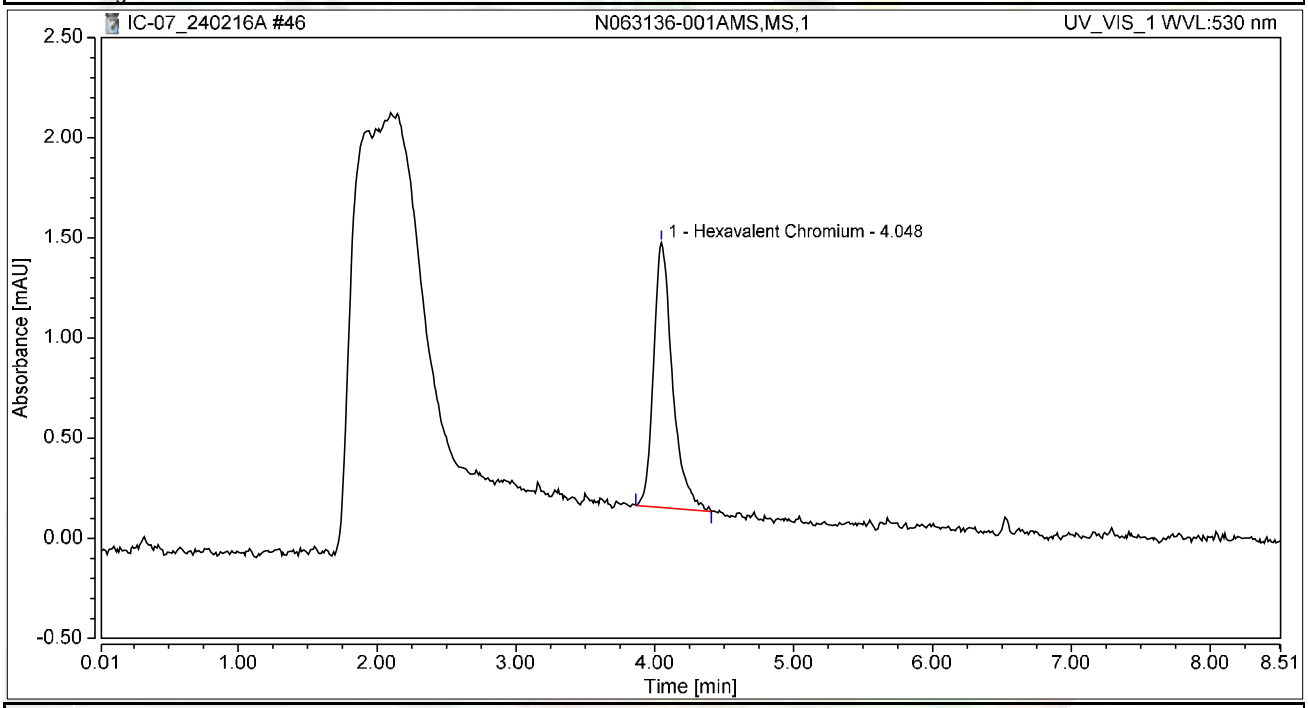
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 15:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

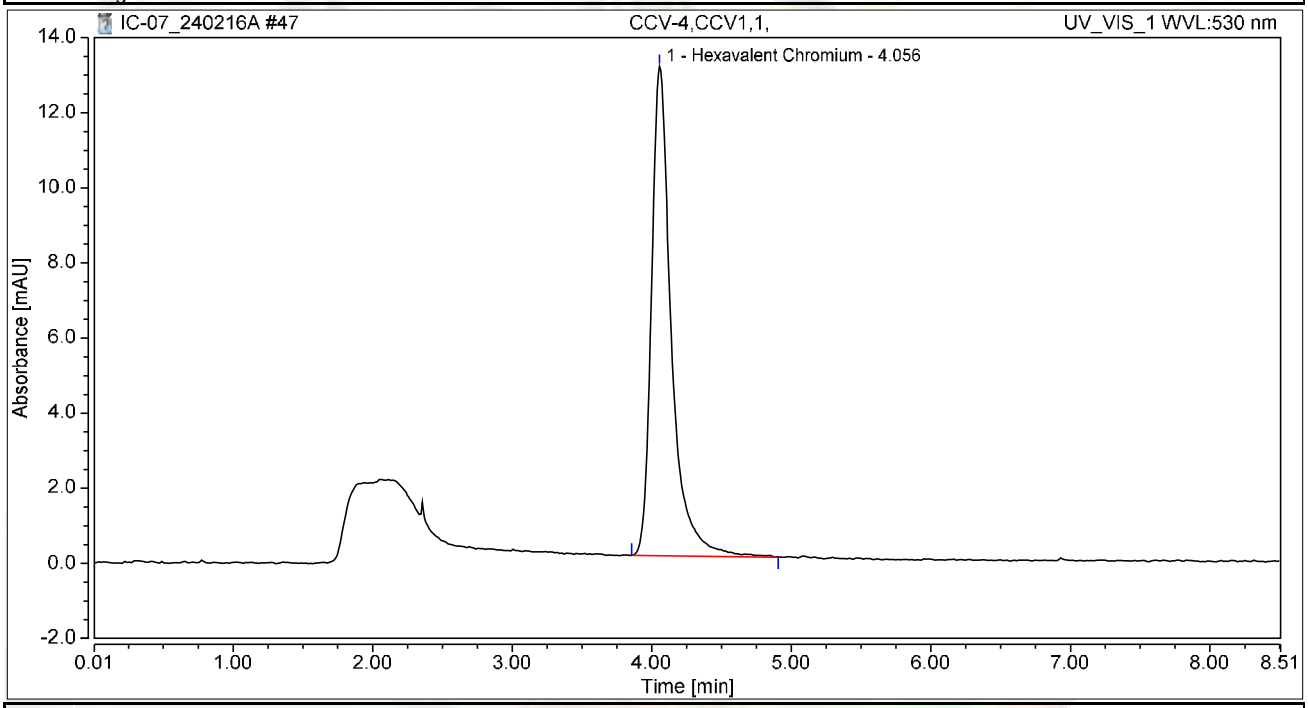
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.208	1.323	100.00	100.00	0.9692
Total:			**0.208**	**1.323**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 15:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

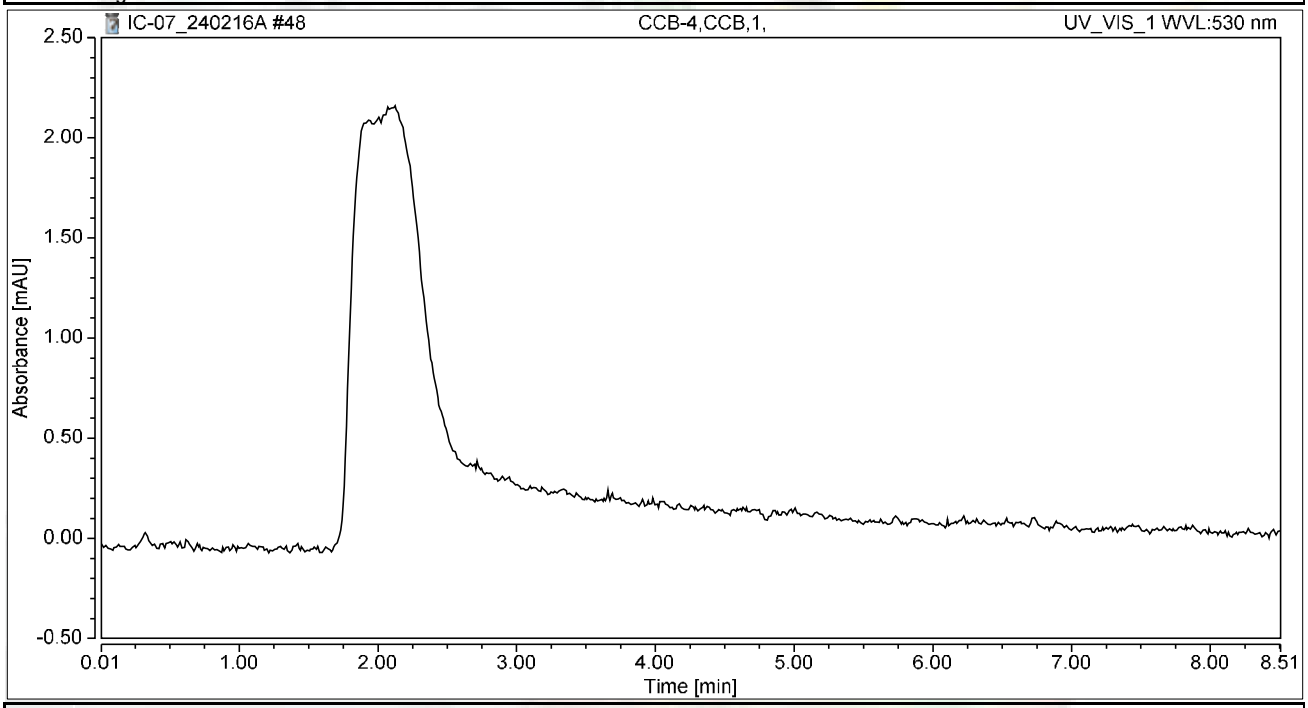
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	2.158	13.026	100.00	100.00	10.0304
Total:			**2.158**	**13.026**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 15:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

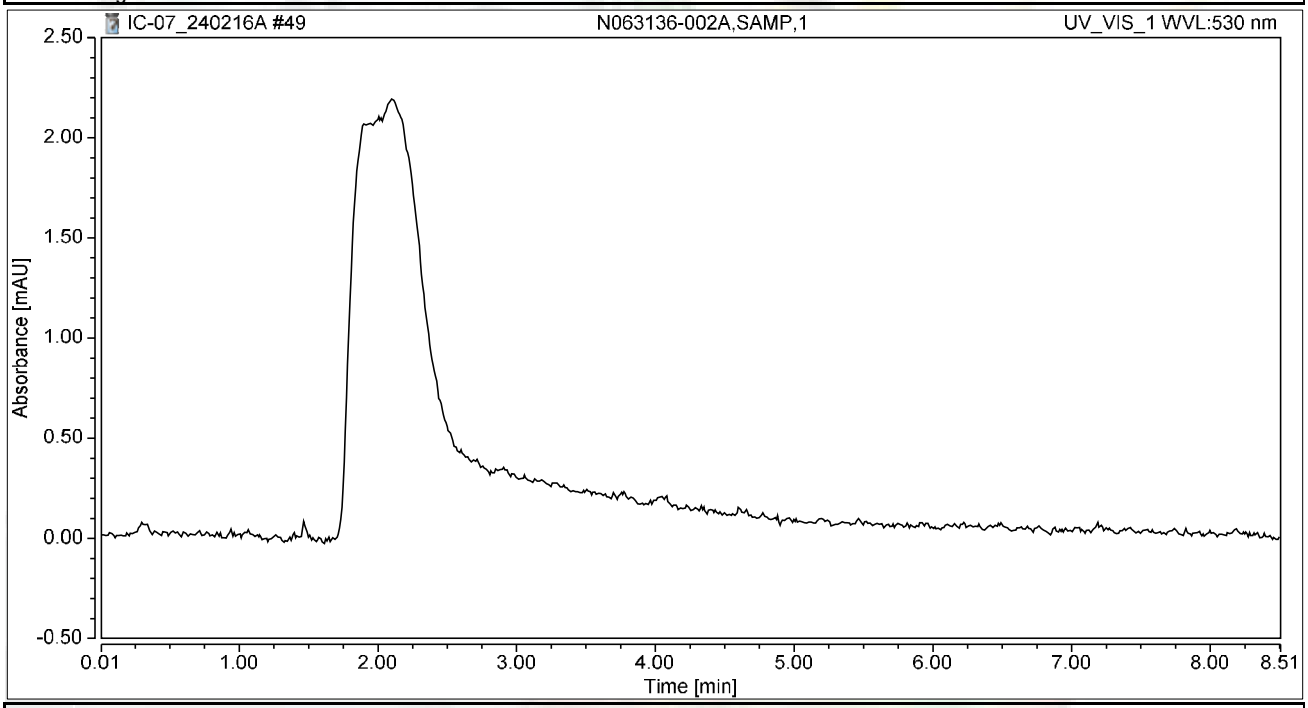
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 15:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

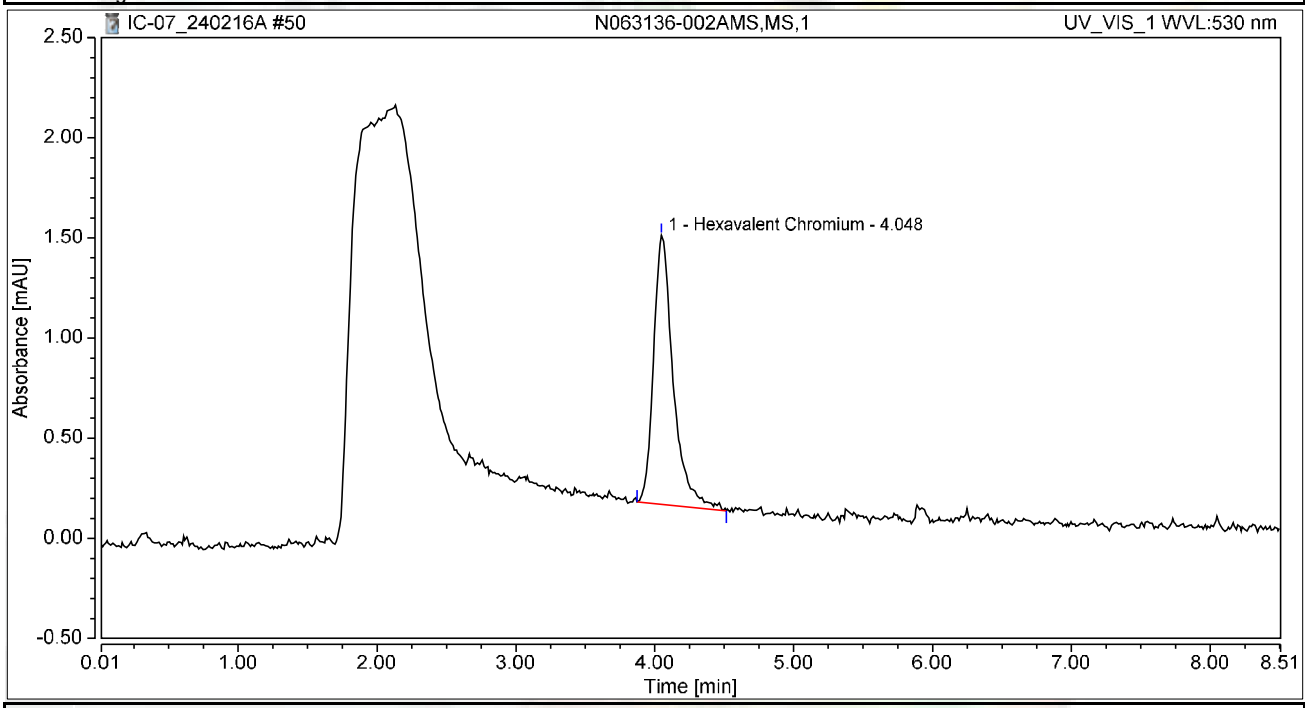
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 15:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

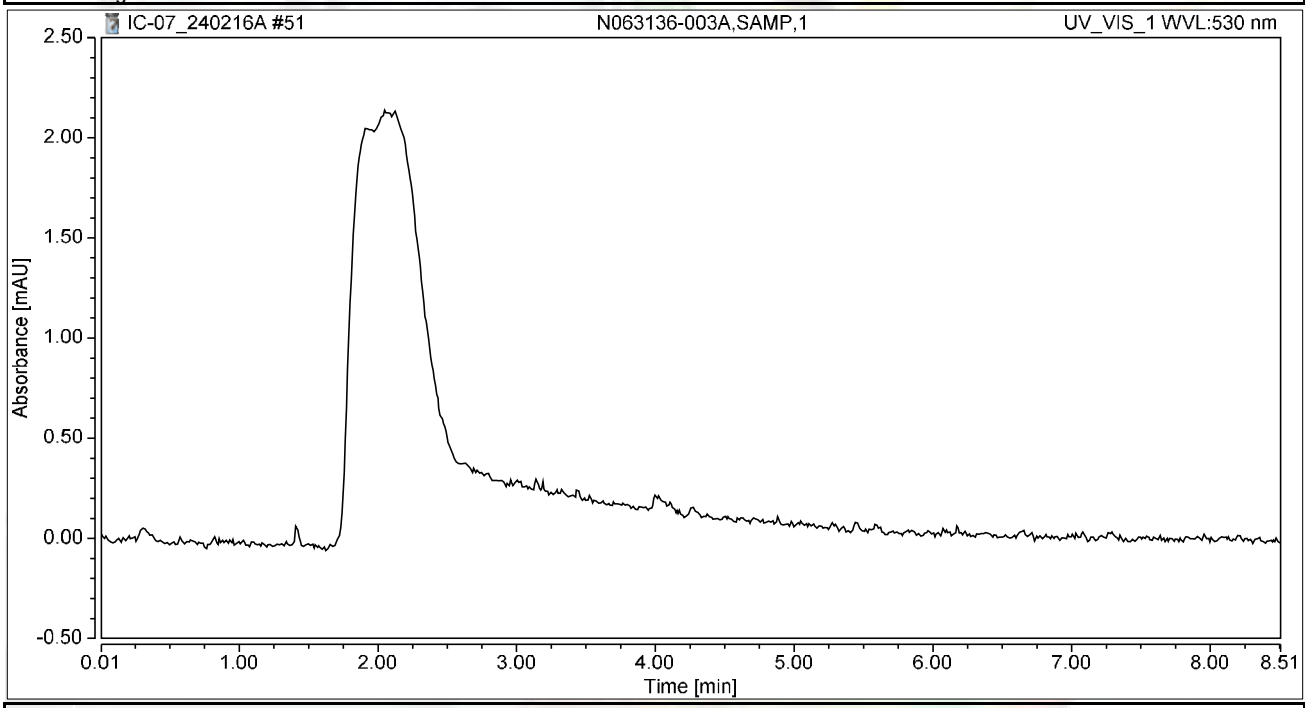
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.221	1.343	100.00	100.00	1.0269
Total:			**0.221**	**1.343**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 16:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

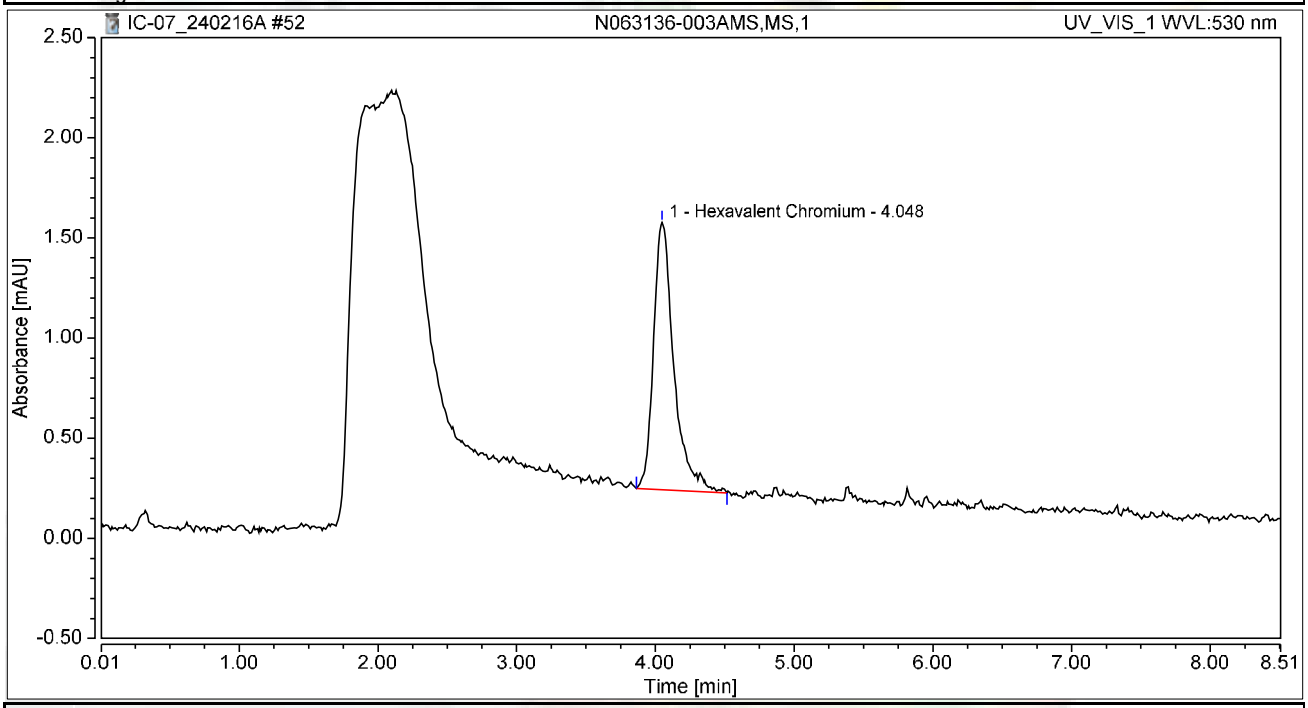
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 16:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

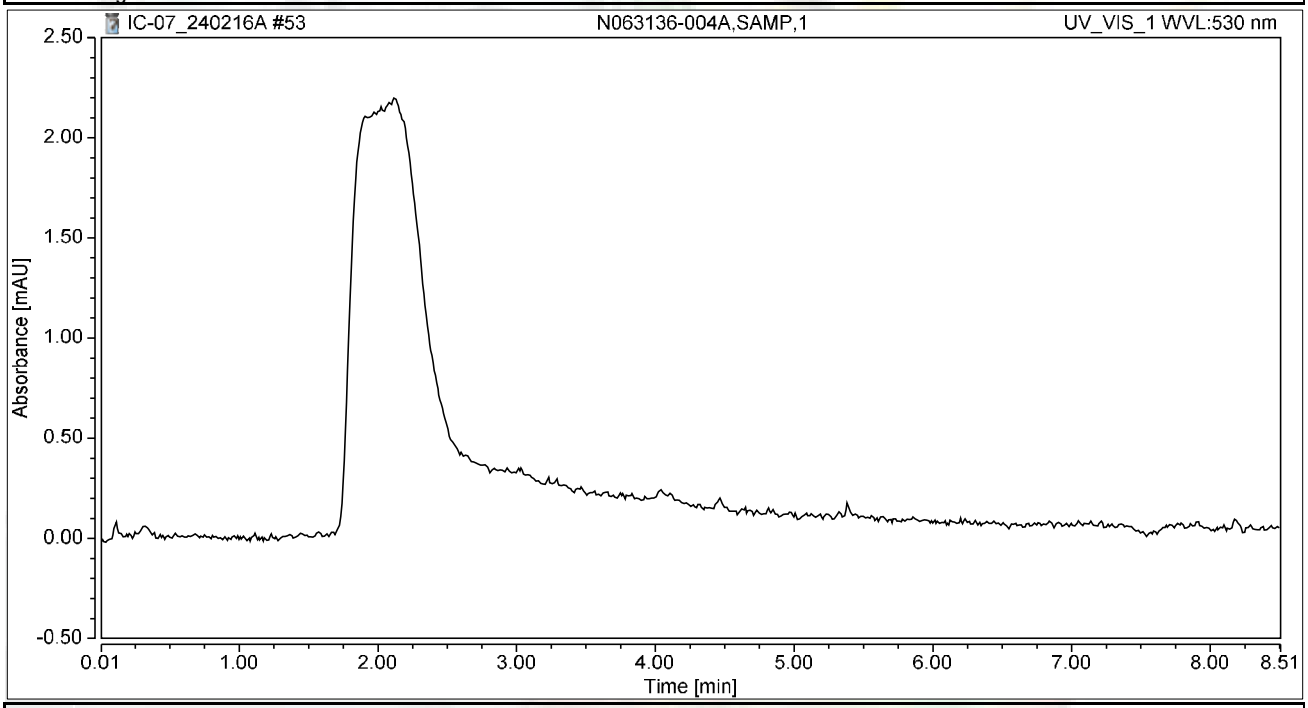
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.226	1.335	100.00	100.00	1.0522
Total:			**0.226**	**1.335**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 16:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

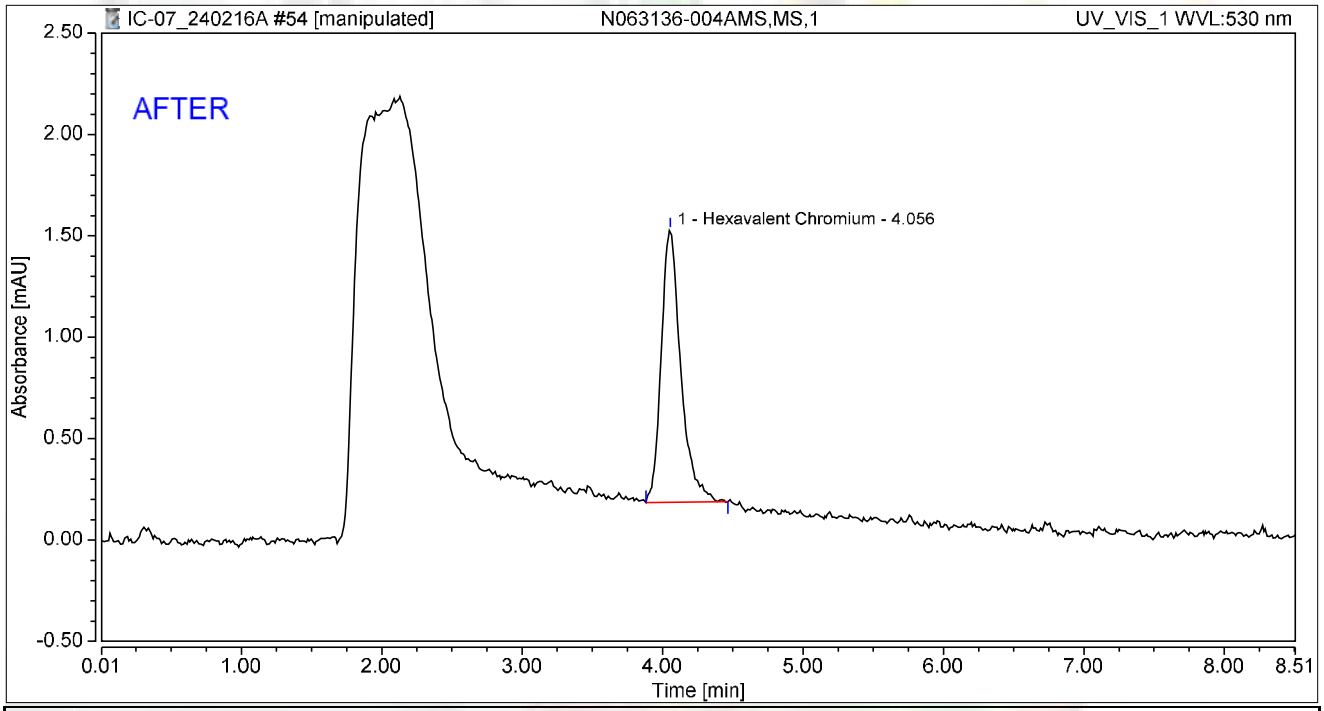
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 16:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.218	1.343	100.00	100.00	1.0120
Total:			**0.218**	**1.343**	**100.00**	**100.00**	

Reviewed by:

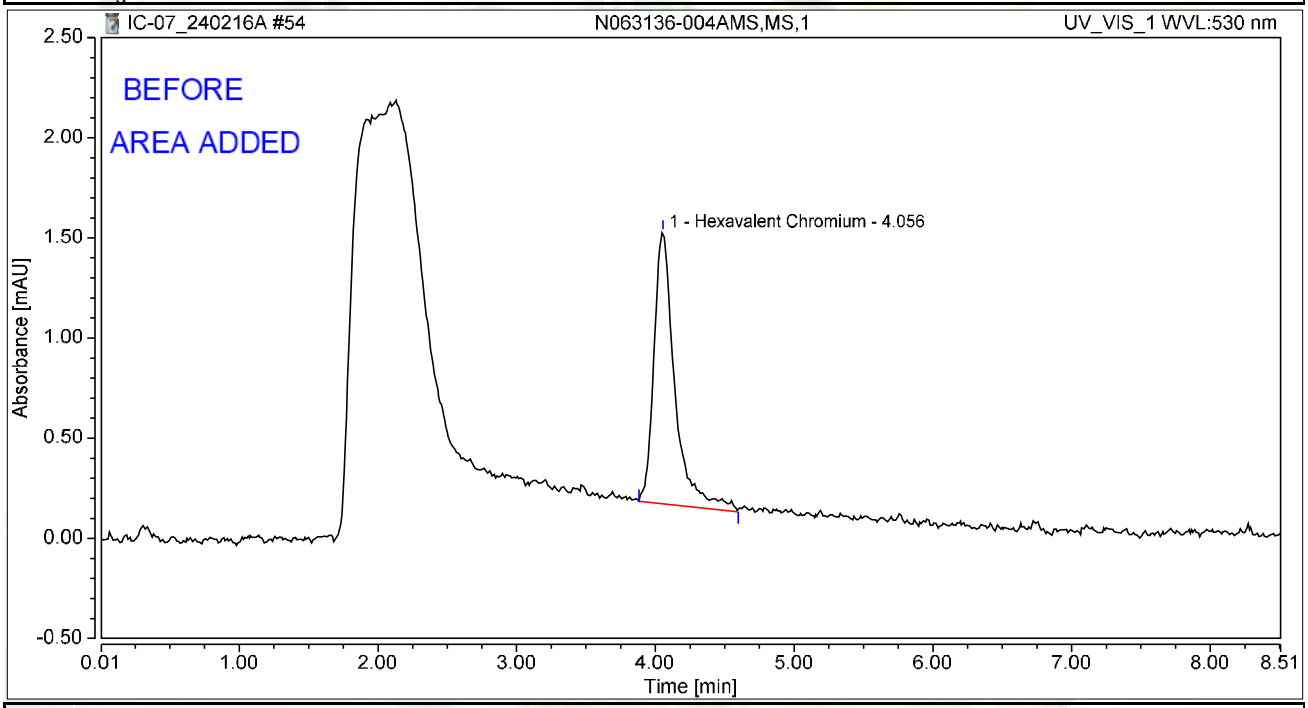
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063136-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 16:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

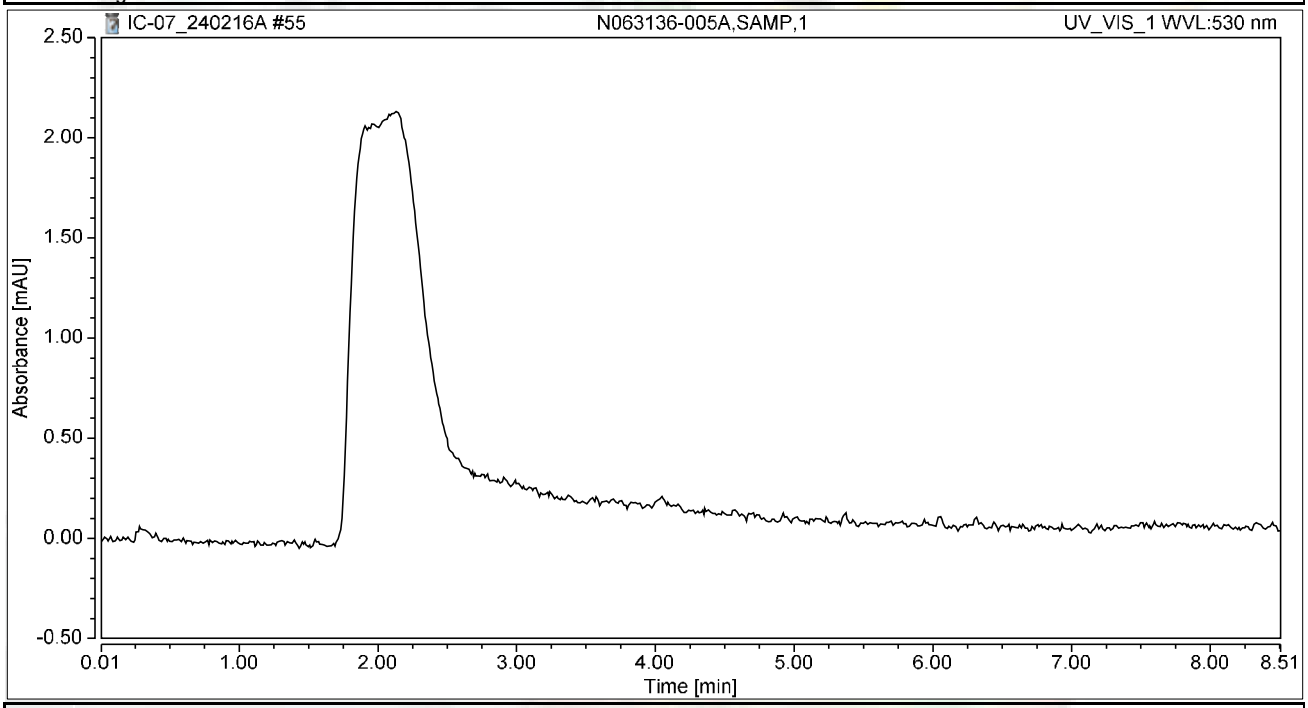
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.237	1.357	100.00	100.00	1.0998
Total:			**0.237**	**1.357**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 16:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

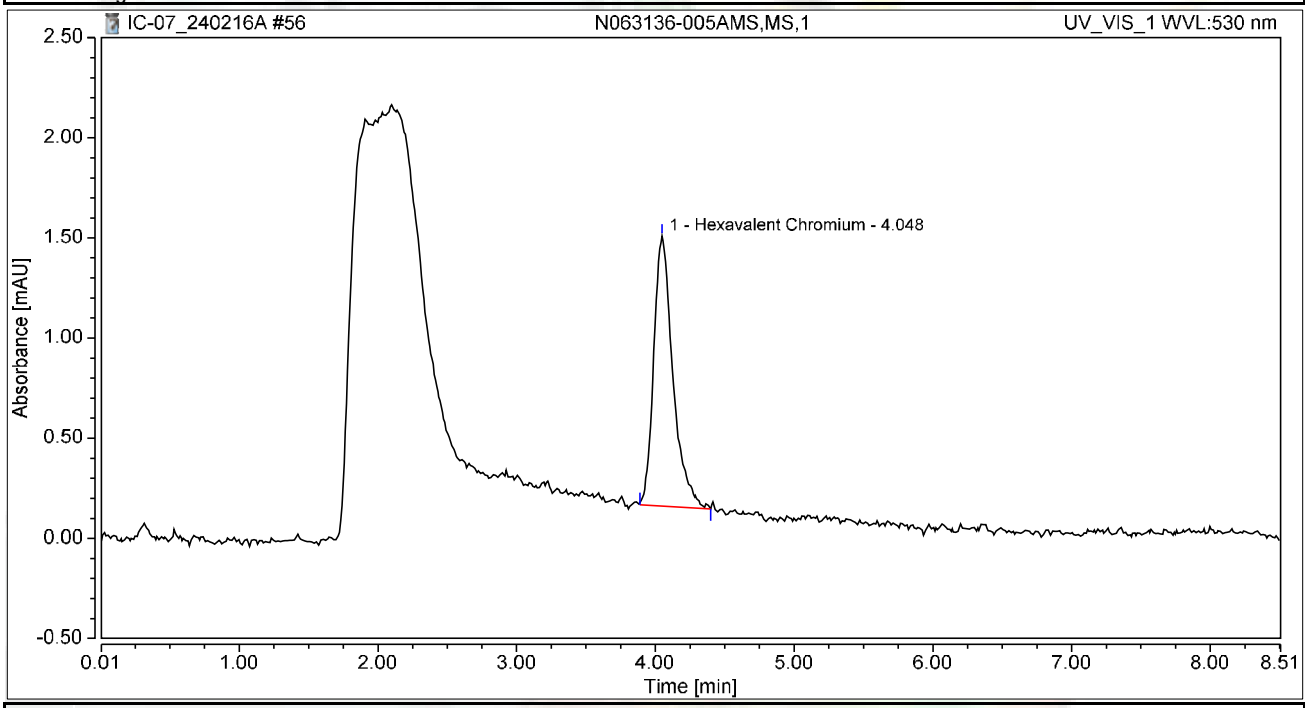
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 16:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

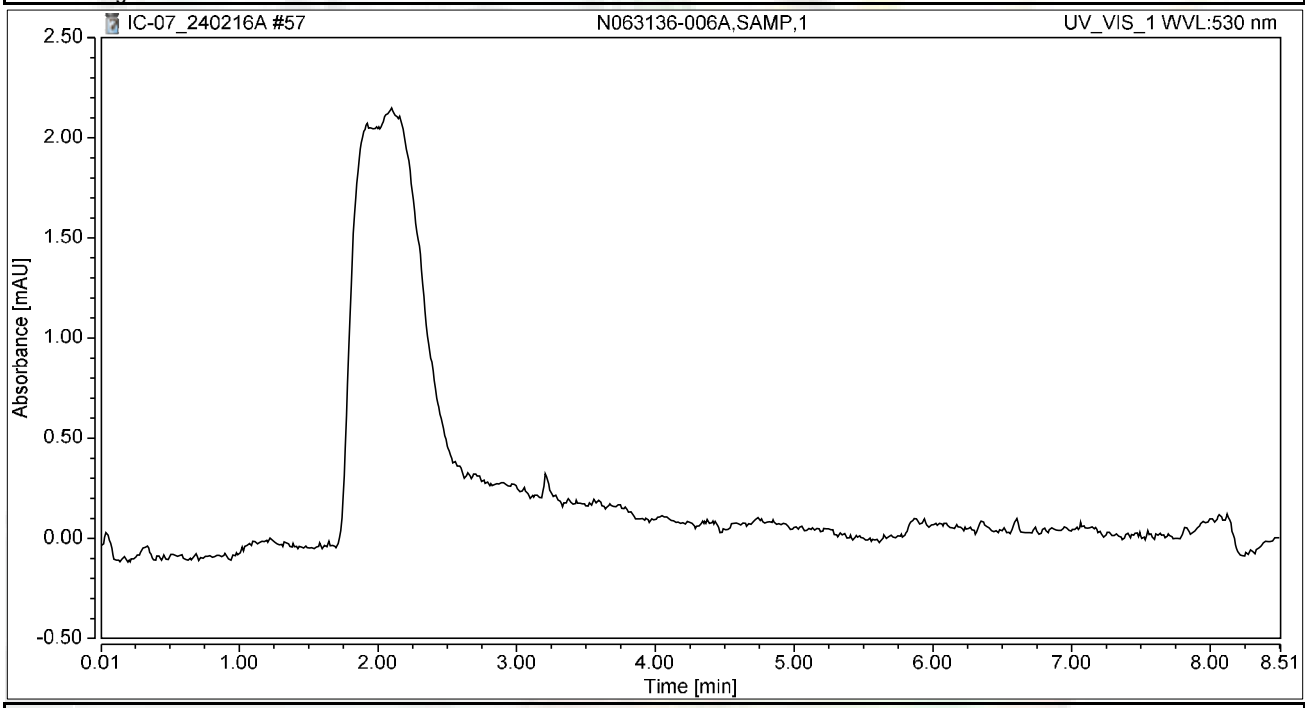
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.215	1.348	100.00	100.00	0.9988
Total:			**0.215**	**1.348**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 16:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

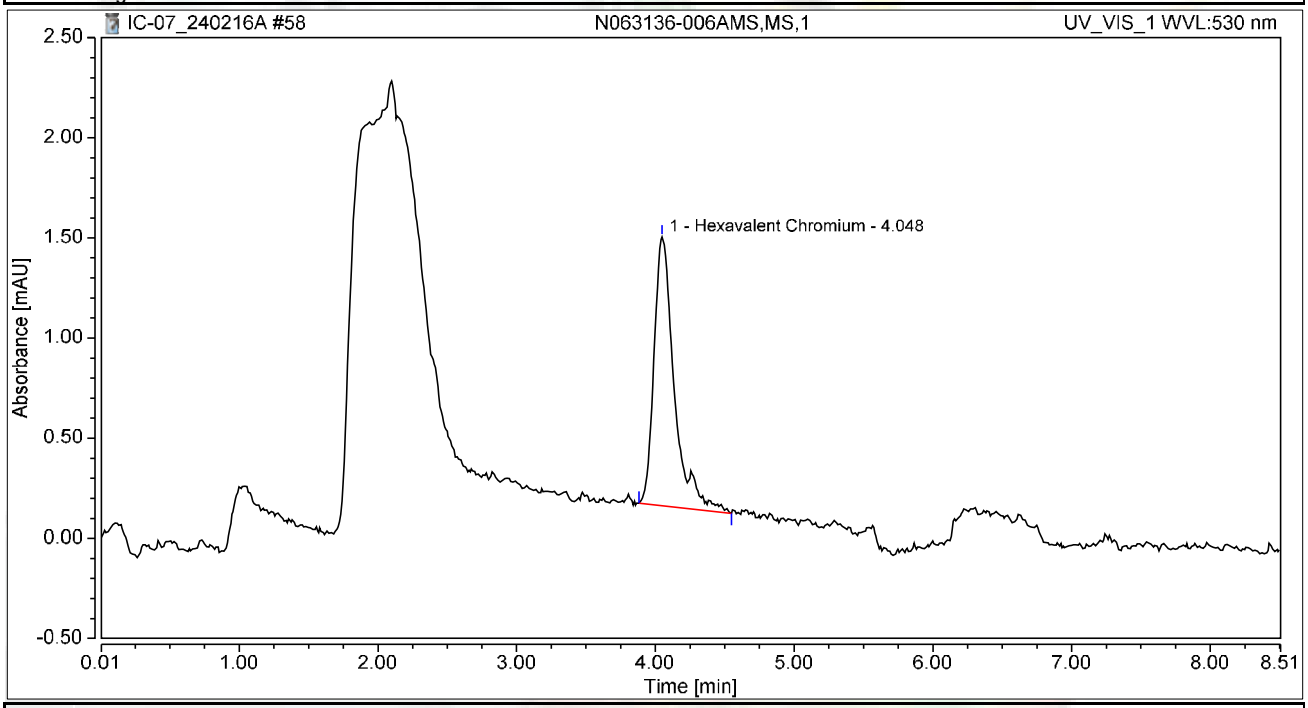
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 17:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

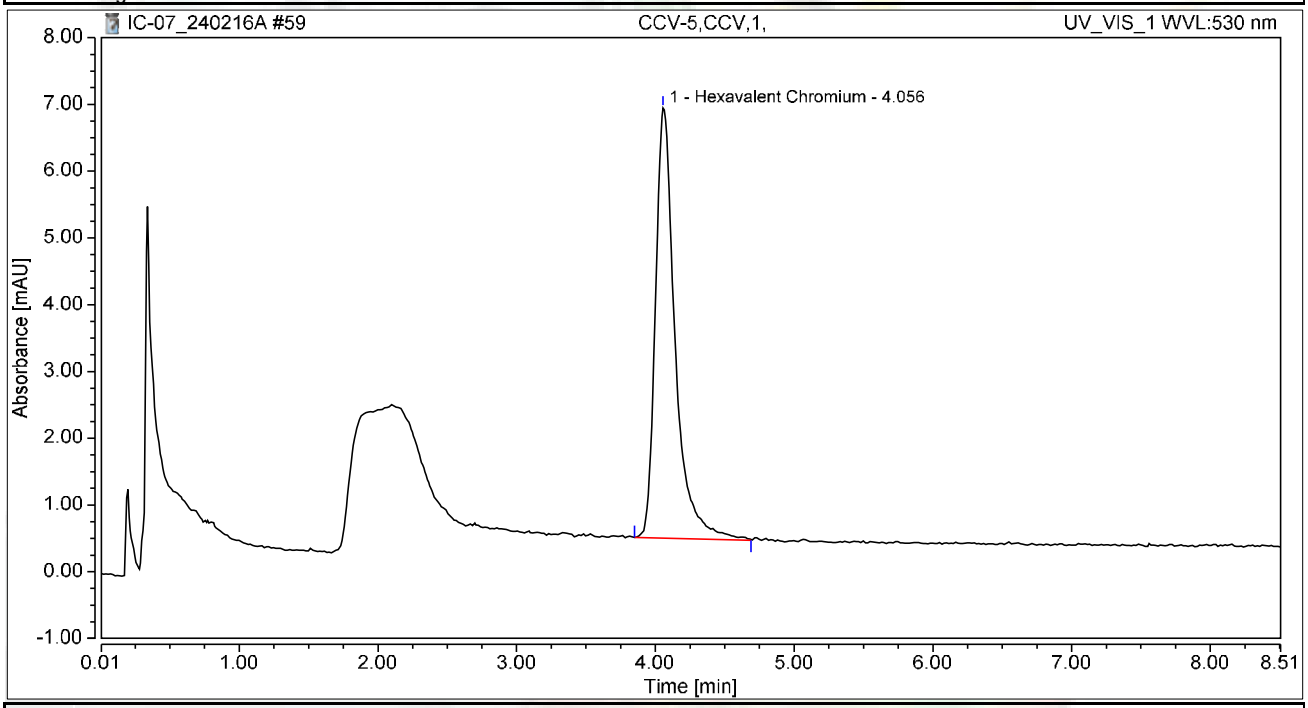
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.226	1.343	100.00	100.00	1.0526
Total:			**0.226**	**1.343**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 17:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

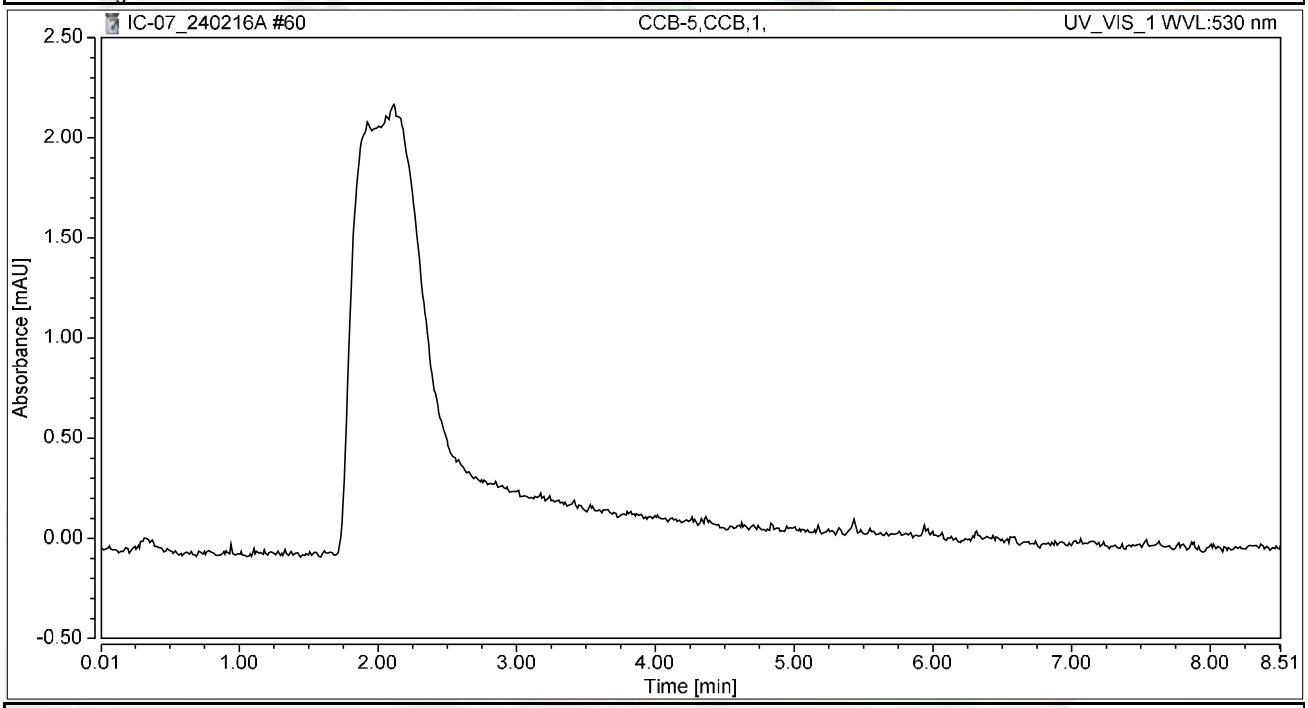
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.063	6.444	100.00	100.00	4.9396
Total:			**1.063**	**6.444**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 17:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

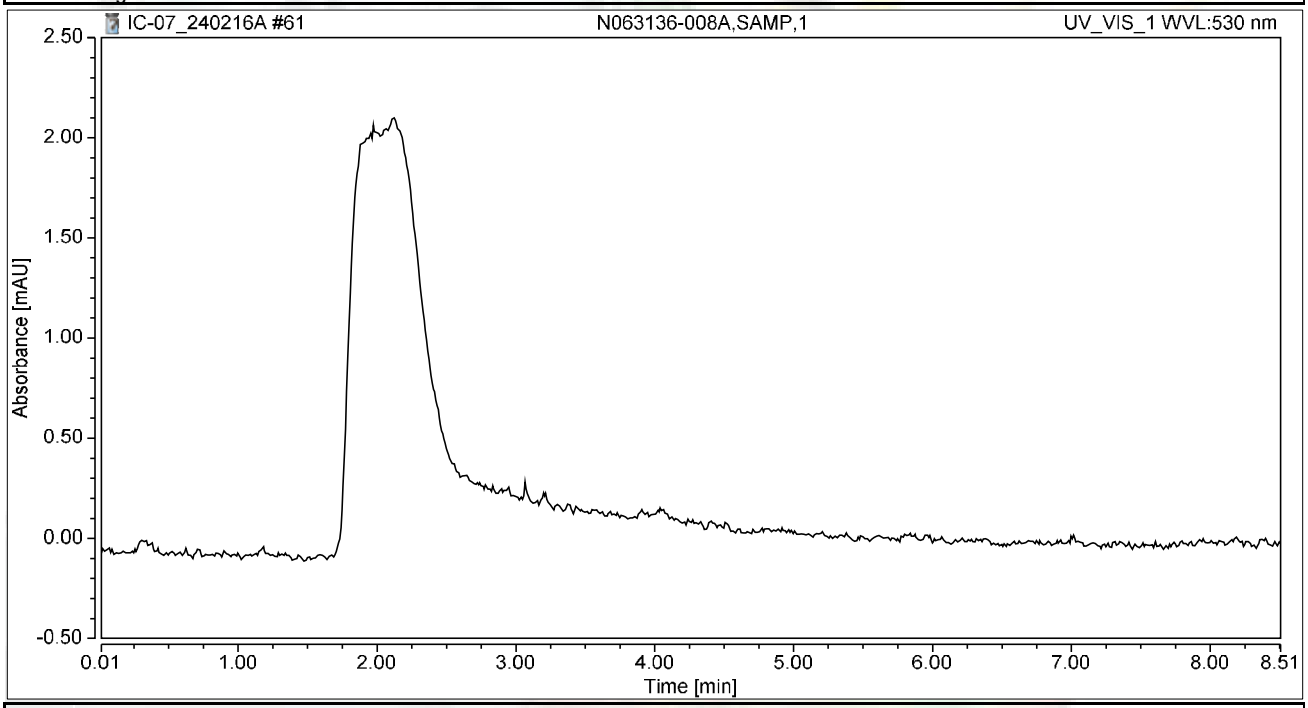
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-008A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 17:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

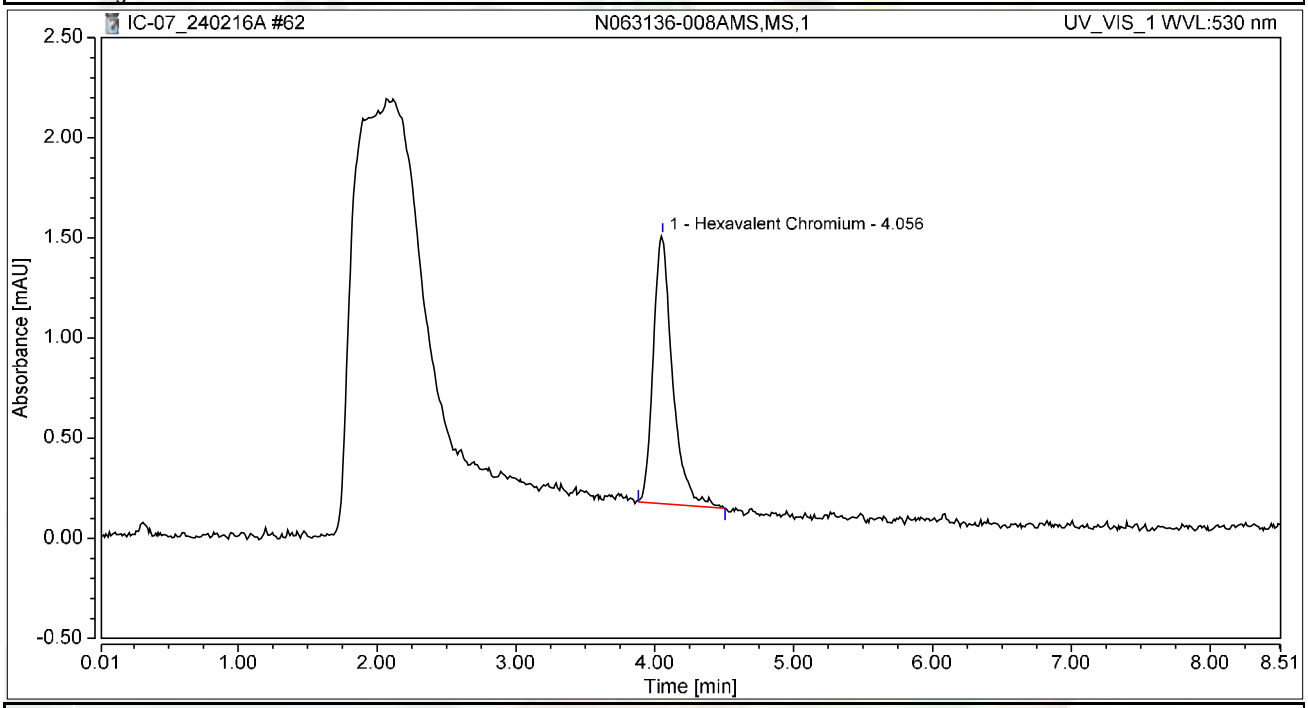
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-008AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 17:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

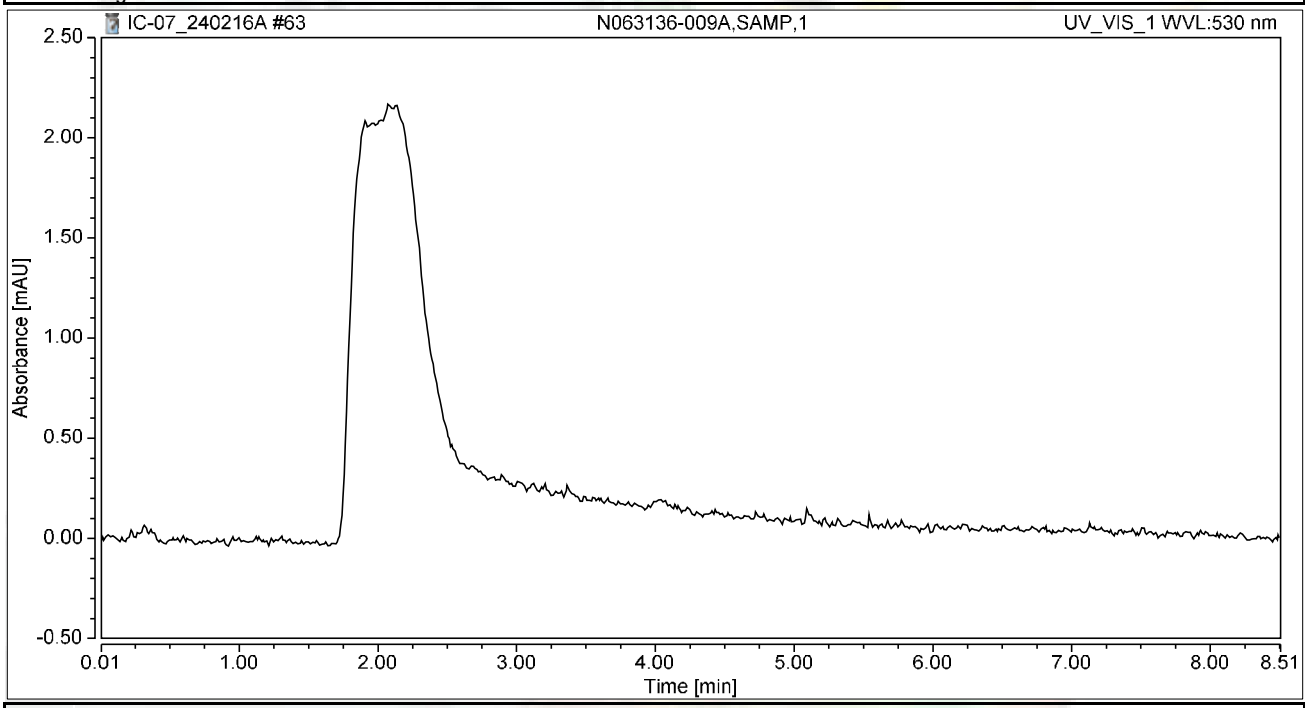
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.215	1.341	100.00	100.00	1.0003
Total:			**0.215**	**1.341**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 17:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

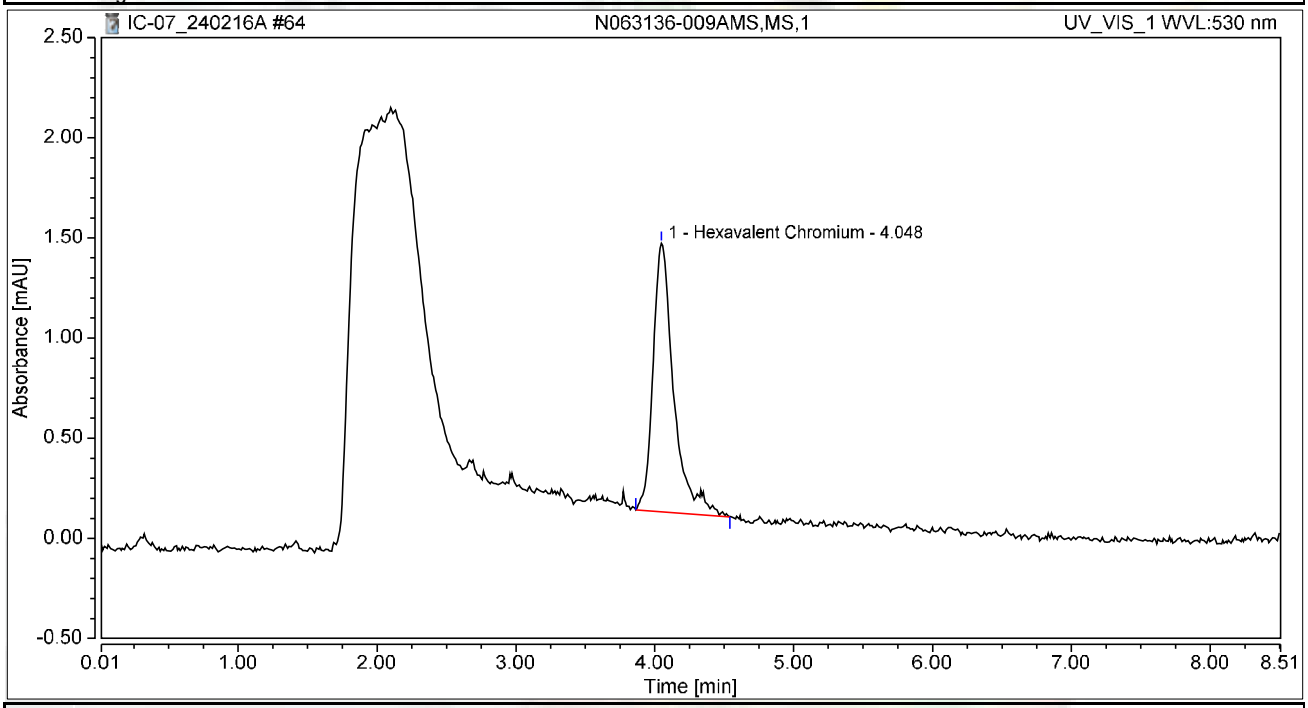
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-009AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 18:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

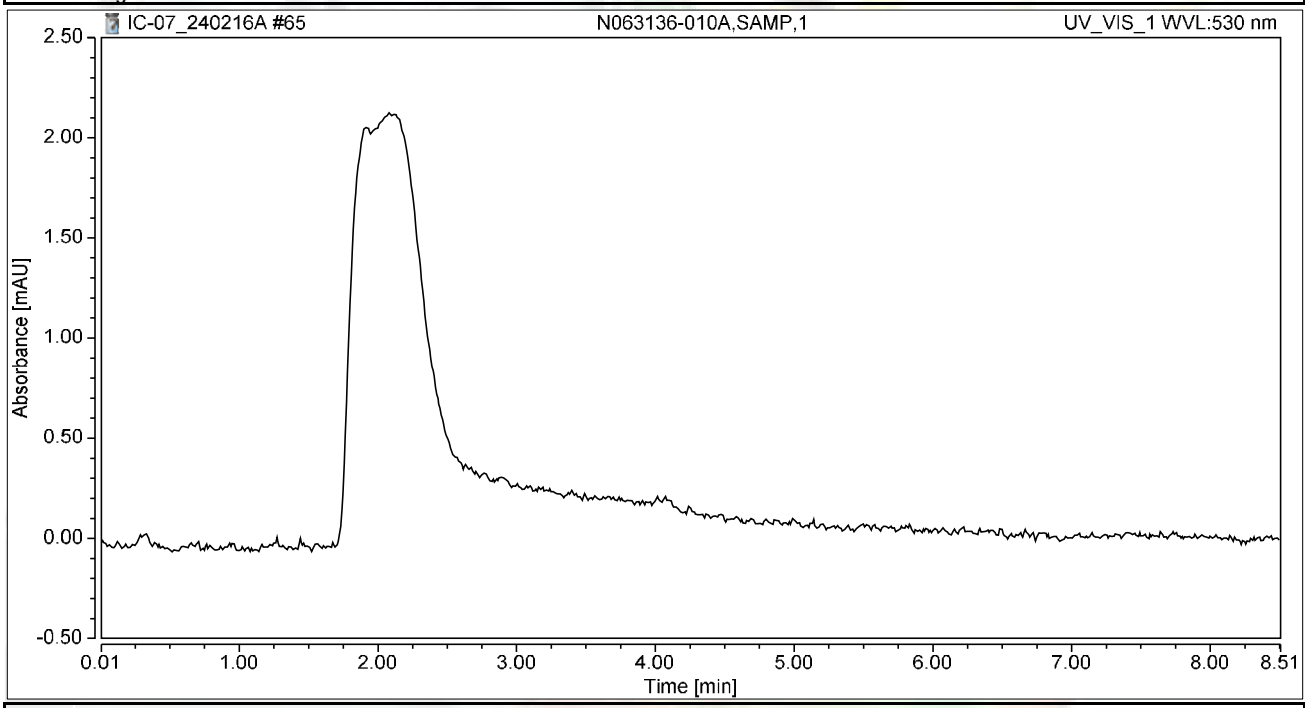
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.232	1.340	100.00	100.00	1.0770
Total:			**0.232**	**1.340**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-010A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 18:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

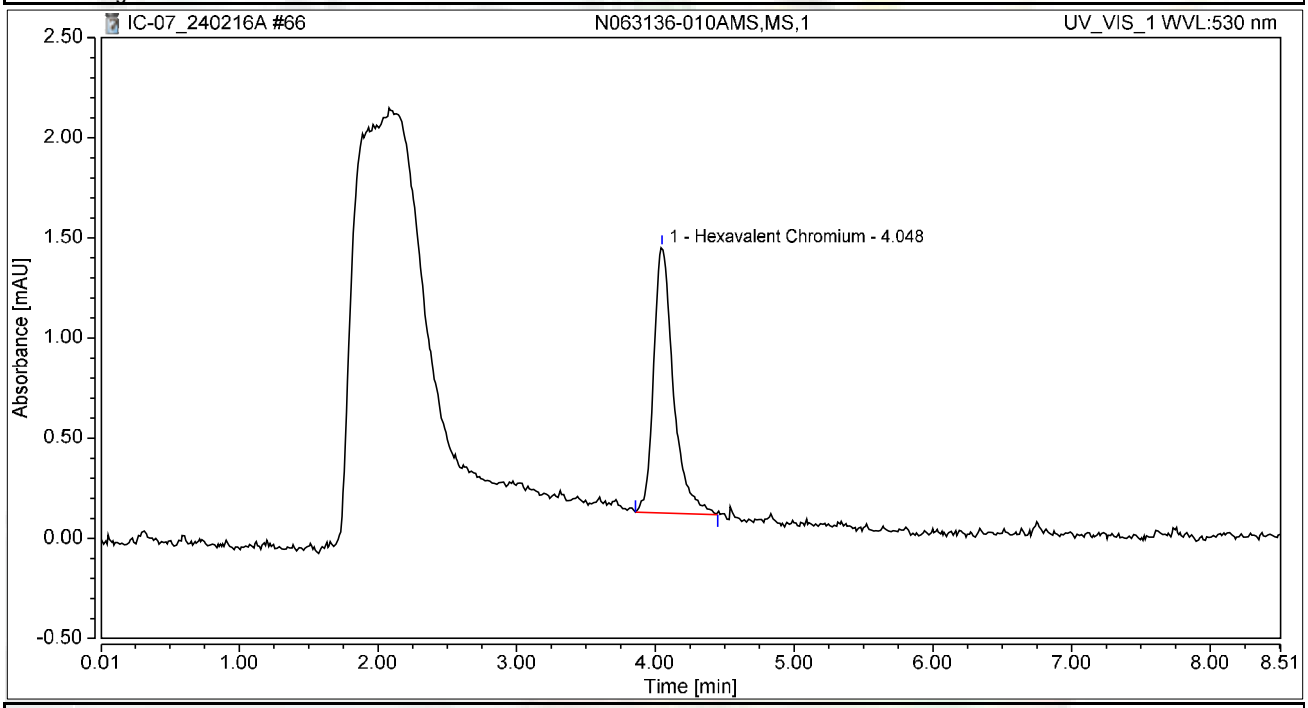
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-010AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 18:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

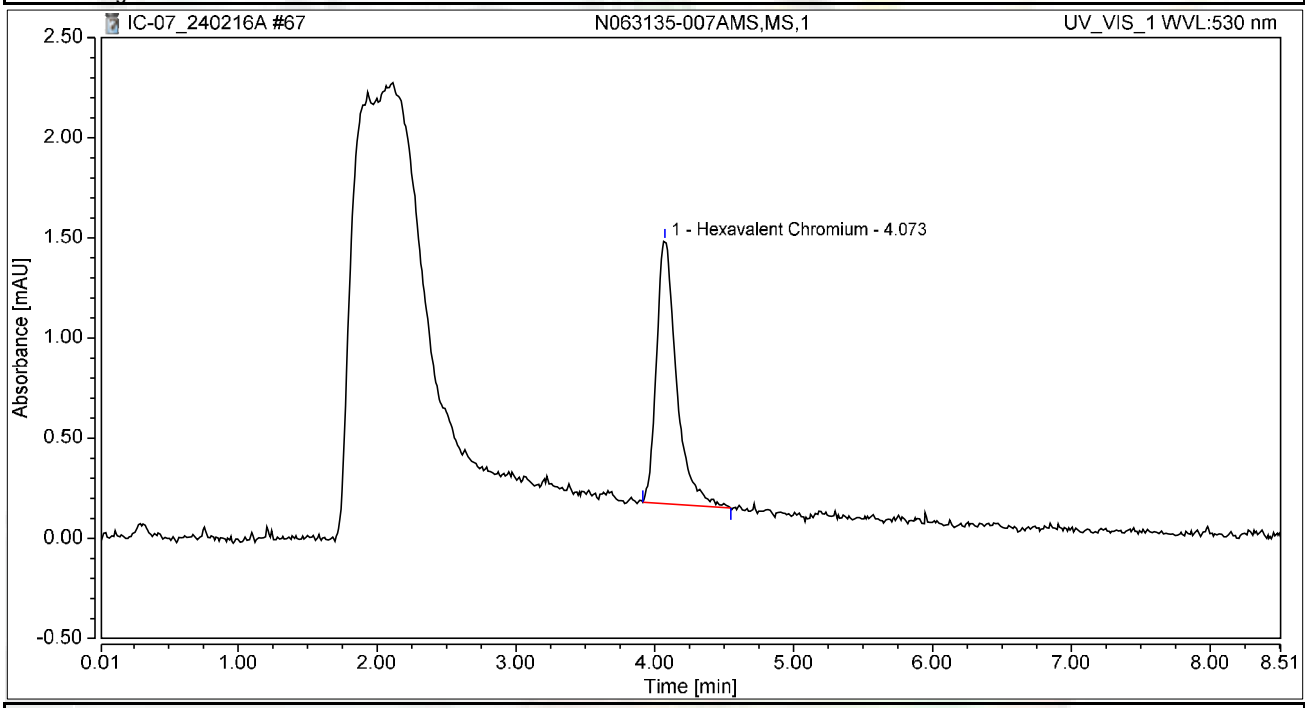
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.219	1.325	100.00	100.00	1.0189
Total:			**0.219**	**1.325**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-007AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 18:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

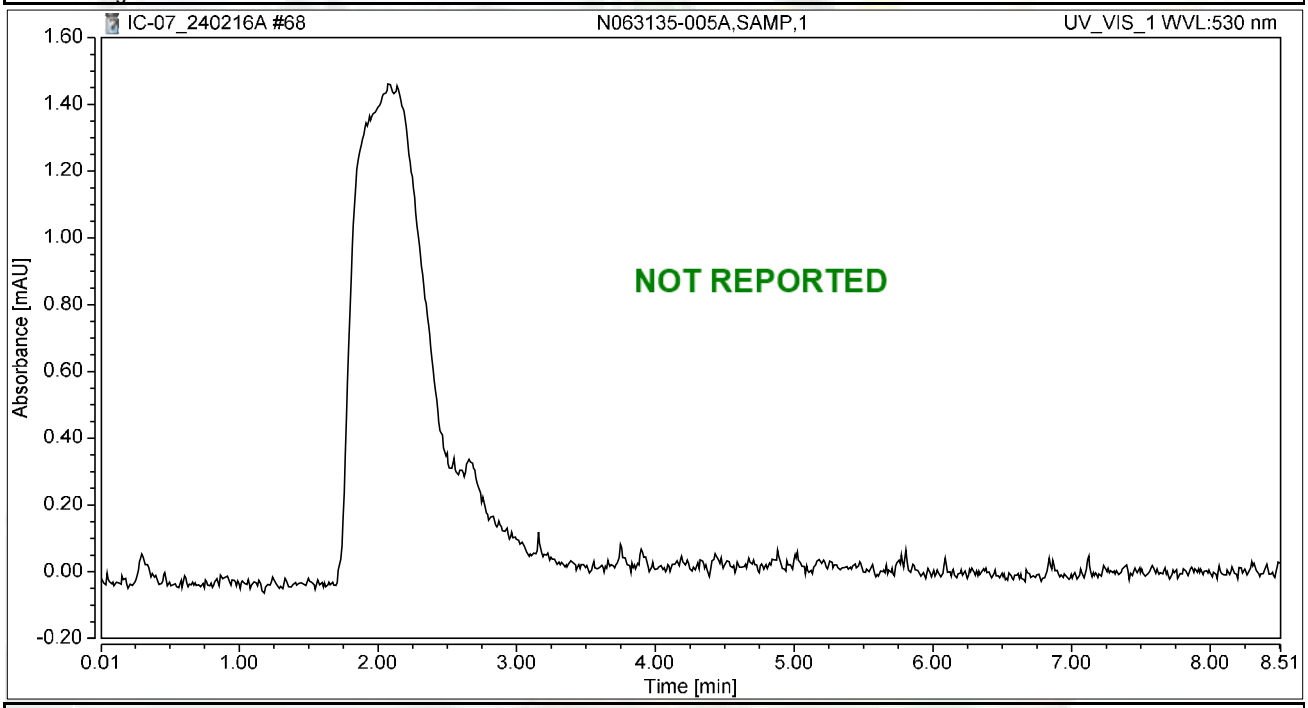
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.073	0.220	1.313	100.00	100.00	1.0246
Total:			**0.220**	**1.313**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 18:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

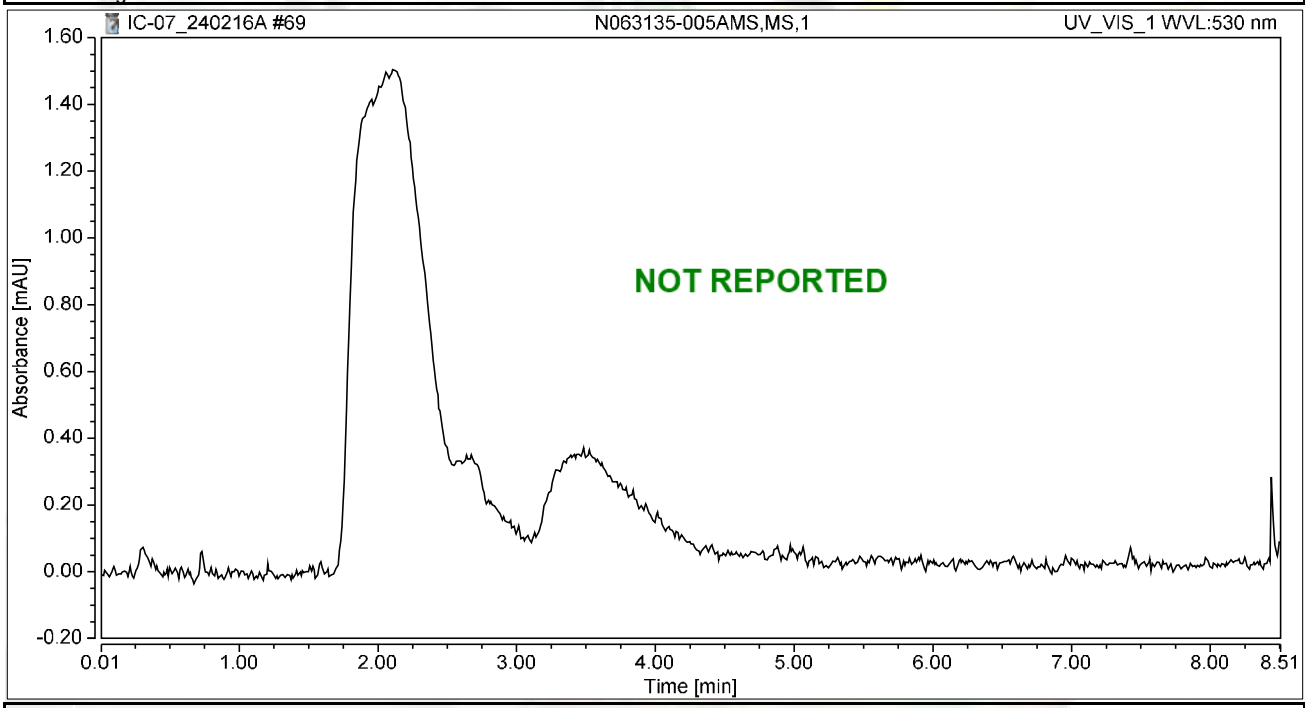
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 18:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

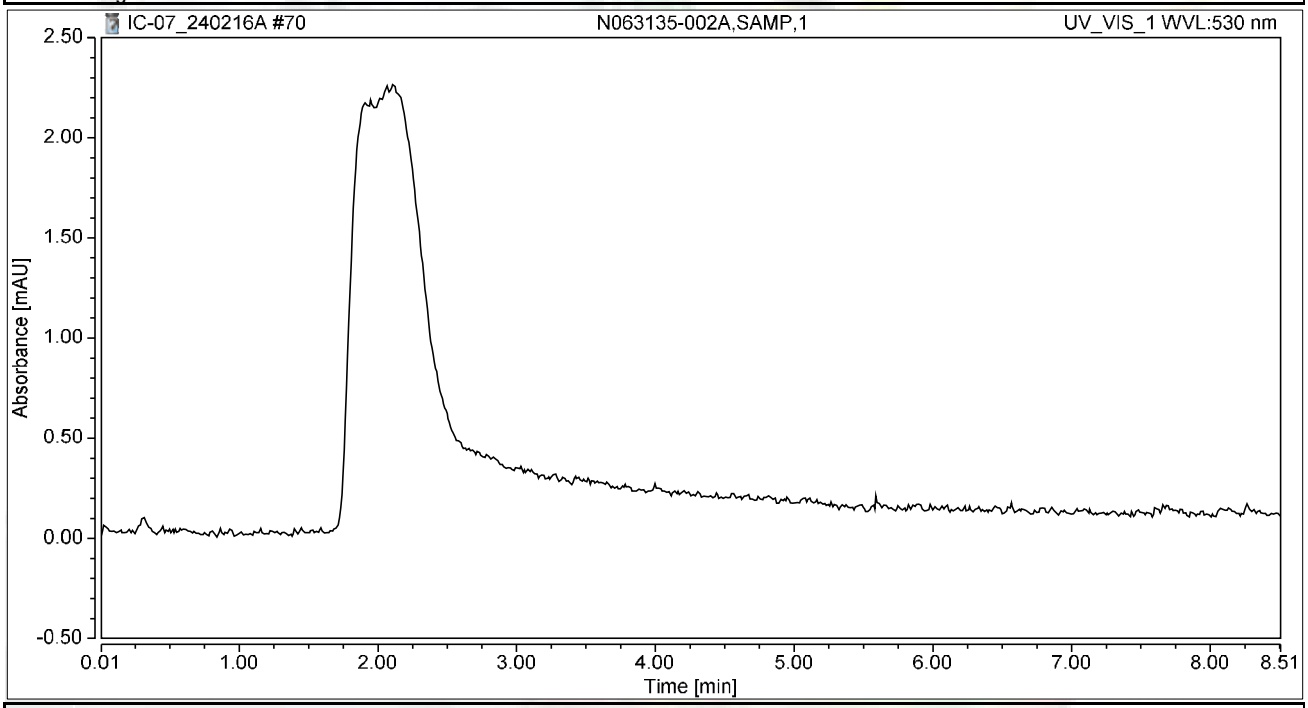
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 19:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

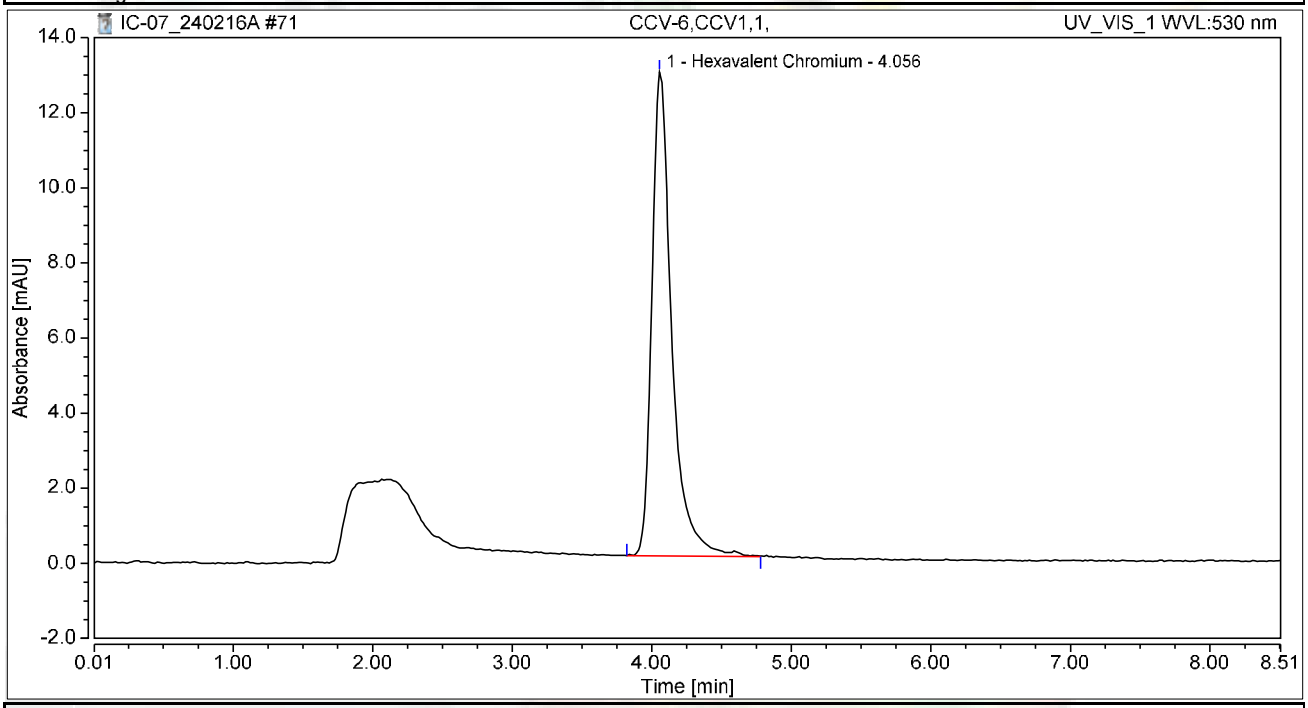
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 19:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

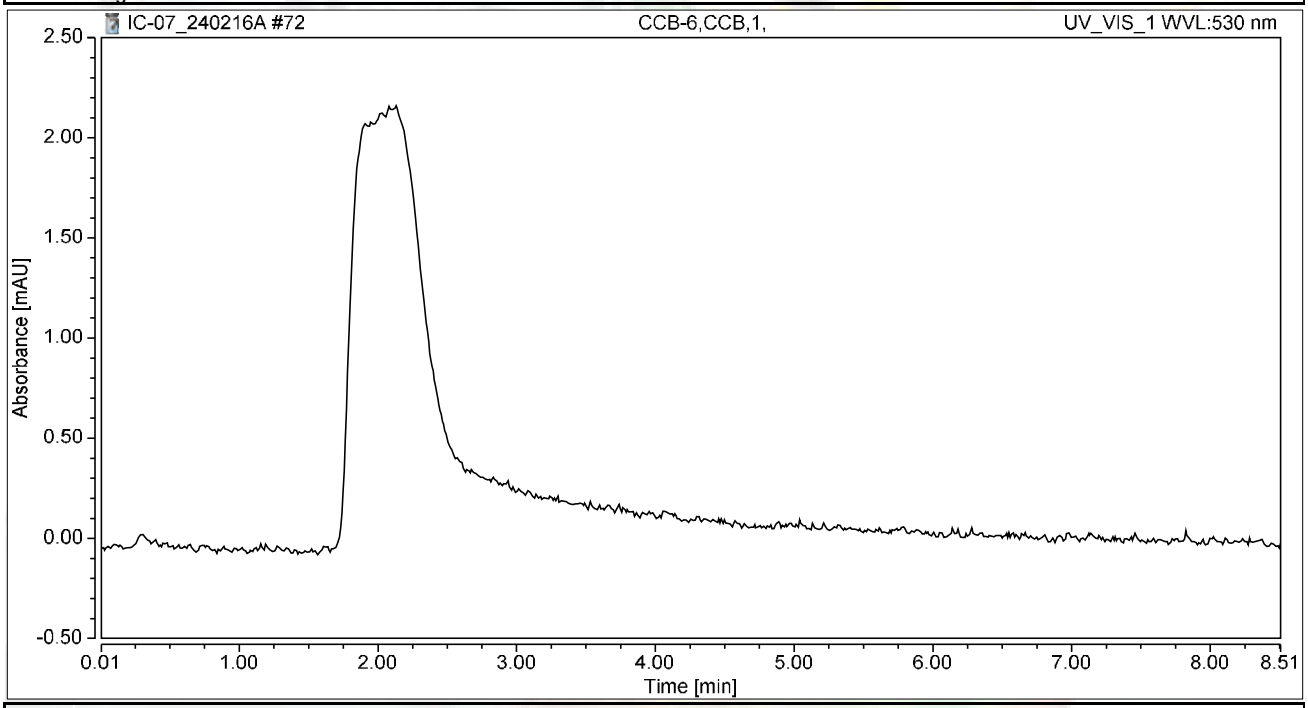
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	2.132	12.881	100.00	100.00	9.9123
Total:			**2.132**	**12.881**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 19:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

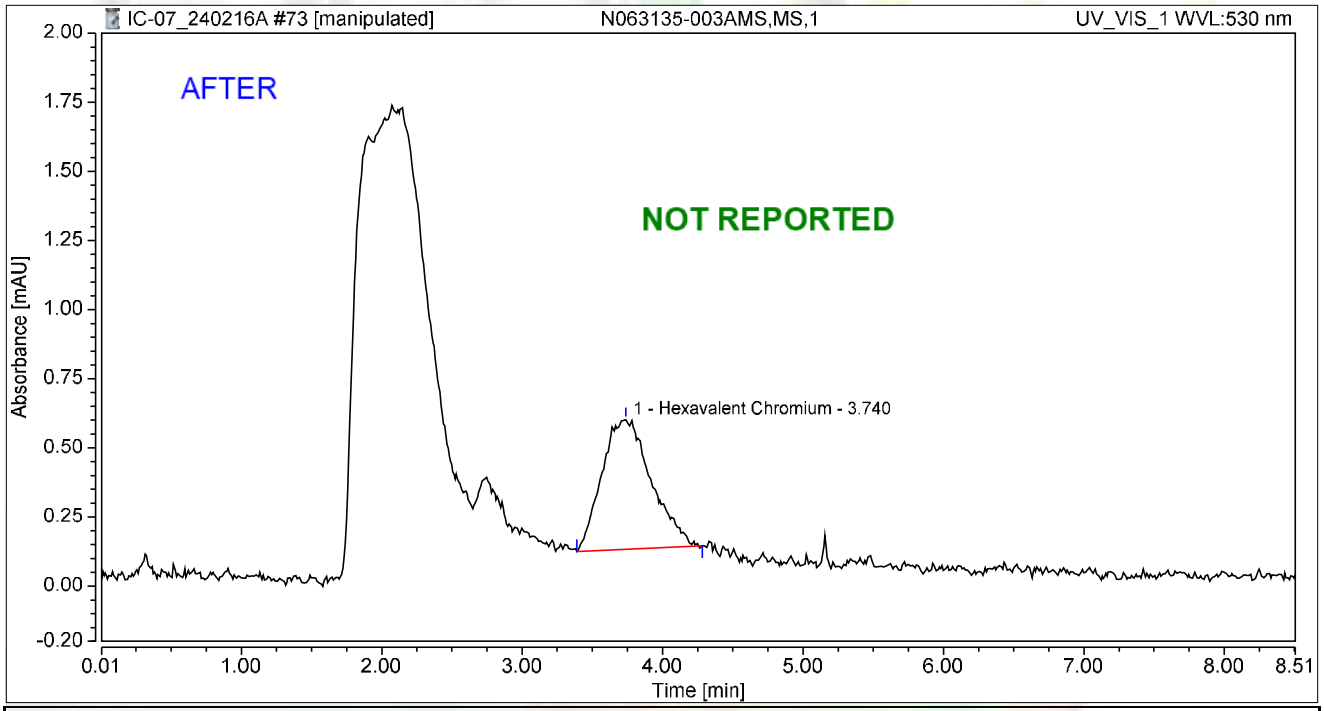
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 19:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

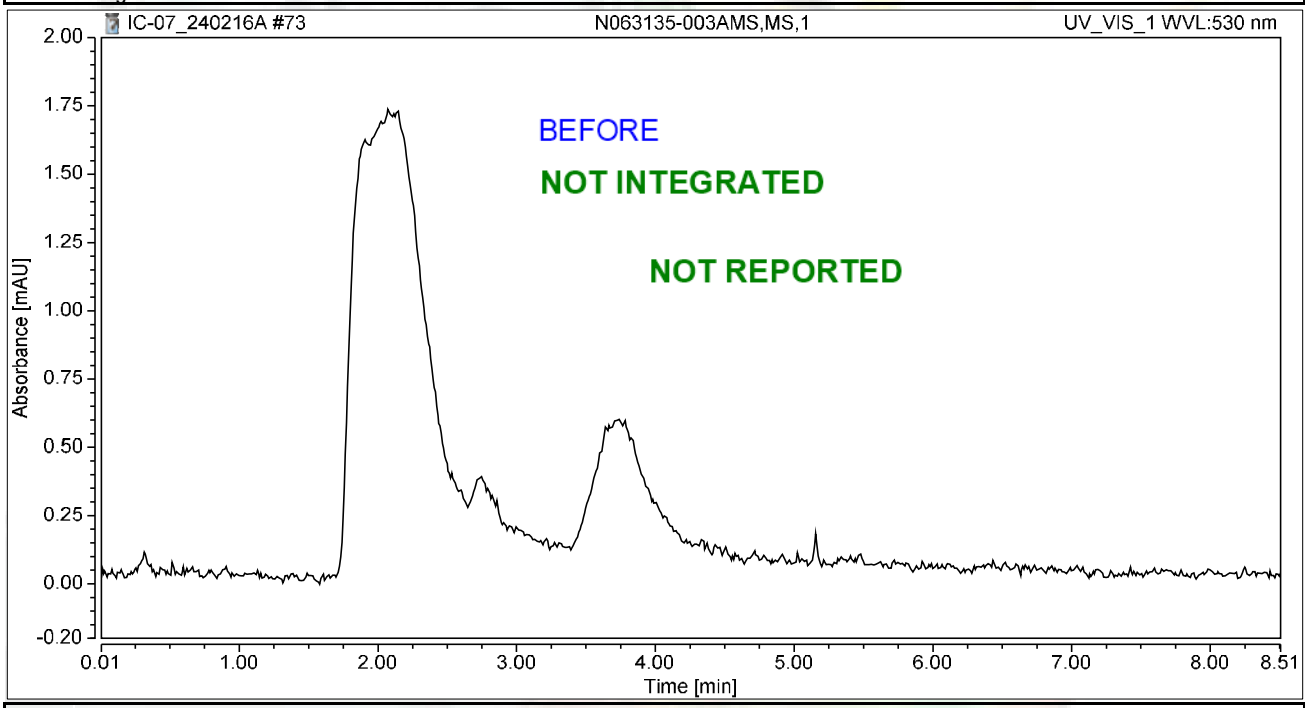
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.740	0.192	0.470	100.00	100.00	0.8920
Total:			**0.192**	**0.470**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063135-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 19:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

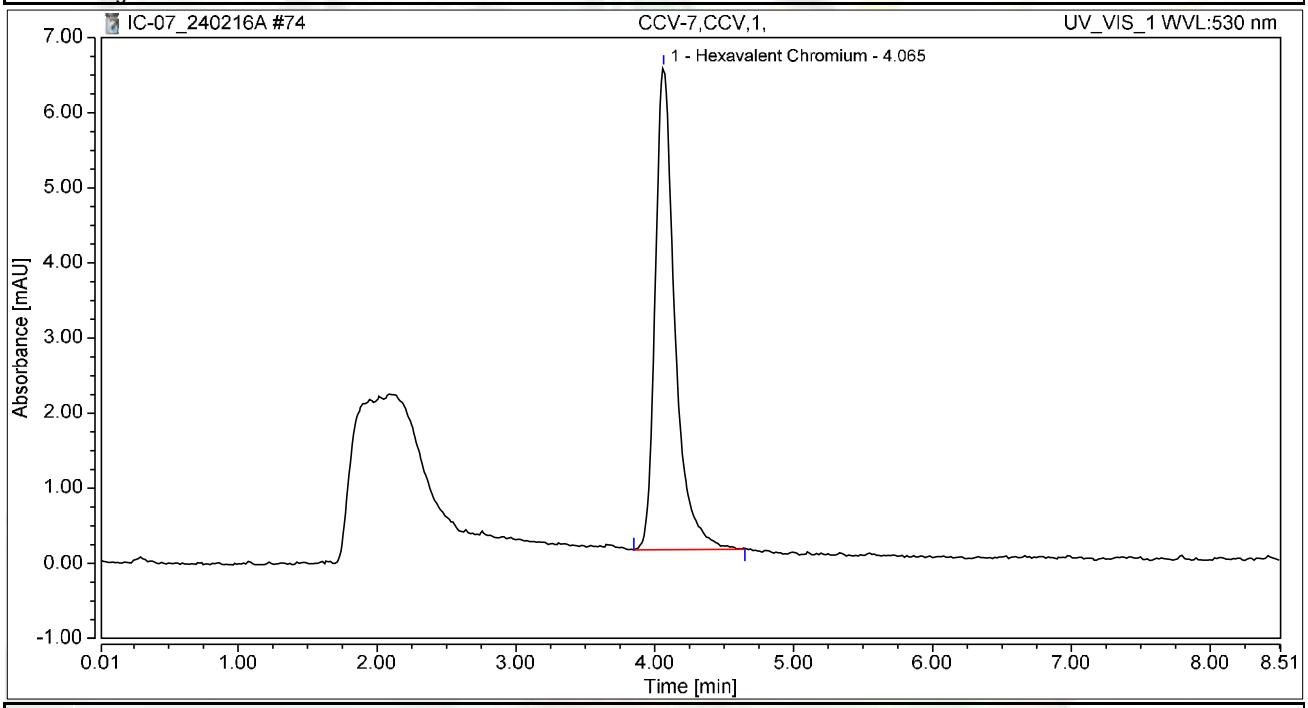
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 19:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

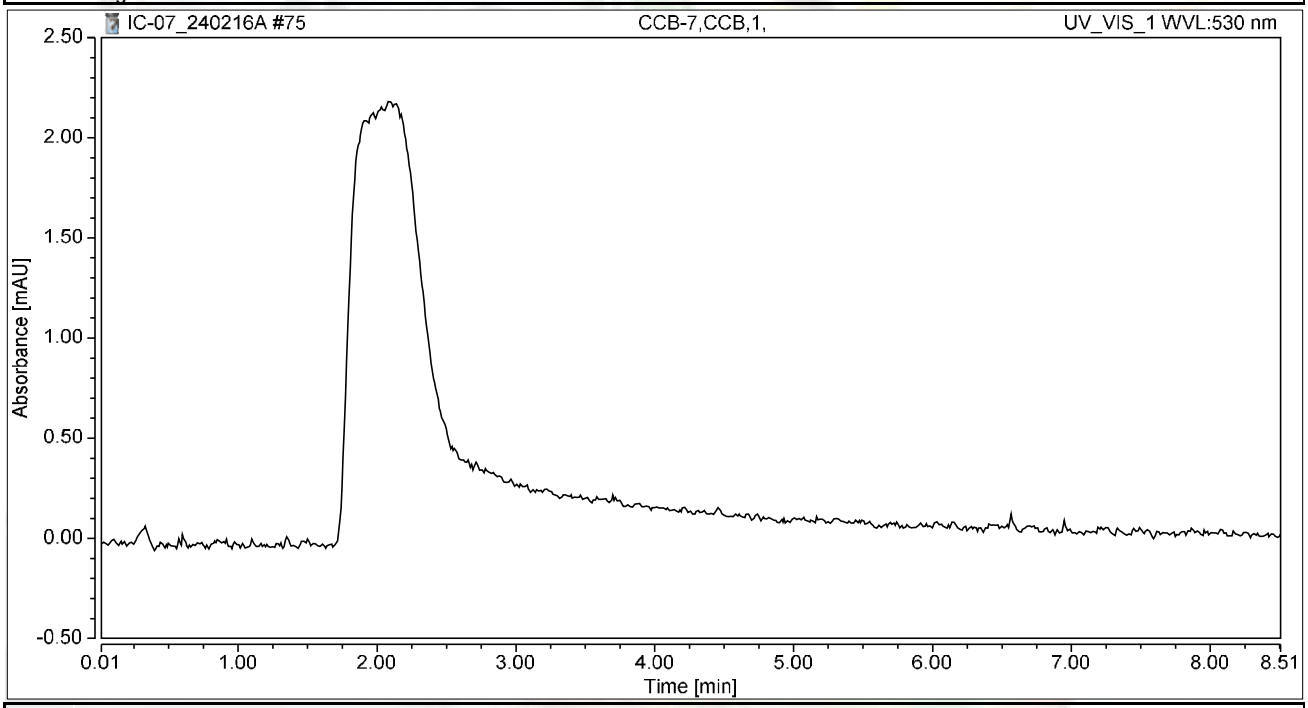
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	1.055	6.425	100.00	100.00	4.9048
Total:			**1.055**	**6.425**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 19:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

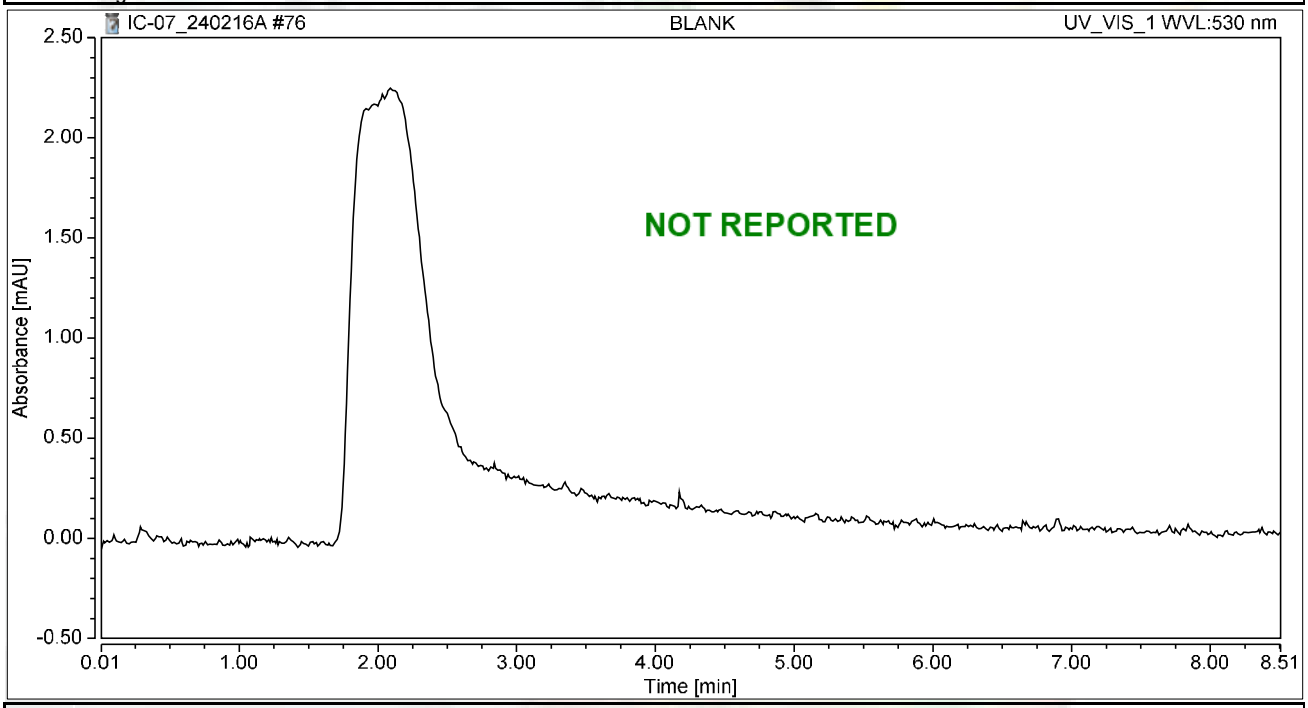
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**16/Feb/24 20:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240217A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/17/24 10:30 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/17/24 10:44 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/17/24 10:53 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/17/24 11:03 AM	Reported
13	MB-R182650	MBLK	1	Hexavalent Chromium	02/17/24 11:12 AM	Reported
14	LCS-R182650	LCS	1	Hexavalent Chromium	02/17/24 11:22 AM	Reported
15	MB-106824	MBLK	1	Hexavalent Chromium	02/17/24 11:31 AM	Reported
16	N063051-001B	SAMP	1	Hexavalent Chromium	02/17/24 11:41 AM	Reported
17	N063051-001BREP	DUP	1	Hexavalent Chromium	02/17/24 11:50 AM	Reported
18	N063051-002B	SAMP	1	Hexavalent Chromium	02/17/24 12:00 PM	Reported
19	N063051-002BREP	DUP	1	Hexavalent Chromium	02/17/24 12:09 PM	Reported
20	N063051-001BMS	MS	1	Hexavalent Chromium	02/17/24 12:19 PM	Reported
21	N063051-001BMSD	MSD	1	Hexavalent Chromium	02/17/24 12:28 PM	Not Reported
22	N06153-001A	SAMP	5	Hexavalent Chromium	02/17/24 12:37 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/17/24 12:46 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/17/24 12:56 PM	Reported
25	N063051-001BMSD	MSD	1	Hexavalent Chromium	02/17/24 1:05 PM	Reported
26	N063153-002A	SAMP	5	Hexavalent Chromium	02/17/24 1:14 PM	Reported
27	N063153-002AMS	MS	5	Hexavalent Chromium	02/17/24 1:24 PM	Reported
28	N063153-004A	SAMP	20	Hexavalent Chromium	02/17/24 1:33 PM	Not Reported
29	N063153-004AMS	MS	20	Hexavalent Chromium	02/17/24 1:43 PM	Not Reported
30	N063153-005A	SAMP	50	Hexavalent Chromium	02/17/24 1:52 PM	Not Reported
31	N063153-005AMS	MS	50	Hexavalent Chromium	02/17/24 2:02 PM	Not Reported
32	N063153-003A	SAMP	1	Hexavalent Chromium	02/17/24 2:11 PM	Reported
33	N063153-003AMS	MS	1	Hexavalent Chromium	02/17/24 2:21 PM	Reported
34	N063153-006A	SAMP	1	Hexavalent Chromium	02/17/24 2:30 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/17/24 2:40 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/17/24 2:49 PM	Reported
37	N063153-006AMS	MS	1	Hexavalent Chromium	02/17/24 2:59 PM	Reported
38	N063136-011A	SAMP	1	Hexavalent Chromium	02/17/24 3:08 PM	Reported
39	N063136-011AMS	MS	1	Hexavalent Chromium	02/17/24 3:18 PM	Reported
40	N063136-012A	SAMP	1	Hexavalent Chromium	02/17/24 3:27 PM	Reported
41	N063136-012AMS	MS	1	Hexavalent Chromium	02/17/24 3:36 PM	Reported
42	N063136-013A	SAMP	1	Hexavalent Chromium	02/17/24 3:46 PM	Reported

INJECTION LOG: 240217A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063136-013AMS	MS	1	Hexavalent Chromium	02/17/24 3:55 PM	Reported
44	N063136-014A	SAMP	1	Hexavalent Chromium	02/17/24 4:05 PM	Reported
45	N063136-014AMS	MS	1	Hexavalent Chromium	02/17/24 4:14 PM	Reported
46	N063153-005A	SAMP	1	Hexavalent Chromium	02/17/24 4:24 PM	Not Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/17/24 4:33 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/17/24 4:43 PM	Reported
49	N063153-005AMS	MS	1	Hexavalent Chromium	02/17/24 4:52 PM	Not Reported
50	N063153-005A	SAMP	5	Hexavalent Chromium	02/17/24 5:02 PM	Not Reported
51	N063153-005AMS	MS	5	Hexavalent Chromium	02/17/24 5:11 PM	Not Reported
52	N063153-001AMS	MS	5	Hexavalent Chromium	02/17/24 5:20 PM	Reported
53	CCV-5	CCV	1	Hexavalent Chromium	02/17/24 5:30 PM	Reported
54	CCB-5	CCB	1	Hexavalent Chromium	02/17/24 5:39 PM	Reported
55	BLANK	BLANK	1	Hexavalent Chromium	02/17/24 5:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240217A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**19/Feb/24 11:31:47**
No. of Injections:	**58**	*Updated By:*	**ics 5000**

Injection Details

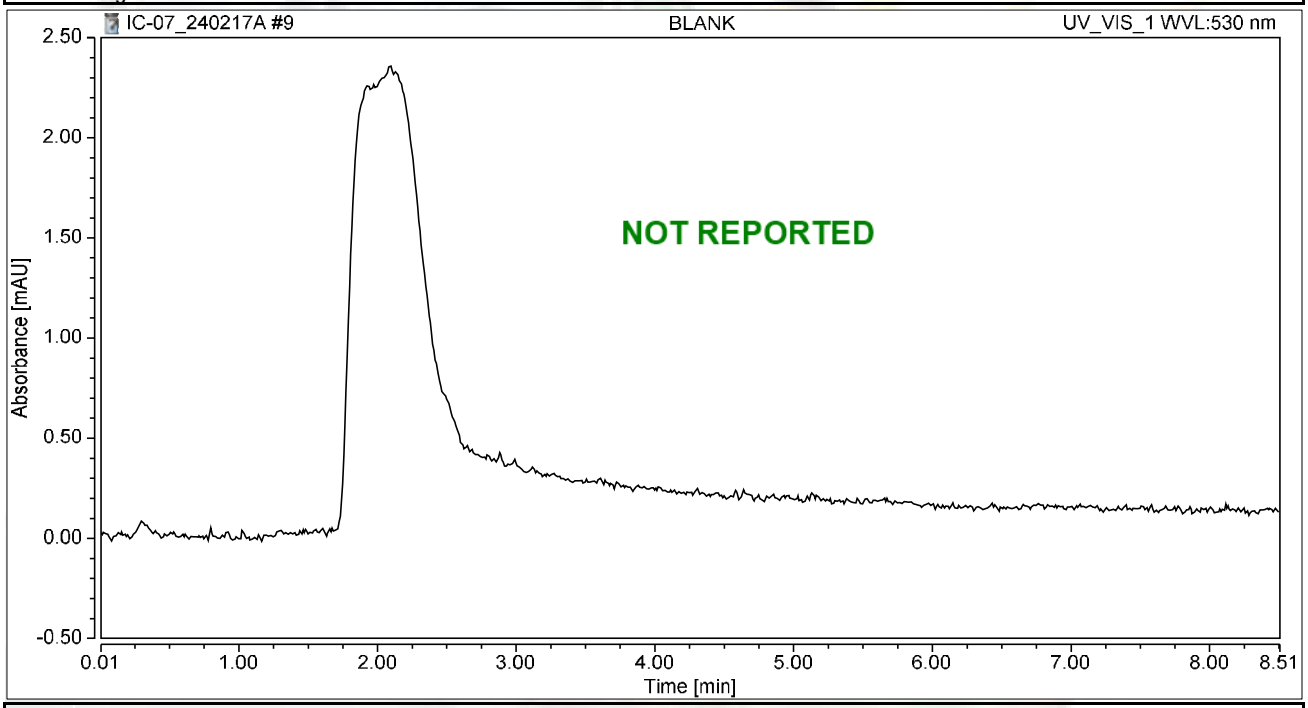
No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/17/2024 10:30	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/17/2024 10:44	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/17/2024 10:53	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/17/2024 11:03	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/17/2024 11:12	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/17/2024 11:22	Finished	LCS @5ppb, IWST-231228B
15	MB-106824,MBLK,1,	7	1000	Unknown		02/17/2024 11:31	Finished	MB STLC
16	N063051-001B,SAMP	8	1000	Unknown		02/17/2024 11:41	Finished	SAMP,10 mL
17	N063051-001BREP,D	9	1000	Unknown		02/17/2024 11:50	Finished	REP,10 mL
18	N063051-002B,SAMP	10	1000	Unknown		02/17/2024 12:00	Finished	SAMP,10 mL
19	N063051-002BREP,D	11	1000	Unknown		02/17/2024 12:09	Finished	REP,10 mL
20	N063051-001BMS,MS	12	1000	Unknown		02/17/2024 12:19	Finished	MS (1ppb), IWST-231228B,10r
21	N063051-001BMSD,M	13	1000	Unknown		02/17/2024 12:28	Finished	MSD (1ppb), IWST-231228B,1(
22	N06153-001A,SAMP,	14	1000	Unknown		02/17/2024 12:37	Finished	SAMP,2>10 mL
23	CCV-2,CCV1,1,	15	1000	Unknown		02/17/2024 12:46	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		02/17/2024 12:56	Finished	CCB R240129C
25	N063051-001BMSD,M	17	1000	Unknown		02/17/2024 13:05	Finished	MSD (1ppb), IWST-231228B,1(
26	N063153-002A,SAMP	18	1000	Unknown		02/17/2024 13:14	Finished	SAMP,2>10 mL
27	N063153-002AMS,MS	19	1000	Unknown		02/17/2024 13:24	Finished	MS (5ppb), IWST-231228B,2>1
28	N063153-004A,SAMP	20	1000	Unknown		02/17/2024 13:33	Finished	SAMP,0.5>10 mL
29	N063153-004AMS,MS	21	1000	Unknown		02/17/2024 13:43	Finished	MS (5ppb), IWST-231228B,0.5
30	N063153-005A,SAMP	22	1000	Unknown		02/17/2024 13:52	Finished	SAMP,0.2>10 mL
31	N063153-005AMS,MS	23	1000	Unknown		02/17/2024 14:02	Finished	MS (5ppb), IWST-231228B,0.2
32	N063153-003A,SAMP	24	1000	Unknown		02/17/2024 14:11	Finished	SAMP,10 mL
33	N063153-003AMS,MS	25	1000	Unknown		02/17/2024 14:21	Finished	MS (1ppb), IWST-231228B,10r
34	N063153-006A,SAMP	26	1000	Unknown		02/17/2024 14:30	Finished	SAMP,10 mL
35	CCV-3,CCV,1,	27	1000	Unknown		02/17/2024 14:40	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	28	1000	Unknown		02/17/2024 14:49	Finished	CCB R240129C
37	N063153-006AMS,MS	29	1000	Unknown		02/17/2024 14:59	Finished	MS (1ppb), IWST-231228B,10r
38	N063136-011A,SAMP	30	1000	Unknown		02/17/2024 15:08	Finished	SAMP,10 mL
39	N063136-011AMS,MS	31	1000	Unknown		02/17/2024 15:18	Finished	MS (1ppb), IWST-231228B,10r
40	N063136-012A,SAMP	32	1000	Unknown		02/17/2024 15:27	Finished	SAMP,10 mL
41	N063136-012AMS,MS	33	1000	Unknown		02/17/2024 15:36	Finished	MS (1ppb), IWST-231228B,10r
42	N063136-013A,SAMP	34	1000	Unknown		02/17/2024 15:46	Finished	SAMP,10 mL
43	N063136-013AMS,MS	35	1000	Unknown		02/17/2024 15:55	Finished	MS (1ppb), IWST-231228B,10r
44	N063136-014A,SAMP	36	1000	Unknown		02/17/2024 16:05	Finished	SAMP,10 mL
45	N063136-014AMS,MS	37	1000	Unknown		02/17/2024 16:14	Finished	MS (1ppb), IWST-231228B,10r
46	N063153-005A,SAMP	38	1000	Unknown		02/17/2024 16:24	Finished	SAMP,10 mL
47	CCV-4,CCV1,1,	39	1000	Unknown		02/17/2024 16:33	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	40	1000	Unknown		02/17/2024 16:43	Finished	CCB R240129C
49	N063153-005AMS,MS	41	1000	Unknown		02/17/2024 16:52	Finished	MS (1ppb), IWST-231228B,10r
50	N063153-005A,SAMP	42	1000	Unknown		02/17/2024 17:02	Finished	SAMP,2>10 mL
51	N063153-005AMS,MS	43	1000	Unknown		02/17/2024 17:11	Finished	MS (1ppb), IWST-231228B,2>1
52	N063153-001AMS,MS	44	1000	Unknown		02/17/2024 17:20	Finished	MS (5ppb), IWST-231228B,2>1
53	CCV-5,CCV,1,	45	1000	Unknown		02/17/2024 17:30	Finished	CCV @5ppb, IWST-231228A
54	CCB-5,CCB,1,	46	1000	Unknown		02/17/2024 17:39	Finished	CCB R240129C
55	BLANK	47	1000	Unknown		02/17/2024 17:49	Finished	BLANK
56	SHUTDOWN	48	1000	Unknown		02/17/2024 17:58	Finished	
57	Eluent: R240215A	49	1000	Unknown		n.a.	Finished	
58	PCR: R240215B	50	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 10:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

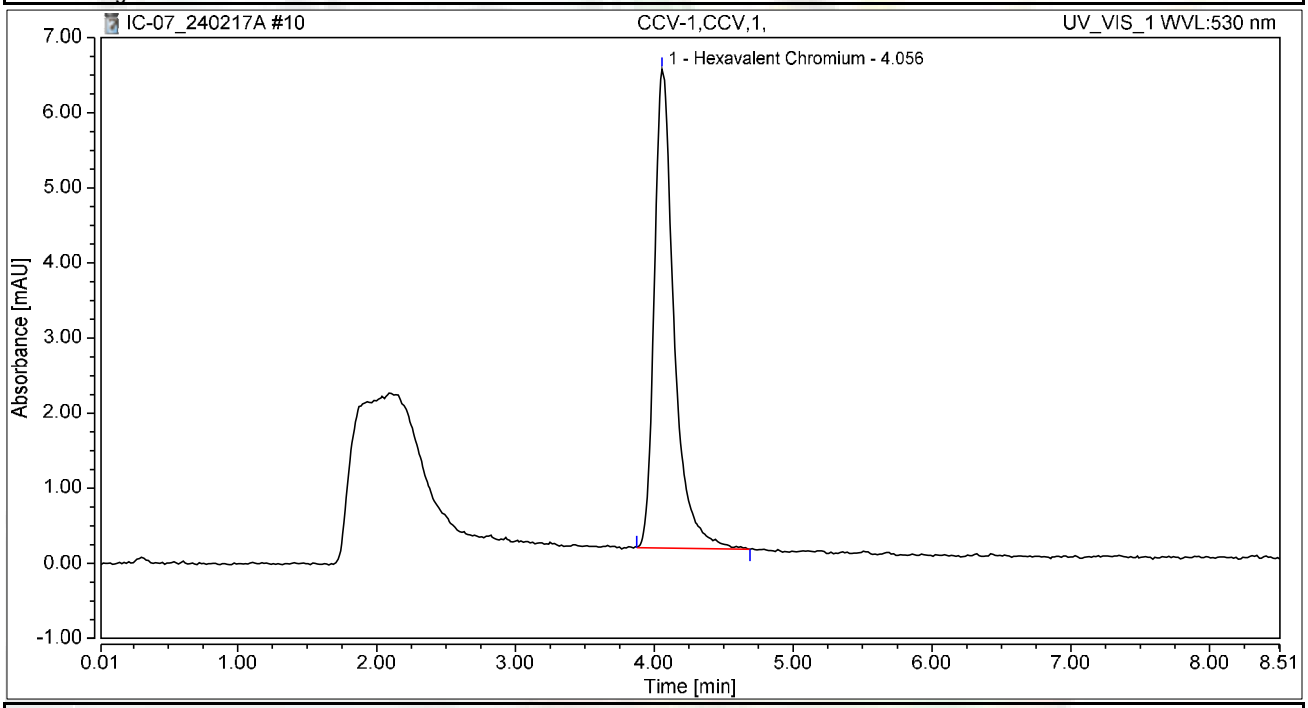
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 10:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.054	6.373	100.00	100.00	4.9014
Total:			**1.054**	**6.373**	**100.00**	**100.00**	

Reviewed by:

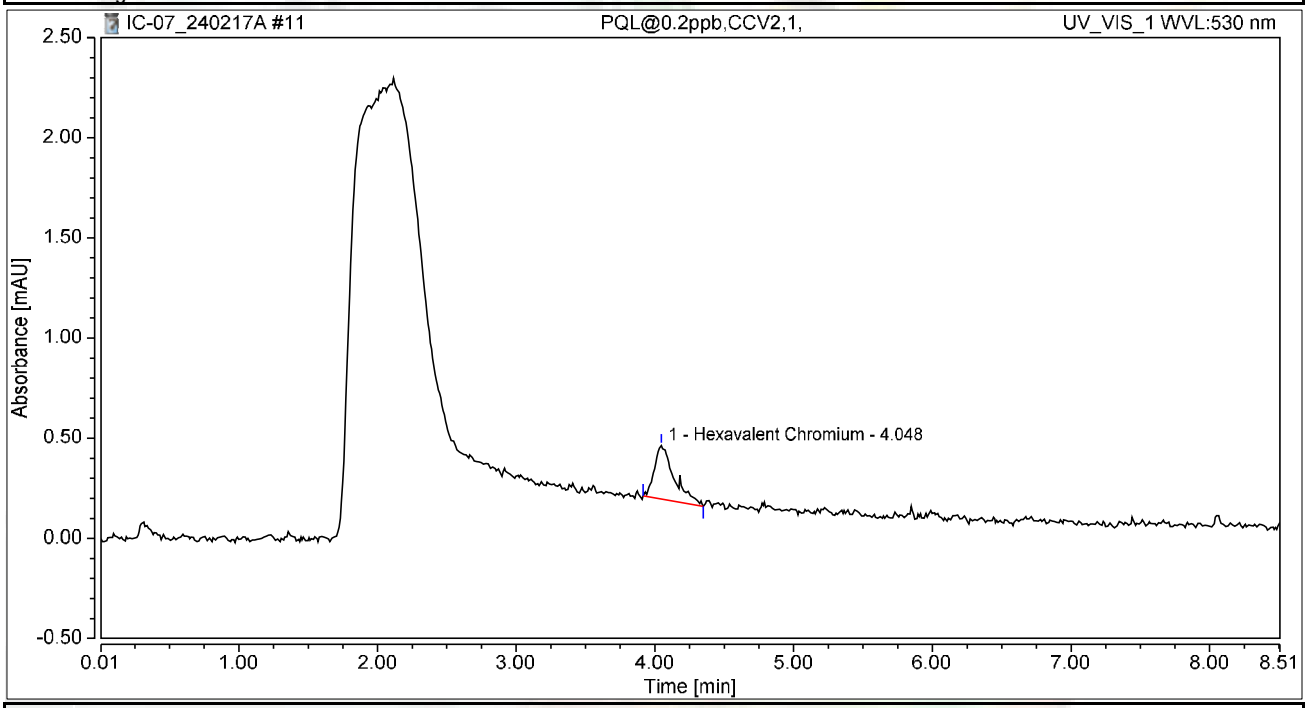
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 10:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

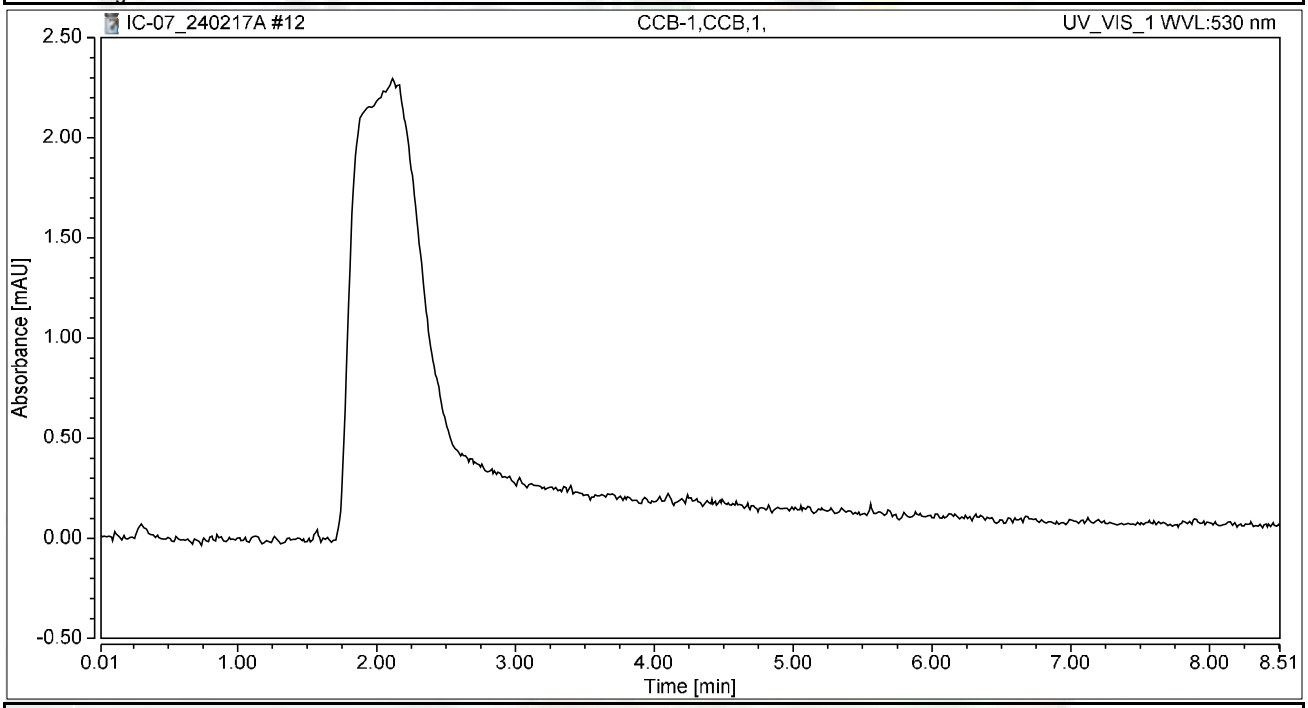
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.045	0.266	100.00	100.00	0.2081
Total:			**0.045**	**0.266**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 11:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

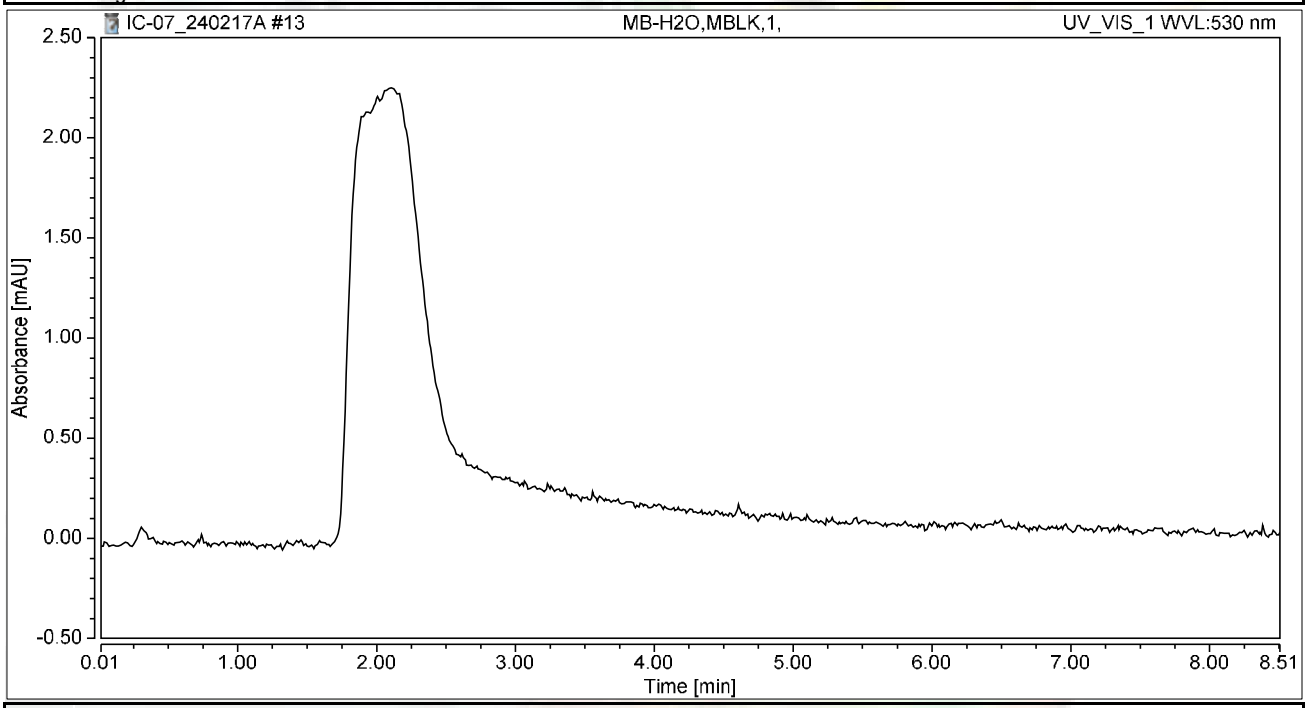
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 11:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

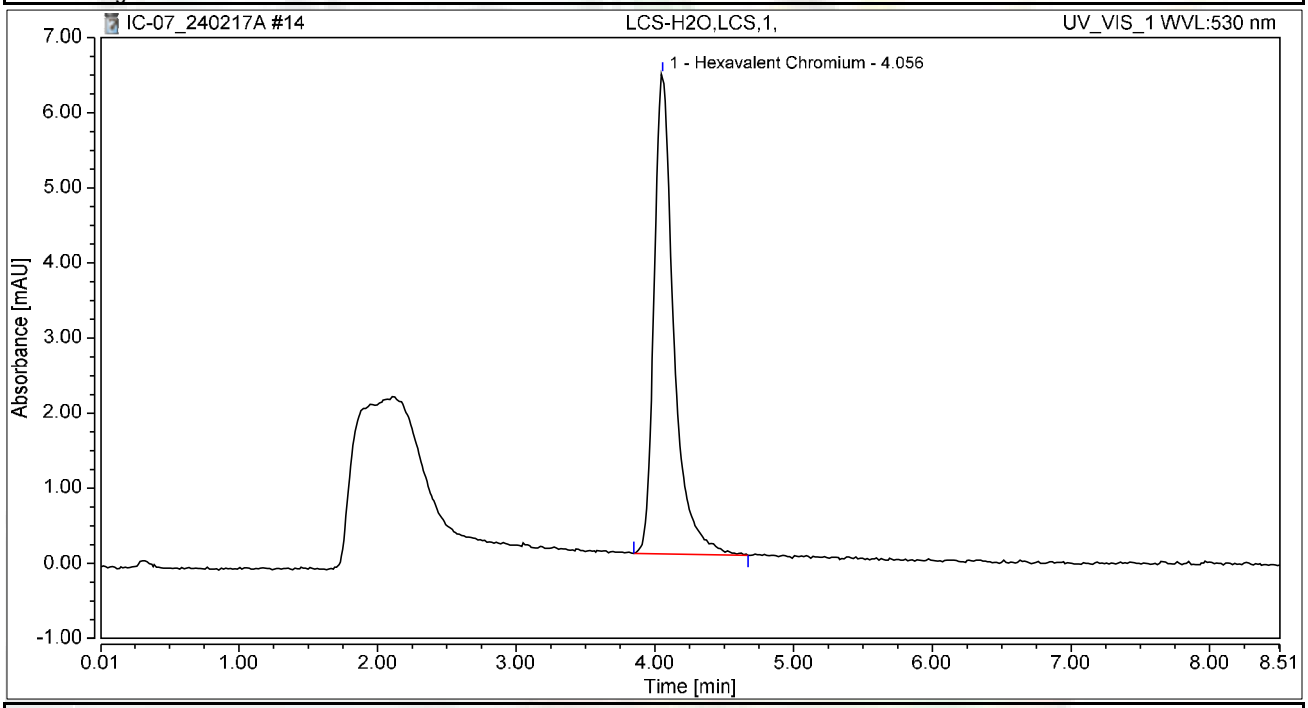
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 11:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

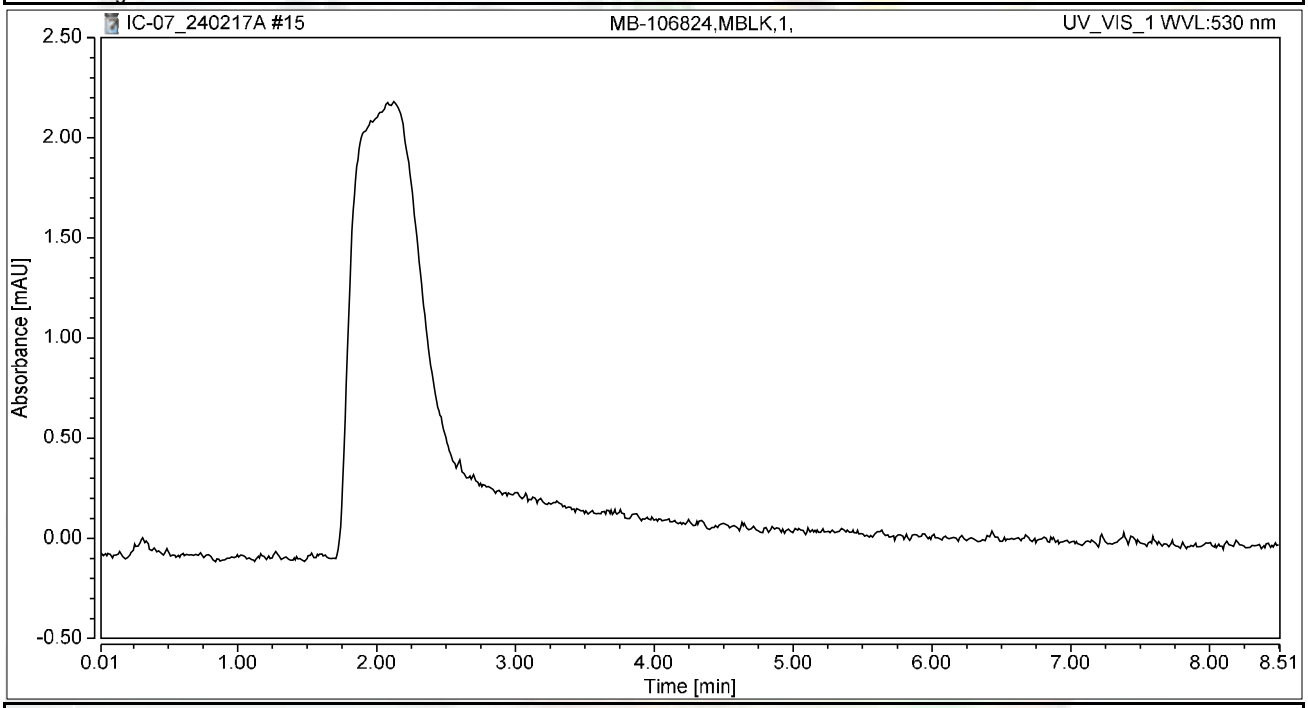
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.056	6.387	100.00	100.00	4.9076
Total:			**1.056**	**6.387**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-106824,MBLK,1,**	*Run Time (min):*	**8.49**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 11:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

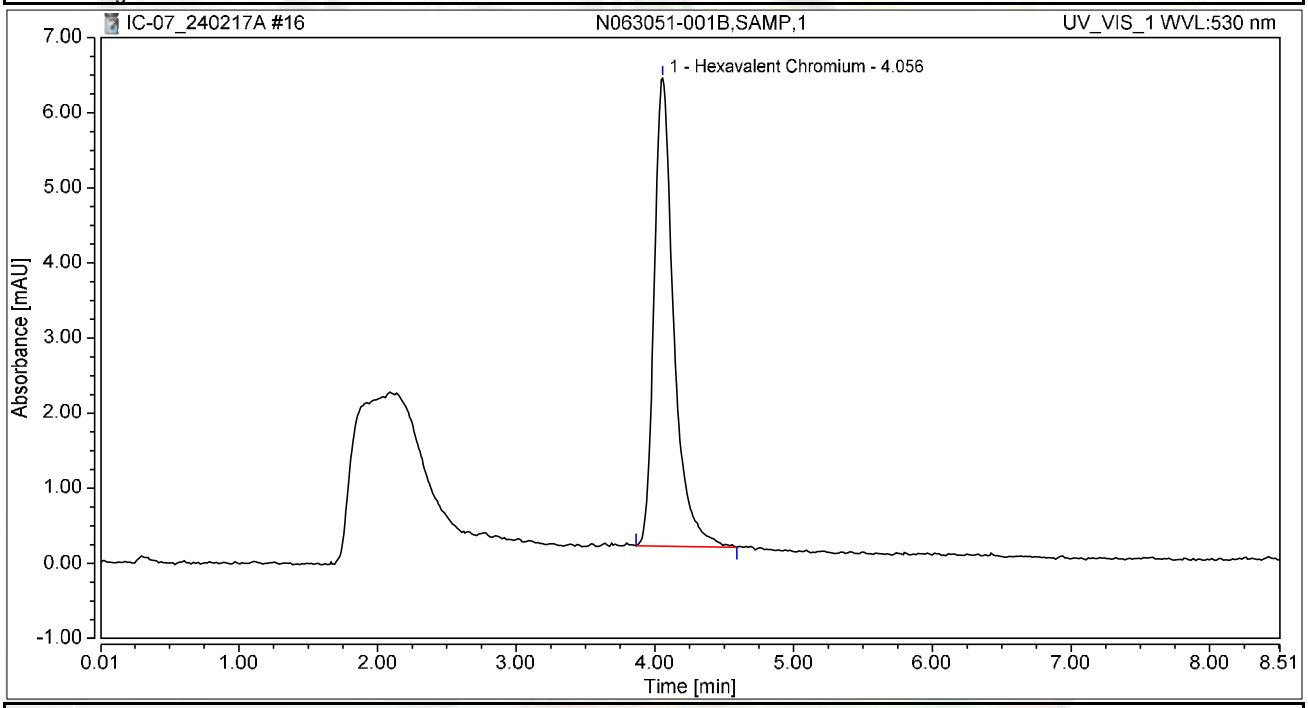
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063051-001B,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 11:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

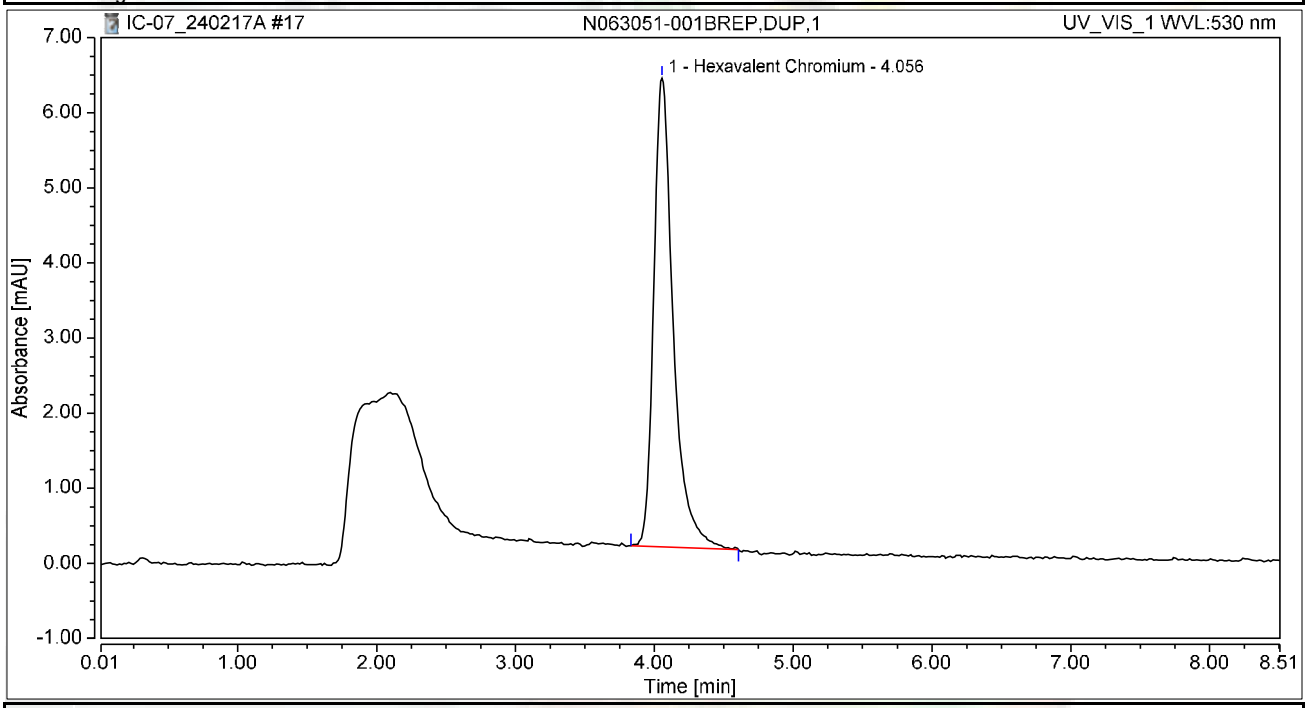
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.023	6.232	100.00	100.00	4.7553
Total:			**1.023**	**6.232**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063051-001BREP,DUP,1**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 11:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

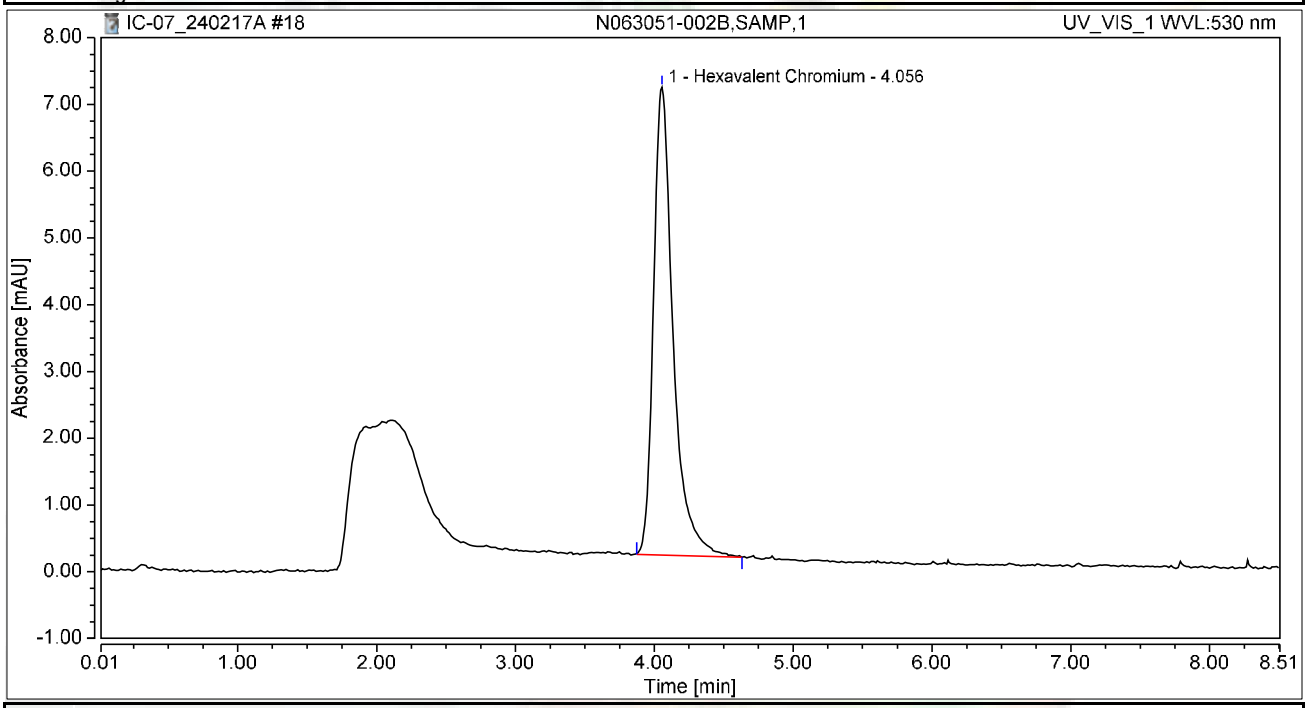
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.018	6.242	100.00	100.00	4.7343
Total:			**1.018**	**6.242**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063051-002B,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 12:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

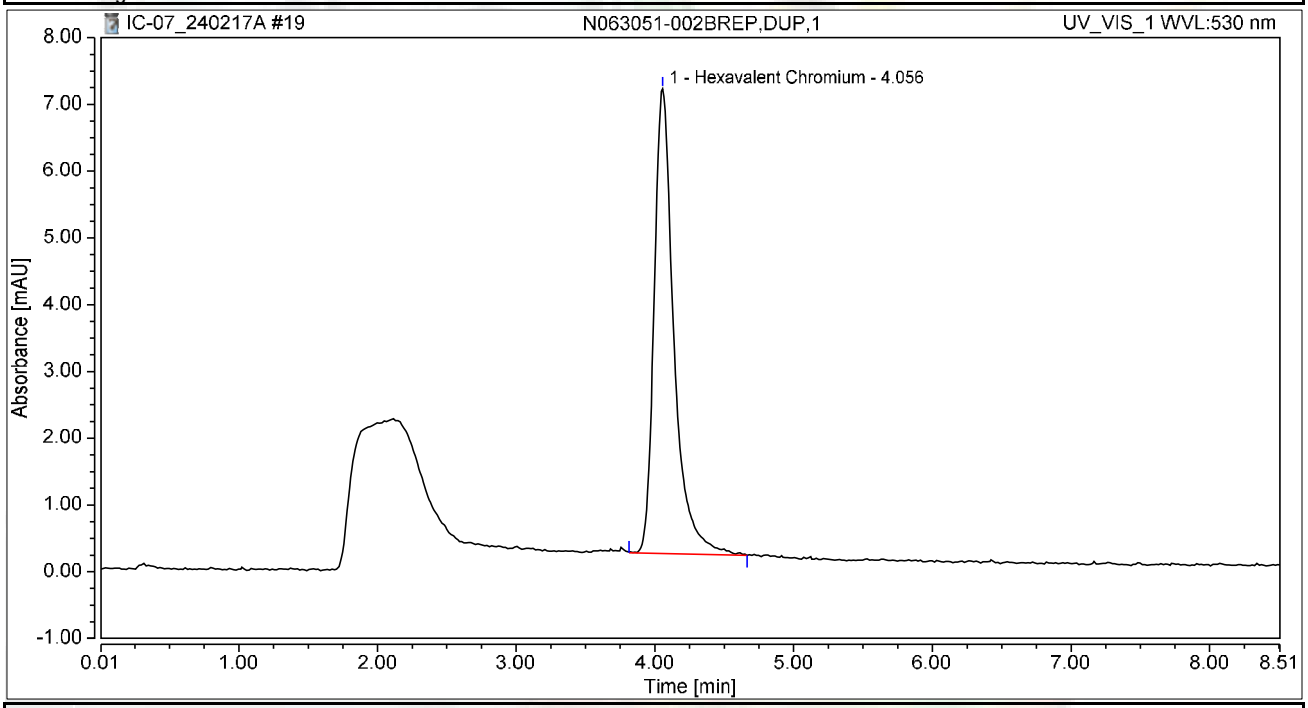
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.149	7.004	100.00	100.00	5.3413
Total:			**1.149**	**7.004**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063051-002BREP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

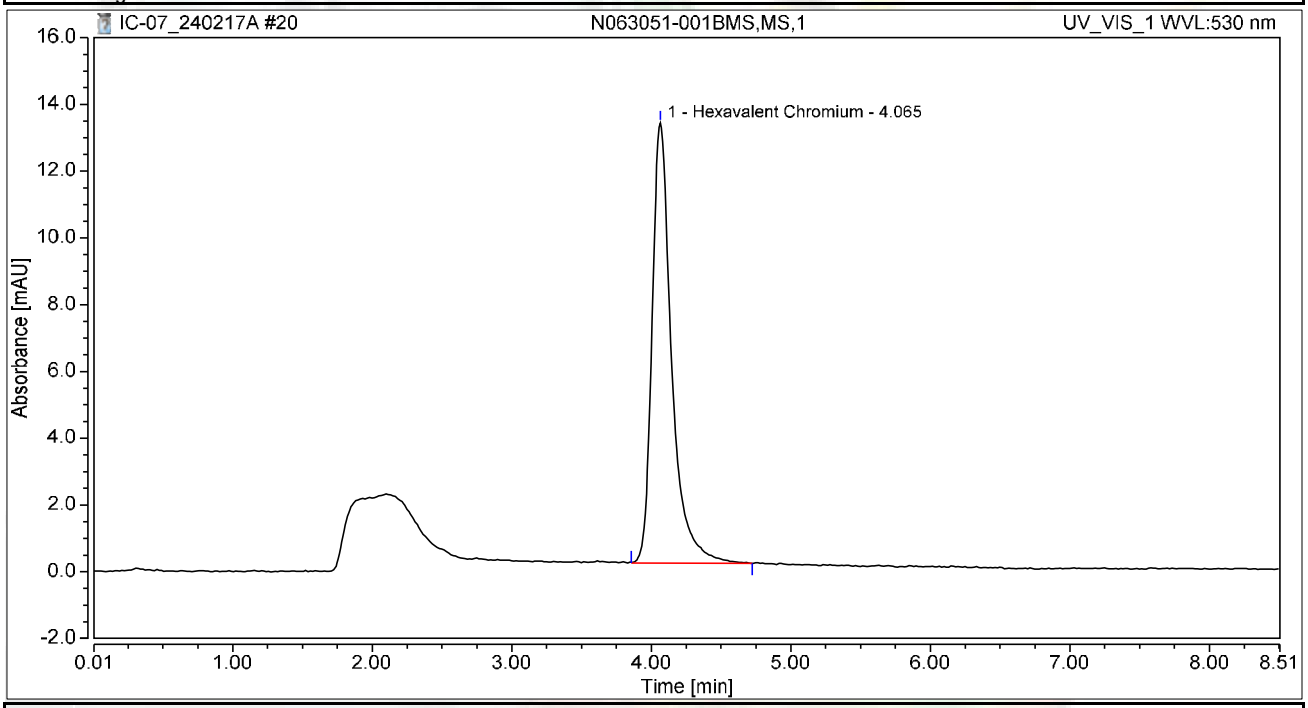
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.151	6.962	100.00	100.00	5.3511
Total:			**1.151**	**6.962**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063051-001BMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

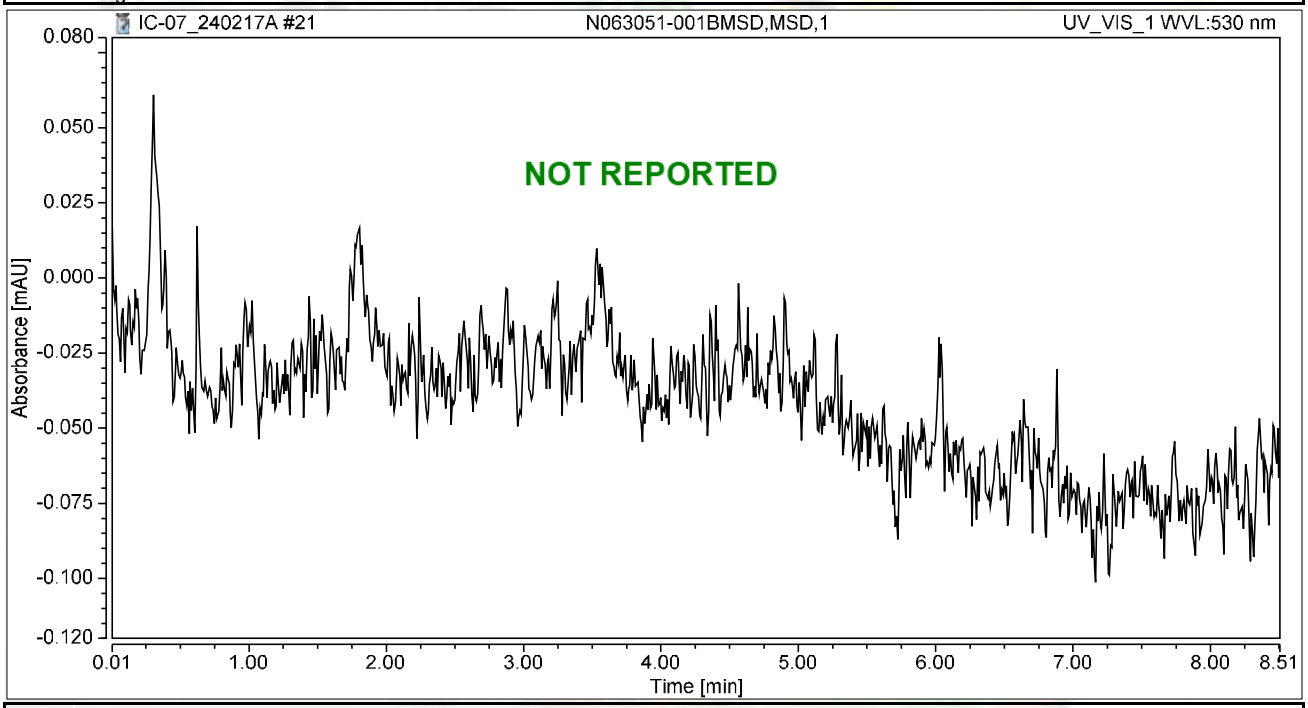
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	2.139	13.185	100.00	100.00	9.9457
Total:			**2.139**	**13.185**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063051-001BMSD,MSD,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

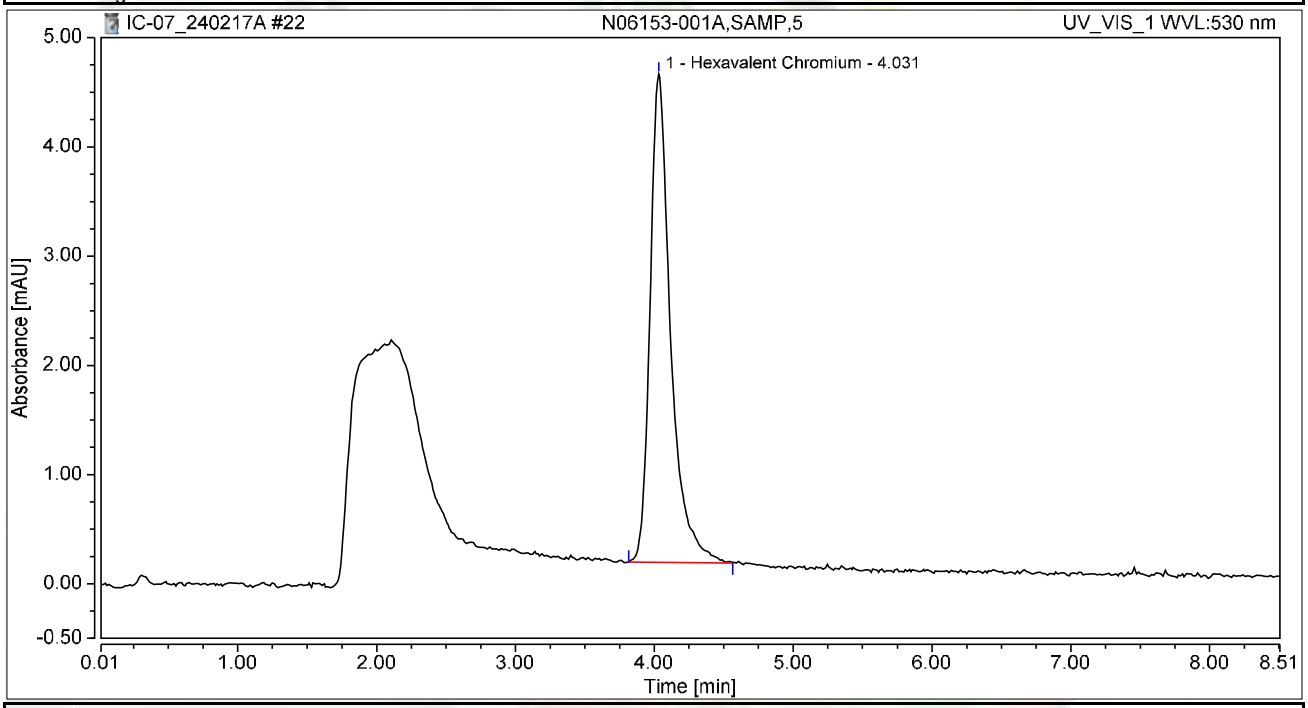
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N06153-001A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 12:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

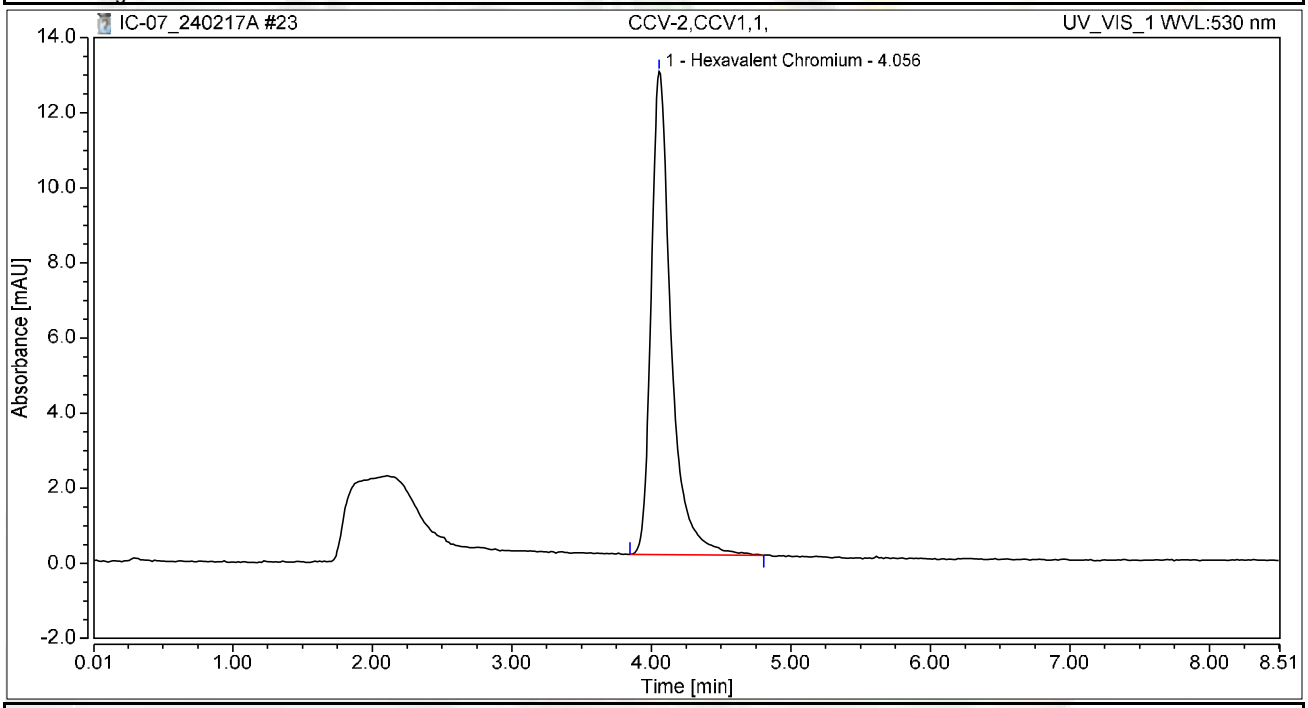
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.767	4.468	100.00	100.00	3.5678
Total:			**0.767**	**4.468**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 12:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

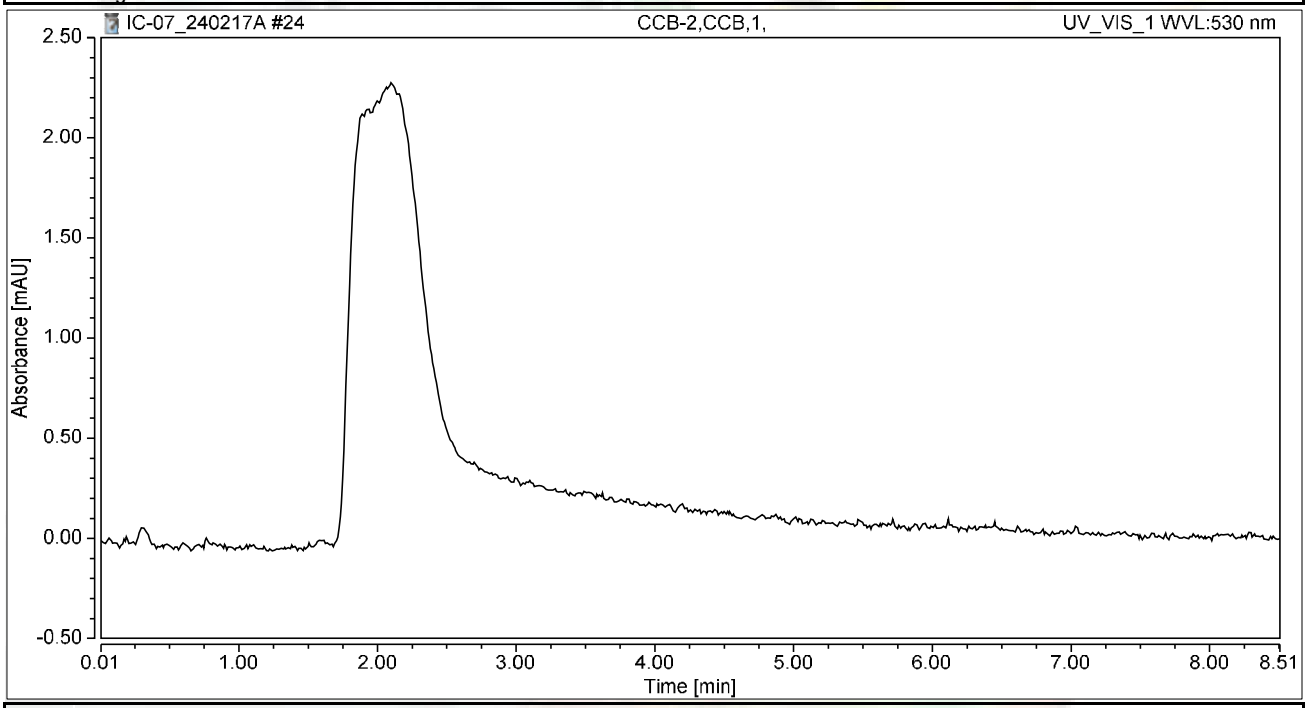
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	2.134	12.860	100.00	100.00	9.9224
Total:			**2.134**	**12.860**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 12:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

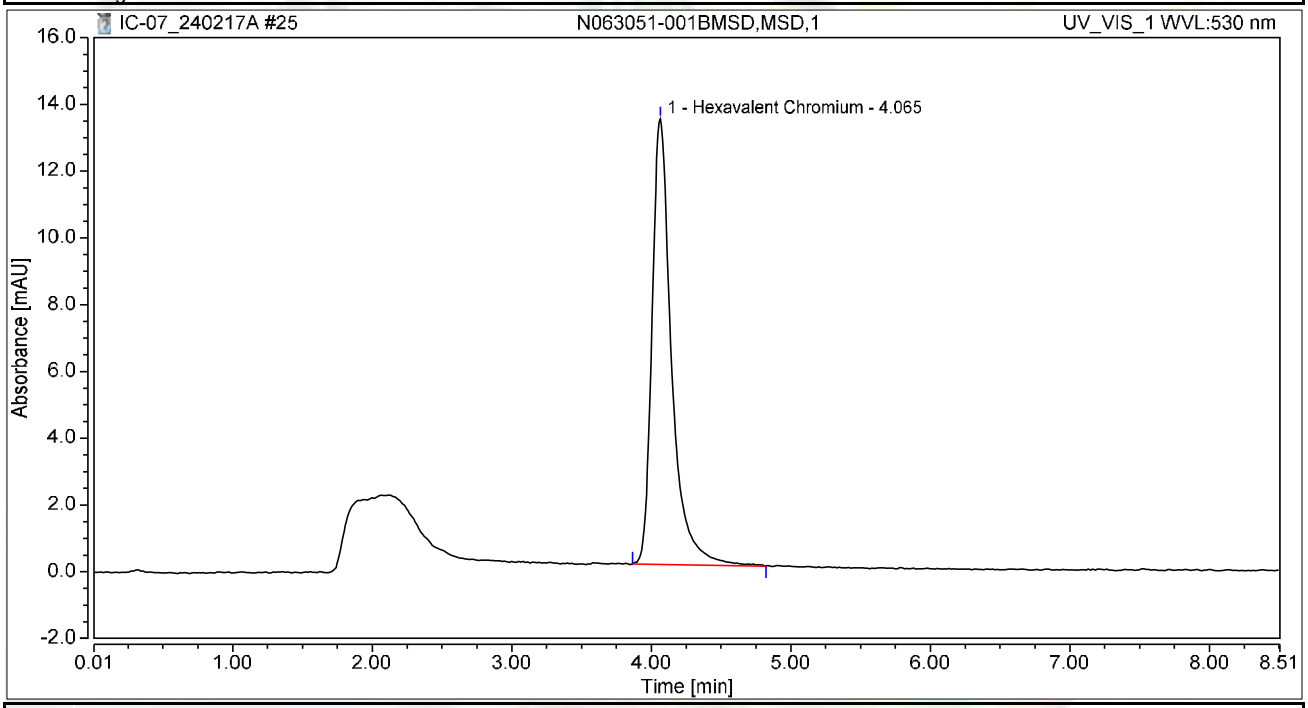
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063051-001BMSD,MSD,1**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 13:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

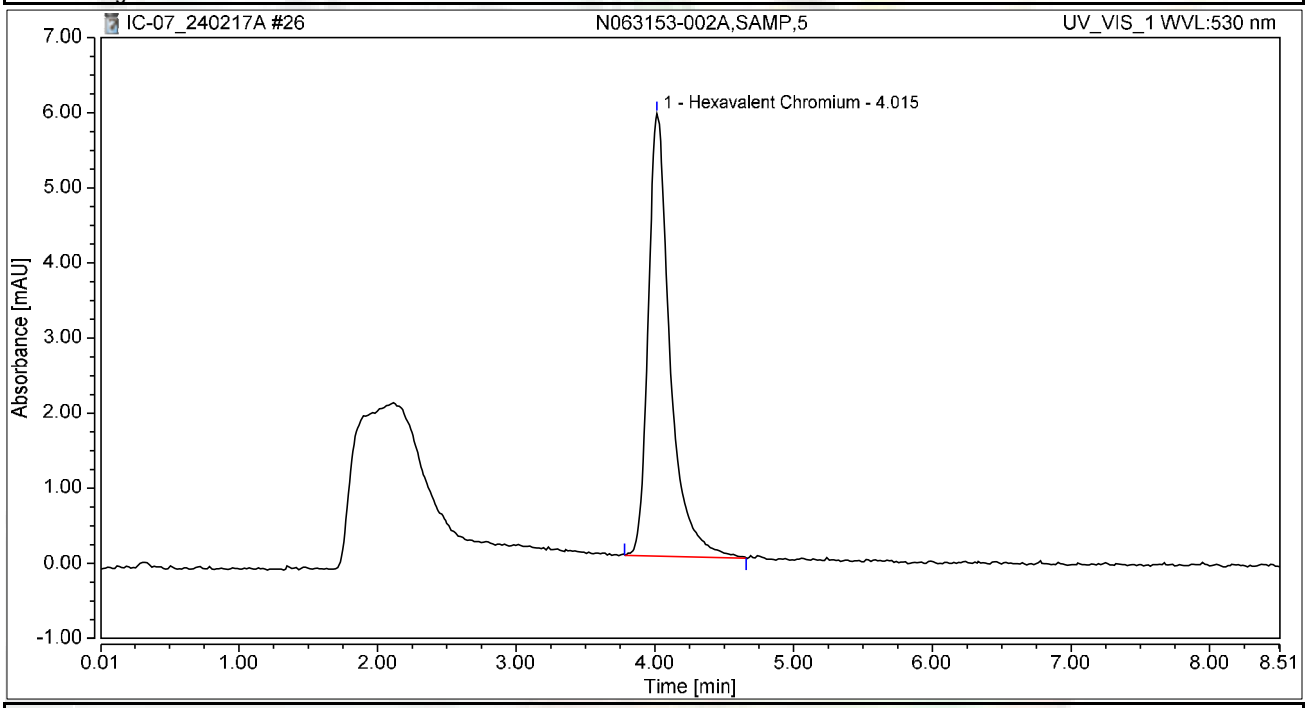
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	2.162	13.345	100.00	100.00	10.0520
Total:			**2.162**	**13.345**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 13:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

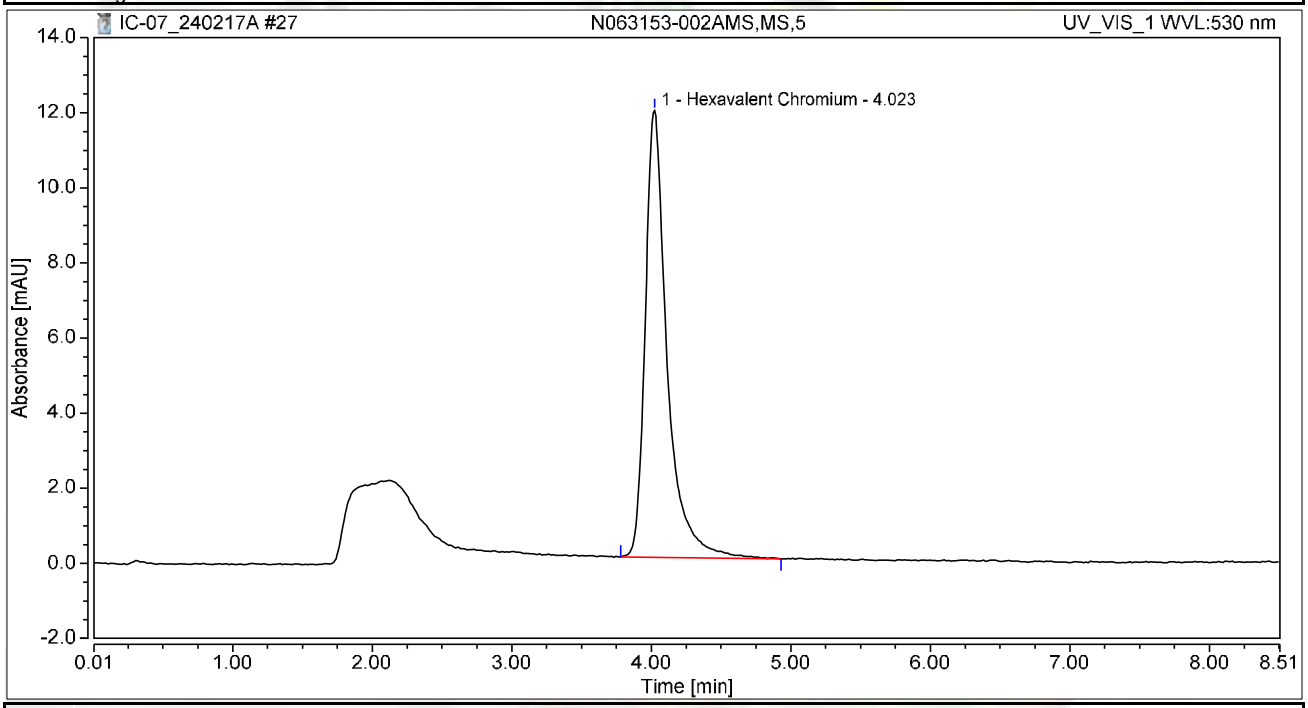
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.078	5.892	100.00	100.00	5.0117
Total:			**1.078**	**5.892**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 13:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

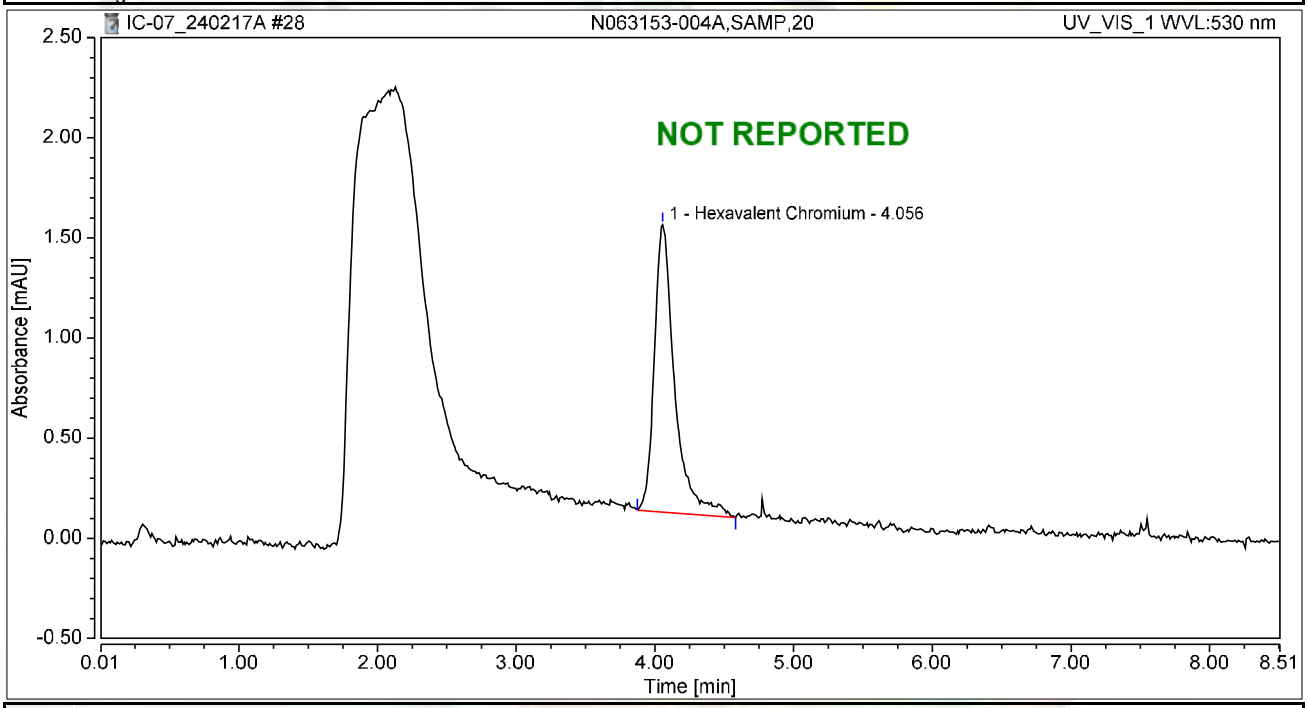
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	2.161	11.895	100.00	100.00	10.0458
Total:			**2.161**	**11.895**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-004A,SAMP,20**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 13:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

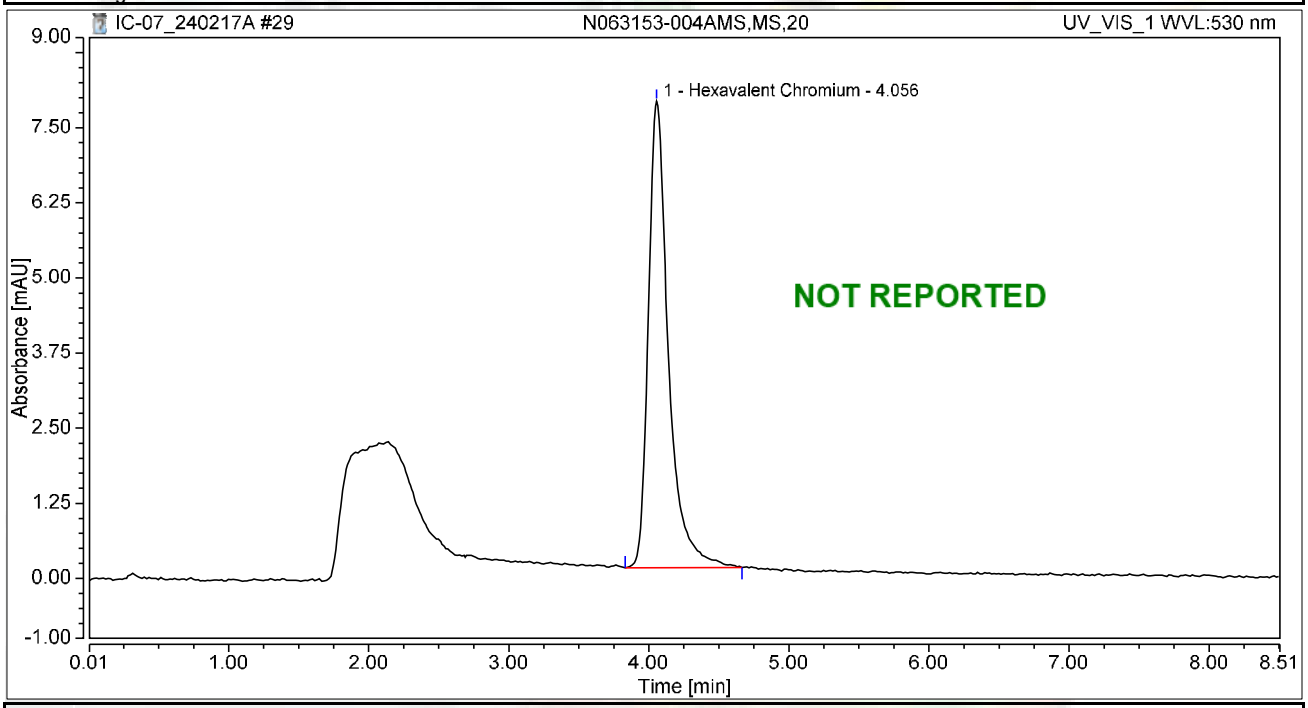
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.244	1.436	100.00	100.00	1.1362
Total:			**0.244**	**1.436**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-004AMS,MS,20**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 13:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

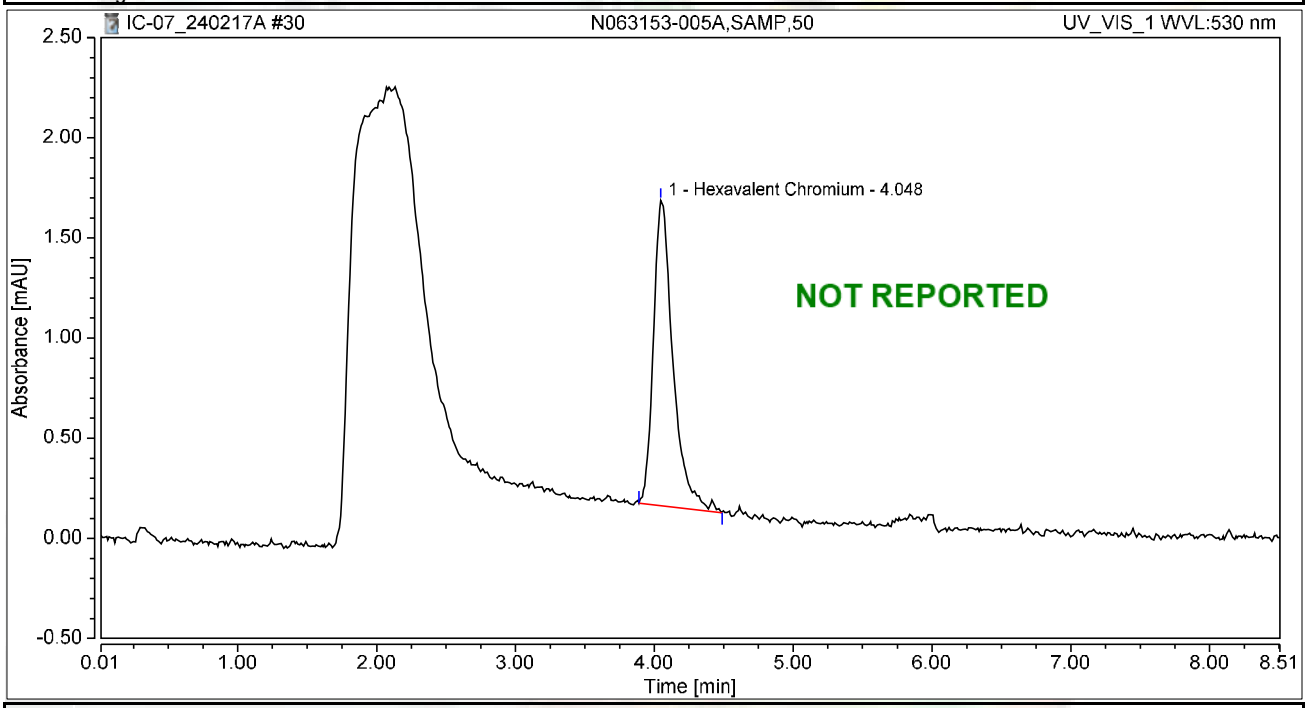
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.291	7.765	100.00	100.00	6.0015
Total:			**1.291**	**7.765**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-005A,SAMP,50**	*Run Time (min):*	**8.49**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 13:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

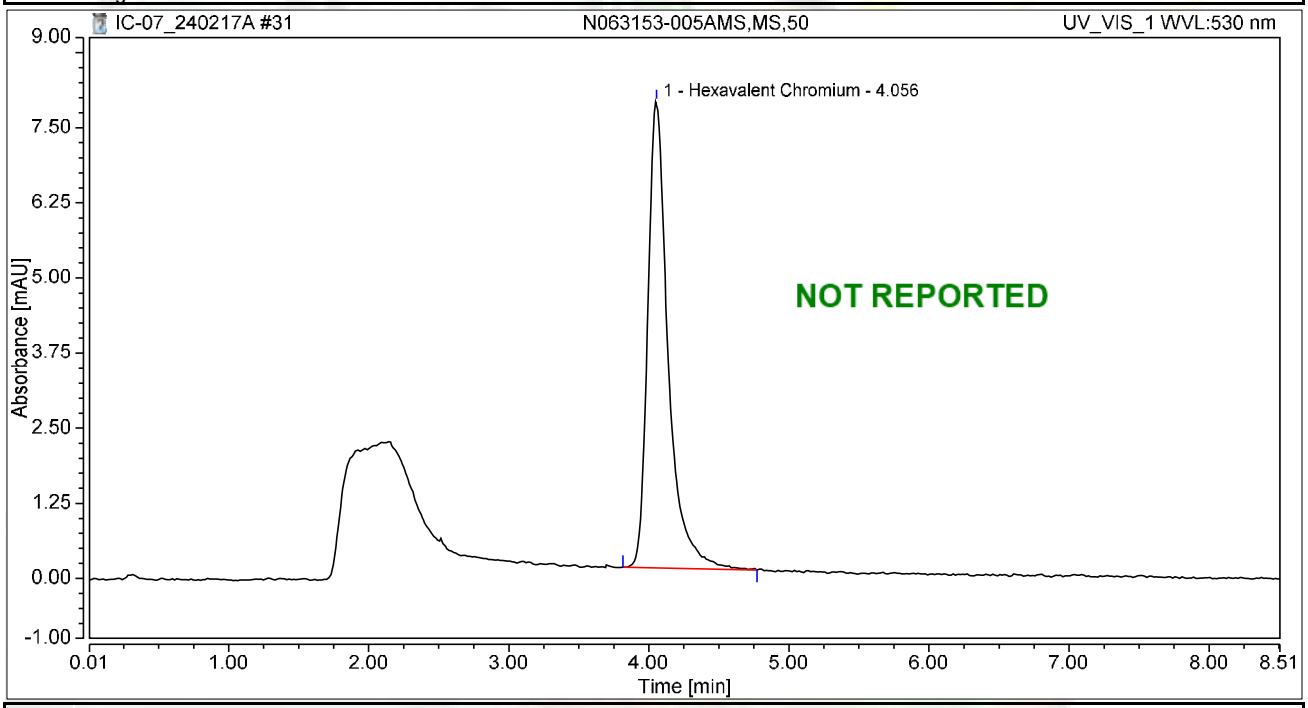
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.249	1.524	100.00	100.00	1.1560
Total:			**0.249**	**1.524**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-005AMS,MS,50**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 14:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

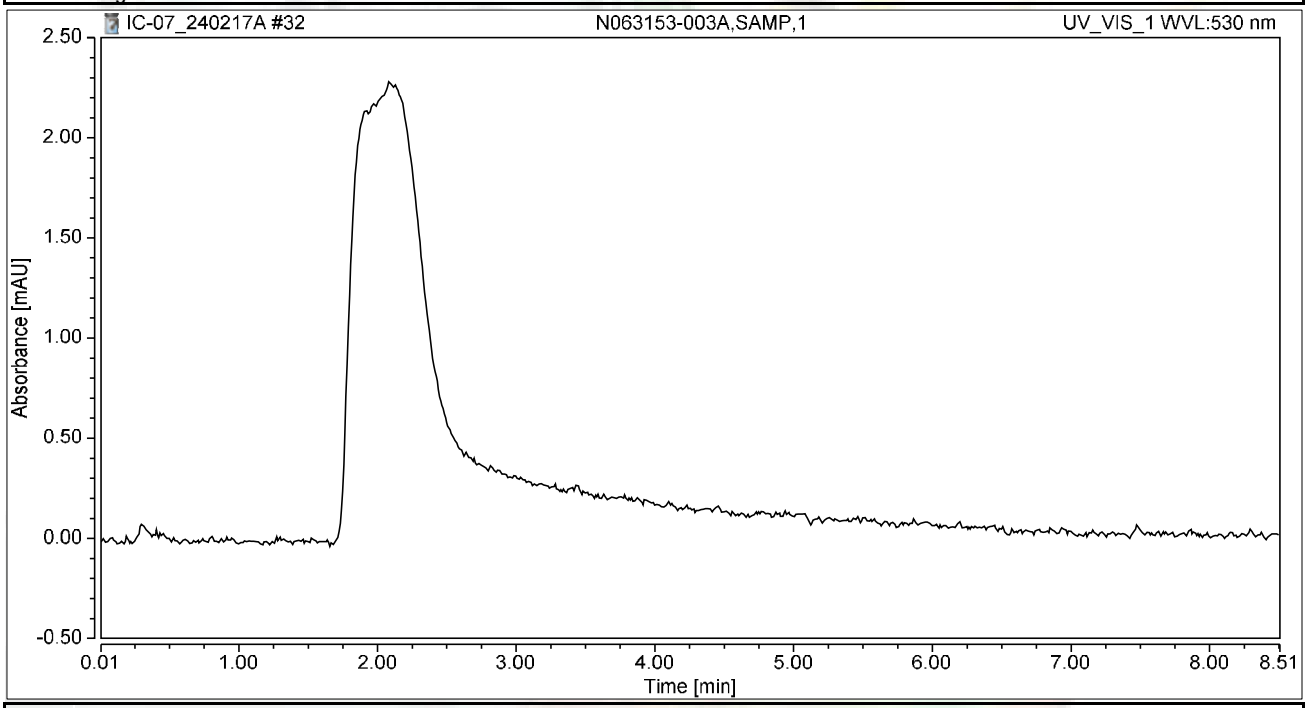
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.311	7.762	100.00	100.00	6.0933
Total:			**1.311**	**7.762**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 14:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

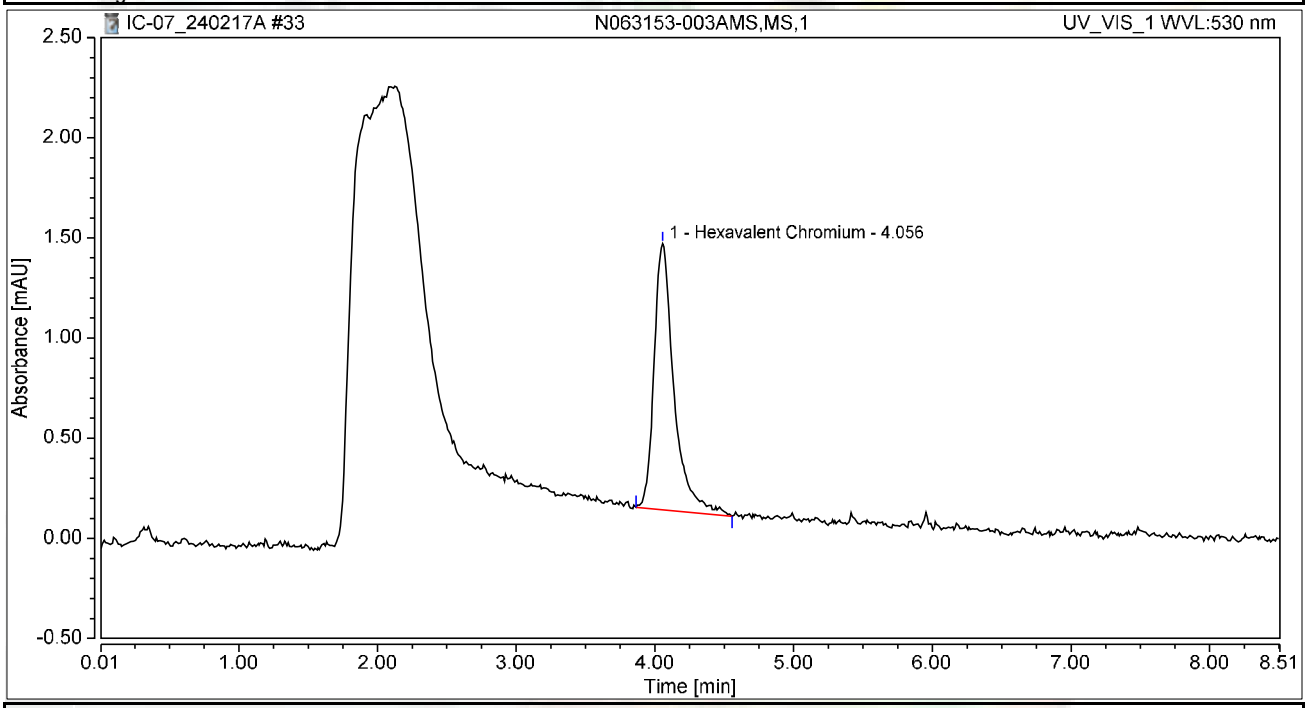
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 14:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

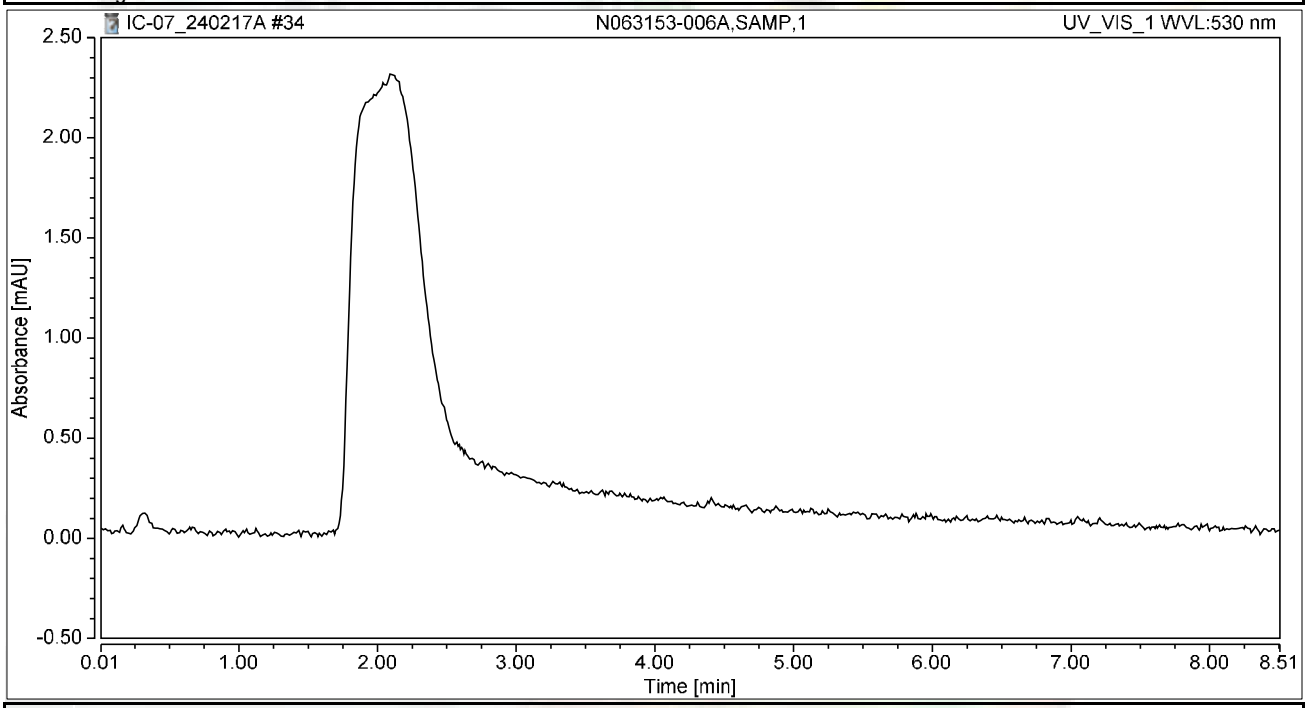
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.221	1.328	100.00	100.00	1.0287
Total:			**0.221**	**1.328**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 14:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

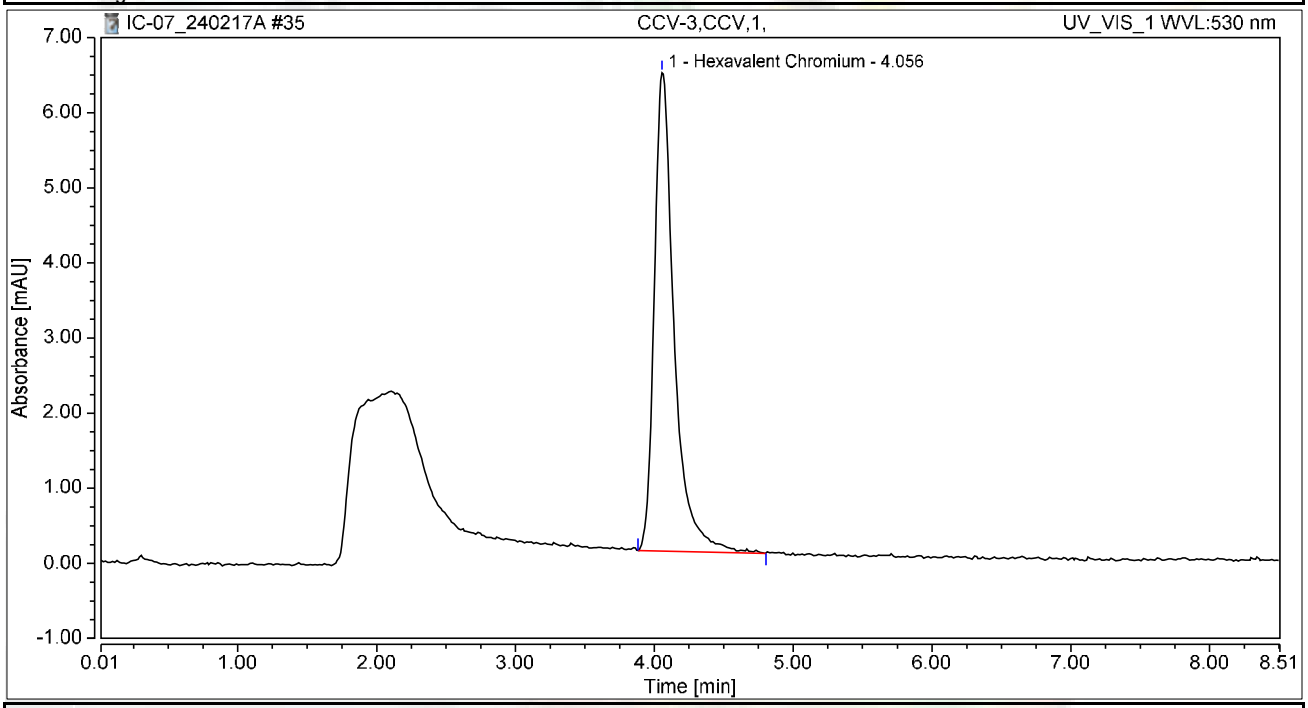
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 14:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

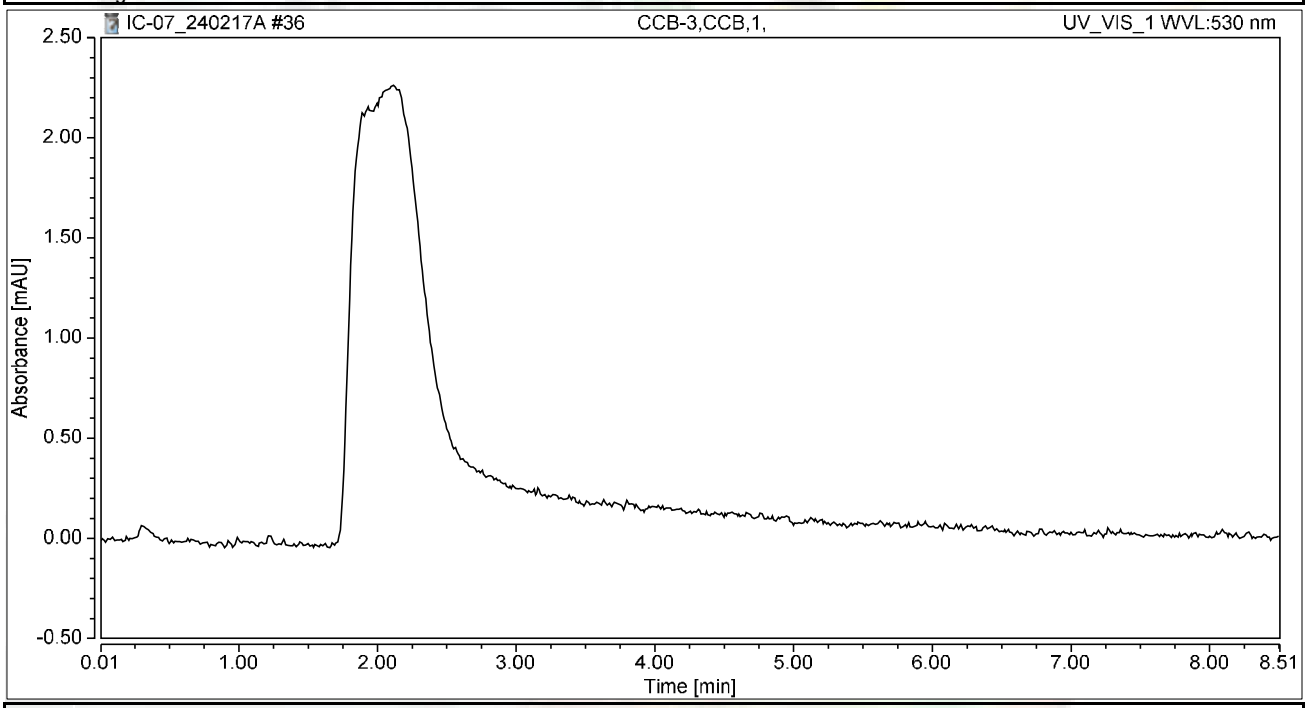
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.059	6.368	100.00	100.00	4.9236
Total:			**1.059**	**6.368**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 14:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

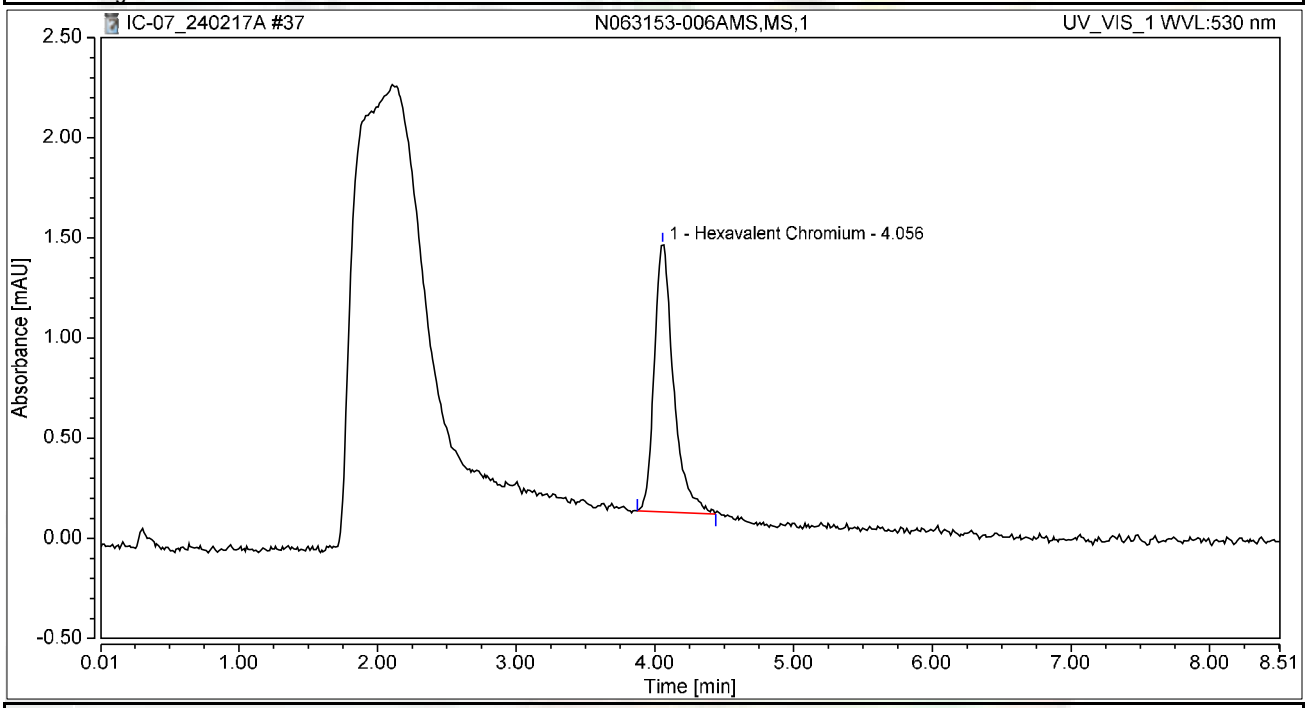
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 14:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

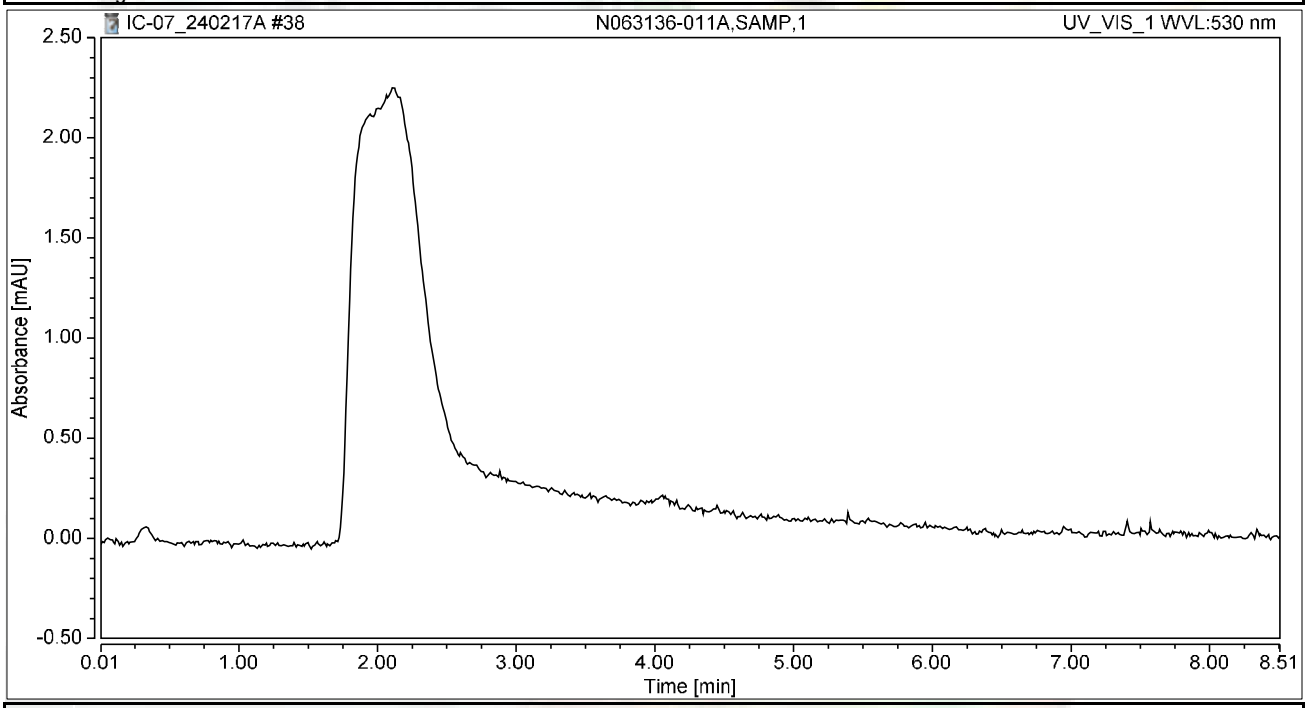
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.216	1.335	100.00	100.00	1.0045
Total:			**0.216**	**1.335**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-011A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 15:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

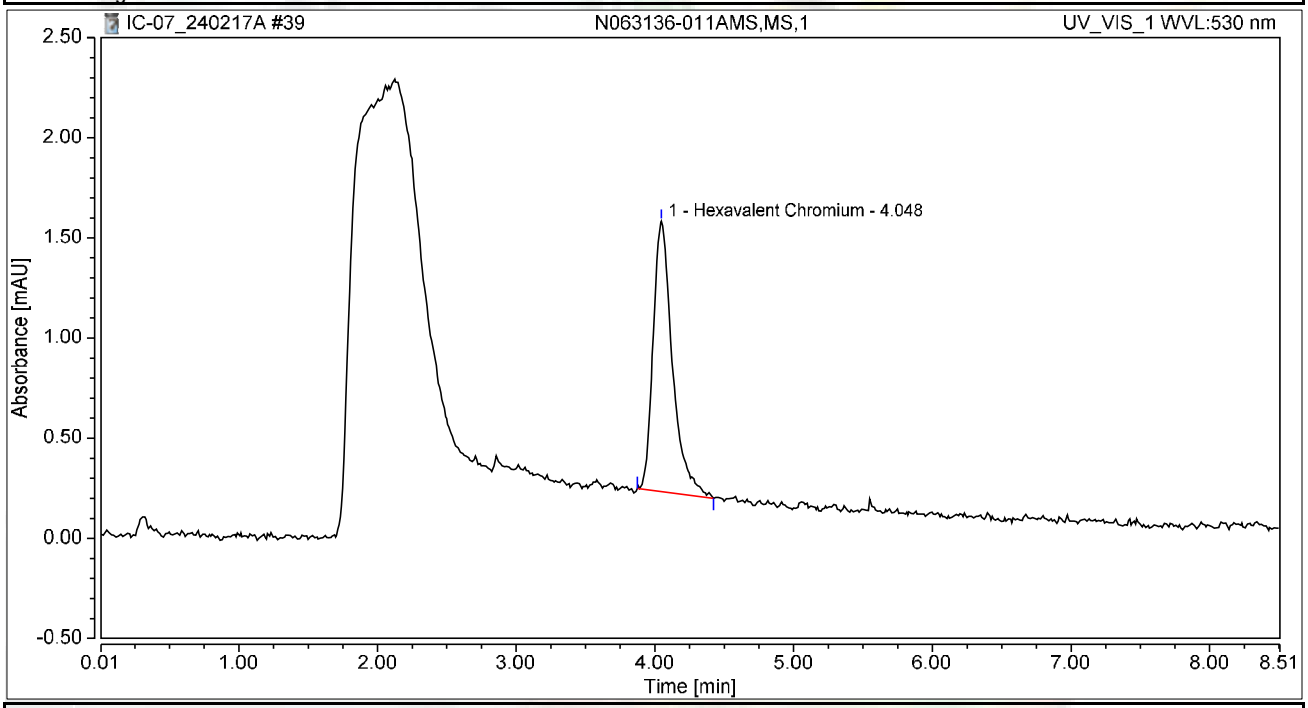
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 15:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

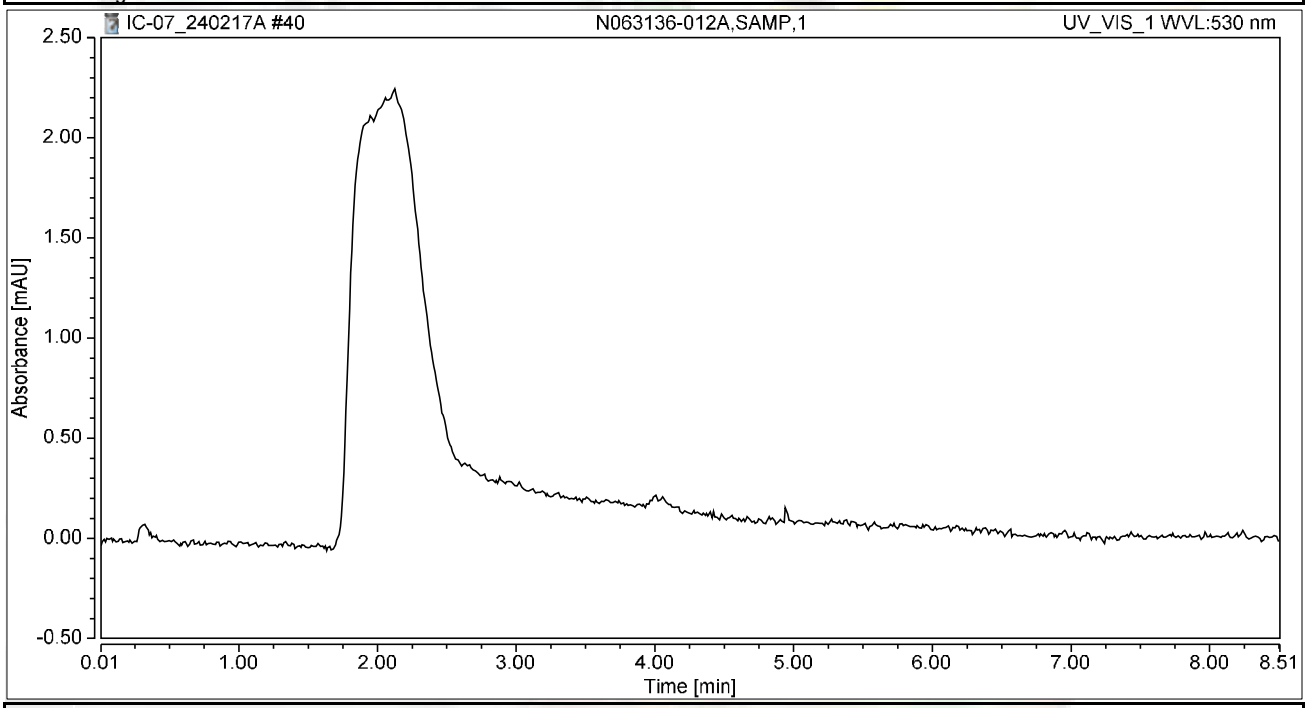
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.217	1.349	100.00	100.00	1.0103
Total:			**0.217**	**1.349**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-012A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 15:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

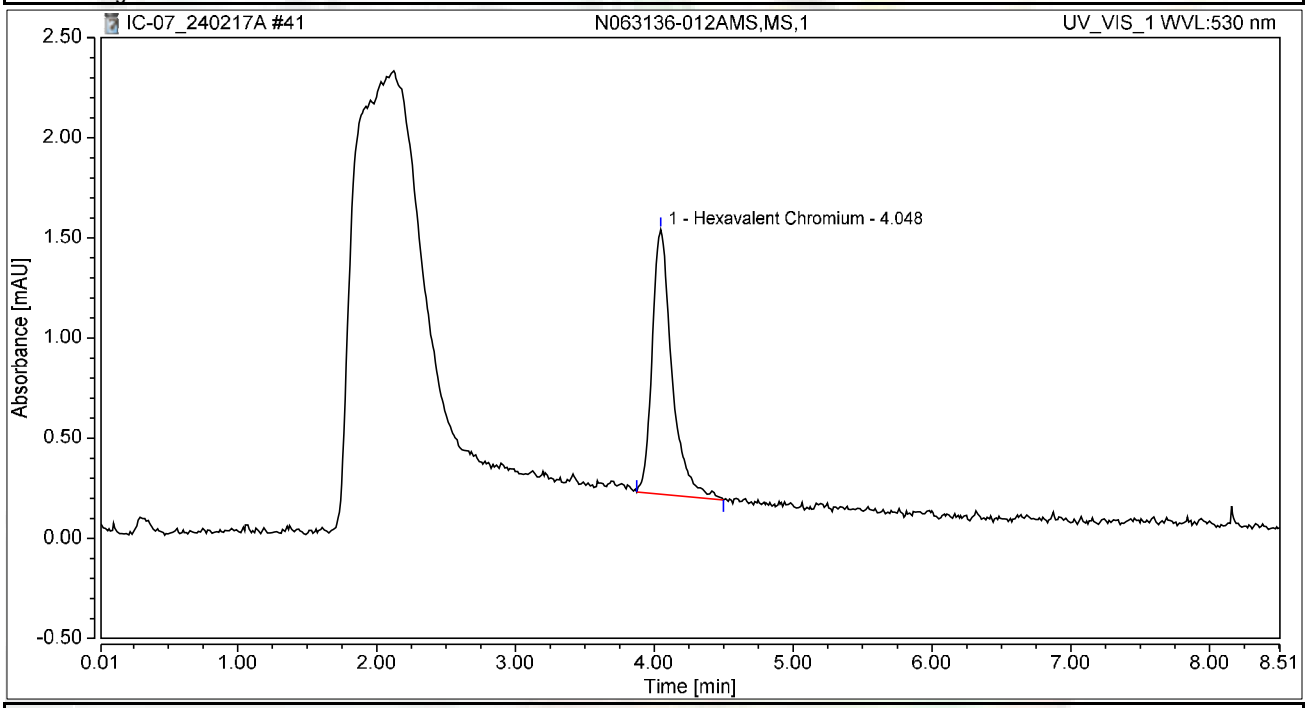
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-012AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 15:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

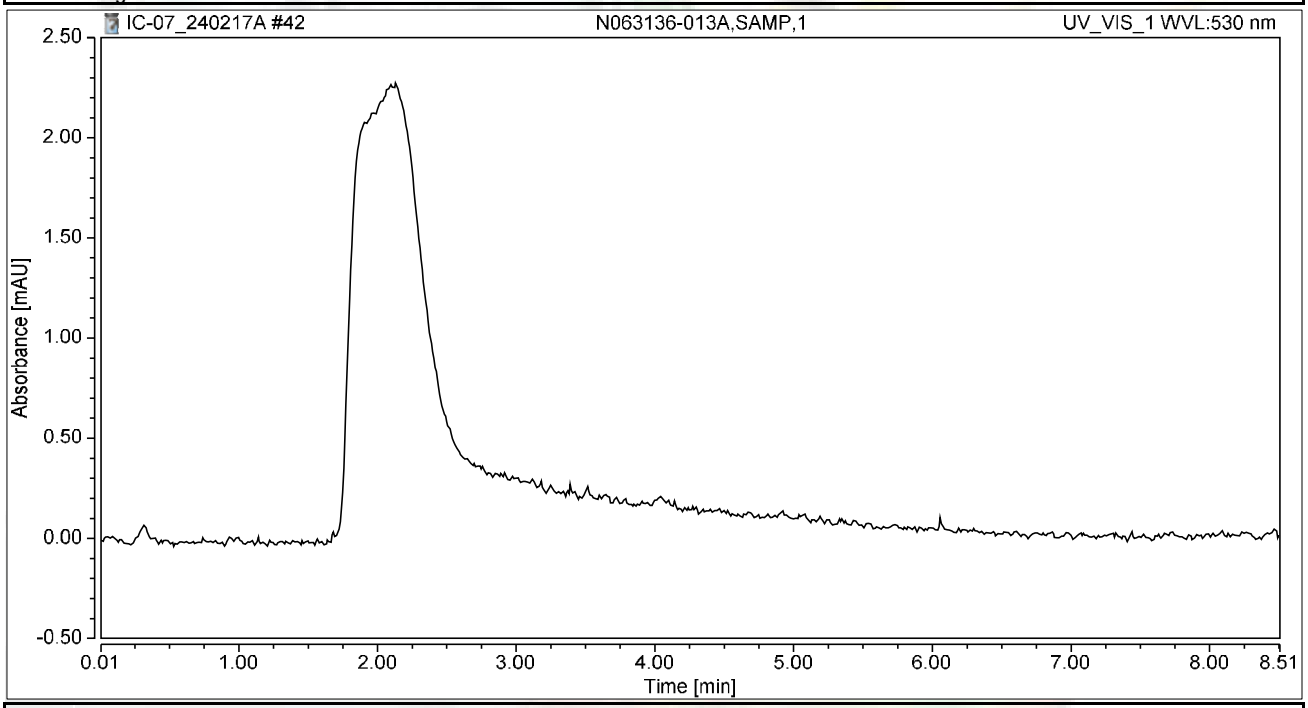
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.219	1.323	100.00	100.00	1.0178
Total:			**0.219**	**1.323**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-013A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 15:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

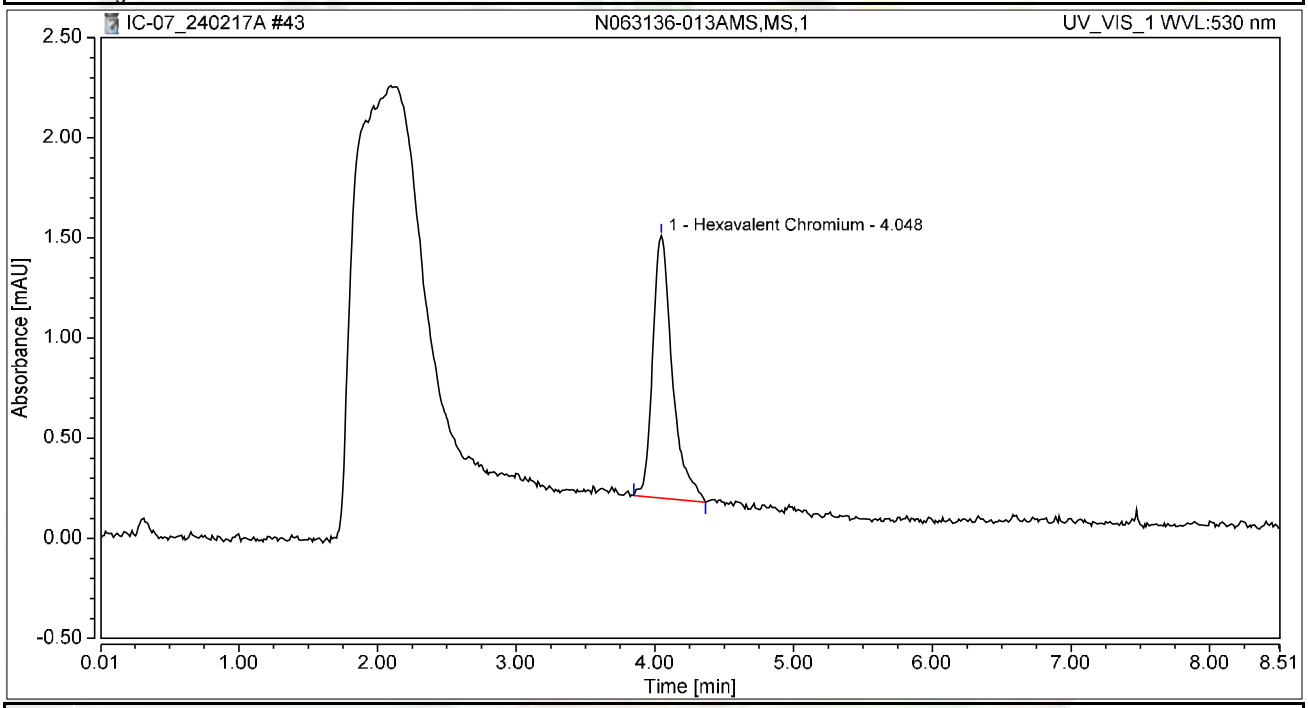
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-013AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 15:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

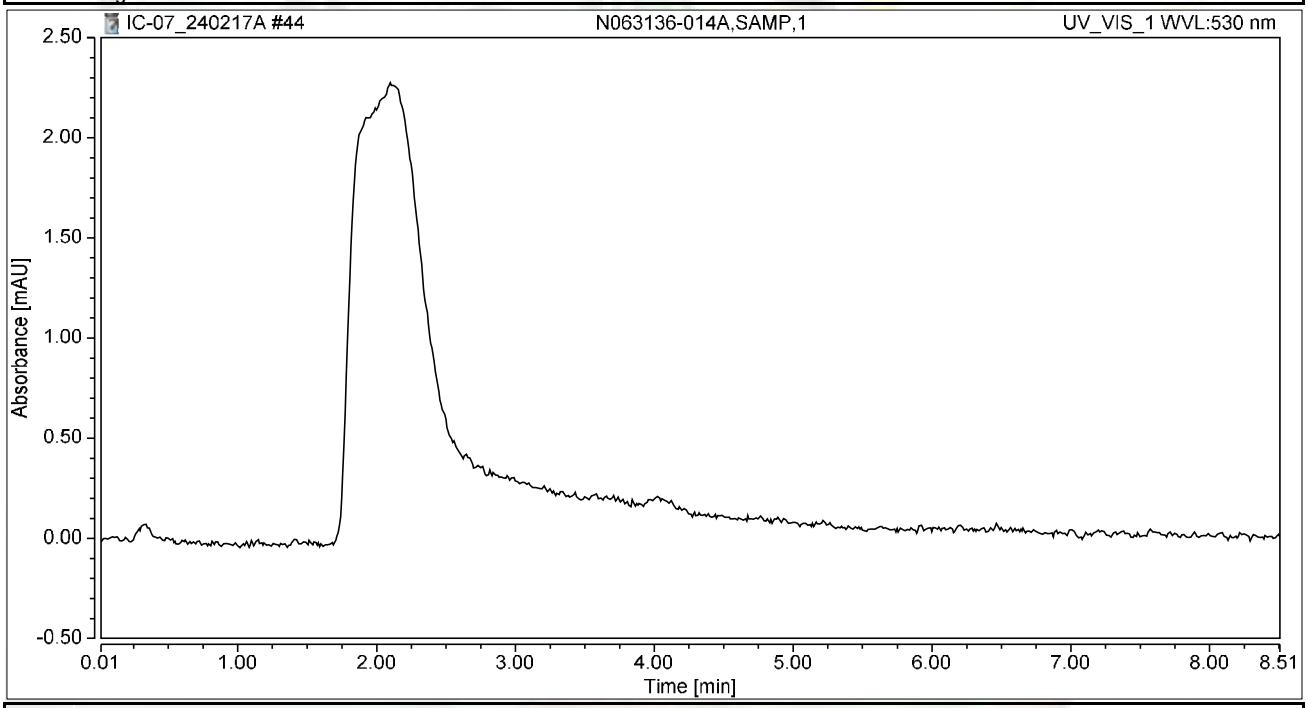
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.215	1.309	100.00	100.00	0.9991
Total:			**0.215**	**1.309**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-014A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 16:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

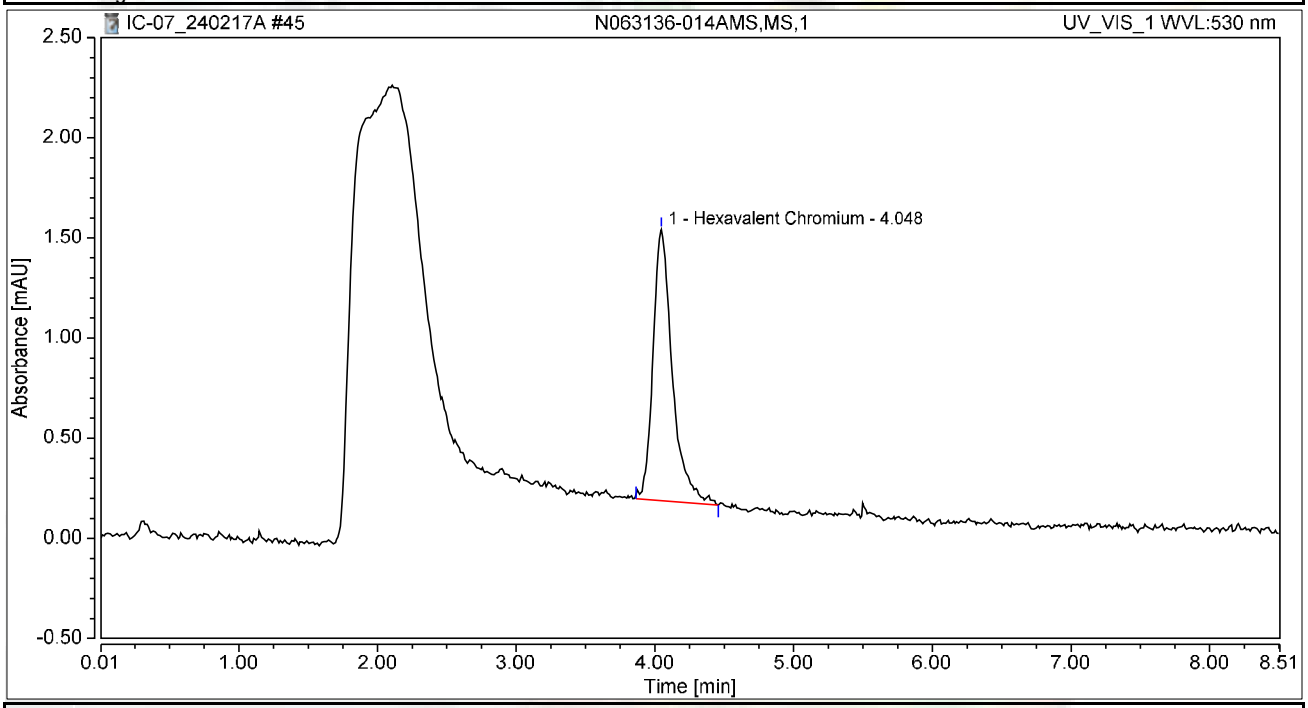
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-014AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 16:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

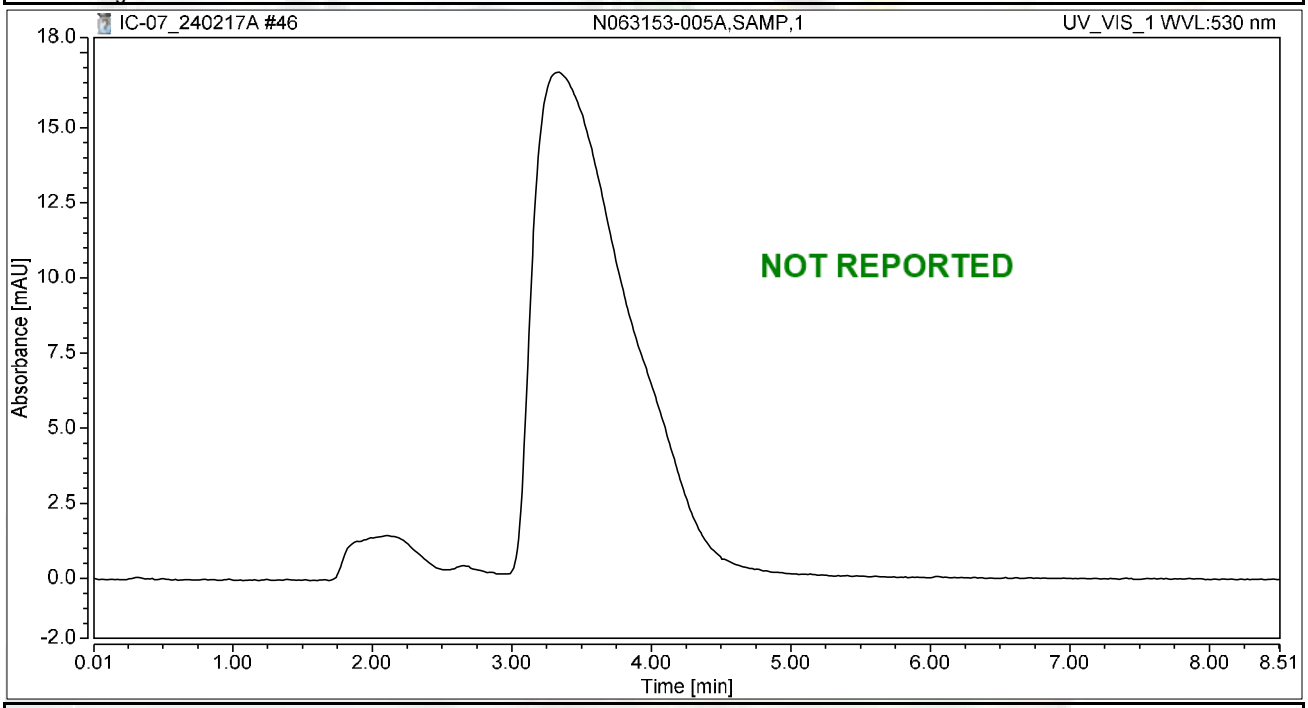
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.219	1.355	100.00	100.00	1.0163
Total:			**0.219**	**1.355**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 16:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

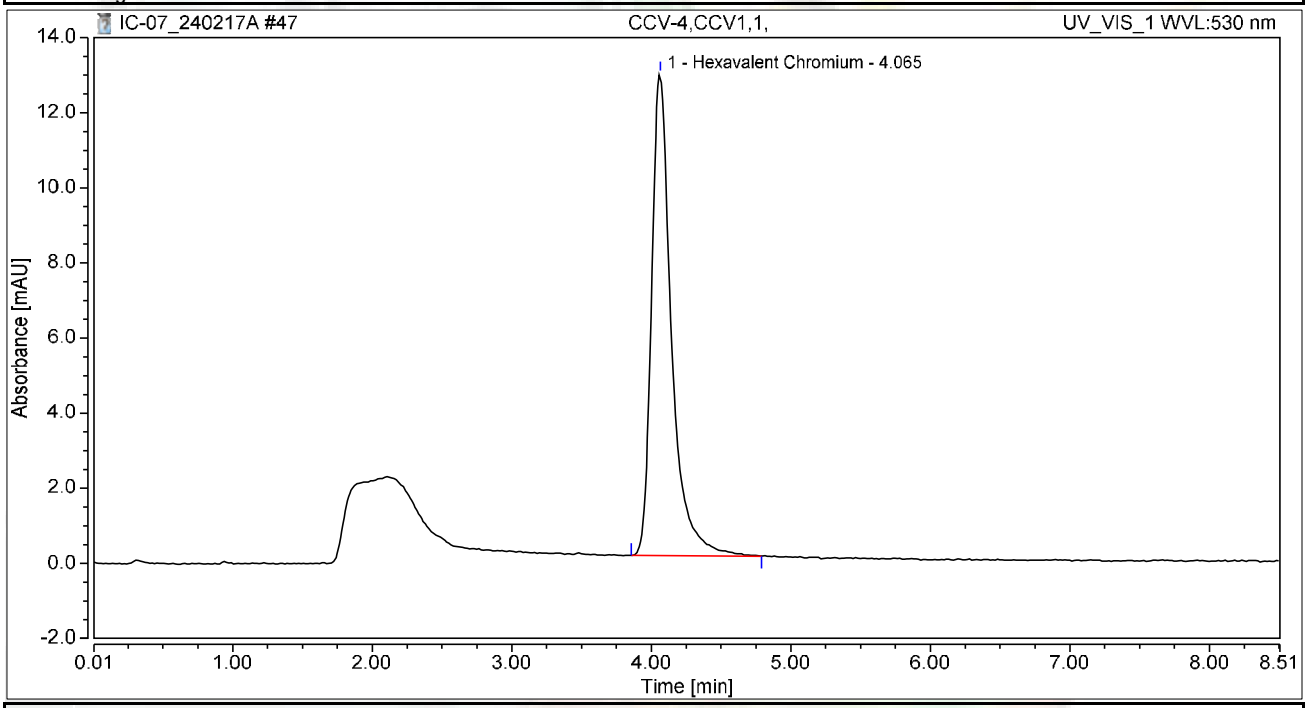
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 16:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

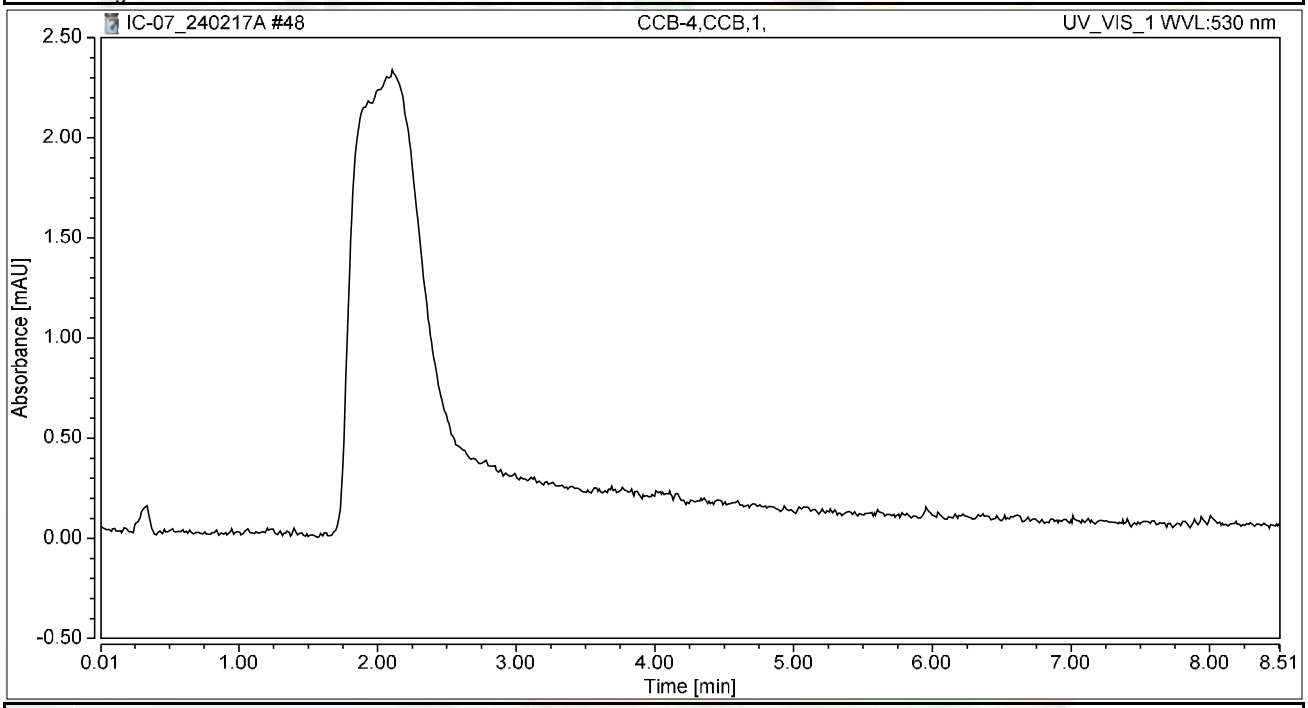
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	2.127	12.832	100.00	100.00	9.8874
Total:			**2.127**	**12.832**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 16:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

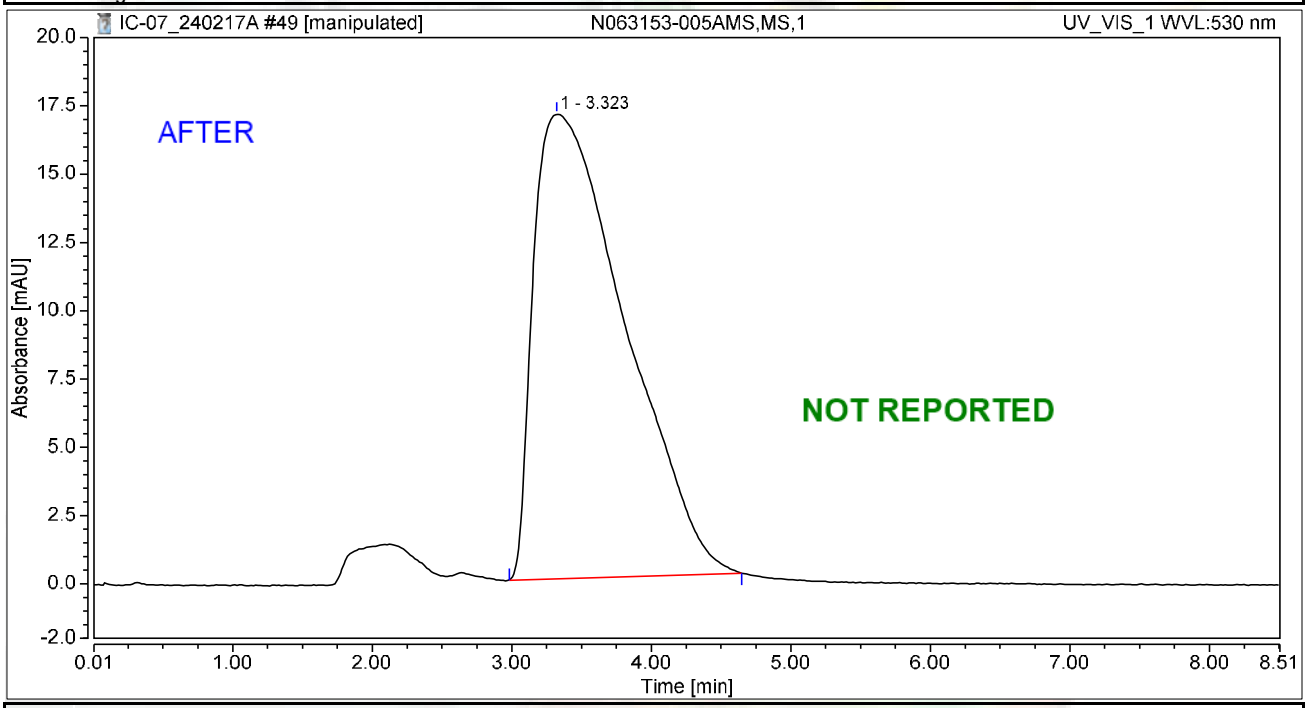
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 16:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

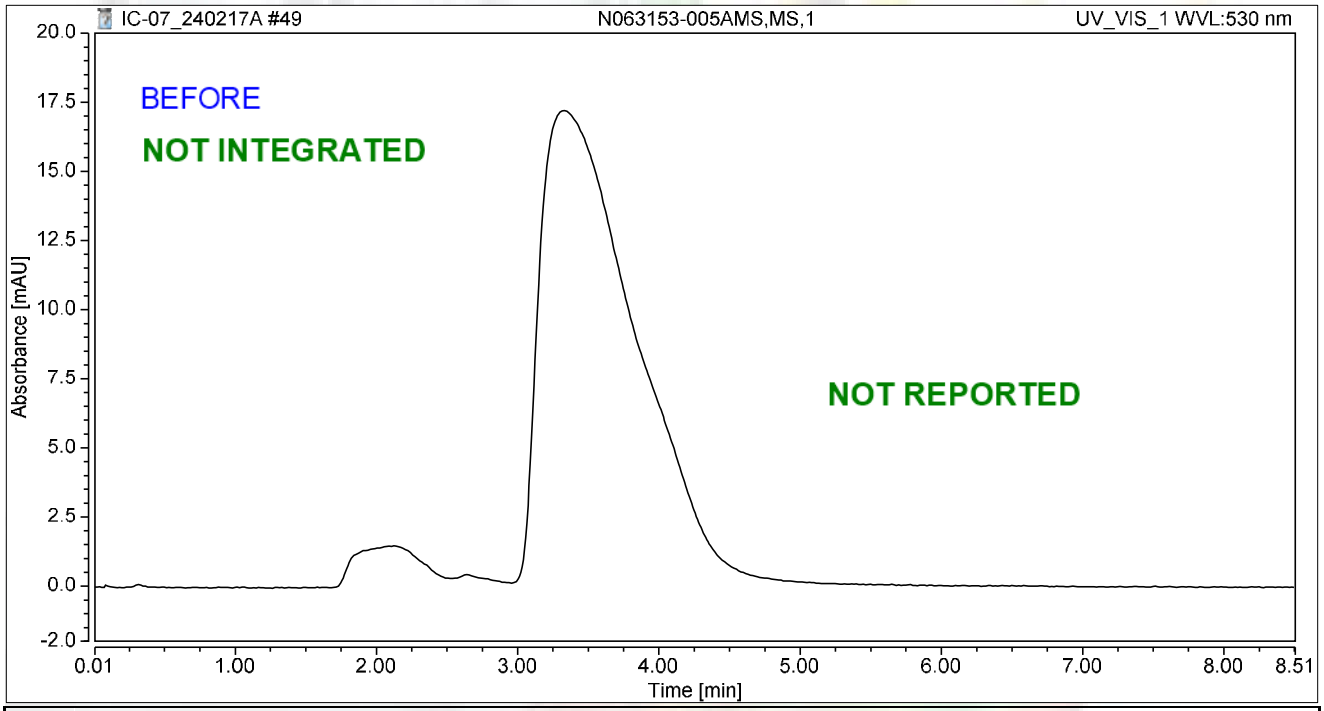
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.323	12.914	17.009	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**12.914**	**17.009**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 16:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

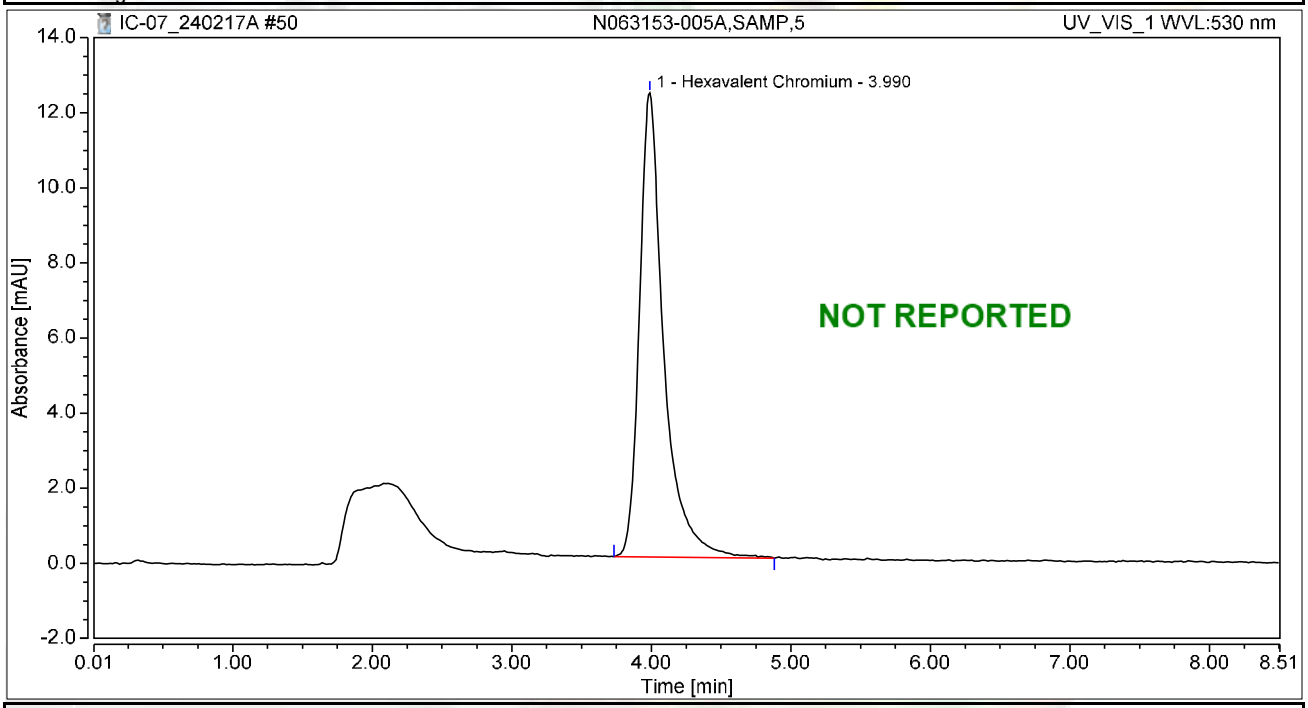
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 17:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

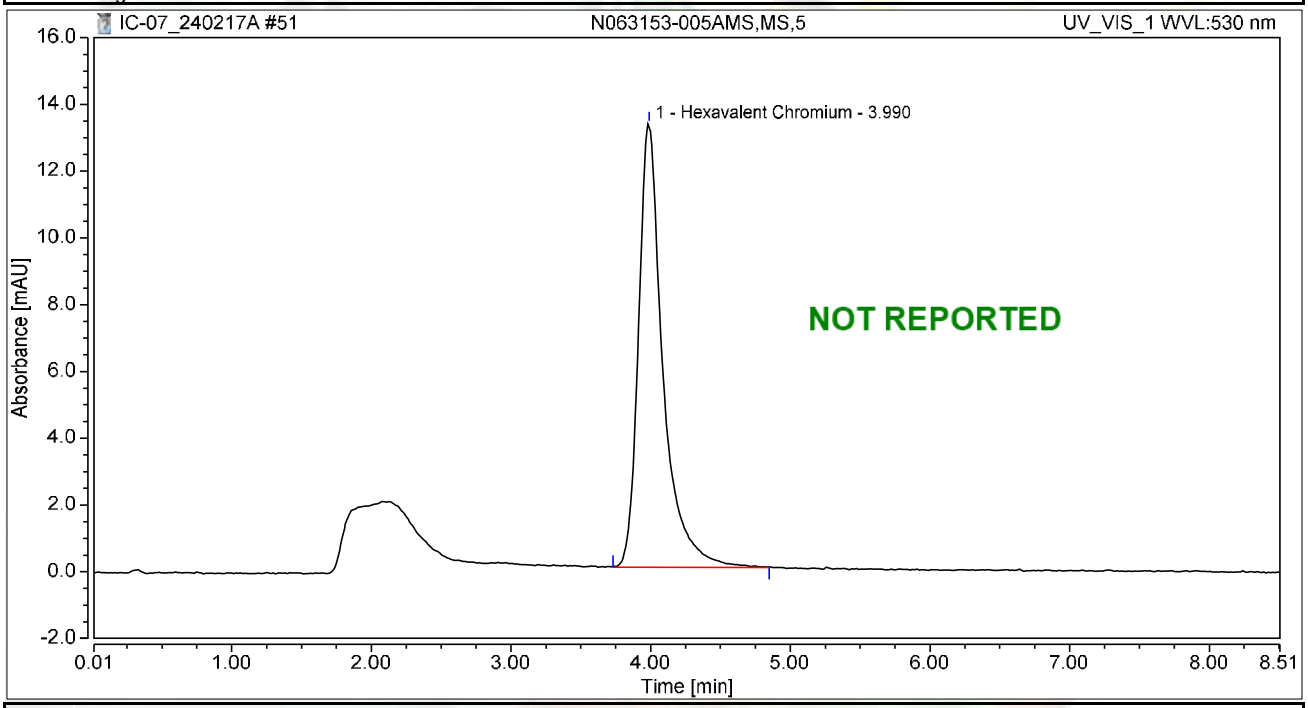
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	2.499	12.355	100.00	100.00	11.6155
Total:			**2.499**	**12.355**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-005AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 17:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

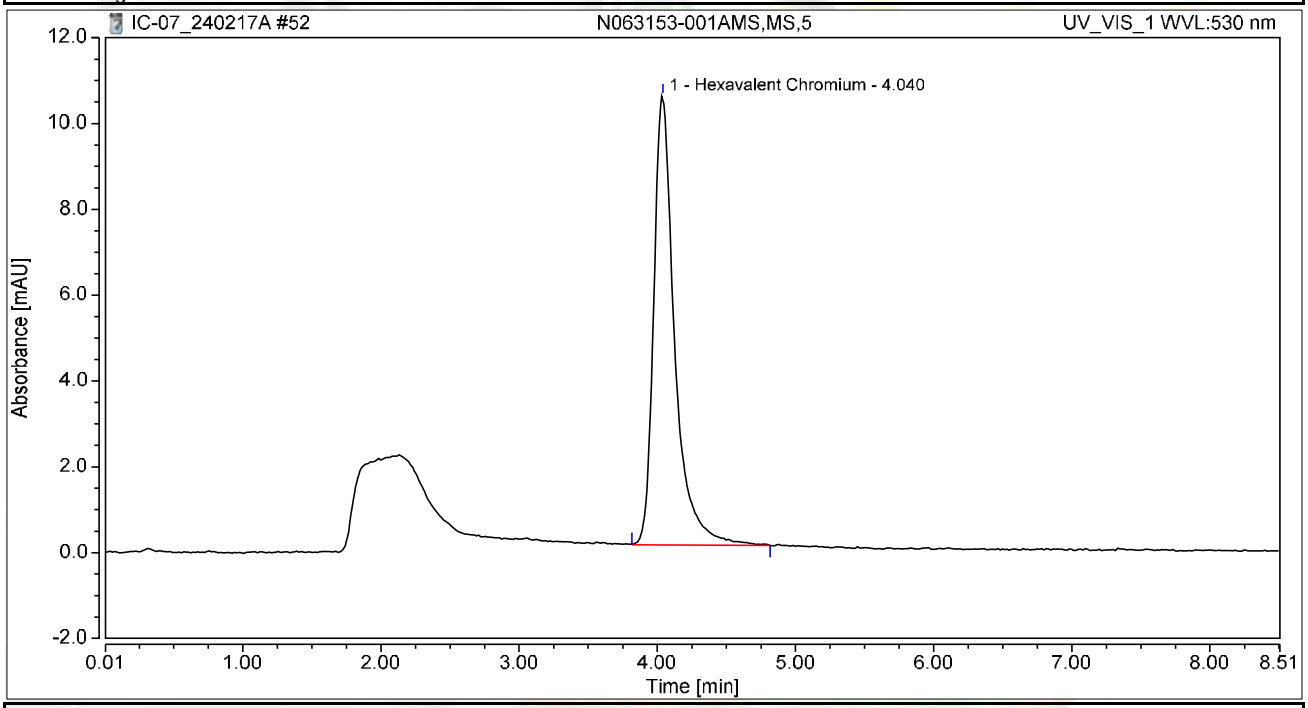
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	2.695	13.284	100.00	100.00	12.5288
Total:			**2.695**	**13.284**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**44**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 17:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

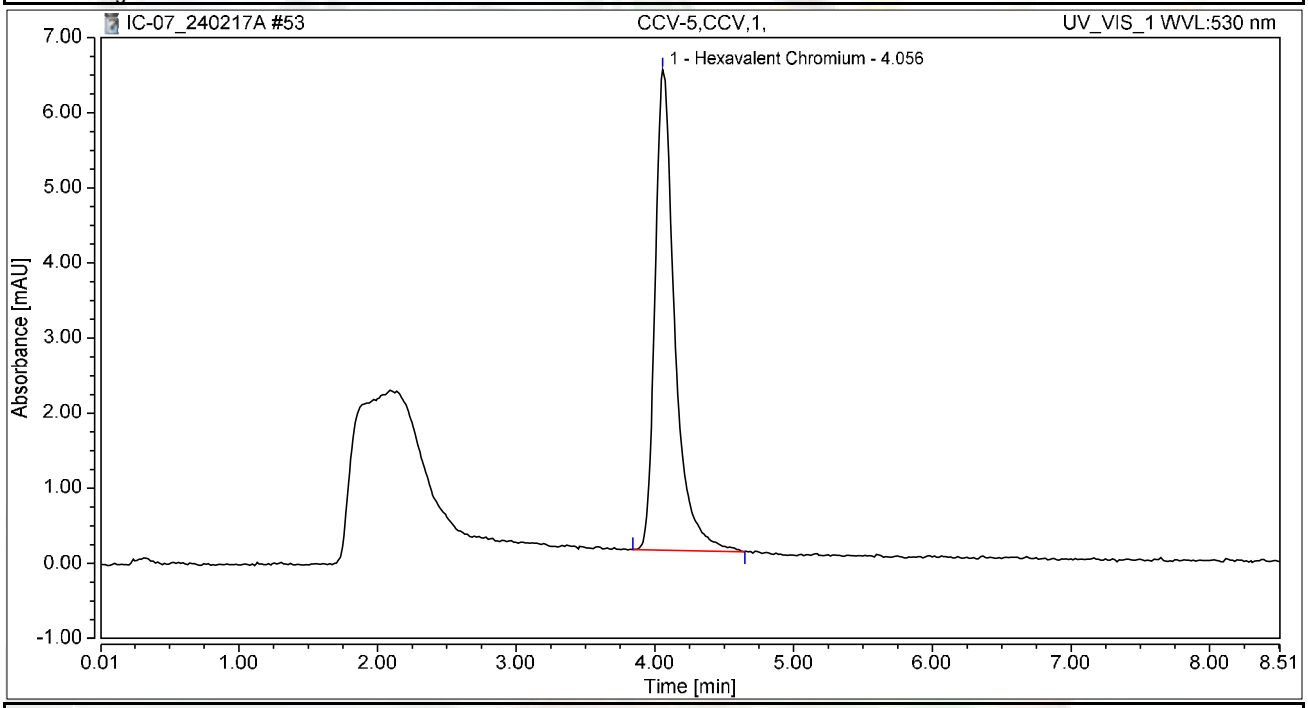
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.836	10.457	100.00	100.00	8.5367
Total:			**1.836**	**10.457**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**45**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 17:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

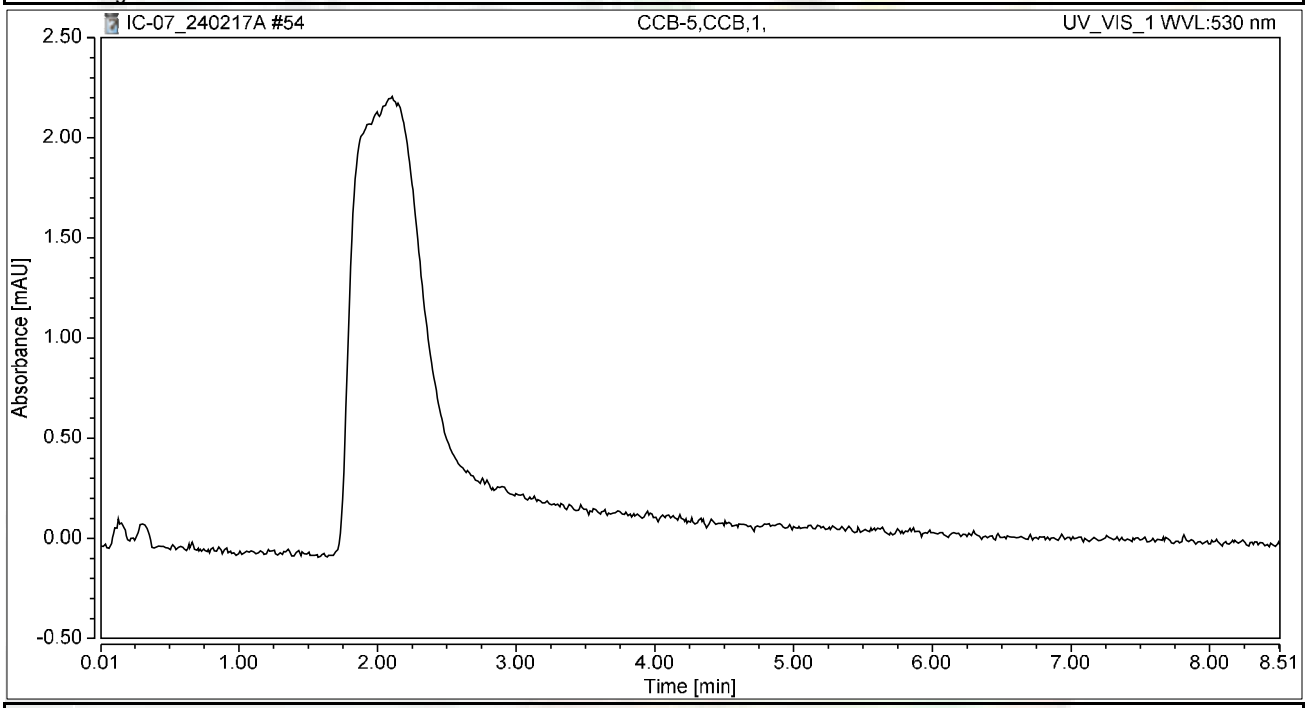
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.058	6.399	100.00	100.00	4.9170
Total:			**1.058**	**6.399**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**46**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 17:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

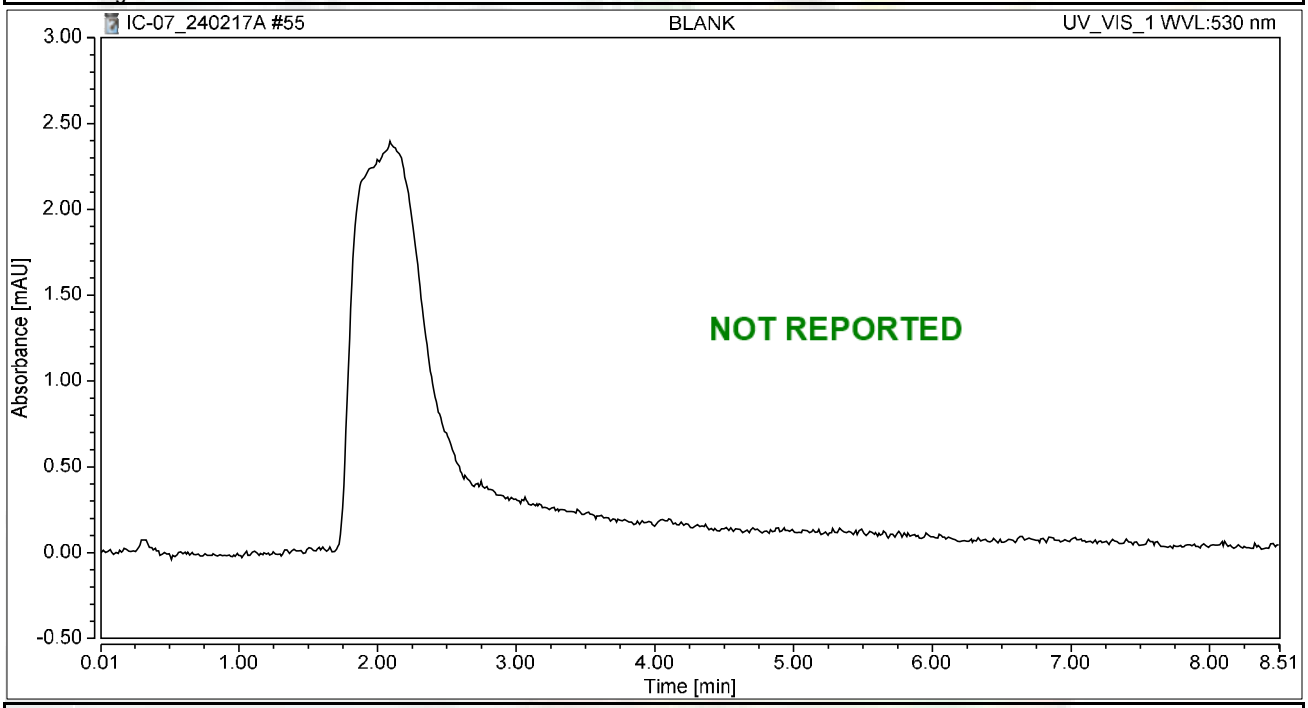
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**47**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 17:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

EPA 6020
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106888
ASSET #: N063136

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/16/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

% RSD of As in LLICV failed. However, % rec passed criteria

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: –

2nd Level Reviewer LG 2/29/2024 Date:

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Surface Water

FORMULA:

Calculate the Arsenic concentration, in ug/L in the original sample as follows:

Arsenic , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063136-001B** , the concentration in ug/L is calculated as follows:

Arsenic , ug/L = 2.206795186 * 1 *(25 / 25)

Arsenic , ug/L = 2.206795186

Reporting results in two significant figures,

Arsenic , ug/L = 2.2

Reviewed by:

JRB 3/12/2024

% RSD SUMMARY

PERCENT RSD SUMMARY: 240216A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]				75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.07	8.335	15	PASS	0.05	85.347	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.48	4.091	15	PASS	0.48	12.174	15	PASS
Std3-5/50 ppb	ICAL	1	4.8	2.764	15	PASS	4.65	6.362	15	PASS
Std4-10/100 ppb	ICAL	1	9.49	2.022	15	PASS	9.53	4.608	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.47	1.458	15	PASS	19.45	1.866	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.38	0.956	15	PASS	38.92	2.757	15	PASS
Std7-100/1000 ppb	ICAL	1	99.89	0.878	15	PASS	100.2	1.121	15	PASS
Std8-200/2000 ppb	ICAL	1	200.26	1.076	15	PASS	200.2	1.495	15	PASS
ICV	ICV	1	101.55	1.72	15	PASS	10.38	0.385	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
LLICV1	CCV1	1	0.53	10.612	20	PASS	0.12	49.355	20	FAIL
MLCCV	CCV	1	19.44	2.321	15	PASS	19.51	2.041	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.52	0.675	15	PASS	20.24	3.376	15	PASS
LLICV1	LLICV	1	0.54	4.282	20	PASS	0.08	22.061	20	<PQL
CCV1	CCV	1	19.53	1.014	15	PASS	19.44	2.894	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.58	1.281	15	PASS	19.41	1.356	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.64	0.826	15	PASS	20.29	1.779	15	PASS
CCV3	CCV	1	19.4	2.52	15	PASS	19.69	1.002	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL	0	427.392	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.42	0.73	15	PASS	20.56	2.854	15	PASS
MB-106888	MBLK	1	<0.000	N/A	15	<PQL	0.02	118.791	15	<PQL
LCS-106888	LCS	1	100.86	0.911	15	PASS	9.83	4.429	15	PASS
N063135-001B	SAMP	1	396.56	1.374	15	PASS	19.62	2.712	15	PASS
N063135-003B	SAMP	1	455.02	0.687	15	PASS	6.72	11.054	15	PASS
N063135-005B	SAMP	1	565.73	1.321	15	PASS	<0.000	N/A	15	<PQL
N063136-001B	SAMP	1	1.53	7.68	15	PASS	2.21	4.195	15	PASS
N063136-001B	SAMP	5	0.28	8.137	15	PASS	0.5	17.272	15	NR!
N063136-001B-PS	PS	1	97.84	0.93	15	PASS	12.44	3.712	15	PASS
N063136-001B-MS	MS	1	103.21	0.664	15	PASS	12.24	4.858	15	PASS
CCV4	CCV	1	19.37	0.31	15	PASS	19.49	3.367	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL	0.01	227.512	15	<PQL
N063136-001B-MSD	MSD	1	102.82	1.074	15	PASS	12.11	2.463	15	PASS
N063136-002B	SAMP	1	1.48	4.321	15	PASS	2.08	1.328	15	PASS
N063136-003B	SAMP	1	10.7	0.621	15	PASS	2.27	7.444	15	PASS
N063136-004B	SAMP	1	2.8	4.45	15	PASS	2.31	3.405	15	PASS

PERCENT RSD SUMMARY: 240216A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]				75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063136-005B	SAMP	1	1.89	6.297	15	PASS	2.31	4.643	15	PASS
N063136-006B	SAMP	1	1.65	2.551	15	PASS	2.42	7.986	15	PASS
N063136-008B	SAMP	1	1.95	6.305	15	PASS	2.38	11.068	15	PASS
N063136-009B	SAMP	1	23.94	2.697	15	PASS	2.3	6.601	15	PASS
N063136-010B	SAMP	1	2.29	4.925	15	PASS	2.35	2.035	15	PASS
CCV5	CCV	1	19.55	1.048	15	PASS	19.35	3.554	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	0	3801.398	15	<PQL
N063136-011B	SAMP	1	2.21	2.569	15	PASS	2.21	2.157	15	PASS
N063136-012B	SAMP	1	68.22	1.073	15	PASS	2.2	3.848	15	PASS
N063136-013B	SAMP	1	72.97	1.018	15	PASS	2.16	7.522	15	PASS
N063136-014B	SAMP	1	2.04	3.859	15	PASS	2.1	1.894	15	PASS
N063135-001B	SAMP	10	42.28	1.469	15	PASS	1.95	3.228	15	PASS
N063135-003B	SAMP	10	49.21	1.154	15	PASS	0.57	28.88	15	NR!
N063135-005B	SAMP	10	61.68	1.389	15	PASS	<0.000	N/A	15	<PQL
CCV6	CCV	1	19.75	1.362	15	PASS	19.46	3.998	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL	0.01	194.938	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	19.92	1.273	15	PASS	20.03	1.529	15	PASS
CCV7	CCV	1	19.57	1.584	15	PASS	19.44	4.09	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	<0.000	N/A	15	<PQL	0	221.729	15	<PQL
ICSAB5	ICSAB	1	20.24	0.378	15	PASS	19.98	1.907	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240216A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0216001.d	RINSE	ICAL	1	02/16/24 12:08 PM
A0216002.d	RINSE	ICAL	1	02/16/24 12:13 PM
A0216003.d	Cal Blk	IBLK	1	02/16/24 12:18 PM
A0216004.d	Std1-0.1/1 ppb	ICAL	1	02/16/24 12:22 PM
A0216005.d	Std2-0.5/5 ppb	ICAL	1	02/16/24 12:27 PM
A0216006.d	Std3-5/50 ppb	ICAL	1	02/16/24 12:32 PM
A0216007.d	Std4-10/100 ppb	ICAL	1	02/16/24 12:37 PM
A0216008.d	Std5-4.0/20/200 ppb	ICAL	1	02/16/24 12:41 PM
A0216009.d	Std6-8.0/40/400 ppb	ICAL	1	02/16/24 12:46 PM
A0216010.d	Std7-100/1000 ppb	ICAL	1	02/16/24 12:51 PM
A0216011.d	Std8-200/2000 ppb	ICAL	1	02/16/24 12:56 PM
A0216012.d	ICV	ICV	1	02/16/24 1:21 PM
A0216013.d	ICB	ICB	1	02/16/24 1:25 PM
A0216014.d	LLICV1	CCV1	1	02/16/24 1:30 PM
A0216015.d	MLCCV	CCV	1	02/16/24 1:38 PM
A0216016.d	ICSA1	ICSA	1	02/16/24 1:42 PM
A0216017.d	ICSAB1	ICSAB	1	02/16/24 1:47 PM
A0216018.d	LLICV1	LLICV	1	02/16/24 1:52 PM
A0216019.d	MB4-106767	MBLK	1	02/16/24 2:00 PM
A0216020.d	MB5-106767	MBLK	1	02/16/24 2:05 PM
A0216021.d	LCS-106767	LCS	1	02/16/24 2:09 PM
A0216022.d	MDL 4	SAMP	1	02/16/24 2:14 PM
A0216023.d	MDL 5	SAMP	1	02/16/24 2:19 PM
A0216024.d	MB4-106768	MBLK	1	02/16/24 2:23 PM
A0216025.d	MB5-106768	MBLK	1	02/16/24 2:28 PM
A0216026.d	LCS-106768	LCS	1	02/16/24 2:33 PM
A0216027.d	MDL 4	SAMP	1	02/16/24 2:37 PM
A0216028.d	MDL 5	SAMP	1	02/16/24 2:42 PM
A0216029.d	CCV1	CCV	1	02/16/24 2:46 PM
A0216030.d	CCB1	CCB	1	02/16/24 2:51 PM
A0216031.d	MB4-106769	MBLK	1	02/16/24 2:56 PM
A0216032.d	MB5-106769	MBLK	1	02/16/24 3:00 PM
A0216033.d	MB4-106769	MBLK	1	02/16/24 3:05 PM
A0216034.d	MB4-106769	MBLK	1	02/16/24 3:10 PM
A0216035.d	MB5-106769	MBLK	1	02/16/24 3:15 PM
A0216036.d	LCS-106769	LCS	1	02/16/24 3:20 PM
A0216037.d	MDL 4	SAMP	1	02/16/24 3:24 PM
A0216038.d	MDL 5	SAMP	1	02/16/24 3:29 PM
A0216039.d	MDL 4	SAMP	1	02/16/24 3:34 PM
A0216040.d	MDL 5	SAMP	1	02/16/24 3:38 PM
A0216041.d	CCV2	CCV	1	02/16/24 3:43 PM
A0216042.d	CCB2	CCB	1	02/16/24 3:48 PM

INJECTION LOG: 240216A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0216043.d	ICSA2	ICSA	1	02/16/24 3:52 PM
A0216044.d	ICSAB2	ICSAB	1	02/16/24 3:57 PM
A0216045.d	MB-106890	MBLK	1	02/16/24 4:02 PM
A0216046.d	LCS-106890	LCS	1	02/16/24 4:06 PM
A0216047.d	N063127-001A	SAMP	1	02/16/24 4:11 PM
A0216048.d	N063127-001A	SAMP	5	02/16/24 4:15 PM
A0216049.d	N063127-001A-PS	PS	1	02/16/24 4:20 PM
A0216050.d	N063127-001A-MS	MS	1	02/16/24 4:25 PM
A0216051.d	N063127-001A-MSD	MSD	1	02/16/24 4:29 PM
A0216052.d	N063128-001A	SAMP	1	02/16/24 4:34 PM
A0216053.d	N063129-001A	SAMP	1	02/16/24 4:39 PM
A0216054.d	CCV3	CCV	1	02/16/24 4:43 PM
A0216055.d	CCB3	CCB	1	02/16/24 4:48 PM
A0216056.d	ICSA3	ICSA	1	02/16/24 4:53 PM
A0216057.d	ICSAB3	ICSAB	1	02/16/24 4:57 PM
A0216058.d	MB-106888	MBLK	1	02/16/24 5:02 PM
A0216059.d	LCS-106888	LCS	1	02/16/24 5:07 PM
A0216060.d	N063135-001B	SAMP	1	02/16/24 5:11 PM
A0216061.d	N063135-003B	SAMP	1	02/16/24 5:16 PM
A0216062.d	N063135-005B	SAMP	1	02/16/24 5:20 PM
A0216063.d	N063136-001B	SAMP	1	02/16/24 5:25 PM
A0216064.d	N063136-001B	SAMP	5	02/16/24 5:30 PM
A0216065.d	N063136-001B-PS	PS	1	02/16/24 5:34 PM
A0216066.d	N063136-001B-MS	MS	1	02/16/24 5:39 PM
A0216067.d	RINSE	RINSE	1	02/16/24 5:44 PM
A0216068.d	CCV4	CCV	1	02/16/24 5:48 PM
A0216069.d	CCB4	CCB	1	02/16/24 5:53 PM
A0216070.d	N063136-001B-MSD	MSD	1	02/16/24 5:57 PM
A0216071.d	N063136-002B	SAMP	1	02/16/24 6:02 PM
A0216072.d	N063136-003B	SAMP	1	02/16/24 6:07 PM
A0216073.d	N063136-004B	SAMP	1	02/16/24 6:12 PM
A0216074.d	N063136-005B	SAMP	1	02/16/24 6:16 PM
A0216075.d	N063136-006B	SAMP	1	02/16/24 6:21 PM
A0216076.d	N063136-008B	SAMP	1	02/16/24 6:25 PM
A0216077.d	N063136-009B	SAMP	1	02/16/24 6:30 PM
A0216078.d	N063136-010B	SAMP	1	02/16/24 6:35 PM
A0216079.d	RINSE	RINSE	1	02/16/24 6:39 PM
A0216080.d	CCV5	CCV	1	02/16/24 6:44 PM
A0216081.d	CCB5	CCB	1	02/16/24 6:49 PM
A0216082.d	N063136-011B	SAMP	1	02/16/24 6:53 PM
A0216083.d	N063136-012B	SAMP	1	02/16/24 6:58 PM
A0216084.d	N063136-013B	SAMP	1	02/16/24 7:02 PM

INJECTION LOG: 240216A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0216085.d	N063136-014B	SAMP	1	02/16/24 7:07 PM
A0216086.d	N063135-001B	SAMP	10	02/16/24 7:12 PM
A0216087.d	N063135-003B	SAMP	10	02/16/24 7:16 PM
A0216088.d	N063135-005B	SAMP	10	02/16/24 7:21 PM
A0216089.d	RINSE	RINSE	1	02/16/24 7:26 PM
A0216090.d	CCV6	CCV	1	02/16/24 7:30 PM
A0216091.d	CCB6	CCB	1	02/16/24 7:35 PM
A0216092.d	ICSA4	ICSA	1	02/16/24 7:40 PM
A0216093.d	ICSAB4	ICSAB	1	02/16/24 7:44 PM
A0216095.d	MB1-106787	MBLK	1	02/16/24 7:54 PM
A0216096.d	MB2-106787	MBLK	1	02/16/24 7:59 PM
A0216097.d	MB3-106787	MBLK	1	02/16/24 8:04 PM
A0216098.d	LCS-106787	LCS	1	02/16/24 8:08 PM
A0216099.d	MDL 1	SAMP	1	02/16/24 8:13 PM
A0216100.d	MDL 2	SAMP	1	02/16/24 8:18 PM
A0216101.d	MDL 3	SAMP	1	02/16/24 8:22 PM
A0216102.d	MDL 1	SAMP	1	02/16/24 8:27 PM
A0216103.d	MDL 2	SAMP	1	02/16/24 8:32 PM
A0216104.d	MDL 3	SAMP	1	02/16/24 8:36 PM
A0216105.d	CCV7	CCV	1	02/16/24 8:41 PM
A0216106.d	CCB7	CCB	1	02/16/24 8:45 PM
A0216107.d	ICSA5	ICSA	1	02/16/24 8:50 PM
A0216108.d	ICSAB5	ICSAB	1	02/16/24 8:55 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/16/2024 11:07:17 AM**
Prep End Date: **2/16/2024 3:00:00 PM**

Reviewed/ Date: JRB 3/12/2024

Initials/ Date: for

Prep Batch **106888** Prep Code:**3010_W_MSDISS_TPK** Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-53**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-106888	Aqueous		25	☐	25	1.000		
MB-106888	Aqueous		25	☐	25	1.000		
N063135-001B	Groundwater	<2	25	☐	25	1.000		
N063135-003B	Groundwater	<2	25	☐	25	1.000		
N063135-005B	Groundwater	<2	25	☐	25	1.000		
N063136-001B	Surface Water	<2	25	☐	25	1.000		
N063136-001B-MS	Surface Water	<2	25	☐	25	1.000		
N063136-001B-MSD	Surface Water	<2	25	☐	25	1.000		
N063136-002B	Surface Water	<2	25	☐	25	1.000		
N063136-003B	Surface Water	<2	25	☐	25	1.000		
N063136-004B	Surface Water	<2	25	☐	25	1.000		
N063136-005B	Surface Water	<2	25	☐	25	1.000		
N063136-006B	Surface Water	<2	25	☐	25	1.000		
N063136-008B	Surface Water	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/16/2024 11:07:17 AM**
Prep End Date: **2/16/2024 3:00:00 PM**
Prep Batch **106888** Prep Code:**3010_W_MSDISS_TPK**

Reviewed/ Date: JRB 3/12/2024
Initials/ Date: for
Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-53**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063136-009B	Surface Water	<2	25	☐	25	1.000		
N063136-010B	Surface Water	<2	25	☐	25	1.000		
N063136-011B	Surface Water	<2	25	☐	25	1.000		
N063136-012B	Surface Water	<2	25	☐	25	1.000		
N063136-013B	Surface Water	<2	25	☐	25	1.000		
N063136-014B	Surface Water	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240215A.b
Acq. Date-Time	2024-02-16 12:04:42
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

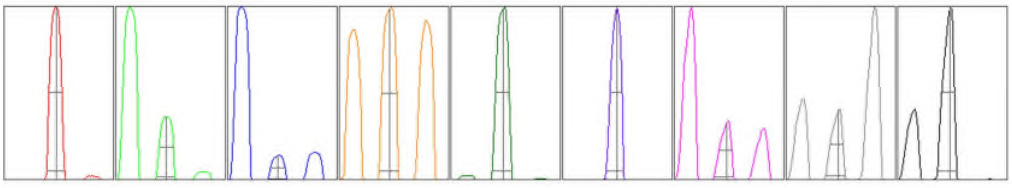
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	5995	59949.07	500.00		2.687	5.000
24	10.00	19419	194190.56	500.00		2.324	5.000
25	10.00	2575	25745.99	500.00		2.795	5.000
26	10.00	2966	29657.14	500.00		3.024	5.000
59	10.00	29892	298918.55	500.00		2.577	5.000
115	10.00	39503	395034.56	500.00		1.897	5.000
206	10.00	7795	77947.24	500.00		2.229	5.000
207	10.00	6504	65039.86	500.00		2.440	5.000
208	10.00	15998	159981.04	500.00		2.186	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.700 %
Doubly Charged	70 / 140 1.698 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	6055.51	8.95	8.90 - 9.10	
24	19772.53	23.90	23.90 - 24.10	
25	2654.65	24.90	24.90 - 25.10	
26	3021.02	25.90	25.90 - 26.10	
59	29544.61	58.95	58.90 - 59.10	
115	38707.90	115.00	114.90 - 115.10	
206	7398.40	205.95	205.90 - 206.10	
207	6556.71	206.95	206.90 - 207.10	
208	16398.83	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.36	0.486	0.900	
24	0.40	0.505	0.900	
25	0.40	0.495	0.900	
26	0.42	0.536	0.900	
59	0.38	0.532	0.900	
115	0.34	0.480	0.900	
206	0.36	0.540	0.900	
207	0.36	0.544	0.900	
208	0.35	0.537	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.1 mm	Torch V	1.3 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2524 V	Pulse HV	1607 V

[H2]

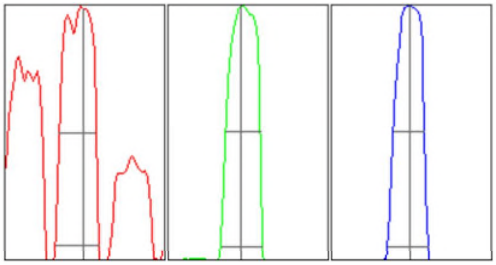
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		170	1702.89			7.650	
59		2113	21125.01			3.072	
115		30720	307203.39			2.719	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.597 %
Doubly Charged	70 / 140 0.325 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	182.77	26.00	25.90 - 26.10	
59	2234.33	58.90	58.90 - 59.10	
115	31954.18	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.70	0.828	0.900	
59	0.65	0.786	0.900	
115	0.59	0.770	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0002	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	-0.04		

Hardware Settings

Torch

Torch H	1.1 mm	Torch V	1.3 mm		

EM

Discriminator	4.5 mV	Analog HV	2524 V	Pulse HV	1607 V

[He]

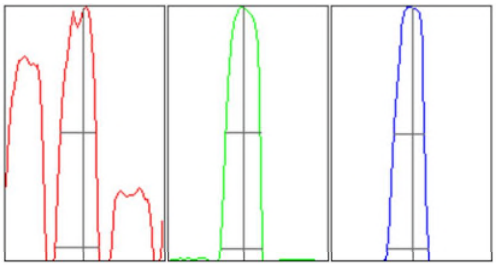
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		78	780.42			12.714	
59		6435	64346.77			2.301	
115		5433	54334.98			2.619	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.241 %
Doubly Charged	70 / 140 1.092 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	79.25	26.00	25.90 - 26.10	
59	6468.51	58.95	58.90 - 59.10	
115	5468.83	115.05	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.66	0.829	0.900	
59	0.65	0.785	0.900	
115	0.58	0.769	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0002	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	-0.04		

Hardware Settings

Torch

Torch H	1.1 mm	Torch V	1.3 mm

EM

Discriminator	4.5 mV	Analog HV	2524 V	Pulse HV	1607 V

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240216A

Instrument ID: ICPMS-03

Analyte	Data File	A0216003.d	A0216004.d	A0216005.d	A0216006.d	A0216007.d	A0216008.d	A0216009.d	A0216010.d	A0216011.d	
	Acq. Date-Time	02/16/2024 12:18 PM	02/16/2024 12:22 PM	02/16/2024 12:27 PM	02/16/2024 12:32 PM	02/16/2024 12:37 PM	02/16/2024 12:41 PM	02/16/2024 12:46 PM	02/16/2024 12:51 PM	02/16/2024 12:56 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	39091.2		39209.2	39002.1	39594.5	38770.4	39258.2	38888.5	38964.2	
55 Mn [2]	CPS	65.3		729.6	6688.7	13359.2	26759.3	54754.6	137493.5	276069.5	1.0000
72 Ge (ISTD) [2]	CPS	23312.2	23881.9	23306.6	23708.3	23504.7	23529.1	23770.6	23578.1	23796.2	
75 As [2]	CPS	6.6	23.3	161.1	1524.5	3089.1	6307.8	12744.7	32533.9	65590.5	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **ICV** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696737**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.376	0.10	10.00	0	104	90	110				
Manganese	101.548	0.50	100.0	0	102	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **ZZZZZZ** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696739**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.116	0.10	0.1000	0	116	80	120				
Manganese	0.529	0.50	0.5000	0	106	80	120				

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **CCV** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696740**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.512	0.10	20.00	0	97.6	90	110				
Manganese	19.437	0.50	20.00	0	97.2	90	110				

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **CCV** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696753**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.441	0.10	20.00	0	97.2	90	110				
Manganese	19.528	0.50	20.00	0	97.6	90	110				

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **CCV** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696765**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181642**
Client ID: **CCV**	Batch ID: **R181642**	TestNo: **EPA 6020**		Analysis Date: **2/16/2024**	SeqNo: **5696765**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.411	0.10	20.00	0	97.1	90	110				
Manganese	19.576	0.50	20.00	0	97.9	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181642**
Client ID: **CCV**	Batch ID: **R181642**	TestNo: **EPA 6020**		Analysis Date: **2/16/2024**	SeqNo: **5696778**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.694	0.10	20.00	0	98.5	90	110				
Manganese	19.396	0.50	20.00	0	97.0	90	110				

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181642**
Client ID: **CCV**	Batch ID: **R181642**	TestNo: **EPA 6020**		Analysis Date: **2/16/2024**	SeqNo: **5696791**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.488	0.10	20.00	0	97.4	90	110				
Manganese	19.370	0.50	20.00	0	96.8	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181642**
Client ID: **CCV**	Batch ID: **R181642**	TestNo: **EPA 6020**		Analysis Date: **2/16/2024**	SeqNo: **5696802**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.353	0.10	20.00	0	96.8	90	110				
Manganese	19.551	0.50	20.00	0	97.8	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181642**
Client ID: **CCV**	Batch ID: **R181642**	TestNo: **EPA 6020**		Analysis Date: **2/16/2024**	SeqNo: **5696811**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.458	0.10	20.00	0	97.3	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181642**
Client ID: **CCV**	Batch ID: **R181642**	TestNo: **EPA 6020**		Analysis Date: **2/16/2024**	SeqNo: **5696811**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.754	0.50	20.00	0	98.8	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB**	SampType: **ICB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181642**
Client ID: **ICB**	Batch ID: **R181642**	TestNo: **EPA 6020**		Analysis Date: **2/16/2024**	SeqNo: **5696738**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181642**
Client ID: **CCB**	Batch ID: **R181642**	TestNo: **EPA 6020**		Analysis Date: **2/16/2024**	SeqNo: **5696754**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181642**
Client ID: **CCB**	Batch ID: **R181642**	TestNo: **EPA 6020**		Analysis Date: **2/16/2024**	SeqNo: **5696766**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181642**
Client ID: **CCB**	Batch ID: **R181642**	TestNo: **EPA 6020**		Analysis Date: **2/16/2024**	SeqNo: **5696779**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **181642**
Client ID: **CCB**	Batch ID: **R181642**	TestNo: **EPA 6020**		Analysis Date: **2/16/2024**	SeqNo: **5696792**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB4** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **CCB** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696792**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **CCB5** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **CCB** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696803**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **CCB6** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **CCB** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696812**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **ICSA** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696741**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **ICSAB** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696742**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.241	0.10	20.00	0	101	80	120				
Manganese	20.521	0.50	20.00	0	103	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **ICSA** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696767**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **ICSAB** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696768**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.292	0.10	20.00	0	101	80	120				
Manganese	20.640	0.50	20.00	0	103	80	120				

Sample ID **ICSA3** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **ICSA** Batch ID: **R181642** TestNo: **EPA 6020** Analysis Date: **2/16/2024** SeqNo: **5696780**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	ICSA3	SampType:	ICSA	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	181642
Client ID:	ICSA	Batch ID:	R181642	TestNo:	EPA 6020			Analysis Date:	2/16/2024	SeqNo:	5696780

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID	ICSAB3	SampType:	ICSAB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	181642
Client ID:	ICSAB	Batch ID:	R181642	TestNo:	EPA 6020			Analysis Date:	2/16/2024	SeqNo:	5696781

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.561	0.10	20.00	0	103	80	120				
Manganese	20.424	0.50	20.00	0	102	80	120				

Sample ID	ICSA4	SampType:	ICSA	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	181642
Client ID:	ICSA	Batch ID:	R181642	TestNo:	EPA 6020			Analysis Date:	2/16/2024	SeqNo:	5696813

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID	ICSAB4	SampType:	ICSAB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	181642
Client ID:	ICSAB	Batch ID:	R181642	TestNo:	EPA 6020			Analysis Date:	2/16/2024	SeqNo:	5696814

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.034	0.10	20.00	0	100	80	120				
Manganese	19.924	0.50	20.00	0	99.6	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240216A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]					72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	39091.2	39091.2	100	PASS	30-150	23312.2	23312.2	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	39434.2	39091.2	100.88	PASS	30-150	23881.9	23312.2	102.44	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	39209.2	39091.2	100.3	PASS	30-150	23306.6	23312.2	99.98	PASS	30-150
Std3-5/50 ppb	ICAL	1	39002.1	39091.2	99.77	PASS	30-150	23708.3	23312.2	101.7	PASS	30-150
Std4-10/100 ppb	ICAL	1	39594.5	39091.2	101.29	PASS	30-150	23504.7	23312.2	100.83	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	38770.4	39091.2	99.18	PASS	30-150	23529.1	23312.2	100.93	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	39258.2	39091.2	100.43	PASS	30-150	23770.6	23312.2	101.97	PASS	30-150
Std7-100/1000 ppb	ICAL	1	38888.5	39091.2	99.48	PASS	30-150	23578.1	23312.2	101.14	PASS	30-150
Std8-200/2000 ppb	ICAL	1	38964.2	39091.2	99.68	PASS	30-150	23796.2	23312.2	102.08	PASS	30-150
ICV	ICV	1	38803.8	39091.2	99.26	PASS	30-150	22930.5	23312.2	98.36	PASS	30-150
ICB	ICB	1	38122.3	39091.2	97.52	PASS	30-150	22778.1	23312.2	97.71	PASS	30-150
LLICV1	CCV1	1	38112.3	39091.2	97.5	PASS	30-150	23079.7	23312.2	99	PASS	30-150
MLCCV	CCV	1	38812.8	39091.2	99.29	PASS	30-150	23193.1	23312.2	99.49	PASS	30-150
ICSA1	ICSA	1	37763.7	39091.2	96.6	PASS	30-150	22860.4	23312.2	98.06	PASS	30-150
ICSAB1	ICSAB	1	38094.4	39091.2	97.45	PASS	30-150	22774.8	23312.2	97.69	PASS	30-150
LLICV1	LLICV	1	37780.4	39091.2	96.65	PASS	30-150	22814.8	23312.2	97.87	PASS	30-150
CCV1	CCV	1	37714.7	39091.2	96.48	PASS	30-150	22612.3	23312.2	97	PASS	30-150
CCB1	CCB	1	37406.2	39091.2	95.69	PASS	30-150	22753.6	23312.2	97.6	PASS	30-150
CCV2	CCV	1	38135.7	39091.2	97.56	PASS	30-150	23390.1	23312.2	100.33	PASS	30-150
CCB2	CCB	1	37891.7	39091.2	96.93	PASS	30-150	22813.7	23312.2	97.86	PASS	30-150
ICSA2	ICSA	1	37847.2	39091.2	96.82	PASS	30-150	22931.6	23312.2	98.37	PASS	30-150
ICSAB2	ICSAB	1	38303.8	39091.2	97.99	PASS	30-150	23453.5	23312.2	100.61	PASS	30-150
CCV3	CCV	1	38846.1	39091.2	99.37	PASS	30-150	23303.3	23312.2	99.96	PASS	30-150
CCB3	CCB	1	38413	39091.2	98.27	PASS	30-150	23160.9	23312.2	99.35	PASS	30-150
ICSA3	ICSA	1	38418.5	39091.2	98.28	PASS	30-150	23352.2	23312.2	100.17	PASS	30-150
ICSAB3	ICSAB	1	38377.3	39091.2	98.17	PASS	30-150	23163.1	23312.2	99.36	PASS	30-150
MB-106888	MBLK	1	37061	39091.2	94.81	PASS	30-150	22835.9	23312.2	97.96	PASS	30-150
LCS-106888	LCS	1	37663.5	39091.2	96.35	PASS	30-150	22642.4	23312.2	97.13	PASS	30-150
N063135-001B	SAMP	1	34090.3	39091.2	87.21	PASS	30-150	20706.5	23312.2	88.82	PASS	30-150
N063135-003B	SAMP	1	33626	39091.2	86.02	PASS	30-150	18795.3	23312.2	80.62	PASS	30-150
N063135-005B	SAMP	1	31574.3	39091.2	80.77	PASS	30-150	17555	23312.2	75.3	PASS	30-150
N063136-001B	SAMP	1	38039.9	39091.2	97.31	PASS	30-150	22660.2	23312.2	97.2	PASS	30-150
N063136-001B	SAMP	5	38551.1	39091.2	98.62	PASS	30-150	23292.2	23312.2	99.91	PASS	30-150
N063136-001B-PS	PS	1	36900.7	39091.2	94.4	PASS	30-150	22219.6	23312.2	95.31	PASS	30-150
N063136-001B-MS	MS	1	36693.6	39091.2	93.87	PASS	30-150	21836.8	23312.2	93.67	PASS	30-150
CCV4	CCV	1	39419.7	39091.2	100.84	PASS	30-150	23684.9	23312.2	101.6	PASS	30-150
CCB4	CCB	1	38198	39091.2	97.72	PASS	30-150	23297.7	23312.2	99.94	PASS	30-150
N063136-001B-MSD	MSD	1	35337.3	39091.2	90.4	PASS	30-150	21757.9	23312.2	93.33	PASS	30-150
N063136-002B	SAMP	1	36842.8	39091.2	94.25	PASS	30-150	22007	23312.2	94.4	PASS	30-150
N063136-003B	SAMP	1	35809.4	39091.2	91.6	PASS	30-150	22241.8	23312.2	95.41	PASS	30-150
N063136-004B	SAMP	1	36117.9	39091.2	92.39	PASS	30-150	21840.2	23312.2	93.69	PASS	30-150

INTERNAL STANDARD: 240216A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]					72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
N063136-005B	SAMP	1	35550	39091.2	90.94	PASS	30-150	21722.2	23312.2	93.18	PASS	30-150
N063136-006B	SAMP	1	35222.6	39091.2	90.1	PASS	30-150	21691	23312.2	93.05	PASS	30-150
N063136-008B	SAMP	1	35640.1	39091.2	91.17	PASS	30-150	21613.2	23312.2	92.71	PASS	30-150
N063136-009B	SAMP	1	35076.7	39091.2	89.73	PASS	30-150	21609.8	23312.2	92.7	PASS	30-150
N063136-010B	SAMP	1	36396.2	39091.2	93.11	PASS	30-150	22158.4	23312.2	95.05	PASS	30-150
CCV5	CCV	1	39239.3	39091.2	100.38	PASS	30-150	24006.5	23312.2	102.98	PASS	30-150
CCB5	CCB	1	38347.2	39091.2	98.1	PASS	30-150	23101.9	23312.2	99.1	PASS	30-150
N063136-011B	SAMP	1	36092.3	39091.2	92.33	PASS	30-150	21869.1	23312.2	93.81	PASS	30-150
N063136-012B	SAMP	1	36271.5	39091.2	92.79	PASS	30-150	21911.4	23312.2	93.99	PASS	30-150
N063136-013B	SAMP	1	36082.2	39091.2	92.3	PASS	30-150	22106.1	23312.2	94.83	PASS	30-150
N063136-014B	SAMP	1	36292.7	39091.2	92.84	PASS	30-150	22038.2	23312.2	94.54	PASS	30-150
N063135-001B	SAMP	10	36666.8	39091.2	93.8	PASS	30-150	22920.5	23312.2	98.32	PASS	30-150
N063135-003B	SAMP	10	37309.3	39091.2	95.44	PASS	30-150	21794.5	23312.2	93.49	PASS	30-150
N063135-005B	SAMP	10	37108.9	39091.2	94.93	PASS	30-150	22141.7	23312.2	94.98	PASS	30-150
CCV6	CCV	1	39856.3	39091.2	101.96	PASS	30-150	24118.9	23312.2	103.46	PASS	30-150
CCB6	CCB	1	39171.4	39091.2	100.21	PASS	30-150	23810.7	23312.2	102.14	PASS	30-150
ICSA4	ICSA	1	39174.7	39091.2	100.21	PASS	30-150	24064.4	23312.2	103.23	PASS	30-150
ICSAB4	ICSAB	1	39636.9	39091.2	101.4	PASS	30-150	23834.1	23312.2	102.24	PASS	30-150
CCV7	CCV	1	39661.4	39091.2	101.46	PASS	30-150	24190.1	23312.2	103.77	PASS	30-150
CCB7	CCB	1	38695.9	39091.2	98.99	PASS	30-150	24045.5	23312.2	103.15	PASS	30-150
ICSA5	ICSA	1	39239.3	39091.2	100.38	PASS	30-150	24058.8	23312.2	103.2	PASS	30-150
ICSAB5	ICSAB	1	40015.6	39091.2	102.36	PASS	30-150	24249.1	23312.2	104.02	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.: N063136
Test Method: EPA 6020
Analysis Date: 2/16/2024

Matrix: Surface Water
Batch No.: 106888

Instrument ID: ICPMS-03
Instrument Description: Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to As & Mn. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063136-001B DT 5x	Arsenic	As	µg/L	2.494526	NA	2.206795	13.04%	10
N063136-001B DT 5x	Manganese	Mn	µg/L	1.412802	NA	1.533521	7.87%	10

Reviewed by:

JRB 3/12/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063136
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **N063136-001B-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **181642**
Client ID: **ZZZZZZ** Batch ID: **106888** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/16/2024** SeqNo: **5696789**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.443	0.10	10.00	2.207	102	80	120				
Manganese	97.836	0.50	100.0	1.534	96.3	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

ARCADIS

Project: PG&E Topock - PCM

Project No.: 30211191

ASSET Laboratories Work Order:

N063153

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063153

Item	Page
Cover Page	1-5
Analytical Result/QC Summary Reports	6-15
Sample Receiving Items	16-19
List of Analysts	20
Raw Data	
EPA 218.6	21-156

March 07, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063153

RE: PG&E Topock - PCM, 30211191

Attention: Dan Bush

Enclosed are the results for sample(s) received on February 16, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

This is an amended report. Please disregard all previous documentation that corresponds to the page(s) enclosed.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

ASSET Laboratories **Date:** *07-Mar-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063153

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 218.6:

The report was amended to update the Lab ID for sample EB-726-Q124. There are no changes in the sample result.

ASSET Laboratories

Date: *28-Feb-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063153
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063153-001A	MW-35-060-Q124	Groundwater	2/16/2024 8:10:00 AM	2/16/2024	2/28/2024
N063153-002A	MW-35-135-Q124	Groundwater	2/16/2024 8:48:00 AM	2/16/2024	2/28/2024
N063153-003A	EB-725-Q124	Groundwater	2/16/2024 9:10:00 AM	2/16/2024	2/28/2024
N063153-004A	MW-97-042-Q124	Groundwater	2/16/2024 8:13:00 AM	2/16/2024	2/28/2024
N063153-005A	MW-97-202-Q124	Groundwater	2/16/2024 8:49:00 AM	2/16/2024	2/28/2024
N063153-006A	EB-726-Q124	Groundwater	2/16/2024 9:00:00 AM	2/16/2024	2/28/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-35-060-Q124
Lab Order:	N063153		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/16/2024 8:10:00 AM
Lab ID:	N063153-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240217A**	QC Batch: **R182650**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	18	0.19	1.0		µg/L	5	2/17/2024 12:37 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-35-135-Q124
Lab Order:	N063153		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/16/2024 8:48:00 AM
Lab ID:	N063153-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240217A**	QC Batch: **R182650**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	25	0.19	1.0		µg/L	5	2/17/2024 01:14 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-725-Q124
Lab Order:	N063153		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/16/2024 9:10:00 AM
Lab ID:	N063153-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240217A**	QC Batch: **R182650**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/17/2024 02:11 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-97-042-Q124
Lab Order:	N063153		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/16/2024 8:13:00 AM
Lab ID:	N063153-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240219A**	QC Batch: **R182690**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	21	0.19	1.0		µg/L	5	2/19/2024 02:23 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-97-202-Q124
Lab Order:	N063153		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/16/2024 8:49:00 AM
Lab ID:	N063153-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240219A**	QC Batch: **R182690**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	57	0.39	2.0		µg/L	10	2/19/2024 03:01 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *07-Mar-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-726-Q124
Lab Order:	N063153	**Collection Date:**	2/16/2024 9:00:00 AM
Project:	PG&E Topock - PCM, 30211191	**Matrix:**	GROUNDWATER
Lab ID:	N063153-006A		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240217A**	QC Batch: **R182650**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/17/2024 02:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063153
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R182650**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **PBW**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698520**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R182650**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **LCSW**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698521**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.908	0.20	5.000	0	98.2	90	110				

Sample ID: **N063051-001BREP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698524**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.734	0.20						4.755	0.443	20	

Sample ID: **N063051-001BMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698527**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.946	0.20	5.000	4.755	104	90	110				

Sample ID: **N063051-001BMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698531**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.052	0.20	5.000	4.755	106	90	110	9.946	1.06	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063153
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063153-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698533**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	50.229	1.0	25.00	25.06	101	90	110				

Sample ID: **N063153-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698535**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.029	0.20	1.000	0	103	90	110				

Sample ID: **N063153-006AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698539**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.005	0.20	1.000	0	100	90	110				

Sample ID: **N063136-011AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698541**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.010	0.20	1.000	0	101	90	110				

Sample ID: **N063136-012AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698543**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.018	0.20	1.000	0	102	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063153
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063136-013AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698545**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.999	0.20	1.000	0	99.9	90	110				

Sample ID: **N063136-014AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698547**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.016	0.20	1.000	0	102	90	110				

Sample ID: **N063153-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698551**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	42.684	1.0	25.00	17.84	99.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063153
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R182690**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182690**
Client ID: **PBW**	Batch ID: **R182690**	TestNo: **EPA 218.6**		Analysis Date: **2/19/2024**	SeqNo: **5699793**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R182690**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182690**
Client ID: **LCSW**	Batch ID: **R182690**	TestNo: **EPA 218.6**		Analysis Date: **2/19/2024**	SeqNo: **5699794**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.800	0.20	5.000	0	96.0	90	110				

Sample ID: **N063153-004ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182690**
Client ID: **ZZZZZZ**	Batch ID: **R182690**	TestNo: **EPA 218.6**		Analysis Date: **2/19/2024**	SeqNo: **5699796**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	20.069	1.0						20.87	3.91	20	

Sample ID: **N063153-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182690**
Client ID: **ZZZZZZ**	Batch ID: **R182690**	TestNo: **EPA 218.6**		Analysis Date: **2/19/2024**	SeqNo: **5699797**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	45.655	1.0	25.00	20.87	99.1	90	110				

Sample ID: **N063153-004AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182690**
Client ID: **ZZZZZZ**	Batch ID: **R182690**	TestNo: **EPA 218.6**		Analysis Date: **2/19/2024**	SeqNo: **5699798**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	45.450	1.0	25.00	20.87	98.3	90	110	45.65	0.449	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

SAMPLE RECEIVING ITEMS

ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

Page 1 of 1

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.moore@rotigen.com	Address:
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com P.O.#
Submitted By: Riggie Tap	Phone: 916-786-3302 Fax:	Phone: 949-727-1400, ext 200 Fax:
Title: Field Tech.		
Signature: Date: 02/16/24	Sampled By: Riggie Tap	
I hereby authorize ASSET Labs to perform the tests indicated below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for	
Project Name: PG&E Topock - PCM	Signature: Date: 02/16/24	
Project Number: 30211191		

EDD Requirement		QA/QC	
Excel EDD		RTNE	
Geotracker		RWQCB	✓
Labspec		CalTrans	
Others	✓	LEVEL III	
Specify: RWQCB		LEVEL IV	
Global ID:		Regulatory	
		Specify State:	

Sample Receipt Condition	Y	N
1. Chilled	✓	
2. Headspace		
3. Container Intact	✓	
4. Seal Present		
5. IR number	3	
6. Method of Cooling: ICE		
Sample Temp: 2.6 °C		
Courier: ASSET		
Tracking No.:		

Matrix: Ground X | Potable | NPDES | Surface; Sediment | Soil | Other Solid

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 250 mL poly	Nitrate, sulfate (EPA 300.0) 1 L poly	Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese 500mL poly	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, 500mL poly	Dissolved metals (SW6020) FF; HNO3 Selenium, Molybdenum 500mL poly	Total Organic Carbon (SM5310C); H2SO4 3x40 mL VOA	Ammonia as Nitrogen (SM4500NH3D); H2SO4 1 L poly	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 125 mL poly	Nitrate (EPA 300.0) 1 L poly	Nitrate (EPA 300.0) 1 L poly	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1		MW-35-060-Q124	2/16/2024	0810		X								~~X~~		E	1	P	BNS	N063153-001
2		MW-35-135-Q124	2/16/2024	0848		X								~~X~~		E	1	P	BNS	-002
3		EB-725-Q124	2/16/2024	0910		X								~~X~~		E	1	P	BNS	-003
4		MW-97-042-Q124	2/16/2024	0813		X								~~X~~	-11	E	1	P	BNS	-004
5		MW-97-202-Q124	2/16/2024	0849		X								~~X~~		E	1	P	BNS	-005
6	EB-726-Q124	~~EB-725-Q124~~	2/16/2024	0900		X								X		E	1	P	BNS	-006
7						~~X~~	(11)									E	~~1~~	P	BNS	(11)
8																				
9																				
10																				
11																				
12																				
13																				
14																				

Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:
Riggie Tap	02/16/24 1200	Michael Alcantara	2/16/24 1200
Michael Alcantara	2/16/24 1556	Chara Cintron	2/16/24 1556
Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days. surcharges will apply for rush analysis.
Less than 24 Hrs.=200% Next Days=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. A. d 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:			
H=HCL	N=HNO_3	S=H_2SO_4	C=4°C
Z=Zn(AC)$_2$	C=NaOH	T=$Na_2S_2O_3$	
Others/Specify:	B	(NH4)2SO4/NH4OH	

Container Type:		
T=Tube	V=VOA	P=Pint
J=Jar	B=Tedlar	G=Glass
M=Metal	M=Metal	C=Can

White=Laboratory Copy
Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	2/16/2024	Workorder:	N063153
Rep sample Temp (Deg C):	2.6	IR Gun ID:	3

Temp Blank: ☑ Yes ☐ No

Carrier name: ASSET

Last 4 digits of Tracking No.: NA Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☐	No ☐	NA ☑
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By YR YRodriguez 2/19/2024

Reviewed By: for: MBC 02/19/2024

ASSET Laboratories

WORK ORDER Summary

19-Feb-24

WorkOrder: N063153

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 2/16/2024 3:56 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063153-001A	MW-35-060-Q124	2/16/2024 8:10:00 AM	3/4/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063153-002A	MW-35-135-Q124	2/16/2024 8:48:00 AM	3/4/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063153-003A	EB-725-Q124	2/16/2024 9:10:00 AM	3/4/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063153-004A	MW-97-042-Q124	2/16/2024 8:13:00 AM	3/4/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063153-005A	MW-97-202-Q124	2/16/2024 8:49:00 AM	3/4/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063153-006A	EB-726-Q124	2/16/2024 9:00:00 AM	3/4/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063153-008A	FOLDER	3/4/2024	3/4/2024		Folder	Folder	☐	☐	☐	LAB
			3/4/2024		Folder	Level IV Report	☐	☐	☐	LAB
			3/4/2024		Folder	Folder	☐	☐	☐	LAB

List of Analysts

ASSET Laboratories Work Order: N063153

NAME	TEST METHOD
Ria Abes	EPA 218.6

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R182650
ASSET #: N063153

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/17/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer RB 02192024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R182690
ASSET #: N063153

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/19/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer RB 02282024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063153-001A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 3.5678 * 5$$

$$Cr^{+6}, \mu g/L = 17.8390$$

Reporting results in two significant figures,

$$\mathbf{Cr^{+6}, \mu g/L = 18}$$

Reviewed by:

dlRocha 2/29/2024

ANALYSIS RUN LOG

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240217A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/17/24 10:30 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/17/24 10:44 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/17/24 10:53 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/17/24 11:03 AM	Reported
13	MB-R182650	MBLK	1	Hexavalent Chromium	02/17/24 11:12 AM	Reported
14	LCS-R182650	LCS	1	Hexavalent Chromium	02/17/24 11:22 AM	Reported
15	MB-106824	MBLK	1	Hexavalent Chromium	02/17/24 11:31 AM	Reported
16	N063051-001B	SAMP	1	Hexavalent Chromium	02/17/24 11:41 AM	Reported
17	N063051-001BREP	DUP	1	Hexavalent Chromium	02/17/24 11:50 AM	Reported
18	N063051-002B	SAMP	1	Hexavalent Chromium	02/17/24 12:00 PM	Reported
19	N063051-002BREP	DUP	1	Hexavalent Chromium	02/17/24 12:09 PM	Reported
20	N063051-001BMS	MS	1	Hexavalent Chromium	02/17/24 12:19 PM	Reported
21	N063051-001BMSD	MSD	1	Hexavalent Chromium	02/17/24 12:28 PM	Not Reported
N063153	~~N06315~~3-001A	SAMP	5	Hexavalent Chromium	02/17/24 12:37 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/17/24 12:46 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/17/24 12:56 PM	Reported
25	N063051-001BMSD	MSD	1	Hexavalent Chromium	02/17/24 1:05 PM	Reported
26	N063153-002A	SAMP	5	Hexavalent Chromium	02/17/24 1:14 PM	Reported
27	N063153-002AMS	MS	5	Hexavalent Chromium	02/17/24 1:24 PM	Reported
28	N063153-004A	SAMP	20	Hexavalent Chromium	02/17/24 1:33 PM	Not Reported
29	N063153-004AMS	MS	20	Hexavalent Chromium	02/17/24 1:43 PM	Not Reported
30	N063153-005A	SAMP	50	Hexavalent Chromium	02/17/24 1:52 PM	Not Reported
31	N063153-005AMS	MS	50	Hexavalent Chromium	02/17/24 2:02 PM	Not Reported
32	N063153-003A	SAMP	1	Hexavalent Chromium	02/17/24 2:11 PM	Reported
33	N063153-003AMS	MS	1	Hexavalent Chromium	02/17/24 2:21 PM	Reported
34	N063153-006A	SAMP	1	Hexavalent Chromium	02/17/24 2:30 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/17/24 2:40 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/17/24 2:49 PM	Reported
37	N063153-006AMS	MS	1	Hexavalent Chromium	02/17/24 2:59 PM	Reported
38	N063136-011A	SAMP	1	Hexavalent Chromium	02/17/24 3:08 PM	Reported
39	N063136-011AMS	MS	1	Hexavalent Chromium	02/17/24 3:18 PM	Reported
40	N063136-012A	SAMP	1	Hexavalent Chromium	02/17/24 3:27 PM	Reported
41	N063136-012AMS	MS	1	Hexavalent Chromium	02/17/24 3:36 PM	Reported
42	N063136-013A	SAMP	1	Hexavalent Chromium	02/17/24 3:46 PM	Reported

dMocha 2/29/2024
for RBA

INJECTION LOG: 240217A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063136-013AMS	MS	1	Hexavalent Chromium	02/17/24 3:55 PM	Reported
44	N063136-014A	SAMP	1	Hexavalent Chromium	02/17/24 4:05 PM	Reported
45	N063136-014AMS	MS	1	Hexavalent Chromium	02/17/24 4:14 PM	Reported
46	N063153-005A	SAMP	1	Hexavalent Chromium	02/17/24 4:24 PM	Not Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/17/24 4:33 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/17/24 4:43 PM	Reported
49	N063153-005AMS	MS	1	Hexavalent Chromium	02/17/24 4:52 PM	Not Reported
50	N063153-005A	SAMP	5	Hexavalent Chromium	02/17/24 5:02 PM	Not Reported
51	N063153-005AMS	MS	5	Hexavalent Chromium	02/17/24 5:11 PM	Not Reported
52	N063153-001AMS	MS	5	Hexavalent Chromium	02/17/24 5:20 PM	Reported
53	CCV-5	CCV	1	Hexavalent Chromium	02/17/24 5:30 PM	Reported
54	CCB-5	CCB	1	Hexavalent Chromium	02/17/24 5:39 PM	Reported
55	BLANK	BLANK	1	Hexavalent Chromium	02/17/24 5:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240217A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**19/Feb/24 11:31:47**
No. of Injections:	**58**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/17/2024 10:30	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/17/2024 10:44	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/17/2024 10:53	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/17/2024 11:03	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/17/2024 11:12	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/17/2024 11:22	Finished	LCS @5ppb, IWST-231228B
15	MB-106824,MBLK,1,	7	1000	Unknown		02/17/2024 11:31	Finished	MB STLC
16	N063051-001B,SAMF	8	1000	Unknown		02/17/2024 11:41	Finished	SAMP,10 mL
17	N063051-001BREP,D	9	1000	Unknown		02/17/2024 11:50	Finished	REP,10 mL
18	N063051-002B,SAMF	10	1000	Unknown		02/17/2024 12:00	Finished	SAMP,10 mL
19	N063051-002BREP,D	11	1000	Unknown		02/17/2024 12:09	Finished	REP,10 mL
20	N063051-001BMS,MS	12	1000	Unknown		02/17/2024 12:19	Finished	MS (1ppb), IWST-231228B,10r
21	N063051-001BMSD,M	13	1000	Unknown		02/17/2024 12:28	Finished	MSD (1ppb), IWST-231228B,1
22	N06153-001A,SAMP,	14	1000	Unknown		02/17/2024 12:37	Finished	SAMP,2>10 mL
23	CCV-2,CCV1,1,	15	1000	Unknown		02/17/2024 12:46	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		02/17/2024 12:56	Finished	CCB R240129C
25	N063051-001BMSD,M	17	1000	Unknown		02/17/2024 13:05	Finished	MSD (1ppb), IWST-231228B,1
26	N063153-002A,SAMF	18	1000	Unknown		02/17/2024 13:14	Finished	SAMP,2>10 mL
27	N063153-002AMS,MS	19	1000	Unknown		02/17/2024 13:24	Finished	MS (5ppb), IWST-231228B,2>
28	N063153-004A,SAMF	20	1000	Unknown		02/17/2024 13:33	Finished	SAMP,0.5>10 mL
29	N063153-004AMS,MS	21	1000	Unknown		02/17/2024 13:43	Finished	MS (5ppb), IWST-231228B,0.5
30	N063153-005A,SAMF	22	1000	Unknown		02/17/2024 13:52	Finished	SAMP,0.2>10 mL
31	N063153-005AMS,MS	23	1000	Unknown		02/17/2024 14:02	Finished	MS (5ppb), IWST-231228B,0.2
32	N063153-003A,SAMF	24	1000	Unknown		02/17/2024 14:11	Finished	SAMP,10 mL
33	N063153-003AMS,MS	25	1000	Unknown		02/17/2024 14:21	Finished	MS (1ppb), IWST-231228B,10r
34	N063153-006A,SAMF	26	1000	Unknown		02/17/2024 14:30	Finished	SAMP,10 mL
35	CCV-3,CCV,1,	27	1000	Unknown		02/17/2024 14:40	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	28	1000	Unknown		02/17/2024 14:49	Finished	CCB R240129C
37	N063153-006AMS,MS	29	1000	Unknown		02/17/2024 14:59	Finished	MS (1ppb), IWST-231228B,10r
38	N063136-011A,SAMF	30	1000	Unknown		02/17/2024 15:08	Finished	SAMP,10 mL
39	N063136-011AMS,MS	31	1000	Unknown		02/17/2024 15:18	Finished	MS (1ppb), IWST-231228B,10r
40	N063136-012A,SAMF	32	1000	Unknown		02/17/2024 15:27	Finished	SAMP,10 mL
41	N063136-012AMS,MS	33	1000	Unknown		02/17/2024 15:36	Finished	MS (1ppb), IWST-231228B,10r
42	N063136-013A,SAMF	34	1000	Unknown		02/17/2024 15:46	Finished	SAMP,10 mL
43	N063136-013AMS,MS	35	1000	Unknown		02/17/2024 15:55	Finished	MS (1ppb), IWST-231228B,10r
44	N063136-014A,SAMF	36	1000	Unknown		02/17/2024 16:05	Finished	SAMP,10 mL
45	N063136-014AMS,MS	37	1000	Unknown		02/17/2024 16:14	Finished	MS (1ppb), IWST-231228B,10r
46	N063153-005A,SAMF	38	1000	Unknown		02/17/2024 16:24	Finished	SAMP,10 mL
47	CCV-4,CCV1,1,	39	1000	Unknown		02/17/2024 16:33	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	40	1000	Unknown		02/17/2024 16:43	Finished	CCB R240129C
49	N063153-005AMS,MS	41	1000	Unknown		02/17/2024 16:52	Finished	MS (1ppb), IWST-231228B,10r
50	N063153-005A,SAMF	42	1000	Unknown		02/17/2024 17:02	Finished	SAMP,2>10 mL
51	N063153-005AMS,MS	43	1000	Unknown		02/17/2024 17:11	Finished	MS (1ppb), IWST-231228B,2>
52	N063153-001AMS,MS	44	1000	Unknown		02/17/2024 17:20	Finished	MS (5ppb), IWST-231228B,2>
53	CCV-5,CCV,1,	45	1000	Unknown		02/17/2024 17:30	Finished	CCV @5ppb, IWST-231228A
54	CCB-5,CCB,1,	46	1000	Unknown		02/17/2024 17:39	Finished	CCB R240129C
55	BLANK	47	1000	Unknown		02/17/2024 17:49	Finished	BLANK
56	SHUTDOWN	48	1000	Unknown		02/17/2024 17:58	Finished	
57	Eluent: R240215A	49	1000	Unknown		n.a.	Finished	
58	PCR: R240215B	50	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240219A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/19/24 12:31 PM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/19/24 12:45 PM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/19/24 12:55 PM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/19/24 1:53 PM	Reported
13	MB-R182690	MBLK	1	Hexavalent Chromium	02/19/24 2:04 PM	Reported
14	LCS-R182690	LCS	1	Hexavalent Chromium	02/19/24 2:13 PM	Reported
15	N063153-004A	SAMP	5	Hexavalent Chromium	02/19/24 2:23 PM	Reported
16	N063153-004ADUP	DUP	5	Hexavalent Chromium	02/19/24 2:32 PM	Reported
17	N063153-004AMS	MS	5	Hexavalent Chromium	02/19/24 2:42 PM	Reported
18	N063153-004AMSD	MSD	5	Hexavalent Chromium	02/19/24 2:51 PM	Reported
19	N063153-005A	SAMP	10	Hexavalent Chromium	02/19/24 3:01 PM	Reported
20	N063153-005AMS	MS	10	Hexavalent Chromium	02/19/24 3:10 PM	Reported
21	N062844-001A	SAMP	1	Hexavalent Chromium	02/19/24 3:19 PM	Not Reported
22	N062844-001AMS	MS	1	Hexavalent Chromium	02/19/24 3:29 PM	Not Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/19/24 3:38 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/19/24 3:48 PM	Reported
25	N062966-016A	SAMP	5	Hexavalent Chromium	02/19/24 3:57 PM	Not Reported
26	N062966-016AMS	MS	5	Hexavalent Chromium	02/19/24 4:07 PM	Not Reported
27	N062966-019A	SAMP	1	Hexavalent Chromium	02/19/24 4:16 PM	Not Reported
28	N062966-019AMS	MS	1	Hexavalent Chromium	02/19/24 4:26 PM	Not Reported
29	N062966-020A	SAMP	1	Hexavalent Chromium	02/19/24 4:35 PM	Not Reported
30	N062966-020AMS	MS	1	Hexavalent Chromium	02/19/24 4:45 PM	Not Reported
31	N063001-007A	SAMP	1	Hexavalent Chromium	02/19/24 4:54 PM	Not Reported
32	N063001-007AMS	MS	1	Hexavalent Chromium	02/19/24 5:03 PM	Not Reported
33	N063053-011A	SAMP	1	Hexavalent Chromium	02/19/24 5:13 PM	Not Reported
34	N063053-011AMS	MS	1	Hexavalent Chromium	02/19/24 5:22 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/19/24 5:32 PM	Not Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/19/24 5:41 PM	Not Reported
37	BLANK	BLANK	1	Hexavalent Chromium	02/19/24 5:51 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240219A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**20/Feb/24 13:50:10**
No. of Injections:	**40**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/19/2024 12:31	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/19/2024 12:45	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,	3	1000	Unknown		02/19/2024 12:55	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	1	1000	Unknown		02/19/2024 13:53	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	2	1000	Unknown		02/19/2024 14:04	Finished	MB R240129C
14	LCS-H2O,LCS,1,	3	1000	Unknown		02/19/2024 14:13	Finished	LCS @5ppb, IWST-231228B
15	N063153-004A,SAMF	4	1000	Unknown		02/19/2024 14:23	Finished	SAMP,2>10 mL
16	N063153-004ADUP,D	5	1000	Unknown		02/19/2024 14:32	Finished	DUP,2>10 mL
17	N063153-004AMS,MS	6	1000	Unknown		02/19/2024 14:42	Finished	MS (5ppb), IWST-231228B,2>
18	N063153-004AMSD,M	7	1000	Unknown		02/19/2024 14:51	Finished	MSD (5ppb), IWST-231228B,2
19	N063153-005A,SAMF	8	1000	Unknown		02/19/2024 15:01	Finished	SAMP,1>10 mL
20	N063153-005AMS,MS	9	1000	Unknown		02/19/2024 15:10	Finished	MS (5ppb), IWST-231228B,1>
21	N062844-001A,SAMF	10	1000	Unknown		02/19/2024 15:19	Finished	MSD (1ppb), IWST-231228B,1
22	N062844-001AMS,MS	11	1000	Unknown		02/19/2024 15:29	Finished	SAMP,2>10 mL
23	CCV-2,CCV1,1,	12	1000	Unknown		02/19/2024 15:38	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	13	1000	Unknown		02/19/2024 15:48	Finished	CCB R240129C
25	N062966-016A,SAMF	14	1000	Unknown		02/19/2024 15:57	Finished	SAMP,2>10 mL
26	N062966-016AMS,MS	15	1000	Unknown		02/19/2024 16:07	Finished	MS (5ppb), IWST-231228B,2>
27	N062966-019A,SAMF	16	1000	Unknown		02/19/2024 16:16	Finished	SAMP,10 mL
28	N062966-019AMS,MS	17	1000	Unknown		02/19/2024 16:26	Finished	MS (5ppb), IWST-231228B,10
29	N062966-020A,SAMF	18	1000	Unknown		02/19/2024 16:35	Finished	SAMP,10 mL
30	N062966-020AMS,MS	19	1000	Unknown		02/19/2024 16:45	Finished	MS (5ppb), IWST-231228B,10
31	N063001-007A,SAMF	20	1000	Unknown		02/19/2024 16:54	Finished	SAMP,10 mL
32	N063001-007AMS,MS	21	1000	Unknown		02/19/2024 17:03	Finished	MS (1ppb), IWST-231228B,10
33	N063053-011A,SAMF	22	1000	Unknown		02/19/2024 17:13	Finished	SAMP,10 mL
34	N063053-011AMS,MS	23	1000	Unknown		02/19/2024 17:22	Finished	MS (1ppb), IWST-231228B,10
35	CCV-3,CCV,1,	24	1000	Unknown		02/19/2024 17:32	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	25	1000	Unknown		02/19/2024 17:41	Finished	CCB R240129C
37	BLANK	26	1000	Unknown		02/19/2024 17:51	Finished	BLANK
38	SHUTDOWN R240215A	27	1000	Unknown		02/19/2024 18:00	Finished	
39	Eluent: ~~R240220A~~	28	1000	Unknown		n.a.	Finished	
40	PCR: ~~R240220B~~ R240215B	29	1000	Unknown		n.a.	Finished	

dlRocha 2/29/2024
for RBA

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 2/20/24
Time Prepared: 1008
Prepared By: MA

Reagent ID:
Sulfuric Acid: 14345
Diphenylcarbazide: 15406
NH4OH + NH4SO4 eluent: A240215A / A240220A
NH4OH + NH4SO4 buffer: A240129C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MB-186824	7.58	9.54	~250 mL	~50 mL		125c
2)	MW-3057-1A	9.24	9.48	"	"		+0.2 mL A240215A
3)	2A	9.18	9.50	"	"		10 uM
4)	MW-153-1A	9.38	-	~250 mL	~50 mL		
5)	2A	9.30	-	"	"		
6)	3A	9.70	-	"	"		
7)	4A	9.44	-	"	"		
8)	5A	9.90	-	"	"		
9)	6A	9.72	-	"	"		
10)							
11)							
12)							
13)							
14)							
15)							

Sample Preparation

Date Prepared: 2/20/24
Time Prepared: 1008
Prepared By: MA

Reagent ID:
Sulfuric Acid: 14345
Diphenylcarbazide: 15406
NH4OH + NH4SO4 eluent: A240220A
NH4OH + NH4SO4 buffer: A240125C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW-181-1A	9.38	-	~250 mL	~50 mL		
2)	2A	9.34	-	"	"		
3)	3A	9.44	-	"	"		
4)	4A	9.64	-	"	"		
5)	MW-182-1A	9.34	-	"	"		
6)	2A	9.68	-	"	"		
7)	3A	9.38	-	"	"		
8)	4A	9.64	-	"	"		
9)	5A	9.44	-	"	"		
10)	6A	9.72	-	"	"		
11)	7A	9.74	-	"	"		
12)	8A	9.46	-	"	"		
13)	9A	9.54	-	"	"		
14)	10A	9.56	-	"	"		
15)	11A	9.38	-	"	"		
	12A	9.74	-	"	"		

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 2/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0427	0.2063	1.0639	2.1157	3.2270	4.3227	0.9999
Measured, in ug/L	0.198500	0.959200	4.946100	9.835700	15.002300	20.095900	
Relative Error (%RE)	-0.8%		-1.1%				

	Stock	Working
Standard Concentration:	1,000,000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063153
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ICV**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5698514**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5698515**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **CCV**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698517**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.901	0.20	5.000	0	98.0	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698518**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.208	0.20	0.2000	0	104	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698529**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.922	0.20	10.00	0	99.2	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063153
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **CCV**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698537**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.924	0.20	5.000	0	98.5	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ZZZZZZ**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698549**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.887	0.20	10.00	0	98.9	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **CCV**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698552**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.917	0.20	5.000	0	98.3	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063153
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182690**
Client ID: **ICV**	Batch ID: **R182690**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5699787**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182690**
Client ID: **ZZZZZZ**	Batch ID: **R182690**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5699788**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182690**
Client ID: **CCV**	Batch ID: **R182690**	TestNo: **EPA 218.6**		Analysis Date: **2/19/2024**	SeqNo: **5699790**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.883	0.20	5.000	0	97.7	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182690**
Client ID: **ZZZZZZ**	Batch ID: **R182690**	TestNo: **EPA 218.6**		Analysis Date: **2/19/2024**	SeqNo: **5699791**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.182	0.20	0.2000	0	91.1	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182690**
Client ID: **ZZZZZZ**	Batch ID: **R182690**	TestNo: **EPA 218.6**		Analysis Date: **2/19/2024**	SeqNo: **5699801**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.958	0.20	10.00	0	99.6	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063153
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **ICB**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5698516**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **CCB**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698519**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **CCB**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698530**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **CCB**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698538**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182650**
Client ID: **CCB**	Batch ID: **R182650**	TestNo: **EPA 218.6**		Analysis Date: **2/17/2024**	SeqNo: **5698550**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063153
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5** SampType: **CCB** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182650**
Client ID: **CCB** Batch ID: **R182650** TestNo: **EPA 218.6** Analysis Date: **2/17/2024** SeqNo: **5698553**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063153
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182690**
Client ID: **ICB**	Batch ID: **R182690**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5699789**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182690**
Client ID: **CCB**	Batch ID: **R182690**	TestNo: **EPA 218.6**		Analysis Date: **2/19/2024**	SeqNo: **5699792**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182690**
Client ID: **CCB**	Batch ID: **R182690**	TestNo: **EPA 218.6**		Analysis Date: **2/19/2024**	SeqNo: **5699802**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/17/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.056	
CCV-2	4.056	
CCV-3	4.056	
CCV-4	4.065	
CCV-5	4.056	
Average	4.058	
Actual RT Window	3.978 - 4.138	
Applied RT Window	3.858 - 4.258	
MB-R182650	N.A.	N.A.
LCS-R182650	4.056	PASS
MB-106824	N.A.	N.A.
N063051-001B	4.056	PASS
N063051-001BREP	4.056	PASS
N063051-002B	4.056	PASS
N063051-002BREP	4.056	PASS
N063051-001BMS	4.065	PASS
N063051-001BMSD	N.A.	N.A.
N063153 ~~N06153~~-001A	4.031	PASS
N063051-001BMSD	4.065	PASS
N063153-002A	4.015	PASS
N063153-002AMS	4.023	PASS
N063153-004A	4.056	PASS
N063153-004AMS	4.056	PASS
N063153-005A	4.048	PASS
N063153-005AMS	4.056	PASS
N063153-003A	N.A.	N.A.
N063153-003AMS	4.056	PASS
N063153-006A	N.A.	N.A.
N063153-006AMS	4.056	PASS
N063136-011A	N.A.	N.A.
N063136-011AMS	4.048	PASS

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/17/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.056	
CCV-2	4.056	
CCV-3	4.056	
CCV-4	4.065	
CCV-5	4.056	
Average	4.058	
Actual RT Window	3.978 - 4.138	
Applied RT Window	3.858 - 4.258	
N063136-012A	N.A.	N.A.
N063136-012AMS	4.048	PASS
N063136-013A	N.A.	N.A.
N063136-013AMS	4.048	PASS
N063136-014A	N.A.	N.A.
N063136-014AMS	4.048	PASS
N063153-005A	N.A.	N.A.
N063153-005AMS	N.A.	N.A.
N063153-005A	3.990	PASS
N063153-005AMS	3.990	PASS
N063153-001AMS	4.040	PASS

Reviewed by:

dMocha 2/29/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/19/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.056	
CCV-2	4.056	
Average	4.056	
Actual RT Window	3.976 - 4.136	
Applied RT Window	3.856 - 4.256	
MB-R182690	N.A.	N.A.
LCS-R182690	4.065	PASS
N063153-004A	4.048	PASS
N063153-004ADUP	4.048	PASS
N063153-004AMS	4.048	PASS
N063153-004AMSD	4.048	PASS
N063153-005A	4.023	PASS
N063153-005AMS	4.023	PASS
N062844-001A	4.048	PASS
N062844-001AMS	4.048	PASS
N062966-016A	4.031	PASS
N062966-016AMS	4.031	PASS
N062966-019AMS	3.856	PASS
N062966-020A	3.881	PASS
N062966-020AMS	3.856	PASS
N063001-007A	4.040	PASS
N063001-007AMS	4.048	PASS
N063053-011A	3.856	PASS
N063053-011AMS	3.856	PASS

Reviewed by:

dMRocha 2/29/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

Reviewed by:

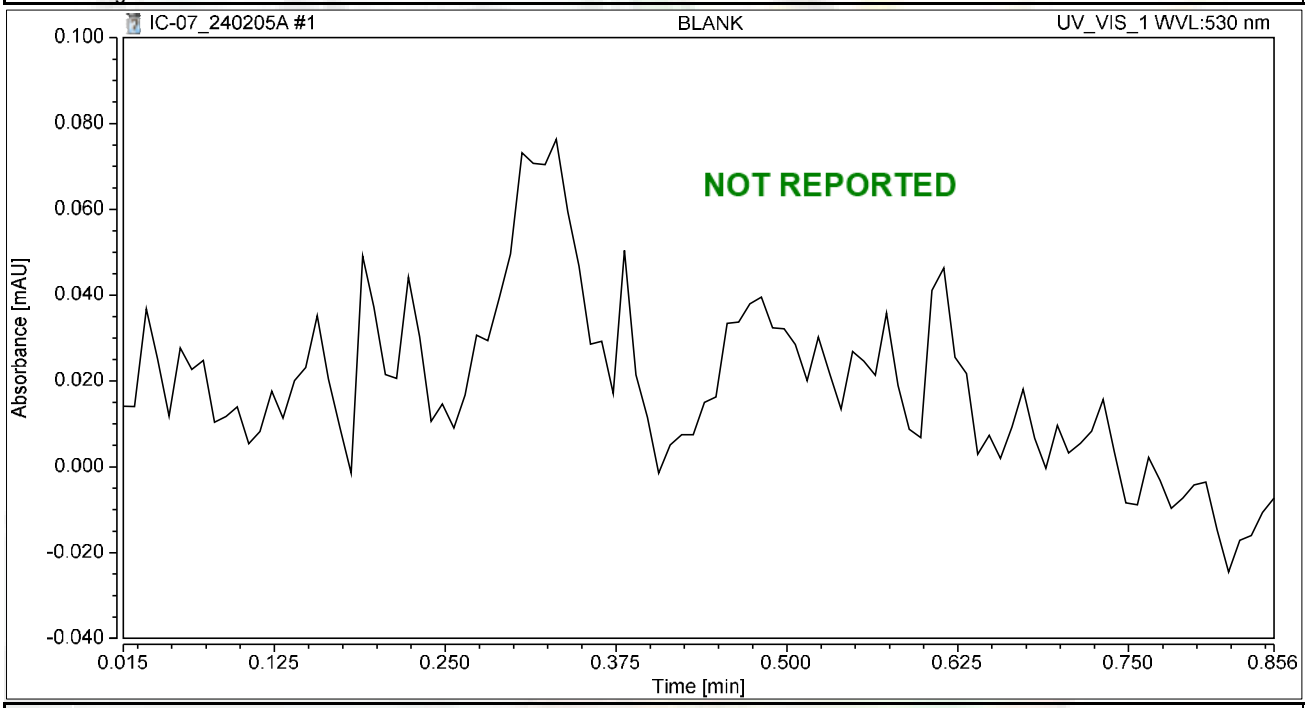
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**0.84**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 11:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

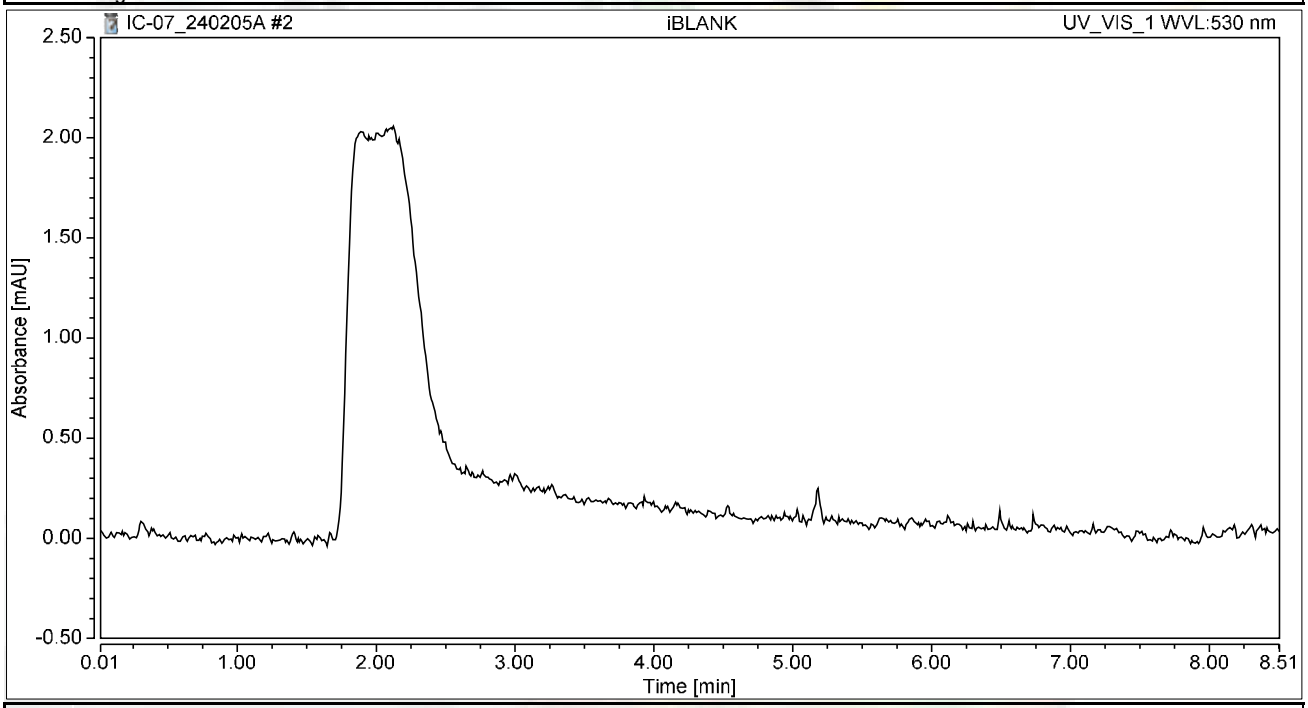
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Reviewed by:

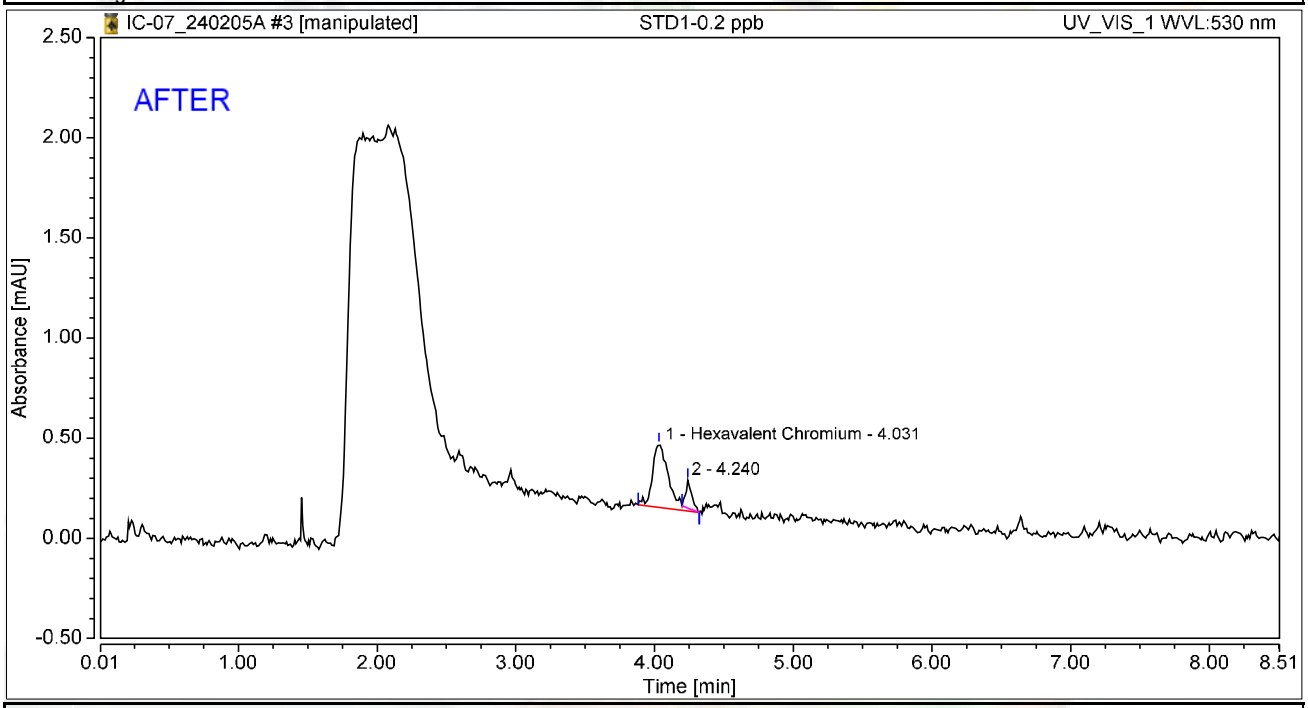
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.043	0.313	85.65	69.19	0.1985
2		4.240	0.007	0.139	14.35	30.81	n.a.
Total:			**0.050**	**0.452**	**100.00**	**100.00**	

Reviewed by:

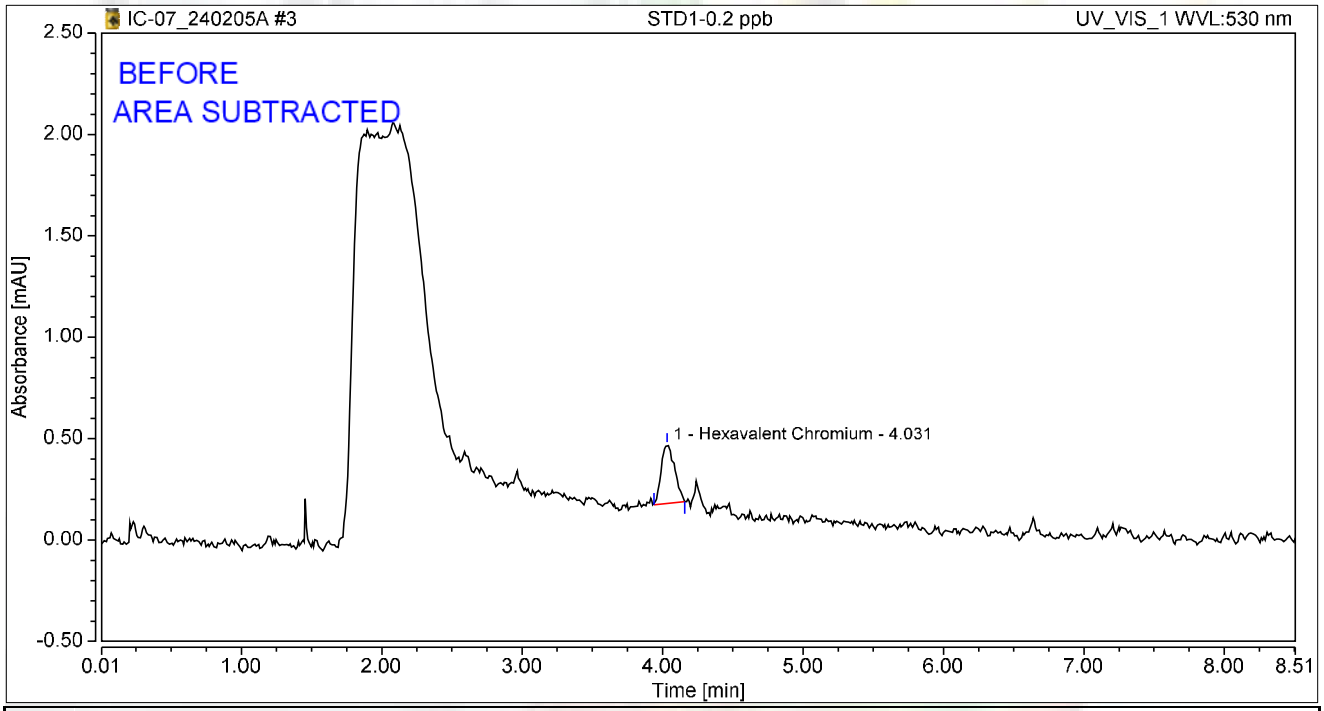
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

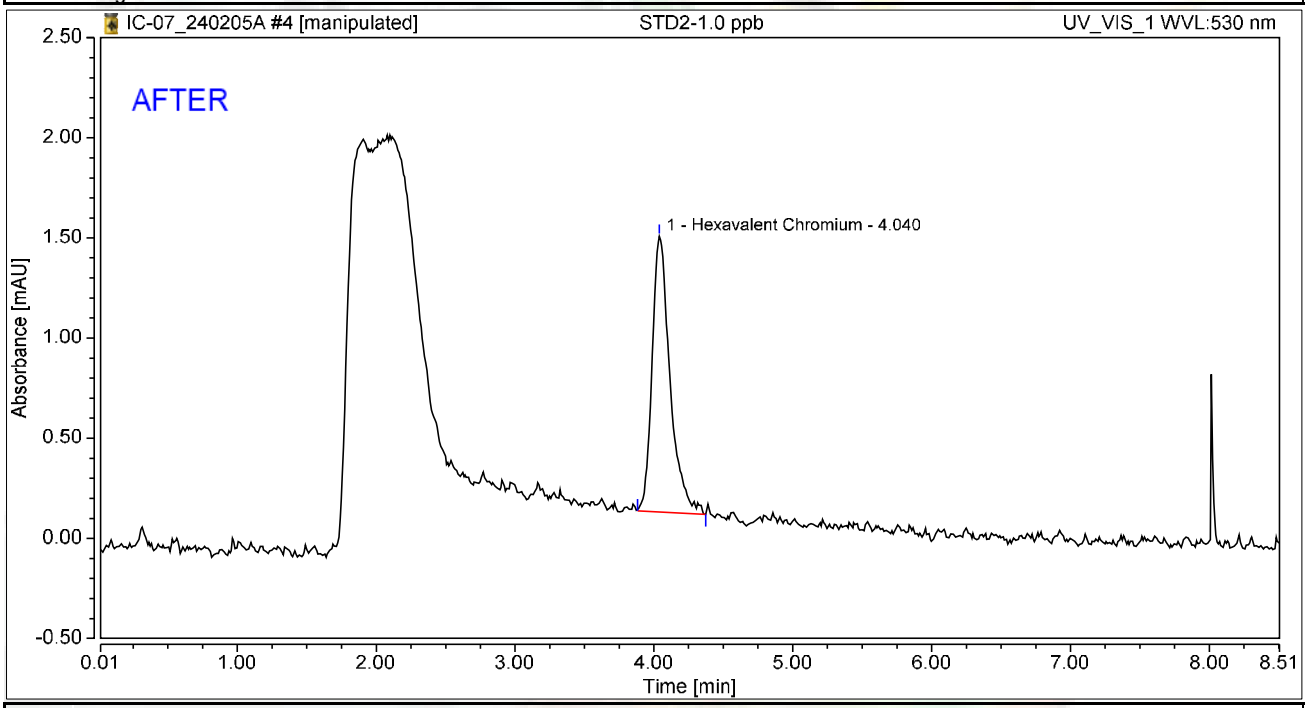
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.032	0.288	100.00	100.00	0.1502
Total:			**0.032**	**0.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.206	1.377	100.00	100.00	0.9592
Total:			**0.206**	**1.377**	**100.00**	**100.00**	

Reviewed by:

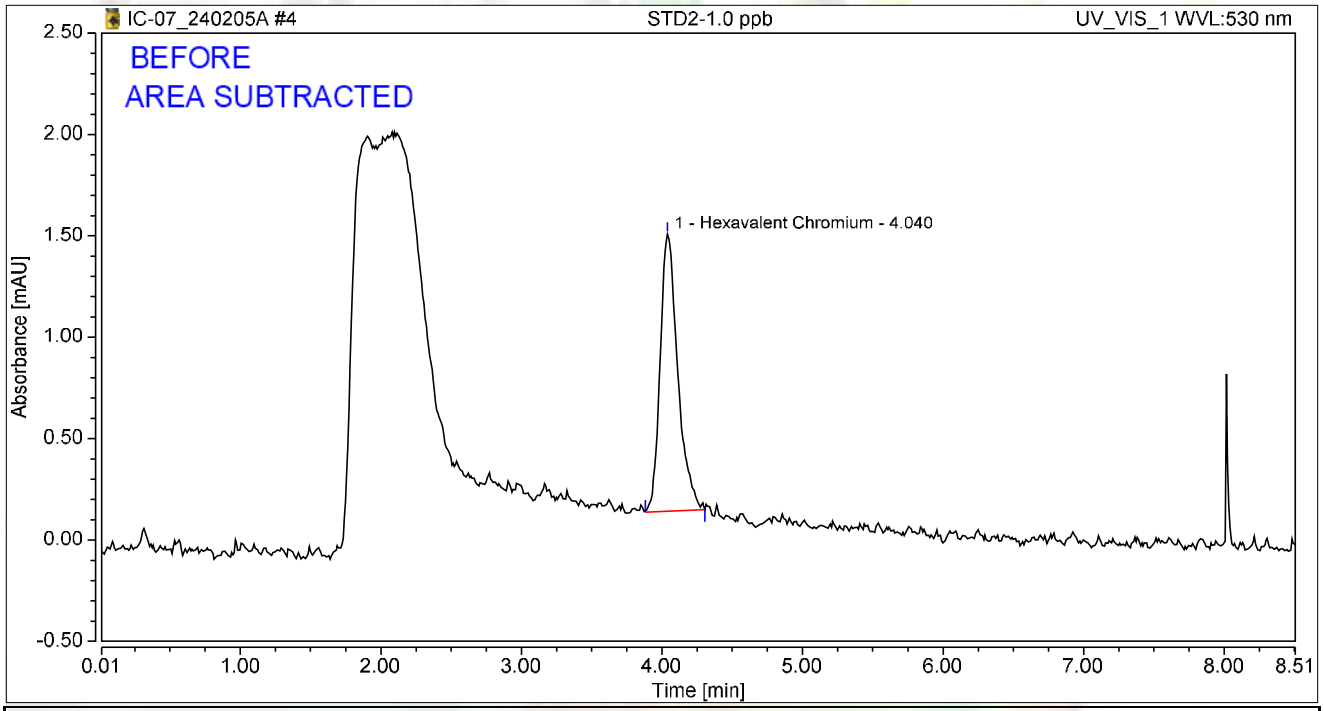
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

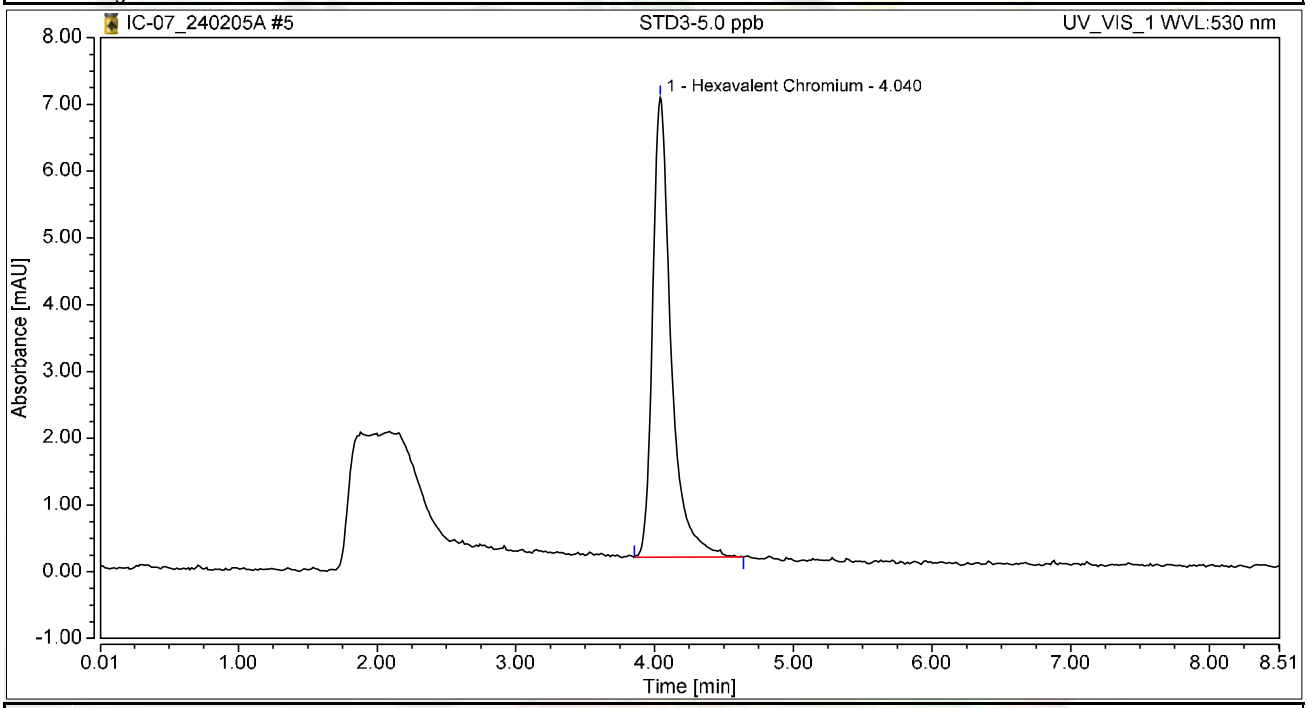
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.198	1.367	100.00	100.00	0.9223
Total:			**0.198**	**1.367**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

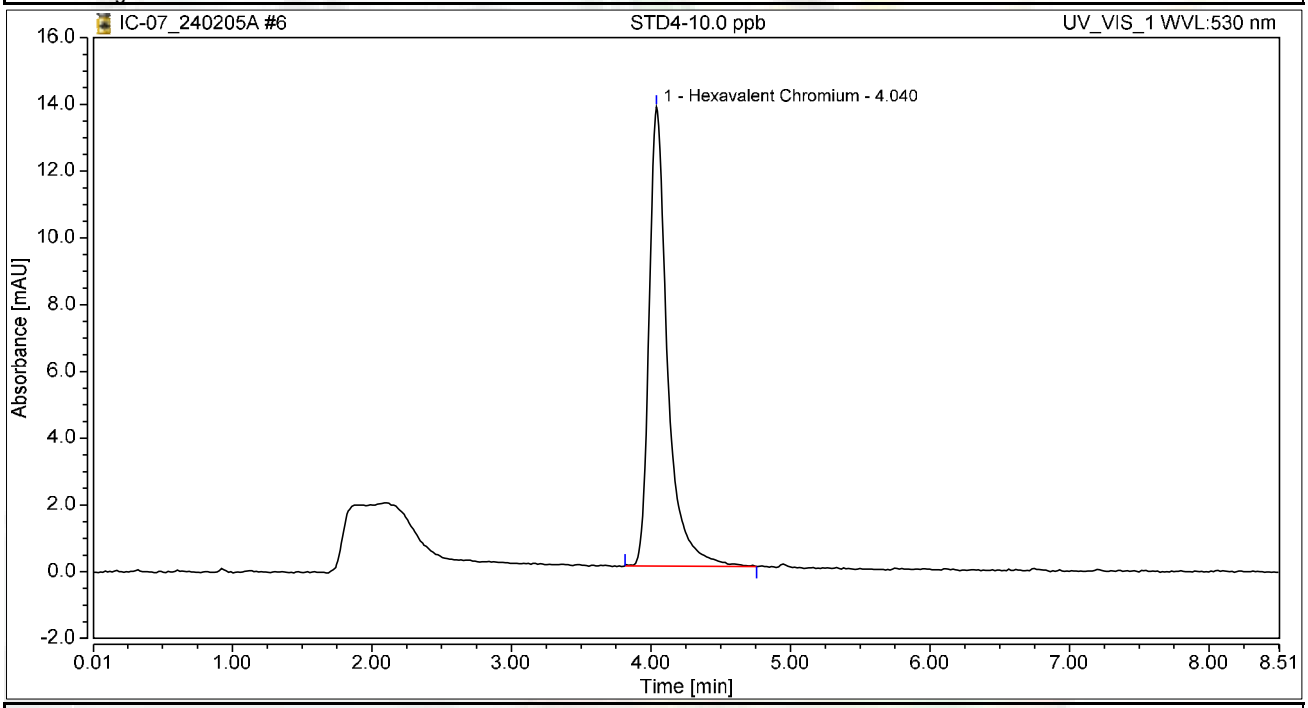
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.064	6.885	100.00	100.00	4.9461
Total:			**1.064**	**6.885**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

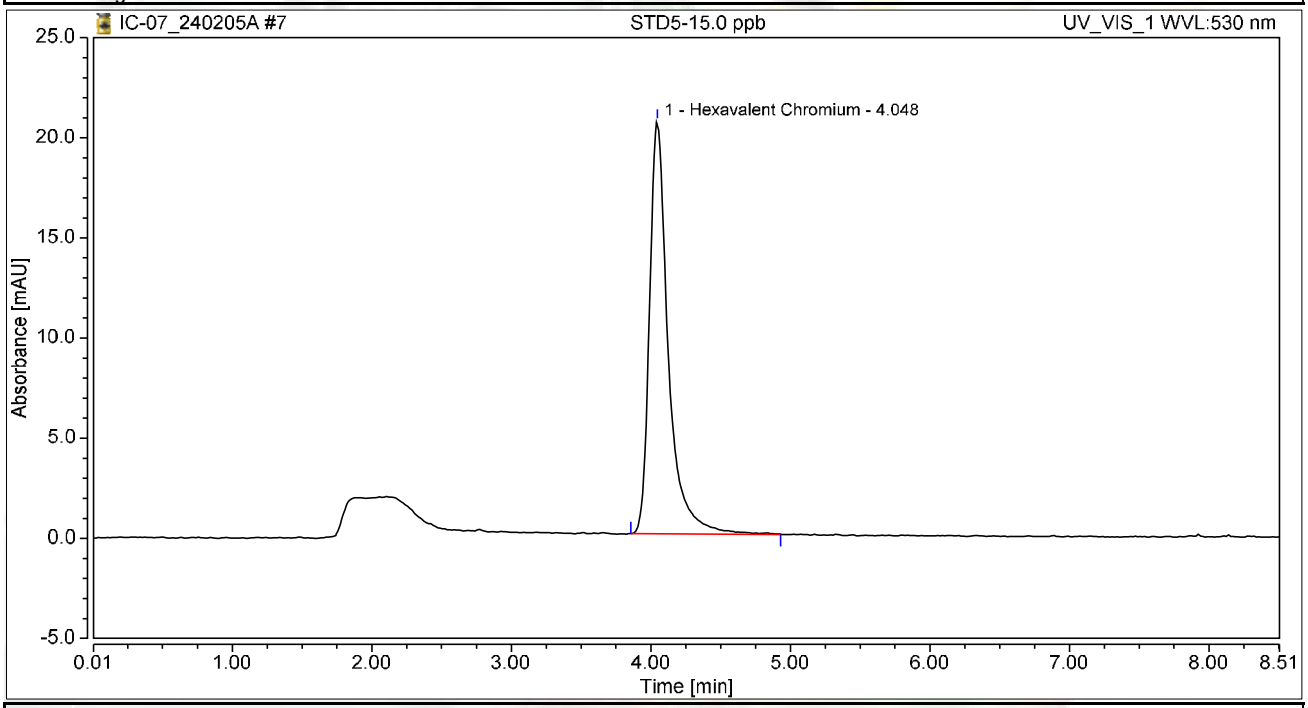
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.116	13.748	100.00	100.00	9.8357
Total:			**2.116**	**13.748**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

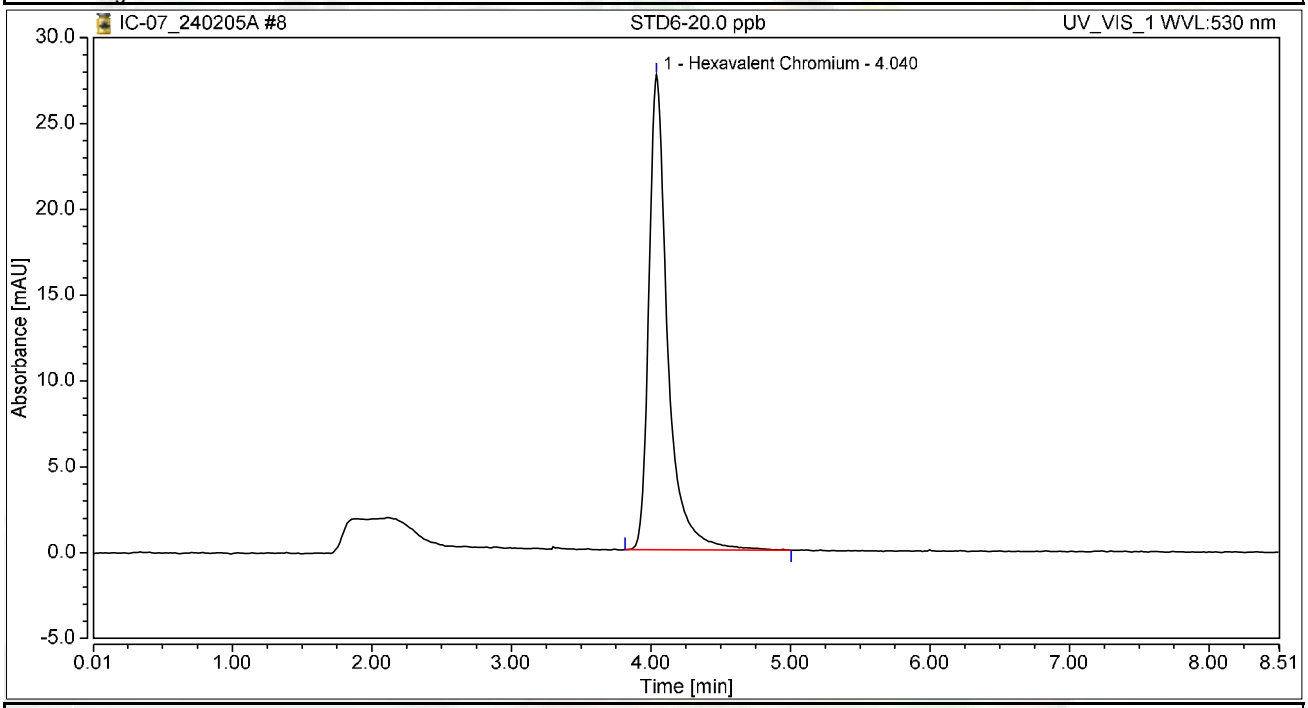
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	3.227	20.605	100.00	100.00	15.0023
Total:			**3.227**	**20.605**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:08**	*Sample Weight:*	**1.0000**

Chromatogram



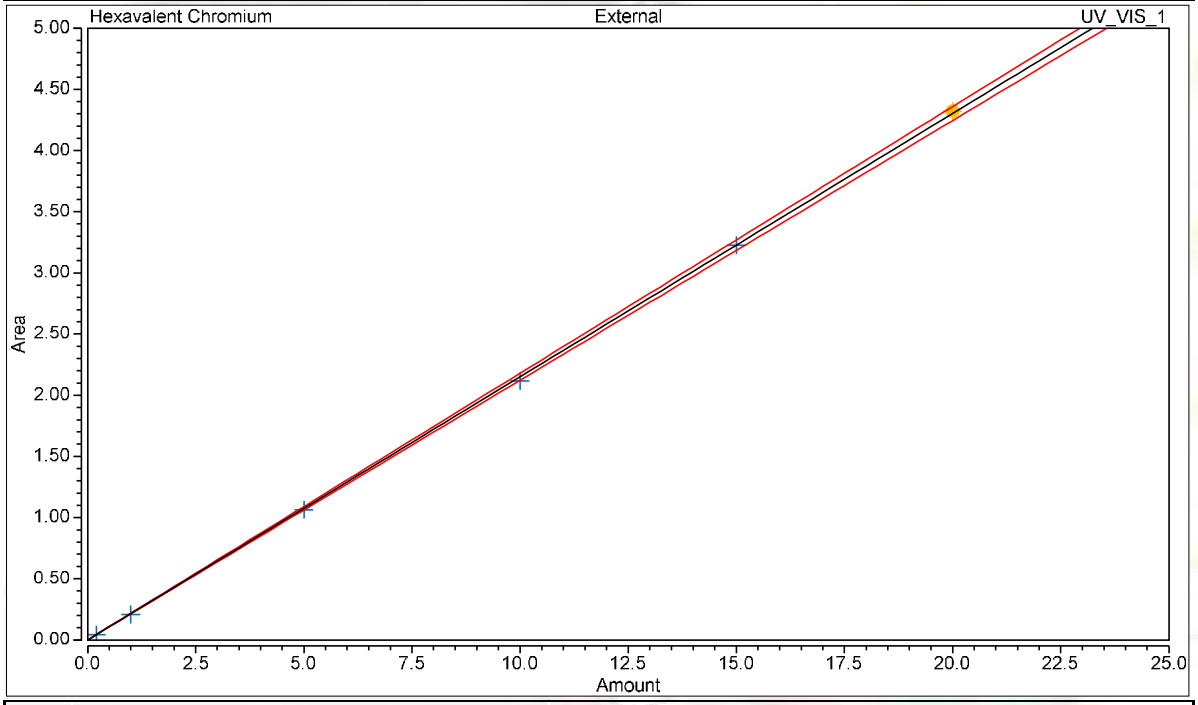
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	4.323	27.676	100.00	100.00	20.0959
Total:			**4.323**	**27.676**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2151
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99987

Calibration Plot Hexavalent Chromium



Calibration Results Hexavalent Chromium

No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0427	0.043	0.313
4	STD2-1.0 ppb	02	1.0000	0.2063	0.206	1.377
5	STD3-5.0 ppb	03	5.0000	1.0639	1.064	6.885
6	STD4-10.0 ppb	04	10.0000	2.1157	2.116	13.748
7	STD5-15.0 ppb	05	15.0000	3.2270	3.227	20.605
8	STD6-20.0 ppb	06	20.0000	4.3227	4.323	27.676

Reviewed by:

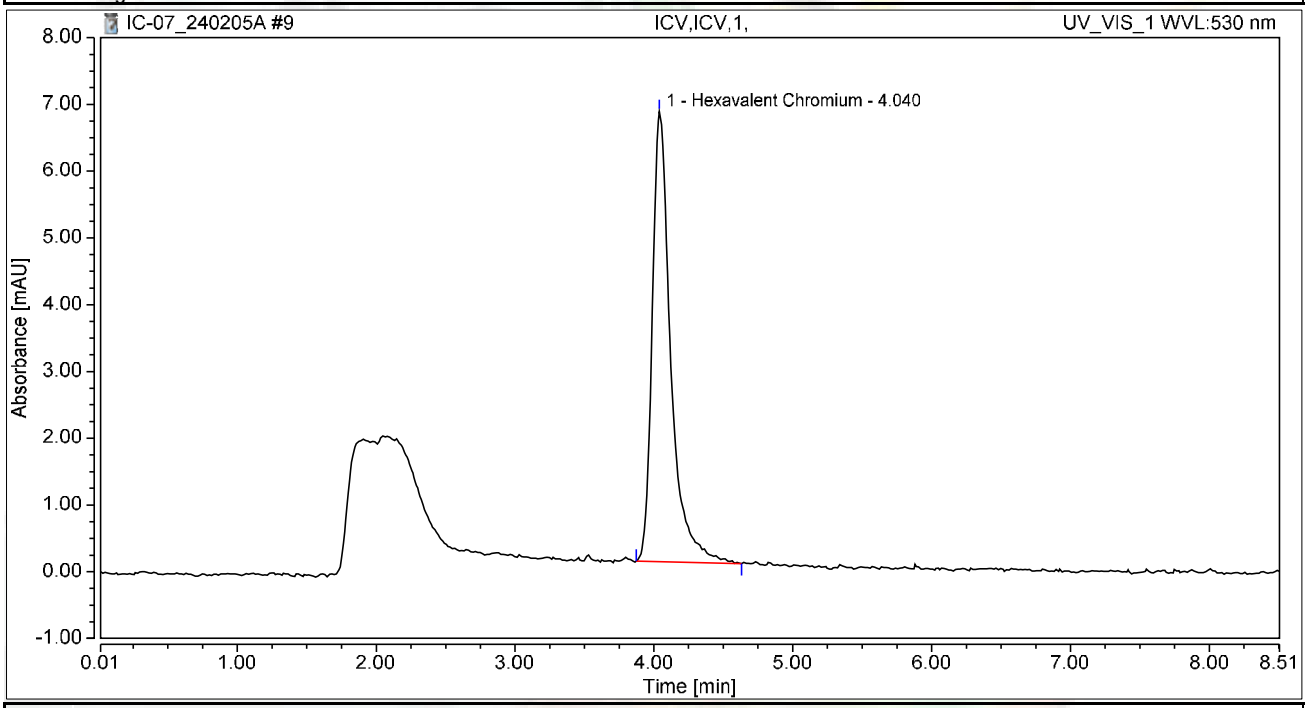
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

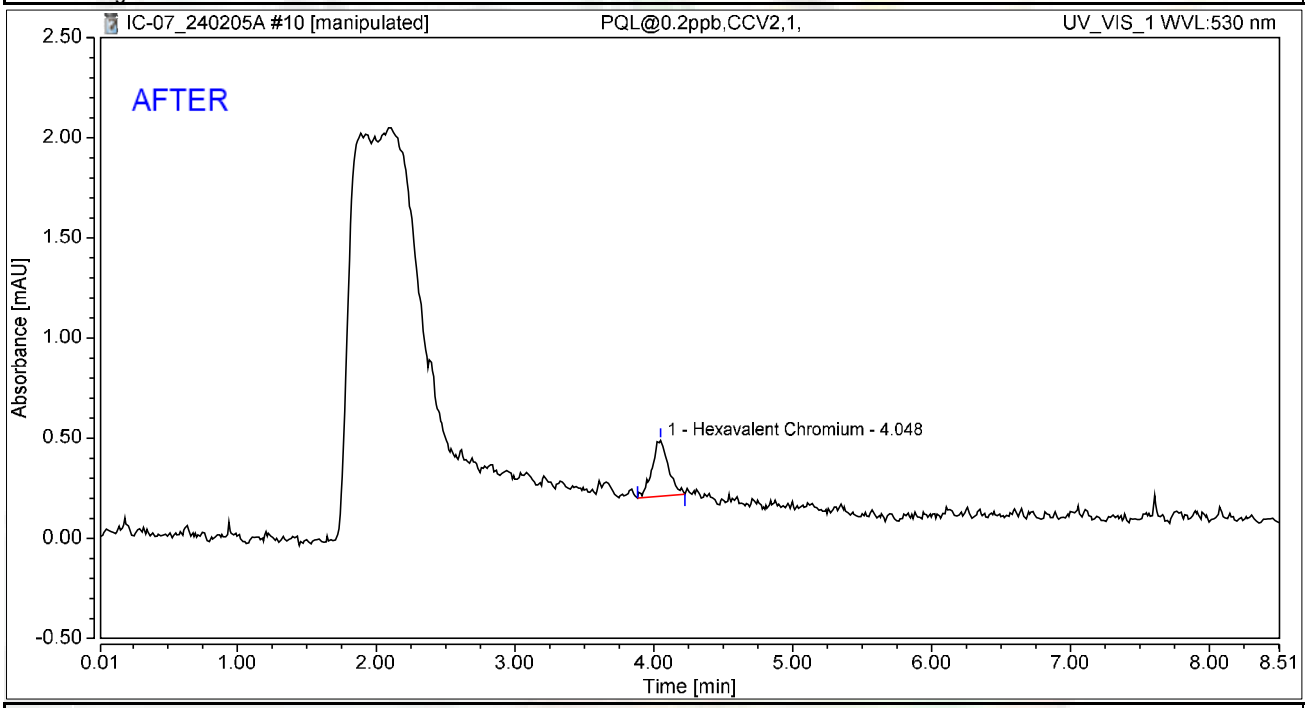
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.040	6.743	100.00	100.00	4.8342
Total:			**1.040**	**6.743**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.039	0.279	100.00	100.00	0.1802
Total:			**0.039**	**0.279**	**100.00**	**100.00**	

Reviewed by:

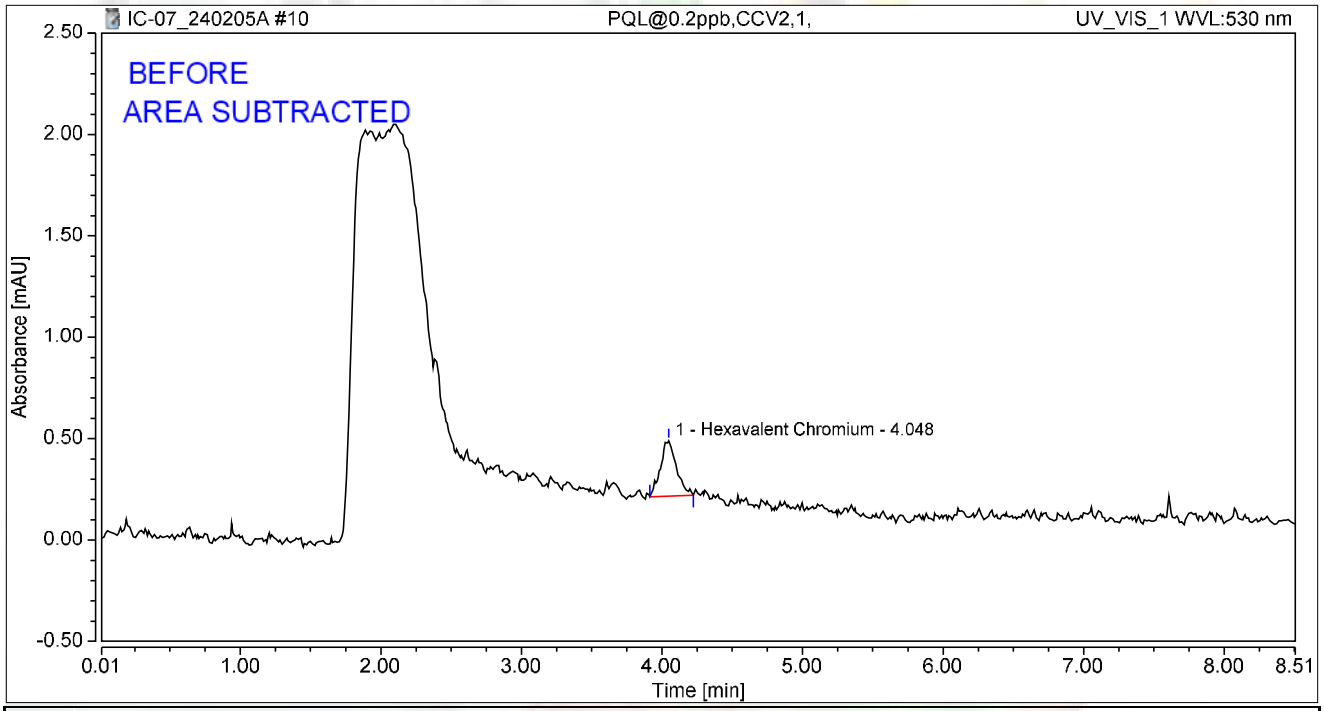
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

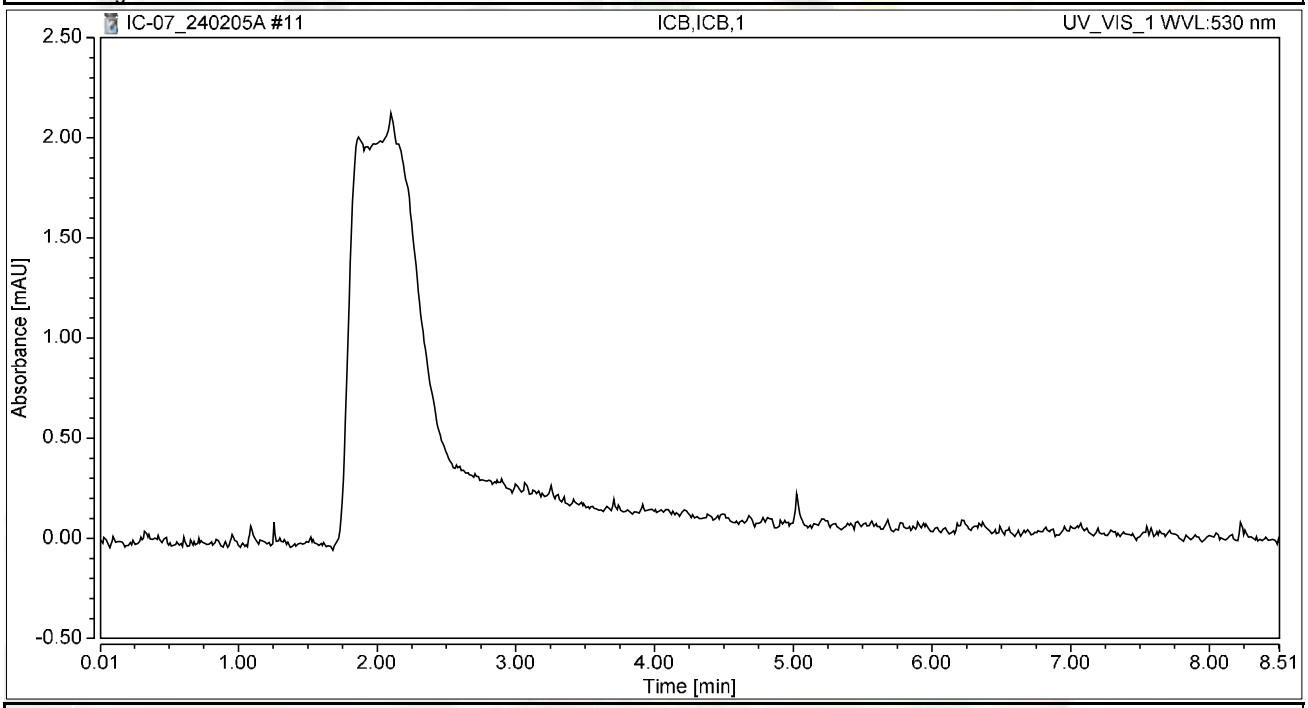
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.036	0.273	100.00	100.00	0.1694
Total:			**0.036**	**0.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

JRB 2/19/2024

RAW DATA

INJECTION LOG: 240217A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/17/24 10:30 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/17/24 10:44 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/17/24 10:53 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/17/24 11:03 AM	Reported
13	MB-R182650	MBLK	1	Hexavalent Chromium	02/17/24 11:12 AM	Reported
14	LCS-R182650	LCS	1	Hexavalent Chromium	02/17/24 11:22 AM	Reported
15	MB-106824	MBLK	1	Hexavalent Chromium	02/17/24 11:31 AM	Reported
16	N063051-001B	SAMP	1	Hexavalent Chromium	02/17/24 11:41 AM	Reported
17	N063051-001BREP	DUP	1	Hexavalent Chromium	02/17/24 11:50 AM	Reported
18	N063051-002B	SAMP	1	Hexavalent Chromium	02/17/24 12:00 PM	Reported
19	N063051-002BREP	DUP	1	Hexavalent Chromium	02/17/24 12:09 PM	Reported
20	N063051-001BMS	MS	1	Hexavalent Chromium	02/17/24 12:19 PM	Reported
21	N063051-001BMSD	MSD	1	Hexavalent Chromium	02/17/24 12:28 PM	Not Reported
N063153	~~N06153~~-001A	SAMP	5	Hexavalent Chromium	02/17/24 12:37 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/17/24 12:46 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/17/24 12:56 PM	Reported
25	N063051-001BMSD	MSD	1	Hexavalent Chromium	02/17/24 1:05 PM	Reported
26	N063153-002A	SAMP	5	Hexavalent Chromium	02/17/24 1:14 PM	Reported
27	N063153-002AMS	MS	5	Hexavalent Chromium	02/17/24 1:24 PM	Reported
28	N063153-004A	SAMP	20	Hexavalent Chromium	02/17/24 1:33 PM	Not Reported
29	N063153-004AMS	MS	20	Hexavalent Chromium	02/17/24 1:43 PM	Not Reported
30	N063153-005A	SAMP	50	Hexavalent Chromium	02/17/24 1:52 PM	Not Reported
31	N063153-005AMS	MS	50	Hexavalent Chromium	02/17/24 2:02 PM	Not Reported
32	N063153-003A	SAMP	1	Hexavalent Chromium	02/17/24 2:11 PM	Reported
33	N063153-003AMS	MS	1	Hexavalent Chromium	02/17/24 2:21 PM	Reported
34	N063153-006A	SAMP	1	Hexavalent Chromium	02/17/24 2:30 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/17/24 2:40 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/17/24 2:49 PM	Reported
37	N063153-006AMS	MS	1	Hexavalent Chromium	02/17/24 2:59 PM	Reported
38	N063136-011A	SAMP	1	Hexavalent Chromium	02/17/24 3:08 PM	Reported
39	N063136-011AMS	MS	1	Hexavalent Chromium	02/17/24 3:18 PM	Reported
40	N063136-012A	SAMP	1	Hexavalent Chromium	02/17/24 3:27 PM	Reported
41	N063136-012AMS	MS	1	Hexavalent Chromium	02/17/24 3:36 PM	Reported
42	N063136-013A	SAMP	1	Hexavalent Chromium	02/17/24 3:46 PM	Reported

dMocha 2/29/2024
for RBA72

INJECTION LOG: 240217A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063136-013AMS	MS	1	Hexavalent Chromium	02/17/24 3:55 PM	Reported
44	N063136-014A	SAMP	1	Hexavalent Chromium	02/17/24 4:05 PM	Reported
45	N063136-014AMS	MS	1	Hexavalent Chromium	02/17/24 4:14 PM	Reported
46	N063153-005A	SAMP	1	Hexavalent Chromium	02/17/24 4:24 PM	Not Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/17/24 4:33 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/17/24 4:43 PM	Reported
49	N063153-005AMS	MS	1	Hexavalent Chromium	02/17/24 4:52 PM	Not Reported
50	N063153-005A	SAMP	5	Hexavalent Chromium	02/17/24 5:02 PM	Not Reported
51	N063153-005AMS	MS	5	Hexavalent Chromium	02/17/24 5:11 PM	Not Reported
52	N063153-001AMS	MS	5	Hexavalent Chromium	02/17/24 5:20 PM	Reported
53	CCV-5	CCV	1	Hexavalent Chromium	02/17/24 5:30 PM	Reported
54	CCB-5	CCB	1	Hexavalent Chromium	02/17/24 5:39 PM	Reported
55	BLANK	BLANK	1	Hexavalent Chromium	02/17/24 5:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240217A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**19/Feb/24 11:31:47**
No. of Injections:	**58**	*Updated By:*	**ics 5000**

Injection Details

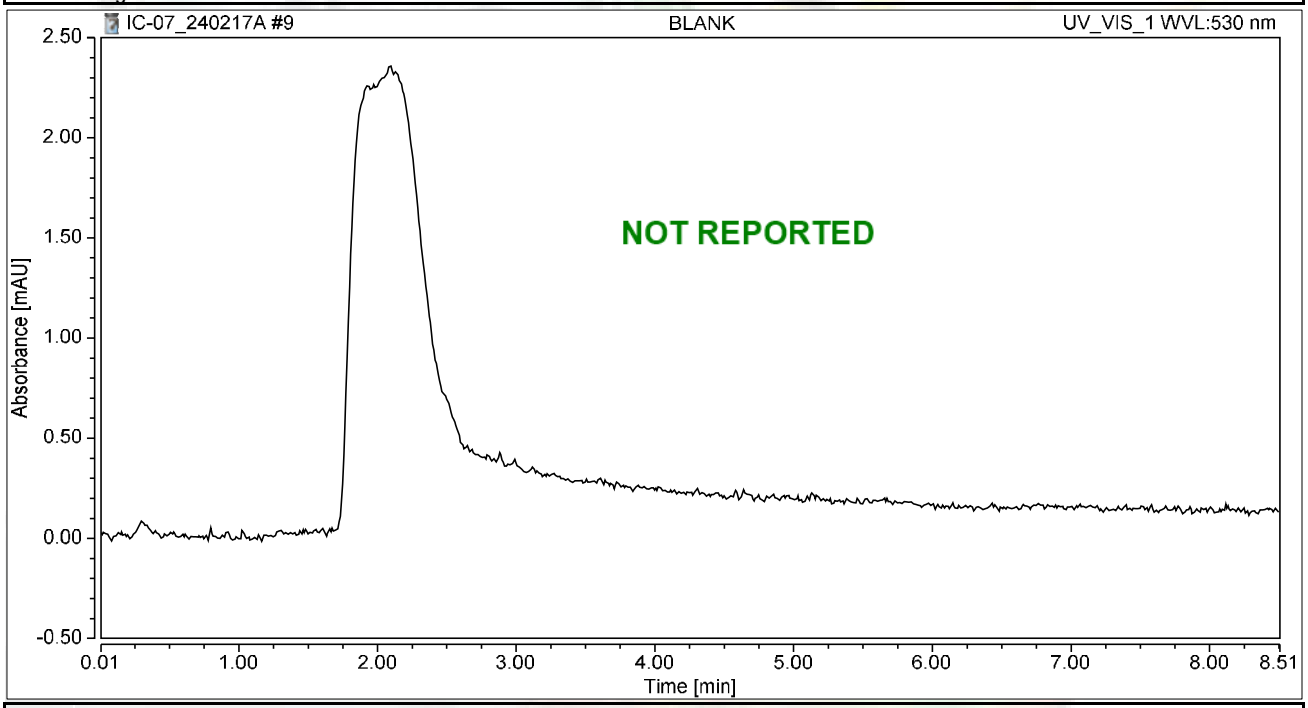
No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/17/2024 10:30	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/17/2024 10:44	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/17/2024 10:53	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/17/2024 11:03	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/17/2024 11:12	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/17/2024 11:22	Finished	LCS @5ppb, IWST-231228B
15	MB-106824,MBLK,1,	7	1000	Unknown		02/17/2024 11:31	Finished	MB STLC
16	N063051-001B,SAMF	8	1000	Unknown		02/17/2024 11:41	Finished	SAMP,10 mL
17	N063051-001BREP,D	9	1000	Unknown		02/17/2024 11:50	Finished	REP,10 mL
18	N063051-002B,SAMF	10	1000	Unknown		02/17/2024 12:00	Finished	SAMP,10 mL
19	N063051-002BREP,D	11	1000	Unknown		02/17/2024 12:09	Finished	REP,10 mL
20	N063051-001BMS,MS	12	1000	Unknown		02/17/2024 12:19	Finished	MS (1ppb), IWST-231228B,10r
21	N063051-001BMSD,M	13	1000	Unknown		02/17/2024 12:28	Finished	MSD (1ppb), IWST-231228B,1
22	N06153-001A,SAMP,	14	1000	Unknown		02/17/2024 12:37	Finished	SAMP,2>10 mL
23	CCV-2,CCV1,1,	15	1000	Unknown		02/17/2024 12:46	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		02/17/2024 12:56	Finished	CCB R240129C
25	N063051-001BMSD,M	17	1000	Unknown		02/17/2024 13:05	Finished	MSD (1ppb), IWST-231228B,1
26	N063153-002A,SAMF	18	1000	Unknown		02/17/2024 13:14	Finished	SAMP,2>10 mL
27	N063153-002AMS,MS	19	1000	Unknown		02/17/2024 13:24	Finished	MS (5ppb), IWST-231228B,2>
28	N063153-004A,SAMF	20	1000	Unknown		02/17/2024 13:33	Finished	SAMP,0.5>10 mL
29	N063153-004AMS,MS	21	1000	Unknown		02/17/2024 13:43	Finished	MS (5ppb), IWST-231228B,0.5
30	N063153-005A,SAMF	22	1000	Unknown		02/17/2024 13:52	Finished	SAMP,0.2>10 mL
31	N063153-005AMS,MS	23	1000	Unknown		02/17/2024 14:02	Finished	MS (5ppb), IWST-231228B,0.2
32	N063153-003A,SAMF	24	1000	Unknown		02/17/2024 14:11	Finished	SAMP,10 mL
33	N063153-003AMS,MS	25	1000	Unknown		02/17/2024 14:21	Finished	MS (1ppb), IWST-231228B,10r
34	N063153-006A,SAMF	26	1000	Unknown		02/17/2024 14:30	Finished	SAMP,10 mL
35	CCV-3,CCV,1,	27	1000	Unknown		02/17/2024 14:40	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	28	1000	Unknown		02/17/2024 14:49	Finished	CCB R240129C
37	N063153-006AMS,MS	29	1000	Unknown		02/17/2024 14:59	Finished	MS (1ppb), IWST-231228B,10r
38	N063136-011A,SAMF	30	1000	Unknown		02/17/2024 15:08	Finished	SAMP,10 mL
39	N063136-011AMS,MS	31	1000	Unknown		02/17/2024 15:18	Finished	MS (1ppb), IWST-231228B,10r
40	N063136-012A,SAMF	32	1000	Unknown		02/17/2024 15:27	Finished	SAMP,10 mL
41	N063136-012AMS,MS	33	1000	Unknown		02/17/2024 15:36	Finished	MS (1ppb), IWST-231228B,10r
42	N063136-013A,SAMF	34	1000	Unknown		02/17/2024 15:46	Finished	SAMP,10 mL
43	N063136-013AMS,MS	35	1000	Unknown		02/17/2024 15:55	Finished	MS (1ppb), IWST-231228B,10r
44	N063136-014A,SAMF	36	1000	Unknown		02/17/2024 16:05	Finished	SAMP,10 mL
45	N063136-014AMS,MS	37	1000	Unknown		02/17/2024 16:14	Finished	MS (1ppb), IWST-231228B,10r
46	N063153-005A,SAMF	38	1000	Unknown		02/17/2024 16:24	Finished	SAMP,10 mL
47	CCV-4,CCV1,1,	39	1000	Unknown		02/17/2024 16:33	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	40	1000	Unknown		02/17/2024 16:43	Finished	CCB R240129C
49	N063153-005AMS,MS	41	1000	Unknown		02/17/2024 16:52	Finished	MS (1ppb), IWST-231228B,10r
50	N063153-005A,SAMF	42	1000	Unknown		02/17/2024 17:02	Finished	SAMP,2>10 mL
51	N063153-005AMS,MS	43	1000	Unknown		02/17/2024 17:11	Finished	MS (1ppb), IWST-231228B,2>
52	N063153-001AMS,MS	44	1000	Unknown		02/17/2024 17:20	Finished	MS (5ppb), IWST-231228B,2>
53	CCV-5,CCV,1,	45	1000	Unknown		02/17/2024 17:30	Finished	CCV @5ppb, IWST-231228A
54	CCB-5,CCB,1,	46	1000	Unknown		02/17/2024 17:39	Finished	CCB R240129C
55	BLANK	47	1000	Unknown		02/17/2024 17:49	Finished	BLANK
56	SHUTDOWN	48	1000	Unknown		02/17/2024 17:58	Finished	
57	Eluent: R240215A	49	1000	Unknown		n.a.	Finished	
58	PCR: R240215B	50	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 10:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

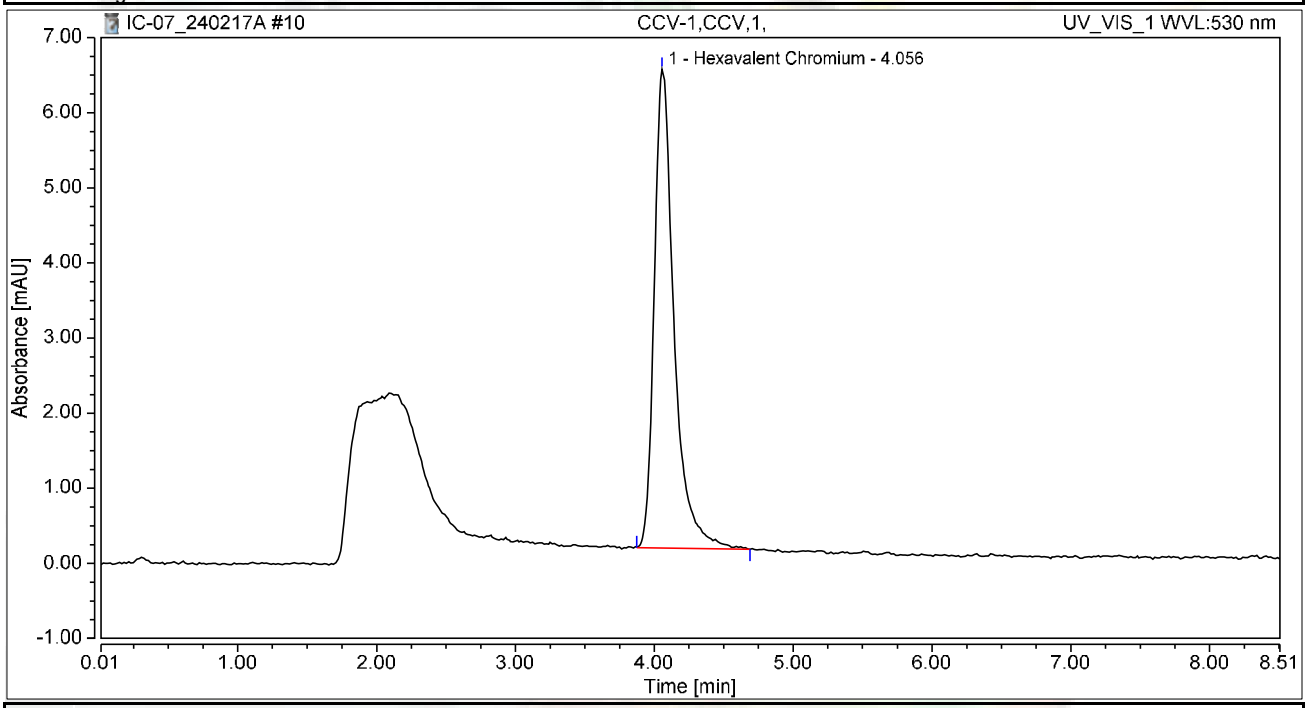
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 10:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.054	6.373	100.00	100.00	4.9014
Total:			**1.054**	**6.373**	**100.00**	**100.00**	

Reviewed by:

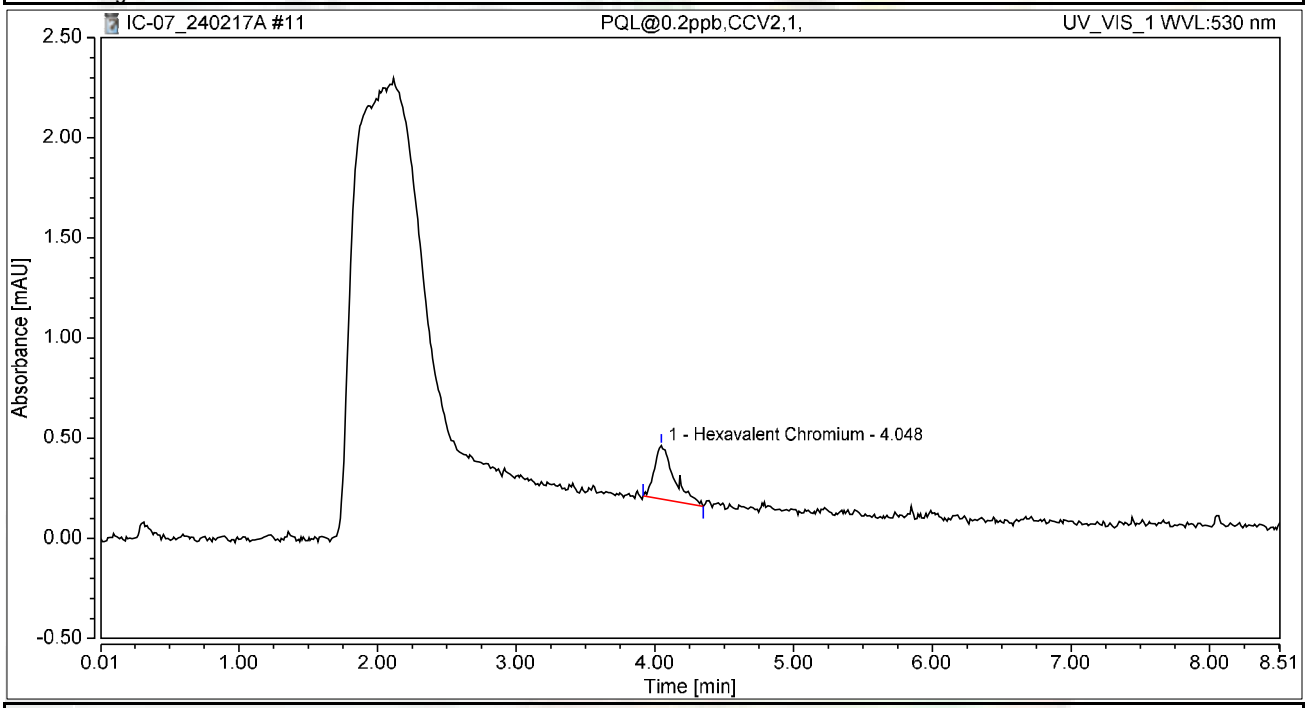
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 10:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

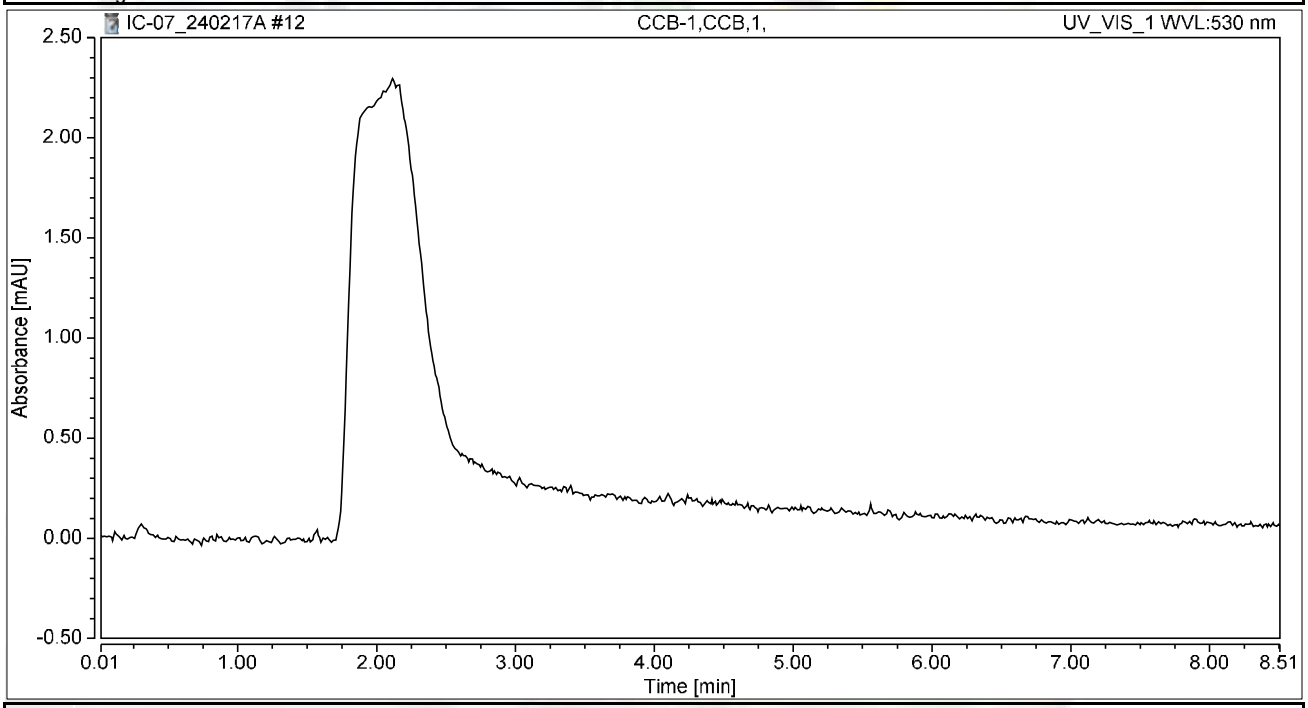
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.045	0.266	100.00	100.00	0.2081
Total:			**0.045**	**0.266**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 11:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

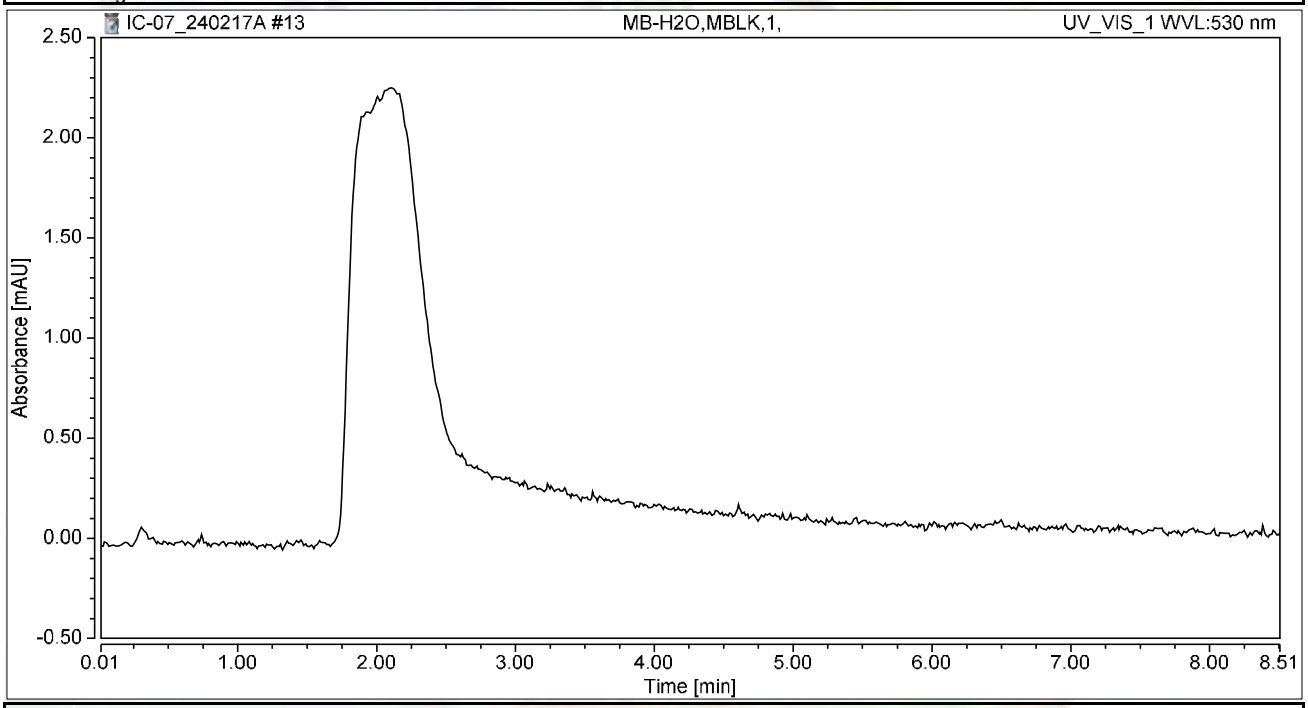
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 11:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

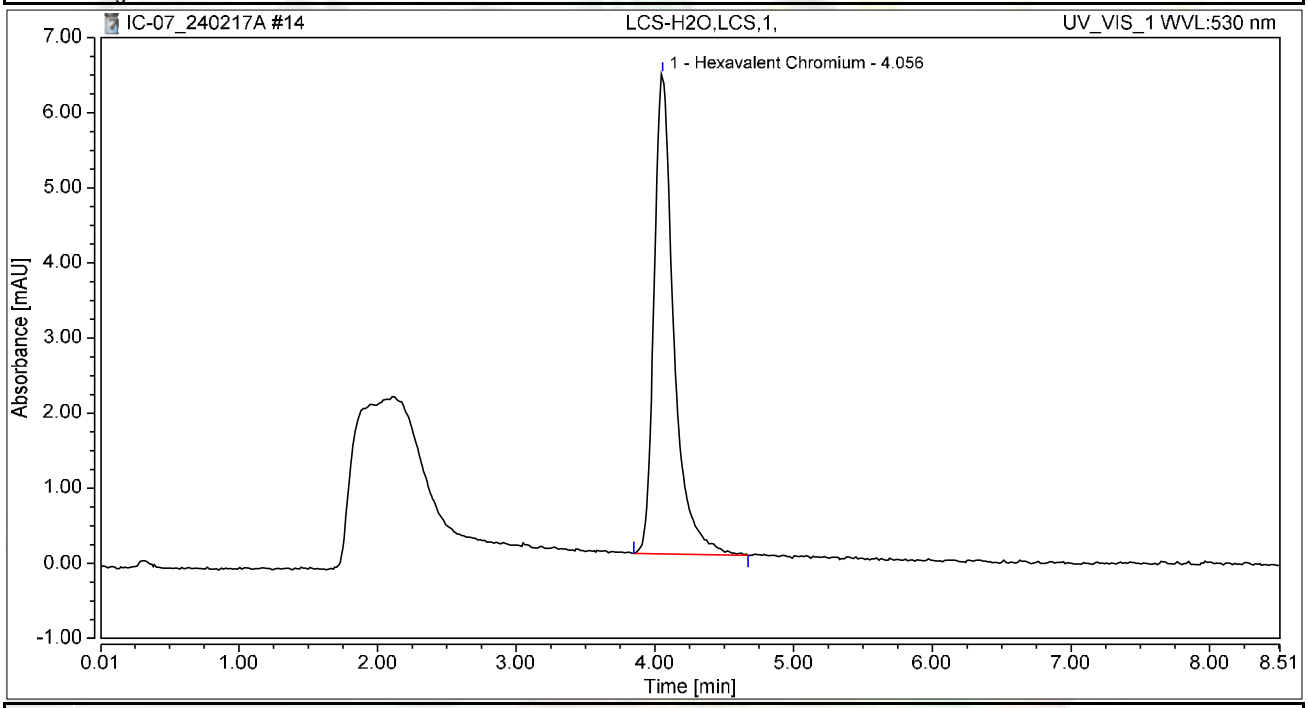
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 11:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

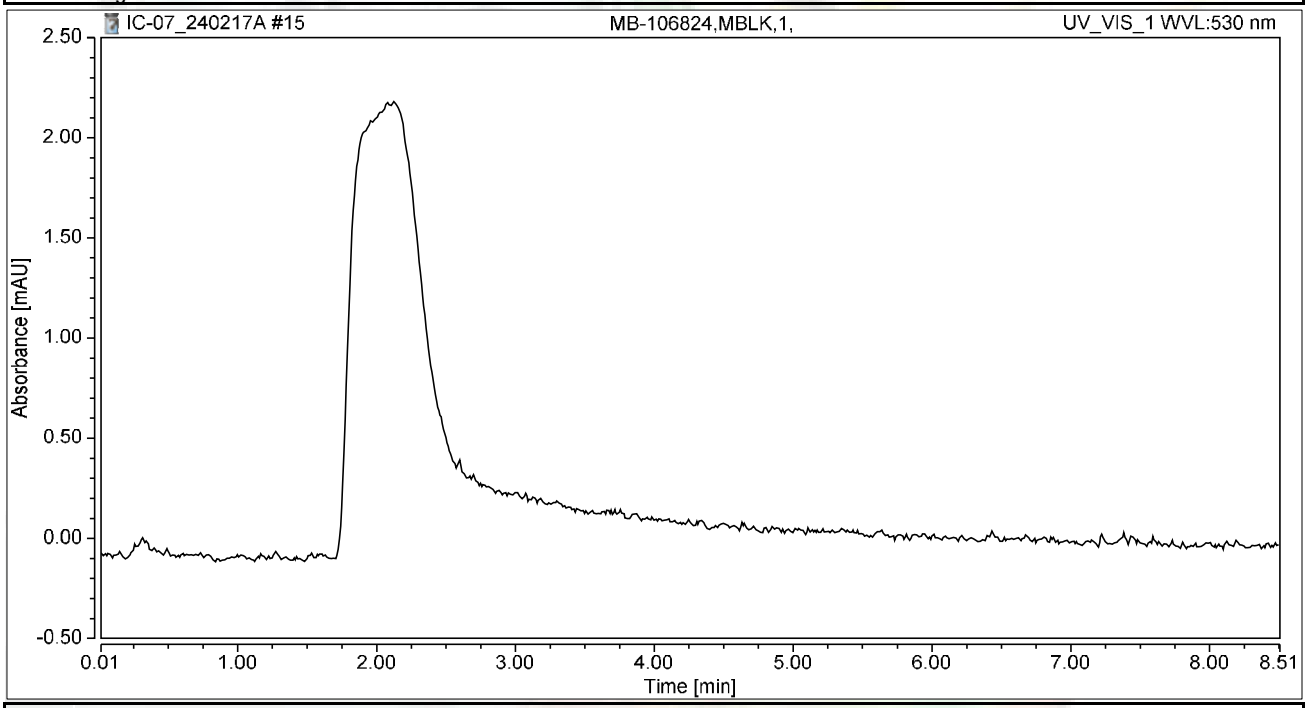
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.056	6.387	100.00	100.00	4.9076
Total:			**1.056**	**6.387**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-106824,MBLK,1,**	*Run Time (min):*	**8.49**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 11:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

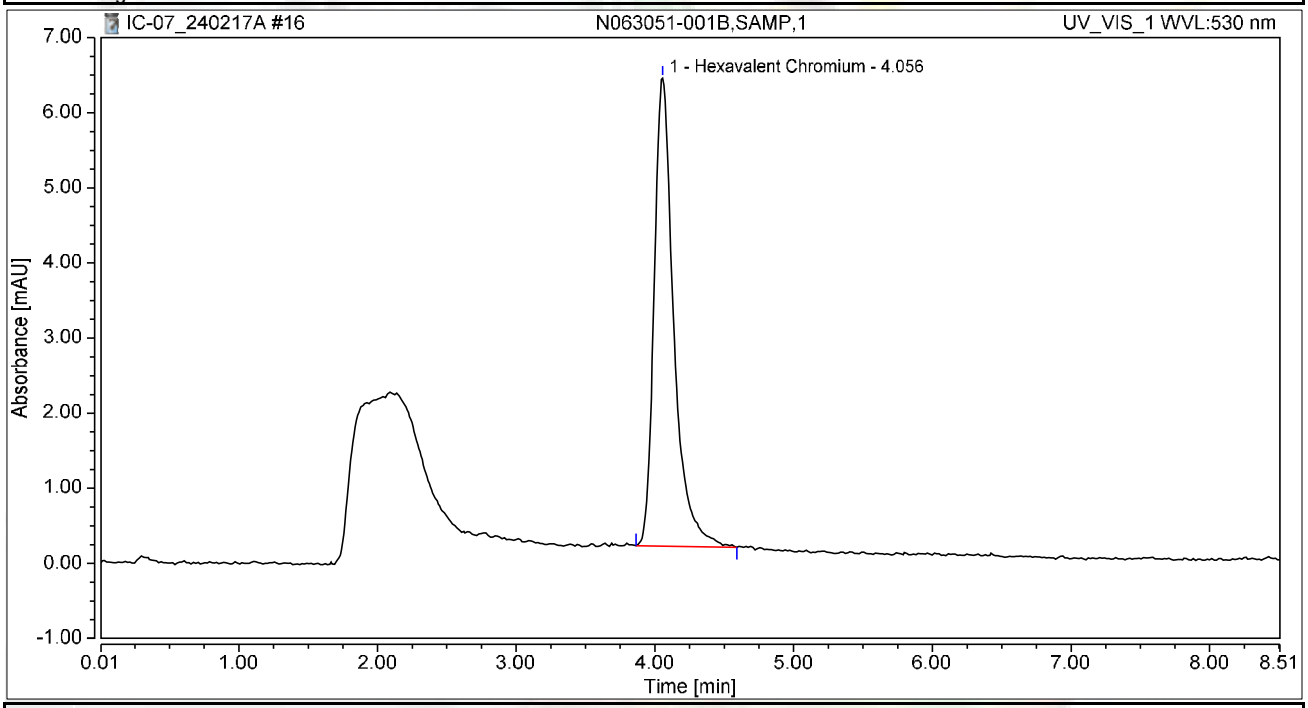
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063051-001B,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 11:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

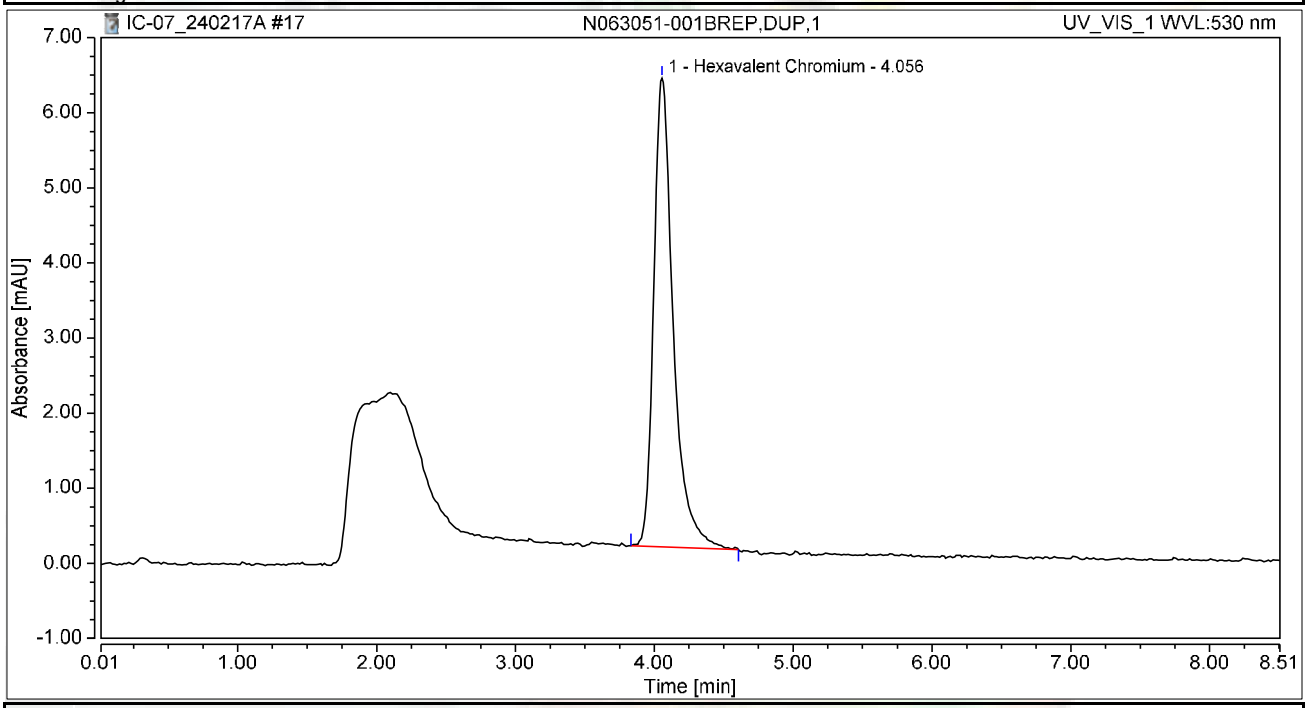
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.023	6.232	100.00	100.00	4.7553
Total:			**1.023**	**6.232**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063051-001BREP,DUP,1**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 11:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

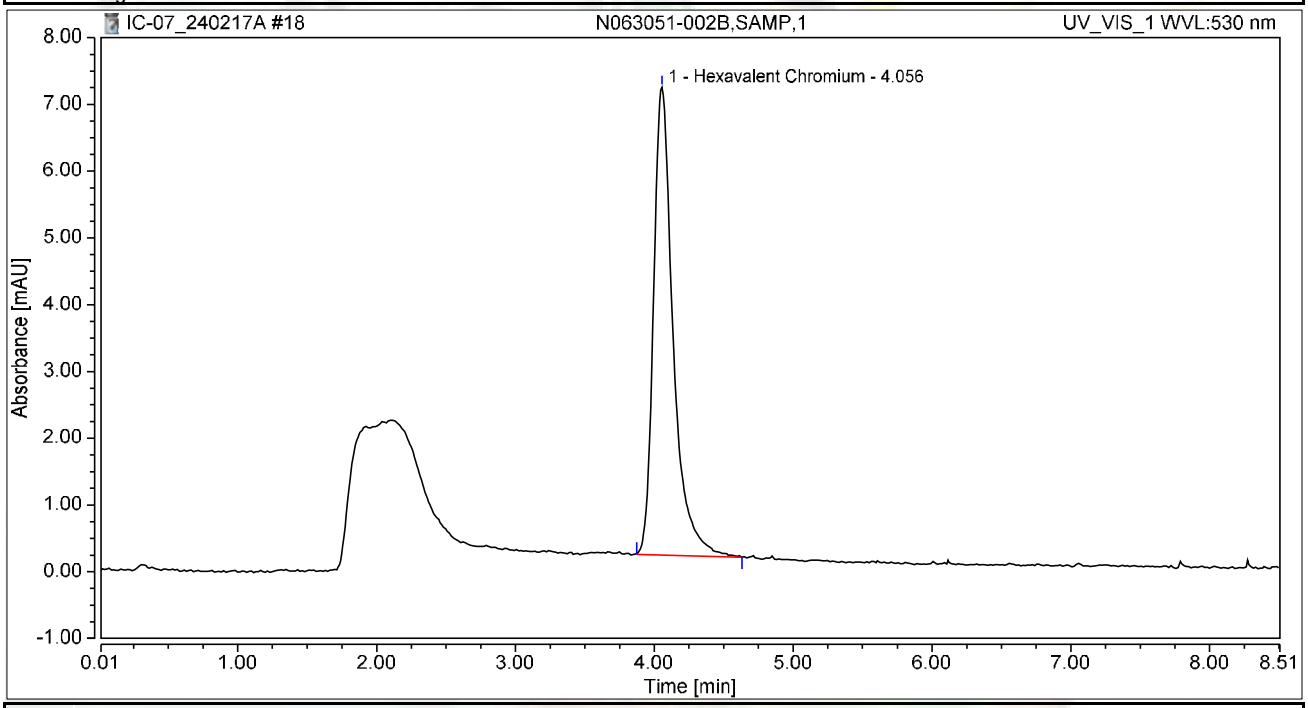
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.018	6.242	100.00	100.00	4.7343
Total:			**1.018**	**6.242**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063051-002B,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 12:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

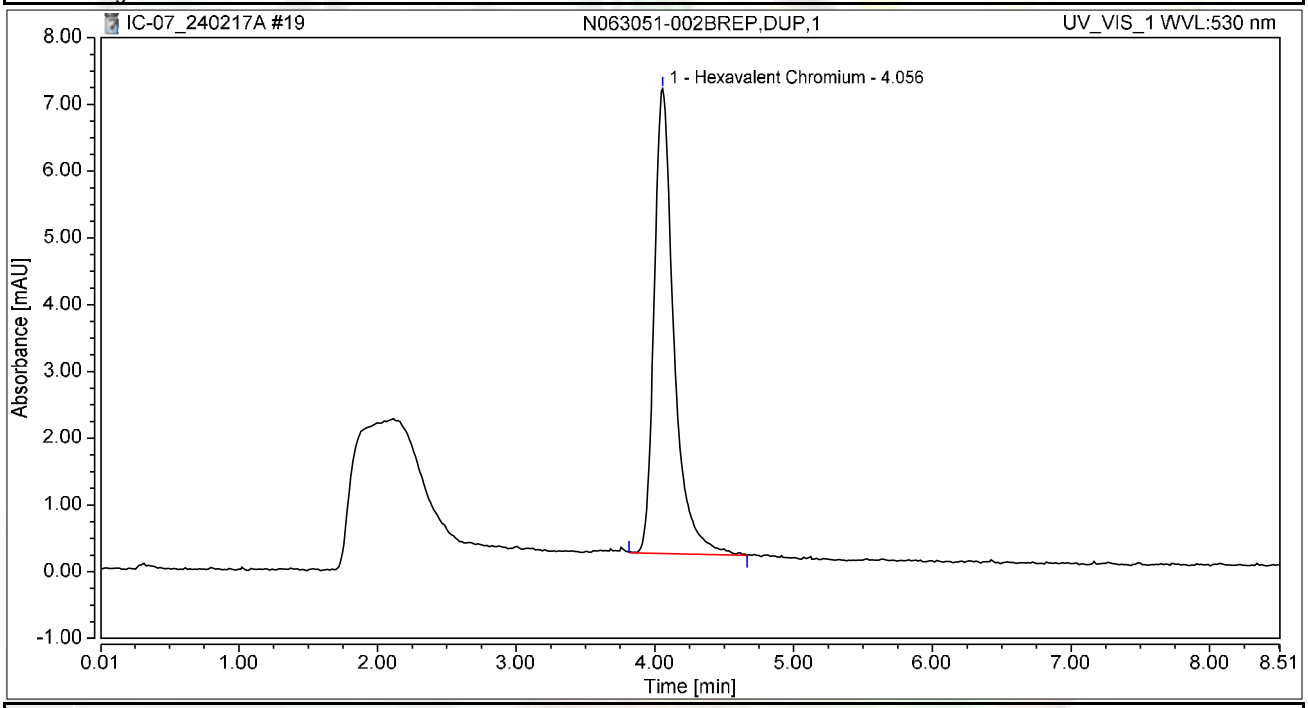
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.149	7.004	100.00	100.00	5.3413
Total:			**1.149**	**7.004**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063051-002BREP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

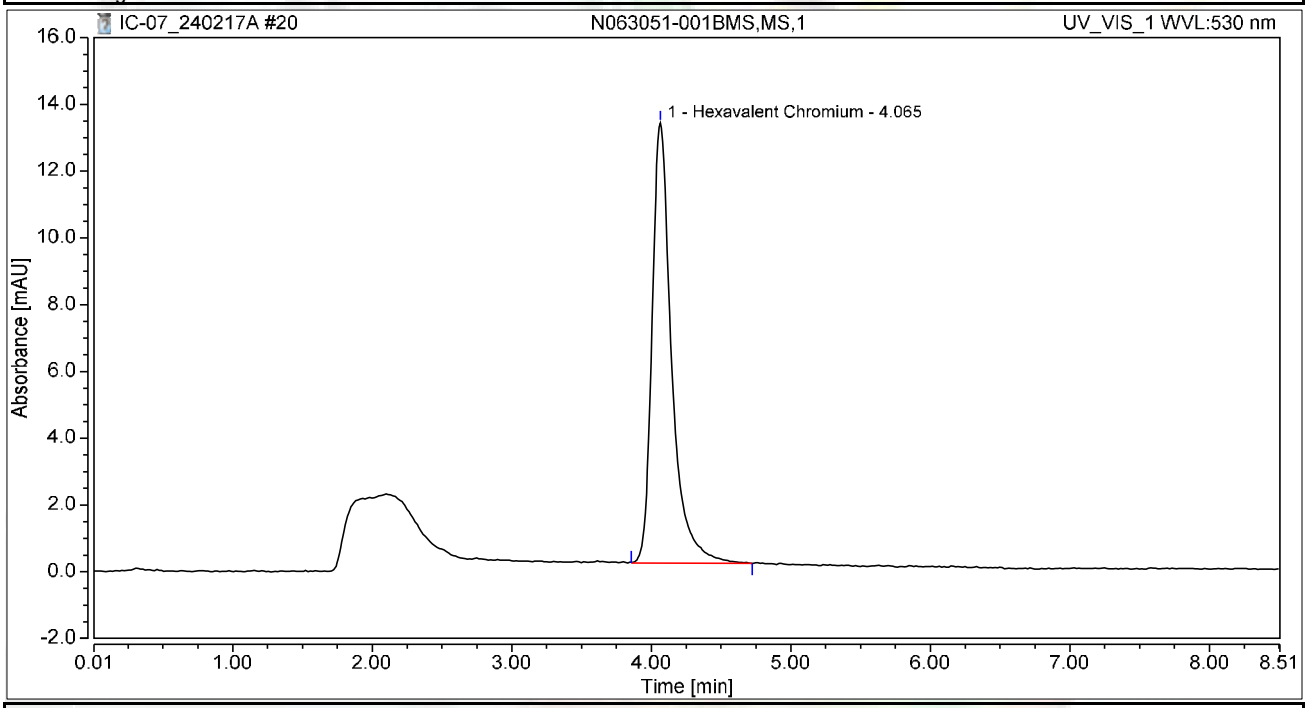
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.151	6.962	100.00	100.00	5.3511
Total:			**1.151**	**6.962**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063051-001BMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

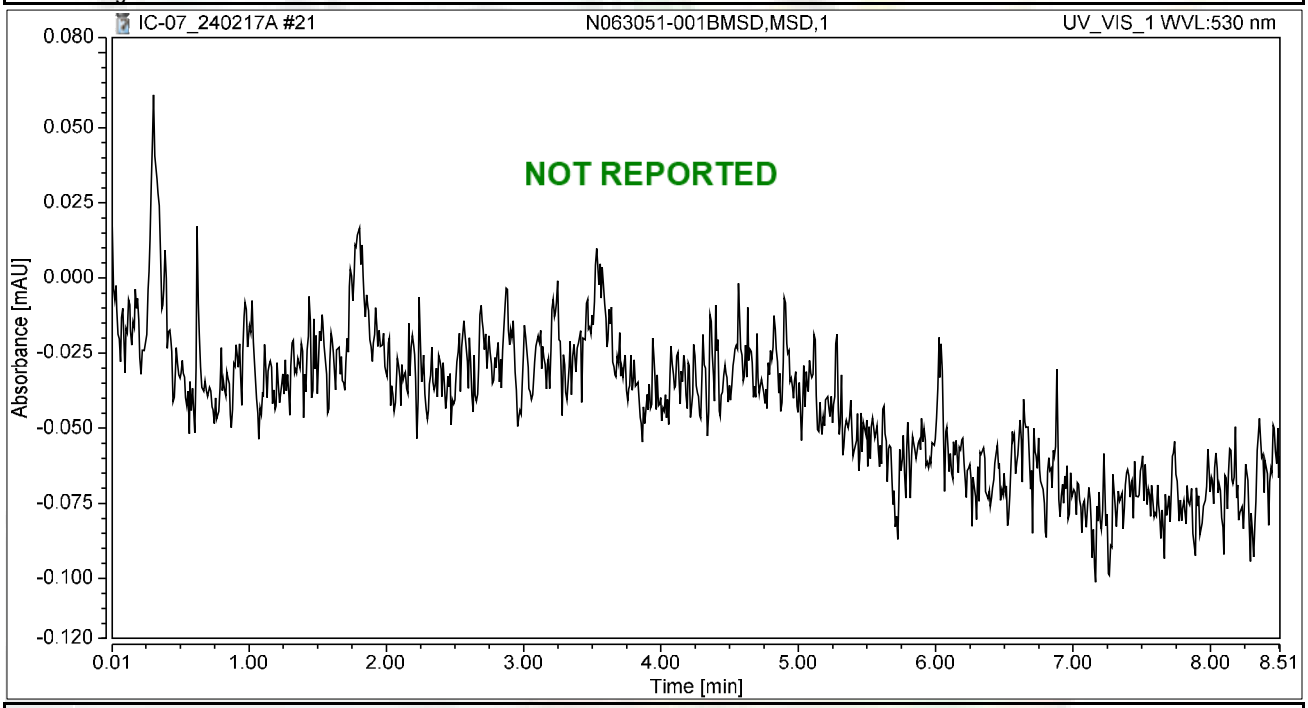
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	2.139	13.185	100.00	100.00	9.9457
Total:			**2.139**	**13.185**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063051-001BMSD,MSD,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



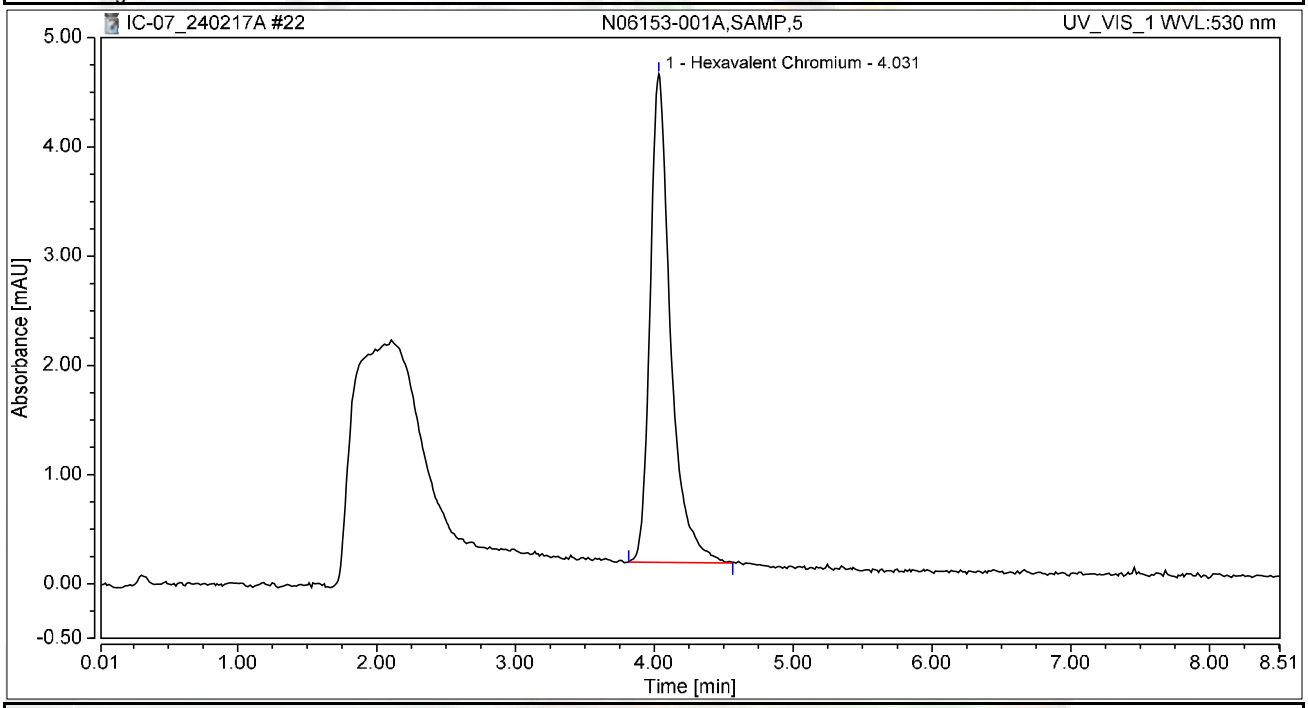
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details	N063153		
Injection Name:	~~N06153-~~001A,SAMP,5	*Run Time (min):*	**8.49**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 12:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.767	4.468	100.00	100.00	3.5678
Total:			**0.767**	**4.468**	**100.00**	**100.00**	

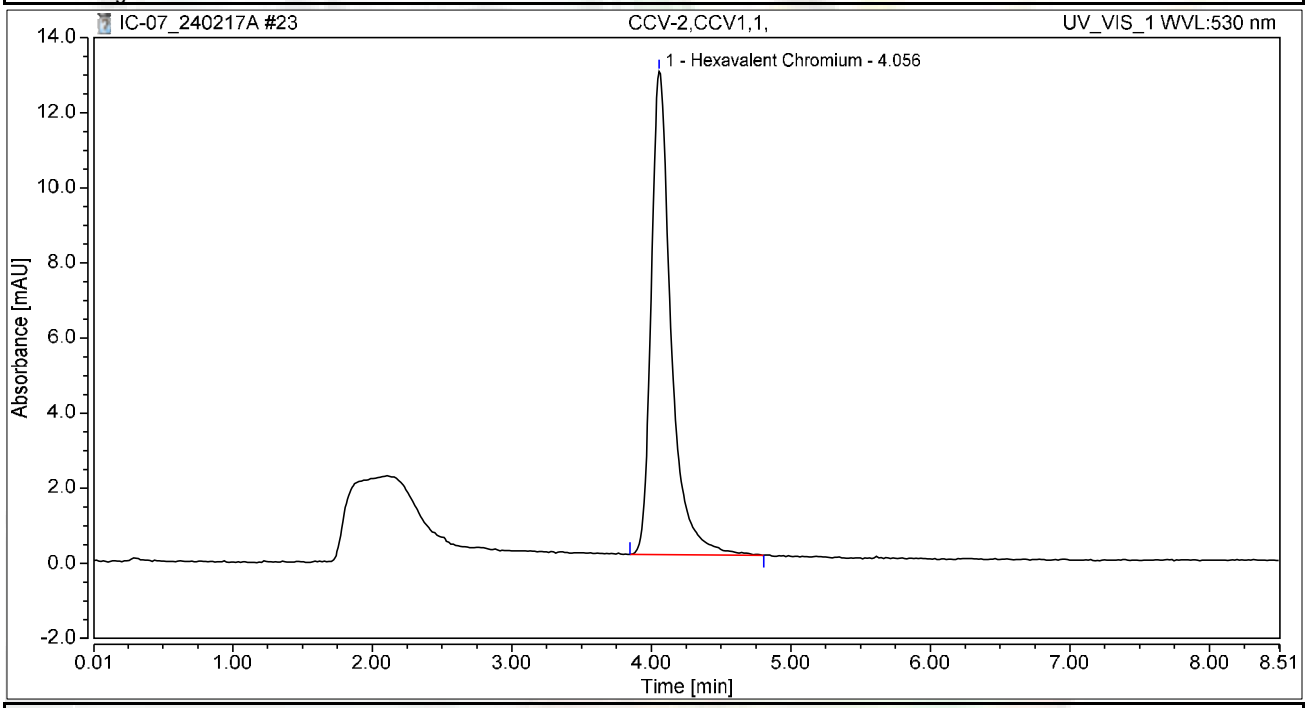
dMocha 2/29/2024
for RBA

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 12:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

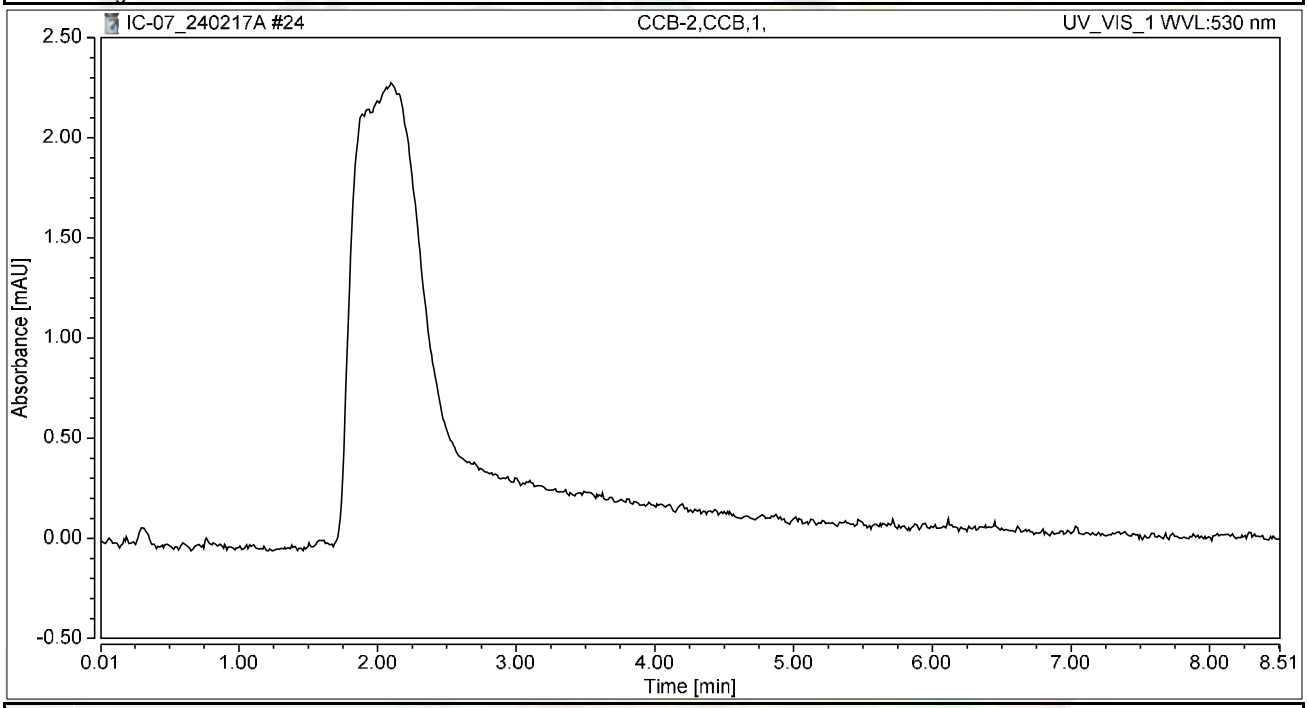
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	2.134	12.860	100.00	100.00	9.9224
Total:			**2.134**	**12.860**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 12:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

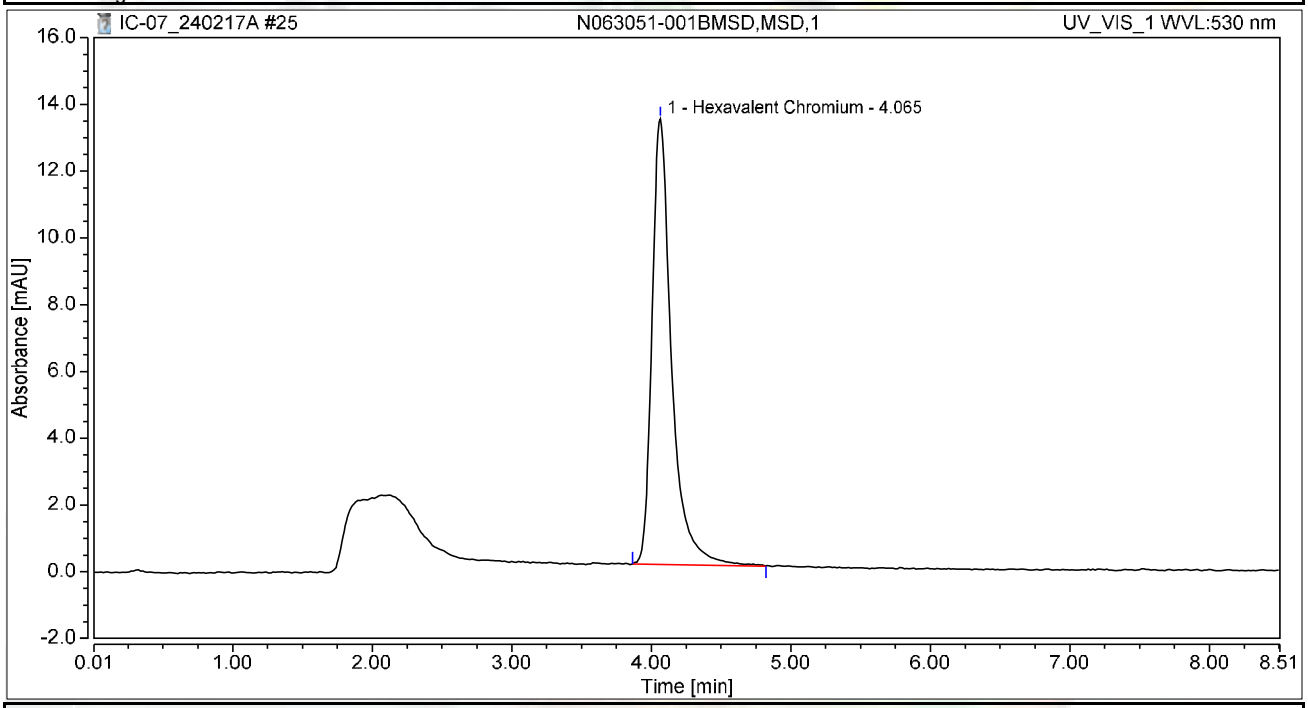
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063051-001BMSD,MSD,1**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 13:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

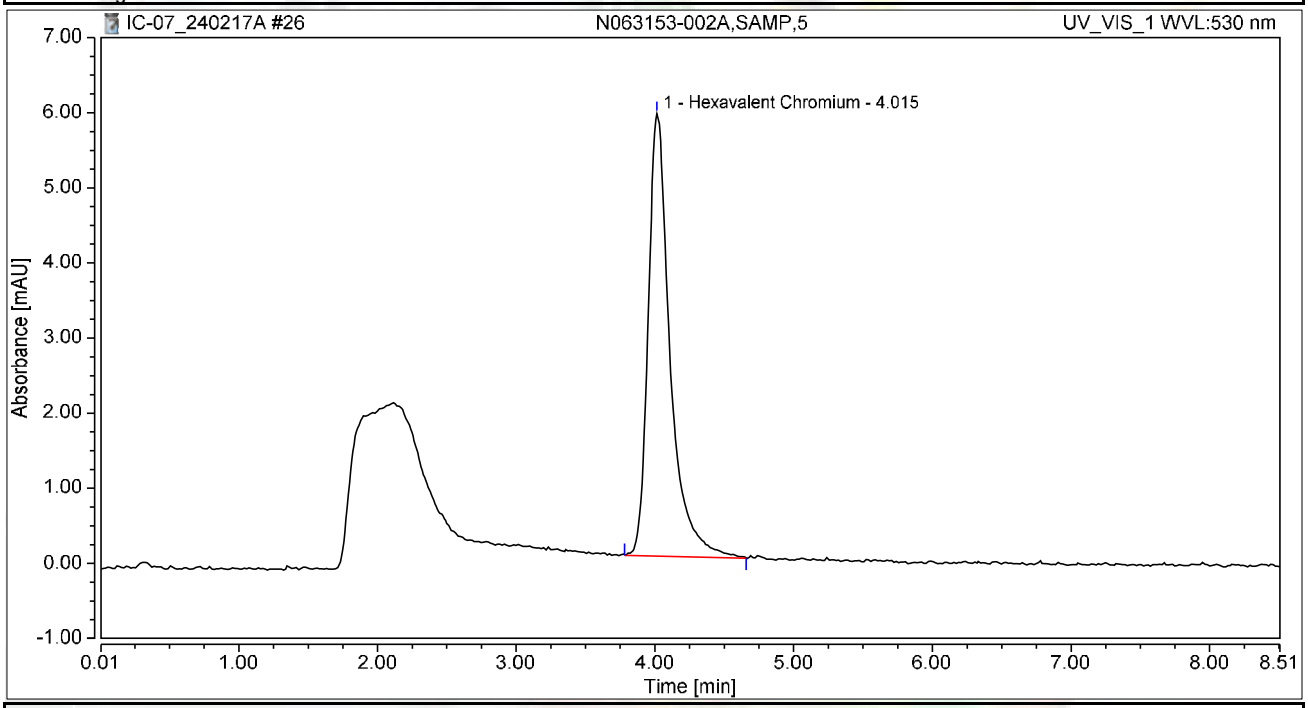
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	2.162	13.345	100.00	100.00	10.0520
Total:			**2.162**	**13.345**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 13:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

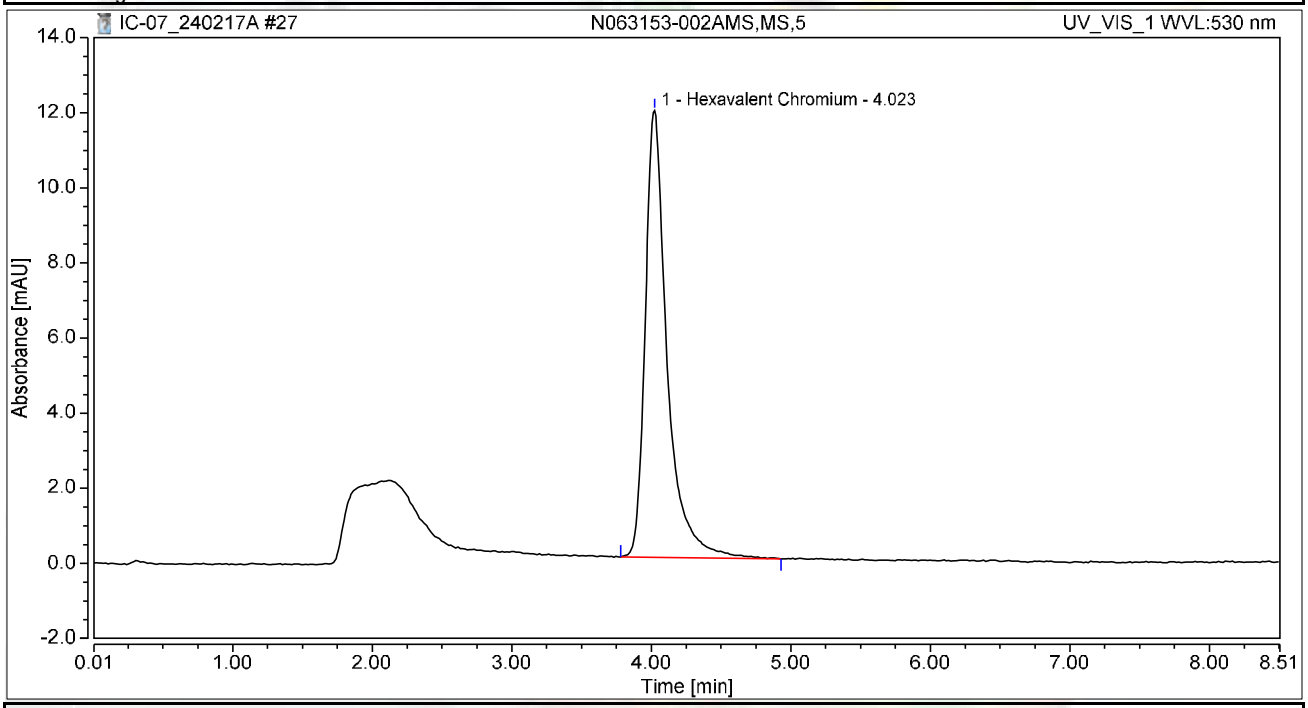
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.078	5.892	100.00	100.00	5.0117
Total:			**1.078**	**5.892**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 13:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

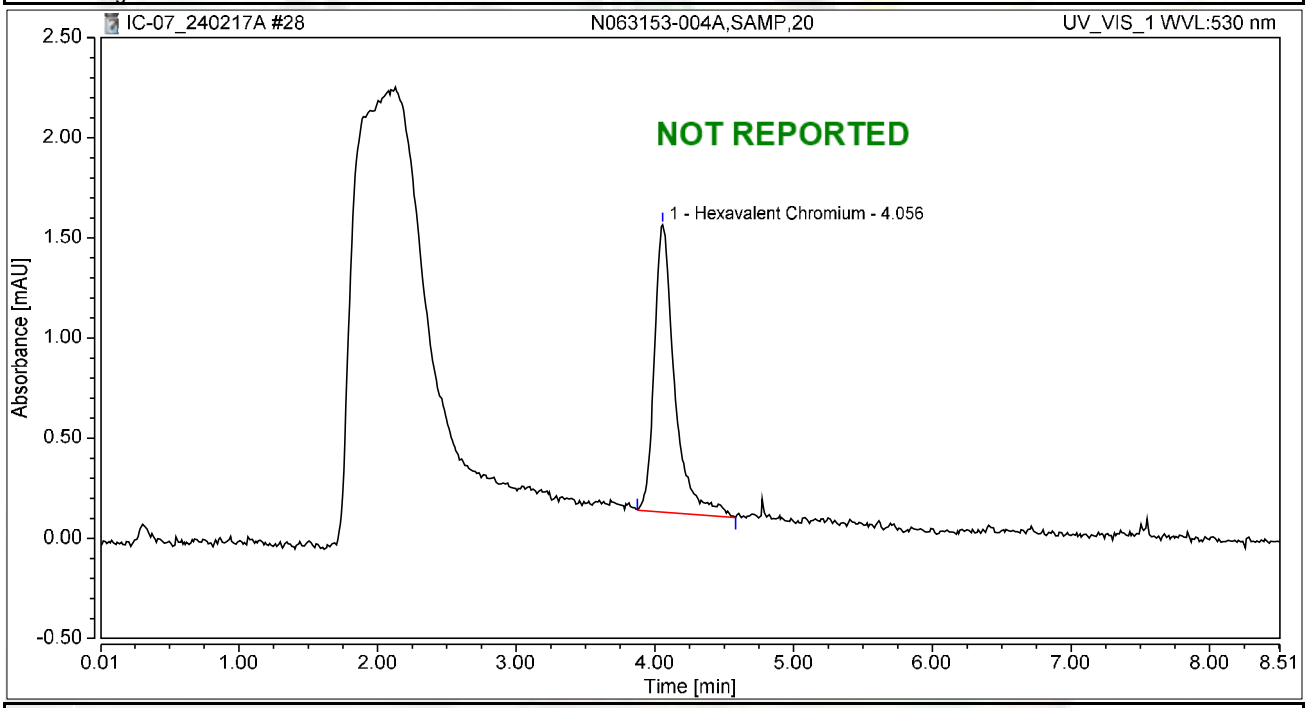
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	2.161	11.895	100.00	100.00	10.0458
Total:			**2.161**	**11.895**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-004A,SAMP,20**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 13:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

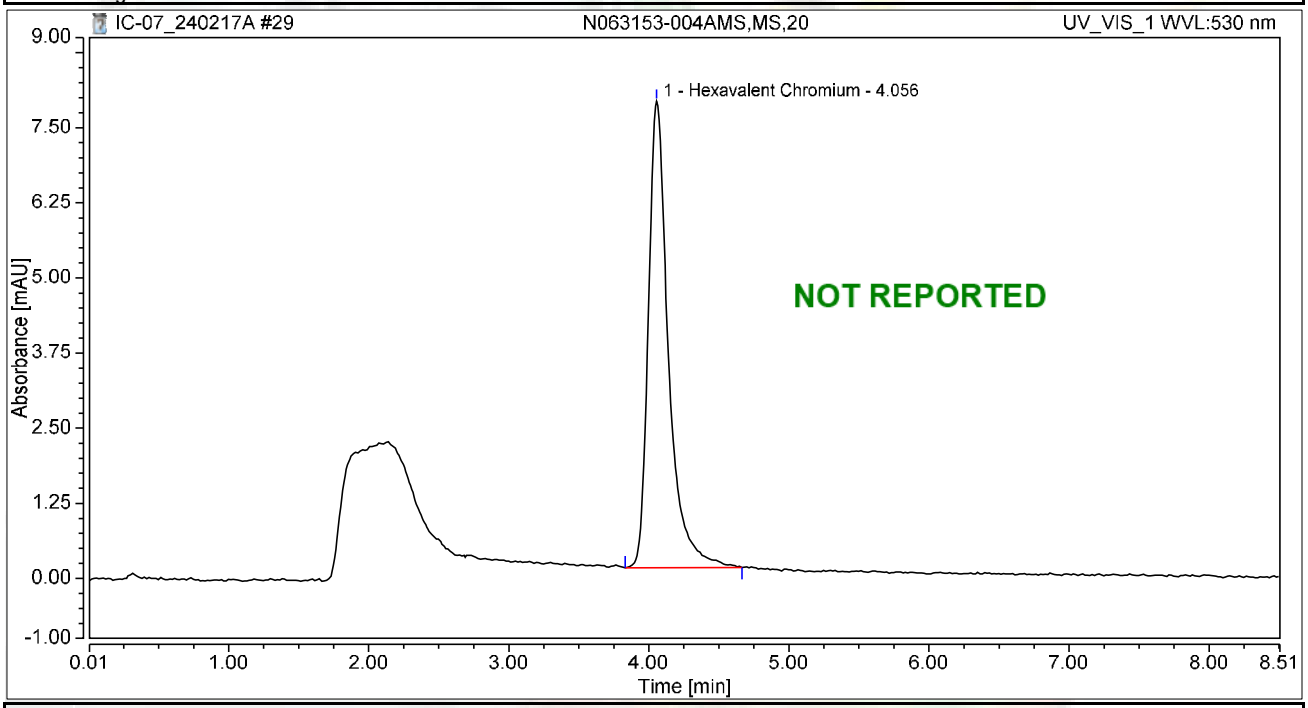
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.244	1.436	100.00	100.00	1.1362
Total:			**0.244**	**1.436**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-004AMS,MS,20**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 13:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

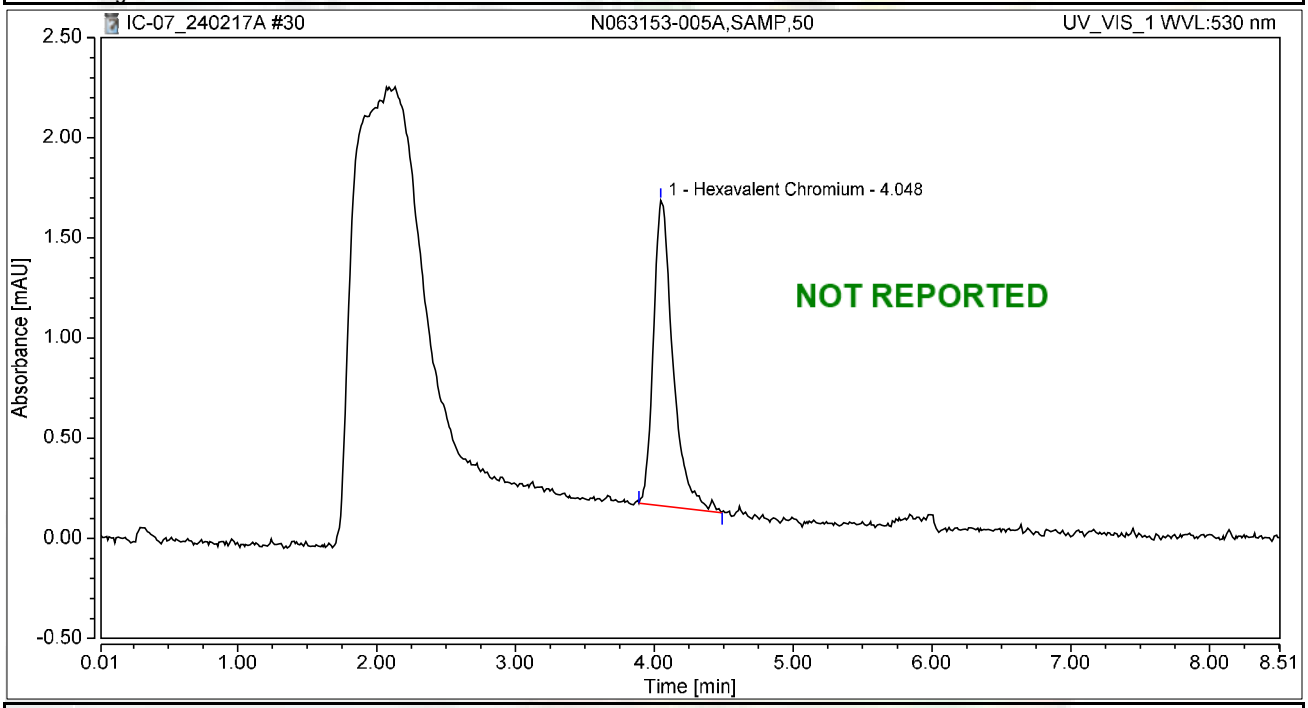
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.291	7.765	100.00	100.00	6.0015
Total:			**1.291**	**7.765**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-005A,SAMP,50**	*Run Time (min):*	**8.49**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 13:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

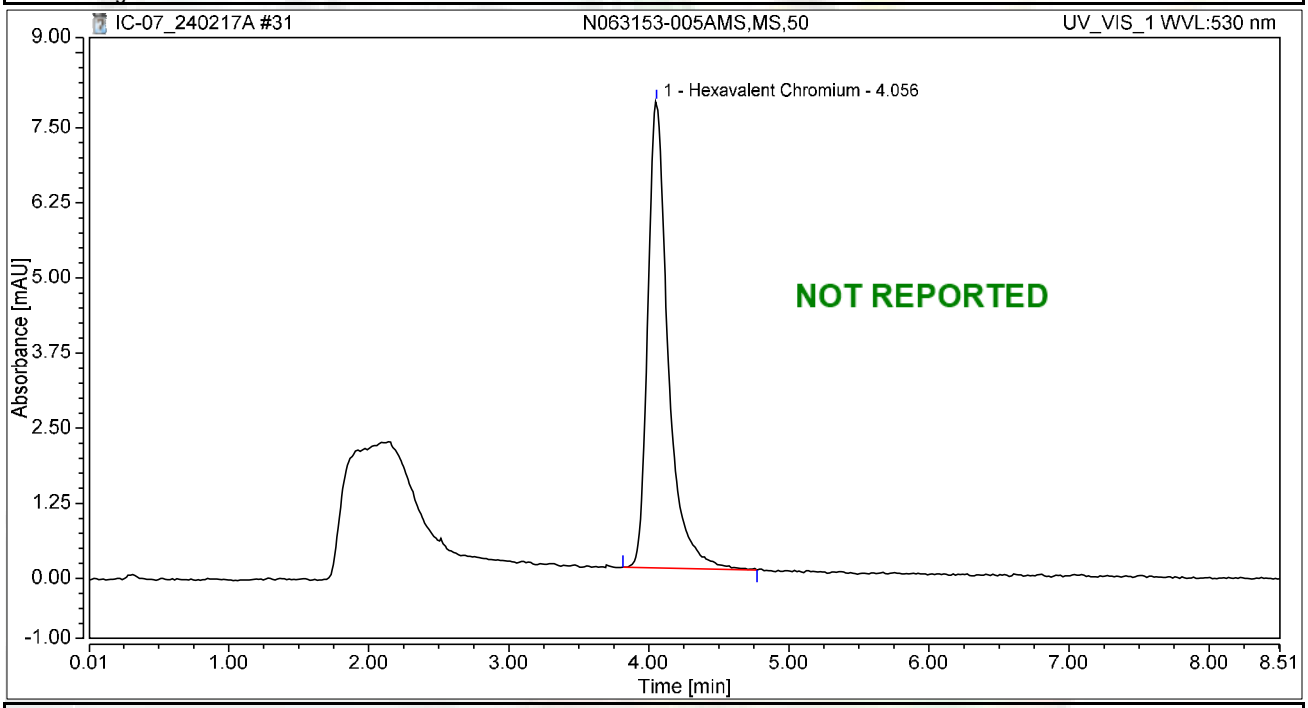
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.249	1.524	100.00	100.00	1.1560
Total:			**0.249**	**1.524**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-005AMS,MS,50**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 14:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

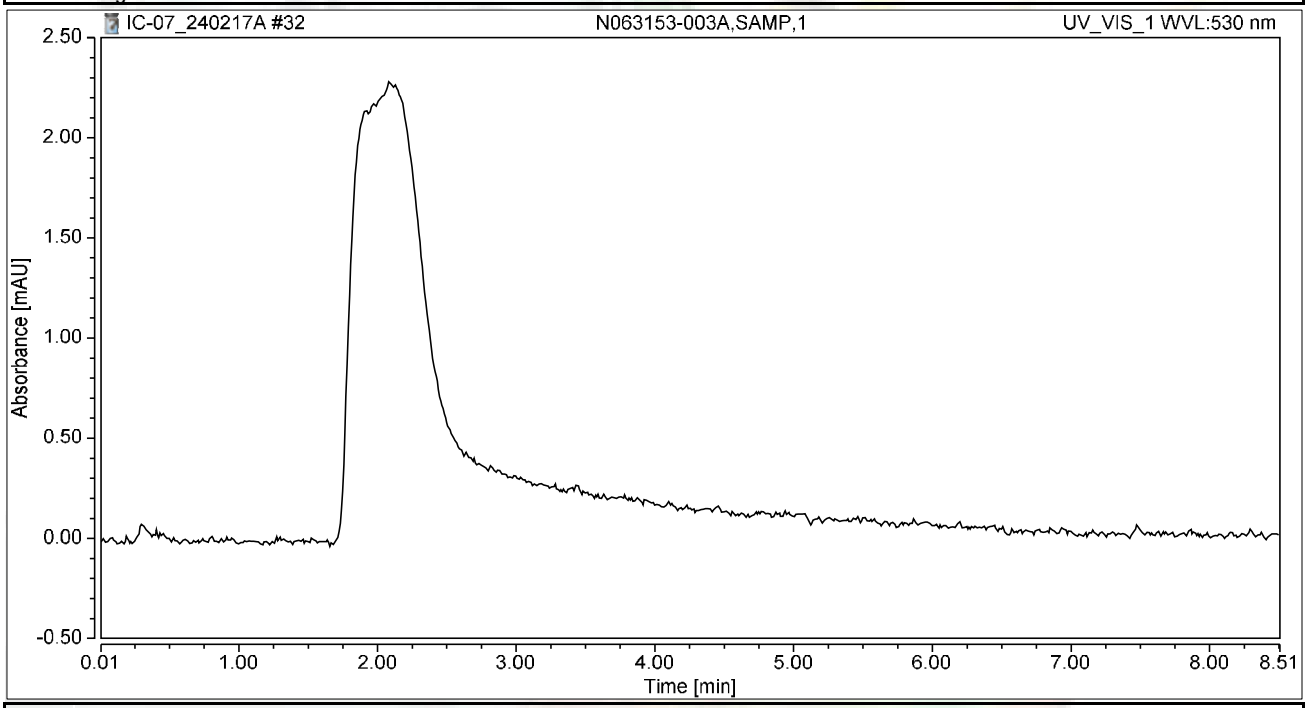
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.311	7.762	100.00	100.00	6.0933
Total:			**1.311**	**7.762**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 14:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

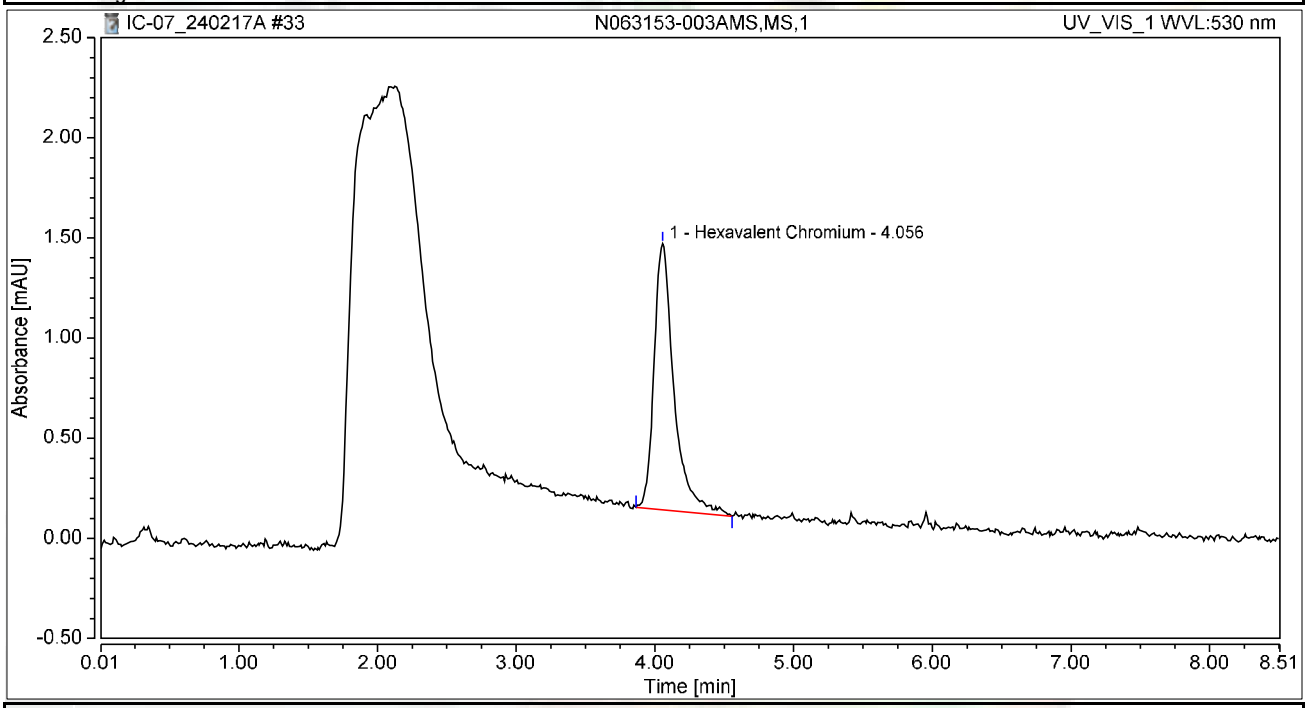
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 14:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

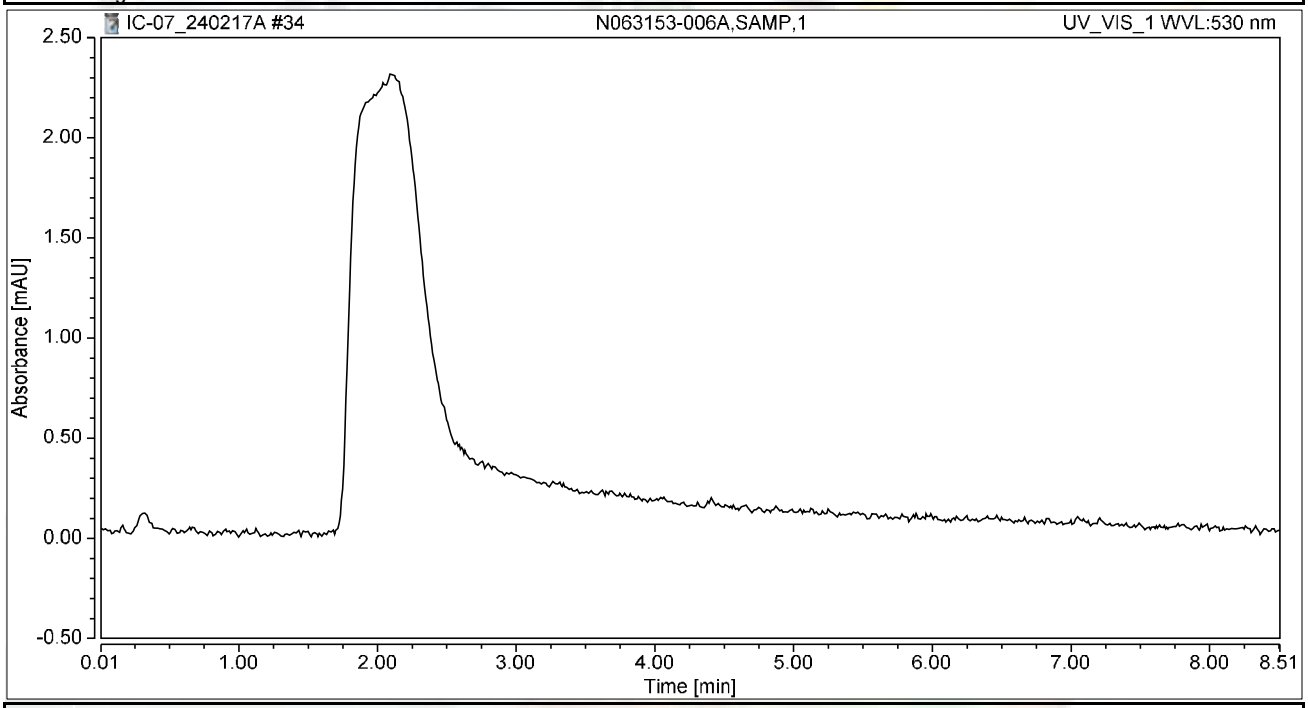
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.221	1.328	100.00	100.00	1.0287
Total:			**0.221**	**1.328**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 14:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

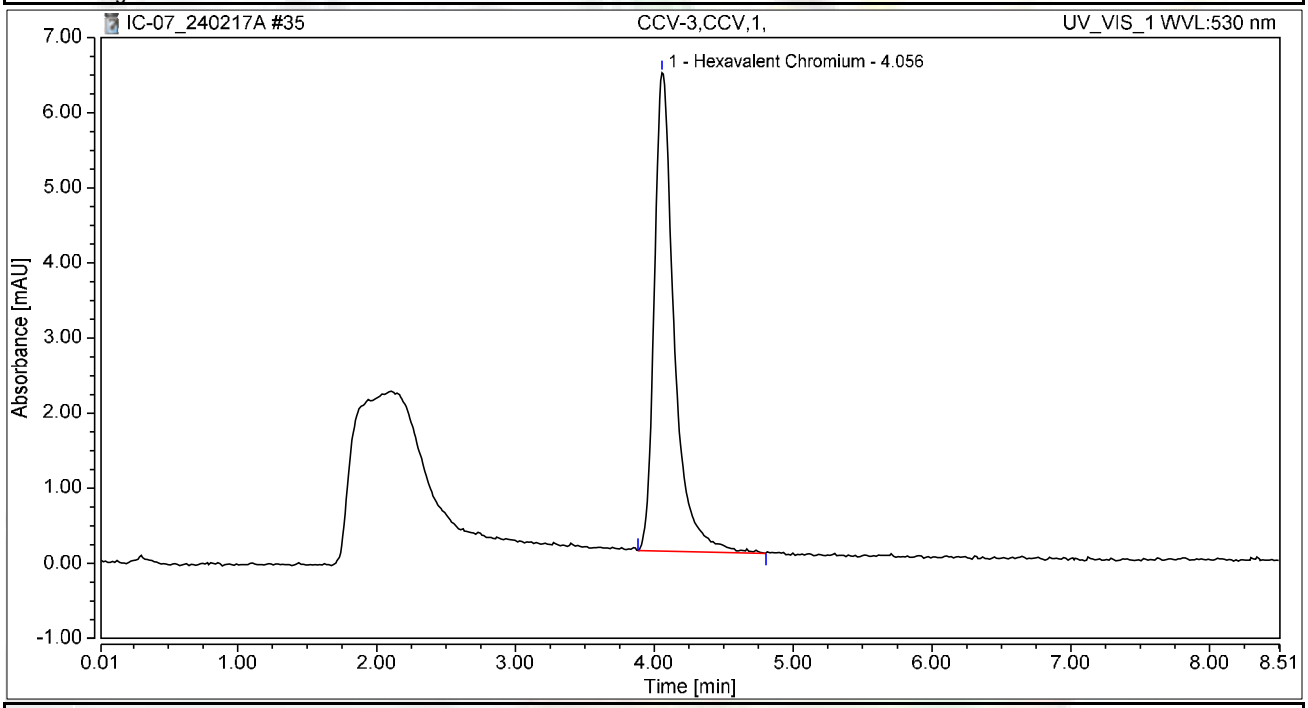
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 14:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

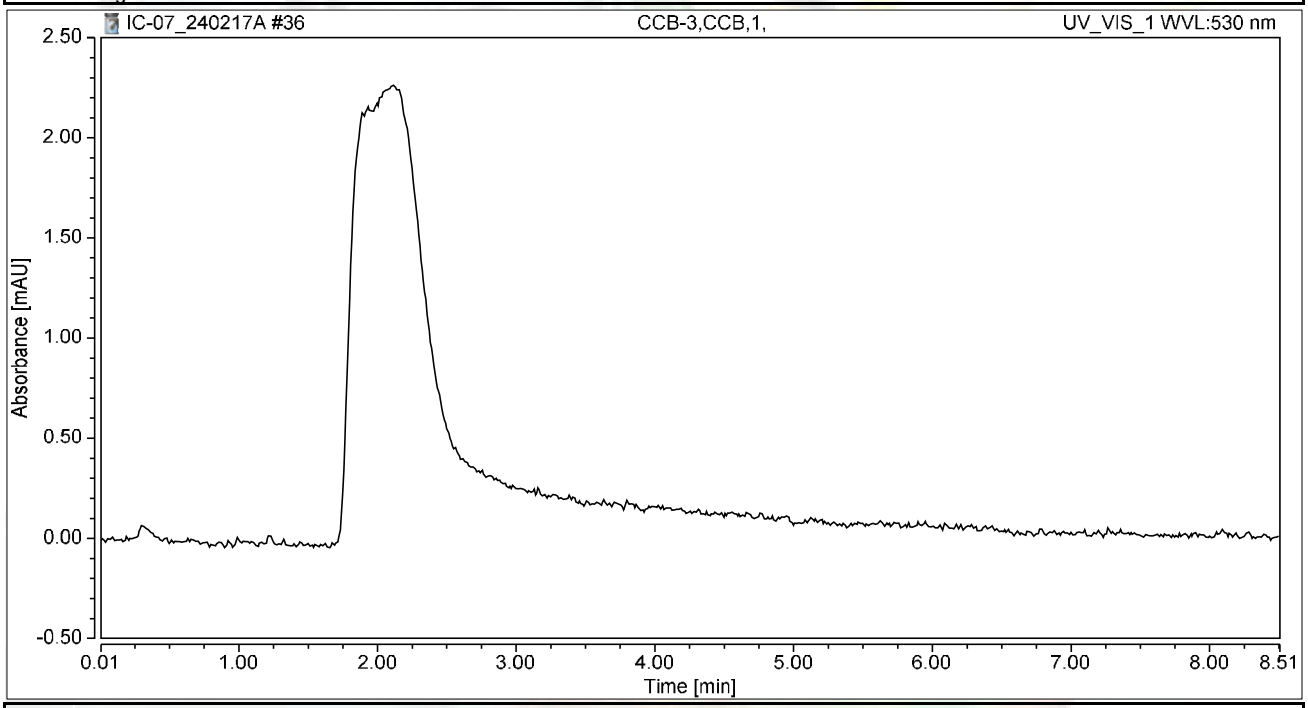
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.059	6.368	100.00	100.00	4.9236
Total:			**1.059**	**6.368**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 14:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

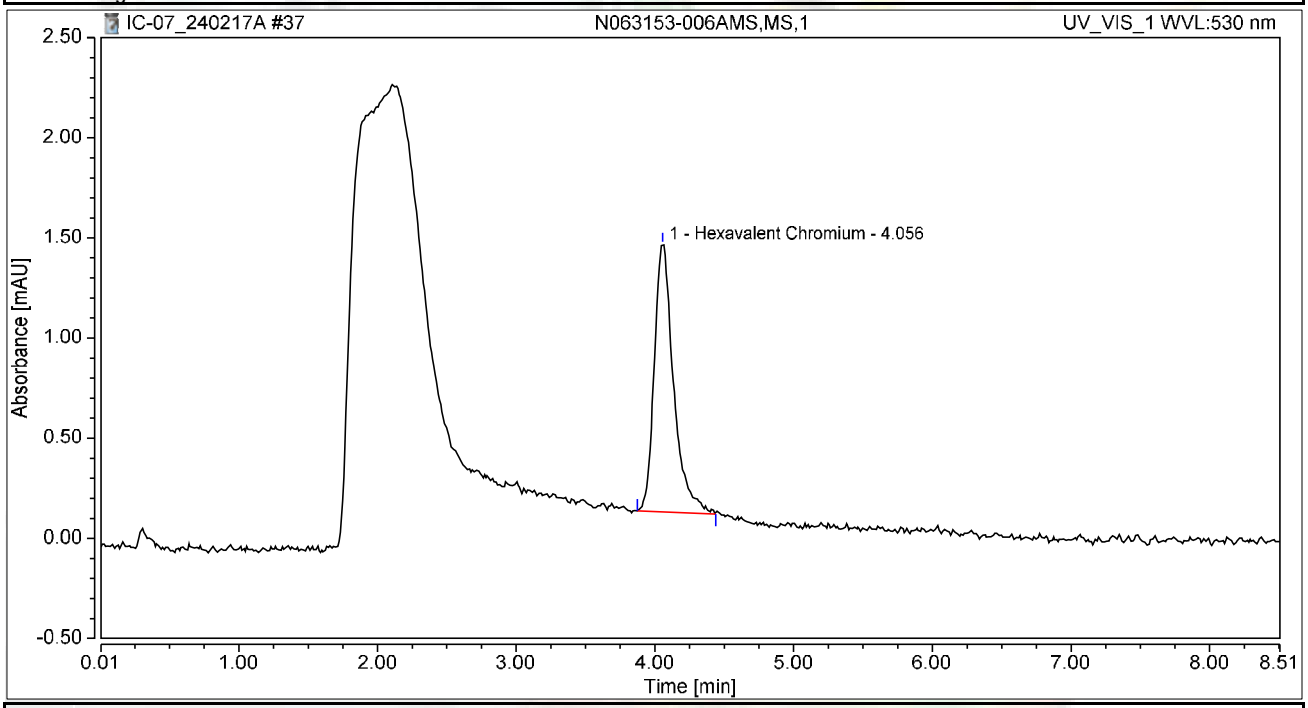
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 14:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

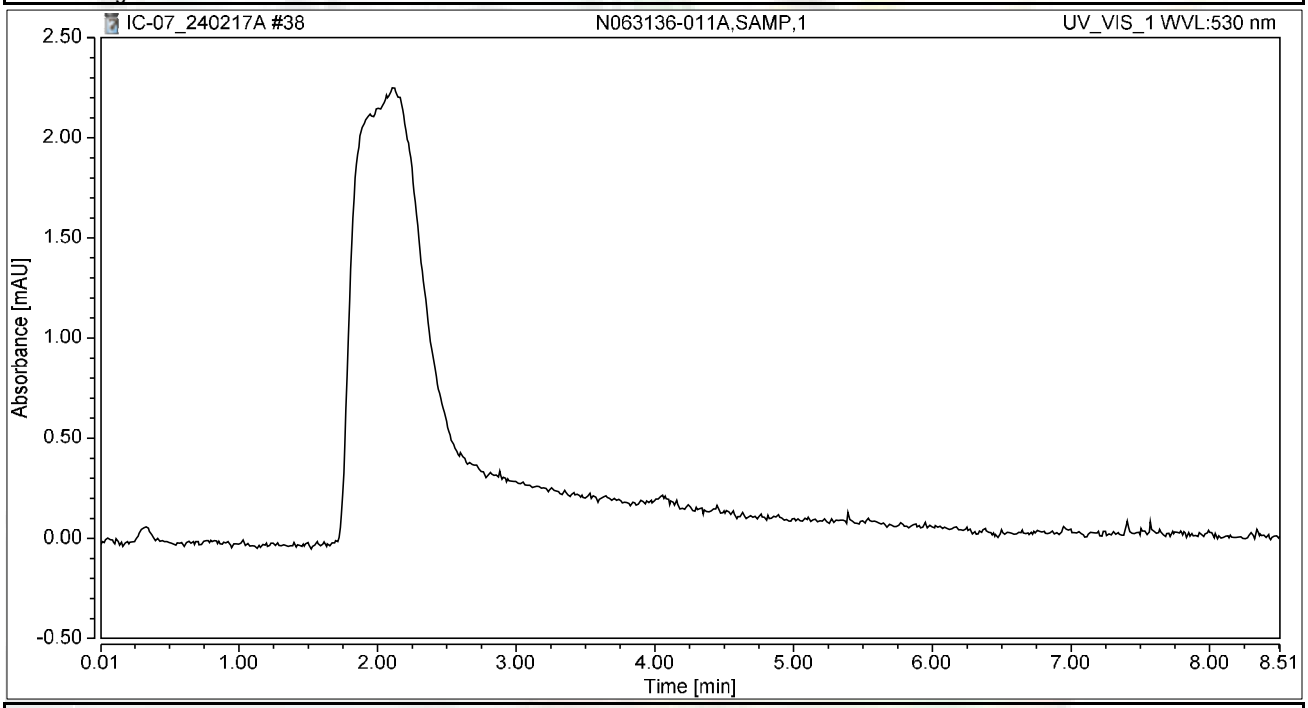
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.216	1.335	100.00	100.00	1.0045
Total:			**0.216**	**1.335**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-011A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 15:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

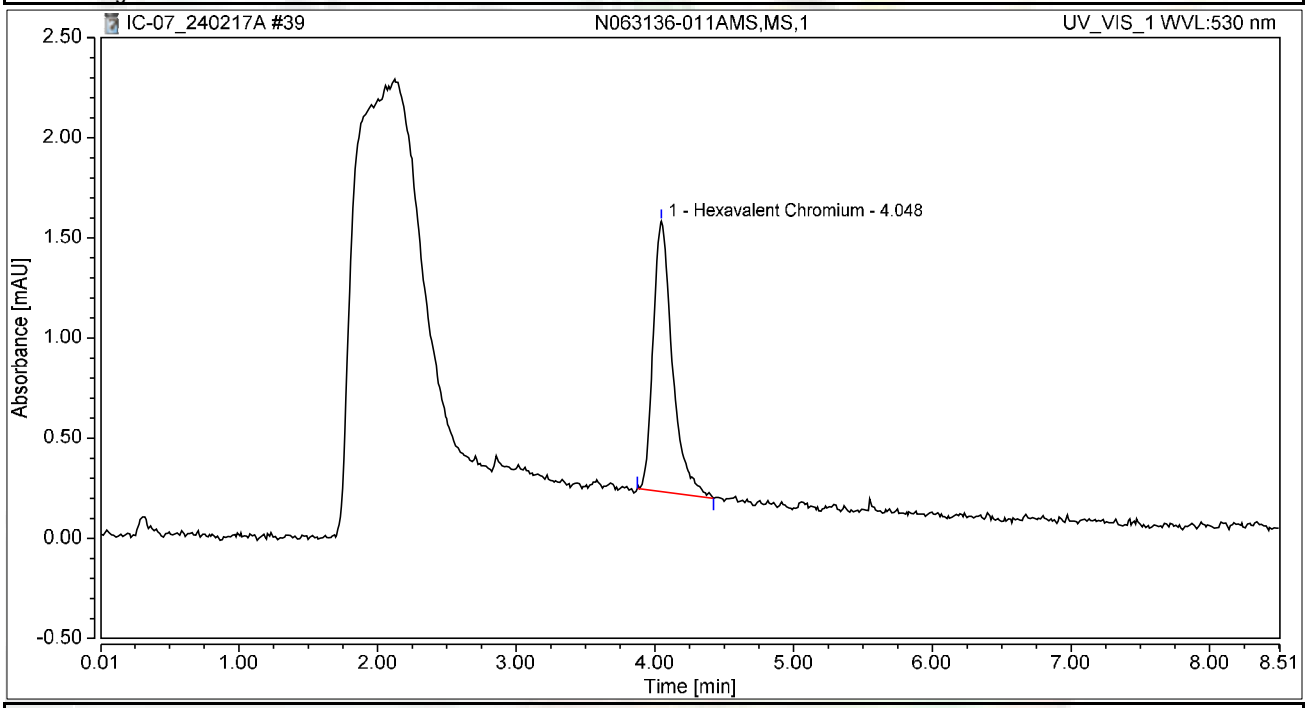
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 15:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

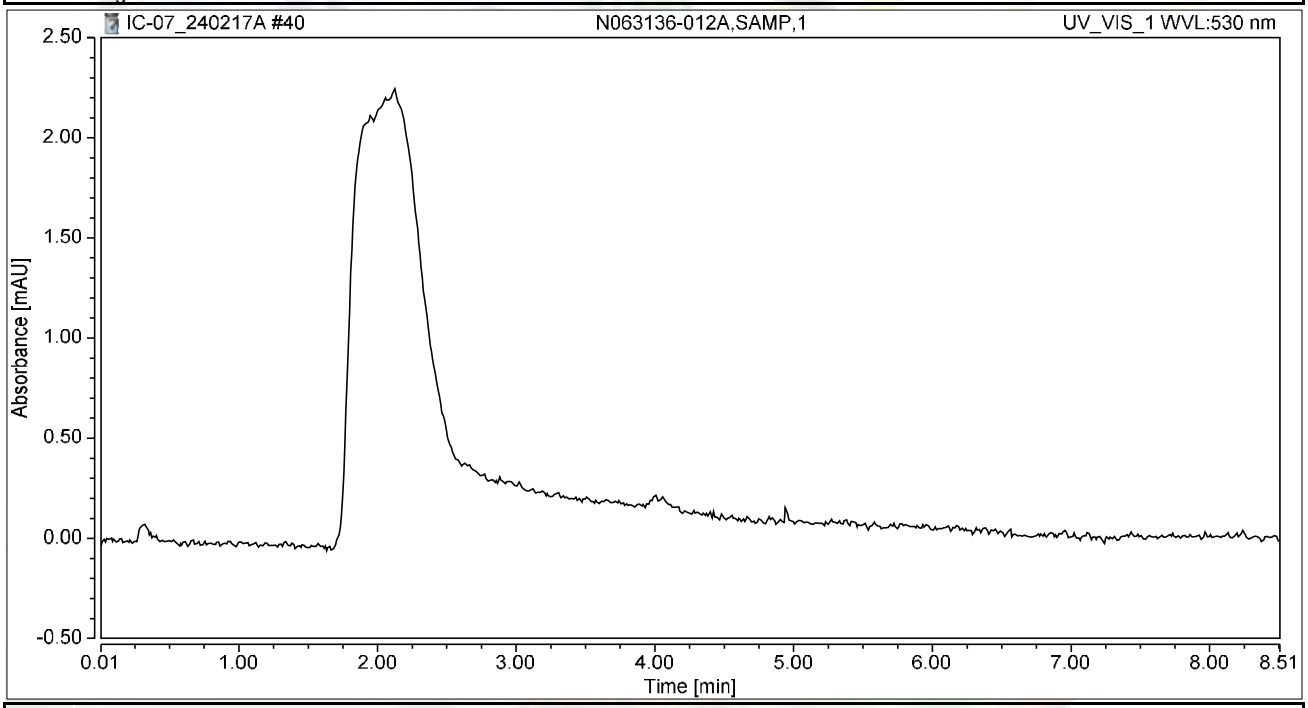
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.217	1.349	100.00	100.00	1.0103
Total:			**0.217**	**1.349**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-012A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 15:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

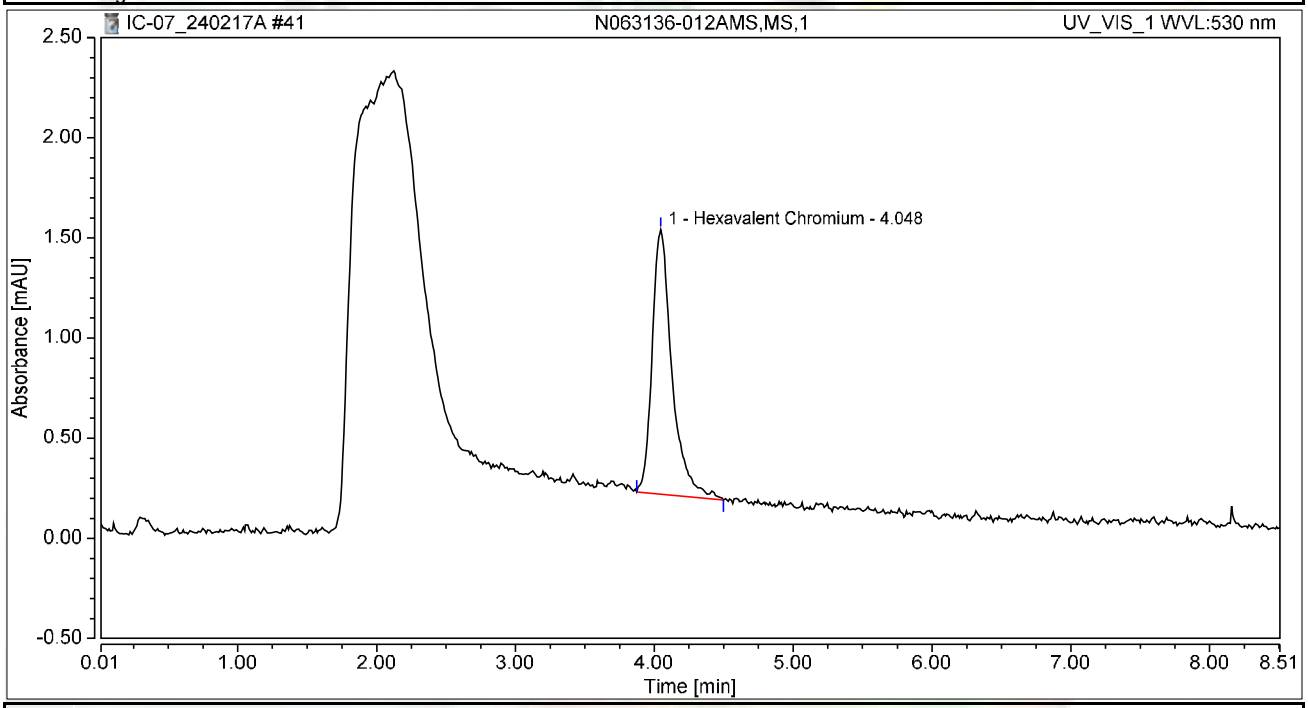
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-012AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 15:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

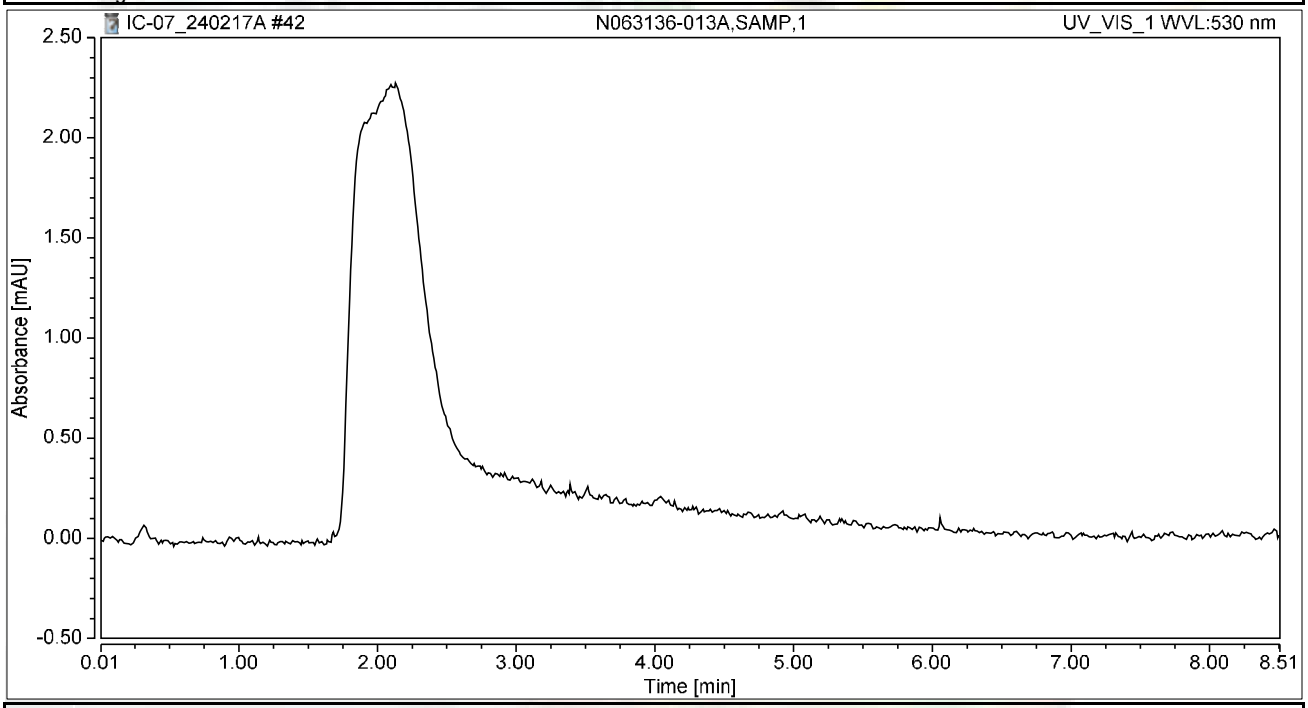
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.219	1.323	100.00	100.00	1.0178
Total:			**0.219**	**1.323**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-013A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 15:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

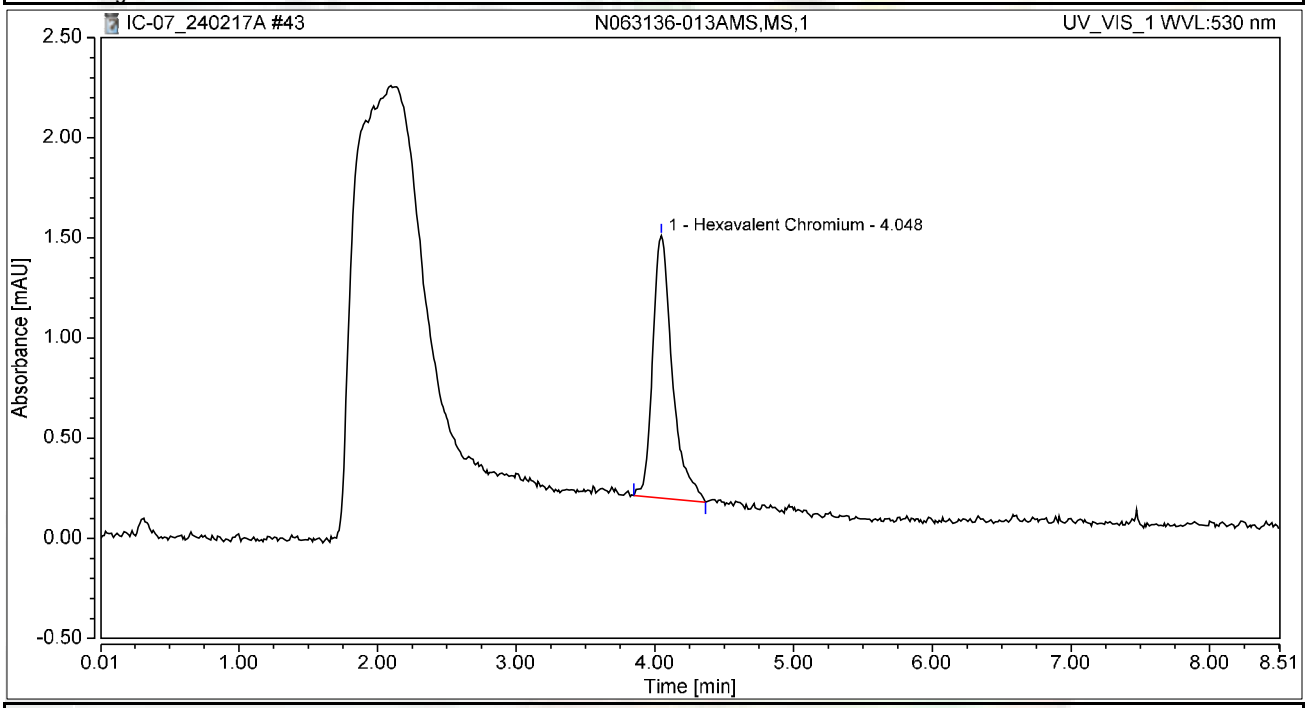
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-013AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 15:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

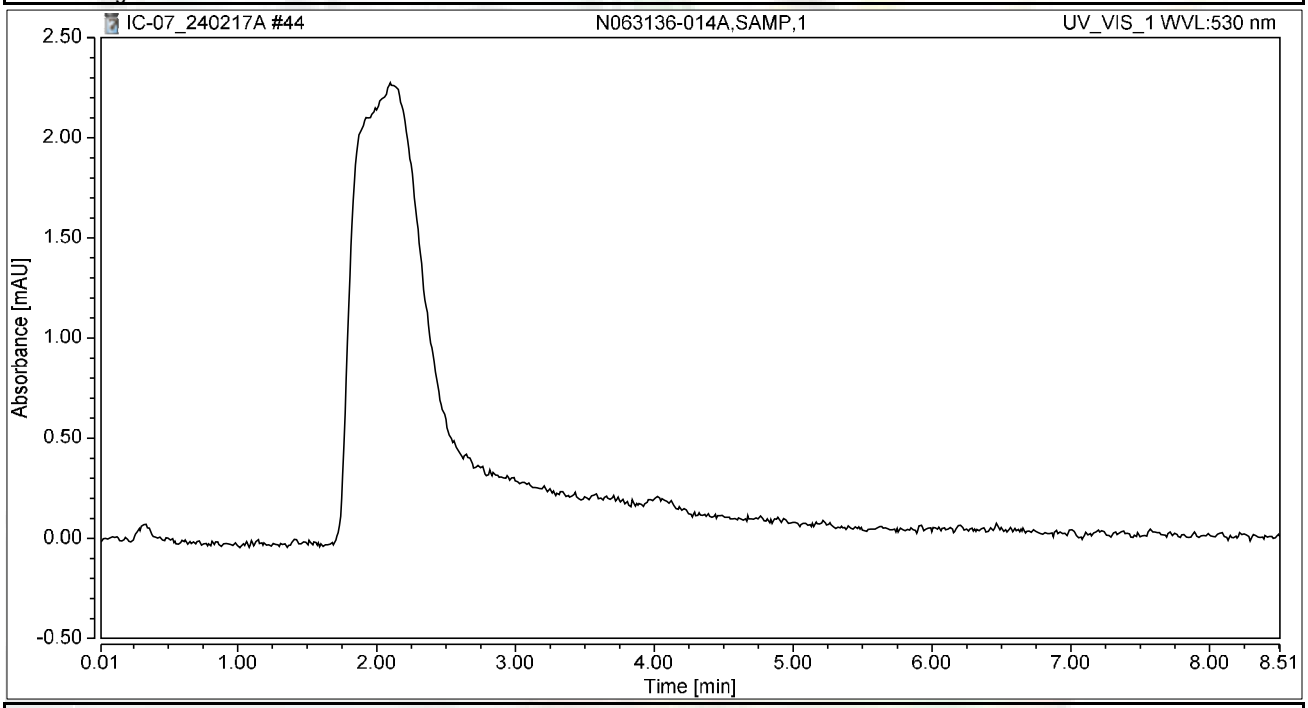
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.215	1.309	100.00	100.00	0.9991
Total:			**0.215**	**1.309**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-014A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 16:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

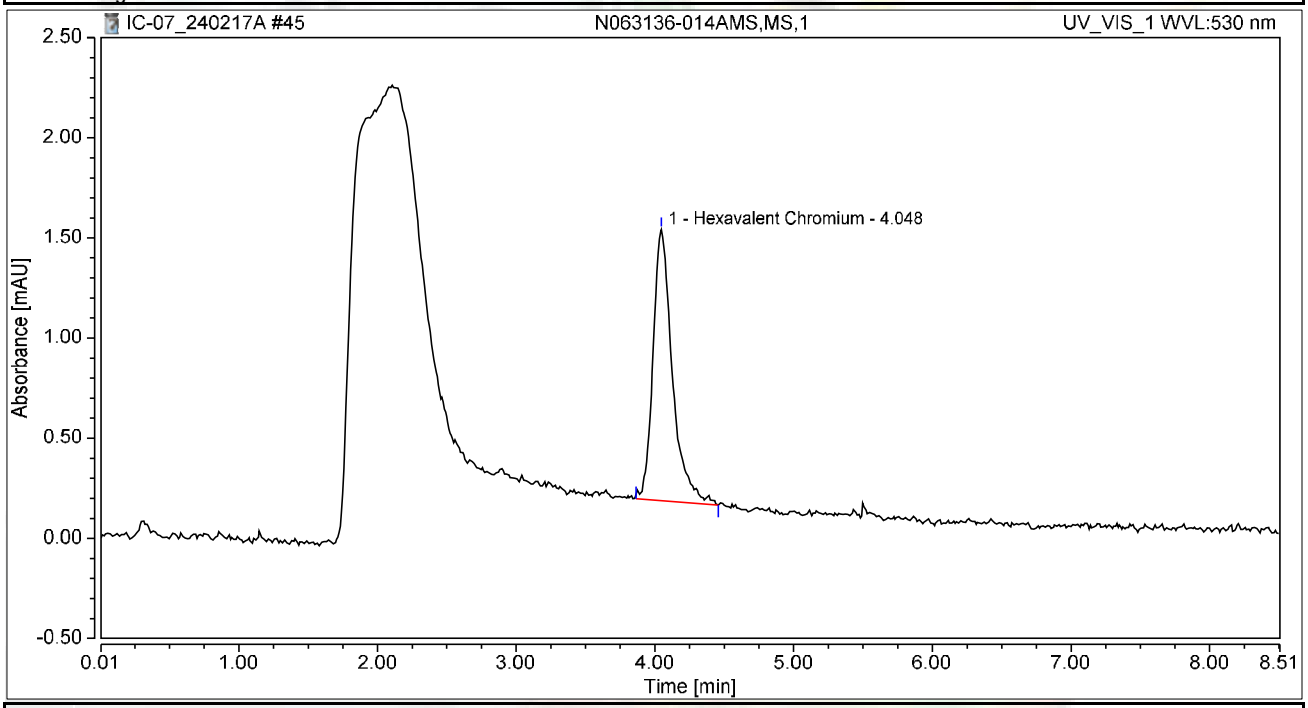
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063136-014AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 16:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

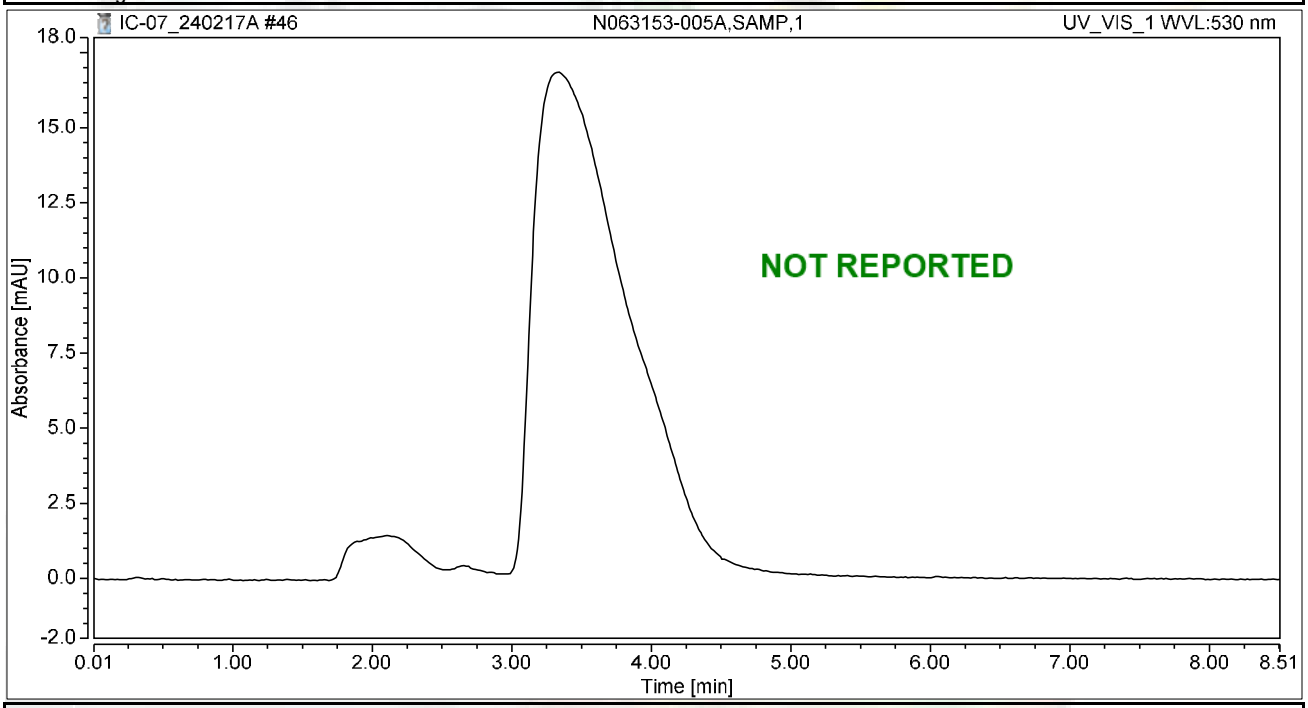
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.219	1.355	100.00	100.00	1.0163
Total:			**0.219**	**1.355**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 16:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

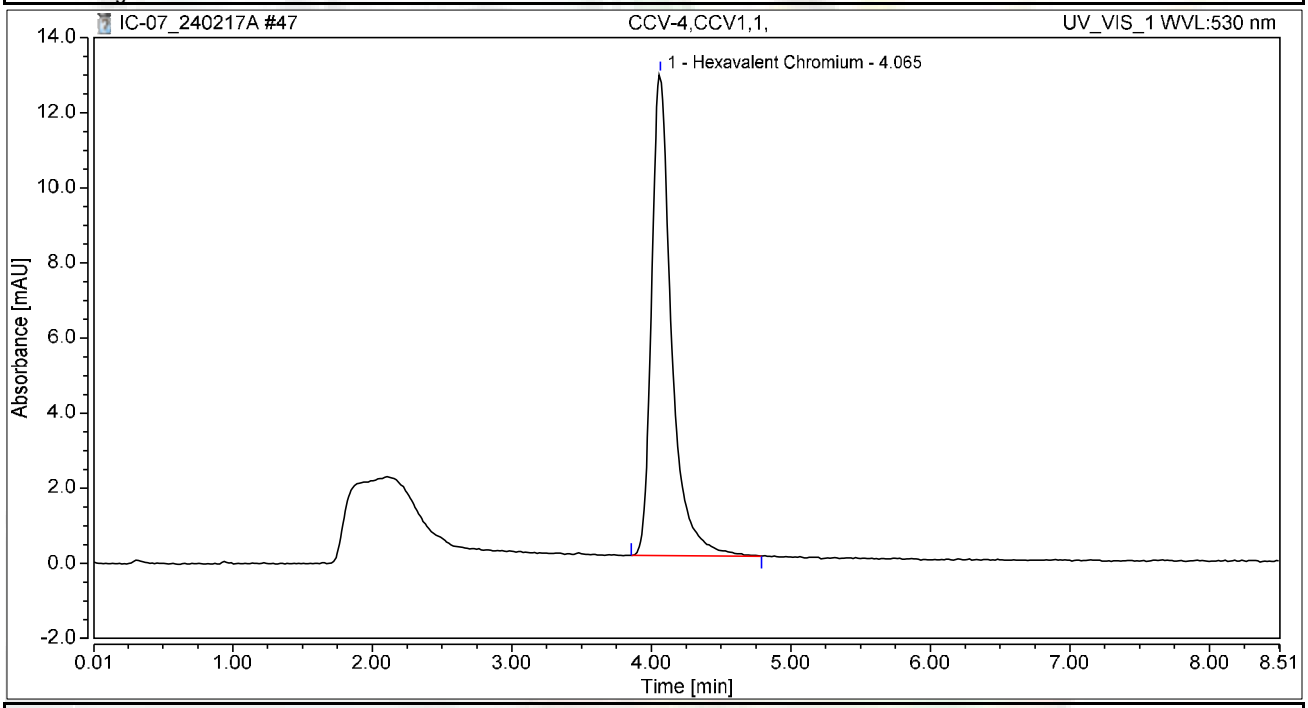
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 16:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

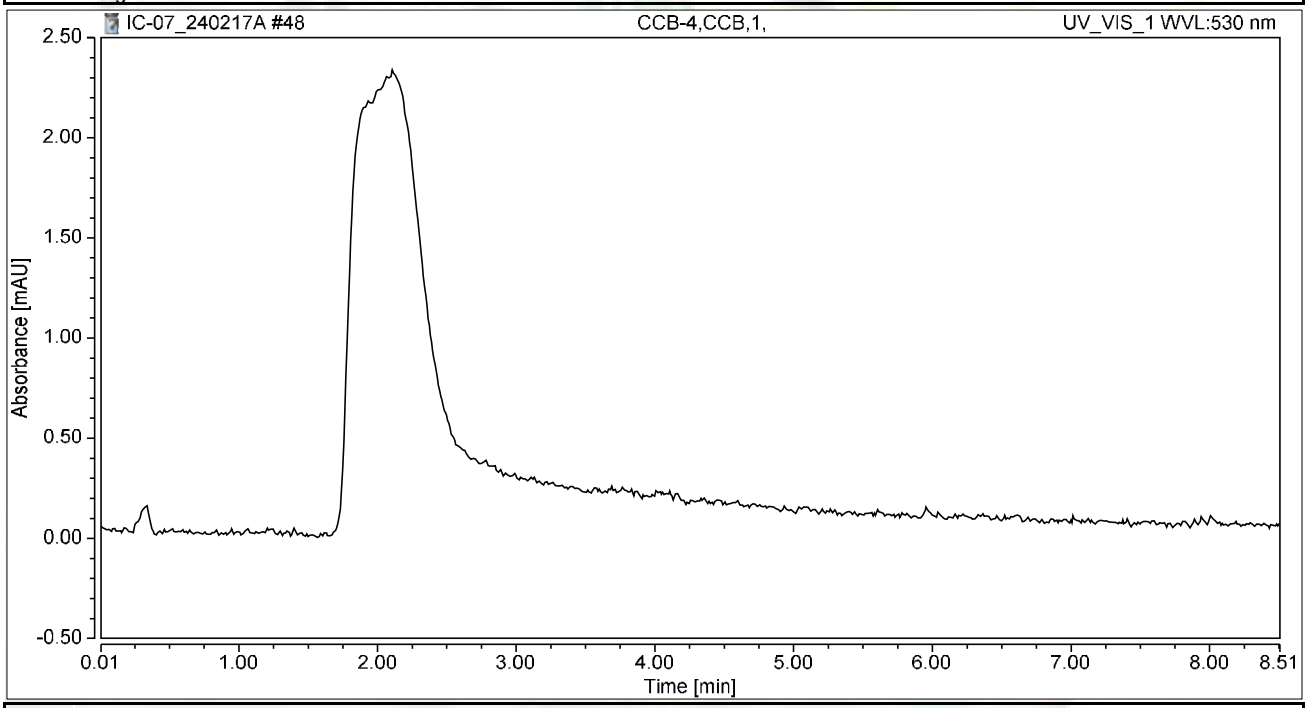
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	2.127	12.832	100.00	100.00	9.8874
Total:			**2.127**	**12.832**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 16:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

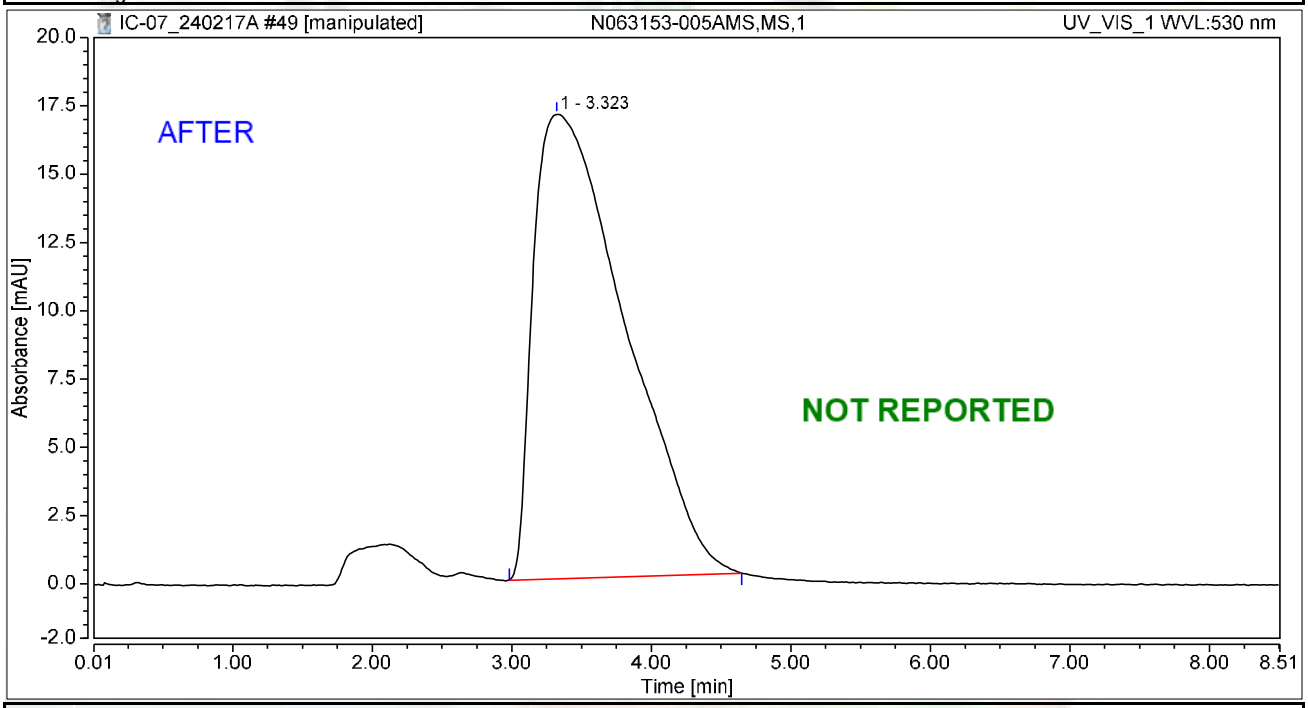
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 16:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

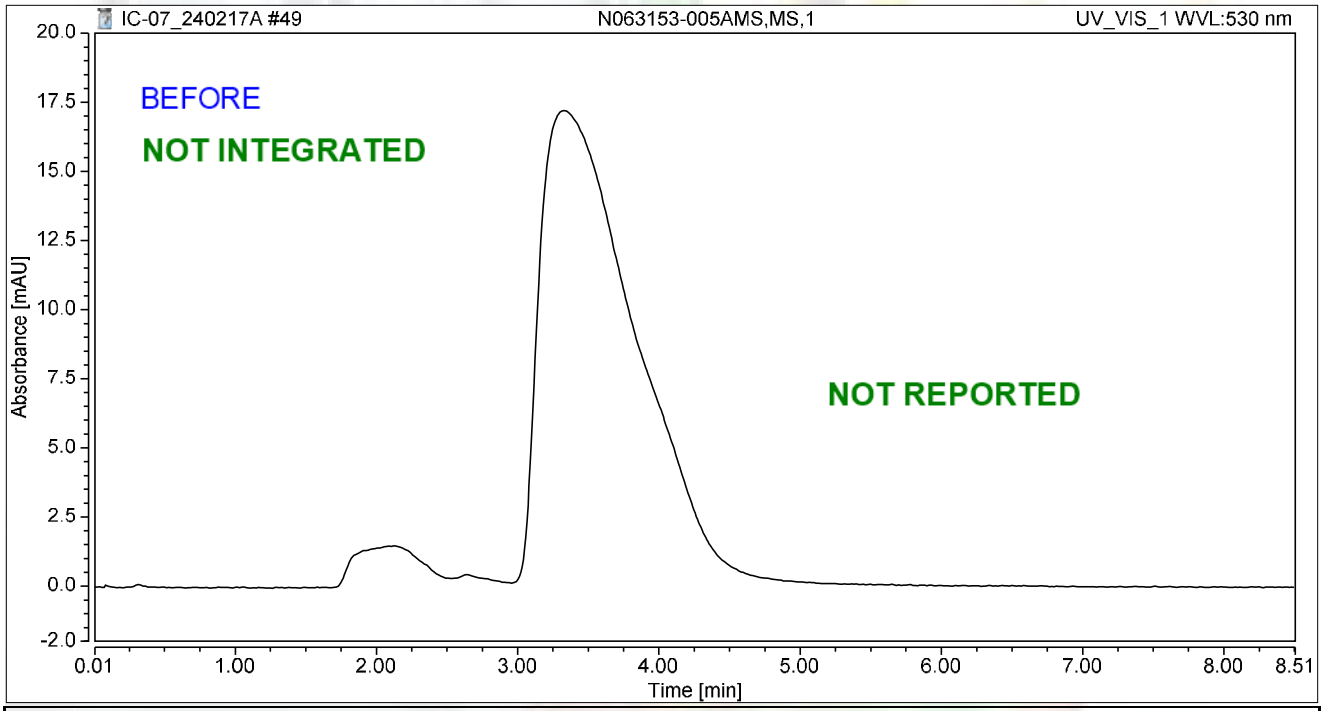
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.323	12.914	17.009	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**12.914**	**17.009**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 16:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

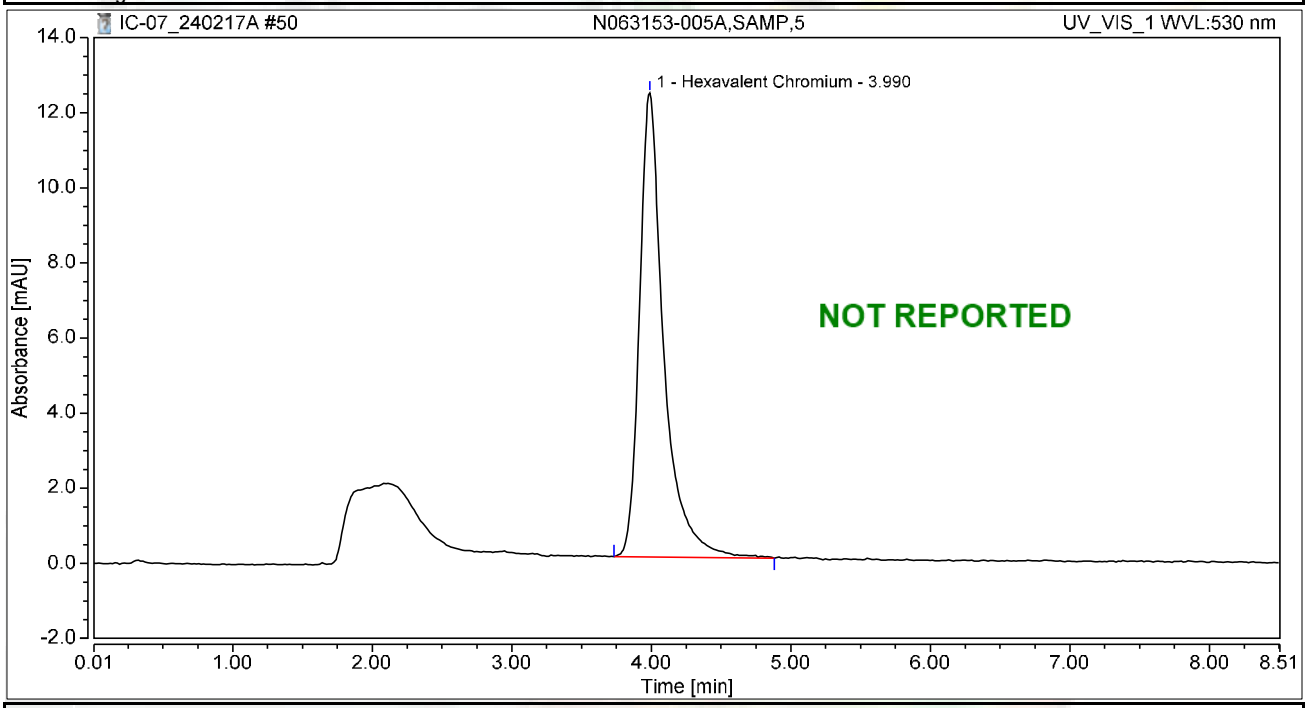
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 17:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

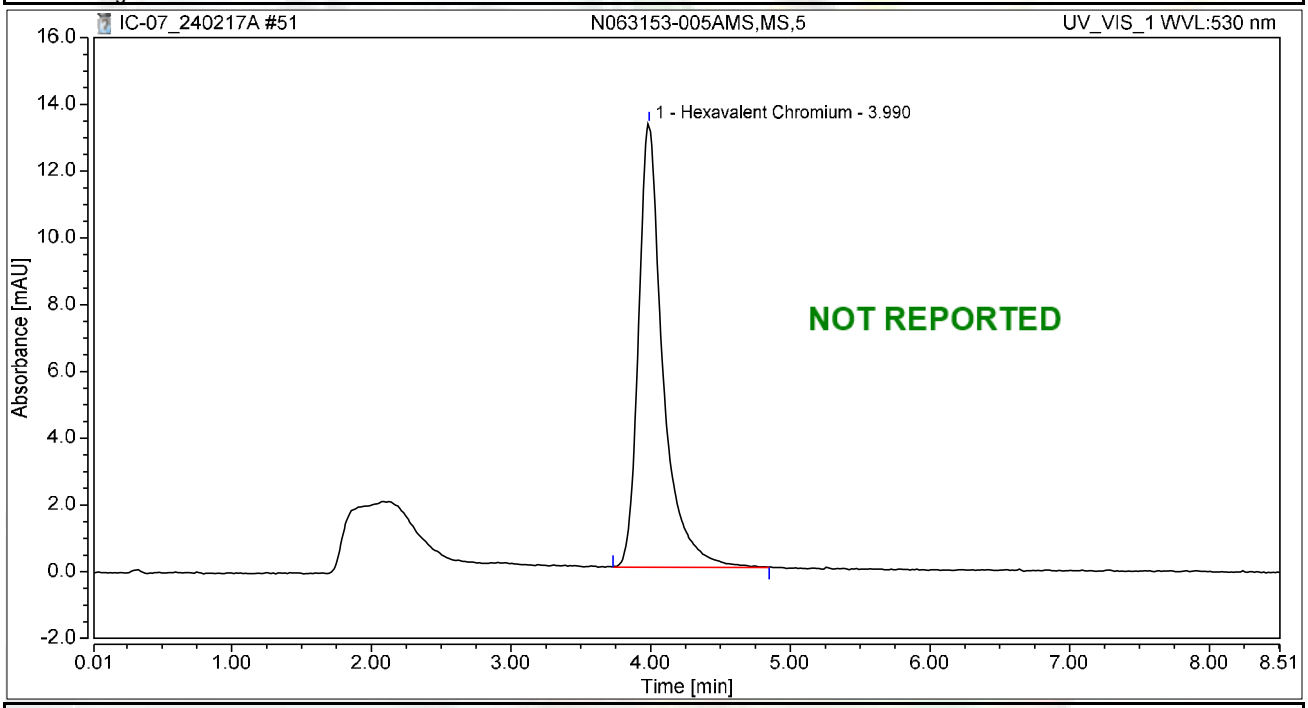
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	2.499	12.355	100.00	100.00	11.6155
Total:			**2.499**	**12.355**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-005AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 17:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

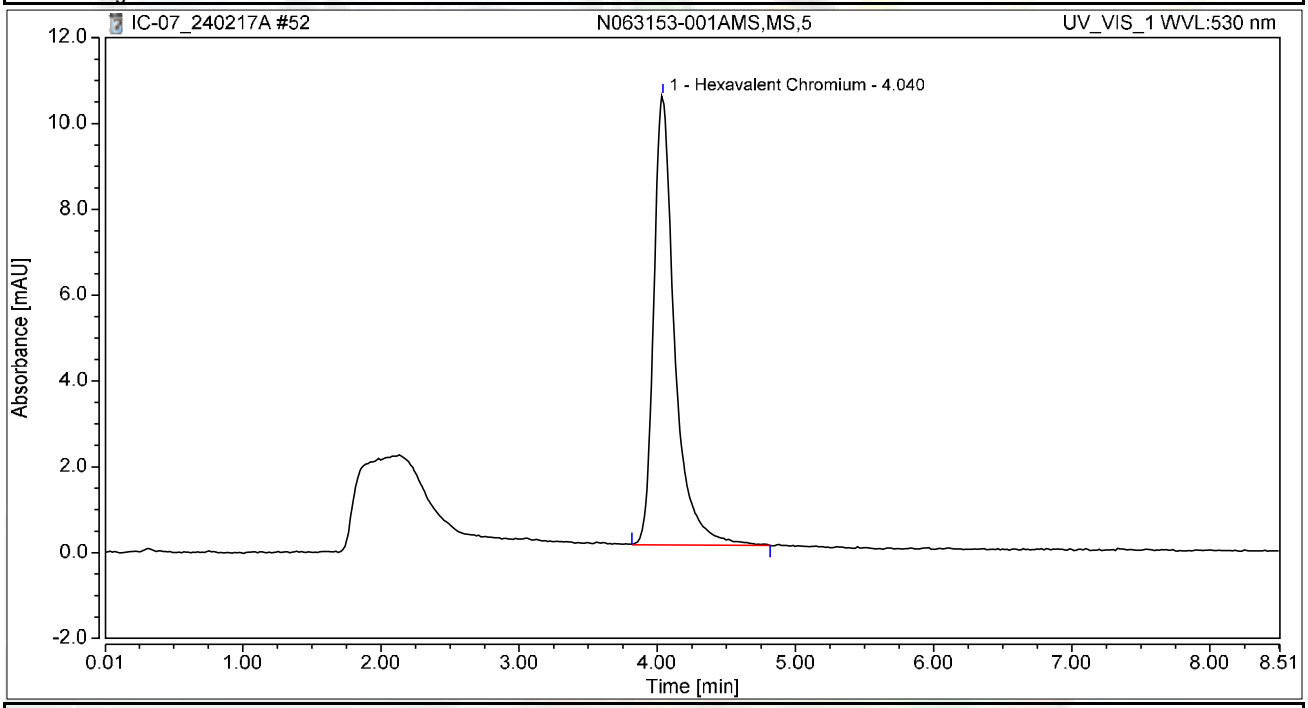
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	2.695	13.284	100.00	100.00	12.5288
Total:			**2.695**	**13.284**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**44**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 17:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

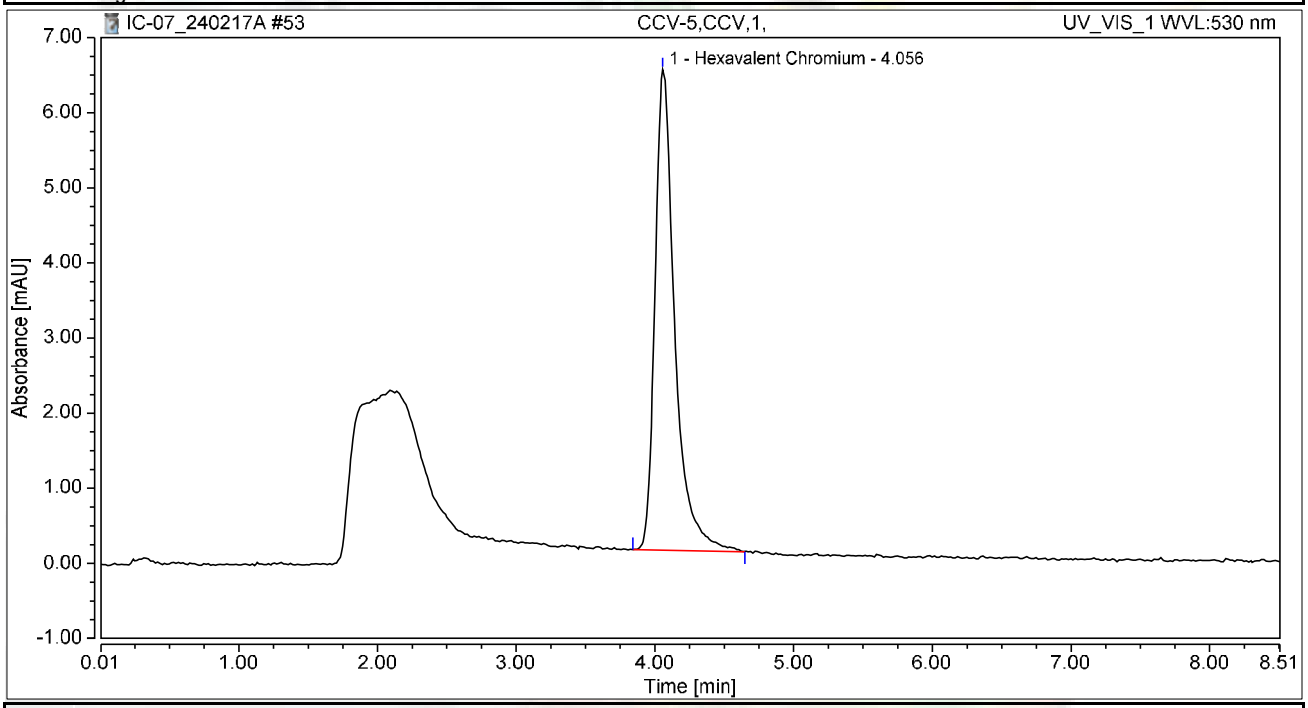
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.836	10.457	100.00	100.00	8.5367
Total:			**1.836**	**10.457**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**45**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 17:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

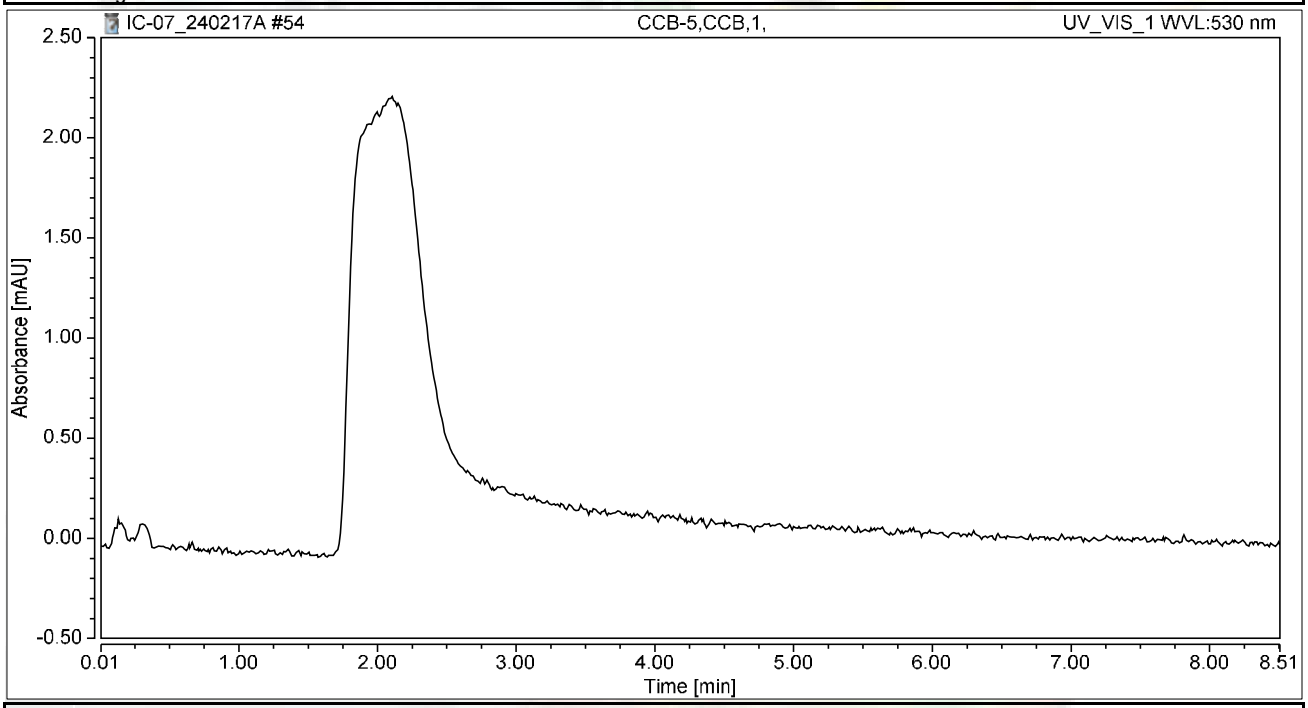
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.058	6.399	100.00	100.00	4.9170
Total:			**1.058**	**6.399**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**46**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 17:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

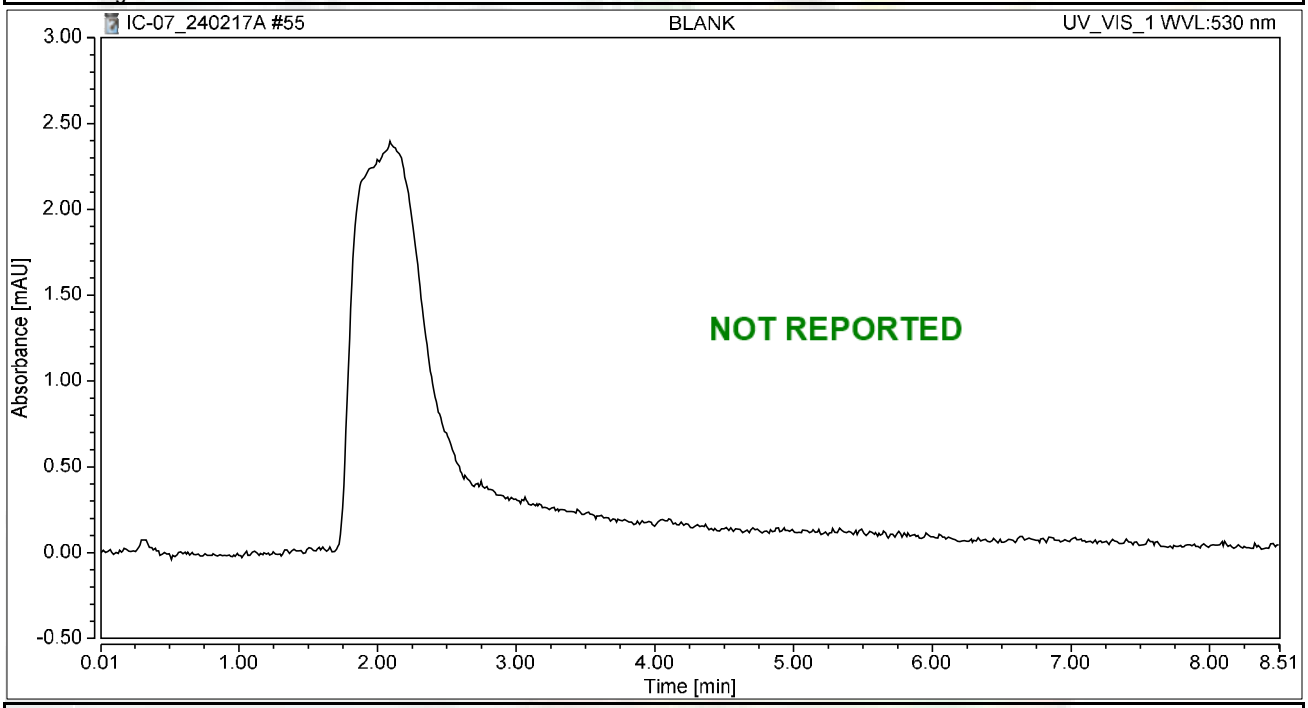
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**47**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**17/Feb/24 17:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240219A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/19/24 12:31 PM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/19/24 12:45 PM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/19/24 12:55 PM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/19/24 1:53 PM	Reported
13	MB-R182690	MBLK	1	Hexavalent Chromium	02/19/24 2:04 PM	Reported
14	LCS-R182690	LCS	1	Hexavalent Chromium	02/19/24 2:13 PM	Reported
15	N063153-004A	SAMP	5	Hexavalent Chromium	02/19/24 2:23 PM	Reported
16	N063153-004ADUP	DUP	5	Hexavalent Chromium	02/19/24 2:32 PM	Reported
17	N063153-004AMS	MS	5	Hexavalent Chromium	02/19/24 2:42 PM	Reported
18	N063153-004AMSD	MSD	5	Hexavalent Chromium	02/19/24 2:51 PM	Reported
19	N063153-005A	SAMP	10	Hexavalent Chromium	02/19/24 3:01 PM	Reported
20	N063153-005AMS	MS	10	Hexavalent Chromium	02/19/24 3:10 PM	Reported
21	N062844-001A	SAMP	1	Hexavalent Chromium	02/19/24 3:19 PM	Not Reported
22	N062844-001AMS	MS	1	Hexavalent Chromium	02/19/24 3:29 PM	Not Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/19/24 3:38 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/19/24 3:48 PM	Reported
25	N062966-016A	SAMP	5	Hexavalent Chromium	02/19/24 3:57 PM	Not Reported
26	N062966-016AMS	MS	5	Hexavalent Chromium	02/19/24 4:07 PM	Not Reported
27	N062966-019A	SAMP	1	Hexavalent Chromium	02/19/24 4:16 PM	Not Reported
28	N062966-019AMS	MS	1	Hexavalent Chromium	02/19/24 4:26 PM	Not Reported
29	N062966-020A	SAMP	1	Hexavalent Chromium	02/19/24 4:35 PM	Not Reported
30	N062966-020AMS	MS	1	Hexavalent Chromium	02/19/24 4:45 PM	Not Reported
31	N063001-007A	SAMP	1	Hexavalent Chromium	02/19/24 4:54 PM	Not Reported
32	N063001-007AMS	MS	1	Hexavalent Chromium	02/19/24 5:03 PM	Not Reported
33	N063053-011A	SAMP	1	Hexavalent Chromium	02/19/24 5:13 PM	Not Reported
34	N063053-011AMS	MS	1	Hexavalent Chromium	02/19/24 5:22 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/19/24 5:32 PM	Not Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/19/24 5:41 PM	Not Reported
37	BLANK	BLANK	1	Hexavalent Chromium	02/19/24 5:51 PM	Not Reported

Reviewed by:

JRB 2/28/2024

Injection Log Summary

Sequence Details

Name:	**IC-07_240219A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**20/Feb/24 13:50:10**
No. of Injections:	**40**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/19/2024 12:31	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/19/2024 12:45	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,	3	1000	Unknown		02/19/2024 12:55	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	1	1000	Unknown		02/19/2024 13:53	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	2	1000	Unknown		02/19/2024 14:04	Finished	MB R240129C
14	LCS-H2O,LCS,1,	3	1000	Unknown		02/19/2024 14:13	Finished	LCS @5ppb, IWST-231228B
15	N063153-004A,SAMF	4	1000	Unknown		02/19/2024 14:23	Finished	SAMP,2>10 mL
16	N063153-004ADUP,D	5	1000	Unknown		02/19/2024 14:32	Finished	DUP,2>10 mL
17	N063153-004AMS,MS	6	1000	Unknown		02/19/2024 14:42	Finished	MS (5ppb), IWST-231228B,2>
18	N063153-004AMSD,M	7	1000	Unknown		02/19/2024 14:51	Finished	MSD (5ppb), IWST-231228B,2
19	N063153-005A,SAMF	8	1000	Unknown		02/19/2024 15:01	Finished	SAMP,1>10 mL
20	N063153-005AMS,MS	9	1000	Unknown		02/19/2024 15:10	Finished	MS (5ppb), IWST-231228B,1>
21	N062844-001A,SAMF	10	1000	Unknown		02/19/2024 15:19	Finished	MSD (1ppb), IWST-231228B,1
22	N062844-001AMS,MS	11	1000	Unknown		02/19/2024 15:29	Finished	SAMP,2>10 mL
23	CCV-2,CCV1,1,	12	1000	Unknown		02/19/2024 15:38	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	13	1000	Unknown		02/19/2024 15:48	Finished	CCB R240129C
25	N062966-016A,SAMF	14	1000	Unknown		02/19/2024 15:57	Finished	SAMP,2>10 mL
26	N062966-016AMS,MS	15	1000	Unknown		02/19/2024 16:07	Finished	MS (5ppb), IWST-231228B,2>
27	N062966-019A,SAMF	16	1000	Unknown		02/19/2024 16:16	Finished	SAMP,10 mL
28	N062966-019AMS,MS	17	1000	Unknown		02/19/2024 16:26	Finished	MS (5ppb), IWST-231228B,10r
29	N062966-020A,SAMF	18	1000	Unknown		02/19/2024 16:35	Finished	SAMP,10 mL
30	N062966-020AMS,MS	19	1000	Unknown		02/19/2024 16:45	Finished	MS (5ppb), IWST-231228B,10r
31	N063001-007A,SAMF	20	1000	Unknown		02/19/2024 16:54	Finished	SAMP,10 mL
32	N063001-007AMS,MS	21	1000	Unknown		02/19/2024 17:03	Finished	MS (1ppb), IWST-231228B,10r
33	N063053-011A,SAMF	22	1000	Unknown		02/19/2024 17:13	Finished	SAMP,10 mL
34	N063053-011AMS,MS	23	1000	Unknown		02/19/2024 17:22	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	24	1000	Unknown		02/19/2024 17:32	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	25	1000	Unknown		02/19/2024 17:41	Finished	CCB R240129C
37	BLANK	26	1000	Unknown		02/19/2024 17:51	Finished	BLANK
38	SHUTDOWN R240215A	27	1000	Unknown		02/19/2024 18:00	Finished	
39	Eluent: ~~R240220A~~	28	1000	Unknown		n.a.	Finished	
40	PCR: ~~R240220B~~ R240215B	29	1000	Unknown		n.a.	Finished	

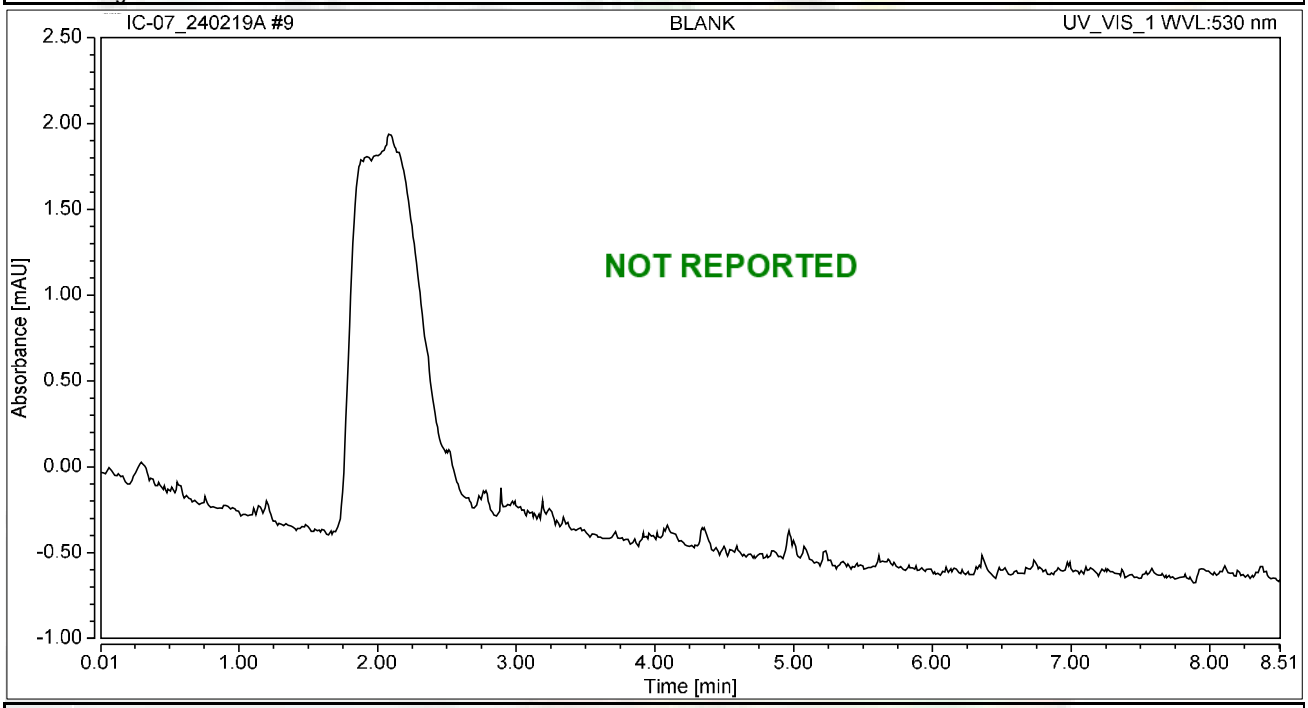
dMocha 2/29/2024
for RBA

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 12:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

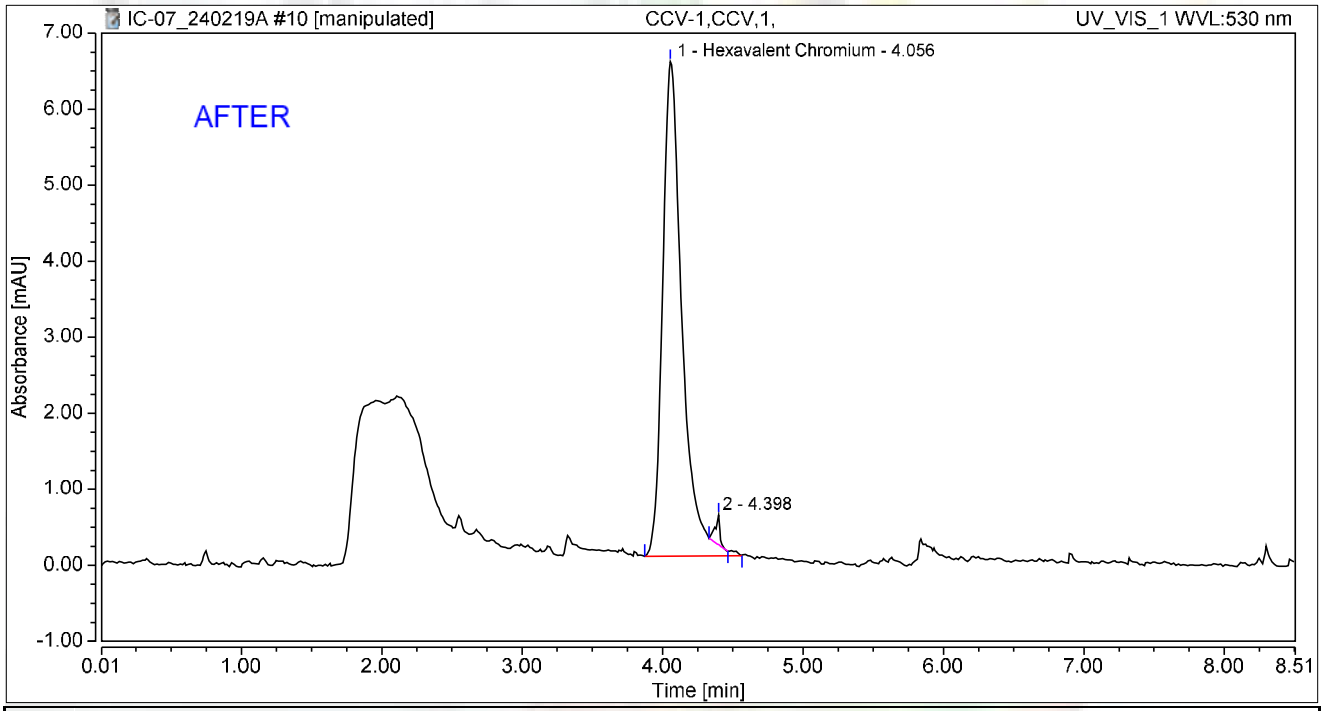
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 12:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.050	6.504	98.69	94.30	4.8831
2		4.398	0.014	0.393	1.31	5.70	n.a.
Total:			**1.064**	**6.897**	**100.00**	**100.00**	

Reviewed by:

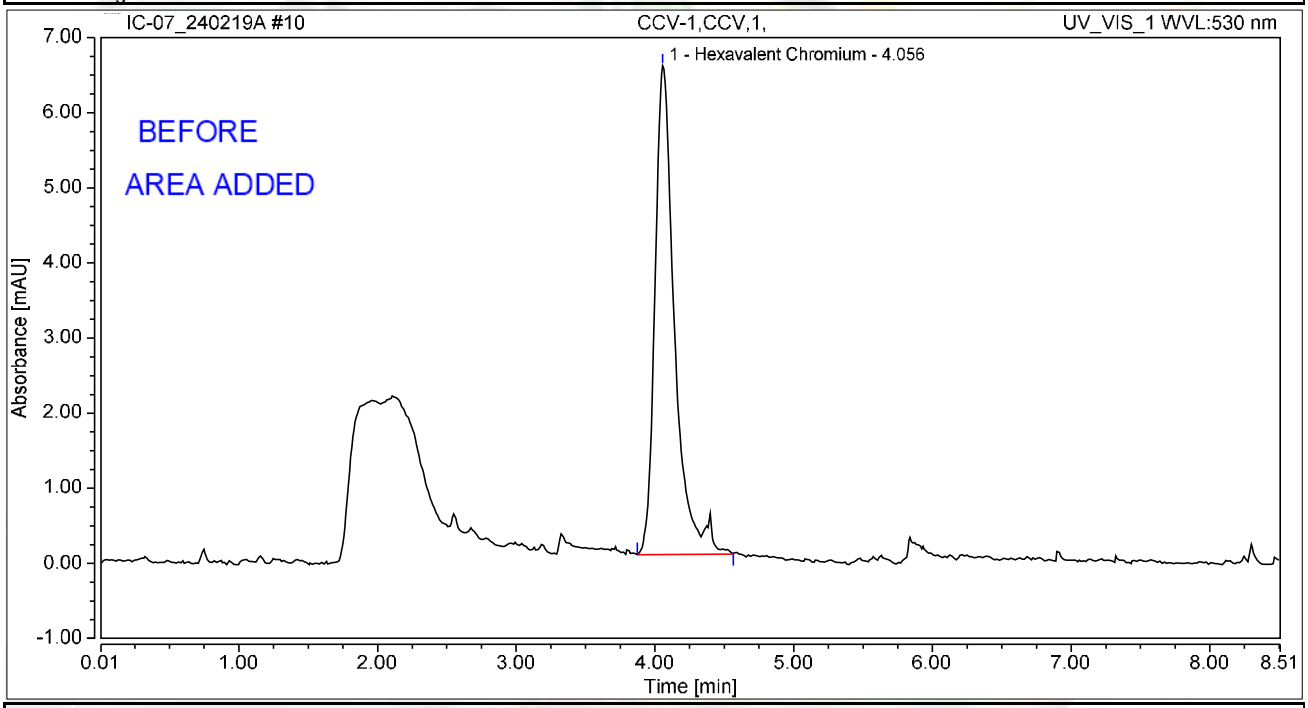
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 12:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

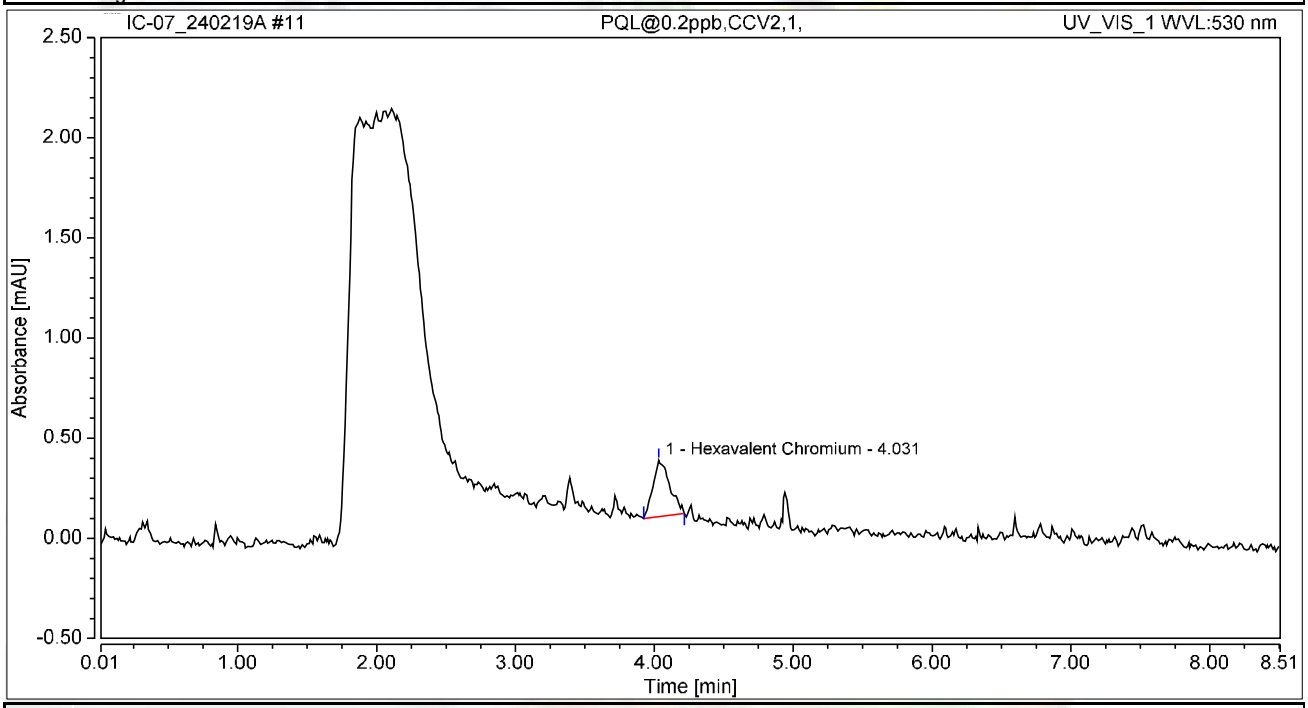
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.064	6.504	100.00	100.00	4.9479
Total:			**1.064**	**6.504**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 12:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

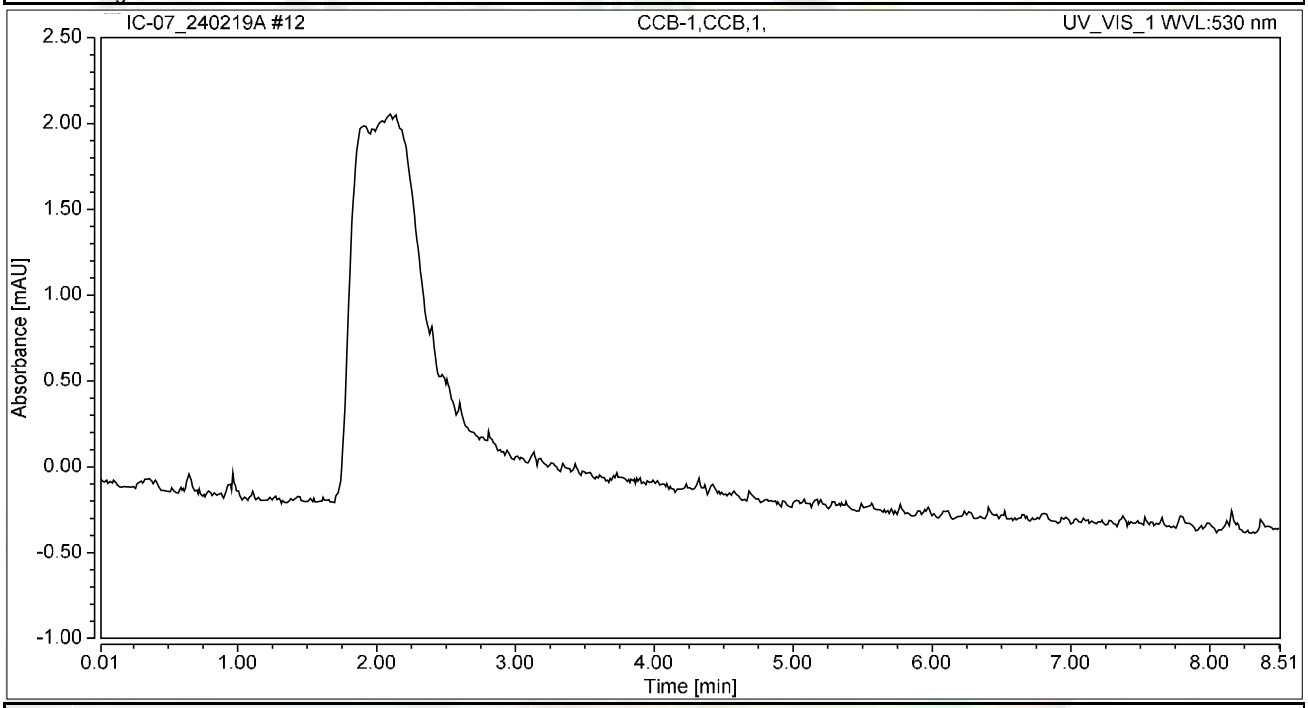
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.039	0.280	100.00	100.00	0.1822
Total:			**0.039**	**0.280**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 13:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

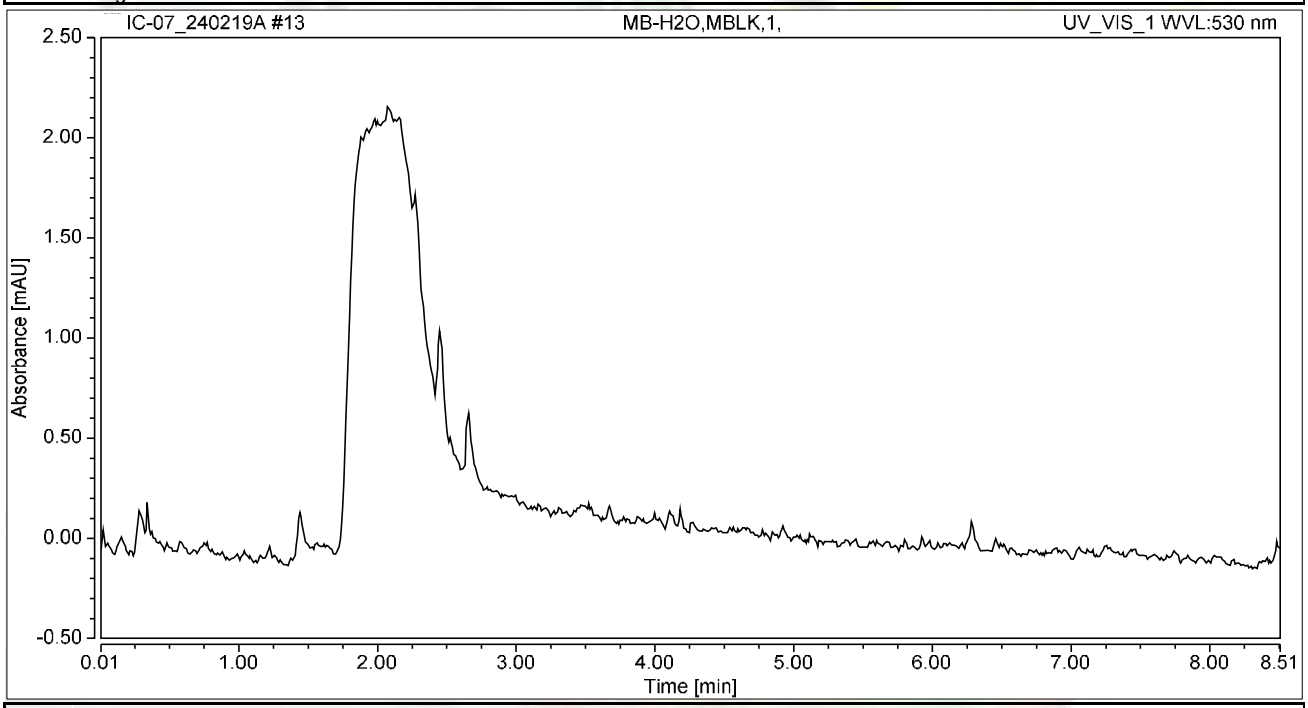
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 14:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

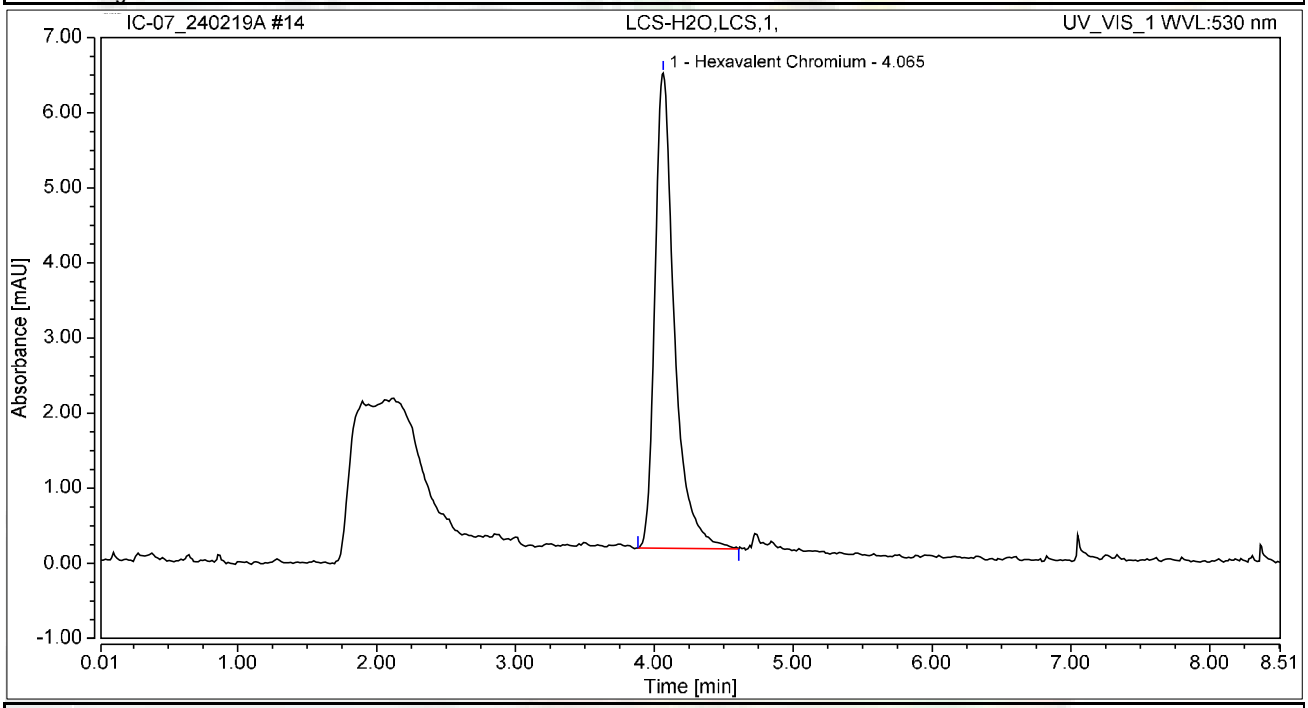
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 14:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

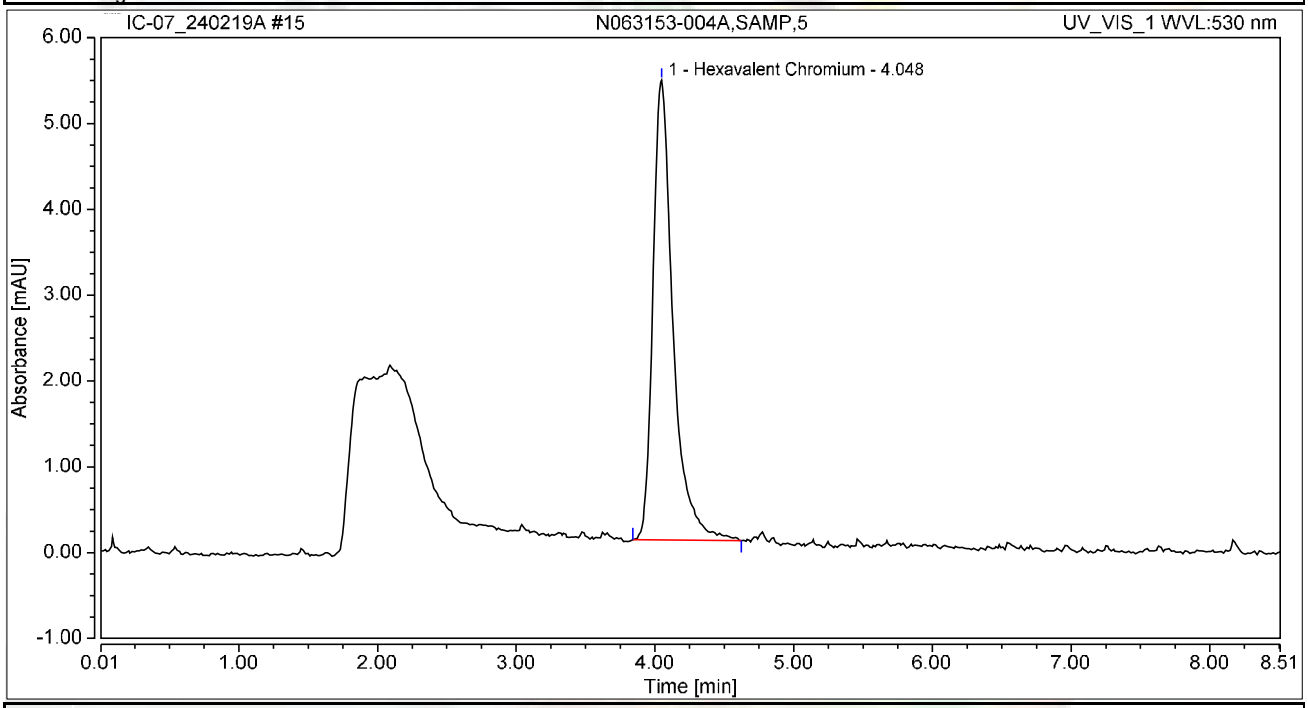
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	1.033	6.331	100.00	100.00	4.8001
Total:			**1.033**	**6.331**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-004A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 14:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

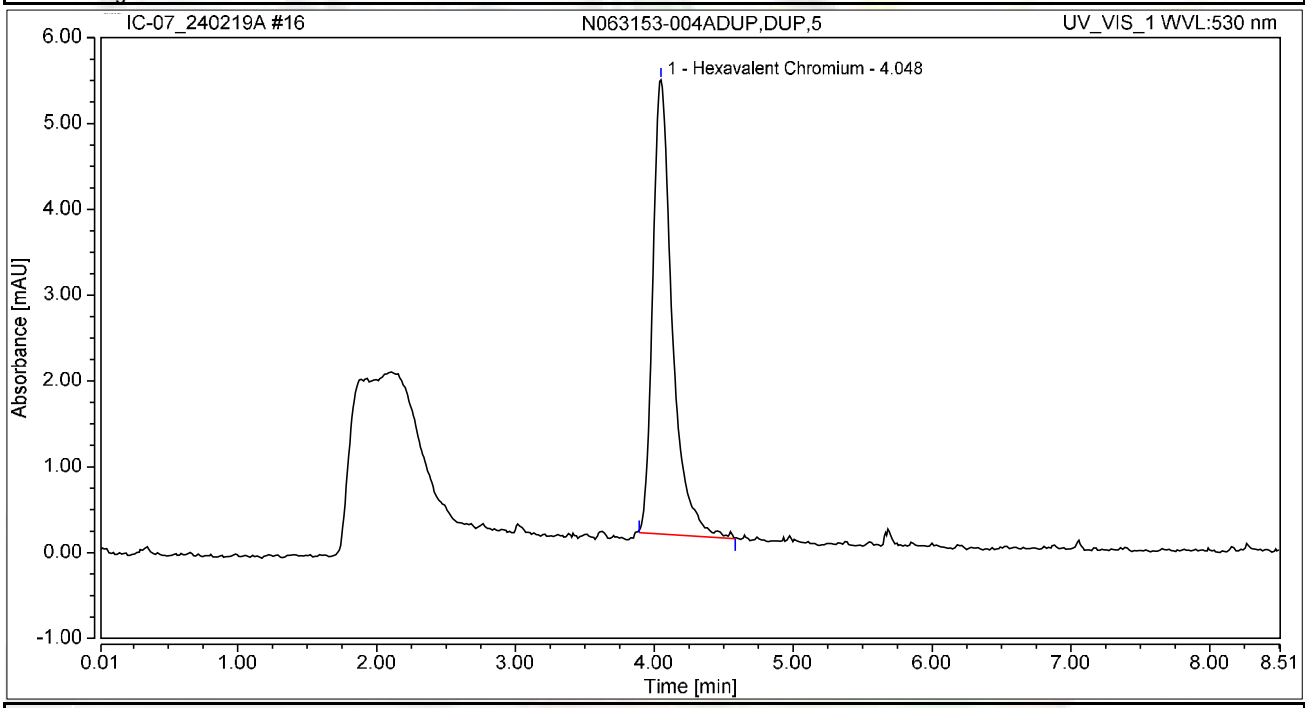
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.898	5.356	100.00	100.00	4.1737
Total:			**0.898**	**5.356**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-004ADUP,DUP,5**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 14:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

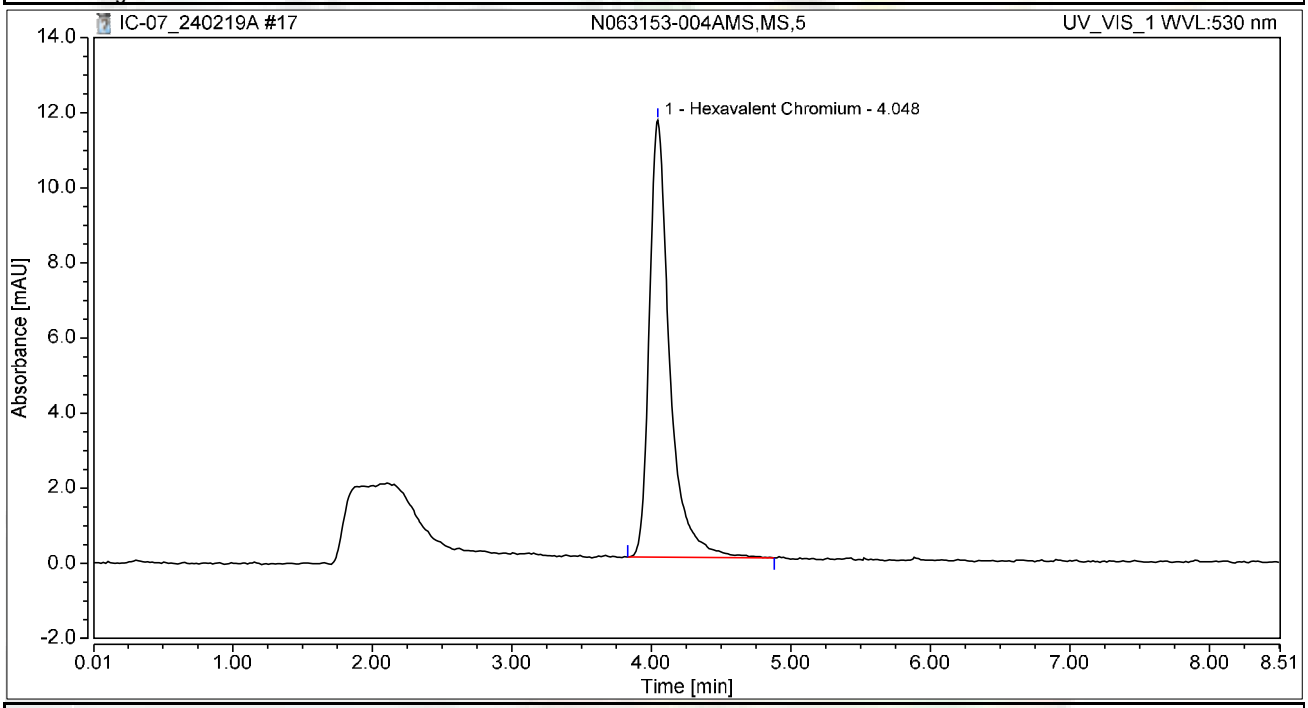
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.863	5.290	100.00	100.00	4.0138
Total:			**0.863**	**5.290**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-004AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 14:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

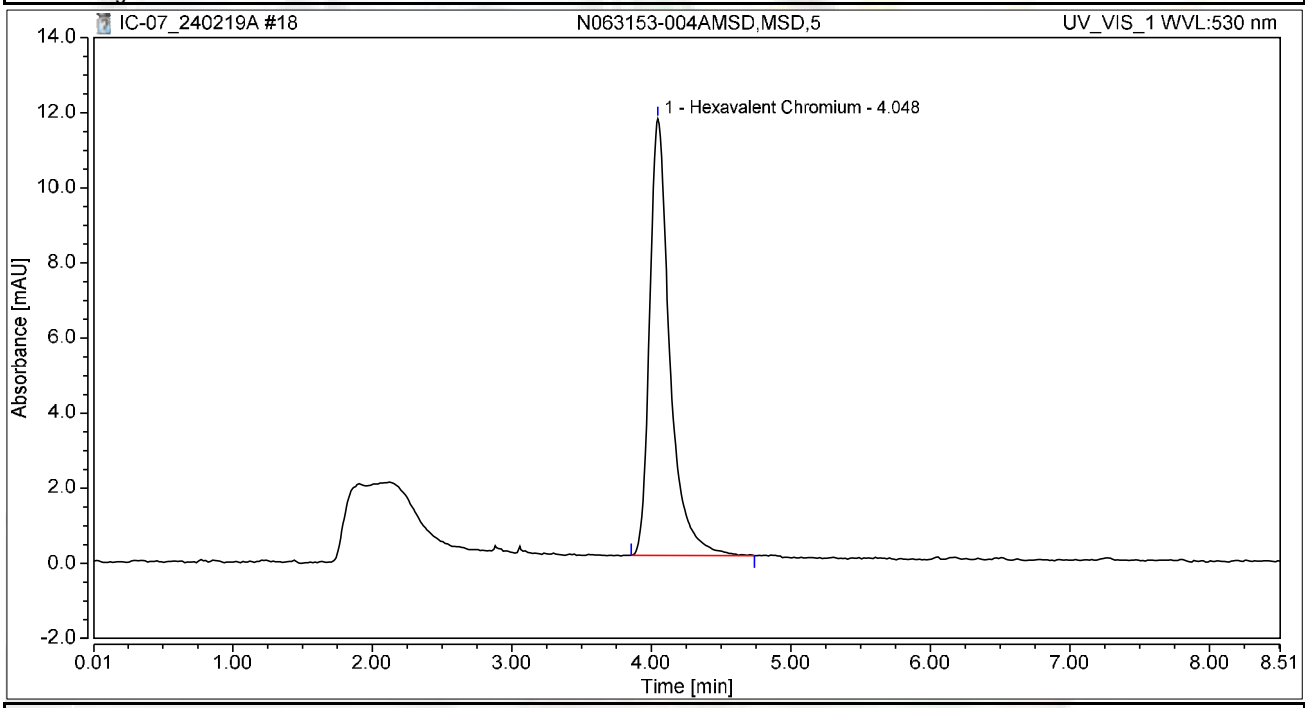
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.964	11.637	100.00	100.00	9.1309
Total:			**1.964**	**11.637**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-004AMSD,MSD,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 14:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

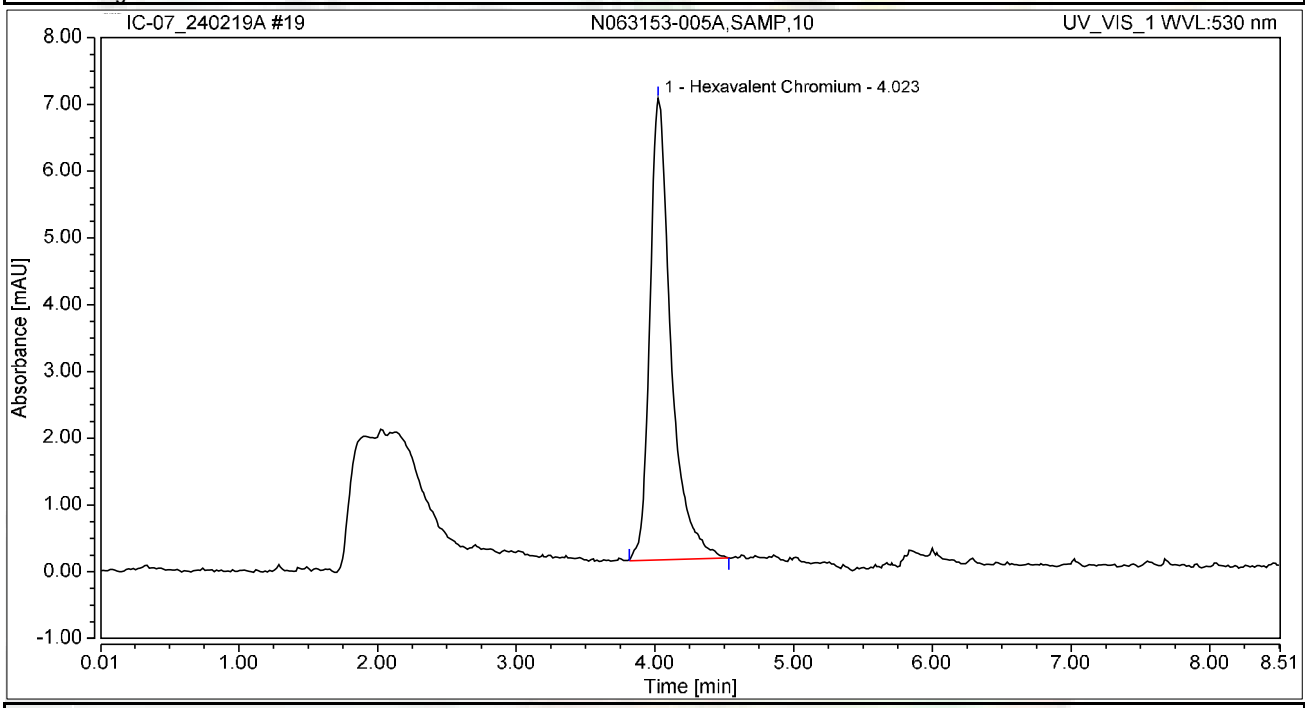
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.955	11.633	100.00	100.00	9.0900
Total:			**1.955**	**11.633**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-005A,SAMP,10**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 15:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

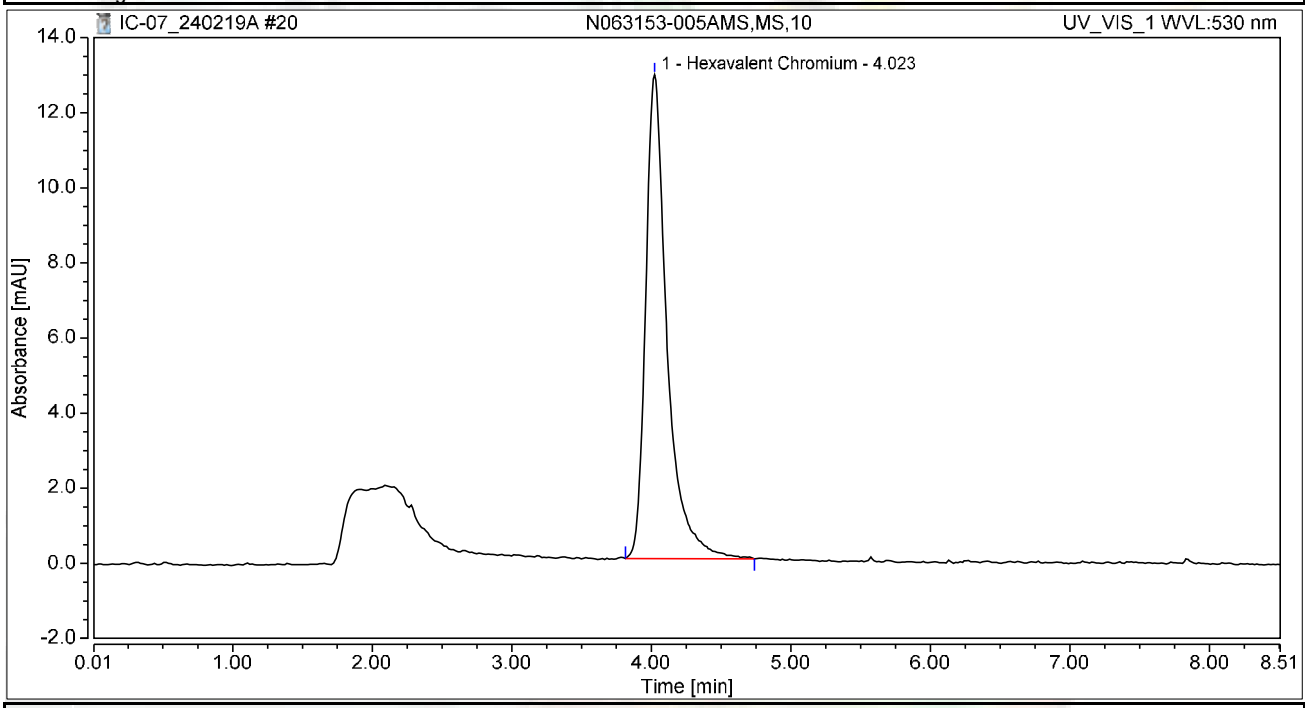
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	1.222	6.915	100.00	100.00	5.6806
Total:			**1.222**	**6.915**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063153-005AMS,MS,10**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 15:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

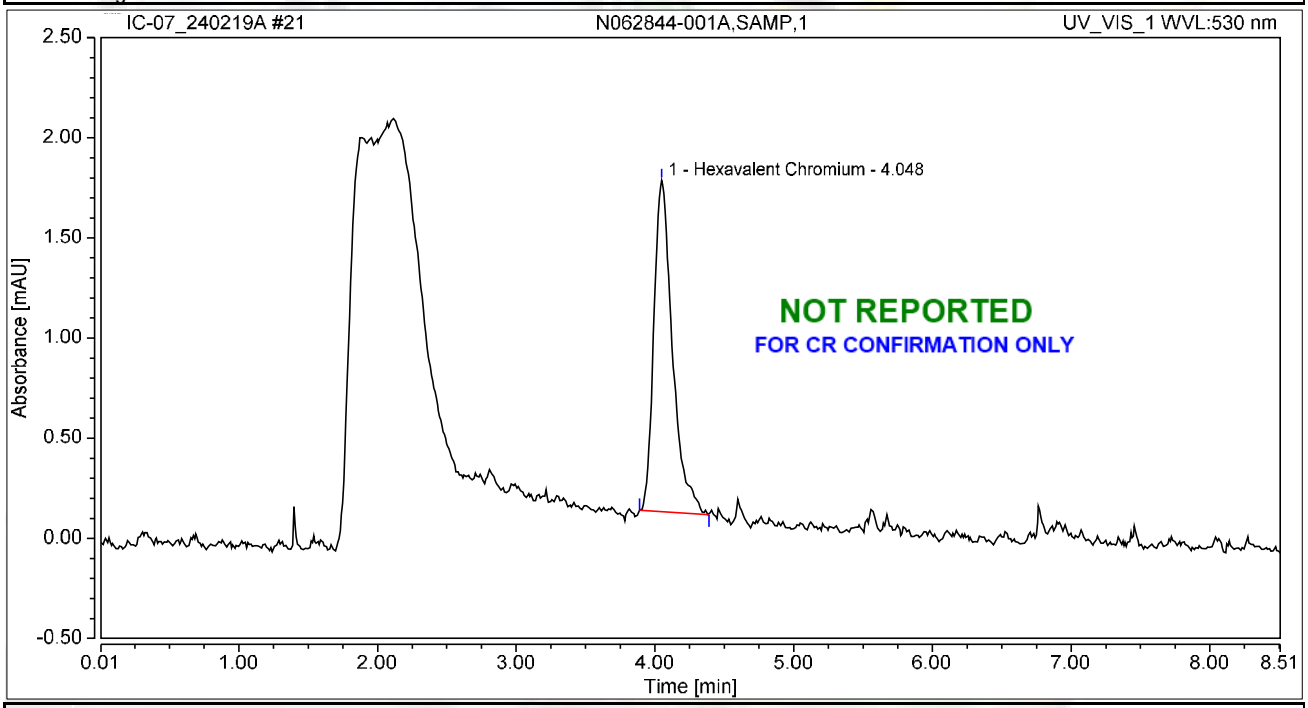
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	2.291	12.885	100.00	100.00	10.6511
Total:			**2.291**	**12.885**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062844-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 15:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

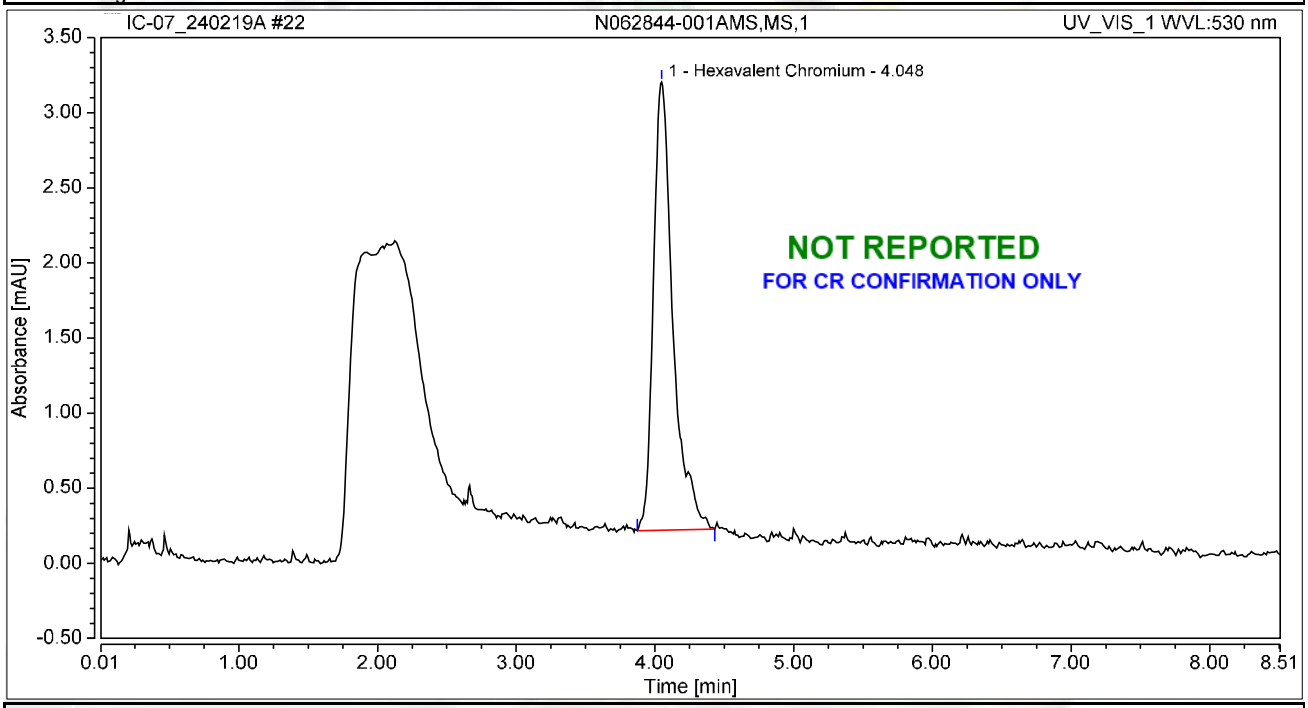
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.257	1.654	100.00	100.00	1.1948
Total:			**0.257**	**1.654**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062844-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 15:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

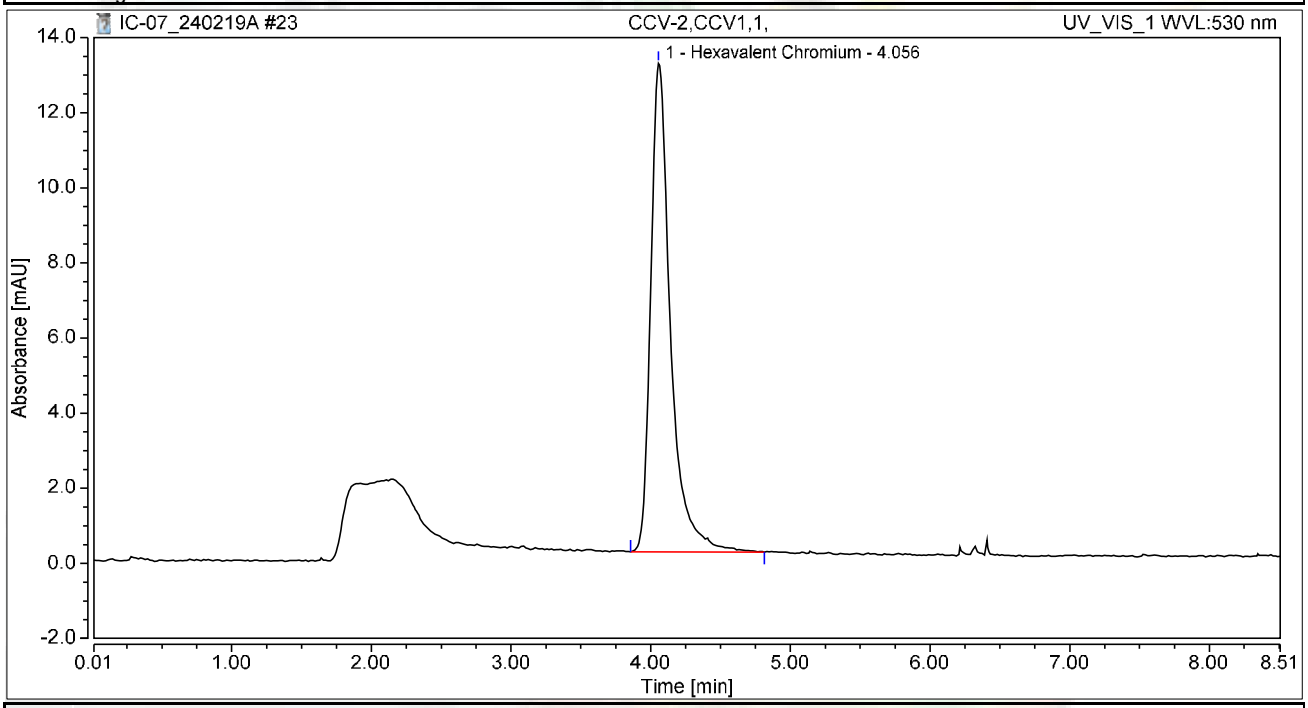
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.486	2.984	100.00	100.00	2.2598
Total:			**0.486**	**2.984**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 15:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

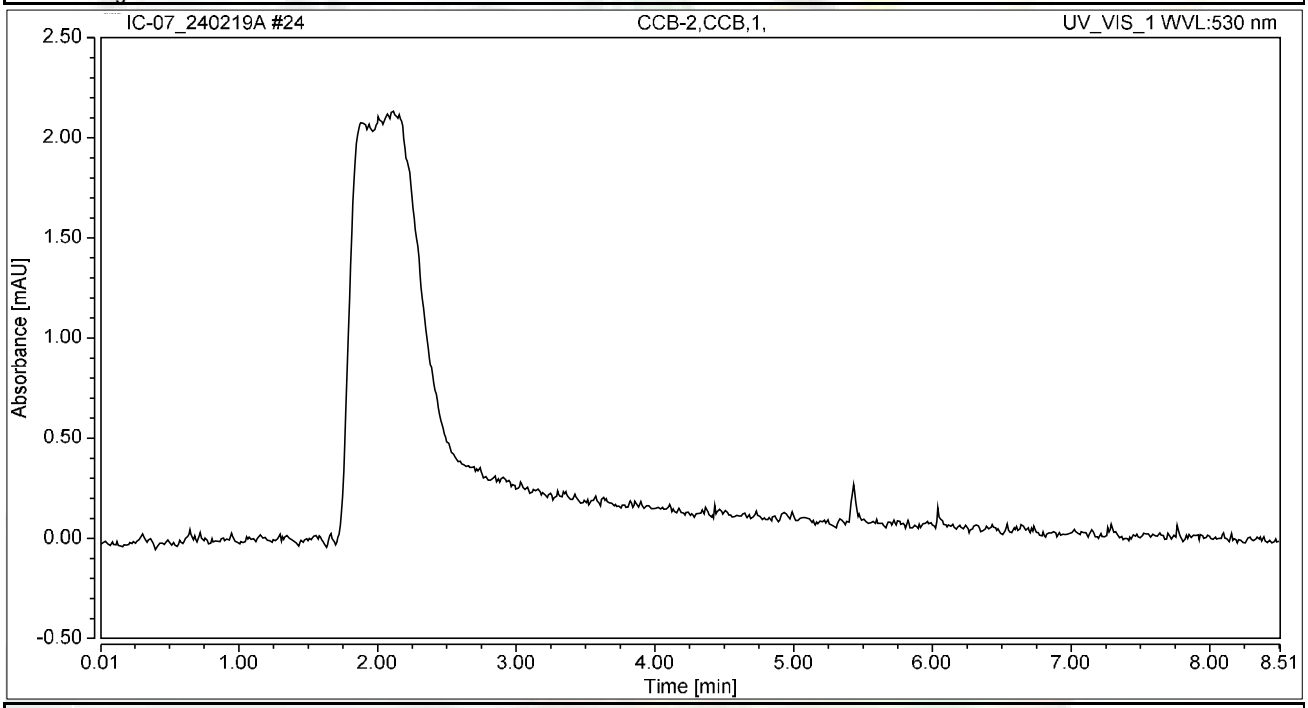
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	2.142	13.012	100.00	100.00	9.9577
Total:			**2.142**	**13.012**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 15:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

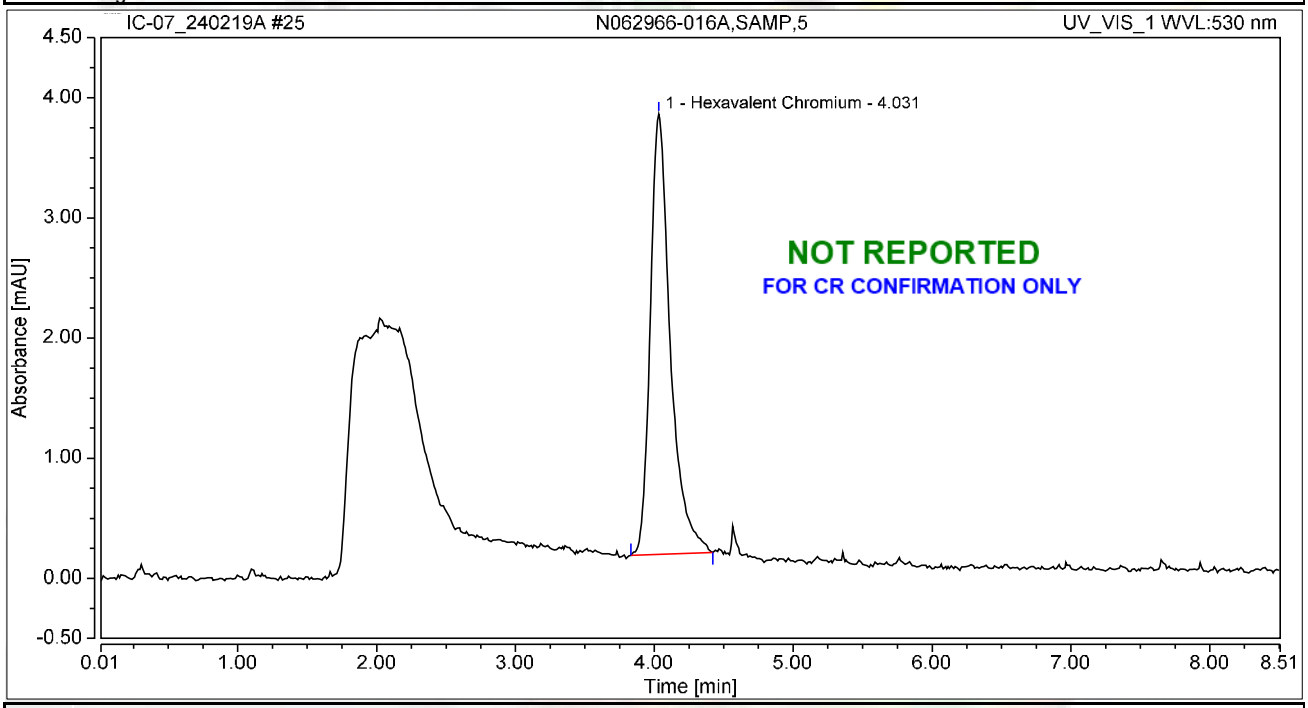
2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**N062966-016A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 15:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

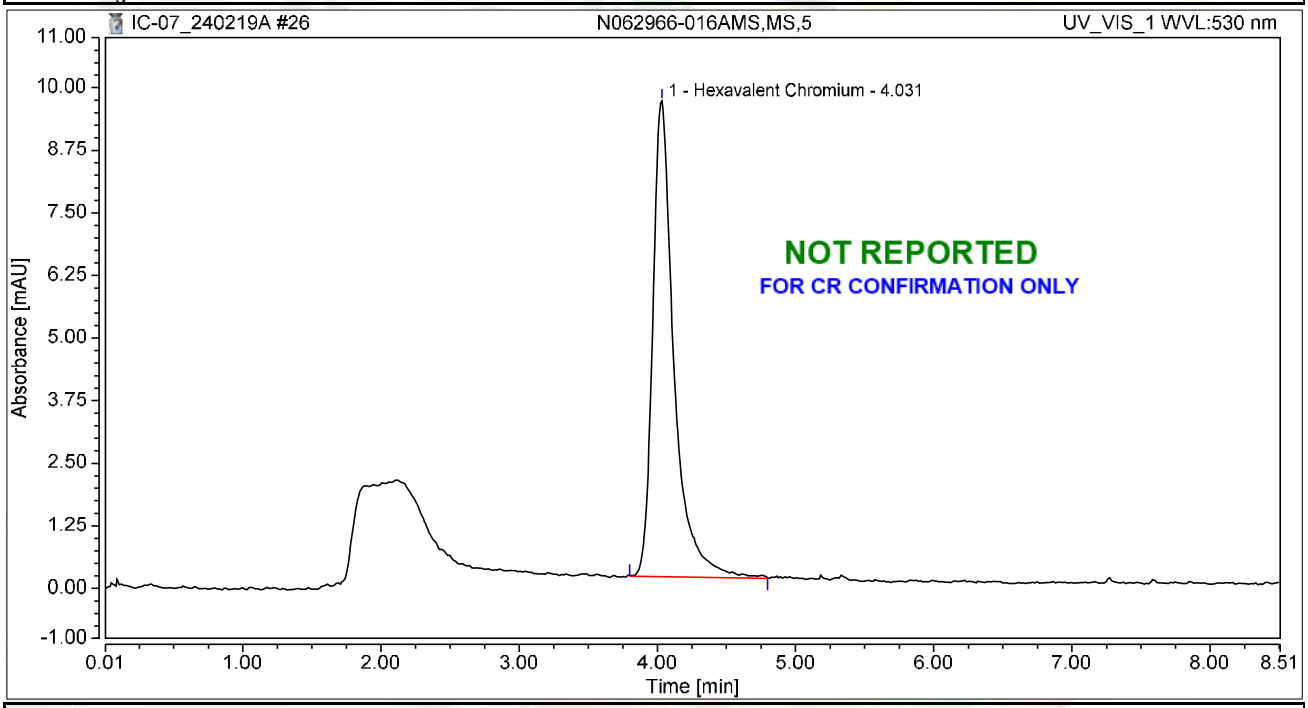
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.615	3.666	100.00	100.00	2.8588
Total:			**0.615**	**3.666**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062966-016AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 16:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

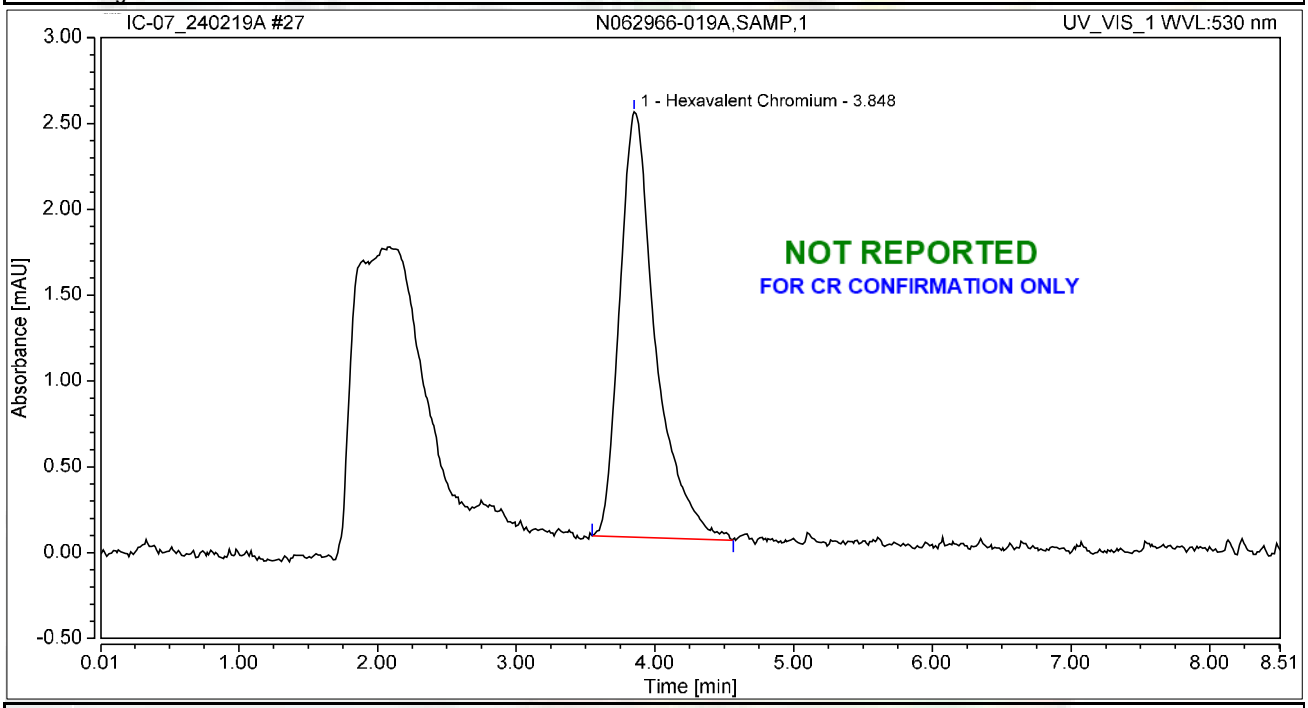
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	1.693	9.494	100.00	100.00	7.8705
Total:			**1.693**	**9.494**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062966-019A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 16:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

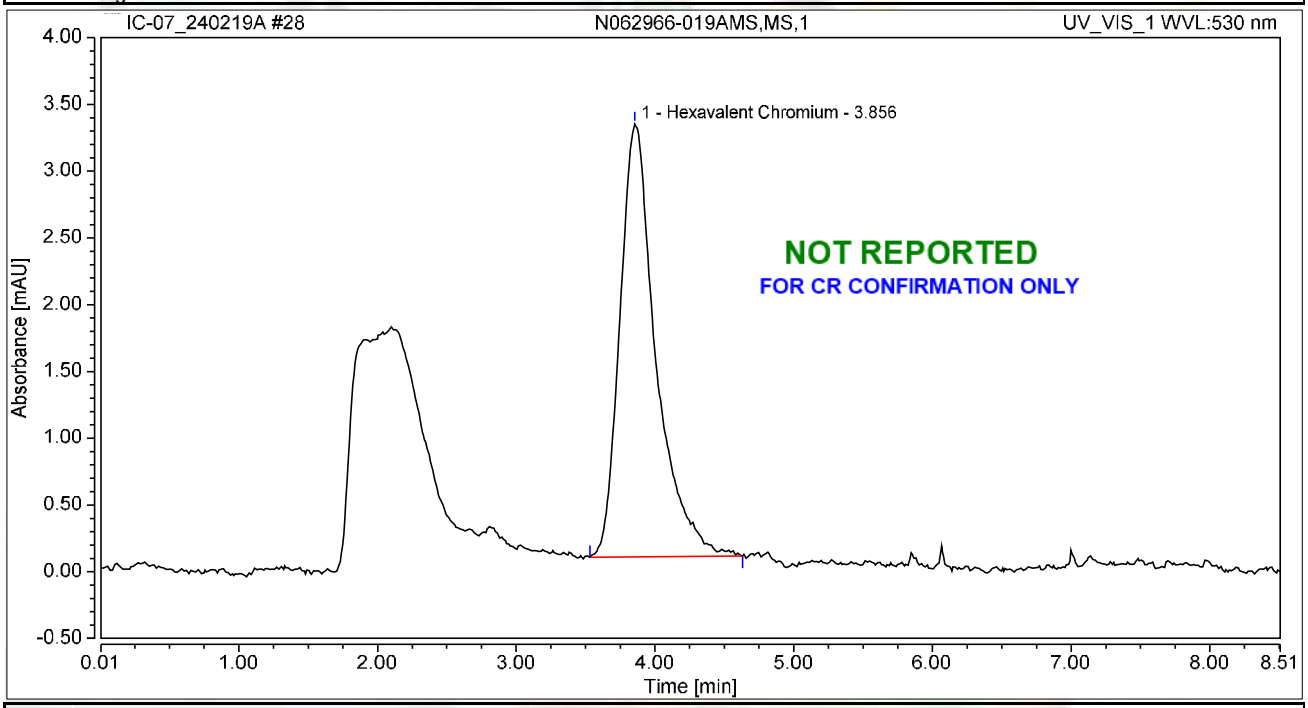
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.848	0.744	2.476	100.00	100.00	3.4565
Total:			**0.744**	**2.476**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062966-019AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 16:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

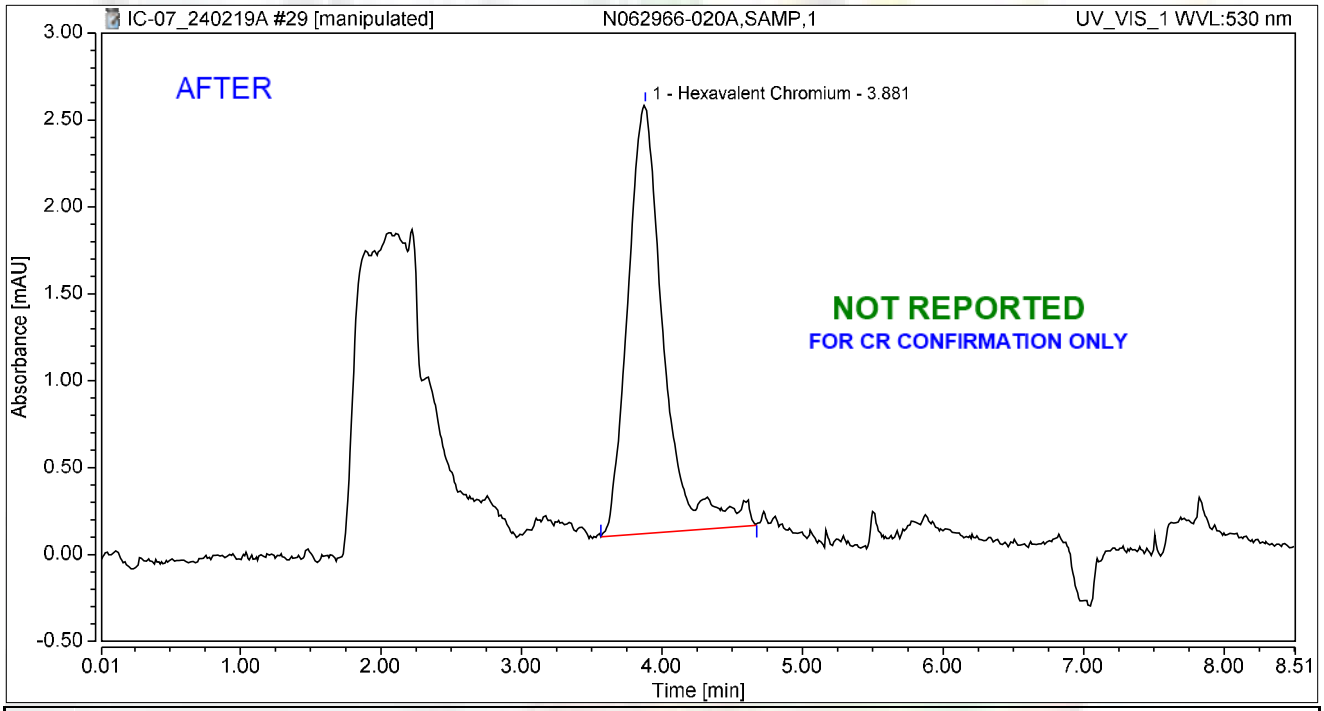
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.976	3.245	100.00	100.00	4.5364
Total:			**0.976**	**3.245**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062966-020A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 16:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

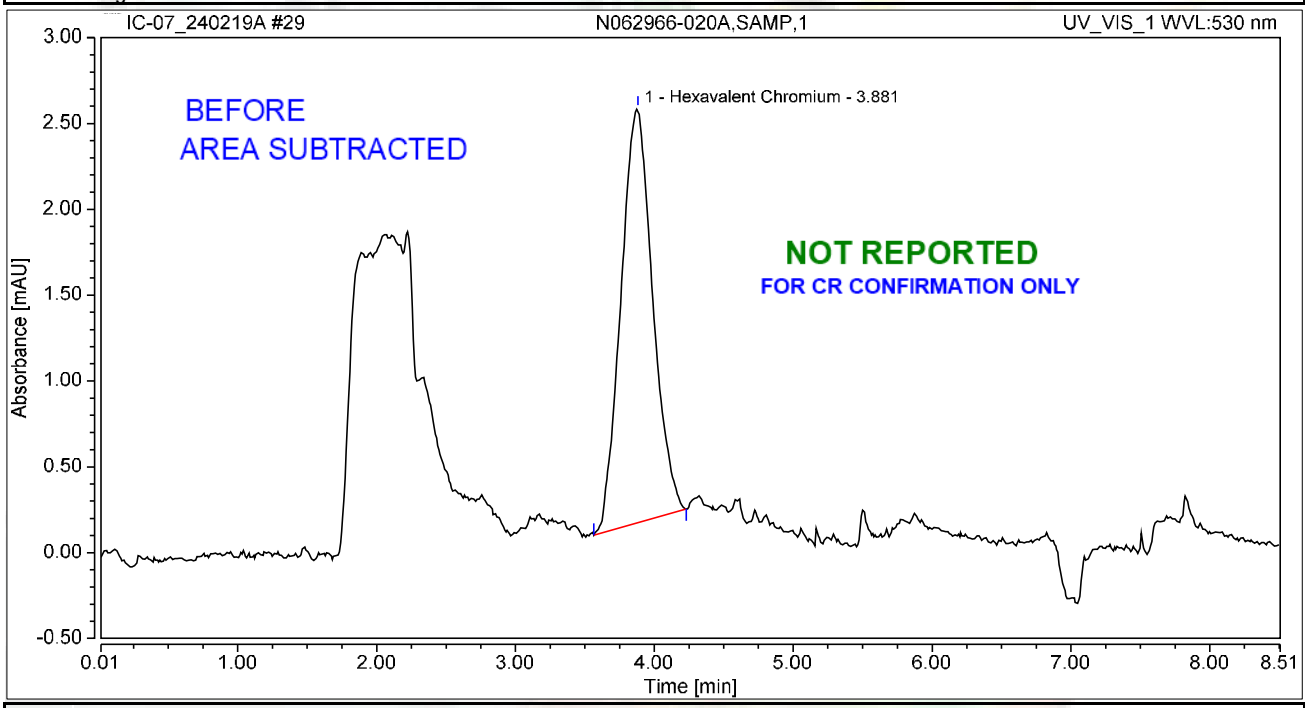
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.881	0.727	2.469	100.00	100.00	3.3817
Total:			**0.727**	**2.469**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062966-020A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 16:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

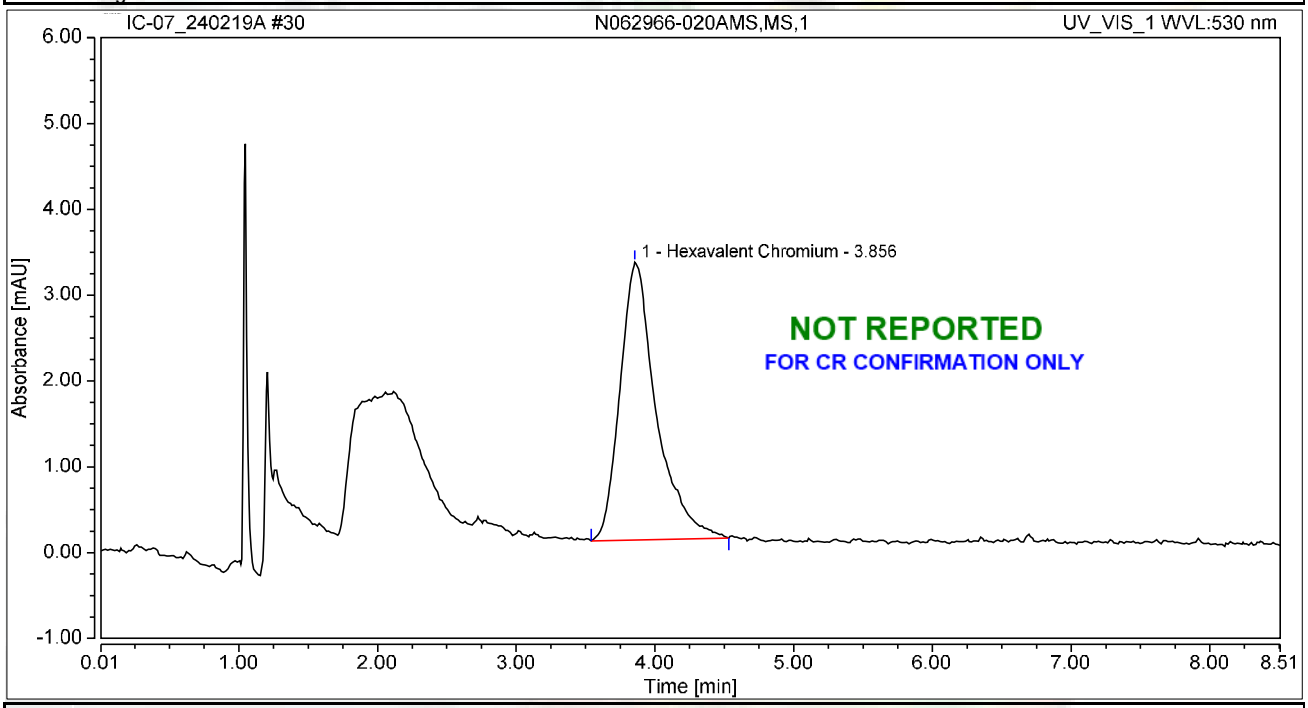
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.881	0.639	2.415	100.00	100.00	2.9702
Total:			**0.639**	**2.415**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N062966-020AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 16:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

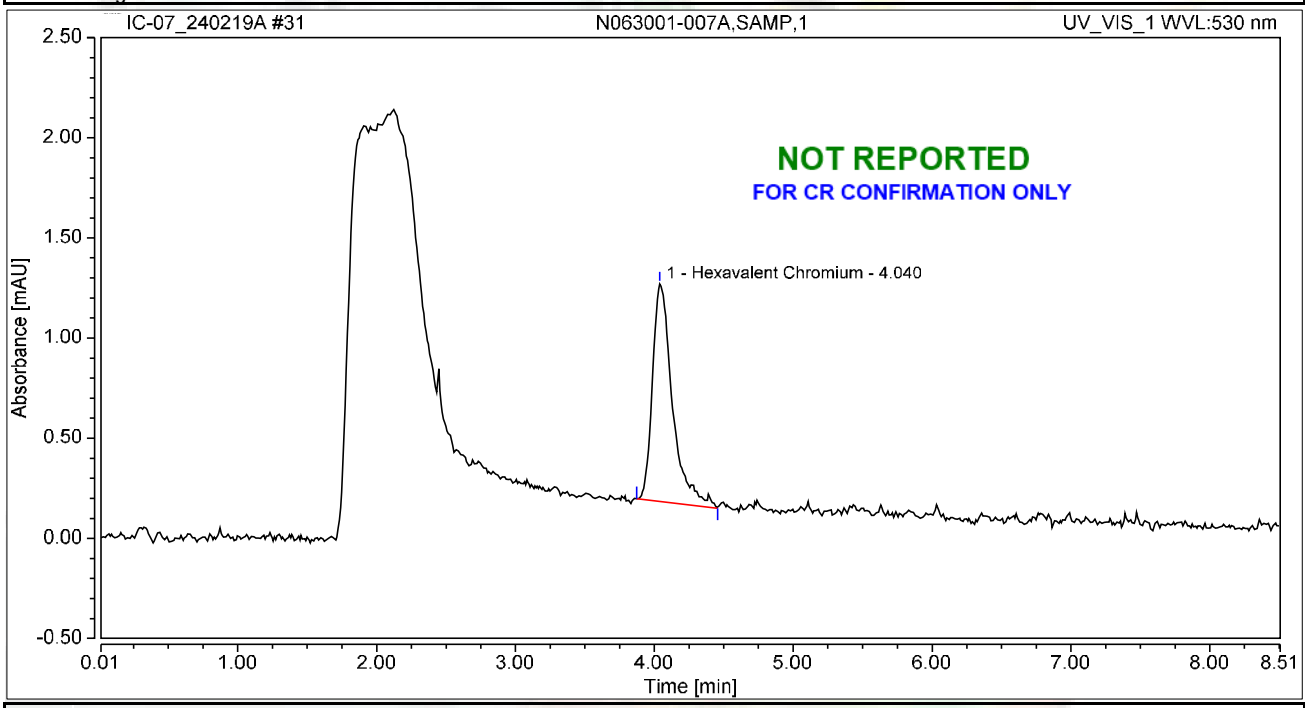
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.978	3.236	100.00	100.00	4.5457
Total:			**0.978**	**3.236**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-007A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 16:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

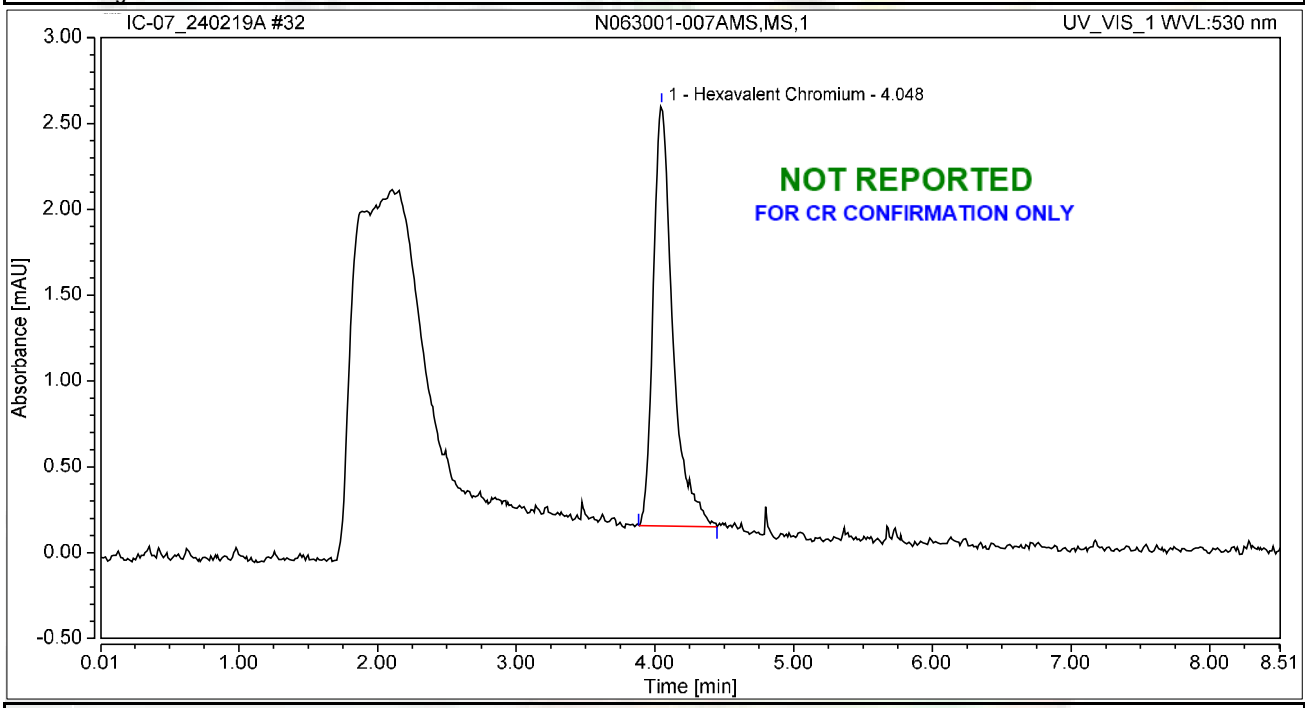
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.182	1.086	100.00	100.00	0.8446
Total:			**0.182**	**1.086**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063001-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 17:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

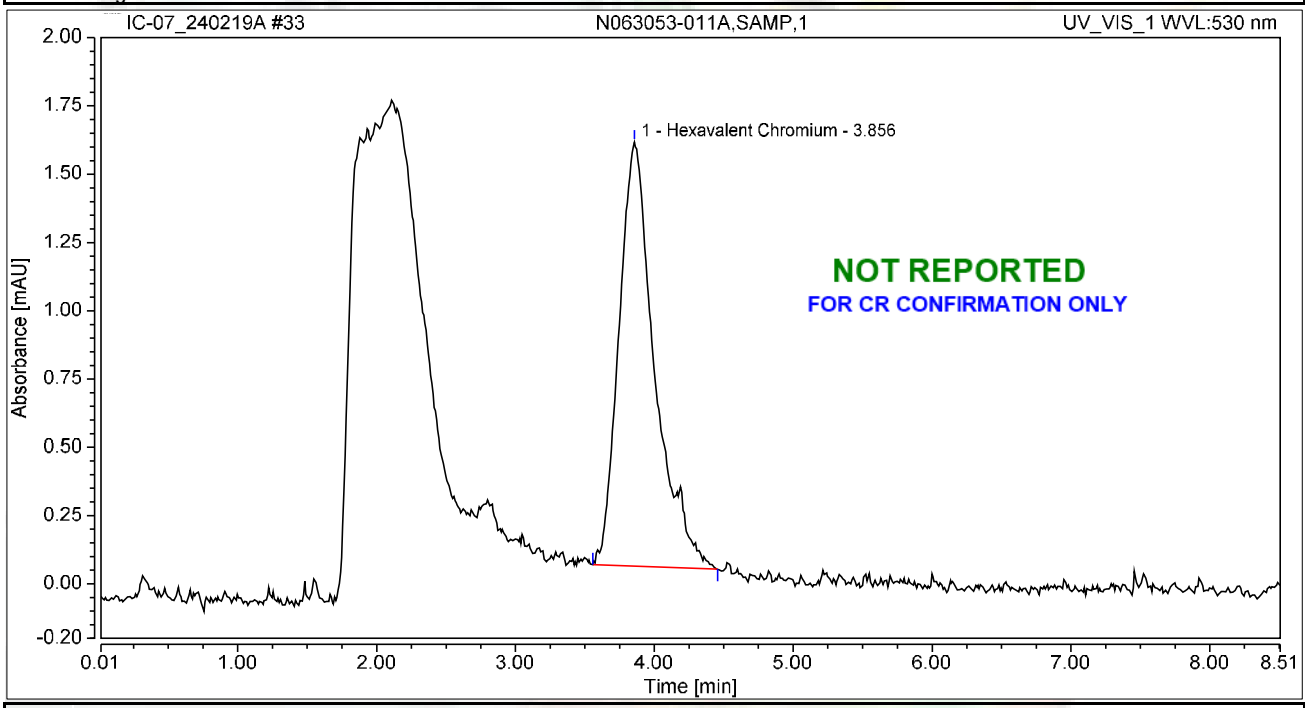
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.399	2.450	100.00	100.00	1.8547
Total:			**0.399**	**2.450**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 17:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

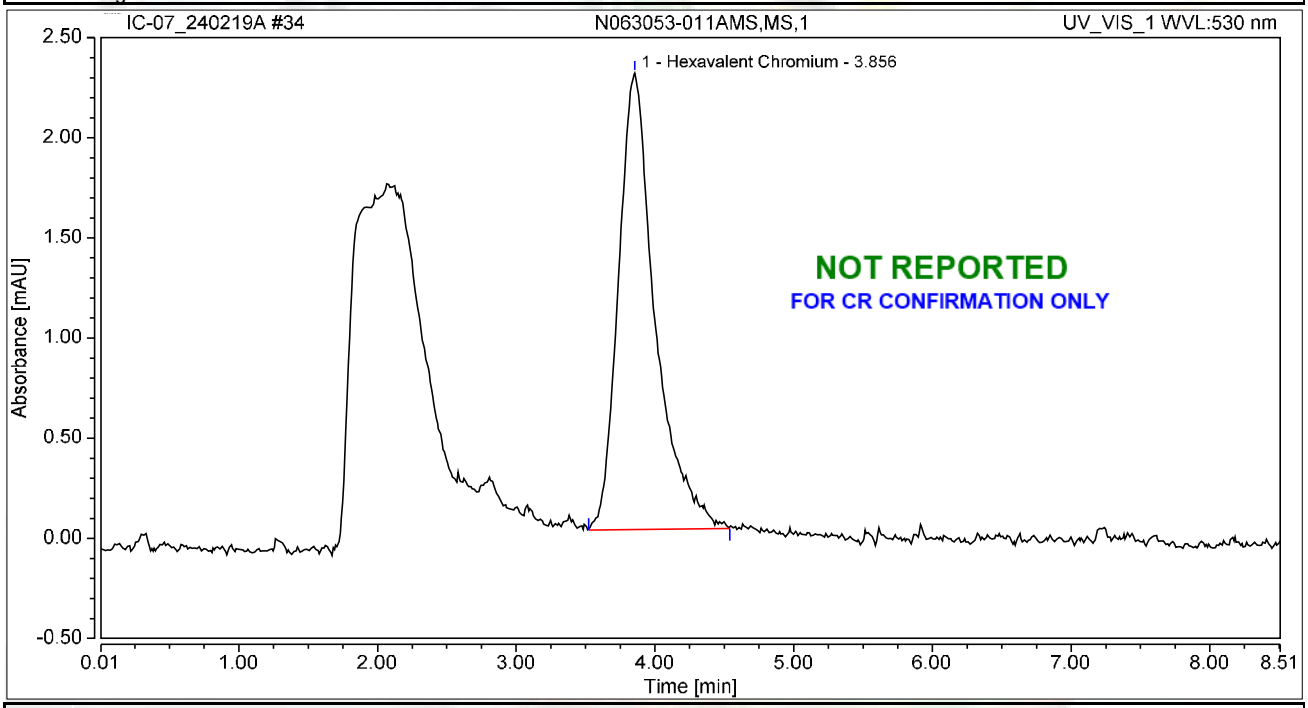
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.462	1.553	100.00	100.00	2.1496
Total:			**0.462**	**1.553**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 17:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

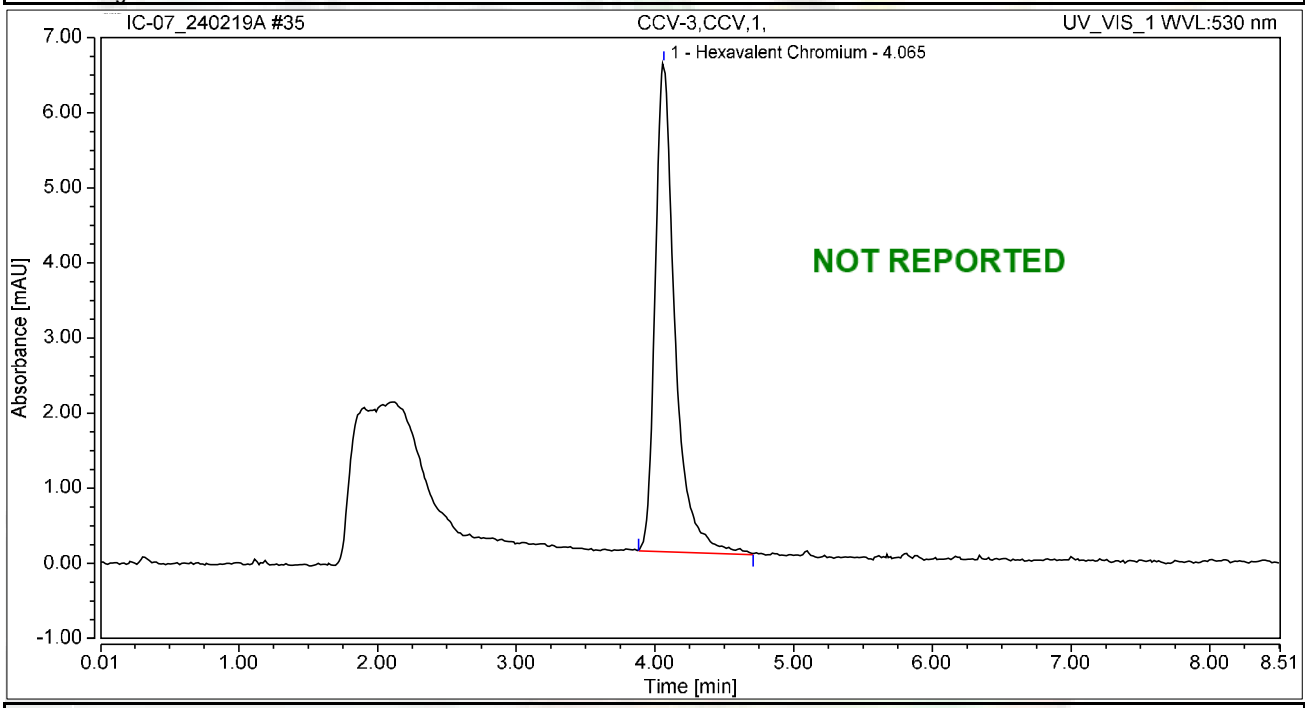
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.698	2.280	100.00	100.00	3.2452
Total:			**0.698**	**2.280**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 17:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

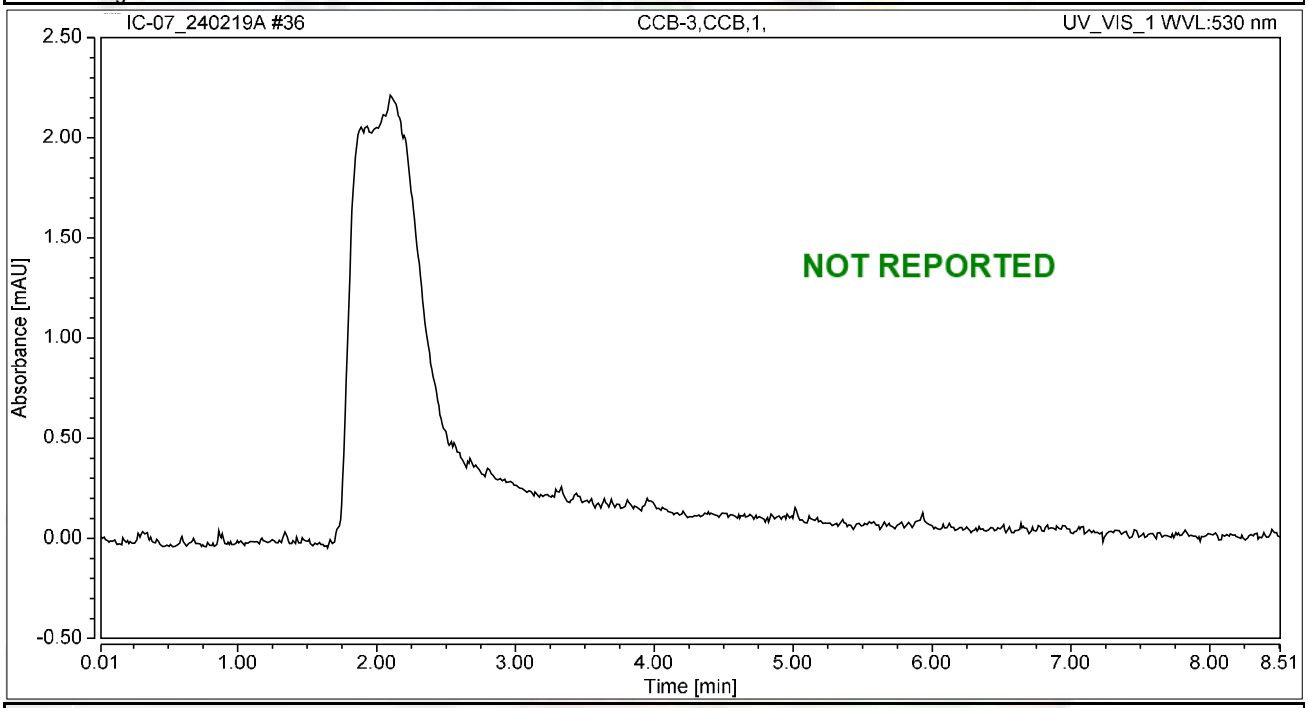
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	1.077	6.501	100.00	100.00	5.0056
Total:			**1.077**	**6.501**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 17:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

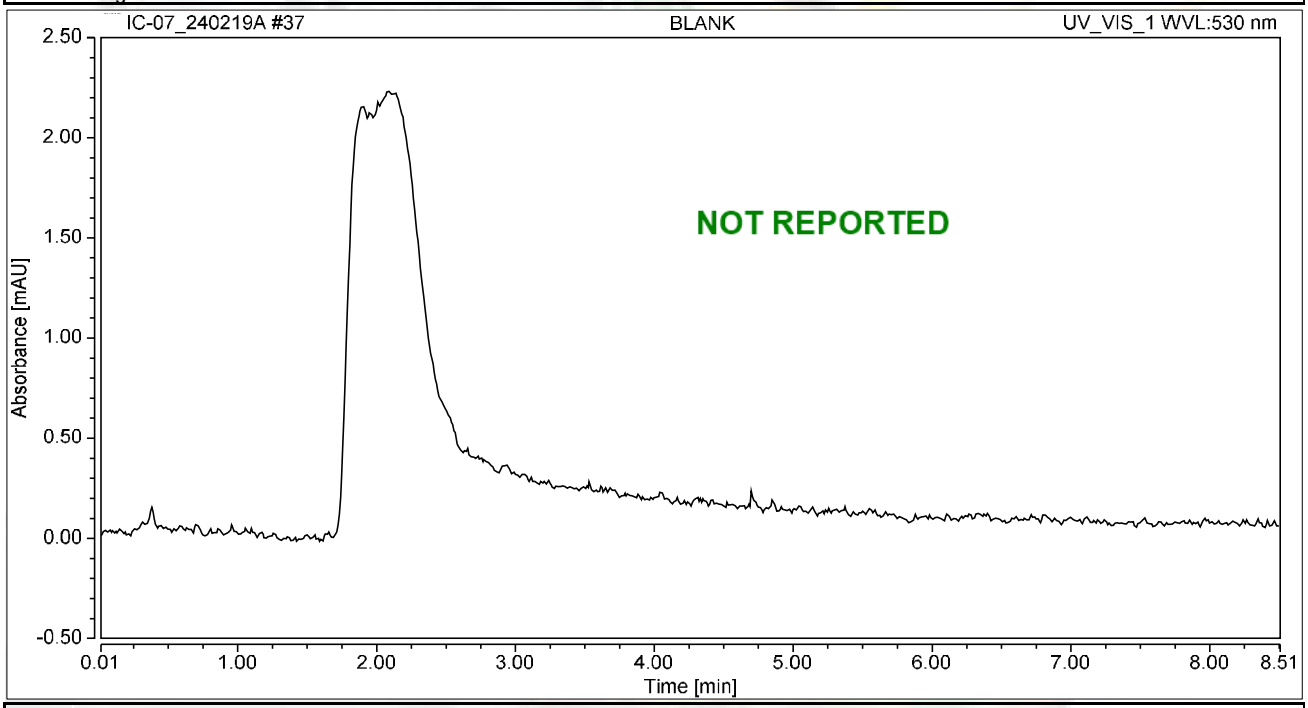
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.49**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Feb/24 17:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

ARCADIS

Project: PG&E Topock - RCM

Project No.: 30211191

ASSET Laboratories Work Order:

N063181

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063181

Item	Page
Cover Page	1-5
Analytical Result/QC Summary Reports	6-23
Sample Receiving Items	24-27
List of Analysts	28
Raw Data	
EPA 218.6	29-138
EPA 300.0	139-161
EPA 6020_Dissolved	162-248

March 12, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063181

RE: PG&E Topock - RCM, 30211191

Attention: Dan Bush

Enclosed are the results for sample(s) received on February 19, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - RCM, 30211191
Lab Order: N063181

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 218.6:

Because the results for total dissolved chromium (32 ug/L) and hexavalent chromium (42 ug/L) for sample N063181-003 (MW-69-195-Q124) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (32 ug/L) and hexavalent chromium (42 ug/L) for sample N063181-003 (MW-69-195-Q124) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 31 and 42 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

ASSET Laboratories

Date: *12-Mar-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - RCM, 30211191
Lab Order: N063181
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063181-001A	MW-65-160-Q124	Groundwater	2/19/2024 1:56:00 PM	2/19/2024	3/12/2024
N063181-001B	MW-65-160-Q124	Groundwater	2/19/2024 1:56:00 PM	2/19/2024	3/12/2024
N063181-001C	MW-65-160-Q124	Groundwater	2/19/2024 1:56:00 PM	2/19/2024	3/12/2024
N063181-002A	MW-65-225-Q124	Groundwater	2/19/2024 1:08:00 PM	2/19/2024	3/12/2024
N063181-002B	MW-65-225-Q124	Groundwater	2/19/2024 1:08:00 PM	2/19/2024	3/12/2024
N063181-002C	MW-65-225-Q124	Groundwater	2/19/2024 1:08:00 PM	2/19/2024	3/12/2024
N063181-003A	MW-69-195-Q124	Groundwater	2/19/2024 2:46:00 PM	2/19/2024	3/12/2024
N063181-003B	MW-69-195-Q124	Groundwater	2/19/2024 2:46:00 PM	2/19/2024	3/12/2024
N063181-003C	MW-69-195-Q124	Groundwater	2/19/2024 2:46:00 PM	2/19/2024	3/12/2024
N063181-004A	EB-727-Q124	Groundwater	2/19/2024 3:00:00 PM	2/19/2024	3/12/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-65-160-Q124
Lab Order:	N063181		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/19/2024 1:56:00 PM
Lab ID:	N063181-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240220A**	QC Batch: **R182732**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	290	1.9	10		µg/L	50	2/20/2024 11:31 AM
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240223E**	QC Batch: **106973**			PrepDate:	**2/20/2024**		Analyst: **DJ**
Chromium	290	0.35	10		µg/L	10	2/23/2024 07:47 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-65-225-Q124
Lab Order:	N063181		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/19/2024 1:08:00 PM
Lab ID:	N063181-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
EPA 218.6							
RunID: **NV00922-IC7_240220A** QC Batch: **R182732**				PrepDate:			Analyst: **RAB**
Hexavalent Chromium	460	1.9	10		µg/L	50	2/20/2024 11:42 AM
DISSOLVED METALS BY ICP-MS							
EPA 3010A **EPA 6020**							
RunID: **NV00922-ICP8_240223E** QC Batch: **106973**				PrepDate:	**2/20/2024**		Analyst: **DJ**
Chromium	470	0.35	10		µg/L	10	2/23/2024 07:51 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-69-195-Q124
Lab Order:	N063181		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/19/2024 2:46:00 PM
Lab ID:	N063181-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240220A** QC Batch: **R182732**				PrepDate:			Analyst: **RAB**
Hexavalent Chromium	42	0.19	1.0		µg/L	5	2/20/2024 02:44 PM
DISSOLVED METALS BY ICP-MS							
		EPA 3010A			**EPA 6020**		
RunID: **NV00922-ICP8_240222E** QC Batch: **106973**				PrepDate:	**2/20/2024**		Analyst: **DJ**
Chromium	32	0.035	1.0		µg/L	1	2/22/2024 11:46 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-727-Q124
Lab Order:	N063181		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/19/2024 3:00:00 PM
Lab ID:	N063181-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240220A**	QC Batch: **R182732**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/20/2024 12:01 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R182732**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **PBW**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701919**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R182732**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **LCSW**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701920**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.950	0.20	5.000	0	99.0	90	110				

Sample ID: **N063181-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701924**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.992	0.20	1.000	0	99.2	90	110				

Sample ID: **N063181-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701925**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	552.090	10	250.0	293.9	103	90	110				

Sample ID: **N063181-001AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701926**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	533.235	10	250.0	293.9	95.7	90	110	552.1	3.47	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063181-002ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:				RunNo: **182732**		
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**				SeqNo: **5701927**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	450.435	10						458.6	1.80	20	

Sample ID: **N063181-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:				RunNo: **182732**		
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**				SeqNo: **5701930**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	695.635	10	250.0	458.6	94.8	90	110				

Sample ID: **N063182-008AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:				RunNo: **182732**		
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**				SeqNo: **5701932**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	141.652	4.0	100.0	43.65	98.0	90	110				

Sample ID: **N063182-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:				RunNo: **182732**		
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**				SeqNo: **5701936**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.004	0.20	1.000	0	100	90	110				

Sample ID: **N063182-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:				RunNo: **182732**		
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**				SeqNo: **5701941**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.994	0.20	1.000	0	99.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063182-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182732**
Client ID: **ZZZZZZ** Batch ID: **R182732** TestNo: **EPA 218.6** Analysis Date: **2/20/2024** SeqNo: **5701943**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.974	0.20	1.000	0	97.4	90	110				

Sample ID: **N063182-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182732**
Client ID: **ZZZZZZ** Batch ID: **R182732** TestNo: **EPA 218.6** Analysis Date: **2/20/2024** SeqNo: **5701945**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.074	0.20	1.000	0	107	90	110				

Sample ID: **N063182-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182732**
Client ID: **ZZZZZZ** Batch ID: **R182732** TestNo: **EPA 218.6** Analysis Date: **2/20/2024** SeqNo: **5701947**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.012	0.20	1.000	0	101	90	110				

Sample ID: **N063182-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182732**
Client ID: **ZZZZZZ** Batch ID: **R182732** TestNo: **EPA 218.6** Analysis Date: **2/20/2024** SeqNo: **5701949**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.001	0.20	1.000	0	100	90	110				

Sample ID: **N063182-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182732**
Client ID: **ZZZZZZ** Batch ID: **R182732** TestNo: **EPA 218.6** Analysis Date: **2/20/2024** SeqNo: **5701953**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.046	0.20	1.000	0	105	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063182-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182732**
Client ID: **ZZZZZZ** Batch ID: **R182732** TestNo: **EPA 218.6** Analysis Date: **2/20/2024** SeqNo: **5701955**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.005	0.20	1.000	0	101	90	110				

Sample ID: **N063182-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182732**
Client ID: **ZZZZZZ** Batch ID: **R182732** TestNo: **EPA 218.6** Analysis Date: **2/20/2024** SeqNo: **5701957**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.620	1.0	5.000	0	92.4	90	110				

Sample ID: **N063182-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182732**
Client ID: **ZZZZZZ** Batch ID: **R182732** TestNo: **EPA 218.6** Analysis Date: **2/20/2024** SeqNo: **5701959**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.015	1.0	5.000	0	100	90	110				

Sample ID: **N063181-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182732**
Client ID: **ZZZZZZ** Batch ID: **R182732** TestNo: **EPA 218.6** Analysis Date: **2/20/2024** SeqNo: **5701960**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	66.807	1.0	25.00	42.02	99.1	90	110				

Sample ID: **N063182-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182732**
Client ID: **ZZZZZZ** Batch ID: **R182732** TestNo: **EPA 218.6** Analysis Date: **2/20/2024** SeqNo: **5701964**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.994	0.20	1.000	0	99.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **MB-106973**	SampType: **MBLK**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/20/2024**	RunNo: **182848**
Client ID: **PBW**	Batch ID: **106973**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/22/2024**	SeqNo: **5708709**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID: **LCS-106973**	SampType: **LCS**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/20/2024**	RunNo: **182848**
Client ID: **LCSW**	Batch ID: **106973**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/22/2024**	SeqNo: **5708710**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.444	1.0	10.00	0	104	85	115				

Sample ID: **N063181-003C-MS**	SampType: **MS**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/20/2024**	RunNo: **182848**
Client ID: **ZZZZZZ**	Batch ID: **106973**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708716**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	41.724	1.0	10.00	31.84	98.8	75	125				

Sample ID: **N063181-003C-MSD**	SampType: **MSD**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/20/2024**	RunNo: **182848**
Client ID: **ZZZZZZ**	Batch ID: **106973**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708717**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	42.162	1.0	10.00	31.84	103	75	125	41.72	1.04	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-65-160-Q124
Lab Order:	N063181		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/19/2024 1:56:00 PM
Lab ID:	N063181-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240220A**	QC Batch: **R182719**			PrepDate:			Analyst: **RAB**
Nitrate as N	13	0.24	0.50		mg/L	10	2/20/2024 03:56 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-65-225-Q124
Lab Order:	N063181		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/19/2024 1:08:00 PM
Lab ID:	N063181-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240220A**	QC Batch: **R182719**			PrepDate:			Analyst: **RAB**
Nitrate as N	8.8	0.24	0.50		mg/L	10	2/20/2024 04:11 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-69-195-Q124
Lab Order:	N063181		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/19/2024 2:46:00 PM
Lab ID:	N063181-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240220A**	QC Batch: **R182719**			PrepDate:			Analyst: **RAB**
Nitrate as N	4.6	0.24	0.50		mg/L	10	2/20/2024 04:26 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **MB-R182719_NO3** SampType: **MBLK** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182719**
Client ID: **PBW** Batch ID: **R182719** TestNo: **EPA 300.0** Analysis Date: **2/20/2024** SeqNo: **5701662**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **LCS-R182719_NO3** SampType: **LCS** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182719**
Client ID: **LCSW** Batch ID: **R182719** TestNo: **EPA 300.0** Analysis Date: **2/20/2024** SeqNo: **5701663**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.232	0.050	1.250	0	98.6	90	110				

Sample ID: **N063169-001BDUP** SampType: **DUP** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182719**
Client ID: **ZZZZZZ** Batch ID: **R182719** TestNo: **EPA 300.0** Analysis Date: **2/20/2024** SeqNo: **5701665**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	8.454	0.25						8.390	0.766	20	

Sample ID: **N063182-008CMS** SampType: **MS** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182719**
Client ID: **ZZZZZZ** Batch ID: **R182719** TestNo: **EPA 300.0** Analysis Date: **2/20/2024** SeqNo: **5701678**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.727	0.50	12.50	0.5250	97.6	80	120				

Sample ID: **N063182-008CMSD** SampType: **MSD** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182719**
Client ID: **ZZZZZZ** Batch ID: **R182719** TestNo: **EPA 300.0** Analysis Date: **2/20/2024** SeqNo: **5701681**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	13.052	0.50	12.50	0.5250	100	80	120	12.73	2.52	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **N063182-011CMS**	SampType: **MS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:					RunNo: **182719**			
Client ID: **ZZZZZZ**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**					SeqNo: **5701682**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Nitrate as N	12.067	0.50	12.50	0.2940	94.2	80	120					

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-65-160-Q124
Lab Order:	N063181		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/19/2024 1:56:00 PM
Lab ID:	N063181-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A			**EPA 6020**			
RunID: **NV00922-ICP8_240222F**	QC Batch: **106973**			PrepDate:		**2/20/2024**	Analyst: **DJ**
Molybdenum	23	0.12	0.50		µg/L	1	2/22/2024 11:36 PM
Selenium	9.6	0.044	0.50		µg/L	1	2/22/2024 11:36 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-65-225-Q124
Lab Order:	N063181		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/19/2024 1:08:00 PM
Lab ID:	N063181-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240222F**	QC Batch: **106973**				PrepDate:	**2/20/2024**	Analyst: **DJ**
Molybdenum	22	0.12	0.50		µg/L	1	2/22/2024 11:41 PM
Selenium	6.6	0.044	0.50		µg/L	1	2/22/2024 11:41 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-69-195-Q124
Lab Order:	N063181		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/19/2024 2:46:00 PM
Lab ID:	N063181-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240222F**	QC Batch: **106973**			PrepDate:		**2/20/2024**	Analyst: **DJ**
Molybdenum	62	0.12	0.50		µg/L	1	2/22/2024 11:46 PM
Selenium	4.4	0.044	0.50		µg/L	1	2/22/2024 11:46 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **MB-106973**	SampType: **MBLK**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/20/2024**	RunNo: **182849**
Client ID: **PBW**	Batch ID: **106973**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/22/2024**	SeqNo: **5708872**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID: **LCS-106973**	SampType: **LCS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/20/2024**	RunNo: **182849**
Client ID: **LCSW**	Batch ID: **106973**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/22/2024**	SeqNo: **5708873**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	10.000	0.50	10.00	0	100	85	115				
Selenium	10.351	0.50	10.00	0	104	85	115				

Sample ID: **N063181-003C-MS**	SampType: **MS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/20/2024**	RunNo: **182849**
Client ID: **ZZZZZZ**	Batch ID: **106973**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708879**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	73.536	0.50	10.00	61.52	120	75	125				
Selenium	14.155	0.50	10.00	4.378	97.8	75	125				

Sample ID: **N063181-003C-MSD**	SampType: **MSD**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/20/2024**	RunNo: **182849**
Client ID: **ZZZZZZ**	Batch ID: **106973**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708880**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	72.941	0.50	10.00	61.52	114	75	125	73.54	0.812	20	
Selenium	14.308	0.50	10.00	4.378	99.3	75	125	14.16	1.07	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

SAMPLE RECEIVING ITEMS

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

ARCUS02 C: 3/5/2024 12:00 AM
FOLDER R: 2/19/2024
N063181-005A 1 of 1

Page 1 of 1

| | | |

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	2/19/2024	Workorder:	N063181
Rep sample Temp (Deg C):	2.4	IR Gun ID:	3

Temp Blank: ☑ Yes ☐ No

Carrier name: ASSET

Last 4 digits of Tracking No.: NA Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By YR YRodriguez 2/20/2024

Reviewed By: for: MBC 02/20/2024

ASSET Laboratories

WORK ORDER Summary

19-Feb-24

WorkOrder: N063181

Client ID: ARCUS02

Project: PG&E Topock - RCM, 30211191 **QC Level:** Level IV **Date Received:** 2/19/2024 7:10 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063181-001A	MW-65-160-Q124	2/19/2024 1:56:00 PM	3/5/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063181-001B			3/5/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063181-001C			3/5/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/5/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			3/5/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063181-002A	MW-65-225-Q124	2/19/2024 1:08:00 PM	3/5/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063181-002B			3/5/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063181-002C			3/5/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/5/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			3/5/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063181-003A	MW-69-195-Q124	2/19/2024 2:46:00 PM	3/5/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063181-003B			3/5/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063181-003C			3/5/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/5/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			3/5/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063181-004A	EB-727-Q124	2/19/2024 3:00:00 PM	3/5/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063181-005A	FOLDER	3/5/2024	3/5/2024		Folder	Folder	☐	☐	☐	LAB
			3/5/2024		Folder	Level IV Report	☐	☐	☐	LAB
			3/5/2024		Folder	Folder	☐	☐	☐	LAB

List of Analysts

ASSET Laboratories Work Order: N063181

NAME	TEST METHOD
Ria Abes	EPA 218.6, EPA 300.0
Diane Jetajobe	EPA 6020_Dissolved

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R182732
ASSET #: N063181
Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/20/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?	X					X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?	X	X			X	
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?	X		X	X		
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

N063181-003A = 42 ppb ; N063181-003C (6020) = 32 ppb
MS protocol performed. Recovery within criteria.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer: RBA Date: _____

2nd Level Reviewer: RB 02282024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063181-001A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 5.8773 * 50$$

$$Cr^{+6}, \mu g/L = 293.8650$$

Reporting results in two significant figures,

$$\mathbf{Cr^{+6}, \mu g/L = 290}$$

Reviewed by:

dMocha 3/5/2024

ANALYSIS RUN LOG

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240220A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/20/24 9:36 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/20/24 9:50 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/20/24 9:59 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/20/24 10:09 AM	Reported
13	MB-R182732	MBLK	1	Hexavalent Chromium	02/20/24 10:18 AM	Reported
14	LCS-R182732	LCS	1	Hexavalent Chromium	02/20/24 10:28 AM	Reported
15	N063181-001A	SAMP	50	Hexavalent Chromium	02/20/24 11:31 AM	Reported
16	N063181-002A	SAMP	50	Hexavalent Chromium	02/20/24 11:42 AM	Reported
17	N063181-003A	SAMP	50	Hexavalent Chromium	02/20/24 11:51 AM	Not Reported
18	N063181-004A	SAMP	1	Hexavalent Chromium	02/20/24 12:01 PM	Reported
19	N063181-004AMS	MS	1	Hexavalent Chromium	02/20/24 12:10 PM	Reported
20	N063181-001AMS	MS	50	Hexavalent Chromium	02/20/24 12:19 PM	Reported
21	N063181-001AMSD	MSD	50	Hexavalent Chromium	02/20/24 12:29 PM	Reported
22	N063181-002ADUP	DUP	50	Hexavalent Chromium	02/20/24 12:38 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/20/24 12:48 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/20/24 12:57 PM	Reported
25	N063181-002AMS	MS	50	Hexavalent Chromium	02/20/24 1:17 PM	Reported
26	N063182-008A	SAMP	20	Hexavalent Chromium	02/20/24 1:28 PM	Reported
27	N063182-008AMS	MS	20	Hexavalent Chromium	02/20/24 1:38 PM	Reported
28	N063182-005A	SAMP	1	Hexavalent Chromium	02/20/24 1:47 PM	Not Reported
29	N063182-005AMS	MS	1	Hexavalent Chromium	02/20/24 1:56 PM	Not Reported
30	N063182-011A	SAMP	1	Hexavalent Chromium	02/20/24 2:06 PM	Not Reported
31	N063182-011AMS	MS	1	Hexavalent Chromium	02/20/24 2:15 PM	Not Reported
32	N063182-001A	SAMP	1	Hexavalent Chromium	02/20/24 2:25 PM	Reported
33	N063182-001AMS	MS	1	Hexavalent Chromium	02/20/24 2:34 PM	Reported
34	N063181-003A	SAMP	5	Hexavalent Chromium	02/20/24 2:44 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/20/24 2:53 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/20/24 3:03 PM	Reported
37	N063182-003A	SAMP	1	Hexavalent Chromium	02/20/24 3:12 PM	Reported
38	N063182-003AMS	MS	1	Hexavalent Chromium	02/20/24 3:22 PM	Reported
39	N063182-009A	SAMP	1	Hexavalent Chromium	02/20/24 3:31 PM	Reported
40	N063182-009AMS	MS	1	Hexavalent Chromium	02/20/24 3:41 PM	Reported
41	N063182-010A	SAMP	1	Hexavalent Chromium	02/20/24 3:50 PM	Reported
42	N063182-010AMS	MS	1	Hexavalent Chromium	02/20/24 3:59 PM	Reported

INJECTION LOG: 240220A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063182-002A	SAMP	1	Hexavalent Chromium	02/20/24 4:09 PM	Reported
44	N063182-002AMS	MS	1	Hexavalent Chromium	02/20/24 4:18 PM	Reported
45	N063182-004A	SAMP	1	Hexavalent Chromium	02/20/24 4:28 PM	Reported
46	N063182-004AMS	MS	1	Hexavalent Chromium	02/20/24 4:37 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/20/24 4:47 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/20/24 4:56 PM	Reported
49	N063182-006A	SAMP	1	Hexavalent Chromium	02/20/24 5:06 PM	Reported
50	N063182-006AMS	MS	1	Hexavalent Chromium	02/20/24 5:15 PM	Reported
51	N063182-007A	SAMP	1	Hexavalent Chromium	02/20/24 5:25 PM	Reported
52	N063182-007AMS	MS	1	Hexavalent Chromium	02/20/24 5:34 PM	Reported
53	N063182-005A	SAMP	5	Hexavalent Chromium	02/20/24 5:43 PM	Reported
54	N063182-005AMS	MS	5	Hexavalent Chromium	02/20/24 5:53 PM	Reported
55	N063182-011A	SAMP	5	Hexavalent Chromium	02/20/24 6:02 PM	Reported
56	N063182-011AMS	MS	5	Hexavalent Chromium	02/20/24 6:12 PM	Reported
57	N063181-003AMS	MS	5	Hexavalent Chromium	02/20/24 6:21 PM	Reported
58	CCV-5	CCV	1	Hexavalent Chromium	02/20/24 6:31 PM	Reported
59	CCB-5	CCB	1	Hexavalent Chromium	02/20/24 6:40 PM	Reported
60	N063182-012A	SAMP	1	Hexavalent Chromium	02/20/24 6:50 PM	Reported
61	N063182-012AMS	MS	1	Hexavalent Chromium	02/20/24 6:59 PM	Reported
62	CCV-6	CCV1	1	Hexavalent Chromium	02/20/24 7:09 PM	Reported
63	CCB-6	CCB	1	Hexavalent Chromium	02/20/24 7:18 PM	Reported
64	BLANK	BLANK	1	Hexavalent Chromium	02/20/24 7:27 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240220A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**20/Feb/24 19:58:17**
No. of Injections:	**67**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/20/2024 09:36	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/20/2024 09:50	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/20/2024 09:59	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/20/2024 10:09	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/20/2024 10:18	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/20/2024 10:28	Finished	LCS @5ppb, IWST-231228B
15	N063181-001A,SAMF	1	1000	Unknown		02/20/2024 11:31	Finished	SAMP,0.2>10 mL
16	N063181-002A,SAMF	2	1000	Unknown		02/20/2024 11:42	Finished	SAMP,0.2>10 mL
17	N063181-003A,SAMF	3	1000	Unknown		02/20/2024 11:51	Finished	SAMP,0.2>10 mL
18	N063181-004A,SAMF	4	1000	Unknown		02/20/2024 12:01	Finished	SAMP,10 mL
19	N063181-004AMS,MS	5	1000	Unknown		02/20/2024 12:10	Finished	MS (1ppb), IWST-231228B,10r
20	N063181-001AMS,MS	6	1000	Unknown		02/20/2024 12:19	Finished	MS (5ppb), IWST-231228B,0.2
21	N063181-001AMSD,M	7	1000	Unknown		02/20/2024 12:29	Finished	MSD (5ppb), IWST-231228B,0
22	N063181-002ADUP,D	8	1000	Unknown		02/20/2024 12:38	Finished	DUP,0.2>10 mL
23	CCV-2,CCV1,1,	9	1000	Unknown		02/20/2024 12:48	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		02/20/2024 12:57	Finished	CCB R240129C
25	N063181-002AMS,MS	1	1000	Unknown		02/20/2024 13:17	Finished	MS (5ppb), IWST-231228B,0.2
26	N063182-008A,SAMF	2	1000	Unknown		02/20/2024 13:28	Finished	SAMP,0.5>10 mL
27	N063182-008AMS,MS	3	1000	Unknown		02/20/2024 13:38	Finished	MS (5ppb), IWST-231228B,0.5
28	N063182-005A,SAMF	4	1000	Unknown		02/20/2024 13:47	Finished	SAMP,10 mL
29	N063182-005AMS,MS	5	1000	Unknown		02/20/2024 13:56	Finished	MS (1ppb), IWST-231228B,10r
30	N063182-011A,SAMF	6	1000	Unknown		02/20/2024 14:06	Finished	SAMP,10 mL
31	N063182-011AMS,MS	7	1000	Unknown		02/20/2024 14:15	Finished	MS (1ppb), IWST-231228B,10r
32	N063182-001A,SAMF	8	1000	Unknown		02/20/2024 14:25	Finished	SAMP,10 mL
33	N063182-001AMS,MS	9	1000	Unknown		02/20/2024 14:34	Finished	MS (1ppb), IWST-231228B,10r
34	N063181-003A,SAMF	10	1000	Unknown		02/20/2024 14:44	Finished	SAMP,2>10 mL
35	CCV-3,CCV,1,	11	1000	Unknown		02/20/2024 14:53	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	12	1000	Unknown		02/20/2024 15:03	Finished	CCB R240129C
37	N063182-003A,SAMF	13	1000	Unknown		02/20/2024 15:12	Finished	SAMP,10 mL
38	N063182-003AMS,MS	14	1000	Unknown		02/20/2024 15:22	Finished	MS (1ppb), IWST-231228B,10r
39	N063182-009A,SAMF	15	1000	Unknown		02/20/2024 15:31	Finished	SAMP,10 mL
40	N063182-009AMS,MS	16	1000	Unknown		02/20/2024 15:41	Finished	MS (1ppb), IWST-231228B,10r
41	N063182-010A,SAMF	17	1000	Unknown		02/20/2024 15:50	Finished	SAMP,10 mL
42	N063182-010AMS,MS	18	1000	Unknown		02/20/2024 15:59	Finished	MS (1ppb), IWST-231228B,10r
43	N063182-002A,SAMF	19	1000	Unknown		02/20/2024 16:09	Finished	SAMP,10 mL
44	N063182-002AMS,MS	20	1000	Unknown		02/20/2024 16:18	Finished	MS (1ppb), IWST-231228B,10r
45	N063182-004A,SAMF	21	1000	Unknown		02/20/2024 16:28	Finished	SAMP,10 mL
46	N063182-004AMS,MS	22	1000	Unknown		02/20/2024 16:37	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	23	1000	Unknown		02/20/2024 16:47	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	24	1000	Unknown		02/20/2024 16:56	Finished	CCB R240129C
49	N063182-006A,SAMF	25	1000	Unknown		02/20/2024 17:06	Finished	SAMP,10 mL
50	N063182-006AMS,MS	26	1000	Unknown		02/20/2024 17:15	Finished	MS (1ppb), IWST-231228B,10r
51	N063182-007A,SAMF	27	1000	Unknown		02/20/2024 17:25	Finished	SAMP,10 mL
52	N063182-007AMS,MS	28	1000	Unknown		02/20/2024 17:34	Finished	MS (1ppb), IWST-231228B,10r
53	N063182-005A,SAMF	29	1000	Unknown		02/20/2024 17:43	Finished	SAMP,2>10 mL
54	N063182-005AMS,MS	30	1000	Unknown		02/20/2024 17:53	Finished	MS (1ppb), IWST-231228B,2>1
55	N063182-011A,SAMF	31	1000	Unknown		02/20/2024 18:02	Finished	SAMP,2>10 mL
56	N063182-011AMS,MS	32	1000	Unknown		02/20/2024 18:12	Finished	MS (1ppb), IWST-231228B,2>1
57	N063181-003AMS,MS	33	1000	Unknown		02/20/2024 18:21	Finished	MS (5ppb), IWST-231228B,2>1
58	CCV-5,CCV,1,	34	1000	Unknown		02/20/2024 18:31	Finished	CCV @5ppb, IWST-231228A
59	CCB-5,CCB,1,	35	1000	Unknown		02/20/2024 18:40	Finished	CCB R240129C
60	N063182-012A,SAMF	36	1000	Unknown		02/20/2024 18:50	Finished	SAMP,10 mL

61	N063182-012AMS,MS	37	1000	Unknown		02/20/2024 18:59	Finished	MS (1ppb), IWST-231228B,10r
62	CCV-6,CCV1,1,	38	1000	Unknown		02/20/2024 19:09	Finished	CCV @10ppb, IWST-231228A
63	CCB-6,CCB,1,	39	1000	Unknown		02/20/2024 19:18	Finished	CCB R240129C
64	BLANK	40	1000	Unknown		02/20/2024 19:27	Finished	BLANK
65	SHUTDOWN R240221A	41	1000	Unknown		02/20/2024 19:37	Finished	
66	Eluent: ~~R240220A~~	42	1000	Unknown		n.a.	Finished	
67	PCR: ~~R240220B~~ R240221B	43	1000	Unknown		n.a.	Finished	

dMocha 3/3/2024
for RBA

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 2/20/24
Time Prepared: 1008
Prepared By: MA

Reagent ID:
Sulfuric Acid: 14345
Diphenylcarbazide: 15406
NH4OH + NH4SO4 eluent: A240257A / A240226A
NH4OH + NH4SO4 buffer: A240129C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MB-186824	7.58	9.54	~250mL	~50mL		125c
2)	MW2057-1A	9.24	9.48	"	"		40.2 mL A240257A
3)	1 2A	9.18	9.50	"	"		10mM
4)	MW2153-1A	9.38	-	~250mL	~250mL		
5)	2A	9.30	-	"	"		
6)	3A	9.70	-	"	"		
7)	4A	9.44	-	"	"		
8)	5A	9.90	-	"	"		
9)	6A	9.72	-	"	"		
10)							
11)							
12)							
13)							
14)							
15)							

Sample Preparation

Date Prepared: 2/20/24
Time Prepared: 1008
Prepared By: MA

Reagent ID:
Sulfuric Acid: 14345
Diphenylcarbazide: 15406
NH4OH + NH4SO4 eluent: A240226A
NH4OH + NH4SO4 buffer: A240129C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW2181-1A	9.38	-	~250mL	~250mL		
2)	2A	9.34	-				
3)	3A	9.44	-				
4)	4A	9.64	-				
5)	MW2182-1A	9.34	-				
6)	2A	9.68	-				
7)	3A	9.38	-				
8)	4A	9.64	-				
9)	5A	9.44	-				
10)	6A	9.72	-				
11)	7A	9.74	-				
12)	8A	9.46	-				
13)	9A	9.54	-				
14)	10A	9.56	-				
15)	11A	9.38	-				
	12A	9.76	-				

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 2/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0427	0.2063	1.0639	2.1157	3.2270	4.3227	0.9999
Measured, in ug/L	0.198500	0.959200	4.946100	9.835700	15.002300	20.095900	
Relative Error (%RE)	-0.8%		-1.1%				

	Stock	Working
Standard Concentration:	1,000,000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ICV**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5701913**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5701914**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **CCV**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701916**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.887	0.20	5.000	0	97.7	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701917**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.215	0.20	0.2000	0	107	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701928**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.050	0.20	10.00	0	101	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **CCV**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701938**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.027	0.20	5.000	0	101	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701950**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.129	0.20	10.00	0	101	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **CCV**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701961**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.996	0.20	5.000	0	99.9	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701965**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.148	0.20	10.00	0	101	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ICB**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5701915**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **CCB**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701918**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **CCB**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701929**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **CCB**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701939**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **CCB**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701951**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **CCB**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701962**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **CCB**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701966**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/20/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.056	
CCV-2	4.056	
CCV-3	4.065	
CCV-4	4.065	
CCV-5	4.065	
CCV-6	4.065	

Average	4.062
Actual RT Window	3.982 - 4.142
Applied RT Window	3.862 - 4.262

MB-R182732	N.A.	N.A.
LCS-R182732	4.056	PASS
N063181-001A	4.048	PASS
N063181-002A	4.048	PASS
N063181-003A	4.056	PASS
N063181-004A	N.A.	N.A.
N063181-004AMS	4.048	PASS
N063181-001AMS	4.048	PASS
N063181-001AMSD	4.048	PASS
N063181-002ADUP	4.048	PASS
N063181-002AMS	4.048	PASS
N063182-008A	4.040	PASS
N063182-008AMS	4.040	PASS
N063182-005A	N.A.	N.A.
N063182-011A	N.A.	N.A.
N063182-011AMS	N.A.	N.A.
N063182-001A	N.A.	N.A.
N063182-001AMS	4.048	PASS
N063181-003A	4.048	PASS
N063182-003A	N.A.	N.A.
N063182-003AMS	3.998	PASS
N063182-009A	N.A.	N.A.

Reviewed by:

dMRocha 3/5/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/20/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.056	
CCV-2	4.056	
CCV-3	4.065	
CCV-4	4.065	
CCV-5	4.065	
CCV-6	4.065	

Average	4.062	
Actual RT Window	3.982 -	4.142
Applied RT Window	3.862 -	4.262

N063182-009AMS	3.990	PASS
N063182-010A	N.A.	N.A.
N063182-010AMS	4.040	PASS
N063182-002A	N.A.	N.A.
N063182-002AMS	4.056	PASS
N063182-004A	N.A.	N.A.
N063182-004AMS	4.048	PASS
N063182-006A	N.A.	N.A.
N063182-006AMS	4.056	PASS
N063182-007A	N.A.	N.A.
N063182-007AMS	4.056	PASS
N063182-005A	N.A.	N.A.
N063182-005AMS	4.006	PASS
N063182-011A	N.A.	N.A.
N063182-011AMS	3.940	PASS
N063181-003AMS	4.048	PASS
N063182-012A	N.A.	N.A.
N063182-012AMS	4.056	PASS

Reviewed by:

dMRocha 3/5/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

Reviewed by:

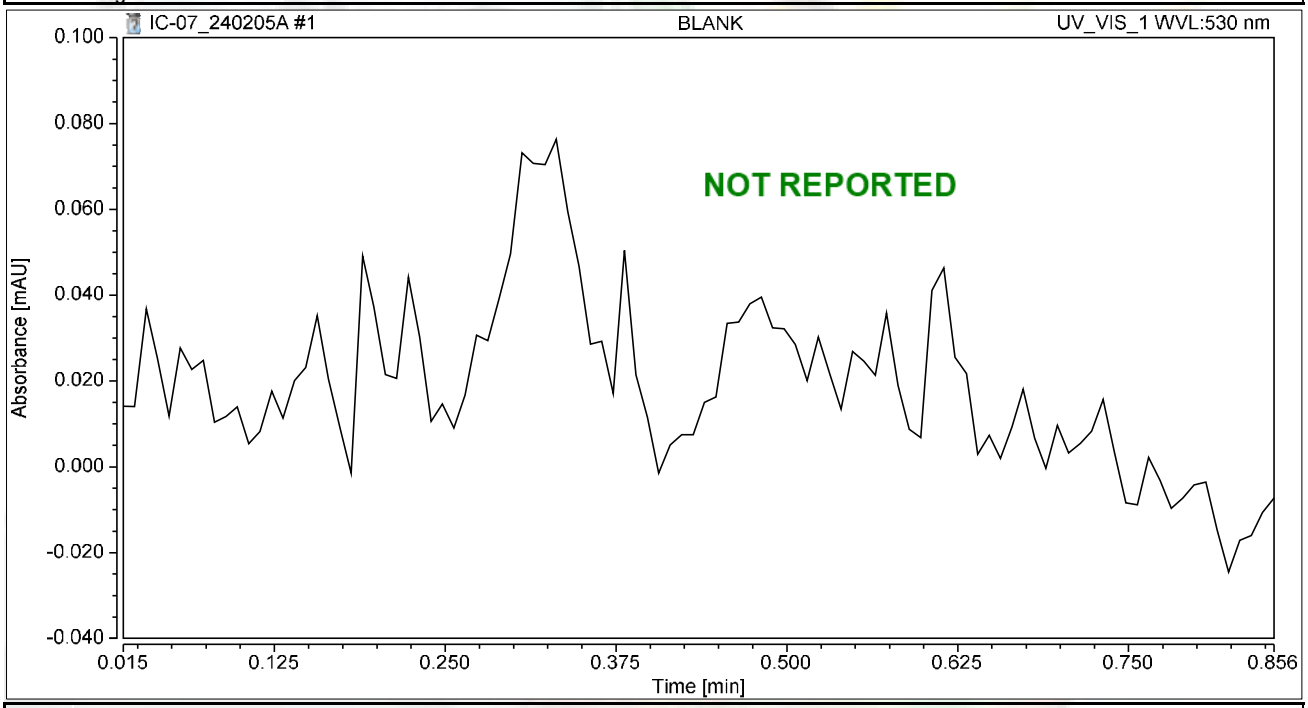
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**0.84**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 11:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

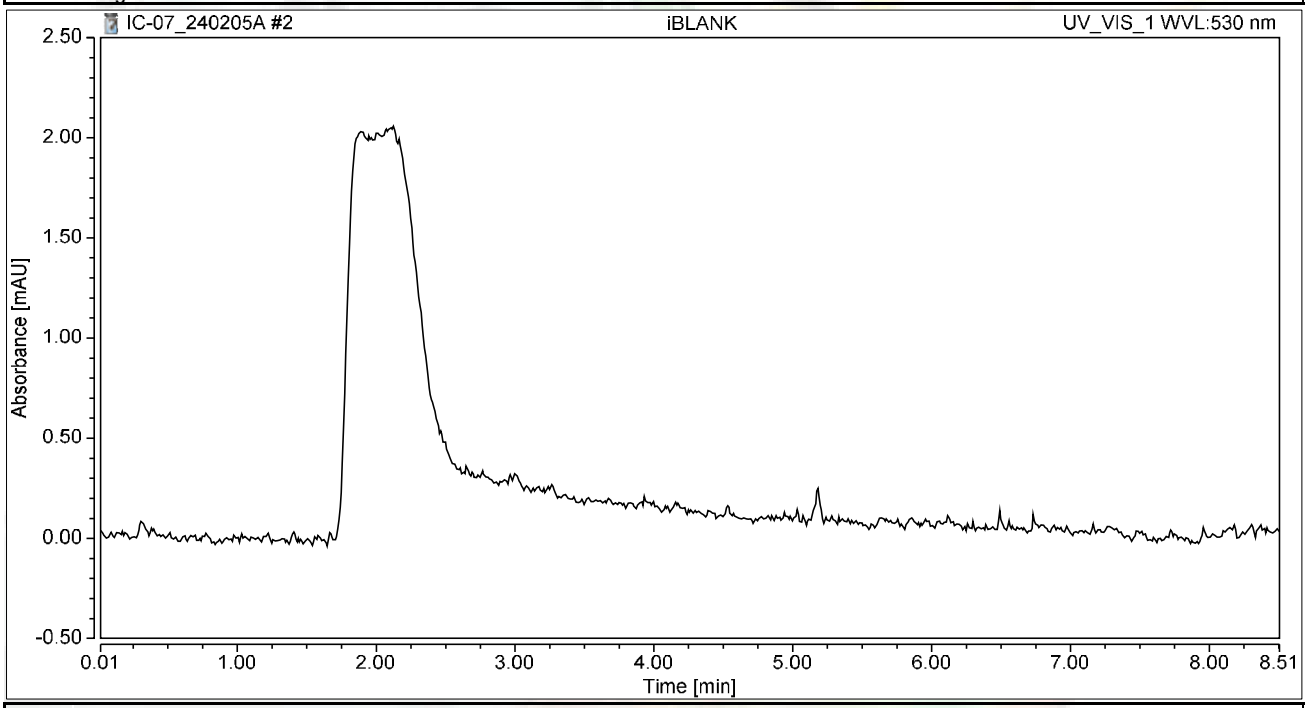
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Reviewed by:

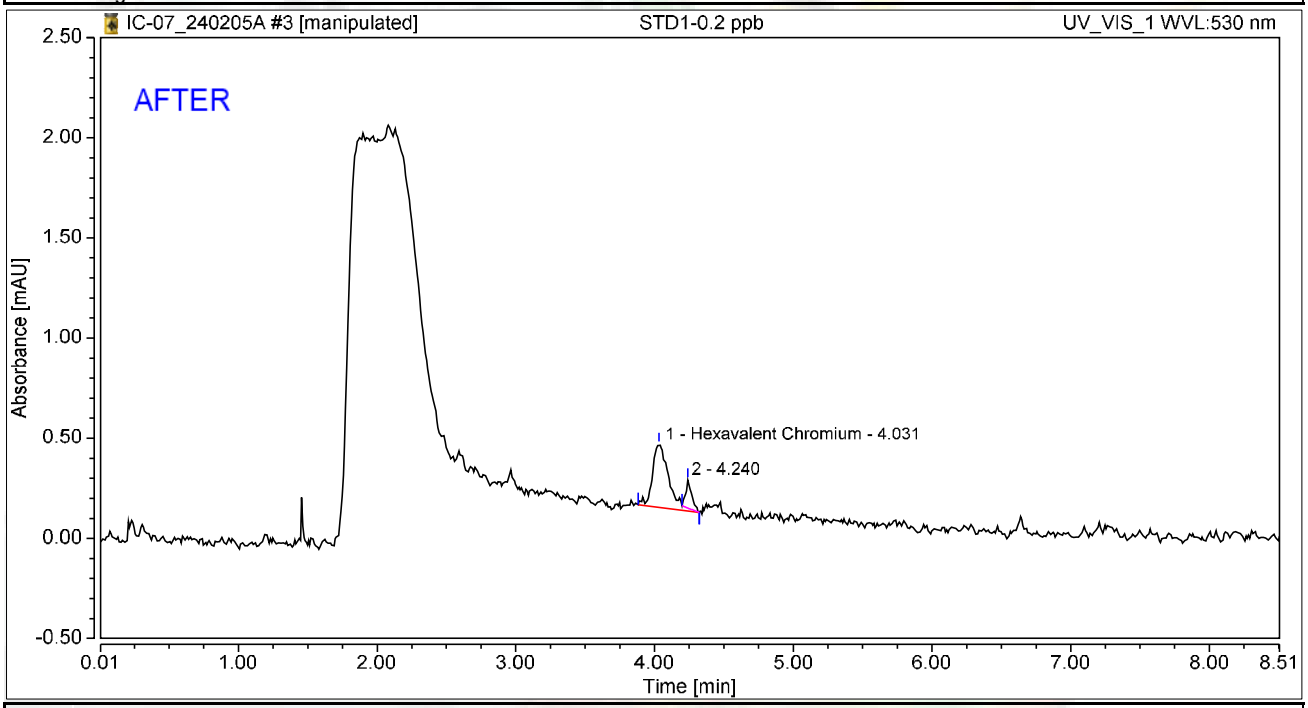
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.043	0.313	85.65	69.19	0.1985
2		4.240	0.007	0.139	14.35	30.81	n.a.
Total:			**0.050**	**0.452**	**100.00**	**100.00**	

Reviewed by:

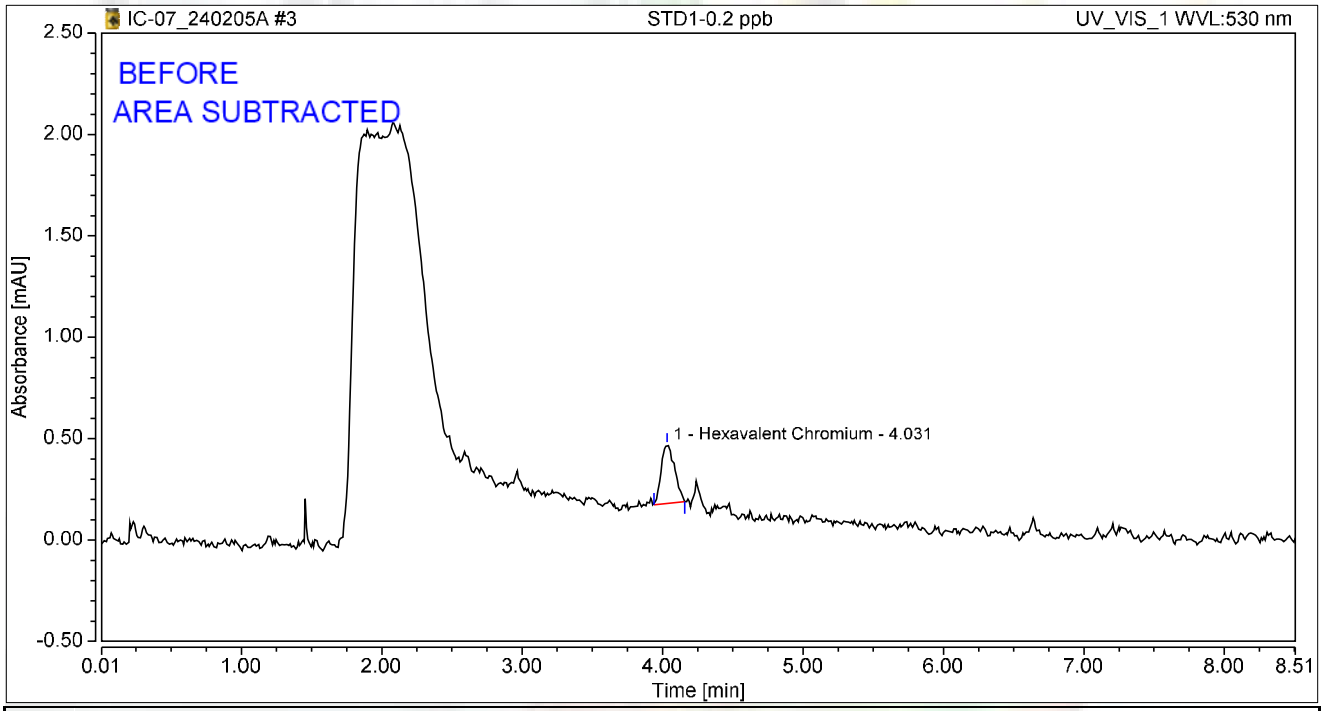
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

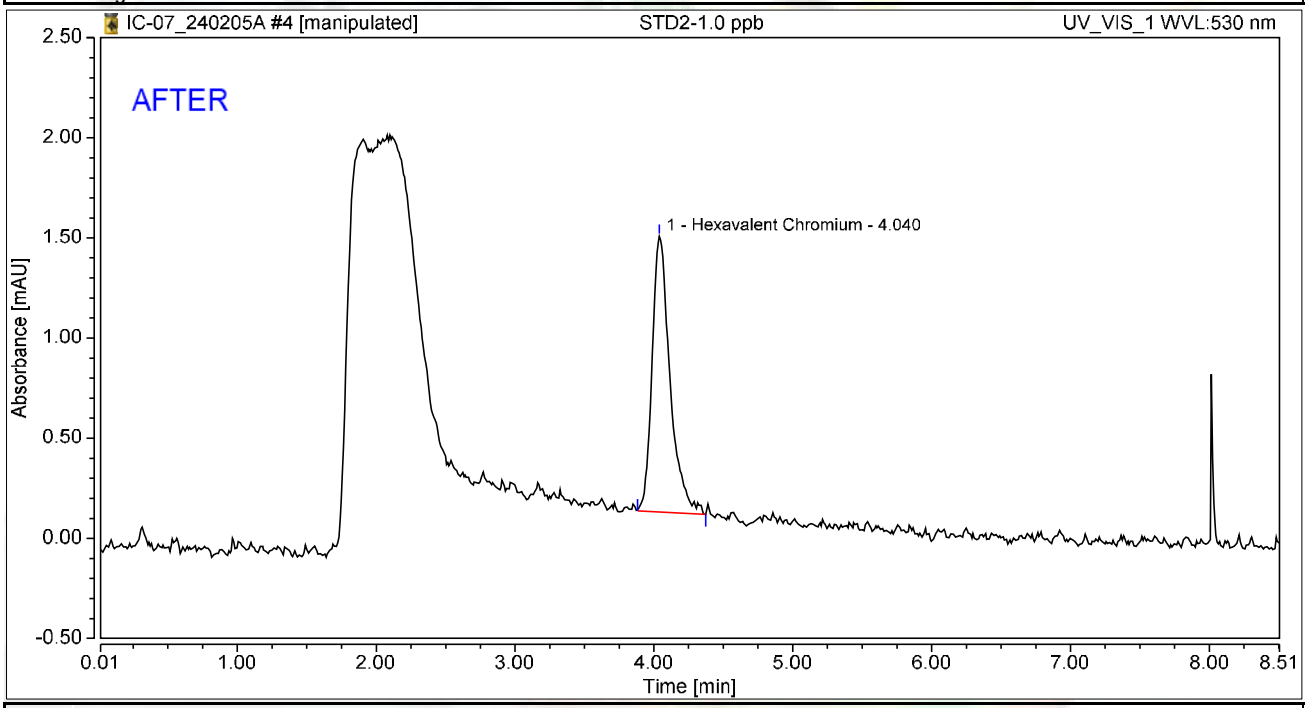
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.032	0.288	100.00	100.00	0.1502
Total:			**0.032**	**0.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.206	1.377	100.00	100.00	0.9592
Total:			**0.206**	**1.377**	**100.00**	**100.00**	

Reviewed by:

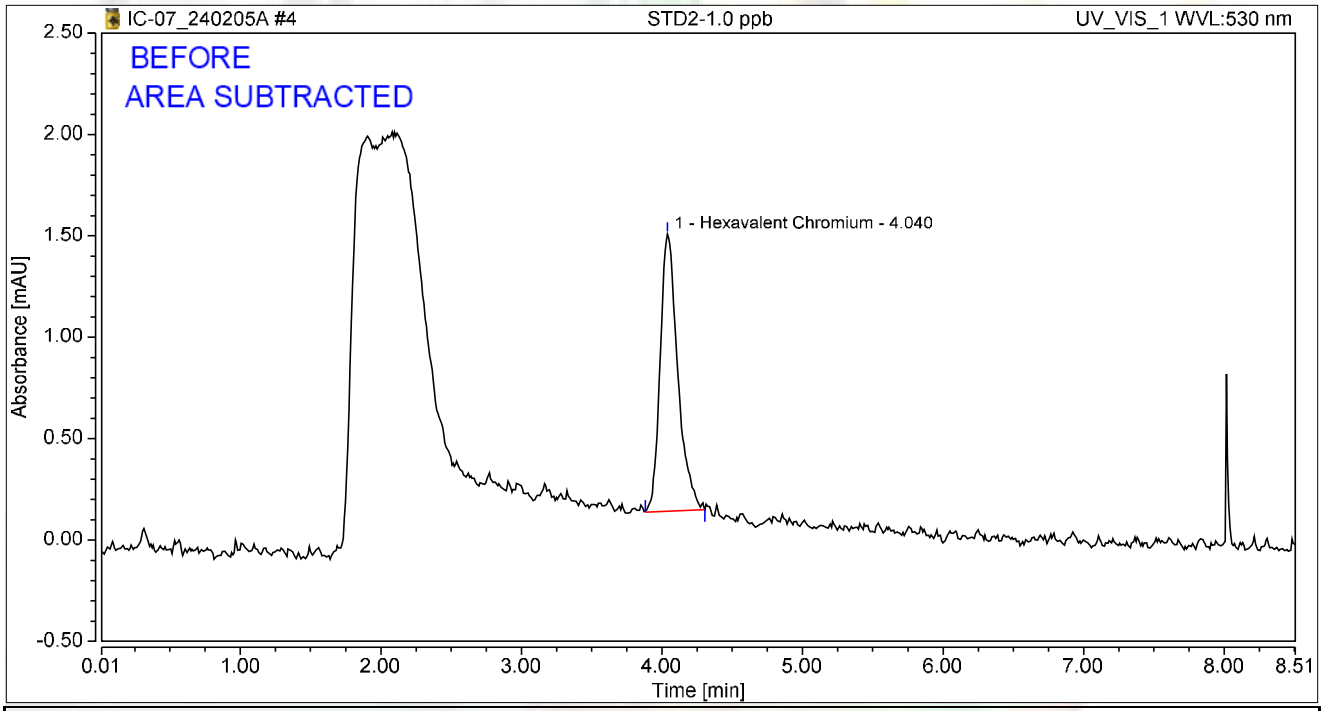
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

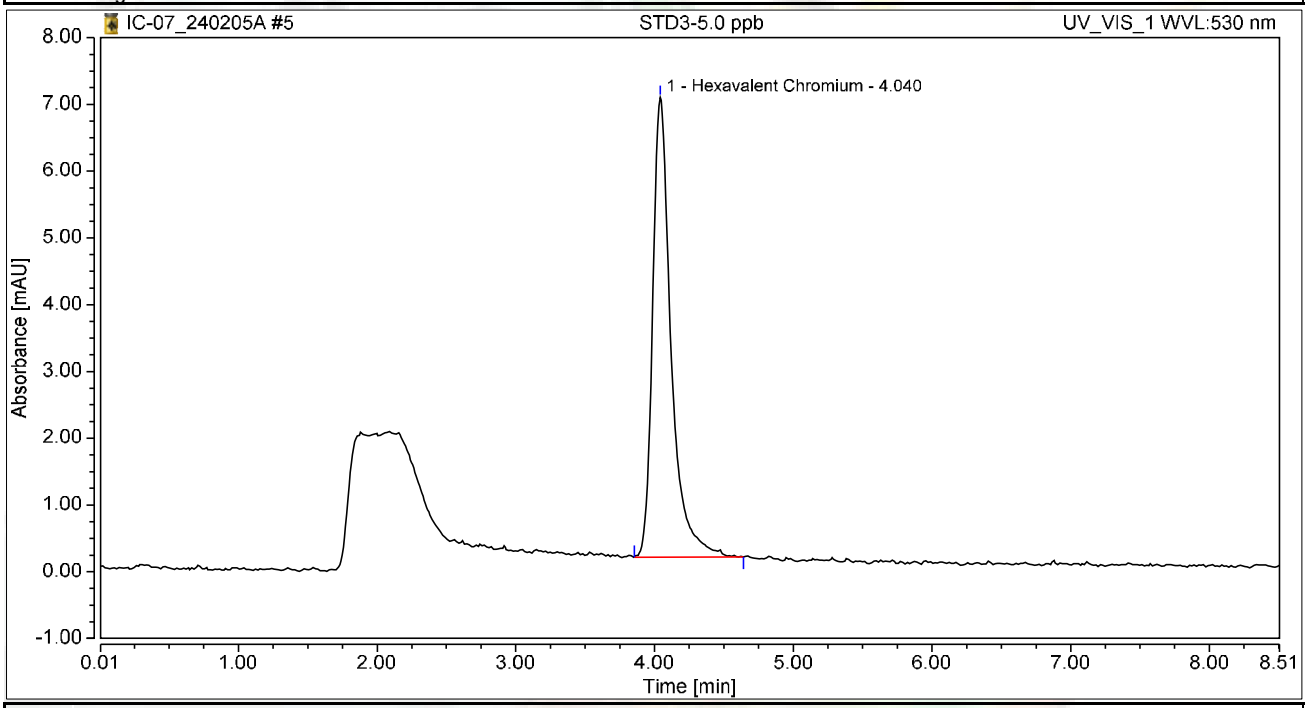
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.198	1.367	100.00	100.00	0.9223
Total:			**0.198**	**1.367**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

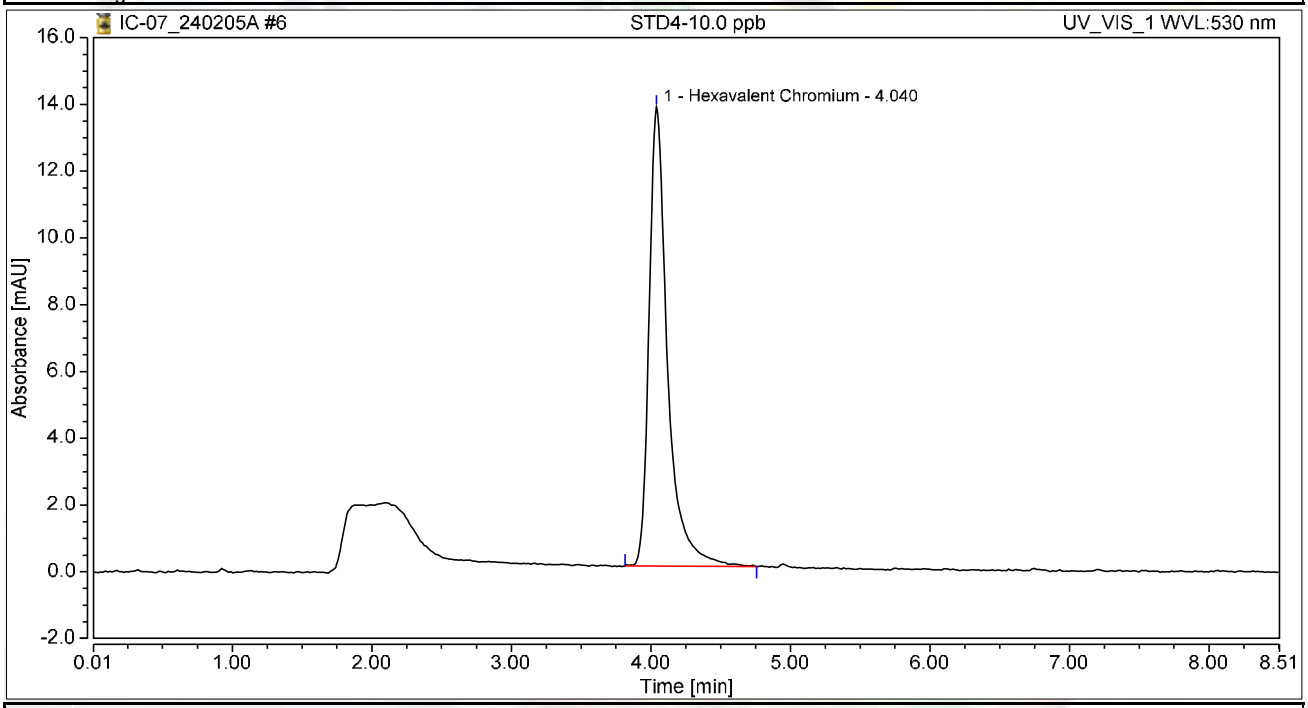
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.064	6.885	100.00	100.00	4.9461
Total:			**1.064**	**6.885**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

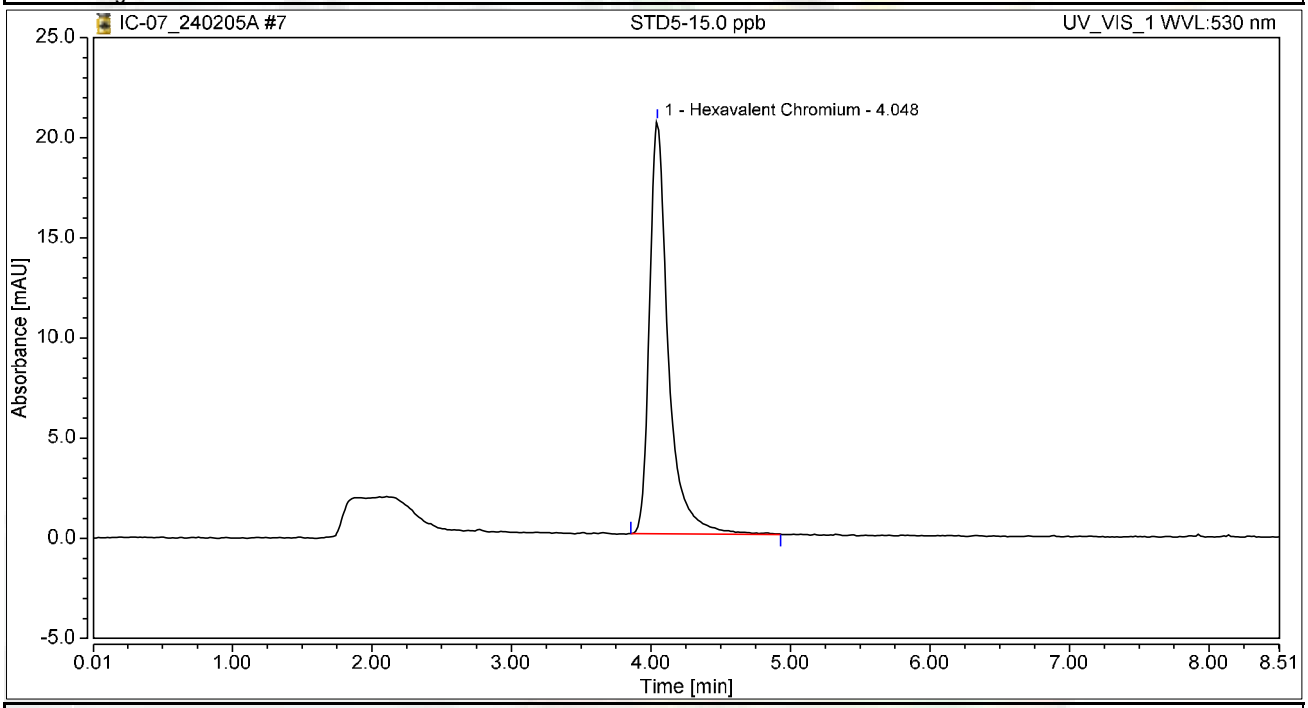
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.116	13.748	100.00	100.00	9.8357
Total:			**2.116**	**13.748**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

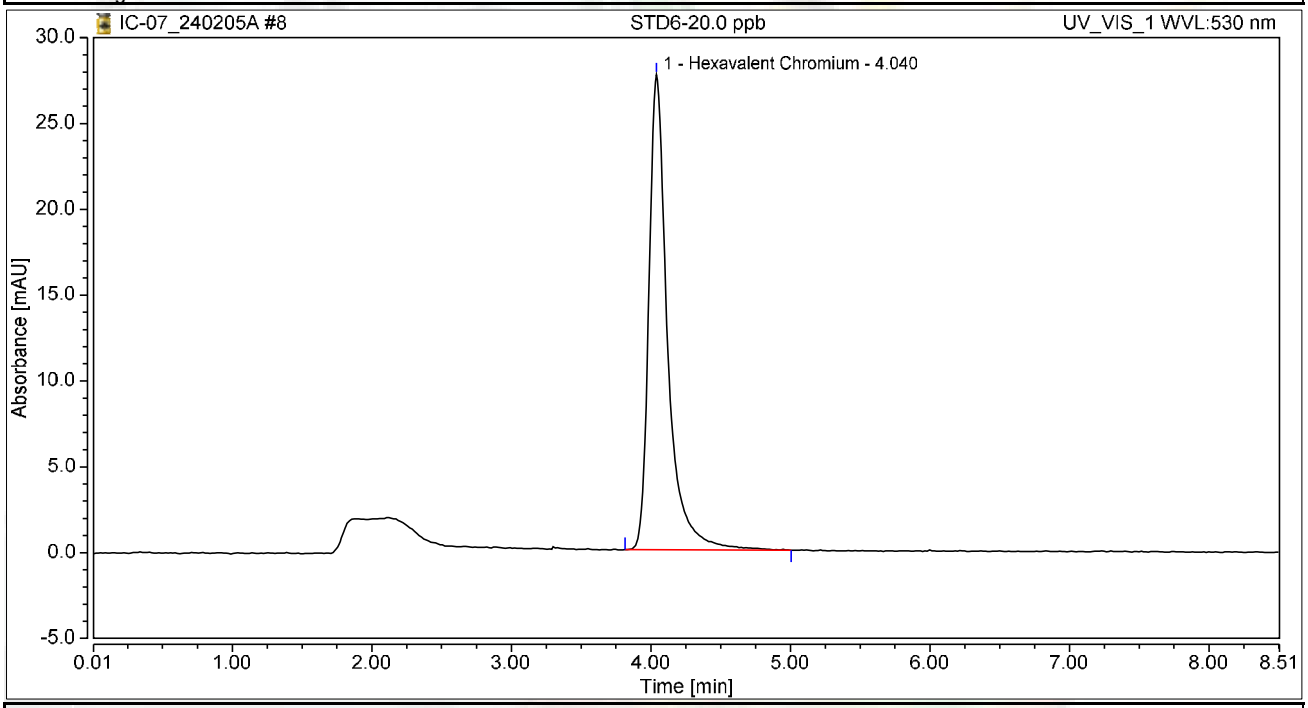
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	3.227	20.605	100.00	100.00	15.0023
Total:			**3.227**	**20.605**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:08**	*Sample Weight:*	**1.0000**

Chromatogram



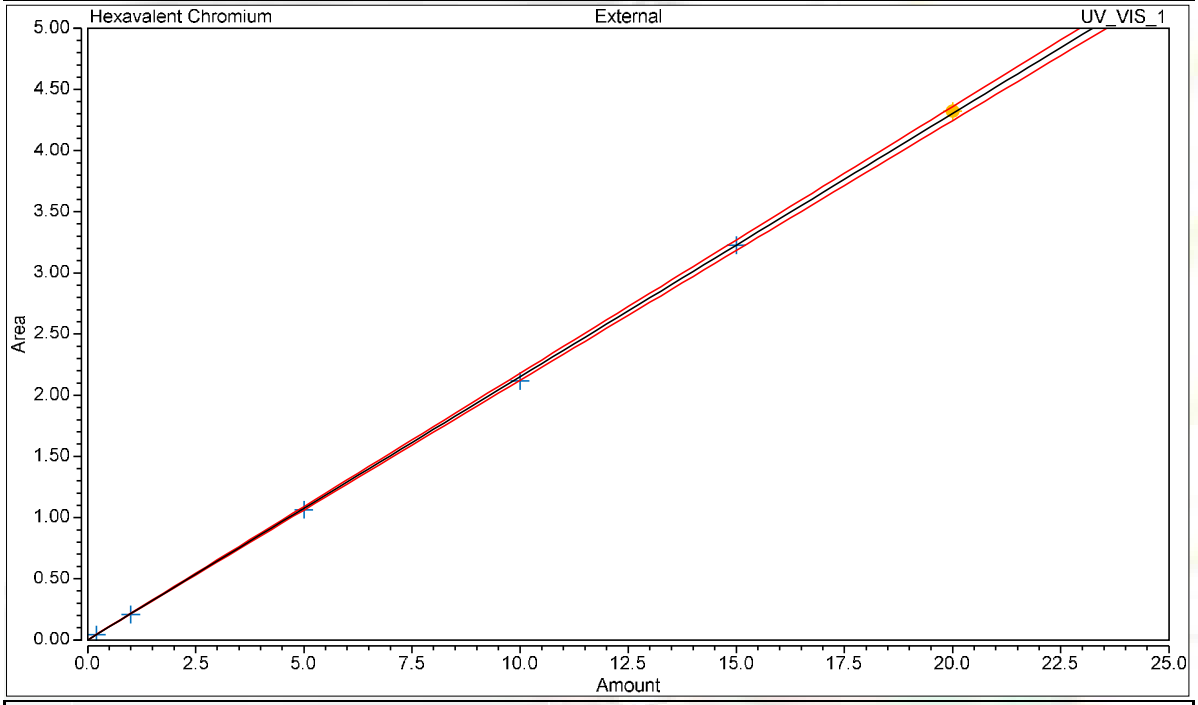
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	4.323	27.676	100.00	100.00	20.0959
Total:			**4.323**	**27.676**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2151
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99987

Calibration Plot Hexavalent Chromium



Calibration Results Hexavalent Chromium

No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0427	0.043	0.313
4	STD2-1.0 ppb	02	1.0000	0.2063	0.206	1.377
5	STD3-5.0 ppb	03	5.0000	1.0639	1.064	6.885
6	STD4-10.0 ppb	04	10.0000	2.1157	2.116	13.748
7	STD5-15.0 ppb	05	15.0000	3.2270	3.227	20.605
8	STD6-20.0 ppb	06	20.0000	4.3227	4.323	27.676

Reviewed by:

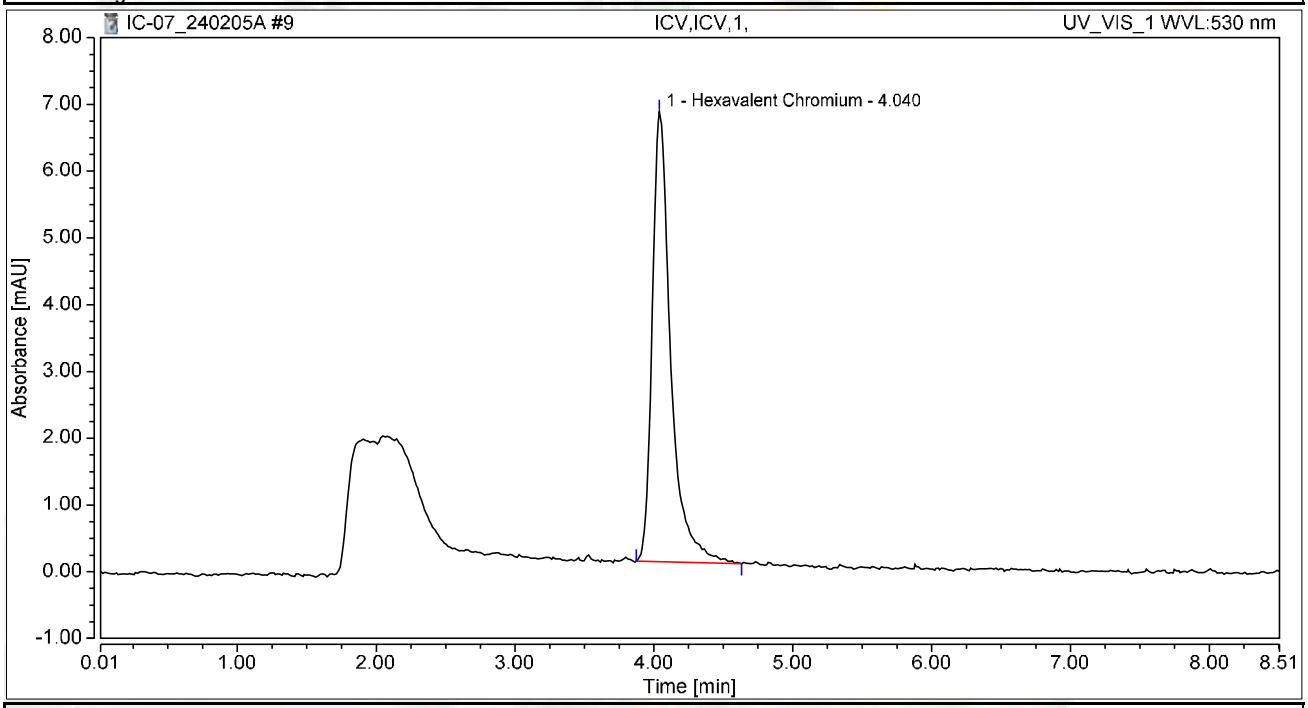
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

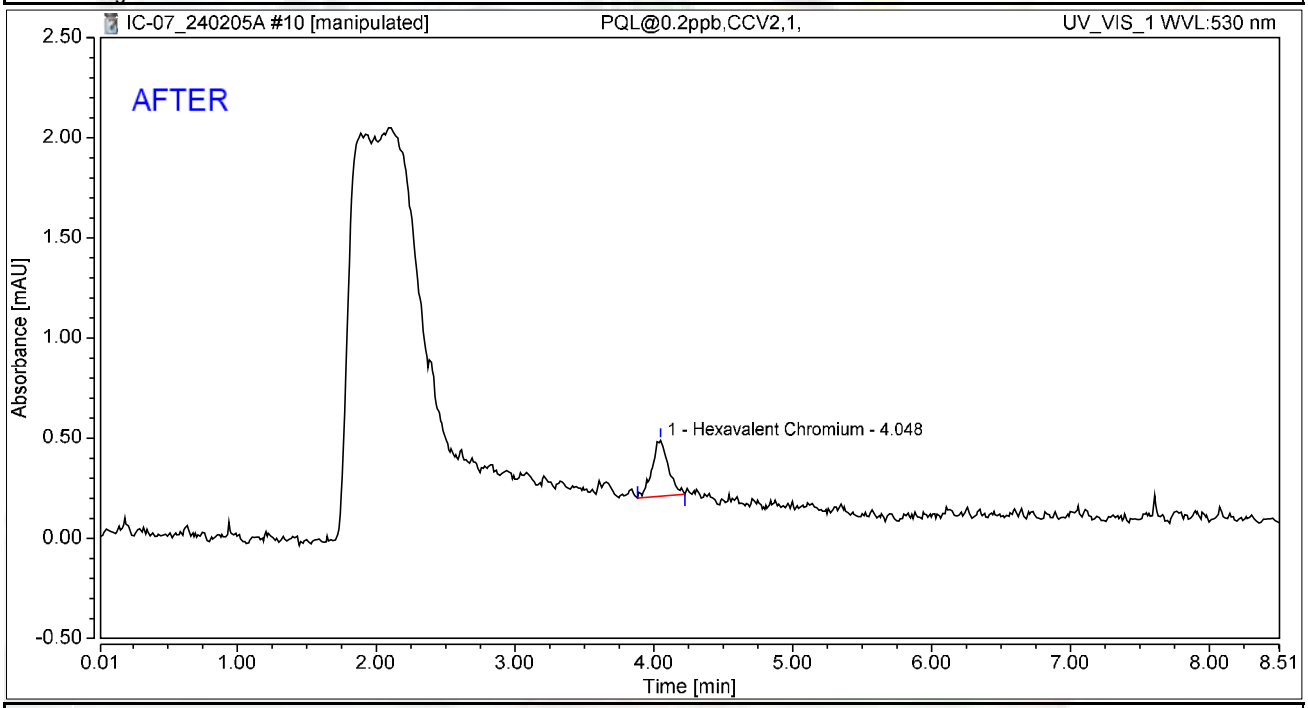
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.040	6.743	100.00	100.00	4.8342
Total:			**1.040**	**6.743**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.039	0.279	100.00	100.00	0.1802
Total:			**0.039**	**0.279**	**100.00**	**100.00**	

Reviewed by:

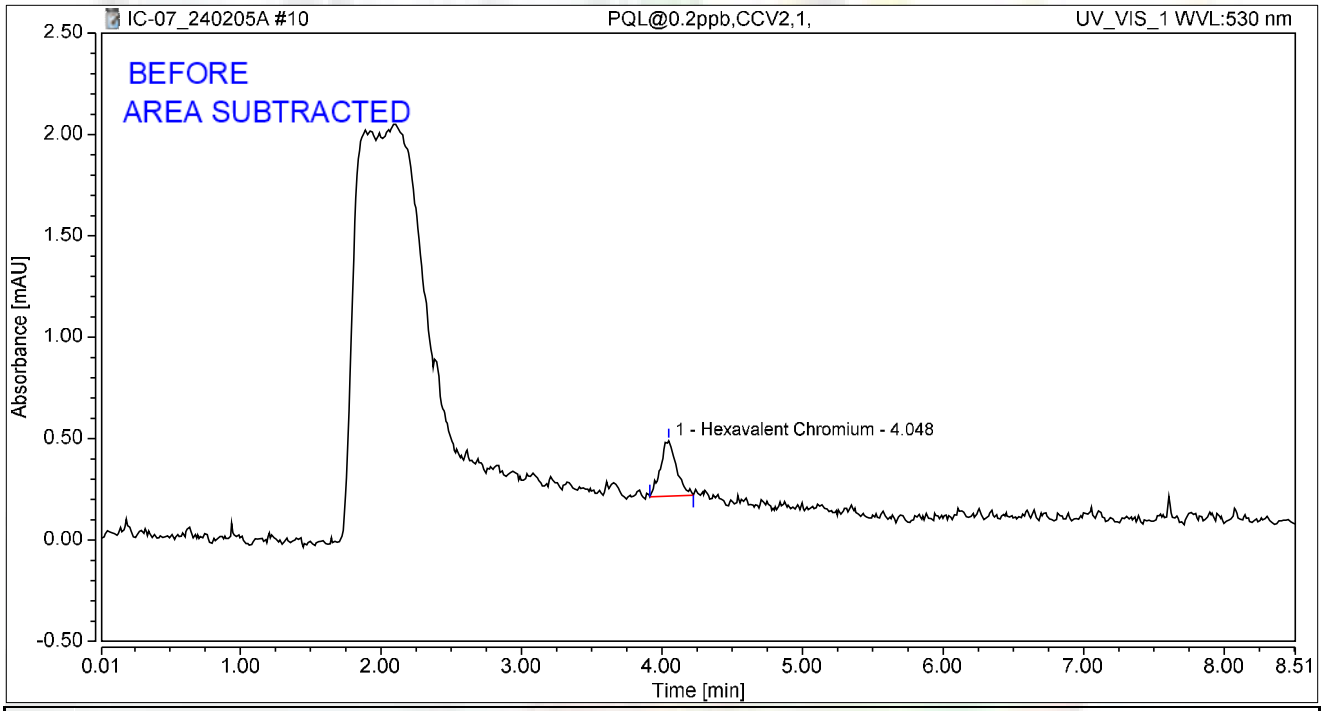
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

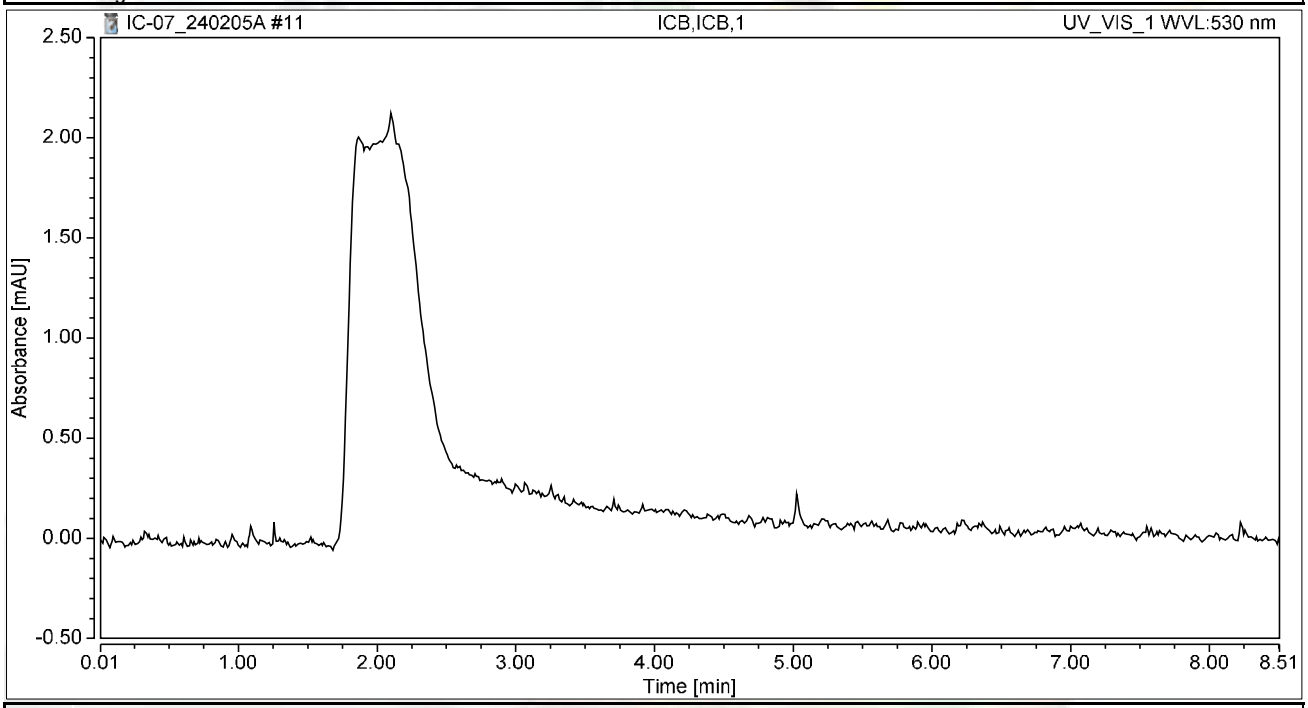
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.036	0.273	100.00	100.00	0.1694
Total:			**0.036**	**0.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

JRB 2/19/2024

RAW DATA

INJECTION LOG: 240220A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/20/24 9:36 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/20/24 9:50 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/20/24 9:59 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/20/24 10:09 AM	Reported
13	MB-R182732	MBLK	1	Hexavalent Chromium	02/20/24 10:18 AM	Reported
14	LCS-R182732	LCS	1	Hexavalent Chromium	02/20/24 10:28 AM	Reported
15	N063181-001A	SAMP	50	Hexavalent Chromium	02/20/24 11:31 AM	Reported
16	N063181-002A	SAMP	50	Hexavalent Chromium	02/20/24 11:42 AM	Reported
17	N063181-003A	SAMP	50	Hexavalent Chromium	02/20/24 11:51 AM	Not Reported
18	N063181-004A	SAMP	1	Hexavalent Chromium	02/20/24 12:01 PM	Reported
19	N063181-004AMS	MS	1	Hexavalent Chromium	02/20/24 12:10 PM	Reported
20	N063181-001AMS	MS	50	Hexavalent Chromium	02/20/24 12:19 PM	Reported
21	N063181-001AMSD	MSD	50	Hexavalent Chromium	02/20/24 12:29 PM	Reported
22	N063181-002ADUP	DUP	50	Hexavalent Chromium	02/20/24 12:38 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/20/24 12:48 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/20/24 12:57 PM	Reported
25	N063181-002AMS	MS	50	Hexavalent Chromium	02/20/24 1:17 PM	Reported
26	N063182-008A	SAMP	20	Hexavalent Chromium	02/20/24 1:28 PM	Reported
27	N063182-008AMS	MS	20	Hexavalent Chromium	02/20/24 1:38 PM	Reported
28	N063182-005A	SAMP	1	Hexavalent Chromium	02/20/24 1:47 PM	Not Reported
29	N063182-005AMS	MS	1	Hexavalent Chromium	02/20/24 1:56 PM	Not Reported
30	N063182-011A	SAMP	1	Hexavalent Chromium	02/20/24 2:06 PM	Not Reported
31	N063182-011AMS	MS	1	Hexavalent Chromium	02/20/24 2:15 PM	Not Reported
32	N063182-001A	SAMP	1	Hexavalent Chromium	02/20/24 2:25 PM	Reported
33	N063182-001AMS	MS	1	Hexavalent Chromium	02/20/24 2:34 PM	Reported
34	N063181-003A	SAMP	5	Hexavalent Chromium	02/20/24 2:44 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/20/24 2:53 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/20/24 3:03 PM	Reported
37	N063182-003A	SAMP	1	Hexavalent Chromium	02/20/24 3:12 PM	Reported
38	N063182-003AMS	MS	1	Hexavalent Chromium	02/20/24 3:22 PM	Reported
39	N063182-009A	SAMP	1	Hexavalent Chromium	02/20/24 3:31 PM	Reported
40	N063182-009AMS	MS	1	Hexavalent Chromium	02/20/24 3:41 PM	Reported
41	N063182-010A	SAMP	1	Hexavalent Chromium	02/20/24 3:50 PM	Reported
42	N063182-010AMS	MS	1	Hexavalent Chromium	02/20/24 3:59 PM	Reported

Reviewed by:

RB 2/28/2024

INJECTION LOG: 240220A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063182-002A	SAMP	1	Hexavalent Chromium	02/20/24 4:09 PM	Reported
44	N063182-002AMS	MS	1	Hexavalent Chromium	02/20/24 4:18 PM	Reported
45	N063182-004A	SAMP	1	Hexavalent Chromium	02/20/24 4:28 PM	Reported
46	N063182-004AMS	MS	1	Hexavalent Chromium	02/20/24 4:37 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/20/24 4:47 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/20/24 4:56 PM	Reported
49	N063182-006A	SAMP	1	Hexavalent Chromium	02/20/24 5:06 PM	Reported
50	N063182-006AMS	MS	1	Hexavalent Chromium	02/20/24 5:15 PM	Reported
51	N063182-007A	SAMP	1	Hexavalent Chromium	02/20/24 5:25 PM	Reported
52	N063182-007AMS	MS	1	Hexavalent Chromium	02/20/24 5:34 PM	Reported
53	N063182-005A	SAMP	5	Hexavalent Chromium	02/20/24 5:43 PM	Reported
54	N063182-005AMS	MS	5	Hexavalent Chromium	02/20/24 5:53 PM	Reported
55	N063182-011A	SAMP	5	Hexavalent Chromium	02/20/24 6:02 PM	Reported
56	N063182-011AMS	MS	5	Hexavalent Chromium	02/20/24 6:12 PM	Reported
57	N063181-003AMS	MS	5	Hexavalent Chromium	02/20/24 6:21 PM	Reported
58	CCV-5	CCV	1	Hexavalent Chromium	02/20/24 6:31 PM	Reported
59	CCB-5	CCB	1	Hexavalent Chromium	02/20/24 6:40 PM	Reported
60	N063182-012A	SAMP	1	Hexavalent Chromium	02/20/24 6:50 PM	Reported
61	N063182-012AMS	MS	1	Hexavalent Chromium	02/20/24 6:59 PM	Reported
62	CCV-6	CCV1	1	Hexavalent Chromium	02/20/24 7:09 PM	Reported
63	CCB-6	CCB	1	Hexavalent Chromium	02/20/24 7:18 PM	Reported
64	BLANK	BLANK	1	Hexavalent Chromium	02/20/24 7:27 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240220A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**20/Feb/24 19:58:17**
No. of Injections:	**67**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/20/2024 09:36	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/20/2024 09:50	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/20/2024 09:59	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/20/2024 10:09	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/20/2024 10:18	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/20/2024 10:28	Finished	LCS @5ppb, IWST-231228B
15	N063181-001A,SAMF	1	1000	Unknown		02/20/2024 11:31	Finished	SAMP,0.2>10 mL
16	N063181-002A,SAMF	2	1000	Unknown		02/20/2024 11:42	Finished	SAMP,0.2>10 mL
17	N063181-003A,SAMF	3	1000	Unknown		02/20/2024 11:51	Finished	SAMP,0.2>10 mL
18	N063181-004A,SAMF	4	1000	Unknown		02/20/2024 12:01	Finished	SAMP,10 mL
19	N063181-004AMS,MS	5	1000	Unknown		02/20/2024 12:10	Finished	MS (1ppb), IWST-231228B,10r
20	N063181-001AMS,MS	6	1000	Unknown		02/20/2024 12:19	Finished	MS (5ppb), IWST-231228B,0.2
21	N063181-001AMSD,M	7	1000	Unknown		02/20/2024 12:29	Finished	MSD (5ppb), IWST-231228B,0
22	N063181-002ADUP,D	8	1000	Unknown		02/20/2024 12:38	Finished	DUP,0.2>10 mL
23	CCV-2,CCV1,1,	9	1000	Unknown		02/20/2024 12:48	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		02/20/2024 12:57	Finished	CCB R240129C
25	N063181-002AMS,MS	1	1000	Unknown		02/20/2024 13:17	Finished	MS (5ppb), IWST-231228B,0.2
26	N063182-008A,SAMF	2	1000	Unknown		02/20/2024 13:28	Finished	SAMP,0.5>10 mL
27	N063182-008AMS,MS	3	1000	Unknown		02/20/2024 13:38	Finished	MS (5ppb), IWST-231228B,0.5
28	N063182-005A,SAMF	4	1000	Unknown		02/20/2024 13:47	Finished	SAMP,10 mL
29	N063182-005AMS,MS	5	1000	Unknown		02/20/2024 13:56	Finished	MS (1ppb), IWST-231228B,10r
30	N063182-011A,SAMF	6	1000	Unknown		02/20/2024 14:06	Finished	SAMP,10 mL
31	N063182-011AMS,MS	7	1000	Unknown		02/20/2024 14:15	Finished	MS (1ppb), IWST-231228B,10r
32	N063182-001A,SAMF	8	1000	Unknown		02/20/2024 14:25	Finished	SAMP,10 mL
33	N063182-001AMS,MS	9	1000	Unknown		02/20/2024 14:34	Finished	MS (1ppb), IWST-231228B,10r
34	N063181-003A,SAMF	10	1000	Unknown		02/20/2024 14:44	Finished	SAMP,2>10 mL
35	CCV-3,CCV,1,	11	1000	Unknown		02/20/2024 14:53	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	12	1000	Unknown		02/20/2024 15:03	Finished	CCB R240129C
37	N063182-003A,SAMF	13	1000	Unknown		02/20/2024 15:12	Finished	SAMP,10 mL
38	N063182-003AMS,MS	14	1000	Unknown		02/20/2024 15:22	Finished	MS (1ppb), IWST-231228B,10r
39	N063182-009A,SAMF	15	1000	Unknown		02/20/2024 15:31	Finished	SAMP,10 mL
40	N063182-009AMS,MS	16	1000	Unknown		02/20/2024 15:41	Finished	MS (1ppb), IWST-231228B,10r
41	N063182-010A,SAMF	17	1000	Unknown		02/20/2024 15:50	Finished	SAMP,10 mL
42	N063182-010AMS,MS	18	1000	Unknown		02/20/2024 15:59	Finished	MS (1ppb), IWST-231228B,10r
43	N063182-002A,SAMF	19	1000	Unknown		02/20/2024 16:09	Finished	SAMP,10 mL
44	N063182-002AMS,MS	20	1000	Unknown		02/20/2024 16:18	Finished	MS (1ppb), IWST-231228B,10r
45	N063182-004A,SAMF	21	1000	Unknown		02/20/2024 16:28	Finished	SAMP,10 mL
46	N063182-004AMS,MS	22	1000	Unknown		02/20/2024 16:37	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	23	1000	Unknown		02/20/2024 16:47	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	24	1000	Unknown		02/20/2024 16:56	Finished	CCB R240129C
49	N063182-006A,SAMF	25	1000	Unknown		02/20/2024 17:06	Finished	SAMP,10 mL
50	N063182-006AMS,MS	26	1000	Unknown		02/20/2024 17:15	Finished	MS (1ppb), IWST-231228B,10r
51	N063182-007A,SAMF	27	1000	Unknown		02/20/2024 17:25	Finished	SAMP,10 mL
52	N063182-007AMS,MS	28	1000	Unknown		02/20/2024 17:34	Finished	MS (1ppb), IWST-231228B,10r
53	N063182-005A,SAMF	29	1000	Unknown		02/20/2024 17:43	Finished	SAMP,2>10 mL
54	N063182-005AMS,MS	30	1000	Unknown		02/20/2024 17:53	Finished	MS (1ppb), IWST-231228B,2>1
55	N063182-011A,SAMF	31	1000	Unknown		02/20/2024 18:02	Finished	SAMP,2>10 mL
56	N063182-011AMS,MS	32	1000	Unknown		02/20/2024 18:12	Finished	MS (1ppb), IWST-231228B,2>1
57	N063181-003AMS,MS	33	1000	Unknown		02/20/2024 18:21	Finished	MS (5ppb), IWST-231228B,2>1
58	CCV-5,CCV,1,	34	1000	Unknown		02/20/2024 18:31	Finished	CCV @5ppb, IWST-231228A
59	CCB-5,CCB,1,	35	1000	Unknown		02/20/2024 18:40	Finished	CCB R240129C
60	N063182-012A,SAMF	36	1000	Unknown		02/20/2024 18:50	Finished	SAMP,10 mL

61	N063182-012AMS,MS	37	1000	Unknown		02/20/2024 18:59	Finished	MS (1ppb), IWST-231228B,10r
62	CCV-6,CCV1,1,	38	1000	Unknown		02/20/2024 19:09	Finished	CCV @10ppb, IWST-231228A
63	CCB-6,CCB,1,	39	1000	Unknown		02/20/2024 19:18	Finished	CCB R240129C
64	BLANK	40	1000	Unknown		02/20/2024 19:27	Finished	BLANK
65	SHUTDOWN R240221A	41	1000	Unknown		02/20/2024 19:37	Finished	
66	Eluent: ~~R240220A~~	42	1000	Unknown		n.a.	Finished	
67	PCR: ~~R240220B~~ R240221B	43	1000	Unknown		n.a.	Finished	

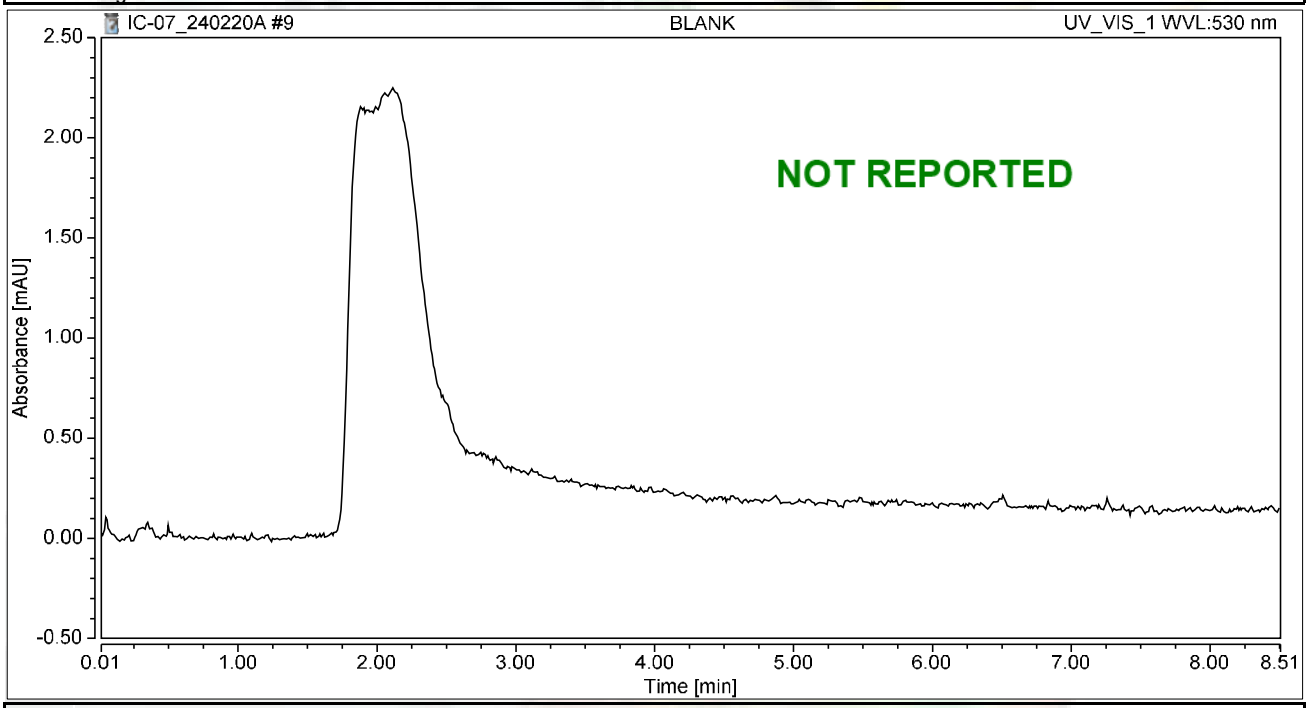
dlRocha 3/3/2024
for RBA

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 09:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

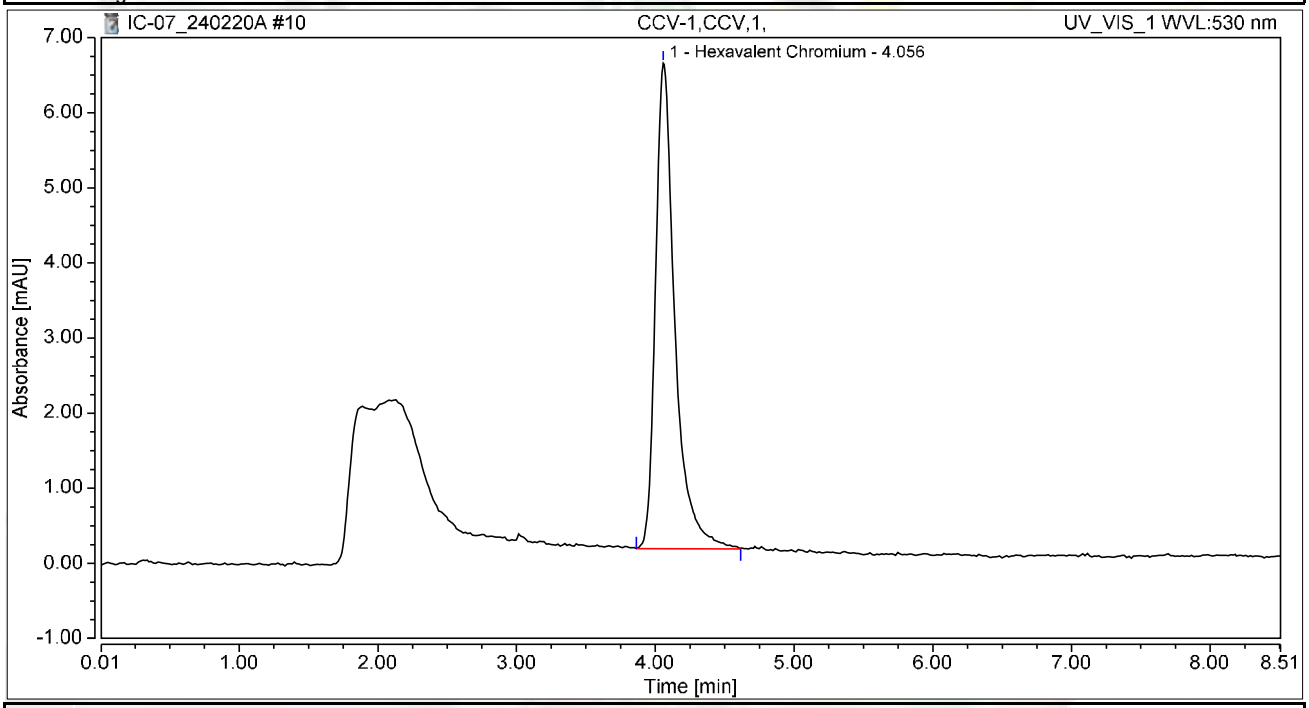
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 09:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.051	6.465	100.00	100.00	4.8869
Total:			**1.051**	**6.465**	**100.00**	**100.00**	

Reviewed by:

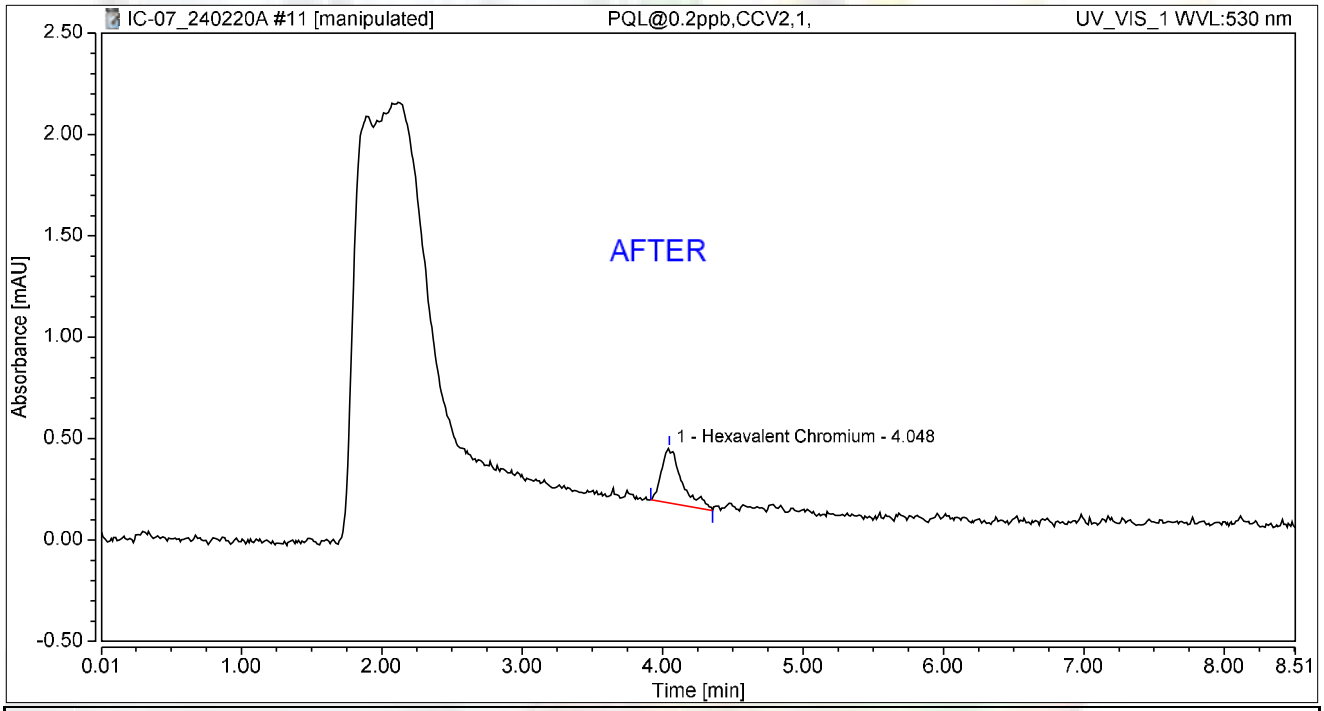
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 09:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.046	0.272	100.00	100.00	0.2147
Total:			**0.046**	**0.272**	**100.00**	**100.00**	

Reviewed by:

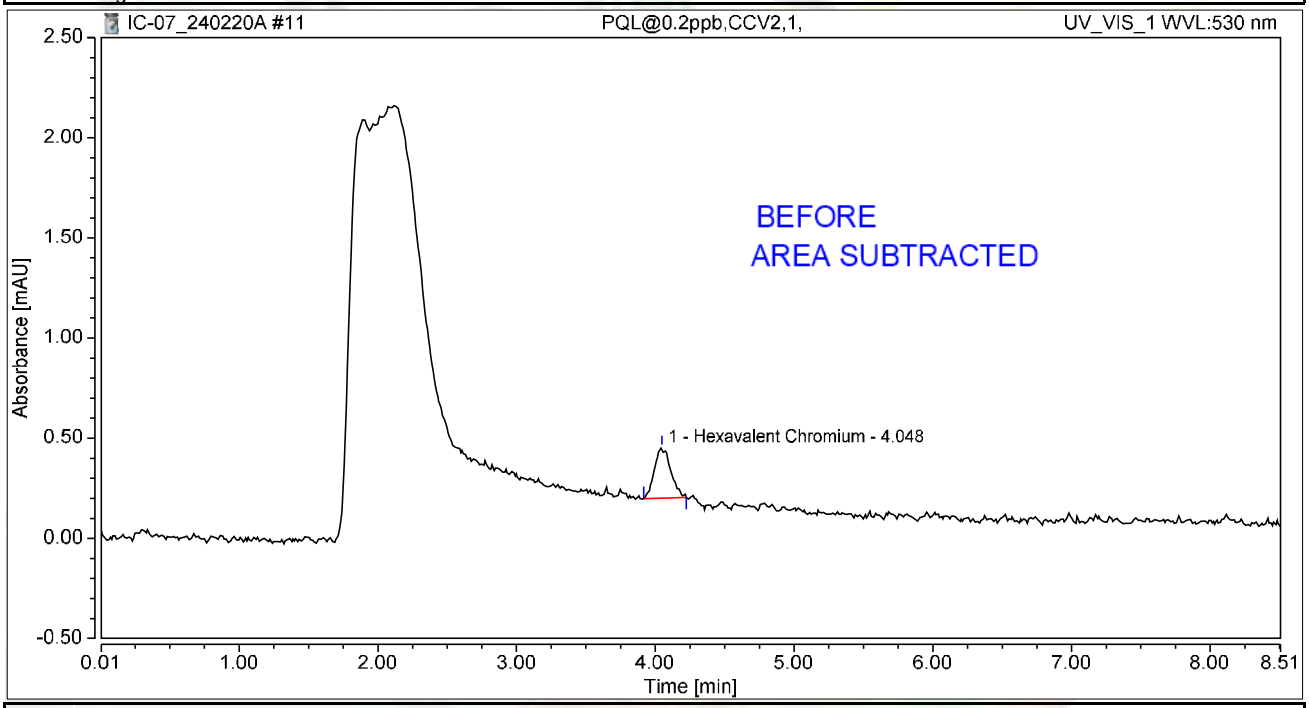
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 09:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

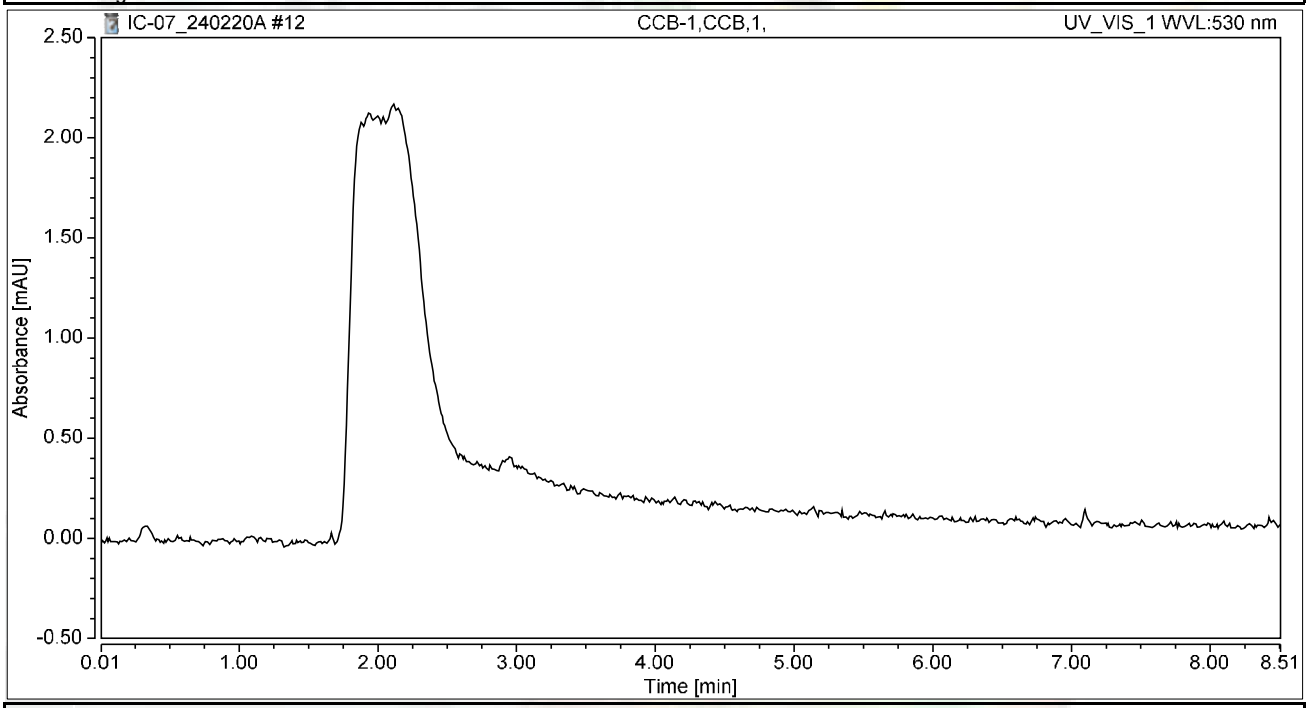
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.034	0.253	100.00	100.00	0.1603
Total:			**0.034**	**0.253**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 10:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

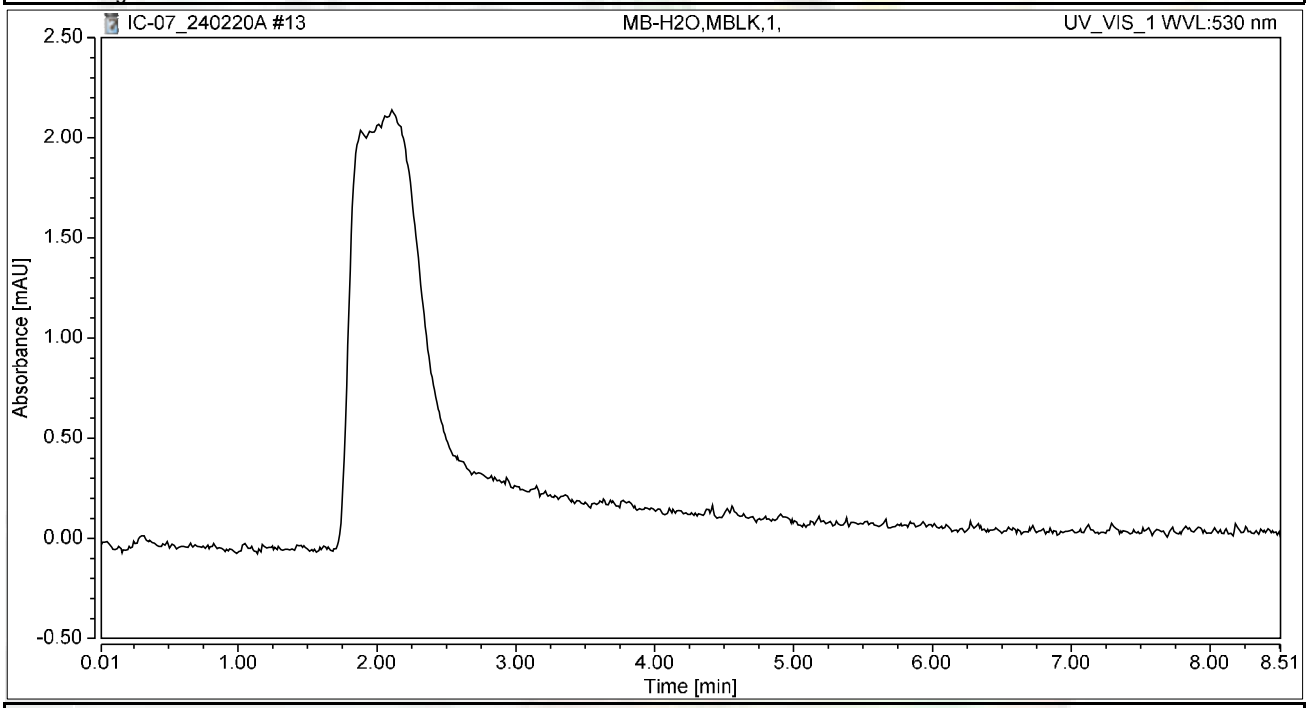
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 10:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

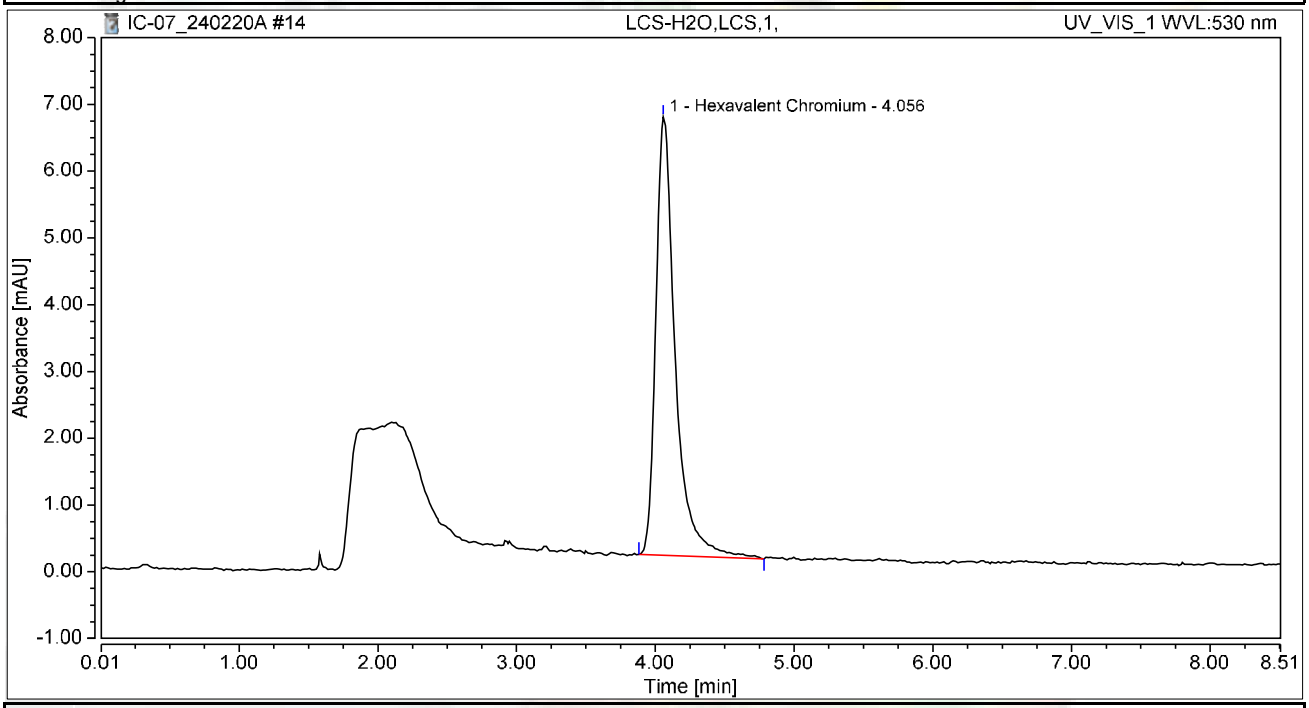
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 10:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

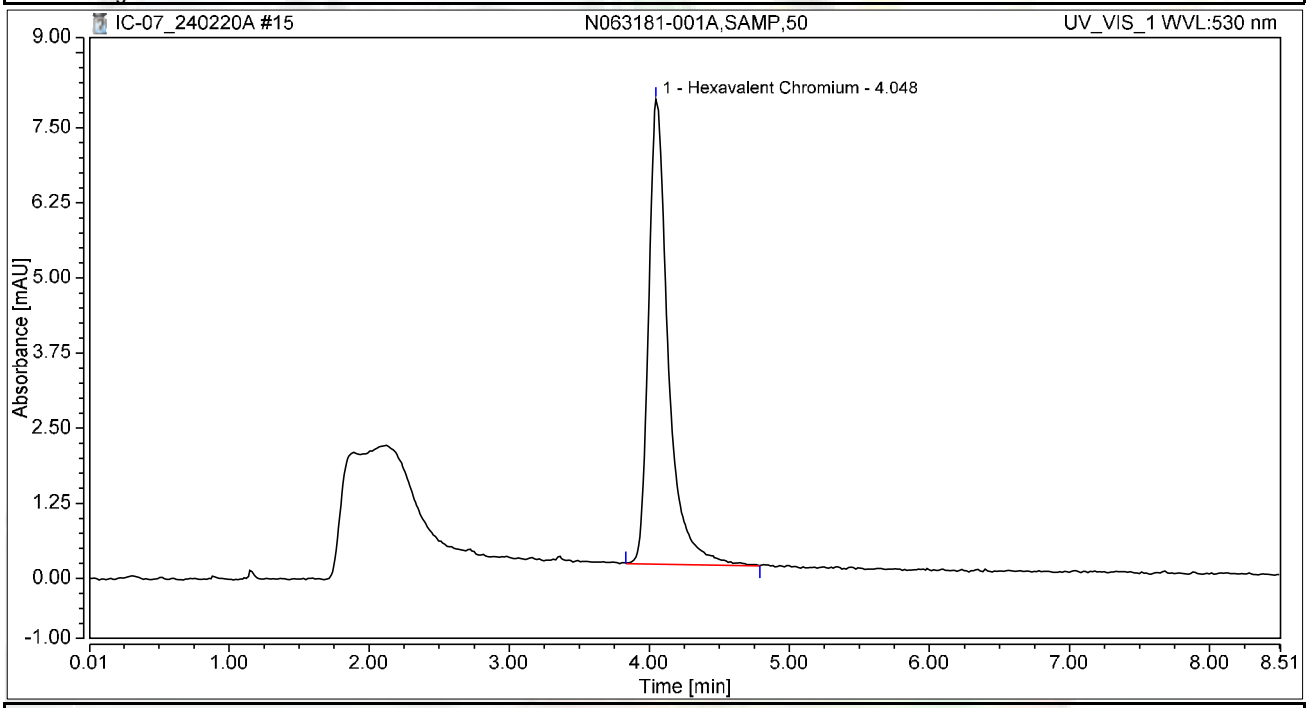
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.065	6.564	100.00	100.00	4.9504
Total:			**1.065**	**6.564**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-001A,SAMP,50**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 11:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

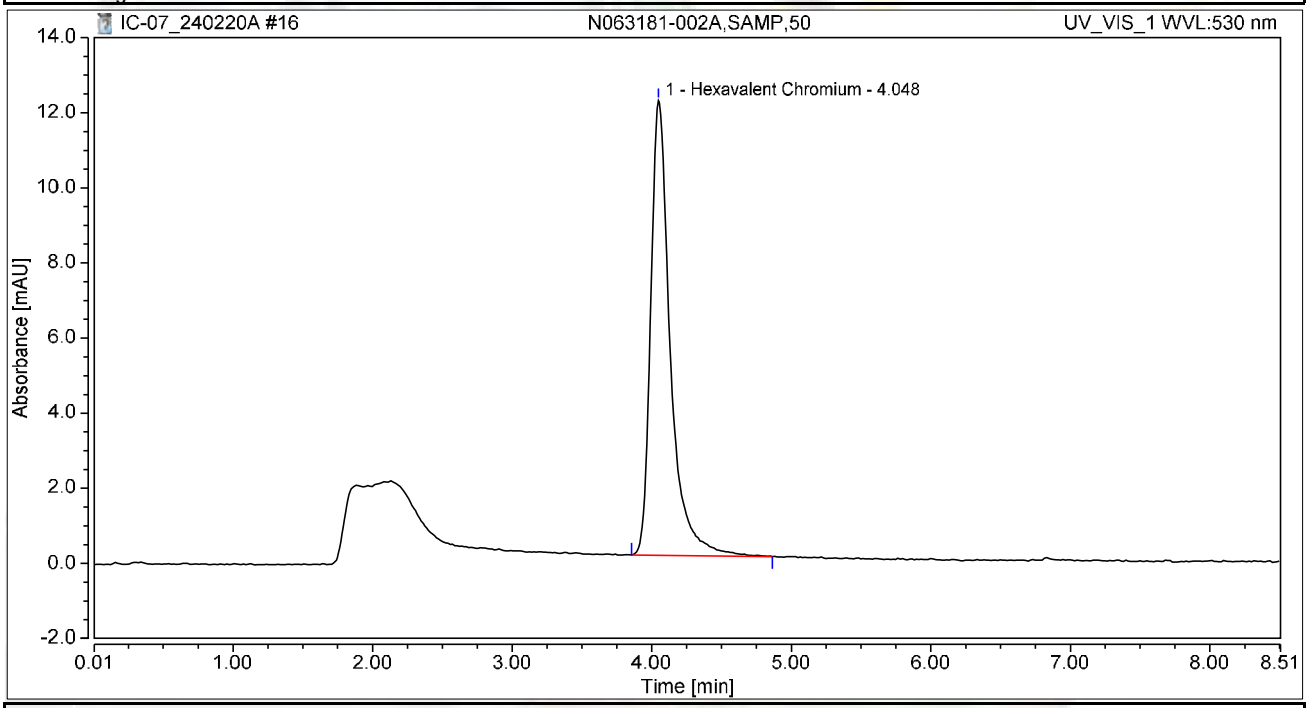
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.264	7.736	100.00	100.00	5.8773
Total:			**1.264**	**7.736**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-002A,SAMP,50**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 11:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

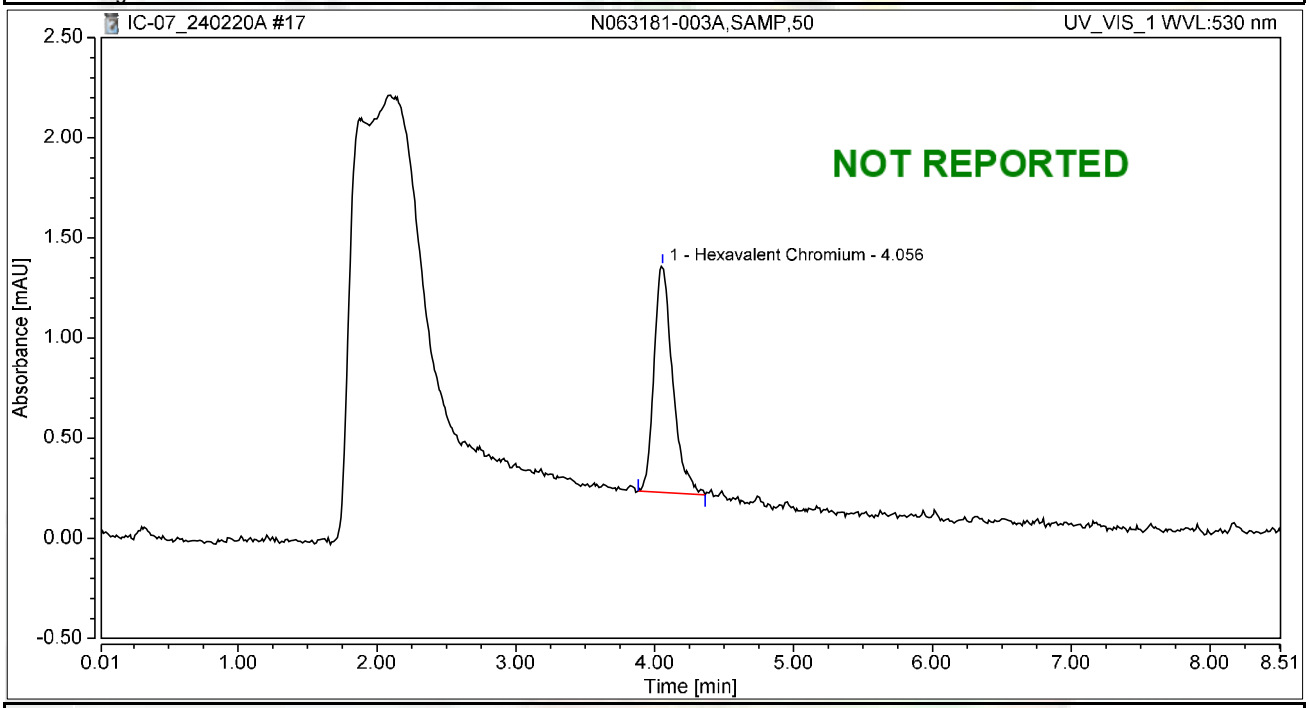
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.973	12.115	100.00	100.00	9.1719
Total:			**1.973**	**12.115**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-003A,SAMP,50**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 11:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

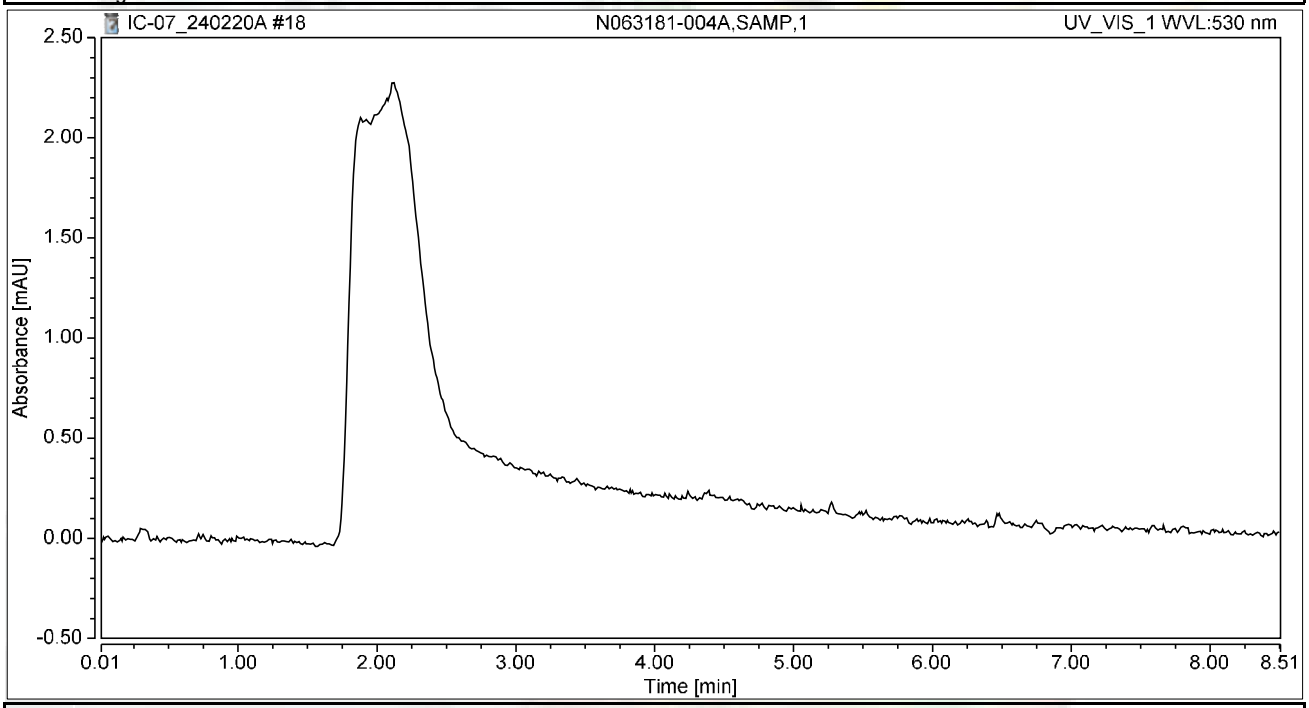
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.176	1.129	100.00	100.00	0.8184
Total:			**0.176**	**1.129**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-004A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 12:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

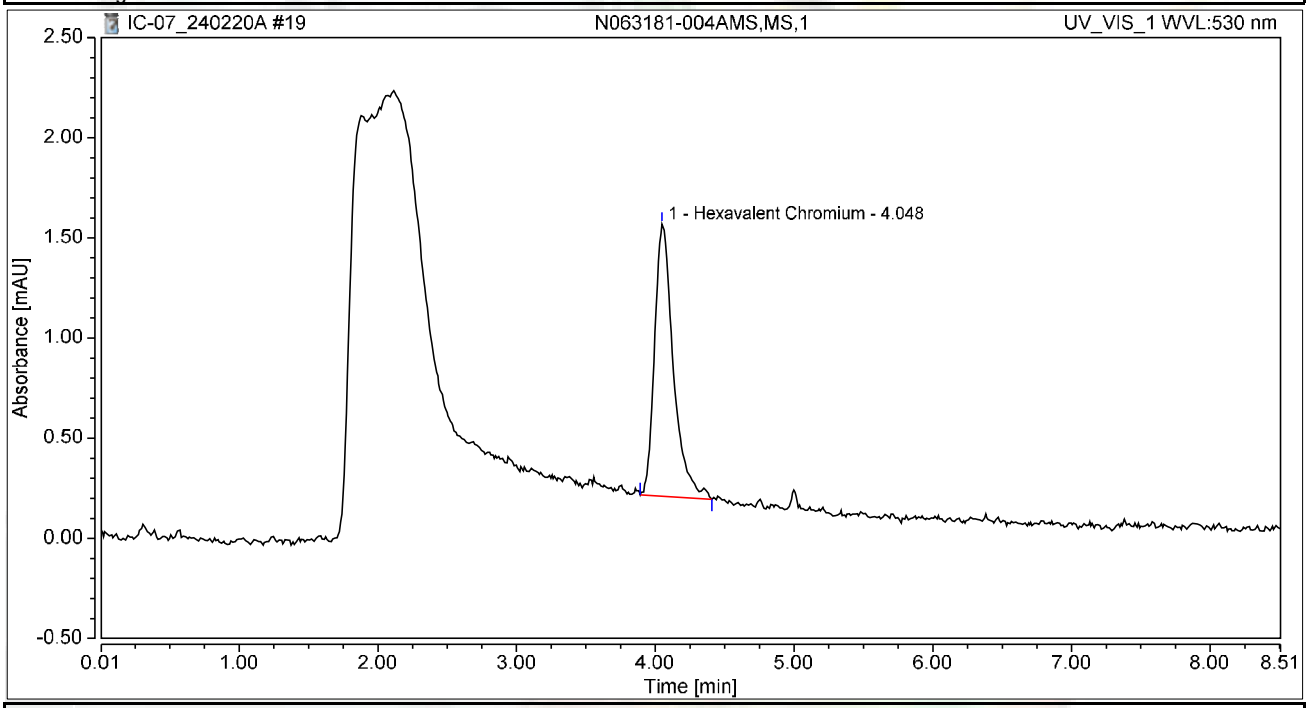
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 12:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

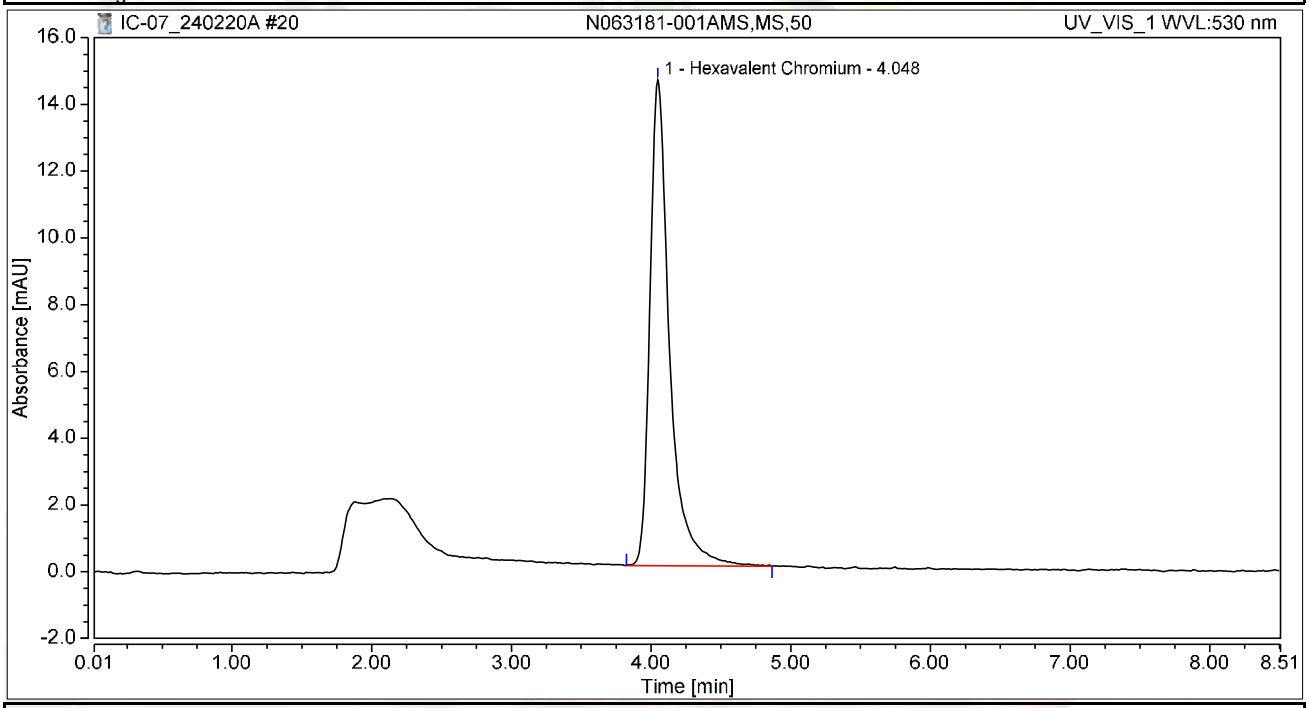
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.213	1.358	100.00	100.00	0.9916
Total:			**0.213**	**1.358**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-001AMS,MS,50**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

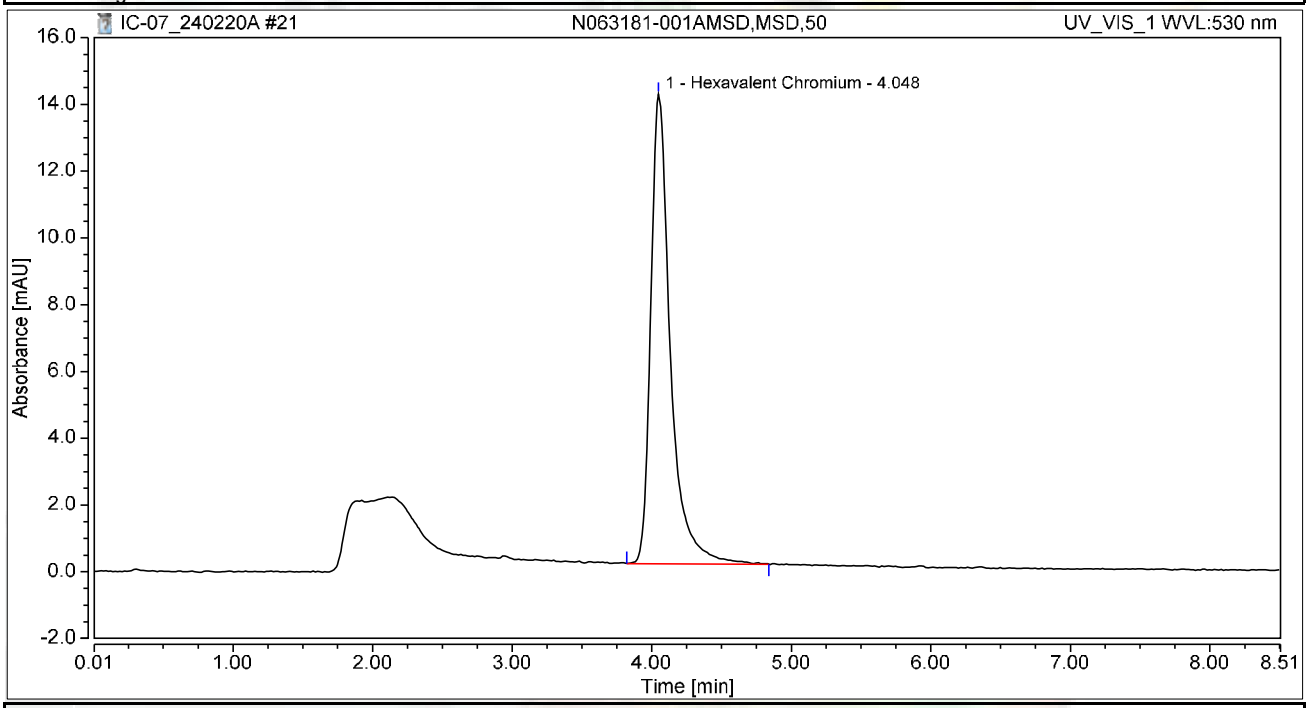
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.375	14.560	100.00	100.00	11.0418
Total:			**2.375**	**14.560**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-001AMSD,MSD,50**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 12:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

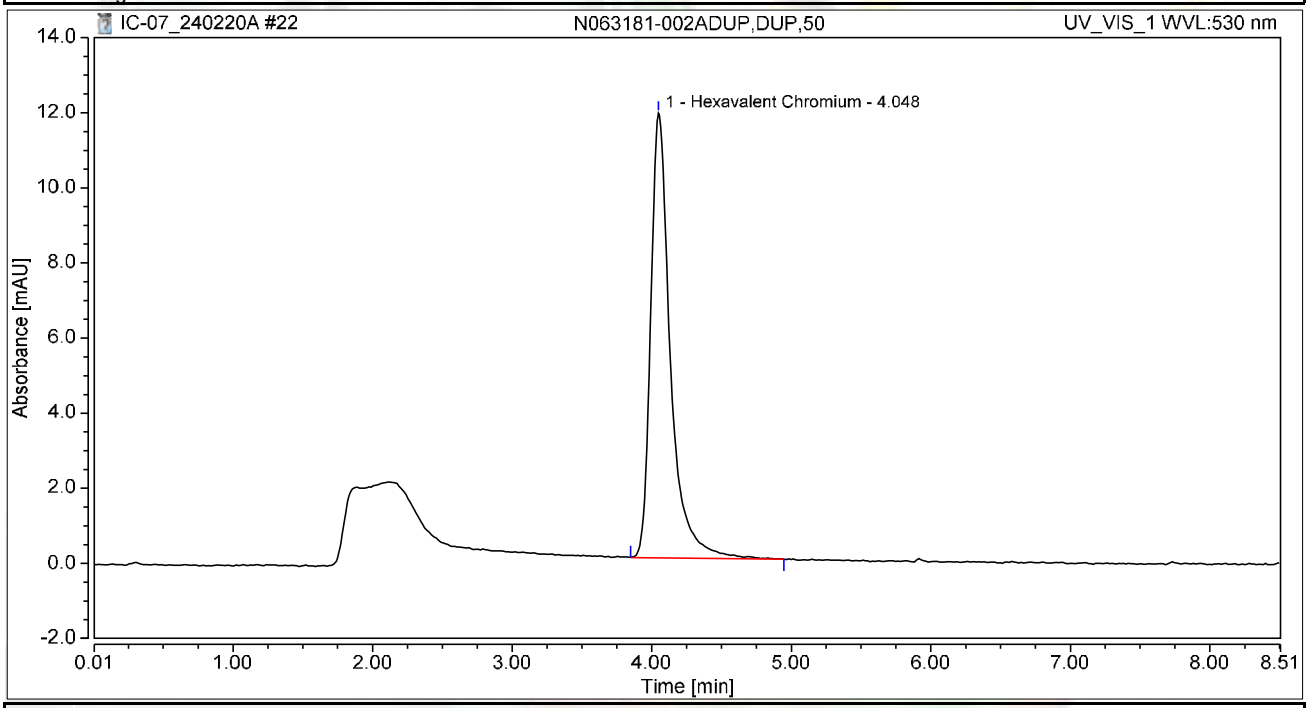
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.294	14.066	100.00	100.00	10.6647
Total:			**2.294**	**14.066**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-002ADUP,DUP,50**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

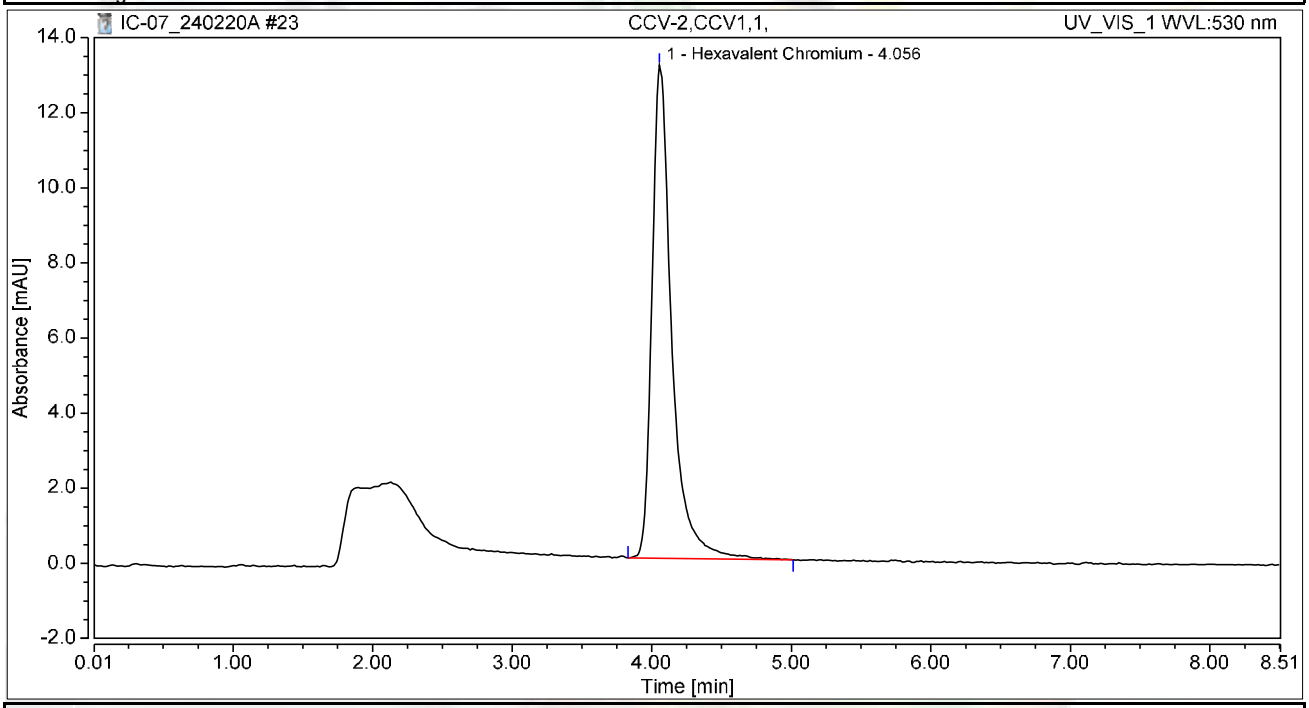
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.938	11.838	100.00	100.00	9.0087
Total:			**1.938**	**11.838**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 12:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

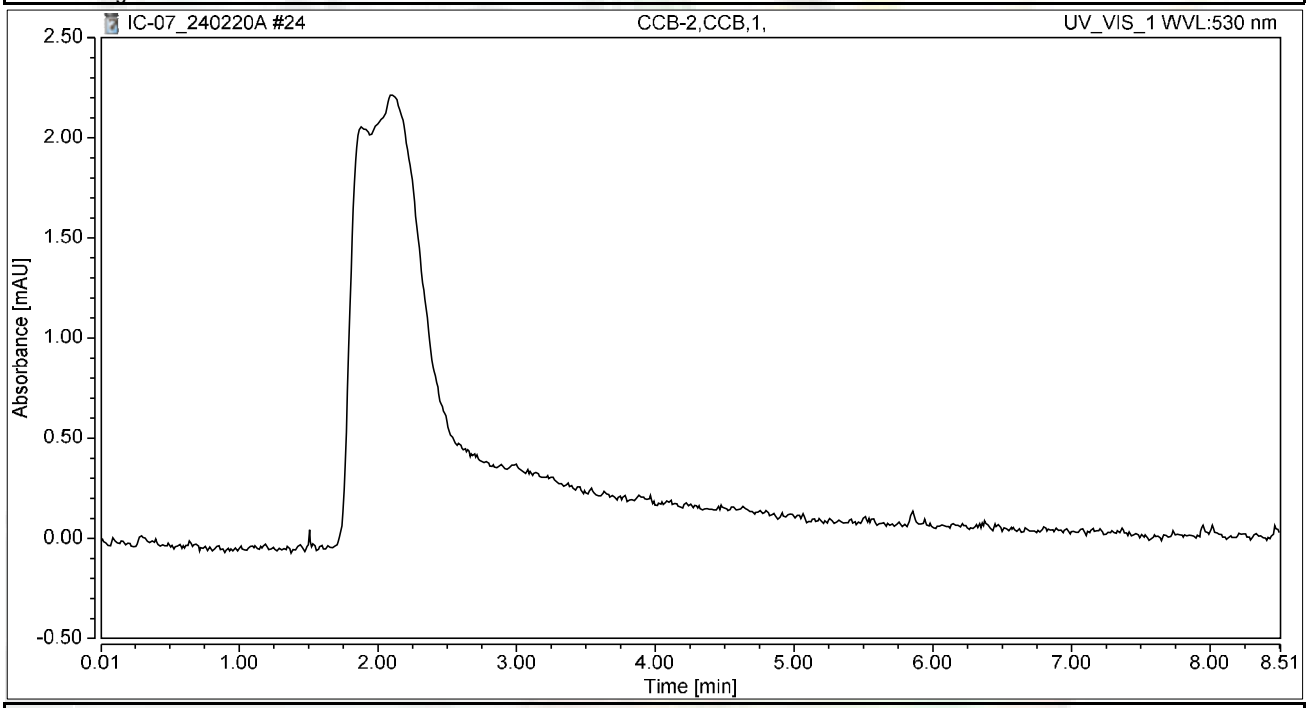
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	2.162	13.129	100.00	100.00	10.0504
Total:			**2.162**	**13.129**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

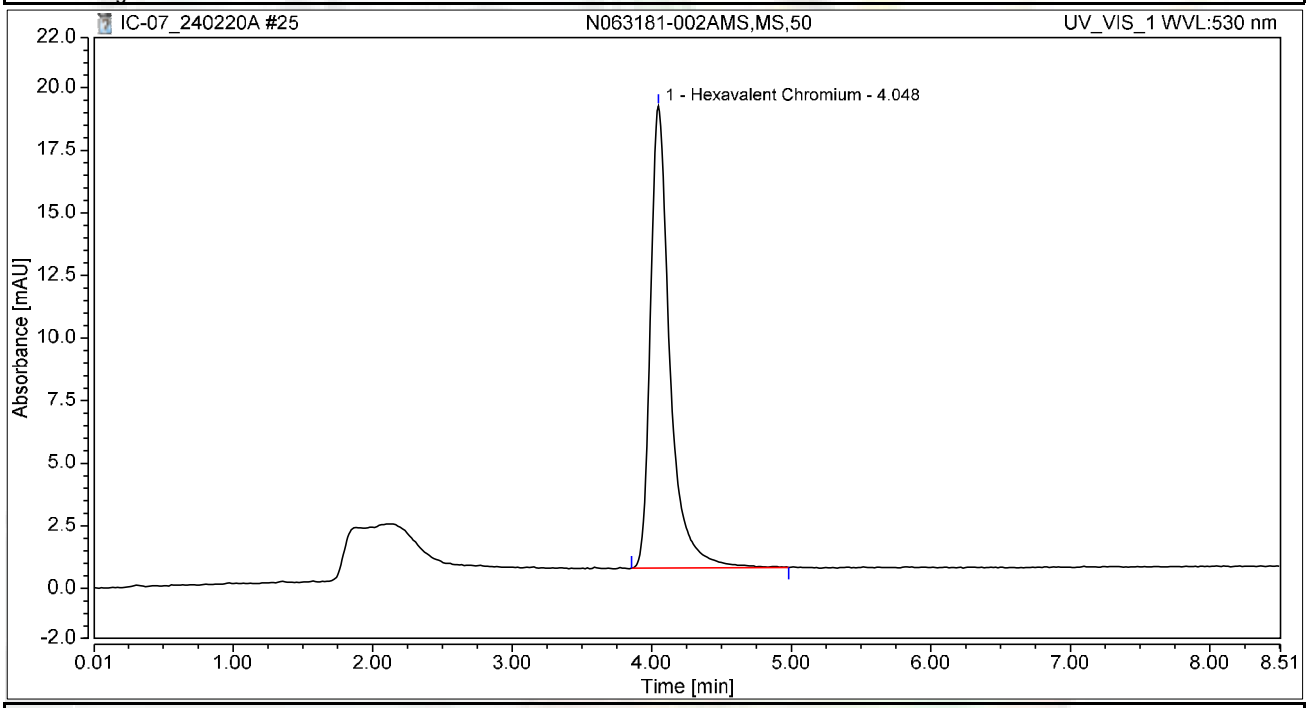
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-002AMS,MS,50**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 13:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

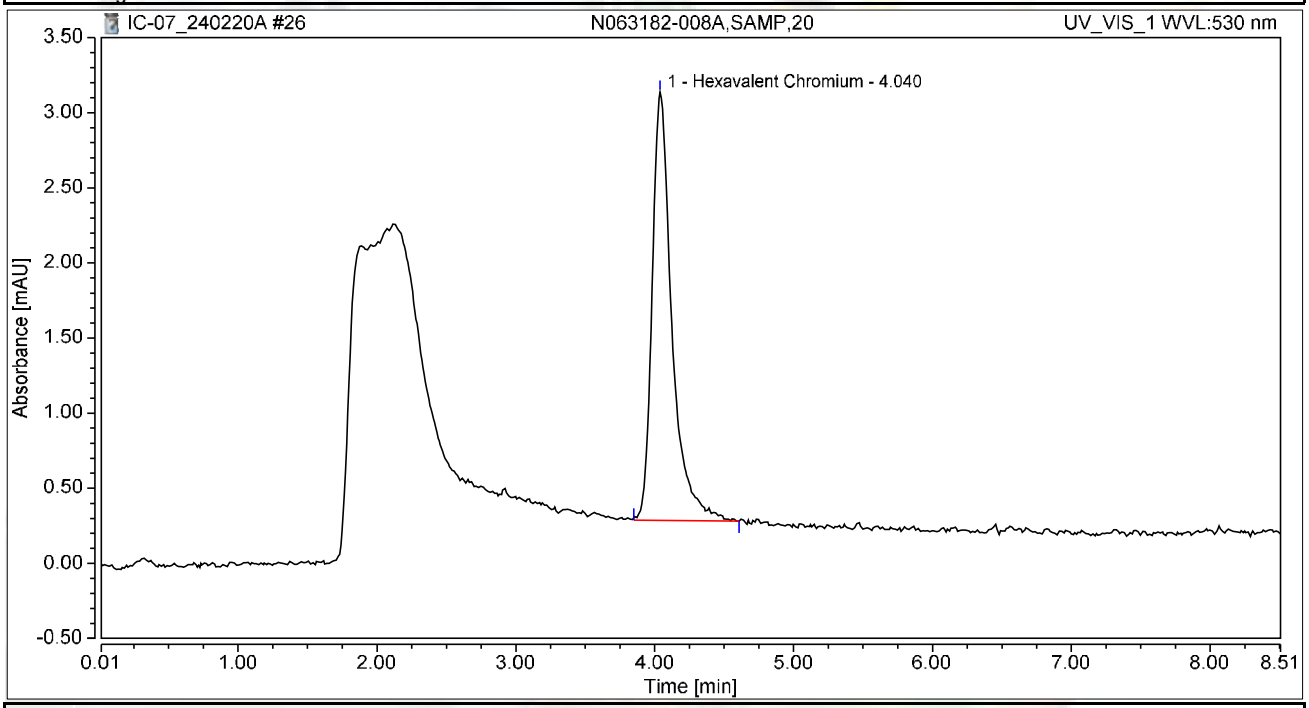
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.993	18.450	100.00	100.00	13.9127
Total:			**2.993**	**18.450**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-008A,SAMP,20**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 13:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

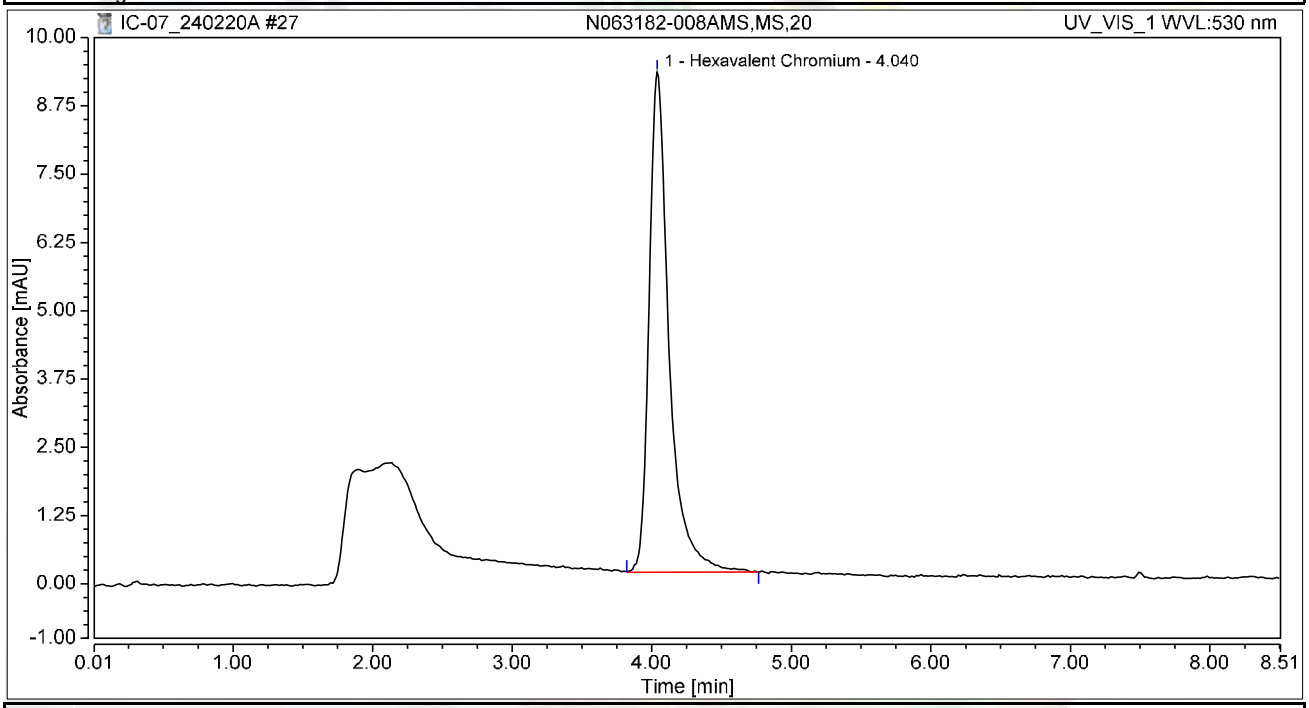
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.469	2.850	100.00	100.00	2.1826
Total:			**0.469**	**2.850**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-008AMS,MS,20**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 13:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

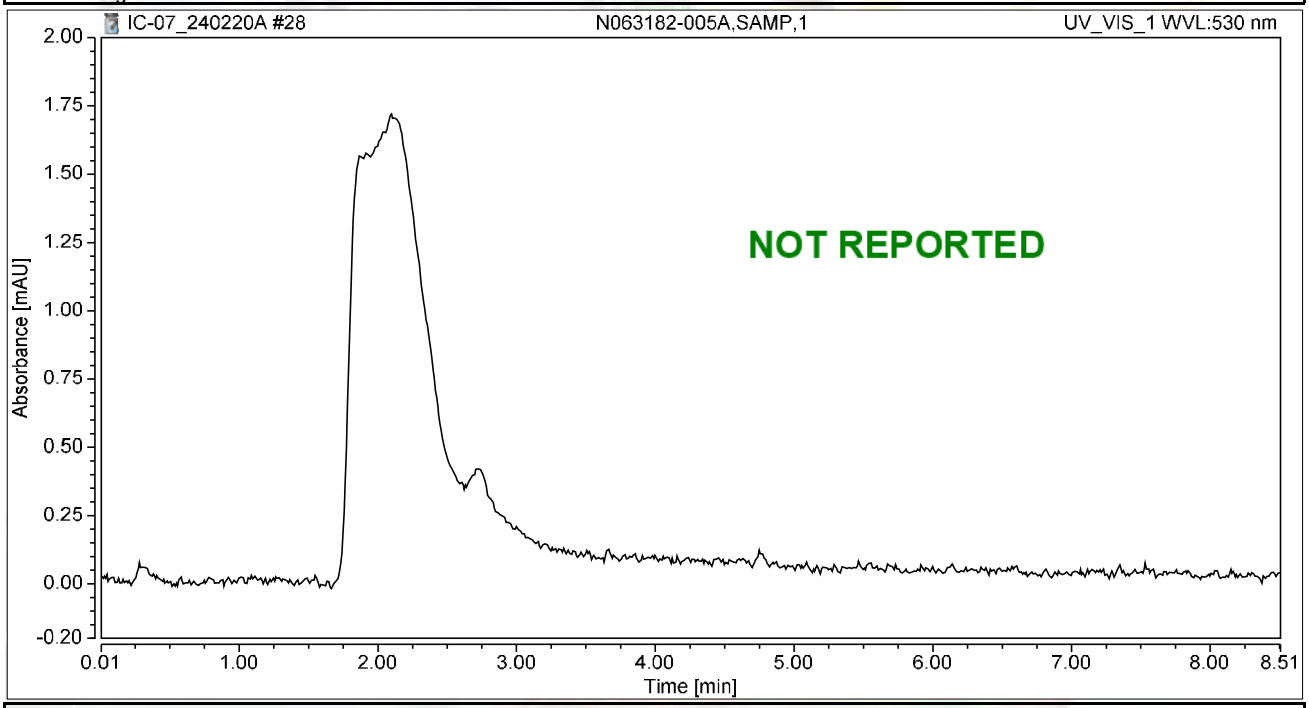
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.523	9.154	100.00	100.00	7.0826
Total:			**1.523**	**9.154**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 13:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

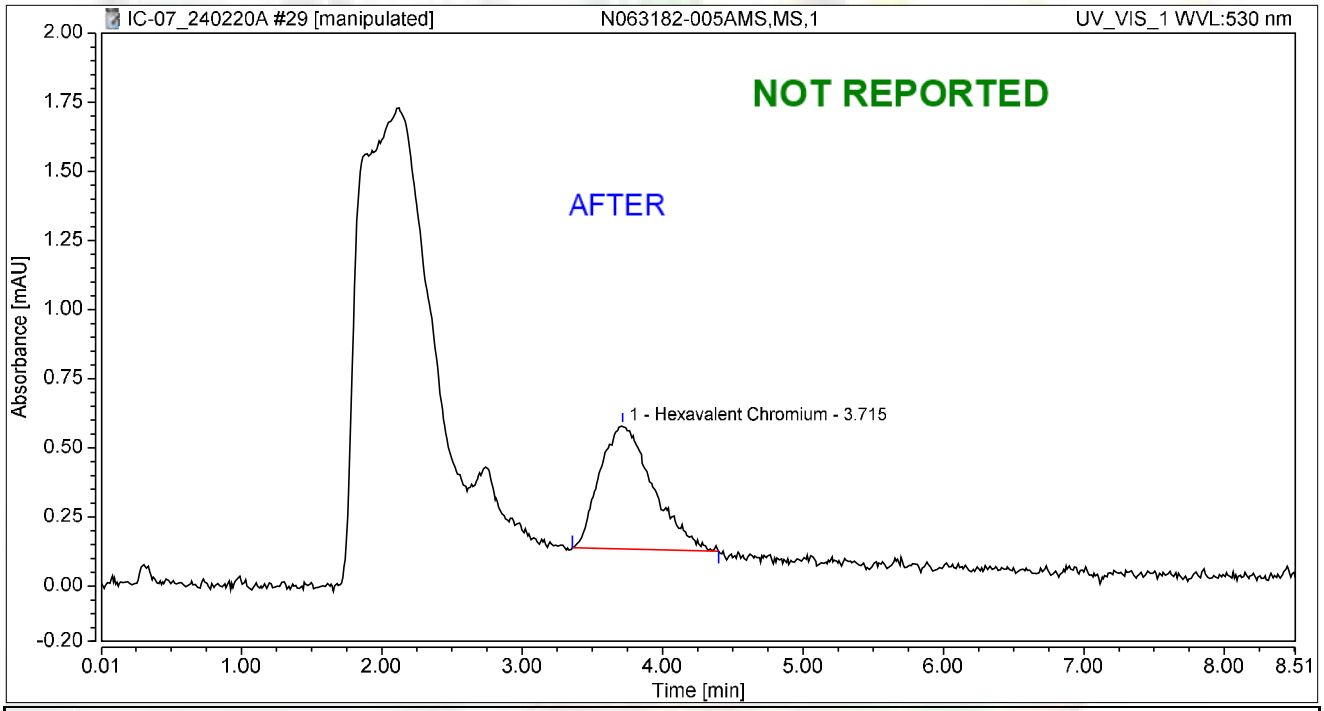
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 13:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

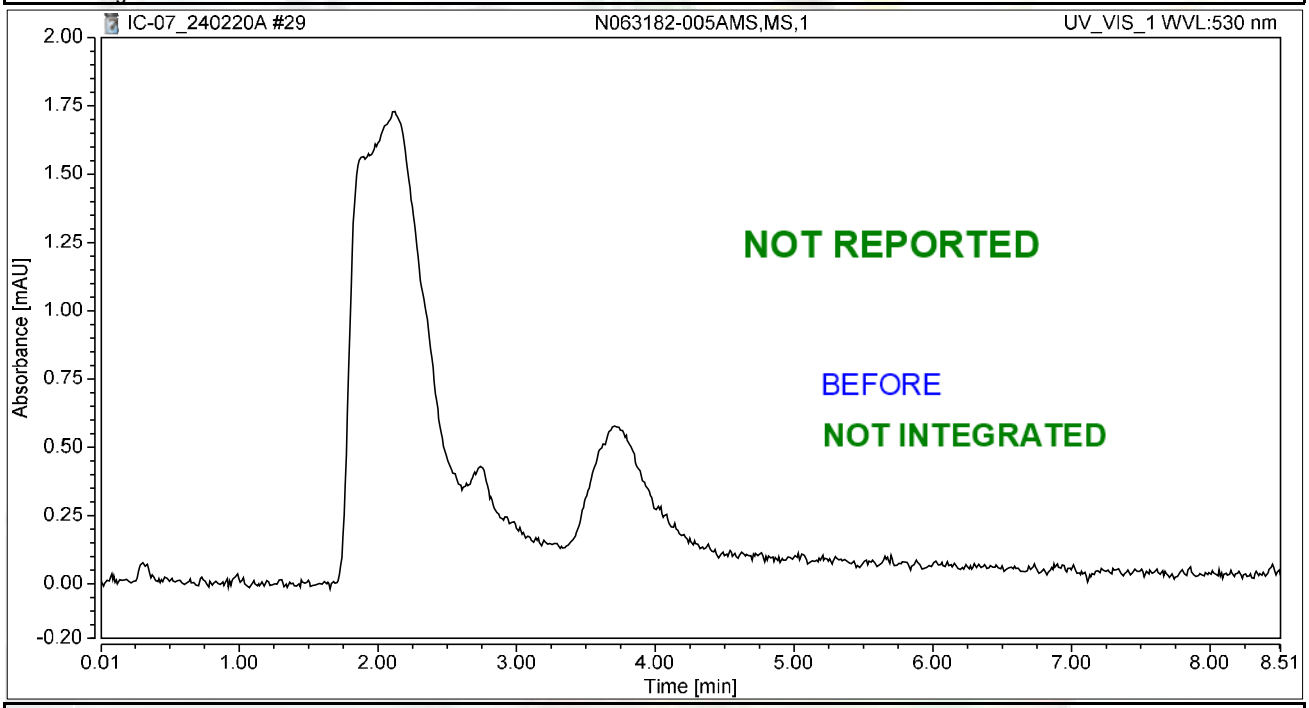
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.715	0.196	0.448	100.00	100.00	0.9116
Total:			**0.196**	**0.448**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 13:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

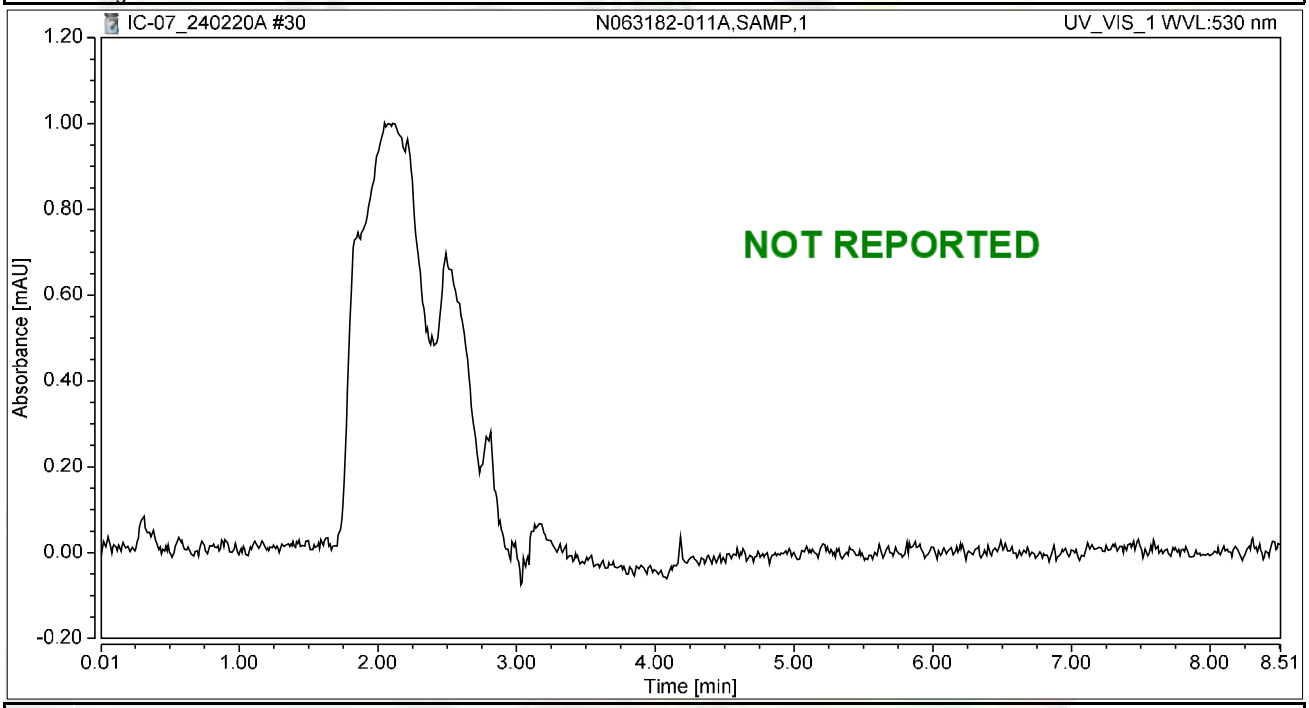
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-011A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 14:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

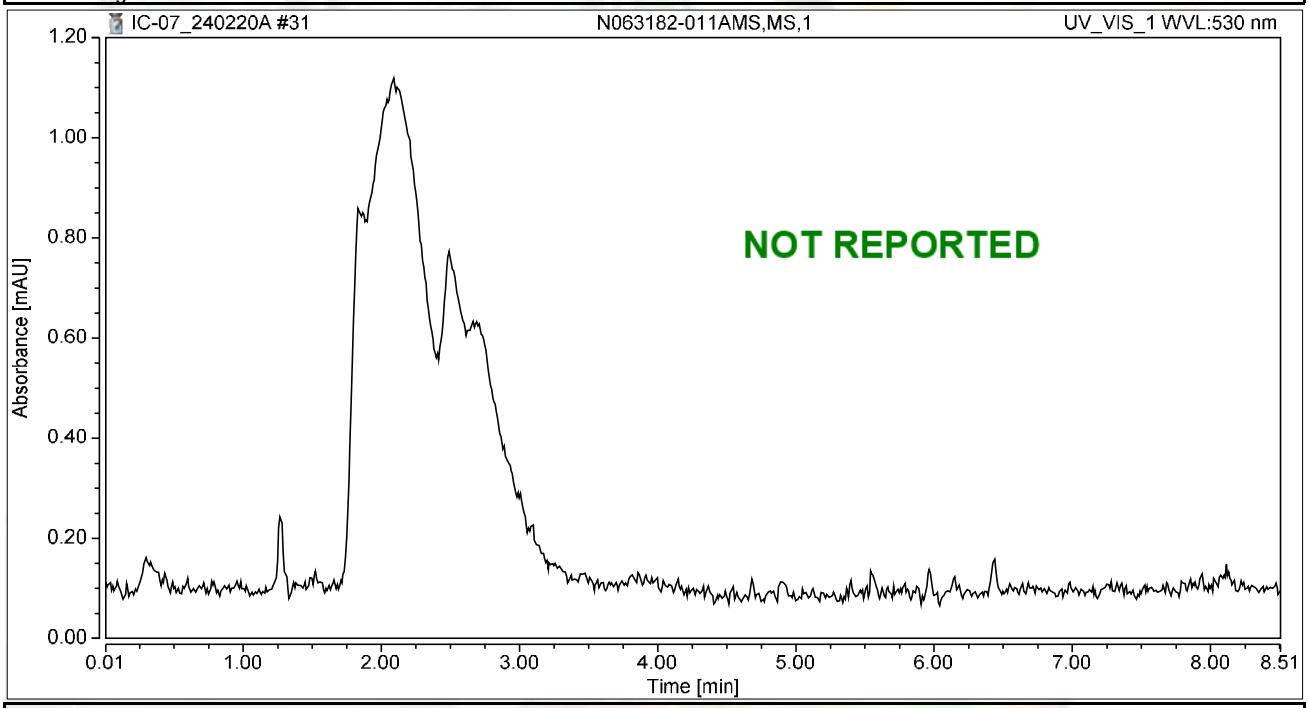
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 14:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

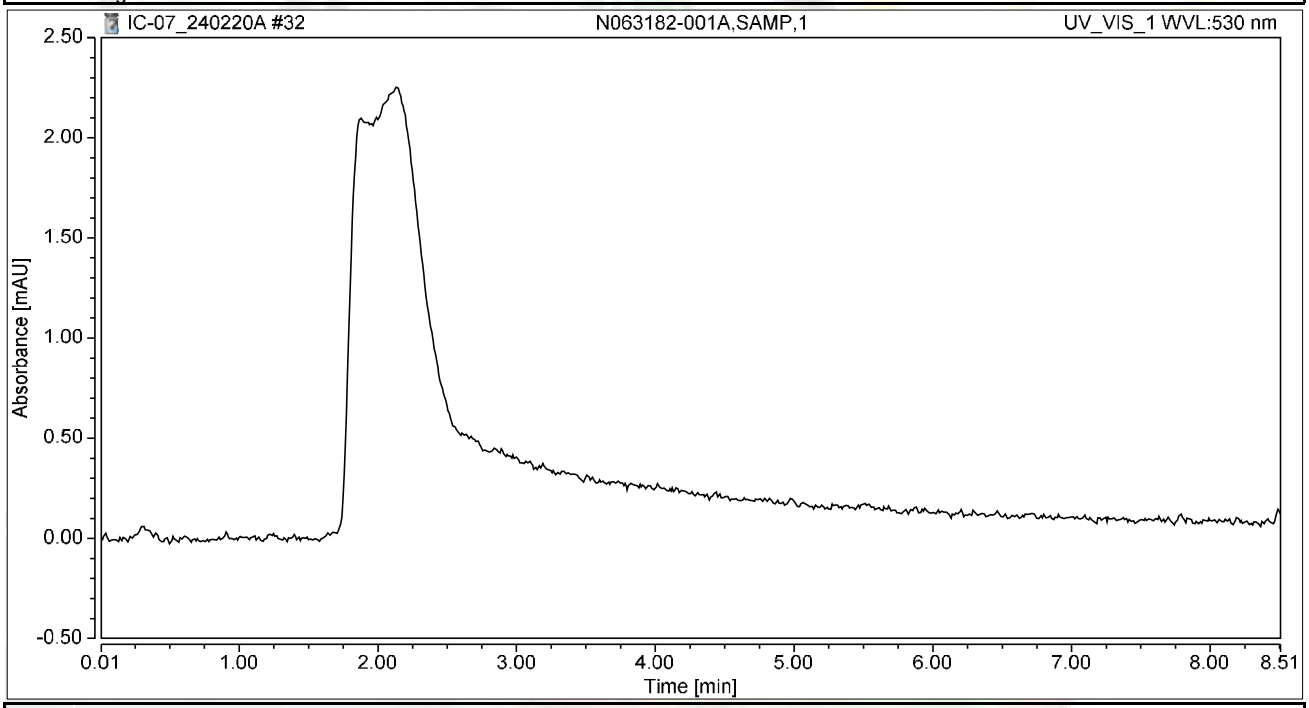
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 14:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

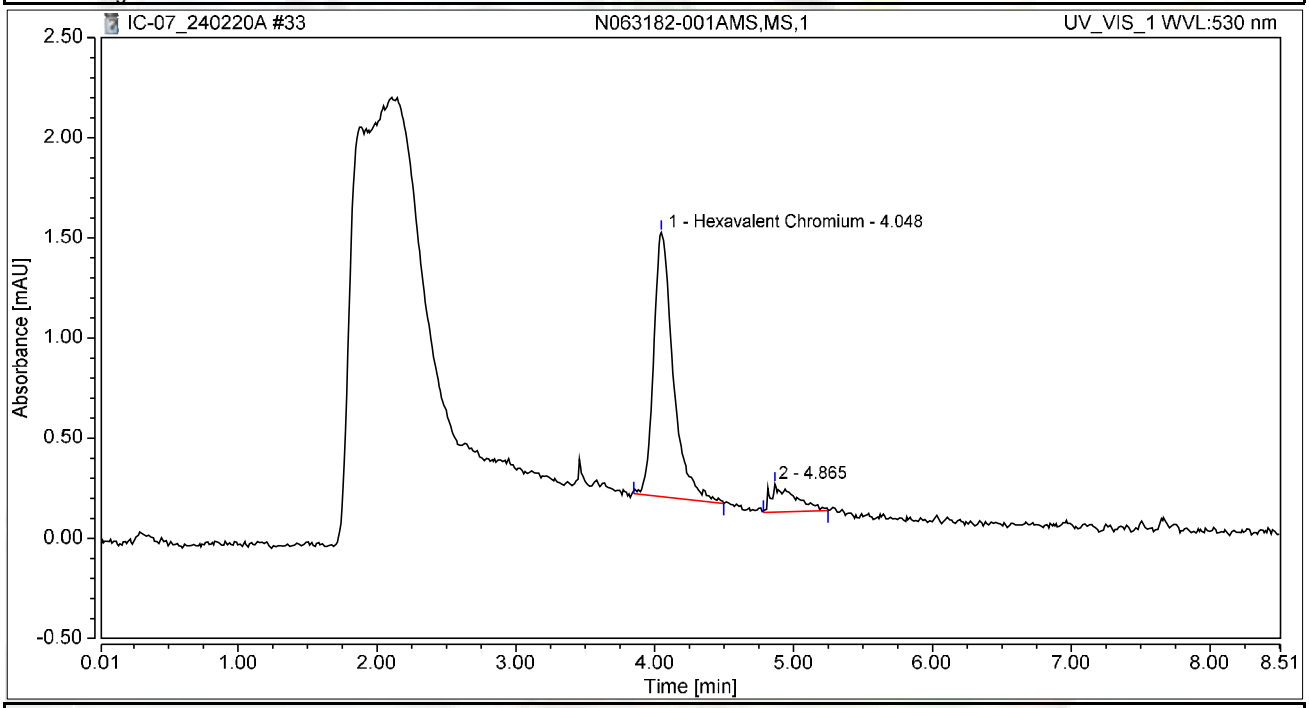
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 14:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

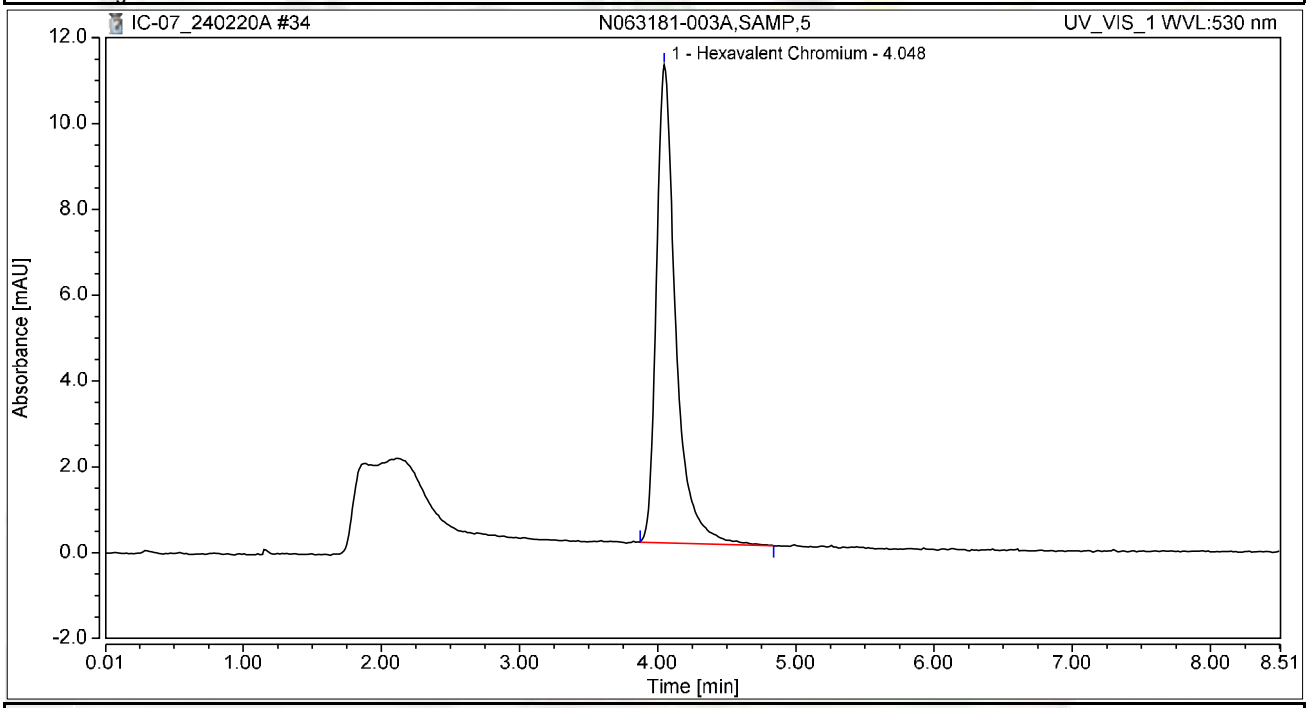
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.216	1.319	88.56	90.38	1.0043
2		4.865	0.028	0.140	11.44	9.62	n.a.
Total:			**0.244**	**1.459**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 14:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

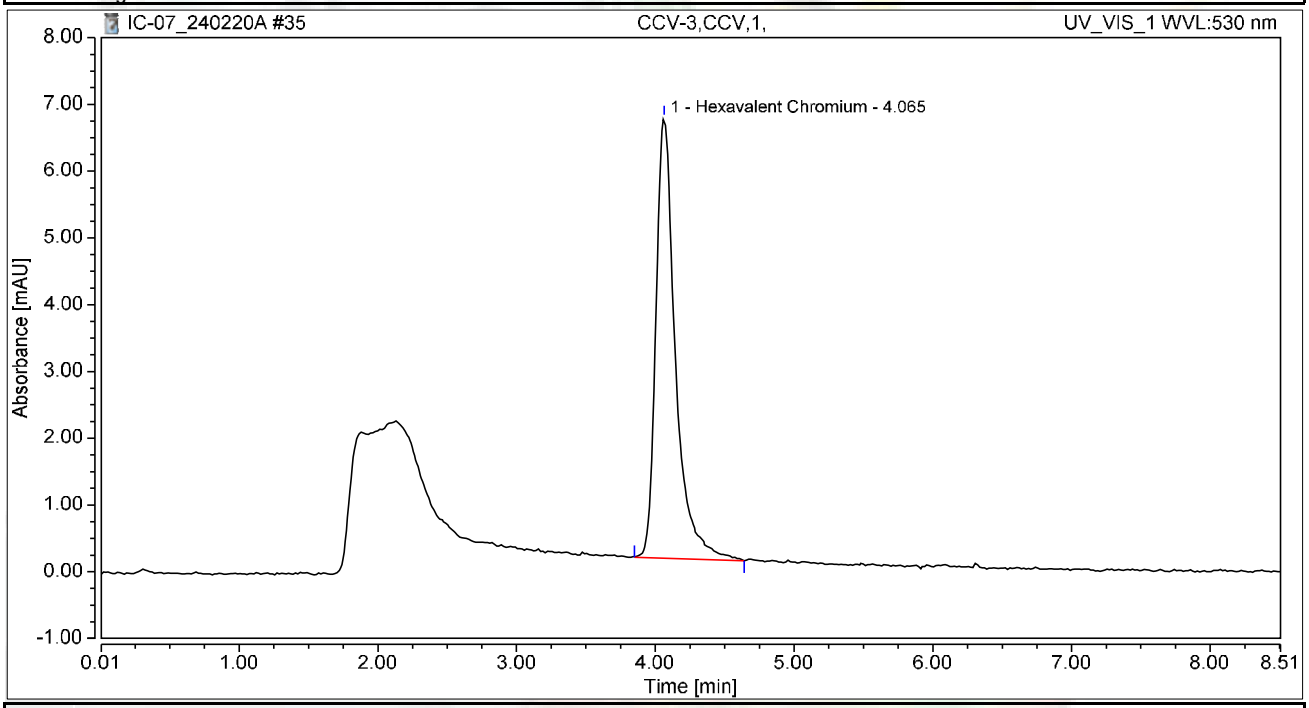
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.808	11.139	100.00	100.00	8.4046
Total:			**1.808**	**11.139**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 14:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

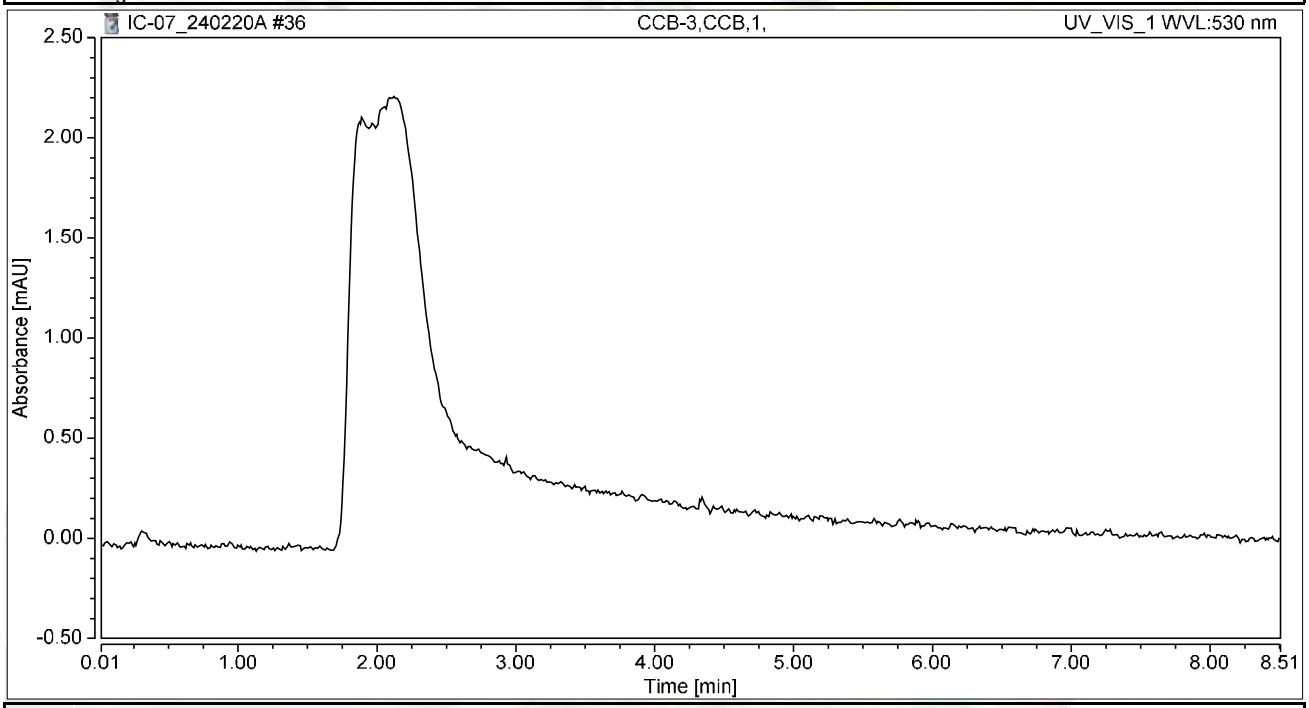
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	1.081	6.594	100.00	100.00	5.0265
Total:			**1.081**	**6.594**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 15:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

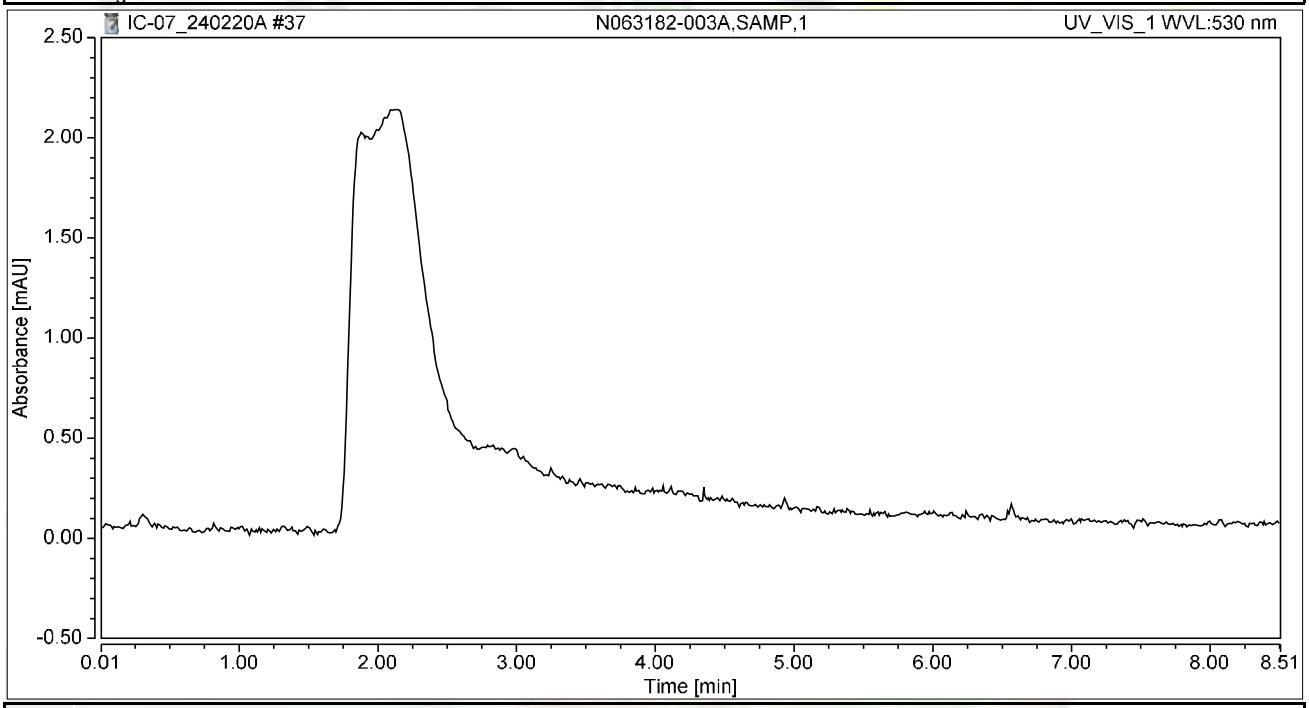
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 15:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

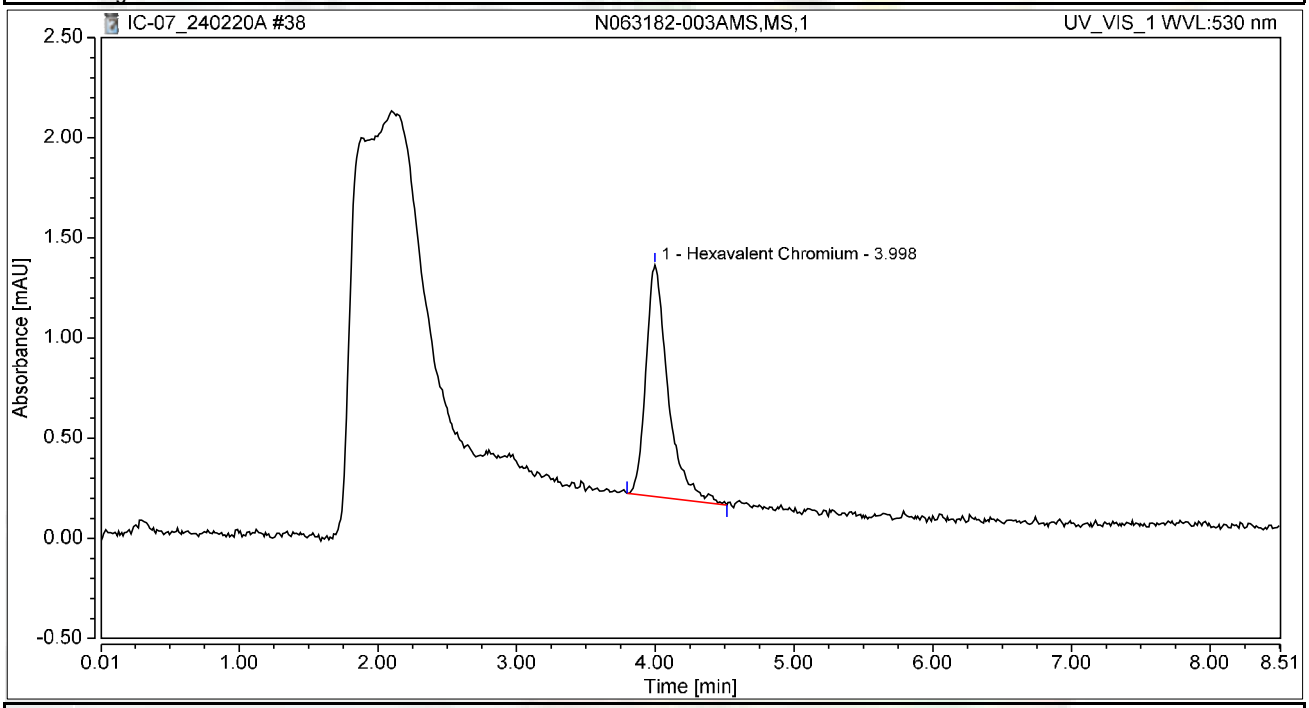
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 15:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

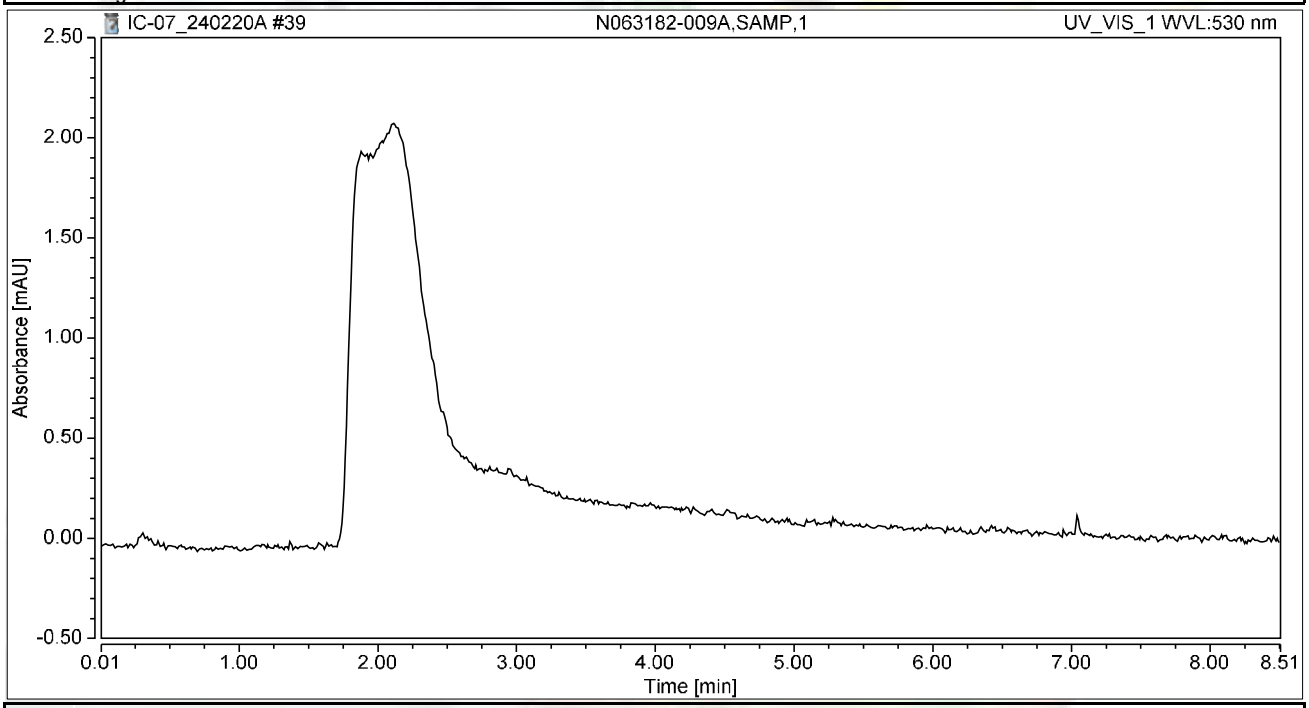
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.214	1.156	100.00	100.00	0.9941
Total:			**0.214**	**1.156**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 15:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

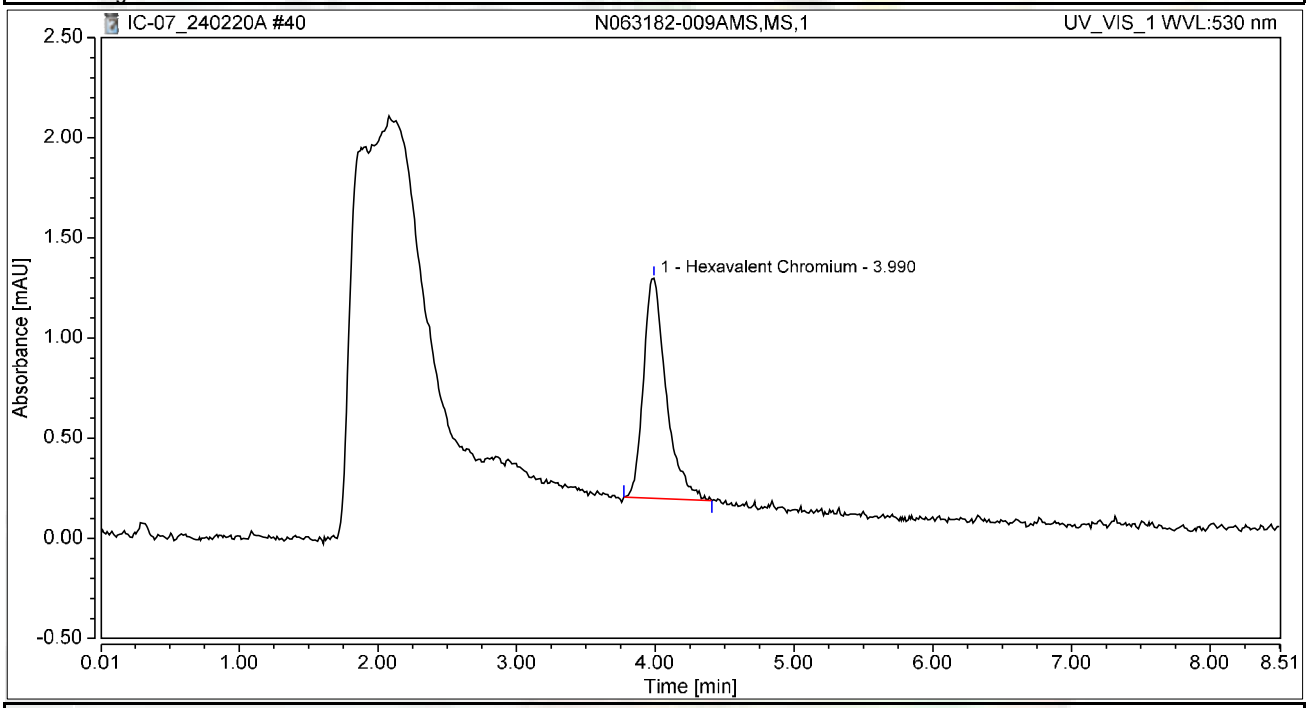
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 15:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

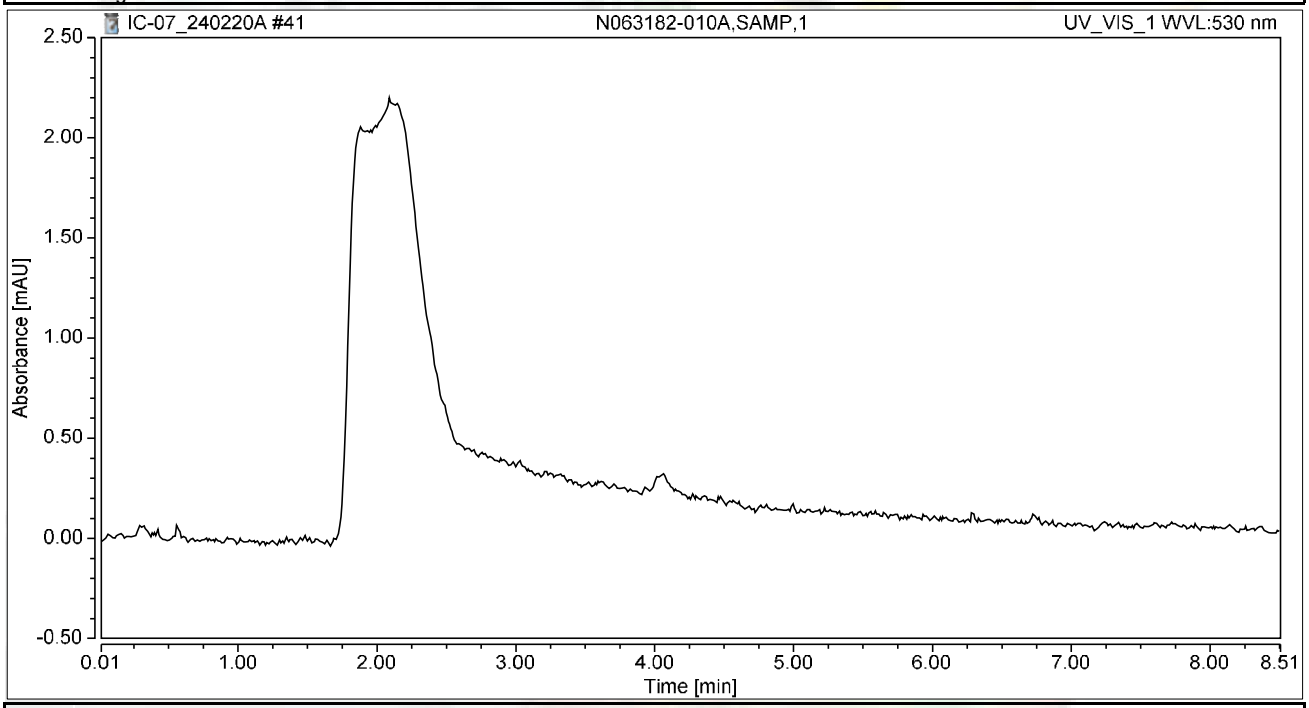
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.210	1.100	100.00	100.00	0.9743
Total:			**0.210**	**1.100**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-010A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 15:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

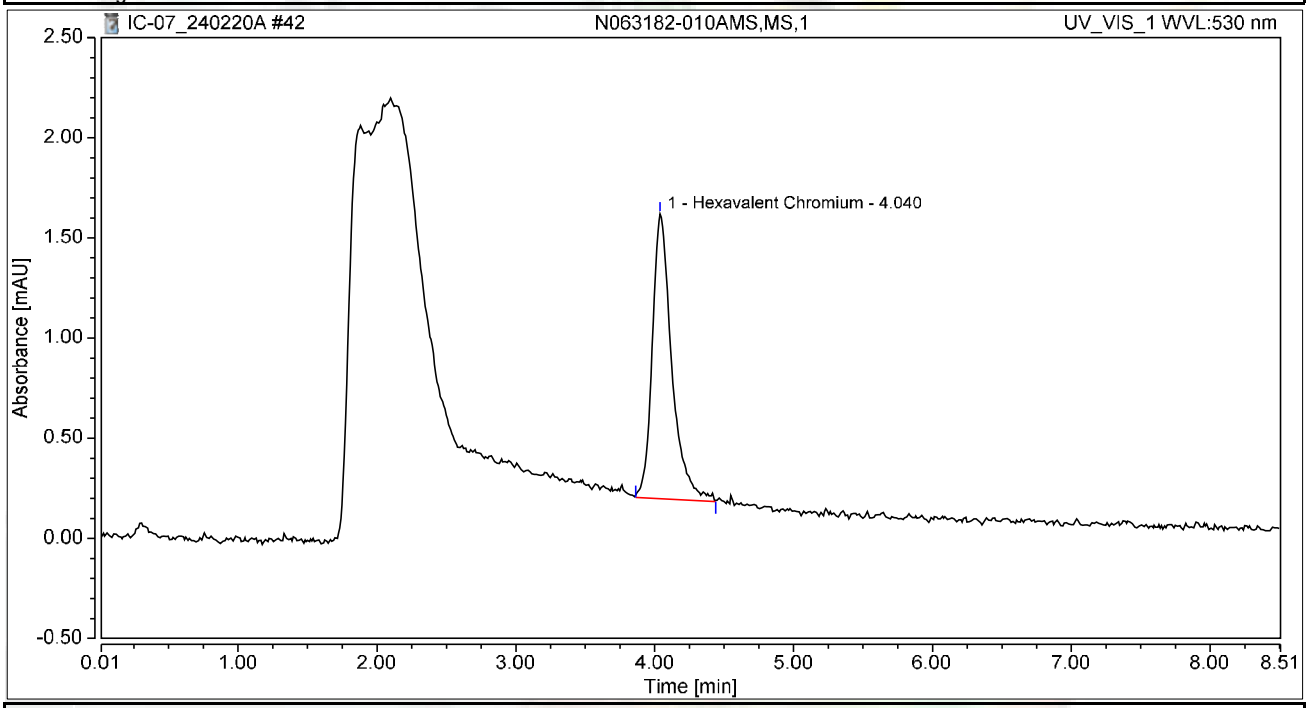
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-010AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 15:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

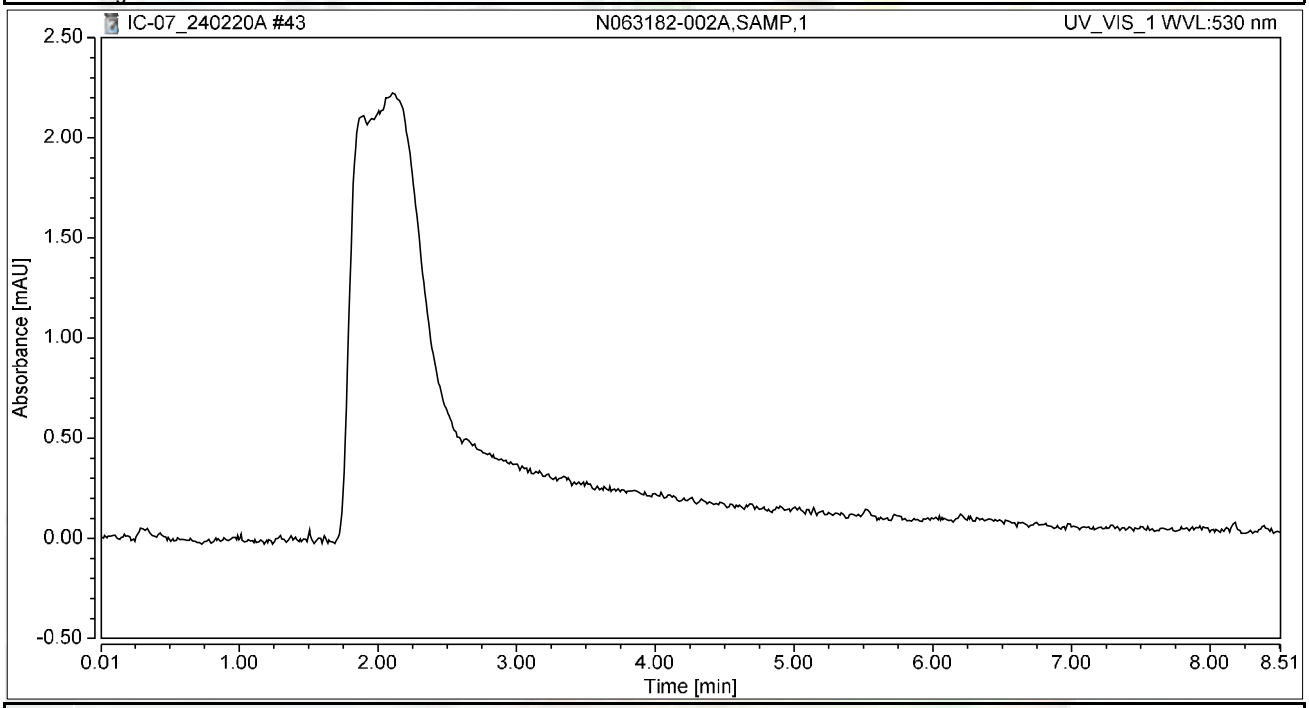
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.231	1.422	100.00	100.00	1.0738
Total:			**0.231**	**1.422**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 16:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

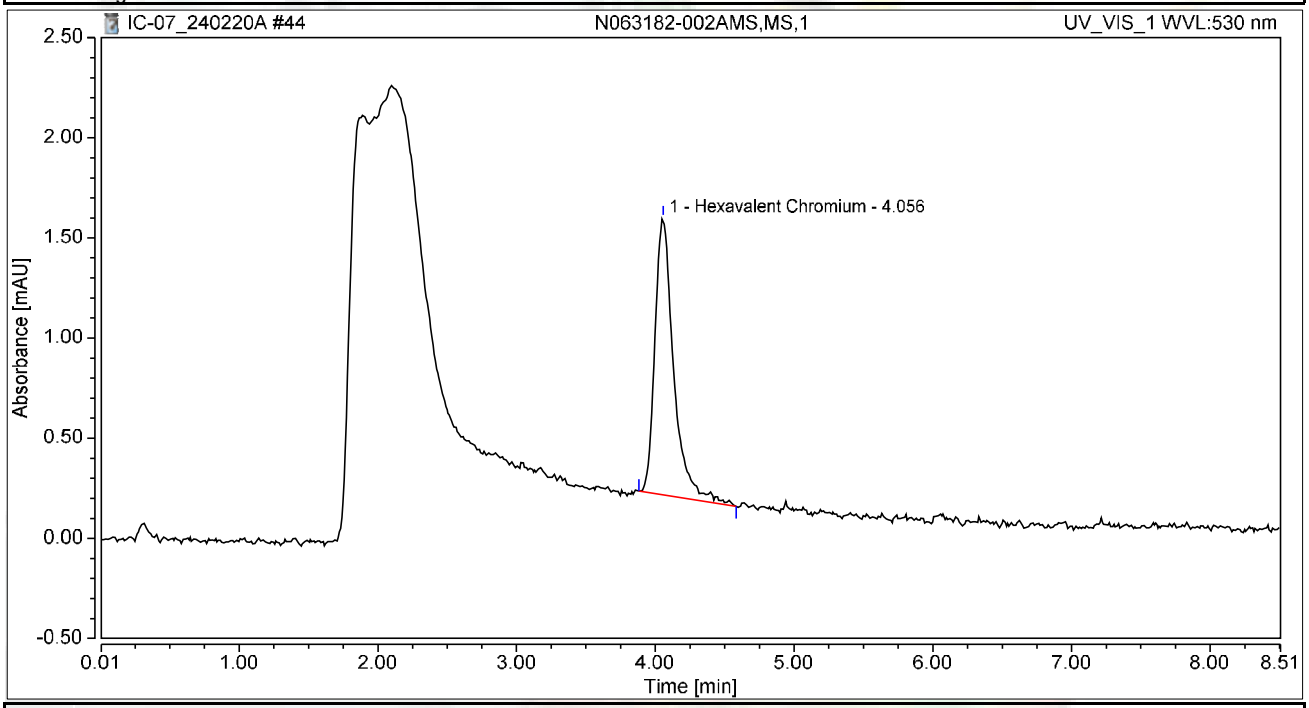
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 16:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

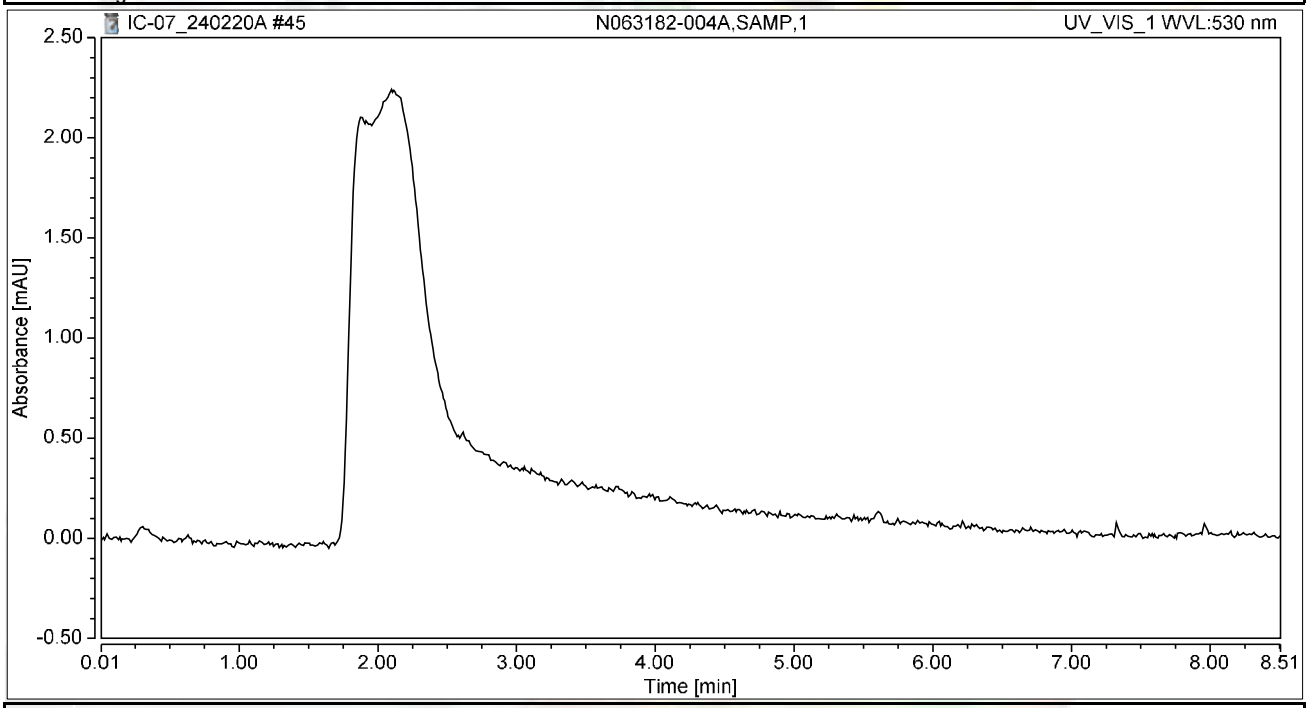
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.218	1.384	100.00	100.00	1.0115
Total:			**0.218**	**1.384**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 16:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

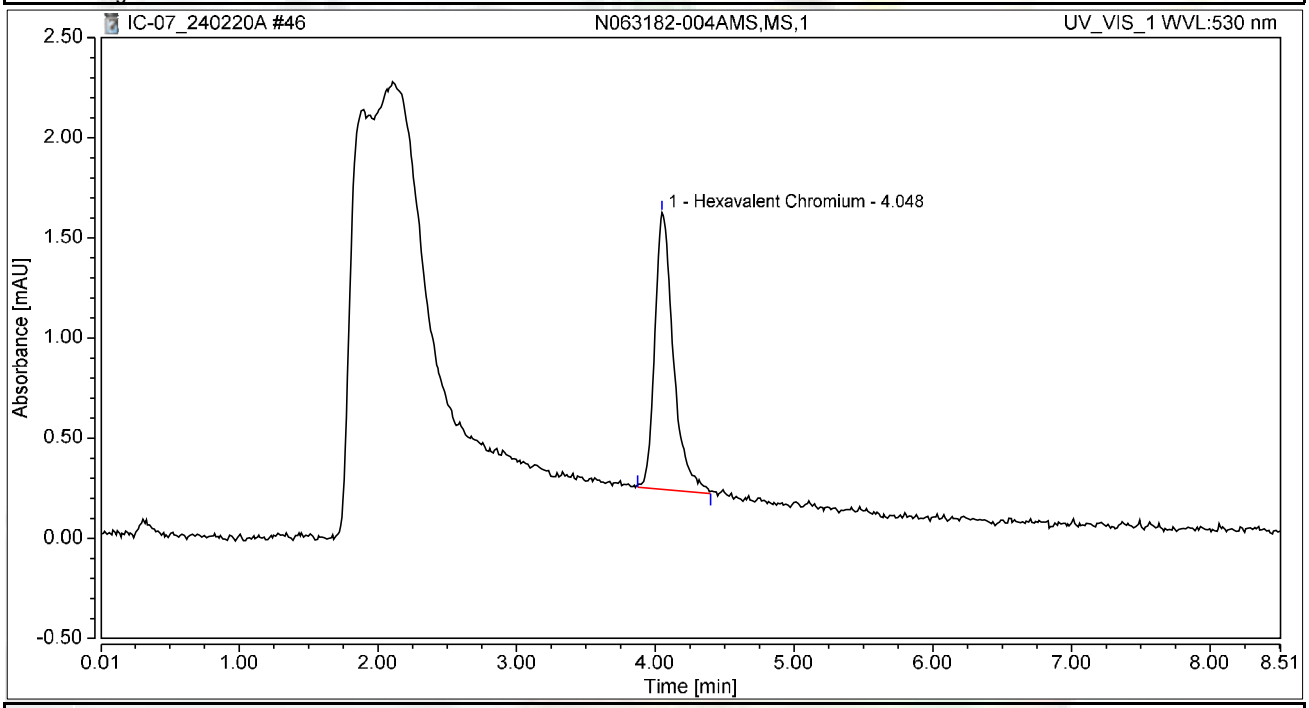
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 16:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

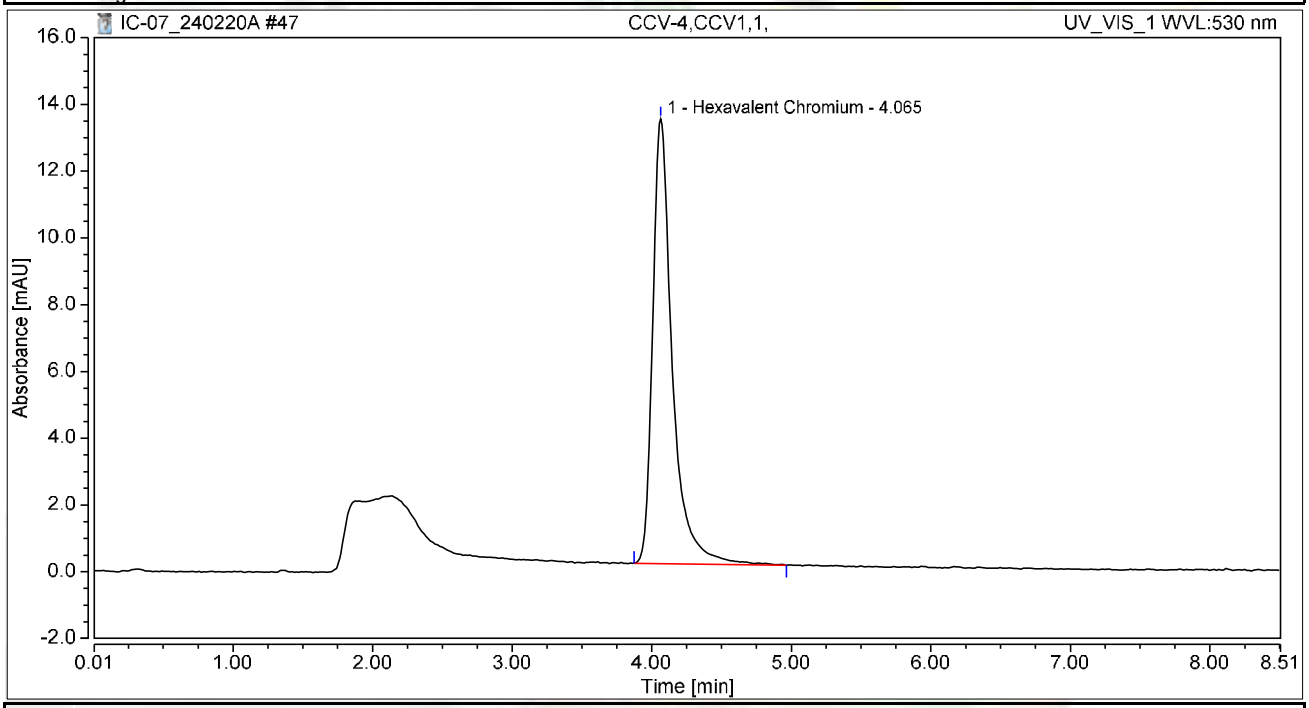
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.215	1.382	100.00	100.00	1.0007
Total:			**0.215**	**1.382**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 16:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

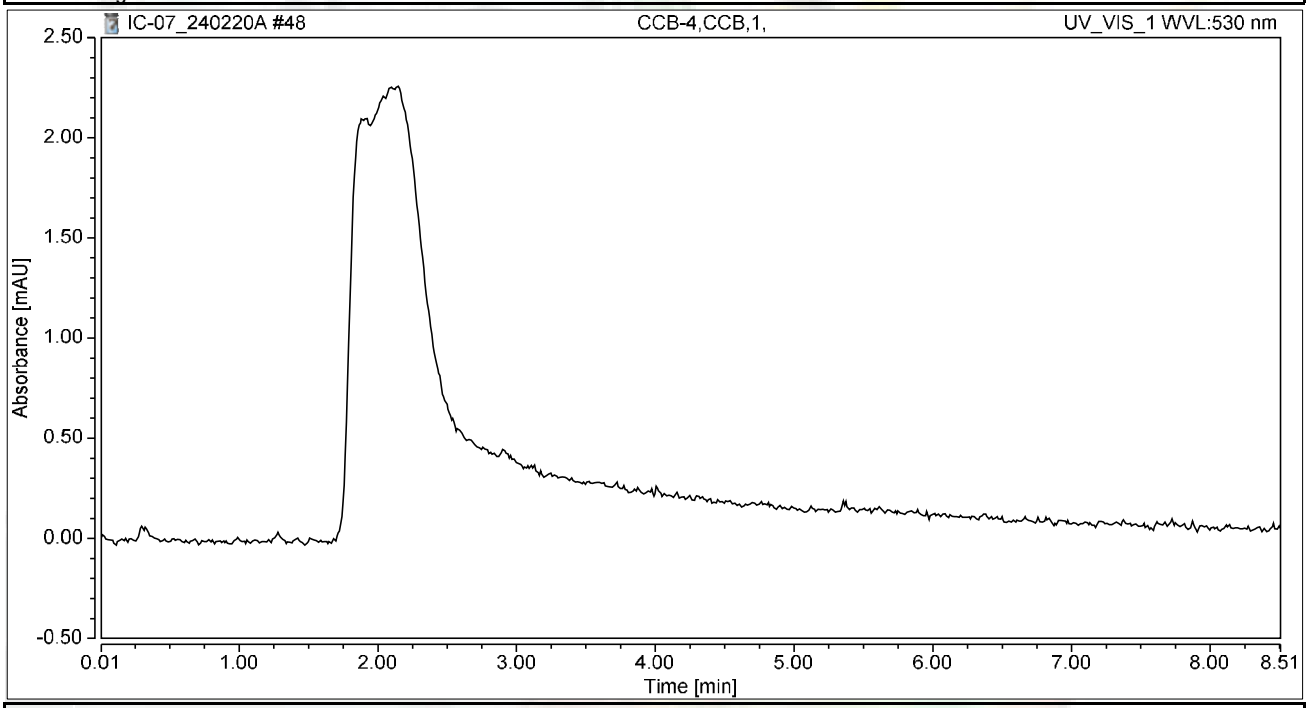
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	2.179	13.334	100.00	100.00	10.1293
Total:			**2.179**	**13.334**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 16:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

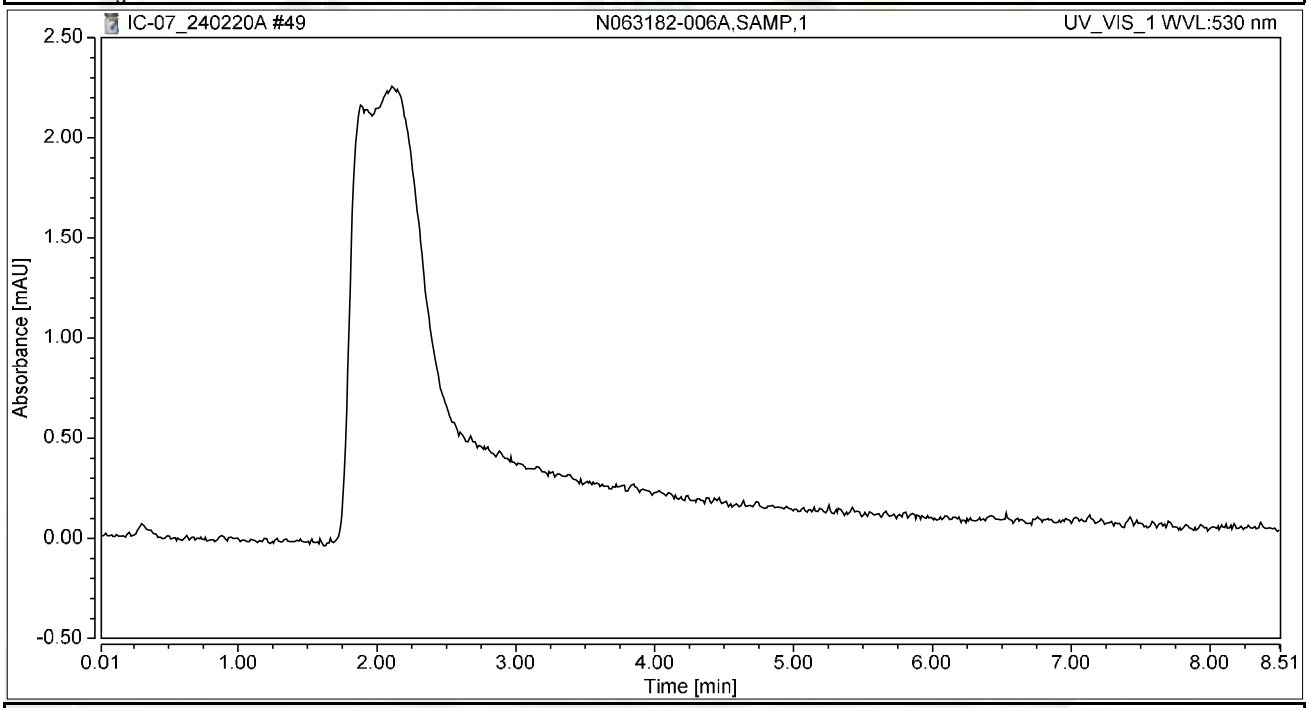
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-006A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 17:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

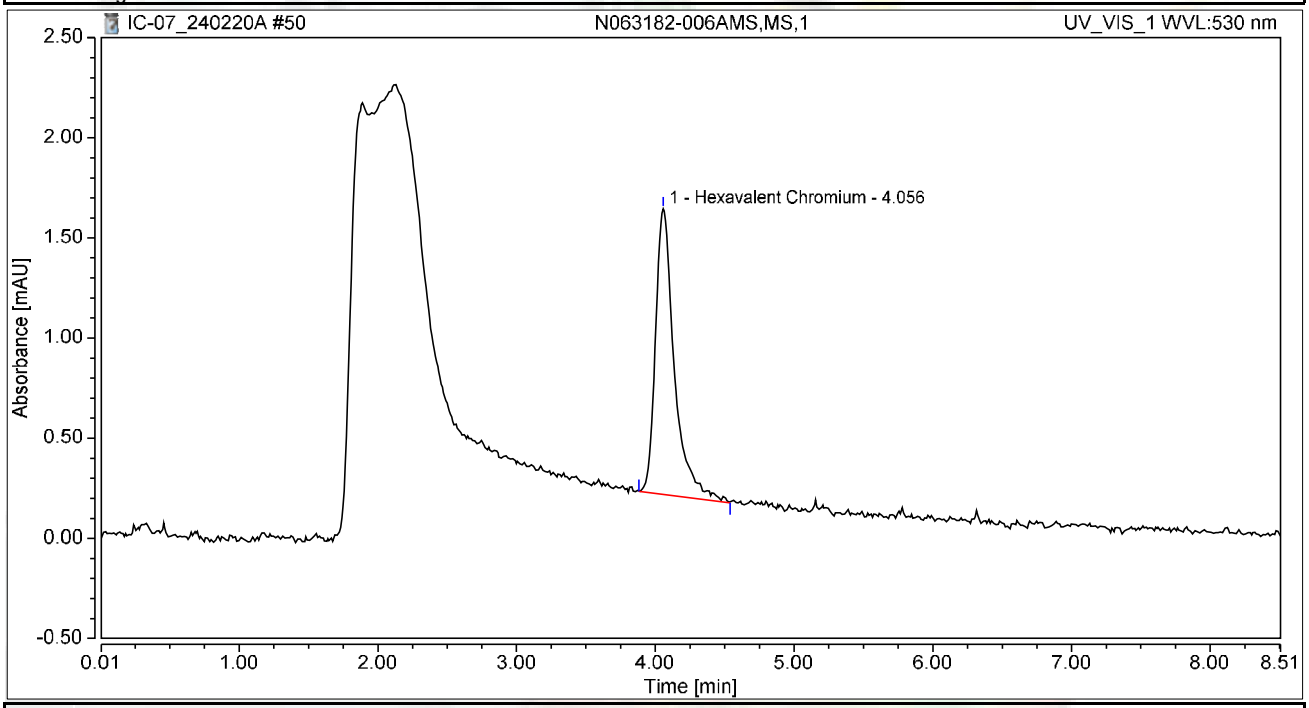
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 17:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

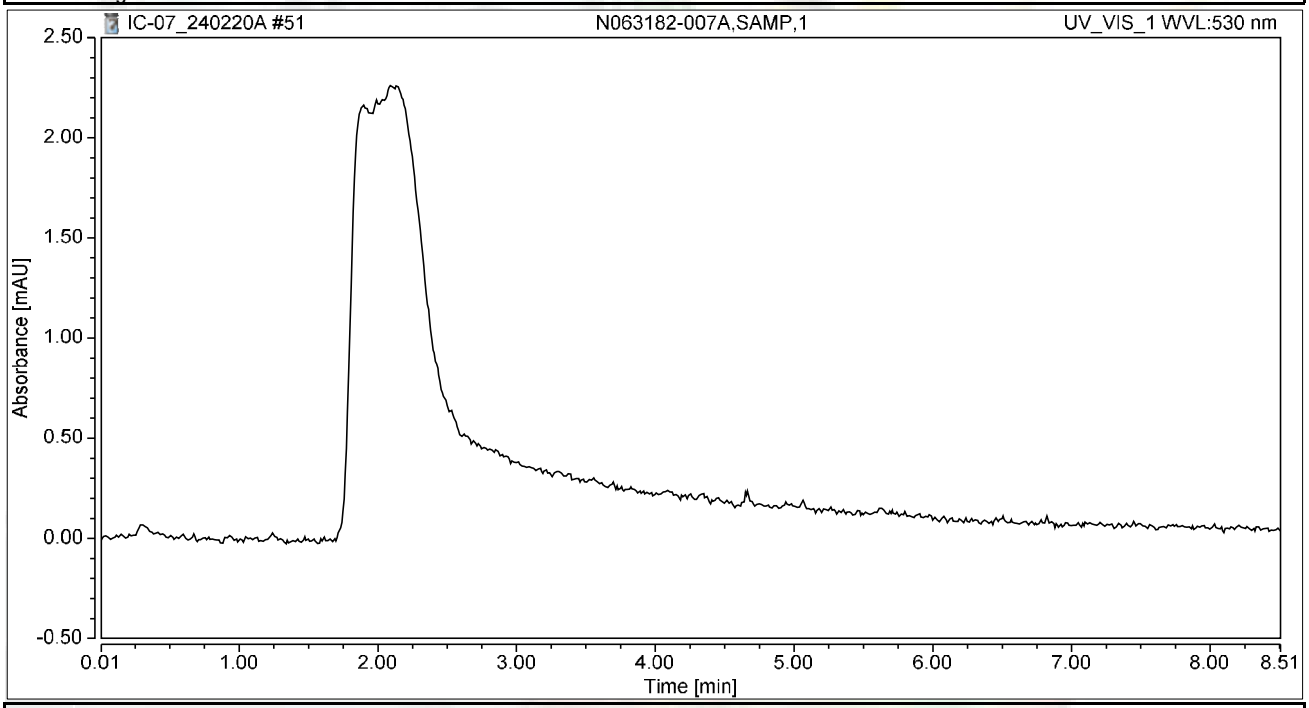
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.225	1.427	100.00	100.00	1.0455
Total:			**0.225**	**1.427**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-007A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 17:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

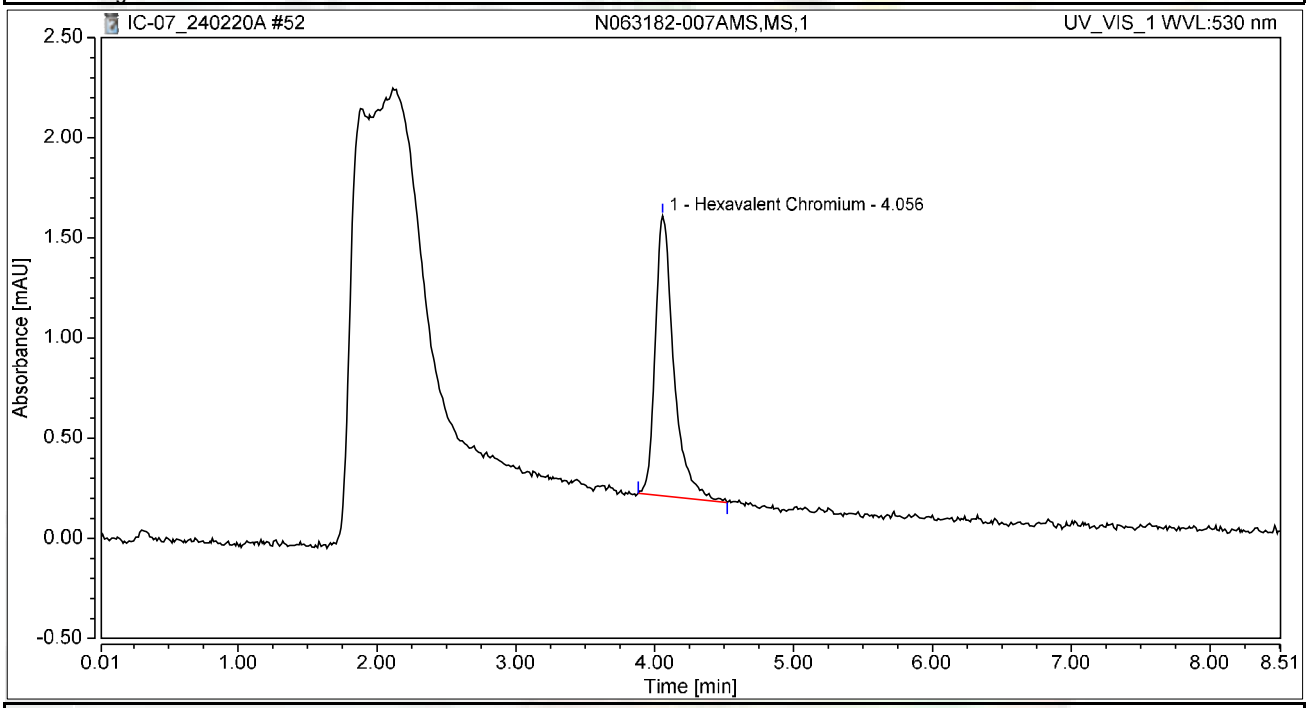
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-007AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 17:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

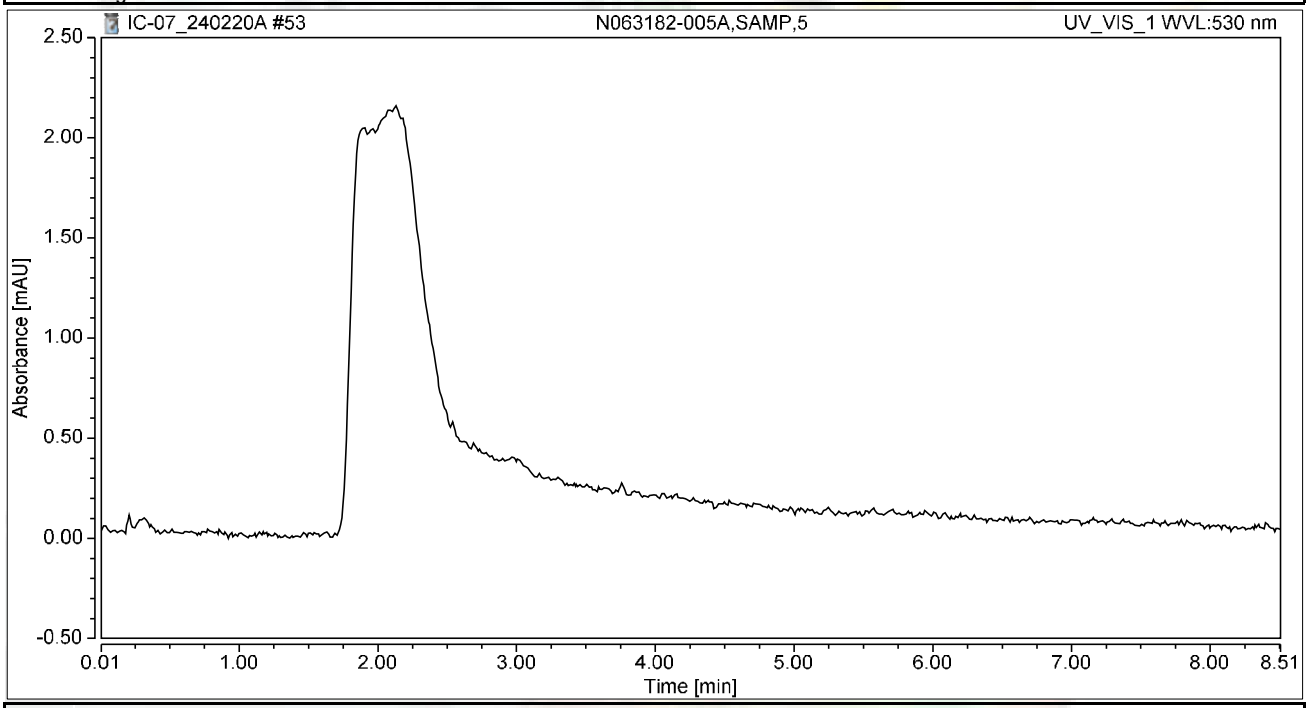
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.216	1.398	100.00	100.00	1.0052
Total:			**0.216**	**1.398**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 17:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

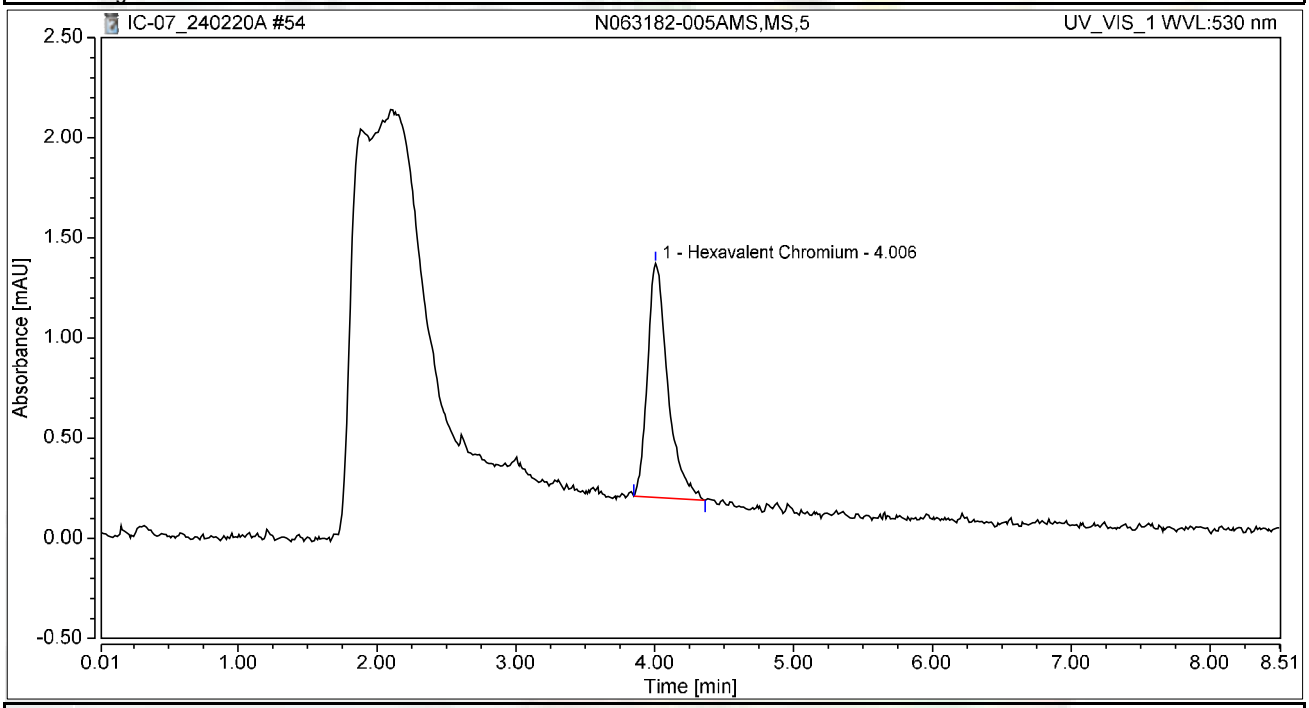
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-005AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 17:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

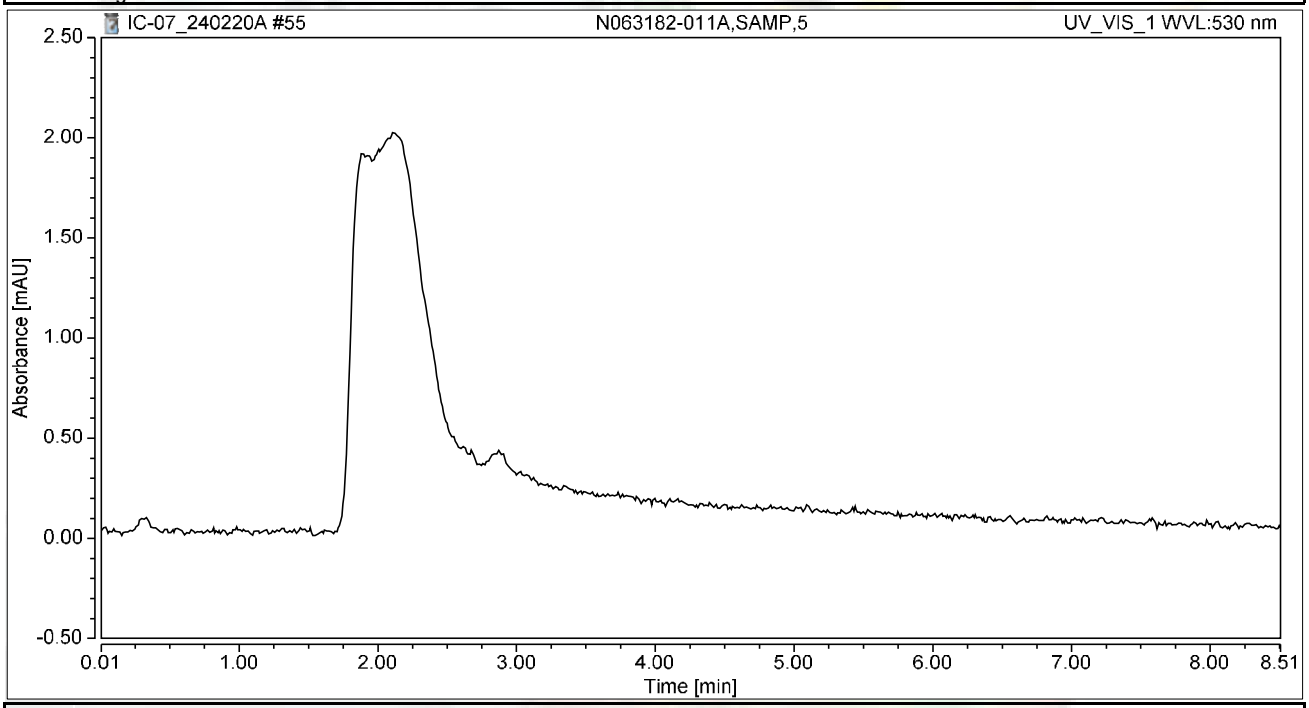
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.199	1.168	100.00	100.00	0.9239
Total:			**0.199**	**1.168**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-011A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 18:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

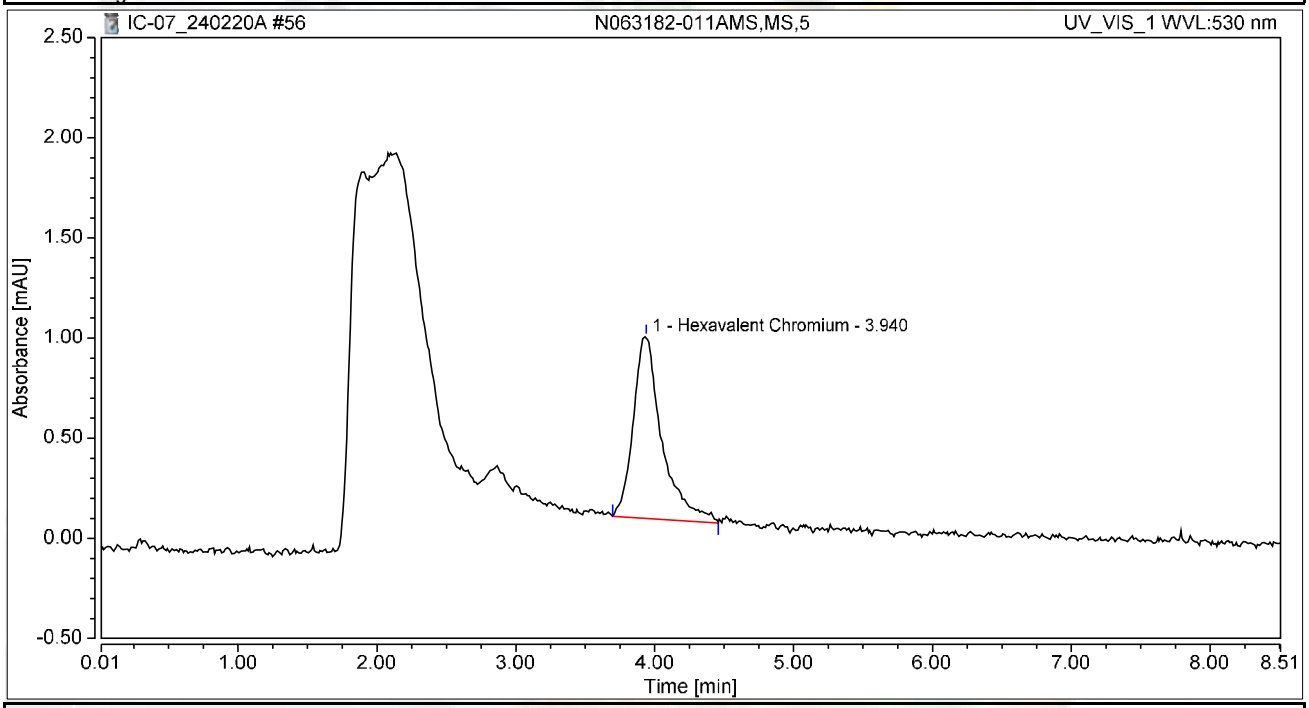
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-011AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 18:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

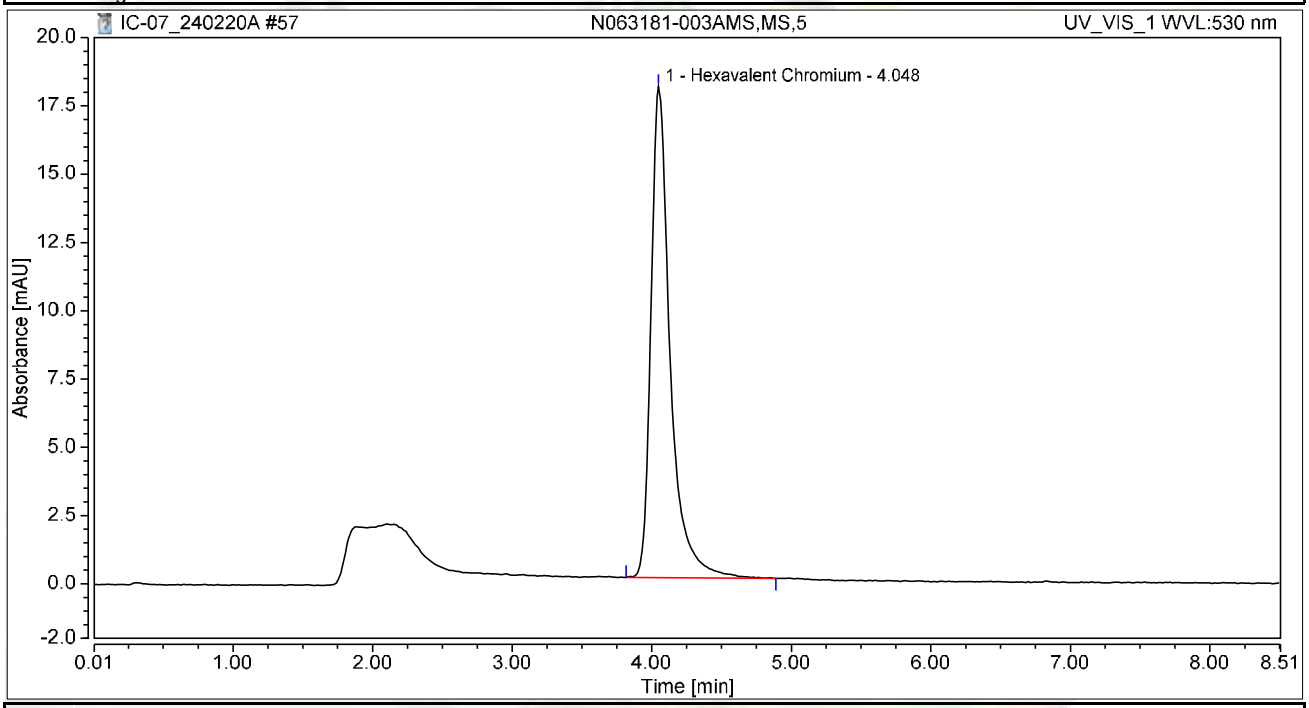
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.216	0.907	100.00	100.00	1.0029
Total:			**0.216**	**0.907**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 18:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

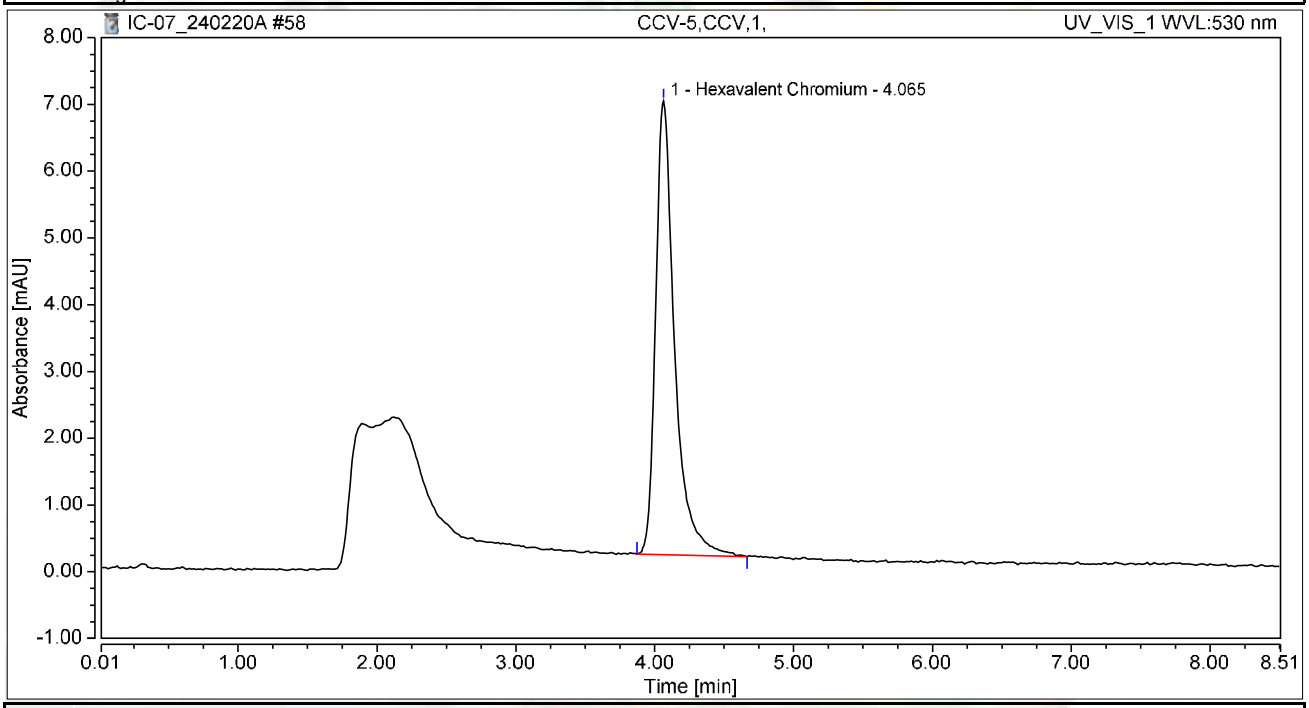
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.874	17.984	100.00	100.00	13.3614
Total:			**2.874**	**17.984**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 18:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

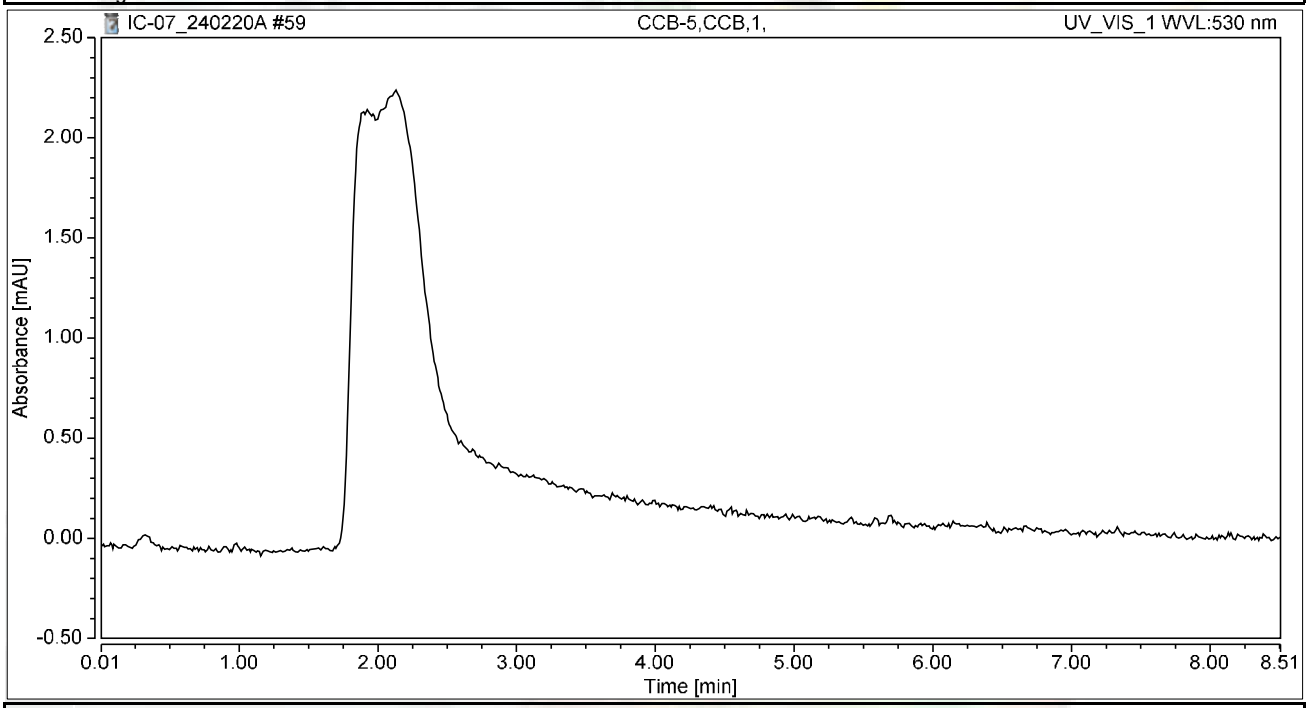
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	1.075	6.799	100.00	100.00	4.9957
Total:			**1.075**	**6.799**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 18:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

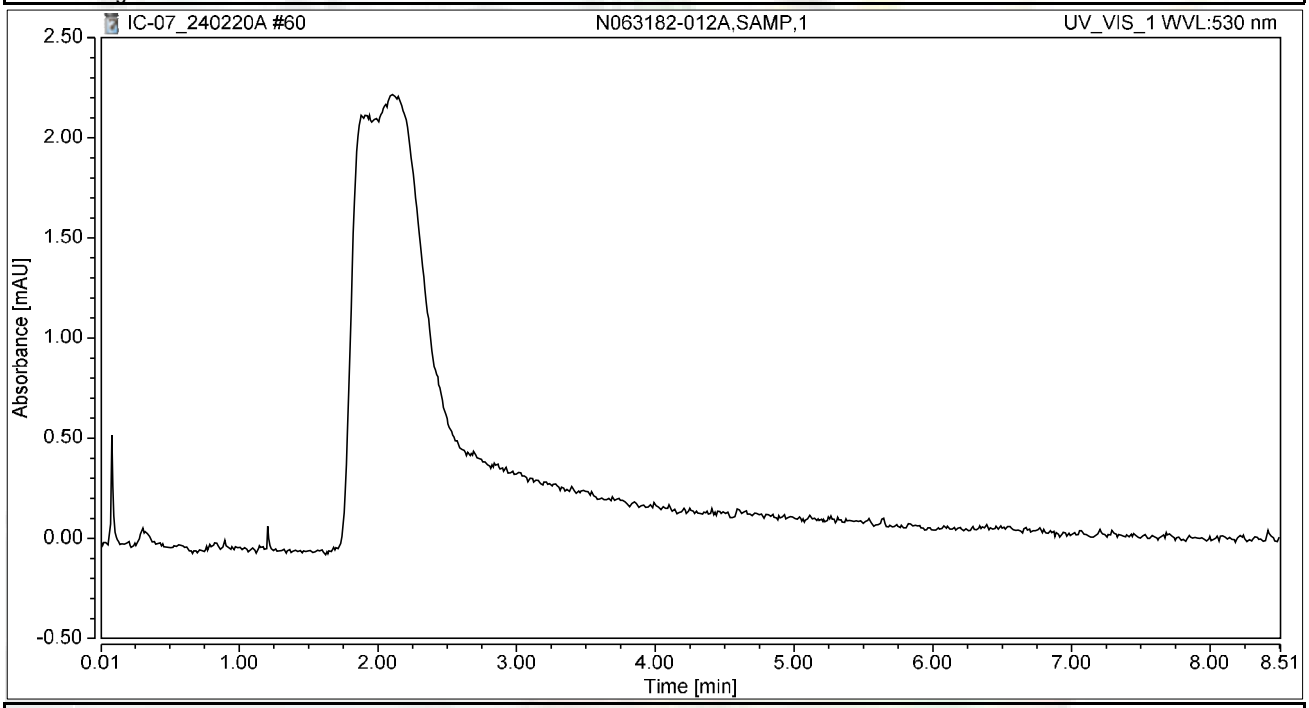
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-012A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 18:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

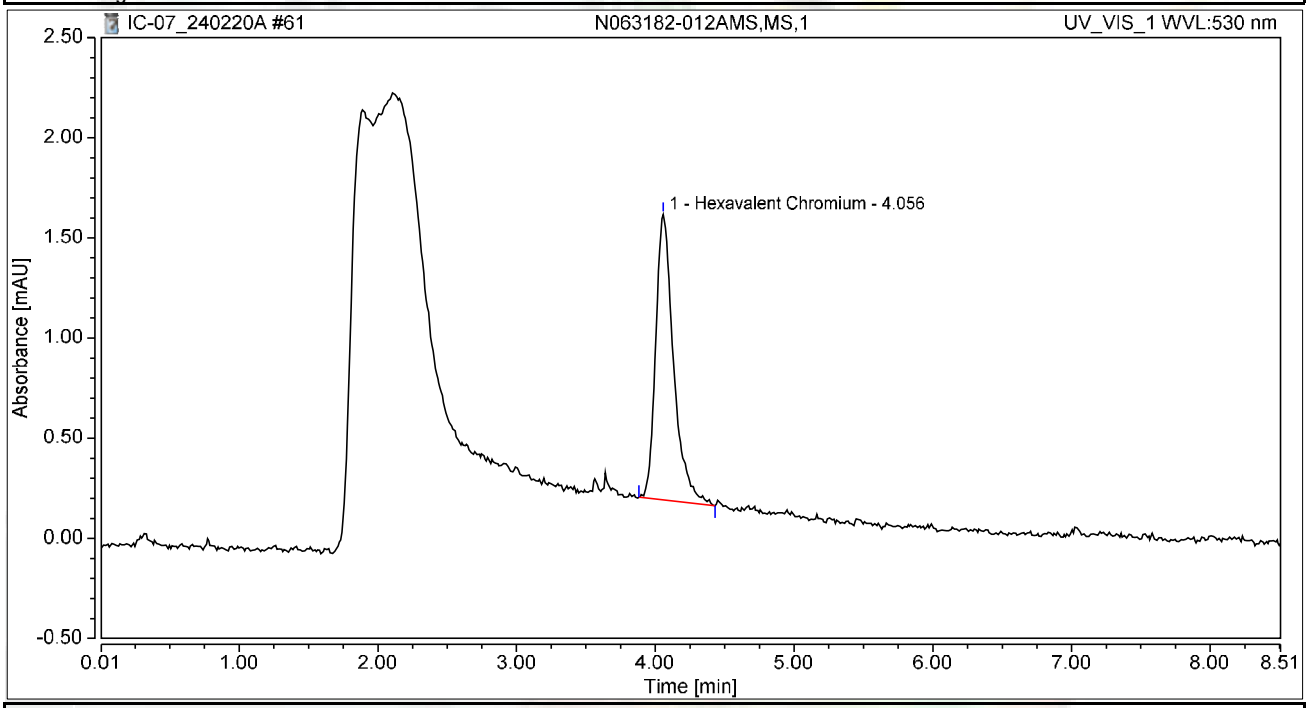
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-012AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 18:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

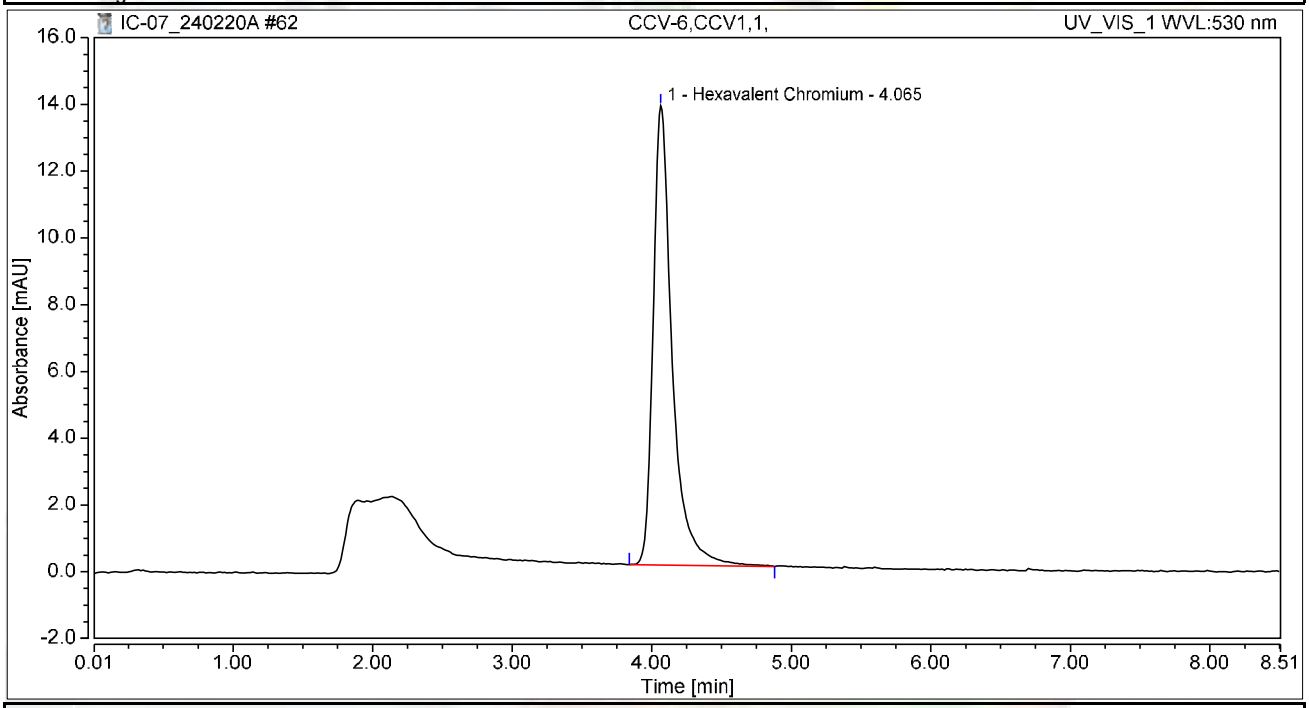
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.214	1.425	100.00	100.00	0.9940
Total:			**0.214**	**1.425**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 19:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

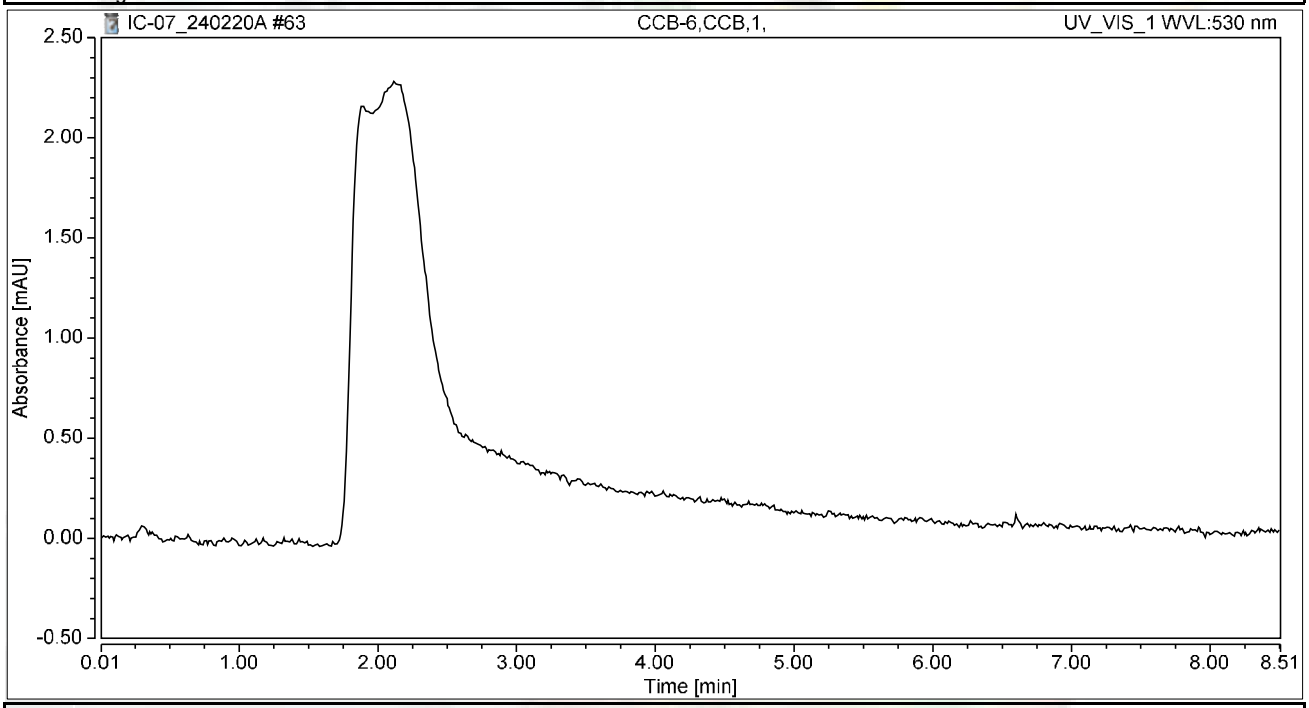
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	2.183	13.760	100.00	100.00	10.1484
Total:			**2.183**	**13.760**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 19:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

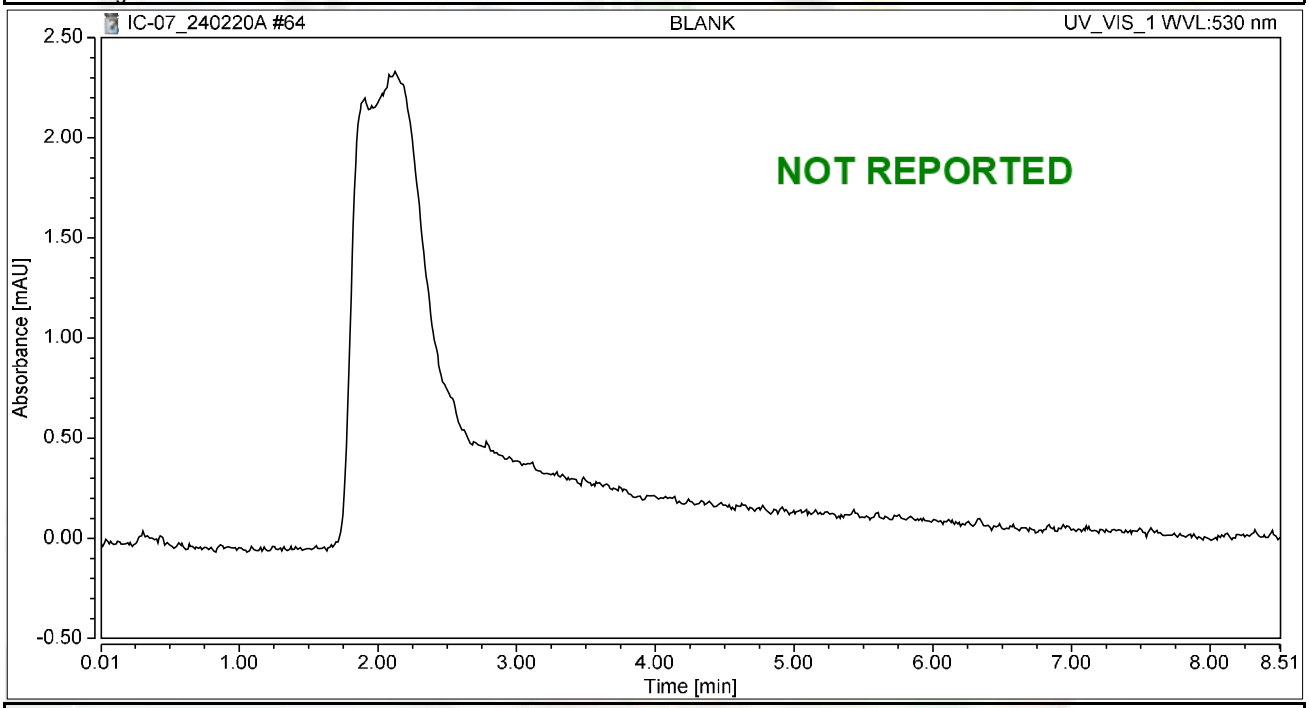
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 19:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

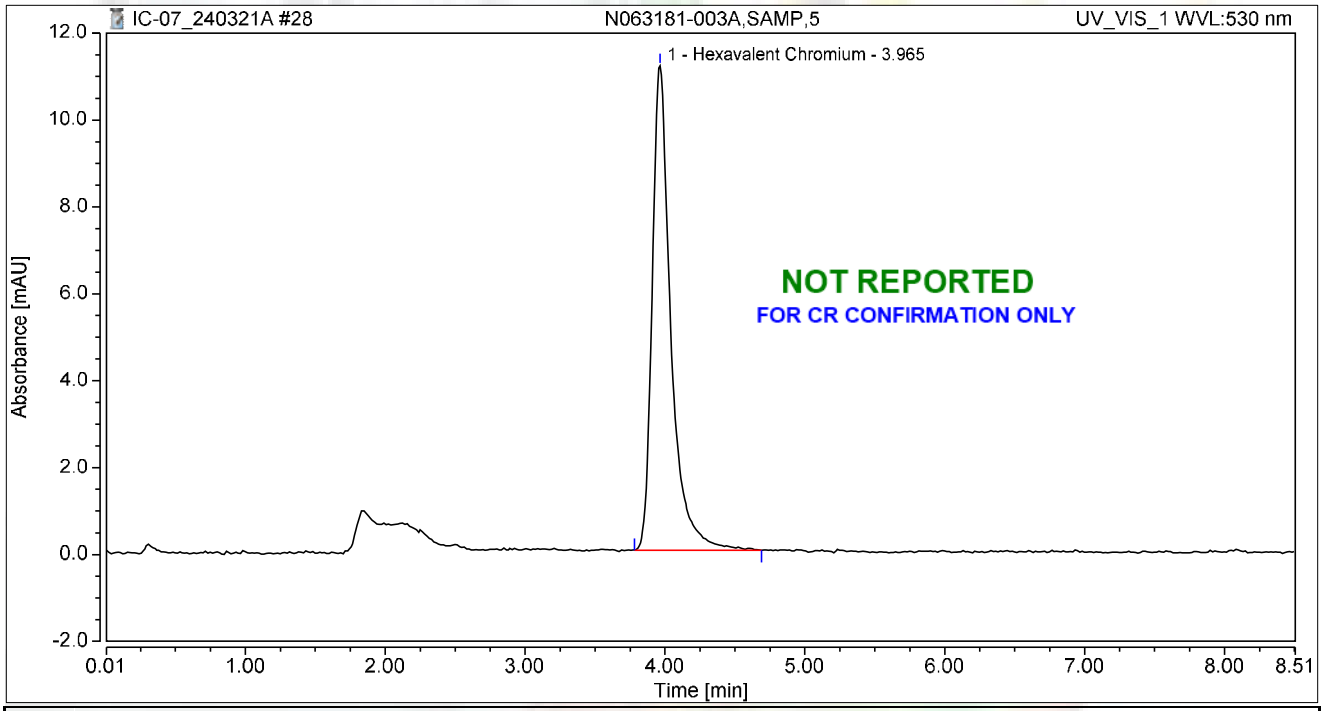
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Mar/24 13:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

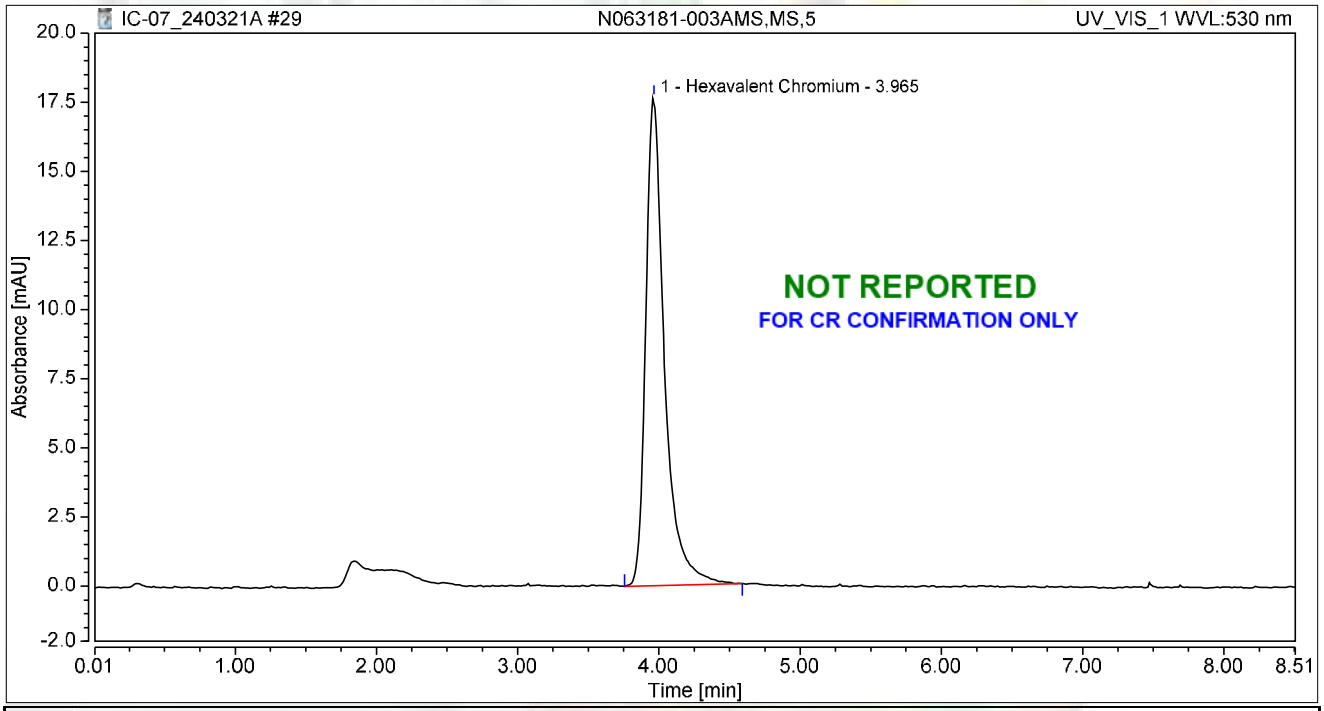
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	1.731	11.153	100.00	100.00	8.1316
Total:			**1.731**	**11.153**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Mar/24 13:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	2.723	17.660	100.00	100.00	12.7953
Total:			**2.723**	**17.660**	**100.00**	**100.00**	

EPA 300.0

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R182719
ASSET #: N063181 / N063182 / N063139

Instrument ID: IC-08
Analyst: RBA
Date Analyzed: 2/20/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)		X			X	
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

Detection of Sulfate in CCB1/2/5 was >1/2PQL. However, N063182 samples were >5X the CCB detection.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 2/25/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: GROUNDWATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the orignal sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N063181-001B** concentration in mg/L is calculated as follows:

Nitrate, mg/L = 1.2943 * 10

= 12.943

Reporting result in two significant figures,

Nitrate, mg/L = 13

Reviewed by:

dMRocha 3/14/2024

ANALYSIS RUN LOG

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 25
Created: 1/24/2024 9:39:27 AM by IC-05
Last Update: 1/24/2024 11:49:06 AM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240124	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240124	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240124	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240124	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240124	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240124	Finished
8	ICV,ICV,1	Unknown	9	1000.0	Anions Default	EPA 300_0_240124	Finished
9	ICB,ICB,1	Unknown	10	1000.0	Anions Default	EPA 300_0_240124	Finished
10	MB-H2O,MBLK,1	Unknown	11	1000.0	Anions Default	EPA 300_0_240124	Finished
11	LCS-H2O,LCS,1	Unknown	12	1000.0	Anions Default	EPA 300_0_240124	Finished
12	N062498-007A,SAMP,5	Unknown	13	1000.0	Anions Default	EPA 300_0_240124	Finished
13	N062498-007ADUP,DUP,5	Unknown	14	1000.0	Anions Default	EPA 300_0_240124	Finished
14	N062498-007AMS,MS,5	Unknown	15	1000.0	Anions Default	EPA 300_0_240124	Finished
15	N062498-007AMSD,MSD,5	Unknown	16	1000.0	Anions Default	EPA 300_0_240124	Finished
16	LCS-2,LCS,1	Unknown	17	1000.0	Anions Default	EPA 300_0_240124	Finished
17	MB-2,MBLK,1	Unknown	18	1000.0	Anions Default	EPA 300_0_240124	Finished
18	N062498-007A,SAMP,5	Unknown	19	1000.0	Anions Default	EPA 300_0_240124	Finished
19	N062498-007ADUP,DUP,5	Unknown	20	1000.0	Anions Default	EPA 300_0_240124	Finished
20	CCV-1,CCV,1	Unknown	21	1000.0	Anions Default	EPA 300_0_240124	Finished
21	CCB-1,CCB,1	Unknown	22	1000.0	Anions Default	EPA 300_0_240124	Finished
22	N062498-007AMS,MS,5	Unknown	23	1000.0	Anions Default	EPA 300_0_240124	Finished
23	N062498-007AMSD,MSD,5	Unknown	24	1000.0	Anions Default	EPA 300_0_240124	Finished
24	CCV-2,CCV,1	Unknown	33	1000.0	Anions Default	EPA 300_0_240124	Finished
25	CCB-2,CCB,1	Unknown	34	1000.0	Anions Default	EPA 300_0_240124	Finished

reviewed by: 1/31/2024

Processed by:
Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)

1/24/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 25
Created: 1/24/2024 9:39:27 AM by IC-05
Last Update: 1/24/2024 11:49:06 AM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	1/24/2024 9:41:36 AM	BLANK
2	Std - 0	1/24/2024 9:56:54 AM	IBLANK
3	Std - 1	1/24/2024 10:32:56 AM	STD-LOW
4	Std - 2	1/24/2024 10:48:14 AM	STD
5	Std - 3	1/24/2024 11:03:32 AM	STD
6	Std - 4	1/24/2024 11:18:50 AM	STD
7	Std - 5	1/24/2024 11:34:08 AM	STD-HIGH
8	ICV,ICV,1	1/24/2024 11:49:26 AM	ICV, IWST-240123B
9	ICB,ICB,1	1/24/2024 12:04:44 PM	CCB
10	MB-H2O,MBLK,1	1/24/2024 12:20:02 PM	MB
11	LCS-H2O,LCS,1	1/24/2024 12:35:19 PM	LCS, IWST-240123B
12	N062498-007A,SAMP,5	1/24/2024 12:50:38 PM	SAMP,2>10mL,
13	N062498-007ADUP,DUP,5	1/24/2024 1:05:56 PM	DUP,2>10mL,
14	N062498-007AMS,MS,5	1/24/2024 1:21:14 PM	MS,2>10mL,
15	N062498-007AMSD,MSD,5	1/24/2024 1:36:33 PM	MSD,2>10mL,
16	LCS-2,LCS,1	1/24/2024 1:51:51 PM	LCS, IWST-240123B
17	MB-2,MBLK,1	1/24/2024 2:07:09 PM	MB
18	N062498-007A,SAMP,5	1/24/2024 2:22:27 PM	SAMP,2>10mL,
19	N062498-007ADUP,DUP,5	1/24/2024 2:37:45 PM	DUP,2>10mL,
20	CCV-1,CCV,1	1/24/2024 2:53:03 PM	CCV, IWST-240123A
21	CCB-1,CCB,1	1/24/2024 3:08:21 PM	CCB
22	N062498-007AMS,MS,5	1/24/2024 3:23:40 PM	MS,2>10mL,
23	N062498-007AMSD,MSD,5	1/24/2024 3:38:58 PM	MSD,2>10mL,
24	CCV-2,CCV,1	1/24/2024 3:54:16 PM	CCV, IWST-240123A
25	CCB-2,CCB,1	1/24/2024 4:09:34 PM	CCB

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 50
Created: 2/19/2024 11:35:31 AM by IC-05
Last Update: 2/20/2024 1:56:27 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240124	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240124	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240124	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240124	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240124	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240124	Finished
8	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
9	CCV-1,CCV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
10	CCB-1,CCB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
11	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
12	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
13	N06369-001B,SAMP,5	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
14	N06369-002B,SAMP,5	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
N063169 15	N06369-003B,SAMP,5	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
16	N06369-001BDUP,DUP,5	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
17	N06369-003B,SAMP,10	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
18	N06369-001BMS,MS,5	Unknown	6	1000.0	Anions Default	EPA 300_0_240124	Finished
19	N06369-001BMSD,MSD,5	Unknown	7	1000.0	Anions Default	EPA 300_0_240124	Finished
20	N063182-008C,SAMP,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240124	Finished
21	CCV-2,CCV,1	Unknown	9	1000.0	Anions Default	EPA 300_0_240124	Finished
22	CCB-2,CCB,1	Unknown	10	1000.0	Anions Default	EPA 300_0_240124	Finished
23	N063182-011C,SAMP,10	Unknown	11	1000.0	Anions Default	EPA 300_0_240124	Finished
24	N063182-001C,SAMP,5	Unknown	12	1000.0	Anions Default	EPA 300_0_240124	Finished
25	N063182-003C,SAMP,5	Unknown	13	1000.0	Anions Default	EPA 300_0_240124	Finished
26	N063182-005C,SAMP,5	Unknown	14	1000.0	Anions Default	EPA 300_0_240124	Finished
27	N063182-009C,SAMP,5	Unknown	15	1000.0	Anions Default	EPA 300_0_240124	Finished
28	N063182-010C,SAMP,5	Unknown	16	1000.0	Anions Default	EPA 300_0_240124	Finished
29	N063181-001B,SAMP,10	Unknown	17	1000.0	Anions Default	EPA 300_0_240124	Finished
30	N063181-002B,SAMP,10	Unknown	18	1000.0	Anions Default	EPA 300_0_240124	Finished
31	N063181-003B,SAMP,10	Unknown	19	1000.0	Anions Default	EPA 300_0_240124	Finished
32	N063182-008CMS,MS,10	Unknown	20	1000.0	Anions Default	EPA 300_0_240124	Finished
33	CCV-3,CCV,1	Unknown	21	1000.0	Anions Default	EPA 300_0_240124	Finished
34	CCB-3,CCB,1	Unknown	22	1000.0	Anions Default	EPA 300_0_240124	Finished
35	N063182-008CMSD,MSD,10	Unknown	23	1000.0	Anions Default	EPA 300_0_240124	Finished
36	N063182-011CMS,MS,10	Unknown	24	1000.0	Anions Default	EPA 300_0_240124	Finished
37	N06139-001B,SAMP,5	Unknown	25	1000.0	Anions Default	EPA 300_0_240124	Finished
N063139 38	N06139-001BDUP,DUP,5	Unknown	26	1000.0	Anions Default	EPA 300_0_240124	Finished
39	N06139-001BMS,MS,5	Unknown	27	1000.0	Anions Default	EPA 300_0_240124	Finished
40	N06139-001BMSD,MSD,5	Unknown	28	1000.0	Anions Default	EPA 300_0_240124	Finished
41	N063182-008C,SAMP,100	Unknown	29	1000.0	Anions Default	EPA 300_0_240124	Finished

JRB 2/26/2024
for RBA
Processed by:

Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)

reviewed by: 2/21/2024

2/20/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 50
Created: 2/19/2024 11:35:31 AM by IC-05
Last Update: 2/20/2024 1:56:27 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	1/24/2024 9:41:36 AM	BLANK
2	Std - 0	1/24/2024 9:56:54 AM	IBLANK
3	Std - 1	1/24/2024 10:32:56 AM	STD-LOW
4	Std - 2	1/24/2024 10:48:14 AM	STD
5	Std - 3	1/24/2024 11:03:32 AM	STD
6	Std - 4	1/24/2024 11:18:50 AM	STD
7	Std - 5	1/24/2024 11:34:08 AM	STD-HIGH
8	BLANK	2/20/2024 7:56:08 AM	BLANK
9	CCV-1,CCV,1	2/20/2024 8:11:26 AM	CCV, IWST-240216A
10	CCB-1,CCB,1	2/20/2024 8:26:44 AM	CCB
11	MB-H2O,MBLK,1	2/20/2024 8:42:02 AM	MB
12	LCS-H2O,LCS,1	2/20/2024 8:57:21 AM	LCS, IWST-240216B
13	N06369-001B,SAMP,5	2/20/2024 9:48:29 AM	SAMP,2>10mL,
14	N06369-002B,SAMP,5	2/20/2024 10:03:47 AM	SAMP,2>10mL,
15	N06369-003B,SAMP,5	2/20/2024 10:19:05 AM	SAMP,2>10mL,
16	N06369-001BDUP,DUP,5	2/20/2024 10:44:59 AM	DUP,2>10mL,
17	N06369-003B,SAMP,10	2/20/2024 11:00:17 AM	SAMP,1>10mL,
18	N06369-001BMS,MS,5	2/20/2024 11:15:35 AM	MS,2>10mL,
19	N06369-001BMSD,MSD,5	2/20/2024 12:11:36 PM	MSD,2>10mL,
20	N063182-008C,SAMP,10	2/20/2024 1:17:14 PM	SAMP,1>10mL,
21	CCV-2,CCV,1	2/20/2024 1:53:51 PM	CCV, IWST-240216A
22	CCB-2,CCB,1	2/20/2024 2:09:09 PM	CCB
23	N063182-011C,SAMP,10	2/20/2024 2:24:26 PM	SAMP,1>10mL,
24	N063182-001C,SAMP,5	2/20/2024 2:39:44 PM	SAMP,2>10mL,
25	N063182-003C,SAMP,5	2/20/2024 2:55:02 PM	SAMP,2>10mL,
26	N063182-005C,SAMP,5	2/20/2024 3:10:20 PM	SAMP,2>10mL,
27	N063182-009C,SAMP,5	2/20/2024 3:25:38 PM	SAMP,2>10mL,
28	N063182-010C,SAMP,5	2/20/2024 3:40:56 PM	SAMP,2>10mL,
29	N063181-001B,SAMP,10	2/20/2024 3:56:13 PM	SAMP,1>10mL,
30	N063181-002B,SAMP,10	2/20/2024 4:11:31 PM	SAMP,1>10mL,
31	N063181-003B,SAMP,10	2/20/2024 4:26:50 PM	SAMP,1>10mL,
32	N063182-008CMS,MS,10	2/20/2024 4:42:08 PM	MS,1>10mL,
33	CCV-3,CCV,1	2/20/2024 4:57:27 PM	CCV, IWST-240216A
34	CCB-3,CCB,1	2/20/2024 5:12:45 PM	CCB
35	N063182-008CMSD,MSD,10	2/20/2024 5:28:03 PM	MSD,1>10mL,
36	N063182-011CMS,MS,10	2/20/2024 5:43:21 PM	MS,1>10mL,
37	N06139-001B,SAMP,5	2/20/2024 5:58:39 PM	SAMP,2>10mL,
38	N06139-001BDUP,DUP,5	2/20/2024 6:13:56 PM	DUP,2>10mL,
39	N06139-001BMS,MS,5	2/20/2024 6:29:15 PM	MS,2>10mL,
40	N06139-001BMSD,MSD,5	2/20/2024 6:44:33 PM	MSD,2>10mL,
41	N063182-008C,SAMP,100	2/20/2024 6:59:51 PM	SAMP,0.1>10mL,

N063169

N063139

JRB 2/26/2024
for RBA

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 50
Created: 2/19/2024 11:35:31 AM by IC-05
Last Update: 2/20/2024 1:56:27 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	N063182-008CDUP,DUP,100	Unknown	30	1000.0	Anions Default	EPA 300_0_240124	Finished
43	N063192-001F,SAMP,5	Unknown	31	1000.0	Anions Default	EPA 300_0_240124	Finished
44	N063192-002F,SAMP,5	Unknown	32	1000.0	Anions Default	EPA 300_0_240124	Finished
45	CCV-4,CCV,1	Unknown	33	1000.0	Anions Default	EPA 300_0_240124	Finished
46	CCB-4,CCB,1	Unknown	34	1000.0	Anions Default	EPA 300_0_240124	Finished
47	N063182-008CMS,MS,100	Unknown	35	1000.0	Anions Default	EPA 300_0_240124	Finished
48	N063182-008CMSD,MSD,100	Unknown	36	1000.0	Anions Default	EPA 300_0_240124	Finished
49	CCV-5,CCV,1	Unknown	35	1000.0	Anions Default	EPA 300_0_240124	Finished
50	CCB-5,CCB,1	Unknown	36	1000.0	Anions Default	EPA 300_0_240124	Finished

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 50
Created: 2/19/2024 11:35:31 AM by IC-05
Last Update: 2/20/2024 1:56:27 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	N063182-008CDUP,DUP,100	2/20/2024 7:15:10 PM	DUP,0.1>10mL,
43	N063192-001F,SAMP,5	2/20/2024 7:30:28 PM	SAMP,2>10mL,
44	N063192-002F,SAMP,5	2/20/2024 7:45:45 PM	SAMP,2>10mL,
45	CCV-4,CCV,1	2/20/2024 8:01:03 PM	CCV, IWST-240216A
46	CCB-4,CCB,1	2/20/2024 8:16:21 PM	CCB
47	N063182-008CMS,MS,100	2/20/2024 8:31:39 PM	MS,0.1>10mL,
48	N063182-008CMSD,MSD,100	2/20/2024 8:46:57 PM	MSD,0.1>10mL,
49	CCV-5,CCV,1	2/20/2024 9:02:16 PM	CCV, IWST-240216A
50	CCB-5,CCB,1	2/20/2024 9:17:34 PM	CCB

INITIAL CALIBRATION DATA SUMMARY

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 1/24/2024

Initial Calibration:

Nitrate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0159	0.0804	0.1690	0.4238	0.8850	1.000
Measured, in mg/L	0.000000	0.067900	0.249500	0.499300	1.217000	2.516400	
Relative Error (%RE)		35.8%		-0.1%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712E

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **ICV**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5701658**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.226	0.050	1.250	0	98.1	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCV**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701660**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.254	0.050	1.250	0	100	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCV**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701667**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.255	0.050	1.250	0	100	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCV**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701679**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.233	0.050	1.250	0	98.6	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCV**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701683**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.218	0.050	1.250	0	97.4	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **CCV-5** SampType: **CCV** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **182719**
Client ID: **CCV** Batch ID: **R182719** TestNo: **EPA 300.0** Analysis Date: **2/20/2024** SeqNo: **5701685**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.212	0.050	1.250	0	97.0	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **ICB**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5701659**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCB**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701661**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCB**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701668**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCB**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701680**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCB**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701684**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **CCB-5** SampType: **CCB** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **182719**
Client ID: **CCB** Batch ID: **R182719** TestNo: **EPA 300.0** Analysis Date: **2/20/2024** SeqNo: **5701686**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/20/2024

Sample Name		Retention Time	Evaluation
ICV	Nitrate	6.727	
CCV-1	Nitrate	6.580	
CCV-2	Nitrate	6.597	
CCV-3	Nitrate	6.630	
CCV-4	Nitrate	6.633	
CCV-5	Nitrate	6.620	
	Average	6.612	
	Applied RT Window	6.412 - 6.812	
MB-R182719_NO3	Nitrate	N.A.	N.A.
LCS-R182719_NO3	Nitrate	6.613	PASS
N063169-001BDUP	Nitrate	6.600	PASS
N063181-001B	Nitrate	6.593	PASS
N063181-002B	Nitrate	6.594	PASS
N063181-003B	Nitrate	6.597	PASS
N063182-008CMS	Nitrate	6.610	PASS
N063182-008CMSD	Nitrate	6.624	PASS
N063182-011CMS	Nitrate	6.607	PASS

Reviewed by:

dlRocha 3/14/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): 10/5/2022, 12/14/2022, 3/22/2023,7/10/2023; 10/3/2023 & 11/14/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: mg/L

Instrument Name: **IC-08 & IC-09**

Datafile IC-08 221005A #24 IC-08 221214A #30 IC-08 230322A #35 IC-08 230710A #13 IC-09 231003A #14 IC-08 231114A #24 IC-09 231114A #19

Analyte	#1	#2	#3	#4	#5	#6	#7	Spike Conc., mg/L	SD	$t_{(n-1)}$ value	MDLs	MDL	PQL
Fluoride	0.100	0.103	0.108	0.118	0.110	0.098	0.126	0.10	0.0101	3.143	**0.0318**	**0.0318**	0.10
Chloride	0.480	0.418	0.472	0.653	0.624	0.587	0.622	0.50	0.0922	3.143	**0.2898**	**0.2898**	0.50
Nitrite	0.068	0.061	0.060	0.071	0.063	0.061	0.070	0.05	0.0047	3.143	**0.0149**	**0.0149**	0.05
Bromide	0.526	0.502	0.509	0.522	0.536	0.527	0.520	0.50	0.0116	3.143	**0.0364**	**0.0364**	0.50
Nitrate	0.073	0.058	0.059	0.073	0.074	0.068	0.073	0.05	0.0068	3.143	**0.0215**	**0.0240**	0.05
Phosphate	0.112	0.096	0.114	0.120	0.130	0.093	0.124	0.10	0.0138	3.143	**0.0433**	**0.0433**	0.10
Sulfate	0.501	0.609	0.638	0.401	0.704	0.620	0.697	0.50	0.1092	3.143	**0.3432**	**0.3432**	0.50

METHOD DETECTION LIMIT (Blanks)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Analyte	MDLb	# of Records
Fluoride	0	63
Chloride	0.1456	80
Nitrite	0.0147	64
Bromide	0	18
Nitrate	0.0240	132
Phosphate	0.0237	34
Sulfate	0.2579	107

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

EPA 6020
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106973
ASSET #: N063181

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/22/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.		X			X	
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?		X			X	
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?	X			X		
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

Cr is OLR in N063181-001C / 002C. For rerun.
N063181-003A (first run) = ~~42~~ 32 ug/L ; confirmation: 31 ug/L ; N063181-003C (218.6) = ~~32~~ 42 ug/L ; confirmation: 42 ug/L

	Yes	No	N/A
1. All assigned sample(s) analyzed	x		
2. Matrix / units correct	x		
3. Does batch meet QC requirements?	x		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	x		
5. Is first level review correct and complete?	x		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 3/4/2024 Date: _____

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106973
ASSET #: N063181

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/23/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.			X			X
24. LCS compounds within control limits.			X			X
25. MS/MSD, RPD's are within control limits			X			X
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

Cr dilution

	Yes	No	N/A
1. All assigned sample(s) analyzed			
2. Matrix / units correct			
3. Does batch meet QC requirements?			
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)			
5. Is first level review correct and complete?			

1st Level Reviewer _____ Date: _____

2nd Level Reviewer _____ Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Groundwater

FORMULA:

Calculate the Molybdenum concentration, in ug/L in the original sample as follows:

Molybdenum , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063181-001C** , the concentration in ug/L is calculated as follows:

Molybdenum , ug/L = 22.9239598 * 1 *(25 / 25)

Molybdenum , ug/L = 22.9239598

Reporting results in two significant figures,

Molybdenum , ug/L = 23

Reviewed by:

JRB 3/24/2024

% RSD SUMMARY

PERCENT RSD SUMMARY: 240222A

Instrument ID: ICPMS-03

Sample Name	Type	DF	52 Cr [2]				78 Se [1]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.07	31.547	15	<PQL	0.1	63.627	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.47	0.627	15	PASS	0.52	9.736	15	PASS
Std3-5/50 ppb	ICAL	1	4.74	0.356	15	PASS	4.67	6.506	15	PASS
Std4-10/100 ppb	ICAL	1	9.88	0.535	15	PASS	9.88	4.324	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.73	1.193	15	PASS	19.19	3.838	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.68	0.757	15	PASS	39.59	1.829	15	PASS
Std7-100/1000 ppb	ICAL	1	100.73	1.369	15	PASS	99.54	1.317	15	PASS
Std8-200/2000 ppb	ICAL	1	199.74	0.438	15	PASS	200.41	1.785	15	PASS
ICV	ICV	1	10.33	0.269	15	PASS	10.2	0.787	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	0.03	36.014	15	<PQL
LLICV1	CCV1	1	1.03	0.148	20	PASS	0.59	12.303	20	PASS
MLCCV	CCV	1	19.78	0.827	15	PASS	19.89	4.597	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL	0.01	57.769	15	<PQL
ICSAB1	ICSAB	1	20.51	1.034	15	PASS	20.38	2.016	15	PASS
CCV1	CCV	1	20.35	0.795	15	PASS	19.75	2.282	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL	0.02	121.428	15	<PQL
CCV2	CCV	1	20.33	1.204	15	PASS	20.51	2.072	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	0.03	76.467	15	<PQL
CCV3	CCV	1	20.22	0.901	15	PASS	21.11	3.366	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL	0.04	76.434	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL	0.03	51.79	15	<PQL
ICSAB2	ICSAB	1	21.08	0.778	15	PASS	20.82	3.098	15	PASS
CCV4	CCV	1	20.3	0.895	15	PASS	20.41	1.409	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL	0	353.314	15	<PQL
CCV5	CCV	1	20.3	2.62	15	PASS	20.5	4.756	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	0.02	49.505	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	0.01	120.961	15	<PQL
ICSAB3	ICSAB	1	20.83	0.594	15	PASS	20.88	2.085	15	PASS
CCV6	CCV	1	20.42	0.838	15	PASS	20.78	0.676	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL	0.01	160.723	15	<PQL
CCV7	CCV	1	20.67	2.559	15	PASS	19.88	1.768	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	0.01	44.063	15	<PQL
MDL 4	SAMP	1	1.1	4.729	15	PASS	0.52	3.467	15	PASS
MDL 4	SAMP	1	1.08	1.721	15	PASS	0.59	21.584	15	NR!
CCV8	CCV	1	20.81	0.73	15	PASS	20.45	3.078	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL	0	202.671	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL	0.02	106.789	15	<PQL
ICSAB4	ICSAB	1	21.31	1.405	15	PASS	20.99	2.437	15	PASS
MB-106973	MBLK	1	<0.000	N/A	15	<PQL	0	400.223	15	<PQL
LCS-106973	LCS	1	10.44	1.796	15	PASS	10.35	1.82	15	PASS

PERCENT RSD SUMMARY: 240222A

Instrument ID: ICPMS-03

Sample Name	Type	DF	52 Cr [2]				78 Se [1]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063181-001C	SAMP	1	281.19	0.63	15	PASS	9.59	3.72	15	PASS
N063181-002C	SAMP	1	438.73	0.778	15	PASS	6.6	3.634	15	PASS
N063181-003C	SAMP	1	31.84	0.849	15	PASS	4.38	1.719	15	PASS
N063181-003C	SAMP	5	6.6	1.612	15	PASS	0.92	2.546	15	PASS
N063181-003C-PS	PS	1	42.49	0.872	15	PASS	14.12	5.093	15	PASS
N063181-003C-MS	MS	1	41.72	2.309	15	PASS	14.16	0.421	15	PASS
N063181-003C-MSD	MSD	1	42.16	0.903	15	PASS	14.31	2.751	15	PASS
CCV9	CCV	1	20.51	2.015	15	PASS	20.61	1.618	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL	0.03	116.396	15	<PQL
N063182-001B	SAMP	1	0.03	43.567	15	<PQL	0.29	18.707	15	<PQL
N063182-003B	SAMP	1	0.03	45.124	15	<PQL	0.07	52.292	15	<PQL
N063182-005B	SAMP	1	0.11	15.807	15	<PQL	0.08	29.074	15	<PQL
N063182-008B	SAMP	1	43.17	0.466	15	PASS	0.23	20.803	15	<PQL
N063182-009B	SAMP	1	<0.000	N/A	15	<PQL	0.02	133.071	15	<PQL
N063182-010B	SAMP	1	0.05	38.6	15	<PQL	0.08	41.332	15	<PQL
N063182-011B	SAMP	1	0.3	8.719	15	PASS	0.43	5.01	15	PASS
CCV10	CCV	1	20.16	1.681	15	PASS	20.97	2.876	15	PASS
CCB10	CCB	1	<0.000	N/A	15	<PQL	0.01	128.091	15	<PQL
ICSA5	ICSA	1	<0.000	N/A	15	<PQL	0.02	61.6	15	<PQL
ICSAB5	ICSAB	1	20.69	1.231	15	PASS	20.68	1.292	15	PASS
CCV11	CCV	1	20.59	0.699	15	PASS	21.31	2.052	15	PASS
CCB11	CCB	1	<0.000	N/A	15	<PQL	0.01	120.335	15	<PQL
CCV12	CCV	1	20.14	1.498	15	PASS	21.51	1.957	15	PASS
CCB12	CCB	1	<0.000	N/A	15	<PQL	0.02	79.354	15	<PQL
CCV13	CCV	1	20.35	0.135	15	PASS	21.47	1.148	15	PASS
CCB13	CCB	1	<0.000	N/A	15	<PQL	0.01	108.008	15	<PQL
ICSA6	ICSA	1	<0.000	N/A	15	<PQL	0	216.8	15	<PQL
ICSAB6	ICSAB	1	21.44	0.844	15	PASS	22.7	2.144	15	PASS
CCV14	CCV	1	20.9	0.769	15	PASS	22.1	1.16	15	PASS
CCB14	CCB	1	<0.000	N/A	15	<PQL	0	200.122	15	<PQL
ICSA7	ICSA	1	<0.000	N/A	15	<PQL	0	201.48	15	<PQL
ICSAB7	ICSAB	1	21.93	0.537	15	PASS	22.4	2.15	15	PASS

PERCENT RSD SUMMARY: 240222A

Instrument ID: ICPMS-03

Sample Name	Type	DF	95 Mo [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.1	3.03	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.48	8.205	15	PASS
Std3-5/50 ppb	ICAL	1	4.75	0.465	15	PASS
Std4-10/100 ppb	ICAL	1	9.61	0.622	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.42	1.184	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.52	1.095	15	PASS
Std7-100/1000 ppb	ICAL	1	100.36	1.077	15	PASS
Std8-200/2000 ppb	ICAL	1	200	0.111	15	PASS
ICV	ICV	1	10.13	0.443	15	PASS
ICB	ICB	1	0.07	20.992	15	<PQL
LLICV1	CCV1	1	0.57	5.662	20	PASS
MLCCV	CCV	1	19.45	0.488	15	PASS
ICSA1	ICSA	1	0.05	2.168	15	PASS
ICSAB1	ICSAB	1	20.02	0.661	15	PASS
CCV1	CCV	1	19.6	1.325	15	PASS
CCB1	CCB	1	0.04	8.573	15	PASS
CCV2	CCV	1	19.45	1.329	15	PASS
CCB2	CCB	1	0.06	20.324	15	<PQL
CCV3	CCV	1	19.54	1.48	15	PASS
CCB3	CCB	1	0.06	22.786	15	<PQL
ICSA2	ICSA	1	0.03	16.241	15	<PQL
ICSAB2	ICSAB	1	19.61	1.121	15	PASS
CCV4	CCV	1	19.42	0.489	15	PASS
CCB4	CCB	1	0.05	17.408	15	<PQL
CCV5	CCV	1	19.15	1.085	15	PASS
CCB5	CCB	1	0.04	16.456	15	<PQL
ICSA3	ICSA	1	0.01	66.299	15	<PQL
ICSAB3	ICSAB	1	19.77	0.983	15	PASS
CCV6	CCV	1	19.55	0.639	15	PASS
CCB6	CCB	1	0.04	16.34	15	<PQL
CCV7	CCV	1	19.31	0.351	15	PASS
CCB7	CCB	1	0.04	28.806	15	<PQL
MDL 4	SAMP	1	0.53	6.161	15	PASS
MDL 4	SAMP	1	0.5	8.382	15	PASS
CCV8	CCV	1	19.5	0.773	15	PASS
CCB8	CCB	1	0.04	19.154	15	<PQL
ICSA4	ICSA	1	0.01	39.278	15	<PQL
ICSAB4	ICSAB	1	19.75	1.404	15	PASS
MB-106973	MBLK	1	0.04	12.5	15	PASS
LCS-106973	LCS	1	10	0.507	15	PASS

PERCENT RSD SUMMARY: 240222A

Instrument ID: ICPMS-03

Sample Name	Type	DF	95 Mo [2]			
			Conc. [ppb]	RSD	Criteria	Comment
N063181-001C	SAMP	1	22.92	1.999	15	PASS
N063181-002C	SAMP	1	22.17	1.077	15	PASS
N063181-003C	SAMP	1	61.52	0.757	15	PASS
N063181-003C	SAMP	5	12.09	0.668	15	PASS
N063181-003C-PS	PS	1	74.04	0.412	15	PASS
N063181-003C-MS	MS	1	73.54	0.746	15	PASS
N063181-003C-MSD	MSD	1	72.94	0.906	15	PASS
CCV9	CCV	1	19.27	1.017	15	PASS
CCB9	CCB	1	0.05	22.233	15	<PQL
N063182-001B	SAMP	1	7.05	2.101	15	PASS
N063182-003B	SAMP	1	4.43	1.65	15	PASS
N063182-005B	SAMP	1	30.4	0.495	15	PASS
N063182-008B	SAMP	1	114.19	1.148	15	PASS
N063182-009B	SAMP	1	16.66	0.114	15	PASS
N063182-010B	SAMP	1	7.88	0.427	15	PASS
N063182-011B	SAMP	1	43.31	0.581	15	PASS
CCV10	CCV	1	19.76	2.641	15	PASS
CCB10	CCB	1	0.04	19.816	15	<PQL
ICSA5	ICSA	1	0.02	45.435	15	<PQL
ICSAB5	ICSAB	1	20.39	1.678	15	PASS
CCV11	CCV	1	19.51	0.256	15	PASS
CCB11	CCB	1	0.04	15.977	15	<PQL
CCV12	CCV	1	19.64	0.711	15	PASS
CCB12	CCB	1	0.05	9.767	15	PASS
CCV13	CCV	1	19.71	1.323	15	PASS
CCB13	CCB	1	0.04	13.153	15	PASS
ICSA6	ICSA	1	0.02	42.981	15	<PQL
ICSAB6	ICSAB	1	20.27	2.508	15	PASS
CCV14	CCV	1	19.47	0.989	15	PASS
CCB14	CCB	1	0.05	14.651	15	PASS
ICSA7	ICSA	1	0.01	67.64	15	<PQL
ICSAB7	ICSAB	1	19.81	0.631	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	52 Cr [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	27.827	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.47	5.773	15	PASS
Std3-5/50 ppb	ICAL	1	4.77	0.723	15	PASS
Std4-10/100 ppb	ICAL	1	9.94	1.066	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.89	0.288	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.64	0.082	15	PASS
Std7-100/1000 ppb	ICAL	1	99.08	1.027	15	PASS
Std8-200/2000 ppb	ICAL	1	200.55	1.19	15	PASS
ICV	ICV	1	10.18	2.082	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL
LLICV1	LLICV	1	1.11	4.614	20	PASS
MLCCV	CCV	1	19.98	1.349	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.29	1.068	15	PASS
MDL 4	ICAL	1	1.12	4.927	15	PASS
CCV1	CCV	1	19.78	1.439	15	PASS
CCB1	CCB	1	1	2.109	15	PASS
CCV2	CCV	1	19.95	1.632	15	PASS
CCB2	CCB	1	1.01	4.255	15	PASS
CCV3	CCV	1	19.93	1.068	15	PASS
CCB3	CCB	1	1.03	2.12	15	PASS
CCV4	CCV	1	20.13	0.256	15	PASS
CCB4	CCB	1	1	1.063	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	0.33	4.345	15	PASS
ICSAB2	ICSAB	1	20.46	0.376	15	PASS
CCV5	CCV	1	20.37	1.139	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	0.33	8.05	15	PASS
ICSAB3	ICSAB	1	20.28	1.359	15	PASS
N063181-001C	SAMP	10	28.97	0.829	15	PASS
N063181-002C	SAMP	10	46.72	1.343	15	PASS
N063182-001B	SAMP	1	0.08	14.651	15	PASS
N063182-003B	SAMP	1	0.08	11.343	15	PASS
N063182-003B	SAMP	10	<0.000	N/A	15	<PQL
N063182-005B	SAMP	1	0.08	10.124	15	PASS
N063182-005B	SAMP	10	<0.000	N/A	15	<PQL
N063182-008B	SAMP	1	41.15	0.364	15	PASS
N063182-009B	SAMP	1	0.02	36.409	15	<PQL
N063182-009B	SAMP	10	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	52 Cr [2]			
			Conc. [ppb]	RSD	Criteria	Comment
CCV6	CCV	1	19.7	1.202	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL
N063182-009B	SAMP	1	0.02	17.84	15	<PQL
N063182-009B	SAMP	1	0.02	26.526	15	<PQL
N063182-009B	SAMP	1	0.02	20.236	15	<PQL
N063182-009B	SAMP	1	0.02	61.396	15	<PQL
N063182-010B	SAMP	10	0.05	16.476	15	<PQL
N063182-011B	SAMP	1	0.25	7.681	15	PASS
N063182-011B	SAMP	100	<0.000	N/A	15	<PQL
CCV7	CCV	1	19.64	0.349	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	0.34	1.824	15	PASS
ICSAB4	ICSAB	1	20.09	1.756	15	PASS
CCV8	CCV	1	20.51	1.021	15	PASS
CCB8	CCB	1	0	1036.098	15	<PQL
CCV9	CCV	1	19.57	0.633	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL
CCV10	CCV	1	19.81	1.03	15	PASS
CCB10	CCB	1	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	0.33	4.609	15	PASS
ICSAB5	ICSAB	1	20.04	0.07	15	PASS
CCV11	CCV	1	19.72	1.941	15	PASS
CCB11	CCB	1	0.01	134.014	15	<PQL
CCV12	CCV	1	19.39	0.576	15	PASS
CCB12	CCB	1	<0.000	N/A	15	<PQL
CCV13	CCV	1	19.49	0.464	15	PASS
CCB13	CCB	1	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	0.33	4.478	15	PASS
ICSAB6	ICSAB	1	20.12	0.449	15	PASS
CCV14	CCV	1	19.61	1.985	15	PASS
CCB14	CCB	1	<0.000	N/A	15	<PQL
CCV15	CCV	1	19.53	1.006	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL
CCV16	CCV	1	19.76	0.985	15	PASS
CCB16	CCB	1	<0.000	N/A	15	<PQL
ICSA7	ICSA	1	0.32	9.091	15	PASS
ICSAB7	ICSAB	1	19.91	0.754	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240222A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0222001.d	RINSE	ICAL	1	02/22/24 2:44 PM
A0222002.d	Cal Blk	IBLK	1	02/22/24 2:49 PM
A0222003.d	Std1-0.1/1 ppb	ICAL	1	02/22/24 2:54 PM
A0222004.d	Std2-0.5/5 ppb	ICAL	1	02/22/24 2:58 PM
A0222005.d	Std3-5/50 ppb	ICAL	1	02/22/24 3:03 PM
A0222006.d	Std4-10/100 ppb	ICAL	1	02/22/24 3:08 PM
A0222007.d	Std5-4.0/20/200 ppb	ICAL	1	02/22/24 3:13 PM
A0222008.d	Std6-8.0/40/400 ppb	ICAL	1	02/22/24 3:17 PM
A0222009.d	Std7-100/1000 ppb	ICAL	1	02/22/24 3:22 PM
A0222010.d	Std8-200/2000 ppb	ICAL	1	02/22/24 3:27 PM
A0222011.d	ICV	ICV	1	02/22/24 3:38 PM
A0222012.d	ICB	ICB	1	02/22/24 3:42 PM
A0222013.d	LLICV1	CCV1	1	02/22/24 3:47 PM
A0222014.d	MLCCV	CCV	1	02/22/24 3:52 PM
A0222015.d	ICSA1	ICSA	1	02/22/24 3:56 PM
A0222016.d	ICSAB1	ICSAB	1	02/22/24 4:01 PM
A0222017.d	MB-107001	MBLK	1	02/22/24 4:08 PM
A0222018.d	LCS-107001	LCS	1	02/22/24 4:12 PM
A0222019.d	N063209-001A	SAMP	1	02/22/24 4:17 PM
A0222020.d	N063209-001A	SAMP	5	02/22/24 4:22 PM
A0222021.d	N063209-001A-PS	PS	1	02/22/24 4:26 PM
A0222022.d	N063209-001A-MS	MS	1	02/22/24 4:31 PM
A0222023.d	N063209-001A-MSD	MSD	1	02/22/24 4:35 PM
A0222024.d	N063210-001A	SAMP	1	02/22/24 4:40 PM
A0222025.d	CCV1	CCV	1	02/22/24 4:45 PM
A0222026.d	CCB1	CCB	1	02/22/24 4:49 PM
A0222027.d	MB-106379	MBLK	1	02/22/24 4:54 PM
A0222028.d	LCS-106379	LCS	1	02/22/24 4:59 PM
A0222029.d	N062498-001A	SAMP	1	02/22/24 5:03 PM
A0222030.d	N062498-001A	SAMP	5	02/22/24 5:10 PM
A0222031.d	N062498-001A	SAMP	25	02/22/24 5:14 PM
A0222032.d	N062640-001A	SAMP	1	02/22/24 5:19 PM
A0222033.d	N062640-001A	SAMP	5	02/22/24 5:24 PM
A0222034.d	N062640-001A-PS	PS	1	02/22/24 5:28 PM
A0222035.d	N062640-001A-MS	MS	1	02/22/24 5:33 PM
A0222036.d	N062640-001A-MSD	MSD	1	02/22/24 5:38 PM
A0222037.d	CCV2	CCV	1	02/22/24 5:42 PM
A0222038.d	CCB2	CCB	1	02/22/24 5:47 PM
A0222039.d	MB-106386	MBLK	1	02/22/24 5:52 PM
A0222040.d	LCS-106386	LCS	1	02/22/24 5:56 PM
A0222041.d	N062498-001A	SAMP	1	02/22/24 6:01 PM
A0222042.d	N062498-001A	SAMP	5	02/22/24 6:05 PM

INJECTION LOG: 240222A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0222043.d	N062498-001A	SAMP	25	02/22/24 6:10 PM
A0222044.d	N062338-001C	SAMP	1	02/22/24 6:15 PM
A0222045.d	N062338-001C	SAMP	5	02/22/24 6:19 PM
A0222046.d	N062338-001C-PS	PS	1	02/22/24 6:24 PM
A0222047.d	N062338-001C-MS	MS	1	02/22/24 6:29 PM
A0222048.d	N062338-001C-MSD	MSD	1	02/22/24 6:33 PM
A0222049.d	CCV3	CCV	1	02/22/24 6:38 PM
A0222050.d	CCB3	CCB	1	02/22/24 6:43 PM
A0222051.d	ICSA2	ICSA	1	02/22/24 6:47 PM
A0222052.d	ICSAB2	ICSAB	1	02/22/24 6:52 PM
A0222053.d	MB-106955	MBLK	1	02/22/24 6:57 PM
A0222054.d	LCS-106955	LCS	1	02/22/24 7:01 PM
A0222055.d	N063150-001A	SAMP	1	02/22/24 7:06 PM
A0222056.d	N063150-002A	SAMP	1	02/22/24 7:11 PM
A0222057.d	N063159-001E	SAMP	1	02/22/24 7:15 PM
A0222058.d	N063159-002E	SAMP	1	02/22/24 7:20 PM
A0222059.d	N063159-003E	SAMP	1	02/22/24 7:25 PM
A0222060.d	N063168-002A	SAMP	1	02/22/24 7:29 PM
A0222061.d	N063168-002A	SAMP	5	02/22/24 7:34 PM
A0222062.d	CCV4	CCV	1	02/22/24 7:39 PM
A0222063.d	CCB4	CCB	1	02/22/24 7:43 PM
A0222064.d	N063168-002A-PS	PS	1	02/22/24 7:48 PM
A0222065.d	N063168-002A-MS	MS	1	02/22/24 7:53 PM
A0222066.d	N063168-002A-MSD	MSD	1	02/22/24 7:57 PM
A0222067.d	N063176-001C	SAMP	1	02/22/24 8:02 PM
A0222068.d	N063168-002A	SAMP	10	02/22/24 8:07 PM
A0222069.d	N063168-002A	SAMP	50	02/22/24 8:11 PM
A0222070.d	N063168-002A-PS	PS	10	02/22/24 8:16 PM
A0222071.d	N063168-002A-MS	MS	10	02/22/24 8:21 PM
A0222072.d	N063168-002A-MSD	MSD	10	02/22/24 8:25 PM
A0222073.d	N063176-001C	SAMP	10	02/22/24 8:30 PM
A0222074.d	CCV5	CCV	1	02/22/24 8:35 PM
A0222075.d	CCB5	CCB	1	02/22/24 8:39 PM
A0222076.d	ICSA3	ICSA	1	02/22/24 8:44 PM
A0222077.d	ICSAB3	ICSAB	1	02/22/24 8:49 PM
A0222078.d	MB-107002	MBLK	1	02/22/24 8:53 PM
A0222079.d	LCS-107002	LCS	1	02/22/24 8:58 PM
A0222080.d	N063186-001C	SAMP	5	02/22/24 9:02 PM
A0222081.d	N063186-001C	SAMP	25	02/22/24 9:07 PM
A0222082.d	N063186-002C	SAMP	5	02/22/24 9:12 PM
A0222083.d	N063186-002C	SAMP	25	02/22/24 9:17 PM
A0222084.d	N063193-001A	SAMP	1	02/22/24 9:21 PM

INJECTION LOG: 240222A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
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A0222086.d	N063193-003A	SAMP	1	02/22/24 9:30 PM
A0222087.d	RINSE	ICAL	1	02/22/24 9:35 PM
A0222088.d	CCV6	CCV	1	02/22/24 9:40 PM
A0222089.d	CCB6	CCB	1	02/22/24 9:45 PM
A0222090.d	N063193-004A	SAMP	1	02/22/24 9:49 PM
A0222091.d	N063193-004A	SAMP	5	02/22/24 9:54 PM
A0222092.d	N063193-004A-PS	PS	1	02/22/24 9:58 PM
A0222093.d	N063193-004A-MS	MS	1	02/22/24 10:03 PM
A0222094.d	N063193-004A-MSD	MSD	1	02/22/24 10:08 PM
A0222095.d	N063195-001A	SAMP	1	02/22/24 10:12 PM
A0222096.d	N063195-002A	SAMP	1	02/22/24 10:17 PM
A0222097.d	N063195-003A	SAMP	1	02/22/24 10:22 PM
A0222098.d	N063195-004A	SAMP	1	02/22/24 10:26 PM
A0222099.d	RINSE	ICAL	1	02/22/24 10:31 PM
A0222100.d	CCV7	CCV	1	02/22/24 10:36 PM
A0222101.d	CCB7	CCB	1	02/22/24 10:40 PM
A0222102.d	N063201-001D	SAMP	1	02/22/24 10:45 PM
A0222103.d	N063201-001D-MS	MS	1	02/22/24 10:50 PM
A0222104.d	RINSE	ICAL	1	02/22/24 10:54 PM
A0222105.d	MDL 4	SAMP	1	02/22/24 10:59 PM
A0222106.d	MDL 4	SAMP	1	02/22/24 11:04 PM
A0222107.d	CCV8	CCV	1	02/22/24 11:08 PM
A0222108.d	CCB8	CCB	1	02/22/24 11:13 PM
A0222109.d	ICSA4	ICSA	1	02/22/24 11:18 PM
A0222110.d	ICSAB4	ICSAB	1	02/22/24 11:22 PM
A0222111.d	MB-106973	MBLK	1	02/22/24 11:27 PM
A0222112.d	LCS-106973	LCS	1	02/22/24 11:32 PM
A0222113.d	N063181-001C	SAMP	1	02/22/24 11:36 PM
A0222114.d	N063181-002C	SAMP	1	02/22/24 11:41 PM
A0222115.d	N063181-003C	SAMP	1	02/22/24 11:46 PM
A0222116.d	N063181-003C	SAMP	5	02/22/24 11:50 PM
A0222117.d	N063181-003C-PS	PS	1	02/22/24 11:55 PM
A0222118.d	N063181-003C-MS	MS	1	02/23/24 12:00 AM
A0222119.d	N063181-003C-MSD	MSD	1	02/23/24 12:04 AM
A0222120.d	RINSE	ICAL	1	02/23/24 12:09 AM
A0222121.d	CCV9	CCV	1	02/23/24 12:14 AM
A0222122.d	CCB9	CCB	1	02/23/24 12:18 AM
A0222123.d	N063182-001B	SAMP	1	02/23/24 12:23 AM
A0222124.d	N063182-003B	SAMP	1	02/23/24 12:28 AM
A0222125.d	N063182-005B	SAMP	1	02/23/24 12:32 AM
A0222126.d	N063182-008B	SAMP	1	02/23/24 12:37 AM

INJECTION LOG: 240222A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0222127.d	N063182-009B	SAMP	1	02/23/24 12:42 AM
A0222128.d	N063182-010B	SAMP	1	02/23/24 12:46 AM
A0222129.d	N063182-011B	SAMP	1	02/23/24 12:51 AM
A0222130.d	RINSE	ICAL	1	02/23/24 12:56 AM
A0222131.d	CCV10	CCV	1	02/23/24 1:00 AM
A0222132.d	CCB10	CCB	1	02/23/24 1:05 AM
A0222133.d	ICSA5	ICSA	1	02/23/24 1:10 AM
A0222134.d	ICSAB5	ICSAB	1	02/23/24 1:14 AM
A0222135.d	MB-106992	MBLK	1	02/23/24 1:19 AM
A0222136.d	LCS-106992	LCS	1	02/23/24 1:24 AM
A0222137.d	N063211-001B	SAMP	1	02/23/24 1:28 AM
A0222138.d	N063211-002B	SAMP	1	02/23/24 1:33 AM
A0222139.d	N063211-003B	SAMP	1	02/23/24 1:38 AM
A0222140.d	N063213-001B	SAMP	1	02/23/24 1:42 AM
A0222141.d	N063213-002B	SAMP	1	02/23/24 1:47 AM
A0222142.d	N063213-003B	SAMP	1	02/23/24 1:52 AM
A0222143.d	N063213-004B	SAMP	1	02/23/24 1:56 AM
A0222144.d	RINSE	ICAL	1	02/23/24 2:01 AM
A0222145.d	CCV11	CCV	1	02/23/24 2:06 AM
A0222146.d	CCB11	CCB	1	02/23/24 2:10 AM
A0222147.d	N063213-005B	SAMP	1	02/23/24 2:15 AM
A0222148.d	N063213-006B	SAMP	1	02/23/24 2:19 AM
A0222149.d	N063213-007B	SAMP	1	02/23/24 2:24 AM
A0222150.d	N063213-008B	SAMP	1	02/23/24 2:29 AM
A0222151.d	N063213-008B	SAMP	5	02/23/24 2:34 AM
A0222152.d	N063213-008B-PS	PS	1	02/23/24 2:38 AM
A0222153.d	N063213-008BMS	MS	1	02/23/24 2:43 AM
A0222154.d	N063213-008BMSD	MSD	1	02/23/24 2:48 AM
A0222155.d	N063214-010B	SAMP	1	02/23/24 2:52 AM
A0222156.d	RINSE	ICAL	1	02/23/24 2:57 AM
A0222157.d	CCV12	CCV	1	02/23/24 3:02 AM
A0222158.d	CCB12	CCB	1	02/23/24 3:06 AM
A0222159.d	N063214-011B	SAMP	1	02/23/24 3:11 AM
A0222160.d	N063214-012B	SAMP	1	02/23/24 3:16 AM
A0222161.d	N063214-013B	SAMP	1	02/23/24 3:20 AM
A0222162.d	N063214-014B	SAMP	1	02/23/24 3:25 AM
A0222163.d	N063214-016B	SAMP	1	02/23/24 3:30 AM
A0222164.d	RINSE	ICAL	1	02/23/24 3:34 AM
A0222165.d	CCV13	CCV	1	02/23/24 3:39 AM
A0222166.d	CCB13	CCB	1	02/23/24 3:43 AM
A0222167.d	ICSA6	ICSA	1	02/23/24 3:48 AM
A0222168.d	ICSAB6	ICSAB	1	02/23/24 3:53 AM

INJECTION LOG: 240222A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0222169.d	MB-107025	MBLK	1	02/23/24 3:58 AM
A0222170.d	LCS-107025	LCS	1	02/23/24 4:02 AM
A0222171.d	N063211-001C	SAMP	1	02/23/24 4:07 AM
A0222172.d	N063211-002C	SAMP	1	02/23/24 4:11 AM
A0222173.d	N063211-002C	SAMP	5	02/23/24 4:16 AM
A0222174.d	N063211-002C-PS	PS	1	02/23/24 4:21 AM
A0222175.d	N063211-002C-MS	MS	1	02/23/24 4:25 AM
A0222176.d	N063211-002C-MSD	MSD	1	02/23/24 4:30 AM
A0222177.d	N063211-003C	SAMP	1	02/23/24 4:35 AM
A0222178.d	RINSE	ICAL	1	02/23/24 4:39 AM
A0222179.d	CCV14	CCV	1	02/23/24 4:44 AM
A0222180.d	CCB14	CCB	1	02/23/24 4:49 AM
A0222181.d	ICSA7	ICSA	1	02/23/24 4:53 AM
A0222182.d	ICSAB7	ICSAB	1	02/23/24 4:58 AM
A0222183.d	RINSE	ICAL	1	02/23/24 5:03 AM
A0222184.d	RINSE	ICAL	1	02/23/24 5:07 AM
A0222185.d	RINSE	ICAL	1	02/23/24 5:12 AM
A0222186.d	RINSE	ICAL	1	02/23/24 5:16 AM
A0222187.d	RINSE	ICAL	1	02/23/24 5:21 AM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223001.d	RINSE	ICAL	1	02/23/24 1:22 PM
A0223002.d	Cal Blk	IBLK	1	02/23/24 1:27 PM
A0223003.d	Std1-0.1/1 ppb	ICAL	1	02/23/24 1:32 PM
A0223004.d	Std2-0.5/5 ppb	ICAL	1	02/23/24 1:36 PM
A0223005.d	Std3-5/50 ppb	ICAL	1	02/23/24 1:41 PM
A0223006.d	Std4-10/100 ppb	ICAL	1	02/23/24 1:46 PM
A0223007.d	Std5-4.0/20/200 ppb	ICAL	1	02/23/24 1:51 PM
A0223008.d	Std6-8.0/40/400 ppb	ICAL	1	02/23/24 1:55 PM
A0223009.d	Std7-100/1000 ppb	ICAL	1	02/23/24 2:00 PM
A0223010.d	Std8-200/2000 ppb	ICAL	1	02/23/24 2:05 PM
A0223011.d	ICV	ICV	1	02/23/24 2:24 PM
A0223012.d	ICB	ICB	1	02/23/24 2:29 PM
A0223013.d	LLICV1	LLICV	1	02/23/24 2:34 PM
A0223014.d	MLCCV	CCV	1	02/23/24 2:38 PM
A0223015.d	ICSA1	ICSA	1	02/23/24 2:43 PM
A0223016.d	ICSAB1	ICSAB	1	02/23/24 2:47 PM
A0223017.d	MDL 4	ICAL	1	02/23/24 3:00 PM
A0223018.d	MB-106955	MBLK	1	02/23/24 3:10 PM
A0223019.d	LCS-106955	LCS	1	02/23/24 3:15 PM
A0223020.d	N063150-001A	SAMP	1	02/23/24 3:19 PM
A0223021.d	N063150-002A	SAMP	1	02/23/24 3:24 PM
A0223022.d	N063168-002A	SAMP	1	02/23/24 3:29 PM
A0223023.d	N063168-002A	SAMP	5	02/23/24 3:33 PM
A0223024.d	N063168-002A-PS	PS	1	02/23/24 3:38 PM
A0223025.d	N063168-002A-MS	MS	1	02/23/24 3:43 PM
A0223026.d	N063168-002A-MSD	MSD	1	02/23/24 3:47 PM
A0223027.d	RINSE	ICAL	1	02/23/24 3:52 PM
A0223028.d	CCV1	CCV	1	02/23/24 3:57 PM
A0223029.d	CCB1	CCB	1	02/23/24 4:01 PM
A0223030.d	MB-107065	MBLK	1	02/23/24 4:06 PM
A0223031.d	LCS-107065	LCS	1	02/23/24 4:11 PM
A0223032.d	N063286-001A	SAMP	1	02/23/24 4:15 PM
A0223033.d	N063286-001A	SAMP	5	02/23/24 4:20 PM
A0223034.d	N063286-001A-PS	PS	1	02/23/24 4:25 PM
A0223035.d	N063286-001A-MS	MS	1	02/23/24 4:29 PM
A0223036.d	N063286-001A-MSD	MSD	1	02/23/24 4:34 PM
A0223037.d	N063287-001A	SAMP	1	02/23/24 4:38 PM
A0223038.d	N063287-002A	SAMP	1	02/23/24 4:43 PM
A0223039.d	N063287-003A	SAMP	1	02/23/24 4:48 PM
A0223040.d	CCV2	CCV	1	02/23/24 4:52 PM
A0223041.d	CCB2	CCB	1	02/23/24 4:57 PM
A0223042.d	N063289-001A	SAMP	1	02/23/24 5:02 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
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A0223044.d	N063289-003A	SAMP	1	02/23/24 5:11 PM
A0223045.d	N063289-004A	SAMP	1	02/23/24 5:16 PM
A0223046.d	CCV3	CCV	1	02/23/24 5:20 PM
A0223047.d	CCB3	CCB	1	02/23/24 5:25 PM
A0223048.d	N063193-004A	SAMP	5	02/23/24 5:30 PM
A0223049.d	N063193-004A	SAMP	25	02/23/24 5:34 PM
A0223050.d	N063193-004A-PS	PS	5	02/23/24 5:39 PM
A0223051.d	N063193-004A-MS	MS	5	02/23/24 5:44 PM
A0223052.d	N063193-004A-MSD	MSD	5	02/23/24 5:48 PM
A0223053.d	N063195-002A	SAMP	5	02/23/24 5:53 PM
A0223054.d	N063195-003A	SAMP	5	02/23/24 5:58 PM
A0223055.d	N063195-004A	SAMP	5	02/23/24 6:02 PM
A0223056.d	N063201-001D	SAMP	5	02/23/24 6:07 PM
A0223057.d	N063201-001D-MS	MS	5	02/23/24 6:12 PM
A0223058.d	CCV4	CCV	1	02/23/24 6:16 PM
A0223059.d	CCB4	CCB	1	02/23/24 6:21 PM
A0223060.d	CCB4	CCB	1	02/23/24 6:27 PM
A0223061.d	ICSA2	ICSA	1	02/23/24 6:32 PM
A0223062.d	ICSAB2	ICSAB	1	02/23/24 6:37 PM
A0223063.d	MB-106955	MBLK	1	02/23/24 6:42 PM
A0223064.d	LCS-106955	LCS	1	02/23/24 6:46 PM
A0223065.d	N063150-001A	SAMP	1	02/23/24 6:51 PM
A0223066.d	N063150-002A	SAMP	1	02/23/24 6:55 PM
A0223067.d	N063168-002A	SAMP	1	02/23/24 7:00 PM
A0223068.d	N063168-002A	SAMP	5	02/23/24 7:05 PM
A0223069.d	N063168-002A-PS	PS	1	02/23/24 7:09 PM
A0223070.d	N063168-002A-MS	MS	1	02/23/24 7:14 PM
A0223071.d	N063168-002A-MSD	MSD	1	02/23/24 7:19 PM
A0223072.d	RINSE	ICAL	1	02/23/24 7:23 PM
A0223073.d	CCV5	CCV	1	02/23/24 7:28 PM
A0223074.d	CCB5	CCB	1	02/23/24 7:33 PM
A0223075.d	ICSA3	ICSA	1	02/23/24 7:37 PM
A0223076.d	ICSAB3	ICSAB	1	02/23/24 7:42 PM
A0223077.d	N063181-001C	SAMP	10	02/23/24 7:47 PM
A0223078.d	N063181-002C	SAMP	10	02/23/24 7:51 PM
A0223079.d	N063182-001B	SAMP	1	02/23/24 7:56 PM
A0223080.d	N063182-003B	SAMP	1	02/23/24 8:01 PM
A0223081.d	N063182-003B	SAMP	10	02/23/24 8:05 PM
A0223082.d	N063182-005B	SAMP	1	02/23/24 8:10 PM
A0223083.d	N063182-005B	SAMP	10	02/23/24 8:15 PM
A0223084.d	N063182-008B	SAMP	1	02/23/24 8:19 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223085.d	N063182-009B	SAMP	1	02/23/24 8:24 PM
A0223086.d	N063182-009B	SAMP	10	02/23/24 8:29 PM
A0223087.d	CCV6	CCV	1	02/23/24 8:33 PM
A0223088.d	CCB6	CCB	1	02/23/24 8:38 PM
A0223089.d	N063182-009B	SAMP	1	02/23/24 8:43 PM
A0223090.d	N063182-009B	SAMP	1	02/23/24 8:47 PM
A0223091.d	N063182-009B	SAMP	1	02/23/24 8:52 PM
A0223092.d	N063182-009B	SAMP	1	02/23/24 8:57 PM
A0223093.d	N063182-010B	SAMP	10	02/23/24 9:01 PM
A0223094.d	N063182-011B	SAMP	1	02/23/24 9:06 PM
A0223095.d	N063182-011B	SAMP	100	02/23/24 9:11 PM
A0223096.d	CCV7	CCV	1	02/23/24 9:15 PM
A0223097.d	CCB7	CCB	1	02/23/24 9:20 PM
A0223098.d	ICSA4	ICSA	1	02/23/24 9:24 PM
A0223099.d	ICSAB4	ICSAB	1	02/23/24 9:29 PM
A0223100.d	MB-106992	MBLK	1	02/23/24 9:34 PM
A0223101.d	LCS-106992	LCS	1	02/23/24 9:39 PM
A0223102.d	N063211-001B	SAMP	10	02/23/24 9:43 PM
A0223103.d	N063211-002B	SAMP	10	02/23/24 9:48 PM
A0223104.d	N063211-003B	SAMP	100	02/23/24 9:52 PM
A0223105.d	N063213-001B	SAMP	10	02/23/24 9:57 PM
A0223106.d	N063213-002B	SAMP	10	02/23/24 10:02 PM
A0223107.d	N063213-003B	SAMP	10	02/23/24 10:07 PM
A0223108.d	N063213-004B	SAMP	10	02/23/24 10:11 PM
A0223109.d	N063213-007B	SAMP	10	02/23/24 10:16 PM
A0223110.d	CCV8	CCV	1	02/23/24 10:20 PM
A0223111.d	CCB8	CCB	1	02/23/24 10:25 PM
A0223112.d	N063213-008B	SAMP	1	02/23/24 10:30 PM
A0223113.d	N063213-008B	SAMP	5	02/23/24 10:34 PM
A0223114.d	N063213-008B-PS	PS	1	02/23/24 10:39 PM
A0223115.d	N063213-008BMS	MS	1	02/23/24 10:44 PM
A0223116.d	N063213-008BMSD	MSD	1	02/23/24 10:48 PM
A0223117.d	N063214-010B	SAMP	1	02/23/24 10:53 PM
A0223118.d	N063214-011B	SAMP	1	02/23/24 10:58 PM
A0223119.d	N063214-011B	SAMP	10	02/23/24 11:03 PM
A0223120.d	N063214-012B	SAMP	1	02/23/24 11:07 PM
A0223121.d	N063214-012B	SAMP	10	02/23/24 11:12 PM
A0223122.d	CCV9	CCV	1	02/23/24 11:16 PM
A0223123.d	CCB9	CCB	1	02/23/24 11:21 PM
A0223124.d	N063214-013B	SAMP	1	02/23/24 11:26 PM
A0223125.d	N063214-013B	SAMP	10	02/23/24 11:30 PM
A0223126.d	N063214-014B	SAMP	1	02/23/24 11:35 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223127.d	N063214-016B	SAMP	1	02/23/24 11:40 PM
A0223128.d	N063214-016B	SAMP	10	02/23/24 11:44 PM
A0223129.d	CCV10	CCV	1	02/23/24 11:49 PM
A0223130.d	CCB10	CCB	1	02/23/24 11:54 PM
A0223131.d	ICSA5	ICSA	1	02/23/24 11:58 PM
A0223132.d	ICSAB5	ICSAB	1	02/24/24 12:03 AM
A0223133.d	MB-107021	MBLK	1	02/24/24 12:08 AM
A0223134.d	LCS-107021	LCS	1	02/24/24 12:12 AM
A0223135.d	N062510-015D	SAMP	5	02/24/24 12:17 AM
A0223136.d	N063248-001B	SAMP	1	02/24/24 12:21 AM
A0223137.d	N063248-002B	SAMP	1	02/24/24 12:26 AM
A0223138.d	N063248-002B	SAMP	5	02/24/24 12:31 AM
A0223139.d	N063248-002B-PS	PS	1	02/24/24 12:35 AM
A0223140.d	N063248-002B-MS	MS	1	02/24/24 12:40 AM
A0223141.d	N063248-002B-MSD	MSD	1	02/24/24 12:45 AM
A0223142.d	RINSE	ICAL	1	02/24/24 12:49 AM
A0223143.d	CCV11	CCV	1	02/24/24 12:54 AM
A0223144.d	CCB11	CCB	1	02/24/24 12:59 AM
A0223145.d	N063248-003B	SAMP	1	02/24/24 1:03 AM
A0223146.d	N063248-004B	SAMP	1	02/24/24 1:08 AM
A0223147.d	N063248-005C	SAMP	1	02/24/24 1:13 AM
A0223148.d	N063248-006C	SAMP	1	02/24/24 1:17 AM
A0223149.d	N063248-007C	SAMP	1	02/24/24 1:22 AM
A0223150.d	N063248-008C	SAMP	1	02/24/24 1:27 AM
A0223151.d	N063248-010B	SAMP	1	02/24/24 1:31 AM
A0223152.d	N063248-011B	SAMP	1	02/24/24 1:36 AM
A0223153.d	N063249-007C	SAMP	1	02/24/24 1:41 AM
A0223154.d	RINSE	ICAL	1	02/24/24 1:45 AM
A0223155.d	CCV12	CCV	1	02/24/24 1:50 AM
A0223156.d	CCB12	CCB	1	02/24/24 1:54 AM
A0223157.d	N063249-009C	SAMP	1	02/24/24 1:59 AM
A0223158.d	N063249-011C	SAMP	1	02/24/24 2:04 AM
A0223159.d	N063249-013C	SAMP	1	02/24/24 2:08 AM
A0223160.d	N063249-015C	SAMP	1	02/24/24 2:13 AM
A0223161.d	N063249-017C	SAMP	1	02/24/24 2:18 AM
A0223162.d	N063249-018C	SAMP	5	02/24/24 2:22 AM
A0223163.d	RINSE	ICAL	1	02/24/24 2:27 AM
A0223164.d	CCV13	CCV	1	02/24/24 2:32 AM
A0223165.d	CCB13	CCB	1	02/24/24 2:36 AM
A0223166.d	ICSA6	ICSA	1	02/24/24 2:41 AM
A0223167.d	ICSAB6	ICSAB	1	02/24/24 2:46 AM
A0223168.d	MB-107055	MBLK	1	02/24/24 2:50 AM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223169.d	LCS-107055	LCS	1	02/24/24 2:55 AM
A0223170.d	N063295-001B	SAMP	1	02/24/24 2:59 AM
A0223171.d	N063295-002B	SAMP	1	02/24/24 3:04 AM
A0223172.d	N063295-002B	SAMP	5	02/24/24 3:09 AM
A0223173.d	N063295-002B-PS	PS	1	02/24/24 3:13 AM
A0223174.d	N063295-002B-MS	MS	1	02/24/24 3:18 AM
A0223175.d	N063295-002B-MSD	MSD	1	02/24/24 3:23 AM
A0223176.d	N063295-003B	SAMP	1	02/24/24 3:27 AM
A0223177.d	RINSE	ICAL	1	02/24/24 3:32 AM
A0223178.d	CCV14	CCV	1	02/24/24 3:37 AM
A0223179.d	CCB14	CCB	1	02/24/24 3:41 AM
A0223180.d	N063295-005C	SAMP	1	02/24/24 3:46 AM
A0223181.d	N063295-006C	SAMP	1	02/24/24 3:51 AM
A0223182.d	N063295-007C	SAMP	1	02/24/24 3:55 AM
A0223183.d	N063295-008C	SAMP	1	02/24/24 4:00 AM
A0223184.d	N063297-001C	SAMP	1	02/24/24 4:05 AM
A0223185.d	N063297-002B	SAMP	1	02/24/24 4:09 AM
A0223186.d	N063297-003B	SAMP	1	02/24/24 4:14 AM
A0223187.d	N063303-001B	SAMP	1	02/24/24 4:19 AM
A0223188.d	N063303-002B	SAMP	1	02/24/24 4:23 AM
A0223189.d	RINSE	ICAL	1	02/24/24 4:28 AM
A0223190.d	CCV15	CCV	1	02/24/24 4:32 AM
A0223191.d	CCB15	CCB	1	02/24/24 4:37 AM
A0223192.d	N063303-006B	SAMP	5	02/24/24 4:42 AM
A0223193.d	N063303-008B	SAMP	1	02/24/24 4:46 AM
A0223194.d	RINSE	ICAL	1	02/24/24 4:51 AM
A0223195.d	CCV16	CCV	1	02/24/24 4:56 AM
A0223196.d	CCB16	CCB	1	02/24/24 5:00 AM
A0223197.d	ICSA7	ICSA	1	02/24/24 5:05 AM
A0223198.d	ICSAB7	ICSAB	1	02/24/24 5:10 AM
A0223199.d	RINSE	ICAL	1	02/24/24 5:14 AM
A0223200.d	RINSE	ICAL	1	02/24/24 5:19 AM
A0223201.d	RINSE	ICAL	1	02/24/24 5:24 AM
A0223202.d	RINSE	ICAL	1	02/24/24 5:28 AM
A0223203.d	RINSE	ICAL	1	02/24/24 5:33 AM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/20/2024 11:31:48 AM**
Prep End Date: **2/20/2024 4:00:00 PM**

Reviewed/ Date: JRB 3/24/2024

Initials/ Date: for

Prep Batch **106973** Prep Code:**3010_W_MSDISS_TPK** Technician: **Diane Jetajobe**

Prep Factor Units
mL / mL

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-106973	Aqueous		25	☐	25	1.000		
MB-106973	Aqueous		25	☐	25	1.000		
N063181-001C	Groundwater	<2	25	☐	25	1.000		
N063181-002C	Groundwater	<2	25	☐	25	1.000		
N063181-003C	Groundwater	<2	25	☐	25	1.000		
N063181-003C-MS	Groundwater	<2	25	☐	25	1.000		
N063181-003C-MSD	Groundwater	<2	25	☐	25	1.000		
N063182-001B	Groundwater	<2	25	☐	25	1.000		
N063182-003B	Groundwater	<2	25	☐	25	1.000		
N063182-005B	Groundwater	<2	25	☐	25	1.000		
N063182-008B	Groundwater	<2	25	☐	25	1.000		
N063182-009B	Groundwater	<2	25	☐	25	1.000		
N063182-010B	Groundwater	<2	25	☐	25	1.000		
N063182-011B	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240220B.b
Acq. Date-Time	2024-02-22 14:40:58
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

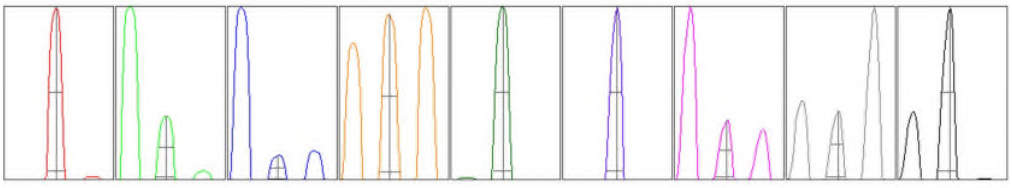
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	5797	57970.91	500.00		1.837	5.000
24	10.00	20008	200084.58	500.00		1.551	5.000
25	10.00	2690	26903.17	500.00		2.940	5.000
26	10.00	3224	32235.80	500.00		2.456	5.000
59	10.00	34982	349824.87	500.00		1.685	5.000
115	10.00	51771	517705.22	500.00		1.604	5.000
206	10.00	10774	107742.12	500.00		1.803	5.000
207	10.00	8750	87496.62	500.00		2.152	5.000
208	10.00	21810	218104.32	500.00		1.494	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.595 %
Doubly Charged	70 / 140 0.876 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	5887.71	8.95	8.90 - 9.10	
24	20875.06	23.90	23.90 - 24.10	
25	2804.39	24.90	24.90 - 25.10	
26	3404.50	25.90	25.90 - 26.10	
59	35717.22	58.95	58.90 - 59.10	
115	51068.43	115.00	114.90 - 115.10	
206	10694.68	205.95	205.90 - 206.10	
207	9252.81	206.95	206.90 - 207.10	
208	23538.10	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.487	0.900	
24	0.42	0.535	0.900	
25	0.41	0.497	0.900	
26	0.42	0.573	0.900	
59	0.39	0.533	0.900	
115	0.35	0.483	0.900	
206	0.36	0.518	0.900	
207	0.35	0.534	0.900	
208	0.35	0.533	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.8 mm	Torch V	1.2 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[H2]

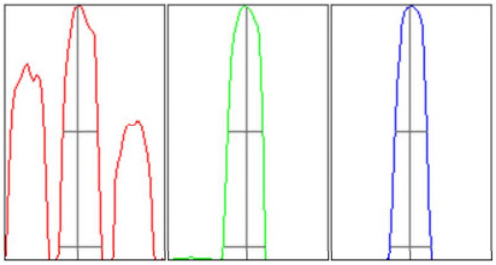
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		370	3704.00			5.824	
59		4948	49482.87			2.603	
115		50299	502985.56			1.913	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.542 %
Doubly Charged	70 / 140 0.383 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	396.56	25.90	25.90 - 26.10	
59	5134.08	59.00	58.90 - 59.10	
115	51662.22	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.66	0.789	0.900	
59	0.67	0.787	0.900	
115	0.60	0.774	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0002	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.00		

Hardware Settings

Torch

Torch H	1.8 mm	Torch V	1.2 mm		

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[He]

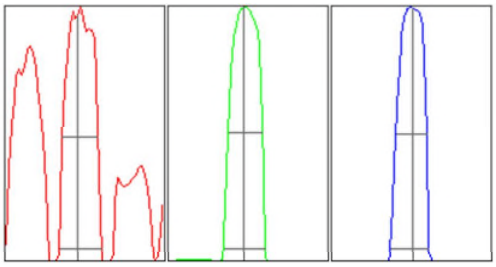
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		129	1287.25			10.276	
59		9841	98411.69			1.883	
115		12860	128599.34			2.017	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.296 %
Doubly Charged	70 / 140 1.072 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	129.76	25.90	25.90 - 26.10	
59	9879.12	58.95	58.90 - 59.10	
115	12880.79	115.05	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.68	0.790	0.900	
59	0.66	0.786	0.900	
115	0.59	0.732	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0002	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.00		

Hardware Settings

Torch

Torch H	1.8 mm	Torch V	1.2 mm

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240222A.b
Acq. Date-Time	2024-02-23 11:44:28
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

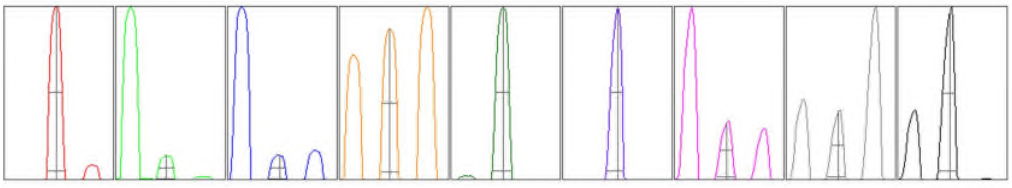
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	4742	47419.90	500.00		3.024	5.000
24	10.00	18706	187057.96	500.00		2.427	5.000
25	10.00	2512	25118.25	500.00		2.587	5.000
26	10.00	3009	30093.30	500.00		2.566	5.000
59	10.00	34030	340296.87	500.00		1.929	5.000
115	10.00	56615	566148.24	500.00		1.847	5.000
206	10.00	12089	120890.72	500.00		2.171	5.000
207	10.00	10015	100148.90	500.00		2.219	5.000
208	10.00	24886	248855.97	500.00		1.967	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.609 %
Doubly Charged	70 / 140 1.407 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	4705.05	8.95	8.90 - 9.10	
24	18796.46	23.90	23.90 - 24.10	
25	2564.26	24.95	24.90 - 25.10	
26	3120.45	25.90	25.90 - 26.10	
59	33894.52	58.95	58.90 - 59.10	
115	56031.92	115.05	114.90 - 115.10	
206	10962.65	205.95	205.90 - 206.10	
207	9673.39	206.95	206.90 - 207.10	
208	24384.42	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.486	0.900	
24	0.41	0.502	0.900	
25	0.41	0.494	0.900	
26	0.41	0.494	0.900	
59	0.38	0.531	0.900	
115	0.34	0.476	0.900	
206	0.36	0.533	0.900	
207	0.35	0.509	0.900	
208	0.35	0.525	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[H2]

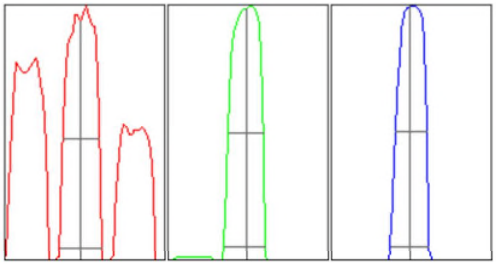
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		356	3555.77			5.984	
59		3819	38194.02			3.844	
115		59590	595903.12			2.349	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.610 %
Doubly Charged	70 / 140 0.333 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	353.80	25.95	25.90 - 26.10	
59	3912.74	59.00	58.90 - 59.10	
115	60486.49	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.70	0.791	0.900	
59	0.67	0.783	0.900	
115	0.60	0.733	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0000	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm		

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[He]

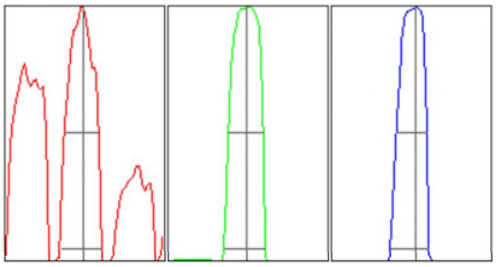
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		138	1375.06			6.914	
59		12115	121151.14			1.919	
115		13480	134797.78			1.974	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.279 %
Doubly Charged	70 / 140 0.982 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	147.01	26.00	25.90 - 26.10	
59	12098.31	59.00	58.90 - 59.10	
115	13611.92	115.10	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.65	0.789	0.900	
59	0.66	0.782	0.900	
115	0.58	0.730	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0000	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240222A

Instrument ID: ICPMS-03

Analyte	Data File	A0222002.d	A0222004.d	A0222005.d	A0222006.d	A0222007.d	A0222008.d	A0222009.d	A0222010.d	
	Acq. Date-Time	02/22/2024 02:49 PM	02/22/2024 02:58 PM	02/22/2024 03:03 PM	02/22/2024 03:08 PM	02/22/2024 03:13 PM	02/22/2024 03:17 PM	02/22/2024 03:22 PM	02/22/2024 03:27 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	74317.7	74221.7	75413.6	74741.7	74468.3	75790.9	74043.2	75166	
52 Cr [2]	CPS	845.6	2876.9	21626.3	43765.2	86191	175586	434100.8	873068.5	1.0000
72 Ge (ISTD) [1]	CPS	120288.5	119953.6	121322.4	120991.2	120030.8	121079.6	118808.9	120667.9	
78 Se [1]	CPS	1.1	166.7	1509	3182.5	6131.2	12755	31467.1	64340.9	1.0000
103 Rh (ISTD) [2]	CPS	869653.6	870621.7	871616.7	870358.8	862440.3	879922.6	857954	872023.8	
95 Mo [2]	CPS	15.6	1147.8	11160.6	22528	45099.7	93603.8	231754.9	469392.8	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION SUMMARY: 240223A

Instrument ID: ICPMS-03

Analyte	Data File	A0223002.d	A0223004.d	A0223005.d	A0223006.d	A0223007.d	A0223008.d	A0223009.d	A0223010.d	
	Acq. Date-Time	02/23/2024 01:27 PM	02/23/2024 01:36 PM	02/23/2024 01:41 PM	02/23/2024 01:46 PM	02/23/2024 01:51 PM	02/23/2024 01:55 PM	02/23/2024 02:00 PM	02/23/2024 02:05 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	72154.9	76342.4	77253.2	77475.2	76063.3	75148	75462.7	76036.5	
52 Cr [2]	CPS	495.6	2850.3	24523.7	50602.4	98925.7	194285.6	486787.3	992400.4	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **ICV** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708775**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	10.134	0.50	10.00	0	101	90	110				
Selenium	10.202	0.50	10.00	0	102	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **ZZZZZZ** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708777**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	0.566	0.50	0.5000	0	113	80	120				
Selenium	0.594	0.50	0.5000	0	119	80	120				

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCV** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708778**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	19.447	0.50	20.00	0	97.2	90	110				
Selenium	19.885	0.50	20.00	0	99.4	90	110				

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCV** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708789**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	19.601	0.50	20.00	0	98.0	90	110				
Selenium	19.754	0.50	20.00	0	98.8	90	110				

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCV** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708801**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCV** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708801**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	19.449	0.50	20.00	0	97.2	90	110				
Selenium	20.507	0.50	20.00	0	103	90	110				

Sample ID **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCV** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708813**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	19.539	0.50	20.00	0	97.7	90	110				
Selenium	21.110	0.50	20.00	0	106	90	110				

Sample ID **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCV** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708826**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	19.420	0.50	20.00	0	97.1	90	110				
Selenium	20.410	0.50	20.00	0	102	90	110				

Sample ID **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCV** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708838**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	19.155	0.50	20.00	0	95.8	90	110				
Selenium	20.503	0.50	20.00	0	103	90	110				

Sample ID **CCV6** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCV** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708851**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	19.551	0.50	20.00	0	97.8	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCV**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708851**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	20.782	0.50	20.00	0	104	90	110				

Sample ID **CCV7**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCV**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708862**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	19.314	0.50	20.00	0	96.6	90	110				
Selenium	19.884	0.50	20.00	0	99.4	90	110				

Sample ID **CCV8**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCV**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708868**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	19.501	0.50	20.00	0	97.5	90	110				
Selenium	20.446	0.50	20.00	0	102	90	110				

Sample ID **CCV9**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCV**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708881**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	19.272	0.50	20.00	0	96.4	90	110				
Selenium	20.607	0.50	20.00	0	103	90	110				

Sample ID **CCV10**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCV**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708890**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	19.764	0.50	20.00	0	98.8	90	110				
Selenium	20.973	0.50	20.00	0	105	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICV**	SampType: **ICV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **ICV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708612**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.331	1.0	10.00	0	103	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **ZZZZZZ**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708614**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	1.035	1.0	1.000	0	103	80	120				

Sample ID **MLCCV**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708615**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.785	1.0	20.00	0	98.9	90	110				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708626**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.348	1.0	20.00	0	102	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708638**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.328	1.0	20.00	0	102	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708650**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.219	1.0	20.00	0	101	90	110				

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708663**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.295	1.0	20.00	0	101	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708675**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.303	1.0	20.00	0	102	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708688**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.422	1.0	20.00	0	102	90	110				

Sample ID **CCV7**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708699**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.671	1.0	20.00	0	103	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCV8**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708705**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.809	1.0	20.00	0	104	90	110				

Sample ID **CCV9**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708718**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.512	1.0	20.00	0	103	90	110				

Sample ID **CCV10**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708727**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.159	1.0	20.00	0	101	90	110				

Sample ID **CCV11**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708740**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.586	1.0	20.00	0	103	90	110				

Sample ID **CCV12**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708751**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.137	1.0	20.00	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCV13**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708758**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.352	1.0	20.00	0	102	90	110				

Sample ID **CCV14**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708771**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.896	1.0	20.00	0	104	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICV**	SampType: **ICV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713210**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.178	1.0	10.00	0	102	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ZZZZZZ**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713212**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	1.112	1.0	1.000	0	111	80	120				

Sample ID **MLCCV**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713213**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.983	1.0	20.00	0	99.9	90	110				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713226**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.779	1.0	20.00	0	98.9	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713238**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.949	1.0	20.00	0	99.7	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713244**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.932	1.0	20.00	0	99.7	90	110				

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713256**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.130	1.0	20.00	0	101	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713270**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.370	1.0	20.00	0	102	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713284**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.695	1.0	20.00	0	98.5	90	110				

Sample ID **CCV7**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713293**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.635	1.0	20.00	0	98.2	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCV8**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713307**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.506	1.0	20.00	0	103	90	110				

Sample ID **CCV9**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713319**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.572	1.0	20.00	0	97.9	90	110				

Sample ID **CCV10**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713326**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.808	1.0	20.00	0	99.0	90	110				

Sample ID **CCV11**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713339**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.717	1.0	20.00	0	98.6	90	110				

Sample ID **CCV12**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713350**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.393	1.0	20.00	0	97.0	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCV13** SampType: **CCV** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCV** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713358**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.492	1.0	20.00	0	97.5	90	110				

Sample ID **CCV14** SampType: **CCV** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCV** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713371**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.610	1.0	20.00	0	98.0	90	110				

Sample ID **CCV15** SampType: **CCV** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCV** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713382**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.525	1.0	20.00	0	97.6	90	110				

Sample ID **CCV16** SampType: **CCV** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCV** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713386**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.757	1.0	20.00	0	98.8	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB**	SampType: **ICB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **ICB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708776**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708790**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708802**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708814**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708827**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708827**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708839**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708852**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB7**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708863**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB8**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708869**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	ND	0.50									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB8**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708869**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	ND	0.50									

Sample ID **CCB9**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708882**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **CCB10**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708891**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICB**	SampType: **ICB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **ICB**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708613**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCB**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708627**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCB**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708639**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCB**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708651**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCB**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708664**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCB**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708676**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCB**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708689**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB7**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCB**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708700**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB8**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCB**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708706**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB9**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCB**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708719**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	CCB10	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	CCB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5708728

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB11	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	CCB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5708741

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB12	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	CCB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5708752

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB13	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	CCB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5708759

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB14	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	CCB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5708772

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICB	SampType:	ICB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713211

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB1	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713227

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.996	1.0									

Sample ID	CCB2	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713239

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	1.008	1.0									

Sample ID	CCB3	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713245

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	1.026	1.0									

Sample ID	CCB4	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713258

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Detect of Cr in CCB1 to CCB3 are >1/2RL and >RL. However, samples affected are reported within CCV5/CCB5 to CCV6/CCB6. Thus, unaffected.

3/7/2024

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713271**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713285**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB7**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713294**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB8**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713308**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB9**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713320**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCB10**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713327**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB11**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713340**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB12**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713351**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB13**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713359**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB14**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713372**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCB15**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713383**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB16**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713387**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **ICSA** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708779**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **ICSAB** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708780**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	20.016	0.50	20.00	0	100	80	120				
Selenium	20.381	0.50	20.00	0	102	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **ICSA** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708815**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **ICSAB** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708816**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	19.612	0.50	20.00	0	98.1	80	120				
Selenium	20.821	0.50	20.00	0	104	80	120				

Sample ID **ICSA3** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **ICSA** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708840**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **ICSA**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708840**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **ICSAB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708841**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	19.766	0.50	20.00	0	98.8	80	120				
Selenium	20.876	0.50	20.00	0	104	80	120				

Sample ID **ICSA4**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **ICSA**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708870**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	ND	0.50									
Selenium	ND	0.50									

Sample ID **ICSAB4**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **ICSAB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708871**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	19.753	0.50	20.00	0	98.8	80	120				
Selenium	20.987	0.50	20.00	0	105	80	120				

Sample ID **ICSA5**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **ICSA**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708892**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	ND	0.50									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA5**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **ICSA**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708892**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	ND	0.50									

Sample ID **ICSAB5**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **ICSAB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708893**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	20.387	0.50	20.00	0	102	80	120				
Selenium	20.680	0.50	20.00	0	103	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICSA1	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	ICSA	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/22/2024	SeqNo:	5708616

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	ICSAB1	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	ICSAB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/22/2024	SeqNo:	5708617

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.508	1.0	20.00	0	103	80	120				

Sample ID	ICSA2	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	ICSA	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/22/2024	SeqNo:	5708652

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	ICSAB2	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	ICSAB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/22/2024	SeqNo:	5708653

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	21.082	1.0	20.00	0	105	80	120				

Sample ID	ICSA3	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	ICSA	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/22/2024	SeqNo:	5708677

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **ICSAB**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708678**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.831	1.0	20.00	0	104	80	120				

Sample ID **ICSA4**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **ICSA**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708707**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **ICSAB4**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **ICSAB**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708708**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	21.312	1.0	20.00	0	107	80	120				

Sample ID **ICSA5**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **ICSA**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708729**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **ICSAB5**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **ICSAB**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708730**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.689	1.0	20.00	0	103	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	**ICSA6**	SampType:	**ICSA**	TestCode:	**6020DIS_CrP**	Units:	**µg/L**	Prep Date:		RunNo:	**182848**
Client ID:	**ICSA**	Batch ID:	**R182848**	TestNo:	**EPA 6020**			Analysis Date:	**2/23/2024**	SeqNo:	**5708760**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	**ICSAB6**	SampType:	**ICSAB**	TestCode:	**6020DIS_CrP**	Units:	**µg/L**	Prep Date:		RunNo:	**182848**
Client ID:	**ICSAB**	Batch ID:	**R182848**	TestNo:	**EPA 6020**			Analysis Date:	**2/23/2024**	SeqNo:	**5708761**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	21.439	1.0	20.00	0	107	80	120				

Sample ID	**ICSA7**	SampType:	**ICSA**	TestCode:	**6020DIS_CrP**	Units:	**µg/L**	Prep Date:		RunNo:	**182848**
Client ID:	**ICSA**	Batch ID:	**R182848**	TestNo:	**EPA 6020**			Analysis Date:	**2/23/2024**	SeqNo:	**5708773**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	**ICSAB7**	SampType:	**ICSAB**	TestCode:	**6020DIS_CrP**	Units:	**µg/L**	Prep Date:		RunNo:	**182848**
Client ID:	**ICSAB**	Batch ID:	**R182848**	TestNo:	**EPA 6020**			Analysis Date:	**2/23/2024**	SeqNo:	**5708774**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	21.926	1.0	20.00	0	110	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICSA1**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSA**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713214**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **ICSAB1**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSAB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713215**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.286	1.0	20.00	0	101	80	120				

Sample ID **ICSA2**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSA**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713259**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.332	1.0									

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSAB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713260**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.461	1.0	20.00	0	102	80	120				

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSA**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713272**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.331	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSAB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713273**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.279	1.0	20.00	0	101	80	120				

Sample ID **ICSA4**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSA**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713295**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.336	1.0									

Sample ID **ICSAB4**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSAB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713296**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.088	1.0	20.00	0	100	80	120				

Sample ID **ICSA5**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSA**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713328**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.328	1.0									

Sample ID **ICSAB5**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSAB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713329**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.040	1.0	20.00	0	100	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICSA6**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSA**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713360**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.328	1.0									

Sample ID **ICSAB6**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSAB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713361**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.121	1.0	20.00	0	101	80	120				

Sample ID **ICSA7**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSA**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713388**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.319	1.0									

Sample ID **ICSAB7**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSAB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713389**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.910	1.0	20.00	0	99.6	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240222A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]					72 Ge (ISTD) [1]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	74317.7	74317.7	100	PASS	30-150	120288.5	120288.5	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	75064.3	74317.7	101	PASS	30-150	119193.7	120288.5	99.09	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	74221.7	74317.7	99.87	PASS	30-150	119953.6	120288.5	99.72	PASS	30-150
Std3-5/50 ppb	ICAL	1	75413.6	74317.7	101.47	PASS	30-150	121322.4	120288.5	100.86	PASS	30-150
Std4-10/100 ppb	ICAL	1	74741.7	74317.7	100.57	PASS	30-150	120991.2	120288.5	100.58	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	74468.3	74317.7	100.2	PASS	30-150	120030.8	120288.5	99.79	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	75790.9	74317.7	101.98	PASS	30-150	121079.6	120288.5	100.66	PASS	30-150
Std7-100/1000 ppb	ICAL	1	74043.2	74317.7	99.63	PASS	30-150	118808.9	120288.5	98.77	PASS	30-150
Std8-200/2000 ppb	ICAL	1	75166	74317.7	101.14	PASS	30-150	120667.9	120288.5	100.32	PASS	30-150
ICV	ICV	1	73191.7	74317.7	98.48	PASS	30-150	117739.1	120288.5	97.88	PASS	30-150
ICB	ICB	1	74494	74317.7	100.24	PASS	30-150	119600.2	120288.5	99.43	PASS	30-150
LLICV1	CCV1	1	73806.5	74317.7	99.31	PASS	30-150	119437.9	120288.5	99.29	PASS	30-150
MLCCV	CCV	1	75228.3	74317.7	101.23	PASS	30-150	120715.1	120288.5	100.35	PASS	30-150
ICSA1	ICSA	1	75910.2	74317.7	102.14	PASS	30-150	121946.1	120288.5	101.38	PASS	30-150
ICSAB1	ICSAB	1	75644.8	74317.7	101.79	PASS	30-150	122116.3	120288.5	101.52	PASS	30-150
CCV1	CCV	1	81339.2	74317.7	109.45	PASS	30-150	126283.3	120288.5	104.98	PASS	30-150
CCB1	CCB	1	81399.4	74317.7	109.53	PASS	30-150	126615.5	120288.5	105.26	PASS	30-150
CCV2	CCV	1	80086.4	74317.7	107.76	PASS	30-150	123839.2	120288.5	102.95	PASS	30-150
CCB2	CCB	1	77497.5	74317.7	104.28	PASS	30-150	119102	120288.5	99.01	PASS	30-150
CCV3	CCV	1	80189.1	74317.7	107.9	PASS	30-150	121537.7	120288.5	101.04	PASS	30-150
CCB3	CCB	1	78822.5	74317.7	106.06	PASS	30-150	119576.4	120288.5	99.41	PASS	30-150
ICSA2	ICSA	1	78291.2	74317.7	105.35	PASS	30-150	118334.2	120288.5	98.38	PASS	30-150
ICSAB2	ICSAB	1	77019.6	74317.7	103.64	PASS	30-150	117733.4	120288.5	97.88	PASS	30-150
CCV4	CCV	1	83110.9	74317.7	111.83	PASS	30-150	123913	120288.5	103.01	PASS	30-150
CCB4	CCB	1	78888.4	74317.7	106.15	PASS	30-150	120520.2	120288.5	100.19	PASS	30-150
CCV5	CCV	1	86294.9	74317.7	116.12	PASS	30-150	133553.3	120288.5	111.03	PASS	30-150
CCB5	CCB	1	85276.3	74317.7	114.75	PASS	30-150	129300.8	120288.5	107.49	PASS	30-150
ICSA3	ICSA	1	86919.1	74317.7	116.96	PASS	30-150	134469.7	120288.5	111.79	PASS	30-150
ICSAB3	ICSAB	1	86928	74317.7	116.97	PASS	30-150	133686.7	120288.5	111.14	PASS	30-150
CCV6	CCV	1	88192.4	74317.7	118.67	PASS	30-150	133469.5	120288.5	110.96	PASS	30-150
CCB6	CCB	1	86735.7	74317.7	116.71	PASS	30-150	133196.2	120288.5	110.73	PASS	30-150
CCV7	CCV	1	89607.7	74317.7	120.57	PASS	30-150	136220.7	120288.5	113.24	PASS	30-150
CCB7	CCB	1	87781.4	74317.7	118.12	PASS	30-150	136261.9	120288.5	113.28	PASS	30-150
MDL 4	SAMP	1	88317.4	74317.7	118.84	PASS	30-150	135437.8	120288.5	112.59	PASS	30-150
MDL 4	SAMP	1	87974.6	74317.7	118.38	PASS	30-150	136004.3	120288.5	113.07	PASS	30-150
CCV8	CCV	1	89339.5	74317.7	120.21	PASS	30-150	138911.7	120288.5	115.48	PASS	30-150
CCB8	CCB	1	88513.9	74317.7	119.1	PASS	30-150	135298.5	120288.5	112.48	PASS	30-150
ICSA4	ICSA	1	90406.2	74317.7	121.65	PASS	30-150	136891.9	120288.5	113.8	PASS	30-150
ICSAB4	ICSAB	1	88829	74317.7	119.53	PASS	30-150	136933.4	120288.5	113.84	PASS	30-150
MB-106973	MBLK	1	87332.3	74317.7	117.51	PASS	30-150	133913.6	120288.5	111.33	PASS	30-150
LCS-106973	LCS	1	88524.1	74317.7	119.12	PASS	30-150	132518.3	120288.5	110.17	PASS	30-150

INTERNAL STANDARD: 240222A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]					72 Ge (ISTD) [1]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
N063181-001C	SAMP	1	88106.4	74317.7	118.55	PASS	30-150	128319.6	120288.5	106.68	PASS	30-150
N063181-002C	SAMP	1	90869.9	74317.7	122.27	PASS	30-150	129220.2	120288.5	107.43	PASS	30-150
N063181-003C	SAMP	1	93382.5	74317.7	125.65	PASS	30-150	135531.6	120288.5	112.67	PASS	30-150
N063181-003C	SAMP	5	93563.6	74317.7	125.9	PASS	30-150	142857.8	120288.5	118.76	PASS	30-150
N063181-003C-PS	PS	1	92932.3	74317.7	125.05	PASS	30-150	134821.7	120288.5	112.08	PASS	30-150
N063181-003C-MS	MS	1	95202.8	74317.7	128.1	PASS	30-150	138018.8	120288.5	114.74	PASS	30-150
N063181-003C-MSD	MSD	1	94733.6	74317.7	127.47	PASS	30-150	139585.8	120288.5	116.04	PASS	30-150
CCV9	CCV	1	98459.2	74317.7	132.48	PASS	30-150	149430.1	120288.5	124.23	PASS	30-150
CCB9	CCB	1	95740.2	74317.7	128.83	PASS	30-150	145332.8	120288.5	120.82	PASS	30-150
N063182-001B	SAMP	1	90928.1	74317.7	122.35	PASS	30-150	137334.4	120288.5	114.17	PASS	30-150
N063182-003B	SAMP	1	91258.6	74317.7	122.8	PASS	30-150	132205.5	120288.5	109.91	PASS	30-150
N063182-005B	SAMP	1	86508.1	74317.7	116.4	PASS	30-150	116440.8	120288.5	96.8	PASS	30-150
N063182-008B	SAMP	1	88466	74317.7	119.04	PASS	30-150	121262.2	120288.5	100.81	PASS	30-150
N063182-009B	SAMP	1	97225.5	74317.7	130.82	PASS	30-150	139767.9	120288.5	116.19	PASS	30-150
N063182-010B	SAMP	1	98615.7	74317.7	132.69	PASS	30-150	142664.1	120288.5	118.6	PASS	30-150
N063182-011B	SAMP	1	78175.2	74317.7	105.19	PASS	30-150	100936.7	120288.5	83.91	PASS	30-150
CCV10	CCV	1	109565.5	74317.7	147.43	PASS	30-150	159104.3	120288.5	132.27	PASS	30-150
CCB10	CCB	1	106474.6	74317.7	143.27	PASS	30-150	153247.5	120288.5	127.4	PASS	30-150
ICSA5	ICSA	1	107287.6	74317.7	144.36	PASS	30-150	156039.4	120288.5	129.72	PASS	30-150
ICSAB5	ICSAB	1	106178.3	74317.7	142.87	PASS	30-150	151073.9	120288.5	125.59	PASS	30-150
CCV11	CCV	1	104200.2	74317.7	140.21	PASS	30-150	147927.1	120288.5	122.98	PASS	30-150
CCB11	CCB	1	101766.8	74317.7	136.93	PASS	30-150	141634.4	120288.5	117.75	PASS	30-150
CCV12	CCV	1	107518.2	74317.7	144.67	PASS	30-150	148686.4	120288.5	123.61	PASS	30-150
CCB12	CCB	1	103006.5	74317.7	138.6	PASS	30-150	147007.1	120288.5	122.21	PASS	30-150
CCV13	CCV	1	102310.2	74317.7	137.67	PASS	30-150	144101.6	120288.5	119.8	PASS	30-150
CCB13	CCB	1	99342.2	74317.7	133.67	PASS	30-150	139484	120288.5	115.96	PASS	30-150
ICSA6	ICSA	1	99544.9	74317.7	133.95	PASS	30-150	140803.9	120288.5	117.06	PASS	30-150
ICSAB6	ICSAB	1	98392.3	74317.7	132.39	PASS	30-150	140448.5	120288.5	116.76	PASS	30-150
CCV14	CCV	1	96374.2	74317.7	129.68	PASS	30-150	135808	120288.5	112.9	PASS	30-150
CCB14	CCB	1	92763.6	74317.7	124.82	PASS	30-150	132850.9	120288.5	110.44	PASS	30-150
ICSA7	ICSA	1	93513.4	74317.7	125.83	PASS	30-150	133946.1	120288.5	111.35	PASS	30-150
ICSAB7	ICSAB	1	91482.2	74317.7	123.1	PASS	30-150	132779.6	120288.5	110.38	PASS	30-150

INTERNAL STANDARD: 240222A

Instrument ID: ICPMS-03

Sample Name	Type	DF	103 Rh (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	869653.6	869653.6	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	868676.1	869653.6	99.89	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	870621.7	869653.6	100.11	PASS	30-150
Std3-5/50 ppb	ICAL	1	871616.7	869653.6	100.23	PASS	30-150
Std4-10/100 ppb	ICAL	1	870358.8	869653.6	100.08	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	862440.3	869653.6	99.17	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	879922.6	869653.6	101.18	PASS	30-150
Std7-100/1000 ppb	ICAL	1	857954	869653.6	98.65	PASS	30-150
Std8-200/2000 ppb	ICAL	1	872023.8	869653.6	100.27	PASS	30-150
ICV	ICV	1	855905.1	869653.6	98.42	PASS	30-150
ICB	ICB	1	877653.5	869653.6	100.92	PASS	30-150
LLICV1	CCV1	1	868069.5	869653.6	99.82	PASS	30-150
MLCCV	CCV	1	877423	869653.6	100.89	PASS	30-150
ICSA1	ICSA	1	890441.8	869653.6	102.39	PASS	30-150
ICSAB1	ICSAB	1	882553.3	869653.6	101.48	PASS	30-150
CCV1	CCV	1	943473.9	869653.6	108.49	PASS	30-150
CCB1	CCB	1	948191.9	869653.6	109.03	PASS	30-150
CCV2	CCV	1	952287.3	869653.6	109.5	PASS	30-150
CCB2	CCB	1	921679.3	869653.6	105.98	PASS	30-150
CCV3	CCV	1	961752.2	869653.6	110.59	PASS	30-150
CCB3	CCB	1	947293.3	869653.6	108.93	PASS	30-150
ICSA2	ICSA	1	946827.9	869653.6	108.87	PASS	30-150
ICSAB2	ICSAB	1	936225.8	869653.6	107.66	PASS	30-150
CCV4	CCV	1	988570.6	869653.6	113.67	PASS	30-150
CCB4	CCB	1	956101.8	869653.6	109.94	PASS	30-150
CCV5	CCV	1	1042171.8	869653.6	119.84	PASS	30-150
CCB5	CCB	1	1031447	869653.6	118.6	PASS	30-150
ICSA3	ICSA	1	1051615.7	869653.6	120.92	PASS	30-150
ICSAB3	ICSAB	1	1048713.2	869653.6	120.59	PASS	30-150
CCV6	CCV	1	1074116.5	869653.6	123.51	PASS	30-150
CCB6	CCB	1	1057519.5	869653.6	121.6	PASS	30-150
CCV7	CCV	1	1097241.6	869653.6	126.17	PASS	30-150
CCB7	CCB	1	1078567.7	869653.6	124.02	PASS	30-150
MDL 4	SAMP	1	1087694.3	869653.6	125.07	PASS	30-150
MDL 4	SAMP	1	1085211.7	869653.6	124.79	PASS	30-150
CCV8	CCV	1	1092249.3	869653.6	125.6	PASS	30-150
CCB8	CCB	1	1082858.9	869653.6	124.52	PASS	30-150
ICSA4	ICSA	1	1110250.9	869653.6	127.67	PASS	30-150
ICSAB4	ICSAB	1	1094233.1	869653.6	125.82	PASS	30-150
MB-106973	MBLK	1	1070700.6	869653.6	123.12	PASS	30-150
LCS-106973	LCS	1	1078758.5	869653.6	124.05	PASS	30-150

INTERNAL STANDARD: 240222A

Instrument ID: ICPMS-03

Sample Name	Type	DF	103 Rh (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
N063181-001C	SAMP	1	952826.4	869653.6	109.56	PASS	30-150
N063181-002C	SAMP	1	917472.2	869653.6	105.5	PASS	30-150
N063181-003C	SAMP	1	1014799.1	869653.6	116.69	PASS	30-150
N063181-003C	SAMP	5	1083002.5	869653.6	124.53	PASS	30-150
N063181-003C-PS	PS	1	1015219.2	869653.6	116.74	PASS	30-150
N063181-003C-MS	MS	1	1028416.7	869653.6	118.26	PASS	30-150
N063181-003C-MSD	MSD	1	1035926.1	869653.6	119.12	PASS	30-150
CCV9	CCV	1	1179782.3	869653.6	135.66	PASS	30-150
CCB9	CCB	1	1164437.5	869653.6	133.9	PASS	30-150
N063182-001B	SAMP	1	1052053	869653.6	120.97	PASS	30-150
N063182-003B	SAMP	1	986541	869653.6	113.44	PASS	30-150
N063182-005B	SAMP	1	834684	869653.6	95.98	PASS	30-150
N063182-008B	SAMP	1	864201.2	869653.6	99.37	PASS	30-150
N063182-009B	SAMP	1	1004831.6	869653.6	115.54	PASS	30-150
N063182-010B	SAMP	1	1061690.5	869653.6	122.08	PASS	30-150
N063182-011B	SAMP	1	677146.7	869653.6	77.86	PASS	30-150
CCV10	CCV	1	1163891.8	869653.6	133.83	PASS	30-150
CCB10	CCB	1	1137457.9	869653.6	130.79	PASS	30-150
ICSA5	ICSA	1	1159723.4	869653.6	133.35	PASS	30-150
ICSAB5	ICSAB	1	1140458	869653.6	131.14	PASS	30-150
CCV11	CCV	1	1145880.2	869653.6	131.76	PASS	30-150
CCB11	CCB	1	1133643.9	869653.6	130.36	PASS	30-150
CCV12	CCV	1	1133921.1	869653.6	130.39	PASS	30-150
CCB12	CCB	1	1111935.5	869653.6	127.86	PASS	30-150
CCV13	CCV	1	1114577.3	869653.6	128.16	PASS	30-150
CCB13	CCB	1	1097149.2	869653.6	126.16	PASS	30-150
ICSA6	ICSA	1	1118726.1	869653.6	128.64	PASS	30-150
ICSAB6	ICSAB	1	1115737.3	869653.6	128.3	PASS	30-150
CCV14	CCV	1	1115617.1	869653.6	128.28	PASS	30-150
CCB14	CCB	1	1094929.6	869653.6	125.9	PASS	30-150
ICSA7	ICSA	1	1126483	869653.6	129.53	PASS	30-150
ICSAB7	ICSAB	1	1114246.2	869653.6	128.13	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	72154.9	72154.9	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	75819.9	72154.9	105.08	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	76342.4	72154.9	105.8	PASS	30-150
Std3-5/50 ppb	ICAL	1	77253.2	72154.9	107.07	PASS	30-150
Std4-10/100 ppb	ICAL	1	77475.2	72154.9	107.37	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	76063.3	72154.9	105.42	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	75148	72154.9	104.15	PASS	30-150
Std7-100/1000 ppb	ICAL	1	75462.7	72154.9	104.58	PASS	30-150
Std8-200/2000 ppb	ICAL	1	76036.5	72154.9	105.38	PASS	30-150
ICV	ICV	1	72025.6	72154.9	99.82	PASS	30-150
ICB	ICB	1	74886.9	72154.9	103.79	PASS	30-150
LLICV1	LLICV	1	75342.3	72154.9	104.42	PASS	30-150
MLCCV	CCV	1	76073.3	72154.9	105.43	PASS	30-150
ICSA1	ICSA	1	76901.4	72154.9	106.58	PASS	30-150
ICSAB1	ICSAB	1	73937.1	72154.9	102.47	PASS	30-150
MDL 4	ICAL	1	76134.7	72154.9	105.52	PASS	30-150
CCV1	CCV	1	78633	72154.9	108.98	PASS	30-150
CCB1	CCB	1	75792	72154.9	105.04	PASS	30-150
CCV2	CCV	1	77108	72154.9	106.86	PASS	30-150
CCB2	CCB	1	75349	72154.9	104.43	PASS	30-150
CCV3	CCV	1	77729.8	72154.9	107.73	PASS	30-150
CCB3	CCB	1	76196.1	72154.9	105.6	PASS	30-150
CCV4	CCV	1	77725.3	72154.9	107.72	PASS	30-150
CCB4	CCB	1	74891.4	72154.9	103.79	PASS	30-150
CCB4	CCB	1	76863.5	72154.9	106.53	PASS	30-150
ICSA2	ICSA	1	78266.7	72154.9	108.47	PASS	30-150
ICSAB2	ICSAB	1	78381.7	72154.9	108.63	PASS	30-150
CCV5	CCV	1	79154.2	72154.9	109.7	PASS	30-150
CCB5	CCB	1	77605.8	72154.9	107.55	PASS	30-150
ICSA3	ICSA	1	80012.9	72154.9	110.89	PASS	30-150
ICSAB3	ICSAB	1	80477.2	72154.9	111.53	PASS	30-150
N063181-001C	SAMP	10	77483.1	72154.9	107.38	PASS	30-150
N063181-002C	SAMP	10	77285.5	72154.9	107.11	PASS	30-150
N063182-001B	SAMP	1	77336.9	72154.9	107.18	PASS	30-150
N063182-003B	SAMP	1	75855.7	72154.9	105.13	PASS	30-150
N063182-003B	SAMP	10	77941.9	72154.9	108.02	PASS	30-150
N063182-005B	SAMP	1	76211.9	72154.9	105.62	PASS	30-150
N063182-005B	SAMP	10	84553.6	72154.9	117.18	PASS	30-150
N063182-008B	SAMP	1	78591.5	72154.9	108.92	PASS	30-150
N063182-009B	SAMP	1	85165.8	72154.9	118.03	PASS	30-150
N063182-009B	SAMP	10	87877.5	72154.9	121.79	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
CCV6	CCV	1	90893.6	72154.9	125.97	PASS	30-150
CCB6	CCB	1	86061.5	72154.9	119.27	PASS	30-150
N063182-009B	SAMP	1	80202.6	72154.9	111.15	PASS	30-150
N063182-009B	SAMP	1	80419.1	72154.9	111.45	PASS	30-150
N063182-009B	SAMP	1	80220.3	72154.9	111.18	PASS	30-150
N063182-009B	SAMP	1	79586.1	72154.9	110.3	PASS	30-150
N063182-010B	SAMP	10	81956.5	72154.9	113.58	PASS	30-150
N063182-011B	SAMP	1	70022.6	72154.9	97.05	PASS	30-150
N063182-011B	SAMP	100	94001.7	72154.9	130.28	PASS	30-150
CCV7	CCV	1	95356	72154.9	132.15	PASS	30-150
CCB7	CCB	1	92681.1	72154.9	128.45	PASS	30-150
ICSA4	ICSA	1	92615	72154.9	128.36	PASS	30-150
ICSAB4	ICSAB	1	91494.6	72154.9	126.8	PASS	30-150
CCV8	CCV	1	83057.4	72154.9	115.11	PASS	30-150
CCB8	CCB	1	81017.5	72154.9	112.28	PASS	30-150
CCV9	CCV	1	95607.4	72154.9	132.5	PASS	30-150
CCB9	CCB	1	91740.5	72154.9	127.14	PASS	30-150
CCV10	CCV	1	91776.3	72154.9	127.19	PASS	30-150
CCB10	CCB	1	87906.6	72154.9	121.83	PASS	30-150
ICSA5	ICSA	1	88163.5	72154.9	122.19	PASS	30-150
ICSAB5	ICSAB	1	88326.5	72154.9	122.41	PASS	30-150
CCV11	CCV	1	91685.6	72154.9	127.07	PASS	30-150
CCB11	CCB	1	88643.6	72154.9	122.85	PASS	30-150
CCV12	CCV	1	95484.6	72154.9	132.33	PASS	30-150
CCB12	CCB	1	92386	72154.9	128.04	PASS	30-150
CCV13	CCV	1	92046.4	72154.9	127.57	PASS	30-150
CCB13	CCB	1	89338.5	72154.9	123.81	PASS	30-150
ICSA6	ICSA	1	90478.1	72154.9	125.39	PASS	30-150
ICSAB6	ICSAB	1	89529.4	72154.9	124.08	PASS	30-150
CCV14	CCV	1	89028.2	72154.9	123.38	PASS	30-150
CCB14	CCB	1	86002.1	72154.9	119.19	PASS	30-150
CCV15	CCV	1	91992.8	72154.9	127.49	PASS	30-150
CCB15	CCB	1	89487.3	72154.9	124.02	PASS	30-150
CCV16	CCV	1	88543.2	72154.9	122.71	PASS	30-150
CCB16	CCB	1	86282.5	72154.9	119.58	PASS	30-150
ICSA7	ICSA	1	87350.2	72154.9	121.06	PASS	30-150
ICSAB7	ICSAB	1	87996.9	72154.9	121.96	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.: N063181
Test Method: EPA 6020
Analysis Date: 2/22/2024

Matrix: Groundwater
Batch No.: 106973

Instrument ID: ICPMS-03
Instrument Description: Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Se. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063181-003C DT 5x	Molybdenum	Mo	µg/L	60.447	PASS	61.52106	1.75%	10
N063181-003C DT 5x	Selenium	Se	µg/L	4.586918	NA	4.378261	4.77%	10
N063181-003C DT 5x	Chromium	Cr	µg/L	33.02435	PASS	31.84091	3.72%	10

Reviewed by:

JRB 3/24/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **N063181-003C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **ZZZZZZ** Batch ID: **106973** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/22/2024** SeqNo: **5708878**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	74.042	0.50	10.00	61.52	125	80	120				S
Selenium	14.116	0.50	10.00	4.378	97.4	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063181
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **N063181-003C-PS**	SampType: **PS**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **ZZZZZZ**	Batch ID: **106973**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/22/2024**	SeqNo: **5708715**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	42.490	1.0	10.00	31.84	106	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

ARCADIS

Project: PG&E Topock - PCM

Project No.: 30211191

ASSET Laboratories Work Order:

N063182

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063182

Item	Page
Cover Page	1-5
Analytical Result/QC Summary Reports	6-48
Sample Receiving Items	49-54
List of Analysts	55
Raw Data	
EPA 218.6	56-163
EPA 300.0	164-192
EPA 6010B_Dissolved	193-220
EPA 6020_Dissolved	221-325

March 06, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063182

RE: PG&E Topock - PCM, 30211191

Attention: Dan Bush

Enclosed are the results for sample(s) received on February 19, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063182

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 218.6:

Dilution was necessary for some samples due to matrix interference. Samples were analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Samples were reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Analytical Comments for EPA 300:

Dilution was necessary due to precipitation of sample upon addition of eluent.

ASSET Laboratories

Date: *06-Mar-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063182
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063182-001A	MW-27-020-Q124	Groundwater	2/19/2024 1:49:00 PM	2/19/2024	3/6/2024
N063182-001B	MW-27-020-Q124	Groundwater	2/19/2024 1:49:00 PM	2/19/2024	3/6/2024
N063182-001C	MW-27-020-Q124	Groundwater	2/19/2024 1:49:00 PM	2/19/2024	3/6/2024
N063182-002A	MW-27-020-EB-Q124	Groundwater	2/19/2024 1:25:00 PM	2/19/2024	3/6/2024
N063182-003A	MW-27-060-Q124	Groundwater	2/19/2024 12:39:00 PM	2/19/2024	3/6/2024
N063182-003B	MW-27-060-Q124	Groundwater	2/19/2024 12:39:00 PM	2/19/2024	3/6/2024
N063182-003C	MW-27-060-Q124	Groundwater	2/19/2024 12:39:00 PM	2/19/2024	3/6/2024
N063182-004A	MW-27-060-EB-Q124	Groundwater	2/19/2024 12:20:00 PM	2/19/2024	3/6/2024
N063182-005A	MW-27-085-Q124	Groundwater	2/19/2024 1:05:00 PM	2/19/2024	3/6/2024
N063182-005B	MW-27-085-Q124	Groundwater	2/19/2024 1:05:00 PM	2/19/2024	3/6/2024
N063182-005C	MW-27-085-Q124	Groundwater	2/19/2024 1:05:00 PM	2/19/2024	3/6/2024
N063182-006A	MW-27-085-EB-Q124	Groundwater	2/19/2024 12:46:00 PM	2/19/2024	3/6/2024
N063182-007A	EB-728-Q124	Groundwater	2/19/2024 2:00:00 PM	2/19/2024	3/6/2024
N063182-008A	PT5D-Q124	Groundwater	2/19/2024 12:39:00 PM	2/19/2024	3/6/2024
N063182-008B	PT5D-Q124	Groundwater	2/19/2024 12:39:00 PM	2/19/2024	3/6/2024
N063182-008C	PT5D-Q124	Groundwater	2/19/2024 12:39:00 PM	2/19/2024	3/6/2024
N063182-009A	PT5M-Q124	Groundwater	2/19/2024 1:11:00 PM	2/19/2024	3/6/2024
N063182-009B	PT5M-Q124	Groundwater	2/19/2024 1:11:00 PM	2/19/2024	3/6/2024
N063182-009C	PT5M-Q124	Groundwater	2/19/2024 1:11:00 PM	2/19/2024	3/6/2024
N063182-010A	PT5S-Q124	Groundwater	2/19/2024 1:43:00 PM	2/19/2024	3/6/2024
N063182-010B	PT5S-Q124	Groundwater	2/19/2024 1:43:00 PM	2/19/2024	3/6/2024
N063182-010C	PT5S-Q124	Groundwater	2/19/2024 1:43:00 PM	2/19/2024	3/6/2024
N063182-011A	MW-22-Q124	Groundwater	2/19/2024 2:35:00 PM	2/19/2024	3/6/2024
N063182-011B	MW-22-Q124	Groundwater	2/19/2024 2:35:00 PM	2/19/2024	3/6/2024
N063182-011C	MW-22-Q124	Groundwater	2/19/2024 2:35:00 PM	2/19/2024	3/6/2024
N063182-012A	EB-729-Q124	Groundwater	2/19/2024 3:10:00 PM	2/19/2024	3/6/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-27-020-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 1:49:00 PM
Lab ID:	N063182-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240220A**	QC Batch: **R182732**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/20/2024 02:25 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-27-020-EB-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 1:25:00 PM
Lab ID:	N063182-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240220A**	QC Batch: **R182732**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/20/2024 04:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-27-060-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 12:39:00 PM
Lab ID:	N063182-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240220A**	QC Batch: **R182732**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/20/2024 03:12 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-27-060-EB-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 12:20:00 PM
Lab ID:	N063182-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240220A**	QC Batch: **R182732**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/20/2024 04:28 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-27-085-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 1:05:00 PM
Lab ID:	N063182-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240220A**	QC Batch: **R182732**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/20/2024 05:43 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-27-085-EB-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 12:46:00 PM
Lab ID:	N063182-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240220A**	QC Batch: **R182732**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/20/2024 05:06 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-728-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 2:00:00 PM
Lab ID:	N063182-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240220A**	QC Batch: **R182732**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/20/2024 05:25 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT5D-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 12:39:00 PM
Lab ID:	N063182-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240220A**	QC Batch: **R182732**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	44	0.77	4.0		µg/L	20	2/20/2024 01:28 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT5M-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 1:11:00 PM
Lab ID:	N063182-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240220A**	QC Batch: **R182732**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/20/2024 03:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT5S-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 1:43:00 PM
Lab ID:	N063182-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240220A**	QC Batch: **R182732**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/20/2024 03:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-22-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 2:35:00 PM
Lab ID:	N063182-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240220A**	QC Batch: **R182732**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/20/2024 06:02 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-729-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 3:10:00 PM
Lab ID:	N063182-012	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240220A**	QC Batch: **R182732**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/20/2024 06:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R182732**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **PBW**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701919**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R182732**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **LCSW**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701920**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.950	0.20	5.000	0	99.0	90	110				

Sample ID: **N063181-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701924**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.992	0.20	1.000	0	99.2	90	110				

Sample ID: **N063181-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701925**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	552.090	10	250.0	293.9	103	90	110				

Sample ID: **N063181-001AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701926**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	533.235	10	250.0	293.9	95.7	90	110	552.1	3.47	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063181-002ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182732**
Client ID: **ZZZZZZ** Batch ID: **R182732** TestNo: **EPA 218.6** Analysis Date: **2/20/2024** SeqNo: **5701927**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	450.435	10						458.6	1.80	20	

Sample ID: **N063181-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182732**
Client ID: **ZZZZZZ** Batch ID: **R182732** TestNo: **EPA 218.6** Analysis Date: **2/20/2024** SeqNo: **5701930**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	695.635	10	250.0	458.6	94.8	90	110				

Sample ID: **N063182-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182732**
Client ID: **ZZZZZZ** Batch ID: **R182732** TestNo: **EPA 218.6** Analysis Date: **2/20/2024** SeqNo: **5701932**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	141.652	4.0	100.0	43.65	98.0	90	110				

Sample ID: **N063182-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182732**
Client ID: **ZZZZZZ** Batch ID: **R182732** TestNo: **EPA 218.6** Analysis Date: **2/20/2024** SeqNo: **5701936**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.004	0.20	1.000	0	100	90	110				

Sample ID: **N063182-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182732**
Client ID: **ZZZZZZ** Batch ID: **R182732** TestNo: **EPA 218.6** Analysis Date: **2/20/2024** SeqNo: **5701941**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.994	0.20	1.000	0	99.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063182-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182732**
Client ID: **ZZZZZZ** Batch ID: **R182732** TestNo: **EPA 218.6** Analysis Date: **2/20/2024** SeqNo: **5701943**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.974	0.20	1.000	0	97.4	90	110				

Sample ID: **N063182-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182732**
Client ID: **ZZZZZZ** Batch ID: **R182732** TestNo: **EPA 218.6** Analysis Date: **2/20/2024** SeqNo: **5701945**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.074	0.20	1.000	0	107	90	110				

Sample ID: **N063182-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182732**
Client ID: **ZZZZZZ** Batch ID: **R182732** TestNo: **EPA 218.6** Analysis Date: **2/20/2024** SeqNo: **5701947**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.012	0.20	1.000	0	101	90	110				

Sample ID: **N063182-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182732**
Client ID: **ZZZZZZ** Batch ID: **R182732** TestNo: **EPA 218.6** Analysis Date: **2/20/2024** SeqNo: **5701949**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.001	0.20	1.000	0	100	90	110				

Sample ID: **N063182-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182732**
Client ID: **ZZZZZZ** Batch ID: **R182732** TestNo: **EPA 218.6** Analysis Date: **2/20/2024** SeqNo: **5701953**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.046	0.20	1.000	0	105	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063182-007AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701955**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.005	0.20	1.000	0	101	90	110				

Sample ID: **N063182-005AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701957**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.620	1.0	5.000	0	92.4	90	110				

Sample ID: **N063182-011AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701959**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.015	1.0	5.000	0	100	90	110				

Sample ID: **N063181-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701960**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	66.807	1.0	25.00	42.02	99.1	90	110				

Sample ID: **N063182-012AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701964**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.994	0.20	1.000	0	99.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-27-020-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 1:49:00 PM
Lab ID:	N063182-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240220A**	QC Batch: **R182719**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.12	0.25		mg/L	5	2/20/2024 02:39 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-27-060-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 12:39:00 PM
Lab ID:	N063182-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240220A**	QC Batch: **R182719**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.12	0.25		mg/L	5	2/20/2024 02:55 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-27-085-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 1:05:00 PM
Lab ID:	N063182-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240220A**	QC Batch: **R182719**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.12	0.25		mg/L	5	2/20/2024 03:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT5D-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 12:39:00 PM
Lab ID:	N063182-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240220A**	QC Batch: **R182719**			PrepDate:			Analyst: **RAB**
Sulfate	940	34	50		mg/L	100	2/20/2024 06:59 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240220A**	QC Batch: **R182719**			PrepDate:			Analyst: **RAB**
Nitrate as N	0.52	0.24	0.50		mg/L	10	2/20/2024 01:17 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT5M-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 1:11:00 PM
Lab ID:	N063182-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240220A**	QC Batch: **R182719**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.12	0.25		mg/L	5	2/20/2024 03:25 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT5S-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 1:43:00 PM
Lab ID:	N063182-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240220A**	QC Batch: **R182719**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.12	0.25		mg/L	5	2/20/2024 03:40 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-22-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 2:35:00 PM
Lab ID:	N063182-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240220A**	QC Batch: **R182719**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/20/2024 02:24 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **MB-R182719_SO4**	SampType: **MBLK**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **182719**			
Client ID: **PBW**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**			SeqNo: **5701691**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **LCS-R182719_SO4**	SampType: **LCS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **182719**			
Client ID: **LCSW**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**			SeqNo: **5701692**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.886	0.50	4.000	0	97.2	90	110				

Sample ID: **N063182-008CDUP**	SampType: **DUP**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **182719**			
Client ID: **ZZZZZZ**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**			SeqNo: **5701698**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	938.850	50						940.8	0.212	20	

Sample ID: **N063182-008CMS**	SampType: **MS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **182719**			
Client ID: **ZZZZZZ**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**			SeqNo: **5701701**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	1319.490	50	400.0	940.8	94.7	80	120				

Sample ID: **N063182-008CMSD**	SampType: **MSD**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **182719**			
Client ID: **ZZZZZZ**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**			SeqNo: **5701702**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	1319.720	50	400.0	940.8	94.7	80	120	1319	0.0174	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **MB-R182719_NO3** SampType: **MBLK** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182719**
Client ID: **PBW** Batch ID: **R182719** TestNo: **EPA 300.0** Analysis Date: **2/20/2024** SeqNo: **5701662**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **LCS-R182719_NO3** SampType: **LCS** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182719**
Client ID: **LCSW** Batch ID: **R182719** TestNo: **EPA 300.0** Analysis Date: **2/20/2024** SeqNo: **5701663**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.232	0.050	1.250	0	98.6	90	110				

Sample ID: **N063169-001BDUP** SampType: **DUP** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182719**
Client ID: **ZZZZZZ** Batch ID: **R182719** TestNo: **EPA 300.0** Analysis Date: **2/20/2024** SeqNo: **5701665**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	8.454	0.25						8.390	0.766	20	

Sample ID: **N063182-008CMS** SampType: **MS** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182719**
Client ID: **ZZZZZZ** Batch ID: **R182719** TestNo: **EPA 300.0** Analysis Date: **2/20/2024** SeqNo: **5701678**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.727	0.50	12.50	0.5250	97.6	80	120				

Sample ID: **N063182-008CMSD** SampType: **MSD** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182719**
Client ID: **ZZZZZZ** Batch ID: **R182719** TestNo: **EPA 300.0** Analysis Date: **2/20/2024** SeqNo: **5701681**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	13.052	0.50	12.50	0.5250	100	80	120	12.73	2.52	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **N063182-011CMS** SampType: **MS** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182719**
Client ID: **ZZZZZZ** Batch ID: **R182719** TestNo: **EPA 300.0** Analysis Date: **2/20/2024** SeqNo: **5701682**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.067	0.50	12.50	0.2940	94.2	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-27-020-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 1:49:00 PM
Lab ID:	N063182-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240221B**	QC Batch: **106974**				PrepDate:	**2/20/2024**	Analyst: **DJ**
Iron	26	13	20		µg/L	1	2/21/2024 04:24 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-27-060-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 12:39:00 PM
Lab ID:	N063182-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240221B**	QC Batch: **106974**				PrepDate:	**2/20/2024**	Analyst: **DJ**
Iron	840	13	20		µg/L	1	2/21/2024 04:36 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-27-085-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 1:05:00 PM
Lab ID:	N063182-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240221B**	QC Batch: **106974**				PrepDate:	**2/20/2024**	Analyst: **DJ**
Iron	260	13	20		µg/L	1	2/21/2024 04:42 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT5D-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 12:39:00 PM
Lab ID:	N063182-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240221B**	QC Batch: **106974**				PrepDate:	**2/20/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	2/21/2024 05:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT5M-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 1:11:00 PM
Lab ID:	N063182-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240221B**	QC Batch: **106974**				PrepDate:	**2/20/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	2/21/2024 05:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT5S-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 1:43:00 PM
Lab ID:	N063182-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240221B**	QC Batch: **106974**				PrepDate:	**2/20/2024**	Analyst: **DJ**
Iron	1000	13	20		µg/L	1	2/21/2024 05:22 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-22-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 2:35:00 PM
Lab ID:	N063182-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_240221B**	QC Batch: **106974**			PrepDate:	**2/20/2024**		Analyst: **DJ**
Iron	22000	13	20		µg/L	1	2/21/2024 05:26 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-106974**	SampType: **MBLK**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/20/2024**	RunNo: **182757**
Client ID: **PBW**	Batch ID: **106974**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/21/2024**	SeqNo: **5703777**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS-106974**	SampType: **LCS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/20/2024**	RunNo: **182757**
Client ID: **LCSW**	Batch ID: **106974**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/21/2024**	SeqNo: **5703778**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	108.671	20	100.0	0	109	85	115				

Sample ID: **N063182-005B-MS**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/20/2024**	RunNo: **182757**
Client ID: **ZZZZZZ**	Batch ID: **106974**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/21/2024**	SeqNo: **5703786**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	359.734	20	100.0	259.0	101	75	125				

Sample ID: **N063182-005B-MSD**	SampType: **MSD**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/20/2024**	RunNo: **182757**
Client ID: **ZZZZZZ**	Batch ID: **106974**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/21/2024**	SeqNo: **5703787**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	351.294	20	100.0	259.0	92.3	75	125	359.7	2.37	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-27-020-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 1:49:00 PM
Lab ID:	N063182-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240222F**	QC Batch: **106973**			PrepDate:		**2/20/2024**	Analyst: **DJ**
Arsenic	0.94	0.050	0.10		µg/L	1	2/23/2024 12:23 AM
Barium	60	0.083	1.0		µg/L	1	2/23/2024 07:56 PM
Manganese	72	0.026	0.50		µg/L	1	2/23/2024 12:23 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-27-060-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 12:39:00 PM
Lab ID:	N063182-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240222F**	QC Batch: **106973**				PrepDate:	**2/20/2024**	Analyst: **DJ**
Arsenic	8.5	0.050	0.10		µg/L	1	2/23/2024 12:28 AM
Barium	240	0.83	10		µg/L	10	2/23/2024 08:05 PM
Manganese	380	0.26	5.0		µg/L	10	2/23/2024 08:05 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-27-085-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 1:05:00 PM
Lab ID:	N063182-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240222F**	QC Batch: **106973**			PrepDate:		**2/20/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/23/2024 12:32 AM
Barium	49	0.083	1.0		µg/L	1	2/23/2024 08:10 PM
Manganese	320	0.26	5.0		µg/L	10	2/23/2024 08:15 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit	
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified	
	DO	Surrogate Diluted Out			

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT5D-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 12:39:00 PM
Lab ID:	N063182-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240222F**	QC Batch: **106973**			PrepDate:		**2/20/2024**	Analyst: **DJ**
Arsenic	0.69	0.050	0.10		µg/L	1	2/23/2024 12:37 AM
Barium	24	0.083	1.0		µg/L	1	2/23/2024 08:19 PM
Manganese	2.7	0.026	0.50		µg/L	1	2/23/2024 12:37 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT5M-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 1:11:00 PM
Lab ID:	N063182-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240223D**	QC Batch: **106973**			PrepDate:		**2/20/2024**	Analyst: **DJ**
Arsenic	0.57	0.050	0.10		µg/L	1	2/23/2024 08:43 PM
Barium	58	0.083	1.0		µg/L	1	2/23/2024 08:24 PM
Manganese	1700	0.26	5.0		µg/L	10	2/23/2024 08:29 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT5S-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 1:43:00 PM
Lab ID:	N063182-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240222F**	QC Batch: **106973**			PrepDate:		**2/20/2024**	Analyst: **DJ**
Arsenic	14	0.050	0.10		µg/L	1	2/23/2024 12:46 AM
Barium	110	0.083	1.0		µg/L	1	2/25/2024 08:50 PM
Manganese	240	0.26	5.0		µg/L	10	2/23/2024 09:01 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-22-Q124
Lab Order:	N063182		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/19/2024 2:35:00 PM
Lab ID:	N063182-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A			**EPA 6020**			
RunID: **NV00922-ICP8_240222F**	QC Batch: **106973**			PrepDate:	**2/20/2024**	Analyst: **DJ**	
Arsenic	14	0.050	0.10		µg/L	1	2/23/2024 12:51 AM
Barium	150	0.083	1.0		µg/L	1	2/25/2024 08:55 PM
Manganese	3200	2.6	50		µg/L	100	2/23/2024 09:11 PM
Molybdenum	43	0.12	0.50		µg/L	1	2/23/2024 12:51 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **MB-106973** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/20/2024** RunNo: **182849**
Client ID: **PBW** Batch ID: **106973** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/22/2024** SeqNo: **5708872**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID: **LCS-106973** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/20/2024** RunNo: **182849**
Client ID: **LCSW** Batch ID: **106973** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/22/2024** SeqNo: **5708873**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.429	0.10	10.00	0	104	85	115				
Barium	10.219	1.0	10.00	0	102	85	115				
Manganese	100.367	0.50	100.0	0	100	85	115				
Molybdenum	10.000	0.50	10.00	0	100	85	115				

Sample ID: **N063181-003C-MS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/20/2024** RunNo: **182849**
Client ID: **ZZZZZZ** Batch ID: **106973** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708879**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.531	0.10	10.00	2.431	101	75	125				
Barium	111.427	1.0	10.00	99.48	119	75	125				
Manganese	163.929	0.50	100.0	69.86	94.1	75	125				
Molybdenum	73.536	0.50	10.00	61.52	120	75	125				

Sample ID: **N063181-003C-MSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/20/2024** RunNo: **182849**
Client ID: **ZZZZZZ** Batch ID: **106973** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708880**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.953	0.10	10.00	2.431	105	75	125	12.53	3.32	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063181-003C-MSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/20/2024** RunNo: **182849**
Client ID: **ZZZZZZ** Batch ID: **106973** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708880**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	111.682	1.0	10.00	99.48	122	75	125	111.4	0.229	20	
Manganese	166.046	0.50	100.0	69.86	96.2	75	125	163.9	1.28	20	
Molybdenum	72.941	0.50	10.00	61.52	114	75	125	73.54	0.812	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

SAMPLE RECEIVING ITEMS

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement	QA/QC	Sample Receipt Condition
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	Excel EDD	RTNE	Y N
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.moore@critigen.com	Address:	Geotracker	RWQCB ✓	1. Chilled ✓
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com P.O.#	Labspec	CalTrans	2. Headspace
Submitted By: Rissie Top		Phone: 949-727-1400, ext 200 Fax:	Others ✓	LEVEL III	3. Container Intact ✓
Title: Field Tech	Phone: 916-786-3302 Fax:		Specify: RWQCB	LEVEL IV	4. Seal Present ✓
Signature: Date: 02/19/24	Sampled By: Rissie Top		Global ID:	Regulatory	5. IR number 3
I hereby authorize ASSET Labs to perform the tests indicated below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for			Specify State:	6. Method of Cooling: ICE
Project Name: PG&E Topock - PCM	Signature: Date: 02/19/24				Sample Temp: 1.9°C / 2.4°C
Project Number: 30211191					Courier: ASSET Tracking No.:

Matrix: Ground X | Sediment | Potable | Soil | NPDES | Other Solid | Surface

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly)	Nitrate, sulfate (EPA 300.0) (1 L poly)	Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Molybdenum (500mL poly)	Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOA)	Ammonia as Nitrogen (SM4500NH3D); H2SO4 (1 L poly)	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 (125 mL poly)	Nitrate (EPA 300.0) (1 L poly)	(1 L poly)	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063182-001	✓ MW-27-020-Q124	2/19/2024	13:49		X		X						X		E	3	P	BNS	
2	-002	✓ MW-27-020-EB-Q124	2/19/2024	13:25		X										E	1	P	BNS	
3	-003	✓ MW-27-060-Q124	2/19/2024	12:39		X		X						X		E	3	P	BNS	
4	-004	✓ MW-27-060-EB-Q124	2/19/2024	12:20		X										E	1	P	BNS	
5	-005	✓ MW-27-085-Q124	2/19/2024	13:05		X		X						X		E	3	P	BNS	
6	-006	✓ MW-27-085-EB-Q124	2/19/2024	12:46		X										E	1	P	BNS	
7	-007	✓ EB-728-Q124	2/19/2024	14:00		X										E	1	P	BNS	
8	-008	✓ PT5D-Q124	2/19/2024	12:39		X	X	X								E	3	P	BNS	
9	-009	✓ PT5M -Q124	2/19/2024	13:11		X		X						X		E	3	P	BNS	
10	-010	✓ PT5S -Q124	2/19/2024	13:43		X		X						X		E	3	P	BNS	
11	-011	✓ MW-22-Q124	2/19/2024	14:35		X		X		X				X		E	3	P	BNS	
12	-012	✓ EB-729-Q124	2/19/2024	15:10		X										E	1	P	B	
13																				
14																				

Relinquished by (Signature and Printed Name): Rissie Top Date/Time: 02/19/24 1550
Relinquished by (Signature and Printed Name): Michael A Centeno Date/Time: 2/19/24 1550
Relinquished by (Signature and Printed Name): Michael A Centeno Date/Time: 2/19/24 1910
Relinquished by (Signature and Printed Name): Michael A Centeno Date/Time: 2/19/24 1910
Relinquished by (Signature and Printed Name): Date/Time:
Relinquished by (Signature and Printed Name): Date/Time:

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:				Container Type:		
H=HCL	N=HNO_3	S=H_2SO_4	C=4°C	T=Tube	V=VOA	P=Pint
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$		J=Jar	B=Tedlar	G=Glass
Others/Specify:	B (NH4)2SO4/NH4OH			M=Metal	M=Metal	C=Can

White=Laboratory Copy
Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	2/19/2024	Workorder:	N063182
Rep sample Temp (Deg C):	1.9/2.4	IR Gun ID:	3

Temp Blank: ☑ Yes ☐ No

Carrier name: ASSET

Last 4 digits of Tracking No.: NA Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By YR YRodriguez 2/20/2024

Reviewed By: for: MBC 02/21/2024

ASSET Laboratories

WORK ORDER Summary

19-Feb-24

WorkOrder: N063182

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 2/19/2024 7:10 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063182-001A	MW-27-020-Q124	2/19/2024 1:49:00 PM	3/5/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063182-001B			3/5/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/5/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/5/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/5/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063182-001C			3/5/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063182-002A	MW-27-020-EB-Q124	2/19/2024 1:25:00 PM	3/5/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063182-003A	MW-27-060-Q124	2/19/2024 12:39:00 PM	3/5/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063182-003B			3/5/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/5/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/5/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/5/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063182-003C			3/5/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063182-004A	MW-27-060-EB-Q124	2/19/2024 12:20:00 PM	3/5/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063182-005A	MW-27-085-Q124	2/19/2024 1:05:00 PM	3/5/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063182-005B			3/5/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/5/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/5/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/5/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063182-005C			3/5/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063182-006A	MW-27-085-EB-Q124	2/19/2024 12:46:00 PM	3/5/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063182-007A	EB-728-Q124	2/19/2024 2:00:00 PM	3/5/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW

WORK ORDER Summary

19-Feb-24

WorkOrder: N063182

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 2/19/2024 7:10 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063182-008A	PT5D-Q124	2/19/2024 12:39:00 PM	3/5/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063182-008B			3/5/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/5/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/5/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/5/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063182-008C			3/5/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/5/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063182-009A	PT5M-Q124	2/19/2024 1:11:00 PM	3/5/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063182-009B			3/5/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/5/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/5/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/5/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063182-009C			3/5/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063182-010A	PT5S-Q124	2/19/2024 1:43:00 PM	3/5/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063182-010B			3/5/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/5/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/5/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/5/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063182-010C			3/5/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063182-011A	MW-22-Q124	2/19/2024 2:35:00 PM	3/5/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063182-011B			3/5/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/5/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

19-Feb-24

WorkOrder: N063182

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 2/19/2024 7:10 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063182-011B	MW-22-Q124	2/19/2024 2:35:00 PM	3/5/2024	Groundwater	EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/5/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063182-011C			3/5/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063182-012A	EB-729-Q124	2/19/2024 3:10:00 PM	3/5/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063182-013A	FOLDER	3/5/2024	3/5/2024		Folder	Folder	☐	☐	☐	LAB
			3/5/2024		Folder	Level IV Report	☐	☐	☐	LAB
			3/5/2024		Folder	Folder	☐	☐	☐	LAB

List of Analysts

ASSET Laboratories Work Order: N063182

NAME	TEST METHOD
Ria Abes	EPA 218.6, EPA 300.0
Diane Jetajobe	EPA 6010B_Dissolved, EPA 6020_Dissolved

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R182732
ASSET #: N063182

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/20/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer RB 02282024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063182-008A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 2.1826 * 20$$

$$Cr^{+6}, \mu g/L = 43.6520$$

Reporting results in two significant figures,

$$\mathbf{Cr^{+6}, \mu g/L = 44}$$

Reviewed by:

dMocha 3/5/2024

ANALYSIS RUN LOG

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240220A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/20/24 9:36 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/20/24 9:50 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/20/24 9:59 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/20/24 10:09 AM	Reported
13	MB-R182732	MBLK	1	Hexavalent Chromium	02/20/24 10:18 AM	Reported
14	LCS-R182732	LCS	1	Hexavalent Chromium	02/20/24 10:28 AM	Reported
15	N063181-001A	SAMP	50	Hexavalent Chromium	02/20/24 11:31 AM	Reported
16	N063181-002A	SAMP	50	Hexavalent Chromium	02/20/24 11:42 AM	Reported
17	N063181-003A	SAMP	50	Hexavalent Chromium	02/20/24 11:51 AM	Not Reported
18	N063181-004A	SAMP	1	Hexavalent Chromium	02/20/24 12:01 PM	Reported
19	N063181-004AMS	MS	1	Hexavalent Chromium	02/20/24 12:10 PM	Reported
20	N063181-001AMS	MS	50	Hexavalent Chromium	02/20/24 12:19 PM	Reported
21	N063181-001AMSD	MSD	50	Hexavalent Chromium	02/20/24 12:29 PM	Reported
22	N063181-002ADUP	DUP	50	Hexavalent Chromium	02/20/24 12:38 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/20/24 12:48 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/20/24 12:57 PM	Reported
25	N063181-002AMS	MS	50	Hexavalent Chromium	02/20/24 1:17 PM	Reported
26	N063182-008A	SAMP	20	Hexavalent Chromium	02/20/24 1:28 PM	Reported
27	N063182-008AMS	MS	20	Hexavalent Chromium	02/20/24 1:38 PM	Reported
28	N063182-005A	SAMP	1	Hexavalent Chromium	02/20/24 1:47 PM	Not Reported
29	N063182-005AMS	MS	1	Hexavalent Chromium	02/20/24 1:56 PM	Not Reported
30	N063182-011A	SAMP	1	Hexavalent Chromium	02/20/24 2:06 PM	Not Reported
31	N063182-011AMS	MS	1	Hexavalent Chromium	02/20/24 2:15 PM	Not Reported
32	N063182-001A	SAMP	1	Hexavalent Chromium	02/20/24 2:25 PM	Reported
33	N063182-001AMS	MS	1	Hexavalent Chromium	02/20/24 2:34 PM	Reported
34	N063181-003A	SAMP	5	Hexavalent Chromium	02/20/24 2:44 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/20/24 2:53 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/20/24 3:03 PM	Reported
37	N063182-003A	SAMP	1	Hexavalent Chromium	02/20/24 3:12 PM	Reported
38	N063182-003AMS	MS	1	Hexavalent Chromium	02/20/24 3:22 PM	Reported
39	N063182-009A	SAMP	1	Hexavalent Chromium	02/20/24 3:31 PM	Reported
40	N063182-009AMS	MS	1	Hexavalent Chromium	02/20/24 3:41 PM	Reported
41	N063182-010A	SAMP	1	Hexavalent Chromium	02/20/24 3:50 PM	Reported
42	N063182-010AMS	MS	1	Hexavalent Chromium	02/20/24 3:59 PM	Reported

INJECTION LOG: 240220A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063182-002A	SAMP	1	Hexavalent Chromium	02/20/24 4:09 PM	Reported
44	N063182-002AMS	MS	1	Hexavalent Chromium	02/20/24 4:18 PM	Reported
45	N063182-004A	SAMP	1	Hexavalent Chromium	02/20/24 4:28 PM	Reported
46	N063182-004AMS	MS	1	Hexavalent Chromium	02/20/24 4:37 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/20/24 4:47 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/20/24 4:56 PM	Reported
49	N063182-006A	SAMP	1	Hexavalent Chromium	02/20/24 5:06 PM	Reported
50	N063182-006AMS	MS	1	Hexavalent Chromium	02/20/24 5:15 PM	Reported
51	N063182-007A	SAMP	1	Hexavalent Chromium	02/20/24 5:25 PM	Reported
52	N063182-007AMS	MS	1	Hexavalent Chromium	02/20/24 5:34 PM	Reported
53	N063182-005A	SAMP	5	Hexavalent Chromium	02/20/24 5:43 PM	Reported
54	N063182-005AMS	MS	5	Hexavalent Chromium	02/20/24 5:53 PM	Reported
55	N063182-011A	SAMP	5	Hexavalent Chromium	02/20/24 6:02 PM	Reported
56	N063182-011AMS	MS	5	Hexavalent Chromium	02/20/24 6:12 PM	Reported
57	N063181-003AMS	MS	5	Hexavalent Chromium	02/20/24 6:21 PM	Reported
58	CCV-5	CCV	1	Hexavalent Chromium	02/20/24 6:31 PM	Reported
59	CCB-5	CCB	1	Hexavalent Chromium	02/20/24 6:40 PM	Reported
60	N063182-012A	SAMP	1	Hexavalent Chromium	02/20/24 6:50 PM	Reported
61	N063182-012AMS	MS	1	Hexavalent Chromium	02/20/24 6:59 PM	Reported
62	CCV-6	CCV1	1	Hexavalent Chromium	02/20/24 7:09 PM	Reported
63	CCB-6	CCB	1	Hexavalent Chromium	02/20/24 7:18 PM	Reported
64	BLANK	BLANK	1	Hexavalent Chromium	02/20/24 7:27 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240220A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**20/Feb/24 19:58:17**
No. of Injections:	**67**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/20/2024 09:36	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/20/2024 09:50	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/20/2024 09:59	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/20/2024 10:09	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/20/2024 10:18	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/20/2024 10:28	Finished	LCS @5ppb, IWST-231228B
15	N063181-001A,SAMF	1	1000	Unknown		02/20/2024 11:31	Finished	SAMP,0.2>10 mL
16	N063181-002A,SAMF	2	1000	Unknown		02/20/2024 11:42	Finished	SAMP,0.2>10 mL
17	N063181-003A,SAMF	3	1000	Unknown		02/20/2024 11:51	Finished	SAMP,0.2>10 mL
18	N063181-004A,SAMF	4	1000	Unknown		02/20/2024 12:01	Finished	SAMP,10 mL
19	N063181-004AMS,MS	5	1000	Unknown		02/20/2024 12:10	Finished	MS (1ppb), IWST-231228B,10r
20	N063181-001AMS,MS	6	1000	Unknown		02/20/2024 12:19	Finished	MS (5ppb), IWST-231228B,0.2
21	N063181-001AMSD,M	7	1000	Unknown		02/20/2024 12:29	Finished	MSD (5ppb), IWST-231228B,0
22	N063181-002ADUP,D	8	1000	Unknown		02/20/2024 12:38	Finished	DUP,0.2>10 mL
23	CCV-2,CCV1,1,	9	1000	Unknown		02/20/2024 12:48	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		02/20/2024 12:57	Finished	CCB R240129C
25	N063181-002AMS,MS	1	1000	Unknown		02/20/2024 13:17	Finished	MS (5ppb), IWST-231228B,0.2
26	N063182-008A,SAMF	2	1000	Unknown		02/20/2024 13:28	Finished	SAMP,0.5>10 mL
27	N063182-008AMS,MS	3	1000	Unknown		02/20/2024 13:38	Finished	MS (5ppb), IWST-231228B,0.5
28	N063182-005A,SAMF	4	1000	Unknown		02/20/2024 13:47	Finished	SAMP,10 mL
29	N063182-005AMS,MS	5	1000	Unknown		02/20/2024 13:56	Finished	MS (1ppb), IWST-231228B,10r
30	N063182-011A,SAMF	6	1000	Unknown		02/20/2024 14:06	Finished	SAMP,10 mL
31	N063182-011AMS,MS	7	1000	Unknown		02/20/2024 14:15	Finished	MS (1ppb), IWST-231228B,10r
32	N063182-001A,SAMF	8	1000	Unknown		02/20/2024 14:25	Finished	SAMP,10 mL
33	N063182-001AMS,MS	9	1000	Unknown		02/20/2024 14:34	Finished	MS (1ppb), IWST-231228B,10r
34	N063181-003A,SAMF	10	1000	Unknown		02/20/2024 14:44	Finished	SAMP,2>10 mL
35	CCV-3,CCV,1,	11	1000	Unknown		02/20/2024 14:53	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	12	1000	Unknown		02/20/2024 15:03	Finished	CCB R240129C
37	N063182-003A,SAMF	13	1000	Unknown		02/20/2024 15:12	Finished	SAMP,10 mL
38	N063182-003AMS,MS	14	1000	Unknown		02/20/2024 15:22	Finished	MS (1ppb), IWST-231228B,10r
39	N063182-009A,SAMF	15	1000	Unknown		02/20/2024 15:31	Finished	SAMP,10 mL
40	N063182-009AMS,MS	16	1000	Unknown		02/20/2024 15:41	Finished	MS (1ppb), IWST-231228B,10r
41	N063182-010A,SAMF	17	1000	Unknown		02/20/2024 15:50	Finished	SAMP,10 mL
42	N063182-010AMS,MS	18	1000	Unknown		02/20/2024 15:59	Finished	MS (1ppb), IWST-231228B,10r
43	N063182-002A,SAMF	19	1000	Unknown		02/20/2024 16:09	Finished	SAMP,10 mL
44	N063182-002AMS,MS	20	1000	Unknown		02/20/2024 16:18	Finished	MS (1ppb), IWST-231228B,10r
45	N063182-004A,SAMF	21	1000	Unknown		02/20/2024 16:28	Finished	SAMP,10 mL
46	N063182-004AMS,MS	22	1000	Unknown		02/20/2024 16:37	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	23	1000	Unknown		02/20/2024 16:47	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	24	1000	Unknown		02/20/2024 16:56	Finished	CCB R240129C
49	N063182-006A,SAMF	25	1000	Unknown		02/20/2024 17:06	Finished	SAMP,10 mL
50	N063182-006AMS,MS	26	1000	Unknown		02/20/2024 17:15	Finished	MS (1ppb), IWST-231228B,10r
51	N063182-007A,SAMF	27	1000	Unknown		02/20/2024 17:25	Finished	SAMP,10 mL
52	N063182-007AMS,MS	28	1000	Unknown		02/20/2024 17:34	Finished	MS (1ppb), IWST-231228B,10r
53	N063182-005A,SAMF	29	1000	Unknown		02/20/2024 17:43	Finished	SAMP,2>10 mL
54	N063182-005AMS,MS	30	1000	Unknown		02/20/2024 17:53	Finished	MS (1ppb), IWST-231228B,2>1
55	N063182-011A,SAMF	31	1000	Unknown		02/20/2024 18:02	Finished	SAMP,2>10 mL
56	N063182-011AMS,MS	32	1000	Unknown		02/20/2024 18:12	Finished	MS (1ppb), IWST-231228B,2>1
57	N063181-003AMS,MS	33	1000	Unknown		02/20/2024 18:21	Finished	MS (5ppb), IWST-231228B,2>1
58	CCV-5,CCV,1,	34	1000	Unknown		02/20/2024 18:31	Finished	CCV @5ppb, IWST-231228A
59	CCB-5,CCB,1,	35	1000	Unknown		02/20/2024 18:40	Finished	CCB R240129C
60	N063182-012A,SAMF	36	1000	Unknown		02/20/2024 18:50	Finished	SAMP,10 mL

61	N063182-012AMS,MS	37	1000	Unknown		02/20/2024 18:59	Finished	MS (1ppb), IWST-231228B,10r
62	CCV-6,CCV1,1,	38	1000	Unknown		02/20/2024 19:09	Finished	CCV @10ppb, IWST-231228A
63	CCB-6,CCB,1,	39	1000	Unknown		02/20/2024 19:18	Finished	CCB R240129C
64	BLANK	40	1000	Unknown		02/20/2024 19:27	Finished	BLANK
65	SHUTDOWNR240221A	41	1000	Unknown		02/20/2024 19:37	Finished	
66	Eluent: ~~R240220A~~	42	1000	Unknown		n.a.	Finished	
67	PCR: ~~R240220B~~	43	1000	Unknown		n.a.	Finished	

R240221B

dRocha 3/3/2024
for RBA

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 2/20/24
Time Prepared: 1008
Prepared By: MA

Reagent ID:
Sulfuric Acid: 14345
Diphenylcarbazide: 15406
NH4OH + NH4SO4 eluent: A240215A / A240220A
NH4OH + NH4SO4 buffer: A240129C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MB-186824	7.58	9.54	~250mL	~50mL		125C
2)	MW2057-1A	9.24	9.48	"	"		40.2 mL A240215A
3)	2A	9.18	9.50	"	"		10mM
4)	MW2153-1A	9.38	-	~250mL	~250mL		
5)	2A	9.30	-	"	"		
6)	3A	9.30	-	"	"		
7)	4A	9.44	-	"	"		
8)	5A	9.50	-	"	"		
9)	6A	9.72	-	"	"		
10)							
11)							
12)							
13)							
14)							
15)							

Sample Preparation

Date Prepared: 2/20/24
Time Prepared: 1008
Prepared By: MA

Reagent ID:
Sulfuric Acid: 14345
Diphenylcarbazide: 15406
NH4OH + NH4SO4 eluent: A240220A
NH4OH + NH4SO4 buffer: A240125C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW2181-1A	9.38	-	~250mL	~250mL		
2)	2A	9.34	-	"	"		
3)	3A	9.44	-	"	"		
4)	4A	9.64	-	"	"		
5)	MW2182-1A	9.34	-	"	"		
6)	2A	9.68	-	"	"		
7)	3A	9.38	-	"	"		
8)	4A	9.64	-	"	"		
9)	5A	9.44	-	"	"		
10)	6A	9.72	-	"	"		
11)	7A	9.74	-	"	"		
12)	8A	9.46	-	"	"		
13)	9A	9.54	-	"	"		
14)	10A	9.56	-	"	"		
15)	11A	9.38	-	"	"		
	12A	9.74	-	"	"		

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 2/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0427	0.2063	1.0639	2.1157	3.2270	4.3227	0.9999
Measured, in ug/L	0.198500	0.959200	4.946100	9.835700	15.002300	20.095900	
Relative Error (%RE)	-0.8%		-1.1%				

	Stock	Working
Standard Concentration:	1,000,000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ICV**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5701913**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5701914**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **CCV**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701916**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.887	0.20	5.000	0	97.7	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701917**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.215	0.20	0.2000	0	107	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701928**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.050	0.20	10.00	0	101	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **CCV**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701938**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.027	0.20	5.000	0	101	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701950**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.129	0.20	10.00	0	101	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **CCV**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701961**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.996	0.20	5.000	0	99.9	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ZZZZZZ**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701965**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.148	0.20	10.00	0	101	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **ICB**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5701915**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **CCB**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701918**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **CCB**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701929**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **CCB**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701939**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **CCB**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701951**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **CCB**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701962**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182732**
Client ID: **CCB**	Batch ID: **R182732**	TestNo: **EPA 218.6**		Analysis Date: **2/20/2024**	SeqNo: **5701966**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/20/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.056	
CCV-2	4.056	
CCV-3	4.065	
CCV-4	4.065	
CCV-5	4.065	
CCV-6	4.065	

Average	4.062
Actual RT Window	3.982 - 4.142
Applied RT Window	3.862 - 4.262

MB-R182732	N.A.	N.A.
LCS-R182732	4.056	PASS
N063181-001A	4.048	PASS
N063181-002A	4.048	PASS
N063181-003A	4.056	PASS
N063181-004A	N.A.	N.A.
N063181-004AMS	4.048	PASS
N063181-001AMS	4.048	PASS
N063181-001AMSD	4.048	PASS
N063181-002ADUP	4.048	PASS
N063181-002AMS	4.048	PASS
N063182-008A	4.040	PASS
N063182-008AMS	4.040	PASS
N063182-005A	N.A.	N.A.
N063182-011A	N.A.	N.A.
N063182-011AMS	N.A.	N.A.
N063182-001A	N.A.	N.A.
N063182-001AMS	4.048	PASS
N063181-003A	4.048	PASS
N063182-003A	N.A.	N.A.
N063182-003AMS	3.998	PASS
N063182-009A	N.A.	N.A.

Reviewed by:

dMocha 3/5/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/20/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.056	
CCV-2	4.056	
CCV-3	4.065	
CCV-4	4.065	
CCV-5	4.065	
CCV-6	4.065	
Average	4.062	
Actual RT Window	3.982 - 4.142	
Applied RT Window	3.862 - 4.262	
N063182-009AMS	3.990	PASS
N063182-010A	N.A.	N.A.
N063182-010AMS	4.040	PASS
N063182-002A	N.A.	N.A.
N063182-002AMS	4.056	PASS
N063182-004A	N.A.	N.A.
N063182-004AMS	4.048	PASS
N063182-006A	N.A.	N.A.
N063182-006AMS	4.056	PASS
N063182-007A	N.A.	N.A.
N063182-007AMS	4.056	PASS
N063182-005A	N.A.	N.A.
N063182-005AMS	4.006	PASS
N063182-011A	N.A.	N.A.
N063182-011AMS	3.940	PASS
N063181-003AMS	4.048	PASS
N063182-012A	N.A.	N.A.
N063182-012AMS	4.056	PASS

Reviewed by:

dMRocha 3/5/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

Reviewed by:

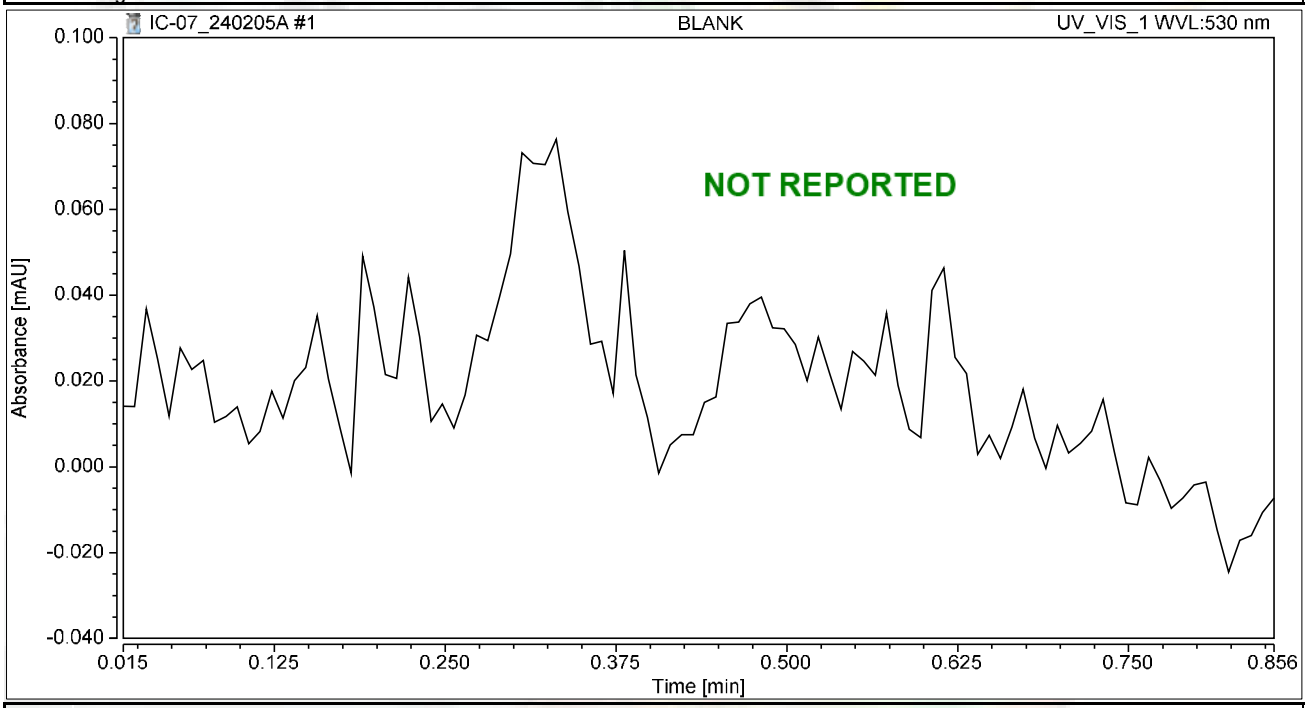
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**0.84**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 11:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

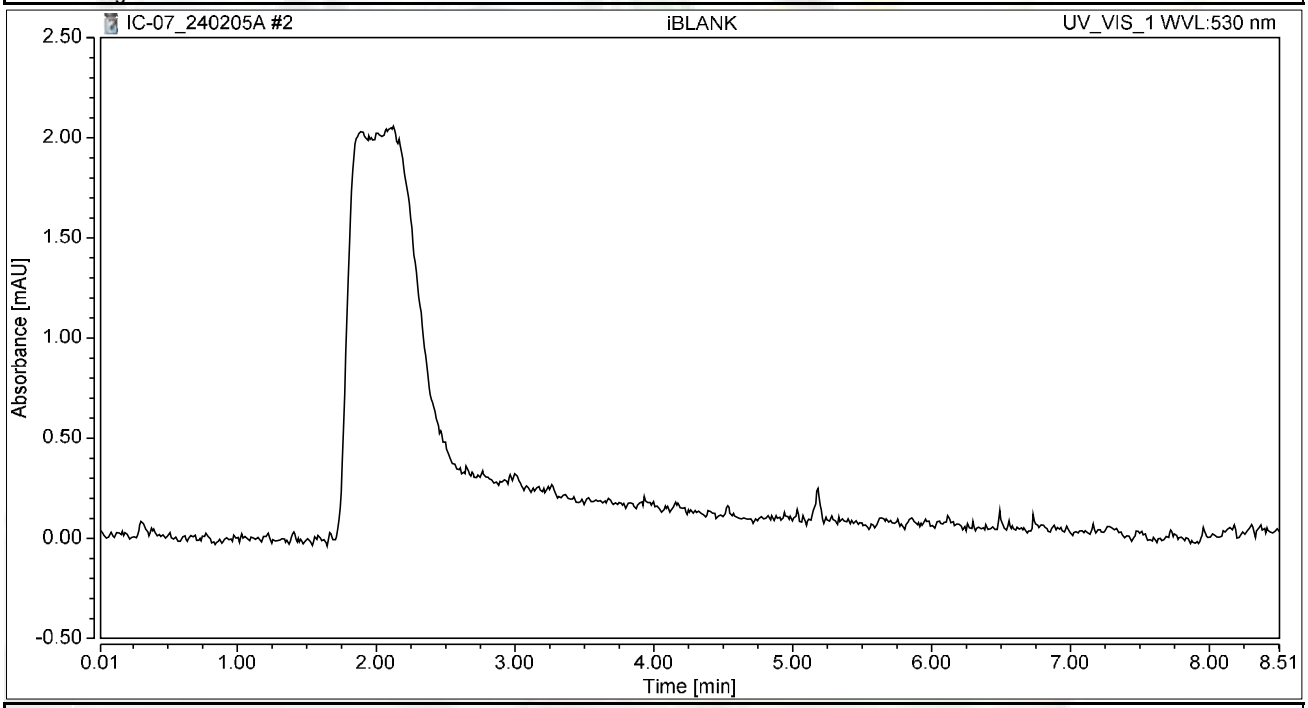
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Reviewed by:

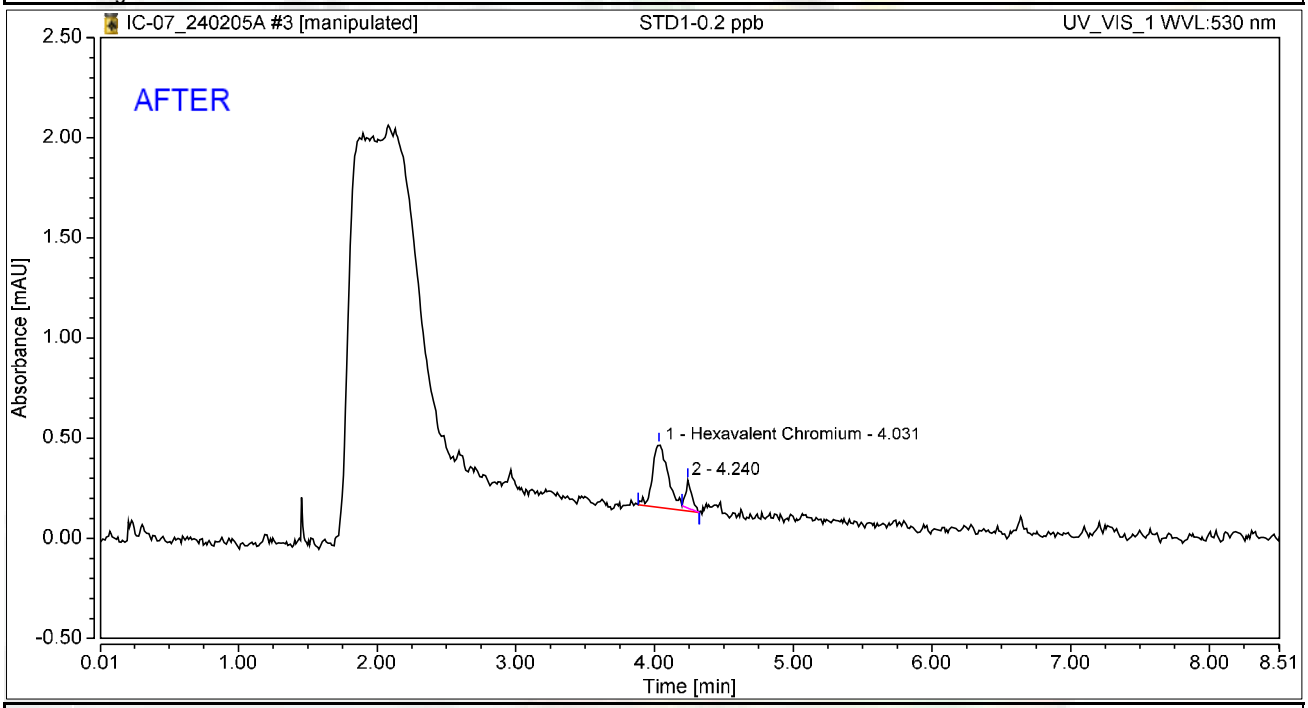
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.043	0.313	85.65	69.19	0.1985
2		4.240	0.007	0.139	14.35	30.81	n.a.
Total:			**0.050**	**0.452**	**100.00**	**100.00**	

Reviewed by:

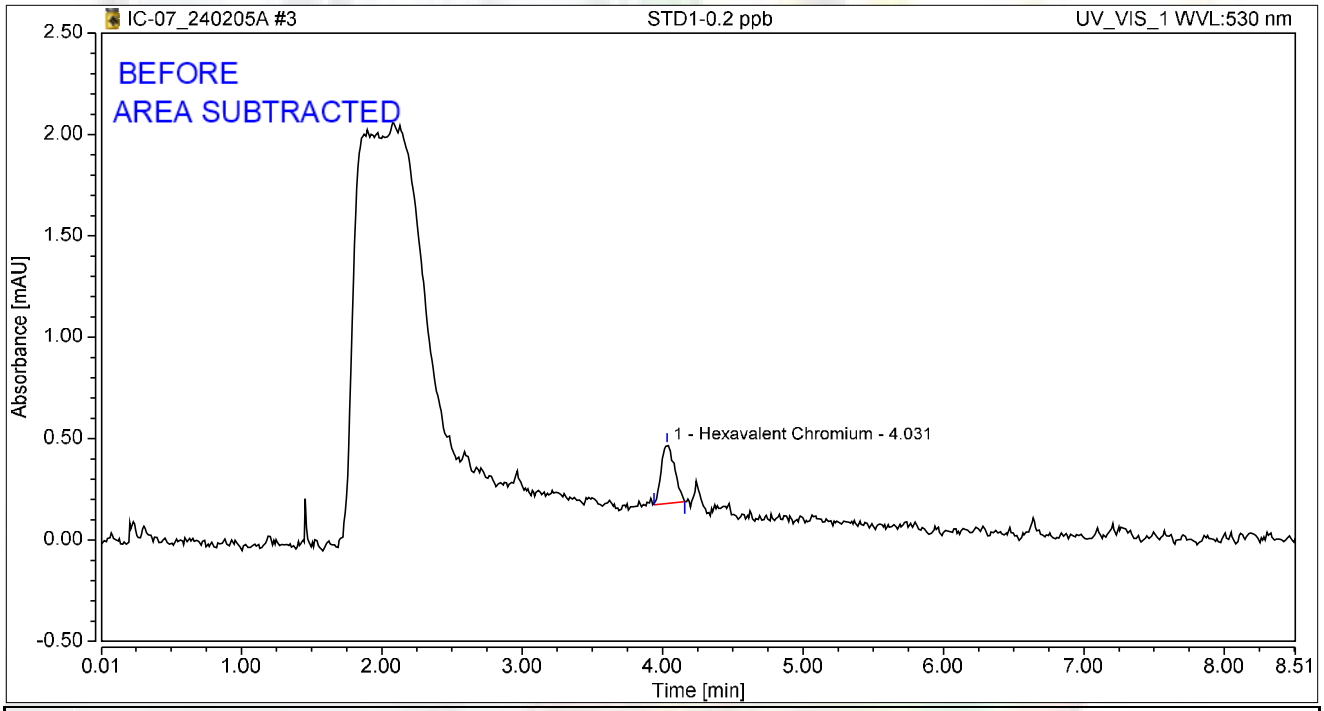
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

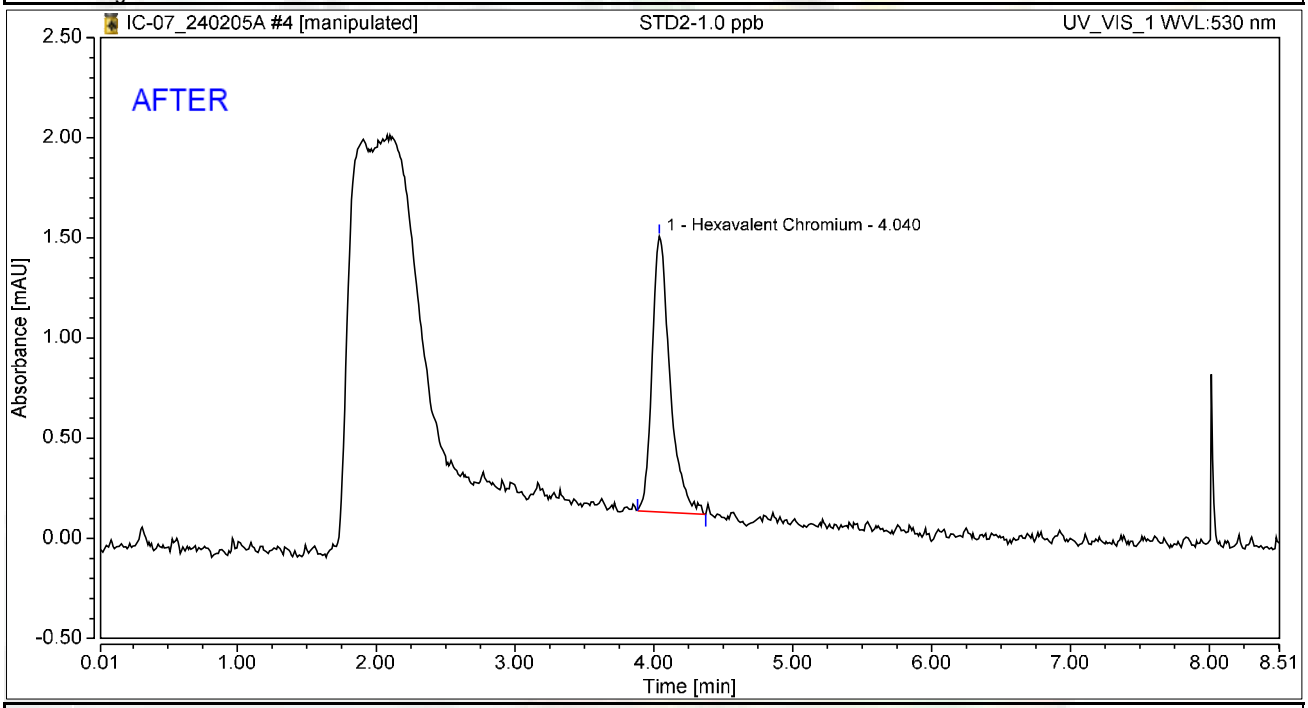
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.032	0.288	100.00	100.00	0.1502
Total:			**0.032**	**0.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.206	1.377	100.00	100.00	0.9592
Total:			**0.206**	**1.377**	**100.00**	**100.00**	

Reviewed by:

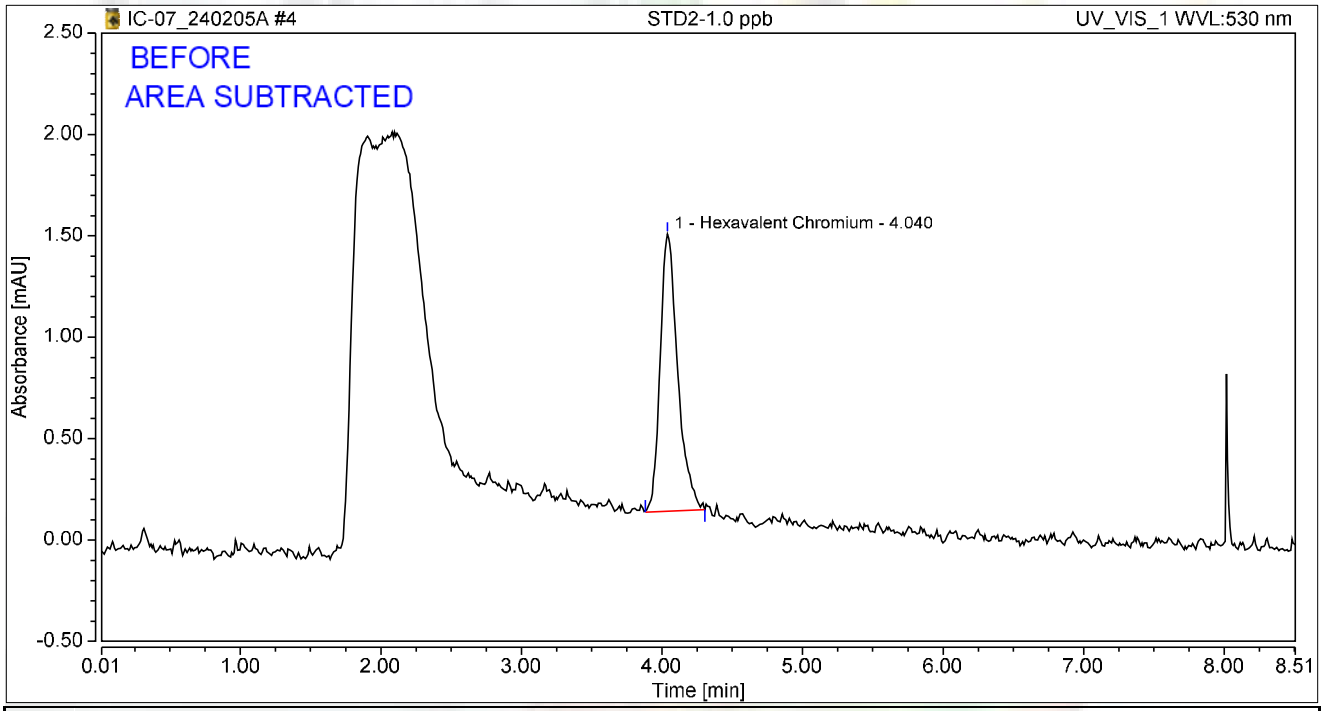
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

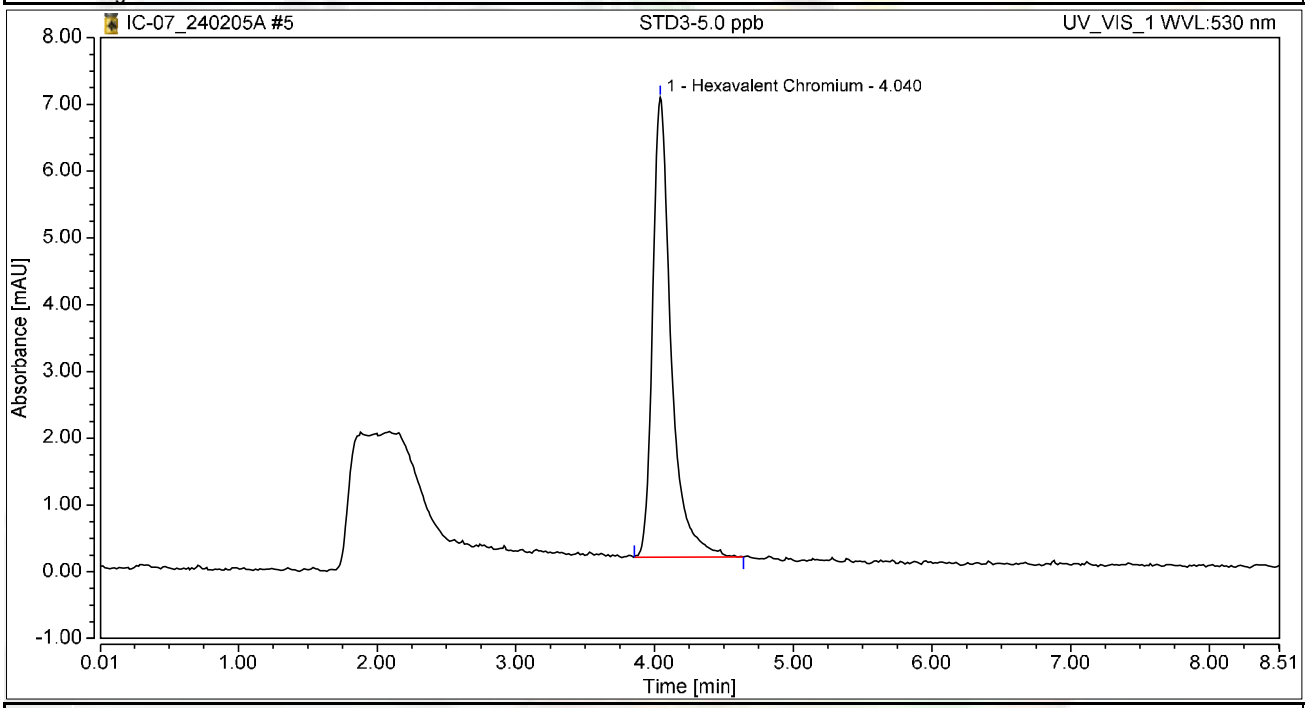
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.198	1.367	100.00	100.00	0.9223
Total:			**0.198**	**1.367**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

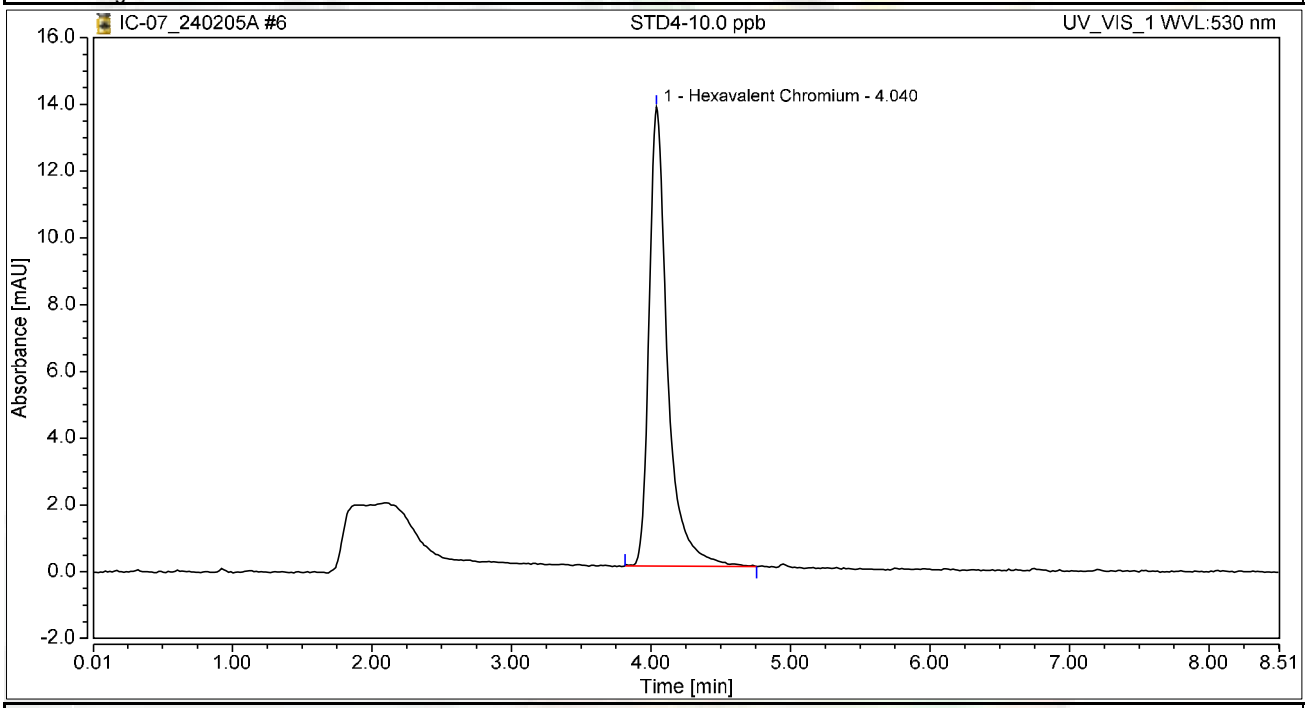
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.064	6.885	100.00	100.00	4.9461
Total:			**1.064**	**6.885**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

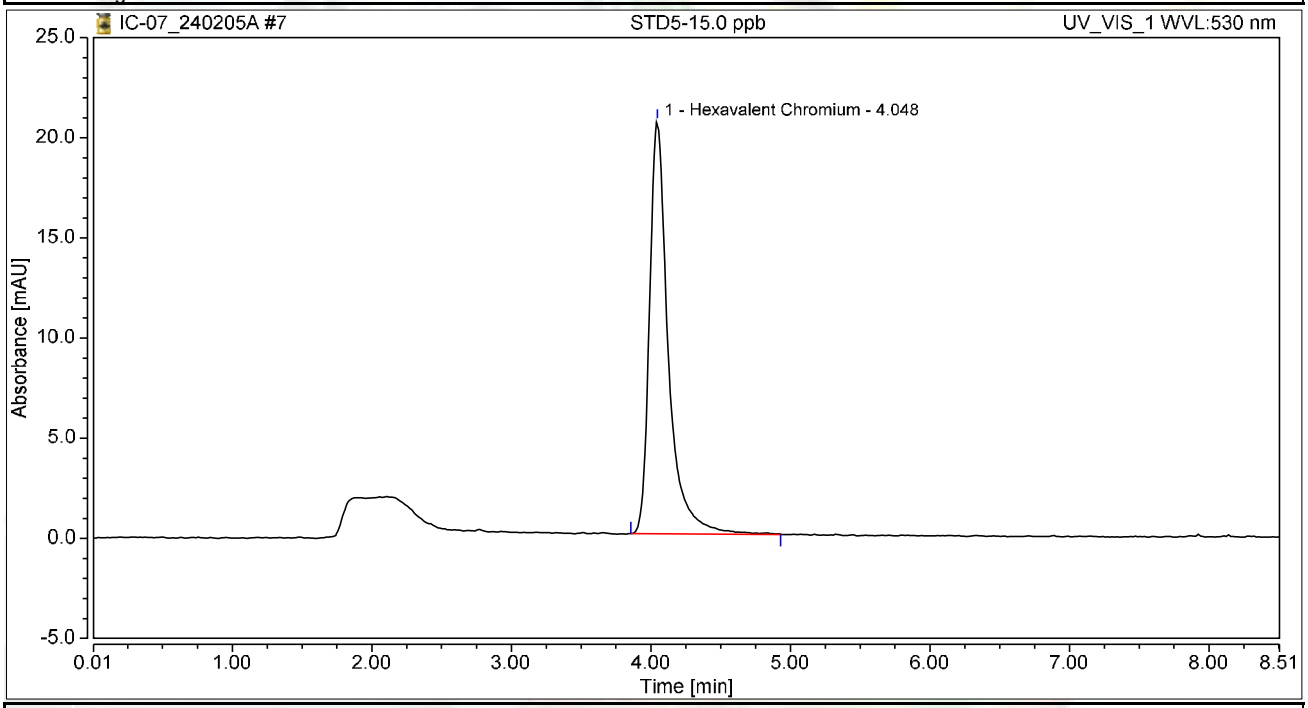
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.116	13.748	100.00	100.00	9.8357
Total:			**2.116**	**13.748**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

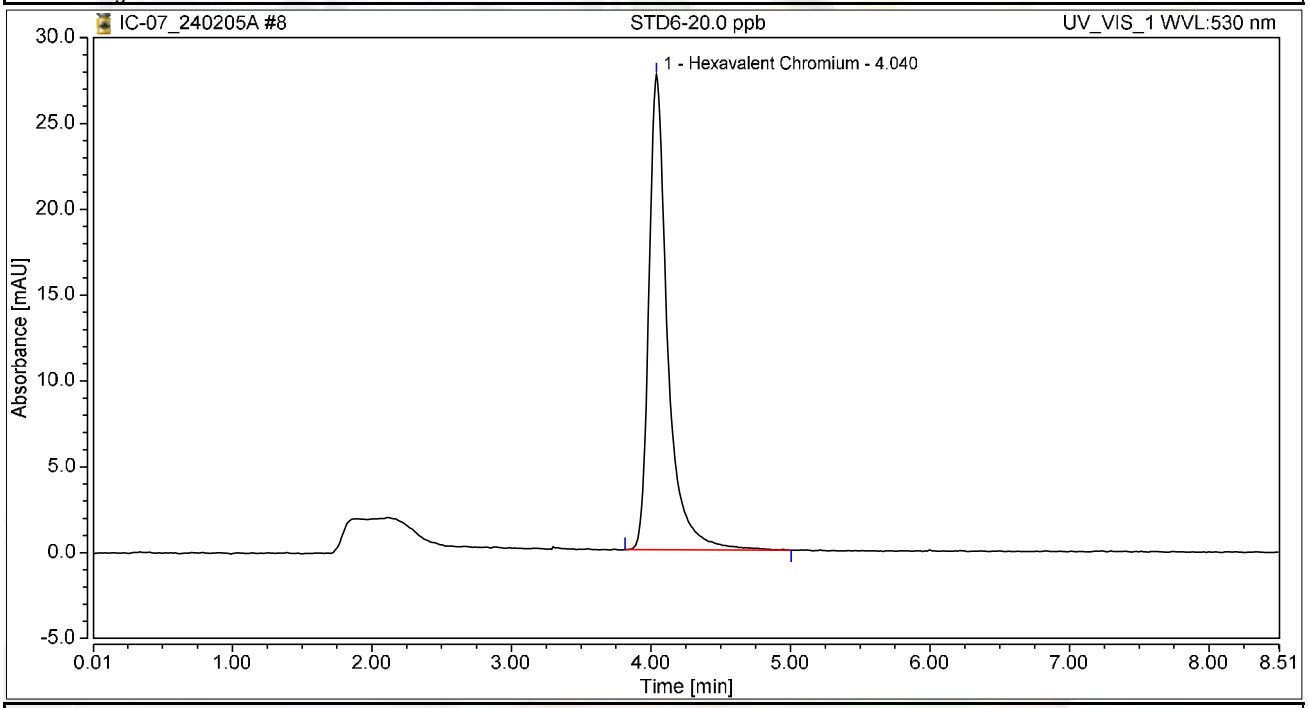
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	3.227	20.605	100.00	100.00	15.0023
Total:			**3.227**	**20.605**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:08**	*Sample Weight:*	**1.0000**

Chromatogram



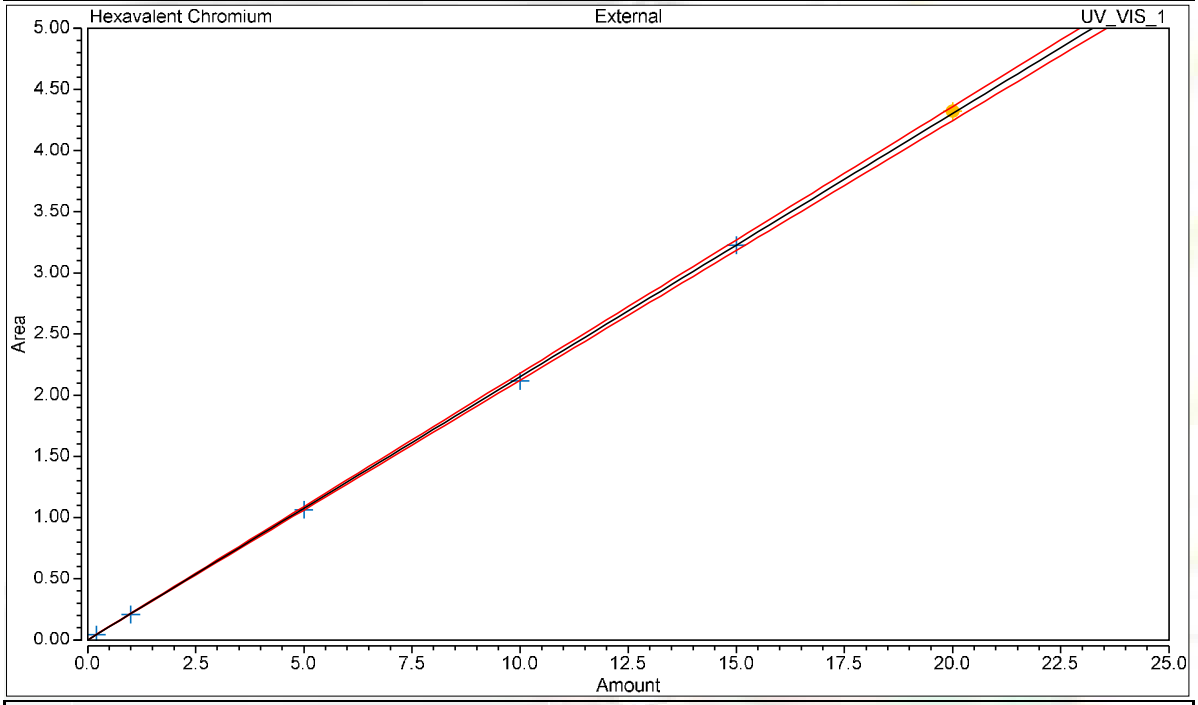
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	4.323	27.676	100.00	100.00	20.0959
Total:			**4.323**	**27.676**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2151
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99987

Calibration Plot Hexavalent Chromium



Calibration Results Hexavalent Chromium

No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0427	0.043	0.313
4	STD2-1.0 ppb	02	1.0000	0.2063	0.206	1.377
5	STD3-5.0 ppb	03	5.0000	1.0639	1.064	6.885
6	STD4-10.0 ppb	04	10.0000	2.1157	2.116	13.748
7	STD5-15.0 ppb	05	15.0000	3.2270	3.227	20.605
8	STD6-20.0 ppb	06	20.0000	4.3227	4.323	27.676

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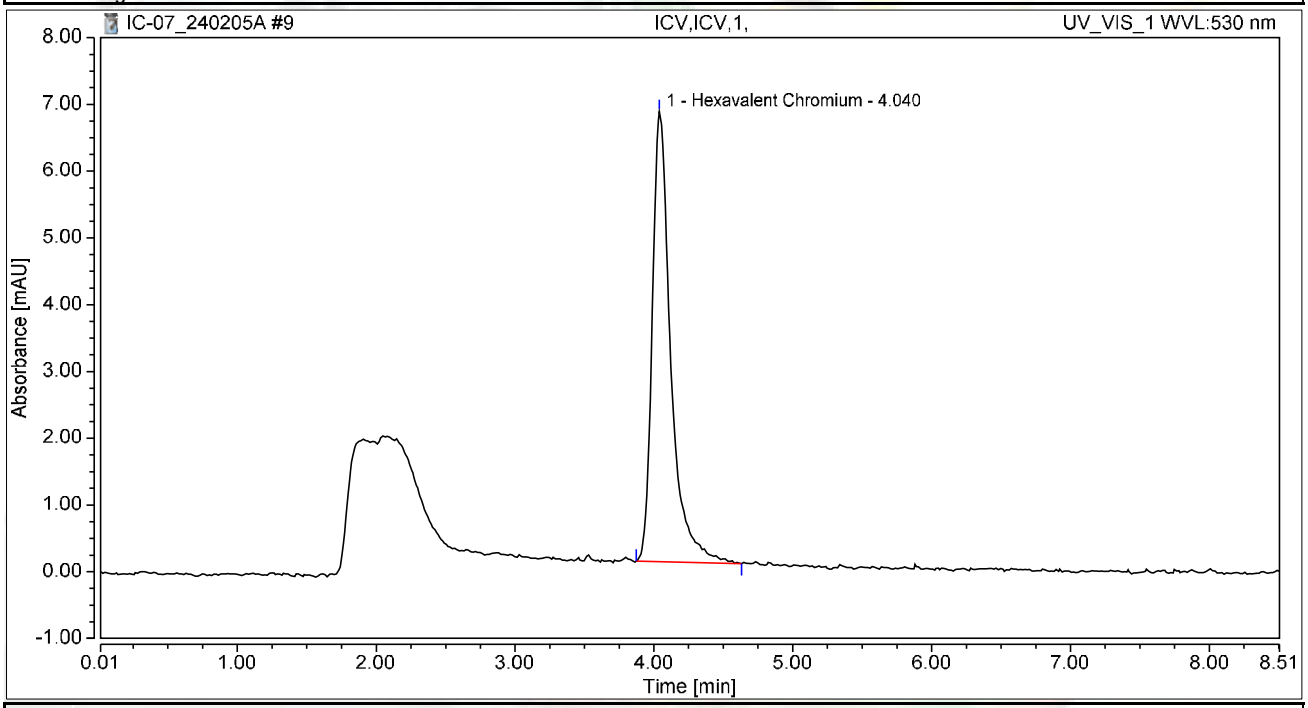
Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

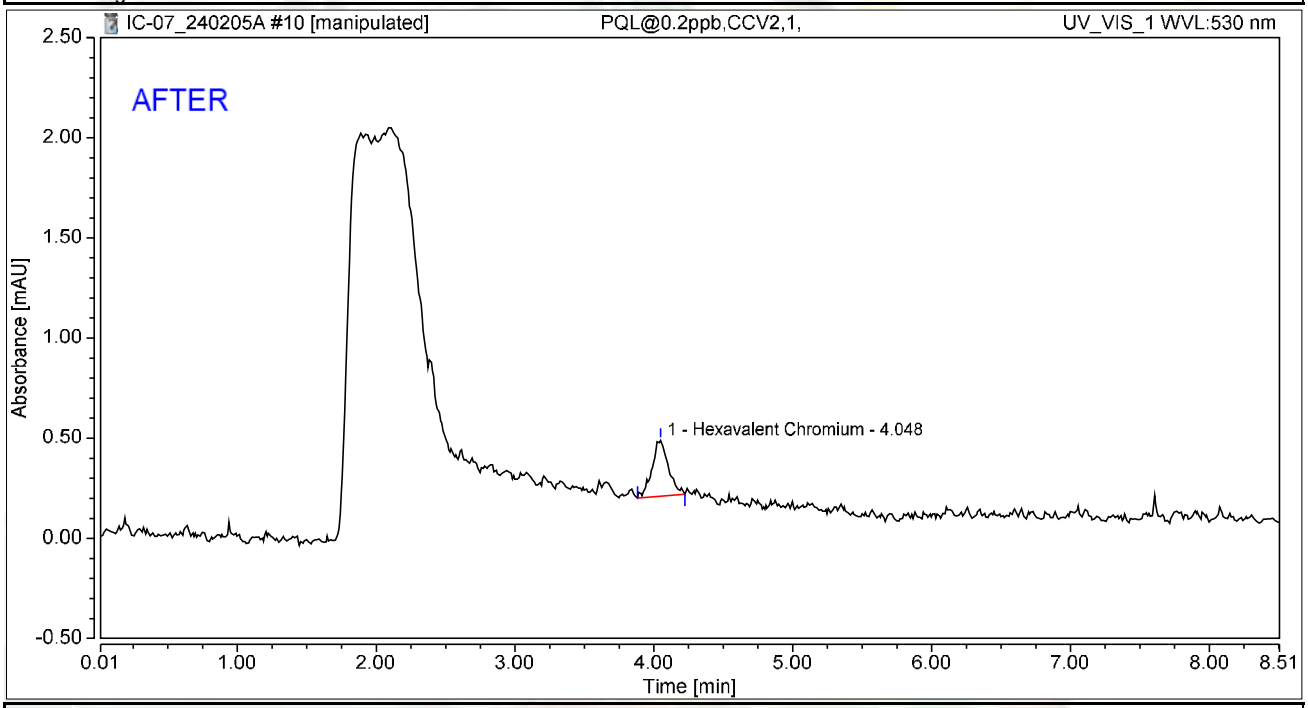
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.040	6.743	100.00	100.00	4.8342
Total:			**1.040**	**6.743**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.039	0.279	100.00	100.00	0.1802
Total:			**0.039**	**0.279**	**100.00**	**100.00**	

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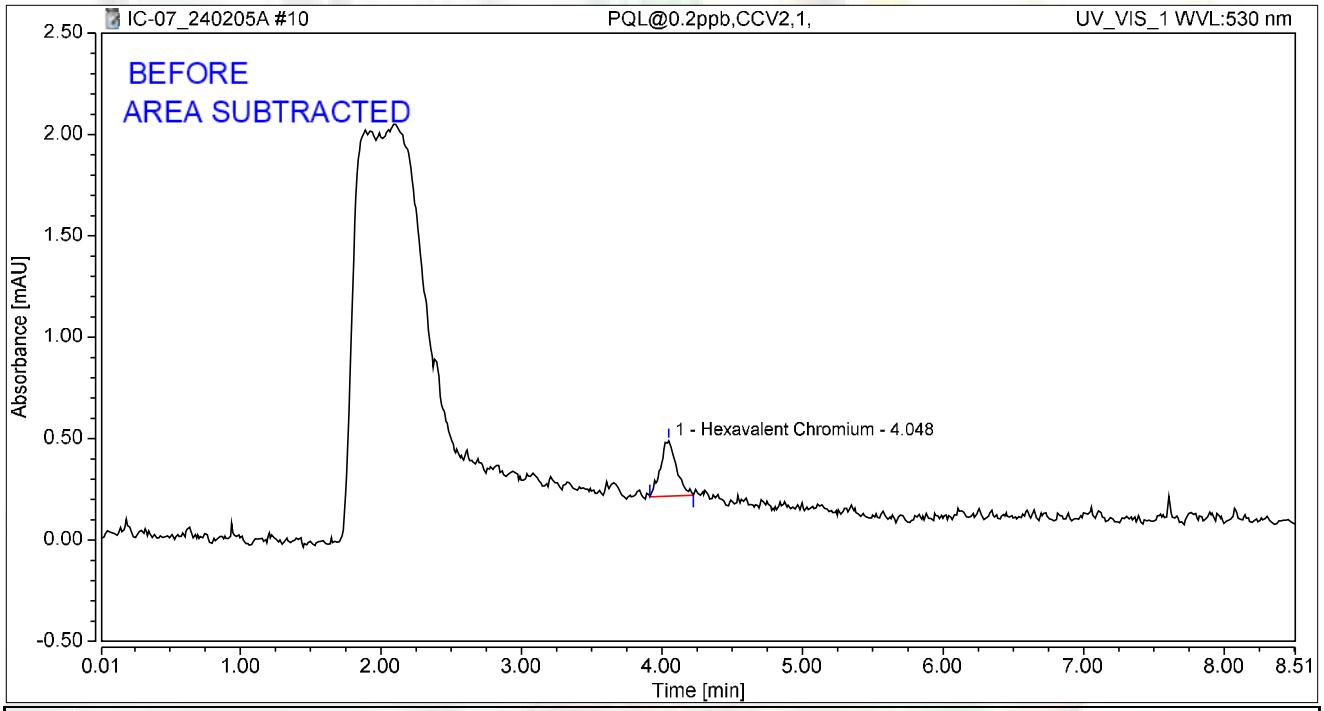
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

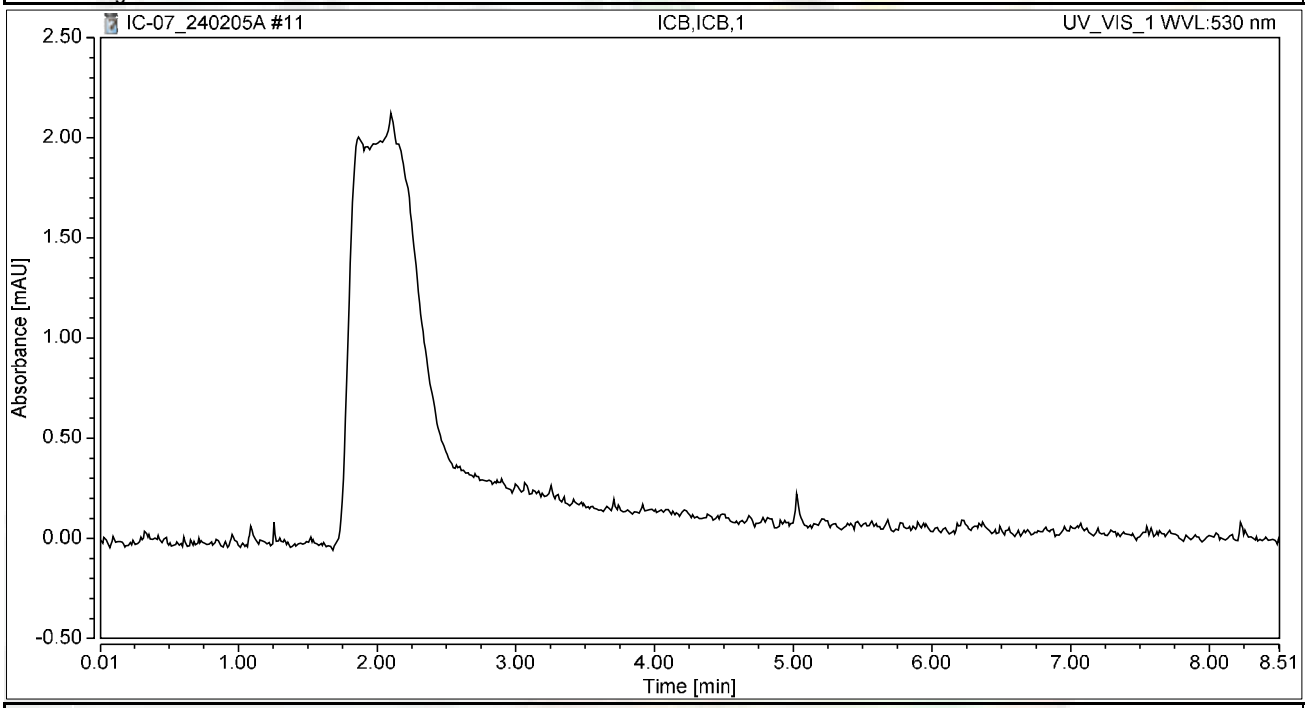
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.036	0.273	100.00	100.00	0.1694
Total:			**0.036**	**0.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

JRB 2/19/2024

RAW DATA

INJECTION LOG: 240220A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/20/24 9:36 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/20/24 9:50 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/20/24 9:59 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/20/24 10:09 AM	Reported
13	MB-R182732	MBLK	1	Hexavalent Chromium	02/20/24 10:18 AM	Reported
14	LCS-R182732	LCS	1	Hexavalent Chromium	02/20/24 10:28 AM	Reported
15	N063181-001A	SAMP	50	Hexavalent Chromium	02/20/24 11:31 AM	Reported
16	N063181-002A	SAMP	50	Hexavalent Chromium	02/20/24 11:42 AM	Reported
17	N063181-003A	SAMP	50	Hexavalent Chromium	02/20/24 11:51 AM	Not Reported
18	N063181-004A	SAMP	1	Hexavalent Chromium	02/20/24 12:01 PM	Reported
19	N063181-004AMS	MS	1	Hexavalent Chromium	02/20/24 12:10 PM	Reported
20	N063181-001AMS	MS	50	Hexavalent Chromium	02/20/24 12:19 PM	Reported
21	N063181-001AMSD	MSD	50	Hexavalent Chromium	02/20/24 12:29 PM	Reported
22	N063181-002ADUP	DUP	50	Hexavalent Chromium	02/20/24 12:38 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/20/24 12:48 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/20/24 12:57 PM	Reported
25	N063181-002AMS	MS	50	Hexavalent Chromium	02/20/24 1:17 PM	Reported
26	N063182-008A	SAMP	20	Hexavalent Chromium	02/20/24 1:28 PM	Reported
27	N063182-008AMS	MS	20	Hexavalent Chromium	02/20/24 1:38 PM	Reported
28	N063182-005A	SAMP	1	Hexavalent Chromium	02/20/24 1:47 PM	Not Reported
29	N063182-005AMS	MS	1	Hexavalent Chromium	02/20/24 1:56 PM	Not Reported
30	N063182-011A	SAMP	1	Hexavalent Chromium	02/20/24 2:06 PM	Not Reported
31	N063182-011AMS	MS	1	Hexavalent Chromium	02/20/24 2:15 PM	Not Reported
32	N063182-001A	SAMP	1	Hexavalent Chromium	02/20/24 2:25 PM	Reported
33	N063182-001AMS	MS	1	Hexavalent Chromium	02/20/24 2:34 PM	Reported
34	N063181-003A	SAMP	5	Hexavalent Chromium	02/20/24 2:44 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/20/24 2:53 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/20/24 3:03 PM	Reported
37	N063182-003A	SAMP	1	Hexavalent Chromium	02/20/24 3:12 PM	Reported
38	N063182-003AMS	MS	1	Hexavalent Chromium	02/20/24 3:22 PM	Reported
39	N063182-009A	SAMP	1	Hexavalent Chromium	02/20/24 3:31 PM	Reported
40	N063182-009AMS	MS	1	Hexavalent Chromium	02/20/24 3:41 PM	Reported
41	N063182-010A	SAMP	1	Hexavalent Chromium	02/20/24 3:50 PM	Reported
42	N063182-010AMS	MS	1	Hexavalent Chromium	02/20/24 3:59 PM	Reported

Reviewed by:

RB 2/28/2024

INJECTION LOG: 240220A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063182-002A	SAMP	1	Hexavalent Chromium	02/20/24 4:09 PM	Reported
44	N063182-002AMS	MS	1	Hexavalent Chromium	02/20/24 4:18 PM	Reported
45	N063182-004A	SAMP	1	Hexavalent Chromium	02/20/24 4:28 PM	Reported
46	N063182-004AMS	MS	1	Hexavalent Chromium	02/20/24 4:37 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/20/24 4:47 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/20/24 4:56 PM	Reported
49	N063182-006A	SAMP	1	Hexavalent Chromium	02/20/24 5:06 PM	Reported
50	N063182-006AMS	MS	1	Hexavalent Chromium	02/20/24 5:15 PM	Reported
51	N063182-007A	SAMP	1	Hexavalent Chromium	02/20/24 5:25 PM	Reported
52	N063182-007AMS	MS	1	Hexavalent Chromium	02/20/24 5:34 PM	Reported
53	N063182-005A	SAMP	5	Hexavalent Chromium	02/20/24 5:43 PM	Reported
54	N063182-005AMS	MS	5	Hexavalent Chromium	02/20/24 5:53 PM	Reported
55	N063182-011A	SAMP	5	Hexavalent Chromium	02/20/24 6:02 PM	Reported
56	N063182-011AMS	MS	5	Hexavalent Chromium	02/20/24 6:12 PM	Reported
57	N063181-003AMS	MS	5	Hexavalent Chromium	02/20/24 6:21 PM	Reported
58	CCV-5	CCV	1	Hexavalent Chromium	02/20/24 6:31 PM	Reported
59	CCB-5	CCB	1	Hexavalent Chromium	02/20/24 6:40 PM	Reported
60	N063182-012A	SAMP	1	Hexavalent Chromium	02/20/24 6:50 PM	Reported
61	N063182-012AMS	MS	1	Hexavalent Chromium	02/20/24 6:59 PM	Reported
62	CCV-6	CCV1	1	Hexavalent Chromium	02/20/24 7:09 PM	Reported
63	CCB-6	CCB	1	Hexavalent Chromium	02/20/24 7:18 PM	Reported
64	BLANK	BLANK	1	Hexavalent Chromium	02/20/24 7:27 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240220A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**20/Feb/24 19:58:17**
No. of Injections:	**67**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/20/2024 09:36	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/20/2024 09:50	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/20/2024 09:59	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/20/2024 10:09	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/20/2024 10:18	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/20/2024 10:28	Finished	LCS @5ppb, IWST-231228B
15	N063181-001A,SAMF	1	1000	Unknown		02/20/2024 11:31	Finished	SAMP,0.2>10 mL
16	N063181-002A,SAMF	2	1000	Unknown		02/20/2024 11:42	Finished	SAMP,0.2>10 mL
17	N063181-003A,SAMF	3	1000	Unknown		02/20/2024 11:51	Finished	SAMP,0.2>10 mL
18	N063181-004A,SAMF	4	1000	Unknown		02/20/2024 12:01	Finished	SAMP,10 mL
19	N063181-004AMS,MS	5	1000	Unknown		02/20/2024 12:10	Finished	MS (1ppb), IWST-231228B,10r
20	N063181-001AMS,MS	6	1000	Unknown		02/20/2024 12:19	Finished	MS (5ppb), IWST-231228B,0.2
21	N063181-001AMSD,M	7	1000	Unknown		02/20/2024 12:29	Finished	MSD (5ppb), IWST-231228B,0
22	N063181-002ADUP,D	8	1000	Unknown		02/20/2024 12:38	Finished	DUP,0.2>10 mL
23	CCV-2,CCV1,1,	9	1000	Unknown		02/20/2024 12:48	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		02/20/2024 12:57	Finished	CCB R240129C
25	N063181-002AMS,MS	1	1000	Unknown		02/20/2024 13:17	Finished	MS (5ppb), IWST-231228B,0.2
26	N063182-008A,SAMF	2	1000	Unknown		02/20/2024 13:28	Finished	SAMP,0.5>10 mL
27	N063182-008AMS,MS	3	1000	Unknown		02/20/2024 13:38	Finished	MS (5ppb), IWST-231228B,0.5
28	N063182-005A,SAMF	4	1000	Unknown		02/20/2024 13:47	Finished	SAMP,10 mL
29	N063182-005AMS,MS	5	1000	Unknown		02/20/2024 13:56	Finished	MS (1ppb), IWST-231228B,10r
30	N063182-011A,SAMF	6	1000	Unknown		02/20/2024 14:06	Finished	SAMP,10 mL
31	N063182-011AMS,MS	7	1000	Unknown		02/20/2024 14:15	Finished	MS (1ppb), IWST-231228B,10r
32	N063182-001A,SAMF	8	1000	Unknown		02/20/2024 14:25	Finished	SAMP,10 mL
33	N063182-001AMS,MS	9	1000	Unknown		02/20/2024 14:34	Finished	MS (1ppb), IWST-231228B,10r
34	N063181-003A,SAMF	10	1000	Unknown		02/20/2024 14:44	Finished	SAMP,2>10 mL
35	CCV-3,CCV,1,	11	1000	Unknown		02/20/2024 14:53	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	12	1000	Unknown		02/20/2024 15:03	Finished	CCB R240129C
37	N063182-003A,SAMF	13	1000	Unknown		02/20/2024 15:12	Finished	SAMP,10 mL
38	N063182-003AMS,MS	14	1000	Unknown		02/20/2024 15:22	Finished	MS (1ppb), IWST-231228B,10r
39	N063182-009A,SAMF	15	1000	Unknown		02/20/2024 15:31	Finished	SAMP,10 mL
40	N063182-009AMS,MS	16	1000	Unknown		02/20/2024 15:41	Finished	MS (1ppb), IWST-231228B,10r
41	N063182-010A,SAMF	17	1000	Unknown		02/20/2024 15:50	Finished	SAMP,10 mL
42	N063182-010AMS,MS	18	1000	Unknown		02/20/2024 15:59	Finished	MS (1ppb), IWST-231228B,10r
43	N063182-002A,SAMF	19	1000	Unknown		02/20/2024 16:09	Finished	SAMP,10 mL
44	N063182-002AMS,MS	20	1000	Unknown		02/20/2024 16:18	Finished	MS (1ppb), IWST-231228B,10r
45	N063182-004A,SAMF	21	1000	Unknown		02/20/2024 16:28	Finished	SAMP,10 mL
46	N063182-004AMS,MS	22	1000	Unknown		02/20/2024 16:37	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	23	1000	Unknown		02/20/2024 16:47	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	24	1000	Unknown		02/20/2024 16:56	Finished	CCB R240129C
49	N063182-006A,SAMF	25	1000	Unknown		02/20/2024 17:06	Finished	SAMP,10 mL
50	N063182-006AMS,MS	26	1000	Unknown		02/20/2024 17:15	Finished	MS (1ppb), IWST-231228B,10r
51	N063182-007A,SAMF	27	1000	Unknown		02/20/2024 17:25	Finished	SAMP,10 mL
52	N063182-007AMS,MS	28	1000	Unknown		02/20/2024 17:34	Finished	MS (1ppb), IWST-231228B,10r
53	N063182-005A,SAMF	29	1000	Unknown		02/20/2024 17:43	Finished	SAMP,2>10 mL
54	N063182-005AMS,MS	30	1000	Unknown		02/20/2024 17:53	Finished	MS (1ppb), IWST-231228B,2>1
55	N063182-011A,SAMF	31	1000	Unknown		02/20/2024 18:02	Finished	SAMP,2>10 mL
56	N063182-011AMS,MS	32	1000	Unknown		02/20/2024 18:12	Finished	MS (1ppb), IWST-231228B,2>1
57	N063181-003AMS,MS	33	1000	Unknown		02/20/2024 18:21	Finished	MS (5ppb), IWST-231228B,2>1
58	CCV-5,CCV,1,	34	1000	Unknown		02/20/2024 18:31	Finished	CCV @5ppb, IWST-231228A
59	CCB-5,CCB,1,	35	1000	Unknown		02/20/2024 18:40	Finished	CCB R240129C
60	N063182-012A,SAMF	36	1000	Unknown		02/20/2024 18:50	Finished	SAMP,10 mL

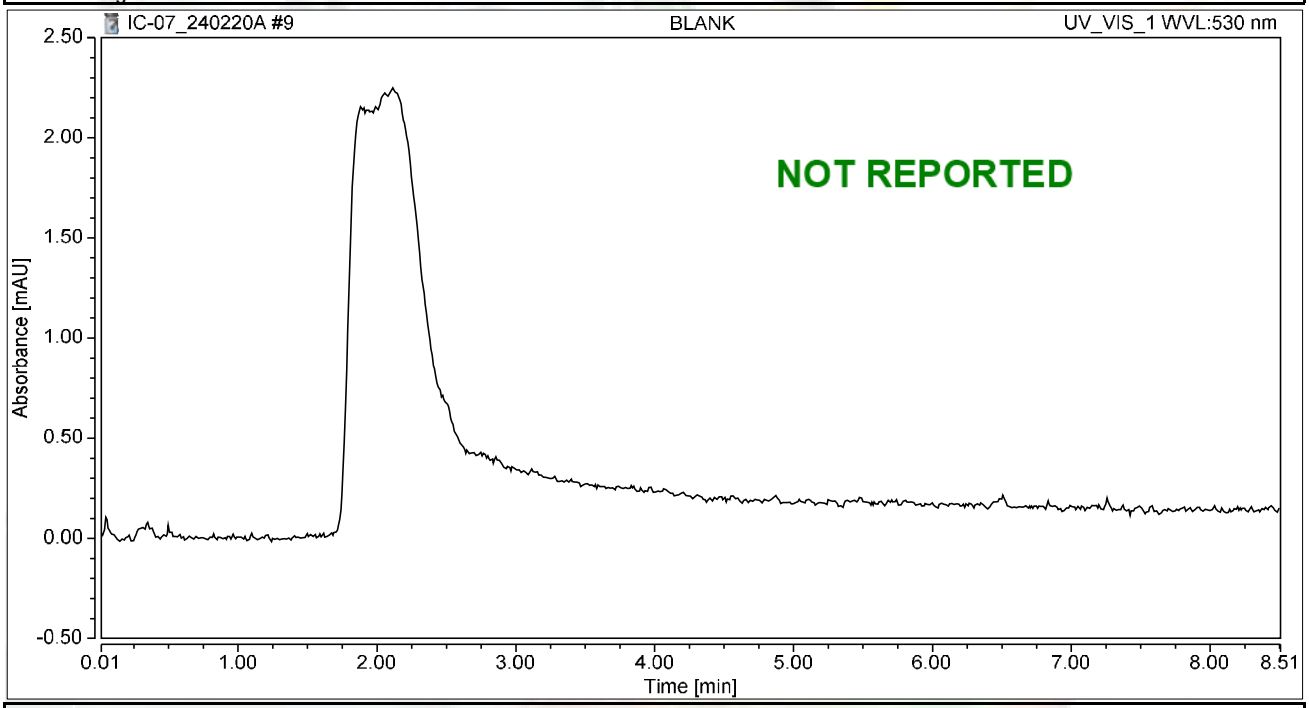
61	N063182-012AMS,MS	37	1000	Unknown		02/20/2024 18:59	Finished	MS (1ppb), IWST-231228B,10r
62	CCV-6,CCV1,1,	38	1000	Unknown		02/20/2024 19:09	Finished	CCV @10ppb, IWST-231228A
63	CCB-6,CCB,1,	39	1000	Unknown		02/20/2024 19:18	Finished	CCB R240129C
64	BLANK	40	1000	Unknown		02/20/2024 19:27	Finished	BLANK
65	SHUTDOWN	41	1000	Unknown		02/20/2024 19:37	Finished	
66	Eluent: R240220A	42	1000	Unknown		n.a.	Finished	
67	PCR: R240220B	43	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 09:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

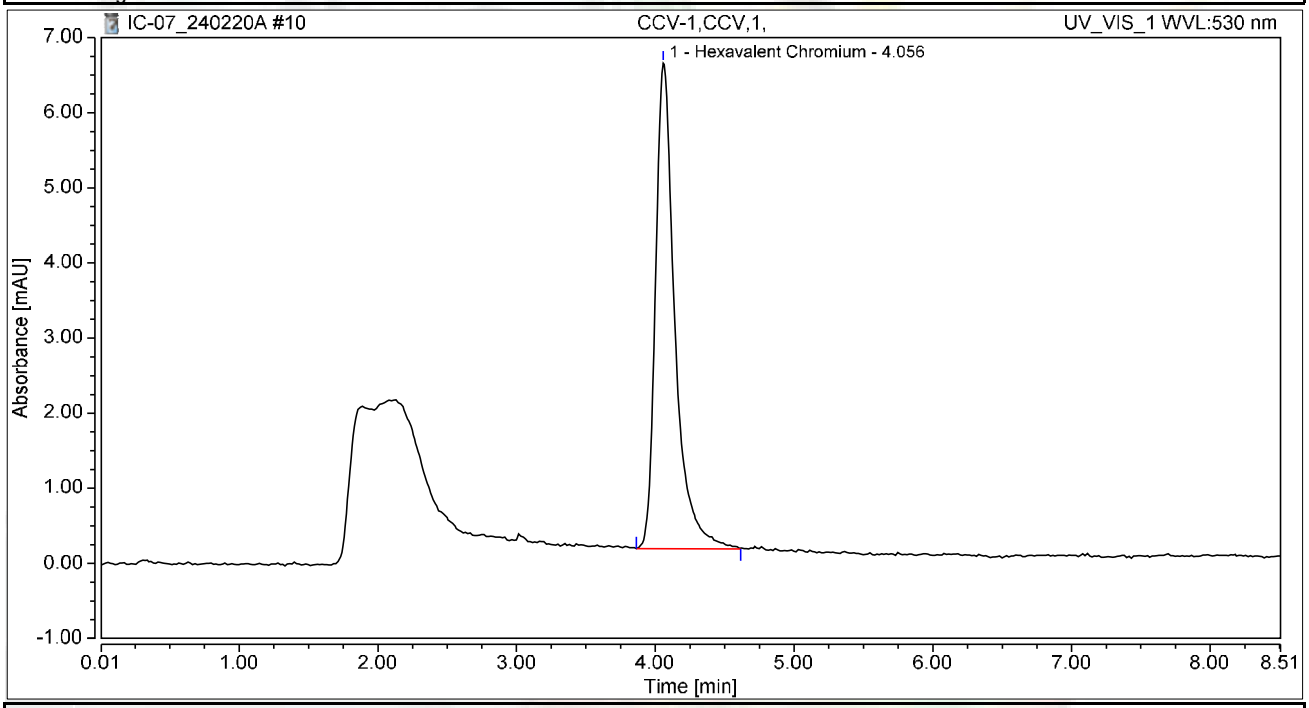
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 09:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.051	6.465	100.00	100.00	4.8869
Total:			**1.051**	**6.465**	**100.00**	**100.00**	

Reviewed by:

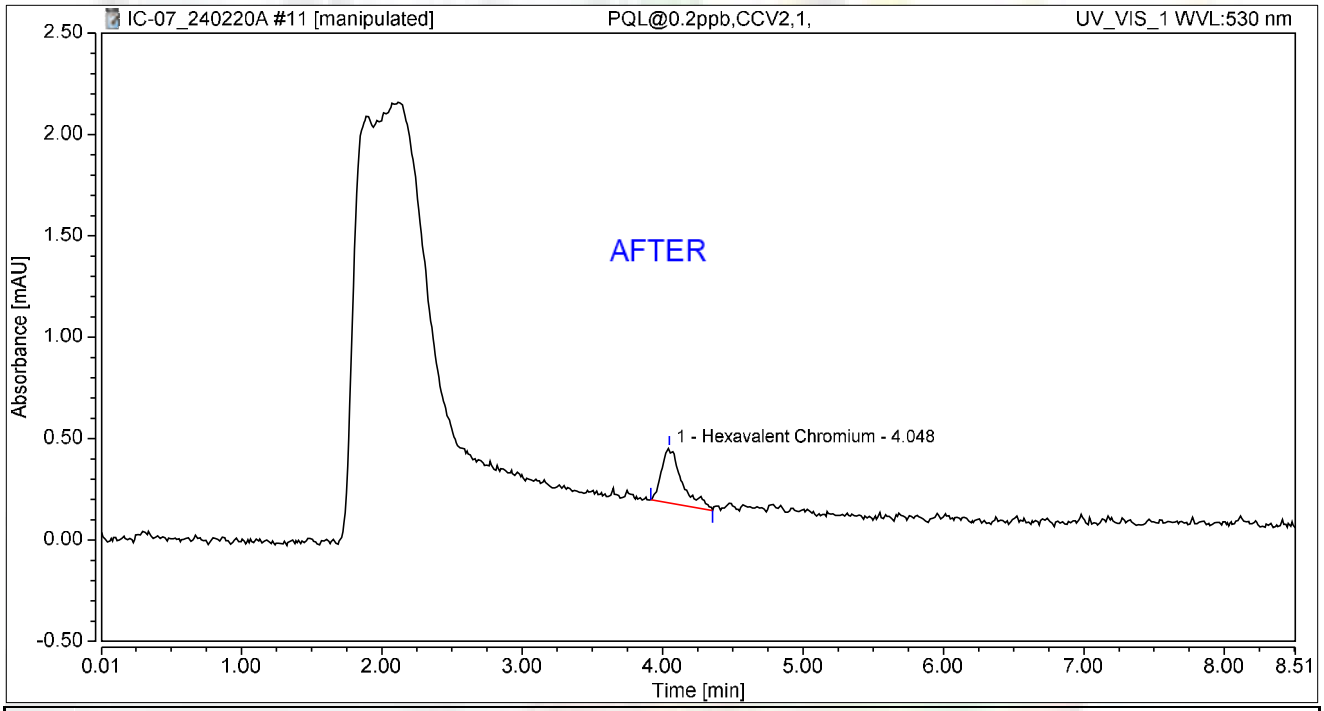
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 09:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.046	0.272	100.00	100.00	0.2147
Total:			**0.046**	**0.272**	**100.00**	**100.00**	

Reviewed by:

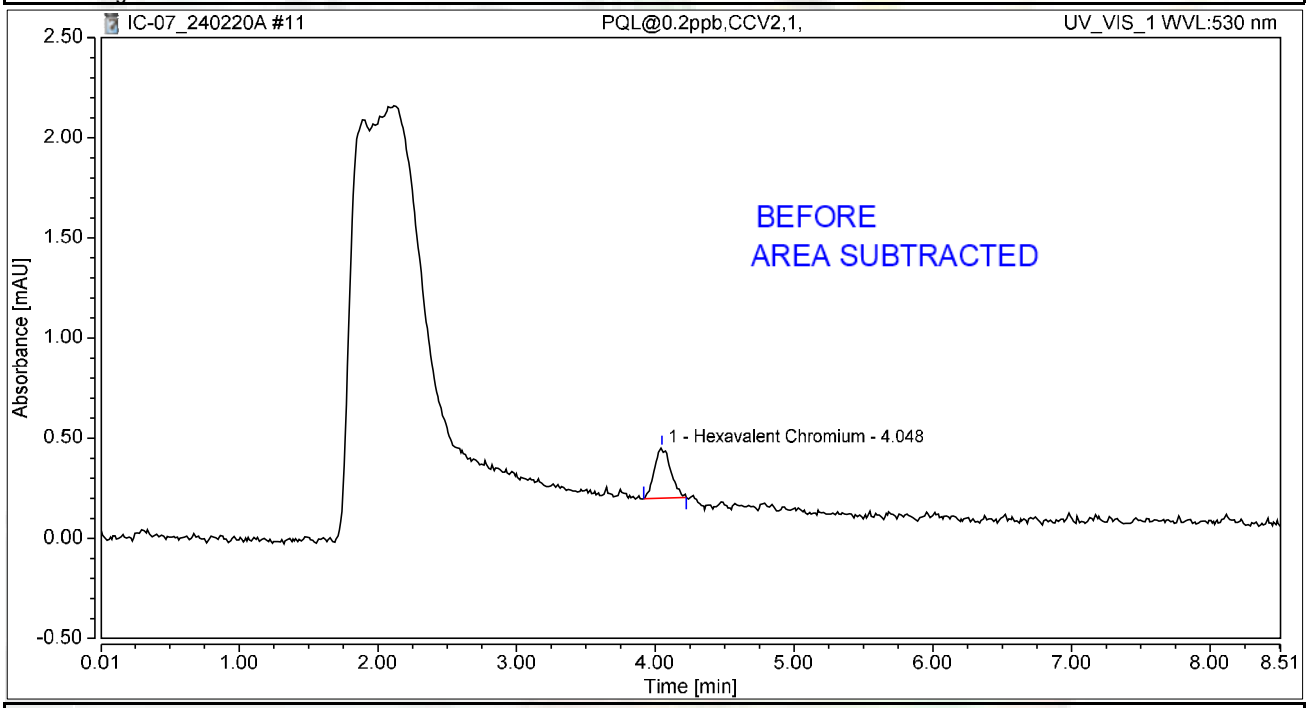
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 09:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

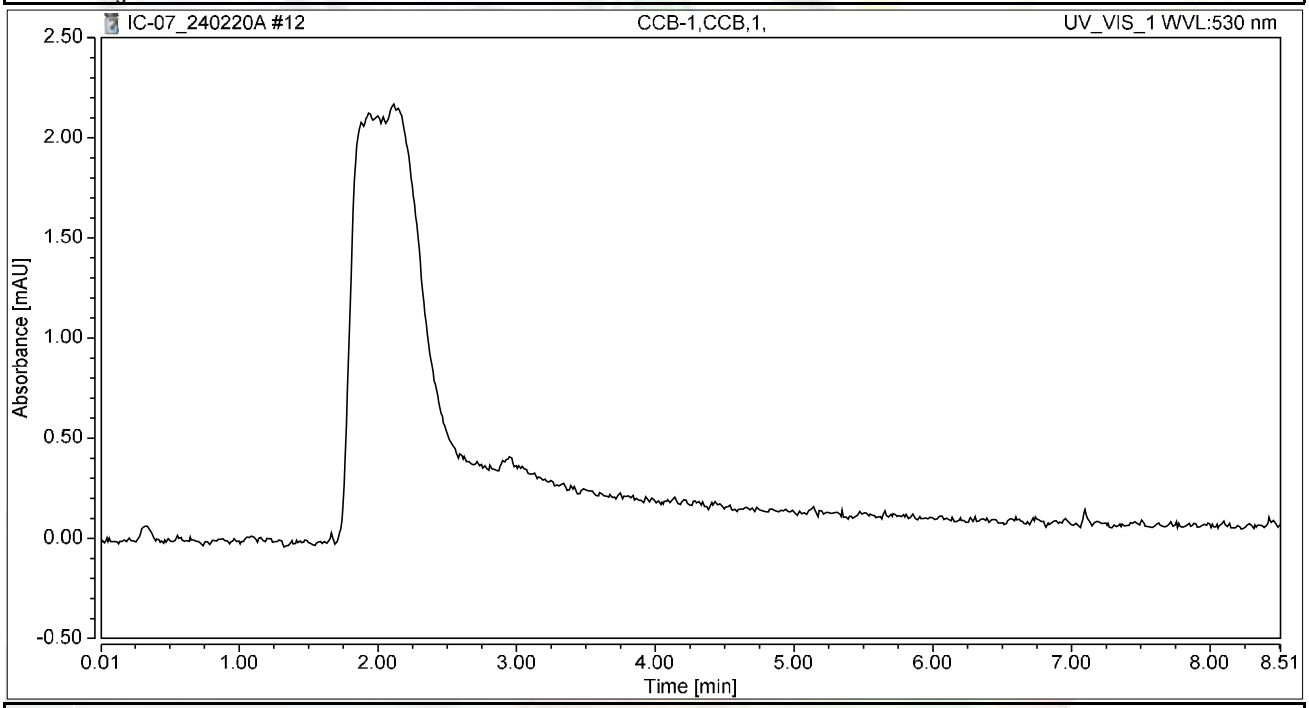
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.034	0.253	100.00	100.00	0.1603
Total:			**0.034**	**0.253**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 10:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

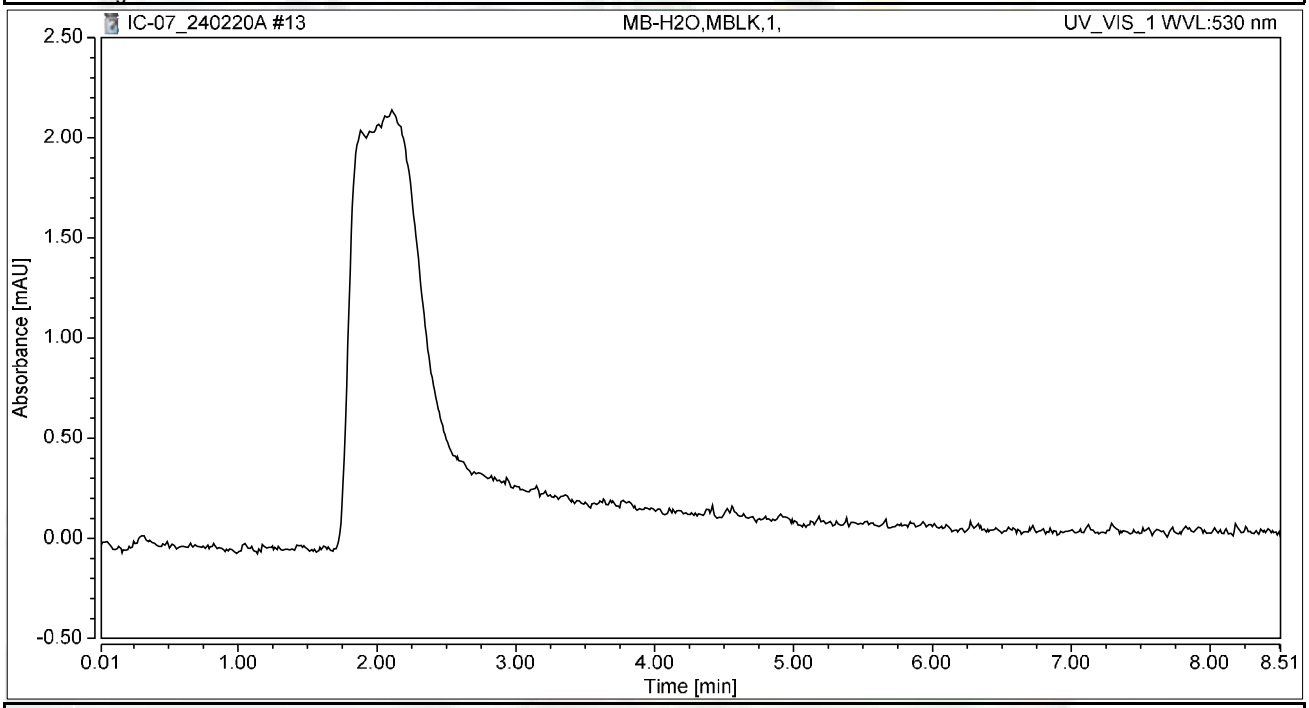
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 10:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

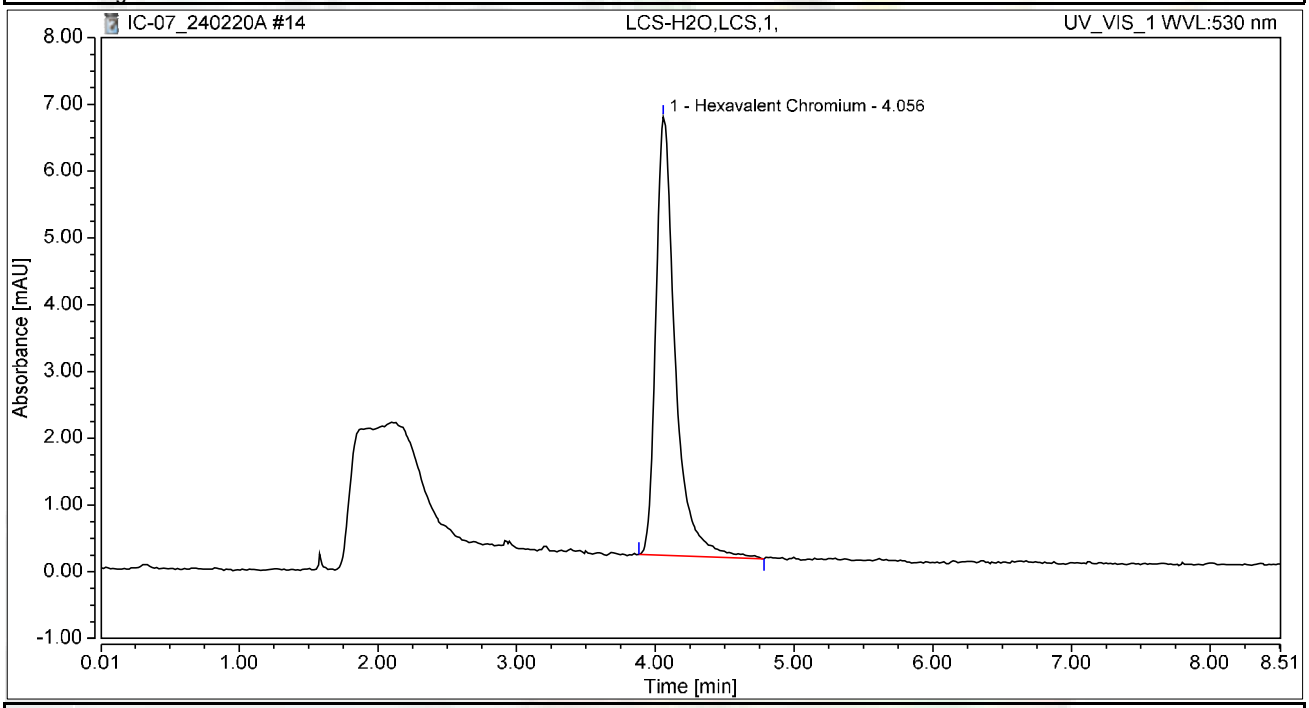
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 10:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

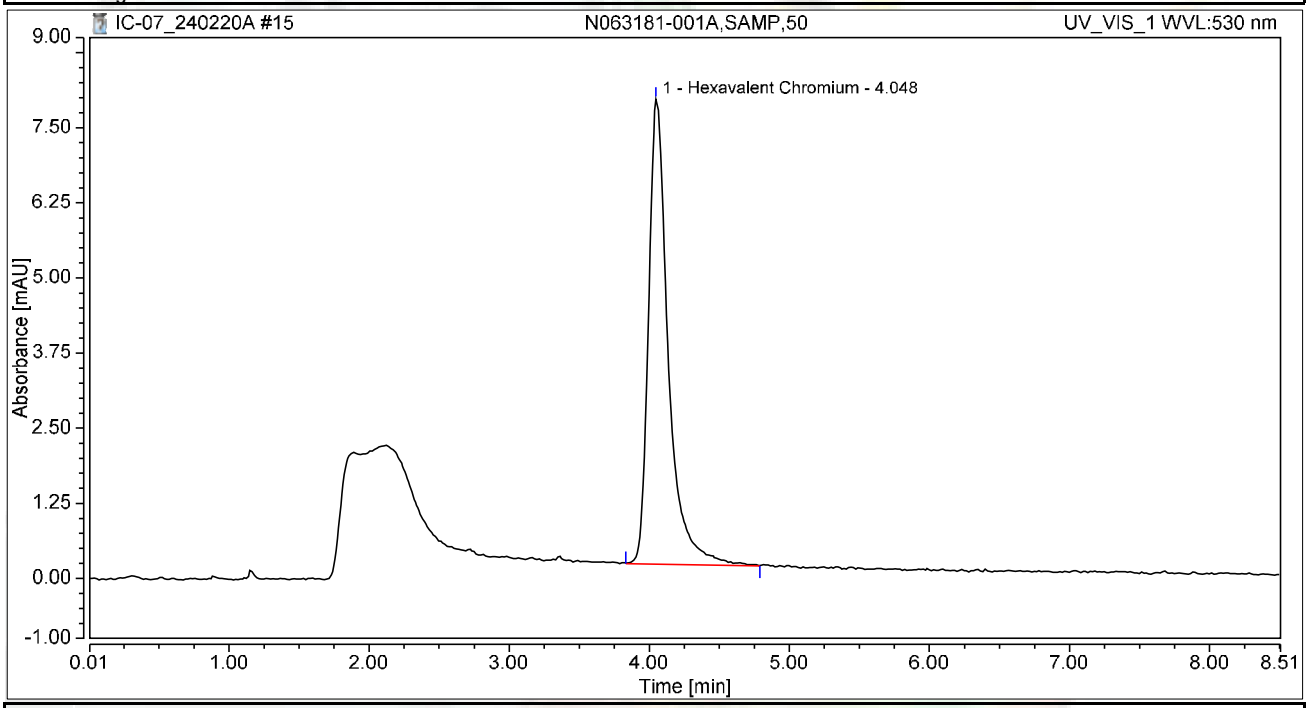
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.065	6.564	100.00	100.00	4.9504
Total:			**1.065**	**6.564**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-001A,SAMP,50**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 11:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

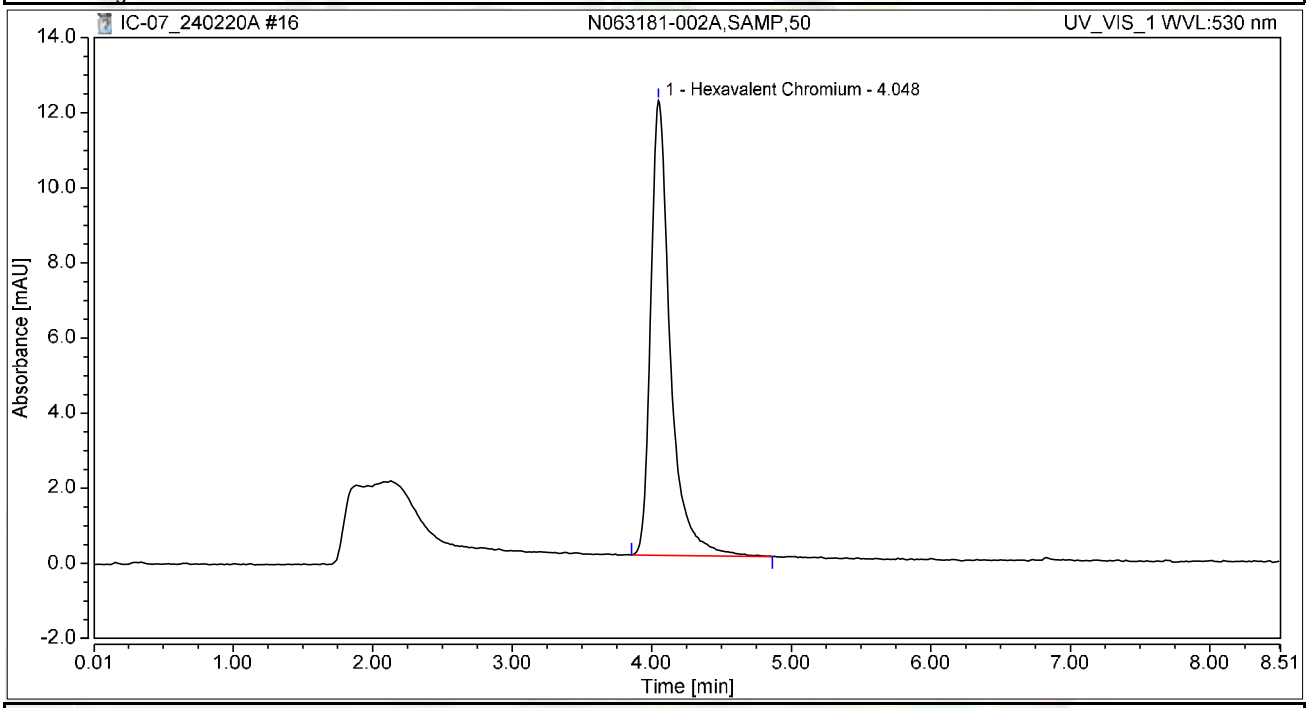
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.264	7.736	100.00	100.00	5.8773
Total:			**1.264**	**7.736**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-002A,SAMP,50**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 11:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

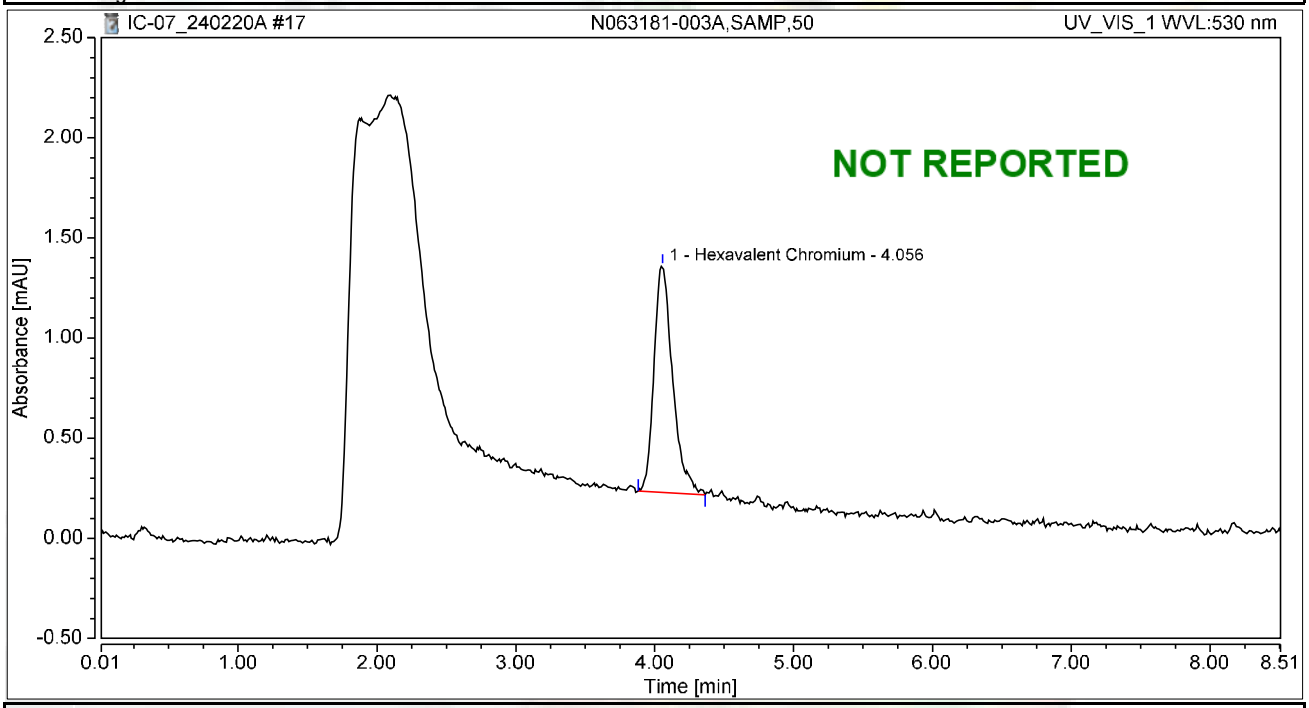
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.973	12.115	100.00	100.00	9.1719
Total:			**1.973**	**12.115**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-003A,SAMP,50**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 11:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

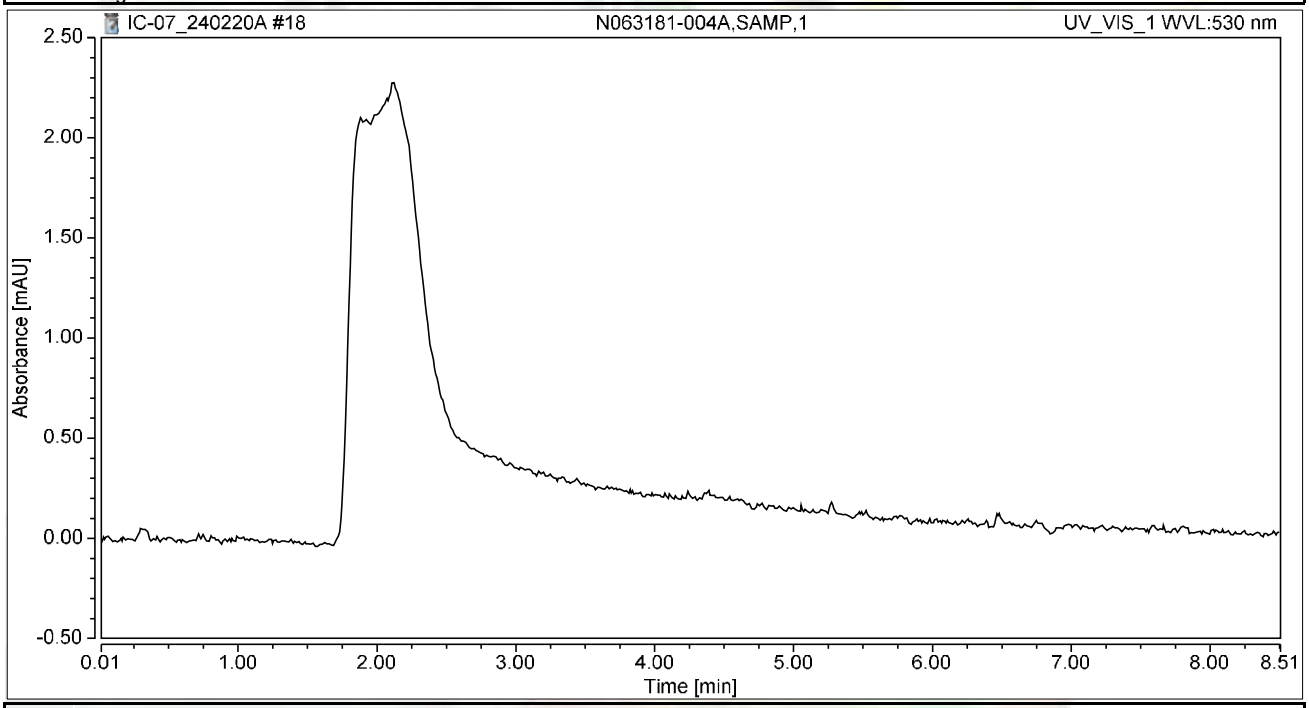
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.176	1.129	100.00	100.00	0.8184
Total:			**0.176**	**1.129**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-004A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 12:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

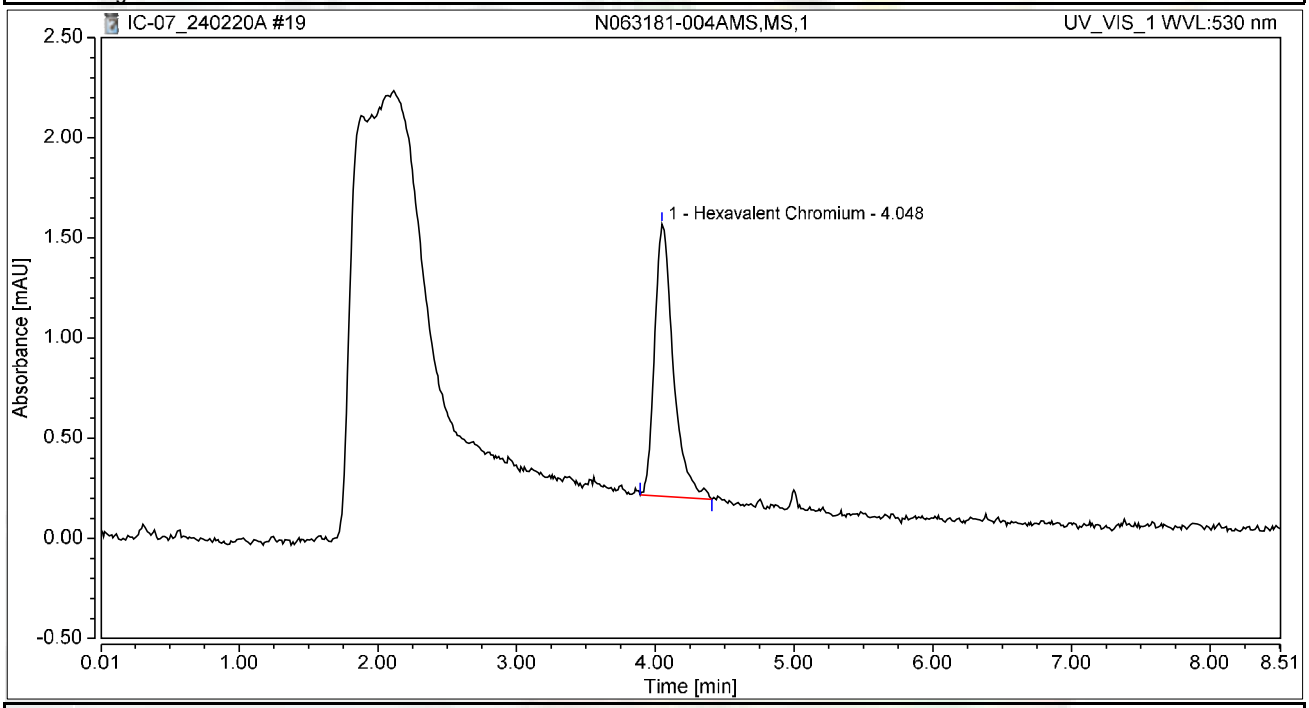
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 12:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

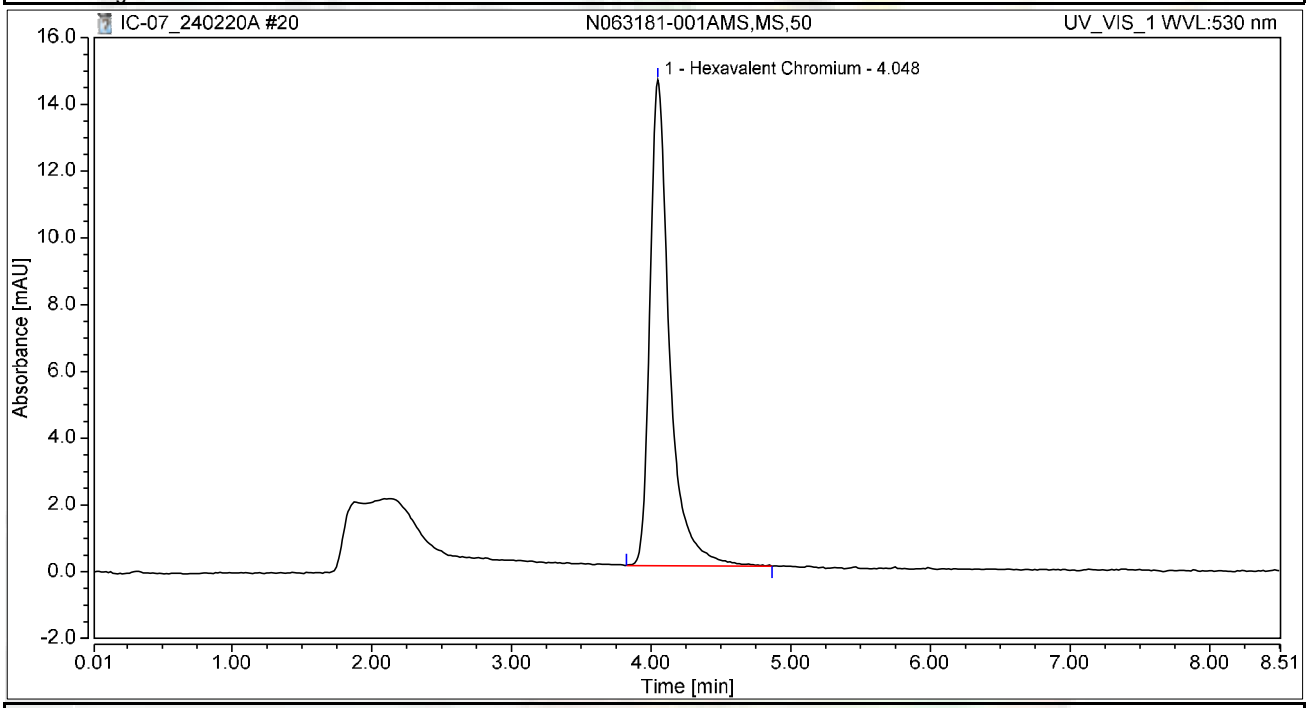
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.213	1.358	100.00	100.00	0.9916
Total:			**0.213**	**1.358**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-001AMS,MS,50**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

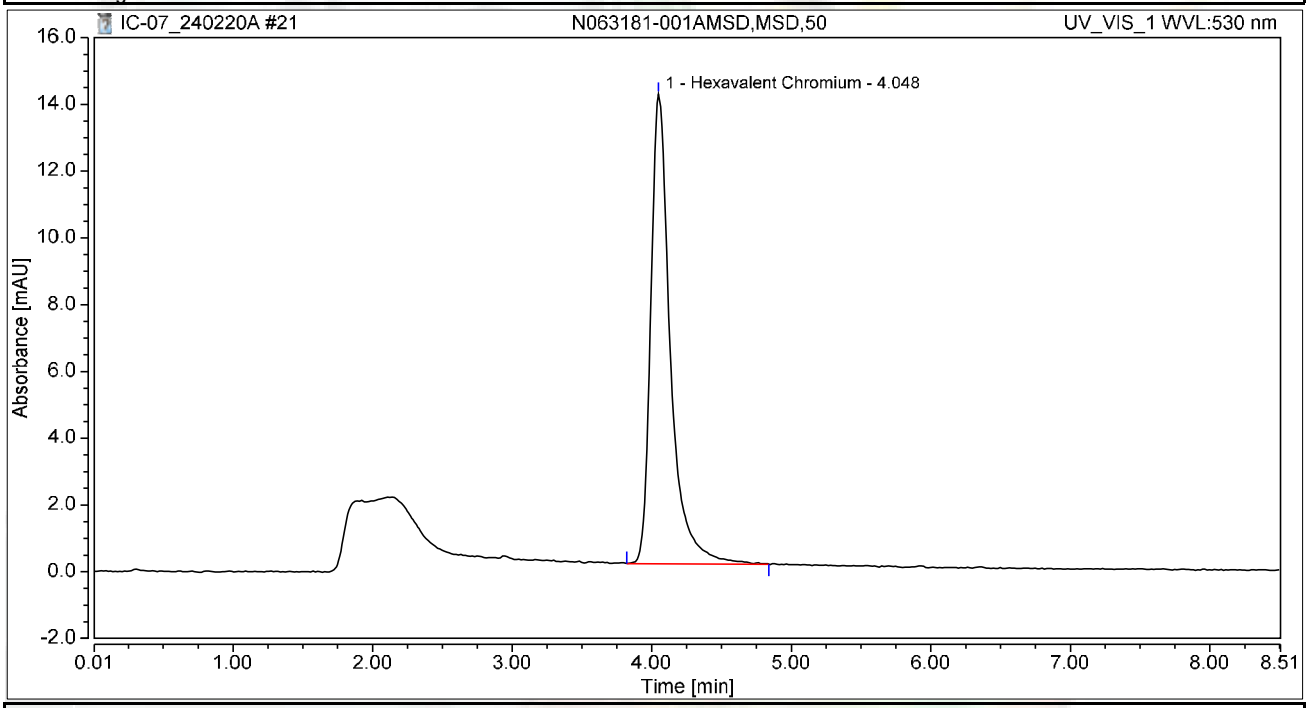
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.375	14.560	100.00	100.00	11.0418
Total:			**2.375**	**14.560**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-001AMSD,MSD,50**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 12:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

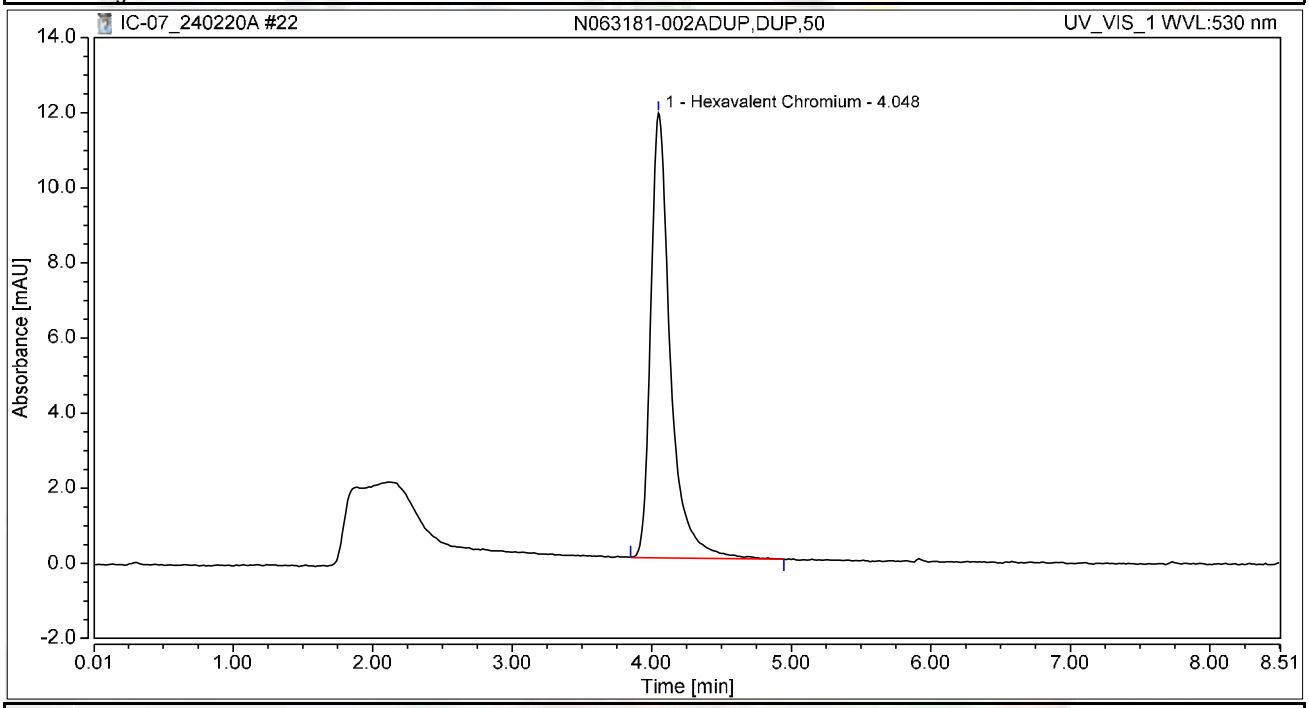
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.294	14.066	100.00	100.00	10.6647
Total:			**2.294**	**14.066**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-002ADUP,DUP,50**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

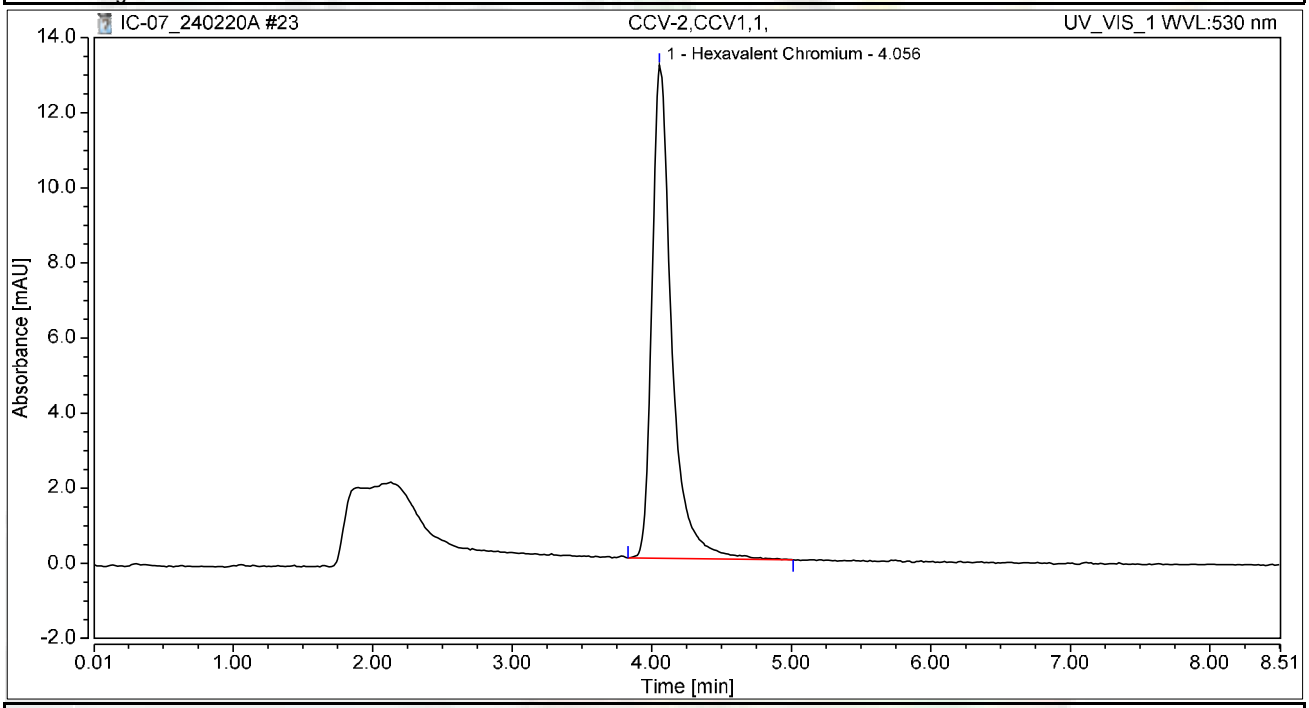
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.938	11.838	100.00	100.00	9.0087
Total:			**1.938**	**11.838**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 12:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

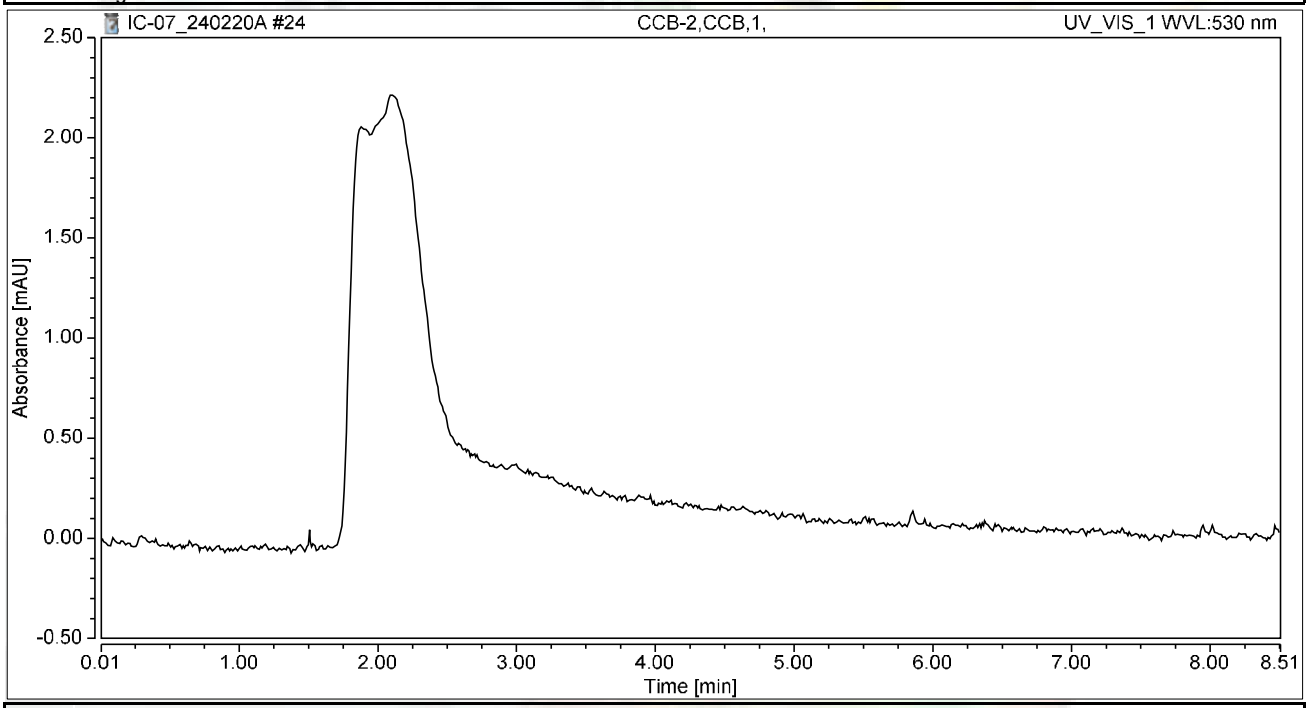
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	2.162	13.129	100.00	100.00	10.0504
Total:			**2.162**	**13.129**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

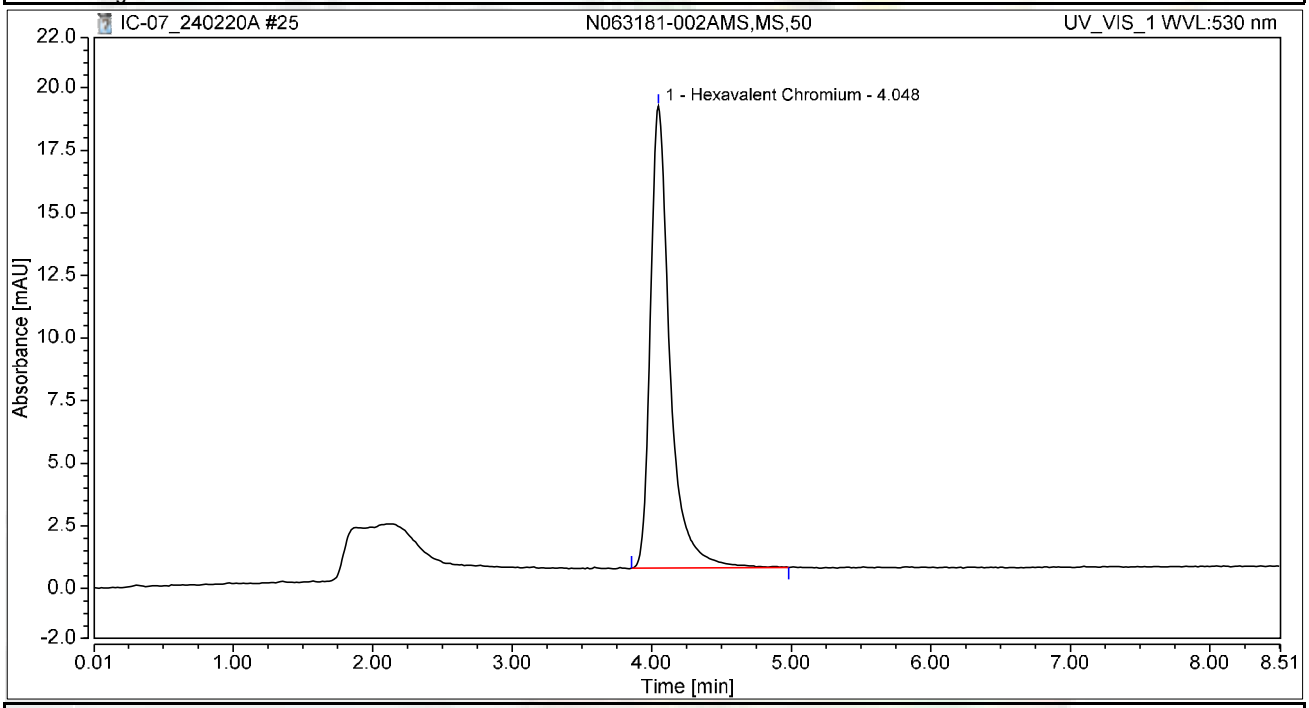
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-002AMS,MS,50**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 13:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

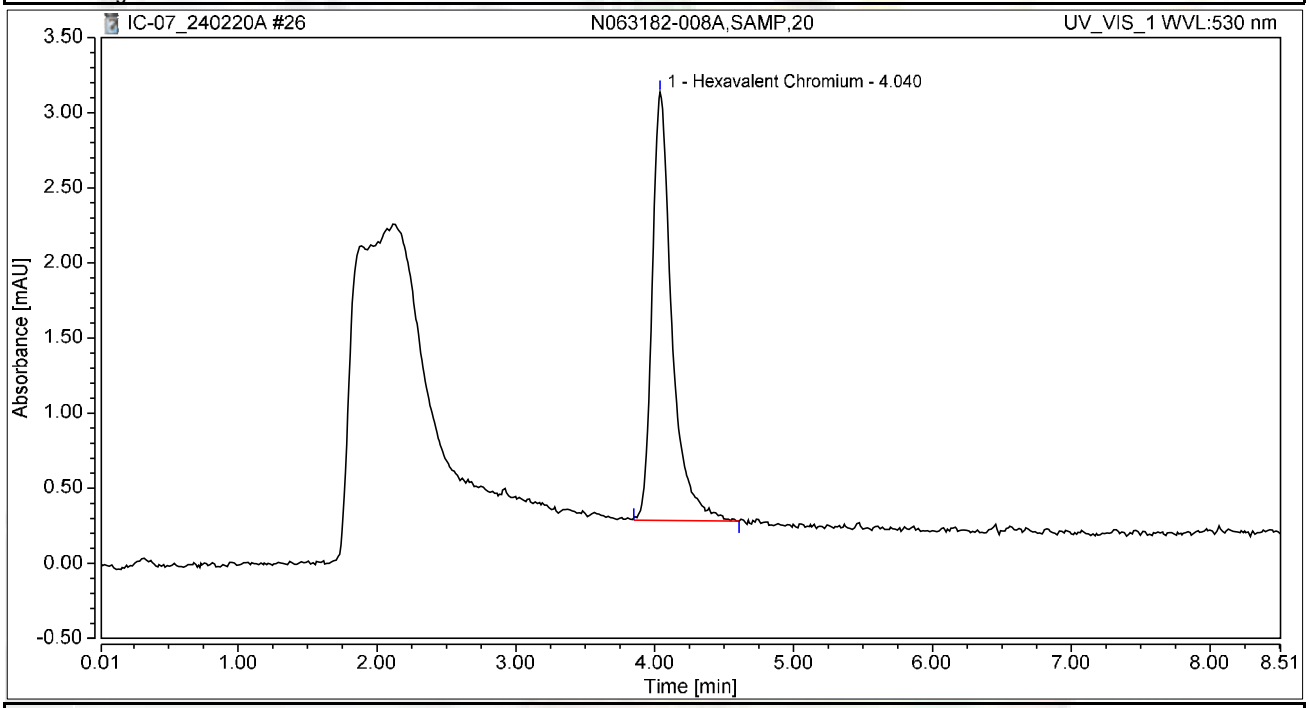
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.993	18.450	100.00	100.00	13.9127
Total:			**2.993**	**18.450**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-008A,SAMP,20**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 13:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

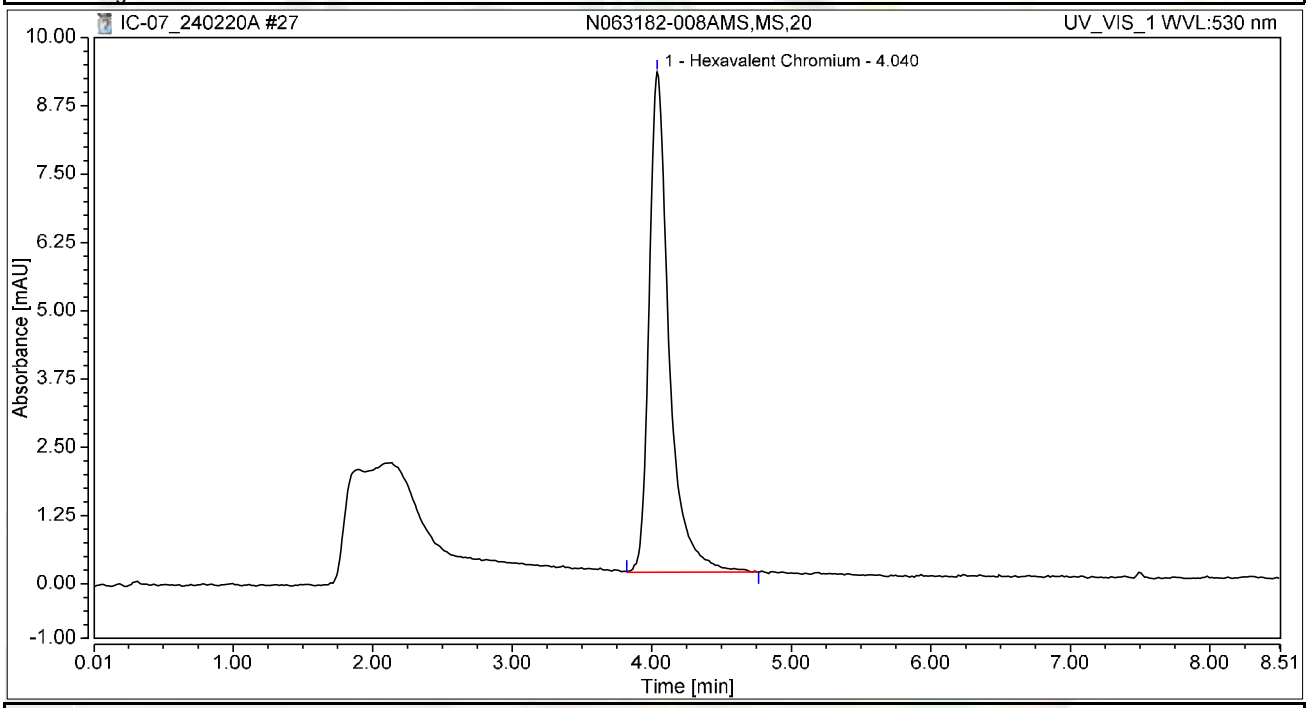
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.469	2.850	100.00	100.00	2.1826
Total:			**0.469**	**2.850**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-008AMS,MS,20**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 13:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

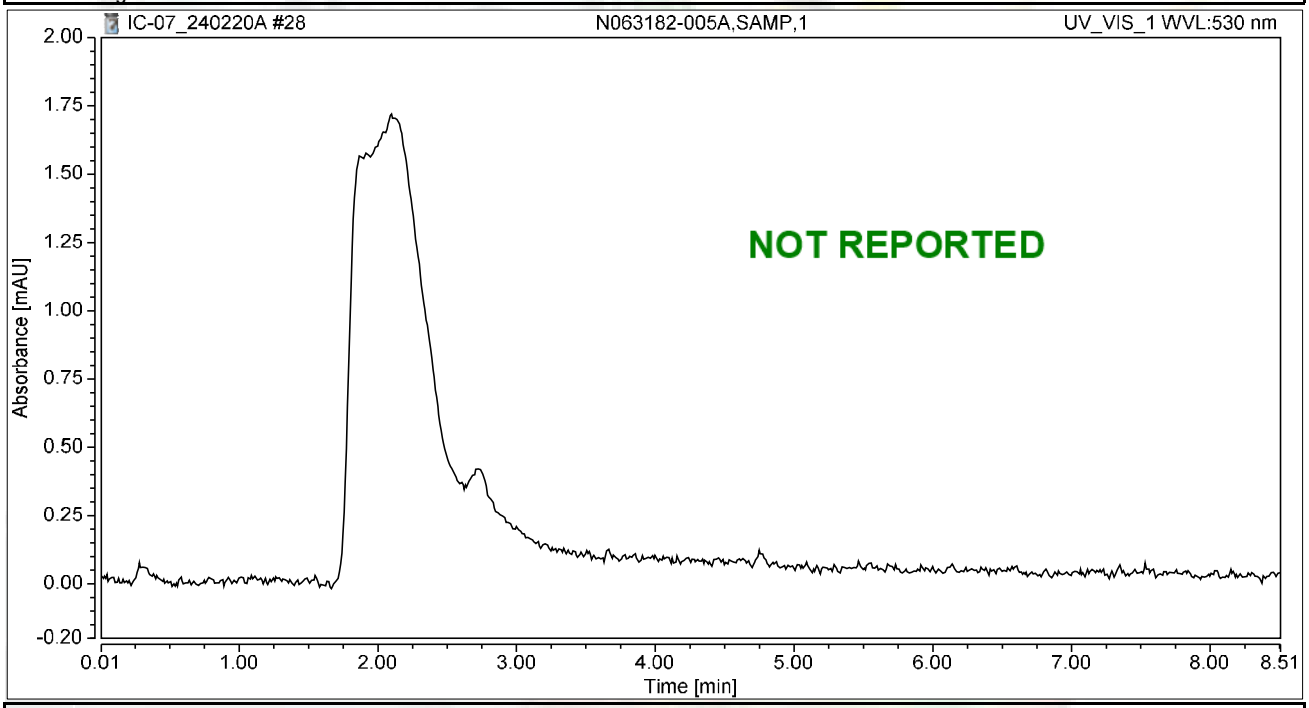
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.523	9.154	100.00	100.00	7.0826
Total:			**1.523**	**9.154**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 13:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

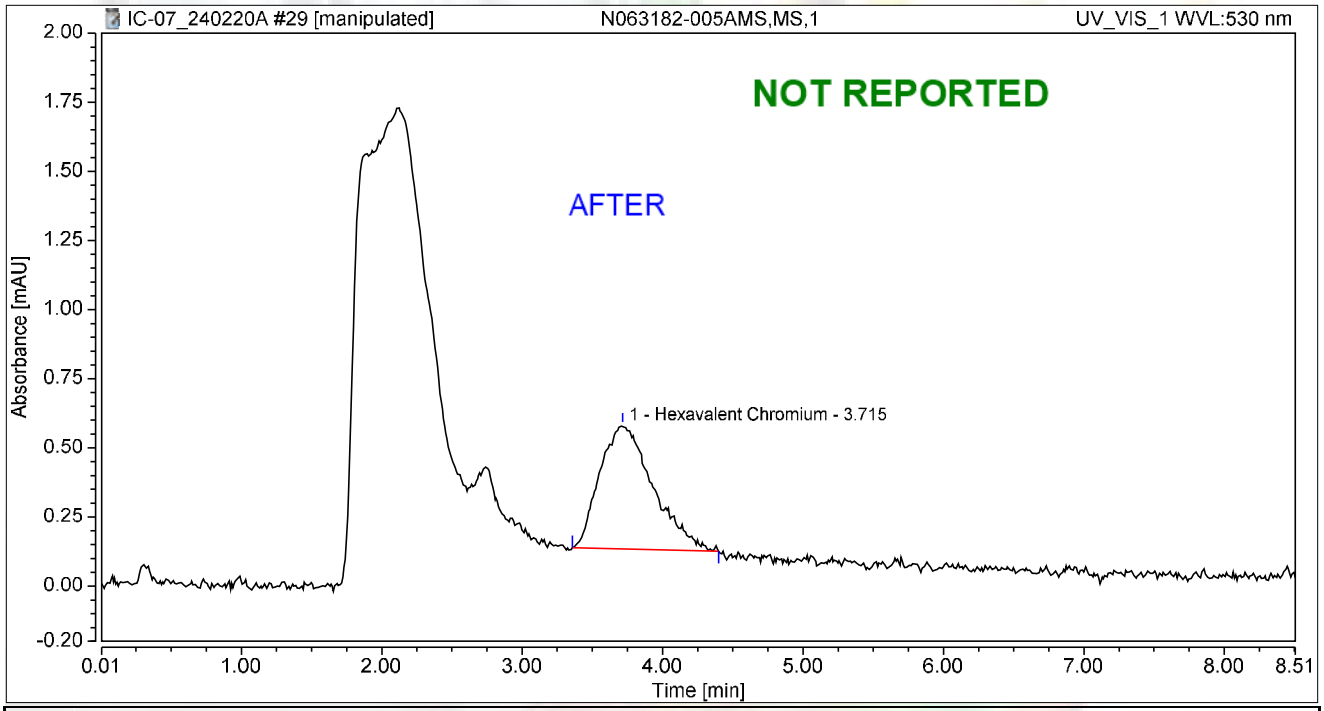
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 13:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

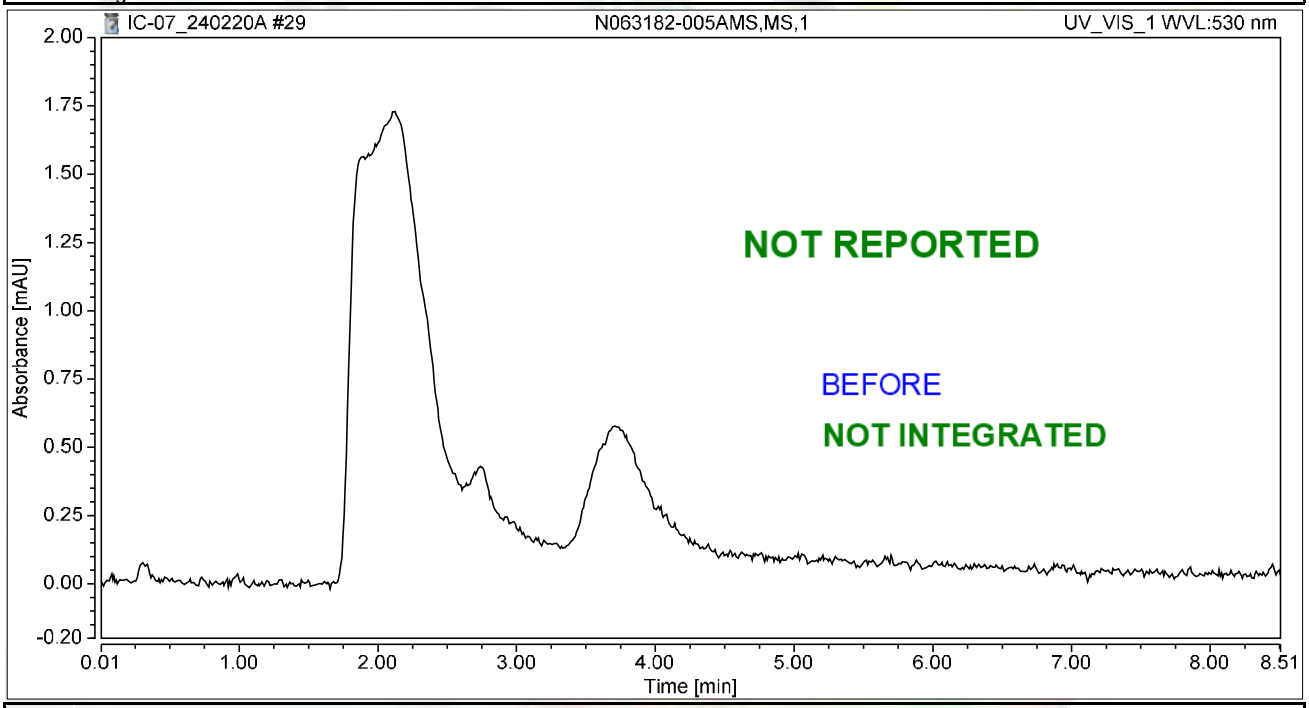
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.715	0.196	0.448	100.00	100.00	0.9116
Total:			**0.196**	**0.448**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 13:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

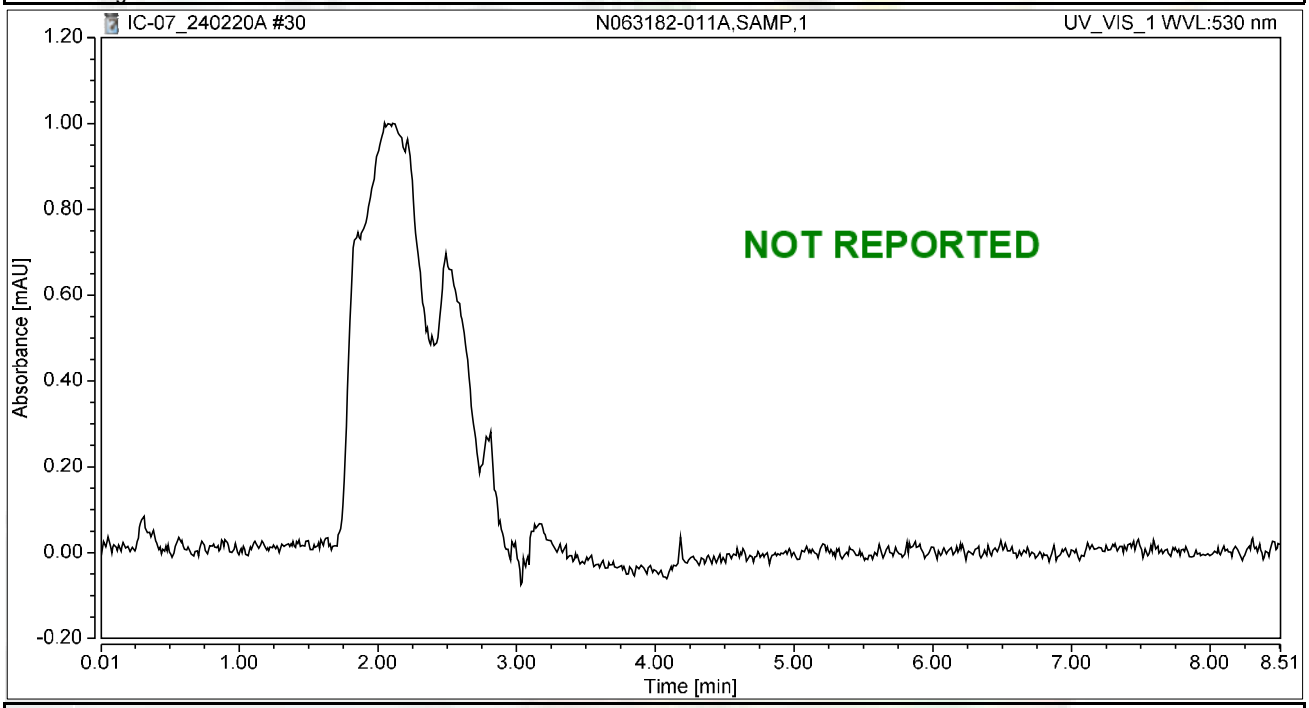
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-011A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 14:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

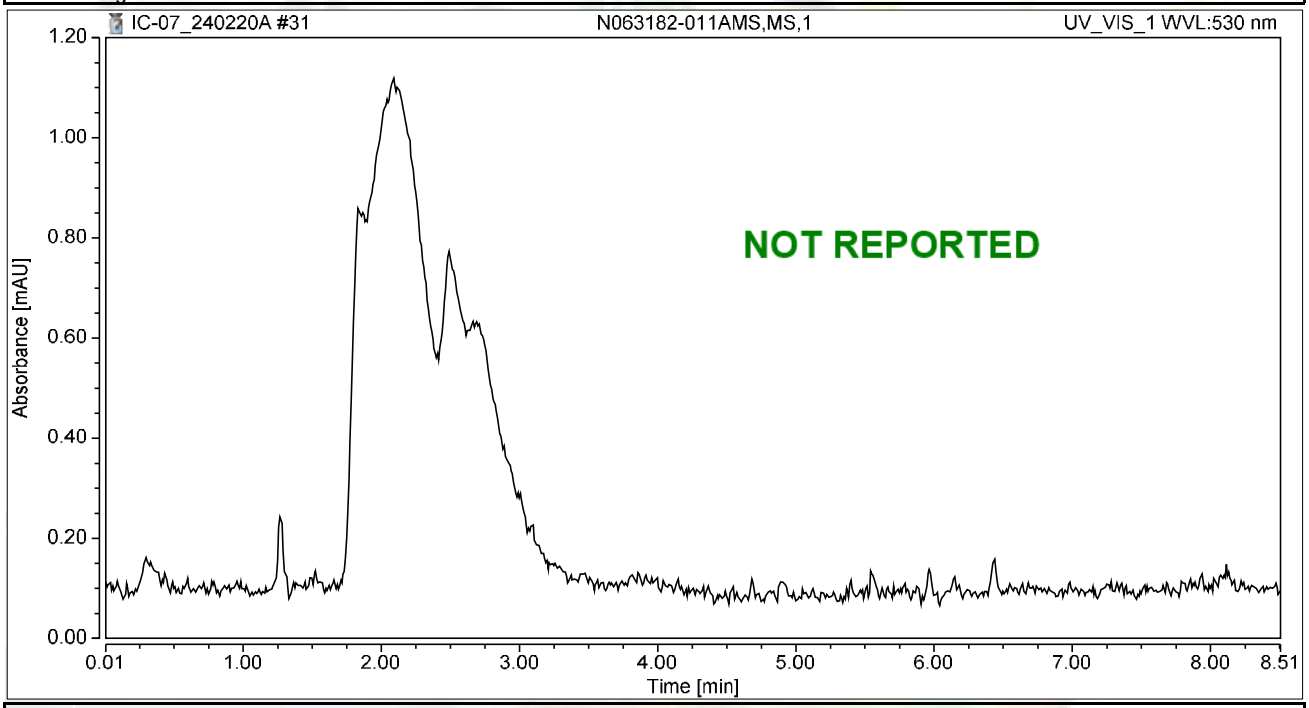
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 14:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

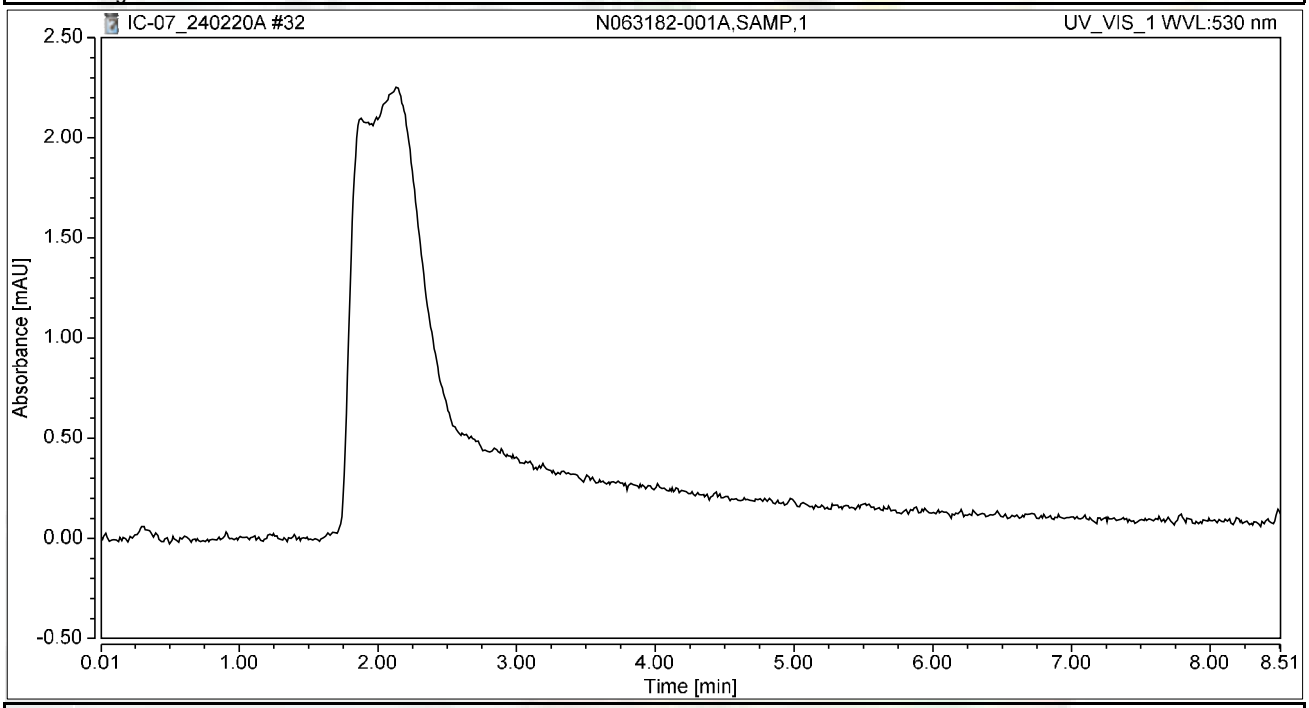
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 14:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

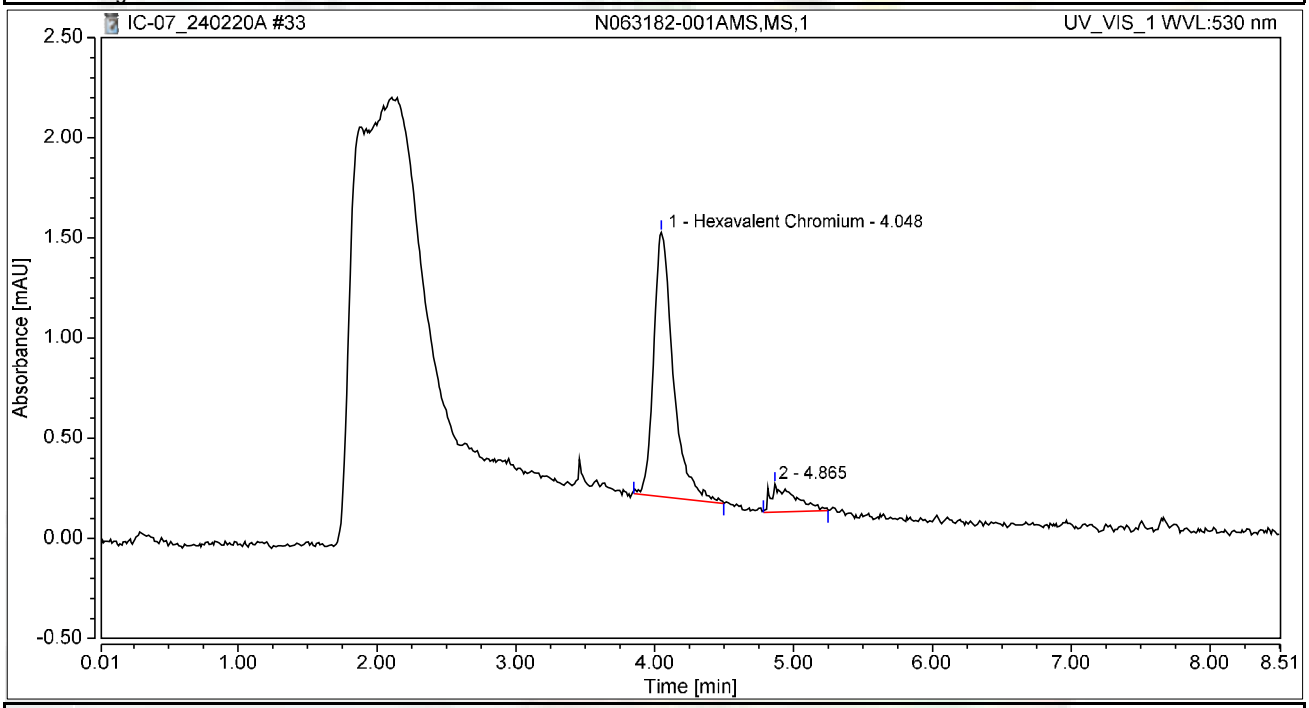
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 14:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

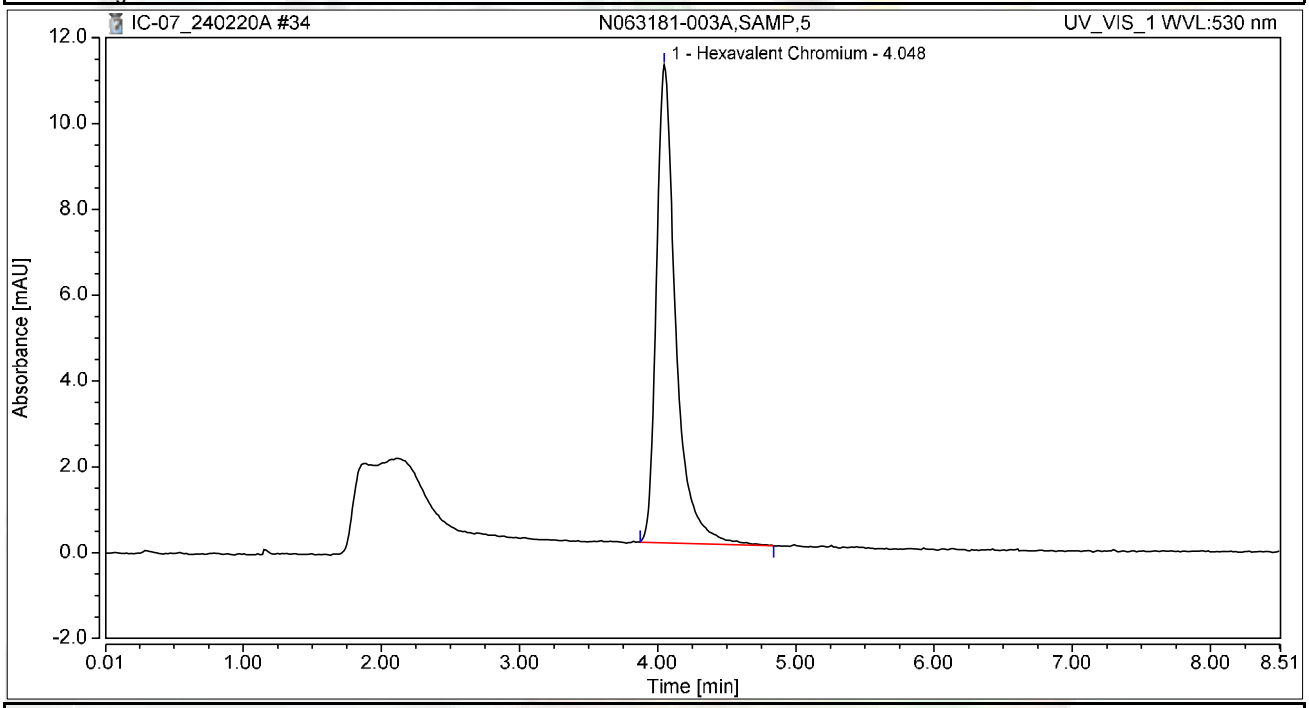
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.216	1.319	88.56	90.38	1.0043
2		4.865	0.028	0.140	11.44	9.62	n.a.
Total:			**0.244**	**1.459**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 14:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

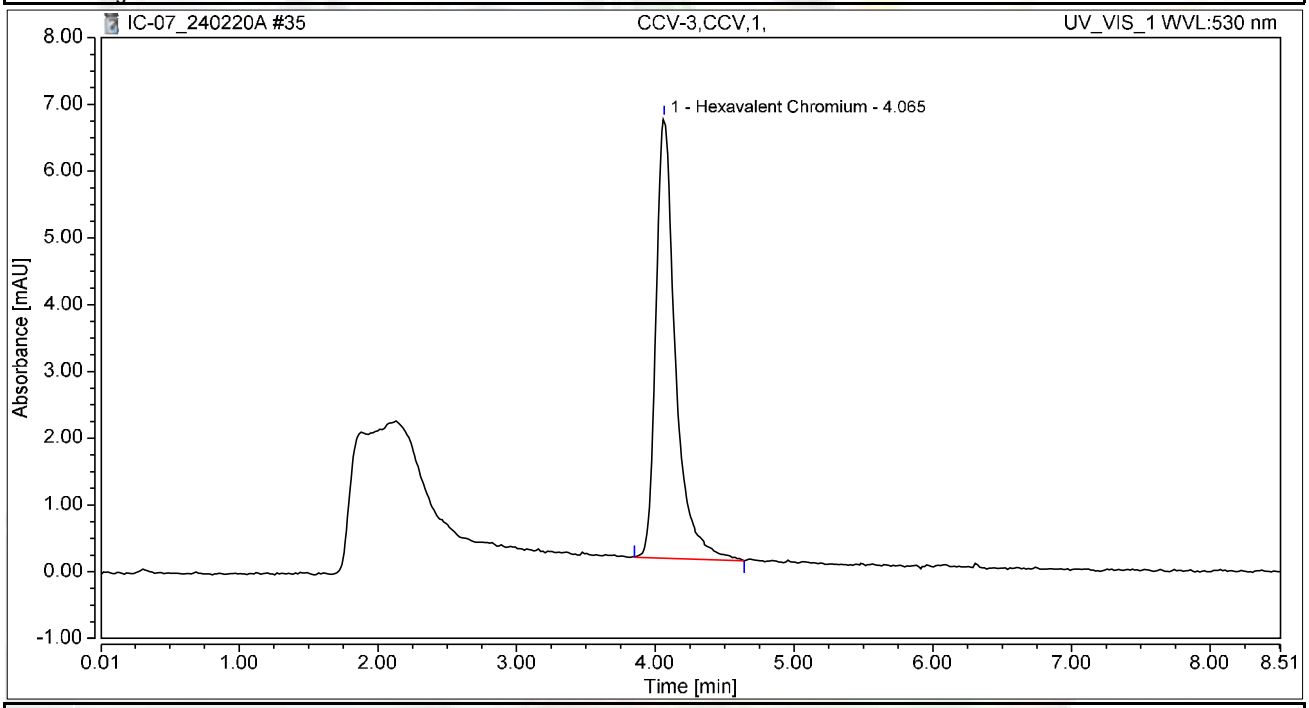
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.808	11.139	100.00	100.00	8.4046
Total:			**1.808**	**11.139**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 14:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

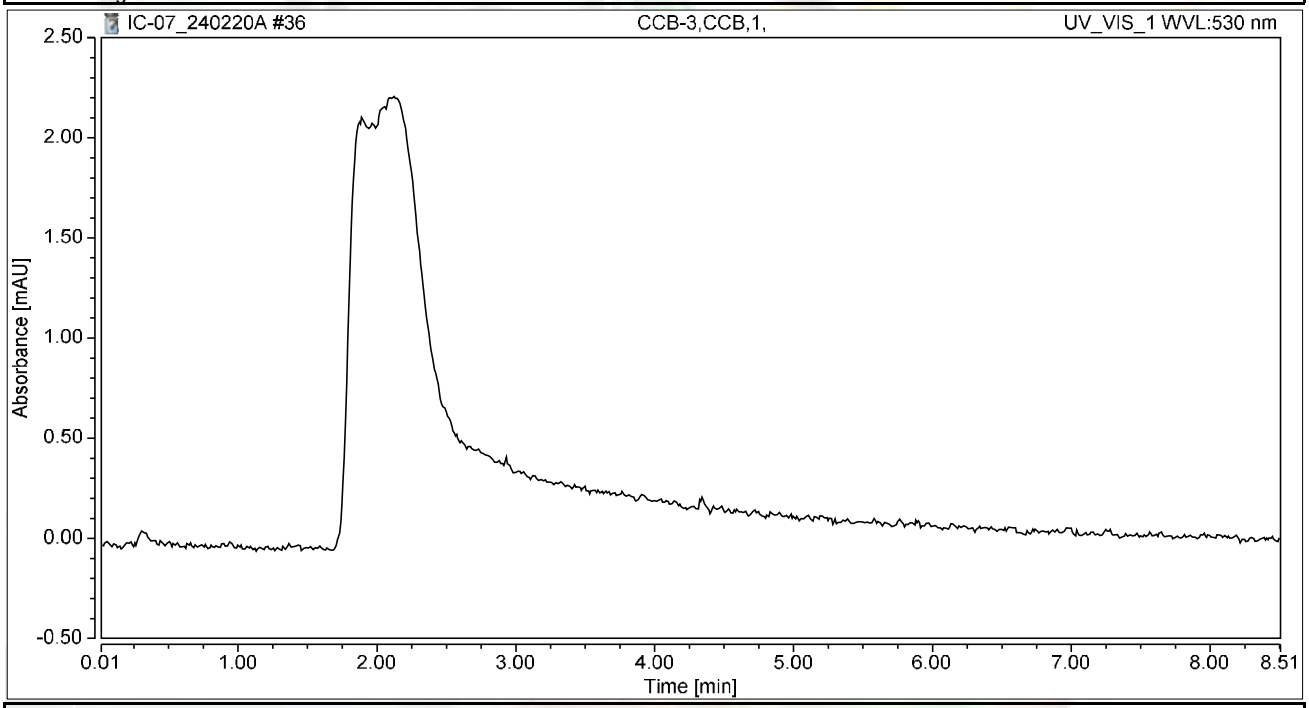
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	1.081	6.594	100.00	100.00	5.0265
Total:			**1.081**	**6.594**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 15:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

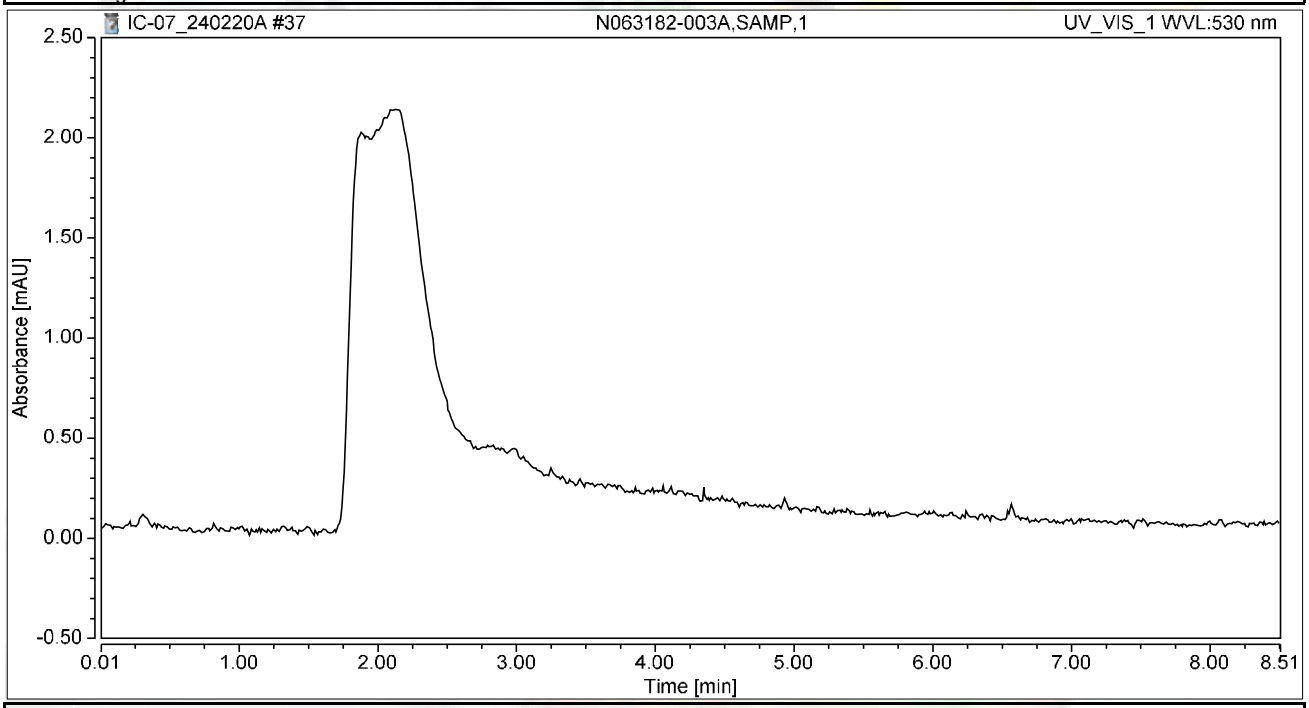
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 15:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

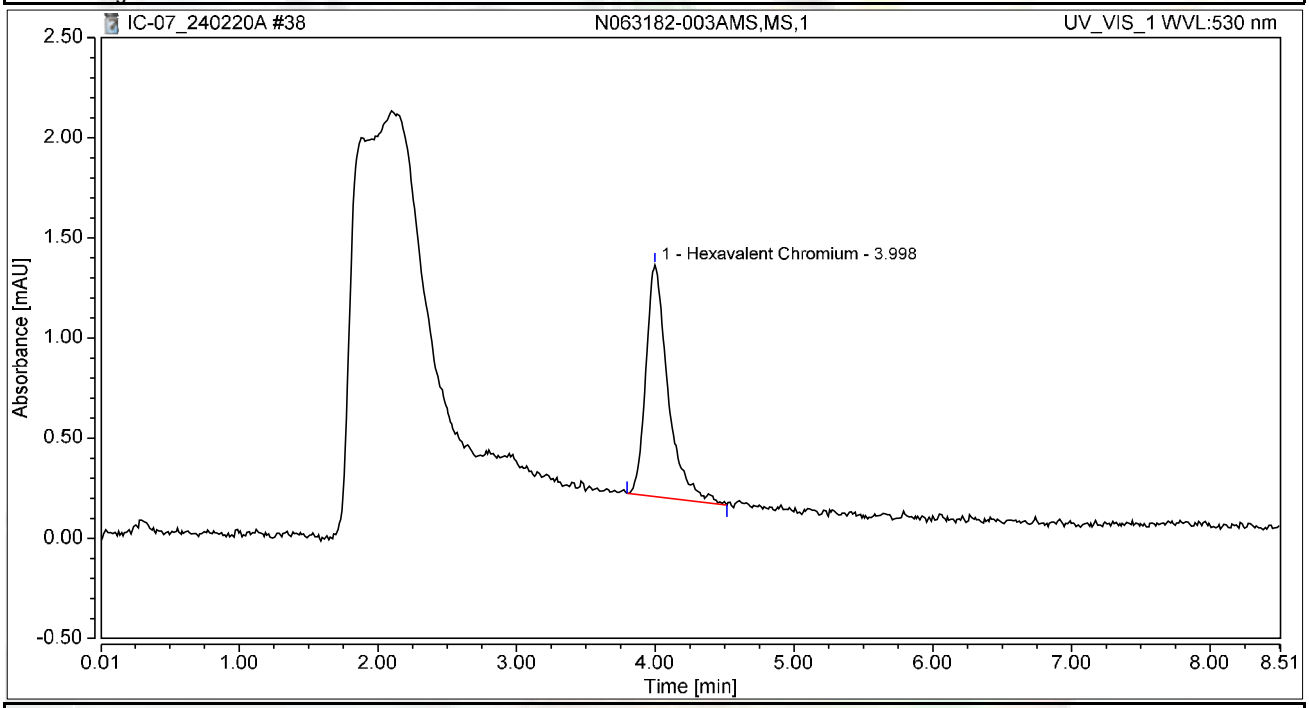
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 15:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

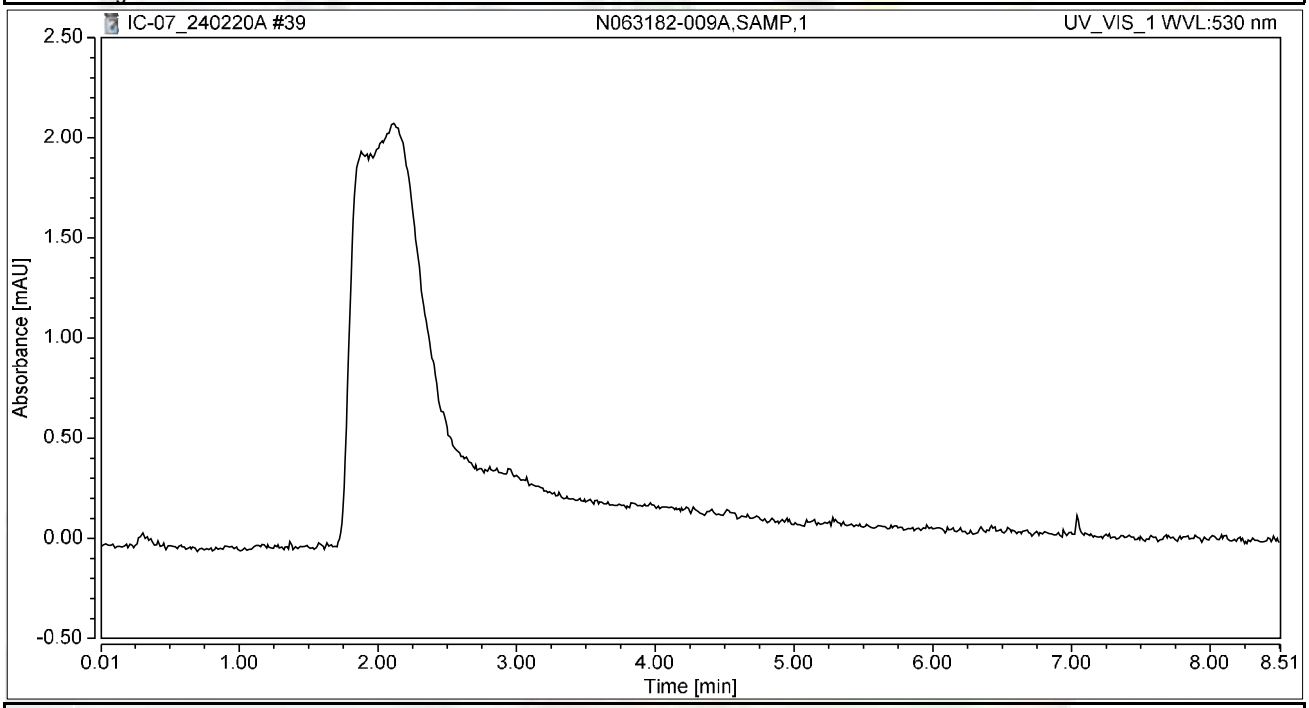
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.214	1.156	100.00	100.00	0.9941
Total:			**0.214**	**1.156**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 15:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

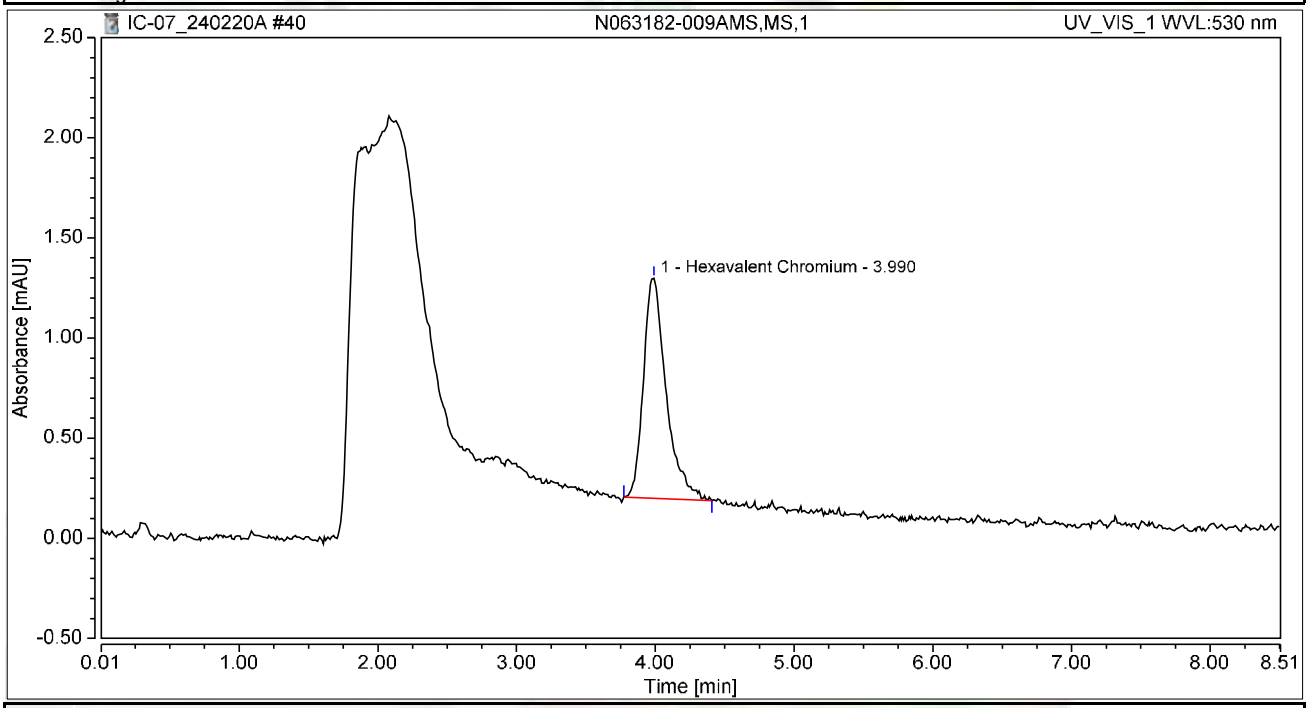
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 15:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

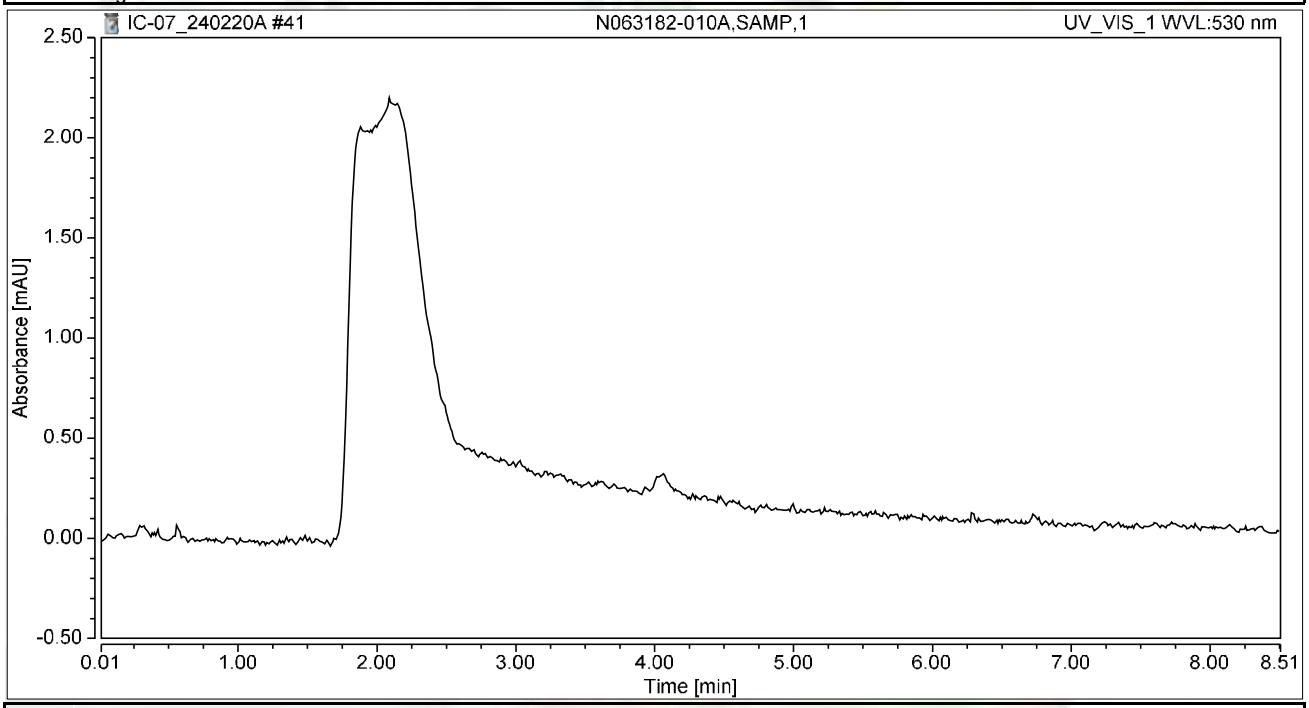
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.210	1.100	100.00	100.00	0.9743
Total:			**0.210**	**1.100**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-010A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 15:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

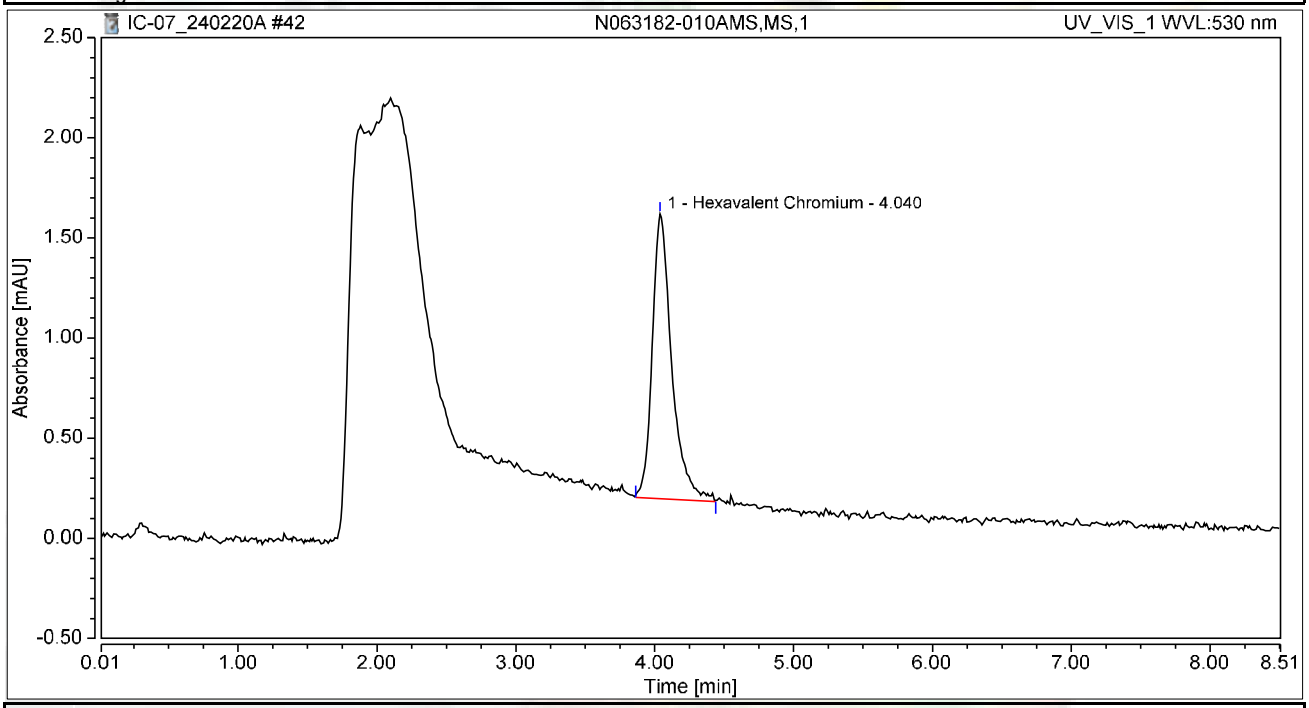
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-010AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 15:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

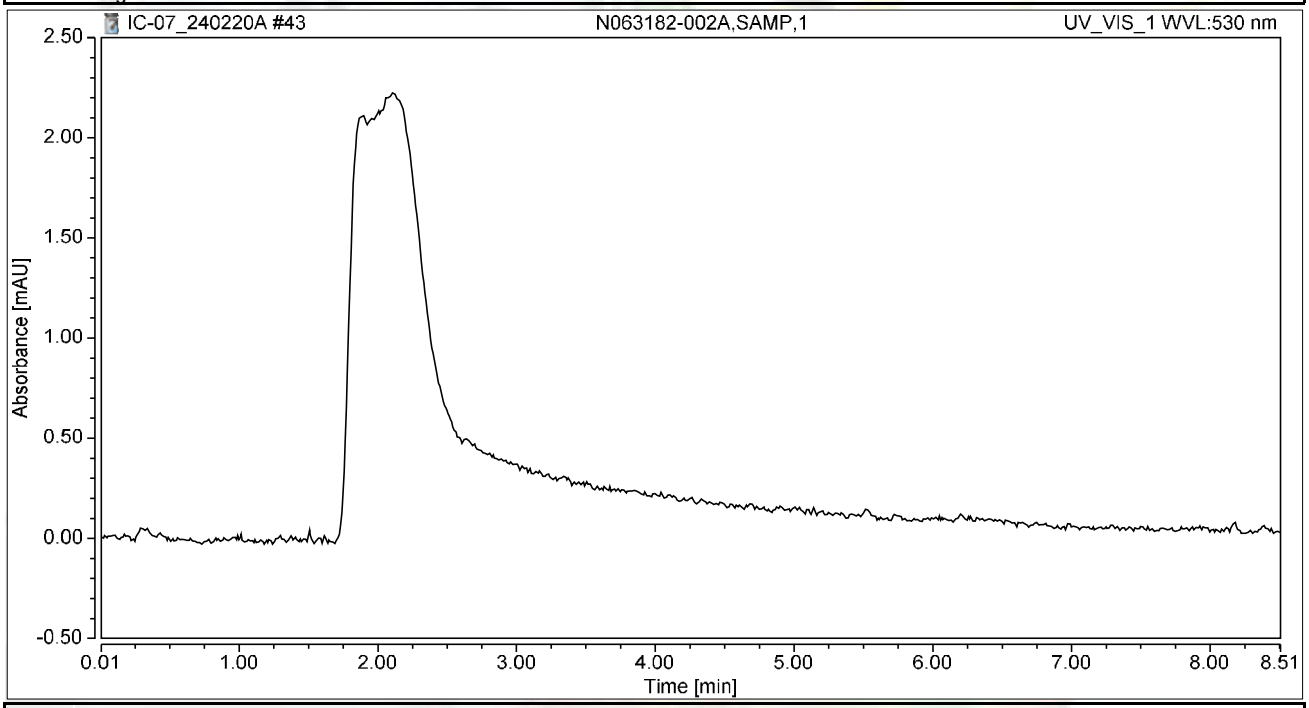
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.231	1.422	100.00	100.00	1.0738
Total:			**0.231**	**1.422**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 16:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

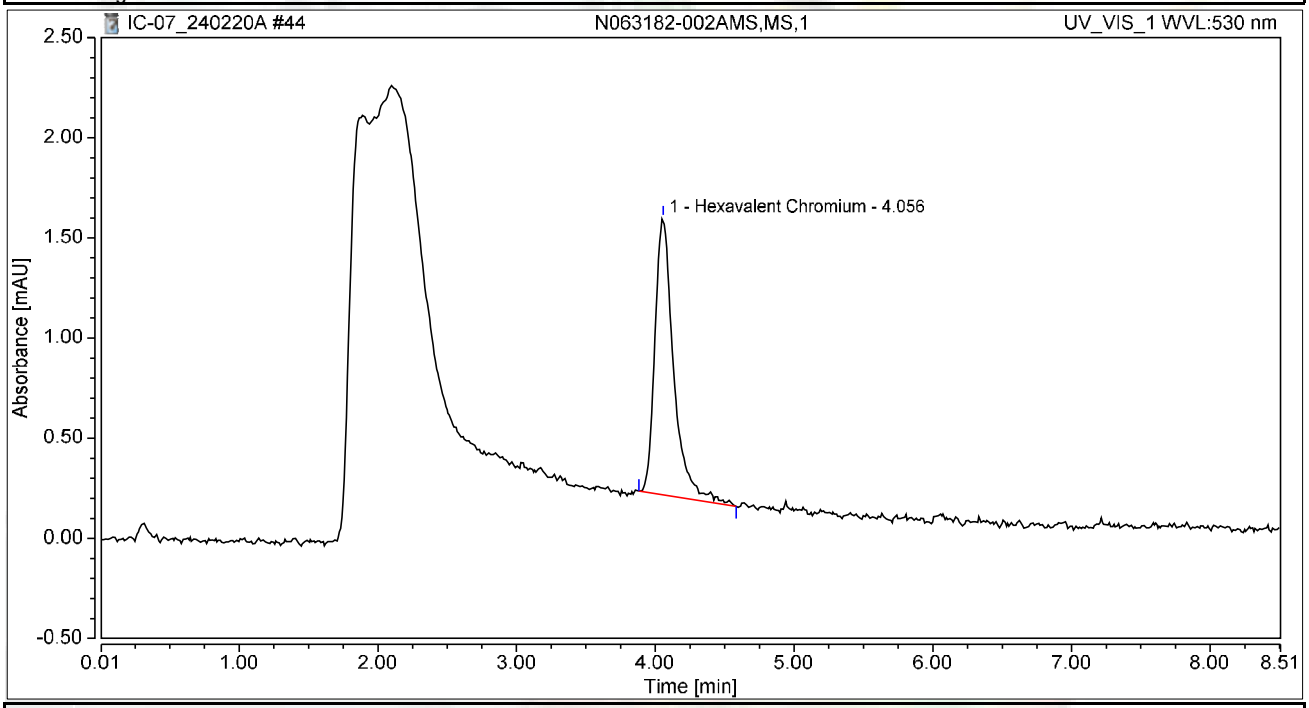
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 16:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

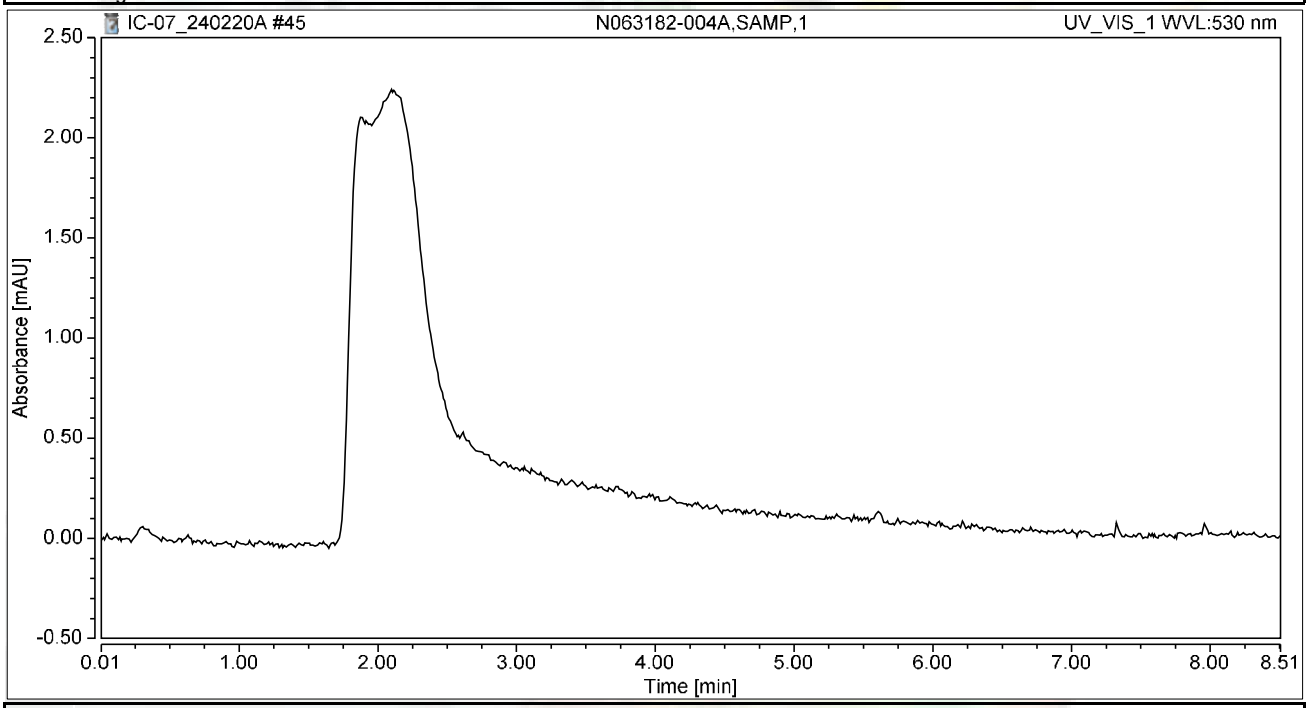
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.218	1.384	100.00	100.00	1.0115
Total:			**0.218**	**1.384**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 16:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

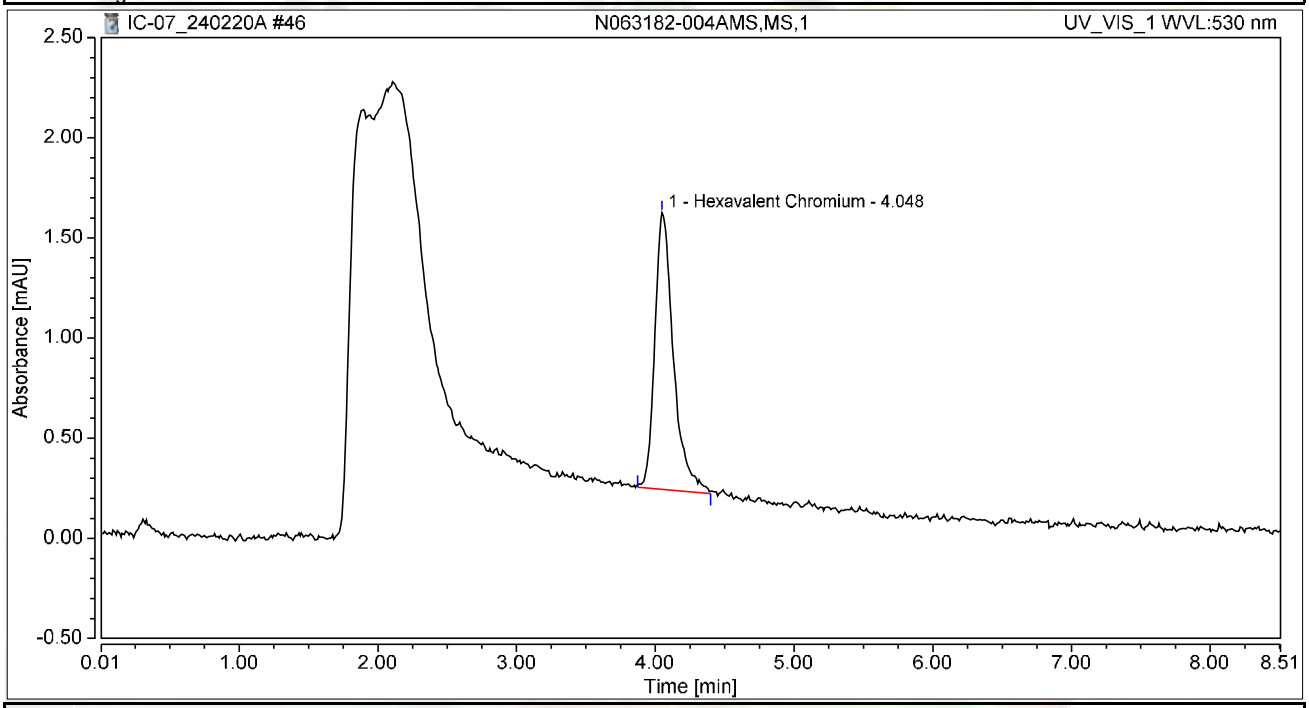
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 16:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

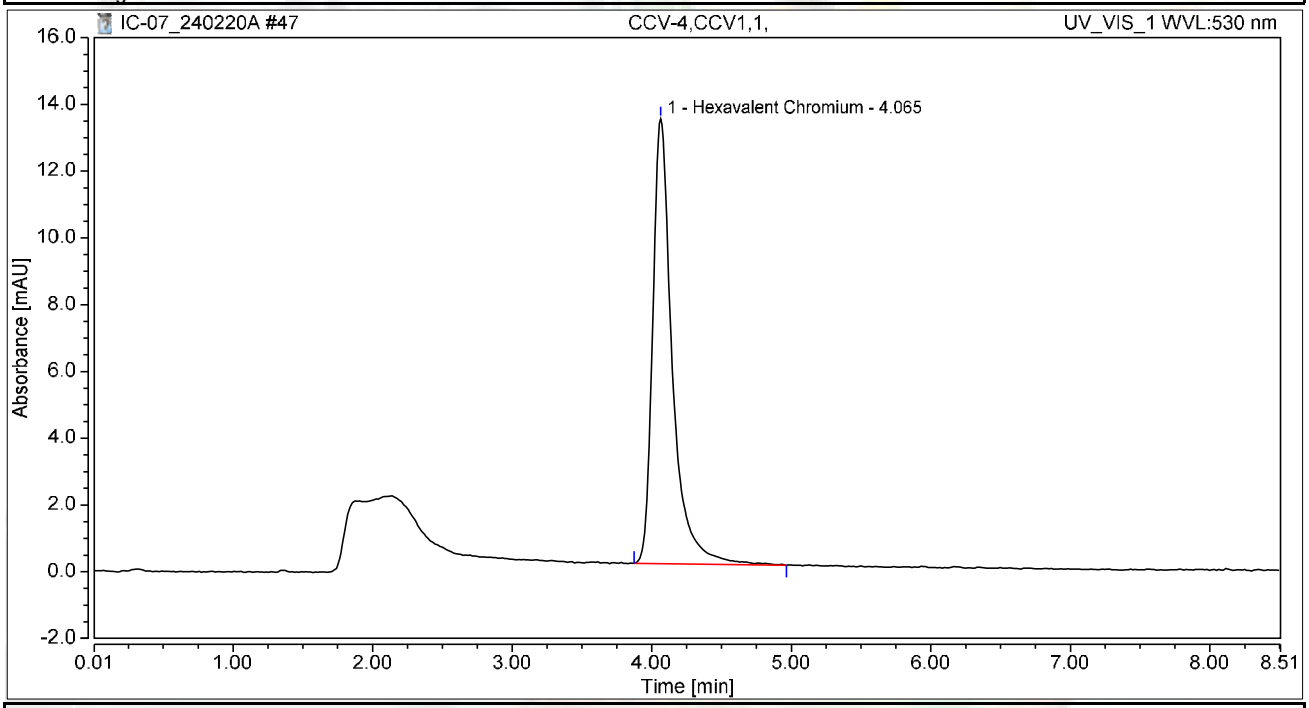
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.215	1.382	100.00	100.00	1.0007
Total:			**0.215**	**1.382**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 16:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

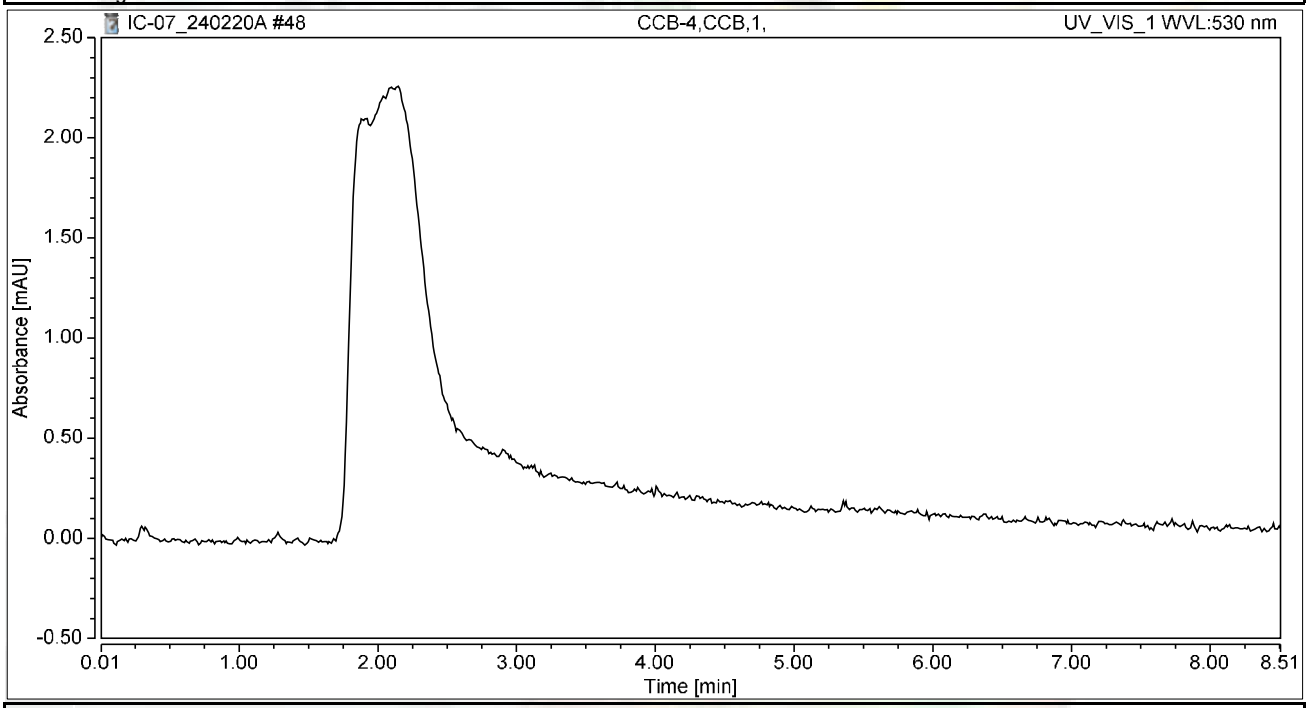
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	2.179	13.334	100.00	100.00	10.1293
Total:			**2.179**	**13.334**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 16:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

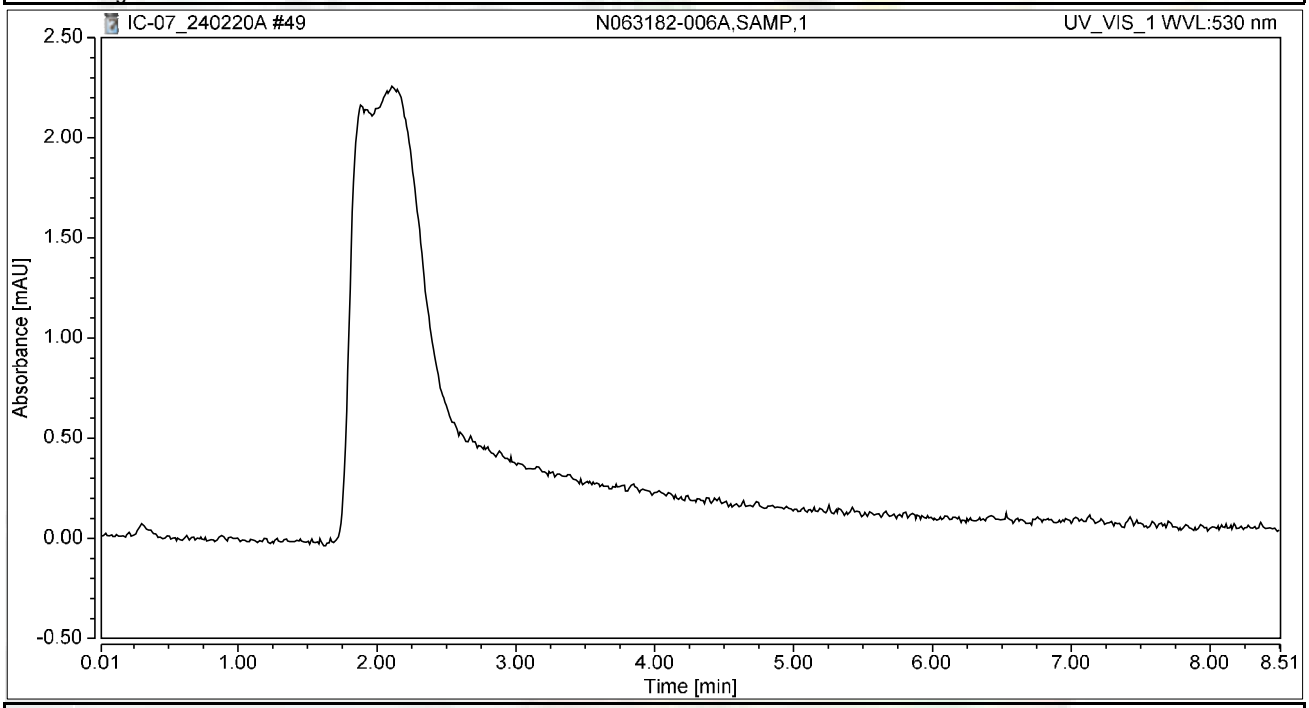
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-006A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 17:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

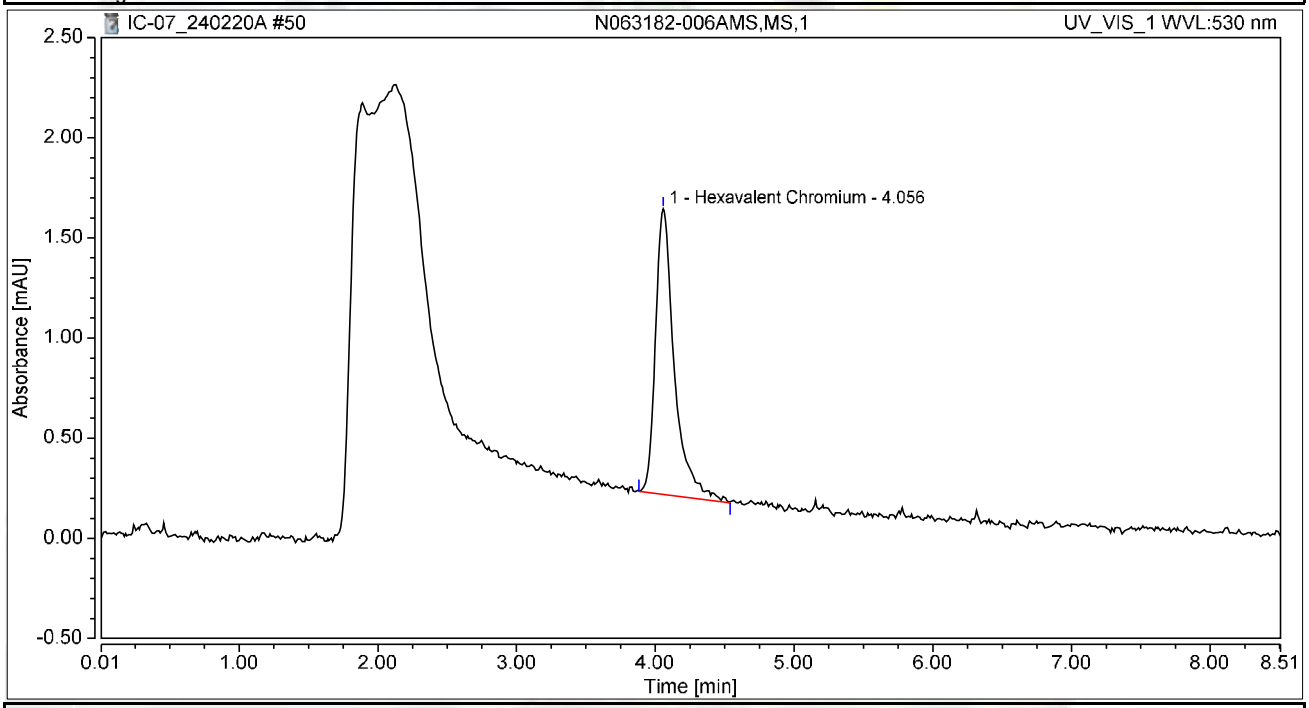
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 17:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

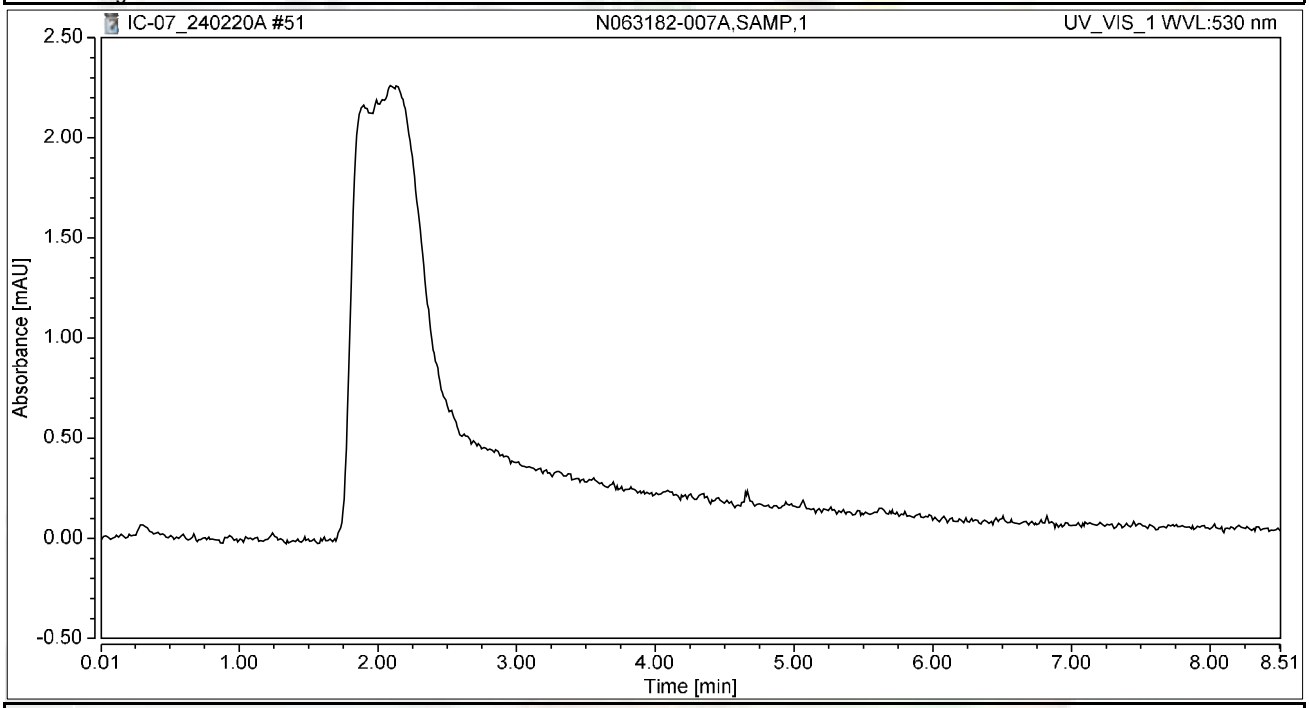
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.225	1.427	100.00	100.00	1.0455
Total:			**0.225**	**1.427**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-007A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 17:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

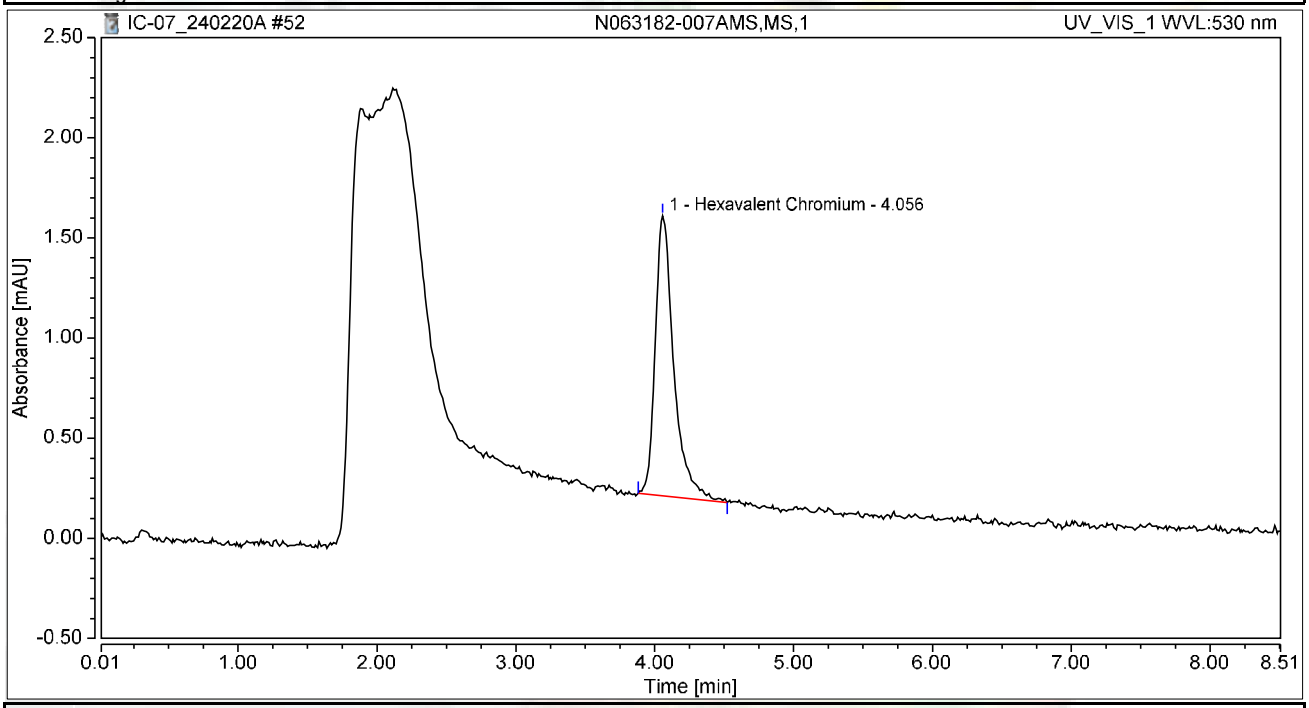
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-007AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 17:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

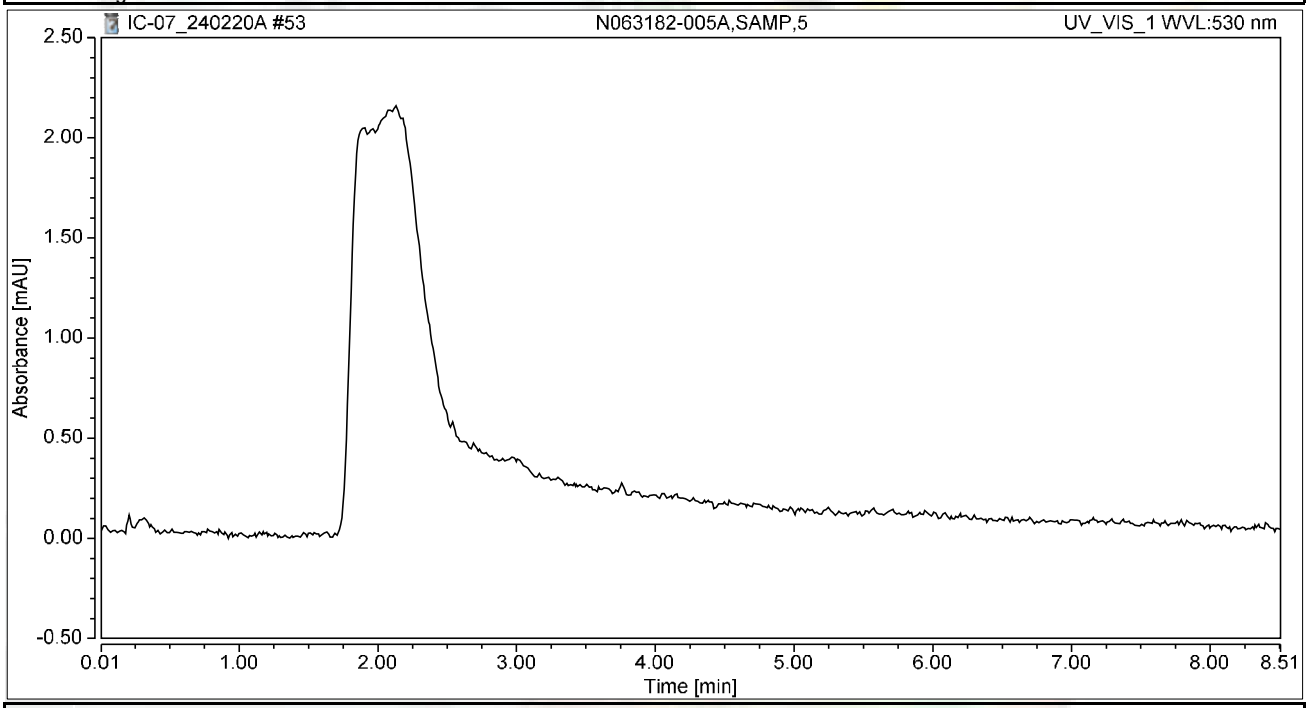
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.216	1.398	100.00	100.00	1.0052
Total:			**0.216**	**1.398**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 17:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

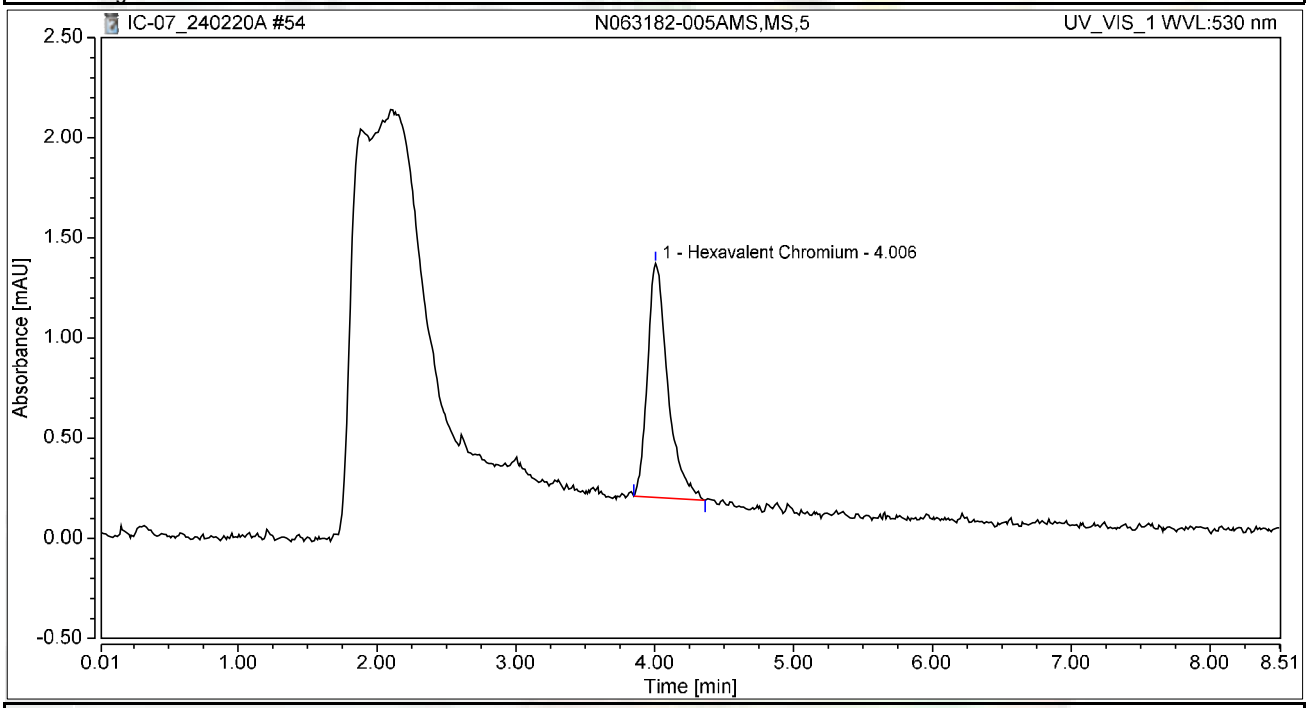
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-005AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 17:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

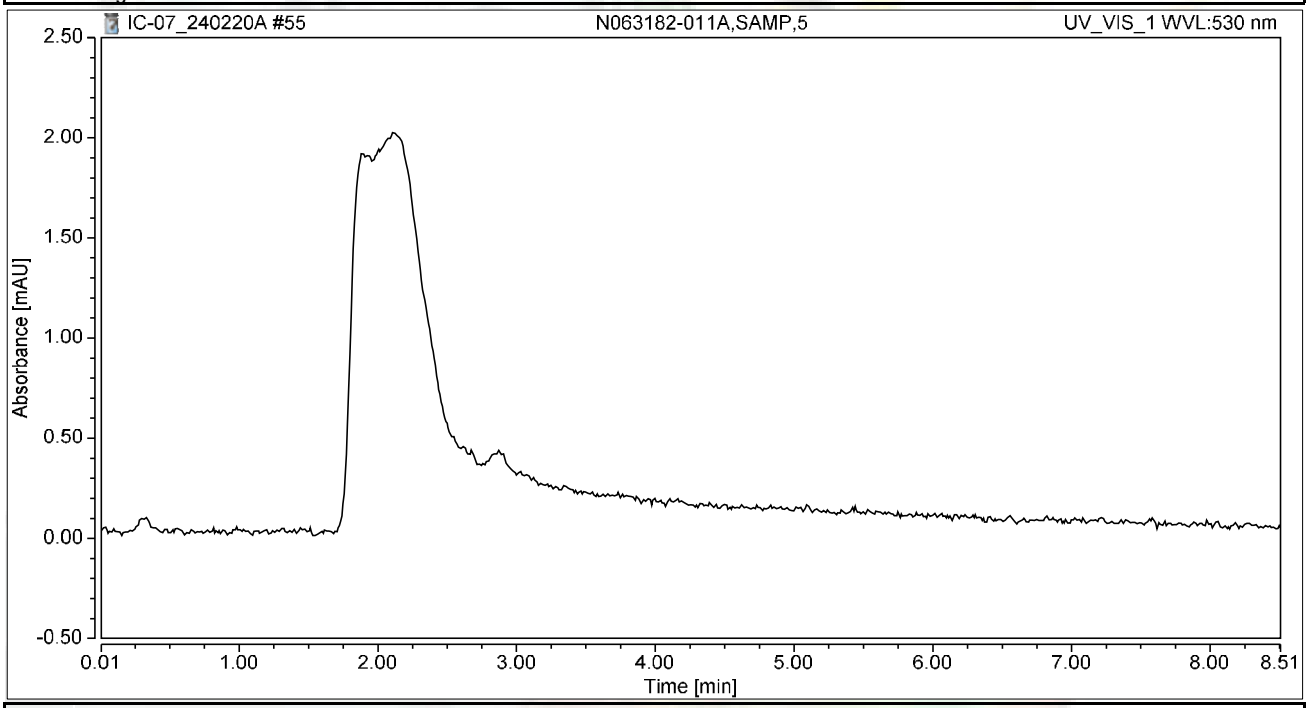
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.199	1.168	100.00	100.00	0.9239
Total:			**0.199**	**1.168**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-011A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 18:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

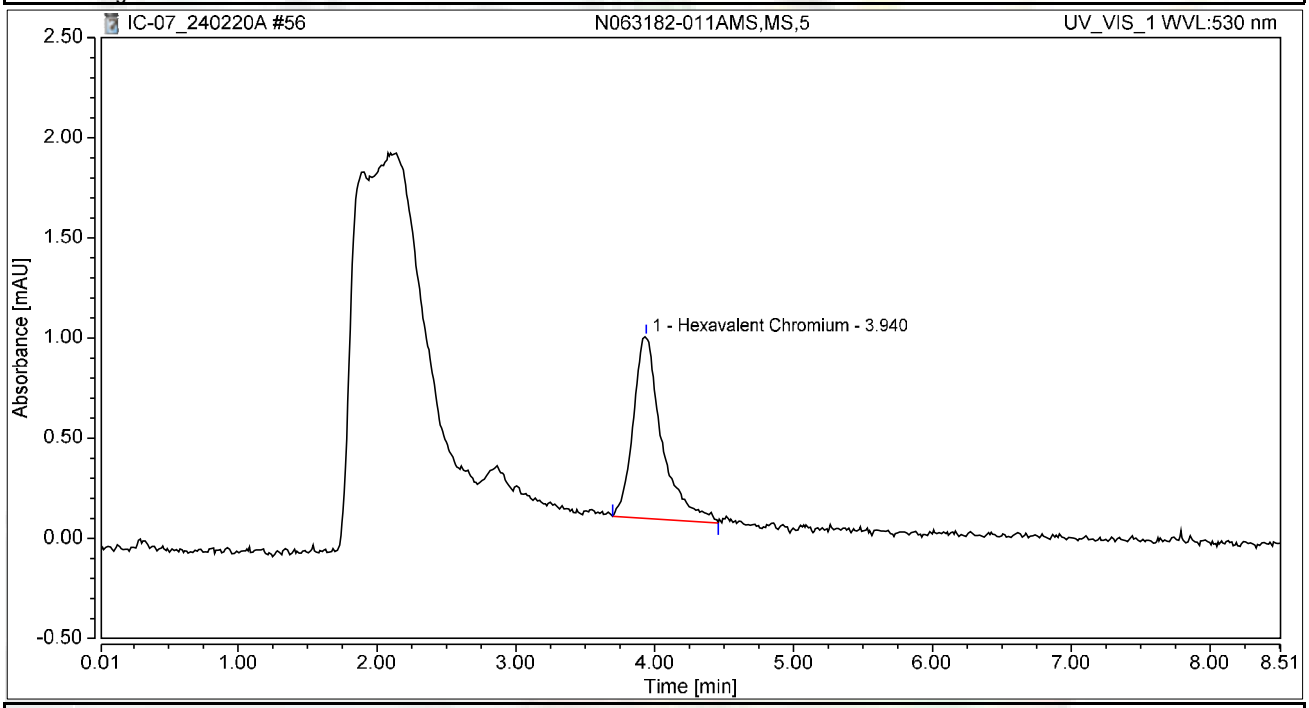
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-011AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 18:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

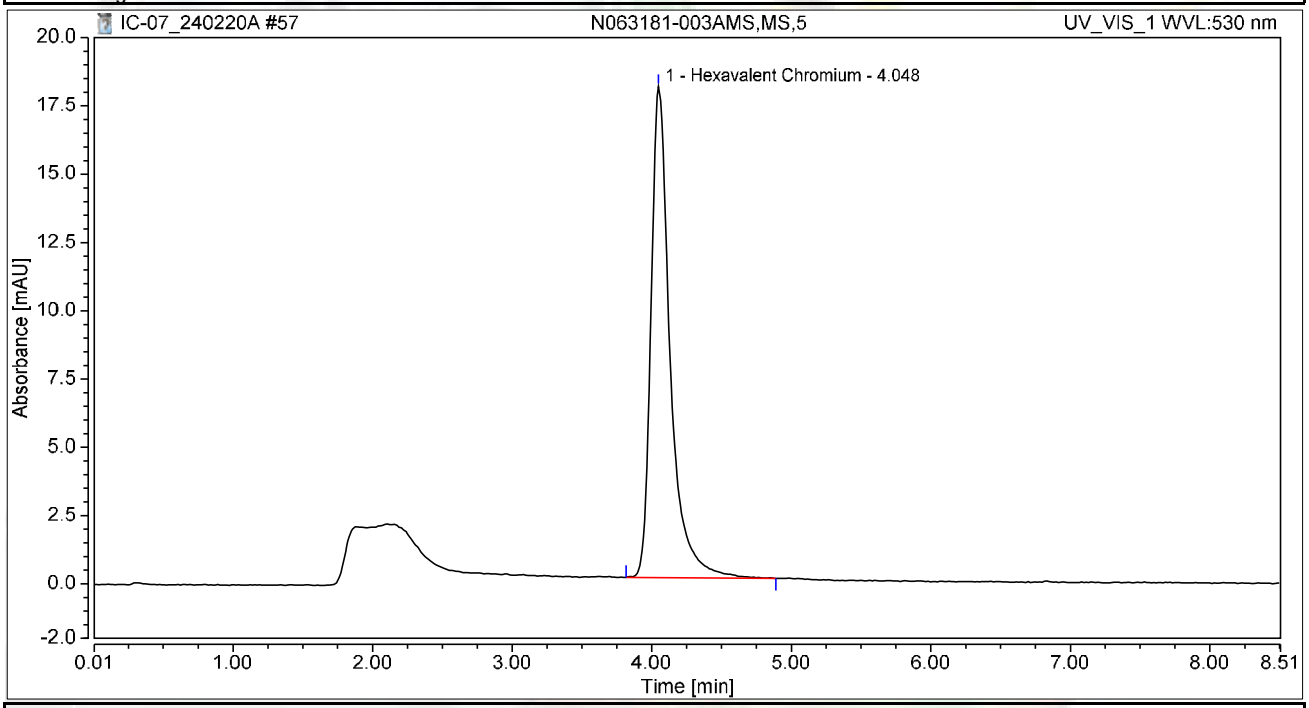
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.216	0.907	100.00	100.00	1.0029
Total:			**0.216**	**0.907**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063181-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 18:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

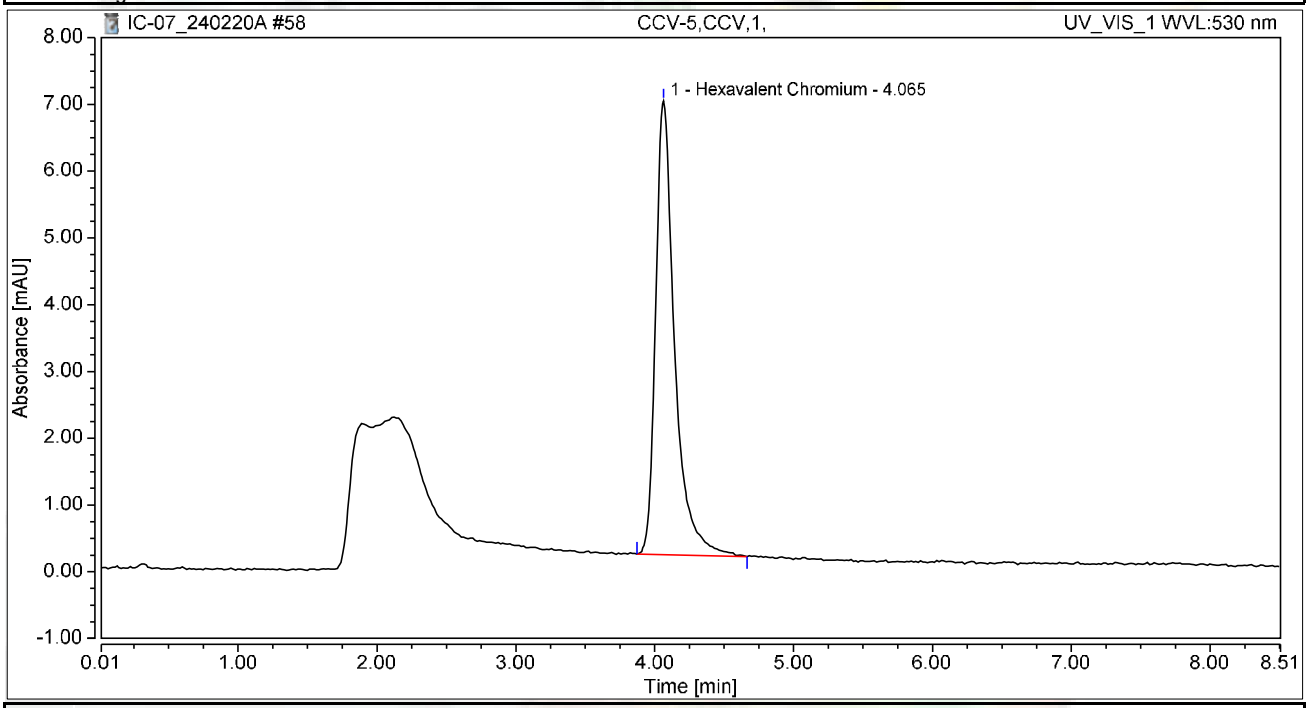
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.874	17.984	100.00	100.00	13.3614
Total:			**2.874**	**17.984**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 18:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

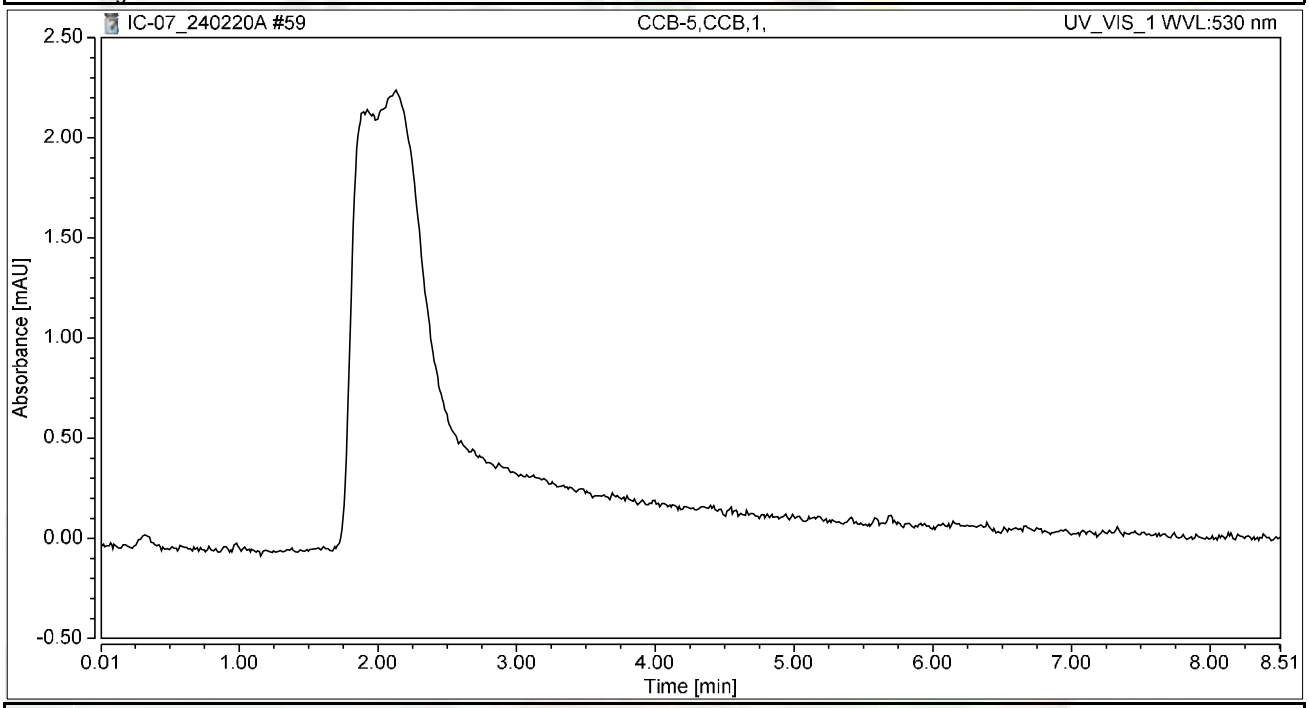
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	1.075	6.799	100.00	100.00	4.9957
Total:			**1.075**	**6.799**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 18:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

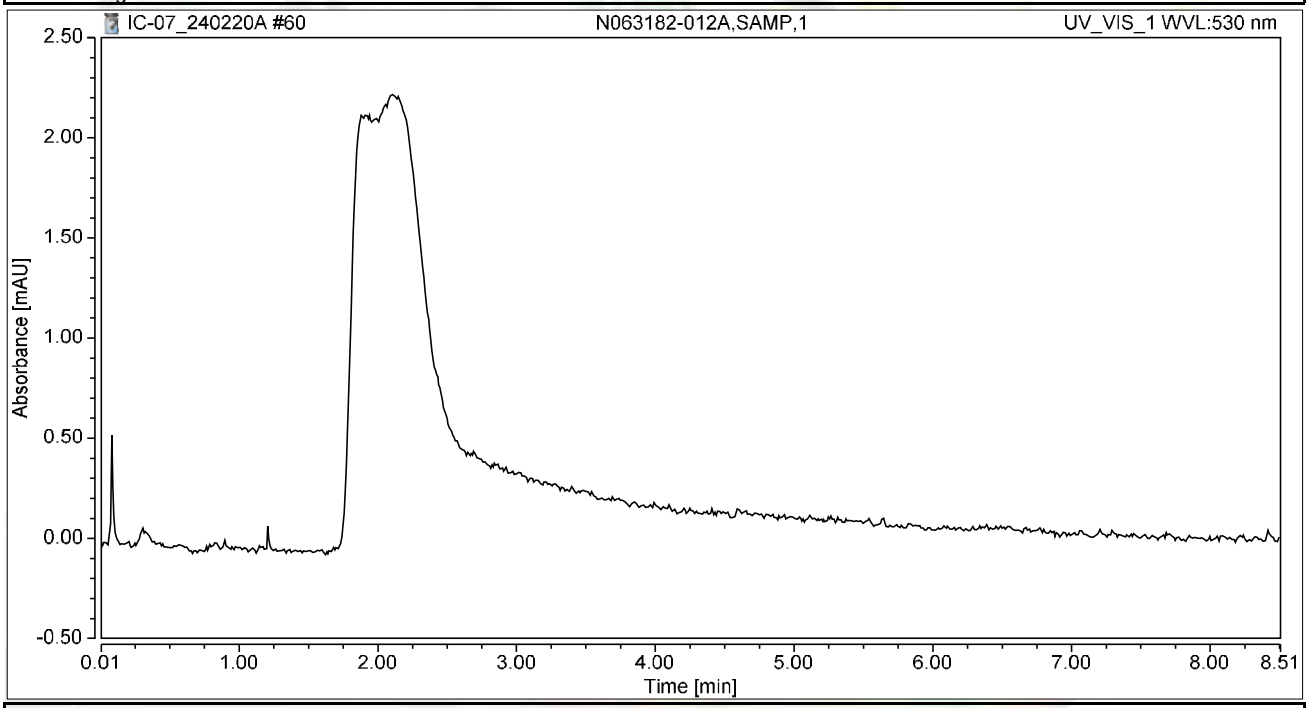
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-012A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 18:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

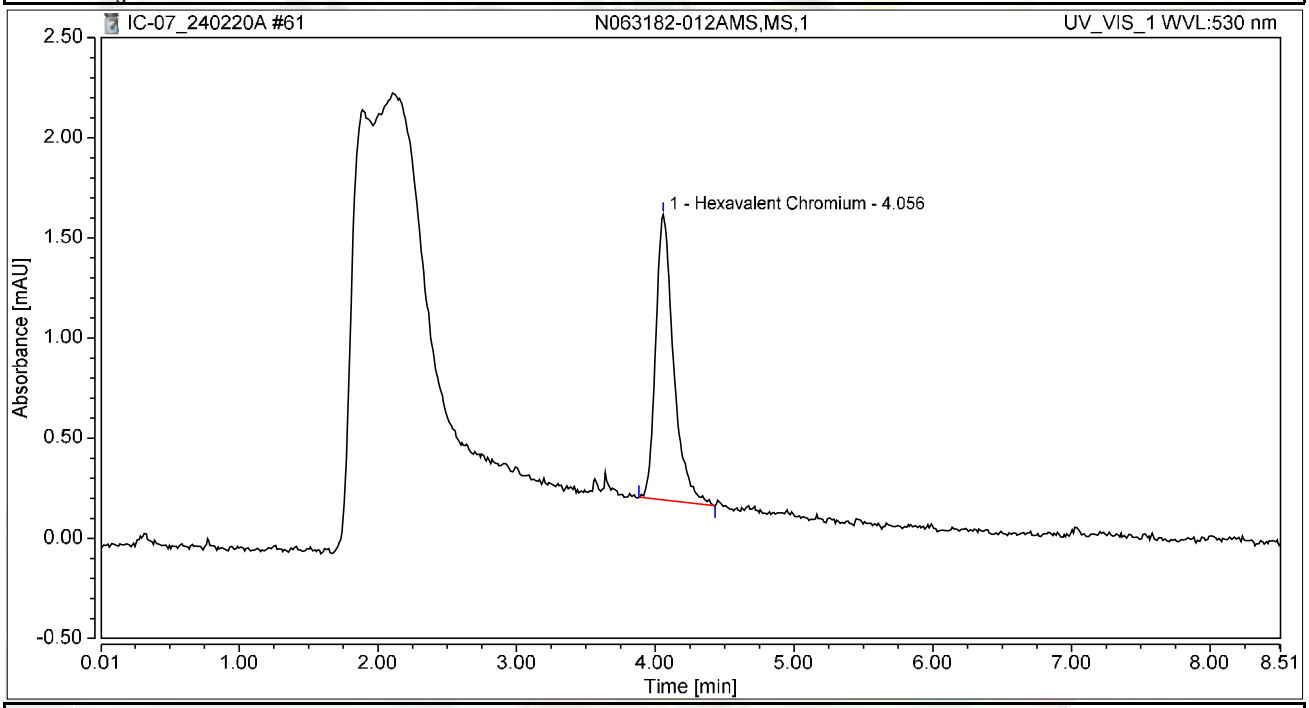
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063182-012AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 18:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

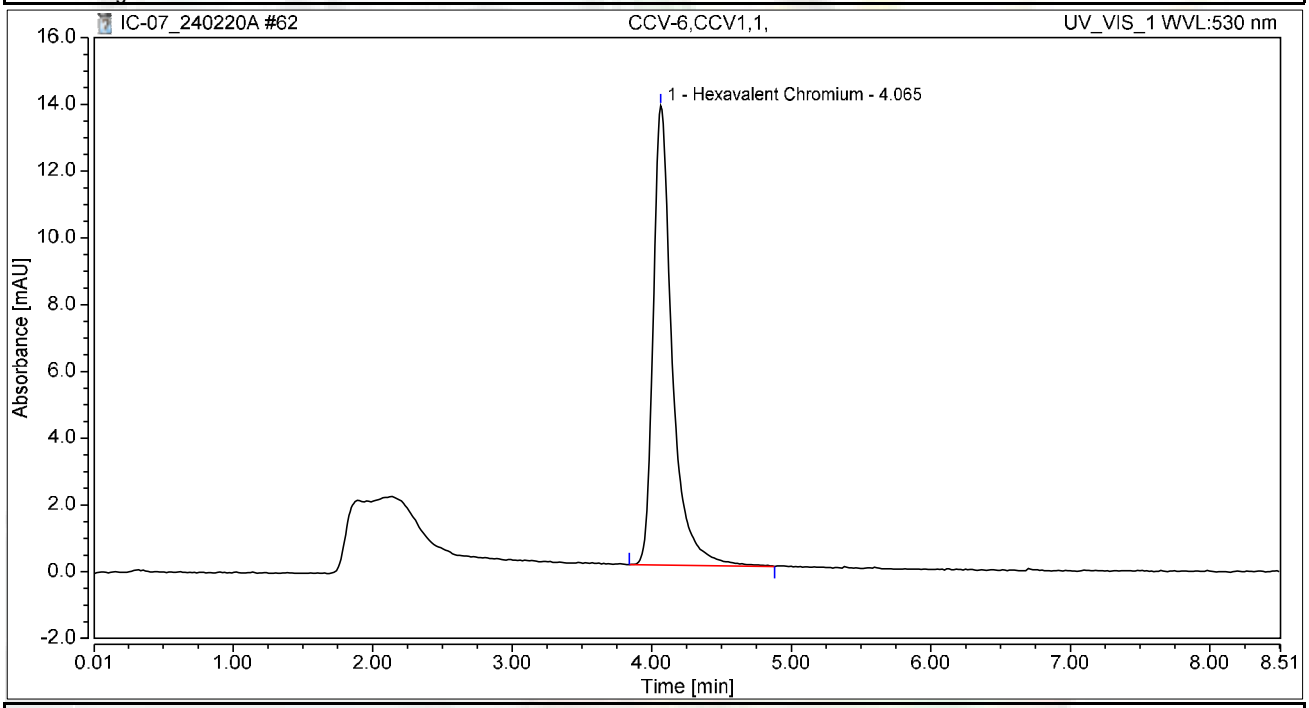
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.214	1.425	100.00	100.00	0.9940
Total:			**0.214**	**1.425**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 19:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

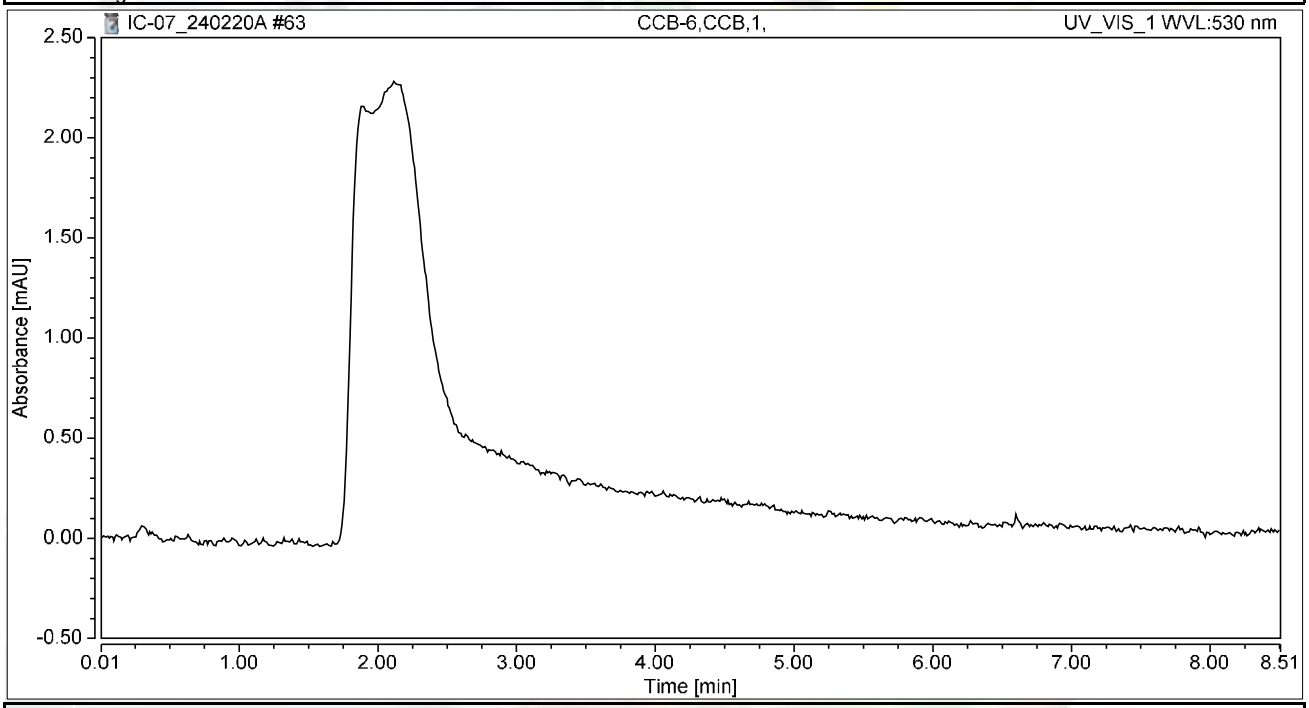
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	2.183	13.760	100.00	100.00	10.1484
Total:			**2.183**	**13.760**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 19:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

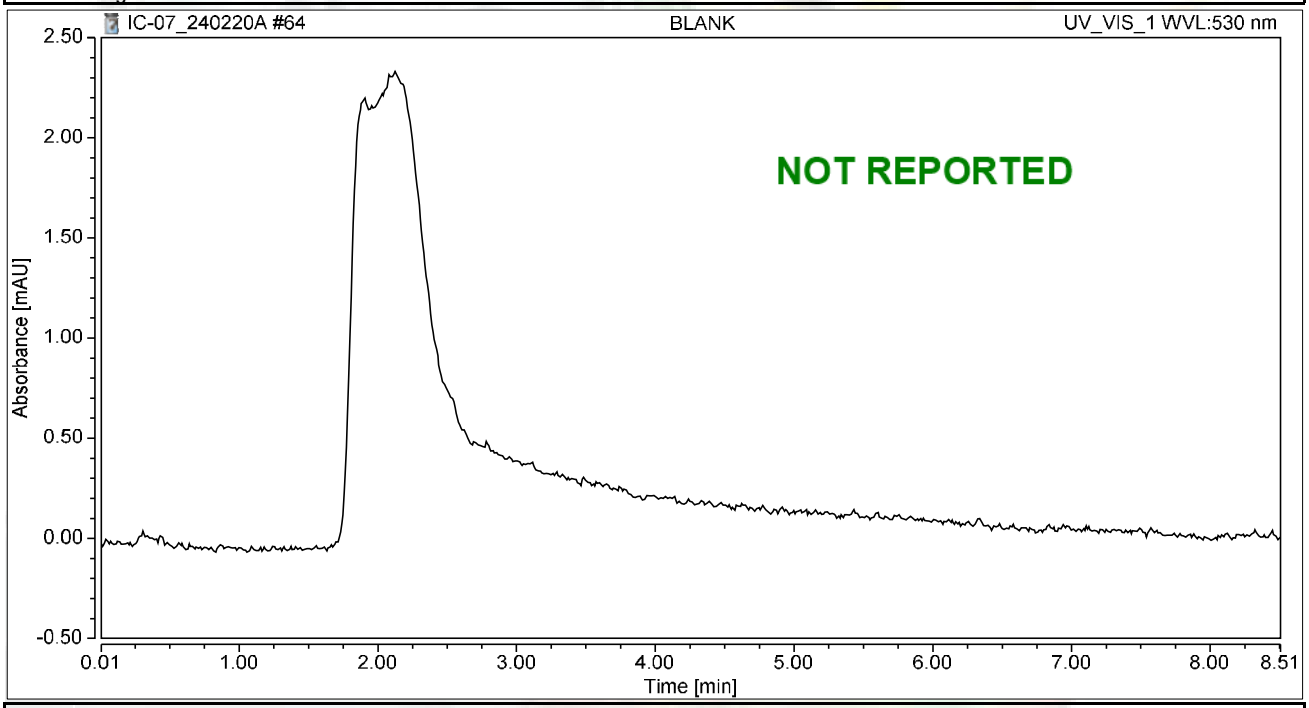
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**20/Feb/24 19:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

EPA 300.0

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R182719
ASSET #: N063181 / N063182 / N063139

Instrument ID: IC-08
Analyst: RBA
Date Analyzed: 2/20/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)		X			X	
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

Detection of Sulfate in CCB1/2/5 was >1/2PQL. However, N063182 samples were >5X the CCB detection.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 2/25/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: GROUNDWATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the orignal sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N063182-008C** concentration in mg/L is calculated as follows:

Nitrate, mg/L = 0.0525 * 10

= 0.525

Reporting result in two significant figures,

Nitrate, mg/L = 0.52

Reviewed by:

dMocha 3/7/2024

ANALYSIS RUN LOG

Sequence: IC-08_240124A
Operator: IC-05
Printed: 1/24/2024 5:54:19 PM

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 25
Created: 1/24/2024 9:39:27 AM by IC-05
Last Update: 1/24/2024 11:49:06 AM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240124	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240124	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240124	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240124	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240124	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240124	Finished
8	ICV,ICV,1	Unknown	9	1000.0	Anions Default	EPA 300_0_240124	Finished
9	ICB,ICB,1	Unknown	10	1000.0	Anions Default	EPA 300_0_240124	Finished
10	MB-H2O,MBLK,1	Unknown	11	1000.0	Anions Default	EPA 300_0_240124	Finished
11	LCS-H2O,LCS,1	Unknown	12	1000.0	Anions Default	EPA 300_0_240124	Finished
12	N062498-007A,SAMP,5	Unknown	13	1000.0	Anions Default	EPA 300_0_240124	Finished
13	N062498-007ADUP,DUP,5	Unknown	14	1000.0	Anions Default	EPA 300_0_240124	Finished
14	N062498-007AMS,MS,5	Unknown	15	1000.0	Anions Default	EPA 300_0_240124	Finished
15	N062498-007AMSD,MSD,5	Unknown	16	1000.0	Anions Default	EPA 300_0_240124	Finished
16	LCS-2,LCS,1	Unknown	17	1000.0	Anions Default	EPA 300_0_240124	Finished
17	MB-2,MBLK,1	Unknown	18	1000.0	Anions Default	EPA 300_0_240124	Finished
18	N062498-007A,SAMP,5	Unknown	19	1000.0	Anions Default	EPA 300_0_240124	Finished
19	N062498-007ADUP,DUP,5	Unknown	20	1000.0	Anions Default	EPA 300_0_240124	Finished
20	CCV-1,CCV,1	Unknown	21	1000.0	Anions Default	EPA 300_0_240124	Finished
21	CCB-1,CCB,1	Unknown	22	1000.0	Anions Default	EPA 300_0_240124	Finished
22	N062498-007AMS,MS,5	Unknown	23	1000.0	Anions Default	EPA 300_0_240124	Finished
23	N062498-007AMSD,MSD,5	Unknown	24	1000.0	Anions Default	EPA 300_0_240124	Finished
24	CCV-2,CCV,1	Unknown	33	1000.0	Anions Default	EPA 300_0_240124	Finished
25	CCB-2,CCB,1	Unknown	34	1000.0	Anions Default	EPA 300_0_240124	Finished

reviewed by: 1/31/2024

Processed by:
Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)

1/24/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 25
Created: 1/24/2024 9:39:27 AM by IC-05
Last Update: 1/24/2024 11:49:06 AM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	1/24/2024 9:41:36 AM	BLANK
2	Std - 0	1/24/2024 9:56:54 AM	IBLANK
3	Std - 1	1/24/2024 10:32:56 AM	STD-LOW
4	Std - 2	1/24/2024 10:48:14 AM	STD
5	Std - 3	1/24/2024 11:03:32 AM	STD
6	Std - 4	1/24/2024 11:18:50 AM	STD
7	Std - 5	1/24/2024 11:34:08 AM	STD-HIGH
8	ICV,ICV,1	1/24/2024 11:49:26 AM	ICV, IWST-240123B
9	ICB,ICB,1	1/24/2024 12:04:44 PM	CCB
10	MB-H2O,MBLK,1	1/24/2024 12:20:02 PM	MB
11	LCS-H2O,LCS,1	1/24/2024 12:35:19 PM	LCS, IWST-240123B
12	N062498-007A,SAMP,5	1/24/2024 12:50:38 PM	SAMP,2>10mL,
13	N062498-007ADUP,DUP,5	1/24/2024 1:05:56 PM	DUP,2>10mL,
14	N062498-007AMS,MS,5	1/24/2024 1:21:14 PM	MS,2>10mL,
15	N062498-007AMSD,MSD,5	1/24/2024 1:36:33 PM	MSD,2>10mL,
16	LCS-2,LCS,1	1/24/2024 1:51:51 PM	LCS, IWST-240123B
17	MB-2,MBLK,1	1/24/2024 2:07:09 PM	MB
18	N062498-007A,SAMP,5	1/24/2024 2:22:27 PM	SAMP,2>10mL,
19	N062498-007ADUP,DUP,5	1/24/2024 2:37:45 PM	DUP,2>10mL,
20	CCV-1,CCV,1	1/24/2024 2:53:03 PM	CCV, IWST-240123A
21	CCB-1,CCB,1	1/24/2024 3:08:21 PM	CCB
22	N062498-007AMS,MS,5	1/24/2024 3:23:40 PM	MS,2>10mL,
23	N062498-007AMSD,MSD,5	1/24/2024 3:38:58 PM	MSD,2>10mL,
24	CCV-2,CCV,1	1/24/2024 3:54:16 PM	CCV, IWST-240123A
25	CCB-2,CCB,1	1/24/2024 4:09:34 PM	CCB

Sequence: IC-08_240220A
Operator: IC-05
Printed: 2/20/2024 9:38:26 PM

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 50
Created: 2/19/2024 11:35:31 AM by IC-05
Last Update: 2/20/2024 1:56:27 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240124	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240124	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240124	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240124	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240124	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240124	Finished
8	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
9	CCV-1,CCV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
10	CCB-1,CCB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
11	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
12	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
13	N06369-001B,SAMP,5	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
14	N06369-002B,SAMP,5	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
15	N06369-003B,SAMP,5	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
16	N06369-001BDUP,DUP,5	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
17	N06369-003B,SAMP,10	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
18	N06369-001BMS,MS,5	Unknown	6	1000.0	Anions Default	EPA 300_0_240124	Finished
19	N06369-001BMSD,MSD,5	Unknown	7	1000.0	Anions Default	EPA 300_0_240124	Finished
20	N063182-008C,SAMP,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240124	Finished
21	CCV-2,CCV,1	Unknown	9	1000.0	Anions Default	EPA 300_0_240124	Finished
22	CCB-2,CCB,1	Unknown	10	1000.0	Anions Default	EPA 300_0_240124	Finished
23	N063182-011C,SAMP,10	Unknown	11	1000.0	Anions Default	EPA 300_0_240124	Finished
24	N063182-001C,SAMP,5	Unknown	12	1000.0	Anions Default	EPA 300_0_240124	Finished
25	N063182-003C,SAMP,5	Unknown	13	1000.0	Anions Default	EPA 300_0_240124	Finished
26	N063182-005C,SAMP,5	Unknown	14	1000.0	Anions Default	EPA 300_0_240124	Finished
27	N063182-009C,SAMP,5	Unknown	15	1000.0	Anions Default	EPA 300_0_240124	Finished
28	N063182-010C,SAMP,5	Unknown	16	1000.0	Anions Default	EPA 300_0_240124	Finished
29	N063181-001B,SAMP,10	Unknown	17	1000.0	Anions Default	EPA 300_0_240124	Finished
30	N063181-002B,SAMP,10	Unknown	18	1000.0	Anions Default	EPA 300_0_240124	Finished
31	N063181-003B,SAMP,10	Unknown	19	1000.0	Anions Default	EPA 300_0_240124	Finished
32	N063182-008CMS,MS,10	Unknown	20	1000.0	Anions Default	EPA 300_0_240124	Finished
33	CCV-3,CCV,1	Unknown	21	1000.0	Anions Default	EPA 300_0_240124	Finished
34	CCB-3,CCB,1	Unknown	22	1000.0	Anions Default	EPA 300_0_240124	Finished
35	N063182-008CMSD,MSD,10	Unknown	23	1000.0	Anions Default	EPA 300_0_240124	Finished
36	N063182-011CMS,MS,10	Unknown	24	1000.0	Anions Default	EPA 300_0_240124	Finished
37	N06139-001B,SAMP,5	Unknown	25	1000.0	Anions Default	EPA 300_0_240124	Finished
38	N06139-001BDUP,DUP,5	Unknown	26	1000.0	Anions Default	EPA 300_0_240124	Finished
39	N06139-001BMS,MS,5	Unknown	27	1000.0	Anions Default	EPA 300_0_240124	Finished
40	N06139-001BMSD,MSD,5	Unknown	28	1000.0	Anions Default	EPA 300_0_240124	Finished
41	N063182-008C,SAMP,100	Unknown	29	1000.0	Anions Default	EPA 300_0_240124	Finished

N063169

N063139

JRB 2/26/2024
for RBA
Processed by:

Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)

reviewed by: 2/21/2024

2/20/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 50
Created: 2/19/2024 11:35:31 AM by IC-05
Last Update: 2/20/2024 1:56:27 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	1/24/2024 9:41:36 AM	BLANK
2	Std - 0	1/24/2024 9:56:54 AM	IBLANK
3	Std - 1	1/24/2024 10:32:56 AM	STD-LOW
4	Std - 2	1/24/2024 10:48:14 AM	STD
5	Std - 3	1/24/2024 11:03:32 AM	STD
6	Std - 4	1/24/2024 11:18:50 AM	STD
7	Std - 5	1/24/2024 11:34:08 AM	STD-HIGH
8	BLANK	2/20/2024 7:56:08 AM	BLANK
9	CCV-1,CCV,1	2/20/2024 8:11:26 AM	CCV, IWST-240216A
10	CCB-1,CCB,1	2/20/2024 8:26:44 AM	CCB
11	MB-H2O,MBLK,1	2/20/2024 8:42:02 AM	MB
12	LCS-H2O,LCS,1	2/20/2024 8:57:21 AM	LCS, IWST-240216B
13	N06369-001B,SAMP,5	2/20/2024 9:48:29 AM	SAMP,2>10mL,
14	N06369-002B,SAMP,5	2/20/2024 10:03:47 AM	SAMP,2>10mL,
15	N06369-003B,SAMP,5	2/20/2024 10:19:05 AM	SAMP,2>10mL,
16	N06369-001BDUP,DUP,5	2/20/2024 10:44:59 AM	DUP,2>10mL,
17	N06369-003B,SAMP,10	2/20/2024 11:00:17 AM	SAMP,1>10mL,
18	N06369-001BMS,MS,5	2/20/2024 11:15:35 AM	MS,2>10mL,
19	N06369-001BMSD,MSD,5	2/20/2024 12:11:36 PM	MSD,2>10mL,
20	N063182-008C,SAMP,10	2/20/2024 1:17:14 PM	SAMP,1>10mL,
21	CCV-2,CCV,1	2/20/2024 1:53:51 PM	CCV, IWST-240216A
22	CCB-2,CCB,1	2/20/2024 2:09:09 PM	CCB
23	N063182-011C,SAMP,10	2/20/2024 2:24:26 PM	SAMP,1>10mL,
24	N063182-001C,SAMP,5	2/20/2024 2:39:44 PM	SAMP,2>10mL,
25	N063182-003C,SAMP,5	2/20/2024 2:55:02 PM	SAMP,2>10mL,
26	N063182-005C,SAMP,5	2/20/2024 3:10:20 PM	SAMP,2>10mL,
27	N063182-009C,SAMP,5	2/20/2024 3:25:38 PM	SAMP,2>10mL,
28	N063182-010C,SAMP,5	2/20/2024 3:40:56 PM	SAMP,2>10mL,
29	N063181-001B,SAMP,10	2/20/2024 3:56:13 PM	SAMP,1>10mL,
30	N063181-002B,SAMP,10	2/20/2024 4:11:31 PM	SAMP,1>10mL,
31	N063181-003B,SAMP,10	2/20/2024 4:26:50 PM	SAMP,1>10mL,
32	N063182-008CMS,MS,10	2/20/2024 4:42:08 PM	MS,1>10mL,
33	CCV-3,CCV,1	2/20/2024 4:57:27 PM	CCV, IWST-240216A
34	CCB-3,CCB,1	2/20/2024 5:12:45 PM	CCB
35	N063182-008CMSD,MSD,10	2/20/2024 5:28:03 PM	MSD,1>10mL,
36	N063182-011CMS,MS,10	2/20/2024 5:43:21 PM	MS,1>10mL,
37	N06139-001B,SAMP,5	2/20/2024 5:58:39 PM	SAMP,2>10mL,
38	N06139-001BDUP,DUP,5	2/20/2024 6:13:56 PM	DUP,2>10mL,
39	N06139-001BMS,MS,5	2/20/2024 6:29:15 PM	MS,2>10mL,
40	N06139-001BMSD,MSD,5	2/20/2024 6:44:33 PM	MSD,2>10mL,
41	N063182-008C,SAMP,100	2/20/2024 6:59:51 PM	SAMP,0.1>10mL,

N063169

N063139

JRB 2/26/2024
for RBA

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 50
Created: 2/19/2024 11:35:31 AM by IC-05
Last Update: 2/20/2024 1:56:27 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	N063182-008CDUP,DUP,100	Unknown	30	1000.0	Anions Default	EPA 300_0_240124	Finished
43	N063192-001F,SAMP,5	Unknown	31	1000.0	Anions Default	EPA 300_0_240124	Finished
44	N063192-002F,SAMP,5	Unknown	32	1000.0	Anions Default	EPA 300_0_240124	Finished
45	CCV-4,CCV,1	Unknown	33	1000.0	Anions Default	EPA 300_0_240124	Finished
46	CCB-4,CCB,1	Unknown	34	1000.0	Anions Default	EPA 300_0_240124	Finished
47	N063182-008CMS,MS,100	Unknown	35	1000.0	Anions Default	EPA 300_0_240124	Finished
48	N063182-008CMSD,MSD,100	Unknown	36	1000.0	Anions Default	EPA 300_0_240124	Finished
49	CCV-5,CCV,1	Unknown	35	1000.0	Anions Default	EPA 300_0_240124	Finished
50	CCB-5,CCB,1	Unknown	36	1000.0	Anions Default	EPA 300_0_240124	Finished

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 50
Created: 2/19/2024 11:35:31 AM by IC-05
Last Update: 2/20/2024 1:56:27 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	N063182-008CDUP,DUP,100	2/20/2024 7:15:10 PM	DUP,0.1>10mL,
43	N063192-001F,SAMP,5	2/20/2024 7:30:28 PM	SAMP,2>10mL,
44	N063192-002F,SAMP,5	2/20/2024 7:45:45 PM	SAMP,2>10mL,
45	CCV-4,CCV,1	2/20/2024 8:01:03 PM	CCV, IWST-240216A
46	CCB-4,CCB,1	2/20/2024 8:16:21 PM	CCB
47	N063182-008CMS,MS,100	2/20/2024 8:31:39 PM	MS,0.1>10mL,
48	N063182-008CMSD,MSD,100	2/20/2024 8:46:57 PM	MSD,0.1>10mL,
49	CCV-5,CCV,1	2/20/2024 9:02:16 PM	CCV, IWST-240216A
50	CCB-5,CCB,1	2/20/2024 9:17:34 PM	CCB

INITIAL CALIBRATION DATA SUMMARY

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 1/24/2024

Initial Calibration:

Nitrate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0159	0.0804	0.1690	0.4238	0.8850	1.000
Measured, in mg/L	0.000000	0.067900	0.249500	0.499300	1.217000	2.516400	
Relative Error (%RE)		35.8%		-0.1%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712E

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 1/24/2024

Initial Calibration:

Sulfate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.5	2	4	10	20	R^2
Area,mAU*min	0.0000	0.0468	0.1991	0.4062	1.0440	2.1777	1.000
Measured, in mg/L	0.000000	0.645000	2.037100	3.930800	9.761300	20.125900	
Relative Error (%RE)		29.0%		-1.7%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712G

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **ICV**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5701687**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.088	0.50	4.000	0	102	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCV**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701689**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.087	0.50	4.000	0	102	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCV**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701693**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.019	0.50	4.000	0	100	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCV**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701695**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.000	0.50	4.000	0	100	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCV**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701699**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.947	0.50	4.000	0	98.7	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **CCV-5** SampType: **CCV** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **182719**
Client ID: **CCV** Batch ID: **R182719** TestNo: **EPA 300.0** Analysis Date: **2/20/2024** SeqNo: **5701703**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.963	0.50	4.000	0	99.1	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **ICV**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5701658**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.226	0.050	1.250	0	98.1	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCV**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701660**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.254	0.050	1.250	0	100	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCV**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701667**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.255	0.050	1.250	0	100	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCV**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701679**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.233	0.050	1.250	0	98.6	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCV**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701683**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.218	0.050	1.250	0	97.4	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **CCV-5** SampType: **CCV** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **182719**
Client ID: **CCV** Batch ID: **R182719** TestNo: **EPA 300.0** Analysis Date: **2/20/2024** SeqNo: **5701685**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.212	0.050	1.250	0	97.0	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **ICB**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5701688**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCB**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701690**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCB**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701694**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCB**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701696**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCB**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701700**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **CCB-5** SampType: **CCB** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **182719**
Client ID: **CCB** Batch ID: **R182719** TestNo: **EPA 300.0** Analysis Date: **2/20/2024** SeqNo: **5701704**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **ICB**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5701659**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCB**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701661**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCB**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701668**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCB**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701680**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182719**
Client ID: **CCB**	Batch ID: **R182719**	TestNo: **EPA 300.0**		Analysis Date: **2/20/2024**	SeqNo: **5701684**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **CCB-5** SampType: **CCB** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **182719**
Client ID: **CCB** Batch ID: **R182719** TestNo: **EPA 300.0** Analysis Date: **2/20/2024** SeqNo: **5701686**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/20/2024

Sample Name		Retention Time	Evaluation
ICV	Nitrate	6.727	
CCV-1	Nitrate	6.580	
CCV-2	Nitrate	6.597	
CCV-3	Nitrate	6.630	
CCV-4	Nitrate	6.633	
CCV-5	Nitrate	6.620	
	Average	6.612	
	Applied RT Window	6.412 - 6.812	
MB-R182719_NO3	Nitrate	N.A.	N.A.
LCS-R182719_NO3	Nitrate	6.613	PASS
N063169-001BDUP	Nitrate	6.600	PASS
N063182-008C	Nitrate	6.580	PASS
N063182-011C	Nitrate	6.584	PASS
N063182-001C	Nitrate	N.A.	N.A.
N063182-003C	Nitrate	6.610	PASS
N063182-005C	Nitrate	N.A.	N.A.
N063182-009C	Nitrate	N.A.	N.A.
N063182-010C	Nitrate	6.594	PASS
N063182-008CMS	Nitrate	6.610	PASS
N063182-008CMSD	Nitrate	6.624	PASS
N063182-011CMS	Nitrate	6.607	PASS

Reviewed by:

dMRocha 3/7/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/20/2024

Sample Name		Retention Time	Evaluation
ICV	Sulfate	10.334	
CCV-1	Sulfate	9.993	
CCV-2	Sulfate	9.947	
CCV-3	Sulfate	10.004	
CCV-4	Sulfate	10.010	
CCV-5	Sulfate	10.000	
	Average	9.991	
	Applied RT Window	9.791 - 10.191	
MB-R182719_SO4	Sulfate	N.A.	N.A.
LCS-R182719_SO4	Sulfate	9.983	PASS
N063182-008C	Sulfate	10.017	PASS
N063182-008CDUP	Sulfate	9.983	PASS
N063182-008CMS	Sulfate	10.013	PASS
N063182-008CMSD	Sulfate	10.017	PASS

Reviewed by:

dMRocha 3/7/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): 10/5/2022, 12/14/2022, 3/22/2023,7/10/2023; 10/3/2023 & 11/14/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: mg/L

Instrument Name: **IC-08 & IC-09**

Datafile IC-08 221005A #24 IC-08 221214A #30 IC-08 230322A #35 IC-08 230710A #13 IC-09 231003A #14 IC-08 231114A #24 IC-09 231114A #19

Analyte	#1	#2	#3	#4	#5	#6	#7	Spike Conc., mg/L	SD	$t_{(n-1)}$ value	MDLs	MDL	PQL
Fluoride	0.100	0.103	0.108	0.118	0.110	0.098	0.126	0.10	0.0101	3.143	**0.0318**	**0.0318**	0.10
Chloride	0.480	0.418	0.472	0.653	0.624	0.587	0.622	0.50	0.0922	3.143	**0.2898**	**0.2898**	0.50
Nitrite	0.068	0.061	0.060	0.071	0.063	0.061	0.070	0.05	0.0047	3.143	**0.0149**	**0.0149**	0.05
Bromide	0.526	0.502	0.509	0.522	0.536	0.527	0.520	0.50	0.0116	3.143	**0.0364**	**0.0364**	0.50
Nitrate	0.073	0.058	0.059	0.073	0.074	0.068	0.073	0.05	0.0068	3.143	**0.0215**	**0.0240**	0.05
Phosphate	0.112	0.096	0.114	0.120	0.130	0.093	0.124	0.10	0.0138	3.143	**0.0433**	**0.0433**	0.10
Sulfate	0.501	0.609	0.638	0.401	0.704	0.620	0.697	0.50	0.1092	3.143	**0.3432**	**0.3432**	0.50

METHOD DETECTION LIMIT (Blanks)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Analyte	MDLb	# of Records
Fluoride	0	63
Chloride	0.1456	80
Nitrite	0.0147	64
Bromide	0	18
Nitrate	0.0240	132
Phosphate	0.0237	34
Sulfate	0.2579	107

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

EPA 6010B
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106974
ASSET #: N063182

Instrument ID: ICP-02
Analyst: DBJ
Date Analyzed: 2/21/2024

Method:

[X] EPA 6010B / 200.7
[ ] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented		X			X	
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer KDG 03042024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in ug/L , in the original sample as follows:

Iron , ug/L = A * DF * PF *CF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL
CF= Conversion Factor from mg/L to ug/L, 1000

For Sample **N063182-001B** , the concentration i ug/L is calculated as follows:

Iron , ug/L = 0.02647 * 1 * (25/25) * 1000

Iron , ug/L = 26.47

Reporting results in two significant figures,

Iron , ug/L = 26

Reviewed by:

dMocha 3/7/2024

% RSD SUMMARY

RSD SUMMARY: 240221B

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	Fe	0	4.76	15	PASS
Standard1	ICAL	1	Fe	0.02	20.14	15	NR!
Standard2	ICAL	1	Fe	0.05	6.44	15	PASS
Standard3	ICAL	1	Fe	2	0.31	15	PASS
Standard4	ICAL	1	Fe	5	0.13	15	PASS
Standard5	ICAL	1	Fe	7.5	0.09	15	PASS
Standard6	ICAL	1	Fe	10	1.1	15	PASS
Standard7	ICAL	1	Fe	20	0.07	15	PASS
ICV	ICV	1	Fe	10.28	0.18	15	PASS
ICB	ICB	1	Fe	0	156.76	15	<PQL
LLICV	CCV1	1	Fe	0.02	9.79	20	PASS
ICSA1	ICSA	1	Fe	177.65	0.18	15	PASS
ICSAB1	ICSAB	1	Fe	179.11	0.34	15	PASS
RINSE	RINSE	1	Fe	0.01	28.44	15	<PQL
CCV1	CCV	1	Fe	10.27	0.25	15	PASS
CCB1	CCB	1	Fe	-0.01	12.95	15	PASS
RINSE	RINSE	1	Fe	0	27.19	15	<PQL
MB-106974	MBLK	1	Fe	-0.01	9.42	15	PASS
LCS-106974	LCS	1	Fe	0.11	0.64	15	PASS
N063182-001B	SAMP	1	Fe	0.03	2.66	15	PASS
CCV2	CCV	1	Fe	10.24	0.13	15	PASS
CCB2	CCB	1	Fe	-0.01	14.86	15	PASS
N063182-003B	SAMP	1	Fe	0.84	0.35	15	PASS
N063182-005B	SAMP	1	Fe	0.26	0.87	15	PASS
N063182-005B	SAMP	5	Fe	0.05	2.47	15	PASS
N063182-005B-PS	PS	1	Fe	0.35	0.32	15	PASS
N063182-005B-MS	MS	1	Fe	0.36	0.37	15	PASS
N063182-005B-MSD	MSD	1	Fe	0.35	0.39	15	PASS
N063182-008B	SAMP	1	Fe	0	32.53	15	<PQL
N063182-009B	SAMP	1	Fe	0.01	6.43	15	PASS
N063182-010B	SAMP	1	Fe	1	0.43	15	PASS
N063182-011B	SAMP	1	Fe	22.43	0.35	15	PASS
CCV3	CCV	1	Fe	10.17	0.17	15	PASS
CCB3	CCB	1	Fe	-0.01	10.01	15	PASS
ICSA2	ICSA	1	Fe	177.53	0.6	15	PASS
ICSAB2	ICSAB	1	Fe	176.71	0.45	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240221B

Instrument ID: ICP-02

STANDARD CODE	
Standard1	MWST-240105M, 0.5<50mL
Standard2	MWST-240105N
Standard3	MWST-240105O, 5<50mL
Standard4	MWST-240105O,12.5<50mL
Standard5	MWST-240105O, 15<40mL
Standard6	MWST-240105O, 25<50mL
Standard7	MWST-240105O
ICV	MWST-240105AE
CCV	MWST-240105O, 25<50mL
ICSA/ICSAB	MWST-240105P / MWST-240105Q
Int. Std. (Y)	MWST-240105B
PS Spike	MWST-240105X / Y/ Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	02/21/2024	01:12:00 PM
2	Standard1	ICAL	1	02/21/2024	01:16:06 PM
3	Standard2	ICAL	1	02/21/2024	01:20:11 PM
4	Standard3	ICAL	1	02/21/2024	01:24:17 PM
5	Standard4	ICAL	1	02/21/2024	01:28:23 PM
6	Standard5	ICAL	1	02/21/2024	01:32:29 PM
7	Standard6	ICAL	1	02/21/2024	01:36:37 PM
8	Standard7	ICAL	1	02/21/2024	01:40:45 PM
250	ICV	ICV	1	02/21/2024	01:48:34 PM
1	ICB	ICB	1	02/21/2024	01:52:43 PM
2	LLICV	CCV1	1	02/21/2024	01:56:47 PM
9	ICSA1	ICSA	1	02/21/2024	02:00:51 PM
10	ICSAB1	ICSAB	1	02/21/2024	02:06:33 PM
239	RINSE	RINSE	1	02/21/2024	02:30:00 PM
131	MB-106993	MBLK	1	02/21/2024	02:34:08 PM
132	LCS-106993	LCS	1	02/21/2024	02:43:41 PM
133	N063211-001B	SAMP	1	02/21/2024	02:47:47 PM
134	N063211-002B	SAMP	1	02/21/2024	02:53:53 PM
135	N063211-003B	SAMP	1	02/21/2024	03:00:00 PM
136	N063214-010B	SAMP	1	02/21/2024	03:06:06 PM
137	N063214-011B	SAMP	1	02/21/2024	03:10:14 PM
138	N063214-011B	SAMP	5	02/21/2024	03:16:21 PM
139	N063214-011B-PS	PS	1	02/21/2024	03:20:29 PM
7	CCV1	CCV	1	02/21/2024	03:26:36 PM
1	CCB1	CCB	1	02/21/2024	03:30:45 PM
140	N063214-011B-MS	MS	1	02/21/2024	03:34:51 PM
141	N063214-011B-MSD	MSD	1	02/21/2024	03:41:17 PM
142	N063214-012B	SAMP	1	02/21/2024	03:47:26 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
143	N063214-013B	SAMP	1	02/21/2024	03:53:33 PM
144	N063214-014B	SAMP	1	02/21/2024	03:59:40 PM
145	N063214-016B	SAMP	1	02/21/2024	04:05:48 PM
239	RINSE	RINSE	1	02/21/2024	04:11:56 PM
146	MB-106974	MBLK	1	02/21/2024	04:16:07 PM
147	LCS-106974	LCS	1	02/21/2024	04:20:15 PM
148	N063182-001B	SAMP	1	02/21/2024	04:24:23 PM
7	CCV2	CCV	1	02/21/2024	04:28:31 PM
1	CCB2	CCB	1	02/21/2024	04:32:39 PM
149	N063182-003B	SAMP	1	02/21/2024	04:36:45 PM
150	N063182-005B	SAMP	1	02/21/2024	04:42:52 PM
151	N063182-005B	SAMP	5	02/21/2024	04:49:01 PM
152	N063182-005B-PS	PS	1	02/21/2024	04:53:10 PM
153	N063182-005B-MS	MS	1	02/21/2024	04:58:48 PM
154	N063182-005B-MSD	MSD	1	02/21/2024	05:04:26 PM
155	N063182-008B	SAMP	1	02/21/2024	05:10:04 PM
156	N063182-009B	SAMP	1	02/21/2024	05:16:11 PM
157	N063182-010B	SAMP	1	02/21/2024	05:22:19 PM
158	N063182-011B	SAMP	1	02/21/2024	05:26:27 PM
7	CCV3	CCV	1	02/21/2024	05:32:06 PM
1	CCB3	CCB	1	02/21/2024	05:36:15 PM
9	ICSA2	ICSA	1	02/21/2024	05:40:20 PM
10	ICSAB2	ICSAB	1	02/21/2024	05:46:03 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/20/2024 11:32:47 AM**
Prep End Date: **2/20/2024 3:40:00 PM**
Prep Batch **106974** Prep Code:**3010_W_DISS**

Reviewed/ Date: dMocha 3/7/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units
mL / mL

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-106974	Aqueous		25	☐	25	1.000		
MB-106974	Aqueous		25	☐	25	1.000		
N063182-001B	Groundwater	<2	25	☐	25	1.000		
N063182-003B	Groundwater	<2	25	☐	25	1.000		
N063182-005B	Groundwater	<2	25	☐	25	1.000		
N063182-005B-MS	Groundwater	<2	25	☐	25	1.000		
N063182-005B-MSD	Groundwater	<2	25	☐	25	1.000		
N063182-008B	Groundwater	<2	25	☐	25	1.000		
N063182-009B	Groundwater	<2	25	☐	25	1.000		
N063182-010B	Groundwater	<2	25	☐	25	1.000		
N063182-011B	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15258	HYDROCHLORIC ACID
16150	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240221B

Instrument ID: ICP-02

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Iron								
CalBlk	02/21/2024	01:12:00 PM	Fe	273.953	114	0.00	mg/L	
Standard1	02/21/2024	01:16:06 PM	Fe	273.953	262	0.0200	mg/L	
Standard2	02/21/2024	01:20:11 PM	Fe	273.953	610	0.050	mg/L	
Standard3	02/21/2024	01:24:17 PM	Fe	273.953	17535	2.000	mg/L	
Standard4	02/21/2024	01:28:23 PM	Fe	273.953	43633	5.000	mg/L	
Standard5	02/21/2024	01:32:29 PM	Fe	273.953	64899	7.500	mg/L	
Standard6	02/21/2024	01:36:37 PM	Fe	273.953	81029	10.000	mg/L	
Standard7	02/21/2024	01:40:45 PM	Fe	273.953	172975	20.000	mg/L	0.9997

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182757**
Client ID: **ICV**	Batch ID: **R182757**	TestNo: **EPA 6010B**		Analysis Date: **2/21/2024**	SeqNo: **5703755**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10282.968	20	10000	0	103	90	110				

Sample ID **LLICV**	SampType: **CCV1**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182757**
Client ID: **ZZZZZZ**	Batch ID: **R182757**	TestNo: **EPA 6010B**		Analysis Date: **2/21/2024**	SeqNo: **5703757**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	17.360	20	20.00	0	86.8	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182757**
Client ID: **CCV**	Batch ID: **R182757**	TestNo: **EPA 6010B**		Analysis Date: **2/21/2024**	SeqNo: **5703769**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10271.934	20	10000	0	103	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182757**
Client ID: **CCV**	Batch ID: **R182757**	TestNo: **EPA 6010B**		Analysis Date: **2/21/2024**	SeqNo: **5703780**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10245.126	20	10000	0	102	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182757**
Client ID: **CCV**	Batch ID: **R182757**	TestNo: **EPA 6010B**		Analysis Date: **2/21/2024**	SeqNo: **5703792**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10172.411	20	10000	0	102	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182757**
Client ID: **ICB**	Batch ID: **R182757**	TestNo: **EPA 6010B**		Analysis Date: **2/21/2024**	SeqNo: **5703756**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-1.75493	20									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182757**
Client ID: **CCB**	Batch ID: **R182757**	TestNo: **EPA 6010B**		Analysis Date: **2/21/2024**	SeqNo: **5703770**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-6.401872	20									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182757**
Client ID: **CCB**	Batch ID: **R182757**	TestNo: **EPA 6010B**		Analysis Date: **2/21/2024**	SeqNo: **5703781**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-7.473318	20									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182757**
Client ID: **CCB**	Batch ID: **R182757**	TestNo: **EPA 6010B**		Analysis Date: **2/21/2024**	SeqNo: **5703793**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-5.91426	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182757**
Client ID: **ICSA** Batch ID: **R182757** TestNo: **EPA 6010B** Analysis Date: **2/21/2024** SeqNo: **5703758**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	542100.909	50	500000	0	108	80	120				
Calcium	556630.365	500	500000	0	111	80	120				
Iron	177650.052	20	200000	0	88.8	80	120				
Magnesium	510570.629	100	500000	0	102	80	120				

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182757**
Client ID: **ICSAB** Batch ID: **R182757** TestNo: **EPA 6010B** Analysis Date: **2/21/2024** SeqNo: **5703759**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	525320.479	50	500000	0	105	80	120				
Calcium	550326.603	500	500000	0	110	80	120				
Iron	179111.661	20	200000	0	89.6	80	120				
Magnesium	502335.269	100	500000	0	100	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182757**
Client ID: **ICSA** Batch ID: **R182757** TestNo: **EPA 6010B** Analysis Date: **2/21/2024** SeqNo: **5703794**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	542476.689	50	500000	0	108	80	120				
Calcium	550477.031	500	500000	0	110	80	120				
Iron	177529.029	20	200000	0	88.8	80	120				
Magnesium	505183.416	100	500000	0	101	80	120				

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182757**
Client ID: **ICSAB** Batch ID: **R182757** TestNo: **EPA 6010B** Analysis Date: **2/21/2024** SeqNo: **5703795**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	521622.150	50	500000	0	104	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182757**
Client ID: **ICSAB**	Batch ID: **R182757**	TestNo: **EPA 6010B**		Analysis Date: **2/21/2024**	SeqNo: **5703795**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	544533.611	500	500000	0	109	80	120				
Iron	176707.439	20	200000	0	88.4	80	120				
Magnesium	489758.438	100	500000	0	98.0	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240221B

Instrument ID: ICP-02

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	1.01	100.84	65-125	PASS
Standard2	ICAL	1	1.12	112.02	65-125	PASS
Standard3	ICAL	1	1.03	102.62	65-125	PASS
Standard4	ICAL	1	1.02	101.77	65-125	PASS
Standard5	ICAL	1	1.01	101.23	65-125	PASS
Standard6	ICAL	1	1.01	101.32	65-125	PASS
Standard7	ICAL	1	0.99	99.39	65-125	PASS
ICV	ICV	1	1.01	100.86	65-125	PASS
ICB	ICB	1	1.02	102.22	65-125	PASS
LLICV	CCV1	1	1.03	102.76	65-125	PASS
ICSA1	ICSA	1	0.87	86.97	65-125	PASS
ICSAB1	ICSAB	1	0.88	87.69	65-125	PASS
RINSE	RINSE	1	1.09	109.04	65-125	PASS
CCV1	CCV	1	1.02	102.46	65-125	PASS
CCB1	CCB	1	1.04	104.05	65-125	PASS
RINSE	RINSE	1	1.06	105.76	65-125	PASS
MB-106974	MBLK	1	1.03	102.77	65-125	PASS
LCS-106974	LCS	1	1.02	101.79	65-125	PASS
N063182-001B	SAMP	1	0.98	98.46	65-125	PASS
CCV2	CCV	1	1.02	101.56	65-125	PASS
CCB2	CCB	1	1.02	101.6	65-125	PASS
N063182-003B	SAMP	1	0.91	90.86	65-125	PASS
N063182-005B	SAMP	1	0.8	79.82	65-125	PASS
N063182-005B	SAMP	5	0.91	91	65-125	PASS
N063182-005B-PS	PS	1	0.78	77.54	65-125	PASS
N063182-005B-MS	MS	1	0.78	77.97	65-125	PASS
N063182-005B-MSD	MSD	1	0.8	79.87	65-125	PASS
N063182-008B	SAMP	1	0.8	79.96	65-125	PASS
N063182-009B	SAMP	1	0.9	90.34	65-125	PASS
N063182-010B	SAMP	1	0.96	95.9	65-125	PASS
N063182-011B	SAMP	1	0.66	65.71	65-125	PASS
CCV3	CCV	1	1.01	101.05	65-125	PASS
CCB3	CCB	1	1.04	103.66	65-125	PASS
ICSA2	ICSA	1	0.87	86.71	65-125	PASS
ICSAB2	ICSAB	1	0.87	87.27	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063182
Test Method: EPA 6010B
Analysis Date: 2/21/2024

Matrix: Groundwater
Batch No.: 106974

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima 7300DV

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Fe. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063182-005B DT 5x	Iron	Fe	µg/L	249.2751	NA	259.0432	3.77%	10

Reviewed by:

dMRocha 3/7/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **N063182-005B-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182757**
Client ID: **ZZZZZZ** Batch ID: **106974** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/21/2024** SeqNo: **5703785**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	345.270	20	100.0	259.0	86.2	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

EPA 6020
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106973
ASSET #: N063182

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/22/2024

Method:

[ ] EPA 6010B / 200.7
[X] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.		X			X	
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)		X			X	
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

%RSD of As in N063182-009B failed. For rerun.
%Rec of Mo in N063181-003C-PS failed. However, LCS passed criteria.
Ba/Mn in N063182-003B and Mn in N063182-005B / 009B / 010B / 011B are OLR. For rerun.
%Rec of Ba in CCV10 failed, high bias. For rerun.

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: –

2nd Level Reviewer LG 3/6/2024 Date:

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106973
ASSET #: N063182

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/23/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

As, ba and Mn re run
% Rec of Ba in CCV7 failed, high bias. N063182-010B/ 011B. For re run

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: –

2nd Level Reviewer LG 3/6/2024 Date:

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106973
ASSET #: N063182

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/25/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.			X			X
24. LCS compounds within control limits.			X			X
25. MS/MSD, RPD's are within control limits			X			X
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

Ba re run

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: —

2nd Level Reviewer LG 3/6/2024 Date:

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Groundwater

FORMULA:

Calculate the Arsenic concentration, in ug/L in the original sample as follows:

Arsenic , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063182-001B** , the concentration in ug/L is calculated as follows:

Arsenic , ug/L = 0.93804 * 1 *(25 / 25)

Arsenic , ug/L = 0.93804

Reporting results in two significant figures,

Arsenic , ug/L = 0.94

Reviewed by:

JRB 3/13/2024

% RSD SUMMARY

PERCENT RSD SUMMARY: 240222A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.1	13.421	15	PASS	0.11	5.93	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.46	7.195	15	PASS	0.52	8.01	15	PASS
Std3-5/50 ppb	ICAL	1	4.93	2.858	15	PASS	4.87	1.264	15	PASS
Std4-10/100 ppb	ICAL	1	9.92	2.19	15	PASS	10.04	1.365	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.84	1.434	15	PASS	19.78	1.27	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.98	0.686	15	PASS	39.92	1.436	15	PASS
Std7-100/1000 ppb	ICAL	1	99.72	0.865	15	PASS	100.87	0.995	15	PASS
Std8-200/2000 ppb	ICAL	1	200.16	0.805	15	PASS	199.61	1.341	15	PASS
ICV	ICV	1	10.11	2.252	15	PASS	102.34	0.945	15	PASS
ICB	ICB	1	0	250.063	15	<PQL	<0.000	N/A	15	<PQL
LLICV1	CCV1	1	1	0.865	20	PASS	0.55	2.715	20	PASS
MLCCV	CCV	1	19.62	3.331	15	PASS	19.75	1.791	15	PASS
ICSA1	ICSA	1	0.01	67.302	15	<PQL	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.39	2.369	15	PASS	20.46	0.914	15	PASS
CCV1	CCV	1	19.95	2.299	15	PASS	19.82	1.552	15	PASS
CCB1	CCB	1	0.01	37.729	15	<PQL	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.97	1.381	15	PASS	19.86	0.847	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV3	CCV	1	20.22	3.611	15	PASS	19.69	1.74	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL	0	3031.101	15	<PQL
ICSA2	ICSA	1	0.02	17.772	15	<PQL	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.46	0.858	15	PASS	20.44	0.26	15	PASS
CCV4	CCV	1	19.78	0.349	15	PASS	19.61	0.534	15	PASS
CCB4	CCB	1	0	149.385	15	<PQL	<0.000	N/A	15	<PQL
CCV5	CCV	1	20.38	1.762	15	PASS	19.88	0.826	15	PASS
CCB5	CCB	1	0	181.392	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	0.01	67.409	15	<PQL	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.86	0.784	15	PASS	20.4	1.325	15	PASS
CCV6	CCV	1	20.07	1.54	15	PASS	19.98	0.534	15	PASS
CCB6	CCB	1	0	30.837	15	<PQL	<0.000	N/A	15	<PQL
CCV7	CCV	1	20.25	0.332	15	PASS	19.9	1.461	15	PASS
CCB7	CCB	1	0.01	86.824	15	<PQL	<0.000	N/A	15	<PQL
MDL 4	SAMP	1	1.09	4.016	15	PASS	0.53	2.575	15	PASS
MDL 4	SAMP	1	1.09	1.521	15	PASS	0.53	3.321	15	PASS
CCV8	CCV	1	20.28	1.132	15	PASS	20.06	0.423	15	PASS
CCB8	CCB	1	0	205.195	15	<PQL	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	0.01	49.628	15	<PQL	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	21	1.237	15	PASS	20.57	1.128	15	PASS
MB-106973	MBLK	1	0.01	0.235	15	PASS	<0.000	N/A	15	<PQL
LCS-106973	LCS	1	10.22	0.684	15	PASS	100.37	0.109	15	PASS

PERCENT RSD SUMMARY: 240222A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063181-001C	SAMP	1	48.96	0.999	15	PASS	2.22	2.162	15	PASS
N063181-002C	SAMP	1	35.72	2.019	15	PASS	0.59	2.206	15	PASS
N063181-003C	SAMP	1	99.48	1	15	PASS	69.86	0.443	15	PASS
N063181-003C	SAMP	5	20.47	1.015	15	PASS	14.65	1.275	15	PASS
N063181-003C-PS	PS	1	111.31	0.484	15	PASS	165.4	0.89	15	PASS
N063181-003C-MS	MS	1	111.43	1.118	15	PASS	163.93	1.876	15	PASS
N063181-003C-MSD	MSD	1	111.68	1.517	15	PASS	166.05	1.524	15	PASS
CCV9	CCV	1	20.39	0.791	15	PASS	19.71	0.834	15	PASS
CCB9	CCB	1	0	73.967	15	<PQL	<0.000	N/A	15	<PQL
N063182-001B	SAMP	1	60.43	1.452	15	PASS	71.61	0.077	15	PASS
N063182-003B	SAMP	1	242.07	0.402	15	PASS	368.44	0.706	15	PASS
N063182-005B	SAMP	1	47.44	0.941	15	PASS	296.18	1.761	15	PASS
N063182-008B	SAMP	1	23.92	1.585	15	PASS	2.66	3.219	15	PASS
N063182-009B	SAMP	1	58.96	1.247	15	PASS	1575.22	1.129	15	PASS
N063182-010B	SAMP	1	118.66	1.285	15	PASS	206.73	0.42	15	PASS
N063182-011B	SAMP	1	159.22	0.774	15	PASS	2656.01	1.564	15	PASS
CCV10	CCV	1	22.16	1.485	15	PASS	19.41	0.438	15	PASS
CCB10	CCB	1	0	629.505	15	<PQL	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	0.02	45.593	15	<PQL	<0.000	N/A	15	<PQL
ICSAB5	ICSAB	1	22.62	1.562	15	PASS	19.81	1.17	15	PASS
CCV11	CCV	1	21.73	1.663	15	PASS	19.6	0.279	15	PASS
CCB11	CCB	1	0	248.449	15	<PQL	<0.000	N/A	15	<PQL
CCV12	CCV	1	22.36	1.061	15	PASS	18.85	2.032	15	PASS
CCB12	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV13	CCV	1	22.15	1.273	15	PASS	19.21	0.53	15	PASS
CCB13	CCB	1	0.01	51.145	15	<PQL	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	0.01	28.749	15	<PQL	<0.000	N/A	15	<PQL
ICSAB6	ICSAB	1	22.26	0.988	15	PASS	20.01	0.216	15	PASS
CCV14	CCV	1	21.38	1.337	15	PASS	19.63	0.171	15	PASS
CCB14	CCB	1	0	269.335	15	<PQL	<0.000	N/A	15	<PQL
ICSA7	ICSA	1	0.02	14.87	15	PASS	<0.000	N/A	15	<PQL
ICSAB7	ICSAB	1	22.02	1.908	15	PASS	20.37	0.97	15	PASS

PERCENT RSD SUMMARY: 240222A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]				95 Mo [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	19.996	15	<PQL	0.1	3.03	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.52	15.285	15	FAIL	0.48	8.205	15	PASS
Std3-5/50 ppb	ICAL	1	5	2.126	15	PASS	4.75	0.465	15	PASS
Std4-10/100 ppb	ICAL	1	9.81	1.577	15	PASS	9.61	0.622	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	20.09	1.313	15	PASS	19.42	1.184	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.92	0.815	15	PASS	39.52	1.095	15	PASS
Std7-100/1000 ppb	ICAL	1	100.04	1.086	15	PASS	100.36	1.077	15	PASS
Std8-200/2000 ppb	ICAL	1	200	0.499	15	PASS	200	0.111	15	PASS
ICV	ICV	1	10.46	2.103	15	PASS	10.13	0.443	15	PASS
ICB	ICB	1	0.01	69.371	15	<PQL	0.07	20.992	15	<PQL
LLICV1	CCV1	1	0.11	3.741	20	PASS	0.57	5.662	20	PASS
MLCCV	CCV	1	19.73	0.571	15	PASS	19.45	0.488	15	PASS
ICSA1	ICSA	1	0.01	74.825	15	<PQL	0.05	2.168	15	PASS
ICSAB1	ICSAB	1	20.81	1.439	15	PASS	20.02	0.661	15	PASS
CCV1	CCV	1	20.28	2.54	15	PASS	19.6	1.325	15	PASS
CCB1	CCB	1	0.05	55.549	15	<PQL	0.04	8.573	15	PASS
CCV2	CCV	1	19.79	1.735	15	PASS	19.45	1.329	15	PASS
CCB2	CCB	1	0.03	67.515	15	<PQL	0.06	20.324	15	<PQL
CCV3	CCV	1	20.41	2.013	15	PASS	19.54	1.48	15	PASS
CCB3	CCB	1	0.03	91.767	15	<PQL	0.06	22.786	15	<PQL
ICSA2	ICSA	1	0.01	33.956	15	<PQL	0.03	16.241	15	<PQL
ICSAB2	ICSAB	1	21	2.39	15	PASS	19.61	1.121	15	PASS
CCV4	CCV	1	20.26	2.487	15	PASS	19.42	0.489	15	PASS
CCB4	CCB	1	0.02	142.997	15	<PQL	0.05	17.408	15	<PQL
CCV5	CCV	1	20.23	1.232	15	PASS	19.15	1.085	15	PASS
CCB5	CCB	1	0.03	20.637	15	<PQL	0.04	16.456	15	<PQL
ICSA3	ICSA	1	0.02	26.154	15	<PQL	0.01	66.299	15	<PQL
ICSAB3	ICSAB	1	20.73	2.132	15	PASS	19.77	0.983	15	PASS
CCV6	CCV	1	20.27	1.598	15	PASS	19.55	0.639	15	PASS
CCB6	CCB	1	0.03	15.263	15	<PQL	0.04	16.34	15	<PQL
CCV7	CCV	1	19.65	0.898	15	PASS	19.31	0.351	15	PASS
CCB7	CCB	1	0.04	38.703	15	<PQL	0.04	28.806	15	<PQL
MDL 4	SAMP	1	0.15	20.743	15	NR!	0.53	6.161	15	PASS
MDL 4	SAMP	1	0.16	7.884	15	PASS	0.5	8.382	15	PASS
CCV8	CCV	1	20.77	0.902	15	PASS	19.5	0.773	15	PASS
CCB8	CCB	1	0.04	29.214	15	<PQL	0.04	19.154	15	<PQL
ICSA4	ICSA	1	0.03	65.21	15	<PQL	0.01	39.278	15	<PQL
ICSAB4	ICSAB	1	20.86	1.117	15	PASS	19.75	1.404	15	PASS
MB-106973	MBLK	1	0.03	42.444	15	<PQL	0.04	12.5	15	PASS
LCS-106973	LCS	1	10.43	0.484	15	PASS	10	0.507	15	PASS

PERCENT RSD SUMMARY: 240222A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]				95 Mo [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063181-001C	SAMP	1	0.05	184.708	15	<PQL	22.92	1.999	15	PASS
N063181-002C	SAMP	1	<0.000	N/A	15	<PQL	22.17	1.077	15	PASS
N063181-003C	SAMP	1	2.43	3.62	15	PASS	61.52	0.757	15	PASS
N063181-003C	SAMP	5	0.45	9.348	15	PASS	12.09	0.668	15	PASS
N063181-003C-PS	PS	1	12.91	3.197	15	PASS	74.04	0.412	15	PASS
N063181-003C-MS	MS	1	12.53	3.878	15	PASS	73.54	0.746	15	PASS
N063181-003C-MSD	MSD	1	12.95	2.641	15	PASS	72.94	0.906	15	PASS
CCV9	CCV	1	20.42	0.653	15	PASS	19.27	1.017	15	PASS
CCB9	CCB	1	0.02	57.729	15	<PQL	0.05	22.233	15	<PQL
N063182-001B	SAMP	1	0.94	9.685	15	PASS	7.05	2.101	15	PASS
N063182-003B	SAMP	1	8.51	2.692	15	PASS	4.43	1.65	15	PASS
N063182-005B	SAMP	1	<0.000	N/A	15	<PQL	30.4	0.495	15	PASS
N063182-008B	SAMP	1	0.69	12.886	15	PASS	114.19	1.148	15	PASS
N063182-009B	SAMP	1	0.49	23.953	15	NR!	16.66	0.114	15	PASS
N063182-010B	SAMP	1	13.78	1.939	15	PASS	7.88	0.427	15	PASS
N063182-011B	SAMP	1	13.86	3.946	15	PASS	43.31	0.581	15	PASS
CCV10	CCV	1	20.21	1.194	15	PASS	19.76	2.641	15	PASS
CCB10	CCB	1	0.02	97.738	15	<PQL	0.04	19.816	15	<PQL
ICSA5	ICSA	1	0.03	30.91	15	<PQL	0.02	45.435	15	<PQL
ICSAB5	ICSAB	1	20.39	2.017	15	PASS	20.39	1.678	15	PASS
CCV11	CCV	1	19.71	0.627	15	PASS	19.51	0.256	15	PASS
CCB11	CCB	1	0.02	33.238	15	<PQL	0.04	15.977	15	<PQL
CCV12	CCV	1	19.39	1.963	15	PASS	19.64	0.711	15	PASS
CCB12	CCB	1	0	224.582	15	<PQL	0.05	9.767	15	PASS
CCV13	CCV	1	20.11	2.368	15	PASS	19.71	1.323	15	PASS
CCB13	CCB	1	0.02	67.708	15	<PQL	0.04	13.153	15	PASS
ICSA6	ICSA	1	0.01	153.89	15	<PQL	0.02	42.981	15	<PQL
ICSAB6	ICSAB	1	20.65	0.713	15	PASS	20.27	2.508	15	PASS
CCV14	CCV	1	19.39	1.151	15	PASS	19.47	0.989	15	PASS
CCB14	CCB	1	0.01	124.567	15	<PQL	0.05	14.651	15	PASS
ICSA7	ICSA	1	0.02	47.887	15	<PQL	0.01	67.64	15	<PQL
ICSAB7	ICSAB	1	20.08	1.865	15	PASS	19.81	0.631	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	15.646	15	<PQL	0.1	4.971	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.47	6.506	15	PASS	0.51	3.025	15	PASS
Std3-5/50 ppb	ICAL	1	4.83	1.27	15	PASS	4.89	3.407	15	PASS
Std4-10/100 ppb	ICAL	1	9.83	2.315	15	PASS	9.86	1.399	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	20.24	1.991	15	PASS	19.81	1.649	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	40.14	1.038	15	PASS	39.51	1.262	15	PASS
Std7-100/1000 ppb	ICAL	1	100.68	1.373	15	PASS	98.5	0.438	15	PASS
Std8-200/2000 ppb	ICAL	1	199.62	1.169	15	PASS	200.88	0.335	15	PASS
ICV	ICV	1	10.17	1.243	15	PASS	101.59	0.398	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	0	258.657	15	<PQL
LLICV1	LLICV	1	1.11	0.584	20	PASS	0.55	6.234	20	PASS
MLCCV	CCV	1	19.88	2.197	15	PASS	19.94	0.442	15	PASS
ICSA1	ICSA	1	0	70.954	15	<PQL	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.4	0.884	15	PASS	20.36	0.139	15	PASS
MDL 4	ICAL	1	1.07	0.459	15	PASS	0.51	4.031	15	PASS
CCV1	CCV	1	19.98	1.016	15	PASS	19.82	1.109	15	PASS
CCB1	CCB	1	0.02	43.803	15	<PQL	0.18	6.931	15	PASS
CCV2	CCV	1	19.84	1.185	15	PASS	19.77	0.493	15	PASS
CCB2	CCB	1	0.02	52.281	15	<PQL	0.19	6.321	15	PASS
CCV3	CCV	1	19.92	1.739	15	PASS	19.59	0.422	15	PASS
CCB3	CCB	1	0.03	49.285	15	<PQL	0.18	13.078	15	PASS
CCV4	CCV	1	20.7	0.766	15	PASS	20	0.995	15	PASS
CCB4	CCB	1	0.02	33.478	15	<PQL	0.18	10.217	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	0.01	20.455	15	<PQL	0.07	11.023	15	PASS
ICSAB2	ICSAB	1	20.62	2.198	15	PASS	20.28	0.565	15	PASS
CCV5	CCV	1	20.65	1.318	15	PASS	20.33	0.561	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	0.01	36.4	15	<PQL	0.06	16.251	15	<PQL
ICSAB3	ICSAB	1	20.58	0.24	15	PASS	20.19	1.163	15	PASS
N063181-001C	SAMP	10	5.09	1.269	15	PASS	0.23	10.85	15	PASS
N063181-002C	SAMP	10	3.84	2.705	15	PASS	0.05	19.553	15	<PQL
N063182-001B	SAMP	1	60.43	1.268	15	PASS	71.7	1.392	15	PASS
N063182-003B	SAMP	1	238.76	1.499	15	PASS	368.81	0.119	15	PASS
N063182-003B	SAMP	10	23.94	1.582	15	PASS	38.16	1.634	15	PASS
N063182-005B	SAMP	1	49	2.155	15	PASS	296.07	0.998	15	PASS
N063182-005B	SAMP	10	5.01	3.407	15	PASS	31.95	1.477	15	PASS
N063182-008B	SAMP	1	24.29	1.317	15	PASS	2.68	2.516	15	PASS
N063182-009B	SAMP	1	58.2	1.402	15	PASS	1579.91	0.686	15	PASS
N063182-009B	SAMP	10	6.11	1.776	15	PASS	167.08	0.749	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCV6	CCV	1	21.35	0.969	15	PASS	19.62	1.472	15	PASS
CCB6	CCB	1	0	8860.741	15	<PQL	<0.000	N/A	15	<PQL
N063182-009B	SAMP	1	57.65	0.951	15	PASS	1596.65	1.233	15	PASS
N063182-009B	SAMP	1	57.31	0.934	15	PASS	1596.97	0.66	15	PASS
N063182-009B	SAMP	1	57.14	1.272	15	PASS	1595.44	0.716	15	PASS
N063182-009B	SAMP	1	57.18	2.19	15	PASS	1602.04	0.297	15	PASS
N063182-010B	SAMP	10	12.91	1.599	15	PASS	23.64	0.29	15	PASS
N063182-011B	SAMP	1	157.03	0.56	15	PASS	2684.29	0.064	15	PASS
N063182-011B	SAMP	100	1.86	1.296	15	PASS	31.83	1.448	15	PASS
CCV7	CCV	1	22.1	1.002	15	PASS	19.92	0.296	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	0.01	61.487	15	<PQL	0.07	22.799	15	<PQL
ICSAB4	ICSAB	1	22.11	0.666	15	PASS	20.31	0.724	15	PASS
CCV8	CCV	1	20.87	1.232	15	PASS	19.91	1.192	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV9	CCV	1	21.75	0.532	15	PASS	19.71	1.201	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV10	CCV	1	21.64	0.313	15	PASS	19.6	0.332	15	PASS
CCB10	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	0.01	90.69	15	<PQL	0.07	14.564	15	PASS
ICSAB5	ICSAB	1	21.85	0.907	15	PASS	20.01	1.125	15	PASS
CCV11	CCV	1	21.74	1.753	15	PASS	19.59	1.17	15	PASS
CCB11	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV12	CCV	1	22.44	1.29	15	PASS	19.65	1.067	15	PASS
CCB12	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV13	CCV	1	22.5	0.471	15	PASS	19.73	0.111	15	PASS
CCB13	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	0.02	57.827	15	<PQL	0.06	10.678	15	PASS
ICSAB6	ICSAB	1	22.35	2.238	15	PASS	20.4	0.351	15	PASS
CCV14	CCV	1	21.97	1.107	15	PASS	19.73	1.059	15	PASS
CCB14	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV15	CCV	1	22.62	1.187	15	PASS	19.75	1.254	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV16	CCV	1	22.1	0.561	15	PASS	20.06	0.772	15	PASS
CCB16	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA7	ICSA	1	0.01	76.638	15	<PQL	0.07	11.198	15	PASS
ICSAB7	ICSAB	1	22.31	0.348	15	PASS	20.29	1.198	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.1	15.379	15	FAIL
Std2-0.5/5 ppb	ICAL	1	0.46	2.776	15	PASS
Std3-5/50 ppb	ICAL	1	4.8	6.312	15	PASS
Std4-10/100 ppb	ICAL	1	9.82	2.017	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.47	2.419	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.93	0.817	15	PASS
Std7-100/1000 ppb	ICAL	1	99.51	0.783	15	PASS
Std8-200/2000 ppb	ICAL	1	200.33	0.784	15	PASS
ICV	ICV	1	10.43	1.082	15	PASS
ICB	ICB	1	0.02	113.613	15	<PQL
LLICV1	LLICV	1	0.09	23.162	20	<PQL
MLCCV	CCV	1	20.04	2.149	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.6	2.753	15	PASS
MDL 4	ICAL	1	0.1	7.053	15	PASS
CCV1	CCV	1	20.03	2.081	15	PASS
CCB1	CCB	1	0	903.97	15	<PQL
CCV2	CCV	1	19.84	0.388	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL
CCV3	CCV	1	19.77	0.594	15	PASS
CCB3	CCB	1	0.01	152.049	15	<PQL
CCV4	CCV	1	20.09	2.99	15	PASS
CCB4	CCB	1	0.01	119.849	15	<PQL
CCB4	CCB	1	0	291.181	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.47	0.498	15	PASS
CCV5	CCV	1	20.55	1.072	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.27	1.285	15	PASS
N063181-001C	SAMP	10	0	2375.601	15	<PQL
N063181-002C	SAMP	10	<0.000	N/A	15	<PQL
N063182-001B	SAMP	1	0.85	7.789	15	PASS
N063182-003B	SAMP	1	8.2	2.485	15	PASS
N063182-003B	SAMP	10	0.79	5.526	15	PASS
N063182-005B	SAMP	1	<0.000	N/A	15	<PQL
N063182-005B	SAMP	10	<0.000	N/A	15	<PQL
N063182-008B	SAMP	1	0.69	20.199	15	NR!
N063182-009B	SAMP	1	0.59	29.581	15	NR!
N063182-009B	SAMP	10	0.06	42.01	15	<PQL

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
CCV6	CCV	1	19.76	2.022	15	PASS
CCB6	CCB	1	0	1214.624	15	<PQL
N063182-009B	SAMP	1	0.57	8.363	15	PASS
N063182-009B	SAMP	1	0.56	21.247	15	NR!
N063182-009B	SAMP	1	0.55	13.158	15	PASS
N063182-009B	SAMP	1	0.59	20.758	15	NR!
N063182-010B	SAMP	10	1.43	4.549	15	PASS
N063182-011B	SAMP	1	13.12	2.507	15	PASS
N063182-011B	SAMP	100	0.05	48.974	15	<PQL
CCV7	CCV	1	20.07	1.253	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.32	0.601	15	PASS
CCV8	CCV	1	20.12	1.584	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL
CCV9	CCV	1	19.93	1.104	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL
CCV10	CCV	1	19.72	2.489	15	PASS
CCB10	CCB	1	0.02	53.568	15	<PQL
ICSA5	ICSA	1	0.01	369.683	15	<PQL
ICSAB5	ICSAB	1	19.98	1.177	15	PASS
CCV11	CCV	1	19.95	2.201	15	PASS
CCB11	CCB	1	0	691.193	15	<PQL
CCV12	CCV	1	19.61	1.699	15	PASS
CCB12	CCB	1	0	535.302	15	<PQL
CCV13	CCV	1	19.79	1.82	15	PASS
CCB13	CCB	1	0.01	170.85	15	<PQL
ICSA6	ICSA	1	0.03	41.639	15	<PQL
ICSAB6	ICSAB	1	19.9	2.439	15	PASS
CCV14	CCV	1	19.66	1.198	15	PASS
CCB14	CCB	1	0	13298.147	15	<PQL
CCV15	CCV	1	19.42	0.935	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL
CCV16	CCV	1	19.87	1.357	15	PASS
CCB16	CCB	1	0	821.372	15	<PQL
ICSA7	ICSA	1	0.01	38.089	15	<PQL
ICSAB7	ICSAB	1	20.3	1.771	15	PASS

PERCENT RSD SUMMARY: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.11	14.881	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.48	5.813	15	PASS
Std3-5/50 ppb	ICAL	1	4.82	2.112	15	PASS
Std4-10/100 ppb	ICAL	1	9.75	0.405	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.49	1.504	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.73	0.713	15	PASS
Std7-100/1000 ppb	ICAL	1	100.14	0.815	15	PASS
Std8-200/2000 ppb	ICAL	1	200.05	0.916	15	PASS
ICV	ICV	1	9.83	1.682	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL
LLICV1	LLICV	1	1.03	1.376	20	PASS
LLICV1	LLICV	1	0.98	4.633	20	PASS
MLCCV	CCV	1	19.62	1.316	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.09	1.176	15	PASS
CCV1	CCV	1	19.83	1.443	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.42	1.347	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL
CCV3	CCV	1	19.57	1.412	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20	1.05	15	PASS
CCV4	CCV	1	19.57	1.898	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL
CCV5	CCV	1	19.87	0.805	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL
CCV6	CCV	1	20.03	0.356	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.72	0.863	15	PASS
N063182-009B	SAMP	1	56	0.587	15	PASS
N063182-010B	SAMP	1	112.12	2.24	15	PASS
N063182-011B	SAMP	1	154.59	1.298	15	PASS
CCV7	CCV	1	20.24	1.861	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL
CCV8	CCV	1	19.7	1.29	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL
CCV9	CCV	1	19.83	0.826	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]			
			Conc. [ppb]	RSD	Criteria	Comment
CCV10	CCV	1	19.67	0.472	15	PASS
CCB10	CCB	1	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.03	1.24	15	PASS
CCV11	CCV	1	20.18	1.144	15	PASS
CCB11	CCB	1	<0.000	N/A	15	<PQL
CCV12	CCV	1	20.93	1.315	15	PASS
CCB12	CCB	1	<0.000	N/A	15	<PQL
CCV13	CCV	1	20.46	0.595	15	PASS
CCB13	CCB	1	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	<0.000	N/A	15	<PQL
ICSAB5	ICSAB	1	20.85	2.538	15	PASS
CCV14	CCV	1	20.52	1.496	15	PASS
CCB14	CCB	1	<0.000	N/A	15	<PQL
CCV15	CCV	1	20.69	1.56	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL
CCV16	CCV	1	20.38	0.567	15	PASS
CCB16	CCB	1	<0.000	N/A	15	<PQL
CCV17	CCV	1	20.99	2.009	15	PASS
CCB17	CCB	1	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	0	345.111	15	<PQL
ICSAB6	ICSAB	1	21.49	1.663	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240222A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0222001.d	RINSE	ICAL	1	02/22/24 2:44 PM
A0222002.d	Cal Blk	IBLK	1	02/22/24 2:49 PM
A0222003.d	Std1-0.1/1 ppb	ICAL	1	02/22/24 2:54 PM
A0222004.d	Std2-0.5/5 ppb	ICAL	1	02/22/24 2:58 PM
A0222005.d	Std3-5/50 ppb	ICAL	1	02/22/24 3:03 PM
A0222006.d	Std4-10/100 ppb	ICAL	1	02/22/24 3:08 PM
A0222007.d	Std5-4.0/20/200 ppb	ICAL	1	02/22/24 3:13 PM
A0222008.d	Std6-8.0/40/400 ppb	ICAL	1	02/22/24 3:17 PM
A0222009.d	Std7-100/1000 ppb	ICAL	1	02/22/24 3:22 PM
A0222010.d	Std8-200/2000 ppb	ICAL	1	02/22/24 3:27 PM
A0222011.d	ICV	ICV	1	02/22/24 3:38 PM
A0222012.d	ICB	ICB	1	02/22/24 3:42 PM
A0222013.d	LLICV1	CCV1	1	02/22/24 3:47 PM
A0222014.d	MLCCV	CCV	1	02/22/24 3:52 PM
A0222015.d	ICSA1	ICSA	1	02/22/24 3:56 PM
A0222016.d	ICSAB1	ICSAB	1	02/22/24 4:01 PM
A0222017.d	MB-107001	MBLK	1	02/22/24 4:08 PM
A0222018.d	LCS-107001	LCS	1	02/22/24 4:12 PM
A0222019.d	N063209-001A	SAMP	1	02/22/24 4:17 PM
A0222020.d	N063209-001A	SAMP	5	02/22/24 4:22 PM
A0222021.d	N063209-001A-PS	PS	1	02/22/24 4:26 PM
A0222022.d	N063209-001A-MS	MS	1	02/22/24 4:31 PM
A0222023.d	N063209-001A-MSD	MSD	1	02/22/24 4:35 PM
A0222024.d	N063210-001A	SAMP	1	02/22/24 4:40 PM
A0222025.d	CCV1	CCV	1	02/22/24 4:45 PM
A0222026.d	CCB1	CCB	1	02/22/24 4:49 PM
A0222027.d	MB-106379	MBLK	1	02/22/24 4:54 PM
A0222028.d	LCS-106379	LCS	1	02/22/24 4:59 PM
A0222029.d	N062498-001A	SAMP	1	02/22/24 5:03 PM
A0222030.d	N062498-001A	SAMP	5	02/22/24 5:10 PM
A0222031.d	N062498-001A	SAMP	25	02/22/24 5:14 PM
A0222032.d	N062640-001A	SAMP	1	02/22/24 5:19 PM
A0222033.d	N062640-001A	SAMP	5	02/22/24 5:24 PM
A0222034.d	N062640-001A-PS	PS	1	02/22/24 5:28 PM
A0222035.d	N062640-001A-MS	MS	1	02/22/24 5:33 PM
A0222036.d	N062640-001A-MSD	MSD	1	02/22/24 5:38 PM
A0222037.d	CCV2	CCV	1	02/22/24 5:42 PM
A0222038.d	CCB2	CCB	1	02/22/24 5:47 PM
A0222039.d	MB-106386	MBLK	1	02/22/24 5:52 PM
A0222040.d	LCS-106386	LCS	1	02/22/24 5:56 PM
A0222041.d	N062498-001A	SAMP	1	02/22/24 6:01 PM
A0222042.d	N062498-001A	SAMP	5	02/22/24 6:05 PM

INJECTION LOG: 240222A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0222043.d	N062498-001A	SAMP	25	02/22/24 6:10 PM
A0222044.d	N062338-001C	SAMP	1	02/22/24 6:15 PM
A0222045.d	N062338-001C	SAMP	5	02/22/24 6:19 PM
A0222046.d	N062338-001C-PS	PS	1	02/22/24 6:24 PM
A0222047.d	N062338-001C-MS	MS	1	02/22/24 6:29 PM
A0222048.d	N062338-001C-MSD	MSD	1	02/22/24 6:33 PM
A0222049.d	CCV3	CCV	1	02/22/24 6:38 PM
A0222050.d	CCB3	CCB	1	02/22/24 6:43 PM
A0222051.d	ICSA2	ICSA	1	02/22/24 6:47 PM
A0222052.d	ICSAB2	ICSAB	1	02/22/24 6:52 PM
A0222053.d	MB-106955	MBLK	1	02/22/24 6:57 PM
A0222054.d	LCS-106955	LCS	1	02/22/24 7:01 PM
A0222055.d	N063150-001A	SAMP	1	02/22/24 7:06 PM
A0222056.d	N063150-002A	SAMP	1	02/22/24 7:11 PM
A0222057.d	N063159-001E	SAMP	1	02/22/24 7:15 PM
A0222058.d	N063159-002E	SAMP	1	02/22/24 7:20 PM
A0222059.d	N063159-003E	SAMP	1	02/22/24 7:25 PM
A0222060.d	N063168-002A	SAMP	1	02/22/24 7:29 PM
A0222061.d	N063168-002A	SAMP	5	02/22/24 7:34 PM
A0222062.d	CCV4	CCV	1	02/22/24 7:39 PM
A0222063.d	CCB4	CCB	1	02/22/24 7:43 PM
A0222064.d	N063168-002A-PS	PS	1	02/22/24 7:48 PM
A0222065.d	N063168-002A-MS	MS	1	02/22/24 7:53 PM
A0222066.d	N063168-002A-MSD	MSD	1	02/22/24 7:57 PM
A0222067.d	N063176-001C	SAMP	1	02/22/24 8:02 PM
A0222068.d	N063168-002A	SAMP	10	02/22/24 8:07 PM
A0222069.d	N063168-002A	SAMP	50	02/22/24 8:11 PM
A0222070.d	N063168-002A-PS	PS	10	02/22/24 8:16 PM
A0222071.d	N063168-002A-MS	MS	10	02/22/24 8:21 PM
A0222072.d	N063168-002A-MSD	MSD	10	02/22/24 8:25 PM
A0222073.d	N063176-001C	SAMP	10	02/22/24 8:30 PM
A0222074.d	CCV5	CCV	1	02/22/24 8:35 PM
A0222075.d	CCB5	CCB	1	02/22/24 8:39 PM
A0222076.d	ICSA3	ICSA	1	02/22/24 8:44 PM
A0222077.d	ICSAB3	ICSAB	1	02/22/24 8:49 PM
A0222078.d	MB-107002	MBLK	1	02/22/24 8:53 PM
A0222079.d	LCS-107002	LCS	1	02/22/24 8:58 PM
A0222080.d	N063186-001C	SAMP	5	02/22/24 9:02 PM
A0222081.d	N063186-001C	SAMP	25	02/22/24 9:07 PM
A0222082.d	N063186-002C	SAMP	5	02/22/24 9:12 PM
A0222083.d	N063186-002C	SAMP	25	02/22/24 9:17 PM
A0222084.d	N063193-001A	SAMP	1	02/22/24 9:21 PM

INJECTION LOG: 240222A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0222085.d	N063193-002A	SAMP	1	02/22/24 9:26 PM
A0222086.d	N063193-003A	SAMP	1	02/22/24 9:30 PM
A0222087.d	RINSE	ICAL	1	02/22/24 9:35 PM
A0222088.d	CCV6	CCV	1	02/22/24 9:40 PM
A0222089.d	CCB6	CCB	1	02/22/24 9:45 PM
A0222090.d	N063193-004A	SAMP	1	02/22/24 9:49 PM
A0222091.d	N063193-004A	SAMP	5	02/22/24 9:54 PM
A0222092.d	N063193-004A-PS	PS	1	02/22/24 9:58 PM
A0222093.d	N063193-004A-MS	MS	1	02/22/24 10:03 PM
A0222094.d	N063193-004A-MSD	MSD	1	02/22/24 10:08 PM
A0222095.d	N063195-001A	SAMP	1	02/22/24 10:12 PM
A0222096.d	N063195-002A	SAMP	1	02/22/24 10:17 PM
A0222097.d	N063195-003A	SAMP	1	02/22/24 10:22 PM
A0222098.d	N063195-004A	SAMP	1	02/22/24 10:26 PM
A0222099.d	RINSE	ICAL	1	02/22/24 10:31 PM
A0222100.d	CCV7	CCV	1	02/22/24 10:36 PM
A0222101.d	CCB7	CCB	1	02/22/24 10:40 PM
A0222102.d	N063201-001D	SAMP	1	02/22/24 10:45 PM
A0222103.d	N063201-001D-MS	MS	1	02/22/24 10:50 PM
A0222104.d	RINSE	ICAL	1	02/22/24 10:54 PM
A0222105.d	MDL 4	SAMP	1	02/22/24 10:59 PM
A0222106.d	MDL 4	SAMP	1	02/22/24 11:04 PM
A0222107.d	CCV8	CCV	1	02/22/24 11:08 PM
A0222108.d	CCB8	CCB	1	02/22/24 11:13 PM
A0222109.d	ICSA4	ICSA	1	02/22/24 11:18 PM
A0222110.d	ICSAB4	ICSAB	1	02/22/24 11:22 PM
A0222111.d	MB-106973	MBLK	1	02/22/24 11:27 PM
A0222112.d	LCS-106973	LCS	1	02/22/24 11:32 PM
A0222113.d	N063181-001C	SAMP	1	02/22/24 11:36 PM
A0222114.d	N063181-002C	SAMP	1	02/22/24 11:41 PM
A0222115.d	N063181-003C	SAMP	1	02/22/24 11:46 PM
A0222116.d	N063181-003C	SAMP	5	02/22/24 11:50 PM
A0222117.d	N063181-003C-PS	PS	1	02/22/24 11:55 PM
A0222118.d	N063181-003C-MS	MS	1	02/23/24 12:00 AM
A0222119.d	N063181-003C-MSD	MSD	1	02/23/24 12:04 AM
A0222120.d	RINSE	ICAL	1	02/23/24 12:09 AM
A0222121.d	CCV9	CCV	1	02/23/24 12:14 AM
A0222122.d	CCB9	CCB	1	02/23/24 12:18 AM
A0222123.d	N063182-001B	SAMP	1	02/23/24 12:23 AM
A0222124.d	N063182-003B	SAMP	1	02/23/24 12:28 AM
A0222125.d	N063182-005B	SAMP	1	02/23/24 12:32 AM
A0222126.d	N063182-008B	SAMP	1	02/23/24 12:37 AM

INJECTION LOG: 240222A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0222127.d	N063182-009B	SAMP	1	02/23/24 12:42 AM
A0222128.d	N063182-010B	SAMP	1	02/23/24 12:46 AM
A0222129.d	N063182-011B	SAMP	1	02/23/24 12:51 AM
A0222130.d	RINSE	ICAL	1	02/23/24 12:56 AM
A0222131.d	CCV10	CCV	1	02/23/24 1:00 AM
A0222132.d	CCB10	CCB	1	02/23/24 1:05 AM
A0222133.d	ICSA5	ICSA	1	02/23/24 1:10 AM
A0222134.d	ICSAB5	ICSAB	1	02/23/24 1:14 AM
A0222135.d	MB-106992	MBLK	1	02/23/24 1:19 AM
A0222136.d	LCS-106992	LCS	1	02/23/24 1:24 AM
A0222137.d	N063211-001B	SAMP	1	02/23/24 1:28 AM
A0222138.d	N063211-002B	SAMP	1	02/23/24 1:33 AM
A0222139.d	N063211-003B	SAMP	1	02/23/24 1:38 AM
A0222140.d	N063213-001B	SAMP	1	02/23/24 1:42 AM
A0222141.d	N063213-002B	SAMP	1	02/23/24 1:47 AM
A0222142.d	N063213-003B	SAMP	1	02/23/24 1:52 AM
A0222143.d	N063213-004B	SAMP	1	02/23/24 1:56 AM
A0222144.d	RINSE	ICAL	1	02/23/24 2:01 AM
A0222145.d	CCV11	CCV	1	02/23/24 2:06 AM
A0222146.d	CCB11	CCB	1	02/23/24 2:10 AM
A0222147.d	N063213-005B	SAMP	1	02/23/24 2:15 AM
A0222148.d	N063213-006B	SAMP	1	02/23/24 2:19 AM
A0222149.d	N063213-007B	SAMP	1	02/23/24 2:24 AM
A0222150.d	N063213-008B	SAMP	1	02/23/24 2:29 AM
A0222151.d	N063213-008B	SAMP	5	02/23/24 2:34 AM
A0222152.d	N063213-008B-PS	PS	1	02/23/24 2:38 AM
A0222153.d	N063213-008BMS	MS	1	02/23/24 2:43 AM
A0222154.d	N063213-008BMSD	MSD	1	02/23/24 2:48 AM
A0222155.d	N063214-010B	SAMP	1	02/23/24 2:52 AM
A0222156.d	RINSE	ICAL	1	02/23/24 2:57 AM
A0222157.d	CCV12	CCV	1	02/23/24 3:02 AM
A0222158.d	CCB12	CCB	1	02/23/24 3:06 AM
A0222159.d	N063214-011B	SAMP	1	02/23/24 3:11 AM
A0222160.d	N063214-012B	SAMP	1	02/23/24 3:16 AM
A0222161.d	N063214-013B	SAMP	1	02/23/24 3:20 AM
A0222162.d	N063214-014B	SAMP	1	02/23/24 3:25 AM
A0222163.d	N063214-016B	SAMP	1	02/23/24 3:30 AM
A0222164.d	RINSE	ICAL	1	02/23/24 3:34 AM
A0222165.d	CCV13	CCV	1	02/23/24 3:39 AM
A0222166.d	CCB13	CCB	1	02/23/24 3:43 AM
A0222167.d	ICSA6	ICSA	1	02/23/24 3:48 AM
A0222168.d	ICSAB6	ICSAB	1	02/23/24 3:53 AM

INJECTION LOG: 240222A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0222169.d	MB-107025	MBLK	1	02/23/24 3:58 AM
A0222170.d	LCS-107025	LCS	1	02/23/24 4:02 AM
A0222171.d	N063211-001C	SAMP	1	02/23/24 4:07 AM
A0222172.d	N063211-002C	SAMP	1	02/23/24 4:11 AM
A0222173.d	N063211-002C	SAMP	5	02/23/24 4:16 AM
A0222174.d	N063211-002C-PS	PS	1	02/23/24 4:21 AM
A0222175.d	N063211-002C-MS	MS	1	02/23/24 4:25 AM
A0222176.d	N063211-002C-MSD	MSD	1	02/23/24 4:30 AM
A0222177.d	N063211-003C	SAMP	1	02/23/24 4:35 AM
A0222178.d	RINSE	ICAL	1	02/23/24 4:39 AM
A0222179.d	CCV14	CCV	1	02/23/24 4:44 AM
A0222180.d	CCB14	CCB	1	02/23/24 4:49 AM
A0222181.d	ICSA7	ICSA	1	02/23/24 4:53 AM
A0222182.d	ICSAB7	ICSAB	1	02/23/24 4:58 AM
A0222183.d	RINSE	ICAL	1	02/23/24 5:03 AM
A0222184.d	RINSE	ICAL	1	02/23/24 5:07 AM
A0222185.d	RINSE	ICAL	1	02/23/24 5:12 AM
A0222186.d	RINSE	ICAL	1	02/23/24 5:16 AM
A0222187.d	RINSE	ICAL	1	02/23/24 5:21 AM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223001.d	RINSE	ICAL	1	02/23/24 1:22 PM
A0223002.d	Cal Blk	IBLK	1	02/23/24 1:27 PM
A0223003.d	Std1-0.1/1 ppb	ICAL	1	02/23/24 1:32 PM
A0223004.d	Std2-0.5/5 ppb	ICAL	1	02/23/24 1:36 PM
A0223005.d	Std3-5/50 ppb	ICAL	1	02/23/24 1:41 PM
A0223006.d	Std4-10/100 ppb	ICAL	1	02/23/24 1:46 PM
A0223007.d	Std5-4.0/20/200 ppb	ICAL	1	02/23/24 1:51 PM
A0223008.d	Std6-8.0/40/400 ppb	ICAL	1	02/23/24 1:55 PM
A0223009.d	Std7-100/1000 ppb	ICAL	1	02/23/24 2:00 PM
A0223010.d	Std8-200/2000 ppb	ICAL	1	02/23/24 2:05 PM
A0223011.d	ICV	ICV	1	02/23/24 2:24 PM
A0223012.d	ICB	ICB	1	02/23/24 2:29 PM
A0223013.d	LLICV1	LLICV	1	02/23/24 2:34 PM
A0223014.d	MLCCV	CCV	1	02/23/24 2:38 PM
A0223015.d	ICSA1	ICSA	1	02/23/24 2:43 PM
A0223016.d	ICSAB1	ICSAB	1	02/23/24 2:47 PM
A0223017.d	MDL 4	ICAL	1	02/23/24 3:00 PM
A0223018.d	MB-106955	MBLK	1	02/23/24 3:10 PM
A0223019.d	LCS-106955	LCS	1	02/23/24 3:15 PM
A0223020.d	N063150-001A	SAMP	1	02/23/24 3:19 PM
A0223021.d	N063150-002A	SAMP	1	02/23/24 3:24 PM
A0223022.d	N063168-002A	SAMP	1	02/23/24 3:29 PM
A0223023.d	N063168-002A	SAMP	5	02/23/24 3:33 PM
A0223024.d	N063168-002A-PS	PS	1	02/23/24 3:38 PM
A0223025.d	N063168-002A-MS	MS	1	02/23/24 3:43 PM
A0223026.d	N063168-002A-MSD	MSD	1	02/23/24 3:47 PM
A0223027.d	RINSE	ICAL	1	02/23/24 3:52 PM
A0223028.d	CCV1	CCV	1	02/23/24 3:57 PM
A0223029.d	CCB1	CCB	1	02/23/24 4:01 PM
A0223030.d	MB-107065	MBLK	1	02/23/24 4:06 PM
A0223031.d	LCS-107065	LCS	1	02/23/24 4:11 PM
A0223032.d	N063286-001A	SAMP	1	02/23/24 4:15 PM
A0223033.d	N063286-001A	SAMP	5	02/23/24 4:20 PM
A0223034.d	N063286-001A-PS	PS	1	02/23/24 4:25 PM
A0223035.d	N063286-001A-MS	MS	1	02/23/24 4:29 PM
A0223036.d	N063286-001A-MSD	MSD	1	02/23/24 4:34 PM
A0223037.d	N063287-001A	SAMP	1	02/23/24 4:38 PM
A0223038.d	N063287-002A	SAMP	1	02/23/24 4:43 PM
A0223039.d	N063287-003A	SAMP	1	02/23/24 4:48 PM
A0223040.d	CCV2	CCV	1	02/23/24 4:52 PM
A0223041.d	CCB2	CCB	1	02/23/24 4:57 PM
A0223042.d	N063289-001A	SAMP	1	02/23/24 5:02 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223043.d	N063289-002A	SAMP	1	02/23/24 5:06 PM
A0223044.d	N063289-003A	SAMP	1	02/23/24 5:11 PM
A0223045.d	N063289-004A	SAMP	1	02/23/24 5:16 PM
A0223046.d	CCV3	CCV	1	02/23/24 5:20 PM
A0223047.d	CCB3	CCB	1	02/23/24 5:25 PM
A0223048.d	N063193-004A	SAMP	5	02/23/24 5:30 PM
A0223049.d	N063193-004A	SAMP	25	02/23/24 5:34 PM
A0223050.d	N063193-004A-PS	PS	5	02/23/24 5:39 PM
A0223051.d	N063193-004A-MS	MS	5	02/23/24 5:44 PM
A0223052.d	N063193-004A-MSD	MSD	5	02/23/24 5:48 PM
A0223053.d	N063195-002A	SAMP	5	02/23/24 5:53 PM
A0223054.d	N063195-003A	SAMP	5	02/23/24 5:58 PM
A0223055.d	N063195-004A	SAMP	5	02/23/24 6:02 PM
A0223056.d	N063201-001D	SAMP	5	02/23/24 6:07 PM
A0223057.d	N063201-001D-MS	MS	5	02/23/24 6:12 PM
A0223058.d	CCV4	CCV	1	02/23/24 6:16 PM
A0223059.d	CCB4	CCB	1	02/23/24 6:21 PM
A0223060.d	CCB4	CCB	1	02/23/24 6:27 PM
A0223061.d	ICSA2	ICSA	1	02/23/24 6:32 PM
A0223062.d	ICSAB2	ICSAB	1	02/23/24 6:37 PM
A0223063.d	MB-106955	MBLK	1	02/23/24 6:42 PM
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A0223066.d	N063150-002A	SAMP	1	02/23/24 6:55 PM
A0223067.d	N063168-002A	SAMP	1	02/23/24 7:00 PM
A0223068.d	N063168-002A	SAMP	5	02/23/24 7:05 PM
A0223069.d	N063168-002A-PS	PS	1	02/23/24 7:09 PM
A0223070.d	N063168-002A-MS	MS	1	02/23/24 7:14 PM
A0223071.d	N063168-002A-MSD	MSD	1	02/23/24 7:19 PM
A0223072.d	RINSE	ICAL	1	02/23/24 7:23 PM
A0223073.d	CCV5	CCV	1	02/23/24 7:28 PM
A0223074.d	CCB5	CCB	1	02/23/24 7:33 PM
A0223075.d	ICSA3	ICSA	1	02/23/24 7:37 PM
A0223076.d	ICSAB3	ICSAB	1	02/23/24 7:42 PM
A0223077.d	N063181-001C	SAMP	10	02/23/24 7:47 PM
A0223078.d	N063181-002C	SAMP	10	02/23/24 7:51 PM
A0223079.d	N063182-001B	SAMP	1	02/23/24 7:56 PM
A0223080.d	N063182-003B	SAMP	1	02/23/24 8:01 PM
A0223081.d	N063182-003B	SAMP	10	02/23/24 8:05 PM
A0223082.d	N063182-005B	SAMP	1	02/23/24 8:10 PM
A0223083.d	N063182-005B	SAMP	10	02/23/24 8:15 PM
A0223084.d	N063182-008B	SAMP	1	02/23/24 8:19 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
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A0223086.d	N063182-009B	SAMP	10	02/23/24 8:29 PM
A0223087.d	CCV6	CCV	1	02/23/24 8:33 PM
A0223088.d	CCB6	CCB	1	02/23/24 8:38 PM
A0223089.d	N063182-009B	SAMP	1	02/23/24 8:43 PM
A0223090.d	N063182-009B	SAMP	1	02/23/24 8:47 PM
A0223091.d	N063182-009B	SAMP	1	02/23/24 8:52 PM
A0223092.d	N063182-009B	SAMP	1	02/23/24 8:57 PM
A0223093.d	N063182-010B	SAMP	10	02/23/24 9:01 PM
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A0223095.d	N063182-011B	SAMP	100	02/23/24 9:11 PM
A0223096.d	CCV7	CCV	1	02/23/24 9:15 PM
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A0223098.d	ICSA4	ICSA	1	02/23/24 9:24 PM
A0223099.d	ICSAB4	ICSAB	1	02/23/24 9:29 PM
A0223100.d	MB-106992	MBLK	1	02/23/24 9:34 PM
A0223101.d	LCS-106992	LCS	1	02/23/24 9:39 PM
A0223102.d	N063211-001B	SAMP	10	02/23/24 9:43 PM
A0223103.d	N063211-002B	SAMP	10	02/23/24 9:48 PM
A0223104.d	N063211-003B	SAMP	100	02/23/24 9:52 PM
A0223105.d	N063213-001B	SAMP	10	02/23/24 9:57 PM
A0223106.d	N063213-002B	SAMP	10	02/23/24 10:02 PM
A0223107.d	N063213-003B	SAMP	10	02/23/24 10:07 PM
A0223108.d	N063213-004B	SAMP	10	02/23/24 10:11 PM
A0223109.d	N063213-007B	SAMP	10	02/23/24 10:16 PM
A0223110.d	CCV8	CCV	1	02/23/24 10:20 PM
A0223111.d	CCB8	CCB	1	02/23/24 10:25 PM
A0223112.d	N063213-008B	SAMP	1	02/23/24 10:30 PM
A0223113.d	N063213-008B	SAMP	5	02/23/24 10:34 PM
A0223114.d	N063213-008B-PS	PS	1	02/23/24 10:39 PM
A0223115.d	N063213-008BMS	MS	1	02/23/24 10:44 PM
A0223116.d	N063213-008BMSD	MSD	1	02/23/24 10:48 PM
A0223117.d	N063214-010B	SAMP	1	02/23/24 10:53 PM
A0223118.d	N063214-011B	SAMP	1	02/23/24 10:58 PM
A0223119.d	N063214-011B	SAMP	10	02/23/24 11:03 PM
A0223120.d	N063214-012B	SAMP	1	02/23/24 11:07 PM
A0223121.d	N063214-012B	SAMP	10	02/23/24 11:12 PM
A0223122.d	CCV9	CCV	1	02/23/24 11:16 PM
A0223123.d	CCB9	CCB	1	02/23/24 11:21 PM
A0223124.d	N063214-013B	SAMP	1	02/23/24 11:26 PM
A0223125.d	N063214-013B	SAMP	10	02/23/24 11:30 PM
A0223126.d	N063214-014B	SAMP	1	02/23/24 11:35 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
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A0223130.d	CCB10	CCB	1	02/23/24 11:54 PM
A0223131.d	ICSA5	ICSA	1	02/23/24 11:58 PM
A0223132.d	ICSAB5	ICSAB	1	02/24/24 12:03 AM
A0223133.d	MB-107021	MBLK	1	02/24/24 12:08 AM
A0223134.d	LCS-107021	LCS	1	02/24/24 12:12 AM
A0223135.d	N062510-015D	SAMP	5	02/24/24 12:17 AM
A0223136.d	N063248-001B	SAMP	1	02/24/24 12:21 AM
A0223137.d	N063248-002B	SAMP	1	02/24/24 12:26 AM
A0223138.d	N063248-002B	SAMP	5	02/24/24 12:31 AM
A0223139.d	N063248-002B-PS	PS	1	02/24/24 12:35 AM
A0223140.d	N063248-002B-MS	MS	1	02/24/24 12:40 AM
A0223141.d	N063248-002B-MSD	MSD	1	02/24/24 12:45 AM
A0223142.d	RINSE	ICAL	1	02/24/24 12:49 AM
A0223143.d	CCV11	CCV	1	02/24/24 12:54 AM
A0223144.d	CCB11	CCB	1	02/24/24 12:59 AM
A0223145.d	N063248-003B	SAMP	1	02/24/24 1:03 AM
A0223146.d	N063248-004B	SAMP	1	02/24/24 1:08 AM
A0223147.d	N063248-005C	SAMP	1	02/24/24 1:13 AM
A0223148.d	N063248-006C	SAMP	1	02/24/24 1:17 AM
A0223149.d	N063248-007C	SAMP	1	02/24/24 1:22 AM
A0223150.d	N063248-008C	SAMP	1	02/24/24 1:27 AM
A0223151.d	N063248-010B	SAMP	1	02/24/24 1:31 AM
A0223152.d	N063248-011B	SAMP	1	02/24/24 1:36 AM
A0223153.d	N063249-007C	SAMP	1	02/24/24 1:41 AM
A0223154.d	RINSE	ICAL	1	02/24/24 1:45 AM
A0223155.d	CCV12	CCV	1	02/24/24 1:50 AM
A0223156.d	CCB12	CCB	1	02/24/24 1:54 AM
A0223157.d	N063249-009C	SAMP	1	02/24/24 1:59 AM
A0223158.d	N063249-011C	SAMP	1	02/24/24 2:04 AM
A0223159.d	N063249-013C	SAMP	1	02/24/24 2:08 AM
A0223160.d	N063249-015C	SAMP	1	02/24/24 2:13 AM
A0223161.d	N063249-017C	SAMP	1	02/24/24 2:18 AM
A0223162.d	N063249-018C	SAMP	5	02/24/24 2:22 AM
A0223163.d	RINSE	ICAL	1	02/24/24 2:27 AM
A0223164.d	CCV13	CCV	1	02/24/24 2:32 AM
A0223165.d	CCB13	CCB	1	02/24/24 2:36 AM
A0223166.d	ICSA6	ICSA	1	02/24/24 2:41 AM
A0223167.d	ICSAB6	ICSAB	1	02/24/24 2:46 AM
A0223168.d	MB-107055	MBLK	1	02/24/24 2:50 AM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
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A0223171.d	N063295-002B	SAMP	1	02/24/24 3:04 AM
A0223172.d	N063295-002B	SAMP	5	02/24/24 3:09 AM
A0223173.d	N063295-002B-PS	PS	1	02/24/24 3:13 AM
A0223174.d	N063295-002B-MS	MS	1	02/24/24 3:18 AM
A0223175.d	N063295-002B-MSD	MSD	1	02/24/24 3:23 AM
A0223176.d	N063295-003B	SAMP	1	02/24/24 3:27 AM
A0223177.d	RINSE	ICAL	1	02/24/24 3:32 AM
A0223178.d	CCV14	CCV	1	02/24/24 3:37 AM
A0223179.d	CCB14	CCB	1	02/24/24 3:41 AM
A0223180.d	N063295-005C	SAMP	1	02/24/24 3:46 AM
A0223181.d	N063295-006C	SAMP	1	02/24/24 3:51 AM
A0223182.d	N063295-007C	SAMP	1	02/24/24 3:55 AM
A0223183.d	N063295-008C	SAMP	1	02/24/24 4:00 AM
A0223184.d	N063297-001C	SAMP	1	02/24/24 4:05 AM
A0223185.d	N063297-002B	SAMP	1	02/24/24 4:09 AM
A0223186.d	N063297-003B	SAMP	1	02/24/24 4:14 AM
A0223187.d	N063303-001B	SAMP	1	02/24/24 4:19 AM
A0223188.d	N063303-002B	SAMP	1	02/24/24 4:23 AM
A0223189.d	RINSE	ICAL	1	02/24/24 4:28 AM
A0223190.d	CCV15	CCV	1	02/24/24 4:32 AM
A0223191.d	CCB15	CCB	1	02/24/24 4:37 AM
A0223192.d	N063303-006B	SAMP	5	02/24/24 4:42 AM
A0223193.d	N063303-008B	SAMP	1	02/24/24 4:46 AM
A0223194.d	RINSE	ICAL	1	02/24/24 4:51 AM
A0223195.d	CCV16	CCV	1	02/24/24 4:56 AM
A0223196.d	CCB16	CCB	1	02/24/24 5:00 AM
A0223197.d	ICSA7	ICSA	1	02/24/24 5:05 AM
A0223198.d	ICSAB7	ICSAB	1	02/24/24 5:10 AM
A0223199.d	RINSE	ICAL	1	02/24/24 5:14 AM
A0223200.d	RINSE	ICAL	1	02/24/24 5:19 AM
A0223201.d	RINSE	ICAL	1	02/24/24 5:24 AM
A0223202.d	RINSE	ICAL	1	02/24/24 5:28 AM
A0223203.d	RINSE	ICAL	1	02/24/24 5:33 AM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
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A0224002.d	Cal Blk	IBLK	1	02/25/24 2:14 PM
A0224003.d	Std1-0.1/1 ppb	ICAL	1	02/25/24 2:19 PM
A0224004.d	Std2-0.5/5 ppb	ICAL	1	02/25/24 2:24 PM
A0224005.d	Std3-5/50 ppb	ICAL	1	02/25/24 2:29 PM
A0224006.d	Std4-10/100 ppb	ICAL	1	02/25/24 2:33 PM
A0224007.d	Std5-4.0/20/200 ppb	ICAL	1	02/25/24 2:38 PM
A0224008.d	Std6-8.0/40/400 ppb	ICAL	1	02/25/24 2:43 PM
A0224009.d	Std7-100/1000 ppb	ICAL	1	02/25/24 2:48 PM
A0224010.d	Std8-200/2000 ppb	ICAL	1	02/25/24 2:52 PM
A0224011.d	ICV	ICV	1	02/25/24 3:01 PM
A0224012.d	ICB	ICB	1	02/25/24 3:05 PM
A0224013.d	LLICV1	LLICV	1	02/25/24 3:10 PM
A0224014.d	LLICV1	LLICV	1	02/25/24 3:15 PM
A0224015.d	MLCCV	CCV	1	02/25/24 3:20 PM
A0224016.d	ICSA1	ICSA	1	02/25/24 3:25 PM
A0224017.d	ICSAB1	ICSAB	1	02/25/24 3:29 PM
A0224018.d	MB-107075	MBLK	1	02/25/24 3:34 PM
A0224019.d	LCS-107075	LCS	1	02/25/24 3:38 PM
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A0224021.d	N063315-001A	SAMP	5	02/25/24 3:48 PM
A0224022.d	N063315-001A-PS	PS	1	02/25/24 3:53 PM
A0224023.d	N063315-001A-MS	MS	1	02/25/24 3:57 PM
A0224024.d	N063315-001A-MSD	MSD	1	02/25/24 4:02 PM
A0224025.d	N063316-001A	SAMP	1	02/25/24 4:06 PM
A0224026.d	N063316-002A	SAMP	1	02/25/24 4:11 PM
A0224027.d	RINSE	ICAL	1	02/25/24 4:16 PM
A0224028.d	CCV1	CCV	1	02/25/24 4:20 PM
A0224029.d	CCB1	CCB	1	02/25/24 4:25 PM
A0224030.d	N063318-001A	SAMP	1	02/25/24 4:30 PM
A0224031.d	N063318-002A	SAMP	1	02/25/24 4:34 PM
A0224032.d	N063290-001A	SAMP	1	02/25/24 4:39 PM
A0224033.d	N063308-001A	SAMP	1	02/25/24 4:44 PM
A0224034.d	N063308-002A	SAMP	1	02/25/24 4:48 PM
A0224035.d	N063308-003A	SAMP	1	02/25/24 4:53 PM
A0224036.d	N063308-004A	SAMP	1	02/25/24 4:58 PM
A0224037.d	N063308-005A	SAMP	1	02/25/24 5:02 PM
A0224038.d	N063308-006A	SAMP	1	02/25/24 5:07 PM
A0224039.d	RINSE	ICAL	1	02/25/24 5:12 PM
A0224040.d	CCV2	CCV	1	02/25/24 5:16 PM
A0224041.d	CCB2	CCB	1	02/25/24 5:21 PM
A0224042.d	N063308-007A	SAMP	1	02/25/24 5:26 PM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
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A0224045.d	N063311-002A	SAMP	1	02/25/24 5:39 PM
A0224046.d	N063311-003A	SAMP	1	02/25/24 5:44 PM
A0224047.d	N063311-004A	SAMP	1	02/25/24 5:49 PM
A0224048.d	N063311-007A	SAMP	1	02/25/24 5:53 PM
A0224049.d	RINSE	ICAL	1	02/25/24 5:58 PM
A0224050.d	CCV3	CCV	1	02/25/24 6:03 PM
A0224051.d	CCB3	CCB	1	02/25/24 6:07 PM
A0224052.d	ICSA2	ICSA	1	02/25/24 6:12 PM
A0224053.d	ICSAB2	ICSAB	1	02/25/24 6:17 PM
A0224054.d	RINSE	ICAL	1	02/25/24 6:21 PM
A0224055.d	MB1-107081	MBLK	1	02/25/24 6:26 PM
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A0224057.d	MB-107081	MBLK	1	02/25/24 6:35 PM
A0224058.d	LCS-107081	LCS	1	02/25/24 6:40 PM
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A0224060.d	MDL2	SAMP	1	02/25/24 6:49 PM
A0224061.d	MDL3	SAMP	1	02/25/24 6:54 PM
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A0224063.d	RINSE	ICAL	1	02/25/24 7:03 PM
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A0224065.d	CCB4	CCB	1	02/25/24 7:13 PM
A0224066.d	N063292-005A	SAMP	1	02/25/24 7:17 PM
A0224067.d	N063292-005A	SAMP	5	02/25/24 7:22 PM
A0224068.d	N063292-005A	SAMP	10	02/25/24 7:27 PM
A0224069.d	N063292-005A	SAMP	50	02/25/24 7:31 PM
A0224070.d	N063292-005A-PS	PS	1	02/25/24 7:36 PM
A0224071.d	N063292-005A-PS	PS	10	02/25/24 7:40 PM
A0224072.d	N063292-005A-MS	MS	1	02/25/24 7:45 PM
A0224073.d	N063292-005A-MS	MS	10	02/25/24 7:50 PM
A0224074.d	N063292-005A-MSD	MSD	1	02/25/24 7:55 PM
A0224075.d	N063292-005A-MSD	MSD	10	02/25/24 7:59 PM
A0224076.d	CCV5	CCV	1	02/25/24 8:04 PM
A0224077.d	CCB5	CCB	1	02/25/24 8:08 PM
A0224078.d	N063292-010A	SAMP	1	02/25/24 8:13 PM
A0224079.d	N063292-015A	SAMP	1	02/25/24 8:18 PM
A0224080.d	RINSE	RINSE	1	02/25/24 8:22 PM
A0224081.d	CCV6	CCV	1	02/25/24 8:27 PM
A0224082.d	CCB6	CCB	1	02/25/24 8:32 PM
A0224083.d	ICSA3	ICSA	1	02/25/24 8:36 PM
A0224084.d	ICSAB3	ICSAB	1	02/25/24 8:41 PM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
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A0224089.d	N063248-002B	SAMP	25	02/25/24 9:04 PM
A0224090.d	N063248-002B-PS	PS	5	02/25/24 9:09 PM
A0224091.d	N063248-002B-MS	MS	5	02/25/24 9:14 PM
A0224092.d	N063248-002B-MSD	MSD	5	02/25/24 9:18 PM
A0224093.d	N063248-003B	SAMP	10	02/25/24 9:23 PM
A0224094.d	N063248-004B	SAMP	10	02/25/24 9:28 PM
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A0224096.d	CCB7	CCB	1	02/25/24 9:37 PM
A0224097.d	N063315-001A	SAMP	100	02/25/24 9:47 PM
A0224098.d	N063315-001A	SAMP	500	02/25/24 9:51 PM
A0224099.d	N063315-001A-PS	PS	100	02/25/24 9:56 PM
A0224100.d	N063315-001A-MS	MS	100	02/25/24 10:00 PM
A0224101.d	N063315-001A-MSD	MSD	100	02/25/24 10:05 PM
A0224102.d	N063316-001A	SAMP	10	02/25/24 10:10 PM
A0224103.d	N063308-003A	SAMP	100	02/25/24 10:15 PM
A0224104.d	N063311-001A	SAMP	10	02/25/24 10:19 PM
A0224105.d	N063311-001A-MS	MS	10	02/25/24 10:24 PM
A0224106.d	N063311-002A	SAMP	10	02/25/24 10:28 PM
A0224107.d	CCV8	CCV	1	02/25/24 10:33 PM
A0224108.d	CCB8	CCB	1	02/25/24 10:38 PM
A0224109.d	N063311-003A	SAMP	10	02/25/24 10:42 PM
A0224110.d	N063311-003A	SAMP	100	02/25/24 10:47 PM
A0224111.d	N063311-004A	SAMP	10	02/25/24 10:52 PM
A0224112.d	N063311-004A	SAMP	100	02/25/24 10:56 PM
A0224113.d	N063311-007A	SAMP	10	02/25/24 11:01 PM
A0224114.d	N063292-005A	SAMP	100	02/25/24 11:06 PM
A0224115.d	N063292-005A	SAMP	500	02/25/24 11:10 PM
A0224116.d	N063292-005A	SAMP	1000	02/25/24 11:15 PM
A0224117.d	N063292-005A	SAMP	5000	02/25/24 11:20 PM
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A0224119.d	CCB9	CCB	1	02/25/24 11:29 PM
A0224120.d	N063292-005A-PS	PS	100	02/25/24 11:34 PM
A0224121.d	N063292-005A-PS	PS	1000	02/25/24 11:39 PM
A0224122.d	N063292-005A-MS	MS	100	02/25/24 11:43 PM
A0224123.d	N063292-005A-MS	MS	1000	02/25/24 11:48 PM
A0224124.d	N063292-005A-MSD	MSD	100	02/25/24 11:53 PM
A0224125.d	N063292-005A-MSD	MSD	1000	02/25/24 11:57 PM
A0224126.d	CCV10	CCV	1	02/26/24 12:02 AM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224127.d	CCB10	CCB	1	02/26/24 12:07 AM
A0224128.d	ICSA4	ICSA	1	02/26/24 12:11 AM
A0224129.d	ICSAB4	ICSAB	1	02/26/24 12:16 AM
A0224130.d	N063248-005C	SAMP	1	02/26/24 12:21 AM
A0224131.d	N063248-005C	SAMP	10	02/26/24 12:25 AM
A0224132.d	N063248-006C	SAMP	1	02/26/24 12:30 AM
A0224133.d	N063248-006C	SAMP	10	02/26/24 12:35 AM
A0224134.d	N063248-007C	SAMP	1	02/26/24 12:39 AM
A0224135.d	N063248-007C	SAMP	10	02/26/24 12:44 AM
A0224136.d	N063248-008C	SAMP	1	02/26/24 12:49 AM
A0224137.d	N063248-008C	SAMP	10	02/26/24 12:53 AM
A0224138.d	N063248-010B	SAMP	1	02/26/24 12:58 AM
A0224139.d	RINSE	ICAL	1	02/26/24 1:03 AM
A0224140.d	CCV11	CCV	1	02/26/24 1:07 AM
A0224141.d	CCB11	CCB	1	02/26/24 1:12 AM
A0224142.d	N063248-011B	SAMP	1	02/26/24 1:16 AM
A0224143.d	N063248-011B	SAMP	10	02/26/24 1:21 AM
A0224144.d	N063249-007C	SAMP	1	02/26/24 1:26 AM
A0224145.d	N063249-007C	SAMP	10	02/26/24 1:30 AM
A0224146.d	N063249-009C	SAMP	1	02/26/24 1:35 AM
A0224147.d	N063249-009C	SAMP	10	02/26/24 1:40 AM
A0224148.d	N063249-011C	SAMP	1	02/26/24 1:44 AM
A0224149.d	N063249-011C	SAMP	10	02/26/24 1:49 AM
A0224150.d	N063249-013C	SAMP	1	02/26/24 1:53 AM
A0224151.d	N063249-013C	SAMP	10	02/26/24 1:58 AM
A0224152.d	CCV12	CCV	1	02/26/24 2:03 AM
A0224153.d	CCB12	CCB	1	02/26/24 2:08 AM
A0224154.d	N063249-015C	SAMP	1	02/26/24 2:12 AM
A0224155.d	N063249-015C	SAMP	10	02/26/24 2:17 AM
A0224156.d	N063249-017C	SAMP	1	02/26/24 2:21 AM
A0224157.d	N063249-017C	SAMP	10	02/26/24 2:26 AM
A0224158.d	N063249-018C	SAMP	5	02/26/24 2:31 AM
A0224159.d	N063311-001A	SAMP	1	02/26/24 2:35 AM
A0224160.d	N063311-001A	SAMP	1	02/26/24 2:40 AM
A0224161.d	N063311-001A	SAMP	1	02/26/24 2:45 AM
A0224162.d	RINSE	ICAL	1	02/26/24 2:49 AM
A0224163.d	CCV13	CCV	1	02/26/24 2:54 AM
A0224164.d	CCB13	CCB	1	02/26/24 2:59 AM
A0224165.d	ICSA5	ICSA	1	02/26/24 3:03 AM
A0224166.d	ICSAB5	ICSAB	1	02/26/24 3:08 AM
A0224167.d	MB-107055	MBLK	1	02/26/24 3:13 AM
A0224168.d	LCS-107055	LCS	1	02/26/24 3:17 AM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224169.d	N063295-001B	SAMP	1	02/26/24 3:22 AM
A0224170.d	N063295-002B	SAMP	1	02/26/24 3:26 AM
A0224171.d	N063295-002B	SAMP	5	02/26/24 3:31 AM
A0224172.d	N063295-002B	SAMP	10	02/26/24 3:36 AM
A0224173.d	N063295-002B	SAMP	50	02/26/24 3:40 AM
A0224174.d	N063295-002B	SAMP	100	02/26/24 3:45 AM
A0224175.d	N063295-002B	SAMP	500	02/26/24 3:50 AM
A0224176.d	CCV14	CCV	1	02/26/24 3:54 AM
A0224177.d	CCB14	CCB	1	02/26/24 3:59 AM
A0224178.d	N063295-002B-PS	PS	1	02/26/24 4:04 AM
A0224179.d	N063295-002B-PS	PS	10	02/26/24 4:08 AM
A0224180.d	N063295-002B-PS	PS	100	02/26/24 4:13 AM
A0224181.d	N063295-002B-MS	MS	1	02/26/24 4:18 AM
A0224182.d	N063295-002B-MS	MS	10	02/26/24 4:22 AM
A0224183.d	N063295-002B-MS	MS	100	02/26/24 4:27 AM
A0224184.d	N063295-002B-MSD	MSD	1	02/26/24 4:32 AM
A0224185.d	N063295-002B-MSD	MSD	10	02/26/24 4:36 AM
A0224186.d	N063295-002B-MSD	MSD	100	02/26/24 4:41 AM
A0224187.d	CCV15	CCV	1	02/26/24 4:46 AM
A0224188.d	CCB15	CCB	1	02/26/24 4:50 AM
A0224189.d	N063295-003B	SAMP	1	02/26/24 4:55 AM
A0224190.d	N063295-005C	SAMP	1	02/26/24 4:59 AM
A0224191.d	N063295-005C	SAMP	10	02/26/24 5:04 AM
A0224192.d	N063295-006C	SAMP	1	02/26/24 5:09 AM
A0224193.d	N063295-006C	SAMP	10	02/26/24 5:14 AM
A0224194.d	N063295-007C	SAMP	1	02/26/24 5:18 AM
A0224195.d	N063295-007C	SAMP	10	02/26/24 5:23 AM
A0224196.d	N063295-008C	SAMP	1	02/26/24 5:27 AM
A0224197.d	N063295-008C	SAMP	10	02/26/24 5:32 AM
A0224198.d	CCV16	CCV	1	02/26/24 5:37 AM
A0224199.d	CCB16	CCB	1	02/26/24 5:41 AM
A0224200.d	N063297-001C	SAMP	1	02/26/24 5:46 AM
A0224201.d	N063297-002B	SAMP	1	02/26/24 5:51 AM
A0224202.d	N063297-003B	SAMP	1	02/26/24 5:55 AM
A0224203.d	N063303-001B	SAMP	1	02/26/24 6:00 AM
A0224204.d	N063303-001B	SAMP	10	02/26/24 6:05 AM
A0224205.d	N063303-002B	SAMP	1	02/26/24 6:09 AM
A0224206.d	N063303-002B	SAMP	10	02/26/24 6:14 AM
A0224207.d	N063303-006B	SAMP	5	02/26/24 6:19 AM
A0224208.d	N063303-008B	SAMP	1	02/26/24 6:23 AM
A0224209.d	N063303-008B	SAMP	10	02/26/24 6:28 AM
A0224210.d	CCV17	CCV	1	02/26/24 6:33 AM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224211.d	CCB17	CCB	1	02/26/24 6:37 AM
A0224212.d	ICSA6	ICSA	1	02/26/24 6:42 AM
A0224213.d	ICSAB6	ICSAB	1	02/26/24 6:47 AM
A0224214.d	RINSE	ICAL	1	02/26/24 6:51 AM
A0224215.d	RINSE	ICAL	1	02/26/24 6:56 AM
A0224216.d	RINSE	ICAL	1	02/26/24 7:00 AM
A0224217.d	RINSE	ICAL	1	02/26/24 7:05 AM
A0224218.d	RINSE	ICAL	1	02/26/24 7:10 AM
A0224219.d	RINSE	ICAL	1	02/26/24 7:14 AM
A0224220.d	RINSE	ICAL	1	02/26/24 7:19 AM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/20/2024 11:31:48 AM**
Prep End Date: **2/20/2024 4:00:00 PM**

Reviewed/ Date: JRB 3/13/2024

Initials/ Date: for

Prep Batch **106973** Prep Code:**3010_W_MSDISS_TPK** Technician: **Diane Jetajobe**

Prep Factor Units
mL / mL

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-106973	Aqueous		25	☐	25	1.000		
MB-106973	Aqueous		25	☐	25	1.000		
N063181-001C	Groundwater	<2	25	☐	25	1.000		
N063181-002C	Groundwater	<2	25	☐	25	1.000		
N063181-003C	Groundwater	<2	25	☐	25	1.000		
N063181-003C-MS	Groundwater	<2	25	☐	25	1.000		
N063181-003C-MSD	Groundwater	<2	25	☐	25	1.000		
N063182-001B	Groundwater	<2	25	☐	25	1.000		
N063182-003B	Groundwater	<2	25	☐	25	1.000		
N063182-005B	Groundwater	<2	25	☐	25	1.000		
N063182-008B	Groundwater	<2	25	☐	25	1.000		
N063182-009B	Groundwater	<2	25	☐	25	1.000		
N063182-010B	Groundwater	<2	25	☐	25	1.000		
N063182-011B	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240220B.b
Acq. Date-Time	2024-02-22 14:40:58
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

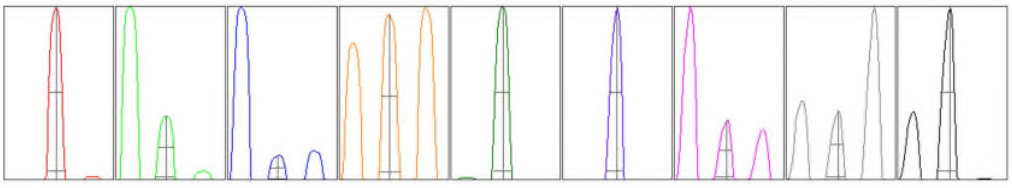
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	5797	57970.91	500.00		1.837	5.000
24	10.00	20008	200084.58	500.00		1.551	5.000
25	10.00	2690	26903.17	500.00		2.940	5.000
26	10.00	3224	32235.80	500.00		2.456	5.000
59	10.00	34982	349824.87	500.00		1.685	5.000
115	10.00	51771	517705.22	500.00		1.604	5.000
206	10.00	10774	107742.12	500.00		1.803	5.000
207	10.00	8750	87496.62	500.00		2.152	5.000
208	10.00	21810	218104.32	500.00		1.494	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.595 %
Doubly Charged	70 / 140 0.876 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	5887.71	8.95	8.90 - 9.10	
24	20875.06	23.90	23.90 - 24.10	
25	2804.39	24.90	24.90 - 25.10	
26	3404.50	25.90	25.90 - 26.10	
59	35717.22	58.95	58.90 - 59.10	
115	51068.43	115.00	114.90 - 115.10	
206	10694.68	205.95	205.90 - 206.10	
207	9252.81	206.95	206.90 - 207.10	
208	23538.10	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.487	0.900	
24	0.42	0.535	0.900	
25	0.41	0.497	0.900	
26	0.42	0.573	0.900	
59	0.39	0.533	0.900	
115	0.35	0.483	0.900	
206	0.36	0.518	0.900	
207	0.35	0.534	0.900	
208	0.35	0.533	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.8 mm	Torch V	1.2 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[H2]

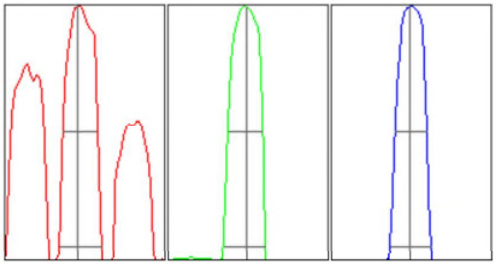
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		370	3704.00			5.824	
59		4948	49482.87			2.603	
115		50299	502985.56			1.913	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.542 %
Doubly Charged	70 / 140 0.383 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	396.56	25.90	25.90 - 26.10	
59	5134.08	59.00	58.90 - 59.10	
115	51662.22	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.66	0.789	0.900	
59	0.67	0.787	0.900	
115	0.60	0.774	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0002	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.00		

Hardware Settings

Torch

Torch H	1.8 mm	Torch V	1.2 mm		

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[He]

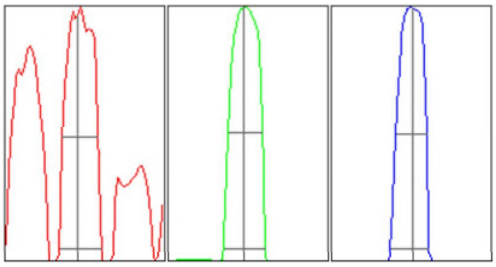
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		129	1287.25			10.276	
59		9841	98411.69			1.883	
115		12860	128599.34			2.017	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.296 %
Doubly Charged	70 / 140 1.072 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	129.76	25.90	25.90 - 26.10	
59	9879.12	58.95	58.90 - 59.10	
115	12880.79	115.05	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.68	0.790	0.900	
59	0.66	0.786	0.900	
115	0.59	0.732	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0002	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.00		

Hardware Settings

Torch

Torch H	1.8 mm	Torch V	1.2 mm

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240222A

Instrument ID: ICPMS-03

Analyte	Data File	A0222002.d	A0222003.d	A0222004.d	A0222005.d	A0222006.d	A0222007.d	A0222008.d	A0222009.d	A0222010.d	
	Acq. Date-Time	02/22/2024 02:49 PM	02/22/2024 02:54 PM	02/22/2024 02:58 PM	02/22/2024 03:03 PM	02/22/2024 03:08 PM	02/22/2024 03:13 PM	02/22/2024 03:17 PM	02/22/2024 03:22 PM	02/22/2024 03:27 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	74317.7		74221.7	75413.6	74741.7	74468.3	75790.9	74043.2	75166	
55 Mn [2]	CPS	137.7		1491.8	13122.2	26656.3	52200.7	107064	264045.7	530334.3	1.0000
72 Ge (ISTD) [2]	CPS	42303.4	42170.8	42207.6	43076.5	42673.3	42101.8	43124.4	42096.2	43190.1	
75 As [2]	CPS	8.9	60	307.7	2939.1	5703.1	11508.3	23411.9	57266.5	117445.5	1.0000
103 Rh (ISTD) [2]	CPS	869653.6		870621.7	871616.7	870358.8	862440.3	879922.6	857954	872023.8	
95 Mo [2]	CPS	15.6		1147.8	11160.6	22528	45099.7	93603.8	231754.9	469392.8	1.0000
159 Tb (ISTD) [3]	CPS	2239327.3		2217504.2	2207983.7	2222994.9	2186783.7	2229374	2196796.8	2262759.1	
137 Ba [3]	CPS	23.3		1956.8	20560.5	41662.6	81932	168321.7	413670.6	855205.3	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION SUMMARY: 240223A

Instrument ID: ICPMS-03

Analyte	Data File	A0223002.d	A0223003.d	A0223004.d	A0223005.d	A0223006.d	A0223007.d	A0223008.d	A0223009.d	A0223010.d	
	Acq. Date-Time	02/23/2024 01:27 PM	02/23/2024 01:32 PM	02/23/2024 01:36 PM	02/23/2024 01:41 PM	02/23/2024 01:46 PM	02/23/2024 01:51 PM	02/23/2024 01:55 PM	02/23/2024 02:00 PM	02/23/2024 02:05 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	72154.9		76342.4	77253.2	77475.2	76063.3	75148	75462.7	76036.5	
55 Mn [2]	CPS	69.9		1458.4	13632.3	27466	54136.3	106561.5	266690.1	547932.1	1.0000
72 Ge (ISTD) [2]	CPS	45744.8	48400.3	48644.2	49579.1	49426.6	48837	47561.1	48045.9	48911.7	
75 As [2]	CPS	19.9	88.8	333.2	3303.5	6714.5	13140.5	26223.8	65989.1	135206.6	1.0000
159 Tb (ISTD) [3]	CPS	2459036.8		2602116.7	2641047.9	2677129.2	2587074.5	2582202.2	2541226.8	2650892	
137 Ba [3]	CPS	50		2356.9	23978.7	49371.8	98171.7	194301.8	479469.4	991663.4	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION SUMMARY: 240225A

Instrument ID: ICPMS-03

Analyte	Data File	A0224002.d	A0224004.d	A0224005.d	A0224006.d	A0224007.d	A0224008.d	A0224009.d	A0224010.d	
	Acq. Date-Time	02/25/2024 02:14 PM	02/25/2024 02:24 PM	02/25/2024 02:29 PM	02/25/2024 02:33 PM	02/25/2024 02:38 PM	02/25/2024 02:43 PM	02/25/2024 02:48 PM	02/25/2024 02:52 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
159 Tb (ISTD) [3]	CPS	2546673.9	2410356.4	2515986.1	2569262.8	2558618.2	2483709.9	2480840.2	2587686.9	
137 Ba [3]	CPS	50	2226.9	23107.4	47656.7	94804.4	187552	472079.2	983581.9	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **ICV** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708775**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.459	0.10	10.00	0	105	90	110				
Barium	10.113	1.0	10.00	0	101	90	110				
Manganese	102.336	0.50	100.0	0	102	90	110				
Molybdenum	10.134	0.50	10.00	0	101	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **ZZZZZZ** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708777**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.108	0.10	0.1000	0	108	80	120				
Barium	0.995	1.0	1.000	0	99.5	80	120				
Manganese	0.548	0.50	0.5000	0	110	80	120				
Molybdenum	0.566	0.50	0.5000	0	113	80	120				

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCV** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708778**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.726	0.10	20.00	0	98.6	90	110				
Barium	19.618	1.0	20.00	0	98.1	90	110				
Manganese	19.747	0.50	20.00	0	98.7	90	110				
Molybdenum	19.447	0.50	20.00	0	97.2	90	110				

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCV** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708789**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.277	0.10	20.00	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCV** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708789**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.951	1.0	20.00	0	99.8	90	110				
Manganese	19.816	0.50	20.00	0	99.1	90	110				
Molybdenum	19.601	0.50	20.00	0	98.0	90	110				

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCV** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708801**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.789	0.10	20.00	0	98.9	90	110				
Barium	19.975	1.0	20.00	0	99.9	90	110				
Manganese	19.855	0.50	20.00	0	99.3	90	110				
Molybdenum	19.449	0.50	20.00	0	97.2	90	110				

Sample ID **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCV** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708813**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.407	0.10	20.00	0	102	90	110				
Barium	20.217	1.0	20.00	0	101	90	110				
Manganese	19.687	0.50	20.00	0	98.4	90	110				
Molybdenum	19.539	0.50	20.00	0	97.7	90	110				

Sample ID **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCV** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708826**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.259	0.10	20.00	0	101	90	110				
Barium	19.781	1.0	20.00	0	98.9	90	110				
Manganese	19.607	0.50	20.00	0	98.0	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCV** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708826**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	19.420	0.50	20.00	0	97.1	90	110				

Sample ID **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCV** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708838**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.228	0.10	20.00	0	101	90	110				
Barium	20.379	1.0	20.00	0	102	90	110				
Manganese	19.885	0.50	20.00	0	99.4	90	110				
Molybdenum	19.155	0.50	20.00	0	95.8	90	110				

Sample ID **CCV6** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCV** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708851**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.267	0.10	20.00	0	101	90	110				
Barium	20.068	1.0	20.00	0	100	90	110				
Manganese	19.976	0.50	20.00	0	99.9	90	110				
Molybdenum	19.551	0.50	20.00	0	97.8	90	110				

Sample ID **CCV7** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCV** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708862**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.648	0.10	20.00	0	98.2	90	110				
Barium	20.251	1.0	20.00	0	101	90	110				
Manganese	19.903	0.50	20.00	0	99.5	90	110				
Molybdenum	19.314	0.50	20.00	0	96.6	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV8**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCV**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708868**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.769	0.10	20.00	0	104	90	110				
Barium	20.275	1.0	20.00	0	101	90	110				
Manganese	20.058	0.50	20.00	0	100	90	110				
Molybdenum	19.501	0.50	20.00	0	97.5	90	110				

Sample ID **CCV9**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCV**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708881**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.421	0.10	20.00	0	102	90	110				
Barium	20.392	1.0	20.00	0	102	90	110				
Manganese	19.709	0.50	20.00	0	98.5	90	110				
Molybdenum	19.272	0.50	20.00	0	96.4	90	110				

Sample ID **CCV10**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCV**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708890**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.214	0.10	20.00	0	101	90	110				
Barium	22.162	1.0	20.00	0	111	90	110				S
Manganese	19.408	0.50	20.00	0	97.0	90	110				
Molybdenum	19.764	0.50	20.00	0	98.8	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

%Rec of Ba in CCV-10 failed, biased high. Affected samples were reanalyzed in R182930. JRB 3/13/2024

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713612**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.429	0.10	10.00	0	104	90	110				
Barium	10.174	1.0	10.00	0	102	90	110				
Manganese	101.593	0.50	100.0	0	102	90	110				
Molybdenum	9.944	0.50	10.00	0	99.4	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ZZZZZZ** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713614**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.092	0.10	0.1000	0	91.5	80	120				
Barium	1.108	1.0	1.000	0	111	80	120				
Manganese	0.546	0.50	0.5000	0	109	80	120				
Molybdenum	0.524	0.50	0.5000	0	105	80	120				

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713615**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.039	0.10	20.00	0	100	90	110				
Barium	19.876	1.0	20.00	0	99.4	90	110				
Manganese	19.940	0.50	20.00	0	99.7	90	110				
Molybdenum	19.336	0.50	20.00	0	96.7	90	110				

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713628**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.030	0.10	20.00	0	100	90	110				
Barium	19.984	1.0	20.00	0	99.9	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713628**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.815	0.50	20.00	0	99.1	90	110				
Molybdenum	19.484	0.50	20.00	0	97.4	90	110				

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713640**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.842	0.10	20.00	0	99.2	90	110				
Barium	19.840	1.0	20.00	0	99.2	90	110				
Manganese	19.773	0.50	20.00	0	98.9	90	110				
Molybdenum	19.479	0.50	20.00	0	97.4	90	110				

Sample ID **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713646**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.766	0.10	20.00	0	98.8	90	110				
Barium	19.918	1.0	20.00	0	99.6	90	110				
Manganese	19.591	0.50	20.00	0	98.0	90	110				
Molybdenum	19.092	0.50	20.00	0	95.5	90	110				

Sample ID **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713658**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.088	0.10	20.00	0	100	90	110				
Barium	20.699	1.0	20.00	0	103	90	110				
Manganese	20.003	0.50	20.00	0	100	90	110				
Molybdenum	19.927	0.50	20.00	0	99.6	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713672**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.546	0.10	20.00	0	103	90	110				
Barium	20.654	1.0	20.00	0	103	90	110				
Manganese	20.328	0.50	20.00	0	102	90	110				
Molybdenum	19.701	0.50	20.00	0	98.5	90	110				

Sample ID **CCV6** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713686**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.762	0.10	20.00	0	98.8	90	110				
Barium	21.352	1.0	20.00	0	107	90	110				
Manganese	19.623	0.50	20.00	0	98.1	90	110				
Molybdenum	20.004	0.50	20.00	0	100	90	110				

Sample ID **CCV7** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713695**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.067	0.10	20.00	0	100	90	110				
Barium	22.103	1.0	20.00	0	111	90	110				S
Manganese	19.918	0.50	20.00	0	99.6	90	110				
Molybdenum	20.352	0.50	20.00	0	102	90	110				

Sample ID **CCV8** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713709**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.122	0.10	20.00	0	101	90	110				
Barium	20.868	1.0	20.00	0	104	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

%Rec of Ba in CCV-7 failed, biased high. Affected samples were reanalyzed in R182939. JRB 3/13/2024

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV8** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713709**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.912	0.50	20.00	0	99.6	90	110				
Molybdenum	19.676	0.50	20.00	0	98.4	90	110				

Sample ID **CCV9** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713721**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.930	0.10	20.00	0	99.7	90	110				
Barium	21.751	1.0	20.00	0	109	90	110				
Manganese	19.706	0.50	20.00	0	98.5	90	110				
Molybdenum	19.929	0.50	20.00	0	99.6	90	110				

Sample ID **CCV10** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713728**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.720	0.10	20.00	0	98.6	90	110				
Barium	21.635	1.0	20.00	0	108	90	110				
Manganese	19.596	0.50	20.00	0	98.0	90	110				
Molybdenum	19.905	0.50	20.00	0	99.5	90	110				

Sample ID **CCV11** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713741**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.953	0.10	20.00	0	99.8	90	110				
Barium	21.740	1.0	20.00	0	109	90	110				
Manganese	19.594	0.50	20.00	0	98.0	90	110				
Molybdenum	20.177	0.50	20.00	0	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV12** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713752**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.609	0.10	20.00	0	98.0	90	110				
Barium	22.443	1.0	20.00	0	112	90	110				S
Manganese	19.647	0.50	20.00	0	98.2	90	110				
Molybdenum	20.246	0.50	20.00	0	101	90	110				

Sample ID **CCV13** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713760**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.787	0.10	20.00	0	98.9	90	110				
Barium	22.496	1.0	20.00	0	112	90	110				S
Manganese	19.731	0.50	20.00	0	98.7	90	110				
Molybdenum	20.168	0.50	20.00	0	101	90	110				

Sample ID **CCV14** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713773**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.661	0.10	20.00	0	98.3	90	110				
Barium	21.969	1.0	20.00	0	110	90	110				
Manganese	19.733	0.50	20.00	0	98.7	90	110				
Molybdenum	19.994	0.50	20.00	0	100	90	110				

Sample ID **CCV15** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713784**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.424	0.10	20.00	0	97.1	90	110				
Barium	22.620	1.0	20.00	0	113	90	110				S

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

%Rec of Ba in CCV12 to CCV16 failed, biased high. However, samples were closed by CCV7/CCB7. JRB 3/13/2024

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV15** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713784**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.746	0.50	20.00	0	98.7	90	110				
Molybdenum	20.077	0.50	20.00	0	100	90	110				

Sample ID **CCV16** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713788**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.868	0.10	20.00	0	99.3	90	110				
Barium	22.098	1.0	20.00	0	110	90	110				S
Manganese	20.059	0.50	20.00	0	100	90	110				
Molybdenum	19.901	0.50	20.00	0	99.5	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

%Rec of Ba in CCV16 failed, high bias. However, Ba is reported at 182939 sequence instead.

3/7/2024

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714090**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	9.828	1.0	10.00	0	98.3	90	110				
Manganese	100.886	0.50	100.0	0	101	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ZZZZZZ** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714092**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	1.026	1.0	1.000	0	103	80	120				
Manganese	0.554	0.50	0.5000	0	111	80	120				

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714094**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.625	1.0	20.00	0	98.1	90	110				
Manganese	19.625	0.50	20.00	0	98.1	90	110				

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714106**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.833	1.0	20.00	0	99.2	90	110				
Manganese	20.008	0.50	20.00	0	100	90	110				

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714117**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.422	1.0	20.00	0	97.1	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714117**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.758	0.50	20.00	0	98.8	90	110				

Sample ID **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714126**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.571	1.0	20.00	0	97.9	90	110				
Manganese	19.779	0.50	20.00	0	98.9	90	110				

Sample ID **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714138**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.567	1.0	20.00	0	97.8	90	110				
Manganese	20.113	0.50	20.00	0	101	90	110				

Sample ID **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714150**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.871	1.0	20.00	0	99.4	90	110				
Manganese	19.723	0.50	20.00	0	98.6	90	110				

Sample ID **CCV6** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714154**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.027	1.0	20.00	0	100	90	110				
Manganese	20.041	0.50	20.00	0	100	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV7** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714168**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.241	1.0	20.00	0	101	90	110				
Manganese	19.644	0.50	20.00	0	98.2	90	110				

Sample ID **CCV8** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714180**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.696	1.0	20.00	0	98.5	90	110				
Manganese	19.665	0.50	20.00	0	98.3	90	110				

Sample ID **CCV9** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714191**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.830	1.0	20.00	0	99.2	90	110				
Manganese	19.440	0.50	20.00	0	97.2	90	110				

Sample ID **CCV10** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714199**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.669	1.0	20.00	0	98.3	90	110				
Manganese	19.832	0.50	20.00	0	99.2	90	110				

Sample ID **CCV11** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714212**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.176	1.0	20.00	0	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	SampType	TestCode	Units	Prep Date	RunNo
CCV11	**CCV**	**6020_DIS_TP**	**µg/L**		**182939**
Client ID: **CCV**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714212**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.405	0.50	20.00	0	97.0	90	110				

Sample ID	SampType	TestCode	Units	Prep Date	RunNo
CCV12	**CCV**	**6020_DIS_TP**	**µg/L**		**182939**
Client ID: **CCV**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714224**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.931	1.0	20.00	0	105	90	110				
Manganese	19.457	0.50	20.00	0	97.3	90	110				

Sample ID	SampType	TestCode	Units	Prep Date	RunNo
CCV13	**CCV**	**6020_DIS_TP**	**µg/L**		**182939**
Client ID: **CCV**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714234**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.460	1.0	20.00	0	102	90	110				
Manganese	19.672	0.50	20.00	0	98.4	90	110				

Sample ID	SampType	TestCode	Units	Prep Date	RunNo
CCV14	**CCV**	**6020_DIS_TP**	**µg/L**		**182939**
Client ID: **CCV**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714247**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.520	1.0	20.00	0	103	90	110				
Manganese	19.622	0.50	20.00	0	98.1	90	110				

Sample ID	SampType	TestCode	Units	Prep Date	RunNo
CCV15	**CCV**	**6020_DIS_TP**	**µg/L**		**182939**
Client ID: **CCV**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714258**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.693	1.0	20.00	0	103	90	110				
Manganese	19.657	0.50	20.00	0	98.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV16**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCV**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714269**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.381	1.0	20.00	0	102	90	110				
Manganese	19.525	0.50	20.00	0	97.6	90	110				

Sample ID **CCV17**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCV**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714281**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.992	1.0	20.00	0	105	90	110				
Manganese	19.685	0.50	20.00	0	98.4	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB** SampType: **ICB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **ICB** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708776**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB1** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCB** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708790**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB2** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCB** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708802**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB3** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCB** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708814**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708814**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708827**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708839**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708852**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB6** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCB** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708852**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	ND	0.50									

Sample ID **CCB7** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCB** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708863**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB8** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCB** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708869**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB9** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **CCB** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5708882**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB10**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **CCB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708891**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB**	SampType: **ICB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713613**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713629**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.185	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713641**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.191	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713647**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB3** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713647**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	0.184	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB4** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713660**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB5** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713673**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB6** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713687**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB7**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713696**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB8**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713710**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB9**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713722**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB10**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713729**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB10**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713729**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB11**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713742**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB12**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713753**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB13**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713761**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB14**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713774**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB15**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713785**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **CCB16**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713789**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB**	SampType: **ICB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714091**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714107**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714118**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714127**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714139**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	CCB4	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	CCB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714139

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID	CCB5	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	CCB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714151

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID	CCB6	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	CCB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714155

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID	CCB7	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	CCB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714169

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID	CCB8	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	CCB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714181

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB9**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714192**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB10**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714200**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB11**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714213**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB12**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714225**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB13**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714235**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	CCB13	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	CCB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/26/2024	SeqNo:	5714235

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID	CCB14	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	CCB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/26/2024	SeqNo:	5714248

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID	CCB15	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	CCB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/26/2024	SeqNo:	5714259

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID	CCB16	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	CCB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/26/2024	SeqNo:	5714270

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID	CCB17	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	CCB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/26/2024	SeqNo:	5714282

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **ICSA** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708779**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **ICSAB** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708780**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.805	0.10	20.00	0	104	80	120				
Barium	20.387	1.0	20.00	0	102	80	120				
Manganese	20.459	0.50	20.00	0	102	80	120				
Molybdenum	20.016	0.50	20.00	0	100	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **ICSA** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708815**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **ICSAB** Batch ID: **R182849** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708816**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.997	0.10	20.00	0	105	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **ICSAB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708816**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.455	1.0	20.00	0	102	80	120				
Manganese	20.445	0.50	20.00	0	102	80	120				
Molybdenum	19.612	0.50	20.00	0	98.1	80	120				

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **ICSA**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708840**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **ICSAB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708841**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.726	0.10	20.00	0	104	80	120				
Barium	20.862	1.0	20.00	0	104	80	120				
Manganese	20.397	0.50	20.00	0	102	80	120				
Molybdenum	19.766	0.50	20.00	0	98.8	80	120				

Sample ID **ICSA4**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **ICSA**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708870**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA4**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **ICSA**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708870**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	ND	0.50									

Sample ID **ICSAB4**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **ICSAB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708871**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.860	0.10	20.00	0	104	80	120				
Barium	21.004	1.0	20.00	0	105	80	120				
Manganese	20.574	0.50	20.00	0	103	80	120				
Molybdenum	19.753	0.50	20.00	0	98.8	80	120				

Sample ID **ICSA5**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **ICSA**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708892**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **ICSAB5**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182849**
Client ID: **ICSAB**	Batch ID: **R182849**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708893**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.394	0.10	20.00	0	102	80	120				
Barium	22.625	1.0	20.00	0	113	80	120				
Manganese	19.814	0.50	20.00	0	99.1	80	120				
Molybdenum	20.387	0.50	20.00	0	102	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSA**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713616**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									

Sample ID **ICSAB1**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSAB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713617**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.604	0.10	20.00	0	103	80	120				
Barium	20.398	1.0	20.00	0	102	80	120				
Manganese	20.364	0.50	20.00	0	102	80	120				
Molybdenum	19.903	0.50	20.00	0	99.5	80	120				

Sample ID **ICSA2**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSA**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713661**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.070	0.50									
Molybdenum	ND	0.50									

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSAB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713662**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.469	0.10	20.00	0	102	80	120				
Barium	20.619	1.0	20.00	0	103	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	ICSAB2	SampType:	ICSAB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	ICSAB	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713662

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	20.279	0.50	20.00	0	101	80	120				
Molybdenum	19.950	0.50	20.00	0	99.7	80	120				

Sample ID	ICSA3	SampType:	ICSA	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	ICSA	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713674

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.060	0.50									
Molybdenum	ND	0.50									

Sample ID	ICSAB3	SampType:	ICSAB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	ICSAB	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713675

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.275	0.10	20.00	0	101	80	120				
Barium	20.581	1.0	20.00	0	103	80	120				
Manganese	20.190	0.50	20.00	0	101	80	120				
Molybdenum	19.590	0.50	20.00	0	98.0	80	120				

Sample ID	ICSA4	SampType:	ICSA	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	ICSA	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713697

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.066	0.50									
Molybdenum	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSAB4**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSAB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713698**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.323	0.10	20.00	0	102	80	120				
Barium	22.109	1.0	20.00	0	111	80	120				
Manganese	20.315	0.50	20.00	0	102	80	120				
Molybdenum	20.187	0.50	20.00	0	101	80	120				

Sample ID **ICSA5**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSA**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713730**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.072	0.50									
Molybdenum	ND	0.50									

Sample ID **ICSAB5**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSAB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713731**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.984	0.10	20.00	0	99.9	80	120				
Barium	21.848	1.0	20.00	0	109	80	120				
Manganese	20.009	0.50	20.00	0	100	80	120				
Molybdenum	20.002	0.50	20.00	0	100	80	120				

Sample ID **ICSA6**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSA**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713762**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA6**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSA**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713762**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	0.061	0.50									
Molybdenum	ND	0.50									

Sample ID **ICSAB6**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSAB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713763**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.902	0.10	20.00	0	99.5	80	120				
Barium	22.348	1.0	20.00	0	112	80	120				
Manganese	20.403	0.50	20.00	0	102	80	120				
Molybdenum	20.057	0.50	20.00	0	100	80	120				

Sample ID **ICSA7**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSA**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713790**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.073	0.50									
Molybdenum	ND	0.50									

Sample ID **ICSAB7**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSAB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713791**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.302	0.10	20.00	0	102	80	120				
Barium	22.309	1.0	20.00	0	112	80	120				
Manganese	20.288	0.50	20.00	0	101	80	120				
Molybdenum	19.818	0.50	20.00	0	99.1	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714095**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB1**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSAB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714096**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.091	1.0	20.00	0	100	80	120				
Manganese	20.503	0.50	20.00	0	103	80	120				

Sample ID **ICSA2**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714128**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSAB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714129**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.003	1.0	20.00	0	100	80	120				
Manganese	20.455	0.50	20.00	0	102	80	120				

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714156**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714156**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSAB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714157**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.723	1.0	20.00	0	104	80	120				
Manganese	20.273	0.50	20.00	0	101	80	120				

Sample ID **ICSA4**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714201**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB4**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSAB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714202**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.034	1.0	20.00	0	100	80	120				
Manganese	20.176	0.50	20.00	0	101	80	120				

Sample ID **ICSA5**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714236**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSAB5**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSAB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714237**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.853	1.0	20.00	0	104	80	120				
Manganese	19.953	0.50	20.00	0	99.8	80	120				

Sample ID **ICSA6**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714283**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB6**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSAB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714284**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	21.492	1.0	20.00	0	107	80	120				
Manganese	20.111	0.50	20.00	0	101	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240222A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	2239327.3	2239327.3	100	PASS	30-150	74317.7	74317.7	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	2203989.8	2239327.3	98.42	PASS	30-150	75064.3	74317.7	101	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	2217504.2	2239327.3	99.03	PASS	30-150	74221.7	74317.7	99.87	PASS	30-150
Std3-5/50 ppb	ICAL	1	2207983.7	2239327.3	98.6	PASS	30-150	75413.6	74317.7	101.47	PASS	30-150
Std4-10/100 ppb	ICAL	1	2222994.9	2239327.3	99.27	PASS	30-150	74741.7	74317.7	100.57	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	2186783.7	2239327.3	97.65	PASS	30-150	74468.3	74317.7	100.2	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	2229374	2239327.3	99.56	PASS	30-150	75790.9	74317.7	101.98	PASS	30-150
Std7-100/1000 ppb	ICAL	1	2196796.8	2239327.3	98.1	PASS	30-150	74043.2	74317.7	99.63	PASS	30-150
Std8-200/2000 ppb	ICAL	1	2262759.1	2239327.3	101.05	PASS	30-150	75166	74317.7	101.14	PASS	30-150
ICV	ICV	1	2206052.4	2239327.3	98.51	PASS	30-150	73191.7	74317.7	98.48	PASS	30-150
ICB	ICB	1	2215919.9	2239327.3	98.95	PASS	30-150	74494	74317.7	100.24	PASS	30-150
LLICV1	CCV1	1	2187366.4	2239327.3	97.68	PASS	30-150	73806.5	74317.7	99.31	PASS	30-150
MLCCV	CCV	1	2223097.9	2239327.3	99.28	PASS	30-150	75228.3	74317.7	101.23	PASS	30-150
ICSA1	ICSA	1	2253399.6	2239327.3	100.63	PASS	30-150	75910.2	74317.7	102.14	PASS	30-150
ICSAB1	ICSAB	1	2220146.7	2239327.3	99.14	PASS	30-150	75644.8	74317.7	101.79	PASS	30-150
CCV1	CCV	1	2221264.8	2239327.3	99.19	PASS	30-150	81339.2	74317.7	109.45	PASS	30-150
CCB1	CCB	1	2199944	2239327.3	98.24	PASS	30-150	81399.4	74317.7	109.53	PASS	30-150
CCV2	CCV	1	2293474.9	2239327.3	102.42	PASS	30-150	80086.4	74317.7	107.76	PASS	30-150
CCB2	CCB	1	2231109.8	2239327.3	99.63	PASS	30-150	77497.5	74317.7	104.28	PASS	30-150
CCV3	CCV	1	2256749	2239327.3	100.78	PASS	30-150	80189.1	74317.7	107.9	PASS	30-150
CCB3	CCB	1	2246549.4	2239327.3	100.32	PASS	30-150	78822.5	74317.7	106.06	PASS	30-150
ICSA2	ICSA	1	2253647.4	2239327.3	100.64	PASS	30-150	78291.2	74317.7	105.35	PASS	30-150
ICSAB2	ICSAB	1	2182753.8	2239327.3	97.47	PASS	30-150	77019.6	74317.7	103.64	PASS	30-150
CCV4	CCV	1	2284884.5	2239327.3	102.03	PASS	30-150	83110.9	74317.7	111.83	PASS	30-150
CCB4	CCB	1	2239268.8	2239327.3	100	PASS	30-150	78888.4	74317.7	106.15	PASS	30-150
CCV5	CCV	1	2408725.2	2239327.3	107.56	PASS	30-150	86294.9	74317.7	116.12	PASS	30-150
CCB5	CCB	1	2388469.8	2239327.3	106.66	PASS	30-150	85276.3	74317.7	114.75	PASS	30-150
ICSA3	ICSA	1	2465692.6	2239327.3	110.11	PASS	30-150	86919.1	74317.7	116.96	PASS	30-150
ICSAB3	ICSAB	1	2420629.9	2239327.3	108.1	PASS	30-150	86928	74317.7	116.97	PASS	30-150
CCV6	CCV	1	2438761.9	2239327.3	108.91	PASS	30-150	88192.4	74317.7	118.67	PASS	30-150
CCB6	CCB	1	2400412.4	2239327.3	107.19	PASS	30-150	86735.7	74317.7	116.71	PASS	30-150
CCV7	CCV	1	2489645.9	2239327.3	111.18	PASS	30-150	89607.7	74317.7	120.57	PASS	30-150
CCB7	CCB	1	2434194.3	2239327.3	108.7	PASS	30-150	87781.4	74317.7	118.12	PASS	30-150
MDL 4	SAMP	1	2453253.1	2239327.3	109.55	PASS	30-150	88317.4	74317.7	118.84	PASS	30-150
MDL 4	SAMP	1	2437969.2	2239327.3	108.87	PASS	30-150	87974.6	74317.7	118.38	PASS	30-150
CCV8	CCV	1	2479009.2	2239327.3	110.7	PASS	30-150	89339.5	74317.7	120.21	PASS	30-150
CCB8	CCB	1	2436739.5	2239327.3	108.82	PASS	30-150	88513.9	74317.7	119.1	PASS	30-150
ICSA4	ICSA	1	2502678.7	2239327.3	111.76	PASS	30-150	90406.2	74317.7	121.65	PASS	30-150
ICSAB4	ICSAB	1	2455325.3	2239327.3	109.65	PASS	30-150	88829	74317.7	119.53	PASS	30-150
MB-106973	MBLK	1	2385295.3	2239327.3	106.52	PASS	30-150	87332.3	74317.7	117.51	PASS	30-150
LCS-106973	LCS	1	2439754.9	2239327.3	108.95	PASS	30-150	88524.1	74317.7	119.12	PASS	30-150

INTERNAL STANDARD: 240222A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
N063181-001C	SAMP	1	2255565.7	2239327.3	100.73	PASS	30-150	88106.4	74317.7	118.55	PASS	30-150
N063181-002C	SAMP	1	2071856.4	2239327.3	92.52	PASS	30-150	90869.9	74317.7	122.27	PASS	30-150
N063181-003C	SAMP	1	2303257	2239327.3	102.85	PASS	30-150	93382.5	74317.7	125.65	PASS	30-150
N063181-003C	SAMP	5	2448928.9	2239327.3	109.36	PASS	30-150	93563.6	74317.7	125.9	PASS	30-150
N063181-003C-PS	PS	1	2317996.4	2239327.3	103.51	PASS	30-150	92932.3	74317.7	125.05	PASS	30-150
N063181-003C-MS	MS	1	2350109.2	2239327.3	104.95	PASS	30-150	95202.8	74317.7	128.1	PASS	30-150
N063181-003C-MSD	MSD	1	2345773.1	2239327.3	104.75	PASS	30-150	94733.6	74317.7	127.47	PASS	30-150
CCV9	CCV	1	2575778.8	2239327.3	115.03	PASS	30-150	98459.2	74317.7	132.48	PASS	30-150
CCB9	CCB	1	2500915.6	2239327.3	111.68	PASS	30-150	95740.2	74317.7	128.83	PASS	30-150
N063182-001B	SAMP	1	2524182.6	2239327.3	112.72	PASS	30-150	90928.1	74317.7	122.35	PASS	30-150
N063182-003B	SAMP	1	2324685.2	2239327.3	103.81	PASS	30-150	91258.6	74317.7	122.8	PASS	30-150
N063182-005B	SAMP	1	1796031.7	2239327.3	80.2	PASS	30-150	86508.1	74317.7	116.4	PASS	30-150
N063182-008B	SAMP	1	1831470.9	2239327.3	81.79	PASS	30-150	88466	74317.7	119.04	PASS	30-150
N063182-009B	SAMP	1	2206542.2	2239327.3	98.54	PASS	30-150	97225.5	74317.7	130.82	PASS	30-150
N063182-010B	SAMP	1	2300629.4	2239327.3	102.74	PASS	30-150	98615.7	74317.7	132.69	PASS	30-150
N063182-011B	SAMP	1	1416973.2	2239327.3	63.28	PASS	30-150	78175.2	74317.7	105.19	PASS	30-150
CCV10	CCV	1	2140415.1	2239327.3	95.58	PASS	30-150	109565.5	74317.7	147.43	PASS	30-150
CCB10	CCB	1	2107149.3	2239327.3	94.1	PASS	30-150	106474.6	74317.7	143.27	PASS	30-150
ICSA5	ICSA	1	2160786.5	2239327.3	96.49	PASS	30-150	107287.6	74317.7	144.36	PASS	30-150
ICSAB5	ICSAB	1	2152280.5	2239327.3	96.11	PASS	30-150	106178.3	74317.7	142.87	PASS	30-150
CCV11	CCV	1	2114912.9	2239327.3	94.44	PASS	30-150	104200.2	74317.7	140.21	PASS	30-150
CCB11	CCB	1	2105839.6	2239327.3	94.04	PASS	30-150	101766.8	74317.7	136.93	PASS	30-150
CCV12	CCV	1	1992058.5	2239327.3	88.96	PASS	30-150	107518.2	74317.7	144.67	PASS	30-150
CCB12	CCB	1	1959698.9	2239327.3	87.51	PASS	30-150	103006.5	74317.7	138.6	PASS	30-150
CCV13	CCV	1	2005885.9	2239327.3	89.58	PASS	30-150	102310.2	74317.7	137.67	PASS	30-150
CCB13	CCB	1	1984925.5	2239327.3	88.64	PASS	30-150	99342.2	74317.7	133.67	PASS	30-150
ICSA6	ICSA	1	2037801.7	2239327.3	91	PASS	30-150	99544.9	74317.7	133.95	PASS	30-150
ICSAB6	ICSAB	1	2033935.2	2239327.3	90.83	PASS	30-150	98392.3	74317.7	132.39	PASS	30-150
CCV14	CCV	1	2069711.2	2239327.3	92.43	PASS	30-150	96374.2	74317.7	129.68	PASS	30-150
CCB14	CCB	1	2052600.6	2239327.3	91.66	PASS	30-150	92763.6	74317.7	124.82	PASS	30-150
ICSA7	ICSA	1	2117525.2	2239327.3	94.56	PASS	30-150	93513.4	74317.7	125.83	PASS	30-150
ICSAB7	ICSAB	1	2149015.9	2239327.3	95.97	PASS	30-150	91482.2	74317.7	123.1	PASS	30-150

INTERNAL STANDARD: 240222A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]					103 Rh (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	42303.4	42303.4	100	PASS	30-150	869653.6	869653.6	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	42170.8	42303.4	99.69	PASS	30-150	868676.1	869653.6	99.89	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	42207.6	42303.4	99.77	PASS	30-150	870621.7	869653.6	100.11	PASS	30-150
Std3-5/50 ppb	ICAL	1	43076.5	42303.4	101.83	PASS	30-150	871616.7	869653.6	100.23	PASS	30-150
Std4-10/100 ppb	ICAL	1	42673.3	42303.4	100.87	PASS	30-150	870358.8	869653.6	100.08	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	42101.8	42303.4	99.52	PASS	30-150	862440.3	869653.6	99.17	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	43124.4	42303.4	101.94	PASS	30-150	879922.6	869653.6	101.18	PASS	30-150
Std7-100/1000 ppb	ICAL	1	42096.2	42303.4	99.51	PASS	30-150	857954	869653.6	98.65	PASS	30-150
Std8-200/2000 ppb	ICAL	1	43190.1	42303.4	102.1	PASS	30-150	872023.8	869653.6	100.27	PASS	30-150
ICV	ICV	1	41914.6	42303.4	99.08	PASS	30-150	855905.1	869653.6	98.42	PASS	30-150
ICB	ICB	1	42363.5	42303.4	100.14	PASS	30-150	877653.5	869653.6	100.92	PASS	30-150
LLICV1	CCV1	1	41749.8	42303.4	98.69	PASS	30-150	868069.5	869653.6	99.82	PASS	30-150
MLCCV	CCV	1	42624.2	42303.4	100.76	PASS	30-150	877423	869653.6	100.89	PASS	30-150
ICSA1	ICSA	1	43306	42303.4	102.37	PASS	30-150	890441.8	869653.6	102.39	PASS	30-150
ICSAB1	ICSAB	1	42449.3	42303.4	100.34	PASS	30-150	882553.3	869653.6	101.48	PASS	30-150
CCV1	CCV	1	45735.9	42303.4	108.11	PASS	30-150	943473.9	869653.6	108.49	PASS	30-150
CCB1	CCB	1	45892.9	42303.4	108.49	PASS	30-150	948191.9	869653.6	109.03	PASS	30-150
CCV2	CCV	1	45947.6	42303.4	108.61	PASS	30-150	952287.3	869653.6	109.5	PASS	30-150
CCB2	CCB	1	44141.6	42303.4	104.35	PASS	30-150	921679.3	869653.6	105.98	PASS	30-150
CCV3	CCV	1	45509.7	42303.4	107.58	PASS	30-150	961752.2	869653.6	110.59	PASS	30-150
CCB3	CCB	1	45187.7	42303.4	106.82	PASS	30-150	947293.3	869653.6	108.93	PASS	30-150
ICSA2	ICSA	1	44871.3	42303.4	106.07	PASS	30-150	946827.9	869653.6	108.87	PASS	30-150
ICSAB2	ICSAB	1	44386.7	42303.4	104.92	PASS	30-150	936225.8	869653.6	107.66	PASS	30-150
CCV4	CCV	1	47173.3	42303.4	111.51	PASS	30-150	988570.6	869653.6	113.67	PASS	30-150
CCB4	CCB	1	45148.8	42303.4	106.73	PASS	30-150	956101.8	869653.6	109.94	PASS	30-150
CCV5	CCV	1	49892.4	42303.4	117.94	PASS	30-150	1042171.8	869653.6	119.84	PASS	30-150
CCB5	CCB	1	49073.3	42303.4	116	PASS	30-150	1031447	869653.6	118.6	PASS	30-150
ICSA3	ICSA	1	50360.5	42303.4	119.05	PASS	30-150	1051615.7	869653.6	120.92	PASS	30-150
ICSAB3	ICSAB	1	50520.9	42303.4	119.43	PASS	30-150	1048713.2	869653.6	120.59	PASS	30-150
CCV6	CCV	1	50949	42303.4	120.44	PASS	30-150	1074116.5	869653.6	123.51	PASS	30-150
CCB6	CCB	1	50426.3	42303.4	119.2	PASS	30-150	1057519.5	869653.6	121.6	PASS	30-150
CCV7	CCV	1	52704.6	42303.4	124.59	PASS	30-150	1097241.6	869653.6	126.17	PASS	30-150
CCB7	CCB	1	51064.8	42303.4	120.71	PASS	30-150	1078567.7	869653.6	124.02	PASS	30-150
MDL 4	SAMP	1	51534.1	42303.4	121.82	PASS	30-150	1087694.3	869653.6	125.07	PASS	30-150
MDL 4	SAMP	1	51797.2	42303.4	122.44	PASS	30-150	1085211.7	869653.6	124.79	PASS	30-150
CCV8	CCV	1	51488.5	42303.4	121.71	PASS	30-150	1092249.3	869653.6	125.6	PASS	30-150
CCB8	CCB	1	51250.9	42303.4	121.15	PASS	30-150	1082858.9	869653.6	124.52	PASS	30-150
ICSA4	ICSA	1	52366.8	42303.4	123.79	PASS	30-150	1110250.9	869653.6	127.67	PASS	30-150
ICSAB4	ICSAB	1	51305.6	42303.4	121.28	PASS	30-150	1094233.1	869653.6	125.82	PASS	30-150
MB-106973	MBLK	1	50431.8	42303.4	119.21	PASS	30-150	1070700.6	869653.6	123.12	PASS	30-150
LCS-106973	LCS	1	51001.4	42303.4	120.56	PASS	30-150	1078758.5	869653.6	124.05	PASS	30-150

INTERNAL STANDARD: 240222A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]					103 Rh (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
N063181-001C	SAMP	1	49696.3	42303.4	117.48	PASS	30-150	952826.4	869653.6	109.56	PASS	30-150
N063181-002C	SAMP	1	50433	42303.4	119.22	PASS	30-150	917472.2	869653.6	105.5	PASS	30-150
N063181-003C	SAMP	1	52882.9	42303.4	125.01	PASS	30-150	1014799.1	869653.6	116.69	PASS	30-150
N063181-003C	SAMP	5	55149.1	42303.4	130.37	PASS	30-150	1083002.5	869653.6	124.53	PASS	30-150
N063181-003C-PS	PS	1	53031.1	42303.4	125.36	PASS	30-150	1015219.2	869653.6	116.74	PASS	30-150
N063181-003C-MS	MS	1	54676.6	42303.4	129.25	PASS	30-150	1028416.7	869653.6	118.26	PASS	30-150
N063181-003C-MSD	MSD	1	53772.4	42303.4	127.11	PASS	30-150	1035926.1	869653.6	119.12	PASS	30-150
CCV9	CCV	1	57240.8	42303.4	135.31	PASS	30-150	1179782.3	869653.6	135.66	PASS	30-150
CCB9	CCB	1	56400	42303.4	133.32	PASS	30-150	1164437.5	869653.6	133.9	PASS	30-150
N063182-001B	SAMP	1	53469.2	42303.4	126.39	PASS	30-150	1052053	869653.6	120.97	PASS	30-150
N063182-003B	SAMP	1	51973.3	42303.4	122.86	PASS	30-150	986541	869653.6	113.44	PASS	30-150
N063182-005B	SAMP	1	46974.9	42303.4	111.04	PASS	30-150	834684	869653.6	95.98	PASS	30-150
N063182-008B	SAMP	1	48878.2	42303.4	115.54	PASS	30-150	864201.2	869653.6	99.37	PASS	30-150
N063182-009B	SAMP	1	54660.9	42303.4	129.21	PASS	30-150	1004831.6	869653.6	115.54	PASS	30-150
N063182-010B	SAMP	1	57331.1	42303.4	135.52	PASS	30-150	1061690.5	869653.6	122.08	PASS	30-150
N063182-011B	SAMP	1	40740.5	42303.4	96.31	PASS	30-150	677146.7	869653.6	77.86	PASS	30-150
CCV10	CCV	1	62445.3	42303.4	147.61	PASS	30-150	1163891.8	869653.6	133.83	PASS	30-150
CCB10	CCB	1	61450.4	42303.4	145.26	PASS	30-150	1137457.9	869653.6	130.79	PASS	30-150
ICSA5	ICSA	1	61233	42303.4	144.75	PASS	30-150	1159723.4	869653.6	133.35	PASS	30-150
ICSAB5	ICSAB	1	60682	42303.4	143.44	PASS	30-150	1140458	869653.6	131.14	PASS	30-150
CCV11	CCV	1	60591.7	42303.4	143.23	PASS	30-150	1145880.2	869653.6	131.76	PASS	30-150
CCB11	CCB	1	58959.2	42303.4	139.37	PASS	30-150	1133643.9	869653.6	130.36	PASS	30-150
CCV12	CCV	1	61405.9	42303.4	145.16	PASS	30-150	1133921.1	869653.6	130.39	PASS	30-150
CCB12	CCB	1	59189.8	42303.4	139.92	PASS	30-150	1111935.5	869653.6	127.86	PASS	30-150
CCV13	CCV	1	59611.4	42303.4	140.91	PASS	30-150	1114577.3	869653.6	128.16	PASS	30-150
CCB13	CCB	1	58084.9	42303.4	137.31	PASS	30-150	1097149.2	869653.6	126.16	PASS	30-150
ICSA6	ICSA	1	59108.6	42303.4	139.73	PASS	30-150	1118726.1	869653.6	128.64	PASS	30-150
ICSAB6	ICSAB	1	57825.2	42303.4	136.69	PASS	30-150	1115737.3	869653.6	128.3	PASS	30-150
CCV14	CCV	1	57841.9	42303.4	136.73	PASS	30-150	1115617.1	869653.6	128.28	PASS	30-150
CCB14	CCB	1	55400.2	42303.4	130.96	PASS	30-150	1094929.6	869653.6	125.9	PASS	30-150
ICSA7	ICSA	1	56568.5	42303.4	133.72	PASS	30-150	1126483	869653.6	129.53	PASS	30-150
ICSAB7	ICSAB	1	56094.8	42303.4	132.6	PASS	30-150	1114246.2	869653.6	128.13	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	2459036.8	2459036.8	100	PASS	30-150	72154.9	72154.9	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	2598836.2	2459036.8	105.69	PASS	30-150	75819.9	72154.9	105.08	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	2602116.7	2459036.8	105.82	PASS	30-150	76342.4	72154.9	105.8	PASS	30-150
Std3-5/50 ppb	ICAL	1	2641047.9	2459036.8	107.4	PASS	30-150	77253.2	72154.9	107.07	PASS	30-150
Std4-10/100 ppb	ICAL	1	2677129.2	2459036.8	108.87	PASS	30-150	77475.2	72154.9	107.37	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	2587074.5	2459036.8	105.21	PASS	30-150	76063.3	72154.9	105.42	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	2582202.2	2459036.8	105.01	PASS	30-150	75148	72154.9	104.15	PASS	30-150
Std7-100/1000 ppb	ICAL	1	2541226.8	2459036.8	103.34	PASS	30-150	75462.7	72154.9	104.58	PASS	30-150
Std8-200/2000 ppb	ICAL	1	2650892	2459036.8	107.8	PASS	30-150	76036.5	72154.9	105.38	PASS	30-150
ICV	ICV	1	2483190.9	2459036.8	100.98	PASS	30-150	72025.6	72154.9	99.82	PASS	30-150
ICB	ICB	1	2571855.2	2459036.8	104.59	PASS	30-150	74886.9	72154.9	103.79	PASS	30-150
LLICV1	LLICV	1	2612657.7	2459036.8	106.25	PASS	30-150	75342.3	72154.9	104.42	PASS	30-150
MLCCV	CCV	1	2664630.7	2459036.8	108.36	PASS	30-150	76073.3	72154.9	105.43	PASS	30-150
ICSA1	ICSA	1	2706916.7	2459036.8	110.08	PASS	30-150	76901.4	72154.9	106.58	PASS	30-150
ICSAB1	ICSAB	1	2593782.3	2459036.8	105.48	PASS	30-150	73937.1	72154.9	102.47	PASS	30-150
MDL 4	ICAL	1	2670548.8	2459036.8	108.6	PASS	30-150	76134.7	72154.9	105.52	PASS	30-150
CCV1	CCV	1	2685857.4	2459036.8	109.22	PASS	30-150	78633	72154.9	108.98	PASS	30-150
CCB1	CCB	1	2616529	2459036.8	106.4	PASS	30-150	75792	72154.9	105.04	PASS	30-150
CCV2	CCV	1	2692999.6	2459036.8	109.51	PASS	30-150	77108	72154.9	106.86	PASS	30-150
CCB2	CCB	1	2601268.7	2459036.8	105.78	PASS	30-150	75349	72154.9	104.43	PASS	30-150
CCV3	CCV	1	2693223.1	2459036.8	109.52	PASS	30-150	77729.8	72154.9	107.73	PASS	30-150
CCB3	CCB	1	2631123.9	2459036.8	107	PASS	30-150	76196.1	72154.9	105.6	PASS	30-150
CCV4	CCV	1	2717325.6	2459036.8	110.5	PASS	30-150	77725.3	72154.9	107.72	PASS	30-150
CCB4	CCB	1	2589231	2459036.8	105.29	PASS	30-150	74891.4	72154.9	103.79	PASS	30-150
CCB4	CCB	1	2662733.8	2459036.8	108.28	PASS	30-150	76863.5	72154.9	106.53	PASS	30-150
ICSA2	ICSA	1	2702443.6	2459036.8	109.9	PASS	30-150	78266.7	72154.9	108.47	PASS	30-150
ICSAB2	ICSAB	1	2720121.5	2459036.8	110.62	PASS	30-150	78381.7	72154.9	108.63	PASS	30-150
CCV5	CCV	1	2751728.2	2459036.8	111.9	PASS	30-150	79154.2	72154.9	109.7	PASS	30-150
CCB5	CCB	1	2725557.6	2459036.8	110.84	PASS	30-150	77605.8	72154.9	107.55	PASS	30-150
ICSA3	ICSA	1	2777216.4	2459036.8	112.94	PASS	30-150	80012.9	72154.9	110.89	PASS	30-150
ICSAB3	ICSAB	1	2801833.3	2459036.8	113.94	PASS	30-150	80477.2	72154.9	111.53	PASS	30-150
N063181-001C	SAMP	10	2707420.2	2459036.8	110.1	PASS	30-150	77483.1	72154.9	107.38	PASS	30-150
N063181-002C	SAMP	10	2673941.4	2459036.8	108.74	PASS	30-150	77285.5	72154.9	107.11	PASS	30-150
N063182-001B	SAMP	1	2773695	2459036.8	112.8	PASS	30-150	77336.9	72154.9	107.18	PASS	30-150
N063182-003B	SAMP	1	2544263.1	2459036.8	103.47	PASS	30-150	75855.7	72154.9	105.13	PASS	30-150
N063182-003B	SAMP	10	2782686.6	2459036.8	113.16	PASS	30-150	77941.9	72154.9	108.02	PASS	30-150
N063182-005B	SAMP	1	1821792	2459036.8	74.09	PASS	30-150	76211.9	72154.9	105.62	PASS	30-150
N063182-005B	SAMP	10	2423270.6	2459036.8	98.55	PASS	30-150	84553.6	72154.9	117.18	PASS	30-150
N063182-008B	SAMP	1	1855938.4	2459036.8	75.47	PASS	30-150	78591.5	72154.9	108.92	PASS	30-150
N063182-009B	SAMP	1	2367398.9	2459036.8	96.27	PASS	30-150	85165.8	72154.9	118.03	PASS	30-150
N063182-009B	SAMP	10	2489568.1	2459036.8	101.24	PASS	30-150	87877.5	72154.9	121.79	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
CCV6	CCV	1	2620084.7	2459036.8	106.55	PASS	30-150	90893.6	72154.9	125.97	PASS	30-150
CCB6	CCB	1	2602736.8	2459036.8	105.84	PASS	30-150	86061.5	72154.9	119.27	PASS	30-150
N063182-009B	SAMP	1	2420522	2459036.8	98.43	PASS	30-150	80202.6	72154.9	111.15	PASS	30-150
N063182-009B	SAMP	1	2417135.7	2459036.8	98.3	PASS	30-150	80419.1	72154.9	111.45	PASS	30-150
N063182-009B	SAMP	1	2449097.1	2459036.8	99.6	PASS	30-150	80220.3	72154.9	111.18	PASS	30-150
N063182-009B	SAMP	1	2461586.2	2459036.8	100.1	PASS	30-150	79586.1	72154.9	110.3	PASS	30-150
N063182-010B	SAMP	10	2711176.7	2459036.8	110.25	PASS	30-150	81956.5	72154.9	113.58	PASS	30-150
N063182-011B	SAMP	1	1542422.2	2459036.8	62.72	PASS	30-150	70022.6	72154.9	97.05	PASS	30-150
N063182-011B	SAMP	100	2521864.5	2459036.8	102.55	PASS	30-150	94001.7	72154.9	130.28	PASS	30-150
CCV7	CCV	1	2611394.6	2459036.8	106.2	PASS	30-150	95356	72154.9	132.15	PASS	30-150
CCB7	CCB	1	2549129.6	2459036.8	103.66	PASS	30-150	92681.1	72154.9	128.45	PASS	30-150
ICSA4	ICSA	1	2589679.3	2459036.8	105.31	PASS	30-150	92615	72154.9	128.36	PASS	30-150
ICSAB4	ICSAB	1	2610405.2	2459036.8	106.16	PASS	30-150	91494.6	72154.9	126.8	PASS	30-150
CCV8	CCV	1	2843491.6	2459036.8	115.63	PASS	30-150	83057.4	72154.9	115.11	PASS	30-150
CCB8	CCB	1	2793886	2459036.8	113.62	PASS	30-150	81017.5	72154.9	112.28	PASS	30-150
CCV9	CCV	1	2466970.5	2459036.8	100.32	PASS	30-150	95607.4	72154.9	132.5	PASS	30-150
CCB9	CCB	1	2427889.6	2459036.8	98.73	PASS	30-150	91740.5	72154.9	127.14	PASS	30-150
CCV10	CCV	1	2516120	2459036.8	102.32	PASS	30-150	91776.3	72154.9	127.19	PASS	30-150
CCB10	CCB	1	2478120.7	2459036.8	100.78	PASS	30-150	87906.6	72154.9	121.83	PASS	30-150
ICSA5	ICSA	1	2569346.3	2459036.8	104.49	PASS	30-150	88163.5	72154.9	122.19	PASS	30-150
ICSAB5	ICSAB	1	2581977.3	2459036.8	105	PASS	30-150	88326.5	72154.9	122.41	PASS	30-150
CCV11	CCV	1	2506644.7	2459036.8	101.94	PASS	30-150	91685.6	72154.9	127.07	PASS	30-150
CCB11	CCB	1	2482422	2459036.8	100.95	PASS	30-150	88643.6	72154.9	122.85	PASS	30-150
CCV12	CCV	1	2529154.3	2459036.8	102.85	PASS	30-150	95484.6	72154.9	132.33	PASS	30-150
CCB12	CCB	1	2495543.3	2459036.8	101.48	PASS	30-150	92386	72154.9	128.04	PASS	30-150
CCV13	CCV	1	2513030.1	2459036.8	102.2	PASS	30-150	92046.4	72154.9	127.57	PASS	30-150
CCB13	CCB	1	2519036.6	2459036.8	102.44	PASS	30-150	89338.5	72154.9	123.81	PASS	30-150
ICSA6	ICSA	1	2614372	2459036.8	106.32	PASS	30-150	90478.1	72154.9	125.39	PASS	30-150
ICSAB6	ICSAB	1	2608829.3	2459036.8	106.09	PASS	30-150	89529.4	72154.9	124.08	PASS	30-150
CCV14	CCV	1	2587708.2	2459036.8	105.23	PASS	30-150	89028.2	72154.9	123.38	PASS	30-150
CCB14	CCB	1	2546233.3	2459036.8	103.55	PASS	30-150	86002.1	72154.9	119.19	PASS	30-150
CCV15	CCV	1	2561437.2	2459036.8	104.16	PASS	30-150	91992.8	72154.9	127.49	PASS	30-150
CCB15	CCB	1	2532460.5	2459036.8	102.99	PASS	30-150	89487.3	72154.9	124.02	PASS	30-150
CCV16	CCV	1	2573924.8	2459036.8	104.67	PASS	30-150	88543.2	72154.9	122.71	PASS	30-150
CCB16	CCB	1	2449049.4	2459036.8	99.59	PASS	30-150	86282.5	72154.9	119.58	PASS	30-150
ICSA7	ICSA	1	2592985.5	2459036.8	105.45	PASS	30-150	87350.2	72154.9	121.06	PASS	30-150
ICSAB7	ICSAB	1	2598872.3	2459036.8	105.69	PASS	30-150	87996.9	72154.9	121.96	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	45744.8	45744.8	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	48400.3	45744.8	105.81	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	48644.2	45744.8	106.34	PASS	30-150
Std3-5/50 ppb	ICAL	1	49579.1	45744.8	108.38	PASS	30-150
Std4-10/100 ppb	ICAL	1	49426.6	45744.8	108.05	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	48837	45744.8	106.76	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	47561.1	45744.8	103.97	PASS	30-150
Std7-100/1000 ppb	ICAL	1	48045.9	45744.8	105.03	PASS	30-150
Std8-200/2000 ppb	ICAL	1	48911.7	45744.8	106.92	PASS	30-150
ICV	ICV	1	45694.7	45744.8	99.89	PASS	30-150
ICB	ICB	1	47418.4	45744.8	103.66	PASS	30-150
LLICV1	LLICV	1	47848.6	45744.8	104.6	PASS	30-150
MLCCV	CCV	1	48577.4	45744.8	106.19	PASS	30-150
ICSA1	ICSA	1	49223.8	45744.8	107.61	PASS	30-150
ICSAB1	ICSAB	1	47285.8	45744.8	103.37	PASS	30-150
MDL 4	ICAL	1	48374.5	45744.8	105.75	PASS	30-150
CCV1	CCV	1	49639.3	45744.8	108.51	PASS	30-150
CCB1	CCB	1	48172.8	45744.8	105.31	PASS	30-150
CCV2	CCV	1	49189.2	45744.8	107.53	PASS	30-150
CCB2	CCB	1	48102.5	45744.8	105.15	PASS	30-150
CCV3	CCV	1	48987.5	45744.8	107.09	PASS	30-150
CCB3	CCB	1	48038	45744.8	105.01	PASS	30-150
CCV4	CCV	1	49443.3	45744.8	108.09	PASS	30-150
CCB4	CCB	1	48802.5	45744.8	106.68	PASS	30-150
CCB4	CCB	1	49080	45744.8	107.29	PASS	30-150
ICSA2	ICSA	1	49857.9	45744.8	108.99	PASS	30-150
ICSAB2	ICSAB	1	49893.5	45744.8	109.07	PASS	30-150
CCV5	CCV	1	50337	45744.8	110.04	PASS	30-150
CCB5	CCB	1	49582.6	45744.8	108.39	PASS	30-150
ICSA3	ICSA	1	50856.5	45744.8	111.17	PASS	30-150
ICSAB3	ICSAB	1	51296.8	45744.8	112.14	PASS	30-150
N063181-001C	SAMP	10	49028.7	45744.8	107.18	PASS	30-150
N063181-002C	SAMP	10	49591.5	45744.8	108.41	PASS	30-150
N063182-001B	SAMP	1	49912.5	45744.8	109.11	PASS	30-150
N063182-003B	SAMP	1	47330.4	45744.8	103.47	PASS	30-150
N063182-003B	SAMP	10	50279.2	45744.8	109.91	PASS	30-150
N063182-005B	SAMP	1	44333.2	45744.8	96.91	PASS	30-150
N063182-005B	SAMP	10	52257.6	45744.8	114.24	PASS	30-150
N063182-008B	SAMP	1	46385.5	45744.8	101.4	PASS	30-150
N063182-009B	SAMP	1	51716	45744.8	113.05	PASS	30-150
N063182-009B	SAMP	10	55210.5	45744.8	120.69	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
CCV6	CCV	1	56200.5	45744.8	122.86	PASS	30-150
CCB6	CCB	1	54404.5	45744.8	118.93	PASS	30-150
N063182-009B	SAMP	1	49395.4	45744.8	107.98	PASS	30-150
N063182-009B	SAMP	1	49246.1	45744.8	107.65	PASS	30-150
N063182-009B	SAMP	1	49843.4	45744.8	108.96	PASS	30-150
N063182-009B	SAMP	1	48767.9	45744.8	106.61	PASS	30-150
N063182-010B	SAMP	10	52139.3	45744.8	113.98	PASS	30-150
N063182-011B	SAMP	1	39154.5	45744.8	85.59	PASS	30-150
N063182-011B	SAMP	100	59077.3	45744.8	129.15	PASS	30-150
CCV7	CCV	1	58732.8	45744.8	128.39	PASS	30-150
CCB7	CCB	1	57501.7	45744.8	125.7	PASS	30-150
ICSA4	ICSA	1	58294.4	45744.8	127.43	PASS	30-150
ICSAB4	ICSAB	1	57988.9	45744.8	126.77	PASS	30-150
CCV8	CCV	1	53384.5	45744.8	116.7	PASS	30-150
CCB8	CCB	1	52609.8	45744.8	115.01	PASS	30-150
CCV9	CCV	1	58132.7	45744.8	127.08	PASS	30-150
CCB9	CCB	1	57913.2	45744.8	126.6	PASS	30-150
CCV10	CCV	1	57158.2	45744.8	124.95	PASS	30-150
CCB10	CCB	1	55358.9	45744.8	121.02	PASS	30-150
ICSA5	ICSA	1	55918.6	45744.8	122.24	PASS	30-150
ICSAB5	ICSAB	1	55404.5	45744.8	121.12	PASS	30-150
CCV11	CCV	1	57334.6	45744.8	125.34	PASS	30-150
CCB11	CCB	1	55259.7	45744.8	120.8	PASS	30-150
CCV12	CCV	1	59541.2	45744.8	130.16	PASS	30-150
CCB12	CCB	1	57170.5	45744.8	124.98	PASS	30-150
CCV13	CCV	1	58137.3	45744.8	127.09	PASS	30-150
CCB13	CCB	1	56121.4	45744.8	122.68	PASS	30-150
ICSA6	ICSA	1	57407	45744.8	125.49	PASS	30-150
ICSAB6	ICSAB	1	56947.6	45744.8	124.49	PASS	30-150
CCV14	CCV	1	56052.3	45744.8	122.53	PASS	30-150
CCB14	CCB	1	54813.7	45744.8	119.82	PASS	30-150
CCV15	CCV	1	57894.2	45744.8	126.56	PASS	30-150
CCB15	CCB	1	56124.8	45744.8	122.69	PASS	30-150
CCV16	CCV	1	56385.6	45744.8	123.26	PASS	30-150
CCB16	CCB	1	54687.6	45744.8	119.55	PASS	30-150
ICSA7	ICSA	1	56307.6	45744.8	123.09	PASS	30-150
ICSAB7	ICSAB	1	55771.3	45744.8	121.92	PASS	30-150

INTERNAL STANDARD: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	2546673.9	2546673.9	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	2477141	2546673.9	97.27	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	2410356.4	2546673.9	94.65	PASS	30-150
Std3-5/50 ppb	ICAL	1	2515986.1	2546673.9	98.79	PASS	30-150
Std4-10/100 ppb	ICAL	1	2569262.8	2546673.9	100.89	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	2558618.2	2546673.9	100.47	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	2483709.9	2546673.9	97.53	PASS	30-150
Std7-100/1000 ppb	ICAL	1	2480840.2	2546673.9	97.41	PASS	30-150
Std8-200/2000 ppb	ICAL	1	2587686.9	2546673.9	101.61	PASS	30-150
ICV	ICV	1	2653524.2	2546673.9	104.2	PASS	30-150
ICB	ICB	1	2570474.6	2546673.9	100.93	PASS	30-150
LLICV1	LLICV	1	2478137.6	2546673.9	97.31	PASS	30-150
LLICV1	LLICV	1	2542268.2	2546673.9	99.83	PASS	30-150
MLCCV	CCV	1	2630585.4	2546673.9	103.29	PASS	30-150
ICSA1	ICSA	1	2627480	2546673.9	103.17	PASS	30-150
ICSAB1	ICSAB	1	2638963.2	2546673.9	103.62	PASS	30-150
CCV1	CCV	1	2694587.4	2546673.9	105.81	PASS	30-150
CCB1	CCB	1	2724865	2546673.9	107	PASS	30-150
CCV2	CCV	1	2796445	2546673.9	109.81	PASS	30-150
CCB2	CCB	1	2784034.1	2546673.9	109.32	PASS	30-150
CCV3	CCV	1	2883421	2546673.9	113.22	PASS	30-150
CCB3	CCB	1	2848797.5	2546673.9	111.86	PASS	30-150
ICSA2	ICSA	1	2873243.9	2546673.9	112.82	PASS	30-150
ICSAB2	ICSAB	1	2879704.4	2546673.9	113.08	PASS	30-150
CCV4	CCV	1	2906215	2546673.9	114.12	PASS	30-150
CCB4	CCB	1	2905314.5	2546673.9	114.08	PASS	30-150
CCV5	CCV	1	2917051.4	2546673.9	114.54	PASS	30-150
CCB5	CCB	1	2923013.9	2546673.9	114.78	PASS	30-150
CCV6	CCV	1	2936579	2546673.9	115.31	PASS	30-150
CCB6	CCB	1	2950049.1	2546673.9	115.84	PASS	30-150
ICSA3	ICSA	1	2910365	2546673.9	114.28	PASS	30-150
ICSAB3	ICSAB	1	2944783	2546673.9	115.63	PASS	30-150
N063182-009B	SAMP	1	2718213.1	2546673.9	106.74	PASS	30-150
N063182-010B	SAMP	1	2917484.7	2546673.9	114.56	PASS	30-150
N063182-011B	SAMP	1	1759979.2	2546673.9	69.11	PASS	30-150
CCV7	CCV	1	2853126.7	2546673.9	112.03	PASS	30-150
CCB7	CCB	1	2887302.8	2546673.9	113.38	PASS	30-150
CCV8	CCV	1	2805939.3	2546673.9	110.18	PASS	30-150
CCB8	CCB	1	2825101.7	2546673.9	110.93	PASS	30-150
CCV9	CCV	1	2856275	2546673.9	112.16	PASS	30-150
CCB9	CCB	1	2876861.9	2546673.9	112.97	PASS	30-150

INTERNAL STANDARD: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]				
			CPS	REF	%REC	Comment	Criteria
CCV10	CCV	1	2834268.2	2546673.9	111.29	PASS	30-150
CCB10	CCB	1	2771600.1	2546673.9	108.83	PASS	30-150
ICSA4	ICSA	1	2750438.3	2546673.9	108	PASS	30-150
ICSAB4	ICSAB	1	2769002.9	2546673.9	108.73	PASS	30-150
CCV11	CCV	1	2408928.8	2546673.9	94.59	PASS	30-150
CCB11	CCB	1	2344078.1	2546673.9	92.05	PASS	30-150
CCV12	CCV	1	2693374.4	2546673.9	105.76	PASS	30-150
CCB12	CCB	1	2682960.7	2546673.9	105.35	PASS	30-150
CCV13	CCV	1	2463267.7	2546673.9	96.72	PASS	30-150
CCB13	CCB	1	2489019.8	2546673.9	97.74	PASS	30-150
ICSA5	ICSA	1	2449915.3	2546673.9	96.2	PASS	30-150
ICSAB5	ICSAB	1	2460970.8	2546673.9	96.63	PASS	30-150
CCV14	CCV	1	2719386.9	2546673.9	106.78	PASS	30-150
CCB14	CCB	1	2717829.1	2546673.9	106.72	PASS	30-150
CCV15	CCV	1	2647392.6	2546673.9	103.95	PASS	30-150
CCB15	CCB	1	2610951.7	2546673.9	102.52	PASS	30-150
CCV16	CCV	1	2409816.1	2546673.9	94.63	PASS	30-150
CCB16	CCB	1	2381204.5	2546673.9	93.5	PASS	30-150
CCV17	CCV	1	2666795.9	2546673.9	104.72	PASS	30-150
CCB17	CCB	1	2632176.7	2546673.9	103.36	PASS	30-150
ICSA6	ICSA	1	2662092.9	2546673.9	104.53	PASS	30-150
ICSAB6	ICSAB	1	2670912.4	2546673.9	104.88	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.: N063182
Test Method: EPA 6020
Analysis Date: 2/22/2024

Matrix: Groundwater
Batch No.: 106973

Instrument ID: ICPMS-03
Instrument Description: Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to As. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063181-003C DT 5x	Arsenic	As	µg/L	2.227557	NA	2.43084	8.36%	10
N063181-003C DT 5x	Barium	Ba	µg/L	102.3743	PASS	99.48032	2.91%	10
N063181-003C DT 5x	Manganese	Mn	µg/L	73.25231	PASS	69.85547	4.86%	10
N063181-003C DT 5x	Molybdenum	Mo	µg/L	60.447	PASS	61.52106	1.75%	10

Reviewed by:

JRB 3/13/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063182
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **N063181-003C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182849**
Client ID: **ZZZZZZ** Batch ID: **106973** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/22/2024** SeqNo: **5708878**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	12.910	0.10	10.00	2.431	105	80	120				
Barium	111.307	1.0	10.00	99.48	118	80	120				
Manganese	165.400	0.50	100.0	69.86	95.5	80	120				
Molybdenum	74.042	0.50	10.00	61.52	125	80	120				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number : 502993
Report Level : II
Report Date : 03/07/2024

Analytical Report *prepared for:*

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Location: N063183

Authorized for release by:

Quynhgiao Le, Project Manager
714-7716900
quynhgiao.le@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Sonny Lorenzo
Asset Laboratories
11110 Artersia
Blvd,
Suite B
Cerritos, CA 90703

Lab Job #:	502993
Location:	N063183
Date Received:	02/22/24

Sample ID	Lab ID	Collected	Matrix
N063183-001A / MW-27-020-Q124	502993-001	02/19/24 13:49	Water
N063183-002A / MW-27-060-Q124	502993-002	02/19/24 12:39	Water
N063183-003A / MW-27-085-Q124	502993-003	02/19/24 13:05	Water
N063183-004A / PT5D-Q124	502993-004	02/19/24 12:39	Water
N063183-005A / PT5M-Q124	502993-005	02/19/24 13:11	Water
N063183-006A / PT5S-Q124	502993-006	02/19/24 13:43	Water
N063183-007A / MW-22-Q124	502993-007	02/19/24 14:35	Water

Case Narrative

Asset Laboratories 11110 Artersia Blvd, Suite B Cerritos, CA 90703 Sonny Lorenzo	Lab Job Number: 502993 Location: N063183 Date Received: 02/22/24

This data package contains sample and QC results for seven water samples, requested for the above referenced project on 02/22/24. The samples were received cold and intact.

Total Organic Carbon by IR (SM 5310B):

- Level II is also requested.
- Low recoveries were observed for total organic carbon in the MS/MSD for batch 334007; the parent sample was not a project sample, and the LCS was within limits. High RPD was also observed for total organic carbon.
- No other analytical problems were encountered.

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

502993

QC Level: Level IV

Subcontractor:

Enthalpy Analytical
931 W. Barkley Ave.
Orange, CA 92868

TEL: (714) 771-6900
FAX: (714) 538-1209
Acct #:

Field Sampler: Riggie Tep

20-Feb-24

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				SM5310B		
N063183-001A / MW-27-020-Q124	Groundwater	2/19/2024 1:49:00 PM	8OZA	1		
N063183-002A / MW-27-060-Q124	Groundwater	2/19/2024 12:39:00 PM	8OZA	1		
N063183-003A / MW-27-085-Q124	Groundwater	2/19/2024 1:05:00 PM	8OZA	1		
N063183-004A / PT5D-Q124	Groundwater	2/19/2024 12:39:00 PM	8OZA	1		
N063183-005A / PT5M-Q124	Groundwater	2/19/2024 1:11:00 PM	8OZA	1		
N063183-006A / PT5S-Q124	Groundwater	2/19/2024 1:43:00 PM	8OZA	1		
N063183-007A / MW-22-Q124	Groundwater	2/19/2024 2:35:00 PM	8OZA	1		

30

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N63183A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for TOC by Sm5310B. EDD requirement Labspec7 edata.

GLS #: 560980623

		Date/Time			Date/Time
Relinquished by:	*YRodriguez*	2/21/2024 1630	**Received by:**	2/24/24	1100
Relinquished by:			**Received by:**		

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Asset Laboratories (502993) Project: N63183A

Date Received: 2/22/24 Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 3.0 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☑ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 3.0 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____ ☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: _____ Date: 2/22/24

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ENTHALPY ANALYTICAL

Analysis Results for 502993

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 502993
Location: N063183
Date Received: 02/22/24

Sample ID: N063183-001A / MW-27-020-Q124 **Lab ID:** 502993-001 **Matrix:** Water **Collected:** 02/19/24 13:49

502993-001 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**3.0**		mg/L	1.0	1	334007	02/27/24	02/27/24	EPL

Sample ID: N063183-002A / MW-27-060-Q124 **Lab ID:** 502993-002 **Matrix:** Water **Collected:** 02/19/24 12:39

502993-002 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**5.5**		mg/L	1.0	1	334007	02/27/24	02/27/24	EPL

Sample ID: N063183-003A / MW-27-085-Q124 **Lab ID:** 502993-003 **Matrix:** Water **Collected:** 02/19/24 13:05

502993-003 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.4**		mg/L	1.0	1	334007	02/27/24	02/27/24	EPL

Sample ID: N063183-004A / PT5D-Q124 **Lab ID:** 502993-004 **Matrix:** Water **Collected:** 02/19/24 12:39

502993-004 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.1**		mg/L	1.0	1	334007	02/27/24	02/27/24	EPL

Sample ID: N063183-005A / PT5M-Q124 **Lab ID:** 502993-005 **Matrix:** Water **Collected:** 02/19/24 13:11

502993-005 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	ND		mg/L	1.0	1	334007	02/27/24	02/27/24	EPL

Sample ID: N063183-006A / PT5S-Q124 **Lab ID:** 502993-006 **Matrix:** Water **Collected:** 02/19/24 13:43

502993-006 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**7.8**		mg/L	1.0	1	334007	02/27/24	02/27/24	EPL

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 502993

Sample ID:	**Lab ID: 502993-007**	**Collected: 02/19/24 14:35**
N063183-007A / MW-22-Q124	**Matrix: Water**	

502993-007 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**22**		mg/L	1.0	1	334007	02/27/24	02/27/24	EPL

ND Not Detected

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type: Blank	**Lab ID: QC1131840**	**Batch: 334007**
Matrix: Water	**Method: SM 5310B**	

QC1131840 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Total Organic Carbon	ND		mg/L	1.0	02/27/24	02/27/24

Type: Lab Control Sample	**Lab ID: QC1131841**	**Batch: 334007**
Matrix: Water	**Method: SM 5310B**	

QC1131841 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Total Organic Carbon	24.91	25.00	mg/L	100%		80-120

Type: Matrix Spike	**Lab ID: QC1131842**	**Batch: 334007**
Matrix (Source ID): Water (502957-003)	**Method: SM 5310B**	

QC1131842 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Total Organic Carbon	44.25	22.57	75.00	mg/L	29%	*	80-120	3

Type: Matrix Spike Duplicate	**Lab ID: QC1131843**	**Batch: 334007**
Matrix (Source ID): Water (502957-003)	**Method: SM 5310B**	

QC1131843 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Total Organic Carbon	31.51	22.57	75.00	mg/L	12%	*	80-120	34*	20	3

* Value is outside QC limits
ND Not Detected

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number : 502999
Report Level : II
Report Date : 03/07/2024

Analytical Report *prepared for:*

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Location: N063212

Authorized for release by:

Quynhgiao Le, Project Manager
714-7716900
quynhgiao.le@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Sonny Lorenzo
Asset Laboratories
11110 Artersia
Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 502999
Location: N063212
Date Received: 02/22/24

Sample ID	Lab ID	Collected	Matrix
N063212-001A / MW-86-030-Q124	502999-001	02/20/24 09:36	Water
N063212-002A / MW-86-066-Q124	502999-002	02/20/24 09:07	Water
N063212-003A / MW-86-120-Q124	502999-003	02/20/24 10:03	Water
N063212-004A / MW-86-140-Q124	502999-004	02/20/24 10:51	Water
N063212-005A / MW-28-025-Q124	502999-005	02/19/24 12:45	Water
N063212-006A / MW-28-090-Q124	502999-006	02/19/24 13:15	Water

Case Narrative

Asset Laboratories 11110 Artersia Blvd, Suite B Cerritos, CA 90703 Sonny Lorenzo	Lab Job Number: 502999 Location: N063212 Date Received: 02/22/24

This data package contains sample and QC results for six water samples, requested for the above referenced project on 02/22/24. The samples were received cold and intact.

Total Organic Carbon by IR (SM 5310B):

- Level II is also requested.
- Low recoveries were observed for total organic carbon in the MS/MSD for batch 334007; the parent sample was not a project sample, and the LCS was within limits. High RPD was also observed for total organic carbon.
- No other analytical problems were encountered.

502999

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Enthalpy Analytical
931 W. Barkley Ave.
Orange, CA 92868

TEL: (714) 771-6900
FAX: (714) 538-1209
Acct #:

Field Sampler: Riggie Tep

21-Feb-24

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				SM5310B		
N063212-001A / MW-86-030-Q124	Groundwater	2/20/2024 9:36:00 AM	8OZA	1		
N063212-002A / MW-86-066-Q124	Groundwater	2/20/2024 9:07:00 AM	8OZA	1		
N063212-003A / MW-86-120-Q124	Groundwater	2/20/2024 10:03:00 AM	8OZA	1		
N063212-004A / MW-86-140-Q124	Groundwater	2/20/2024 10:51:00 AM	8OZA	1		
N063212-005A / MW-28-025-Q124	Groundwater	2/19/2024 12:45:00 PM	8OZA	1		
N063212-006A / MW-28-090-Q124	Groundwater	2/19/2024 1:15:00 PM	8OZA	1		

3 0

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N63212A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for TOC by SM5310B. EDD requirement Labspec7 edata.

GLS #: 560980623

		Date/Time			Date/Time
Relinquished by:	YRodriguez	2/21/2024 1630	**Received by:**	2/22/24	1100
Relinquished by:			**Received by:**		

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Asset Lans Project: NO63212

Date Received: 2/22/24 Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): ____

Sample Temp (°C), One from each cooler: #1: 3.0 #2: ____ #3: ____ #4: ____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: ____

Section 3

Was the cooler packed with: ☑ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other ____

Cooler Temp (°C): #1: ____ #2: ____ #3: ____ #4: ____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: ____ Date/Time ____

☐ Email (email sent to/on): ____ / ____

Project Manager's response:

Completed By: [signature] Date: 2/22/24

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LAS VEGAS, NV 89118

Ship To
ENHALPY ANALYTICAL
SAMPLE RECEIVING
806 N. BATAVIA
ORANGE, CA 92868

COD: $0.00
Weight: 0 lb(s)
Reference:

Delivery Instructions:

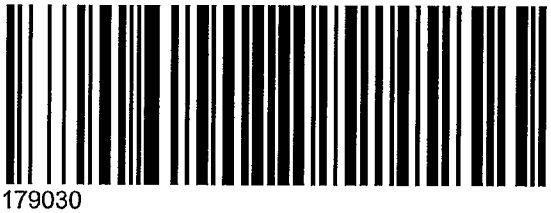
Signature Type: STANDARD

Tracking #: 560980623

PDS

ORANGE

S10219D



4179030

ORC CA927-RD0

Print Date: 2/21/2024 12:18 PM

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TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all of the General Logistics Systems US, Inc. (GLS) service terms & conditions including, but not limited to; limits of liability, declared value conditions, and claim procedures which are available on our website at www.gls-us.com.

ENTHALPY ANALYTICAL

Analysis Results for 502999

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 502999
Location: N063212
Date Received: 02/22/24

Sample ID: N063212-001A / MW-86-030-Q124 **Lab ID:** 502999-001 **Matrix:** Water **Collected:** 02/20/24 09:36

502999-001 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**11**		mg/L	1.0	1	334007	02/27/24	02/27/24	EPL

Sample ID: N063212-002A / MW-86-066-Q124 **Lab ID:** 502999-002 **Matrix:** Water **Collected:** 02/20/24 09:07

502999-002 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.4**		mg/L	1.0	1	334007	02/27/24	02/27/24	EPL

Sample ID: N063212-003A / MW-86-120-Q124 **Lab ID:** 502999-003 **Matrix:** Water **Collected:** 02/20/24 10:03

502999-003 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**3.4**		mg/L	1.0	1	334007	02/27/24	02/27/24	EPL

Sample ID: N063212-004A / MW-86-140-Q124 **Lab ID:** 502999-004 **Matrix:** Water **Collected:** 02/20/24 10:51

502999-004 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**5.2**		mg/L	1.0	1	334007	02/27/24	02/27/24	EPL

Sample ID: N063212-005A / MW-28-025-Q124 **Lab ID:** 502999-005 **Matrix:** Water **Collected:** 02/19/24 12:45

502999-005 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.4**		mg/L	1.0	1	334007	02/27/24	02/27/24	EPL

Sample ID: N063212-006A / MW-28-090-Q124 **Lab ID:** 502999-006 **Matrix:** Water **Collected:** 02/19/24 13:15

502999-006 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.7**		mg/L	1.0	1	334007	02/27/24	02/27/24	EPL

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type: Blank	**Lab ID: QC1131840**	**Batch: 334007**
Matrix: Water	**Method: SM 5310B**	

QC1131840 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Total Organic Carbon	ND		mg/L	1.0	02/27/24	02/27/24

Type: Lab Control Sample	**Lab ID: QC1131841**	**Batch: 334007**
Matrix: Water	**Method: SM 5310B**	

QC1131841 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Total Organic Carbon	24.91	25.00	mg/L	100%		80-120

Type: Matrix Spike	**Lab ID: QC1131842**	**Batch: 334007**
Matrix (Source ID): Water (502957-003)	**Method: SM 5310B**	

QC1131842 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Total Organic Carbon	44.25	22.57	75.00	mg/L	29%	*	80-120	3

Type: Matrix Spike Duplicate	**Lab ID: QC1131843**	**Batch: 334007**
Matrix (Source ID): Water (502957-003)	**Method: SM 5310B**	

QC1131843 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Total Organic Carbon	31.51	22.57	75.00	mg/L	12%	*	80-120	34*	20	3

* Value is outside QC limits
ND Not Detected

ARCADIS

Project: PG&E Topock - non routine

Project No.: 30211191

ASSET Laboratories Work Order:

N063213

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063213

Item	Page
Cover Page	1-5
Analytical Result/QC Summary Reports	6-20
Sample Receiving Items	21-25
List of Analysts	26
Raw Data	
EPA 218.6	27-164
EPA 6020_Dissolved	165-240

March 12, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063213

RE: PG&E Topock - non routine, 30211191

Attention: Dan Bush

Enclosed are the results for sample(s) received on February 20, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - non routine, 30211191
Lab Order: N063213

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 218.6:

Because the results for total dissolved chromium (38 ug/L) and hexavalent chromium (27 ug/L) for sample N063213-001 (MW-57-070-Q124) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Dilution was necessary for sample N063213-006A due to matrix interference. Samples were analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Samples were reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (38 ug/L) and hexavalent chromium (27 ug/L) for sample N063213-001 (MW-57-070-Q124) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 35 and 30 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

ASSET Laboratories

Date: *12-Mar-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - non routine, 30211191
Lab Order: N063213
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063213-001A	MW-57-070-Q124	Groundwater	2/20/2024 12:33:00 PM	2/20/2024	3/12/2024
N063213-001B	MW-57-070-Q124	Groundwater	2/20/2024 12:33:00 PM	2/20/2024	3/12/2024
N063213-002A	MW-58BR-Q124	Groundwater	2/20/2024 1:11:00 PM	2/20/2024	3/12/2024
N063213-002B	MW-58BR-Q124	Groundwater	2/20/2024 1:11:00 PM	2/20/2024	3/12/2024
N063213-003A	MW-60-125-Q124	Groundwater	2/20/2024 11:47:00 AM	2/20/2024	3/12/2024
N063213-003B	MW-60-125-Q124	Groundwater	2/20/2024 11:47:00 AM	2/20/2024	3/12/2024
N063213-004A	MW-62-065-Q124	Groundwater	2/20/2024 9:49:00 AM	2/20/2024	3/12/2024
N063213-004B	MW-62-065-Q124	Groundwater	2/20/2024 9:49:00 AM	2/20/2024	3/12/2024
N063213-005A	MW-63-065-Q124	Groundwater	2/20/2024 9:04:00 AM	2/20/2024	3/12/2024
N063213-005B	MW-63-065-Q124	Groundwater	2/20/2024 9:04:00 AM	2/20/2024	3/12/2024
N063213-006A	MW-64BR-Q124	Groundwater	2/20/2024 11:07:00 AM	2/20/2024	3/12/2024
N063213-006B	MW-64BR-Q124	Groundwater	2/20/2024 11:07:00 AM	2/20/2024	3/12/2024
N063213-007A	MW-70BR-225-Q124	Groundwater	2/20/2024 1:36:00 PM	2/20/2024	3/12/2024
N063213-007B	MW-70BR-225-Q124	Groundwater	2/20/2024 1:36:00 PM	2/20/2024	3/12/2024
N063213-008A	MW-72-080-Q124	Groundwater	2/20/2024 10:27:00 AM	2/20/2024	3/12/2024
N063213-008B	MW-72-080-Q124	Groundwater	2/20/2024 10:27:00 AM	2/20/2024	3/12/2024
N063213-009A	EB-731-Q124	Groundwater	2/20/2024 1:20:00 PM	2/20/2024	3/12/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-57-070-Q124
Lab Order:	N063213		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/20/2024 12:33:00 PM
Lab ID:	N063213-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240221A** QC Batch: **R182773**				PrepDate:			Analyst: **RAB**
Hexavalent Chromium	27	0.19	1.0		µg/L	5	2/21/2024 08:43 PM
DISSOLVED METALS BY ICP-MS							
		EPA 3010A			**EPA 6020**		
RunID: **NV00922-ICP8_240222E** QC Batch: **106992**				PrepDate:	**2/21/2024**		Analyst: **DJ**
Chromium	38	0.035	1.0		µg/L	1	2/23/2024 01:42 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-58BR-Q124
Lab Order:	N063213		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/20/2024 1:11:00 PM
Lab ID:	N063213-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
EPA 218.6							
RunID: **NV00922-IC7_240221A** QC Batch: **R182773** PrepDate: Analyst: **RAB**							
Hexavalent Chromium	8.1	0.039	0.20		µg/L	1	2/21/2024 12:11 PM
DISSOLVED METALS BY ICP-MS							
EPA 3010A **EPA 6020**							
RunID: **NV00922-ICP8_240222E** QC Batch: **106992** PrepDate: **2/21/2024** Analyst: **DJ**							
Chromium	8.2	0.035	1.0		µg/L	1	2/23/2024 01:47 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-60-125-Q124
Lab Order:	N063213		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/20/2024 11:47:00 AM
Lab ID:	N063213-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
EPA 218.6							
RunID: **NV00922-IC7_240221A** QC Batch: **R182773**				PrepDate:			Analyst: **RAB**
Hexavalent Chromium	480	3.9	20		µg/L	100	2/21/2024 09:02 PM
DISSOLVED METALS BY ICP-MS							
EPA 3010A **EPA 6020**							
RunID: **NV00922-ICP8_240223E** QC Batch: **106992**				PrepDate: **2/21/2024**			Analyst: **DJ**
Chromium	490	0.35	10		µg/L	10	2/23/2024 10:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-62-065-Q124
Lab Order:	N063213		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/20/2024 9:49:00 AM
Lab ID:	N063213-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
EPA 218.6							
RunID: **NV00922-IC7_240221A** QC Batch: **R182773**				PrepDate:			Analyst: **RAB**
Hexavalent Chromium	580	3.9	20		µg/L	100	2/21/2024 12:39 PM
DISSOLVED METALS BY ICP-MS							
EPA 3010A **EPA 6020**							
RunID: **NV00922-ICP8_240223E** QC Batch: **106992**				PrepDate: **2/21/2024**			Analyst: **DJ**
Chromium	590	0.35	10		µg/L	10	2/23/2024 10:11 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-63-065-Q124
Lab Order:	N063213		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/20/2024 9:04:00 AM
Lab ID:	N063213-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
EPA 218.6							
RunID: **NV00922-IC7_240221A** QC Batch: **R182773** PrepDate: Analyst: **RAB**							
Hexavalent Chromium	1.6	0.039	0.20		µg/L	1	2/21/2024 12:20 PM
DISSOLVED METALS BY ICP-MS							
EPA 3010A **EPA 6020**							
RunID: **NV00922-ICP8_240222E** QC Batch: **106992** PrepDate: **2/21/2024** Analyst: **DJ**							
Chromium	1.8	0.035	1.0		µg/L	1	2/23/2024 02:15 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-64BR-Q124
Lab Order:	N063213		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/20/2024 11:07:00 AM
Lab ID:	N063213-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
EPA 218.6							
RunID: **NV00922-IC7_240221A** QC Batch: **R182773** PrepDate: Analyst: **RAB**							
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/21/2024 02:37 PM
DISSOLVED METALS BY ICP-MS							
EPA 3010A **EPA 6020**							
RunID: **NV00922-ICP8_240222E** QC Batch: **106992** PrepDate: **2/21/2024** Analyst: **DJ**							
Chromium	ND	0.035	1.0		µg/L	1	2/23/2024 02:19 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-70BR-225-Q124
Lab Order:	N063213		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/20/2024 1:36:00 PM
Lab ID:	N063213-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240221A**	QC Batch: **R182773**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	1100	7.7	40		µg/L	200	2/21/2024 12:52 PM
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240223E**	QC Batch: **106992**			PrepDate:	**2/21/2024**		Analyst: **DJ**
Chromium	1100	0.35	10		µg/L	10	2/23/2024 10:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-72-080-Q124
Lab Order:	N063213		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/20/2024 10:27:00 AM
Lab ID:	N063213-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
EPA 218.6							
RunID: **NV00922-IC7_240221A** QC Batch: **R182773** PrepDate: Analyst: **RAB**							
Hexavalent Chromium	47	0.39	2.0		µg/L	10	2/21/2024 10:17 AM
DISSOLVED METALS BY ICP-MS							
EPA 3010A **EPA 6020**							
RunID: **NV00922-ICP8_240222E** QC Batch: **106992** PrepDate: **2/21/2024** Analyst: **DJ**							
Chromium	48	0.035	1.0		µg/L	1	2/23/2024 02:29 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-731-Q124
Lab Order:	N063213		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/20/2024 1:20:00 PM
Lab ID:	N063213-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240221A**	QC Batch: **R182773**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/21/2024 02:56 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R182773**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **PBW**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704448**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R182773**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **LCSW**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704449**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.000	0.20	5.000	0	100	90	110				

Sample ID: **N063211-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704454**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.417	0.20	1.000	0.3980	102	90	110				

Sample ID: **N063211-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704455**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.452	0.20	1.000	0.4578	99.5	90	110				

Sample ID: **N063211-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704456**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.248	0.20	1.000	0.3007	94.7	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063213-008AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704457**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	95.417	2.0	50.00	47.41	96.0	90	110				

Sample ID: **N063213-008AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704460**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	95.860	2.0	50.00	47.41	96.9	90	110	95.42	0.463	20	

Sample ID: **N063211-001ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704465**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.392	0.20						0.3980	1.65	20	

Sample ID: **N063213-005AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704468**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.581	0.20	1.000	1.646	93.4	90	110				

Sample ID: **N063213-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704469**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1070.640	20	500.0	575.3	99.1	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063213-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182773**
Client ID: **ZZZZZZ** Batch ID: **R182773** TestNo: **EPA 218.6** Analysis Date: **2/21/2024** SeqNo: **5704470**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2121.240	40	1000	1126	99.6	90	110				

Sample ID: **N063213-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182773**
Client ID: **ZZZZZZ** Batch ID: **R182773** TestNo: **EPA 218.6** Analysis Date: **2/21/2024** SeqNo: **5704472**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.883	1.0	5.000	0	97.7	90	110				

Sample ID: **N063213-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182773**
Client ID: **ZZZZZZ** Batch ID: **R182773** TestNo: **EPA 218.6** Analysis Date: **2/21/2024** SeqNo: **5704474**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.047	0.20	1.000	0	105	90	110				

Sample ID: **N062911-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182773**
Client ID: **ZZZZZZ** Batch ID: **R182773** TestNo: **EPA 218.6** Analysis Date: **2/21/2024** SeqNo: **5704477**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.424	1.0	5.000	0.6365	95.8	90	110				

Sample ID: **N063214-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182773**
Client ID: **ZZZZZZ** Batch ID: **R182773** TestNo: **EPA 218.6** Analysis Date: **2/21/2024** SeqNo: **5704480**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.945	0.20	1.000	0	94.5	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063214-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182773**
Client ID: **ZZZZZZ** Batch ID: **R182773** TestNo: **EPA 218.6** Analysis Date: **2/21/2024** SeqNo: **5704484**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.992	0.20	1.000	0	99.2	90	110				

Sample ID: **N063214-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182773**
Client ID: **ZZZZZZ** Batch ID: **R182773** TestNo: **EPA 218.6** Analysis Date: **2/21/2024** SeqNo: **5704486**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.995	0.20	1.000	0	99.5	90	110				

Sample ID: **N063214-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182773**
Client ID: **ZZZZZZ** Batch ID: **R182773** TestNo: **EPA 218.6** Analysis Date: **2/21/2024** SeqNo: **5704490**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.895	1.0	5.000	0	97.9	90	110				

Sample ID: **N063214-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182773**
Client ID: **ZZZZZZ** Batch ID: **R182773** TestNo: **EPA 218.6** Analysis Date: **2/21/2024** SeqNo: **5704492**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.639	1.0	5.000	0	92.8	90	110				

Sample ID: **N063213-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182773**
Client ID: **ZZZZZZ** Batch ID: **R182773** TestNo: **EPA 218.6** Analysis Date: **2/21/2024** SeqNo: **5704497**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	51.472	1.0	25.00	26.91	98.2	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063213-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182773**
Client ID: **ZZZZZZ** Batch ID: **R182773** TestNo: **EPA 218.6** Analysis Date: **2/21/2024** SeqNo: **5704499**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	954.410	20	500.0	475.8	95.7	90	110				

Sample ID: **N063213-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182773**
Client ID: **ZZZZZZ** Batch ID: **R182773** TestNo: **EPA 218.6** Analysis Date: **2/21/2024** SeqNo: **5704501**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	12.737	0.20	5.000	8.107	92.6	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **MB-106992**	SampType: **MBLK**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/21/2024**	RunNo: **182848**
Client ID: **PBW**	Batch ID: **106992**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708731**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID: **LCS-106992**	SampType: **LCS**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/21/2024**	RunNo: **182848**
Client ID: **LCSW**	Batch ID: **106992**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708732**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.433	1.0	10.00	0	104	85	115				

Sample ID: **N063213-008BMS**	SampType: **MS**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/21/2024**	RunNo: **182848**
Client ID: **ZZZZZZ**	Batch ID: **106992**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708748**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	57.145	1.0	10.00	48.16	89.9	75	125				

Sample ID: **N063213-008BMSD**	SampType: **MSD**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/21/2024**	RunNo: **182848**
Client ID: **ZZZZZZ**	Batch ID: **106992**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708749**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	57.085	1.0	10.00	48.16	89.3	75	125	57.14	0.105	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

SAMPLE RECEIVING ITEMS

ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

Page 1 of 1

ARCUS02 C: 3/6/2024 12:00 AM
FOLDER R: 2/20/2024 1 of 1
N063213-010A

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.moore@critigen.com	Address:	
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com	P.O.#
Submitted By: Rissie Tep	Phone: 916-786-3302 Fax:	Phone: 949-727-1400, ext 200	Fax:
Title: Field Tech			
Signature: Date: 02-20-24	Sampled By: Rissie Tep		
Project Name: PG&E Topock - non routine	Signature: Date: 02-20-24		
Project Number: 30211191			

I hereby authorize ASSET Labs to perform the tests indicated below.

I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for

EDD Re			
Excel EDD		RWQCB	✓
Geotracker		CalTrans	
Labspec		LEVEL III	
Others	✓	LEVEL IV	
Specify: RWQCB		Regulatory	
Global ID:		Specify State:	

	Y	N
1. Chilled	/	
2. Headspace		
3. Container Intact	/	
4. Seal Present	/	
5. IR number	3	
6. Method of Cooling:	wet ice 2.21.24 TR	
Sample Temp:	2.2°C	

Courier: ASET

Tracking No.:

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Matrix	250 mL poly: Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH	1 L poly: Nitrate, sulfate (EPA 300.0)	500mL poly: Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese	500mL poly: Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium,	500mL poly: Dissolved metals (SW6020) FF; HNO3 Molybdenum	3x40 mL VOA: Total Organic Carbon (SM5310C); H2SO4	1 L poly: Ammonia as Nitrogen (SM4500NH3D); H2SO4	125 mL poly: Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4	1 L poly: Nitrate (EPA 300.0)	1 L poly	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063213-001	MW-57-070-Q124	2/20/2024	12:33		Ground	X			X							E	2	P	BNS	
2	-002	MW-58BR-Q124	2/20/2024	13:11		Ground	X			X							E	2	P	BNS	
3	-003	MW-60-125-Q124	2/20/2024	11:47		Ground	X			X							E	2	P	BNS	
4	-004	MW-62-065-Q124	2/20/2024	9:49		Ground	X			X							E	2	P	BNS	
5	-005	MW-63-065-Q124	2/20/2024	9:04		Ground	X			X							E	2	P	BNS	
6	-006	MW-64BR-Q124	2/20/2024	11:07		Ground	X			X							E	2	P	BNS	
7	-007	MW-70BR-225-Q124	2/20/2024	13:36		Ground	X			X							E	2	P	BNS	
8	-008	MW-72-080-Q124	2/20/2024	10:27		Ground	X			X							E	2	P	BNS	MSMSD
9	-009	EB-731-Q124	2/20/2024	13:20		Ground	X			X	(E1)						E	1	P	BNS	
10																					
11																					
12																					
13																					
14																					

Relinquished by (Signature and Printed Name): Rissie Tep 02-20-24 1525 Date/Time:
Relinquished by (Signature and Printed Name): Michael Alcantara 2/20/24 1525 Date/Time:
Relinquished by (Signature and Printed Name): Michael Alcantara 2/20/24 1928 Date/Time:
Relinquished by (Signature and Printed Name): Michael Alcantara 2/20/24 1928 Date/Time:
Relinquished by (Signature and Printed Name): Date/Time:
Relinquished by (Signature and Printed Name): Date/Time:

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms:
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
   Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:

H=HCL	N=HNO_3	S=H_2SO_4	C=4°C
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$	
Others/Specify:	B	(NH4)2SO4/NH4OH	

Container Type:

T=Tube	V=VOA	P=Pint
J=Jar	B=Tedlar	G=Glass
M=Metal	M=Metal	C=Can

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	2/20/2024	Workorder:	N063213
Rep sample Temp (Deg C):	2.2	IR Gun ID:	3
Temp Blank:	☑ Yes ☐ No		
Carrier name:	ASSET		
Last 4 digits of Tracking No.:	NA	Packing Material Used:	None
Cooling process:	☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None		

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By: CC Chara Cintron 2/21/2024

Reviewed By: for: MBC 02/21/2024

ASSET Laboratories

WORK ORDER Summary

21-Feb-24

WorkOrder: N063213

Client ID: ARCUS02

Project: PG&E Topock - non routine, 30211191 **QC Level:** Level IV **Date Received:** 2/20/2024 7:28 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063213-001A	MW-57-070-Q124	2/20/2024 12:33:00 PM	3/6/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063213-001B			3/6/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/6/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063213-002A	MW-58BR-Q124	2/20/2024 1:11:00 PM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063213-002B			3/6/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/6/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063213-003A	MW-60-125-Q124	2/20/2024 11:47:00 AM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063213-003B			3/6/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/6/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063213-004A	MW-62-065-Q124	2/20/2024 9:49:00 AM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063213-004B			3/6/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/6/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063213-005A	MW-63-065-Q124	2/20/2024 9:04:00 AM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063213-005B			3/6/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/6/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063213-006A	MW-64BR-Q124	2/20/2024 11:07:00 AM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063213-006B			3/6/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/6/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063213-007A	MW-70BR-225-Q124	2/20/2024 1:36:00 PM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063213-007B			3/6/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/6/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063213-008A	MW-72-080-Q124	2/20/2024 10:27:00 AM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☑	☐	WW

WORK ORDER Summary

21-Feb-24

WorkOrder: N063213

Client ID: ARCUS02

Project: PG&E Topock - non routine, 30211191 **QC Level:** Level IV **Date Received:** 2/20/2024 7:28 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063213-008B	MW-72-080-Q124	2/20/2024 10:27:00 AM	3/6/2024	Groundwater	EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☑	☐	WW
			3/6/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☑	☐	WW
N063213-009A	EB-731-Q124	2/20/2024 1:20:00 PM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063213-010A	FOLDER	3/6/2024	3/6/2024		Folder	Folder	☐	☐	☐	LAB
			3/6/2024		Folder	Level IV Report	☐	☐	☐	LAB
			3/6/2024		Folder	Folder	☐	☐	☐	LAB

List of Analysts

ASSET Laboratories Work Order: N063213

NAME	TEST METHOD
Ria Abes	EPA 218.6
Diane Jetajobe	EPA 6020_Dissolved

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R182773
ASSET #: N063213

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/21/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?	X					X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?	X					X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments: Dilution was necessary for sample N063213-006A due to matrix interference.
N063213-001A = 27 ppb ; N063213-001B (6020) = 38 ppb
MS protocol performed. Recovery within criteria.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer RB 02272024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063213-001A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 5.3824 * 5$$

$$Cr^{+6}, \mu g/L = 26.9120$$

Reporting results in two significant figures,

$$\mathbf{Cr^{+6}, \mu g/L = 27}$$

Reviewed by:

dMocha 3/14/2024

ANALYSIS RUN LOG

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240221A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/21/24 9:16 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/21/24 9:30 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/21/24 9:39 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/21/24 9:49 AM	Reported
13	MB-R182773	MBLK	1	Hexavalent Chromium	02/21/24 9:58 AM	Reported
14	LCS-R182773	LCS	1	Hexavalent Chromium	02/21/24 10:08 AM	Reported
15	N063213-008A	SAMP	10	Hexavalent Chromium	02/21/24 10:17 AM	Reported
16	N063211-001A	SAMP	1	Hexavalent Chromium	02/21/24 10:27 AM	Reported
17	N063211-002A	SAMP	1	Hexavalent Chromium	02/21/24 10:36 AM	Reported
18	N063211-003A	SAMP	1	Hexavalent Chromium	02/21/24 10:46 AM	Reported
19	N063211-001AMS	MS	1	Hexavalent Chromium	02/21/24 10:55 AM	Reported
20	N063211-002AMS	MS	1	Hexavalent Chromium	02/21/24 11:04 AM	Reported
21	N063211-003AMS	MS	1	Hexavalent Chromium	02/21/24 11:14 AM	Reported
22	N063213-008AMS	MS	10	Hexavalent Chromium	02/21/24 11:23 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/21/24 11:33 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/21/24 11:42 AM	Reported
25	N063213-008AMSD	MSD	10	Hexavalent Chromium	02/21/24 11:52 AM	Reported
26	N063213-001A	SAMP	1	Hexavalent Chromium	02/21/24 12:01 PM	Not Reported
27	N063213-002A	SAMP	1	Hexavalent Chromium	02/21/24 12:11 PM	Reported
28	N063213-005A	SAMP	1	Hexavalent Chromium	02/21/24 12:20 PM	Reported
29	N063213-003A	SAMP	5	Hexavalent Chromium	02/21/24 12:30 PM	Not Reported
30	N063213-004A	SAMP	100	Hexavalent Chromium	02/21/24 12:39 PM	Reported
31	N063213-007A	SAMP	200	Hexavalent Chromium	02/21/24 12:52 PM	Reported
32	N063211-001ADUP	DUP	1	Hexavalent Chromium	02/21/24 1:03 PM	Reported
33	N063213-001AMS	MS	1	Hexavalent Chromium	02/21/24 1:12 PM	Not Reported
34	N063213-002AMS	MS	1	Hexavalent Chromium	02/21/24 1:21 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/21/24 1:31 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/21/24 1:40 PM	Reported
37	N063213-005AMS	MS	1	Hexavalent Chromium	02/21/24 1:50 PM	Reported
38	N063213-004AMS	MS	100	Hexavalent Chromium	02/21/24 1:59 PM	Reported
39	N063213-007AMS	MS	200	Hexavalent Chromium	02/21/24 2:09 PM	Reported
40	N063213-006A	SAMP	1	Hexavalent Chromium	02/21/24 2:18 PM	Not Reported
41	N063213-006AMS	MS	1	Hexavalent Chromium	02/21/24 2:28 PM	Not Reported
42	N063213-006A	SAMP	5	Hexavalent Chromium	02/21/24 2:37 PM	Reported

INJECTION LOG: 240221A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063213-006AMS	MS	5	Hexavalent Chromium	02/21/24 2:46 PM	Reported
44	N063213-009A	SAMP	1	Hexavalent Chromium	02/21/24 2:56 PM	Reported
45	N063213-009AMS	MS	1	Hexavalent Chromium	02/21/24 3:05 PM	Reported
46	N063213-003AMS	MS	5	Hexavalent Chromium	02/21/24 3:15 PM	Not Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/21/24 3:24 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/21/24 3:34 PM	Reported
49	N063214-007A	SAMP	1	Hexavalent Chromium	02/21/24 3:43 PM	Not Reported
50	N063214-007AMS	MS	1	Hexavalent Chromium	02/21/24 3:53 PM	Not Reported
51	N063214-001A	SAMP	1	Hexavalent Chromium	02/21/24 4:02 PM	Not Reported
52	N063214-001AMS	MS	1	Hexavalent Chromium	02/21/24 4:52 PM	Not Reported
53	N063214-003A	SAMP	1	Hexavalent Chromium	02/21/24 5:05 PM	Not Reported
54	N063214-003AMS	MS	1	Hexavalent Chromium	02/21/24 5:15 PM	Not Reported
55	N062911-004A MS	~~SAMP~~	5	Hexavalent Chromium	02/21/24 5:24 PM	Reported
N062911-004AMS 56	~~N063911-004AMS~~	MS ~~SAMP~~	5	Hexavalent Chromium	02/21/24 5:34 PM	Reported
57	N063214-002A	SAMP	1	Hexavalent Chromium	02/21/24 5:43 PM	Reported
58	N063214-002AMS	MS	1	Hexavalent Chromium	02/21/24 5:52 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/21/24 6:02 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/21/24 6:11 PM	Reported
61	N063214-004A	SAMP	1	Hexavalent Chromium	02/21/24 6:21 PM	Reported
62	N063214-004AMS	MS	1	Hexavalent Chromium	02/21/24 6:30 PM	Reported
63	N063214-006A	SAMP	1	Hexavalent Chromium	02/21/24 6:40 PM	Reported
64	N063214-006AMS	MS	1	Hexavalent Chromium	02/21/24 6:49 PM	Reported
65	N063214-008A	SAMP	1	Hexavalent Chromium	02/21/24 6:59 PM	Not Reported
66	N063214-008AMS	MS	1	Hexavalent Chromium	02/21/24 7:08 PM	Not Reported
67	N063214-001A	SAMP	5	Hexavalent Chromium	02/21/24 7:18 PM	Reported
68	N063214-001AMS	MS	5	Hexavalent Chromium	02/21/24 7:27 PM	Reported
69	N063214-003A	SAMP	5	Hexavalent Chromium	02/21/24 7:37 PM	Reported
70	N063214-003AMS	MS	5	Hexavalent Chromium	02/21/24 7:46 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/21/24 7:55 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/21/24 8:05 PM	Reported
73	N063214-005A	SAMP	5	Hexavalent Chromium	02/21/24 8:14 PM	Not Reported
74	N063214-005AMS	MS	5	Hexavalent Chromium	02/21/24 8:24 PM	Not Reported
75	N063213-001AMS	MS	5	Hexavalent Chromium	02/21/24 8:33 PM	Reported
76	N063213-001A	SAMP	5	Hexavalent Chromium	02/21/24 8:43 PM	Reported
77	N063213-003AMS	MS	100	Hexavalent Chromium	02/21/24 8:52 PM	Reported
78	N063213-003A	SAMP	100	Hexavalent Chromium	02/21/24 9:02 PM	Reported
79	N063213-002AMS	MS	1	Hexavalent Chromium	02/21/24 9:11 PM	Reported
80	N063214-005A	SAMP	1	Hexavalent Chromium	02/21/24 9:21 PM	Not Reported
81	N063214-005AMS	MS	1	Hexavalent Chromium	02/21/24 9:30 PM	Not Reported
82	CCV-7	CCV	1	Hexavalent Chromium	02/21/24 9:39 PM	Reported
83	CCB-7	CCB	1	Hexavalent Chromium	02/21/24 9:49 PM	Reported
84	BLANK	BLANK	1	Hexavalent Chromium	02/21/24 9:58 PM	Not Reported

JRB 2/27/2024
for RBA

dMocha 3/7/2024
for RBA

Injection Log Summary

Sequence Details

Name:	**IC-07_240221A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**22/Feb/24 12:29:45**
No. of Injections:	**87**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/21/2024 09:16	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/21/2024 09:30	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/21/2024 09:39	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/21/2024 09:49	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/21/2024 09:58	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/21/2024 10:08	Finished	LCS @5ppb, IWST-231228B
15	N063213-008A,SAMF	7	1000	Unknown		02/21/2024 10:17	Finished	SAMP,1>10 mL
16	N063211-001A,SAMF	8	1000	Unknown		02/21/2024 10:27	Finished	SAMP,10 mL
17	N063211-002A,SAMF	9	1000	Unknown		02/21/2024 10:36	Finished	SAMP,10 mL
18	N063211-003A,SAMF	10	1000	Unknown		02/21/2024 10:46	Finished	SAMP,10 mL
19	N063211-001AMS,MS	11	1000	Unknown		02/21/2024 10:55	Finished	MS (1ppb), IWST-231228B,10r
20	N063211-002AMS,MS	12	1000	Unknown		02/21/2024 11:04	Finished	MS (1ppb), IWST-231228B,10r
21	N063211-003AMS,MS	13	1000	Unknown		02/21/2024 11:14	Finished	MS (1ppb), IWST-231228B,10r
22	N063213-008AMS,MS	14	1000	Unknown		02/21/2024 11:23	Finished	MS (5ppb), IWST-231228B,1>1
23	CCV-2,CCV1,1,	15	1000	Unknown		02/21/2024 11:33	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		02/21/2024 11:42	Finished	CCB R240129C
25	N063213-008AMSD,M	17	1000	Unknown		02/21/2024 11:52	Finished	MSD (5ppb), IWST-231228B,1
26	N063213-001A,SAMF	18	1000	Unknown		02/21/2024 12:01	Finished	SAMP,10 mL
27	N063213-002A,SAMF	19	1000	Unknown		02/21/2024 12:11	Finished	SAMP,10 mL
28	N063213-005A,SAMF	20	1000	Unknown		02/21/2024 12:20	Finished	SAMP,10 mL
29	N063213-003A,SAMF	21	1000	Unknown		02/21/2024 12:30	Finished	SAMP,2>10 mL
30	N063213-004A,SAMF	22	1000	Unknown		02/21/2024 12:39	Finished	SAMP,0.1>10 mL
31	N063213-007A,SAMF	1	1000	Unknown		02/21/2024 12:52	Finished	SAMP,0.05>10 mL
32	N063211-001ADUP,D	2	1000	Unknown		02/21/2024 13:03	Finished	DUP,10 mL
33	N063213-001AMS,MS	3	1000	Unknown		02/21/2024 13:12	Finished	MS (5ppb), IWST-231228B,10r
34	N063213-002AMS,MS	4	1000	Unknown		02/21/2024 13:21	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	5	1000	Unknown		02/21/2024 13:31	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	6	1000	Unknown		02/21/2024 13:40	Finished	CCB R240129C
37	N063213-005AMS,MS	7	1000	Unknown		02/21/2024 13:50	Finished	MS (1ppb), IWST-231228B,10r
38	N063213-004AMS,MS	8	1000	Unknown		02/21/2024 13:59	Finished	MS (5ppb), IWST-231228B,0.1
39	N063213-007AMS,MS	9	1000	Unknown		02/21/2024 14:09	Finished	MS (5ppb), IWST-231228B,0.0
40	N063213-006A,SAMF	10	1000	Unknown		02/21/2024 14:18	Finished	SAMP,10 mL
41	N063213-006AMS,MS	11	1000	Unknown		02/21/2024 14:28	Finished	MS (1ppb), IWST-231228B,10r
42	N063213-006A,SAMF	12	1000	Unknown		02/21/2024 14:37	Finished	SAMP,2>10 mL
43	N063213-006AMS,MS	13	1000	Unknown		02/21/2024 14:46	Finished	MS (1ppb), IWST-231228B,2>1
44	N063213-009A,SAMF	14	1000	Unknown		02/21/2024 14:56	Finished	SAMP,10 mL
45	N063213-009AMS,MS	15	1000	Unknown		02/21/2024 15:05	Finished	MS (1ppb), IWST-231228B,10r
46	N063213-003AMS,MS	16	1000	Unknown		02/21/2024 15:15	Finished	MS (5ppb), IWST-231228B,2>1
47	CCV-4,CCV1,1,	17	1000	Unknown		02/21/2024 15:24	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	18	1000	Unknown		02/21/2024 15:34	Finished	CCB R240129C
49	N063214-007A,SAMF	19	1000	Unknown		02/21/2024 15:43	Finished	SAMP,10 mL
50	N063214-007AMS,MS	20	1000	Unknown		02/21/2024 15:53	Finished	MS (1ppb), IWST-231228B,10r
51	N063214-001A,SAMF	21	1000	Unknown		02/21/2024 16:02	Finished	SAMP,10 mL
52	N063214-001AMS,MS	1	1000	Unknown		02/21/2024 16:52	Finished	MS (1ppb), IWST-231228B,10r
53	N063214-003A,SAMF	2	1000	Unknown		02/21/2024 17:05	Finished	SAMP,10 mL
54	N063214-003AMS,MS	3	1000	Unknown		02/21/2024 17:15	Finished	MS (1ppb), IWST-231228B,10r
55	N062911-004A,SAMF MS SAMP	4	1000	Unknown		02/21/2024 17:24	Finished	SAMP,2>10 mL
56	~~N063911-004AMS,MS~~	5	1000	Unknown		02/21/2024 17:34	Finished	MS (1ppb), IWST-231228B,2>1
57	N063214-002A,SAMF	6	1000	Unknown		02/21/2024 17:43	Finished	SAMP,10 mL
58	N063214-002AMS,MS	7	1000	Unknown		02/21/2024 17:52	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	8	1000	Unknown		02/21/2024 18:02	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	9	1000	Unknown		02/21/2024 18:11	Finished	CCB R240129C

N062911-004MS

JRB 2/27/2024
for RBA

dMocha 3/7/2024
for RBA

IC-07 RBA 2/22/2024 12:32:46 PM

61	N063214-004A,SAMP	10	1000	Unknown		02/21/2024 18:21	Finished	SAMP,10 mL
62	N063214-004AMS,MS	11	1000	Unknown		02/21/2024 18:30	Finished	MS (1ppb), IWST-231228B,10r
63	N063214-006A,SAMP	12	1000	Unknown		02/21/2024 18:40	Finished	SAMP,10 mL
64	N063214-006AMS,MS	13	1000	Unknown		02/21/2024 18:49	Finished	MS (1ppb), IWST-231228B,10r
65	N063214-008A,SAMP	14	1000	Unknown		02/21/2024 18:59	Finished	SAMP,10 mL
66	N063214-008AMS,MS	15	1000	Unknown		02/21/2024 19:08	Finished	MS (1ppb), IWST-231228B,10r
67	N063214-001A,SAMP	16	1000	Unknown		02/21/2024 19:18	Finished	SAMP,2>10 mL
68	N063214-001AMS,MS	17	1000	Unknown		02/21/2024 19:27	Finished	MS (1ppb), IWST-231228B,2>1
69	N063214-003A,SAMP	18	1000	Unknown		02/21/2024 19:37	Finished	SAMP,2>10 mL
70	N063214-003AMS,MS	19	1000	Unknown		02/21/2024 19:46	Finished	MS (1ppb), IWST-231228B,2>1
71	CCV-6,CCV1,1,	20	1000	Unknown		02/21/2024 19:55	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	21	1000	Unknown		02/21/2024 20:05	Finished	CCB R240129C
73	N063214-005A,SAMP	22	1000	Unknown		02/21/2024 20:14	Finished	SAMP,2>10 mL
74	N063214-005AMS,MS	23	1000	Unknown		02/21/2024 20:24	Finished	MS (1ppb), IWST-231228B,2>1
75	N063213-001AMS,MS	24	1000	Unknown		02/21/2024 20:33	Finished	MS (5ppb), IWST-231228B,2>1
76	N063213-001A,SAMP	25	1000	Unknown		02/21/2024 20:43	Finished	SAMP,2>10 mL
77	N063213-003AMS,MS	26	1000	Unknown		02/21/2024 20:52	Finished	MS (5ppb), IWST-231228B,0.1
78	N063213-003A,SAMP	27	1000	Unknown		02/21/2024 21:02	Finished	SAMP,0.1>10 mL
79	N063213-002AMS,MS	28	1000	Unknown		02/21/2024 21:11	Finished	MS (5ppb), IWST-231228B,10r
80	N063214-005A,SAMP	29	1000	Unknown		02/21/2024 21:21	Finished	SAMP,10 mL
81	N063214-005AMS,MS	30	1000	Unknown		02/21/2024 21:30	Finished	MS (1ppb), IWST-231228B,10r
82	CCV-7,CCV,1,	31	1000	Unknown		02/21/2024 21:39	Finished	CCV @5ppb, IWST-231228A
83	CCB-7,CCB,1,	32	1000	Unknown		02/21/2024 21:49	Finished	CCB R240129C
84	BLANK	33	1000	Unknown		02/21/2024 21:58	Finished	BLANK
85	SHUTDOWN R240221A	34	1000	Unknown		02/21/2024 22:08	Finished	
86	Eluent: ~~R240220A~~	35	1000	Unknown		n.a.	Finished	
87	PCR: ~~R240220B~~	36	1000	Unknown		n.a.	Finished	

R240221B

dMocha 3/3/2024
for RBA

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 2/21/24
Time Prepared: 0946 H
Prepared By: RA

Reagent ID:
Sulfuric Acid: 143135
Diphenylcarbazide: 157109
NH4OH + NH4SO4 eluent: M240220A
NH4OH + NH4SO4 buffer: M240129C

Con NaOH. M231224C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW3211-1A	9.34	-	~250mL	~250mL		
2)	2A	9.38	-				
3)	3A	9.31	-				
4)	MW3217-1A	8.80	9.66			+7	
5)	2A	8.76	9.62			+7	
6)	3A	9.38	-				
7)	4A	9.46	-				
8)	5A	9.32	-				
9)	6A	9.01	9.49			+4	
10)	7A	9.46	-				
11)	8A	9.32	-				
12)	9A	9.68	-				
13)	MW3214-1A	9.15	9.51			+3	
14)	2A	9.68	-				
15)	3A	9.26	9.37			+2	
	4A	9.66	-				

Sample Preparation

Date Prepared: 2/21/24
Time Prepared: 0946 H
Prepared By: RA

Reagent ID:
Sulfuric Acid: 143135
Diphenylcarbazide: 157109
NH4OH + NH4SO4 eluent: M240220A
NH4OH + NH4SO4 buffer: M240129C

Con NaOH M231224C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW3214-5A	9.21	9.39	~250mL	~250mL	+3	
2)	6A	9.71	-				
3)	7A	9.11	9.50			+4	
4)	8A	9.66	-				
5)	9A	9.64	-				
6)	10A	9.38	-				
7)	11A	9.14	9.44			+3	
8)	12A	8.90	9.47			+4	
9)	13A	8.94	9.49			+4	
10)	14A	9.00	9.64			+5	
11)	15A	9.64	-				
12)	16A	9.32	-				
13)	17A	9.71	-				
14)	18A	9.70	-				
15)							

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 2/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0427	0.2063	1.0639	2.1157	3.2270	4.3227	0.9999
Measured, in ug/L	0.198500	0.959200	4.946100	9.835700	15.002300	20.095900	
Relative Error (%RE)	-0.8%		-1.1%				

	Stock	Working
Standard Concentration:	1,000,000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ICV**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5704442**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5704443**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCV**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704445**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.942	0.20	5.000	0	98.8	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704446**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.193	0.20	0.2000	0	96.5	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704458**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.938	0.20	10.00	0	99.4	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCV**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704466**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.977	0.20	5.000	0	99.5	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704475**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.893	0.20	10.00	0	98.9	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCV**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704481**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.863	0.20	5.000	0	97.3	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704493**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.764	0.20	10.00	0	97.6	95	105				

Sample ID: **CCV-7**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCV**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704502**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.859	0.20	5.000	0	97.2	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ICB**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5704444**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCB**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704447**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCB**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704459**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCB**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704467**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCB**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704476**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCB**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704482**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCB**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704494**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-7**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCB**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704503**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/21/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.065	
CCV-2	4.056	
CCV-3	4.056	
CCV-4	4.056	
CCV-5	4.056	
CCV-6	4.065	
CCV-7	4.056	

Average	4.059
Actual RT Window	3.979 - 4.139
Applied RT Window	3.859 - 4.259

MB-R182773	N.A.	N.A.
LCS-R182773	4.065	PASS
N063213-008A	4.023	PASS
N063211-001A	3.923	PASS
N063211-002A	3.923	PASS
N063211-003A	3.906	PASS
N063211-001AMS	3.915	PASS
N063211-002AMS	3.915	PASS
N063211-003AMS	3.906	PASS
N063213-008AMS	4.031	PASS
N063213-008AMSD	4.023	PASS
N063213-001A	4.048	PASS
N063213-002A	3.898	PASS
N063213-005A	3.931	PASS
N063213-003A	4.031	PASS
N063213-004A	4.056	PASS
N063213-007A	4.056	PASS
N063211-001ADUP	3.923	PASS
N063213-001AMS	4.040	PASS
N063213-002AMS	3.898	PASS
N063213-005AMS	3.940	PASS

Reviewed by:

dMRocha 3/7/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/21/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.065	
CCV-2	4.056	
CCV-3	4.056	
CCV-4	4.056	
CCV-5	4.056	
CCV-6	4.065	
CCV-7	4.056	
Average	4.059	
Actual RT Window	3.979 - 4.139	
Applied RT Window	3.859 - 4.259	
N063213-004AMS	4.056	PASS
N063213-007AMS	4.056	PASS
N063213-006A	N.A.	N.A.
N063213-006A	N.A.	N.A.
N063213-006AMS	4.015	PASS
N063213-009A	N.A.	N.A.
N063213-009AMS	4.056	PASS
N063213-003AMS	4.031	PASS
N063214-007A	N.A.	N.A.
N063214-007AMS	N.A.	N.A.
N063214-001A	N.A.	N.A.
N063214-003A	N.A.	N.A.
N063214-003AMS	N.A.	N.A.
N062911-004AMS	4.031	PASS
N063911-004AMS	4.015	PASS
N063214-002A	N.A.	N.A.
N063214-002AMS	4.048	PASS
N063214-004A	N.A.	N.A.
N063214-004AMS	4.056	PASS
N063214-006A	N.A.	N.A.
N063214-006AMS	4.056	PASS

Reviewed by:

dMRocha 3/7/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/21/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.065	
CCV-2	4.056	
CCV-3	4.056	
CCV-4	4.056	
CCV-5	4.056	
CCV-6	4.065	
CCV-7	4.056	

Average	4.059
Actual RT Window	3.979 - 4.139
Applied RT Window	3.859 - 4.259

N063214-008A	N.A.	N.A.
N063214-008AMS	4.048	PASS
N063214-001A	N.A.	N.A.
N063214-001AMS	4.006	PASS
N063214-003A	N.A.	N.A.
N063214-003AMS	3.965	PASS
N063214-005A	N.A.	N.A.
N063213-001AMS	4.048	PASS
N063213-001A	4.048	PASS
N063213-003AMS	4.056	PASS
N063213-003A	4.056	PASS
N063213-002AMS	3.898	PASS
N063214-005A	N.A.	N.A.
N063214-005AMS	N.A.	N.A.

Reviewed by:

dMocha 3/7/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

Reviewed by:

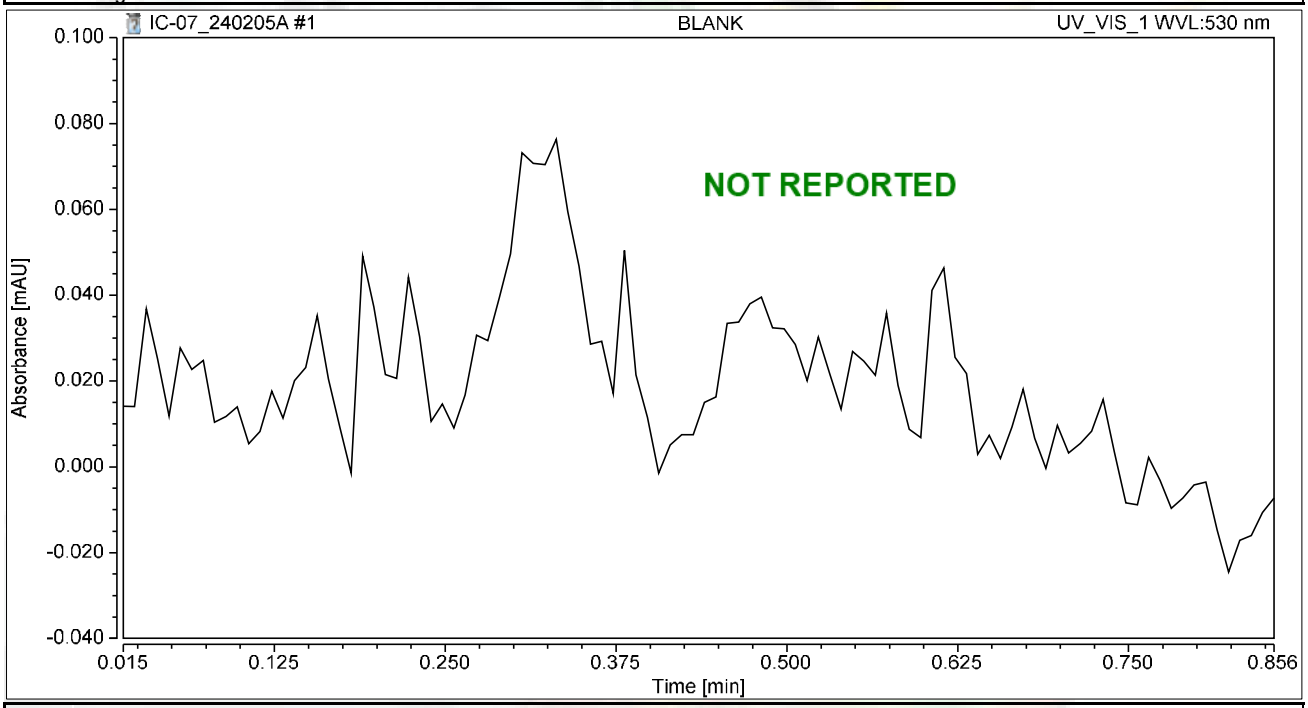
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**0.84**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 11:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

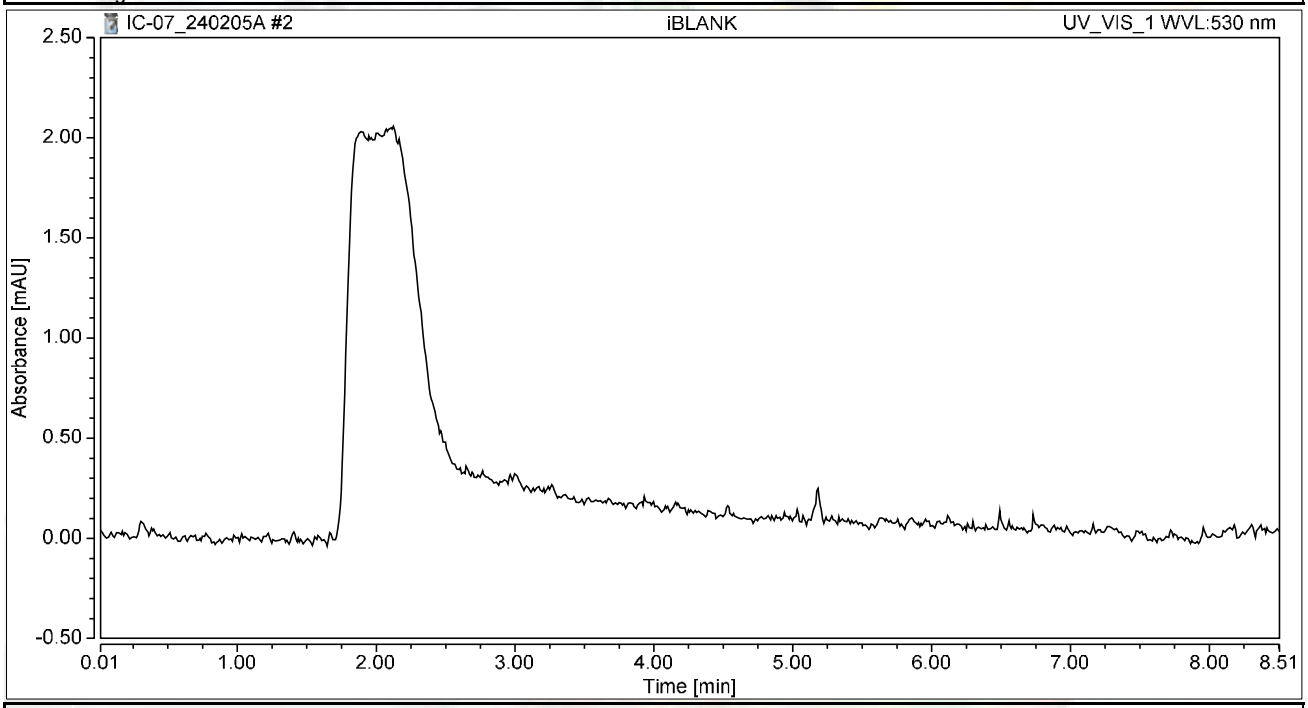
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Reviewed by:

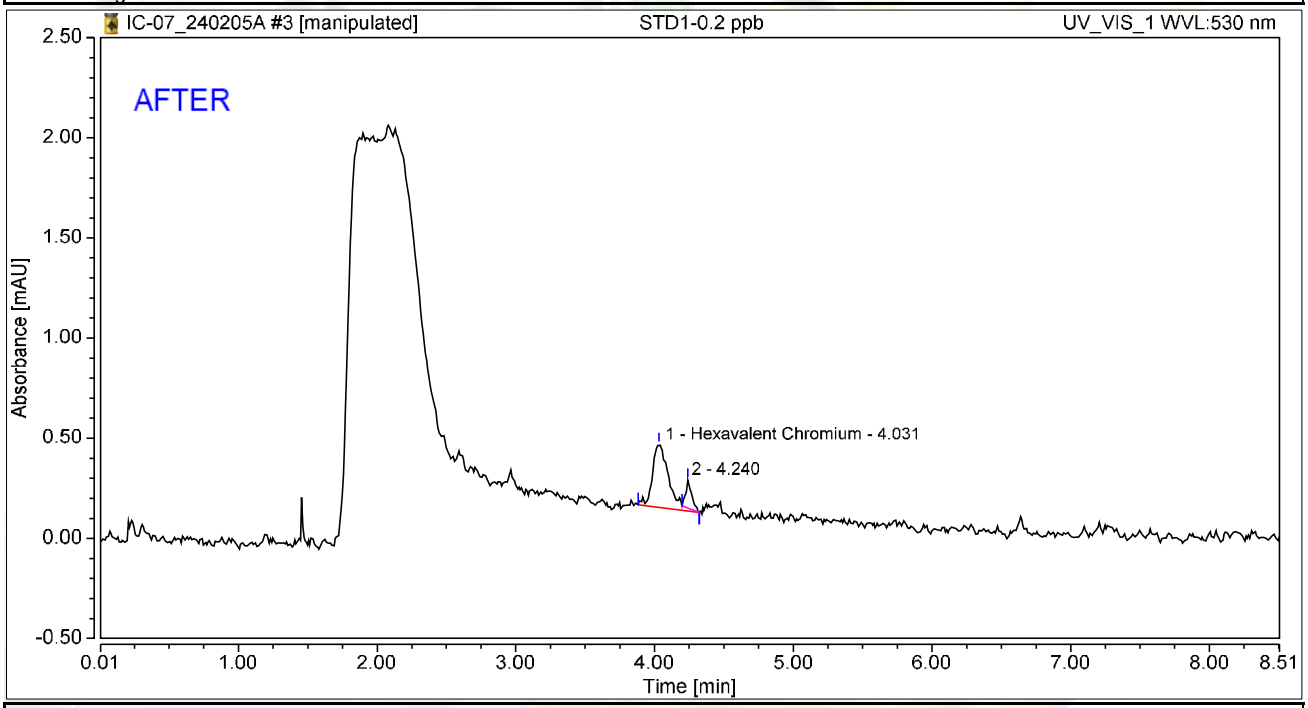
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.043	0.313	85.65	69.19	0.1985
2		4.240	0.007	0.139	14.35	30.81	n.a.
Total:			**0.050**	**0.452**	**100.00**	**100.00**	

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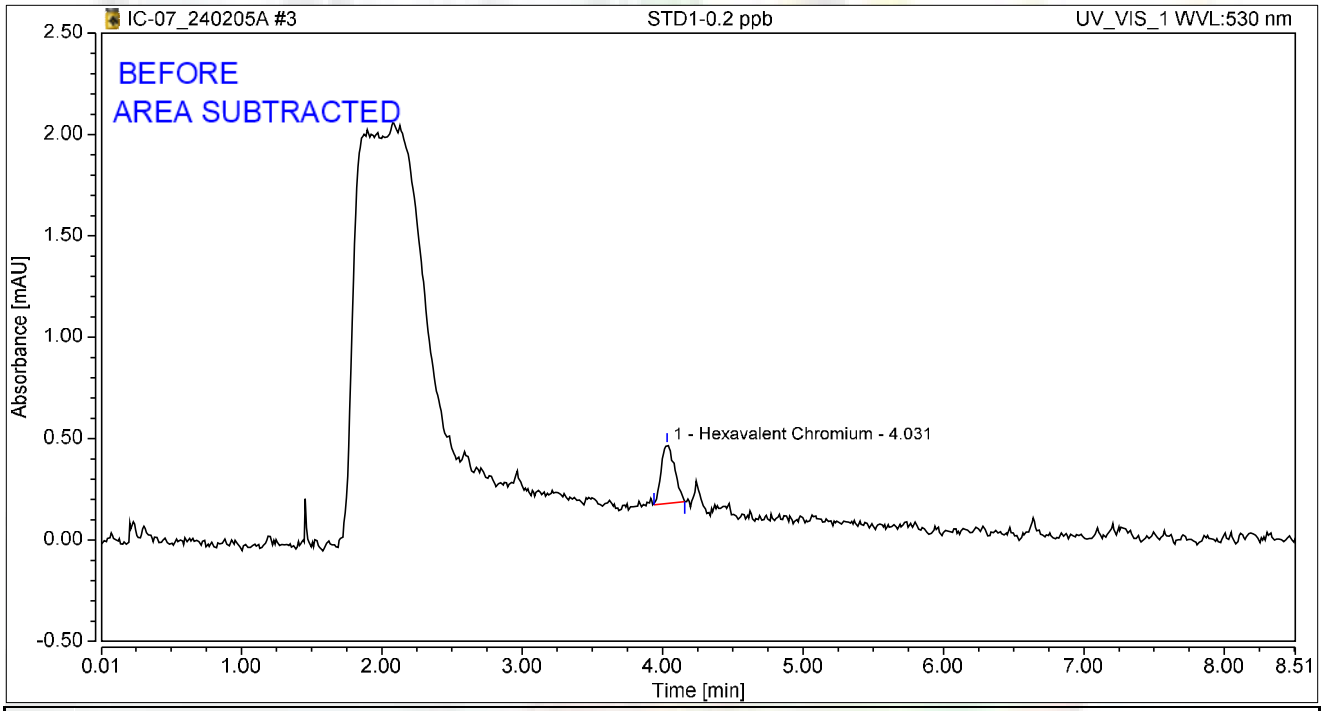
Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

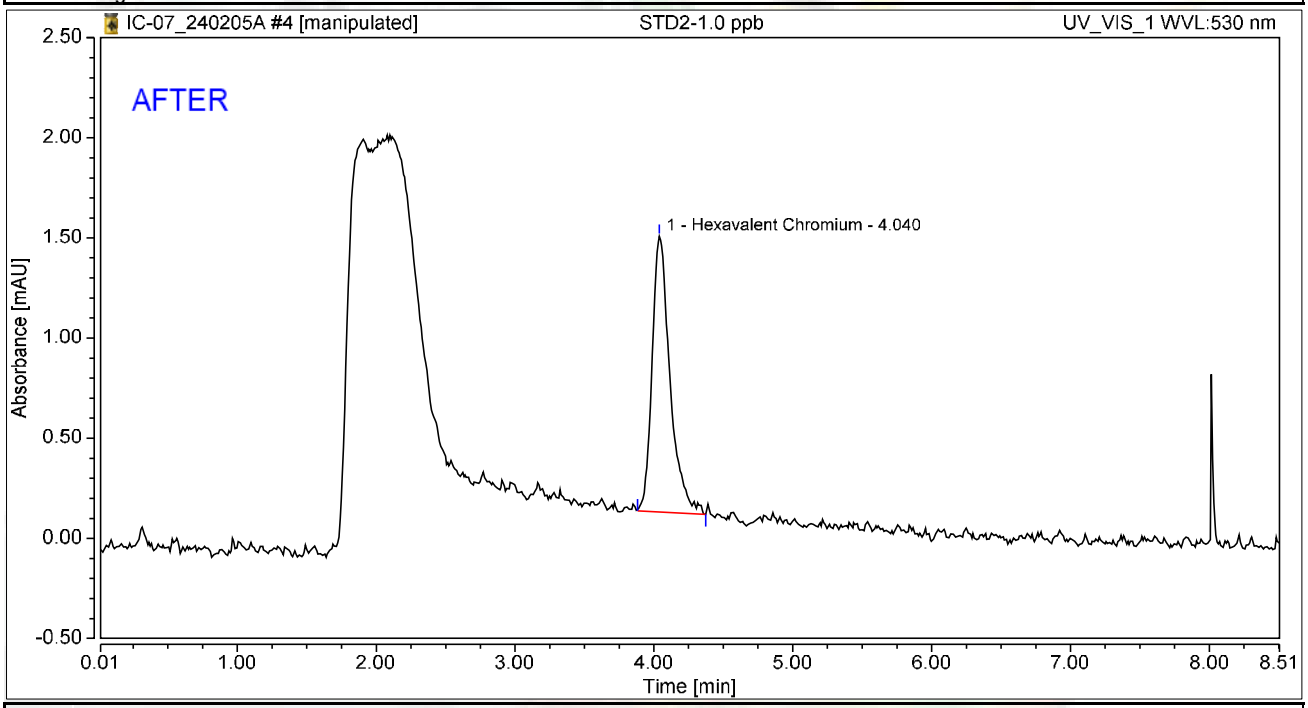
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.032	0.288	100.00	100.00	0.1502
Total:			**0.032**	**0.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.206	1.377	100.00	100.00	0.9592
Total:			**0.206**	**1.377**	**100.00**	**100.00**	

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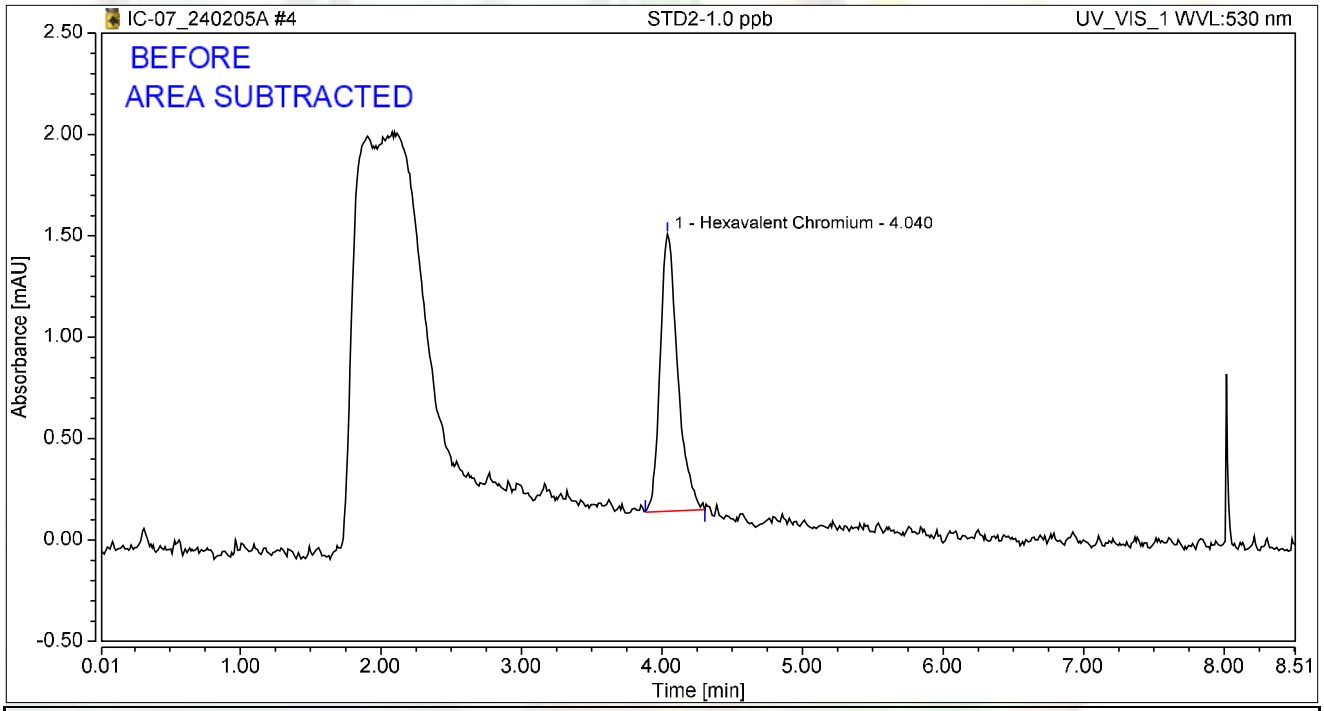
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

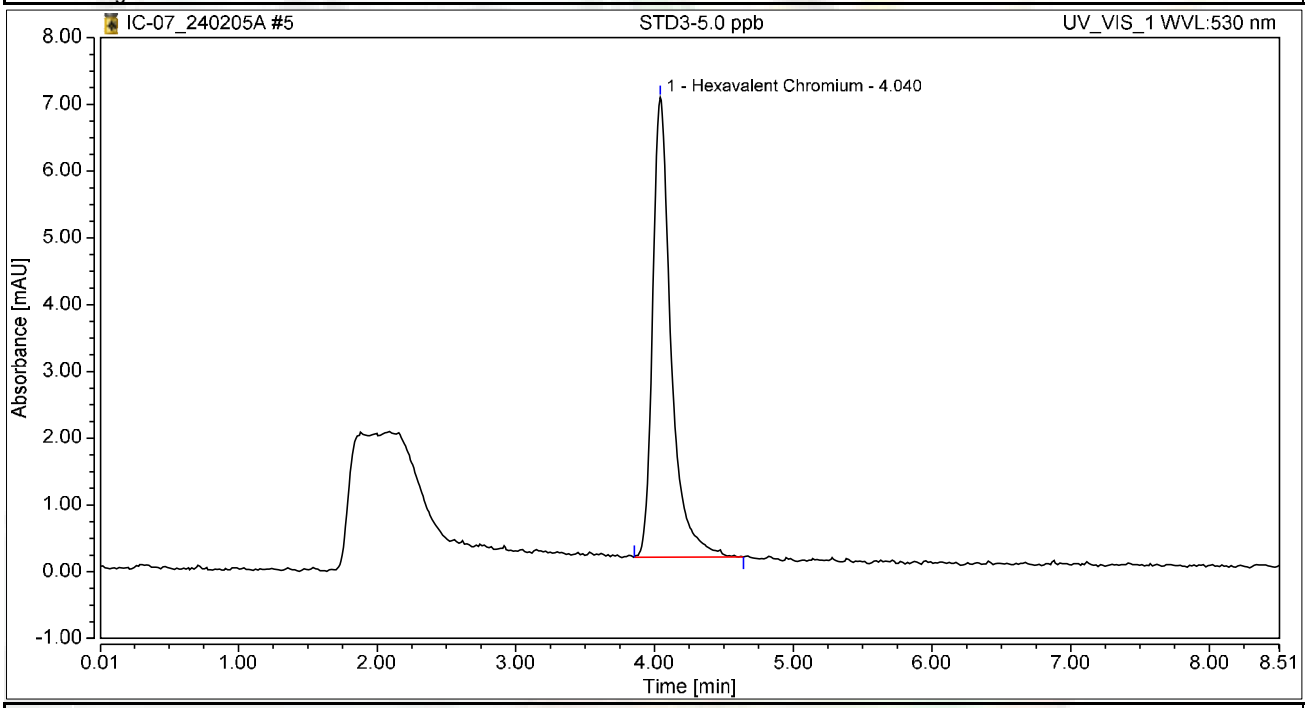
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.198	1.367	100.00	100.00	0.9223
Total:			**0.198**	**1.367**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

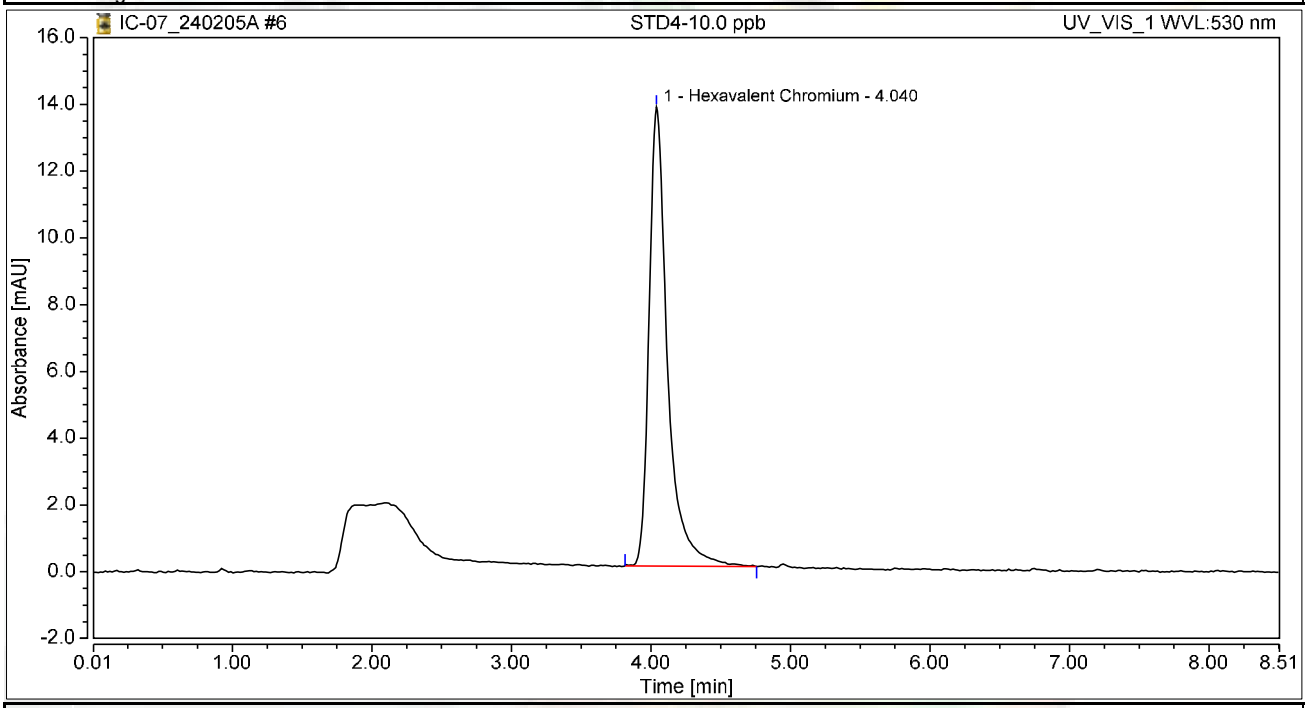
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.064	6.885	100.00	100.00	4.9461
Total:			**1.064**	**6.885**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

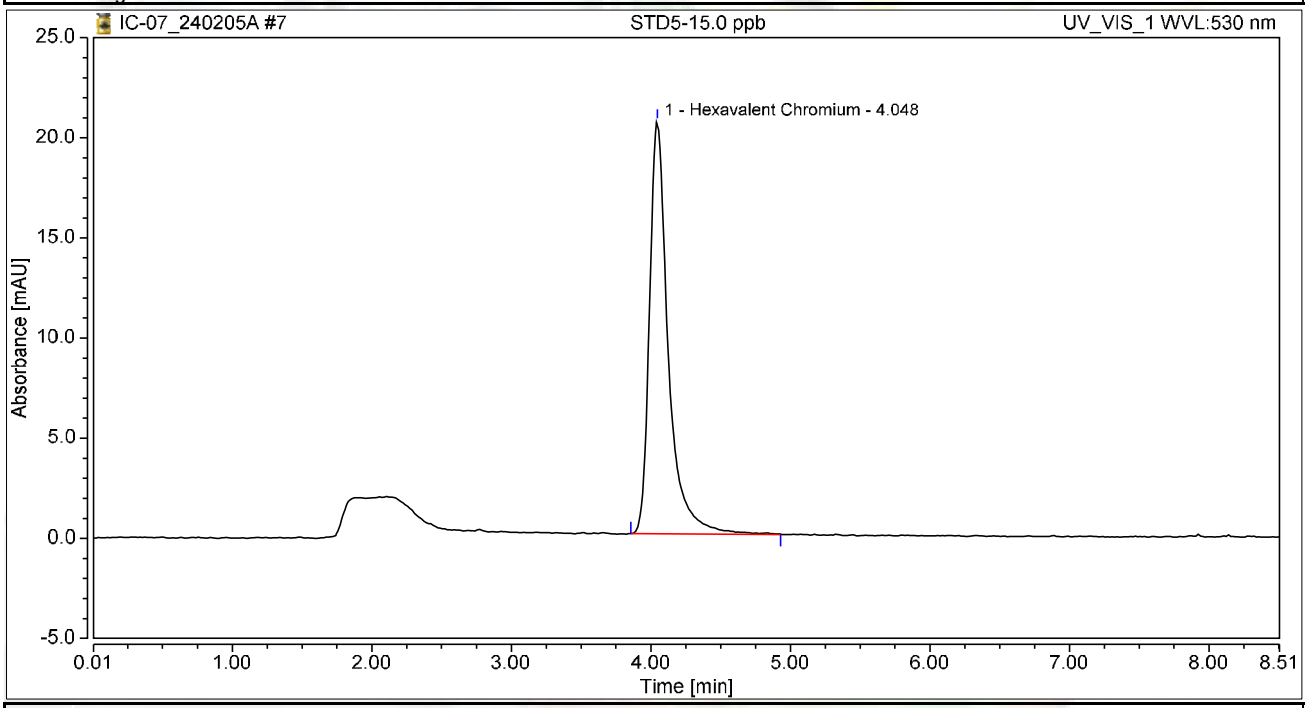
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.116	13.748	100.00	100.00	9.8357
Total:			**2.116**	**13.748**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

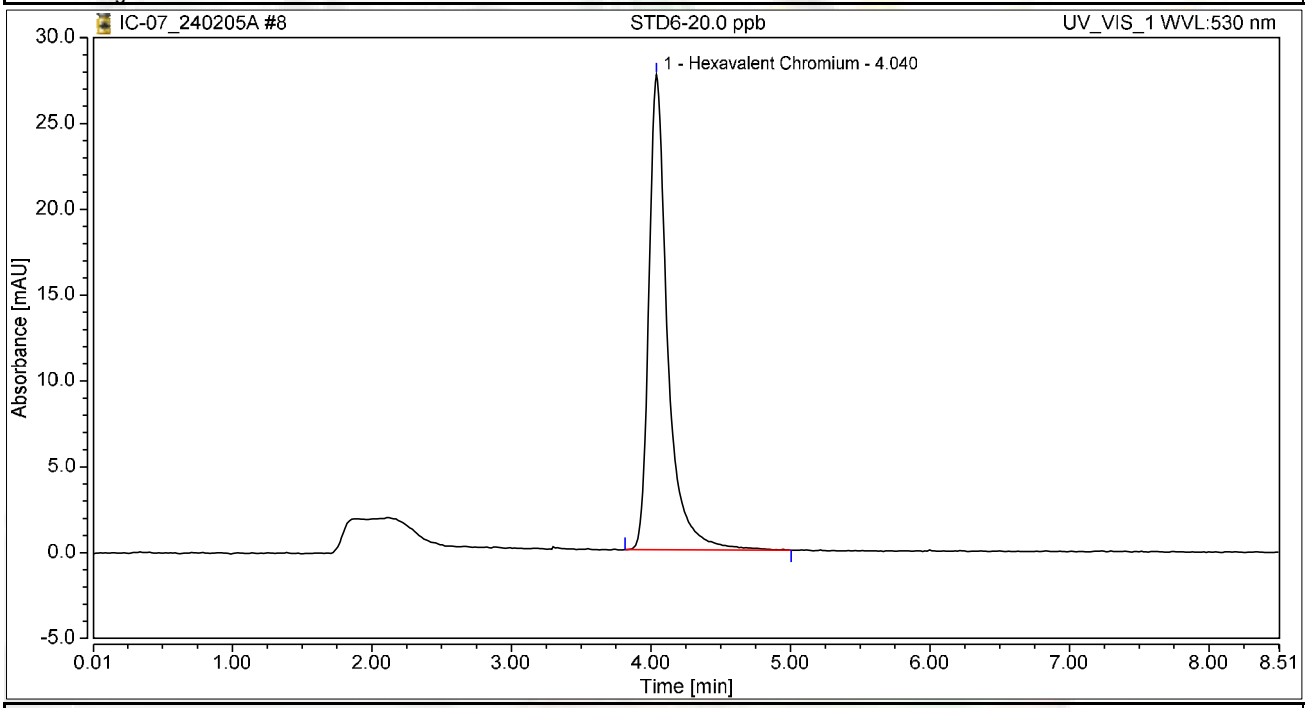
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	3.227	20.605	100.00	100.00	15.0023
Total:			**3.227**	**20.605**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:08**	*Sample Weight:*	**1.0000**

Chromatogram



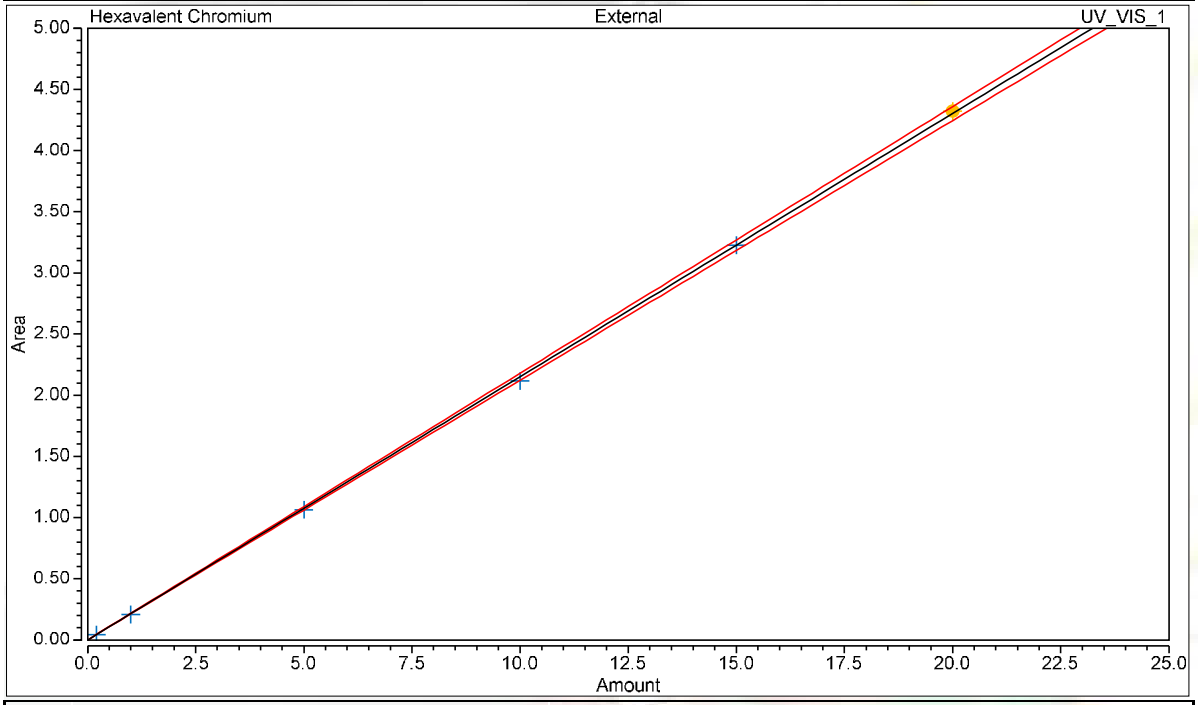
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	4.323	27.676	100.00	100.00	20.0959
Total:			**4.323**	**27.676**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2151
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99987

Calibration Plot — Hexavalent Chromium



Calibration Results — Hexavalent Chromium

No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0427	0.043	0.313
4	STD2-1.0 ppb	02	1.0000	0.2063	0.206	1.377
5	STD3-5.0 ppb	03	5.0000	1.0639	1.064	6.885
6	STD4-10.0 ppb	04	10.0000	2.1157	2.116	13.748
7	STD5-15.0 ppb	05	15.0000	3.2270	3.227	20.605
8	STD6-20.0 ppb	06	20.0000	4.3227	4.323	27.676

Reviewed by:

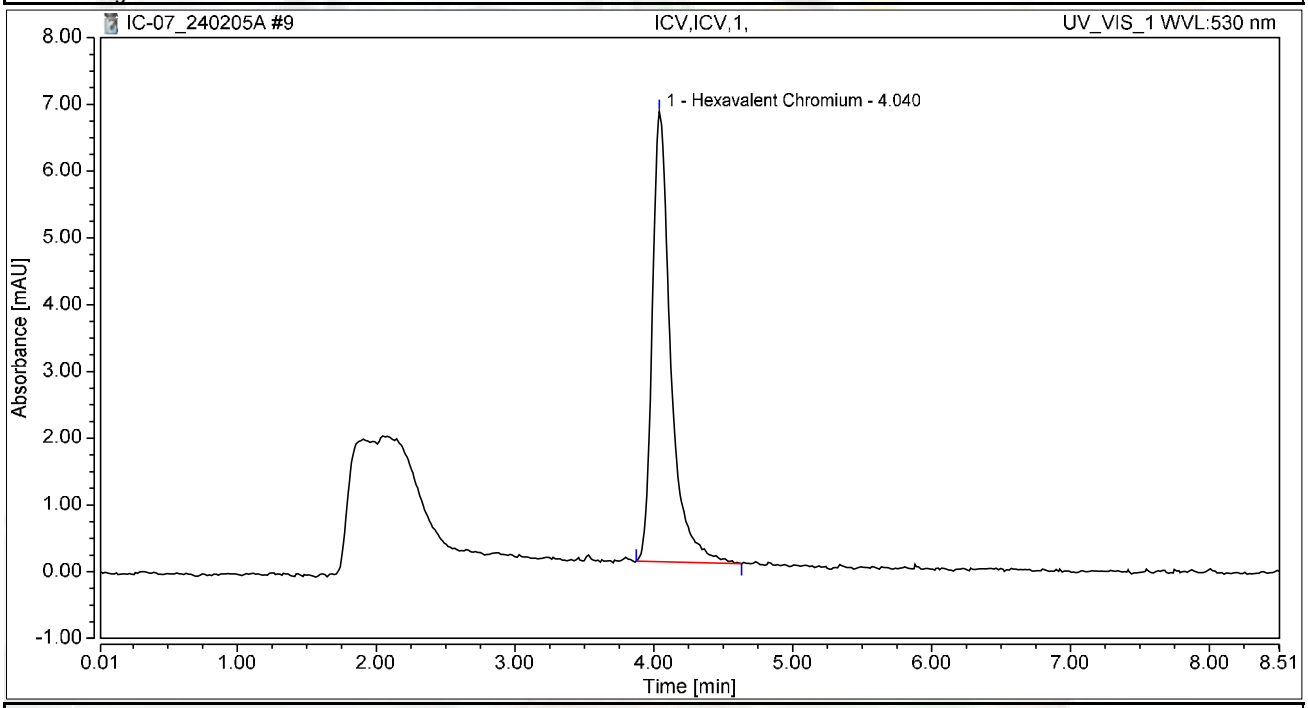
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

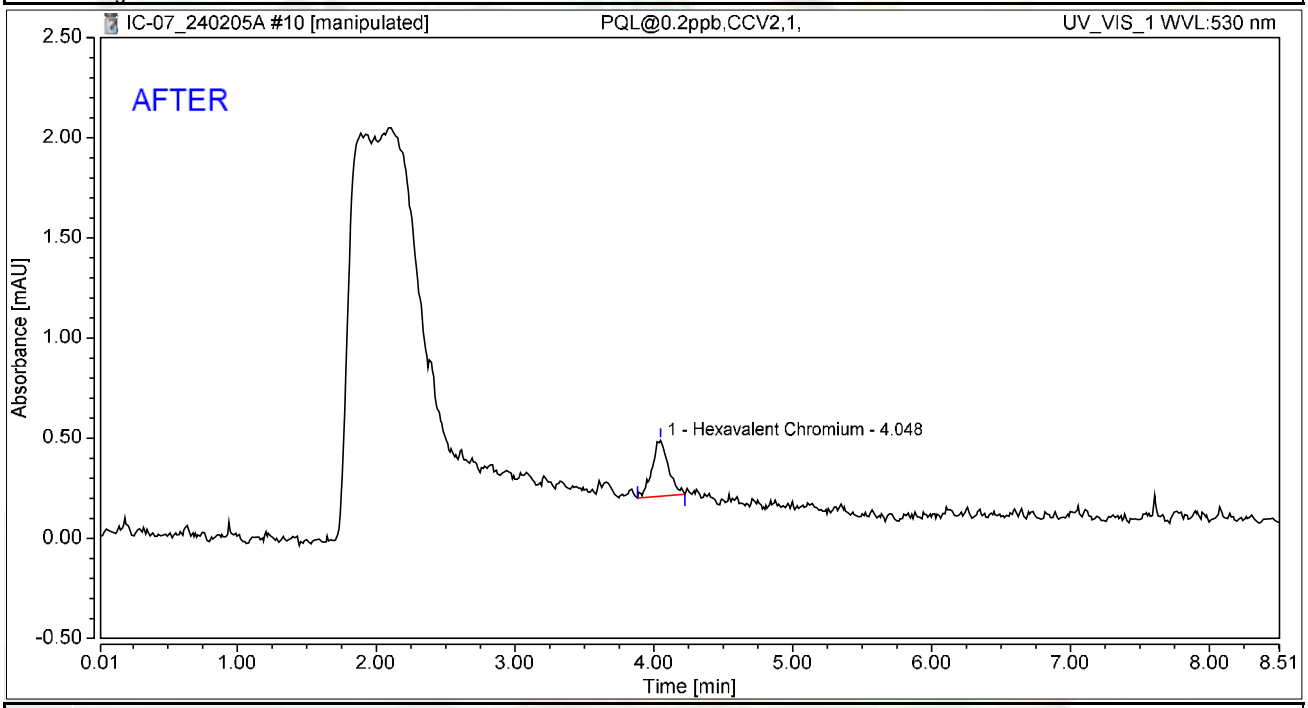
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.040	6.743	100.00	100.00	4.8342
Total:			**1.040**	**6.743**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.039	0.279	100.00	100.00	0.1802
Total:			**0.039**	**0.279**	**100.00**	**100.00**	

Reviewed by:

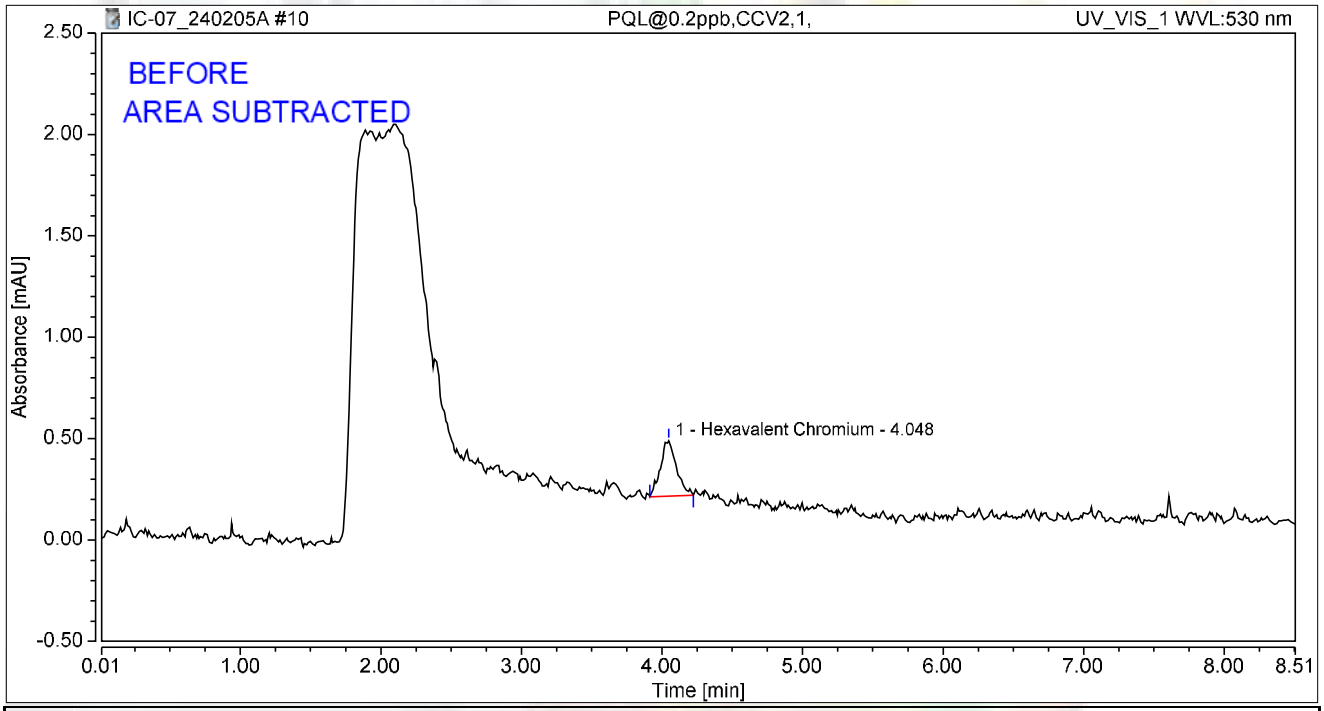
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

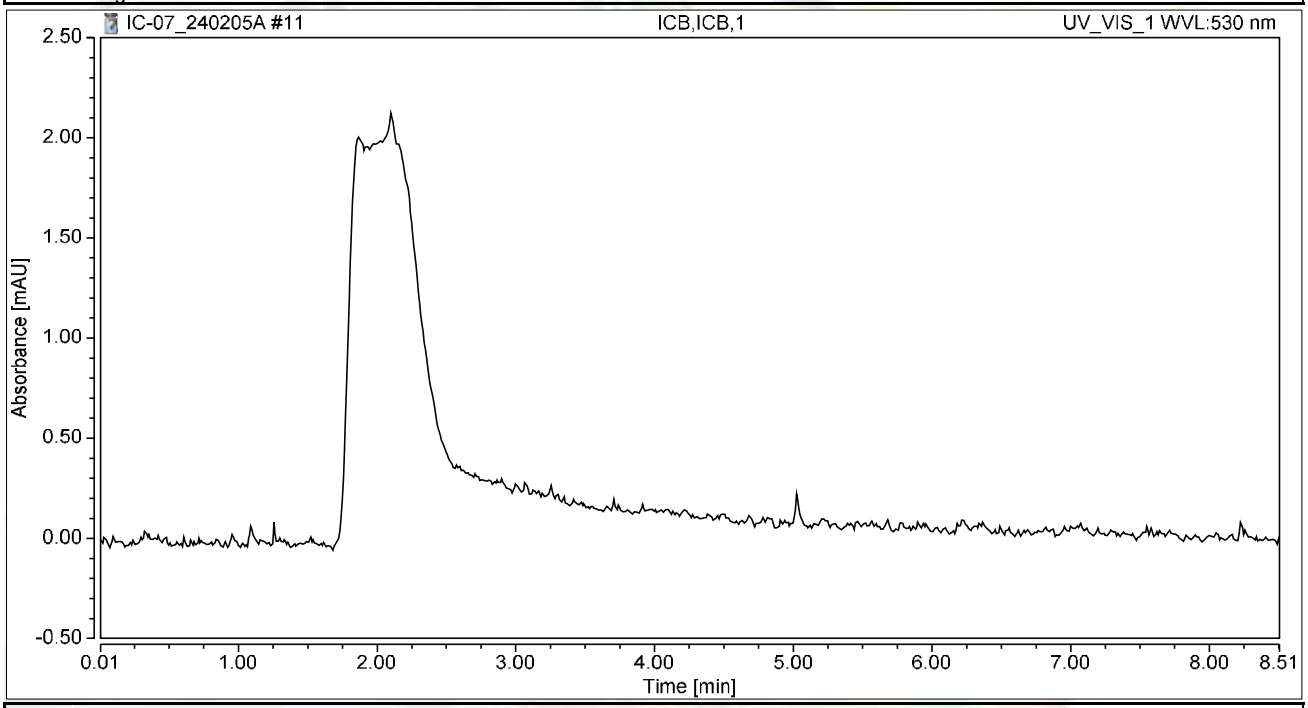
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.036	0.273	100.00	100.00	0.1694
Total:			**0.036**	**0.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

JRB 2/19/2024

RAW DATA

INJECTION LOG: 240221A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/21/24 9:16 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/21/24 9:30 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/21/24 9:39 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/21/24 9:49 AM	Reported
13	MB-R182773	MBLK	1	Hexavalent Chromium	02/21/24 9:58 AM	Reported
14	LCS-R182773	LCS	1	Hexavalent Chromium	02/21/24 10:08 AM	Reported
15	N063213-008A	SAMP	10	Hexavalent Chromium	02/21/24 10:17 AM	Reported
16	N063211-001A	SAMP	1	Hexavalent Chromium	02/21/24 10:27 AM	Reported
17	N063211-002A	SAMP	1	Hexavalent Chromium	02/21/24 10:36 AM	Reported
18	N063211-003A	SAMP	1	Hexavalent Chromium	02/21/24 10:46 AM	Reported
19	N063211-001AMS	MS	1	Hexavalent Chromium	02/21/24 10:55 AM	Reported
20	N063211-002AMS	MS	1	Hexavalent Chromium	02/21/24 11:04 AM	Reported
21	N063211-003AMS	MS	1	Hexavalent Chromium	02/21/24 11:14 AM	Reported
22	N063213-008AMS	MS	10	Hexavalent Chromium	02/21/24 11:23 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/21/24 11:33 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/21/24 11:42 AM	Reported
25	N063213-008AMSD	MSD	10	Hexavalent Chromium	02/21/24 11:52 AM	Reported
26	N063213-001A	SAMP	1	Hexavalent Chromium	02/21/24 12:01 PM	Not Reported
27	N063213-002A	SAMP	1	Hexavalent Chromium	02/21/24 12:11 PM	Reported
28	N063213-005A	SAMP	1	Hexavalent Chromium	02/21/24 12:20 PM	Reported
29	N063213-003A	SAMP	5	Hexavalent Chromium	02/21/24 12:30 PM	Not Reported
30	N063213-004A	SAMP	100	Hexavalent Chromium	02/21/24 12:39 PM	Reported
31	N063213-007A	SAMP	200	Hexavalent Chromium	02/21/24 12:52 PM	Reported
32	N063211-001ADUP	DUP	1	Hexavalent Chromium	02/21/24 1:03 PM	Reported
33	N063213-001AMS	MS	1	Hexavalent Chromium	02/21/24 1:12 PM	Not Reported
34	N063213-002AMS	MS	1	Hexavalent Chromium	02/21/24 1:21 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/21/24 1:31 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/21/24 1:40 PM	Reported
37	N063213-005AMS	MS	1	Hexavalent Chromium	02/21/24 1:50 PM	Reported
38	N063213-004AMS	MS	100	Hexavalent Chromium	02/21/24 1:59 PM	Reported
39	N063213-007AMS	MS	200	Hexavalent Chromium	02/21/24 2:09 PM	Reported
40	N063213-006A	SAMP	1	Hexavalent Chromium	02/21/24 2:18 PM	Not Reported
41	N063213-006AMS	MS	1	Hexavalent Chromium	02/21/24 2:28 PM	Not Reported
42	N063213-006A	SAMP	5	Hexavalent Chromium	02/21/24 2:37 PM	Reported

Reviewed by:

JRB 2/27/2024

INJECTION LOG: 240221A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063213-006AMS	MS	5	Hexavalent Chromium	02/21/24 2:46 PM	Reported
44	N063213-009A	SAMP	1	Hexavalent Chromium	02/21/24 2:56 PM	Reported
45	N063213-009AMS	MS	1	Hexavalent Chromium	02/21/24 3:05 PM	Reported
46	N063213-003AMS	MS	5	Hexavalent Chromium	02/21/24 3:15 PM	Not Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/21/24 3:24 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/21/24 3:34 PM	Reported
49	N063214-007A	SAMP	1	Hexavalent Chromium	02/21/24 3:43 PM	Not Reported
50	N063214-007AMS	MS	1	Hexavalent Chromium	02/21/24 3:53 PM	Not Reported
51	N063214-001A	SAMP	1	Hexavalent Chromium	02/21/24 4:02 PM	Not Reported
52	N063214-001AMS	MS	1	Hexavalent Chromium	02/21/24 4:52 PM	Not Reported
53	N063214-003A	SAMP	1	Hexavalent Chromium	02/21/24 5:05 PM	Not Reported
54	N063214-003AMS	MS	1	Hexavalent Chromium	02/21/24 5:15 PM	Not Reported
55	N062911-004A MS	~~SAMP~~	5	Hexavalent Chromium	02/21/24 5:24 PM	Reported
N062911-004AMS 56	~~N063911-004AMS~~	MS ~~SAMP~~	5	Hexavalent Chromium	02/21/24 5:34 PM	Reported
57	N063214-002A	SAMP	1	Hexavalent Chromium	02/21/24 5:43 PM	Reported
58	N063214-002AMS	MS	1	Hexavalent Chromium	02/21/24 5:52 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/21/24 6:02 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/21/24 6:11 PM	Reported
61	N063214-004A	SAMP	1	Hexavalent Chromium	02/21/24 6:21 PM	Reported
62	N063214-004AMS	MS	1	Hexavalent Chromium	02/21/24 6:30 PM	Reported
63	N063214-006A	SAMP	1	Hexavalent Chromium	02/21/24 6:40 PM	Reported
64	N063214-006AMS	MS	1	Hexavalent Chromium	02/21/24 6:49 PM	Reported
65	N063214-008A	SAMP	1	Hexavalent Chromium	02/21/24 6:59 PM	Not Reported
66	N063214-008AMS	MS	1	Hexavalent Chromium	02/21/24 7:08 PM	Not Reported
67	N063214-001A	SAMP	5	Hexavalent Chromium	02/21/24 7:18 PM	Reported
68	N063214-001AMS	MS	5	Hexavalent Chromium	02/21/24 7:27 PM	Reported
69	N063214-003A	SAMP	5	Hexavalent Chromium	02/21/24 7:37 PM	Reported
70	N063214-003AMS	MS	5	Hexavalent Chromium	02/21/24 7:46 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/21/24 7:55 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/21/24 8:05 PM	Reported
73	N063214-005A	SAMP	5	Hexavalent Chromium	02/21/24 8:14 PM	Not Reported
74	N063214-005AMS	MS	5	Hexavalent Chromium	02/21/24 8:24 PM	Not Reported
75	N063213-001AMS	MS	5	Hexavalent Chromium	02/21/24 8:33 PM	Reported
76	N063213-001A	SAMP	5	Hexavalent Chromium	02/21/24 8:43 PM	Reported
77	N063213-003AMS	MS	100	Hexavalent Chromium	02/21/24 8:52 PM	Reported
78	N063213-003A	SAMP	100	Hexavalent Chromium	02/21/24 9:02 PM	Reported
79	N063213-002AMS	MS	1	Hexavalent Chromium	02/21/24 9:11 PM	Reported
80	N063214-005A	SAMP	1	Hexavalent Chromium	02/21/24 9:21 PM	Not Reported
81	N063214-005AMS	MS	1	Hexavalent Chromium	02/21/24 9:30 PM	Not Reported
82	CCV-7	CCV	1	Hexavalent Chromium	02/21/24 9:39 PM	Reported
83	CCB-7	CCB	1	Hexavalent Chromium	02/21/24 9:49 PM	Reported
84	BLANK	BLANK	1	Hexavalent Chromium	02/21/24 9:58 PM	Not Reported

JRB 2/27/2024
for RBA

dMocha 3/7/2024
for RBA

Injection Log Summary

Sequence Details

Name:	**IC-07_240221A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**22/Feb/24 12:29:45**
No. of Injections:	**87**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/21/2024 09:16	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/21/2024 09:30	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/21/2024 09:39	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/21/2024 09:49	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/21/2024 09:58	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/21/2024 10:08	Finished	LCS @5ppb, IWST-231228B
15	N063213-008A,SAMF	7	1000	Unknown		02/21/2024 10:17	Finished	SAMP,1>10 mL
16	N063211-001A,SAMF	8	1000	Unknown		02/21/2024 10:27	Finished	SAMP,10 mL
17	N063211-002A,SAMF	9	1000	Unknown		02/21/2024 10:36	Finished	SAMP,10 mL
18	N063211-003A,SAMF	10	1000	Unknown		02/21/2024 10:46	Finished	SAMP,10 mL
19	N063211-001AMS,MS	11	1000	Unknown		02/21/2024 10:55	Finished	MS (1ppb), IWST-231228B,10r
20	N063211-002AMS,MS	12	1000	Unknown		02/21/2024 11:04	Finished	MS (1ppb), IWST-231228B,10r
21	N063211-003AMS,MS	13	1000	Unknown		02/21/2024 11:14	Finished	MS (1ppb), IWST-231228B,10r
22	N063213-008AMS,MS	14	1000	Unknown		02/21/2024 11:23	Finished	MS (5ppb), IWST-231228B,1>1
23	CCV-2,CCV1,1,	15	1000	Unknown		02/21/2024 11:33	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		02/21/2024 11:42	Finished	CCB R240129C
25	N063213-008AMSD,M	17	1000	Unknown		02/21/2024 11:52	Finished	MSD (5ppb), IWST-231228B,1
26	N063213-001A,SAMF	18	1000	Unknown		02/21/2024 12:01	Finished	SAMP,10 mL
27	N063213-002A,SAMF	19	1000	Unknown		02/21/2024 12:11	Finished	SAMP,10 mL
28	N063213-005A,SAMF	20	1000	Unknown		02/21/2024 12:20	Finished	SAMP,10 mL
29	N063213-003A,SAMF	21	1000	Unknown		02/21/2024 12:30	Finished	SAMP,2>10 mL
30	N063213-004A,SAMF	22	1000	Unknown		02/21/2024 12:39	Finished	SAMP,0.1>10 mL
31	N063213-007A,SAMF	1	1000	Unknown		02/21/2024 12:52	Finished	SAMP,0.05>10 mL
32	N063211-001ADUP,D	2	1000	Unknown		02/21/2024 13:03	Finished	DUP,10 mL
33	N063213-001AMS,MS	3	1000	Unknown		02/21/2024 13:12	Finished	MS (5ppb), IWST-231228B,10r
34	N063213-002AMS,MS	4	1000	Unknown		02/21/2024 13:21	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	5	1000	Unknown		02/21/2024 13:31	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	6	1000	Unknown		02/21/2024 13:40	Finished	CCB R240129C
37	N063213-005AMS,MS	7	1000	Unknown		02/21/2024 13:50	Finished	MS (1ppb), IWST-231228B,10r
38	N063213-004AMS,MS	8	1000	Unknown		02/21/2024 13:59	Finished	MS (5ppb), IWST-231228B,0.1
39	N063213-007AMS,MS	9	1000	Unknown		02/21/2024 14:09	Finished	MS (5ppb), IWST-231228B,0.0
40	N063213-006A,SAMF	10	1000	Unknown		02/21/2024 14:18	Finished	SAMP,10 mL
41	N063213-006AMS,MS	11	1000	Unknown		02/21/2024 14:28	Finished	MS (1ppb), IWST-231228B,10r
42	N063213-006A,SAMF	12	1000	Unknown		02/21/2024 14:37	Finished	SAMP,2>10 mL
43	N063213-006AMS,MS	13	1000	Unknown		02/21/2024 14:46	Finished	MS (1ppb), IWST-231228B,2>1
44	N063213-009A,SAMF	14	1000	Unknown		02/21/2024 14:56	Finished	SAMP,10 mL
45	N063213-009AMS,MS	15	1000	Unknown		02/21/2024 15:05	Finished	MS (1ppb), IWST-231228B,10r
46	N063213-003AMS,MS	16	1000	Unknown		02/21/2024 15:15	Finished	MS (5ppb), IWST-231228B,2>1
47	CCV-4,CCV1,1,	17	1000	Unknown		02/21/2024 15:24	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	18	1000	Unknown		02/21/2024 15:34	Finished	CCB R240129C
49	N063214-007A,SAMF	19	1000	Unknown		02/21/2024 15:43	Finished	SAMP,10 mL
50	N063214-007AMS,MS	20	1000	Unknown		02/21/2024 15:53	Finished	MS (1ppb), IWST-231228B,10r
51	N063214-001A,SAMF	21	1000	Unknown		02/21/2024 16:02	Finished	SAMP,10 mL
52	N063214-001AMS,MS	1	1000	Unknown		02/21/2024 16:52	Finished	MS (1ppb), IWST-231228B,10r
53	N063214-003A,SAMF	2	1000	Unknown		02/21/2024 17:05	Finished	SAMP,10 mL
54	N063214-003AMS,MS	3	1000	Unknown		02/21/2024 17:15	Finished	MS (1ppb), IWST-231228B,10r
55	N062911-004A,SAMF MS SAMP	4	1000	Unknown		02/21/2024 17:24	Finished	SAMP,2>10 mL
56	~~N063911-004AMS,MS~~	5	1000	Unknown		02/21/2024 17:34	Finished	MS (1ppb), IWST-231228B,2>1
57	N063214-002A,SAMF	6	1000	Unknown		02/21/2024 17:43	Finished	SAMP,10 mL
58	N063214-002AMS,MS	7	1000	Unknown		02/21/2024 17:52	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	8	1000	Unknown		02/21/2024 18:02	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	9	1000	Unknown		02/21/2024 18:11	Finished	CCB R240129C

N062911-004MS

JRB 2/27/2024
for RBA

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for RBA

IC-07 RBA 2/22/2024 12:32:46 PM

61	N063214-004A,SAMP	10	1000	Unknown		02/21/2024 18:21	Finished	SAMP,10 mL
62	N063214-004AMS,MS	11	1000	Unknown		02/21/2024 18:30	Finished	MS (1ppb), IWST-231228B,10r
63	N063214-006A,SAMP	12	1000	Unknown		02/21/2024 18:40	Finished	SAMP,10 mL
64	N063214-006AMS,MS	13	1000	Unknown		02/21/2024 18:49	Finished	MS (1ppb), IWST-231228B,10r
65	N063214-008A,SAMP	14	1000	Unknown		02/21/2024 18:59	Finished	SAMP,10 mL
66	N063214-008AMS,MS	15	1000	Unknown		02/21/2024 19:08	Finished	MS (1ppb), IWST-231228B,10r
67	N063214-001A,SAMP	16	1000	Unknown		02/21/2024 19:18	Finished	SAMP,2>10 mL
68	N063214-001AMS,MS	17	1000	Unknown		02/21/2024 19:27	Finished	MS (1ppb), IWST-231228B,2>1
69	N063214-003A,SAMP	18	1000	Unknown		02/21/2024 19:37	Finished	SAMP,2>10 mL
70	N063214-003AMS,MS	19	1000	Unknown		02/21/2024 19:46	Finished	MS (1ppb), IWST-231228B,2>1
71	CCV-6,CCV1,1,	20	1000	Unknown		02/21/2024 19:55	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	21	1000	Unknown		02/21/2024 20:05	Finished	CCB R240129C
73	N063214-005A,SAMP	22	1000	Unknown		02/21/2024 20:14	Finished	SAMP,2>10 mL
74	N063214-005AMS,MS	23	1000	Unknown		02/21/2024 20:24	Finished	MS (1ppb), IWST-231228B,2>1
75	N063213-001AMS,MS	24	1000	Unknown		02/21/2024 20:33	Finished	MS (5ppb), IWST-231228B,2>1
76	N063213-001A,SAMP	25	1000	Unknown		02/21/2024 20:43	Finished	SAMP,2>10 mL
77	N063213-003AMS,MS	26	1000	Unknown		02/21/2024 20:52	Finished	MS (5ppb), IWST-231228B,0.1
78	N063213-003A,SAMP	27	1000	Unknown		02/21/2024 21:02	Finished	SAMP,0.1>10 mL
79	N063213-002AMS,MS	28	1000	Unknown		02/21/2024 21:11	Finished	MS (5ppb), IWST-231228B,10r
80	N063214-005A,SAMP	29	1000	Unknown		02/21/2024 21:21	Finished	SAMP,10 mL
81	N063214-005AMS,MS	30	1000	Unknown		02/21/2024 21:30	Finished	MS (1ppb), IWST-231228B,10r
82	CCV-7,CCV,1,	31	1000	Unknown		02/21/2024 21:39	Finished	CCV @5ppb, IWST-231228A
83	CCB-7,CCB,1,	32	1000	Unknown		02/21/2024 21:49	Finished	CCB R240129C
84	BLANK	33	1000	Unknown		02/21/2024 21:58	Finished	BLANK
85	SHUTDOWN R240221A	34	1000	Unknown		02/21/2024 22:08	Finished	
86	Eluent: ~~R240220A~~	35	1000	Unknown		n.a.	Finished	
87	PCR: ~~R240220B~~	36	1000	Unknown		n.a.	Finished	

R240221B

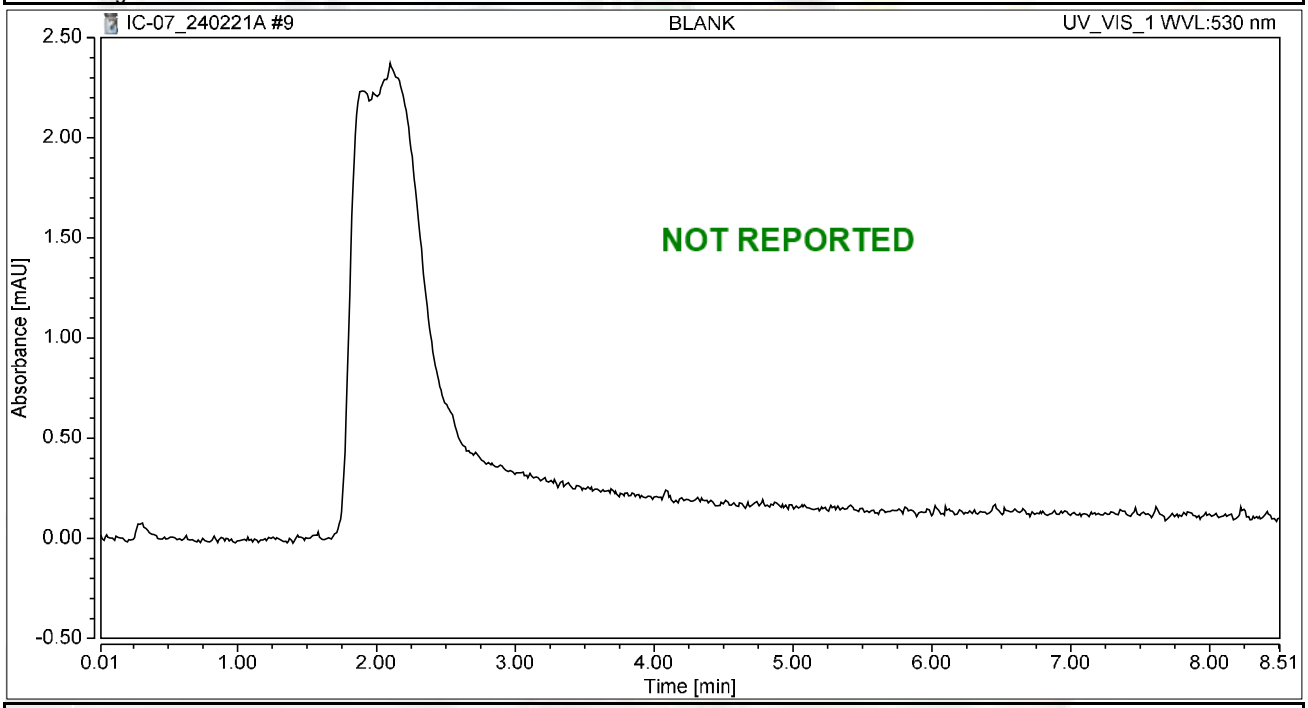
dMocha 3/3/2024
for RBA

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 09:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

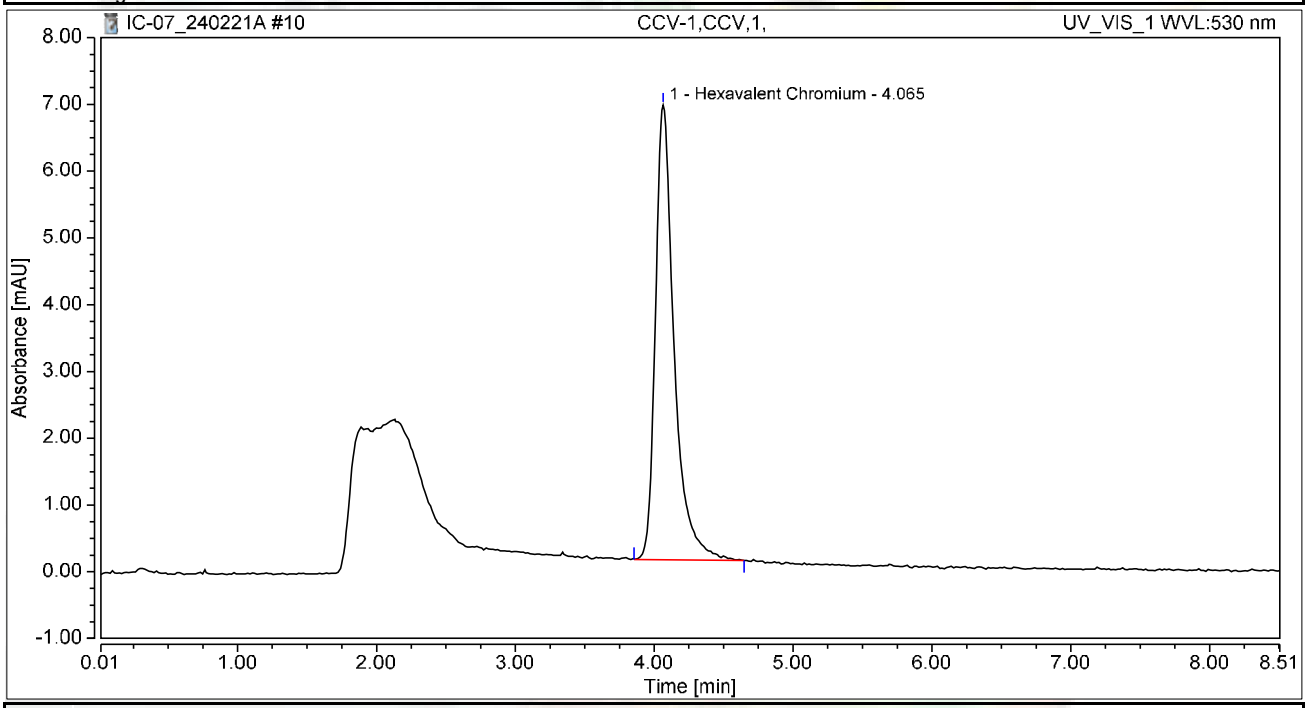
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 09:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	1.063	6.813	100.00	100.00	4.9416
Total:			**1.063**	**6.813**	**100.00**	**100.00**	

Reviewed by:

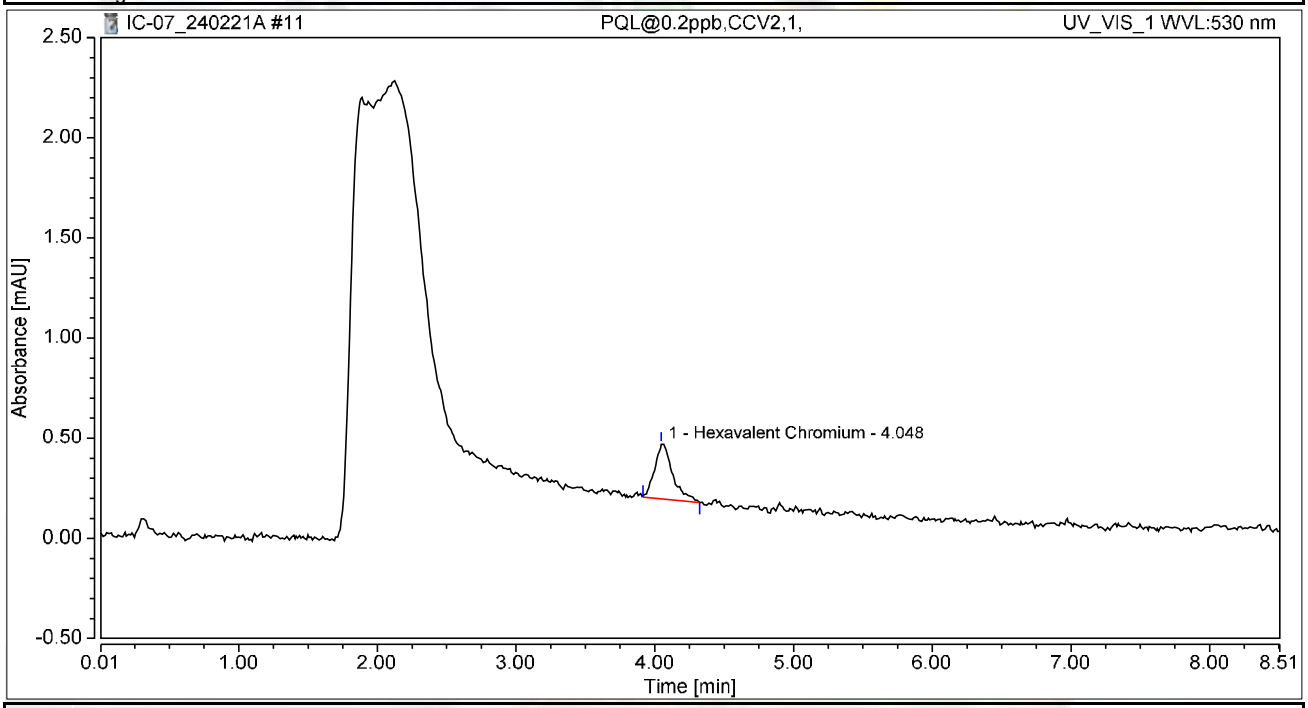
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 09:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

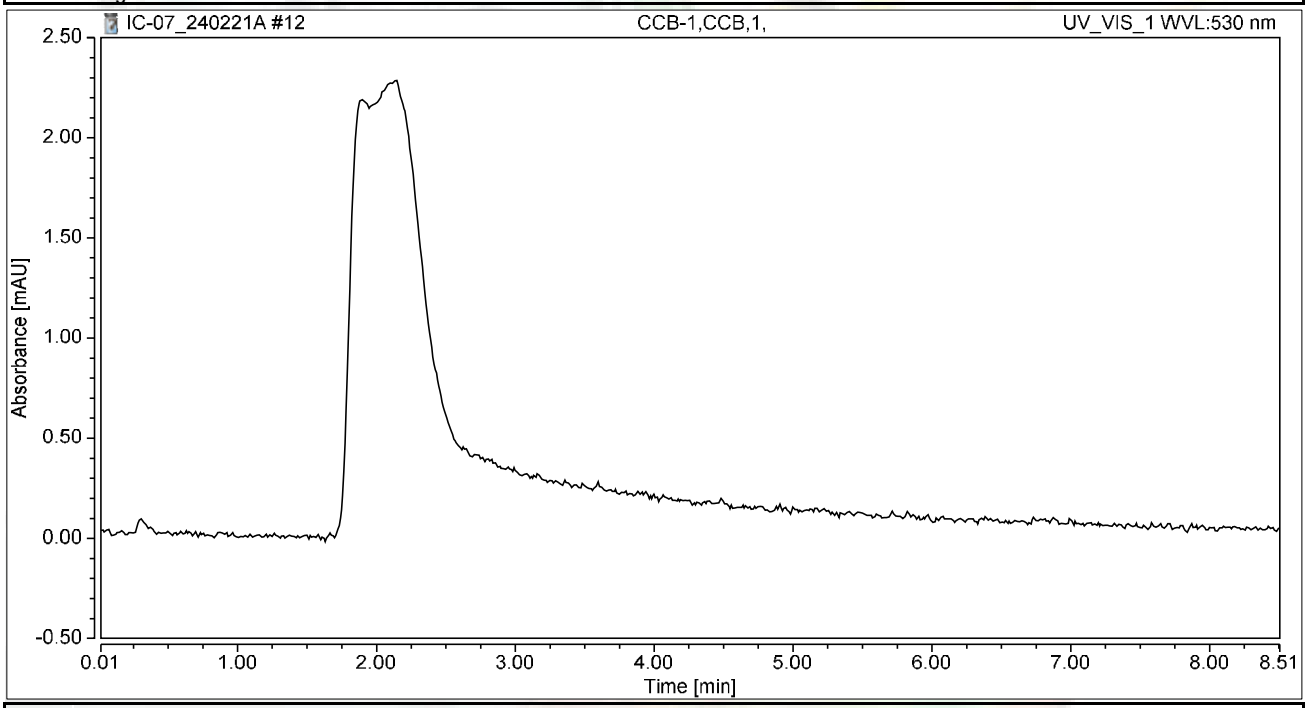
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.041	0.273	100.00	100.00	0.1929
Total:			**0.041**	**0.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 09:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

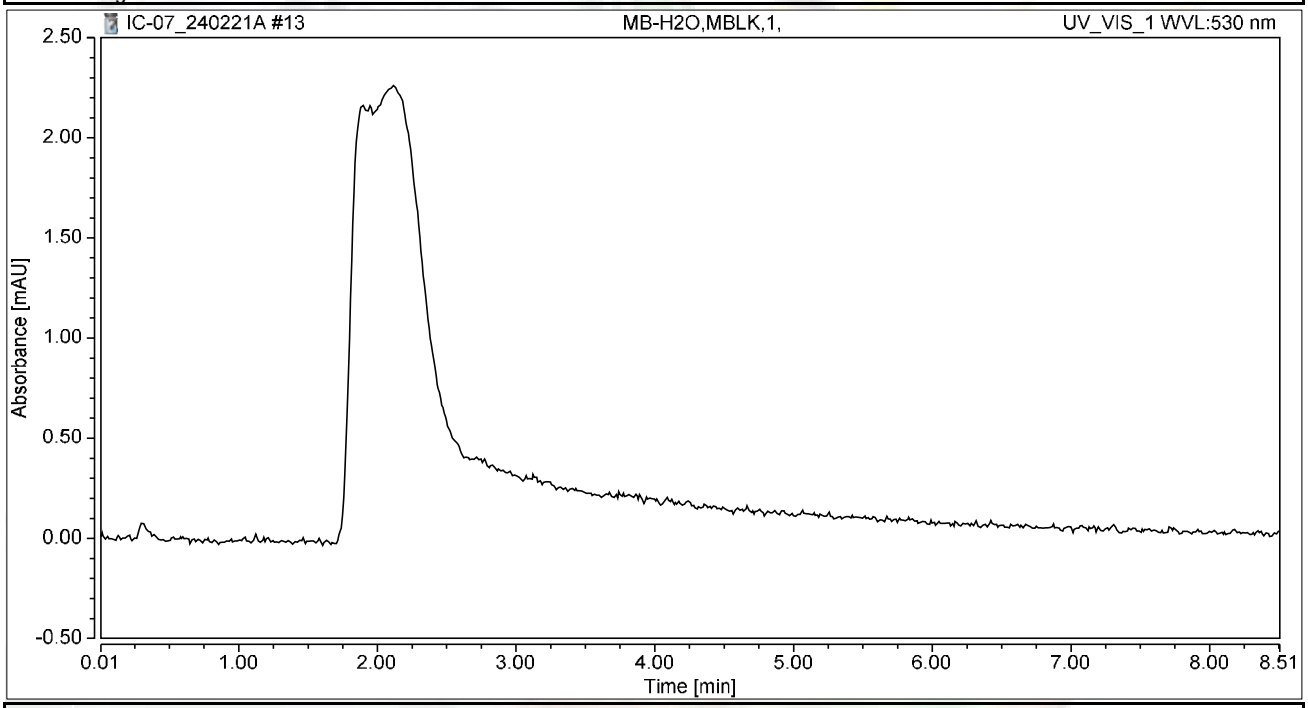
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 09:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

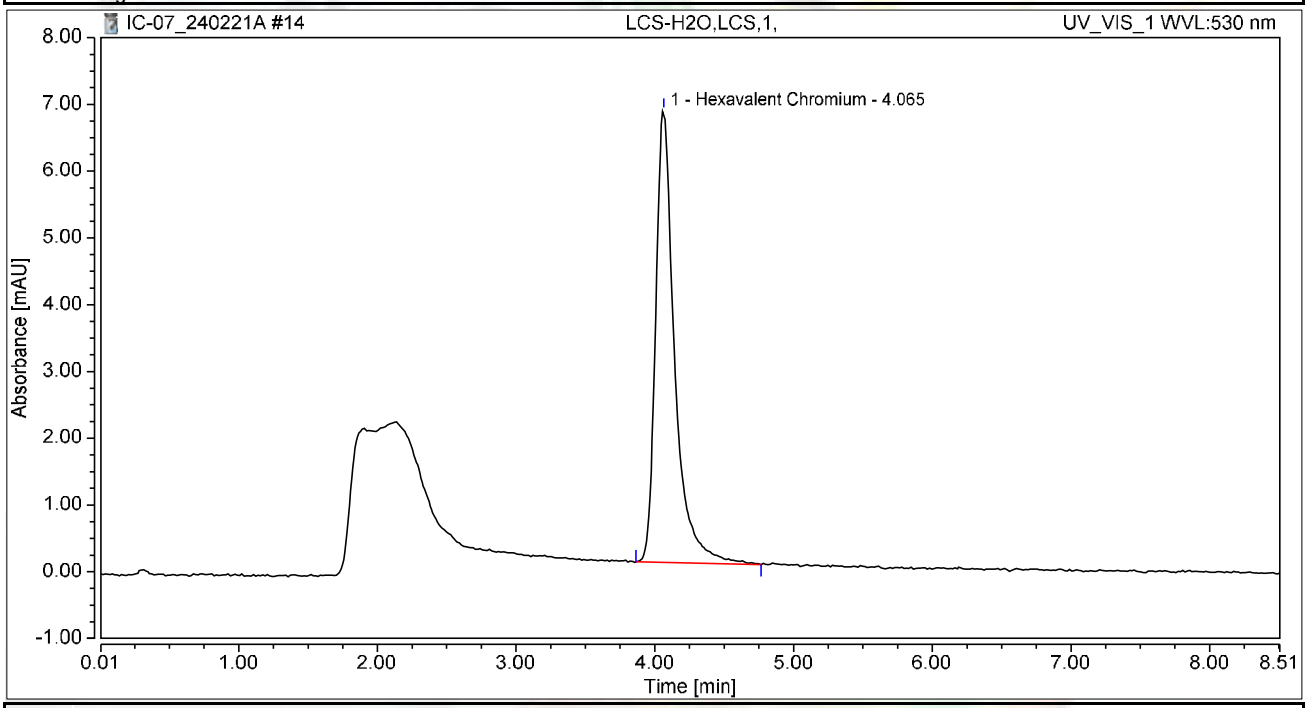
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 10:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

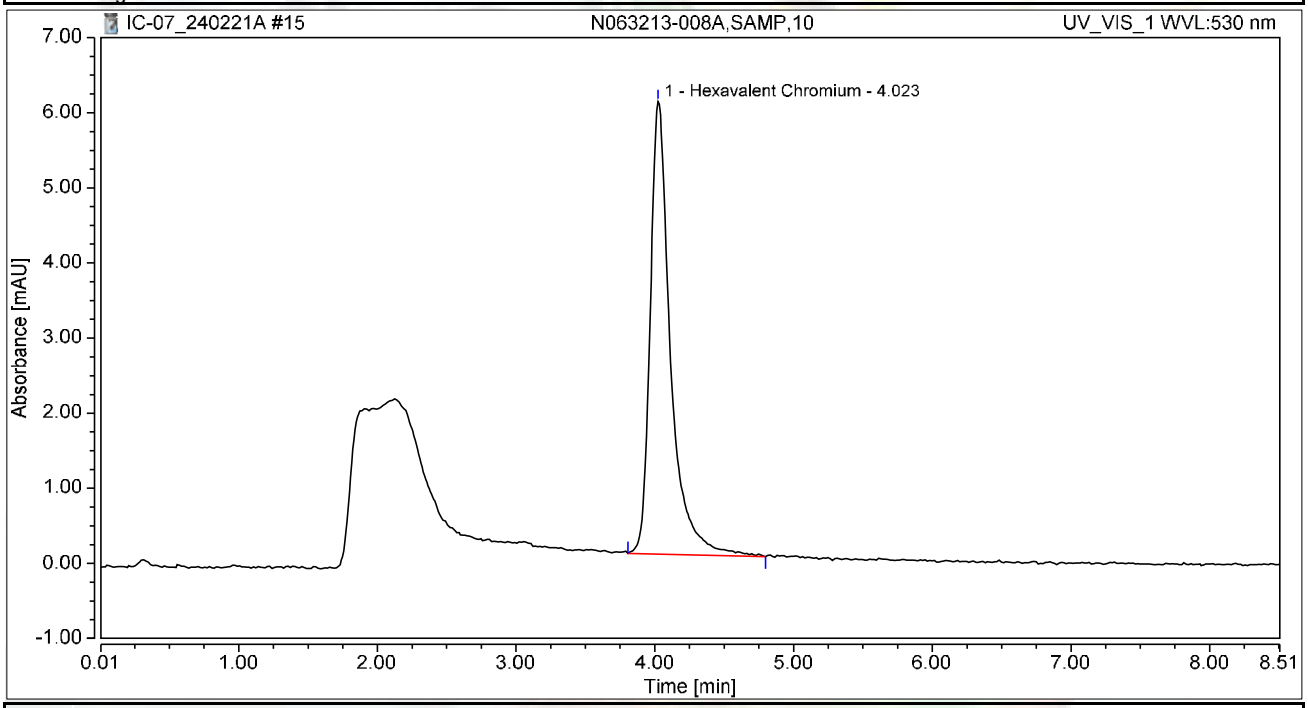
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	1.075	6.771	100.00	100.00	4.9996
Total:			**1.075**	**6.771**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-008A,SAMP,10**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 10:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

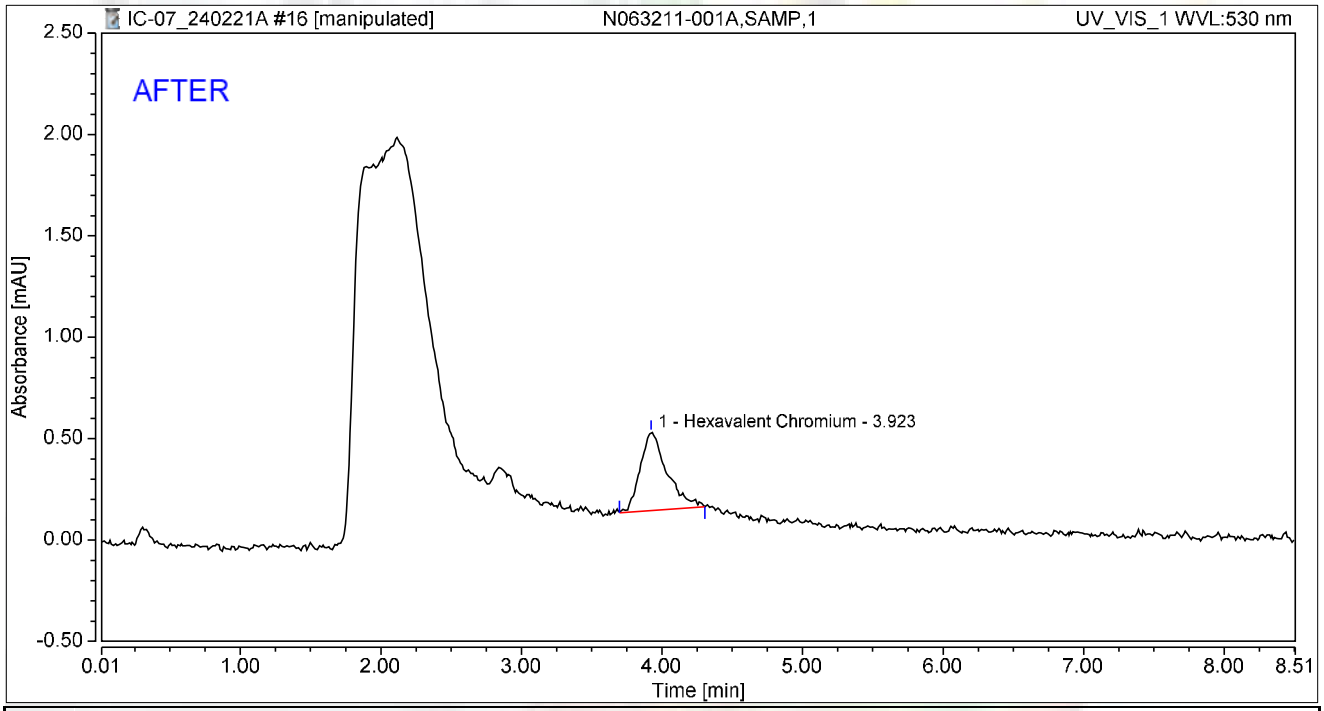
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	1.020	6.022	100.00	100.00	4.7409
Total:			**1.020**	**6.022**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063211-001A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 10:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.086	0.385	100.00	100.00	0.3980
Total:			**0.086**	**0.385**	**100.00**	**100.00**	

Reviewed by:

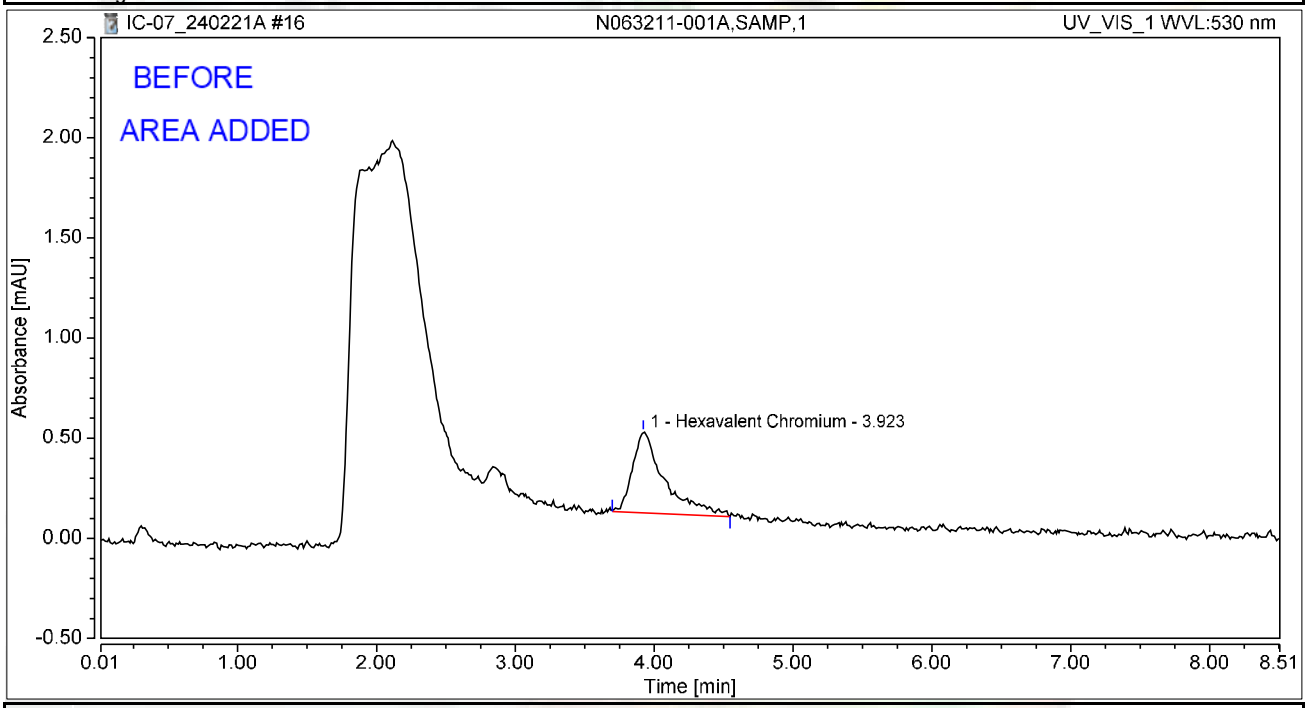
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063211-001A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 10:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

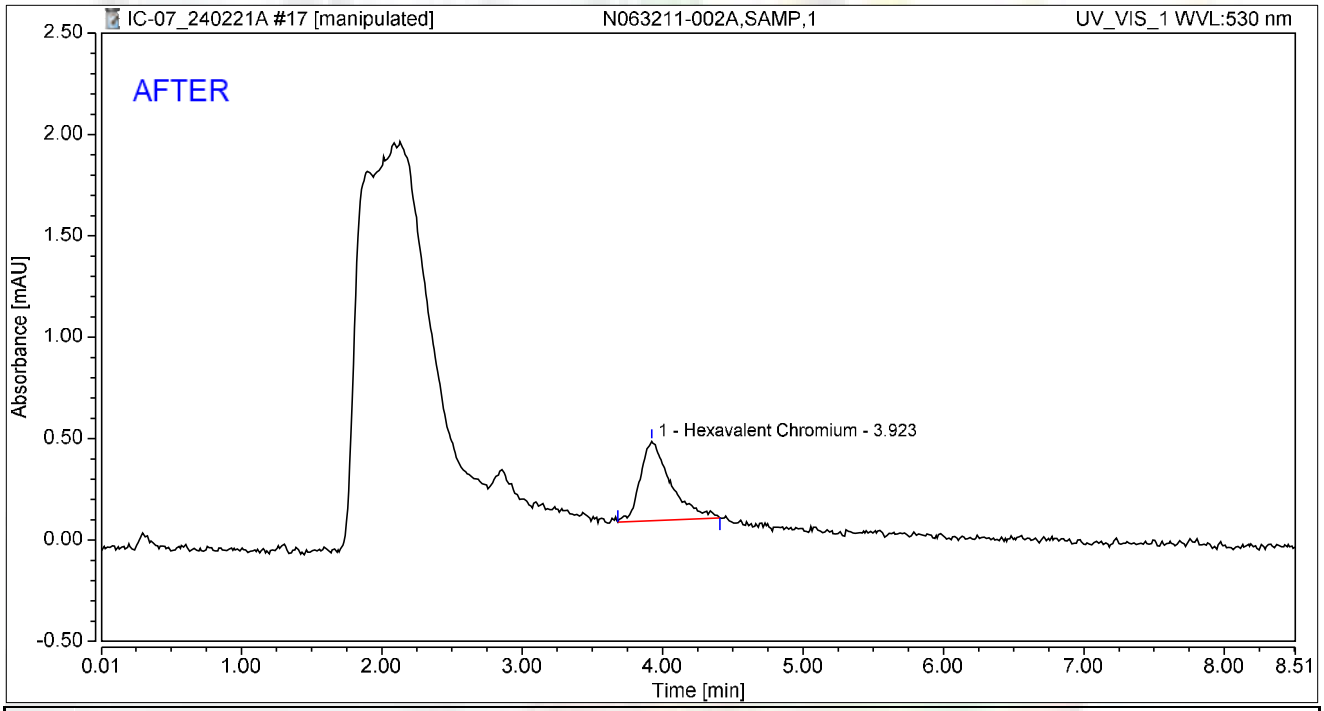
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.108	0.403	100.00	100.00	0.5039
Total:			**0.108**	**0.403**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063211-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 10:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.098	0.392	100.00	100.00	0.4578
Total:			**0.098**	**0.392**	**100.00**	**100.00**	

Reviewed by:

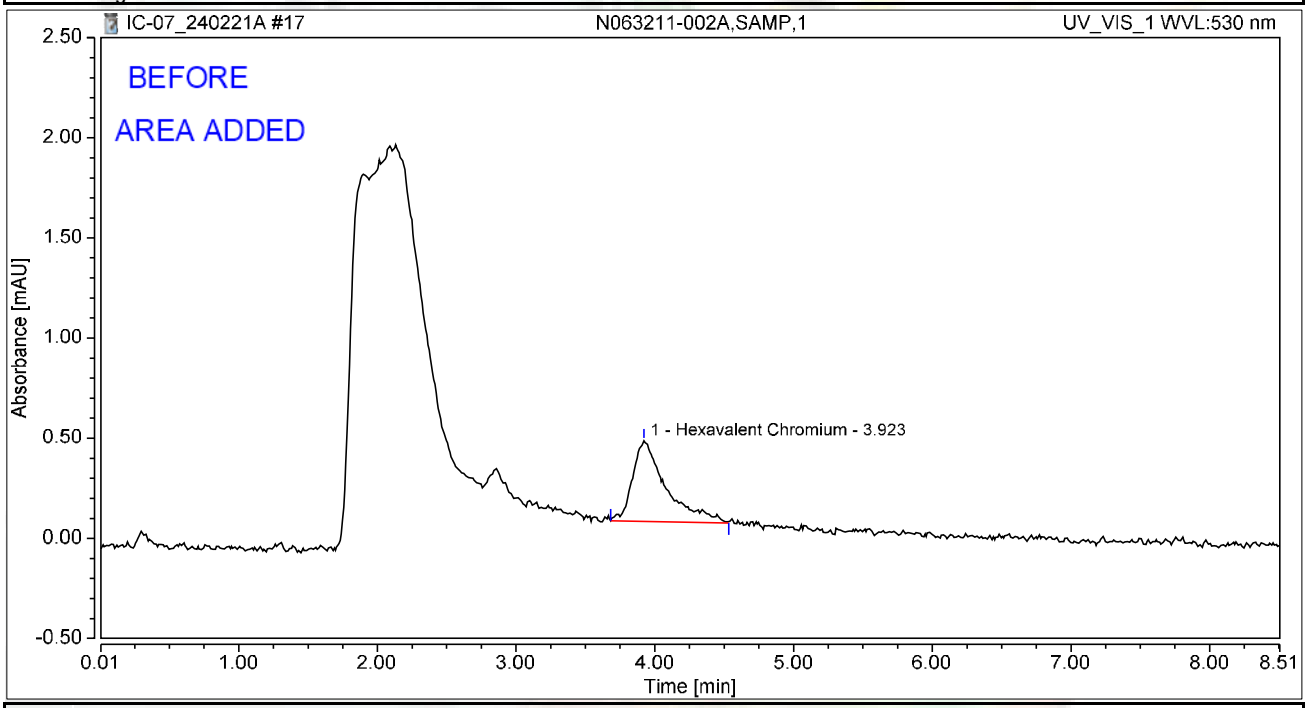
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063211-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 10:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

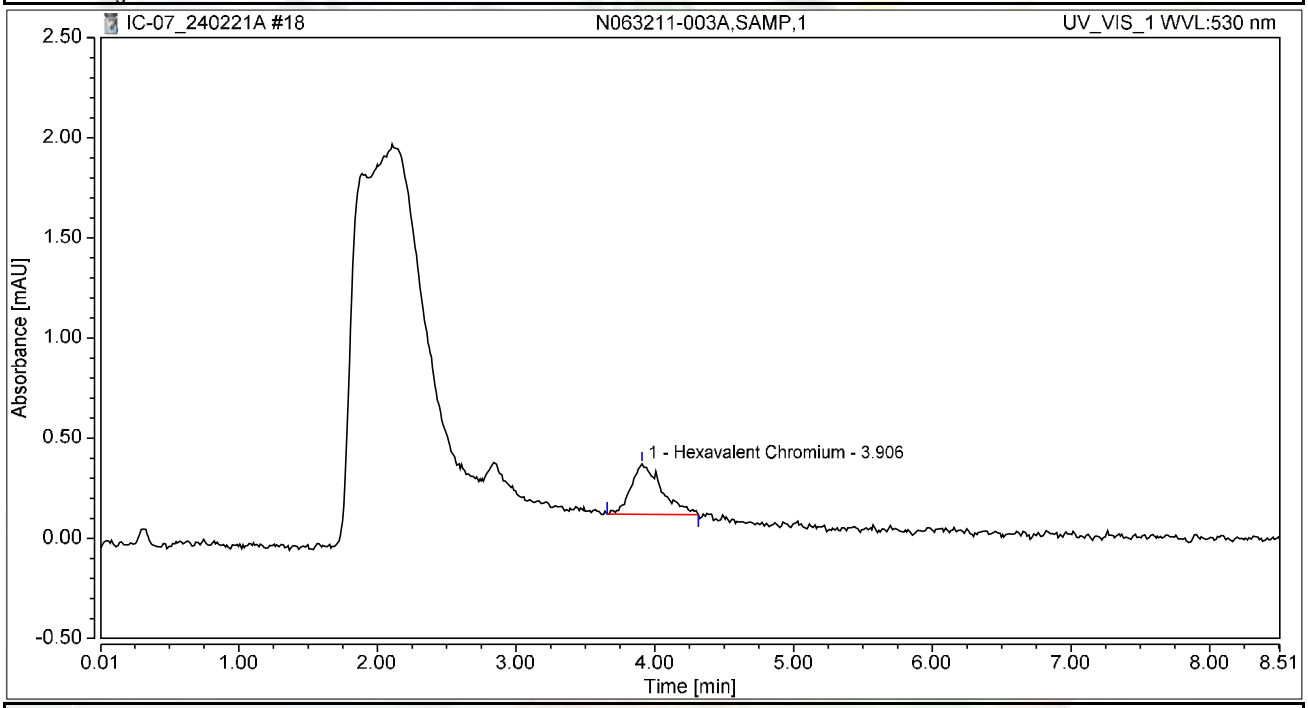
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.112	0.402	100.00	100.00	0.5211
Total:			**0.112**	**0.402**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063211-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 10:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

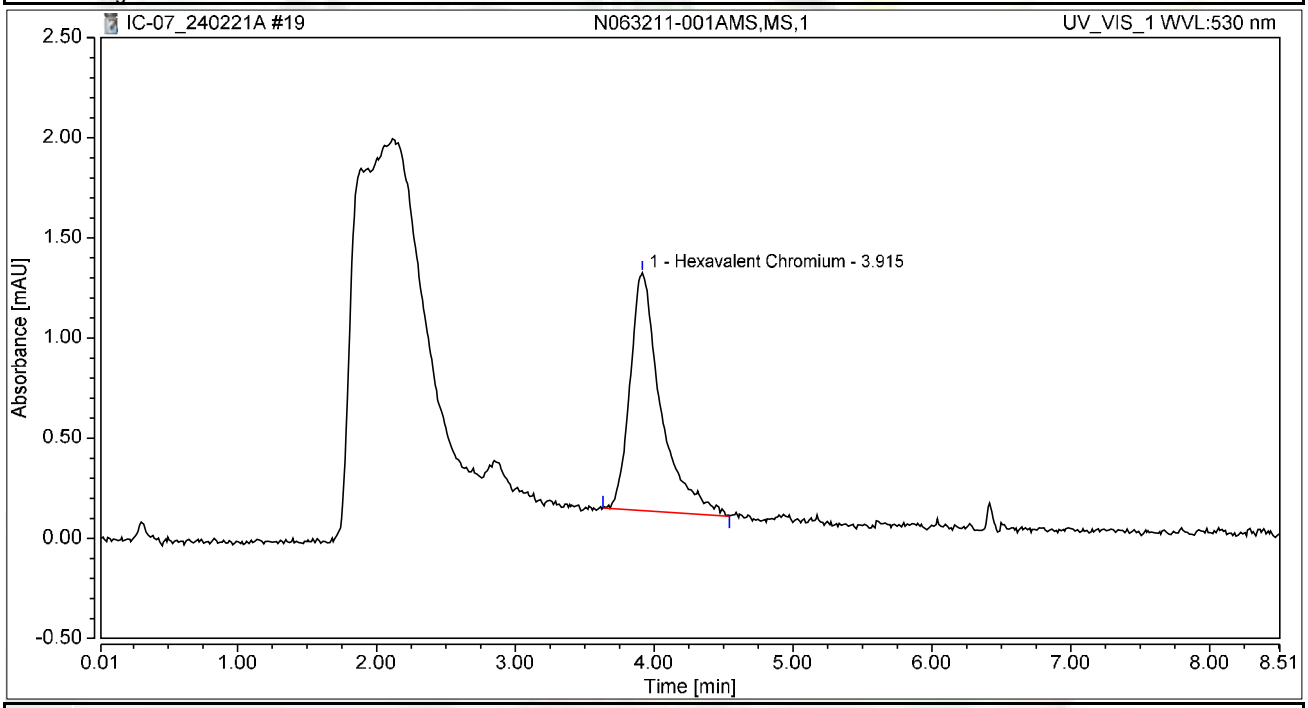
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.906	0.065	0.252	100.00	100.00	0.3007
Total:			**0.065**	**0.252**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063211-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 10:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

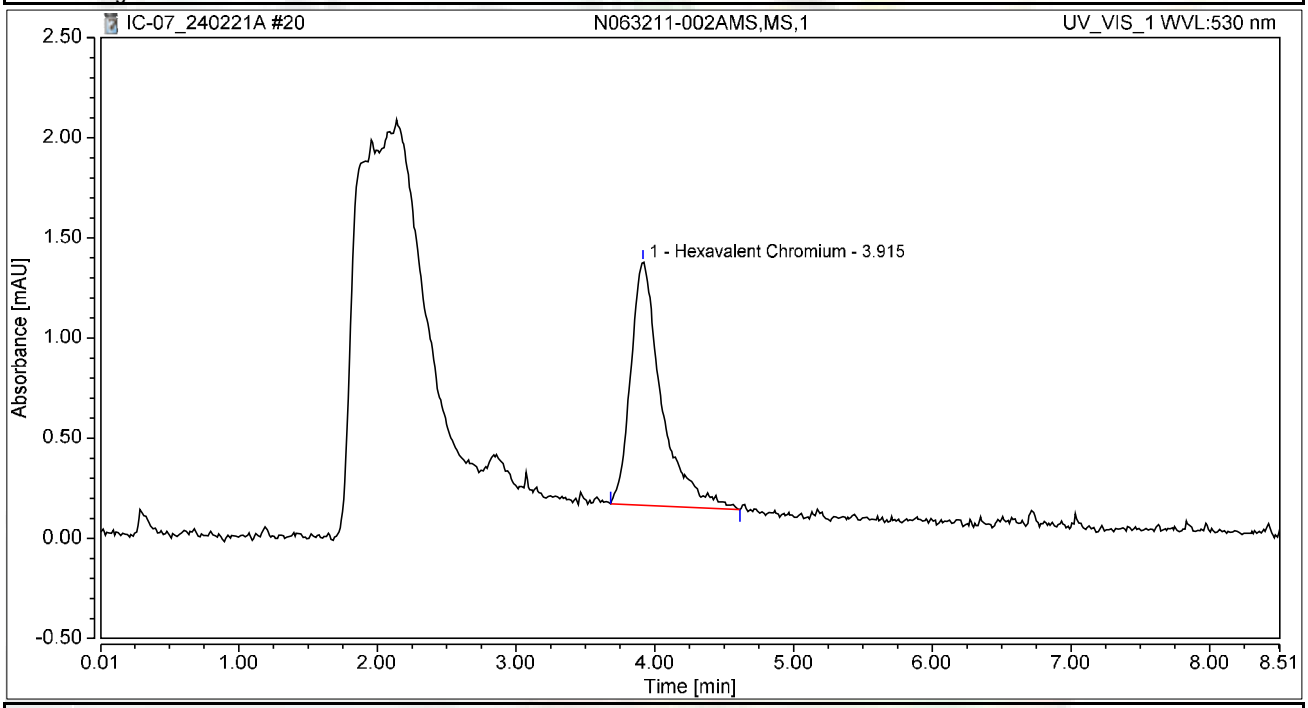
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.915	0.305	1.187	100.00	100.00	1.4173
Total:			**0.305**	**1.187**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063211-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 11:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

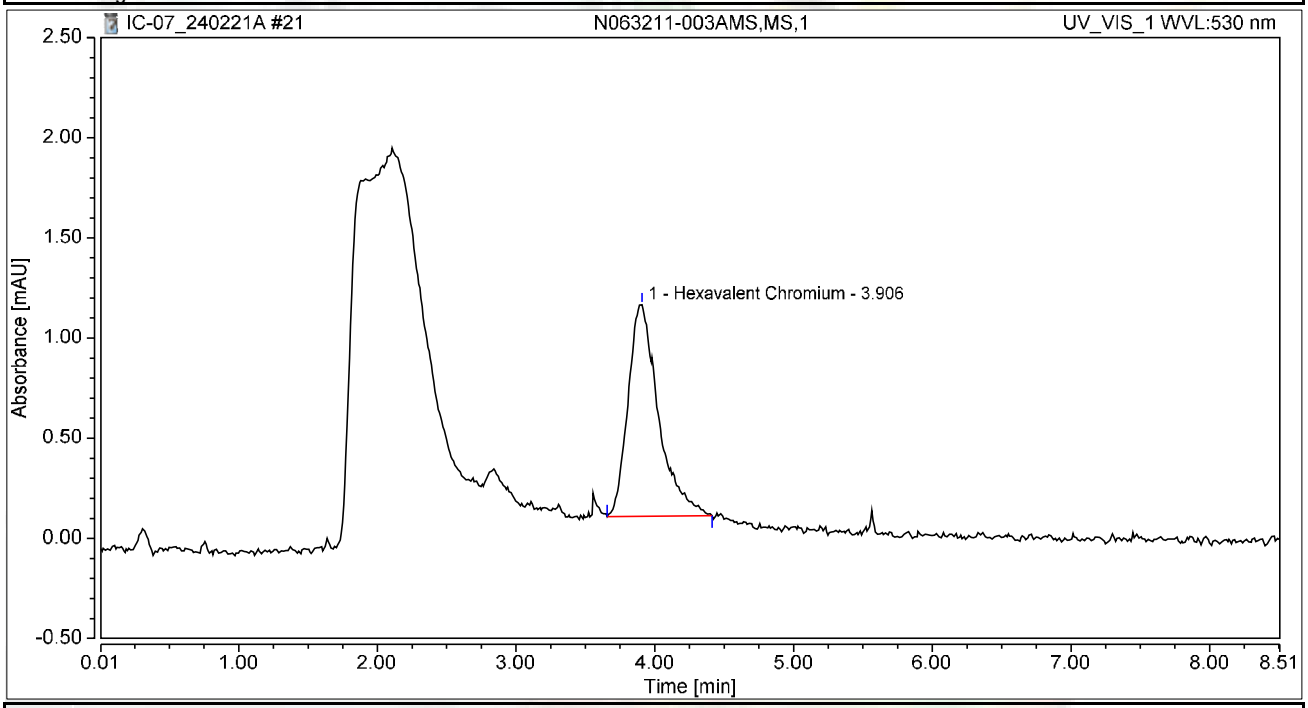
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.915	0.312	1.214	100.00	100.00	1.4523
Total:			**0.312**	**1.214**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063211-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 11:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

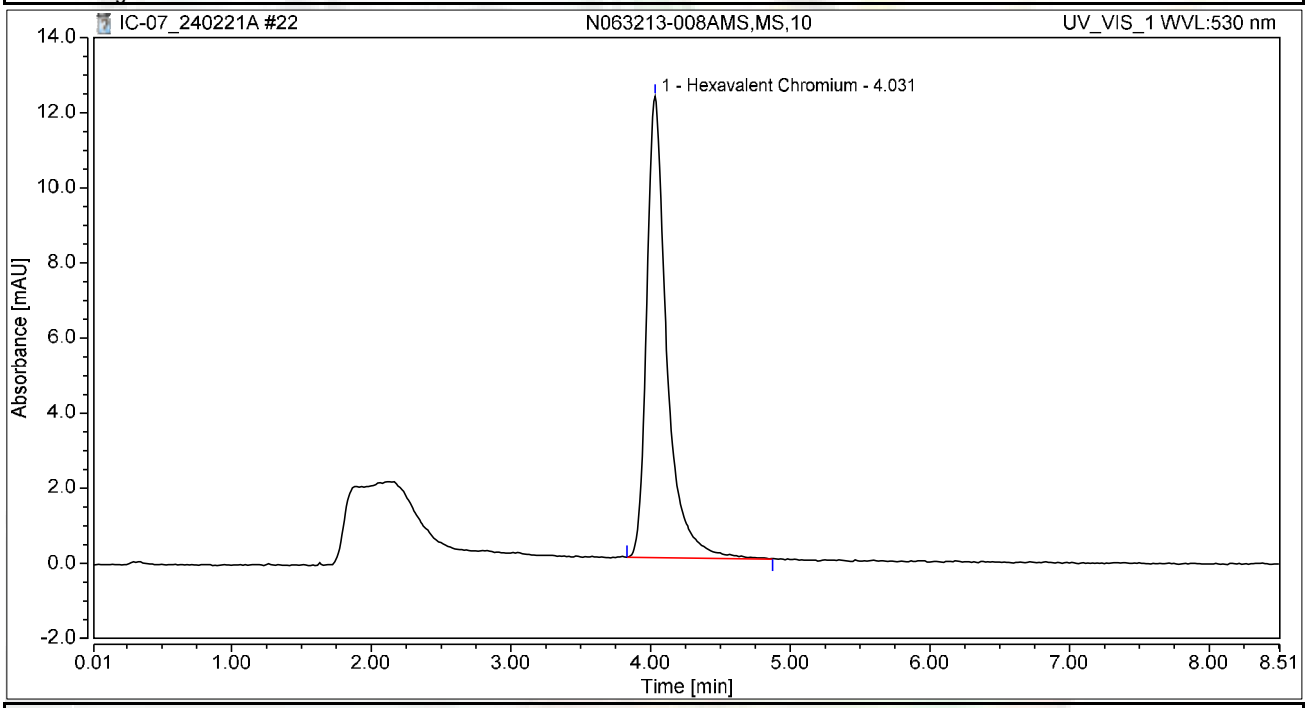
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.906	0.268	1.056	100.00	100.00	1.2476
Total:			**0.268**	**1.056**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-008AMS,MS,10**	*Run Time (min):*	**8.49**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 11:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

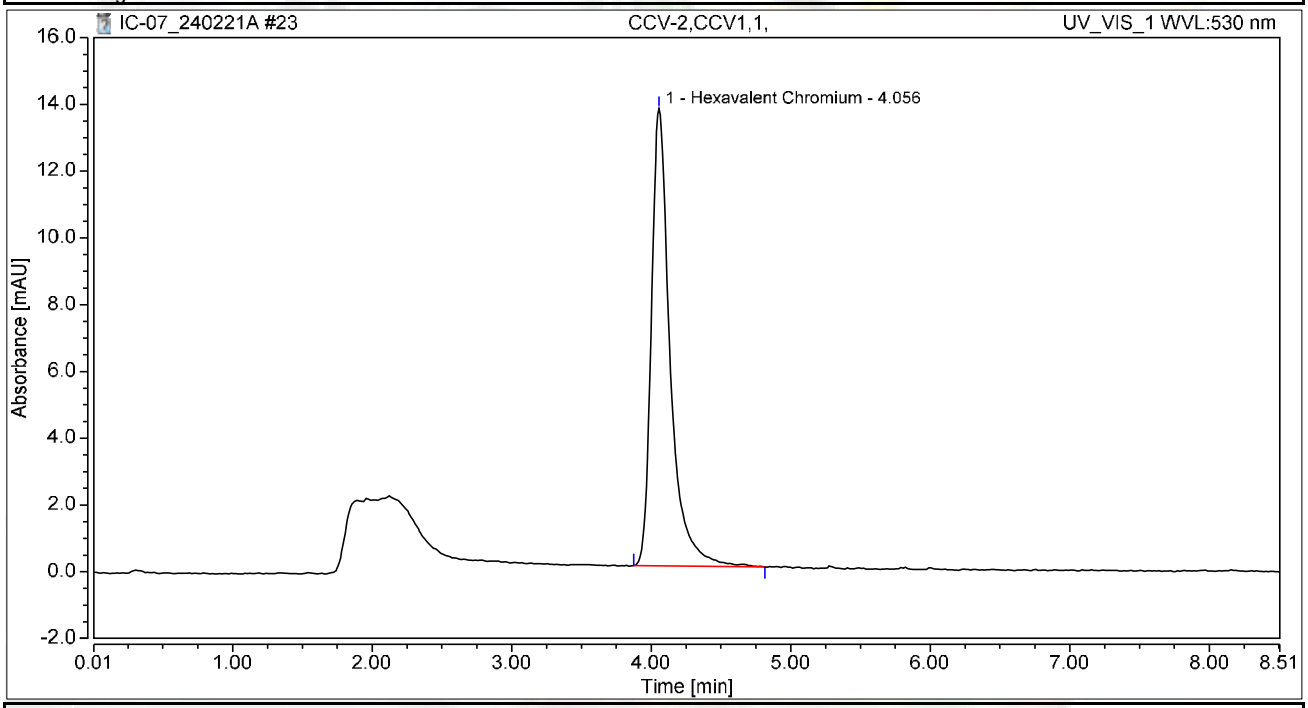
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	2.052	12.282	100.00	100.00	9.5417
Total:			**2.052**	**12.282**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 11:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

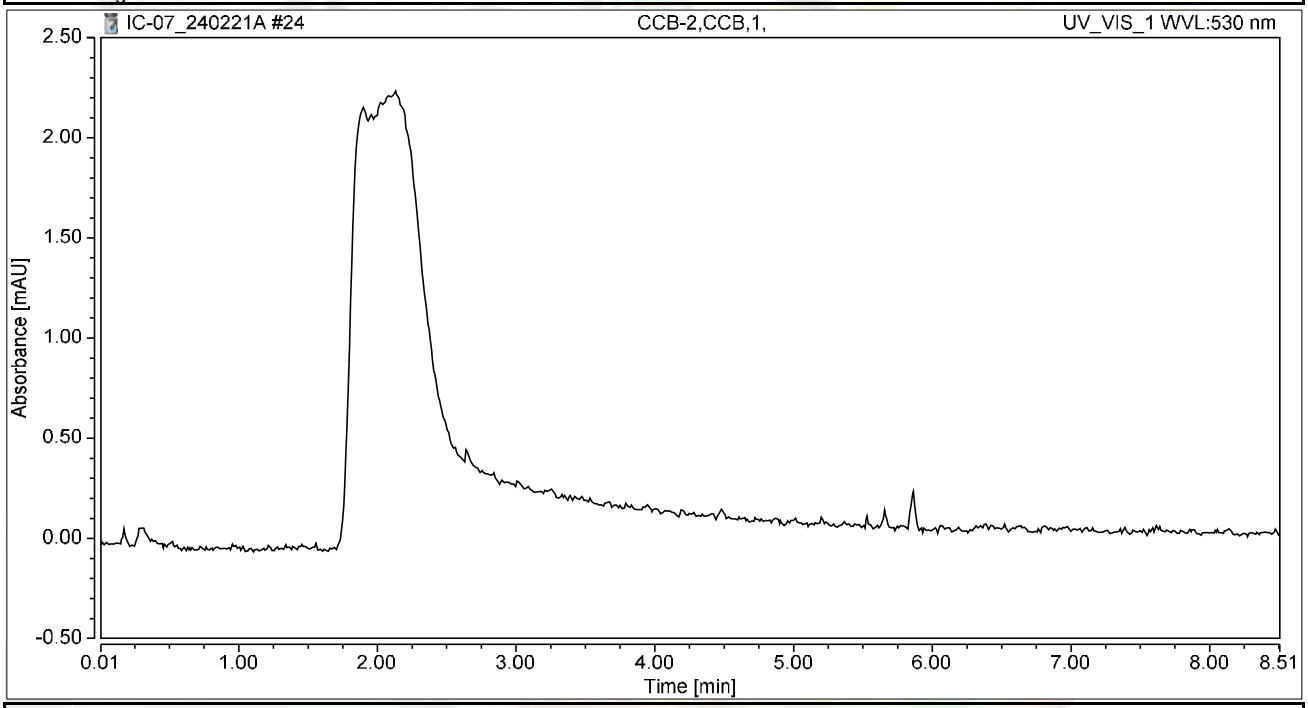
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	2.138	13.696	100.00	100.00	9.9378
Total:			**2.138**	**13.696**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 11:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

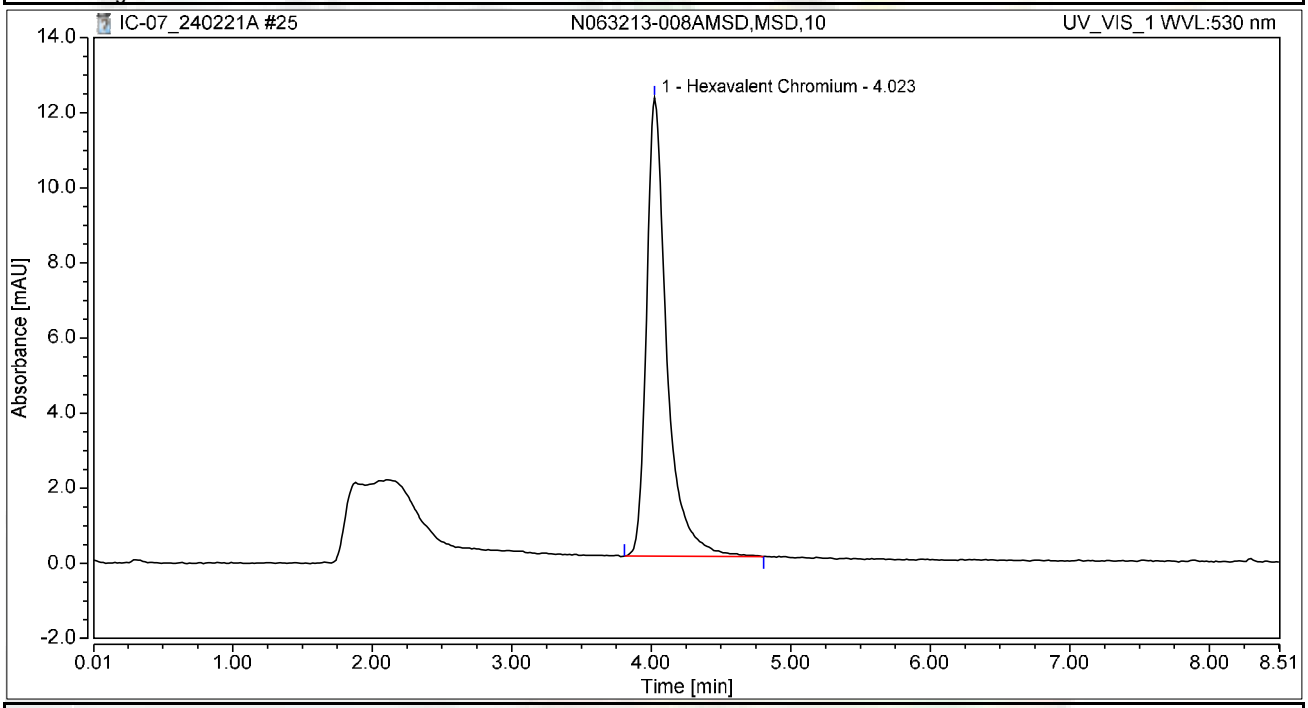
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-008AMSD,MSD,10**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 11:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

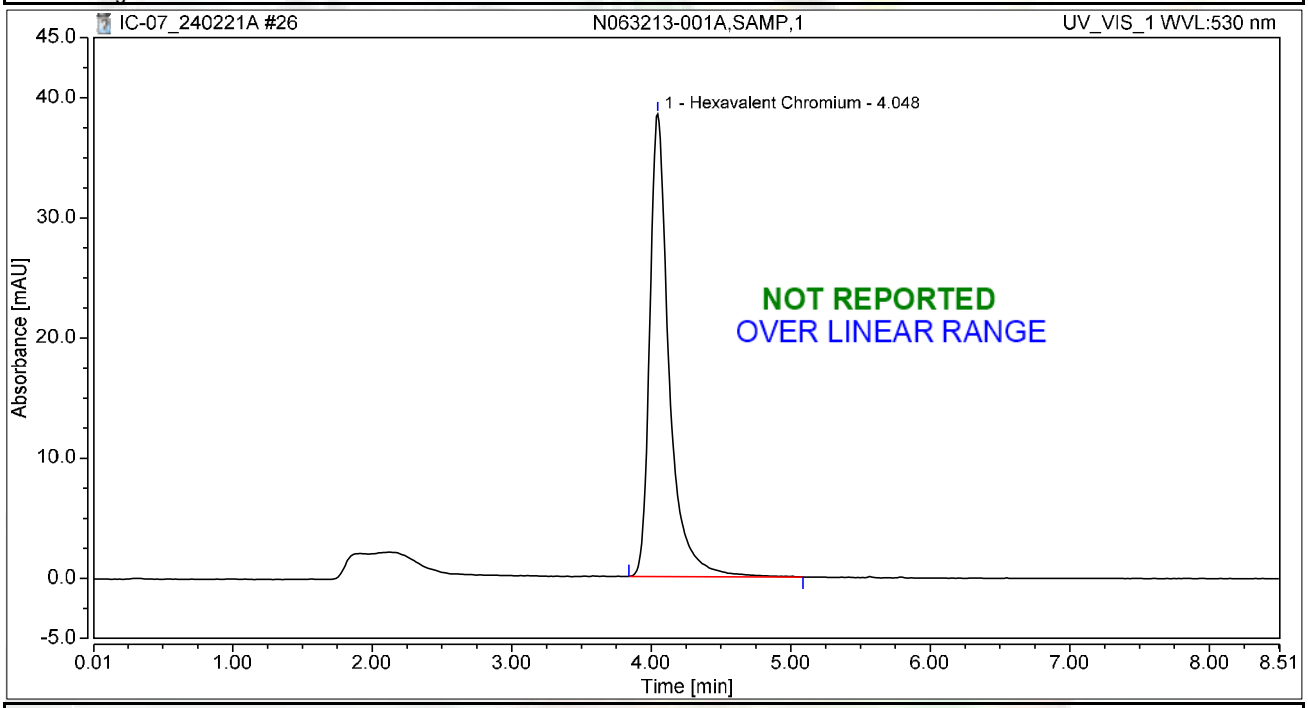
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	2.062	12.208	100.00	100.00	9.5860
Total:			**2.062**	**12.208**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 12:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

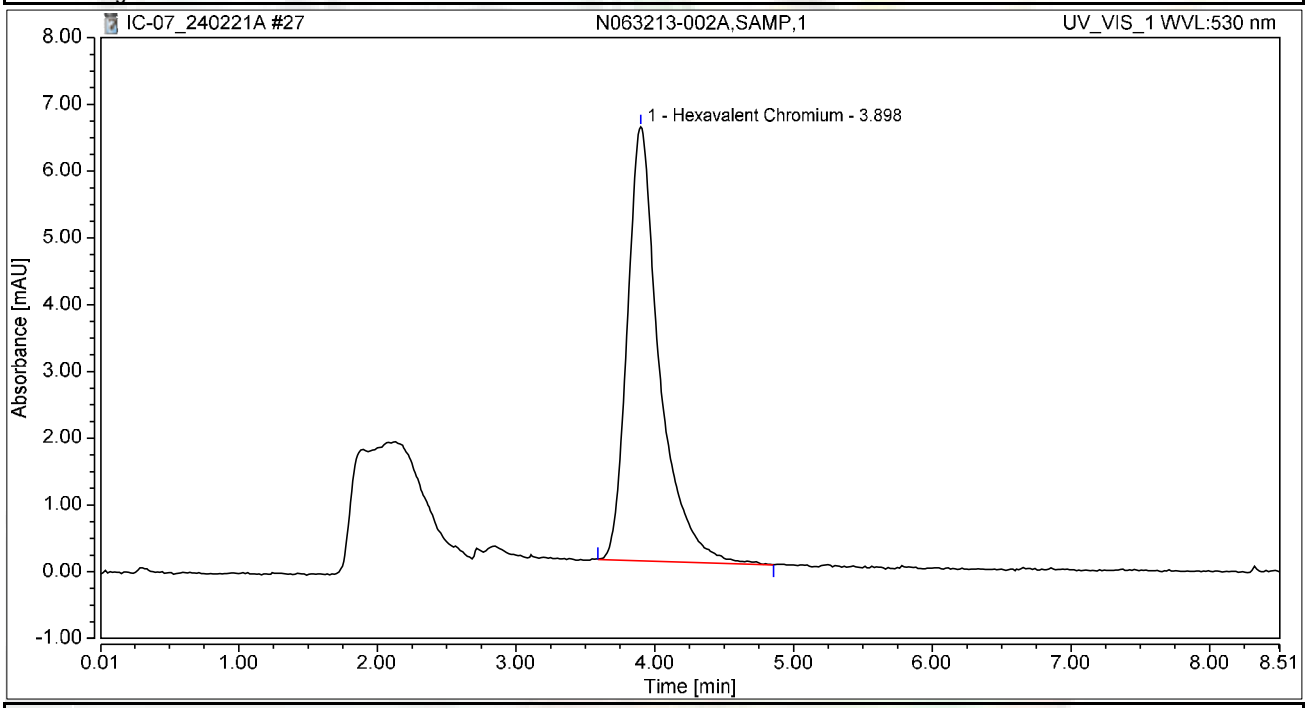
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	6.210	38.498	100.00	100.00	28.8715
Total:			**6.210**	**38.498**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 12:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

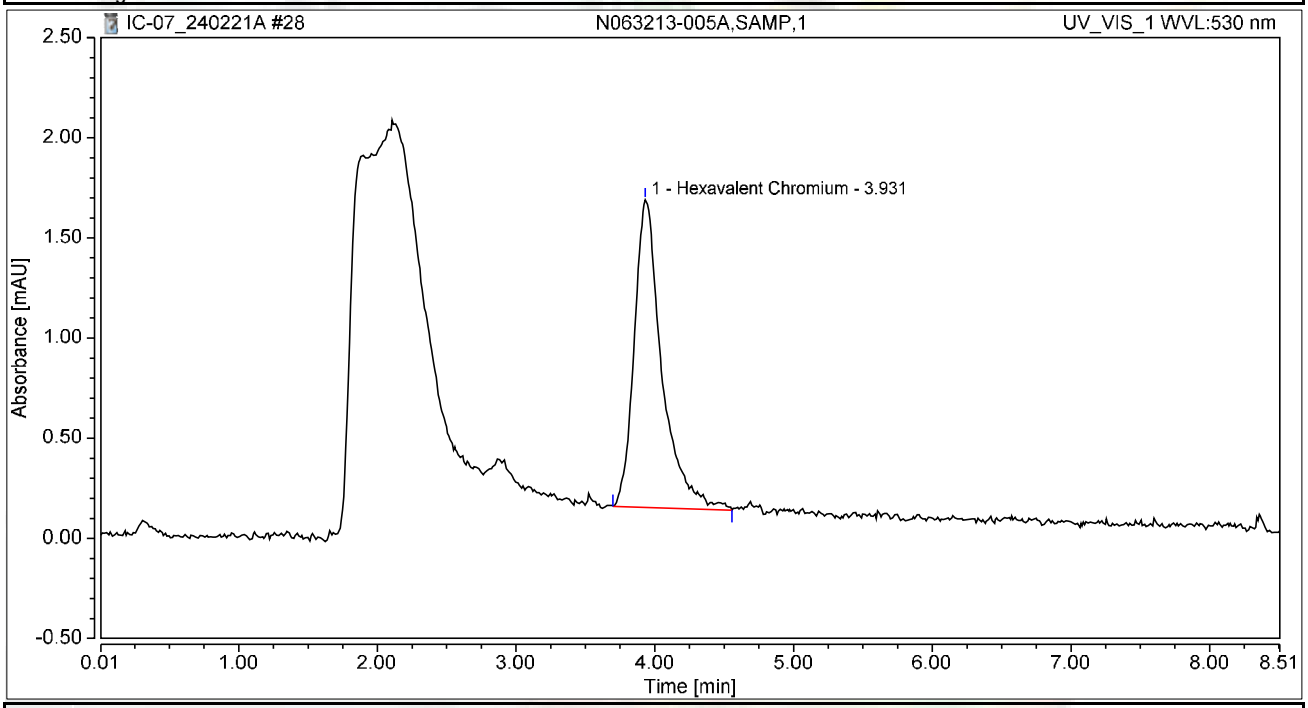
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.898	1.744	6.500	100.00	100.00	8.1074
Total:			**1.744**	**6.500**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 12:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

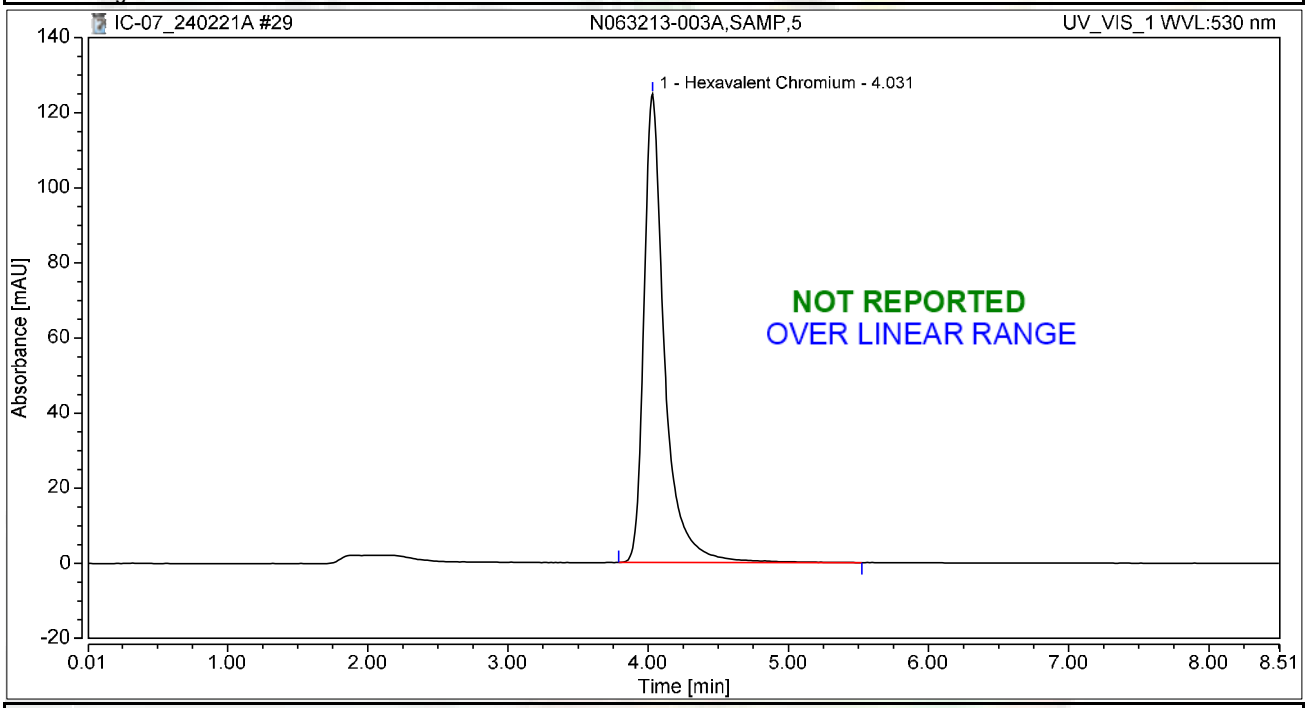
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.931	0.354	1.537	100.00	100.00	1.6463
Total:			**0.354**	**1.537**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 12:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

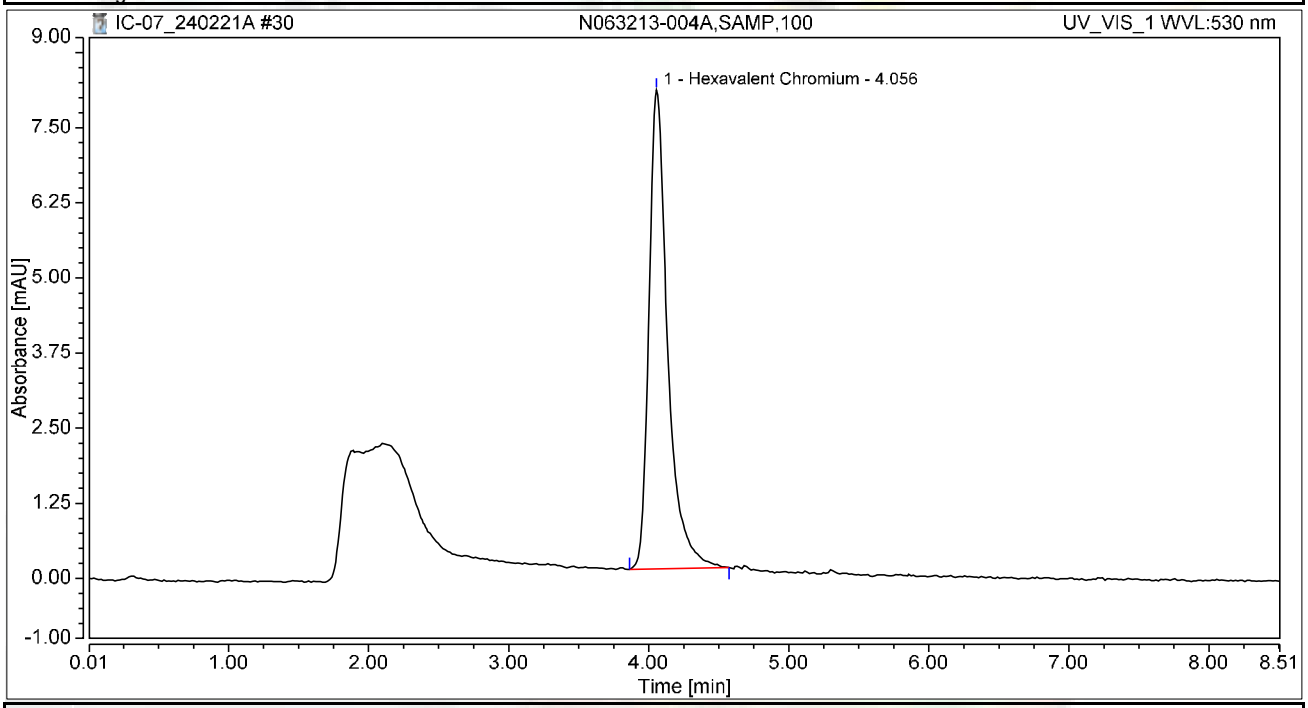
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	21.220	124.763	100.00	100.00	98.6496
Total:			**21.220**	**124.763**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-004A,SAMP,100**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 12:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

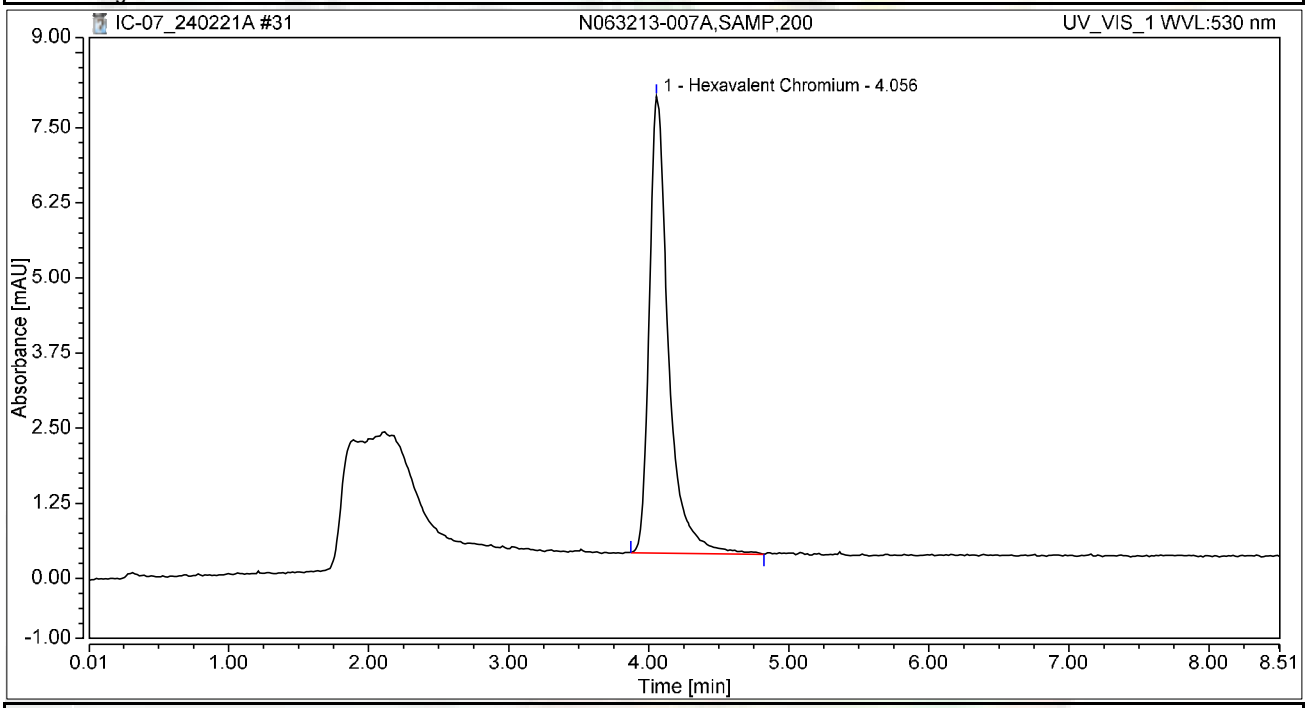
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.238	7.969	100.00	100.00	5.7533
Total:			**1.238**	**7.969**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-007A,SAMP,200**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 12:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

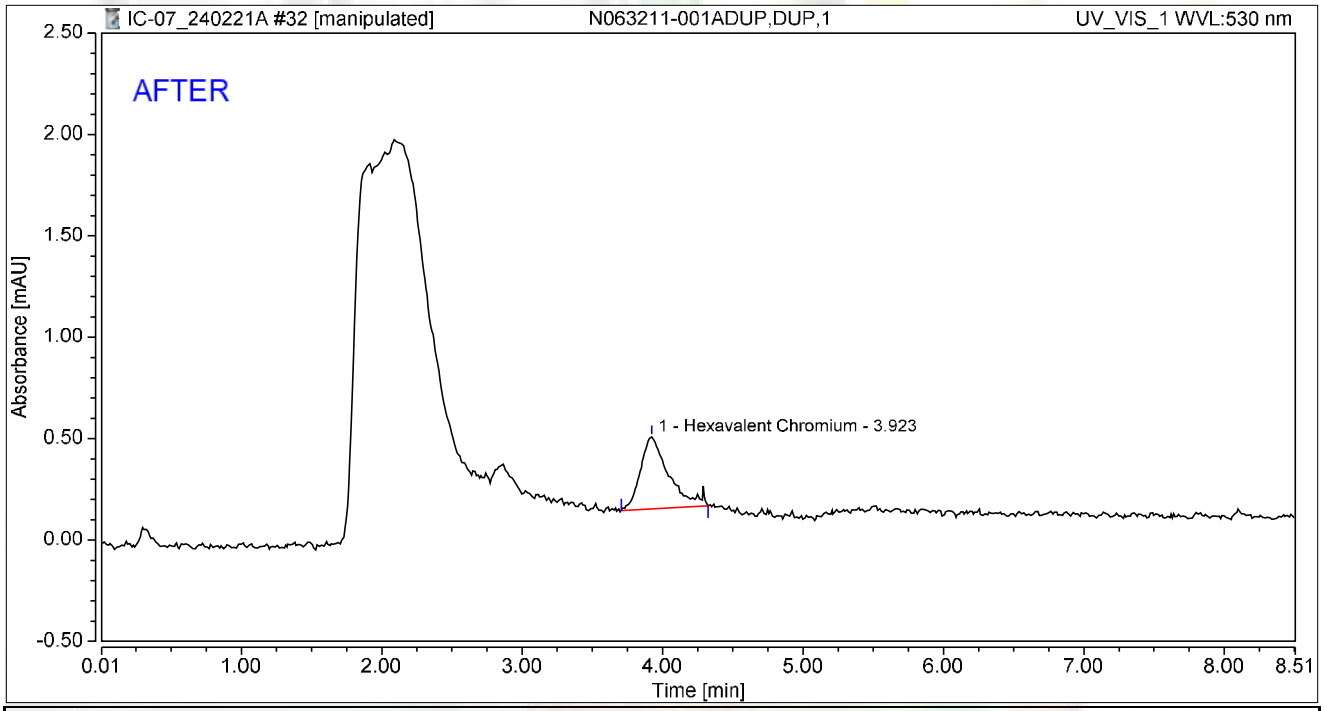
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.211	7.604	100.00	100.00	5.6277
Total:			**1.211**	**7.604**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063211-001ADUP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 13:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.084	0.354	100.00	100.00	0.3915
Total:			**0.084**	**0.354**	**100.00**	**100.00**	

Reviewed by:

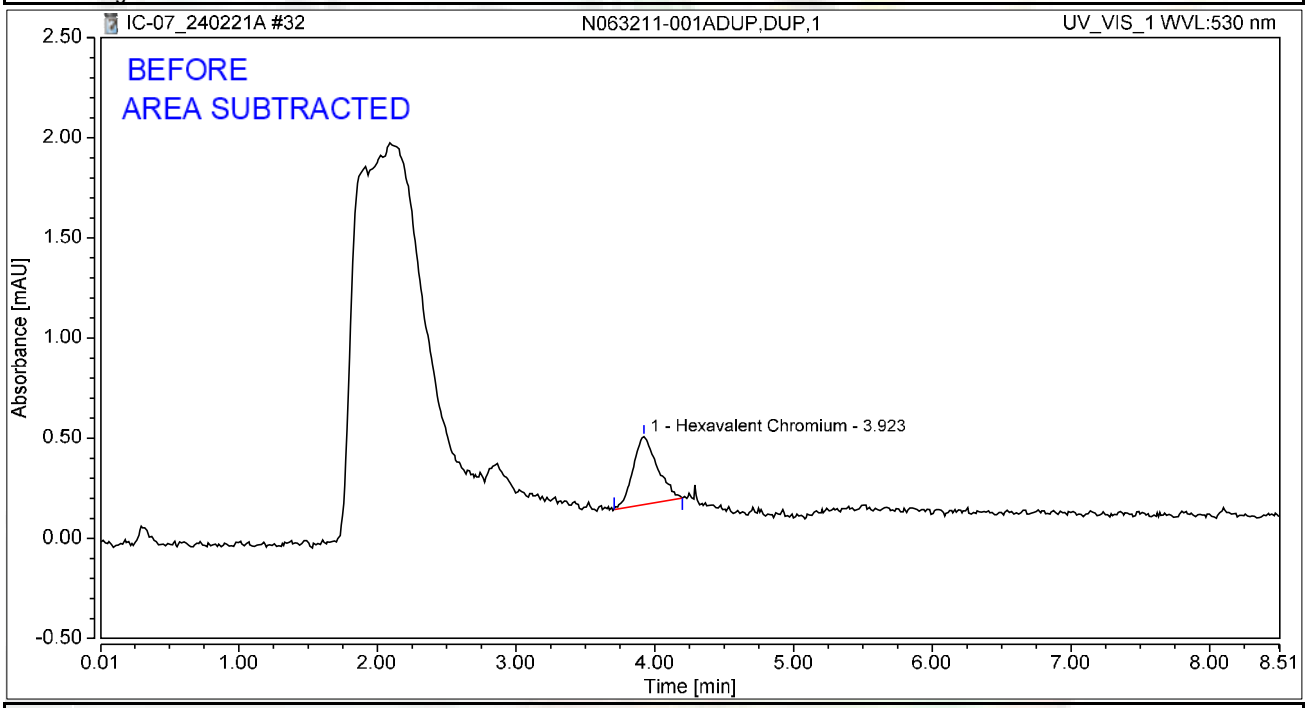
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063211-001ADUP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 13:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

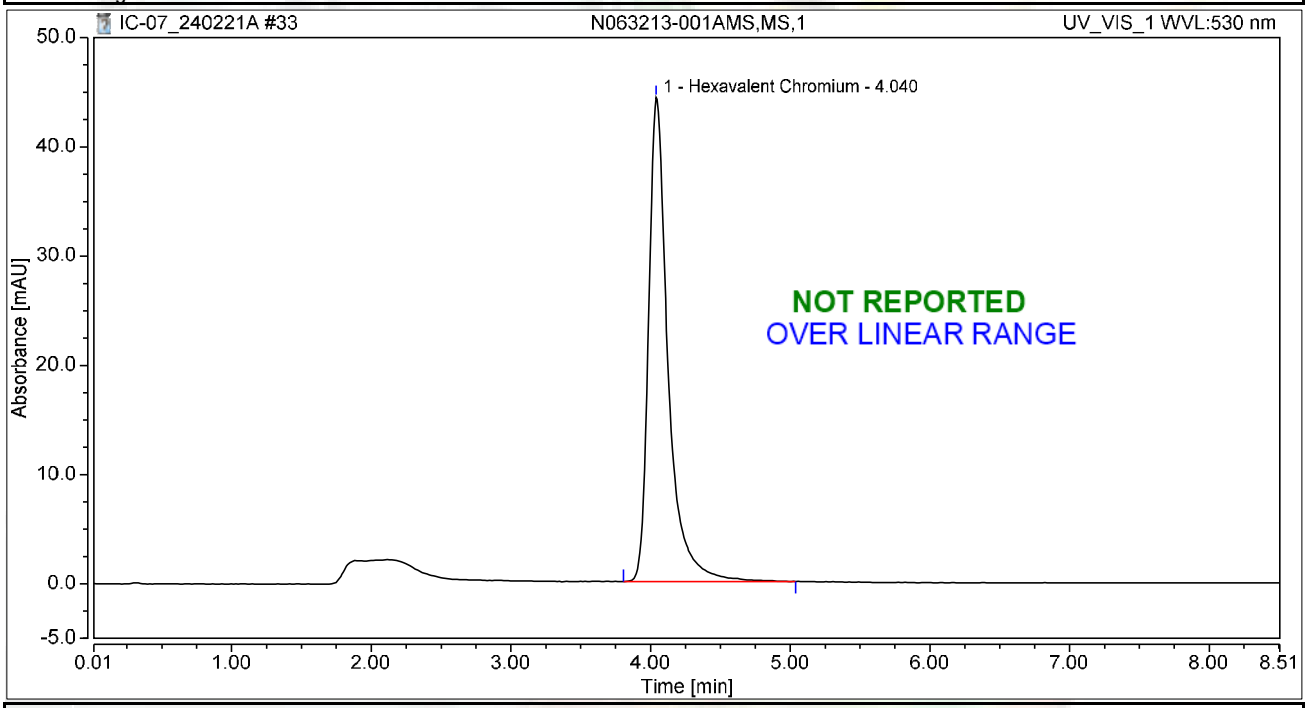
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.070	0.338	100.00	100.00	0.3235
Total:			**0.070**	**0.338**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 13:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

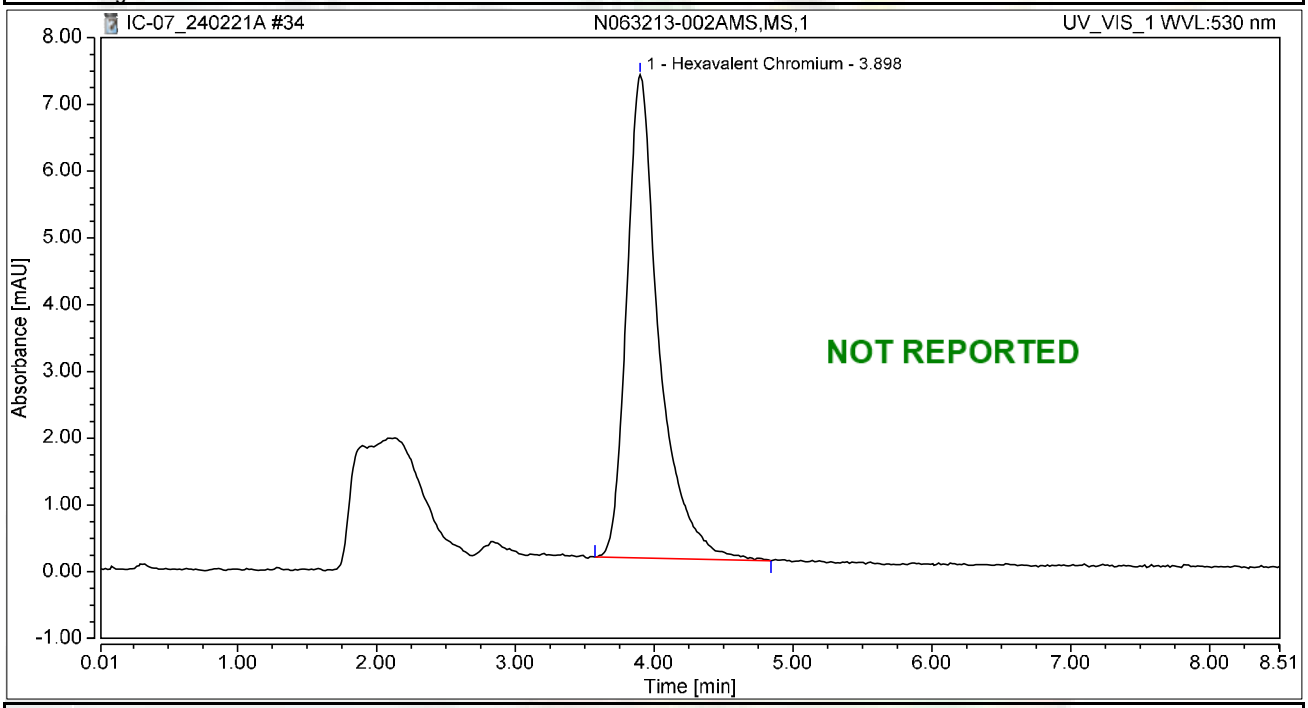
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	7.171	44.306	100.00	100.00	33.3380
Total:			**7.171**	**44.306**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 13:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

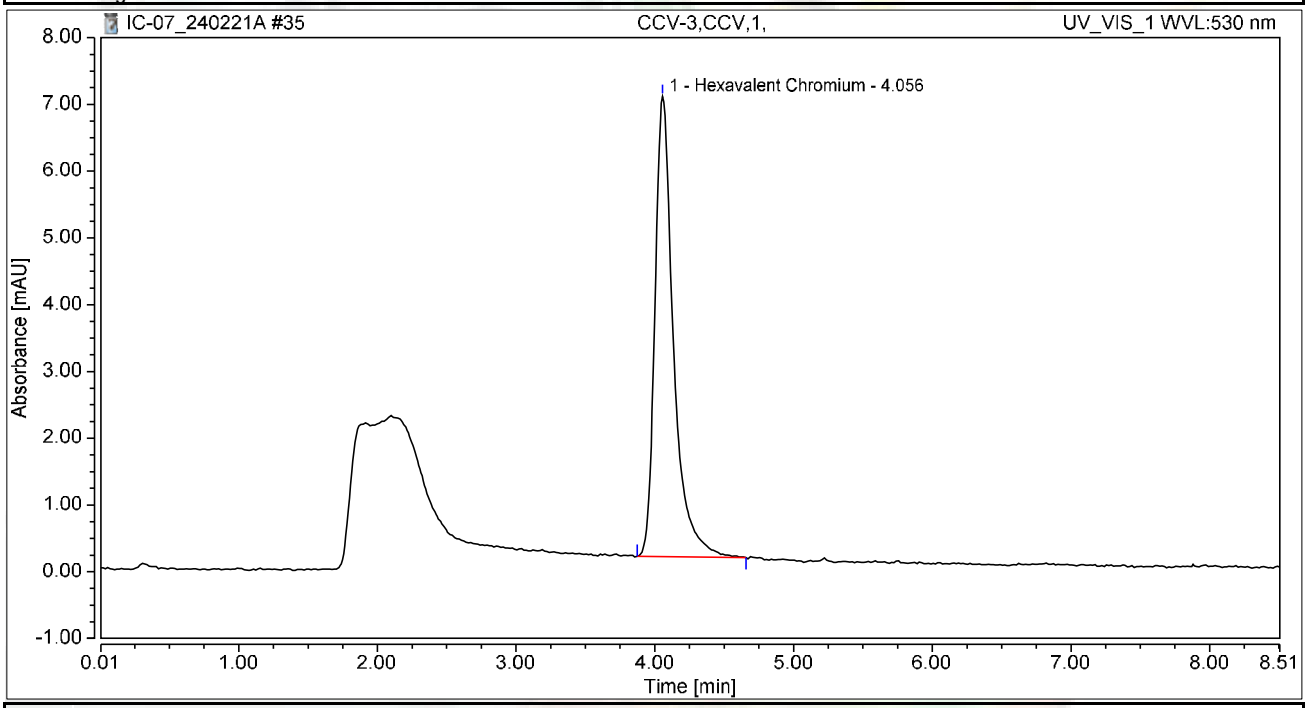
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.898	1.958	7.237	100.00	100.00	9.1039
Total:			**1.958**	**7.237**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 13:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

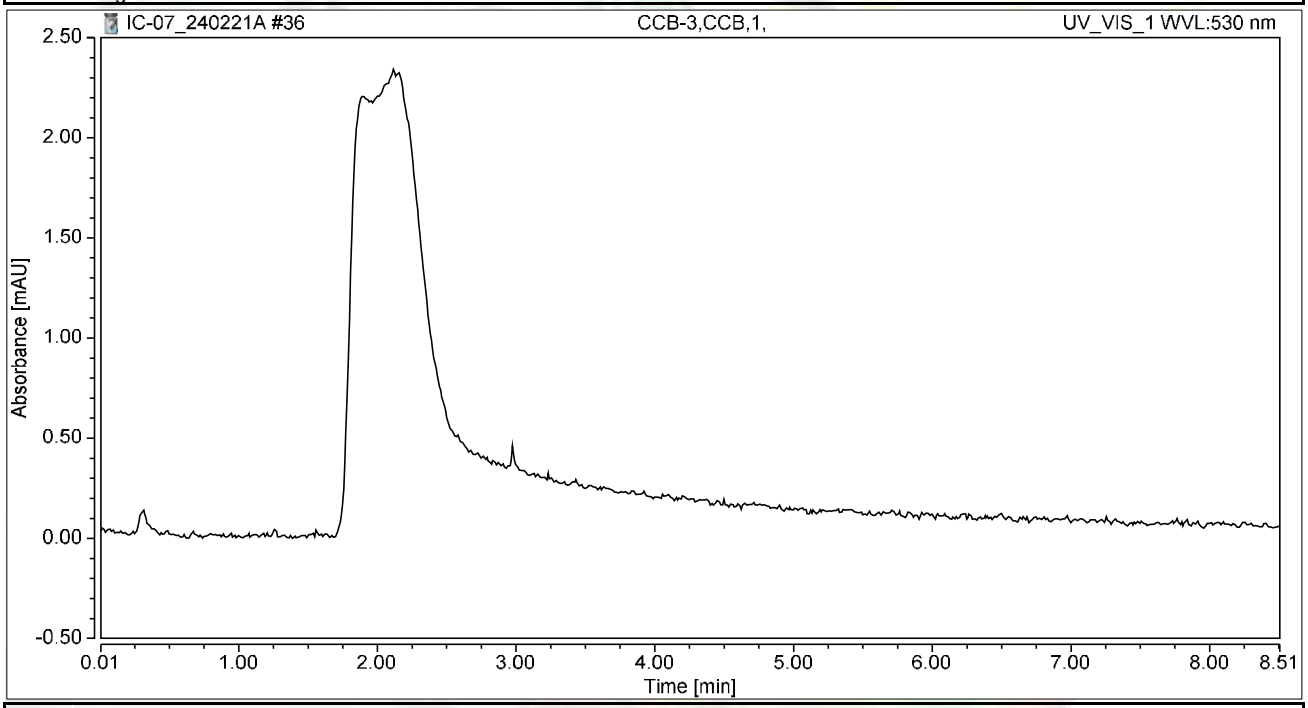
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.071	6.894	100.00	100.00	4.9771
Total:			**1.071**	**6.894**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

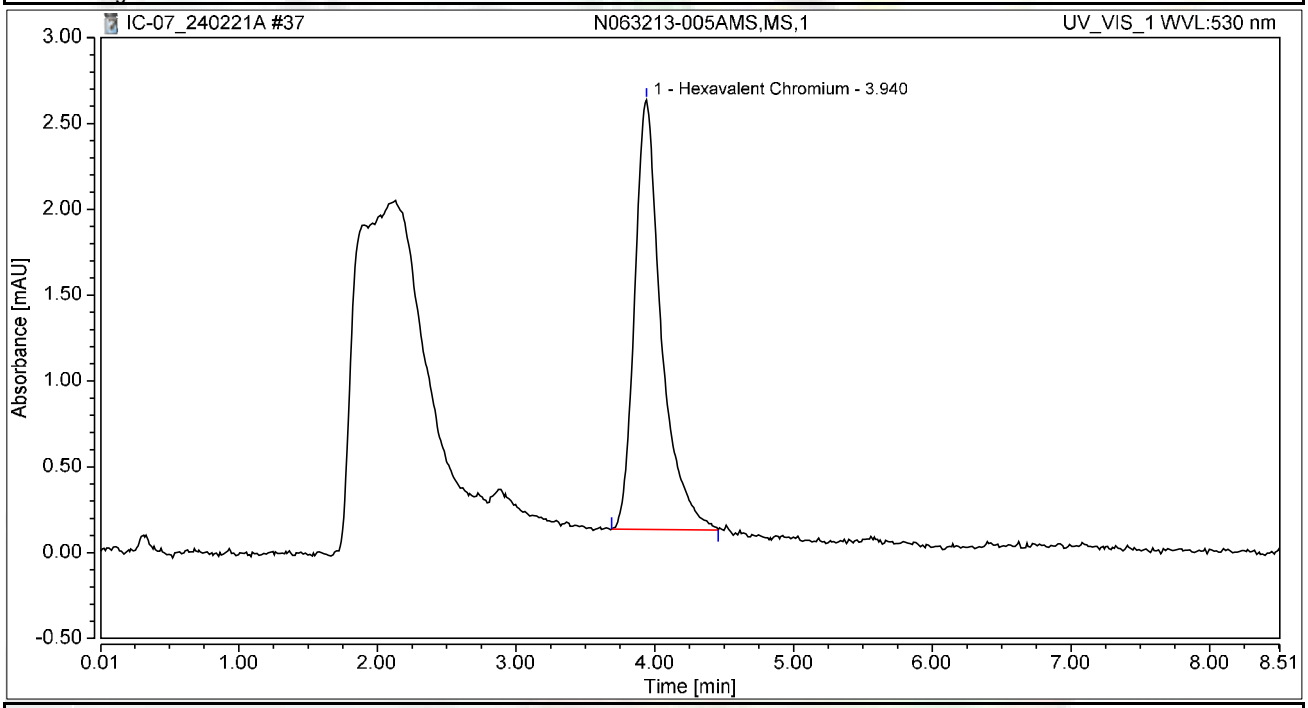
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 13:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

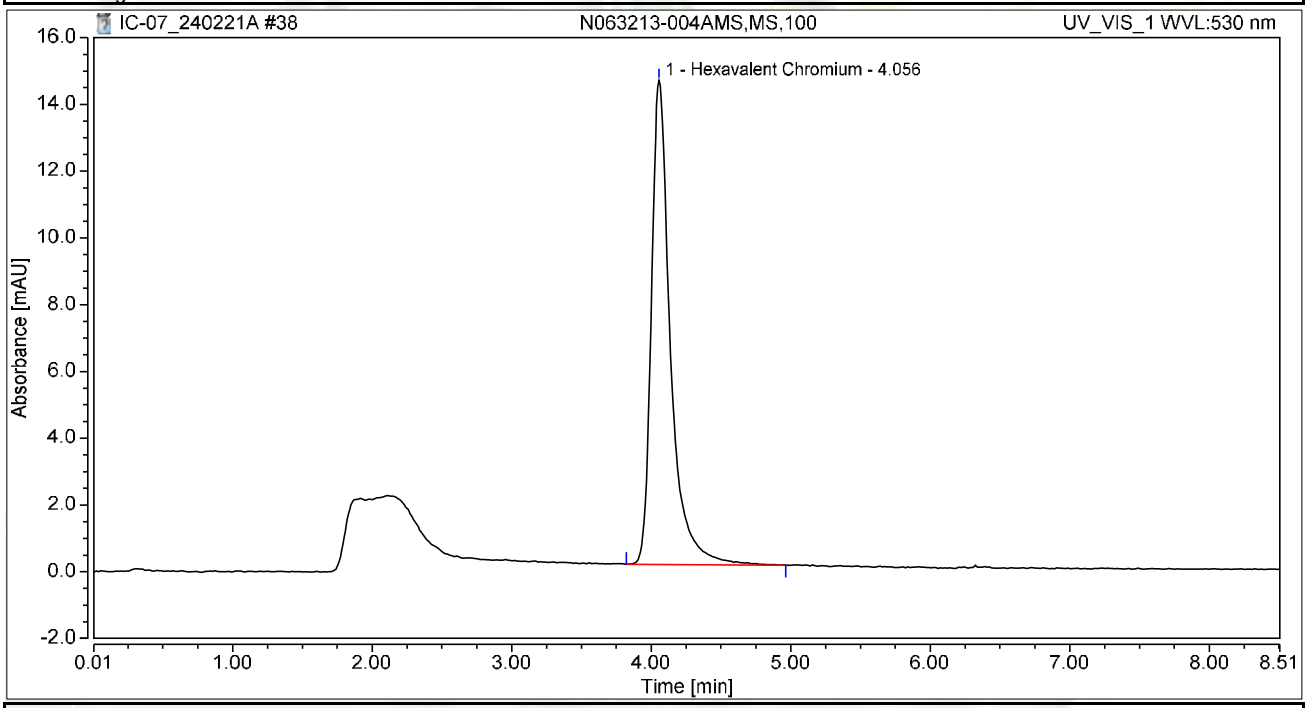
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.555	2.501	100.00	100.00	2.5807
Total:			**0.555**	**2.501**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-004AMS,MS,100**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 13:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

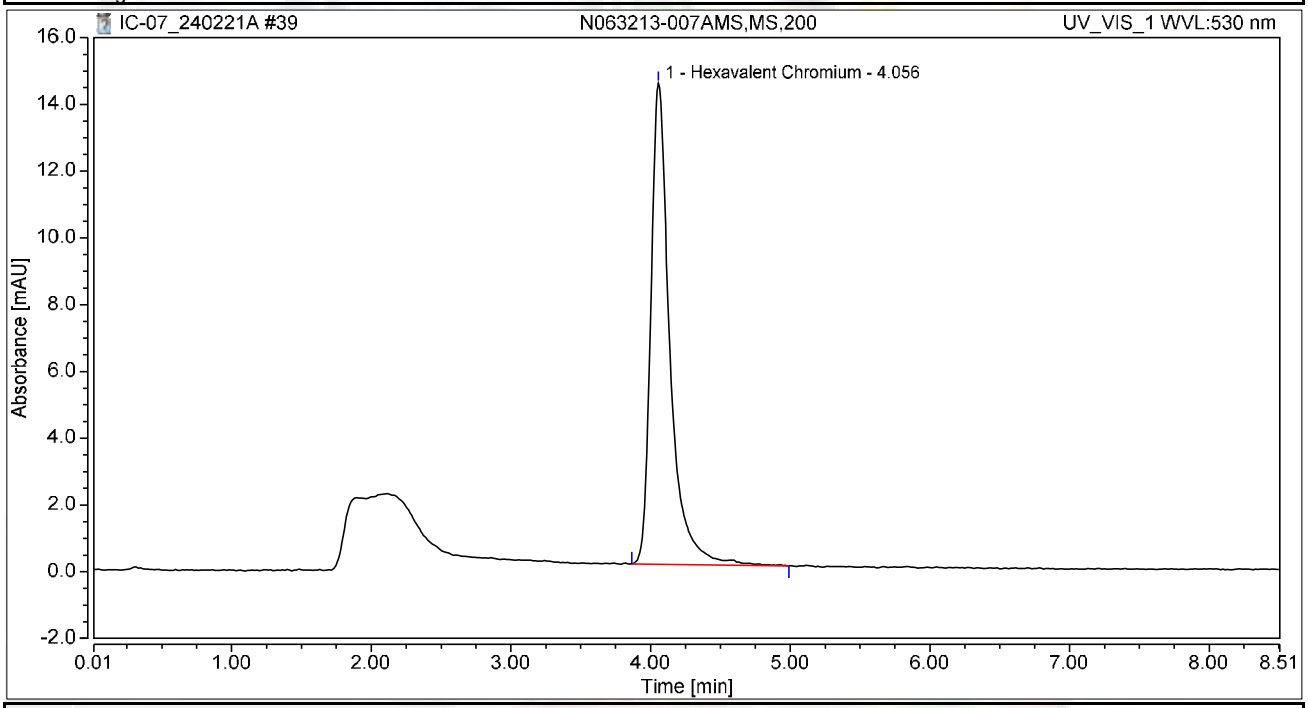
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	2.303	14.502	100.00	100.00	10.7064
Total:			**2.303**	**14.502**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-007AMS,MS,200**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 14:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

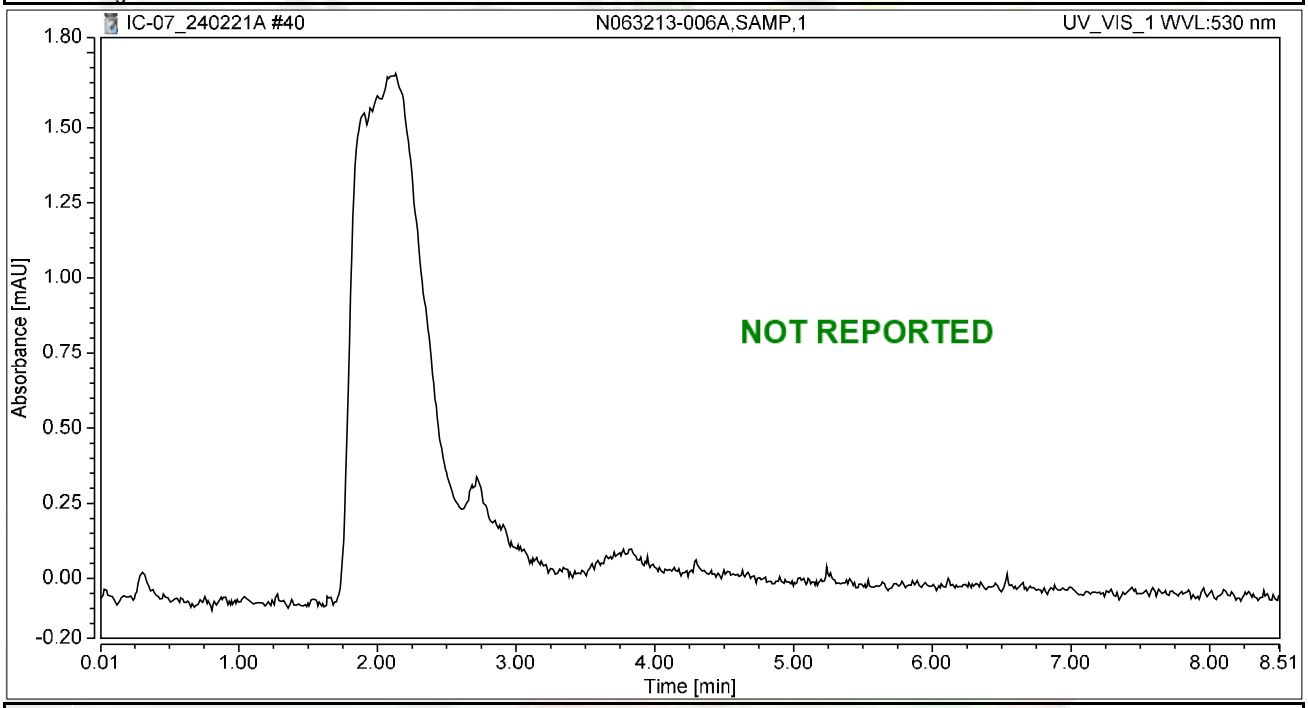
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	2.281	14.403	100.00	100.00	10.6062
Total:			**2.281**	**14.403**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 14:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

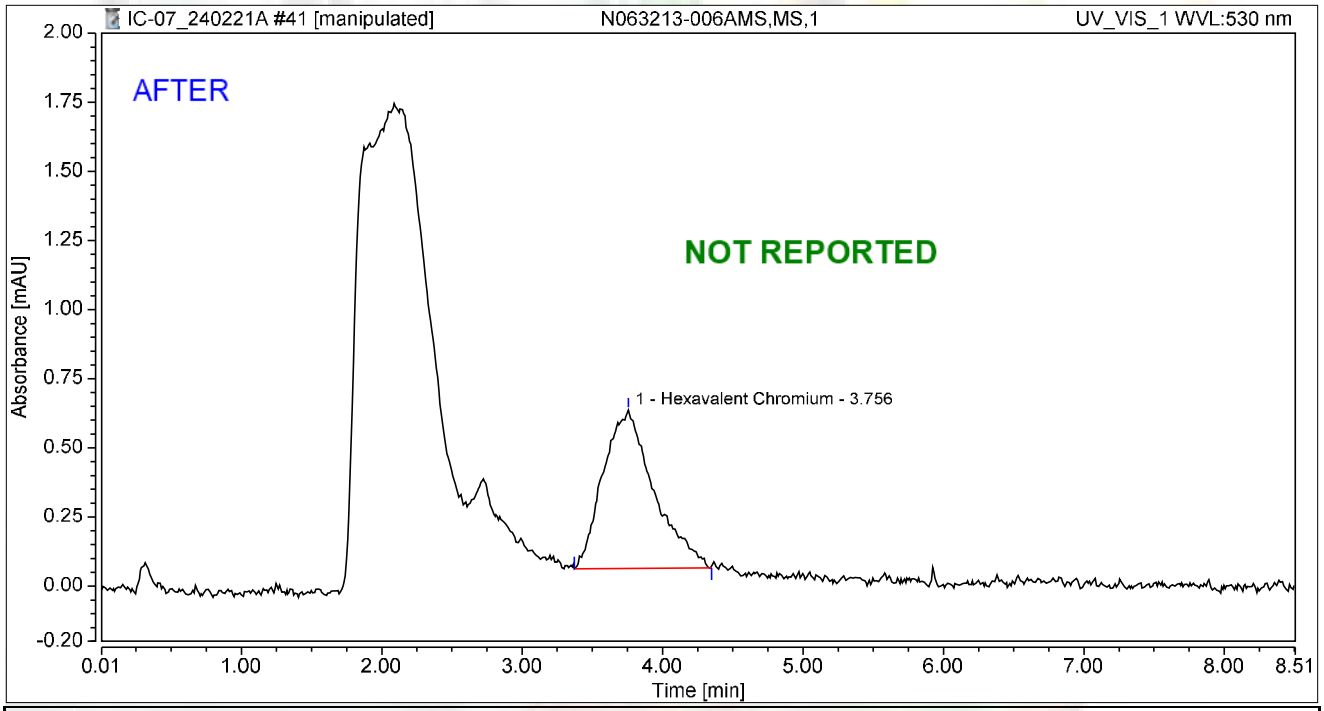
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 14:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

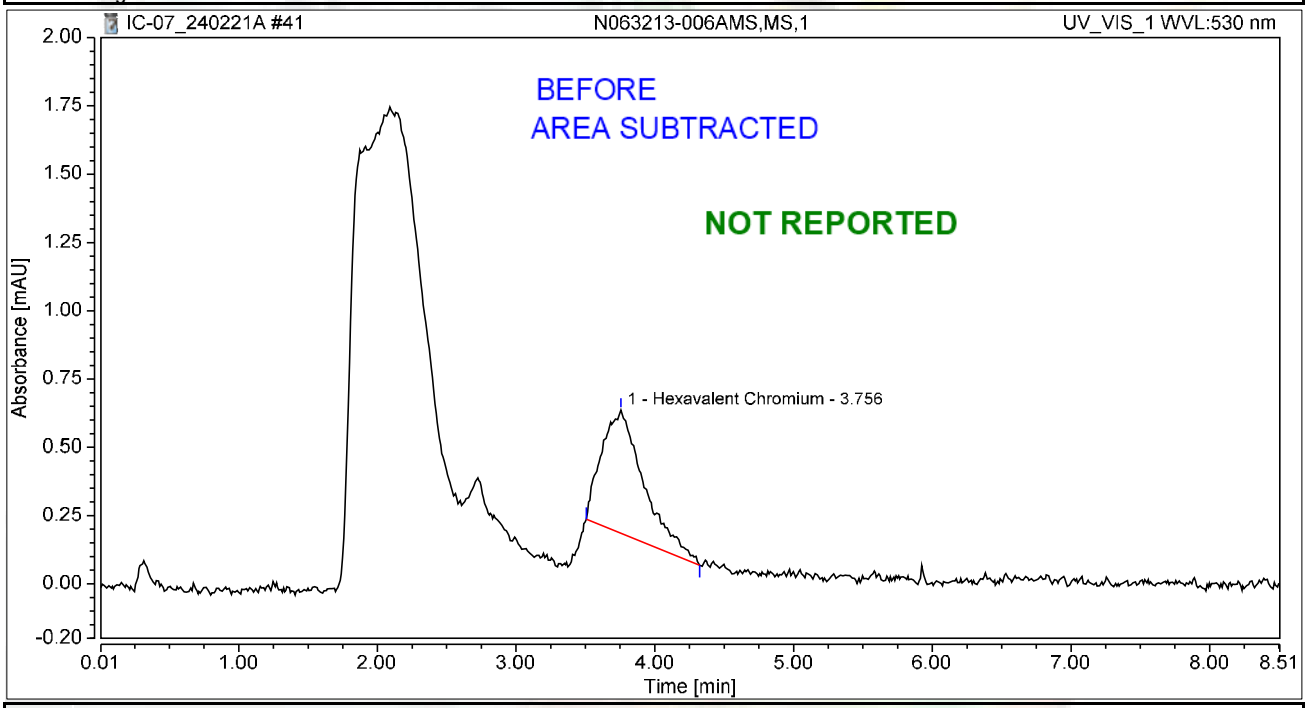
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.756	0.240	0.572	100.00	100.00	1.1181
Total:			**0.240**	**0.572**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 14:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

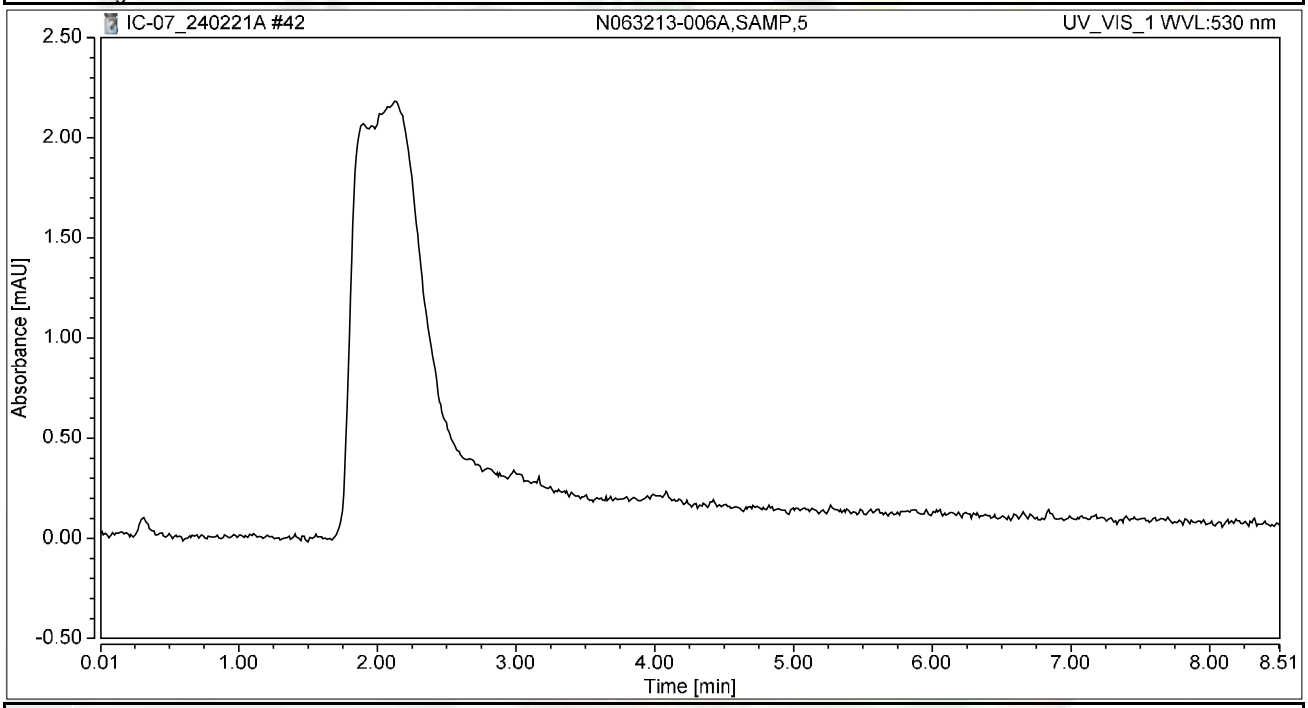
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.756	0.159	0.451	100.00	100.00	0.7378
Total:			**0.159**	**0.451**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-006A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 14:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

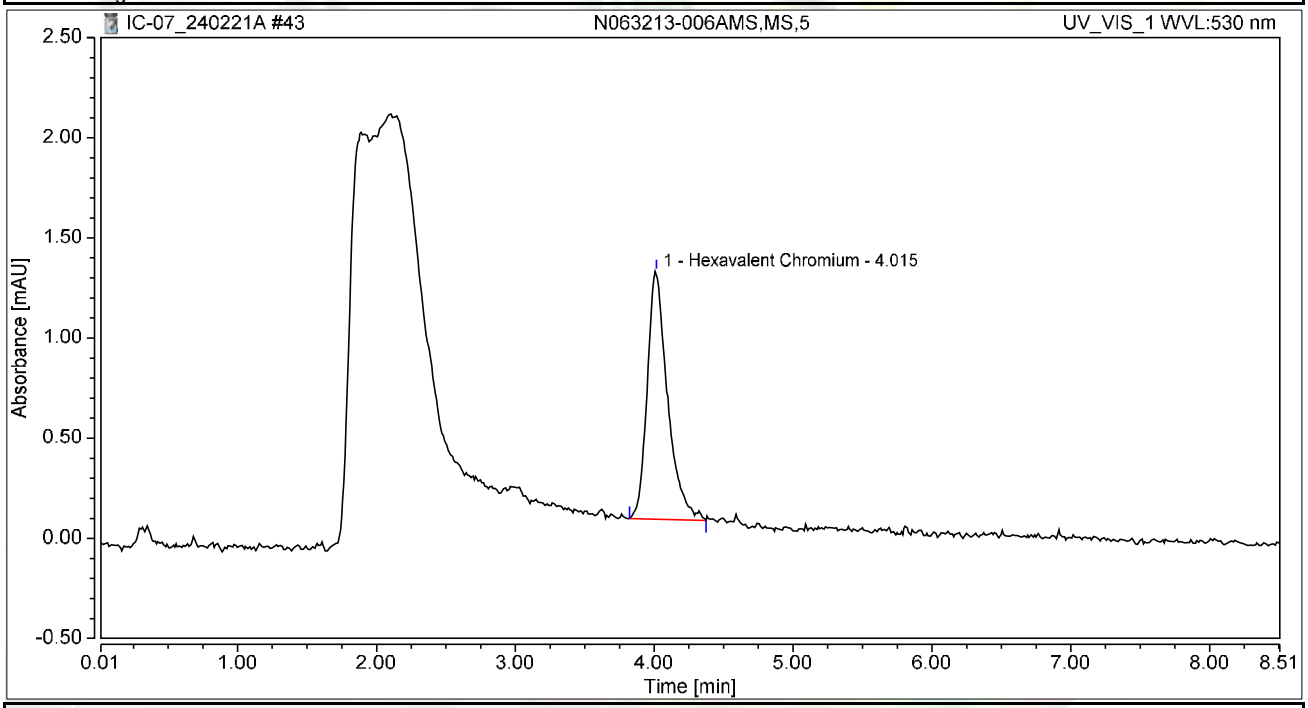
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-006AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 14:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

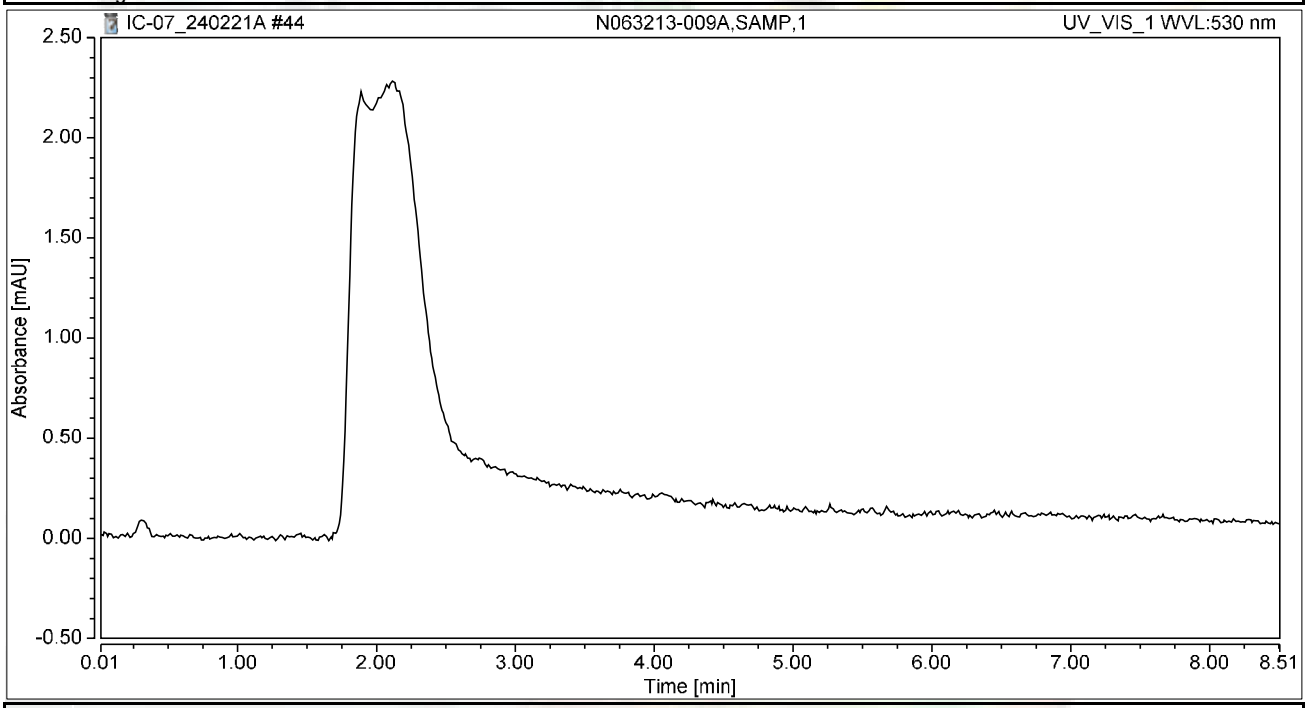
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.210	1.236	100.00	100.00	0.9766
Total:			**0.210**	**1.236**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-009A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 14:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

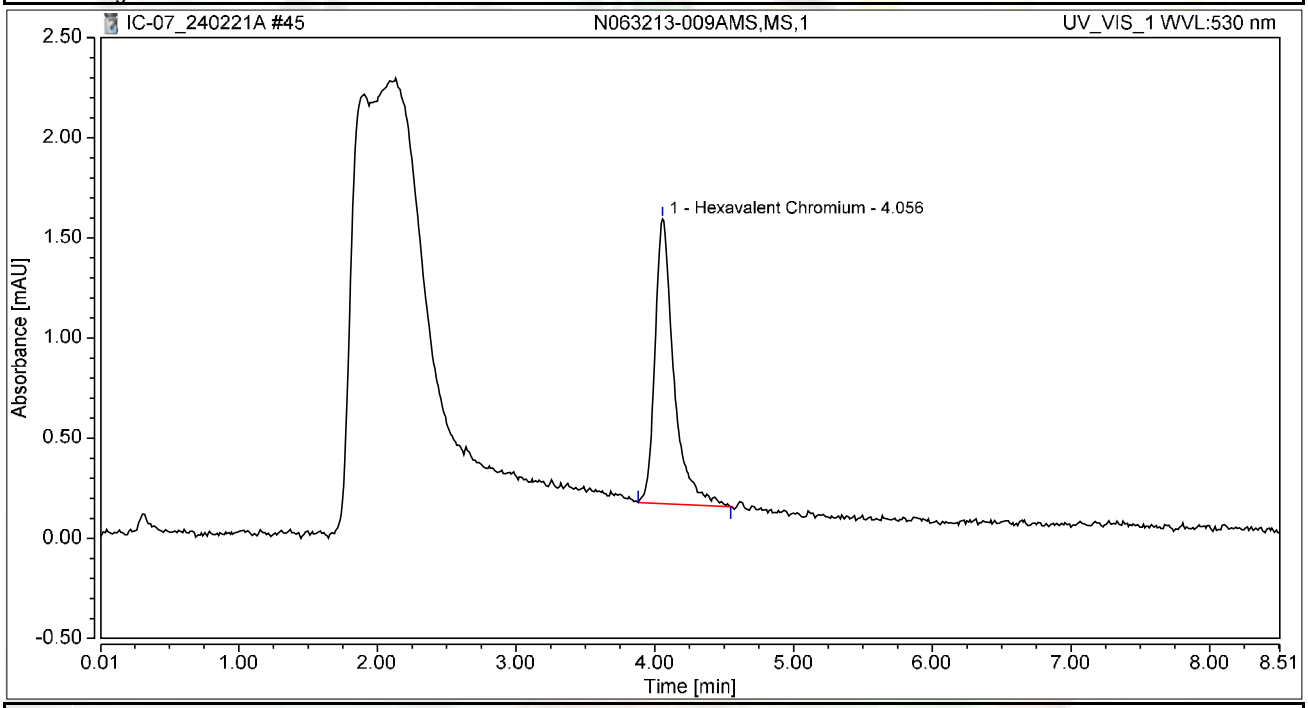
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 15:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

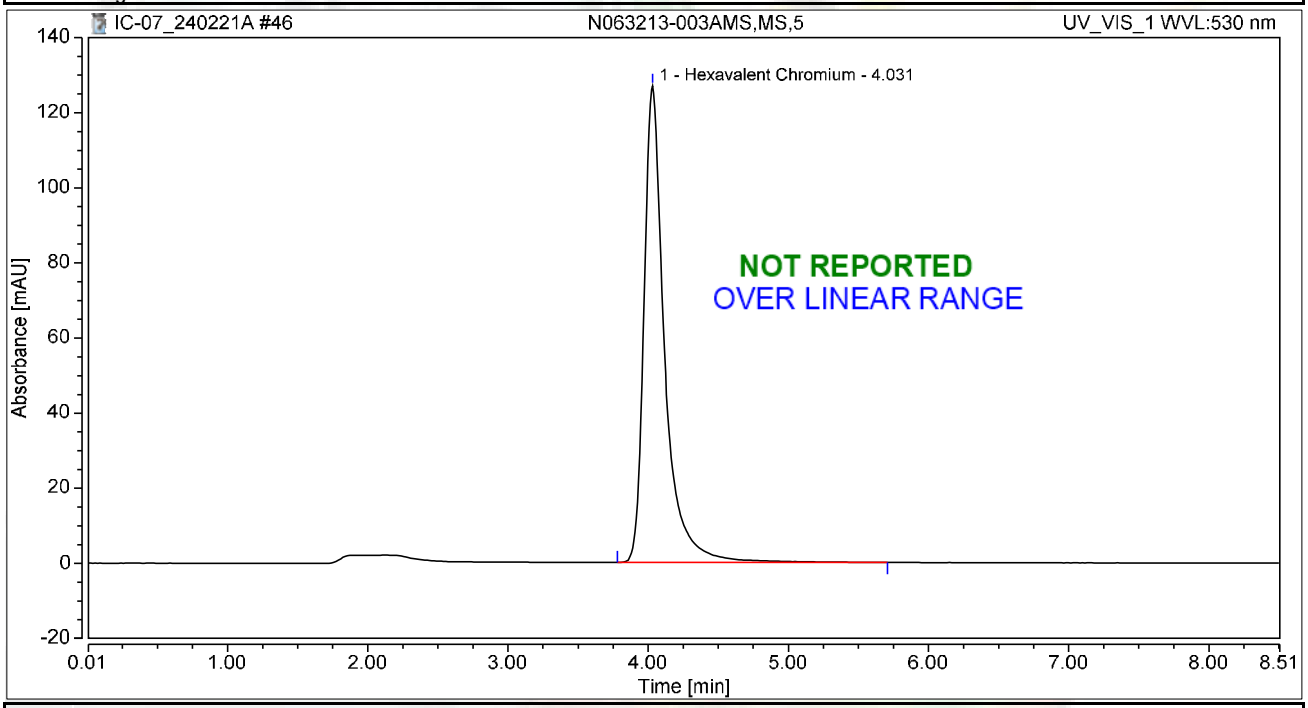
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.225	1.422	100.00	100.00	1.0467
Total:			**0.225**	**1.422**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 15:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

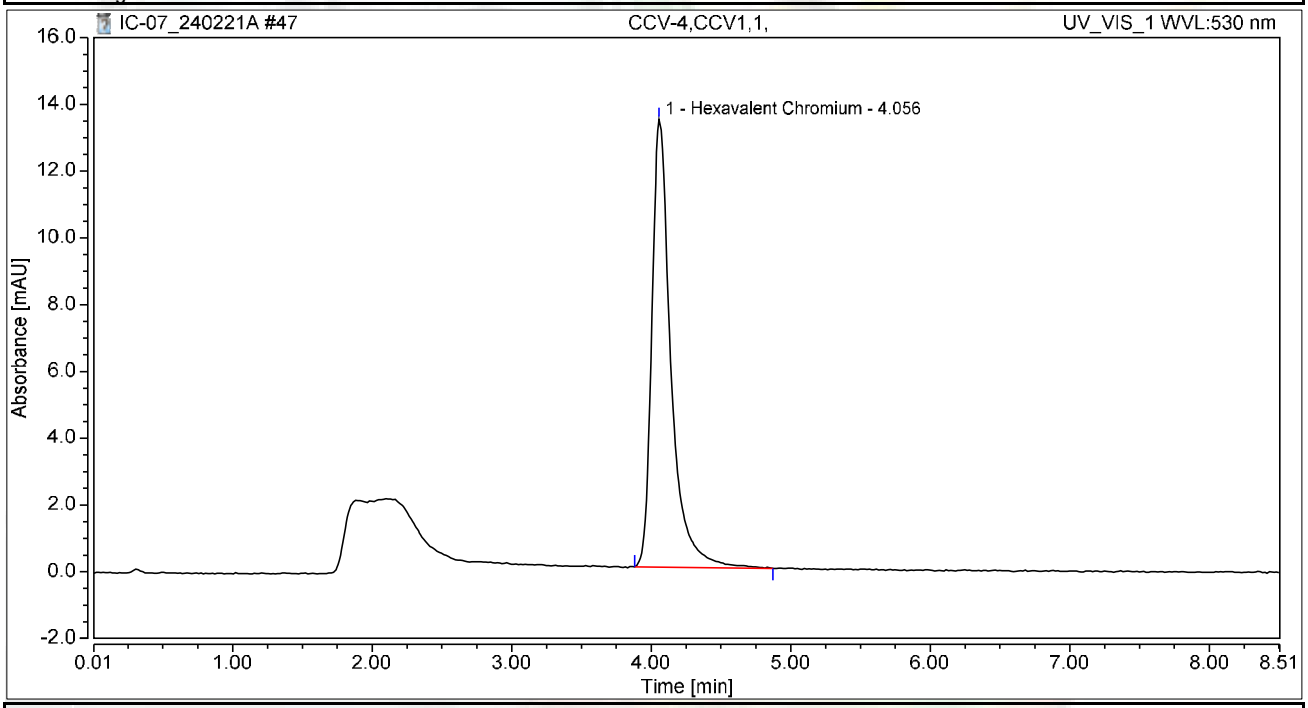
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	21.656	126.939	100.00	100.00	100.6789
Total:			**21.656**	**126.939**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 15:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

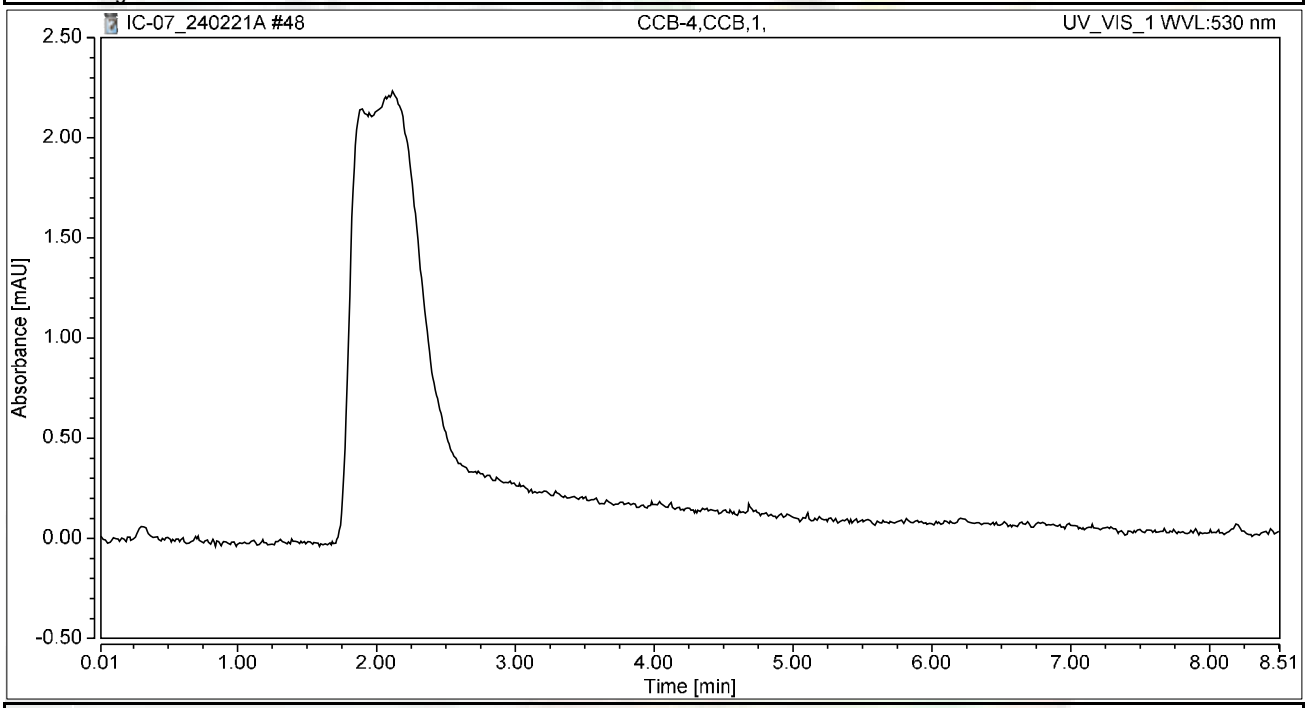
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	2.128	13.405	100.00	100.00	9.8925
Total:			**2.128**	**13.405**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 15:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

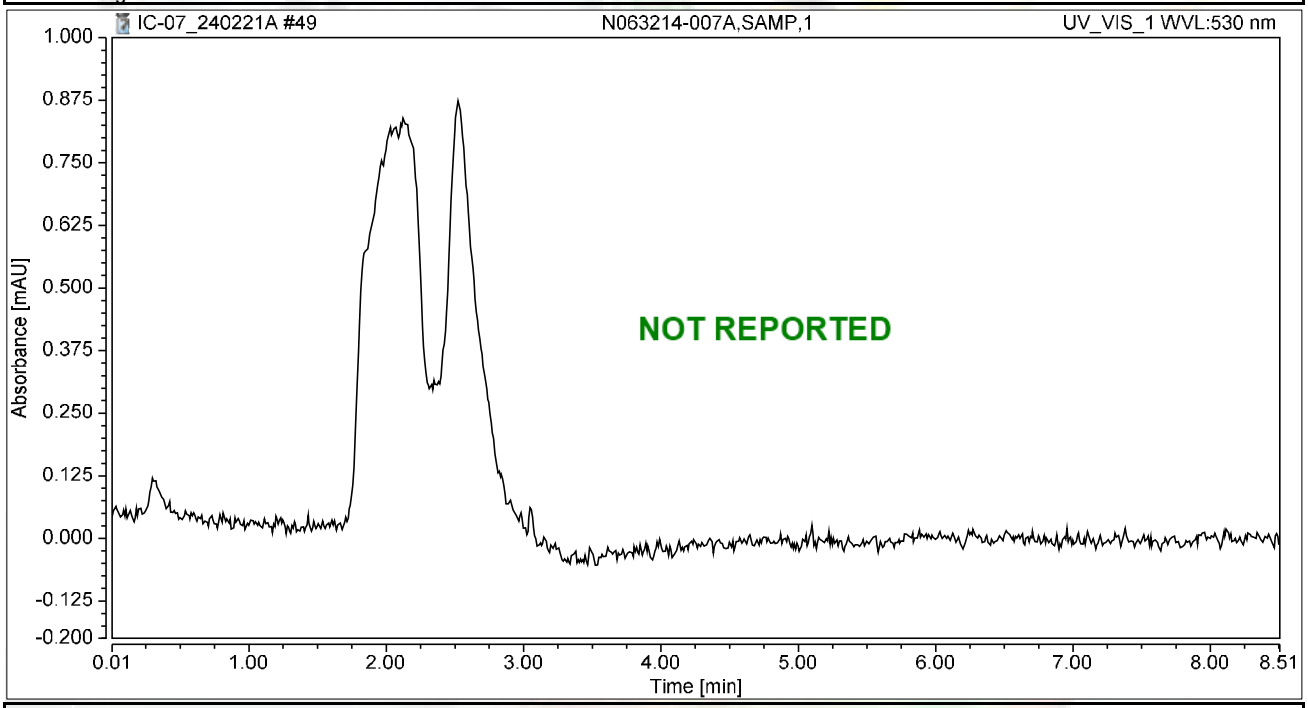
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-007A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 15:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

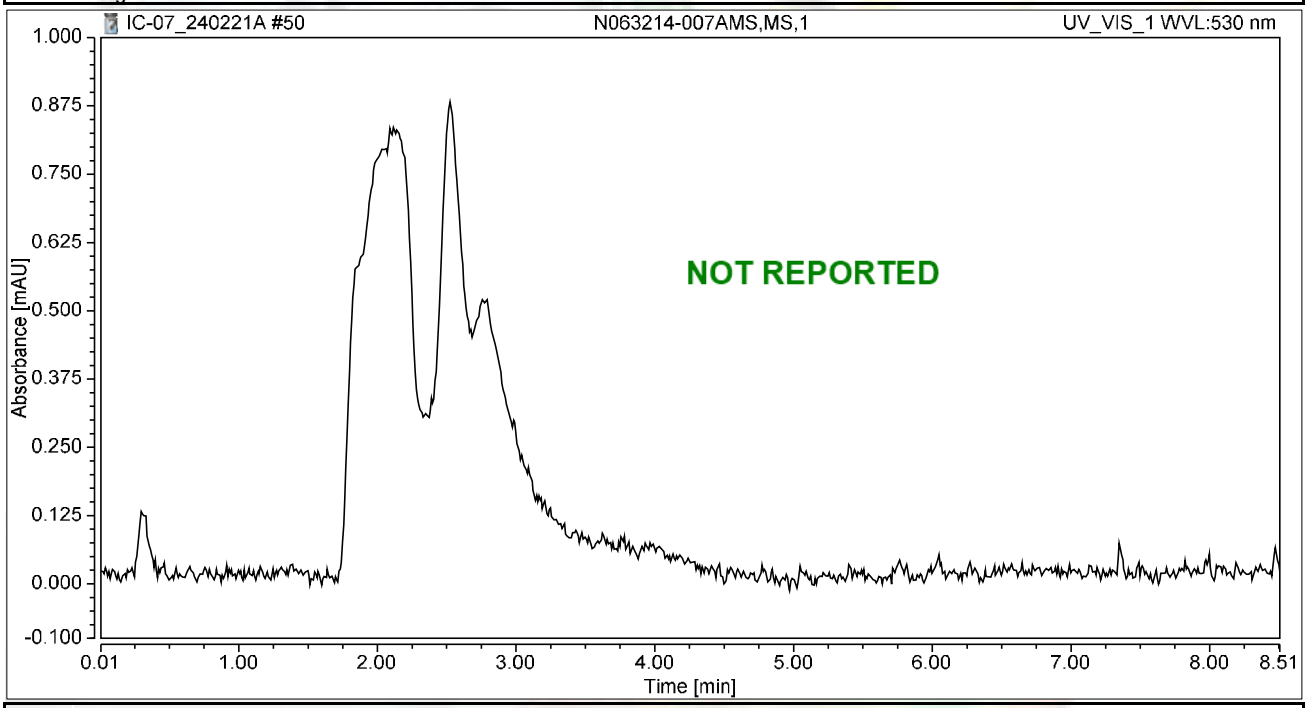
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 15:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

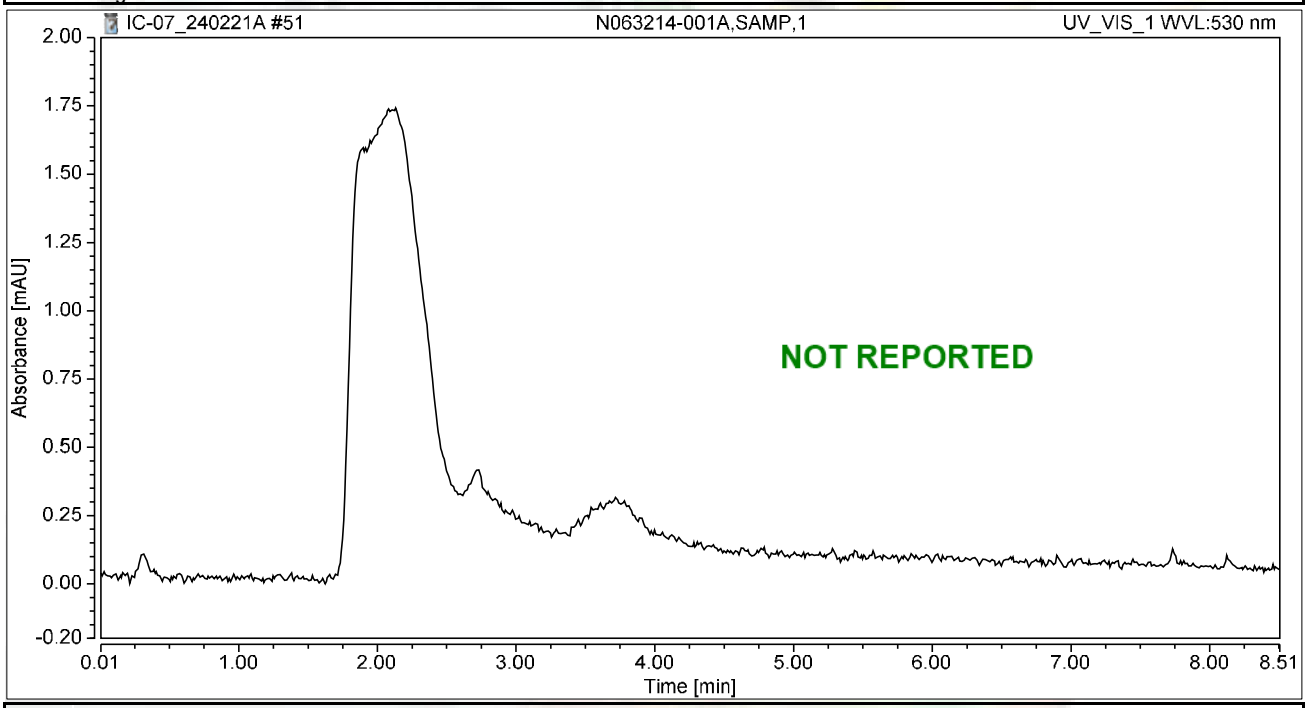
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 16:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

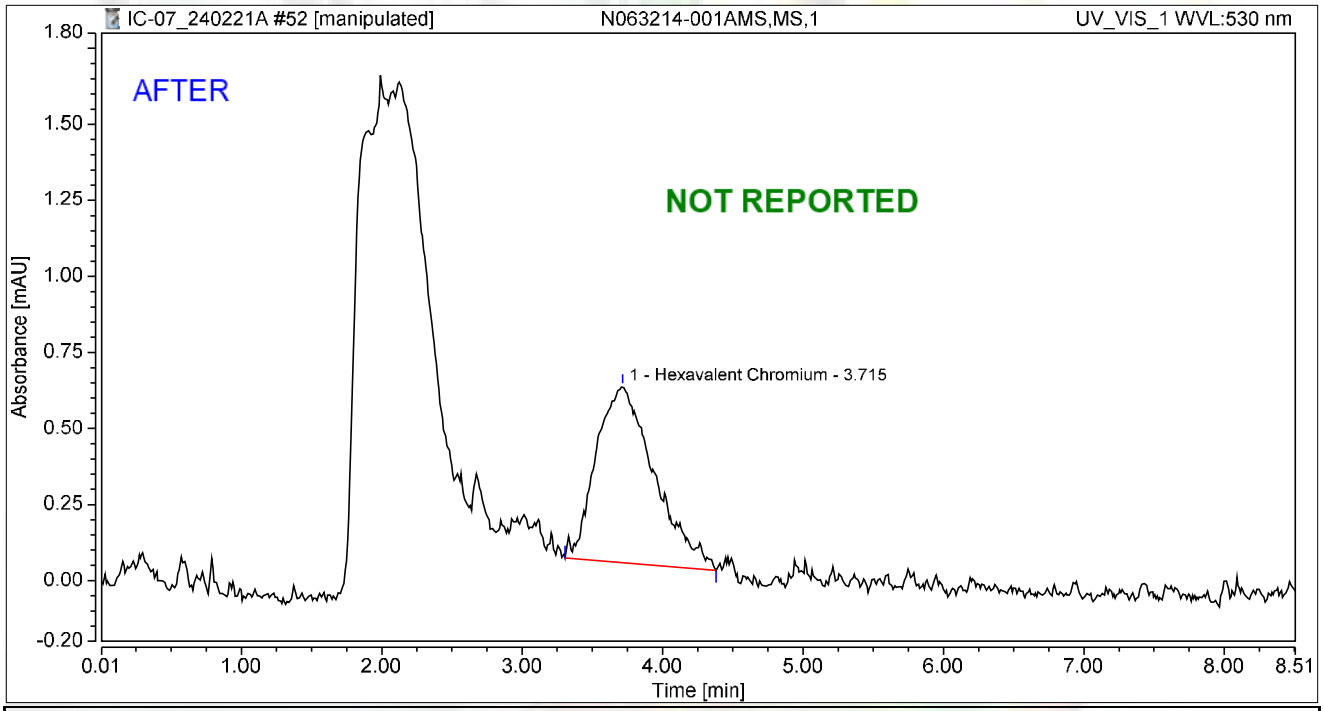
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 16:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

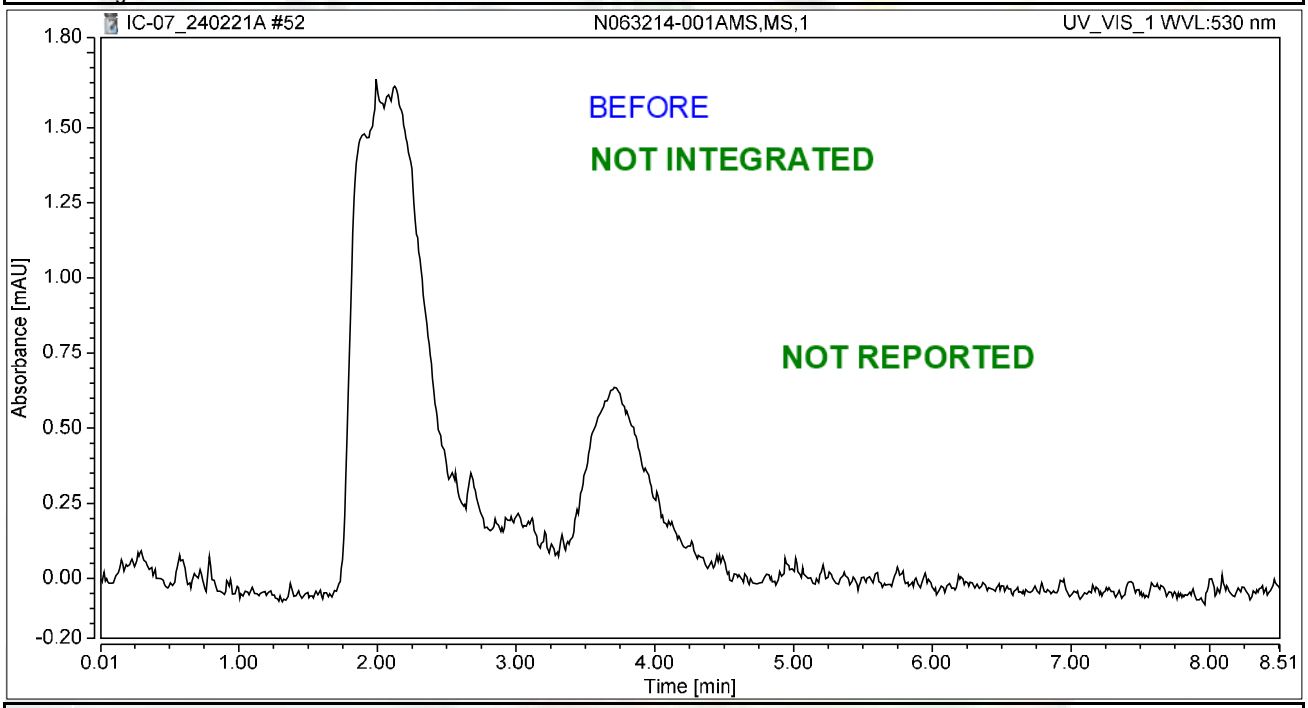
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.715	0.278	0.580	100.00	100.00	1.2930
Total:			**0.278**	**0.580**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 16:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

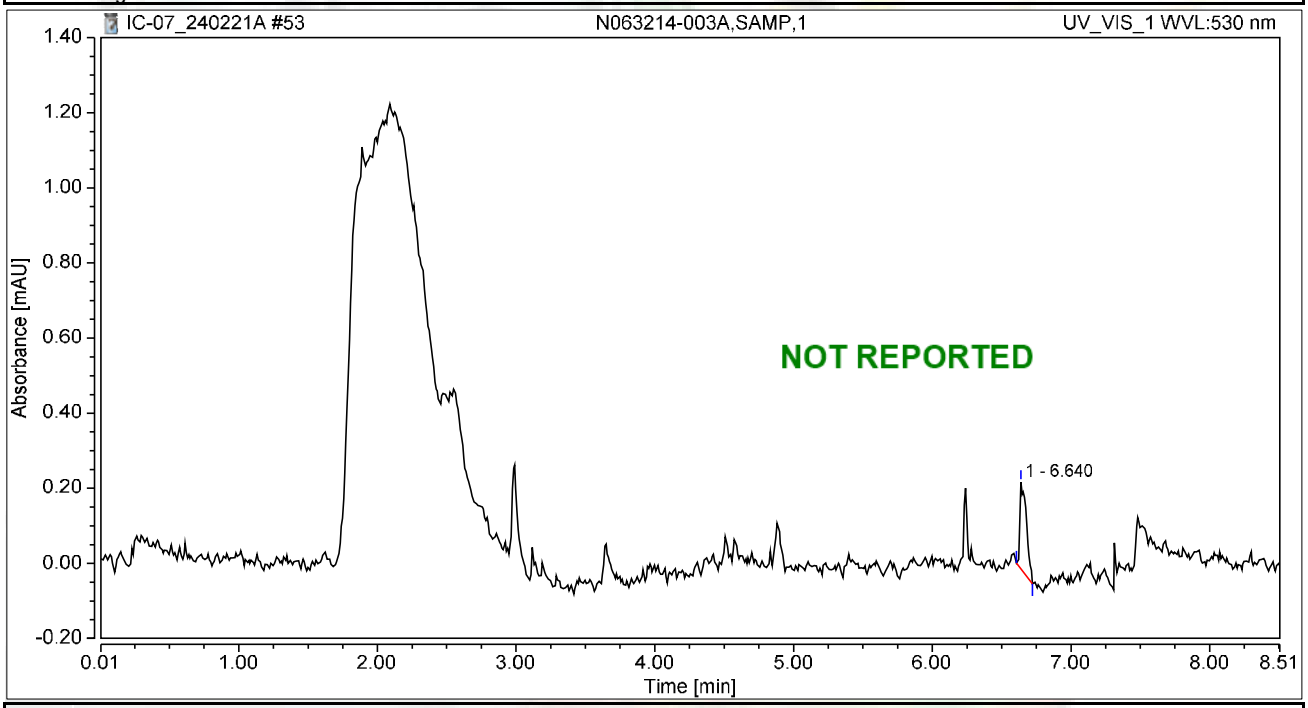
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 17:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

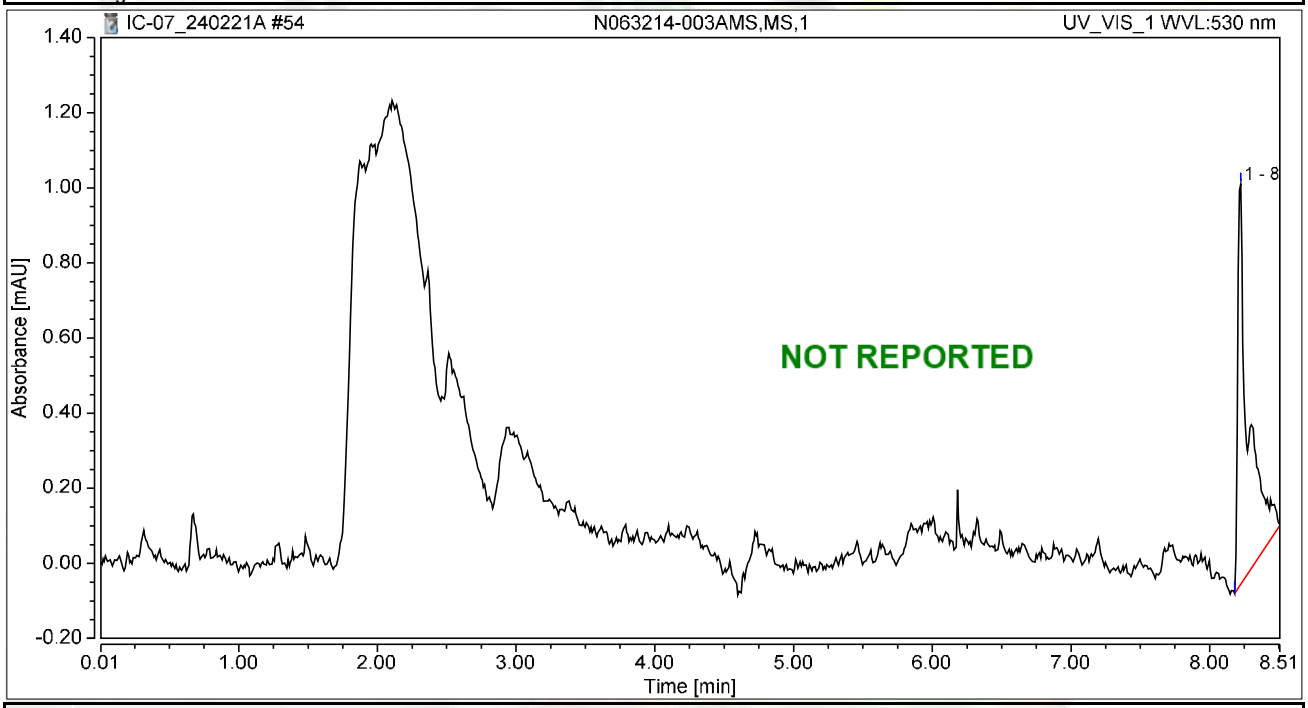
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		6.640	0.012	0.231	100.00	100.00	n.a.
Total:			**0.012**	**0.231**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 17:15**	*Sample Weight:*	**1.0000**

Chromatogram



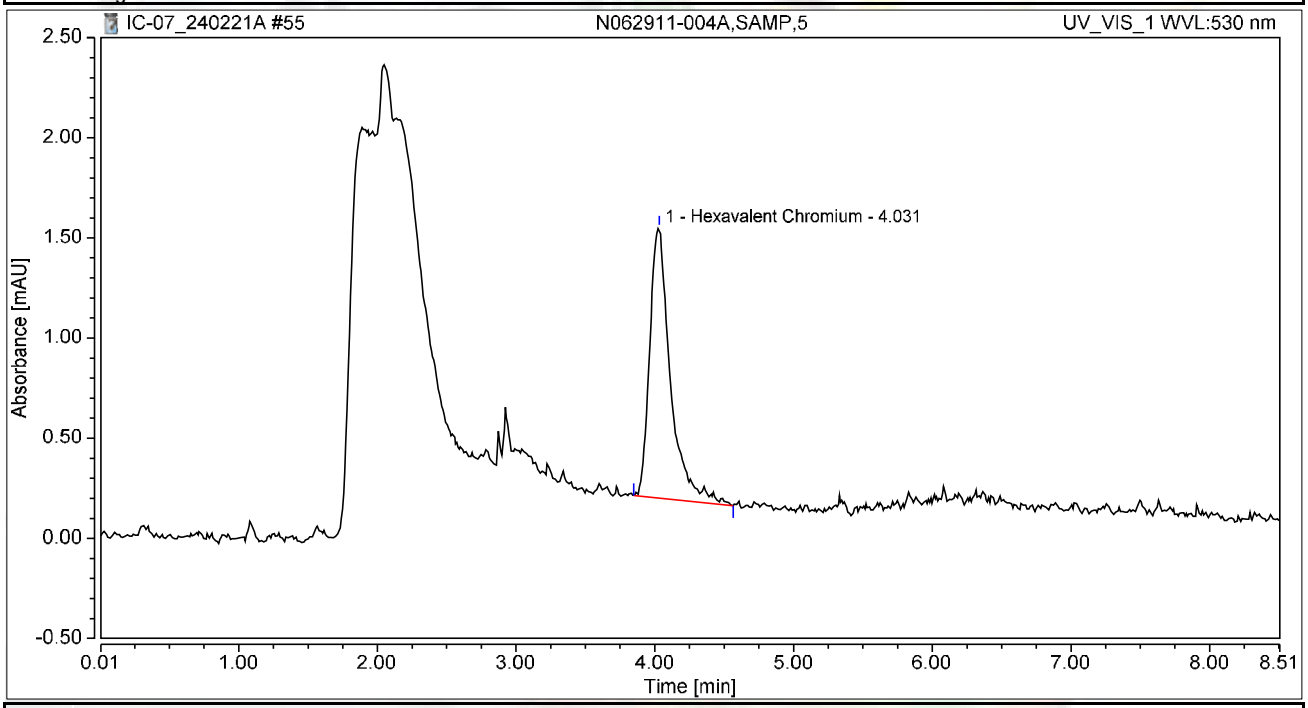
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		8.223	0.095	1.066	100.00	100.00	n.a.
Total:			**0.095**	**1.066**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details	N062911-004AMS,MS,5		
Injection Name:	~~N062911-004A,SAMP,5~~	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 17:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.233	1.350	100.00	100.00	1.0848
Total:			**0.233**	**1.350**	**100.00**	**100.00**	

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for RBA

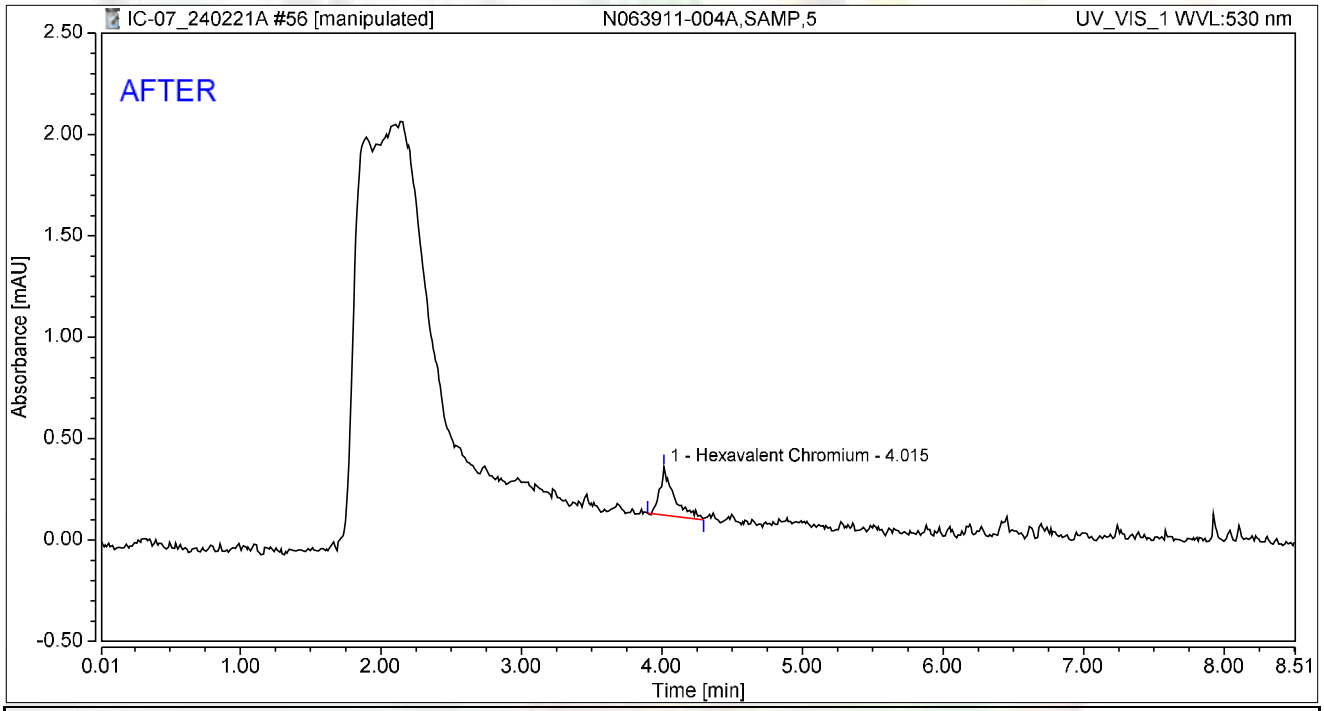
Chromatogram and Results

Injection Details

N062911-004A

Injection Name:	~~N063911-004A~~,SAMP,5	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 17:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.027	0.238	100.00	100.00	0.1273
Total:			**0.027**	**0.238**	**100.00**	**100.00**	

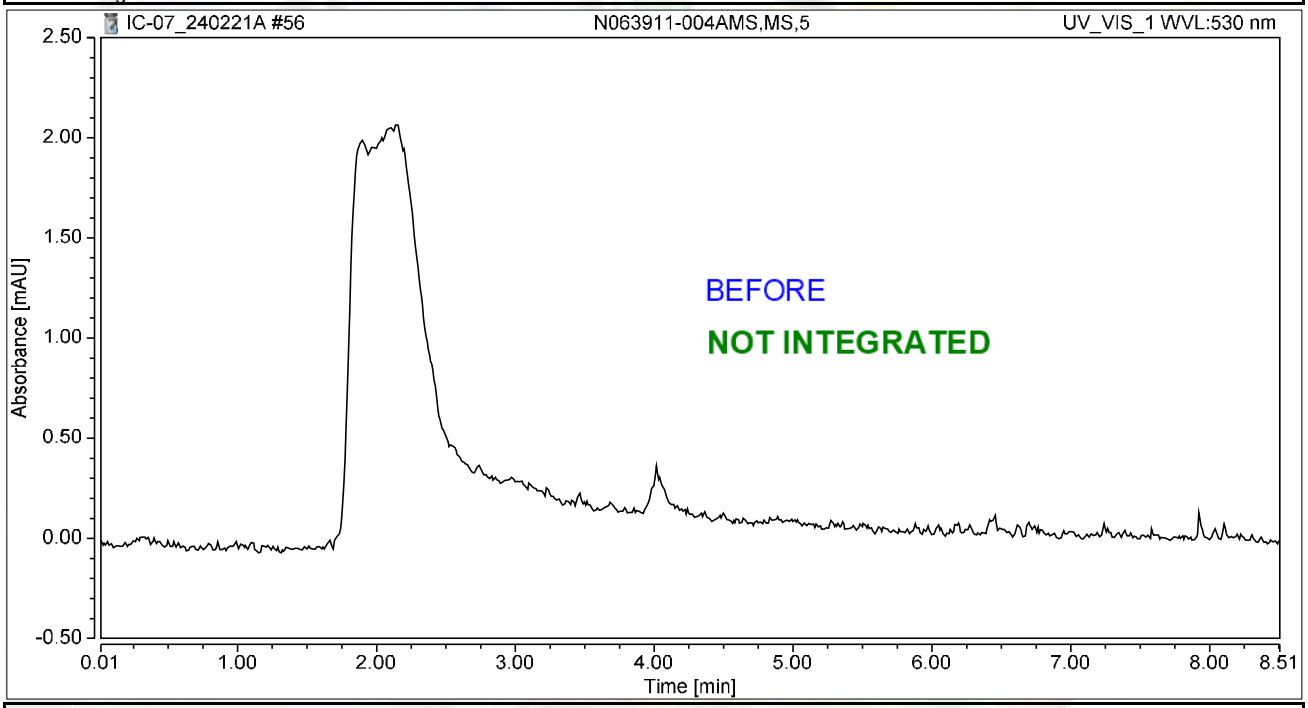
Reviewed by:

JRB 2/27/2024

Chromatogram and Results

Injection Details	N062911-004A,SAMP,5		
Injection Name:	~~N063911-004AMS,MS,5~~	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 17:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

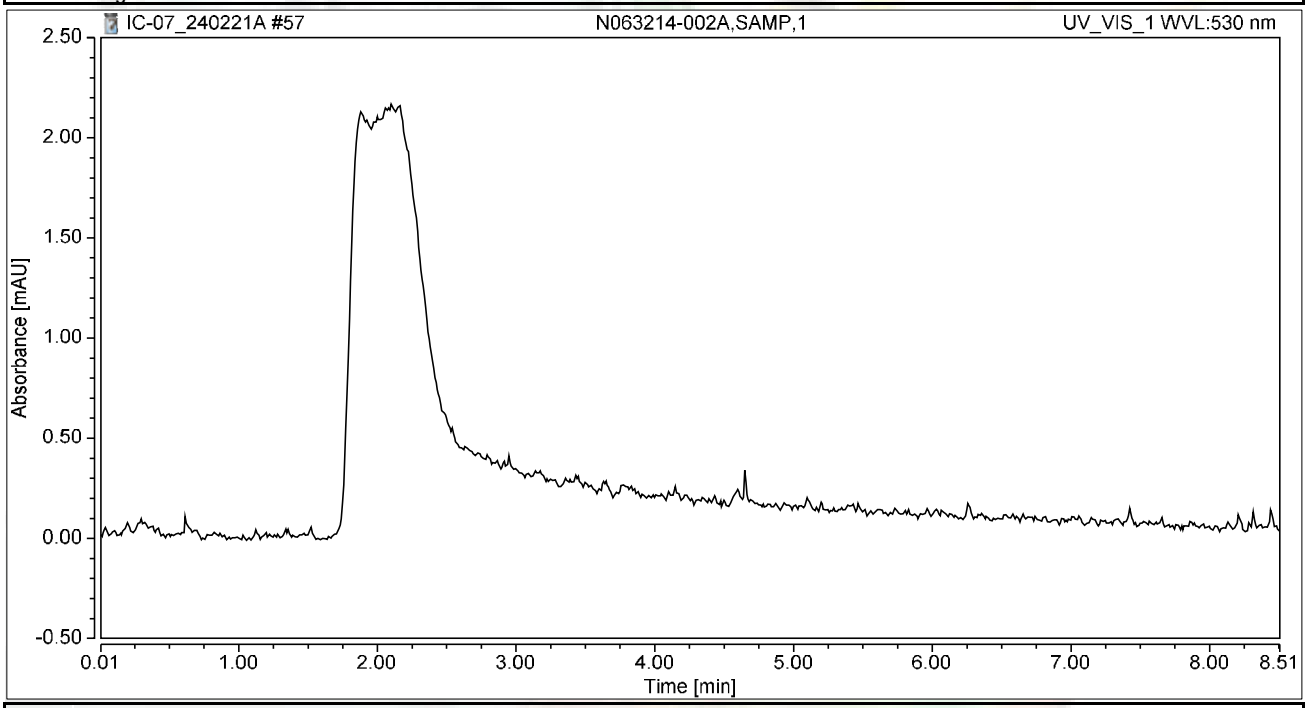
JRB 2/27/2024
for RBA

Chromatogram and Results

Injection Details

Injection Name:	**N063214-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 17:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

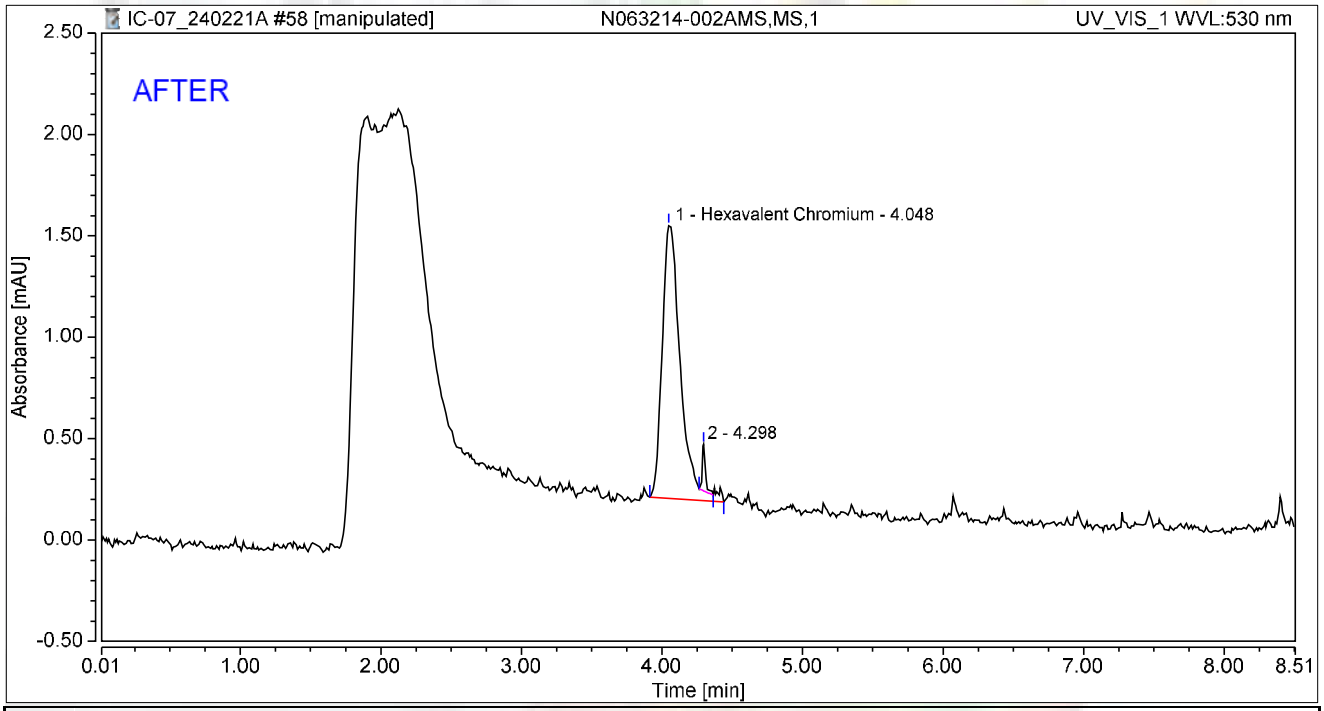
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 17:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.203	1.345	96.84	85.42	0.9454
2		4.298	0.007	0.229	3.16	14.58	n.a.
Total:			**0.210**	**1.575**	**100.00**	**100.00**	

Reviewed by:

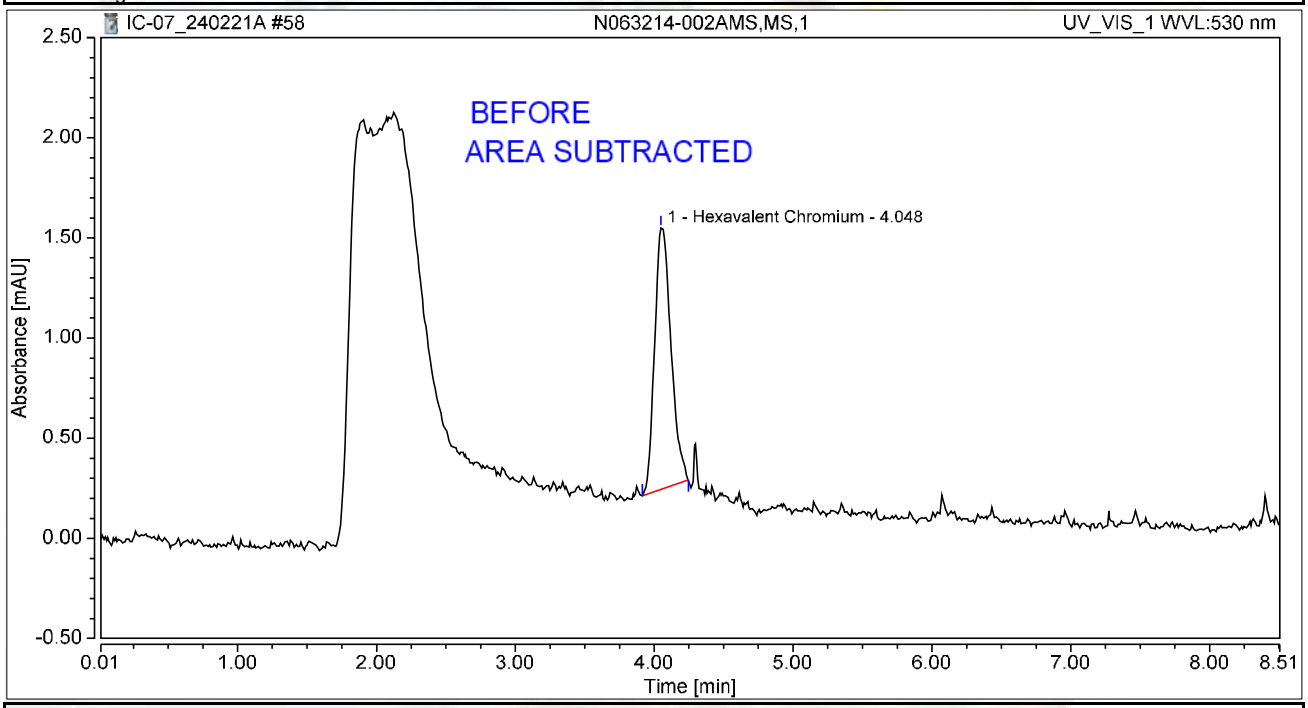
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063214-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 17:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

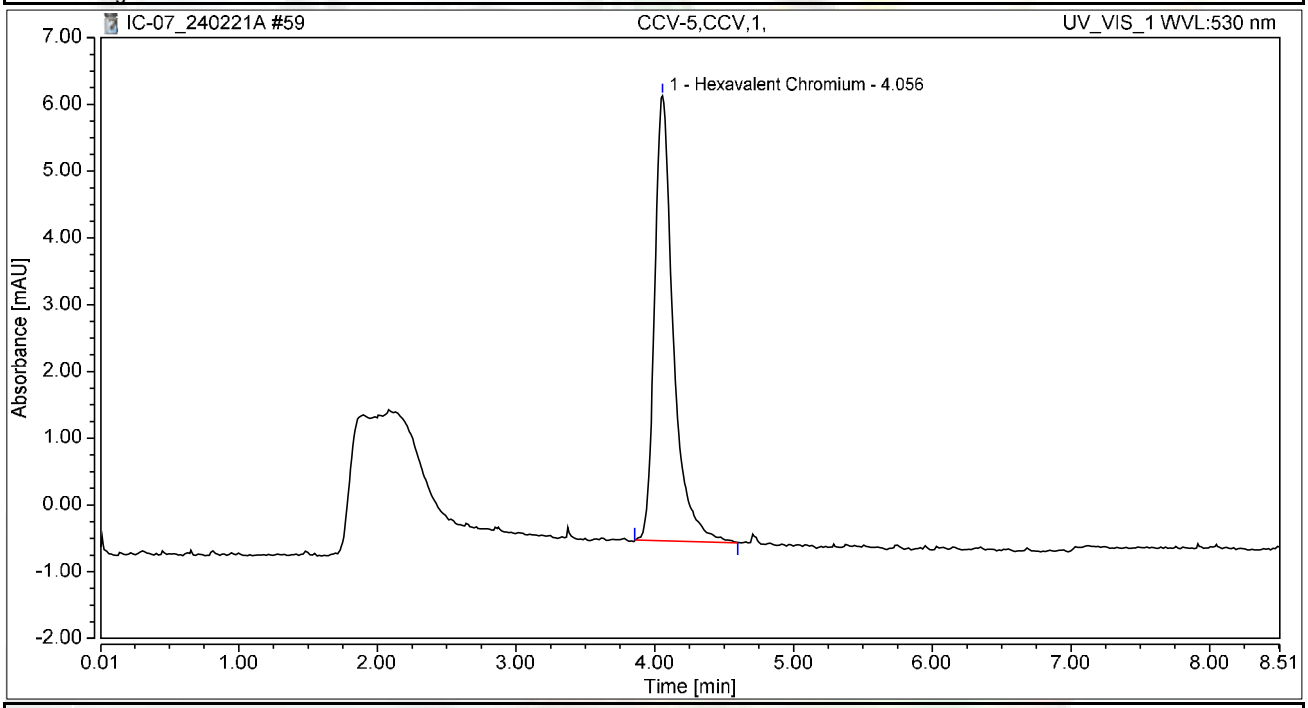
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.179	1.307	100.00	100.00	0.8299
Total:			**0.179**	**1.307**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 18:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

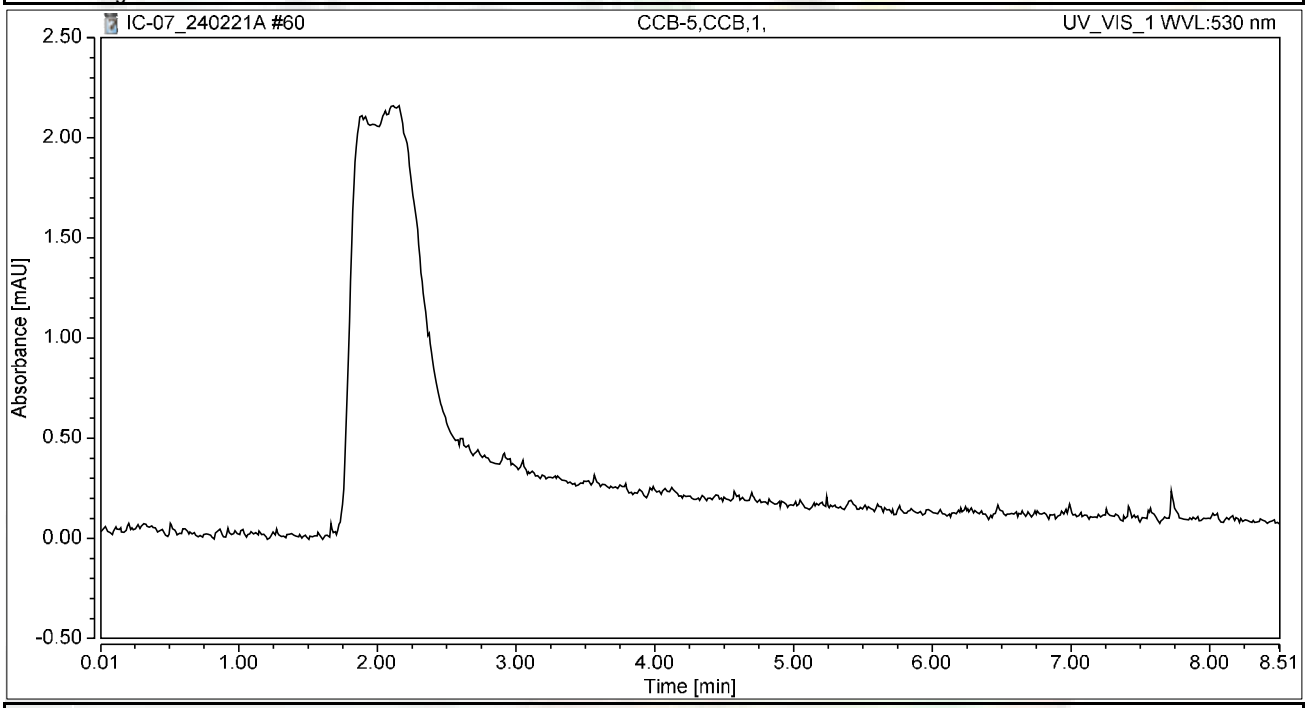
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.046	6.670	100.00	100.00	4.8634
Total:			**1.046**	**6.670**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 18:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

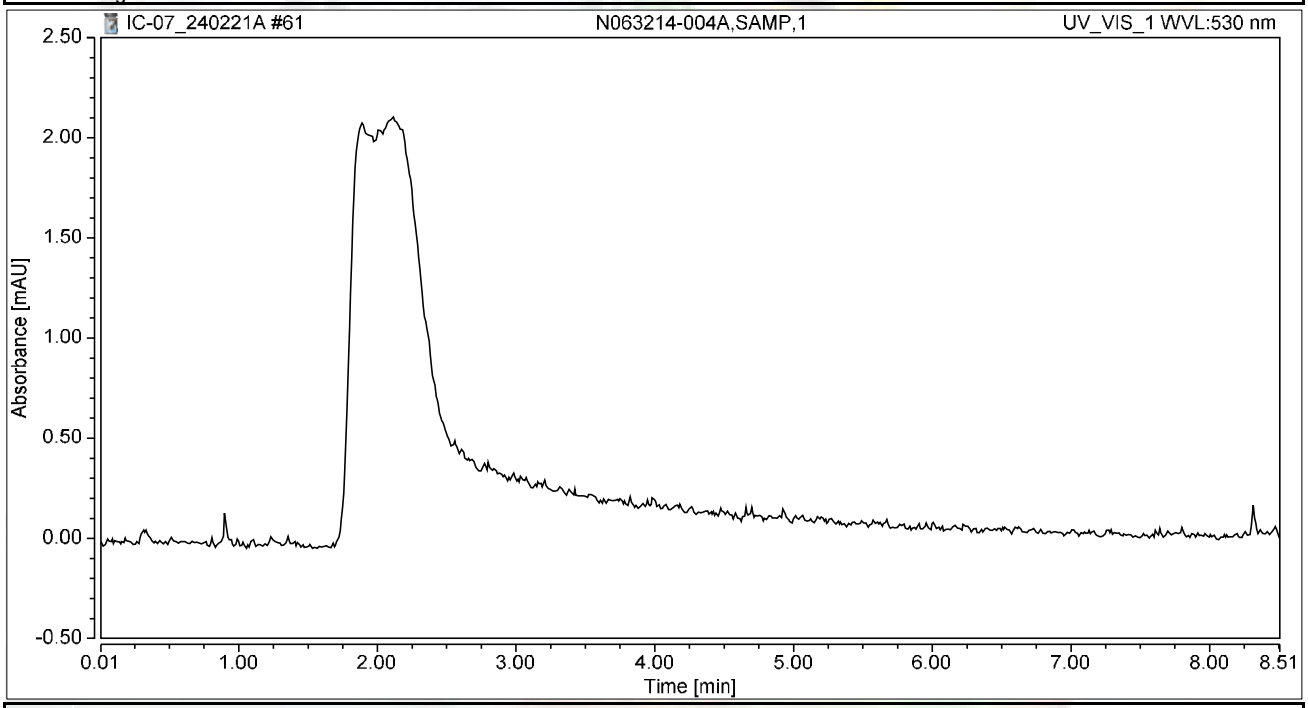
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 18:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

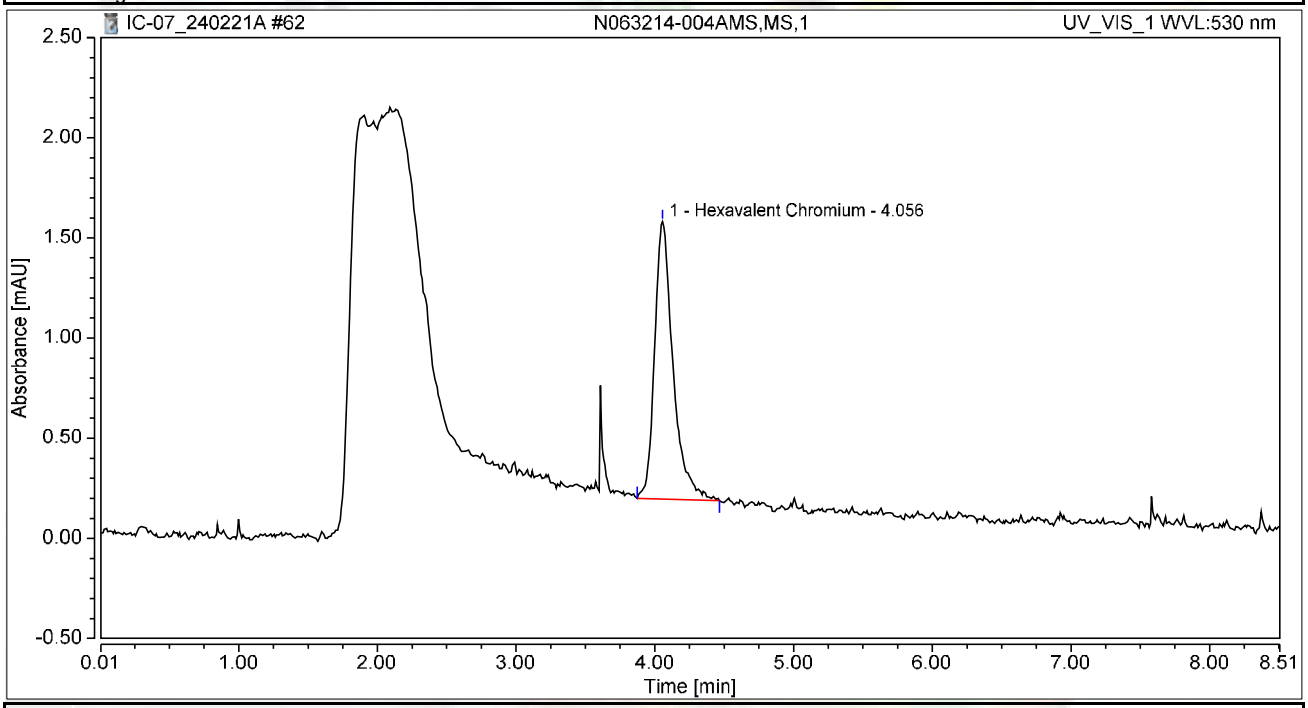
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 18:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

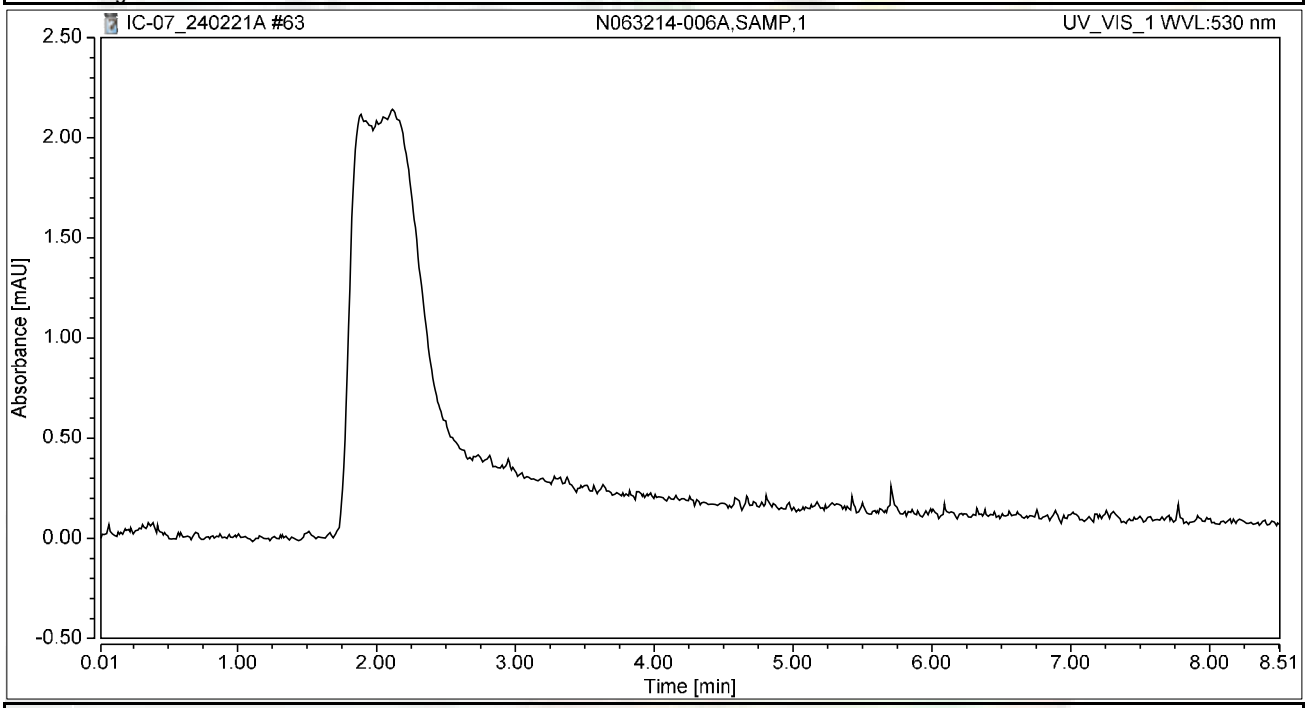
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.213	1.386	100.00	100.00	0.9919
Total:			**0.213**	**1.386**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-006A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 18:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

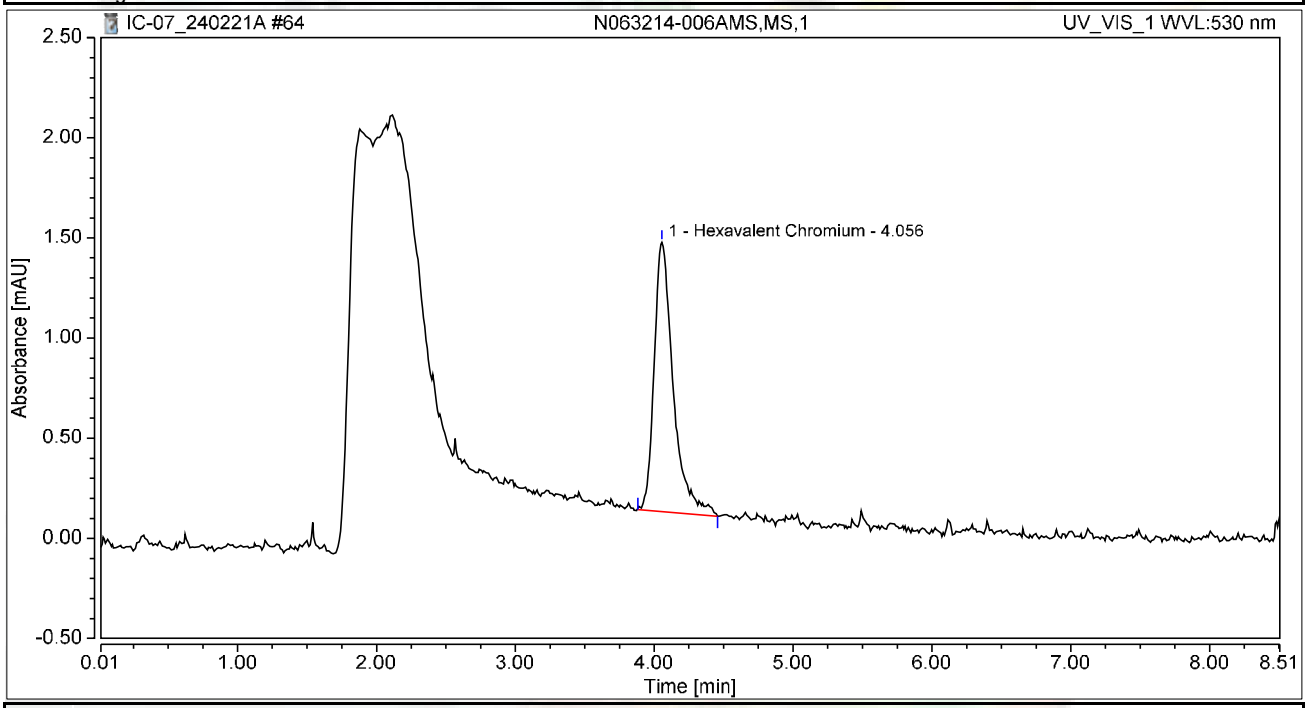
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-006AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 18:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

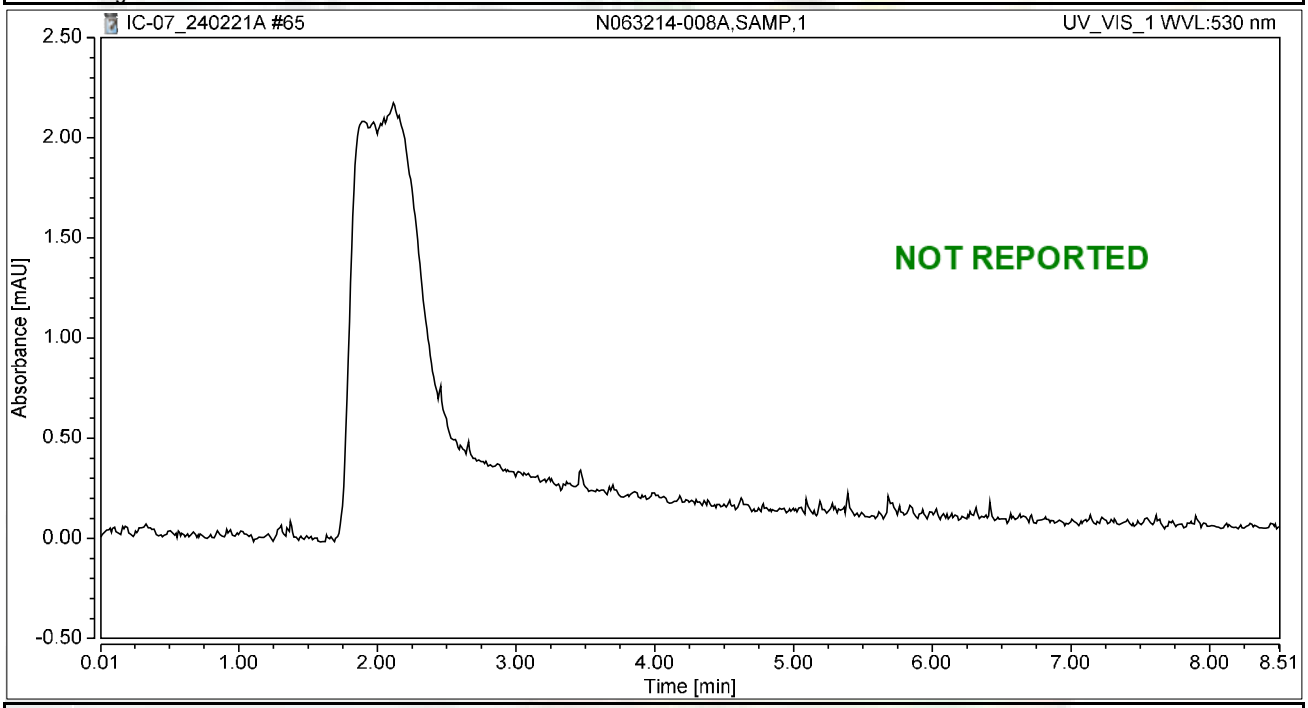
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.214	1.346	100.00	100.00	0.9948
Total:			**0.214**	**1.346**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 18:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

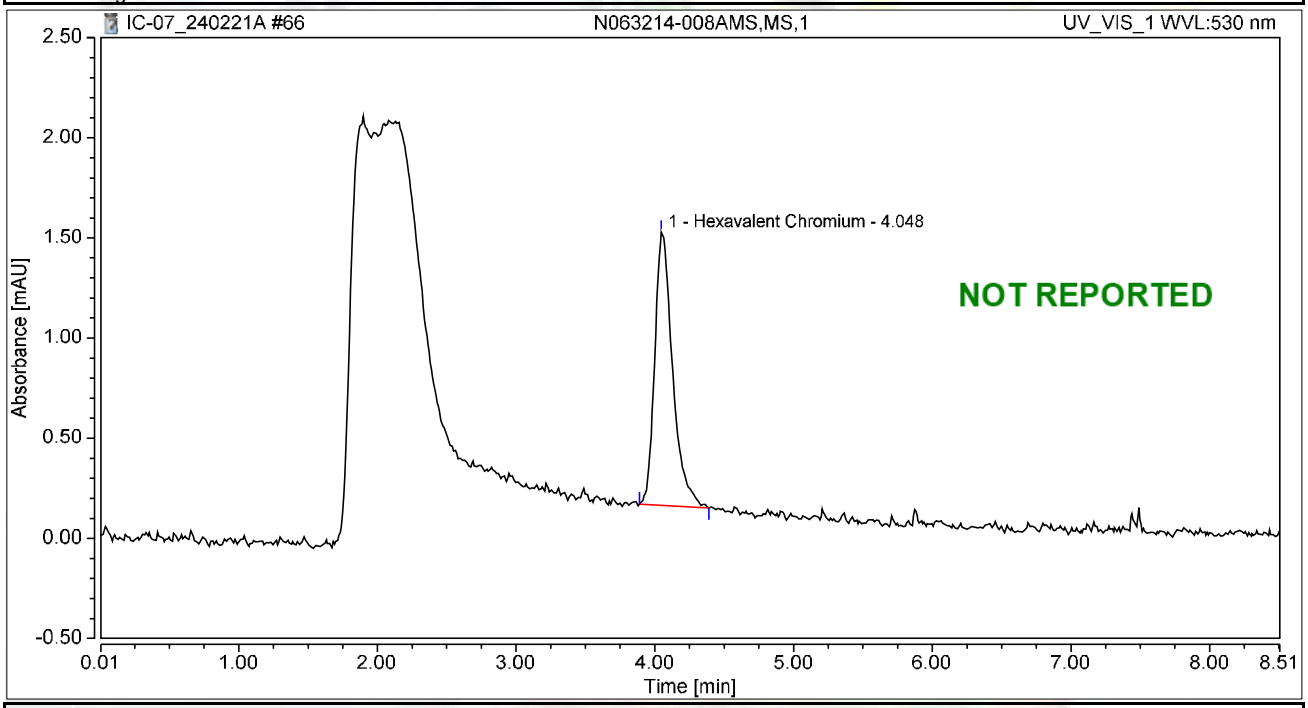
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 19:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

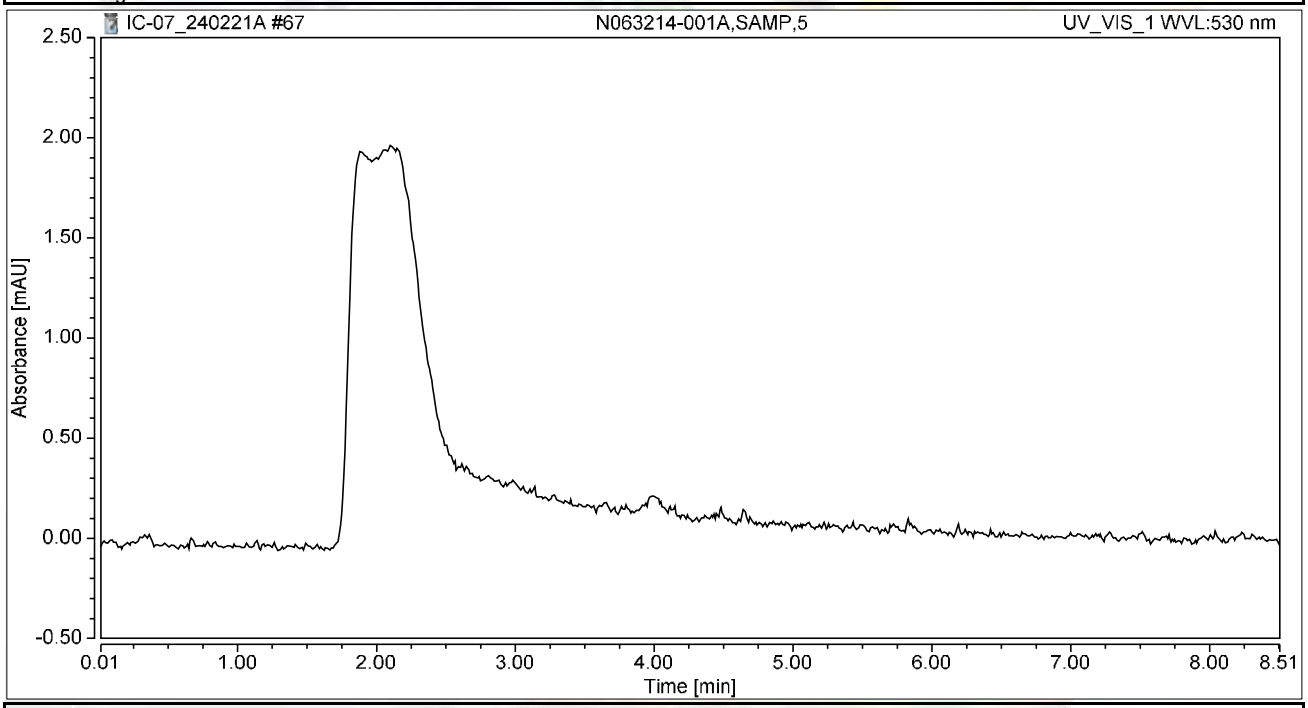
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.204	1.364	100.00	100.00	0.9475
Total:			**0.204**	**1.364**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-001A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 19:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

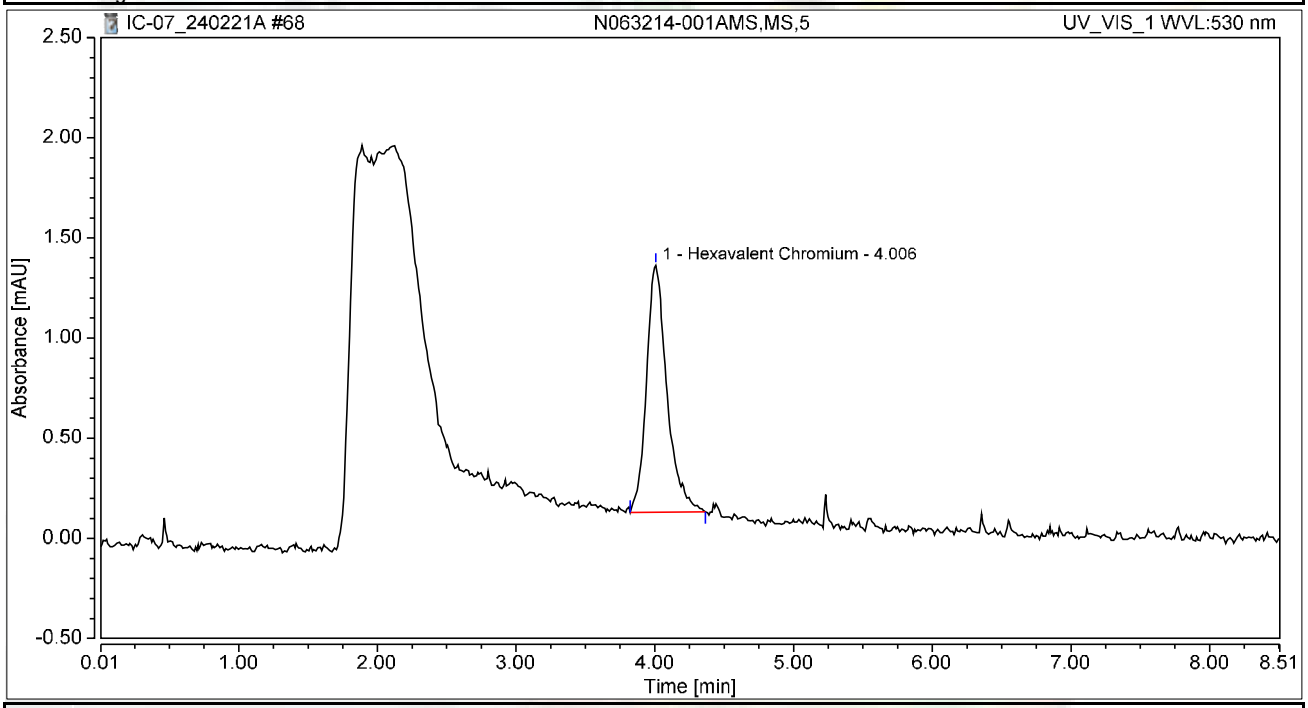
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 19:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

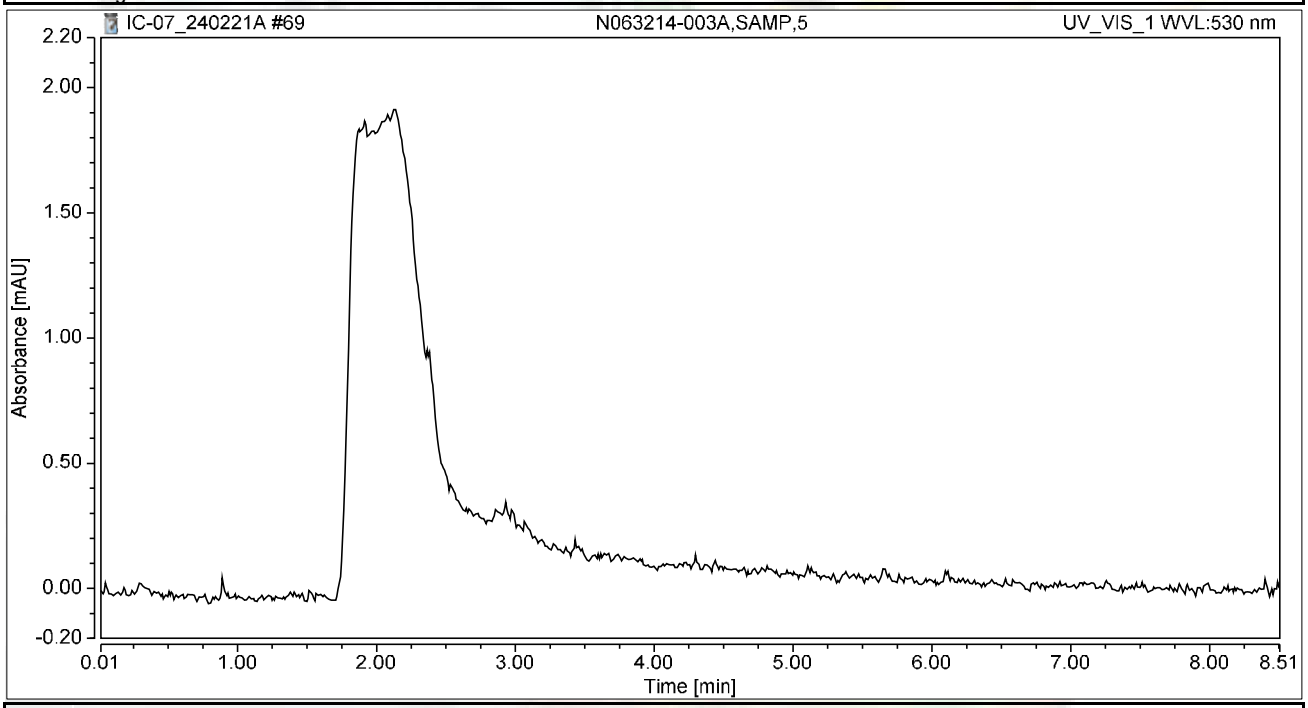
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.211	1.232	100.00	100.00	0.9789
Total:			**0.211**	**1.232**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-003A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 19:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

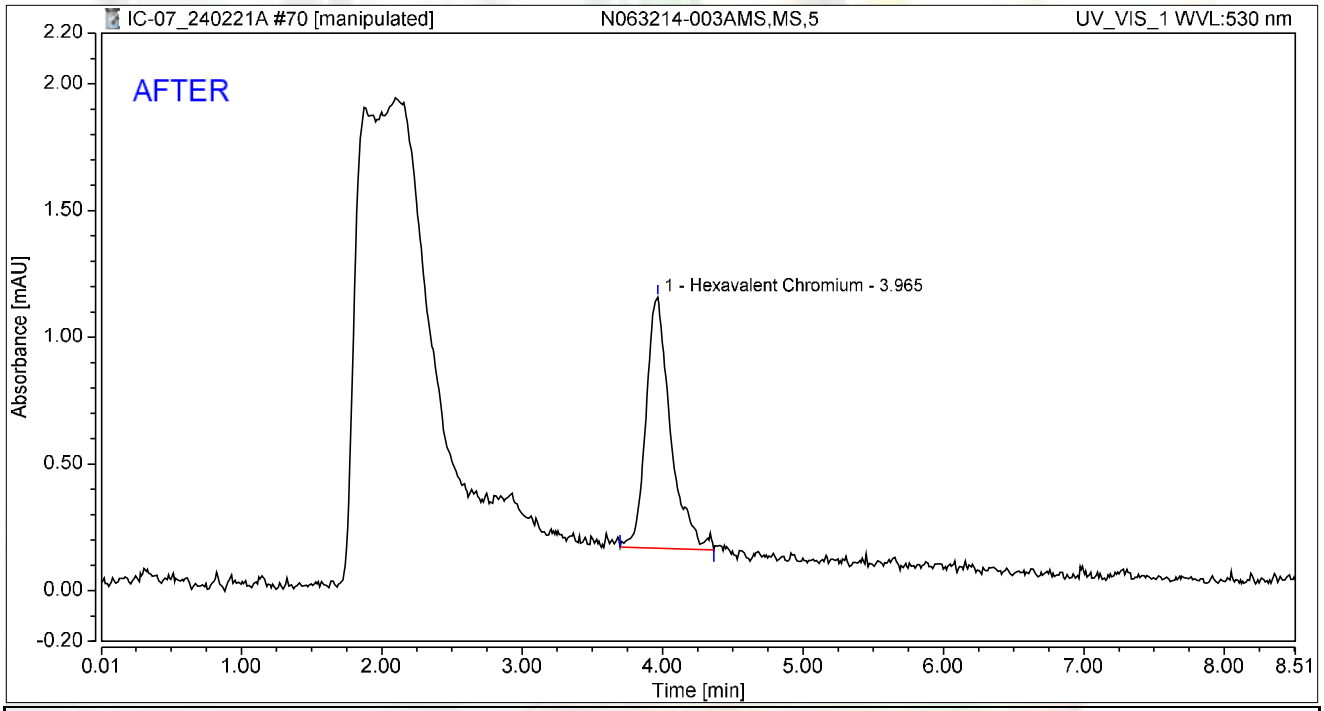
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 19:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.200	0.990	100.00	100.00	0.9278
Total:			**0.200**	**0.990**	**100.00**	**100.00**	

Reviewed by:

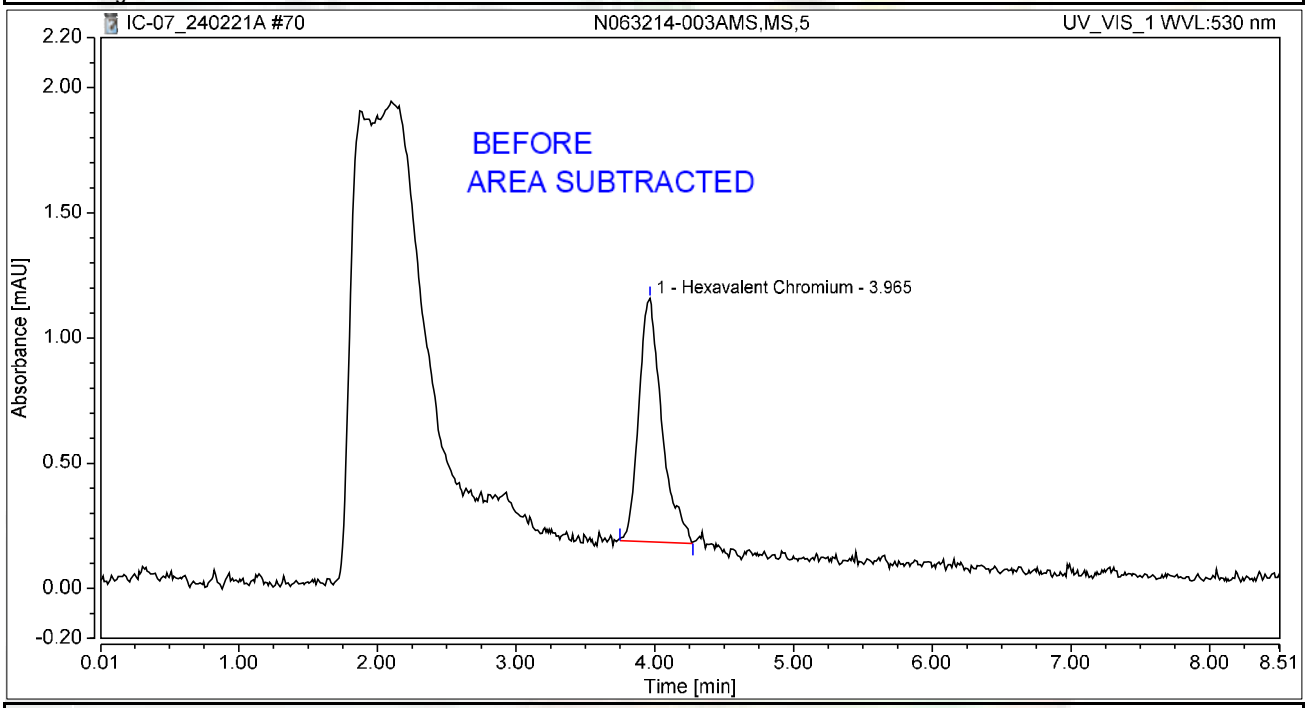
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063214-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 19:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

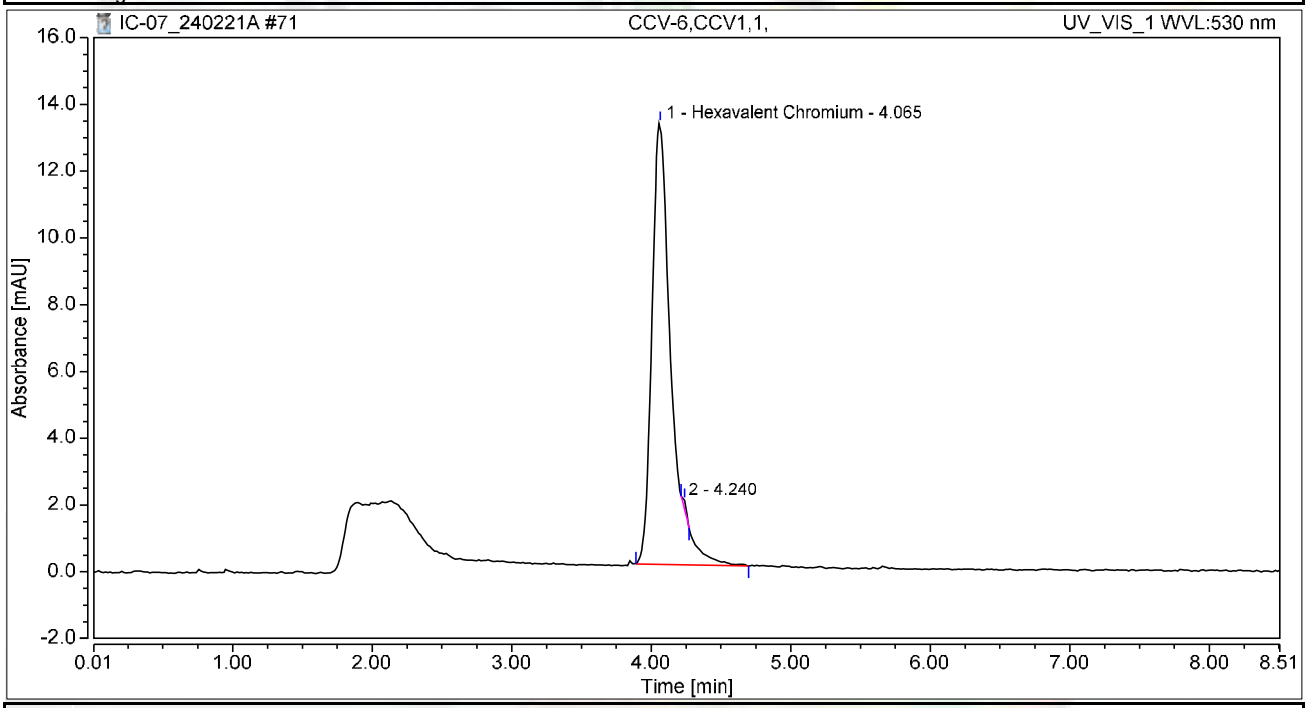
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.186	0.971	100.00	100.00	0.8653
Total:			**0.186**	**0.971**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 19:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

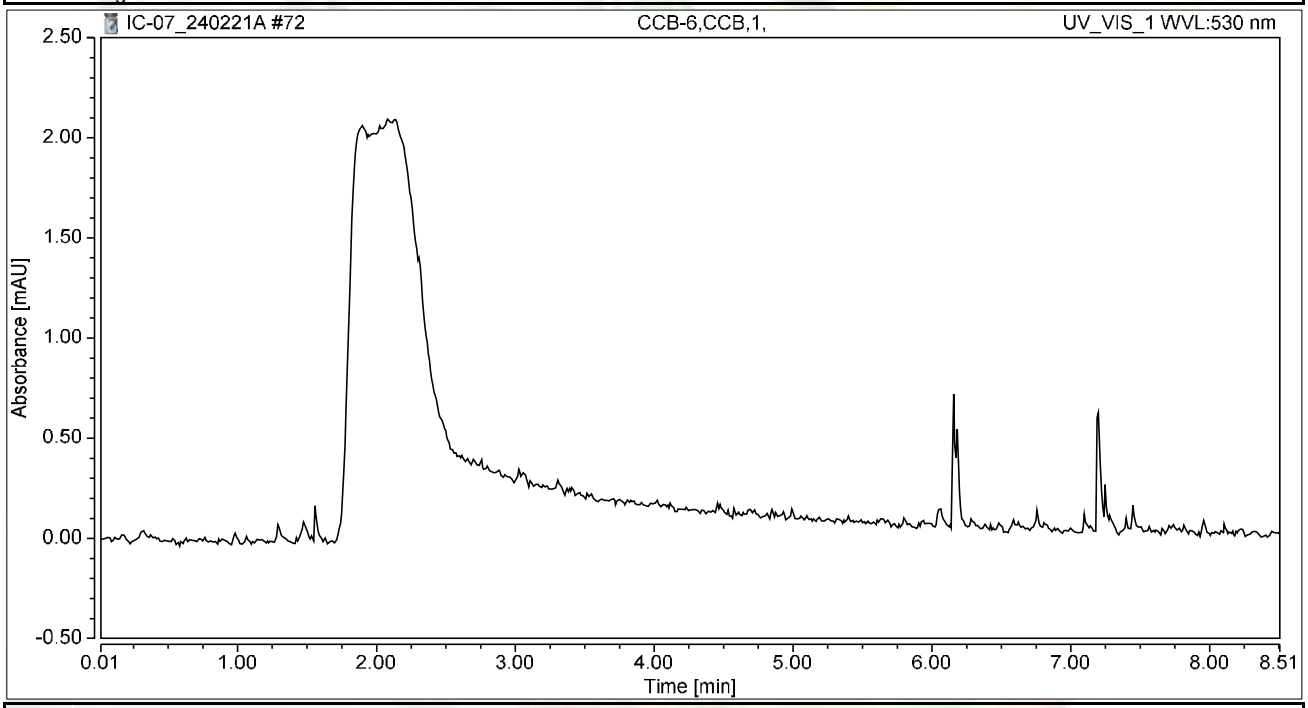
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	2.100	13.209	99.61	97.89	9.7638
2		4.240	0.008	0.285	0.39	2.11	n.a.
Total:			**2.108**	**13.494**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 20:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

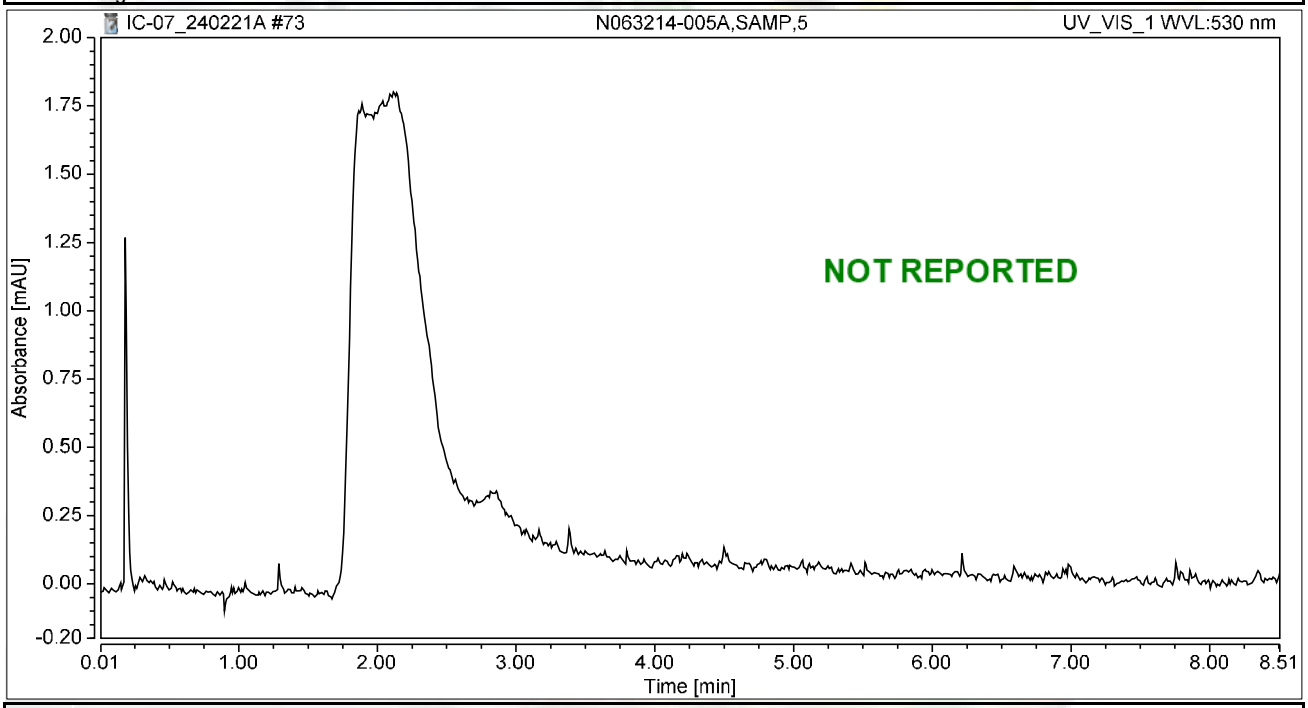
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 20:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

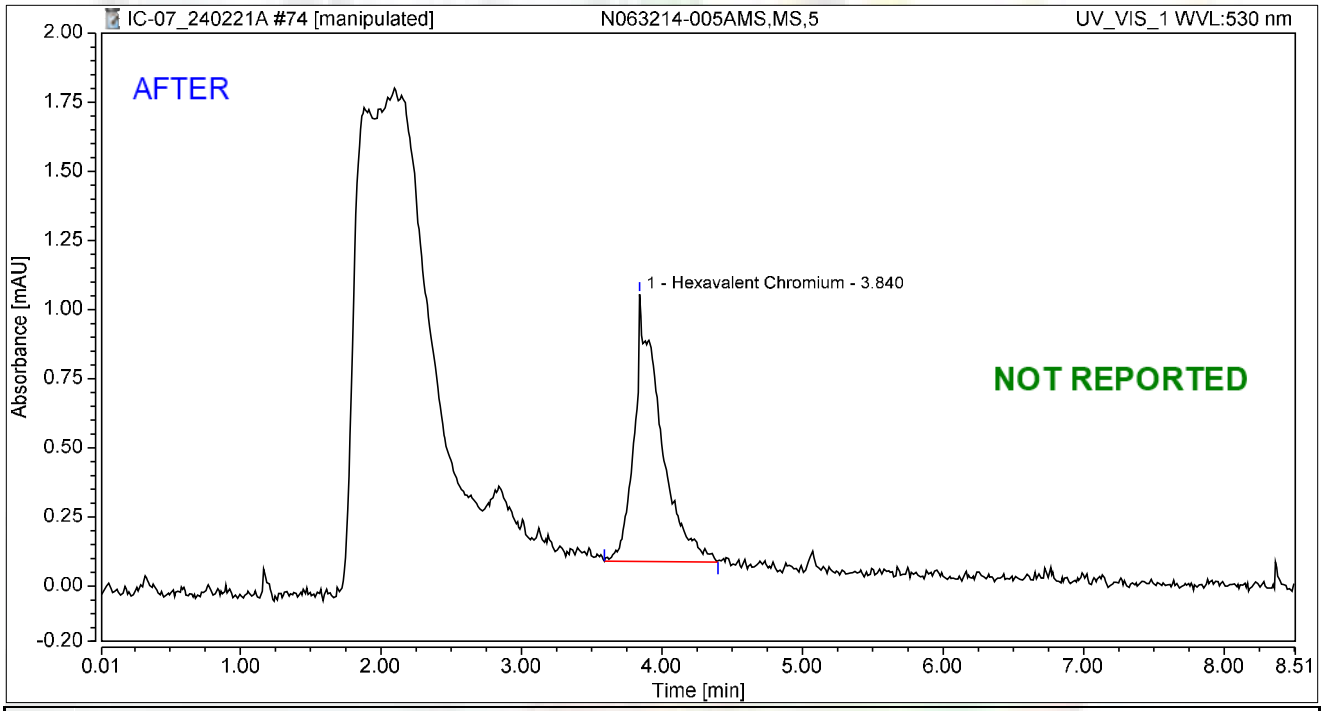
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-005AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 20:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.840	0.210	0.967	100.00	100.00	0.9758
Total:			**0.210**	**0.967**	**100.00**	**100.00**	

Reviewed by:

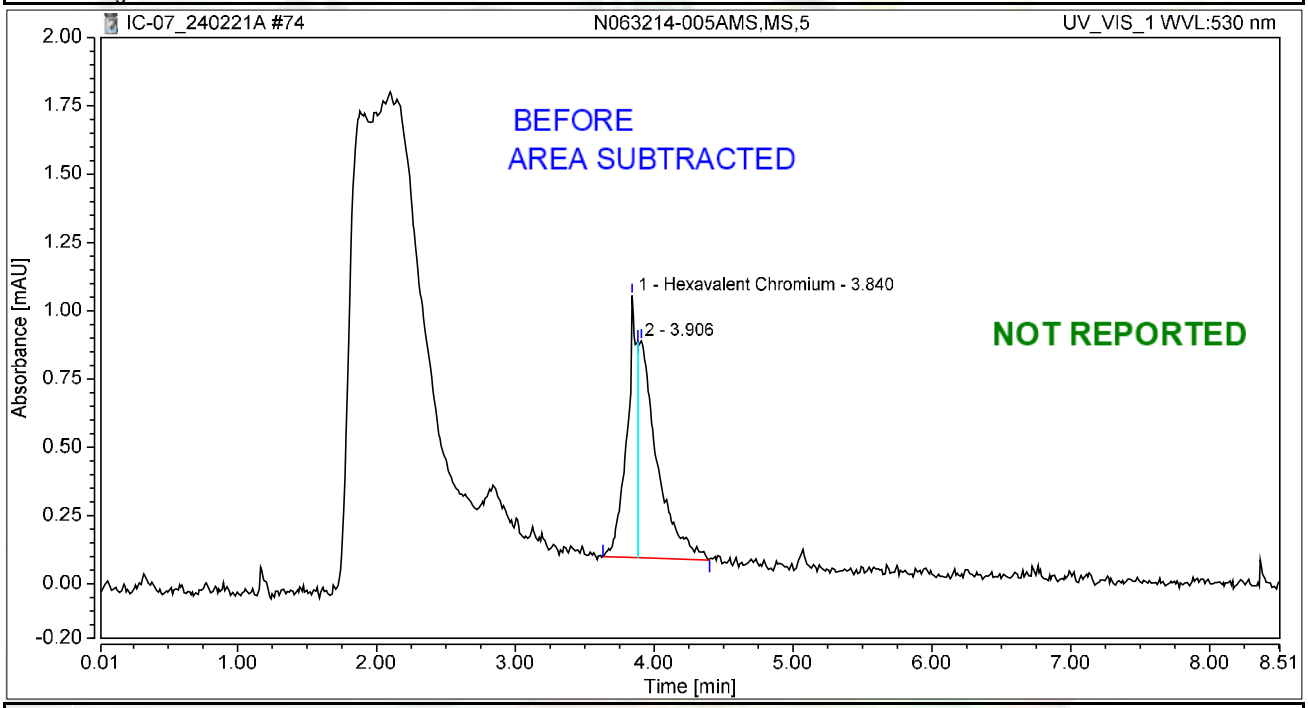
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063214-005AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 20:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

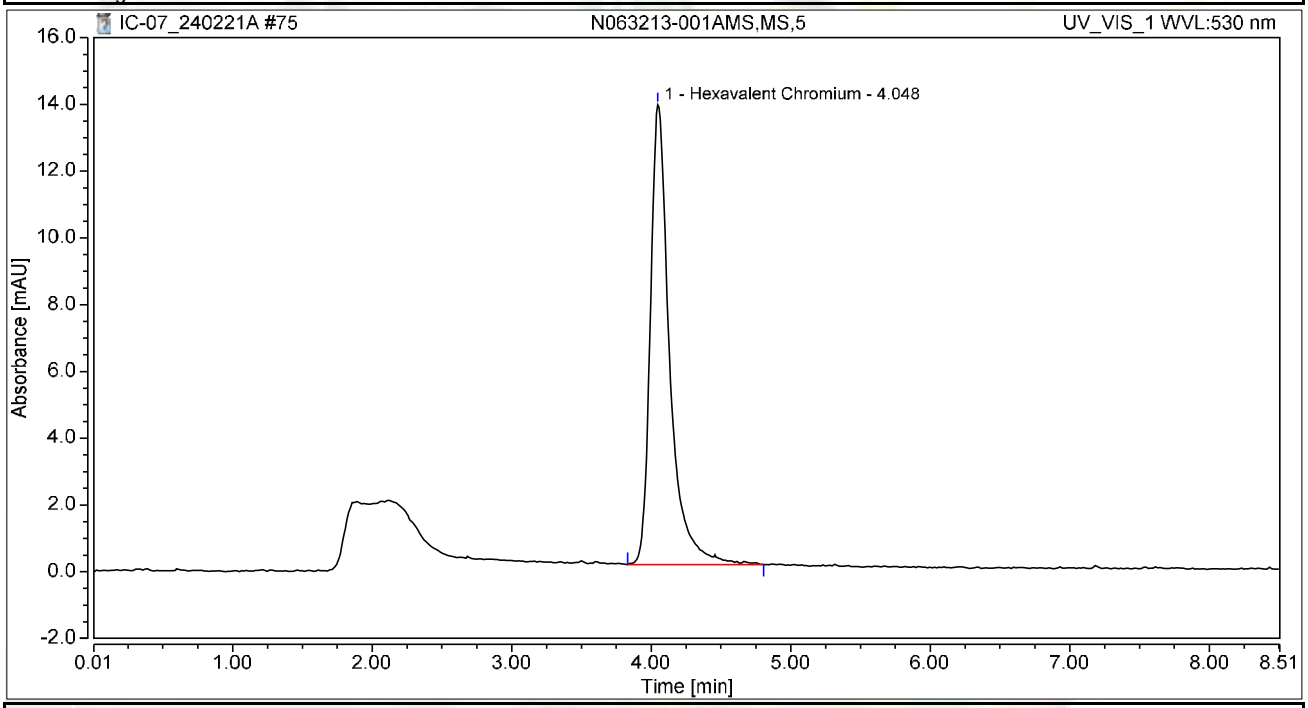
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.840	0.078	0.959	38.16	54.71	0.3646
2		3.906	0.127	0.794	61.84	45.29	n.a.
Total:			**0.206**	**1.754**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 20:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

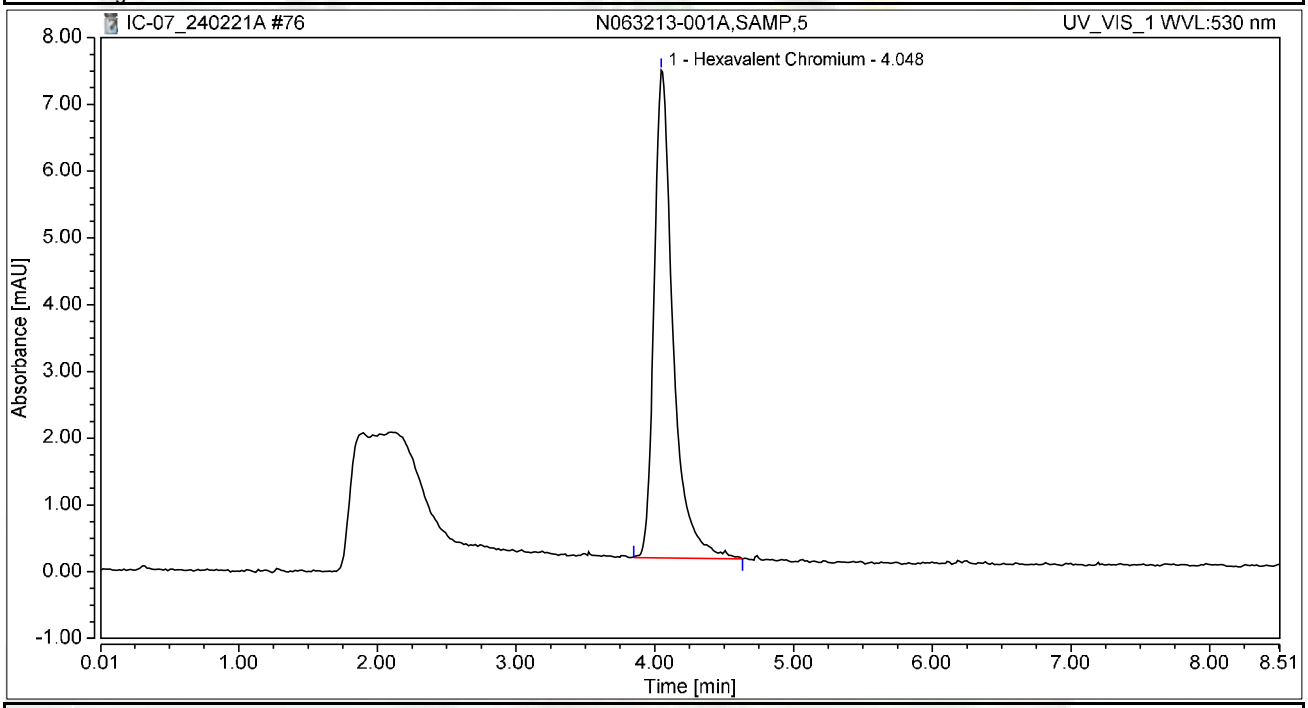
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.214	13.774	100.00	100.00	10.2944
Total:			**2.214**	**13.774**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 20:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

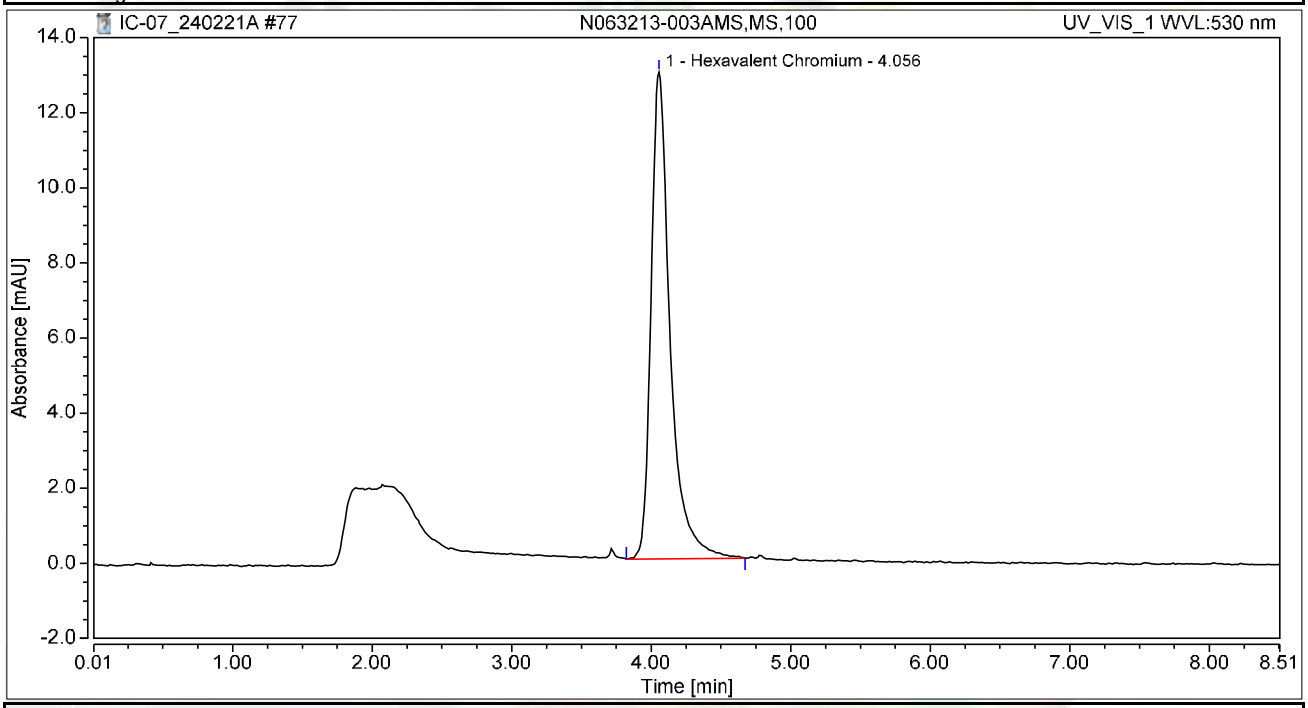
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.158	7.302	100.00	100.00	5.3824
Total:			**1.158**	**7.302**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-003AMS,MS,100**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 20:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

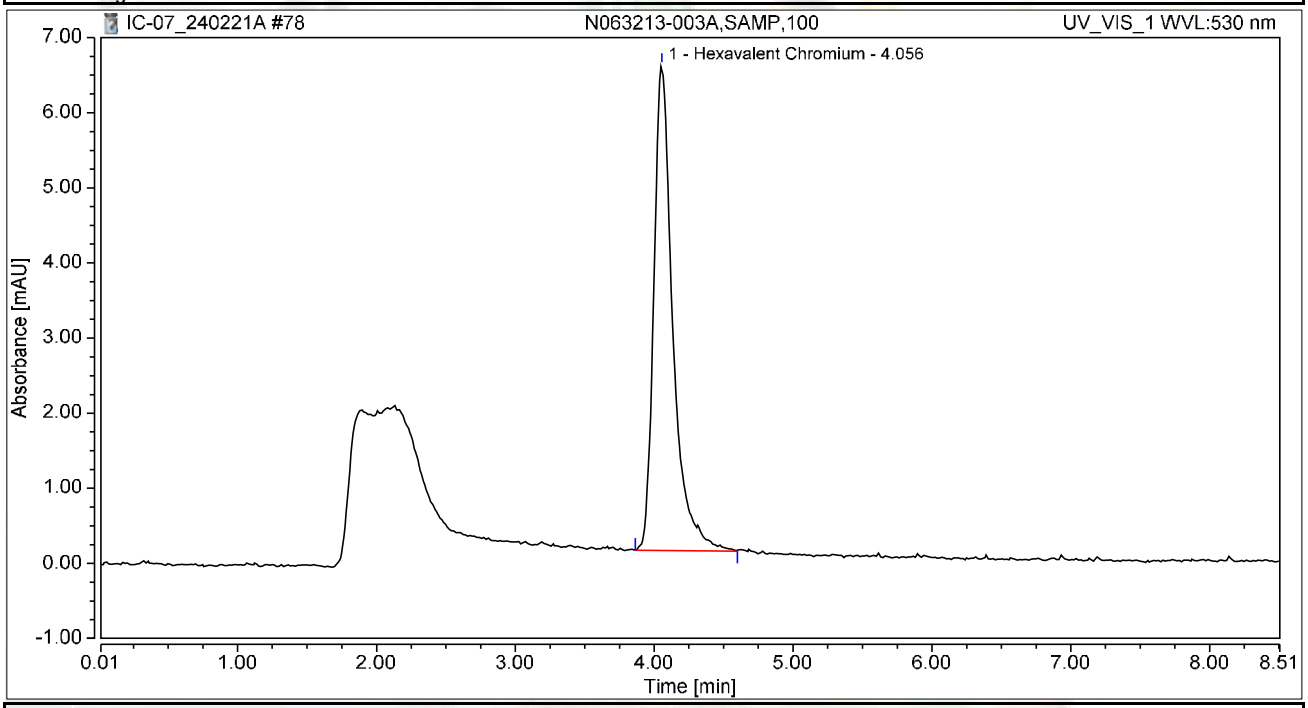
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	2.053	12.963	100.00	100.00	9.5441
Total:			**2.053**	**12.963**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-003A,SAMP,100**	*Run Time (min):*	**8.49**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 21:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

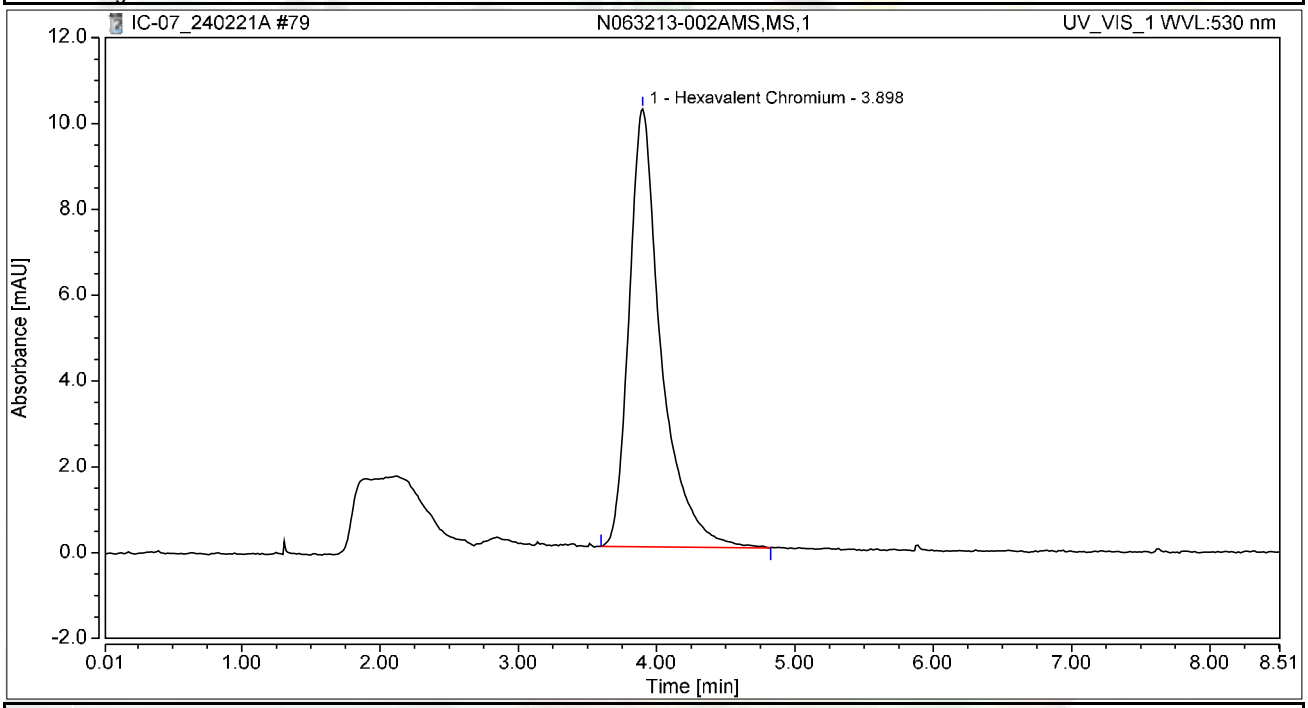
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.023	6.459	100.00	100.00	4.7580
Total:			**1.023**	**6.459**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 21:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

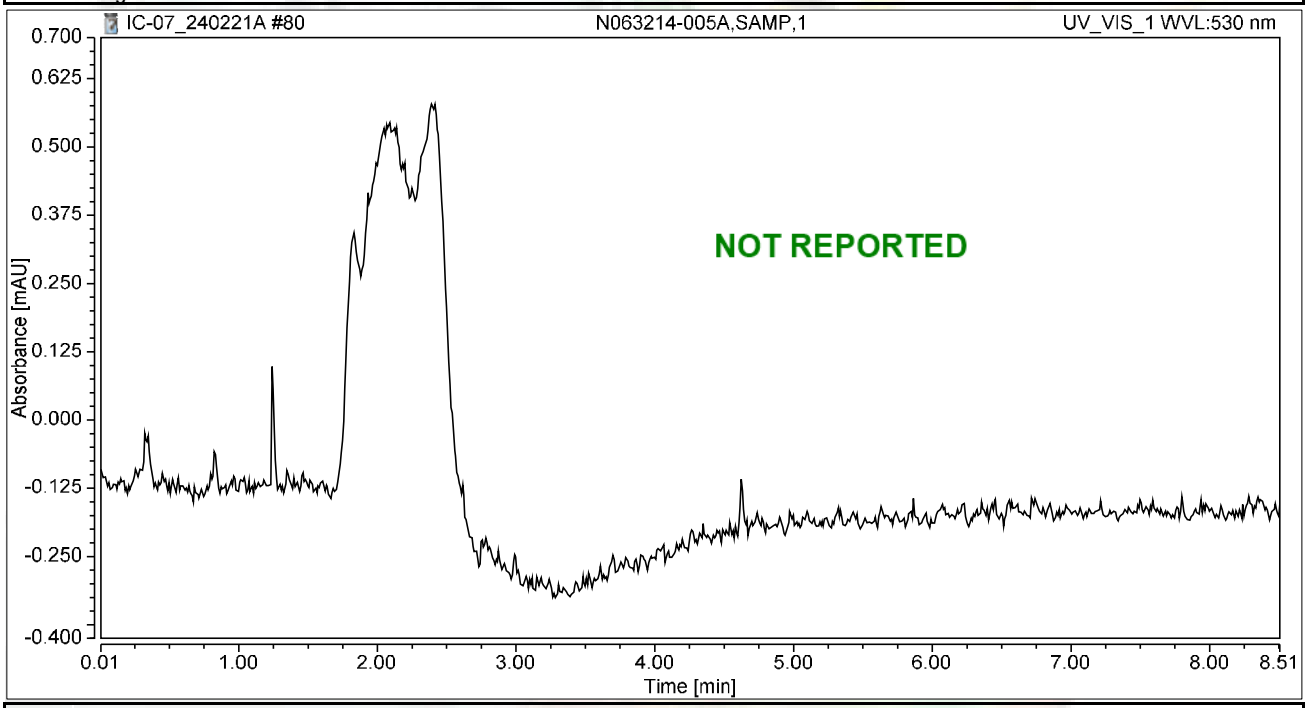
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.898	2.740	10.201	100.00	100.00	12.7372
Total:			**2.740**	**10.201**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 21:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

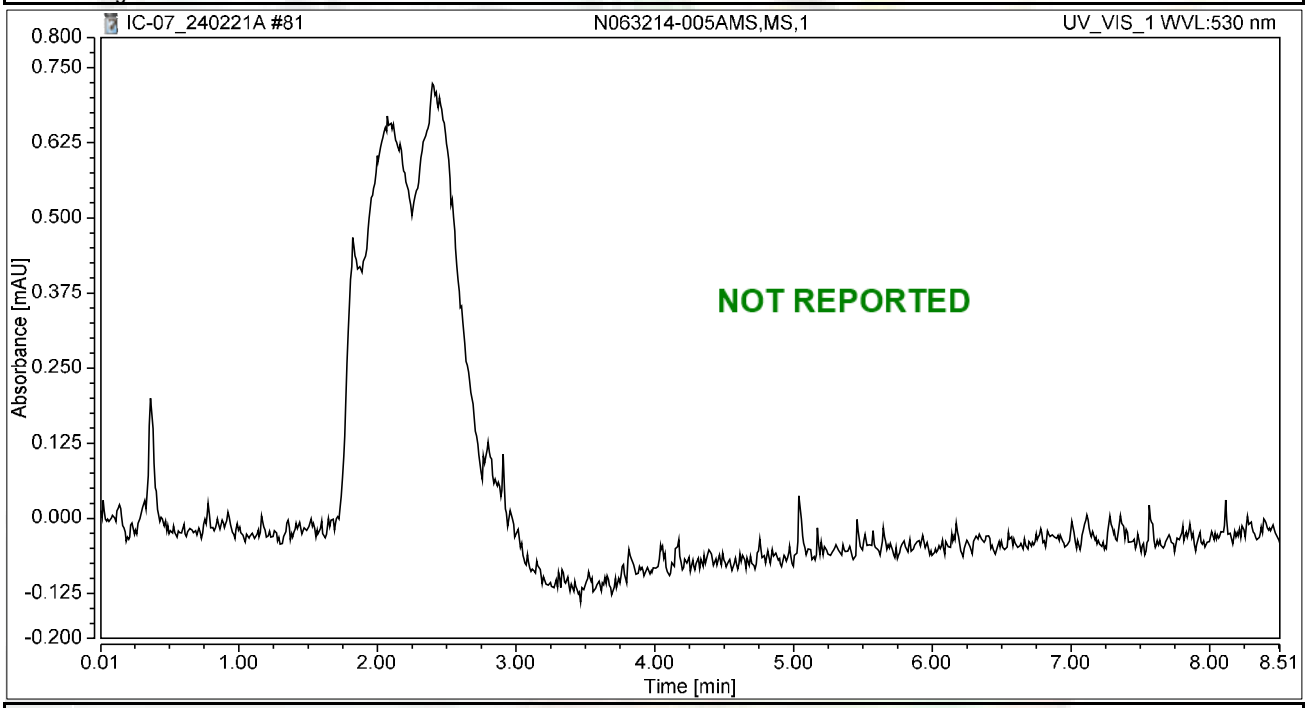
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 21:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

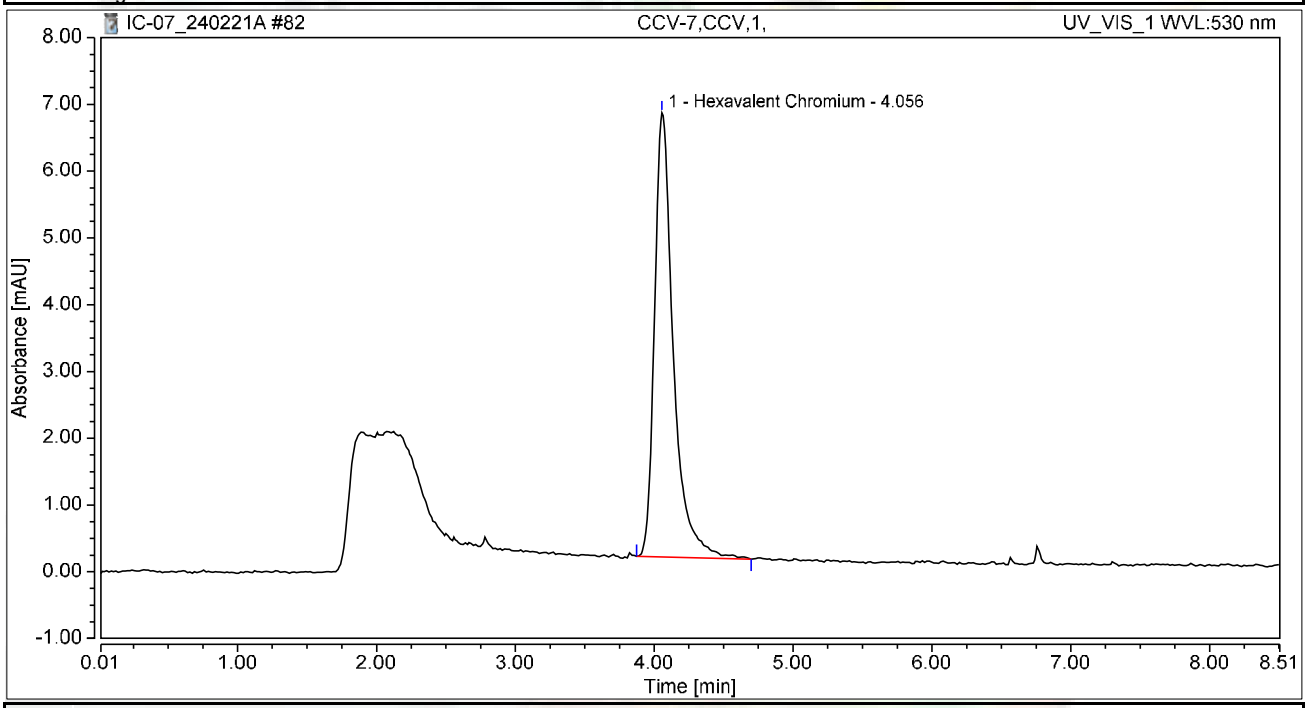
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 21:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

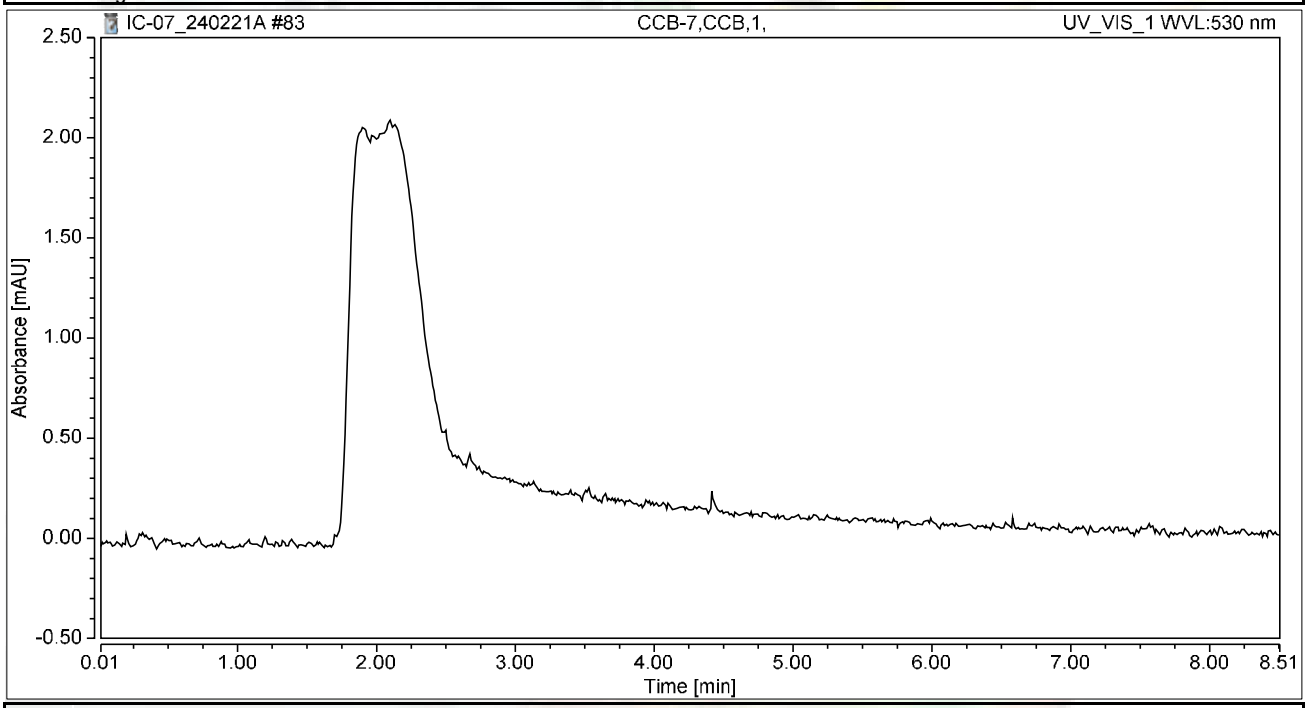
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.045	6.656	100.00	100.00	4.8590
Total:			**1.045**	**6.656**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 21:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

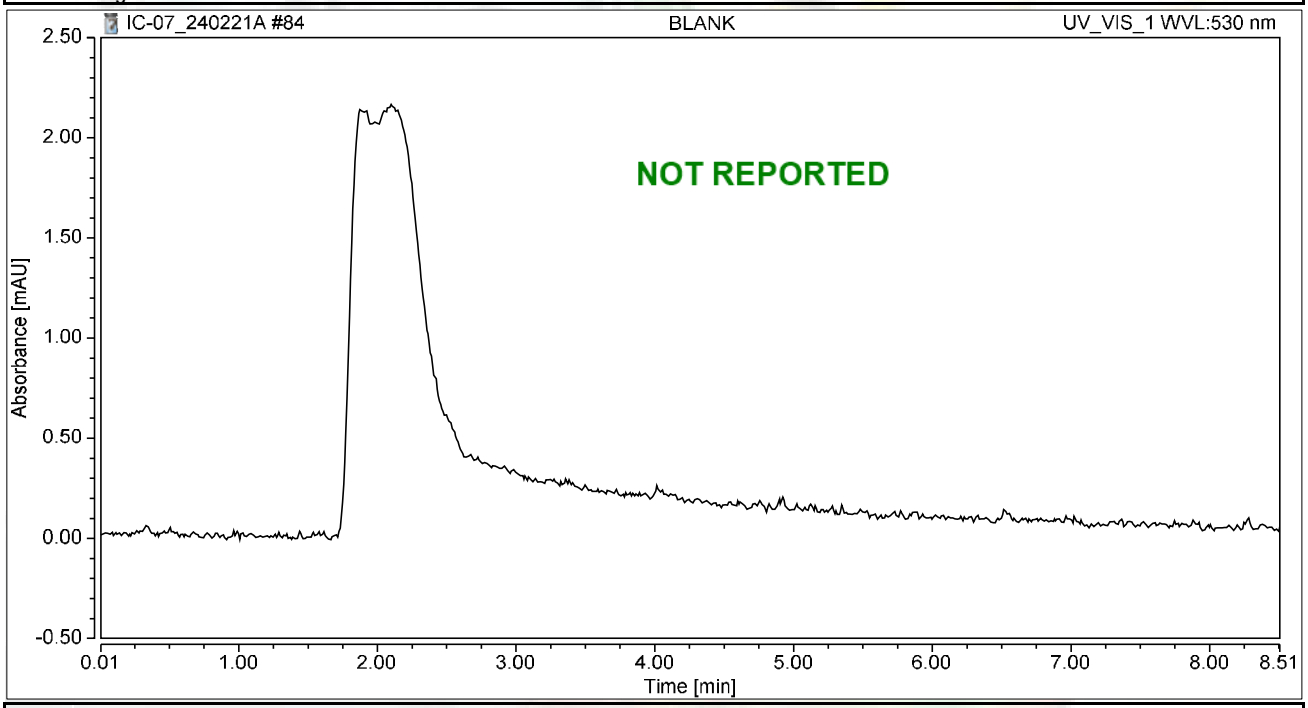
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 21:58**	*Sample Weight:*	**1.0000**

Chromatogram



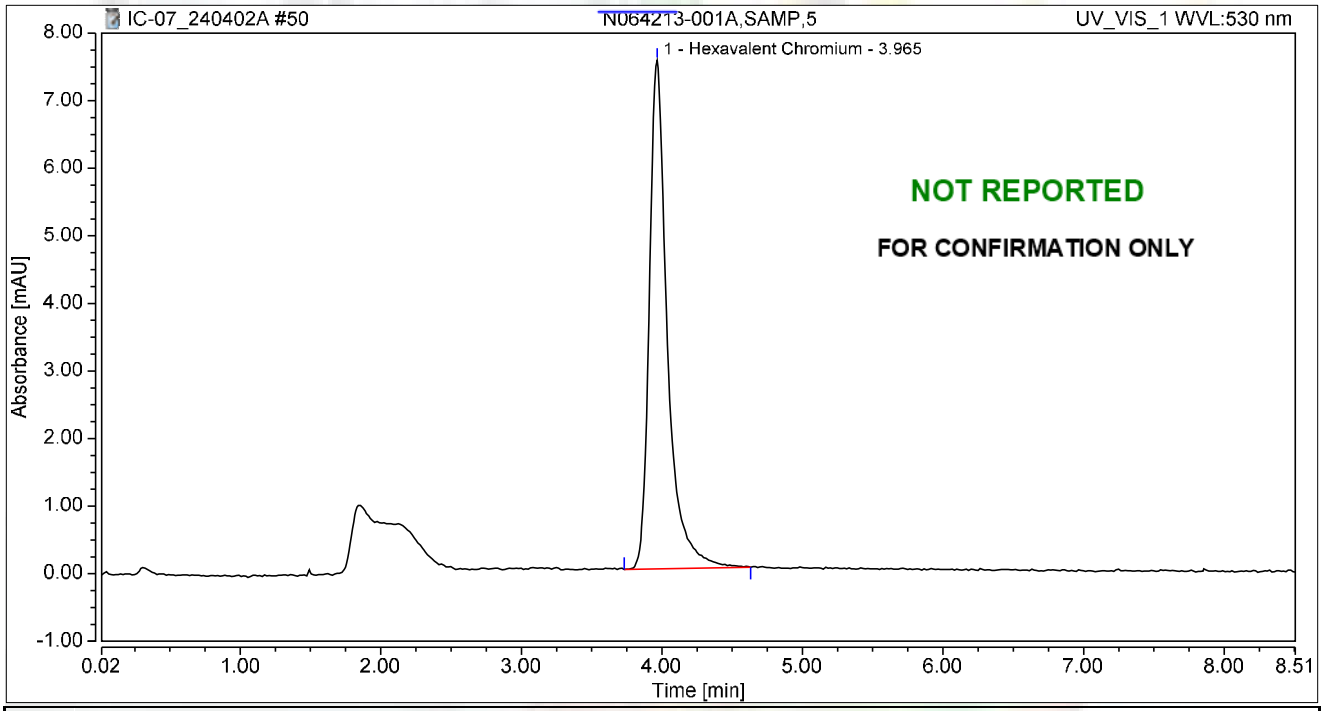
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details	N063213		
Injection Name:	~~N064213~~-001A,SAMP,5	*Run Time (min):*	**8.49**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240401C_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**02/Apr/24 15:30**	*Sample Weight:*	**1.0000**

Chromatogram **N063213**



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	1.126	7.523	100.00	100.00	5.2028
Total:			**1.126**	**7.523**	**100.00**	**100.00**	

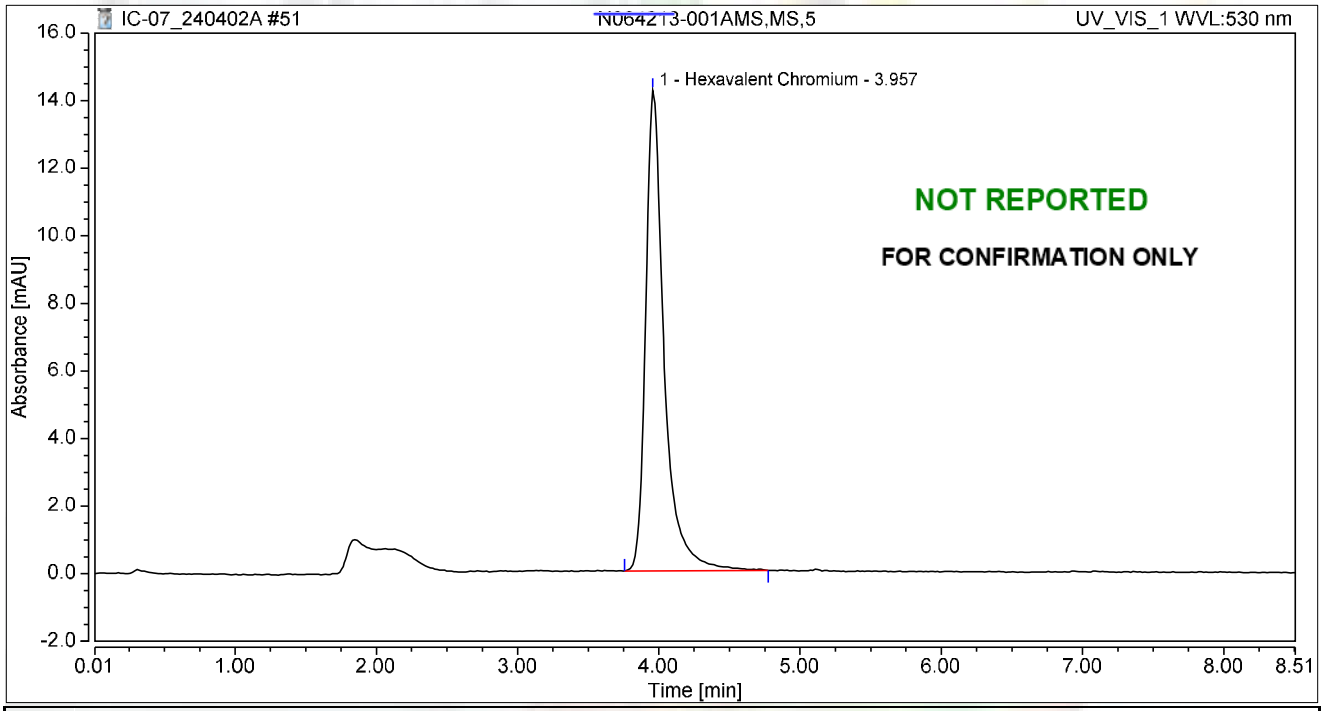
dMocha 4/2/2024

for RBA

Chromatogram and Results

Injection Details	N063213		
Injection Name:	~~N064213~~-001AMS,MS,5	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240401C_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**02/Apr/24 15:39**	*Sample Weight:*	**1.0000**

Chromatogram **N063213**



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.957	2.164	14.219	100.00	100.00	9.9992
Total:			**2.164**	**14.219**	**100.00**	**100.00**	

dMocha 4/2/2024

for RBA

EPA 6020
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106992
ASSET #: N063213

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/22/2024

Method:

[ ] EPA 6010B / 200.7
[X] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.		X			X	
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

Cr is OLR in N063213-003B / 004B / 007B. For rerun.

	Yes	No	N/A
1. All assigned sample(s) analyzed	x		
2. Matrix / units correct	x		
3. Does batch meet QC requirements?	x		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	x		
5. Is first level review correct and complete?	x		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 3/4/2024 Date: _____

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106992
ASSET #: N063213

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/23/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.			X			X
24. LCS compounds within control limits.			X			X
25. MS/MSD, RPD's are within control limits			X			X
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

Cr rerun.

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 3/4/2024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Groundwater

FORMULA:

Calculate the Chromium concentration, in ug/L in the original sample as follows:

Chromium , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063213-001B** , the concentration in ug/L is calculated as follows:

Chromium , ug/L = 37.5428 * 1 *(25 / 25)

Chromium , ug/L = 37.5428

Reporting results in two significant figures,

Chromium , ug/L = 38

Reviewed by:

JRB 4/5/2024

% RSD SUMMARY

PERCENT RSD SUMMARY: 240222A

Instrument ID: ICPMS-03

Sample Name	Type	DF	52 Cr [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.07	31.547	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.47	0.627	15	PASS
Std3-5/50 ppb	ICAL	1	4.74	0.356	15	PASS
Std4-10/100 ppb	ICAL	1	9.88	0.535	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.73	1.193	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.68	0.757	15	PASS
Std7-100/1000 ppb	ICAL	1	100.73	1.369	15	PASS
Std8-200/2000 ppb	ICAL	1	199.74	0.438	15	PASS
ICV	ICV	1	10.33	0.269	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL
LLICV1	CCV1	1	1.03	0.148	20	PASS
MLCCV	CCV	1	19.78	0.827	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.51	1.034	15	PASS
CCV1	CCV	1	20.35	0.795	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL
CCV2	CCV	1	20.33	1.204	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL
CCV3	CCV	1	20.22	0.901	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	21.08	0.778	15	PASS
CCV4	CCV	1	20.3	0.895	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL
CCV5	CCV	1	20.3	2.62	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.83	0.594	15	PASS
CCV6	CCV	1	20.42	0.838	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL
CCV7	CCV	1	20.67	2.559	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL
MDL 4	SAMP	1	1.1	4.729	15	PASS
MDL 4	SAMP	1	1.08	1.721	15	PASS
CCV8	CCV	1	20.81	0.73	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	21.31	1.405	15	PASS
CCV9	CCV	1	20.51	2.015	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240222A

Instrument ID: ICPMS-03

Sample Name	Type	DF	52 Cr [2]			
			Conc. [ppb]	RSD	Criteria	Comment
CCV10	CCV	1	20.16	1.681	15	PASS
CCB10	CCB	1	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	<0.000	N/A	15	<PQL
ICSAB5	ICSAB	1	20.69	1.231	15	PASS
MB-106992	MBLK	1	<0.000	N/A	15	<PQL
LCS-106992	LCS	1	10.43	3.557	15	PASS
N063211-001B	SAMP	1	5.42	1.413	15	PASS
N063211-002B	SAMP	1	5.61	1.77	15	PASS
N063211-003B	SAMP	1	7.96	2.498	15	PASS
N063213-001B	SAMP	1	37.54	0.588	15	PASS
N063213-002B	SAMP	1	8.15	2.559	15	PASS
N063213-003B	SAMP	1	499.37	1.3	15	PASS
N063213-004B	SAMP	1	595.07	0.649	15	PASS
CCV11	CCV	1	20.59	0.699	15	PASS
CCB11	CCB	1	<0.000	N/A	15	<PQL
N063213-005B	SAMP	1	1.76	1.35	15	PASS
N063213-006B	SAMP	1	0.3	4.348	15	PASS
N063213-007B	SAMP	1	1119.48	0.421	15	PASS
N063213-008B	SAMP	1	48.16	0.469	15	PASS
N063213-008B	SAMP	5	10.46	2.232	15	PASS
N063213-008B-PS	PS	1	57.2	0.952	15	PASS
N063213-008BMS	MS	1	57.14	0.572	15	PASS
N063213-008BMSD	MSD	1	57.09	0.879	15	PASS
N063214-010B	SAMP	1	0.17	1.982	15	PASS
CCV12	CCV	1	20.14	1.498	15	PASS
CCB12	CCB	1	<0.000	N/A	15	<PQL
N063214-011B	SAMP	1	0	1781.901	15	<PQL
N063214-012B	SAMP	1	0.04	33.41	15	<PQL
N063214-013B	SAMP	1	0.13	8.146	15	PASS
N063214-014B	SAMP	1	<0.000	N/A	15	<PQL
N063214-016B	SAMP	1	<0.000	N/A	15	<PQL
CCV13	CCV	1	20.35	0.135	15	PASS
CCB13	CCB	1	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	<0.000	N/A	15	<PQL
ICSAB6	ICSAB	1	21.44	0.844	15	PASS
CCV14	CCV	1	20.9	0.769	15	PASS
CCB14	CCB	1	<0.000	N/A	15	<PQL
ICSA7	ICSA	1	<0.000	N/A	15	<PQL
ICSAB7	ICSAB	1	21.93	0.537	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	52 Cr [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	27.827	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.47	5.773	15	PASS
Std3-5/50 ppb	ICAL	1	4.77	0.723	15	PASS
Std4-10/100 ppb	ICAL	1	9.94	1.066	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.89	0.288	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.64	0.082	15	PASS
Std7-100/1000 ppb	ICAL	1	99.08	1.027	15	PASS
Std8-200/2000 ppb	ICAL	1	200.55	1.19	15	PASS
ICV	ICV	1	10.18	2.082	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL
LLICV1	CCV1	1	1.11	4.614	20	PASS
MLCCV	CCV	1	19.98	1.349	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.29	1.068	15	PASS
MDL 4	ICAL	1	1.12	4.927	15	PASS
CCV1	CCV	1	19.78	1.439	15	PASS
CCB1	CCB	1	1	2.109	15	PASS
CCV2	CCV	1	19.95	1.632	15	PASS
CCB2	CCB	1	1.01	4.255	15	PASS
CCV3	CCV	1	19.93	1.068	15	PASS
CCB3	CCB	1	1.03	2.12	15	PASS
CCV4	CCV	1	20.13	0.256	15	PASS
CCB4	CCB	1	1	1.063	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	0.33	4.345	15	PASS
ICSAB2	ICSAB	1	20.46	0.376	15	PASS
CCV5	CCV	1	20.37	1.139	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	0.33	8.05	15	PASS
ICSAB3	ICSAB	1	20.28	1.359	15	PASS
CCV6	CCV	1	19.7	1.202	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL
CCV7	CCV	1	19.64	0.349	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	0.34	1.824	15	PASS
ICSAB4	ICSAB	1	20.09	1.756	15	PASS
MB-106992	MBLK	1	<0.000	N/A	15	<PQL
LCS-106992	LCS	1	10.13	0.413	15	PASS
N063211-001B	SAMP	10	0.52	3.921	15	PASS
N063211-002B	SAMP	10	0.54	5.912	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	52 Cr [2]			
			Conc. [ppb]	RSD	Criteria	Comment
N063211-003B	SAMP	100	0.05	13.916	15	PASS
N063213-001B	SAMP	10	3.65	1.646	15	PASS
N063213-002B	SAMP	10	0.96	2.927	15	PASS
N063213-003B	SAMP	10	48.8	0.82	15	PASS
N063213-004B	SAMP	10	59.42	0.403	15	PASS
N063213-007B	SAMP	10	113.35	1.287	15	PASS
CCV8	CCV	1	20.51	1.021	15	PASS
CCB8	CCB	1	0	1036.098	15	<PQL
N063213-008B	SAMP	1	45.77	0.37	15	PASS
N063213-008B	SAMP	5	9.48	0.549	15	PASS
N063213-008B-PS	PS	1	53.98	0.825	15	PASS
N063213-008BMS	MS	1	53.67	1.744	15	PASS
N063213-008BMSD	MSD	1	53.11	1.661	15	PASS
N063214-010B	SAMP	1	0.21	9.019	15	PASS
N063214-011B	SAMP	1	0.03	41.378	15	<PQL
N063214-011B	SAMP	10	<0.000	N/A	15	<PQL
N063214-012B	SAMP	1	0.07	6.505	15	PASS
N063214-012B	SAMP	10	<0.000	N/A	15	<PQL
CCV9	CCV	1	19.57	0.633	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL
N063214-013B	SAMP	1	0.14	18.196	15	<PQL
N063214-013B	SAMP	10	<0.000	N/A	15	<PQL
N063214-014B	SAMP	1	0.02	23.901	15	<PQL
N063214-016B	SAMP	1	0.02	31.122	15	<PQL
N063214-016B	SAMP	10	<0.000	N/A	15	<PQL
CCV10	CCV	1	19.81	1.03	15	PASS
CCB10	CCB	1	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	0.33	4.609	15	PASS
ICSAB5	ICSAB	1	20.04	0.07	15	PASS
CCV11	CCV	1	19.72	1.941	15	PASS
CCB11	CCB	1	0.01	134.014	15	<PQL
CCV12	CCV	1	19.39	0.576	15	PASS
CCB12	CCB	1	<0.000	N/A	15	<PQL
CCV13	CCV	1	19.49	0.464	15	PASS
CCB13	CCB	1	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	0.33	4.478	15	PASS
ICSAB6	ICSAB	1	20.12	0.449	15	PASS
CCV14	CCV	1	19.61	1.985	15	PASS
CCB14	CCB	1	<0.000	N/A	15	<PQL
CCV15	CCV	1	19.53	1.006	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	52 Cr [2]			
			Conc. [ppb]	RSD	Criteria	Comment
CCV16	CCV	1	19.76	0.985	15	PASS
CCB16	CCB	1	<0.000	N/A	15	<PQL
ICSA7	ICSA	1	0.32	9.091	15	PASS
ICSAB7	ICSAB	1	19.91	0.754	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240222A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0222001.d	RINSE	ICAL	1	02/22/24 2:44 PM
A0222002.d	Cal Blk	IBLK	1	02/22/24 2:49 PM
A0222003.d	Std1-0.1/1 ppb	ICAL	1	02/22/24 2:54 PM
A0222004.d	Std2-0.5/5 ppb	ICAL	1	02/22/24 2:58 PM
A0222005.d	Std3-5/50 ppb	ICAL	1	02/22/24 3:03 PM
A0222006.d	Std4-10/100 ppb	ICAL	1	02/22/24 3:08 PM
A0222007.d	Std5-4.0/20/200 ppb	ICAL	1	02/22/24 3:13 PM
A0222008.d	Std6-8.0/40/400 ppb	ICAL	1	02/22/24 3:17 PM
A0222009.d	Std7-100/1000 ppb	ICAL	1	02/22/24 3:22 PM
A0222010.d	Std8-200/2000 ppb	ICAL	1	02/22/24 3:27 PM
A0222011.d	ICV	ICV	1	02/22/24 3:38 PM
A0222012.d	ICB	ICB	1	02/22/24 3:42 PM
A0222013.d	LLICV1	CCV1	1	02/22/24 3:47 PM
A0222014.d	MLCCV	CCV	1	02/22/24 3:52 PM
A0222015.d	ICSA1	ICSA	1	02/22/24 3:56 PM
A0222016.d	ICSAB1	ICSAB	1	02/22/24 4:01 PM
A0222017.d	MB-107001	MBLK	1	02/22/24 4:08 PM
A0222018.d	LCS-107001	LCS	1	02/22/24 4:12 PM
A0222019.d	N063209-001A	SAMP	1	02/22/24 4:17 PM
A0222020.d	N063209-001A	SAMP	5	02/22/24 4:22 PM
A0222021.d	N063209-001A-PS	PS	1	02/22/24 4:26 PM
A0222022.d	N063209-001A-MS	MS	1	02/22/24 4:31 PM
A0222023.d	N063209-001A-MSD	MSD	1	02/22/24 4:35 PM
A0222024.d	N063210-001A	SAMP	1	02/22/24 4:40 PM
A0222025.d	CCV1	CCV	1	02/22/24 4:45 PM
A0222026.d	CCB1	CCB	1	02/22/24 4:49 PM
A0222027.d	MB-106379	MBLK	1	02/22/24 4:54 PM
A0222028.d	LCS-106379	LCS	1	02/22/24 4:59 PM
A0222029.d	N062498-001A	SAMP	1	02/22/24 5:03 PM
A0222030.d	N062498-001A	SAMP	5	02/22/24 5:10 PM
A0222031.d	N062498-001A	SAMP	25	02/22/24 5:14 PM
A0222032.d	N062640-001A	SAMP	1	02/22/24 5:19 PM
A0222033.d	N062640-001A	SAMP	5	02/22/24 5:24 PM
A0222034.d	N062640-001A-PS	PS	1	02/22/24 5:28 PM
A0222035.d	N062640-001A-MS	MS	1	02/22/24 5:33 PM
A0222036.d	N062640-001A-MSD	MSD	1	02/22/24 5:38 PM
A0222037.d	CCV2	CCV	1	02/22/24 5:42 PM
A0222038.d	CCB2	CCB	1	02/22/24 5:47 PM
A0222039.d	MB-106386	MBLK	1	02/22/24 5:52 PM
A0222040.d	LCS-106386	LCS	1	02/22/24 5:56 PM
A0222041.d	N062498-001A	SAMP	1	02/22/24 6:01 PM
A0222042.d	N062498-001A	SAMP	5	02/22/24 6:05 PM

INJECTION LOG: 240222A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0222043.d	N062498-001A	SAMP	25	02/22/24 6:10 PM
A0222044.d	N062338-001C	SAMP	1	02/22/24 6:15 PM
A0222045.d	N062338-001C	SAMP	5	02/22/24 6:19 PM
A0222046.d	N062338-001C-PS	PS	1	02/22/24 6:24 PM
A0222047.d	N062338-001C-MS	MS	1	02/22/24 6:29 PM
A0222048.d	N062338-001C-MSD	MSD	1	02/22/24 6:33 PM
A0222049.d	CCV3	CCV	1	02/22/24 6:38 PM
A0222050.d	CCB3	CCB	1	02/22/24 6:43 PM
A0222051.d	ICSA2	ICSA	1	02/22/24 6:47 PM
A0222052.d	ICSAB2	ICSAB	1	02/22/24 6:52 PM
A0222053.d	MB-106955	MBLK	1	02/22/24 6:57 PM
A0222054.d	LCS-106955	LCS	1	02/22/24 7:01 PM
A0222055.d	N063150-001A	SAMP	1	02/22/24 7:06 PM
A0222056.d	N063150-002A	SAMP	1	02/22/24 7:11 PM
A0222057.d	N063159-001E	SAMP	1	02/22/24 7:15 PM
A0222058.d	N063159-002E	SAMP	1	02/22/24 7:20 PM
A0222059.d	N063159-003E	SAMP	1	02/22/24 7:25 PM
A0222060.d	N063168-002A	SAMP	1	02/22/24 7:29 PM
A0222061.d	N063168-002A	SAMP	5	02/22/24 7:34 PM
A0222062.d	CCV4	CCV	1	02/22/24 7:39 PM
A0222063.d	CCB4	CCB	1	02/22/24 7:43 PM
A0222064.d	N063168-002A-PS	PS	1	02/22/24 7:48 PM
A0222065.d	N063168-002A-MS	MS	1	02/22/24 7:53 PM
A0222066.d	N063168-002A-MSD	MSD	1	02/22/24 7:57 PM
A0222067.d	N063176-001C	SAMP	1	02/22/24 8:02 PM
A0222068.d	N063168-002A	SAMP	10	02/22/24 8:07 PM
A0222069.d	N063168-002A	SAMP	50	02/22/24 8:11 PM
A0222070.d	N063168-002A-PS	PS	10	02/22/24 8:16 PM
A0222071.d	N063168-002A-MS	MS	10	02/22/24 8:21 PM
A0222072.d	N063168-002A-MSD	MSD	10	02/22/24 8:25 PM
A0222073.d	N063176-001C	SAMP	10	02/22/24 8:30 PM
A0222074.d	CCV5	CCV	1	02/22/24 8:35 PM
A0222075.d	CCB5	CCB	1	02/22/24 8:39 PM
A0222076.d	ICSA3	ICSA	1	02/22/24 8:44 PM
A0222077.d	ICSAB3	ICSAB	1	02/22/24 8:49 PM
A0222078.d	MB-107002	MBLK	1	02/22/24 8:53 PM
A0222079.d	LCS-107002	LCS	1	02/22/24 8:58 PM
A0222080.d	N063186-001C	SAMP	5	02/22/24 9:02 PM
A0222081.d	N063186-001C	SAMP	25	02/22/24 9:07 PM
A0222082.d	N063186-002C	SAMP	5	02/22/24 9:12 PM
A0222083.d	N063186-002C	SAMP	25	02/22/24 9:17 PM
A0222084.d	N063193-001A	SAMP	1	02/22/24 9:21 PM

INJECTION LOG: 240222A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
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A0222086.d	N063193-003A	SAMP	1	02/22/24 9:30 PM
A0222087.d	RINSE	ICAL	1	02/22/24 9:35 PM
A0222088.d	CCV6	CCV	1	02/22/24 9:40 PM
A0222089.d	CCB6	CCB	1	02/22/24 9:45 PM
A0222090.d	N063193-004A	SAMP	1	02/22/24 9:49 PM
A0222091.d	N063193-004A	SAMP	5	02/22/24 9:54 PM
A0222092.d	N063193-004A-PS	PS	1	02/22/24 9:58 PM
A0222093.d	N063193-004A-MS	MS	1	02/22/24 10:03 PM
A0222094.d	N063193-004A-MSD	MSD	1	02/22/24 10:08 PM
A0222095.d	N063195-001A	SAMP	1	02/22/24 10:12 PM
A0222096.d	N063195-002A	SAMP	1	02/22/24 10:17 PM
A0222097.d	N063195-003A	SAMP	1	02/22/24 10:22 PM
A0222098.d	N063195-004A	SAMP	1	02/22/24 10:26 PM
A0222099.d	RINSE	ICAL	1	02/22/24 10:31 PM
A0222100.d	CCV7	CCV	1	02/22/24 10:36 PM
A0222101.d	CCB7	CCB	1	02/22/24 10:40 PM
A0222102.d	N063201-001D	SAMP	1	02/22/24 10:45 PM
A0222103.d	N063201-001D-MS	MS	1	02/22/24 10:50 PM
A0222104.d	RINSE	ICAL	1	02/22/24 10:54 PM
A0222105.d	MDL 4	SAMP	1	02/22/24 10:59 PM
A0222106.d	MDL 4	SAMP	1	02/22/24 11:04 PM
A0222107.d	CCV8	CCV	1	02/22/24 11:08 PM
A0222108.d	CCB8	CCB	1	02/22/24 11:13 PM
A0222109.d	ICSA4	ICSA	1	02/22/24 11:18 PM
A0222110.d	ICSAB4	ICSAB	1	02/22/24 11:22 PM
A0222111.d	MB-106973	MBLK	1	02/22/24 11:27 PM
A0222112.d	LCS-106973	LCS	1	02/22/24 11:32 PM
A0222113.d	N063181-001C	SAMP	1	02/22/24 11:36 PM
A0222114.d	N063181-002C	SAMP	1	02/22/24 11:41 PM
A0222115.d	N063181-003C	SAMP	1	02/22/24 11:46 PM
A0222116.d	N063181-003C	SAMP	5	02/22/24 11:50 PM
A0222117.d	N063181-003C-PS	PS	1	02/22/24 11:55 PM
A0222118.d	N063181-003C-MS	MS	1	02/23/24 12:00 AM
A0222119.d	N063181-003C-MSD	MSD	1	02/23/24 12:04 AM
A0222120.d	RINSE	ICAL	1	02/23/24 12:09 AM
A0222121.d	CCV9	CCV	1	02/23/24 12:14 AM
A0222122.d	CCB9	CCB	1	02/23/24 12:18 AM
A0222123.d	N063182-001B	SAMP	1	02/23/24 12:23 AM
A0222124.d	N063182-003B	SAMP	1	02/23/24 12:28 AM
A0222125.d	N063182-005B	SAMP	1	02/23/24 12:32 AM
A0222126.d	N063182-008B	SAMP	1	02/23/24 12:37 AM

INJECTION LOG: 240222A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
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A0222128.d	N063182-010B	SAMP	1	02/23/24 12:46 AM
A0222129.d	N063182-011B	SAMP	1	02/23/24 12:51 AM
A0222130.d	RINSE	ICAL	1	02/23/24 12:56 AM
A0222131.d	CCV10	CCV	1	02/23/24 1:00 AM
A0222132.d	CCB10	CCB	1	02/23/24 1:05 AM
A0222133.d	ICSA5	ICSA	1	02/23/24 1:10 AM
A0222134.d	ICSAB5	ICSAB	1	02/23/24 1:14 AM
A0222135.d	MB-106992	MBLK	1	02/23/24 1:19 AM
A0222136.d	LCS-106992	LCS	1	02/23/24 1:24 AM
A0222137.d	N063211-001B	SAMP	1	02/23/24 1:28 AM
A0222138.d	N063211-002B	SAMP	1	02/23/24 1:33 AM
A0222139.d	N063211-003B	SAMP	1	02/23/24 1:38 AM
A0222140.d	N063213-001B	SAMP	1	02/23/24 1:42 AM
A0222141.d	N063213-002B	SAMP	1	02/23/24 1:47 AM
A0222142.d	N063213-003B	SAMP	1	02/23/24 1:52 AM
A0222143.d	N063213-004B	SAMP	1	02/23/24 1:56 AM
A0222144.d	RINSE	ICAL	1	02/23/24 2:01 AM
A0222145.d	CCV11	CCV	1	02/23/24 2:06 AM
A0222146.d	CCB11	CCB	1	02/23/24 2:10 AM
A0222147.d	N063213-005B	SAMP	1	02/23/24 2:15 AM
A0222148.d	N063213-006B	SAMP	1	02/23/24 2:19 AM
A0222149.d	N063213-007B	SAMP	1	02/23/24 2:24 AM
A0222150.d	N063213-008B	SAMP	1	02/23/24 2:29 AM
A0222151.d	N063213-008B	SAMP	5	02/23/24 2:34 AM
A0222152.d	N063213-008B-PS	PS	1	02/23/24 2:38 AM
A0222153.d	N063213-008BMS	MS	1	02/23/24 2:43 AM
A0222154.d	N063213-008BMSD	MSD	1	02/23/24 2:48 AM
A0222155.d	N063214-010B	SAMP	1	02/23/24 2:52 AM
A0222156.d	RINSE	ICAL	1	02/23/24 2:57 AM
A0222157.d	CCV12	CCV	1	02/23/24 3:02 AM
A0222158.d	CCB12	CCB	1	02/23/24 3:06 AM
A0222159.d	N063214-011B	SAMP	1	02/23/24 3:11 AM
A0222160.d	N063214-012B	SAMP	1	02/23/24 3:16 AM
A0222161.d	N063214-013B	SAMP	1	02/23/24 3:20 AM
A0222162.d	N063214-014B	SAMP	1	02/23/24 3:25 AM
A0222163.d	N063214-016B	SAMP	1	02/23/24 3:30 AM
A0222164.d	RINSE	ICAL	1	02/23/24 3:34 AM
A0222165.d	CCV13	CCV	1	02/23/24 3:39 AM
A0222166.d	CCB13	CCB	1	02/23/24 3:43 AM
A0222167.d	ICSA6	ICSA	1	02/23/24 3:48 AM
A0222168.d	ICSAB6	ICSAB	1	02/23/24 3:53 AM

INJECTION LOG: 240222A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0222169.d	MB-107025	MBLK	1	02/23/24 3:58 AM
A0222170.d	LCS-107025	LCS	1	02/23/24 4:02 AM
A0222171.d	N063211-001C	SAMP	1	02/23/24 4:07 AM
A0222172.d	N063211-002C	SAMP	1	02/23/24 4:11 AM
A0222173.d	N063211-002C	SAMP	5	02/23/24 4:16 AM
A0222174.d	N063211-002C-PS	PS	1	02/23/24 4:21 AM
A0222175.d	N063211-002C-MS	MS	1	02/23/24 4:25 AM
A0222176.d	N063211-002C-MSD	MSD	1	02/23/24 4:30 AM
A0222177.d	N063211-003C	SAMP	1	02/23/24 4:35 AM
A0222178.d	RINSE	ICAL	1	02/23/24 4:39 AM
A0222179.d	CCV14	CCV	1	02/23/24 4:44 AM
A0222180.d	CCB14	CCB	1	02/23/24 4:49 AM
A0222181.d	ICSA7	ICSA	1	02/23/24 4:53 AM
A0222182.d	ICSAB7	ICSAB	1	02/23/24 4:58 AM
A0222183.d	RINSE	ICAL	1	02/23/24 5:03 AM
A0222184.d	RINSE	ICAL	1	02/23/24 5:07 AM
A0222185.d	RINSE	ICAL	1	02/23/24 5:12 AM
A0222186.d	RINSE	ICAL	1	02/23/24 5:16 AM
A0222187.d	RINSE	ICAL	1	02/23/24 5:21 AM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223001.d	RINSE	ICAL	1	02/23/24 1:22 PM
A0223002.d	Cal Blk	IBLK	1	02/23/24 1:27 PM
A0223003.d	Std1-0.1/1 ppb	ICAL	1	02/23/24 1:32 PM
A0223004.d	Std2-0.5/5 ppb	ICAL	1	02/23/24 1:36 PM
A0223005.d	Std3-5/50 ppb	ICAL	1	02/23/24 1:41 PM
A0223006.d	Std4-10/100 ppb	ICAL	1	02/23/24 1:46 PM
A0223007.d	Std5-4.0/20/200 ppb	ICAL	1	02/23/24 1:51 PM
A0223008.d	Std6-8.0/40/400 ppb	ICAL	1	02/23/24 1:55 PM
A0223009.d	Std7-100/1000 ppb	ICAL	1	02/23/24 2:00 PM
A0223010.d	Std8-200/2000 ppb	ICAL	1	02/23/24 2:05 PM
A0223011.d	ICV	ICV	1	02/23/24 2:24 PM
A0223012.d	ICB	ICB	1	02/23/24 2:29 PM
A0223013.d	LLICV1	LLICV	1	02/23/24 2:34 PM
A0223014.d	MLCCV	CCV	1	02/23/24 2:38 PM
A0223015.d	ICSA1	ICSA	1	02/23/24 2:43 PM
A0223016.d	ICSAB1	ICSAB	1	02/23/24 2:47 PM
A0223017.d	MDL 4	ICAL	1	02/23/24 3:00 PM
A0223018.d	MB-106955	MBLK	1	02/23/24 3:10 PM
A0223019.d	LCS-106955	LCS	1	02/23/24 3:15 PM
A0223020.d	N063150-001A	SAMP	1	02/23/24 3:19 PM
A0223021.d	N063150-002A	SAMP	1	02/23/24 3:24 PM
A0223022.d	N063168-002A	SAMP	1	02/23/24 3:29 PM
A0223023.d	N063168-002A	SAMP	5	02/23/24 3:33 PM
A0223024.d	N063168-002A-PS	PS	1	02/23/24 3:38 PM
A0223025.d	N063168-002A-MS	MS	1	02/23/24 3:43 PM
A0223026.d	N063168-002A-MSD	MSD	1	02/23/24 3:47 PM
A0223027.d	RINSE	ICAL	1	02/23/24 3:52 PM
A0223028.d	CCV1	CCV	1	02/23/24 3:57 PM
A0223029.d	CCB1	CCB	1	02/23/24 4:01 PM
A0223030.d	MB-107065	MBLK	1	02/23/24 4:06 PM
A0223031.d	LCS-107065	LCS	1	02/23/24 4:11 PM
A0223032.d	N063286-001A	SAMP	1	02/23/24 4:15 PM
A0223033.d	N063286-001A	SAMP	5	02/23/24 4:20 PM
A0223034.d	N063286-001A-PS	PS	1	02/23/24 4:25 PM
A0223035.d	N063286-001A-MS	MS	1	02/23/24 4:29 PM
A0223036.d	N063286-001A-MSD	MSD	1	02/23/24 4:34 PM
A0223037.d	N063287-001A	SAMP	1	02/23/24 4:38 PM
A0223038.d	N063287-002A	SAMP	1	02/23/24 4:43 PM
A0223039.d	N063287-003A	SAMP	1	02/23/24 4:48 PM
A0223040.d	CCV2	CCV	1	02/23/24 4:52 PM
A0223041.d	CCB2	CCB	1	02/23/24 4:57 PM
A0223042.d	N063289-001A	SAMP	1	02/23/24 5:02 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223043.d	N063289-002A	SAMP	1	02/23/24 5:06 PM
A0223044.d	N063289-003A	SAMP	1	02/23/24 5:11 PM
A0223045.d	N063289-004A	SAMP	1	02/23/24 5:16 PM
A0223046.d	CCV3	CCV	1	02/23/24 5:20 PM
A0223047.d	CCB3	CCB	1	02/23/24 5:25 PM
A0223048.d	N063193-004A	SAMP	5	02/23/24 5:30 PM
A0223049.d	N063193-004A	SAMP	25	02/23/24 5:34 PM
A0223050.d	N063193-004A-PS	PS	5	02/23/24 5:39 PM
A0223051.d	N063193-004A-MS	MS	5	02/23/24 5:44 PM
A0223052.d	N063193-004A-MSD	MSD	5	02/23/24 5:48 PM
A0223053.d	N063195-002A	SAMP	5	02/23/24 5:53 PM
A0223054.d	N063195-003A	SAMP	5	02/23/24 5:58 PM
A0223055.d	N063195-004A	SAMP	5	02/23/24 6:02 PM
A0223056.d	N063201-001D	SAMP	5	02/23/24 6:07 PM
A0223057.d	N063201-001D-MS	MS	5	02/23/24 6:12 PM
A0223058.d	CCV4	CCV	1	02/23/24 6:16 PM
A0223059.d	CCB4	CCB	1	02/23/24 6:21 PM
A0223060.d	CCB4	CCB	1	02/23/24 6:27 PM
A0223061.d	ICSA2	ICSA	1	02/23/24 6:32 PM
A0223062.d	ICSAB2	ICSAB	1	02/23/24 6:37 PM
A0223063.d	MB-106955	MBLK	1	02/23/24 6:42 PM
A0223064.d	LCS-106955	LCS	1	02/23/24 6:46 PM
A0223065.d	N063150-001A	SAMP	1	02/23/24 6:51 PM
A0223066.d	N063150-002A	SAMP	1	02/23/24 6:55 PM
A0223067.d	N063168-002A	SAMP	1	02/23/24 7:00 PM
A0223068.d	N063168-002A	SAMP	5	02/23/24 7:05 PM
A0223069.d	N063168-002A-PS	PS	1	02/23/24 7:09 PM
A0223070.d	N063168-002A-MS	MS	1	02/23/24 7:14 PM
A0223071.d	N063168-002A-MSD	MSD	1	02/23/24 7:19 PM
A0223072.d	RINSE	ICAL	1	02/23/24 7:23 PM
A0223073.d	CCV5	CCV	1	02/23/24 7:28 PM
A0223074.d	CCB5	CCB	1	02/23/24 7:33 PM
A0223075.d	ICSA3	ICSA	1	02/23/24 7:37 PM
A0223076.d	ICSAB3	ICSAB	1	02/23/24 7:42 PM
A0223077.d	N063181-001C	SAMP	10	02/23/24 7:47 PM
A0223078.d	N063181-002C	SAMP	10	02/23/24 7:51 PM
A0223079.d	N063182-001B	SAMP	1	02/23/24 7:56 PM
A0223080.d	N063182-003B	SAMP	1	02/23/24 8:01 PM
A0223081.d	N063182-003B	SAMP	10	02/23/24 8:05 PM
A0223082.d	N063182-005B	SAMP	1	02/23/24 8:10 PM
A0223083.d	N063182-005B	SAMP	10	02/23/24 8:15 PM
A0223084.d	N063182-008B	SAMP	1	02/23/24 8:19 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223085.d	N063182-009B	SAMP	1	02/23/24 8:24 PM
A0223086.d	N063182-009B	SAMP	10	02/23/24 8:29 PM
A0223087.d	CCV6	CCV	1	02/23/24 8:33 PM
A0223088.d	CCB6	CCB	1	02/23/24 8:38 PM
A0223089.d	N063182-009B	SAMP	1	02/23/24 8:43 PM
A0223090.d	N063182-009B	SAMP	1	02/23/24 8:47 PM
A0223091.d	N063182-009B	SAMP	1	02/23/24 8:52 PM
A0223092.d	N063182-009B	SAMP	1	02/23/24 8:57 PM
A0223093.d	N063182-010B	SAMP	10	02/23/24 9:01 PM
A0223094.d	N063182-011B	SAMP	1	02/23/24 9:06 PM
A0223095.d	N063182-011B	SAMP	100	02/23/24 9:11 PM
A0223096.d	CCV7	CCV	1	02/23/24 9:15 PM
A0223097.d	CCB7	CCB	1	02/23/24 9:20 PM
A0223098.d	ICSA4	ICSA	1	02/23/24 9:24 PM
A0223099.d	ICSAB4	ICSAB	1	02/23/24 9:29 PM
A0223100.d	MB-106992	MBLK	1	02/23/24 9:34 PM
A0223101.d	LCS-106992	LCS	1	02/23/24 9:39 PM
A0223102.d	N063211-001B	SAMP	10	02/23/24 9:43 PM
A0223103.d	N063211-002B	SAMP	10	02/23/24 9:48 PM
A0223104.d	N063211-003B	SAMP	100	02/23/24 9:52 PM
A0223105.d	N063213-001B	SAMP	10	02/23/24 9:57 PM
A0223106.d	N063213-002B	SAMP	10	02/23/24 10:02 PM
A0223107.d	N063213-003B	SAMP	10	02/23/24 10:07 PM
A0223108.d	N063213-004B	SAMP	10	02/23/24 10:11 PM
A0223109.d	N063213-007B	SAMP	10	02/23/24 10:16 PM
A0223110.d	CCV8	CCV	1	02/23/24 10:20 PM
A0223111.d	CCB8	CCB	1	02/23/24 10:25 PM
A0223112.d	N063213-008B	SAMP	1	02/23/24 10:30 PM
A0223113.d	N063213-008B	SAMP	5	02/23/24 10:34 PM
A0223114.d	N063213-008B-PS	PS	1	02/23/24 10:39 PM
A0223115.d	N063213-008BMS	MS	1	02/23/24 10:44 PM
A0223116.d	N063213-008BMSD	MSD	1	02/23/24 10:48 PM
A0223117.d	N063214-010B	SAMP	1	02/23/24 10:53 PM
A0223118.d	N063214-011B	SAMP	1	02/23/24 10:58 PM
A0223119.d	N063214-011B	SAMP	10	02/23/24 11:03 PM
A0223120.d	N063214-012B	SAMP	1	02/23/24 11:07 PM
A0223121.d	N063214-012B	SAMP	10	02/23/24 11:12 PM
A0223122.d	CCV9	CCV	1	02/23/24 11:16 PM
A0223123.d	CCB9	CCB	1	02/23/24 11:21 PM
A0223124.d	N063214-013B	SAMP	1	02/23/24 11:26 PM
A0223125.d	N063214-013B	SAMP	10	02/23/24 11:30 PM
A0223126.d	N063214-014B	SAMP	1	02/23/24 11:35 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
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A0223128.d	N063214-016B	SAMP	10	02/23/24 11:44 PM
A0223129.d	CCV10	CCV	1	02/23/24 11:49 PM
A0223130.d	CCB10	CCB	1	02/23/24 11:54 PM
A0223131.d	ICSA5	ICSA	1	02/23/24 11:58 PM
A0223132.d	ICSAB5	ICSAB	1	02/24/24 12:03 AM
A0223133.d	MB-107021	MBLK	1	02/24/24 12:08 AM
A0223134.d	LCS-107021	LCS	1	02/24/24 12:12 AM
A0223135.d	N062510-015D	SAMP	5	02/24/24 12:17 AM
A0223136.d	N063248-001B	SAMP	1	02/24/24 12:21 AM
A0223137.d	N063248-002B	SAMP	1	02/24/24 12:26 AM
A0223138.d	N063248-002B	SAMP	5	02/24/24 12:31 AM
A0223139.d	N063248-002B-PS	PS	1	02/24/24 12:35 AM
A0223140.d	N063248-002B-MS	MS	1	02/24/24 12:40 AM
A0223141.d	N063248-002B-MSD	MSD	1	02/24/24 12:45 AM
A0223142.d	RINSE	ICAL	1	02/24/24 12:49 AM
A0223143.d	CCV11	CCV	1	02/24/24 12:54 AM
A0223144.d	CCB11	CCB	1	02/24/24 12:59 AM
A0223145.d	N063248-003B	SAMP	1	02/24/24 1:03 AM
A0223146.d	N063248-004B	SAMP	1	02/24/24 1:08 AM
A0223147.d	N063248-005C	SAMP	1	02/24/24 1:13 AM
A0223148.d	N063248-006C	SAMP	1	02/24/24 1:17 AM
A0223149.d	N063248-007C	SAMP	1	02/24/24 1:22 AM
A0223150.d	N063248-008C	SAMP	1	02/24/24 1:27 AM
A0223151.d	N063248-010B	SAMP	1	02/24/24 1:31 AM
A0223152.d	N063248-011B	SAMP	1	02/24/24 1:36 AM
A0223153.d	N063249-007C	SAMP	1	02/24/24 1:41 AM
A0223154.d	RINSE	ICAL	1	02/24/24 1:45 AM
A0223155.d	CCV12	CCV	1	02/24/24 1:50 AM
A0223156.d	CCB12	CCB	1	02/24/24 1:54 AM
A0223157.d	N063249-009C	SAMP	1	02/24/24 1:59 AM
A0223158.d	N063249-011C	SAMP	1	02/24/24 2:04 AM
A0223159.d	N063249-013C	SAMP	1	02/24/24 2:08 AM
A0223160.d	N063249-015C	SAMP	1	02/24/24 2:13 AM
A0223161.d	N063249-017C	SAMP	1	02/24/24 2:18 AM
A0223162.d	N063249-018C	SAMP	5	02/24/24 2:22 AM
A0223163.d	RINSE	ICAL	1	02/24/24 2:27 AM
A0223164.d	CCV13	CCV	1	02/24/24 2:32 AM
A0223165.d	CCB13	CCB	1	02/24/24 2:36 AM
A0223166.d	ICSA6	ICSA	1	02/24/24 2:41 AM
A0223167.d	ICSAB6	ICSAB	1	02/24/24 2:46 AM
A0223168.d	MB-107055	MBLK	1	02/24/24 2:50 AM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223169.d	LCS-107055	LCS	1	02/24/24 2:55 AM
A0223170.d	N063295-001B	SAMP	1	02/24/24 2:59 AM
A0223171.d	N063295-002B	SAMP	1	02/24/24 3:04 AM
A0223172.d	N063295-002B	SAMP	5	02/24/24 3:09 AM
A0223173.d	N063295-002B-PS	PS	1	02/24/24 3:13 AM
A0223174.d	N063295-002B-MS	MS	1	02/24/24 3:18 AM
A0223175.d	N063295-002B-MSD	MSD	1	02/24/24 3:23 AM
A0223176.d	N063295-003B	SAMP	1	02/24/24 3:27 AM
A0223177.d	RINSE	ICAL	1	02/24/24 3:32 AM
A0223178.d	CCV14	CCV	1	02/24/24 3:37 AM
A0223179.d	CCB14	CCB	1	02/24/24 3:41 AM
A0223180.d	N063295-005C	SAMP	1	02/24/24 3:46 AM
A0223181.d	N063295-006C	SAMP	1	02/24/24 3:51 AM
A0223182.d	N063295-007C	SAMP	1	02/24/24 3:55 AM
A0223183.d	N063295-008C	SAMP	1	02/24/24 4:00 AM
A0223184.d	N063297-001C	SAMP	1	02/24/24 4:05 AM
A0223185.d	N063297-002B	SAMP	1	02/24/24 4:09 AM
A0223186.d	N063297-003B	SAMP	1	02/24/24 4:14 AM
A0223187.d	N063303-001B	SAMP	1	02/24/24 4:19 AM
A0223188.d	N063303-002B	SAMP	1	02/24/24 4:23 AM
A0223189.d	RINSE	ICAL	1	02/24/24 4:28 AM
A0223190.d	CCV15	CCV	1	02/24/24 4:32 AM
A0223191.d	CCB15	CCB	1	02/24/24 4:37 AM
A0223192.d	N063303-006B	SAMP	5	02/24/24 4:42 AM
A0223193.d	N063303-008B	SAMP	1	02/24/24 4:46 AM
A0223194.d	RINSE	ICAL	1	02/24/24 4:51 AM
A0223195.d	CCV16	CCV	1	02/24/24 4:56 AM
A0223196.d	CCB16	CCB	1	02/24/24 5:00 AM
A0223197.d	ICSA7	ICSA	1	02/24/24 5:05 AM
A0223198.d	ICSAB7	ICSAB	1	02/24/24 5:10 AM
A0223199.d	RINSE	ICAL	1	02/24/24 5:14 AM
A0223200.d	RINSE	ICAL	1	02/24/24 5:19 AM
A0223201.d	RINSE	ICAL	1	02/24/24 5:24 AM
A0223202.d	RINSE	ICAL	1	02/24/24 5:28 AM
A0223203.d	RINSE	ICAL	1	02/24/24 5:33 AM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/21/2024 9:43:52 AM**
Prep End Date: **2/21/2024 2:00:00 PM**
Prep Batch **106992** Prep Code: **3010_W_MSDISS_TPK**

Reviewed/ Date: JRB 4/5/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-01-36**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-106992	Aqueous		25	☐	25	1.000		
MB-106992	Aqueous		25	☐	25	1.000		
N063211-001B	Water	<2	25	☐	25	1.000		
N063211-002B	Water	<2	25	☐	25	1.000		
N063211-003B	Water	<2	25	☐	25	1.000		
N063213-001B	Groundwater	<2	25	☐	25	1.000		
N063213-002B	Groundwater	<2	25	☐	25	1.000		
N063213-003B	Groundwater	<2	25	☐	25	1.000		
N063213-004B	Groundwater	<2	25	☐	25	1.000		
N063213-005B	Groundwater	<2	25	☐	25	1.000		
N063213-006B	Groundwater	<2	25	☐	25	1.000		
N063213-007B	Groundwater	<2	25	☐	25	1.000		
N063213-008B	Groundwater	<2	25	☐	25	1.000		
N063213-008BMS	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/21/2024 9:43:52 AM**
Prep End Date: **2/21/2024 2:00:00 PM**
Prep Batch **106992** Prep Code:**3010_W_MSDISS_TPK**

Reviewed/ Date: JRB 4/5/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-01-36**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063213-008BMSD	Groundwater	<2	25	☐	25	1.000		
N063214-010B	Groundwater	<2	25	☐	25	1.000		
N063214-011B	Groundwater	<2	25	☐	25	1.000		
N063214-012B	Groundwater	<2	25	☐	25	1.000		
N063214-013B	Groundwater	<2	25	☐	25	1.000		
N063214-014B	Groundwater	<2	25	☐	25	1.000		
N063214-016B	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240220B.b
Acq. Date-Time	2024-02-22 14:40:58
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

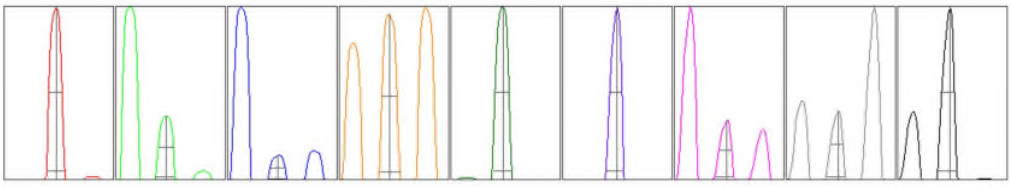
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	5797	57970.91	500.00		1.837	5.000
24	10.00	20008	200084.58	500.00		1.551	5.000
25	10.00	2690	26903.17	500.00		2.940	5.000
26	10.00	3224	32235.80	500.00		2.456	5.000
59	10.00	34982	349824.87	500.00		1.685	5.000
115	10.00	51771	517705.22	500.00		1.604	5.000
206	10.00	10774	107742.12	500.00		1.803	5.000
207	10.00	8750	87496.62	500.00		2.152	5.000
208	10.00	21810	218104.32	500.00		1.494	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.595 %
Doubly Charged	70 / 140 0.876 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	5887.71	8.95	8.90 - 9.10	
24	20875.06	23.90	23.90 - 24.10	
25	2804.39	24.90	24.90 - 25.10	
26	3404.50	25.90	25.90 - 26.10	
59	35717.22	58.95	58.90 - 59.10	
115	51068.43	115.00	114.90 - 115.10	
206	10694.68	205.95	205.90 - 206.10	
207	9252.81	206.95	206.90 - 207.10	
208	23538.10	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.487	0.900	
24	0.42	0.535	0.900	
25	0.41	0.497	0.900	
26	0.42	0.573	0.900	
59	0.39	0.533	0.900	
115	0.35	0.483	0.900	
206	0.36	0.518	0.900	
207	0.35	0.534	0.900	
208	0.35	0.533	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.8 mm	Torch V	1.2 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[H2]

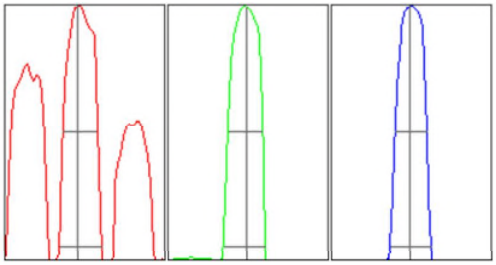
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		370	3704.00			5.824	
59		4948	49482.87			2.603	
115		50299	502985.56			1.913	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.542 %
Doubly Charged	70 / 140 0.383 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	396.56	25.90	25.90 - 26.10	
59	5134.08	59.00	58.90 - 59.10	
115	51662.22	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.66	0.789	0.900	
59	0.67	0.787	0.900	
115	0.60	0.774	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0002	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.00		

Hardware Settings

Torch

Torch H	1.8 mm	Torch V	1.2 mm		

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[He]

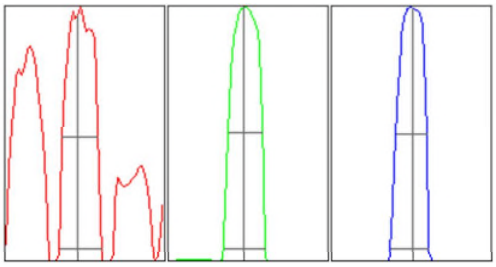
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		129	1287.25			10.276	
59		9841	98411.69			1.883	
115		12860	128599.34			2.017	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.296 %
Doubly Charged	70 / 140 1.072 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	129.76	25.90	25.90 - 26.10	
59	9879.12	58.95	58.90 - 59.10	
115	12880.79	115.05	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.68	0.790	0.900	
59	0.66	0.786	0.900	
115	0.59	0.732	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0002	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.00		

Hardware Settings

Torch

Torch H	1.8 mm	Torch V	1.2 mm

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240222A.b
Acq. Date-Time	2024-02-23 11:44:28
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

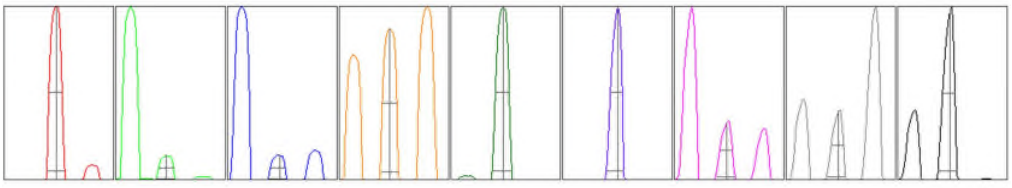
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	4742	47419.90	500.00		3.024	5.000
24	10.00	18706	187057.96	500.00		2.427	5.000
25	10.00	2512	25118.25	500.00		2.587	5.000
26	10.00	3009	30093.30	500.00		2.566	5.000
59	10.00	34030	340296.87	500.00		1.929	5.000
115	10.00	56615	566148.24	500.00		1.847	5.000
206	10.00	12089	120890.72	500.00		2.171	5.000
207	10.00	10015	100148.90	500.00		2.219	5.000
208	10.00	24886	248855.97	500.00		1.967	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.609 %
Doubly Charged	70 / 140 1.407 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	4705.05	8.95	8.90 - 9.10	
24	18796.46	23.90	23.90 - 24.10	
25	2564.26	24.95	24.90 - 25.10	
26	3120.45	25.90	25.90 - 26.10	
59	33894.52	58.95	58.90 - 59.10	
115	56031.92	115.05	114.90 - 115.10	
206	10962.65	205.95	205.90 - 206.10	
207	9673.39	206.95	206.90 - 207.10	
208	24384.42	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.486	0.900	
24	0.41	0.502	0.900	
25	0.41	0.494	0.900	
26	0.41	0.494	0.900	
59	0.38	0.531	0.900	
115	0.34	0.476	0.900	
206	0.36	0.533	0.900	
207	0.35	0.509	0.900	
208	0.35	0.525	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[H2]

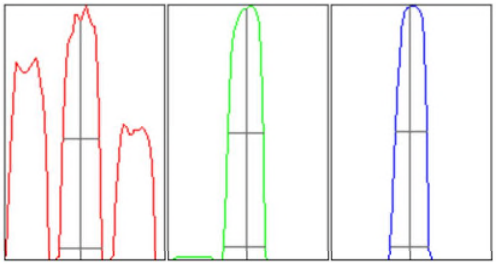
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		356	3555.77			5.984	
59		3819	38194.02			3.844	
115		59590	595903.12			2.349	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.610 %
Doubly Charged	70 / 140 0.333 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	353.80	25.95	25.90 - 26.10	
59	3912.74	59.00	58.90 - 59.10	
115	60486.49	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.70	0.791	0.900	
59	0.67	0.783	0.900	
115	0.60	0.733	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0000	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm		

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[He]

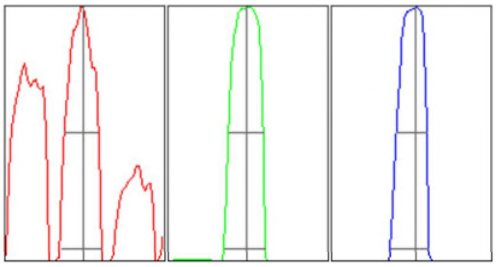
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		138	1375.06			6.914	
59		12115	121151.14			1.919	
115		13480	134797.78			1.974	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.279 %
Doubly Charged	70 / 140 0.982 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	147.01	26.00	25.90 - 26.10	
59	12098.31	59.00	58.90 - 59.10	
115	13611.92	115.10	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.65	0.789	0.900	
59	0.66	0.782	0.900	
115	0.58	0.730	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0000	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240222A

Instrument ID: ICPMS-03

Analyte	Data File	A0222002.d	A0222003.d	A0222004.d	A0222005.d	A0222006.d	A0222007.d	A0222008.d	A0222009.d	A0222010.d	
	Acq. Date-Time	02/22/2024 02:49 PM	02/22/2024 02:54 PM	02/22/2024 02:58 PM	02/22/2024 03:03 PM	02/22/2024 03:08 PM	02/22/2024 03:13 PM	02/22/2024 03:17 PM	02/22/2024 03:22 PM	02/22/2024 03:27 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	74317.7	75064.3	74221.7	75413.6	74741.7	74468.3	75790.9	74043.2	75166	
52 Cr [2]	CPS	845.6	1168.9	2876.9	21626.3	43765.2	86191	175586	434100.8	873068.5	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION SUMMARY: 240223A

Instrument ID: ICPMS-03

Analyte	Data File	A0223002.d	A0223004.d	A0223005.d	A0223006.d	A0223007.d	A0223008.d	A0223009.d	A0223010.d	
	Acq. Date-Time	02/23/2024 01:27 PM	02/23/2024 01:36 PM	02/23/2024 01:41 PM	02/23/2024 01:46 PM	02/23/2024 01:51 PM	02/23/2024 01:55 PM	02/23/2024 02:00 PM	02/23/2024 02:05 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	72154.9	76342.4	77253.2	77475.2	76063.3	75148	75462.7	76036.5	
52 Cr [2]	CPS	495.6	2850.3	24523.7	50602.4	98925.7	194285.6	486787.3	992400.4	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICV**	SampType: **ICV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **ICV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708612**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.331	1.0	10.00	0	103	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **ZZZZZZ**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708614**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	1.035	1.0	1.000	0	103	80	120				

Sample ID **MLCCV**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708615**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.785	1.0	20.00	0	98.9	90	110				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708626**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.348	1.0	20.00	0	102	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708638**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.328	1.0	20.00	0	102	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708650**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.219	1.0	20.00	0	101	90	110				

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708663**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.295	1.0	20.00	0	101	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708675**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.303	1.0	20.00	0	102	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708688**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.422	1.0	20.00	0	102	90	110				

Sample ID **CCV7**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708699**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.671	1.0	20.00	0	103	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	CCV8	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	CCV	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/22/2024	SeqNo:	5708705

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.809	1.0	20.00	0	104	90	110				

Sample ID	CCV9	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	CCV	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5708718

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.512	1.0	20.00	0	103	90	110				

Sample ID	CCV10	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	CCV	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5708727

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.159	1.0	20.00	0	101	90	110				

Sample ID	CCV11	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	CCV	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5708740

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.586	1.0	20.00	0	103	90	110				

Sample ID	CCV12	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	CCV	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5708751

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.137	1.0	20.00	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCV13**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708758**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.352	1.0	20.00	0	102	90	110				

Sample ID **CCV14**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCV**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5708771**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.896	1.0	20.00	0	104	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICV	SampType:	ICV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICV	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713210

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.178	1.0	10.00	0	102	90	110				

Sample ID	LLICV1	SampType:	CCV1	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ZZZZZZ	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713212

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	1.112	1.0	1.000	0	111	80	120				

Sample ID	MLCCV	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCV	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713213

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.983	1.0	20.00	0	99.9	90	110				

Sample ID	CCV1	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCV	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713226

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.779	1.0	20.00	0	98.9	90	110				

Sample ID	CCV2	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCV	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713238

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.949	1.0	20.00	0	99.7	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713244**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.932	1.0	20.00	0	99.7	90	110				

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713256**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.130	1.0	20.00	0	101	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713270**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.370	1.0	20.00	0	102	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713284**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.695	1.0	20.00	0	98.5	90	110				

Sample ID **CCV7**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713293**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.635	1.0	20.00	0	98.2	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	CCV8	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCV	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713307

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.506	1.0	20.00	0	103	90	110				

Sample ID	CCV9	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCV	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713319

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.572	1.0	20.00	0	97.9	90	110				

Sample ID	CCV10	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCV	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713326

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.808	1.0	20.00	0	99.0	90	110				

Sample ID	CCV11	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCV	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713339

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.717	1.0	20.00	0	98.6	90	110				

Sample ID	CCV12	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCV	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713350

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.393	1.0	20.00	0	97.0	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCV13**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713358**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.492	1.0	20.00	0	97.5	90	110				

Sample ID **CCV14**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713371**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.610	1.0	20.00	0	98.0	90	110				

Sample ID **CCV15**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713382**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.525	1.0	20.00	0	97.6	90	110				

Sample ID **CCV16**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713386**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.757	1.0	20.00	0	98.8	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICB**	SampType: **ICB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **ICB**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708613**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCB**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708627**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCB**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708639**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCB**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708651**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182848**
Client ID: **CCB**	Batch ID: **R182848**	TestNo: **EPA 6020**		Analysis Date: **2/22/2024**	SeqNo: **5708664**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	CCB5	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	CCB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/22/2024	SeqNo:	5708676

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB6	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	CCB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/22/2024	SeqNo:	5708689

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB7	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	CCB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/22/2024	SeqNo:	5708700

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB8	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	CCB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/22/2024	SeqNo:	5708706

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB9	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	CCB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5708719

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	CCB10	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	CCB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5708728

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB11	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	CCB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5708741

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB12	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	CCB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5708752

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB13	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	CCB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5708759

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB14	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	CCB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5708772

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICB	SampType:	ICB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713211

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB1	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713227

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.996	1.0									

Sample ID	CCB2	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713239

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	1.008	1.0									

Sample ID	CCB3	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713245

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	1.026	1.0									

Sample ID	CCB4	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713258

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Detect of Chromium in CCB1 to CCB3 is > RL. However, samples were enclosed by CCV7/CCB7 onwards.

JRB 4/5/2024

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713271**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713285**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB7**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713294**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB8**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713308**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB9**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713320**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCB10**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713327**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB11**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713340**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB12**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713351**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB13**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713359**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB14**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713372**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCB15**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713383**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB16**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713387**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182848**
Client ID: **ICSA** Batch ID: **R182848** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708616**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182848**
Client ID: **ICSAB** Batch ID: **R182848** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708617**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.508	1.0	20.00	0	103	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182848**
Client ID: **ICSA** Batch ID: **R182848** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708652**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182848**
Client ID: **ICSAB** Batch ID: **R182848** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708653**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	21.082	1.0	20.00	0	105	80	120				

Sample ID **ICSA3** SampType: **ICSA** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182848**
Client ID: **ICSA** Batch ID: **R182848** TestNo: **EPA 6020** Analysis Date: **2/22/2024** SeqNo: **5708677**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICSAB3	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	ICSAB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/22/2024	SeqNo:	5708678

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.831	1.0	20.00	0	104	80	120				

Sample ID	ICSA4	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	ICSA	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/22/2024	SeqNo:	5708707

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	ICSAB4	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	ICSAB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/22/2024	SeqNo:	5708708

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	21.312	1.0	20.00	0	107	80	120				

Sample ID	ICSA5	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	ICSA	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5708729

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	ICSAB5	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	ICSAB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5708730

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.689	1.0	20.00	0	103	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICSA6	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	ICSA	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5708760

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	ICSAB6	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	ICSAB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5708761

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	21.439	1.0	20.00	0	107	80	120				

Sample ID	ICSA7	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	ICSA	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5708773

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	ICSAB7	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182848
Client ID:	ICSAB	Batch ID:	R182848	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5708774

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	21.926	1.0	20.00	0	110	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICSA1	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSA	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713214

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	ICSAB1	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSAB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713215

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.286	1.0	20.00	0	101	80	120				

Sample ID	ICSA2	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSA	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713259

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.332	1.0									

Sample ID	ICSAB2	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSAB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713260

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.461	1.0	20.00	0	102	80	120				

Sample ID	ICSA3	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSA	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713272

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.331	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSAB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713273**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.279	1.0	20.00	0	101	80	120				

Sample ID **ICSA4**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSA**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713295**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.336	1.0									

Sample ID **ICSAB4**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSAB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713296**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.088	1.0	20.00	0	100	80	120				

Sample ID **ICSA5**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSA**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713328**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.328	1.0									

Sample ID **ICSAB5**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSAB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713329**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.040	1.0	20.00	0	100	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICSA6	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSA	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713360

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.328	1.0									

Sample ID	ICSAB6	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSAB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713361

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.121	1.0	20.00	0	101	80	120				

Sample ID	ICSA7	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSA	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713388

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.319	1.0									

Sample ID	ICSAB7	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSAB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713389

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.910	1.0	20.00	0	99.6	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240222A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	74317.7	74317.7	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	75064.3	74317.7	101	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	74221.7	74317.7	99.87	PASS	30-150
Std3-5/50 ppb	ICAL	1	75413.6	74317.7	101.47	PASS	30-150
Std4-10/100 ppb	ICAL	1	74741.7	74317.7	100.57	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	74468.3	74317.7	100.2	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	75790.9	74317.7	101.98	PASS	30-150
Std7-100/1000 ppb	ICAL	1	74043.2	74317.7	99.63	PASS	30-150
Std8-200/2000 ppb	ICAL	1	75166	74317.7	101.14	PASS	30-150
ICV	ICV	1	73191.7	74317.7	98.48	PASS	30-150
ICB	ICB	1	74494	74317.7	100.24	PASS	30-150
LLICV1	CCV1	1	73806.5	74317.7	99.31	PASS	30-150
MLCCV	CCV	1	75228.3	74317.7	101.23	PASS	30-150
ICSA1	ICSA	1	75910.2	74317.7	102.14	PASS	30-150
ICSAB1	ICSAB	1	75644.8	74317.7	101.79	PASS	30-150
CCV1	CCV	1	81339.2	74317.7	109.45	PASS	30-150
CCB1	CCB	1	81399.4	74317.7	109.53	PASS	30-150
CCV2	CCV	1	80086.4	74317.7	107.76	PASS	30-150
CCB2	CCB	1	77497.5	74317.7	104.28	PASS	30-150
CCV3	CCV	1	80189.1	74317.7	107.9	PASS	30-150
CCB3	CCB	1	78822.5	74317.7	106.06	PASS	30-150
ICSA2	ICSA	1	78291.2	74317.7	105.35	PASS	30-150
ICSAB2	ICSAB	1	77019.6	74317.7	103.64	PASS	30-150
CCV4	CCV	1	83110.9	74317.7	111.83	PASS	30-150
CCB4	CCB	1	78888.4	74317.7	106.15	PASS	30-150
CCV5	CCV	1	86294.9	74317.7	116.12	PASS	30-150
CCB5	CCB	1	85276.3	74317.7	114.75	PASS	30-150
ICSA3	ICSA	1	86919.1	74317.7	116.96	PASS	30-150
ICSAB3	ICSAB	1	86928	74317.7	116.97	PASS	30-150
CCV6	CCV	1	88192.4	74317.7	118.67	PASS	30-150
CCB6	CCB	1	86735.7	74317.7	116.71	PASS	30-150
CCV7	CCV	1	89607.7	74317.7	120.57	PASS	30-150
CCB7	CCB	1	87781.4	74317.7	118.12	PASS	30-150
MDL 4	SAMP	1	88317.4	74317.7	118.84	PASS	30-150
MDL 4	SAMP	1	87974.6	74317.7	118.38	PASS	30-150
CCV8	CCV	1	89339.5	74317.7	120.21	PASS	30-150
CCB8	CCB	1	88513.9	74317.7	119.1	PASS	30-150
ICSA4	ICSA	1	90406.2	74317.7	121.65	PASS	30-150
ICSAB4	ICSAB	1	88829	74317.7	119.53	PASS	30-150
CCV9	CCV	1	98459.2	74317.7	132.48	PASS	30-150
CCB9	CCB	1	95740.2	74317.7	128.83	PASS	30-150

INTERNAL STANDARD: 240222A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
CCV10	CCV	1	109565.5	74317.7	147.43	PASS	30-150
CCB10	CCB	1	106474.6	74317.7	143.27	PASS	30-150
ICSA5	ICSA	1	107287.6	74317.7	144.36	PASS	30-150
ICSAB5	ICSAB	1	106178.3	74317.7	142.87	PASS	30-150
MB-106992	MBLK	1	102193.8	74317.7	137.51	PASS	30-150
LCS-106992	LCS	1	101429.4	74317.7	136.48	PASS	30-150
N063211-001B	SAMP	1	91636.2	74317.7	123.3	PASS	30-150
N063211-002B	SAMP	1	92563.8	74317.7	124.55	PASS	30-150
N063211-003B	SAMP	1	91729.3	74317.7	123.43	PASS	30-150
N063213-001B	SAMP	1	100026.3	74317.7	134.59	PASS	30-150
N063213-002B	SAMP	1	91233	74317.7	122.76	PASS	30-150
N063213-003B	SAMP	1	90187.6	74317.7	121.35	PASS	30-150
N063213-004B	SAMP	1	94107.9	74317.7	126.63	PASS	30-150
CCV11	CCV	1	104200.2	74317.7	140.21	PASS	30-150
CCB11	CCB	1	101766.8	74317.7	136.93	PASS	30-150
N063213-005B	SAMP	1	91119.3	74317.7	122.61	PASS	30-150
N063213-006B	SAMP	1	87591.6	74317.7	117.86	PASS	30-150
N063213-007B	SAMP	1	88694.1	74317.7	119.34	PASS	30-150
N063213-008B	SAMP	1	86549.5	74317.7	116.46	PASS	30-150
N063213-008B	SAMP	5	97545	74317.7	131.25	PASS	30-150
N063213-008B-PS	PS	1	86563	74317.7	116.48	PASS	30-150
N063213-008BMS	MS	1	87087	74317.7	117.18	PASS	30-150
N063213-008BMSD	MSD	1	86811.9	74317.7	116.81	PASS	30-150
N063214-010B	SAMP	1	101866.3	74317.7	137.07	PASS	30-150
CCV12	CCV	1	107518.2	74317.7	144.67	PASS	30-150
CCB12	CCB	1	103006.5	74317.7	138.6	PASS	30-150
N063214-011B	SAMP	1	88498.7	74317.7	119.08	PASS	30-150
N063214-012B	SAMP	1	86824.4	74317.7	116.83	PASS	30-150
N063214-013B	SAMP	1	86911.4	74317.7	116.95	PASS	30-150
N063214-014B	SAMP	1	97838.9	74317.7	131.65	PASS	30-150
N063214-016B	SAMP	1	89592.4	74317.7	120.55	PASS	30-150
CCV13	CCV	1	102310.2	74317.7	137.67	PASS	30-150
CCB13	CCB	1	99342.2	74317.7	133.67	PASS	30-150
ICSA6	ICSA	1	99544.9	74317.7	133.95	PASS	30-150
ICSAB6	ICSAB	1	98392.3	74317.7	132.39	PASS	30-150
CCV14	CCV	1	96374.2	74317.7	129.68	PASS	30-150
CCB14	CCB	1	92763.6	74317.7	124.82	PASS	30-150
ICSA7	ICSA	1	93513.4	74317.7	125.83	PASS	30-150
ICSAB7	ICSAB	1	91482.2	74317.7	123.1	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	72154.9	72154.9	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	75819.9	72154.9	105.08	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	76342.4	72154.9	105.8	PASS	30-150
Std3-5/50 ppb	ICAL	1	77253.2	72154.9	107.07	PASS	30-150
Std4-10/100 ppb	ICAL	1	77475.2	72154.9	107.37	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	76063.3	72154.9	105.42	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	75148	72154.9	104.15	PASS	30-150
Std7-100/1000 ppb	ICAL	1	75462.7	72154.9	104.58	PASS	30-150
Std8-200/2000 ppb	ICAL	1	76036.5	72154.9	105.38	PASS	30-150
ICV	ICV	1	72025.6	72154.9	99.82	PASS	30-150
ICB	ICB	1	74886.9	72154.9	103.79	PASS	30-150
LLICV1	CCV1	1	75342.3	72154.9	104.42	PASS	30-150
MLCCV	CCV	1	76073.3	72154.9	105.43	PASS	30-150
ICSA1	ICSA	1	76901.4	72154.9	106.58	PASS	30-150
ICSAB1	ICSAB	1	73937.1	72154.9	102.47	PASS	30-150
MDL 4	ICAL	1	76134.7	72154.9	105.52	PASS	30-150
CCV1	CCV	1	78633	72154.9	108.98	PASS	30-150
CCB1	CCB	1	75792	72154.9	105.04	PASS	30-150
CCV2	CCV	1	77108	72154.9	106.86	PASS	30-150
CCB2	CCB	1	75349	72154.9	104.43	PASS	30-150
CCV3	CCV	1	77729.8	72154.9	107.73	PASS	30-150
CCB3	CCB	1	76196.1	72154.9	105.6	PASS	30-150
CCV4	CCV	1	77725.3	72154.9	107.72	PASS	30-150
CCB4	CCB	1	74891.4	72154.9	103.79	PASS	30-150
CCB4	CCB	1	76863.5	72154.9	106.53	PASS	30-150
ICSA2	ICSA	1	78266.7	72154.9	108.47	PASS	30-150
ICSAB2	ICSAB	1	78381.7	72154.9	108.63	PASS	30-150
CCV5	CCV	1	79154.2	72154.9	109.7	PASS	30-150
CCB5	CCB	1	77605.8	72154.9	107.55	PASS	30-150
ICSA3	ICSA	1	80012.9	72154.9	110.89	PASS	30-150
ICSAB3	ICSAB	1	80477.2	72154.9	111.53	PASS	30-150
CCV6	CCV	1	90893.6	72154.9	125.97	PASS	30-150
CCB6	CCB	1	86061.5	72154.9	119.27	PASS	30-150
CCV7	CCV	1	95356	72154.9	132.15	PASS	30-150
CCB7	CCB	1	92681.1	72154.9	128.45	PASS	30-150
ICSA4	ICSA	1	92615	72154.9	128.36	PASS	30-150
ICSAB4	ICSAB	1	91494.6	72154.9	126.8	PASS	30-150
MB-106992	MBLK	1	88992.3	72154.9	123.34	PASS	30-150
LCS-106992	LCS	1	88836	72154.9	123.12	PASS	30-150
N063211-001B	SAMP	10	84678.8	72154.9	117.36	PASS	30-150
N063211-002B	SAMP	10	83995.4	72154.9	116.41	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
N063211-003B	SAMP	100	83955.3	72154.9	116.35	PASS	30-150
N063213-001B	SAMP	10	82623.1	72154.9	114.51	PASS	30-150
N063213-002B	SAMP	10	81991	72154.9	113.63	PASS	30-150
N063213-003B	SAMP	10	81573.6	72154.9	113.05	PASS	30-150
N063213-004B	SAMP	10	81657.2	72154.9	113.17	PASS	30-150
N063213-007B	SAMP	10	81788.2	72154.9	113.35	PASS	30-150
CCV8	CCV	1	83057.4	72154.9	115.11	PASS	30-150
CCB8	CCB	1	81017.5	72154.9	112.28	PASS	30-150
N063213-008B	SAMP	1	76428.4	72154.9	105.92	PASS	30-150
N063213-008B	SAMP	5	85786.5	72154.9	118.89	PASS	30-150
N063213-008B-PS	PS	1	76289.8	72154.9	105.73	PASS	30-150
N063213-008BMS	MS	1	77344.7	72154.9	107.19	PASS	30-150
N063213-008BMSD	MSD	1	78037.9	72154.9	108.15	PASS	30-150
N063214-010B	SAMP	1	91614.2	72154.9	126.97	PASS	30-150
N063214-011B	SAMP	1	82348.5	72154.9	114.13	PASS	30-150
N063214-011B	SAMP	10	92612.7	72154.9	128.35	PASS	30-150
N063214-012B	SAMP	1	79637.7	72154.9	110.37	PASS	30-150
N063214-012B	SAMP	10	90907.9	72154.9	125.99	PASS	30-150
CCV9	CCV	1	95607.4	72154.9	132.5	PASS	30-150
CCB9	CCB	1	91740.5	72154.9	127.14	PASS	30-150
N063214-013B	SAMP	1	76657.3	72154.9	106.24	PASS	30-150
N063214-013B	SAMP	10	90302.6	72154.9	125.15	PASS	30-150
N063214-014B	SAMP	1	86302.8	72154.9	119.61	PASS	30-150
N063214-016B	SAMP	1	80097.7	72154.9	111.01	PASS	30-150
N063214-016B	SAMP	10	88046.1	72154.9	122.02	PASS	30-150
CCV10	CCV	1	91776.3	72154.9	127.19	PASS	30-150
CCB10	CCB	1	87906.6	72154.9	121.83	PASS	30-150
ICSA5	ICSA	1	88163.5	72154.9	122.19	PASS	30-150
ICSAB5	ICSAB	1	88326.5	72154.9	122.41	PASS	30-150
CCV11	CCV	1	91685.6	72154.9	127.07	PASS	30-150
CCB11	CCB	1	88643.6	72154.9	122.85	PASS	30-150
CCV12	CCV	1	95484.6	72154.9	132.33	PASS	30-150
CCB12	CCB	1	92386	72154.9	128.04	PASS	30-150
CCV13	CCV	1	92046.4	72154.9	127.57	PASS	30-150
CCB13	CCB	1	89338.5	72154.9	123.81	PASS	30-150
ICSA6	ICSA	1	90478.1	72154.9	125.39	PASS	30-150
ICSAB6	ICSAB	1	89529.4	72154.9	124.08	PASS	30-150
CCV14	CCV	1	89028.2	72154.9	123.38	PASS	30-150
CCB14	CCB	1	86002.1	72154.9	119.19	PASS	30-150
CCV15	CCV	1	91992.8	72154.9	127.49	PASS	30-150
CCB15	CCB	1	89487.3	72154.9	124.02	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
CCV16	CCV	1	88543.2	72154.9	122.71	PASS	30-150
CCB16	CCB	1	86282.5	72154.9	119.58	PASS	30-150
ICSA7	ICSA	1	87350.2	72154.9	121.06	PASS	30-150
ICSAB7	ICSAB	1	87996.9	72154.9	121.96	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.: N063213
Test Method: EPA 6020
Analysis Date: 2/22/2024

Matrix: Groundwater
Batch No.: 106992

Instrument ID: ICPMS-03
Instrument Description: Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063213-008B DT 5x	Chromium	Cr	µg/L	52.28454	PASS	48.15819	8.57%	10

Reviewed by:

JRB 4/5/2024

Note: NA - Not Applicable

03/07/24 21:33

DT_EPA 6020_N063213_106992

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063213
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **N063213-008B-PS** SampType: **PS** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182848**
Client ID: **ZZZZZZ** Batch ID: **106992** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708747**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	57.203	1.0	10.00	48.16	90.4	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

ARCADIS

Project: PG&E Topock - PCM

Project No.: 30211191

ASSET Laboratories Work Order:

N063214

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063214

Item	Page
Cover Page	1-6
Analytical Result/QC Summary Reports	7-67
Sample Receiving Items	68-76
List of Analysts	77
Raw Data	
EPA 218.6	78-573
EPA 300.0	574-592
EPA 6010B_Dissolved	593-620
EPA 6020_Dissolved	621-679

March 06, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063214

RE: PG&E Topock - PCM, 30211191

Attention: Dan Bush

Enclosed are the results for sample(s) received on February 20, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063214

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 218.6:

Dilution was necessary for some samples due to matrix interference. Samples were analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Samples were reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Analytical Comments for EPA 300:

Dilution was necessary due to precipitation of sample upon addition of eluent.

Analytical Comments for EPA 6010B:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Iron in QC sample N063214-011B-MS and N063214-011B-MSD possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

ASSET Laboratories

Date: *06-Mar-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063214
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063214-001A	MW-49-135-Q124	Groundwater	2/20/2024 11:18:00 AM	2/20/2024	3/6/2024
N063214-002A	MW-49-135-EB-Q124	Groundwater	2/20/2024 10:50:00 AM	2/20/2024	3/6/2024
N063214-003A	MW-49-275-Q124	Groundwater	2/20/2024 10:44:00 AM	2/20/2024	3/6/2024
N063214-004A	MW-49-275-EB-Q124	Groundwater	2/20/2024 9:55:00 AM	2/20/2024	3/6/2024
N063214-005A	MW-49-365-Q124	Groundwater	2/20/2024 9:42:00 AM	2/20/2024	3/6/2024
N063214-006A	MW-49-365-EB-Q124	Groundwater	2/20/2024 9:00:00 AM	2/20/2024	3/6/2024
N063214-007A	MW-29-Q124	Groundwater	2/20/2024 12:08:00 AM	2/20/2024	3/6/2024
N063214-008A	MW-29-EB-Q124	Groundwater	2/20/2024 11:40:00 AM	2/20/2024	3/6/2024
N063214-009A	EB-730-Q124	Groundwater	2/20/2024 2:00:00 PM	2/20/2024	3/6/2024
N063214-010A	MW-86-030-Q124	Groundwater	2/20/2024 9:36:00 AM	2/20/2024	3/6/2024
N063214-010B	MW-86-030-Q124	Groundwater	2/20/2024 9:36:00 AM	2/20/2024	3/6/2024
N063214-010C	MW-86-030-Q124	Groundwater	2/20/2024 9:36:00 AM	2/20/2024	3/6/2024
N063214-011A	MW-86-066-Q124	Groundwater	2/20/2024 9:07:00 AM	2/20/2024	3/6/2024
N063214-011B	MW-86-066-Q124	Groundwater	2/20/2024 9:07:00 AM	2/20/2024	3/6/2024
N063214-011C	MW-86-066-Q124	Groundwater	2/20/2024 9:07:00 AM	2/20/2024	3/6/2024
N063214-012A	MW-86-120-Q124	Groundwater	2/20/2024 10:03:00 AM	2/20/2024	3/6/2024
N063214-012B	MW-86-120-Q124	Groundwater	2/20/2024 10:03:00 AM	2/20/2024	3/6/2024
N063214-012C	MW-86-120-Q124	Groundwater	2/20/2024 10:03:00 AM	2/20/2024	3/6/2024
N063214-013A	MW-86-140-Q124	Groundwater	2/20/2024 10:51:00 AM	2/20/2024	3/6/2024
N063214-013B	MW-86-140-Q124	Groundwater	2/20/2024 10:51:00 AM	2/20/2024	3/6/2024
N063214-013C	MW-86-140-Q124	Groundwater	2/20/2024 10:51:00 AM	2/20/2024	3/6/2024
N063214-014A	MW-28-025-Q124	Groundwater	2/20/2024 12:45:00 PM	2/20/2024	3/6/2024
N063214-014B	MW-28-025-Q124	Groundwater	2/20/2024 12:45:00 PM	2/20/2024	3/6/2024
N063214-014C	MW-28-025-Q124	Groundwater	2/20/2024 12:45:00 PM	2/20/2024	3/6/2024
N063214-015A	MW-28-025-EB-Q124	Groundwater	2/20/2024 12:20:00 PM	2/20/2024	3/6/2024
N063214-016A	MW-28-090-Q124	Groundwater	2/20/2024 1:15:00 PM	2/20/2024	3/6/2024
N063214-016B	MW-28-090-Q124	Groundwater	2/20/2024 1:15:00 PM	2/20/2024	3/6/2024
N063214-016C	MW-28-090-Q124	Groundwater	2/20/2024 1:15:00 PM	2/20/2024	3/6/2024
N063214-017A	MW-28-090-EB-Q124	Groundwater	2/20/2024 12:54:00 PM	2/20/2024	3/6/2024

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063214
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063214-018A	EB-732-Q124	Groundwater	2/20/2024 2:30:00 PM	2/20/2024	3/6/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-49-135-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 11:18:00 AM
Lab ID:	N063214-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240221A**	QC Batch: **R182773**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/21/2024 07:18 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-49-135-EB-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 10:50:00 AM
Lab ID:	N063214-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240221A**	QC Batch: **R182773**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/21/2024 05:43 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-49-275-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 10:44:00 AM
Lab ID:	N063214-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240221A**	QC Batch: **R182773**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/21/2024 07:37 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-49-275-EB-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 9:55:00 AM
Lab ID:	N063214-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240221A**	QC Batch: **R182773**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/21/2024 06:21 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-49-365-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 9:42:00 AM
Lab ID:	N063214-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240229A**	QC Batch: **R183037**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/29/2024 12:05 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-49-365-EB-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 9:00:00 AM
Lab ID:	N063214-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240221A**	QC Batch: **R182773**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/21/2024 06:40 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-29-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 12:08:00 AM
Lab ID:	N063214-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240226A**	QC Batch: **R182953**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/26/2024 01:34 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-29-EB-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 11:40:00 AM
Lab ID:	N063214-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240222A**	QC Batch: **R182897**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/22/2024 10:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-730-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 2:00:00 PM
Lab ID:	N063214-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240222A**	QC Batch: **R182897**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/22/2024 12:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-86-030-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 9:36:00 AM
Lab ID:	N063214-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240222A**	QC Batch: **R182897**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/22/2024 09:38 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-86-066-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 9:07:00 AM
Lab ID:	N063214-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240222A**	QC Batch: **R182897**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/22/2024 11:13 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-86-120-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 10:03:00 AM
Lab ID:	N063214-012	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240222A**	QC Batch: **R182897**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/22/2024 02:53 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-86-140-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 10:51:00 AM
Lab ID:	N063214-013	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240222A**	QC Batch: **R182897**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/22/2024 03:12 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-28-025-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 12:45:00 PM
Lab ID:	N063214-014	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240222A**	QC Batch: **R182897**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/22/2024 09:57 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-28-025-EB-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 12:20:00 PM
Lab ID:	N063214-015	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240222A**	QC Batch: **R182897**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/22/2024 12:29 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-28-090-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 1:15:00 PM
Lab ID:	N063214-016	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240222A**	QC Batch: **R182897**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/22/2024 10:16 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-28-090-EB-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 12:54:00 PM
Lab ID:	N063214-017	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240223A**	QC Batch: **R182899**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/23/2024 03:13 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-732-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 2:30:00 PM
Lab ID:	N063214-018	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240222A**	QC Batch: **R182897**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/22/2024 02:14 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R182773**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **PBW**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704448**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R182773**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **LCSW**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704449**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.000	0.20	5.000	0	100	90	110				

Sample ID: **N063211-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704454**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.417	0.20	1.000	0.3980	102	90	110				

Sample ID: **N063211-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704455**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.452	0.20	1.000	0.4578	99.5	90	110				

Sample ID: **N063211-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704456**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.248	0.20	1.000	0.3007	94.7	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063213-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182773**
Client ID: **ZZZZZZ** Batch ID: **R182773** TestNo: **EPA 218.6** Analysis Date: **2/21/2024** SeqNo: **5704457**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	95.417	2.0	50.00	47.41	96.0	90	110				

Sample ID: **N063213-008AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182773**
Client ID: **ZZZZZZ** Batch ID: **R182773** TestNo: **EPA 218.6** Analysis Date: **2/21/2024** SeqNo: **5704460**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	95.860	2.0	50.00	47.41	96.9	90	110	95.42	0.463	20	

Sample ID: **N063211-001ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182773**
Client ID: **ZZZZZZ** Batch ID: **R182773** TestNo: **EPA 218.6** Analysis Date: **2/21/2024** SeqNo: **5704465**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.392	0.20						0.3980	1.65	20	

Sample ID: **N063213-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182773**
Client ID: **ZZZZZZ** Batch ID: **R182773** TestNo: **EPA 218.6** Analysis Date: **2/21/2024** SeqNo: **5704468**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.581	0.20	1.000	1.646	93.4	90	110				

Sample ID: **N063213-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182773**
Client ID: **ZZZZZZ** Batch ID: **R182773** TestNo: **EPA 218.6** Analysis Date: **2/21/2024** SeqNo: **5704469**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1070.640	20	500.0	575.3	99.1	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063213-007AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704470**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2121.240	40	1000	1126	99.6	90	110				

Sample ID: **N063213-006AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704472**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.883	1.0	5.000	0	97.7	90	110				

Sample ID: **N063213-009AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704474**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.047	0.20	1.000	0	105	90	110				

Sample ID: **N062911-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704477**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.424	1.0	5.000	0.6365	95.8	90	110				

Sample ID: **N063214-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704480**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.945	0.20	1.000	0	94.5	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063214-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704484**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.992	0.20	1.000	0	99.2	90	110				

Sample ID: **N063214-006AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704486**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.995	0.20	1.000	0	99.5	90	110				

Sample ID: **N063214-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704490**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.895	1.0	5.000	0	97.9	90	110				

Sample ID: **N063214-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704492**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.639	1.0	5.000	0	92.8	90	110				

Sample ID: **N063213-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704497**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	51.472	1.0	25.00	26.91	98.2	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063213-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704499**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	954.410	20	500.0	475.8	95.7	90	110				

Sample ID: **N063213-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704501**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	12.737	0.20	5.000	8.107	92.6	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R182897**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **PBW**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711903**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R182897**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **LCSW**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711904**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.967	0.20	5.000	0	99.3	90	110				

Sample ID: **N063214-010AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711906**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.061	0.20	1.000	0.08110	97.9	90	110				

Sample ID: **N063214-014AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711908**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.988	0.20	1.000	0	98.8	90	110				

Sample ID: **N063214-016AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711910**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.957	0.20	1.000	0	95.7	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063214-014AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711911**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.975	0.20	1.000	0	97.5	90	110	0.9884	1.34	20	

Sample ID: **N063214-010ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711912**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.090	0.20						0.08110	0	20	

Sample ID: **N063214-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711916**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.927	0.20	1.000	0	92.7	90	110				

Sample ID: **N063214-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711918**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.046	0.20	1.000	0	105	90	110				

Sample ID: **N063214-015AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711920**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.977	0.20	1.000	0	97.7	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063214-018AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711924**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.969	0.20	1.000	0	96.9	90	110				

Sample ID: **N063214-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711928**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.829	1.0	5.000	0	96.6	90	110				

Sample ID: **N063214-013AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711930**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.685	1.0	5.000	0.7440	98.8	90	110				

Sample ID: **N063249-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711936**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.971	0.20	1.000	0	97.1	90	110				

Sample ID: **N063249-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711938**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.996	0.20	1.000	0	99.6	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063249-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711940**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.956	0.20	1.000	0	95.6	90	110				

Sample ID: **N063249-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711942**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.974	0.20	1.000	0	97.4	90	110				

Sample ID: **N063249-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711946**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.425	1.0	5.000	0.4640	99.2	90	110				

Sample ID: **N063249-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711948**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.454	1.0	5.000	0.2780	104	90	110				

Sample ID: **N063249-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711950**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	15.142	1.0	5.000	10.63	90.2	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063249-005AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711952**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.978	1.0	5.000	4.815	103	90	110				

Sample ID: **N063249-007AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711954**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.691	1.0	5.000	0	93.8	90	110				

Sample ID: **N063249-009AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711958**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.930	1.0	5.000	0	98.6	90	110				

Sample ID: **N063214-008AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711960**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.010	0.20	1.000	0	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R182899**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **PBW**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711969**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R182899**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **LCSW**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711970**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.884	0.20	5.000	0	97.7	90	110				

Sample ID: **N063248-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711973**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1285.610	20	500.0	781.4	101	90	110				

Sample ID: **N063248-003AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711974**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1292.340	20	500.0	781.4	102	90	110	1286	0.522	20	

Sample ID: **N063248-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711977**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.945	0.20	1.000	0	94.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063248-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711979**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	673.460	10	250.0	426.5	98.8	90	110				

Sample ID: **N063248-010AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711983**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	41.218	1.0	25.00	16.86	97.4	90	110				

Sample ID: **N063248-009AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711985**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.126	0.20	1.000	0.2206	90.5	90	110				

Sample ID: **N063248-008AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711987**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.671	1.0	5.000	0	93.4	90	110				

Sample ID: **N063214-017AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711995**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.036	0.20	1.000	0	104	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063249-017AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5711997**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.968	0.20	1.000	0	96.8	90	110				

Sample ID: **N063248-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5711999**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	520.875	10	250.0	281.3	95.8	90	110				

Sample ID: **N063248-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712001**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.786	1.0	5.000	0	95.7	90	110				

Sample ID: **N063248-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712005**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.843	1.0	5.000	0	96.9	90	110				

Sample ID: **N063248-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712007**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.604	1.0	5.000	0	92.1	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063248-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712009**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.770	1.0	5.000	0	95.4	90	110				

Sample ID: **N063249-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712011**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.044	0.20	1.000	0	104	90	110				

Sample ID: **N063249-014AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712013**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.999	0.20	1.000	0	99.9	90	110				

Sample ID: **N063249-016AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712017**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.026	0.20	1.000	0	103	90	110				

Sample ID: **N063249-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.637	1.0	5.000	0	92.7	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063249-013AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712021**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.652	1.0	5.000	0	93.0	90	110				

Sample ID: **N063249-015AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712025**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.037	1.0	5.000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R182953**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **PBW**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714780**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R182953**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **LCSW**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714781**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.913	0.20	5.000	0	98.3	90	110				

Sample ID: **N063214-007AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714783**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.661	1.0	5.000	0	93.2	90	110				

Sample ID: **N063295-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714787**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	58.337	1.0	25.00	34.17	96.7	90	110				

Sample ID: **N063295-001AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714788**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	58.670	1.0	25.00	34.17	98.0	90	110	58.34	0.570	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063295-003ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714790**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	24.591	1.0						23.94	2.70	20	

Sample ID: **N063295-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714791**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	48.490	1.0	25.00	23.94	98.2	90	110				

Sample ID: **N063295-005AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714795**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.543	1.0	5.000	0	90.9	90	110				

Sample ID: **N063295-006AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714797**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.556	1.0	5.000	0	91.1	90	110				

Sample ID: **N063295-007AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714799**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.867	1.0	5.000	0	97.3	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063295-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714801**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.020	0.20	1.000	0	102	90	110				

Sample ID: **N063295-008AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714805**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.779	1.0	5.000	0	95.6	90	110				

Sample ID: **N063249-018AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714807**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.706	1.0	5.000	0	94.1	90	110				

Sample ID: **N063249-019AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714813**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.035	0.20	1.000	0	103	90	110				

Sample ID: **N063297-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714815**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	45.034	1.0	25.00	21.25	95.1	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063297-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182953**
Client ID: **ZZZZZZ** Batch ID: **R182953** TestNo: **EPA 218.6** Analysis Date: **2/26/2024** SeqNo: **5714817**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	20.054	4.0	20.00	0	100	90	110				

Sample ID: **N063297-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182953**
Client ID: **ZZZZZZ** Batch ID: **R182953** TestNo: **EPA 218.6** Analysis Date: **2/26/2024** SeqNo: **5714819**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	51.159	1.0	25.00	26.42	98.9	90	110				

Sample ID: **N063297-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182953**
Client ID: **ZZZZZZ** Batch ID: **R182953** TestNo: **EPA 218.6** Analysis Date: **2/26/2024** SeqNo: **5714823**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.989	0.20	1.000	0	98.9	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R183037**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183037**
Client ID: **PBW**	Batch ID: **R183037**	TestNo: **EPA 218.6**		Analysis Date: **2/29/2024**	SeqNo: **5718879**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R183037**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183037**
Client ID: **LCSW**	Batch ID: **R183037**	TestNo: **EPA 218.6**		Analysis Date: **2/29/2024**	SeqNo: **5718880**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.894	0.20	5.000	0	97.9	90	110				

Sample ID: **N063214-005AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183037**
Client ID: **ZZZZZZ**	Batch ID: **R183037**	TestNo: **EPA 218.6**		Analysis Date: **2/29/2024**	SeqNo: **5718886**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.536	1.0	5.000	0	90.7	90	110				

Sample ID: **N063407-001AREP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183037**
Client ID: **ZZZZZZ**	Batch ID: **R183037**	TestNo: **EPA 218.6**		Analysis Date: **2/29/2024**	SeqNo: **5718891**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20						0	0	20	

Sample ID: **N063407-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183037**
Client ID: **ZZZZZZ**	Batch ID: **R183037**	TestNo: **EPA 218.6**		Analysis Date: **2/29/2024**	SeqNo: **5718892**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.082	0.20	1.000	0	108	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063407-001AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183037**
Client ID: **ZZZZZZ** Batch ID: **R183037** TestNo: **EPA 218.6** Analysis Date: **2/29/2024** SeqNo: **5718893**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.064	0.20	1.000	0	106	90	110	1.082	1.65	20	

Sample ID: **N063406-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183037**
Client ID: **ZZZZZZ** Batch ID: **R183037** TestNo: **EPA 218.6** Analysis Date: **2/29/2024** SeqNo: **5718894**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.389	0.20	1.000	0.3134	108	90	110				

Sample ID: **N063406-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183037**
Client ID: **ZZZZZZ** Batch ID: **R183037** TestNo: **EPA 218.6** Analysis Date: **2/29/2024** SeqNo: **5718895**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.159	0.20	1.000	0.2130	94.6	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-86-030-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 9:36:00 AM
Lab ID:	N063214-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240221A**	QC Batch: **R182763**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.12	0.25		mg/L	5	2/21/2024 11:24 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-86-066-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 9:07:00 AM
Lab ID:	N063214-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240221A**	QC Batch: **R182763**			PrepDate:			Analyst: **RAB**
Nitrate as N	0.62	0.12	0.25		mg/L	5	2/21/2024 11:39 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-86-120-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 10:03:00 AM
Lab ID:	N063214-012	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240221A**	QC Batch: **R182763**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/21/2024 10:53 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-86-140-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 10:51:00 AM
Lab ID:	N063214-013	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240221A**	QC Batch: **R182763**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/21/2024 11:08 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-28-025-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 12:45:00 PM
Lab ID:	N063214-014	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240221A**	QC Batch: **R182763**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.12	0.25		mg/L	5	2/21/2024 11:54 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-28-090-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 1:15:00 PM
Lab ID:	N063214-016	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240221A**	QC Batch: **R182763**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.12	0.25		mg/L	5	2/21/2024 12:09 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **MB-R182763_NO3** SampType: **MBLK** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182763**
Client ID: **PBW** Batch ID: **R182763** TestNo: **EPA 300.0** Analysis Date: **2/21/2024** SeqNo: **5704047**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **LCS-R182763_NO3** SampType: **LCS** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182763**
Client ID: **LCSW** Batch ID: **R182763** TestNo: **EPA 300.0** Analysis Date: **2/21/2024** SeqNo: **5704048**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.214	0.050	1.250	0	97.2	90	110				

Sample ID: **N063214-012CMS** SampType: **MS** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182763**
Client ID: **ZZZZZZ** Batch ID: **R182763** TestNo: **EPA 300.0** Analysis Date: **2/21/2024** SeqNo: **5704055**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.212	0.50	12.50	0.2920	95.4	80	120				

Sample ID: **N063214-012CMSD** SampType: **MSD** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182763**
Client ID: **ZZZZZZ** Batch ID: **R182763** TestNo: **EPA 300.0** Analysis Date: **2/21/2024** SeqNo: **5704056**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	11.836	0.50	12.50	0.2920	92.4	80	120	12.21	3.13	20	

Sample ID: **N063214-012CDUP** SampType: **DUP** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182763**
Client ID: **ZZZZZZ** Batch ID: **R182763** TestNo: **EPA 300.0** Analysis Date: **2/21/2024** SeqNo: **5704059**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	0.274	0.50						0.2920	0	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-86-030-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 9:36:00 AM
Lab ID:	N063214-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240221B**	QC Batch: **106993**				PrepDate:	**2/21/2024**	Analyst: **DJ**
Iron	910	13	20		µg/L	1	2/21/2024 03:06 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-86-066-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 9:07:00 AM
Lab ID:	N063214-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240221B**	QC Batch: **106993**				PrepDate:	**2/21/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	2/21/2024 03:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-86-120-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 10:03:00 AM
Lab ID:	N063214-012	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240221B**	QC Batch: **106993**				PrepDate:	**2/21/2024**	Analyst: **DJ**
Iron	100	13	20		µg/L	1	2/21/2024 03:47 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-86-140-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 10:51:00 AM
Lab ID:	N063214-013	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240221B**	QC Batch: **106993**				PrepDate:	**2/21/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	2/21/2024 03:53 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-28-025-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 12:45:00 PM
Lab ID:	N063214-014	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240221B**	QC Batch: **106993**				PrepDate:	**2/21/2024**	Analyst: **DJ**
Iron	28	13	20		µg/L	1	2/21/2024 03:59 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-28-090-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 1:15:00 PM
Lab ID:	N063214-016	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240221B**	QC Batch: **106993**				PrepDate:	**2/21/2024**	Analyst: **DJ**
Iron	360	13	20		µg/L	1	2/21/2024 04:05 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-106993**	SampType: **MBLK**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/21/2024**	RunNo: **182757**
Client ID: **PBW**	Batch ID: **106993**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/21/2024**	SeqNo: **5703760**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS-106993**	SampType: **LCS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/21/2024**	RunNo: **182757**
Client ID: **LCSW**	Batch ID: **106993**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/21/2024**	SeqNo: **5703761**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	89.706	20	100.0	0	89.7	85	115				

Sample ID: **N063214-011B-MS**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/21/2024**	RunNo: **182757**
Client ID: **ZZZZZZ**	Batch ID: **106993**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/21/2024**	SeqNo: **5703771**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	192.154	20	100.0	19.38	173	75	125				S

Sample ID: **N063214-011B-MSD**	SampType: **MSD**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/21/2024**	RunNo: **182757**
Client ID: **ZZZZZZ**	Batch ID: **106993**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/21/2024**	SeqNo: **5703772**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	190.311	20	100.0	19.38	171	75	125	192.2	0.964	20	S

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N063214-011B-PS**	SampType: **PS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182757**
Client ID: **ZZZZZZ**	Batch ID: **106993**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/21/2024**	SeqNo: **5703768**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	111.510	20	100.0	19.38	92.1	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *06-Mar-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-86-030-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 9:36:00 AM
Lab ID:	N063214-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240223D**	QC Batch: **106992**				PrepDate:	**2/21/2024**	Analyst: **DJ**
Arsenic	7.4	0.050	0.10		µg/L	1	2/23/2024 10:53 PM
Barium	110	0.083	1.0		µg/L	1	2/23/2024 10:53 PM
Manganese	120	0.026	0.50		µg/L	1	2/23/2024 10:53 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-86-066-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 9:07:00 AM
Lab ID:	N063214-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240223D**	QC Batch: **106992**			PrepDate:		**2/21/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/23/2024 10:58 PM
Barium	64	0.083	1.0		µg/L	1	2/23/2024 10:58 PM
Manganese	290	0.26	5.0		µg/L	10	2/23/2024 11:03 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-86-120-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 10:03:00 AM
Lab ID:	N063214-012	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240223D**	QC Batch: **106992**			PrepDate:	**2/21/2024**	Analyst: **DJ**	
Arsenic	ND	0.050	0.10		µg/L	1	2/23/2024 11:07 PM
Barium	50	0.083	1.0		µg/L	1	2/23/2024 11:07 PM
Manganese	520	0.26	5.0		µg/L	10	2/23/2024 11:12 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-86-140-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 10:51:00 AM
Lab ID:	N063214-013	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240223D**	QC Batch: **106992**			PrepDate:	**2/21/2024**	Analyst: **DJ**	
Arsenic	ND	0.050	0.10		µg/L	1	2/23/2024 11:26 PM
Barium	55	0.083	1.0		µg/L	1	2/23/2024 11:26 PM
Manganese	900	0.26	5.0		µg/L	10	2/23/2024 11:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-28-025-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 12:45:00 PM
Lab ID:	N063214-014	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240223D**	QC Batch: **106992**			PrepDate:		**2/21/2024**	Analyst: **DJ**
Arsenic	0.86	0.050	0.10		µg/L	1	2/23/2024 11:35 PM
Barium	81	0.083	1.0		µg/L	1	2/23/2024 11:35 PM
Manganese	19	0.026	0.50		µg/L	1	2/23/2024 11:35 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-28-090-Q124
Lab Order:	N063214		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/20/2024 1:15:00 PM
Lab ID:	N063214-016	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240223D**	QC Batch: **106992**				PrepDate:	**2/21/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/23/2024 11:40 PM
Barium	30	0.083	1.0		µg/L	1	2/23/2024 11:40 PM
Manganese	330	0.26	5.0		µg/L	10	2/23/2024 11:44 PM

Qualifiers:				
	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **MB-106992** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/21/2024** RunNo: **182930**
Client ID: **PBW** Batch ID: **106992** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5713699**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **LCS-106992** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/21/2024** RunNo: **182930**
Client ID: **LCSW** Batch ID: **106992** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5713700**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.087	0.10	10.00	0	101	85	115				
Barium	10.725	1.0	10.00	0	107	85	115				
Manganese	100.481	0.50	100.0	0	100	85	115				

Sample ID: **N063213-008BMS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/21/2024** RunNo: **182930**
Client ID: **ZZZZZZ** Batch ID: **106992** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5713714**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	15.828	0.10	10.00	5.415	104	75	125				
Barium	130.405	1.0	10.00	122.5	79.2	75	125				
Manganese	152.767	0.50	100.0	62.42	90.3	75	125				

Sample ID: **N063213-008BMSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/21/2024** RunNo: **182930**
Client ID: **ZZZZZZ** Batch ID: **106992** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5713715**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	14.876	0.10	10.00	5.415	94.6	75	125	15.83	6.20	20	
Barium	130.981	1.0	10.00	122.5	85.0	75	125	130.4	0.441	20	
Manganese	152.449	0.50	100.0	62.42	90.0	75	125	152.8	0.209	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

SAMPLE RECEIVING ITEMS

ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

ARCUS02 C: 3/6/2024 12:00 AM
FOLDER R: 2/20/2024
N063214-019A 1 of 1

Page 1 of 1

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Req.
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	Excel EDD
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.moore@frielgen.com	Address:	Geotracker
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com P.O.#	Labspec
Submitted By: Riggie Tep		Phone: 949-727-1400, ext 200 Fax:	Others ✓
Title: Field Tech	Phone: 916-786-3302 Fax:		Specify: RWQCB
Signature: Date: 02-20-24	Sampled By: Riggie Tep		Global ID:
I hereby authorize ASSET Labs to perform the tests indicated below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally misidentifying the sample location, date or time of collection is considered fraud and may be grounds for		
Project Name: PG&E Topock - PCM	Signature: Date: 02-20-24		
Project Number: 30211191			

EDD Req.			
Excel EDD		RTNE	
Geotracker		RWQCB	✓
Labspec		CalTrans	
Others	✓	LEVEL III	
Specify: RWQCB		LEVEL IV	
Global ID:		Regulatory	
		Specify State:	

	Y	N
1. Chilled	✓	
2. Headspace		
3. Container Intact	✓	
4. Seal Present	✓	
5. IR number	3	
6. Method of Cooling: ICE		

Sample Temp: 1.8°C / 2.2°C

Courier: ASET

Tracking No.:

Matrix: Ground X; Sediment; Potable; Soil; NPDES; Other Solid; Surface

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly)	Nitrate, sulfate (EPA 300.0) (1 L poly)	Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Molybdenum (500mL poly)	Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOA)	Ammonia as Nitrogen (SM4500NH3D); H2SO4 (1L poly)	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 (125 mL poly)	Nitrate (EPA 300.0) (1 L poly)	1 L poly			Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063214-001	✓ MW-49-135-Q124	2/20/2024	11:18		X												E	1	P	BNS	
2	-002	✓ MW-49-135-EB-Q124	2/20/2024	10:50		X												E	1	P	BNS	
3	-003	✓ MW-49-275-Q124	2/20/2024	10:44		X												E	1	P	BNS	
4	-004	✓ MW-49-275-EB-Q124	2/20/2024	9:55		X												E	1	P	BNS	
5	-005	✓ MW-49-365-Q124	2/20/2024	9:42		X												E	1	P	BNS	
6	-006	✓ MW-49-365-EB-Q124	2/20/2024	9:00		X												E	1	P	BNS	
7	-007	✓ MW-29-Q124	2/20/2024	10:08		X												E	1	P	BNS	
8	-008	✓ MW-29-EB-Q124	2/20/2024	11:40		X												E	1	P	B	
9	-009	✓ EB-730-Q124	2/20/2024	14:00		X												E	1	P	B	
10	-010	✓ MW-86-030-Q124	2/20/2024	9:36		X		X						X				E	3	P	BN	
11	-011	✓ MW-86-066-Q124	2/20/2024	9:07		X		X						X				E	3	P	BN	
12	-012	✓ MW-86-120-Q124	2/20/2024	10:03		X		X						X				E	3	P	BN	
13	-013	✓ MW-86-140-Q124	2/20/2024	10:51		X		X						X				E	3	P	BN	
14																						

Relinquished by (Signature and Printed Name): Riggie Tep 02-20-24 1525 Date/Time:
Relinquished by (Signature and Printed Name): Michael Mcanton 2/20/24 1525 Date/Time:
Relinquished by (Signature and Printed Name): Michael Mcanton 2/20/24 1528 Date/Time:
Relinquished by (Signature and Printed Name): Michael Mcanton 2/20/24 1528 Date/Time:
Relinquished by (Signature and Printed Name): Date/Time:
Relinquished by (Signature and Printed Name): Date/Time:

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35% 4 Workdays=20%
3. Custom EDD formats will be on additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:

H=HCL	N=HNO_3	S=H_2SO_4	C=4°C
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$	
Others/Specify:	B	(NH4)2SO4/NH4OH	

Container Type:

T=Tube	V=VOA	P=Pint
J=Jar	B=Tedlar	G=Glass
M=Metal	M=Metal	C=Can

69

NOG 32134

ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

Page 1 of 1

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement	QA/QC	Sample Receipt Condition
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	Excel EDD	RTNE	Y N
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.angore@crisigen.com	Address:	Geotracker	RWQCB ✓	1. Chilled ✓
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com P.O.#	Labspec	CalTrans	2. Headspace
Submitted By: Riggie Tep			Others ✓	LEVEL III	3. Container Intact ✓
Title: Field Tech	Phone: 916-786-3302 Fax:	Phone: 949-727-1400, ext 200 Fax:	Specify: RWQCB	LEVEL IV	4. Seal Present ✓
Signature: Date: 02-20-24	Sampled By: Riggie Tep		Global ID:	Regulatory	5. IR number 3
I hereby authorize ASSET Labs to perform the tests indicated below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally misidentifying the sample location, date or time of collection is considered fraud and may be grounds for			Specify State:	6. Method of Cooling: ICE
Project Name: PG&E Topock - PCM	Signature: Date: 02-20-24				Sample Temp: °C 1.8 / 2.2
Project Number: 30211191					Courier: ASSET Tracking No.:

Matrix			
Ground	X	Sediment	
Potable		Soil	
NPDES		Other Solid	
Surface			

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	250 mL poly: Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH	1 L poly: Nitrite, Nitrate, sulfate (EPA 300.0)	500mL poly: Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese	500mL poly: Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium,	500mL poly: Dissolved metals (SW6020) FF; HNO3 Selenium, Molybdenum	3x40 mL VOA: Total Organic Carbon (SM5310C); H2SO4	1 L poly: Ammonia as Nitrogen (SM4500NH3D); H2SO4	125 mL poly: Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4	1 L poly: Nitrate, sulfate (EPA 300.0)	1 L poly: Nitrate (EPA 300.0)	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063214-014	✓ MW-28-025-Q124	2/20/2024	12:45		X		X							X	E	3	P	BNS	
2	-015	✓ MW-28-025-EB-Q124	2/20/2024	12:20		X										E	1	P	BNS	
3	-016	✓ MW-28-090-Q124	2/20/2024	13:15		X		X							X	E	3	P	BNS	
4	-017	✓ MW-28-090-EB-Q124	2/20/2024	12:54		X										E	1	P	BNS	
5	-018	✓ EB-732-Q124	2/20/2024	1430		X										E	1	P	BNS	
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				

Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:
Riggie Tep	02-20-24 1525	Michael Meantem	2/20/24 1525
Michael Meantem	2/20/24 1928	Michael Meantem	2/20/24 1928
Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

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1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:				Container Type:		
H=HCL	N=HNO_3	S=H_2SO_4	C=4°C	T=Tube	V=VOA	P=Pint
Z=$Zn(AC)_2$	O=NaOH	T=$Na_2S_2O_3$		J=Jar	B=Tedlar	G=Glass
Others/Specify:	B	(NH4)2SO4/NH4OH		M=Metal	M=Metal	C=Can

70

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	2/20/2024	Workorder:	N063214
Rep sample Temp (Deg C):	1.8 / 2.2	IR Gun ID:	3

Temp Blank: ☑ Yes ☐ No

Carrier name: ASSET

Last 4 digits of Tracking No.: NA Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By: CC Chara Cintron 2/21/2024

Reviewed By: for: MBC 02/21/2024

Subject: RE: PG&E Topock - PCM, 30211191 (ASSET Labs No. N063214)
From: "Madsen, Laura" <Laura.Madsen@arcadis.com>
Date: 2/21/2024, 3:47 PM
To: Yoandra Rodriguez <yoandra@assetlaboratories.com>
CC: "maryann.balilu@assetlaboratoriesph.com" <maryann.balilu@assetlaboratoriesph.com>, "jimuel.penafiel@assetlaboratoriesph.com" <jimuel.penafiel@assetlaboratoriesph.com>

HI Yoandra,

Sample time is 1208 for Sample 7.

Thanks,

Laura

Laura Madsen PG

Project Geologist

Arcadis U.S., Inc.
M +1 303 653 5749

From: Yoandra Rodriguez <yoandra@assetlaboratories.com>
Sent: Wednesday, February 21, 2024 5:53 PM
To: Madsen, Laura <Laura.Madsen@arcadis.com>
Cc: maryann.balilu@assetlaboratoriesph.com; jimuel.penafiel@assetlaboratoriesph.com
Subject: PG&E Topock - PCM, 30211191 (ASSET Labs No. N063214)

Hi Laura,

Please confirm collection time for sample 7 on the attached COC:

- COC: 1008

- Label: 1208

--
Thanks,

Yoandra Rodriguez

Project Manager

Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 | F: 702.307.2691
California: 11110 Artesia Blvd., Ste. B, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436

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ASSET Laboratories

WORK ORDER Summary

21-Feb-24

WorkOrder: N063214

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 2/20/2024 7:28 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063214-001A	MW-49-135-Q124	2/20/2024 11:18:00 AM	3/6/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063214-002A	MW-49-135-EB-Q124	2/20/2024 10:50:00 AM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063214-003A	MW-49-275-Q124	2/20/2024 10:44:00 AM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063214-004A	MW-49-275-EB-Q124	2/20/2024 9:55:00 AM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063214-005A	MW-49-365-Q124	2/20/2024 9:42:00 AM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063214-006A	MW-49-365-EB-Q124	2/20/2024 9:00:00 AM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063214-007A	MW-29-Q124	2/20/2024 12:08:00 AM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063214-008A	MW-29-EB-Q124	2/20/2024 11:40:00 AM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063214-009A	EB-730-Q124	2/20/2024 2:00:00 PM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063214-010A	MW-86-030-Q124	2/20/2024 9:36:00 AM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063214-010B			3/6/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/6/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/6/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/6/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063214-010C			3/6/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063214-011A	MW-86-066-Q124	2/20/2024 9:07:00 AM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063214-011B			3/6/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/6/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/6/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/6/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063214-011C			3/6/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063214-012A	MW-86-120-Q124	2/20/2024 10:03:00 AM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW

WORK ORDER Summary

21-Feb-24

WorkOrder: N063214

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 2/20/2024 7:28 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063214-012B	MW-86-120-Q124	2/20/2024 10:03:00 AM	3/6/2024	Groundwater	EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/6/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/6/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/6/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063214-012C			3/6/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063214-013A	MW-86-140-Q124	2/20/2024 10:51:00 AM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063214-013B			3/6/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/6/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/6/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/6/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063214-013C			3/6/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063214-014A	MW-28-025-Q124	2/20/2024 12:45:00 PM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063214-014B			3/6/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/6/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/6/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/6/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063214-014C			3/6/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063214-015A	MW-28-025-EB-Q124	2/20/2024 12:20:00 PM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063214-016A	MW-28-090-Q124	2/20/2024 1:15:00 PM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063214-016B			3/6/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/6/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/6/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW

WORK ORDER Summary

21-Feb-24

WorkOrder: N063214

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 2/20/2024 7:28 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063214-016B	MW-28-090-Q124	2/20/2024 1:15:00 PM	3/6/2024	Groundwater	EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063214-016C			3/6/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063214-017A	MW-28-090-EB-Q124	2/20/2024 12:54:00 PM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063214-018A	EB-732-Q124	2/20/2024 2:30:00 PM	3/6/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063214-019A	FOLDER	3/6/2024	3/6/2024		Folder	Folder	☐	☐	☐	LAB
			3/6/2024		Folder	Level IV Report	☐	☐	☐	LAB
			3/6/2024		Folder	Folder	☐	☐	☐	LAB

List of Analysts

ASSET Laboratories Work Order: N063214

NAME	TEST METHOD
Ria Abes	EPA 218.6, EPA 300.0
Diane Jetajobe	EPA 6010B_Dissolved, EPA 6020_Dissolved

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R182773
ASSET #: N063214

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/21/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments: Dilution was necessary for some samples due to matrix interference.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer: RBA Date: _____

2nd Level Reviewer: RB 02272024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R182897
ASSET #: N063214

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/22/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments: Dilution was necessary for some samples due to matrix interference.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer RB 02282024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R182899
ASSET #: N063214

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/23/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer RB 02272024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R182953
ASSET #: N063214

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/26/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments: Dilution was necessary for some samples due to matrix interference.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer RB 02292024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R183037
ASSET #: N063214

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/29/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments: Dilution was necessary for some samples due to matrix interference.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer RB 03032024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063214-001A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 0.0000 * 5$$

$$Cr^{+6}, \mu g/L = 0.0000$$

Since PQL is 1 µg/L,

Cr^{+6} ,µg/L = ND

Reviewed by:

dMocha 3/7/2024

ANALYSIS RUN LOG

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240221A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/21/24 9:16 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/21/24 9:30 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/21/24 9:39 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/21/24 9:49 AM	Reported
13	MB-R182773	MBLK	1	Hexavalent Chromium	02/21/24 9:58 AM	Reported
14	LCS-R182773	LCS	1	Hexavalent Chromium	02/21/24 10:08 AM	Reported
15	N063213-008A	SAMP	10	Hexavalent Chromium	02/21/24 10:17 AM	Reported
16	N063211-001A	SAMP	1	Hexavalent Chromium	02/21/24 10:27 AM	Reported
17	N063211-002A	SAMP	1	Hexavalent Chromium	02/21/24 10:36 AM	Reported
18	N063211-003A	SAMP	1	Hexavalent Chromium	02/21/24 10:46 AM	Reported
19	N063211-001AMS	MS	1	Hexavalent Chromium	02/21/24 10:55 AM	Reported
20	N063211-002AMS	MS	1	Hexavalent Chromium	02/21/24 11:04 AM	Reported
21	N063211-003AMS	MS	1	Hexavalent Chromium	02/21/24 11:14 AM	Reported
22	N063213-008AMS	MS	10	Hexavalent Chromium	02/21/24 11:23 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/21/24 11:33 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/21/24 11:42 AM	Reported
25	N063213-008AMSD	MSD	10	Hexavalent Chromium	02/21/24 11:52 AM	Reported
26	N063213-001A	SAMP	1	Hexavalent Chromium	02/21/24 12:01 PM	Not Reported
27	N063213-002A	SAMP	1	Hexavalent Chromium	02/21/24 12:11 PM	Reported
28	N063213-005A	SAMP	1	Hexavalent Chromium	02/21/24 12:20 PM	Reported
29	N063213-003A	SAMP	5	Hexavalent Chromium	02/21/24 12:30 PM	Not Reported
30	N063213-004A	SAMP	100	Hexavalent Chromium	02/21/24 12:39 PM	Reported
31	N063213-007A	SAMP	200	Hexavalent Chromium	02/21/24 12:52 PM	Reported
32	N063211-001ADUP	DUP	1	Hexavalent Chromium	02/21/24 1:03 PM	Reported
33	N063213-001AMS	MS	1	Hexavalent Chromium	02/21/24 1:12 PM	Not Reported
34	N063213-002AMS	MS	1	Hexavalent Chromium	02/21/24 1:21 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/21/24 1:31 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/21/24 1:40 PM	Reported
37	N063213-005AMS	MS	1	Hexavalent Chromium	02/21/24 1:50 PM	Reported
38	N063213-004AMS	MS	100	Hexavalent Chromium	02/21/24 1:59 PM	Reported
39	N063213-007AMS	MS	200	Hexavalent Chromium	02/21/24 2:09 PM	Reported
40	N063213-006A	SAMP	1	Hexavalent Chromium	02/21/24 2:18 PM	Not Reported
41	N063213-006AMS	MS	1	Hexavalent Chromium	02/21/24 2:28 PM	Not Reported
42	N063213-006A	SAMP	5	Hexavalent Chromium	02/21/24 2:37 PM	Reported

INJECTION LOG: 240221A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063213-006AMS	MS	5	Hexavalent Chromium	02/21/24 2:46 PM	Reported
44	N063213-009A	SAMP	1	Hexavalent Chromium	02/21/24 2:56 PM	Reported
45	N063213-009AMS	MS	1	Hexavalent Chromium	02/21/24 3:05 PM	Reported
46	N063213-003AMS	MS	5	Hexavalent Chromium	02/21/24 3:15 PM	Not Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/21/24 3:24 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/21/24 3:34 PM	Reported
49	N063214-007A	SAMP	1	Hexavalent Chromium	02/21/24 3:43 PM	Not Reported
50	N063214-007AMS	MS	1	Hexavalent Chromium	02/21/24 3:53 PM	Not Reported
51	N063214-001A	SAMP	1	Hexavalent Chromium	02/21/24 4:02 PM	Not Reported
52	N063214-001AMS	MS	1	Hexavalent Chromium	02/21/24 4:52 PM	Not Reported
53	N063214-003A	SAMP	1	Hexavalent Chromium	02/21/24 5:05 PM	Not Reported
54	N063214-003AMS	MS	1	Hexavalent Chromium	02/21/24 5:15 PM	Not Reported
55	N062911-004A MS	~~SAMP~~	5	Hexavalent Chromium	02/21/24 5:24 PM	Reported
N062911-004AMS 56	~~N063911-004AMS~~	MS ~~SAMP~~	5	Hexavalent Chromium	02/21/24 5:34 PM	Reported
57	N063214-002A	SAMP	1	Hexavalent Chromium	02/21/24 5:43 PM	Reported
58	N063214-002AMS	MS	1	Hexavalent Chromium	02/21/24 5:52 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/21/24 6:02 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/21/24 6:11 PM	Reported
61	N063214-004A	SAMP	1	Hexavalent Chromium	02/21/24 6:21 PM	Reported
62	N063214-004AMS	MS	1	Hexavalent Chromium	02/21/24 6:30 PM	Reported
63	N063214-006A	SAMP	1	Hexavalent Chromium	02/21/24 6:40 PM	Reported
64	N063214-006AMS	MS	1	Hexavalent Chromium	02/21/24 6:49 PM	Reported
65	N063214-008A	SAMP	1	Hexavalent Chromium	02/21/24 6:59 PM	Not Reported
66	N063214-008AMS	MS	1	Hexavalent Chromium	02/21/24 7:08 PM	Not Reported
67	N063214-001A	SAMP	5	Hexavalent Chromium	02/21/24 7:18 PM	Reported
68	N063214-001AMS	MS	5	Hexavalent Chromium	02/21/24 7:27 PM	Reported
69	N063214-003A	SAMP	5	Hexavalent Chromium	02/21/24 7:37 PM	Reported
70	N063214-003AMS	MS	5	Hexavalent Chromium	02/21/24 7:46 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/21/24 7:55 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/21/24 8:05 PM	Reported
73	N063214-005A	SAMP	5	Hexavalent Chromium	02/21/24 8:14 PM	Not Reported
74	N063214-005AMS	MS	5	Hexavalent Chromium	02/21/24 8:24 PM	Not Reported
75	N063213-001AMS	MS	5	Hexavalent Chromium	02/21/24 8:33 PM	Reported
76	N063213-001A	SAMP	5	Hexavalent Chromium	02/21/24 8:43 PM	Reported
77	N063213-003AMS	MS	100	Hexavalent Chromium	02/21/24 8:52 PM	Reported
78	N063213-003A	SAMP	100	Hexavalent Chromium	02/21/24 9:02 PM	Reported
79	N063213-002AMS	MS	1	Hexavalent Chromium	02/21/24 9:11 PM	Reported
80	N063214-005A	SAMP	1	Hexavalent Chromium	02/21/24 9:21 PM	Not Reported
81	N063214-005AMS	MS	1	Hexavalent Chromium	02/21/24 9:30 PM	Not Reported
82	CCV-7	CCV	1	Hexavalent Chromium	02/21/24 9:39 PM	Reported
83	CCB-7	CCB	1	Hexavalent Chromium	02/21/24 9:49 PM	Reported
84	BLANK	BLANK	1	Hexavalent Chromium	02/21/24 9:58 PM	Not Reported

JRB 2/27/2024
for RBA

dMocha 3/7/2024
for RBA

Injection Log Summary

Sequence Details

Name:	**IC-07_240221A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**22/Feb/24 12:29:45**
No. of Injections:	**87**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/21/2024 09:16	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/21/2024 09:30	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/21/2024 09:39	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/21/2024 09:49	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/21/2024 09:58	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/21/2024 10:08	Finished	LCS @5ppb, IWST-231228B
15	N063213-008A,SAMP	7	1000	Unknown		02/21/2024 10:17	Finished	SAMP,1>10 mL
16	N063211-001A,SAMP	8	1000	Unknown		02/21/2024 10:27	Finished	SAMP,10 mL
17	N063211-002A,SAMP	9	1000	Unknown		02/21/2024 10:36	Finished	SAMP,10 mL
18	N063211-003A,SAMP	10	1000	Unknown		02/21/2024 10:46	Finished	SAMP,10 mL
19	N063211-001AMS,MS	11	1000	Unknown		02/21/2024 10:55	Finished	MS (1ppb), IWST-231228B,10r
20	N063211-002AMS,MS	12	1000	Unknown		02/21/2024 11:04	Finished	MS (1ppb), IWST-231228B,10r
21	N063211-003AMS,MS	13	1000	Unknown		02/21/2024 11:14	Finished	MS (1ppb), IWST-231228B,10r
22	N063213-008AMS,MS	14	1000	Unknown		02/21/2024 11:23	Finished	MS (5ppb), IWST-231228B,1>
23	CCV-2,CCV1,1,	15	1000	Unknown		02/21/2024 11:33	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		02/21/2024 11:42	Finished	CCB R240129C
25	N063213-008AMSD,M	17	1000	Unknown		02/21/2024 11:52	Finished	MSD (5ppb), IWST-231228B,1
26	N063213-001A,SAMP	18	1000	Unknown		02/21/2024 12:01	Finished	SAMP,10 mL
27	N063213-002A,SAMP	19	1000	Unknown		02/21/2024 12:11	Finished	SAMP,10 mL
28	N063213-005A,SAMP	20	1000	Unknown		02/21/2024 12:20	Finished	SAMP,10 mL
29	N063213-003A,SAMP	21	1000	Unknown		02/21/2024 12:30	Finished	SAMP,2>10 mL
30	N063213-004A,SAMP	22	1000	Unknown		02/21/2024 12:39	Finished	SAMP,0.1>10 mL
31	N063213-007A,SAMP	1	1000	Unknown		02/21/2024 12:52	Finished	SAMP,0.05>10 mL
32	N063211-001ADUP,D	2	1000	Unknown		02/21/2024 13:03	Finished	DUP,10 mL
33	N063213-001AMS,MS	3	1000	Unknown		02/21/2024 13:12	Finished	MS (5ppb), IWST-231228B,10r
34	N063213-002AMS,MS	4	1000	Unknown		02/21/2024 13:21	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	5	1000	Unknown		02/21/2024 13:31	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	6	1000	Unknown		02/21/2024 13:40	Finished	CCB R240129C
37	N063213-005AMS,MS	7	1000	Unknown		02/21/2024 13:50	Finished	MS (1ppb), IWST-231228B,10r
38	N063213-004AMS,MS	8	1000	Unknown		02/21/2024 13:59	Finished	MS (5ppb), IWST-231228B,0.1
39	N063213-007AMS,MS	9	1000	Unknown		02/21/2024 14:09	Finished	MS (5ppb), IWST-231228B,0.0
40	N063213-006A,SAMP	10	1000	Unknown		02/21/2024 14:18	Finished	SAMP,10 mL
41	N063213-006AMS,MS	11	1000	Unknown		02/21/2024 14:28	Finished	MS (1ppb), IWST-231228B,10r
42	N063213-006A,SAMP	12	1000	Unknown		02/21/2024 14:37	Finished	SAMP,2>10 mL
43	N063213-006AMS,MS	13	1000	Unknown		02/21/2024 14:46	Finished	MS (1ppb), IWST-231228B,2>
44	N063213-009A,SAMP	14	1000	Unknown		02/21/2024 14:56	Finished	SAMP,10 mL
45	N063213-009AMS,MS	15	1000	Unknown		02/21/2024 15:05	Finished	MS (1ppb), IWST-231228B,10r
46	N063213-003AMS,MS	16	1000	Unknown		02/21/2024 15:15	Finished	MS (5ppb), IWST-231228B,2>
47	CCV-4,CCV1,1,	17	1000	Unknown		02/21/2024 15:24	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	18	1000	Unknown		02/21/2024 15:34	Finished	CCB R240129C
49	N063214-007A,SAMP	19	1000	Unknown		02/21/2024 15:43	Finished	SAMP,10 mL
50	N063214-007AMS,MS	20	1000	Unknown		02/21/2024 15:53	Finished	MS (1ppb), IWST-231228B,10r
51	N063214-001A,SAMP	21	1000	Unknown		02/21/2024 16:02	Finished	SAMP,10 mL
52	N063214-001AMS,MS	1	1000	Unknown		02/21/2024 16:52	Finished	MS (1ppb), IWST-231228B,10r
53	N063214-003A,SAMP	2	1000	Unknown		02/21/2024 17:05	Finished	SAMP,10 mL
54	N063214-003AMS,MS	3	1000	Unknown		02/21/2024 17:15	Finished	MS (1ppb), IWST-231228B,10r
55	N062911-004A,SAMP	4	1000	Unknown		02/21/2024 17:24	Finished	SAMP,2>10 mL
56	N063911-004AMS,MS	5	1000	Unknown		02/21/2024 17:34	Finished	MS (1ppb), IWST-231228B,2>
57	N063214-002A,SAMP	6	1000	Unknown		02/21/2024 17:43	Finished	SAMP,10 mL
58	N063214-002AMS,MS	7	1000	Unknown		02/21/2024 17:52	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	8	1000	Unknown		02/21/2024 18:02	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	9	1000	Unknown		02/21/2024 18:11	Finished	CCB R240129C

N062911-004MS

JRB 2/27/2024
for RBA

dMocha 3/7/2024
for RBA

IC-07 RBA 2/22/2024 12:32:46 PM

61	N063214-004A,SAMP	10	1000	Unknown		02/21/2024 18:21	Finished	SAMP,10 mL
62	N063214-004AMS,MS	11	1000	Unknown		02/21/2024 18:30	Finished	MS (1ppb), IWST-231228B,10r
63	N063214-006A,SAMP	12	1000	Unknown		02/21/2024 18:40	Finished	SAMP,10 mL
64	N063214-006AMS,MS	13	1000	Unknown		02/21/2024 18:49	Finished	MS (1ppb), IWST-231228B,10r
65	N063214-008A,SAMP	14	1000	Unknown		02/21/2024 18:59	Finished	SAMP,10 mL
66	N063214-008AMS,MS	15	1000	Unknown		02/21/2024 19:08	Finished	MS (1ppb), IWST-231228B,10r
67	N063214-001A,SAMP	16	1000	Unknown		02/21/2024 19:18	Finished	SAMP,2>10 mL
68	N063214-001AMS,MS	17	1000	Unknown		02/21/2024 19:27	Finished	MS (1ppb), IWST-231228B,2>1
69	N063214-003A,SAMP	18	1000	Unknown		02/21/2024 19:37	Finished	SAMP,2>10 mL
70	N063214-003AMS,MS	19	1000	Unknown		02/21/2024 19:46	Finished	MS (1ppb), IWST-231228B,2>1
71	CCV-6,CCV1,1,	20	1000	Unknown		02/21/2024 19:55	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	21	1000	Unknown		02/21/2024 20:05	Finished	CCB R240129C
73	N063214-005A,SAMP	22	1000	Unknown		02/21/2024 20:14	Finished	SAMP,2>10 mL
74	N063214-005AMS,MS	23	1000	Unknown		02/21/2024 20:24	Finished	MS (1ppb), IWST-231228B,2>1
75	N063213-001AMS,MS	24	1000	Unknown		02/21/2024 20:33	Finished	MS (5ppb), IWST-231228B,2>1
76	N063213-001A,SAMP	25	1000	Unknown		02/21/2024 20:43	Finished	SAMP,2>10 mL
77	N063213-003AMS,MS	26	1000	Unknown		02/21/2024 20:52	Finished	MS (5ppb), IWST-231228B,0.1
78	N063213-003A,SAMP	27	1000	Unknown		02/21/2024 21:02	Finished	SAMP,0.1>10 mL
79	N063213-002AMS,MS	28	1000	Unknown		02/21/2024 21:11	Finished	MS (5ppb), IWST-231228B,10r
80	N063214-005A,SAMP	29	1000	Unknown		02/21/2024 21:21	Finished	SAMP,10 mL
81	N063214-005AMS,MS	30	1000	Unknown		02/21/2024 21:30	Finished	MS (1ppb), IWST-231228B,10r
82	CCV-7,CCV,1,	31	1000	Unknown		02/21/2024 21:39	Finished	CCV @5ppb, IWST-231228A
83	CCB-7,CCB,1,	32	1000	Unknown		02/21/2024 21:49	Finished	CCB R240129C
84	BLANK	33	1000	Unknown		02/21/2024 21:58	Finished	BLANK
85	SHUTDOWN R240221A	34	1000	Unknown		02/21/2024 22:08	Finished	
86	Eluent: ~~R240220A~~	35	1000	Unknown		n.a.	Finished	
87	PCR: ~~R240220B~~	36	1000	Unknown		n.a.	Finished	

R240221B

dMocha 3/3/2024
for RBA

INJECTION LOG: 240222A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/22/24 8:37 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/22/24 8:51 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/22/24 9:00 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/22/24 9:10 AM	Reported
13	MB-R182897	MBLK	1	Hexavalent Chromium	02/22/24 9:19 AM	Reported
14	LCS-R182897	LCS	1	Hexavalent Chromium	02/22/24 9:29 AM	Reported
15	N063214-010A	SAMP	1	Hexavalent Chromium	02/22/24 9:38 AM	Reported
16	N063214-010AMS	MS	1	Hexavalent Chromium	02/22/24 9:48 AM	Reported
17	N063214-014A	SAMP	1	Hexavalent Chromium	02/22/24 9:57 AM	Reported
18	N063214-014AMS	MS	1	Hexavalent Chromium	02/22/24 10:07 AM	Reported
19	N063214-016A	SAMP	1	Hexavalent Chromium	02/22/24 10:16 AM	Reported
20	N063214-016AMS	MS	1	Hexavalent Chromium	02/22/24 10:26 AM	Reported
21	N063214-014AMSD	MSD	1	Hexavalent Chromium	02/22/24 10:35 AM	Reported
22	N063214-010ADUP	DUP	1	Hexavalent Chromium	02/22/24 10:45 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/22/24 10:54 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/22/24 11:03 AM	Reported
25	N063214-011A	SAMP	1	Hexavalent Chromium	02/22/24 11:13 AM	Reported
26	N063214-011AMS	MS	1	Hexavalent Chromium	02/22/24 11:22 AM	Reported
27	N063214-012A	SAMP	1	Hexavalent Chromium	02/22/24 11:32 AM	Not Reported
28	N063214-012AMS	MS	1	Hexavalent Chromium	02/22/24 11:41 AM	Not Reported
29	N063214-013A	SAMP	1	Hexavalent Chromium	02/22/24 11:51 AM	Not Reported
30	N063214-013AMS	MS	1	Hexavalent Chromium	02/22/24 12:00 PM	Not Reported
31	N063214-009A	SAMP	1	Hexavalent Chromium	02/22/24 12:10 PM	Reported
32	N063214-009AMS	MS	1	Hexavalent Chromium	02/22/24 12:19 PM	Reported
33	N063214-015A	SAMP	1	Hexavalent Chromium	02/22/24 12:29 PM	Reported
34	N063214-015AMS	MS	1	Hexavalent Chromium	02/22/24 12:38 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/22/24 12:47 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/22/24 12:57 PM	Reported
37	N063214-017A	SAMP	1	Hexavalent Chromium	02/22/24 1:06 PM	Not Reported
38	N063214-017AMS	MS	1	Hexavalent Chromium	02/22/24 1:16 PM	Not Reported
39	N063214-018A	SAMP	1	Hexavalent Chromium	02/22/24 2:14 PM	Reported
40	N063214-018AMS	MS	1	Hexavalent Chromium	02/22/24 2:24 PM	Reported
41	N063214-011A	SAMP	5	Hexavalent Chromium	02/22/24 2:34 PM	Not Reported
42	N063214-011AMS	MS	5	Hexavalent Chromium	02/22/24 2:43 PM	Not Reported

For RBA 3/5/2024

INJECTION LOG: 240222A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063214-012A	SAMP	5	Hexavalent Chromium	02/22/24 2:53 PM	Reported
44	N063214-012AMS	MS	5	Hexavalent Chromium	02/22/24 3:02 PM	Reported
45	N063214-013A	SAMP	5	Hexavalent Chromium	02/22/24 3:12 PM	Reported
46	N063214-013AMS	MS	5	Hexavalent Chromium	02/22/24 3:21 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/22/24 3:31 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/22/24 3:40 PM	Reported
49	N063249-001A	SAMP	1	Hexavalent Chromium	02/22/24 4:02 PM	Not Reported
50	N063249-001AMS	MS	1	Hexavalent Chromium	02/22/24 4:13 PM	Not Reported
51	N063249-003A	SAMP	1	Hexavalent Chromium	02/22/24 4:22 PM	Not Reported
52	N063249-003AMS	MS	1	Hexavalent Chromium	02/22/24 4:32 PM	Not Reported
53	N063249-004A	SAMP	1	Hexavalent Chromium	02/22/24 4:41 PM	Not Reported
54	N063249-004AMS	MS	1	Hexavalent Chromium	02/22/24 4:51 PM	Not Reported
55	N063249-005A	SAMP	1	Hexavalent Chromium	02/22/24 5:00 PM	Not Reported
56	N063249-005AMS	MS	1	Hexavalent Chromium	02/22/24 5:10 PM	Not Reported
57	N063249-007A	SAMP	1	Hexavalent Chromium	02/22/24 5:19 PM	Not Reported
58	N063249-007AMS	MS	1	Hexavalent Chromium	02/22/24 5:29 PM	Not Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/22/24 5:38 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/22/24 5:47 PM	Reported
61	N063249-009A	SAMP	1	Hexavalent Chromium	02/22/24 5:57 PM	Not Reported
62	N063249-009AMS	MS	1	Hexavalent Chromium	02/22/24 6:10 PM	Not Reported
63	N063249-002A	SAMP	1	Hexavalent Chromium	02/22/24 6:20 PM	Reported
64	N063249-002AMS	MS	1	Hexavalent Chromium	02/22/24 6:29 PM	Reported
65	N063249-006A	SAMP	1	Hexavalent Chromium	02/22/24 6:42 PM	Reported
66	N063249-006AMS	MS	1	Hexavalent Chromium	02/22/24 6:51 PM	Reported
67	N063249-008A	SAMP	1	Hexavalent Chromium	02/22/24 7:01 PM	Reported
68	N063249-008AMS	MS	1	Hexavalent Chromium	02/22/24 7:10 PM	Reported
69	~~N063249-009A~~ N063249-010A	SAMP	1	Hexavalent Chromium	02/22/24 7:20 PM	Reported
70	~~N063249-009AMS~~ N063249-010AMS	MS	1	Hexavalent Chromium	02/22/24 7:29 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/22/24 7:39 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/22/24 7:48 PM	Reported
73	N063249-001A	SAMP	5	Hexavalent Chromium	02/22/24 7:57 PM	Reported
74	N063249-001AMS	MS	5	Hexavalent Chromium	02/22/24 8:07 PM	Reported
75	N063249-003A	SAMP	5	Hexavalent Chromium	02/22/24 8:16 PM	Reported
76	N063249-003AMS	MS	5	Hexavalent Chromium	02/22/24 8:26 PM	Reported
77	N063249-004A	SAMP	5	Hexavalent Chromium	02/22/24 8:35 PM	Reported
78	N063249-004AMS	MS	5	Hexavalent Chromium	02/22/24 8:45 PM	Reported
79	N063249-005A	SAMP	5	Hexavalent Chromium	02/22/24 8:54 PM	Reported
80	N063249-005AMS	MS	5	Hexavalent Chromium	02/22/24 9:04 PM	Reported
81	N063249-007A	SAMP	5	Hexavalent Chromium	02/22/24 9:13 PM	Reported
82	N063249-007AMS	MS	5	Hexavalent Chromium	02/22/24 9:23 PM	Reported
83	CCV-7	CCV	1	Hexavalent Chromium	02/22/24 9:32 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	02/22/24 9:41 PM	Reported

For RBA 3/5/2024

INJECTION LOG: 240222A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063249-009A	SAMP	5	Hexavalent Chromium	02/22/24 9:51 PM	Reported
86	N063249-009AMS	MS	5	Hexavalent Chromium	02/22/24 10:00 PM	Reported
87	N063214-008A	SAMP	1	Hexavalent Chromium	02/22/24 10:10 PM	Reported
88	N063214-008AMS	MS	1	Hexavalent Chromium	02/22/24 10:19 PM	Reported
89	CCV-8	CCV1	1	Hexavalent Chromium	02/22/24 10:29 PM	Reported
90	CCB-8	CCB	1	Hexavalent Chromium	02/22/24 10:38 PM	Reported
91	BLANK	BLANK	1	Hexavalent Chromium	02/22/24 10:48 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240222A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**22/Feb/24 23:18:26**
No. of Injections:	**94**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/22/2024 08:37	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/22/2024 08:51	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/22/2024 09:00	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/22/2024 09:10	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/22/2024 09:19	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/22/2024 09:29	Finished	LCS @5ppb, IWST-231228B
15	N063214-010A,SAMF	7	1000	Unknown		02/22/2024 09:38	Finished	SAMP,10 mL
16	N063214-010AMS,MS	8	1000	Unknown		02/22/2024 09:48	Finished	MS (1ppb), IWST-231228B,10r
17	N063214-014A,SAMF	9	1000	Unknown		02/22/2024 09:57	Finished	SAMP,10 mL
18	N063214-014AMS,MS	10	1000	Unknown		02/22/2024 10:07	Finished	MS (1ppb), IWST-231228B,10r
19	N063214-016A,SAMF	11	1000	Unknown		02/22/2024 10:16	Finished	SAMP,10 mL
20	N063214-016AMS,MS	12	1000	Unknown		02/22/2024 10:26	Finished	MS (1ppb), IWST-231228B,10r
21	N063214-014AMSD,M	13	1000	Unknown		02/22/2024 10:35	Finished	MSD (1ppb), IWST-231228B,1(
22	N063214-010ADUP,D	14	1000	Unknown		02/22/2024 10:45	Finished	DUP,10 mL
23	CCV-2,CCV1,1,	15	1000	Unknown		02/22/2024 10:54	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		02/22/2024 11:03	Finished	CCB R240129C
25	N063214-011A,SAMF	17	1000	Unknown		02/22/2024 11:13	Finished	SAMP,10 mL
26	N063214-011AMS,MS	18	1000	Unknown		02/22/2024 11:22	Finished	MS (1ppb), IWST-231228B,10r
27	N063214-012A,SAMF	19	1000	Unknown		02/22/2024 11:32	Finished	SAMP,10 mL
28	N063214-012AMS,MS	20	1000	Unknown		02/22/2024 11:41	Finished	MS (1ppb), IWST-231228B,10r
29	N063214-013A,SAMF	21	1000	Unknown		02/22/2024 11:51	Finished	SAMP,10 mL
30	N063214-013AMS,MS	22	1000	Unknown		02/22/2024 12:00	Finished	MS (1ppb), IWST-231228B,10r
31	N063214-009A,SAMF	23	1000	Unknown		02/22/2024 12:10	Finished	SAMP,10 mL
32	N063214-009AMS,MS	24	1000	Unknown		02/22/2024 12:19	Finished	MS (1ppb), IWST-231228B,10r
33	N063214-015A,SAMF	25	1000	Unknown		02/22/2024 12:29	Finished	SAMP,10 mL
34	N063214-015AMS,MS	26	1000	Unknown		02/22/2024 12:38	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	27	1000	Unknown		02/22/2024 12:47	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	28	1000	Unknown		02/22/2024 12:57	Finished	CCB R240129C
37	N063214-017A,SAMF	29	1000	Unknown		02/22/2024 13:06	Finished	SAMP,10 mL
38	N063214-017AMS,MS	30	1000	Unknown		02/22/2024 13:16	Interrupted	MS (1ppb), IWST-231228B,10r
39	N063214-018A,SAMF	1	1000	Unknown		02/22/2024 14:14	Finished	SAMP,10 mL
40	N063214-018AMS,MS	2	1000	Unknown		02/22/2024 14:24	Finished	MS (1ppb), IWST-231228B,10r
41	N063214-011A,SAMF	3	1000	Unknown		02/22/2024 14:34	Finished	SAMP,2>10 mL
42	N063214-011AMS,MS	4	1000	Unknown		02/22/2024 14:43	Finished	MS (1ppb), IWST-231228B,2>1
43	N063214-012A,SAMF	5	1000	Unknown		02/22/2024 14:53	Finished	SAMP,2>10 mL
44	N063214-012AMS,MS	6	1000	Unknown		02/22/2024 15:02	Finished	MS (1ppb), IWST-231228B,2>1
45	N063214-013A,SAMF	7	1000	Unknown		02/22/2024 15:12	Finished	SAMP,2>10 mL
46	N063214-013AMS,MS	8	1000	Unknown		02/22/2024 15:21	Finished	MS (1ppb), IWST-231228B,2>1
47	CCV-4,CCV1,1,	9	1000	Unknown		02/22/2024 15:31	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	10	1000	Unknown		02/22/2024 15:40	Finished	CCB R240129C
49	N063249-001A,SAMF	1	1000	Unknown		02/22/2024 16:02	Finished	SAMP,10 mL
50	N063249-001AMS,MS	2	1000	Unknown		02/22/2024 16:13	Finished	MS (1ppb), IWST-231228B,10r
51	N063249-003A,SAMF	3	1000	Unknown		02/22/2024 16:22	Finished	SAMP,10 mL
52	N063249-003AMS,MS	4	1000	Unknown		02/22/2024 16:32	Finished	MS (1ppb), IWST-231228B,10r
53	N063249-004A,SAMF	5	1000	Unknown		02/22/2024 16:41	Finished	SAMP,10 mL
54	N063249-004AMS,MS	6	1000	Unknown		02/22/2024 16:51	Finished	MS (1ppb), IWST-231228B,10r
55	N063249-005A,SAMF	7	1000	Unknown		02/22/2024 17:00	Finished	SAMP,10 mL
56	N063249-005AMS,MS	8	1000	Unknown		02/22/2024 17:10	Finished	MS (1ppb), IWST-231228B,10r
57	N063249-007A,SAMF	9	1000	Unknown		02/22/2024 17:19	Finished	SAMP,10 mL
58	N063249-007AMS,MS	10	1000	Unknown		02/22/2024 17:29	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	11	1000	Unknown		02/22/2024 17:38	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	12	1000	Unknown		02/22/2024 17:47	Finished	CCB R240129C

61	N063249-009A,SAMP	13	1000	Unknown		02/22/2024 17:57	Finished	SAMP,10 mL
62	N063249-009AMS,MS	14	1000	Unknown		02/22/2024 18:10	Finished	MS (1ppb), IWST-231228B,10r
63	N063249-002A,SAMP	15	1000	Unknown		02/22/2024 18:20	Finished	SAMP,10 mL
64	N063249-002AMS,MS	16	1000	Unknown		02/22/2024 18:29	Finished	MS (1ppb), IWST-231228B,10r
65	N063249-006A,SAMP	17	1000	Unknown		02/22/2024 18:42	Finished	SAMP,10 mL
66	N063249-006AMS,MS	18	1000	Unknown		02/22/2024 18:51	Finished	MS (1ppb), IWST-231228B,10r
67	N063249-008A,SAMP	19	1000	Unknown		02/22/2024 19:01	Finished	SAMP,10 mL
68	N063249-008AMS,MS	20	1000	Unknown		02/22/2024 19:10	Finished	MS (1ppb), IWST-231228B,10r
69	~~N063249-010A,SAMP~~	21	1000	Unknown		02/22/2024 19:20	Finished	SAMP,10 mL
70	~~N063249-010AMS,MS~~	22	1000	Unknown		02/22/2024 19:29	Finished	MS (1ppb), IWST-231228B,10r
71	CCV-6,CCV1,1,	23	1000	Unknown		02/22/2024 19:39	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	24	1000	Unknown		02/22/2024 19:48	Finished	CCB R240129C
73	N063249-001A,SAMP	25	1000	Unknown		02/22/2024 19:57	Finished	SAMP,2>10 mL
74	N063249-001AMS,MS	26	1000	Unknown		02/22/2024 20:07	Finished	MS (1ppb), IWST-231228B,2>1
75	N063249-003A,SAMP	27	1000	Unknown		02/22/2024 20:16	Finished	SAMP,2>10 mL
76	N063249-003AMS,MS	28	1000	Unknown		02/22/2024 20:26	Finished	MS (1ppb), IWST-231228B,2>1
77	N063249-004A,SAMP	29	1000	Unknown		02/22/2024 20:35	Finished	SAMP,2>10 mL
78	N063249-004AMS,MS	30	1000	Unknown		02/22/2024 20:45	Finished	MS (1ppb), IWST-231228B,2>1
79	N063249-005A,SAMP	31	1000	Unknown		02/22/2024 20:54	Finished	SAMP,2>10 mL
80	N063249-005AMS,MS	32	1000	Unknown		02/22/2024 21:04	Finished	MS (1ppb), IWST-231228B,2>1
81	N063249-007A,SAMP	33	1000	Unknown		02/22/2024 21:13	Finished	SAMP,2>10 mL
82	N063249-007AMS,MS	34	1000	Unknown		02/22/2024 21:23	Finished	MS (1ppb), IWST-231228B,2>1
83	CCV-7,CCV,1,	35	1000	Unknown		02/22/2024 21:32	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	36	1000	Unknown		02/22/2024 21:41	Finished	CCB R240129C
85	N063249-009A,SAMP	37	1000	Unknown		02/22/2024 21:51	Finished	SAMP,2>10 mL
86	N063249-009AMS,MS	38	1000	Unknown		02/22/2024 22:00	Finished	MS (1ppb), IWST-231228B,2>1
87	N063214-008A,SAMP	39	1000	Unknown		02/22/2024 22:10	Finished	SAMP,10 mL
88	N063214-008AMS,MS	40	1000	Unknown		02/22/2024 22:19	Finished	MS (1ppb), IWST-231228B,10r
89	CCV-8,CCV1,1,	41	1000	Unknown		02/22/2024 22:29	Finished	CCV @10ppb, IWST-231228A
90	CCB-8,CCB,1,	42	1000	Unknown		02/22/2024 22:38	Finished	CCB R240129C
91	BLANK	43	1000	Unknown		02/22/2024 22:48	Finished	BLANK
92	SHUTDOWN	44	1000	Unknown		02/22/2024 22:57	Finished	
93	Eluent: R240222A	45	1000	Unknown		n.a.	Finished	
94	PCR: R240222B	46	1000	Unknown		n.a.	Finished	

N063249-010A,SAMP,1
N063249-010AMS,MS,1

INJECTION LOG: 240223A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/23/24 9:11 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/23/24 9:24 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/23/24 9:34 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/23/24 9:43 AM	Reported
13	MB-R182899	MBLK	1	Hexavalent Chromium	02/23/24 9:53 AM	Reported
14	LCS-R182899	LCS	1	Hexavalent Chromium	02/23/24 10:02 AM	Reported
15	N063248-001A	SAMP	1	Hexavalent Chromium	02/23/24 10:27 AM	Reported
16	N063248-003A	SAMP	1	Hexavalent Chromium	02/23/24 10:39 AM	Not Reported
17	N063248-005A	SAMP	1	Hexavalent Chromium	02/23/24 10:48 AM	Not Reported
18	N063248-006A	SAMP	1	Hexavalent Chromium	02/23/24 10:58 AM	Not Reported
19	N063248-007A	SAMP	1	Hexavalent Chromium	02/23/24 11:07 AM	Not Reported
20	N063248-003A	SAMP	100	Hexavalent Chromium	02/23/24 11:17 AM	Reported
21	N063248-003AMS	MS	100	Hexavalent Chromium	02/23/24 11:26 AM	Reported
22	N063248-003AMSD	MSD	100	Hexavalent Chromium	02/23/24 11:36 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/23/24 11:45 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/23/24 11:54 AM	Reported
25	N063248-001AMS	MS	1	Hexavalent Chromium	02/23/24 12:04 PM	Reported
26	N063248-005AMS	MS	1	Hexavalent Chromium	02/23/24 12:13 PM	Not Reported
27	N063248-011A	SAMP	1	Hexavalent Chromium	02/23/24 12:23 PM	Not Reported
28	N063248-011AMS	MS	1	Hexavalent Chromium	02/23/24 12:32 PM	Not Reported
29	N063248-006AMS	MS	1	Hexavalent Chromium	02/23/24 12:42 PM	Not Reported
30	N063248-007AMS	MS	1	Hexavalent Chromium	02/23/24 12:51 PM	Not Reported
31	N063248-002A	SAMP	50	Hexavalent Chromium	02/23/24 1:01 PM	Reported
32	N063248-002AMS	MS	50	Hexavalent Chromium	02/23/24 1:10 PM	Reported
33	N063248-004A	SAMP	5	Hexavalent Chromium	02/23/24 1:20 PM	Not Reported
34	N063248-004AMS	MS	5	Hexavalent Chromium	02/23/24 1:29 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/23/24 1:39 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/23/24 1:48 PM	Reported
37	N063248-010A	SAMP	5	Hexavalent Chromium	02/23/24 1:57 PM	Reported
38	N063248-010AMS	MS	5	Hexavalent Chromium	02/23/24 2:07 PM	Reported
39	N063248-008A	SAMP	1	Hexavalent Chromium	02/23/24 2:16 PM	Not Reported
40	N063248-008AMS	MS	1	Hexavalent Chromium	02/23/24 2:26 PM	Not Reported
41	N063248-009A	SAMP	1	Hexavalent Chromium	02/23/24 2:35 PM	Reported
42	N063248-009AMS	MS	1	Hexavalent Chromium	02/23/24 2:45 PM	Reported

3/5/2024

For RBA

INJECTION LOG: 240223A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063248-008A	SAMP	5	Hexavalent Chromium	02/23/24 2:54 PM	Reported
44	N063248-008AMS	MS	5	Hexavalent Chromium	02/23/24 3:04 PM	Reported
45	N063214-017A	SAMP	1	Hexavalent Chromium	02/23/24 3:13 PM	Reported
46	MB-107024	MBLK	1	Hexavalent Chromium	02/23/24 3:23 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/23/24 3:32 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/23/24 3:42 PM	Reported
49	N063246-001A	SAMP	1	Hexavalent Chromium	02/23/24 3:51 PM	Reported
50	N063246-001AREP	DUP	1	Hexavalent Chromium	02/23/24 4:00 PM	Reported
51	N063248-002ADUP	DUP	50	Hexavalent Chromium	02/23/24 4:14 PM	Reported
52	N063214-017AMS	MS	1	Hexavalent Chromium	02/23/24 4:26 PM	Reported
53	N063249-017A	SAMP	1	Hexavalent Chromium	02/23/24 4:35 PM	Reported
54	N063249-017AMS	MS	1	Hexavalent Chromium	02/23/24 4:45 PM	Reported
55	N063248-004A	SAMP	50	Hexavalent Chromium	02/23/24 4:54 PM	Reported
56	N063248-004AMS	MS	50	Hexavalent Chromium	02/23/24 5:23 PM	Reported
57	N063248-005A	SAMP	5	Hexavalent Chromium	02/23/24 5:34 PM	Reported
58	N063248-005AMS	MS	5	Hexavalent Chromium	02/23/24 5:43 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/23/24 5:53 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/23/24 6:02 PM	Reported
61	N063248-006A	SAMP	5	Hexavalent Chromium	02/23/24 6:12 PM	Reported
62	N063248-006AMS	MS	5	Hexavalent Chromium	02/23/24 6:21 PM	Reported
63	N063248-007A	SAMP	5	Hexavalent Chromium	02/23/24 6:31 PM	Reported
64	N063248-007AMS	MS	5	Hexavalent Chromium	02/23/24 6:40 PM	Reported
65	N063248-011A	SAMP	5	Hexavalent Chromium	02/23/24 6:50 PM	Reported
66	N063248-011AMS	MS	5	Hexavalent Chromium	02/23/24 6:59 PM	Reported
67	N063249-012A	SAMP	1	Hexavalent Chromium	02/23/24 7:09 PM	Reported
68	N063249-012AMS	MS	1	Hexavalent Chromium	02/23/24 7:18 PM	Reported
69	N063249-014A	SAMP	1	Hexavalent Chromium	02/23/24 7:27 PM	Reported
70	N063249-014AMS	MS	1	Hexavalent Chromium	02/23/24 7:37 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/23/24 7:46 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/23/24 7:56 PM	Reported
73	N063249-016A	SAMP	1	Hexavalent Chromium	02/23/24 8:05 PM	Reported
74	N063249-016AMS	MS	1	Hexavalent Chromium	02/23/24 8:15 PM	Reported
75	N063249-011A	SAMP	1	Hexavalent Chromium	02/23/24 8:24 PM	Not Reported
76	N063249-011AMS	MS	1	Hexavalent Chromium	02/23/24 8:34 PM	Not Reported
77	N063249-011A	SAMP	5	Hexavalent Chromium	02/23/24 8:43 PM	Reported
78	N063249-011AMS	MS	5	Hexavalent Chromium	02/23/24 8:53 PM	Reported
79	N063249-013A	SAMP	1	Hexavalent Chromium	02/23/24 9:02 PM	Not Reported
80	N063249-013AMS	MS	1	Hexavalent Chromium	02/23/24 9:12 PM	Not Reported
81	N063249-013A	SAMP	5	Hexavalent Chromium	02/23/24 9:21 PM	Reported
82	N063249-013AMS	MS	5	Hexavalent Chromium	02/23/24 9:30 PM	Reported
83	CCV-7	CCV	1	Hexavalent Chromium	02/23/24 9:40 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	02/23/24 9:49 PM	Reported

INJECTION LOG: 240223A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063249-015A	SAMP	1	Hexavalent Chromium	02/23/24 9:59 PM	Not Reported
86	N063249-015AMS	MS	1	Hexavalent Chromium	02/23/24 10:08 PM	Not Reported
87	N063249-015A	SAMP	5	Hexavalent Chromium	02/23/24 10:18 PM	Reported
88	N063249-015AMS	MS	5	Hexavalent Chromium	02/23/24 10:27 PM	Reported
89	CCV-8	CCV1	1	Hexavalent Chromium	02/23/24 10:37 PM	Reported
90	CCB-8	CCB	1	Hexavalent Chromium	02/23/24 10:46 PM	Reported
91	BLANK	BLANK	1	Hexavalent Chromium	02/23/24 10:56 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240223A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**23/Feb/24 23:26:19**
No. of Injections:	**94**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/23/2024 09:11	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/23/2024 09:24	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/23/2024 09:34	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/23/2024 09:43	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/23/2024 09:53	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/23/2024 10:02	Finished	LCS @5ppb, IWST-231228B
15	N063248-001A,SAMF	1	1000	Unknown		02/23/2024 10:27	Finished	SAMP,10 mL
16	N063248-003A,SAMF	2	1000	Unknown		02/23/2024 10:39	Finished	SAMP,10 mL
17	N063248-005A,SAMF	3	1000	Unknown		02/23/2024 10:48	Finished	SAMP,10 mL
18	N063248-006A,SAMF	4	1000	Unknown		02/23/2024 10:58	Finished	SAMP,10 mL
19	N063248-007A,SAMF	5	1000	Unknown		02/23/2024 11:07	Finished	SAMP,10 mL
20	N063248-003A,SAMF	6	1000	Unknown		02/23/2024 11:17	Finished	SAMP,0.1>10 mL
21	N063248-003AMS,MS	7	1000	Unknown		02/23/2024 11:26	Finished	MS (5ppb), IWST-231228B,0.1
22	N063248-003AMSD,M	8	1000	Unknown		02/23/2024 11:36	Finished	MSD (5ppb), IWST-231228B,0
23	CCV-2,CCV1,1,	9	1000	Unknown		02/23/2024 11:45	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		02/23/2024 11:54	Finished	CCB R240129C
25	N063248-001AMS,MS	11	1000	Unknown		02/23/2024 12:04	Finished	MS (1ppb), IWST-231228B,10r
26	N063248-005AMS,MS	12	1000	Unknown		02/23/2024 12:13	Finished	MS (1ppb), IWST-231228B,10r
27	N063248-011A,SAMF	13	1000	Unknown		02/23/2024 12:23	Finished	SAMP,10 mL
28	N063248-011AMS,MS	14	1000	Unknown		02/23/2024 12:32	Finished	MS (1ppb), IWST-231228B,10r
29	N063248-006AMS,MS	15	1000	Unknown		02/23/2024 12:42	Finished	MS (1ppb), IWST-231228B,10r
30	N063248-007AMS,MS	16	1000	Unknown		02/23/2024 12:51	Finished	MS (1ppb), IWST-231228B,10r
31	N063248-002A,SAMF	17	1000	Unknown		02/23/2024 13:01	Finished	SAMP,0.2>10 mL
32	N063248-002AMS,MS	18	1000	Unknown		02/23/2024 13:10	Finished	MS (5ppb), IWST-231228B,0.2
33	N063248-004A,SAMF	19	1000	Unknown		02/23/2024 13:20	Finished	SAMP,2>10 mL
34	N063248-004AMS,MS	20	1000	Unknown		02/23/2024 13:29	Finished	MS (5ppb), IWST-231228B,2>1
35	CCV-3,CCV,1,	21	1000	Unknown		02/23/2024 13:39	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	22	1000	Unknown		02/23/2024 13:48	Finished	CCB R240129C
37	N063248-010A,SAMF	23	1000	Unknown		02/23/2024 13:57	Finished	SAMP,2>10 mL
38	N063248-010AMS,MS	24	1000	Unknown		02/23/2024 14:07	Finished	MS (5ppb), IWST-231228B,2>1
39	N063248-008A,SAMF	25	1000	Unknown		02/23/2024 14:16	Finished	SAMP,10 mL
40	N063248-008AMS,MS	26	1000	Unknown		02/23/2024 14:26	Finished	MS (1ppb), IWST-231228B,10r
41	N063248-009A,SAMF	27	1000	Unknown		02/23/2024 14:35	Finished	SAMP,10 mL
42	N063248-009AMS,MS	28	1000	Unknown		02/23/2024 14:45	Finished	MS (1ppb), IWST-231228B,10r
43	N063248-008A,SAMF	29	1000	Unknown		02/23/2024 14:54	Finished	SAMP,2>10 mL
44	N063248-008AMS,MS	30	1000	Unknown		02/23/2024 15:04	Finished	MS (1ppb), IWST-231228B,2>1
45	N063214-017A,SAMF	31	1000	Unknown		02/23/2024 15:13	Finished	SAMP,10 mL
46	MB-107024,MBLK,1,	32	1000	Unknown		02/23/2024 15:23	Finished	MB TCLP
47	CCV-4,CCV1,1,	33	1000	Unknown		02/23/2024 15:32	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	34	1000	Unknown		02/23/2024 15:42	Finished	CCB R240129C
49	N063246-001A,SAMF	35	1000	Unknown		02/23/2024 15:51	Finished	SAMP,10 mL
50	N063246-001AREP,D	36	1000	Unknown		02/23/2024 16:00	Finished	REP,10 mL
51	N063248-002ADUP,D	1	1000	Unknown		02/23/2024 16:14	Finished	DUP,0.2>10 mL
52	N063214-017AMS,MS	2	1000	Unknown		02/23/2024 16:26	Finished	MS (1ppb), IWST-231228B,10r
53	N063249-017A,SAMF	3	1000	Unknown		02/23/2024 16:35	Finished	SAMP,10 mL
54	N063249-017AMS,MS	4	1000	Unknown		02/23/2024 16:45	Finished	MS (1ppb), IWST-231228B,10r
55	N063248-004A,SAMF	5	1000	Unknown		02/23/2024 16:54	Finished	SAMP,0.2>10 mL
56	N063248-004AMS,MS	1	1000	Unknown		02/23/2024 17:23	Finished	MS (5ppb), IWST-231228B,0.2
57	N063248-005A,SAMF	2	1000	Unknown		02/23/2024 17:34	Finished	SAMP,2>10 mL
58	N063248-005AMS,MS	3	1000	Unknown		02/23/2024 17:43	Finished	MS (1ppb), IWST-231228B,2>1
59	CCV-5,CCV,1,	4	1000	Unknown		02/23/2024 17:53	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	5	1000	Unknown		02/23/2024 18:02	Finished	CCB R240129C

61	N063248-006A,SAMF	6	1000	Unknown		02/23/2024 18:12	Finished	SAMP,2>10 mL
62	N063248-006AMS,MS	7	1000	Unknown		02/23/2024 18:21	Finished	MS (1ppb), IWST-231228B,2>1
63	N063248-007A,SAMF	8	1000	Unknown		02/23/2024 18:31	Finished	SAMP,2>10 mL
64	N063248-007AMS,MS	9	1000	Unknown		02/23/2024 18:40	Finished	MS (1ppb), IWST-231228B,2>1
65	N063248-011A,SAMF	10	1000	Unknown		02/23/2024 18:50	Finished	SAMP,2>10 mL
66	N063248-011AMS,MS	11	1000	Unknown		02/23/2024 18:59	Finished	MS (1ppb), IWST-231228B,2>1
67	N063249-012A,SAMF	12	1000	Unknown		02/23/2024 19:09	Finished	SAMP,10 mL
68	N063249-012AMS,MS	13	1000	Unknown		02/23/2024 19:18	Finished	MS (1ppb), IWST-231228B,10r
69	N063249-014A,SAMF	14	1000	Unknown		02/23/2024 19:27	Finished	SAMP,10 mL
70	N063249-014AMS,MS	15	1000	Unknown		02/23/2024 19:37	Finished	MS (1ppb), IWST-231228B,10r
71	CCV-6,CCV1,1,	16	1000	Unknown		02/23/2024 19:46	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	17	1000	Unknown		02/23/2024 19:56	Finished	CCB R240129C
73	N063249-016A,SAMF	18	1000	Unknown		02/23/2024 20:05	Finished	SAMP,10 mL
74	N063249-016AMS,MS	19	1000	Unknown		02/23/2024 20:15	Finished	MS (1ppb), IWST-231228B,10r
75	N063249-011A,SAMF	20	1000	Unknown		02/23/2024 20:24	Finished	SAMP,10 mL
76	N063249-011AMS,MS	21	1000	Unknown		02/23/2024 20:34	Finished	MS (1ppb), IWST-231228B,10r
77	N063249-011A,SAMF	22	1000	Unknown		02/23/2024 20:43	Finished	SAMP,2>10 mL
78	N063249-011AMS,MS	23	1000	Unknown		02/23/2024 20:53	Finished	MS (1ppb), IWST-231228B,2>1
79	N063249-013A,SAMF	24	1000	Unknown		02/23/2024 21:02	Finished	SAMP,10 mL
80	N063249-013AMS,MS	25	1000	Unknown		02/23/2024 21:12	Finished	MS (1ppb), IWST-231228B,10r
81	N063249-013A,SAMF	26	1000	Unknown		02/23/2024 21:21	Finished	SAMP,2>10 mL
82	N063249-013AMS,MS	27	1000	Unknown		02/23/2024 21:30	Finished	MS (1ppb), IWST-231228B,2>1
83	CCV-7,CCV,1,	28	1000	Unknown		02/23/2024 21:40	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	29	1000	Unknown		02/23/2024 21:49	Finished	CCB R240129C
85	N063249-015A,SAMF	30	1000	Unknown		02/23/2024 21:59	Finished	SAMP,10 mL
86	N063249-015AMS,MS	31	1000	Unknown		02/23/2024 22:08	Finished	MS (1ppb), IWST-231228B,10r
87	N063249-015A,SAMF	32	1000	Unknown		02/23/2024 22:18	Finished	SAMP,2>10 mL
88	N063249-015AMS,MS	33	1000	Unknown		02/23/2024 22:27	Finished	MS (1ppb), IWST-231228B,2>1
89	CCV-8,CCV1,1,	34	1000	Unknown		02/23/2024 22:37	Finished	CCV @10ppb, IWST-231228A
90	CCB-8,CCB,1,	35	1000	Unknown		02/23/2024 22:46	Finished	CCB R240129C
91	BLANK	36	1000	Unknown		02/23/2024 22:56	Finished	BLANK
92	SHUTDOWN R240222A	37	1000	Unknown		02/23/2024 23:05	Finished	
93	Eluent: ~~R240220A~~	38	1000	Unknown		n.a.	Finished	
94	PCR: ~~R240220B~~ R240222B	39	1000	Unknown		n.a.	Finished	

dMocha 3/7/2024
for RBA

INJECTION LOG: 240226A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/26/24 10:02 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/26/24 10:15 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/26/24 10:25 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/26/24 10:34 AM	Reported
13	MB-R182953	MBLK	1	Hexavalent Chromium	02/26/24 10:44 AM	Reported
14	LCS-R182953	LCS	1	Hexavalent Chromium	02/26/24 10:53 AM	Reported
15	N063295-001A	SAMP	1	Hexavalent Chromium	02/26/24 11:55 AM	Not Reported
16	N063295-003A	SAMP	1	Hexavalent Chromium	02/26/24 12:08 PM	Not Reported
17	N063295-005A	SAMP	1	Hexavalent Chromium	02/26/24 1:04 PM	Not Reported
18	N063295-006A	SAMP	1	Hexavalent Chromium	02/26/24 1:15 PM	Not Reported
19	N063295-007A	SAMP	1	Hexavalent Chromium	02/26/24 1:24 PM	Not Reported
20	N063214-007A	SAMP	5	Hexavalent Chromium	02/26/24 1:34 PM	Reported
21	N063214-007AMS	MS	5	Hexavalent Chromium	02/26/24 1:43 PM	Reported
22	N063295-001AMS	MS	1	Hexavalent Chromium	02/26/24 1:53 PM	Not Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/26/24 2:02 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/26/24 2:12 PM	Reported
25	N063295-003AMS	MS	1	Hexavalent Chromium	02/26/24 2:21 PM	Not Reported
26	N063295-005AMS	MS	1	Hexavalent Chromium	02/26/24 2:30 PM	Not Reported
27	N063295-006AMS	MS	1	Hexavalent Chromium	02/26/24 2:40 PM	Not Reported
28	N063295-007AMS	MS	1	Hexavalent Chromium	02/26/24 2:49 PM	Not Reported
29	N063295-001A	SAMP	5	Hexavalent Chromium	02/26/24 2:59 PM	Reported
30	N063295-001AMS	MS	5	Hexavalent Chromium	02/26/24 3:08 PM	Reported
31	N063295-001AMSD	MSD	5	Hexavalent Chromium	02/26/24 3:18 PM	Reported
32	N063295-003A	SAMP	5	Hexavalent Chromium	02/26/24 3:27 PM	Reported
33	N063295-003ADUP	DUP	5	Hexavalent Chromium	02/26/24 3:37 PM	Reported
34	N063295-003AMS	MS	5	Hexavalent Chromium	02/26/24 3:46 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/26/24 4:07 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/26/24 4:18 PM	Reported
37	N063295-005A	SAMP	5	Hexavalent Chromium	02/26/24 4:27 PM	Reported
38	N063295-005AMS	MS	5	Hexavalent Chromium	02/26/24 4:37 PM	Reported
39	N063295-006A	SAMP	5	Hexavalent Chromium	02/26/24 4:46 PM	Reported
40	N063295-006AMS	MS	5	Hexavalent Chromium	02/26/24 4:56 PM	Reported
41	N063295-007A	SAMP	5	Hexavalent Chromium	02/26/24 5:05 PM	Reported
42	N063295-007AMS	MS	5	Hexavalent Chromium	02/26/24 5:15 PM	Reported

INJECTION LOG: 240226A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063295-004A	SAMP	1	Hexavalent Chromium	02/26/24 5:24 PM	Reported
44	N063295-004AMS	MS	1	Hexavalent Chromium	02/26/24 5:33 PM	Reported
45	N063295-002A	SAMP	1	Hexavalent Chromium	02/26/24 5:43 PM	Not Reported
46	N063295-002AMS	MS	1	Hexavalent Chromium	02/26/24 5:52 PM	Not Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/26/24 6:02 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/26/24 6:11 PM	Reported
49	N063295-002A	SAMP	5	Hexavalent Chromium	02/26/24 6:21 PM	Not Reported
50	N063295-002AMS	MS	5	Hexavalent Chromium	02/26/24 6:30 PM	Not Reported
51	N063295-008A	SAMP	1	Hexavalent Chromium	02/26/24 6:40 PM	Not Reported
52	N063295-008AMS	MS	1	Hexavalent Chromium	02/26/24 6:49 PM	Not Reported
53	N063295-008A	SAMP	5	Hexavalent Chromium	02/26/24 6:59 PM	Reported
54	N063295-008AMS	MS	5	Hexavalent Chromium	02/26/24 7:08 PM	Reported
55	N063249-018A	SAMP	1	Hexavalent Chromium	02/26/24 7:18 PM	Not Reported
56	N063249-018AMS	MS	1	Hexavalent Chromium	02/26/24 7:27 PM	Not Reported
57	N063249-018A	SAMP	5	Hexavalent Chromium	02/26/24 7:36 PM	Reported
58	N063249-018AMS	MS	5	Hexavalent Chromium	02/26/24 7:46 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/26/24 7:55 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/26/24 8:05 PM	Reported
61	N063249-010A	SAMP	1	Hexavalent Chromium	02/26/24 8:14 PM	Not Reported
62	N063249-010AMS	MS	1	Hexavalent Chromium	02/26/24 8:24 PM	Not Reported
63	N063249-019A	SAMP	1	Hexavalent Chromium	02/26/24 8:33 PM	Reported
64	N063249-019AMS	MS	1	Hexavalent Chromium	02/26/24 8:43 PM	Reported
65	N063297-001A	SAMP	5	Hexavalent Chromium	02/26/24 8:52 PM	Reported
66	N063297-001AMS	MS	5	Hexavalent Chromium	02/26/24 9:02 PM	Reported
67	N063297-002A	SAMP	20	Hexavalent Chromium	02/26/24 9:11 PM	Reported
68	N063297-002AMS	MS	20	Hexavalent Chromium	02/26/24 9:21 PM	Reported
69	N063297-003A	SAMP	5	Hexavalent Chromium	02/26/24 9:30 PM	Reported
70	N063297-003AMS	MS	5	Hexavalent Chromium	02/26/24 9:39 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/26/24 9:49 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/26/24 9:58 PM	Reported
73	N063295-001A	SAMP	1	Hexavalent Chromium	02/26/24 10:08 PM	Not Reported
74	N063295-003A	SAMP	1	Hexavalent Chromium	02/26/24 10:17 PM	Not Reported
75	N063297-004A	SAMP	1	Hexavalent Chromium	02/26/24 10:27 PM	Reported
76	N063297-004AMS	MS	1	Hexavalent Chromium	02/26/24 10:36 PM	Reported
77	CCV-7	CCV	1	Hexavalent Chromium	02/26/24 10:46 PM	Reported
78	CCB-7	CCB	1	Hexavalent Chromium	02/26/24 10:55 PM	Reported
79	BLANK	BLANK	1	Hexavalent Chromium	02/26/24 11:04 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240226A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**26/Feb/24 23:35:17**
No. of Injections:	**82**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/26/2024 10:02	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/26/2024 10:15	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/26/2024 10:25	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/26/2024 10:34	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/26/2024 10:44	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/26/2024 10:53	Finished	LCS @5ppb, IWST-231228B
15	N063295-001A,SAMP	1	1000	Unknown		02/26/2024 11:55	Finished	SAMP,10 mL
16	N063295-003A,SAMP	2	1000	Unknown		02/26/2024 12:08	Finished	SAMP,10 mL
17	N063295-005A,SAMP	1	1000	Unknown		02/26/2024 13:04	Finished	SAMP,10 mL
18	N063295-006A,SAMP	2	1000	Unknown		02/26/2024 13:15	Finished	SAMP,10 mL
19	N063295-007A,SAMP	3	1000	Unknown		02/26/2024 13:24	Finished	SAMP,10 mL
20	N063214-007A,SAMP	4	1000	Unknown		02/26/2024 13:34	Finished	SAMP,2>10 mL
21	N063214-007AMS,MS	5	1000	Unknown		02/26/2024 13:43	Finished	MS (1ppb), IWST-231228B,2>
22	N063295-001AMS,MS	6	1000	Unknown		02/26/2024 13:53	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	7	1000	Unknown		02/26/2024 14:02	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	8	1000	Unknown		02/26/2024 14:12	Finished	CCB R240129C
25	N063295-003AMS,MS	9	1000	Unknown		02/26/2024 14:21	Finished	MS (1ppb), IWST-231228B,10r
26	N063295-005AMS,MS	10	1000	Unknown		02/26/2024 14:30	Finished	MS (1ppb), IWST-231228B,10r
27	N063295-006AMS,MS	11	1000	Unknown		02/26/2024 14:40	Finished	MS (1ppb), IWST-231228B,10r
28	N063295-007AMS,MS	12	1000	Unknown		02/26/2024 14:49	Finished	MS (1ppb), IWST-231228B,10r
29	N063295-001A,SAMP	13	1000	Unknown		02/26/2024 14:59	Finished	SAMP,2>10 mL
30	N063295-001AMS,MS	14	1000	Unknown		02/26/2024 15:08	Finished	MS (5ppb), IWST-231228B,2>
31	N063295-001AMSD,M	15	1000	Unknown		02/26/2024 15:18	Finished	MSD (5ppb), IWST-231228B,2
32	N063295-003A,SAMP	16	1000	Unknown		02/26/2024 15:27	Finished	SAMP,2>10 mL
33	N063295-003ADUP,D	17	1000	Unknown		02/26/2024 15:37	Finished	DUP,2>10 mL
34	N063295-003AMS,MS	18	1000	Unknown		02/26/2024 15:46	Finished	MS (5ppb), IWST-231228B,2>
35	CCV-3,CCV,1,	1	1000	Unknown		02/26/2024 16:07	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	2	1000	Unknown		02/26/2024 16:18	Finished	CCB R240129C
37	N063295-005A,SAMP	3	1000	Unknown		02/26/2024 16:27	Finished	SAMP,2>10 mL
38	N063295-005AMS,MS	4	1000	Unknown		02/26/2024 16:37	Finished	MS (1ppb), IWST-231228B,2>
39	N063295-006A,SAMP	5	1000	Unknown		02/26/2024 16:46	Finished	SAMP,2>10 mL
40	N063295-006AMS,MS	6	1000	Unknown		02/26/2024 16:56	Finished	MS (1ppb), IWST-231228B,2>
41	N063295-007A,SAMP	7	1000	Unknown		02/26/2024 17:05	Finished	SAMP,2>10 mL
42	N063295-007AMS,MS	8	1000	Unknown		02/26/2024 17:15	Finished	MS (1ppb), IWST-231228B,2>
43	N063295-004A,SAMP	9	1000	Unknown		02/26/2024 17:24	Finished	SAMP,10 mL
44	N063295-004AMS,MS	10	1000	Unknown		02/26/2024 17:33	Finished	MS (1ppb), IWST-231228B,10r
45	N063295-002A,SAMP	11	1000	Unknown		02/26/2024 17:43	Finished	SAMP,10 mL
46	N063295-002AMS,MS	12	1000	Unknown		02/26/2024 17:52	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	13	1000	Unknown		02/26/2024 18:02	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	14	1000	Unknown		02/26/2024 18:11	Finished	CCB R240129C
49	N063295-002A,SAMP	15	1000	Unknown		02/26/2024 18:21	Finished	SAMP,2>10 mL
50	N063295-002AMS,MS	16	1000	Unknown		02/26/2024 18:30	Finished	MS (1ppb), IWST-231228B,2>
51	N063295-008A,SAMP	17	1000	Unknown		02/26/2024 18:40	Finished	SAMP,10 mL
52	N063295-008AMS,MS	18	1000	Unknown		02/26/2024 18:49	Finished	MS (1ppb), IWST-231228B,10r
53	N063295-008A,SAMP	19	1000	Unknown		02/26/2024 18:59	Finished	SAMP,2>10 mL
54	N063295-008AMS,MS	20	1000	Unknown		02/26/2024 19:08	Finished	MS (1ppb), IWST-231228B,2>
55	N063249-018A,SAMP	21	1000	Unknown		02/26/2024 19:18	Finished	SAMP,10 mL
56	N063249-018AMS,MS	22	1000	Unknown		02/26/2024 19:27	Finished	MS (1ppb), IWST-231228B,10r
57	N063249-018A,SAMP	23	1000	Unknown		02/26/2024 19:36	Finished	SAMP,2>10 mL
58	N063249-018AMS,MS	24	1000	Unknown		02/26/2024 19:46	Finished	MS (1ppb), IWST-231228B,2>
59	CCV-5,CCV,1,	25	1000	Unknown		02/26/2024 19:55	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	26	1000	Unknown		02/26/2024 20:05	Finished	CCB R240129C

61	N063249-010A,SAMP	27	1000	Unknown		02/26/2024 20:14	Finished	SAMP,10 mL
62	N063249-010AMS,MS	28	1000	Unknown		02/26/2024 20:24	Finished	MS (1ppb), IWST-231228B,10r
63	N063249-019A,SAMP	29	1000	Unknown		02/26/2024 20:33	Finished	SAMP,10 mL
64	N063249-019AMS,MS	30	1000	Unknown		02/26/2024 20:43	Finished	MS (1ppb), IWST-231228B,10r
65	N063297-001A,SAMP	31	1000	Unknown		02/26/2024 20:52	Finished	SAMP,2>10 mL
66	N063297-001AMS,MS	32	1000	Unknown		02/26/2024 21:02	Finished	MS (5ppb), IWST-231228B,2>1
67	N063297-002A,SAMP	33	1000	Unknown		02/26/2024 21:11	Finished	SAMP,0.5>10 mL
68	N063297-002AMS,MS	34	1000	Unknown		02/26/2024 21:21	Finished	MS (1ppb), IWST-231228B,0.5
69	N063297-003A,SAMP	35	1000	Unknown		02/26/2024 21:30	Finished	SAMP,2>10 mL
70	N063297-003AMS,MS	36	1000	Unknown		02/26/2024 21:39	Finished	MS (5ppb), IWST-231228B,2>1
71	CCV-6,CCV1,1,	37	1000	Unknown		02/26/2024 21:49	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	38	1000	Unknown		02/26/2024 21:58	Finished	CCB R240129C
73	N063295-001A,SAMP	39	1000	Unknown		02/26/2024 22:08	Finished	SAMP,10 mL
74	N063295-003A,SAMP	40	1000	Unknown		02/26/2024 22:17	Finished	SAMP,10 mL
75	N063297-004A,SAMP	41	1000	Unknown		02/26/2024 22:27	Finished	SAMP,10 mL
76	N063297-004AMS,MS	42	1000	Unknown		02/26/2024 22:36	Finished	MS (1ppb), IWST-231228B,10r
77	CCV-7,CCV,1,	43	1000	Unknown		02/26/2024 22:46	Finished	CCV @5ppb, IWST-231228A
78	CCB-7,CCB,1,	44	1000	Unknown		02/26/2024 22:55	Finished	CCB R240129C
79	BLANK	45	1000	Unknown		02/26/2024 23:04	Finished	BLANK
80	SHUTDOWN R240226A	46	1000	Unknown		02/26/2024 23:14	Finished	
81	Eluent: ~~R240228A~~	47	1000	Unknown		n.a.	Finished	
82	PCR: ~~R240228B~~ R240226B	48	1000	Unknown		n.a.	Finished	

dMocha 3/7/2024
for RBA

INJECTION LOG: 240229A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/29/24 10:06 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/29/24 10:19 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/29/24 10:29 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/29/24 10:38 AM	Reported
13	MB-R183037	MBLK	1	Hexavalent Chromium	02/29/24 10:48 AM	Reported
14	LCS-R183037	LCS	1	Hexavalent Chromium	02/29/24 10:57 AM	Reported
15	N063053-007A	SAMP	20	Hexavalent Chromium	02/29/24 11:06 AM	Not Reported
16	N063353-007AMS	MS	20	Hexavalent Chromium	02/29/24 11:16 AM	Not Reported
17	N063406-001A	SAMP	1	Hexavalent Chromium	02/29/24 11:45 AM	Reported
18	N063406-002A	SAMP	1	Hexavalent Chromium	02/29/24 11:56 AM	Reported
19	N063214-005A	SAMP	5	Hexavalent Chromium	02/29/24 12:05 PM	Reported
20	N063214-005AMS	MS	5	Hexavalent Chromium	02/29/24 12:15 PM	Reported
21	MB-107165	MBLK	1	Hexavalent Chromium	02/29/24 12:24 PM	Reported
22	N063407-001A	SAMP	1	Hexavalent Chromium	02/29/24 12:34 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/29/24 12:43 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/29/24 12:53 PM	Reported
25	N063407-001AREP	DUP	1	Hexavalent Chromium	02/29/24 1:02 PM	Reported
26	N063407-001AMS	MS	1	Hexavalent Chromium	02/29/24 1:12 PM	Reported
27	N063407-001AMSD	MSD	1	Hexavalent Chromium	02/29/24 1:21 PM	Reported
28	N063406-001AMS	MS	1	Hexavalent Chromium	02/29/24 1:30 PM	Reported
29	N063406-002AMS	MS	1	Hexavalent Chromium	02/29/24 1:40 PM	Reported
30	N063406-001A	SAMP	5	Hexavalent Chromium	02/29/24 1:49 PM	Not Reported
31	N063406-001AMS	MS	5	Hexavalent Chromium	02/29/24 1:59 PM	Not Reported
32	N063406-002A	SAMP	5	Hexavalent Chromium	02/29/24 2:08 PM	Not Reported
33	N063406-002AMS	MS	5	Hexavalent Chromium	02/29/24 2:18 PM	Not Reported
34	CCV-3	CCV	1	Hexavalent Chromium	02/29/24 2:27 PM	Reported
35	CCB-3	CCB	1	Hexavalent Chromium	02/29/24 2:37 PM	Reported
36	BLANK	BLANK	1	Hexavalent Chromium	02/29/24 2:46 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240229A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**29/Feb/24 15:16:52**
No. of Injections:	**39**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/29/2024 10:06	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/29/2024 10:19	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/29/2024 10:29	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/29/2024 10:38	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/29/2024 10:48	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/29/2024 10:57	Finished	LCS @5ppb, IWST-231228B
15	N063053-007A,SAMP	7	1000	Unknown		02/29/2024 11:06	Finished	SAMP,0.5>10 mL
16	N063353-007AMS,MS	8	1000	Unknown		02/29/2024 11:16	Finished	MS (5ppb), IWST-231228B,0.5
17	N063406-001A,SAMP	1	1000	Unknown		02/29/2024 11:45	Finished	SAMP,10 mL
18	N063406-002A,SAMP	2	1000	Unknown		02/29/2024 11:56	Finished	SAMP,10 mL
19	N063214-005A,SAMP	3	1000	Unknown		02/29/2024 12:05	Finished	SAMP,2>10 mL
20	N063214-005AMS,MS	4	1000	Unknown		02/29/2024 12:15	Finished	MS (1ppb), IWST-231228B,2>1
21	MB-107165,MBLK,1	5	1000	Unknown		02/29/2024 12:24	Finished	MB TCLP
22	N063407-001A,SAMP	6	1000	Unknown		02/29/2024 12:34	Finished	SAMP,10 mL
23	CCV-2,CCV1,1,	7	1000	Unknown		02/29/2024 12:43	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	8	1000	Unknown		02/29/2024 12:53	Finished	CCB R240129C
25	N063407-001AREP,D	9	1000	Unknown		02/29/2024 13:02	Finished	DUP,10 mL
26	N063407-001AMS,MS	10	1000	Unknown		02/29/2024 13:12	Finished	MS (1ppb), IWST-231228B,10r
27	N063407-001AMSD,M	11	1000	Unknown		02/29/2024 13:21	Finished	MSD (1ppb), IWST-231228B,1(
28	N063406-001AMS,MS	12	1000	Unknown		02/29/2024 13:30	Finished	MS (1ppb), IWST-231228B,10r
29	N063406-002AMS,MS	13	1000	Unknown		02/29/2024 13:40	Finished	MS (1ppb), IWST-231228B,10r
30	N063406-001A,SAMP	14	1000	Unknown		02/29/2024 13:49	Finished	SAMP,2>10 mL
31	N063406-001AMS,MS	15	1000	Unknown		02/29/2024 13:59	Finished	MS (1ppb), IWST-231228B,2>1
32	N063406-002A,SAMP	16	1000	Unknown		02/29/2024 14:08	Finished	SAMP,2>10 mL
33	N063406-002AMS,MS	17	1000	Unknown		02/29/2024 14:18	Finished	MS (1ppb), IWST-231228B,2>1
34	CCV-3,CCV,1,	18	1000	Unknown		02/29/2024 14:27	Finished	CCV @5ppb, IWST-231228A
35	CCB-3,CCB,1,	19	1000	Unknown		02/29/2024 14:37	Finished	CCB R240129C
36	BLANK	20	1000	Unknown		02/29/2024 14:46	Finished	BLANK
37	SHUTDOWN	21	1000	Unknown		02/29/2024 14:56	Finished	
38	Eluent: R240226A	22	1000	Unknown		n.a.	Finished	
39	PCR: R240226B	23	1000	Unknown		n.a.	Finished	

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 2/21/24
Time Prepared: 0946 H
Prepared By: RA

Reagent ID:
Sulfuric Acid: 143135
Diphenylcarbazide: 157109
NH4OH + NH4SO4 eluent: M240220A
NH4OH + NH4SO4 buffer: M240129C

Con NaOH. M231224C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW3211-1A	9.34	-	~250mL	~250mL		
2)	2A	9.38	-				
3)	3A	9.31	-				
4)	MW3217-1A	8.80	9.66			+7	
5)	2A	8.76	9.62			+7	
6)	3A	9.38	-				
7)	4A	9.46	-				
8)	5A	9.32	-				
9)	6A	9.01	9.49			+4	
10)	7A	9.46	-				
11)	8A	9.32	-				
12)	9A	9.68	-				
13)	MW3214-1A	9.15	9.51			+3	
14)	2A	9.68	-				
15)	3A	9.26	9.37			+2	
	4A	9.66	-				

Sample Preparation

Date Prepared: 2/21/24
Time Prepared: 0946 H
Prepared By: RA

Reagent ID:
Sulfuric Acid: 143135
Diphenylcarbazide: 157109
NH4OH + NH4SO4 eluent: M240220A
NH4OH + NH4SO4 buffer: M240129C

Con NaOH M231224C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW3214-5A	9.21	9.39	~250mL	~250mL	+3	
2)	6A	9.71	-				
3)	7A	9.11	9.50			+4	
4)	8A	9.66	-				
5)	9A	9.64	-				
6)	10A	9.38	-				
7)	11A	9.14	9.44			+3	
8)	12A	8.90	9.47			+4	
9)	13A	8.94	9.49			+4	
10)	14A	9.00	9.64			+5	
11)	15A	9.64	-				
12)	16A	9.32	-				
13)	17A	9.71	-				
14)	18A	9.70	-				
15)							

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 2/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0427	0.2063	1.0639	2.1157	3.2270	4.3227	0.9999
Measured, in ug/L	0.198500	0.959200	4.946100	9.835700	15.002300	20.095900	
Relative Error (%RE)	-0.8%		-1.1%				

	Stock	Working
Standard Concentration:	1,000,000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ICV**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5704442**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5704443**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCV**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704445**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.942	0.20	5.000	0	98.8	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704446**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.193	0.20	0.2000	0	96.5	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704458**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.938	0.20	10.00	0	99.4	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCV**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704466**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.977	0.20	5.000	0	99.5	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704475**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.893	0.20	10.00	0	98.9	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCV**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704481**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.863	0.20	5.000	0	97.3	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ZZZZZZ**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704493**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.764	0.20	10.00	0	97.6	95	105				

Sample ID: **CCV-7**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCV**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704502**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.859	0.20	5.000	0	97.2	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ICV**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5711897**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5711898**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCV**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711900**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.965	0.20	5.000	0	99.3	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711901**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.202	0.20	0.2000	0	101	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711913**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.127	0.20	10.00	0	101	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCV**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711921**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.018	0.20	5.000	0	100	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711931**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.004	0.20	10.00	0	100	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCV**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711933**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.947	0.20	5.000	0	98.9	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711943**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.880	0.20	10.00	0	98.8	95	105				

Sample ID: **CCV-7**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCV**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711955**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.046	0.20	5.000	0	101	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-8** SampType: **CCV1** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711961**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.973	0.20	10.00	0	99.7	95	105				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ICV**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5711963**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5711964**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCV**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711966**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.911	0.20	5.000	0	98.2	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711967**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.195	0.20	0.2000	0	97.3	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711975**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.928	0.20	10.00	0	99.3	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCV**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711980**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.010	0.20	5.000	0	100	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711990**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.085	0.20	10.00	0	101	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCV**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712002**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.992	0.20	5.000	0	99.8	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712014**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.100	0.20	10.00	0	101	95	105				

Sample ID: **CCV-7**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCV**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712022**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.137	0.20	5.000	0	103	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-8**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712026**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.180	0.20	10.00	0	102	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ICV**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5714774**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5714775**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCV**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714777**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.984	0.20	5.000	0	99.7	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714778**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.189	0.20	0.2000	0	94.7	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714784**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.988	0.20	10.00	0	99.9	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCV**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714792**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.875	0.20	5.000	0	97.5	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714802**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.791	0.20	10.00	0	97.9	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCV**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714808**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.964	0.20	5.000	0	99.3	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714820**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.066	0.20	10.00	0	101	95	105				

Sample ID: **CCV-7**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCV**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714824**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.009	0.20	5.000	0	100	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183037**
Client ID: **ICV**	Batch ID: **R183037**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5718873**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183037**
Client ID: **ZZZZZZ**	Batch ID: **R183037**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5718874**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183037**
Client ID: **CCV**	Batch ID: **R183037**	TestNo: **EPA 218.6**		Analysis Date: **2/29/2024**	SeqNo: **5718876**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.871	0.20	5.000	0	97.4	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183037**
Client ID: **ZZZZZZ**	Batch ID: **R183037**	TestNo: **EPA 218.6**		Analysis Date: **2/29/2024**	SeqNo: **5718877**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.199	0.20	0.2000	0	99.4	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183037**
Client ID: **ZZZZZZ**	Batch ID: **R183037**	TestNo: **EPA 218.6**		Analysis Date: **2/29/2024**	SeqNo: **5718889**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.929	0.20	10.00	0	99.3	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183037**
Client ID: **CCV**	Batch ID: **R183037**	TestNo: **EPA 218.6**		Analysis Date: **2/29/2024**	SeqNo: **5718896**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.001	0.20	5.000	0	100	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **ICB**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5704444**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCB**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704447**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCB**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704459**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCB**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704467**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCB**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704476**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCB**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704482**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCB**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704494**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-7**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182773**
Client ID: **CCB**	Batch ID: **R182773**	TestNo: **EPA 218.6**		Analysis Date: **2/21/2024**	SeqNo: **5704503**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ICB**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5711899**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCB**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711902**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCB**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711914**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCB**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711922**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCB**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711932**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCB**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711934**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCB**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711944**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-7**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCB**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711956**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-8**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCB**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711962**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ICB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5711965**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711968**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711976**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711981**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711991**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712003**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712015**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-7**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-8**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712027**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ICB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5714776**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714779**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714785**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714793**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714803**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714809**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714821**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-7**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714825**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183037**
Client ID: **ICB**	Batch ID: **R183037**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5718875**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183037**
Client ID: **CCB**	Batch ID: **R183037**	TestNo: **EPA 218.6**		Analysis Date: **2/29/2024**	SeqNo: **5718878**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183037**
Client ID: **CCB**	Batch ID: **R183037**	TestNo: **EPA 218.6**		Analysis Date: **2/29/2024**	SeqNo: **5718890**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183037**
Client ID: **CCB**	Batch ID: **R183037**	TestNo: **EPA 218.6**		Analysis Date: **2/29/2024**	SeqNo: **5718897**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/21/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.065	
CCV-2	4.056	
CCV-3	4.056	
CCV-4	4.056	
CCV-5	4.056	
CCV-6	4.065	
CCV-7	4.056	

Average	4.059
Actual RT Window	3.979 - 4.139
Applied RT Window	3.859 - 4.259

MB-R182773	N.A.	N.A.
LCS-R182773	4.065	PASS
N063213-008A	4.023	PASS
N063211-001A	3.923	PASS
N063211-002A	3.923	PASS
N063211-003A	3.906	PASS
N063211-001AMS	3.915	PASS
N063211-002AMS	3.915	PASS
N063211-003AMS	3.906	PASS
N063213-008AMS	4.031	PASS
N063213-008AMSD	4.023	PASS
N063213-001A	4.048	PASS
N063213-002A	3.898	PASS
N063213-005A	3.931	PASS
N063213-003A	4.031	PASS
N063213-004A	4.056	PASS
N063213-007A	4.056	PASS
N063211-001ADUP	3.923	PASS
N063213-001AMS	4.040	PASS
N063213-002AMS	3.898	PASS
N063213-005AMS	3.940	PASS

Reviewed by:

dMRocha 3/7/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/21/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.065	
CCV-2	4.056	
CCV-3	4.056	
CCV-4	4.056	
CCV-5	4.056	
CCV-6	4.065	
CCV-7	4.056	
Average	4.059	
Actual RT Window	3.979 - 4.139	
Applied RT Window	3.859 - 4.259	
N063213-004AMS	4.056	PASS
N063213-007AMS	4.056	PASS
N063213-006A	N.A.	N.A.
N063213-006A	N.A.	N.A.
N063213-006AMS	4.015	PASS
N063213-009A	N.A.	N.A.
N063213-009AMS	4.056	PASS
N063213-003AMS	4.031	PASS
N063214-007A	N.A.	N.A.
N063214-007AMS	N.A.	N.A.
N063214-001A	N.A.	N.A.
N063214-003A	N.A.	N.A.
N063214-003AMS	N.A.	N.A.
N062911-004AMS	4.031	PASS
N063911-004AMS	4.015	PASS
N063214-002A	N.A.	N.A.
N063214-002AMS	4.048	PASS
N063214-004A	N.A.	N.A.
N063214-004AMS	4.056	PASS
N063214-006A	N.A.	N.A.
N063214-006AMS	4.056	PASS

Reviewed by:

dMRocha 3/7/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/21/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.065	
CCV-2	4.056	
CCV-3	4.056	
CCV-4	4.056	
CCV-5	4.056	
CCV-6	4.065	
CCV-7	4.056	

Average	4.059	
Actual RT Window	3.979 -	4.139
Applied RT Window	3.859 -	4.259

N063214-008A	N.A.	N.A.
N063214-008AMS	4.048	PASS
N063214-001A	N.A.	N.A.
N063214-001AMS	4.006	PASS
N063214-003A	N.A.	N.A.
N063214-003AMS	3.965	PASS
N063214-005A	N.A.	N.A.
N063213-001AMS	4.048	PASS
N063213-001A	4.048	PASS
N063213-003AMS	4.056	PASS
N063213-003A	4.056	PASS
N063213-002AMS	3.898	PASS
N063214-005A	N.A.	N.A.
N063214-005AMS	N.A.	N.A.

Reviewed by:

dMocha 3/7/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/22/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.056	
CCV-2	4.048	
CCV-3	4.056	
CCV-4	4.048	
CCV-5	4.056	
CCV-6	4.048	
CCV-7	4.048	
CCV-8	4.048	

Average	4.051		
Actual RT Window	3.971	-	4.131
Applied RT Window	3.851	-	4.251

MB-R182897	N.A.	N.A.
LCS-R182897	4.056	PASS
N063214-010A	4.056	PASS
N063214-010AMS	4.048	PASS
N063214-014A	N.A.	N.A.
N063214-014AMS	4.048	PASS
N063214-016A	N.A.	N.A.
N063214-016AMS	3.898	PASS
N063214-014AMSD	4.048	PASS
N063214-010ADUP	4.040	PASS
N063214-011A	N.A.	N.A.
N063214-011AMS	3.890	PASS
N063214-012A	N.A.	N.A.
N063214-009A	N.A.	N.A.
N063214-009AMS	4.048	PASS
N063214-015A	N.A.	N.A.
N063214-015AMS	4.048	PASS
N063214-017A	N.A.	N.A.
N063214-017AMS	N.A.	N.A.
N063214-018A	N.A.	N.A.

Reviewed by:

dMocha 3/7/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/22/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.056	
CCV-2	4.048	
CCV-3	4.056	
CCV-4	4.048	
CCV-5	4.056	
CCV-6	4.048	
CCV-7	4.048	
CCV-8	4.048	

Average	4.051
Actual RT Window	3.971 - 4.131
Applied RT Window	3.851 - 4.251

N063214-018AMS	4.056	PASS
N063214-011A	N.A.	N.A.
N063214-011AMS	4.023	PASS
N063214-012A	N.A.	N.A.
N063214-012AMS	4.015	PASS
N063214-013A	4.006	PASS
N063214-013AMS	4.006	PASS
N063249-003AMS	3.856	PASS
N063249-004A	N.A.	N.A.
N063249-004AMS	N.A.	N.A.
N063249-007A	N.A.	N.A.
N063249-007AMS	N.A.	N.A.
N063249-009A	N.A.	N.A.
N063249-009AMS	N.A.	N.A.
N063249-002A	N.A.	N.A.
N063249-002AMS	4.056	PASS
N063249-006A	N.A.	N.A.
N063249-006AMS	4.048	PASS
N063249-008A	N.A.	N.A.
N063249-008AMS	4.048	PASS

Reviewed by:

dMRocha 3/7/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/22/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.056	
CCV-2	4.048	
CCV-3	4.056	
CCV-4	4.048	
CCV-5	4.056	
CCV-6	4.048	
CCV-7	4.048	
CCV-8	4.048	

Average	4.051	
Actual RT Window	3.971 -	4.131
Applied RT Window	3.851 -	4.251

~~N063249-009A~~	N063249-010A	N.A.	N.A.
~~N063249-009AMS~~	N063249-010AMS	4.048	PASS
N063249-001A		4.023	PASS
N063249-001AMS		4.023	PASS
N063249-003A		4.023	PASS
N063249-003AMS		4.031	PASS
N063249-004A		3.990	PASS
N063249-004AMS		3.998	PASS
N063249-005A		4.015	PASS
N063249-005AMS		4.023	PASS
N063249-007A		N.A.	N.A.
N063249-007AMS		3.965	PASS
N063249-009A		N.A.	N.A.
N063249-009AMS		3.981	PASS
N063214-008A		N.A.	N.A.
N063214-008AMS		4.048	PASS

Reviewed by:

dMocha 3/7/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/23/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.048	
CCV-2	4.048	
CCV-3	4.048	
CCV-4	4.040	
CCV-5	4.040	
CCV-6	4.040	
CCV-7	4.040	
CCV-8	4.040	
Average	4.043	
Actual RT Window	3.963 - 4.123	
Applied RT Window	3.843 - 4.243	
MB-R182899	N.A.	N.A.
LCS-R182899	4.040	PASS
N063248-001A	N.A.	N.A.
N063248-003A	3.848	PASS
N063248-005A	N.A.	N.A.
N063248-006A	N.A.	N.A.
N063248-007A	N.A.	N.A.
N063248-003A	4.048	PASS
N063248-003AMS	4.040	PASS
N063248-003AMSD	4.040	PASS
N063248-001AMS	3.965	PASS
N063248-011A	N.A.	N.A.
N063248-006AMS	N.A.	N.A.
N063248-007AMS	N.A.	N.A.
N063248-002A	4.040	PASS
N063248-002AMS	4.040	PASS
N063248-004A	4.015	PASS
N063248-004AMS	4.006	PASS
N063248-010A	4.031	PASS
N063248-010AMS	4.031	PASS

Reviewed by:

dMocha 3/7/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/23/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.048	
CCV-2	4.048	
CCV-3	4.048	
CCV-4	4.040	
CCV-5	4.040	
CCV-6	4.040	
CCV-7	4.040	
CCV-8	4.040	
Average	4.043	
Actual RT Window	3.963 - 4.123	
Applied RT Window	3.843 - 4.243	
N063248-008A	N.A.	N.A.
N063248-008AMS	N.A.	N.A.
N063248-009A	4.031	PASS
N063248-009AMS	4.040	PASS
N063248-008A	N.A.	N.A.
N063248-008AMS	3.965	PASS
N063214-017A	N.A.	N.A.
MB-107024	N.A.	N.A.
N063246-001A	4.040	PASS
N063246-001AREP	4.040	PASS
N063248-002ADUP	4.040	PASS
N063214-017AMS	4.040	PASS
N063249-017A	N.A.	N.A.
N063249-017AMS	4.040	PASS
N063248-004A	4.040	PASS
N063248-004AMS	4.040	PASS
N063248-005A	N.A.	N.A.
N063248-005AMS	3.990	PASS
N063248-006A	N.A.	N.A.
N063248-006AMS	3.973	PASS

Reviewed by:

dMocha 3/7/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/23/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.048	
CCV-2	4.048	
CCV-3	4.048	
CCV-4	4.040	
CCV-5	4.040	
CCV-6	4.040	
CCV-7	4.040	
CCV-8	4.040	

Average	4.043	
Actual RT Window	3.963 -	4.123
Applied RT Window	3.843 -	4.243

N063248-007A	N.A.	N.A.
N063248-007AMS	3.973	PASS
N063248-011A	N.A.	N.A.
N063248-011AMS	3.998	PASS
N063249-012A	N.A.	N.A.
N063249-012AMS	4.040	PASS
N063249-014A	N.A.	N.A.
N063249-014AMS	4.040	PASS
N063249-016A	N.A.	N.A.
N063249-016AMS	4.040	PASS
N063249-011A	N.A.	N.A.
N063249-011A	N.A.	N.A.
N063249-011AMS	4.006	PASS
N063249-013A	N.A.	N.A.
N063249-013AMS	N.A.	N.A.
N063249-013A	N.A.	N.A.
N063249-013AMS	3.931	PASS
N063249-015A	N.A.	N.A.
N063249-015AMS	N.A.	N.A.
N063249-015A	N.A.	N.A.

Reviewed by:

dMocha 3/7/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/23/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.048	
CCV-2	4.048	
CCV-3	4.048	
CCV-4	4.040	
CCV-5	4.040	
CCV-6	4.040	
CCV-7	4.040	
CCV-8	4.040	
Average	4.043	
Actual RT Window	3.963 - 4.123	
Applied RT Window	3.843 - 4.243	
N063249-015AMS	3.965	PASS

Reviewed by:

dMocha 3/7/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/26/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.048	
CCV-3	4.040	
CCV-4	4.048	
CCV-5	4.040	
CCV-6	4.040	
CCV-7	4.040	

Average	4.042
Actual RT Window	3.962 - 4.122
Applied RT Window	3.842 - 4.242

MB-R182953	N.A.	N.A.
LCS-R182953	4.040	PASS
N063295-001A	N.A.	N.A.
N063295-003A	N.A.	N.A.
N063295-005A	N.A.	N.A.
N063295-006A	N.A.	N.A.
N063295-007A	N.A.	N.A.
N063214-007A	N.A.	N.A.
N063214-007AMS	3.931	PASS
N063295-001AMS	3.915	PASS
N063295-003AMS	3.906	PASS
N063295-005AMS	N.A.	N.A.
N063295-006AMS	N.A.	N.A.
N063295-007AMS	N.A.	N.A.
N063295-001A	4.023	PASS
N063295-001AMS	4.023	PASS
N063295-001AMSD	4.015	PASS
N063295-003A	4.015	PASS
N063295-003ADUP	4.015	PASS
N063295-003AMS	4.015	PASS
N063295-005A	N.A.	N.A.

Reviewed by:

dMRocha 3/7/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/26/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.048	
CCV-3	4.040	
CCV-4	4.048	
CCV-5	4.040	
CCV-6	4.040	
CCV-7	4.040	
Average	4.042	
Actual RT Window	3.962 - 4.122	
Applied RT Window	3.842 - 4.242	
N063295-005AMS	3.981	PASS
N063295-006A	N.A.	N.A.
N063295-006AMS	3.965	PASS
N063295-007A	N.A.	N.A.
N063295-007AMS	3.973	PASS
N063295-004A	N.A.	N.A.
N063295-004AMS	4.040	PASS
N063295-002A	N.A.	N.A.
N063295-002AMS	N.A.	N.A.
N063295-002A	3.981	PASS
N063295-002AMS	3.981	PASS
N063295-008A	N.A.	N.A.
N063295-008AMS	N.A.	N.A.
N063295-008A	N.A.	N.A.
N063295-008AMS	3.973	PASS
N063249-018A	N.A.	N.A.
N063249-018AMS	N.A.	N.A.
N063249-018A	N.A.	N.A.
N063249-018AMS	3.973	PASS
N063249-010A	N.A.	N.A.
N063249-010AMS	4.040	PASS

Reviewed by:

dlRocha 3/7/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/26/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.048	
CCV-3	4.040	
CCV-4	4.048	
CCV-5	4.040	
CCV-6	4.040	
CCV-7	4.040	

Average	4.042	
Actual RT Window	3.962 -	4.122
Applied RT Window	3.842 -	4.242

N063249-019A	N.A.	N.A.
N063249-019AMS	4.031	PASS
N063297-001A	4.040	PASS
N063297-001AMS	4.040	PASS
N063297-002A	N.A.	N.A.
N063297-002AMS	4.023	PASS
N063297-003A	4.031	PASS
N063297-003AMS	4.031	PASS
N063295-001A	3.906	PASS
N063295-003A	3.906	PASS
N063297-004A	N.A.	N.A.
N063297-004AMS	4.031	PASS

Reviewed by:

dRocha 3/7/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/29/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.023	
CCV-2	4.023	
CCV-3	4.023	
Average	4.023	
Actual RT Window	3.943 - 4.103	
Applied RT Window	3.823 - 4.223	
MB-R183037	N.A.	N.A.
LCS-R183037	4.023	PASS
N063053-007A	4.015	PASS
N063353-007AMS	4.015	PASS
N063406-001A	3.856	PASS
N063406-002A	3.831	PASS
N063214-005A	N.A.	N.A.
N063214-005AMS	3.856	PASS
MB-107165	N.A.	N.A.
N063407-001A	N.A.	N.A.
N063407-001AREP	N.A.	N.A.
N063407-001AMS	4.023	PASS
N063407-001AMSD	4.023	PASS
N063406-001AMS	3.840	PASS
N063406-002AMS	3.831	PASS
N063406-001A	N.A.	N.A.
N063406-001AMS	3.990	PASS
N063406-002A	N.A.	N.A.
N063406-002AMS	3.998	PASS

Reviewed by:

dMocha 3/7/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

Reviewed by:

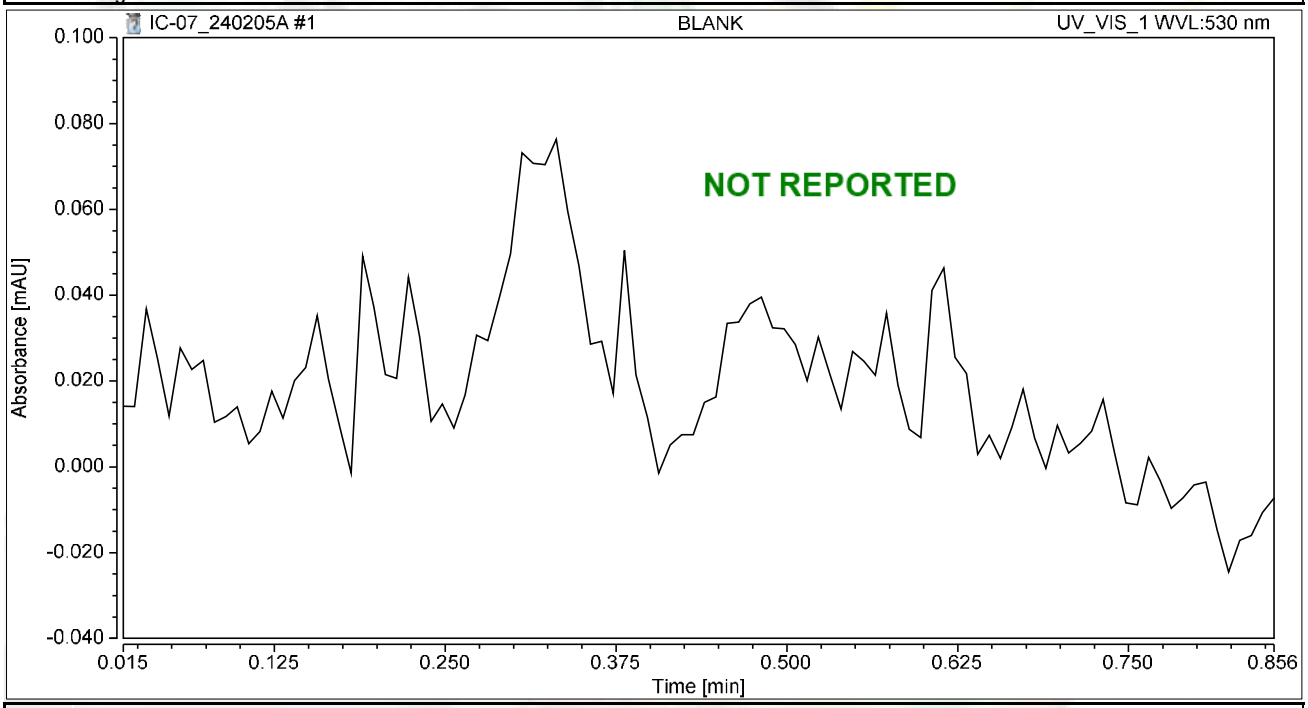
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**0.84**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 11:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

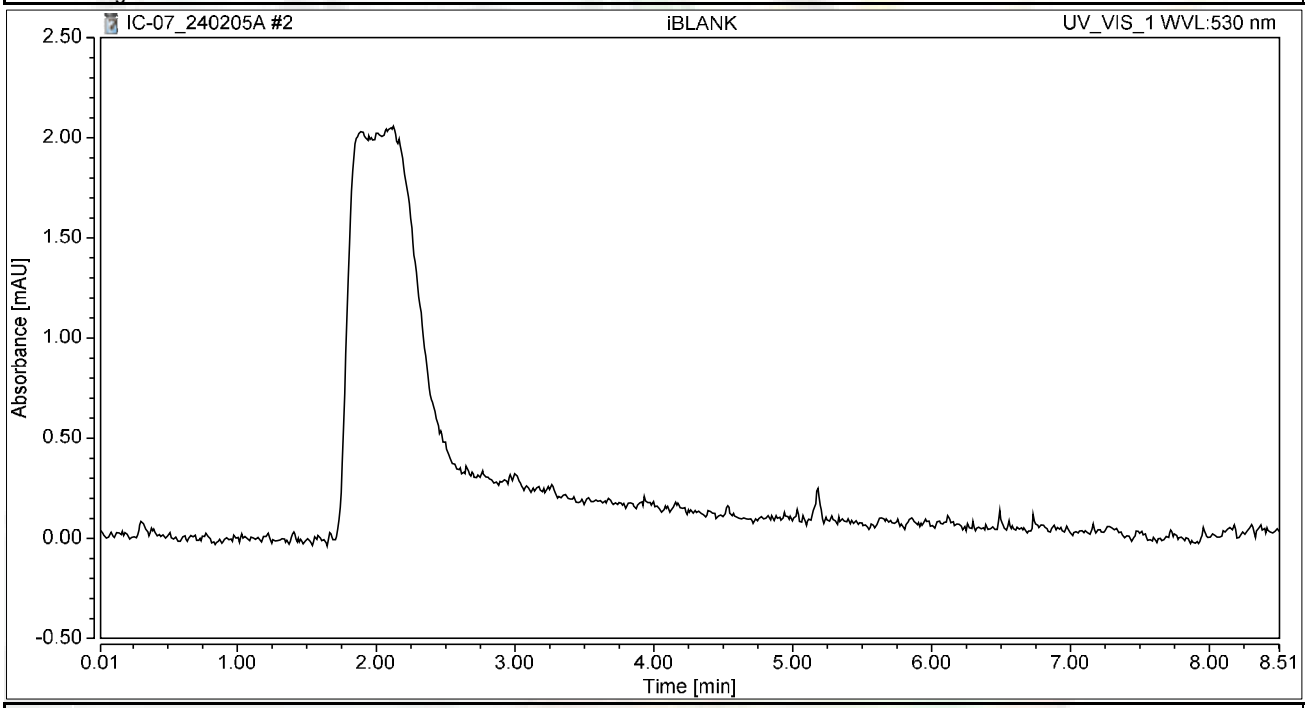
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Reviewed by:

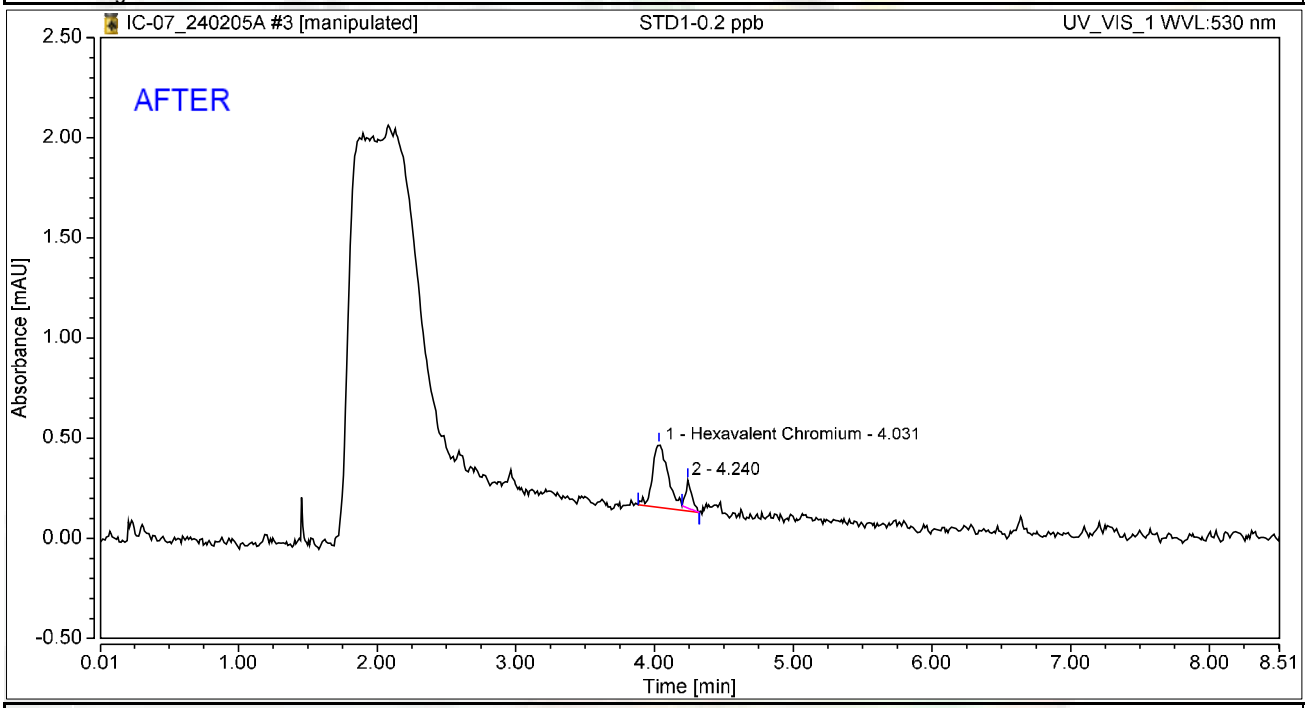
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.043	0.313	85.65	69.19	0.1985
2		4.240	0.007	0.139	14.35	30.81	n.a.
Total:			**0.050**	**0.452**	**100.00**	**100.00**	

Reviewed by:

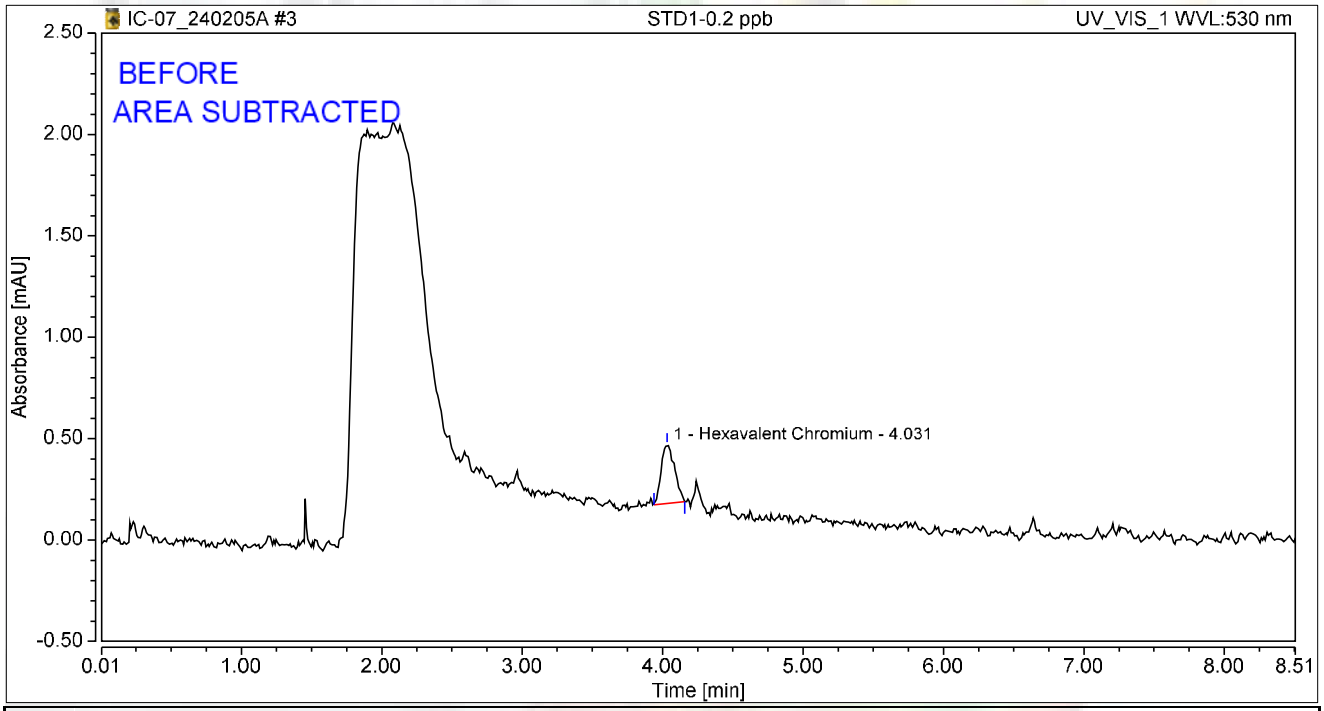
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

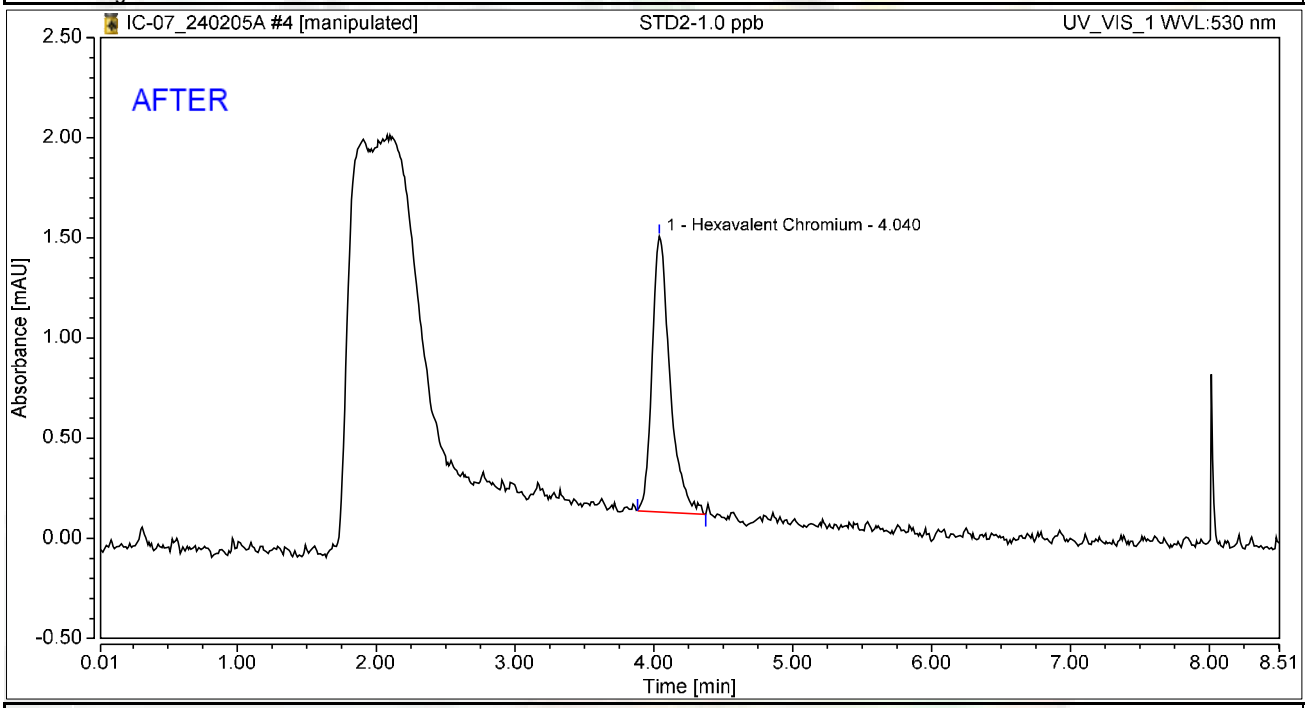
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.032	0.288	100.00	100.00	0.1502
Total:			**0.032**	**0.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.206	1.377	100.00	100.00	0.9592
Total:			**0.206**	**1.377**	**100.00**	**100.00**	

Reviewed by:

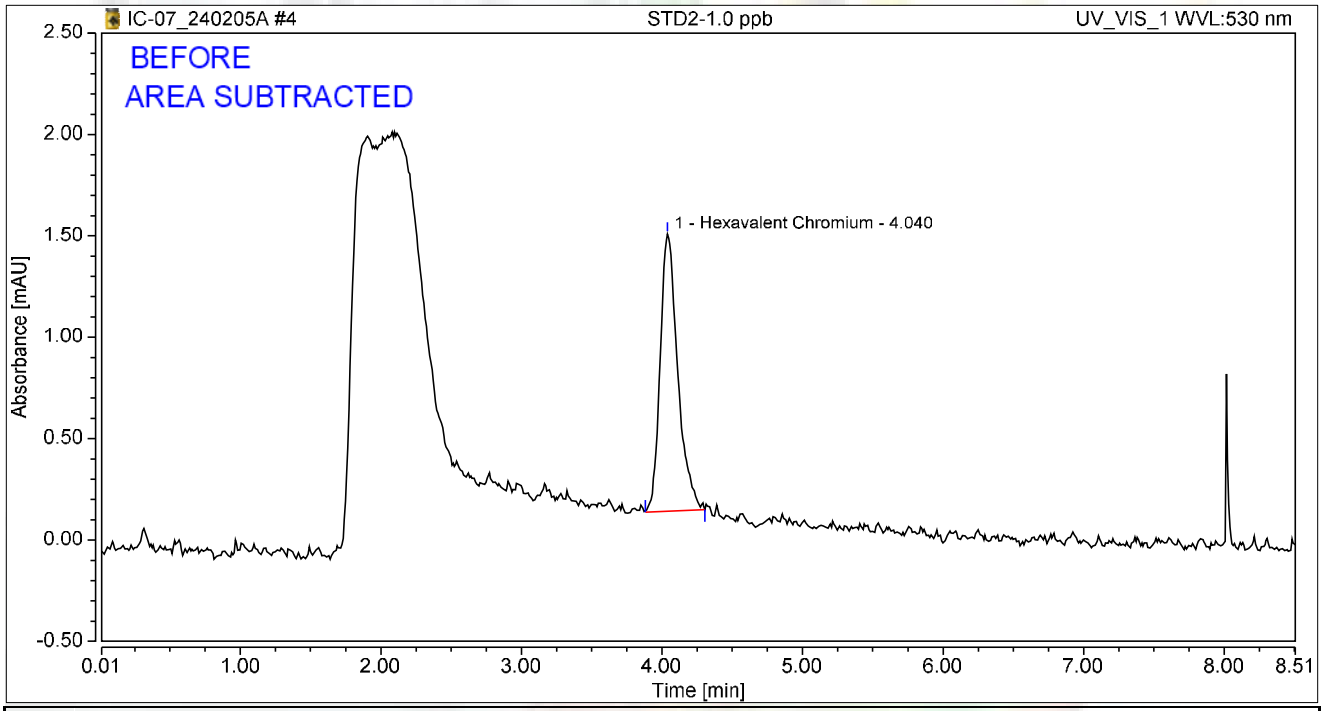
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

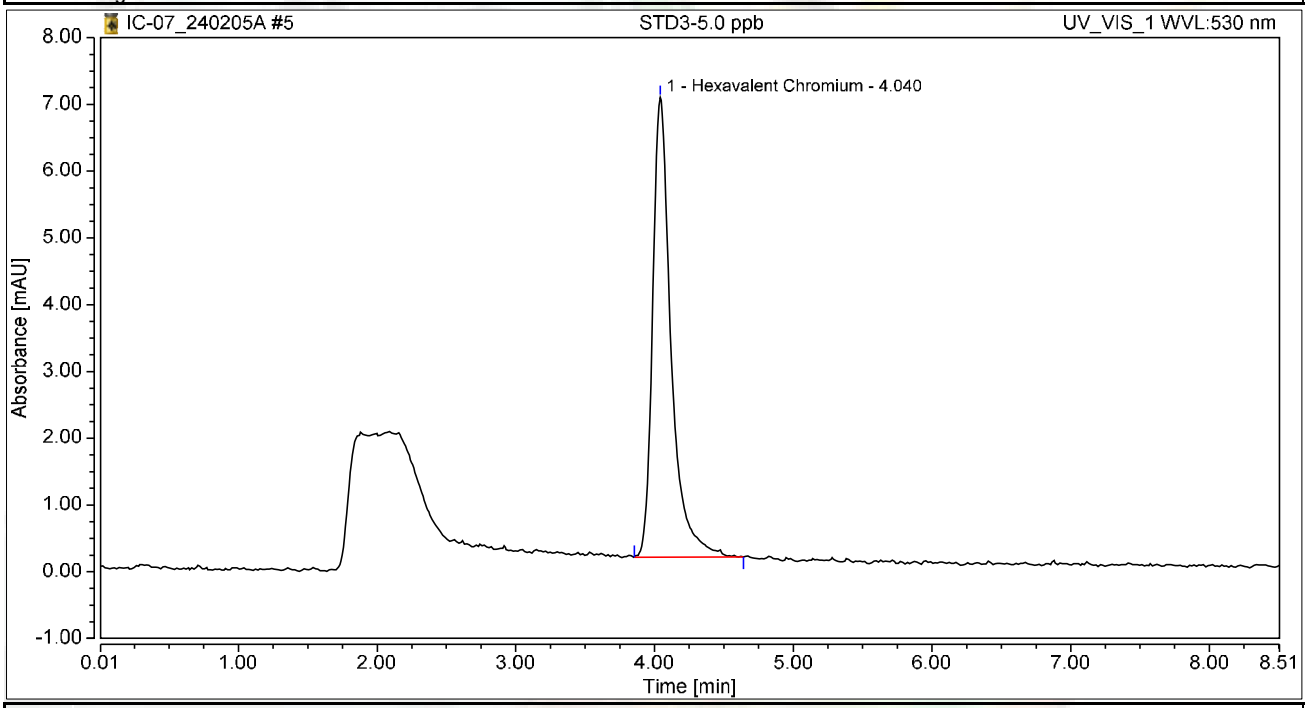
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.198	1.367	100.00	100.00	0.9223
Total:			**0.198**	**1.367**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

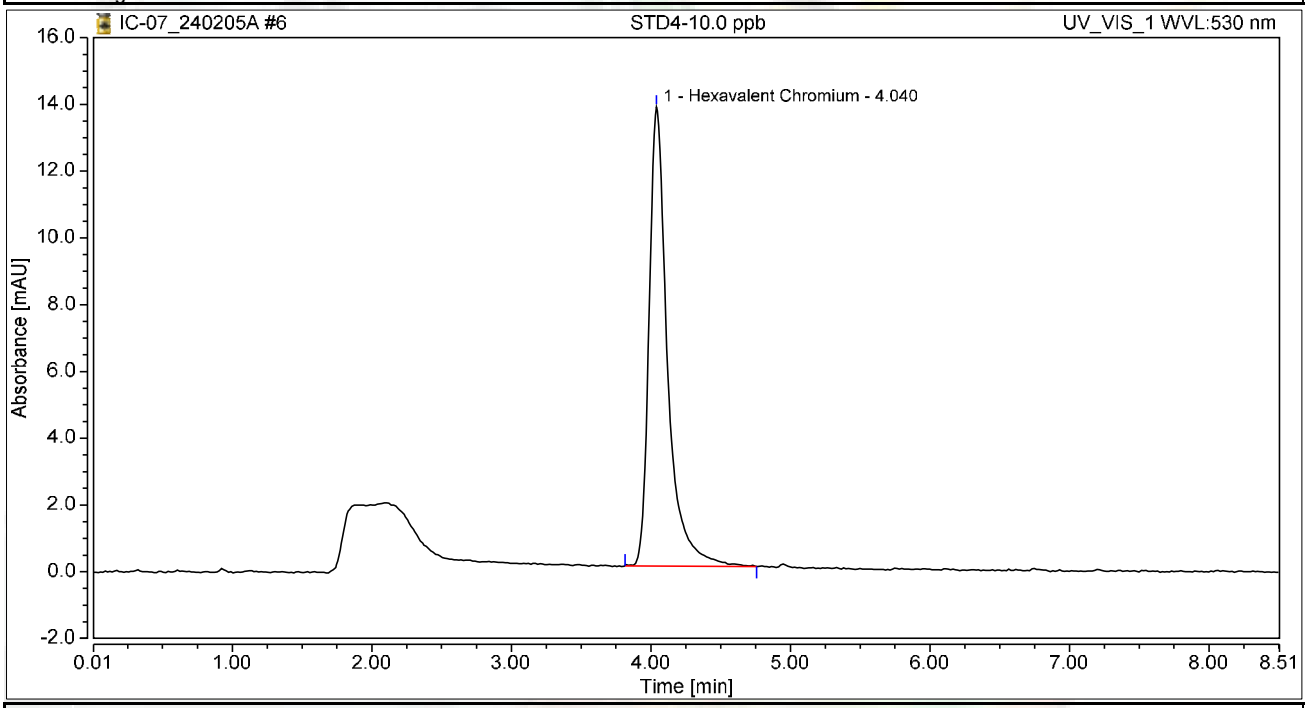
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.064	6.885	100.00	100.00	4.9461
Total:			**1.064**	**6.885**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

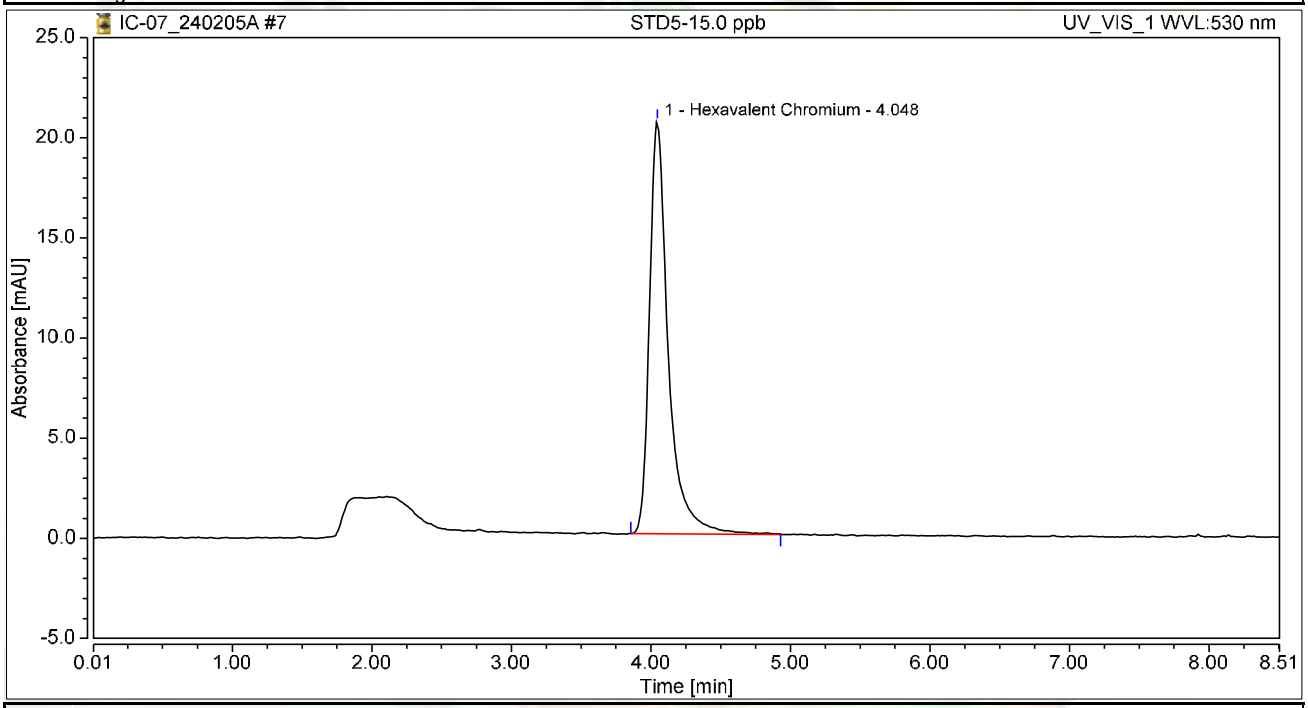
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.116	13.748	100.00	100.00	9.8357
Total:			**2.116**	**13.748**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

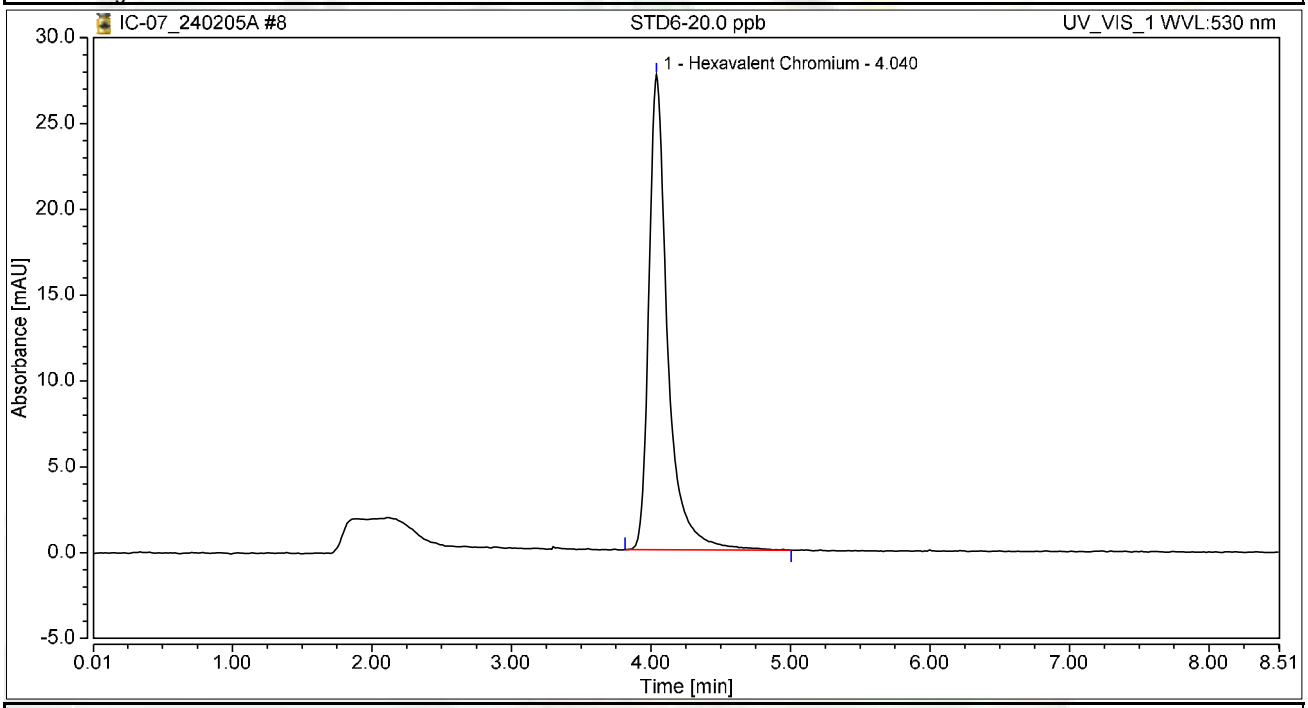
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	3.227	20.605	100.00	100.00	15.0023
Total:			**3.227**	**20.605**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:08**	*Sample Weight:*	**1.0000**

Chromatogram



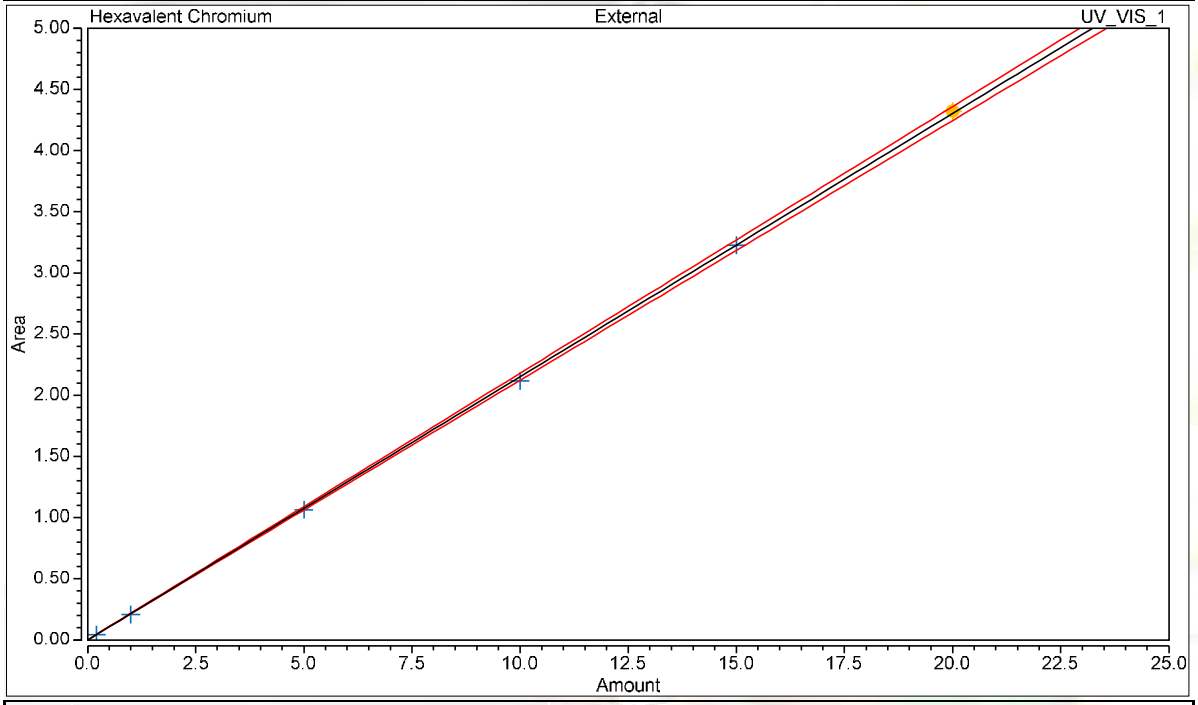
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	4.323	27.676	100.00	100.00	20.0959
Total:			**4.323**	**27.676**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2151
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99987

Calibration Plot Hexavalent Chromium



Calibration Results Hexavalent Chromium

No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0427	0.043	0.313
4	STD2-1.0 ppb	02	1.0000	0.2063	0.206	1.377
5	STD3-5.0 ppb	03	5.0000	1.0639	1.064	6.885
6	STD4-10.0 ppb	04	10.0000	2.1157	2.116	13.748
7	STD5-15.0 ppb	05	15.0000	3.2270	3.227	20.605
8	STD6-20.0 ppb	06	20.0000	4.3227	4.323	27.676

Reviewed by:

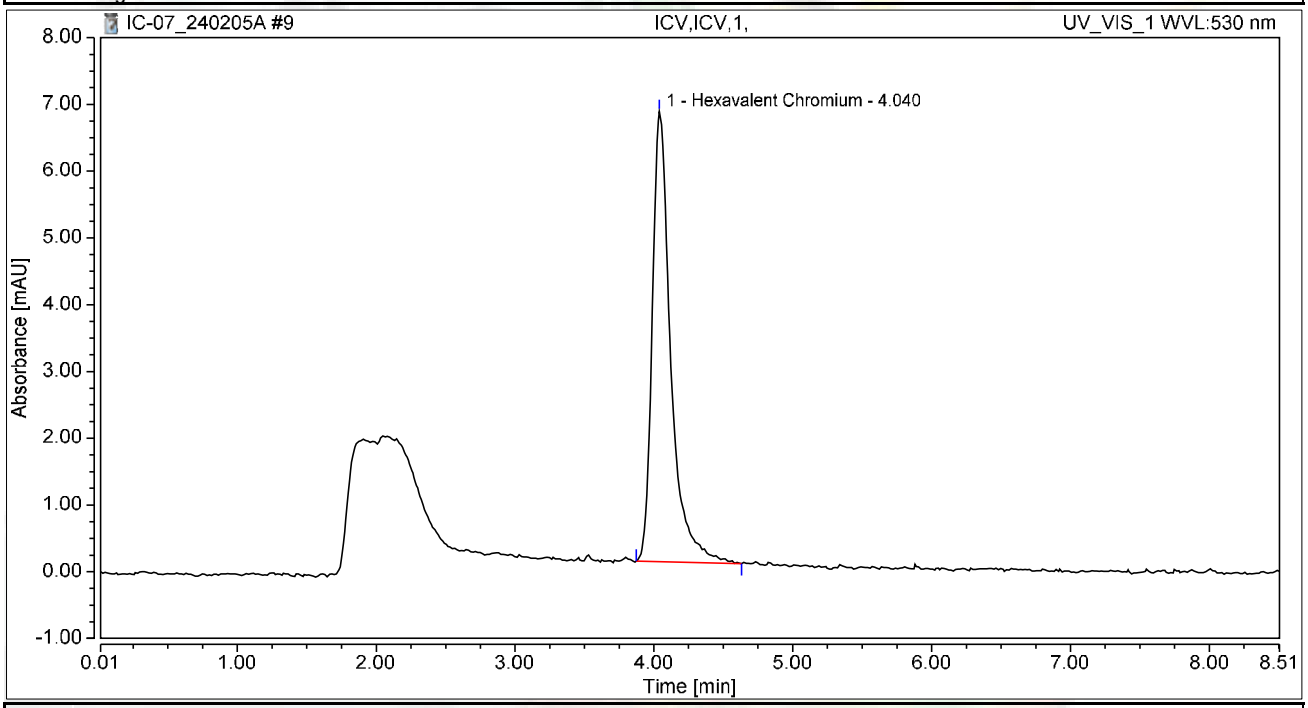
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

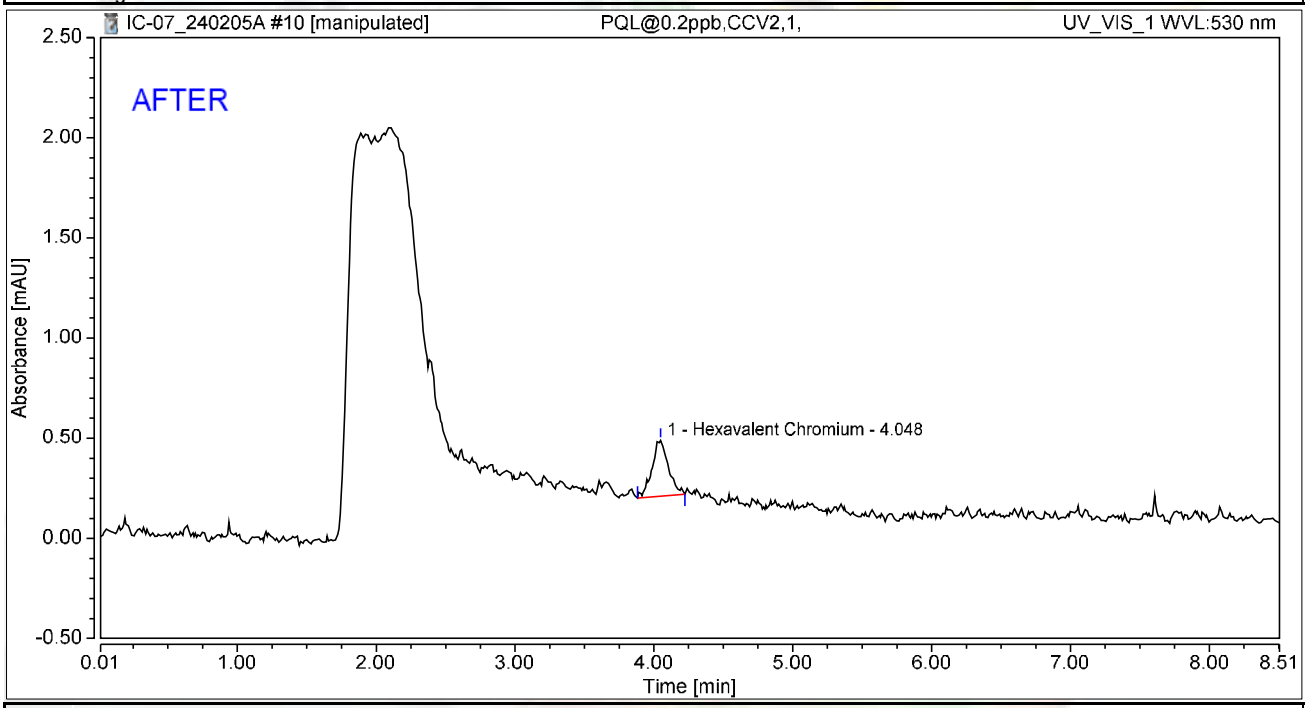
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.040	6.743	100.00	100.00	4.8342
Total:			**1.040**	**6.743**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.039	0.279	100.00	100.00	0.1802
Total:			**0.039**	**0.279**	**100.00**	**100.00**	

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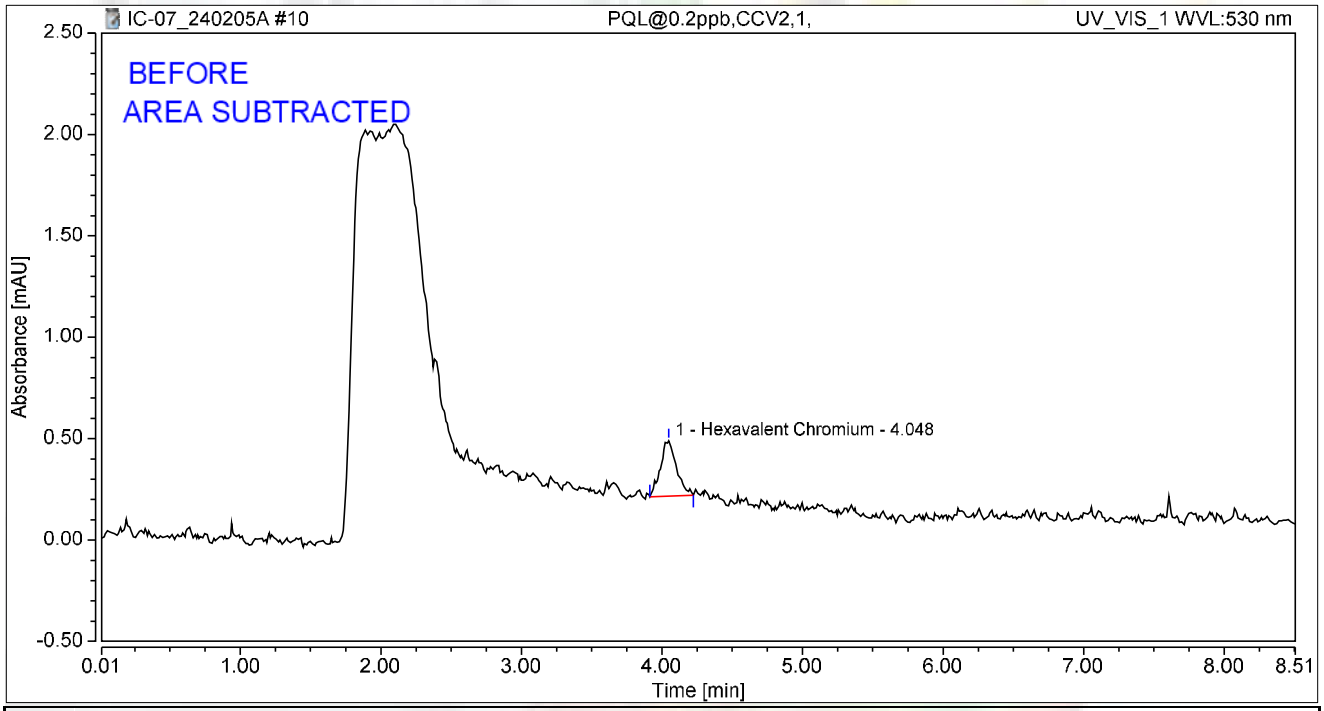
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

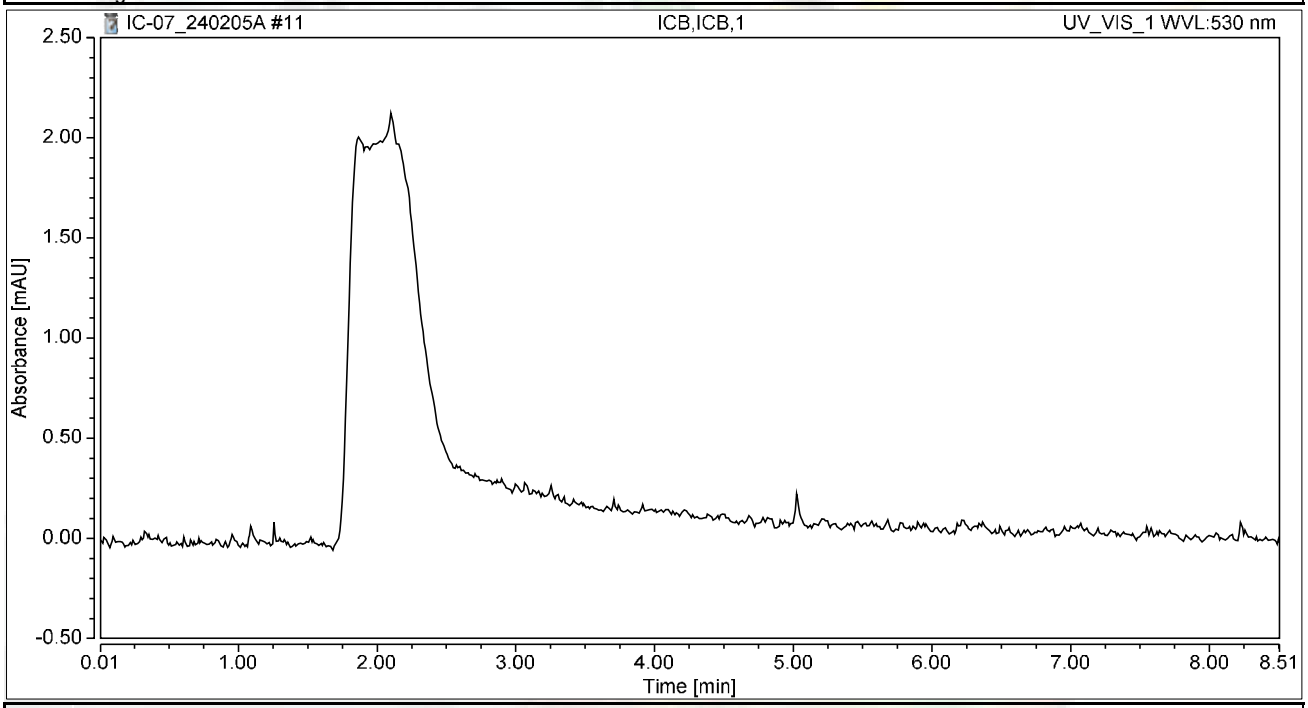
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.036	0.273	100.00	100.00	0.1694
Total:			**0.036**	**0.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

JRB 2/19/2024

RAW DATA

INJECTION LOG: 240221A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/21/24 9:16 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/21/24 9:30 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/21/24 9:39 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/21/24 9:49 AM	Reported
13	MB-R182773	MBLK	1	Hexavalent Chromium	02/21/24 9:58 AM	Reported
14	LCS-R182773	LCS	1	Hexavalent Chromium	02/21/24 10:08 AM	Reported
15	N063213-008A	SAMP	10	Hexavalent Chromium	02/21/24 10:17 AM	Reported
16	N063211-001A	SAMP	1	Hexavalent Chromium	02/21/24 10:27 AM	Reported
17	N063211-002A	SAMP	1	Hexavalent Chromium	02/21/24 10:36 AM	Reported
18	N063211-003A	SAMP	1	Hexavalent Chromium	02/21/24 10:46 AM	Reported
19	N063211-001AMS	MS	1	Hexavalent Chromium	02/21/24 10:55 AM	Reported
20	N063211-002AMS	MS	1	Hexavalent Chromium	02/21/24 11:04 AM	Reported
21	N063211-003AMS	MS	1	Hexavalent Chromium	02/21/24 11:14 AM	Reported
22	N063213-008AMS	MS	10	Hexavalent Chromium	02/21/24 11:23 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/21/24 11:33 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/21/24 11:42 AM	Reported
25	N063213-008AMSD	MSD	10	Hexavalent Chromium	02/21/24 11:52 AM	Reported
26	N063213-001A	SAMP	1	Hexavalent Chromium	02/21/24 12:01 PM	Not Reported
27	N063213-002A	SAMP	1	Hexavalent Chromium	02/21/24 12:11 PM	Reported
28	N063213-005A	SAMP	1	Hexavalent Chromium	02/21/24 12:20 PM	Reported
29	N063213-003A	SAMP	5	Hexavalent Chromium	02/21/24 12:30 PM	Not Reported
30	N063213-004A	SAMP	100	Hexavalent Chromium	02/21/24 12:39 PM	Reported
31	N063213-007A	SAMP	200	Hexavalent Chromium	02/21/24 12:52 PM	Reported
32	N063211-001ADUP	DUP	1	Hexavalent Chromium	02/21/24 1:03 PM	Reported
33	N063213-001AMS	MS	1	Hexavalent Chromium	02/21/24 1:12 PM	Not Reported
34	N063213-002AMS	MS	1	Hexavalent Chromium	02/21/24 1:21 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/21/24 1:31 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/21/24 1:40 PM	Reported
37	N063213-005AMS	MS	1	Hexavalent Chromium	02/21/24 1:50 PM	Reported
38	N063213-004AMS	MS	100	Hexavalent Chromium	02/21/24 1:59 PM	Reported
39	N063213-007AMS	MS	200	Hexavalent Chromium	02/21/24 2:09 PM	Reported
40	N063213-006A	SAMP	1	Hexavalent Chromium	02/21/24 2:18 PM	Not Reported
41	N063213-006AMS	MS	1	Hexavalent Chromium	02/21/24 2:28 PM	Not Reported
42	N063213-006A	SAMP	5	Hexavalent Chromium	02/21/24 2:37 PM	Reported

Reviewed by:

JRB 2/27/2024

INJECTION LOG: 240221A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063213-006AMS	MS	5	Hexavalent Chromium	02/21/24 2:46 PM	Reported
44	N063213-009A	SAMP	1	Hexavalent Chromium	02/21/24 2:56 PM	Reported
45	N063213-009AMS	MS	1	Hexavalent Chromium	02/21/24 3:05 PM	Reported
46	N063213-003AMS	MS	5	Hexavalent Chromium	02/21/24 3:15 PM	Not Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/21/24 3:24 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/21/24 3:34 PM	Reported
49	N063214-007A	SAMP	1	Hexavalent Chromium	02/21/24 3:43 PM	Not Reported
50	N063214-007AMS	MS	1	Hexavalent Chromium	02/21/24 3:53 PM	Not Reported
51	N063214-001A	SAMP	1	Hexavalent Chromium	02/21/24 4:02 PM	Not Reported
52	N063214-001AMS	MS	1	Hexavalent Chromium	02/21/24 4:52 PM	Not Reported
53	N063214-003A	SAMP	1	Hexavalent Chromium	02/21/24 5:05 PM	Not Reported
54	N063214-003AMS	MS	1	Hexavalent Chromium	02/21/24 5:15 PM	Not Reported
55	N062911-004A MS	~~SAMP~~	5	Hexavalent Chromium	02/21/24 5:24 PM	Reported
N062911-004AMS 56	~~N063911-004AMS~~	MS ~~SAMP~~	5	Hexavalent Chromium	02/21/24 5:34 PM	Reported
57	N063214-002A	SAMP	1	Hexavalent Chromium	02/21/24 5:43 PM	Reported
58	N063214-002AMS	MS	1	Hexavalent Chromium	02/21/24 5:52 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/21/24 6:02 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/21/24 6:11 PM	Reported
61	N063214-004A	SAMP	1	Hexavalent Chromium	02/21/24 6:21 PM	Reported
62	N063214-004AMS	MS	1	Hexavalent Chromium	02/21/24 6:30 PM	Reported
63	N063214-006A	SAMP	1	Hexavalent Chromium	02/21/24 6:40 PM	Reported
64	N063214-006AMS	MS	1	Hexavalent Chromium	02/21/24 6:49 PM	Reported
65	N063214-008A	SAMP	1	Hexavalent Chromium	02/21/24 6:59 PM	Not Reported
66	N063214-008AMS	MS	1	Hexavalent Chromium	02/21/24 7:08 PM	Not Reported
67	N063214-001A	SAMP	5	Hexavalent Chromium	02/21/24 7:18 PM	Reported
68	N063214-001AMS	MS	5	Hexavalent Chromium	02/21/24 7:27 PM	Reported
69	N063214-003A	SAMP	5	Hexavalent Chromium	02/21/24 7:37 PM	Reported
70	N063214-003AMS	MS	5	Hexavalent Chromium	02/21/24 7:46 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/21/24 7:55 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/21/24 8:05 PM	Reported
73	N063214-005A	SAMP	5	Hexavalent Chromium	02/21/24 8:14 PM	Not Reported
74	N063214-005AMS	MS	5	Hexavalent Chromium	02/21/24 8:24 PM	Not Reported
75	N063213-001AMS	MS	5	Hexavalent Chromium	02/21/24 8:33 PM	Reported
76	N063213-001A	SAMP	5	Hexavalent Chromium	02/21/24 8:43 PM	Reported
77	N063213-003AMS	MS	100	Hexavalent Chromium	02/21/24 8:52 PM	Reported
78	N063213-003A	SAMP	100	Hexavalent Chromium	02/21/24 9:02 PM	Reported
79	N063213-002AMS	MS	1	Hexavalent Chromium	02/21/24 9:11 PM	Reported
80	N063214-005A	SAMP	1	Hexavalent Chromium	02/21/24 9:21 PM	Not Reported
81	N063214-005AMS	MS	1	Hexavalent Chromium	02/21/24 9:30 PM	Not Reported
82	CCV-7	CCV	1	Hexavalent Chromium	02/21/24 9:39 PM	Reported
83	CCB-7	CCB	1	Hexavalent Chromium	02/21/24 9:49 PM	Reported
84	BLANK	BLANK	1	Hexavalent Chromium	02/21/24 9:58 PM	Not Reported

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for RBA

Injection Log Summary

Sequence Details

Name:	**IC-07_240221A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**22/Feb/24 12:29:45**
No. of Injections:	**87**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/21/2024 09:16	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/21/2024 09:30	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/21/2024 09:39	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/21/2024 09:49	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/21/2024 09:58	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/21/2024 10:08	Finished	LCS @5ppb, IWST-231228B
15	N063213-008A,SAMF	7	1000	Unknown		02/21/2024 10:17	Finished	SAMP,1>10 mL
16	N063211-001A,SAMF	8	1000	Unknown		02/21/2024 10:27	Finished	SAMP,10 mL
17	N063211-002A,SAMF	9	1000	Unknown		02/21/2024 10:36	Finished	SAMP,10 mL
18	N063211-003A,SAMF	10	1000	Unknown		02/21/2024 10:46	Finished	SAMP,10 mL
19	N063211-001AMS,MS	11	1000	Unknown		02/21/2024 10:55	Finished	MS (1ppb), IWST-231228B,10r
20	N063211-002AMS,MS	12	1000	Unknown		02/21/2024 11:04	Finished	MS (1ppb), IWST-231228B,10r
21	N063211-003AMS,MS	13	1000	Unknown		02/21/2024 11:14	Finished	MS (1ppb), IWST-231228B,10r
22	N063213-008AMS,MS	14	1000	Unknown		02/21/2024 11:23	Finished	MS (5ppb), IWST-231228B,1>
23	CCV-2,CCV1,1,	15	1000	Unknown		02/21/2024 11:33	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		02/21/2024 11:42	Finished	CCB R240129C
25	N063213-008AMSD,M	17	1000	Unknown		02/21/2024 11:52	Finished	MSD (5ppb), IWST-231228B,1
26	N063213-001A,SAMF	18	1000	Unknown		02/21/2024 12:01	Finished	SAMP,10 mL
27	N063213-002A,SAMF	19	1000	Unknown		02/21/2024 12:11	Finished	SAMP,10 mL
28	N063213-005A,SAMF	20	1000	Unknown		02/21/2024 12:20	Finished	SAMP,10 mL
29	N063213-003A,SAMF	21	1000	Unknown		02/21/2024 12:30	Finished	SAMP,2>10 mL
30	N063213-004A,SAMF	22	1000	Unknown		02/21/2024 12:39	Finished	SAMP,0.1>10 mL
31	N063213-007A,SAMF	1	1000	Unknown		02/21/2024 12:52	Finished	SAMP,0.05>10 mL
32	N063211-001ADUP,D	2	1000	Unknown		02/21/2024 13:03	Finished	DUP,10 mL
33	N063213-001AMS,MS	3	1000	Unknown		02/21/2024 13:12	Finished	MS (5ppb), IWST-231228B,10r
34	N063213-002AMS,MS	4	1000	Unknown		02/21/2024 13:21	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	5	1000	Unknown		02/21/2024 13:31	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	6	1000	Unknown		02/21/2024 13:40	Finished	CCB R240129C
37	N063213-005AMS,MS	7	1000	Unknown		02/21/2024 13:50	Finished	MS (1ppb), IWST-231228B,10r
38	N063213-004AMS,MS	8	1000	Unknown		02/21/2024 13:59	Finished	MS (5ppb), IWST-231228B,0.1
39	N063213-007AMS,MS	9	1000	Unknown		02/21/2024 14:09	Finished	MS (5ppb), IWST-231228B,0.0
40	N063213-006A,SAMF	10	1000	Unknown		02/21/2024 14:18	Finished	SAMP,10 mL
41	N063213-006AMS,MS	11	1000	Unknown		02/21/2024 14:28	Finished	MS (1ppb), IWST-231228B,10r
42	N063213-006A,SAMF	12	1000	Unknown		02/21/2024 14:37	Finished	SAMP,2>10 mL
43	N063213-006AMS,MS	13	1000	Unknown		02/21/2024 14:46	Finished	MS (1ppb), IWST-231228B,2>
44	N063213-009A,SAMF	14	1000	Unknown		02/21/2024 14:56	Finished	SAMP,10 mL
45	N063213-009AMS,MS	15	1000	Unknown		02/21/2024 15:05	Finished	MS (1ppb), IWST-231228B,10r
46	N063213-003AMS,MS	16	1000	Unknown		02/21/2024 15:15	Finished	MS (5ppb), IWST-231228B,2>
47	CCV-4,CCV1,1,	17	1000	Unknown		02/21/2024 15:24	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	18	1000	Unknown		02/21/2024 15:34	Finished	CCB R240129C
49	N063214-007A,SAMF	19	1000	Unknown		02/21/2024 15:43	Finished	SAMP,10 mL
50	N063214-007AMS,MS	20	1000	Unknown		02/21/2024 15:53	Finished	MS (1ppb), IWST-231228B,10r
51	N063214-001A,SAMF	21	1000	Unknown		02/21/2024 16:02	Finished	SAMP,10 mL
52	N063214-001AMS,MS	1	1000	Unknown		02/21/2024 16:52	Finished	MS (1ppb), IWST-231228B,10r
53	N063214-003A,SAMF	2	1000	Unknown		02/21/2024 17:05	Finished	SAMP,10 mL
54	N063214-003AMS,MS	3	1000	Unknown		02/21/2024 17:15	Finished	MS (1ppb), IWST-231228B,10r
55	N062911-004A,SAMF MS SAMP	4	1000	Unknown		02/21/2024 17:24	Finished	SAMP,2>10 mL
56	~~N063911-004AMS,MS~~	5	1000	Unknown		02/21/2024 17:34	Finished	MS (1ppb), IWST-231228B,2>
57	N063214-002A,SAMF	6	1000	Unknown		02/21/2024 17:43	Finished	SAMP,10 mL
58	N063214-002AMS,MS	7	1000	Unknown		02/21/2024 17:52	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	8	1000	Unknown		02/21/2024 18:02	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	9	1000	Unknown		02/21/2024 18:11	Finished	CCB R240129C

N062911-004MS

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IC-07 RBA 2/22/2024 12:32:46 PM

61	N063214-004A,SAMP	10	1000	Unknown		02/21/2024 18:21	Finished	SAMP,10 mL
62	N063214-004AMS,MS	11	1000	Unknown		02/21/2024 18:30	Finished	MS (1ppb), IWST-231228B,10r
63	N063214-006A,SAMP	12	1000	Unknown		02/21/2024 18:40	Finished	SAMP,10 mL
64	N063214-006AMS,MS	13	1000	Unknown		02/21/2024 18:49	Finished	MS (1ppb), IWST-231228B,10r
65	N063214-008A,SAMP	14	1000	Unknown		02/21/2024 18:59	Finished	SAMP,10 mL
66	N063214-008AMS,MS	15	1000	Unknown		02/21/2024 19:08	Finished	MS (1ppb), IWST-231228B,10r
67	N063214-001A,SAMP	16	1000	Unknown		02/21/2024 19:18	Finished	SAMP,2>10 mL
68	N063214-001AMS,MS	17	1000	Unknown		02/21/2024 19:27	Finished	MS (1ppb), IWST-231228B,2>1
69	N063214-003A,SAMP	18	1000	Unknown		02/21/2024 19:37	Finished	SAMP,2>10 mL
70	N063214-003AMS,MS	19	1000	Unknown		02/21/2024 19:46	Finished	MS (1ppb), IWST-231228B,2>1
71	CCV-6,CCV1,1,	20	1000	Unknown		02/21/2024 19:55	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	21	1000	Unknown		02/21/2024 20:05	Finished	CCB R240129C
73	N063214-005A,SAMP	22	1000	Unknown		02/21/2024 20:14	Finished	SAMP,2>10 mL
74	N063214-005AMS,MS	23	1000	Unknown		02/21/2024 20:24	Finished	MS (1ppb), IWST-231228B,2>1
75	N063213-001AMS,MS	24	1000	Unknown		02/21/2024 20:33	Finished	MS (5ppb), IWST-231228B,2>1
76	N063213-001A,SAMP	25	1000	Unknown		02/21/2024 20:43	Finished	SAMP,2>10 mL
77	N063213-003AMS,MS	26	1000	Unknown		02/21/2024 20:52	Finished	MS (5ppb), IWST-231228B,0.1
78	N063213-003A,SAMP	27	1000	Unknown		02/21/2024 21:02	Finished	SAMP,0.1>10 mL
79	N063213-002AMS,MS	28	1000	Unknown		02/21/2024 21:11	Finished	MS (5ppb), IWST-231228B,10r
80	N063214-005A,SAMP	29	1000	Unknown		02/21/2024 21:21	Finished	SAMP,10 mL
81	N063214-005AMS,MS	30	1000	Unknown		02/21/2024 21:30	Finished	MS (1ppb), IWST-231228B,10r
82	CCV-7,CCV,1,	31	1000	Unknown		02/21/2024 21:39	Finished	CCV @5ppb, IWST-231228A
83	CCB-7,CCB,1,	32	1000	Unknown		02/21/2024 21:49	Finished	CCB R240129C
84	BLANK	33	1000	Unknown		02/21/2024 21:58	Finished	BLANK
85	SHUTDOWN R240221A	34	1000	Unknown		02/21/2024 22:08	Finished	
86	Eluent: ~~R240220A~~	35	1000	Unknown		n.a.	Finished	
87	PCR: ~~R240220B~~ R240221B	36	1000	Unknown		n.a.	Finished	

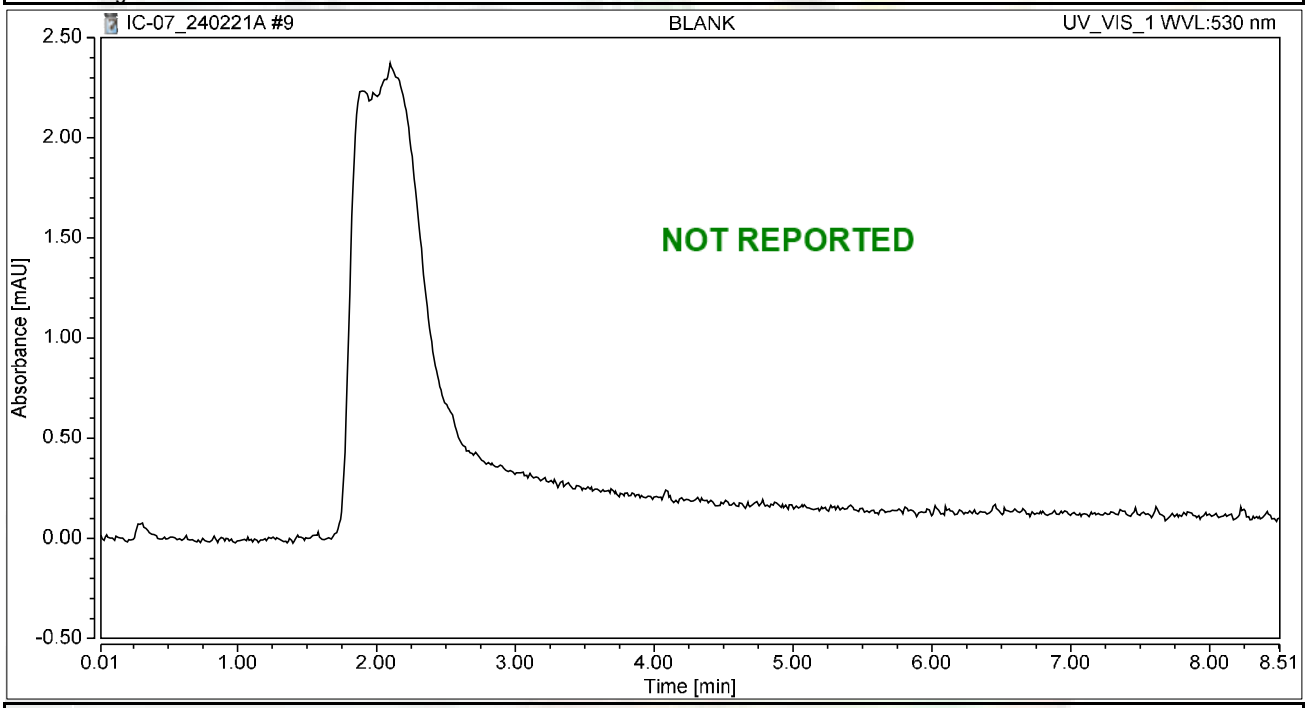
dMocha 3/3/2024
for RBA

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 09:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

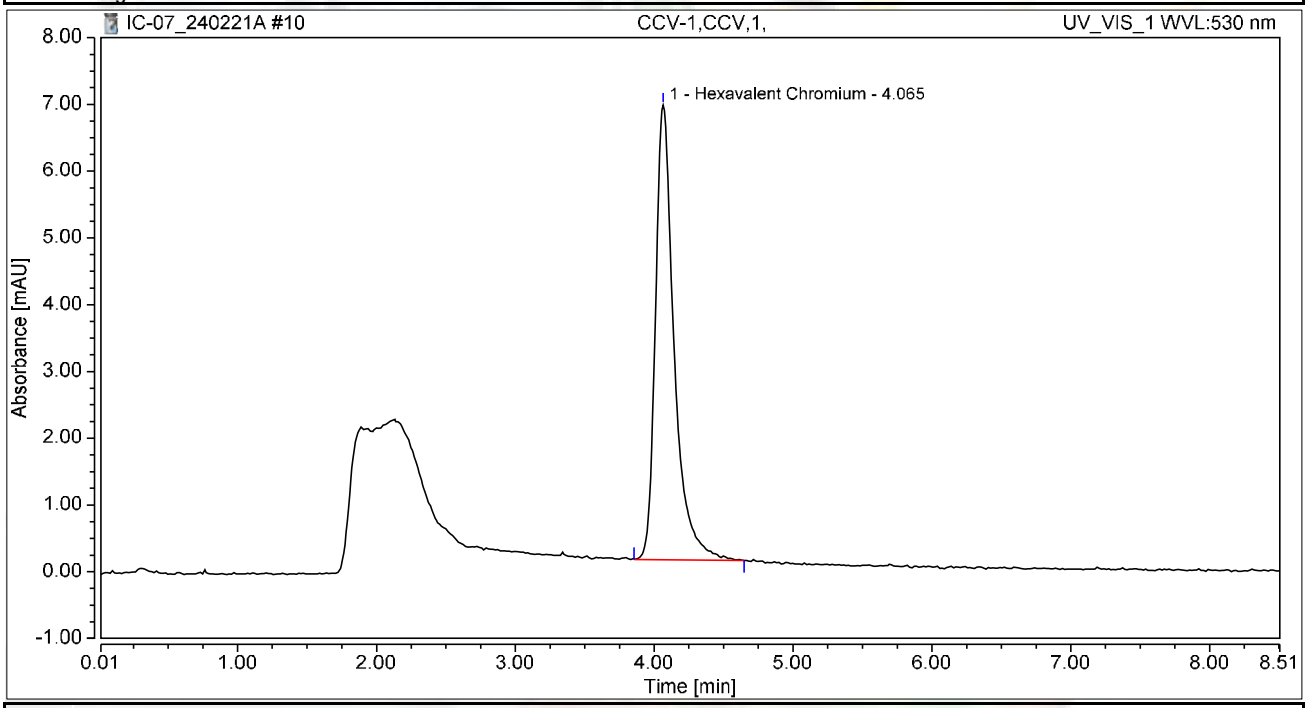
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 09:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	1.063	6.813	100.00	100.00	4.9416
Total:			**1.063**	**6.813**	**100.00**	**100.00**	

Reviewed by:

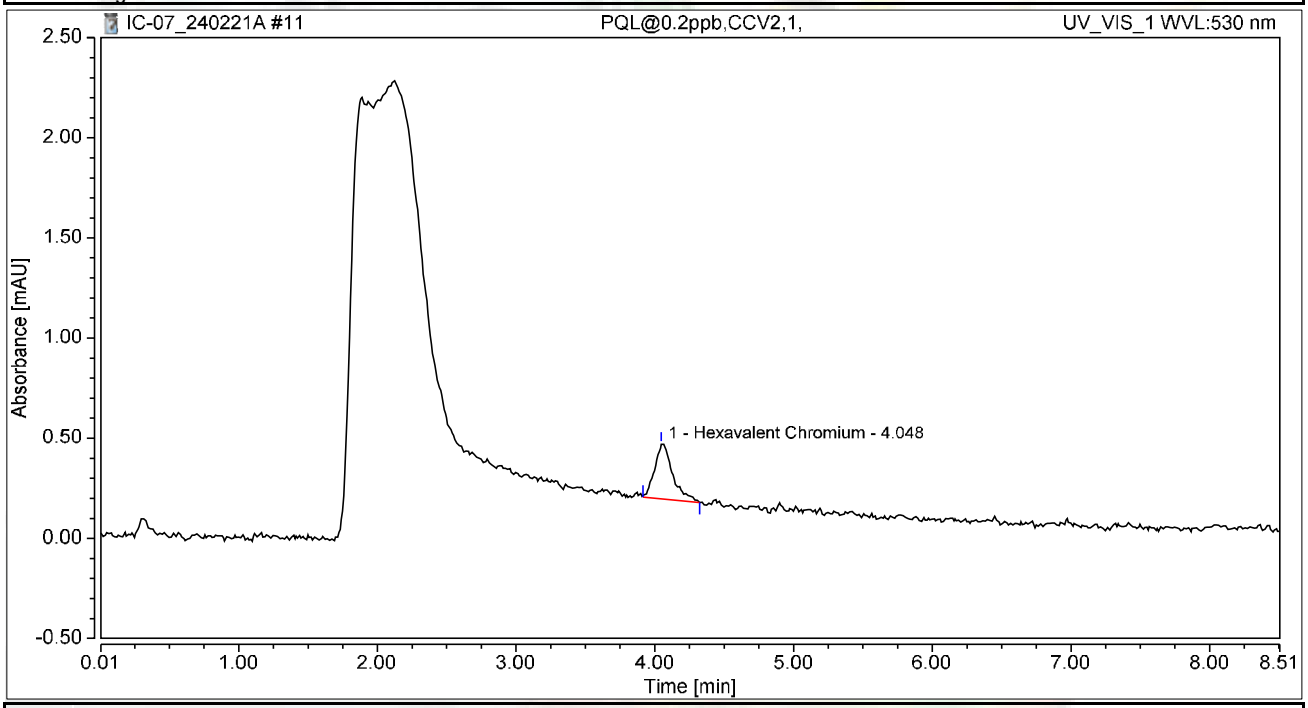
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 09:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

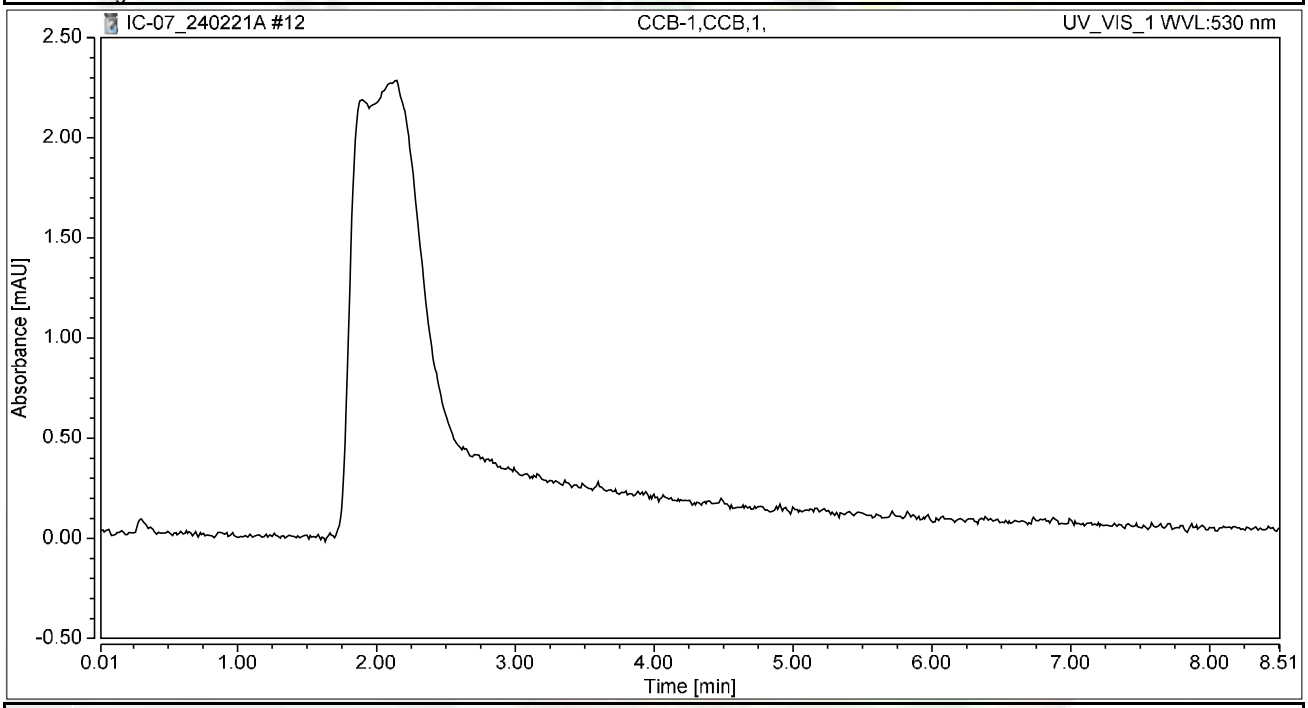
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.041	0.273	100.00	100.00	0.1929
Total:			**0.041**	**0.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 09:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

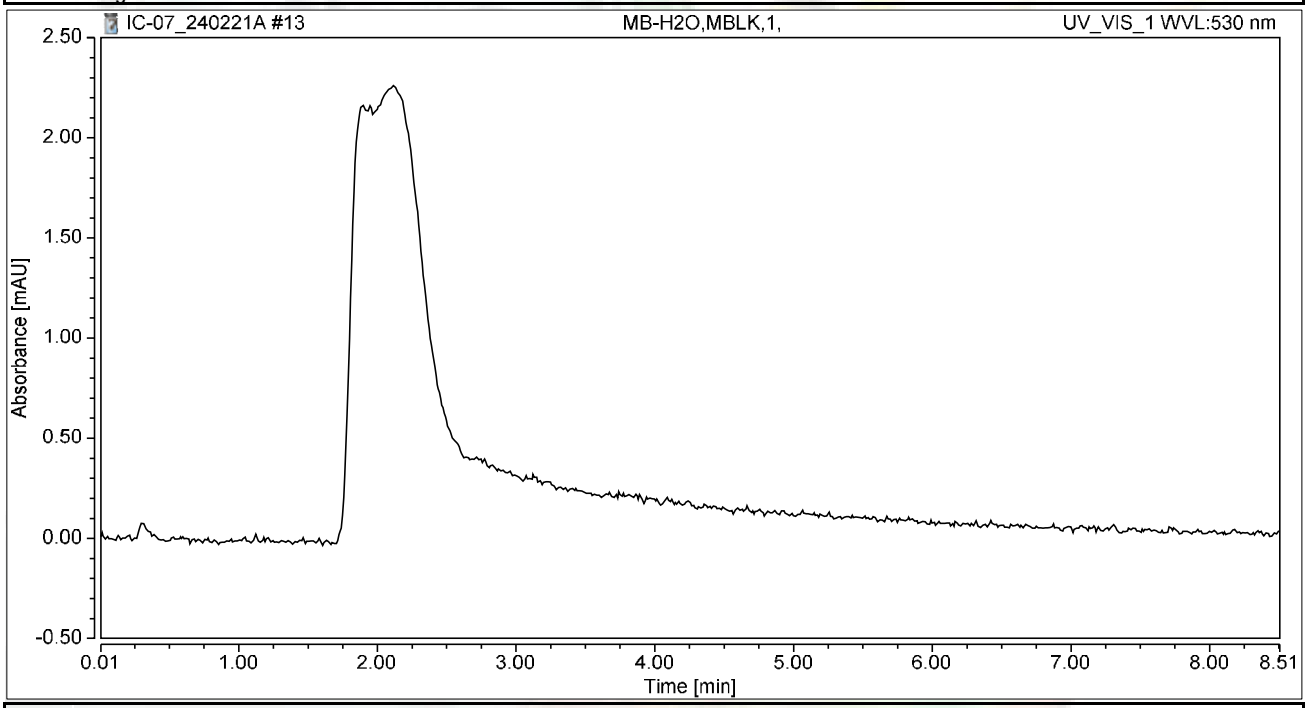
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 09:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

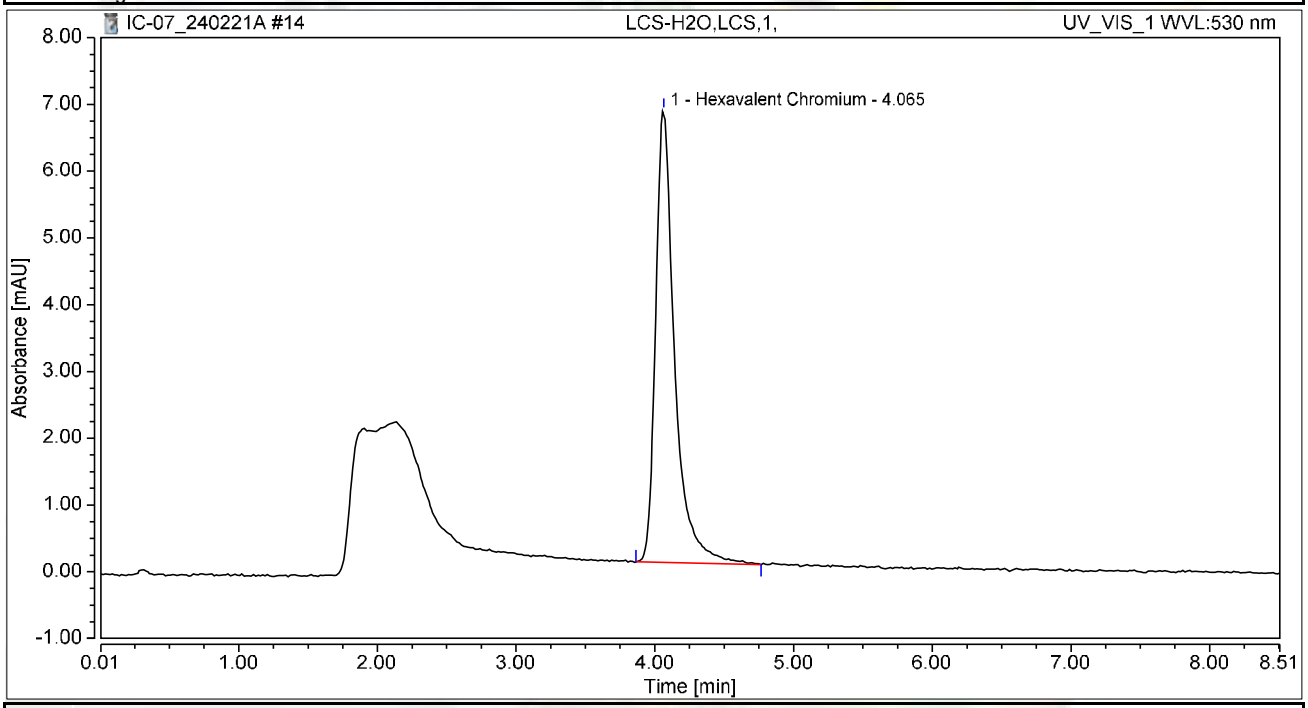
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 10:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

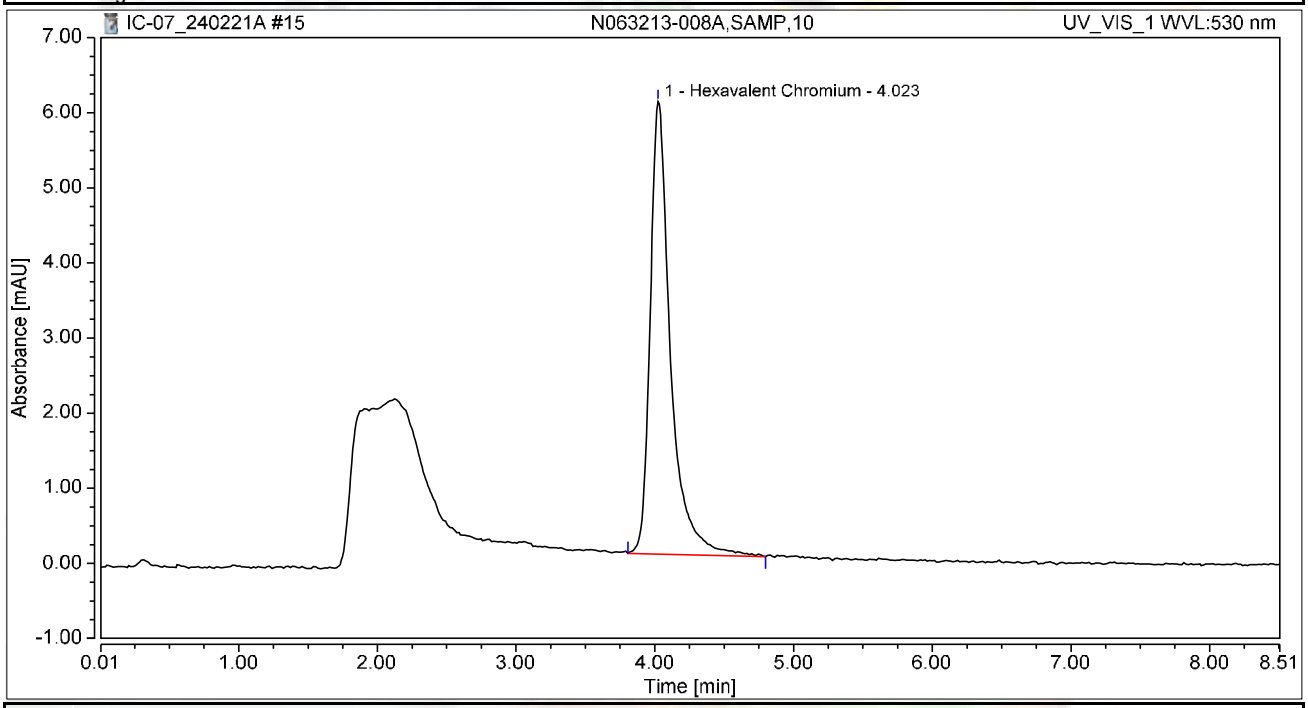
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	1.075	6.771	100.00	100.00	4.9996
Total:			**1.075**	**6.771**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-008A,SAMP,10**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 10:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

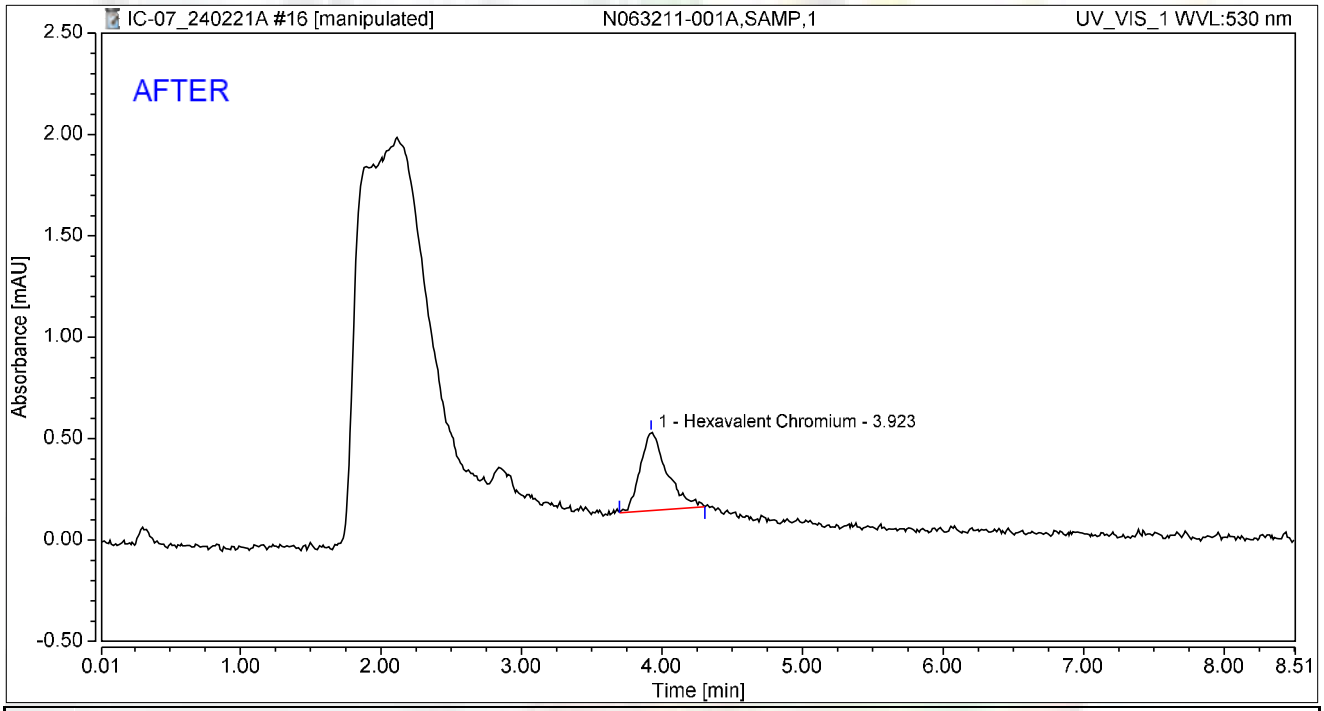
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	1.020	6.022	100.00	100.00	4.7409
Total:			**1.020**	**6.022**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063211-001A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 10:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.086	0.385	100.00	100.00	0.3980
Total:			**0.086**	**0.385**	**100.00**	**100.00**	

Reviewed by:

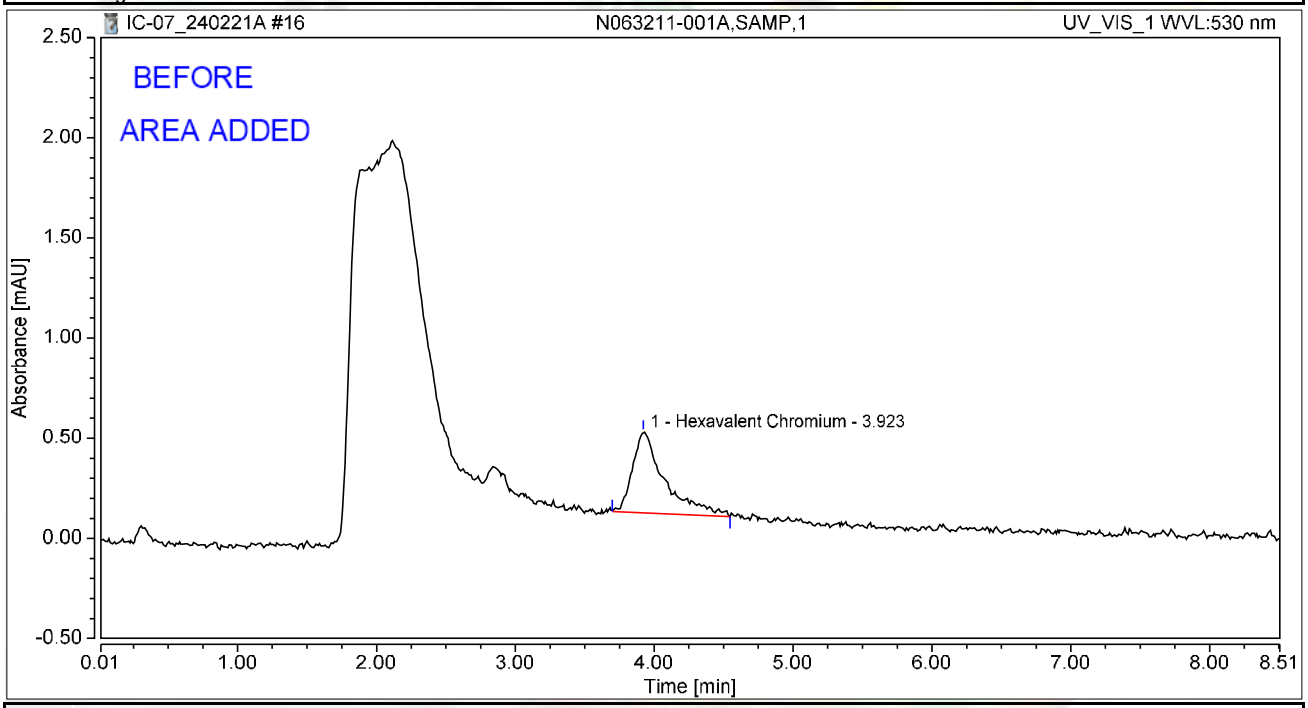
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063211-001A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 10:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

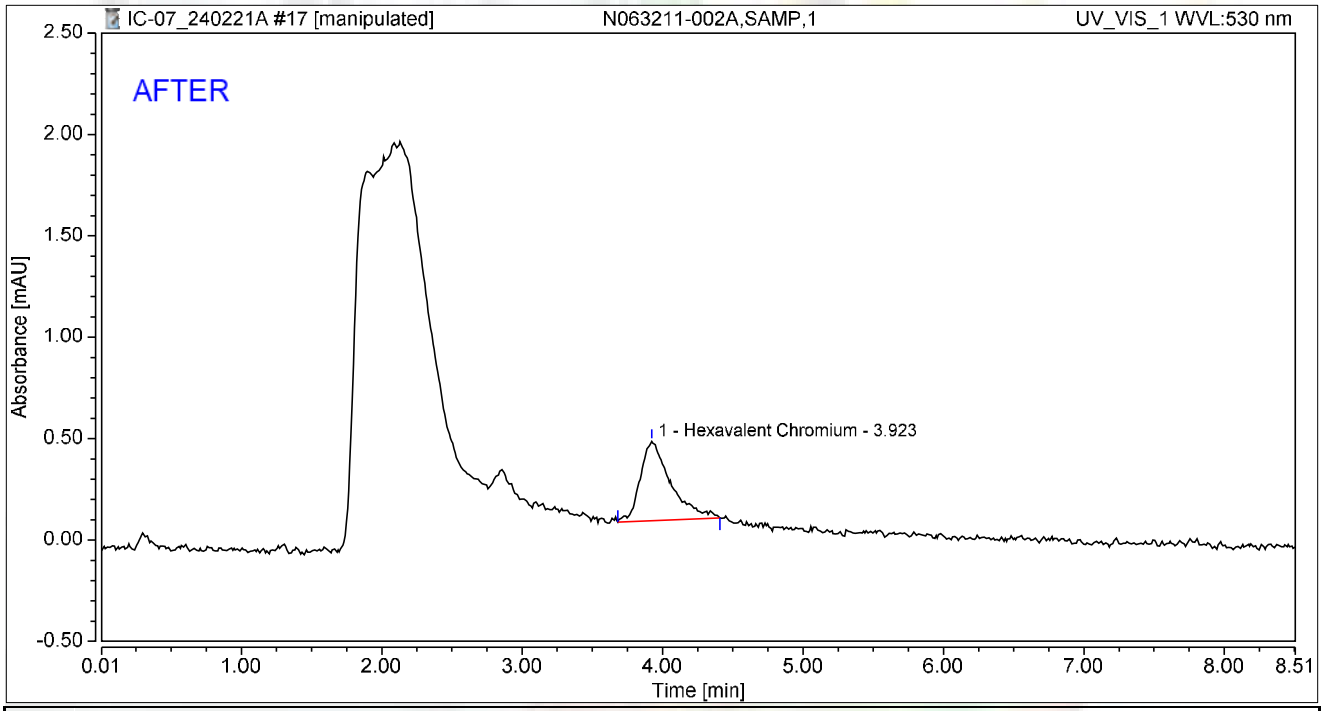
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.108	0.403	100.00	100.00	0.5039
Total:			**0.108**	**0.403**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063211-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 10:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.098	0.392	100.00	100.00	0.4578
Total:			**0.098**	**0.392**	**100.00**	**100.00**	

Reviewed by:

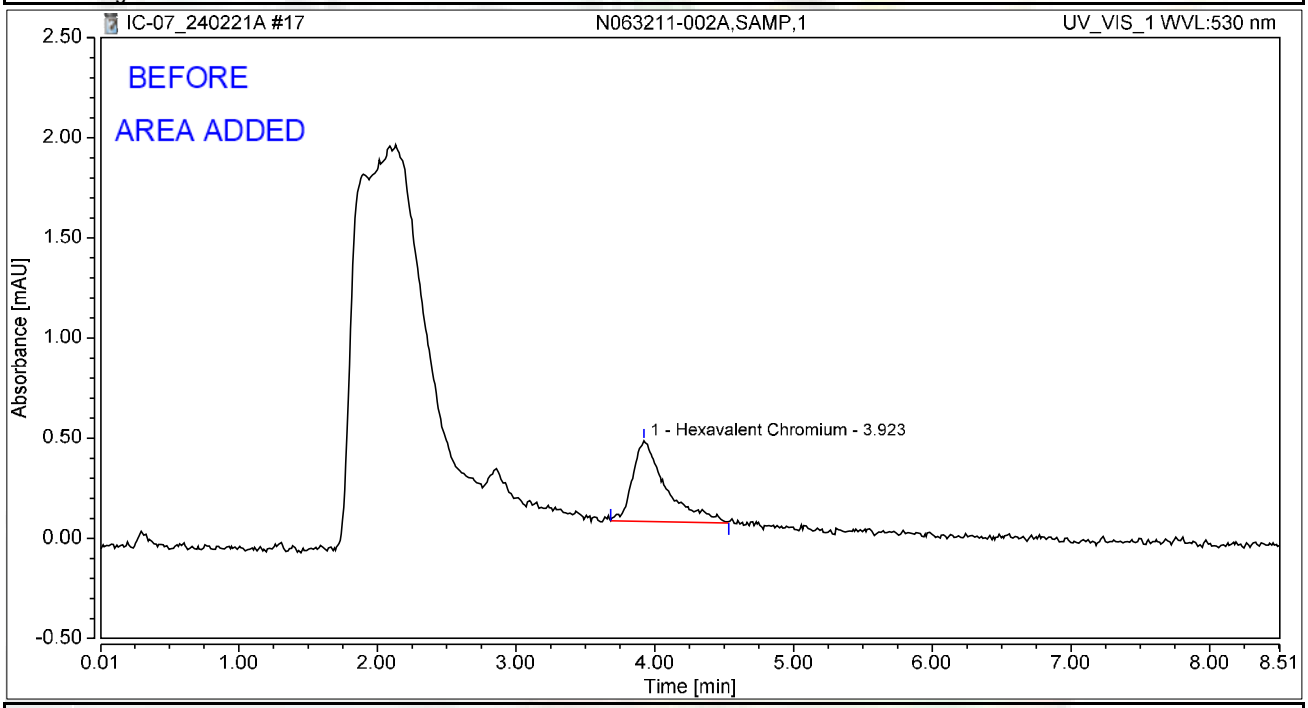
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063211-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 10:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

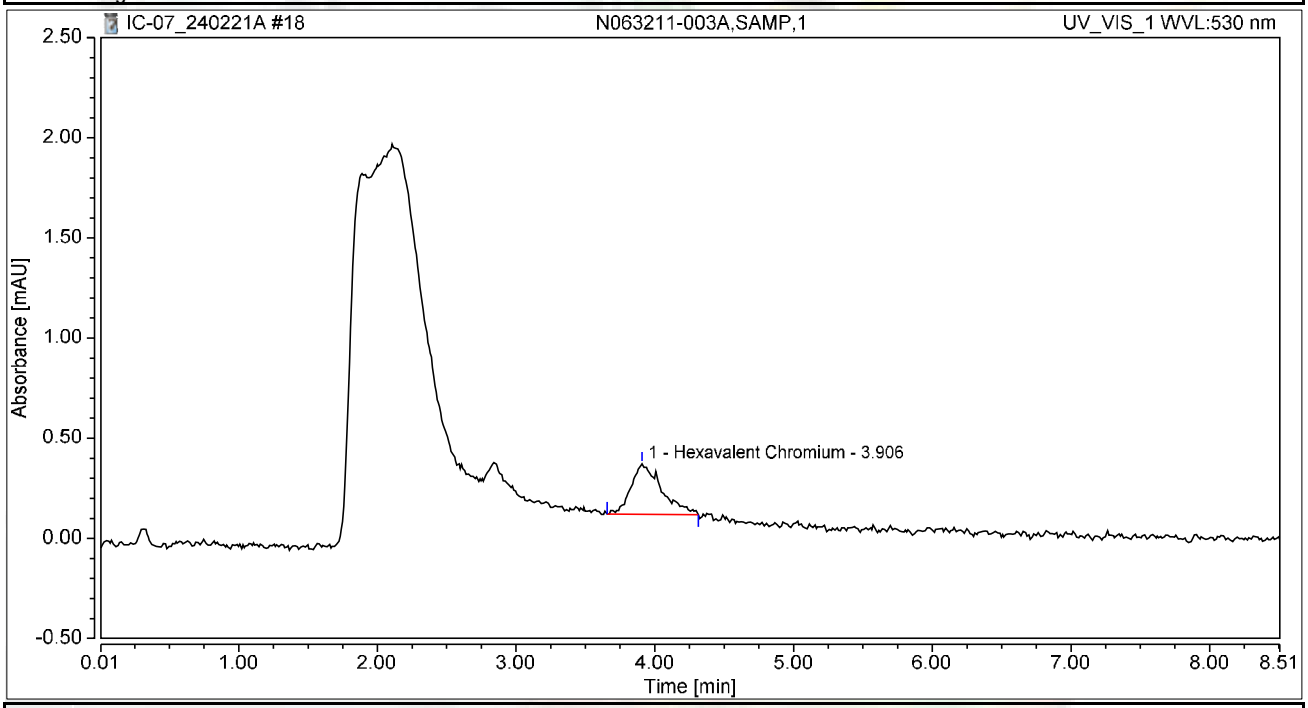
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.112	0.402	100.00	100.00	0.5211
Total:			**0.112**	**0.402**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063211-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 10:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

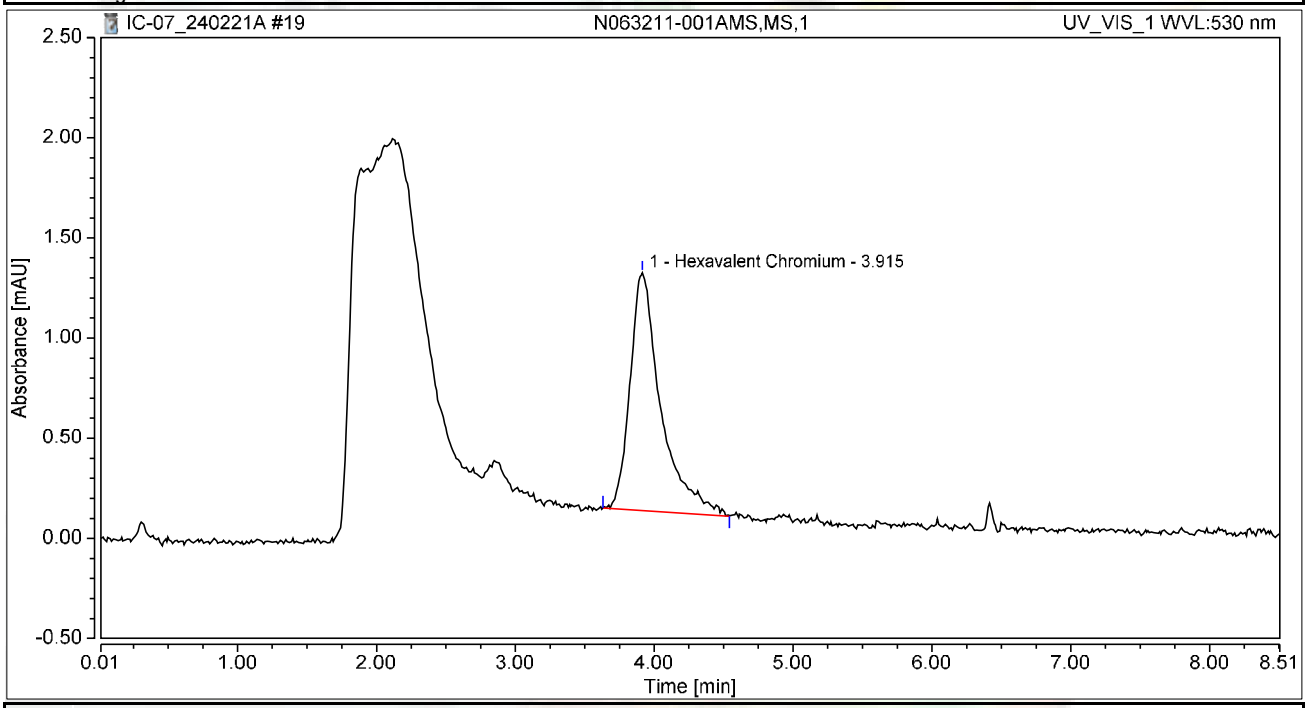
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.906	0.065	0.252	100.00	100.00	0.3007
Total:			**0.065**	**0.252**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063211-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 10:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

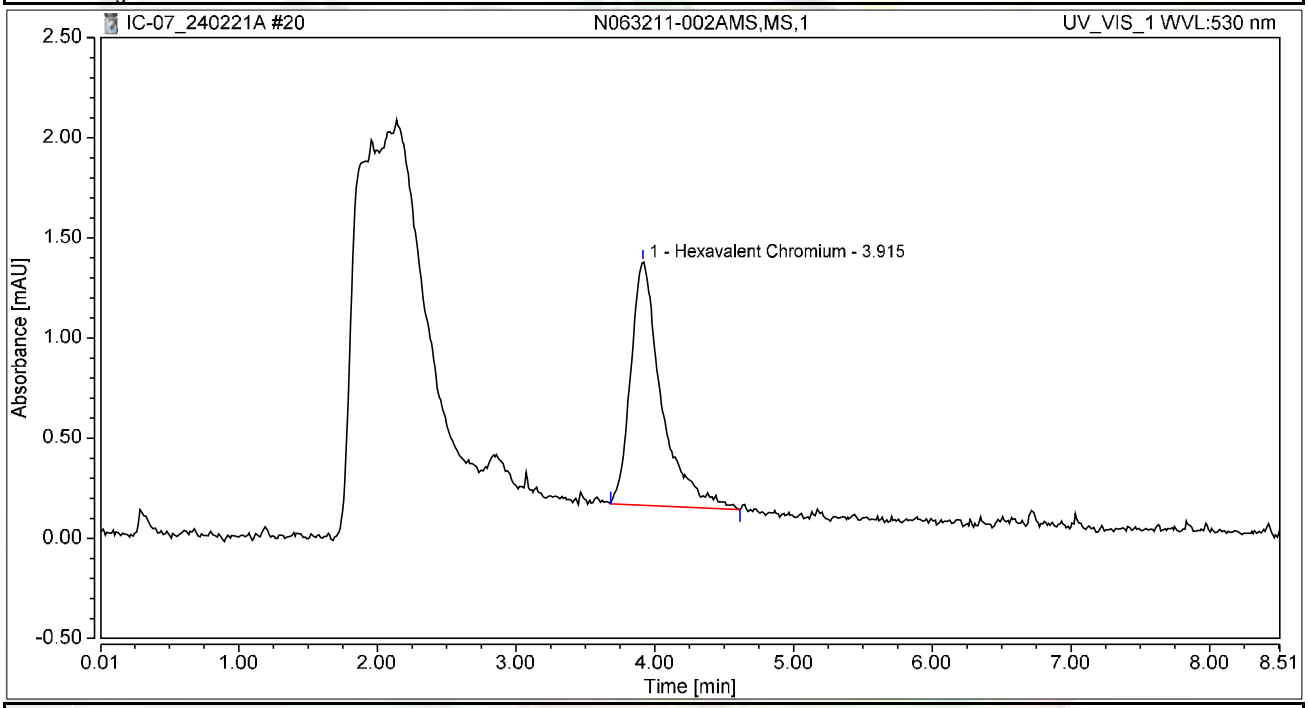
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.915	0.305	1.187	100.00	100.00	1.4173
Total:			**0.305**	**1.187**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063211-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 11:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

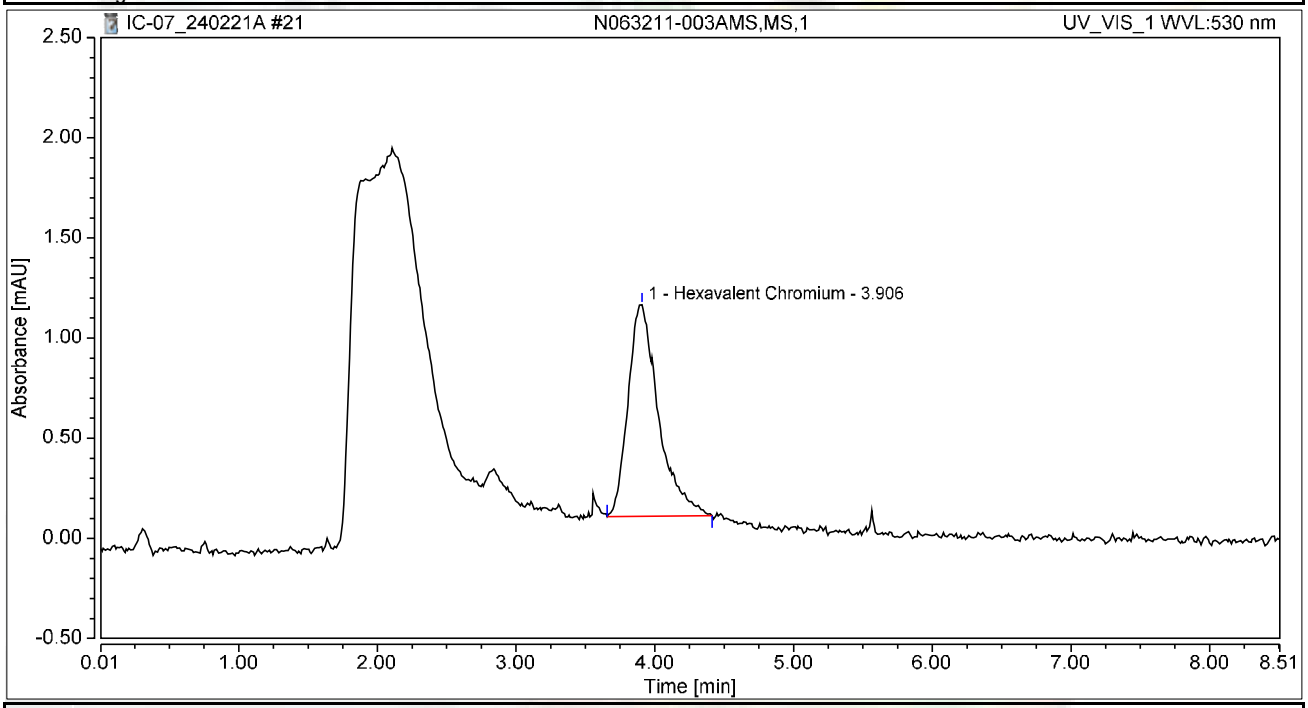
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.915	0.312	1.214	100.00	100.00	1.4523
Total:			**0.312**	**1.214**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063211-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 11:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

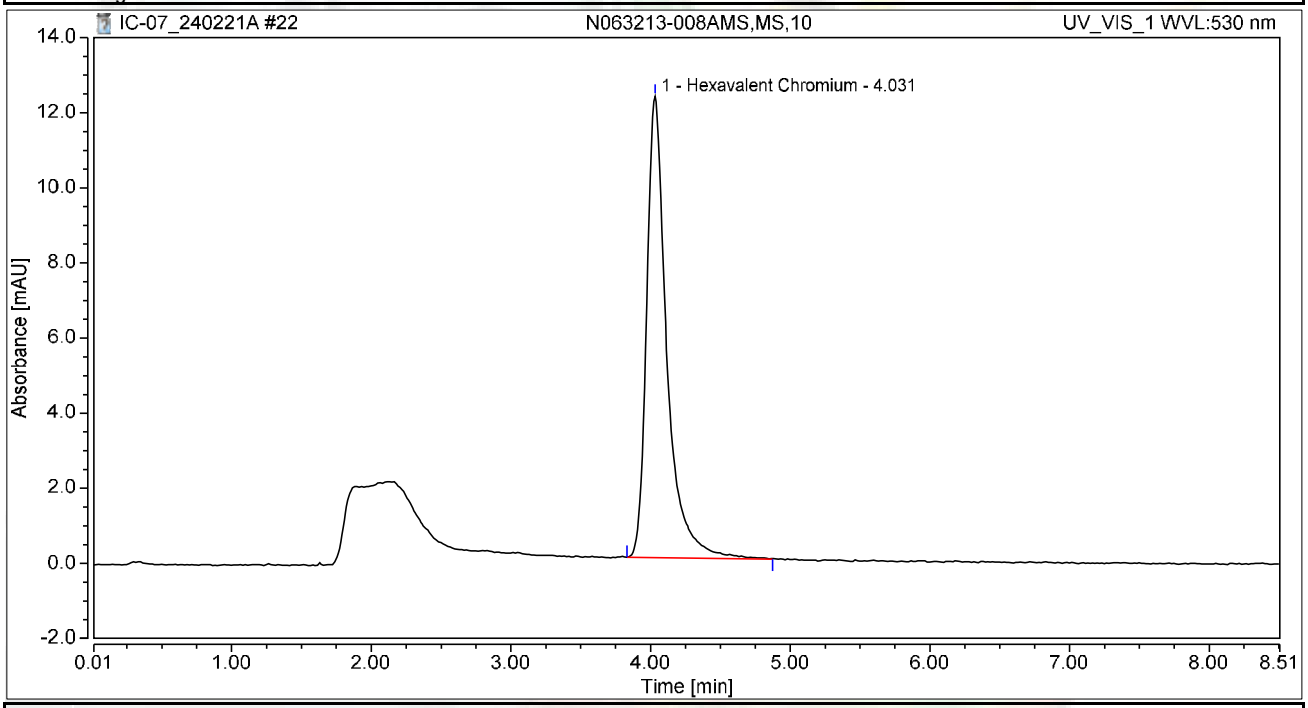
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.906	0.268	1.056	100.00	100.00	1.2476
Total:			**0.268**	**1.056**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-008AMS,MS,10**	*Run Time (min):*	**8.49**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 11:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

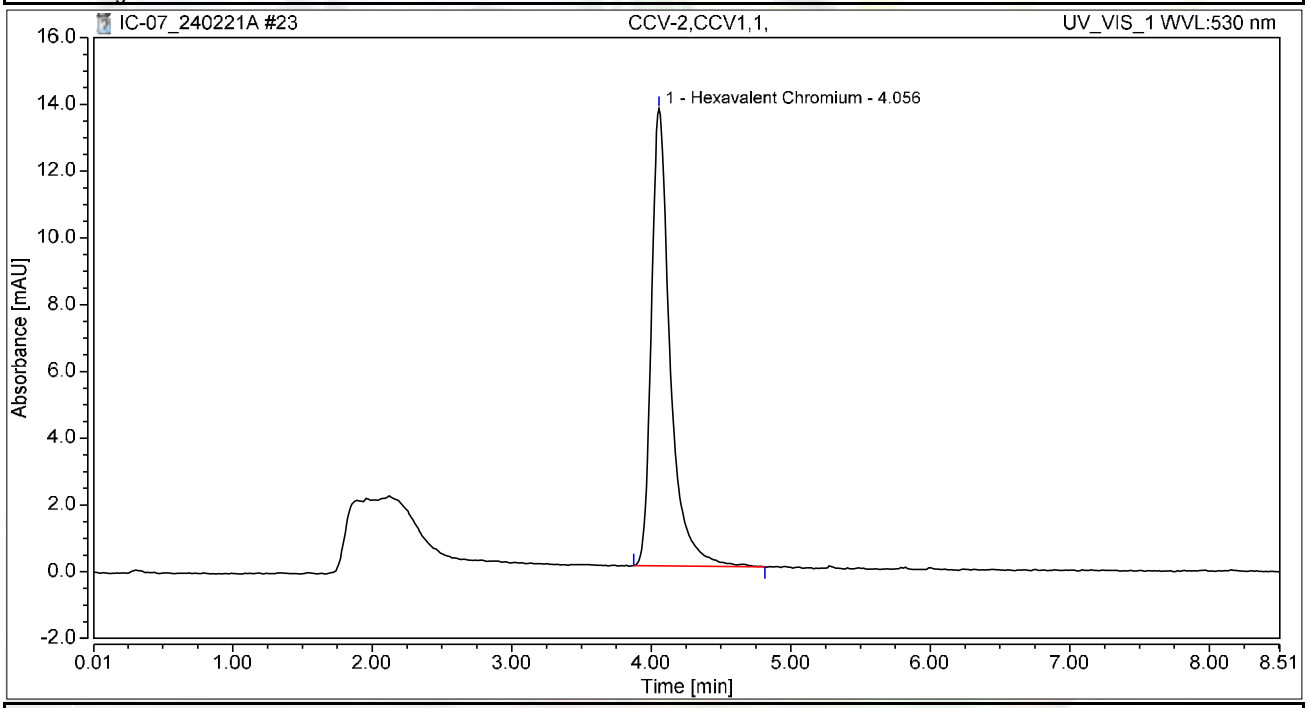
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	2.052	12.282	100.00	100.00	9.5417
Total:			**2.052**	**12.282**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 11:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

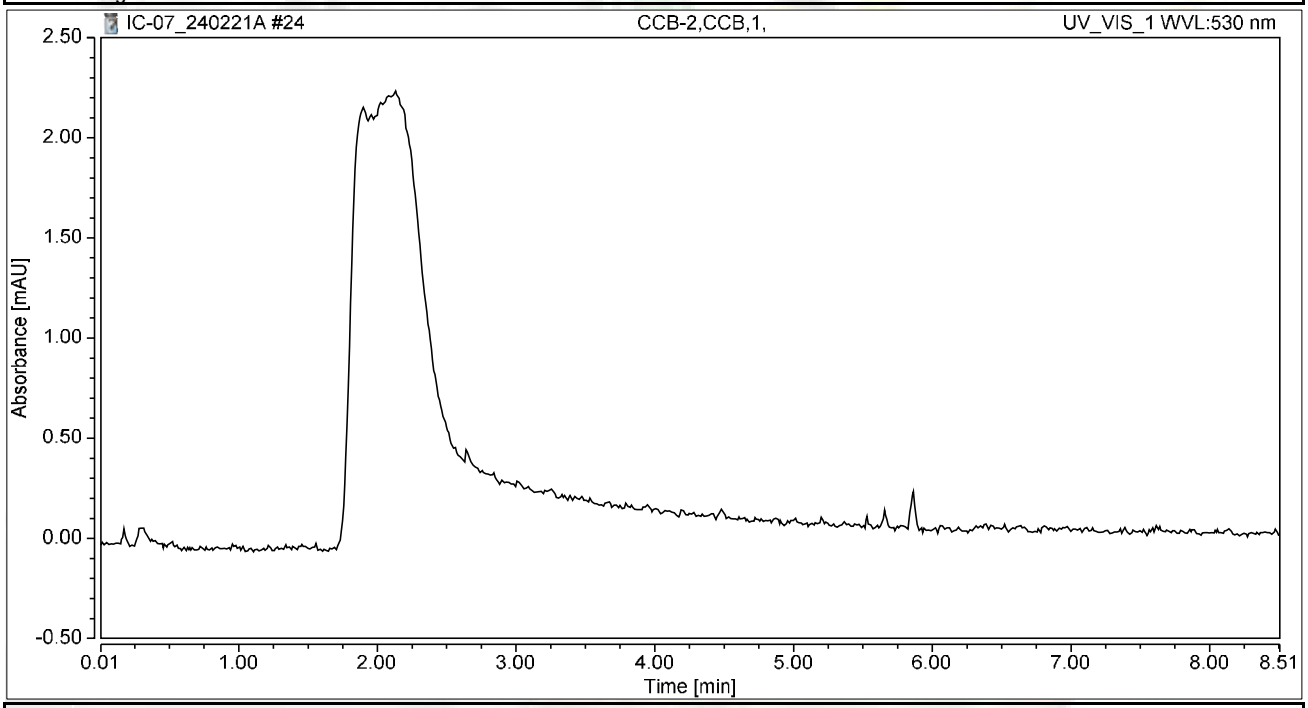
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	2.138	13.696	100.00	100.00	9.9378
Total:			**2.138**	**13.696**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 11:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

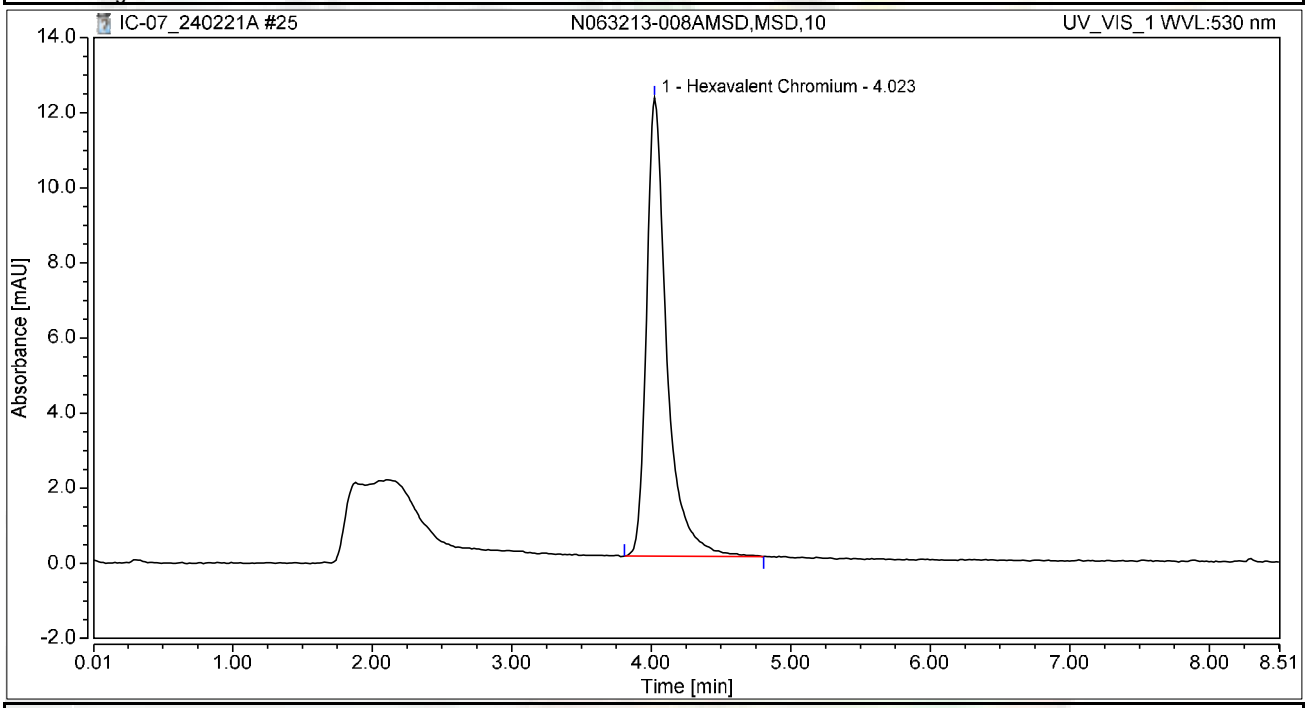
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-008AMSD,MSD,10**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 11:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

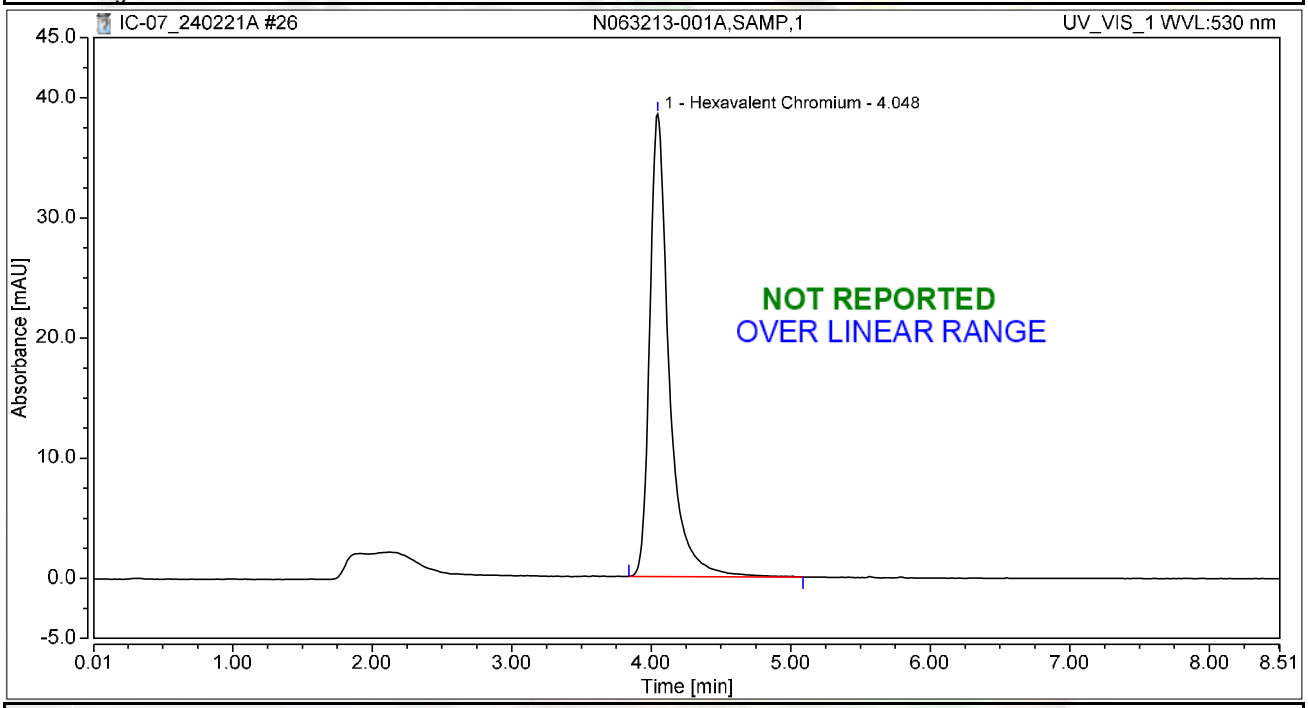
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	2.062	12.208	100.00	100.00	9.5860
Total:			**2.062**	**12.208**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 12:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

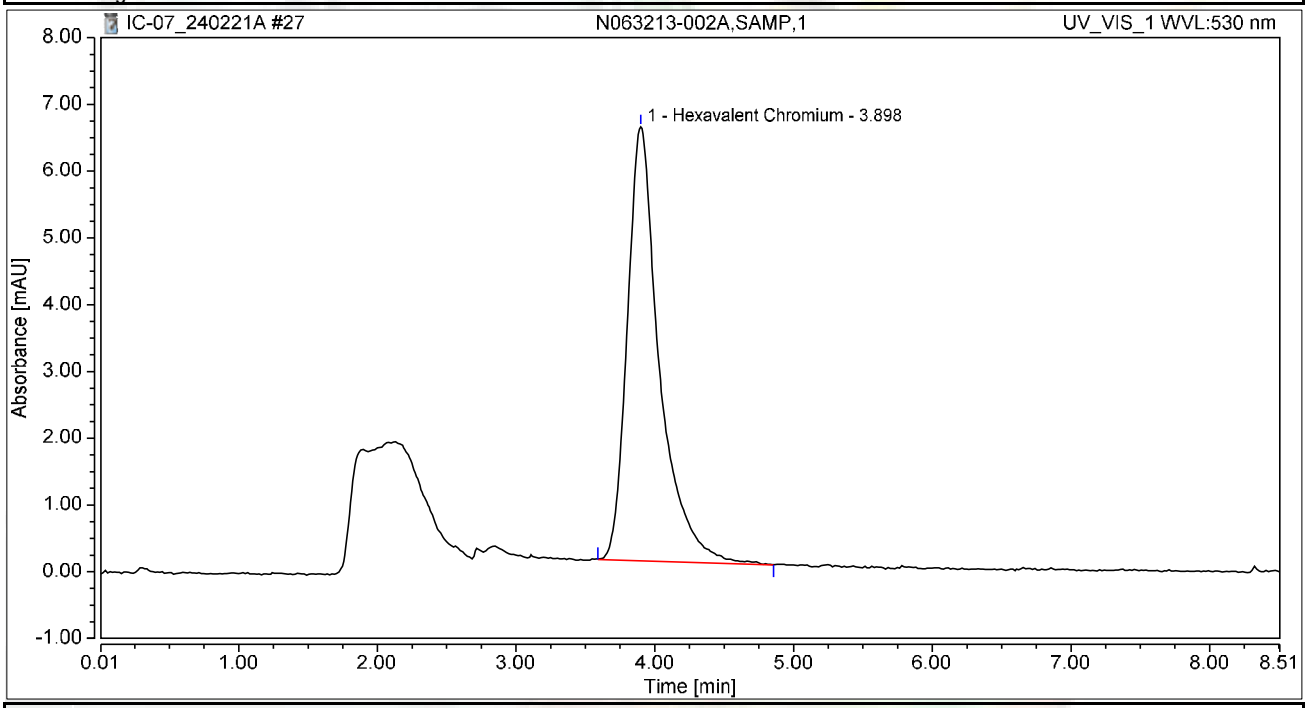
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	6.210	38.498	100.00	100.00	28.8715
Total:			**6.210**	**38.498**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 12:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

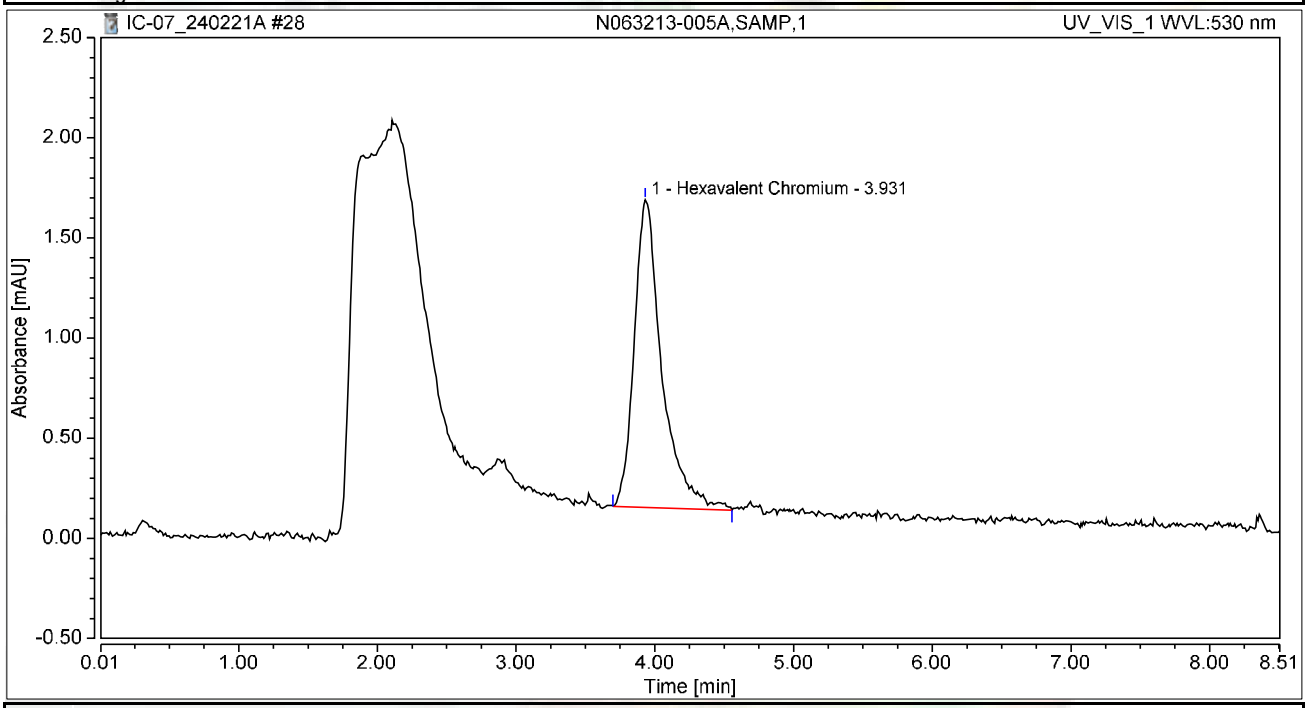
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.898	1.744	6.500	100.00	100.00	8.1074
Total:			**1.744**	**6.500**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 12:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

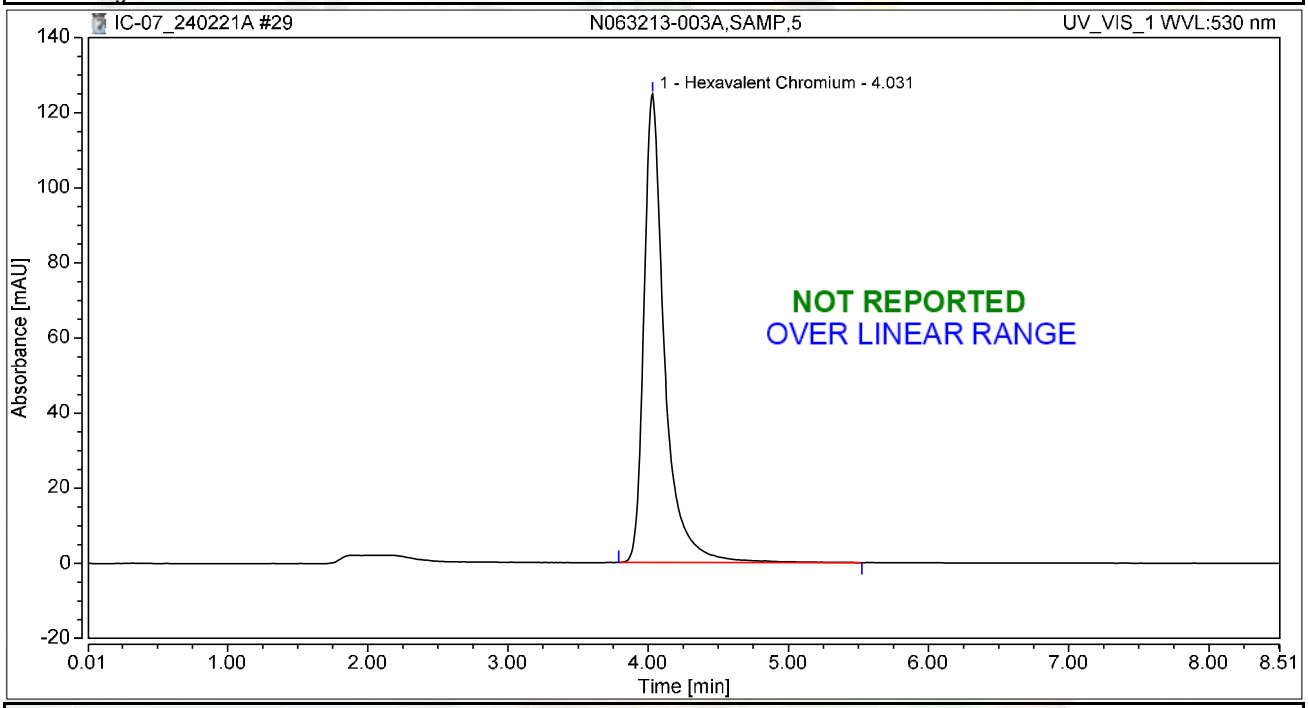
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.931	0.354	1.537	100.00	100.00	1.6463
Total:			**0.354**	**1.537**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 12:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

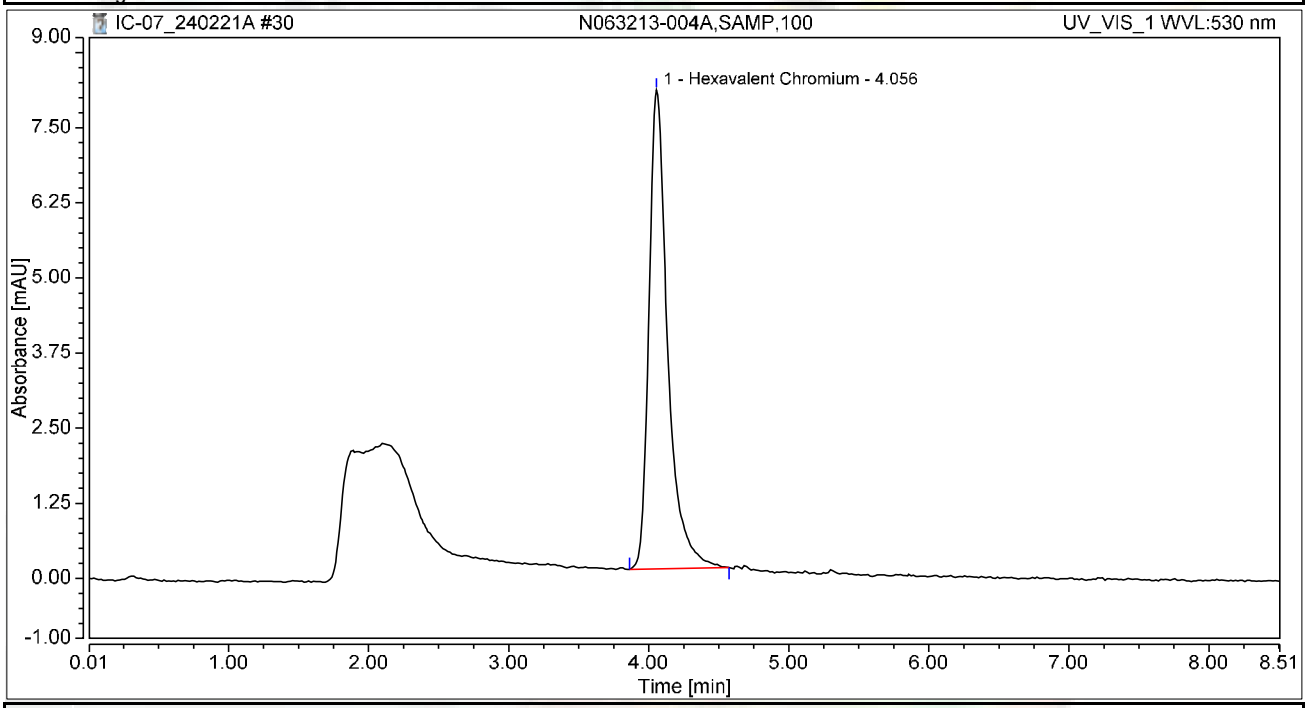
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	21.220	124.763	100.00	100.00	98.6496
Total:			**21.220**	**124.763**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-004A,SAMP,100**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 12:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

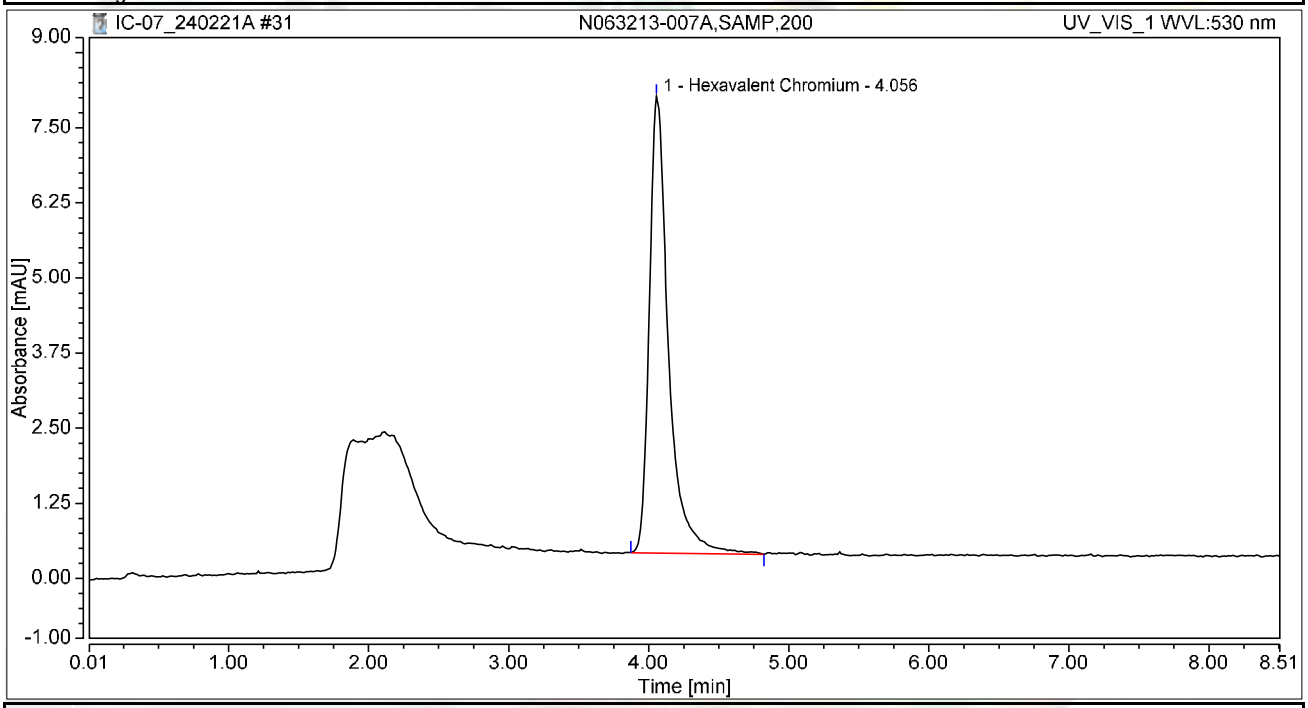
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.238	7.969	100.00	100.00	5.7533
Total:			**1.238**	**7.969**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-007A,SAMP,200**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 12:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

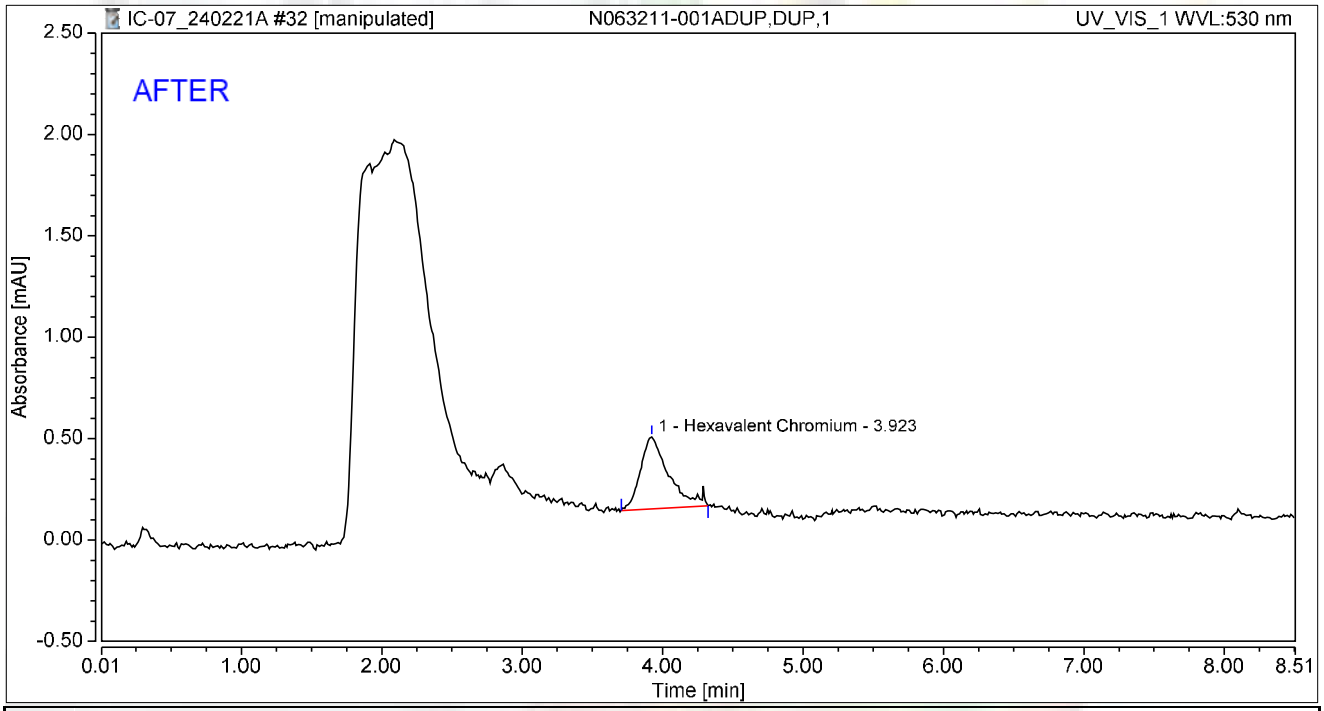
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.211	7.604	100.00	100.00	5.6277
Total:			**1.211**	**7.604**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063211-001ADUP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 13:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.084	0.354	100.00	100.00	0.3915
Total:			**0.084**	**0.354**	**100.00**	**100.00**	

Reviewed by:

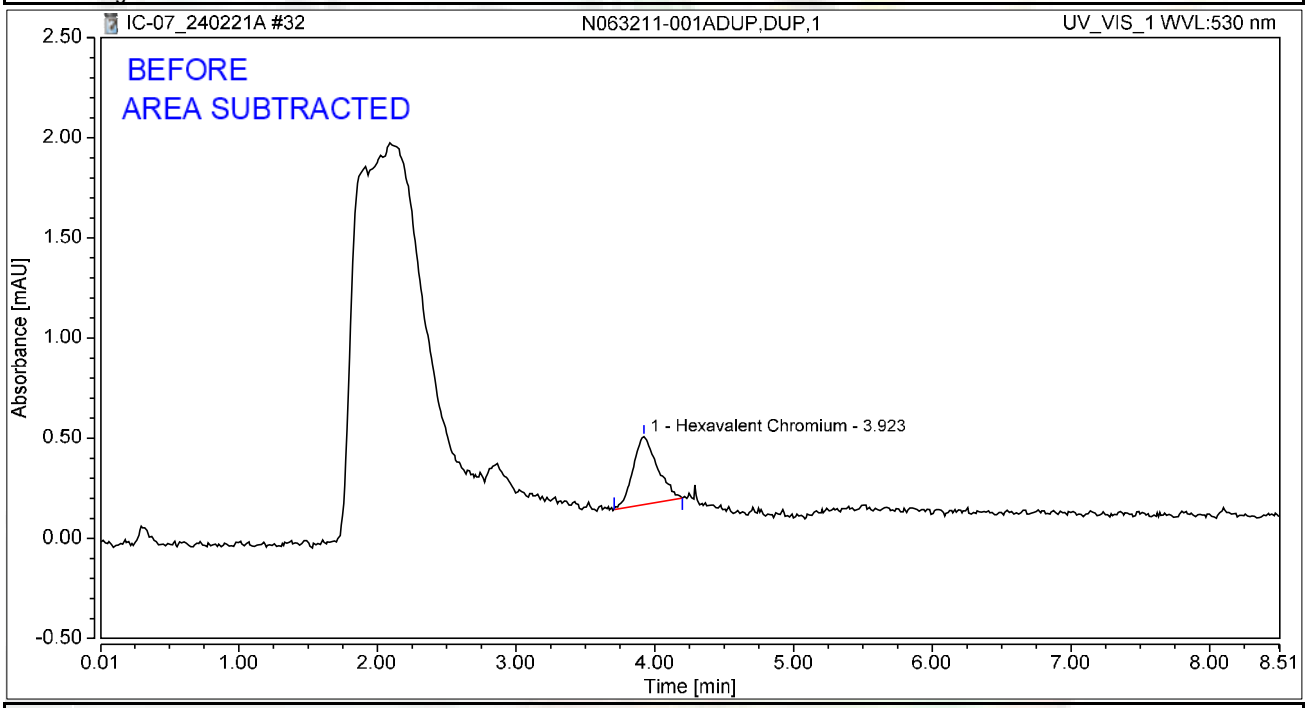
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063211-001ADUP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 13:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

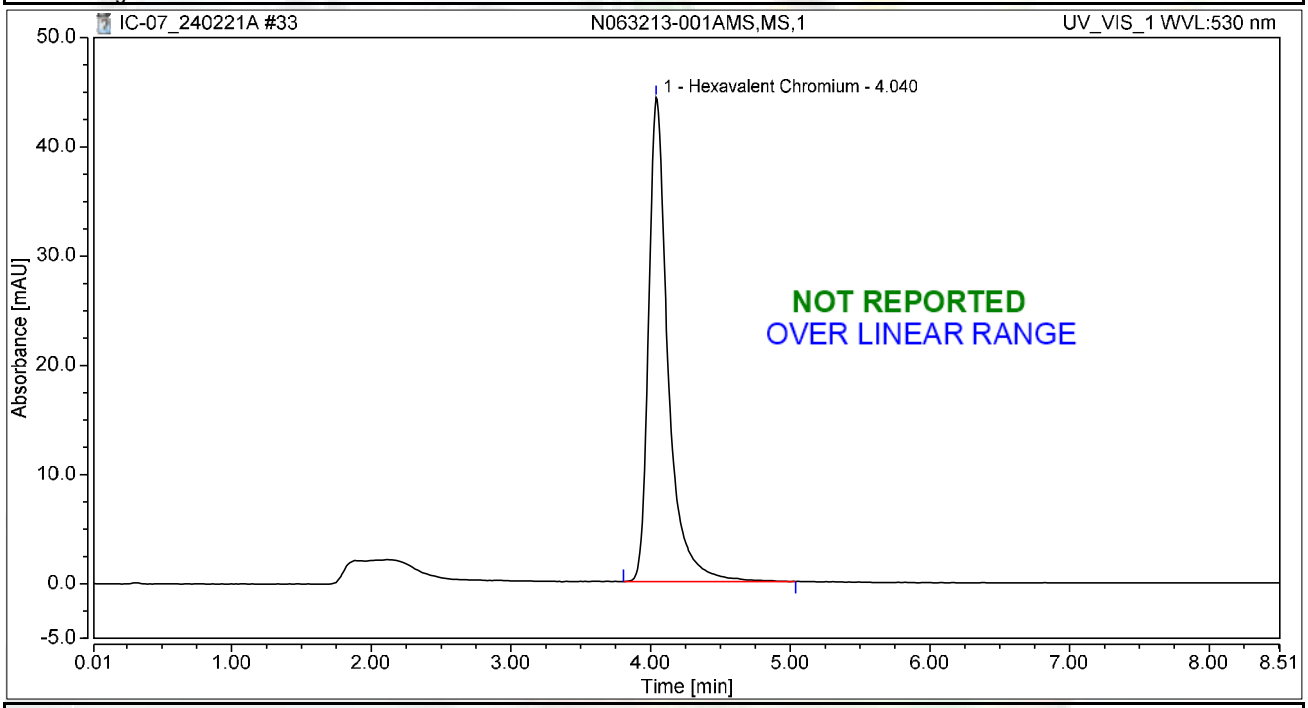
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.070	0.338	100.00	100.00	0.3235
Total:			**0.070**	**0.338**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 13:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

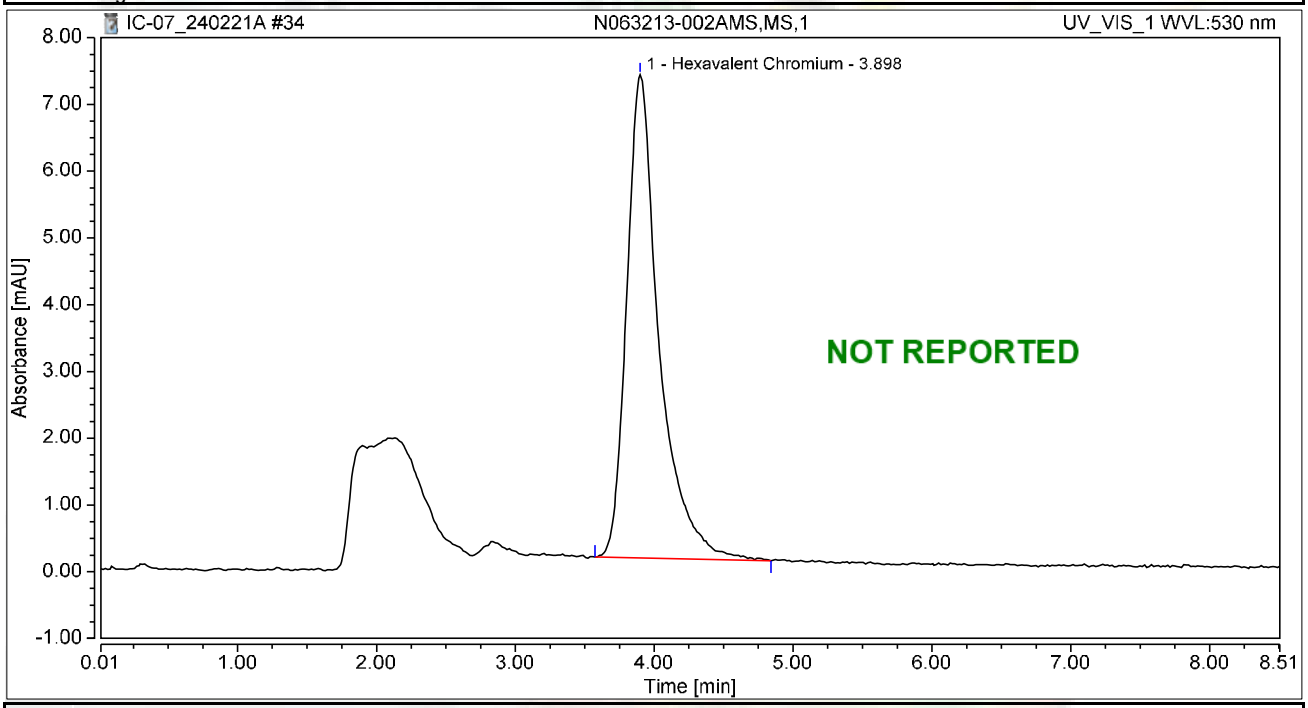
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	7.171	44.306	100.00	100.00	33.3380
Total:			**7.171**	**44.306**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 13:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

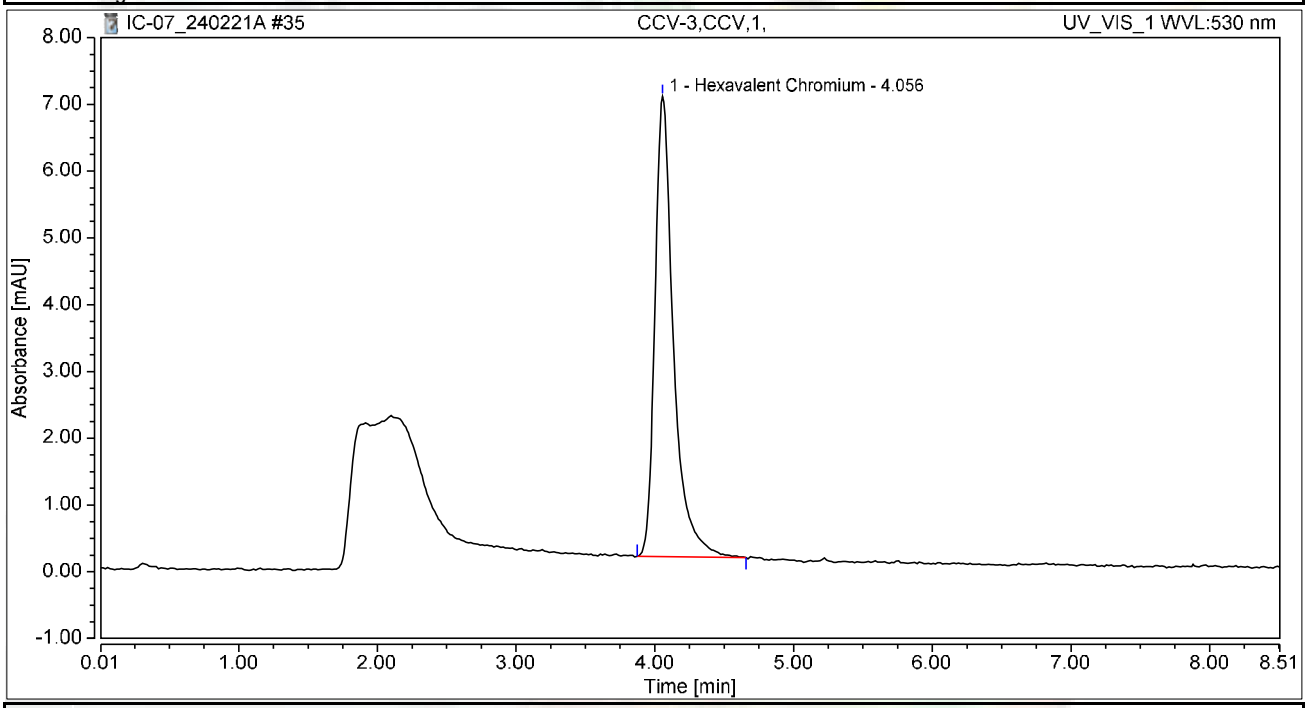
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.898	1.958	7.237	100.00	100.00	9.1039
Total:			**1.958**	**7.237**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 13:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

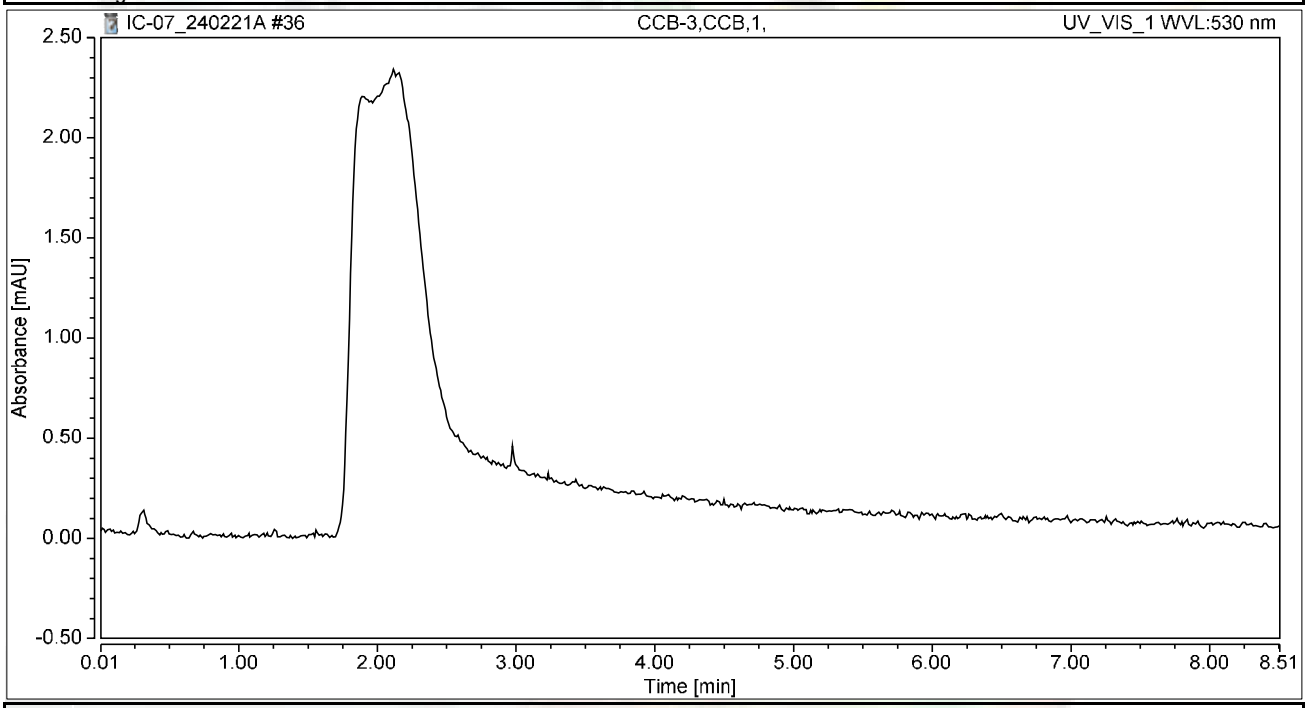
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.071	6.894	100.00	100.00	4.9771
Total:			**1.071**	**6.894**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

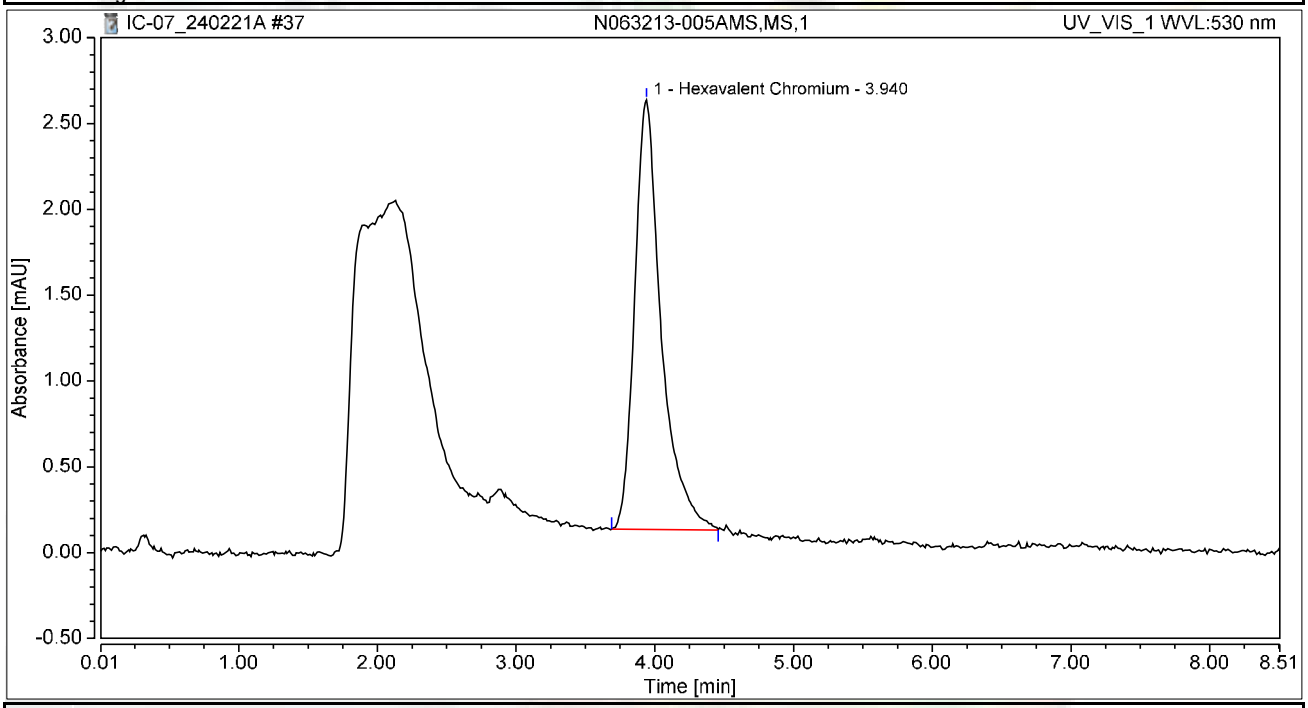
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 13:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

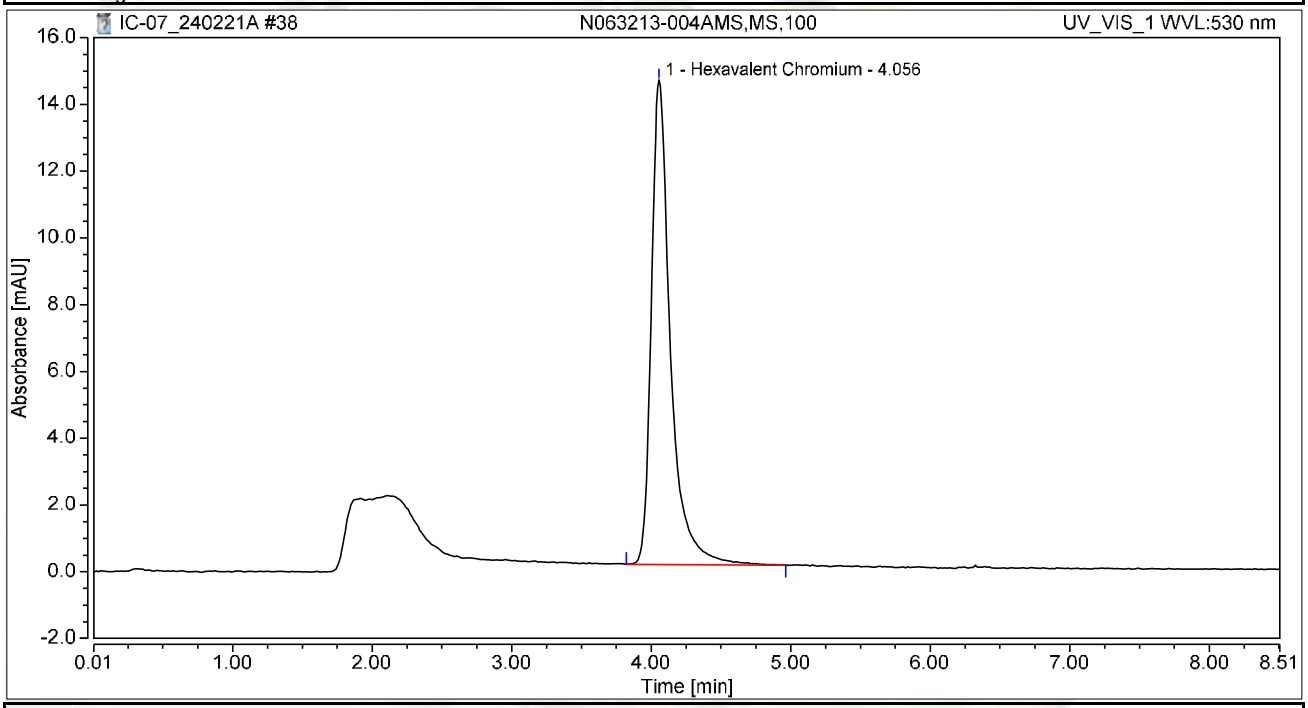
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.555	2.501	100.00	100.00	2.5807
Total:			**0.555**	**2.501**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-004AMS,MS,100**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 13:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

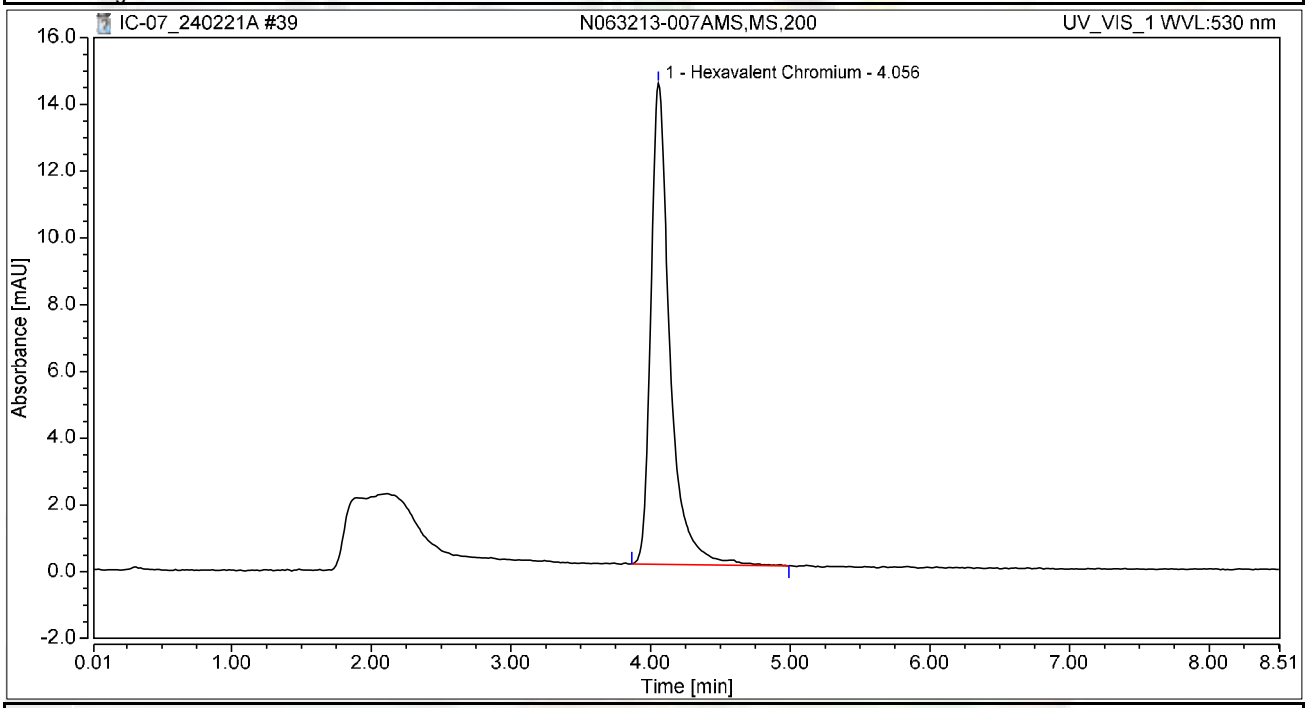
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	2.303	14.502	100.00	100.00	10.7064
Total:			**2.303**	**14.502**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-007AMS,MS,200**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 14:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

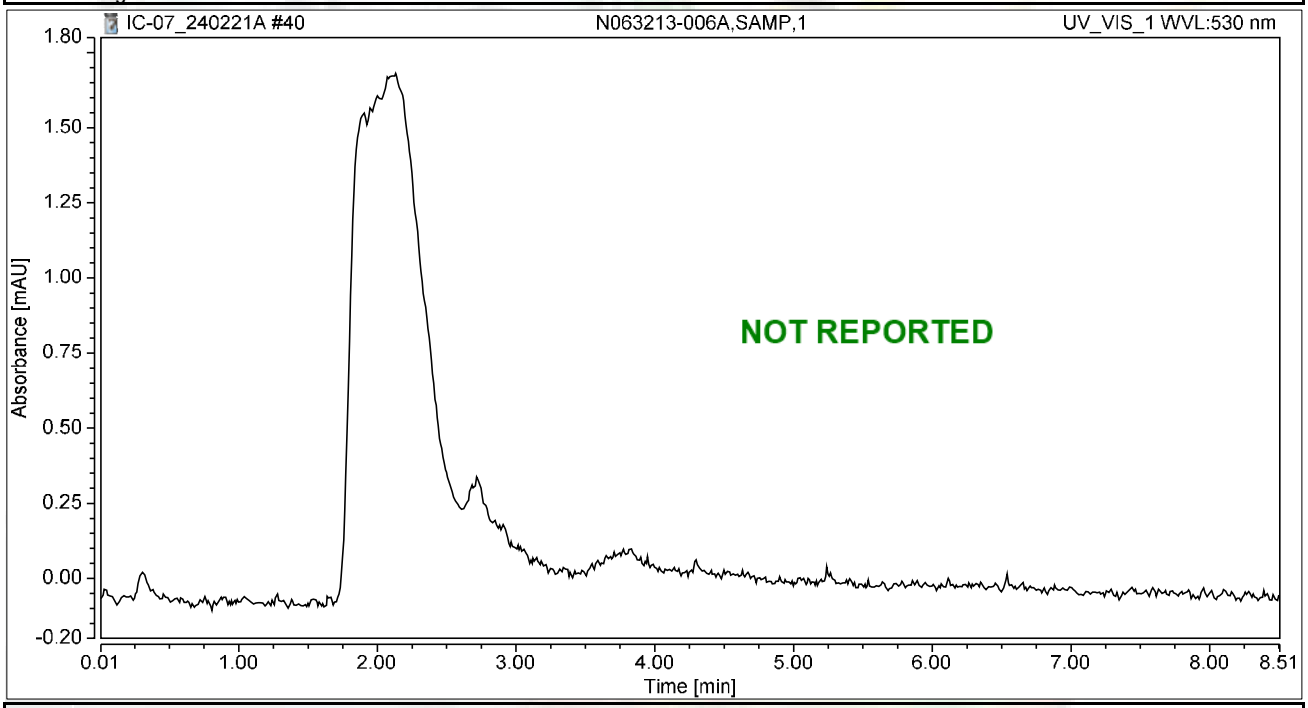
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	2.281	14.403	100.00	100.00	10.6062
Total:			**2.281**	**14.403**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 14:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

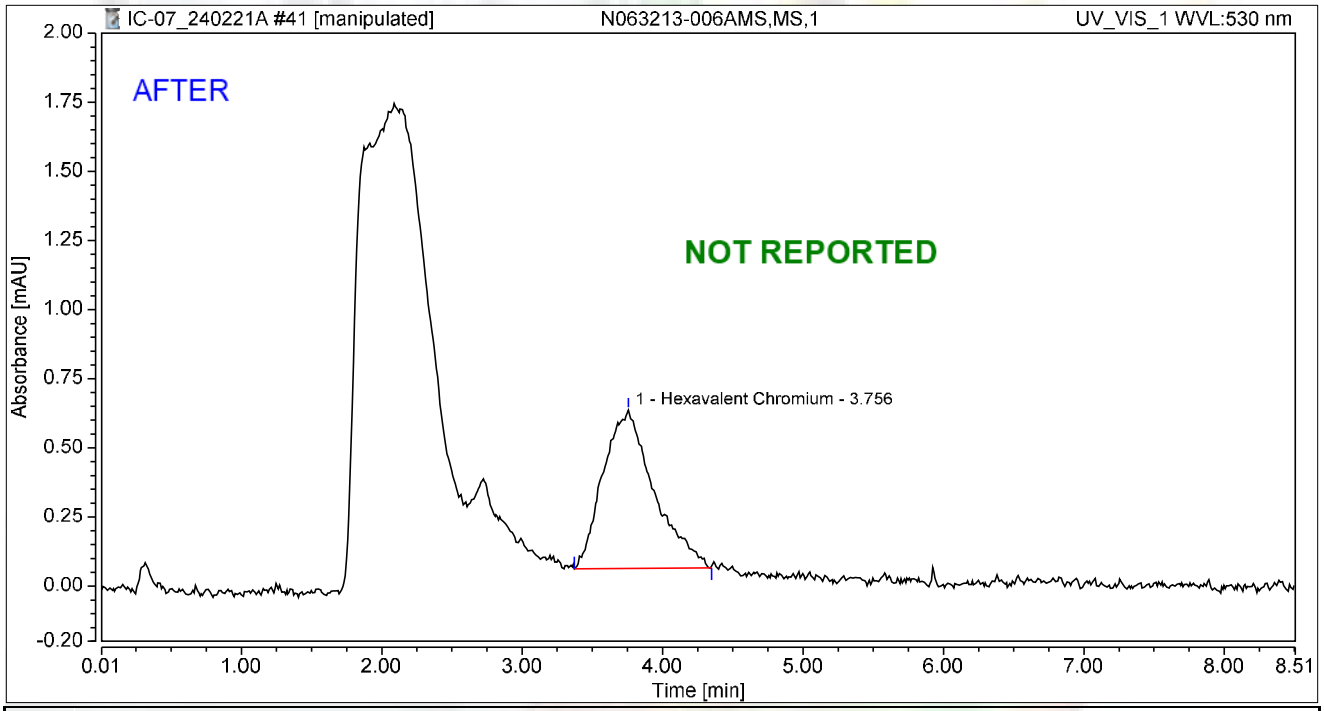
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 14:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

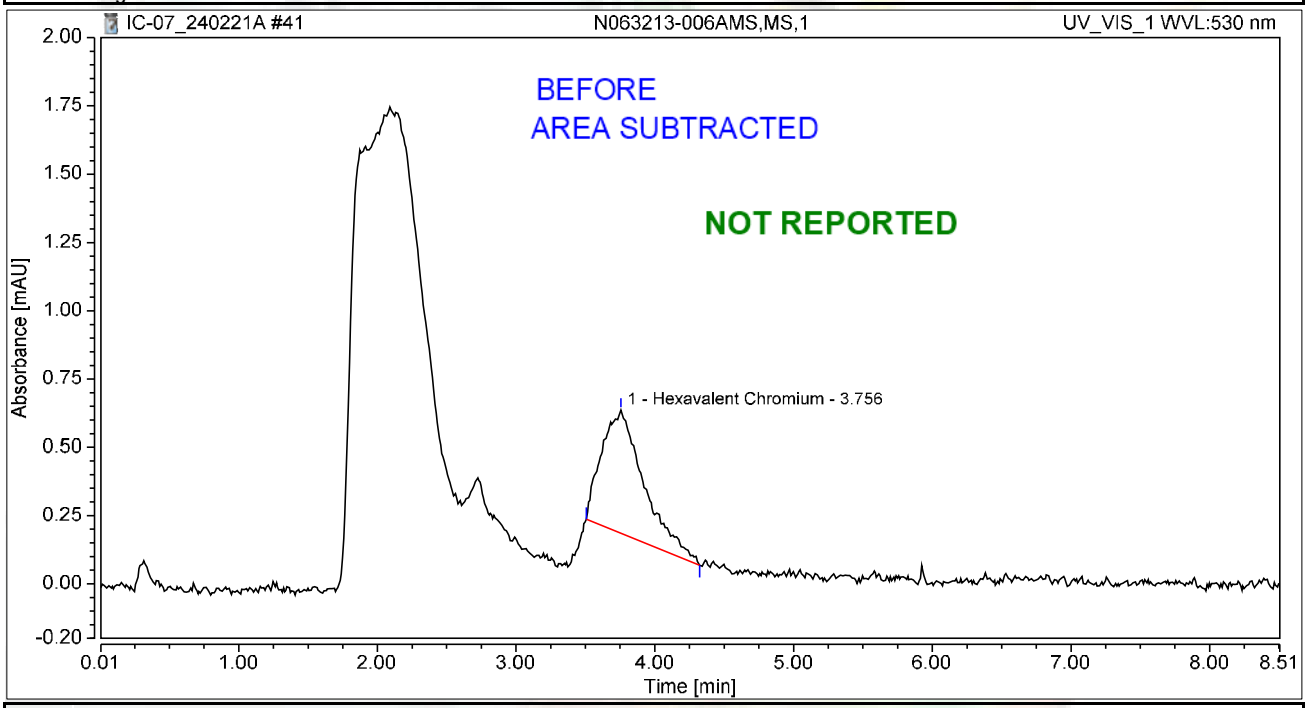
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.756	0.240	0.572	100.00	100.00	1.1181
Total:			**0.240**	**0.572**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 14:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

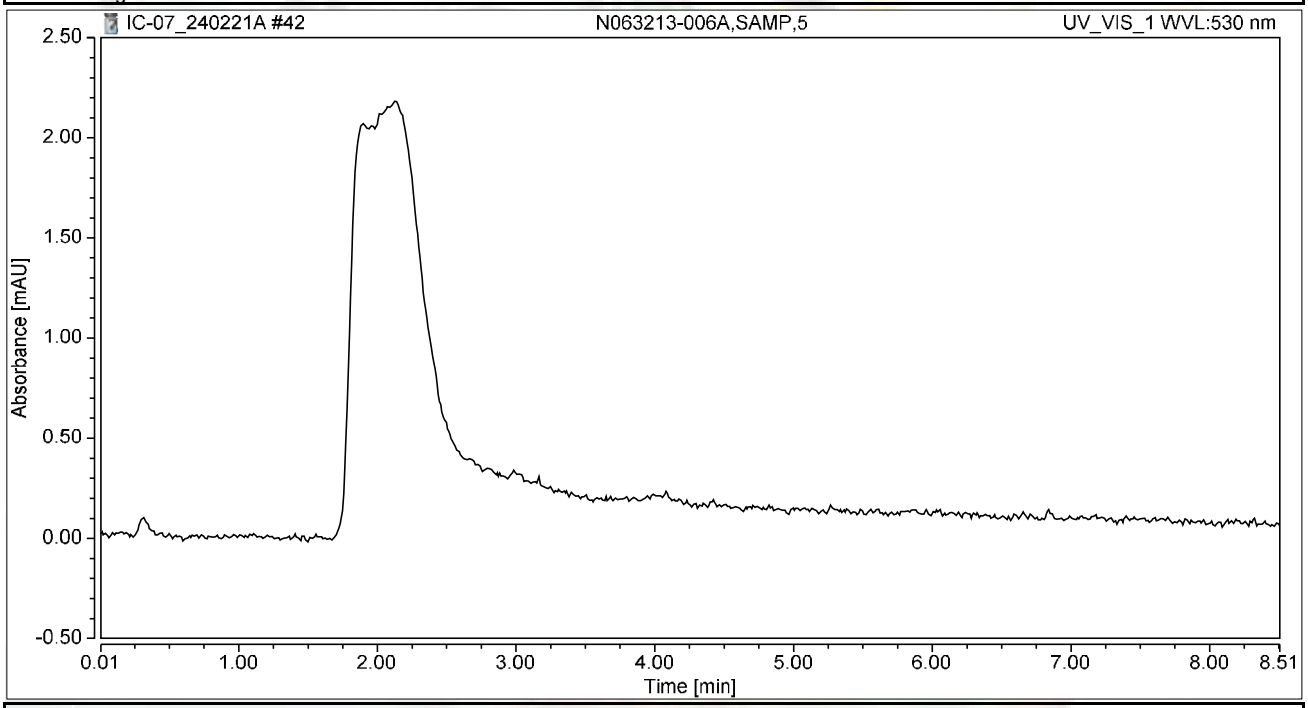
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.756	0.159	0.451	100.00	100.00	0.7378
Total:			**0.159**	**0.451**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-006A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 14:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

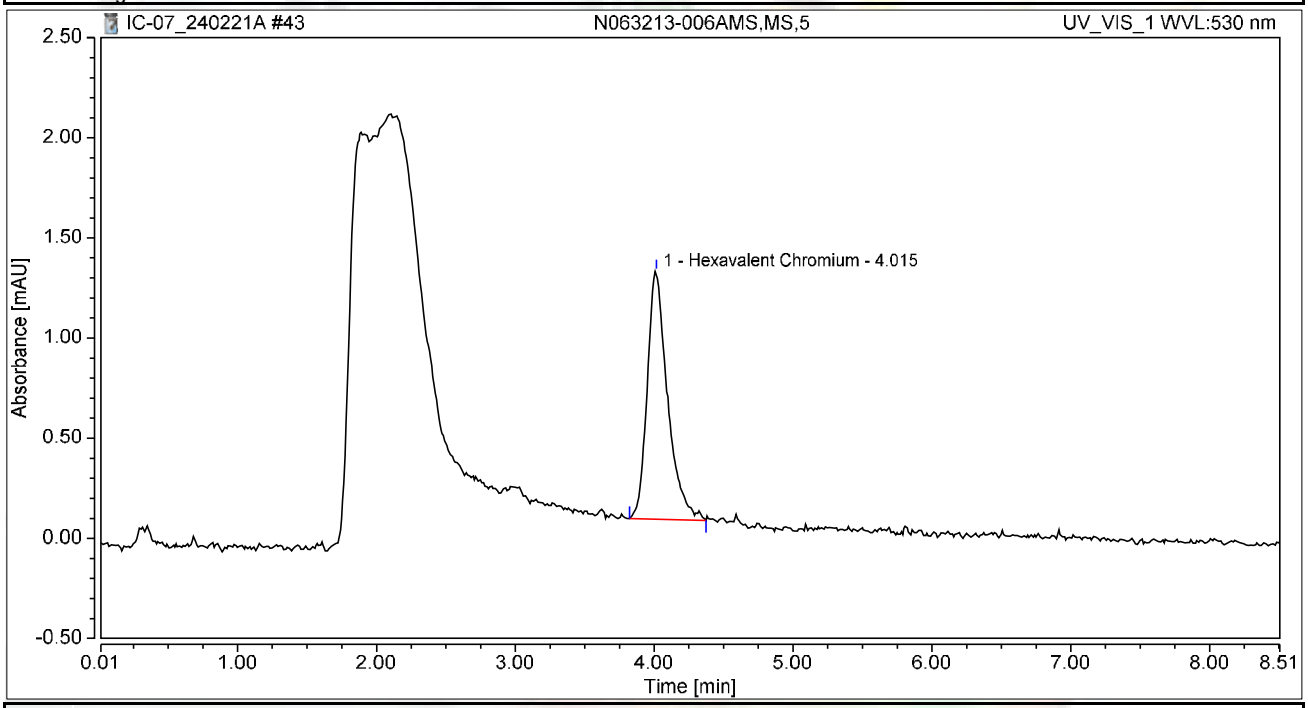
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-006AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 14:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

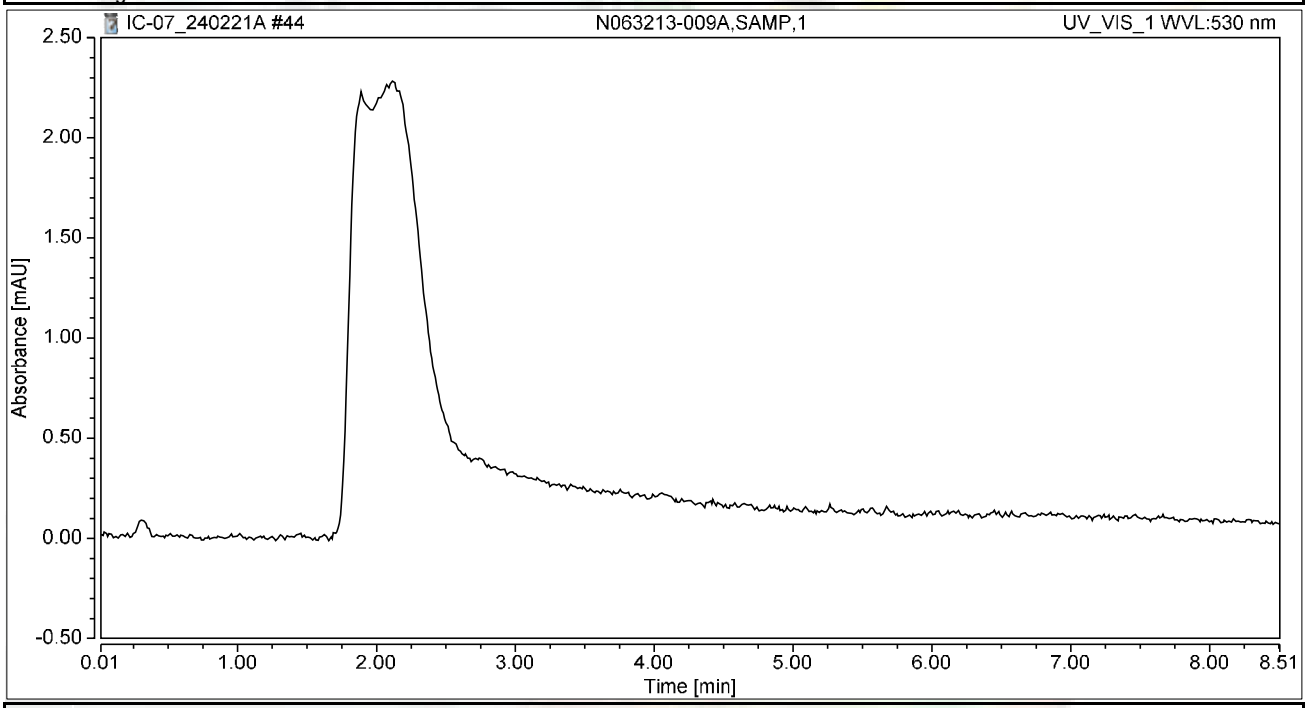
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.210	1.236	100.00	100.00	0.9766
Total:			**0.210**	**1.236**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-009A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 14:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

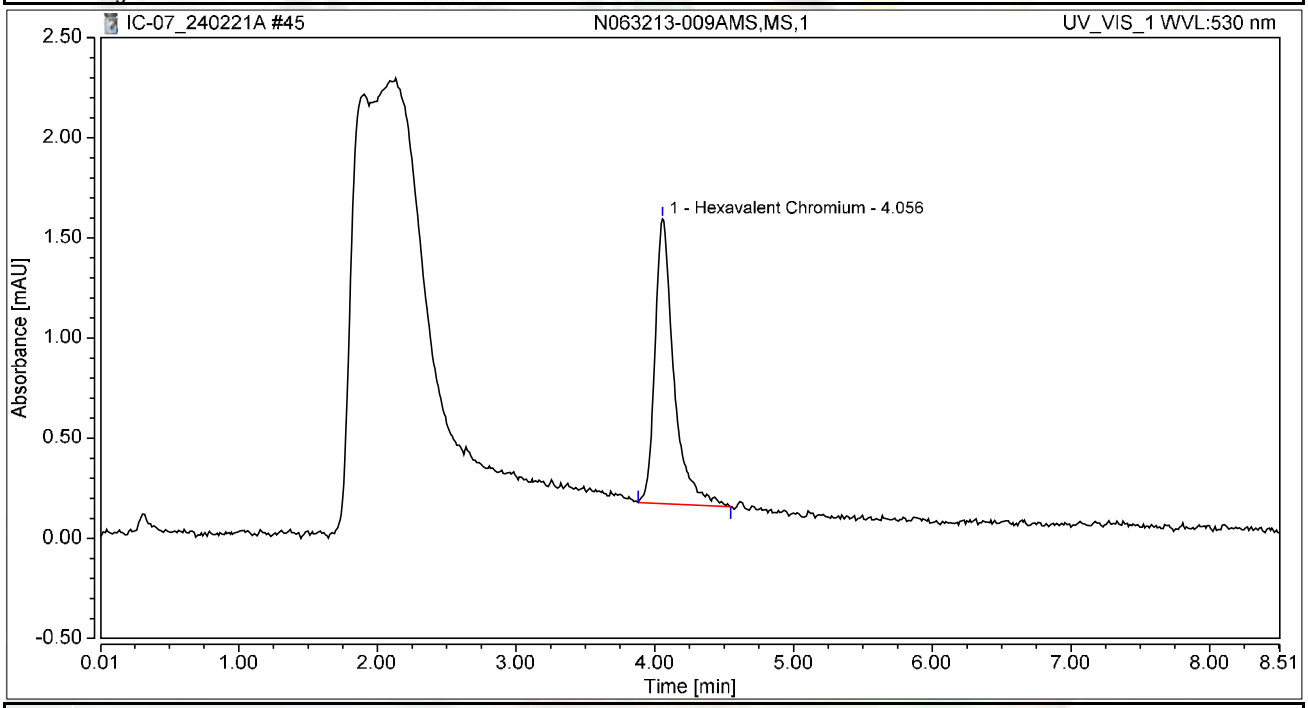
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 15:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

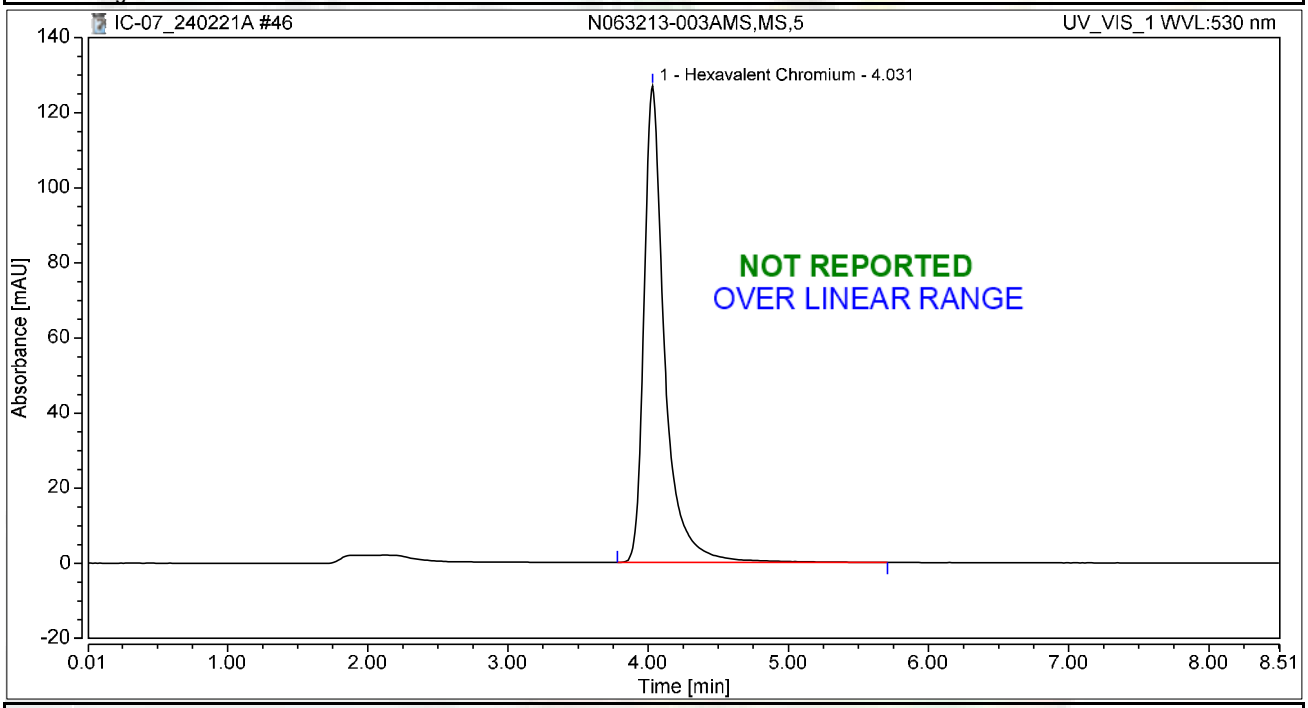
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.225	1.422	100.00	100.00	1.0467
Total:			**0.225**	**1.422**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 15:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

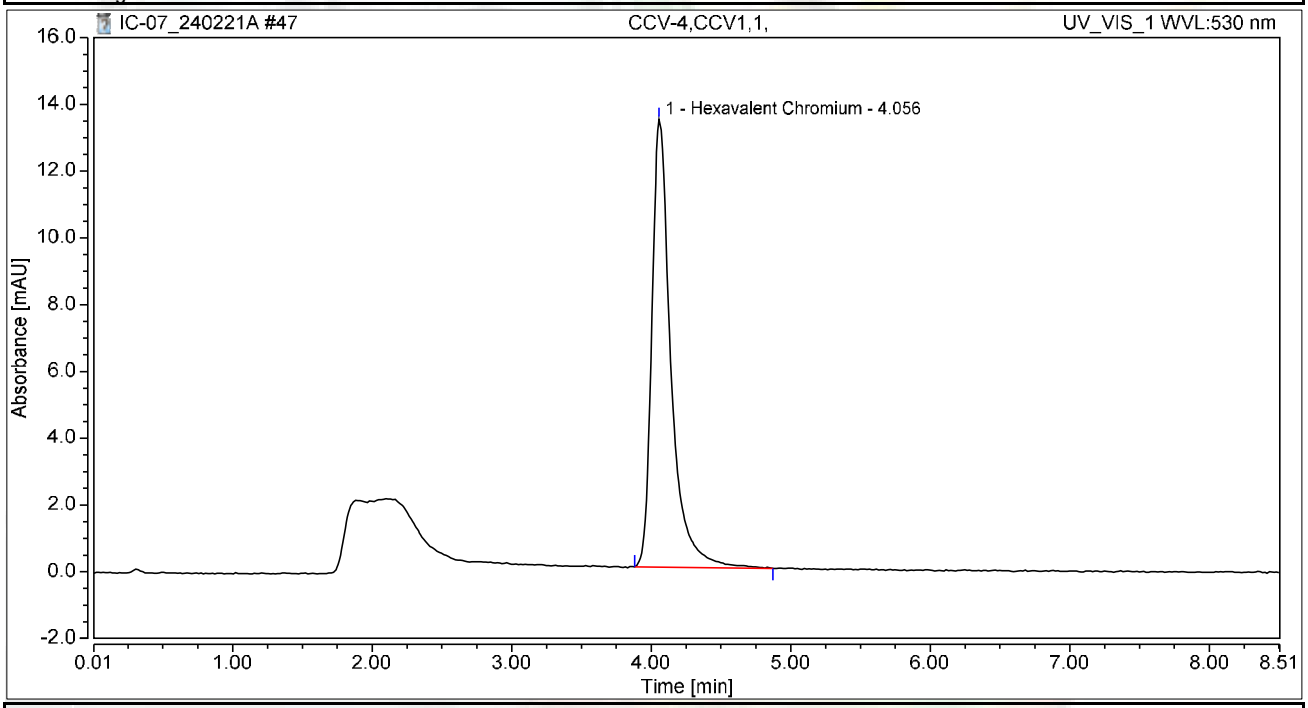
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	21.656	126.939	100.00	100.00	100.6789
Total:			**21.656**	**126.939**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 15:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

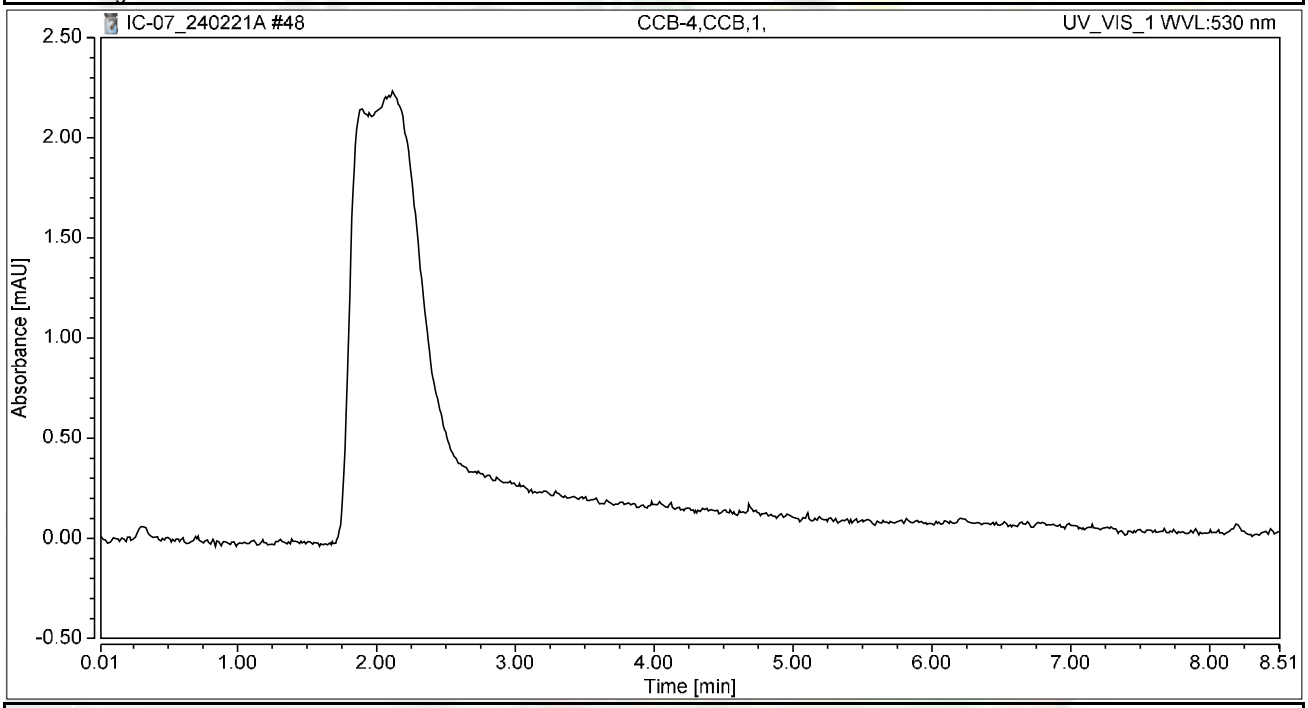
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	2.128	13.405	100.00	100.00	9.8925
Total:			**2.128**	**13.405**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 15:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

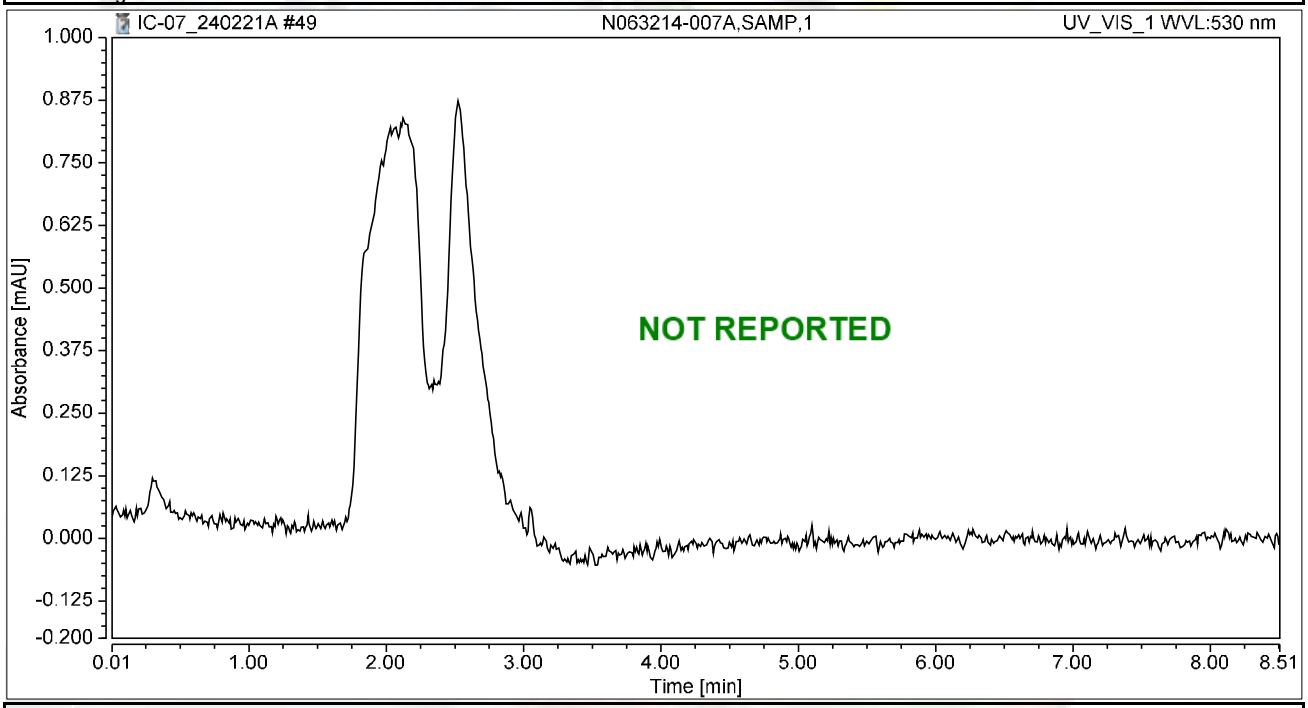
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-007A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 15:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

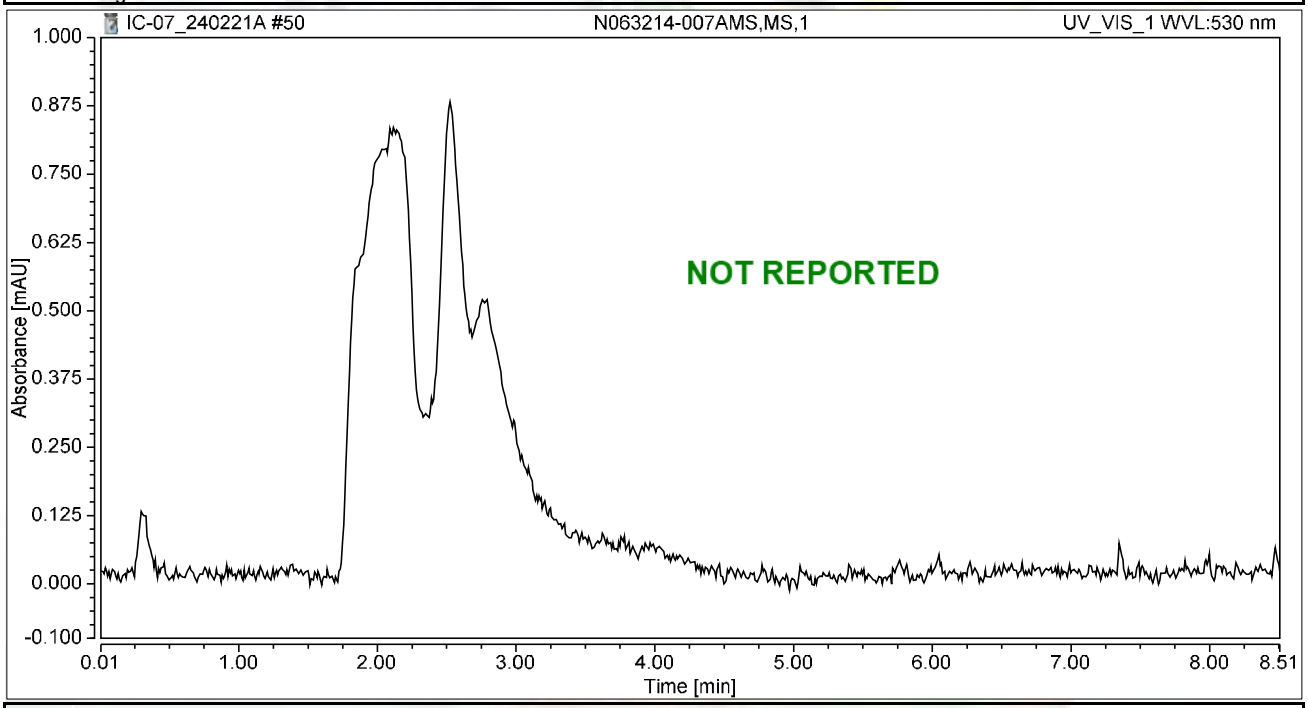
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 15:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

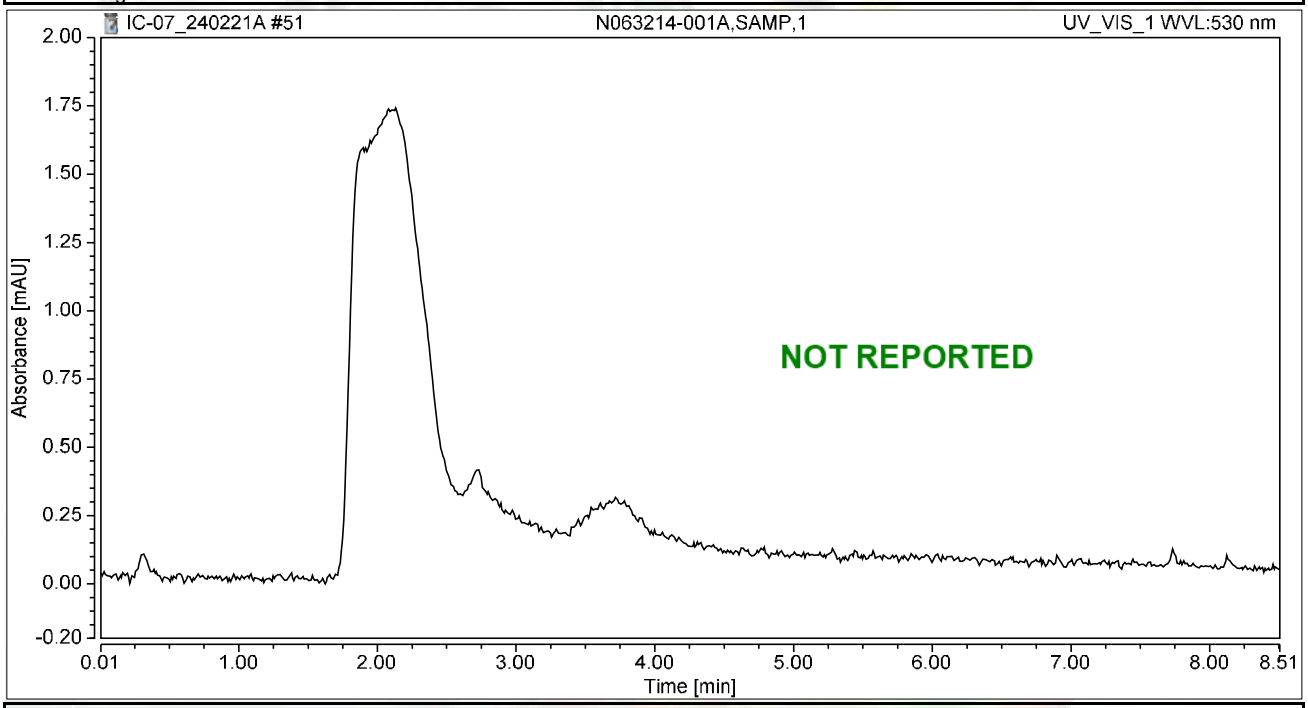
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 16:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

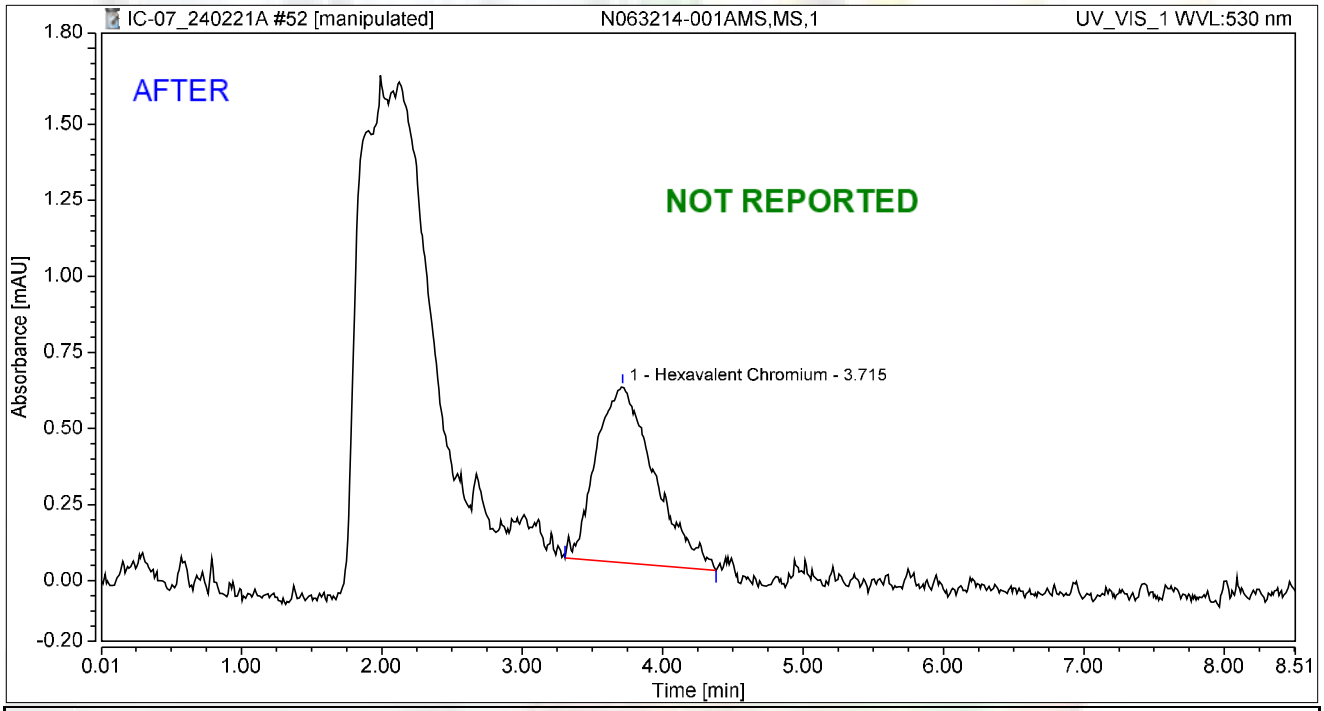
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 16:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

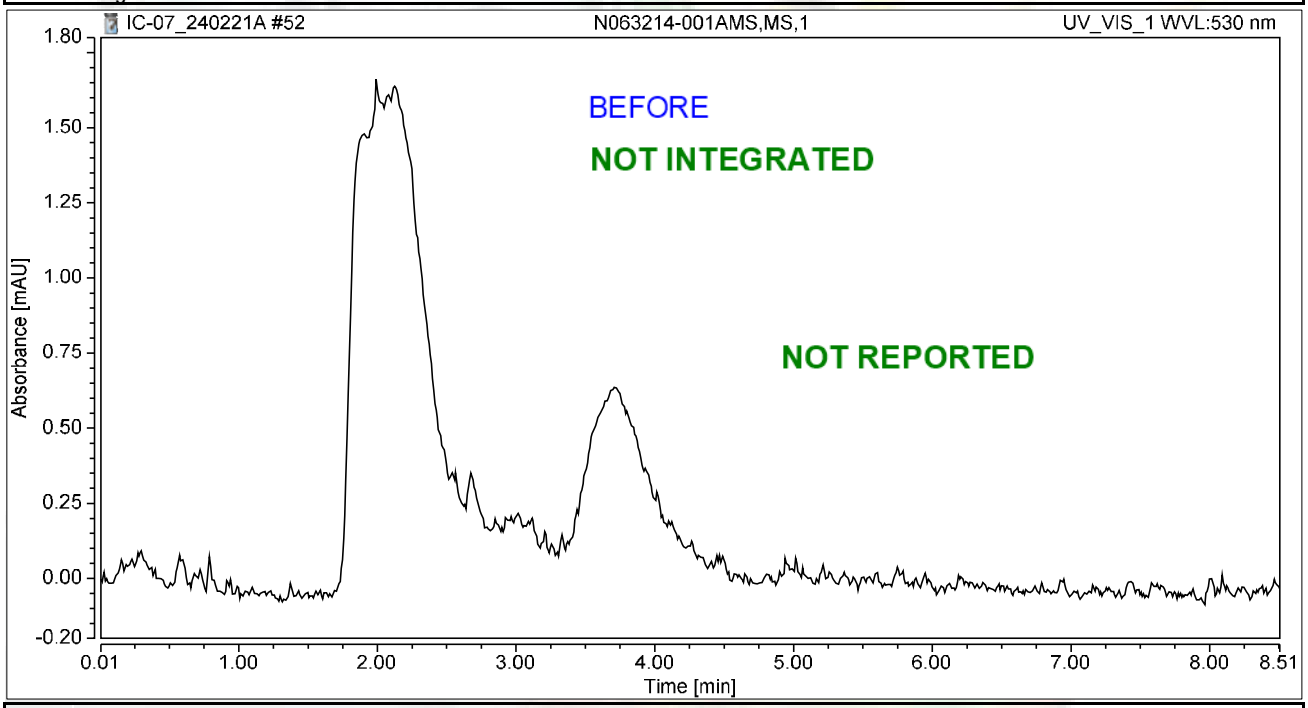
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.715	0.278	0.580	100.00	100.00	1.2930
Total:			**0.278**	**0.580**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 16:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

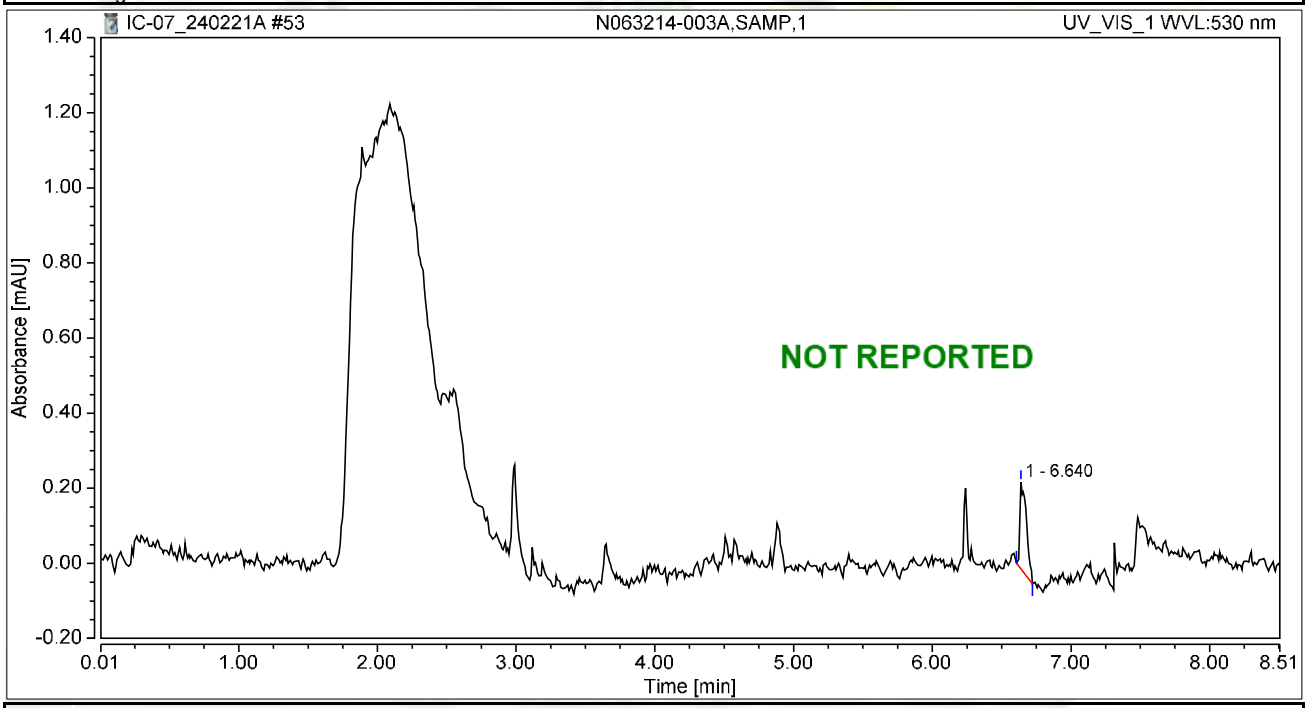
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 17:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

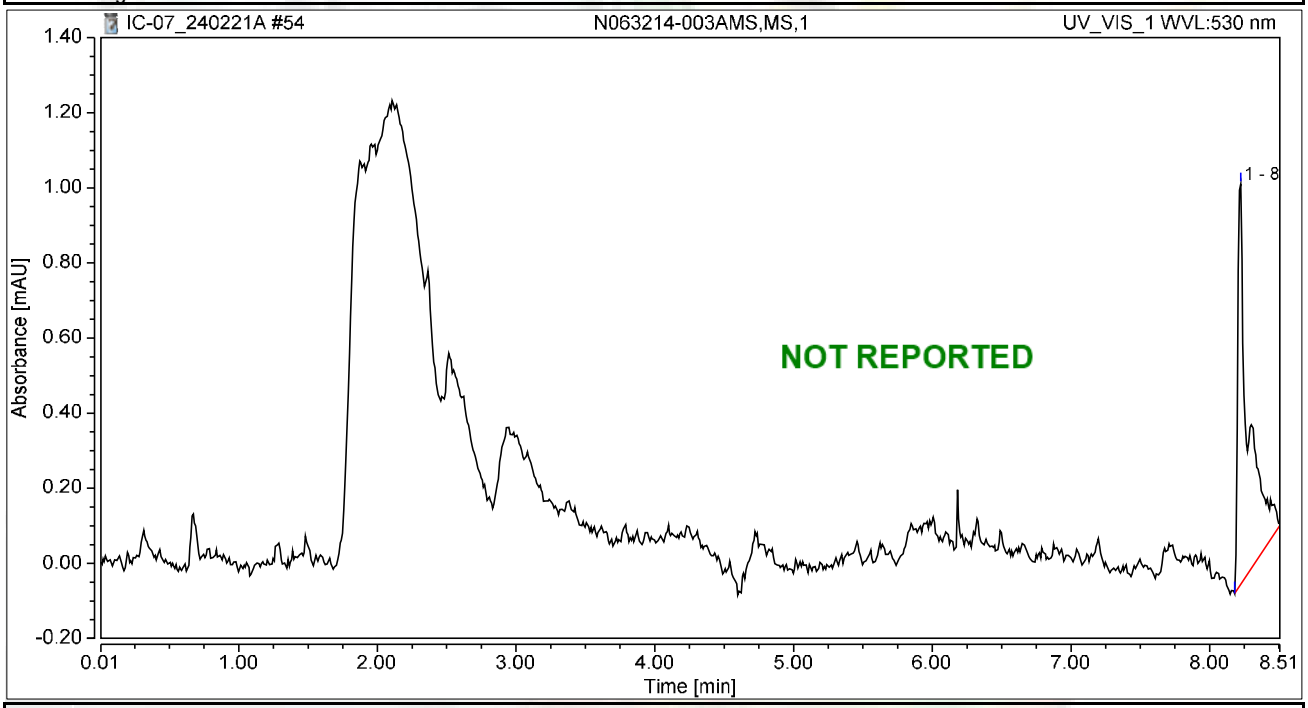
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		6.640	0.012	0.231	100.00	100.00	n.a.
Total:			**0.012**	**0.231**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 17:15**	*Sample Weight:*	**1.0000**

Chromatogram



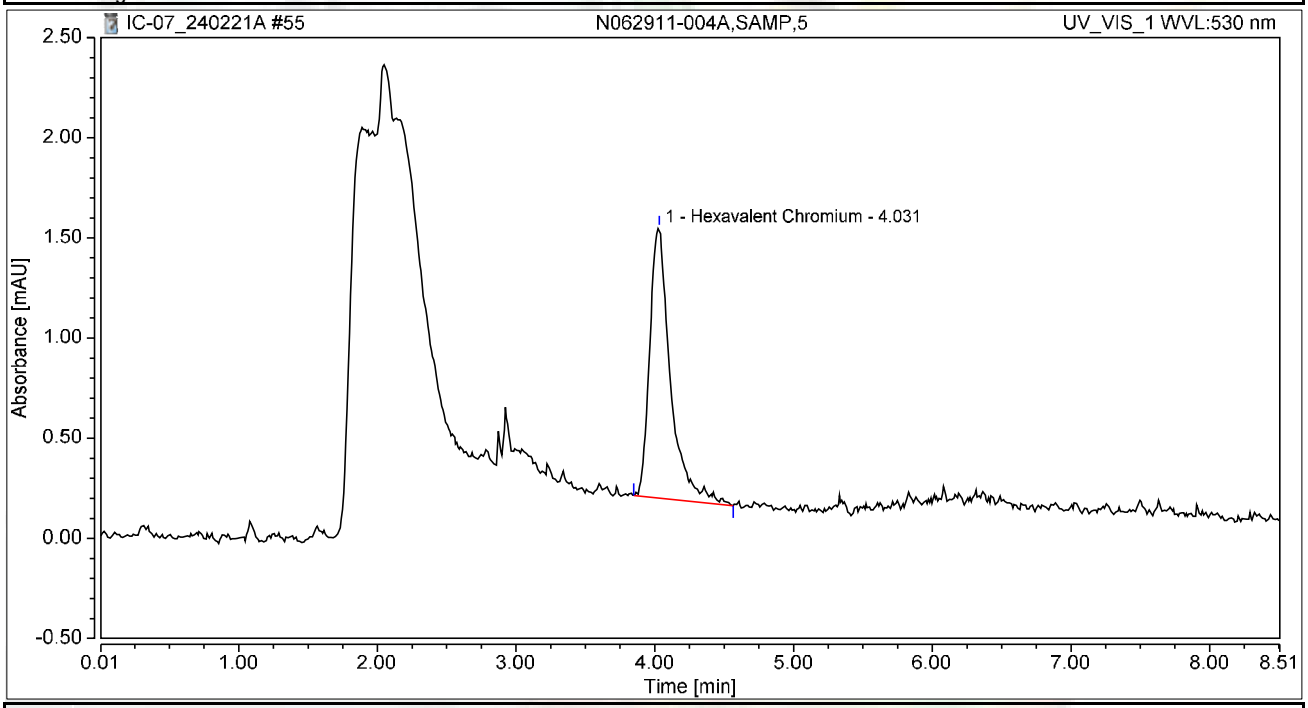
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		8.223	0.095	1.066	100.00	100.00	n.a.
Total:			**0.095**	**1.066**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details	N062911-004AMS,MS,5		
Injection Name:	~~N062911-004A,SAMP,5~~	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 17:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.233	1.350	100.00	100.00	1.0848
Total:			**0.233**	**1.350**	**100.00**	**100.00**	

JRB 2/27/2024
for RBA

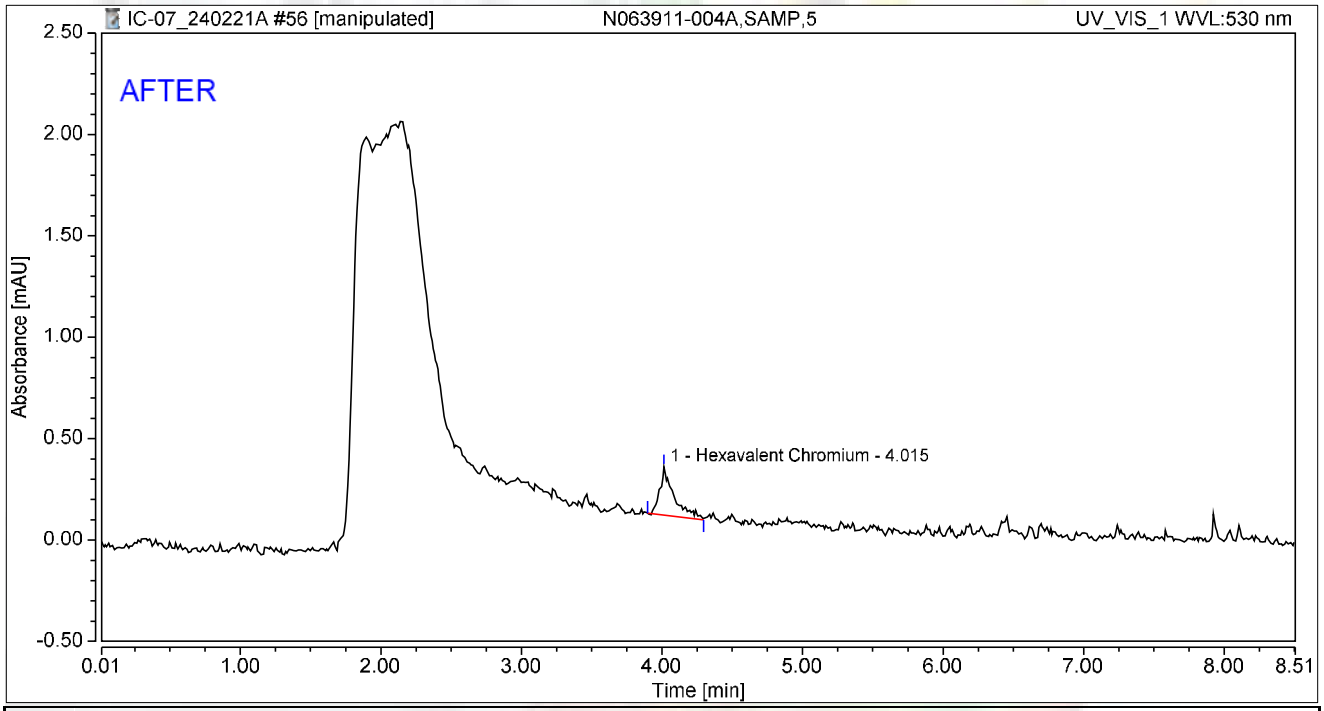
Chromatogram and Results

Injection Details

N062911-004A

Injection Name:	~~N063911-004A~~,SAMP,5	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 17:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.027	0.238	100.00	100.00	0.1273
Total:			**0.027**	**0.238**	**100.00**	**100.00**	

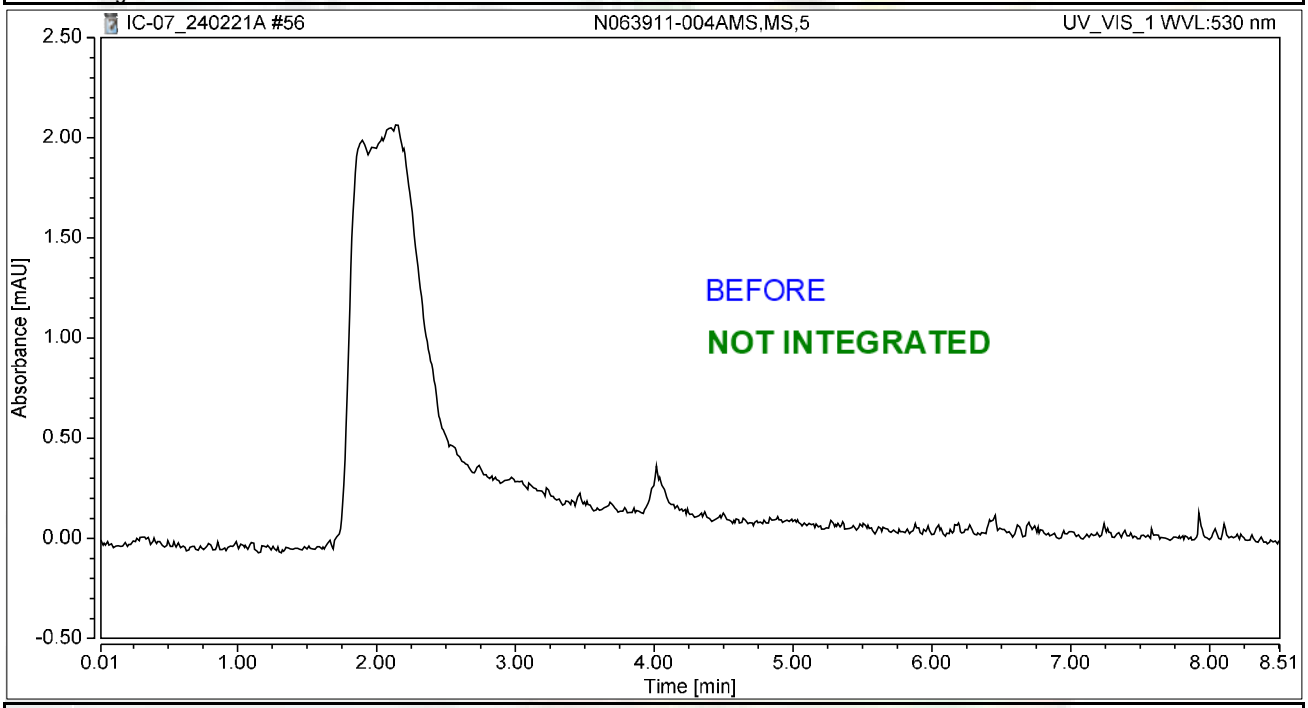
Reviewed by:

JRB 2/27/2024

Chromatogram and Results

Injection Details	N062911-004A,SAMP,5		
Injection Name:	~~N063911-004AMS,MS,5~~	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 17:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

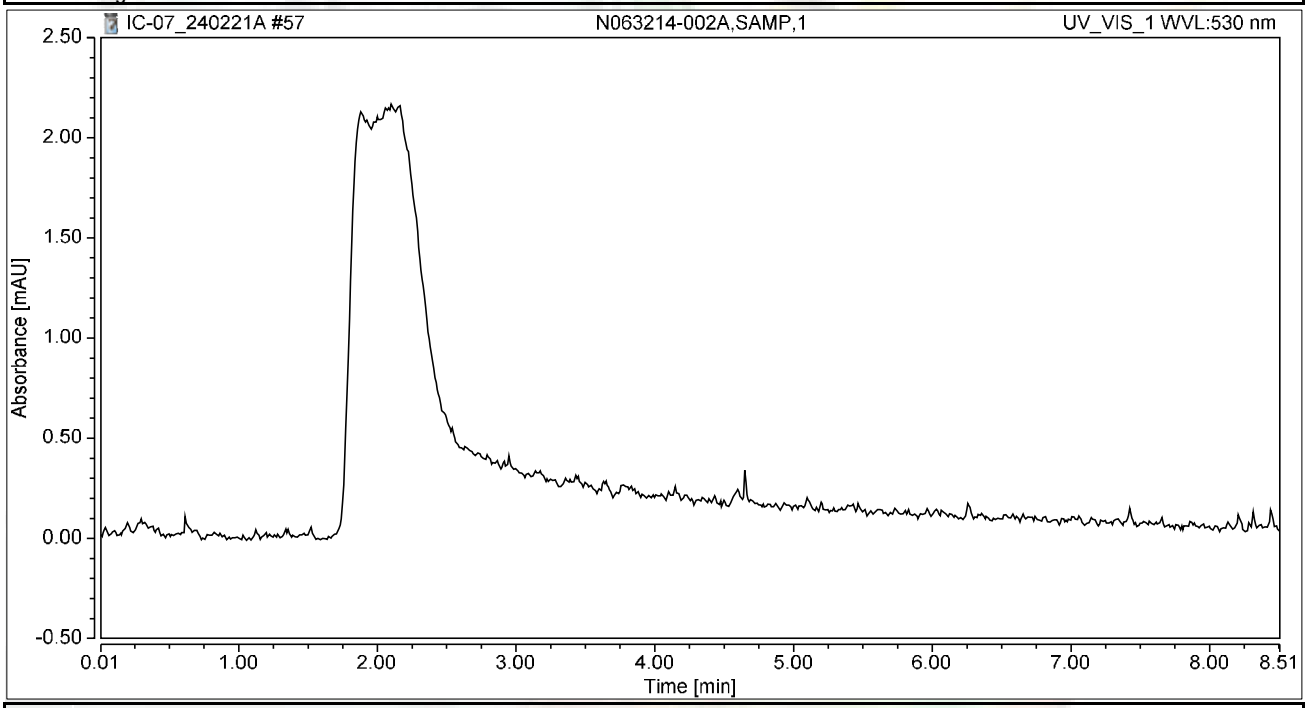
JRB 2/27/2024
for RBA

Chromatogram and Results

Injection Details

Injection Name:	**N063214-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 17:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

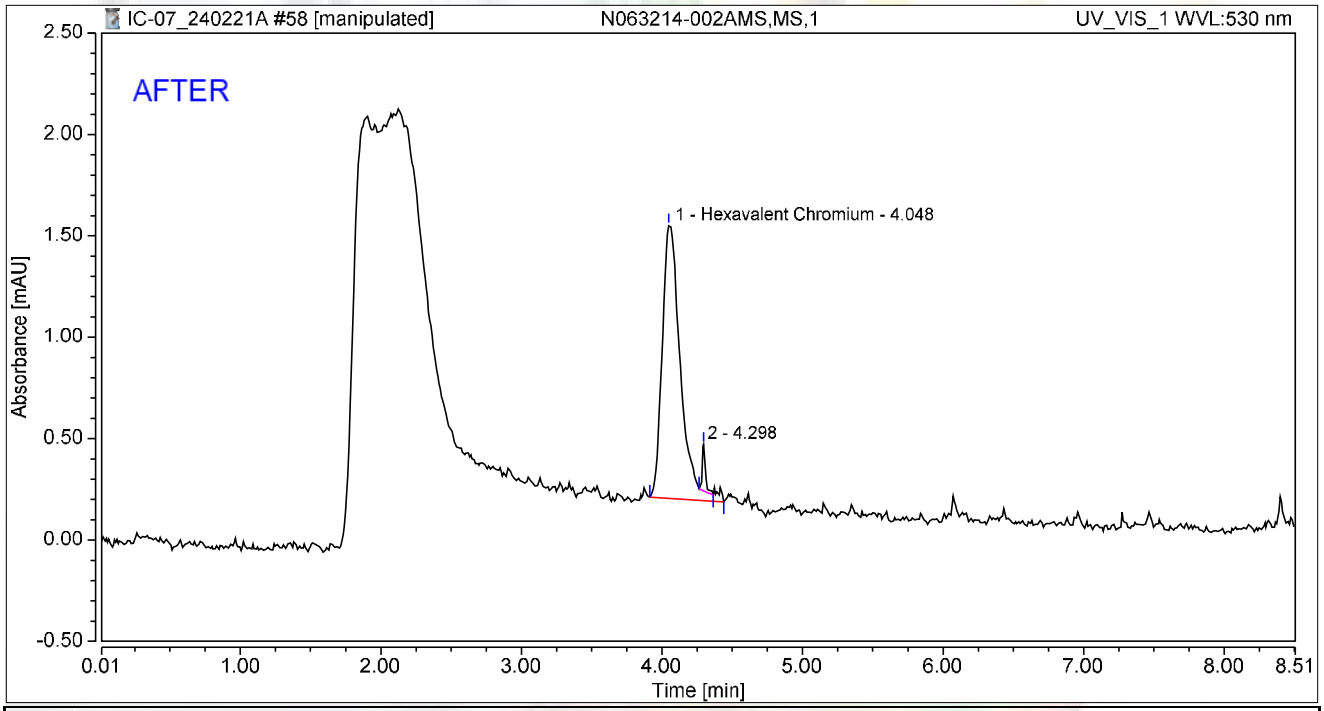
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 17:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.203	1.345	96.84	85.42	0.9454
2		4.298	0.007	0.229	3.16	14.58	n.a.
Total:			**0.210**	**1.575**	**100.00**	**100.00**	

Reviewed by:

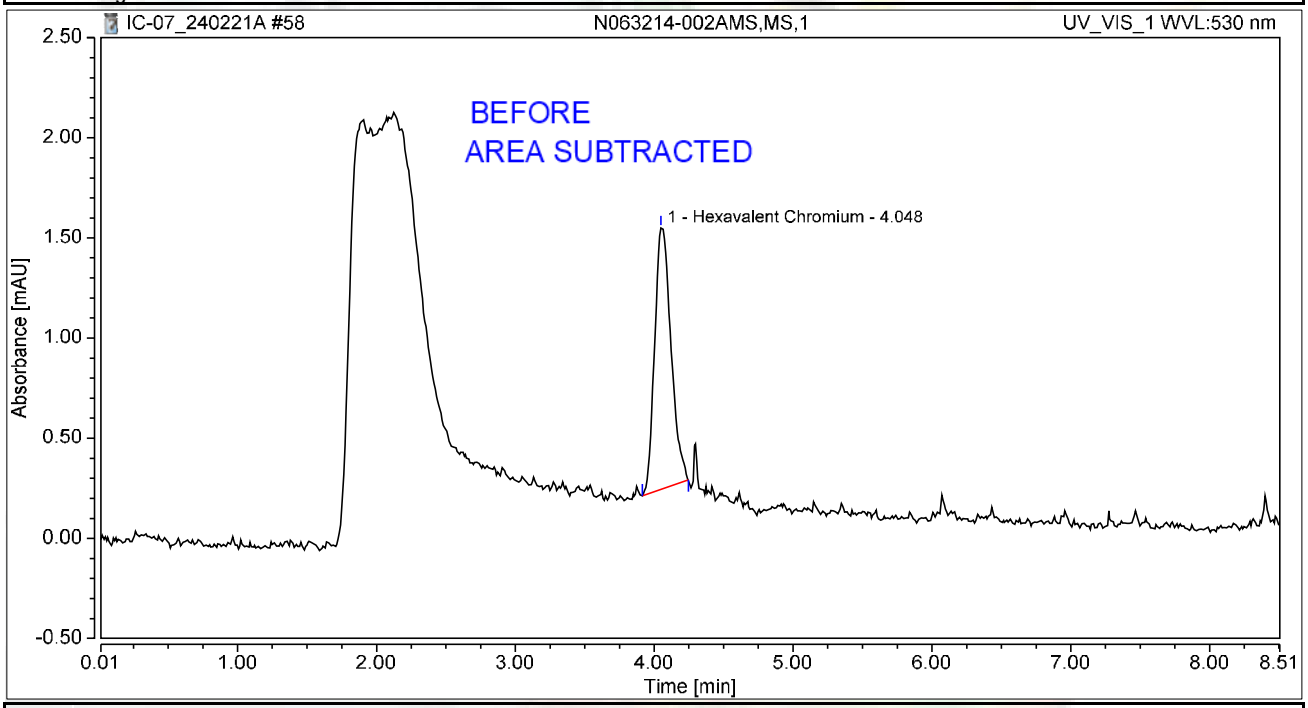
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063214-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 17:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

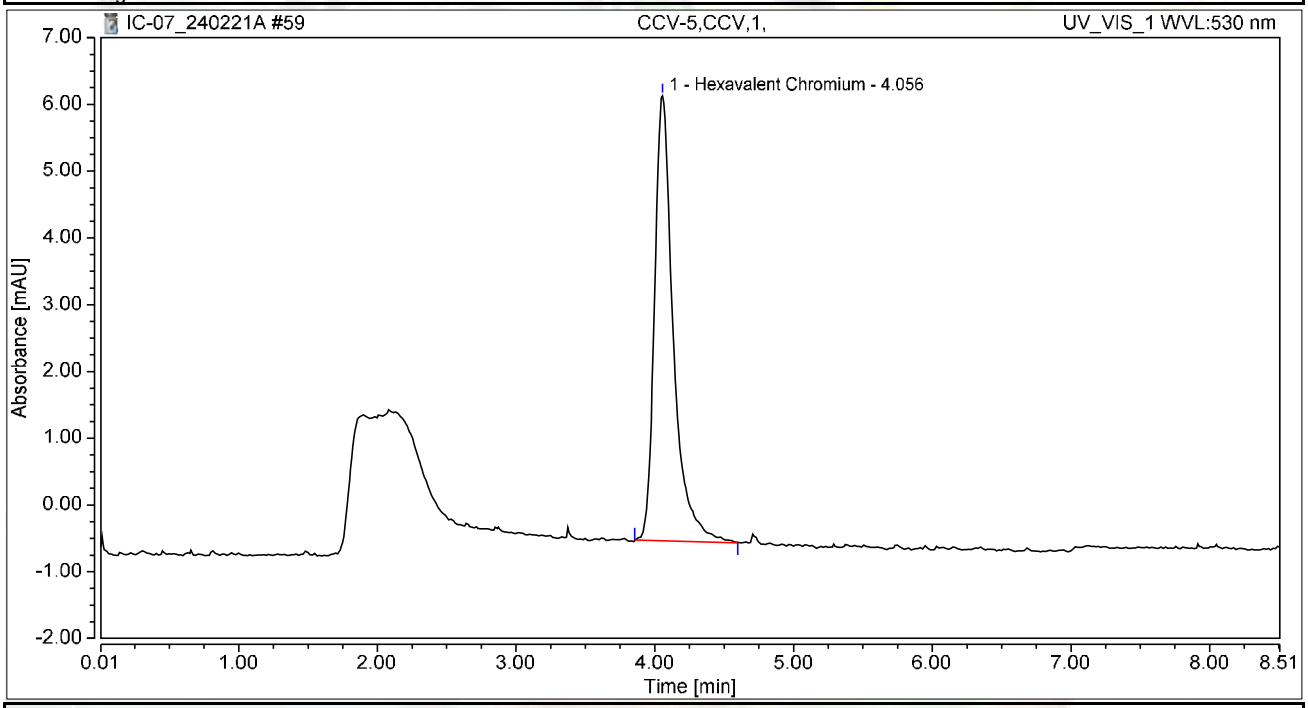
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.179	1.307	100.00	100.00	0.8299
Total:			**0.179**	**1.307**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 18:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

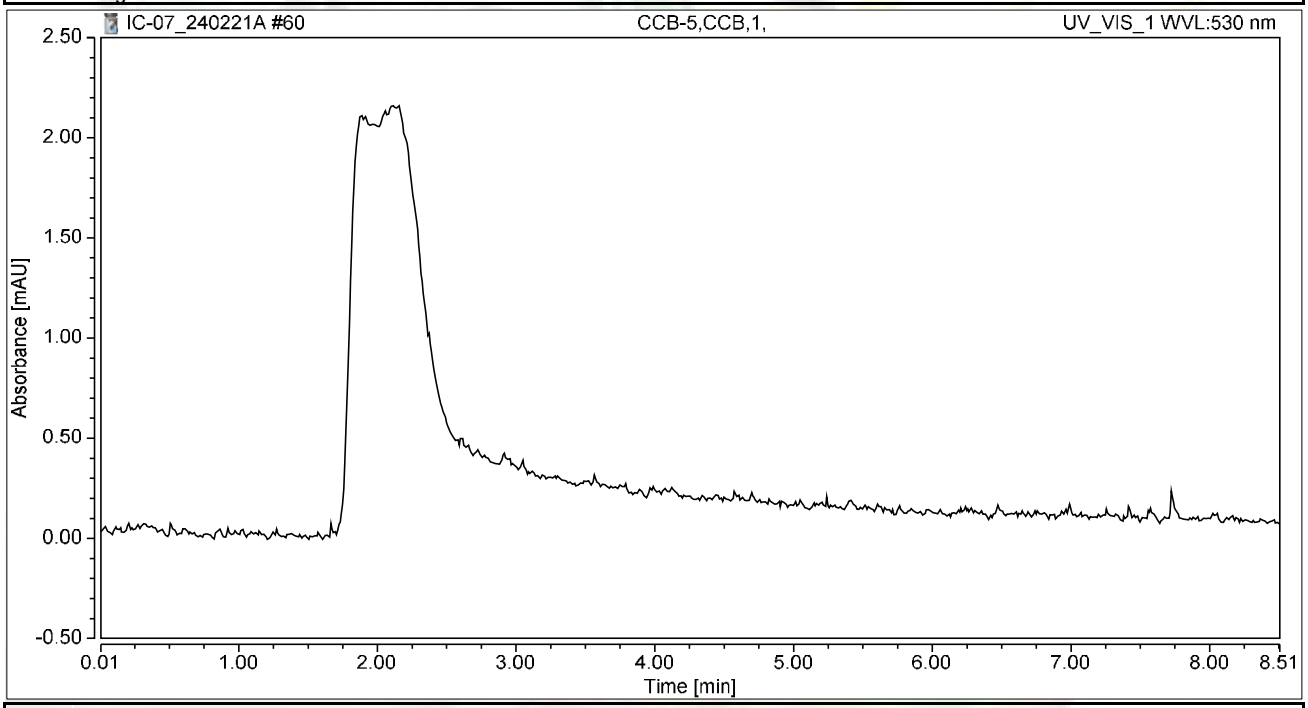
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.046	6.670	100.00	100.00	4.8634
Total:			**1.046**	**6.670**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 18:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

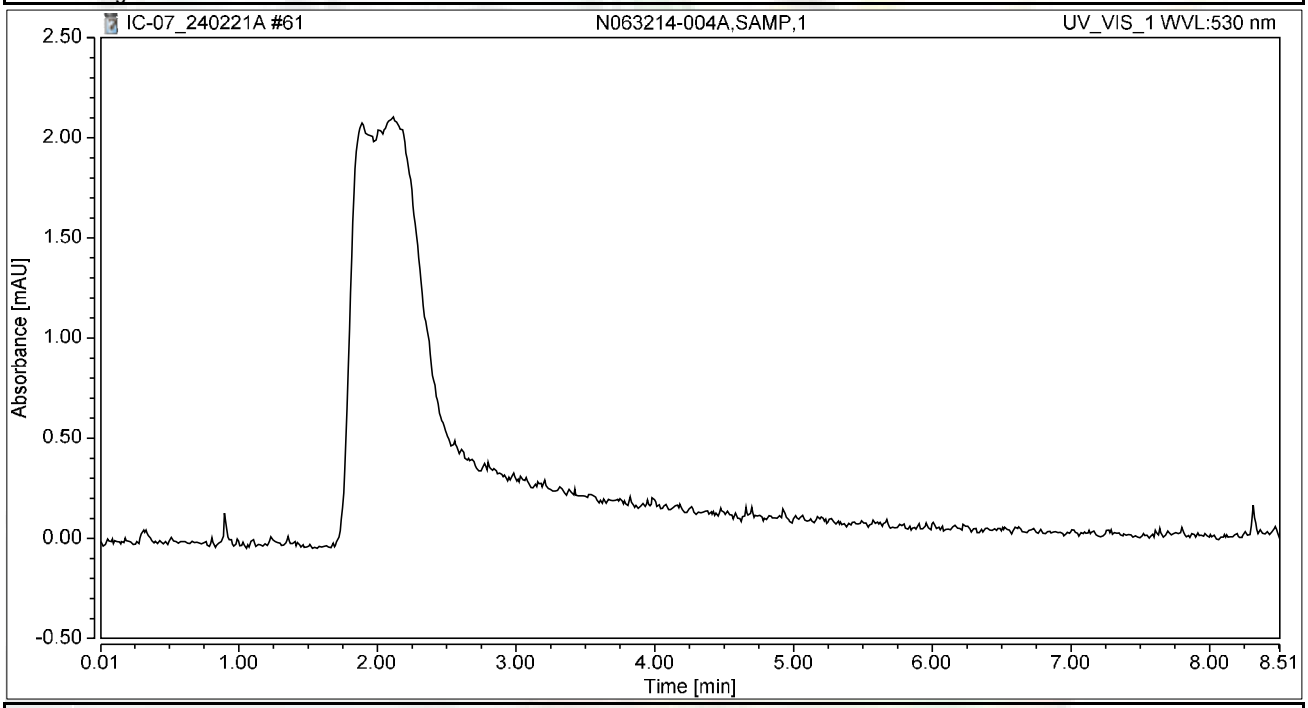
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 18:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

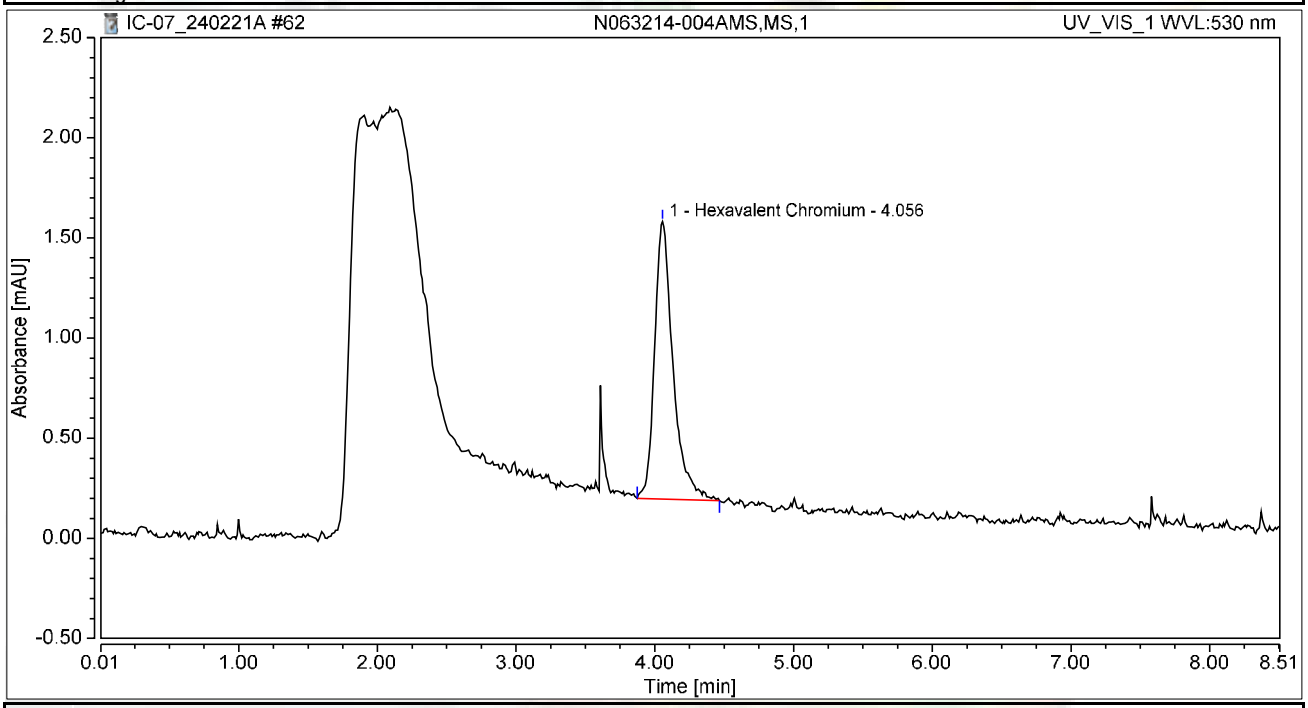
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 18:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

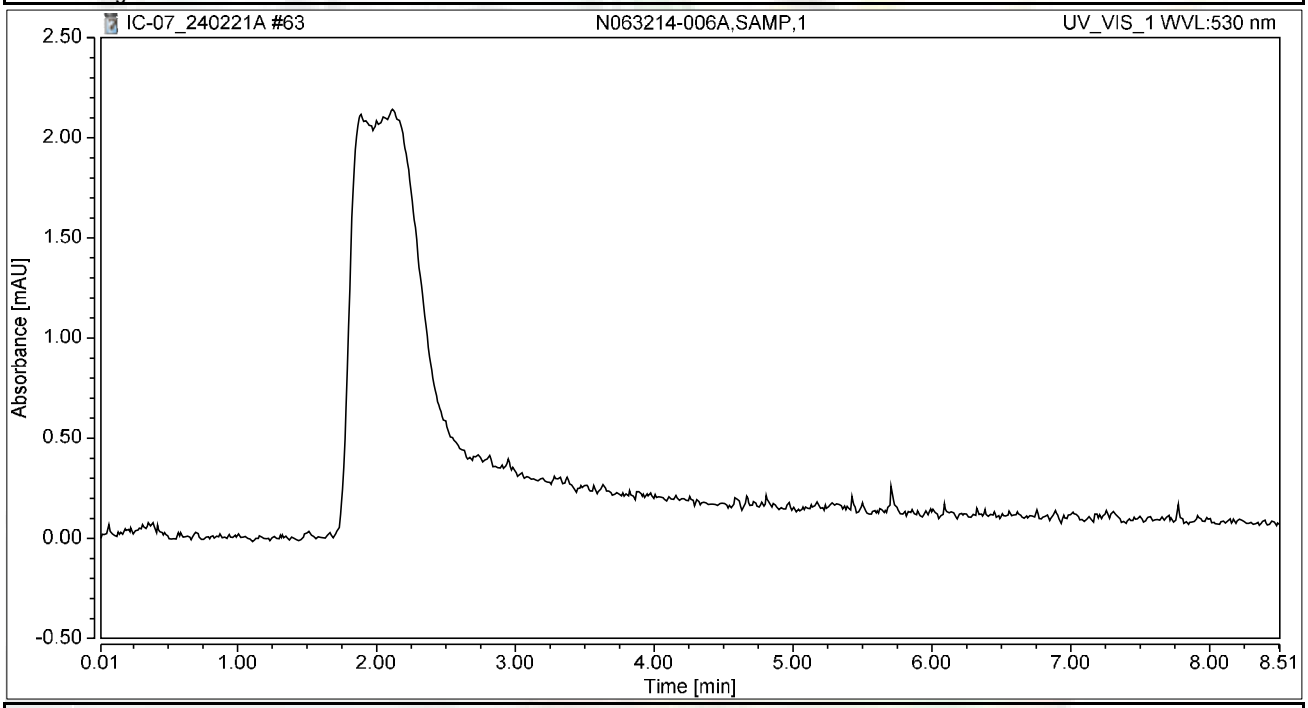
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.213	1.386	100.00	100.00	0.9919
Total:			**0.213**	**1.386**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-006A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 18:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

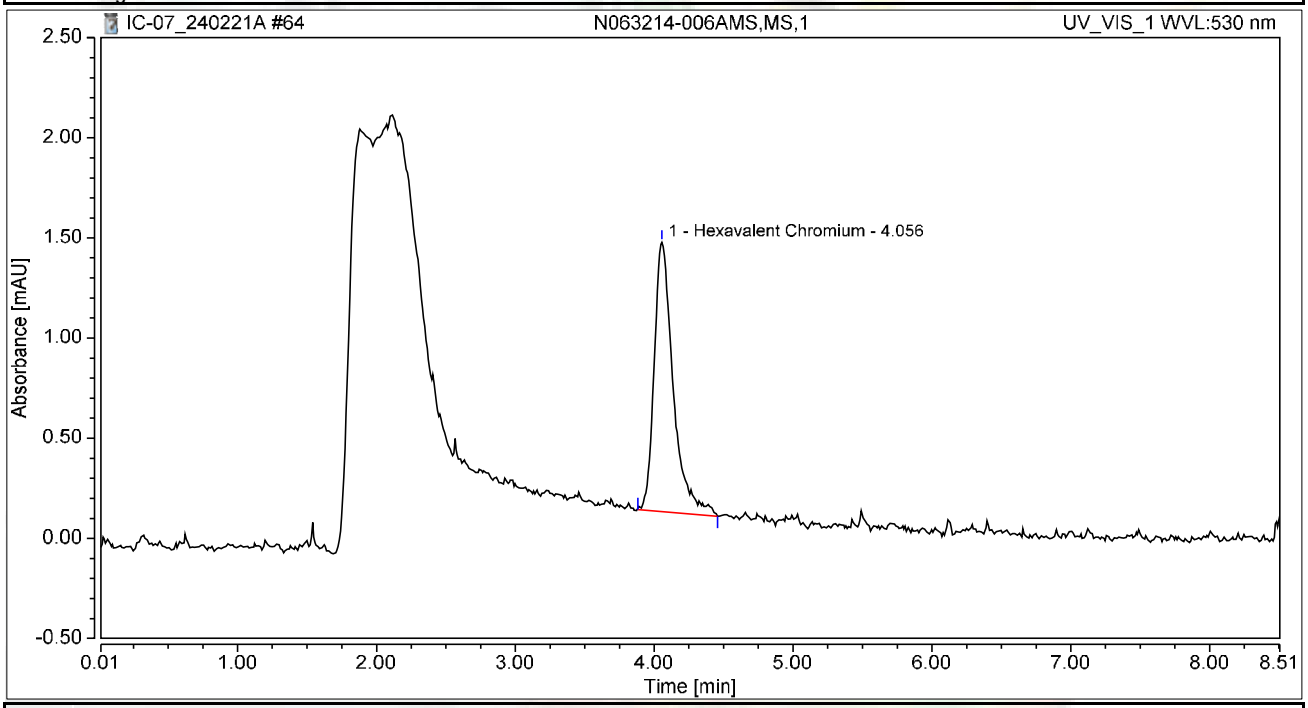
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-006AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 18:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

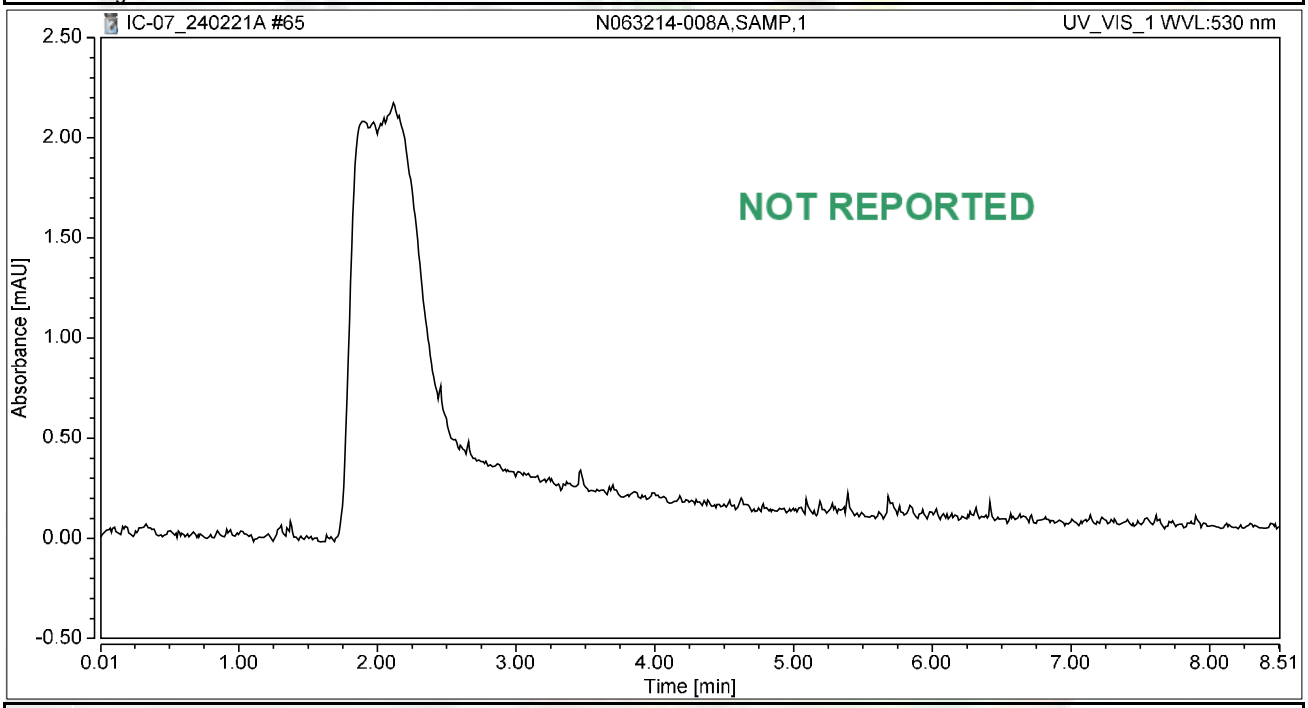
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.214	1.346	100.00	100.00	0.9948
Total:			**0.214**	**1.346**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 18:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

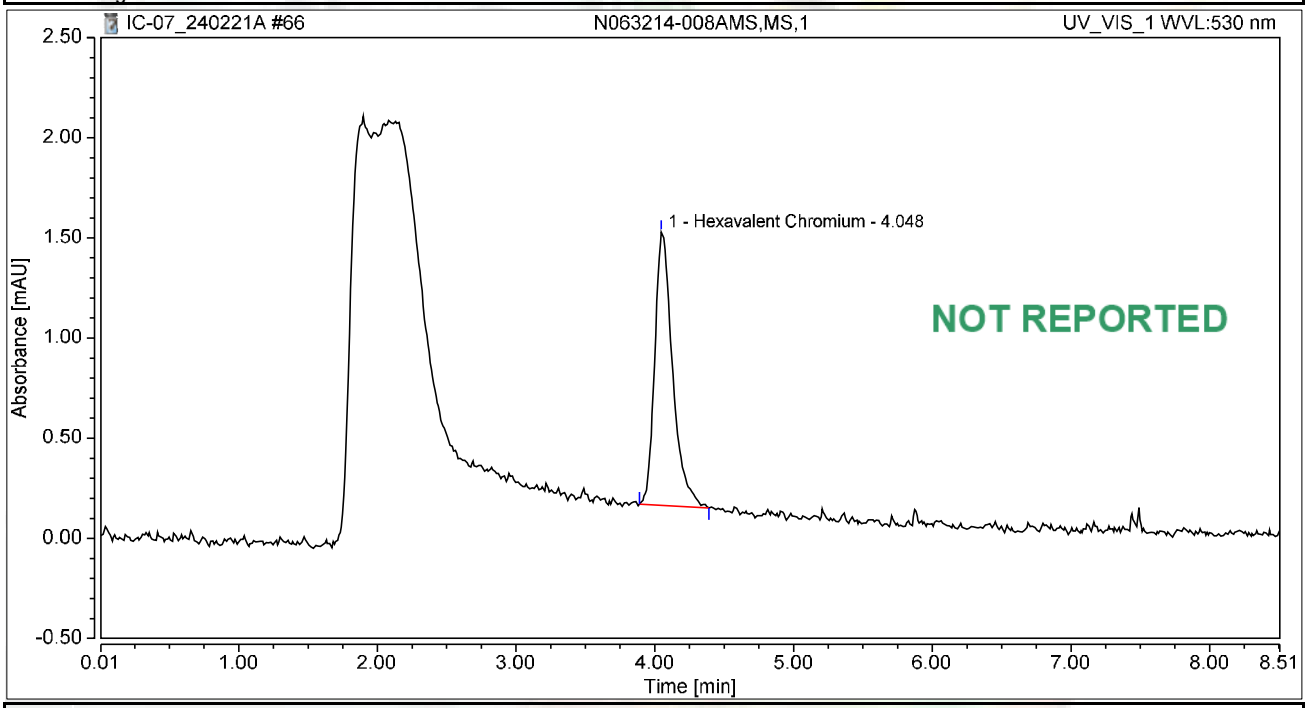
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 19:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

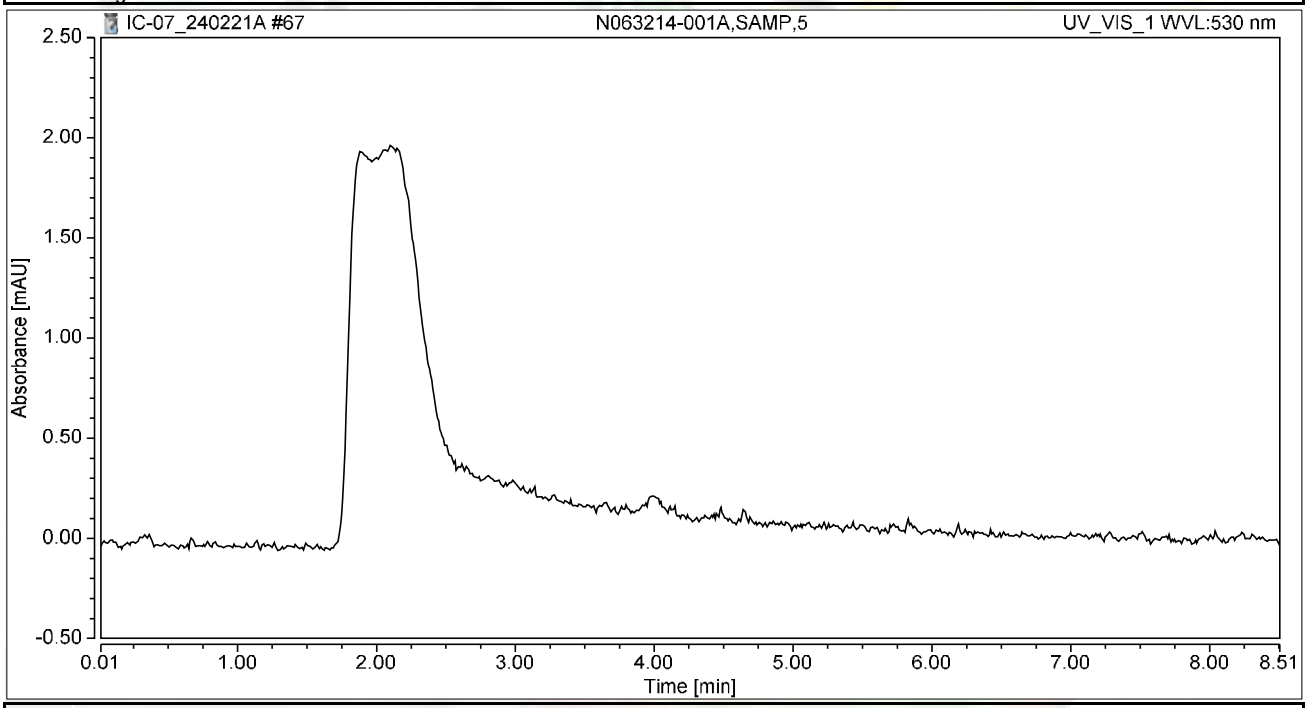
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.204	1.364	100.00	100.00	0.9475
Total:			**0.204**	**1.364**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-001A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 19:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

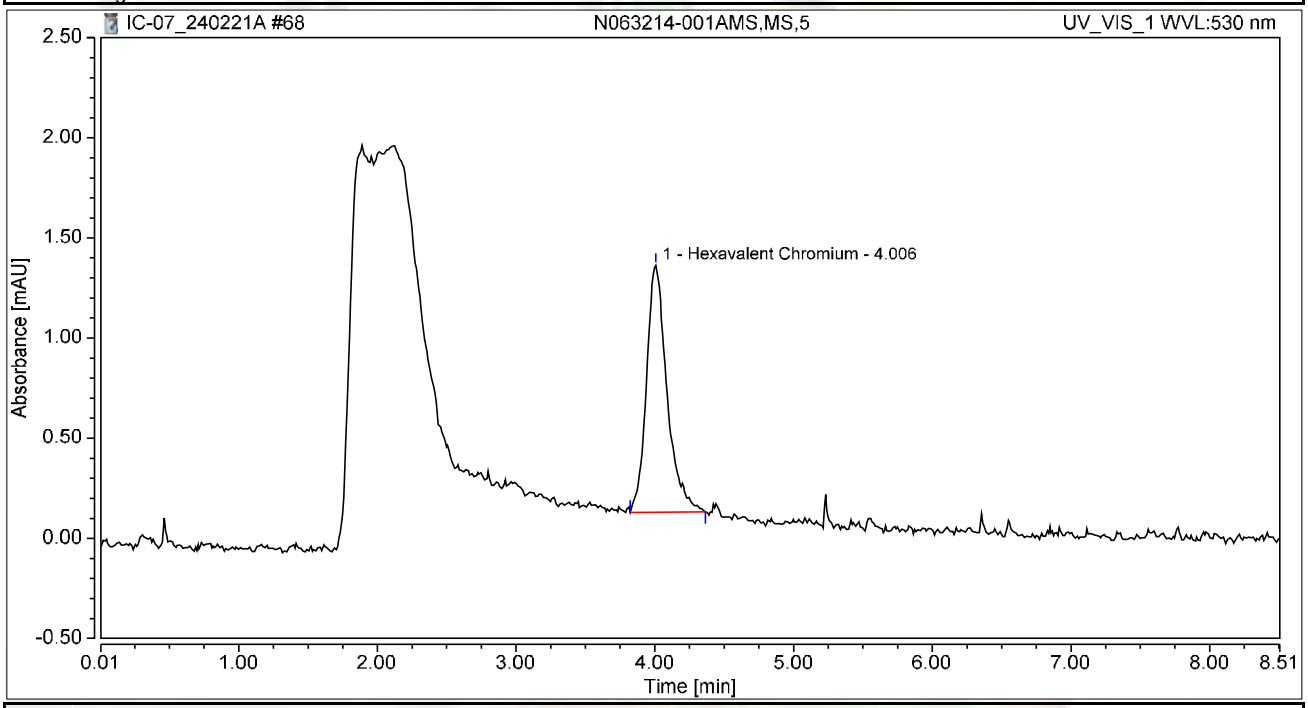
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 19:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

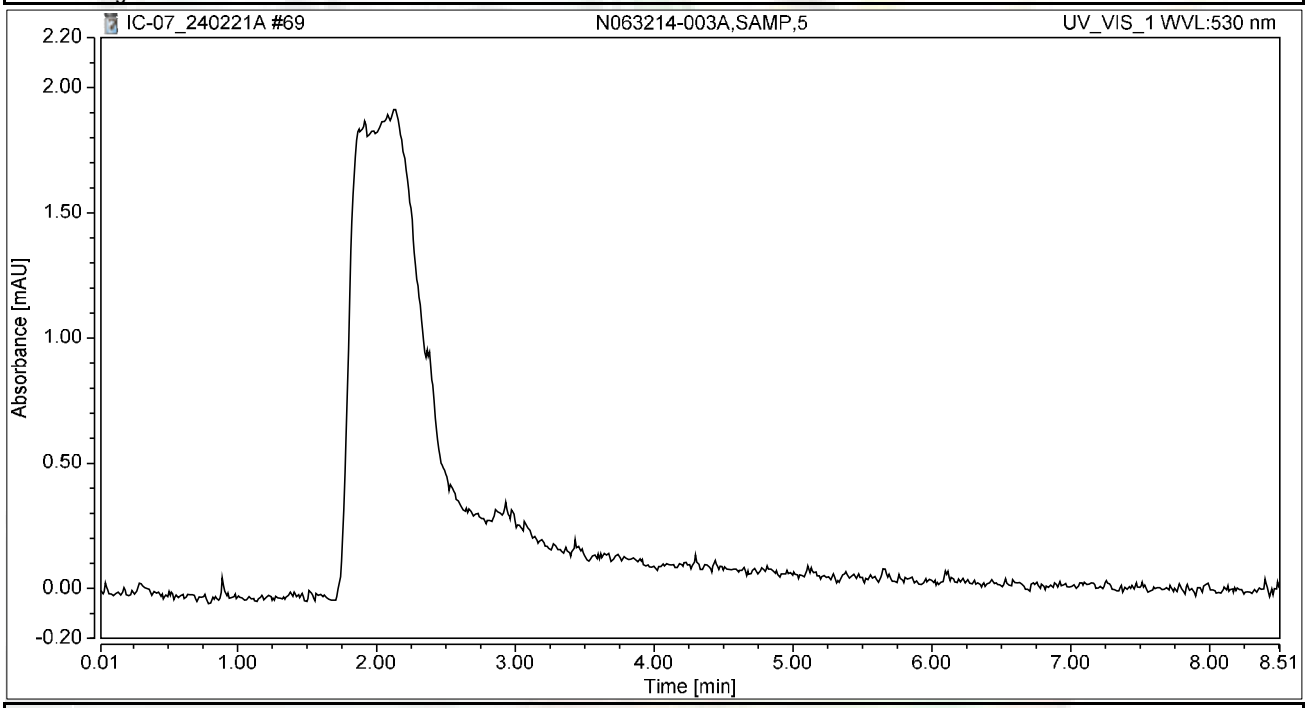
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.211	1.232	100.00	100.00	0.9789
Total:			**0.211**	**1.232**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-003A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 19:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

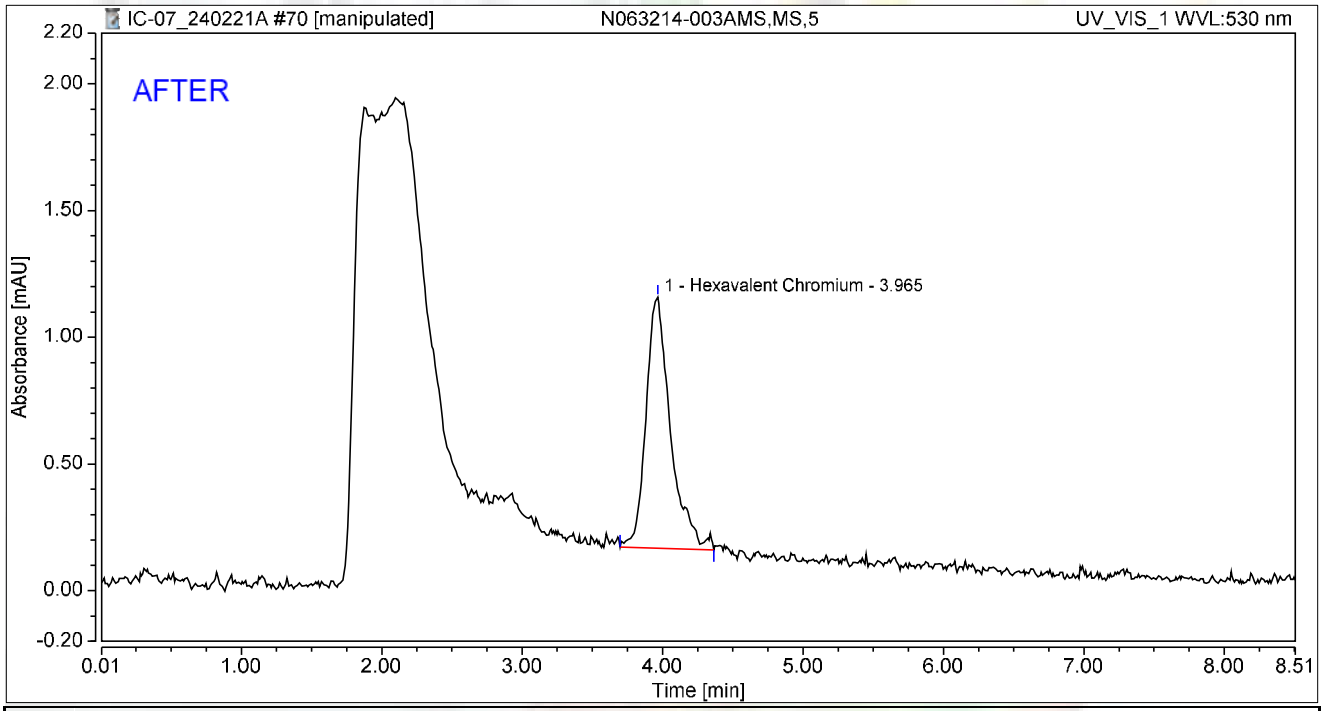
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 19:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.200	0.990	100.00	100.00	0.9278
Total:			**0.200**	**0.990**	**100.00**	**100.00**	

Reviewed by:

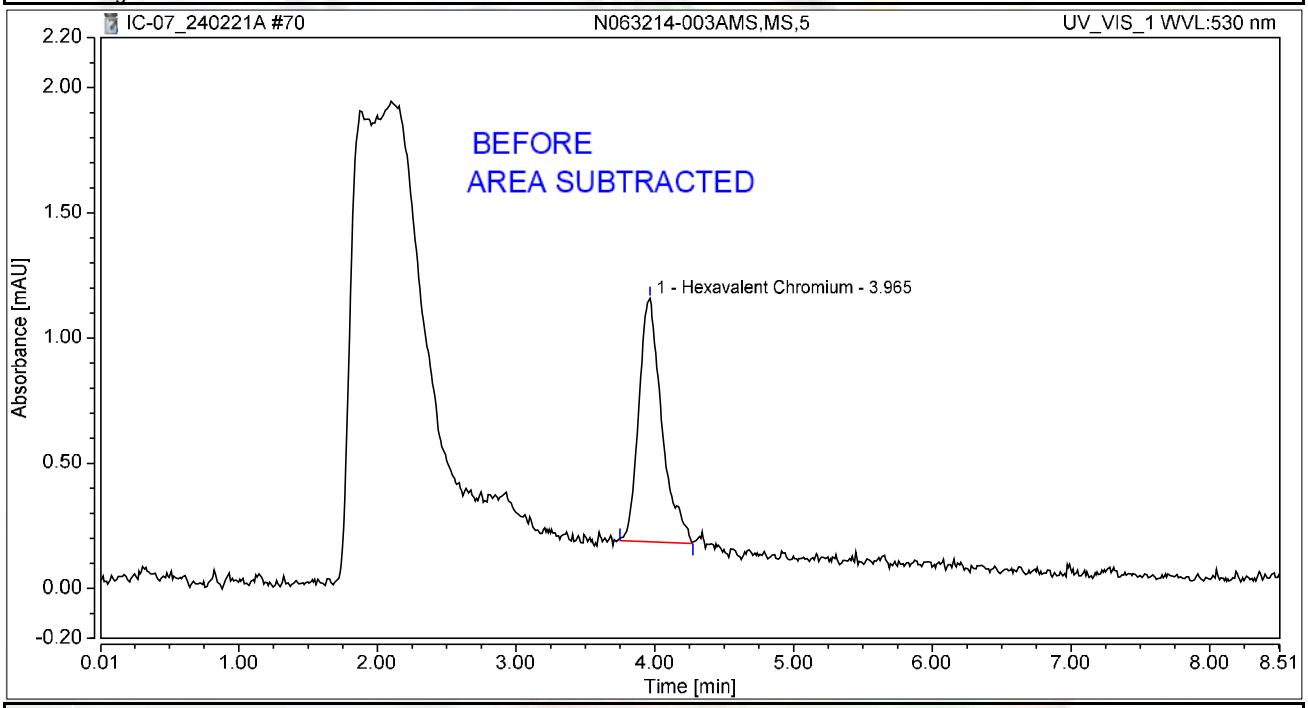
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063214-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 19:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

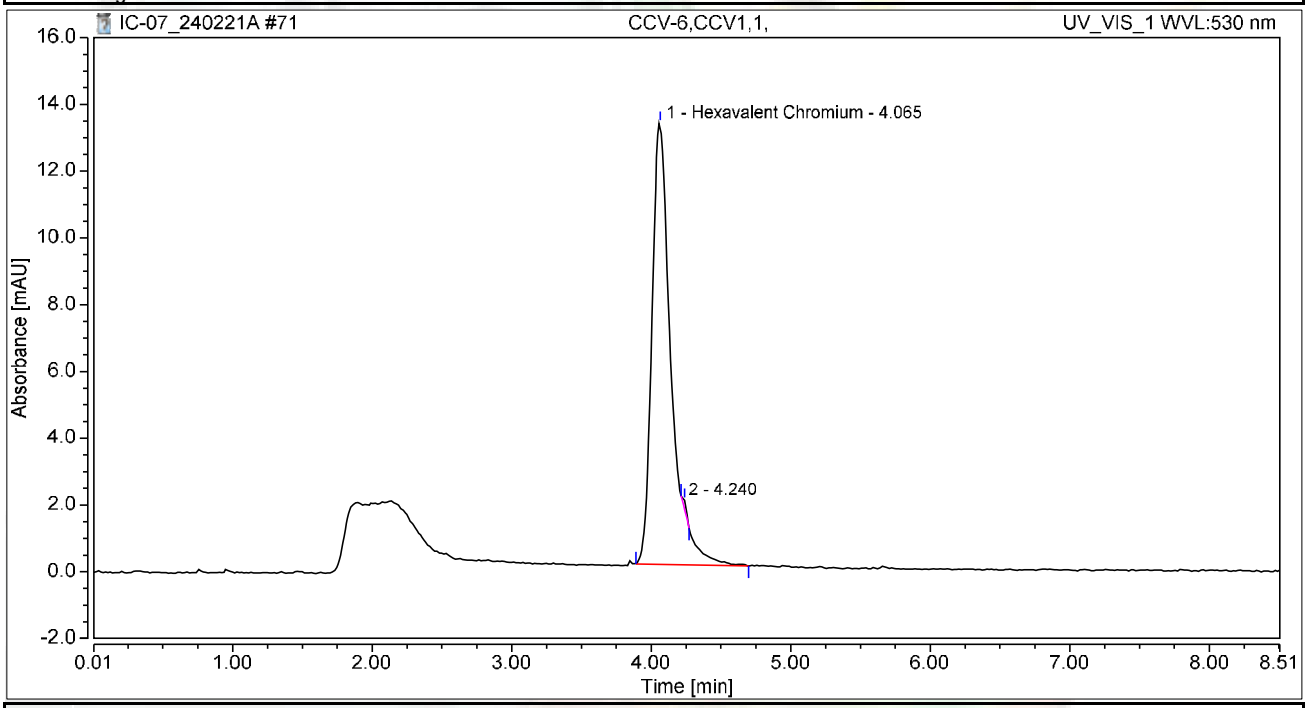
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.186	0.971	100.00	100.00	0.8653
Total:			**0.186**	**0.971**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 19:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

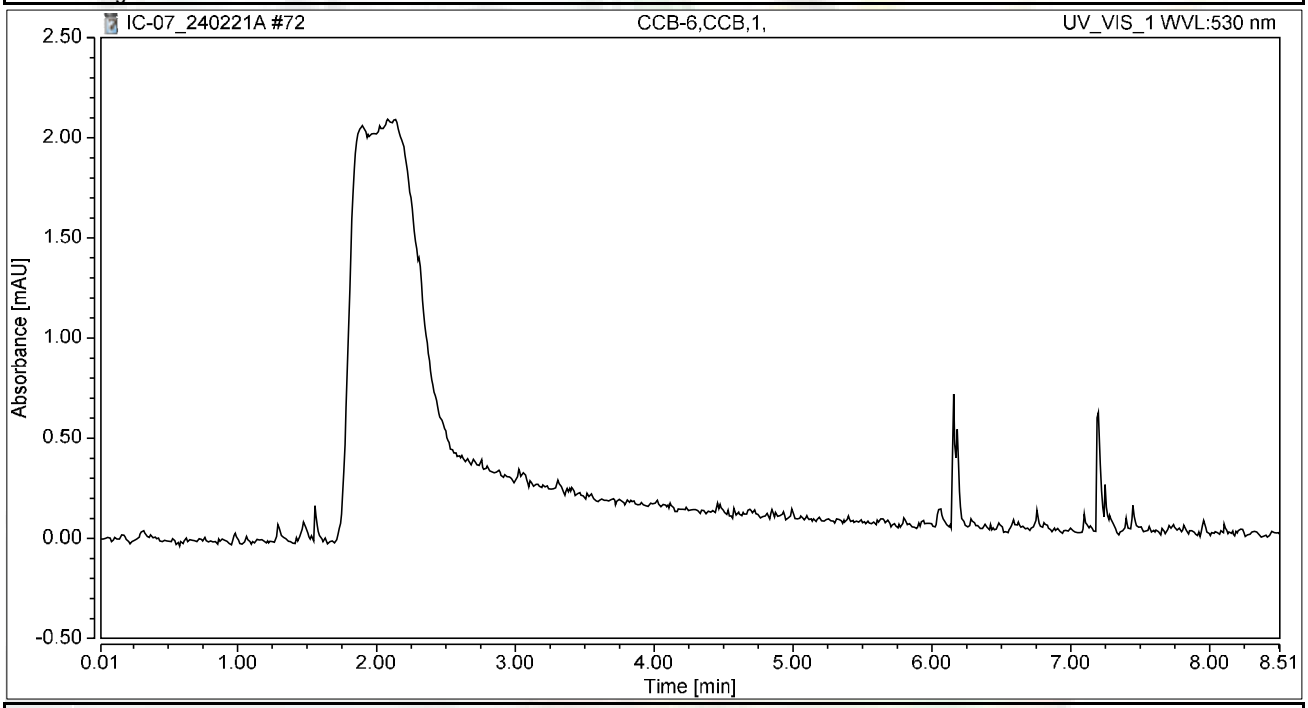
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.065	2.100	13.209	99.61	97.89	9.7638
2		4.240	0.008	0.285	0.39	2.11	n.a.
Total:			**2.108**	**13.494**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 20:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

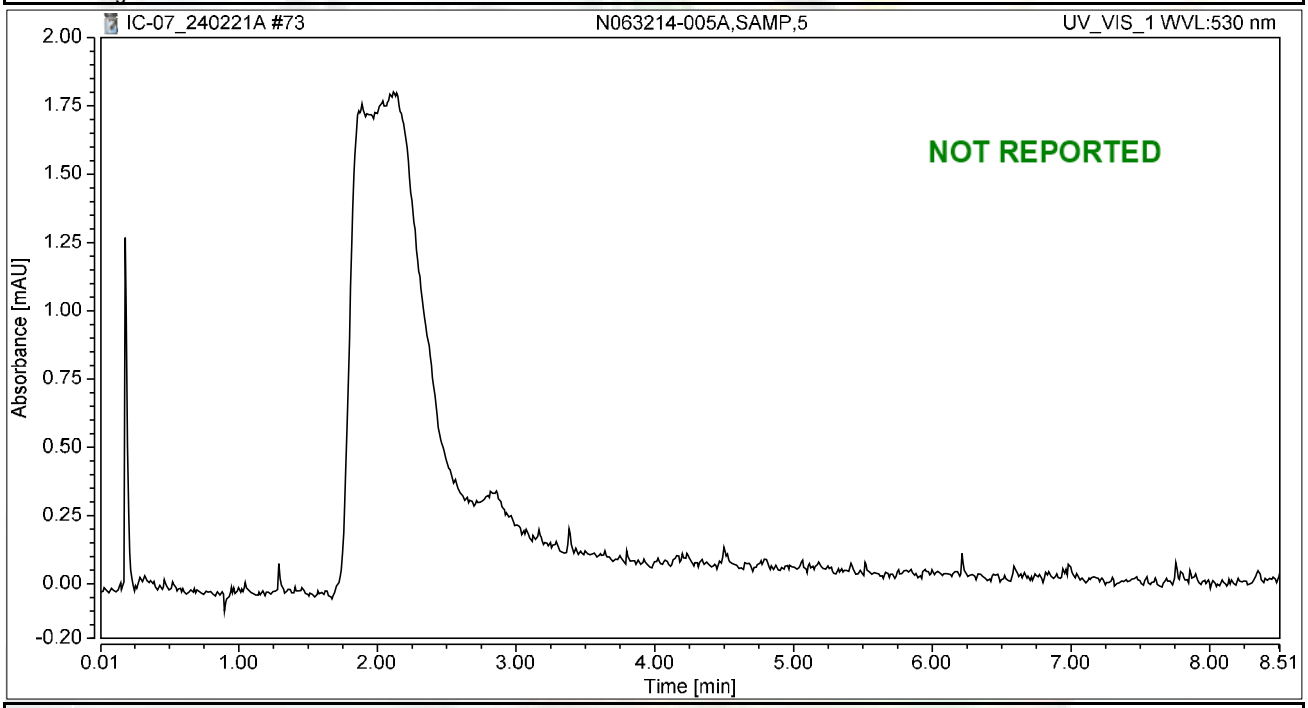
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 20:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

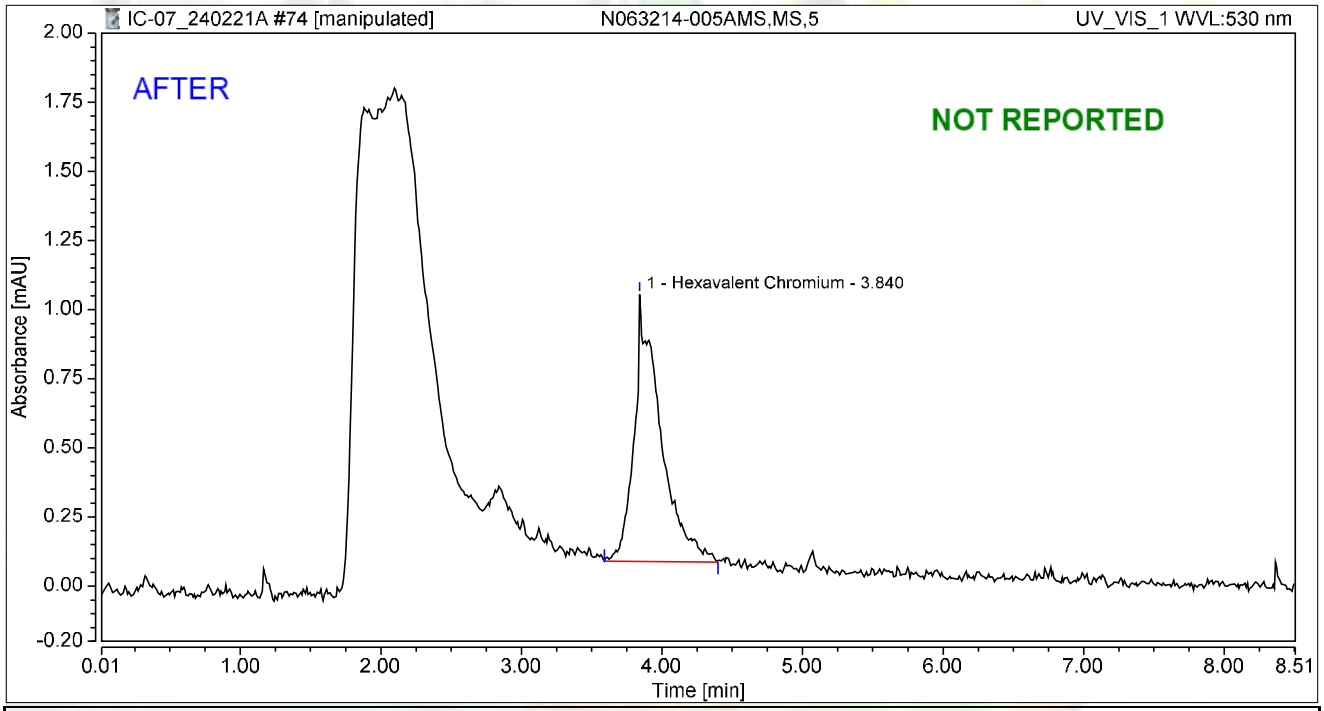
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-005AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 20:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.840	0.210	0.967	100.00	100.00	0.9758
Total:			**0.210**	**0.967**	**100.00**	**100.00**	

Reviewed by:

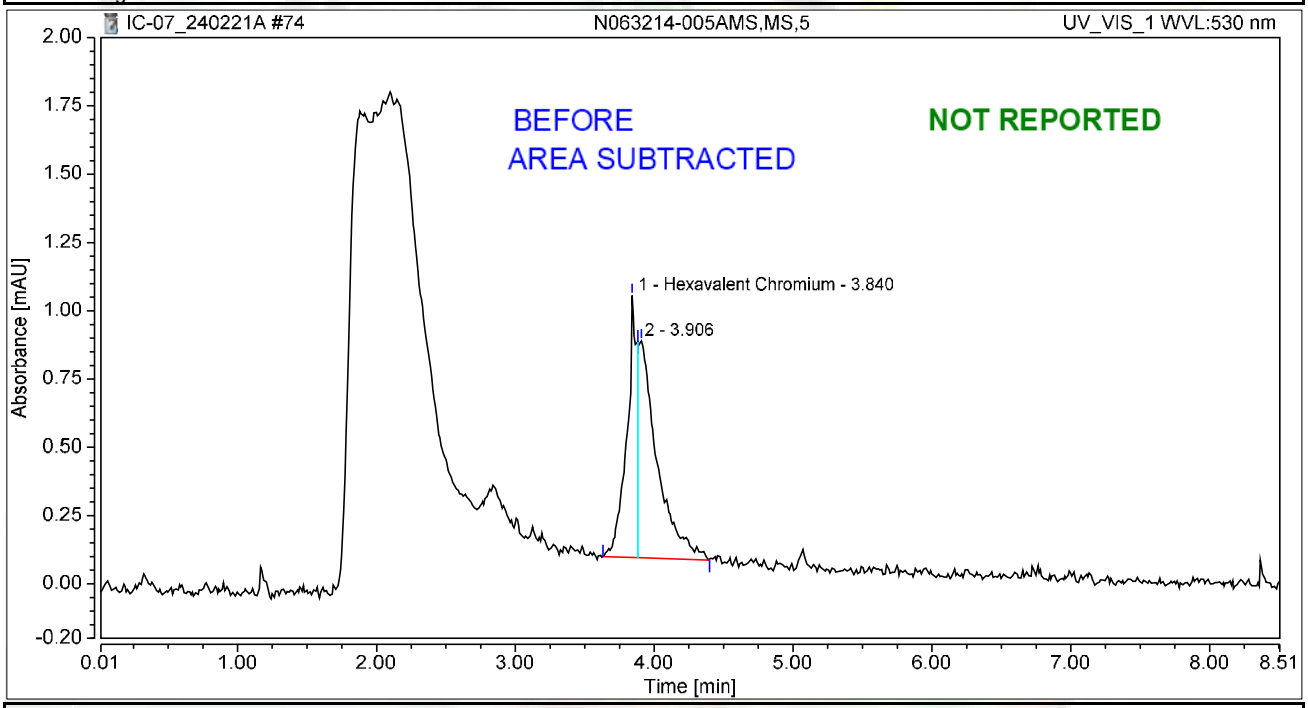
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063214-005AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 20:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

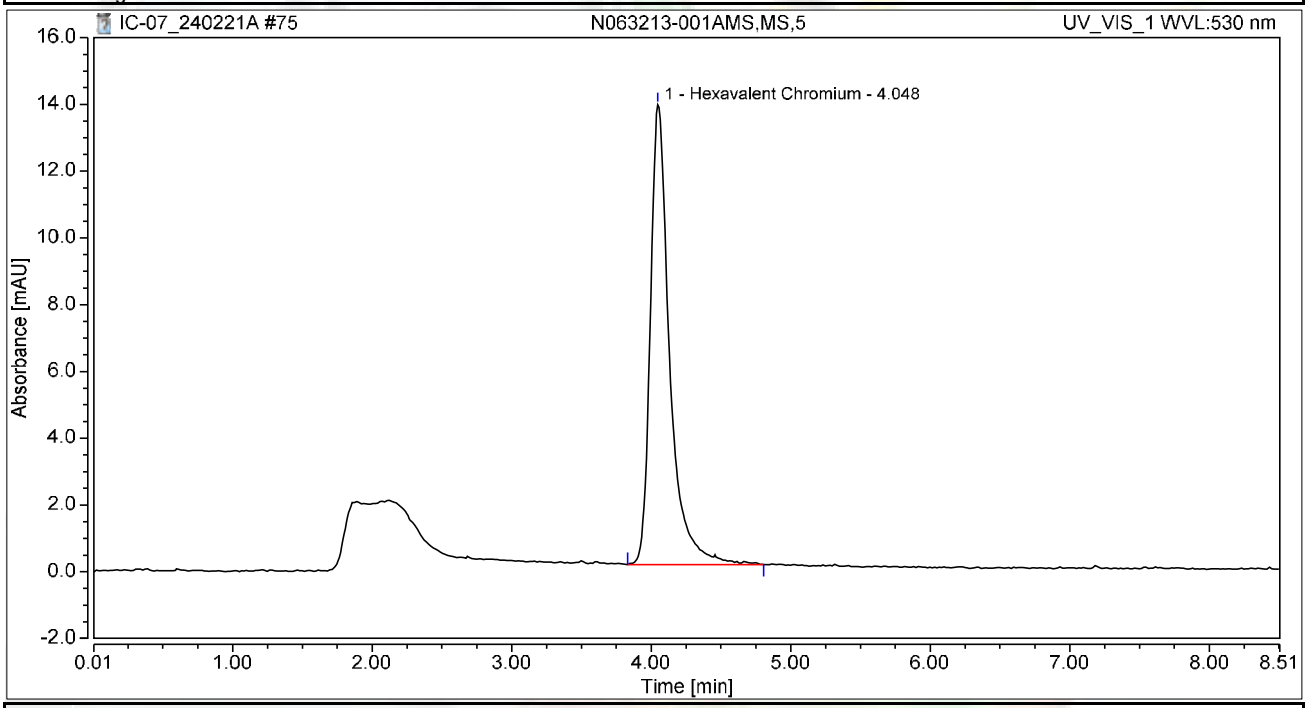
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.840	0.078	0.959	38.16	54.71	0.3646
2		3.906	0.127	0.794	61.84	45.29	n.a.
Total:			**0.206**	**1.754**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 20:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

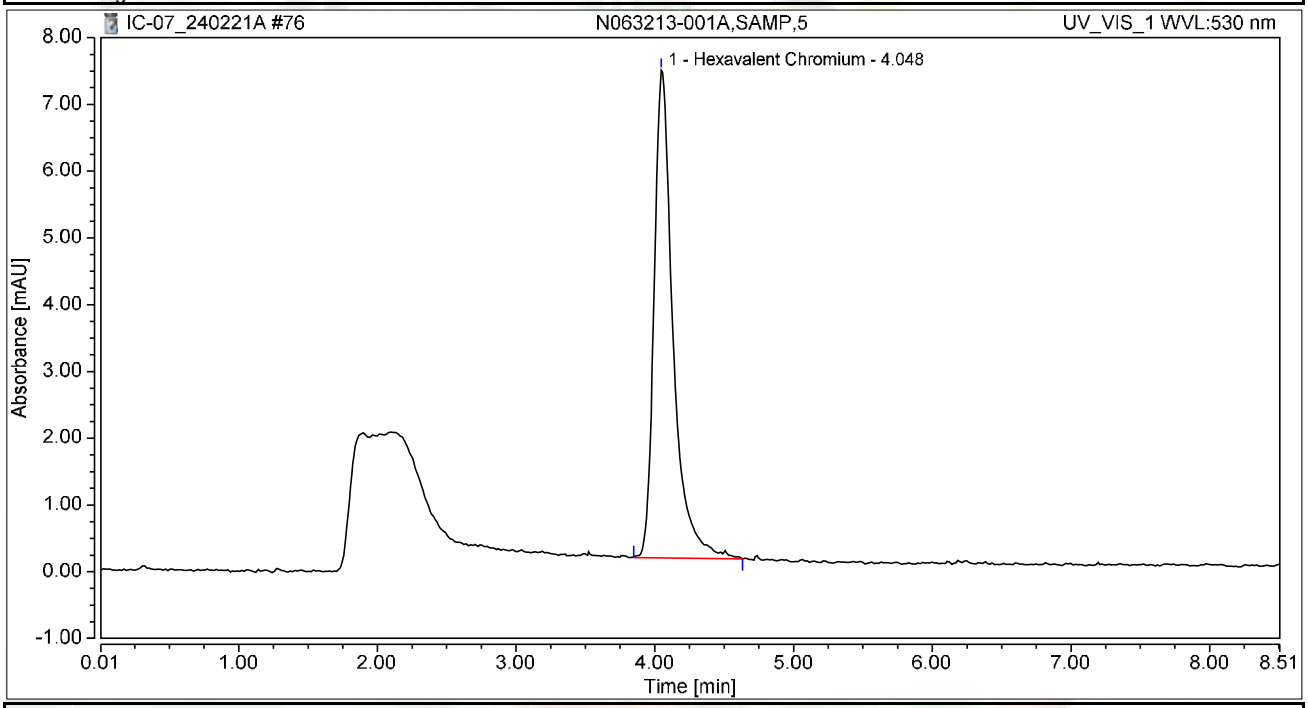
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.214	13.774	100.00	100.00	10.2944
Total:			**2.214**	**13.774**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 20:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

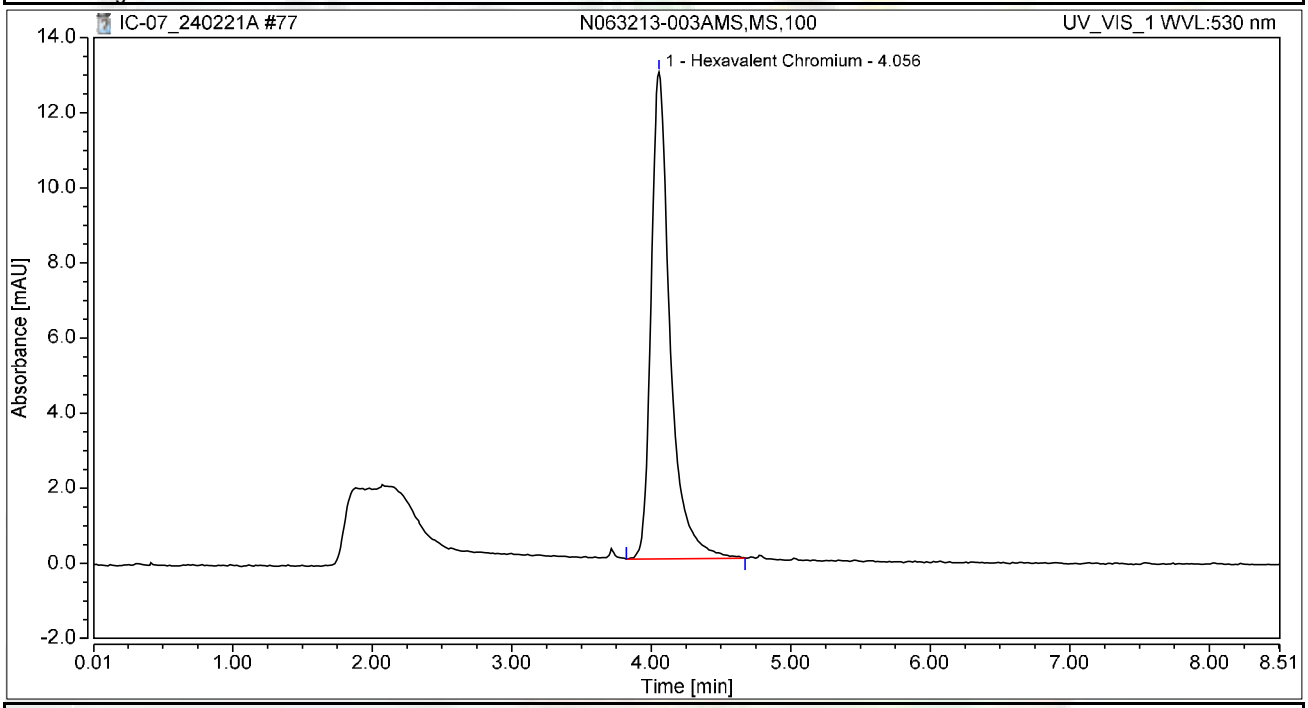
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.158	7.302	100.00	100.00	5.3824
Total:			**1.158**	**7.302**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-003AMS,MS,100**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 20:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

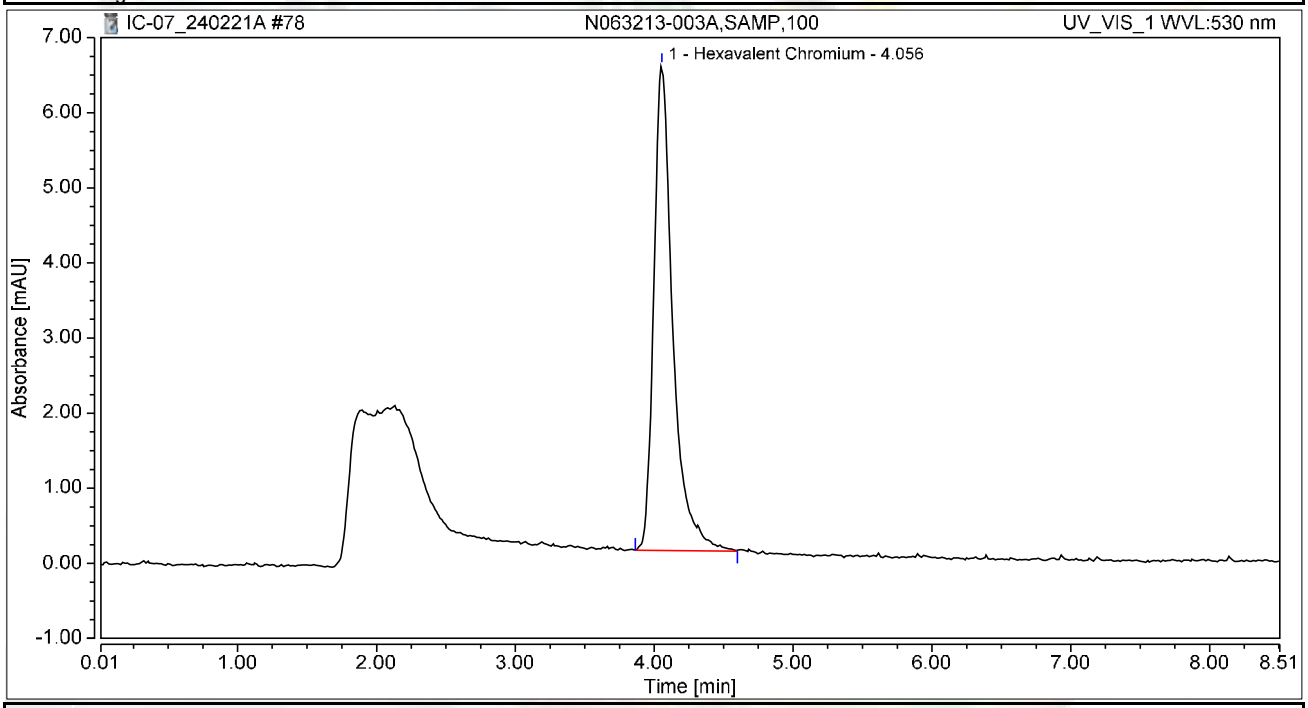
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	2.053	12.963	100.00	100.00	9.5441
Total:			**2.053**	**12.963**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-003A,SAMP,100**	*Run Time (min):*	**8.49**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 21:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

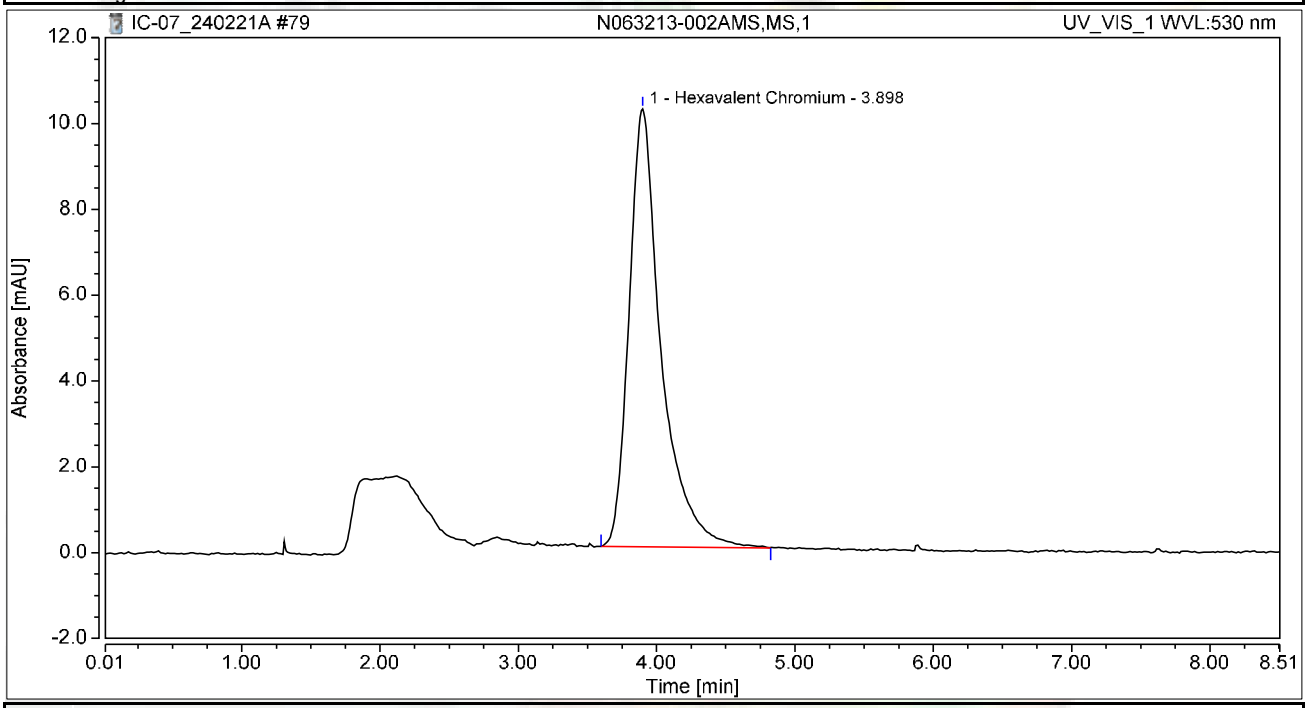
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.023	6.459	100.00	100.00	4.7580
Total:			**1.023**	**6.459**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063213-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 21:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

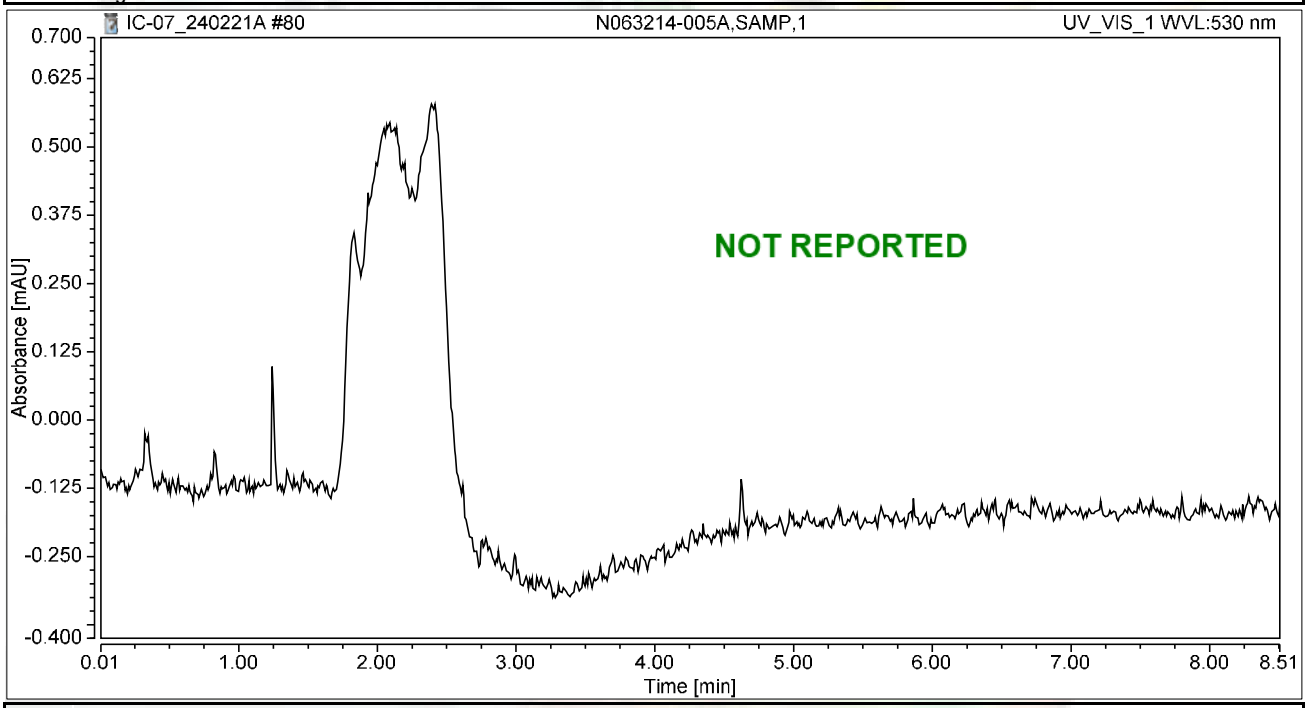
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.898	2.740	10.201	100.00	100.00	12.7372
Total:			**2.740**	**10.201**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 21:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

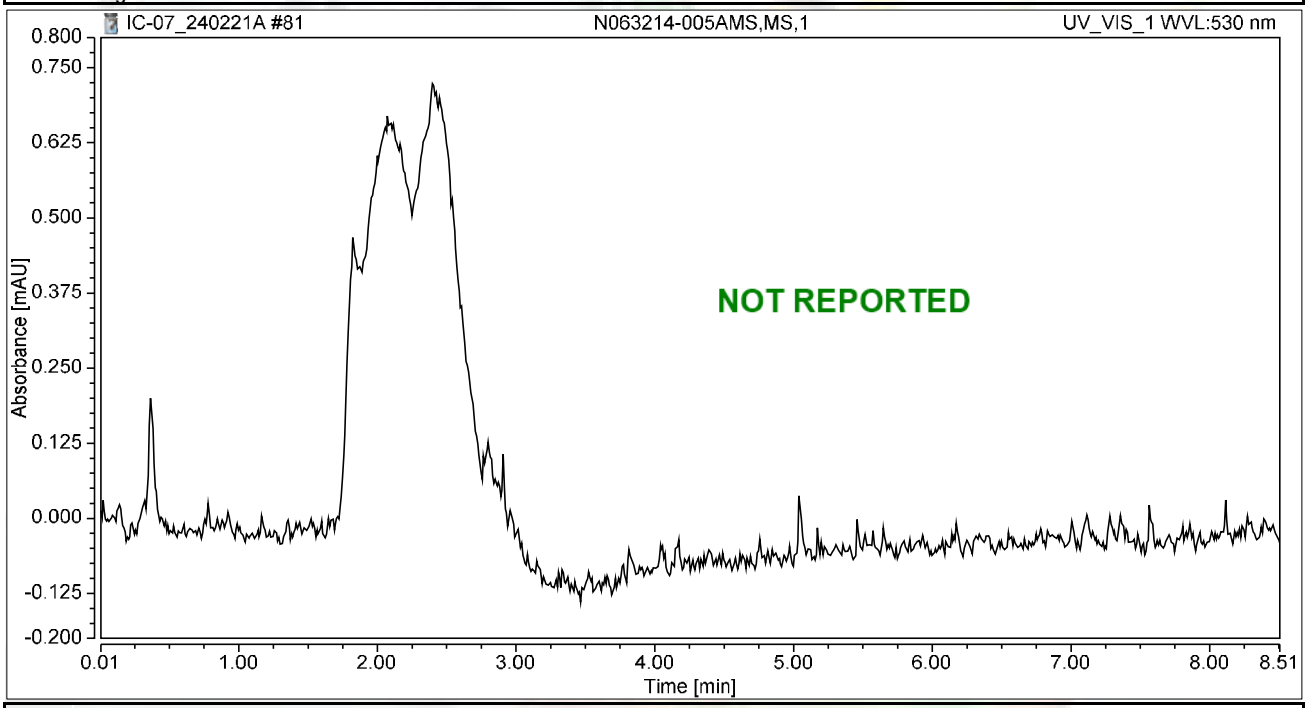
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 21:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

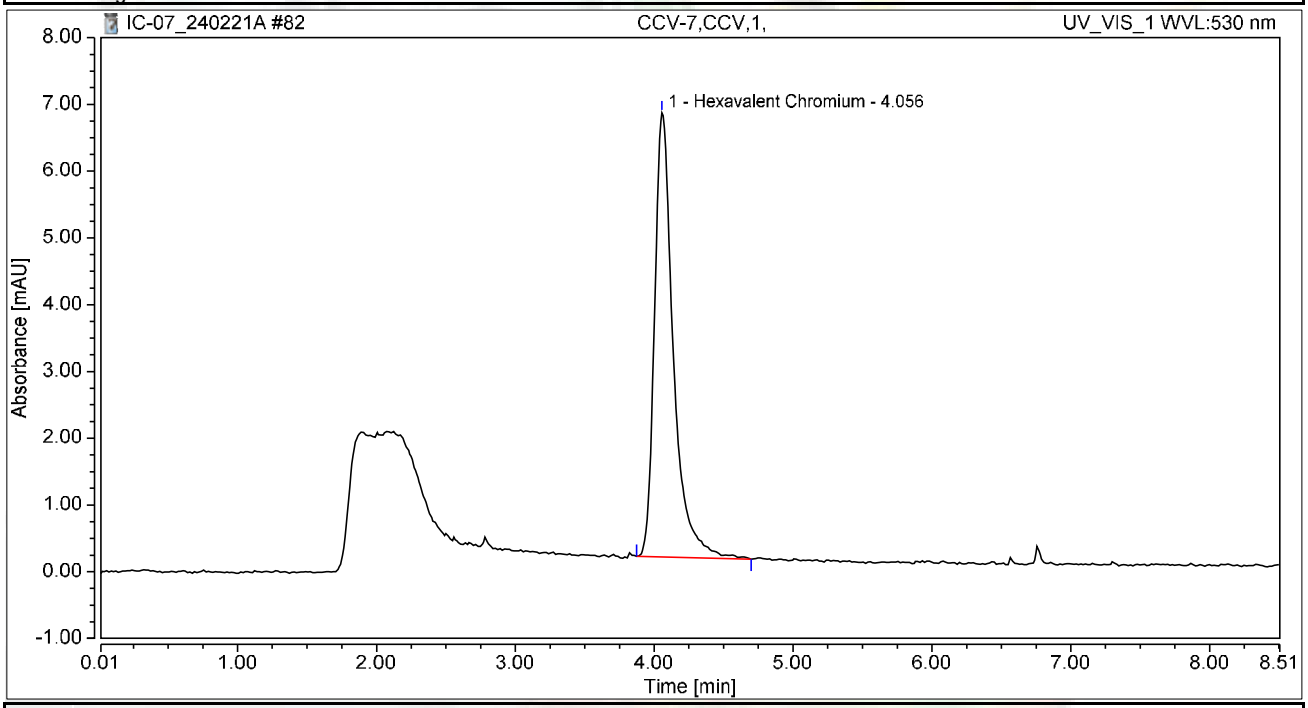
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 21:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

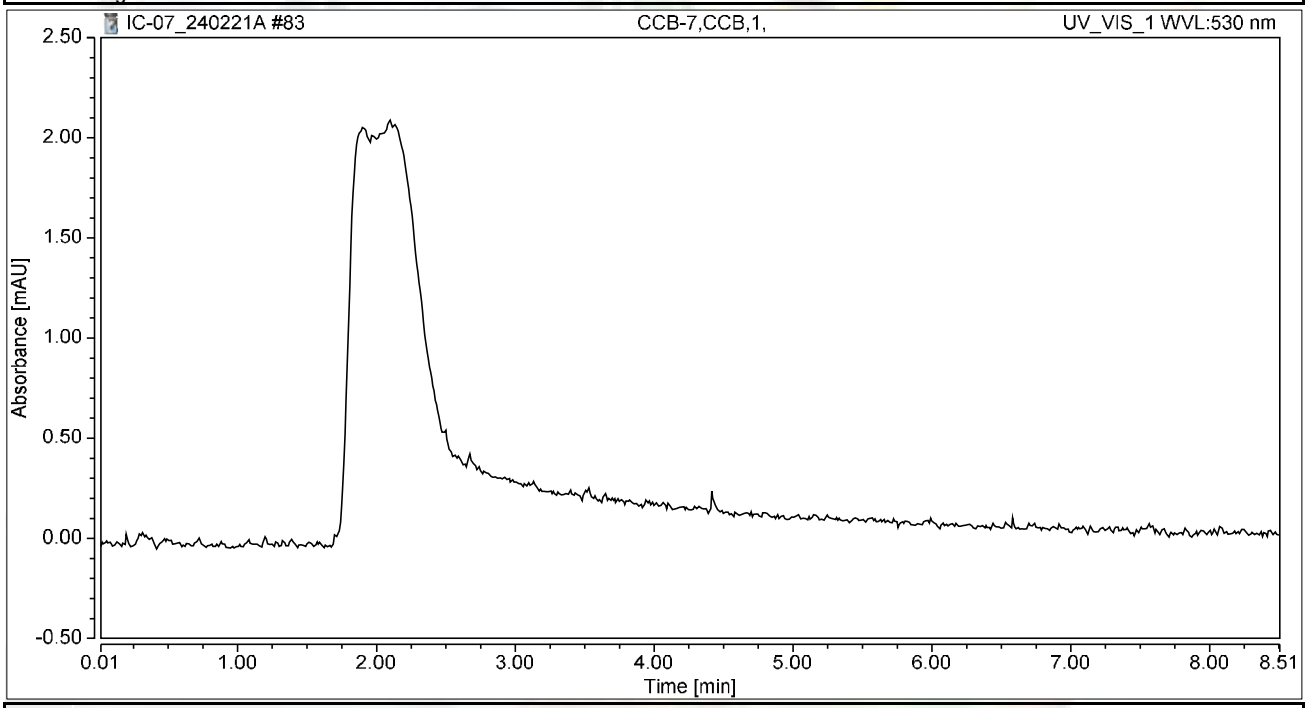
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.045	6.656	100.00	100.00	4.8590
Total:			**1.045**	**6.656**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 21:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

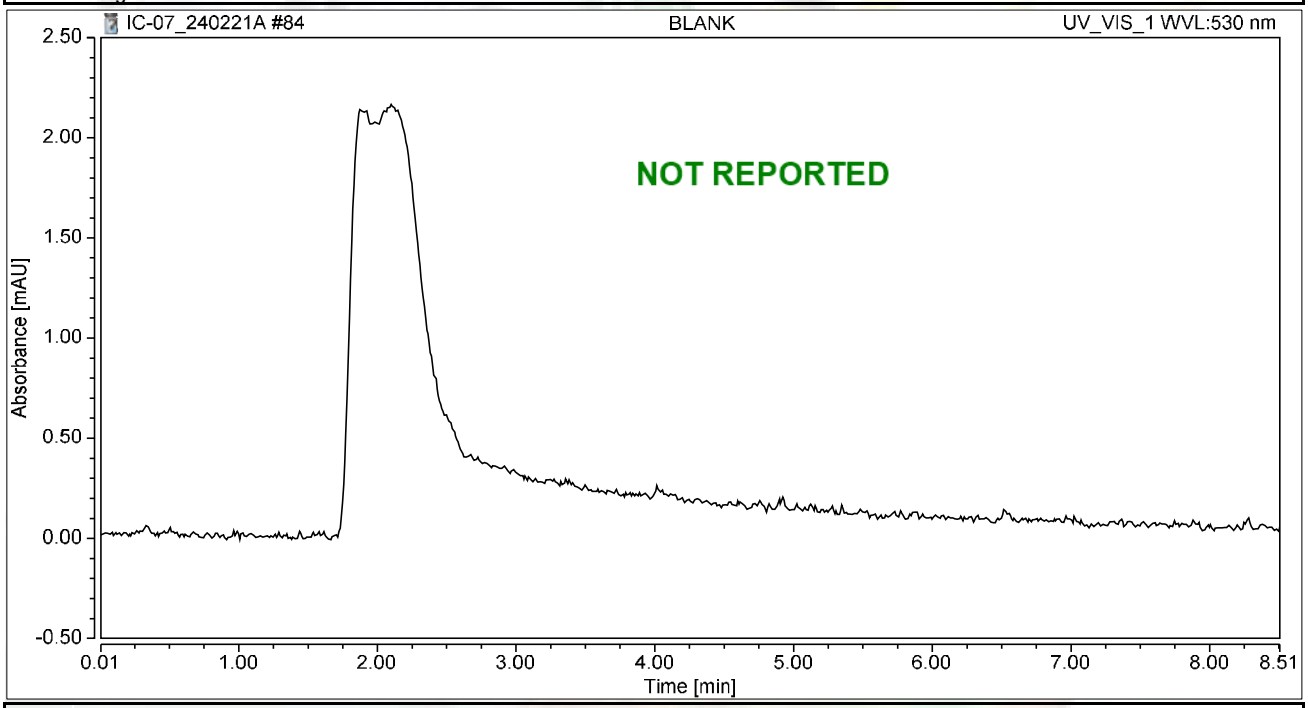
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**21/Feb/24 21:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240222A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/22/24 8:37 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/22/24 8:51 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/22/24 9:00 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/22/24 9:10 AM	Reported
13	MB-R182897	MBLK	1	Hexavalent Chromium	02/22/24 9:19 AM	Reported
14	LCS-R182897	LCS	1	Hexavalent Chromium	02/22/24 9:29 AM	Reported
15	N063214-010A	SAMP	1	Hexavalent Chromium	02/22/24 9:38 AM	Reported
16	N063214-010AMS	MS	1	Hexavalent Chromium	02/22/24 9:48 AM	Reported
17	N063214-014A	SAMP	1	Hexavalent Chromium	02/22/24 9:57 AM	Reported
18	N063214-014AMS	MS	1	Hexavalent Chromium	02/22/24 10:07 AM	Reported
19	N063214-016A	SAMP	1	Hexavalent Chromium	02/22/24 10:16 AM	Reported
20	N063214-016AMS	MS	1	Hexavalent Chromium	02/22/24 10:26 AM	Reported
21	N063214-014AMSD	MSD	1	Hexavalent Chromium	02/22/24 10:35 AM	Reported
22	N063214-010ADUP	DUP	1	Hexavalent Chromium	02/22/24 10:45 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/22/24 10:54 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/22/24 11:03 AM	Reported
25	N063214-011A	SAMP	1	Hexavalent Chromium	02/22/24 11:13 AM	Reported
26	N063214-011AMS	MS	1	Hexavalent Chromium	02/22/24 11:22 AM	Reported
27	N063214-012A	SAMP	1	Hexavalent Chromium	02/22/24 11:32 AM	Not Reported
28	N063214-012AMS	MS	1	Hexavalent Chromium	02/22/24 11:41 AM	Not Reported
29	N063214-013A	SAMP	1	Hexavalent Chromium	02/22/24 11:51 AM	Not Reported
30	N063214-013AMS	MS	1	Hexavalent Chromium	02/22/24 12:00 PM	Not Reported
31	N063214-009A	SAMP	1	Hexavalent Chromium	02/22/24 12:10 PM	Reported
32	N063214-009AMS	MS	1	Hexavalent Chromium	02/22/24 12:19 PM	Reported
33	N063214-015A	SAMP	1	Hexavalent Chromium	02/22/24 12:29 PM	Reported
34	N063214-015AMS	MS	1	Hexavalent Chromium	02/22/24 12:38 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/22/24 12:47 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/22/24 12:57 PM	Reported
37	N063214-017A	SAMP	1	Hexavalent Chromium	02/22/24 1:06 PM	Not Reported
38	N063214-017AMS	MS	1	Hexavalent Chromium	02/22/24 1:16 PM	Not Reported
39	N063214-018A	SAMP	1	Hexavalent Chromium	02/22/24 2:14 PM	Reported
40	N063214-018AMS	MS	1	Hexavalent Chromium	02/22/24 2:24 PM	Reported
41	N063214-011A	SAMP	5	Hexavalent Chromium	02/22/24 2:34 PM	Not Reported
42	N063214-011AMS	MS	5	Hexavalent Chromium	02/22/24 2:43 PM	Not Reported

Reviewed by:

RB 2/28/2024

INJECTION LOG: 240222A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063214-012A	SAMP	5	Hexavalent Chromium	02/22/24 2:53 PM	Reported
44	N063214-012AMS	MS	5	Hexavalent Chromium	02/22/24 3:02 PM	Reported
45	N063214-013A	SAMP	5	Hexavalent Chromium	02/22/24 3:12 PM	Reported
46	N063214-013AMS	MS	5	Hexavalent Chromium	02/22/24 3:21 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/22/24 3:31 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/22/24 3:40 PM	Reported
49	N063249-001A	SAMP	1	Hexavalent Chromium	02/22/24 4:02 PM	Not Reported
50	N063249-001AMS	MS	1	Hexavalent Chromium	02/22/24 4:13 PM	Not Reported
51	N063249-003A	SAMP	1	Hexavalent Chromium	02/22/24 4:22 PM	Not Reported
52	N063249-003AMS	MS	1	Hexavalent Chromium	02/22/24 4:32 PM	Not Reported
53	N063249-004A	SAMP	1	Hexavalent Chromium	02/22/24 4:41 PM	Not Reported
54	N063249-004AMS	MS	1	Hexavalent Chromium	02/22/24 4:51 PM	Not Reported
55	N063249-005A	SAMP	1	Hexavalent Chromium	02/22/24 5:00 PM	Not Reported
56	N063249-005AMS	MS	1	Hexavalent Chromium	02/22/24 5:10 PM	Not Reported
57	N063249-007A	SAMP	1	Hexavalent Chromium	02/22/24 5:19 PM	Not Reported
58	N063249-007AMS	MS	1	Hexavalent Chromium	02/22/24 5:29 PM	Not Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/22/24 5:38 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/22/24 5:47 PM	Reported
61	N063249-009A	SAMP	1	Hexavalent Chromium	02/22/24 5:57 PM	Not Reported
62	N063249-009AMS	MS	1	Hexavalent Chromium	02/22/24 6:10 PM	Not Reported
63	N063249-002A	SAMP	1	Hexavalent Chromium	02/22/24 6:20 PM	Reported
64	N063249-002AMS	MS	1	Hexavalent Chromium	02/22/24 6:29 PM	Reported
65	N063249-006A	SAMP	1	Hexavalent Chromium	02/22/24 6:42 PM	Reported
66	N063249-006AMS	MS	1	Hexavalent Chromium	02/22/24 6:51 PM	Reported
67	N063249-008A	SAMP	1	Hexavalent Chromium	02/22/24 7:01 PM	Reported
68	N063249-008AMS	MS	1	Hexavalent Chromium	02/22/24 7:10 PM	Reported
69	N063249-010A	SAMP	1	Hexavalent Chromium	02/22/24 7:20 PM	Reported
70	N063249-010AMS	MS	1	Hexavalent Chromium	02/22/24 7:29 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/22/24 7:39 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/22/24 7:48 PM	Reported
73	N063249-001A	SAMP	5	Hexavalent Chromium	02/22/24 7:57 PM	Reported
74	N063249-001AMS	MS	5	Hexavalent Chromium	02/22/24 8:07 PM	Reported
75	N063249-003A	SAMP	5	Hexavalent Chromium	02/22/24 8:16 PM	Reported
76	N063249-003AMS	MS	5	Hexavalent Chromium	02/22/24 8:26 PM	Reported
77	N063249-004A	SAMP	5	Hexavalent Chromium	02/22/24 8:35 PM	Reported
78	N063249-004AMS	MS	5	Hexavalent Chromium	02/22/24 8:45 PM	Reported
79	N063249-005A	SAMP	5	Hexavalent Chromium	02/22/24 8:54 PM	Reported
80	N063249-005AMS	MS	5	Hexavalent Chromium	02/22/24 9:04 PM	Reported
81	N063249-007A	SAMP	5	Hexavalent Chromium	02/22/24 9:13 PM	Reported
82	N063249-007AMS	MS	5	Hexavalent Chromium	02/22/24 9:23 PM	Reported
83	CCV-7	CCV	1	Hexavalent Chromium	02/22/24 9:32 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	02/22/24 9:41 PM	Reported

INJECTION LOG: 240222A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063249-009A	SAMP	5	Hexavalent Chromium	02/22/24 9:51 PM	Reported
86	N063249-009AMS	MS	5	Hexavalent Chromium	02/22/24 10:00 PM	Reported
87	N063214-008A	SAMP	1	Hexavalent Chromium	02/22/24 10:10 PM	Reported
88	N063214-008AMS	MS	1	Hexavalent Chromium	02/22/24 10:19 PM	Reported
89	CCV-8	CCV1	1	Hexavalent Chromium	02/22/24 10:29 PM	Reported
90	CCB-8	CCB	1	Hexavalent Chromium	02/22/24 10:38 PM	Reported
91	BLANK	BLANK	1	Hexavalent Chromium	02/22/24 10:48 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240222A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**22/Feb/24 23:18:26**
No. of Injections:	**94**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/22/2024 08:37	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/22/2024 08:51	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/22/2024 09:00	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/22/2024 09:10	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/22/2024 09:19	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/22/2024 09:29	Finished	LCS @5ppb, IWST-231228B
15	N063214-010A,SAMF	7	1000	Unknown		02/22/2024 09:38	Finished	SAMP,10 mL
16	N063214-010AMS,MS	8	1000	Unknown		02/22/2024 09:48	Finished	MS (1ppb), IWST-231228B,10r
17	N063214-014A,SAMF	9	1000	Unknown		02/22/2024 09:57	Finished	SAMP,10 mL
18	N063214-014AMS,MS	10	1000	Unknown		02/22/2024 10:07	Finished	MS (1ppb), IWST-231228B,10r
19	N063214-016A,SAMF	11	1000	Unknown		02/22/2024 10:16	Finished	SAMP,10 mL
20	N063214-016AMS,MS	12	1000	Unknown		02/22/2024 10:26	Finished	MS (1ppb), IWST-231228B,10r
21	N063214-014AMSD,M	13	1000	Unknown		02/22/2024 10:35	Finished	MSD (1ppb), IWST-231228B,1(
22	N063214-010ADUP,D	14	1000	Unknown		02/22/2024 10:45	Finished	DUP,10 mL
23	CCV-2,CCV1,1,	15	1000	Unknown		02/22/2024 10:54	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		02/22/2024 11:03	Finished	CCB R240129C
25	N063214-011A,SAMF	17	1000	Unknown		02/22/2024 11:13	Finished	SAMP,10 mL
26	N063214-011AMS,MS	18	1000	Unknown		02/22/2024 11:22	Finished	MS (1ppb), IWST-231228B,10r
27	N063214-012A,SAMF	19	1000	Unknown		02/22/2024 11:32	Finished	SAMP,10 mL
28	N063214-012AMS,MS	20	1000	Unknown		02/22/2024 11:41	Finished	MS (1ppb), IWST-231228B,10r
29	N063214-013A,SAMF	21	1000	Unknown		02/22/2024 11:51	Finished	SAMP,10 mL
30	N063214-013AMS,MS	22	1000	Unknown		02/22/2024 12:00	Finished	MS (1ppb), IWST-231228B,10r
31	N063214-009A,SAMF	23	1000	Unknown		02/22/2024 12:10	Finished	SAMP,10 mL
32	N063214-009AMS,MS	24	1000	Unknown		02/22/2024 12:19	Finished	MS (1ppb), IWST-231228B,10r
33	N063214-015A,SAMF	25	1000	Unknown		02/22/2024 12:29	Finished	SAMP,10 mL
34	N063214-015AMS,MS	26	1000	Unknown		02/22/2024 12:38	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	27	1000	Unknown		02/22/2024 12:47	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	28	1000	Unknown		02/22/2024 12:57	Finished	CCB R240129C
37	N063214-017A,SAMF	29	1000	Unknown		02/22/2024 13:06	Finished	SAMP,10 mL
38	N063214-017AMS,MS	30	1000	Unknown		02/22/2024 13:16	Interrupted	MS (1ppb), IWST-231228B,10r
39	N063214-018A,SAMF	1	1000	Unknown		02/22/2024 14:14	Finished	SAMP,10 mL
40	N063214-018AMS,MS	2	1000	Unknown		02/22/2024 14:24	Finished	MS (1ppb), IWST-231228B,10r
41	N063214-011A,SAMF	3	1000	Unknown		02/22/2024 14:34	Finished	SAMP,2>10 mL
42	N063214-011AMS,MS	4	1000	Unknown		02/22/2024 14:43	Finished	MS (1ppb), IWST-231228B,2>1
43	N063214-012A,SAMF	5	1000	Unknown		02/22/2024 14:53	Finished	SAMP,2>10 mL
44	N063214-012AMS,MS	6	1000	Unknown		02/22/2024 15:02	Finished	MS (1ppb), IWST-231228B,2>1
45	N063214-013A,SAMF	7	1000	Unknown		02/22/2024 15:12	Finished	SAMP,2>10 mL
46	N063214-013AMS,MS	8	1000	Unknown		02/22/2024 15:21	Finished	MS (1ppb), IWST-231228B,2>1
47	CCV-4,CCV1,1,	9	1000	Unknown		02/22/2024 15:31	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	10	1000	Unknown		02/22/2024 15:40	Finished	CCB R240129C
49	N063249-001A,SAMF	1	1000	Unknown		02/22/2024 16:02	Finished	SAMP,10 mL
50	N063249-001AMS,MS	2	1000	Unknown		02/22/2024 16:13	Finished	MS (1ppb), IWST-231228B,10r
51	N063249-003A,SAMF	3	1000	Unknown		02/22/2024 16:22	Finished	SAMP,10 mL
52	N063249-003AMS,MS	4	1000	Unknown		02/22/2024 16:32	Finished	MS (1ppb), IWST-231228B,10r
53	N063249-004A,SAMF	5	1000	Unknown		02/22/2024 16:41	Finished	SAMP,10 mL
54	N063249-004AMS,MS	6	1000	Unknown		02/22/2024 16:51	Finished	MS (1ppb), IWST-231228B,10r
55	N063249-005A,SAMF	7	1000	Unknown		02/22/2024 17:00	Finished	SAMP,10 mL
56	N063249-005AMS,MS	8	1000	Unknown		02/22/2024 17:10	Finished	MS (1ppb), IWST-231228B,10r
57	N063249-007A,SAMF	9	1000	Unknown		02/22/2024 17:19	Finished	SAMP,10 mL
58	N063249-007AMS,MS	10	1000	Unknown		02/22/2024 17:29	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	11	1000	Unknown		02/22/2024 17:38	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	12	1000	Unknown		02/22/2024 17:47	Finished	CCB R240129C

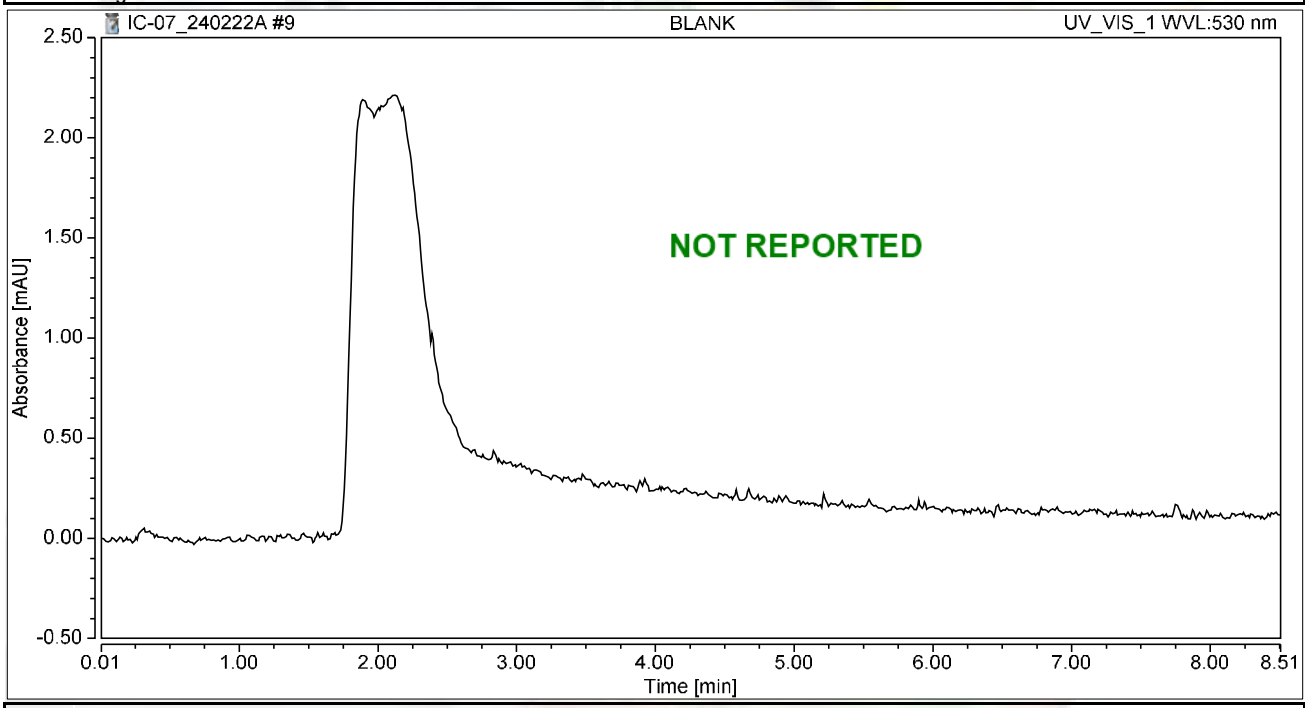
61	N063249-009A,SAMP	13	1000	Unknown		02/22/2024 17:57	Finished	SAMP,10 mL
62	N063249-009AMS,MS	14	1000	Unknown		02/22/2024 18:10	Finished	MS (1ppb), IWST-231228B,10r
63	N063249-002A,SAMP	15	1000	Unknown		02/22/2024 18:20	Finished	SAMP,10 mL
64	N063249-002AMS,MS	16	1000	Unknown		02/22/2024 18:29	Finished	MS (1ppb), IWST-231228B,10r
65	N063249-006A,SAMP	17	1000	Unknown		02/22/2024 18:42	Finished	SAMP,10 mL
66	N063249-006AMS,MS	18	1000	Unknown		02/22/2024 18:51	Finished	MS (1ppb), IWST-231228B,10r
67	N063249-008A,SAMP	19	1000	Unknown		02/22/2024 19:01	Finished	SAMP,10 mL
68	N063249-008AMS,MS	20	1000	Unknown		02/22/2024 19:10	Finished	MS (1ppb), IWST-231228B,10r
69	N063249-010A,SAMP	21	1000	Unknown		02/22/2024 19:20	Finished	SAMP,10 mL
70	N063249-010AMS,MS	22	1000	Unknown		02/22/2024 19:29	Finished	MS (1ppb), IWST-231228B,10r
71	CCV-6,CCV1,1,	23	1000	Unknown		02/22/2024 19:39	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	24	1000	Unknown		02/22/2024 19:48	Finished	CCB R240129C
73	N063249-001A,SAMP	25	1000	Unknown		02/22/2024 19:57	Finished	SAMP,2>10 mL
74	N063249-001AMS,MS	26	1000	Unknown		02/22/2024 20:07	Finished	MS (1ppb), IWST-231228B,2>1
75	N063249-003A,SAMP	27	1000	Unknown		02/22/2024 20:16	Finished	SAMP,2>10 mL
76	N063249-003AMS,MS	28	1000	Unknown		02/22/2024 20:26	Finished	MS (1ppb), IWST-231228B,2>1
77	N063249-004A,SAMP	29	1000	Unknown		02/22/2024 20:35	Finished	SAMP,2>10 mL
78	N063249-004AMS,MS	30	1000	Unknown		02/22/2024 20:45	Finished	MS (1ppb), IWST-231228B,2>1
79	N063249-005A,SAMP	31	1000	Unknown		02/22/2024 20:54	Finished	SAMP,2>10 mL
80	N063249-005AMS,MS	32	1000	Unknown		02/22/2024 21:04	Finished	MS (1ppb), IWST-231228B,2>1
81	N063249-007A,SAMP	33	1000	Unknown		02/22/2024 21:13	Finished	SAMP,2>10 mL
82	N063249-007AMS,MS	34	1000	Unknown		02/22/2024 21:23	Finished	MS (1ppb), IWST-231228B,2>1
83	CCV-7,CCV,1,	35	1000	Unknown		02/22/2024 21:32	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	36	1000	Unknown		02/22/2024 21:41	Finished	CCB R240129C
85	N063249-009A,SAMP	37	1000	Unknown		02/22/2024 21:51	Finished	SAMP,2>10 mL
86	N063249-009AMS,MS	38	1000	Unknown		02/22/2024 22:00	Finished	MS (1ppb), IWST-231228B,2>1
87	N063214-008A,SAMP	39	1000	Unknown		02/22/2024 22:10	Finished	SAMP,10 mL
88	N063214-008AMS,MS	40	1000	Unknown		02/22/2024 22:19	Finished	MS (1ppb), IWST-231228B,10r
89	CCV-8,CCV1,1,	41	1000	Unknown		02/22/2024 22:29	Finished	CCV @10ppb, IWST-231228A
90	CCB-8,CCB,1,	42	1000	Unknown		02/22/2024 22:38	Finished	CCB R240129C
91	BLANK	43	1000	Unknown		02/22/2024 22:48	Finished	BLANK
92	SHUTDOWN	44	1000	Unknown		02/22/2024 22:57	Finished	
93	Eluent: R240222A	45	1000	Unknown		n.a.	Finished	
94	PCR: R240222B	46	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 08:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

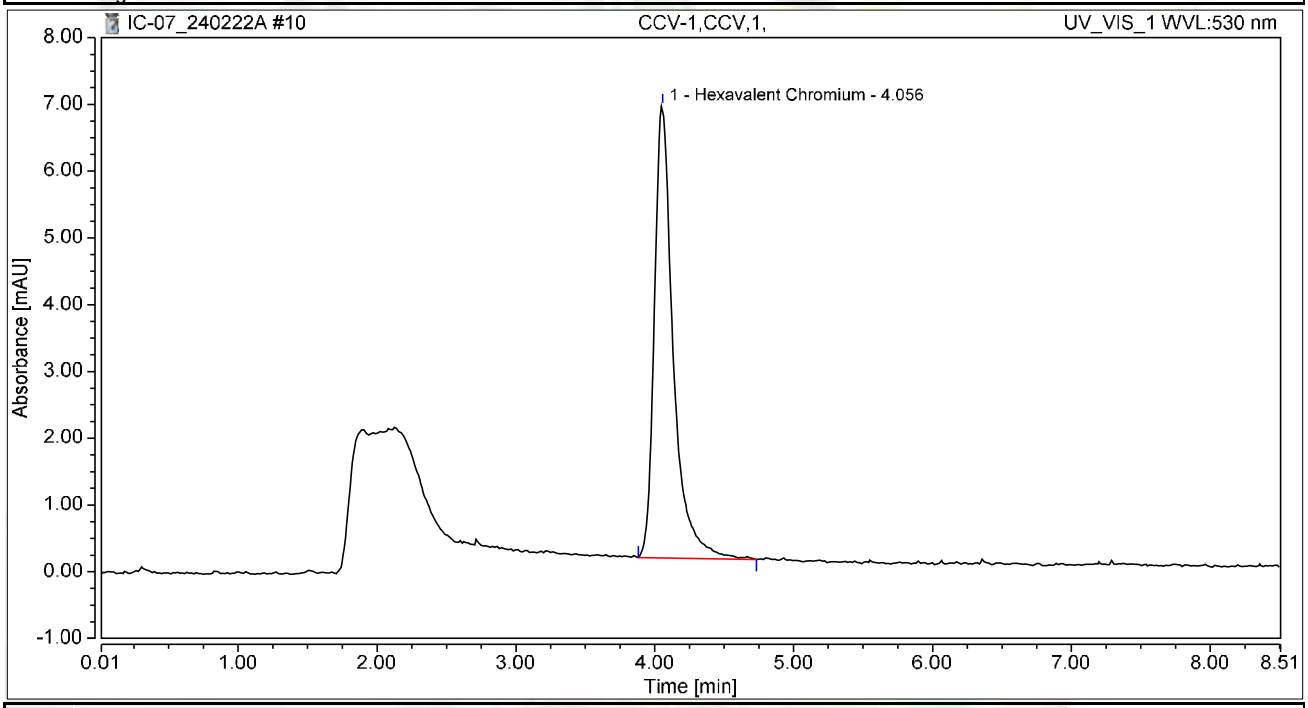
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 08:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.068	6.773	100.00	100.00	4.9648
Total:			**1.068**	**6.773**	**100.00**	**100.00**	

Reviewed by:

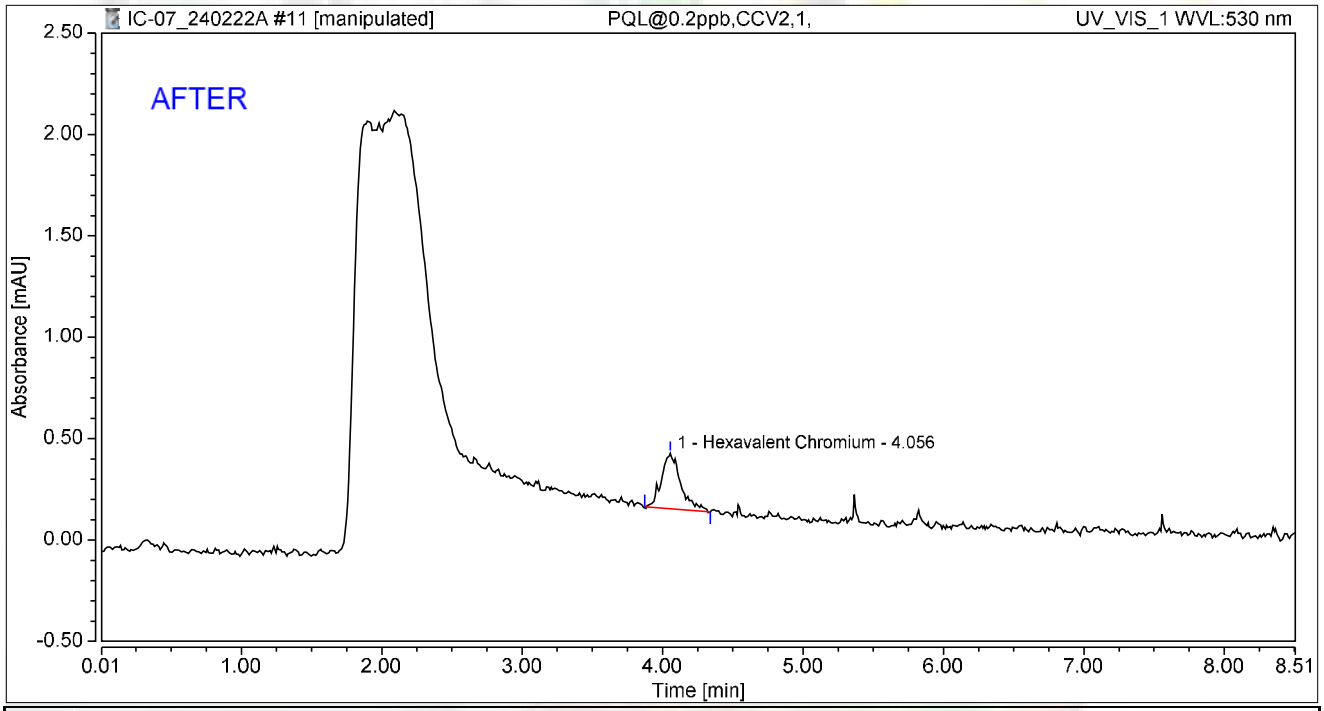
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 09:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.044	0.274	100.00	100.00	0.2023
Total:			**0.044**	**0.274**	**100.00**	**100.00**	

Reviewed by:

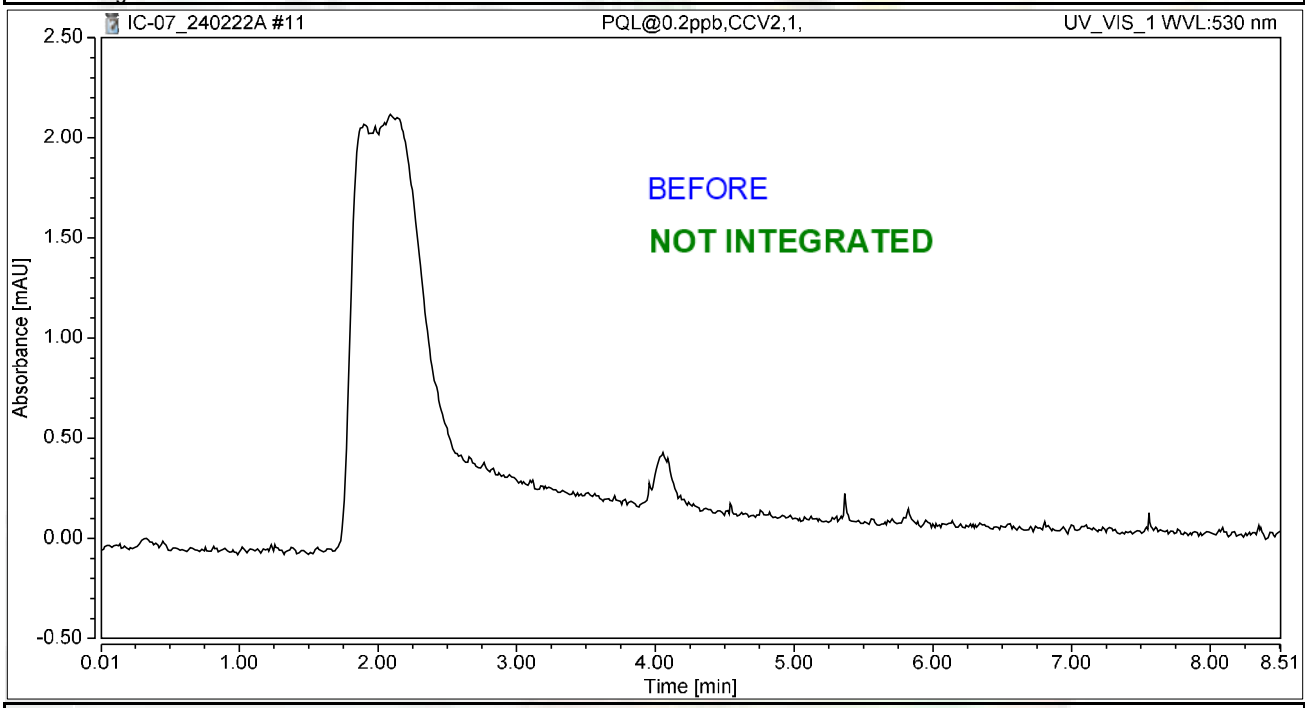
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 09:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

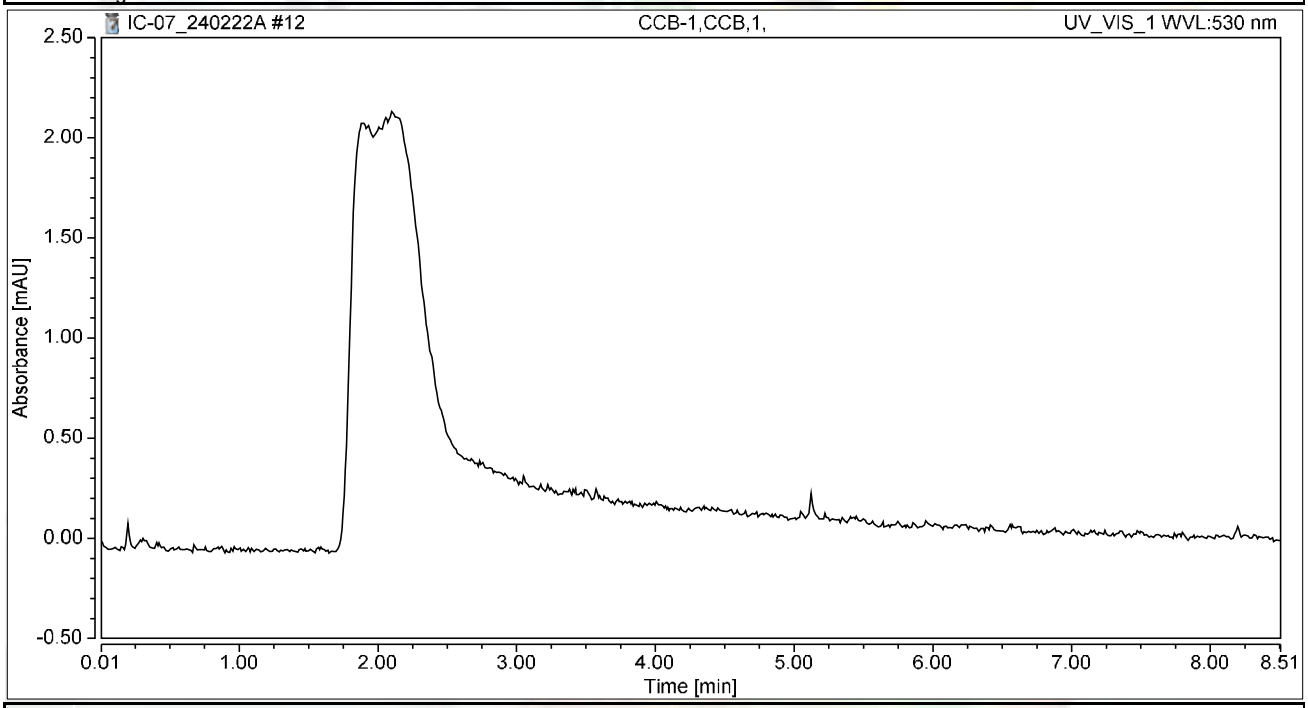
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 09:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

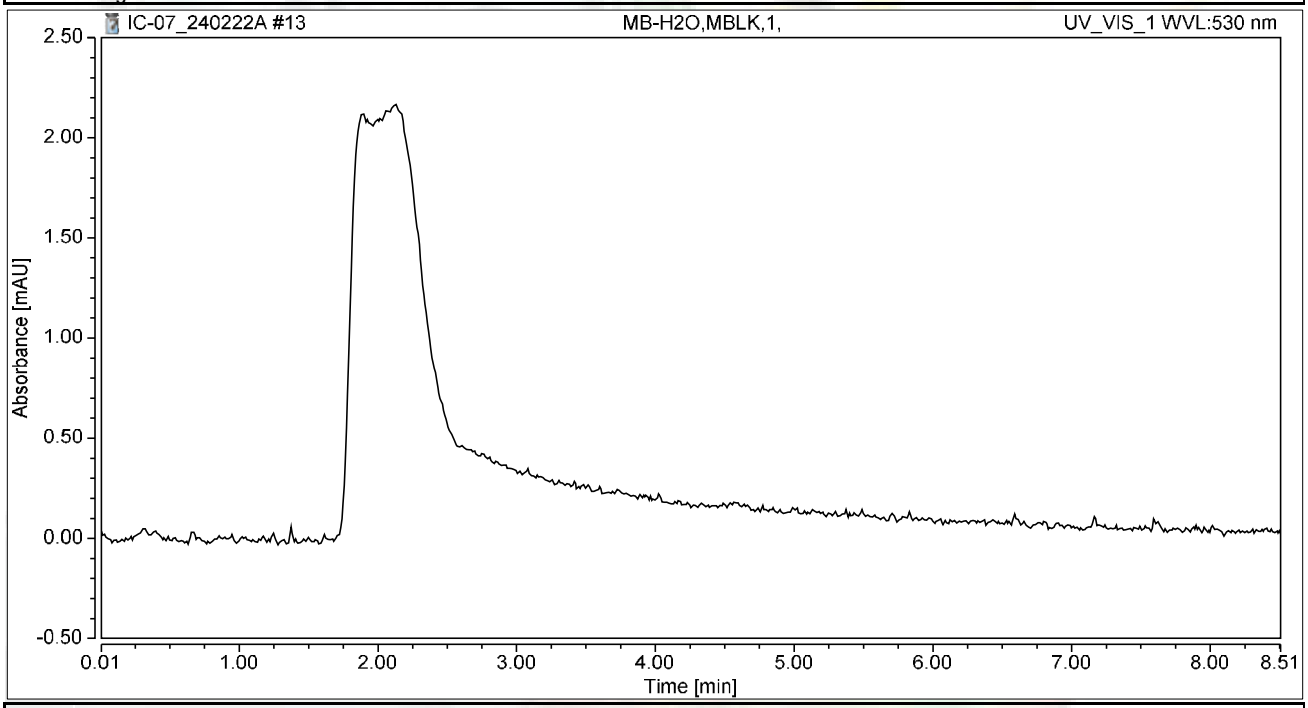
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 09:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

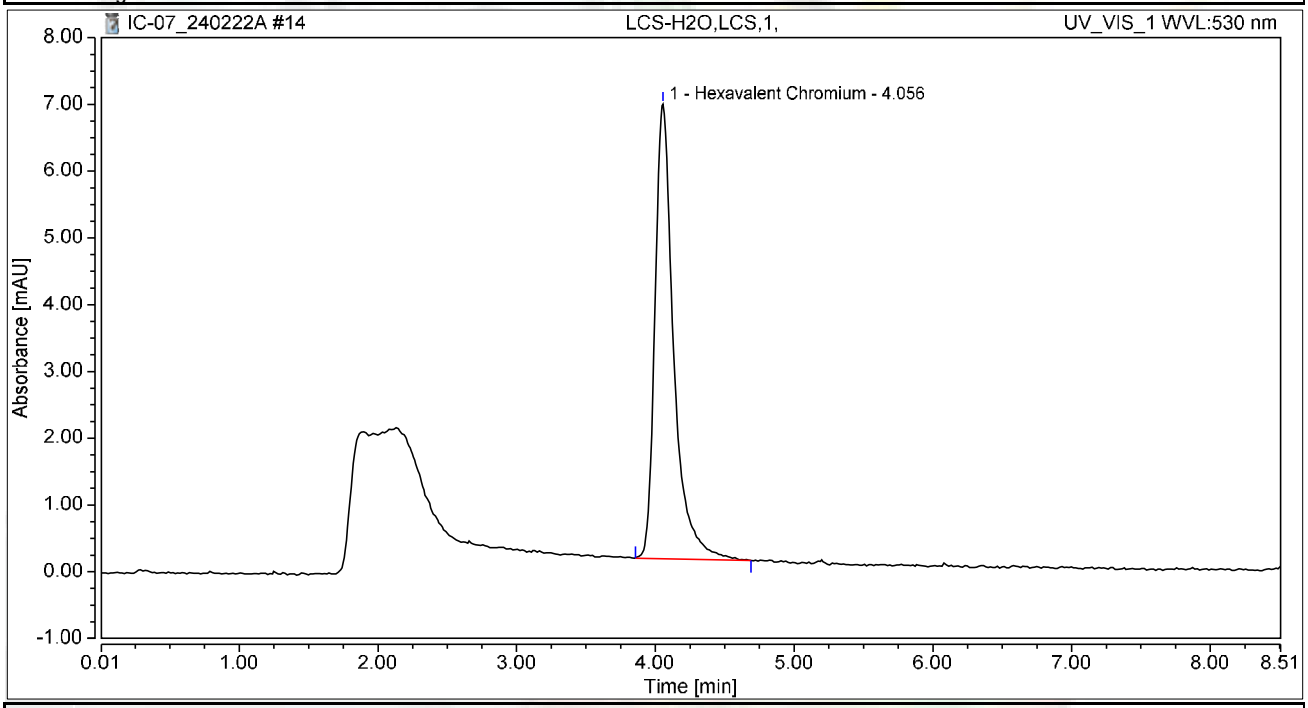
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 09:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

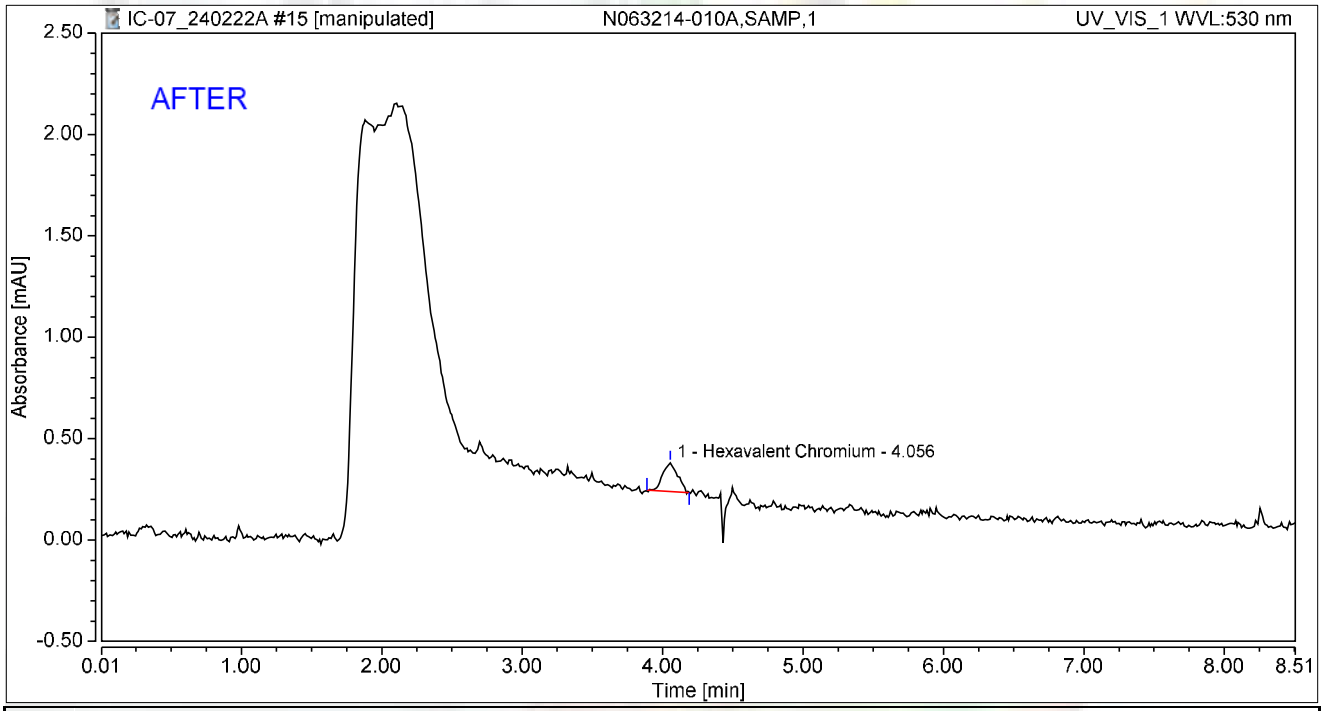
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.068	6.810	100.00	100.00	4.9673
Total:			**1.068**	**6.810**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-010A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 09:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.017	0.141	100.00	100.00	0.0811
Total:			**0.017**	**0.141**	**100.00**	**100.00**	

Reviewed by:

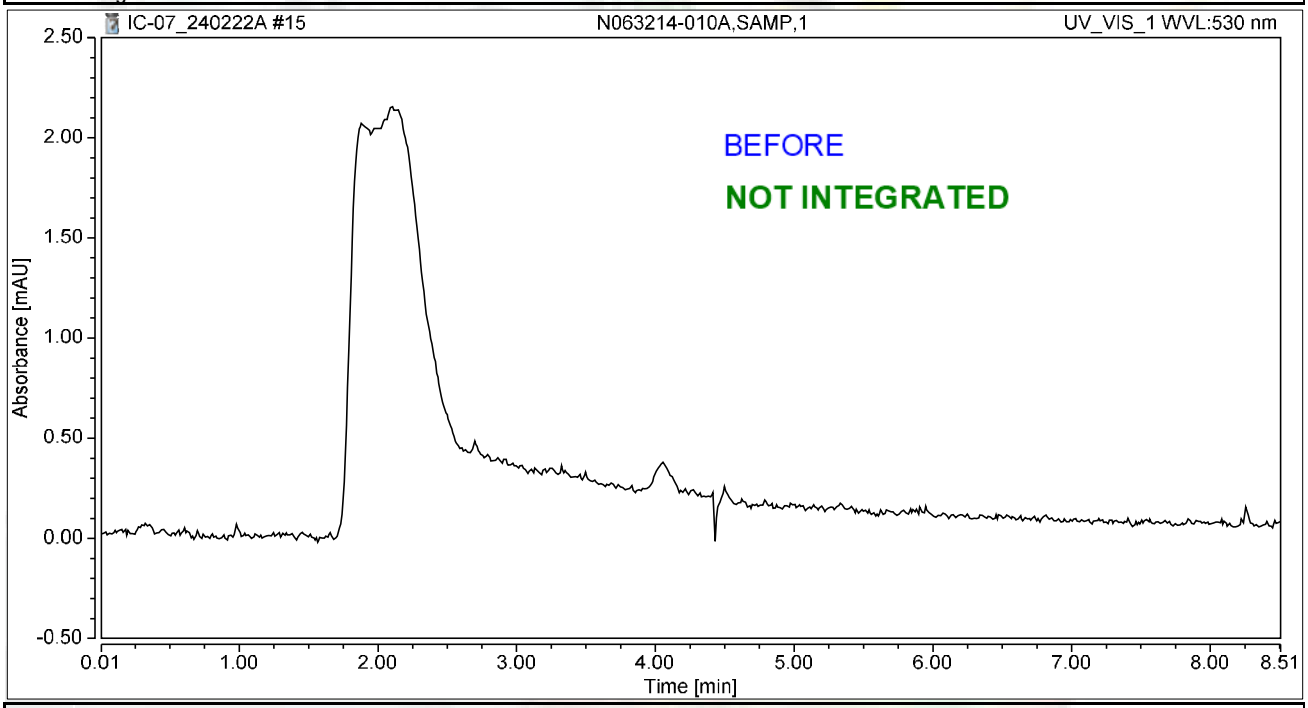
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063214-010A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 09:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

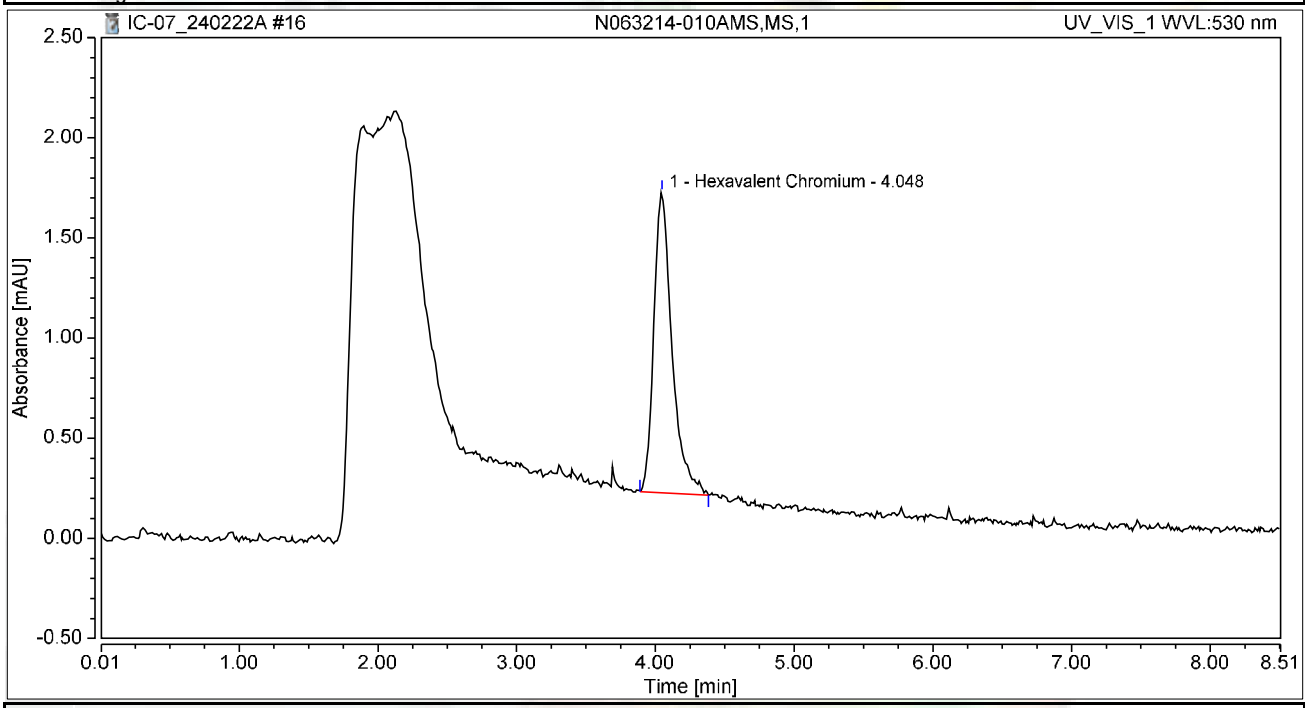
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-010AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 09:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

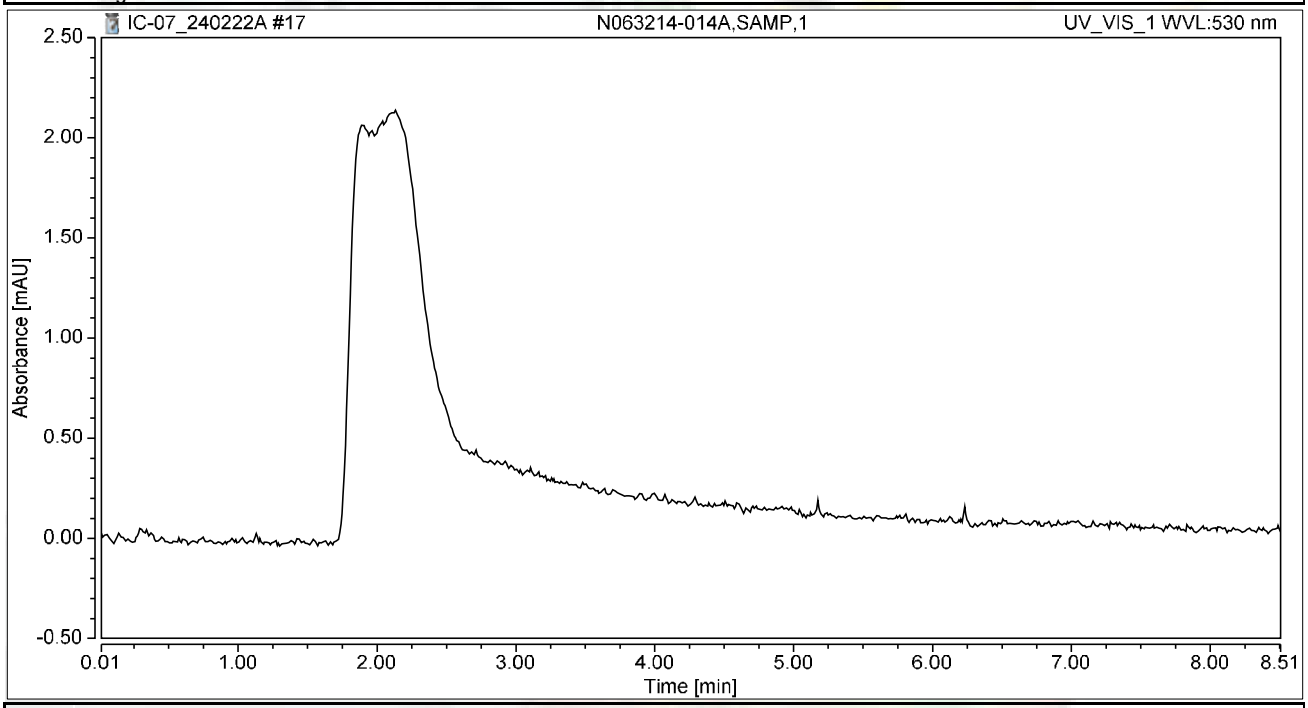
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.228	1.501	100.00	100.00	1.0605
Total:			**0.228**	**1.501**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-014A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 09:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

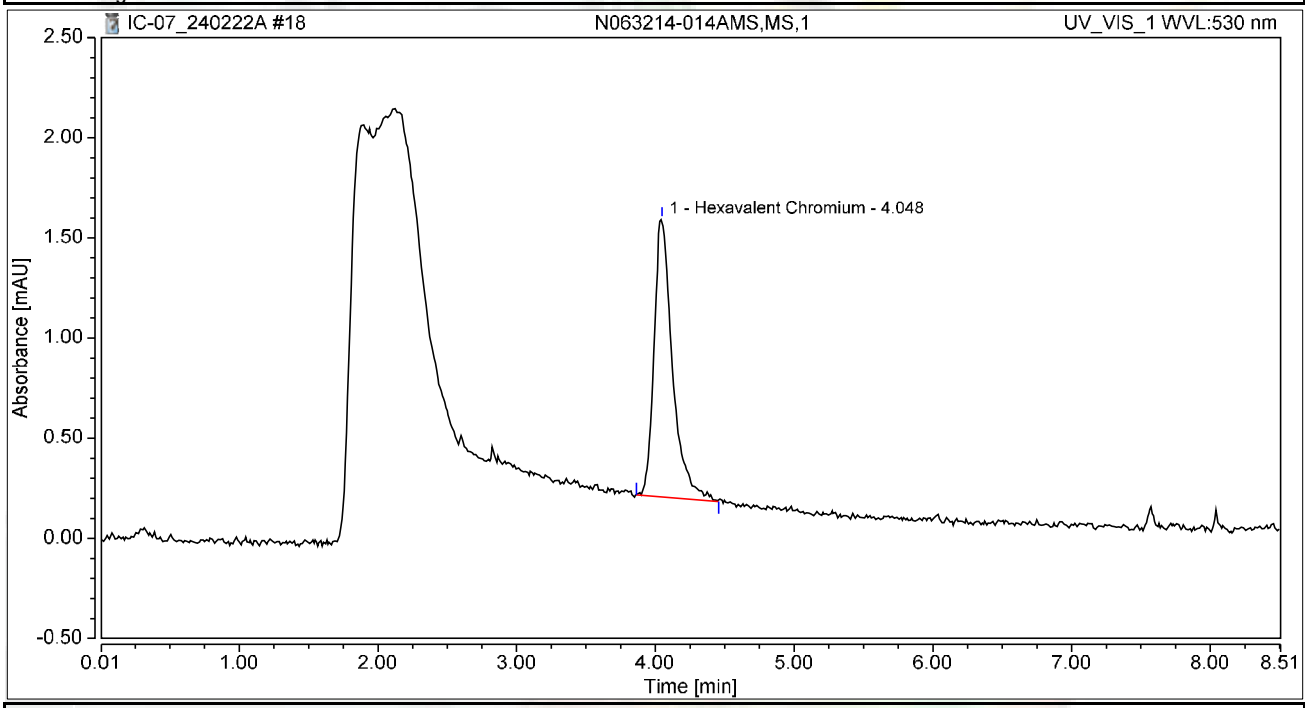
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-014AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 10:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

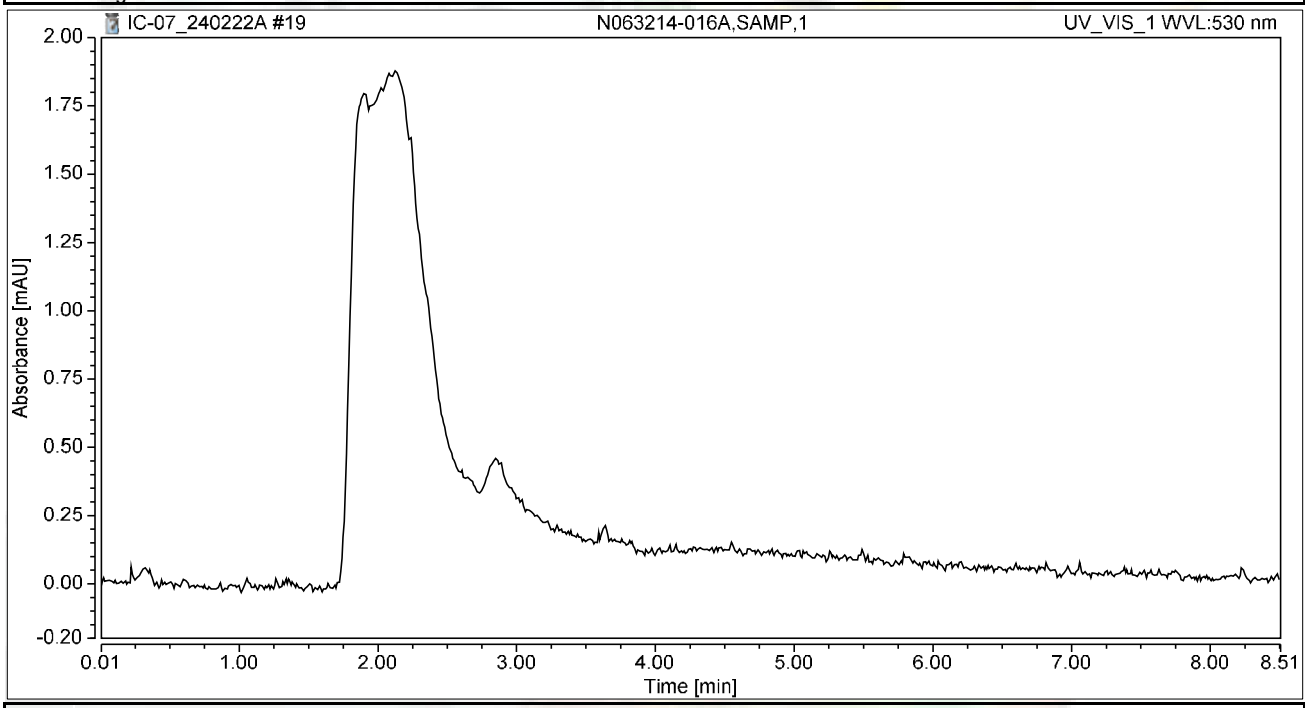
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.213	1.386	100.00	100.00	0.9884
Total:			**0.213**	**1.386**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-016A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 10:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

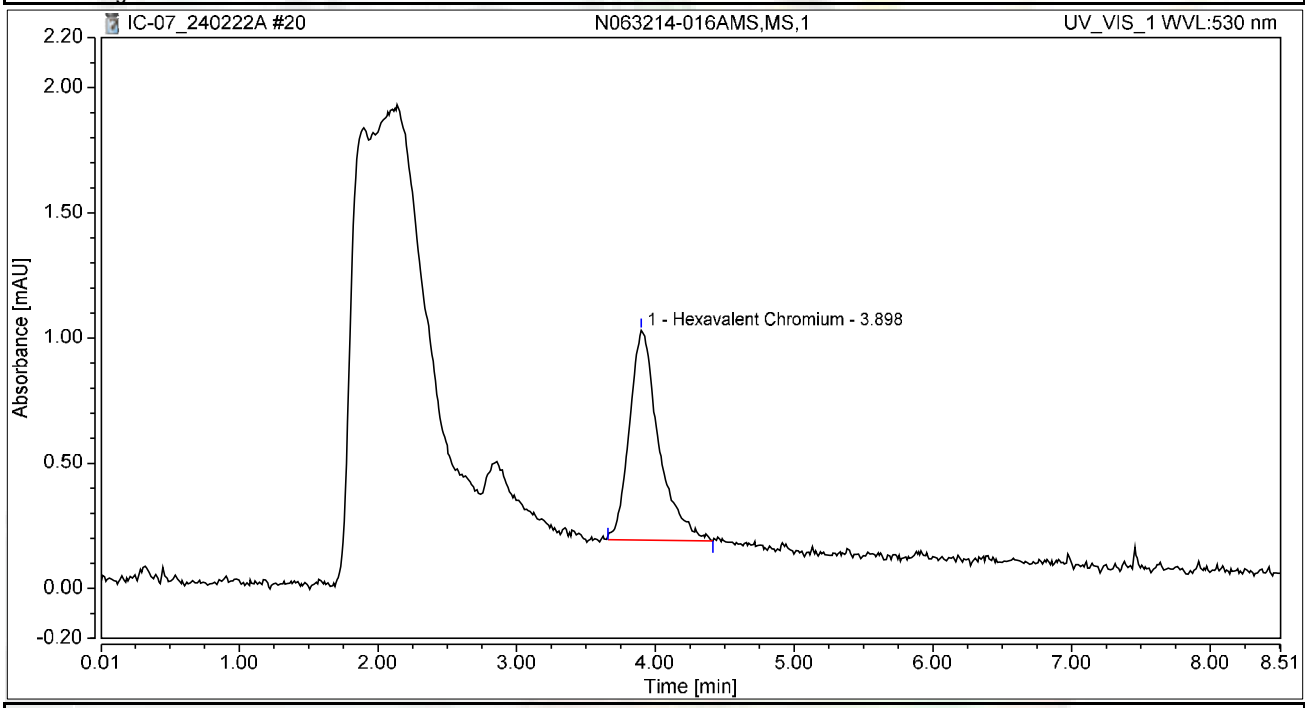
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-016AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 10:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

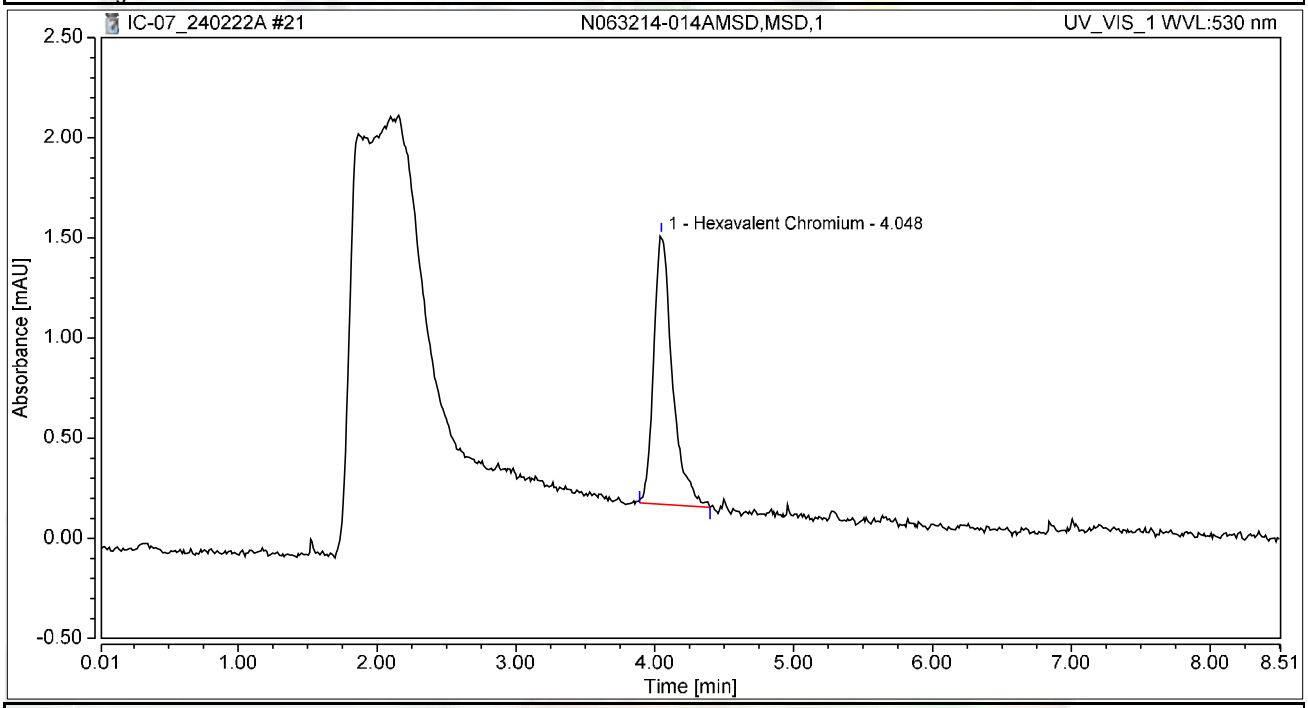
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.898	0.206	0.837	100.00	100.00	0.9570
Total:			**0.206**	**0.837**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-014AMSD,MSD,1**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 10:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

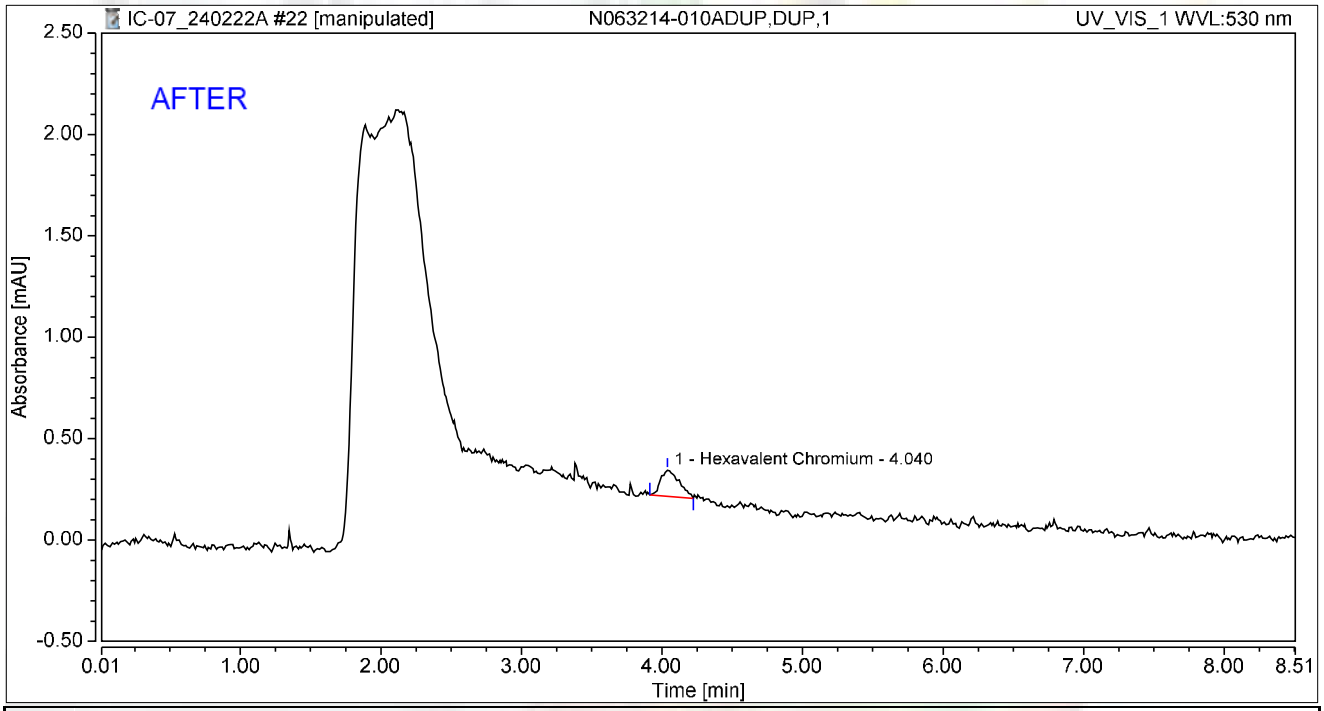
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.210	1.346	100.00	100.00	0.9752
Total:			**0.210**	**1.346**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-010ADUP,DUP,1**	*Run Time (min):*	**8.49**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 10:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.019	0.129	100.00	100.00	0.0903
Total:			**0.019**	**0.129**	**100.00**	**100.00**	

Reviewed by:

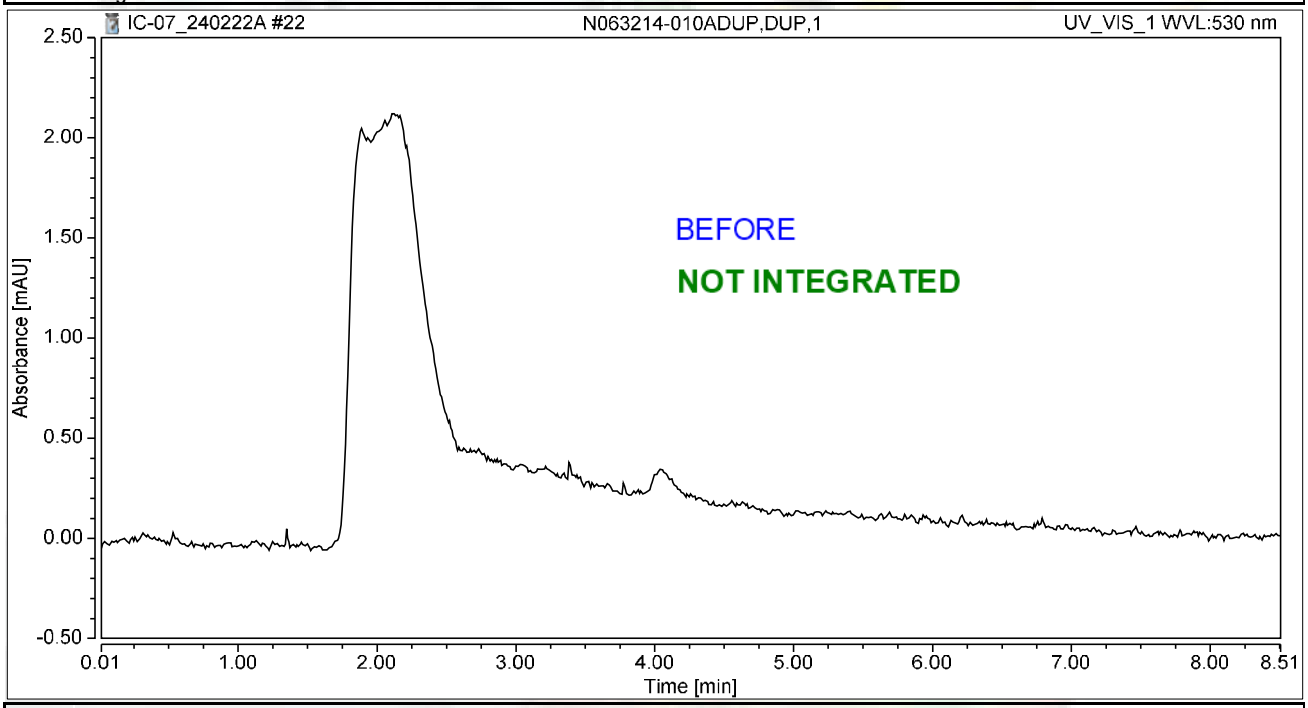
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063214-010ADUP,DUP,1**	*Run Time (min):*	**8.49**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 10:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

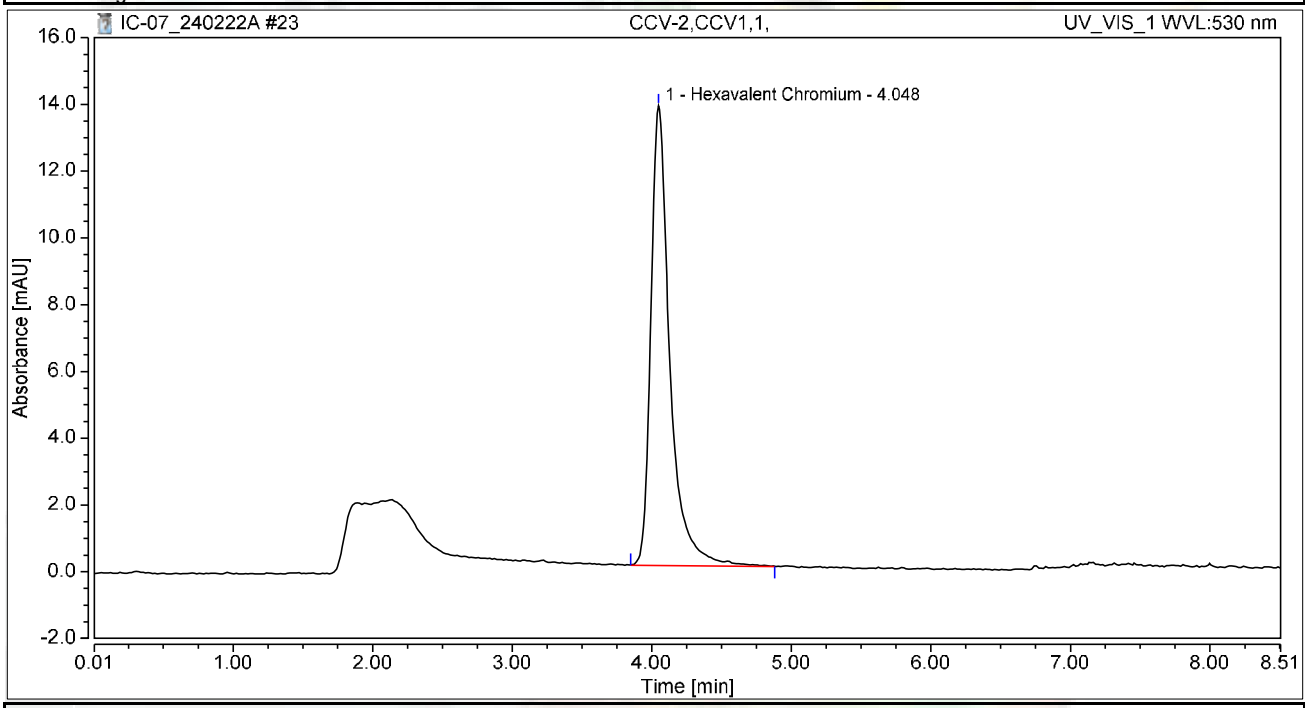
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 10:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

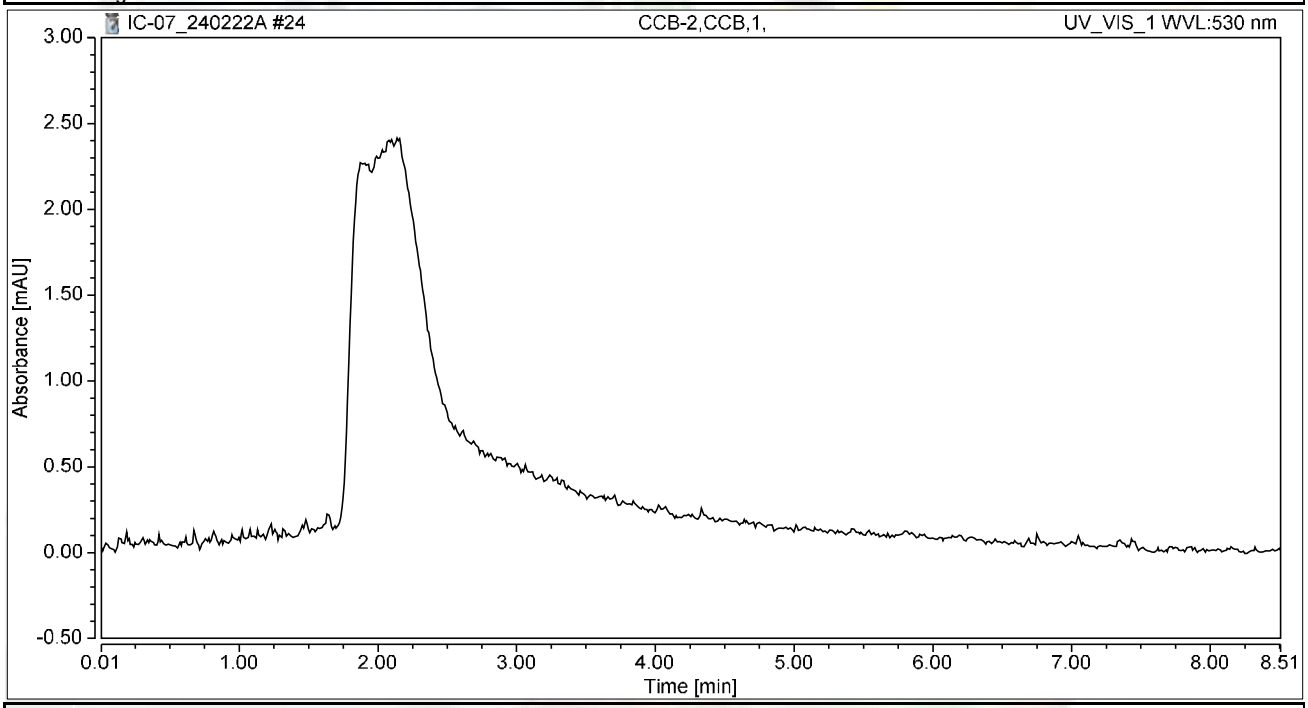
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.178	13.774	100.00	100.00	10.1274
Total:			**2.178**	**13.774**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 11:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

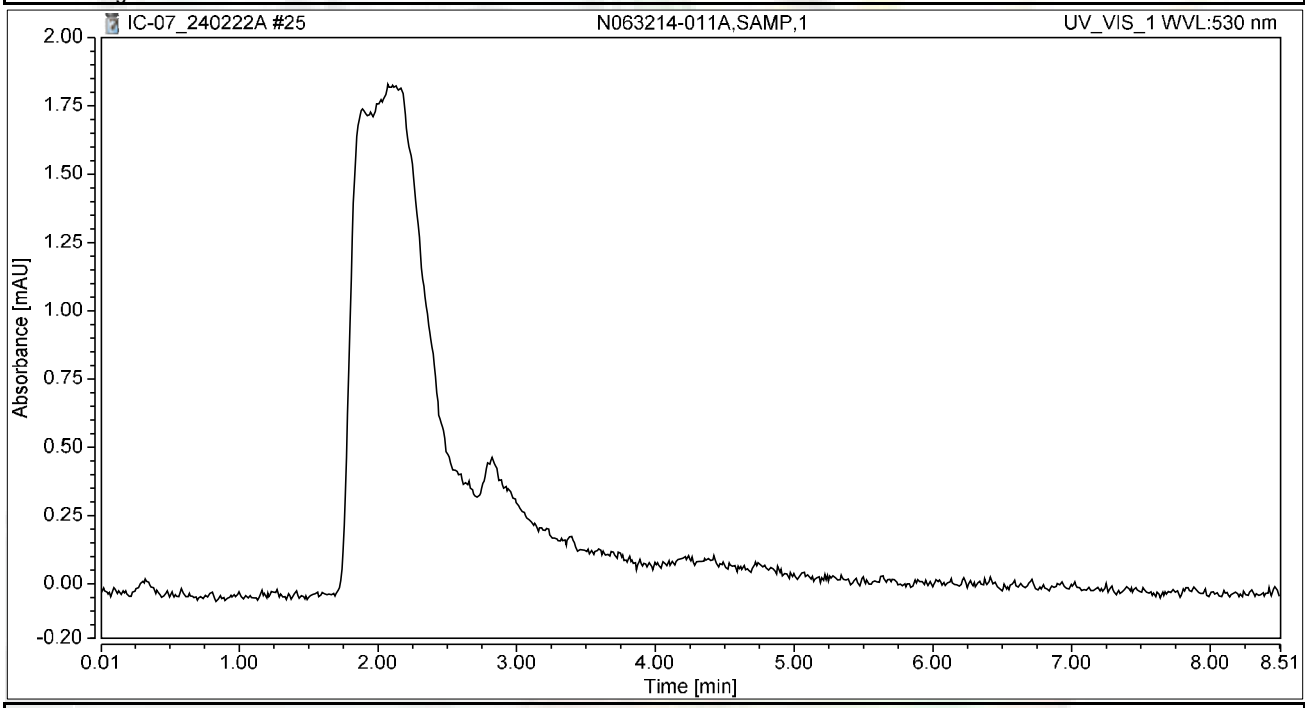
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-011A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 11:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

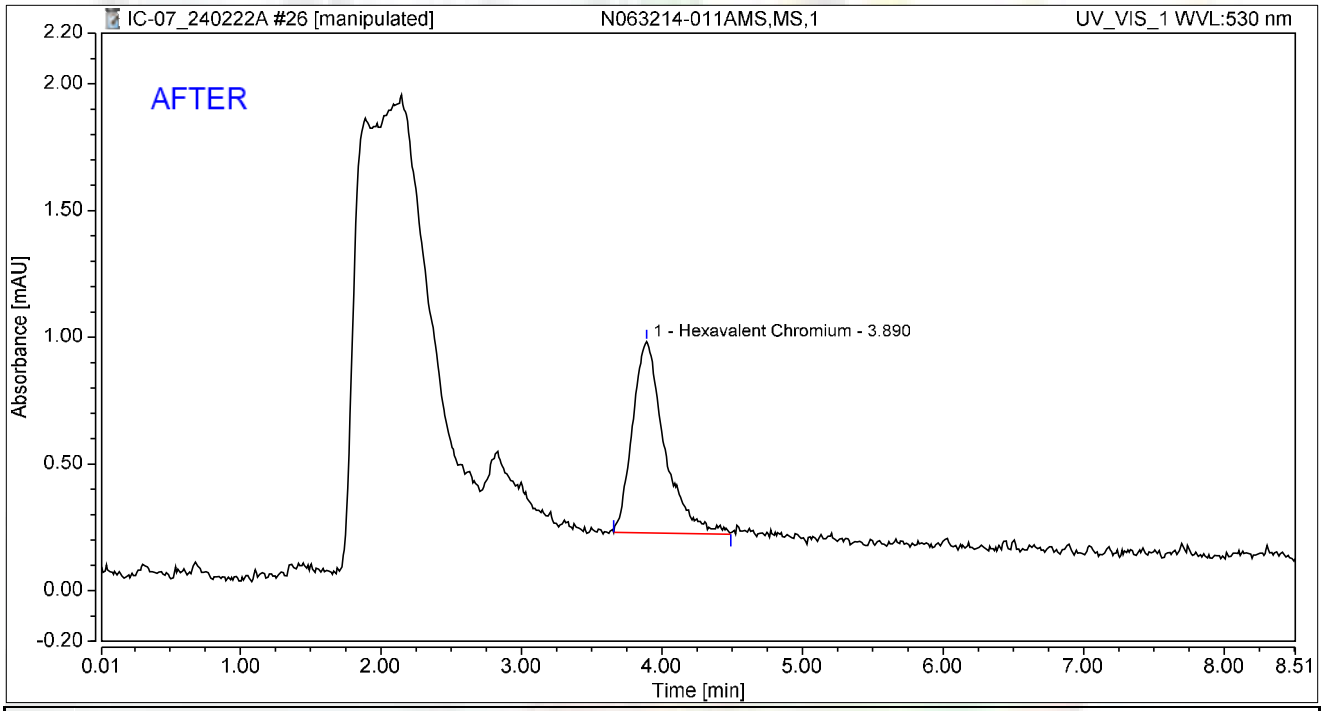
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-011AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 11:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.890	0.199	0.754	100.00	100.00	0.9268
Total:			**0.199**	**0.754**	**100.00**	**100.00**	

Reviewed by:

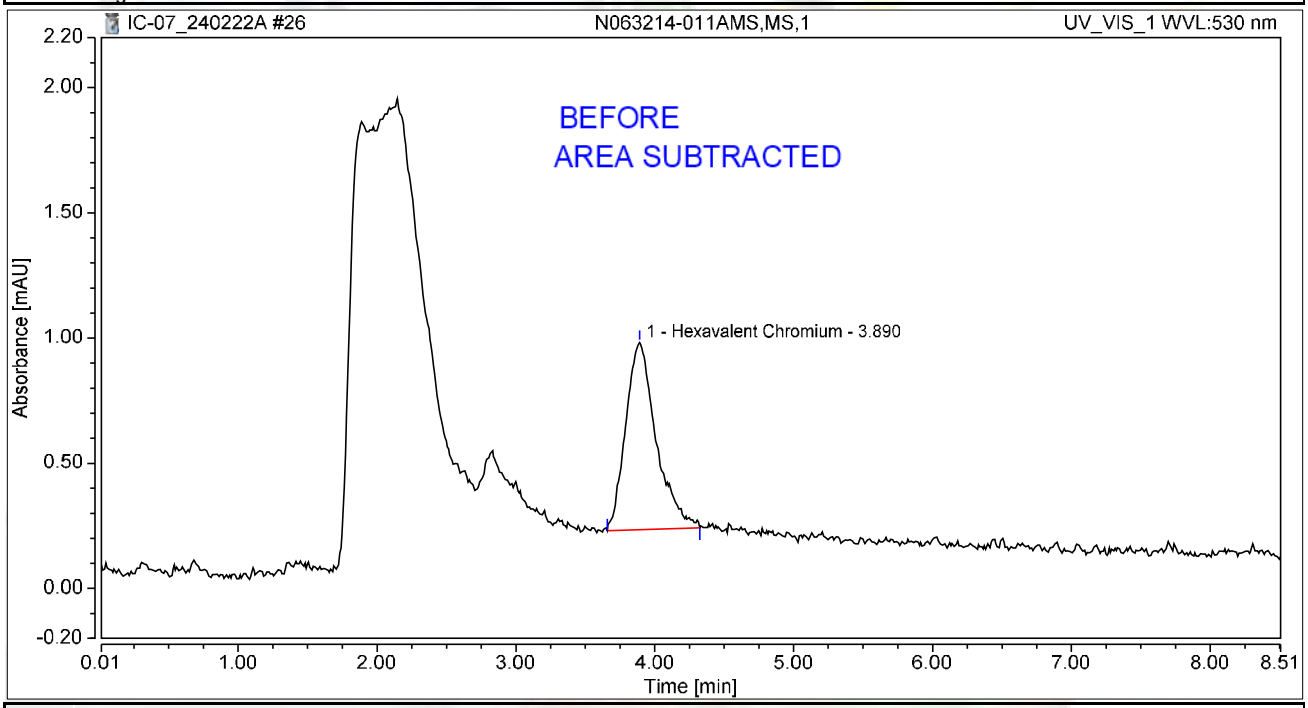
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063214-011AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 11:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

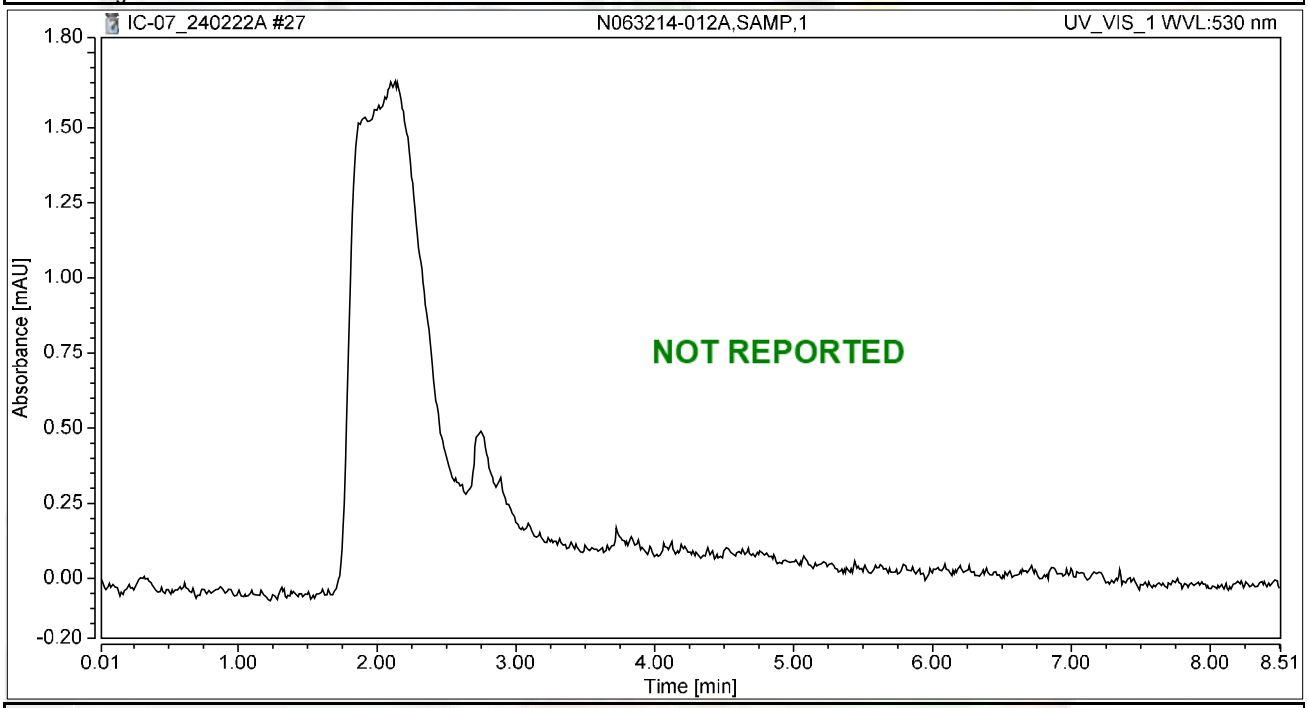
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.890	0.190	0.748	100.00	100.00	0.8830
Total:			**0.190**	**0.748**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-012A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 11:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

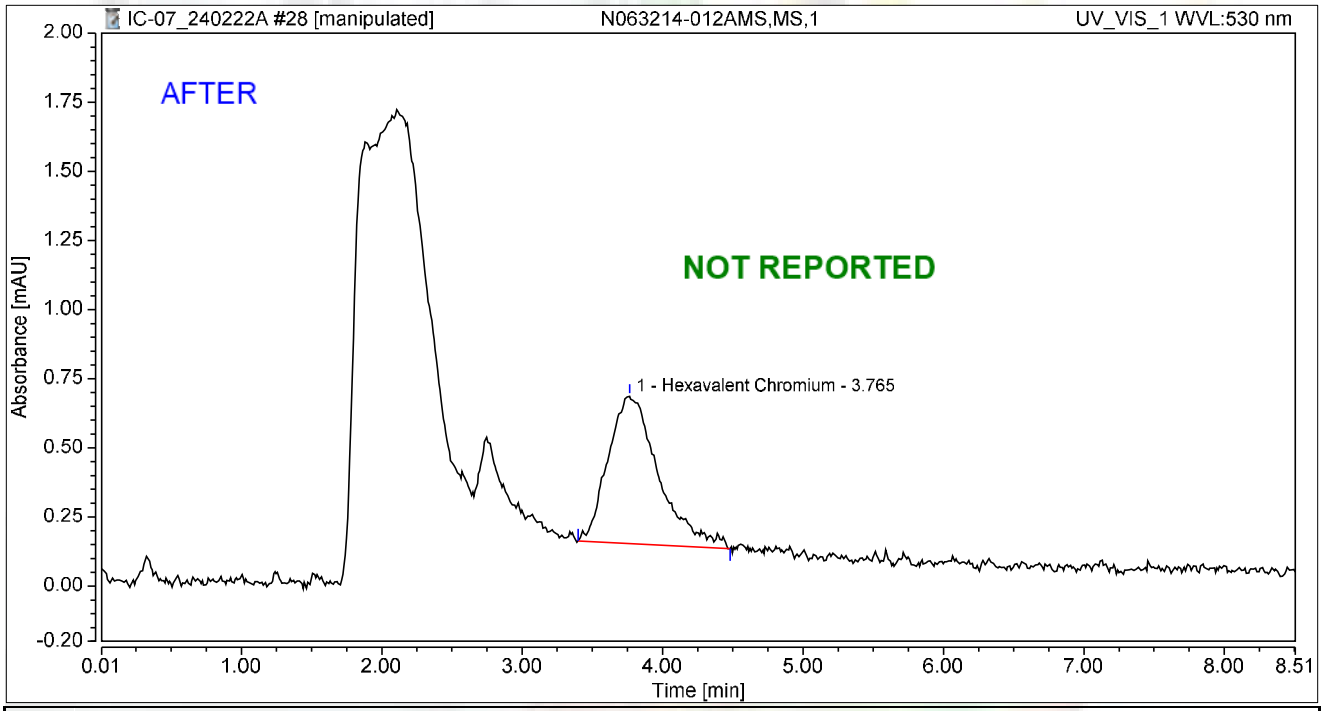
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-012AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 11:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

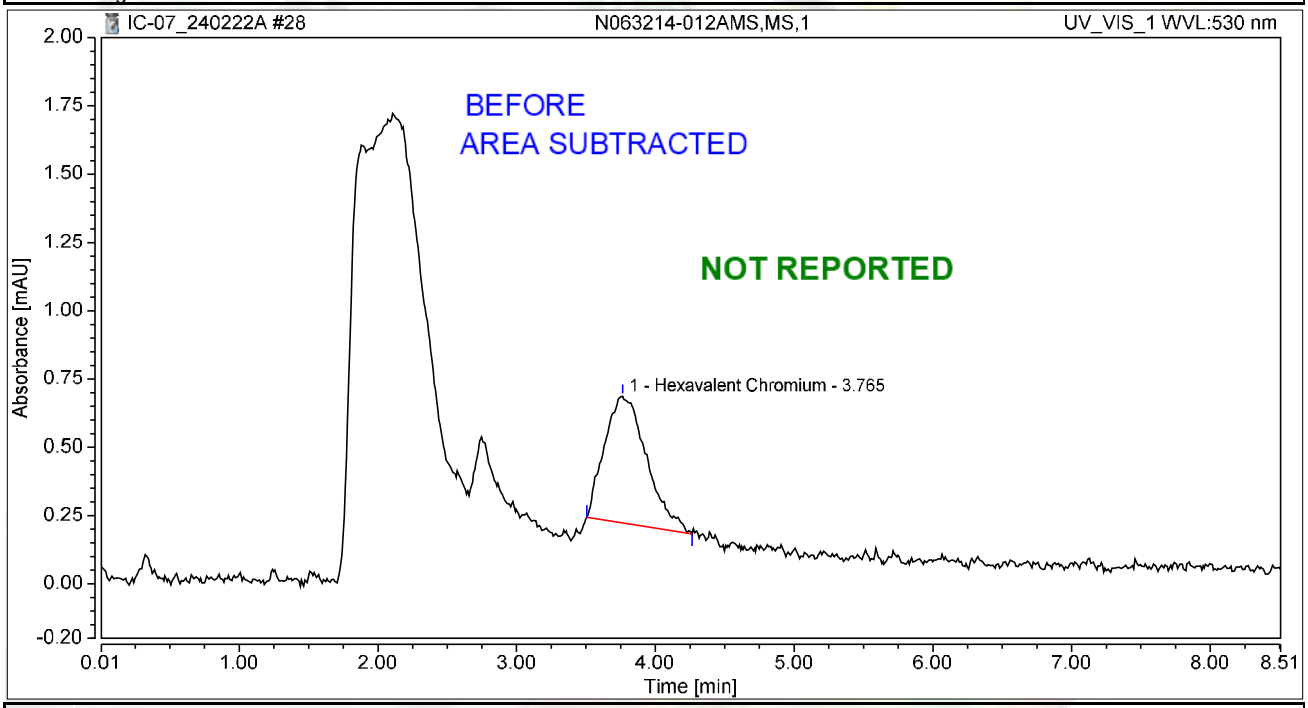
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.765	0.222	0.533	100.00	100.00	1.0324
Total:			**0.222**	**0.533**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-012AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 11:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

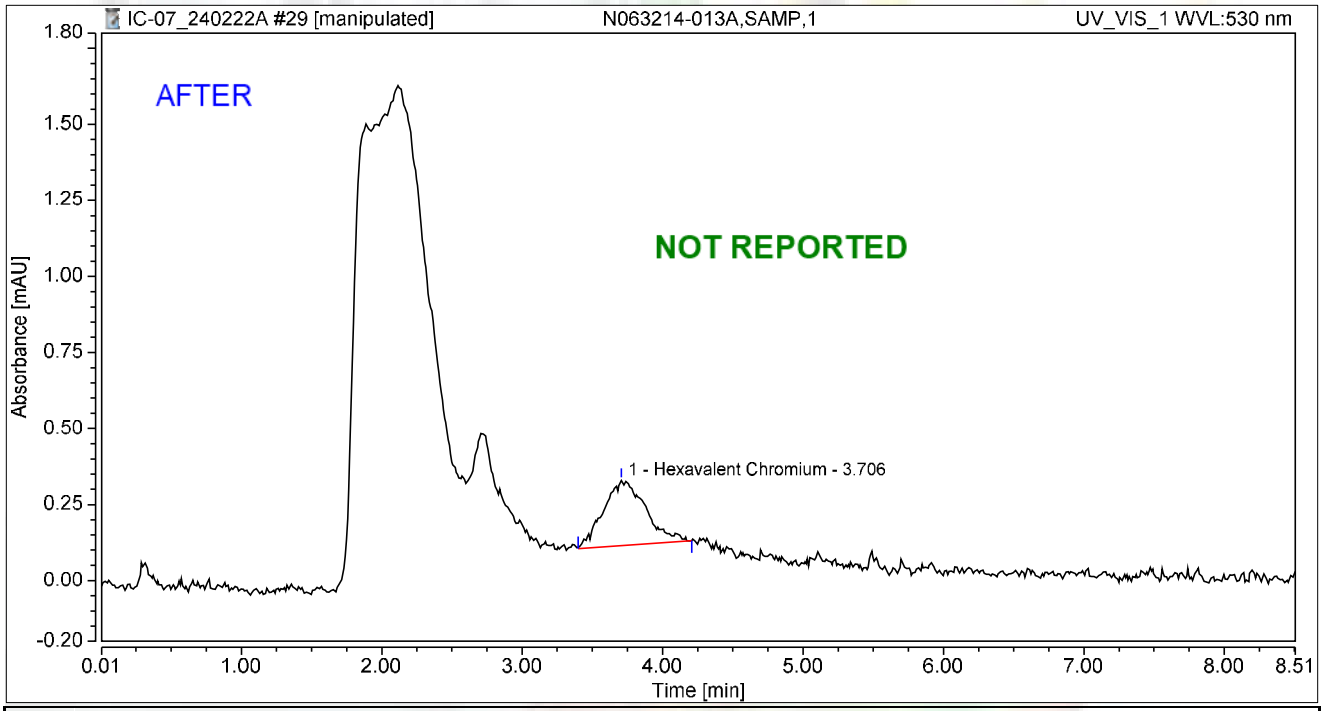
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.765	0.163	0.463	100.00	100.00	0.7589
Total:			**0.163**	**0.463**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-013A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 11:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

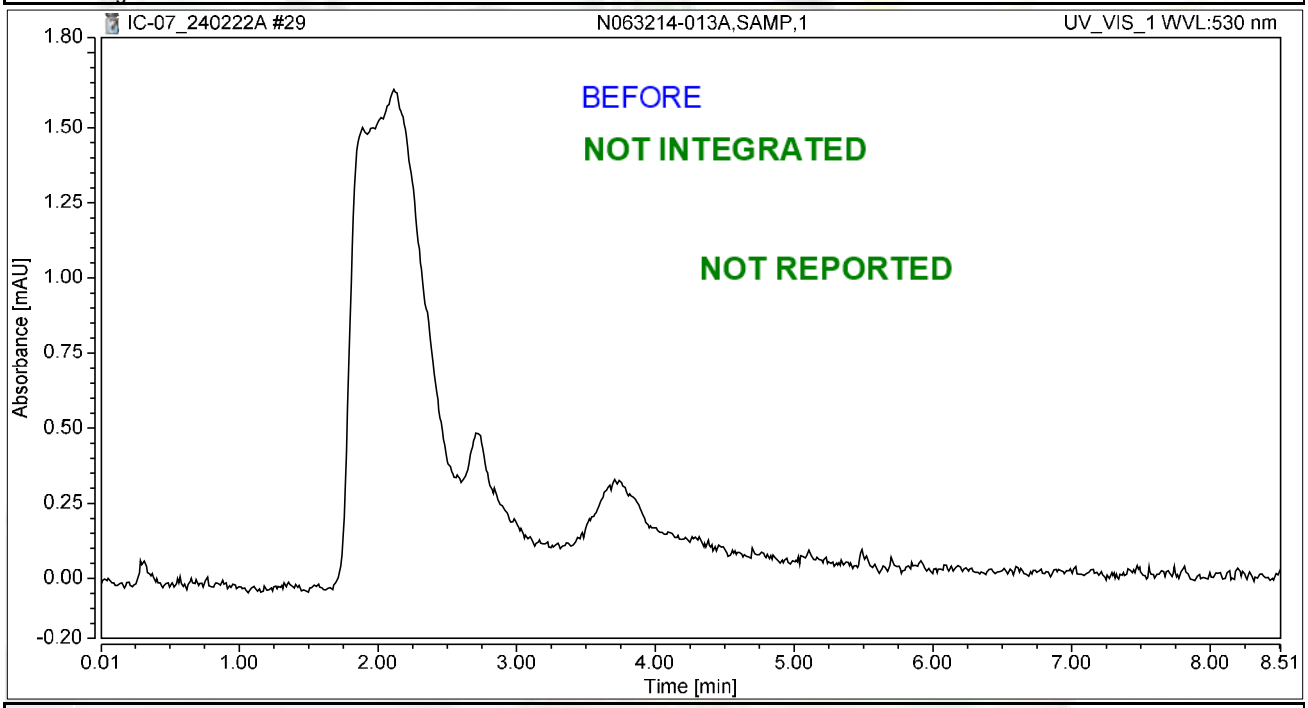
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.706	0.074	0.215	100.00	100.00	0.3450
Total:			**0.074**	**0.215**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-013A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 11:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

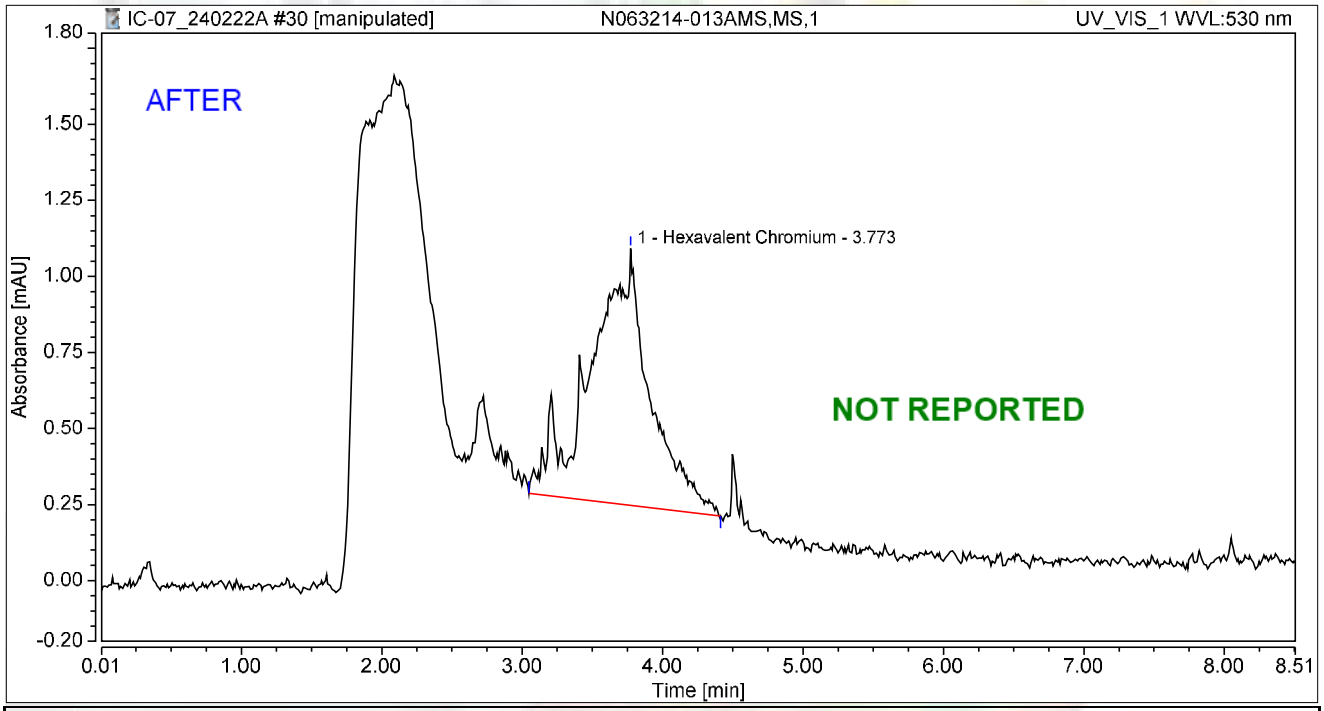
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-013AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 12:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

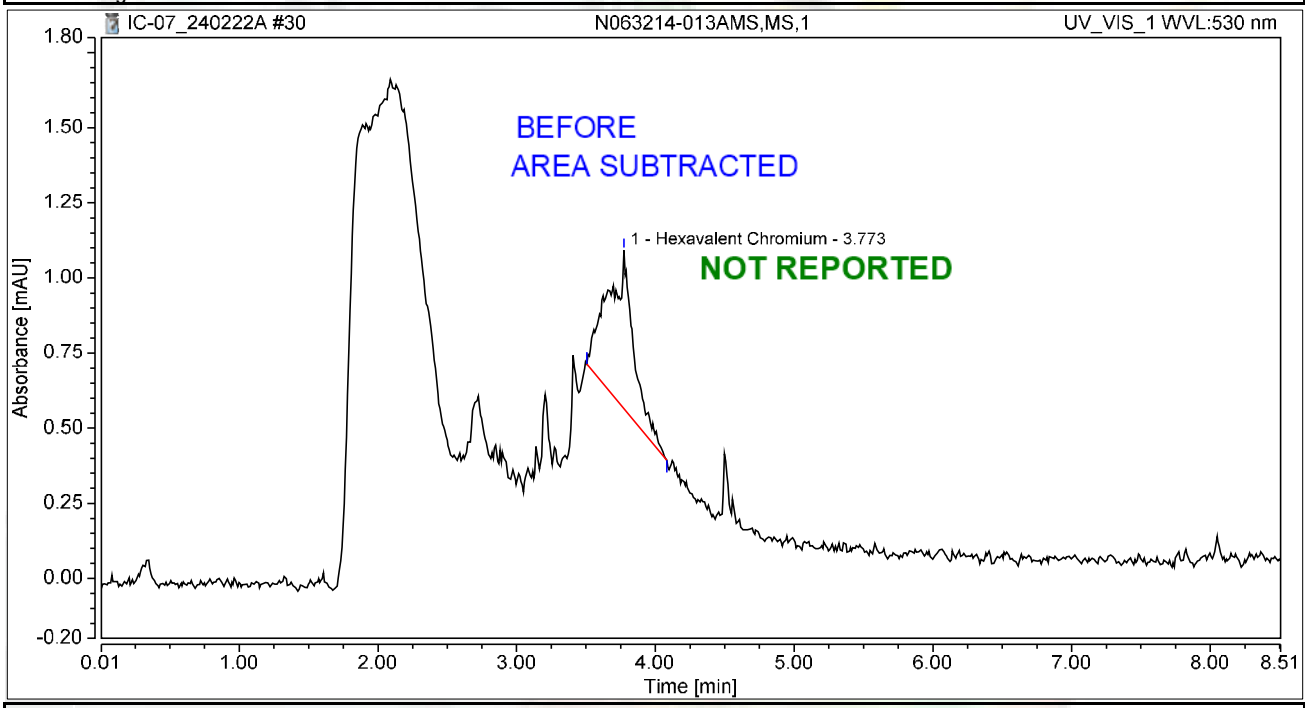
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.773	0.407	0.845	100.00	100.00	1.8899
Total:			**0.407**	**0.845**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-013AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 12:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

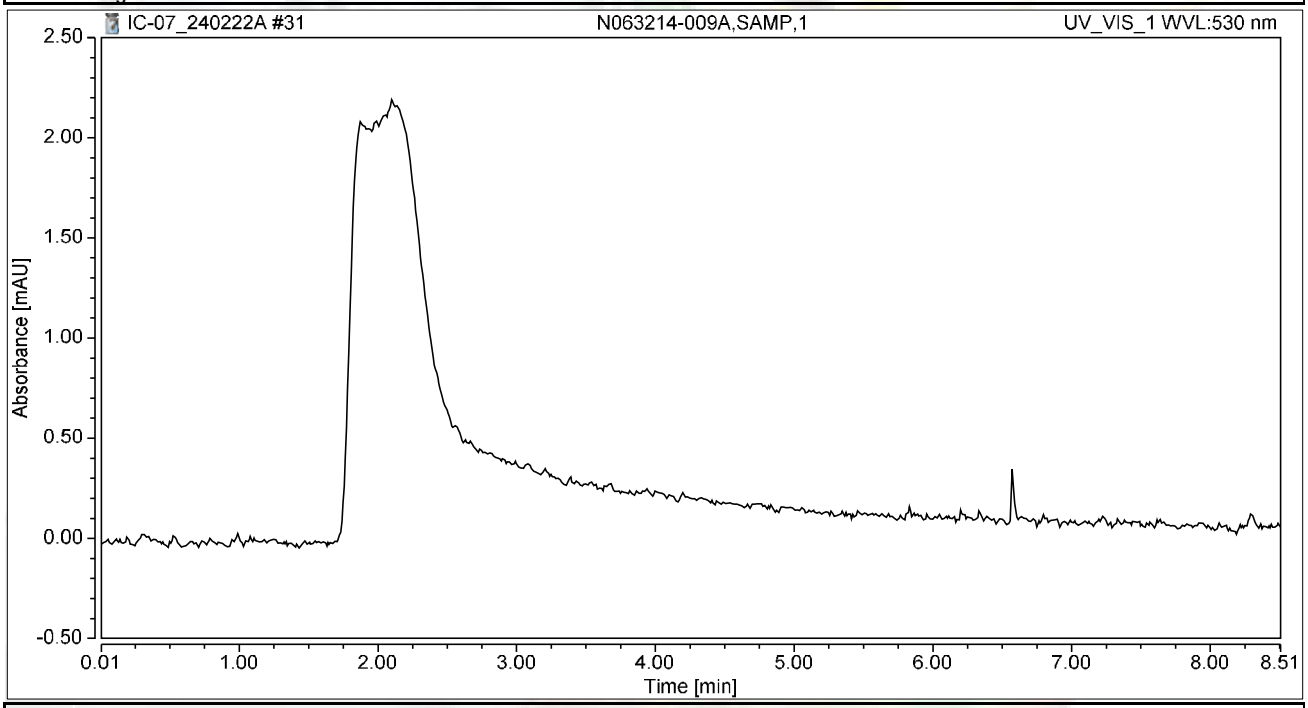
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.773	0.113	0.527	100.00	100.00	0.5255
Total:			**0.113**	**0.527**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 12:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

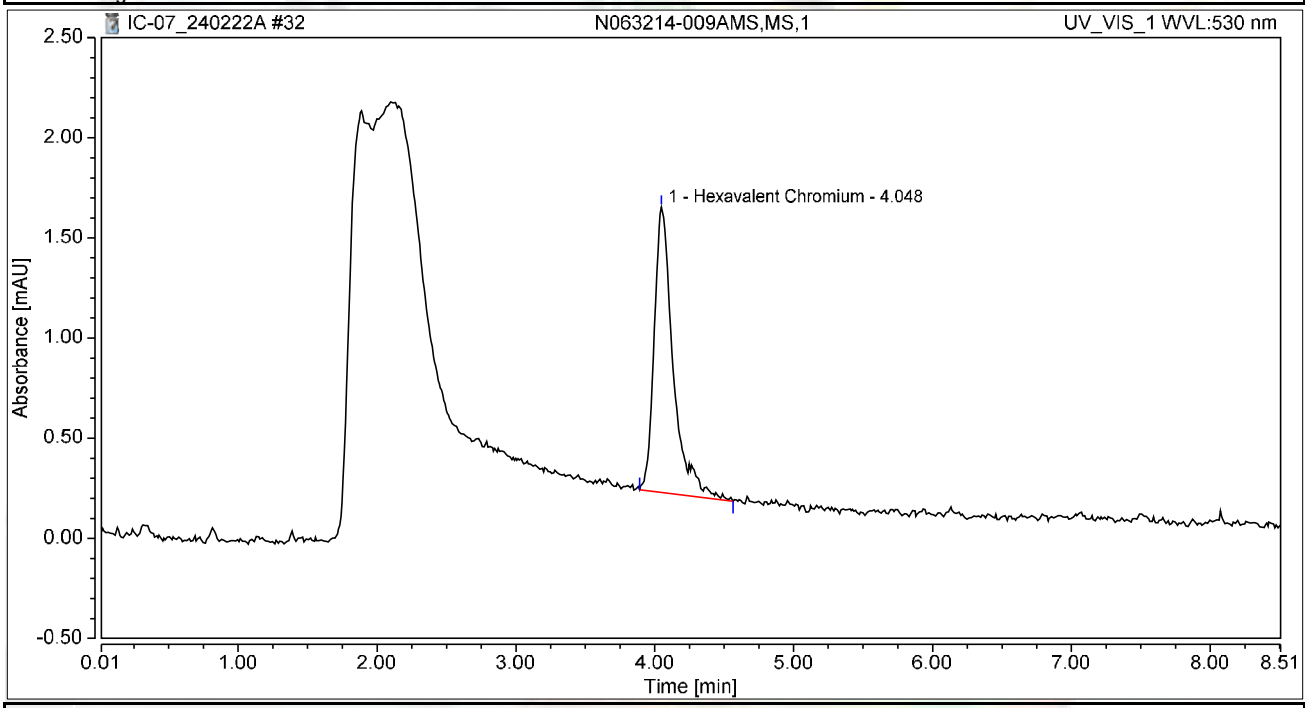
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-009AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

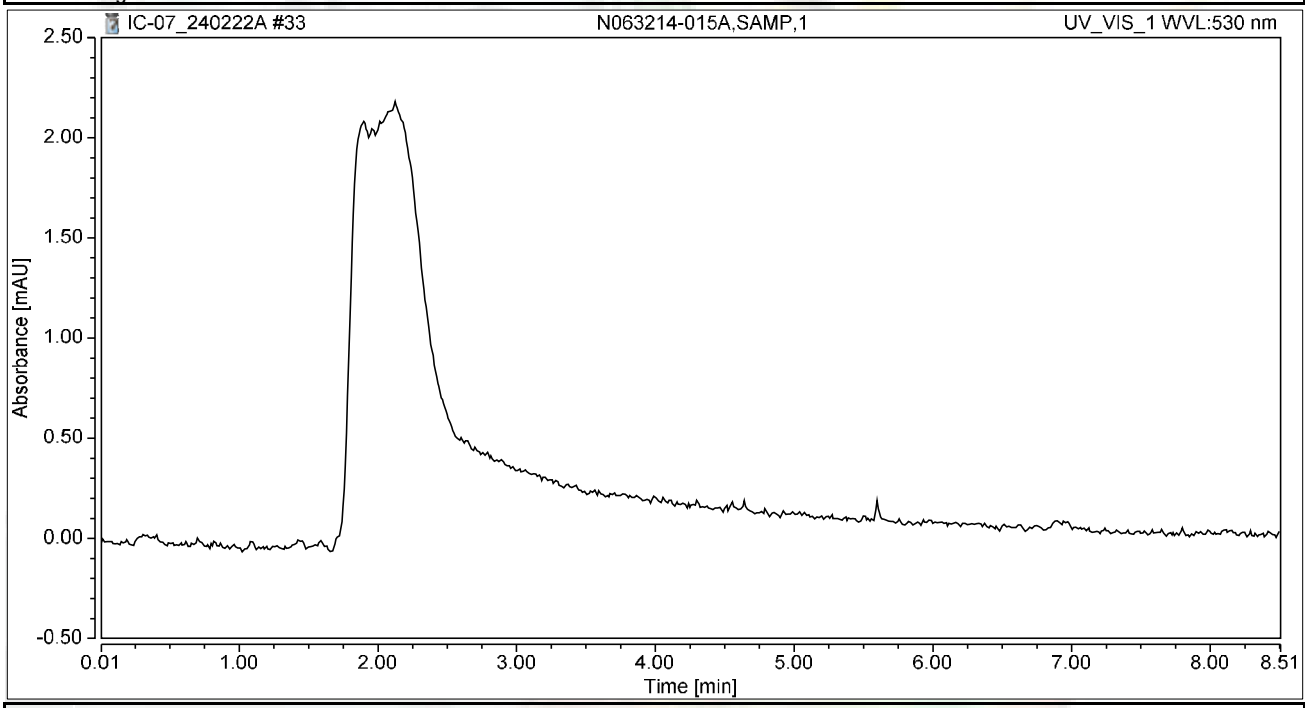
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.225	1.422	100.00	100.00	1.0464
Total:			**0.225**	**1.422**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-015A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 12:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

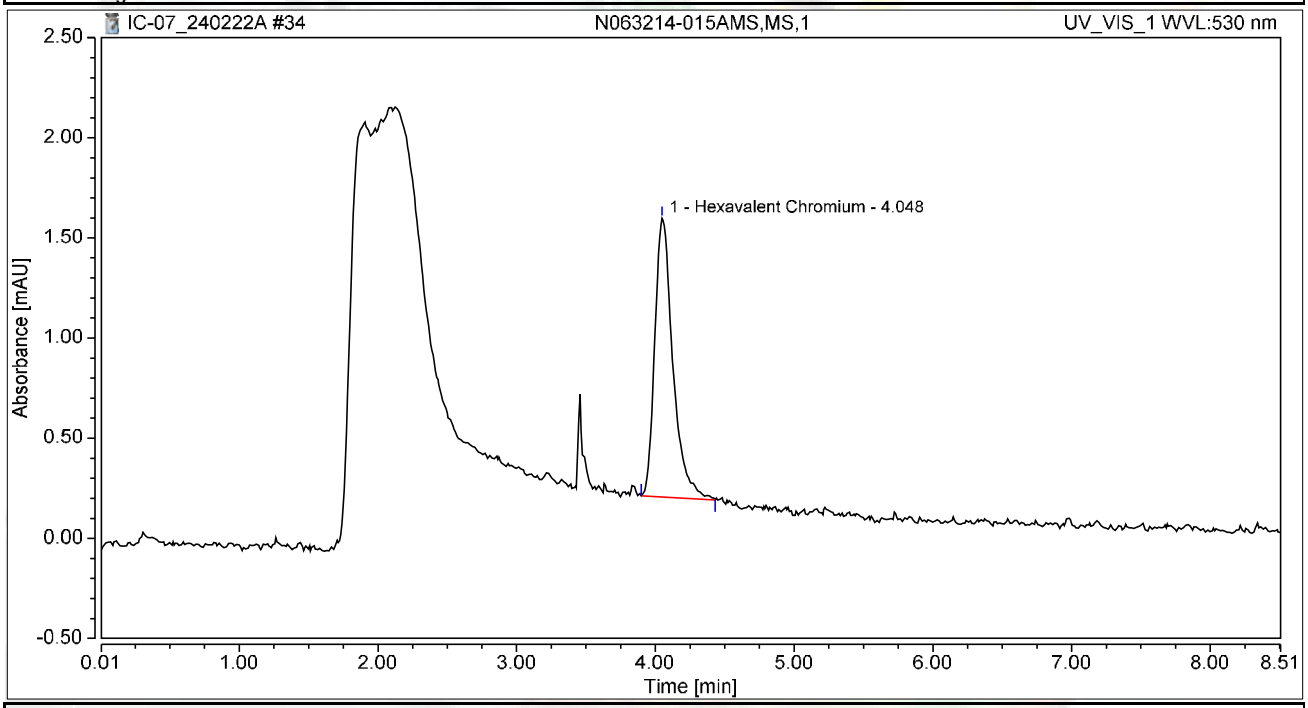
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-015AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

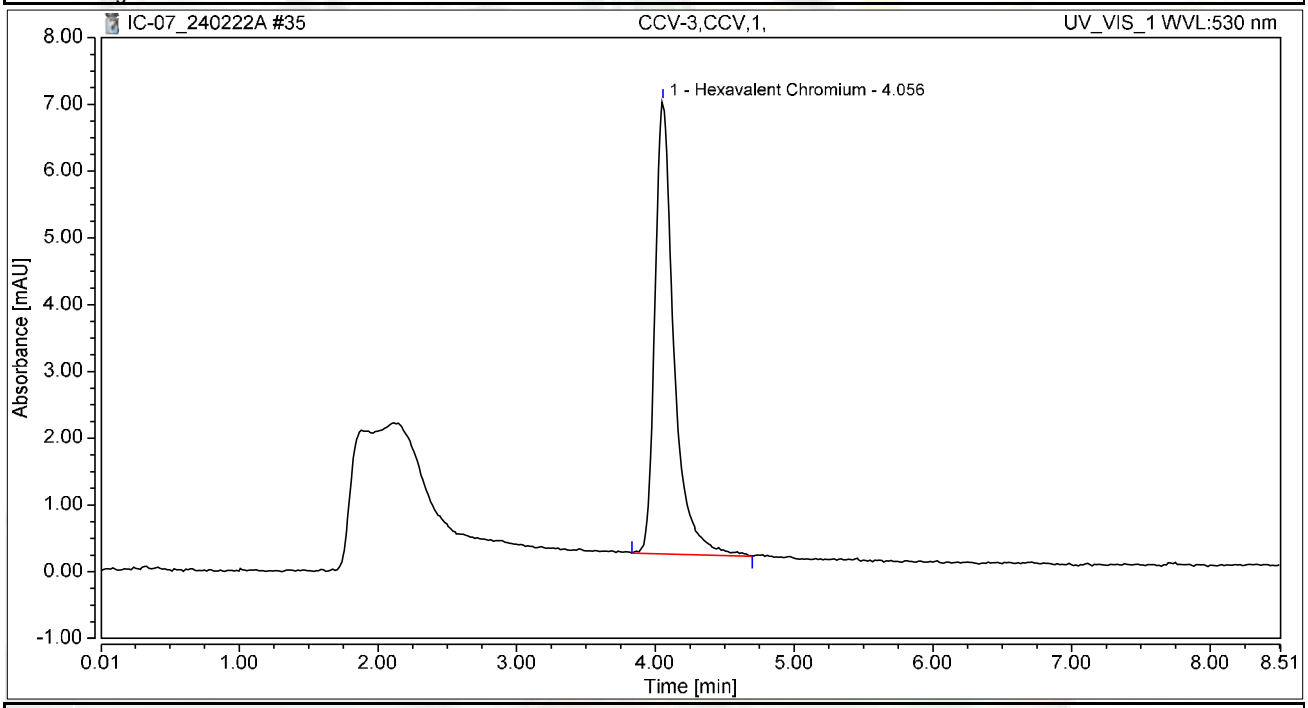
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.210	1.392	100.00	100.00	0.9766
Total:			**0.210**	**1.392**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

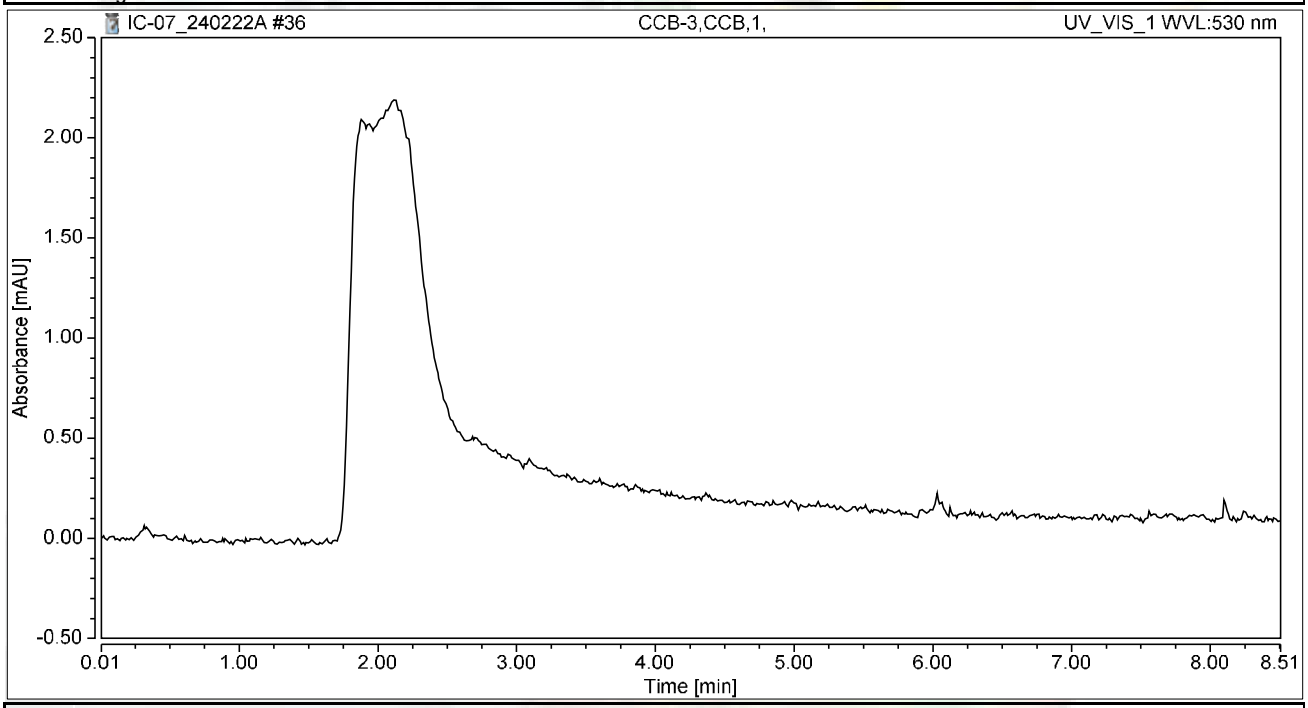
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.079	6.785	100.00	100.00	5.0179
Total:			**1.079**	**6.785**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

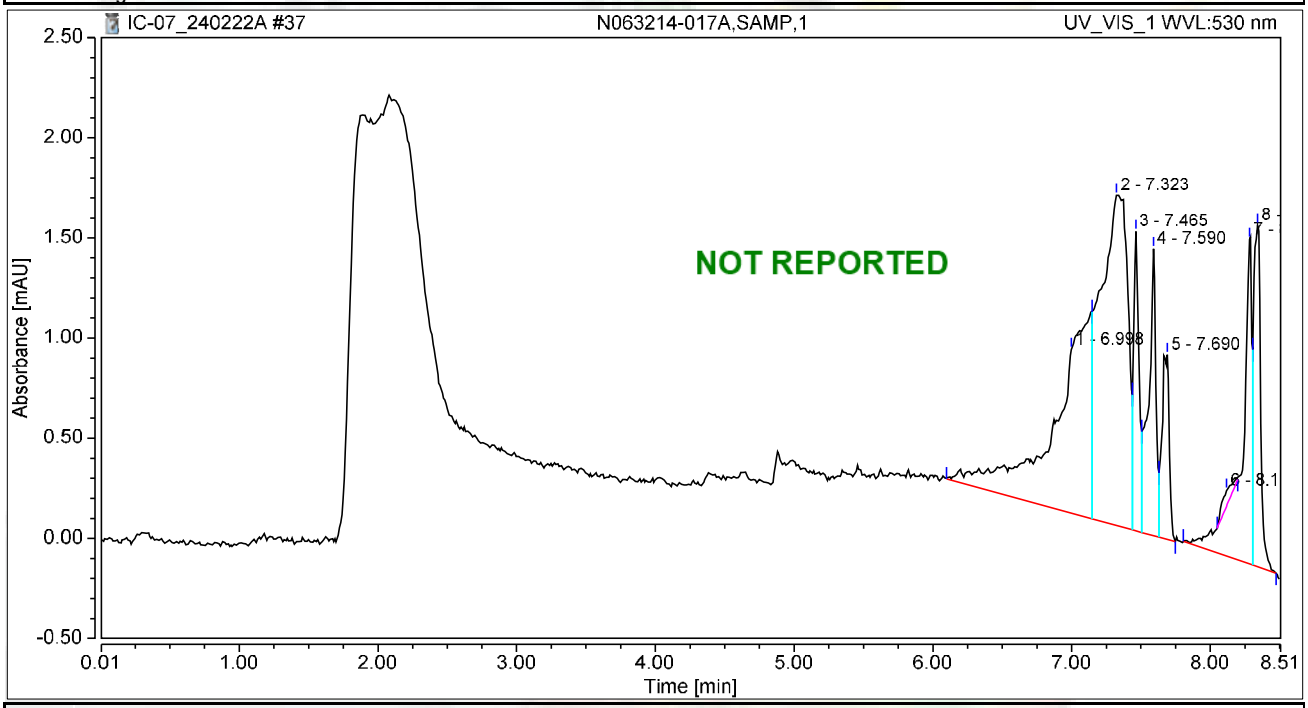
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-017A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 13:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

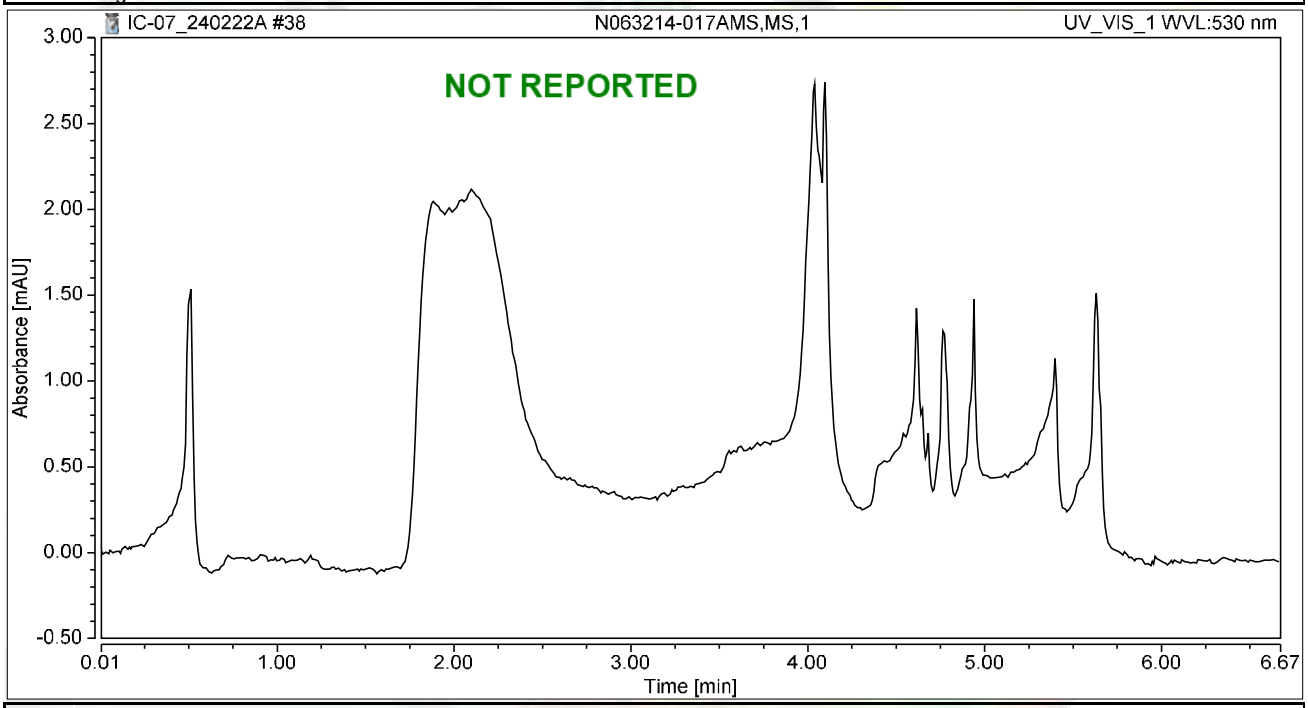
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		6.998	0.313	0.816	27.06	8.40	n.a.
2		7.323	0.379	1.648	32.77	16.97	n.a.
3		7.465	0.065	1.495	5.65	15.39	n.a.
4		7.590	0.091	1.432	7.85	14.73	n.a.
5		7.690	0.057	0.921	4.91	9.48	n.a.
6		8.115	0.007	0.081	0.62	0.83	n.a.
7		8.281	0.146	1.619	12.67	16.67	n.a.
8		8.340	0.098	1.704	8.47	17.53	n.a.
Total:			**1.155**	**9.716**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-017AMS,MS,1**	*Run Time (min):*	**6.67**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 13:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

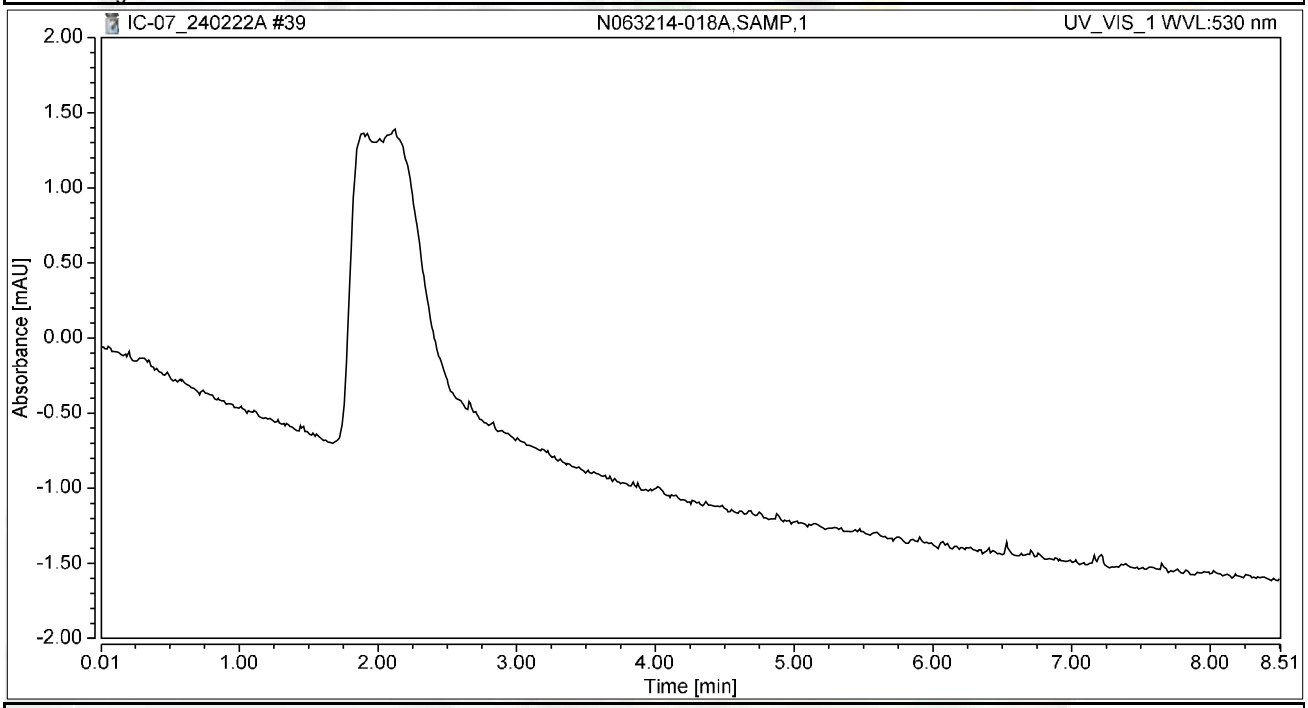
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-018A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 14:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

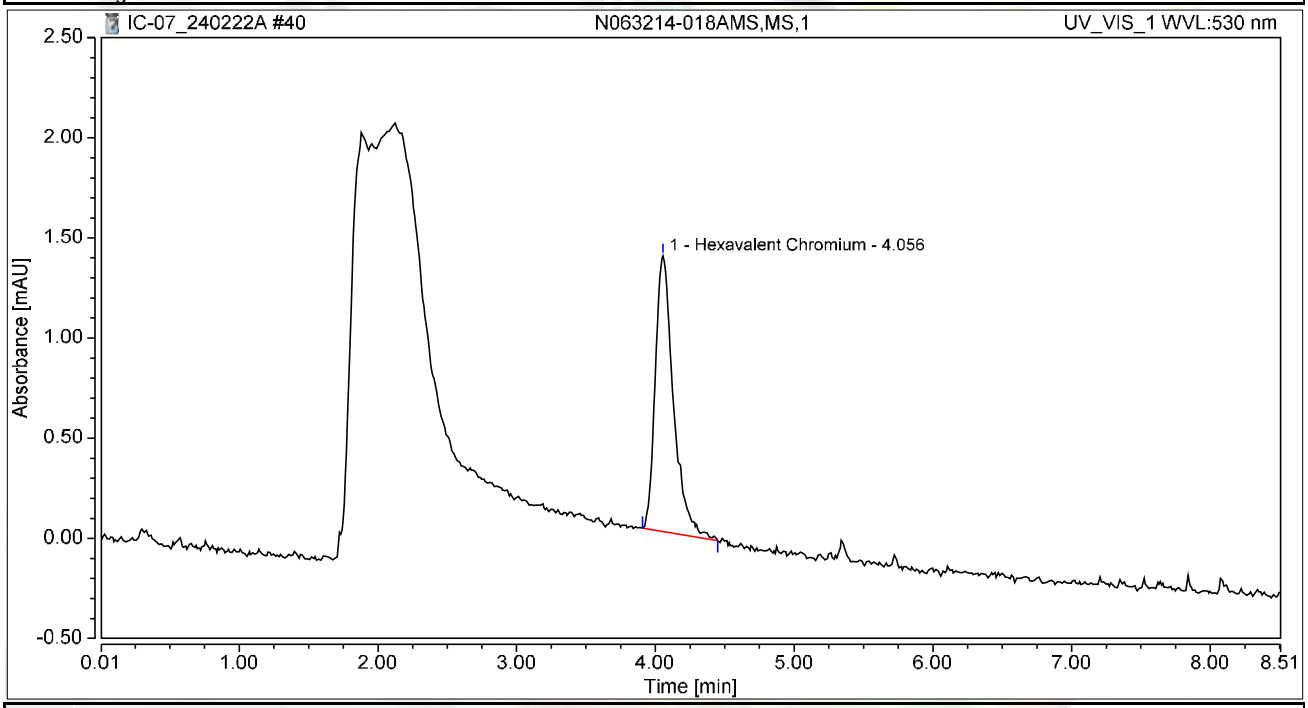
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-018AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 14:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

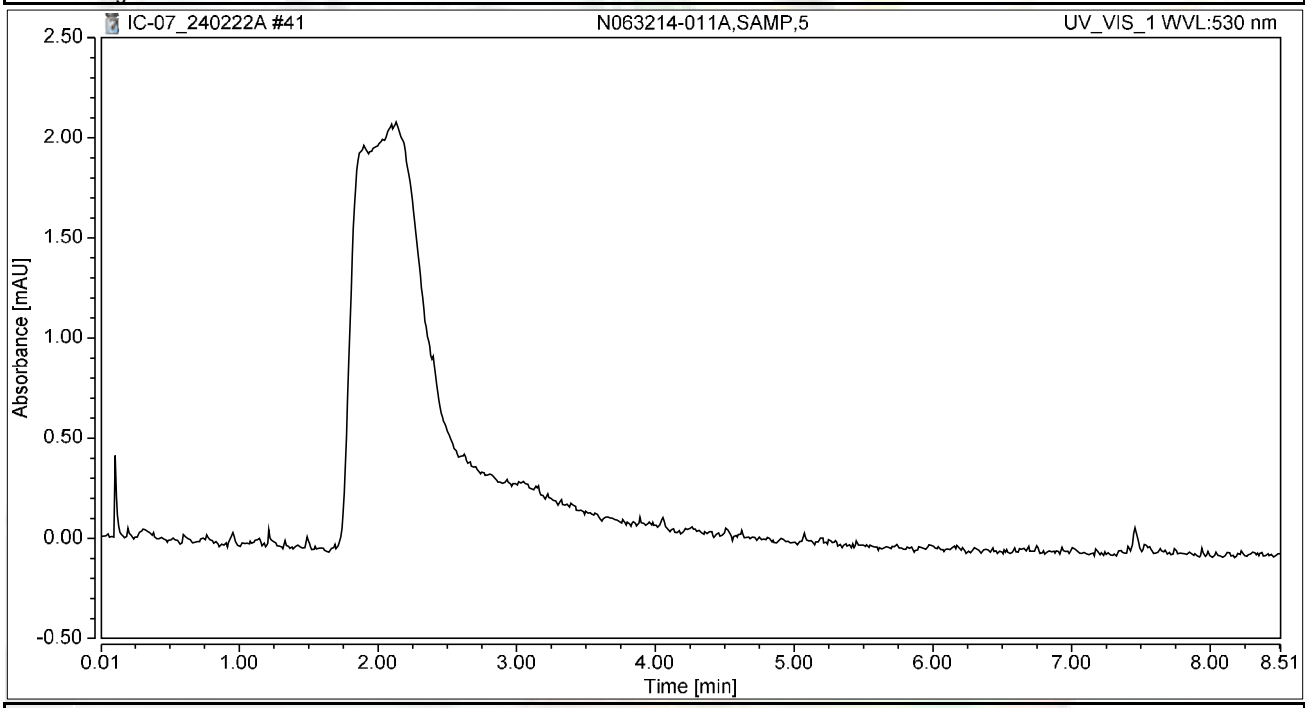
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.208	1.377	100.00	100.00	0.9692
Total:			**0.208**	**1.377**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-011A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 14:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

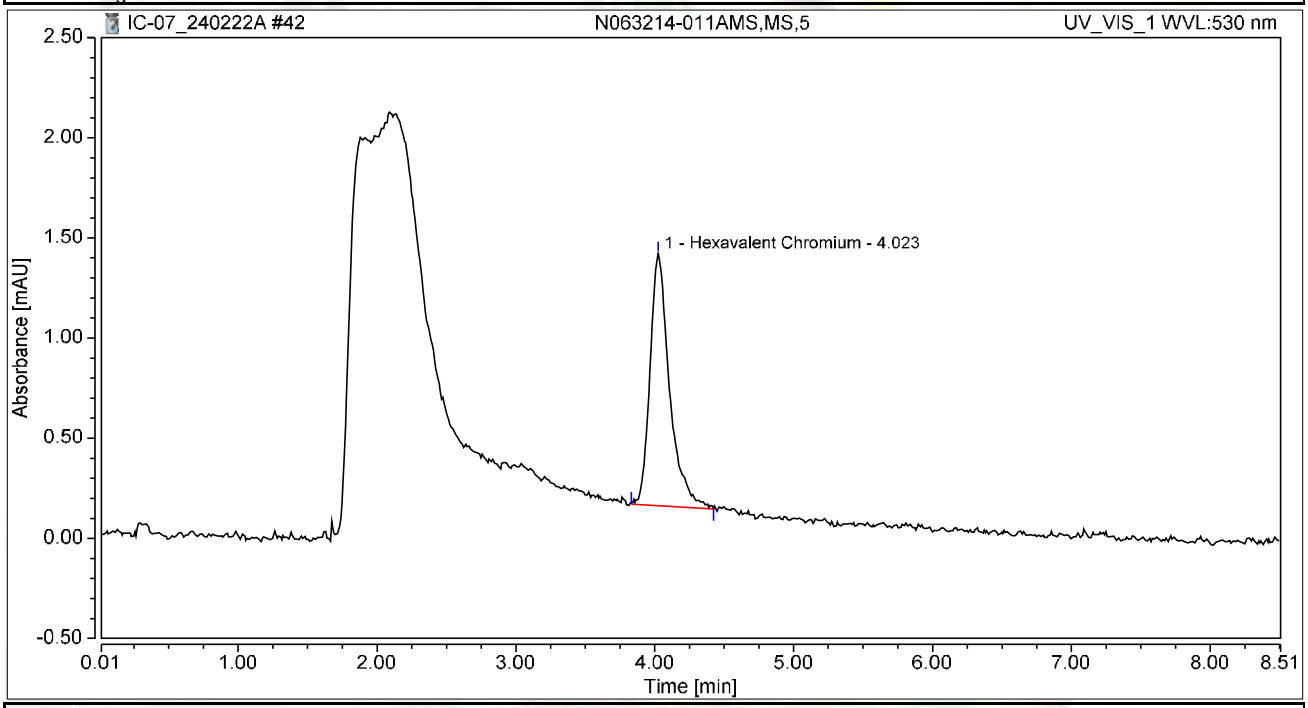
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-011AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 14:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

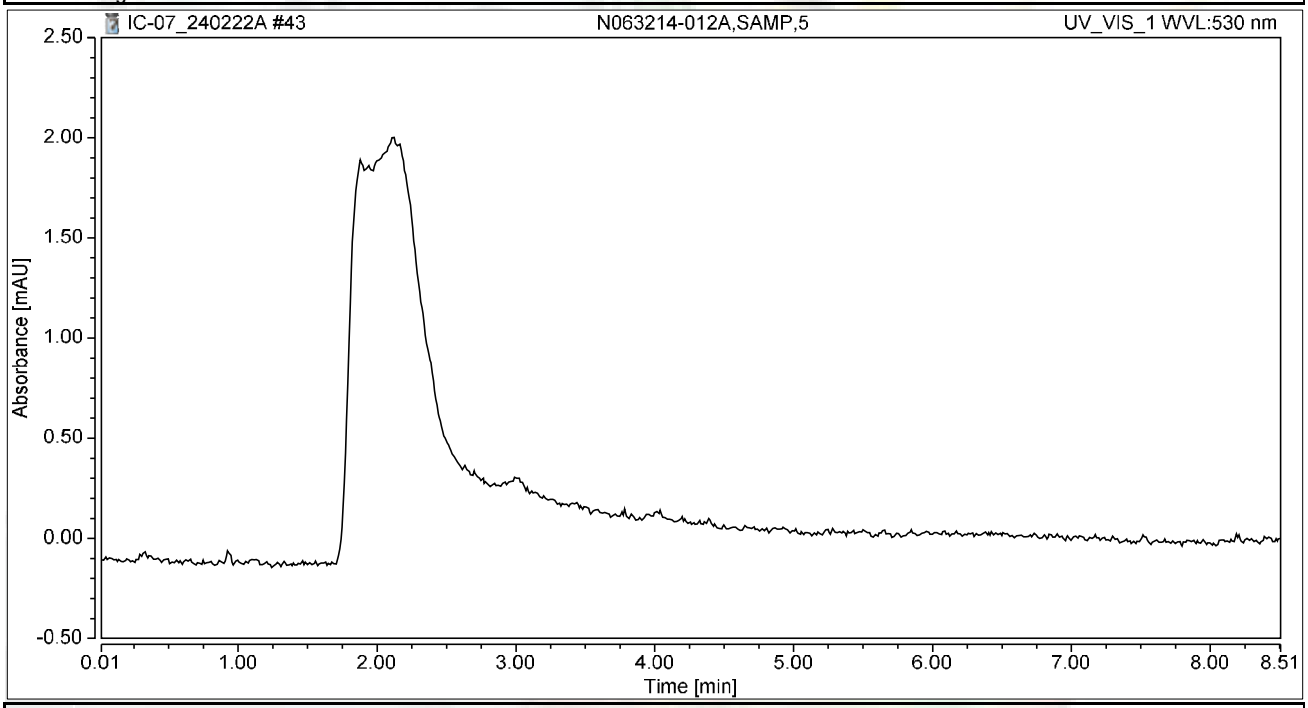
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.204	1.257	100.00	100.00	0.9494
Total:			**0.204**	**1.257**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-012A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 14:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

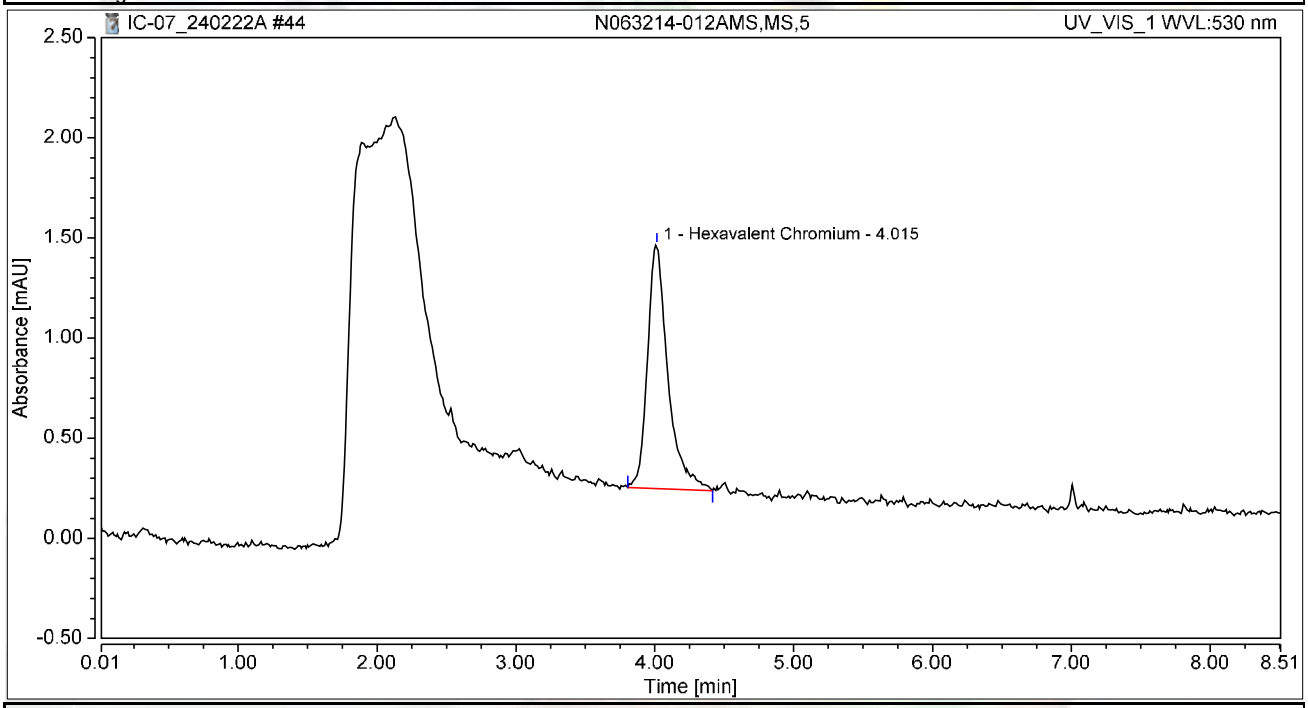
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-012AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 15:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

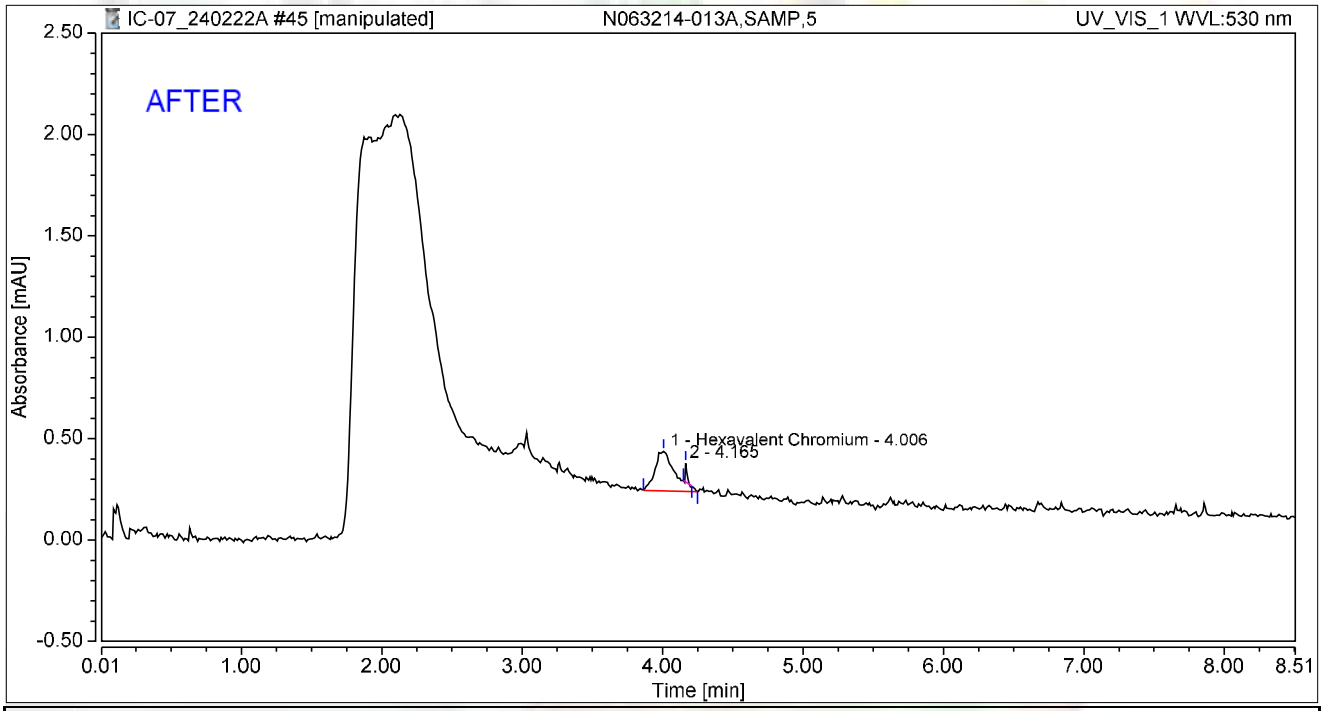
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.208	1.217	100.00	100.00	0.9658
Total:			**0.208**	**1.217**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-013A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 15:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.032	0.195	96.15	67.95	0.1488
2		4.165	0.001	0.092	3.85	32.05	n.a.
Total:			**0.033**	**0.287**	**100.00**	**100.00**	

Reviewed by:

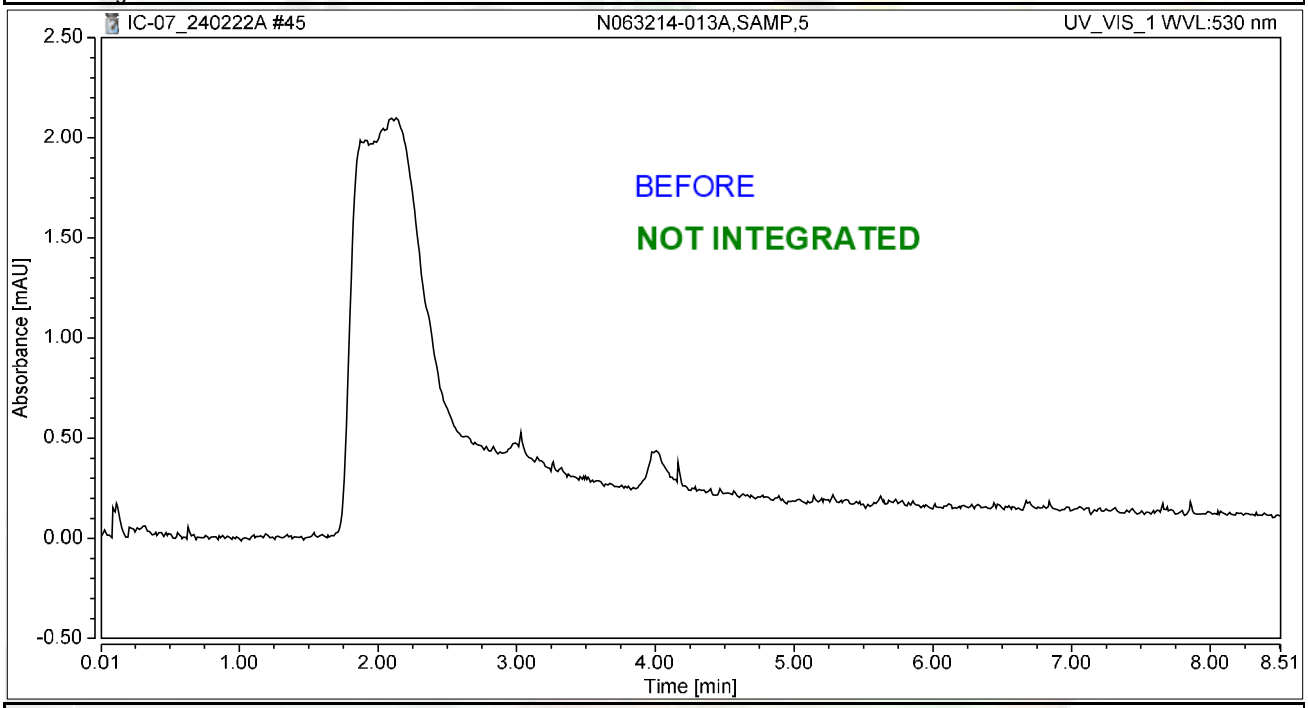
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063214-013A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 15:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

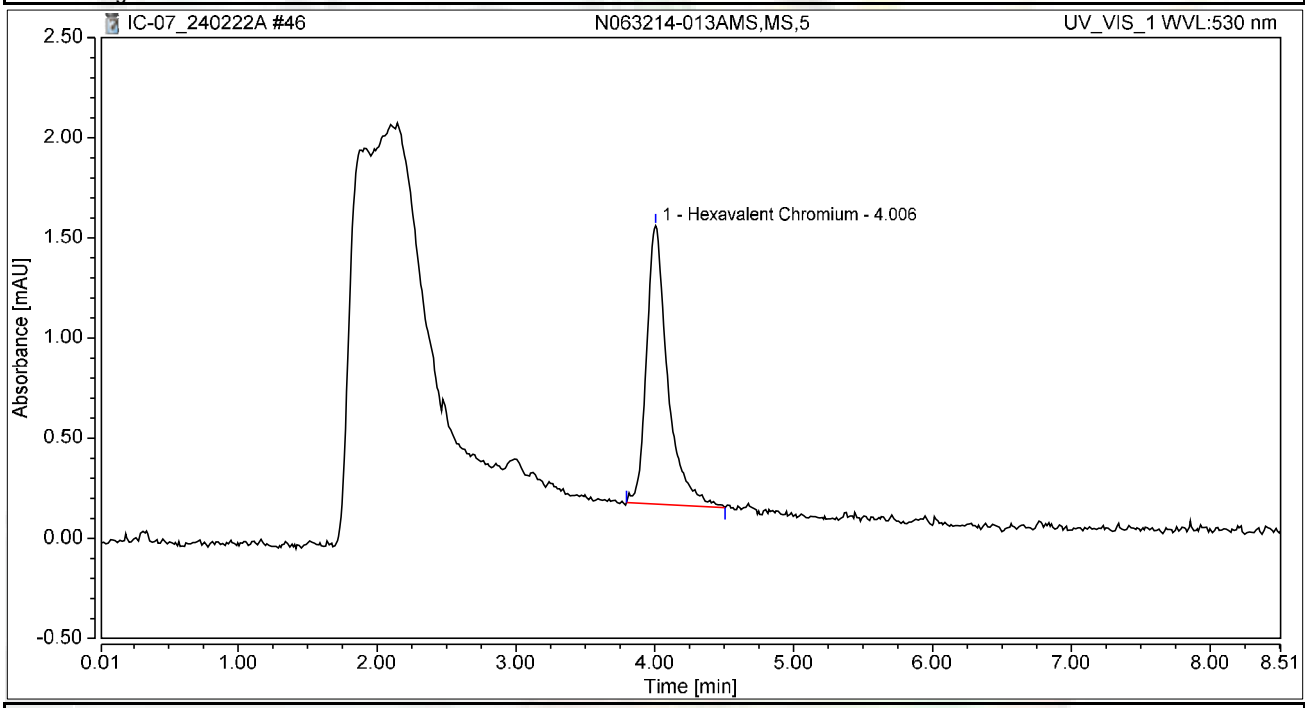
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-013AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 15:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

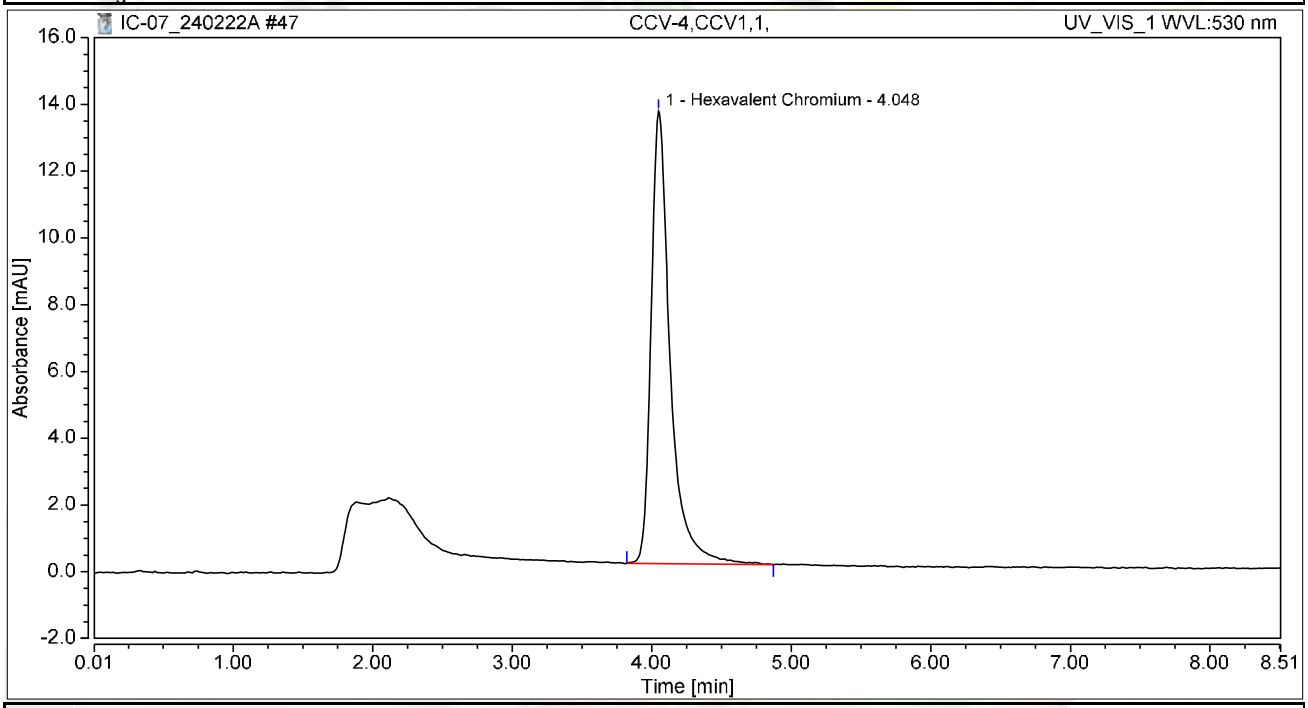
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.245	1.389	100.00	100.00	1.1370
Total:			**0.245**	**1.389**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 15:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

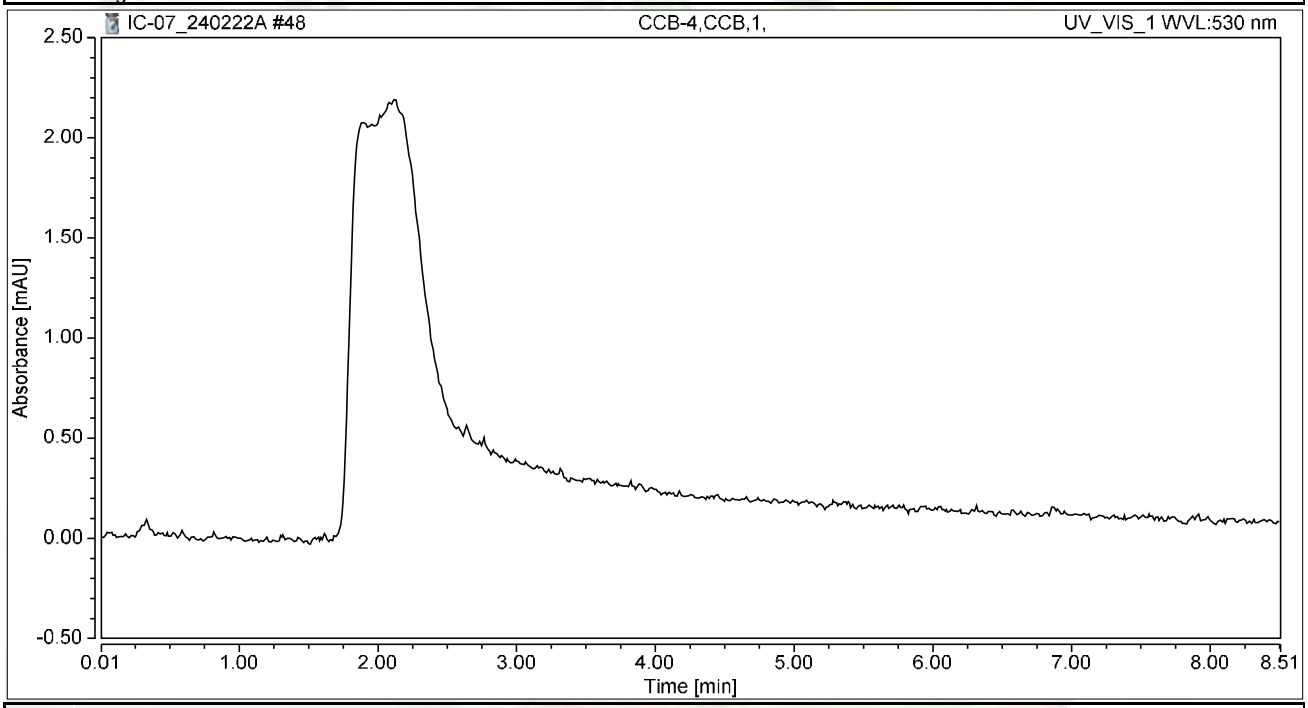
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.152	13.549	100.00	100.00	10.0043
Total:			**2.152**	**13.549**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 15:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

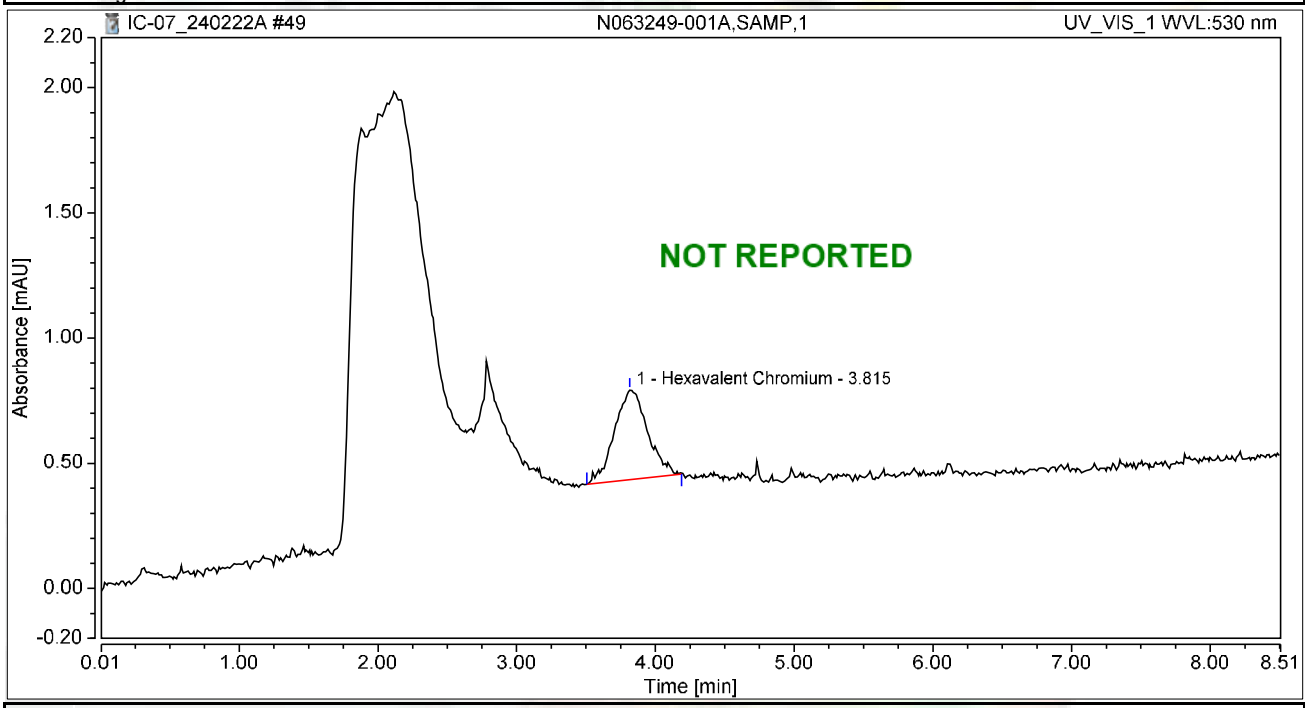
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 16:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

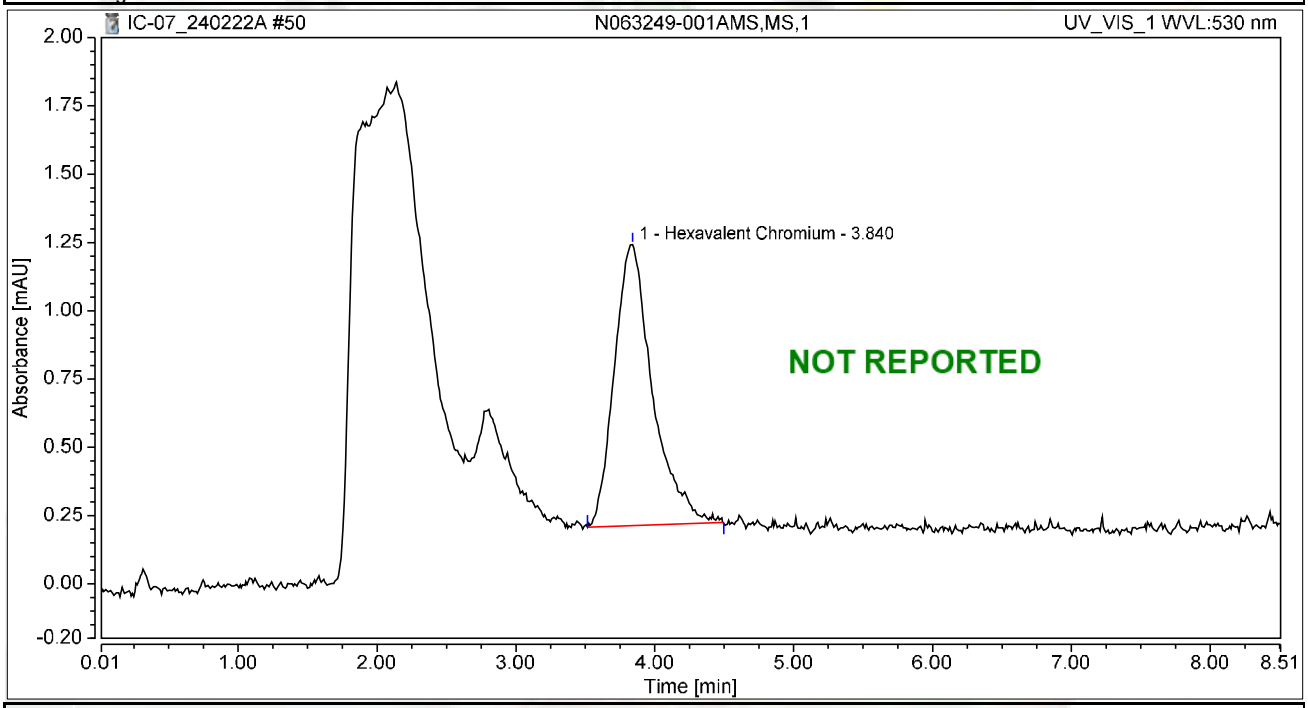
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	0.099	0.358	100.00	100.00	0.4601
Total:			**0.099**	**0.358**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 16:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

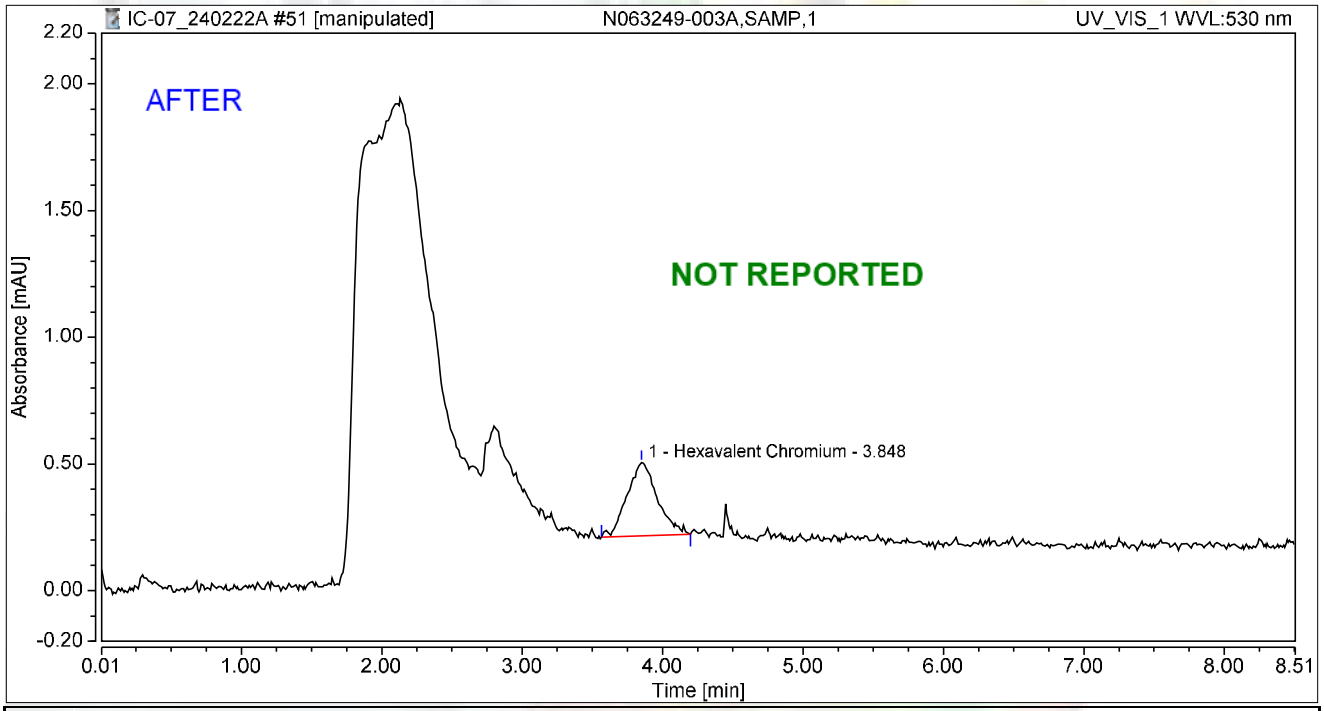
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.840	0.327	1.028	100.00	100.00	1.5212
Total:			**0.327**	**1.028**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 16:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

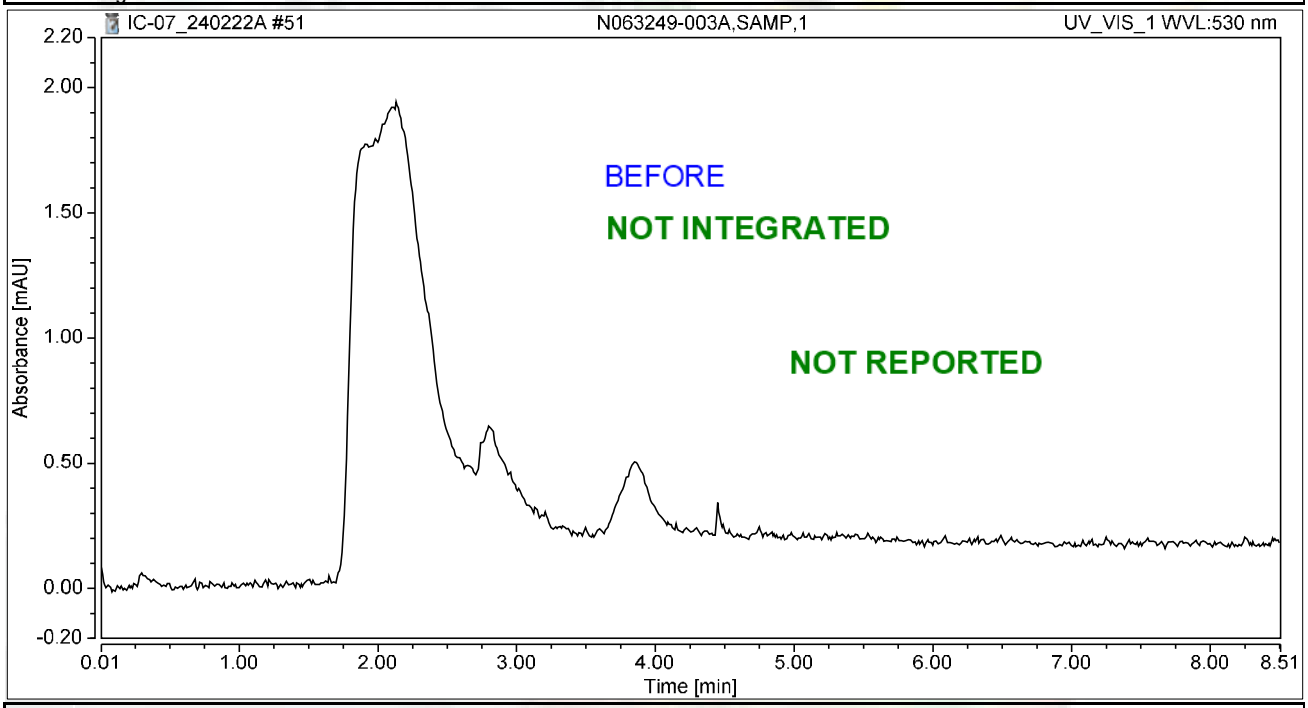
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.848	0.073	0.290	100.00	100.00	0.3375
Total:			**0.073**	**0.290**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 16:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

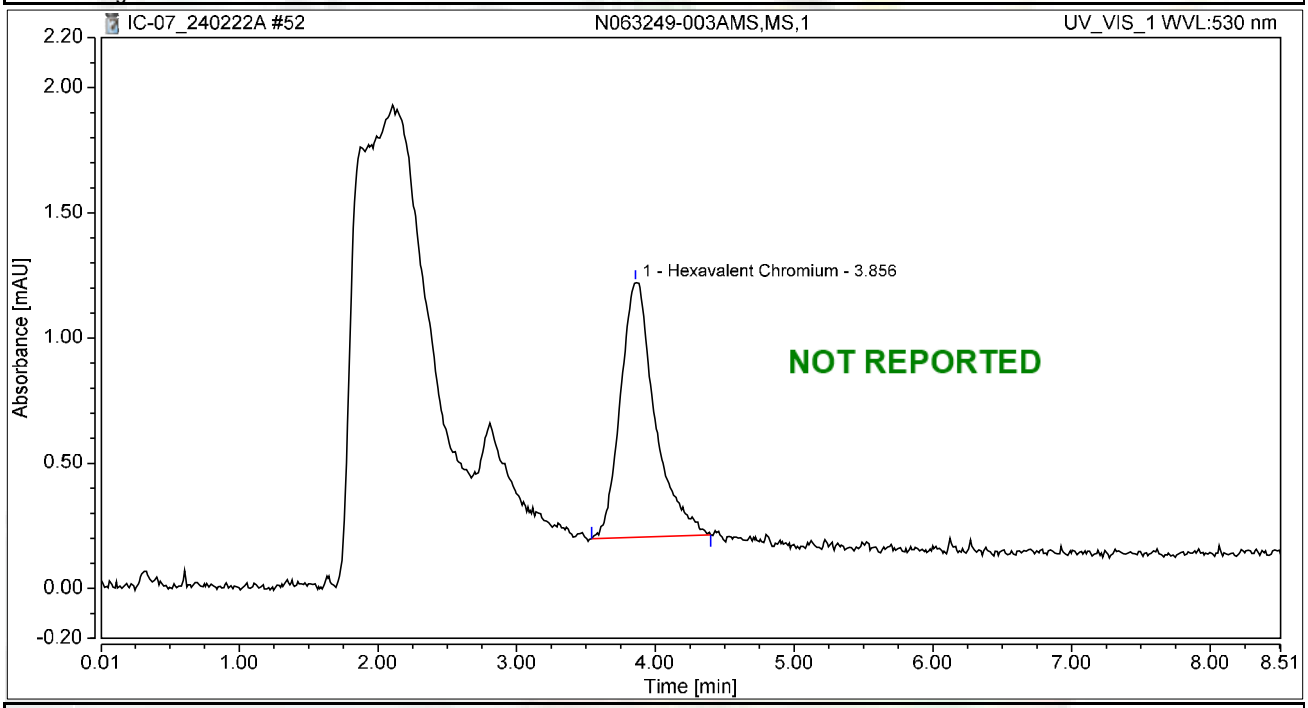
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 16:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

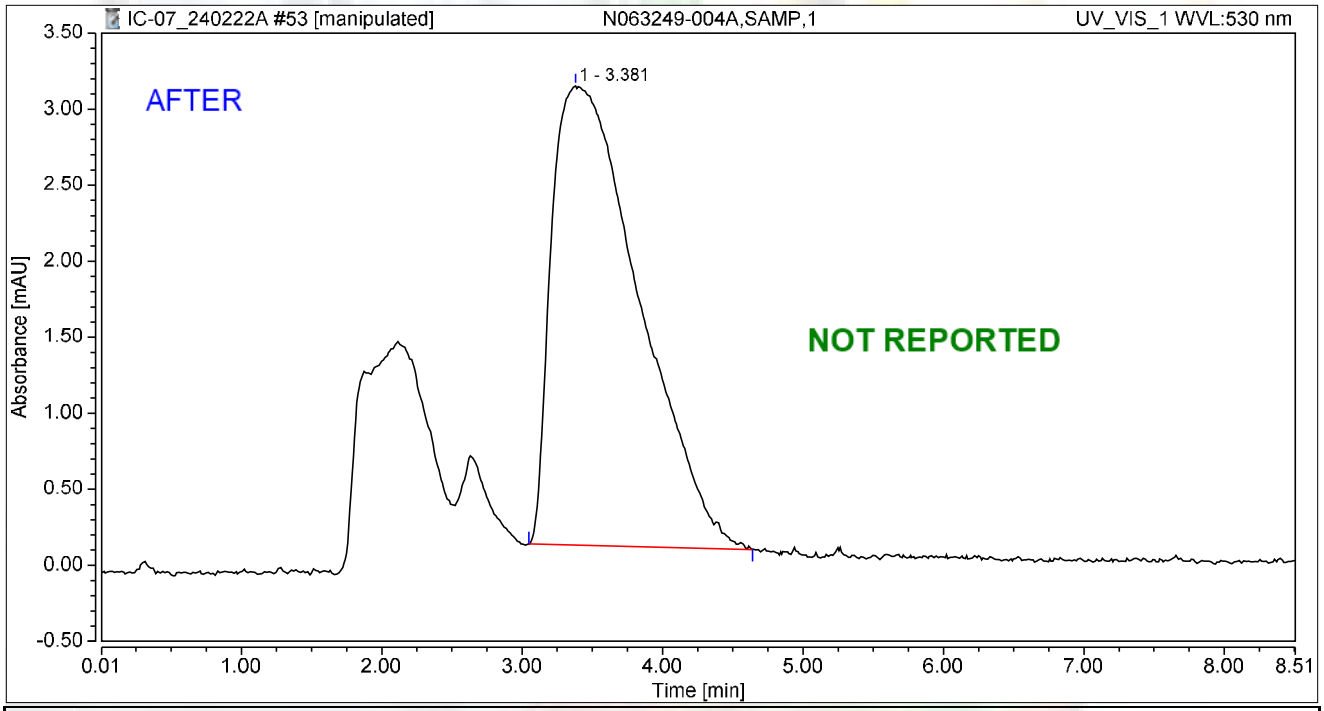
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.294	1.019	100.00	100.00	1.3662
Total:			**0.294**	**1.019**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 16:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

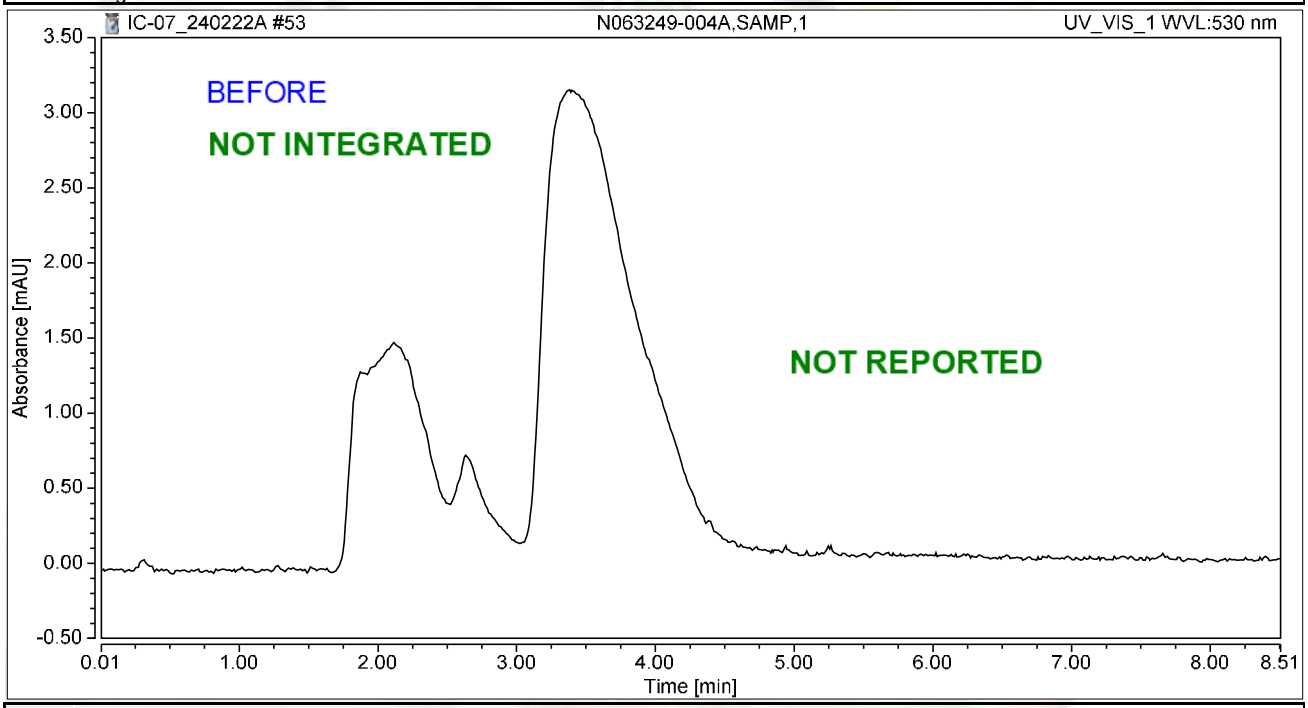
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.381	2.179	3.019	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**2.179**	**3.019**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 16:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

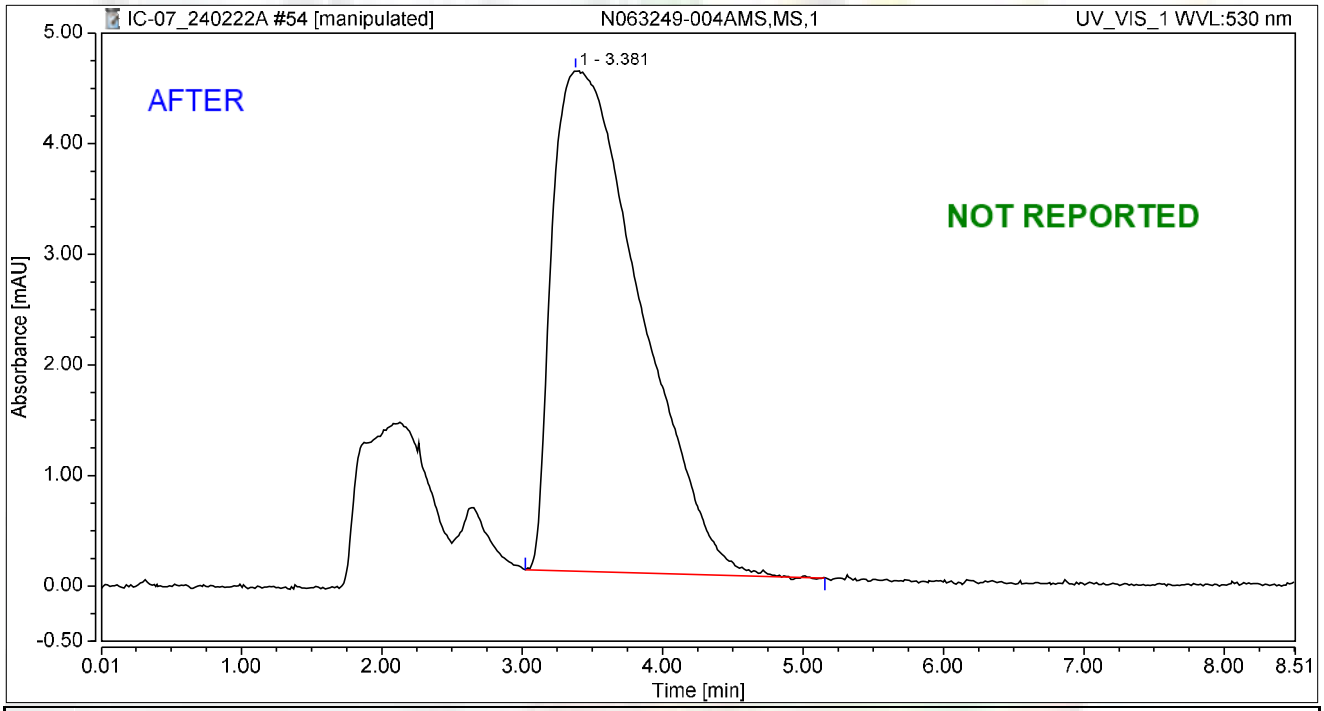
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 16:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

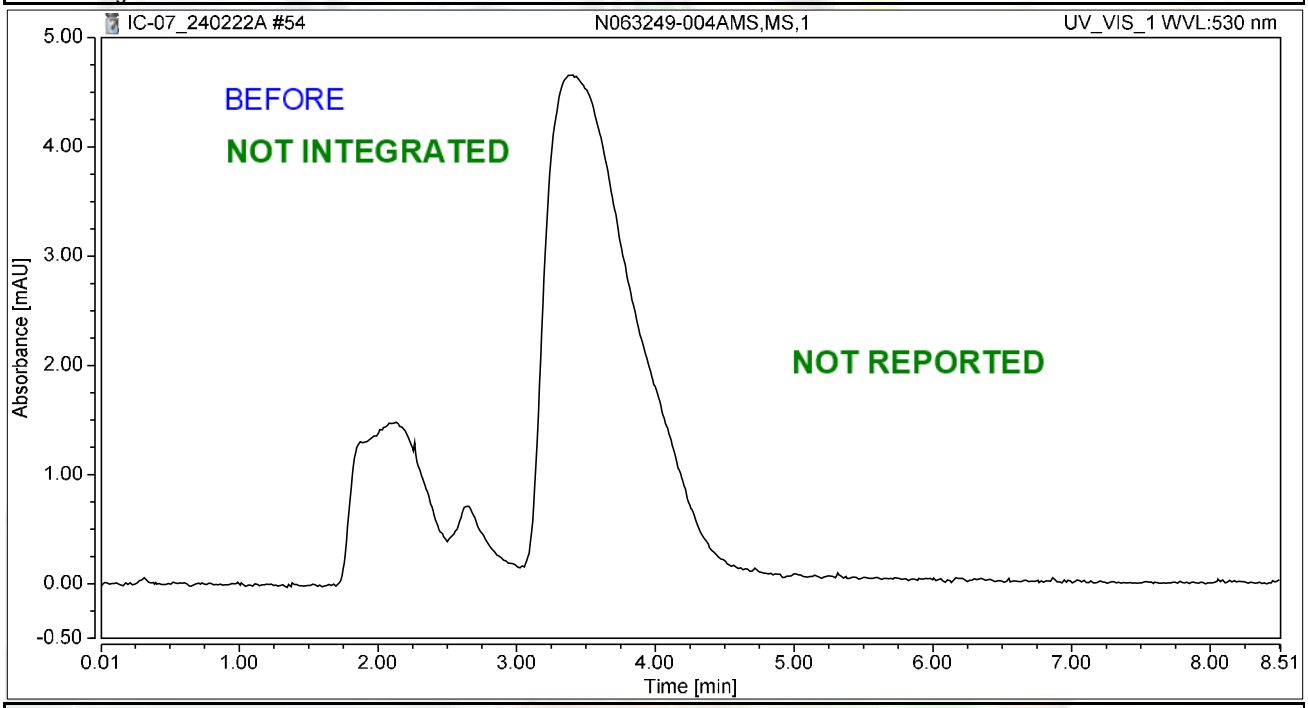
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.381	3.295	4.528	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**3.295**	**4.528**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 16:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

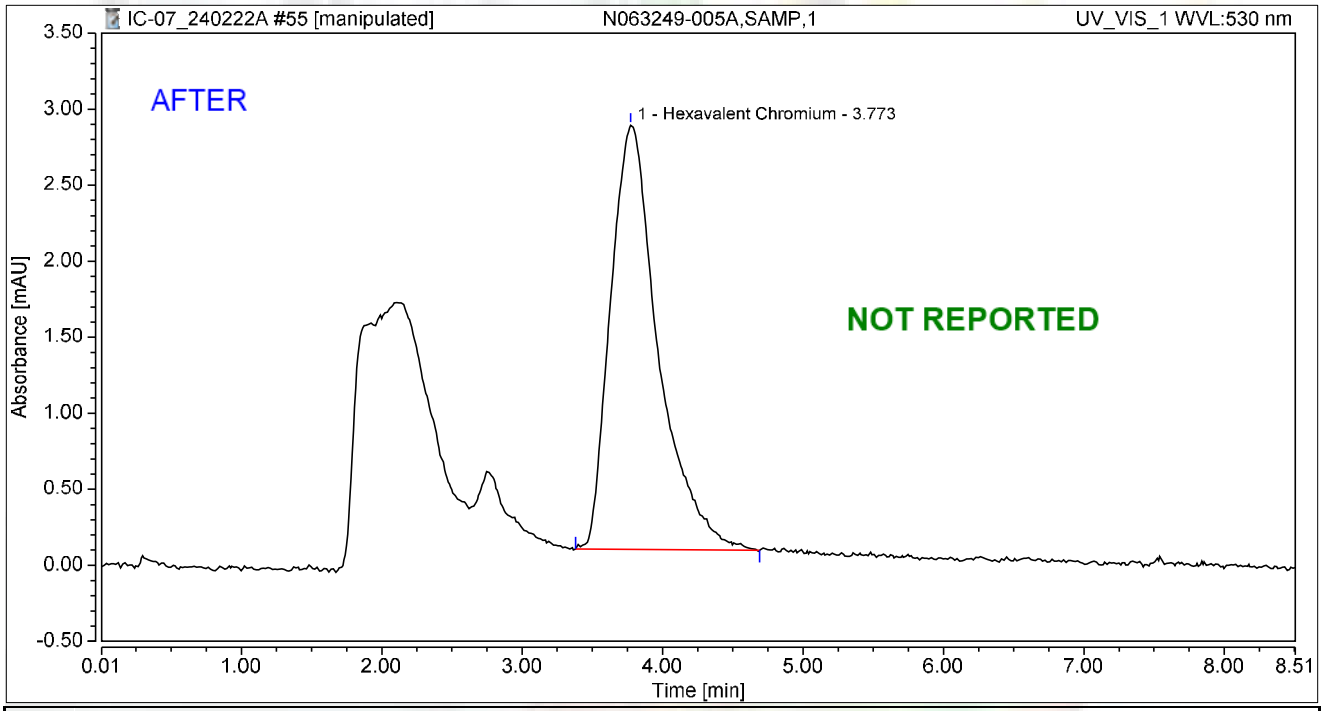
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 17:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

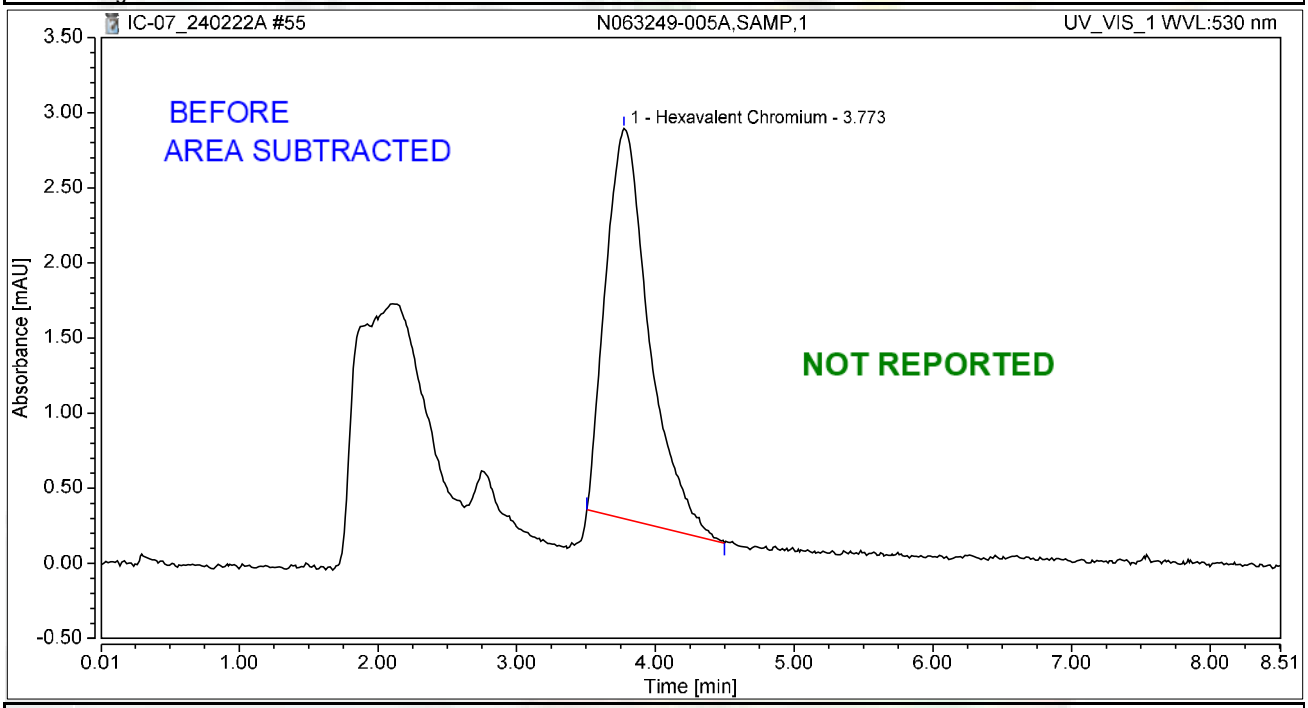
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.773	1.099	2.789	100.00	100.00	5.1081
Total:			**1.099**	**2.789**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 17:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

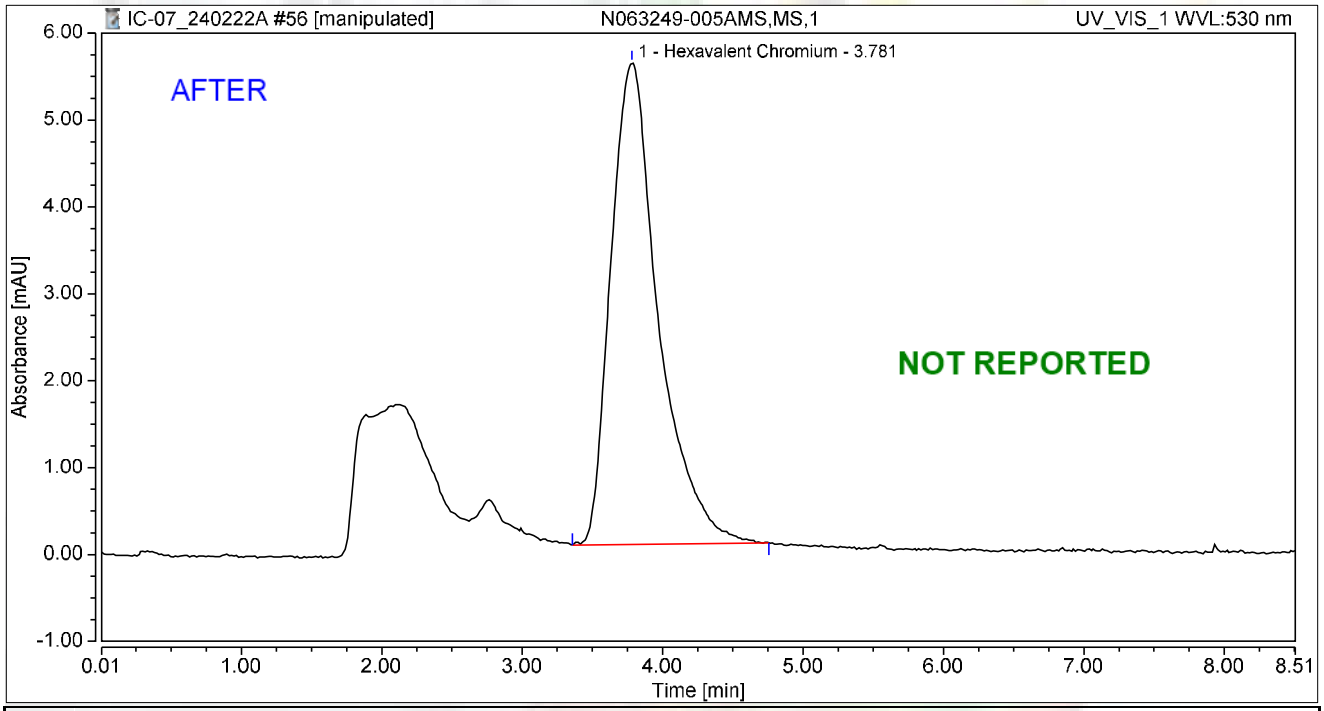
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.773	0.946	2.597	100.00	100.00	4.3996
Total:			**0.946**	**2.597**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 17:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

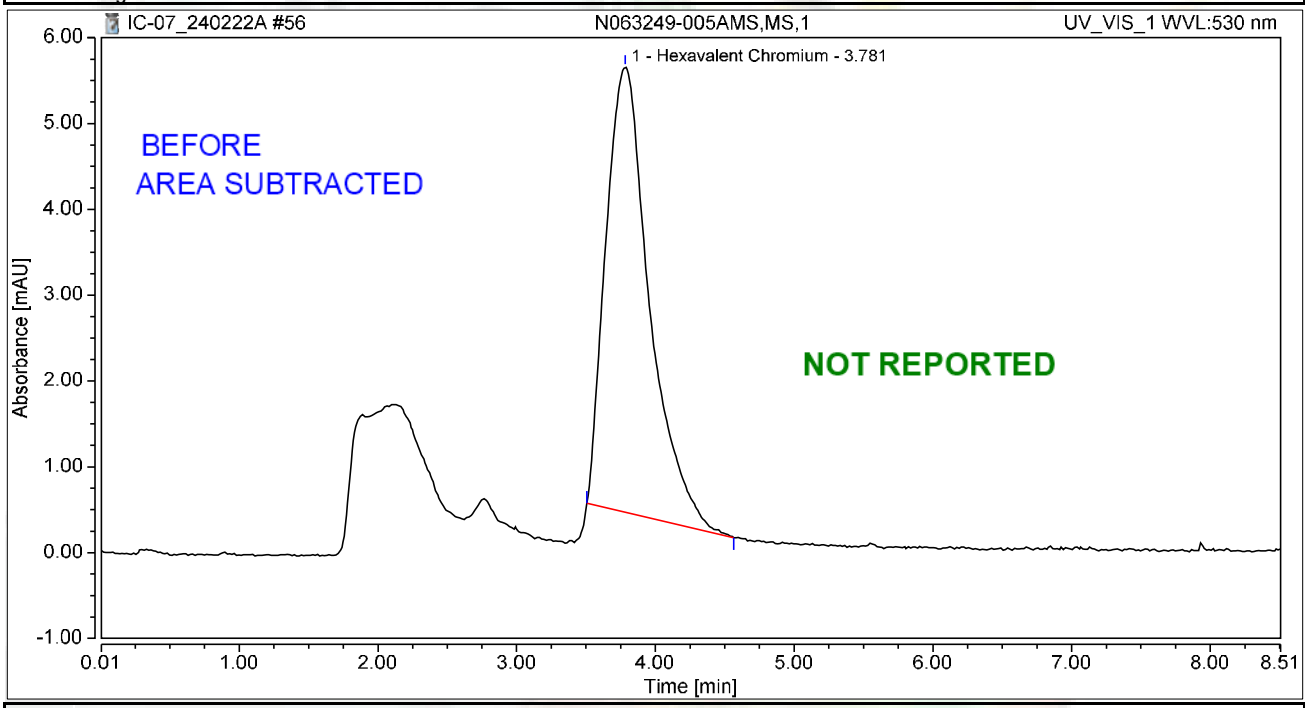
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.781	2.179	5.544	100.00	100.00	10.1280
Total:			**2.179**	**5.544**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 17:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

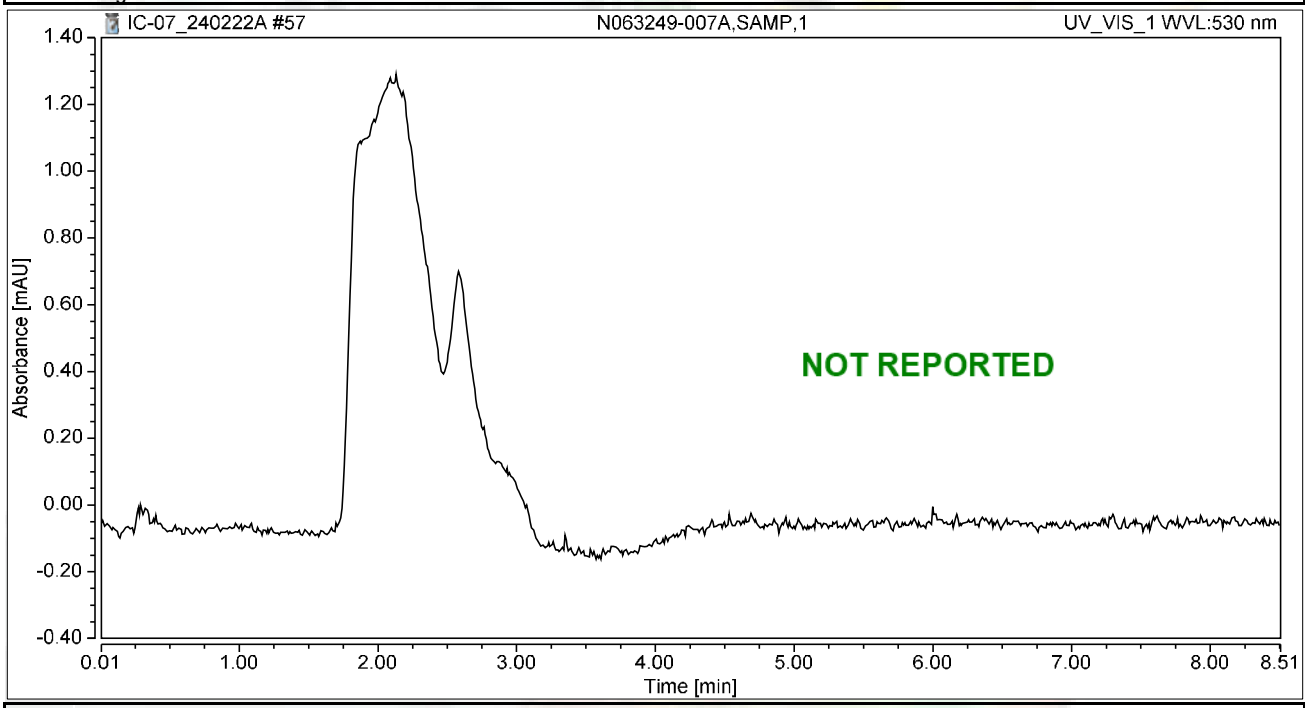
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.781	1.888	5.185	100.00	100.00	8.7768
Total:			**1.888**	**5.185**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-007A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 17:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

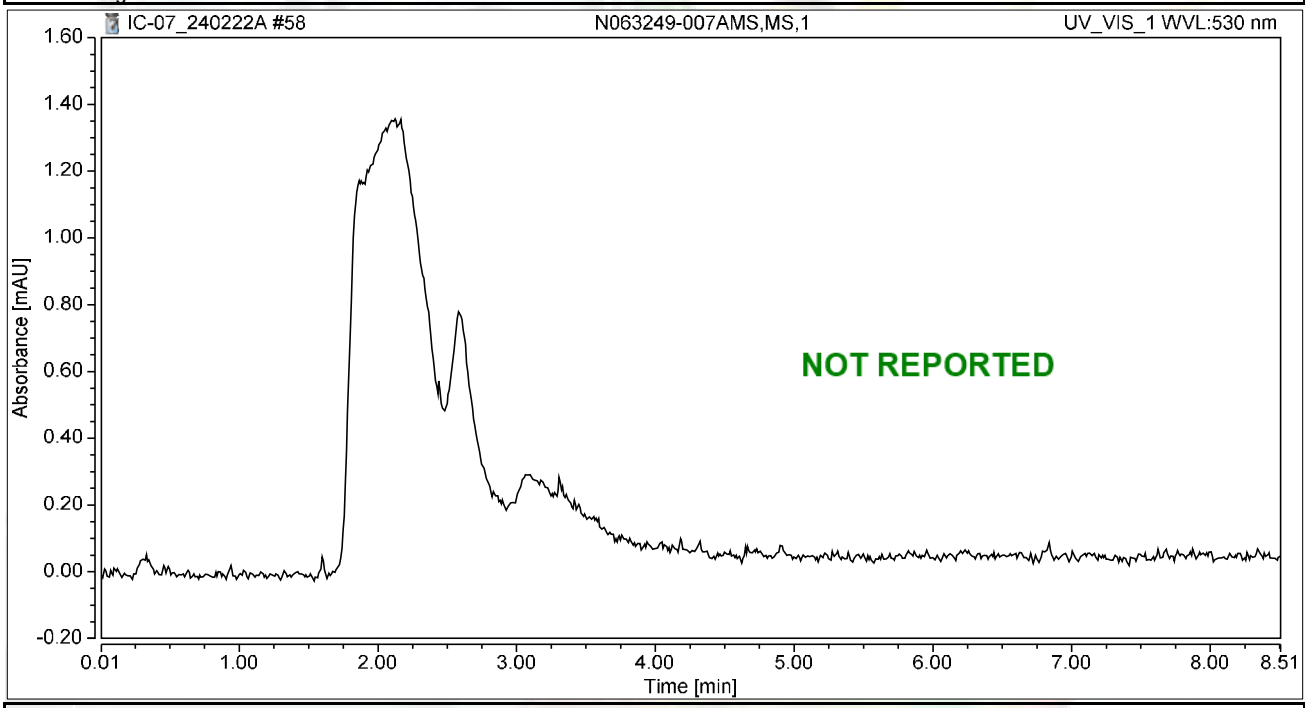
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 17:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

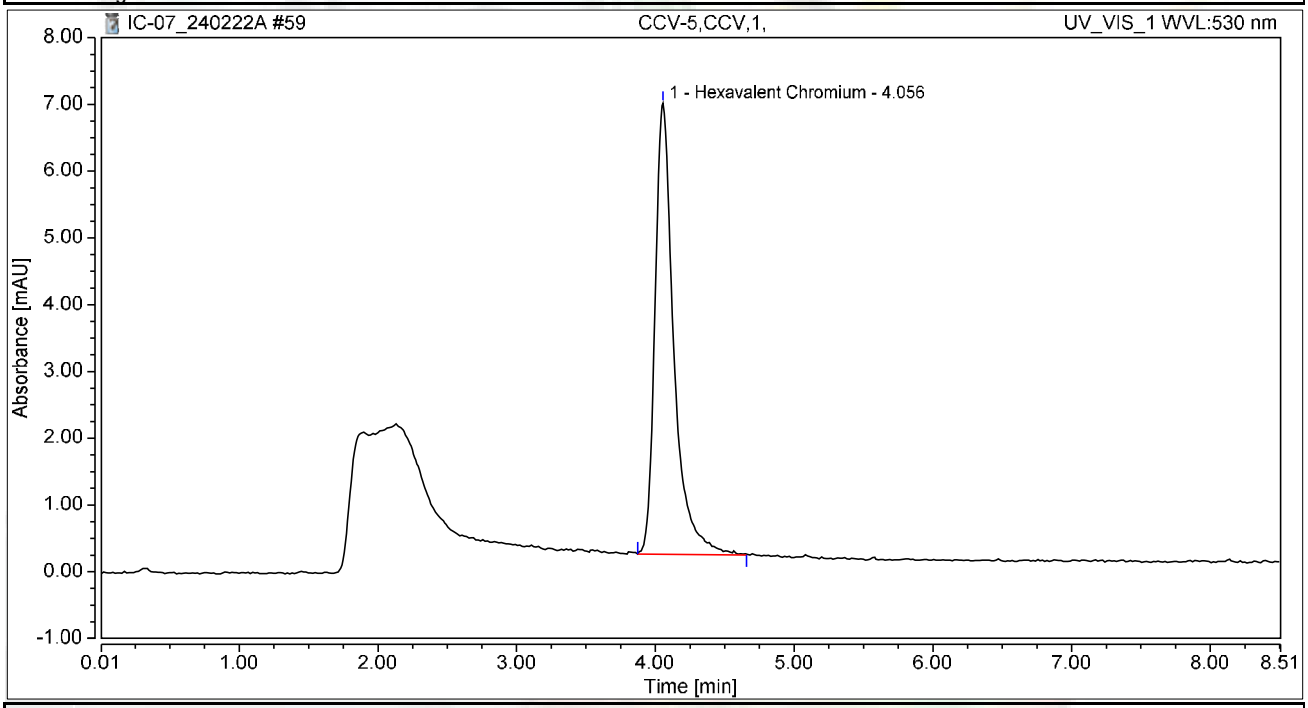
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 17:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

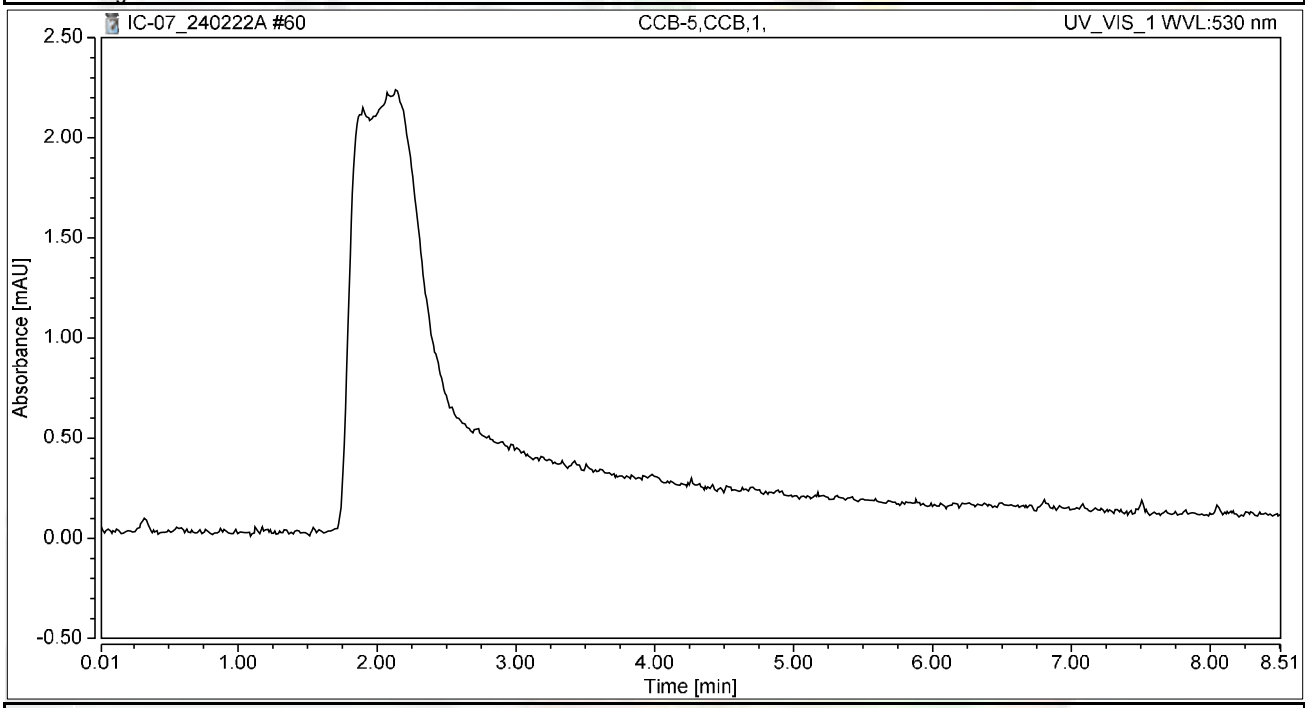
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.064	6.755	100.00	100.00	4.9466
Total:			**1.064**	**6.755**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 17:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

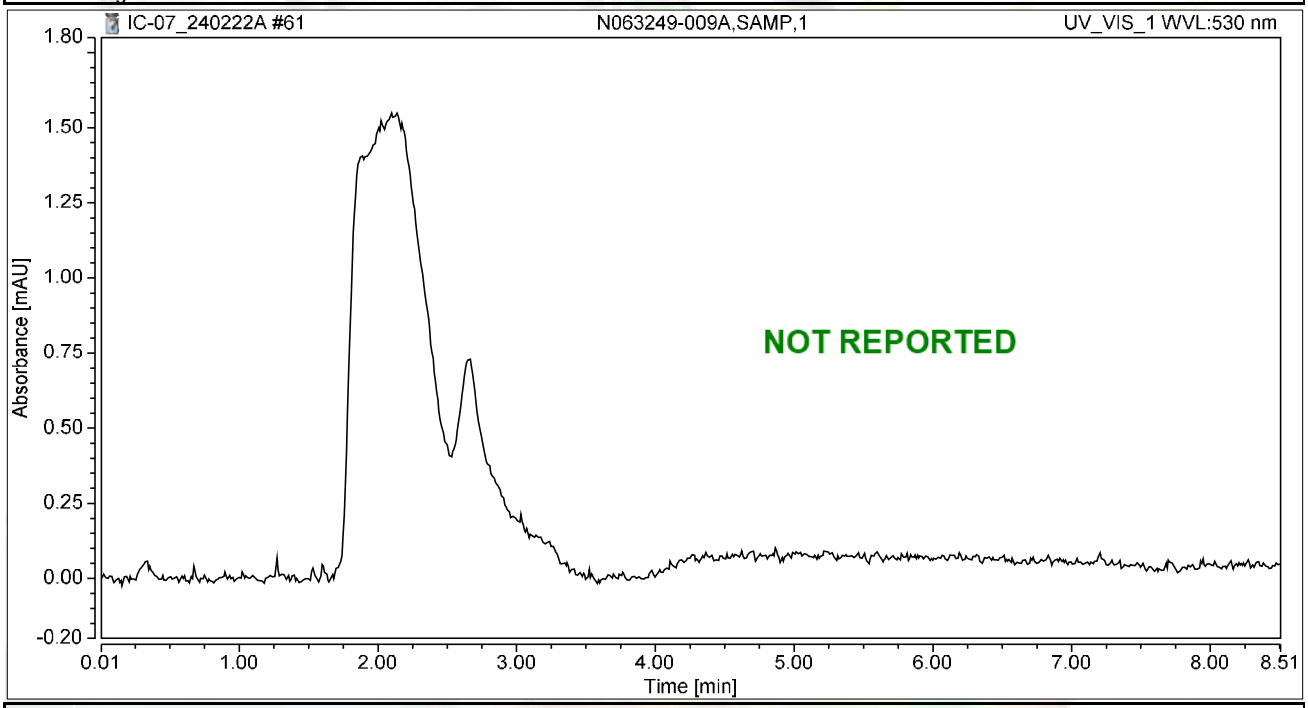
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 17:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

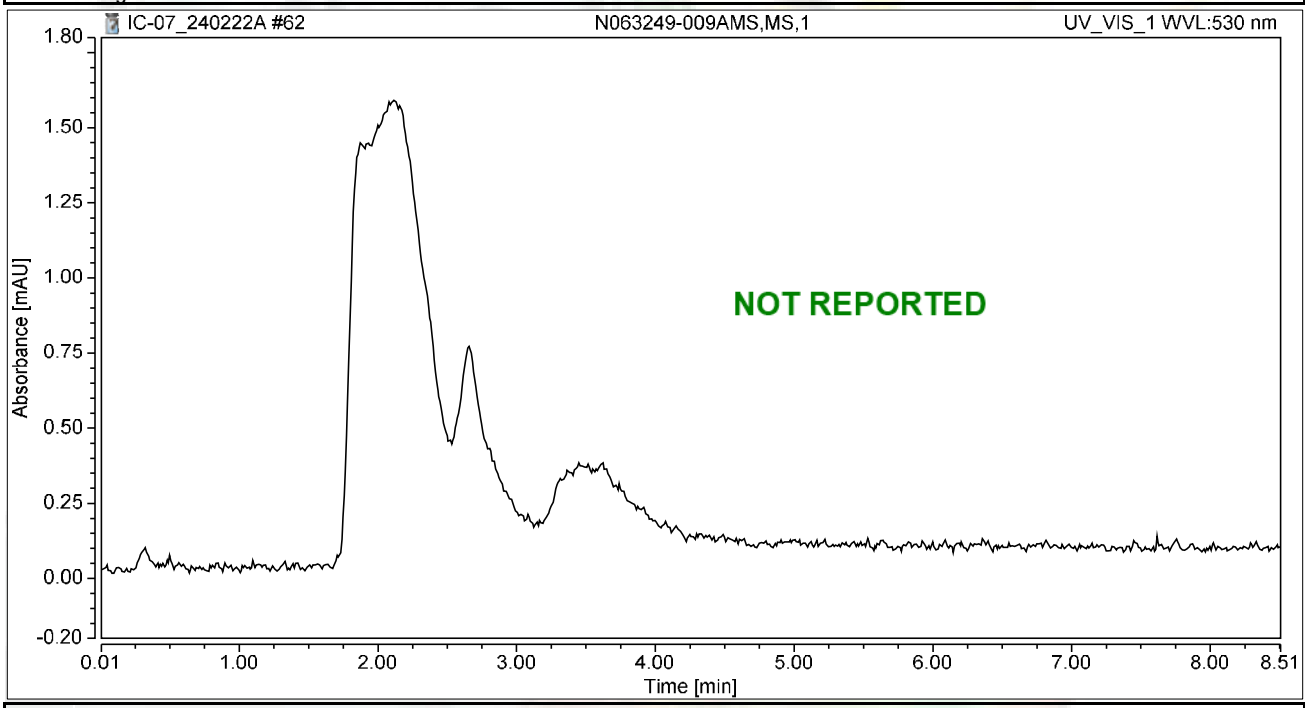
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 18:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

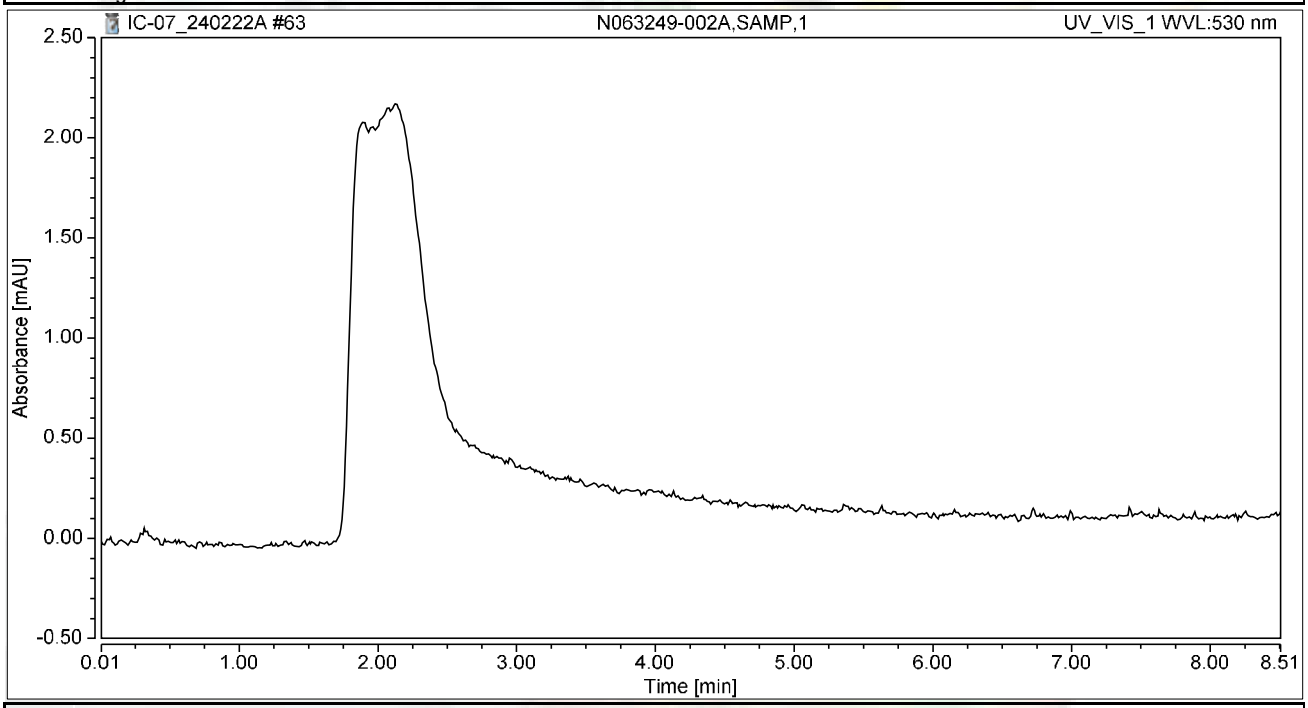
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 18:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

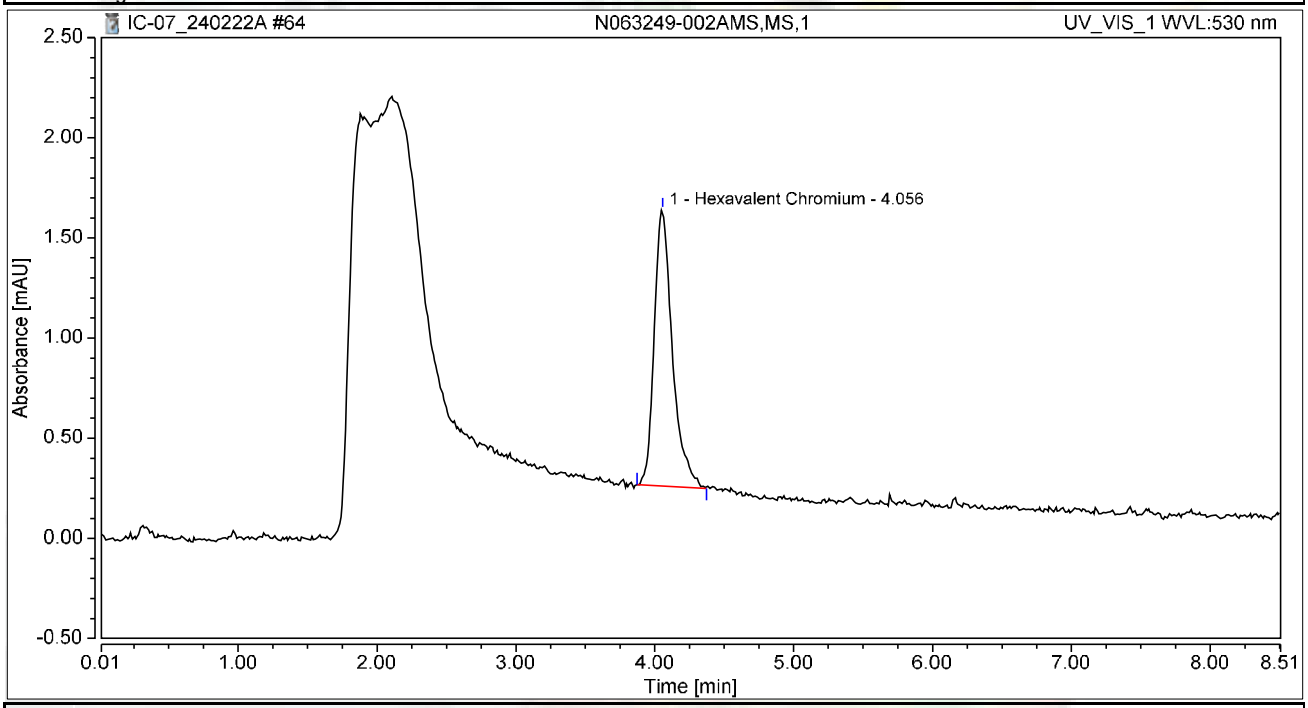
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 18:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

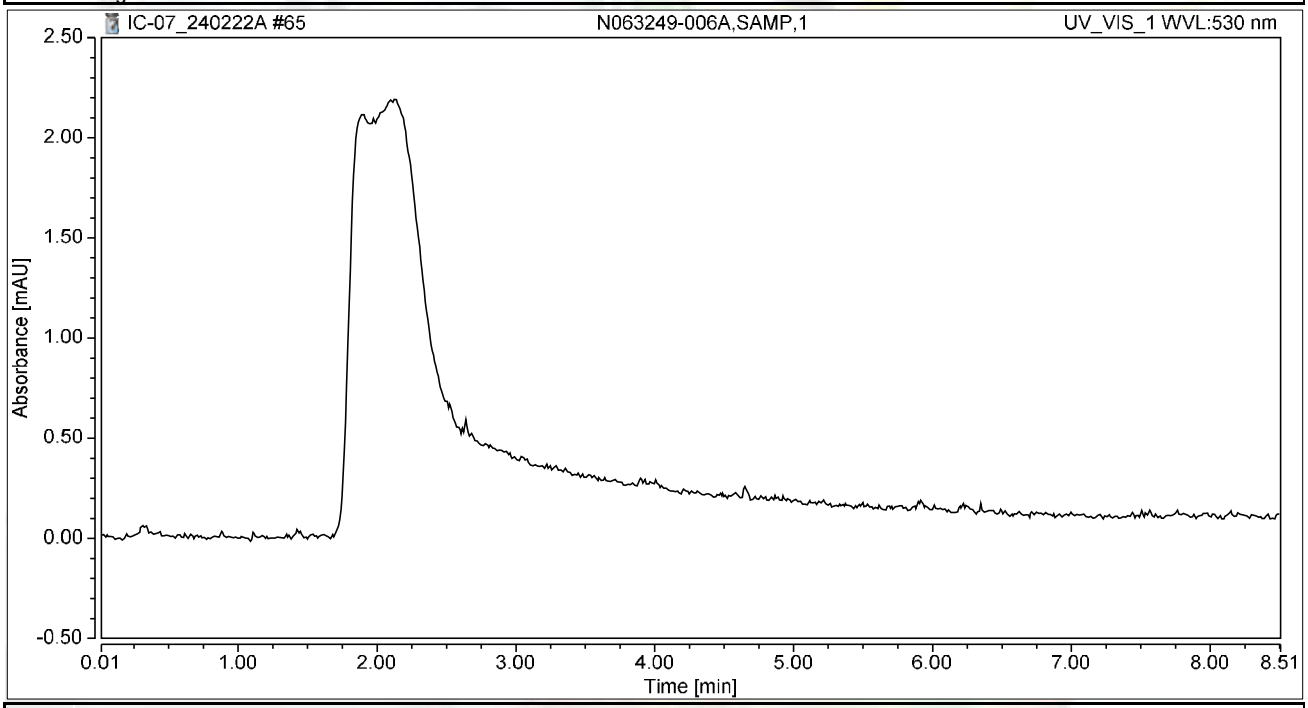
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.209	1.379	100.00	100.00	0.9714
Total:			**0.209**	**1.379**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-006A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 18:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

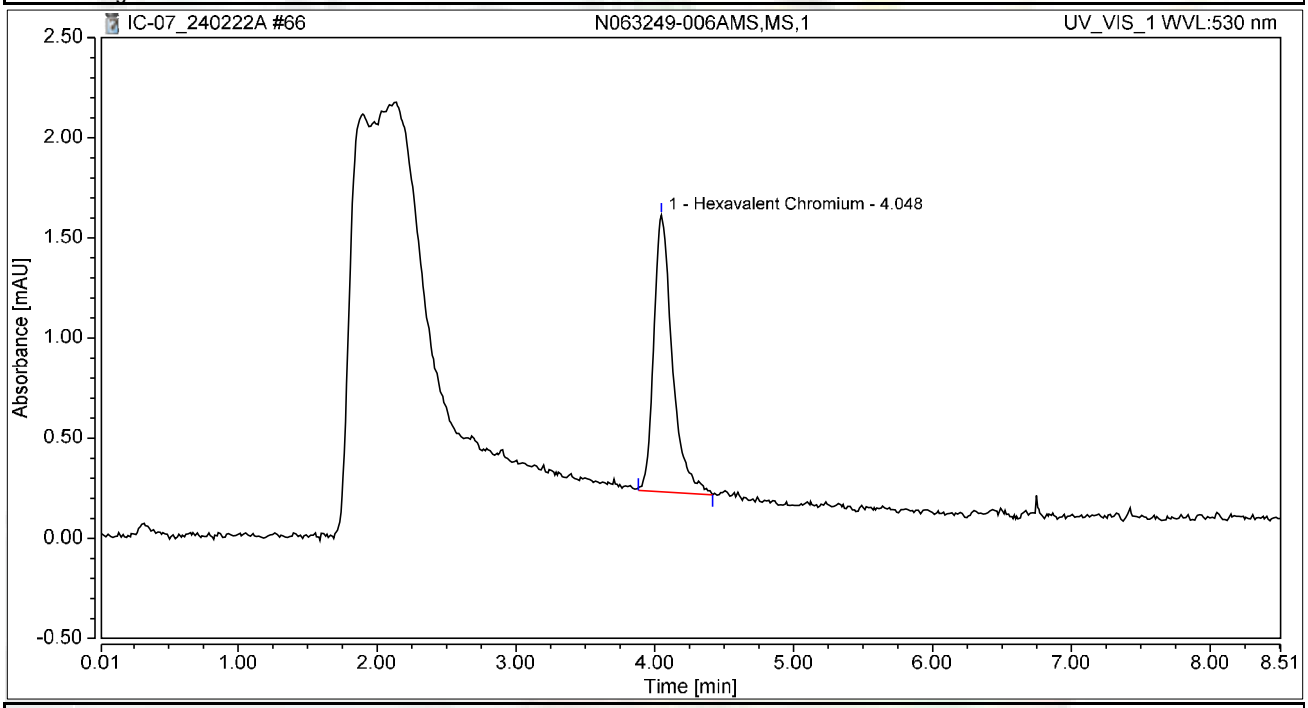
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-006AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 18:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

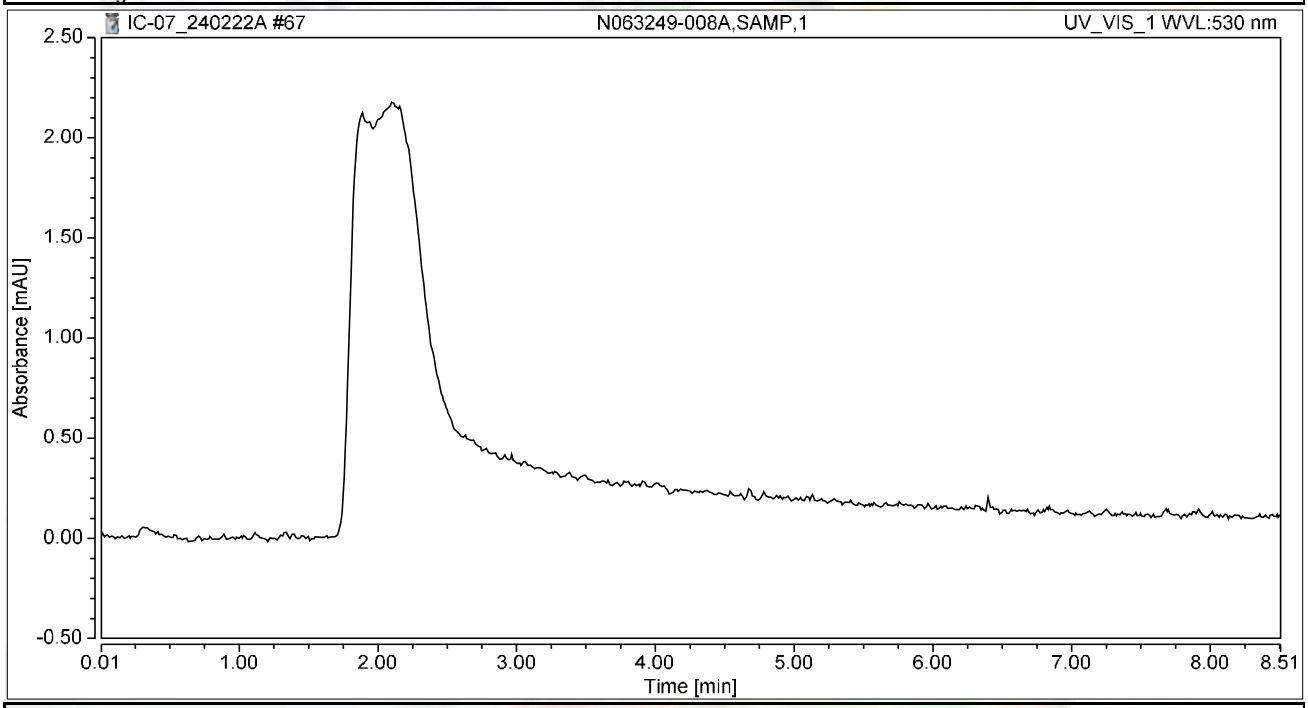
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.214	1.381	100.00	100.00	0.9956
Total:			**0.214**	**1.381**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 19:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

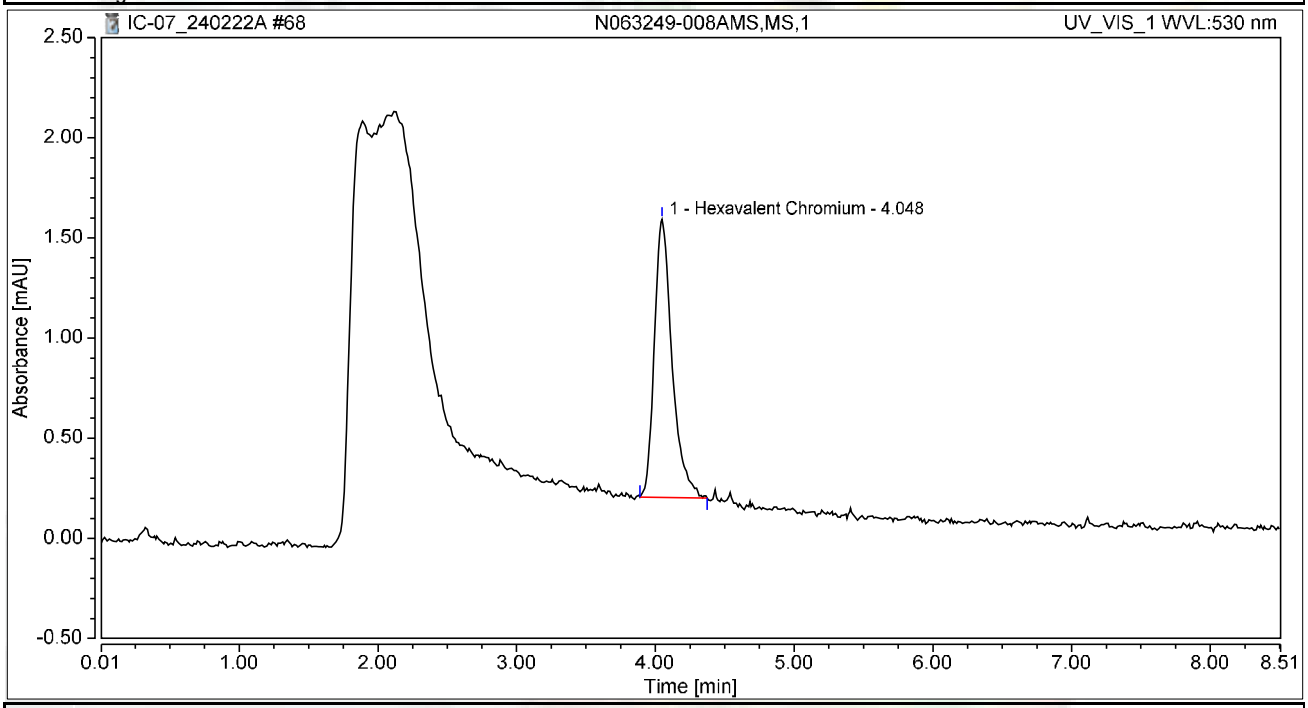
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 19:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.206	1.388	100.00	100.00	0.9562
Total:			**0.206**	**1.388**	**100.00**	**100.00**	

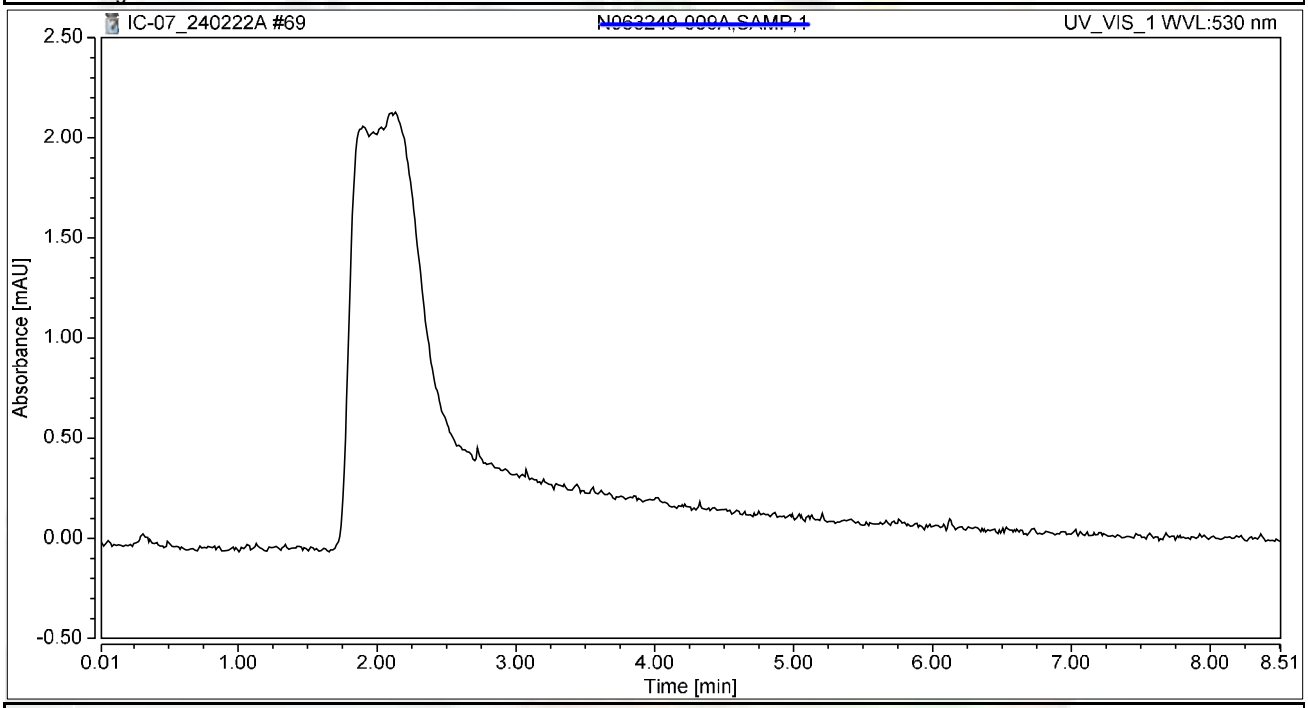
Chromatogram and Results

Injection Details

Injection Name:	~~N063249-009A,SAMP,1~~ N063249-010A,SAMP,1	*Run Time (min):*	**8.49**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 19:20**	*Sample Weight:*	**1.0000**

Chromatogram

N063249-010A,SAMP,1



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

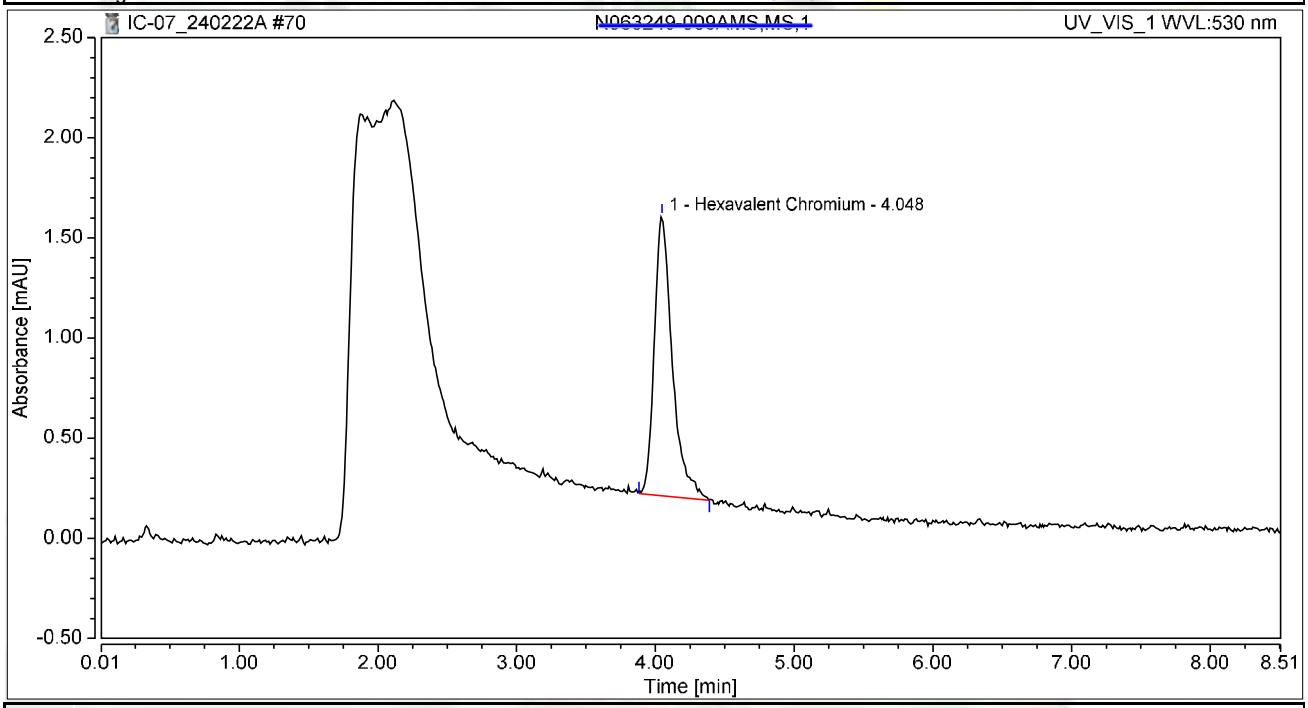
Chromatogram and Results

Injection Details

Injection Name:	~~N063249-009AMS,MS,1~~ N063249-010AMS,MS,1	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 19:29**	*Sample Weight:*	**1.0000**

Chromatogram

N063249-010AMS,MS,1



Integration Results

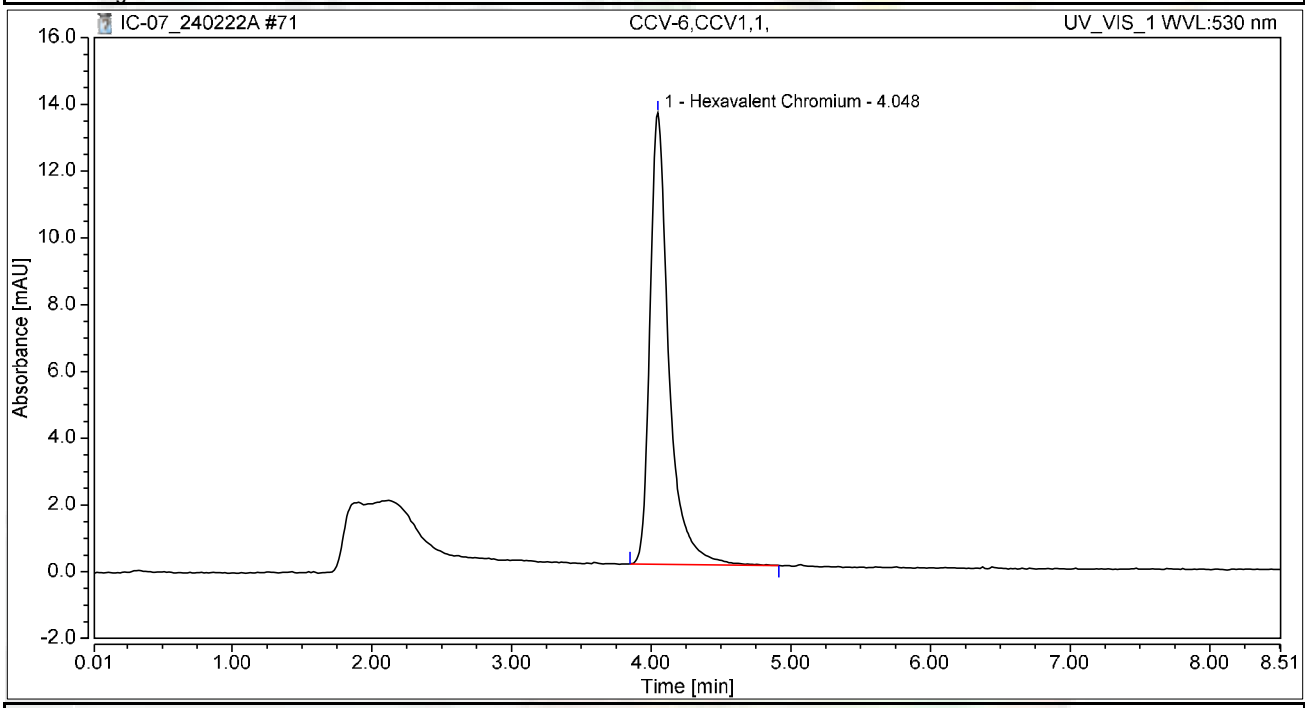
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.210	1.397	100.00	100.00	0.9740
Total:			**0.210**	**1.397**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 19:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

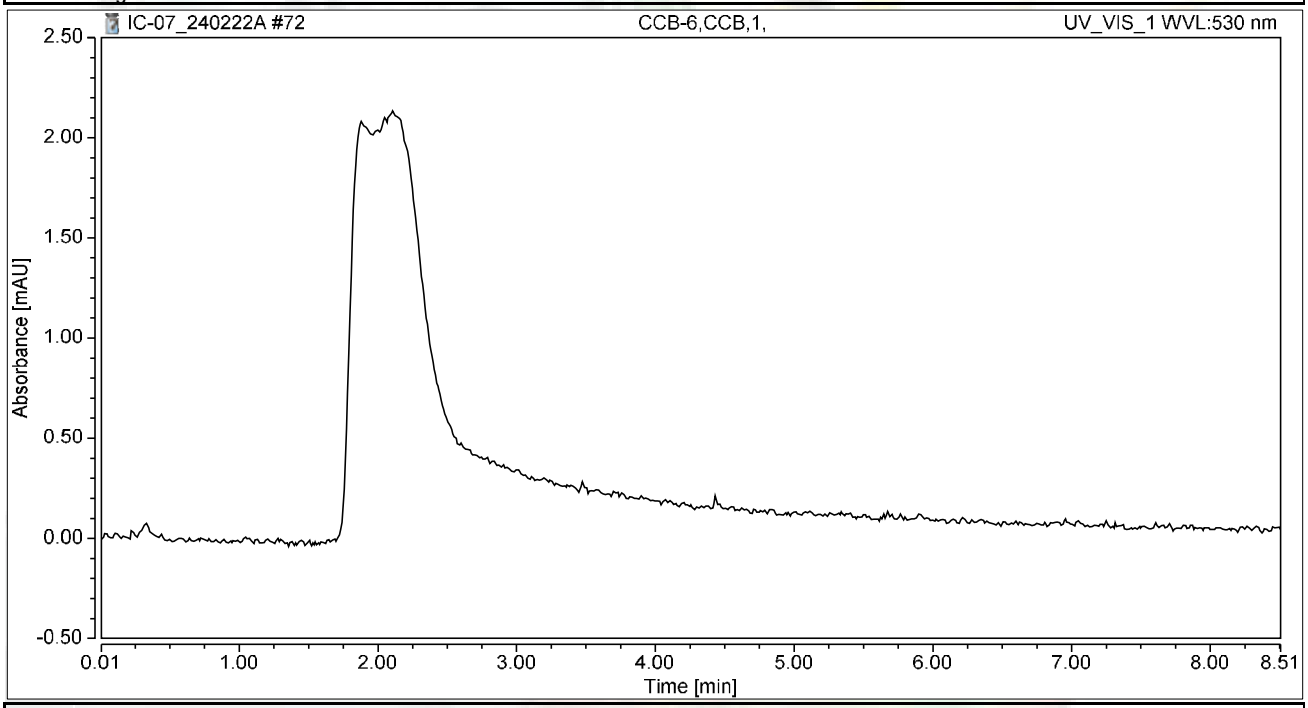
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.125	13.531	100.00	100.00	9.8795
Total:			**2.125**	**13.531**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 19:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

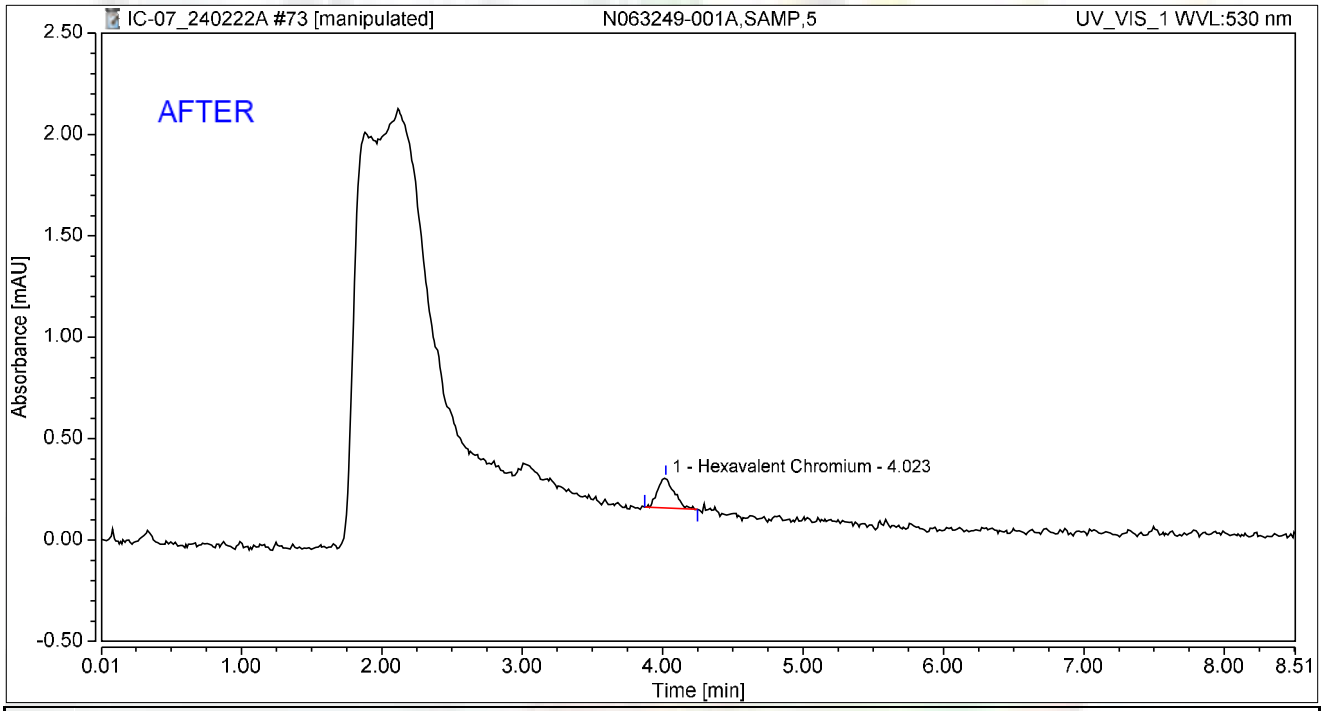
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 19:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.020	0.149	100.00	100.00	0.0928
Total:			**0.020**	**0.149**	**100.00**	**100.00**	

Reviewed by:

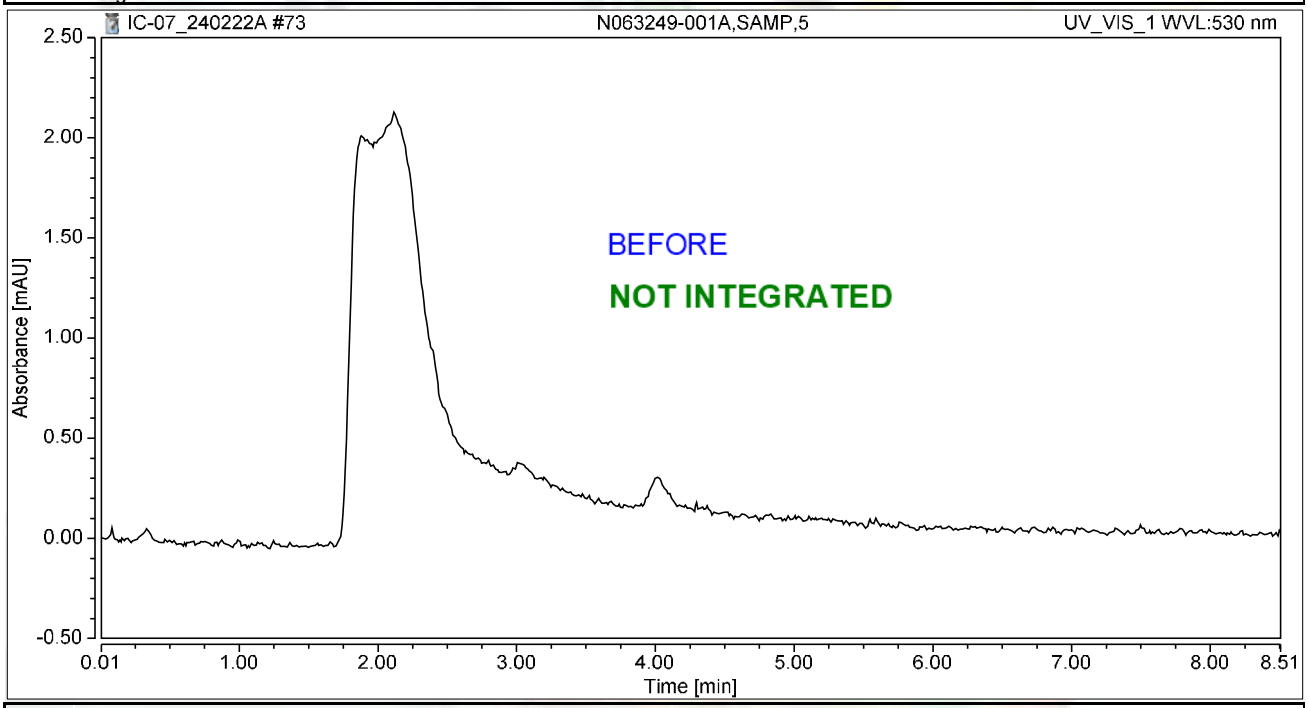
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063249-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 19:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

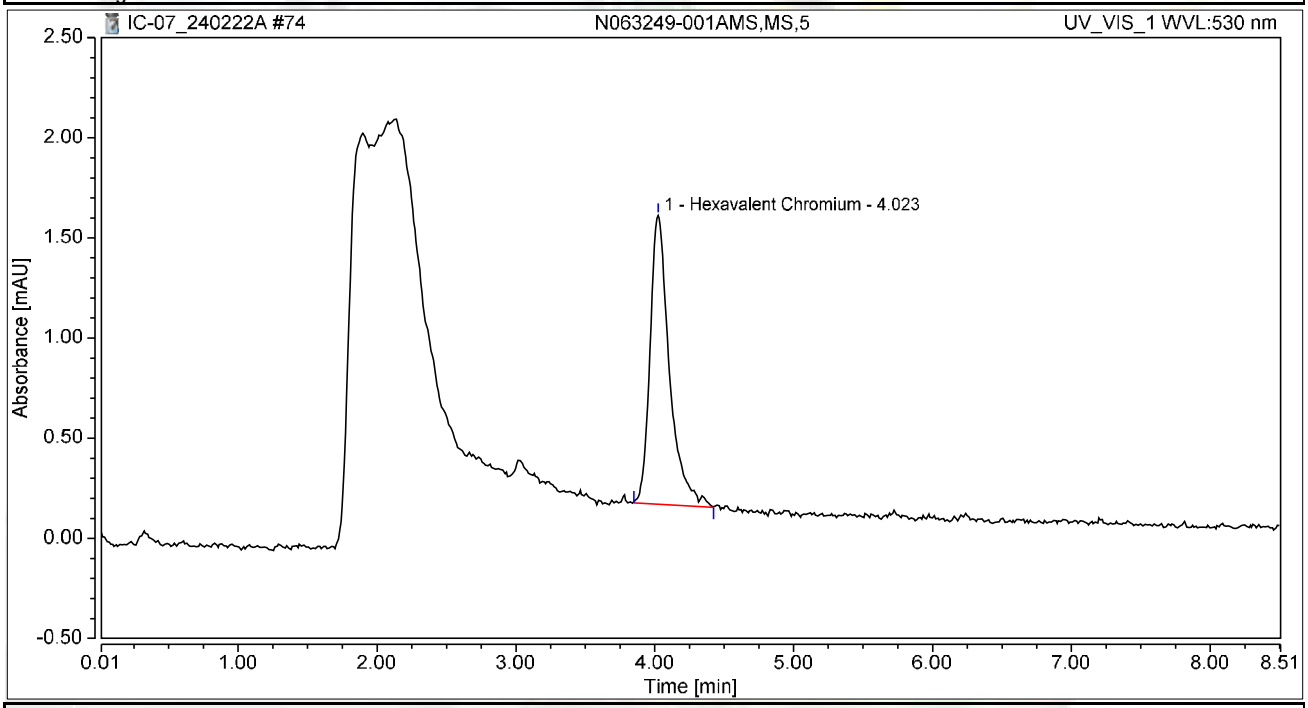
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-001AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 20:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

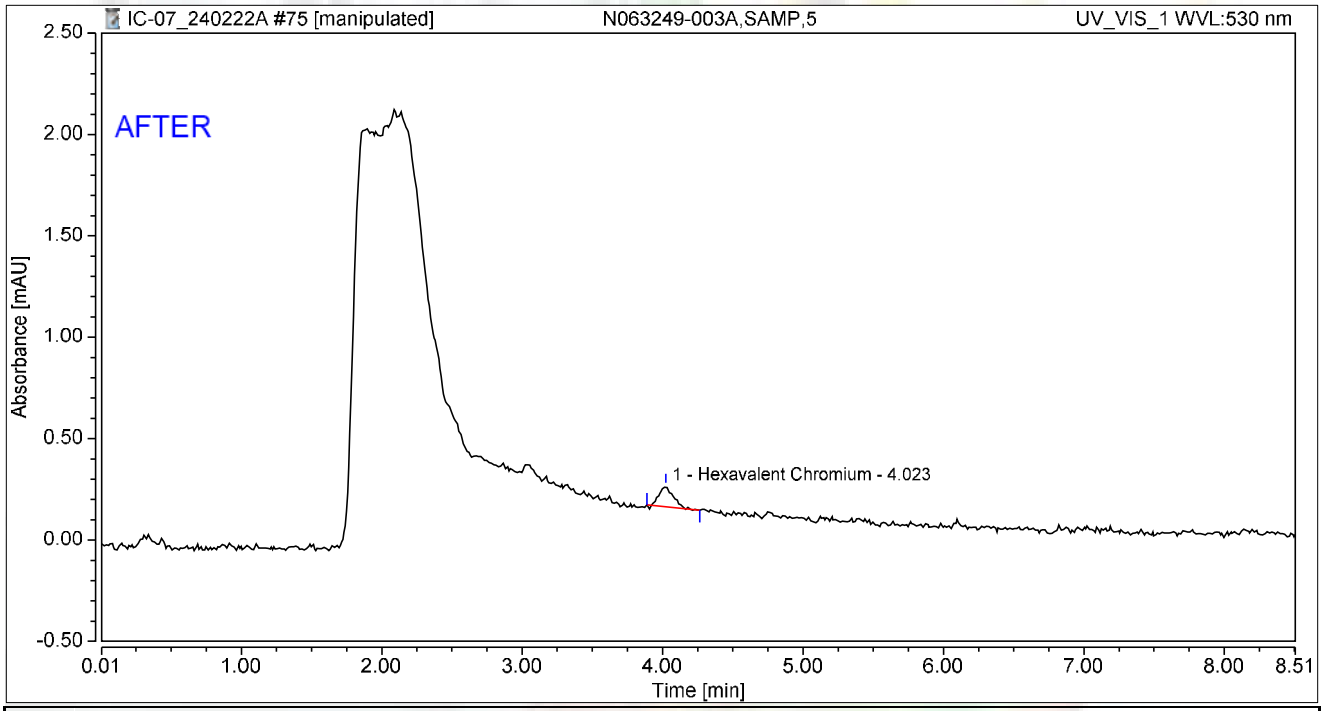
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.233	1.442	100.00	100.00	1.0850
Total:			**0.233**	**1.442**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 20:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.012	0.103	100.00	100.00	0.0556
Total:			**0.012**	**0.103**	**100.00**	**100.00**	

Reviewed by:

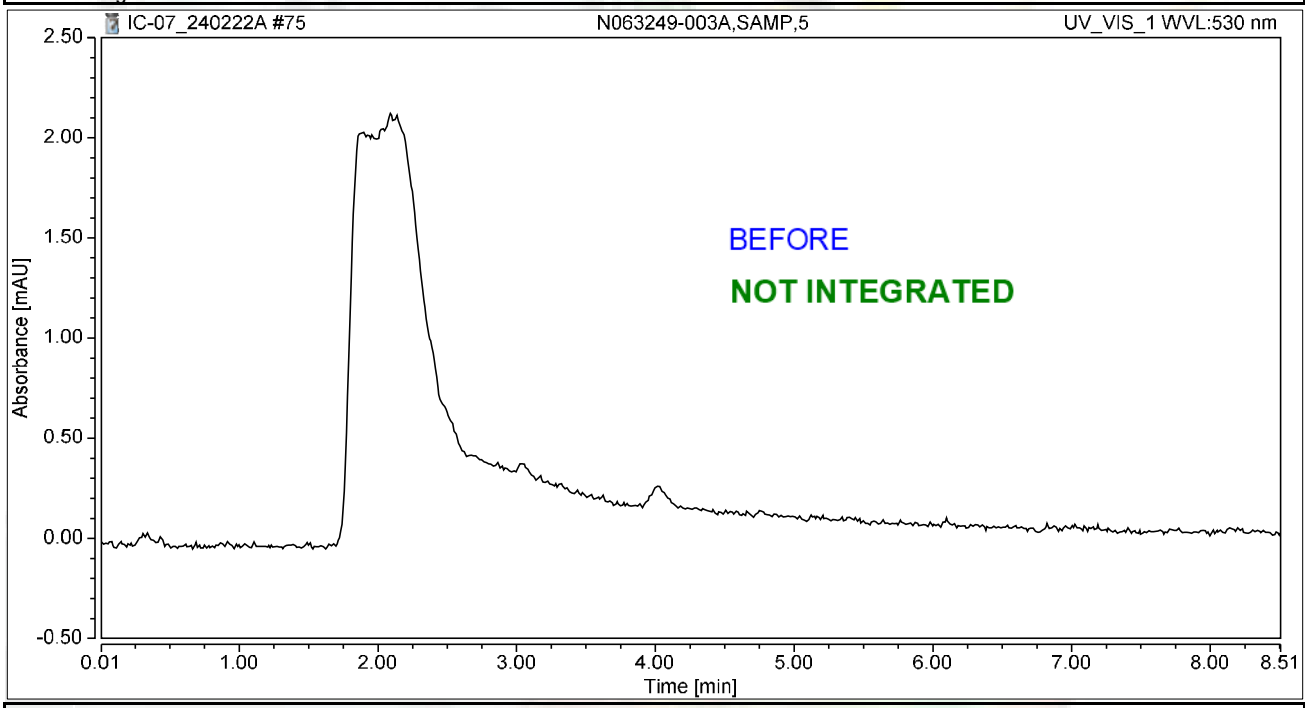
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063249-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 20:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

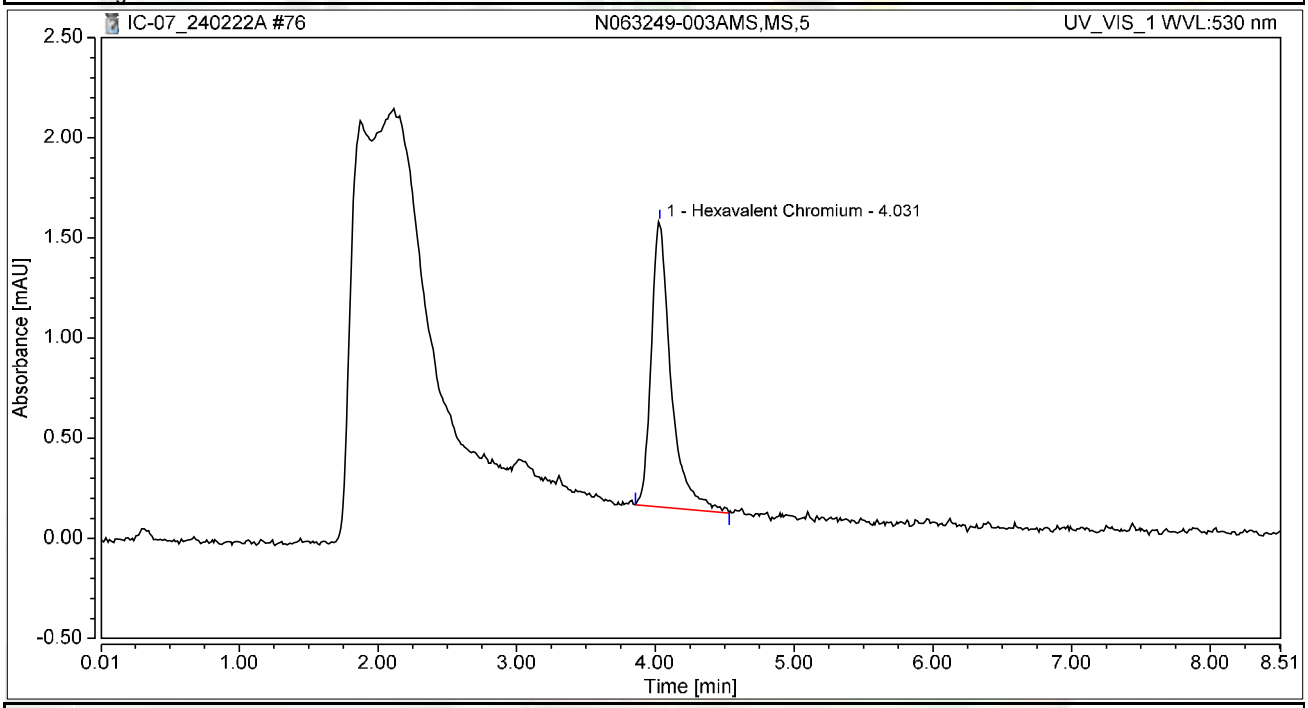
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 20:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

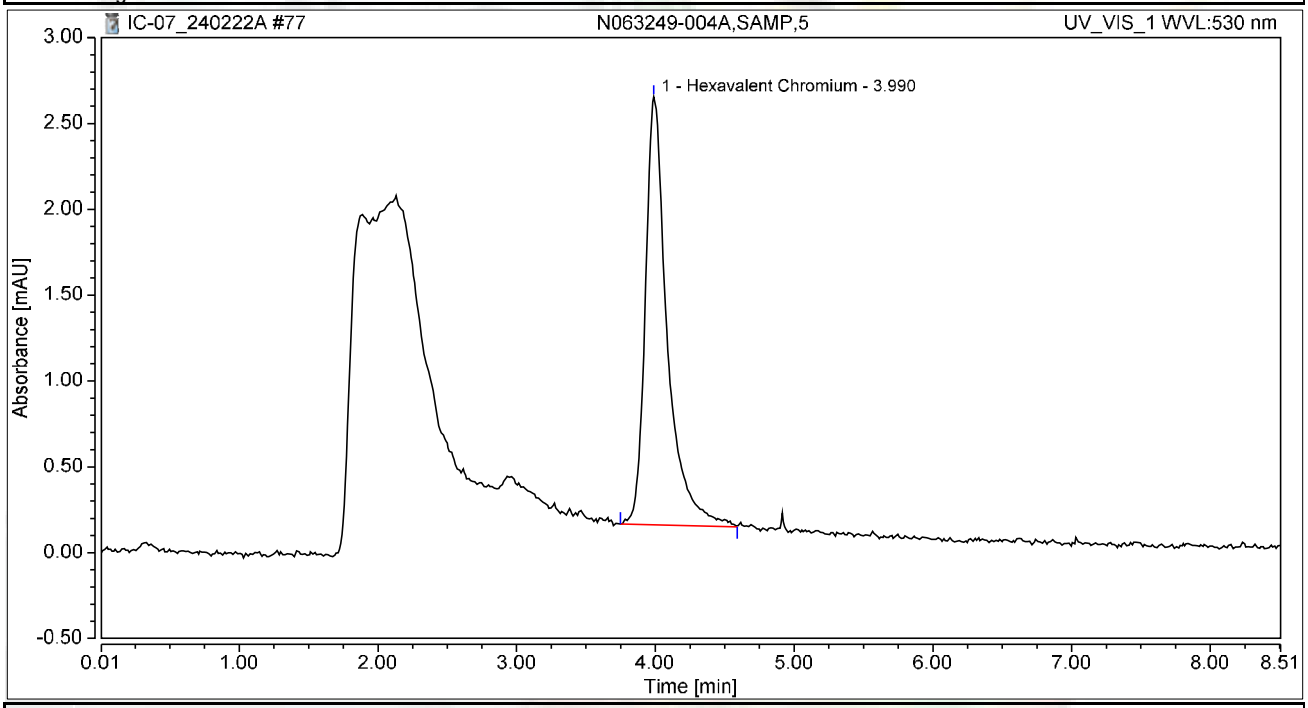
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.235	1.423	100.00	100.00	1.0908
Total:			**0.235**	**1.423**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-004A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 20:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

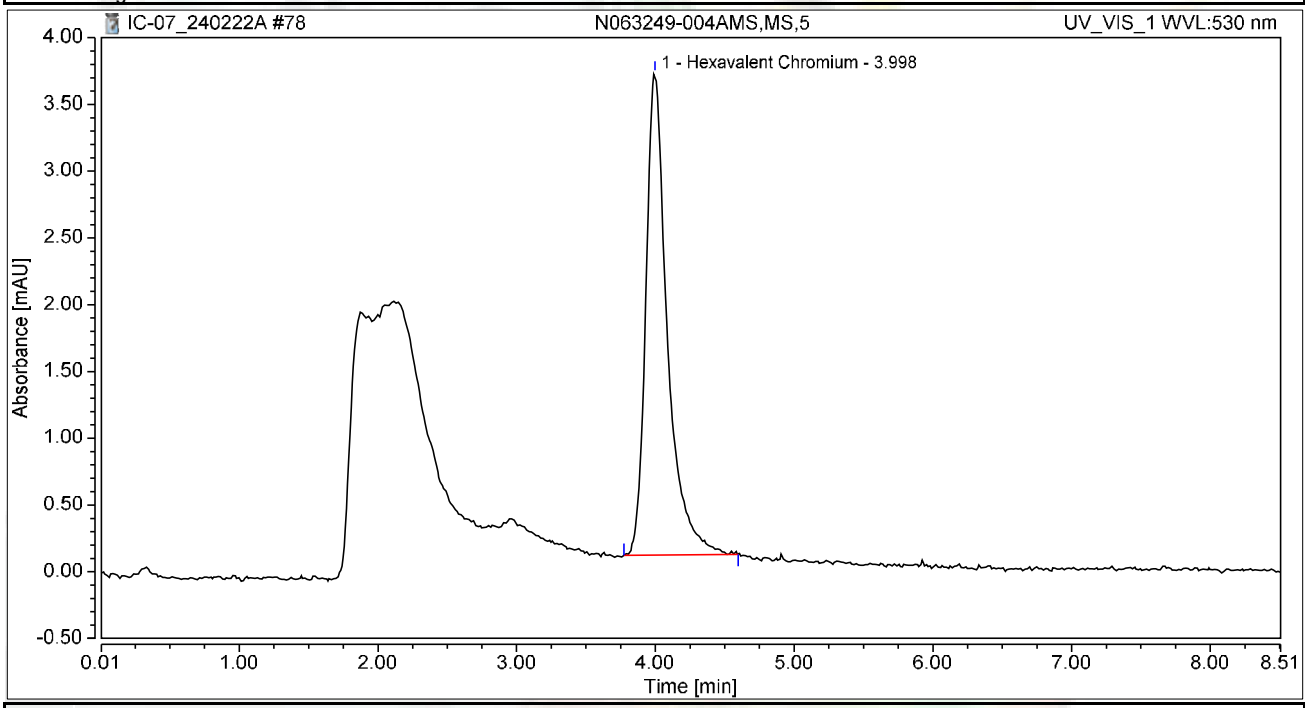
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.457	2.492	100.00	100.00	2.1265
Total:			**0.457**	**2.492**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-004AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 20:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

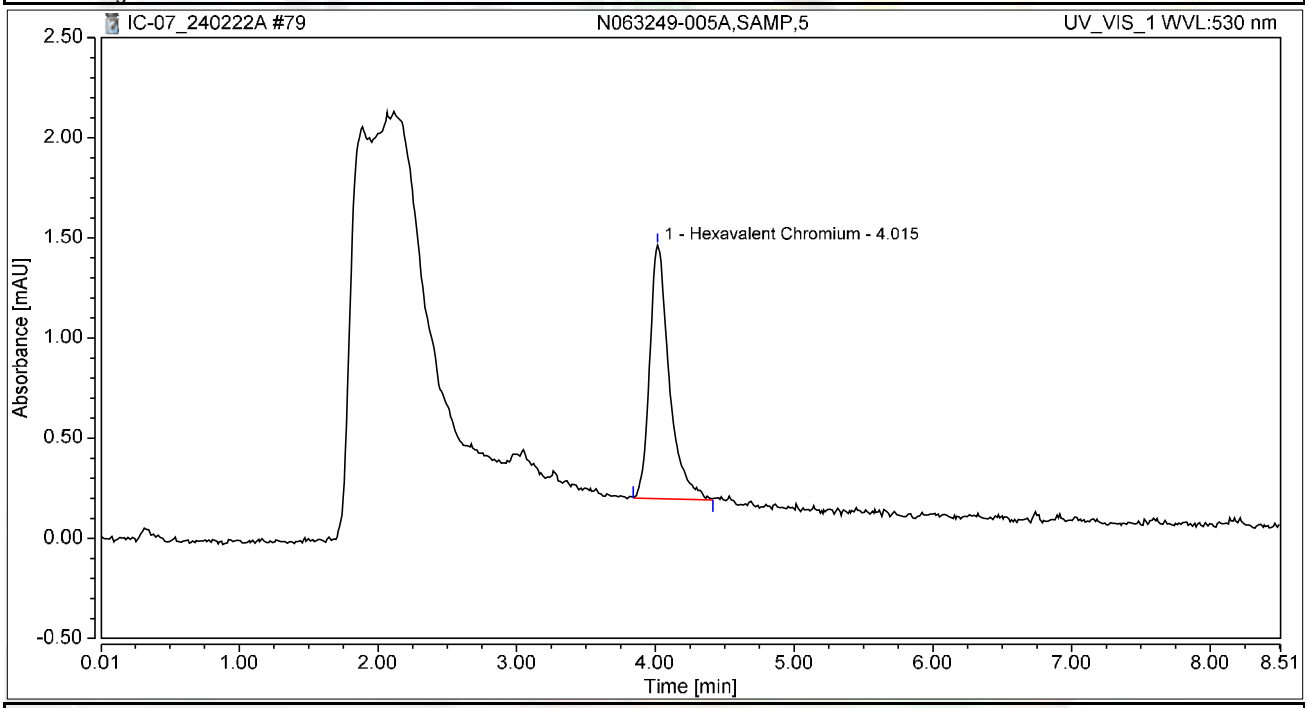
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.651	3.609	100.00	100.00	3.0284
Total:			**0.651**	**3.609**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 20:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

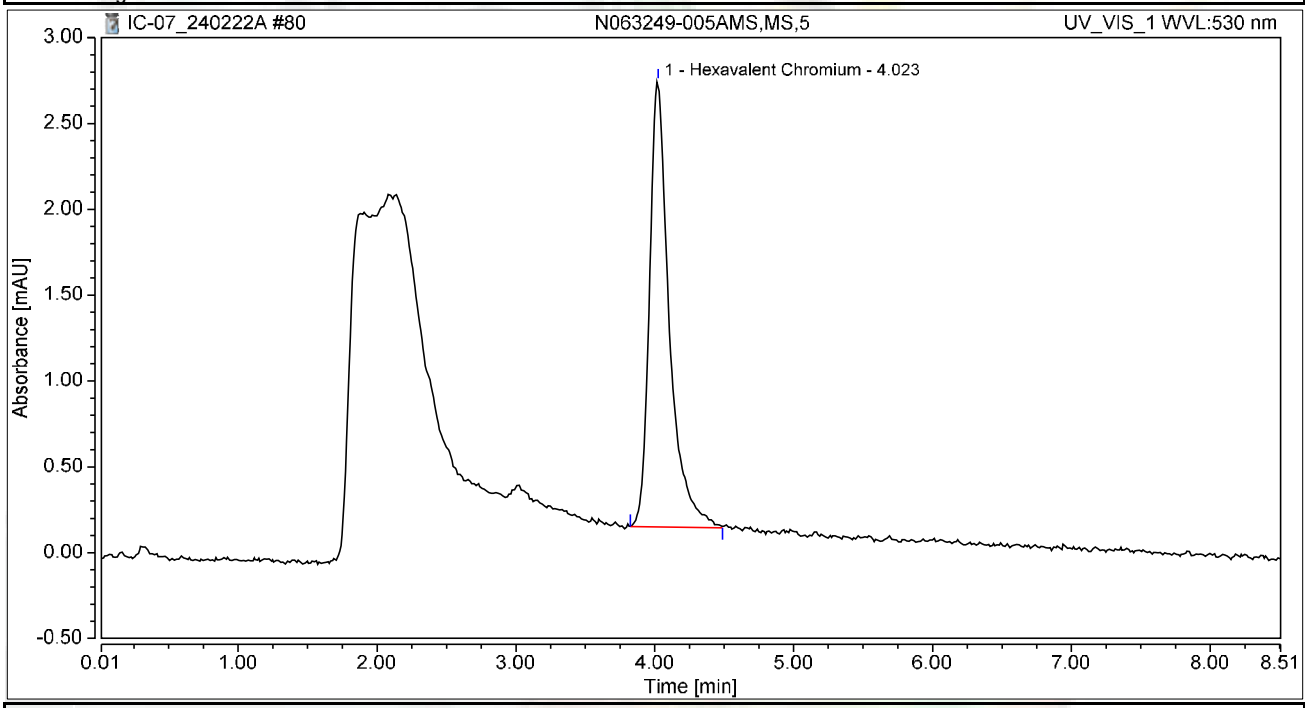
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.207	1.265	100.00	100.00	0.9630
Total:			**0.207**	**1.265**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-005AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 21:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

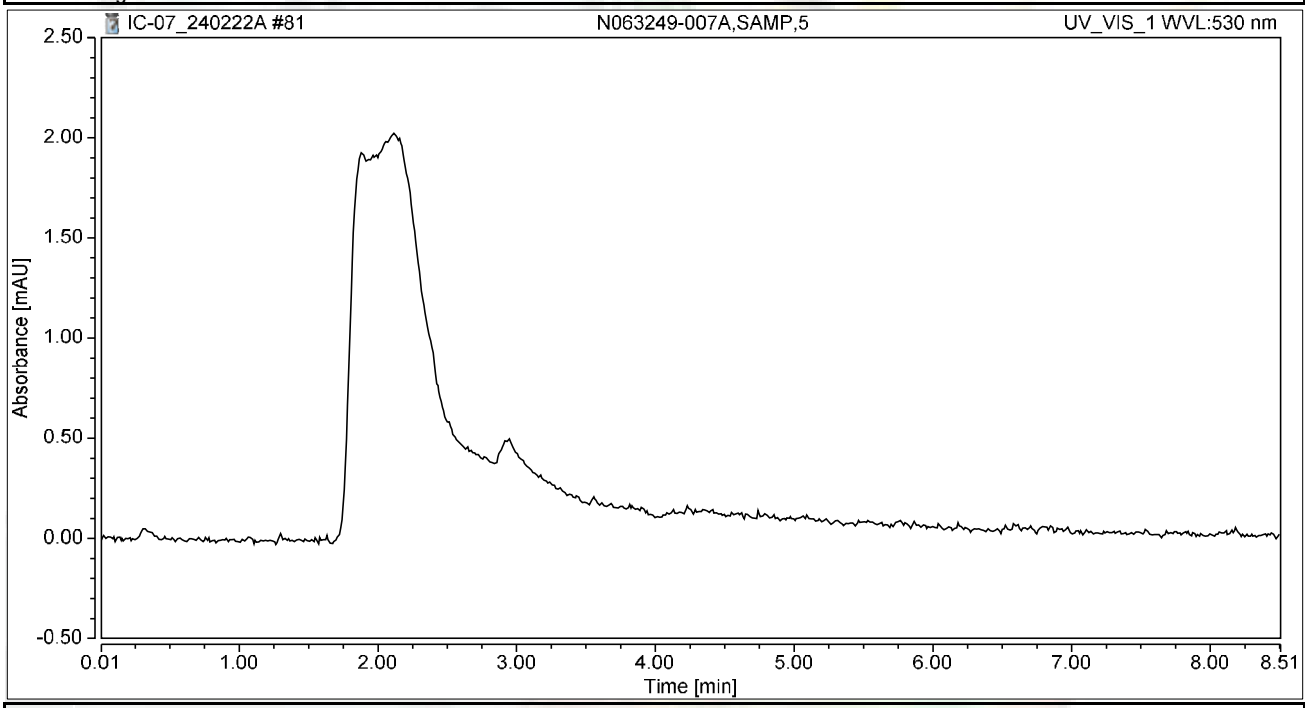
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.429	2.596	100.00	100.00	1.9956
Total:			**0.429**	**2.596**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-007A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 21:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

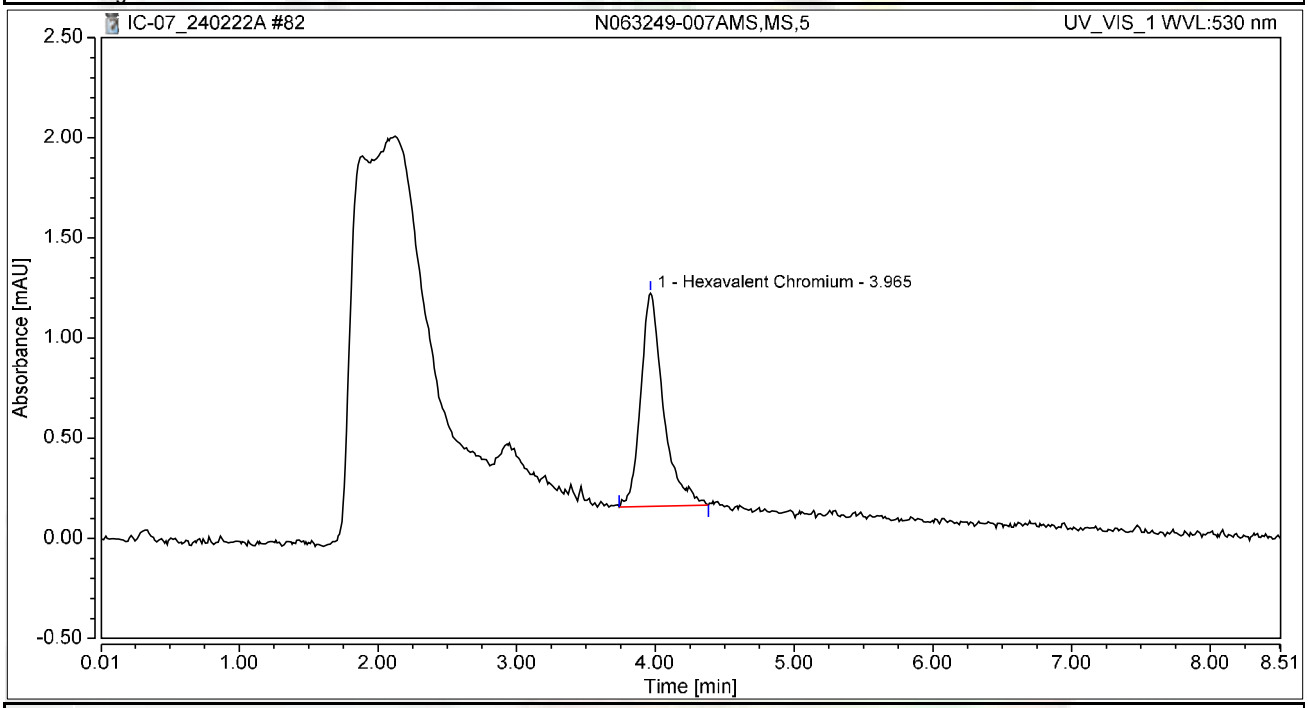
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-007AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 21:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

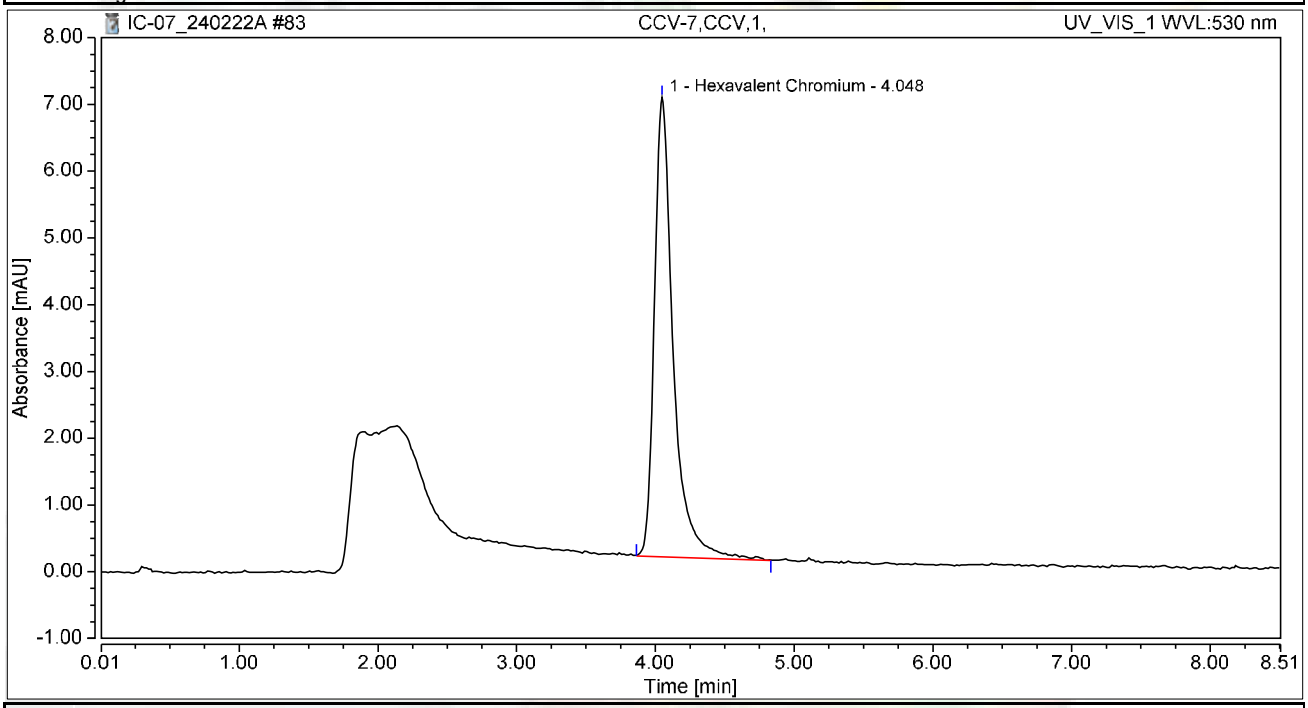
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.202	1.065	100.00	100.00	0.9382
Total:			**0.202**	**1.065**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 21:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

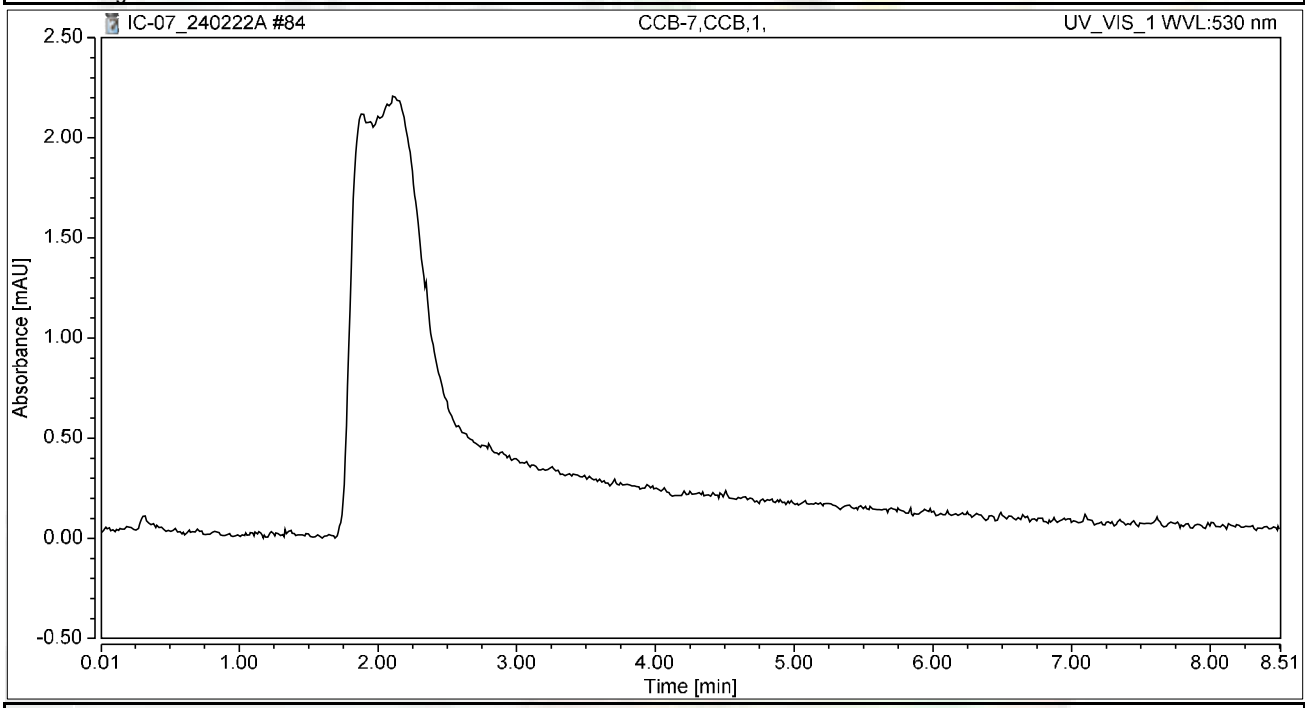
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.085	6.885	100.00	100.00	5.0456
Total:			**1.085**	**6.885**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 21:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

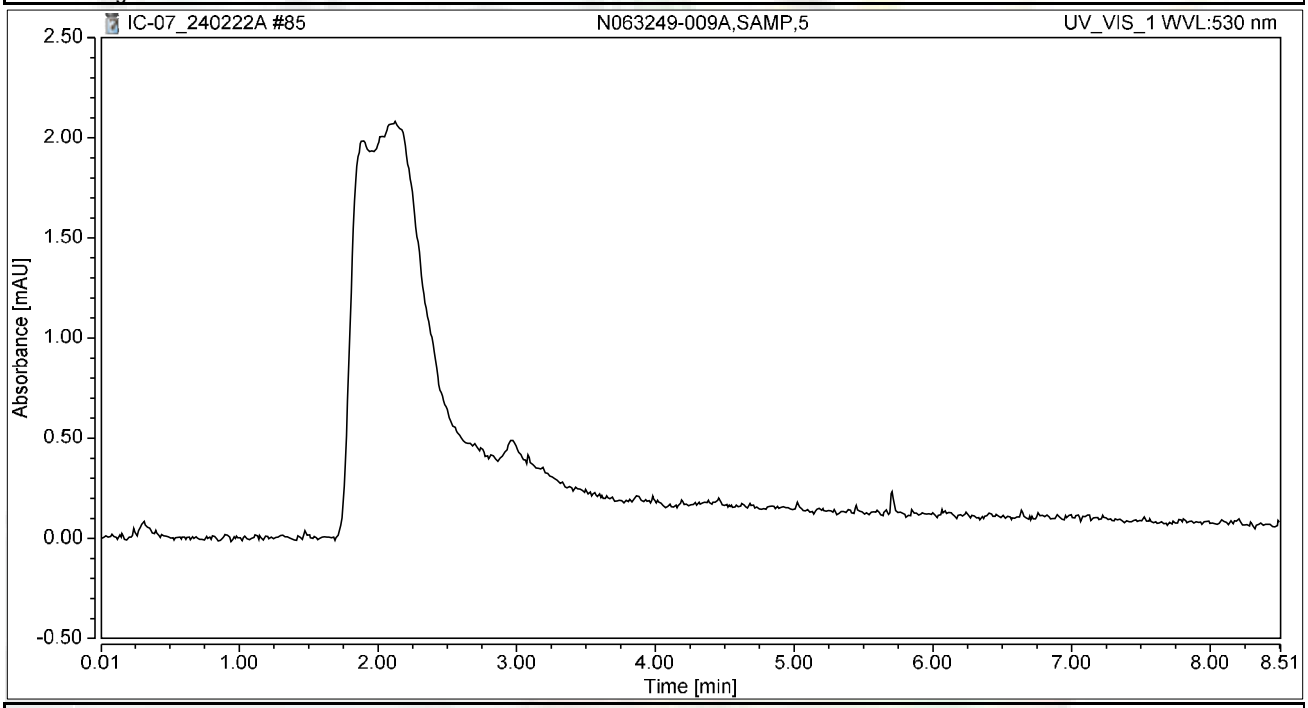
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-009A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 21:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

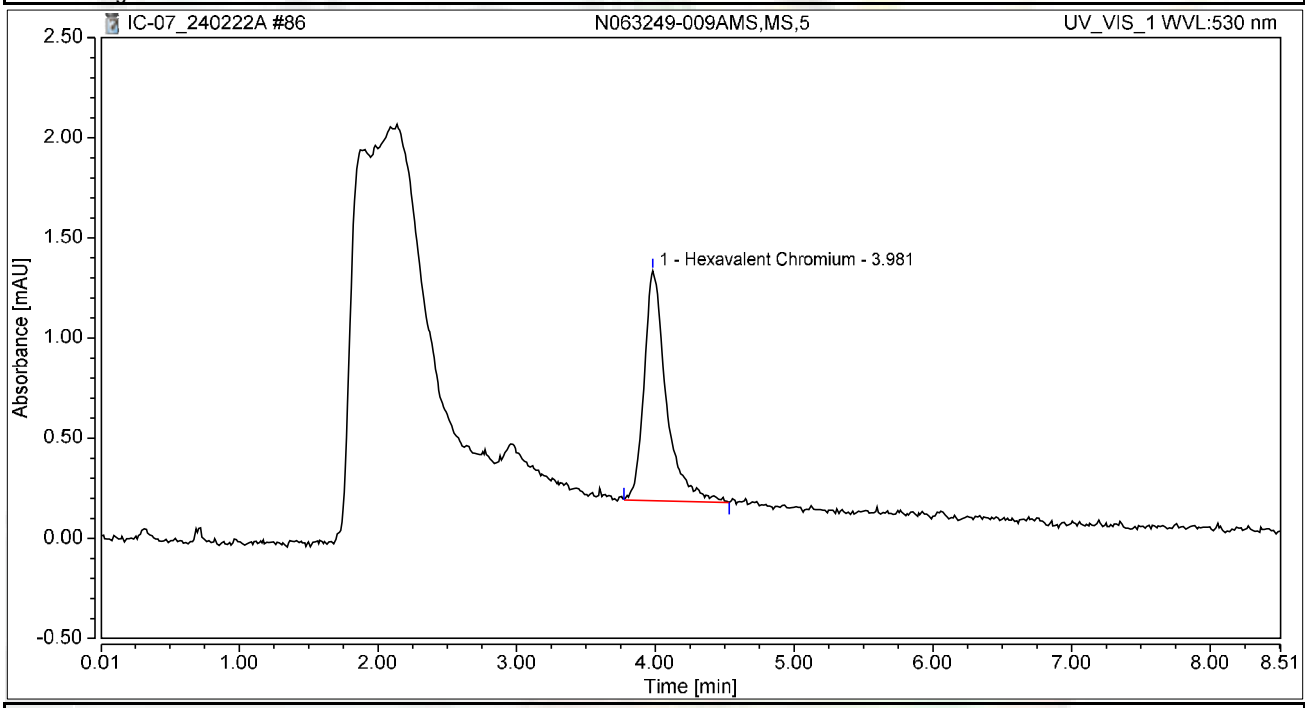
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-009AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 22:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

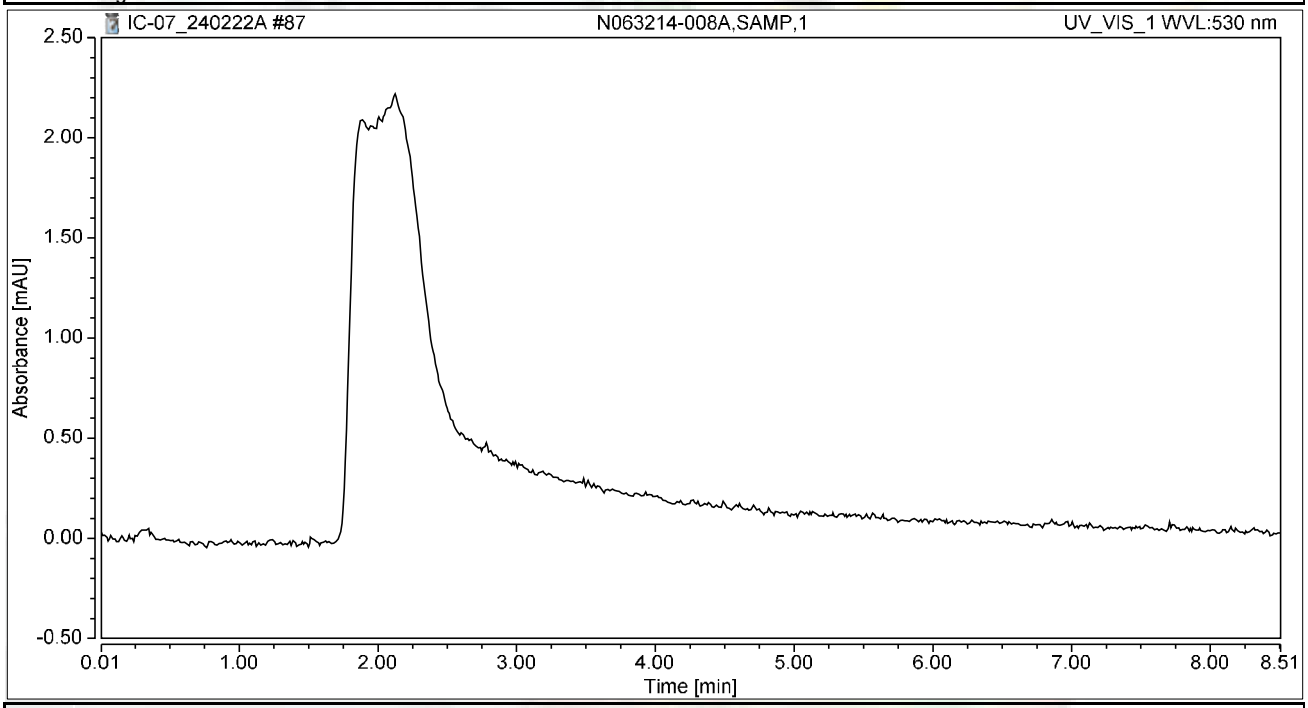
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.212	1.147	100.00	100.00	0.9859
Total:			**0.212**	**1.147**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 22:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

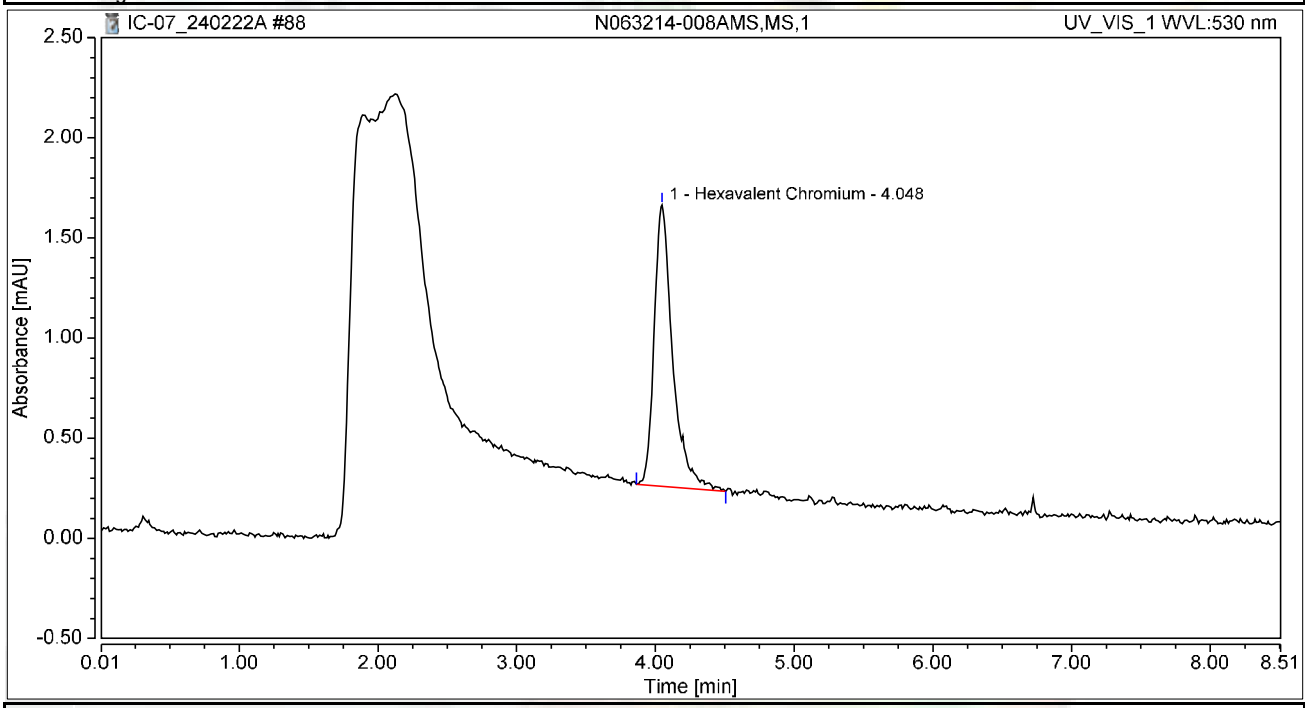
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 22:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

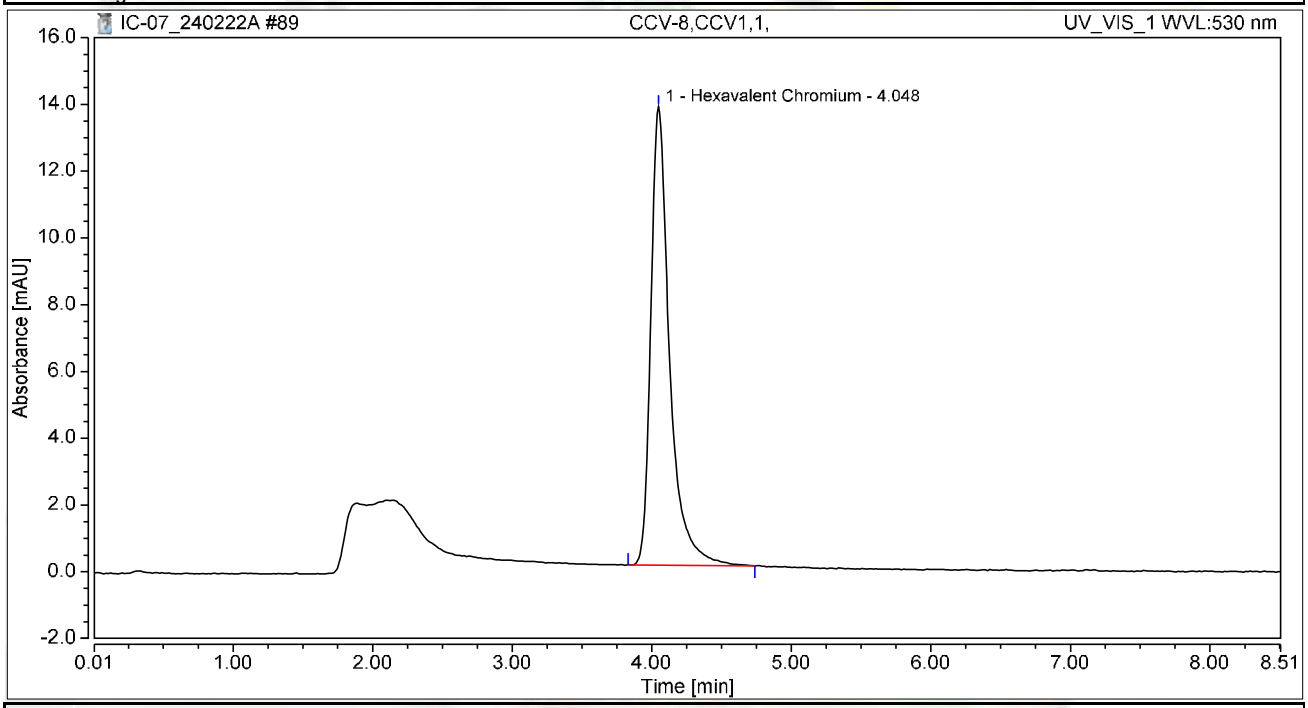
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.217	1.405	100.00	100.00	1.0101
Total:			**0.217**	**1.405**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-8,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 22:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

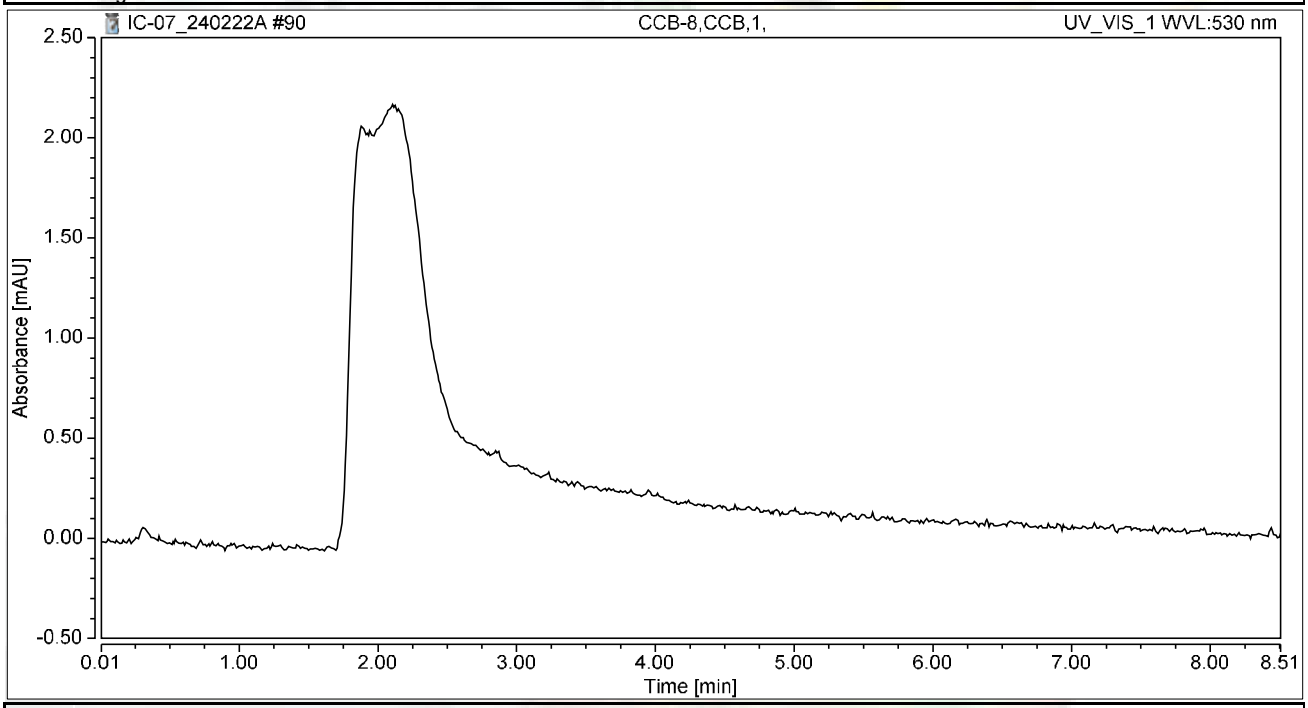
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.145	13.732	100.00	100.00	9.9728
Total:			**2.145**	**13.732**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-8,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 22:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

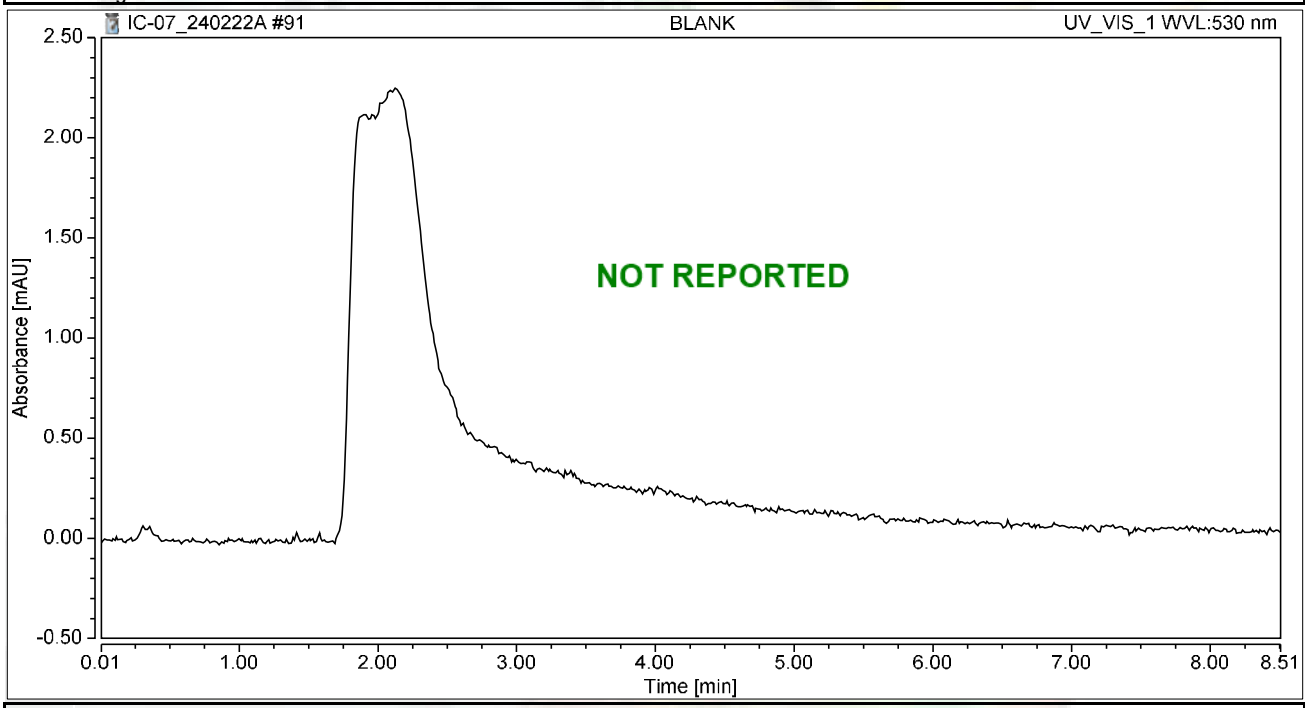
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 22:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240223A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/23/24 9:11 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/23/24 9:24 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/23/24 9:34 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/23/24 9:43 AM	Reported
13	MB-R182899	MBLK	1	Hexavalent Chromium	02/23/24 9:53 AM	Reported
14	LCS-R182899	LCS	1	Hexavalent Chromium	02/23/24 10:02 AM	Reported
15	N063248-001A	SAMP	1	Hexavalent Chromium	02/23/24 10:27 AM	Reported
16	N063248-003A	SAMP	1	Hexavalent Chromium	02/23/24 10:39 AM	Not Reported
17	N063248-005A	SAMP	1	Hexavalent Chromium	02/23/24 10:48 AM	Not Reported
18	N063248-006A	SAMP	1	Hexavalent Chromium	02/23/24 10:58 AM	Not Reported
19	N063248-007A	SAMP	1	Hexavalent Chromium	02/23/24 11:07 AM	Not Reported
20	N063248-003A	SAMP	100	Hexavalent Chromium	02/23/24 11:17 AM	Reported
21	N063248-003AMS	MS	100	Hexavalent Chromium	02/23/24 11:26 AM	Reported
22	N063248-003AMSD	MSD	100	Hexavalent Chromium	02/23/24 11:36 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/23/24 11:45 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/23/24 11:54 AM	Reported
25	N063248-001AMS	MS	1	Hexavalent Chromium	02/23/24 12:04 PM	Reported
26	N063248-005AMS	MS	1	Hexavalent Chromium	02/23/24 12:13 PM	Not Reported
27	N063248-011A	SAMP	1	Hexavalent Chromium	02/23/24 12:23 PM	Not Reported
28	N063248-011AMS	MS	1	Hexavalent Chromium	02/23/24 12:32 PM	Not Reported
29	N063248-006AMS	MS	1	Hexavalent Chromium	02/23/24 12:42 PM	Not Reported
30	N063248-007AMS	MS	1	Hexavalent Chromium	02/23/24 12:51 PM	Not Reported
31	N063248-002A	SAMP	50	Hexavalent Chromium	02/23/24 1:01 PM	Reported
32	N063248-002AMS	MS	50	Hexavalent Chromium	02/23/24 1:10 PM	Reported
33	N063248-004A	SAMP	5	Hexavalent Chromium	02/23/24 1:20 PM	Not Reported
34	N063248-004AMS	MS	5	Hexavalent Chromium	02/23/24 1:29 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/23/24 1:39 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/23/24 1:48 PM	Reported
37	N063248-010A	SAMP	5	Hexavalent Chromium	02/23/24 1:57 PM	Reported
38	N063248-010AMS	MS	5	Hexavalent Chromium	02/23/24 2:07 PM	Reported
39	N063248-008A	SAMP	1	Hexavalent Chromium	02/23/24 2:16 PM	Not Reported
40	N063248-008AMS	MS	1	Hexavalent Chromium	02/23/24 2:26 PM	Not Reported
41	N063248-009A	SAMP	1	Hexavalent Chromium	02/23/24 2:35 PM	Reported
42	N063248-009AMS	MS	1	Hexavalent Chromium	02/23/24 2:45 PM	Reported

Reviewed by:

JRB 2/27/2024

IC-07 / RBA / 2/26/2024 4:29 PM

INJECTION LOG: 240223A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063248-008A	SAMP	5	Hexavalent Chromium	02/23/24 2:54 PM	Reported
44	N063248-008AMS	MS	5	Hexavalent Chromium	02/23/24 3:04 PM	Reported
45	N063214-017A	SAMP	1	Hexavalent Chromium	02/23/24 3:13 PM	Reported
46	MB-107024	MBLK	1	Hexavalent Chromium	02/23/24 3:23 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/23/24 3:32 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/23/24 3:42 PM	Reported
49	N063246-001A	SAMP	1	Hexavalent Chromium	02/23/24 3:51 PM	Reported
50	N063246-001AREP	DUP	1	Hexavalent Chromium	02/23/24 4:00 PM	Reported
51	N063248-002ADUP	DUP	50	Hexavalent Chromium	02/23/24 4:14 PM	Reported
52	N063214-017AMS	MS	1	Hexavalent Chromium	02/23/24 4:26 PM	Reported
53	N063249-017A	SAMP	1	Hexavalent Chromium	02/23/24 4:35 PM	Reported
54	N063249-017AMS	MS	1	Hexavalent Chromium	02/23/24 4:45 PM	Reported
55	N063248-004A	SAMP	50	Hexavalent Chromium	02/23/24 4:54 PM	Reported
56	N063248-004AMS	MS	50	Hexavalent Chromium	02/23/24 5:23 PM	Reported
57	N063248-005A	SAMP	5	Hexavalent Chromium	02/23/24 5:34 PM	Reported
58	N063248-005AMS	MS	5	Hexavalent Chromium	02/23/24 5:43 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/23/24 5:53 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/23/24 6:02 PM	Reported
61	N063248-006A	SAMP	5	Hexavalent Chromium	02/23/24 6:12 PM	Reported
62	N063248-006AMS	MS	5	Hexavalent Chromium	02/23/24 6:21 PM	Reported
63	N063248-007A	SAMP	5	Hexavalent Chromium	02/23/24 6:31 PM	Reported
64	N063248-007AMS	MS	5	Hexavalent Chromium	02/23/24 6:40 PM	Reported
65	N063248-011A	SAMP	5	Hexavalent Chromium	02/23/24 6:50 PM	Reported
66	N063248-011AMS	MS	5	Hexavalent Chromium	02/23/24 6:59 PM	Reported
67	N063249-012A	SAMP	1	Hexavalent Chromium	02/23/24 7:09 PM	Reported
68	N063249-012AMS	MS	1	Hexavalent Chromium	02/23/24 7:18 PM	Reported
69	N063249-014A	SAMP	1	Hexavalent Chromium	02/23/24 7:27 PM	Reported
70	N063249-014AMS	MS	1	Hexavalent Chromium	02/23/24 7:37 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/23/24 7:46 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/23/24 7:56 PM	Reported
73	N063249-016A	SAMP	1	Hexavalent Chromium	02/23/24 8:05 PM	Reported
74	N063249-016AMS	MS	1	Hexavalent Chromium	02/23/24 8:15 PM	Reported
75	N063249-011A	SAMP	1	Hexavalent Chromium	02/23/24 8:24 PM	Not Reported
76	N063249-011AMS	MS	1	Hexavalent Chromium	02/23/24 8:34 PM	Not Reported
77	N063249-011A	SAMP	5	Hexavalent Chromium	02/23/24 8:43 PM	Reported
78	N063249-011AMS	MS	5	Hexavalent Chromium	02/23/24 8:53 PM	Reported
79	N063249-013A	SAMP	1	Hexavalent Chromium	02/23/24 9:02 PM	Not Reported
80	N063249-013AMS	MS	1	Hexavalent Chromium	02/23/24 9:12 PM	Not Reported
81	N063249-013A	SAMP	5	Hexavalent Chromium	02/23/24 9:21 PM	Reported
82	N063249-013AMS	MS	5	Hexavalent Chromium	02/23/24 9:30 PM	Reported
83	CCV-7	CCV	1	Hexavalent Chromium	02/23/24 9:40 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	02/23/24 9:49 PM	Reported

INJECTION LOG: 240223A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063249-015A	SAMP	1	Hexavalent Chromium	02/23/24 9:59 PM	Not Reported
86	N063249-015AMS	MS	1	Hexavalent Chromium	02/23/24 10:08 PM	Not Reported
87	N063249-015A	SAMP	5	Hexavalent Chromium	02/23/24 10:18 PM	Reported
88	N063249-015AMS	MS	5	Hexavalent Chromium	02/23/24 10:27 PM	Reported
89	CCV-8	CCV1	1	Hexavalent Chromium	02/23/24 10:37 PM	Reported
90	CCB-8	CCB	1	Hexavalent Chromium	02/23/24 10:46 PM	Reported
91	BLANK	BLANK	1	Hexavalent Chromium	02/23/24 10:56 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240223A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**23/Feb/24 23:26:19**
No. of Injections:	**94**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/23/2024 09:11	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/23/2024 09:24	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/23/2024 09:34	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/23/2024 09:43	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/23/2024 09:53	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/23/2024 10:02	Finished	LCS @5ppb, IWST-231228B
15	N063248-001A,SAMF	1	1000	Unknown		02/23/2024 10:27	Finished	SAMP,10 mL
16	N063248-003A,SAMF	2	1000	Unknown		02/23/2024 10:39	Finished	SAMP,10 mL
17	N063248-005A,SAMF	3	1000	Unknown		02/23/2024 10:48	Finished	SAMP,10 mL
18	N063248-006A,SAMF	4	1000	Unknown		02/23/2024 10:58	Finished	SAMP,10 mL
19	N063248-007A,SAMF	5	1000	Unknown		02/23/2024 11:07	Finished	SAMP,10 mL
20	N063248-003A,SAMF	6	1000	Unknown		02/23/2024 11:17	Finished	SAMP,0.1>10 mL
21	N063248-003AMS,MS	7	1000	Unknown		02/23/2024 11:26	Finished	MS (5ppb), IWST-231228B,0.1
22	N063248-003AMSD,M	8	1000	Unknown		02/23/2024 11:36	Finished	MSD (5ppb), IWST-231228B,0
23	CCV-2,CCV1,1,	9	1000	Unknown		02/23/2024 11:45	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		02/23/2024 11:54	Finished	CCB R240129C
25	N063248-001AMS,MS	11	1000	Unknown		02/23/2024 12:04	Finished	MS (1ppb), IWST-231228B,10r
26	N063248-005AMS,MS	12	1000	Unknown		02/23/2024 12:13	Finished	MS (1ppb), IWST-231228B,10r
27	N063248-011A,SAMF	13	1000	Unknown		02/23/2024 12:23	Finished	SAMP,10 mL
28	N063248-011AMS,MS	14	1000	Unknown		02/23/2024 12:32	Finished	MS (1ppb), IWST-231228B,10r
29	N063248-006AMS,MS	15	1000	Unknown		02/23/2024 12:42	Finished	MS (1ppb), IWST-231228B,10r
30	N063248-007AMS,MS	16	1000	Unknown		02/23/2024 12:51	Finished	MS (1ppb), IWST-231228B,10r
31	N063248-002A,SAMF	17	1000	Unknown		02/23/2024 13:01	Finished	SAMP,0.2>10 mL
32	N063248-002AMS,MS	18	1000	Unknown		02/23/2024 13:10	Finished	MS (5ppb), IWST-231228B,0.2
33	N063248-004A,SAMF	19	1000	Unknown		02/23/2024 13:20	Finished	SAMP,2>10 mL
34	N063248-004AMS,MS	20	1000	Unknown		02/23/2024 13:29	Finished	MS (5ppb), IWST-231228B,2>1
35	CCV-3,CCV,1,	21	1000	Unknown		02/23/2024 13:39	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	22	1000	Unknown		02/23/2024 13:48	Finished	CCB R240129C
37	N063248-010A,SAMF	23	1000	Unknown		02/23/2024 13:57	Finished	SAMP,2>10 mL
38	N063248-010AMS,MS	24	1000	Unknown		02/23/2024 14:07	Finished	MS (5ppb), IWST-231228B,2>1
39	N063248-008A,SAMF	25	1000	Unknown		02/23/2024 14:16	Finished	SAMP,10 mL
40	N063248-008AMS,MS	26	1000	Unknown		02/23/2024 14:26	Finished	MS (1ppb), IWST-231228B,10r
41	N063248-009A,SAMF	27	1000	Unknown		02/23/2024 14:35	Finished	SAMP,10 mL
42	N063248-009AMS,MS	28	1000	Unknown		02/23/2024 14:45	Finished	MS (1ppb), IWST-231228B,10r
43	N063248-008A,SAMF	29	1000	Unknown		02/23/2024 14:54	Finished	SAMP,2>10 mL
44	N063248-008AMS,MS	30	1000	Unknown		02/23/2024 15:04	Finished	MS (1ppb), IWST-231228B,2>1
45	N063214-017A,SAMF	31	1000	Unknown		02/23/2024 15:13	Finished	SAMP,10 mL
46	MB-107024,MBLK,1,	32	1000	Unknown		02/23/2024 15:23	Finished	MB TCLP
47	CCV-4,CCV1,1,	33	1000	Unknown		02/23/2024 15:32	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	34	1000	Unknown		02/23/2024 15:42	Finished	CCB R240129C
49	N063246-001A,SAMF	35	1000	Unknown		02/23/2024 15:51	Finished	SAMP,10 mL
50	N063246-001AREP,D	36	1000	Unknown		02/23/2024 16:00	Finished	REP,10 mL
51	N063248-002ADUP,D	1	1000	Unknown		02/23/2024 16:14	Finished	DUP,0.2>10 mL
52	N063214-017AMS,MS	2	1000	Unknown		02/23/2024 16:26	Finished	MS (1ppb), IWST-231228B,10r
53	N063249-017A,SAMF	3	1000	Unknown		02/23/2024 16:35	Finished	SAMP,10 mL
54	N063249-017AMS,MS	4	1000	Unknown		02/23/2024 16:45	Finished	MS (1ppb), IWST-231228B,10r
55	N063248-004A,SAMF	5	1000	Unknown		02/23/2024 16:54	Finished	SAMP,0.2>10 mL
56	N063248-004AMS,MS	1	1000	Unknown		02/23/2024 17:23	Finished	MS (5ppb), IWST-231228B,0.2
57	N063248-005A,SAMF	2	1000	Unknown		02/23/2024 17:34	Finished	SAMP,2>10 mL
58	N063248-005AMS,MS	3	1000	Unknown		02/23/2024 17:43	Finished	MS (1ppb), IWST-231228B,2>1
59	CCV-5,CCV,1,	4	1000	Unknown		02/23/2024 17:53	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	5	1000	Unknown		02/23/2024 18:02	Finished	CCB R240129C

61	N063248-006A,SAMP	6	1000	Unknown		02/23/2024 18:12	Finished	SAMP,2>10 mL
62	N063248-006AMS,MS	7	1000	Unknown		02/23/2024 18:21	Finished	MS (1ppb), IWST-231228B,2>1
63	N063248-007A,SAMP	8	1000	Unknown		02/23/2024 18:31	Finished	SAMP,2>10 mL
64	N063248-007AMS,MS	9	1000	Unknown		02/23/2024 18:40	Finished	MS (1ppb), IWST-231228B,2>1
65	N063248-011A,SAMP	10	1000	Unknown		02/23/2024 18:50	Finished	SAMP,2>10 mL
66	N063248-011AMS,MS	11	1000	Unknown		02/23/2024 18:59	Finished	MS (1ppb), IWST-231228B,2>1
67	N063249-012A,SAMP	12	1000	Unknown		02/23/2024 19:09	Finished	SAMP,10 mL
68	N063249-012AMS,MS	13	1000	Unknown		02/23/2024 19:18	Finished	MS (1ppb), IWST-231228B,10r
69	N063249-014A,SAMP	14	1000	Unknown		02/23/2024 19:27	Finished	SAMP,10 mL
70	N063249-014AMS,MS	15	1000	Unknown		02/23/2024 19:37	Finished	MS (1ppb), IWST-231228B,10r
71	CCV-6,CCV1,1,	16	1000	Unknown		02/23/2024 19:46	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	17	1000	Unknown		02/23/2024 19:56	Finished	CCB R240129C
73	N063249-016A,SAMP	18	1000	Unknown		02/23/2024 20:05	Finished	SAMP,10 mL
74	N063249-016AMS,MS	19	1000	Unknown		02/23/2024 20:15	Finished	MS (1ppb), IWST-231228B,10r
75	N063249-011A,SAMP	20	1000	Unknown		02/23/2024 20:24	Finished	SAMP,10 mL
76	N063249-011AMS,MS	21	1000	Unknown		02/23/2024 20:34	Finished	MS (1ppb), IWST-231228B,10r
77	N063249-011A,SAMP	22	1000	Unknown		02/23/2024 20:43	Finished	SAMP,2>10 mL
78	N063249-011AMS,MS	23	1000	Unknown		02/23/2024 20:53	Finished	MS (1ppb), IWST-231228B,2>1
79	N063249-013A,SAMP	24	1000	Unknown		02/23/2024 21:02	Finished	SAMP,10 mL
80	N063249-013AMS,MS	25	1000	Unknown		02/23/2024 21:12	Finished	MS (1ppb), IWST-231228B,10r
81	N063249-013A,SAMP	26	1000	Unknown		02/23/2024 21:21	Finished	SAMP,2>10 mL
82	N063249-013AMS,MS	27	1000	Unknown		02/23/2024 21:30	Finished	MS (1ppb), IWST-231228B,2>1
83	CCV-7,CCV,1,	28	1000	Unknown		02/23/2024 21:40	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	29	1000	Unknown		02/23/2024 21:49	Finished	CCB R240129C
85	N063249-015A,SAMP	30	1000	Unknown		02/23/2024 21:59	Finished	SAMP,10 mL
86	N063249-015AMS,MS	31	1000	Unknown		02/23/2024 22:08	Finished	MS (1ppb), IWST-231228B,10r
87	N063249-015A,SAMP	32	1000	Unknown		02/23/2024 22:18	Finished	SAMP,2>10 mL
88	N063249-015AMS,MS	33	1000	Unknown		02/23/2024 22:27	Finished	MS (1ppb), IWST-231228B,2>1
89	CCV-8,CCV1,1,	34	1000	Unknown		02/23/2024 22:37	Finished	CCV @10ppb, IWST-231228A
90	CCB-8,CCB,1,	35	1000	Unknown		02/23/2024 22:46	Finished	CCB R240129C
91	BLANK	36	1000	Unknown		02/23/2024 22:56	Finished	BLANK
92	SHUTDOWN R240222A	37	1000	Unknown		02/23/2024 23:05	Finished	
93	Eluent: ~~R240220A~~	38	1000	Unknown		n.a.	Finished	
94	PCR: ~~R240220B~~ R240222B	39	1000	Unknown		n.a.	Finished	

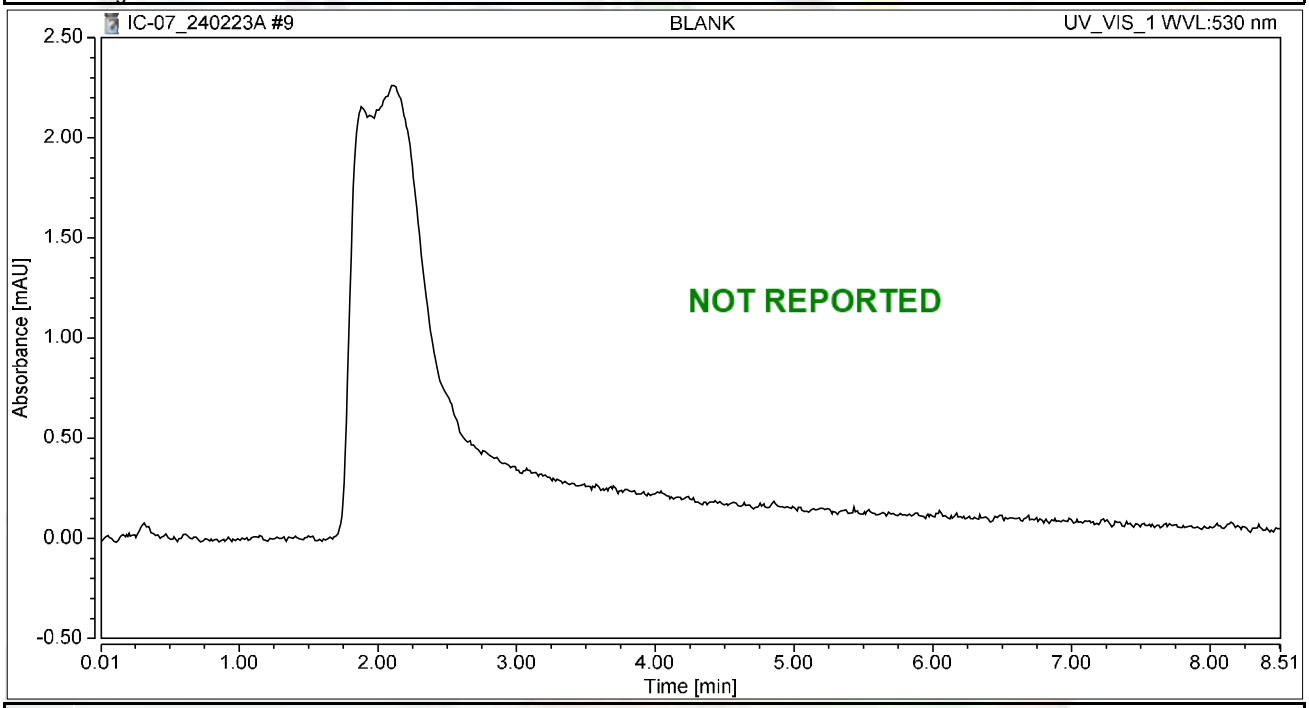
dMocha 3/7/2024
for RBA

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 09:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

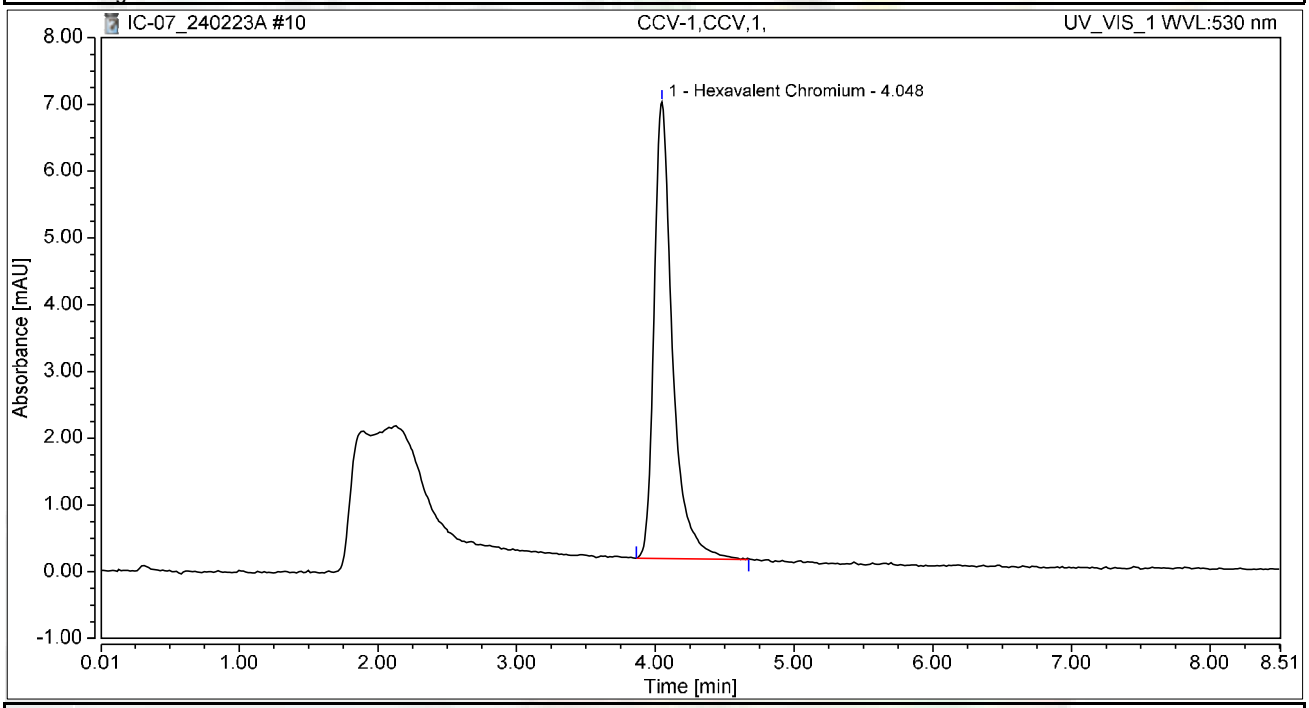
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 09:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.056	6.840	100.00	100.00	4.9105
Total:			**1.056**	**6.840**	**100.00**	**100.00**	

Reviewed by:

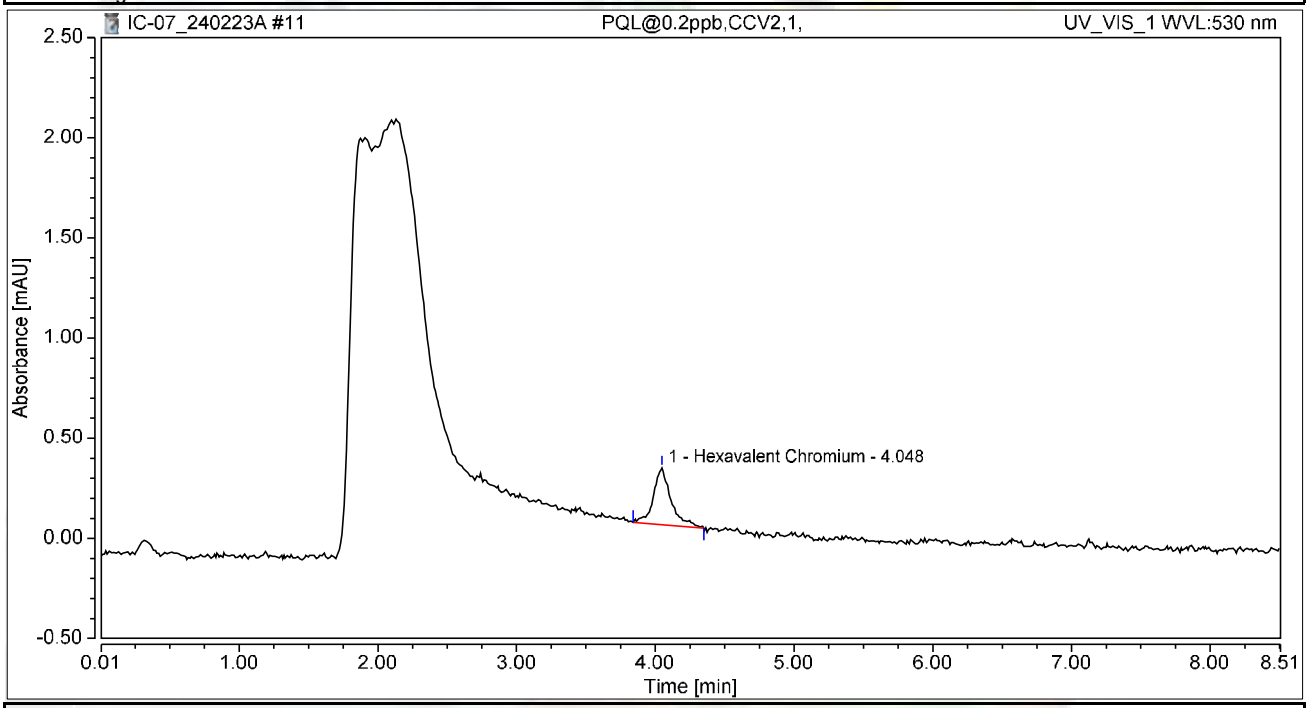
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 09:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

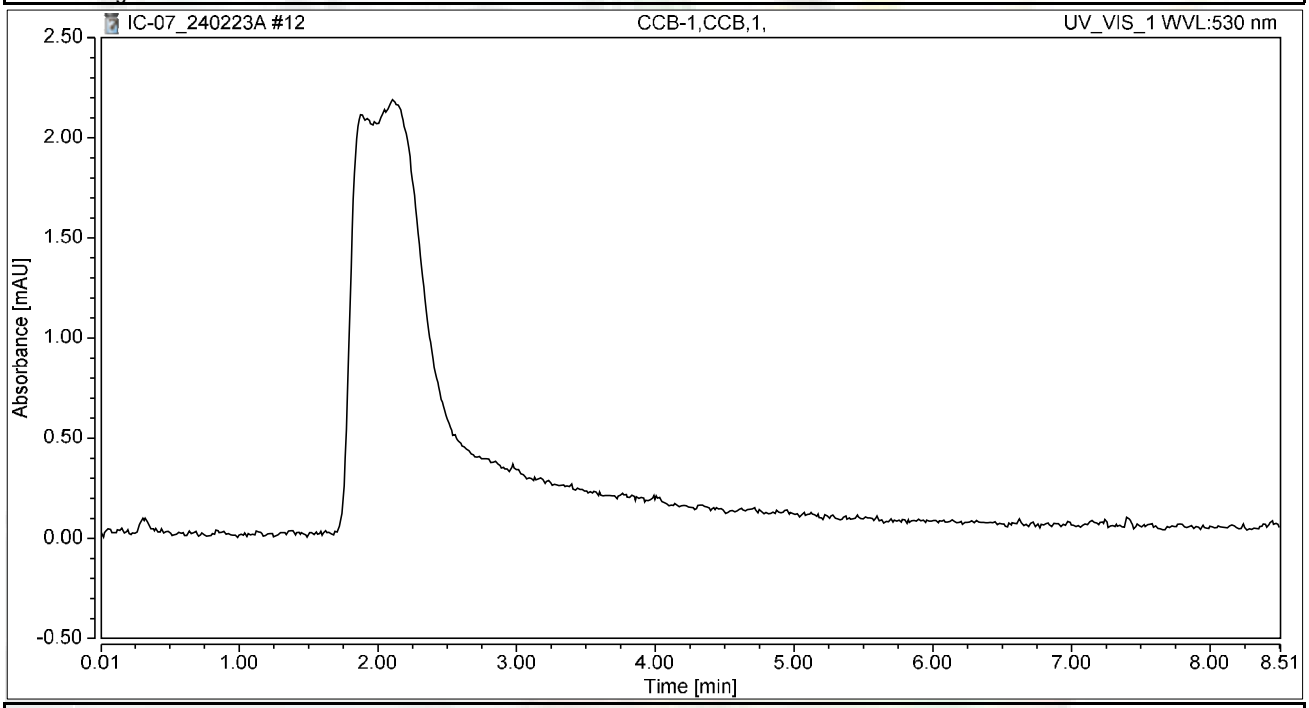
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.042	0.285	100.00	100.00	0.1946
Total:			**0.042**	**0.285**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 09:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

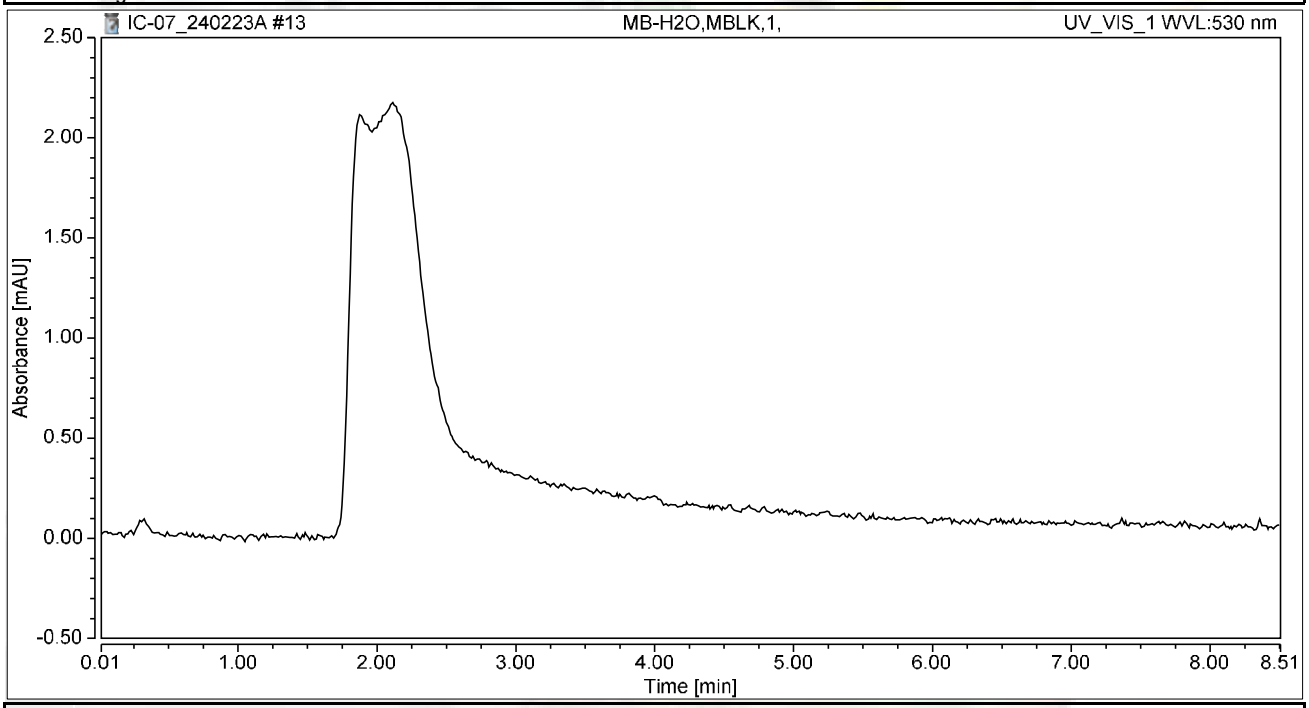
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 09:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

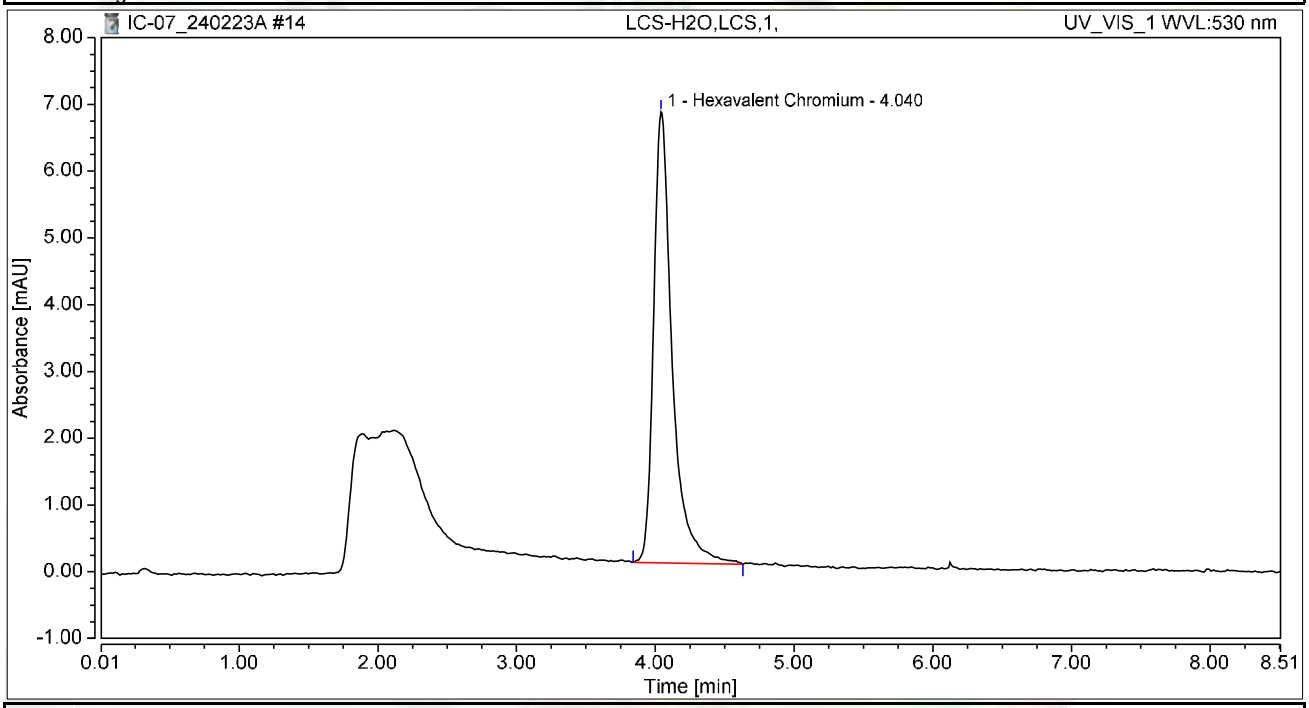
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 10:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

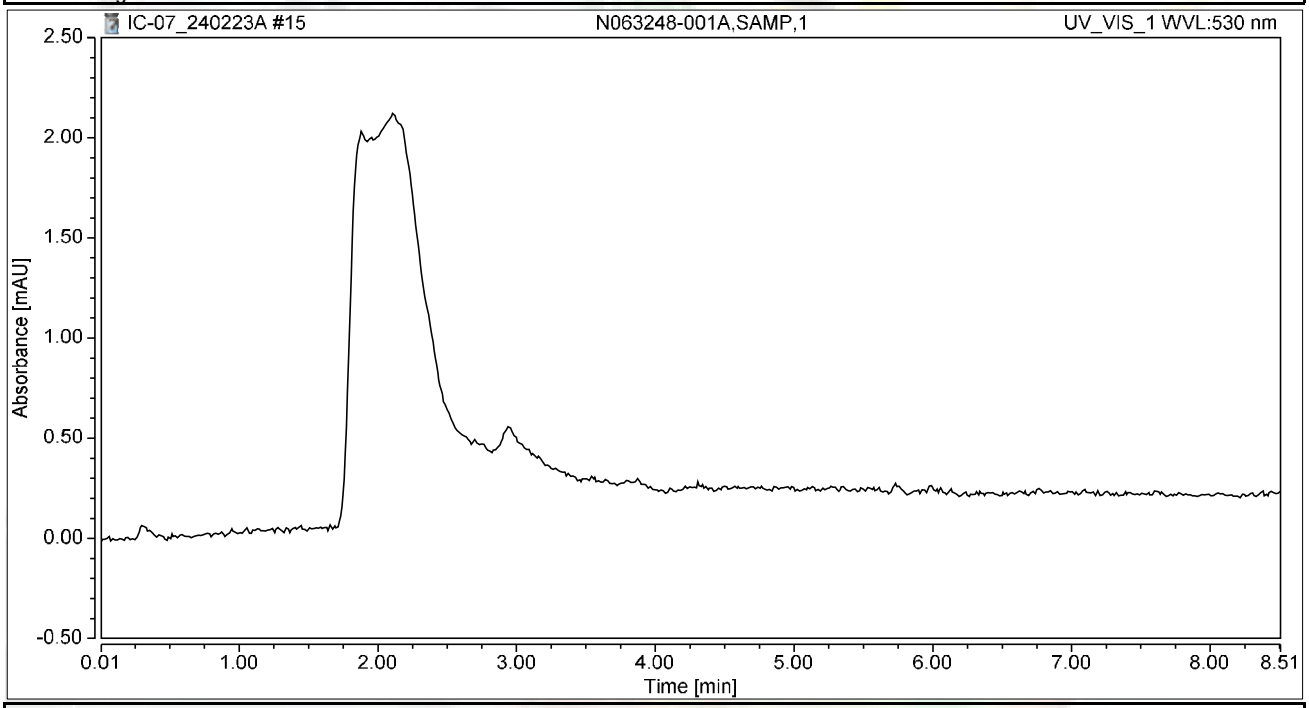
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.050	6.754	100.00	100.00	4.8836
Total:			**1.050**	**6.754**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 10:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

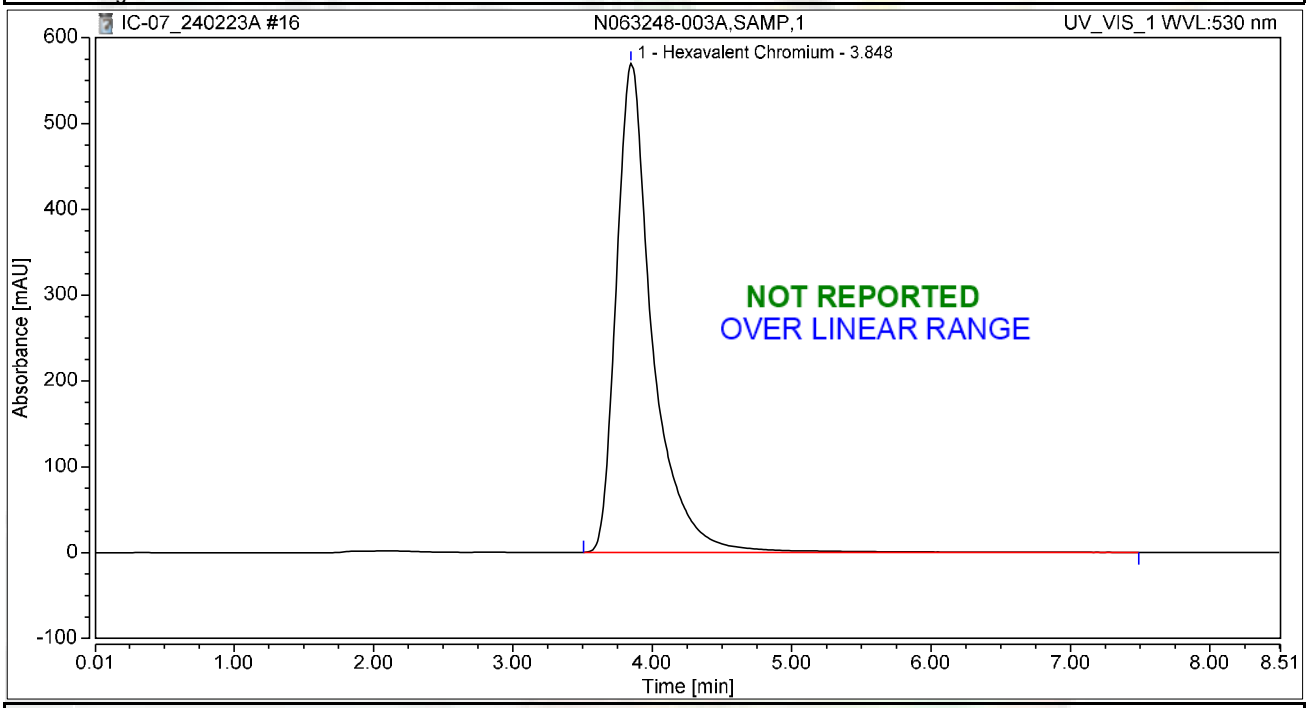
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 10:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

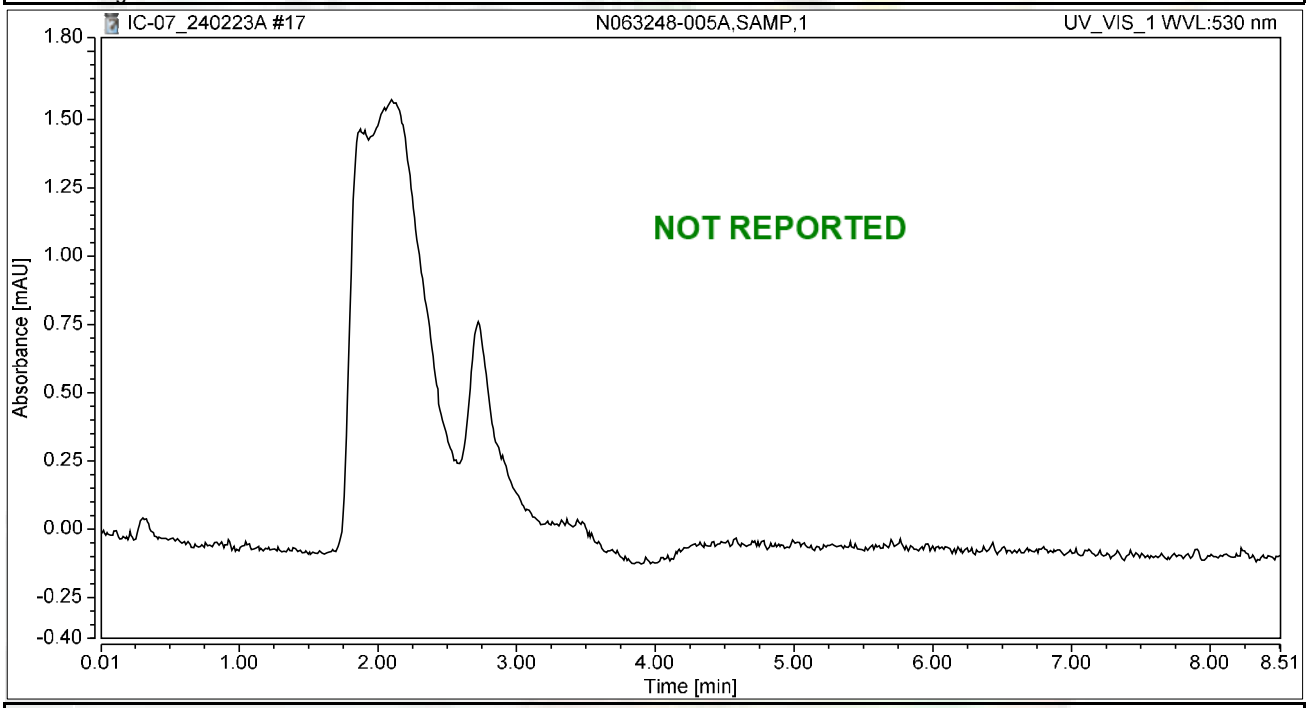
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.848	171.021	569.893	100.00	100.00	795.0688
Total:			**171.021**	**569.893**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 10:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

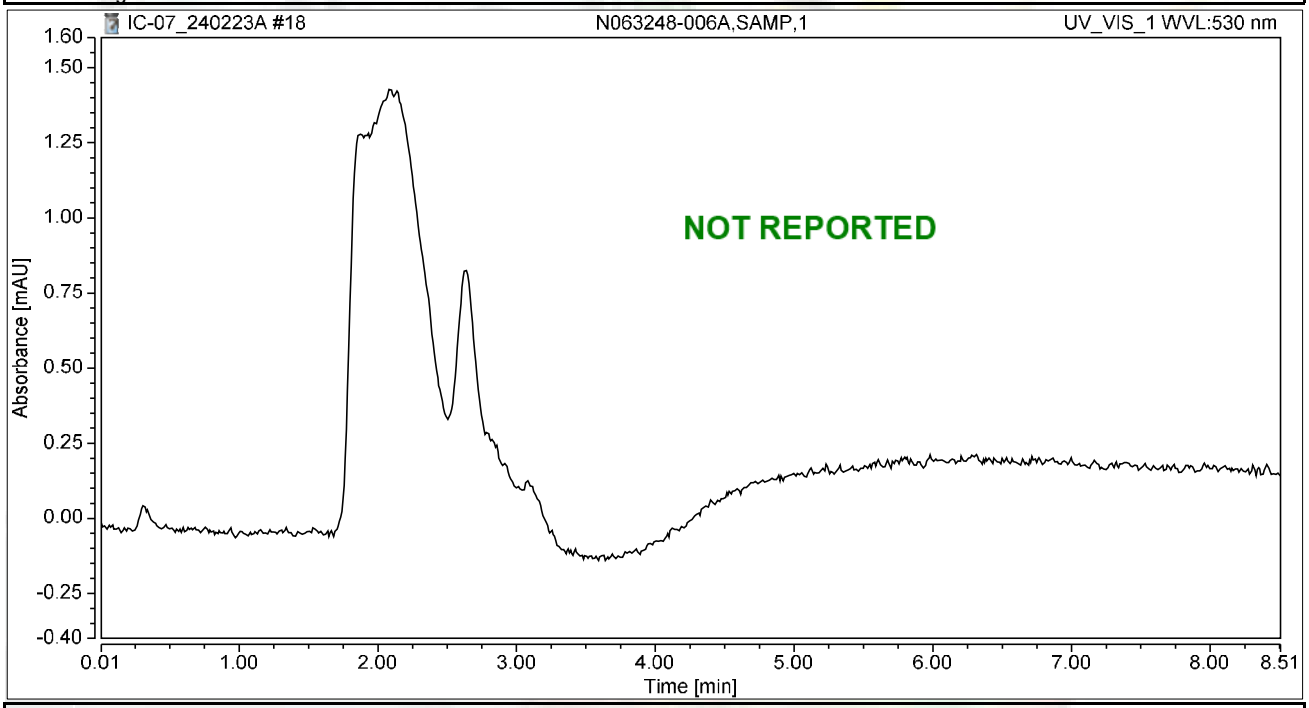
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 10:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

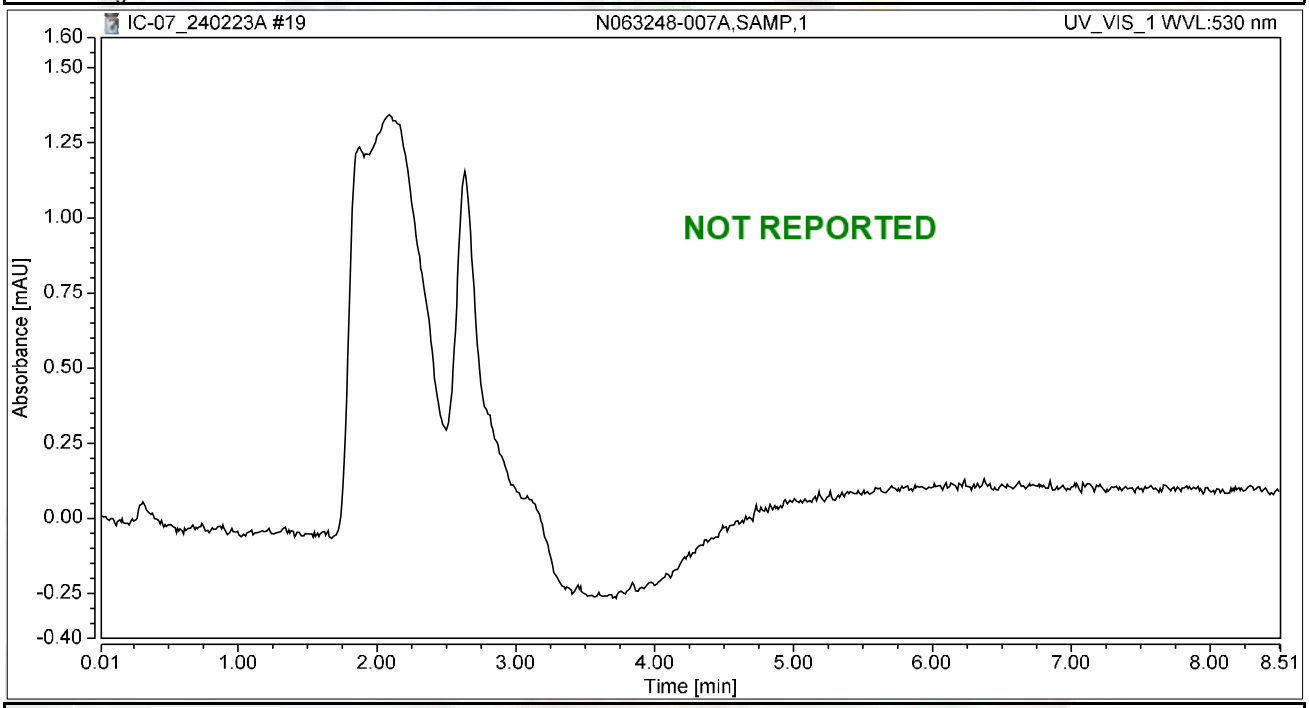
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-007A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 11:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

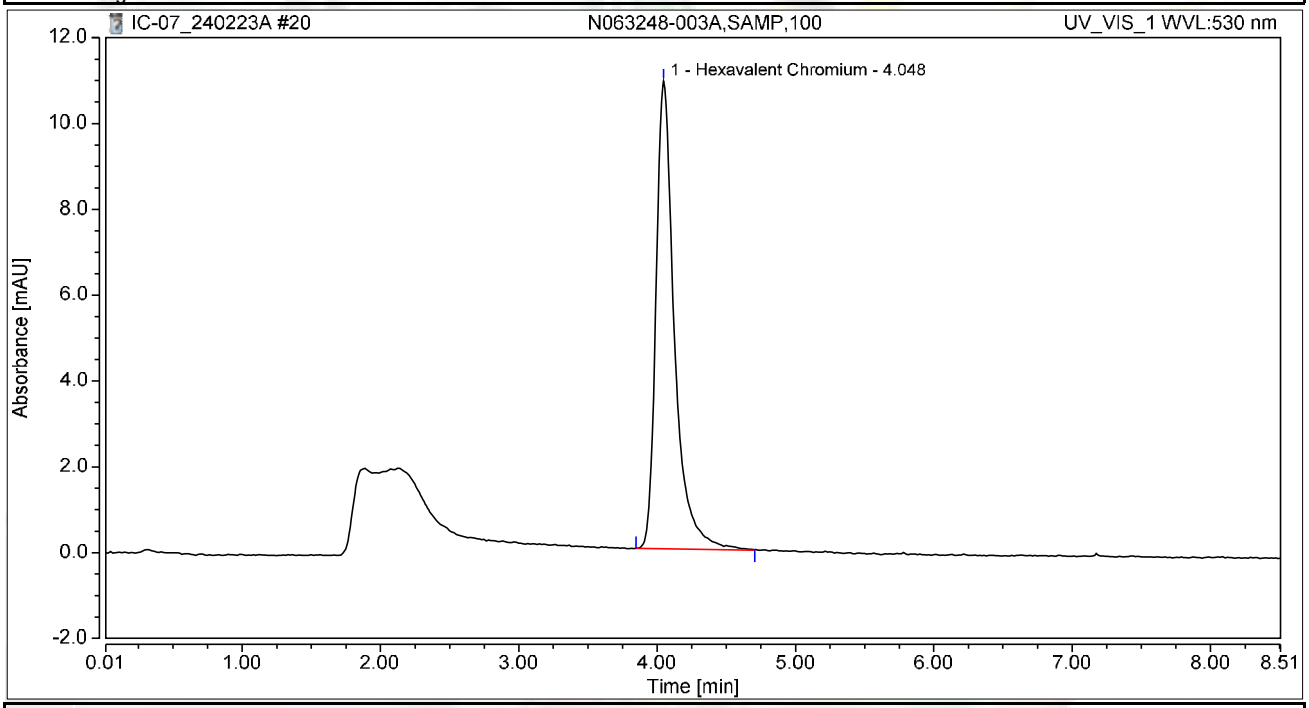
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-003A,SAMP,100**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 11:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

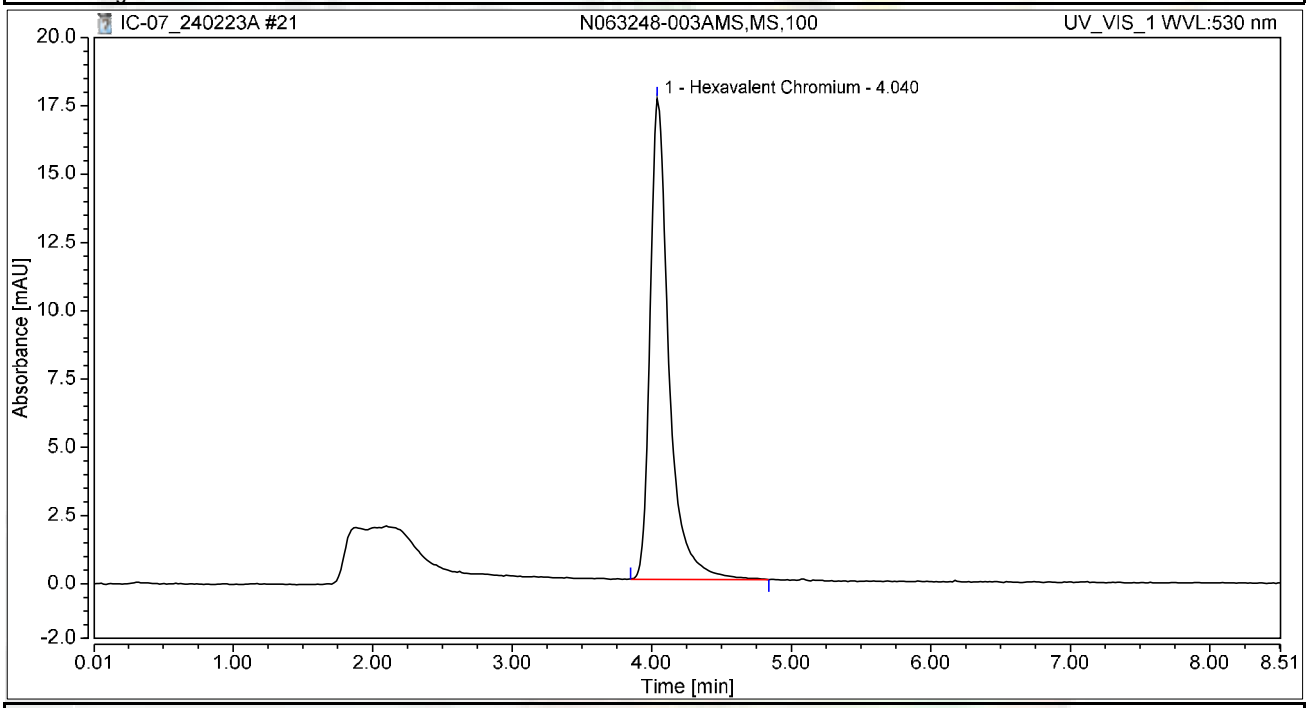
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.681	10.896	100.00	100.00	7.8137
Total:			**1.681**	**10.896**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-003AMS,MS,100**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 11:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

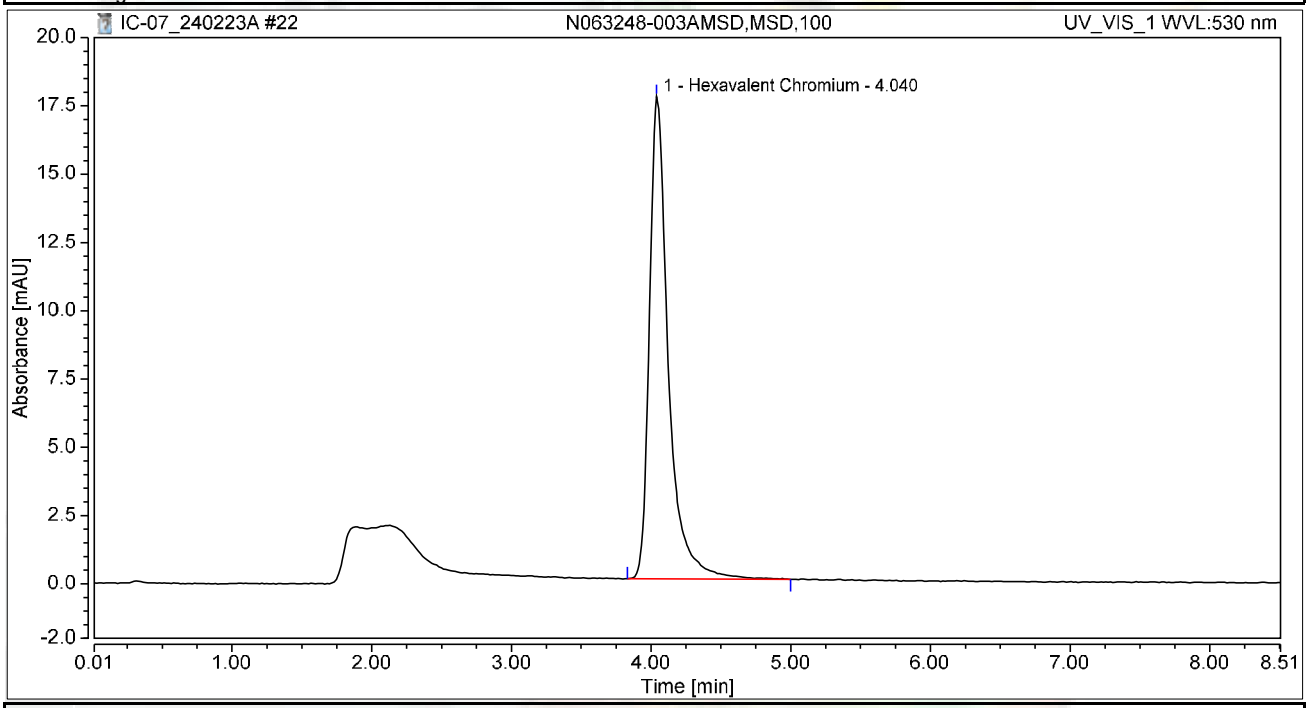
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.765	17.608	100.00	100.00	12.8561
Total:			**2.765**	**17.608**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-003AMSD,MSD,100**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 11:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

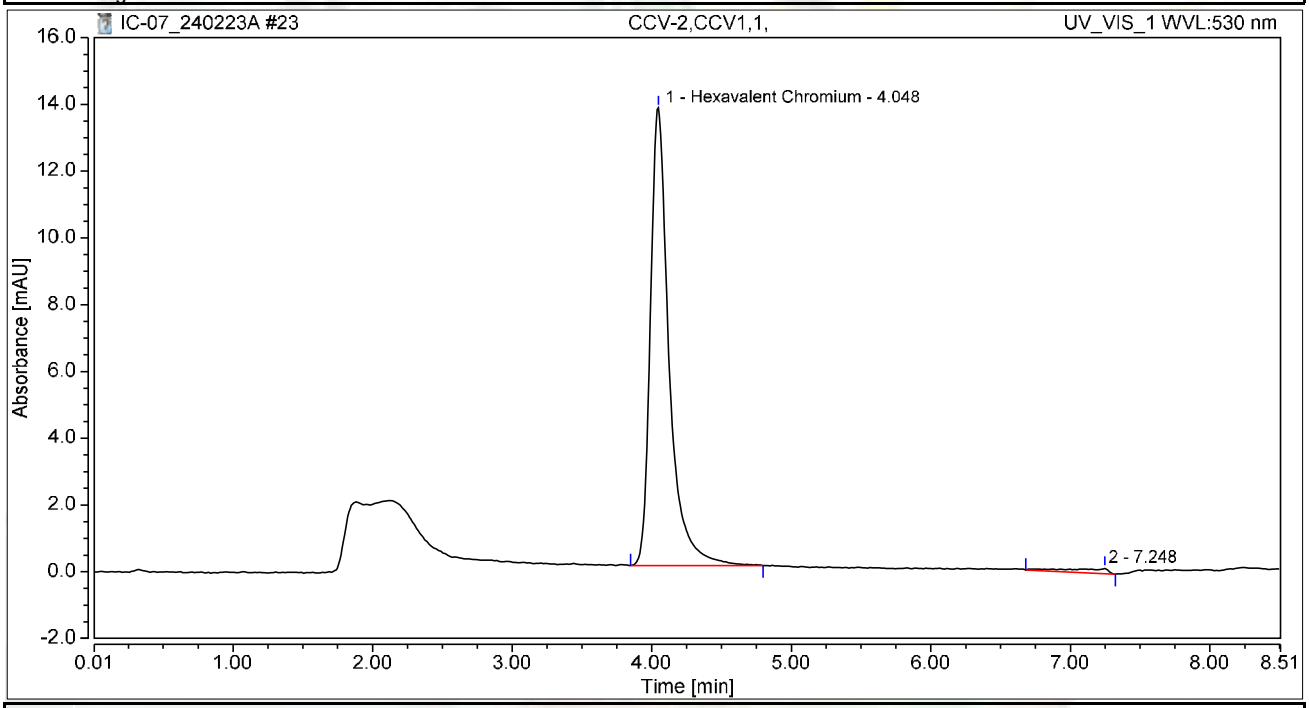
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.780	17.665	100.00	100.00	12.9234
Total:			**2.780**	**17.665**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 11:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

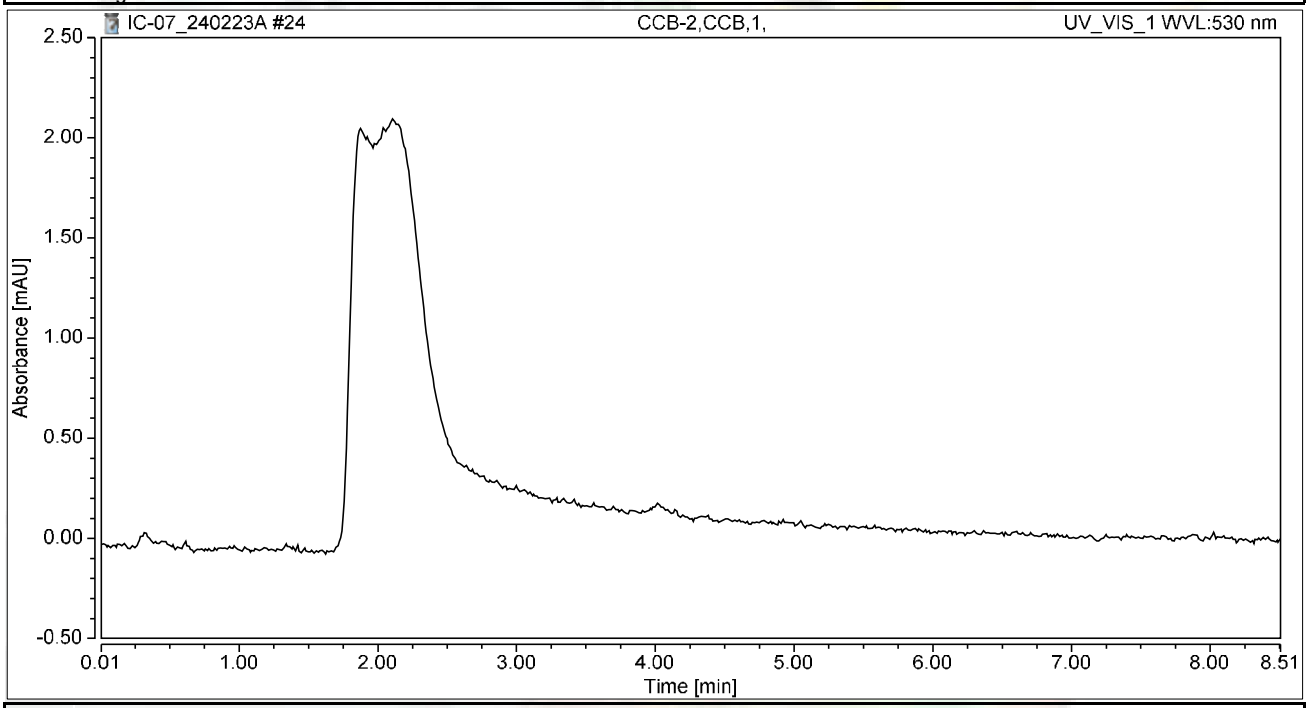
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.136	13.716	97.76	98.82	9.9284
2		7.248	0.049	0.164	2.24	1.18	n.a.
Total:			**2.185**	**13.880**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 11:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

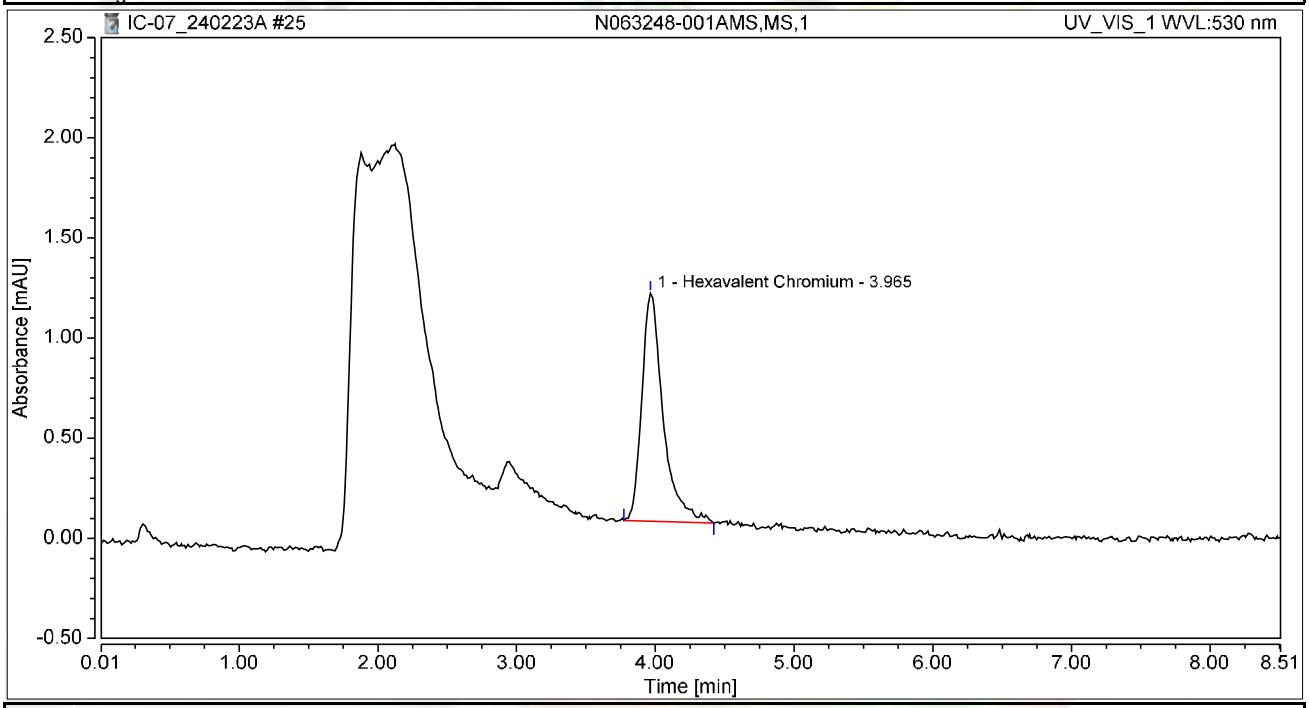
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

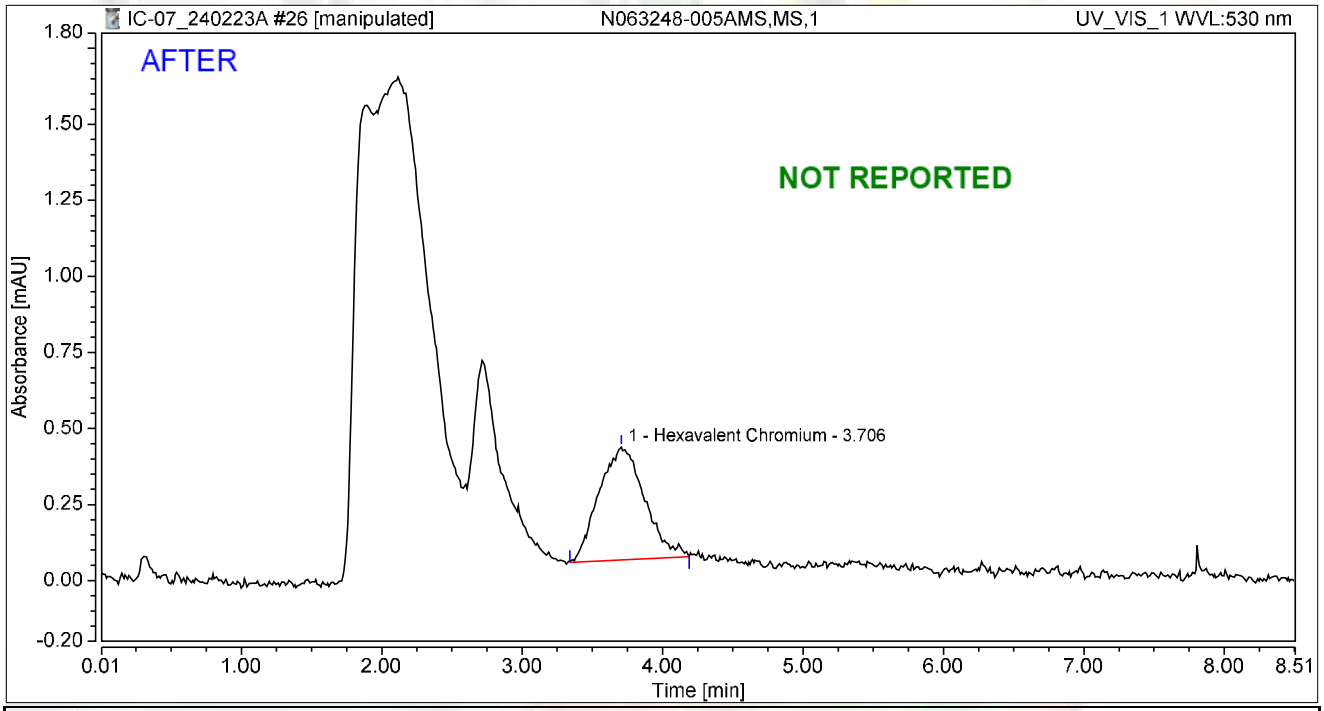
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.203	1.139	100.00	100.00	0.9445
Total:			**0.203**	**1.139**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

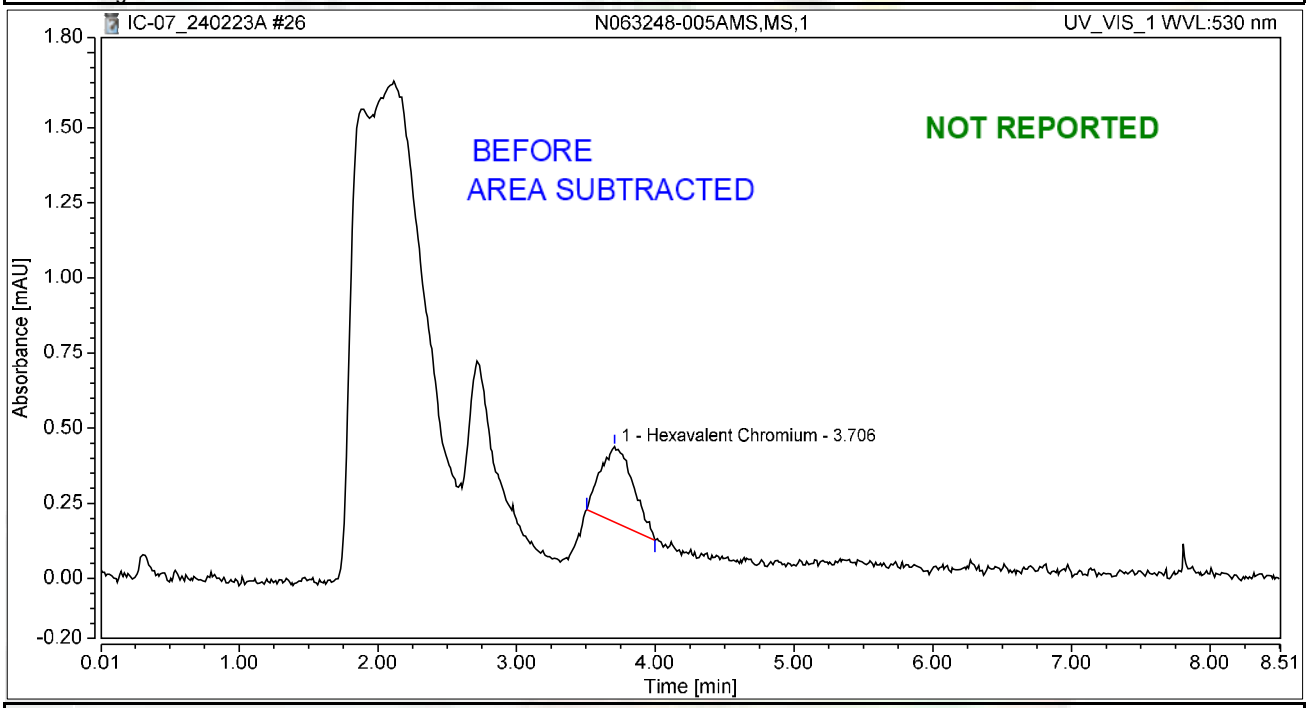
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.706	0.140	0.372	100.00	100.00	0.6496
Total:			**0.140**	**0.372**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

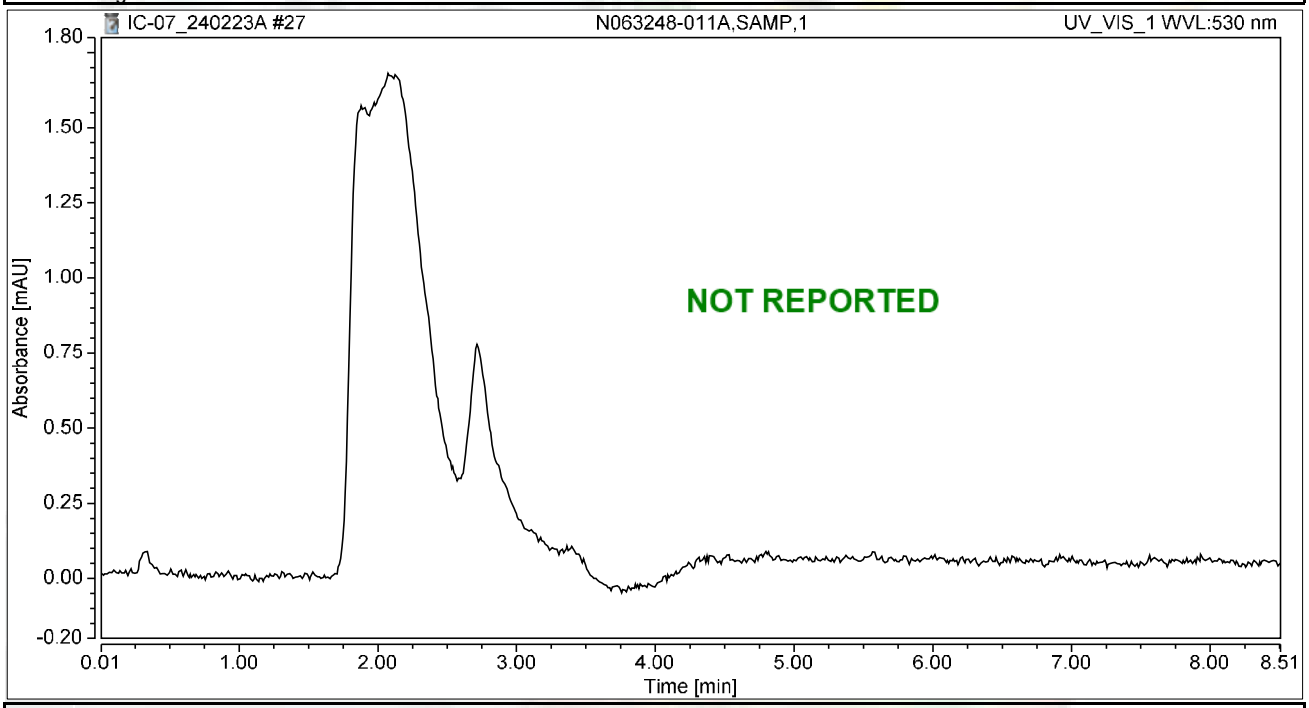
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.706	0.069	0.251	100.00	100.00	0.3207
Total:			**0.069**	**0.251**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-011A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

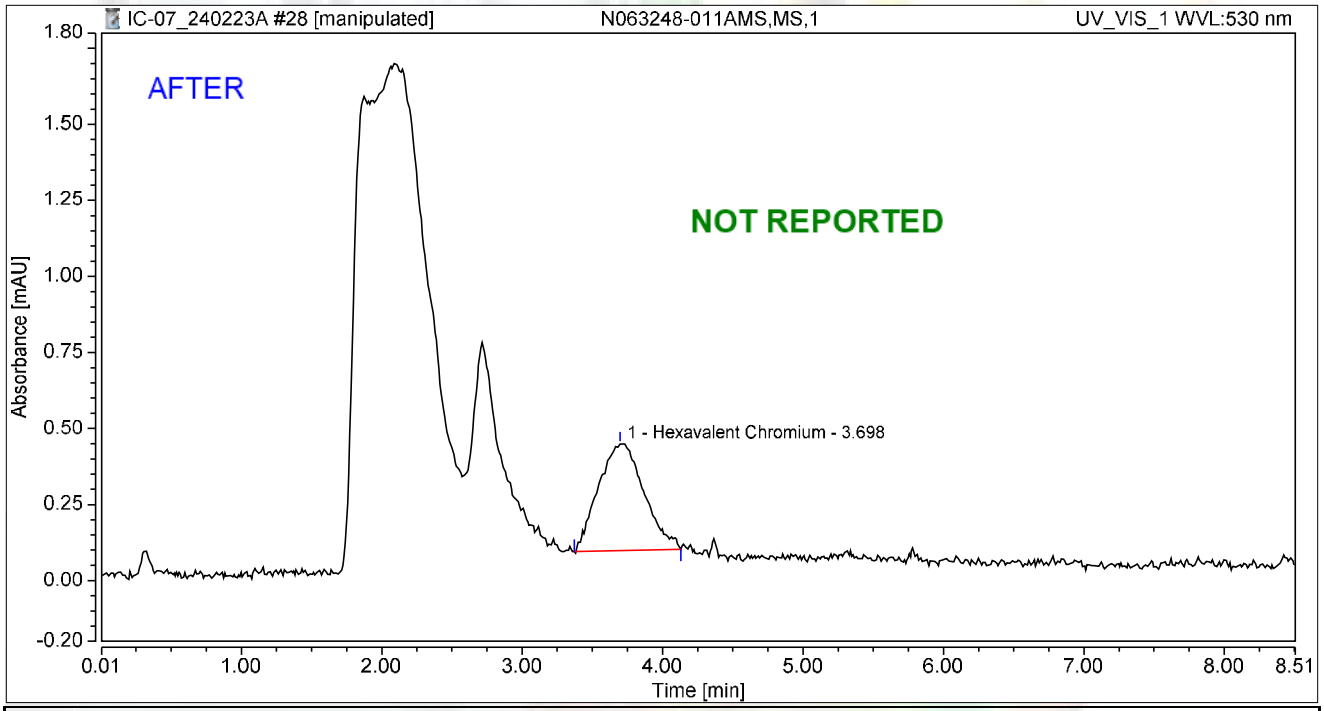
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

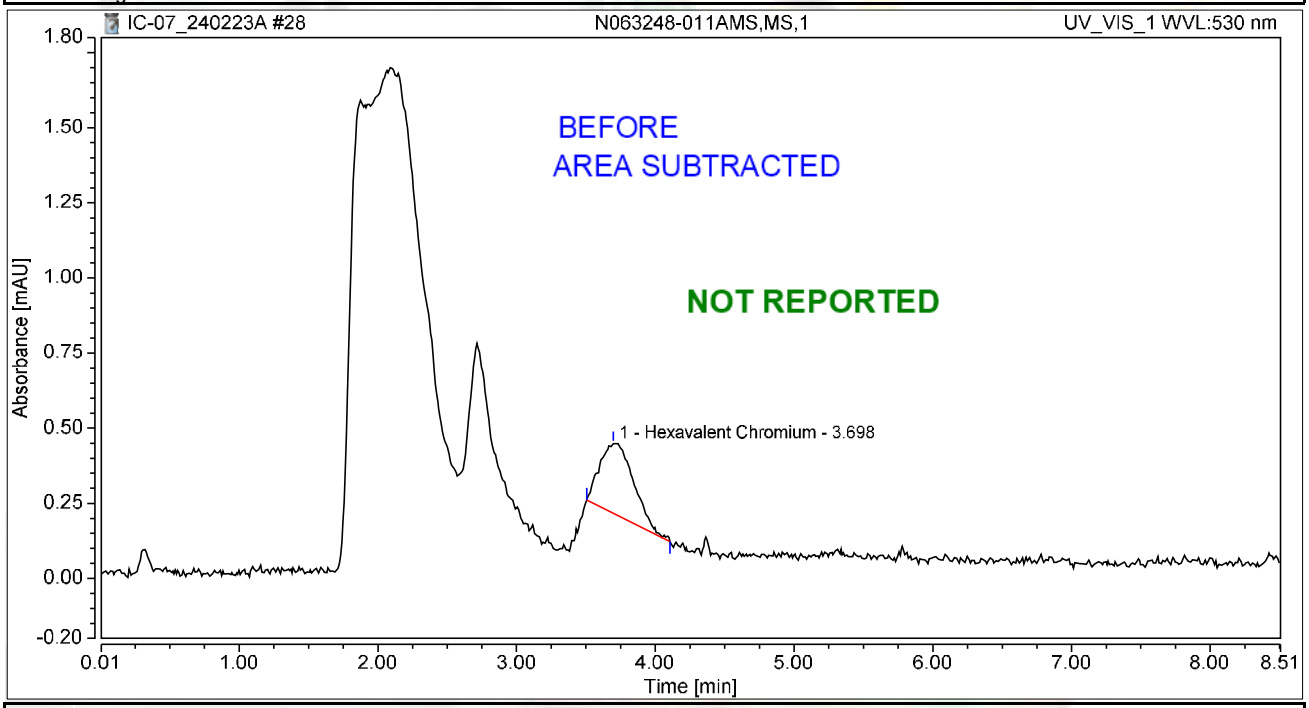
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.698	0.132	0.350	100.00	100.00	0.6137
Total:			**0.132**	**0.350**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

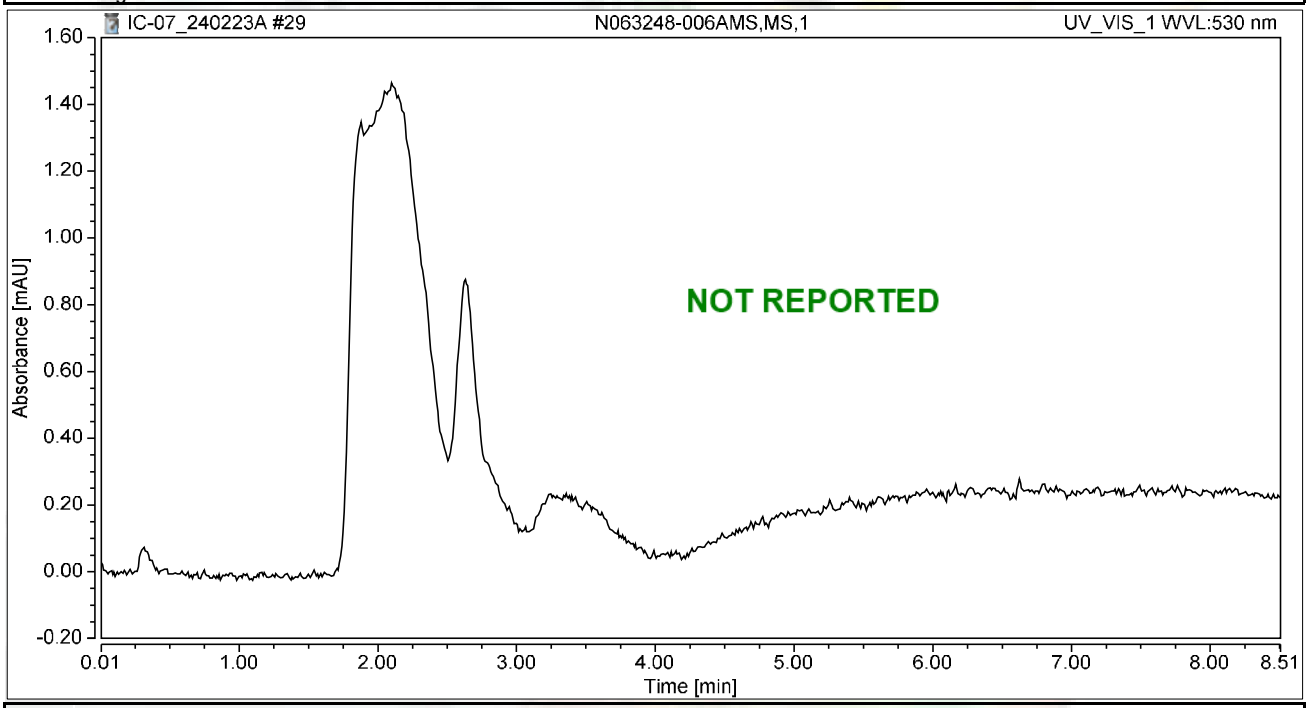
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.698	0.067	0.232	100.00	100.00	0.3105
Total:			**0.067**	**0.232**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

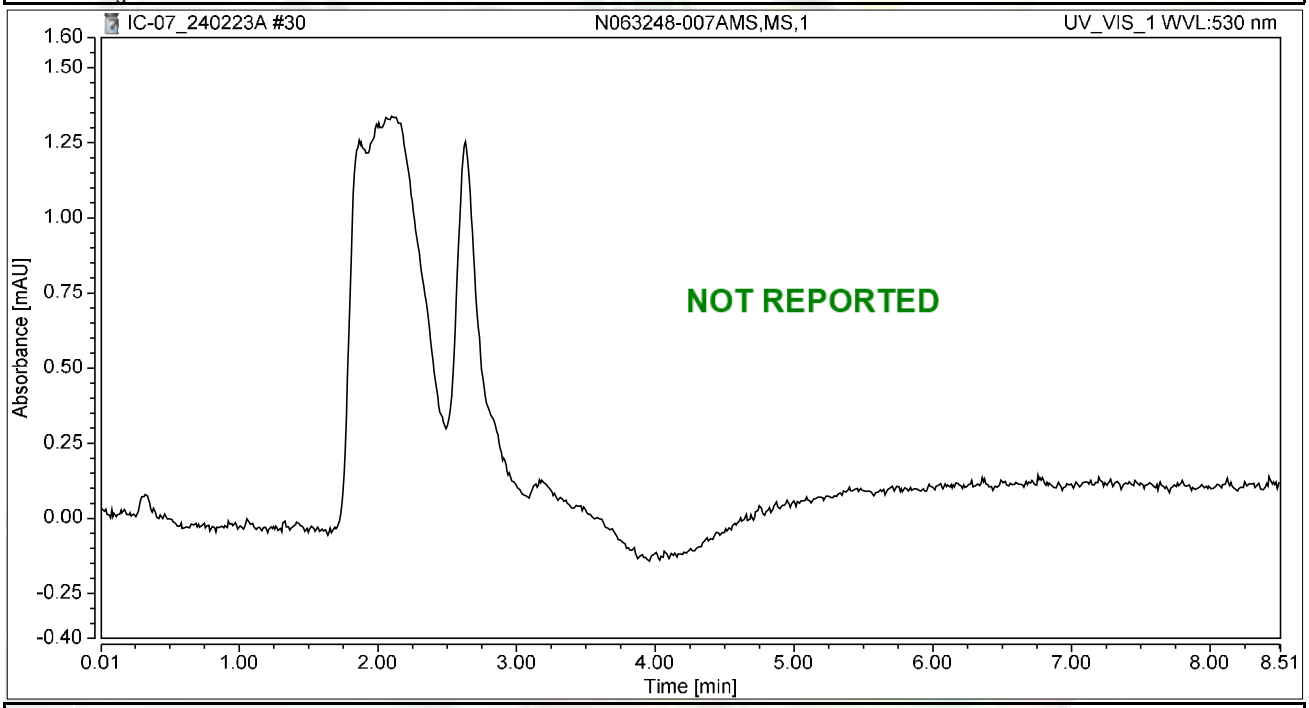
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

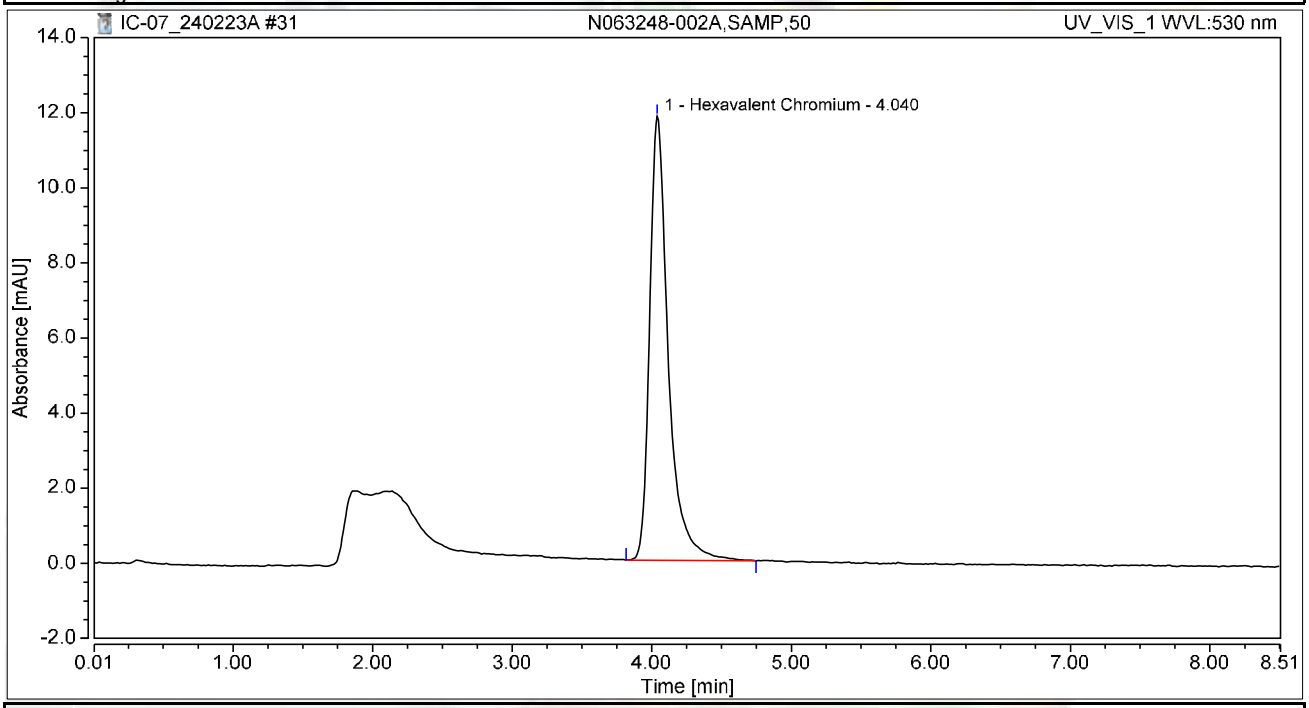
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-002A,SAMP,50**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 13:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

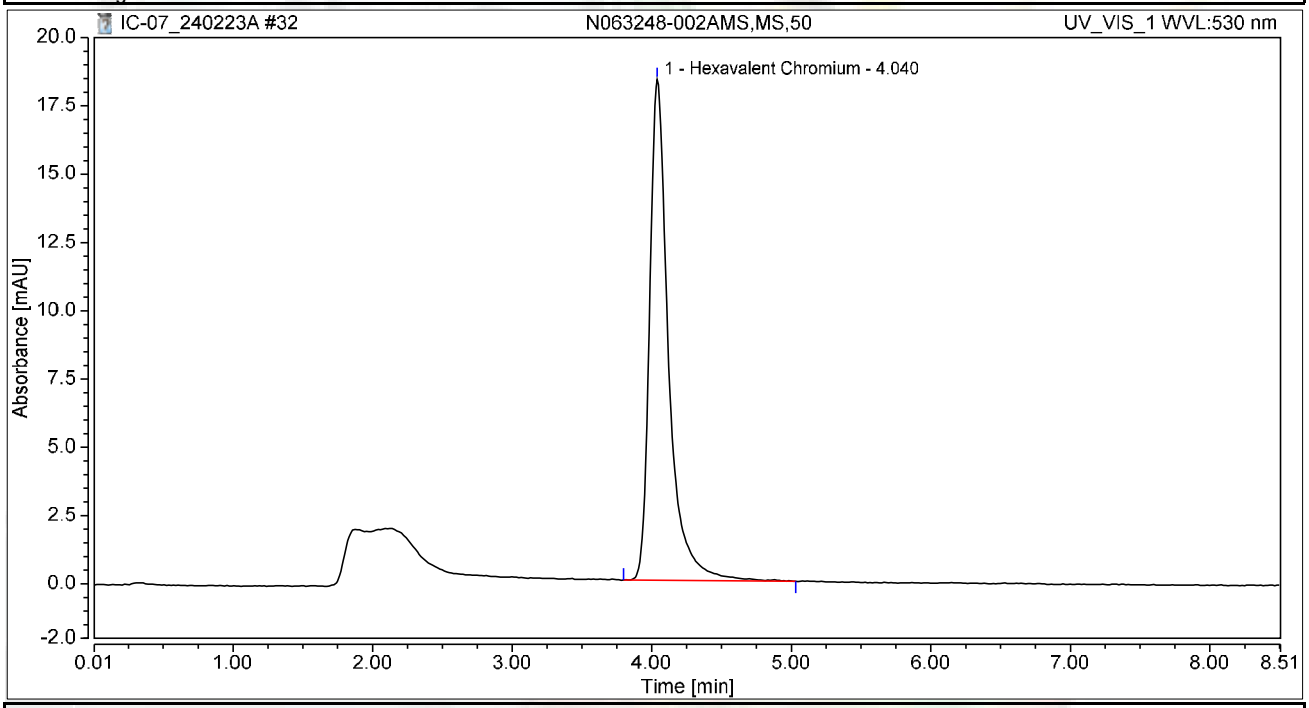
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.835	11.823	100.00	100.00	8.5302
Total:			**1.835**	**11.823**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-002AMS,MS,50**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 13:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

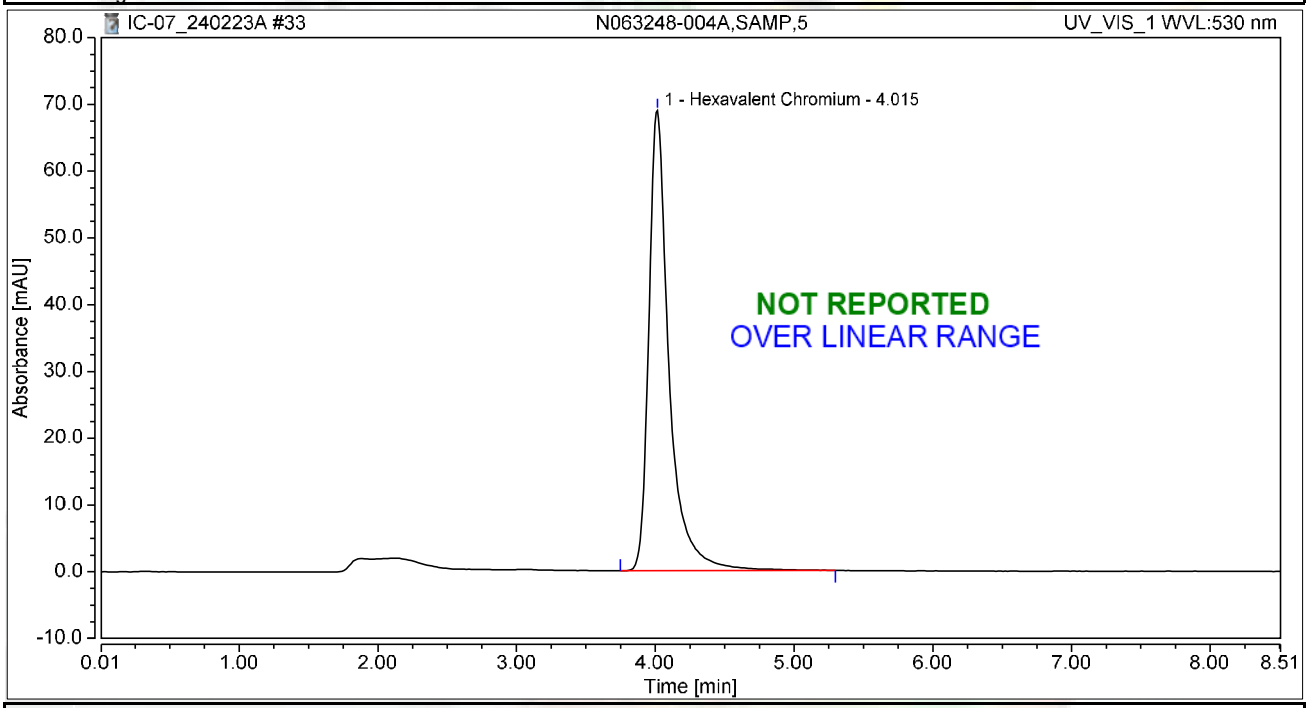
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.897	18.335	100.00	100.00	13.4692
Total:			**2.897**	**18.335**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-004A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 13:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

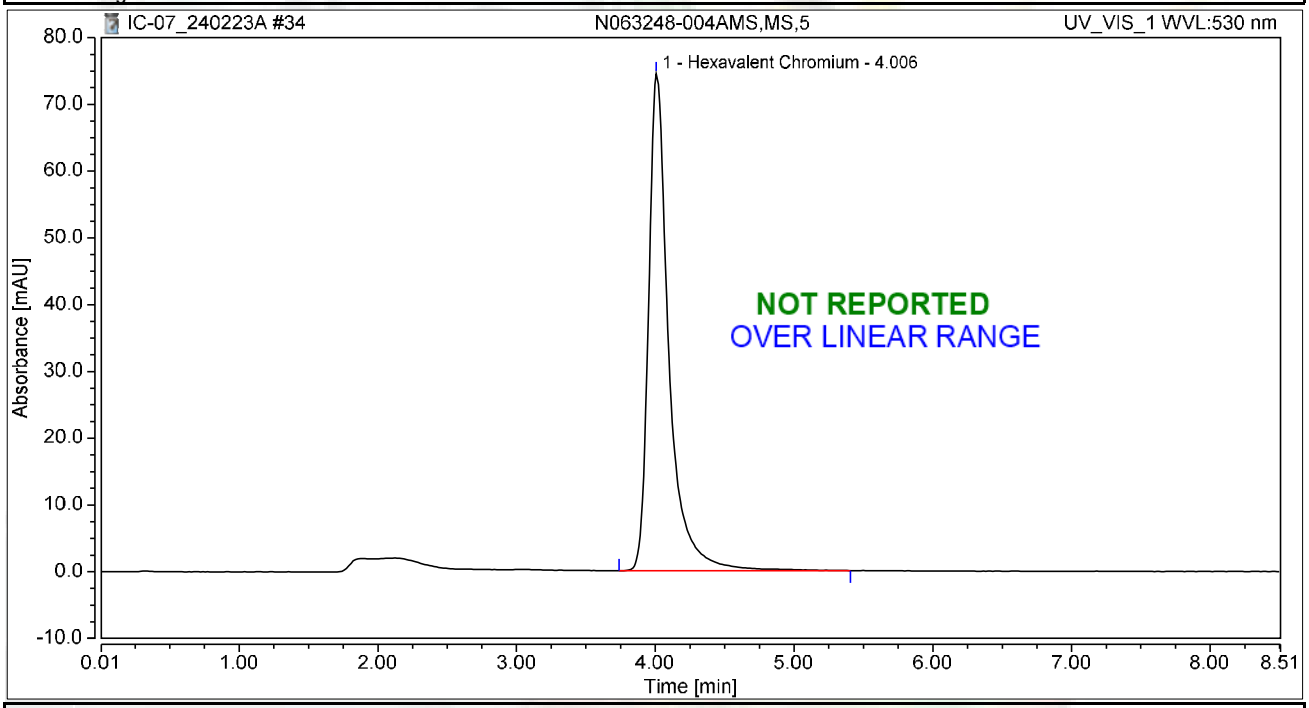
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	11.717	68.940	100.00	100.00	54.4706
Total:			**11.717**	**68.940**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-004AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 13:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

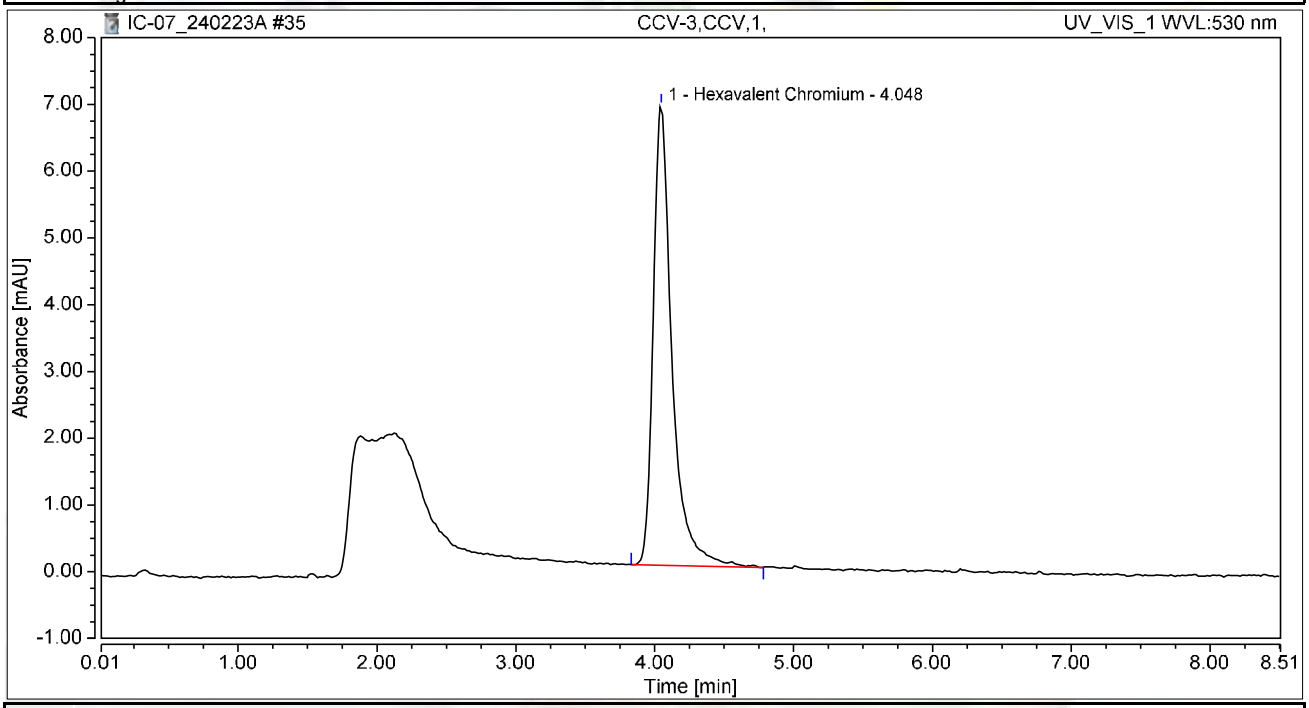
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	12.712	74.454	100.00	100.00	59.0961
Total:			**12.712**	**74.454**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 13:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

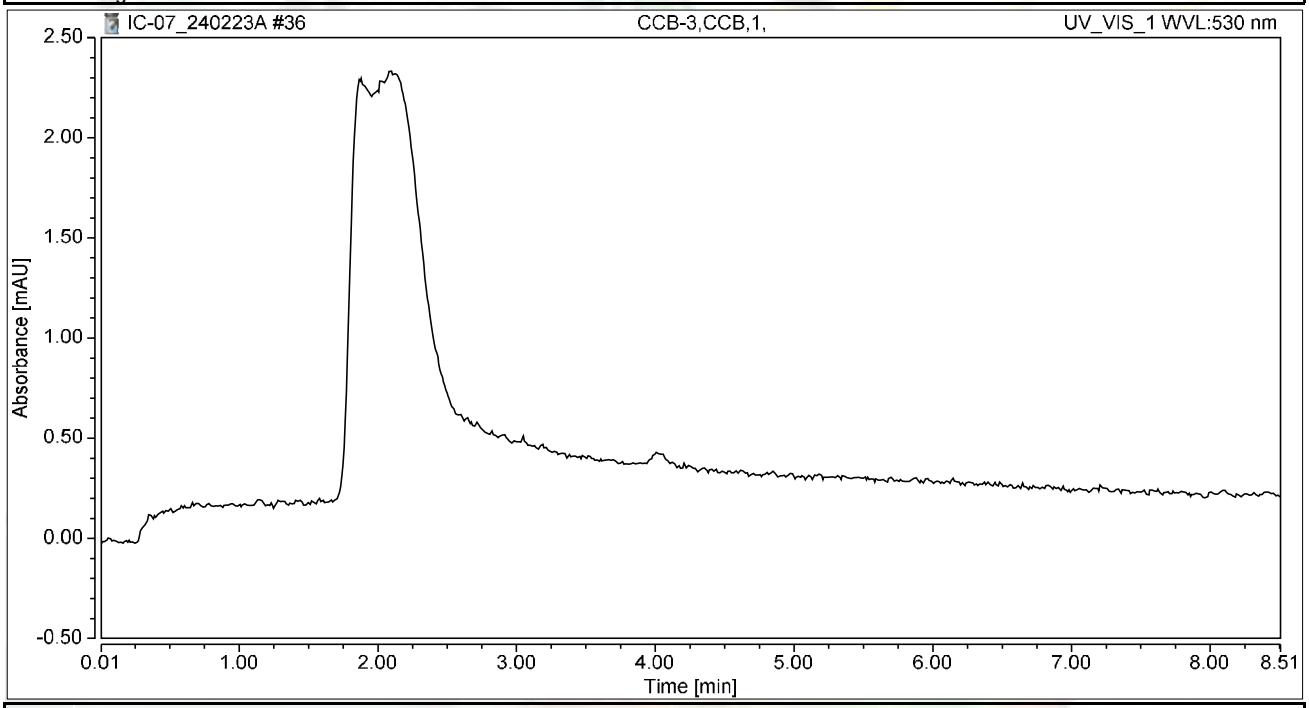
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.078	6.886	100.00	100.00	5.0096
Total:			**1.078**	**6.886**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 13:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

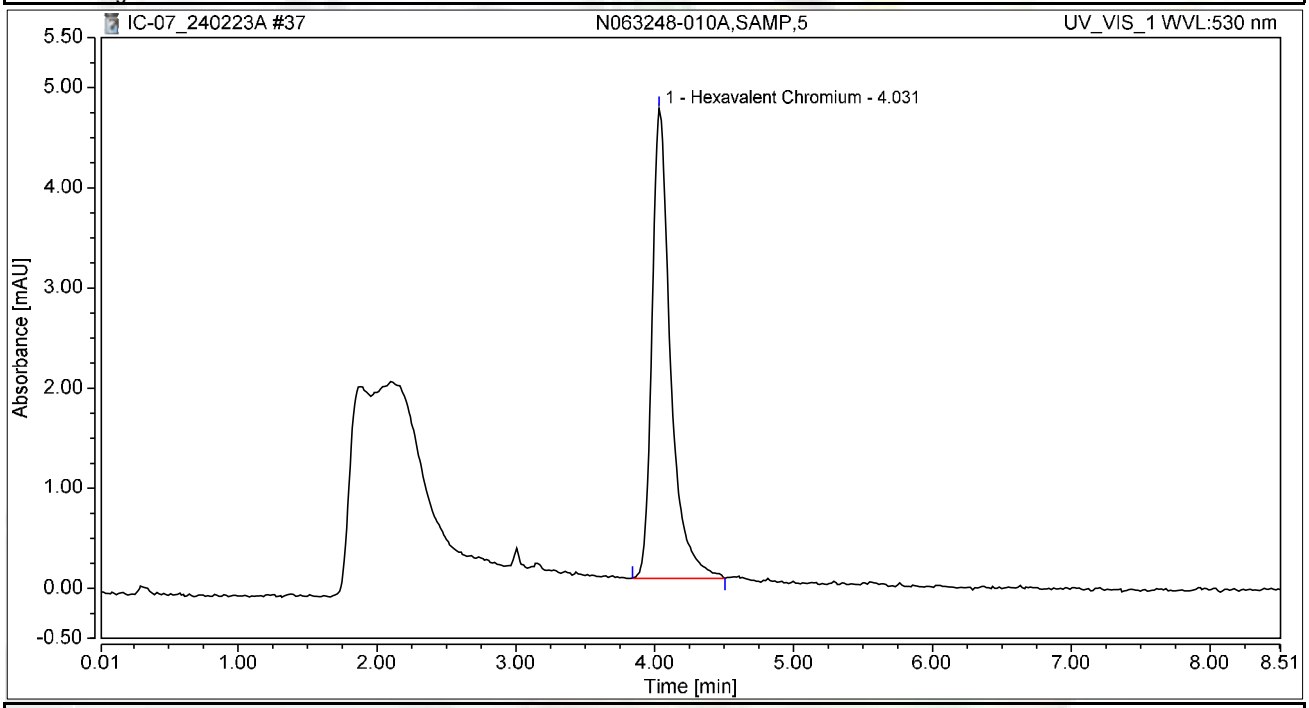
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-010A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 13:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

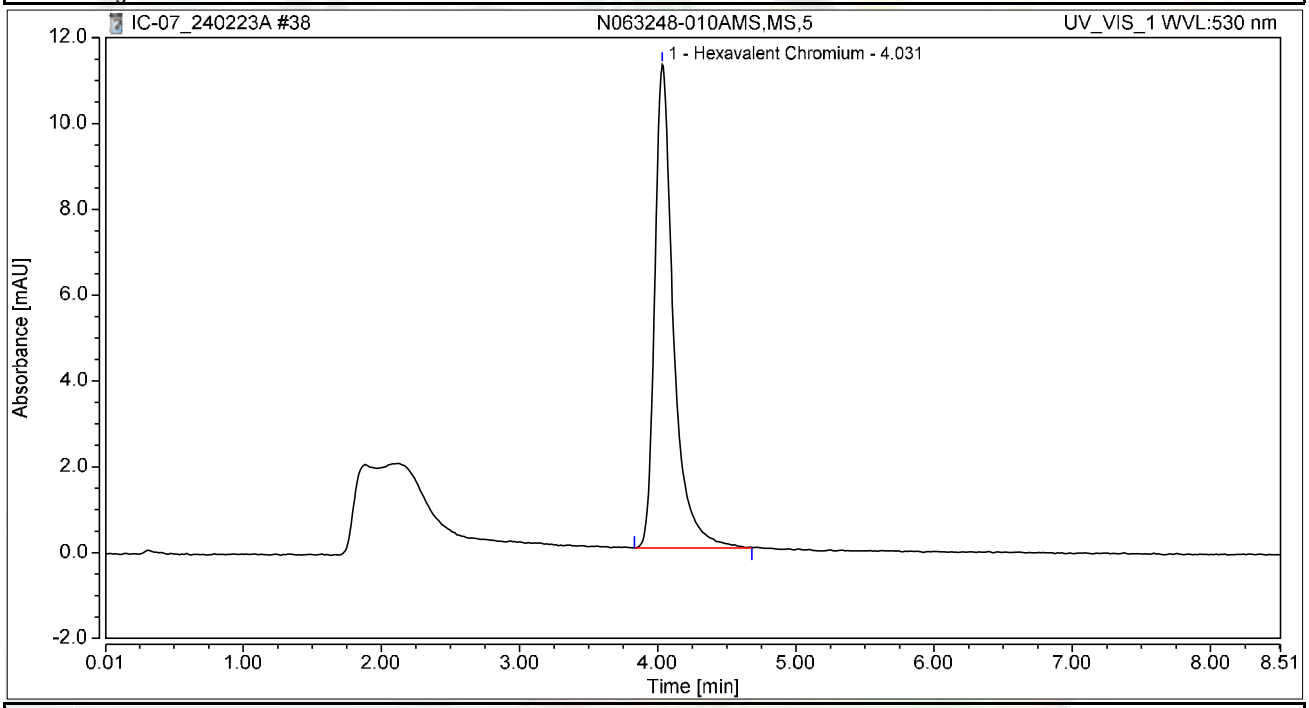
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.726	4.691	100.00	100.00	3.3729
Total:			**0.726**	**4.691**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-010AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 14:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

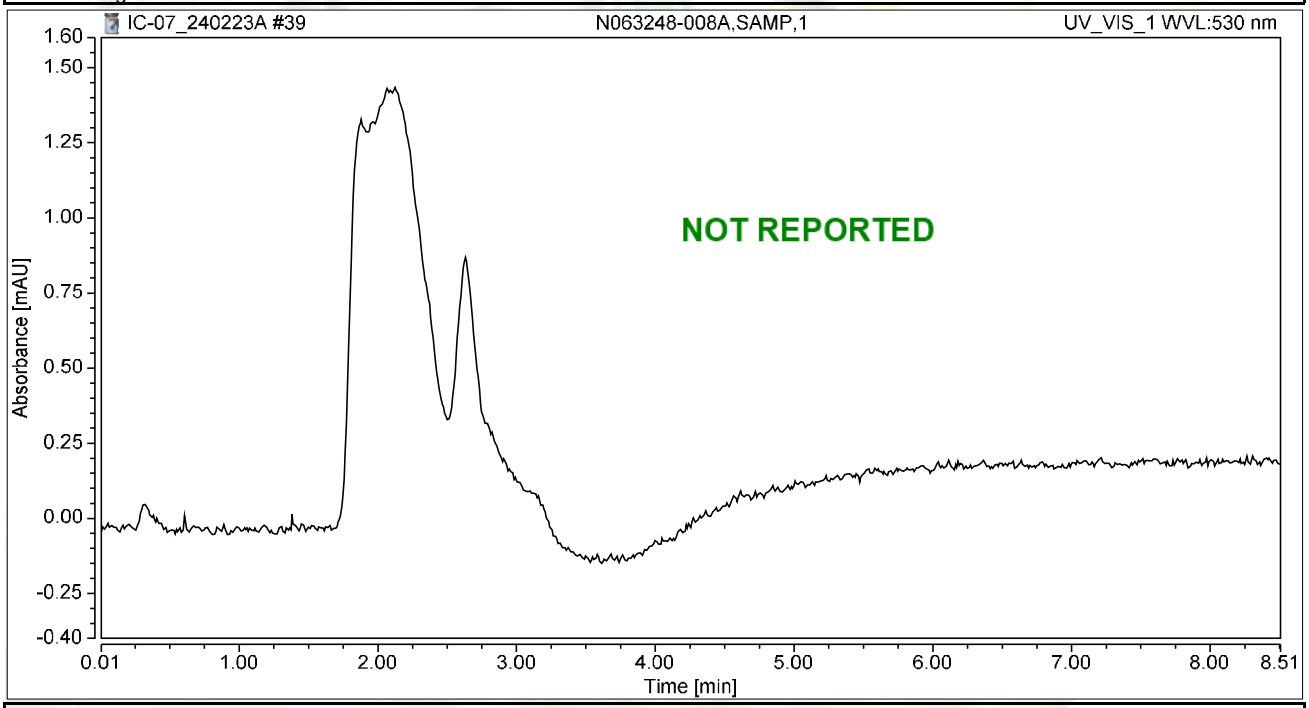
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	1.773	11.273	100.00	100.00	8.2436
Total:			**1.773**	**11.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 14:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

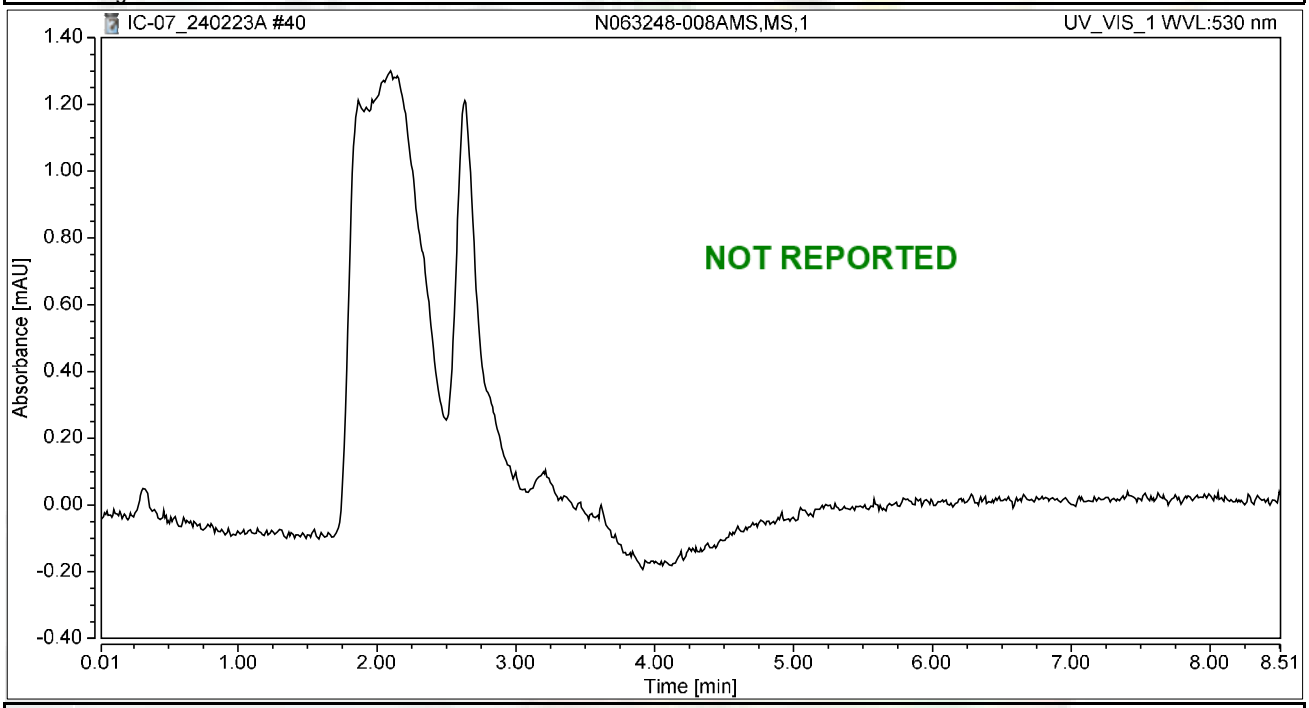
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-008AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 14:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

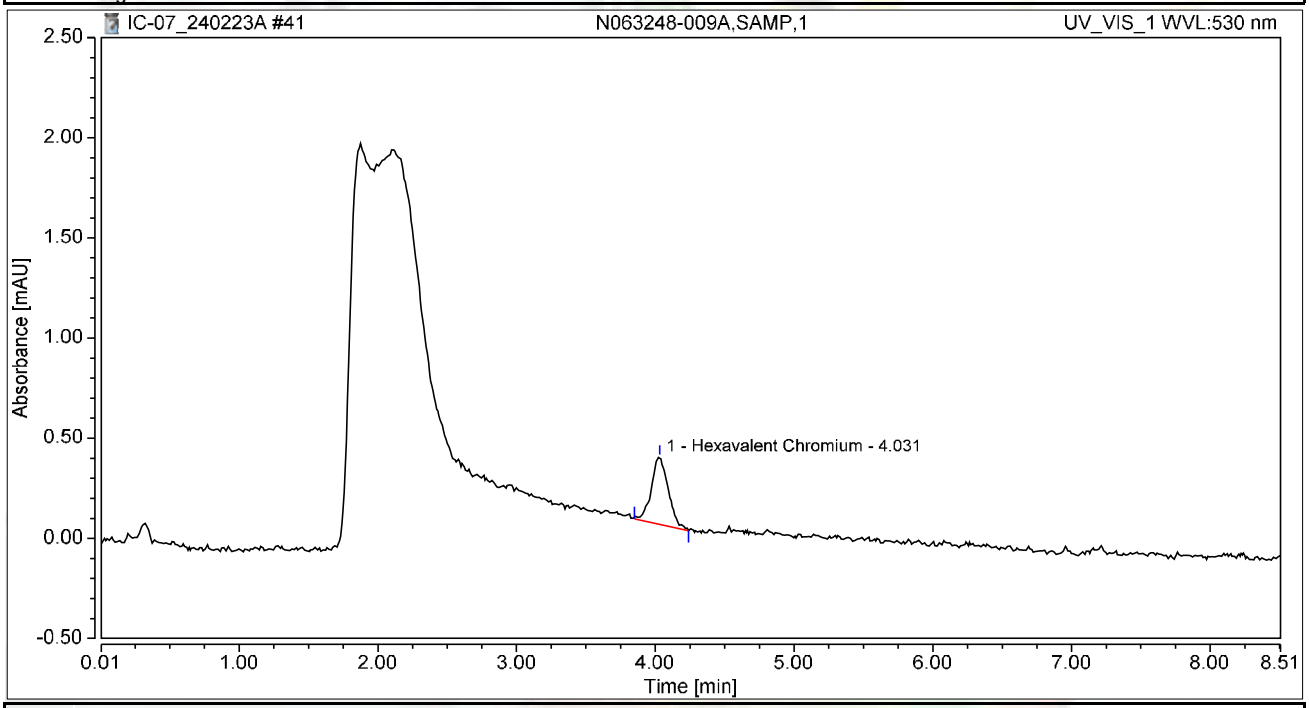
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 14:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

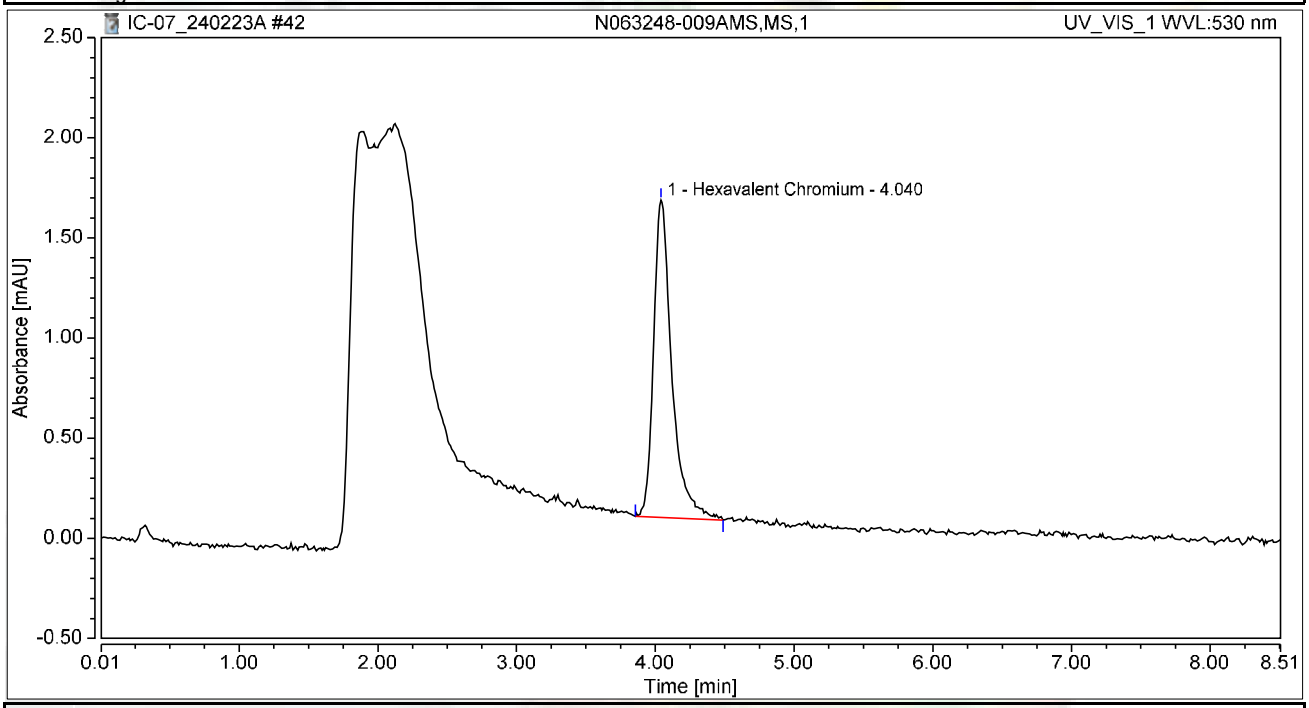
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.047	0.334	100.00	100.00	0.2206
Total:			**0.047**	**0.334**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 14:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

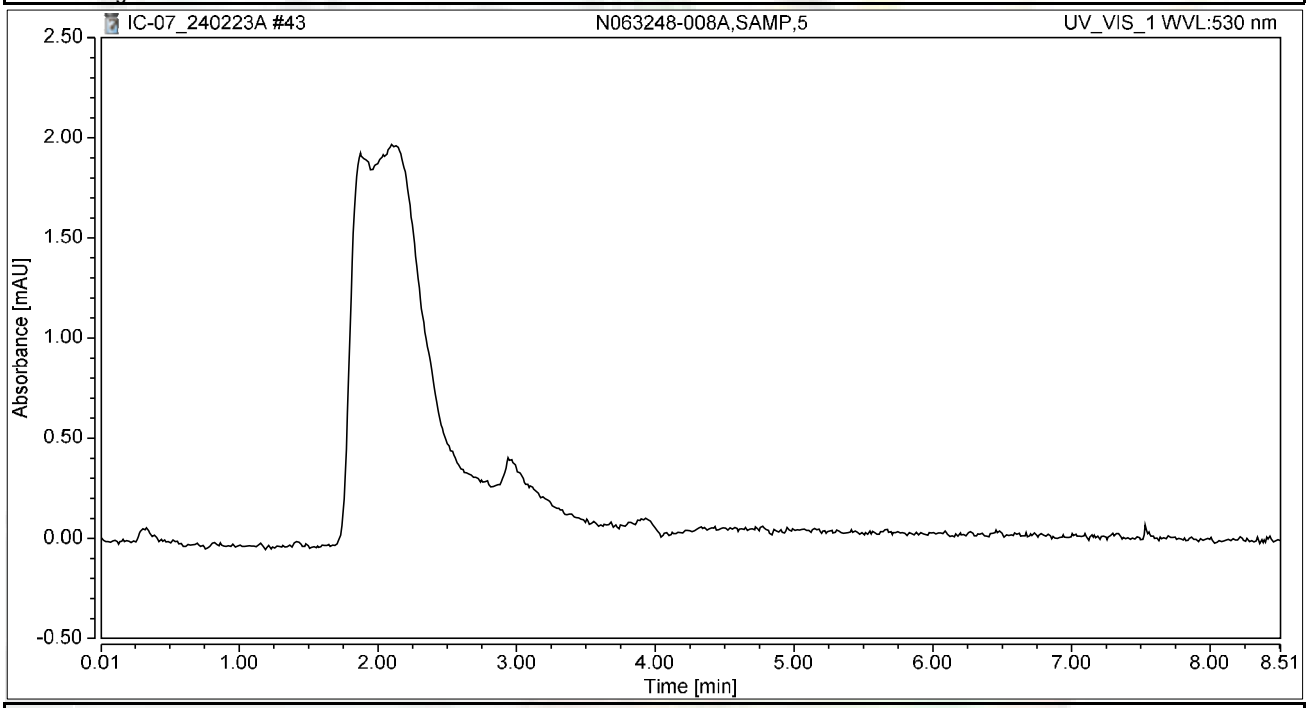
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.242	1.584	100.00	100.00	1.1257
Total:			**0.242**	**1.584**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-008A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 14:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

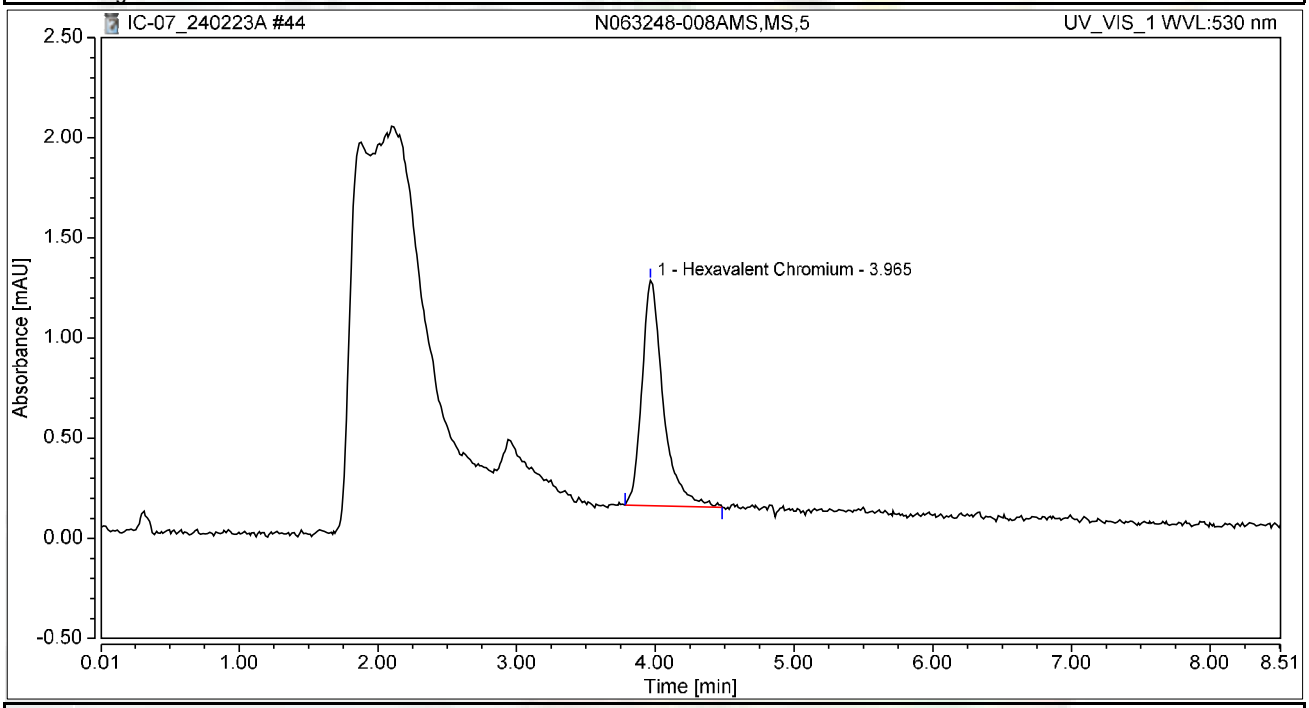
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-008AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 15:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

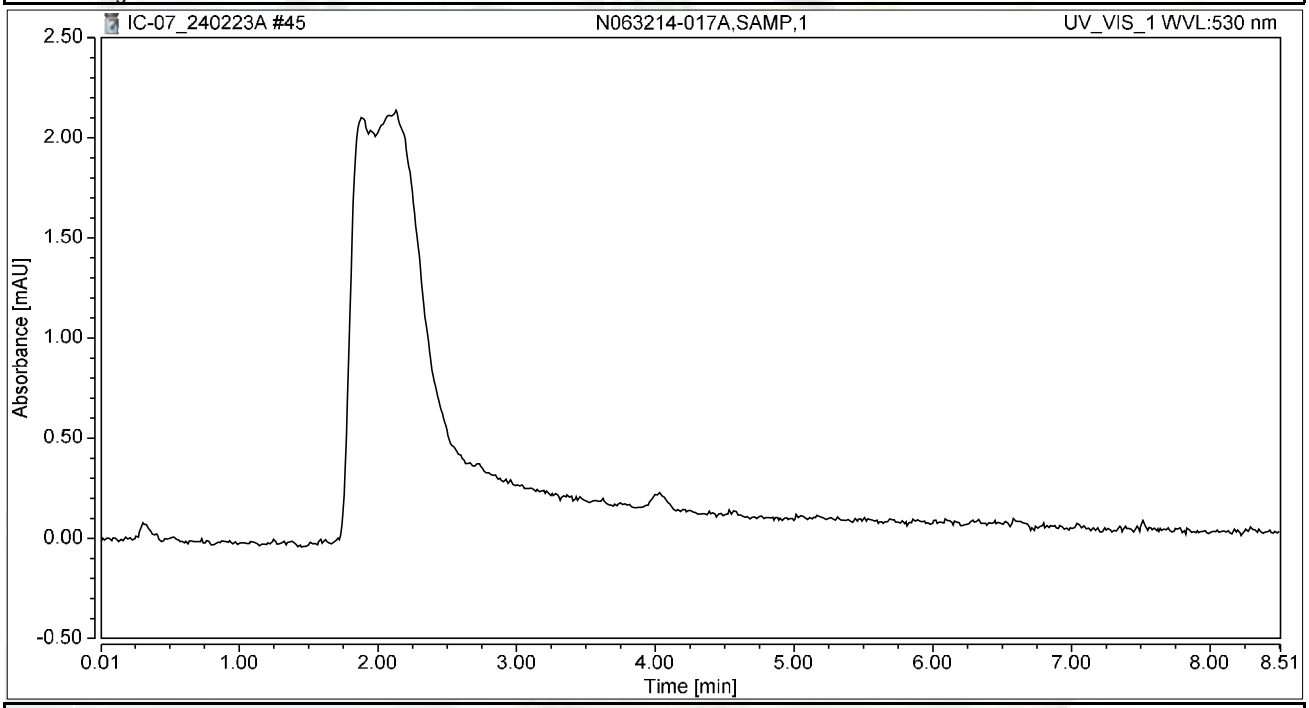
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.201	1.124	100.00	100.00	0.9342
Total:			**0.201**	**1.124**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-017A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 15:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

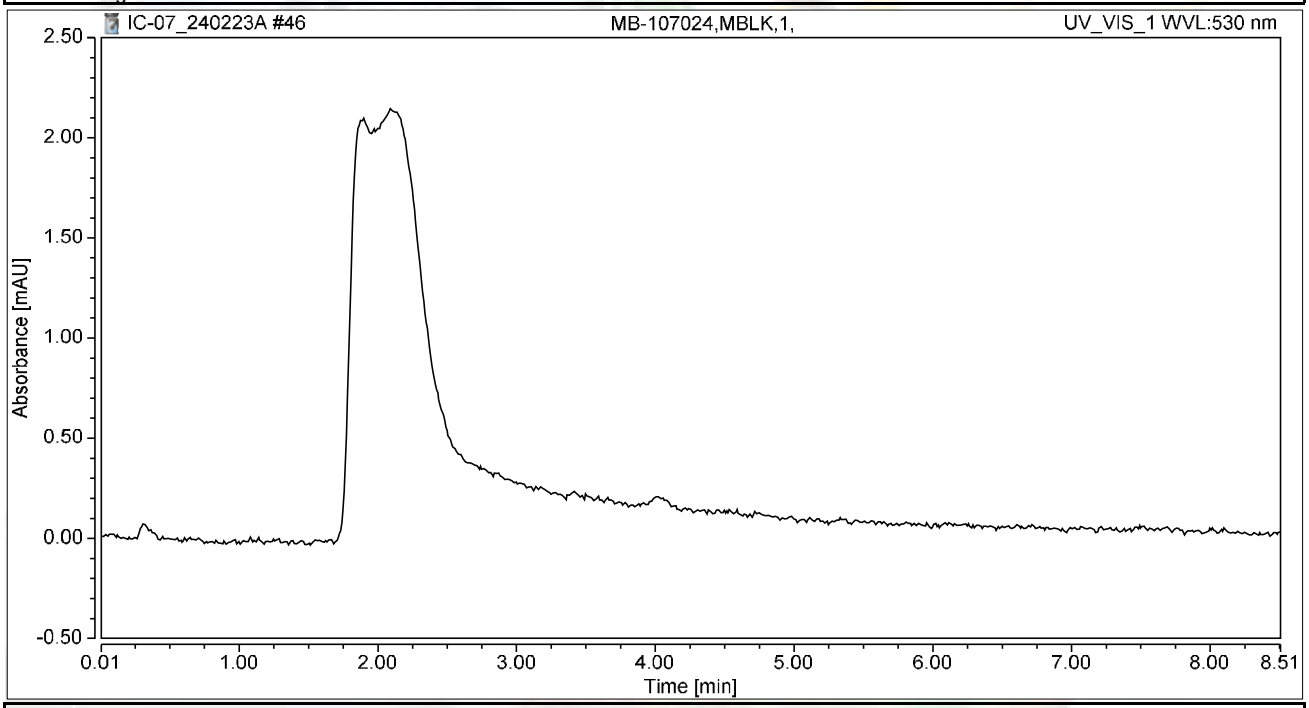
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-107024,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 15:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

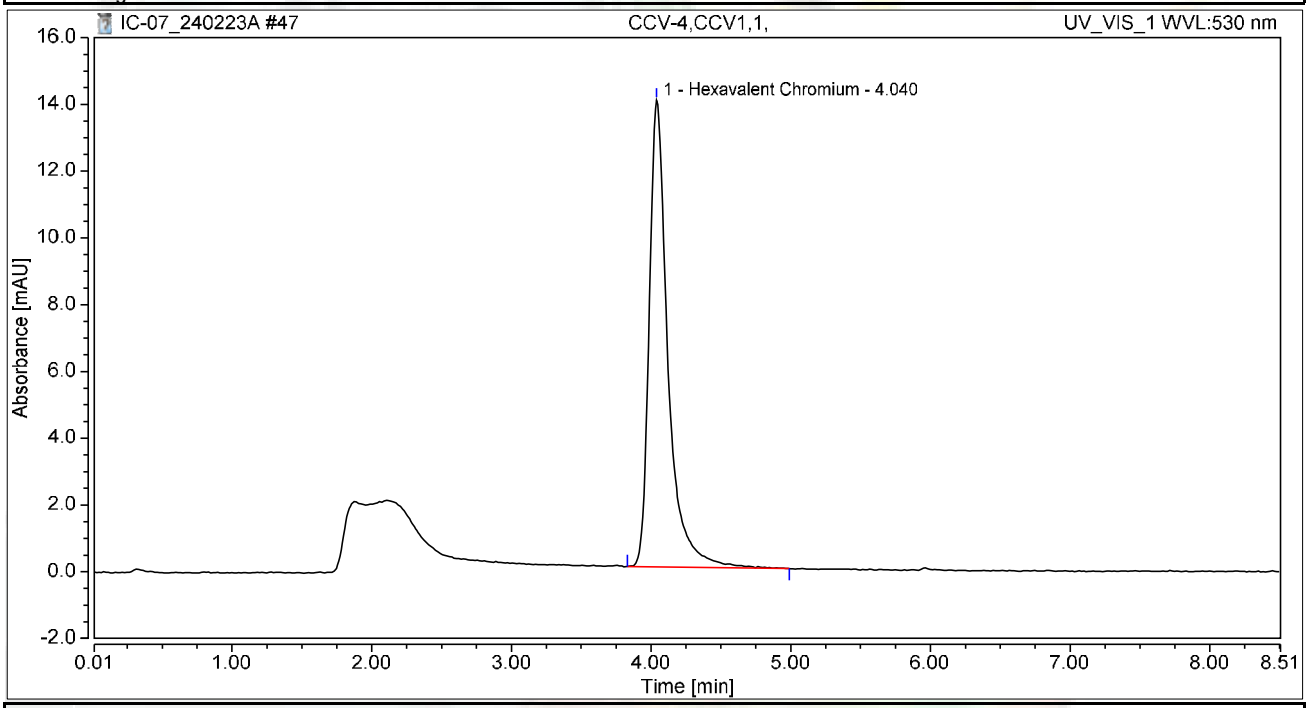
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 15:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

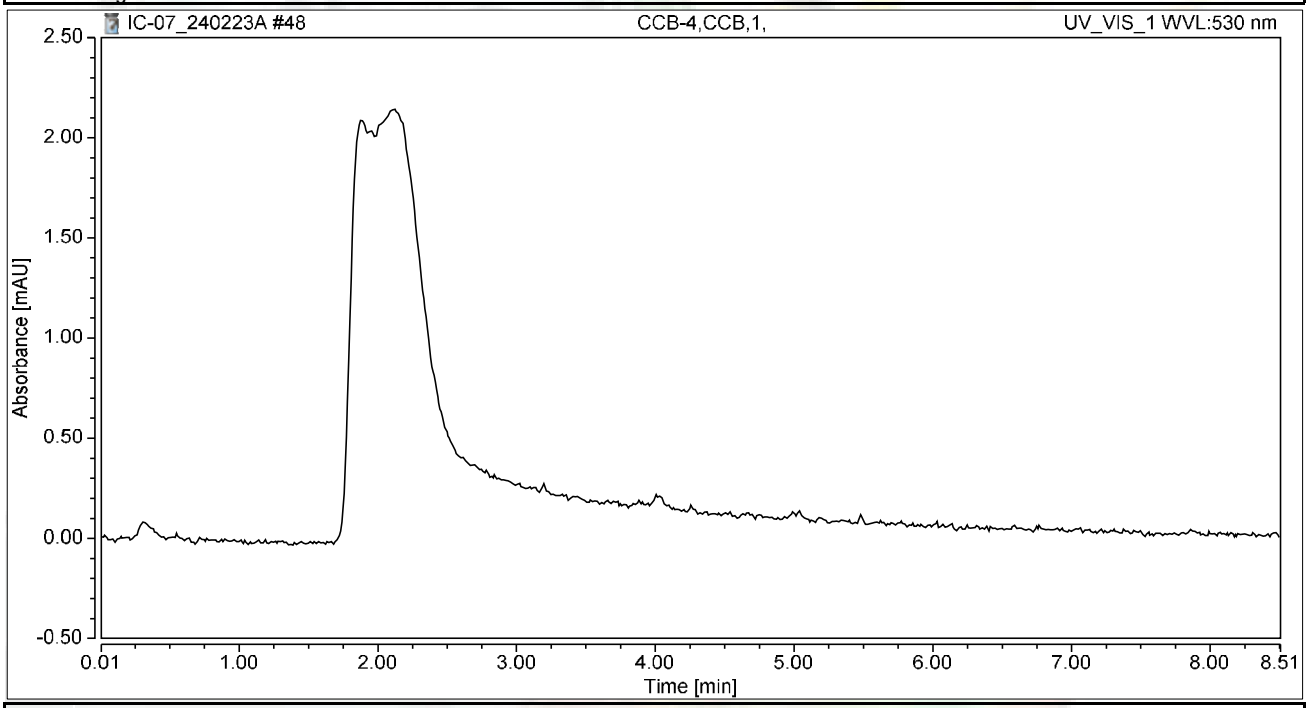
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.169	13.981	100.00	100.00	10.0853
Total:			**2.169**	**13.981**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 15:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

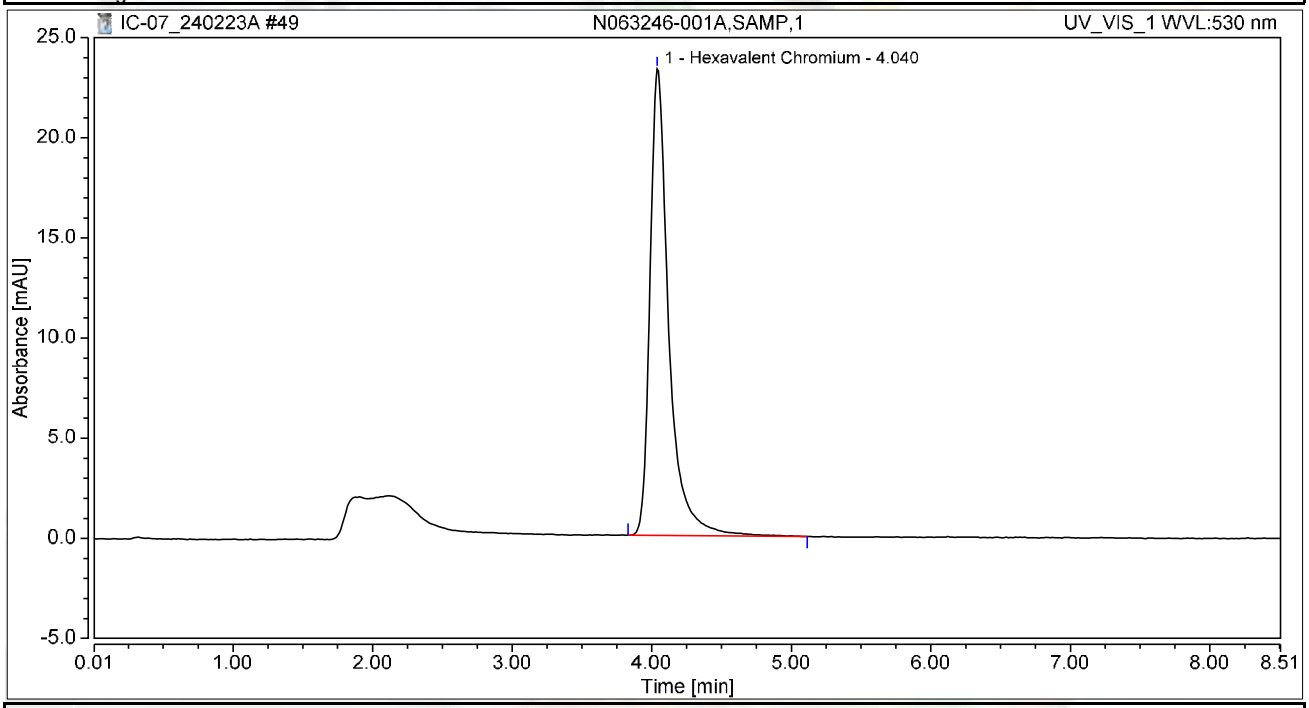
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063246-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 15:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

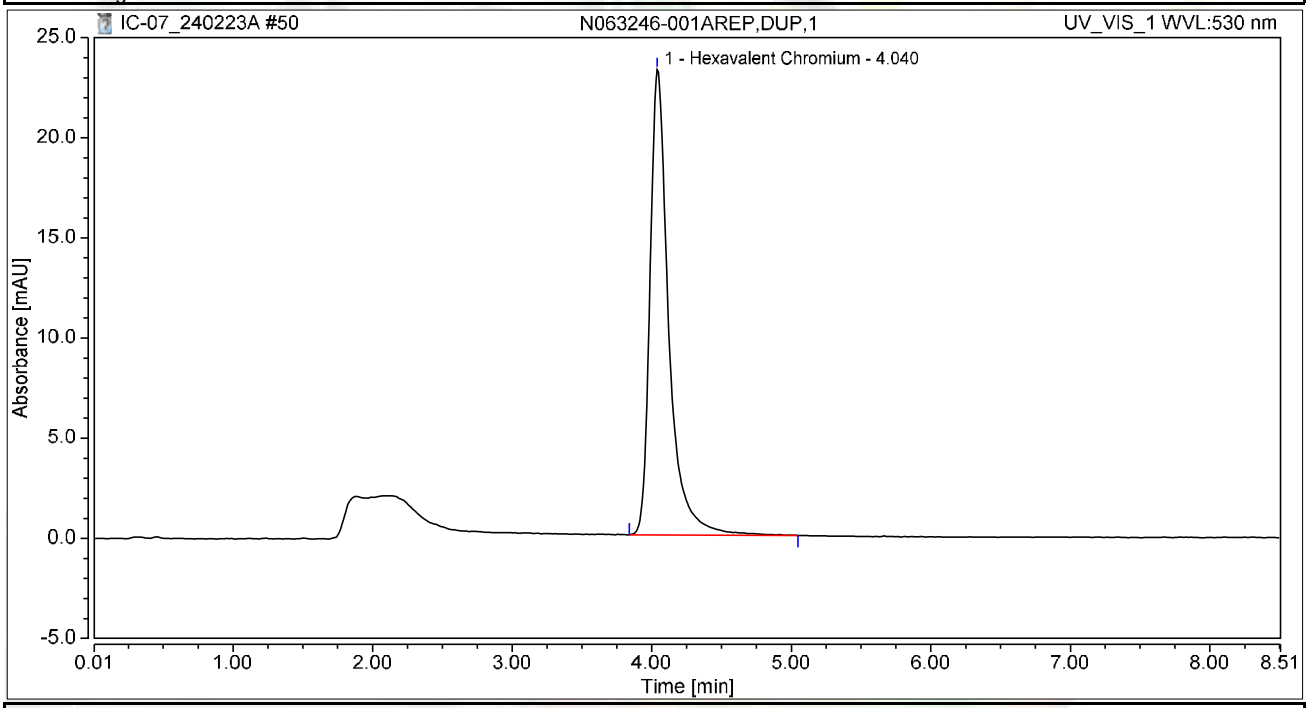
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	3.642	23.293	100.00	100.00	16.9307
Total:			**3.642**	**23.293**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063246-001AREP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 16:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

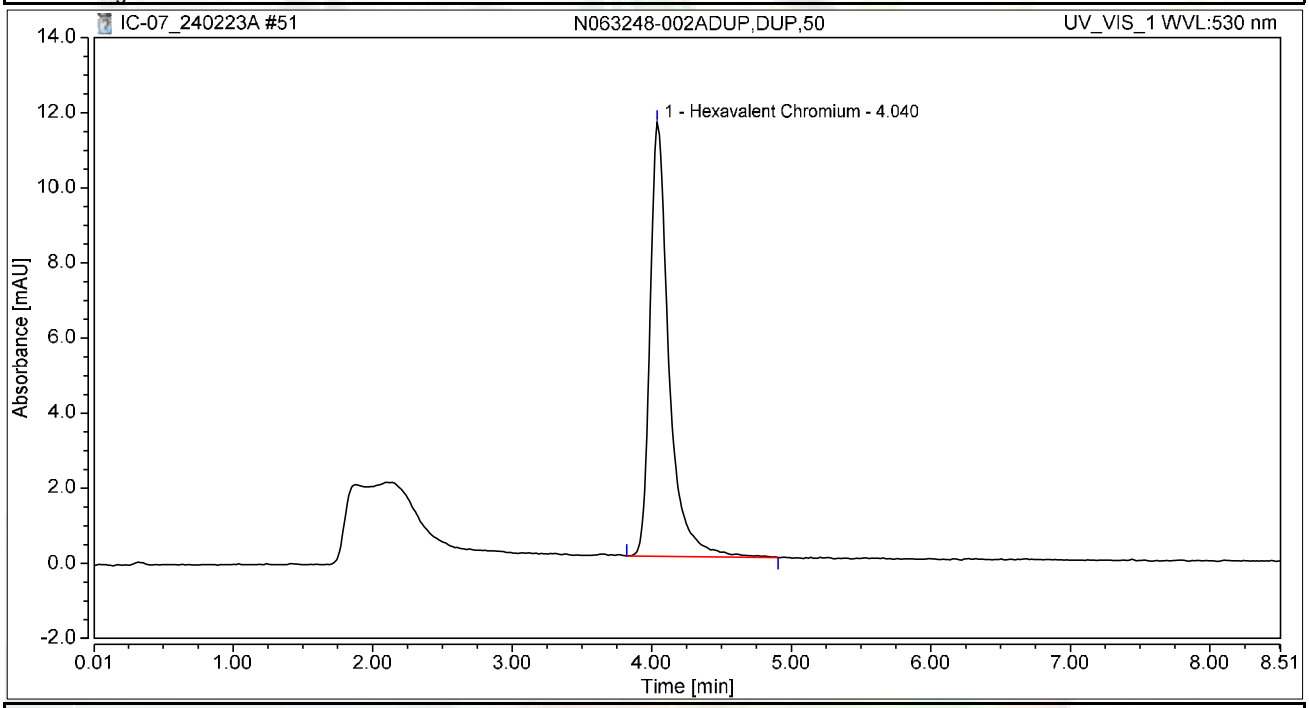
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	3.636	23.234	100.00	100.00	16.9039
Total:			**3.636**	**23.234**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-002ADUP,DUP,50**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 16:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

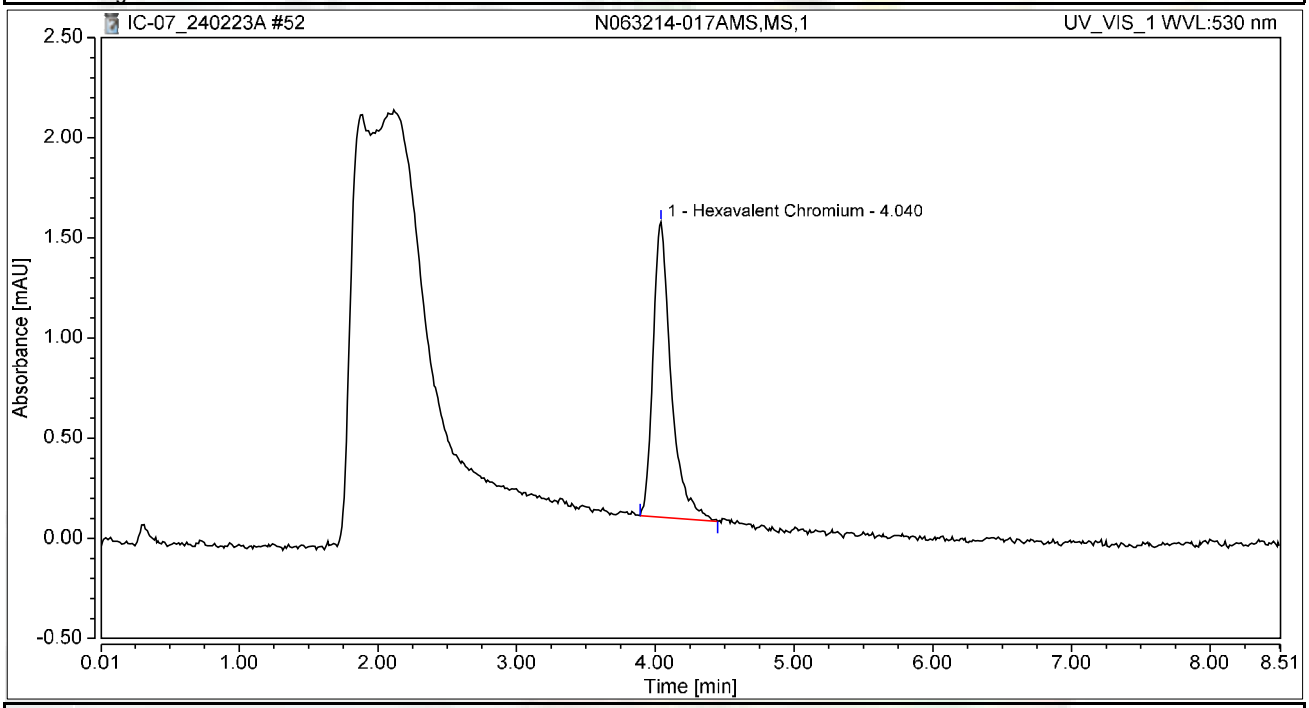
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.825	11.557	100.00	100.00	8.4841
Total:			**1.825**	**11.557**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-017AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 16:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

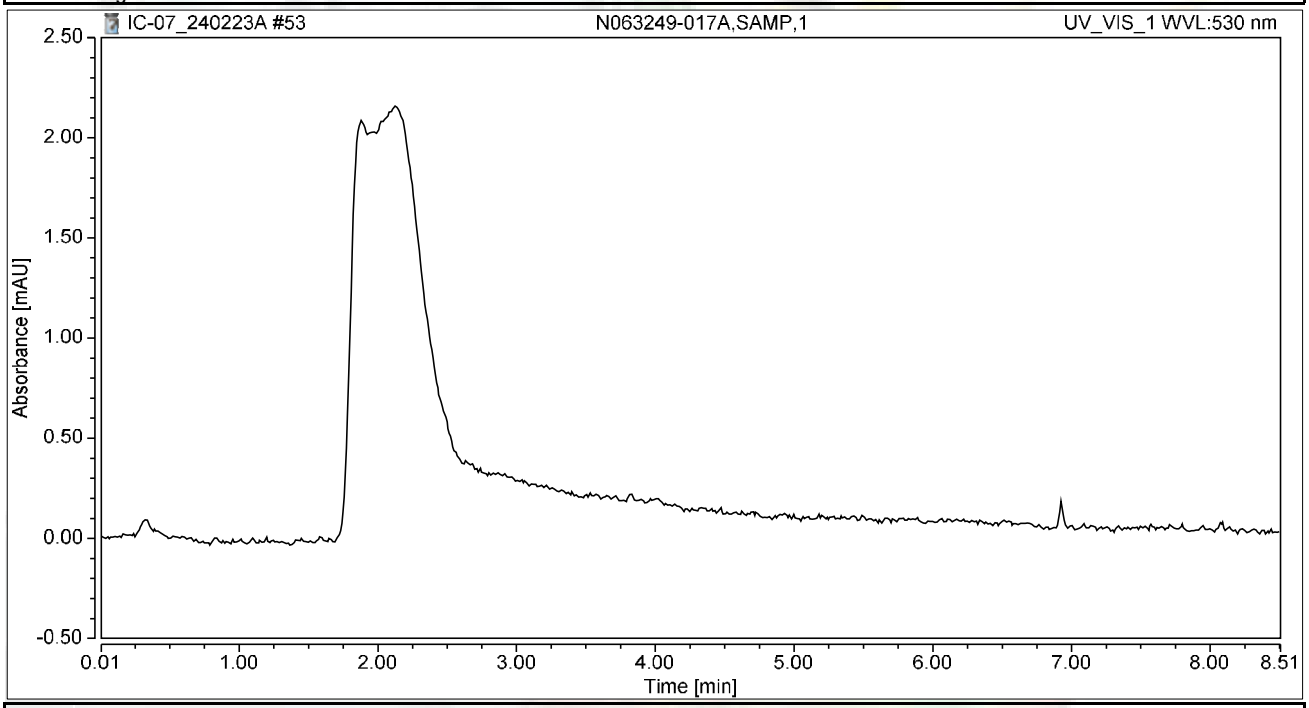
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.223	1.475	100.00	100.00	1.0359
Total:			**0.223**	**1.475**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-017A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 16:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

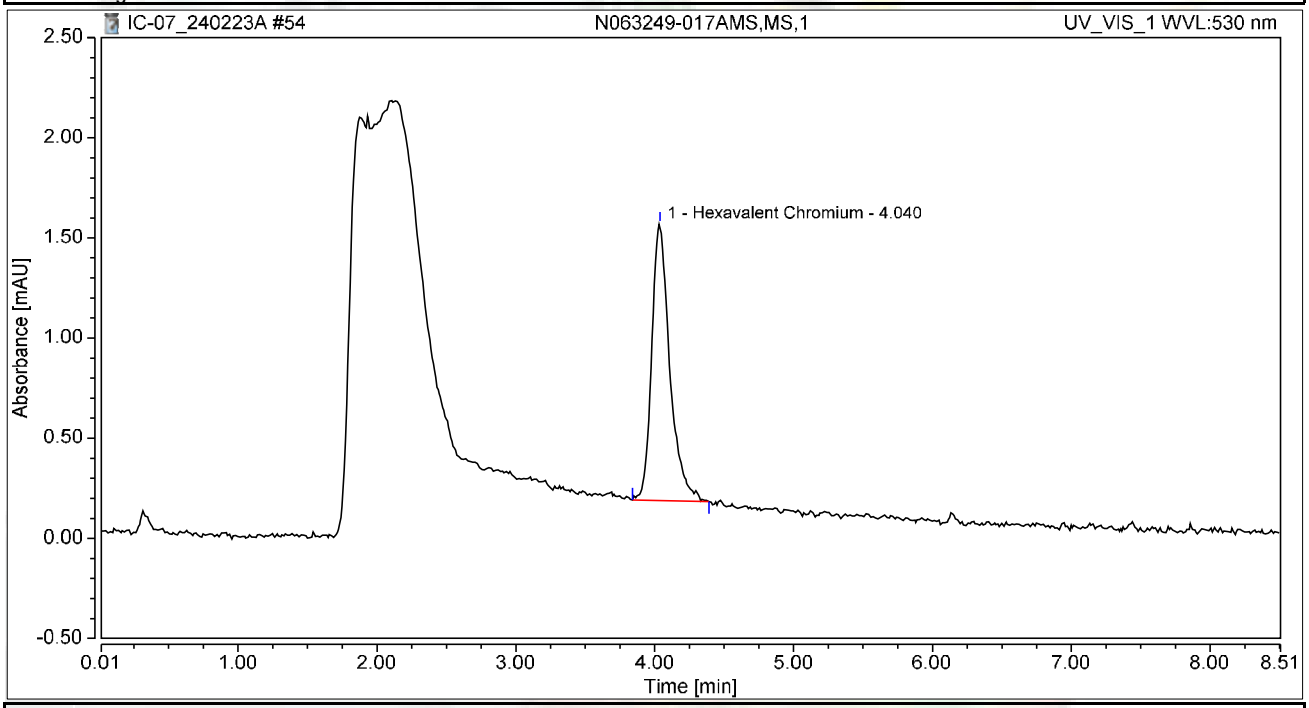
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-017AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 16:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

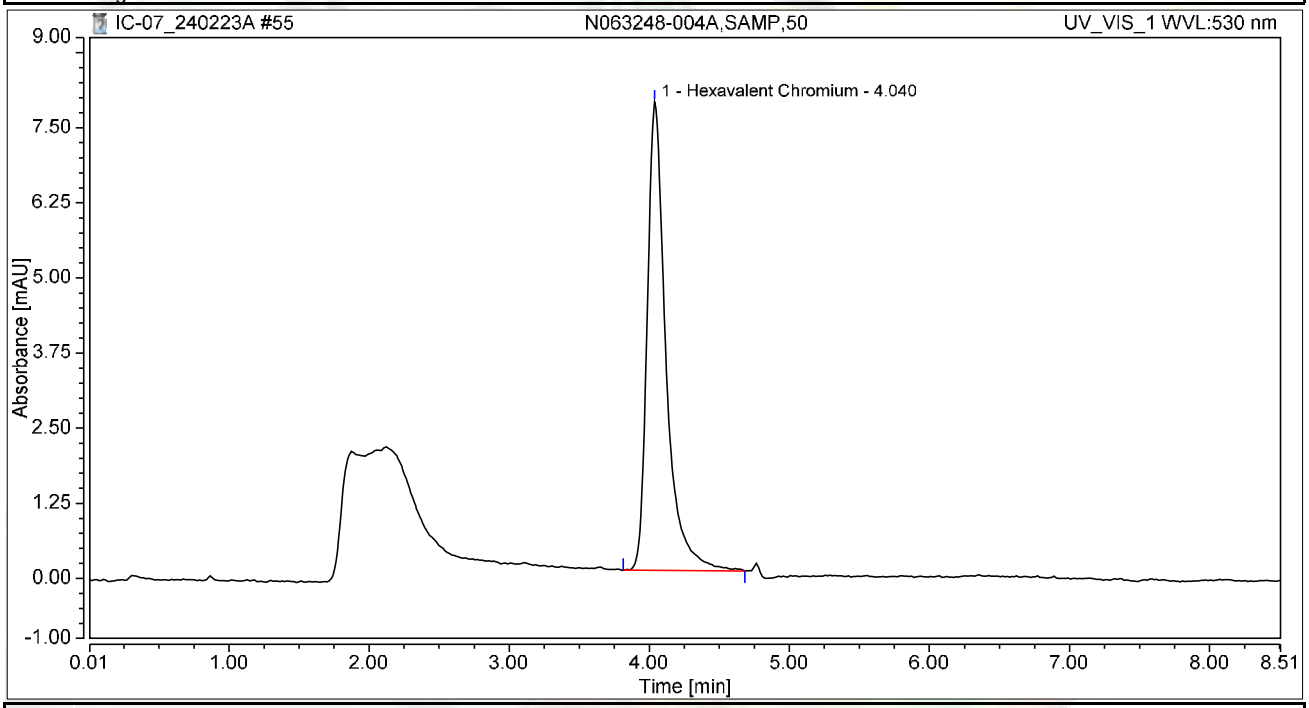
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.208	1.380	100.00	100.00	0.9682
Total:			**0.208**	**1.380**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-004A,SAMP,50**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 16:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

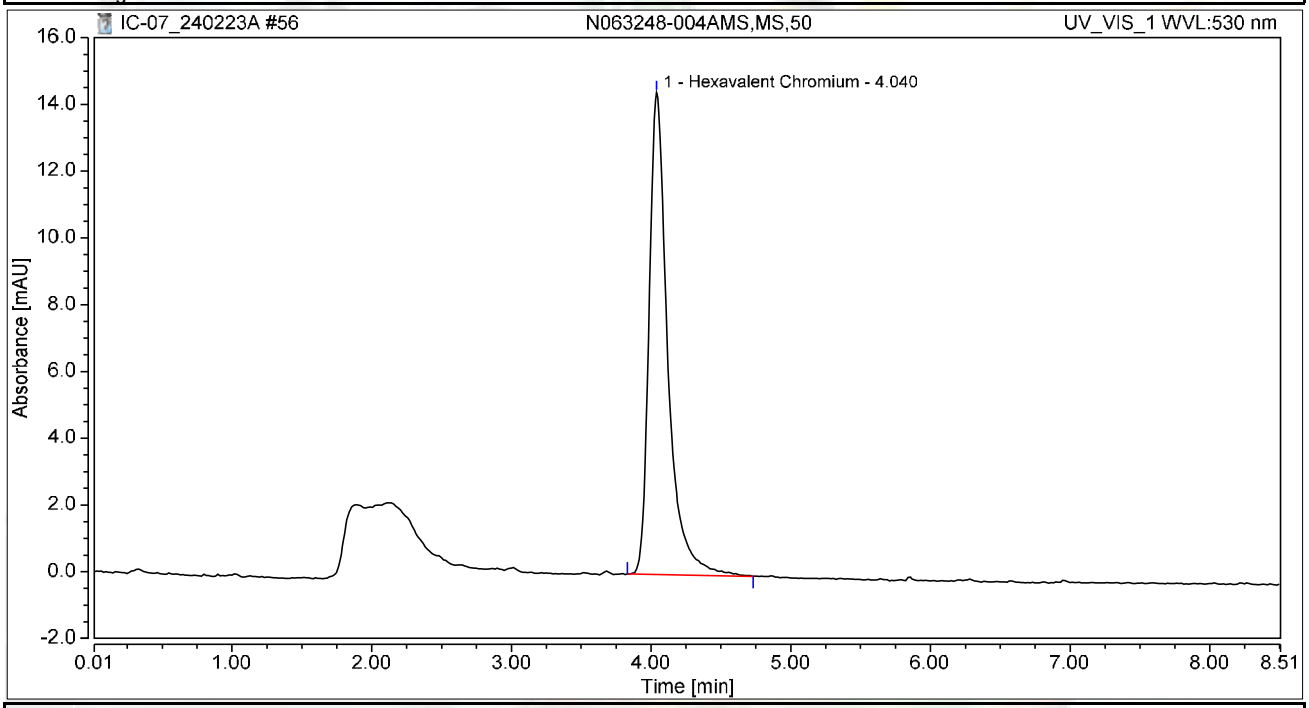
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.210	7.795	100.00	100.00	5.6268
Total:			**1.210**	**7.795**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-004AMS,MS,50**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 17:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

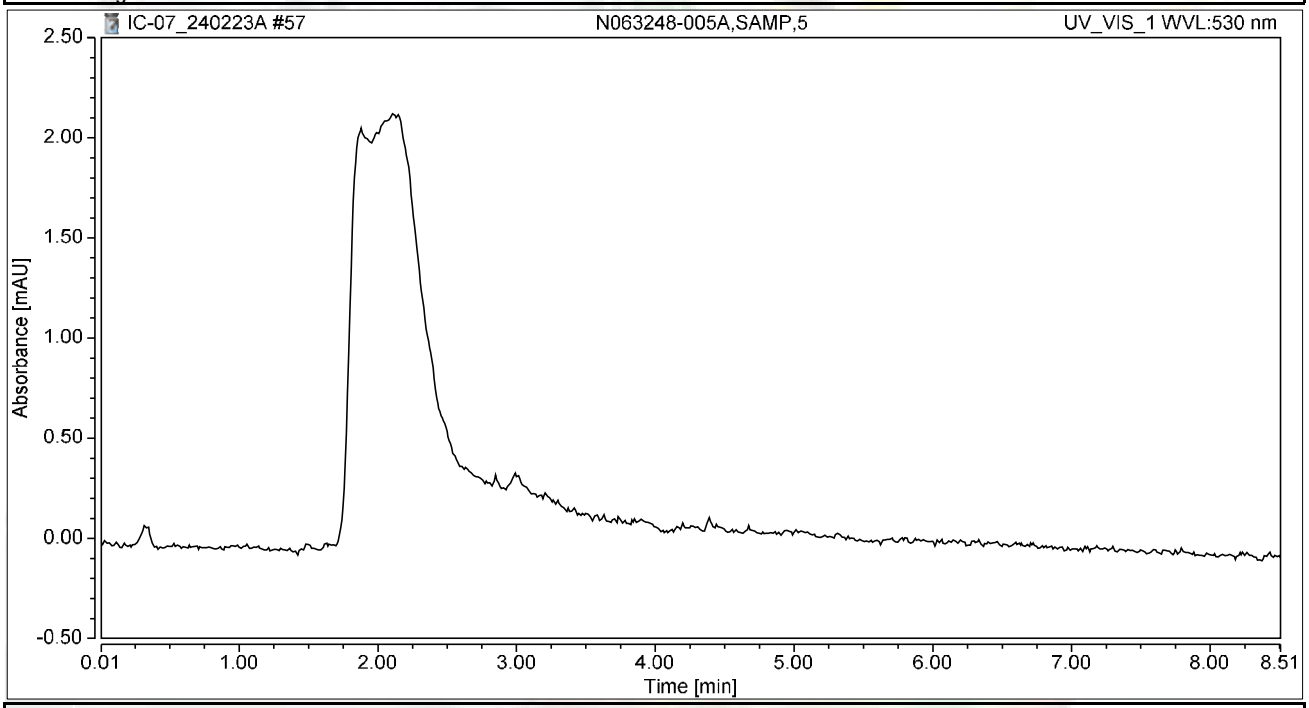
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.241	14.433	100.00	100.00	10.4175
Total:			**2.241**	**14.433**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 17:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

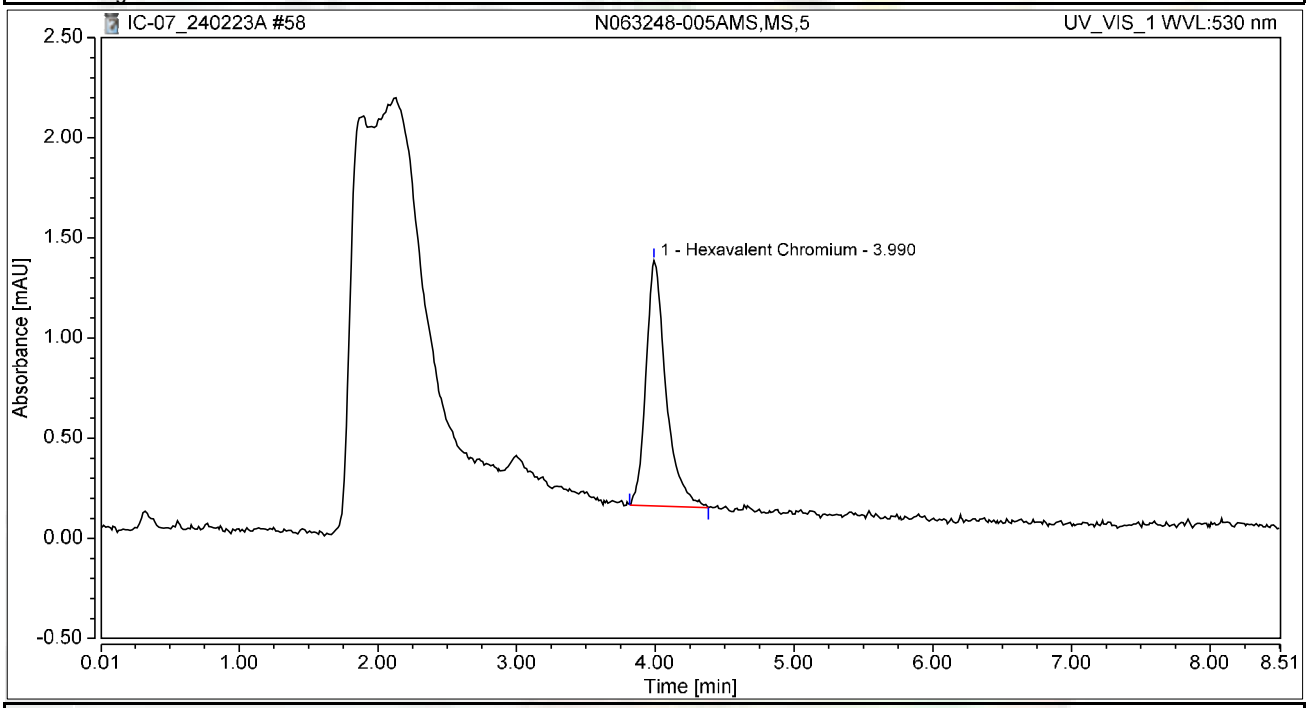
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-005AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 17:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

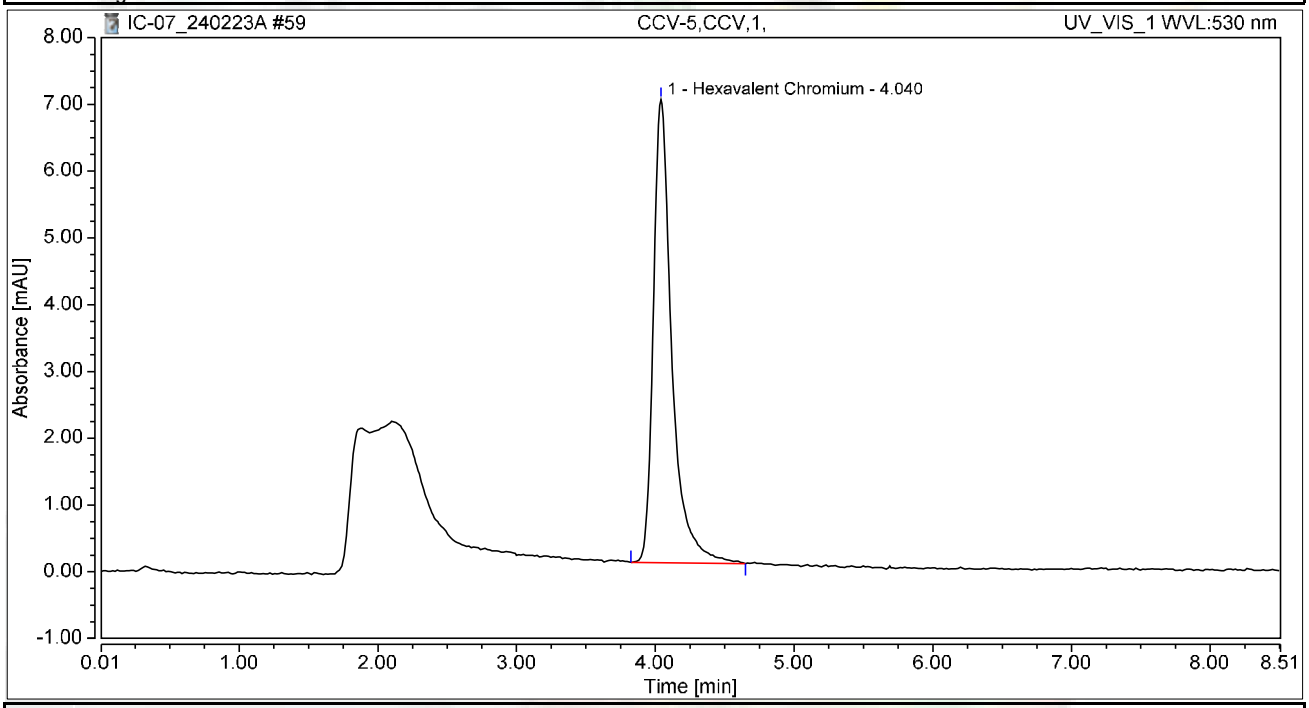
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.206	1.226	100.00	100.00	0.9571
Total:			**0.206**	**1.226**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 17:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

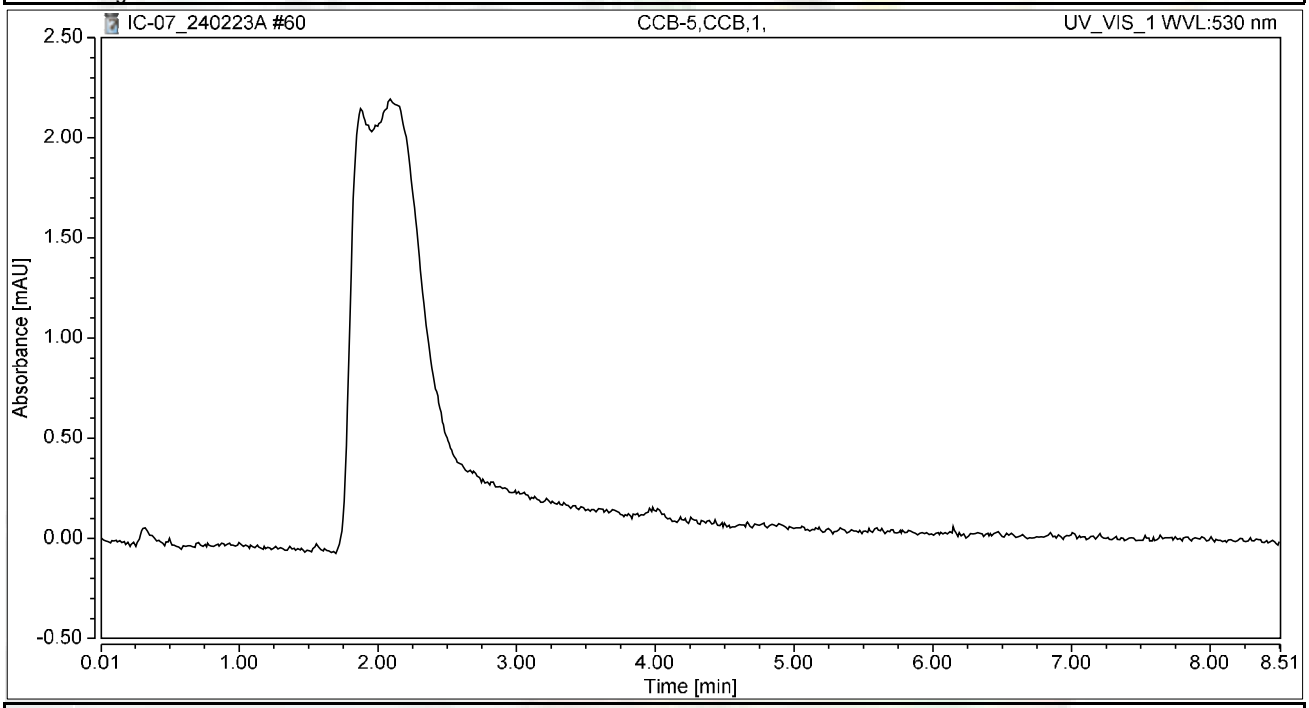
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.074	6.936	100.00	100.00	4.9917
Total:			**1.074**	**6.936**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

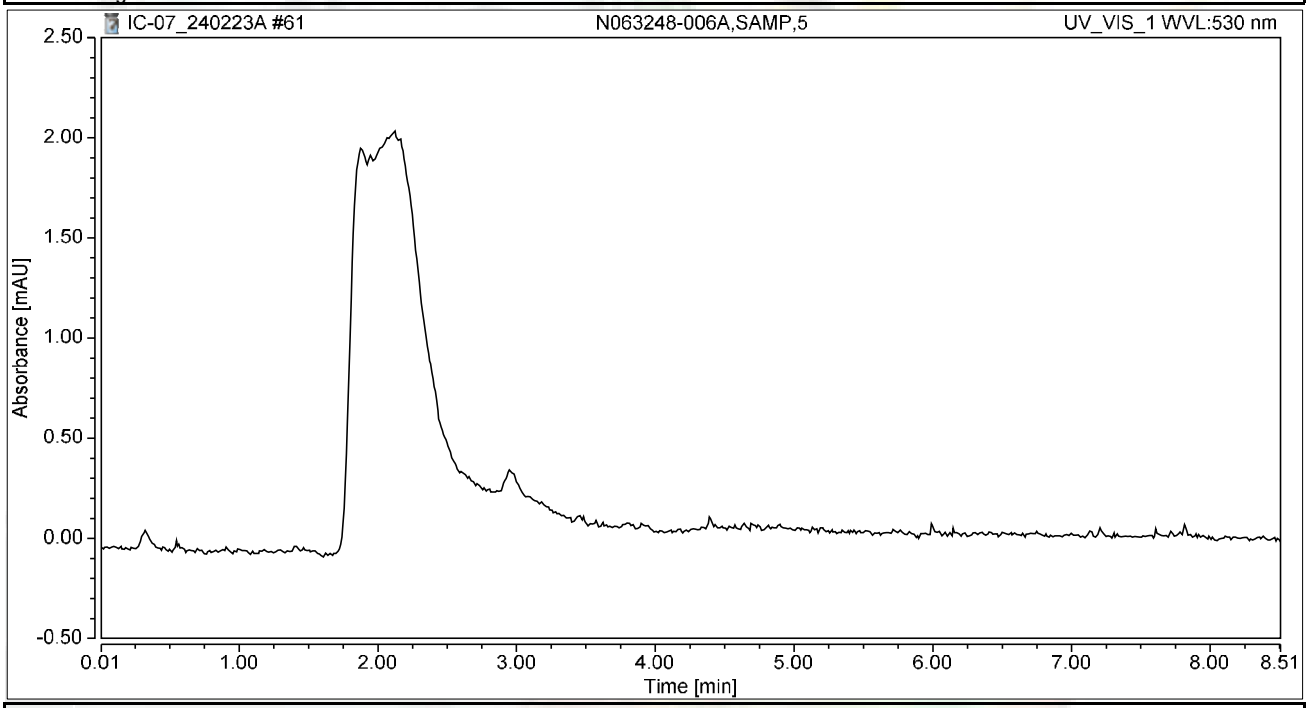
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-006A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

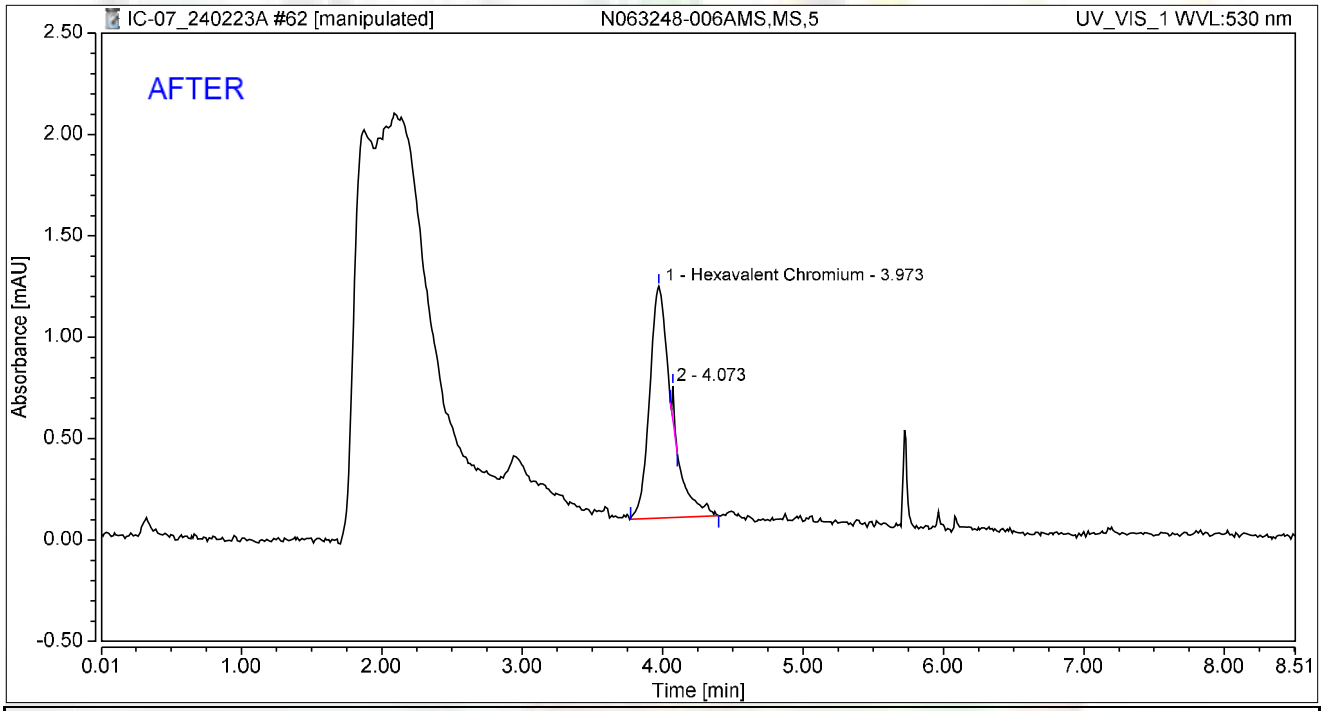
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-006AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.208	1.143	98.85	87.38	0.9686
2		4.073	0.002	0.165	1.15	12.62	n.a.
Total:			**0.211**	**1.309**	**100.00**	**100.00**	

Reviewed by:

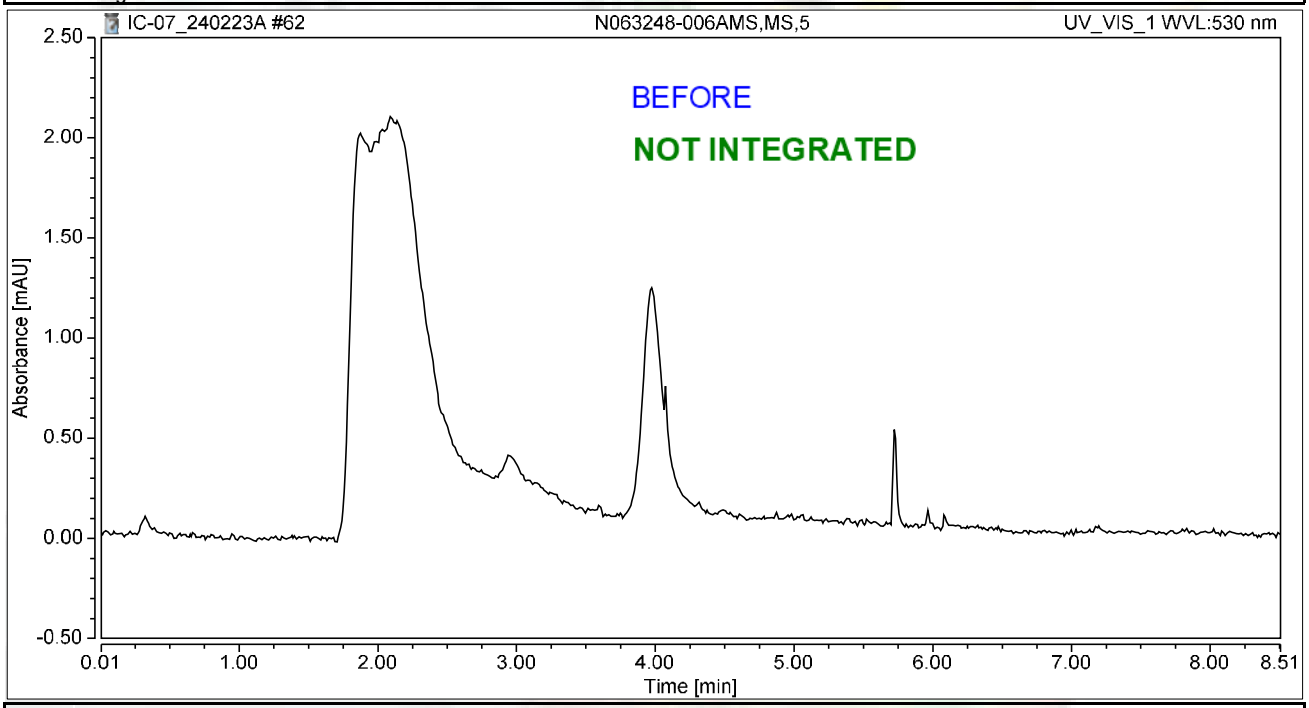
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063248-006AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

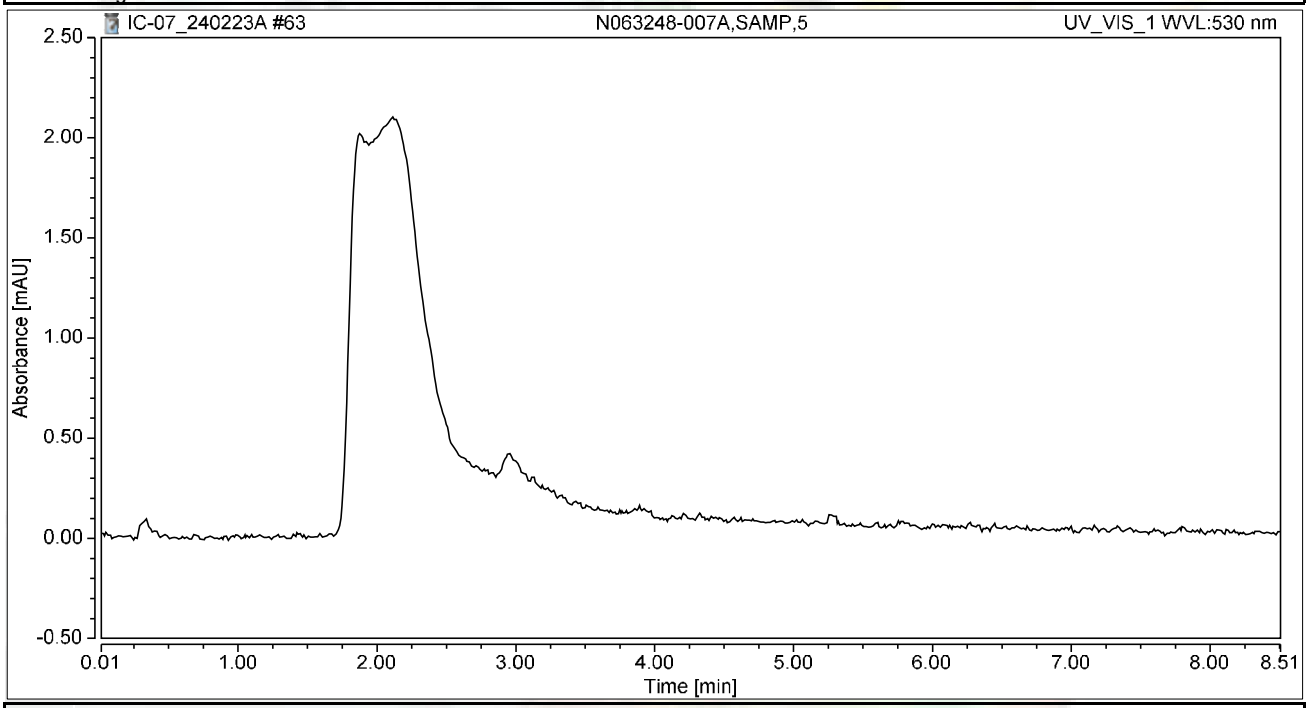
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-007A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

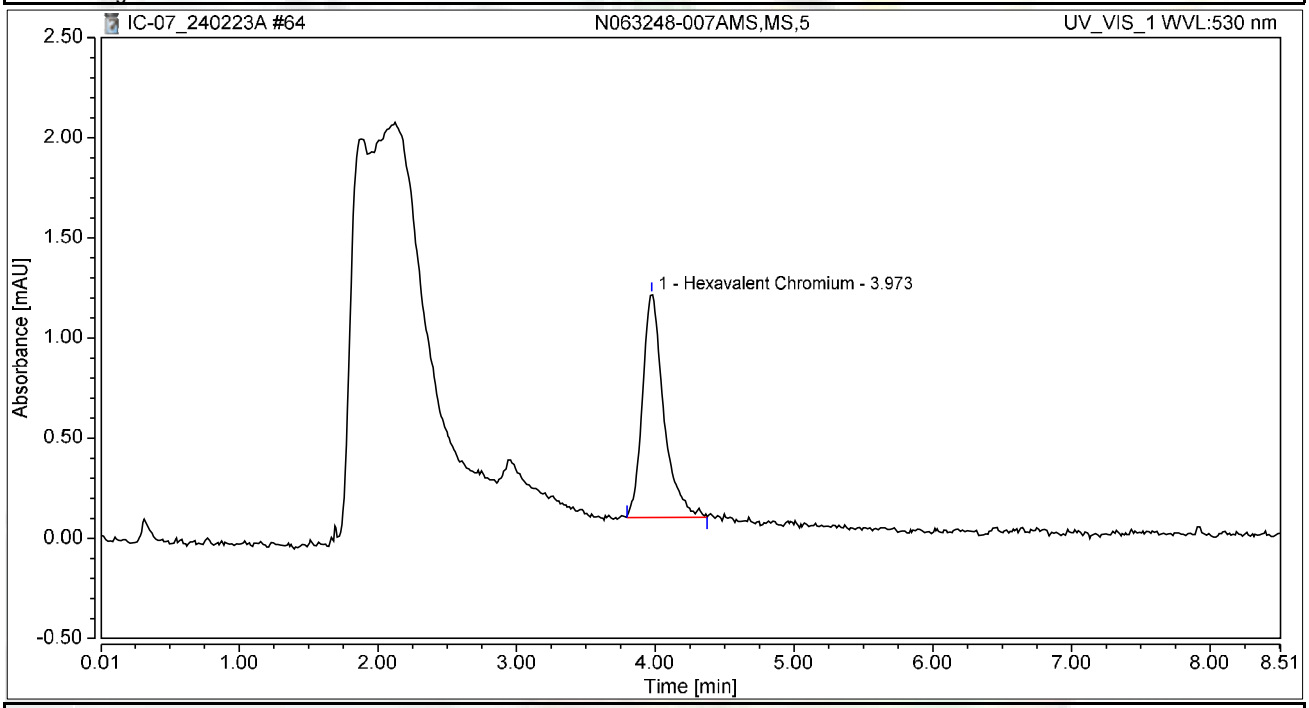
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-007AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

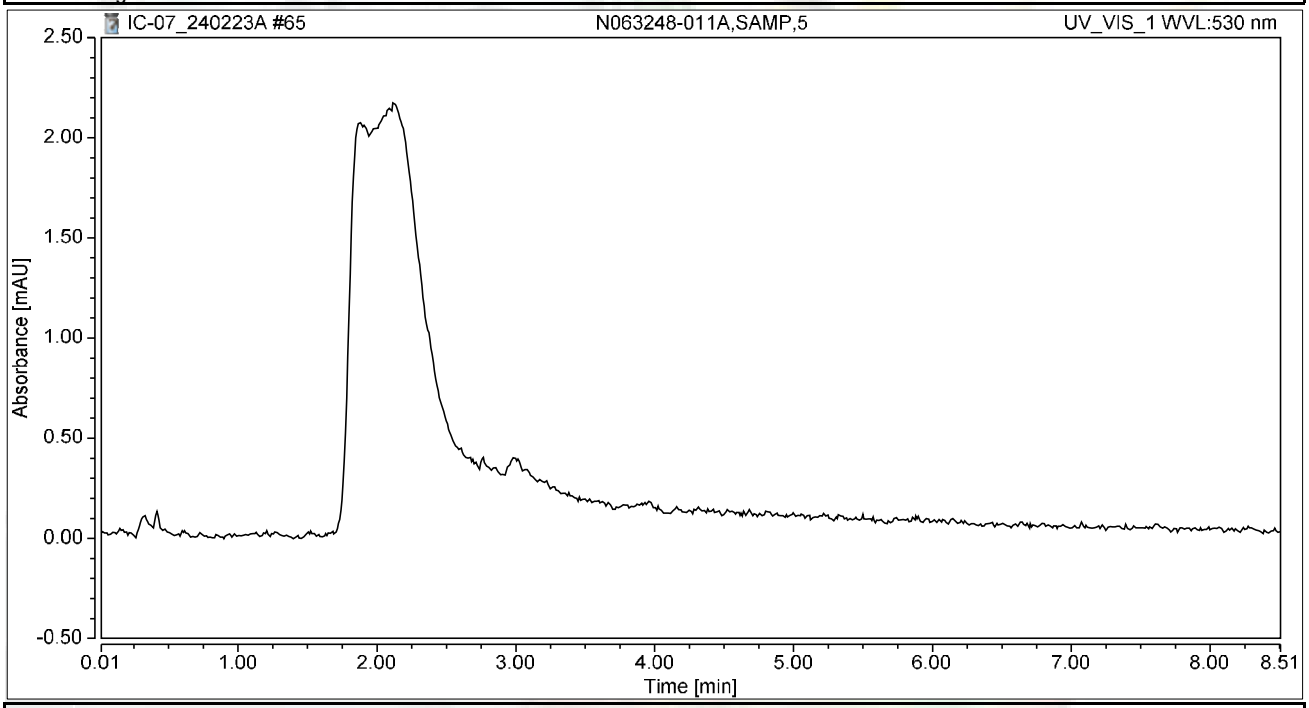
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.198	1.114	100.00	100.00	0.9207
Total:			**0.198**	**1.114**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-011A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

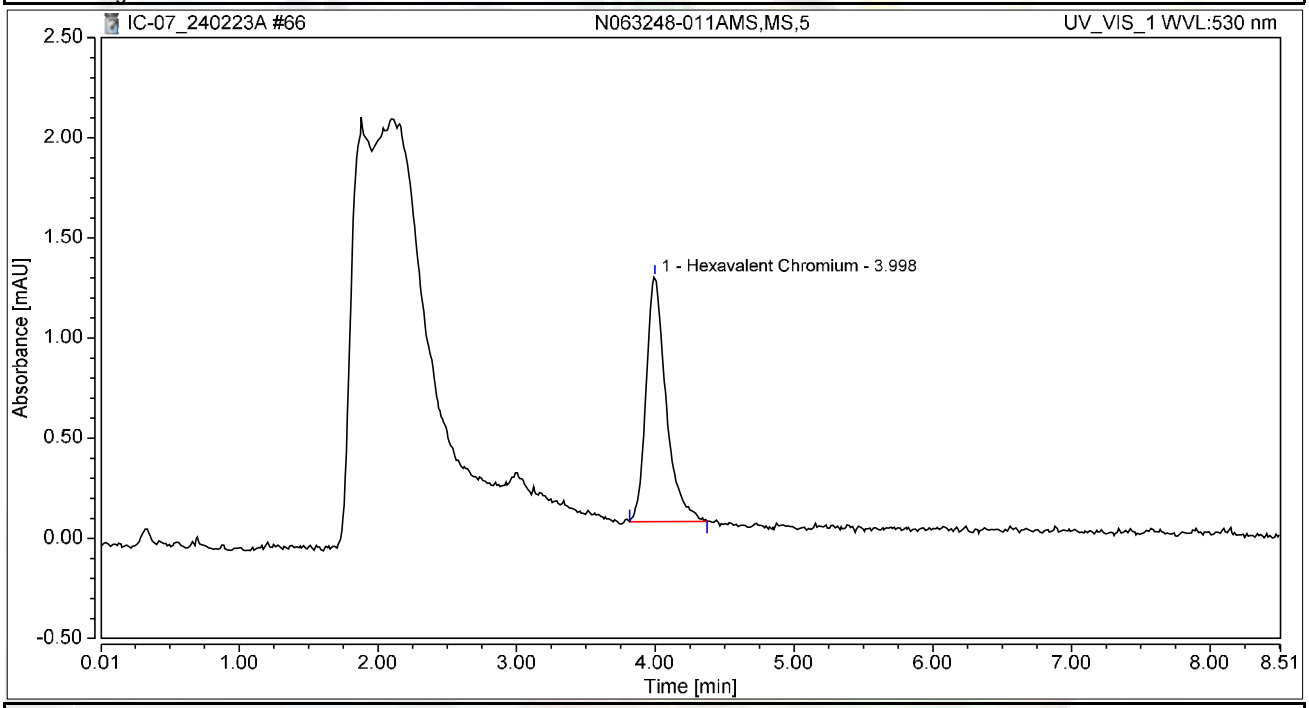
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-011AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

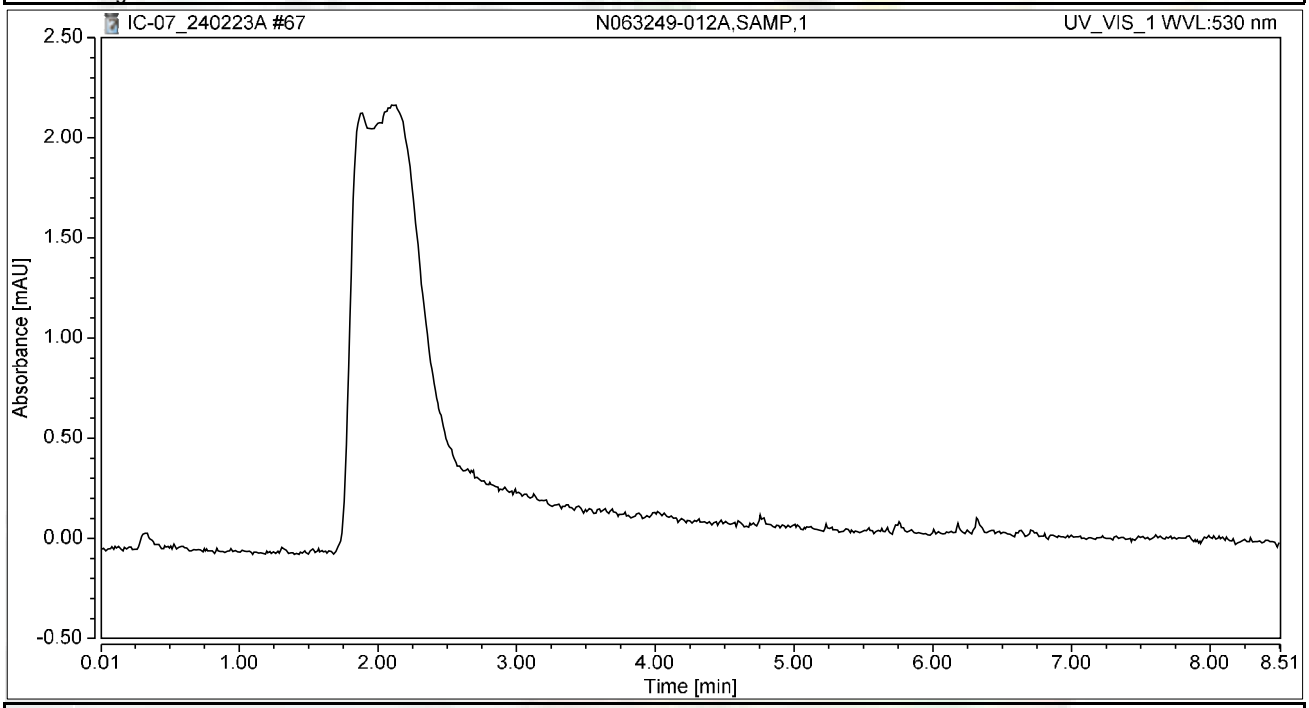
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.205	1.221	100.00	100.00	0.9540
Total:			**0.205**	**1.221**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-012A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 19:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

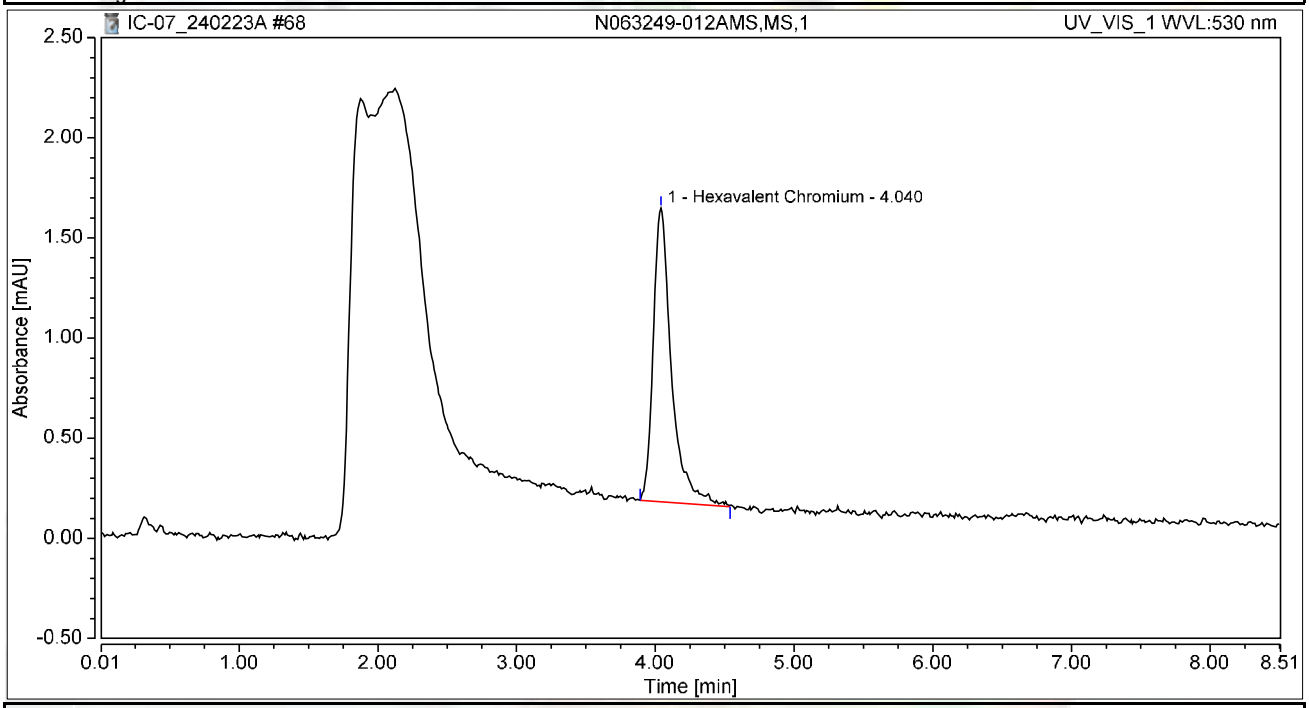
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-012AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 19:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

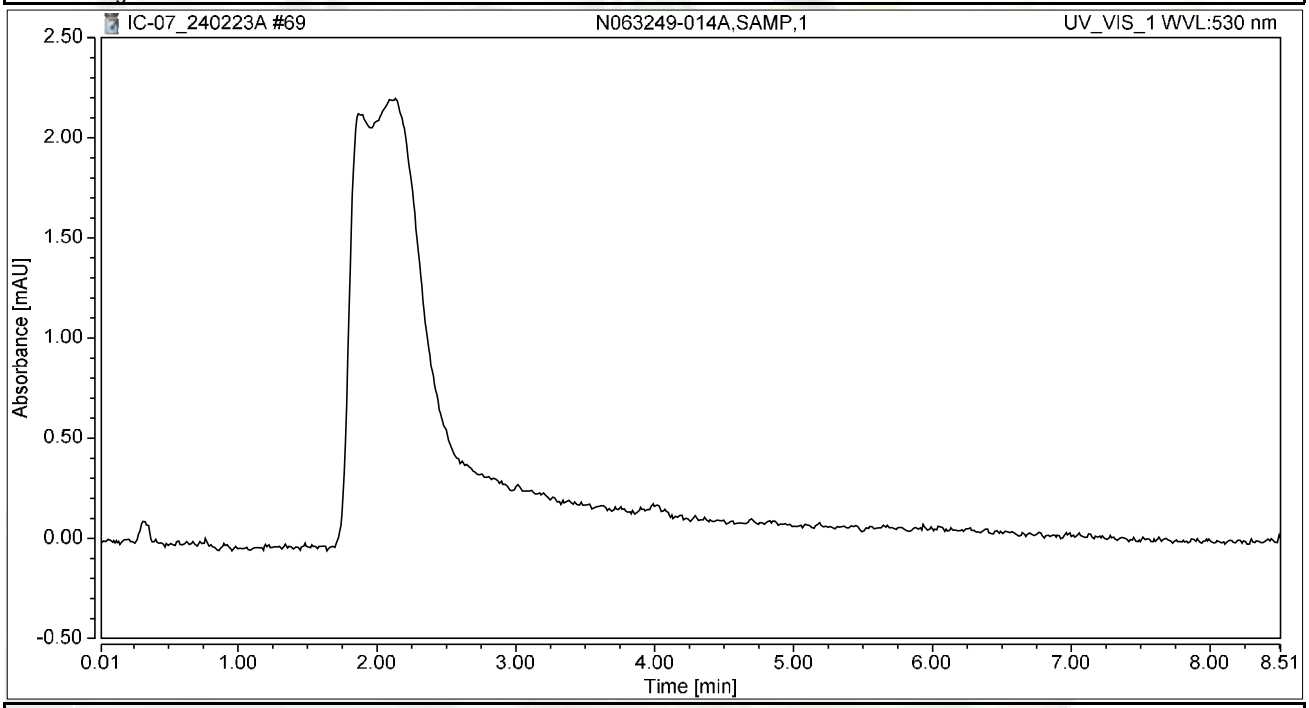
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.224	1.467	100.00	100.00	1.0436
Total:			**0.224**	**1.467**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-014A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 19:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

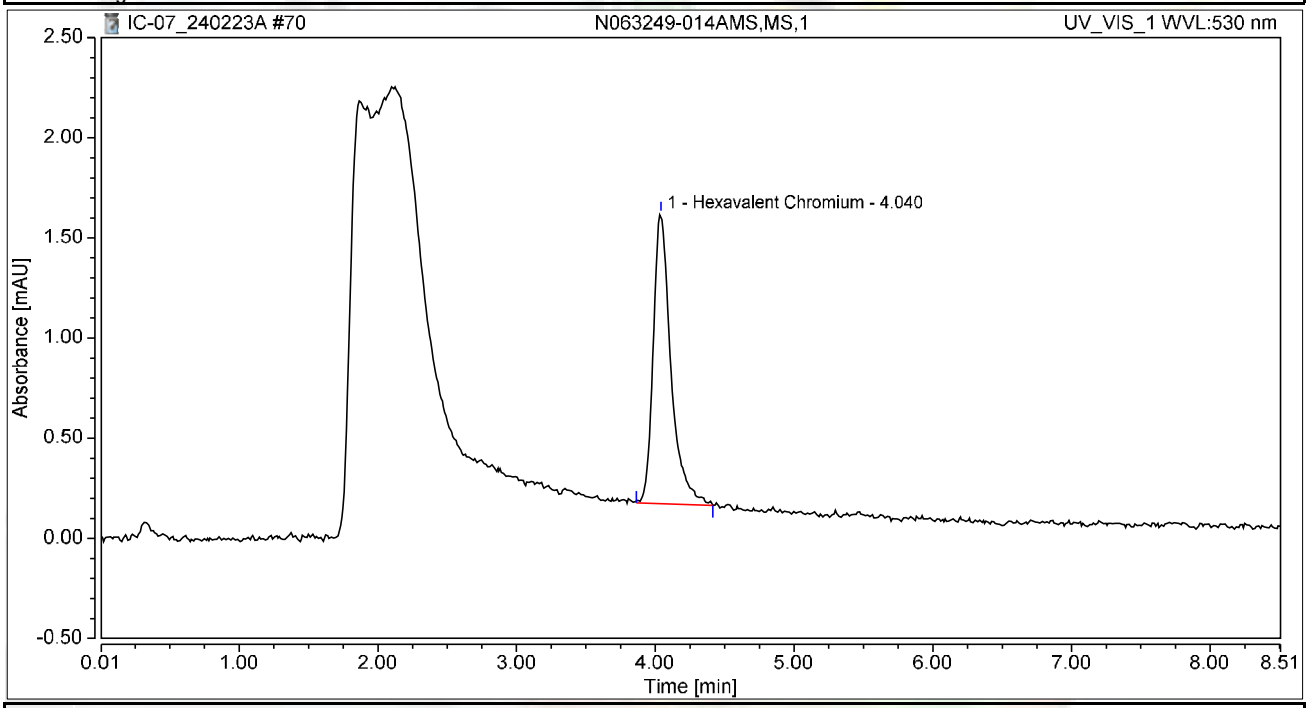
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-014AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 19:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

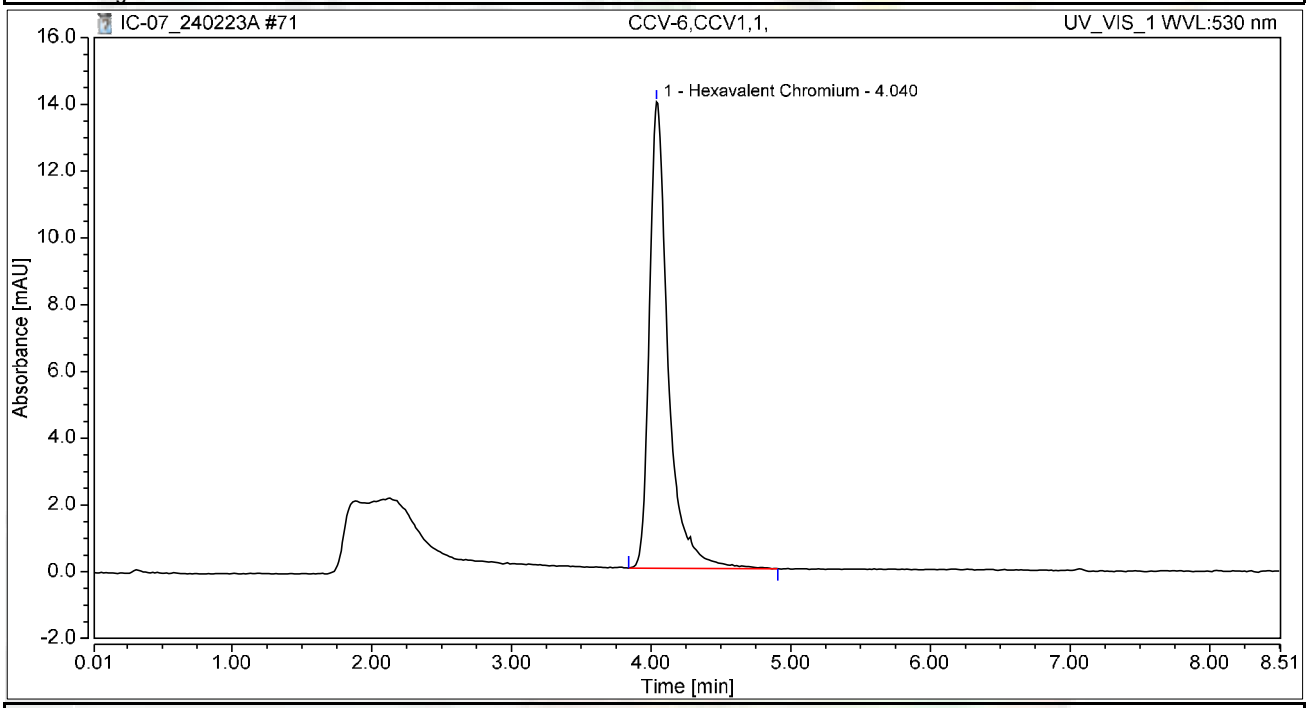
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.215	1.449	100.00	100.00	0.9993
Total:			**0.215**	**1.449**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 19:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

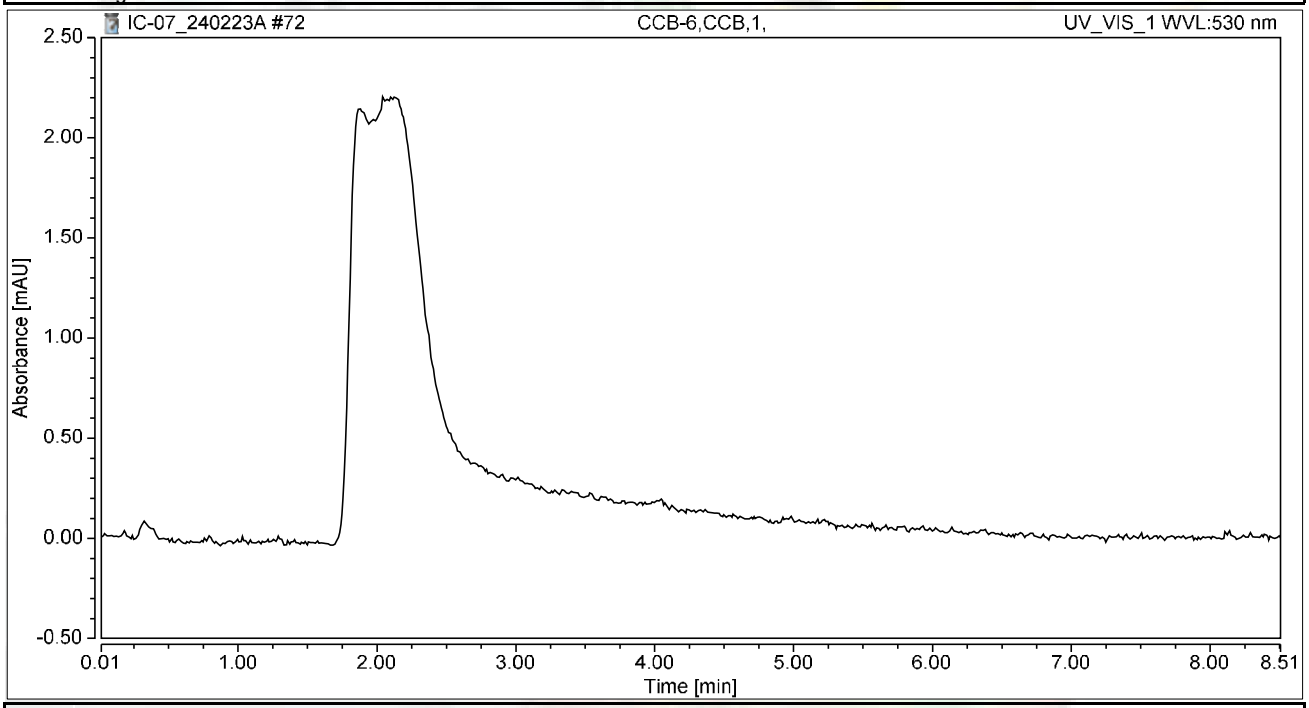
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.173	13.968	100.00	100.00	10.0999
Total:			**2.173**	**13.968**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 19:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

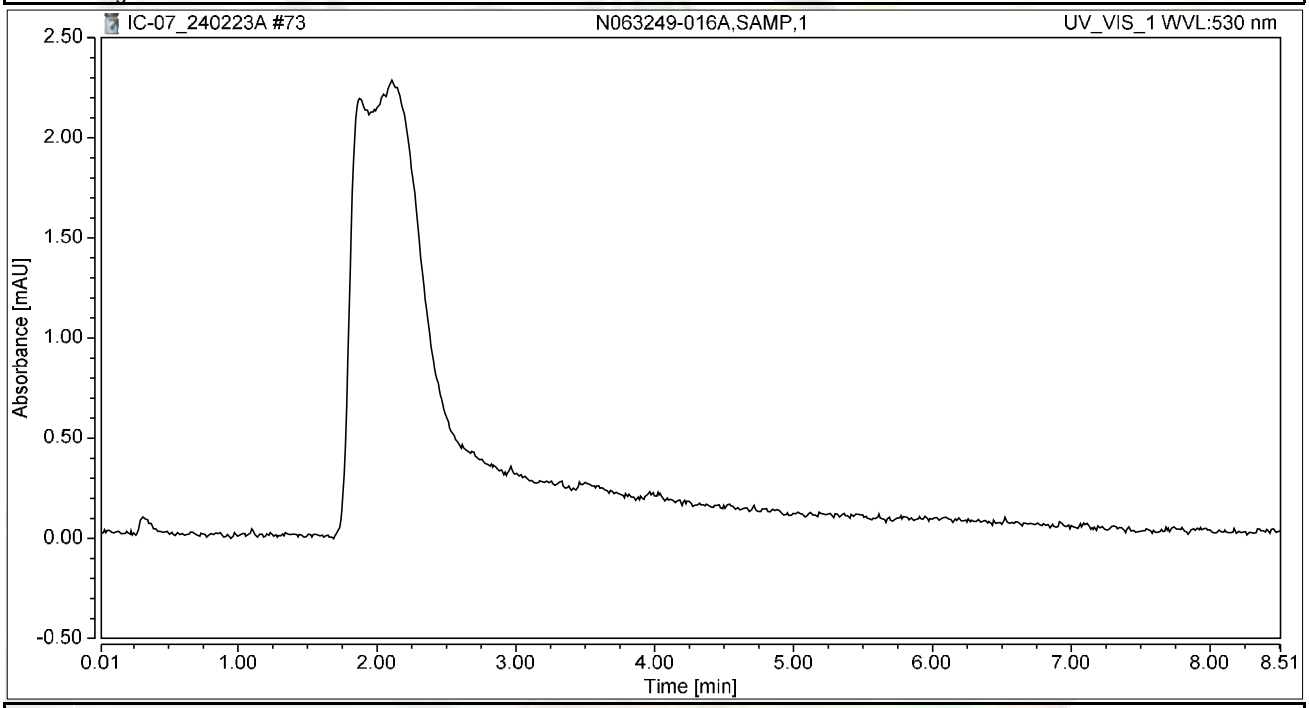
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-016A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 20:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

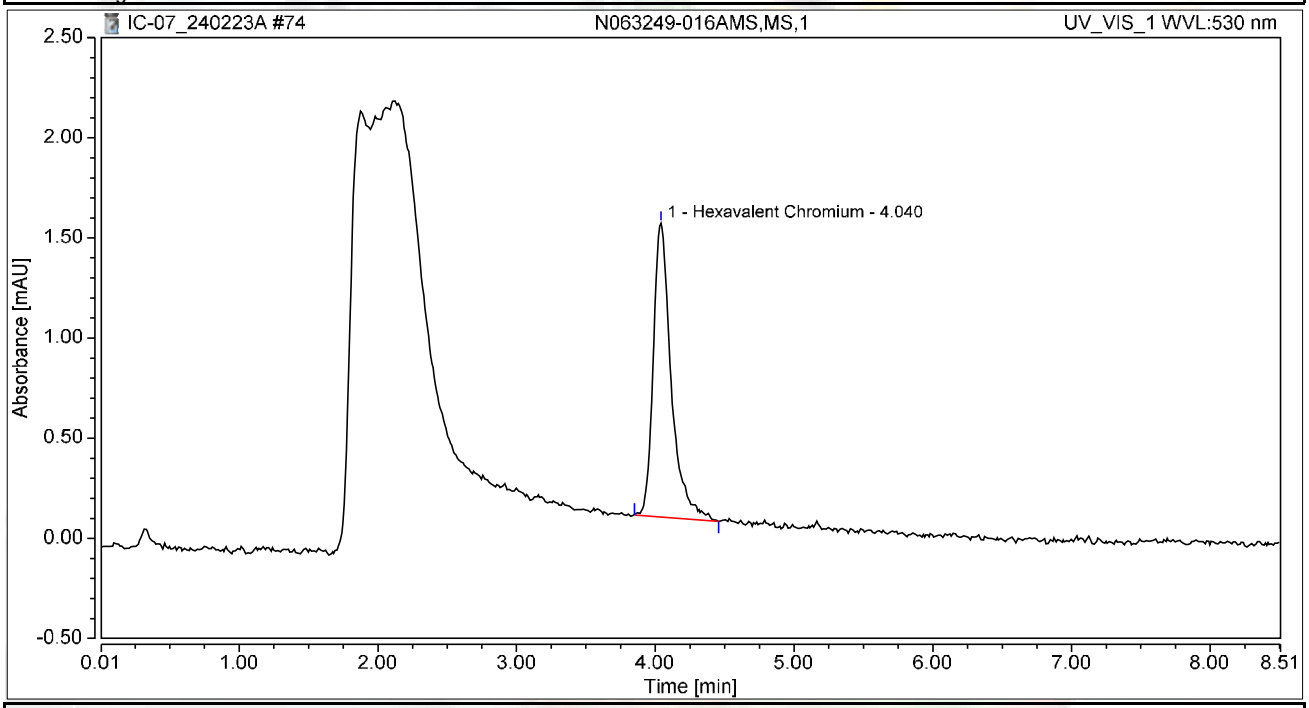
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-016AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 20:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

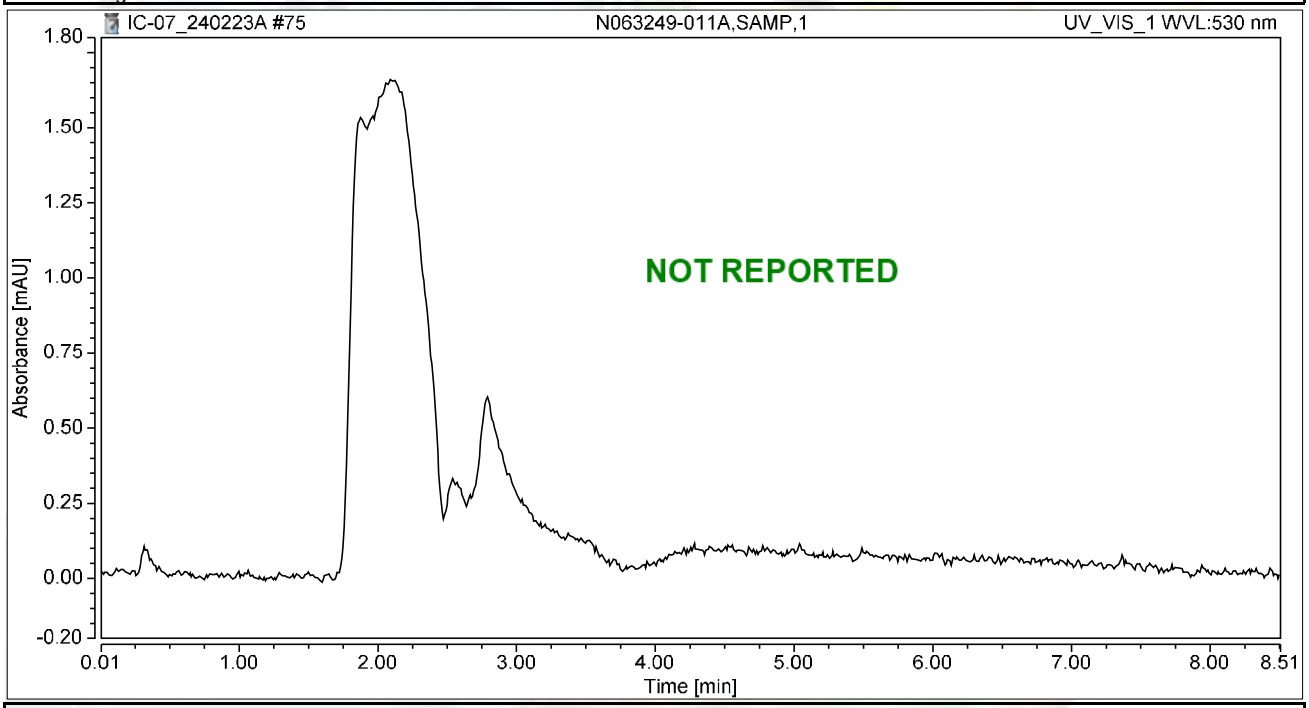
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.221	1.468	100.00	100.00	1.0262
Total:			**0.221**	**1.468**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-011A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 20:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

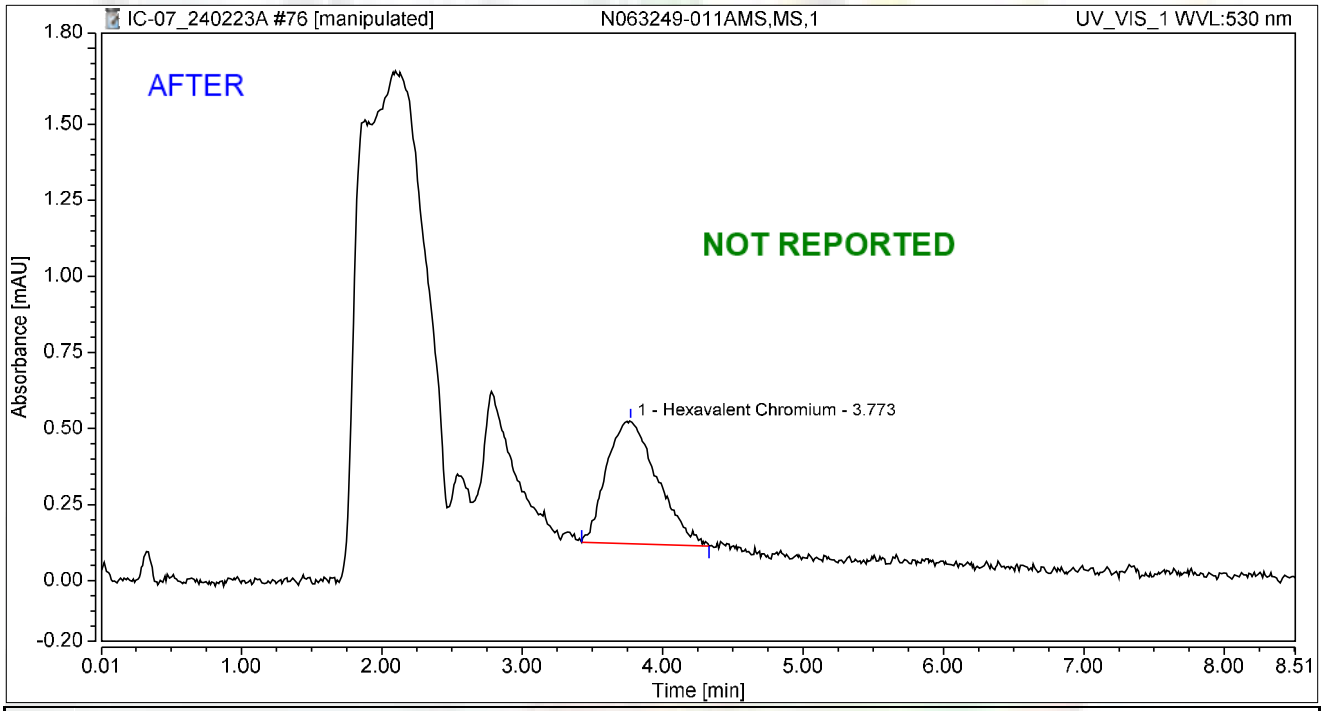
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 20:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

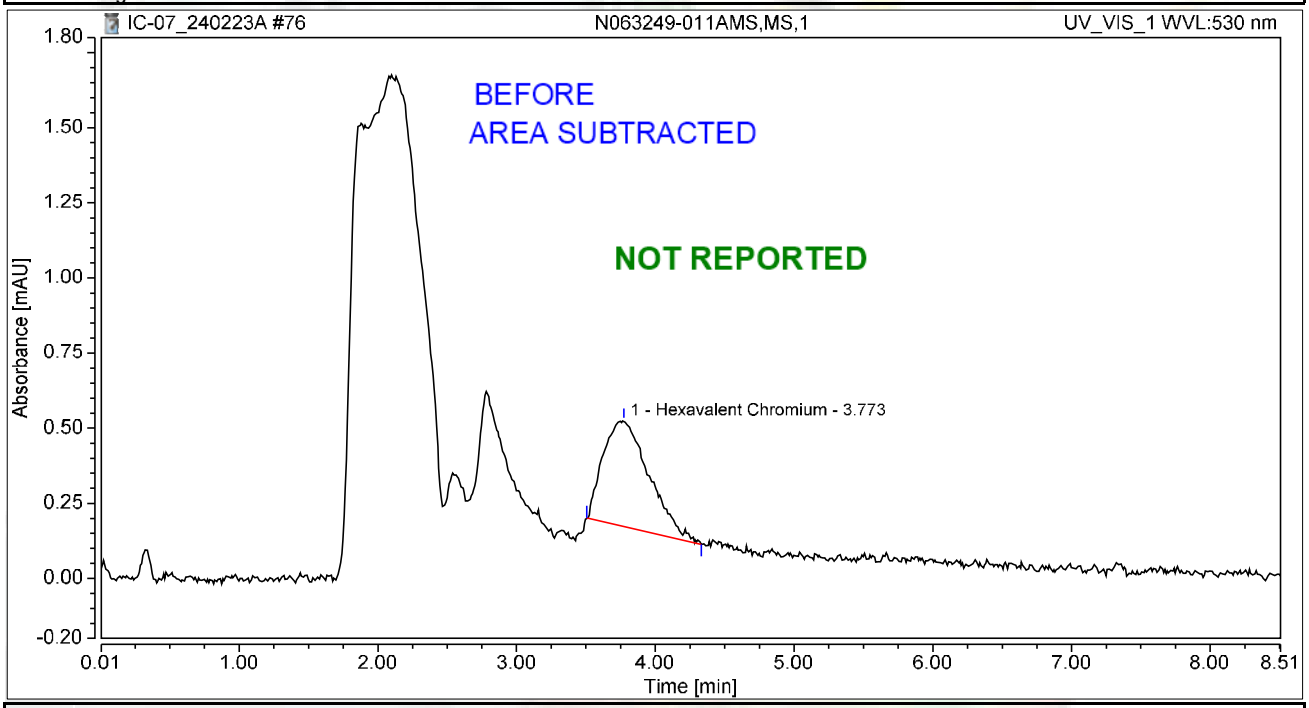
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.773	0.169	0.404	100.00	100.00	0.7870
Total:			**0.169**	**0.404**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 20:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

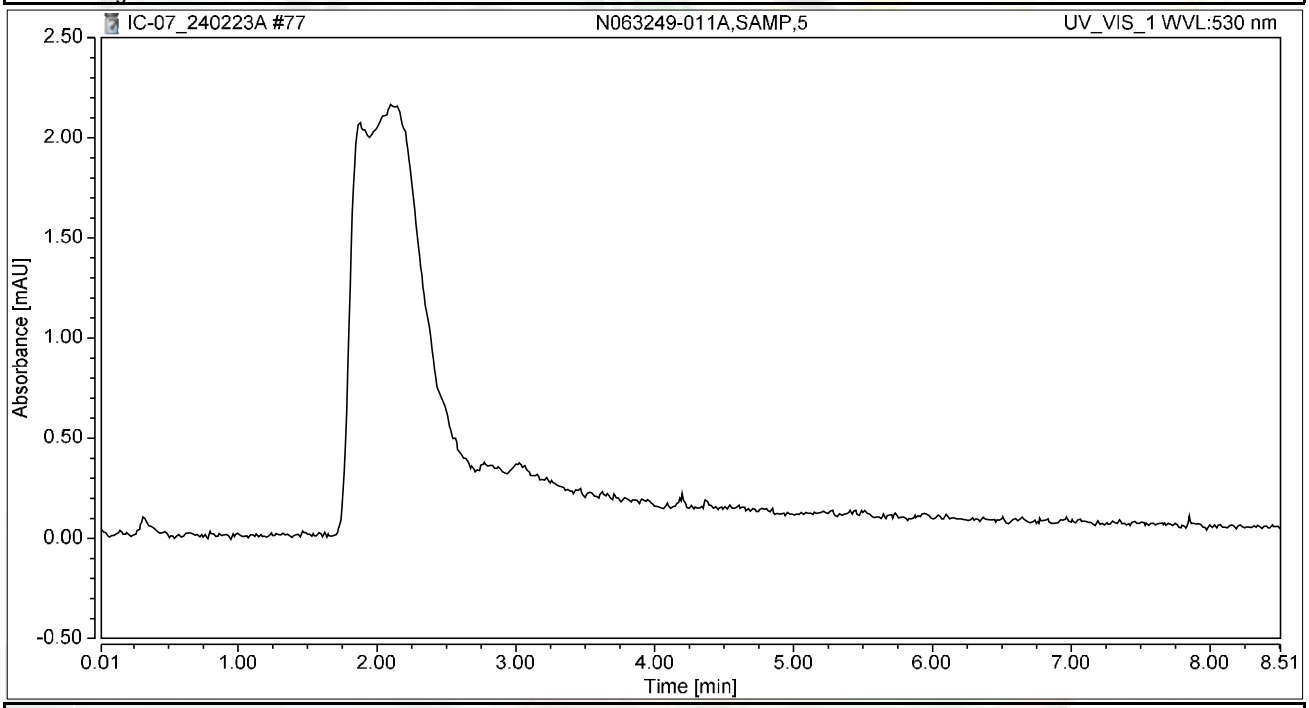
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.773	0.135	0.352	100.00	100.00	0.6282
Total:			**0.135**	**0.352**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-011A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 20:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

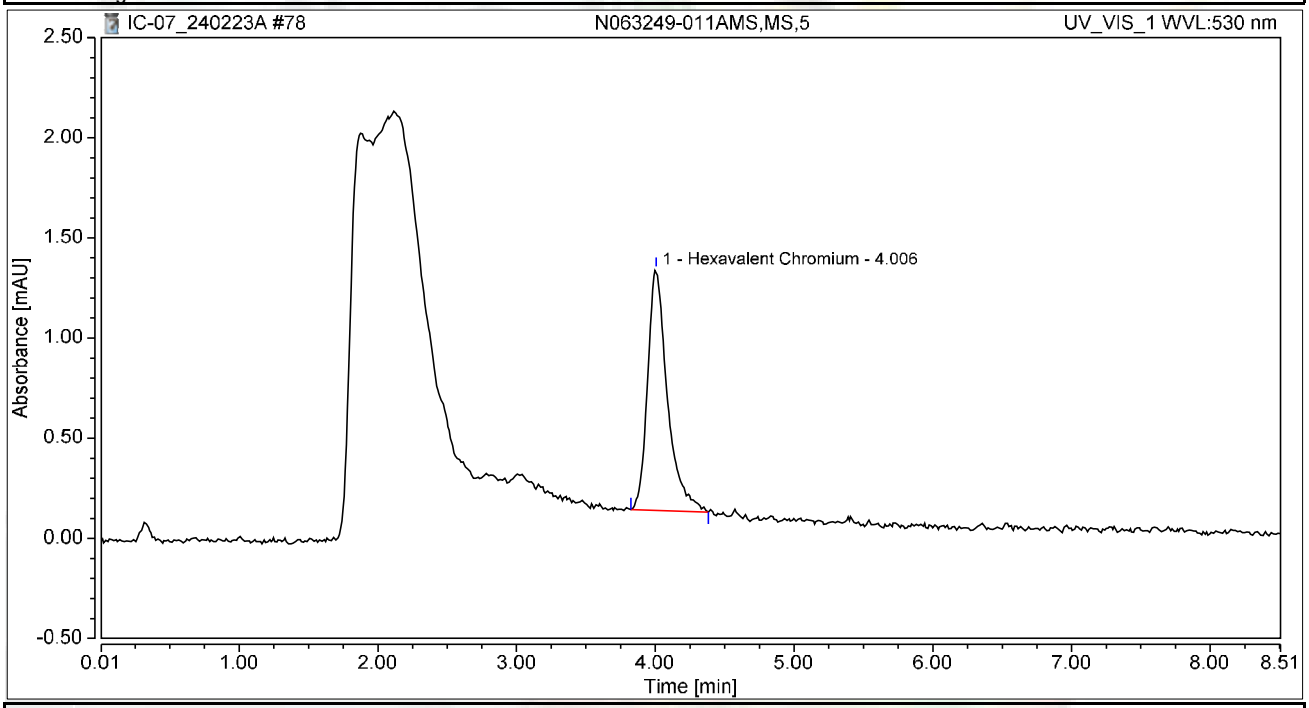
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-011AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 20:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

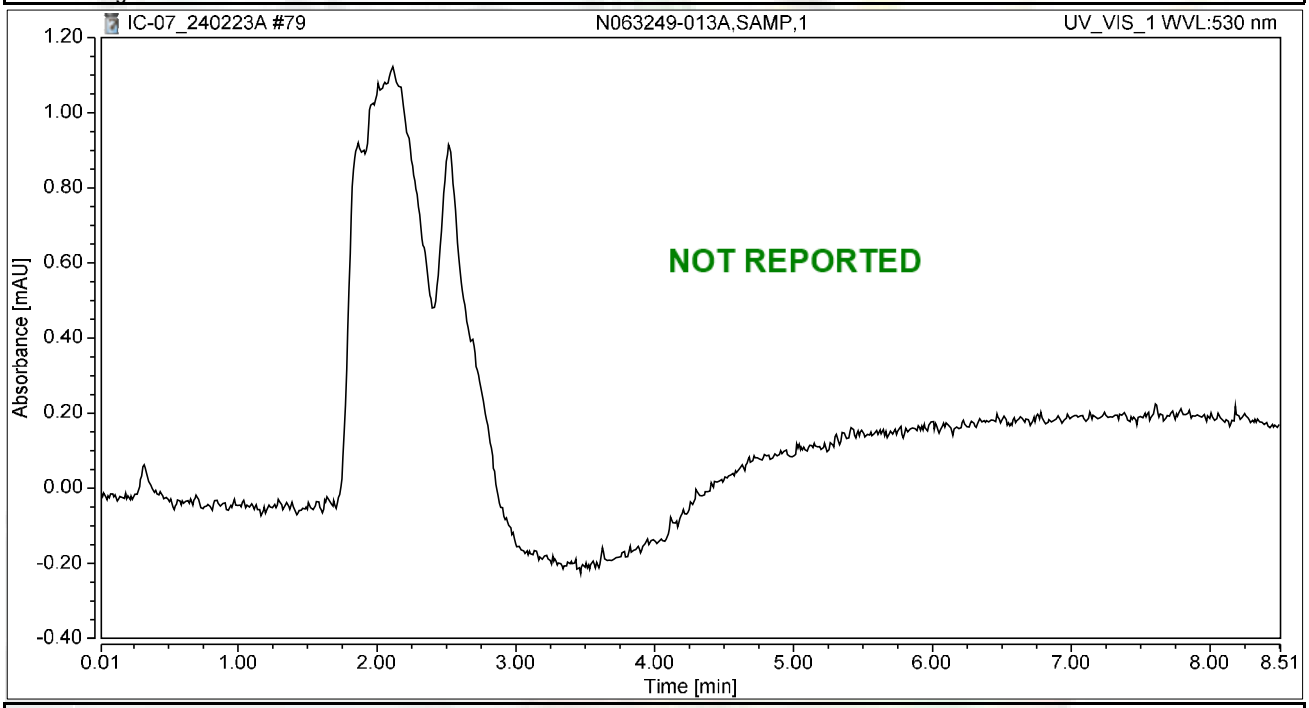
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.199	1.202	100.00	100.00	0.9273
Total:			**0.199**	**1.202**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-013A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 21:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

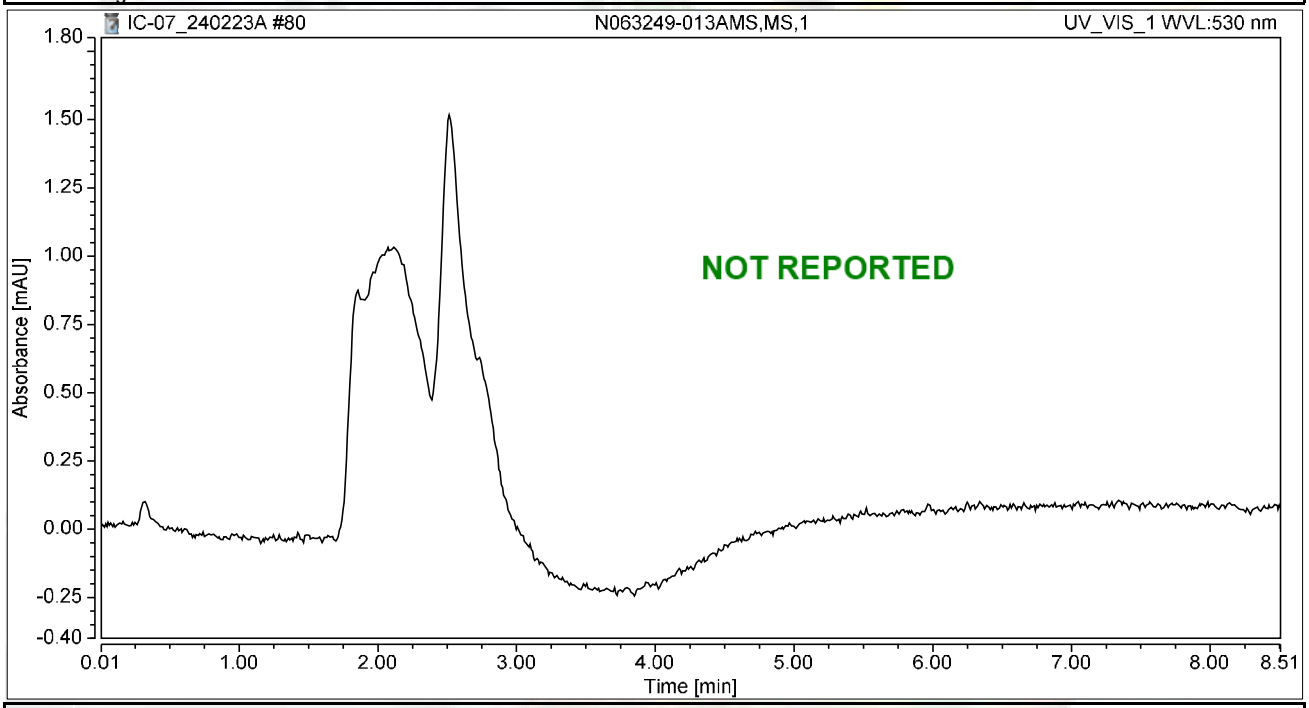
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-013AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 21:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

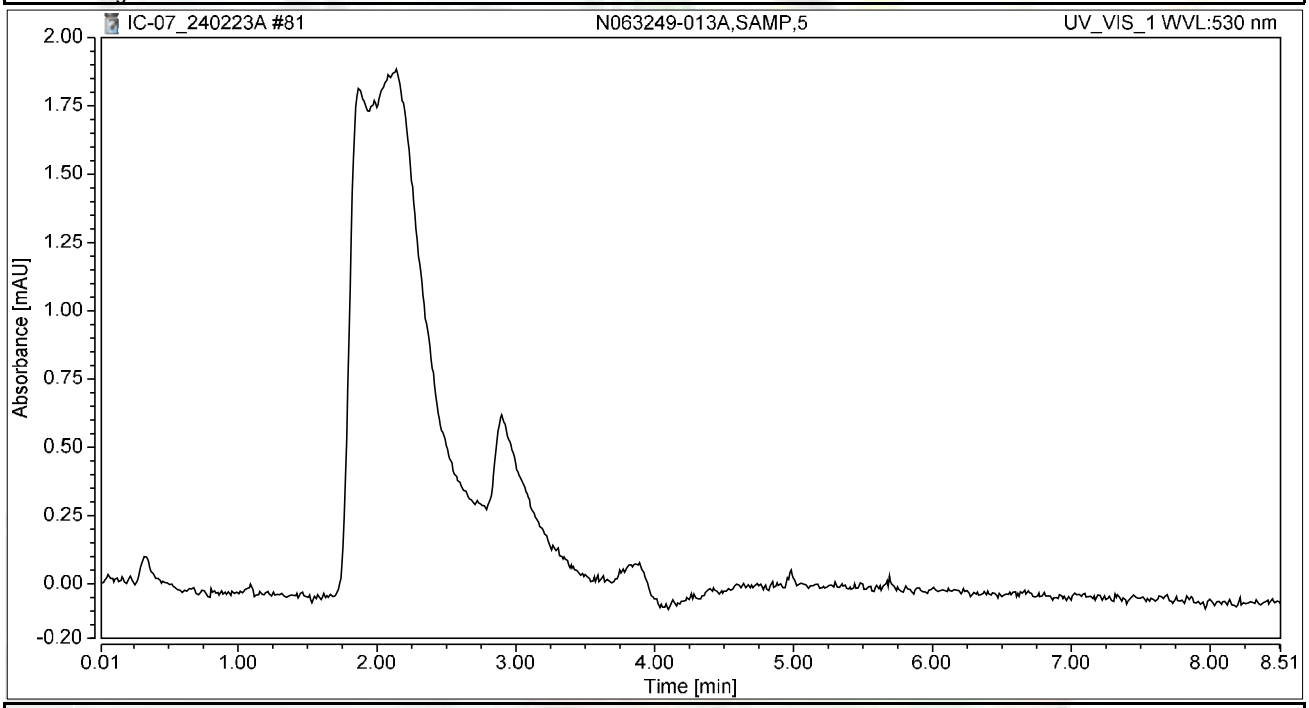
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-013A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 21:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

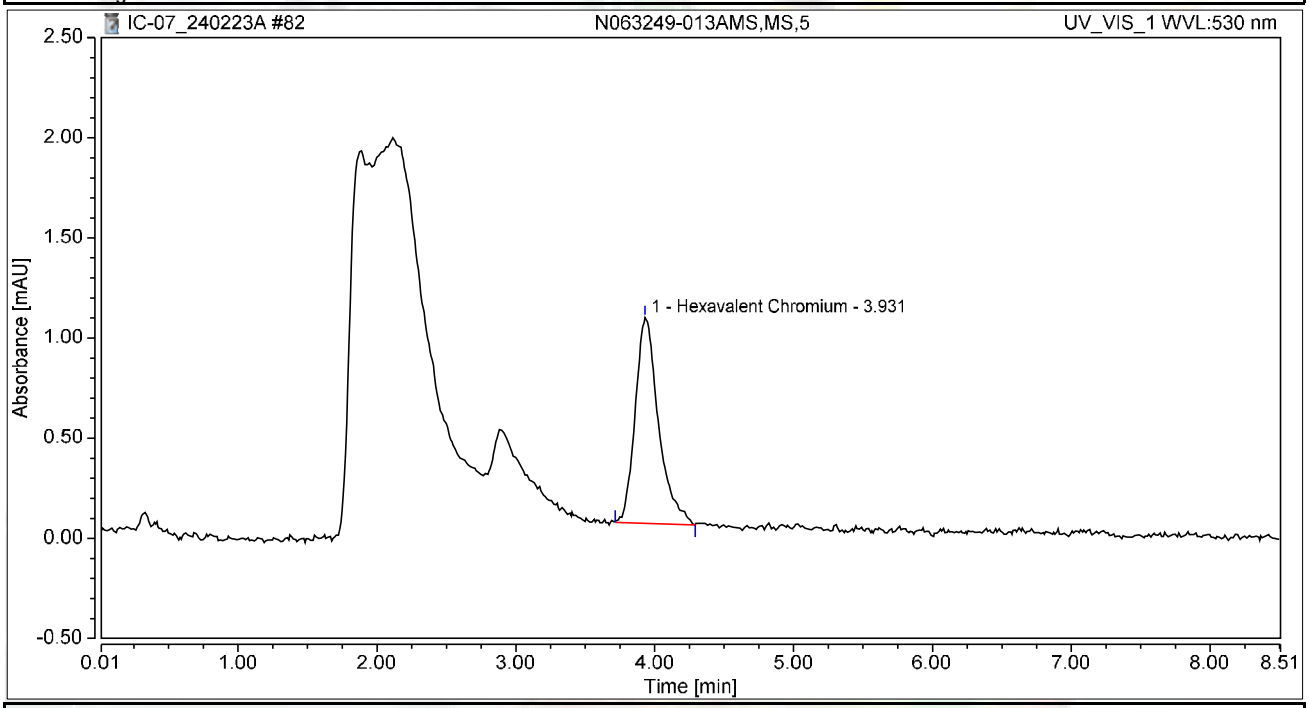
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-013AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 21:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

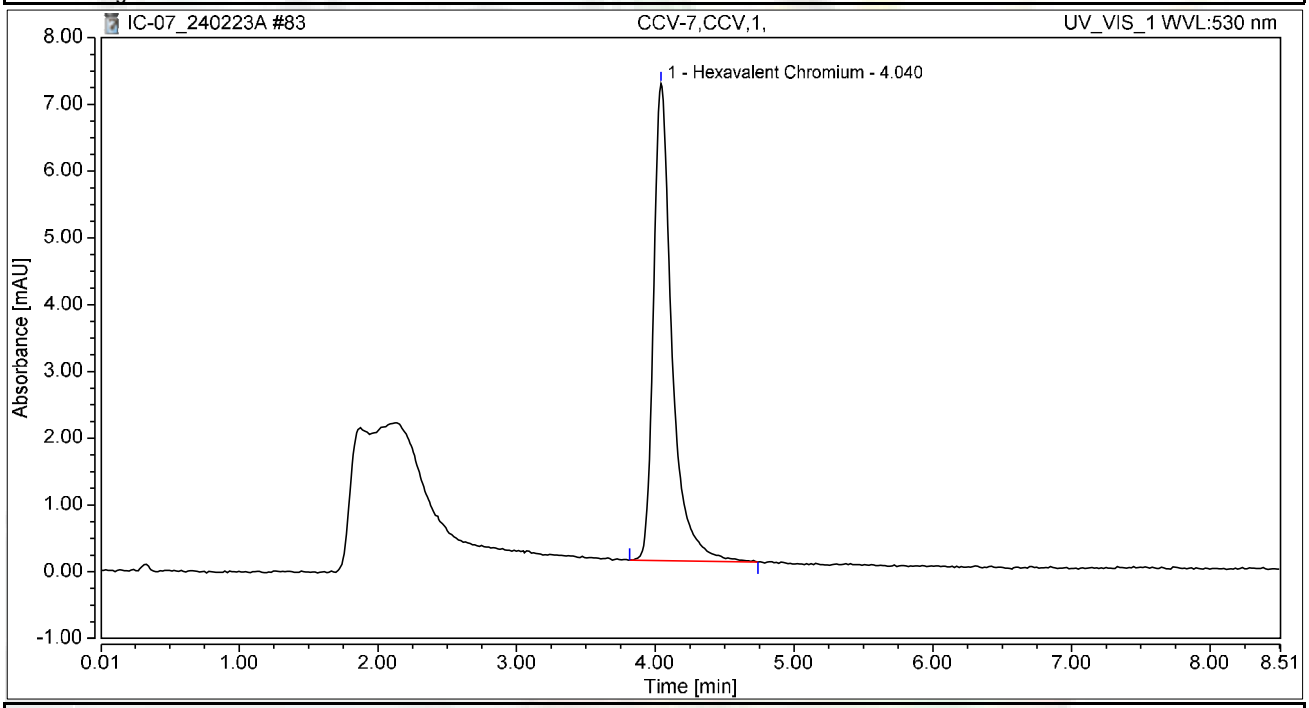
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.931	0.200	1.028	100.00	100.00	0.9304
Total:			**0.200**	**1.028**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 21:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

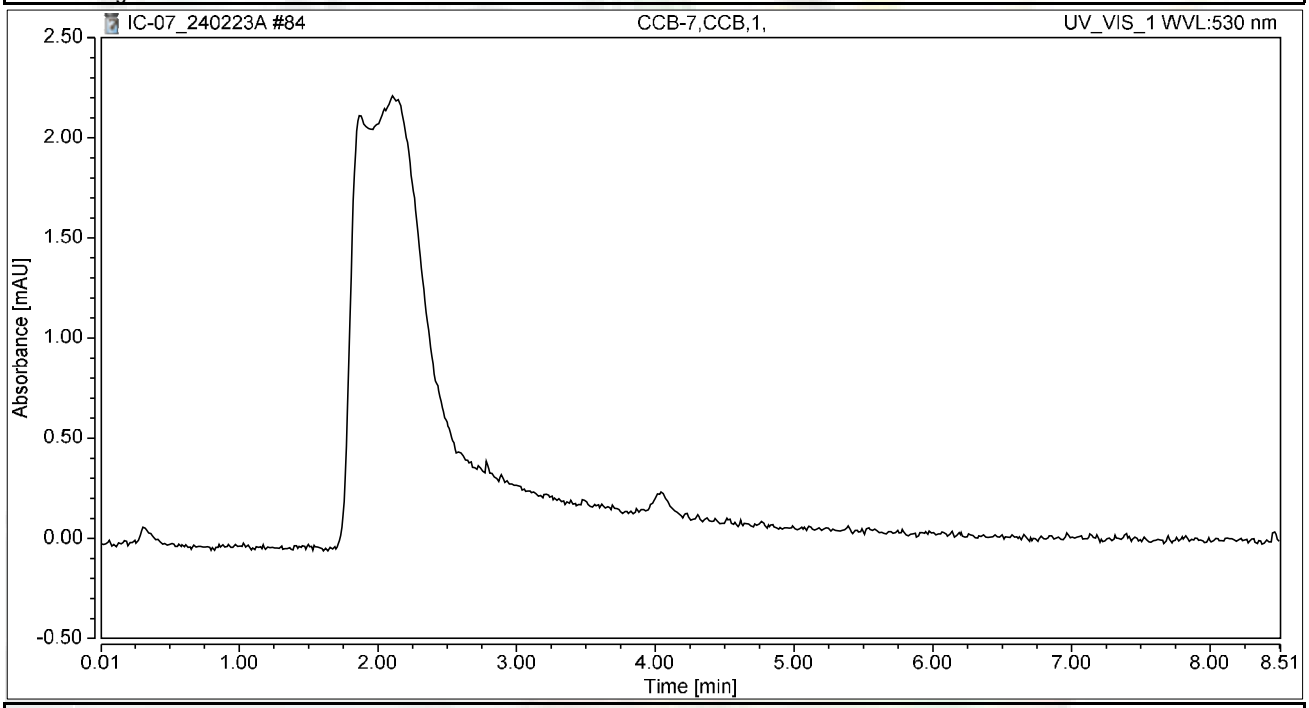
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.105	7.142	100.00	100.00	5.1365
Total:			**1.105**	**7.142**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 21:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

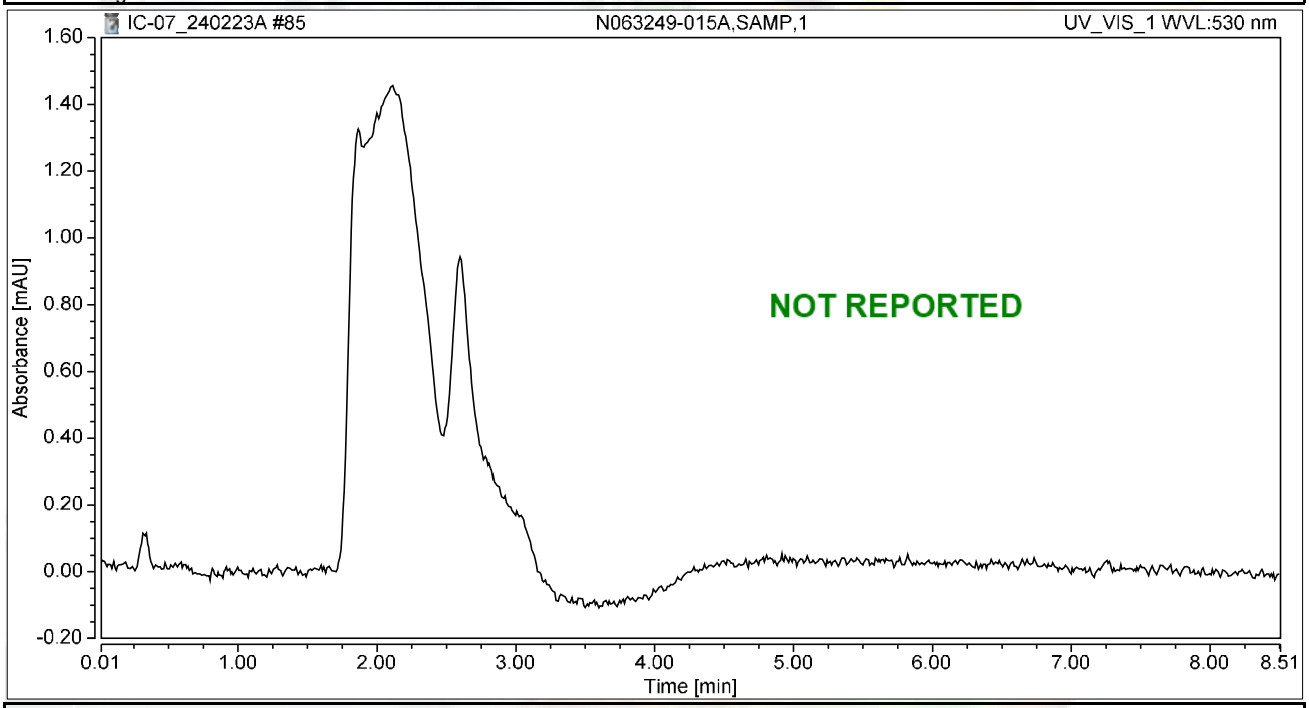
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-015A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 21:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

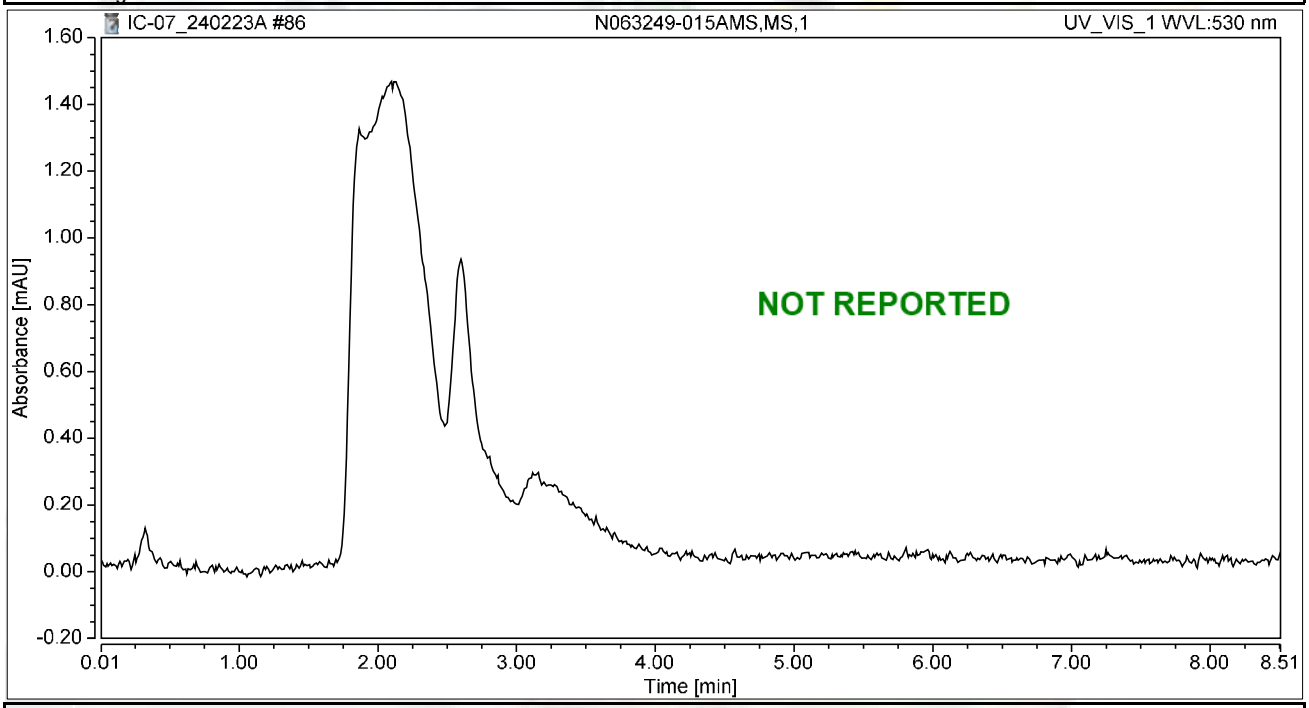
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-015AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 22:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

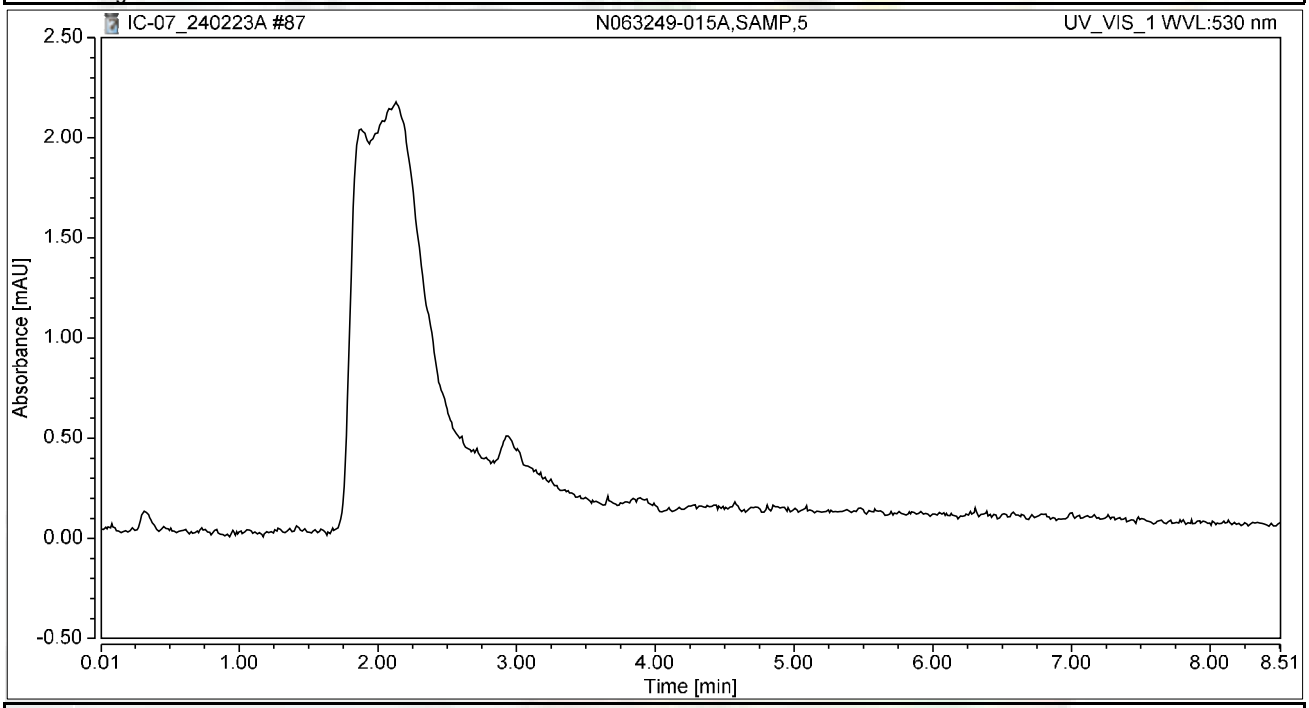
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-015A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 22:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

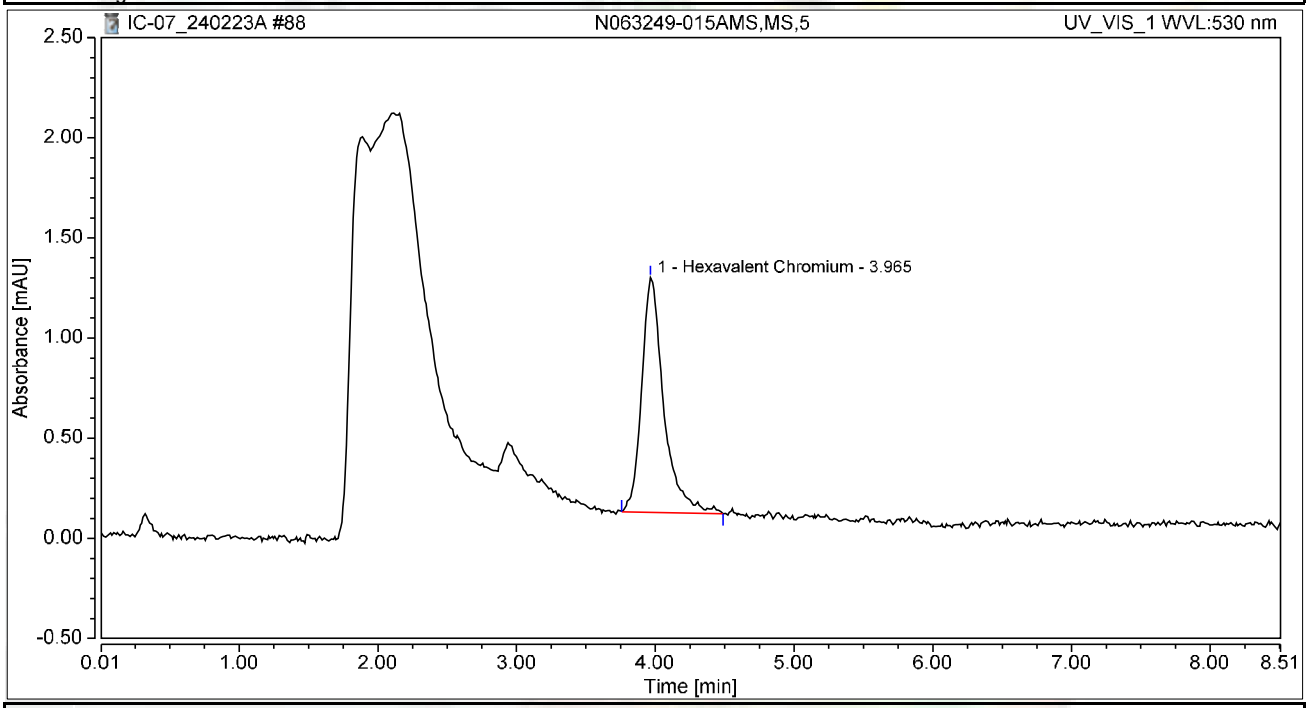
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-015AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 22:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

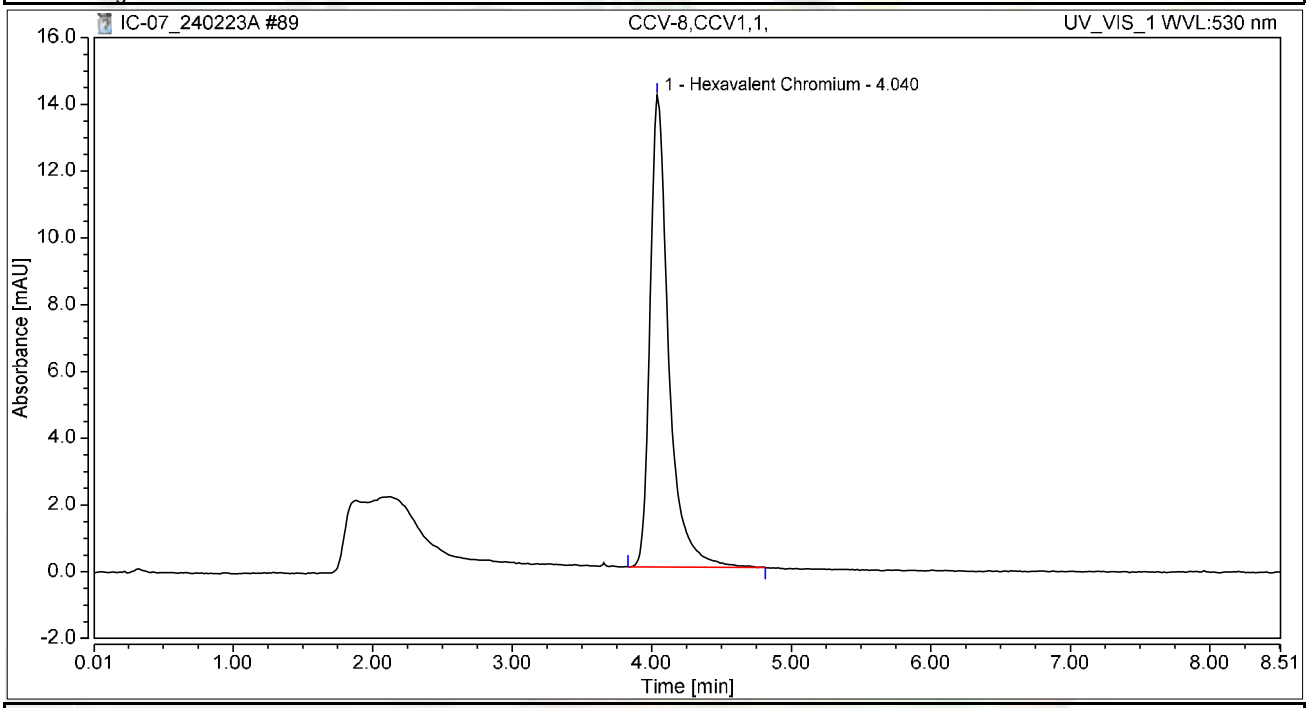
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.217	1.172	100.00	100.00	1.0073
Total:			**0.217**	**1.172**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-8,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 22:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

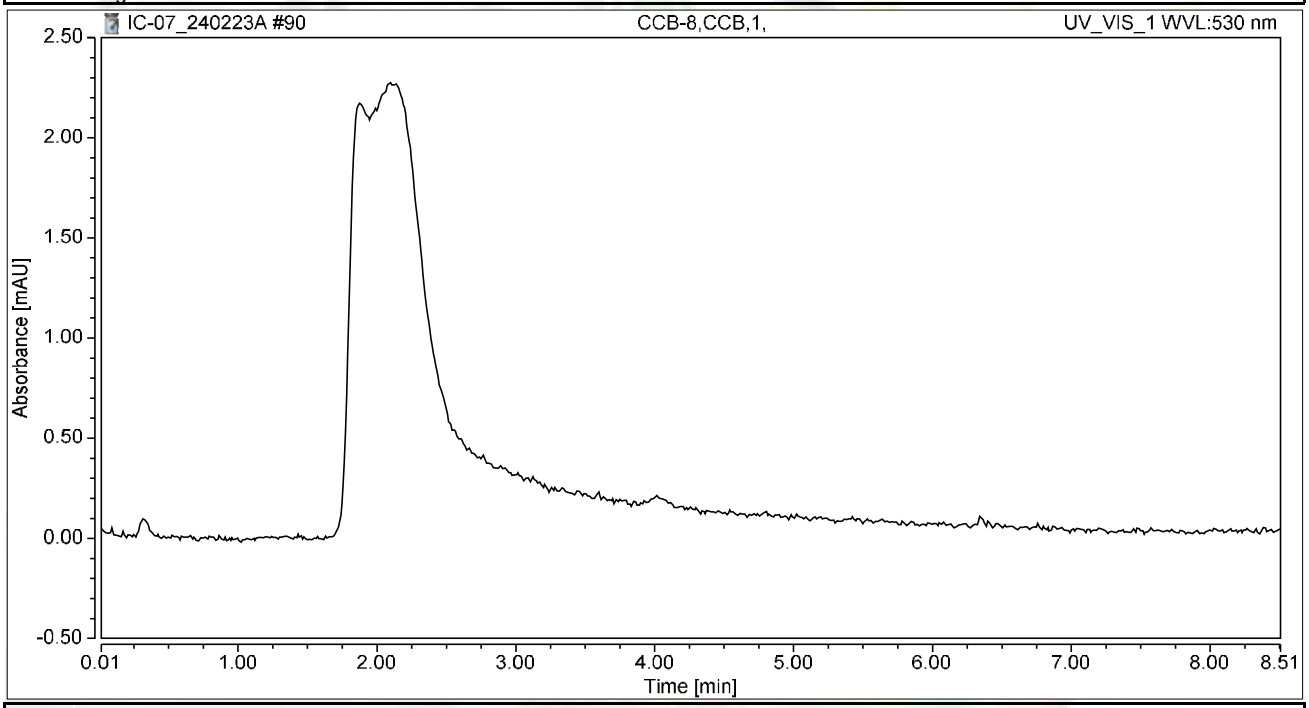
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.190	14.136	100.00	100.00	10.1795
Total:			**2.190**	**14.136**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-8,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 22:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

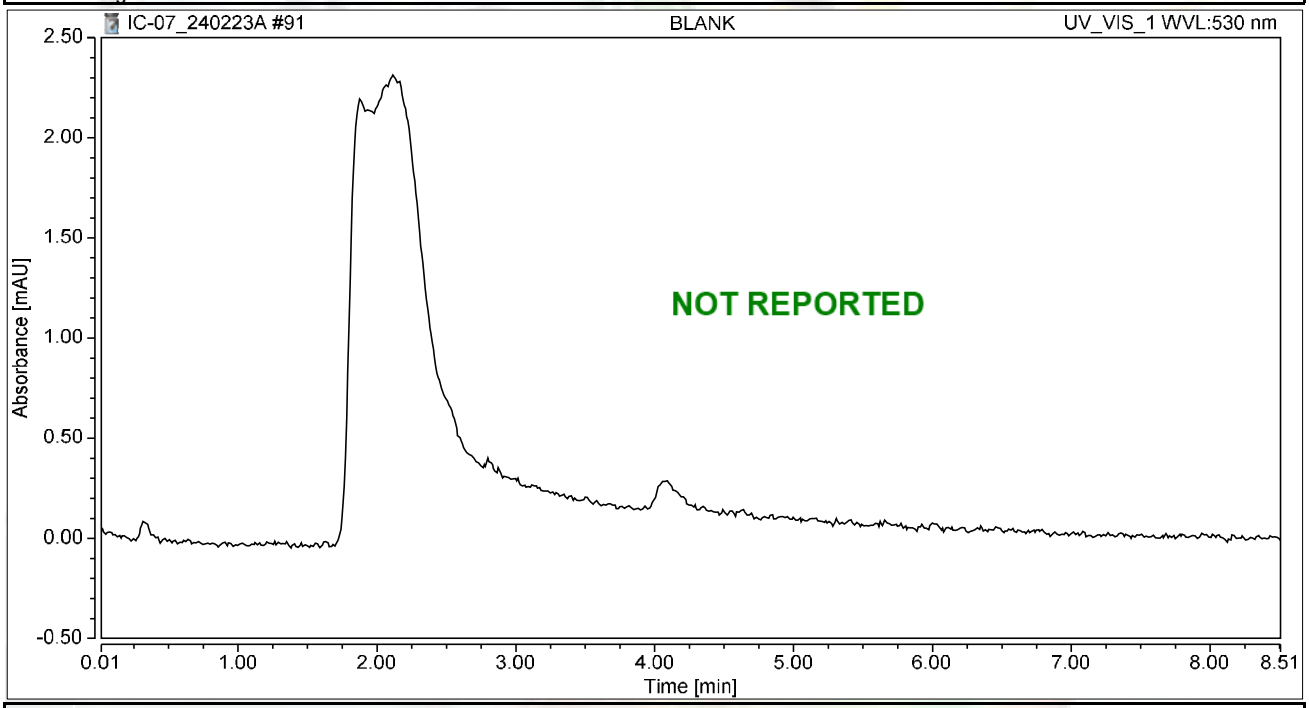
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.49**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 22:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240226A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/26/24 10:02 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/26/24 10:15 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/26/24 10:25 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/26/24 10:34 AM	Reported
13	MB-R182953	MBLK	1	Hexavalent Chromium	02/26/24 10:44 AM	Reported
14	LCS-R182953	LCS	1	Hexavalent Chromium	02/26/24 10:53 AM	Reported
15	N063295-001A	SAMP	1	Hexavalent Chromium	02/26/24 11:55 AM	Not Reported
16	N063295-003A	SAMP	1	Hexavalent Chromium	02/26/24 12:08 PM	Not Reported
17	N063295-005A	SAMP	1	Hexavalent Chromium	02/26/24 1:04 PM	Not Reported
18	N063295-006A	SAMP	1	Hexavalent Chromium	02/26/24 1:15 PM	Not Reported
19	N063295-007A	SAMP	1	Hexavalent Chromium	02/26/24 1:24 PM	Not Reported
20	N063214-007A	SAMP	5	Hexavalent Chromium	02/26/24 1:34 PM	Reported
21	N063214-007AMS	MS	5	Hexavalent Chromium	02/26/24 1:43 PM	Reported
22	N063295-001AMS	MS	1	Hexavalent Chromium	02/26/24 1:53 PM	Not Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/26/24 2:02 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/26/24 2:12 PM	Reported
25	N063295-003AMS	MS	1	Hexavalent Chromium	02/26/24 2:21 PM	Not Reported
26	N063295-005AMS	MS	1	Hexavalent Chromium	02/26/24 2:30 PM	Not Reported
27	N063295-006AMS	MS	1	Hexavalent Chromium	02/26/24 2:40 PM	Not Reported
28	N063295-007AMS	MS	1	Hexavalent Chromium	02/26/24 2:49 PM	Not Reported
29	N063295-001A	SAMP	5	Hexavalent Chromium	02/26/24 2:59 PM	Reported
30	N063295-001AMS	MS	5	Hexavalent Chromium	02/26/24 3:08 PM	Reported
31	N063295-001AMSD	MSD	5	Hexavalent Chromium	02/26/24 3:18 PM	Reported
32	N063295-003A	SAMP	5	Hexavalent Chromium	02/26/24 3:27 PM	Reported
33	N063295-003ADUP	DUP	5	Hexavalent Chromium	02/26/24 3:37 PM	Reported
34	N063295-003AMS	MS	5	Hexavalent Chromium	02/26/24 3:46 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/26/24 4:07 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/26/24 4:18 PM	Reported
37	N063295-005A	SAMP	5	Hexavalent Chromium	02/26/24 4:27 PM	Reported
38	N063295-005AMS	MS	5	Hexavalent Chromium	02/26/24 4:37 PM	Reported
39	N063295-006A	SAMP	5	Hexavalent Chromium	02/26/24 4:46 PM	Reported
40	N063295-006AMS	MS	5	Hexavalent Chromium	02/26/24 4:56 PM	Reported
41	N063295-007A	SAMP	5	Hexavalent Chromium	02/26/24 5:05 PM	Reported
42	N063295-007AMS	MS	5	Hexavalent Chromium	02/26/24 5:15 PM	Reported

Reviewed by:

RB 2/29/2024

INJECTION LOG: 240226A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063295-004A	SAMP	1	Hexavalent Chromium	02/26/24 5:24 PM	Reported
44	N063295-004AMS	MS	1	Hexavalent Chromium	02/26/24 5:33 PM	Reported
45	N063295-002A	SAMP	1	Hexavalent Chromium	02/26/24 5:43 PM	Not Reported
46	N063295-002AMS	MS	1	Hexavalent Chromium	02/26/24 5:52 PM	Not Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/26/24 6:02 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/26/24 6:11 PM	Reported
49	N063295-002A	SAMP	5	Hexavalent Chromium	02/26/24 6:21 PM	Not Reported
50	N063295-002AMS	MS	5	Hexavalent Chromium	02/26/24 6:30 PM	Not Reported
51	N063295-008A	SAMP	1	Hexavalent Chromium	02/26/24 6:40 PM	Not Reported
52	N063295-008AMS	MS	1	Hexavalent Chromium	02/26/24 6:49 PM	Not Reported
53	N063295-008A	SAMP	5	Hexavalent Chromium	02/26/24 6:59 PM	Reported
54	N063295-008AMS	MS	5	Hexavalent Chromium	02/26/24 7:08 PM	Reported
55	N063249-018A	SAMP	1	Hexavalent Chromium	02/26/24 7:18 PM	Not Reported
56	N063249-018AMS	MS	1	Hexavalent Chromium	02/26/24 7:27 PM	Not Reported
57	N063249-018A	SAMP	5	Hexavalent Chromium	02/26/24 7:36 PM	Reported
58	N063249-018AMS	MS	5	Hexavalent Chromium	02/26/24 7:46 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/26/24 7:55 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/26/24 8:05 PM	Reported
61	N063249-010A	SAMP	1	Hexavalent Chromium	02/26/24 8:14 PM	Not Reported
62	N063249-010AMS	MS	1	Hexavalent Chromium	02/26/24 8:24 PM	Not Reported
63	N063249-019A	SAMP	1	Hexavalent Chromium	02/26/24 8:33 PM	Reported
64	N063249-019AMS	MS	1	Hexavalent Chromium	02/26/24 8:43 PM	Reported
65	N063297-001A	SAMP	5	Hexavalent Chromium	02/26/24 8:52 PM	Reported
66	N063297-001AMS	MS	5	Hexavalent Chromium	02/26/24 9:02 PM	Reported
67	N063297-002A	SAMP	20	Hexavalent Chromium	02/26/24 9:11 PM	Reported
68	N063297-002AMS	MS	20	Hexavalent Chromium	02/26/24 9:21 PM	Reported
69	N063297-003A	SAMP	5	Hexavalent Chromium	02/26/24 9:30 PM	Reported
70	N063297-003AMS	MS	5	Hexavalent Chromium	02/26/24 9:39 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/26/24 9:49 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/26/24 9:58 PM	Reported
73	N063295-001A	SAMP	1	Hexavalent Chromium	02/26/24 10:08 PM	Not Reported
74	N063295-003A	SAMP	1	Hexavalent Chromium	02/26/24 10:17 PM	Not Reported
75	N063297-004A	SAMP	1	Hexavalent Chromium	02/26/24 10:27 PM	Reported
76	N063297-004AMS	MS	1	Hexavalent Chromium	02/26/24 10:36 PM	Reported
77	CCV-7	CCV	1	Hexavalent Chromium	02/26/24 10:46 PM	Reported
78	CCB-7	CCB	1	Hexavalent Chromium	02/26/24 10:55 PM	Reported
79	BLANK	BLANK	1	Hexavalent Chromium	02/26/24 11:04 PM	Not Reported

dMRocha 3/7/2024
for RBA

Injection Log Summary

Sequence Details

Name:	**IC-07_240226A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**26/Feb/24 23:35:17**
No. of Injections:	**82**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/26/2024 10:02	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/26/2024 10:15	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/26/2024 10:25	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/26/2024 10:34	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/26/2024 10:44	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/26/2024 10:53	Finished	LCS @5ppb, IWST-231228B
15	N063295-001A,SAMP	1	1000	Unknown		02/26/2024 11:55	Finished	SAMP,10 mL
16	N063295-003A,SAMP	2	1000	Unknown		02/26/2024 12:08	Finished	SAMP,10 mL
17	N063295-005A,SAMP	1	1000	Unknown		02/26/2024 13:04	Finished	SAMP,10 mL
18	N063295-006A,SAMP	2	1000	Unknown		02/26/2024 13:15	Finished	SAMP,10 mL
19	N063295-007A,SAMP	3	1000	Unknown		02/26/2024 13:24	Finished	SAMP,10 mL
20	N063214-007A,SAMP	4	1000	Unknown		02/26/2024 13:34	Finished	SAMP,2>10 mL
21	N063214-007AMS,MS	5	1000	Unknown		02/26/2024 13:43	Finished	MS (1ppb), IWST-231228B,2>
22	N063295-001AMS,MS	6	1000	Unknown		02/26/2024 13:53	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	7	1000	Unknown		02/26/2024 14:02	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	8	1000	Unknown		02/26/2024 14:12	Finished	CCB R240129C
25	N063295-003AMS,MS	9	1000	Unknown		02/26/2024 14:21	Finished	MS (1ppb), IWST-231228B,10r
26	N063295-005AMS,MS	10	1000	Unknown		02/26/2024 14:30	Finished	MS (1ppb), IWST-231228B,10r
27	N063295-006AMS,MS	11	1000	Unknown		02/26/2024 14:40	Finished	MS (1ppb), IWST-231228B,10r
28	N063295-007AMS,MS	12	1000	Unknown		02/26/2024 14:49	Finished	MS (1ppb), IWST-231228B,10r
29	N063295-001A,SAMP	13	1000	Unknown		02/26/2024 14:59	Finished	SAMP,2>10 mL
30	N063295-001AMS,MS	14	1000	Unknown		02/26/2024 15:08	Finished	MS (5ppb), IWST-231228B,2>
31	N063295-001AMSD,M	15	1000	Unknown		02/26/2024 15:18	Finished	MSD (5ppb), IWST-231228B,2
32	N063295-003A,SAMP	16	1000	Unknown		02/26/2024 15:27	Finished	SAMP,2>10 mL
33	N063295-003ADUP,D	17	1000	Unknown		02/26/2024 15:37	Finished	DUP,2>10 mL
34	N063295-003AMS,MS	18	1000	Unknown		02/26/2024 15:46	Finished	MS (5ppb), IWST-231228B,2>
35	CCV-3,CCV,1,	1	1000	Unknown		02/26/2024 16:07	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	2	1000	Unknown		02/26/2024 16:18	Finished	CCB R240129C
37	N063295-005A,SAMP	3	1000	Unknown		02/26/2024 16:27	Finished	SAMP,2>10 mL
38	N063295-005AMS,MS	4	1000	Unknown		02/26/2024 16:37	Finished	MS (1ppb), IWST-231228B,2>
39	N063295-006A,SAMP	5	1000	Unknown		02/26/2024 16:46	Finished	SAMP,2>10 mL
40	N063295-006AMS,MS	6	1000	Unknown		02/26/2024 16:56	Finished	MS (1ppb), IWST-231228B,2>
41	N063295-007A,SAMP	7	1000	Unknown		02/26/2024 17:05	Finished	SAMP,2>10 mL
42	N063295-007AMS,MS	8	1000	Unknown		02/26/2024 17:15	Finished	MS (1ppb), IWST-231228B,2>
43	N063295-004A,SAMP	9	1000	Unknown		02/26/2024 17:24	Finished	SAMP,10 mL
44	N063295-004AMS,MS	10	1000	Unknown		02/26/2024 17:33	Finished	MS (1ppb), IWST-231228B,10r
45	N063295-002A,SAMP	11	1000	Unknown		02/26/2024 17:43	Finished	SAMP,10 mL
46	N063295-002AMS,MS	12	1000	Unknown		02/26/2024 17:52	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	13	1000	Unknown		02/26/2024 18:02	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	14	1000	Unknown		02/26/2024 18:11	Finished	CCB R240129C
49	N063295-002A,SAMP	15	1000	Unknown		02/26/2024 18:21	Finished	SAMP,2>10 mL
50	N063295-002AMS,MS	16	1000	Unknown		02/26/2024 18:30	Finished	MS (1ppb), IWST-231228B,2>
51	N063295-008A,SAMP	17	1000	Unknown		02/26/2024 18:40	Finished	SAMP,10 mL
52	N063295-008AMS,MS	18	1000	Unknown		02/26/2024 18:49	Finished	MS (1ppb), IWST-231228B,10r
53	N063295-008A,SAMP	19	1000	Unknown		02/26/2024 18:59	Finished	SAMP,2>10 mL
54	N063295-008AMS,MS	20	1000	Unknown		02/26/2024 19:08	Finished	MS (1ppb), IWST-231228B,2>
55	N063249-018A,SAMP	21	1000	Unknown		02/26/2024 19:18	Finished	SAMP,10 mL
56	N063249-018AMS,MS	22	1000	Unknown		02/26/2024 19:27	Finished	MS (1ppb), IWST-231228B,10r
57	N063249-018A,SAMP	23	1000	Unknown		02/26/2024 19:36	Finished	SAMP,2>10 mL
58	N063249-018AMS,MS	24	1000	Unknown		02/26/2024 19:46	Finished	MS (1ppb), IWST-231228B,2>
59	CCV-5,CCV,1,	25	1000	Unknown		02/26/2024 19:55	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	26	1000	Unknown		02/26/2024 20:05	Finished	CCB R240129C

61	N063249-010A,SAMP	27	1000	Unknown		02/26/2024 20:14	Finished	SAMP,10 mL
62	N063249-010AMS,MS	28	1000	Unknown		02/26/2024 20:24	Finished	MS (1ppb), IWST-231228B,10r
63	N063249-019A,SAMP	29	1000	Unknown		02/26/2024 20:33	Finished	SAMP,10 mL
64	N063249-019AMS,MS	30	1000	Unknown		02/26/2024 20:43	Finished	MS (1ppb), IWST-231228B,10r
65	N063297-001A,SAMP	31	1000	Unknown		02/26/2024 20:52	Finished	SAMP,2>10 mL
66	N063297-001AMS,MS	32	1000	Unknown		02/26/2024 21:02	Finished	MS (5ppb), IWST-231228B,2>1
67	N063297-002A,SAMP	33	1000	Unknown		02/26/2024 21:11	Finished	SAMP,0.5>10 mL
68	N063297-002AMS,MS	34	1000	Unknown		02/26/2024 21:21	Finished	MS (1ppb), IWST-231228B,0.5
69	N063297-003A,SAMP	35	1000	Unknown		02/26/2024 21:30	Finished	SAMP,2>10 mL
70	N063297-003AMS,MS	36	1000	Unknown		02/26/2024 21:39	Finished	MS (5ppb), IWST-231228B,2>1
71	CCV-6,CCV1,1,	37	1000	Unknown		02/26/2024 21:49	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	38	1000	Unknown		02/26/2024 21:58	Finished	CCB R240129C
73	N063295-001A,SAMP	39	1000	Unknown		02/26/2024 22:08	Finished	SAMP,10 mL
74	N063295-003A,SAMP	40	1000	Unknown		02/26/2024 22:17	Finished	SAMP,10 mL
75	N063297-004A,SAMP	41	1000	Unknown		02/26/2024 22:27	Finished	SAMP,10 mL
76	N063297-004AMS,MS	42	1000	Unknown		02/26/2024 22:36	Finished	MS (1ppb), IWST-231228B,10r
77	CCV-7,CCV,1,	43	1000	Unknown		02/26/2024 22:46	Finished	CCV @5ppb, IWST-231228A
78	CCB-7,CCB,1,	44	1000	Unknown		02/26/2024 22:55	Finished	CCB R240129C
79	BLANK	45	1000	Unknown		02/26/2024 23:04	Finished	BLANK
80	SHUTDOWN R240226A	46	1000	Unknown		02/26/2024 23:14	Finished	
81	Eluent: ~~R240228A~~	47	1000	Unknown		n.a.	Finished	
82	PCR: ~~R240228B~~ R240226B	48	1000	Unknown		n.a.	Finished	

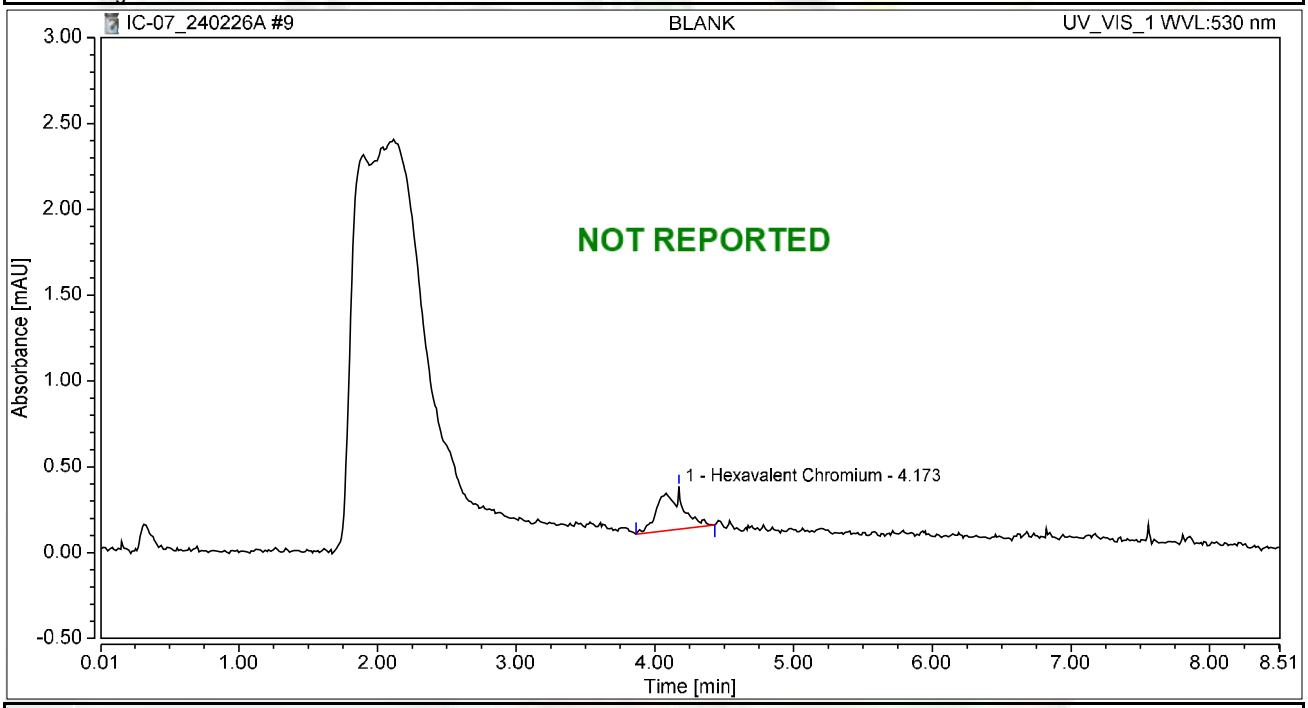
dMocha 3/7/2024
for RBA

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 10:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

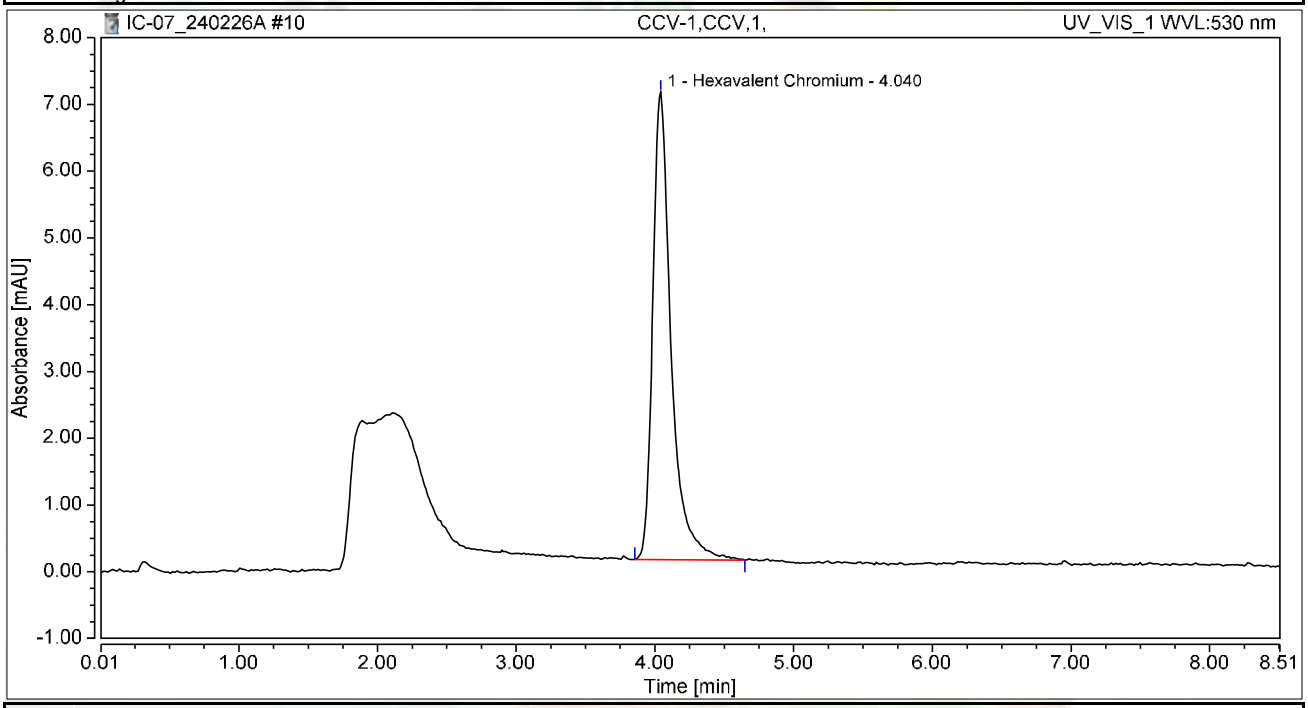
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.173	0.050	0.248	100.00	100.00	0.2323
Total:			**0.050**	**0.248**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 10:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.072	7.003	100.00	100.00	4.9840
Total:			**1.072**	**7.003**	**100.00**	**100.00**	

Reviewed by:

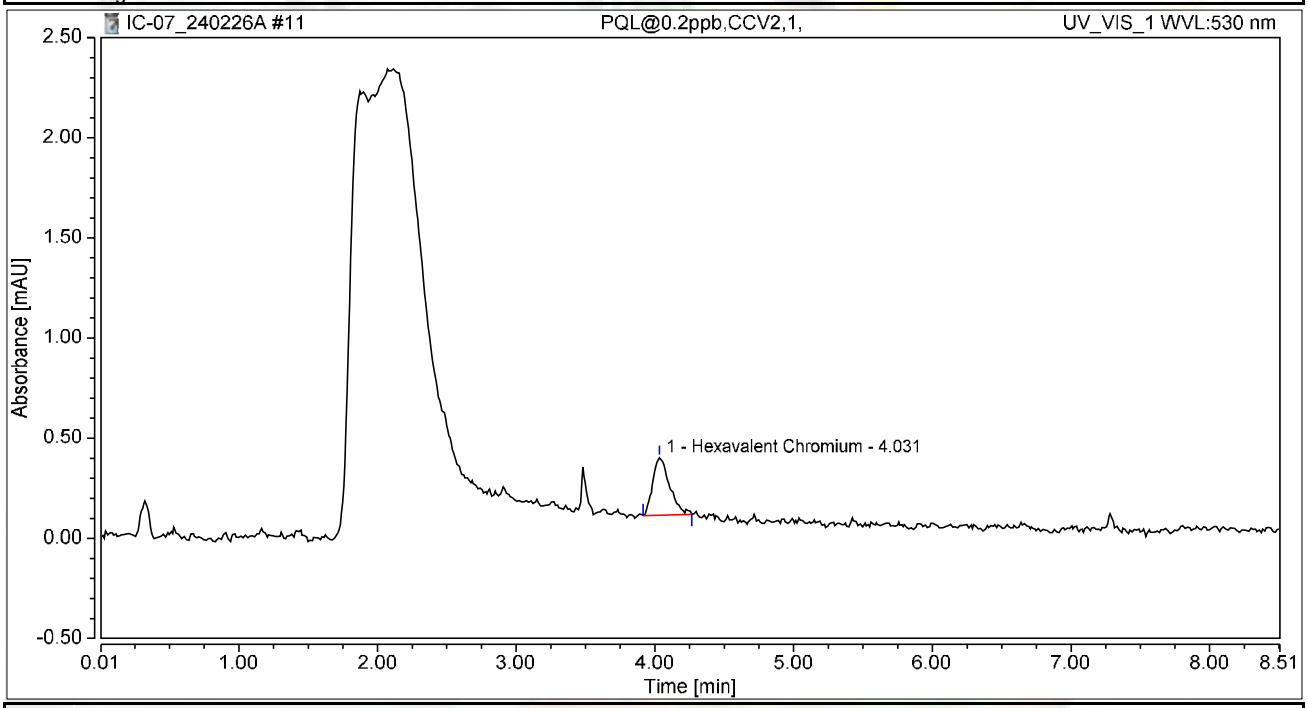
JRB 2/29/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 10:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

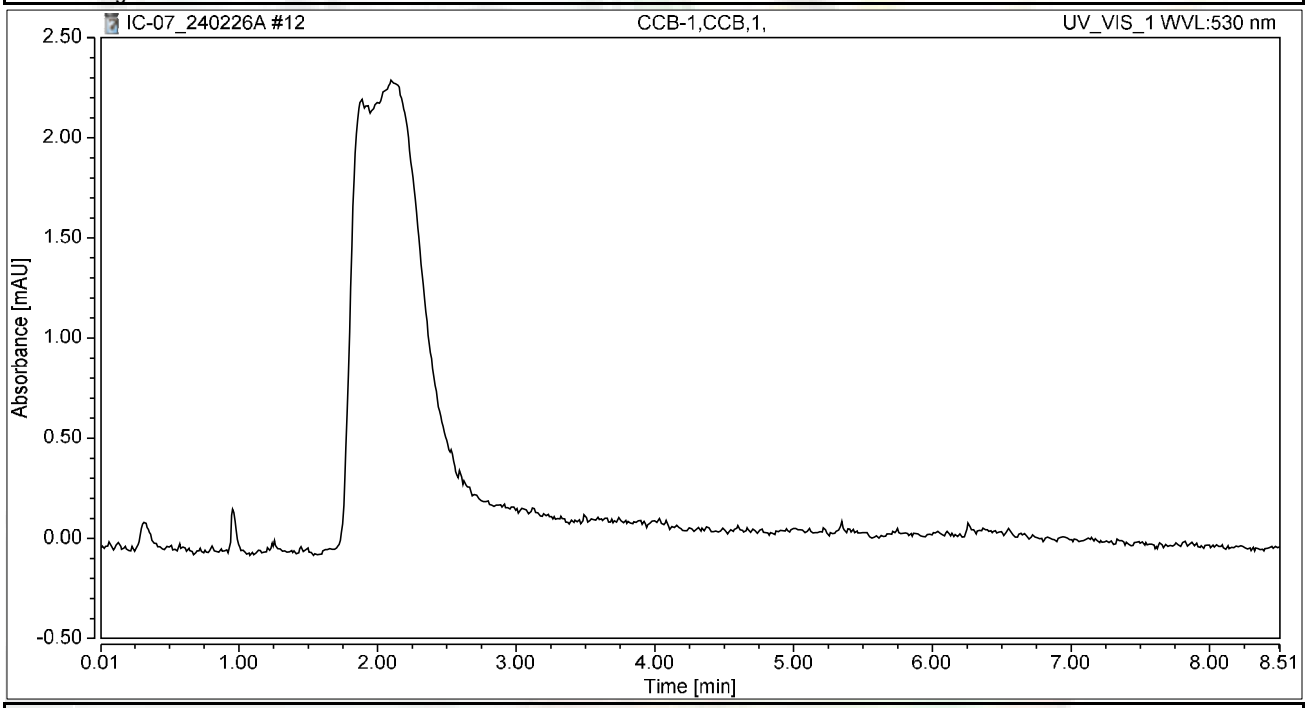
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.041	0.288	100.00	100.00	0.1893
Total:			**0.041**	**0.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 10:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

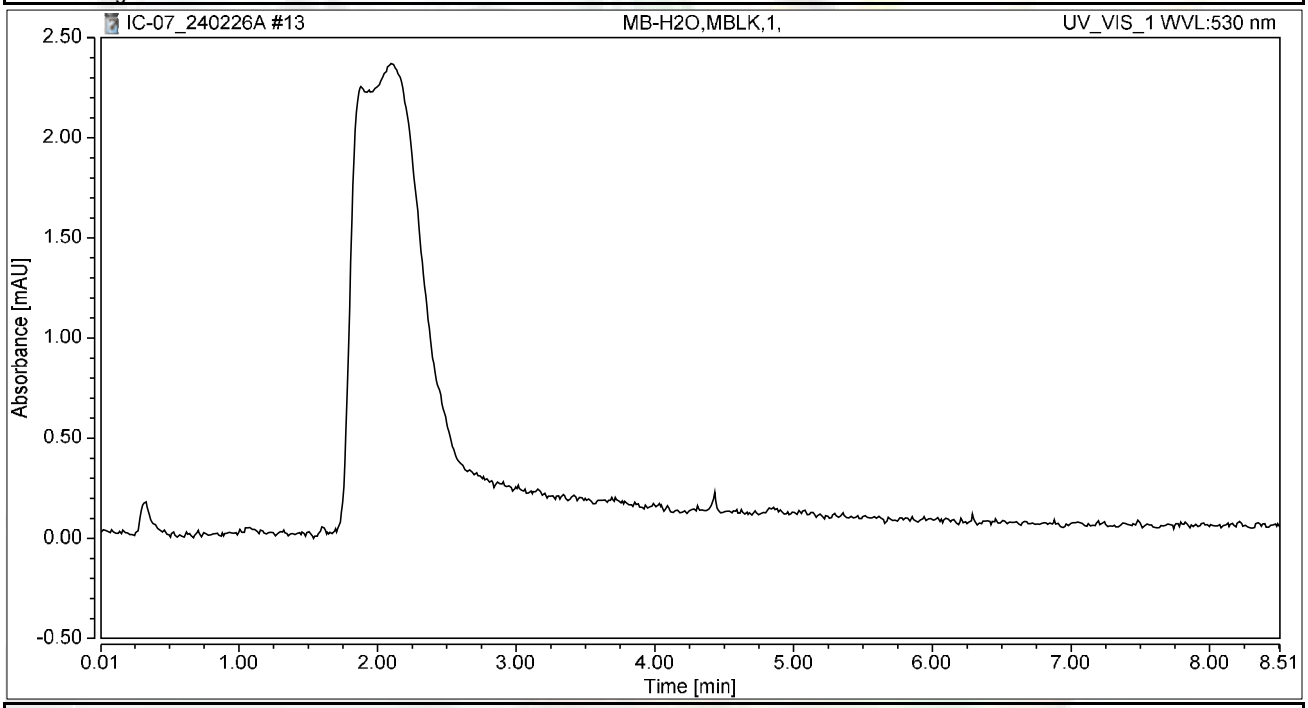
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 10:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

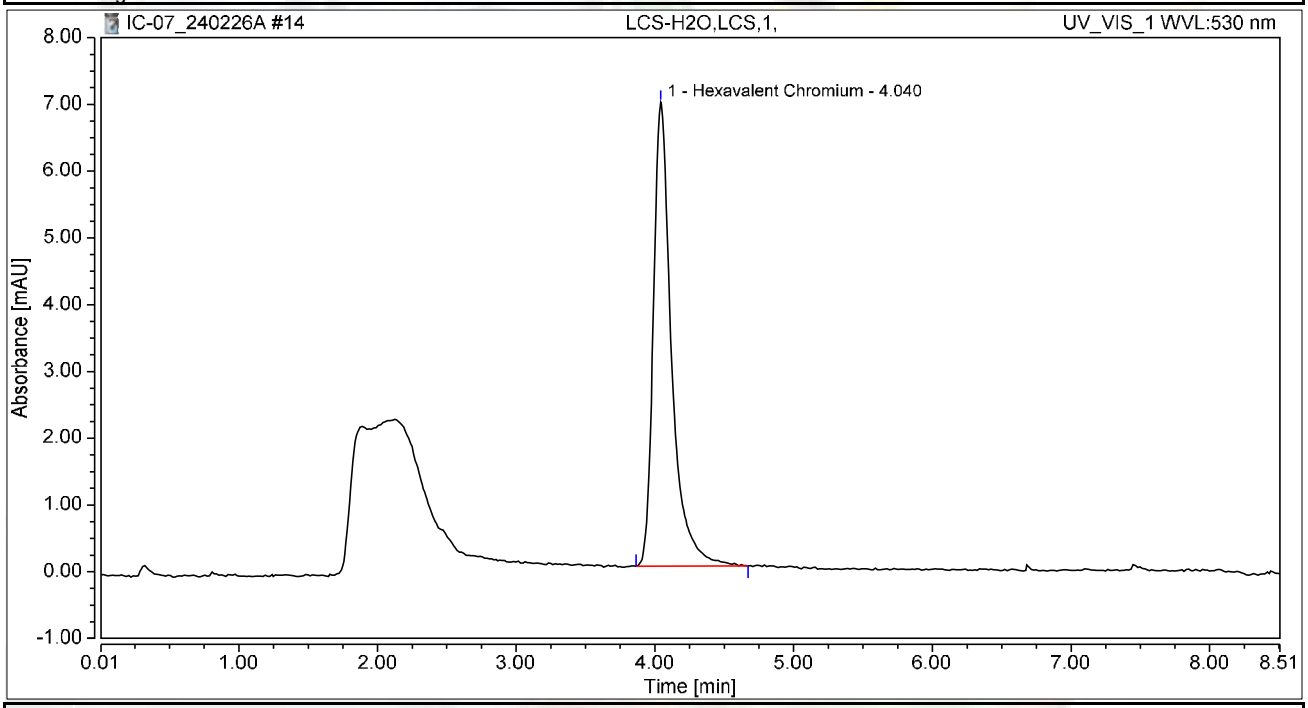
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 10:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

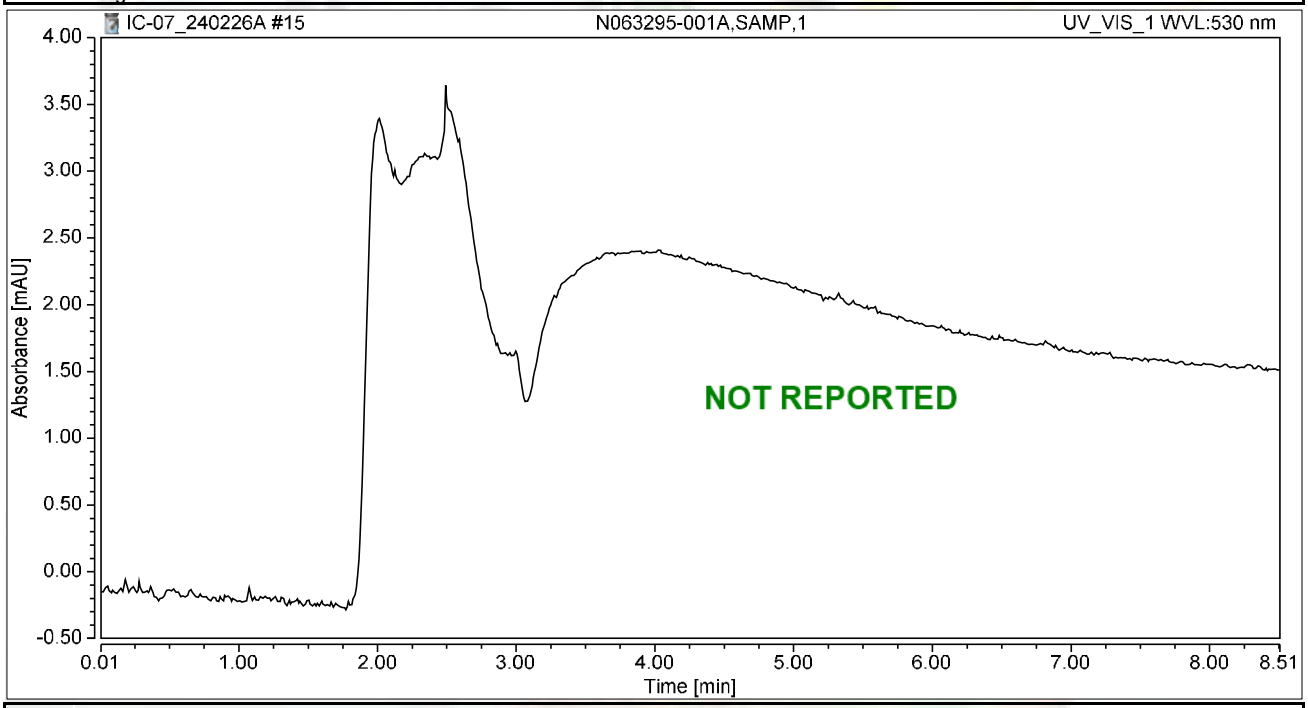
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.057	6.951	100.00	100.00	4.9128
Total:			**1.057**	**6.951**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 11:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

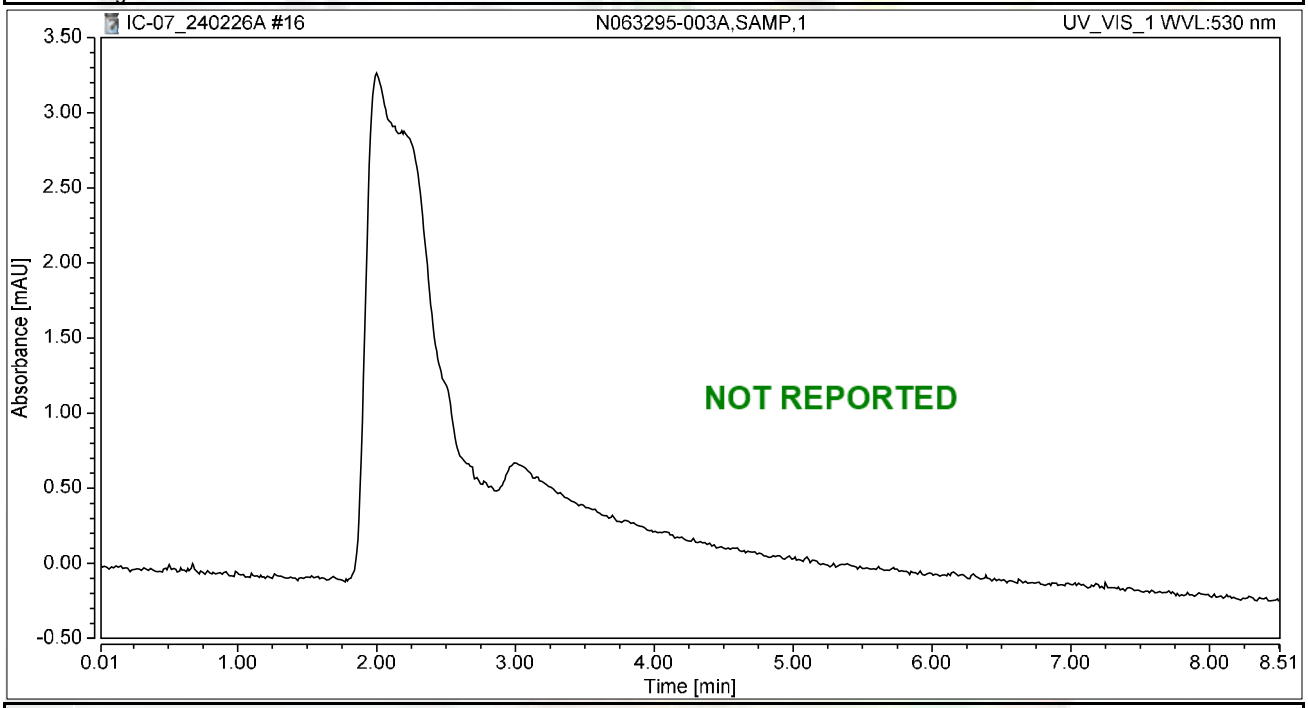
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 12:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

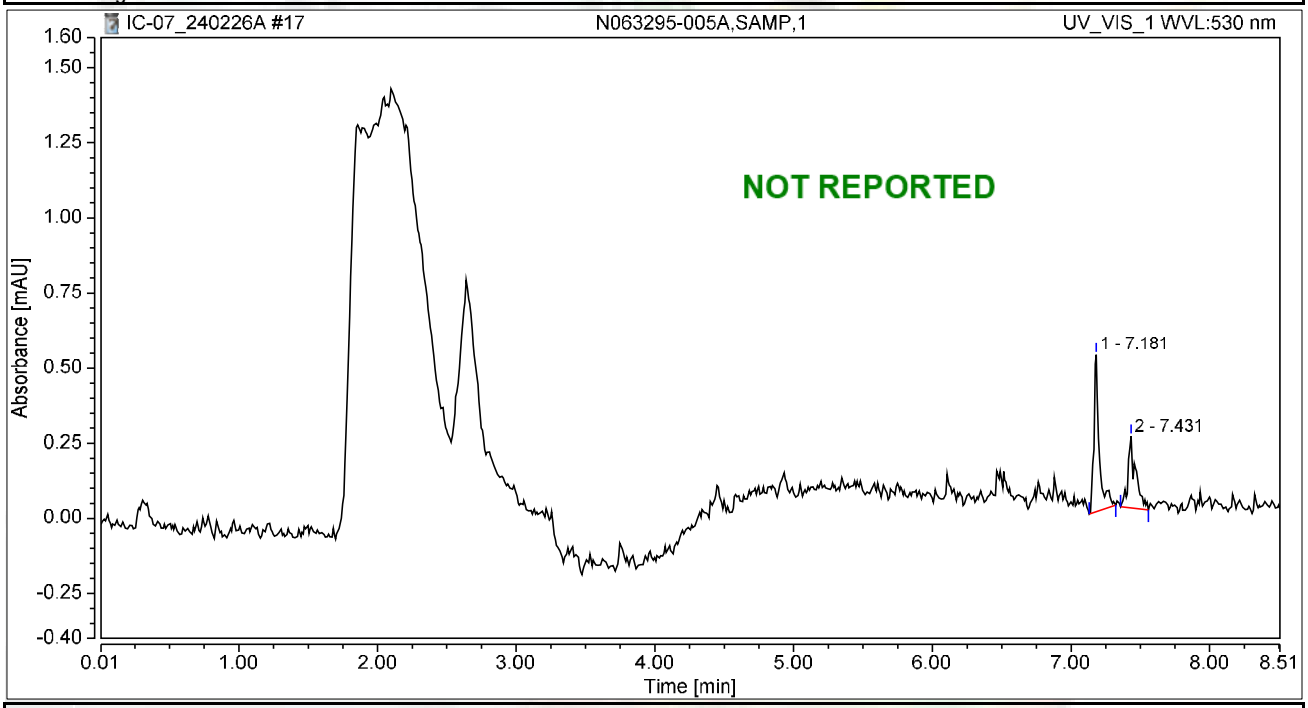
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 13:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

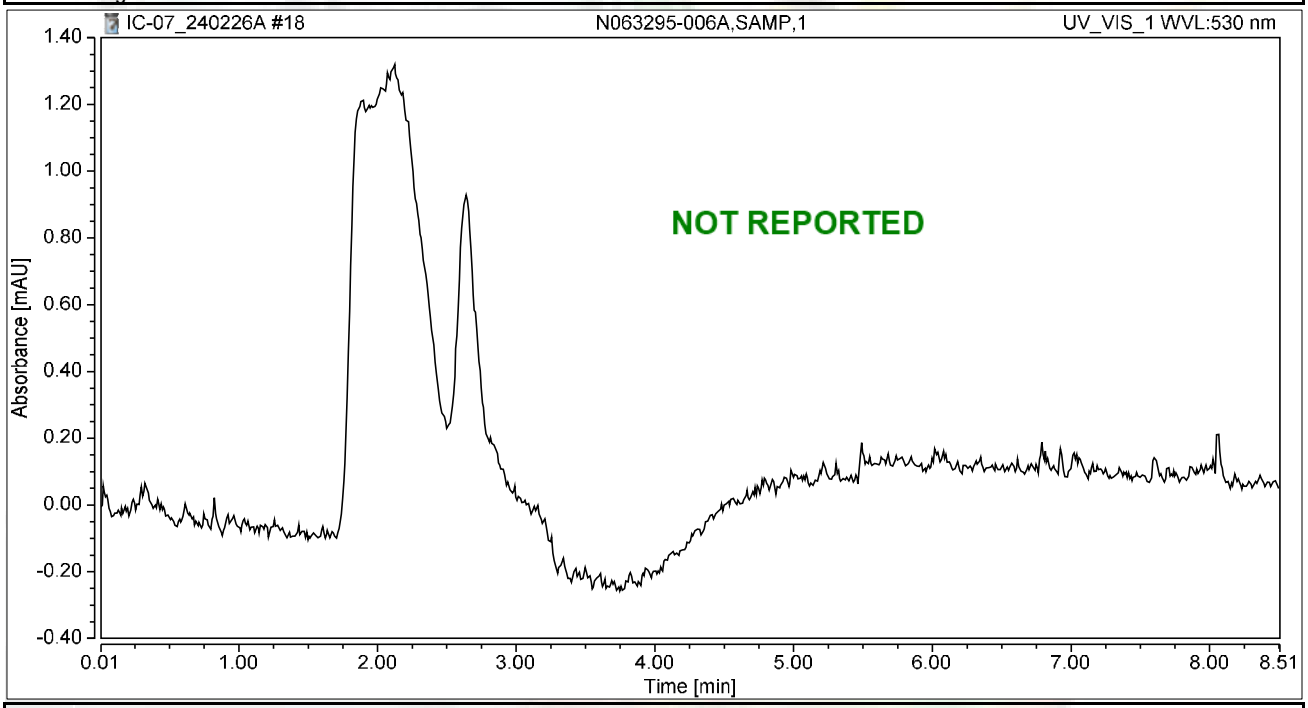
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		7.181	0.024	0.523	60.57	68.74	n.a.
2		7.431	0.015	0.238	39.43	31.26	n.a.
Total:			**0.039**	**0.761**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 13:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

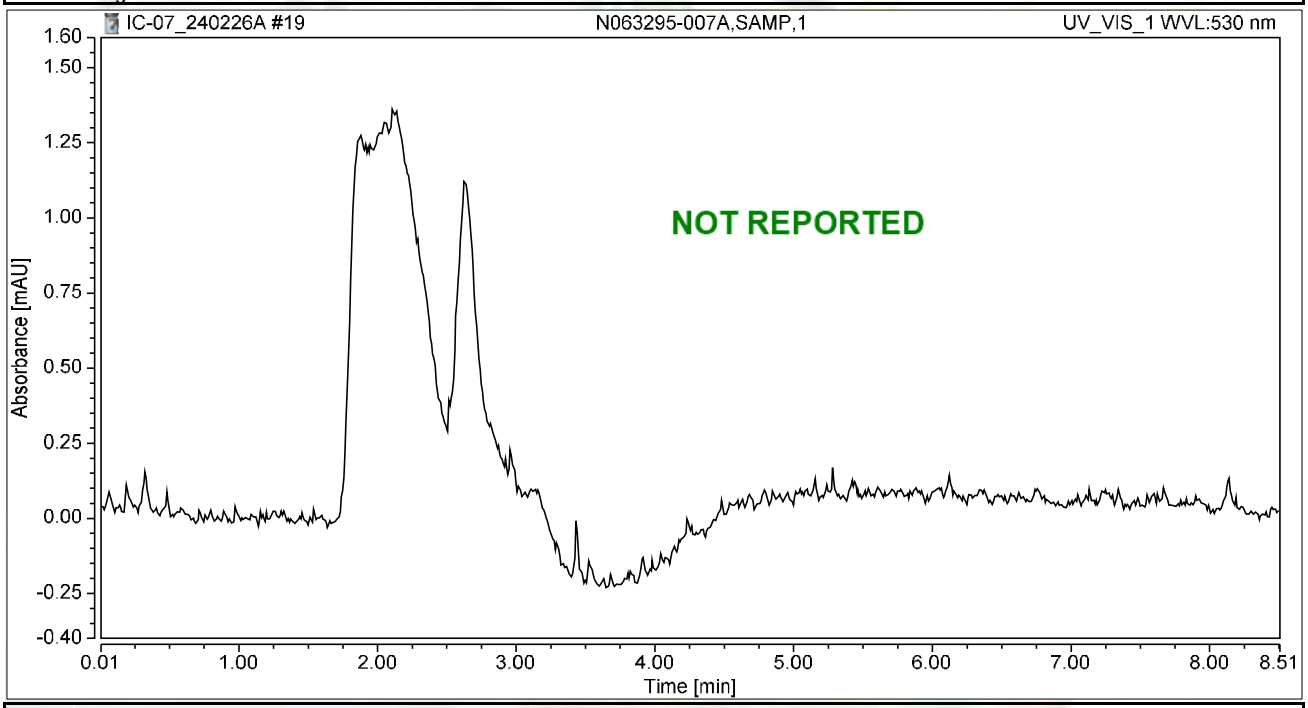
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-007A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 13:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

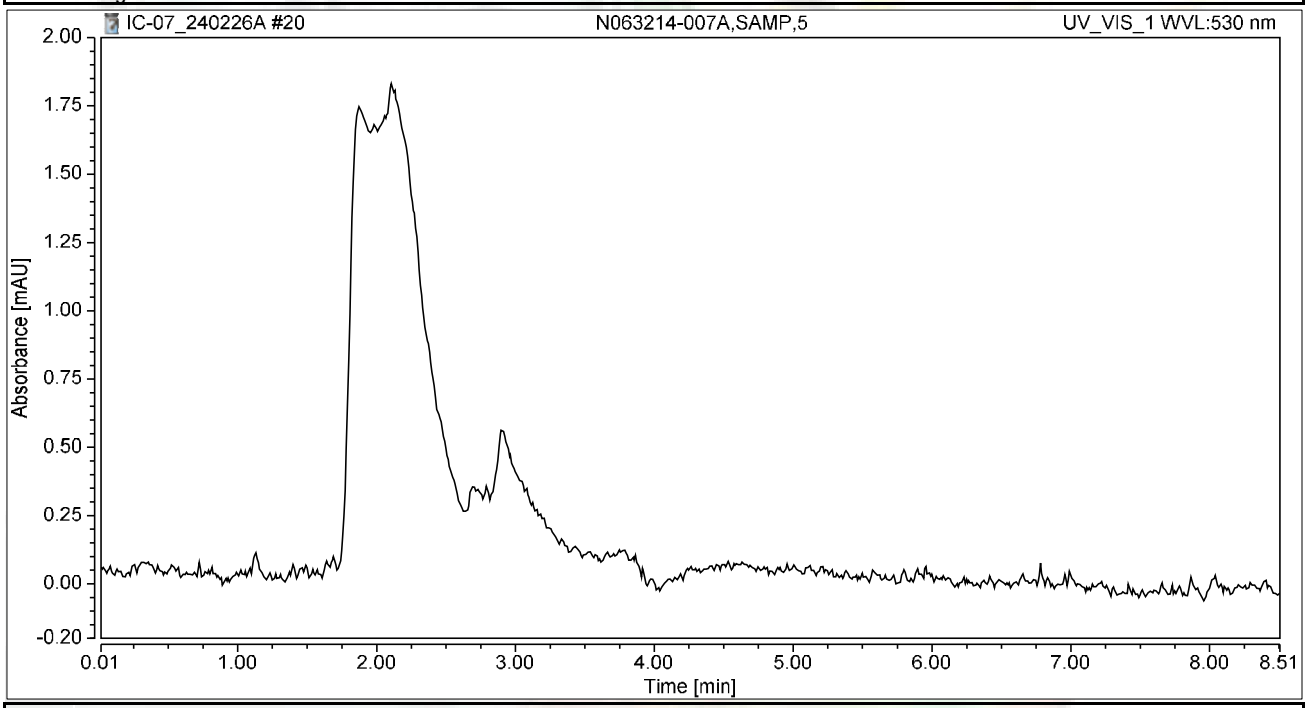
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-007A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 13:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

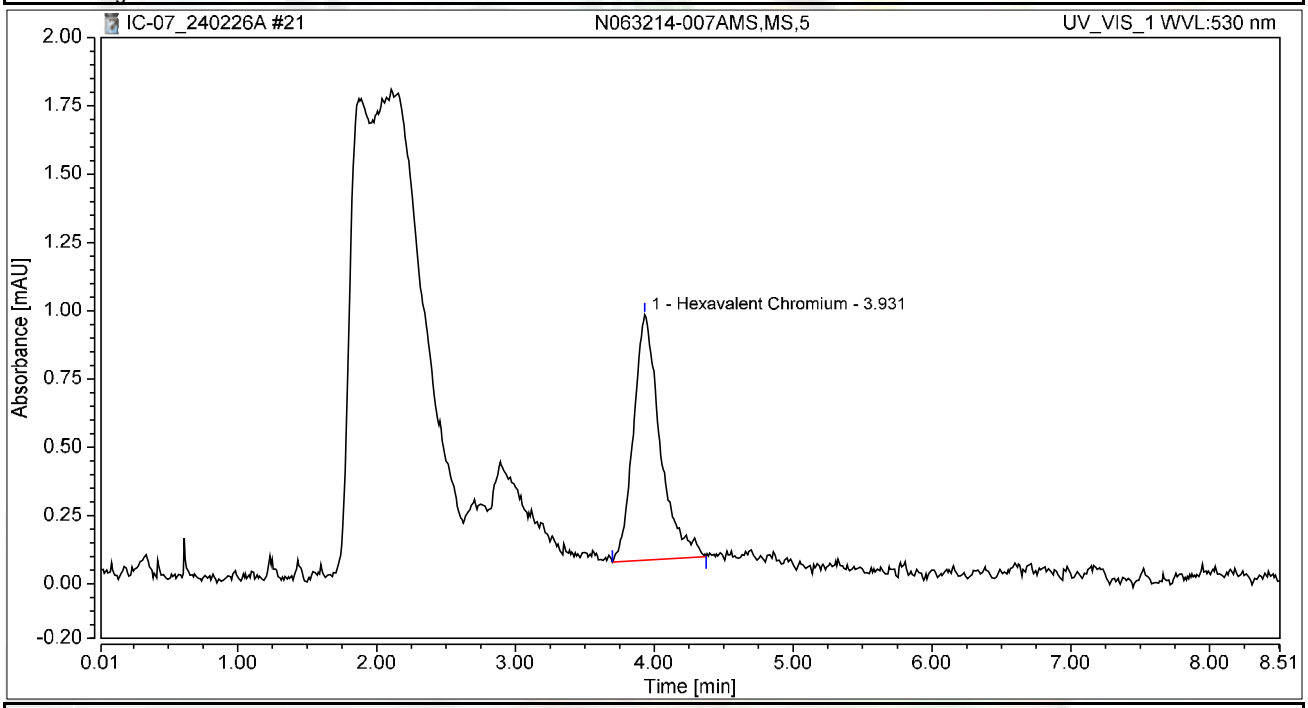
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-007AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 13:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

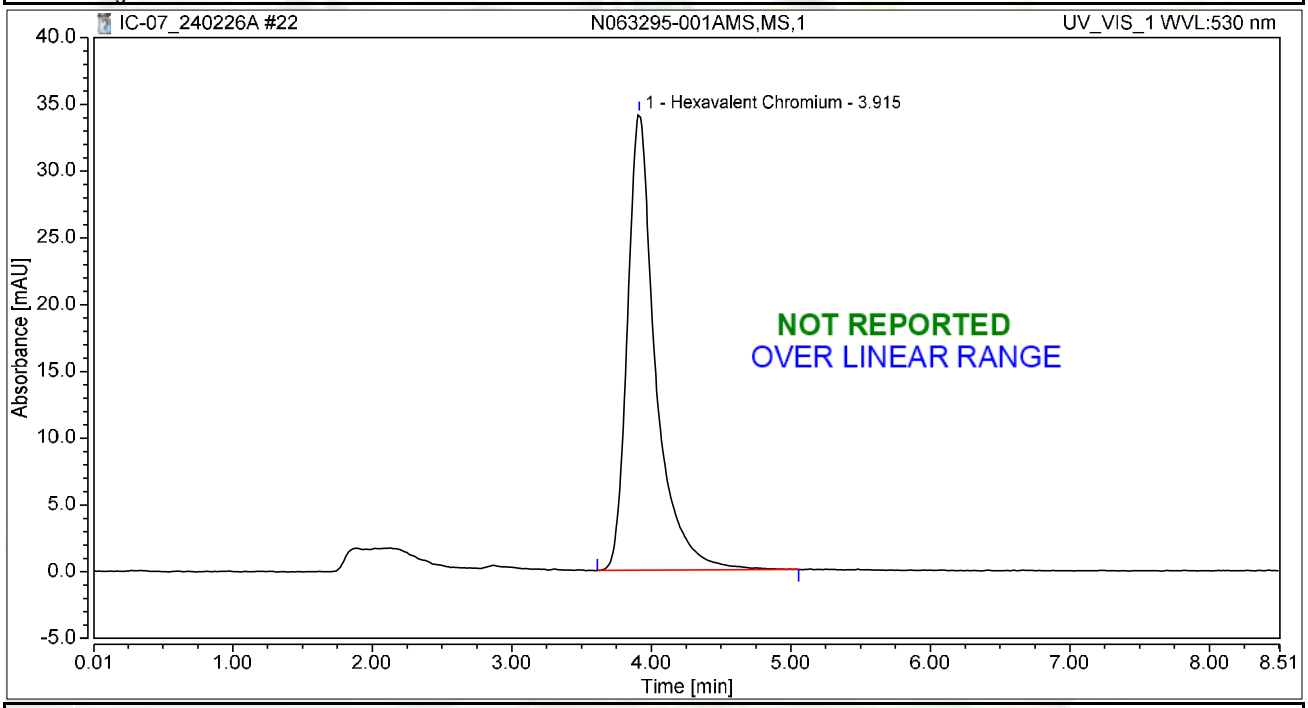
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.931	0.200	0.899	100.00	100.00	0.9321
Total:			**0.200**	**0.899**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 13:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

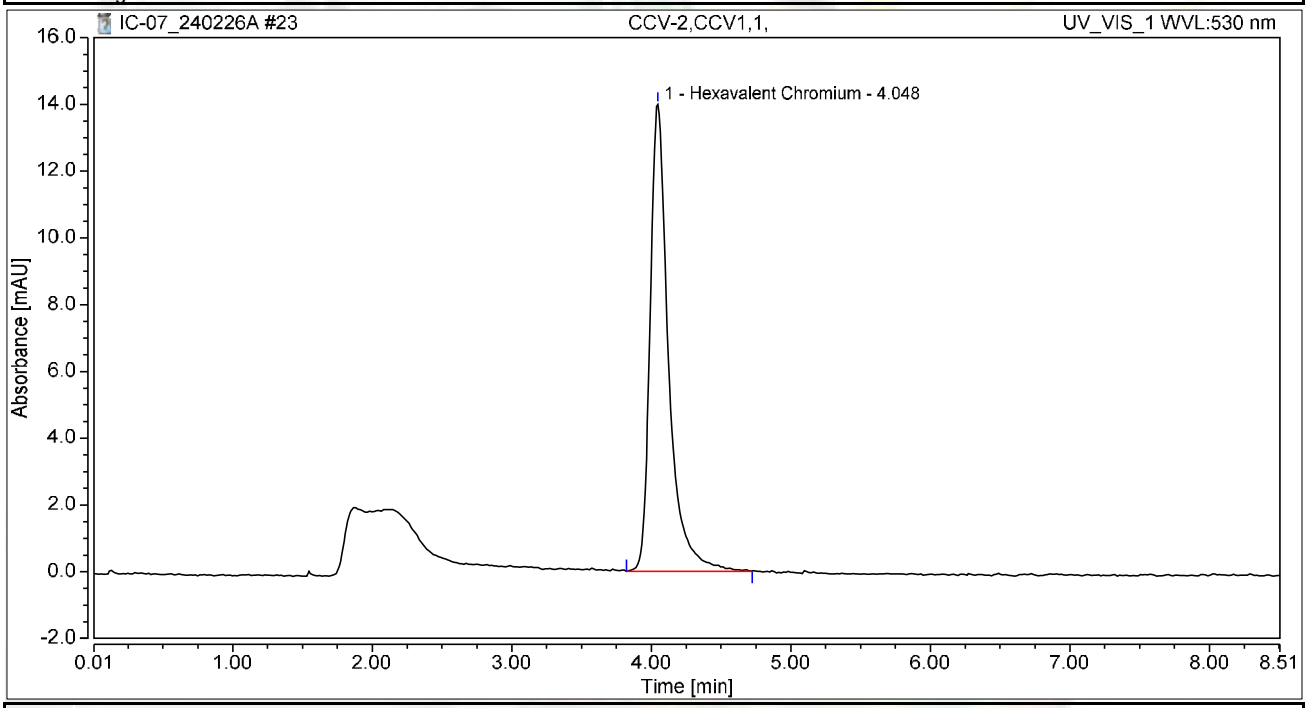
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.915	7.991	34.212	100.00	100.00	37.1510
Total:			**7.991**	**34.212**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

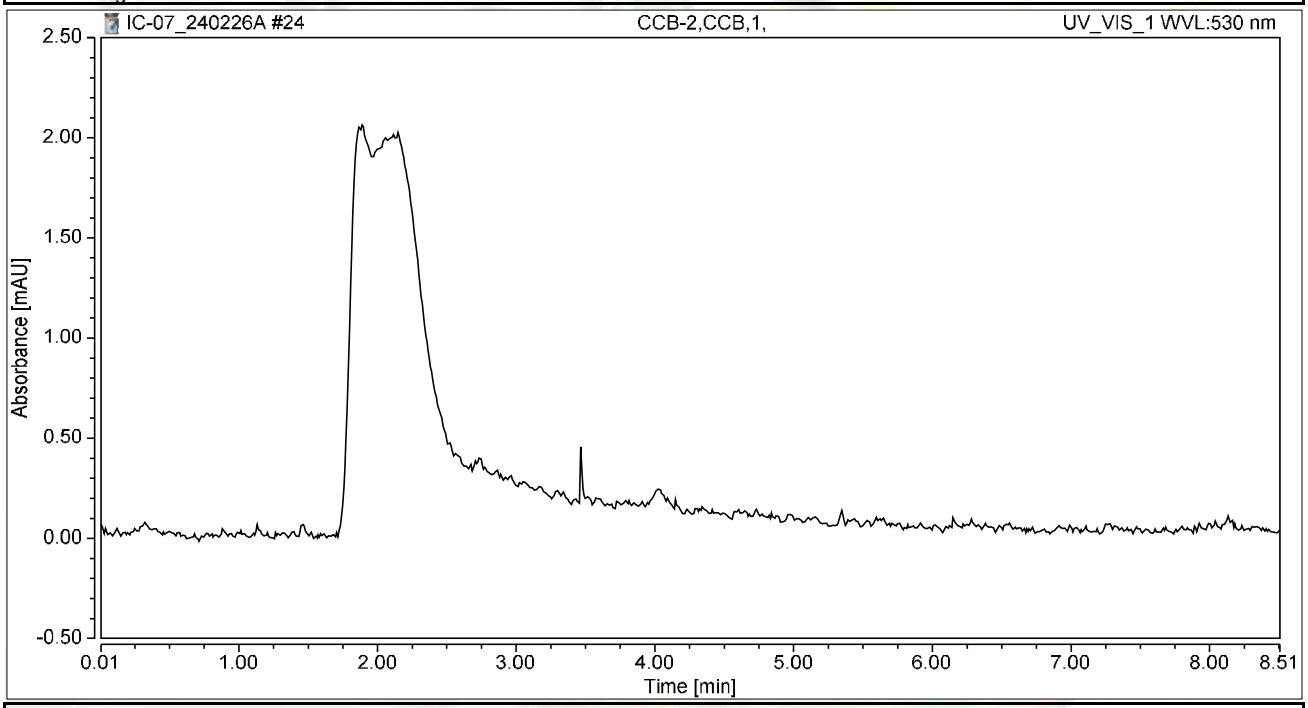
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.148	13.984	100.00	100.00	9.9881
Total:			**2.148**	**13.984**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

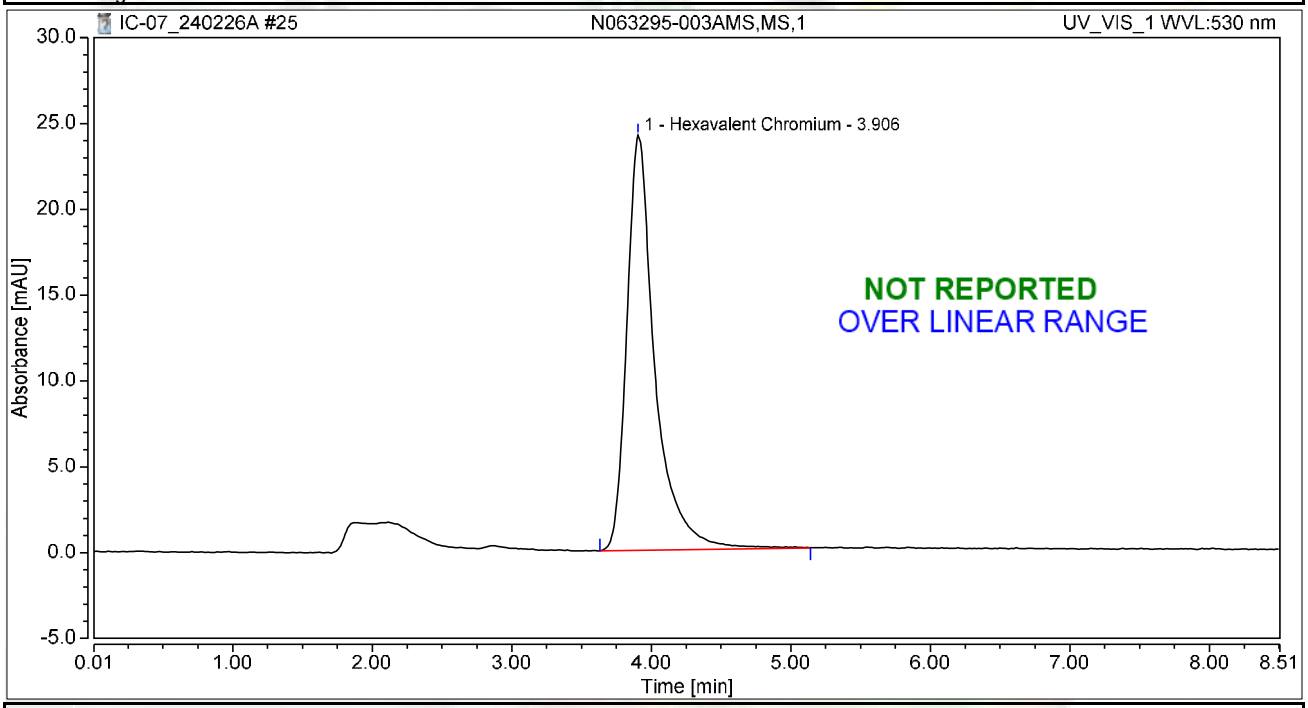
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

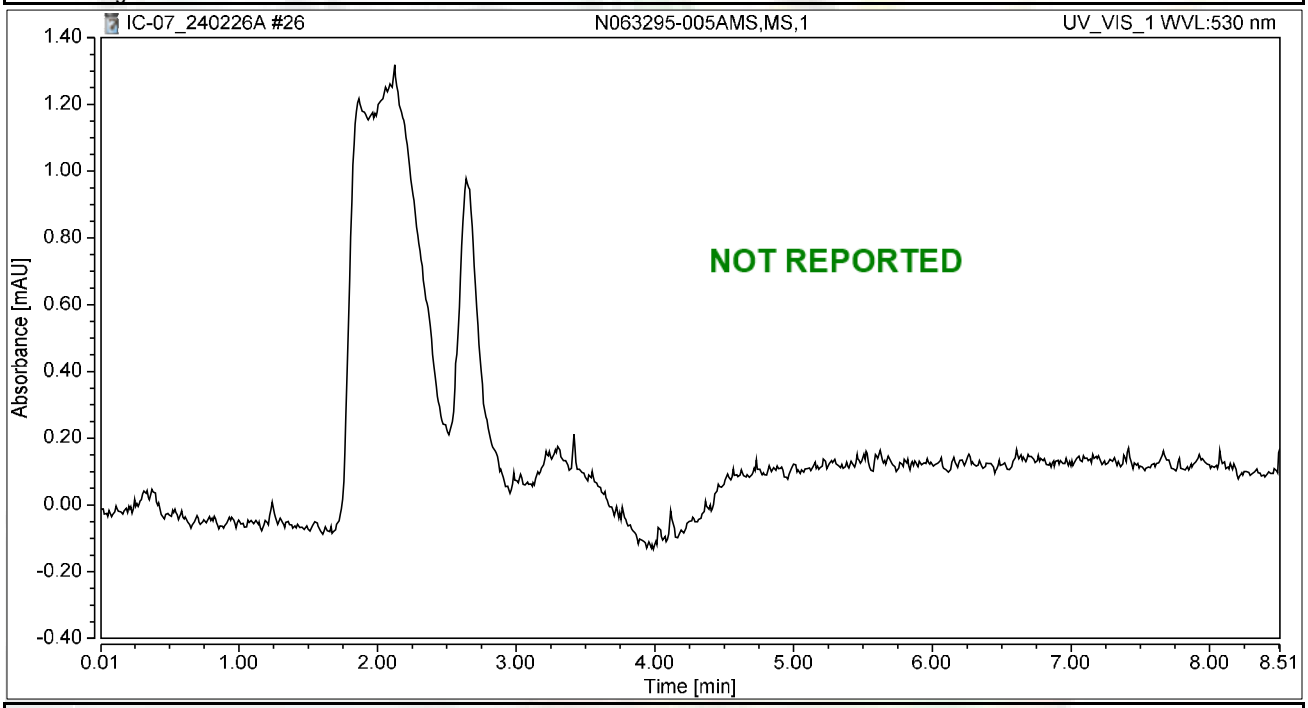
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.906	5.637	24.161	100.00	100.00	26.2075
Total:			**5.637**	**24.161**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

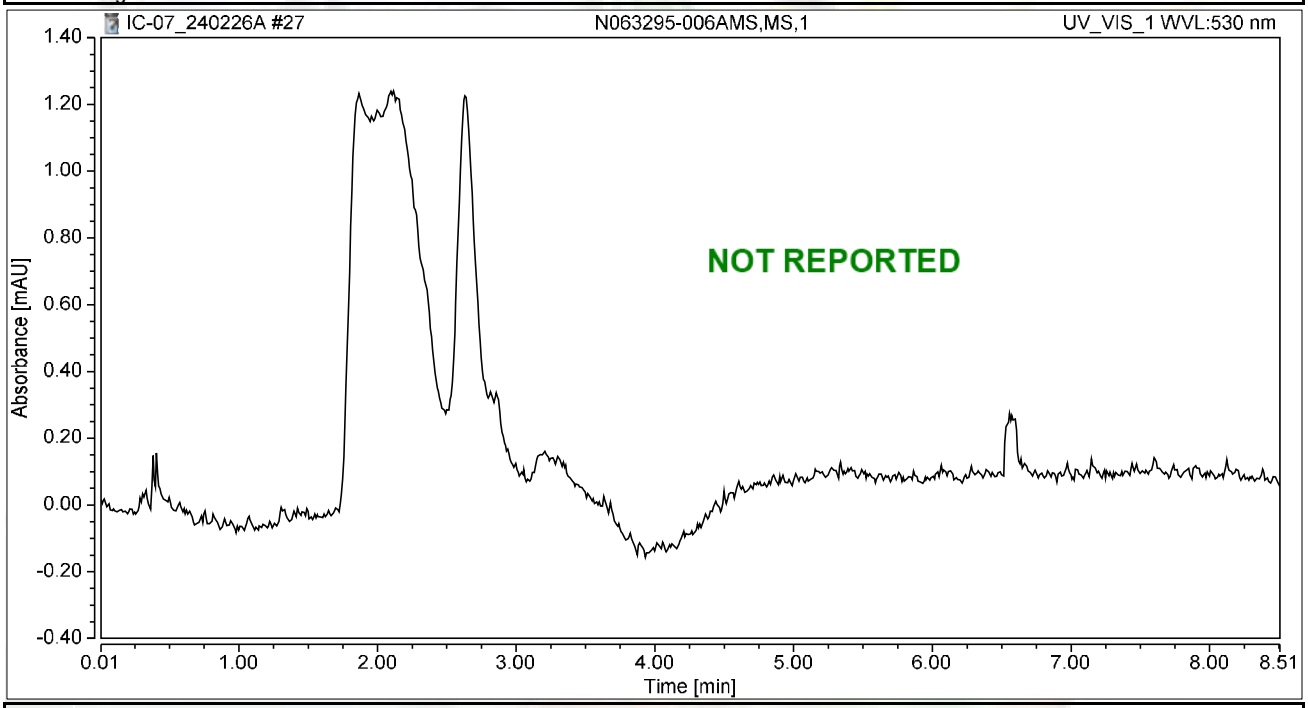
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

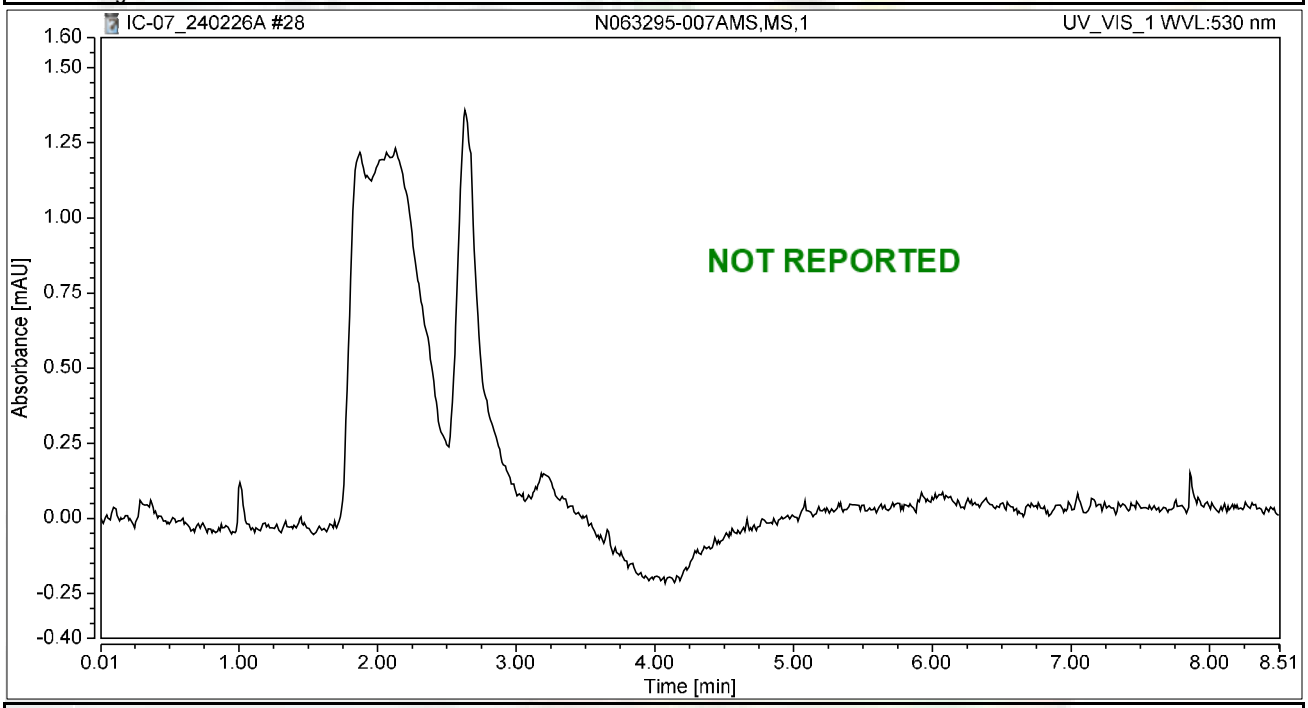
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

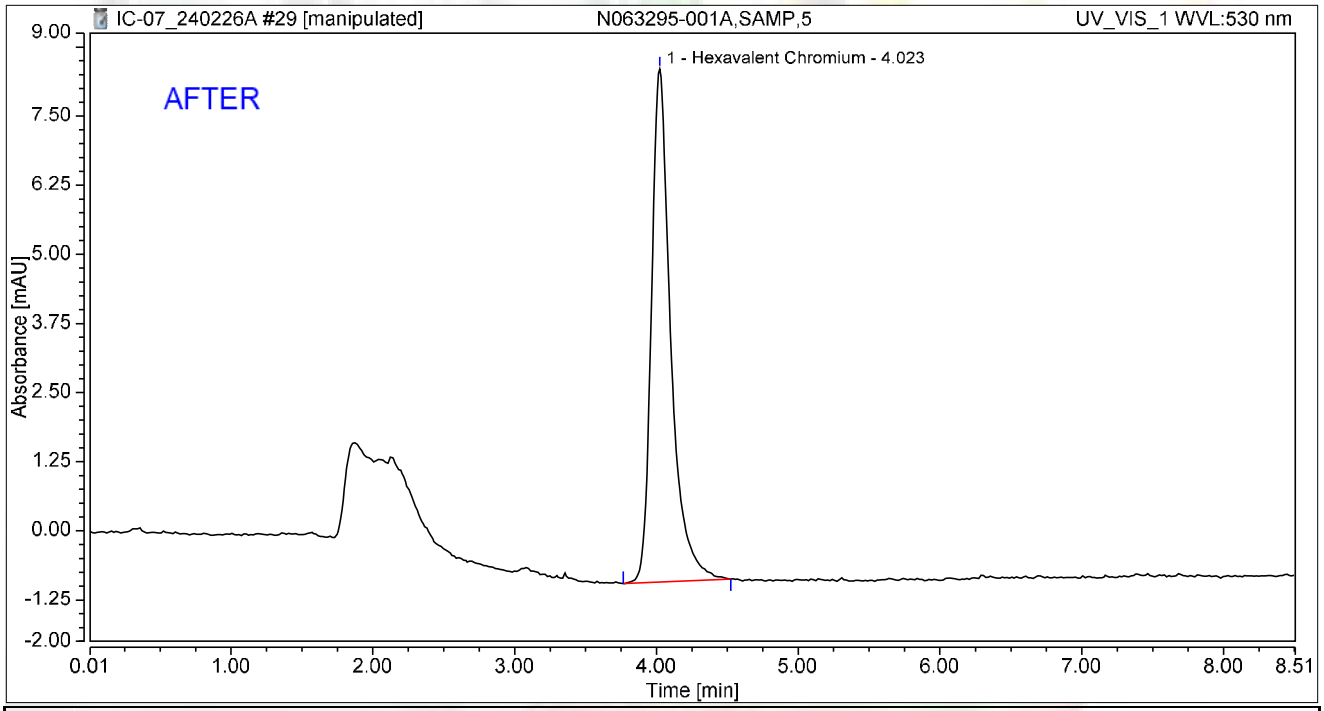
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	1.470	9.276	100.00	100.00	6.8342
Total:			**1.470**	**9.276**	**100.00**	**100.00**	

Reviewed by:

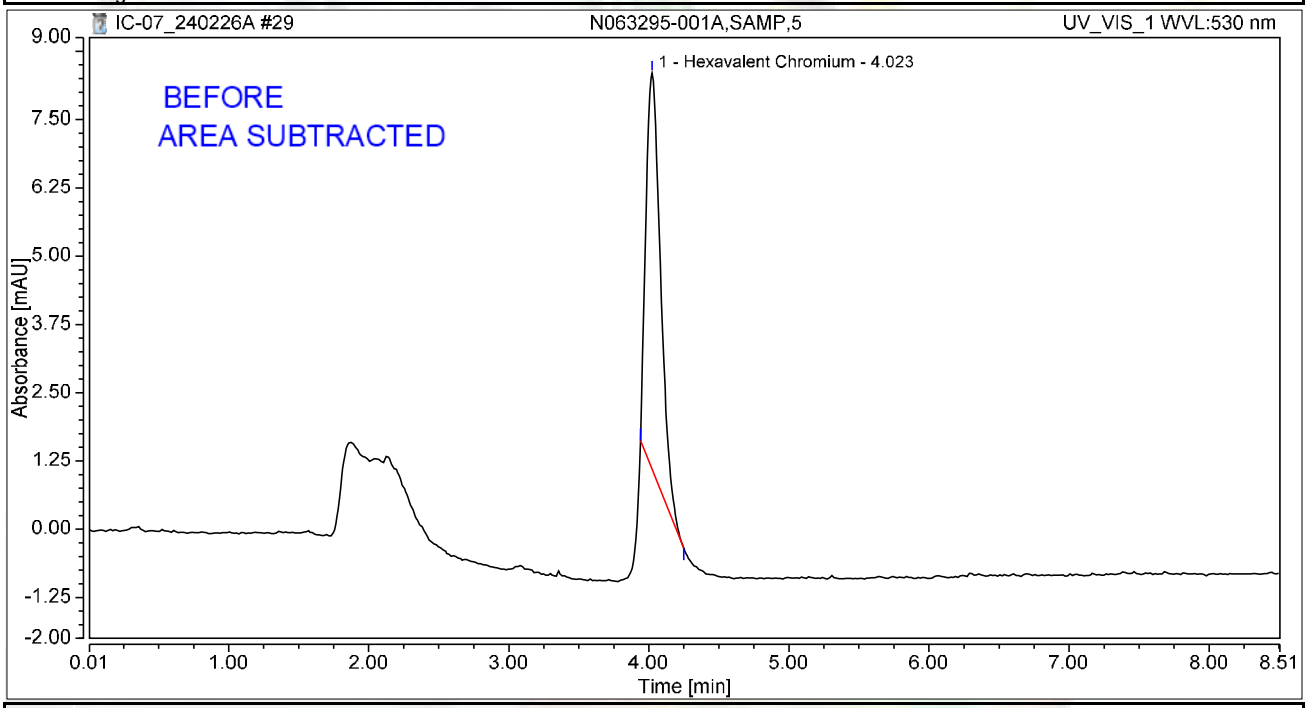
JRB 2/29/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063295-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

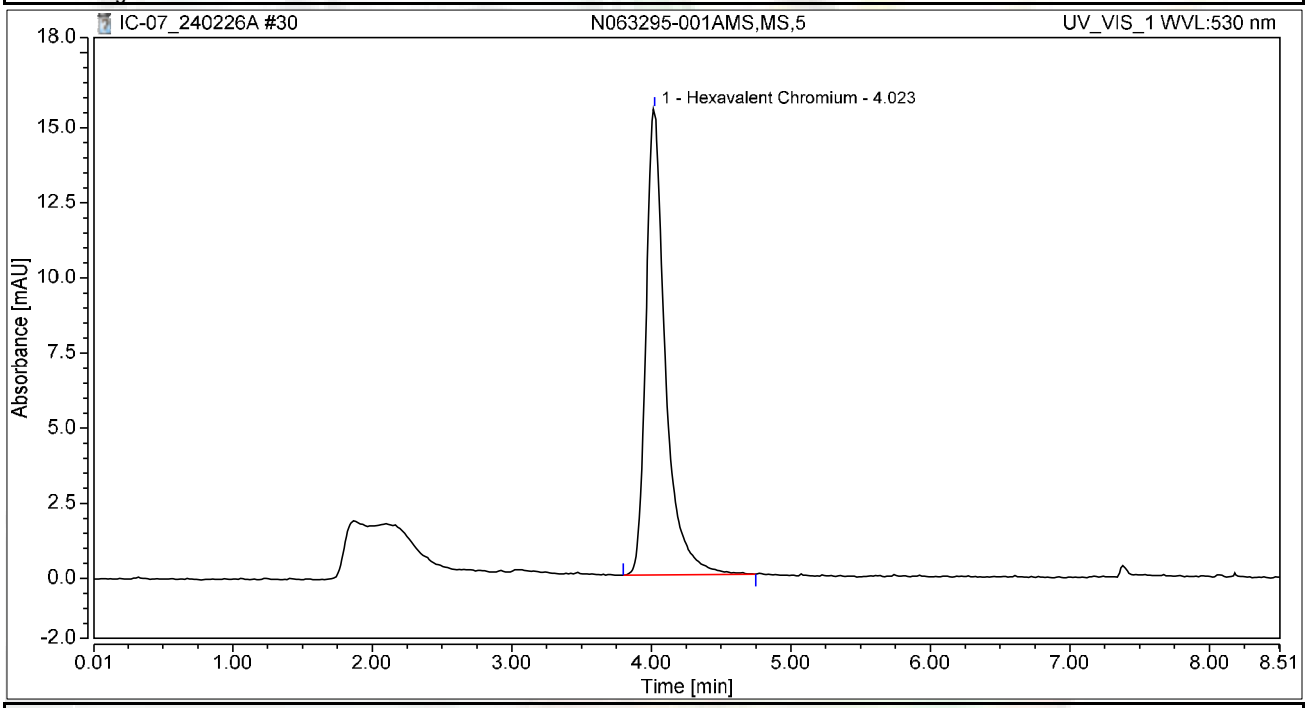
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.878	7.255	100.00	100.00	4.0818
Total:			**0.878**	**7.255**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 15:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

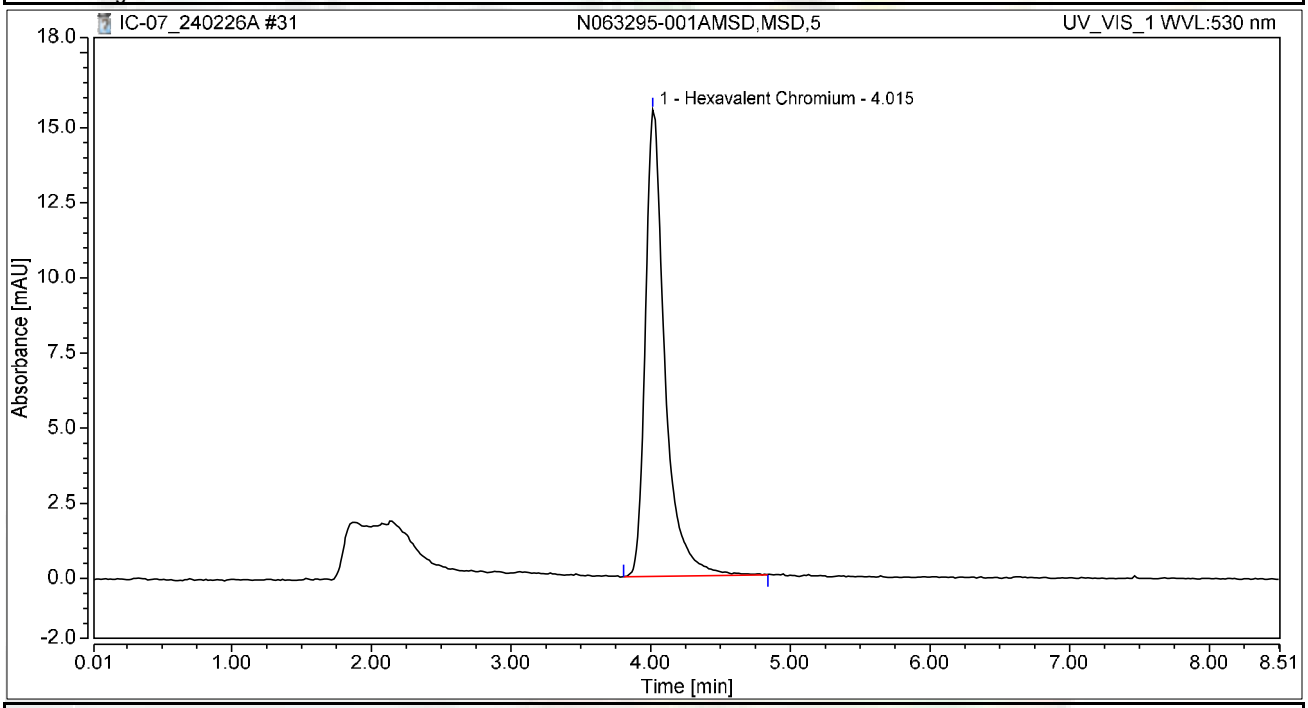
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	2.510	15.510	100.00	100.00	11.6673
Total:			**2.510**	**15.510**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-001AMSD,MSD,5**	*Run Time (min):*	**8.49**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 15:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

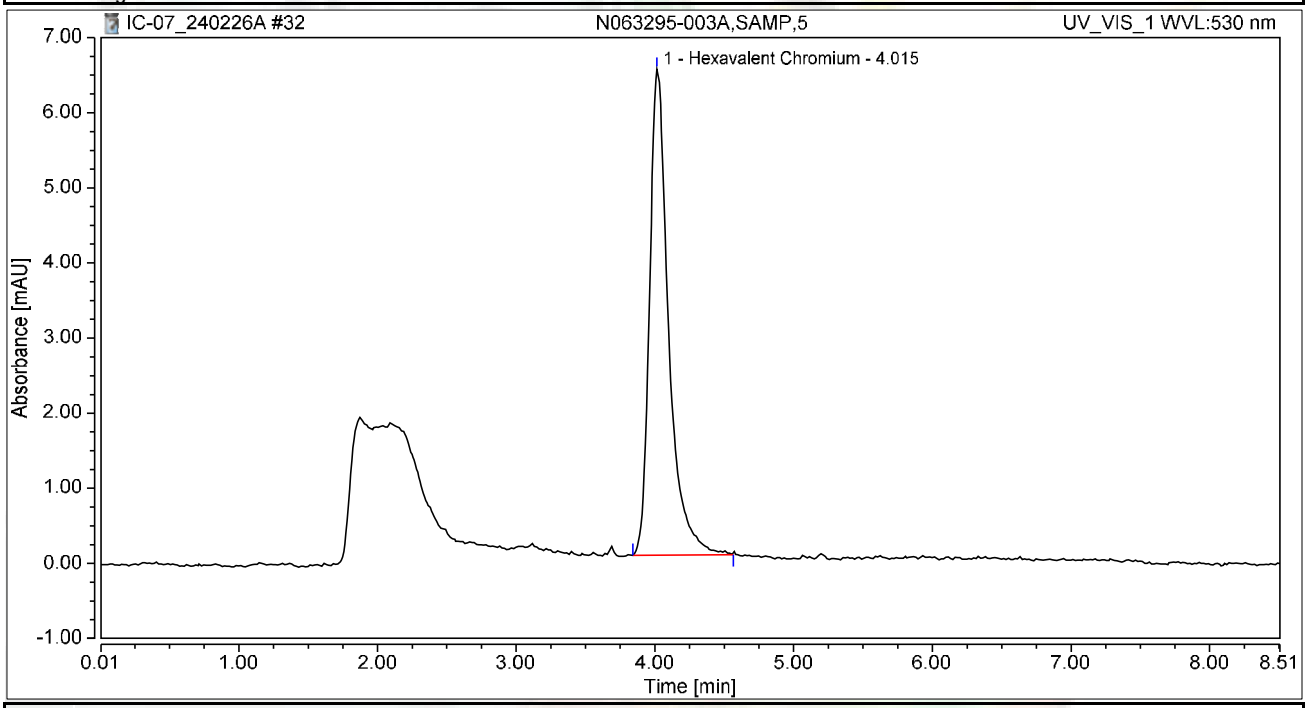
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	2.524	15.529	100.00	100.00	11.7340
Total:			**2.524**	**15.529**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 15:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

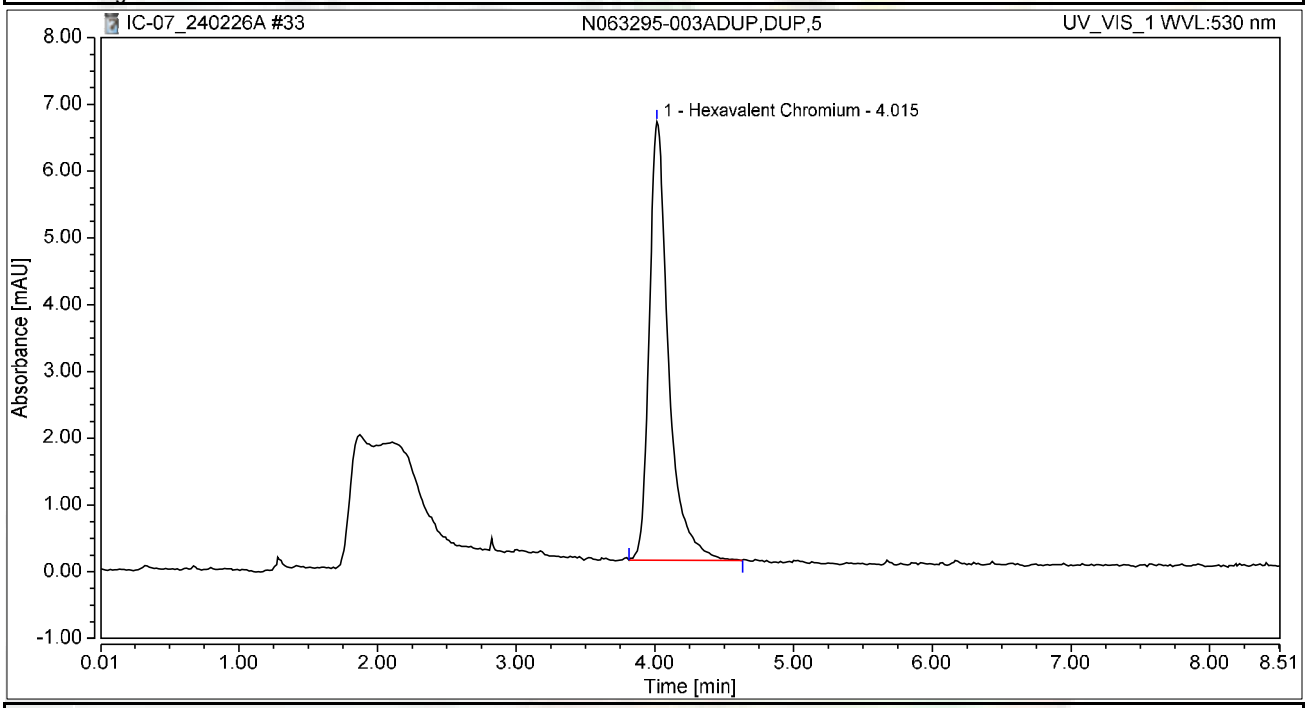
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.030	6.472	100.00	100.00	4.7872
Total:			**1.030**	**6.472**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003ADUP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 15:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

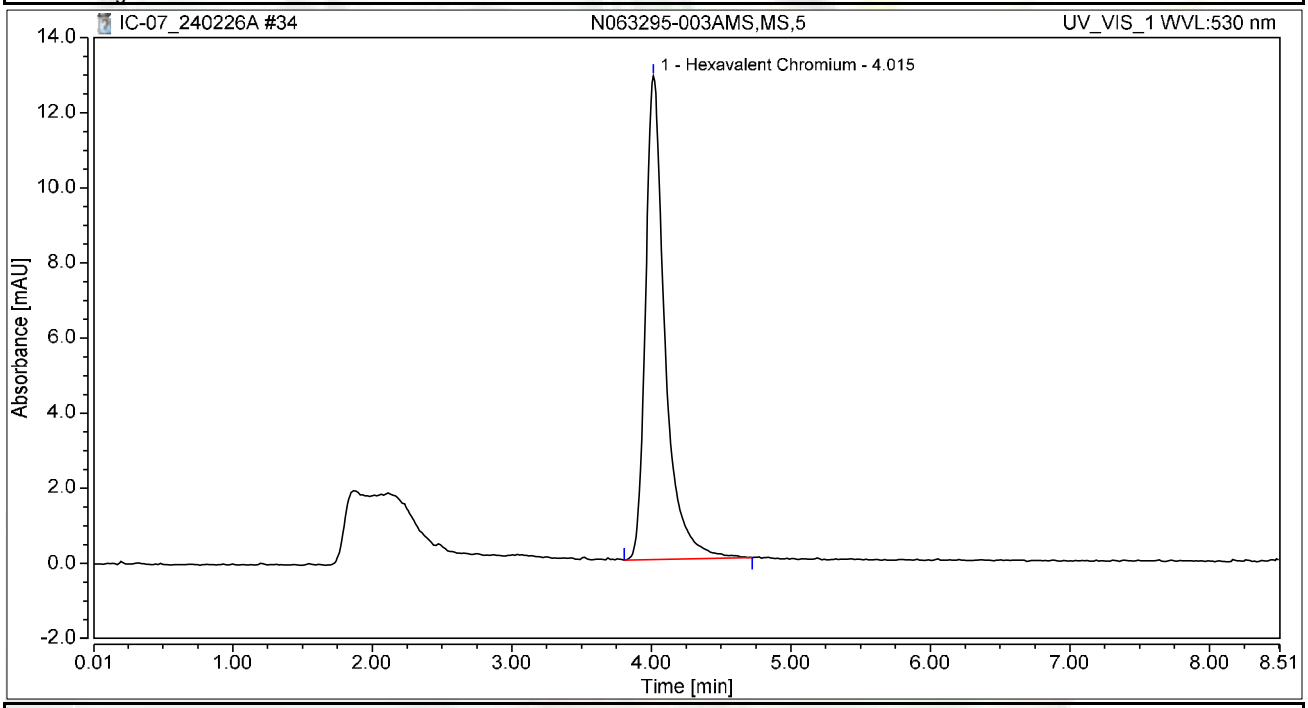
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.058	6.567	100.00	100.00	4.9182
Total:			**1.058**	**6.567**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 15:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

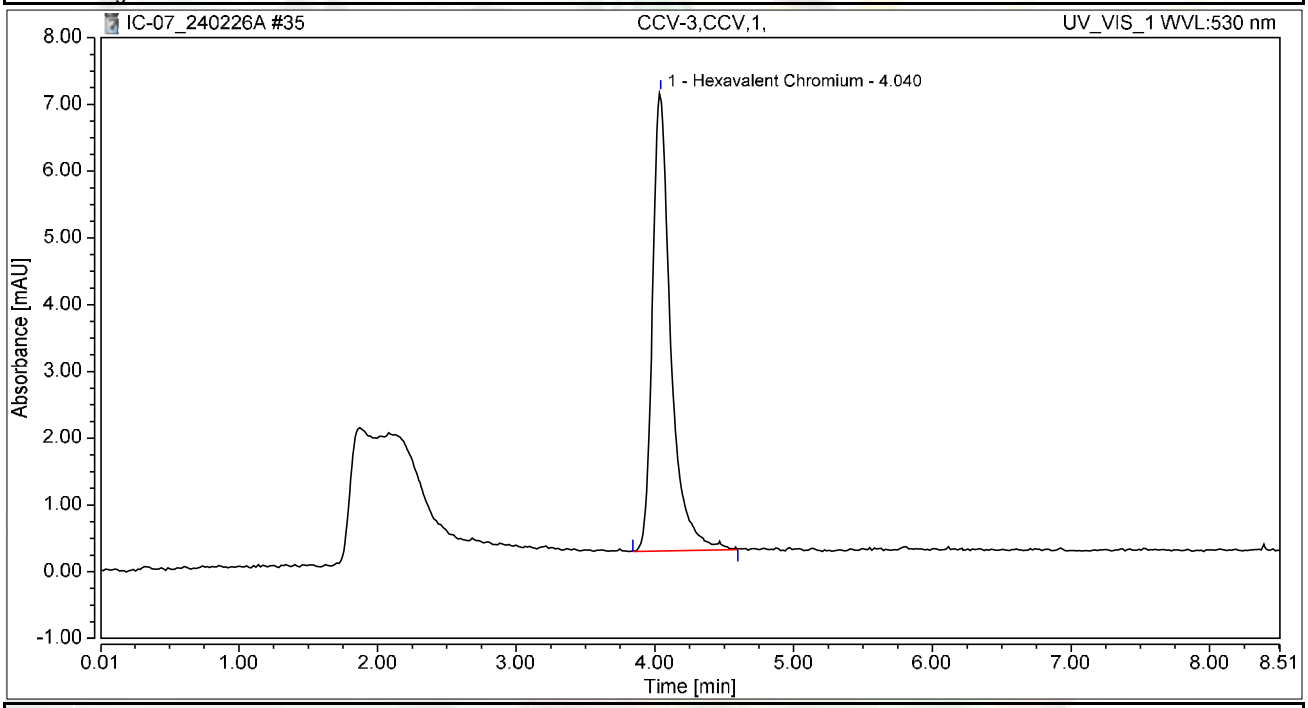
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	2.086	12.876	100.00	100.00	9.6979
Total:			**2.086**	**12.876**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 16:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

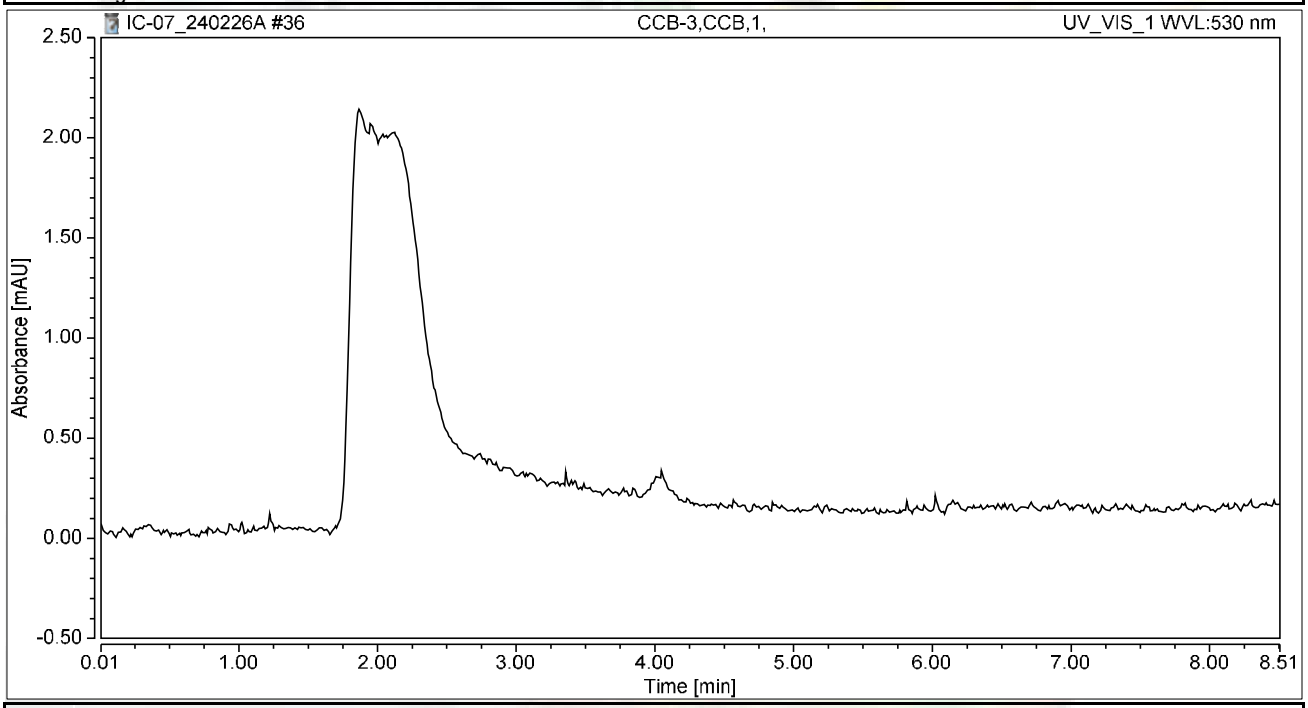
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.049	6.875	100.00	100.00	4.8750
Total:			**1.049**	**6.875**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 16:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

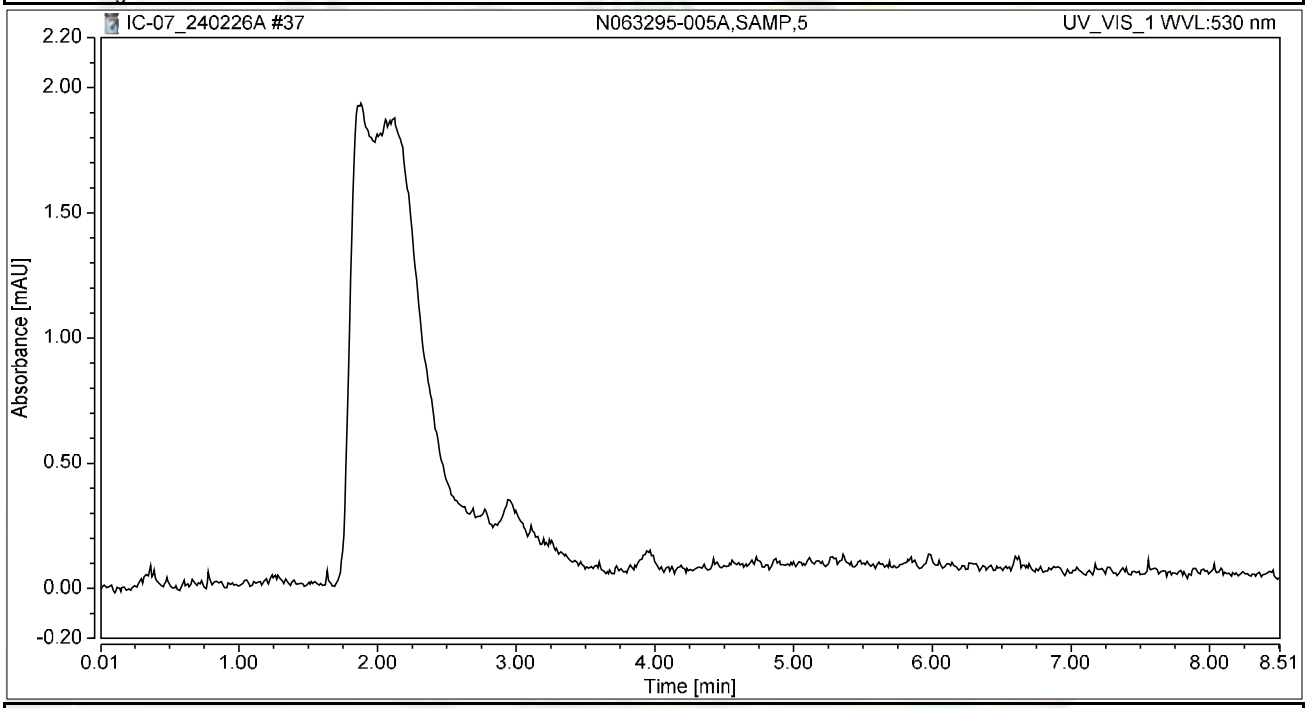
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 16:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

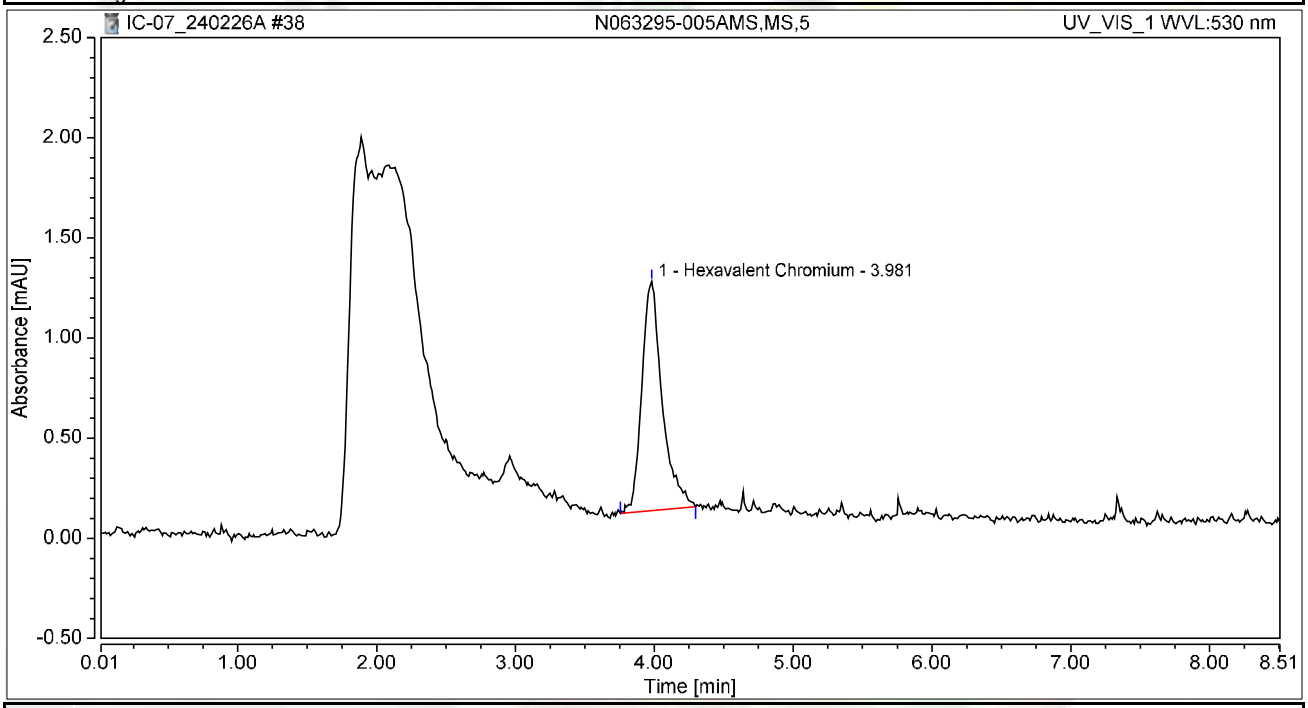
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-005AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 16:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

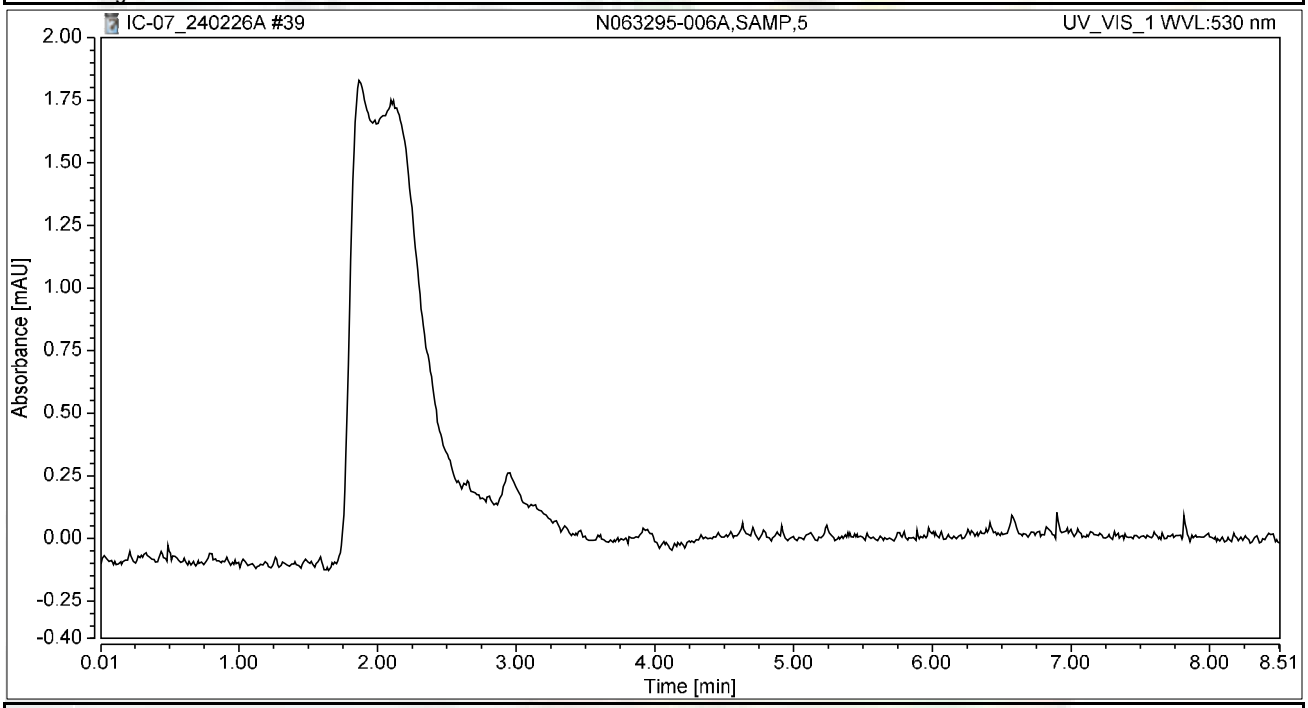
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.195	1.144	100.00	100.00	0.9085
Total:			**0.195**	**1.144**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-006A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 16:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

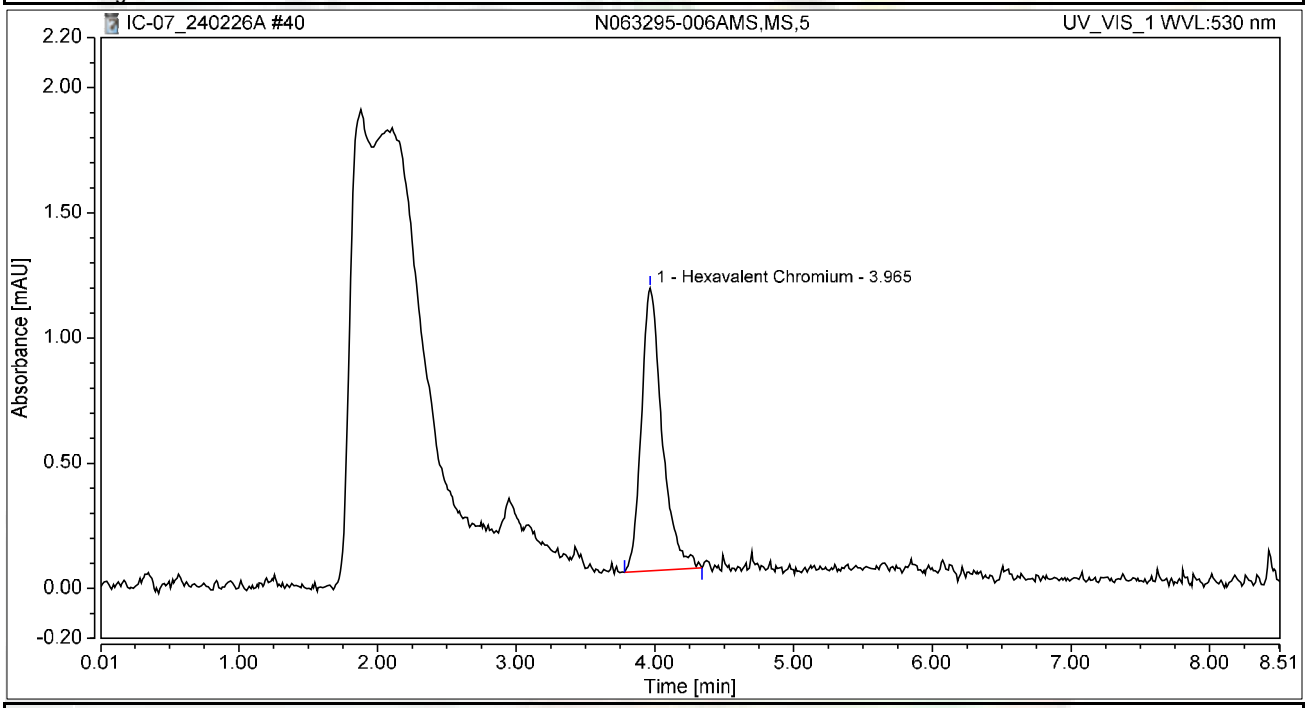
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-006AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 16:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

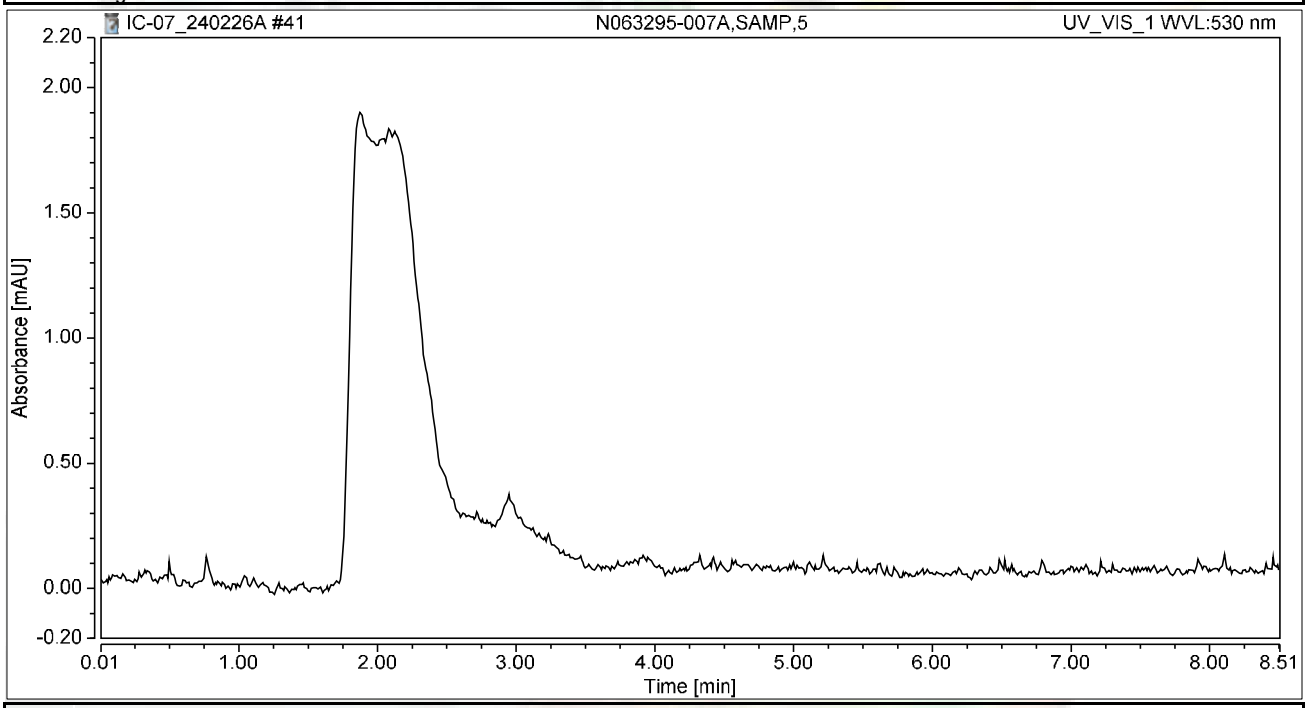
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.196	1.130	100.00	100.00	0.9111
Total:			**0.196**	**1.130**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-007A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

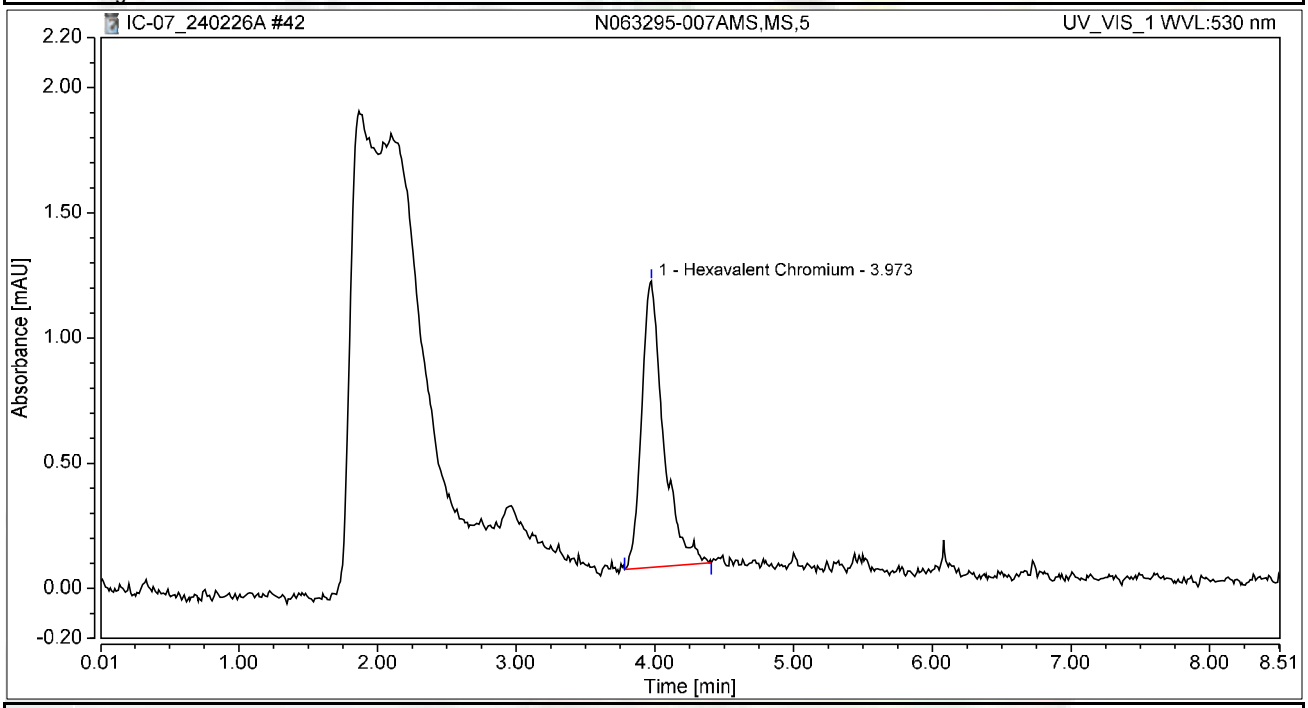
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-007AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

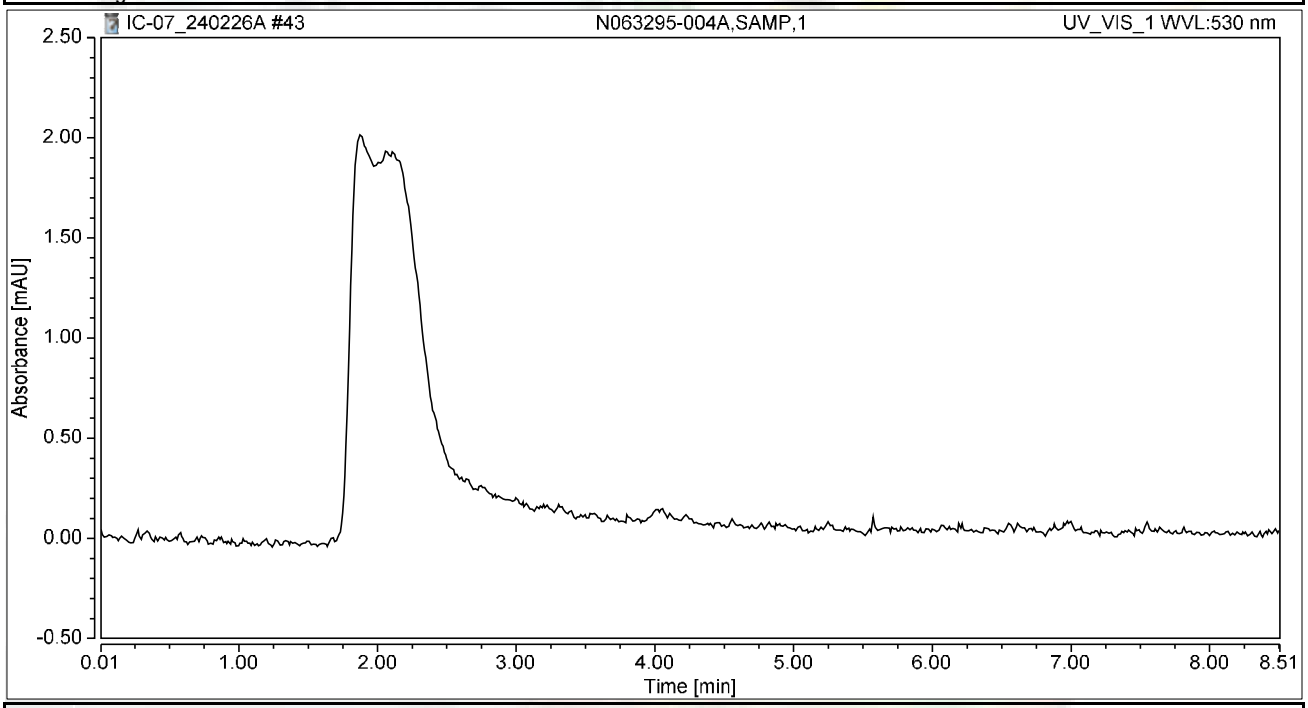
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.209	1.143	100.00	100.00	0.9734
Total:			**0.209**	**1.143**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

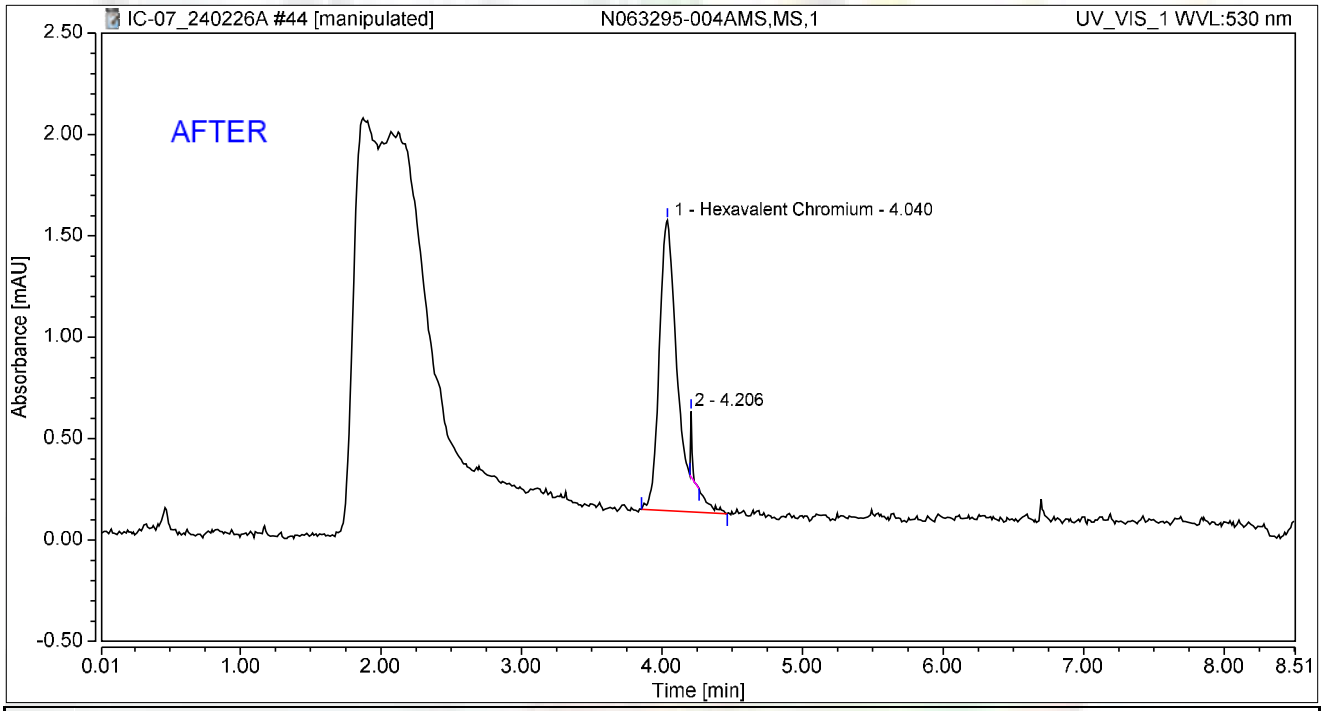
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-004AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.219	1.431	98.11	81.61	1.0195
2		4.206	0.004	0.323	1.89	18.39	n.a.
Total:			**0.224**	**1.754**	**100.00**	**100.00**	

Reviewed by:

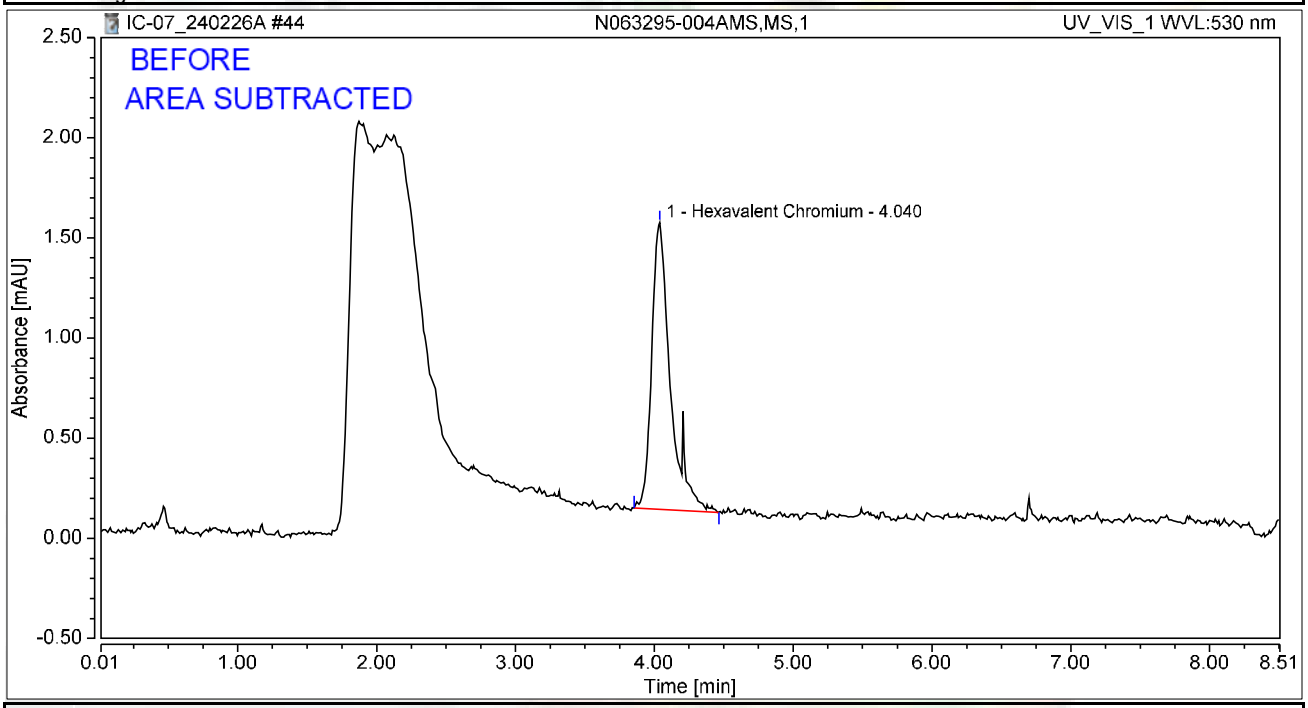
JRB 2/29/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063295-004AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

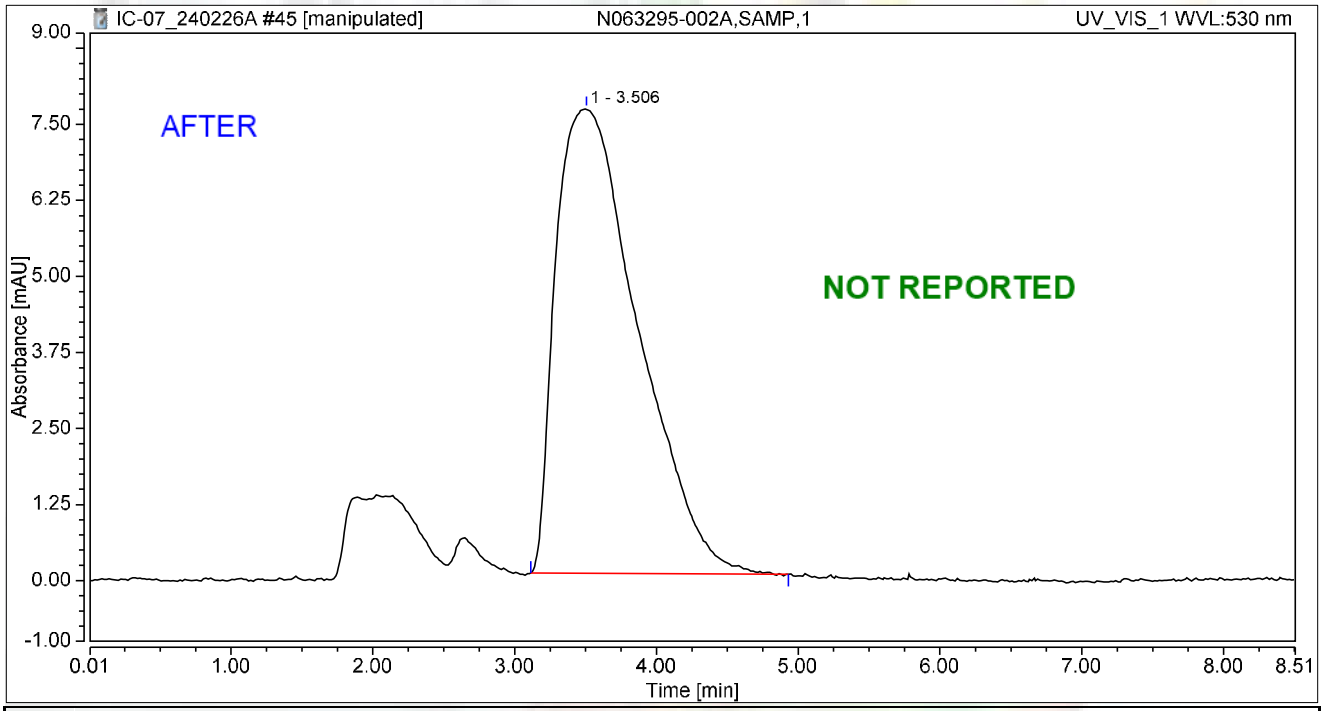
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.224	1.431	100.00	100.00	1.0391
Total:			**0.224**	**1.431**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

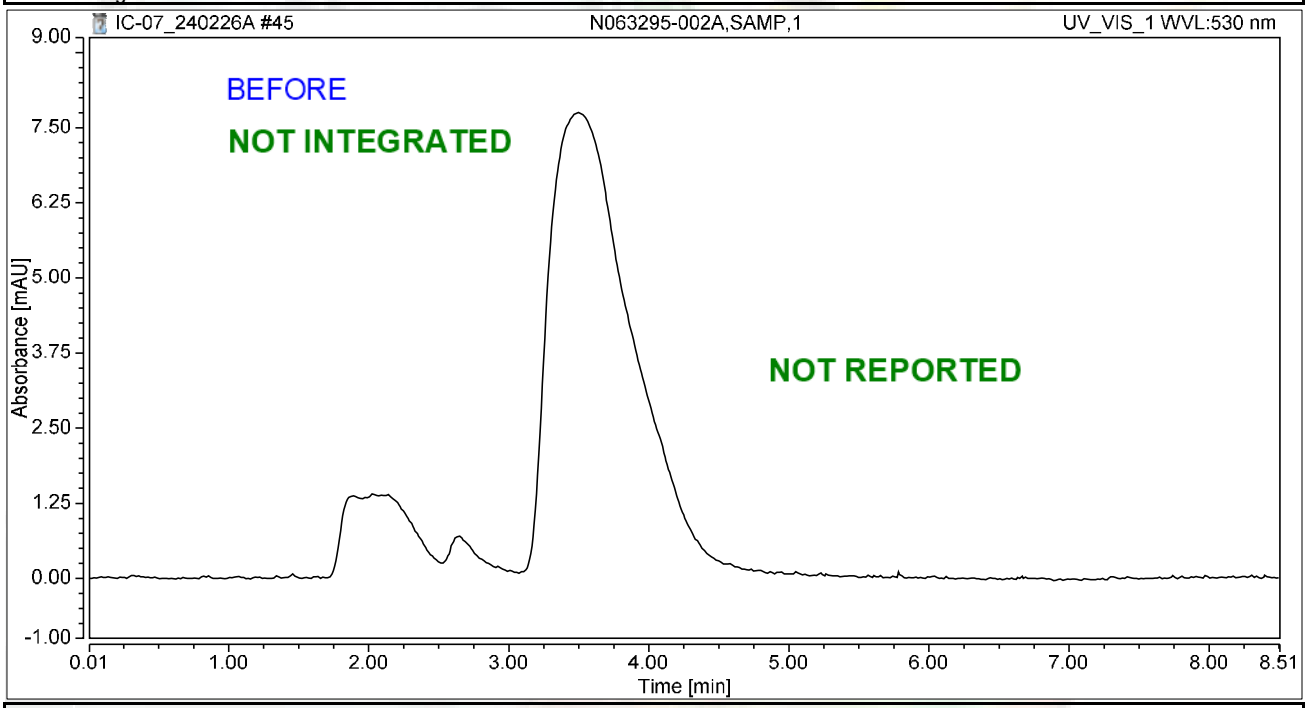
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.506	5.137	7.645	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**5.137**	**7.645**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

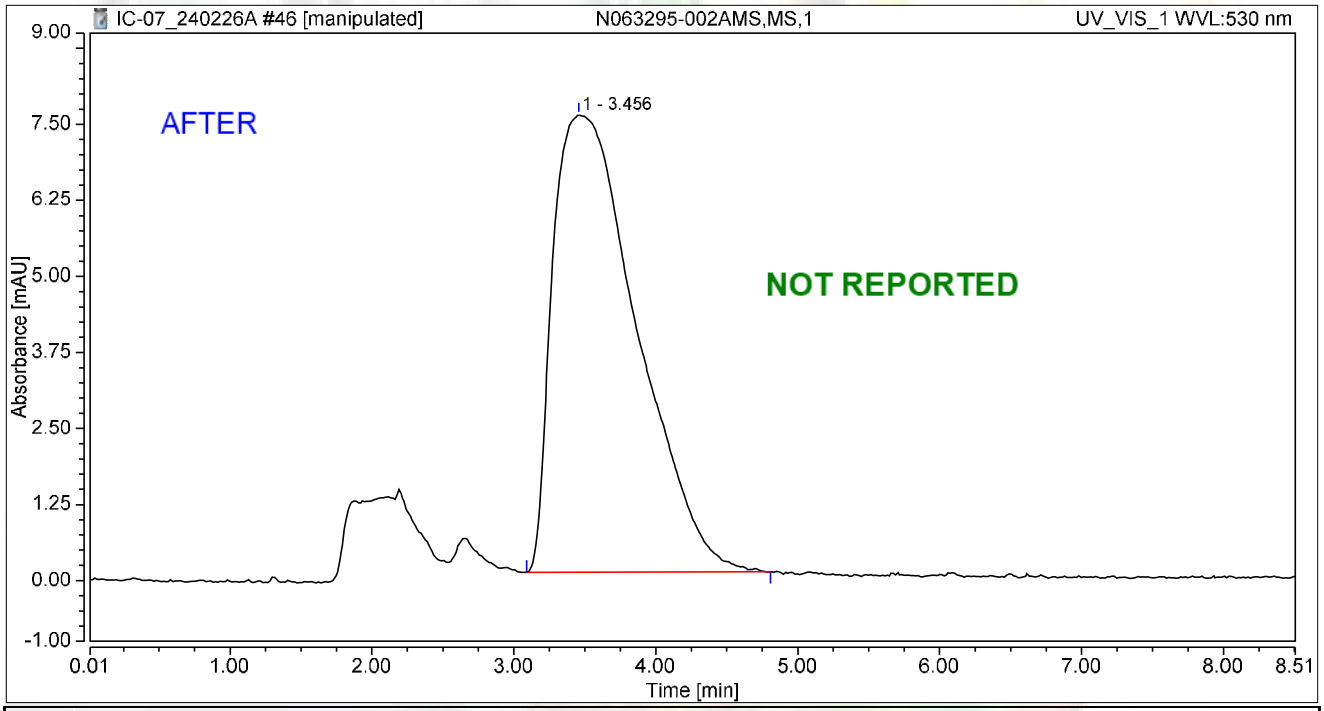
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

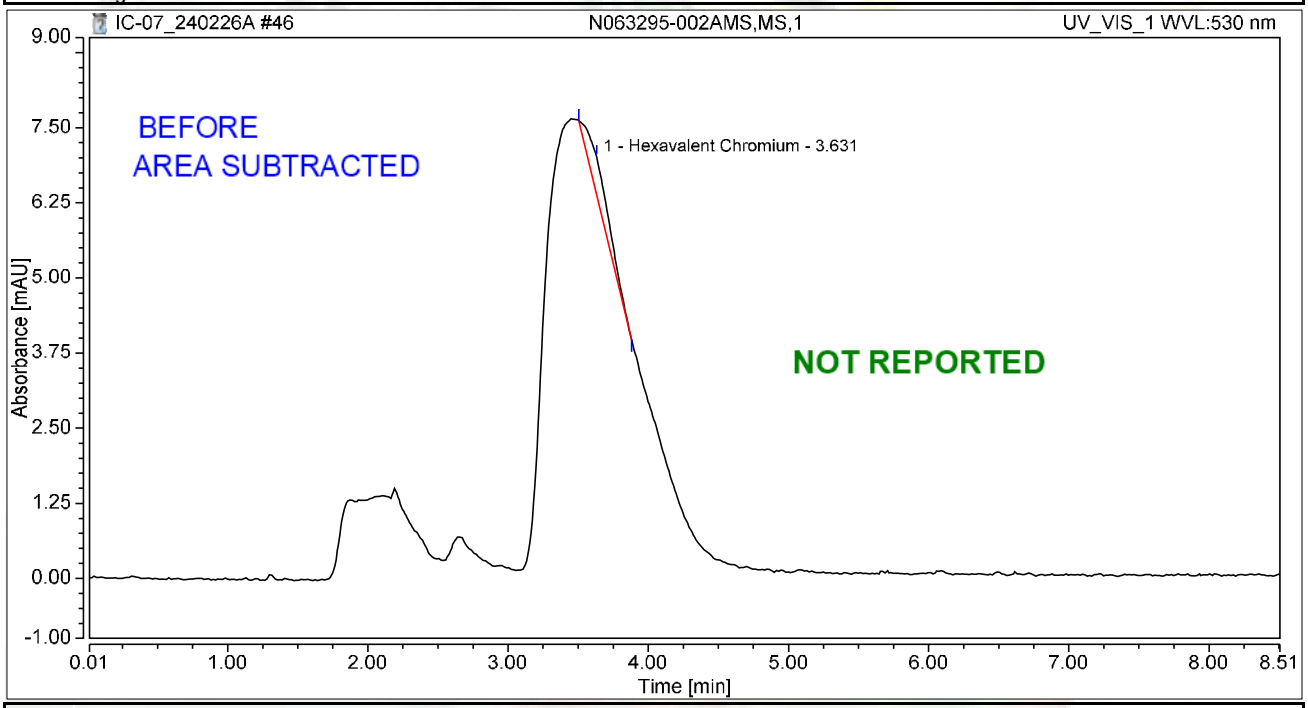
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.456	5.153	7.514	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**5.153**	**7.514**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

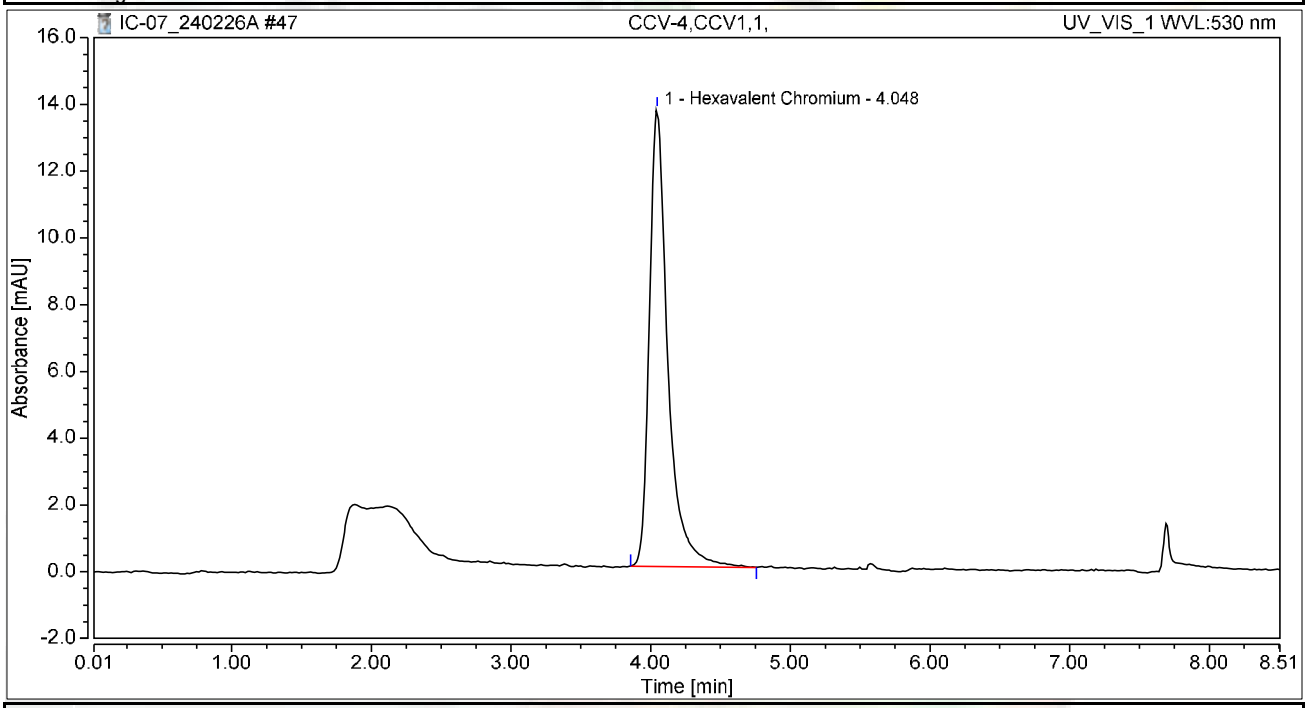
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.631	0.118	0.612	100.00	100.00	0.5478
Total:			**0.118**	**0.612**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 18:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

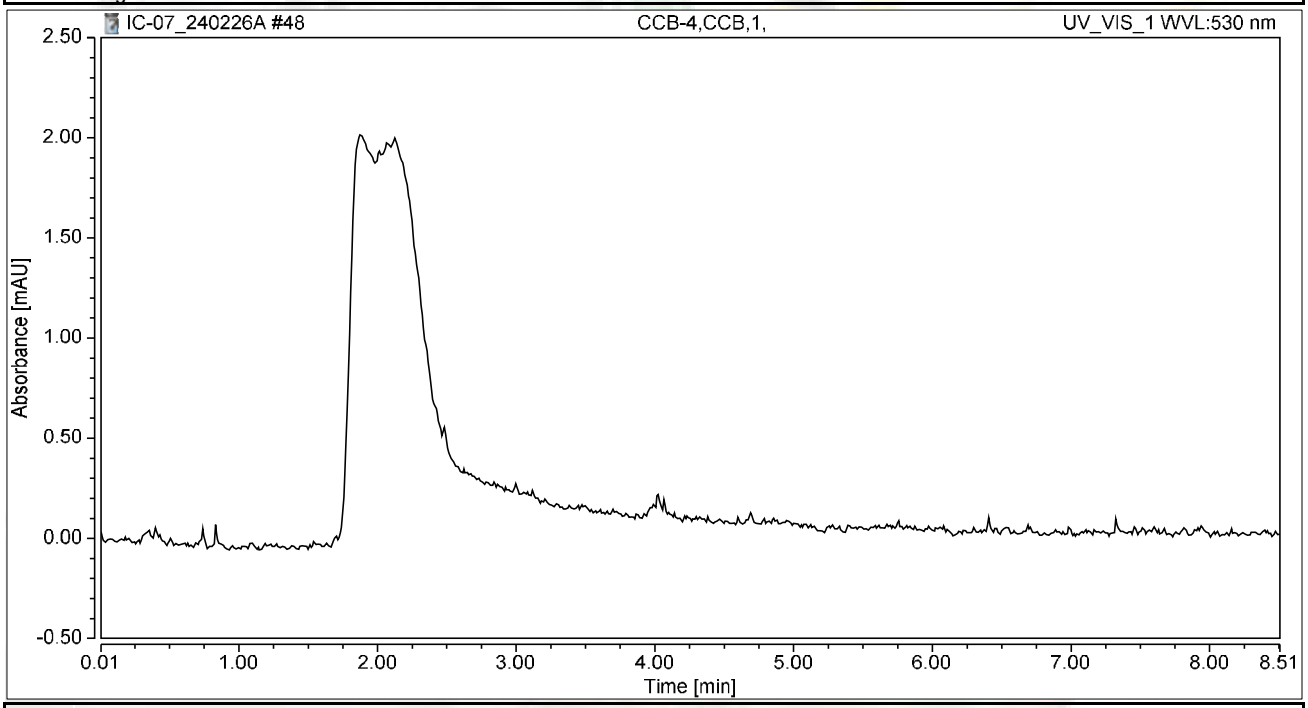
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.106	13.699	100.00	100.00	9.7906
Total:			**2.106**	**13.699**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 18:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

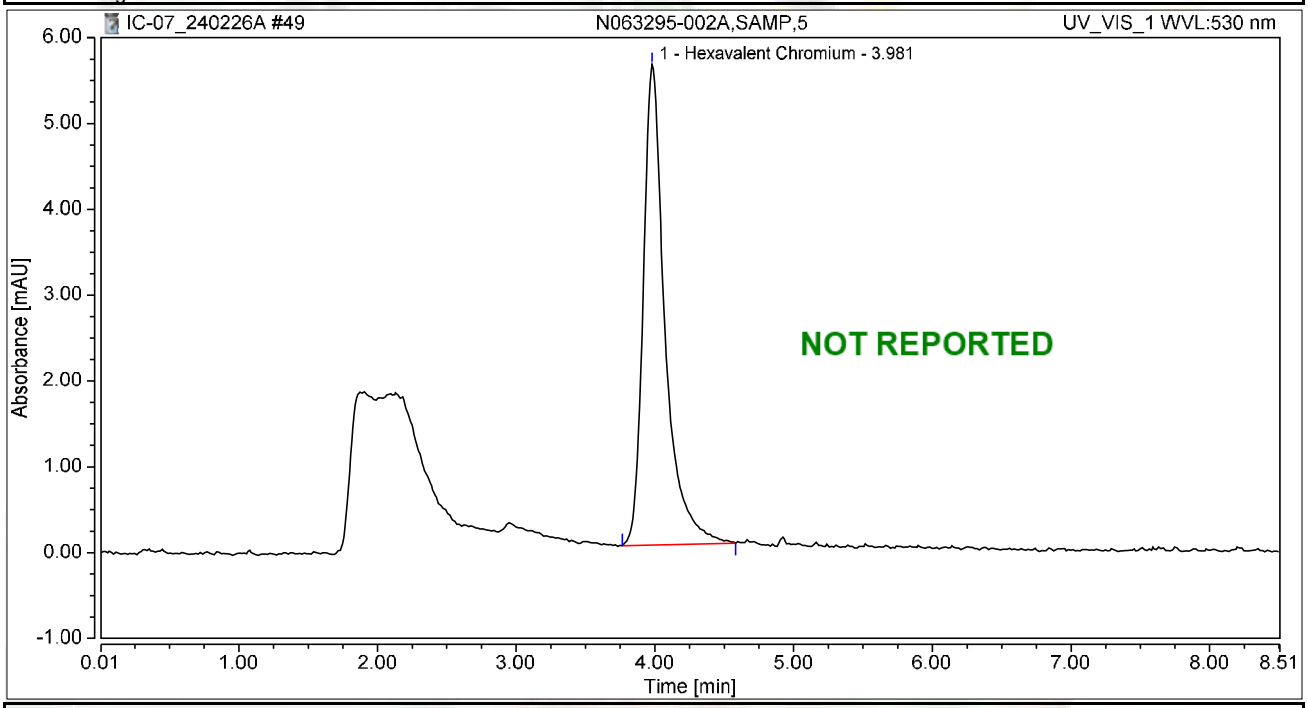
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 18:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

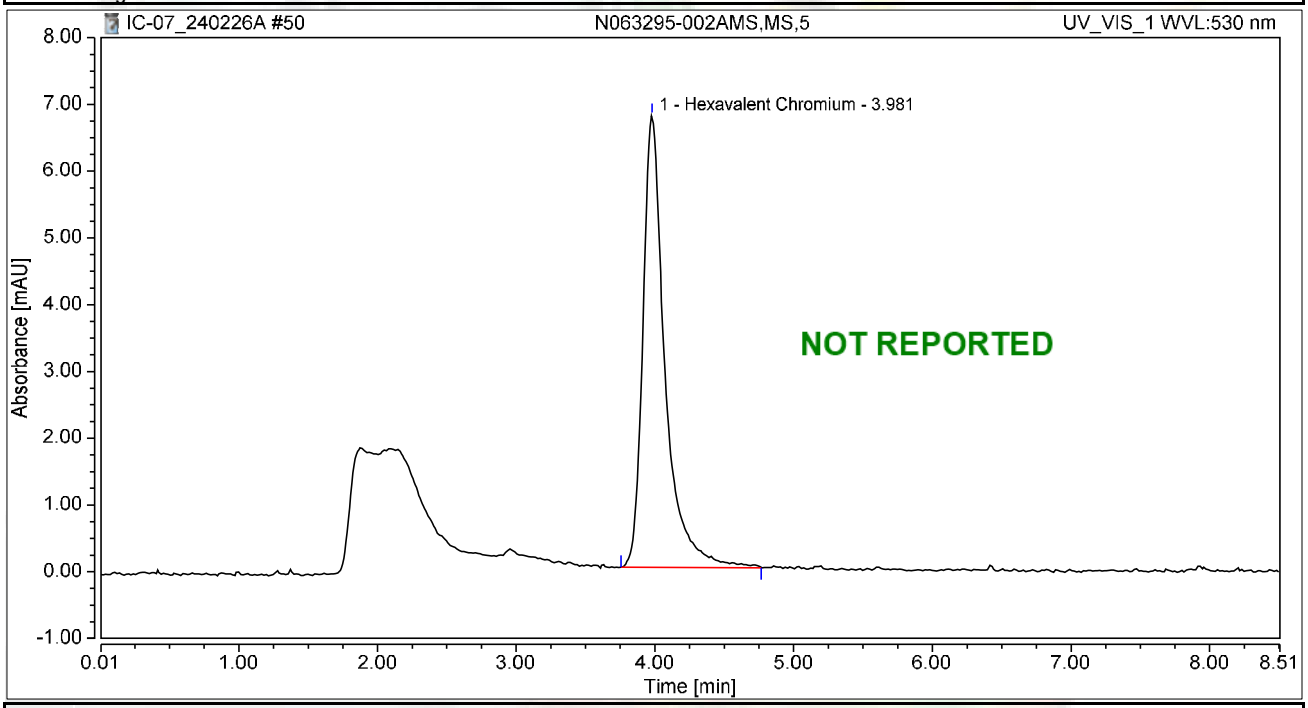
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.018	5.597	100.00	100.00	4.7311
Total:			**1.018**	**5.597**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 18:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

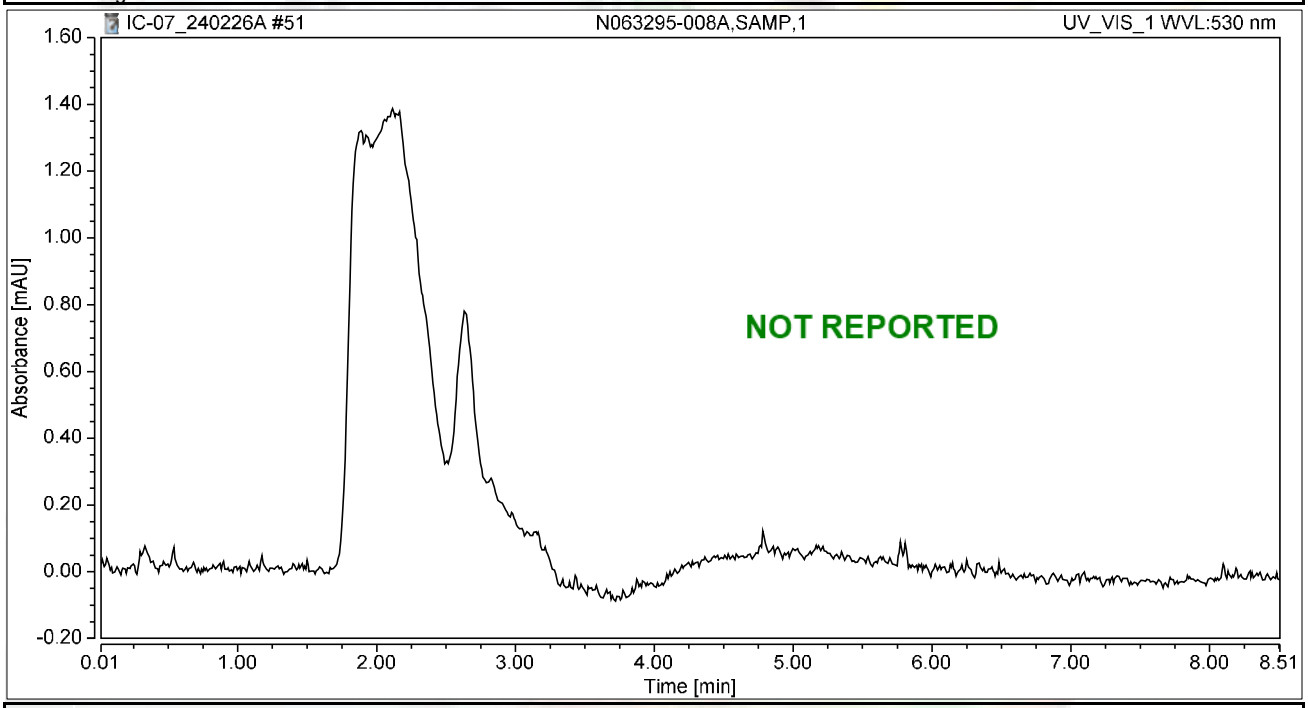
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.250	6.768	100.00	100.00	5.8122
Total:			**1.250**	**6.768**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-008A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 18:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

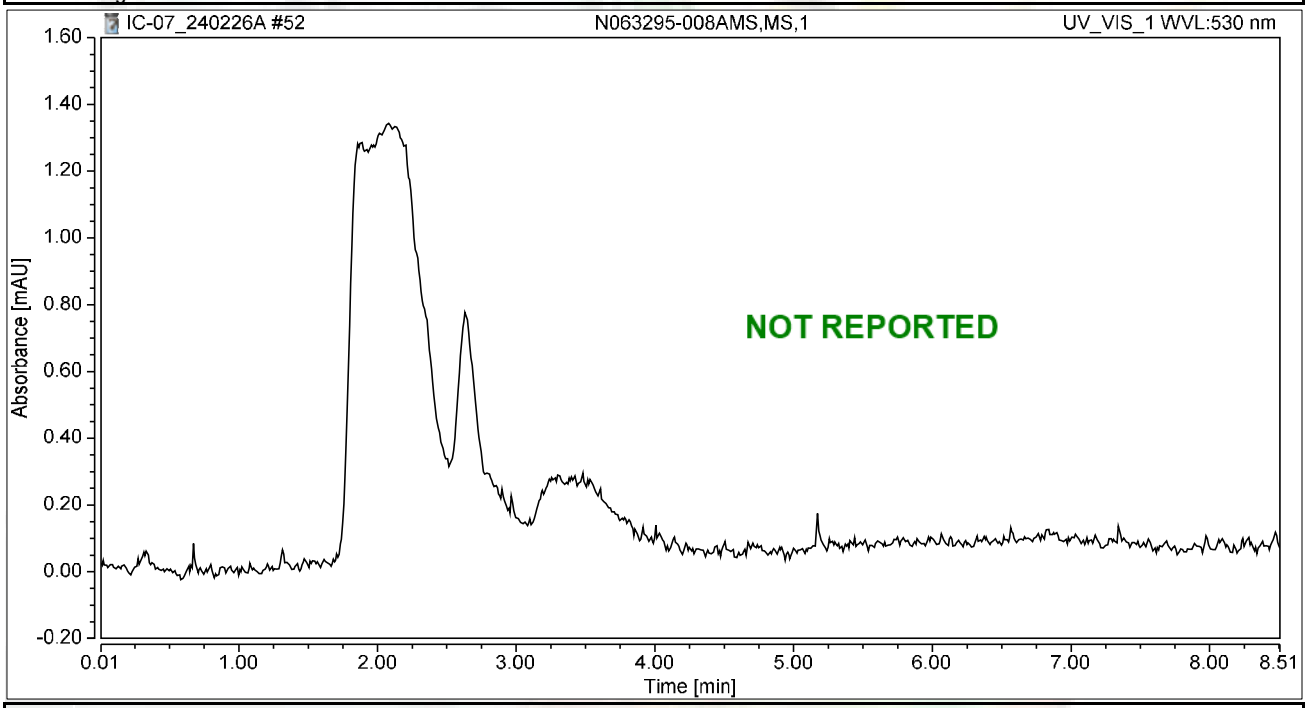
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 18:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

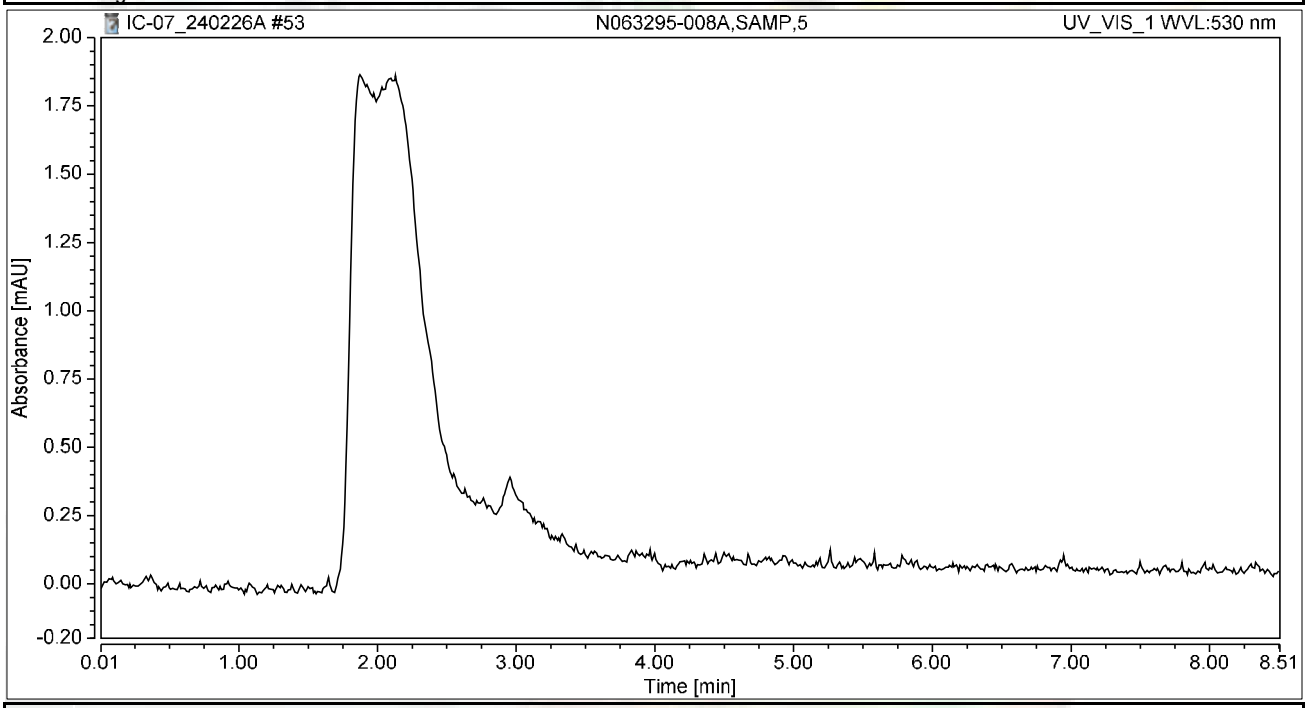
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-008A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 18:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

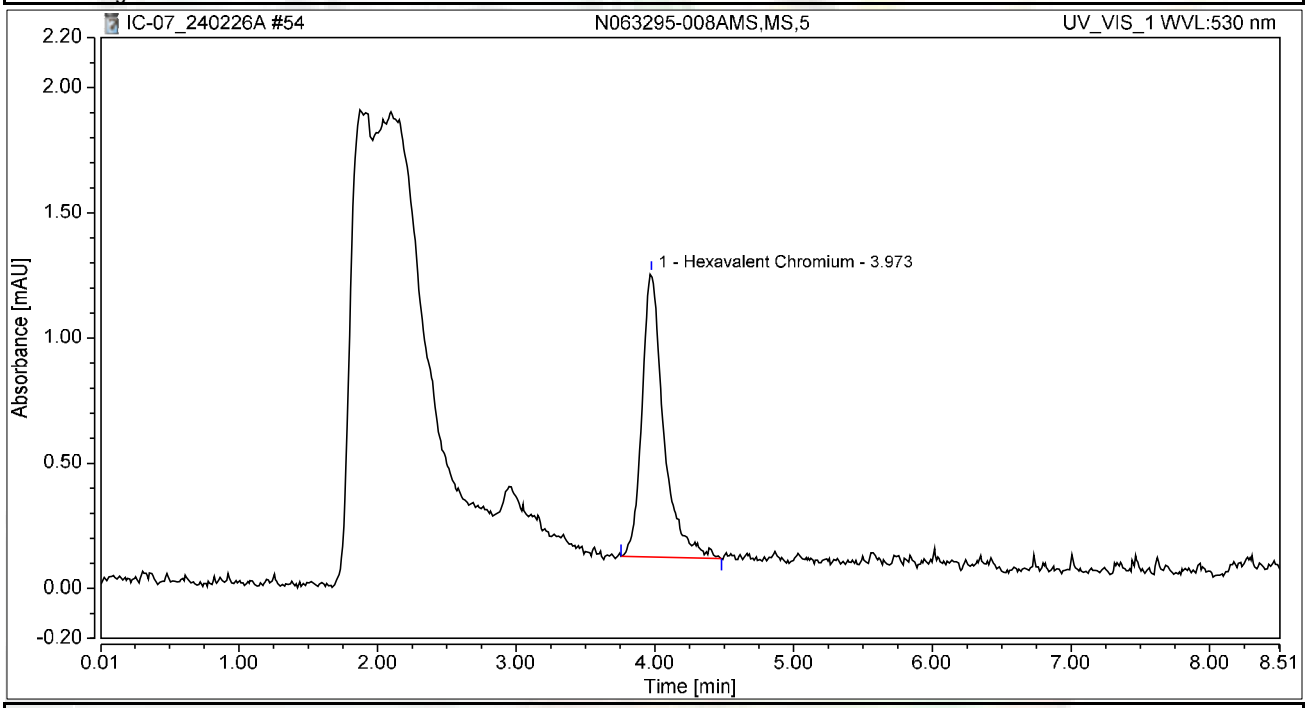
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-008AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 19:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

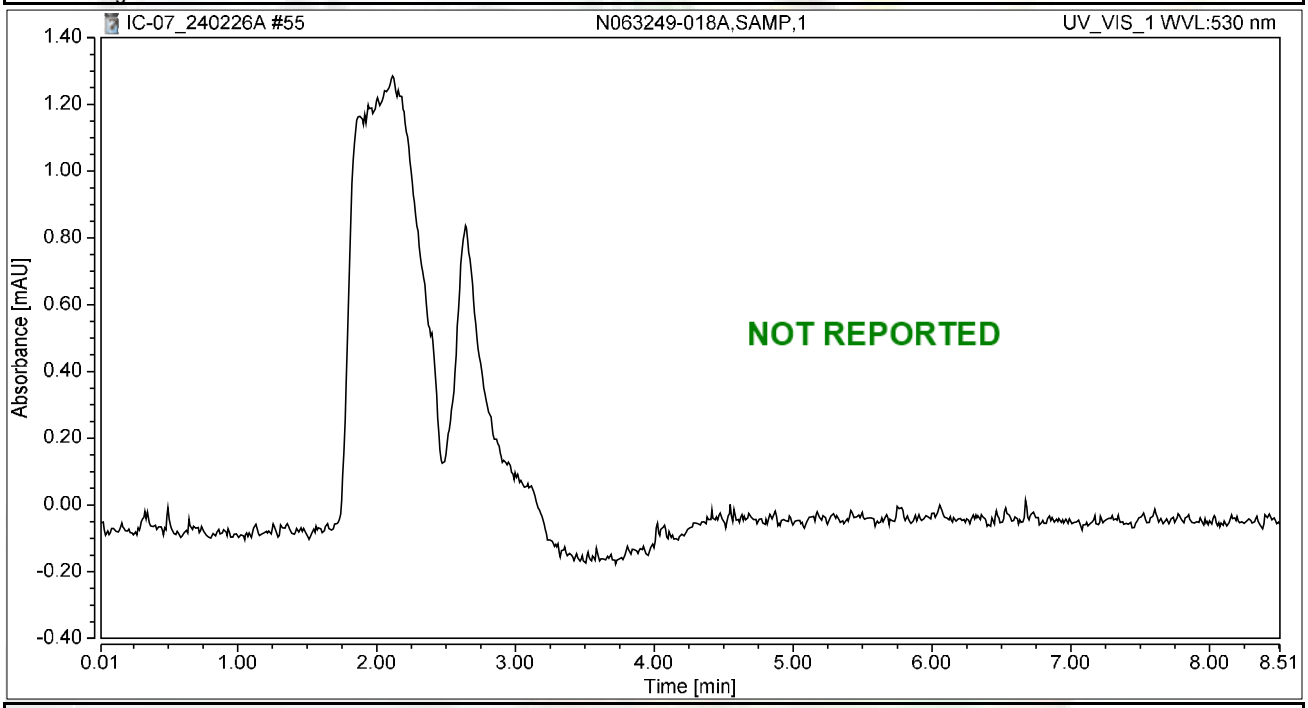
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.206	1.134	100.00	100.00	0.9557
Total:			**0.206**	**1.134**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-018A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 19:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

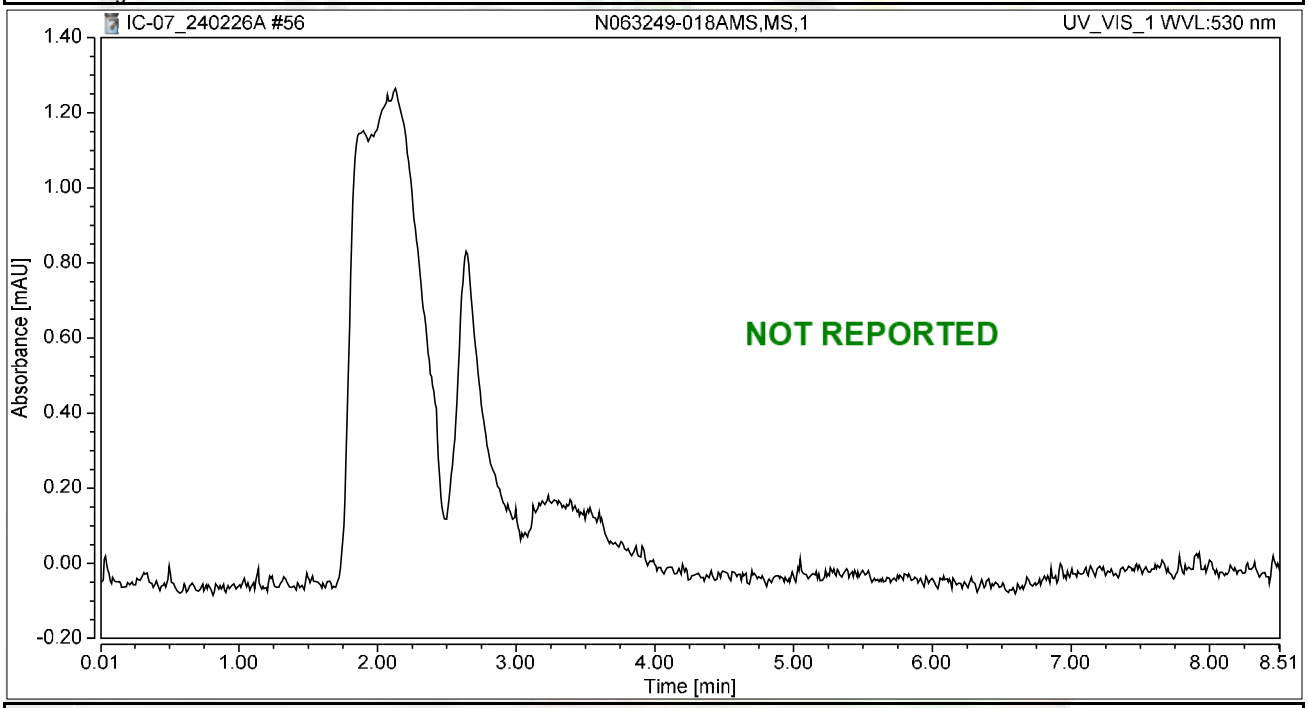
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-018AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 19:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

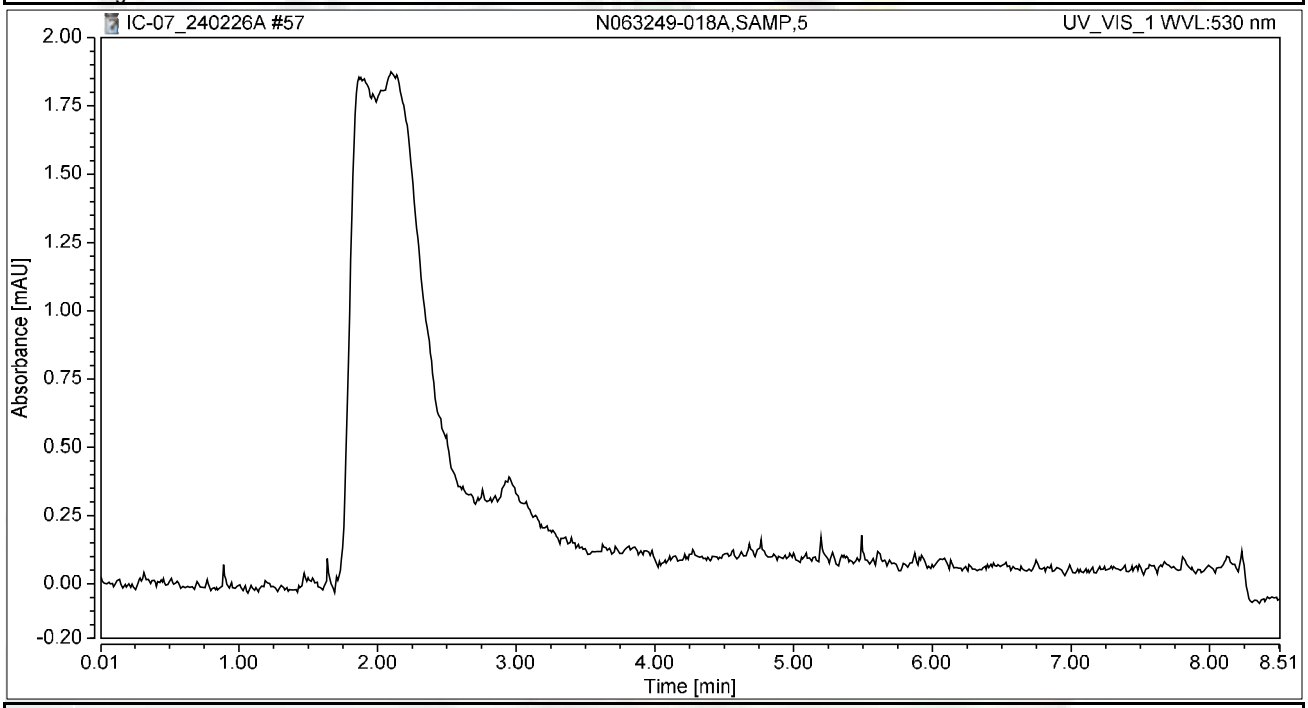
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-018A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 19:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

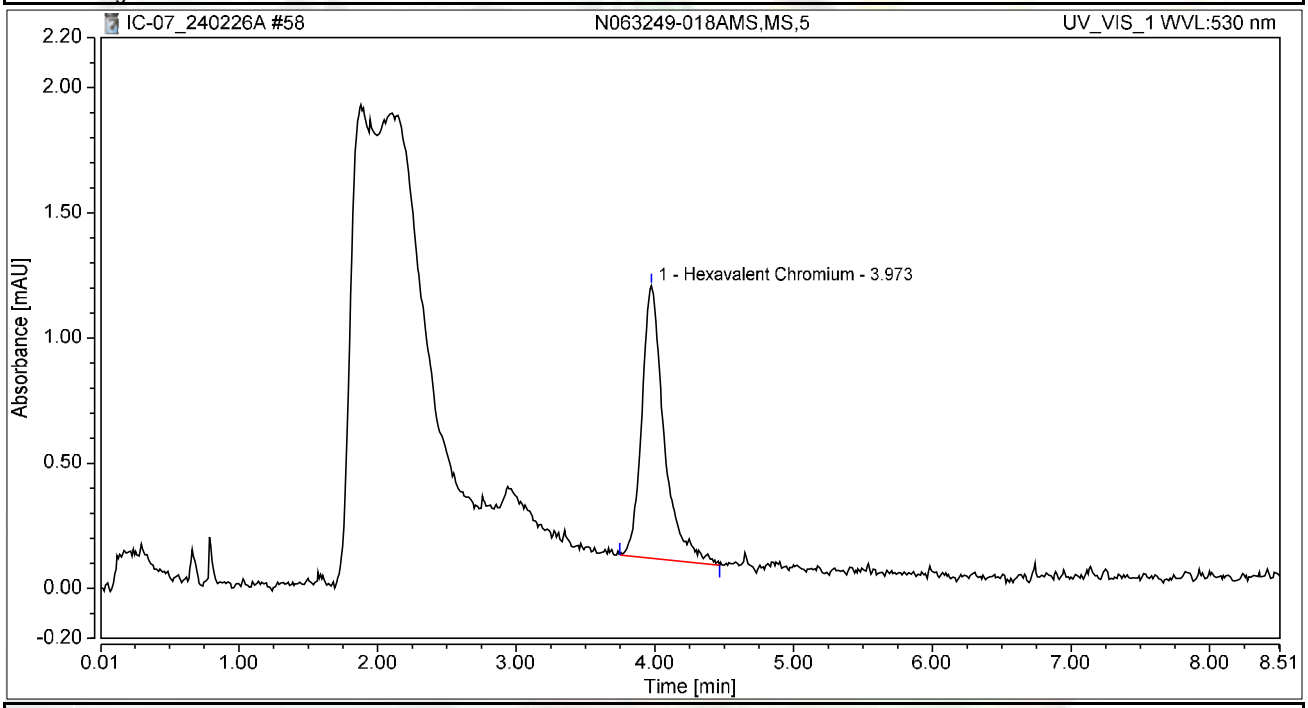
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-018AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 19:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

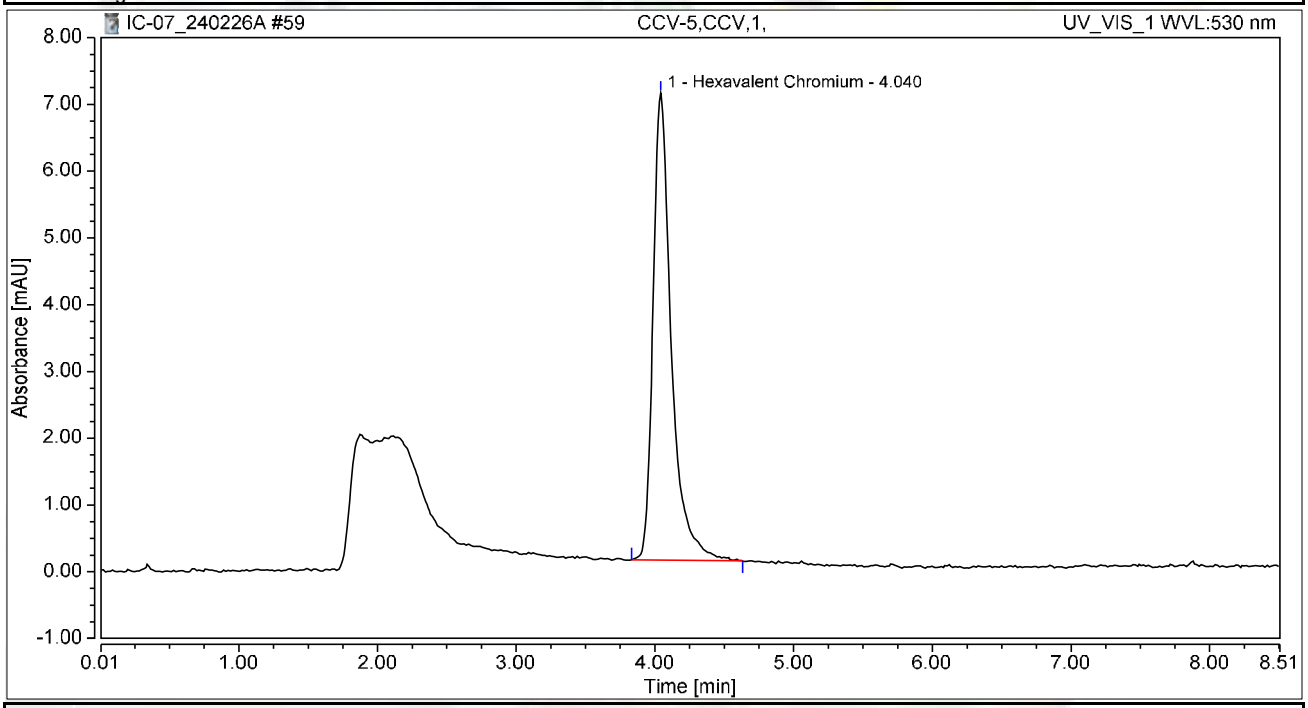
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.202	1.089	100.00	100.00	0.9411
Total:			**0.202**	**1.089**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 19:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

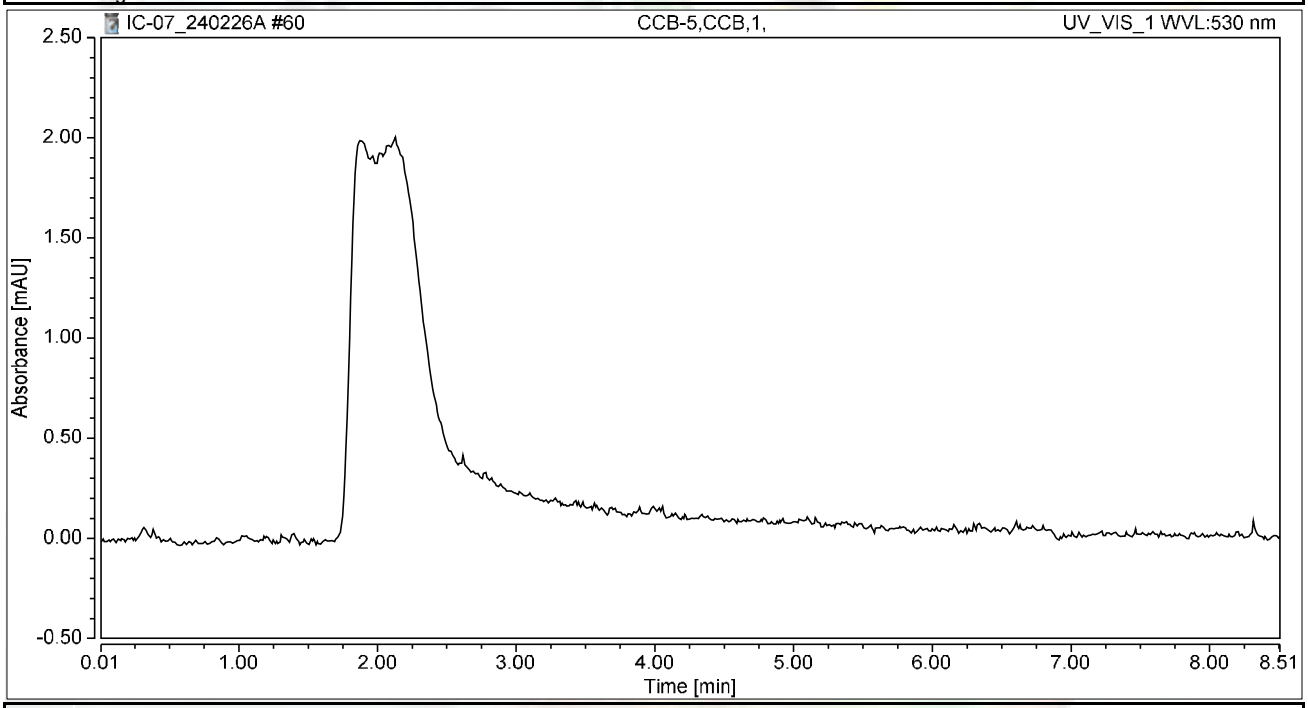
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.068	6.997	100.00	100.00	4.9638
Total:			**1.068**	**6.997**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 20:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

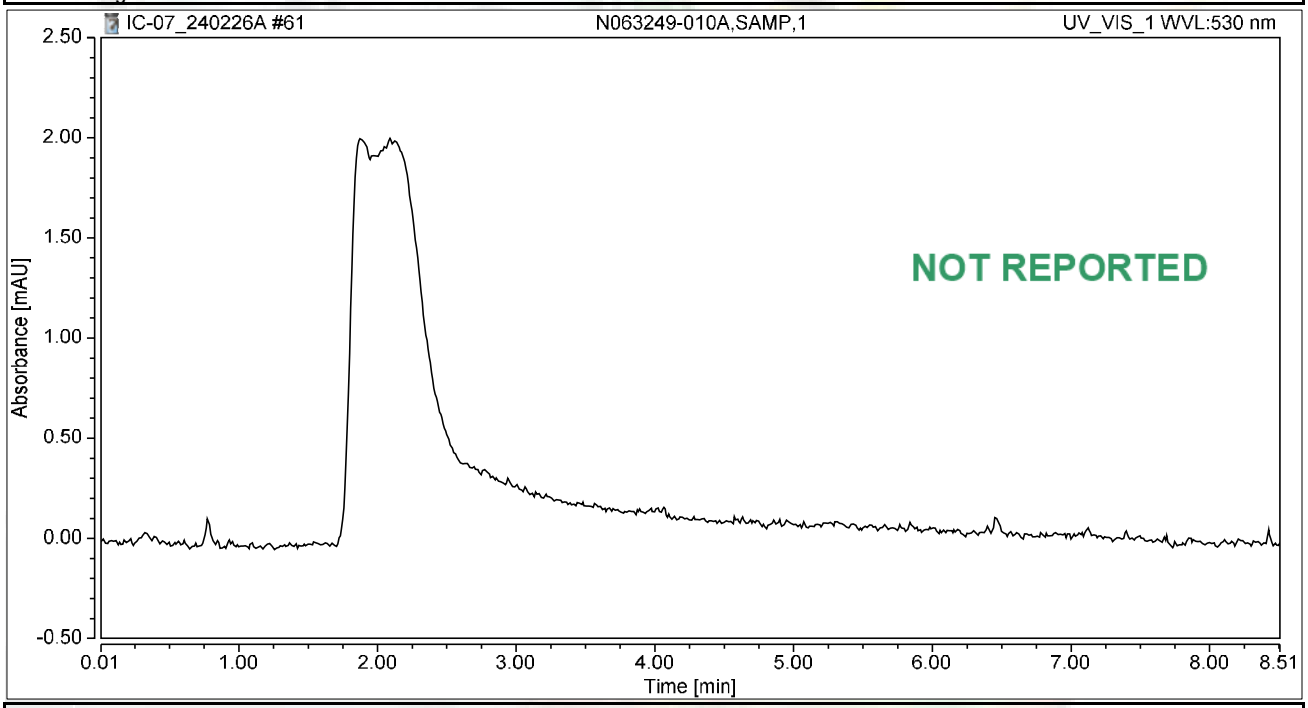
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-010A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 20:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

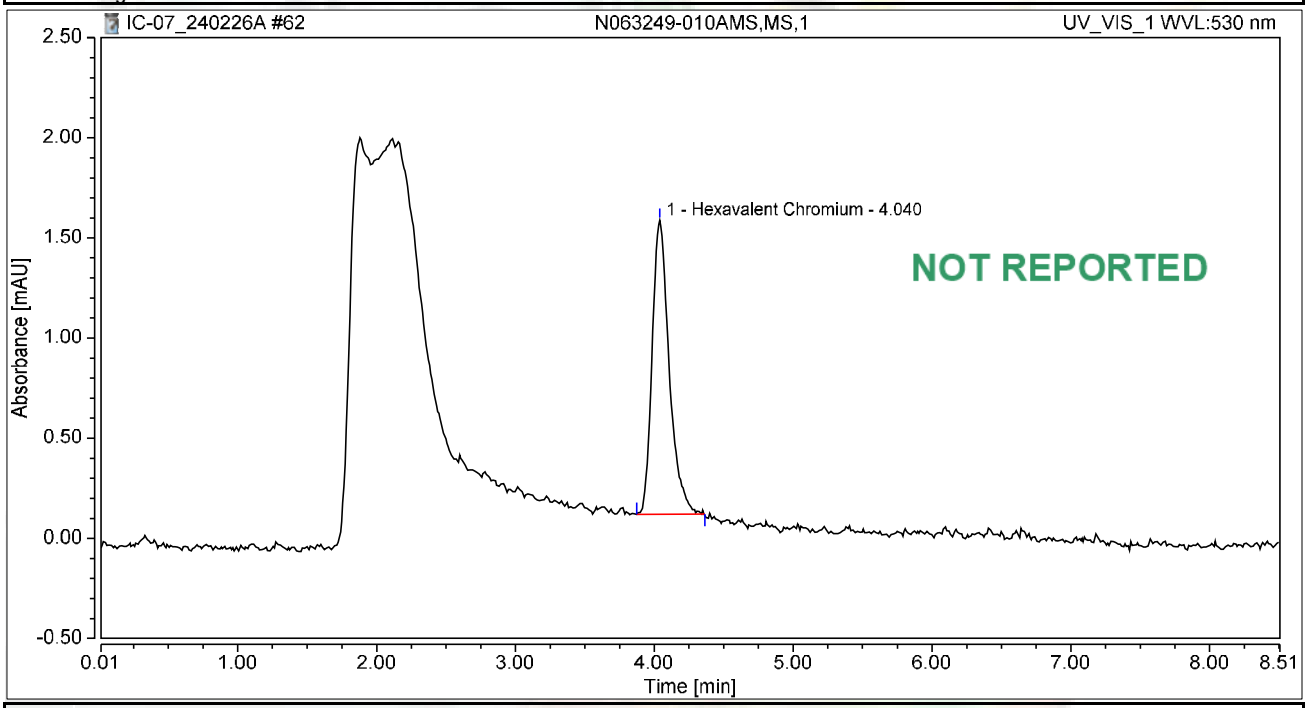
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-010AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 20:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

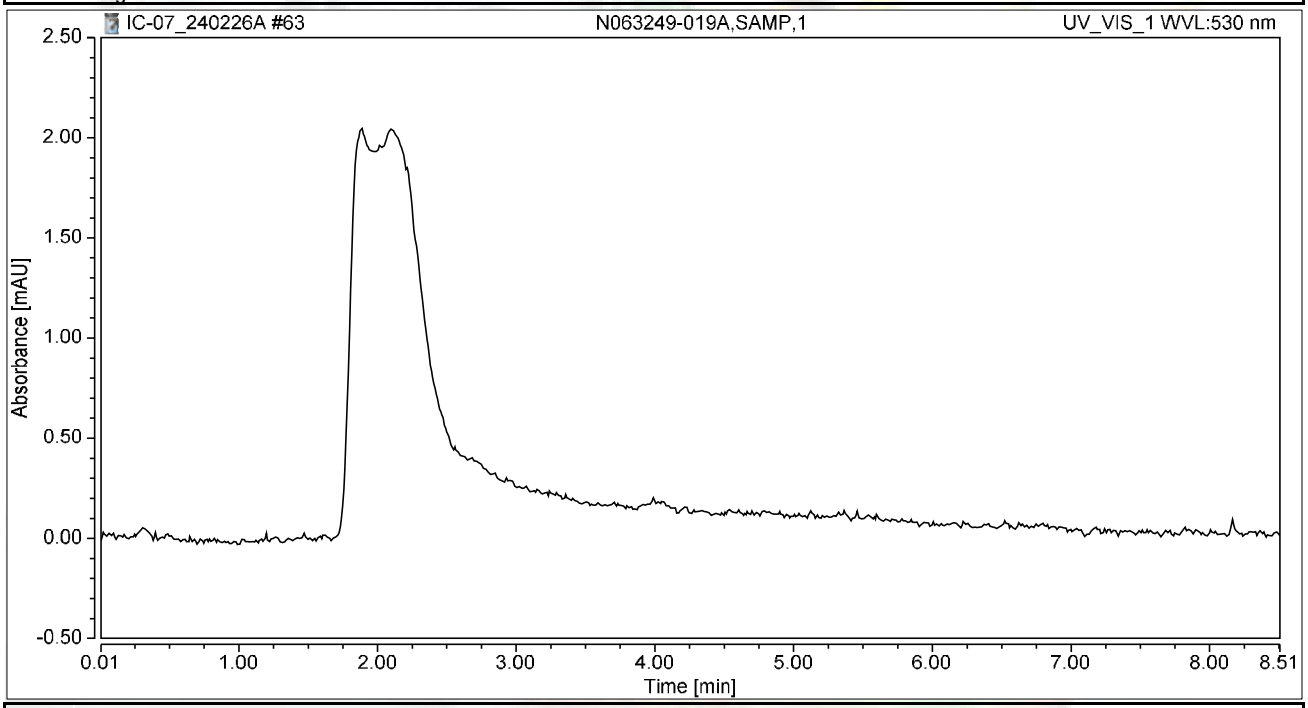
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.210	1.468	100.00	100.00	0.9750
Total:			**0.210**	**1.468**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-019A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 20:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

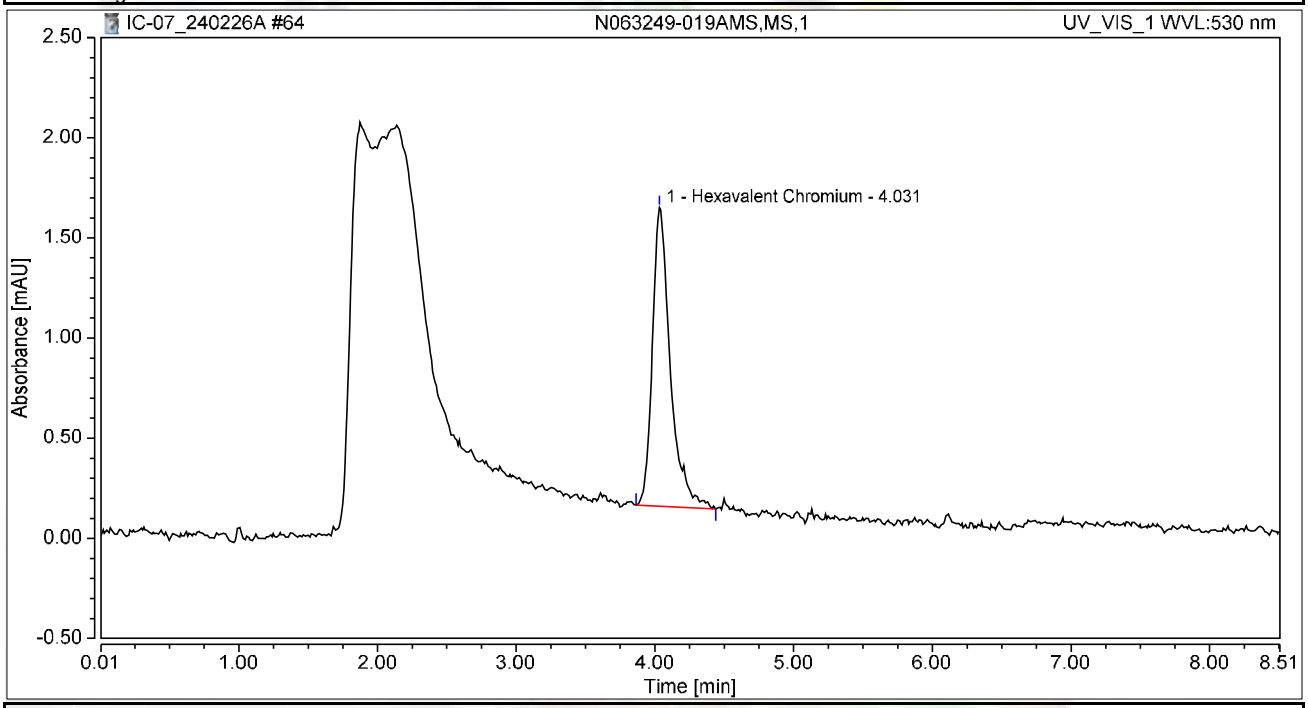
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-019AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 20:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

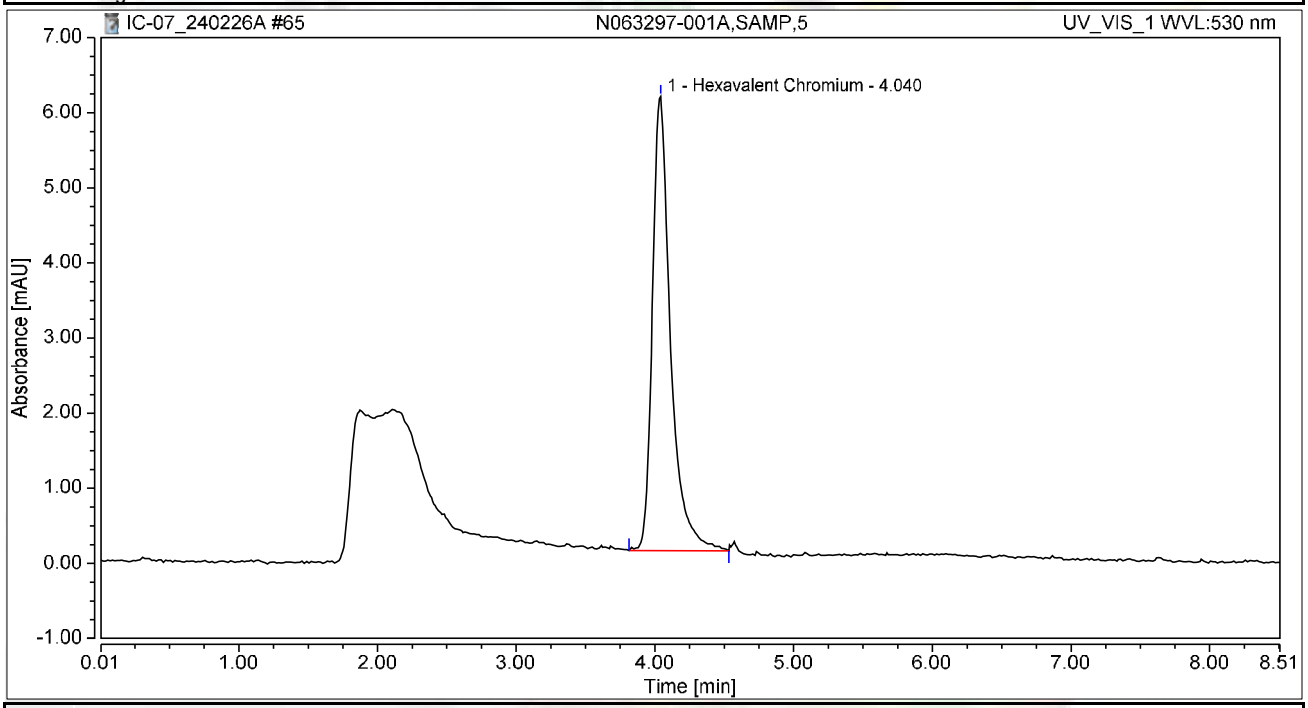
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.223	1.492	100.00	100.00	1.0345
Total:			**0.223**	**1.492**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 20:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

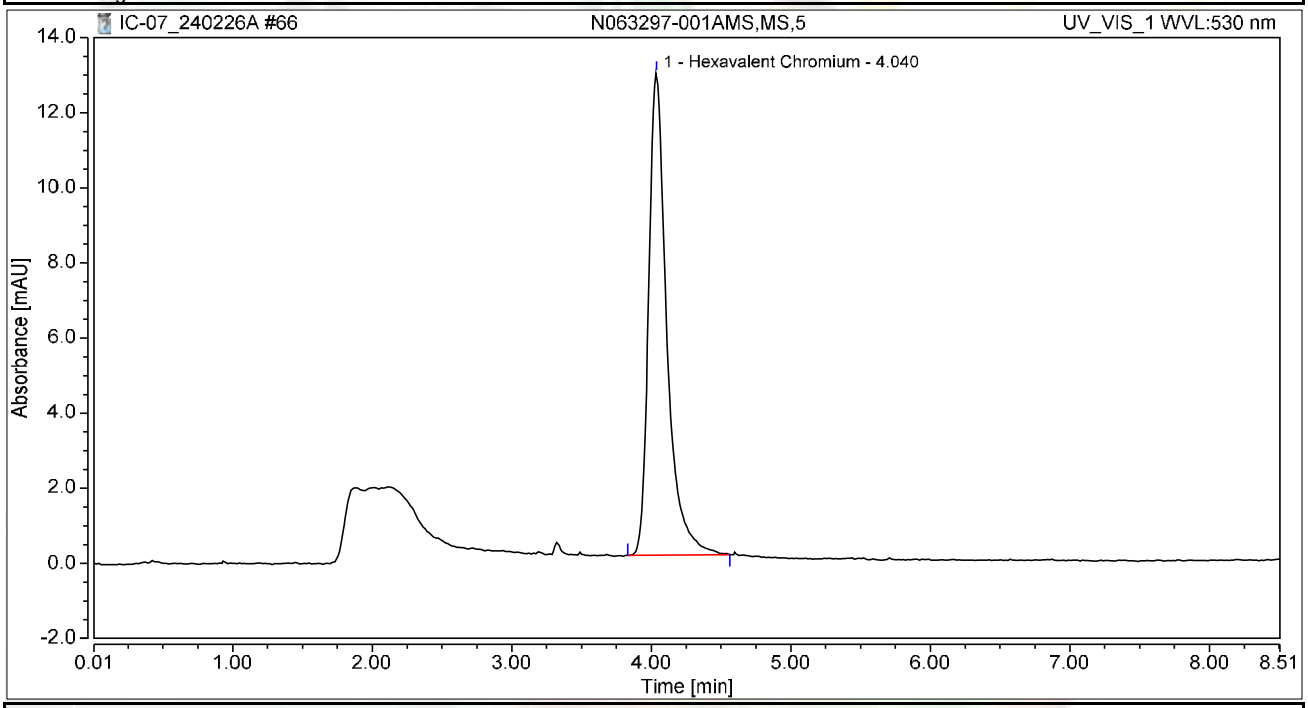
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.914	6.042	100.00	100.00	4.2497
Total:			**0.914**	**6.042**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 21:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

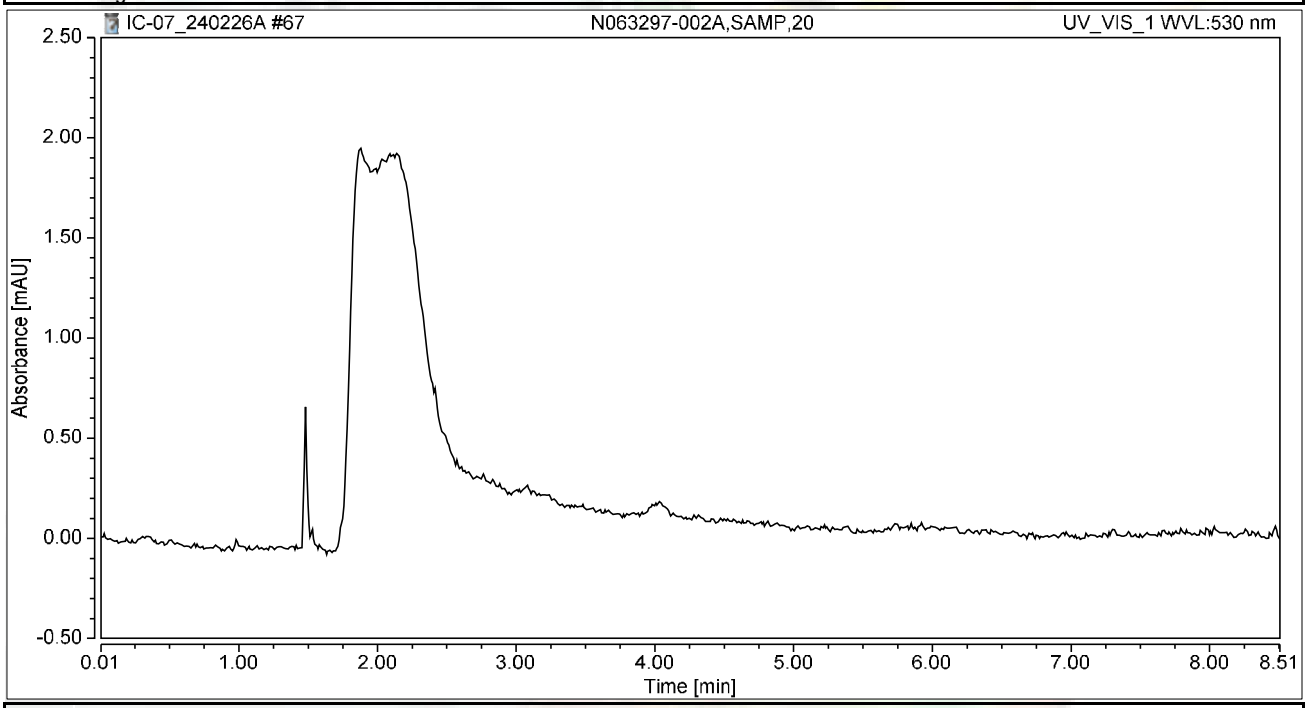
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.937	12.842	100.00	100.00	9.0067
Total:			**1.937**	**12.842**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-002A,SAMP,20**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 21:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

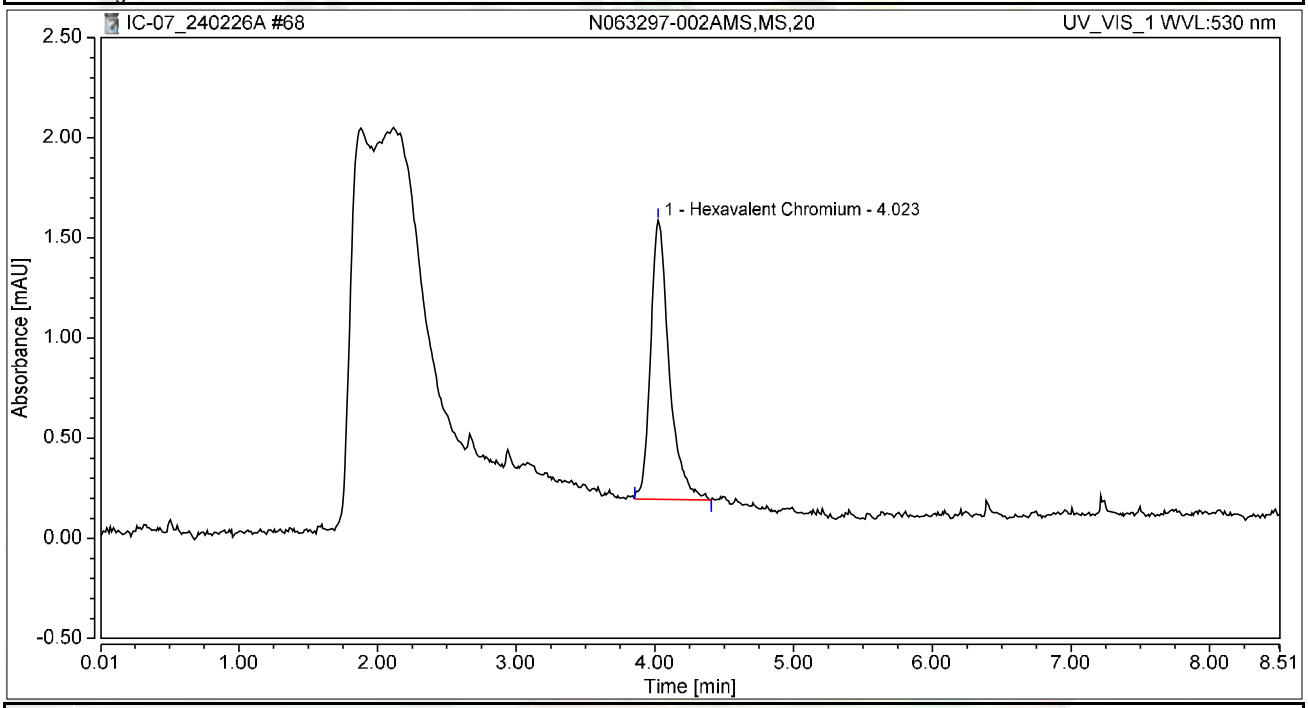
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-002AMS,MS,20**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 21:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

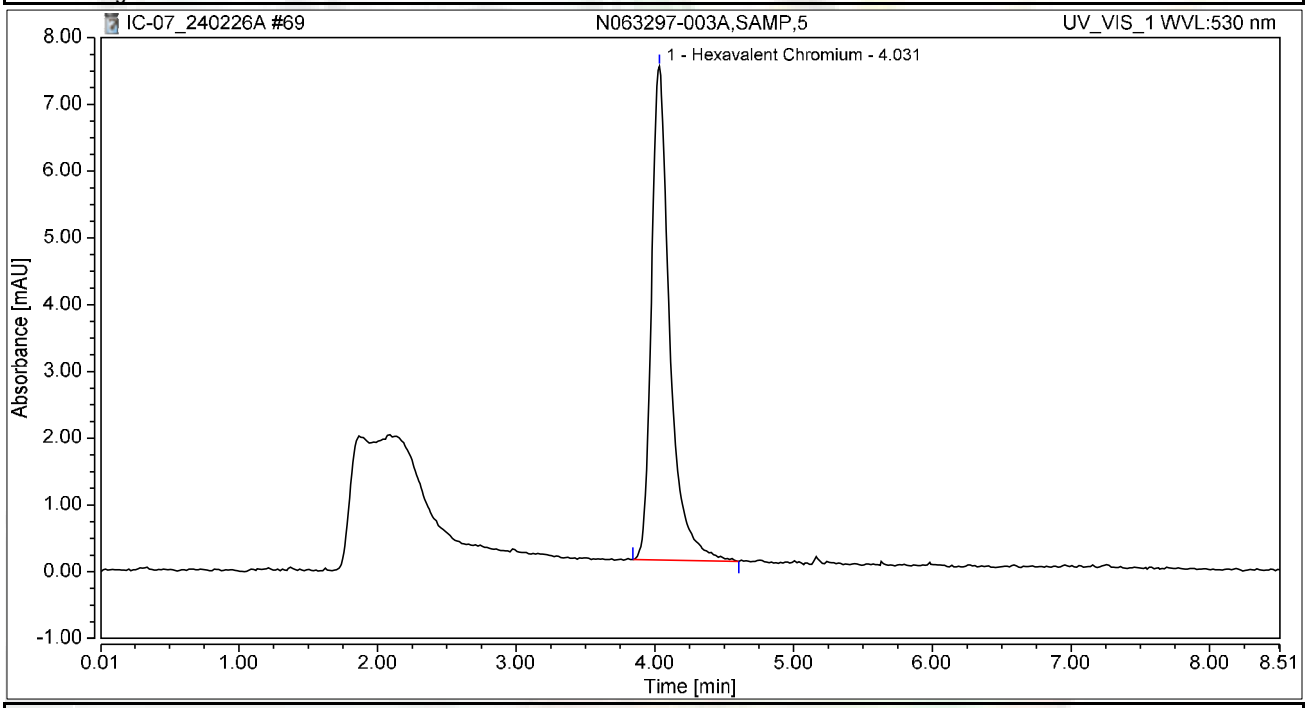
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.216	1.392	100.00	100.00	1.0027
Total:			**0.216**	**1.392**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 21:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

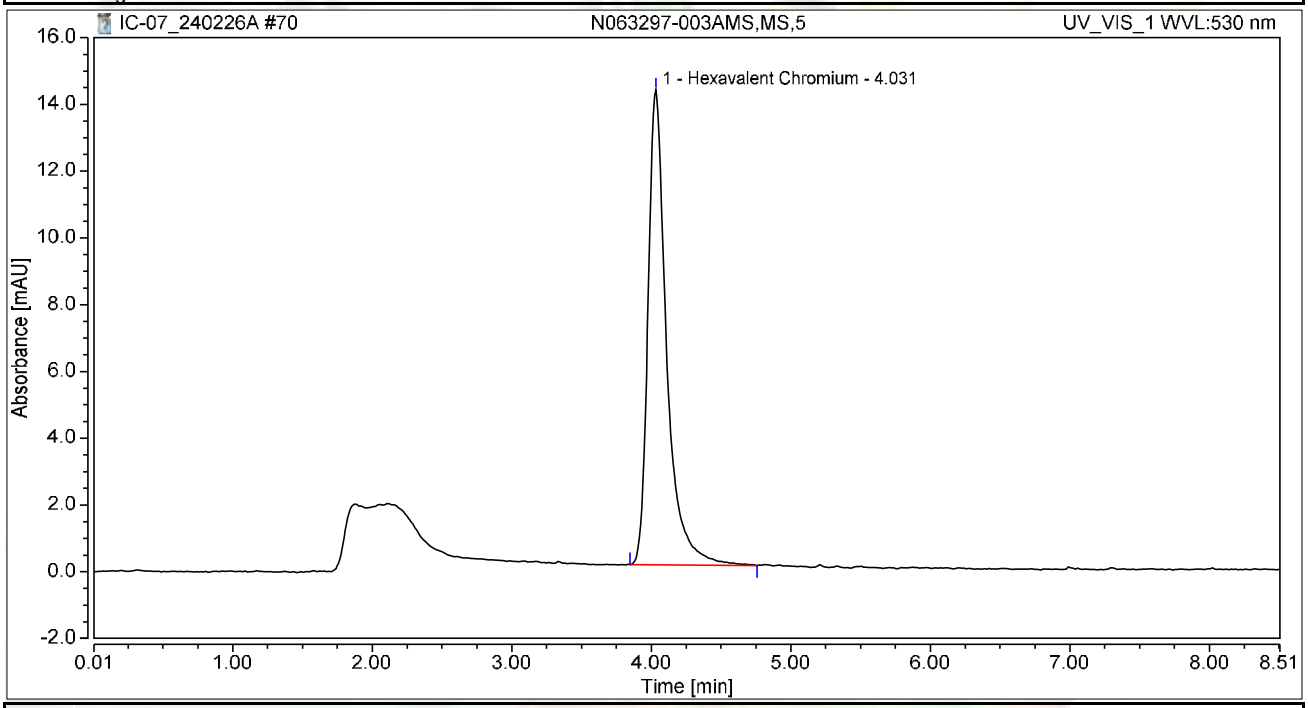
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	1.137	7.392	100.00	100.00	5.2846
Total:			**1.137**	**7.392**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 21:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

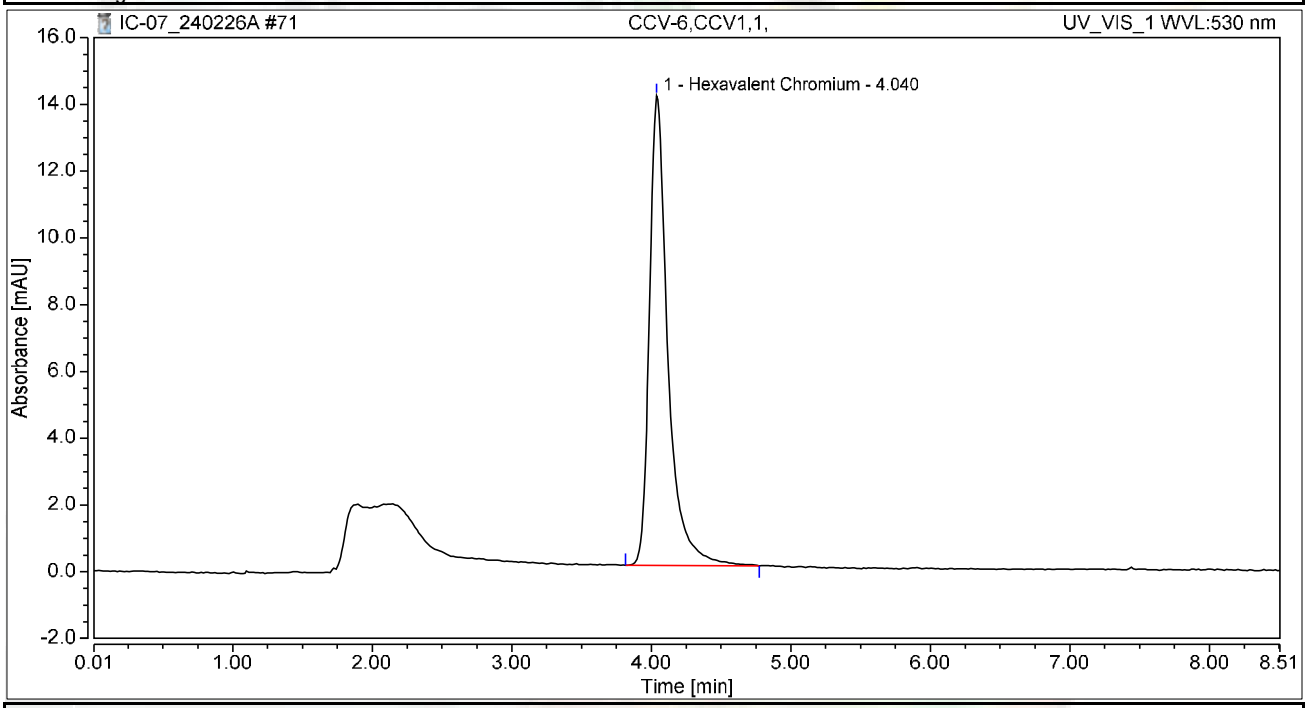
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	2.201	14.235	100.00	100.00	10.2317
Total:			**2.201**	**14.235**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 21:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

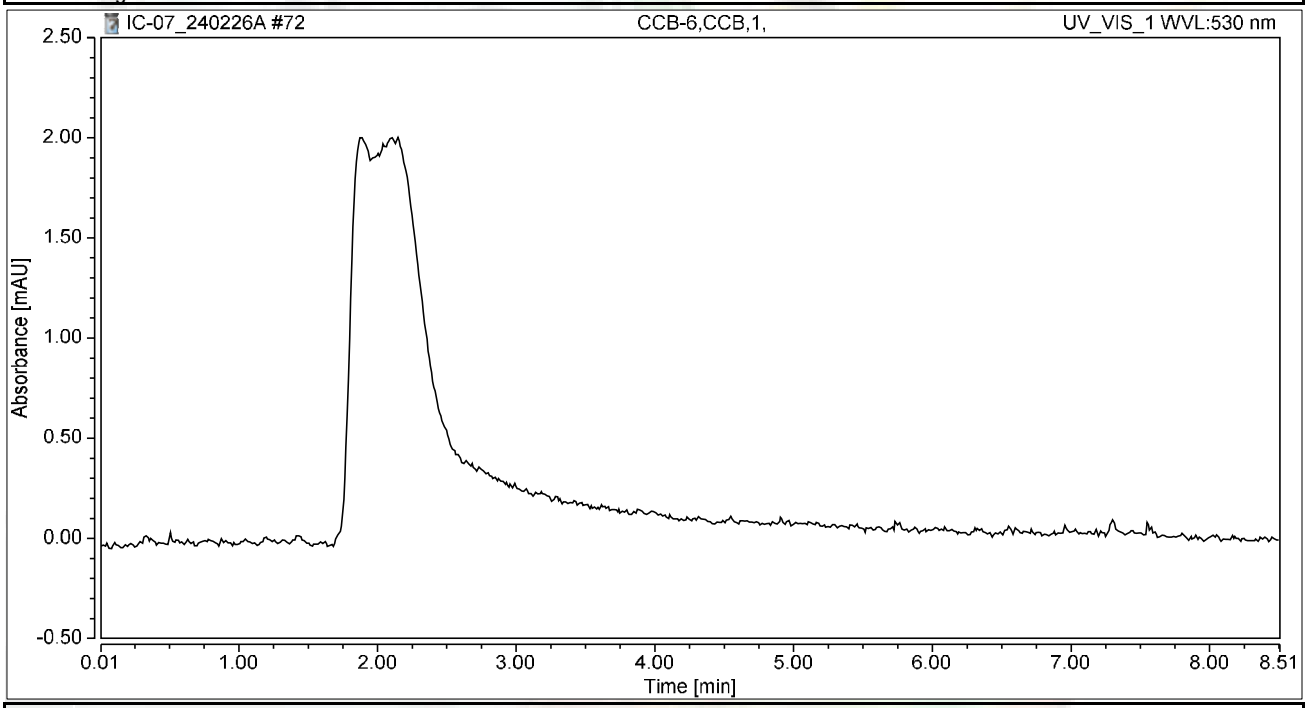
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.165	14.074	100.00	100.00	10.0661
Total:			**2.165**	**14.074**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 21:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

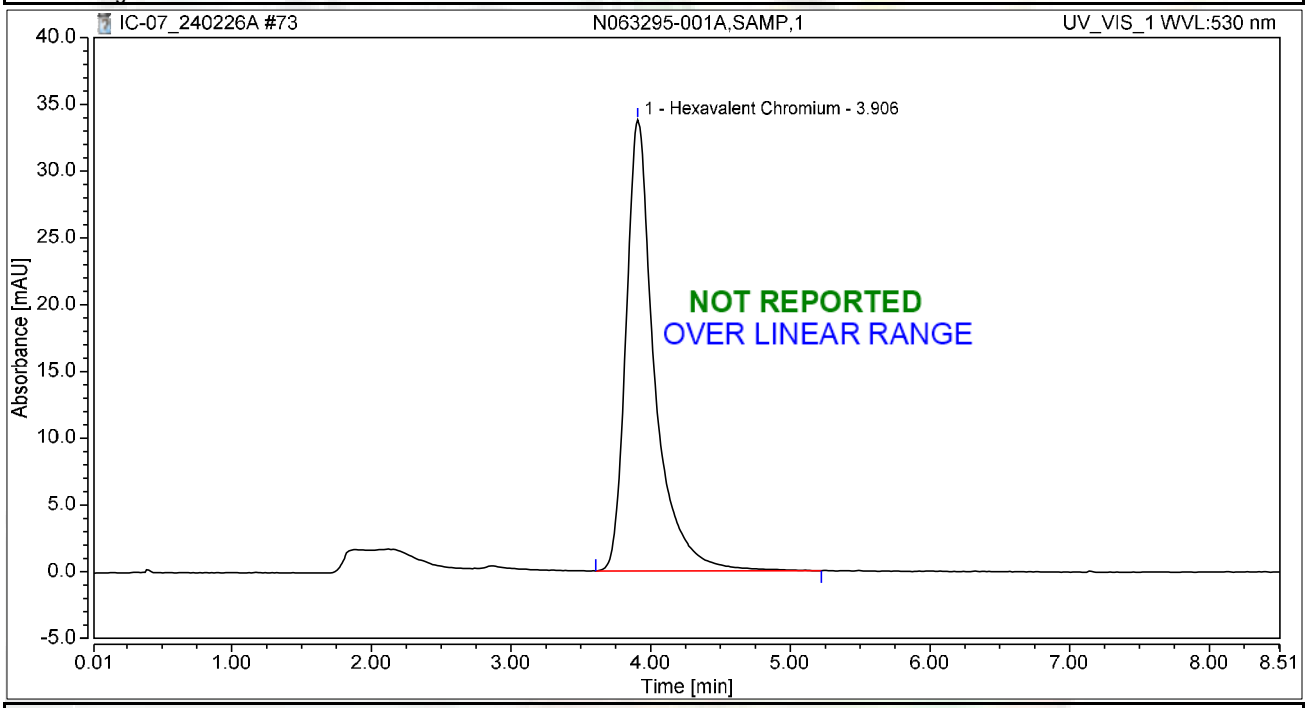
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-001A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 22:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

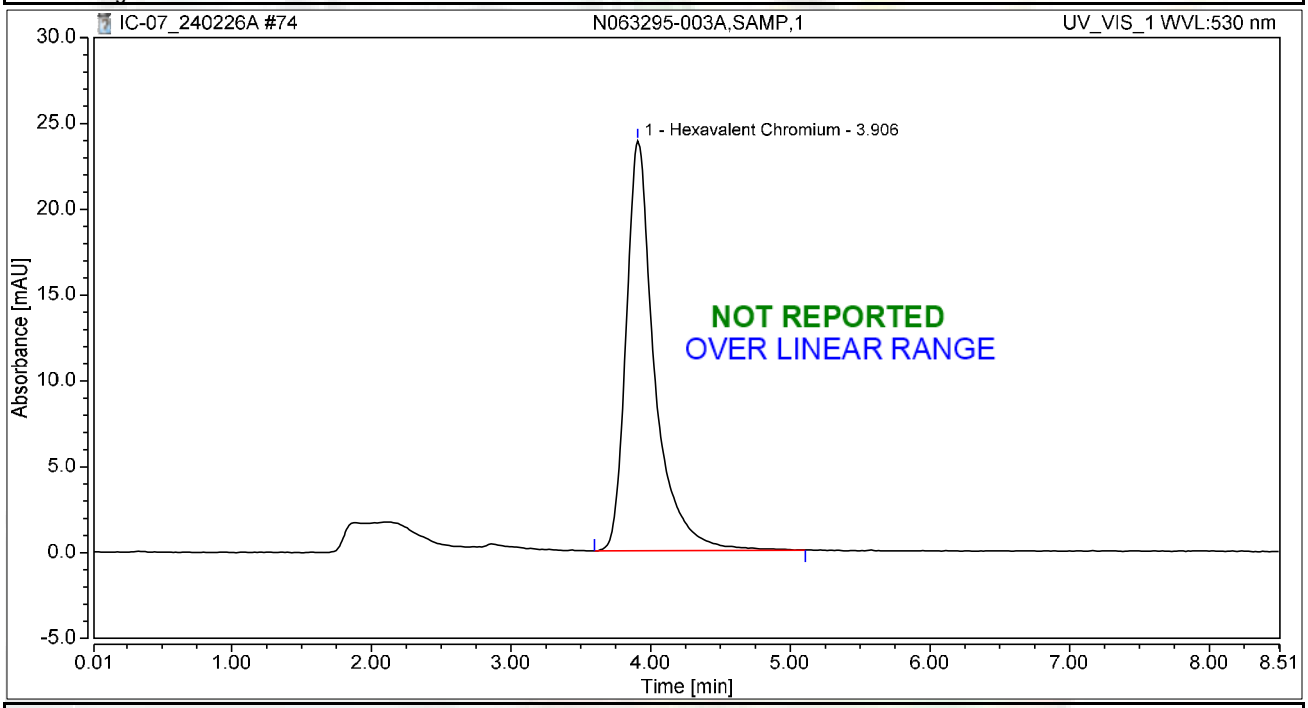
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.906	7.987	33.781	100.00	100.00	37.1333
Total:			**7.987**	**33.781**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 22:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

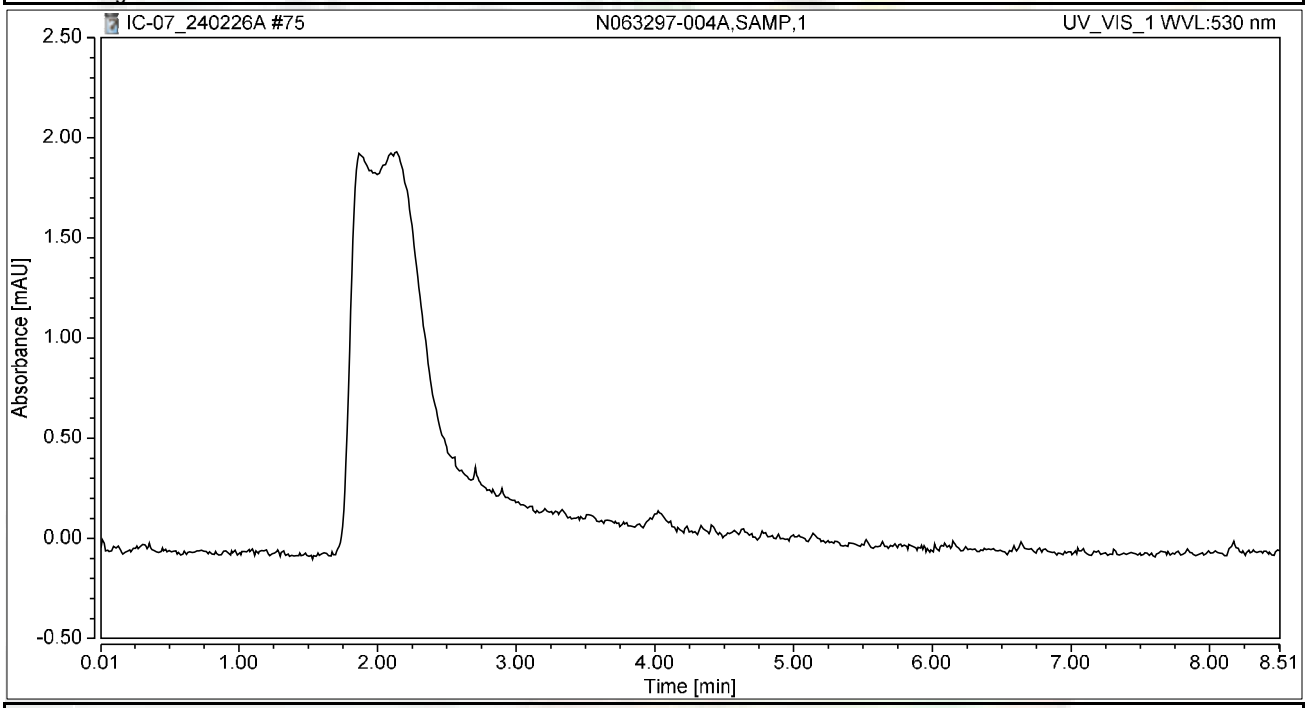
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.906	5.632	23.868	100.00	100.00	26.1840
Total:			**5.632**	**23.868**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 22:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

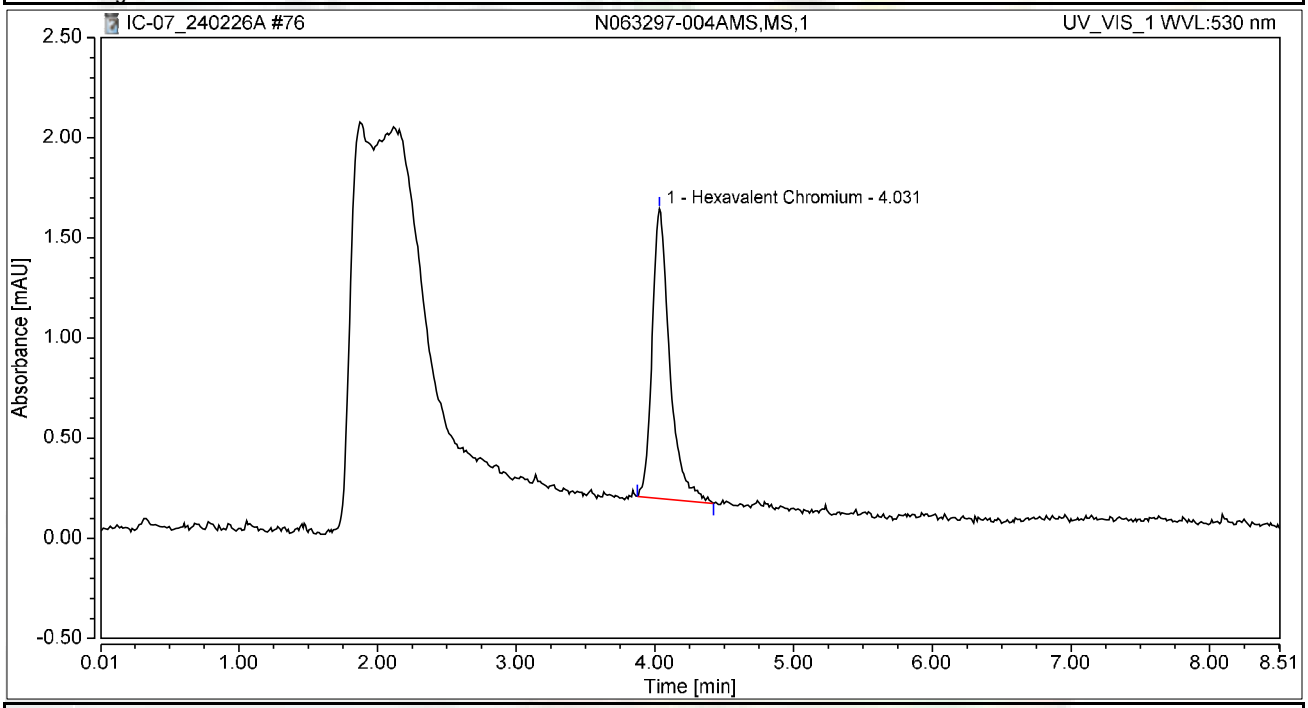
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 22:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

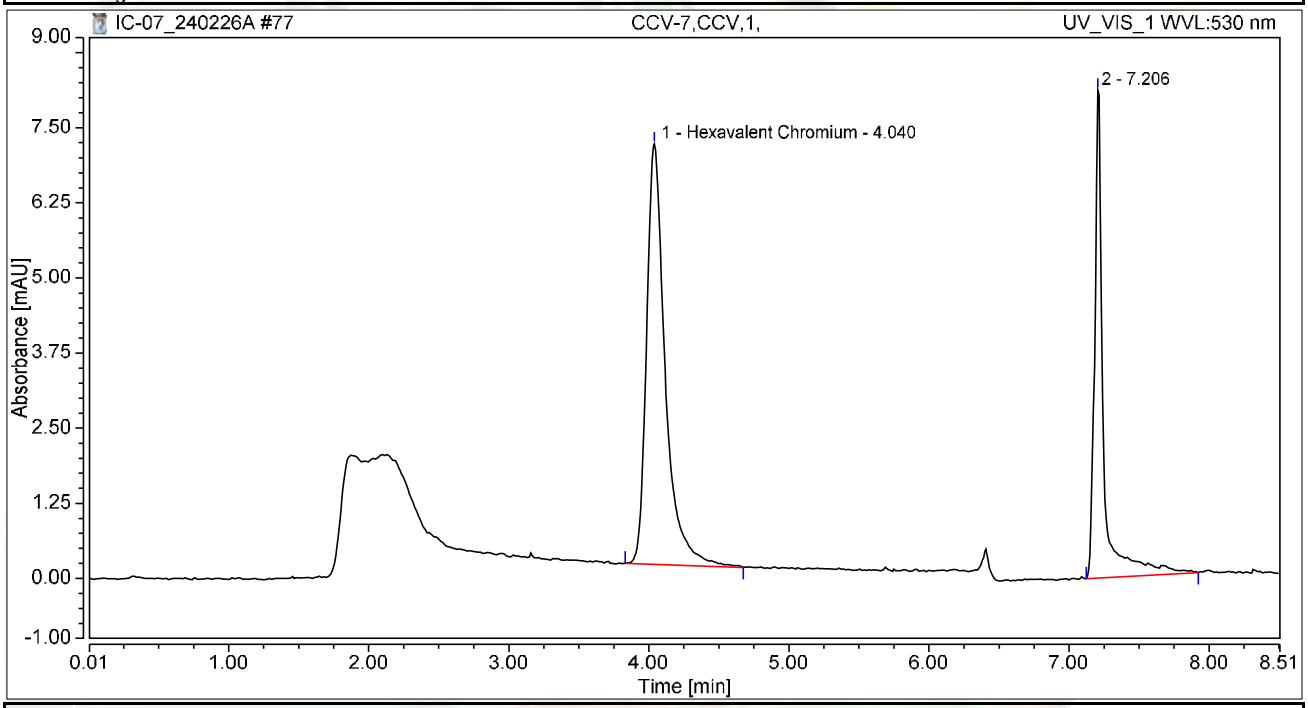
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.213	1.447	100.00	100.00	0.9887
Total:			**0.213**	**1.447**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 22:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

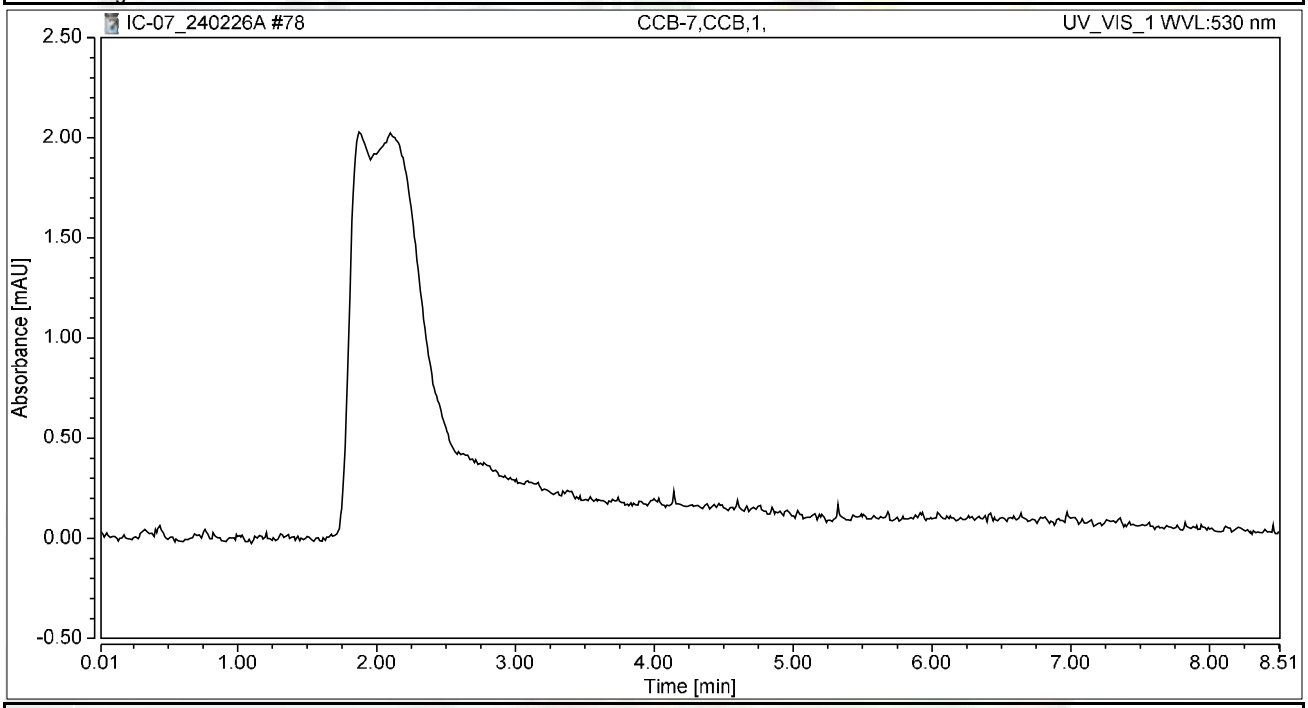
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.077	6.999	64.62	46.28	5.0091
2		7.206	0.590	8.124	35.38	53.72	n.a.
Total:			**1.667**	**15.123**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**44**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 22:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

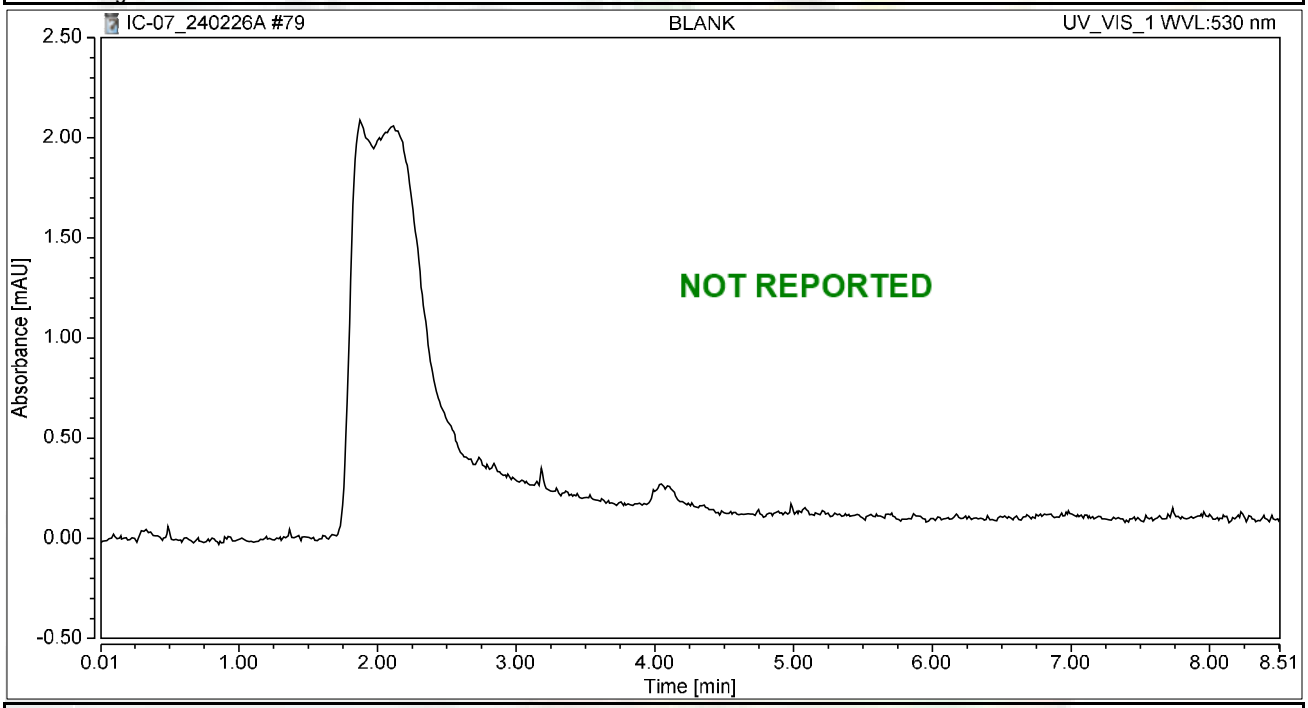
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**45**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 23:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

JRB 2/29/2024

RAW DATA

INJECTION LOG: 240229A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/29/24 10:06 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/29/24 10:19 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/29/24 10:29 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/29/24 10:38 AM	Reported
13	MB-R183037	MBLK	1	Hexavalent Chromium	02/29/24 10:48 AM	Reported
14	LCS-R183037	LCS	1	Hexavalent Chromium	02/29/24 10:57 AM	Reported
15	N063053-007A	SAMP	20	Hexavalent Chromium	02/29/24 11:06 AM	Not Reported
16	N063353-007AMS	MS	20	Hexavalent Chromium	02/29/24 11:16 AM	Not Reported
17	N063406-001A	SAMP	1	Hexavalent Chromium	02/29/24 11:45 AM	Reported
18	N063406-002A	SAMP	1	Hexavalent Chromium	02/29/24 11:56 AM	Reported
19	N063214-005A	SAMP	5	Hexavalent Chromium	02/29/24 12:05 PM	Reported
20	N063214-005AMS	MS	5	Hexavalent Chromium	02/29/24 12:15 PM	Reported
21	MB-107165	MBLK	1	Hexavalent Chromium	02/29/24 12:24 PM	Reported
22	N063407-001A	SAMP	1	Hexavalent Chromium	02/29/24 12:34 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/29/24 12:43 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/29/24 12:53 PM	Reported
25	N063407-001AREP	DUP	1	Hexavalent Chromium	02/29/24 1:02 PM	Reported
26	N063407-001AMS	MS	1	Hexavalent Chromium	02/29/24 1:12 PM	Reported
27	N063407-001AMSD	MSD	1	Hexavalent Chromium	02/29/24 1:21 PM	Reported
28	N063406-001AMS	MS	1	Hexavalent Chromium	02/29/24 1:30 PM	Reported
29	N063406-002AMS	MS	1	Hexavalent Chromium	02/29/24 1:40 PM	Reported
30	N063406-001A	SAMP	5	Hexavalent Chromium	02/29/24 1:49 PM	Not Reported
31	N063406-001AMS	MS	5	Hexavalent Chromium	02/29/24 1:59 PM	Not Reported
32	N063406-002A	SAMP	5	Hexavalent Chromium	02/29/24 2:08 PM	Not Reported
33	N063406-002AMS	MS	5	Hexavalent Chromium	02/29/24 2:18 PM	Not Reported
34	CCV-3	CCV	1	Hexavalent Chromium	02/29/24 2:27 PM	Reported
35	CCB-3	CCB	1	Hexavalent Chromium	02/29/24 2:37 PM	Reported
36	BLANK	BLANK	1	Hexavalent Chromium	02/29/24 2:46 PM	Not Reported

Reviewed by:

JRB 3/3/2024

Injection Log Summary

Sequence Details

Name:	**IC-07_240229A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**29/Feb/24 15:16:52**
No. of Injections:	**39**	*Updated By:*	**ics 5000**

Injection Details

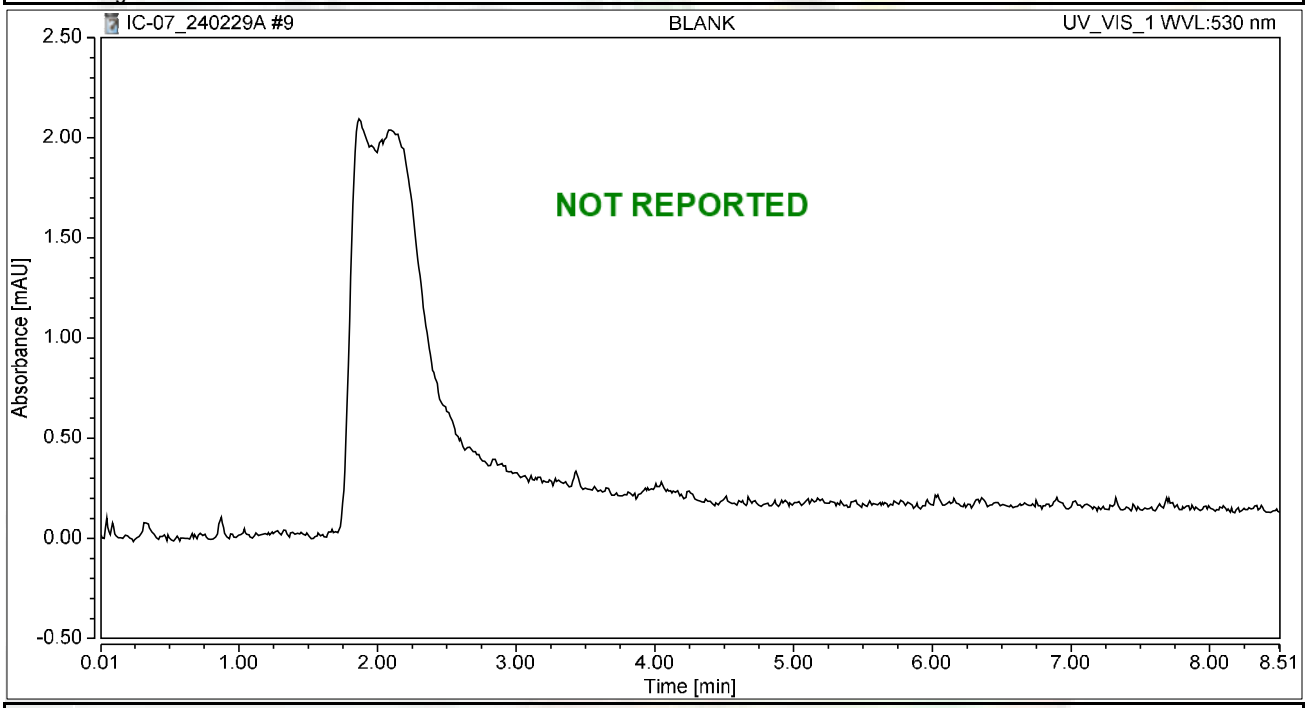
No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/29/2024 10:06	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/29/2024 10:19	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/29/2024 10:29	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/29/2024 10:38	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/29/2024 10:48	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/29/2024 10:57	Finished	LCS @5ppb, IWST-231228B
15	N063053-007A,SAMP	7	1000	Unknown		02/29/2024 11:06	Finished	SAMP,0.5>10 mL
16	N063353-007AMS,MS	8	1000	Unknown		02/29/2024 11:16	Finished	MS (5ppb), IWST-231228B,0.5
17	N063406-001A,SAMP	1	1000	Unknown		02/29/2024 11:45	Finished	SAMP,10 mL
18	N063406-002A,SAMP	2	1000	Unknown		02/29/2024 11:56	Finished	SAMP,10 mL
19	N063214-005A,SAMP	3	1000	Unknown		02/29/2024 12:05	Finished	SAMP,2>10 mL
20	N063214-005AMS,MS	4	1000	Unknown		02/29/2024 12:15	Finished	MS (1ppb), IWST-231228B,2>1
21	MB-107165,MBLK,1	5	1000	Unknown		02/29/2024 12:24	Finished	MB TCLP
22	N063407-001A,SAMP	6	1000	Unknown		02/29/2024 12:34	Finished	SAMP,10 mL
23	CCV-2,CCV1,1,	7	1000	Unknown		02/29/2024 12:43	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	8	1000	Unknown		02/29/2024 12:53	Finished	CCB R240129C
25	N063407-001AREP,D	9	1000	Unknown		02/29/2024 13:02	Finished	DUP,10 mL
26	N063407-001AMS,MS	10	1000	Unknown		02/29/2024 13:12	Finished	MS (1ppb), IWST-231228B,10r
27	N063407-001AMSD,M	11	1000	Unknown		02/29/2024 13:21	Finished	MSD (1ppb), IWST-231228B,1(
28	N063406-001AMS,MS	12	1000	Unknown		02/29/2024 13:30	Finished	MS (1ppb), IWST-231228B,10r
29	N063406-002AMS,MS	13	1000	Unknown		02/29/2024 13:40	Finished	MS (1ppb), IWST-231228B,10r
30	N063406-001A,SAMP	14	1000	Unknown		02/29/2024 13:49	Finished	SAMP,2>10 mL
31	N063406-001AMS,MS	15	1000	Unknown		02/29/2024 13:59	Finished	MS (1ppb), IWST-231228B,2>1
32	N063406-002A,SAMP	16	1000	Unknown		02/29/2024 14:08	Finished	SAMP,2>10 mL
33	N063406-002AMS,MS	17	1000	Unknown		02/29/2024 14:18	Finished	MS (1ppb), IWST-231228B,2>1
34	CCV-3,CCV,1,	18	1000	Unknown		02/29/2024 14:27	Finished	CCV @5ppb, IWST-231228A
35	CCB-3,CCB,1,	19	1000	Unknown		02/29/2024 14:37	Finished	CCB R240129C
36	BLANK	20	1000	Unknown		02/29/2024 14:46	Finished	BLANK
37	SHUTDOWN	21	1000	Unknown		02/29/2024 14:56	Finished	
38	Eluent: R240226A	22	1000	Unknown		n.a.	Finished	
39	PCR: R240226B	23	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 10:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

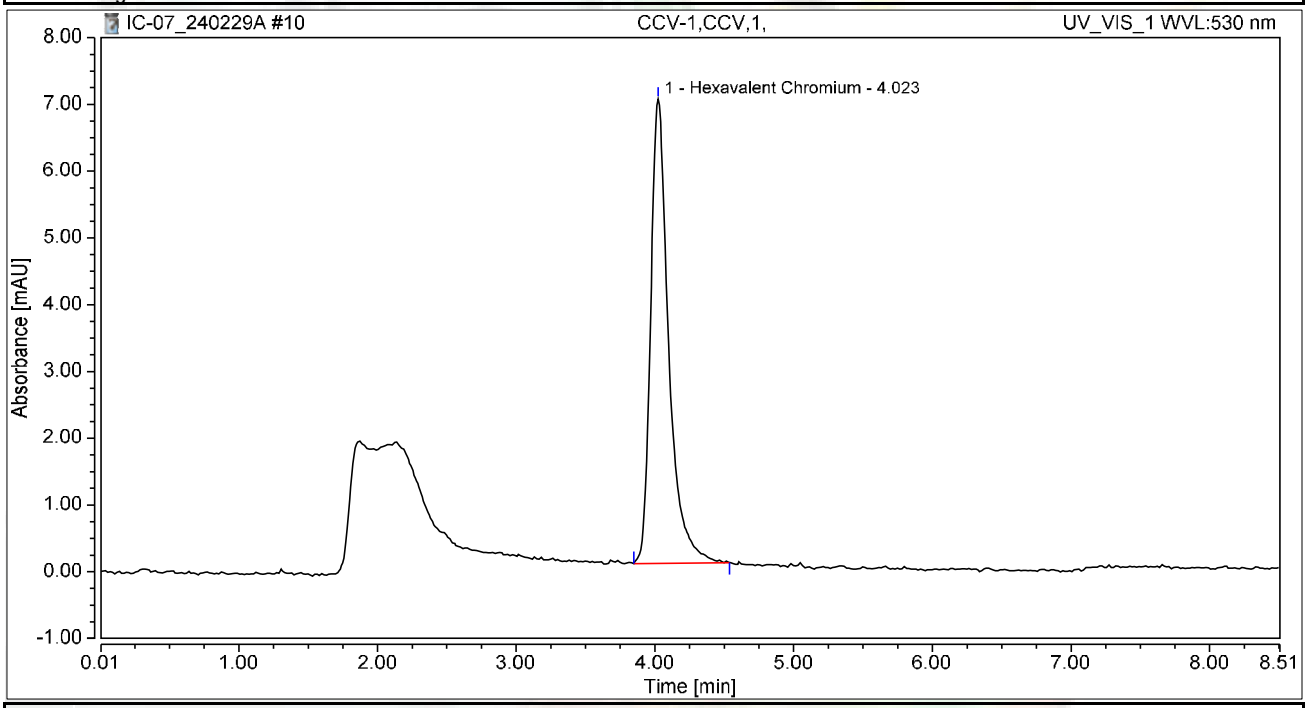
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 10:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	1.048	6.956	100.00	100.00	4.8707
Total:			**1.048**	**6.956**	**100.00**	**100.00**	

Reviewed by:

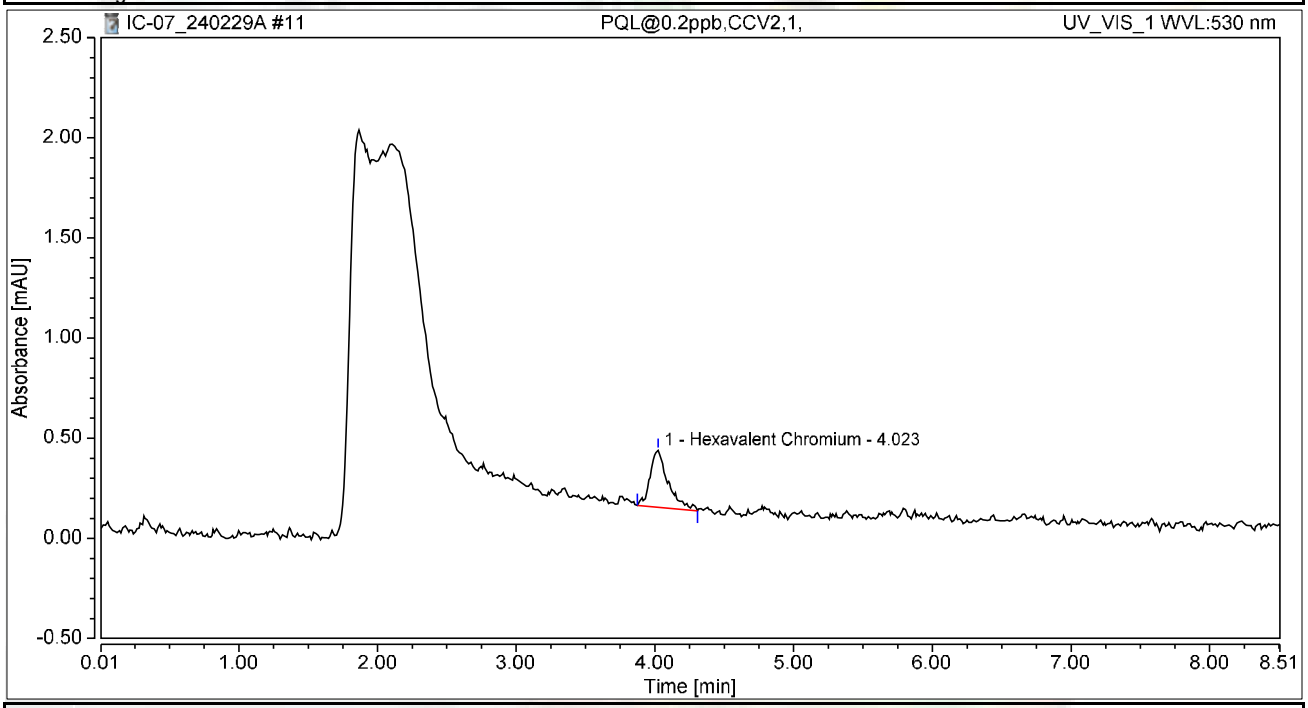
JRB 3/3/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 10:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

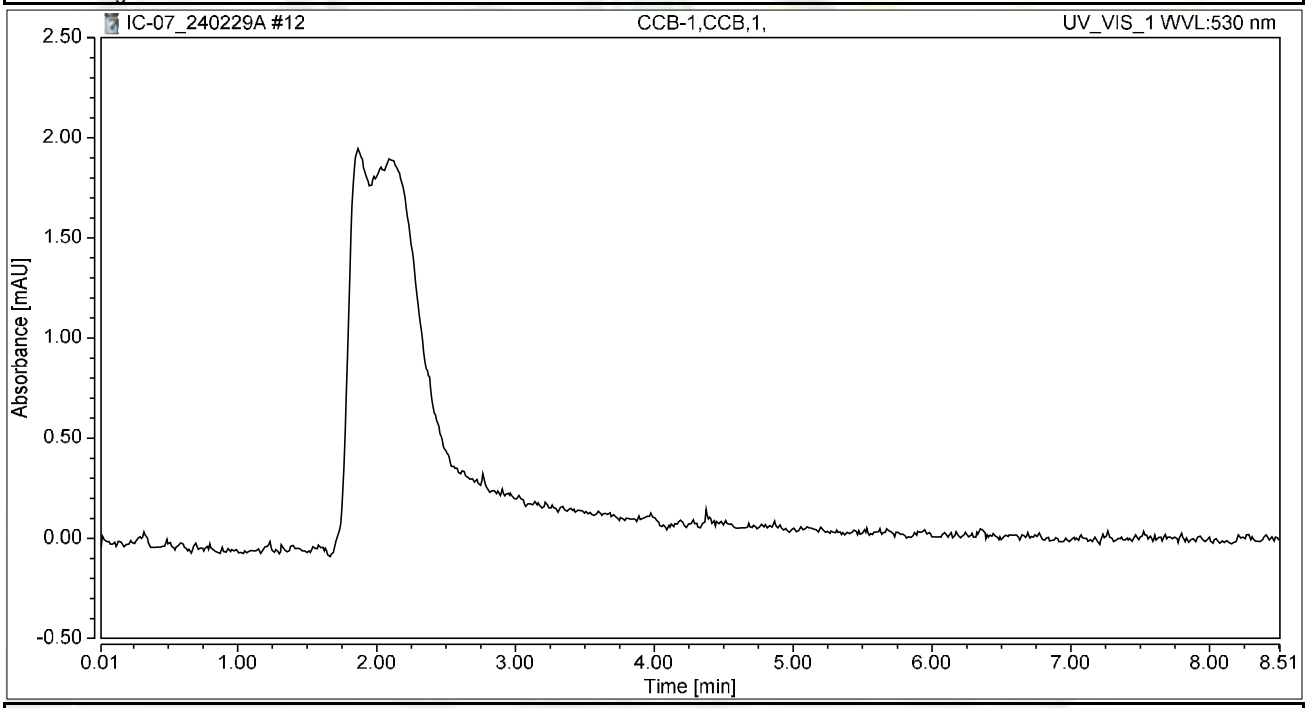
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.043	0.284	100.00	100.00	0.1987
Total:			**0.043**	**0.284**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 10:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

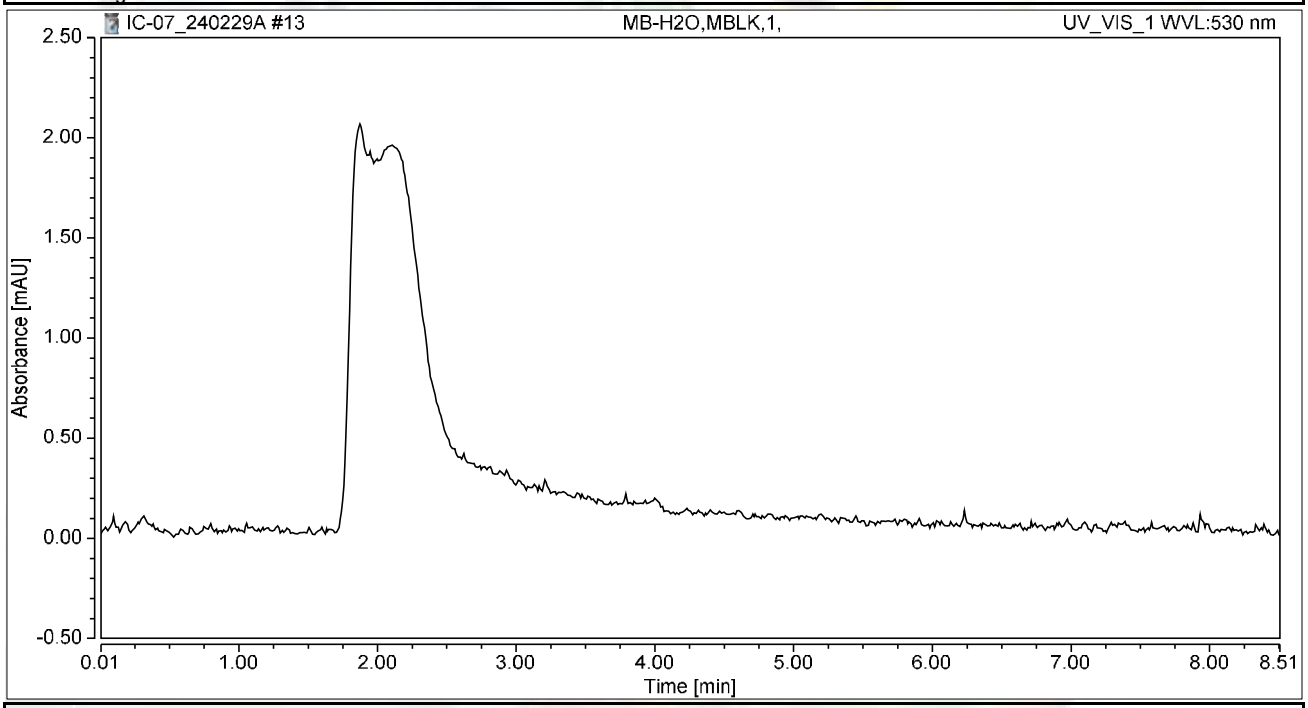
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 10:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

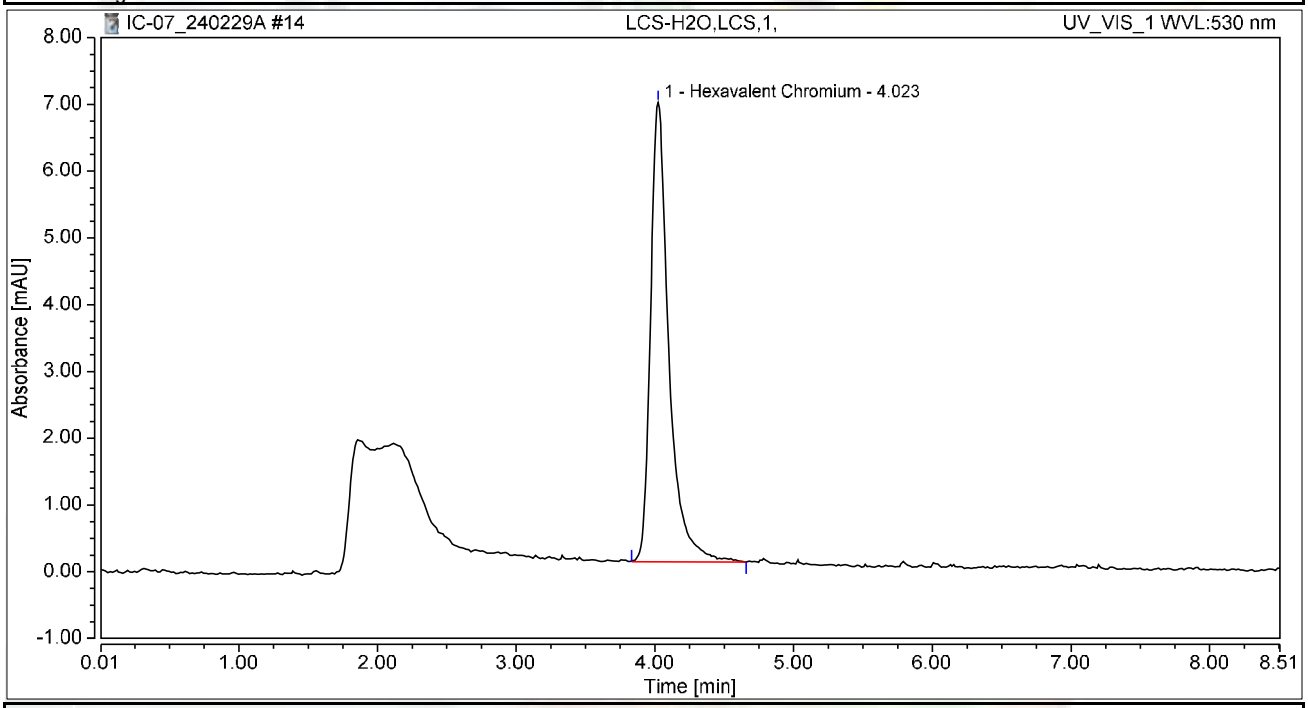
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 10:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

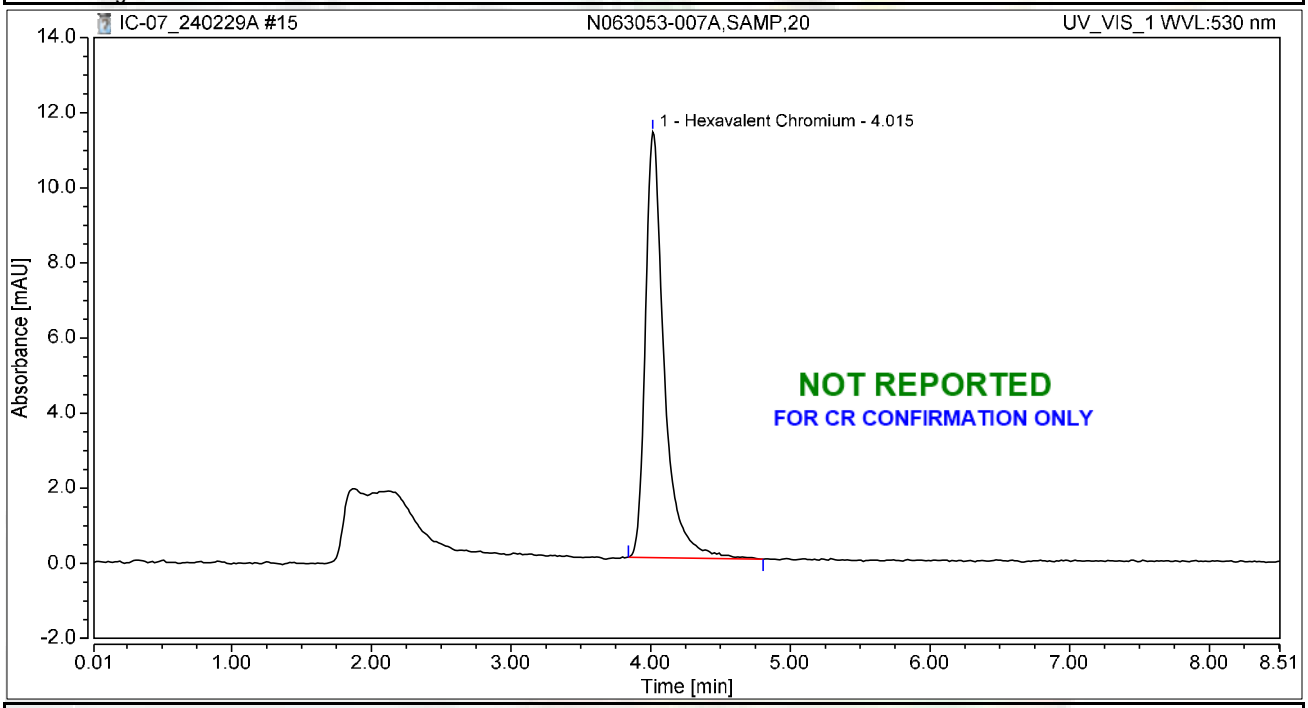
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	1.053	6.877	100.00	100.00	4.8944
Total:			**1.053**	**6.877**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063053-007A,SAMP,20**	*Run Time (min):*	**8.49**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 11:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

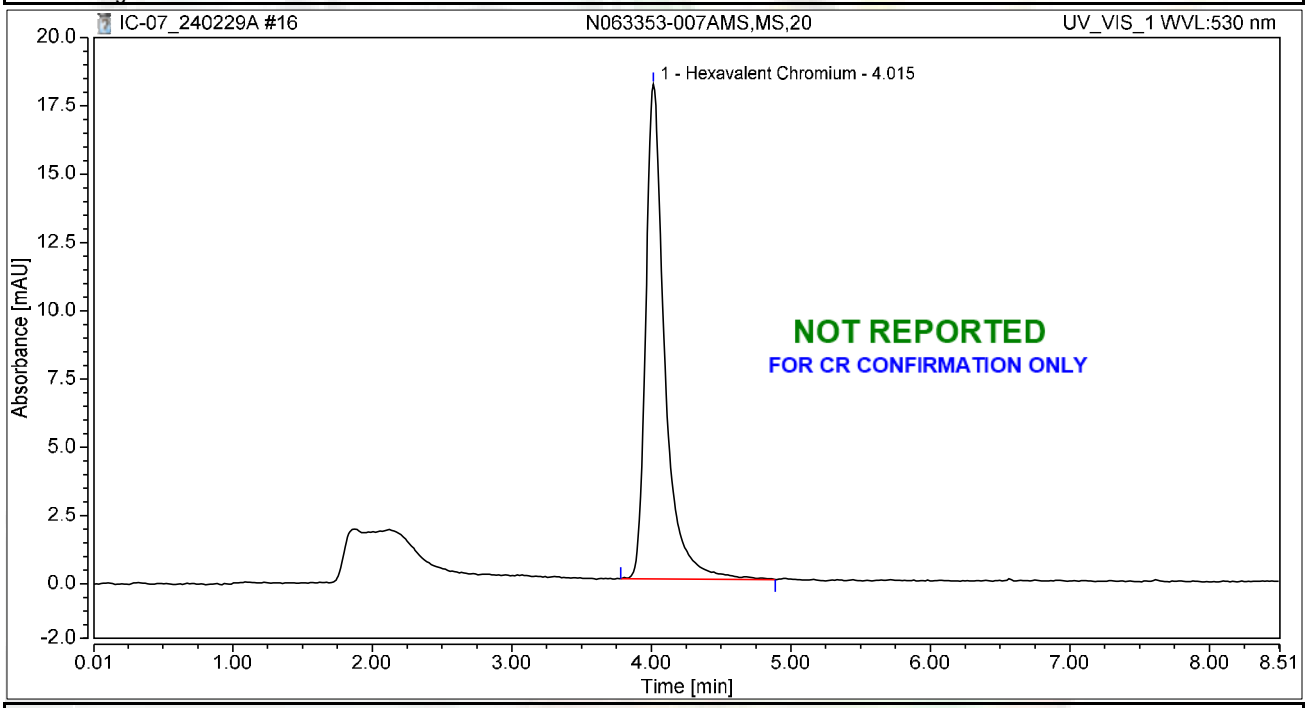
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.778	11.340	100.00	100.00	8.2674
Total:			**1.778**	**11.340**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063353-007AMS,MS,20**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 11:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

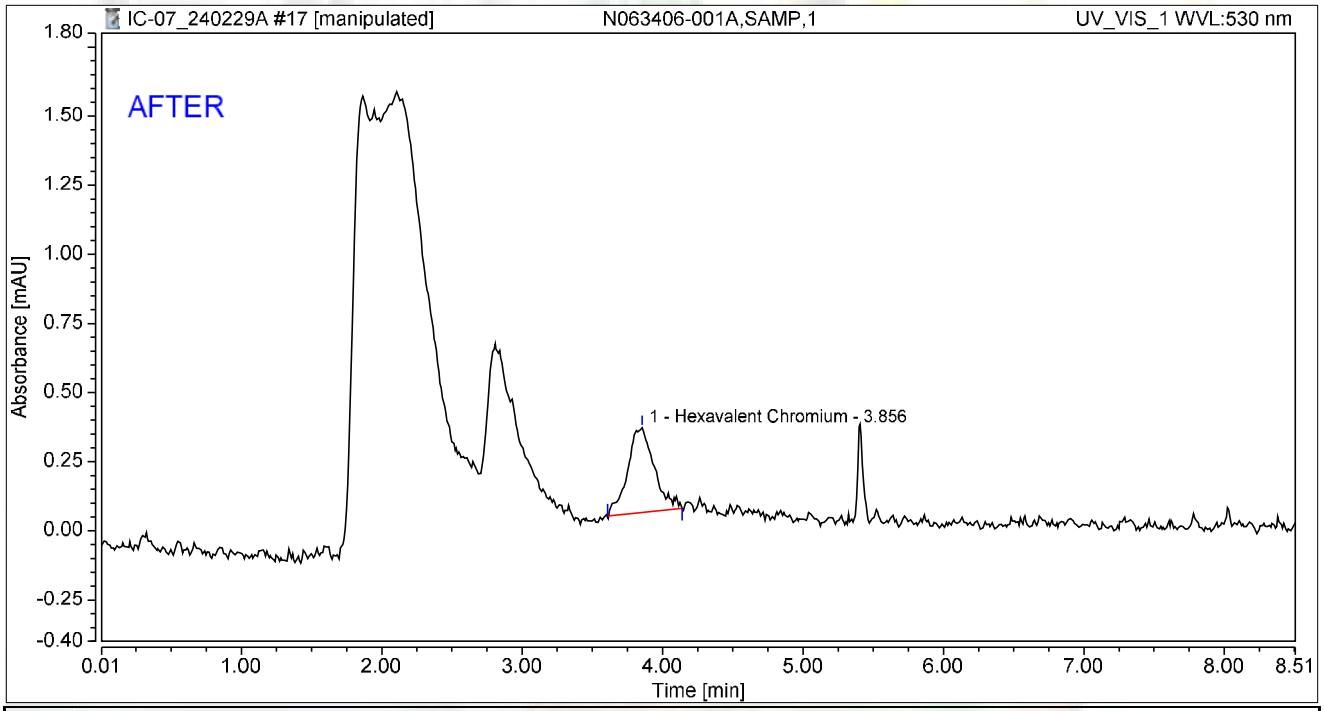
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	2.870	18.113	100.00	100.00	13.3436
Total:			**2.870**	**18.113**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063406-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 11:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.067	0.306	100.00	100.00	0.3134
Total:			**0.067**	**0.306**	**100.00**	**100.00**	

Reviewed by:

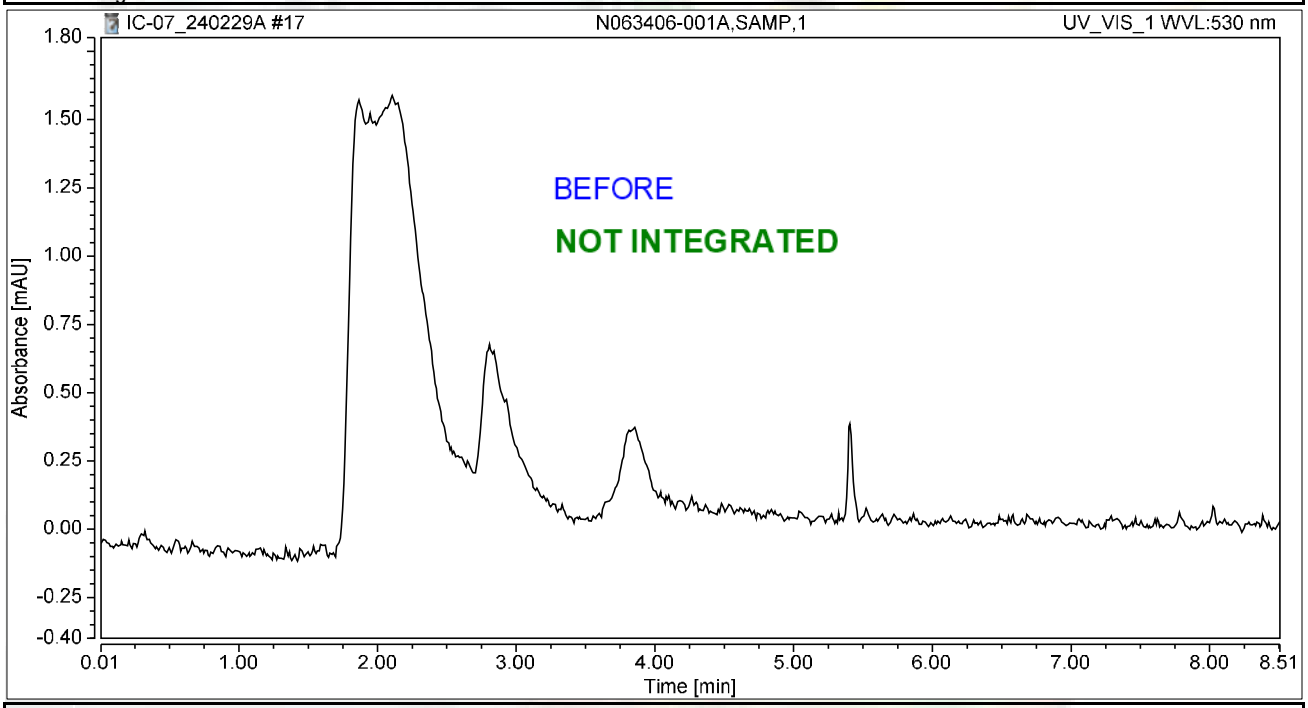
JRB 3/3/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063406-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 11:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

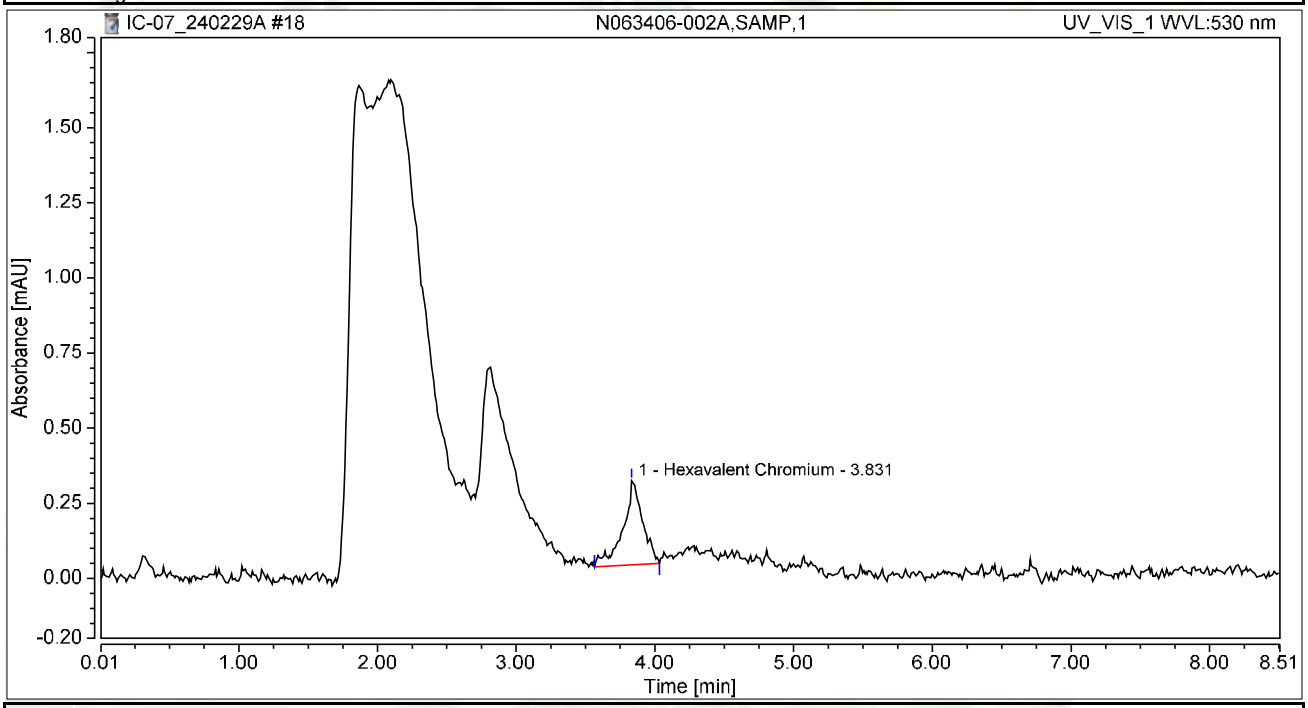
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063406-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 11:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

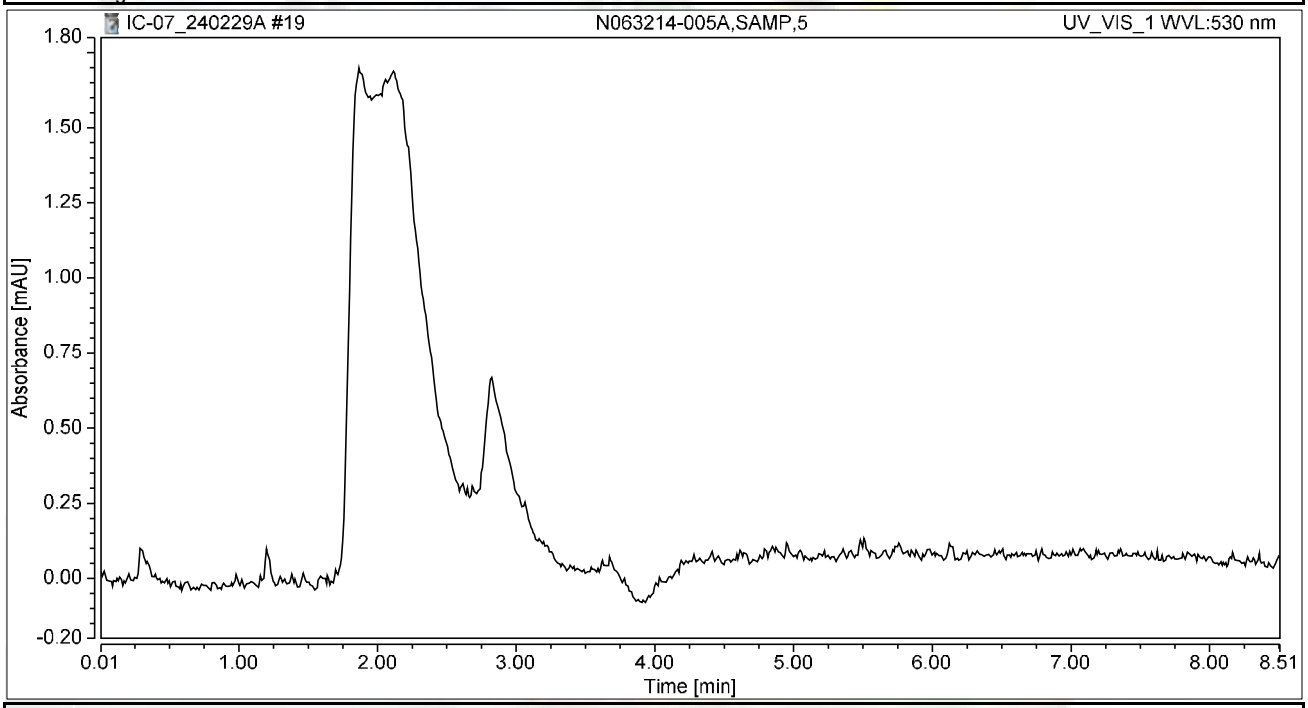
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.831	0.046	0.279	100.00	100.00	0.2130
Total:			**0.046**	**0.279**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 12:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

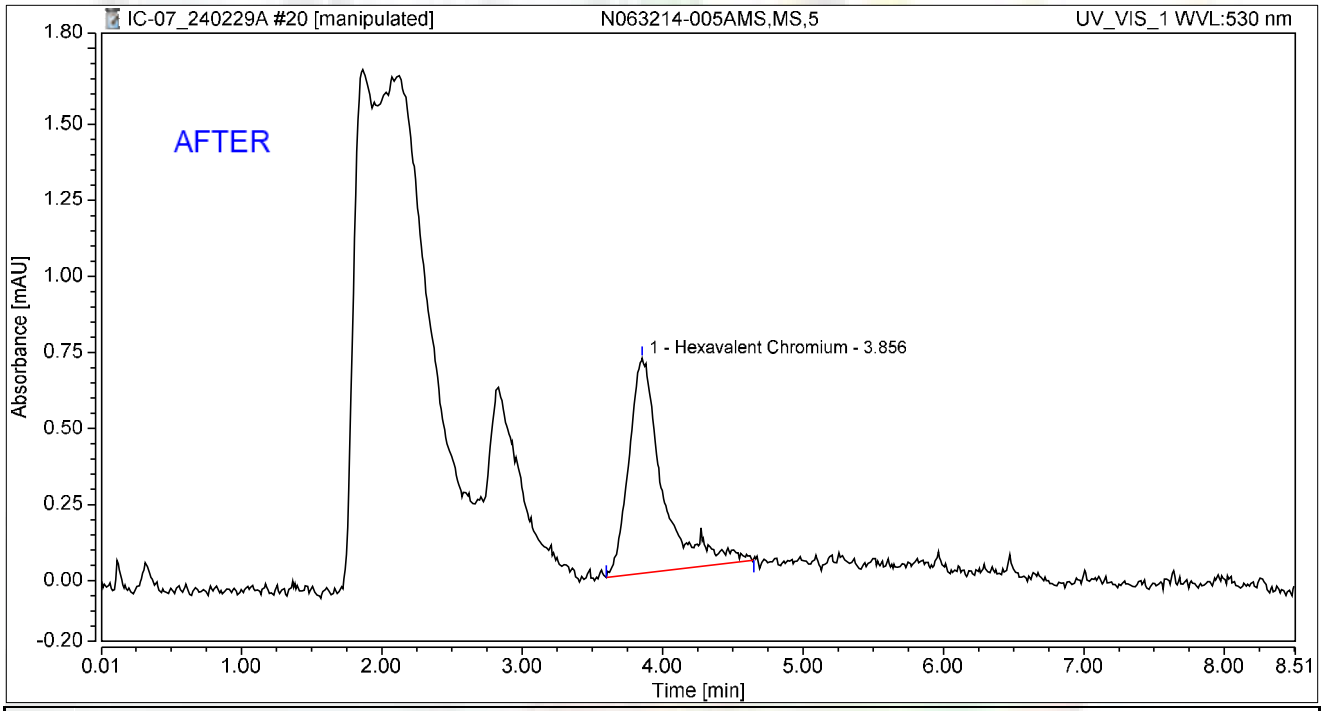
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-005AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 12:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.195	0.705	100.00	100.00	0.9071
Total:			**0.195**	**0.705**	**100.00**	**100.00**	

Reviewed by:

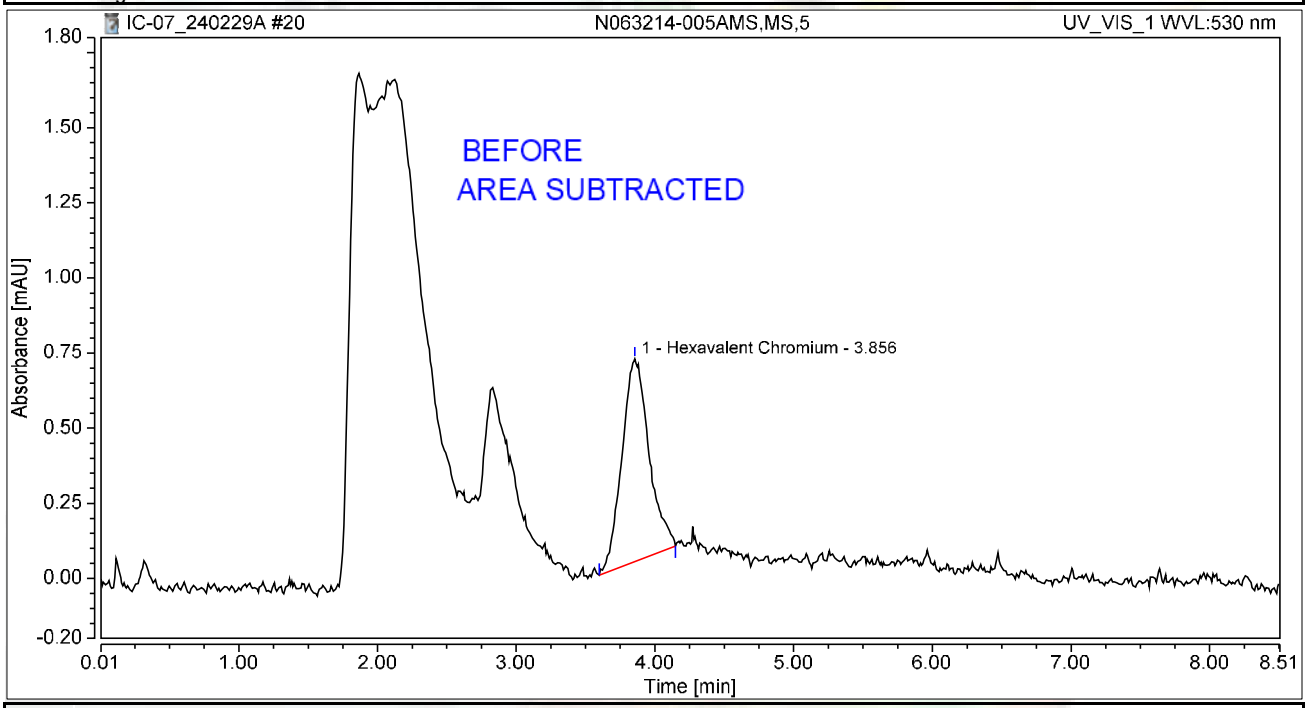
JRB 3/3/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063214-005AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 12:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

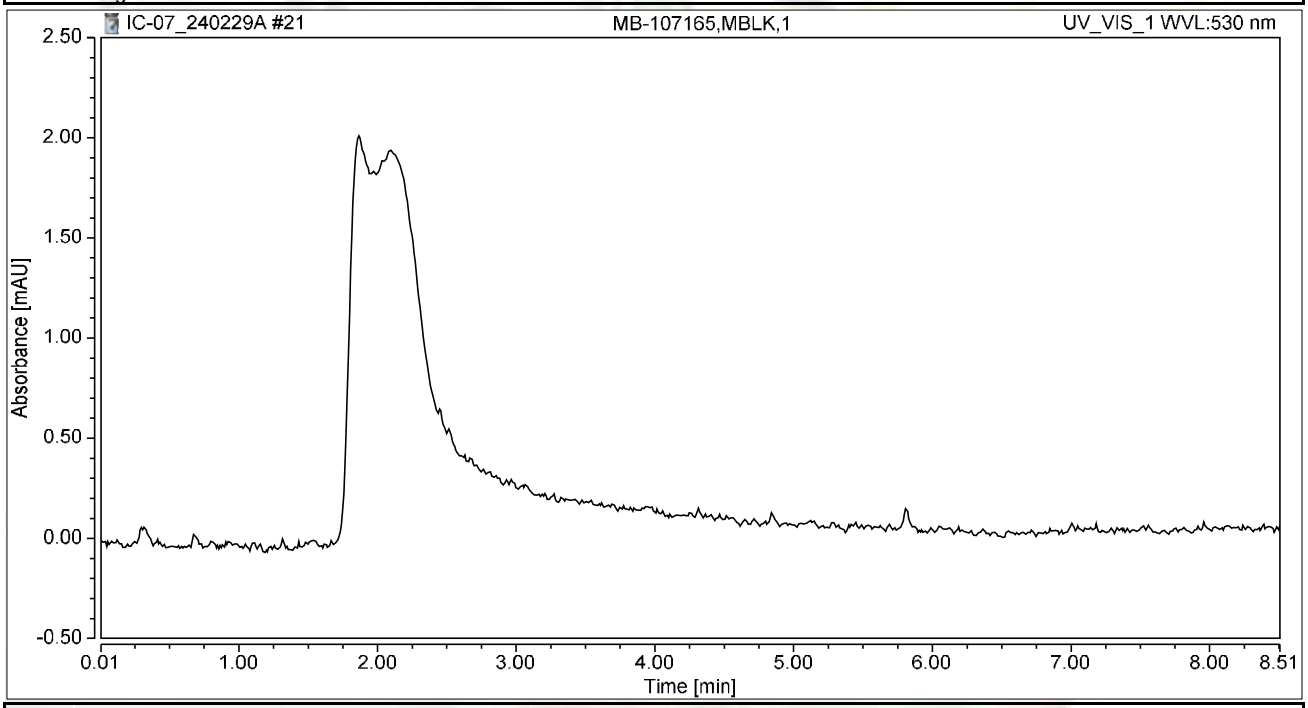
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.153	0.674	100.00	100.00	0.7100
Total:			**0.153**	**0.674**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-107165,MBLK,1**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 12:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

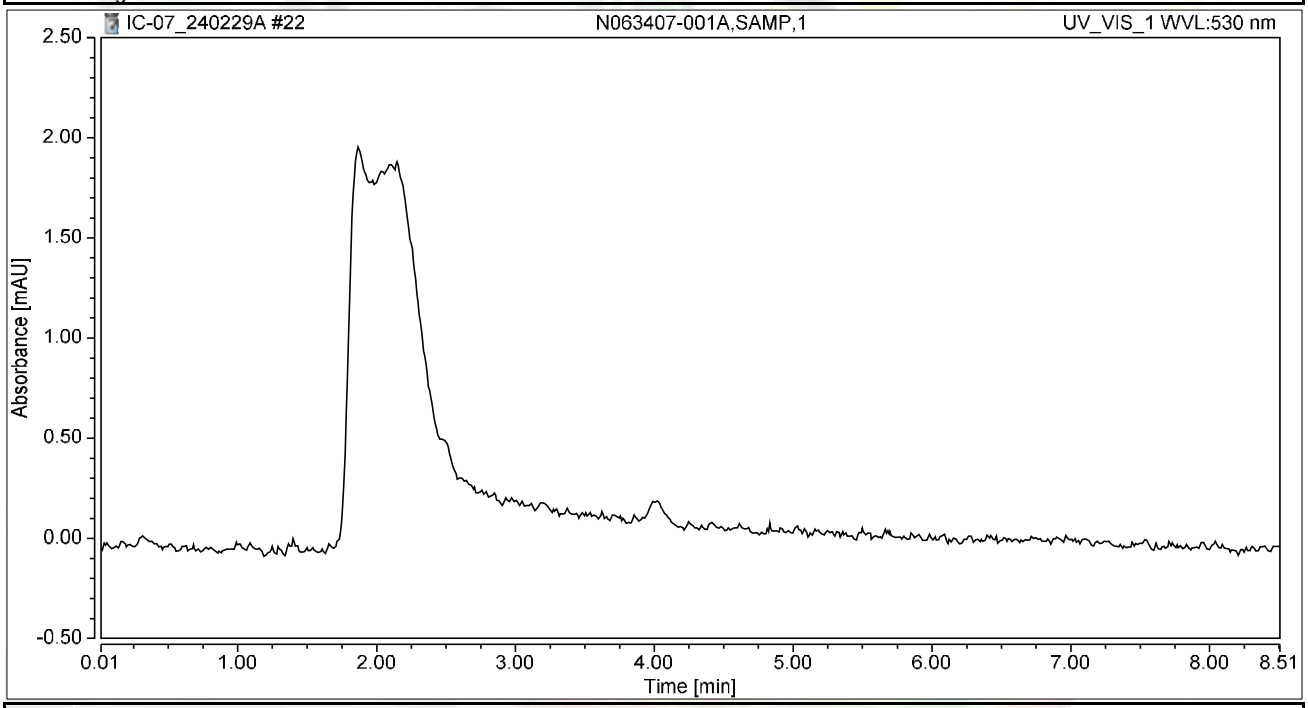
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063407-001A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 12:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

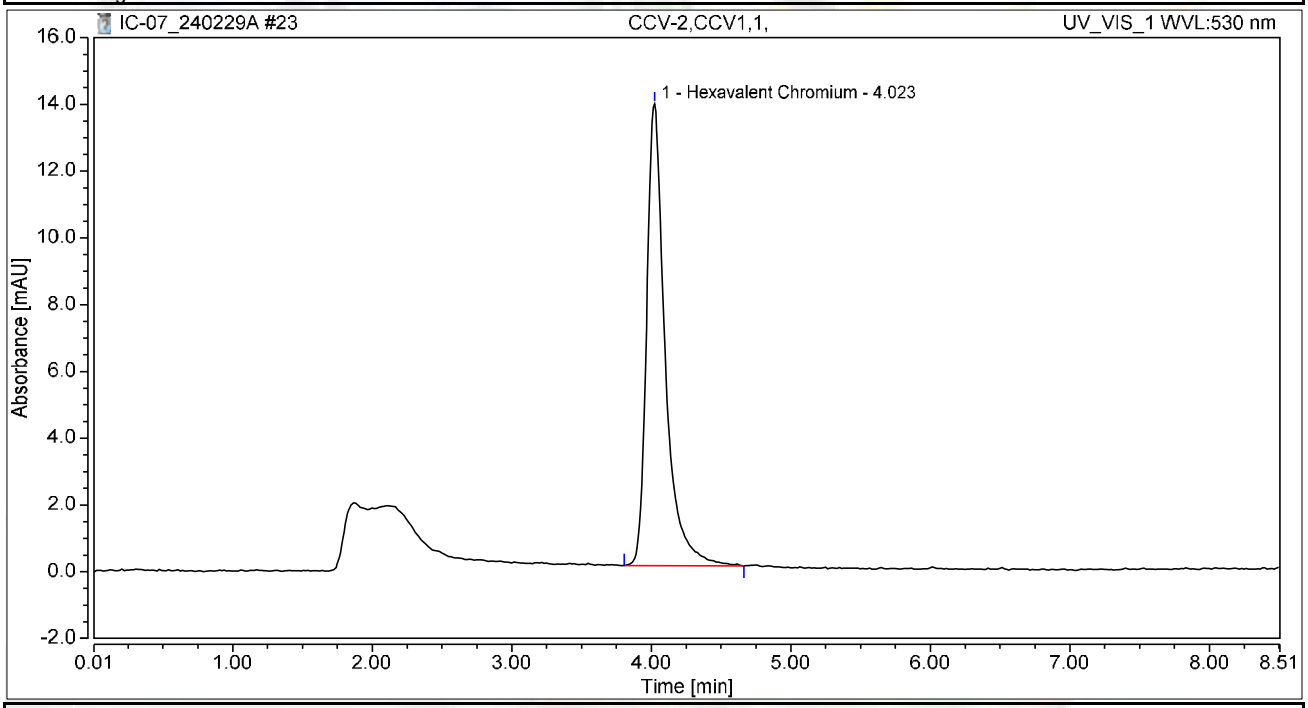
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 12:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

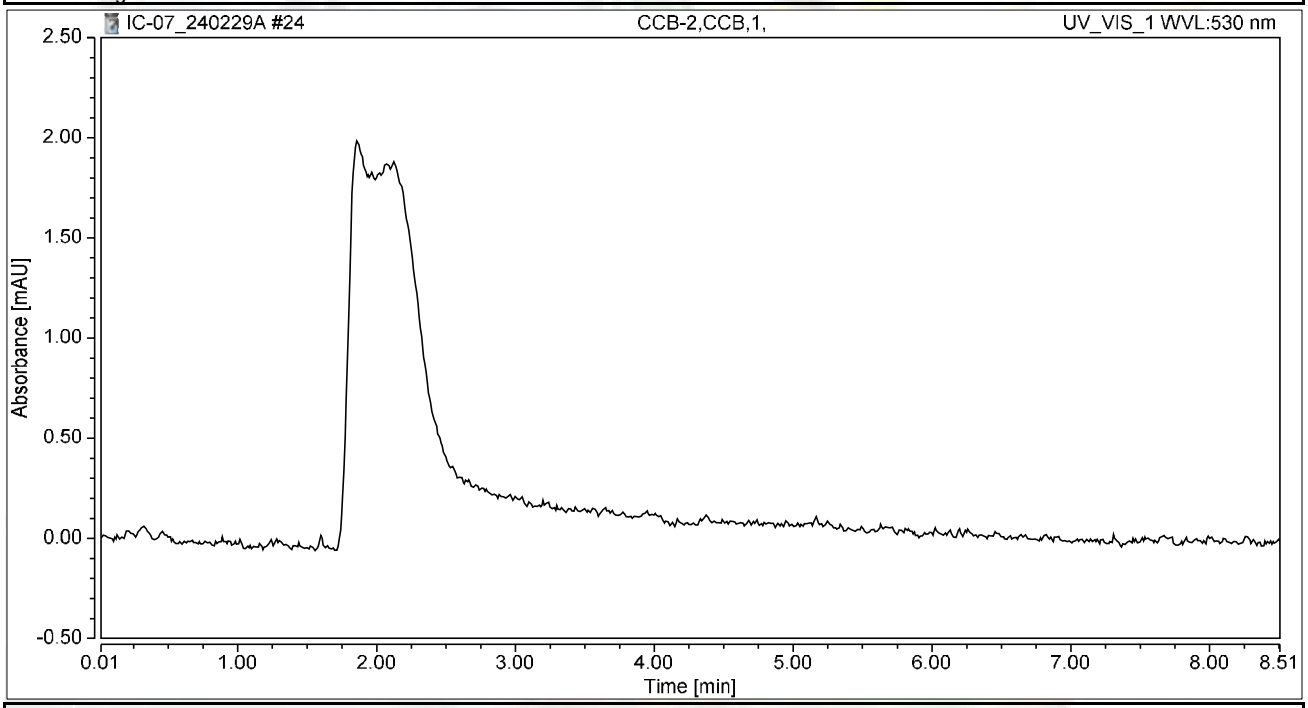
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	2.136	13.843	100.00	100.00	9.9291
Total:			**2.136**	**13.843**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 12:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

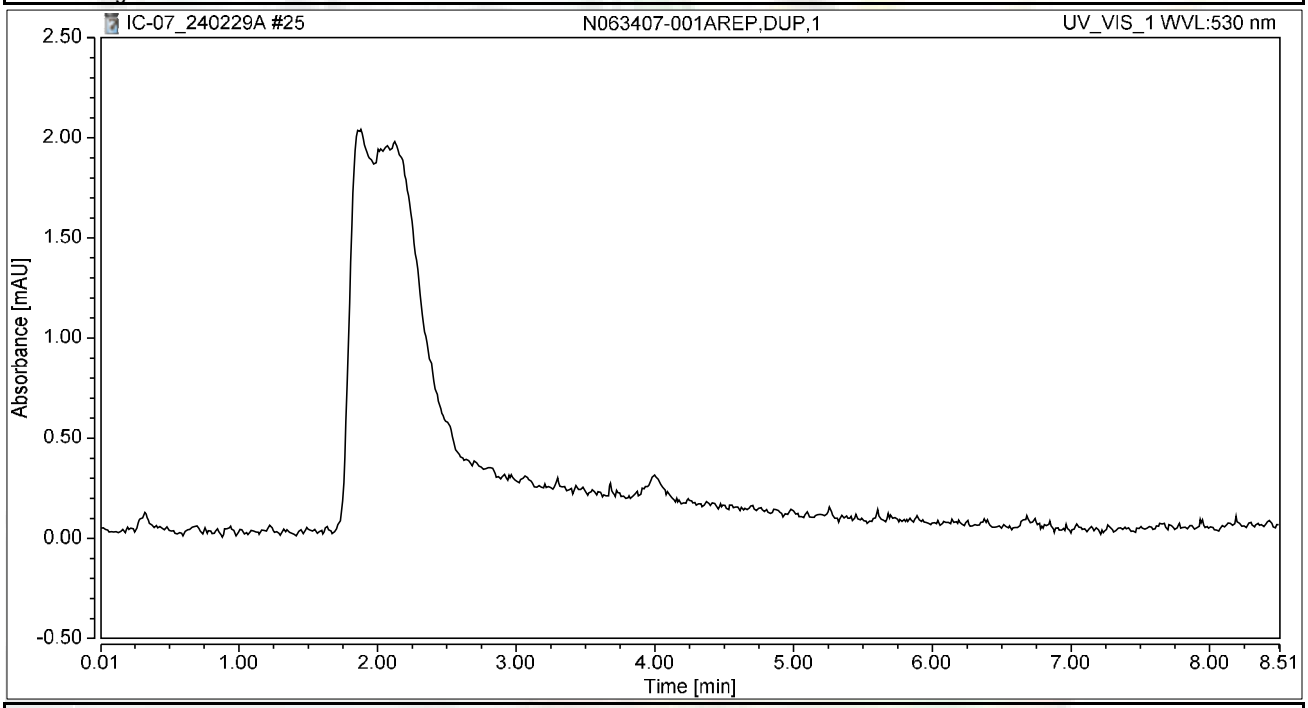
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063407-001AREP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 13:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

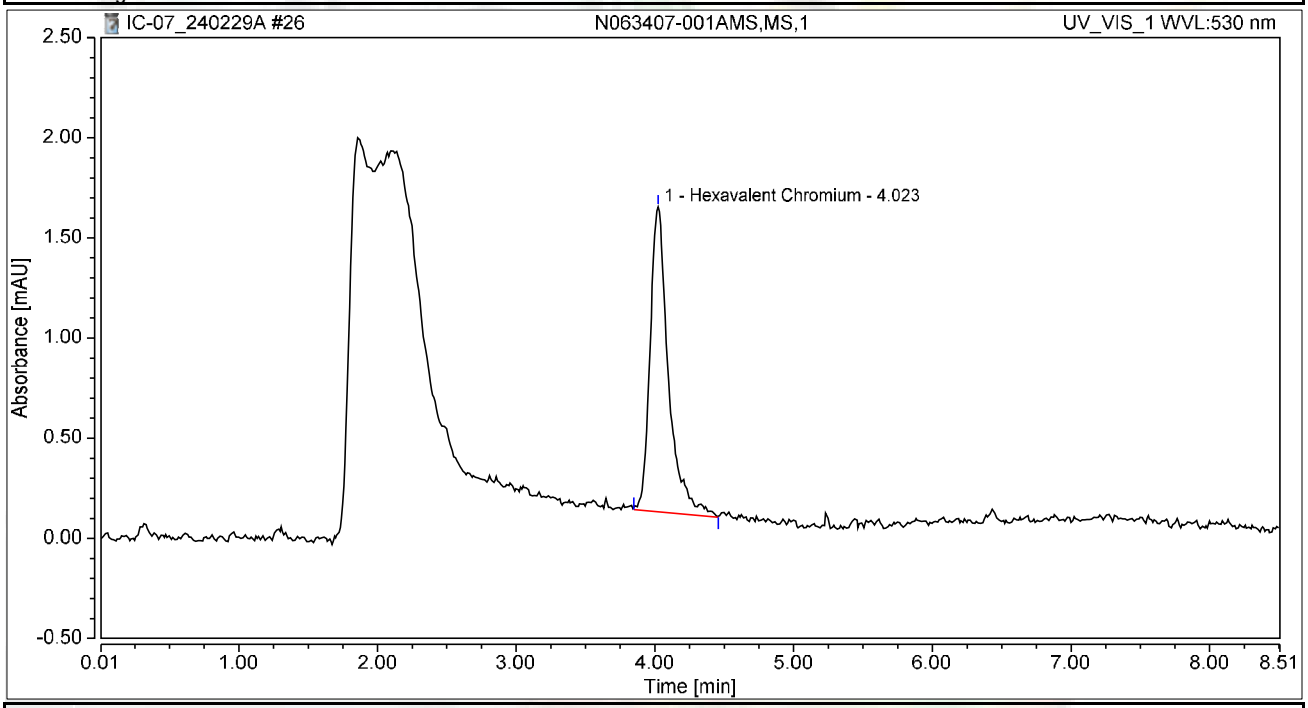
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063407-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 13:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

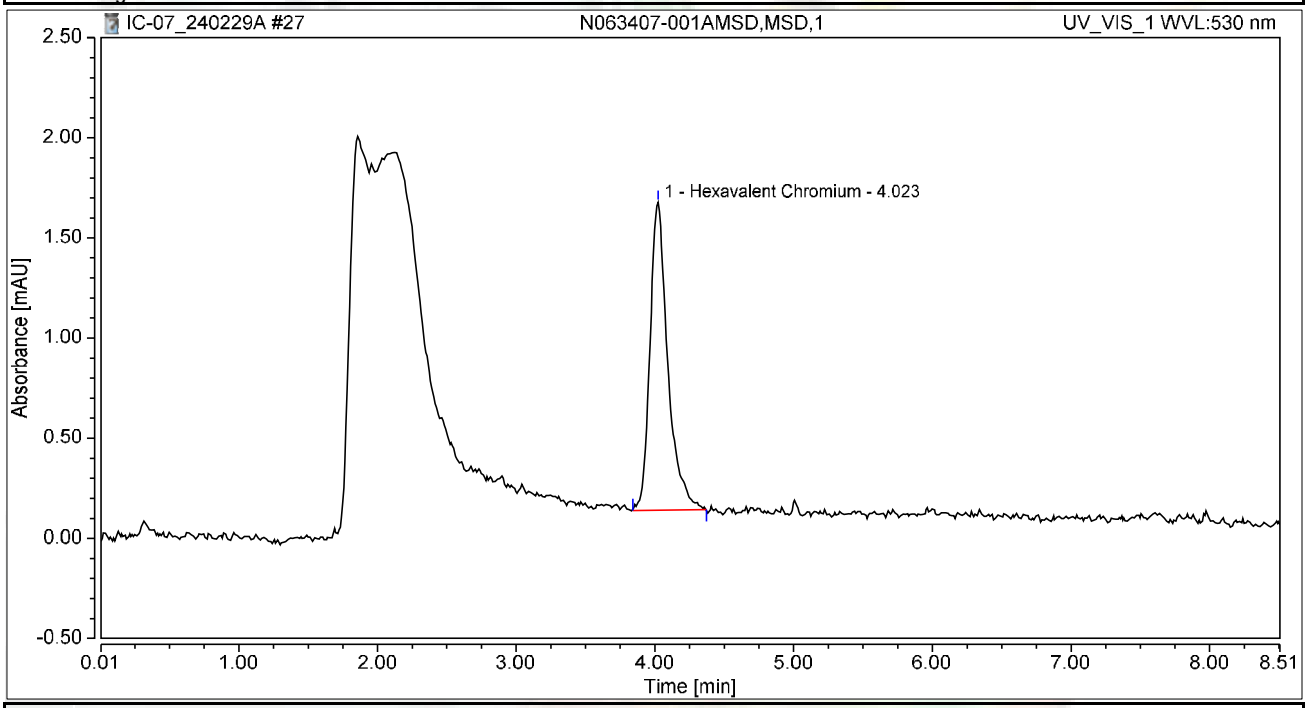
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.233	1.521	100.00	100.00	1.0821
Total:			**0.233**	**1.521**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063407-001AMSD,MSD,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 13:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

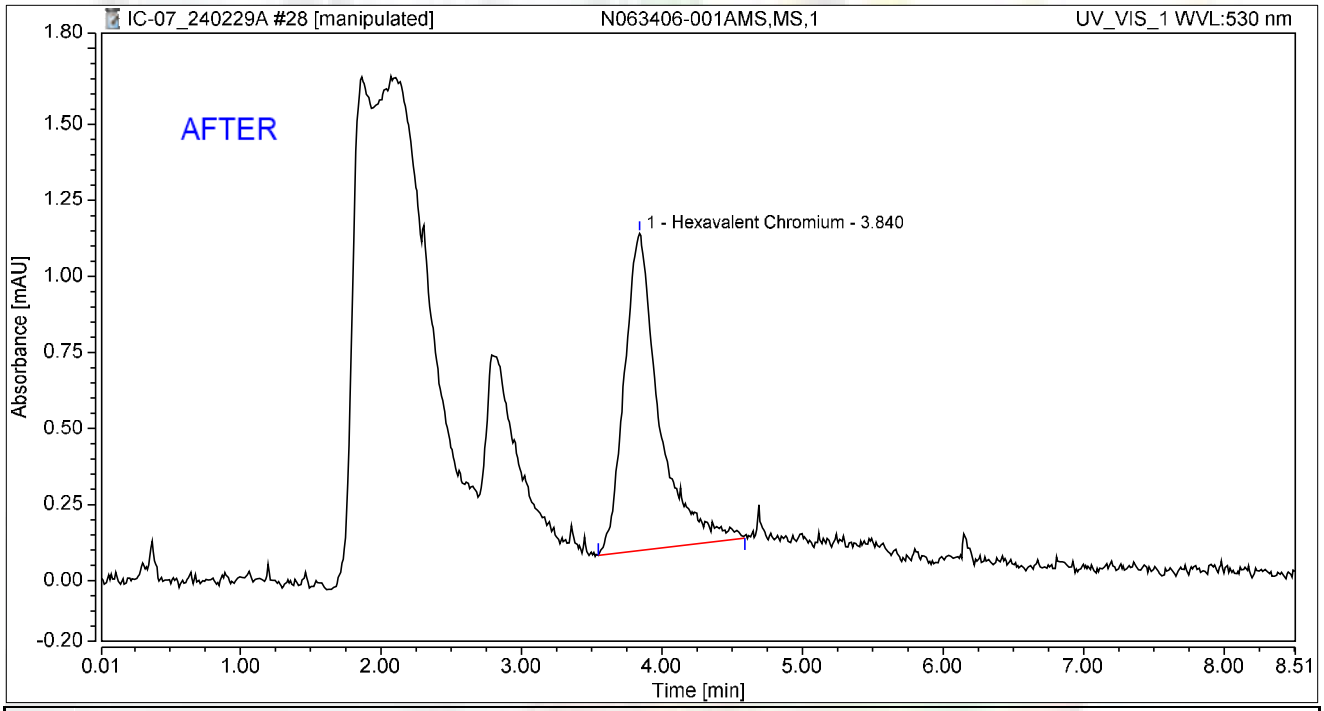
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.229	1.537	100.00	100.00	1.0644
Total:			**0.229**	**1.537**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063406-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.840	0.299	1.043	100.00	100.00	1.3892
Total:			**0.299**	**1.043**	**100.00**	**100.00**	

Reviewed by:

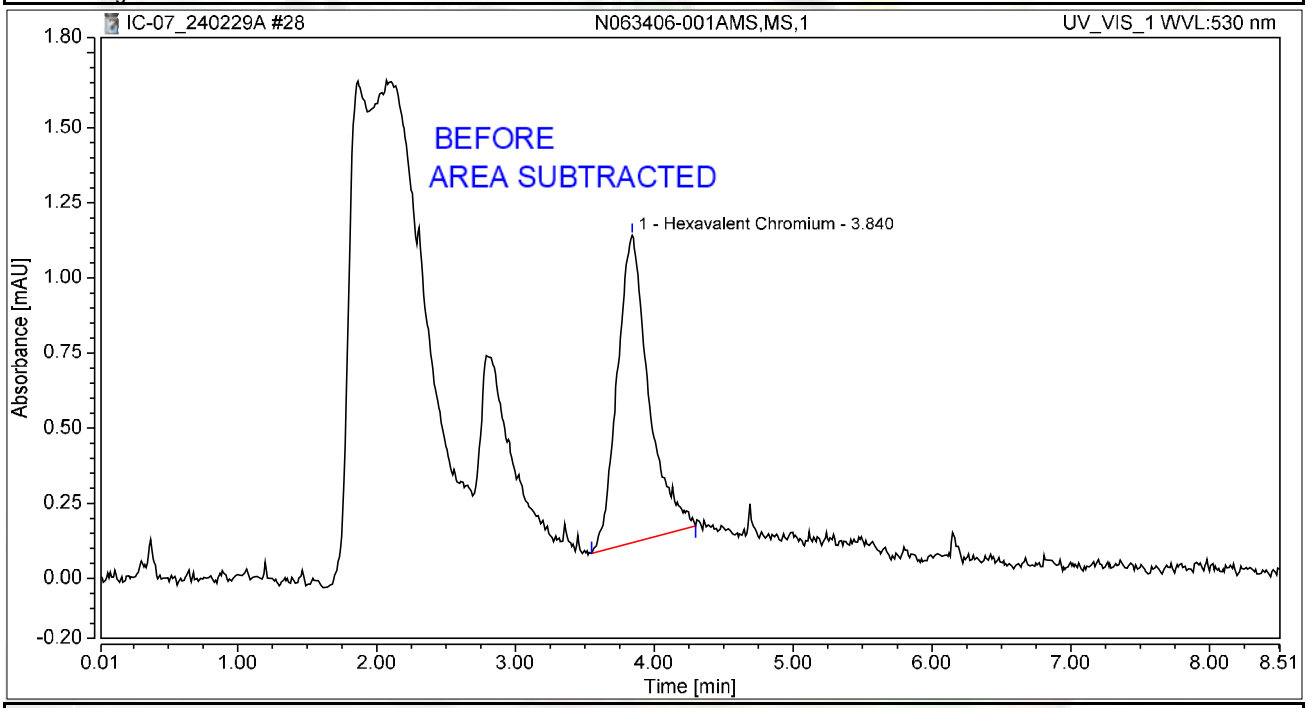
JRB 3/3/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063406-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

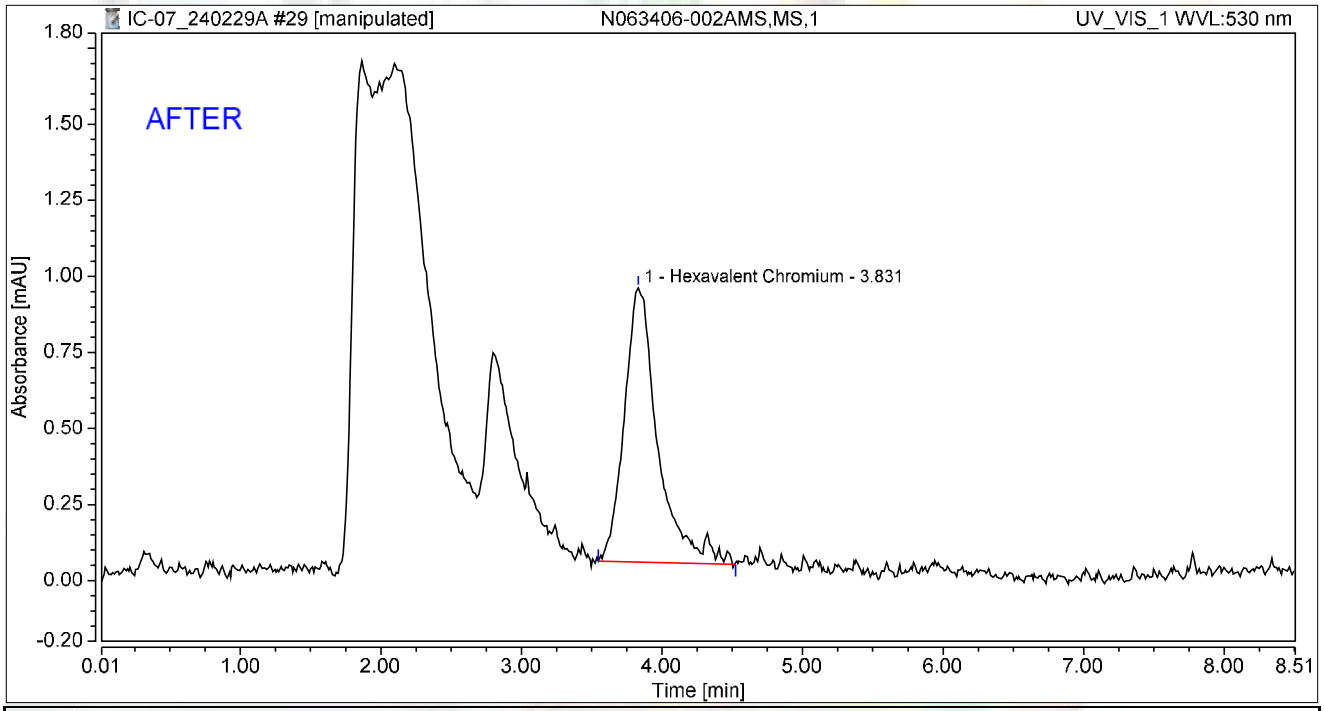
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.840	0.269	1.023	100.00	100.00	1.2496
Total:			**0.269**	**1.023**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063406-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.831	0.249	0.902	100.00	100.00	1.1588
Total:			**0.249**	**0.902**	**100.00**	**100.00**	

Reviewed by:

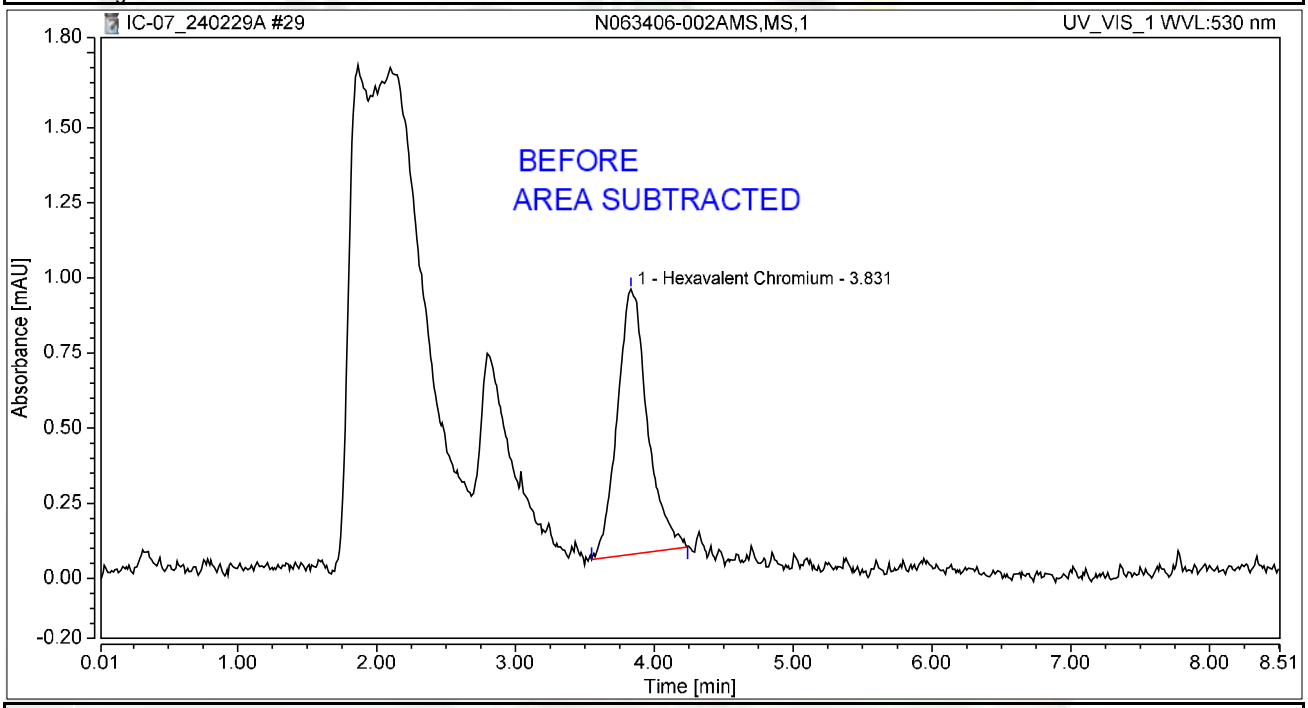
JRB 3/3/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063406-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

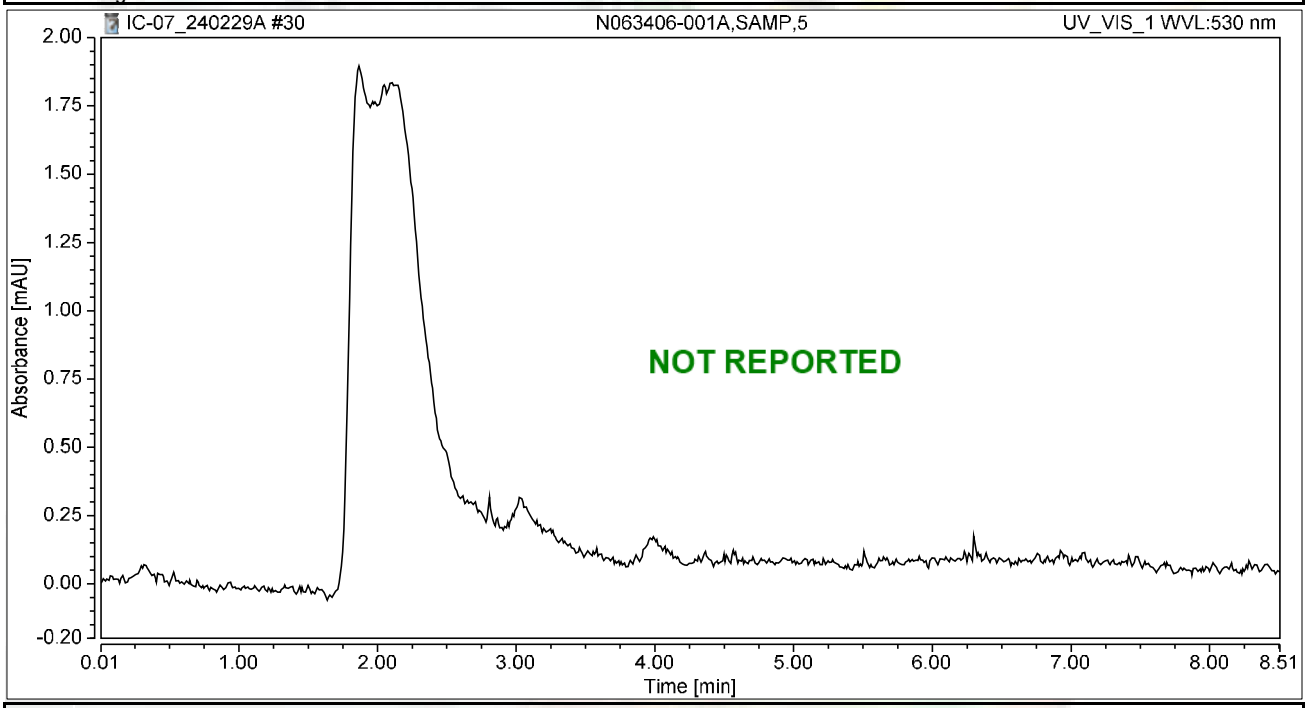
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.831	0.222	0.882	100.00	100.00	1.0313
Total:			**0.222**	**0.882**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063406-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 13:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

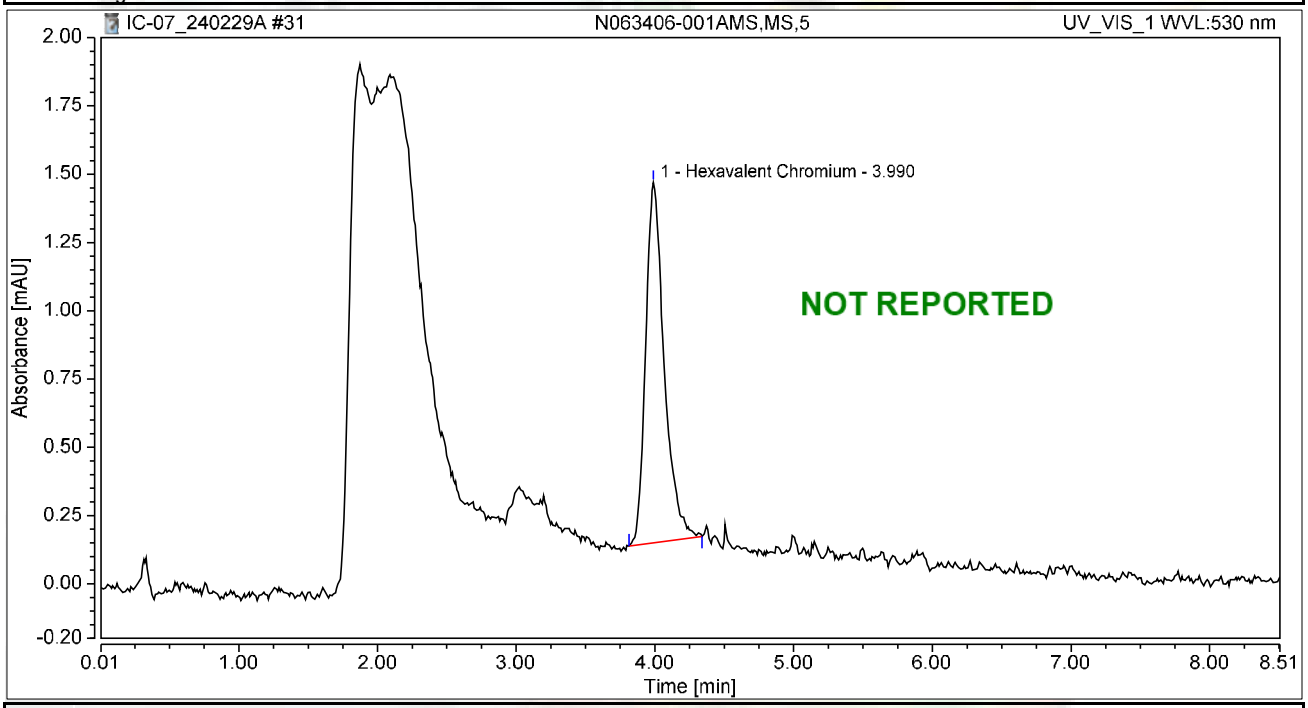
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063406-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 13:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

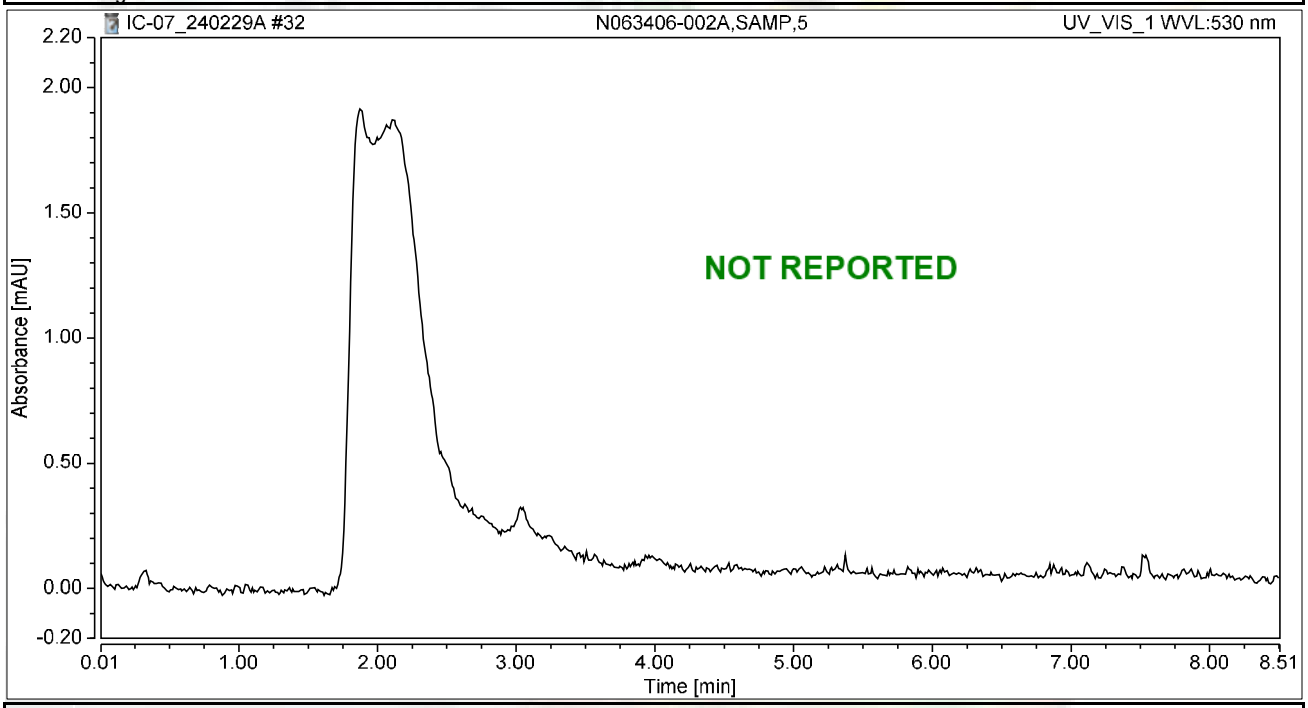
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.204	1.319	100.00	100.00	0.9478
Total:			**0.204**	**1.319**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063406-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 14:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

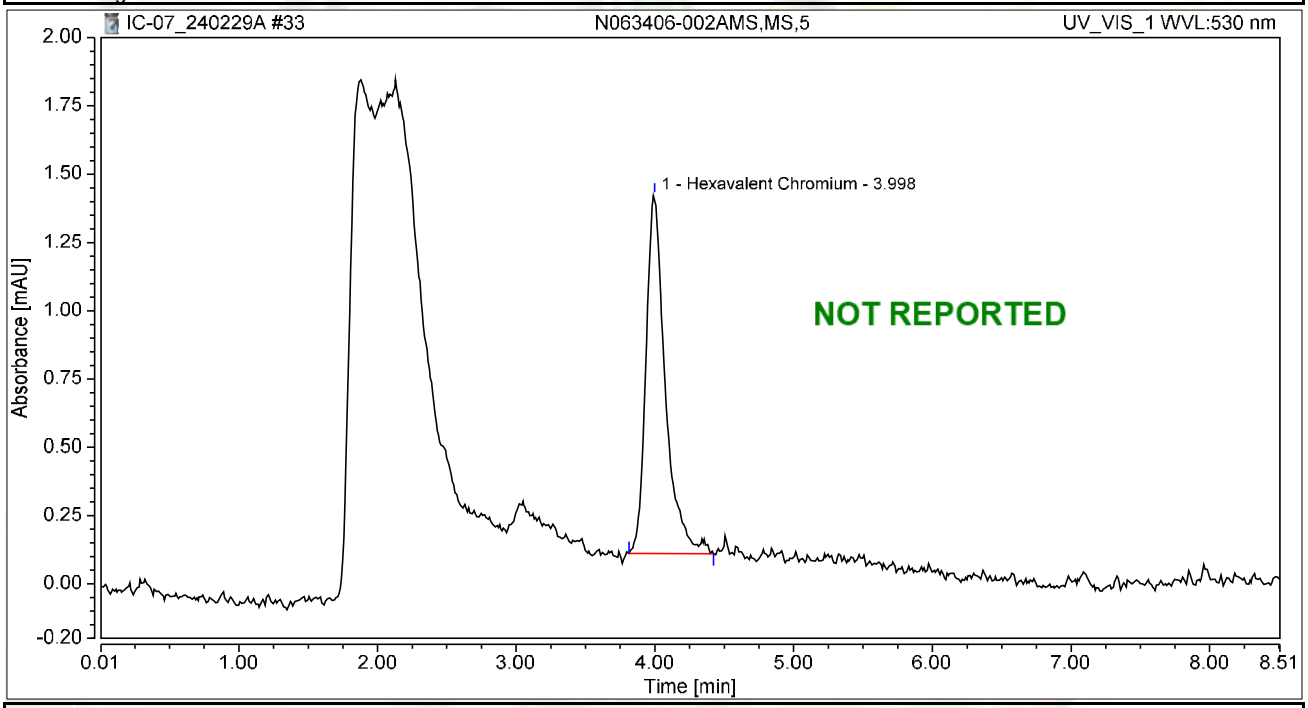
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063406-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 14:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

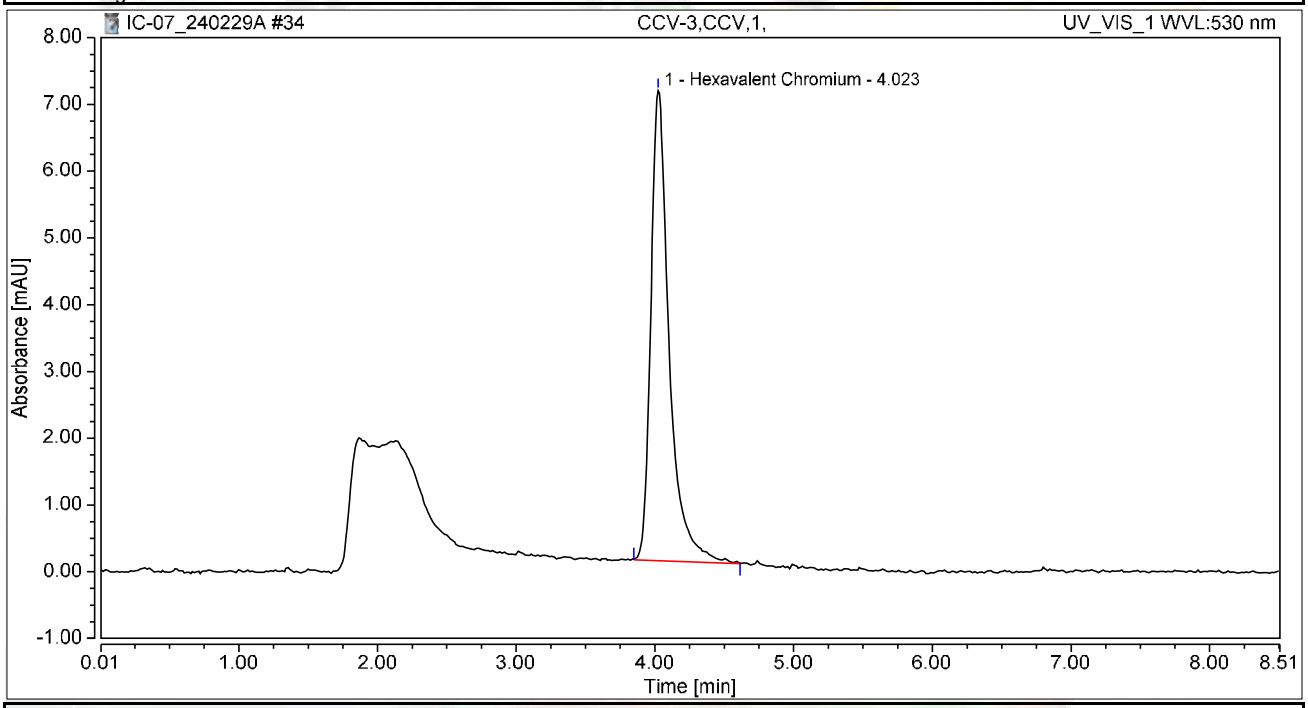
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.212	1.313	100.00	100.00	0.9857
Total:			**0.212**	**1.313**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 14:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

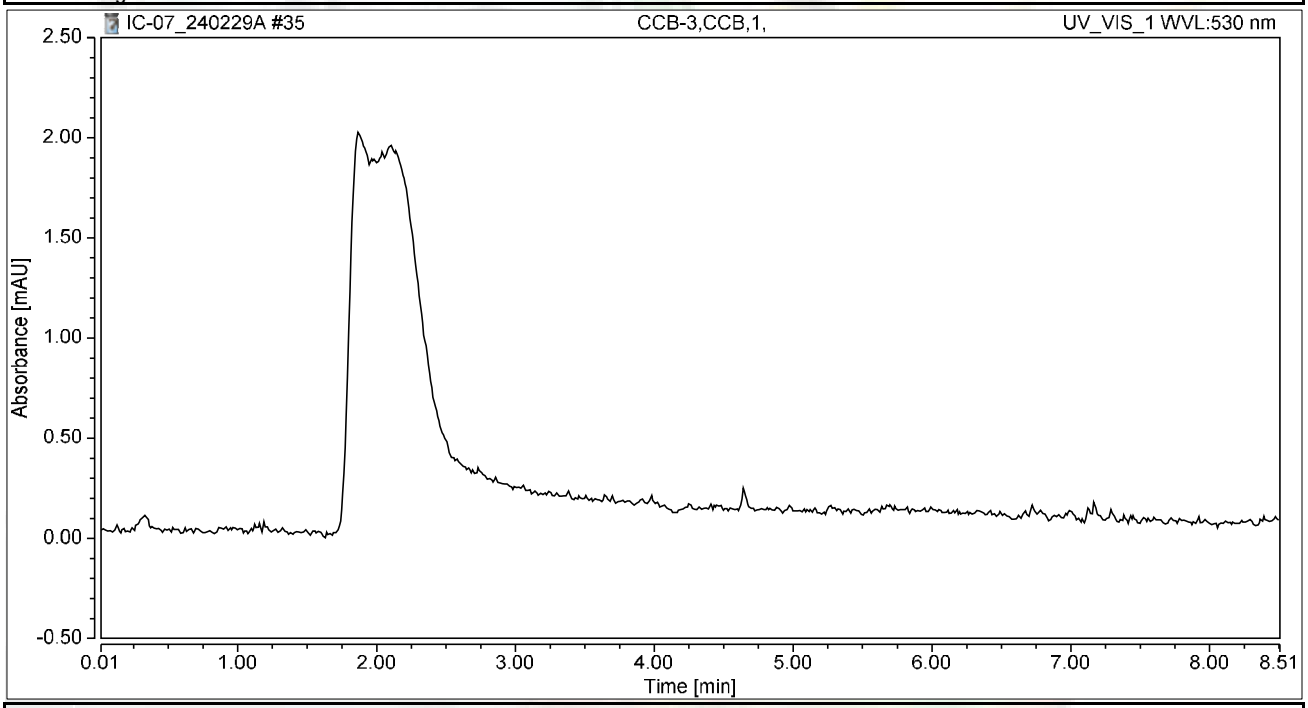
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	1.076	7.039	100.00	100.00	5.0011
Total:			**1.076**	**7.039**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 14:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

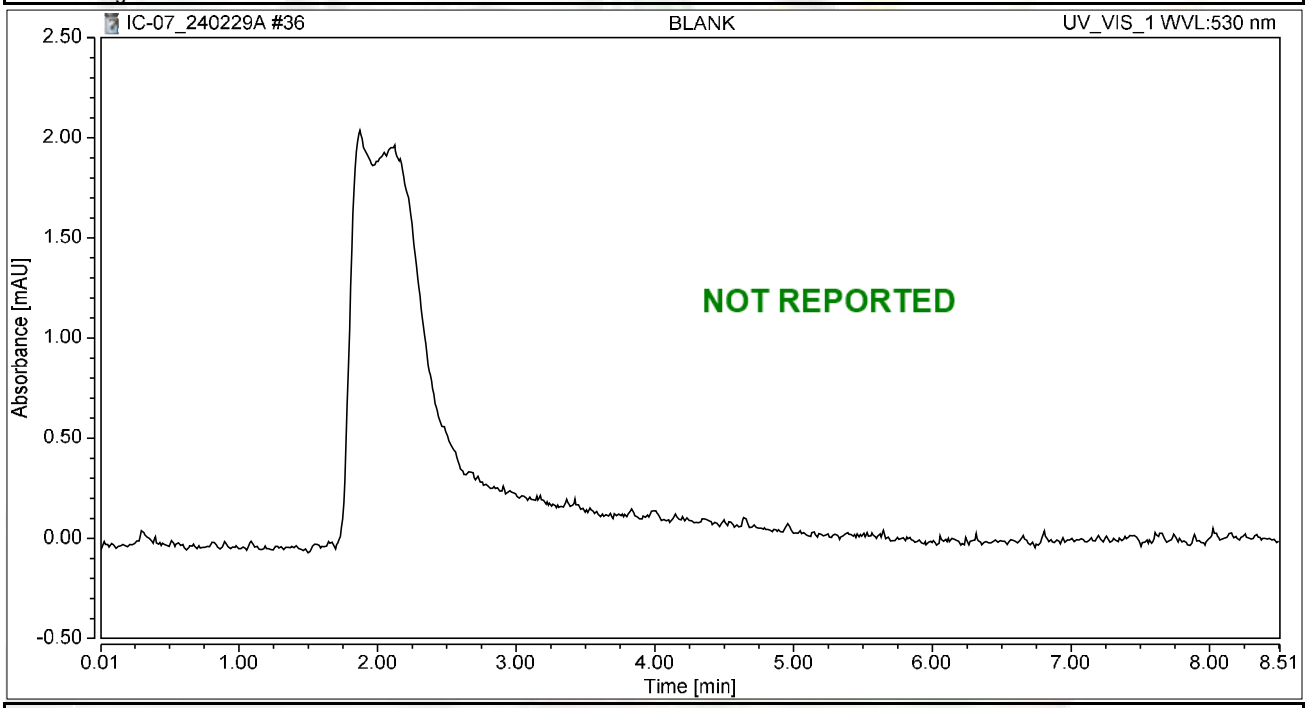
3/3/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**29/Feb/24 14:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

EPA 300.0

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R182763
ASSET #: N063214

Instrument ID: IC-08
Analyst: RBA
Date Analyzed: 2/21/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	x		
2. Matrix / units correct	x		
3. Is QC present and complete?	x		
4. Are analytical results correct? (dilutions,calculations)	x		
5. Is first level review correct and complete?	x		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 2/28/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: GROUNDWATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the orignal sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N063214-011C** concentration in mg/L is calculated as follows:

Nitrate, mg/L = 0.124 * 5

= 0.62

Reporting result in two significant figures,

Nitrate, mg/L = 0.62

Reviewed by:

dMocha 3/7/2024

ANALYSIS RUN LOG

Sequence: IC-08_240124A
Operator: IC-05
Printed: 1/24/2024 5:54:19 PM

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 25
Created: 1/24/2024 9:39:27 AM by IC-05
Last Update: 1/24/2024 11:49:06 AM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240124	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240124	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240124	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240124	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240124	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240124	Finished
8	ICV,ICV,1	Unknown	9	1000.0	Anions Default	EPA 300_0_240124	Finished
9	ICB,ICB,1	Unknown	10	1000.0	Anions Default	EPA 300_0_240124	Finished
10	MB-H2O,MBLK,1	Unknown	11	1000.0	Anions Default	EPA 300_0_240124	Finished
11	LCS-H2O,LCS,1	Unknown	12	1000.0	Anions Default	EPA 300_0_240124	Finished
12	N062498-007A,SAMP,5	Unknown	13	1000.0	Anions Default	EPA 300_0_240124	Finished
13	N062498-007ADUP,DUP,5	Unknown	14	1000.0	Anions Default	EPA 300_0_240124	Finished
14	N062498-007AMS,MS,5	Unknown	15	1000.0	Anions Default	EPA 300_0_240124	Finished
15	N062498-007AMSD,MSD,5	Unknown	16	1000.0	Anions Default	EPA 300_0_240124	Finished
16	LCS-2,LCS,1	Unknown	17	1000.0	Anions Default	EPA 300_0_240124	Finished
17	MB-2,MBLK,1	Unknown	18	1000.0	Anions Default	EPA 300_0_240124	Finished
18	N062498-007A,SAMP,5	Unknown	19	1000.0	Anions Default	EPA 300_0_240124	Finished
19	N062498-007ADUP,DUP,5	Unknown	20	1000.0	Anions Default	EPA 300_0_240124	Finished
20	CCV-1,CCV,1	Unknown	21	1000.0	Anions Default	EPA 300_0_240124	Finished
21	CCB-1,CCB,1	Unknown	22	1000.0	Anions Default	EPA 300_0_240124	Finished
22	N062498-007AMS,MS,5	Unknown	23	1000.0	Anions Default	EPA 300_0_240124	Finished
23	N062498-007AMSD,MSD,5	Unknown	24	1000.0	Anions Default	EPA 300_0_240124	Finished
24	CCV-2,CCV,1	Unknown	33	1000.0	Anions Default	EPA 300_0_240124	Finished
25	CCB-2,CCB,1	Unknown	34	1000.0	Anions Default	EPA 300_0_240124	Finished

reviewed by: 1/31/2024

Processed by:
Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)

1/24/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 25
Created: 1/24/2024 9:39:27 AM by IC-05
Last Update: 1/24/2024 11:49:06 AM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	1/24/2024 9:41:36 AM	BLANK
2	Std - 0	1/24/2024 9:56:54 AM	IBLANK
3	Std - 1	1/24/2024 10:32:56 AM	STD-LOW
4	Std - 2	1/24/2024 10:48:14 AM	STD
5	Std - 3	1/24/2024 11:03:32 AM	STD
6	Std - 4	1/24/2024 11:18:50 AM	STD
7	Std - 5	1/24/2024 11:34:08 AM	STD-HIGH
8	ICV,ICV,1	1/24/2024 11:49:26 AM	ICV, IWST-240123B
9	ICB,ICB,1	1/24/2024 12:04:44 PM	CCB
10	MB-H2O,MBLK,1	1/24/2024 12:20:02 PM	MB
11	LCS-H2O,LCS,1	1/24/2024 12:35:19 PM	LCS, IWST-240123B
12	N062498-007A,SAMP,5	1/24/2024 12:50:38 PM	SAMP,2>10mL,
13	N062498-007ADUP,DUP,5	1/24/2024 1:05:56 PM	DUP,2>10mL,
14	N062498-007AMS,MS,5	1/24/2024 1:21:14 PM	MS,2>10mL,
15	N062498-007AMSD,MSD,5	1/24/2024 1:36:33 PM	MSD,2>10mL,
16	LCS-2,LCS,1	1/24/2024 1:51:51 PM	LCS, IWST-240123B
17	MB-2,MBLK,1	1/24/2024 2:07:09 PM	MB
18	N062498-007A,SAMP,5	1/24/2024 2:22:27 PM	SAMP,2>10mL,
19	N062498-007ADUP,DUP,5	1/24/2024 2:37:45 PM	DUP,2>10mL,
20	CCV-1,CCV,1	1/24/2024 2:53:03 PM	CCV, IWST-240123A
21	CCB-1,CCB,1	1/24/2024 3:08:21 PM	CCB
22	N062498-007AMS,MS,5	1/24/2024 3:23:40 PM	MS,2>10mL,
23	N062498-007AMSD,MSD,5	1/24/2024 3:38:58 PM	MSD,2>10mL,
24	CCV-2,CCV,1	1/24/2024 3:54:16 PM	CCV, IWST-240123A
25	CCB-2,CCB,1	1/24/2024 4:09:34 PM	CCB

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 40
Created: 2/20/2024 12:02:47 PM by IC-05
Last Update: 2/21/2024 7:53:23 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240124	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240124	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240124	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240124	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240124	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240124	Finished
8	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
9	CCV-1,CCV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
10	CCB-1,CCB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
11	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
12	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
13	N063214-012C,SAMP,10	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
14	N063214-013C,SAMP,10	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
15	N063214-010C,SAMP,5	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
16	N063214-011C,SAMP,5	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
17	N063214-014C,SAMP,5	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
18	N063214-016C,SAMP,5	Unknown	6	1000.0	Anions Default	EPA 300_0_240124	Finished
19	N063214-012CMS,MS,10	Unknown	7	1000.0	Anions Default	EPA 300_0_240124	Finished
20	N063214-012CMSD,MSD,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240124	Finished
21	CCV-2,CCV,1	Unknown	9	1000.0	Anions Default	EPA 300_0_240124	Finished
22	CCB-2,CCB,1	Unknown	10	1000.0	Anions Default	EPA 300_0_240124	Finished
23	N063214-012CDUP,DUP,10	Unknown	11	1000.0	Anions Default	EPA 300_0_240124	Finished
24	CCV-3,CCV,1	Unknown	12	1000.0	Anions Default	EPA 300_0_240124	Finished
25	CCB-3,CCB,1	Unknown	13	1000.0	Anions Default	EPA 300_0_240124	Finished
26	LCS-2,LCS,1	Unknown	14	1000.0	Anions Default	EPA 300_0_240124	Finished
27	MB-2,MBLK,1	Unknown	15	1000.0	Anions Default	EPA 300_0_240124	Finished
28	N063234-001A,SAMP,1	Unknown	16	1000.0	Anions Default	EPA 300_0_240124	Finished
29	N063235-001A,SAMP,1	Unknown	17	1000.0	Anions Default	EPA 300_0_240124	Finished
30	N063238-002A,SAMP,1	Unknown	18	1000.0	Anions Default	EPA 300_0_240124	Finished
31	N063234-001AMS,MS,1	Unknown	19	1000.0	Anions Default	EPA 300_0_240124	Finished
32	N063234-001AMSD,MSD,1	Unknown	20	1000.0	Anions Default	EPA 300_0_240124	Finished
33	N063234-002A,SAMP,1	Unknown	21	1000.0	Anions Default	EPA 300_0_240124	Finished
34	N063234-003A,SAMP,1	Unknown	22	1000.0	Anions Default	EPA 300_0_240124	Finished
35	N063238-001A,SAMP,1	Unknown	23	1000.0	Anions Default	EPA 300_0_240124	Finished
36	CCV-4,CCV,1	Unknown	24	1000.0	Anions Default	EPA 300_0_240124	Finished
37	CCB-4,CCB,1	Unknown	25	1000.0	Anions Default	EPA 300_0_240124	Finished
38	N063235-001ADUP,DUP,1	Unknown	26	1000.0	Anions Default	EPA 300_0_240124	Finished
39	CCV-5,CCV,1	Unknown	27	1000.0	Anions Default	EPA 300_0_240124	Finished
40	CCB-5,CCB,1	Unknown	28	1000.0	Anions Default	EPA 300_0_240124	Finished

Processed by:

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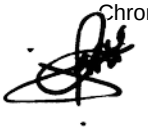


Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 40
Created: 2/20/2024 12:02:47 PM by IC-05
Last Update: 2/21/2024 7:53:23 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	1/24/2024 9:41:36 AM	BLANK
2	Std - 0	1/24/2024 9:56:54 AM	IBLANK
3	Std - 1	1/24/2024 10:32:56 AM	STD-LOW
4	Std - 2	1/24/2024 10:48:14 AM	STD
5	Std - 3	1/24/2024 11:03:32 AM	STD
6	Std - 4	1/24/2024 11:18:50 AM	STD
7	Std - 5	1/24/2024 11:34:08 AM	STD-HIGH
8	BLANK	2/21/2024 8:15:07 AM	BLANK
9	CCV-1,CCV,1	2/21/2024 8:30:25 AM	CCV, IWST-240216A
10	CCB-1,CCB,1	2/21/2024 8:45:43 AM	CCB
11	MB-H2O,MBLK,1	2/21/2024 9:01:01 AM	MB
12	LCS-H2O,LCS,1	2/21/2024 9:16:19 AM	LCS, IWST-240216B
13	N063214-012C,SAMP,10	2/21/2024 10:53:28 AM	SAMP,1>10mL,
14	N063214-013C,SAMP,10	2/21/2024 11:08:46 AM	SAMP,1>10mL,
15	N063214-010C,SAMP,5	2/21/2024 11:24:04 AM	SAMP,2>10mL,
16	N063214-011C,SAMP,5	2/21/2024 11:39:22 AM	SAMP,2>10mL,
17	N063214-014C,SAMP,5	2/21/2024 11:54:40 AM	SAMP,2>10mL,
18	N063214-016C,SAMP,5	2/21/2024 12:09:58 PM	SAMP,2>10mL,
19	N063214-012CMS,MS,10	2/21/2024 12:25:16 PM	MS,1>10mL,
20	N063214-012CMSD,MSD,10	2/21/2024 12:40:34 PM	MSD,1>10mL,
21	CCV-2,CCV,1	2/21/2024 12:55:52 PM	CCV, IWST-240216A
22	CCB-2,CCB,1	2/21/2024 1:11:10 PM	CCB
23	N063214-012CDUP,DUP,10	2/21/2024 1:26:27 PM	DUP,1>10mL,
24	CCV-3,CCV,1	2/21/2024 1:41:45 PM	CCV, IWST-240216A
25	CCB-3,CCB,1	2/21/2024 1:57:04 PM	CCB
26	LCS-2,LCS,1	2/21/2024 3:45:44 PM	LCS, IWST-240216B
27	MB-2,MBLK,1	2/21/2024 4:01:02 PM	MB
28	N063234-001A,SAMP,1	2/21/2024 4:16:20 PM	SAMP,10mL,
29	N063235-001A,SAMP,1	2/21/2024 4:31:39 PM	SAMP,10mL,
30	N063238-002A,SAMP,1	2/21/2024 4:46:57 PM	SAMP,10mL,
31	N063234-001AMS,MS,1	2/21/2024 5:02:16 PM	MS,10mL,
32	N063234-001AMSD,MSD,1	2/21/2024 5:17:34 PM	MSD,10mL,
33	N063234-002A,SAMP,1	2/21/2024 5:32:52 PM	SAMP,10mL,
34	N063234-003A,SAMP,1	2/21/2024 5:48:10 PM	SAMP,10mL,
35	N063238-001A,SAMP,1	2/21/2024 6:03:28 PM	SAMP,10mL,
36	CCV-4,CCV,1	2/21/2024 6:18:46 PM	CCV, IWST-240216A
37	CCB-4,CCB,1	2/21/2024 6:34:04 PM	CCB
38	N063235-001ADUP,DUP,1	2/21/2024 6:49:22 PM	DUP,10mL,
39	CCV-5,CCV,1	2/21/2024 7:04:40 PM	CCV, IWST-240216A
40	CCB-5,CCB,1	2/21/2024 7:19:58 PM	CCB

INITIAL CALIBRATION DATA SUMMARY

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 1/24/2024

Initial Calibration:

Nitrate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0159	0.0804	0.1690	0.4238	0.8850	1.000
Measured, in mg/L	0.000000	0.067900	0.249500	0.499300	1.217000	2.516400	
Relative Error (%RE)		35.8%		-0.1%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712E

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182763**
Client ID: **ICV**	Batch ID: **R182763**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5704043**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.226	0.050	1.250	0	98.1	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182763**
Client ID: **CCV**	Batch ID: **R182763**	TestNo: **EPA 300.0**		Analysis Date: **2/21/2024**	SeqNo: **5704045**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.211	0.050	1.250	0	96.9	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182763**
Client ID: **CCV**	Batch ID: **R182763**	TestNo: **EPA 300.0**		Analysis Date: **2/21/2024**	SeqNo: **5704057**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.183	0.050	1.250	0	94.7	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182763**
Client ID: **CCV**	Batch ID: **R182763**	TestNo: **EPA 300.0**		Analysis Date: **2/21/2024**	SeqNo: **5704060**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.193	0.050	1.250	0	95.5	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182763**
Client ID: **ICB**	Batch ID: **R182763**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5704044**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182763**
Client ID: **CCB**	Batch ID: **R182763**	TestNo: **EPA 300.0**		Analysis Date: **2/21/2024**	SeqNo: **5704046**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182763**
Client ID: **CCB**	Batch ID: **R182763**	TestNo: **EPA 300.0**		Analysis Date: **2/21/2024**	SeqNo: **5704058**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182763**
Client ID: **CCB**	Batch ID: **R182763**	TestNo: **EPA 300.0**		Analysis Date: **2/21/2024**	SeqNo: **5704061**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/21/2024

Sample Name		Retention Time	Evaluation
ICV	Nitrate	6.727	
CCV-1	Nitrate	6.610	
CCV-2	Nitrate	6.534	
CCV-3	Nitrate	6.553	
	Average	6.566	
	Applied RT Window	6.366 - 6.766	
MB-R182763_NO3	Nitrate	N.A.	N.A.
LCS-R182763_NO3	Nitrate	6.603	PASS
N063214-012C	Nitrate	6.580	PASS
N063214-013C	Nitrate	N.A.	N.A.
N063214-010C	Nitrate	N.A.	N.A.
N063214-011C	Nitrate	6.573	PASS
N063214-014C	Nitrate	6.557	PASS
N063214-016C	Nitrate	N.A.	N.A.
N063214-012CMS	Nitrate	6.560	PASS
N063214-012CMSD	Nitrate	6.524	PASS
N063214-012CDUP	Nitrate	6.510	PASS

Reviewed by:

dMocha 3/7/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): 10/5/2022, 12/14/2022, 3/22/2023,7/10/2023; 10/3/2023 & 11/14/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: mg/L

Instrument Name: **IC-08 & IC-09**

Datafile IC-08 221005A #24 IC-08 221214A #30 IC-08 230322A #35 IC-08 230710A #13 IC-09 231003A #14 IC-08 231114A #24 IC-09 231114A #19

Analyte	#1	#2	#3	#4	#5	#6	#7	Spike Conc., mg/L	SD	$t_{(n-1)}$ value	MDLs	MDL	PQL
Fluoride	0.100	0.103	0.108	0.118	0.110	0.098	0.126	0.10	0.0101	3.143	**0.0318**	**0.0318**	0.10
Chloride	0.480	0.418	0.472	0.653	0.624	0.587	0.622	0.50	0.0922	3.143	**0.2898**	**0.2898**	0.50
Nitrite	0.068	0.061	0.060	0.071	0.063	0.061	0.070	0.05	0.0047	3.143	**0.0149**	**0.0149**	0.05
Bromide	0.526	0.502	0.509	0.522	0.536	0.527	0.520	0.50	0.0116	3.143	**0.0364**	**0.0364**	0.50
Nitrate	0.073	0.058	0.059	0.073	0.074	0.068	0.073	0.05	0.0068	3.143	**0.0215**	**0.0240**	0.05
Phosphate	0.112	0.096	0.114	0.120	0.130	0.093	0.124	0.10	0.0138	3.143	**0.0433**	**0.0433**	0.10
Sulfate	0.501	0.609	0.638	0.401	0.704	0.620	0.697	0.50	0.1092	3.143	**0.3432**	**0.3432**	0.50

METHOD DETECTION LIMIT (Blanks)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Analyte	MDLb	# of Records
Fluoride	0	63
Chloride	0.1456	80
Nitrite	0.0147	64
Bromide	0	18
Nitrate	0.0240	132
Phosphate	0.0237	34
Sulfate	0.2579	107

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

EPA 6010B
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106993
ASSET #: N063214

Instrument ID: ICP-02
Analyst: DBJ
Date Analyzed: 2/21/2024

Method:

[X] EPA 6010B / 200.7
[ ] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented		X			X	
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

%Rec of Fe in N063214-011B-MS/MSD failed, high bias. However, LCS passed criteria.

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer KDG 03042024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in ug/L , in the original sample as follows:

Iron , ug/L = A * DF * PF *CF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL
CF= Conversion Factor from mg/L to ug/L, 1000

For Sample **N063214-010B** , the concentration i ug/L is calculated as follows:

Iron , ug/L = 0.91232 * 1 * (25/25) * 1000

Iron , ug/L = 912.32

Reporting results in two significant figures,

Iron , ug/L = 910

Reviewed by:

dMocha 3/7/2024

% RSD SUMMARY

RSD SUMMARY: 240221B

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	Fe	0	4.76	15	PASS
Standard1	ICAL	1	Fe	0.02	20.14	15	NR!
Standard2	ICAL	1	Fe	0.05	6.44	15	PASS
Standard3	ICAL	1	Fe	2	0.31	15	PASS
Standard4	ICAL	1	Fe	5	0.13	15	PASS
Standard5	ICAL	1	Fe	7.5	0.09	15	PASS
Standard6	ICAL	1	Fe	10	1.1	15	PASS
Standard7	ICAL	1	Fe	20	0.07	15	PASS
ICV	ICV	1	Fe	10.28	0.18	15	PASS
ICB	ICB	1	Fe	0	156.76	15	<PQL
LLICV	CCV1	1	Fe	0.02	9.79	20	PASS
ICSA1	ICSA	1	Fe	177.65	0.18	15	PASS
ICSAB1	ICSAB	1	Fe	179.11	0.34	15	PASS
RINSE	RINSE	1	Fe	0.01	28.44	15	<PQL
MB-106993	MBLK	1	Fe	0	102.1	15	<PQL
LCS-106993	LCS	1	Fe	0.09	1.58	15	PASS
N063211-001B	SAMP	1	Fe	0.75	0.47	15	PASS
N063211-002B	SAMP	1	Fe	0.71	0.42	15	PASS
N063211-003B	SAMP	1	Fe	1.16	0.44	15	PASS
N063214-010B	SAMP	1	Fe	0.91	0.51	15	PASS
N063214-011B	SAMP	1	Fe	0.02	10.13	15	PASS
N063214-011B	SAMP	5	Fe	0	33.57	15	<PQL
N063214-011B-PS	PS	1	Fe	0.11	0.31	15	PASS
CCV1	CCV	1	Fe	10.27	0.25	15	PASS
CCB1	CCB	1	Fe	-0.01	12.95	15	PASS
N063214-011B-MS	MS	1	Fe	0.19	0.68	15	PASS
N063214-011B-MSD	MSD	1	Fe	0.19	0.31	15	PASS
N063214-012B	SAMP	1	Fe	0.1	1.05	15	PASS
N063214-013B	SAMP	1	Fe	0	22.48	15	<PQL
N063214-014B	SAMP	1	Fe	0.03	3.14	15	PASS
N063214-016B	SAMP	1	Fe	0.36	0.61	15	PASS
RINSE	RINSE	1	Fe	0	27.19	15	<PQL
CCV2	CCV	1	Fe	10.24	0.13	15	PASS
CCB2	CCB	1	Fe	-0.01	14.86	15	PASS
CCV3	CCV	1	Fe	10.17	0.17	15	PASS
CCB3	CCB	1	Fe	-0.01	10.01	15	PASS
ICSA2	ICSA	1	Fe	177.53	0.6	15	PASS
ICSAB2	ICSAB	1	Fe	176.71	0.45	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240221B

Instrument ID: ICP-02

STANDARD CODE	
Standard1	MWST-240105M, 0.5<50mL
Standard2	MWST-240105N
Standard3	MWST-240105O, 5<50mL
Standard4	MWST-240105O,12.5<50mL
Standard5	MWST-240105O, 15<40mL
Standard6	MWST-240105O, 25<50mL
Standard7	MWST-240105O
ICV	MWST-240105AE
CCV	MWST-240105O, 25<50mL
ICSA/ICSAB	MWST-240105P / MWST-240105Q
Int. Std. (Y)	MWST-240105B
PS Spike	MWST-240105X / Y/ Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	02/21/2024	01:12:00 PM
2	Standard1	ICAL	1	02/21/2024	01:16:06 PM
3	Standard2	ICAL	1	02/21/2024	01:20:11 PM
4	Standard3	ICAL	1	02/21/2024	01:24:17 PM
5	Standard4	ICAL	1	02/21/2024	01:28:23 PM
6	Standard5	ICAL	1	02/21/2024	01:32:29 PM
7	Standard6	ICAL	1	02/21/2024	01:36:37 PM
8	Standard7	ICAL	1	02/21/2024	01:40:45 PM
250	ICV	ICV	1	02/21/2024	01:48:34 PM
1	ICB	ICB	1	02/21/2024	01:52:43 PM
2	LLICV	CCV1	1	02/21/2024	01:56:47 PM
9	ICSA1	ICSA	1	02/21/2024	02:00:51 PM
10	ICSAB1	ICSAB	1	02/21/2024	02:06:33 PM
239	RINSE	RINSE	1	02/21/2024	02:30:00 PM
131	MB-106993	MBLK	1	02/21/2024	02:34:08 PM
132	LCS-106993	LCS	1	02/21/2024	02:43:41 PM
133	N063211-001B	SAMP	1	02/21/2024	02:47:47 PM
134	N063211-002B	SAMP	1	02/21/2024	02:53:53 PM
135	N063211-003B	SAMP	1	02/21/2024	03:00:00 PM
136	N063214-010B	SAMP	1	02/21/2024	03:06:06 PM
137	N063214-011B	SAMP	1	02/21/2024	03:10:14 PM
138	N063214-011B	SAMP	5	02/21/2024	03:16:21 PM
139	N063214-011B-PS	PS	1	02/21/2024	03:20:29 PM
7	CCV1	CCV	1	02/21/2024	03:26:36 PM
1	CCB1	CCB	1	02/21/2024	03:30:45 PM
140	N063214-011B-MS	MS	1	02/21/2024	03:34:51 PM
141	N063214-011B-MSD	MSD	1	02/21/2024	03:41:17 PM
142	N063214-012B	SAMP	1	02/21/2024	03:47:26 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
143	N063214-013B	SAMP	1	02/21/2024	03:53:33 PM
144	N063214-014B	SAMP	1	02/21/2024	03:59:40 PM
145	N063214-016B	SAMP	1	02/21/2024	04:05:48 PM
239	RINSE	RINSE	1	02/21/2024	04:11:56 PM
146	MB-106974	MBLK	1	02/21/2024	04:16:07 PM
147	LCS-106974	LCS	1	02/21/2024	04:20:15 PM
148	N063182-001B	SAMP	1	02/21/2024	04:24:23 PM
7	CCV2	CCV	1	02/21/2024	04:28:31 PM
1	CCB2	CCB	1	02/21/2024	04:32:39 PM
149	N063182-003B	SAMP	1	02/21/2024	04:36:45 PM
150	N063182-005B	SAMP	1	02/21/2024	04:42:52 PM
151	N063182-005B	SAMP	5	02/21/2024	04:49:01 PM
152	N063182-005B-PS	PS	1	02/21/2024	04:53:10 PM
153	N063182-005B-MS	MS	1	02/21/2024	04:58:48 PM
154	N063182-005B-MSD	MSD	1	02/21/2024	05:04:26 PM
155	N063182-008B	SAMP	1	02/21/2024	05:10:04 PM
156	N063182-009B	SAMP	1	02/21/2024	05:16:11 PM
157	N063182-010B	SAMP	1	02/21/2024	05:22:19 PM
158	N063182-011B	SAMP	1	02/21/2024	05:26:27 PM
7	CCV3	CCV	1	02/21/2024	05:32:06 PM
1	CCB3	CCB	1	02/21/2024	05:36:15 PM
9	ICSA2	ICSA	1	02/21/2024	05:40:20 PM
10	ICSAB2	ICSAB	1	02/21/2024	05:46:03 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/21/2024 9:45:18 AM**
Prep End Date: **2/21/2024 2:00:00 PM**
Prep Batch **106993** Prep Code: **3010_W_DISS**

Reviewed/ Date: dMRocha 3/7/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-01-36**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-106993	Aqueous		25	☐	25	1.000		
MB-106993	Aqueous		25	☐	25	1.000		
N063211-001B	Water	<2	25	☐	25	1.000		
N063211-002B	Water	<2	25	☐	25	1.000		
N063211-003B	Water	<2	25	☐	25	1.000		
N063214-010B	Groundwater	<2	25	☐	25	1.000		
N063214-011B	Groundwater	<2	25	☐	25	1.000		
N063214-011B-MS	Groundwater	<2	25	☐	25	1.000		
N063214-011B-MSD	Groundwater	<2	25	☐	25	1.000		
N063214-012B	Groundwater	<2	25	☐	25	1.000		
N063214-013B	Groundwater	<2	25	☐	25	1.000		
N063214-014B	Groundwater	<2	25	☐	25	1.000		
N063214-016B	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15258	HYDROCHLORIC ACID
16150	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240221B

Instrument ID: ICP-02

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Iron								
CalBlk	02/21/2024	01:12:00 PM	Fe	273.953	114	0.00	mg/L	
Standard1	02/21/2024	01:16:06 PM	Fe	273.953	262	0.0200	mg/L	
Standard2	02/21/2024	01:20:11 PM	Fe	273.953	610	0.050	mg/L	
Standard3	02/21/2024	01:24:17 PM	Fe	273.953	17535	2.000	mg/L	
Standard4	02/21/2024	01:28:23 PM	Fe	273.953	43633	5.000	mg/L	
Standard5	02/21/2024	01:32:29 PM	Fe	273.953	64899	7.500	mg/L	
Standard6	02/21/2024	01:36:37 PM	Fe	273.953	81029	10.000	mg/L	
Standard7	02/21/2024	01:40:45 PM	Fe	273.953	172975	20.000	mg/L	0.9997

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182757**
Client ID: **ICV**	Batch ID: **R182757**	TestNo: **EPA 6010B**		Analysis Date: **2/21/2024**	SeqNo: **5703755**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10282.968	20	10000	0	103	90	110				

Sample ID **LLICV**	SampType: **CCV1**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182757**
Client ID: **ZZZZZZ**	Batch ID: **R182757**	TestNo: **EPA 6010B**		Analysis Date: **2/21/2024**	SeqNo: **5703757**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	17.360	20	20.00	0	86.8	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182757**
Client ID: **CCV**	Batch ID: **R182757**	TestNo: **EPA 6010B**		Analysis Date: **2/21/2024**	SeqNo: **5703769**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10271.934	20	10000	0	103	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182757**
Client ID: **CCV**	Batch ID: **R182757**	TestNo: **EPA 6010B**		Analysis Date: **2/21/2024**	SeqNo: **5703780**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10245.126	20	10000	0	102	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182757**
Client ID: **CCV**	Batch ID: **R182757**	TestNo: **EPA 6010B**		Analysis Date: **2/21/2024**	SeqNo: **5703792**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10172.411	20	10000	0	102	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182757**
Client ID: **ICB**	Batch ID: **R182757**	TestNo: **EPA 6010B**		Analysis Date: **2/21/2024**	SeqNo: **5703756**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-1.75493	20									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182757**
Client ID: **CCB**	Batch ID: **R182757**	TestNo: **EPA 6010B**		Analysis Date: **2/21/2024**	SeqNo: **5703770**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-6.401872	20									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182757**
Client ID: **CCB**	Batch ID: **R182757**	TestNo: **EPA 6010B**		Analysis Date: **2/21/2024**	SeqNo: **5703781**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-7.473318	20									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182757**
Client ID: **CCB**	Batch ID: **R182757**	TestNo: **EPA 6010B**		Analysis Date: **2/21/2024**	SeqNo: **5703793**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-5.91426	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182757**
Client ID: **ICSA** Batch ID: **R182757** TestNo: **EPA 6010B** Analysis Date: **2/21/2024** SeqNo: **5703758**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	542100.909	50	500000	0	108	80	120				
Calcium	556630.365	500	500000	0	111	80	120				
Iron	177650.052	20	200000	0	88.8	80	120				
Magnesium	510570.629	100	500000	0	102	80	120				

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182757**
Client ID: **ICSAB** Batch ID: **R182757** TestNo: **EPA 6010B** Analysis Date: **2/21/2024** SeqNo: **5703759**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	525320.479	50	500000	0	105	80	120				
Calcium	550326.603	500	500000	0	110	80	120				
Iron	179111.661	20	200000	0	89.6	80	120				
Magnesium	502335.269	100	500000	0	100	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182757**
Client ID: **ICSA** Batch ID: **R182757** TestNo: **EPA 6010B** Analysis Date: **2/21/2024** SeqNo: **5703794**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	542476.689	50	500000	0	108	80	120				
Calcium	550477.031	500	500000	0	110	80	120				
Iron	177529.029	20	200000	0	88.8	80	120				
Magnesium	505183.416	100	500000	0	101	80	120				

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182757**
Client ID: **ICSAB** Batch ID: **R182757** TestNo: **EPA 6010B** Analysis Date: **2/21/2024** SeqNo: **5703795**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	521622.150	50	500000	0	104	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182757**
Client ID: **ICSAB**	Batch ID: **R182757**	TestNo: **EPA 6010B**		Analysis Date: **2/21/2024**	SeqNo: **5703795**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	544533.611	500	500000	0	109	80	120				
Iron	176707.439	20	200000	0	88.4	80	120				
Magnesium	489758.438	100	500000	0	98.0	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240221B

Instrument ID: ICP-02

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	1.01	100.84	65-125	PASS
Standard2	ICAL	1	1.12	112.02	65-125	PASS
Standard3	ICAL	1	1.03	102.62	65-125	PASS
Standard4	ICAL	1	1.02	101.77	65-125	PASS
Standard5	ICAL	1	1.01	101.23	65-125	PASS
Standard6	ICAL	1	1.01	101.32	65-125	PASS
Standard7	ICAL	1	0.99	99.39	65-125	PASS
ICV	ICV	1	1.01	100.86	65-125	PASS
ICB	ICB	1	1.02	102.22	65-125	PASS
LLICV	CCV1	1	1.03	102.76	65-125	PASS
ICSA1	ICSA	1	0.87	86.97	65-125	PASS
ICSAB1	ICSAB	1	0.88	87.69	65-125	PASS
RINSE	RINSE	1	1.09	109.04	65-125	PASS
MB-106993	MBLK	1	1.04	103.59	65-125	PASS
LCS-106993	LCS	1	0.98	98.41	65-125	PASS
N063211-001B	SAMP	1	0.84	84.17	65-125	PASS
N063211-002B	SAMP	1	0.85	84.62	65-125	PASS
N063211-003B	SAMP	1	0.85	85.02	65-125	PASS
N063214-010B	SAMP	1	0.96	96.06	65-125	PASS
N063214-011B	SAMP	1	0.84	84.3	65-125	PASS
N063214-011B	SAMP	5	0.94	93.75	65-125	PASS
N063214-011B-PS	PS	1	0.82	81.53	65-125	PASS
CCV1	CCV	1	1.02	102.46	65-125	PASS
CCB1	CCB	1	1.04	104.05	65-125	PASS
N063214-011B-MS	MS	1	0.84	83.86	65-125	PASS
N063214-011B-MSD	MSD	1	0.84	84.01	65-125	PASS
N063214-012B	SAMP	1	0.8	79.53	65-125	PASS
N063214-013B	SAMP	1	0.77	76.97	65-125	PASS
N063214-014B	SAMP	1	0.97	96.69	65-125	PASS
N063214-016B	SAMP	1	0.84	83.78	65-125	PASS
RINSE	RINSE	1	1.06	105.76	65-125	PASS
CCV2	CCV	1	1.02	101.56	65-125	PASS
CCB2	CCB	1	1.02	101.6	65-125	PASS
CCV3	CCV	1	1.01	101.05	65-125	PASS
CCB3	CCB	1	1.04	103.66	65-125	PASS
ICSA2	ICSA	1	0.87	86.71	65-125	PASS
ICSAB2	ICSAB	1	0.87	87.27	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063214
Test Method: EPA 6010B
Analysis Date: 2/21/2024

Matrix: Groundwater
Batch No.: 106993

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima 7300DV

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Fe. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063214-011B DT 5x	Iron	Fe	µg/L	0	NA	19.38222	100.00%	10

Reviewed by:

dMocha 3/7/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **N063214-011B-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182757**
Client ID: **ZZZZZZ** Batch ID: **106993** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/21/2024** SeqNo: **5703768**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	111.510	20	100.0	19.38	92.1	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

EPA 6020
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 106992
ASSET #: N063214

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/23/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

% Rec of Ba in several CCVs failed, high bias. However, IQCs that enclosed sample passed criteria

	Yes	No	N/A
1. All assigned sample(s) analyzed	x		
2. Matrix / units correct	x		
3. Does batch meet QC requirements?	x		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	x		
5. Is first level review correct and complete?	x		

1st Level Reviewer DBJ Date: –

2nd Level Reviewer LG 3/4/2024 Date:

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Groundwater

FORMULA:

Calculate the Arsenic concentration, in ug/L in the original sample as follows:

Arsenic , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063214-010B** , the concentration in ug/L is calculated as follows:

Arsenic , ug/L = 7.38207 * 1 *(25 / 25)

Arsenic , ug/L = 7.38207

Reporting results in two significant figures,

Arsenic , ug/L = 7.4

Reviewed by:

JRB 3/13/2024

% RSD SUMMARY

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	15.646	15	<PQL	0.1	4.971	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.47	6.506	15	PASS	0.51	3.025	15	PASS
Std3-5/50 ppb	ICAL	1	4.83	1.27	15	PASS	4.89	3.407	15	PASS
Std4-10/100 ppb	ICAL	1	9.83	2.315	15	PASS	9.86	1.399	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	20.24	1.991	15	PASS	19.81	1.649	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	40.14	1.038	15	PASS	39.51	1.262	15	PASS
Std7-100/1000 ppb	ICAL	1	100.68	1.373	15	PASS	98.5	0.438	15	PASS
Std8-200/2000 ppb	ICAL	1	199.62	1.169	15	PASS	200.88	0.335	15	PASS
ICV	ICV	1	10.17	1.243	15	PASS	101.59	0.398	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	0	258.657	15	<PQL
LLICV1	LLICV	1	1.11	0.584	20	PASS	0.55	6.234	20	PASS
MLCCV	CCV	1	19.88	2.197	15	PASS	19.94	0.442	15	PASS
ICSA1	ICSA	1	0	70.954	15	<PQL	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.4	0.884	15	PASS	20.36	0.139	15	PASS
MDL 4	ICAL	1	1.07	0.459	15	PASS	0.51	4.031	15	PASS
CCV1	CCV	1	19.98	1.016	15	PASS	19.82	1.109	15	PASS
CCB1	CCB	1	0.02	43.803	15	<PQL	0.18	6.931	15	PASS
CCV2	CCV	1	19.84	1.185	15	PASS	19.77	0.493	15	PASS
CCB2	CCB	1	0.02	52.281	15	<PQL	0.19	6.321	15	PASS
CCV3	CCV	1	19.92	1.739	15	PASS	19.59	0.422	15	PASS
CCB3	CCB	1	0.03	49.285	15	<PQL	0.18	13.078	15	PASS
CCV4	CCV	1	20.7	0.766	15	PASS	20	0.995	15	PASS
CCB4	CCB	1	0.02	33.478	15	<PQL	0.18	10.217	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	0.01	20.455	15	<PQL	0.07	11.023	15	PASS
ICSAB2	ICSAB	1	20.62	2.198	15	PASS	20.28	0.565	15	PASS
CCV5	CCV	1	20.65	1.318	15	PASS	20.33	0.561	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	0.01	36.4	15	<PQL	0.06	16.251	15	<PQL
ICSAB3	ICSAB	1	20.58	0.24	15	PASS	20.19	1.163	15	PASS
CCV6	CCV	1	21.35	0.969	15	PASS	19.62	1.472	15	PASS
CCB6	CCB	1	0	8860.741	15	<PQL	<0.000	N/A	15	<PQL
CCV7	CCV	1	22.1	1.002	15	PASS	19.92	0.296	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	0.01	61.487	15	<PQL	0.07	22.799	15	<PQL
ICSAB4	ICSAB	1	22.11	0.666	15	PASS	20.31	0.724	15	PASS
MB-106992	MBLK	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
LCS-106992	LCS	1	10.72	2.501	15	PASS	100.48	0.626	15	PASS
N063211-001B	SAMP	10	1.69	4.175	15	PASS	175.54	0.372	15	PASS
N063211-002B	SAMP	10	1.97	1.08	15	PASS	173.27	1.095	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063211-003B	SAMP	100	0.18	2.909	15	PASS	19.89	1.675	15	PASS
N063213-001B	SAMP	10	14.21	0.628	15	PASS	30.95	1.163	15	PASS
N063213-002B	SAMP	10	20.05	0.406	15	PASS	39.83	0.761	15	PASS
N063213-003B	SAMP	10	3.89	2.495	15	PASS	1.29	1.867	15	PASS
N063213-004B	SAMP	10	3.9	4.941	15	PASS	0.15	12.336	15	PASS
N063213-007B	SAMP	10	4.65	1.32	15	PASS	0.6	1.014	15	PASS
CCV8	CCV	1	20.87	1.232	15	PASS	19.91	1.192	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063213-008B	SAMP	1	122.48	1.039	15	PASS	62.42	1.219	15	PASS
N063213-008B	SAMP	5	24.67	0.879	15	PASS	12.81	1.95	15	PASS
N063213-008B-PS	PS	1	131.34	0.539	15	PASS	153.17	0.658	15	PASS
N063213-008BMS	MS	1	130.4	0.366	15	PASS	152.77	0.738	15	PASS
N063213-008BMSD	MSD	1	130.98	0.922	15	PASS	152.45	1.965	15	PASS
N063214-010B	SAMP	1	113.73	0.729	15	PASS	121.82	0.583	15	PASS
N063214-011B	SAMP	1	64.28	0.627	15	PASS	284.21	0.339	15	PASS
N063214-011B	SAMP	10	6.59	2.756	15	PASS	29.05	0.535	15	PASS
N063214-012B	SAMP	1	50.08	1.372	15	PASS	467.87	0.153	15	PASS
N063214-012B	SAMP	10	5.31	1.371	15	PASS	51.68	0.934	15	PASS
CCV9	CCV	1	21.75	0.532	15	PASS	19.71	1.201	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063214-013B	SAMP	1	55.3	1.129	15	PASS	869.31	0.715	15	PASS
N063214-013B	SAMP	10	5.68	2.444	15	PASS	90.09	1.235	15	PASS
N063214-014B	SAMP	1	80.66	0.944	15	PASS	19.04	0.895	15	PASS
N063214-016B	SAMP	1	29.74	0.164	15	PASS	314.56	1.557	15	PASS
N063214-016B	SAMP	10	3.12	2.013	15	PASS	33.14	0.782	15	PASS
CCV10	CCV	1	21.64	0.313	15	PASS	19.6	0.332	15	PASS
CCB10	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	0.01	90.69	15	<PQL	0.07	14.564	15	PASS
ICSAB5	ICSAB	1	21.85	0.907	15	PASS	20.01	1.125	15	PASS
CCV11	CCV	1	21.74	1.753	15	PASS	19.59	1.17	15	PASS
CCB11	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV12	CCV	1	22.44	1.29	15	PASS	19.65	1.067	15	PASS
CCB12	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV13	CCV	1	22.5	0.471	15	PASS	19.73	0.111	15	PASS
CCB13	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	0.02	57.827	15	<PQL	0.06	10.678	15	PASS
ICSAB6	ICSAB	1	22.35	2.238	15	PASS	20.4	0.351	15	PASS
CCV14	CCV	1	21.97	1.107	15	PASS	19.73	1.059	15	PASS
CCB14	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV15	CCV	1	22.62	1.187	15	PASS	19.75	1.254	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCV16	CCV	1	22.1	0.561	15	PASS	20.06	0.772	15	PASS
CCB16	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA7	ICSA	1	0.01	76.638	15	<PQL	0.07	11.198	15	PASS
ICSAB7	ICSAB	1	22.31	0.348	15	PASS	20.29	1.198	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.1	15.379	15	FAIL
Std2-0.5/5 ppb	ICAL	1	0.46	2.776	15	PASS
Std3-5/50 ppb	ICAL	1	4.8	6.312	15	PASS
Std4-10/100 ppb	ICAL	1	9.82	2.017	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.47	2.419	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.93	0.817	15	PASS
Std7-100/1000 ppb	ICAL	1	99.51	0.783	15	PASS
Std8-200/2000 ppb	ICAL	1	200.33	0.784	15	PASS
ICV	ICV	1	10.43	1.082	15	PASS
ICB	ICB	1	0.02	113.613	15	<PQL
LLICV1	LLICV	1	0.09	23.162	20	<PQL
MLCCV	CCV	1	20.04	2.149	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.6	2.753	15	PASS
MDL 4	ICAL	1	0.1	7.053	15	PASS
CCV1	CCV	1	20.03	2.081	15	PASS
CCB1	CCB	1	0	903.97	15	<PQL
CCV2	CCV	1	19.84	0.388	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL
CCV3	CCV	1	19.77	0.594	15	PASS
CCB3	CCB	1	0.01	152.049	15	<PQL
CCV4	CCV	1	20.09	2.99	15	PASS
CCB4	CCB	1	0.01	119.849	15	<PQL
CCB4	CCB	1	0	291.181	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.47	0.498	15	PASS
CCV5	CCV	1	20.55	1.072	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.27	1.285	15	PASS
CCV6	CCV	1	19.76	2.022	15	PASS
CCB6	CCB	1	0	1214.624	15	<PQL
CCV7	CCV	1	20.07	1.253	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.32	0.601	15	PASS
MB-106992	MBLK	1	0	11529.46	15	<PQL
LCS-106992	LCS	1	10.09	0.471	15	PASS
N063211-001B	SAMP	10	<0.000	N/A	15	<PQL
N063211-002B	SAMP	10	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
N063211-003B	SAMP	100	<0.000	N/A	15	<PQL
N063213-001B	SAMP	10	0.25	10.763	15	PASS
N063213-002B	SAMP	10	<0.000	N/A	15	<PQL
N063213-003B	SAMP	10	<0.000	N/A	15	<PQL
N063213-004B	SAMP	10	<0.000	N/A	15	<PQL
N063213-007B	SAMP	10	<0.000	N/A	15	<PQL
CCV8	CCV	1	20.12	1.584	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL
N063213-008B	SAMP	1	5.42	9.041	15	PASS
N063213-008B	SAMP	5	1.02	4.718	15	PASS
N063213-008B-PS	PS	1	15.09	1.876	15	PASS
N063213-008BMS	MS	1	15.83	2.038	15	PASS
N063213-008BMSD	MSD	1	14.88	2.818	15	PASS
N063214-010B	SAMP	1	7.38	2.812	15	PASS
N063214-011B	SAMP	1	<0.000	N/A	15	<PQL
N063214-011B	SAMP	10	<0.000	N/A	15	<PQL
N063214-012B	SAMP	1	<0.000	N/A	15	<PQL
N063214-012B	SAMP	10	<0.000	N/A	15	<PQL
CCV9	CCV	1	19.93	1.104	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL
N063214-013B	SAMP	1	<0.000	N/A	15	<PQL
N063214-013B	SAMP	10	<0.000	N/A	15	<PQL
N063214-014B	SAMP	1	0.86	2.948	15	PASS
N063214-016B	SAMP	1	<0.000	N/A	15	<PQL
N063214-016B	SAMP	10	<0.000	N/A	15	<PQL
CCV10	CCV	1	19.72	2.489	15	PASS
CCB10	CCB	1	0.02	53.568	15	<PQL
ICSA5	ICSA	1	0.01	369.683	15	<PQL
ICSAB5	ICSAB	1	19.98	1.177	15	PASS
CCV11	CCV	1	19.95	2.201	15	PASS
CCB11	CCB	1	0	691.193	15	<PQL
CCV12	CCV	1	19.61	1.699	15	PASS
CCB12	CCB	1	0	535.302	15	<PQL
CCV13	CCV	1	19.79	1.82	15	PASS
CCB13	CCB	1	0.01	170.85	15	<PQL
ICSA6	ICSA	1	0.03	41.639	15	<PQL
ICSAB6	ICSAB	1	19.9	2.439	15	PASS
CCV14	CCV	1	19.66	1.198	15	PASS
CCB14	CCB	1	0	13298.147	15	<PQL
CCV15	CCV	1	19.42	0.935	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
CCV16	CCV	1	19.87	1.357	15	PASS
CCB16	CCB	1	0	821.372	15	<PQL
ICSA7	ICSA	1	0.01	38.089	15	<PQL
ICSAB7	ICSAB	1	20.3	1.771	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223001.d	RINSE	ICAL	1	02/23/24 1:22 PM
A0223002.d	Cal Blk	IBLK	1	02/23/24 1:27 PM
A0223003.d	Std1-0.1/1 ppb	ICAL	1	02/23/24 1:32 PM
A0223004.d	Std2-0.5/5 ppb	ICAL	1	02/23/24 1:36 PM
A0223005.d	Std3-5/50 ppb	ICAL	1	02/23/24 1:41 PM
A0223006.d	Std4-10/100 ppb	ICAL	1	02/23/24 1:46 PM
A0223007.d	Std5-4.0/20/200 ppb	ICAL	1	02/23/24 1:51 PM
A0223008.d	Std6-8.0/40/400 ppb	ICAL	1	02/23/24 1:55 PM
A0223009.d	Std7-100/1000 ppb	ICAL	1	02/23/24 2:00 PM
A0223010.d	Std8-200/2000 ppb	ICAL	1	02/23/24 2:05 PM
A0223011.d	ICV	ICV	1	02/23/24 2:24 PM
A0223012.d	ICB	ICB	1	02/23/24 2:29 PM
A0223013.d	LLICV1	LLICV	1	02/23/24 2:34 PM
A0223014.d	MLCCV	CCV	1	02/23/24 2:38 PM
A0223015.d	ICSA1	ICSA	1	02/23/24 2:43 PM
A0223016.d	ICSAB1	ICSAB	1	02/23/24 2:47 PM
A0223017.d	MDL 4	ICAL	1	02/23/24 3:00 PM
A0223018.d	MB-106955	MBLK	1	02/23/24 3:10 PM
A0223019.d	LCS-106955	LCS	1	02/23/24 3:15 PM
A0223020.d	N063150-001A	SAMP	1	02/23/24 3:19 PM
A0223021.d	N063150-002A	SAMP	1	02/23/24 3:24 PM
A0223022.d	N063168-002A	SAMP	1	02/23/24 3:29 PM
A0223023.d	N063168-002A	SAMP	5	02/23/24 3:33 PM
A0223024.d	N063168-002A-PS	PS	1	02/23/24 3:38 PM
A0223025.d	N063168-002A-MS	MS	1	02/23/24 3:43 PM
A0223026.d	N063168-002A-MSD	MSD	1	02/23/24 3:47 PM
A0223027.d	RINSE	ICAL	1	02/23/24 3:52 PM
A0223028.d	CCV1	CCV	1	02/23/24 3:57 PM
A0223029.d	CCB1	CCB	1	02/23/24 4:01 PM
A0223030.d	MB-107065	MBLK	1	02/23/24 4:06 PM
A0223031.d	LCS-107065	LCS	1	02/23/24 4:11 PM
A0223032.d	N063286-001A	SAMP	1	02/23/24 4:15 PM
A0223033.d	N063286-001A	SAMP	5	02/23/24 4:20 PM
A0223034.d	N063286-001A-PS	PS	1	02/23/24 4:25 PM
A0223035.d	N063286-001A-MS	MS	1	02/23/24 4:29 PM
A0223036.d	N063286-001A-MSD	MSD	1	02/23/24 4:34 PM
A0223037.d	N063287-001A	SAMP	1	02/23/24 4:38 PM
A0223038.d	N063287-002A	SAMP	1	02/23/24 4:43 PM
A0223039.d	N063287-003A	SAMP	1	02/23/24 4:48 PM
A0223040.d	CCV2	CCV	1	02/23/24 4:52 PM
A0223041.d	CCB2	CCB	1	02/23/24 4:57 PM
A0223042.d	N063289-001A	SAMP	1	02/23/24 5:02 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223043.d	N063289-002A	SAMP	1	02/23/24 5:06 PM
A0223044.d	N063289-003A	SAMP	1	02/23/24 5:11 PM
A0223045.d	N063289-004A	SAMP	1	02/23/24 5:16 PM
A0223046.d	CCV3	CCV	1	02/23/24 5:20 PM
A0223047.d	CCB3	CCB	1	02/23/24 5:25 PM
A0223048.d	N063193-004A	SAMP	5	02/23/24 5:30 PM
A0223049.d	N063193-004A	SAMP	25	02/23/24 5:34 PM
A0223050.d	N063193-004A-PS	PS	5	02/23/24 5:39 PM
A0223051.d	N063193-004A-MS	MS	5	02/23/24 5:44 PM
A0223052.d	N063193-004A-MSD	MSD	5	02/23/24 5:48 PM
A0223053.d	N063195-002A	SAMP	5	02/23/24 5:53 PM
A0223054.d	N063195-003A	SAMP	5	02/23/24 5:58 PM
A0223055.d	N063195-004A	SAMP	5	02/23/24 6:02 PM
A0223056.d	N063201-001D	SAMP	5	02/23/24 6:07 PM
A0223057.d	N063201-001D-MS	MS	5	02/23/24 6:12 PM
A0223058.d	CCV4	CCV	1	02/23/24 6:16 PM
A0223059.d	CCB4	CCB	1	02/23/24 6:21 PM
A0223060.d	CCB4	CCB	1	02/23/24 6:27 PM
A0223061.d	ICSA2	ICSA	1	02/23/24 6:32 PM
A0223062.d	ICSAB2	ICSAB	1	02/23/24 6:37 PM
A0223063.d	MB-106955	MBLK	1	02/23/24 6:42 PM
A0223064.d	LCS-106955	LCS	1	02/23/24 6:46 PM
A0223065.d	N063150-001A	SAMP	1	02/23/24 6:51 PM
A0223066.d	N063150-002A	SAMP	1	02/23/24 6:55 PM
A0223067.d	N063168-002A	SAMP	1	02/23/24 7:00 PM
A0223068.d	N063168-002A	SAMP	5	02/23/24 7:05 PM
A0223069.d	N063168-002A-PS	PS	1	02/23/24 7:09 PM
A0223070.d	N063168-002A-MS	MS	1	02/23/24 7:14 PM
A0223071.d	N063168-002A-MSD	MSD	1	02/23/24 7:19 PM
A0223072.d	RINSE	ICAL	1	02/23/24 7:23 PM
A0223073.d	CCV5	CCV	1	02/23/24 7:28 PM
A0223074.d	CCB5	CCB	1	02/23/24 7:33 PM
A0223075.d	ICSA3	ICSA	1	02/23/24 7:37 PM
A0223076.d	ICSAB3	ICSAB	1	02/23/24 7:42 PM
A0223077.d	N063181-001C	SAMP	10	02/23/24 7:47 PM
A0223078.d	N063181-002C	SAMP	10	02/23/24 7:51 PM
A0223079.d	N063182-001B	SAMP	1	02/23/24 7:56 PM
A0223080.d	N063182-003B	SAMP	1	02/23/24 8:01 PM
A0223081.d	N063182-003B	SAMP	10	02/23/24 8:05 PM
A0223082.d	N063182-005B	SAMP	1	02/23/24 8:10 PM
A0223083.d	N063182-005B	SAMP	10	02/23/24 8:15 PM
A0223084.d	N063182-008B	SAMP	1	02/23/24 8:19 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223085.d	N063182-009B	SAMP	1	02/23/24 8:24 PM
A0223086.d	N063182-009B	SAMP	10	02/23/24 8:29 PM
A0223087.d	CCV6	CCV	1	02/23/24 8:33 PM
A0223088.d	CCB6	CCB	1	02/23/24 8:38 PM
A0223089.d	N063182-009B	SAMP	1	02/23/24 8:43 PM
A0223090.d	N063182-009B	SAMP	1	02/23/24 8:47 PM
A0223091.d	N063182-009B	SAMP	1	02/23/24 8:52 PM
A0223092.d	N063182-009B	SAMP	1	02/23/24 8:57 PM
A0223093.d	N063182-010B	SAMP	10	02/23/24 9:01 PM
A0223094.d	N063182-011B	SAMP	1	02/23/24 9:06 PM
A0223095.d	N063182-011B	SAMP	100	02/23/24 9:11 PM
A0223096.d	CCV7	CCV	1	02/23/24 9:15 PM
A0223097.d	CCB7	CCB	1	02/23/24 9:20 PM
A0223098.d	ICSA4	ICSA	1	02/23/24 9:24 PM
A0223099.d	ICSAB4	ICSAB	1	02/23/24 9:29 PM
A0223100.d	MB-106992	MBLK	1	02/23/24 9:34 PM
A0223101.d	LCS-106992	LCS	1	02/23/24 9:39 PM
A0223102.d	N063211-001B	SAMP	10	02/23/24 9:43 PM
A0223103.d	N063211-002B	SAMP	10	02/23/24 9:48 PM
A0223104.d	N063211-003B	SAMP	100	02/23/24 9:52 PM
A0223105.d	N063213-001B	SAMP	10	02/23/24 9:57 PM
A0223106.d	N063213-002B	SAMP	10	02/23/24 10:02 PM
A0223107.d	N063213-003B	SAMP	10	02/23/24 10:07 PM
A0223108.d	N063213-004B	SAMP	10	02/23/24 10:11 PM
A0223109.d	N063213-007B	SAMP	10	02/23/24 10:16 PM
A0223110.d	CCV8	CCV	1	02/23/24 10:20 PM
A0223111.d	CCB8	CCB	1	02/23/24 10:25 PM
A0223112.d	N063213-008B	SAMP	1	02/23/24 10:30 PM
A0223113.d	N063213-008B	SAMP	5	02/23/24 10:34 PM
A0223114.d	N063213-008B-PS	PS	1	02/23/24 10:39 PM
A0223115.d	N063213-008BMS	MS	1	02/23/24 10:44 PM
A0223116.d	N063213-008BMSD	MSD	1	02/23/24 10:48 PM
A0223117.d	N063214-010B	SAMP	1	02/23/24 10:53 PM
A0223118.d	N063214-011B	SAMP	1	02/23/24 10:58 PM
A0223119.d	N063214-011B	SAMP	10	02/23/24 11:03 PM
A0223120.d	N063214-012B	SAMP	1	02/23/24 11:07 PM
A0223121.d	N063214-012B	SAMP	10	02/23/24 11:12 PM
A0223122.d	CCV9	CCV	1	02/23/24 11:16 PM
A0223123.d	CCB9	CCB	1	02/23/24 11:21 PM
A0223124.d	N063214-013B	SAMP	1	02/23/24 11:26 PM
A0223125.d	N063214-013B	SAMP	10	02/23/24 11:30 PM
A0223126.d	N063214-014B	SAMP	1	02/23/24 11:35 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223127.d	N063214-016B	SAMP	1	02/23/24 11:40 PM
A0223128.d	N063214-016B	SAMP	10	02/23/24 11:44 PM
A0223129.d	CCV10	CCV	1	02/23/24 11:49 PM
A0223130.d	CCB10	CCB	1	02/23/24 11:54 PM
A0223131.d	ICSA5	ICSA	1	02/23/24 11:58 PM
A0223132.d	ICSAB5	ICSAB	1	02/24/24 12:03 AM
A0223133.d	MB-107021	MBLK	1	02/24/24 12:08 AM
A0223134.d	LCS-107021	LCS	1	02/24/24 12:12 AM
A0223135.d	N062510-015D	SAMP	5	02/24/24 12:17 AM
A0223136.d	N063248-001B	SAMP	1	02/24/24 12:21 AM
A0223137.d	N063248-002B	SAMP	1	02/24/24 12:26 AM
A0223138.d	N063248-002B	SAMP	5	02/24/24 12:31 AM
A0223139.d	N063248-002B-PS	PS	1	02/24/24 12:35 AM
A0223140.d	N063248-002B-MS	MS	1	02/24/24 12:40 AM
A0223141.d	N063248-002B-MSD	MSD	1	02/24/24 12:45 AM
A0223142.d	RINSE	ICAL	1	02/24/24 12:49 AM
A0223143.d	CCV11	CCV	1	02/24/24 12:54 AM
A0223144.d	CCB11	CCB	1	02/24/24 12:59 AM
A0223145.d	N063248-003B	SAMP	1	02/24/24 1:03 AM
A0223146.d	N063248-004B	SAMP	1	02/24/24 1:08 AM
A0223147.d	N063248-005C	SAMP	1	02/24/24 1:13 AM
A0223148.d	N063248-006C	SAMP	1	02/24/24 1:17 AM
A0223149.d	N063248-007C	SAMP	1	02/24/24 1:22 AM
A0223150.d	N063248-008C	SAMP	1	02/24/24 1:27 AM
A0223151.d	N063248-010B	SAMP	1	02/24/24 1:31 AM
A0223152.d	N063248-011B	SAMP	1	02/24/24 1:36 AM
A0223153.d	N063249-007C	SAMP	1	02/24/24 1:41 AM
A0223154.d	RINSE	ICAL	1	02/24/24 1:45 AM
A0223155.d	CCV12	CCV	1	02/24/24 1:50 AM
A0223156.d	CCB12	CCB	1	02/24/24 1:54 AM
A0223157.d	N063249-009C	SAMP	1	02/24/24 1:59 AM
A0223158.d	N063249-011C	SAMP	1	02/24/24 2:04 AM
A0223159.d	N063249-013C	SAMP	1	02/24/24 2:08 AM
A0223160.d	N063249-015C	SAMP	1	02/24/24 2:13 AM
A0223161.d	N063249-017C	SAMP	1	02/24/24 2:18 AM
A0223162.d	N063249-018C	SAMP	5	02/24/24 2:22 AM
A0223163.d	RINSE	ICAL	1	02/24/24 2:27 AM
A0223164.d	CCV13	CCV	1	02/24/24 2:32 AM
A0223165.d	CCB13	CCB	1	02/24/24 2:36 AM
A0223166.d	ICSA6	ICSA	1	02/24/24 2:41 AM
A0223167.d	ICSAB6	ICSAB	1	02/24/24 2:46 AM
A0223168.d	MB-107055	MBLK	1	02/24/24 2:50 AM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223169.d	LCS-107055	LCS	1	02/24/24 2:55 AM
A0223170.d	N063295-001B	SAMP	1	02/24/24 2:59 AM
A0223171.d	N063295-002B	SAMP	1	02/24/24 3:04 AM
A0223172.d	N063295-002B	SAMP	5	02/24/24 3:09 AM
A0223173.d	N063295-002B-PS	PS	1	02/24/24 3:13 AM
A0223174.d	N063295-002B-MS	MS	1	02/24/24 3:18 AM
A0223175.d	N063295-002B-MSD	MSD	1	02/24/24 3:23 AM
A0223176.d	N063295-003B	SAMP	1	02/24/24 3:27 AM
A0223177.d	RINSE	ICAL	1	02/24/24 3:32 AM
A0223178.d	CCV14	CCV	1	02/24/24 3:37 AM
A0223179.d	CCB14	CCB	1	02/24/24 3:41 AM
A0223180.d	N063295-005C	SAMP	1	02/24/24 3:46 AM
A0223181.d	N063295-006C	SAMP	1	02/24/24 3:51 AM
A0223182.d	N063295-007C	SAMP	1	02/24/24 3:55 AM
A0223183.d	N063295-008C	SAMP	1	02/24/24 4:00 AM
A0223184.d	N063297-001C	SAMP	1	02/24/24 4:05 AM
A0223185.d	N063297-002B	SAMP	1	02/24/24 4:09 AM
A0223186.d	N063297-003B	SAMP	1	02/24/24 4:14 AM
A0223187.d	N063303-001B	SAMP	1	02/24/24 4:19 AM
A0223188.d	N063303-002B	SAMP	1	02/24/24 4:23 AM
A0223189.d	RINSE	ICAL	1	02/24/24 4:28 AM
A0223190.d	CCV15	CCV	1	02/24/24 4:32 AM
A0223191.d	CCB15	CCB	1	02/24/24 4:37 AM
A0223192.d	N063303-006B	SAMP	5	02/24/24 4:42 AM
A0223193.d	N063303-008B	SAMP	1	02/24/24 4:46 AM
A0223194.d	RINSE	ICAL	1	02/24/24 4:51 AM
A0223195.d	CCV16	CCV	1	02/24/24 4:56 AM
A0223196.d	CCB16	CCB	1	02/24/24 5:00 AM
A0223197.d	ICSA7	ICSA	1	02/24/24 5:05 AM
A0223198.d	ICSAB7	ICSAB	1	02/24/24 5:10 AM
A0223199.d	RINSE	ICAL	1	02/24/24 5:14 AM
A0223200.d	RINSE	ICAL	1	02/24/24 5:19 AM
A0223201.d	RINSE	ICAL	1	02/24/24 5:24 AM
A0223202.d	RINSE	ICAL	1	02/24/24 5:28 AM
A0223203.d	RINSE	ICAL	1	02/24/24 5:33 AM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/21/2024 9:43:52 AM**
Prep End Date: **2/21/2024 2:00:00 PM**
Prep Batch **106992** Prep Code: **3010_W_MSDISS_TPK**

Reviewed/ Date: JRB for 3/13/2024
Initials/ Date: _____
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-01-36**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-106992	Aqueous		25	☐	25	1.000		
MB-106992	Aqueous		25	☐	25	1.000		
N063211-001B	Water	<2	25	☐	25	1.000		
N063211-002B	Water	<2	25	☐	25	1.000		
N063211-003B	Water	<2	25	☐	25	1.000		
N063213-001B	Groundwater	<2	25	☐	25	1.000		
N063213-002B	Groundwater	<2	25	☐	25	1.000		
N063213-003B	Groundwater	<2	25	☐	25	1.000		
N063213-004B	Groundwater	<2	25	☐	25	1.000		
N063213-005B	Groundwater	<2	25	☐	25	1.000		
N063213-006B	Groundwater	<2	25	☐	25	1.000		
N063213-007B	Groundwater	<2	25	☐	25	1.000		
N063213-008B	Groundwater	<2	25	☐	25	1.000		
N063213-008BMS	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/21/2024 9:43:52 AM**
Prep End Date: **2/21/2024 2:00:00 PM**
Prep Batch **106992** Prep Code:**3010_W_MSDISS_TPK**

Reviewed/ Date: JRB 3/13/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-01-36**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063213-008BMSD	Groundwater	<2	25	☐	25	1.000		
N063214-010B	Groundwater	<2	25	☐	25	1.000		
N063214-011B	Groundwater	<2	25	☐	25	1.000		
N063214-012B	Groundwater	<2	25	☐	25	1.000		
N063214-013B	Groundwater	<2	25	☐	25	1.000		
N063214-014B	Groundwater	<2	25	☐	25	1.000		
N063214-016B	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240222A.b
Acq. Date-Time	2024-02-23 11:44:28
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

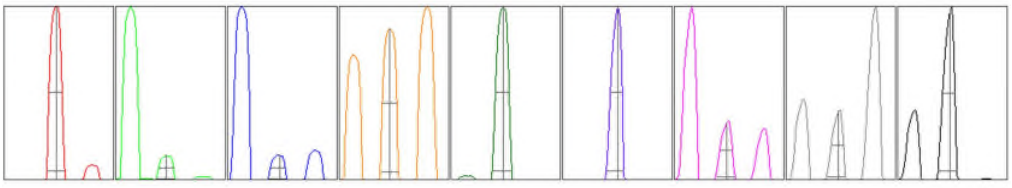
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	4742	47419.90	500.00		3.024	5.000
24	10.00	18706	187057.96	500.00		2.427	5.000
25	10.00	2512	25118.25	500.00		2.587	5.000
26	10.00	3009	30093.30	500.00		2.566	5.000
59	10.00	34030	340296.87	500.00		1.929	5.000
115	10.00	56615	566148.24	500.00		1.847	5.000
206	10.00	12089	120890.72	500.00		2.171	5.000
207	10.00	10015	100148.90	500.00		2.219	5.000
208	10.00	24886	248855.97	500.00		1.967	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.609 %
Doubly Charged	70 / 140 1.407 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	4705.05	8.95	8.90 - 9.10	
24	18796.46	23.90	23.90 - 24.10	
25	2564.26	24.95	24.90 - 25.10	
26	3120.45	25.90	25.90 - 26.10	
59	33894.52	58.95	58.90 - 59.10	
115	56031.92	115.05	114.90 - 115.10	
206	10962.65	205.95	205.90 - 206.10	
207	9673.39	206.95	206.90 - 207.10	
208	24384.42	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.486	0.900	
24	0.41	0.502	0.900	
25	0.41	0.494	0.900	
26	0.41	0.494	0.900	
59	0.38	0.531	0.900	
115	0.34	0.476	0.900	
206	0.36	0.533	0.900	
207	0.35	0.509	0.900	
208	0.35	0.525	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[H2]

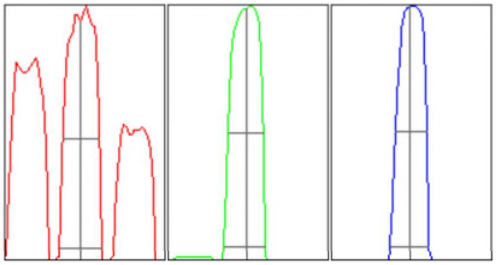
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		356	3555.77			5.984	
59		3819	38194.02			3.844	
115		59590	595903.12			2.349	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.610 %
Doubly Charged	70 / 140 0.333 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	353.80	25.95	25.90 - 26.10	
59	3912.74	59.00	58.90 - 59.10	
115	60486.49	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.70	0.791	0.900	
59	0.67	0.783	0.900	
115	0.60	0.733	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0000	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm		

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[He]

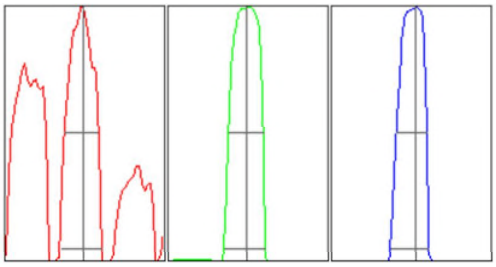
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		138	1375.06			6.914	
59		12115	121151.14			1.919	
115		13480	134797.78			1.974	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.279 %
Doubly Charged	70 / 140 0.982 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	147.01	26.00	25.90 - 26.10	
59	12098.31	59.00	58.90 - 59.10	
115	13611.92	115.10	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.65	0.789	0.900	
59	0.66	0.782	0.900	
115	0.58	0.730	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0000	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240223A

Instrument ID: ICPMS-03

Analyte	Data File	A0223002.d	A0223003.d	A0223004.d	A0223005.d	A0223006.d	A0223007.d	A0223008.d	A0223009.d	A0223010.d	
	Acq. Date-Time	02/23/2024 01:27 PM	02/23/2024 01:32 PM	02/23/2024 01:36 PM	02/23/2024 01:41 PM	02/23/2024 01:46 PM	02/23/2024 01:51 PM	02/23/2024 01:55 PM	02/23/2024 02:00 PM	02/23/2024 02:05 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	72154.9		76342.4	77253.2	77475.2	76063.3	75148	75462.7	76036.5	
55 Mn [2]	CPS	69.9		1458.4	13632.3	27466	54136.3	106561.5	266690.1	547932.1	1.0000
72 Ge (ISTD) [2]	CPS	45744.8	48400.3	48644.2	49579.1	49426.6	48837	47561.1	48045.9	48911.7	
75 As [2]	CPS	19.9	88.8	333.2	3303.5	6714.5	13140.5	26223.8	65989.1	135206.6	1.0000
159 Tb (ISTD) [3]	CPS	2459036.8		2602116.7	2641047.9	2677129.2	2587074.5	2582202.2	2541226.8	2650892	
137 Ba [3]	CPS	50		2356.9	23978.7	49371.8	98171.7	194301.8	479469.4	991663.4	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713612**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.429	0.10	10.00	0	104	90	110				
Barium	10.174	1.0	10.00	0	102	90	110				
Manganese	101.593	0.50	100.0	0	102	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ZZZZZZ** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713614**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.092	0.10	0.1000	0	91.5	80	120				
Barium	1.108	1.0	1.000	0	111	80	120				
Manganese	0.546	0.50	0.5000	0	109	80	120				

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713615**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.039	0.10	20.00	0	100	90	110				
Barium	19.876	1.0	20.00	0	99.4	90	110				
Manganese	19.940	0.50	20.00	0	99.7	90	110				

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713628**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.030	0.10	20.00	0	100	90	110				
Barium	19.984	1.0	20.00	0	99.9	90	110				
Manganese	19.815	0.50	20.00	0	99.1	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713640**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.842	0.10	20.00	0	99.2	90	110				
Barium	19.840	1.0	20.00	0	99.2	90	110				
Manganese	19.773	0.50	20.00	0	98.9	90	110				

Sample ID **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713646**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.766	0.10	20.00	0	98.8	90	110				
Barium	19.918	1.0	20.00	0	99.6	90	110				
Manganese	19.591	0.50	20.00	0	98.0	90	110				

Sample ID **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713658**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.088	0.10	20.00	0	100	90	110				
Barium	20.699	1.0	20.00	0	103	90	110				
Manganese	20.003	0.50	20.00	0	100	90	110				

Sample ID **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713672**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.546	0.10	20.00	0	103	90	110				
Barium	20.654	1.0	20.00	0	103	90	110				
Manganese	20.328	0.50	20.00	0	102	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV6** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713686**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.762	0.10	20.00	0	98.8	90	110				
Barium	21.352	1.0	20.00	0	107	90	110				
Manganese	19.623	0.50	20.00	0	98.1	90	110				

Sample ID **CCV7** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713695**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.067	0.10	20.00	0	100	90	110				
Barium	22.103	1.0	20.00	0	111	90	110				S
Manganese	19.918	0.50	20.00	0	99.6	90	110				

Sample ID **CCV8** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713709**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.122	0.10	20.00	0	101	90	110				
Barium	20.868	1.0	20.00	0	104	90	110				
Manganese	19.912	0.50	20.00	0	99.6	90	110				

Sample ID **CCV9** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713721**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.930	0.10	20.00	0	99.7	90	110				
Barium	21.751	1.0	20.00	0	109	90	110				
Manganese	19.706	0.50	20.00	0	98.5	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

%Rec of Ba in CCV7, CCV12 to CCV16 failed, biased high. However, samples are enclosed by CCV8/CCB8 and CCV10/CCB10.

JRB 3/13/2024

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV10** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713728**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.720	0.10	20.00	0	98.6	90	110				
Barium	21.635	1.0	20.00	0	108	90	110				
Manganese	19.596	0.50	20.00	0	98.0	90	110				

Sample ID **CCV11** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713741**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.953	0.10	20.00	0	99.8	90	110				
Barium	21.740	1.0	20.00	0	109	90	110				
Manganese	19.594	0.50	20.00	0	98.0	90	110				

Sample ID **CCV12** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713752**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.609	0.10	20.00	0	98.0	90	110				
Barium	22.443	1.0	20.00	0	112	90	110				S
Manganese	19.647	0.50	20.00	0	98.2	90	110				

Sample ID **CCV13** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713760**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.787	0.10	20.00	0	98.9	90	110				
Barium	22.496	1.0	20.00	0	112	90	110				S
Manganese	19.731	0.50	20.00	0	98.7	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV14** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713773**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.661	0.10	20.00	0	98.3	90	110				
Barium	21.969	1.0	20.00	0	110	90	110				
Manganese	19.733	0.50	20.00	0	98.7	90	110				

Sample ID **CCV15** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713784**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.424	0.10	20.00	0	97.1	90	110				
Barium	22.620	1.0	20.00	0	113	90	110				S
Manganese	19.746	0.50	20.00	0	98.7	90	110				

Sample ID **CCV16** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713788**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.868	0.10	20.00	0	99.3	90	110				
Barium	22.098	1.0	20.00	0	110	90	110				S
Manganese	20.059	0.50	20.00	0	100	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values ,		

%Rec of Ba in CCV7, CCV12 to CCV16 failed, biased high. However, samples are enclosed by CCV8/CCB8 and CCV10/CCB10.

JRB 3/13/2024

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB** SampType: **ICB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713613**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB1** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713629**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.185	0.50									

Sample ID **CCB2** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713641**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.191	0.50									

Sample ID **CCB3** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713647**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.184	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB4** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713660**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB5** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713673**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB6** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713687**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB7** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713696**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB8** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713710**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB9** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713722**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB10** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713729**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB11** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713742**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB12** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713753**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB13** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713761**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB14** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713774**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB15** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713785**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB16**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713789**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713616**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713617**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.604	0.10	20.00	0	103	80	120				
Barium	20.398	1.0	20.00	0	102	80	120				
Manganese	20.364	0.50	20.00	0	102	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713661**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.070	0.50									

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713662**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.469	0.10	20.00	0	102	80	120				
Barium	20.619	1.0	20.00	0	103	80	120				
Manganese	20.279	0.50	20.00	0	101	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA3** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713674**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.060	0.50									

Sample ID **ICSAB3** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713675**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.275	0.10	20.00	0	101	80	120				
Barium	20.581	1.0	20.00	0	103	80	120				
Manganese	20.190	0.50	20.00	0	101	80	120				

Sample ID **ICSA4** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713697**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.066	0.50									

Sample ID **ICSAB4** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713698**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.323	0.10	20.00	0	102	80	120				
Barium	22.109	1.0	20.00	0	111	80	120				
Manganese	20.315	0.50	20.00	0	102	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA5** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713730**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.072	0.50									

Sample ID **ICSAB5** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713731**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.984	0.10	20.00	0	99.9	80	120				
Barium	21.848	1.0	20.00	0	109	80	120				
Manganese	20.009	0.50	20.00	0	100	80	120				

Sample ID **ICSA6** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713762**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.061	0.50									

Sample ID **ICSAB6** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713763**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.902	0.10	20.00	0	99.5	80	120				
Barium	22.348	1.0	20.00	0	112	80	120				
Manganese	20.403	0.50	20.00	0	102	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA7**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSA**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713790**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.073	0.50									

Sample ID **ICSAB7**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSAB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713791**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.302	0.10	20.00	0	102	80	120				
Barium	22.309	1.0	20.00	0	112	80	120				
Manganese	20.288	0.50	20.00	0	101	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	2459036.8	2459036.8	100	PASS	30-150	72154.9	72154.9	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	2598836.2	2459036.8	105.69	PASS	30-150	75819.9	72154.9	105.08	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	2602116.7	2459036.8	105.82	PASS	30-150	76342.4	72154.9	105.8	PASS	30-150
Std3-5/50 ppb	ICAL	1	2641047.9	2459036.8	107.4	PASS	30-150	77253.2	72154.9	107.07	PASS	30-150
Std4-10/100 ppb	ICAL	1	2677129.2	2459036.8	108.87	PASS	30-150	77475.2	72154.9	107.37	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	2587074.5	2459036.8	105.21	PASS	30-150	76063.3	72154.9	105.42	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	2582202.2	2459036.8	105.01	PASS	30-150	75148	72154.9	104.15	PASS	30-150
Std7-100/1000 ppb	ICAL	1	2541226.8	2459036.8	103.34	PASS	30-150	75462.7	72154.9	104.58	PASS	30-150
Std8-200/2000 ppb	ICAL	1	2650892	2459036.8	107.8	PASS	30-150	76036.5	72154.9	105.38	PASS	30-150
ICV	ICV	1	2483190.9	2459036.8	100.98	PASS	30-150	72025.6	72154.9	99.82	PASS	30-150
ICB	ICB	1	2571855.2	2459036.8	104.59	PASS	30-150	74886.9	72154.9	103.79	PASS	30-150
LLICV1	LLICV	1	2612657.7	2459036.8	106.25	PASS	30-150	75342.3	72154.9	104.42	PASS	30-150
MLCCV	CCV	1	2664630.7	2459036.8	108.36	PASS	30-150	76073.3	72154.9	105.43	PASS	30-150
ICSA1	ICSA	1	2706916.7	2459036.8	110.08	PASS	30-150	76901.4	72154.9	106.58	PASS	30-150
ICSAB1	ICSAB	1	2593782.3	2459036.8	105.48	PASS	30-150	73937.1	72154.9	102.47	PASS	30-150
MDL 4	ICAL	1	2670548.8	2459036.8	108.6	PASS	30-150	76134.7	72154.9	105.52	PASS	30-150
CCV1	CCV	1	2685857.4	2459036.8	109.22	PASS	30-150	78633	72154.9	108.98	PASS	30-150
CCB1	CCB	1	2616529	2459036.8	106.4	PASS	30-150	75792	72154.9	105.04	PASS	30-150
CCV2	CCV	1	2692999.6	2459036.8	109.51	PASS	30-150	77108	72154.9	106.86	PASS	30-150
CCB2	CCB	1	2601268.7	2459036.8	105.78	PASS	30-150	75349	72154.9	104.43	PASS	30-150
CCV3	CCV	1	2693223.1	2459036.8	109.52	PASS	30-150	77729.8	72154.9	107.73	PASS	30-150
CCB3	CCB	1	2631123.9	2459036.8	107	PASS	30-150	76196.1	72154.9	105.6	PASS	30-150
CCV4	CCV	1	2717325.6	2459036.8	110.5	PASS	30-150	77725.3	72154.9	107.72	PASS	30-150
CCB4	CCB	1	2589231	2459036.8	105.29	PASS	30-150	74891.4	72154.9	103.79	PASS	30-150
CCB4	CCB	1	2662733.8	2459036.8	108.28	PASS	30-150	76863.5	72154.9	106.53	PASS	30-150
ICSA2	ICSA	1	2702443.6	2459036.8	109.9	PASS	30-150	78266.7	72154.9	108.47	PASS	30-150
ICSAB2	ICSAB	1	2720121.5	2459036.8	110.62	PASS	30-150	78381.7	72154.9	108.63	PASS	30-150
CCV5	CCV	1	2751728.2	2459036.8	111.9	PASS	30-150	79154.2	72154.9	109.7	PASS	30-150
CCB5	CCB	1	2725557.6	2459036.8	110.84	PASS	30-150	77605.8	72154.9	107.55	PASS	30-150
ICSA3	ICSA	1	2777216.4	2459036.8	112.94	PASS	30-150	80012.9	72154.9	110.89	PASS	30-150
ICSAB3	ICSAB	1	2801833.3	2459036.8	113.94	PASS	30-150	80477.2	72154.9	111.53	PASS	30-150
CCV6	CCV	1	2620084.7	2459036.8	106.55	PASS	30-150	90893.6	72154.9	125.97	PASS	30-150
CCB6	CCB	1	2602736.8	2459036.8	105.84	PASS	30-150	86061.5	72154.9	119.27	PASS	30-150
CCV7	CCV	1	2611394.6	2459036.8	106.2	PASS	30-150	95356	72154.9	132.15	PASS	30-150
CCB7	CCB	1	2549129.6	2459036.8	103.66	PASS	30-150	92681.1	72154.9	128.45	PASS	30-150
ICSA4	ICSA	1	2589679.3	2459036.8	105.31	PASS	30-150	92615	72154.9	128.36	PASS	30-150
ICSAB4	ICSAB	1	2610405.2	2459036.8	106.16	PASS	30-150	91494.6	72154.9	126.8	PASS	30-150
MB-106992	MBLK	1	2578409	2459036.8	104.85	PASS	30-150	88992.3	72154.9	123.34	PASS	30-150
LCS-106992	LCS	1	2669875.1	2459036.8	108.57	PASS	30-150	88836	72154.9	123.12	PASS	30-150
N063211-001B	SAMP	10	2644655.7	2459036.8	107.55	PASS	30-150	84678.8	72154.9	117.36	PASS	30-150
N063211-002B	SAMP	10	2665428.8	2459036.8	108.39	PASS	30-150	83995.4	72154.9	116.41	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
N063211-003B	SAMP	100	2668003.4	2459036.8	108.5	PASS	30-150	83955.3	72154.9	116.35	PASS	30-150
N063213-001B	SAMP	10	2783649.5	2459036.8	113.2	PASS	30-150	82623.1	72154.9	114.51	PASS	30-150
N063213-002B	SAMP	10	2700060.8	2459036.8	109.8	PASS	30-150	81991	72154.9	113.63	PASS	30-150
N063213-003B	SAMP	10	2711242.4	2459036.8	110.26	PASS	30-150	81573.6	72154.9	113.05	PASS	30-150
N063213-004B	SAMP	10	2698074.2	2459036.8	109.72	PASS	30-150	81657.2	72154.9	113.17	PASS	30-150
N063213-007B	SAMP	10	2699625.5	2459036.8	109.78	PASS	30-150	81788.2	72154.9	113.35	PASS	30-150
CCV8	CCV	1	2843491.6	2459036.8	115.63	PASS	30-150	83057.4	72154.9	115.11	PASS	30-150
CCB8	CCB	1	2793886	2459036.8	113.62	PASS	30-150	81017.5	72154.9	112.28	PASS	30-150
N063213-008B	SAMP	1	1758370.2	2459036.8	71.51	PASS	30-150	76428.4	72154.9	105.92	PASS	30-150
N063213-008B	SAMP	5	2331158.4	2459036.8	94.8	PASS	30-150	85786.5	72154.9	118.89	PASS	30-150
N063213-008B-PS	PS	1	1815526.7	2459036.8	73.83	PASS	30-150	76289.8	72154.9	105.73	PASS	30-150
N063213-008BMS	MS	1	1786393.7	2459036.8	72.65	PASS	30-150	77344.7	72154.9	107.19	PASS	30-150
N063213-008BMSD	MSD	1	1772892.6	2459036.8	72.1	PASS	30-150	78037.9	72154.9	108.15	PASS	30-150
N063214-010B	SAMP	1	2473684.2	2459036.8	100.6	PASS	30-150	91614.2	72154.9	126.97	PASS	30-150
N063214-011B	SAMP	1	2079295.5	2459036.8	84.56	PASS	30-150	82348.5	72154.9	114.13	PASS	30-150
N063214-011B	SAMP	10	2399646.1	2459036.8	97.58	PASS	30-150	92612.7	72154.9	128.35	PASS	30-150
N063214-012B	SAMP	1	1920347.2	2459036.8	78.09	PASS	30-150	79637.7	72154.9	110.37	PASS	30-150
N063214-012B	SAMP	10	2293727.2	2459036.8	93.28	PASS	30-150	90907.9	72154.9	125.99	PASS	30-150
CCV9	CCV	1	2466970.5	2459036.8	100.32	PASS	30-150	95607.4	72154.9	132.5	PASS	30-150
CCB9	CCB	1	2427889.6	2459036.8	98.73	PASS	30-150	91740.5	72154.9	127.14	PASS	30-150
N063214-013B	SAMP	1	1892156.3	2459036.8	76.95	PASS	30-150	76657.3	72154.9	106.24	PASS	30-150
N063214-013B	SAMP	10	2262448.7	2459036.8	92.01	PASS	30-150	90302.6	72154.9	125.15	PASS	30-150
N063214-014B	SAMP	1	2439417.2	2459036.8	99.2	PASS	30-150	86302.8	72154.9	119.61	PASS	30-150
N063214-016B	SAMP	1	2142949.5	2459036.8	87.15	PASS	30-150	80097.7	72154.9	111.01	PASS	30-150
N063214-016B	SAMP	10	2415583.6	2459036.8	98.23	PASS	30-150	88046.1	72154.9	122.02	PASS	30-150
CCV10	CCV	1	2516120	2459036.8	102.32	PASS	30-150	91776.3	72154.9	127.19	PASS	30-150
CCB10	CCB	1	2478120.7	2459036.8	100.78	PASS	30-150	87906.6	72154.9	121.83	PASS	30-150
ICSA5	ICSA	1	2569346.3	2459036.8	104.49	PASS	30-150	88163.5	72154.9	122.19	PASS	30-150
ICSAB5	ICSAB	1	2581977.3	2459036.8	105	PASS	30-150	88326.5	72154.9	122.41	PASS	30-150
CCV11	CCV	1	2506644.7	2459036.8	101.94	PASS	30-150	91685.6	72154.9	127.07	PASS	30-150
CCB11	CCB	1	2482422	2459036.8	100.95	PASS	30-150	88643.6	72154.9	122.85	PASS	30-150
CCV12	CCV	1	2529154.3	2459036.8	102.85	PASS	30-150	95484.6	72154.9	132.33	PASS	30-150
CCB12	CCB	1	2495543.3	2459036.8	101.48	PASS	30-150	92386	72154.9	128.04	PASS	30-150
CCV13	CCV	1	2513030.1	2459036.8	102.2	PASS	30-150	92046.4	72154.9	127.57	PASS	30-150
CCB13	CCB	1	2519036.6	2459036.8	102.44	PASS	30-150	89338.5	72154.9	123.81	PASS	30-150
ICSA6	ICSA	1	2614372	2459036.8	106.32	PASS	30-150	90478.1	72154.9	125.39	PASS	30-150
ICSAB6	ICSAB	1	2608829.3	2459036.8	106.09	PASS	30-150	89529.4	72154.9	124.08	PASS	30-150
CCV14	CCV	1	2587708.2	2459036.8	105.23	PASS	30-150	89028.2	72154.9	123.38	PASS	30-150
CCB14	CCB	1	2546233.3	2459036.8	103.55	PASS	30-150	86002.1	72154.9	119.19	PASS	30-150
CCV15	CCV	1	2561437.2	2459036.8	104.16	PASS	30-150	91992.8	72154.9	127.49	PASS	30-150
CCB15	CCB	1	2532460.5	2459036.8	102.99	PASS	30-150	89487.3	72154.9	124.02	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
CCV16	CCV	1	2573924.8	2459036.8	104.67	PASS	30-150	88543.2	72154.9	122.71	PASS	30-150
CCB16	CCB	1	2449049.4	2459036.8	99.59	PASS	30-150	86282.5	72154.9	119.58	PASS	30-150
ICSA7	ICSA	1	2592985.5	2459036.8	105.45	PASS	30-150	87350.2	72154.9	121.06	PASS	30-150
ICSAB7	ICSAB	1	2598872.3	2459036.8	105.69	PASS	30-150	87996.9	72154.9	121.96	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	45744.8	45744.8	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	48400.3	45744.8	105.81	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	48644.2	45744.8	106.34	PASS	30-150
Std3-5/50 ppb	ICAL	1	49579.1	45744.8	108.38	PASS	30-150
Std4-10/100 ppb	ICAL	1	49426.6	45744.8	108.05	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	48837	45744.8	106.76	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	47561.1	45744.8	103.97	PASS	30-150
Std7-100/1000 ppb	ICAL	1	48045.9	45744.8	105.03	PASS	30-150
Std8-200/2000 ppb	ICAL	1	48911.7	45744.8	106.92	PASS	30-150
ICV	ICV	1	45694.7	45744.8	99.89	PASS	30-150
ICB	ICB	1	47418.4	45744.8	103.66	PASS	30-150
LLICV1	LLICV	1	47848.6	45744.8	104.6	PASS	30-150
MLCCV	CCV	1	48577.4	45744.8	106.19	PASS	30-150
ICSA1	ICSA	1	49223.8	45744.8	107.61	PASS	30-150
ICSAB1	ICSAB	1	47285.8	45744.8	103.37	PASS	30-150
MDL 4	ICAL	1	48374.5	45744.8	105.75	PASS	30-150
CCV1	CCV	1	49639.3	45744.8	108.51	PASS	30-150
CCB1	CCB	1	48172.8	45744.8	105.31	PASS	30-150
CCV2	CCV	1	49189.2	45744.8	107.53	PASS	30-150
CCB2	CCB	1	48102.5	45744.8	105.15	PASS	30-150
CCV3	CCV	1	48987.5	45744.8	107.09	PASS	30-150
CCB3	CCB	1	48038	45744.8	105.01	PASS	30-150
CCV4	CCV	1	49443.3	45744.8	108.09	PASS	30-150
CCB4	CCB	1	48802.5	45744.8	106.68	PASS	30-150
CCB4	CCB	1	49080	45744.8	107.29	PASS	30-150
ICSA2	ICSA	1	49857.9	45744.8	108.99	PASS	30-150
ICSAB2	ICSAB	1	49893.5	45744.8	109.07	PASS	30-150
CCV5	CCV	1	50337	45744.8	110.04	PASS	30-150
CCB5	CCB	1	49582.6	45744.8	108.39	PASS	30-150
ICSA3	ICSA	1	50856.5	45744.8	111.17	PASS	30-150
ICSAB3	ICSAB	1	51296.8	45744.8	112.14	PASS	30-150
CCV6	CCV	1	56200.5	45744.8	122.86	PASS	30-150
CCB6	CCB	1	54404.5	45744.8	118.93	PASS	30-150
CCV7	CCV	1	58732.8	45744.8	128.39	PASS	30-150
CCB7	CCB	1	57501.7	45744.8	125.7	PASS	30-150
ICSA4	ICSA	1	58294.4	45744.8	127.43	PASS	30-150
ICSAB4	ICSAB	1	57988.9	45744.8	126.77	PASS	30-150
MB-106992	MBLK	1	55814.7	45744.8	122.01	PASS	30-150
LCS-106992	LCS	1	55633	45744.8	121.62	PASS	30-150
N063211-001B	SAMP	10	54459.1	45744.8	119.05	PASS	30-150
N063211-002B	SAMP	10	53471.4	45744.8	116.89	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
N063211-003B	SAMP	100	53327.6	45744.8	116.58	PASS	30-150
N063213-001B	SAMP	10	53196.1	45744.8	116.29	PASS	30-150
N063213-002B	SAMP	10	52373.5	45744.8	114.49	PASS	30-150
N063213-003B	SAMP	10	51976.6	45744.8	113.62	PASS	30-150
N063213-004B	SAMP	10	52272.2	45744.8	114.27	PASS	30-150
N063213-007B	SAMP	10	51909.8	45744.8	113.48	PASS	30-150
CCV8	CCV	1	53384.5	45744.8	116.7	PASS	30-150
CCB8	CCB	1	52609.8	45744.8	115.01	PASS	30-150
N063213-008B	SAMP	1	45266.8	45744.8	98.96	PASS	30-150
N063213-008B	SAMP	5	52194	45744.8	114.1	PASS	30-150
N063213-008B-PS	PS	1	44450.2	45744.8	97.17	PASS	30-150
N063213-008BMS	MS	1	44872.5	45744.8	98.09	PASS	30-150
N063213-008BMSD	MSD	1	45346	45744.8	99.13	PASS	30-150
N063214-010B	SAMP	1	56756.9	45744.8	124.07	PASS	30-150
N063214-011B	SAMP	1	49219.3	45744.8	107.6	PASS	30-150
N063214-011B	SAMP	10	56592	45744.8	123.71	PASS	30-150
N063214-012B	SAMP	1	46053.5	45744.8	100.67	PASS	30-150
N063214-012B	SAMP	10	55609.6	45744.8	121.56	PASS	30-150
CCV9	CCV	1	58132.7	45744.8	127.08	PASS	30-150
CCB9	CCB	1	57913.2	45744.8	126.6	PASS	30-150
N063214-013B	SAMP	1	44942.6	45744.8	98.25	PASS	30-150
N063214-013B	SAMP	10	54697.7	45744.8	119.57	PASS	30-150
N063214-014B	SAMP	1	53260.8	45744.8	116.43	PASS	30-150
N063214-016B	SAMP	1	48809.2	45744.8	106.7	PASS	30-150
N063214-016B	SAMP	10	55354.3	45744.8	121.01	PASS	30-150
CCV10	CCV	1	57158.2	45744.8	124.95	PASS	30-150
CCB10	CCB	1	55358.9	45744.8	121.02	PASS	30-150
ICSA5	ICSA	1	55918.6	45744.8	122.24	PASS	30-150
ICSAB5	ICSAB	1	55404.5	45744.8	121.12	PASS	30-150
CCV11	CCV	1	57334.6	45744.8	125.34	PASS	30-150
CCB11	CCB	1	55259.7	45744.8	120.8	PASS	30-150
CCV12	CCV	1	59541.2	45744.8	130.16	PASS	30-150
CCB12	CCB	1	57170.5	45744.8	124.98	PASS	30-150
CCV13	CCV	1	58137.3	45744.8	127.09	PASS	30-150
CCB13	CCB	1	56121.4	45744.8	122.68	PASS	30-150
ICSA6	ICSA	1	57407	45744.8	125.49	PASS	30-150
ICSAB6	ICSAB	1	56947.6	45744.8	124.49	PASS	30-150
CCV14	CCV	1	56052.3	45744.8	122.53	PASS	30-150
CCB14	CCB	1	54813.7	45744.8	119.82	PASS	30-150
CCV15	CCV	1	57894.2	45744.8	126.56	PASS	30-150
CCB15	CCB	1	56124.8	45744.8	122.69	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
CCV16	CCV	1	56385.6	45744.8	123.26	PASS	30-150
CCB16	CCB	1	54687.6	45744.8	119.55	PASS	30-150
ICSA7	ICSA	1	56307.6	45744.8	123.09	PASS	30-150
ICSAB7	ICSAB	1	55771.3	45744.8	121.92	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.: N063214
Test Method: EPA 6020
Analysis Date: 2/23/2024

Matrix: Groundwater
Batch No.: 106992

Instrument ID: ICPMS-03
Instrument Description: Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063213-008B DT 5x	Arsenic	As	µg/L	5.115809	PASS	5.415053	5.53%	10
N063213-008B DT 5x	Barium	Ba	µg/L	123.3386	PASS	122.484	0.70%	10
N063213-008B DT 5x	Manganese	Mn	µg/L	64.02896	PASS	62.42235	2.57%	10

Reviewed by:

JRB 3/13/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063214
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **N063213-008B-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ZZZZZZ** Batch ID: **106992** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5713713**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	15.093	0.10	10.00	5.415	96.8	80	120				
Barium	131.345	1.0	10.00	122.5	88.6	80	120				
Manganese	153.172	0.50	100.0	62.42	90.7	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number : 503100
Report Level : II
Report Date : 03/12/2024

Analytical Report *prepared for:*

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Location: N063247

Authorized for release by:

Quynhgiao Le, Project Manager
714-7716900
quynhgiao.le@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Sonny Lorenzo
Asset Laboratories
11110 Artersia
Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 503100
Location: N063247
Date Received: 02/23/24

Sample ID	Lab ID	Collected	Matrix
N063247-001A / MW-52D-Q124	503100-001	02/21/24 12:36	Water
N063247-002A / MW-52M-Q124	503100-002	02/21/24 11:30	Water
N063247-003A / MW-52S-Q124	503100-003	02/21/24 11:58	Water
N063247-004A / MW-53D-Q124	503100-004	02/21/24 10:47	Water
N063247-005A / MW-53M-Q124	503100-005	02/21/24 09:52	Water
N063247-006A / MW-53S-Q124	503100-006	02/21/24 10:20	Water
N063247-007A / MW-90-031-Q124	503100-007	02/21/24 14:47	Water
N063247-008A / ER-03-LF10-Q124	503100-008	02/21/24 11:51	Water
N063247-009A / ER-03-LF30-Q124	503100-009	02/21/24 12:26	Water
N063247-010A / ER-03-LF50-Q124	503100-010	02/21/24 12:52	Water
N063247-011A / ER-03-Q124	503100-011	02/21/24 13:46	Water
N063247-012A / MW-926-Q124	503100-012	02/21/24 12:01	Water

Case Narrative

Asset Laboratories 11110 Artersia Blvd, Suite B Cerritos, CA 90703 Sonny Lorenzo	Lab Job Number: 503100 Location: N063247 Date Received: 02/23/24

This data package contains sample and QC results for twelve water samples, requested for the above referenced project on 02/23/24. The samples were received cold and intact.

Total Organic Carbon by IR (SM 5310B):

- Level II is also requested.
- No analytical problems were encountered.

5703100

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Enthalpy Analytical
931 W. Barkley Ave.
Orange, CA 92868

TEL: (714) 771-6900
FAX: (714) 538-1209
Acct #:

Field Sampler: Riggie Tep

22-Feb-24

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				SM5310B		
N063247-001A / MW-52D-Q124	Groundwater	2/21/2024 12:36:00 PM	8OZA	1		
N063247-002A / MW-52M-Q124	Groundwater	2/21/2024 11:30:00 AM	8OZA	1		
N063247-003A / MW-52S-Q124	Groundwater	2/21/2024 11:58:00 AM	8OZA	1		
N063247-004A / MW-53D-Q124	Groundwater	2/21/2024 10:47:00 AM	8OZA	1		
N063247-005A / MW-53M-Q124	Groundwater	2/21/2024 9:52:00 AM	8OZA	1		
N063247-006A / MW-53S-Q124	Groundwater	2/21/2024 10:20:00 AM	8OZA	1		
N063247-007A / MW-90-031-Q124	Groundwater	2/21/2024 2:47:00 PM	8OZA	1		
N063247-008A / ER-03-LF10-Q124	Groundwater	2/21/2024 11:51:00 AM	8OZA	1		
N063247-009A / ER-03-LF30-Q124	Groundwater	2/21/2024 12:26:00 PM	8OZA	1		
N063247-010A / ER-03-LF50-Q124	Groundwater	2/21/2024 12:52:00 PM	8OZA	1		
N063247-011A / ER-03-Q124	Groundwater	2/21/2024 1:46:00 PM	8OZA	1		
N063247-012A / MW-926-Q124	Groundwater	2/21/2024 12:01:00 PM	8OZA	1		

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N63247A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for TOC by SM5310B. EDD requirement Labspec7 edata.

GLS #: 560988423

		Date/Time			Date/Time
Relinquished by:	YRodriguez	2/22/2024 1630	**Received by:**		2/23/24 1200
Relinquished by:			**Received by:**		

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Asset Laboratories Project: N063247

Date Received: 2/23/24 Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 4.2 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☑ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 2.1 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____

☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: _____ Date: 2/23/24

GLS.

800-322-5555
www.gls-us.com

2.1/4.2

Ship From
ADVANCED TECHNOLOGY
LABORATORIES, INC.
MARLON CARTIN
3151 W. POST RD.
LAS VEGAS, NV 89118

Ship To
ENHALPY ANALYTICAL
SAMPLE RECEIVING
806 N. BATAVIA
ORANGE, CA 92868

COD: $0.00
Weight: 0 lb(s)
Reference:

Delivery Instructions:

Signature Type: STANDARD

Tracking #: 560988423

PDS

ORANGE

S10219D

4250229

ORC CA927-RD0

Print Date: 2/22/2024 12:57 PM

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.
Step 2: Fold this page in half.
Step 3: Securely attach this label to your package and do not cover the barcode.

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all of the General Logistics Systems US, Inc. (GLS) service terms & conditions including, but not limited to; limits of liability, declared value conditions, and claim procedures which are available on our website at www.gls-us.com.

ENTHALPY ANALYTICAL

Analysis Results for 503100

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 503100
Location: N063247
Date Received: 02/23/24

Sample ID: N063247-001A / MW-52D-Q124 **Lab ID:** 503100-001 **Collected:** 02/21/24 12:36 **Matrix:** Water

503100-001 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**3.4**		mg/L	1.0	1	334086	03/06/24	03/06/24	EPL

Sample ID: N063247-002A / MW-52M-Q124 **Lab ID:** 503100-002 **Collected:** 02/21/24 11:30 **Matrix:** Water

503100-002 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.7**		mg/L	1.0	1	334086	03/06/24	03/06/24	EPL

Sample ID: N063247-003A / MW-52S-Q124 **Lab ID:** 503100-003 **Collected:** 02/21/24 11:58 **Matrix:** Water

503100-003 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**38**		mg/L	1.0	1	334086	03/06/24	03/06/24	EPL

Sample ID: N063247-004A / MW-53D-Q124 **Lab ID:** 503100-004 **Collected:** 02/21/24 10:47 **Matrix:** Water

503100-004 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.0**		mg/L	1.0	1	334086	03/06/24	03/06/24	EPL

Sample ID: N063247-005A / MW-53M-Q124 **Lab ID:** 503100-005 **Collected:** 02/21/24 09:52 **Matrix:** Water

503100-005 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**5.0**		mg/L	1.0	1	334086	03/06/24	03/06/24	EPL

Sample ID: N063247-006A / MW-53S-Q124 **Lab ID:** 503100-006 **Collected:** 02/21/24 10:20 **Matrix:** Water

503100-006 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**5.8**		mg/L	1.0	1	334086	03/06/24	03/06/24	EPL

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 503100

Sample ID: N063247-007A / MW-90-031-Q124 **Lab ID:** 503100-007 **Matrix:** Water **Collected:** 02/21/24 14:47

503100-007 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**25**		mg/L	1.0	1	334086	03/06/24	03/06/24	EPL

Sample ID: N063247-008A / ER-03-LF10-Q124 **Lab ID:** 503100-008 **Matrix:** Water **Collected:** 02/21/24 11:51

503100-008 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.0**		mg/L	1.0	1	334086	03/06/24	03/06/24	EPL

Sample ID: N063247-009A / ER-03-LF30-Q124 **Lab ID:** 503100-009 **Matrix:** Water **Collected:** 02/21/24 12:26

503100-009 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	ND		mg/L	1.0	1	334086	03/06/24	03/06/24	EPL

Sample ID: N063247-010A / ER-03-LF50-Q124 **Lab ID:** 503100-010 **Matrix:** Water **Collected:** 02/21/24 12:52

503100-010 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	ND		mg/L	1.0	1	334086	03/06/24	03/06/24	EPL

Sample ID: N063247-011A / ER-03-Q124 **Lab ID:** 503100-011 **Matrix:** Water **Collected:** 02/21/24 13:46

503100-011 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	ND		mg/L	1.0	1	334086	03/06/24	03/06/24	EPL

Sample ID: N063247-012A / MW-926-Q124 **Lab ID:** 503100-012 **Matrix:** Water **Collected:** 02/21/24 12:01

503100-012 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**5.5**		mg/L	1.0	1	334533	03/05/24	03/05/24	EPL

ND Not Detected

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type: Blank **Lab ID: QC1132124** **Batch: 334086**
Matrix: Water **Method: SM 5310B**

QC1132124 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Total Organic Carbon	ND		mg/L	1.0	03/05/24	03/05/24

Type: Lab Control Sample **Lab ID: QC1132125** **Batch: 334086**
Matrix: Water **Method: SM 5310B**

QC1132125 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Total Organic Carbon	25.28	25.00	mg/L	101%		80-120

Type: Matrix Spike **Lab ID: QC1132126** **Batch: 334086**
Matrix (Source ID): Water (503052-001) **Method: SM 5310B**

QC1132126 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Total Organic Carbon	31.28	3.613	25.00	mg/L	111%		80-120	1

Type: Matrix Spike Duplicate **Lab ID: QC1132127** **Batch: 334086**
Matrix (Source ID): Water (503052-001) **Method: SM 5310B**

QC1132127 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Total Organic Carbon	30.73	3.613	25.00	mg/L	108%		80-120	2	20	1

Type: Blank **Lab ID: QC1133656** **Batch: 334533**
Matrix: Water **Method: SM 5310B**

QC1133656 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Total Organic Carbon	ND		mg/L	1.0	03/05/24	03/05/24

Type: Lab Control Sample **Lab ID: QC1133657** **Batch: 334533**
Matrix: Water **Method: SM 5310B**

QC1133657 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Total Organic Carbon	24.83	25.00	mg/L	99%		80-120

Type: Matrix Spike **Lab ID: QC1133658** **Batch: 334533**
Matrix (Source ID): Water (503100-012) **Method: SM 5310B**

QC1133658 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Total Organic Carbon	29.36	5.501	25.00	mg/L	95%		80-120	1

ENTHALPY ANALYTICAL

Batch QC

Type:	**Matrix Spike Duplicate**	**Lab ID:**	**QC1133659**	**Batch:**	**334533**
Matrix (Source ID):	**Water (503100-012)**	**Method:**	**SM 5310B**		

QC1133659 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Total Organic Carbon	29.48	5.501	25.00	mg/L	96%		80-120	0	20	1

ND Not Detected

ARCADIS

Project: PG&E Topock - non routine

Project No.: 30211191

ASSET Laboratories Work Order:

N063248

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063248

Item	Page
Cover Page	1-7
Analytical Result/QC Summary Reports	8-58
Sample Receiving Items	59-72
List of Analysts	73
Raw Data	
SM 2540C	74-83
EPA 218.6	84-228
SM 2320 B	229-238
EPA 300.0	239-292
EPA 6010B_Dissolved	293-358
EPA 6010B_Total	359-395
EPA 6020_Dissolved	396-524

March 12, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063248

RE: PG&E Topock - non routine, 30211191

Attention: Dan Bush

Enclosed are the results for sample(s) received on February 21, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - non routine, 30211191
Lab Order: N063248

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Samples N063248-001 (ER-01-LF10-Q124), N063248-003 (ER-02-LF10-Q124), N063248-005 (ER-03-LF10-Q124), N063248-006 (ER-03-LF30-Q124), N063248-007 (ER-03-LF50-Q124) were not analyzed as per correspondence.

Subcontracted Analyses:

Nitrate/Nitrite and Ammonia were subcontracted to BC labs - Bakersfield, CA.

Analytical Comments for EPA 218.6:

Because the results for total dissolved chromium (1.0 ug/L) and hexavalent chromium (0 ug/L) for sample N063248-008 (ER-03-Q124) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Analytical Comments for EPA 300.0:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Nitrogen, Nitrite in QC samples N063248-005BMS and N063248-005BMSD possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6010B_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Iron in QC samples N063248-005C-MS1 and N063248-005C-MSD1 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike passed acceptance criteria. The associated Laboratory

Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Sodium in QC samples N063248-006C-MS2 and N063248-006C-MSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike Duplicate (MSD) is outside recovery criteria for Sodium in QC sample N063248-005C-MSD1 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6010B_Total:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Iron in QC samples N063248-005D-MS and N063248-005D-MSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (1.0 ug/L) and hexavalent chromium (0 ug/L) for sample N063248-008 (ER-03-Q124) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 1.1 and 0.11 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Chromium in QC samples N063248-002B-MS and N063248-002B-MSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike Duplicate (MSD) is outside recovery criteria for Barium in QC sample N063248-002B-MSD possibly due to matrix interference. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

ASSET Laboratories

Date: *12-Mar-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - non routine, 30211191
Lab Order: N063248
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063248-001A	ER-01-LF10-Q124	Groundwater	2/21/2024 8:50:00 AM	2/21/2024	3/12/2024
N063248-001B	ER-01-LF10-Q124	Groundwater	2/21/2024 8:50:00 AM	2/21/2024	3/12/2024
N063248-002A	ER-01-Q124	Groundwater	2/21/2024 9:44:00 AM	2/21/2024	3/12/2024
N063248-002B	ER-01-Q124	Groundwater	2/21/2024 9:44:00 AM	2/21/2024	3/12/2024
N063248-003A	ER-02-LF10-Q124	Groundwater	2/21/2024 10:24:00 AM	2/21/2024	3/12/2024
N063248-003B	ER-02-LF10-Q124	Groundwater	2/21/2024 10:24:00 AM	2/21/2024	3/12/2024
N063248-004A	ER-02-Q124	Groundwater	2/21/2024 11:11:00 AM	2/21/2024	3/12/2024
N063248-004B	ER-02-Q124	Groundwater	2/21/2024 11:11:00 AM	2/21/2024	3/12/2024
N063248-005A	ER-03-LF10-Q124	Groundwater	2/21/2024 11:51:00 AM	2/21/2024	3/12/2024
N063248-005B	ER-03-LF10-Q124	Groundwater	2/21/2024 11:51:00 AM	2/21/2024	3/12/2024
N063248-005C	ER-03-LF10-Q124	Groundwater	2/21/2024 11:51:00 AM	2/21/2024	3/12/2024
N063248-005D	ER-03-LF10-Q124	Groundwater	2/21/2024 11:51:00 AM	2/21/2024	3/12/2024
N063248-005E	ER-03-LF10-Q124	Groundwater	2/21/2024 11:51:00 AM	2/21/2024	3/12/2024
N063248-005F	ER-03-LF10-Q124	Groundwater	2/21/2024 11:51:00 AM	2/21/2024	3/12/2024
N063248-005G	ER-03-LF10-Q124	Groundwater	2/21/2024 11:51:00 AM	2/21/2024	3/12/2024
N063248-006A	ER-03-LF30-Q124	Groundwater	2/21/2024 12:26:00 PM	2/21/2024	3/12/2024
N063248-006B	ER-03-LF30-Q124	Groundwater	2/21/2024 12:26:00 PM	2/21/2024	3/12/2024
N063248-006C	ER-03-LF30-Q124	Groundwater	2/21/2024 12:26:00 PM	2/21/2024	3/12/2024
N063248-006D	ER-03-LF30-Q124	Groundwater	2/21/2024 12:26:00 PM	2/21/2024	3/12/2024
N063248-006E	ER-03-LF30-Q124	Groundwater	2/21/2024 12:26:00 PM	2/21/2024	3/12/2024
N063248-006F	ER-03-LF30-Q124	Groundwater	2/21/2024 12:26:00 PM	2/21/2024	3/12/2024
N063248-006G	ER-03-LF30-Q124	Groundwater	2/21/2024 12:26:00 PM	2/21/2024	3/12/2024
N063248-007A	ER-03-LF50-Q124	Groundwater	2/21/2024 12:52:00 PM	2/21/2024	3/12/2024
N063248-007B	ER-03-LF50-Q124	Groundwater	2/21/2024 12:52:00 PM	2/21/2024	3/12/2024
N063248-007C	ER-03-LF50-Q124	Groundwater	2/21/2024 12:52:00 PM	2/21/2024	3/12/2024
N063248-007D	ER-03-LF50-Q124	Groundwater	2/21/2024 12:52:00 PM	2/21/2024	3/12/2024
N063248-007E	ER-03-LF50-Q124	Groundwater	2/21/2024 12:52:00 PM	2/21/2024	3/12/2024
N063248-007F	ER-03-LF50-Q124	Groundwater	2/21/2024 12:52:00 PM	2/21/2024	3/12/2024
N063248-007G	ER-03-LF50-Q124	Groundwater	2/21/2024 12:52:00 PM	2/21/2024	3/12/2024

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - non routine, 30211191
Lab Order: N063248
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063248-008A	ER-03-Q124	Groundwater	2/21/2024 1:46:00 PM	2/21/2024	3/12/2024
N063248-008B	ER-03-Q124	Groundwater	2/21/2024 1:46:00 PM	2/21/2024	3/12/2024
N063248-008C	ER-03-Q124	Groundwater	2/21/2024 1:46:00 PM	2/21/2024	3/12/2024
N063248-008D	ER-03-Q124	Groundwater	2/21/2024 1:46:00 PM	2/21/2024	3/12/2024
N063248-008E	ER-03-Q124	Groundwater	2/21/2024 1:46:00 PM	2/21/2024	3/12/2024
N063248-008F	ER-03-Q124	Groundwater	2/21/2024 1:46:00 PM	2/21/2024	3/12/2024
N063248-008G	ER-03-Q124	Groundwater	2/21/2024 1:46:00 PM	2/21/2024	3/12/2024
N063248-009A	EB-734-Q124	Groundwater	2/21/2024 2:00:00 PM	2/21/2024	3/12/2024
N063248-010A	MW-15-Q124	Groundwater	2/21/2024 8:25:00 AM	2/21/2024	3/12/2024
N063248-010B	MW-15-Q124	Groundwater	2/21/2024 8:25:00 AM	2/21/2024	3/12/2024
N063248-010C	MW-15-Q124	Groundwater	2/21/2024 8:25:00 AM	2/21/2024	3/12/2024
N063248-011A	MW-926-Q124	Groundwater	2/21/2024 12:01:00 PM	2/21/2024	3/12/2024
N063248-011B	MW-926-Q124	Groundwater	2/21/2024 12:01:00 PM	2/21/2024	3/12/2024
N063248-011C	MW-926-Q124	Groundwater	2/21/2024 12:01:00 PM	2/21/2024	3/12/2024
N063248-011D	MW-926-Q124	Groundwater	2/21/2024 12:01:00 PM	2/21/2024	3/12/2024
N063248-011E	MW-926-Q124	Groundwater	2/21/2024 12:01:00 PM	2/21/2024	3/12/2024
N063248-011F	MW-926-Q124	Groundwater	2/21/2024 12:01:00 PM	2/21/2024	3/12/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	ER-03-Q124
Lab Order:	N063248		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/21/2024 1:46:00 PM
Lab ID:	N063248-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_240222G**	QC Batch: **107029**			PrepDate:	**2/22/2024**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	12000	100	100		mg/L	1	2/22/2024 10:59 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-15-Q124
Lab Order:	N063248		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/21/2024 8:25:00 AM
Lab ID:	N063248-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_240222G**	QC Batch: **107029**			PrepDate:	**2/22/2024**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	1400	17	17		mg/L	1	2/22/2024 10:59 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-926-Q124
Lab Order:	N063248		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/21/2024 12:01:00 PM
Lab ID:	N063248-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_240222G**	QC Batch: **107029**			PrepDate:	**2/22/2024**		Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	8800	100	100		mg/L	1	2/22/2024 10:59 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_WPGE

Sample ID: **LCS-107029**	SampType: **LCS**	TestCode: **160.1_2540C**	Units: **mg/L**	Prep Date: **2/22/2024**	RunNo: **182907**
Client ID: **LCSW**	Batch ID: **107029**	TestNo: **SM2540C**		Analysis Date: **2/22/2024**	SeqNo: **5712252**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	974.000	10	1000	0	97.4	80	120				

Sample ID: **MB-107029**	SampType: **MBLK**	TestCode: **160.1_2540C**	Units: **mg/L**	Prep Date: **2/22/2024**	RunNo: **182907**
Client ID: **PBW**	Batch ID: **107029**	TestNo: **SM2540C**		Analysis Date: **2/22/2024**	SeqNo: **5712253**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	ND	10									

Sample ID: **N063253-001CDUP**	SampType: **DUP**	TestCode: **160.1_2540C**	Units: **mg/L**	Prep Date: **2/22/2024**	RunNo: **182907**
Client ID: **ZZZZZZ**	Batch ID: **107029**	TestNo: **SM2540C**		Analysis Date: **2/22/2024**	SeqNo: **5712264**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	131600.000	1000						125600	4.67	5	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	ER-01-Q124
Lab Order:	N063248		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/21/2024 9:44:00 AM
Lab ID:	N063248-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240223A**	QC Batch: **R182899**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	430	1.9	10		µg/L	50	2/23/2024 01:01 PM
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240225D**	QC Batch: **107021**			PrepDate:	**2/22/2024**		Analyst: **DJ**
Chromium	410	0.18	5.0		µg/L	5	2/25/2024 09:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	ER-02-Q124
Lab Order:	N063248		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/21/2024 11:11:00 AM
Lab ID:	N063248-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240223A**	QC Batch: **R182899**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	280	1.9	10		µg/L	50	2/23/2024 04:54 PM
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240225D**	QC Batch: **107021**			PrepDate:	**2/22/2024**		Analyst: **DJ**
Chromium	280	0.35	10		µg/L	10	2/25/2024 09:28 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	ER-03-Q124
Lab Order:	N063248		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/21/2024 1:46:00 PM
Lab ID:	N063248-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240223A**	QC Batch: **R182899**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/23/2024 02:54 PM
DISSOLVED METALS BY ICP-MS							
	EPA 3010A			**EPA 6020**			
RunID: **NV00922-ICP8_240223E**	QC Batch: **107021**			PrepDate:	**2/22/2024**		Analyst: **DJ**
Chromium	1.0	0.035	1.0		µg/L	1	2/24/2024 01:27 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-734-Q124
Lab Order:	N063248		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/21/2024 2:00:00 PM
Lab ID:	N063248-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240223A**	QC Batch: **R182899**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	0.22	0.039	0.20		µg/L	1	2/23/2024 02:35 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-15-Q124
Lab Order:	N063248		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/21/2024 8:25:00 AM
Lab ID:	N063248-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240223A** QC Batch: **R182899**				PrepDate:			Analyst: **RAB**
Hexavalent Chromium	17	0.19	1.0		µg/L	5	2/23/2024 01:57 PM
DISSOLVED METALS BY ICP-MS							
			EPA 3010A		**EPA 6020**		
RunID: **NV00922-ICP8_240223E** QC Batch: **107021**				PrepDate:	**2/22/2024**		Analyst: **DJ**
Chromium	17	0.035	1.0		µg/L	1	2/24/2024 01:31 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-926-Q124
Lab Order:	N063248		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/21/2024 12:01:00 PM
Lab ID:	N063248-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240223A**	QC Batch: **R182899**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/23/2024 06:50 PM
DISSOLVED METALS BY ICP-MS							
	EPA 3010A			**EPA 6020**			
RunID: **NV00922-ICP8_240223E**	QC Batch: **107021**			PrepDate:	**2/22/2024**		Analyst: **DJ**
Chromium	ND	0.035	1.0		µg/L	1	2/24/2024 01:36 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R182899**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **PBW**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711969**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R182899**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **LCSW**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711970**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.884	0.20	5.000	0	97.7	90	110				

Sample ID: **N063248-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711973**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1285.610	20	500.0	781.4	101	90	110				

Sample ID: **N063248-003AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711974**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1292.340	20	500.0	781.4	102	90	110	1286	0.522	20	

Sample ID: **N063248-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711977**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.945	0.20	1.000	0	94.4	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063248-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5711979**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	673.460	10	250.0	426.5	98.8	90	110				

Sample ID: **N063248-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5711983**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	41.218	1.0	25.00	16.86	97.4	90	110				

Sample ID: **N063248-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5711985**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.126	0.20	1.000	0.2206	90.5	90	110				

Sample ID: **N063248-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5711987**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.671	1.0	5.000	0	93.4	90	110				

Sample ID: **N063214-017AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5711995**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.036	0.20	1.000	0	104	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063249-017AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5711997**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.968	0.20	1.000	0	96.8	90	110				

Sample ID: **N063248-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5711999**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	520.875	10	250.0	281.3	95.8	90	110				

Sample ID: **N063248-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712001**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.786	1.0	5.000	0	95.7	90	110				

Sample ID: **N063248-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712005**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.843	1.0	5.000	0	96.9	90	110				

Sample ID: **N063248-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712007**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.604	1.0	5.000	0	92.1	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063248-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712009**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.770	1.0	5.000	0	95.4	90	110				

Sample ID: **N063249-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712011**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.044	0.20	1.000	0	104	90	110				

Sample ID: **N063249-014AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712013**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.999	0.20	1.000	0	99.9	90	110				

Sample ID: **N063249-016AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712017**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.026	0.20	1.000	0	103	90	110				

Sample ID: **N063249-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.637	1.0	5.000	0	92.7	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063249-013AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712021**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.652	1.0	5.000	0	93.0	90	110				

Sample ID: **N063249-015AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712025**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.037	1.0	5.000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **MB-107021**	SampType: **MBLK**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/22/2024**	RunNo: **182925**
Client ID: **PBW**	Batch ID: **107021**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/24/2024**	SeqNo: **5713330**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID: **LCS-107021**	SampType: **LCS**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/22/2024**	RunNo: **182925**
Client ID: **LCSW**	Batch ID: **107021**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/24/2024**	SeqNo: **5713331**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	9.999	1.0	10.00	0	100	85	115				

Sample ID: **N063248-002B-MS**	SampType: **MS**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/22/2024**	RunNo: **182944**
Client ID: **ZZZZZZ**	Batch ID: **107021**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/25/2024**	SeqNo: **5714390**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	446.797	5.0	10.00	412.0	348	75	125				S

Sample ID: **N063248-002B-MSD**	SampType: **MSD**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/22/2024**	RunNo: **182944**
Client ID: **ZZZZZZ**	Batch ID: **107021**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/25/2024**	SeqNo: **5714391**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	478.180	5.0	10.00	412.0	662	75	125	446.8	6.79	20	S

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **N063248-002B-PS** SampType: **PS** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182944**
Client ID: **ZZZZZZ** Batch ID: **107021** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/25/2024** SeqNo: **5714389**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	484.502	5.0	50.00	412.0	145	80	120				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	ER-03-Q124
Lab Order:	N063248		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/21/2024 1:46:00 PM
Lab ID:	N063248-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_240225B**	QC Batch: **R183092**			PrepDate:			Analyst: **LR**
Alkalinity, Total (As CaCO3)	22	5.0	5.0		mg/L	1	2/25/2024 11:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-15-Q124
Lab Order:	N063248		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/21/2024 8:25:00 AM
Lab ID:	N063248-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_240225B**	QC Batch: **R183092**			PrepDate:			Analyst: **LR**
Alkalinity, Total (As CaCO3)	72	5.0	5.0		mg/L	1	2/25/2024 11:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-926-Q124
Lab Order:	N063248		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/21/2024 12:01:00 PM
Lab ID:	N063248-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_240225B**	QC Batch: **R183092**			PrepDate:			Analyst: **LR**
Alkalinity, Total (As CaCO3)	76	5.0	5.0		mg/L	1	2/25/2024 11:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 2320_W_SP

Sample ID: **LCS-R183092**	SampType: **LCS**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **183092**
Client ID: **LCSW**	Batch ID: **R183092**	TestNo: **SM 2320 B**		Analysis Date: **2/25/2024**	SeqNo: **5721613**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	94.262	5.0	100.0	0	94.3	85	115				

Sample ID: **MB-R183092**	SampType: **MBLK**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **183092**
Client ID: **PBW**	Batch ID: **R183092**	TestNo: **SM 2320 B**		Analysis Date: **2/25/2024**	SeqNo: **5721614**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	ND	5.0									

Sample ID: **N063248-005BDUP**	SampType: **DUP**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **183092**
Client ID: **ZZZZZZ**	Batch ID: **R183092**	TestNo: **SM 2320 B**		Analysis Date: **2/25/2024**	SeqNo: **5721616**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	75.820	5.0						74.80	1.36	30	

Sample ID: **N063248-005BMS**	SampType: **MS**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **183092**
Client ID: **ZZZZZZ**	Batch ID: **R183092**	TestNo: **SM 2320 B**		Analysis Date: **2/25/2024**	SeqNo: **5721617**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	169.057	5.0	100.0	74.80	94.3	75	125				

Sample ID: **N063248-005BMSD**	SampType: **MSD**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **183092**
Client ID: **ZZZZZZ**	Batch ID: **R183092**	TestNo: **SM 2320 B**		Analysis Date: **2/25/2024**	SeqNo: **5721618**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	168.033	5.0	100.0	74.80	93.2	75	125	169.1	0.608	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	ER-03-Q124
Lab Order:	N063248		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/21/2024 1:46:00 PM
Lab ID:	N063248-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240223A** QC Batch: **R182874**				PrepDate:			Analyst: **RAB**
Chloride	6000	580	1000		mg/L	2000	2/23/2024 05:22 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240222A** QC Batch: **R182813**				PrepDate:			Analyst: **RAB**
Fluoride	5.1	0.32	1.0		mg/L	10	2/22/2024 10:22 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240222A** QC Batch: **R182813**				PrepDate:			Analyst: **RAB**
Nitrogen, Nitrite	ND	0.15	5.0		mg/L	10	2/22/2024 10:22 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240223A** QC Batch: **R182874**				PrepDate:			Analyst: **RAB**
Sulfate	720	34	50		mg/L	100	2/23/2024 06:54 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240222A** QC Batch: **R182813**				PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/22/2024 10:22 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-15-Q124
Lab Order:	N063248		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/21/2024 8:25:00 AM
Lab ID:	N063248-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240222A** QC Batch: **R182813**				PrepDate:			Analyst: **RAB**
Bromide	ND	0.18	2.5		mg/L	5	2/22/2024 11:30 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240223A** QC Batch: **R182874**				PrepDate:			Analyst: **RAB**
Chloride	520	29	50		mg/L	100	2/23/2024 05:37 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240222A** QC Batch: **R182813**				PrepDate:			Analyst: **RAB**
Fluoride	ND	0.16	0.50		mg/L	5	2/22/2024 11:30 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240223A** QC Batch: **R182874**				PrepDate:			Analyst: **RAB**
Sulfate	180	6.9	10		mg/L	20	2/23/2024 07:09 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240222A** QC Batch: **R182813**				PrepDate:			Analyst: **RAB**
Nitrate as N	6.5	0.12	0.25		mg/L	5	2/22/2024 11:30 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California **Client Sample ID:** MW-926-Q124
Lab Order: N063248
Project: PG&E Topock - non routine, 30211191 **Collection Date:** 2/21/2024 12:01:00 PM
Lab ID: N063248-011 **Matrix:** GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240223A** QC Batch: **R182874**				PrepDate:			Analyst: **RAB**
Chloride	4300	290	500		mg/L	1000	2/23/2024 05:53 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240222A** QC Batch: **R182813**				PrepDate:			Analyst: **RAB**
Fluoride	3.6	0.32	1.0		mg/L	10	2/22/2024 01:33 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240222A** QC Batch: **R182813**				PrepDate:			Analyst: **RAB**
Nitrogen, Nitrite	ND	0.15	5.0		mg/L	10	2/22/2024 01:33 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240223A** QC Batch: **R182874**				PrepDate:			Analyst: **RAB**
Sulfate	540	34	50		mg/L	100	2/23/2024 07:25 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240222A** QC Batch: **R182813**				PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/22/2024 01:33 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_BRPGE

Sample ID: **MB-R182813_BR**	SampType: **MBLK**	TestCode: **300_W_BRP**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **PBW**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705940**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	ND	0.50									

Sample ID: **LCS-R182813_BR**	SampType: **LCS**	TestCode: **300_W_BRP**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **LCSW**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705941**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	1.197	0.50	1.250	0	95.8	90	110				

Sample ID: **N063248-010CMS**	SampType: **MS**	TestCode: **300_W_BRP**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ZZZZZZ**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705945**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	6.814	2.5	6.250	0.4285	102	80	120				

Sample ID: **N063248-010CMSD**	SampType: **MSD**	TestCode: **300_W_BRP**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ZZZZZZ**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705946**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	6.856	2.5	6.250	0.4285	103	80	120	6.814	0.622	20	

Sample ID: **N063248-010CDUP**	SampType: **DUP**	TestCode: **300_W_BRP**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ZZZZZZ**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705949**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	0.415	2.5						0.4285	0	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID: **MB-R182874_CL**	SampType: **MBLK**	TestCode: **300_W_CLP**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **PBW**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711093**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID: **LCS-R182874_CL**	SampType: **LCS**	TestCode: **300_W_CLP**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **LCSW**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711094**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.931	0.50	2.000	0	96.6	90	110				

Sample ID: **N063297-001BDUP**	SampType: **DUP**	TestCode: **300_W_CLP**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **ZZZZZZ**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711096**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	54.921	5.0						54.82	0.193	20	

Sample ID: **N063297-001BMS**	SampType: **MS**	TestCode: **300_W_CLP**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **ZZZZZZ**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711097**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	75.102	5.0	20.00	54.82	101	80	120				

Sample ID: **N063297-001BMSD**	SampType: **MSD**	TestCode: **300_W_CLP**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **ZZZZZZ**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711098**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	75.046	5.0	20.00	54.82	101	80	120	75.10	0.0746	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID: **N063252-001CMS**	SampType: **MS**	TestCode: **300_W_CLP**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **ZZZZZZ**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711100**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	14573.600	1000	4000	10420	104	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID: **MB-R182813_F**	SampType: **MBLK**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **PBW**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705915**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Sample ID: **LCS-R182813_F**	SampType: **LCS**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **LCSW**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705916**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.194	0.10	1.250	0	95.5	90	110				

Sample ID: **N063248-005BMS**	SampType: **MS**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ZZZZZZ**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705925**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	15.168	1.0	12.50	3.811	90.9	80	120				

Sample ID: **N063248-005BMSD**	SampType: **MSD**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ZZZZZZ**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705926**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	14.529	1.0	12.50	3.811	85.7	80	120	15.17	4.30	20	

Sample ID: **N063248-011CDUP**	SampType: **DUP**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ZZZZZZ**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705927**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	3.754	1.0						3.636	3.19	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID: **N063248-010CDUP**	SampType: **DUP**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ZZZZZZ**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705930**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.350	0.50						0.3165	0	20	

Sample ID: **N063248-008BMS**	SampType: **MS**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ZZZZZZ**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705931**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	17.151	1.0	12.50	5.085	96.5	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_NO2PGE

Sample ID: **MB-R182813_NO2**	SampType: **MBLK**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **PBW**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705958**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	ND	0.50									

Sample ID: **LCS-R182813_NO2**	SampType: **LCS**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **LCSW**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705959**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	1.216	0.50	1.250	0	97.3	90	110				

Sample ID: **N063248-005BMS**	SampType: **MS**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ZZZZZZ**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705967**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	8.549	5.0	12.50	0	68.4	80	120				S

Sample ID: **N063248-005BMSD**	SampType: **MSD**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ZZZZZZ**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705968**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	8.635	5.0	12.50	0	69.1	80	120	8.549	1.00	20	S

Sample ID: **N063248-011CDUP**	SampType: **DUP**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ZZZZZZ**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705969**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	ND	5.0						0	0	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **MB-R182874_SO4**	SampType: **MBLK**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **PBW**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710470**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **LCS-R182874_SO4**	SampType: **LCS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **LCSW**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710471**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.018	0.50	4.000	0	100	90	110				

Sample ID: **N063297-001BDUP**	SampType: **DUP**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **ZZZZZZ**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710473**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	73.427	5.0						73.66	0.315	20	

Sample ID: **N063297-001BMS**	SampType: **MS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **ZZZZZZ**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710474**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	112.140	5.0	40.00	73.66	96.2	80	120				

Sample ID: **N063297-001BMSD**	SampType: **MSD**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **ZZZZZZ**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710475**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	112.875	5.0	40.00	73.66	98.0	80	120	112.1	0.653	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **N063252-001CMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **182874**
Client ID: **ZZZZZZ** Batch ID: **R182874** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5710477**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	21537.400	1000	8000	13600	99.2	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **MB-R182813_NO3** SampType: **MBLK** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182813**
Client ID: **PBW** Batch ID: **R182813** TestNo: **EPA 300.0** Analysis Date: **2/22/2024** SeqNo: **5705980**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **LCS-R182813_NO3** SampType: **LCS** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182813**
Client ID: **LCSW** Batch ID: **R182813** TestNo: **EPA 300.0** Analysis Date: **2/22/2024** SeqNo: **5705981**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.238	0.050	1.250	0	99.1	90	110				

Sample ID: **N063248-005BMS** SampType: **MS** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182813**
Client ID: **ZZZZZZ** Batch ID: **R182813** TestNo: **EPA 300.0** Analysis Date: **2/22/2024** SeqNo: **5705997**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	11.782	0.50	12.50	0	94.3	80	120				

Sample ID: **N063248-005BMSD** SampType: **MSD** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182813**
Client ID: **ZZZZZZ** Batch ID: **R182813** TestNo: **EPA 300.0** Analysis Date: **2/22/2024** SeqNo: **5705998**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.238	0.50	12.50	0	97.9	80	120	11.78	3.80	20	

Sample ID: **N063248-011CDUP** SampType: **DUP** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182813**
Client ID: **ZZZZZZ** Batch ID: **R182813** TestNo: **EPA 300.0** Analysis Date: **2/22/2024** SeqNo: **5705999**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.50						0	0	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **N063248-010CDUP**	SampType: **DUP**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ZZZZZZ**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5706002**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	6.370	0.25						6.455	1.33	20	

Sample ID: **N063249-017BMS**	SampType: **MS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ZZZZZZ**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5706003**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	11.838	0.50	12.50	0	94.7	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Client Sample ID: ER-03-Q124
Lab Order: N063248
Project: PG&E Topock - non routine, 30211191
Collection Date: 2/21/2024 1:46:00 PM
Lab ID: N063248-008
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240223B**	QC Batch: **107026**			PrepDate:		**2/22/2024**	Analyst: **DJ**
Iron	130	13	20		µg/L	1	2/23/2024 02:03 PM
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240223A**	QC Batch: **107026**			PrepDate:		**2/22/2024**	Analyst: **DJ**
Boron	2.9	0.035	0.10		mg/L	1	2/23/2024 02:03 PM
Calcium	350	0.18	0.50		mg/L	1	2/23/2024 02:03 PM
Magnesium	2.8	0.017	0.10		mg/L	1	2/23/2024 02:03 PM
Potassium	45	0.69	2.5		mg/L	5	2/26/2024 01:12 PM
Sodium	4600	170	250		mg/L	500	2/26/2024 02:46 PM
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240223C**	QC Batch: **107028**			PrepDate:		**2/22/2024**	Analyst: **DJ**
Iron	120	13	20		µg/L	1	2/23/2024 03:47 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-15-Q124
Lab Order:	N063248		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/21/2024 8:25:00 AM
Lab ID:	N063248-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240223B**	QC Batch: **107026**			PrepDate:	**2/22/2024**		Analyst: **DJ**
Iron	ND	13	20		µg/L	1	2/23/2024 02:08 PM
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240223A**	QC Batch: **107026**			PrepDate:	**2/22/2024**		Analyst: **DJ**
Boron	0.28	0.035	0.10		mg/L	1	2/23/2024 02:08 PM
Calcium	140	0.18	0.50		mg/L	1	2/23/2024 02:08 PM
Magnesium	35	0.017	0.10		mg/L	1	2/23/2024 02:08 PM
Potassium	11	0.69	2.5		mg/L	5	2/26/2024 01:17 PM
Sodium	240	8.5	12		mg/L	25	2/26/2024 02:49 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Client Sample ID: MW-926-Q124
Lab Order: N063248
Project: PG&E Topock - non routine, 30211191
Collection Date: 2/21/2024 12:01:00 PM
Lab ID: N063248-011
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240223B**	QC Batch: **107026**			PrepDate:		**2/22/2024**	Analyst: **DJ**
Iron	350	13	20		µg/L	1	2/23/2024 02:13 PM
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240223A**	QC Batch: **107026**			PrepDate:		**2/22/2024**	Analyst: **DJ**
Boron	2.1	0.035	0.10		mg/L	1	2/23/2024 02:13 PM
Calcium	250	0.18	0.50		mg/L	1	2/23/2024 02:13 PM
Magnesium	17	0.017	0.10		mg/L	1	2/23/2024 02:13 PM
Potassium	36	0.69	2.5		mg/L	5	2/26/2024 01:20 PM
Sodium	3300	170	250		mg/L	500	2/26/2024 02:52 PM
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240223C**	QC Batch: **107028**			PrepDate:		**2/22/2024**	Analyst: **DJ**
Iron	410	13	20		µg/L	1	2/23/2024 04:17 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-107026**	SampType: **MBLK**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/22/2024**	RunNo: **182846**
Client ID: **PBW**	Batch ID: **107026**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708215**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS1-107026**	SampType: **LCS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/22/2024**	RunNo: **182846**
Client ID: **LCSW**	Batch ID: **107026**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708216**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	86.185	20	100.0	0	86.2	85	115				

Sample ID: **N063248-005C-MS1**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/22/2024**	RunNo: **182846**
Client ID: **ZZZZZZ**	Batch ID: **107026**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708220**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	512.940	20	100.0	357.7	155	75	125				S

Sample ID: **N063248-005C-MSD**	SampType: **MSD**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/22/2024**	RunNo: **182846**
Client ID: **ZZZZZZ**	Batch ID: **107026**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708221**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	488.087	20	100.0	357.7	130	75	125	512.9	4.97	20	S

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID: **MB-107026** SampType: **MBLK** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: **2/22/2024** RunNo: **182845**
Client ID: **PBW** Batch ID: **107026** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708137**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	ND	0.10									
Calcium	ND	0.50									
Magnesium	ND	0.10									

Sample ID: **LCS1-107026** SampType: **LCS** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: **2/22/2024** RunNo: **182845**
Client ID: **LCSW** Batch ID: **107026** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708138**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5.306	0.10	5.000	0	106	85	115				
Calcium	10.895	0.50	10.00	0	109	85	115				
Magnesium	11.028	0.10	10.00	0	110	85	115				

Sample ID: **N063248-005C-MS1** SampType: **MS** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: **2/22/2024** RunNo: **182845**
Client ID: **ZZZZZZ** Batch ID: **107026** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708142**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	7.192	0.10	5.000	1.975	104	75	125				
Calcium	246.943	0.50	10.00	237.9	90.1	75	125				
Magnesium	25.683	0.10	10.00	16.50	91.8	75	125				

Sample ID: **N063248-005C-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: **2/22/2024** RunNo: **182845**
Client ID: **ZZZZZZ** Batch ID: **107026** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708143**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	7.047	0.10	5.000	1.975	101	75	125	7.192	2.03	20	
Calcium	233.623	0.50	10.00	237.9	-43.1	75	125	246.9	5.54	20	S
Magnesium	24.771	0.10	10.00	16.50	82.7	75	125	25.68	3.62	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID: **MB-107026**	SampType: **MBLK**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date: **2/22/2024**	RunNo: **182926**
Client ID: **PBW**	Batch ID: **107026**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/26/2024**	SeqNo: **5713395**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	ND	0.50									
Sodium	ND	0.50									

Sample ID: **LCS2-107026**	SampType: **LCS**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date: **2/22/2024**	RunNo: **182926**
Client ID: **LCSW**	Batch ID: **107026**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/26/2024**	SeqNo: **5713396**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	19.750	0.50	20.00	0	98.7	85	115				
Sodium	19.600	0.50	20.00	0	98.0	85	115				

Sample ID: **N063248-006C-MS2**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date: **2/22/2024**	RunNo: **182926**
Client ID: **ZZZZZZ**	Batch ID: **107026**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/26/2024**	SeqNo: **5713421**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	66.397	2.5	20.00	43.77	113	75	125				

Sample ID: **N063248-006C-MS2**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date: **2/22/2024**	RunNo: **182926**
Client ID: **ZZZZZZ**	Batch ID: **107026**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/26/2024**	SeqNo: **5713422**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	4617.010	250	20.00	4498	596	75	125				S

Sample ID: **N063248-006C-MSD**	SampType: **MSD**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date: **2/22/2024**	RunNo: **182926**
Client ID: **ZZZZZZ**	Batch ID: **107026**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/26/2024**	SeqNo: **5713423**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	65.819	2.5	20.00	43.77	110	75	125	66.40	0.875	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID: **N063248-006C-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: **2/22/2024** RunNo: **182926**
Client ID: **ZZZZZZ** Batch ID: **107026** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/26/2024** SeqNo: **5713424**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	4461.992	250	20.00	4498	-179	75	125	4617	3.41	20	S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID: **MB-107028**	SampType: **MBLK**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date: **2/22/2024**	RunNo: **182914**
Client ID: **PBW**	Batch ID: **107028**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5712451**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS-107028**	SampType: **LCS**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date: **2/22/2024**	RunNo: **182914**
Client ID: **LCSW**	Batch ID: **107028**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5712452**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	95.684	20	100.0	0	95.7	85	115				

Sample ID: **N063248-005D-MS**	SampType: **MS**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date: **2/22/2024**	RunNo: **182914**
Client ID: **ZZZZZZ**	Batch ID: **107028**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5712456**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	547.010	20	100.0	411.6	135	75	125				S

Sample ID: **N063248-005D-MSD**	SampType: **MSD**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date: **2/22/2024**	RunNo: **182914**
Client ID: **ZZZZZZ**	Batch ID: **107028**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5712457**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	571.162	20	100.0	411.6	160	75	125	547.0	4.32	20	S

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N063248-005C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ZZZZZZ** Batch ID: **107026** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708219**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	444.661	20	100.0	357.7	87.0	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID: **N063248-005C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **ZZZZZZ** Batch ID: **107026** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708141**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	7.117	0.10	5.000	1.975	103	80	120				
Calcium	244.450	0.50	10.00	237.9	65.2	80	120				S
Magnesium	25.104	0.10	10.00	16.50	86.0	80	120				

Sample ID: **N063248-006C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182926**
Client ID: **ZZZZZZ** Batch ID: **107026** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/26/2024** SeqNo: **5713417**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	166.997	2.5	100.0	43.77	123	80	120				S

Sample ID: **N063248-006C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182926**
Client ID: **ZZZZZZ** Batch ID: **107026** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/26/2024** SeqNo: **5713418**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	13651.189	250	10000	4498	91.5	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID: **N063248-005D-PS**	SampType: **PS**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182914**
Client ID: **ZZZZZZ**	Batch ID: **107028**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5712455**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	509.245	20	100.0	411.6	97.7	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	ER-03-Q124
Lab Order:	N063248		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/21/2024 1:46:00 PM
Lab ID:	N063248-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A			**EPA 6020**			
RunID: **NV00922-ICP8_240223D**	QC Batch: **107021**			PrepDate:		**2/22/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/24/2024 01:27 AM
Barium	100	0.083	1.0		µg/L	1	2/26/2024 12:49 AM
Manganese	780	0.26	5.0		µg/L	10	2/26/2024 12:53 AM
Molybdenum	81	0.12	0.50		µg/L	1	2/24/2024 01:27 AM
Selenium	ND	0.044	0.50		µg/L	1	2/24/2024 01:27 AM
Vanadium	ND	0.067	1.0		µg/L	1	2/24/2024 01:27 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-15-Q124
Lab Order:	N063248		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/21/2024 8:25:00 AM
Lab ID:	N063248-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240223D**	QC Batch: **107021**			PrepDate:		**2/22/2024**	Analyst: **DJ**
Arsenic	0.90	0.050	0.10		µg/L	1	2/24/2024 01:31 AM
Barium	68	0.083	1.0		µg/L	1	2/26/2024 12:58 AM
Manganese	ND	0.026	0.50		µg/L	1	2/24/2024 01:31 AM
Zinc	ND	0.26	10		µg/L	1	2/24/2024 01:31 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-926-Q124
Lab Order:	N063248		
Project:	PG&E Topock - non routine, 30211191	**Collection Date:**	2/21/2024 12:01:00 PM
Lab ID:	N063248-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A			**EPA 6020**			
RunID: **NV00922-ICP8_240223D**	QC Batch: **107021**			PrepDate:		**2/22/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/24/2024 01:36 AM
Barium	130	0.083	1.0		µg/L	1	2/26/2024 01:16 AM
Manganese	450	0.26	5.0		µg/L	10	2/26/2024 01:21 AM
Molybdenum	120	0.12	0.50		µg/L	1	2/24/2024 01:36 AM
Selenium	ND	0.044	0.50		µg/L	1	2/24/2024 01:36 AM
Vanadium	ND	0.067	1.0		µg/L	1	2/24/2024 01:36 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **MB-107021** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/22/2024** RunNo: **182930**
Client ID: **PBW** Batch ID: **107021** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/24/2024** SeqNo: **5713732**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	ND	1.0									
Zinc	ND	10									

Sample ID: **LCS-107021** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/22/2024** RunNo: **182930**
Client ID: **LCSW** Batch ID: **107021** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/24/2024** SeqNo: **5713733**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.228	0.10	10.00	0	102	85	115				
Barium	10.933	1.0	10.00	0	109	85	115				
Manganese	98.248	0.50	100.0	0	98.2	85	115				
Molybdenum	9.979	0.50	10.00	0	99.8	85	115				
Selenium	9.623	0.50	10.00	0	96.2	85	115				
Vanadium	9.795	1.0	10.00	0	98.0	85	115				
Zinc	98.248	10	100.0	0	98.2	85	115				

Sample ID: **N063248-002B-MS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/22/2024** RunNo: **182930**
Client ID: **ZZZZZZ** Batch ID: **107021** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/24/2024** SeqNo: **5713739**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	8.522	0.10	10.00	0	85.2	75	125				
Barium	71.602	1.0	10.00	59.79	118	75	125				
Molybdenum	47.107	0.50	10.00	34.62	125	75	125				
Selenium	12.228	0.50	10.00	2.827	94.0	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063248-002B-MS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/22/2024** RunNo: **182930**
Client ID: **ZZZZZZ** Batch ID: **107021** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/24/2024** SeqNo: **5713739**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vanadium	11.041	1.0	10.00	1.497	95.4	75	125				
Zinc	115.156	10	100.0	28.11	87.0	75	125				

Sample ID: **N063248-002B-MSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/22/2024** RunNo: **182930**
Client ID: **ZZZZZZ** Batch ID: **107021** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/24/2024** SeqNo: **5713740**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	8.891	0.10	10.00	0	88.9	75	125	8.522	4.23	20	
Barium	72.472	1.0	10.00	59.79	127	75	125	71.60	1.21	20	S
Molybdenum	46.869	0.50	10.00	34.62	122	75	125	47.11	0.507	20	
Selenium	11.648	0.50	10.00	2.827	88.2	75	125	12.23	4.86	20	
Vanadium	11.031	1.0	10.00	1.497	95.3	75	125	11.04	0.0976	20	
Zinc	114.204	10	100.0	28.11	86.1	75	125	115.2	0.831	20	

Sample ID: **N063248-002B-MS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/22/2024** RunNo: **182939**
Client ID: **ZZZZZZ** Batch ID: **107021** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/25/2024** SeqNo: **5714164**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	197.619	2.5	100.0	93.50	104	75	125				

Sample ID: **N063248-002B-MSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/22/2024** RunNo: **182939**
Client ID: **ZZZZZZ** Batch ID: **107021** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/25/2024** SeqNo: **5714165**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	208.873	2.5	100.0	93.50	115	75	125	197.6	5.54	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063248-002B-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ZZZZZZ** Batch ID: **107021** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/24/2024** SeqNo: **5713738**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	8.948	0.10	10.00	0	89.5	80	120				
Barium	70.158	1.0	10.00	59.79	104	80	120				
Molybdenum	45.791	0.50	10.00	34.62	112	80	120				
Selenium	11.905	0.50	10.00	2.827	90.8	80	120				
Vanadium	11.353	1.0	10.00	1.497	98.6	80	120				
Zinc	114.802	10	100.0	28.11	86.7	80	120				

Sample ID: **N063248-002B-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ZZZZZZ** Batch ID: **107021** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/25/2024** SeqNo: **5714163**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	586.103	2.5	500.0	93.50	98.5	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SAMPLE RECEIVING ITEMS

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Contact us: N063248
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

CHAIN OF CUSTODY RECORD

Page 1 of 1

| | | |

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement: Excel EDD; Geotracker; Labspec; Others ✓; Specify: RWQCB; Global ID
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	QA/QC: RTNE; RWQCB ✓; CalTrans; LEVEL III; LEVEL IV; Regulatory; Specify State
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.mouw@cardnogen.com	Address:	Sample Receipt Condition: Y N; 1 Chilled; 2 Headspace; 3 Container intact; 4 Seal Present; 5 IR number; 6 Method of Cooling
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com P.O.#	Sample Temp:
Submitted By: Rustie Tap	Phone: 916-786-3302 Fax:	Phone: 949-727-1400, ext 200 Fax:	Courier: Tracking No:
Title: Field Tech	Sampled By: Rustie Tap		
Signature: Date: 02/21/24	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for		
I hereby authorize ASSET Labs to perform the tests indicated below.			
Project Name: PG&E Topock - non routine	Signature: Date: 02/21/24		
Project Number: 30211191			

Matrix: Ground; Potable; NPDES; Surface; Sediment; Soil; Other Solid

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2 SO4, NH4, OH 250 mL poly	Nitrate, Nitrite, sulfate, chloride, fluoride (EPA 300.0) 1 L poly	Dissolved metals (SW6020) FF; HNO3 Molybdenum, selenium, vanadium 500mL poly	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium. 500mL poly	Dissolved metals (SW6020) FF; HNO3 Arsenic, Barium, Boron, Calcium, Potassium, Sodium, Iron, Manganese, Magnesium 500mL poly	Bromide, Sulfate, Nitrate, Fluoride, Chloride (EPA 300.0) 1 liter poly	Total Dissolved Solids (SM2540) 1 liter poly	Alkalinity, Total as CaCO3 (SM2320B) 1 liter poly	Ammonia as Nitrogen (SM4500NH3D); H2SO4 1 L poly	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 125 mL poly	~~Hardness~~ 4 L poly	Total metals (SW6010) No filter; HNO3 Total Iron 500mL poly	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1		✓ ER-01-LF10-Q124	2/21/2024	8:50		X			X									E	2	P	BNS	
2		✓ ER-01-Q124	2/21/2024	9:44		X			X									E	2	P	BNS	
3		✓ ER-02-LF10-Q124	2/21/2024	10:24		X			X									E	2	P	BNS	
4		✓ ER-02-Q124	2/21/2024	11:11		X			X									E	2	P	BNS	
5		✓ ER-03-LF10-Q124	2/21/2024	11:51		X	X	X	X	X		X	X	X	X		X	E	6	P	BNS	
6		✓ ER-03-LF30-Q124	2/21/2024	12:26		X	X	X	X	X		X	X	X	X		X	E	6	P	BNS	
7		✓ ER-03-LF50-Q124	2/21/2024	12:52		X	X	X	X	X		X	X	X	X		X	E	6	P	BNS	
8		✓ ER-03-Q124	2/21/2024	13:46		X	X	X	X	X		X	X	X	X		X	E	6	P	BNS	
9																		E	2	P	BNS	
10																		E	2	P	BNS	
11		✓ EB-734-Q124	2/21/2024	14:00		X												E	1	P	BNS	
12		✓ MW-15-Q124	2/21/2024	8:25		X			X	X	X	X	X			X		E	3	P	BNS	
13		✓ MW-926-Q124	2/21/2024	12:01		X	X	X	X	X		X	X	X	X		X	E	6	P	BNS	
14																		E	2	P	BNS	

Relinquished by (Signature and Printed Name): Rustie Tap 02/21/24 1505 — Date/Time:
Relinquished by (Signature and Printed Name): [illegible] ARCEO — Date/Time: 2/21/24 1505
Relinquished by (Signature and Printed Name): — Date/Time:
Relinquished by (Signature and Printed Name): — Date/Time:
Relinquished by (Signature and Printed Name): — Date/Time:
Relinquished by (Signature and Printed Name): — Date/Time:

Turn Around Time (TAT)

- A = < 24 Hrs or Same Day TAT
- B = Next Workday
- C = 2 Workdays
- D = 3 Workdays
- X E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:
zinc dissolved SW 6020
↳ 500 mL HNO3 FF

Preservatives: H=HCL; N=HNO_3; S=H_2SO_4; C=4°C; Z=Zn(AC_2); O=NaOH; T=$Na_2S_2O_3$; Others/Specify: B (NH4)2SO4/NH4OH

Container Type: T=Tube; A=VOA; P=Pint; J=Jar; B=Bottle; G=Glass; M=Metal; C=Can

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs =200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=25%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project

5. Trip Blanks and Equipment Blanks are billable samples.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

White=Laboratory Copy
Yellow=Customer's Copy

61

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	2/21/2024	Workorder:	N063248
Rep sample Temp (Deg C):	4.2 / 3.8	IR Gun ID:	3

Temp Blank: ☑ Yes ☐ No

Carrier name: ASSET

Last 4 digits of Tracking No.: NA Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By: CC Chara Cintron 2/23/2024

Reviewed By: for: MBC 02/23/2024

Subject: RE: TOPOCK lab_login N063247, N063248 and N063249 COC and Work Order Summary for Samples Received 2/21/2024
From: "Madsen, Laura" <Laura.Madsen@arcadis.com>
Date: 3/4/2024, 9:22 AM
To: ASSET Sample Control CA <samplecontrol@assetlaboratories.com>, "Bush, Daniel" <Dan.Bush@arcadis.com>, LabReports <LabReports@arcadis.com>, "yoandra@assetlaboratories.com" <yoandra@assetlaboratories.com>, "marlon@assetlaboratories.com" <marlon@assetlaboratories.com>
CC: "Woods, Nikki" <Nichole.Woods@arcadis.com>, "Manoharan, Sandhyasree" <sandhyasree.manoharan@arcadis.com>, "Ekambaram, Revathi" <revathi.ekambaram@arcadis.com>, "R, Ganesh" <ganesh.r@arcadis.com>

Hi Yoandra,

We need to get the following samples HELD and not reported. I realize you probably have some analysis started on them, but we don't want the data reported. Can you please hold all analysis from these samples listed below? There are other samples in the SDGs that we do want completed and reported, however.

ProjectName	Lab SDG	ClientSampID	DateCollected	DateDue	
PG&E Topock - non routine, 30211191	N063295	TWB-01-LF10-Q124	2/22/2024 11:41:00 AM	3/8/2024 12:00:00 AM	11
PG&E Topock - non routine, 30211191	N063295	ER-04-LF50-Q124	2/22/2024 9:51:00 AM	3/8/2024 12:00:00 AM	11
PG&E Topock - non routine, 30211191	N063295	ER-04-LF30-Q124	2/22/2024 9:23:00 AM	3/8/2024 12:00:00 AM	11
PG&E Topock - non routine, 30211191	N063295	ER-04-LF10-Q124	2/22/2024 8:55:00 AM	3/8/2024 12:00:00 AM	11
PG&E Topock - non routine, 30211191	N063248	ER-03-LF50-Q124	2/21/2024 12:52:00 PM	3/7/2024 12:00:00 AM	11
PG&E Topock - non routine, 30211191	N063248	ER-03-LF30-Q124	2/21/2024 12:26:00 PM	3/7/2024 12:00:00 AM	11
PG&E Topock - non routine, 30211191	N063248	ER-03-LF10-Q124	2/21/2024 11:51:00 AM	3/7/2024 12:00:00 AM	11
PG&E Topock - non routine, 30211191	N063248	ER-02-LF10-Q124	2/21/2024 10:24:00 AM	3/7/2024 12:00:00 AM	11
PG&E Topock - non routine, 30211191	N063248	ER-01-LF10-Q124	2/21/2024 8:50:00 AM	3/7/2024 12:00:00 AM	11

Thanks,

Laura

Laura Madsen PG

Project Geologist

Arcadis U.S., Inc.
M +1 303 653 5749

Subject: COC errors for samples 2/21 Topock
From: "Madsen, Laura" <Laura.Madsen@arcadis.com>
Date: 2/22/2024, 7:40 AM
To: "yoandra@assetlaboratories.com" <yoandra@assetlaboratories.com>, "marlon@assetlaboratories.com" <marlon@assetlaboratories.com>, AssetLabs Sample Control <samplecontrol@assetlaboratories.com>
CC: Nara Tep <Ntep@blainetech.com>

Hi Yoandra,
The COC files sent to the field team were incorrect versions and missing a few items. WE marked up the COCs attached and corrected them. The corrections are below too. Can you please use these versions for the login?

For MW-15, dissolved zinc is missing. There is hardness on there but I didn't see that on the PST so I replaced it with dissolved zinc.

The rest I filled in with a blue X.

- Missing metals – Dissolved metals: Chromium, Arsenic, Barium, Boron, Calcium, Potassium, Sodium, Iron, Manganese, Magnesium
  - ER-03-LF10-Q124
  - ER-03-LF30-Q124
  - ER-03-LF50-Q124
  - ER-03-Q124
  - MW-926-Q124

- Missing Cr(VI) 218.6
  - MW-52D-EB-Q124
  - MW-52M-EB-Q124
  - MW-52S-EB-Q124
  - MW-53D-EB-Q124

Thanks!

Laura Madsen PG
Project Geologist
Arcadis U.S., Inc.
121 N Washington Ave #337 | Minneapolis, MN | 55401 | USA
T +1 720 344 3771
M +1 303 653 5749
www.arcadis.com

Professional Geologist / PG-TN, # 5574

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WORK ORDER Summary

06-Mar-24

WorkOrder: N063248

Client ID: ARCUS02

Project: PG&E Topock - non routine, 30211191 **QC Level:** Level IV **Date Received:** 2/21/2024 5:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063248-001A	ER-01-LF10-Q124	2/21/2024 8:50:00 AM	3/7/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☑	☐	☐	WW
N063248-001B			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☑	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☑	☐	☐	WW
N063248-002A	ER-01-Q124	2/21/2024 9:44:00 AM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063248-002B			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063248-003A	ER-02-LF10-Q124	2/21/2024 10:24:00 AM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☑	☐	☐	WW
N063248-003B			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☑	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☑	☐	☐	WW
N063248-004A	ER-02-Q124	2/21/2024 11:11:00 AM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063248-004B			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063248-005A	ER-03-LF10-Q124	2/21/2024 11:51:00 AM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☑	☐	☐	WW
N063248-005B			3/7/2024		SM 2320 B	ALKALINITY, SPECIATED	☑	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☑	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☑	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☑	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☑	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☑	☐	☐	WW
			3/7/2024		SM 1030F1	Cation-Anion Balance Calculation	☑	☐	☐	WW
N063248-005C			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☑	☐	☐	WW
			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☑	☐	☐	WW

WORK ORDER Summary

06-Mar-24

WorkOrder: N063248

Client ID: ARCUS02

Project: PG&E Topock - non routine, 30211191 **QC Level:** Level IV **Date Received:** 2/21/2024 5:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063248-005C	ER-03-LF10-Q124	2/21/2024 11:51:00 AM	3/7/2024	Groundwater	EPA 6010B	DISSOLVED METALS BY ICP	☑	☐	☐	WW
			3/7/2024		EPA 6010B	DISSOLVED METALS BY ICP	☑	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☑	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☑	☐	☐	WW
N063248-005D			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☑	☐	☐	WW
			3/7/2024		EPA 6010B	TOTAL METALS BY ICP	☑	☐	☐	WW
N063248-005E			3/7/2024		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☑	☐	☑	SUB
N063248-005F			3/7/2024		SM4500-NH3C	AMMONIA-N	☑	☐	☑	SUB
N063248-005G			3/7/2024		SM2540C	TOTAL FILTERABLE RESIDUE	☑	☐	☐	WW
			3/7/2024			Total Dissolved Solids Prep	☑	☐	☐	WW
N063248-006A	ER-03-LF30-Q124	2/21/2024 12:26:00 PM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☑	☐	☐	WW
N063248-006B			3/7/2024		SM 2320 B	ALKALINITY, SPECIATED	☑	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☑	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☑	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☑	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☑	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☑	☐	☐	WW
			3/7/2024		SM 1030F1	Cation-Anion Balance Calculation	☑	☐	☐	WW
N063248-006C			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☑	☐	☐	WW
			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☑	☐	☐	WW
			3/7/2024		EPA 6010B	DISSOLVED METALS BY ICP	☑	☐	☐	WW
			3/7/2024		EPA 6010B	DISSOLVED METALS BY ICP	☑	☐	☐	WW

WORK ORDER Summary

06-Mar-24

WorkOrder: N063248

Client ID: ARCUS02

Project: PG&E Topock - non routine, 30211191 **QC Level:** Level IV **Date Received:** 2/21/2024 5:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063248-006C	ER-03-LF30-Q124	2/21/2024 12:26:00 PM	3/7/2024	Groundwater	EPA 6020	DISSOLVED METALS BY ICP-MS	☑	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☑	☐	☐	WW
N063248-006D			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☑	☐	☐	WW
			3/7/2024		EPA 6010B	TOTAL METALS BY ICP	☑	☐	☐	WW
N063248-006E			3/7/2024		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☑	☐	☑	SUB
N063248-006F			3/7/2024		SM4500-NH3C	AMMONIA-N	☑	☐	☑	SUB
N063248-006G			3/7/2024		SM2540C	TOTAL FILTERABLE RESIDUE	☑	☐	☐	WW
			3/7/2024			Total Dissolved Solids Prep	☑	☐	☐	WW
N063248-007A	ER-03-LF50-Q124	2/21/2024 12:52:00 PM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☑	☐	☐	WW
N063248-007B			3/7/2024		SM 2320 B	ALKALINITY, SPECIATED	☑	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☑	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☑	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☑	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☑	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☑	☐	☐	WW
			3/7/2024		SM 1030F1	Cation-Anion Balance Calculation	☑	☐	☐	WW
N063248-007C			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☑	☐	☐	WW
			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☑	☐	☐	WW
			3/7/2024		EPA 6010B	DISSOLVED METALS BY ICP	☑	☐	☐	WW
			3/7/2024		EPA 6010B	DISSOLVED METALS BY ICP	☑	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☑	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☑	☐	☐	WW

WORK ORDER Summary

06-Mar-24

WorkOrder: N063248

Client ID: ARCUS02

Project: PG&E Topock - non routine, 30211191 **QC Level:** Level IV **Date Received:** 2/21/2024 5:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063248-007D	ER-03-LF50-Q124	2/21/2024 12:52:00 PM	3/7/2024	Groundwater	EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☑	☐	☐	WW
			3/7/2024		EPA 6010B	TOTAL METALS BY ICP	☑	☐	☐	WW
N063248-007E			3/7/2024		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☑	☐	☑	SUB
N063248-007F			3/7/2024		SM4500-NH3C	AMMONIA-N	☑	☐	☑	SUB
N063248-007G			3/7/2024		SM2540C	TOTAL FILTERABLE RESIDUE	☑	☐	☐	WW
			3/7/2024			Total Dissolved Solids Prep	☑	☐	☐	WW
N063248-008A	ER-03-Q124	2/21/2024 1:46:00 PM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063248-008B			3/7/2024		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/7/2024		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N063248-008C			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/7/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063248-008D			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW

WORK ORDER Summary

06-Mar-24

WorkOrder: N063248

Client ID: ARCUS02

Project: PG&E Topock - non routine, 30211191 **QC Level:** Level IV **Date Received:** 2/21/2024 5:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063248-008E	ER-03-Q124	2/21/2024 1:46:00 PM	3/7/2024	Groundwater	SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N063248-008F			3/7/2024		SM4500-NH3C	AMMONIA-N	☐	☐	☑	SUB
N063248-008G			3/7/2024		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			3/7/2024			Total Dissolved Solids Prep	☐	☐	☐	WW
N063248-009A	EB-734-Q124	2/21/2024 2:00:00 PM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063248-010A	MW-15-Q124	2/21/2024 8:25:00 AM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063248-010B			3/7/2024		SM 2340 B	Hardness by Calculation	☑	☐	☐	WW
			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/7/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063248-010C			3/7/2024		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			3/7/2024			Total Dissolved Solids Prep	☐	☐	☐	WW
			3/7/2024		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/7/2024		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW

WORK ORDER Summary

06-Mar-24

WorkOrder: N063248

Client ID: ARCUS02

Project: PG&E Topock - non routine, 30211191 **QC Level:** Level IV **Date Received:** 2/21/2024 5:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063248-011A	MW-926-Q124	2/21/2024 12:01:00 PM	3/7/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063248-011B			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/7/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063248-011C			3/7/2024		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	WW
			3/7/2024			Total Dissolved Solids Prep	☐	☐	☐	WW
			3/7/2024		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/7/2024		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	WW
N063248-011D			3/7/2024		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N063248-011E			3/7/2024		SM4500-NH3C	AMMONIA-N	☐	☐	☑	SUB
N063248-011F			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
N063248-012A	FOLDER	3/7/2024	3/7/2024		Folder	Folder	☐	☐	☐	LAB
			3/7/2024		Folder	Level IV Report	☐	☐	☐	LAB

WORK ORDER Summary

06-Mar-24

WorkOrder: N063248

Client ID: ARCUS02

Project: PG&E Topock - non routine, 30211191 **QC Level:** Level IV **Date Received:** 2/21/2024 5:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063248-012A	FOLDER	3/7/2024	3/7/2024		Folder	Folder	☐	☐	☐	LAB

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

Field Sampler: Riggie Tep

22-Feb-24

				Ammonia	Requested Tests	
Sample ID	**Matrix**	**Date Collected**	**Bottle Type**	**SM4500-NH3C**	~~**SM4500-NO3F**~~ Nitrate/Nitrite	
N063248-005E / ER-03-LF10-Q124	Groundwater	2/21/2024 11:51:00 AM	8OZP		1	
N063248-005F / ER-03-LF10-Q124	Groundwater	2/21/2024 11:51:00 AM	16OZP	1		
N063248-006E / ER-03-LF30-Q124	Groundwater	2/21/2024 12:26:00 PM	8OZP		1	
N063248-006F / ER-03-LF30-Q124	Groundwater	2/21/2024 12:26:00 PM	16OZP	1		
N063248-007E / ER-03-LF50-Q124	Groundwater	2/21/2024 12:52:00 PM	8OZP		1	
N063248-007F / ER-03-LF50-Q124	Groundwater	2/21/2024 12:52:00 PM	16OZP	1		
N063248-008E / ER-03-Q124	Groundwater	2/21/2024 1:46:00 PM	8OZP		1	
N063248-008F / ER-03-Q124	Groundwater	2/21/2024 1:46:00 PM	16OZP	1		
N063248-011D / MW-926-Q124	Groundwater	2/21/2024 12:01:00 PM	8OZP		1	
N063248-011E / MW-926-Q124	Groundwater	2/21/2024 12:01:00 PM	16OZP	1		

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N63248A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for Nitrate/~~Nitrate~~ Nitrite and Ammonia. EDD requirement Labspec7 edata.

GLS #:

		Date/Time			Date/Time
Relinquished by:	YRodriguez	2/22/2024 1630	**Received by:**		
Relinquished by:			**Received by:**		

List of Analysts

ASSET Laboratories Work Order: N063248

NAME	TEST METHOD
Lilia Ramit	SM 2540C, SM 2320 B
Ria Abes	EPA 218.6, EPA 300.0
Diane Jetajobe	EPA 6010B_Dissolved, EPA 6010B_Total, EPA 6020_Dissolved

SM 2540C

Wet Chemistry Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107029 **Analyst:** LSR

ASSET #: N063248 **Date Analyzed:** 22-Feb

Method: EPA 160.1 / SM 2540C

Initial Calibration	1st Level Review Y	N	N/A	2nd Level Review Y	N	N/A
1. ICAL before initial sample analysis or every 24 hrs.			X			X
2. Does correlation coefficient,r, meet criteria ?(r = 0.995)			X			X
3. ICV within ± 15% of expected value.			X			X
Continuing Calibration						
4. CCV after every 10 samples and at the end of analysis sequence.			X			X
5. CCV within ± 15% of expected value.			X			X
6. Calibration blanks run after ICV and CCV?			X			X
7. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)			X			X
Sample Information						
8. All samples are within linear range.			X			X
9. Are all samples analyzed within hold time.	X			X		
QC Items						
10. Method blank values are below 1/2 the reporting limit.	X			X		
11. LCS compounds within control limits.	X			X		
12. ~~MS/MSD~~, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
13. Are Non-Conformances documented			X			X
14. Runlog complete and included in package.	X			X		
15. Spectrophotometer tape included (Spec work only)			X			X
16. Digestion log complete and included in package (if applicable)			X			X
Preliminary Report						
17. Does the raw data match the preliminary report?	X			X		
18. Are analytical results correct?	X			X		
19. Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer LSR Date: 3/5/2024

2nd Level Reviewer JRB 3/12/2024 Date:

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: SM 2540C
TEST NAME: Total Filterable Residue
MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying
B = weight of dish in g
C = volume of sample used in mL

For **N063248-008G,** TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(52.2702 - 52.1511)*1000000}{10}$$

= 11910 mg/L

Reporting result in two significant figures,

TDS= 12000 mg/L

Reviewed by:

JRB 3/26/2024

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/22/2024 10:59:42 AM**
Prep End Date: **2/23/2024 1:00:00 PM**
Prep Batch **107029** Prep Code:**160.1_W_PREP**

Reviewed/ Date: JRB 3/26/2024
Initials/ Date: 3/5/2024 LSR
Technician: **Lilia Ramit**

Prep Factor Units: **mL / mL**
Temp. (°C): **180**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107029	Water		100	☐	100	1.000		
MB-107029	Water		100	☐	100	1.000		
N063192-001F	Water		50	☐	100	2.000		
N063192-002F	Water		75	☐	100	1.333		
N063248-005G	Groundwater		10	☐	100	10.000		
N063248-006G	Groundwater		10	☐	100	10.000		
N063248-007G	Groundwater		10	☐	100	10.000		
N063248-008G	Groundwater		10	☐	100	10.000		
N063248-010C	Groundwater		60	☐	100	1.667		
N063248-011C	Groundwater		10	☐	100	10.000		
N063252-001C	Leachate		2	☐	100	50.000		
N063253-001C	Leachate		1	☐	100	100.000		
N063253-001C-DUP	Leachate		1	☐	100	100.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15937	Glass Fiber Filter, 47mm

Spk ID	Spike Name	SampType	AmtAdd
IWST240122A	1000 ppm NaCl	LCS	100

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/22/2024 10:59:42 AM**
Prep End Date:

Reviewed/ Date: JRB 2/27/2024
Initials/ Date: for 3/5/2024 LSR
Technician: **Lilia Ramit**

Prep Batch **107029** Prep Code: **160.1_W_PREP**

Prep Factor Units: **mL / mL**

Sample ID	Matrix	pH (Cond)	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107029	Water	1WSP240122A	100	☐	100	1.000		
MB-107029	Water		100	☐	100	1.000		
N063192-001F	Water	2590	100 / 50	☐	100	1.000		
N063192-002F	Water	1773	100 / 75	☐	100	1.000		
N063248-005G	Groundwater	14170	100 / 10	☐	100	1.000		
N063248-006G	Groundwater	18360	100 / 10	☐	100	1.000		
N063248-007G	Groundwater	18220	100 / 10	☐	100	1.000		
N063248-008G	Groundwater	18130	100 / 10	☐	100	1.000		
N063248-010C	Groundwater	2410	100 / 60	☐	100	1.000		
N063248-011C	Groundwater	13060	100 / 10	☐	100	1.000		
N063252-001C	Leachate	52000	100 / 2	☐	100	1.000		
N063253-001C	Leachate	97600	100 / 1	☐	100	1.000		
N063253-001C-DUP	Leachate	I	100 / 1	☐	100	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

15137

LOGBOOK DATA, QUANTITATION REPORT and/or SPECTRA

Name of Test: TDS

TSS / TS / TDS Preparation and Runlog

QC Batch No.: 107029

		1	2	3
Date Prepared: 2/22/24	In Oven Date:	2/23/24	2/23/24	
Time Prepared: 1059	Time:	900	1100	
Prepared By: LW	Temp°C:	178	178	
	Out Oven Date:	2/23/24	2/23/24	
	Time:	1000	1200	
	Temp°C:	178	178	

Date	Sample ID	Sample Vol. (ml)	Crucible + Filter (TSS)	Crucible + Filter+Sample (TSS)	Comments
2/27/24 By	MB - 107029	100	63.6750 63.6747	63.6748 63.6749	
5	LCS - 107029	100	66.2358 66.2355	66.3331 66.3329	
F	NOC3192-1F	50	65.1454 65.1450	65.2446 65.2447	
RR	1 2F	75	60.7697 60.7693	60.8691 60.8694	
5	NO63248-5 G	10	54.0892 54.0888	54.1705 54.1702	
A	6 G	10	56.3291 56.3287	56.4414 56.4412	
7	7 G	10	53.0997 53.0993	53.2152 53.2149	
11	8 G	10	52.1515 52.1511	52.2704 52.2702	
E	10 C	60	49.3826 49.3823	49.4640 49.4638	
12	11C	10	55.1396 55.1392	55.2264 55.2267	3/5/2024 LSR
8	NO63252-1C	2	50.6154 50.6153	50.6984 50.6984	
2	NO63253-1C	1	52.5623 52.5619	52.6871 52.6875	Reviewed by:
3	1 1CDUP	1	50.9037 50.9035	51.0348 51.0351	JRB 2/27/2024

TOTAL DISSOLVED SOLIDS, TDS

TDS, mg/L = (A-B) X 10000*PF

where:
- A = weight in grams of dish + residue after drying
- B = weight of dish in grams
- PF = 100/volume of sample used in mL

Date Finished:	vol of sample (mL)	weight of dish in grams (B)	weight in grams of dish + residue after drying (A)	(A-B)*10000	prep fact (PF)	TDS, mg/L	CONDUCTIVITY	RATIO	Sample Type
2/23/2024									
MB-107029	100	63.6747	63.6749	2	1	2			MBLK
LCS-107029	100	66.2355	66.3329	974	1	974			LCS
N063192-001F	50	65.145	65.2447	997	2	1994	2590	0.770	SAMP
N063192-002F	75	60.7693	60.8694	1001	1.33333333	1334.66667	1773	0.753	SAMP
N063248-005G	10	54.0888	54.1702	814	10	8140	14170	0.574	SAMP
N063248-006G	10	56.3287	56.4412	1125	10	11250	18360	0.613	SAMP
N063248-007G	10	53.0993	53.2149	1156	10	11560	18220	0.634	SAMP
N063248-008G	10	52.1511	52.2702	1191	10	11910	18130	0.657	SAMP
N063248-010C	60	49.3823	49.4638	815	1.66666667	1358.33333	2110	0.644	SAMP
N063248-011C	10	55.1392	55.2267	875	10	8750	13060	0.670	SAMP
N063252-001C	2	50.6153	50.6984	831	50	41550	52000	0.799	SAMP
N063253-001C	1	52.5619	52.6875	1256	100	125600	97600	1.287	SAMP
N063253-001CDUP	1	50.9035	51.0351	1316	100	131600	97600	1.348	DUP

3/5/2024 LSR

Reviewed by:

JRB 3/26/2024

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R182899
ASSET #: N063248

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/23/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?	X				X	
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?	X			X		
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X	X		
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments: Dilution was necessary for some samples due to matrix interference.
N063248-008A = <1.0 ppb ; N063248-008C (6020) = 1.0 ppb
MS protocol performed. Recovery within criteria.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer RB 02272024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063248-002A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 8.5302 * 50$$

$$Cr^{+6}, \mu g/L = 426.5100$$

Reporting results in two significant figures,

$$\mathbf{Cr^{+6}, \mu g/L = 430}$$

Reviewed by:

dMocha 3/20/2024

ANALYSIS RUN LOG

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240223A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/23/24 9:11 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/23/24 9:24 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/23/24 9:34 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/23/24 9:43 AM	Reported
13	MB-R182899	MBLK	1	Hexavalent Chromium	02/23/24 9:53 AM	Reported
14	LCS-R182899	LCS	1	Hexavalent Chromium	02/23/24 10:02 AM	Reported
15	N063248-001A	SAMP	1	Hexavalent Chromium	02/23/24 10:27 AM	Reported
16	N063248-003A	SAMP	1	Hexavalent Chromium	02/23/24 10:39 AM	Not Reported
17	N063248-005A	SAMP	1	Hexavalent Chromium	02/23/24 10:48 AM	Not Reported
18	N063248-006A	SAMP	1	Hexavalent Chromium	02/23/24 10:58 AM	Not Reported
19	N063248-007A	SAMP	1	Hexavalent Chromium	02/23/24 11:07 AM	Not Reported
20	N063248-003A	SAMP	100	Hexavalent Chromium	02/23/24 11:17 AM	Reported
21	N063248-003AMS	MS	100	Hexavalent Chromium	02/23/24 11:26 AM	Reported
22	N063248-003AMSD	MSD	100	Hexavalent Chromium	02/23/24 11:36 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/23/24 11:45 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/23/24 11:54 AM	Reported
25	N063248-001AMS	MS	1	Hexavalent Chromium	02/23/24 12:04 PM	Reported
26	N063248-005AMS	MS	1	Hexavalent Chromium	02/23/24 12:13 PM	Not Reported
27	N063248-011A	SAMP	1	Hexavalent Chromium	02/23/24 12:23 PM	Not Reported
28	N063248-011AMS	MS	1	Hexavalent Chromium	02/23/24 12:32 PM	Not Reported
29	N063248-006AMS	MS	1	Hexavalent Chromium	02/23/24 12:42 PM	Not Reported
30	N063248-007AMS	MS	1	Hexavalent Chromium	02/23/24 12:51 PM	Not Reported
31	N063248-002A	SAMP	50	Hexavalent Chromium	02/23/24 1:01 PM	Reported
32	N063248-002AMS	MS	50	Hexavalent Chromium	02/23/24 1:10 PM	Reported
33	N063248-004A	SAMP	5	Hexavalent Chromium	02/23/24 1:20 PM	Not Reported
34	N063248-004AMS	MS	5	Hexavalent Chromium	02/23/24 1:29 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/23/24 1:39 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/23/24 1:48 PM	Reported
37	N063248-010A	SAMP	5	Hexavalent Chromium	02/23/24 1:57 PM	Reported
38	N063248-010AMS	MS	5	Hexavalent Chromium	02/23/24 2:07 PM	Reported
39	N063248-008A	SAMP	1	Hexavalent Chromium	02/23/24 2:16 PM	Not Reported
40	N063248-008AMS	MS	1	Hexavalent Chromium	02/23/24 2:26 PM	Not Reported
41	N063248-009A	SAMP	1	Hexavalent Chromium	02/23/24 2:35 PM	Reported
42	N063248-009AMS	MS	1	Hexavalent Chromium	02/23/24 2:45 PM	Reported

INJECTION LOG: 240223A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063248-008A	SAMP	5	Hexavalent Chromium	02/23/24 2:54 PM	Reported
44	N063248-008AMS	MS	5	Hexavalent Chromium	02/23/24 3:04 PM	Reported
45	N063214-017A	SAMP	1	Hexavalent Chromium	02/23/24 3:13 PM	Reported
46	MB-107024	MBLK	1	Hexavalent Chromium	02/23/24 3:23 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/23/24 3:32 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/23/24 3:42 PM	Reported
49	N063246-001A	SAMP	1	Hexavalent Chromium	02/23/24 3:51 PM	Reported
50	N063246-001AREP	DUP	1	Hexavalent Chromium	02/23/24 4:00 PM	Reported
51	N063248-002ADUP	DUP	50	Hexavalent Chromium	02/23/24 4:14 PM	Reported
52	N063214-017AMS	MS	1	Hexavalent Chromium	02/23/24 4:26 PM	Reported
53	N063249-017A	SAMP	1	Hexavalent Chromium	02/23/24 4:35 PM	Reported
54	N063249-017AMS	MS	1	Hexavalent Chromium	02/23/24 4:45 PM	Reported
55	N063248-004A	SAMP	50	Hexavalent Chromium	02/23/24 4:54 PM	Reported
56	N063248-004AMS	MS	50	Hexavalent Chromium	02/23/24 5:23 PM	Reported
57	N063248-005A	SAMP	5	Hexavalent Chromium	02/23/24 5:34 PM	Reported
58	N063248-005AMS	MS	5	Hexavalent Chromium	02/23/24 5:43 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/23/24 5:53 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/23/24 6:02 PM	Reported
61	N063248-006A	SAMP	5	Hexavalent Chromium	02/23/24 6:12 PM	Reported
62	N063248-006AMS	MS	5	Hexavalent Chromium	02/23/24 6:21 PM	Reported
63	N063248-007A	SAMP	5	Hexavalent Chromium	02/23/24 6:31 PM	Reported
64	N063248-007AMS	MS	5	Hexavalent Chromium	02/23/24 6:40 PM	Reported
65	N063248-011A	SAMP	5	Hexavalent Chromium	02/23/24 6:50 PM	Reported
66	N063248-011AMS	MS	5	Hexavalent Chromium	02/23/24 6:59 PM	Reported
67	N063249-012A	SAMP	1	Hexavalent Chromium	02/23/24 7:09 PM	Reported
68	N063249-012AMS	MS	1	Hexavalent Chromium	02/23/24 7:18 PM	Reported
69	N063249-014A	SAMP	1	Hexavalent Chromium	02/23/24 7:27 PM	Reported
70	N063249-014AMS	MS	1	Hexavalent Chromium	02/23/24 7:37 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/23/24 7:46 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/23/24 7:56 PM	Reported
73	N063249-016A	SAMP	1	Hexavalent Chromium	02/23/24 8:05 PM	Reported
74	N063249-016AMS	MS	1	Hexavalent Chromium	02/23/24 8:15 PM	Reported
75	N063249-011A	SAMP	1	Hexavalent Chromium	02/23/24 8:24 PM	Not Reported
76	N063249-011AMS	MS	1	Hexavalent Chromium	02/23/24 8:34 PM	Not Reported
77	N063249-011A	SAMP	5	Hexavalent Chromium	02/23/24 8:43 PM	Reported
78	N063249-011AMS	MS	5	Hexavalent Chromium	02/23/24 8:53 PM	Reported
79	N063249-013A	SAMP	1	Hexavalent Chromium	02/23/24 9:02 PM	Not Reported
80	N063249-013AMS	MS	1	Hexavalent Chromium	02/23/24 9:12 PM	Not Reported
81	N063249-013A	SAMP	5	Hexavalent Chromium	02/23/24 9:21 PM	Reported
82	N063249-013AMS	MS	5	Hexavalent Chromium	02/23/24 9:30 PM	Reported
83	CCV-7	CCV	1	Hexavalent Chromium	02/23/24 9:40 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	02/23/24 9:49 PM	Reported

INJECTION LOG: 240223A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063249-015A	SAMP	1	Hexavalent Chromium	02/23/24 9:59 PM	Not Reported
86	N063249-015AMS	MS	1	Hexavalent Chromium	02/23/24 10:08 PM	Not Reported
87	N063249-015A	SAMP	5	Hexavalent Chromium	02/23/24 10:18 PM	Reported
88	N063249-015AMS	MS	5	Hexavalent Chromium	02/23/24 10:27 PM	Reported
89	CCV-8	CCV1	1	Hexavalent Chromium	02/23/24 10:37 PM	Reported
90	CCB-8	CCB	1	Hexavalent Chromium	02/23/24 10:46 PM	Reported
91	BLANK	BLANK	1	Hexavalent Chromium	02/23/24 10:56 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240223A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**23/Feb/24 23:26:19**
No. of Injections:	**94**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/23/2024 09:11	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/23/2024 09:24	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/23/2024 09:34	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/23/2024 09:43	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/23/2024 09:53	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/23/2024 10:02	Finished	LCS @5ppb, IWST-231228B
15	N063248-001A,SAMF	1	1000	Unknown		02/23/2024 10:27	Finished	SAMP,10 mL
16	N063248-003A,SAMF	2	1000	Unknown		02/23/2024 10:39	Finished	SAMP,10 mL
17	N063248-005A,SAMF	3	1000	Unknown		02/23/2024 10:48	Finished	SAMP,10 mL
18	N063248-006A,SAMF	4	1000	Unknown		02/23/2024 10:58	Finished	SAMP,10 mL
19	N063248-007A,SAMF	5	1000	Unknown		02/23/2024 11:07	Finished	SAMP,10 mL
20	N063248-003A,SAMF	6	1000	Unknown		02/23/2024 11:17	Finished	SAMP,0.1>10 mL
21	N063248-003AMS,MS	7	1000	Unknown		02/23/2024 11:26	Finished	MS (5ppb), IWST-231228B,0.1
22	N063248-003AMSD,M	8	1000	Unknown		02/23/2024 11:36	Finished	MSD (5ppb), IWST-231228B,0
23	CCV-2,CCV1,1,	9	1000	Unknown		02/23/2024 11:45	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		02/23/2024 11:54	Finished	CCB R240129C
25	N063248-001AMS,MS	11	1000	Unknown		02/23/2024 12:04	Finished	MS (1ppb), IWST-231228B,10r
26	N063248-005AMS,MS	12	1000	Unknown		02/23/2024 12:13	Finished	MS (1ppb), IWST-231228B,10r
27	N063248-011A,SAMF	13	1000	Unknown		02/23/2024 12:23	Finished	SAMP,10 mL
28	N063248-011AMS,MS	14	1000	Unknown		02/23/2024 12:32	Finished	MS (1ppb), IWST-231228B,10r
29	N063248-006AMS,MS	15	1000	Unknown		02/23/2024 12:42	Finished	MS (1ppb), IWST-231228B,10r
30	N063248-007AMS,MS	16	1000	Unknown		02/23/2024 12:51	Finished	MS (1ppb), IWST-231228B,10r
31	N063248-002A,SAMF	17	1000	Unknown		02/23/2024 13:01	Finished	SAMP,0.2>10 mL
32	N063248-002AMS,MS	18	1000	Unknown		02/23/2024 13:10	Finished	MS (5ppb), IWST-231228B,0.2
33	N063248-004A,SAMF	19	1000	Unknown		02/23/2024 13:20	Finished	SAMP,2>10 mL
34	N063248-004AMS,MS	20	1000	Unknown		02/23/2024 13:29	Finished	MS (5ppb), IWST-231228B,2>1
35	CCV-3,CCV,1,	21	1000	Unknown		02/23/2024 13:39	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	22	1000	Unknown		02/23/2024 13:48	Finished	CCB R240129C
37	N063248-010A,SAMF	23	1000	Unknown		02/23/2024 13:57	Finished	SAMP,2>10 mL
38	N063248-010AMS,MS	24	1000	Unknown		02/23/2024 14:07	Finished	MS (5ppb), IWST-231228B,2>1
39	N063248-008A,SAMF	25	1000	Unknown		02/23/2024 14:16	Finished	SAMP,10 mL
40	N063248-008AMS,MS	26	1000	Unknown		02/23/2024 14:26	Finished	MS (1ppb), IWST-231228B,10r
41	N063248-009A,SAMF	27	1000	Unknown		02/23/2024 14:35	Finished	SAMP,10 mL
42	N063248-009AMS,MS	28	1000	Unknown		02/23/2024 14:45	Finished	MS (1ppb), IWST-231228B,10r
43	N063248-008A,SAMF	29	1000	Unknown		02/23/2024 14:54	Finished	SAMP,2>10 mL
44	N063248-008AMS,MS	30	1000	Unknown		02/23/2024 15:04	Finished	MS (1ppb), IWST-231228B,2>1
45	N063214-017A,SAMF	31	1000	Unknown		02/23/2024 15:13	Finished	SAMP,10 mL
46	MB-107024,MBLK,1,	32	1000	Unknown		02/23/2024 15:23	Finished	MB TCLP
47	CCV-4,CCV1,1,	33	1000	Unknown		02/23/2024 15:32	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	34	1000	Unknown		02/23/2024 15:42	Finished	CCB R240129C
49	N063246-001A,SAMF	35	1000	Unknown		02/23/2024 15:51	Finished	SAMP,10 mL
50	N063246-001AREP,D	36	1000	Unknown		02/23/2024 16:00	Finished	REP,10 mL
51	N063248-002ADUP,D	1	1000	Unknown		02/23/2024 16:14	Finished	DUP,0.2>10 mL
52	N063214-017AMS,MS	2	1000	Unknown		02/23/2024 16:26	Finished	MS (1ppb), IWST-231228B,10r
53	N063249-017A,SAMF	3	1000	Unknown		02/23/2024 16:35	Finished	SAMP,10 mL
54	N063249-017AMS,MS	4	1000	Unknown		02/23/2024 16:45	Finished	MS (1ppb), IWST-231228B,10r
55	N063248-004A,SAMF	5	1000	Unknown		02/23/2024 16:54	Finished	SAMP,0.2>10 mL
56	N063248-004AMS,MS	1	1000	Unknown		02/23/2024 17:23	Finished	MS (5ppb), IWST-231228B,0.2
57	N063248-005A,SAMF	2	1000	Unknown		02/23/2024 17:34	Finished	SAMP,2>10 mL
58	N063248-005AMS,MS	3	1000	Unknown		02/23/2024 17:43	Finished	MS (1ppb), IWST-231228B,2>1
59	CCV-5,CCV,1,	4	1000	Unknown		02/23/2024 17:53	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	5	1000	Unknown		02/23/2024 18:02	Finished	CCB R240129C

61	N063248-006A,SAMP	6	1000	Unknown		02/23/2024 18:12	Finished	SAMP,2>10 mL
62	N063248-006AMS,MS	7	1000	Unknown		02/23/2024 18:21	Finished	MS (1ppb), IWST-231228B,2>1
63	N063248-007A,SAMP	8	1000	Unknown		02/23/2024 18:31	Finished	SAMP,2>10 mL
64	N063248-007AMS,MS	9	1000	Unknown		02/23/2024 18:40	Finished	MS (1ppb), IWST-231228B,2>1
65	N063248-011A,SAMP	10	1000	Unknown		02/23/2024 18:50	Finished	SAMP,2>10 mL
66	N063248-011AMS,MS	11	1000	Unknown		02/23/2024 18:59	Finished	MS (1ppb), IWST-231228B,2>1
67	N063249-012A,SAMP	12	1000	Unknown		02/23/2024 19:09	Finished	SAMP,10 mL
68	N063249-012AMS,MS	13	1000	Unknown		02/23/2024 19:18	Finished	MS (1ppb), IWST-231228B,10r
69	N063249-014A,SAMP	14	1000	Unknown		02/23/2024 19:27	Finished	SAMP,10 mL
70	N063249-014AMS,MS	15	1000	Unknown		02/23/2024 19:37	Finished	MS (1ppb), IWST-231228B,10r
71	CCV-6,CCV1,1,	16	1000	Unknown		02/23/2024 19:46	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	17	1000	Unknown		02/23/2024 19:56	Finished	CCB R240129C
73	N063249-016A,SAMP	18	1000	Unknown		02/23/2024 20:05	Finished	SAMP,10 mL
74	N063249-016AMS,MS	19	1000	Unknown		02/23/2024 20:15	Finished	MS (1ppb), IWST-231228B,10r
75	N063249-011A,SAMP	20	1000	Unknown		02/23/2024 20:24	Finished	SAMP,10 mL
76	N063249-011AMS,MS	21	1000	Unknown		02/23/2024 20:34	Finished	MS (1ppb), IWST-231228B,10r
77	N063249-011A,SAMP	22	1000	Unknown		02/23/2024 20:43	Finished	SAMP,2>10 mL
78	N063249-011AMS,MS	23	1000	Unknown		02/23/2024 20:53	Finished	MS (1ppb), IWST-231228B,2>1
79	N063249-013A,SAMP	24	1000	Unknown		02/23/2024 21:02	Finished	SAMP,10 mL
80	N063249-013AMS,MS	25	1000	Unknown		02/23/2024 21:12	Finished	MS (1ppb), IWST-231228B,10r
81	N063249-013A,SAMP	26	1000	Unknown		02/23/2024 21:21	Finished	SAMP,2>10 mL
82	N063249-013AMS,MS	27	1000	Unknown		02/23/2024 21:30	Finished	MS (1ppb), IWST-231228B,2>1
83	CCV-7,CCV,1,	28	1000	Unknown		02/23/2024 21:40	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	29	1000	Unknown		02/23/2024 21:49	Finished	CCB R240129C
85	N063249-015A,SAMP	30	1000	Unknown		02/23/2024 21:59	Finished	SAMP,10 mL
86	N063249-015AMS,MS	31	1000	Unknown		02/23/2024 22:08	Finished	MS (1ppb), IWST-231228B,10r
87	N063249-015A,SAMP	32	1000	Unknown		02/23/2024 22:18	Finished	SAMP,2>10 mL
88	N063249-015AMS,MS	33	1000	Unknown		02/23/2024 22:27	Finished	MS (1ppb), IWST-231228B,2>1
89	CCV-8,CCV1,1,	34	1000	Unknown		02/23/2024 22:37	Finished	CCV @10ppb, IWST-231228A
90	CCB-8,CCB,1,	35	1000	Unknown		02/23/2024 22:46	Finished	CCB R240129C
91	BLANK	36	1000	Unknown		02/23/2024 22:56	Finished	BLANK
92	SHUTDOWN R240222A	37	1000	Unknown		02/23/2024 23:05	Finished	
93	Eluent: ~~R240220A~~	38	1000	Unknown		n.a.	Finished	
94	PCR: ~~R240220B~~ R240222B	39	1000	Unknown		n.a.	Finished	

dlRocha 3/20/2024

for RBA

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 2/22/24
Time Prepared: 1035H
Prepared By: MA

Reagent ID:
Sulfuric Acid: 143135
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: M240222A
NH4OH + NH4SO4 buffer: M240124C

6N NaOH: M031228C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW7248-1A	9.34	-	~250 mL	~250 mL		
2)	2A	9.36	-				
3)	3A	9.44	-				
4)	4A	9.42	-				
5)	5A	9.38	-				
6)	6A	9.32	-				
7)	7A	9.36	-				
8)	8A	8.90	9.48			+4	
9)	9A	9.71	-				
10)	10A	8.80	9.52			+6	
11)	11A	9.40	-				
12)	MW7249-1A	9.28	-				
13)	2A	9.68	-				
14)	3A	9.20	9.40			+3	
15)	4A	9.11	9.49			+5	
	5A	9.16	9.54			+5	

Sample Preparation

Date Prepared: 2/22/24
Time Prepared: 1037H
Prepared By: MA

Reagent ID:
Sulfuric Acid: 143135
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: M240222A
NH4OH + NH4SO4 buffer: M240124C

6N NaOH: M031228C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW7249-6A	9.66	-	~250 mL	~250 mL		
2)	7A	8.59	9.68			+8	
3)	8A	9.74	-				
4)	9A	8.68	9.69			+8	
5)	10A	9.75	-				
6)	11A	8.70	9.63			+7	
7)	12A	9.76	-				
8)	13A	8.84	9.58			+6	
9)	14A	9.70	-				
10)	15A	9.72	-				
11)	16A	9.68	-				
12)	17A	9.30	-				
13)	18A	9.21	-				
14)	19B	9.71	-				
15)							

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 2/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0427	0.2063	1.0639	2.1157	3.2270	4.3227	0.9999
Measured, in ug/L	0.198500	0.959200	4.946100	9.835700	15.002300	20.095900	
Relative Error (%RE)	-0.8%		-1.1%				

	Stock	Working
Standard Concentration:	1,000,000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ICV**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5711963**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5711964**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCV**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711966**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.911	0.20	5.000	0	98.2	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711967**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.195	0.20	0.2000	0	97.3	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711975**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.928	0.20	10.00	0	99.3	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCV**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711980**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.010	0.20	5.000	0	100	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711990**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.085	0.20	10.00	0	101	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCV**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712002**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.992	0.20	5.000	0	99.8	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712014**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.100	0.20	10.00	0	101	95	105				

Sample ID: **CCV-7**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCV**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712022**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.137	0.20	5.000	0	103	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-8** SampType: **CCV1** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712026**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.180	0.20	10.00	0	102	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ICB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5711965**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711968**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711976**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711981**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711991**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712003**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712015**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-7**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-8**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712027**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/23/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.048	
CCV-2	4.048	
CCV-3	4.048	
CCV-4	4.040	
CCV-5	4.040	
CCV-6	4.040	
CCV-7	4.040	
CCV-8	4.040	

Average	4.043
Actual RT Window	3.963 - 4.123
Applied RT Window	3.843 - 4.243

MB-R182899	N.A.	N.A.
LCS-R182899	4.040	PASS
N063248-001A	N.A.	N.A.
N063248-003A	3.848	PASS
N063248-005A	N.A.	N.A.
N063248-006A	N.A.	N.A.
N063248-007A	N.A.	N.A.
N063248-003A	4.048	PASS
N063248-003AMS	4.040	PASS
N063248-003AMSD	4.040	PASS
N063248-001AMS	3.965	PASS
N063248-011A	N.A.	N.A.
N063248-006AMS	N.A.	N.A.
N063248-007AMS	N.A.	N.A.
N063248-002A	4.040	PASS
N063248-002AMS	4.040	PASS
N063248-004A	4.015	PASS
N063248-004AMS	4.006	PASS
N063248-010A	4.031	PASS
N063248-010AMS	4.031	PASS

Reviewed by:

dMRocha 3/20/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/23/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.048	
CCV-2	4.048	
CCV-3	4.048	
CCV-4	4.040	
CCV-5	4.040	
CCV-6	4.040	
CCV-7	4.040	
CCV-8	4.040	
Average	4.043	
Actual RT Window	3.963 - 4.123	
Applied RT Window	3.843 - 4.243	
N063248-008A	N.A.	N.A.
N063248-008AMS	N.A.	N.A.
N063248-009A	4.031	PASS
N063248-009AMS	4.040	PASS
N063248-008A	N.A.	N.A.
N063248-008AMS	3.965	PASS
N063214-017A	N.A.	N.A.
MB-107024	N.A.	N.A.
N063246-001A	4.040	PASS
N063246-001AREP	4.040	PASS
N063248-002ADUP	4.040	PASS
N063214-017AMS	4.040	PASS
N063249-017A	N.A.	N.A.
N063249-017AMS	4.040	PASS
N063248-004A	4.040	PASS
N063248-004AMS	4.040	PASS
N063248-005A	N.A.	N.A.
N063248-005AMS	3.990	PASS
N063248-006A	N.A.	N.A.
N063248-006AMS	3.973	PASS

Reviewed by:

dlRocha 3/20/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/23/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.048	
CCV-2	4.048	
CCV-3	4.048	
CCV-4	4.040	
CCV-5	4.040	
CCV-6	4.040	
CCV-7	4.040	
CCV-8	4.040	
Average	4.043	
Actual RT Window	3.963 - 4.123	
Applied RT Window	3.843 - 4.243	
N063248-007A	N.A.	N.A.
N063248-007AMS	3.973	PASS
N063248-011A	N.A.	N.A.
N063248-011AMS	3.998	PASS
N063249-012A	N.A.	N.A.
N063249-012AMS	4.040	PASS
N063249-014A	N.A.	N.A.
N063249-014AMS	4.040	PASS
N063249-016A	N.A.	N.A.
N063249-016AMS	4.040	PASS
N063249-011A	N.A.	N.A.
N063249-011A	N.A.	N.A.
N063249-011AMS	4.006	PASS
N063249-013A	N.A.	N.A.
N063249-013AMS	N.A.	N.A.
N063249-013A	N.A.	N.A.
N063249-013AMS	3.931	PASS
N063249-015A	N.A.	N.A.
N063249-015AMS	N.A.	N.A.
N063249-015A	N.A.	N.A.

Reviewed by:

dMocha 3/20/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/23/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.048	
CCV-2	4.048	
CCV-3	4.048	
CCV-4	4.040	
CCV-5	4.040	
CCV-6	4.040	
CCV-7	4.040	
CCV-8	4.040	
Average	4.043	
Actual RT Window	3.963 - 4.123	
Applied RT Window	3.843 - 4.243	
N063249-015AMS	3.965	PASS

Reviewed by:

dMocha 3/20/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

Reviewed by:

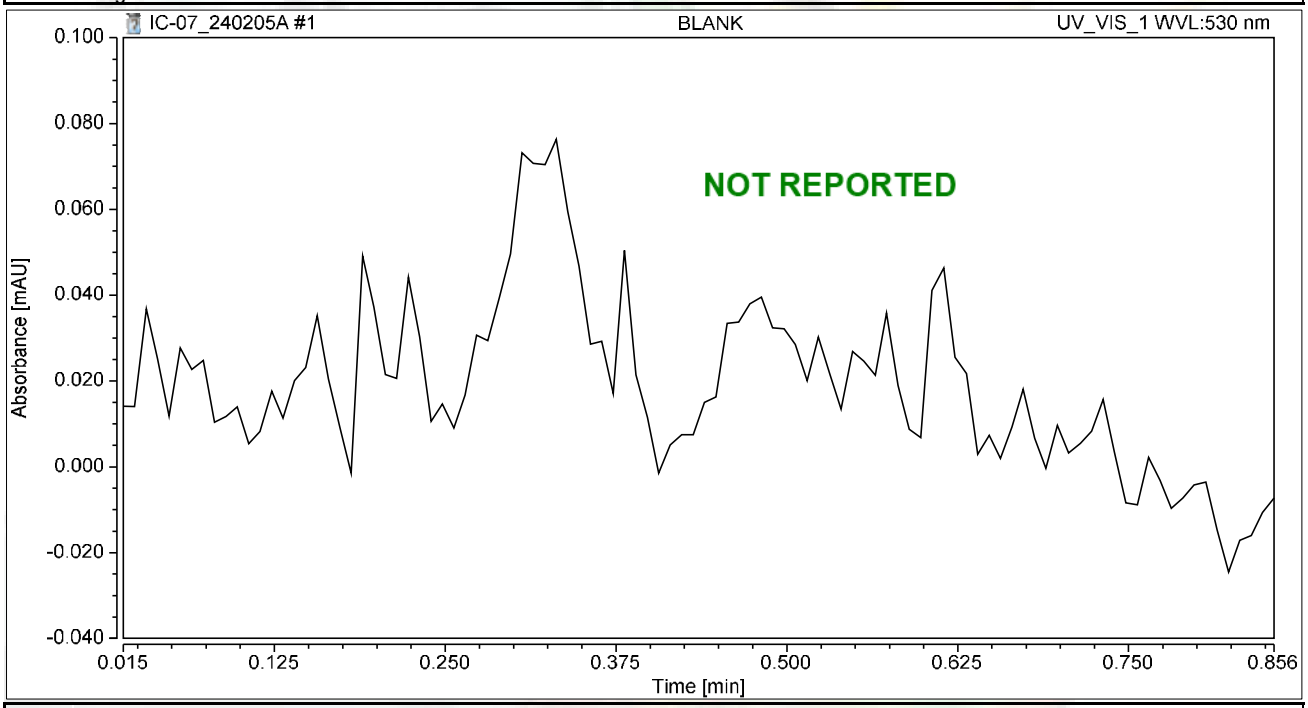
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**0.84**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 11:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

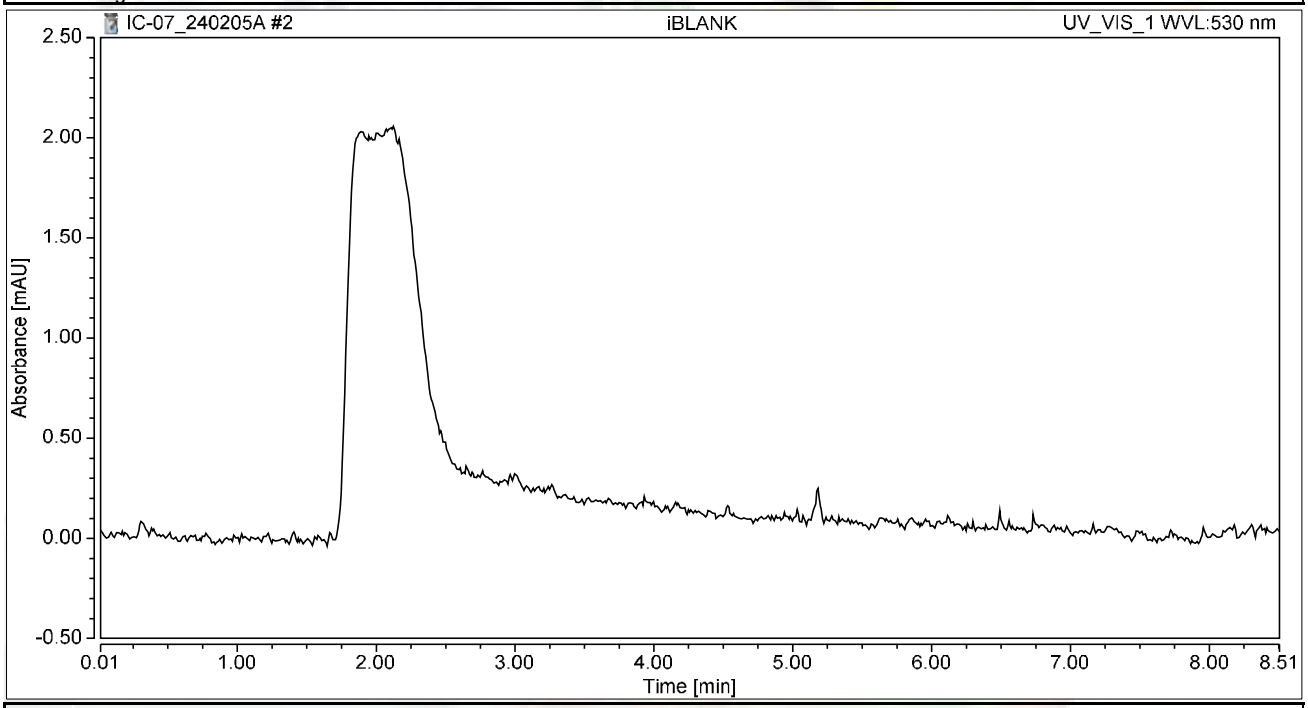
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Reviewed by:

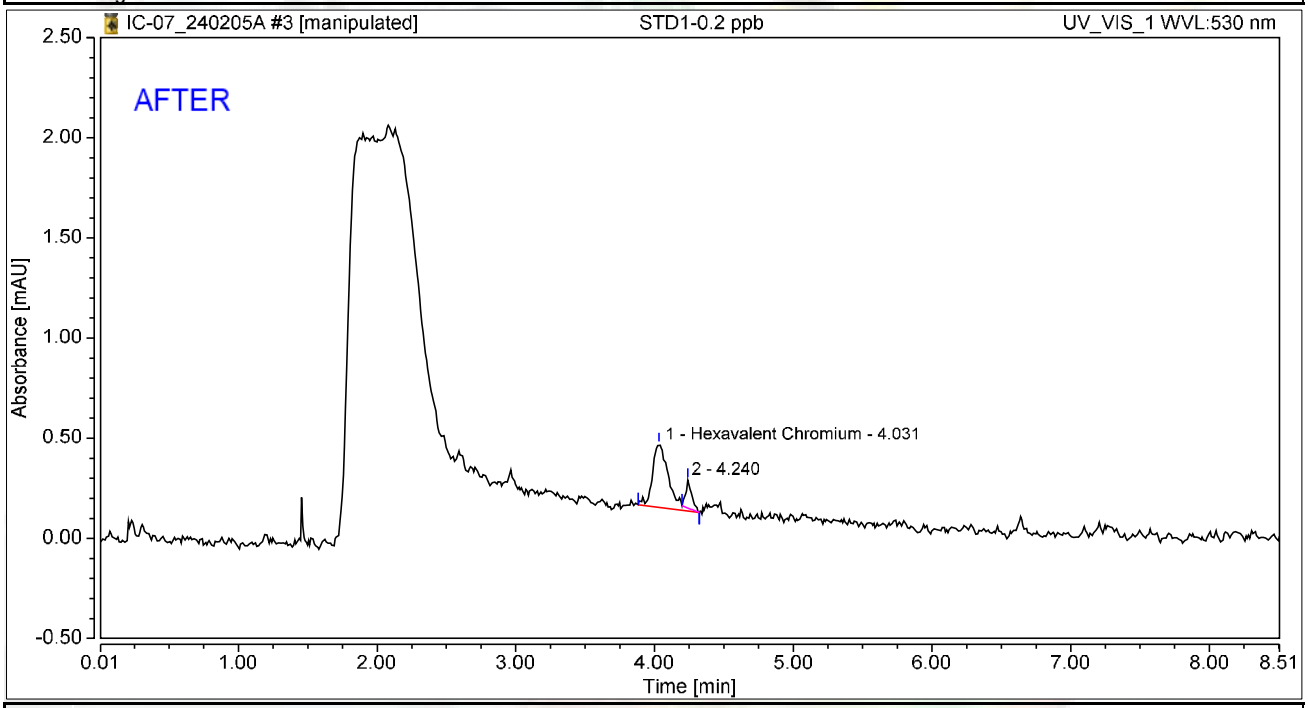
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.043	0.313	85.65	69.19	0.1985
2		4.240	0.007	0.139	14.35	30.81	n.a.
Total:			**0.050**	**0.452**	**100.00**	**100.00**	

Reviewed by:

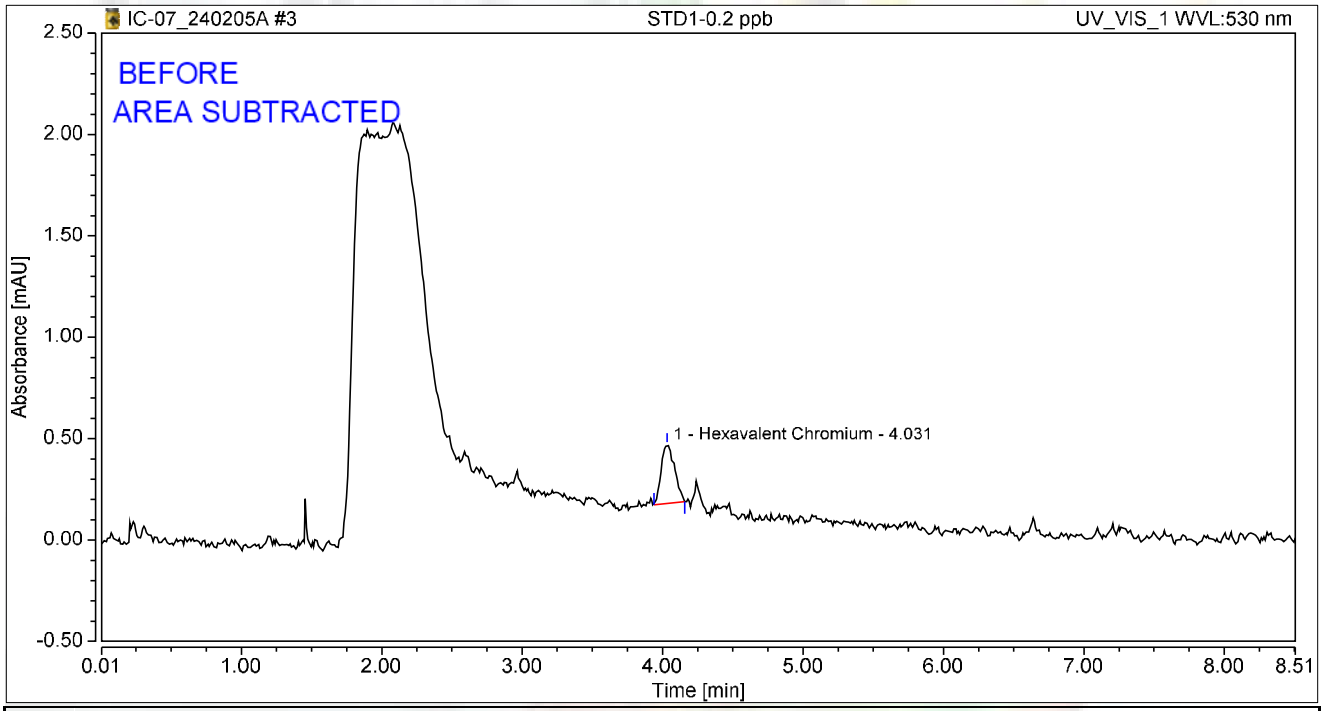
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

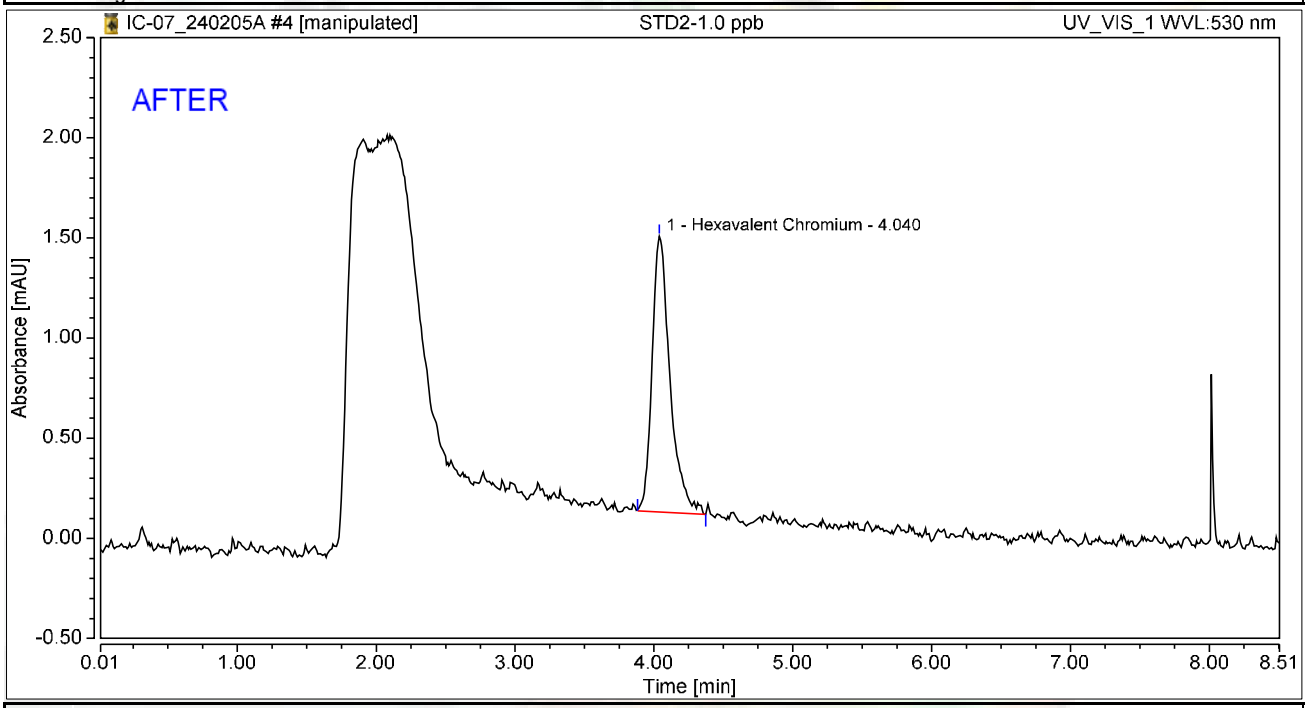
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.032	0.288	100.00	100.00	0.1502
Total:			**0.032**	**0.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.206	1.377	100.00	100.00	0.9592
Total:			**0.206**	**1.377**	**100.00**	**100.00**	

Reviewed by:

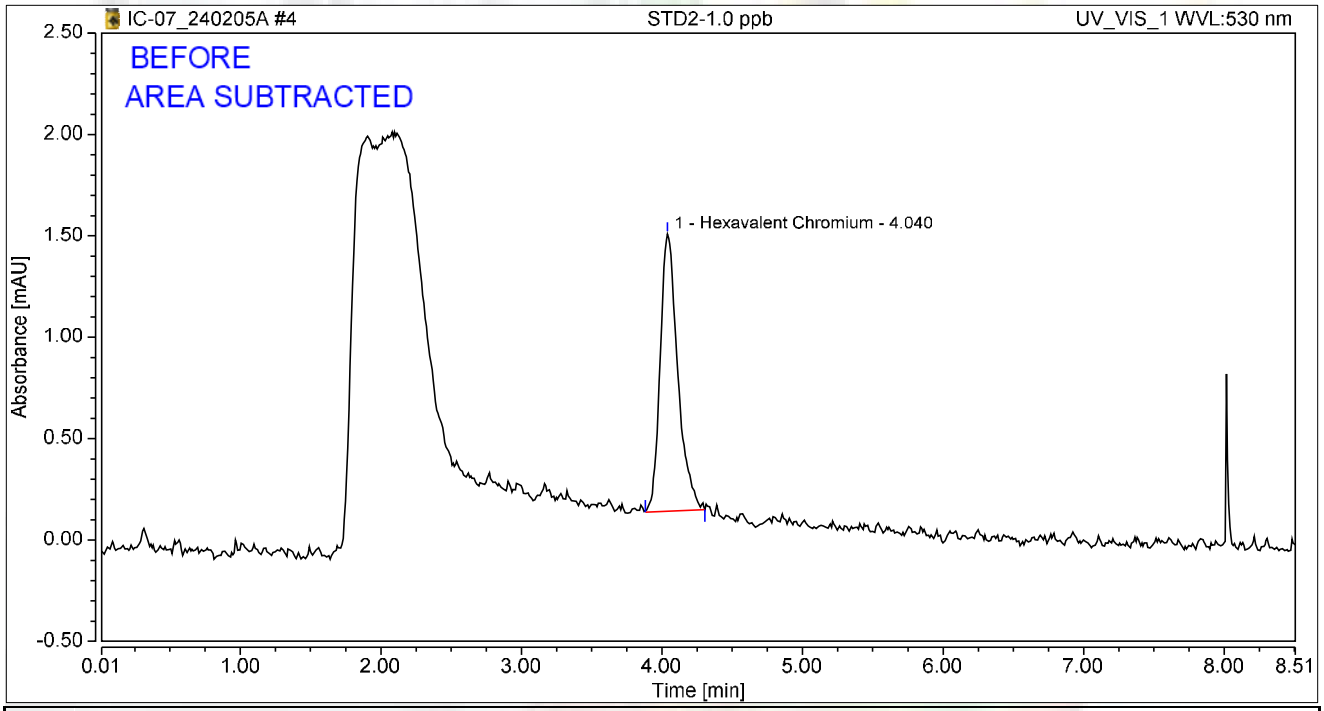
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

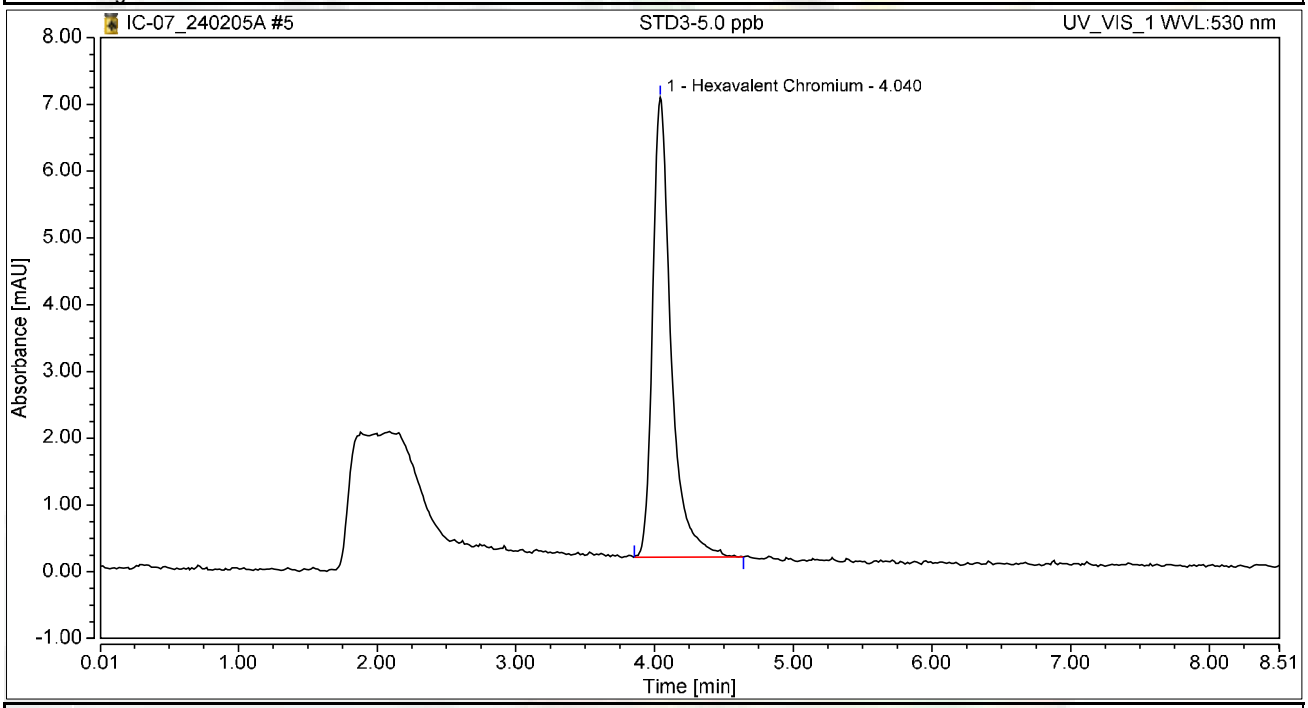
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.198	1.367	100.00	100.00	0.9223
Total:			**0.198**	**1.367**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

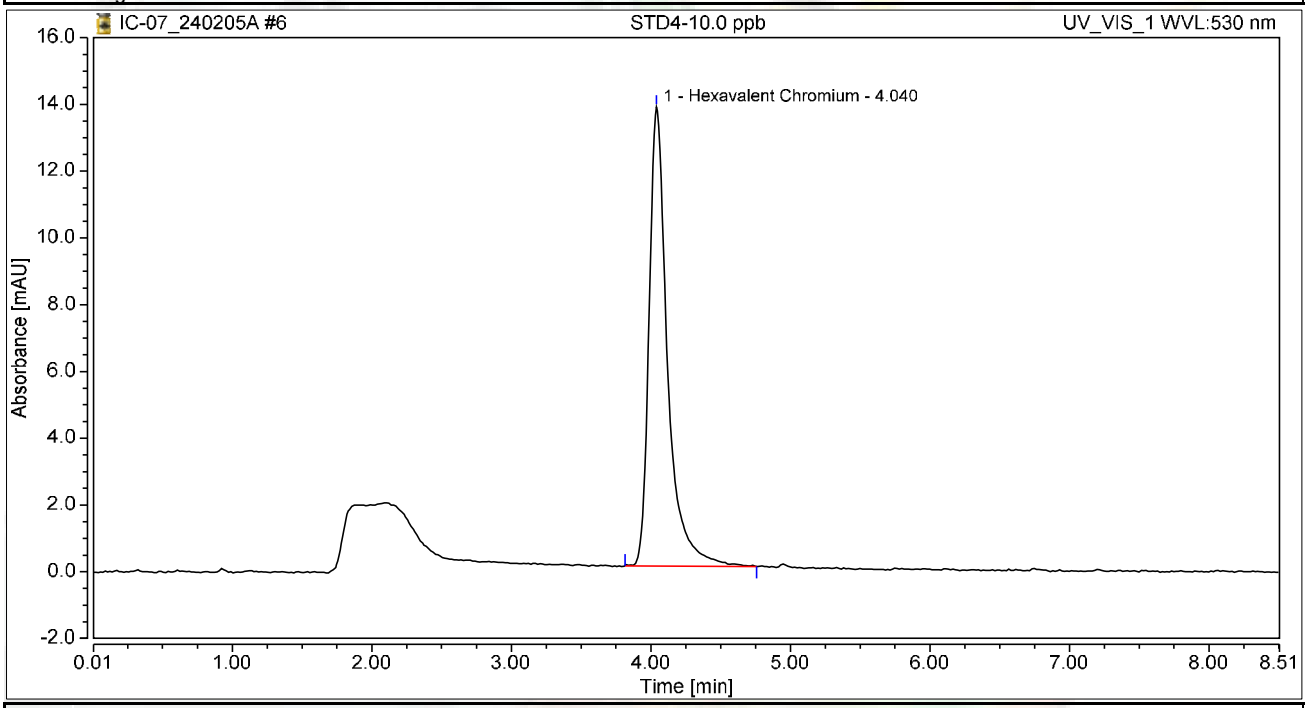
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.064	6.885	100.00	100.00	4.9461
Total:			**1.064**	**6.885**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

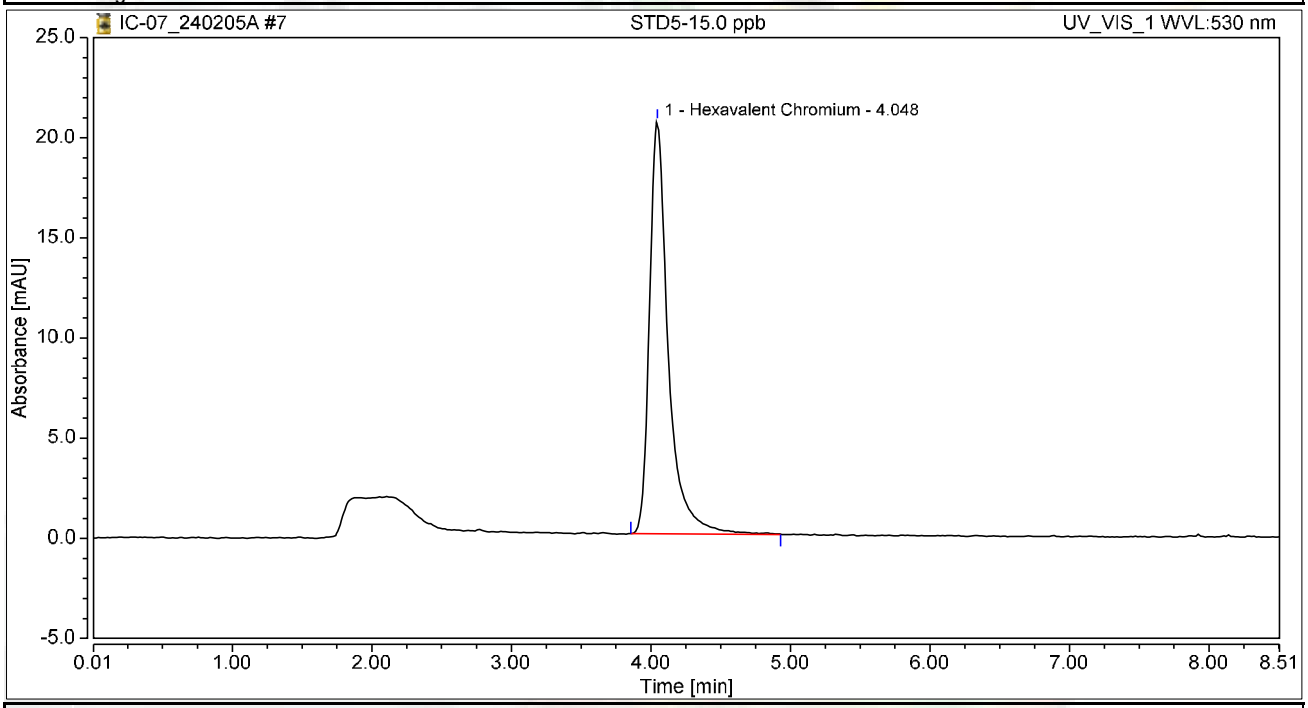
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.116	13.748	100.00	100.00	9.8357
Total:			**2.116**	**13.748**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

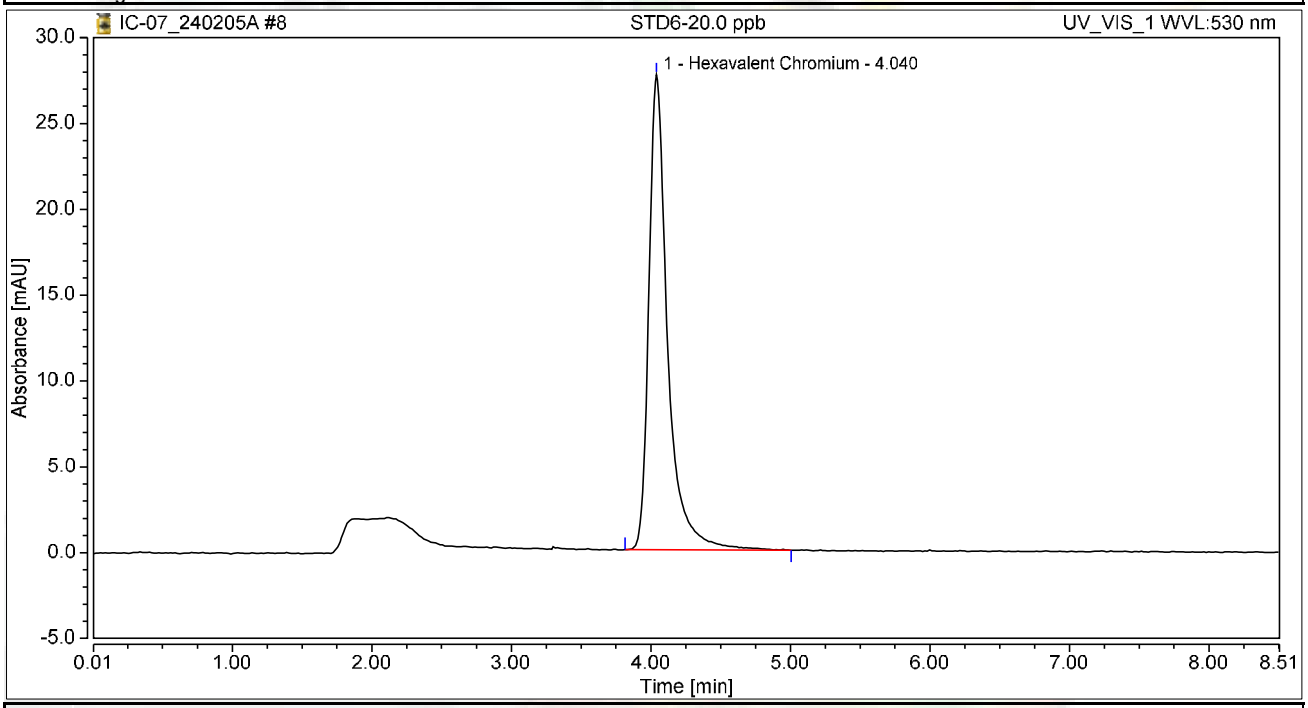
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	3.227	20.605	100.00	100.00	15.0023
Total:			**3.227**	**20.605**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:08**	*Sample Weight:*	**1.0000**

Chromatogram



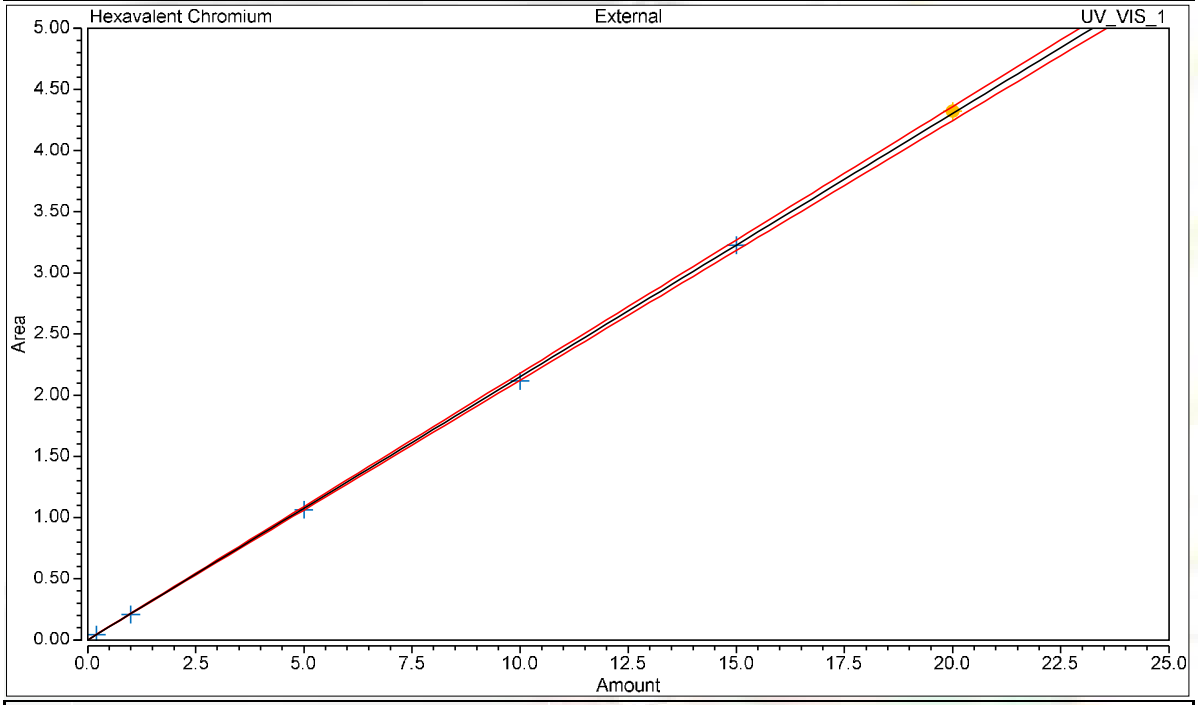
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	4.323	27.676	100.00	100.00	20.0959
Total:			**4.323**	**27.676**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2151
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99987

Calibration Plot — Hexavalent Chromium



Calibration Results — Hexavalent Chromium

No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0427	0.043	0.313
4	STD2-1.0 ppb	02	1.0000	0.2063	0.206	1.377
5	STD3-5.0 ppb	03	5.0000	1.0639	1.064	6.885
6	STD4-10.0 ppb	04	10.0000	2.1157	2.116	13.748
7	STD5-15.0 ppb	05	15.0000	3.2270	3.227	20.605
8	STD6-20.0 ppb	06	20.0000	4.3227	4.323	27.676

Reviewed by:

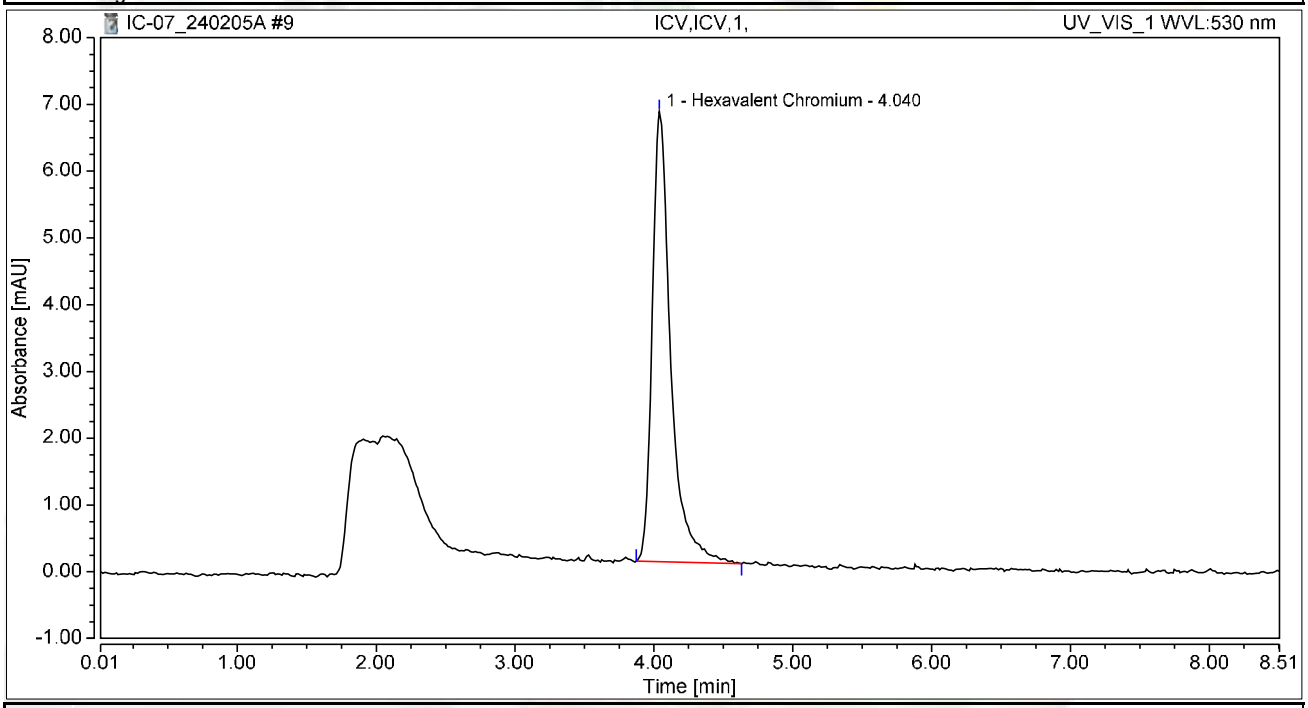
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

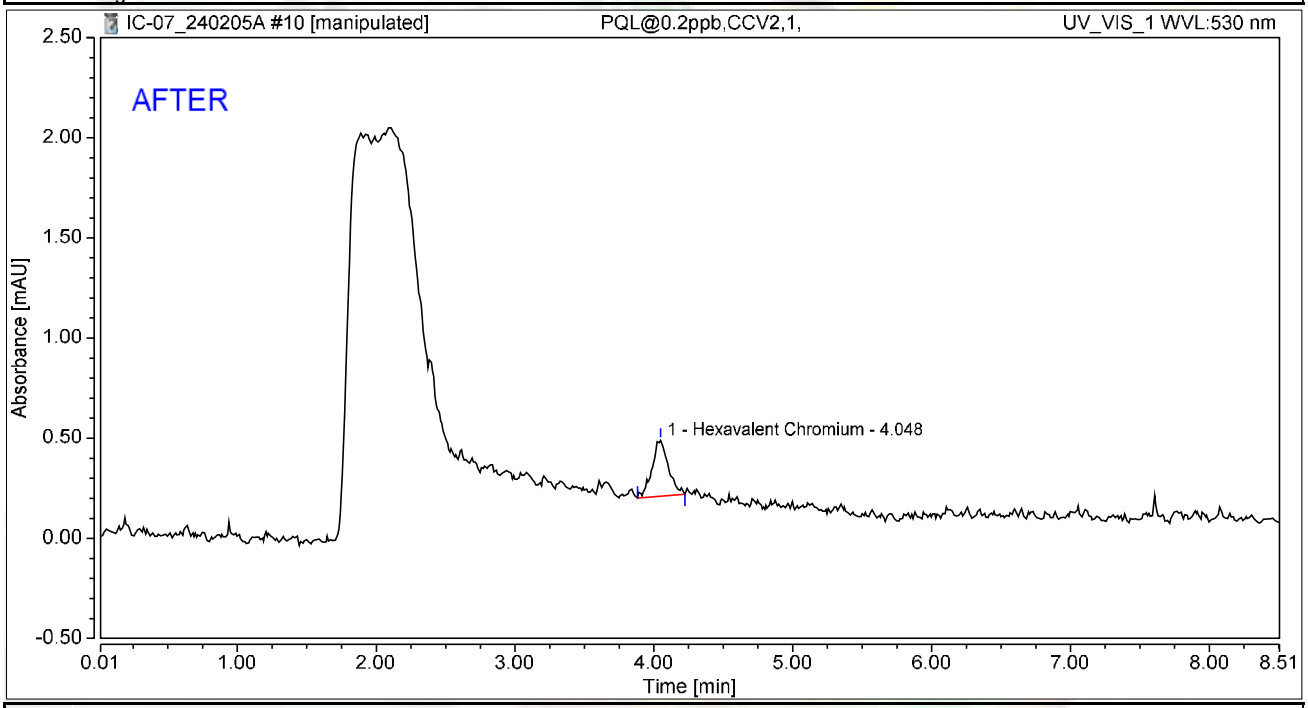
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.040	6.743	100.00	100.00	4.8342
Total:			**1.040**	**6.743**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.039	0.279	100.00	100.00	0.1802
Total:			**0.039**	**0.279**	**100.00**	**100.00**	

Reviewed by:

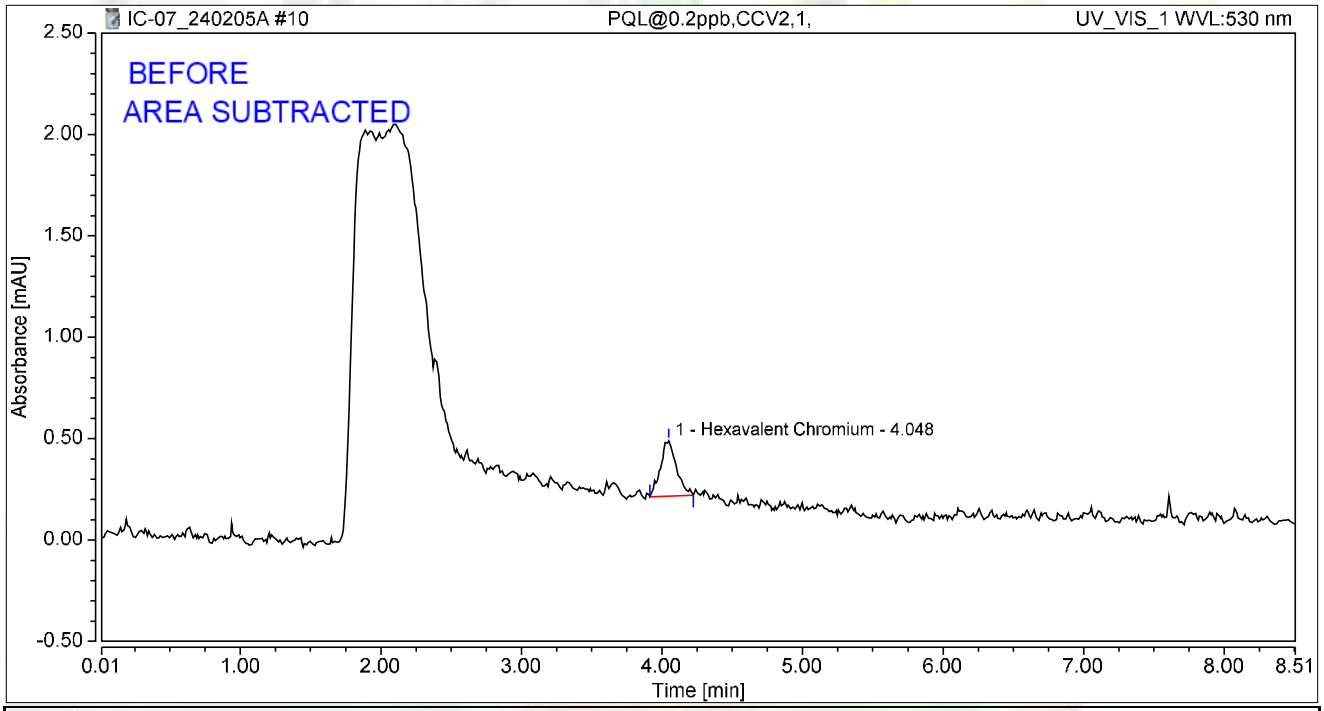
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

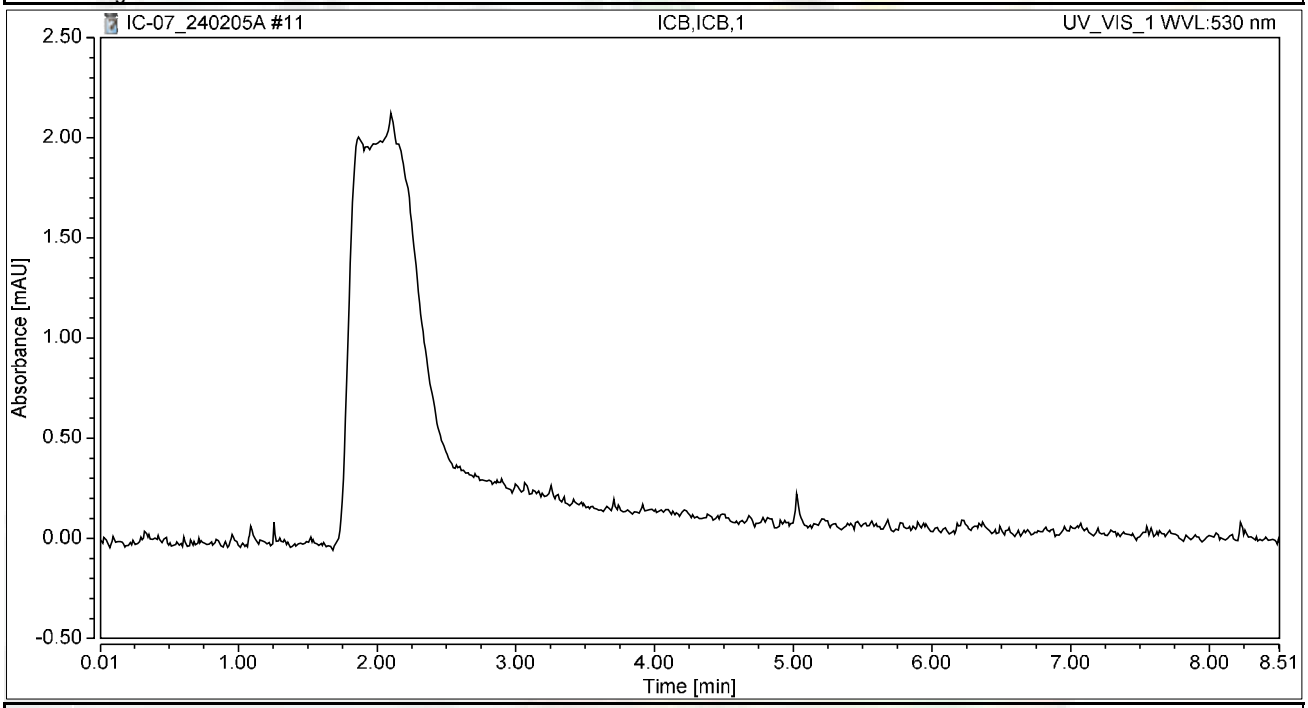
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.036	0.273	100.00	100.00	0.1694
Total:			**0.036**	**0.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

JRB 2/19/2024

RAW DATA

INJECTION LOG: 240223A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/23/24 9:11 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/23/24 9:24 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/23/24 9:34 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/23/24 9:43 AM	Reported
13	MB-R182899	MBLK	1	Hexavalent Chromium	02/23/24 9:53 AM	Reported
14	LCS-R182899	LCS	1	Hexavalent Chromium	02/23/24 10:02 AM	Reported
15	N063248-001A	SAMP	1	Hexavalent Chromium	02/23/24 10:27 AM	Reported
16	N063248-003A	SAMP	1	Hexavalent Chromium	02/23/24 10:39 AM	Not Reported
17	N063248-005A	SAMP	1	Hexavalent Chromium	02/23/24 10:48 AM	Not Reported
18	N063248-006A	SAMP	1	Hexavalent Chromium	02/23/24 10:58 AM	Not Reported
19	N063248-007A	SAMP	1	Hexavalent Chromium	02/23/24 11:07 AM	Not Reported
20	N063248-003A	SAMP	100	Hexavalent Chromium	02/23/24 11:17 AM	Reported
21	N063248-003AMS	MS	100	Hexavalent Chromium	02/23/24 11:26 AM	Reported
22	N063248-003AMSD	MSD	100	Hexavalent Chromium	02/23/24 11:36 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/23/24 11:45 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/23/24 11:54 AM	Reported
25	N063248-001AMS	MS	1	Hexavalent Chromium	02/23/24 12:04 PM	Reported
26	N063248-005AMS	MS	1	Hexavalent Chromium	02/23/24 12:13 PM	Not Reported
27	N063248-011A	SAMP	1	Hexavalent Chromium	02/23/24 12:23 PM	Not Reported
28	N063248-011AMS	MS	1	Hexavalent Chromium	02/23/24 12:32 PM	Not Reported
29	N063248-006AMS	MS	1	Hexavalent Chromium	02/23/24 12:42 PM	Not Reported
30	N063248-007AMS	MS	1	Hexavalent Chromium	02/23/24 12:51 PM	Not Reported
31	N063248-002A	SAMP	50	Hexavalent Chromium	02/23/24 1:01 PM	Reported
32	N063248-002AMS	MS	50	Hexavalent Chromium	02/23/24 1:10 PM	Reported
33	N063248-004A	SAMP	5	Hexavalent Chromium	02/23/24 1:20 PM	Not Reported
34	N063248-004AMS	MS	5	Hexavalent Chromium	02/23/24 1:29 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/23/24 1:39 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/23/24 1:48 PM	Reported
37	N063248-010A	SAMP	5	Hexavalent Chromium	02/23/24 1:57 PM	Reported
38	N063248-010AMS	MS	5	Hexavalent Chromium	02/23/24 2:07 PM	Reported
39	N063248-008A	SAMP	1	Hexavalent Chromium	02/23/24 2:16 PM	Not Reported
40	N063248-008AMS	MS	1	Hexavalent Chromium	02/23/24 2:26 PM	Not Reported
41	N063248-009A	SAMP	1	Hexavalent Chromium	02/23/24 2:35 PM	Reported
42	N063248-009AMS	MS	1	Hexavalent Chromium	02/23/24 2:45 PM	Reported

Reviewed by:

JRB 2/27/2024

IC-07 / RBA / 2/26/2024 4:29 PM

INJECTION LOG: 240223A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063248-008A	SAMP	5	Hexavalent Chromium	02/23/24 2:54 PM	Reported
44	N063248-008AMS	MS	5	Hexavalent Chromium	02/23/24 3:04 PM	Reported
45	N063214-017A	SAMP	1	Hexavalent Chromium	02/23/24 3:13 PM	Reported
46	MB-107024	MBLK	1	Hexavalent Chromium	02/23/24 3:23 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/23/24 3:32 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/23/24 3:42 PM	Reported
49	N063246-001A	SAMP	1	Hexavalent Chromium	02/23/24 3:51 PM	Reported
50	N063246-001AREP	DUP	1	Hexavalent Chromium	02/23/24 4:00 PM	Reported
51	N063248-002ADUP	DUP	50	Hexavalent Chromium	02/23/24 4:14 PM	Reported
52	N063214-017AMS	MS	1	Hexavalent Chromium	02/23/24 4:26 PM	Reported
53	N063249-017A	SAMP	1	Hexavalent Chromium	02/23/24 4:35 PM	Reported
54	N063249-017AMS	MS	1	Hexavalent Chromium	02/23/24 4:45 PM	Reported
55	N063248-004A	SAMP	50	Hexavalent Chromium	02/23/24 4:54 PM	Reported
56	N063248-004AMS	MS	50	Hexavalent Chromium	02/23/24 5:23 PM	Reported
57	N063248-005A	SAMP	5	Hexavalent Chromium	02/23/24 5:34 PM	Reported
58	N063248-005AMS	MS	5	Hexavalent Chromium	02/23/24 5:43 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/23/24 5:53 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/23/24 6:02 PM	Reported
61	N063248-006A	SAMP	5	Hexavalent Chromium	02/23/24 6:12 PM	Reported
62	N063248-006AMS	MS	5	Hexavalent Chromium	02/23/24 6:21 PM	Reported
63	N063248-007A	SAMP	5	Hexavalent Chromium	02/23/24 6:31 PM	Reported
64	N063248-007AMS	MS	5	Hexavalent Chromium	02/23/24 6:40 PM	Reported
65	N063248-011A	SAMP	5	Hexavalent Chromium	02/23/24 6:50 PM	Reported
66	N063248-011AMS	MS	5	Hexavalent Chromium	02/23/24 6:59 PM	Reported
67	N063249-012A	SAMP	1	Hexavalent Chromium	02/23/24 7:09 PM	Reported
68	N063249-012AMS	MS	1	Hexavalent Chromium	02/23/24 7:18 PM	Reported
69	N063249-014A	SAMP	1	Hexavalent Chromium	02/23/24 7:27 PM	Reported
70	N063249-014AMS	MS	1	Hexavalent Chromium	02/23/24 7:37 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/23/24 7:46 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/23/24 7:56 PM	Reported
73	N063249-016A	SAMP	1	Hexavalent Chromium	02/23/24 8:05 PM	Reported
74	N063249-016AMS	MS	1	Hexavalent Chromium	02/23/24 8:15 PM	Reported
75	N063249-011A	SAMP	1	Hexavalent Chromium	02/23/24 8:24 PM	Not Reported
76	N063249-011AMS	MS	1	Hexavalent Chromium	02/23/24 8:34 PM	Not Reported
77	N063249-011A	SAMP	5	Hexavalent Chromium	02/23/24 8:43 PM	Reported
78	N063249-011AMS	MS	5	Hexavalent Chromium	02/23/24 8:53 PM	Reported
79	N063249-013A	SAMP	1	Hexavalent Chromium	02/23/24 9:02 PM	Not Reported
80	N063249-013AMS	MS	1	Hexavalent Chromium	02/23/24 9:12 PM	Not Reported
81	N063249-013A	SAMP	5	Hexavalent Chromium	02/23/24 9:21 PM	Reported
82	N063249-013AMS	MS	5	Hexavalent Chromium	02/23/24 9:30 PM	Reported
83	CCV-7	CCV	1	Hexavalent Chromium	02/23/24 9:40 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	02/23/24 9:49 PM	Reported

INJECTION LOG: 240223A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063249-015A	SAMP	1	Hexavalent Chromium	02/23/24 9:59 PM	Not Reported
86	N063249-015AMS	MS	1	Hexavalent Chromium	02/23/24 10:08 PM	Not Reported
87	N063249-015A	SAMP	5	Hexavalent Chromium	02/23/24 10:18 PM	Reported
88	N063249-015AMS	MS	5	Hexavalent Chromium	02/23/24 10:27 PM	Reported
89	CCV-8	CCV1	1	Hexavalent Chromium	02/23/24 10:37 PM	Reported
90	CCB-8	CCB	1	Hexavalent Chromium	02/23/24 10:46 PM	Reported
91	BLANK	BLANK	1	Hexavalent Chromium	02/23/24 10:56 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240223A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**23/Feb/24 23:26:19**
No. of Injections:	**94**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/23/2024 09:11	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/23/2024 09:24	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/23/2024 09:34	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/23/2024 09:43	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/23/2024 09:53	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/23/2024 10:02	Finished	LCS @5ppb, IWST-231228B
15	N063248-001A,SAMF	1	1000	Unknown		02/23/2024 10:27	Finished	SAMP,10 mL
16	N063248-003A,SAMF	2	1000	Unknown		02/23/2024 10:39	Finished	SAMP,10 mL
17	N063248-005A,SAMF	3	1000	Unknown		02/23/2024 10:48	Finished	SAMP,10 mL
18	N063248-006A,SAMF	4	1000	Unknown		02/23/2024 10:58	Finished	SAMP,10 mL
19	N063248-007A,SAMF	5	1000	Unknown		02/23/2024 11:07	Finished	SAMP,10 mL
20	N063248-003A,SAMF	6	1000	Unknown		02/23/2024 11:17	Finished	SAMP,0.1>10 mL
21	N063248-003AMS,MS	7	1000	Unknown		02/23/2024 11:26	Finished	MS (5ppb), IWST-231228B,0.1
22	N063248-003AMSD,M	8	1000	Unknown		02/23/2024 11:36	Finished	MSD (5ppb), IWST-231228B,0
23	CCV-2,CCV1,1,	9	1000	Unknown		02/23/2024 11:45	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		02/23/2024 11:54	Finished	CCB R240129C
25	N063248-001AMS,MS	11	1000	Unknown		02/23/2024 12:04	Finished	MS (1ppb), IWST-231228B,10r
26	N063248-005AMS,MS	12	1000	Unknown		02/23/2024 12:13	Finished	MS (1ppb), IWST-231228B,10r
27	N063248-011A,SAMF	13	1000	Unknown		02/23/2024 12:23	Finished	SAMP,10 mL
28	N063248-011AMS,MS	14	1000	Unknown		02/23/2024 12:32	Finished	MS (1ppb), IWST-231228B,10r
29	N063248-006AMS,MS	15	1000	Unknown		02/23/2024 12:42	Finished	MS (1ppb), IWST-231228B,10r
30	N063248-007AMS,MS	16	1000	Unknown		02/23/2024 12:51	Finished	MS (1ppb), IWST-231228B,10r
31	N063248-002A,SAMF	17	1000	Unknown		02/23/2024 13:01	Finished	SAMP,0.2>10 mL
32	N063248-002AMS,MS	18	1000	Unknown		02/23/2024 13:10	Finished	MS (5ppb), IWST-231228B,0.2
33	N063248-004A,SAMF	19	1000	Unknown		02/23/2024 13:20	Finished	SAMP,2>10 mL
34	N063248-004AMS,MS	20	1000	Unknown		02/23/2024 13:29	Finished	MS (5ppb), IWST-231228B,2>1
35	CCV-3,CCV,1,	21	1000	Unknown		02/23/2024 13:39	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	22	1000	Unknown		02/23/2024 13:48	Finished	CCB R240129C
37	N063248-010A,SAMF	23	1000	Unknown		02/23/2024 13:57	Finished	SAMP,2>10 mL
38	N063248-010AMS,MS	24	1000	Unknown		02/23/2024 14:07	Finished	MS (5ppb), IWST-231228B,2>1
39	N063248-008A,SAMF	25	1000	Unknown		02/23/2024 14:16	Finished	SAMP,10 mL
40	N063248-008AMS,MS	26	1000	Unknown		02/23/2024 14:26	Finished	MS (1ppb), IWST-231228B,10r
41	N063248-009A,SAMF	27	1000	Unknown		02/23/2024 14:35	Finished	SAMP,10 mL
42	N063248-009AMS,MS	28	1000	Unknown		02/23/2024 14:45	Finished	MS (1ppb), IWST-231228B,10r
43	N063248-008A,SAMF	29	1000	Unknown		02/23/2024 14:54	Finished	SAMP,2>10 mL
44	N063248-008AMS,MS	30	1000	Unknown		02/23/2024 15:04	Finished	MS (1ppb), IWST-231228B,2>1
45	N063214-017A,SAMF	31	1000	Unknown		02/23/2024 15:13	Finished	SAMP,10 mL
46	MB-107024,MBLK,1,	32	1000	Unknown		02/23/2024 15:23	Finished	MB TCLP
47	CCV-4,CCV1,1,	33	1000	Unknown		02/23/2024 15:32	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	34	1000	Unknown		02/23/2024 15:42	Finished	CCB R240129C
49	N063246-001A,SAMF	35	1000	Unknown		02/23/2024 15:51	Finished	SAMP,10 mL
50	N063246-001AREP,D	36	1000	Unknown		02/23/2024 16:00	Finished	REP,10 mL
51	N063248-002ADUP,D	1	1000	Unknown		02/23/2024 16:14	Finished	DUP,0.2>10 mL
52	N063214-017AMS,MS	2	1000	Unknown		02/23/2024 16:26	Finished	MS (1ppb), IWST-231228B,10r
53	N063249-017A,SAMF	3	1000	Unknown		02/23/2024 16:35	Finished	SAMP,10 mL
54	N063249-017AMS,MS	4	1000	Unknown		02/23/2024 16:45	Finished	MS (1ppb), IWST-231228B,10r
55	N063248-004A,SAMF	5	1000	Unknown		02/23/2024 16:54	Finished	SAMP,0.2>10 mL
56	N063248-004AMS,MS	1	1000	Unknown		02/23/2024 17:23	Finished	MS (5ppb), IWST-231228B,0.2
57	N063248-005A,SAMF	2	1000	Unknown		02/23/2024 17:34	Finished	SAMP,2>10 mL
58	N063248-005AMS,MS	3	1000	Unknown		02/23/2024 17:43	Finished	MS (1ppb), IWST-231228B,2>1
59	CCV-5,CCV,1,	4	1000	Unknown		02/23/2024 17:53	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	5	1000	Unknown		02/23/2024 18:02	Finished	CCB R240129C

61	N063248-006A,SAMF	6	1000	Unknown		02/23/2024 18:12	Finished	SAMP,2>10 mL
62	N063248-006AMS,MS	7	1000	Unknown		02/23/2024 18:21	Finished	MS (1ppb), IWST-231228B,2>1
63	N063248-007A,SAMF	8	1000	Unknown		02/23/2024 18:31	Finished	SAMP,2>10 mL
64	N063248-007AMS,MS	9	1000	Unknown		02/23/2024 18:40	Finished	MS (1ppb), IWST-231228B,2>1
65	N063248-011A,SAMF	10	1000	Unknown		02/23/2024 18:50	Finished	SAMP,2>10 mL
66	N063248-011AMS,MS	11	1000	Unknown		02/23/2024 18:59	Finished	MS (1ppb), IWST-231228B,2>1
67	N063249-012A,SAMF	12	1000	Unknown		02/23/2024 19:09	Finished	SAMP,10 mL
68	N063249-012AMS,MS	13	1000	Unknown		02/23/2024 19:18	Finished	MS (1ppb), IWST-231228B,10r
69	N063249-014A,SAMF	14	1000	Unknown		02/23/2024 19:27	Finished	SAMP,10 mL
70	N063249-014AMS,MS	15	1000	Unknown		02/23/2024 19:37	Finished	MS (1ppb), IWST-231228B,10r
71	CCV-6,CCV1,1,	16	1000	Unknown		02/23/2024 19:46	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	17	1000	Unknown		02/23/2024 19:56	Finished	CCB R240129C
73	N063249-016A,SAMF	18	1000	Unknown		02/23/2024 20:05	Finished	SAMP,10 mL
74	N063249-016AMS,MS	19	1000	Unknown		02/23/2024 20:15	Finished	MS (1ppb), IWST-231228B,10r
75	N063249-011A,SAMF	20	1000	Unknown		02/23/2024 20:24	Finished	SAMP,10 mL
76	N063249-011AMS,MS	21	1000	Unknown		02/23/2024 20:34	Finished	MS (1ppb), IWST-231228B,10r
77	N063249-011A,SAMF	22	1000	Unknown		02/23/2024 20:43	Finished	SAMP,2>10 mL
78	N063249-011AMS,MS	23	1000	Unknown		02/23/2024 20:53	Finished	MS (1ppb), IWST-231228B,2>1
79	N063249-013A,SAMF	24	1000	Unknown		02/23/2024 21:02	Finished	SAMP,10 mL
80	N063249-013AMS,MS	25	1000	Unknown		02/23/2024 21:12	Finished	MS (1ppb), IWST-231228B,10r
81	N063249-013A,SAMF	26	1000	Unknown		02/23/2024 21:21	Finished	SAMP,2>10 mL
82	N063249-013AMS,MS	27	1000	Unknown		02/23/2024 21:30	Finished	MS (1ppb), IWST-231228B,2>1
83	CCV-7,CCV,1,	28	1000	Unknown		02/23/2024 21:40	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	29	1000	Unknown		02/23/2024 21:49	Finished	CCB R240129C
85	N063249-015A,SAMF	30	1000	Unknown		02/23/2024 21:59	Finished	SAMP,10 mL
86	N063249-015AMS,MS	31	1000	Unknown		02/23/2024 22:08	Finished	MS (1ppb), IWST-231228B,10r
87	N063249-015A,SAMF	32	1000	Unknown		02/23/2024 22:18	Finished	SAMP,2>10 mL
88	N063249-015AMS,MS	33	1000	Unknown		02/23/2024 22:27	Finished	MS (1ppb), IWST-231228B,2>1
89	CCV-8,CCV1,1,	34	1000	Unknown		02/23/2024 22:37	Finished	CCV @10ppb, IWST-231228A
90	CCB-8,CCB,1,	35	1000	Unknown		02/23/2024 22:46	Finished	CCB R240129C
91	BLANK	36	1000	Unknown		02/23/2024 22:56	Finished	BLANK
92	SHUTDOWN R240222A	37	1000	Unknown		02/23/2024 23:05	Finished	
93	Eluent: ~~R240220A~~	38	1000	Unknown		n.a.	Finished	
94	PCR: ~~R240220B~~ R240222B	39	1000	Unknown		n.a.	Finished	

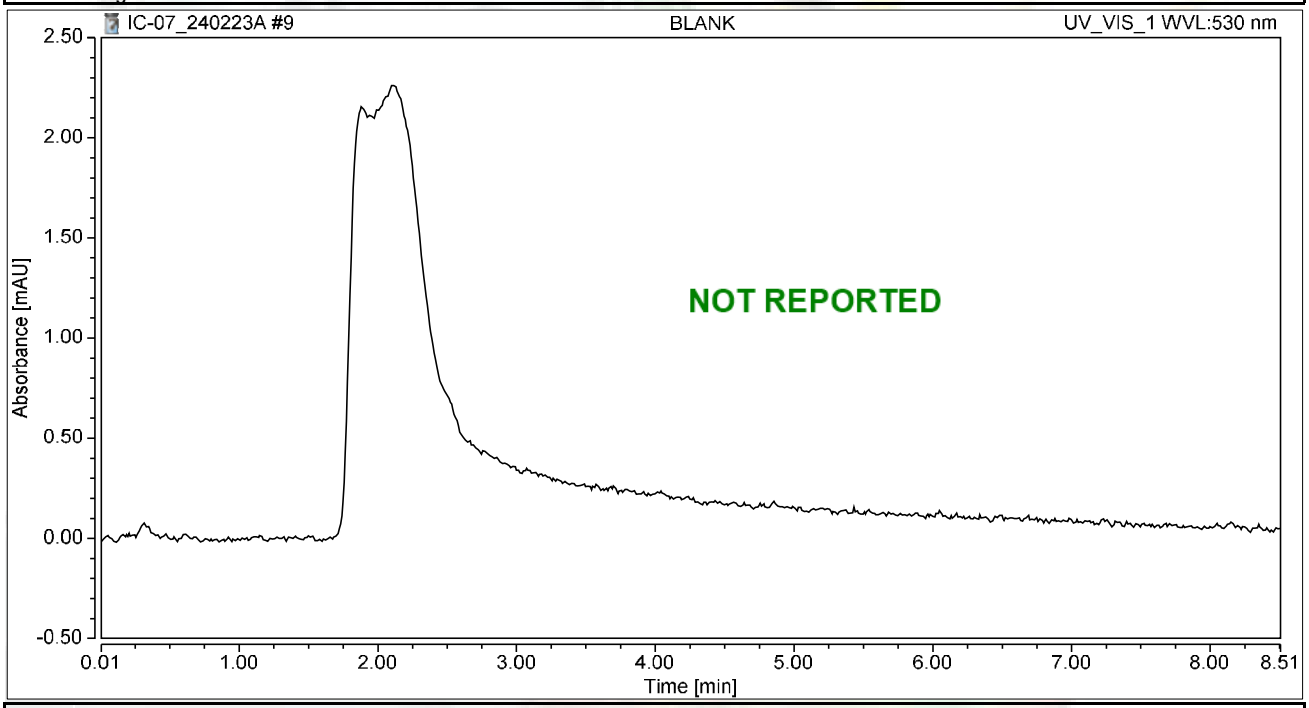
dMocha 3/20/2024
for RBA

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 09:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

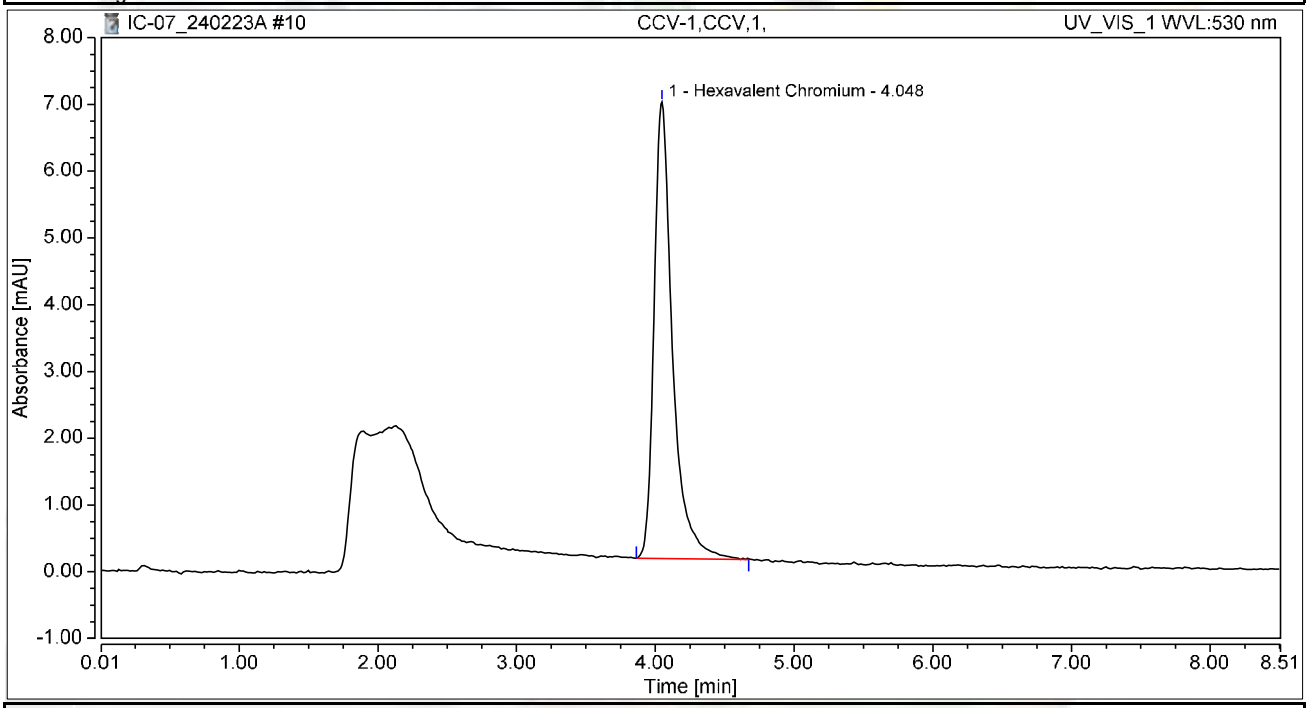
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 09:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.056	6.840	100.00	100.00	4.9105
Total:			**1.056**	**6.840**	**100.00**	**100.00**	

Reviewed by:

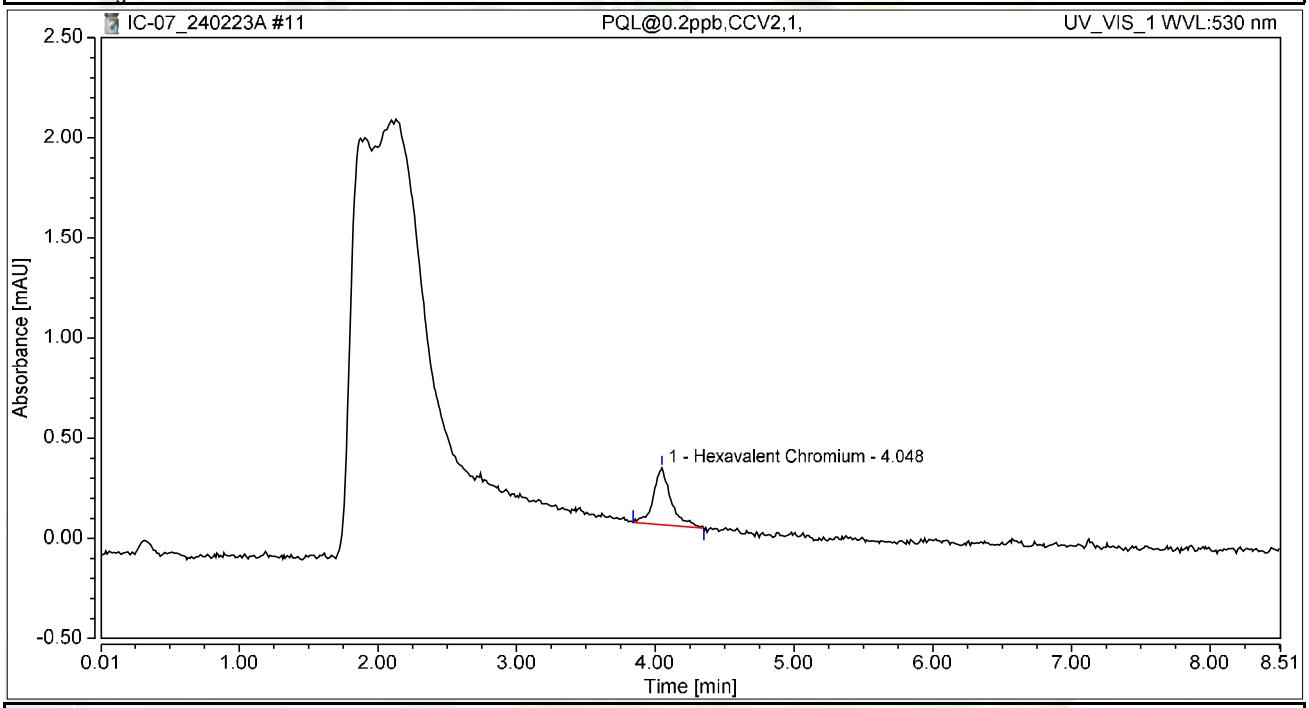
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 09:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

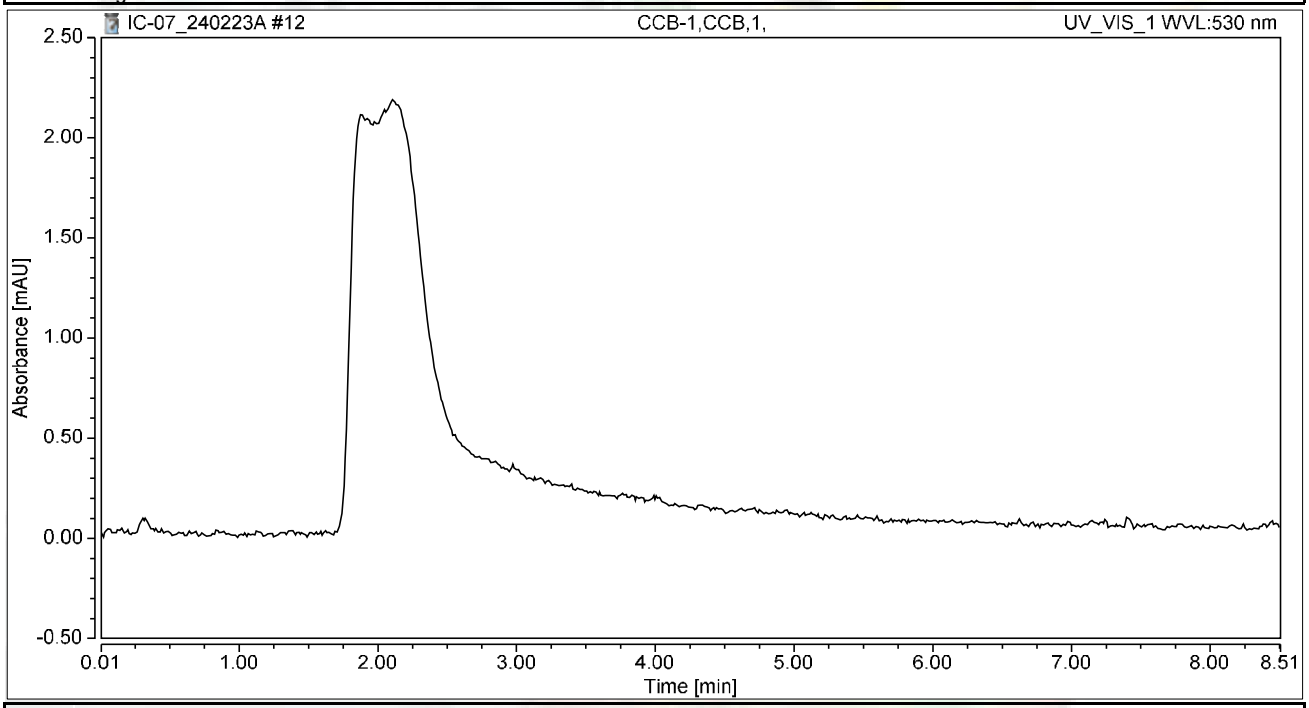
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.042	0.285	100.00	100.00	0.1946
Total:			**0.042**	**0.285**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 09:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

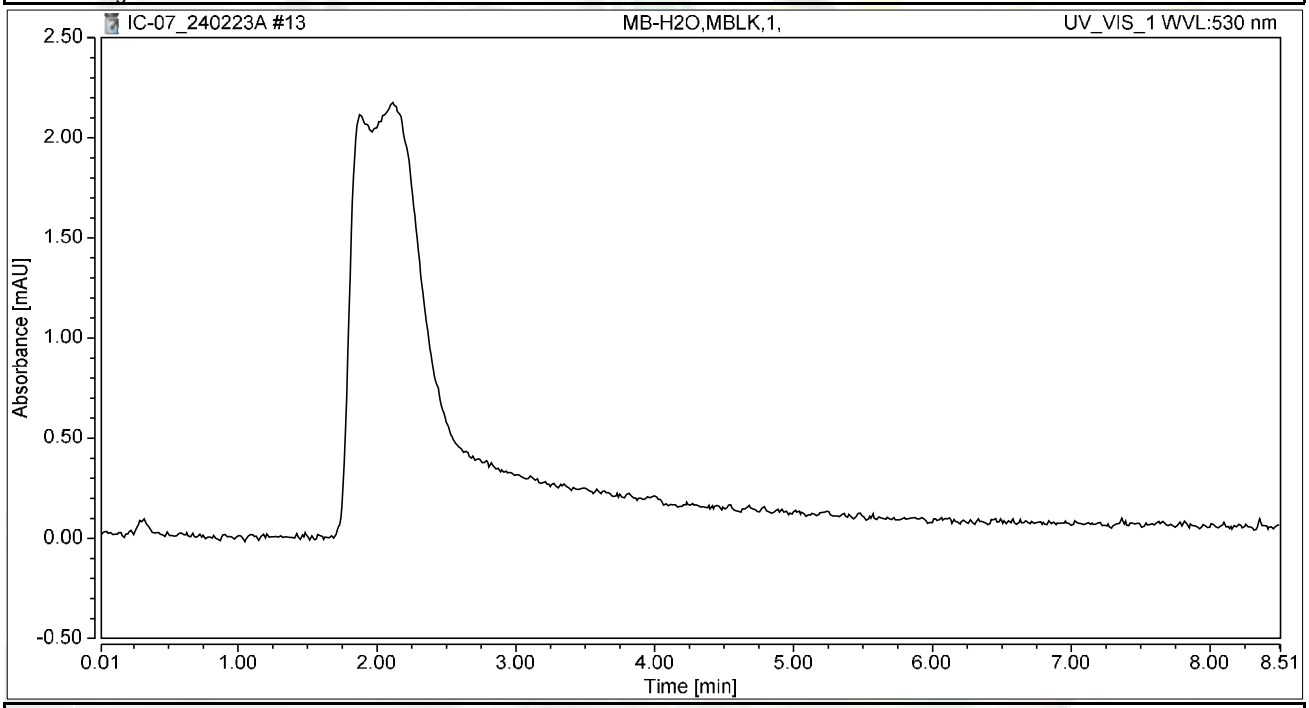
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 09:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

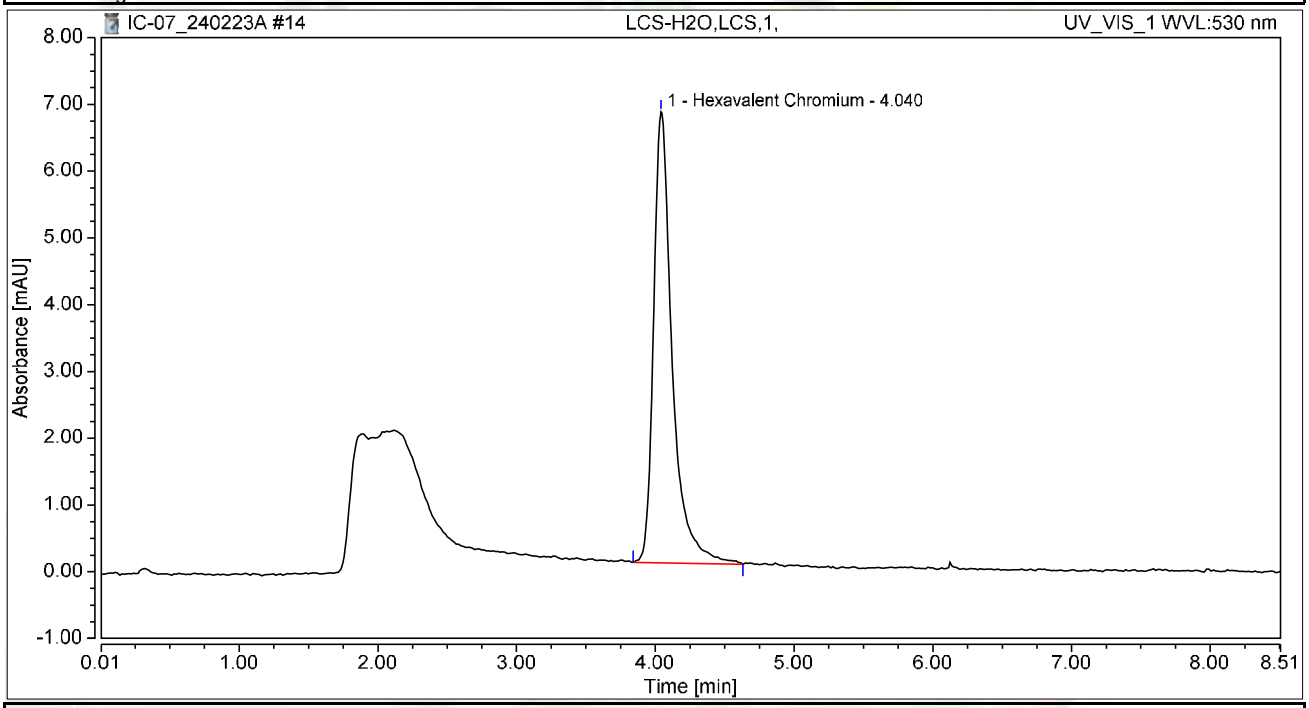
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 10:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

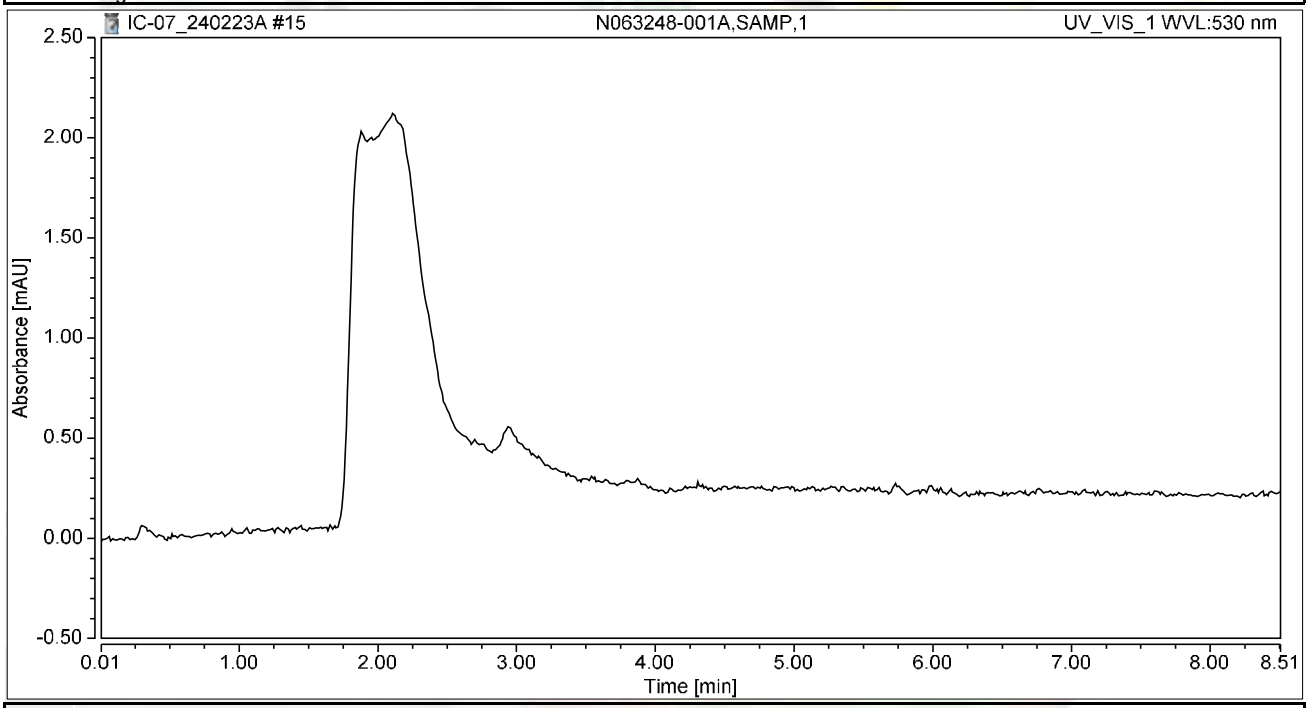
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.050	6.754	100.00	100.00	4.8836
Total:			**1.050**	**6.754**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 10:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

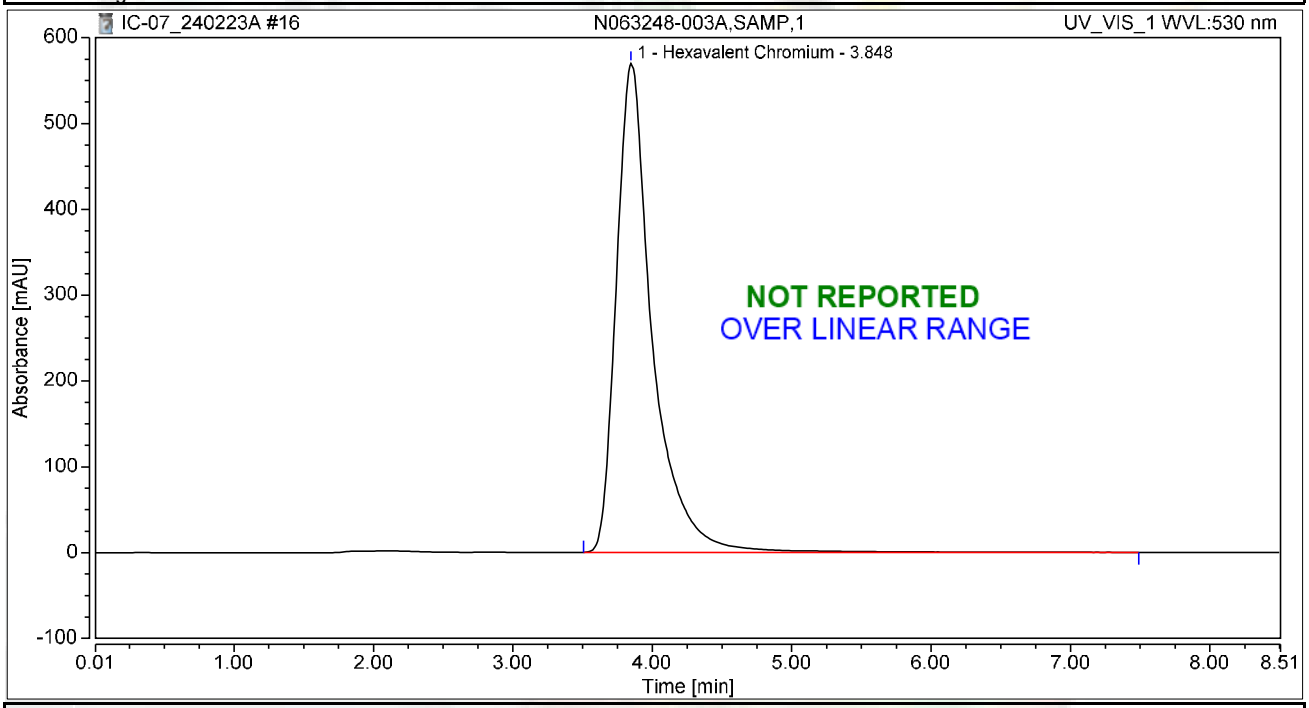
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 10:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

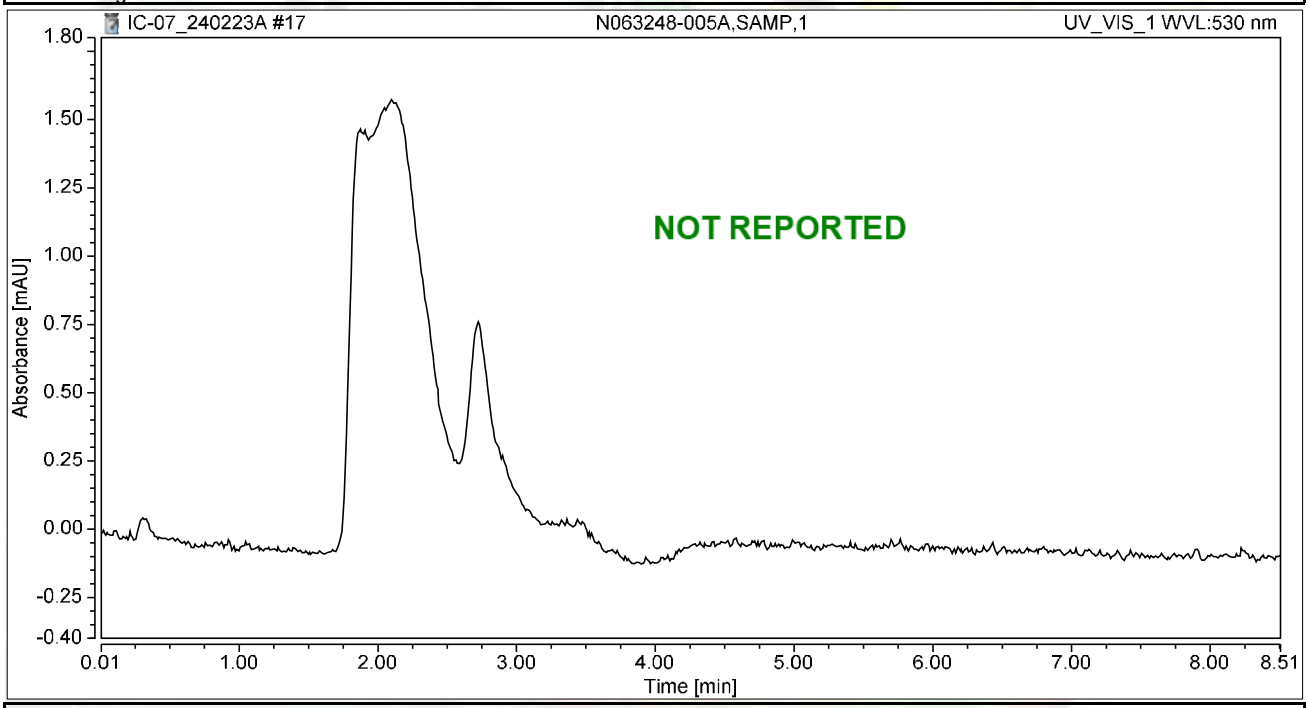
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.848	171.021	569.893	100.00	100.00	795.0688
Total:			**171.021**	**569.893**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 10:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

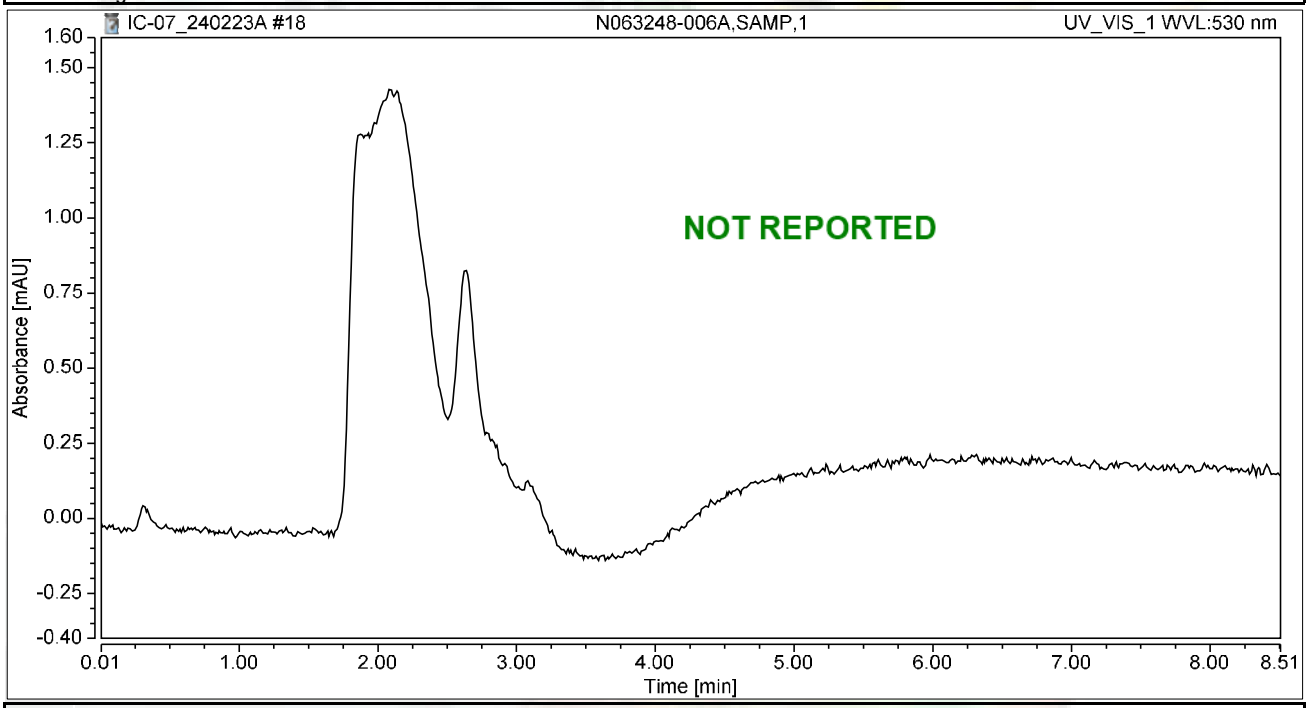
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 10:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

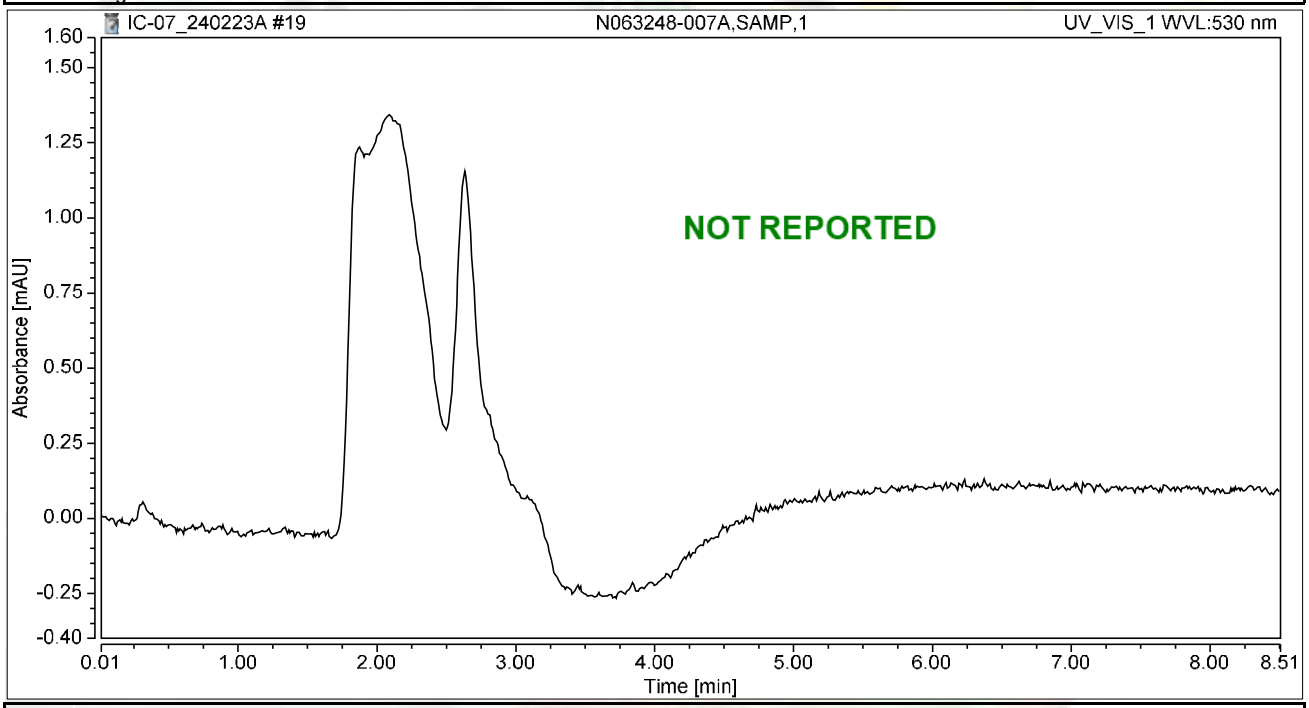
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-007A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 11:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

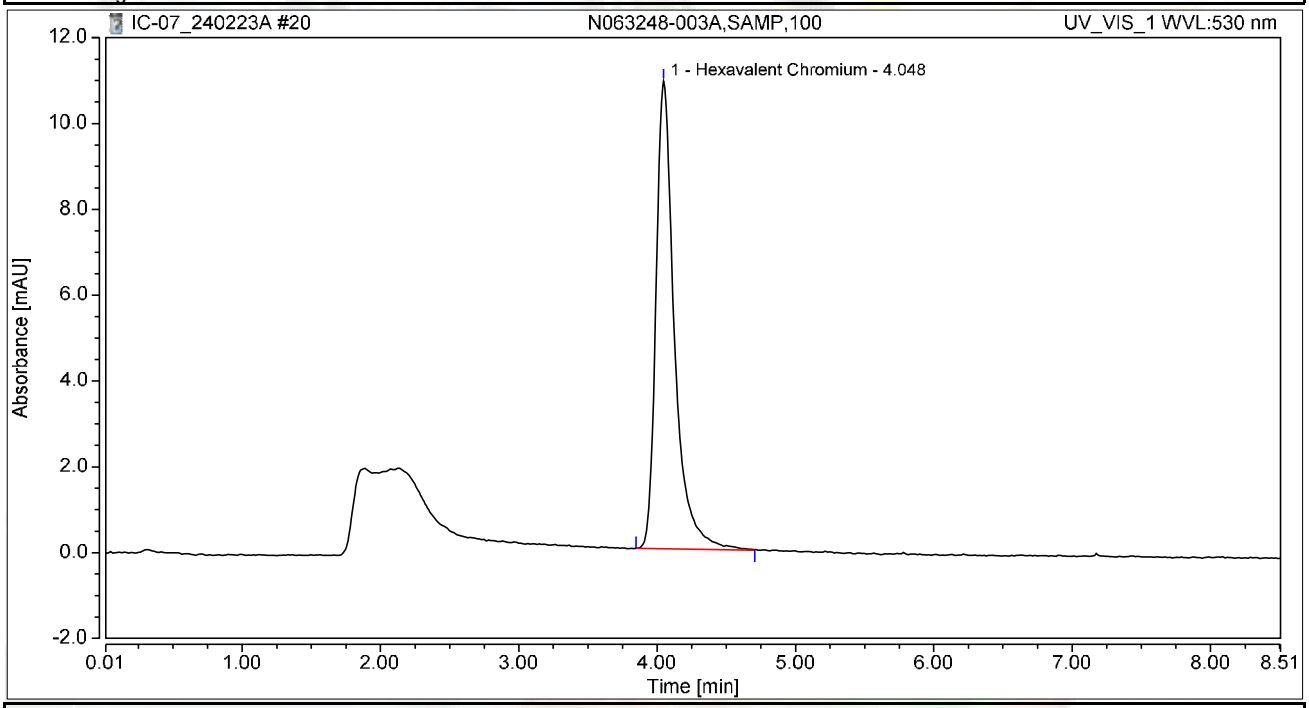
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-003A,SAMP,100**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 11:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

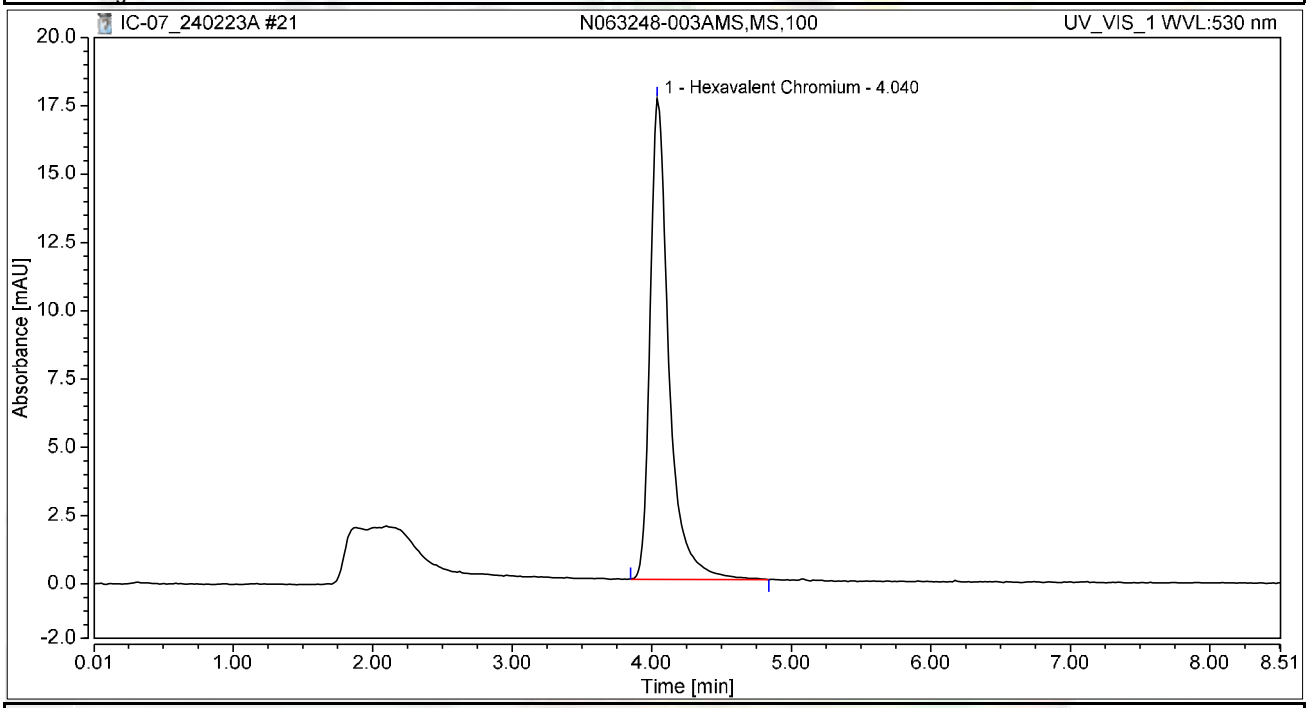
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.681	10.896	100.00	100.00	7.8137
Total:			**1.681**	**10.896**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-003AMS,MS,100**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 11:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

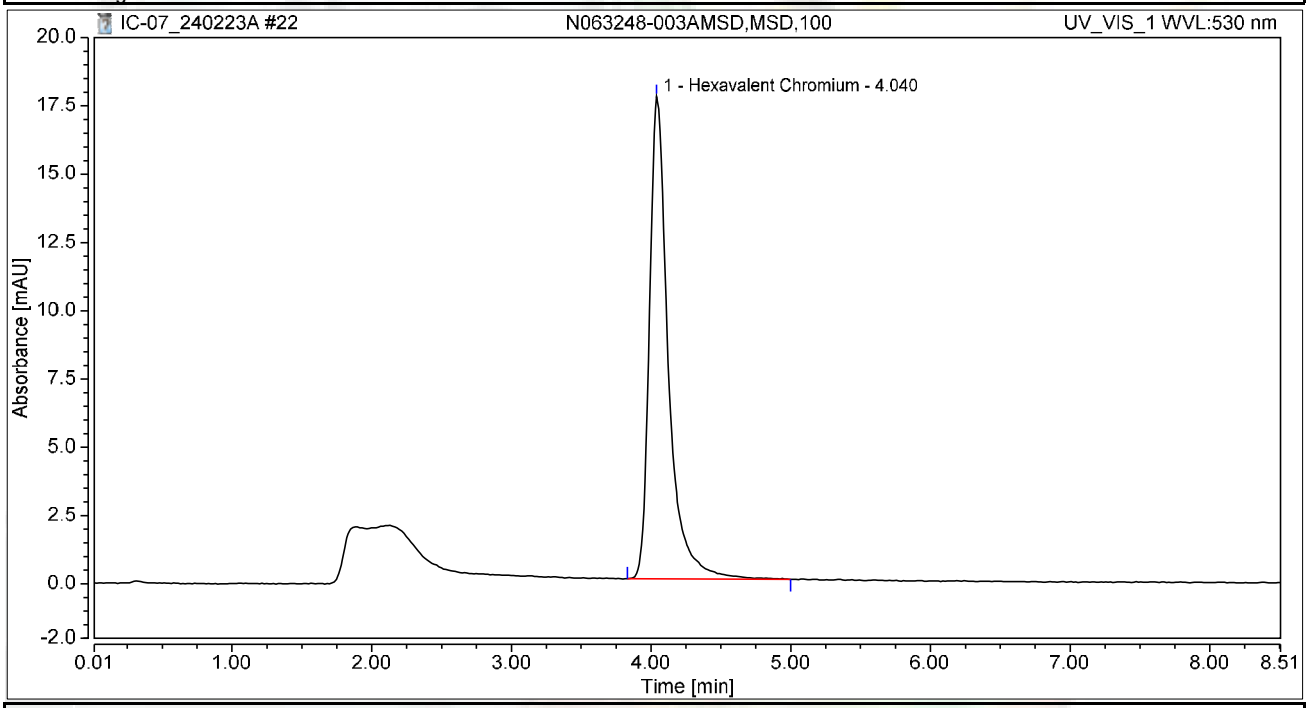
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.765	17.608	100.00	100.00	12.8561
Total:			**2.765**	**17.608**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-003AMSD,MSD,100**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 11:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

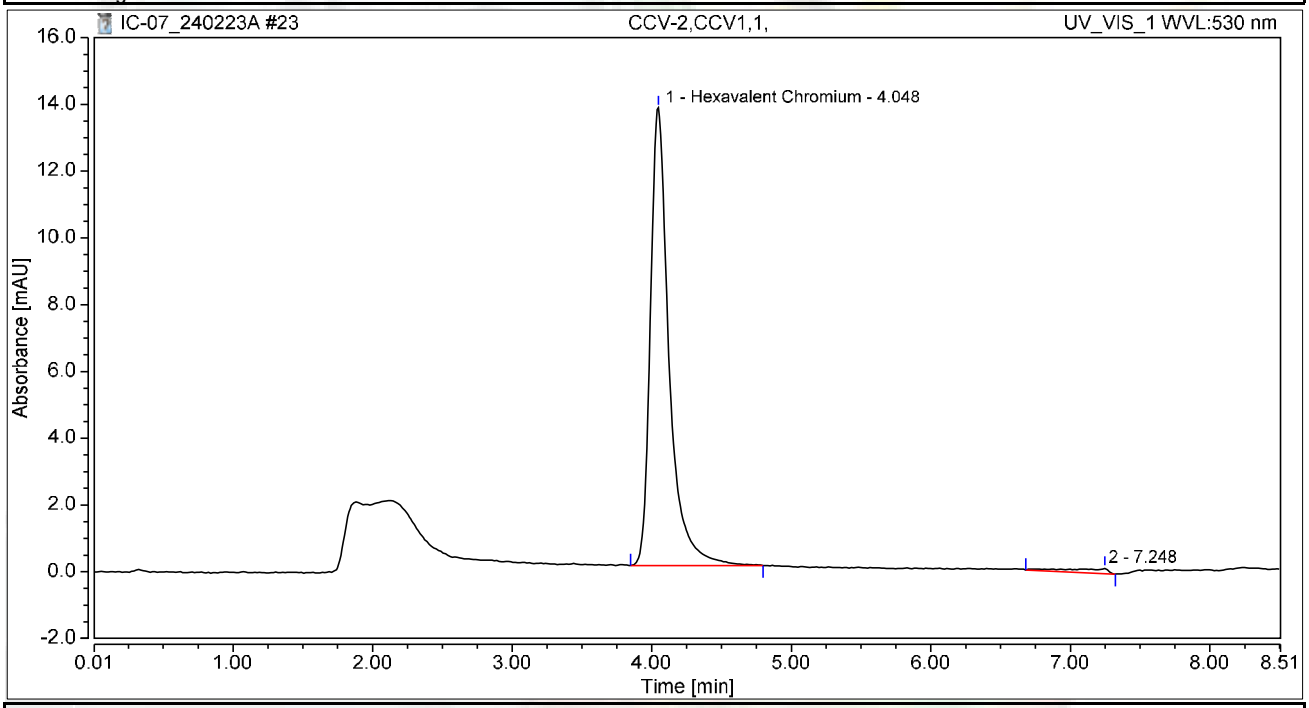
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.780	17.665	100.00	100.00	12.9234
Total:			**2.780**	**17.665**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 11:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

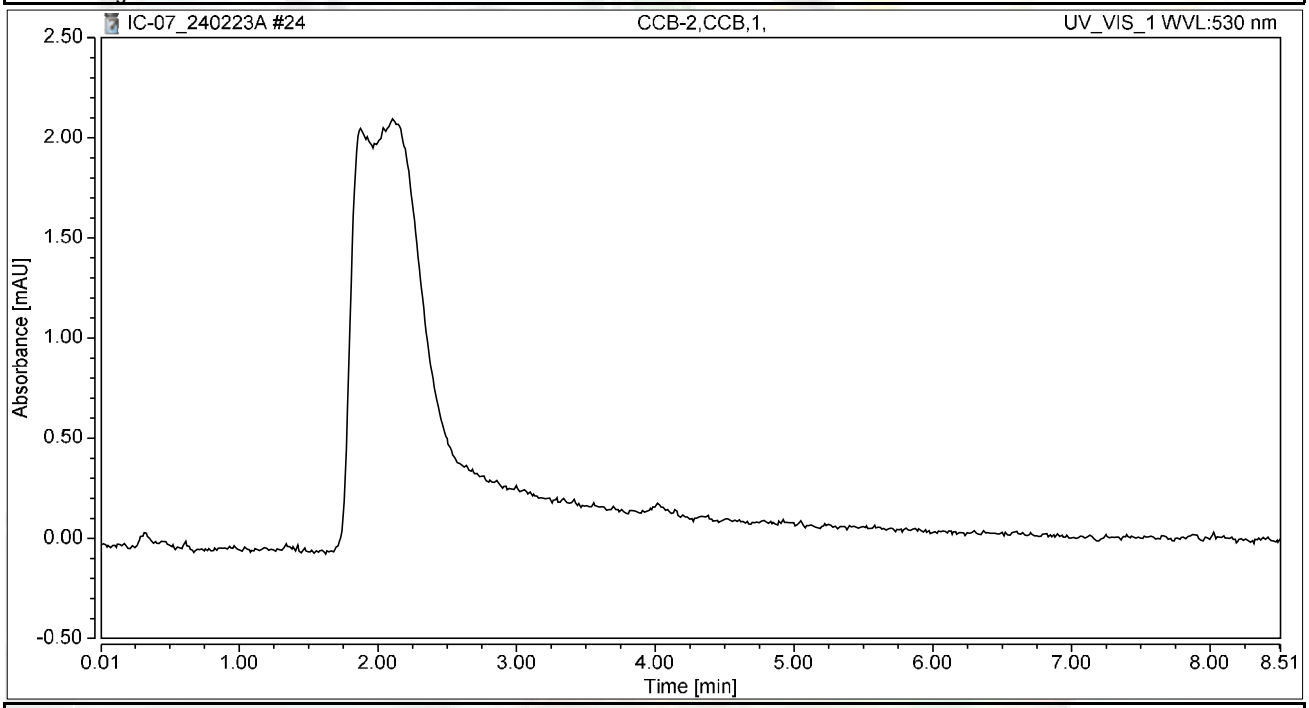
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.136	13.716	97.76	98.82	9.9284
2		7.248	0.049	0.164	2.24	1.18	n.a.
Total:			**2.185**	**13.880**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 11:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

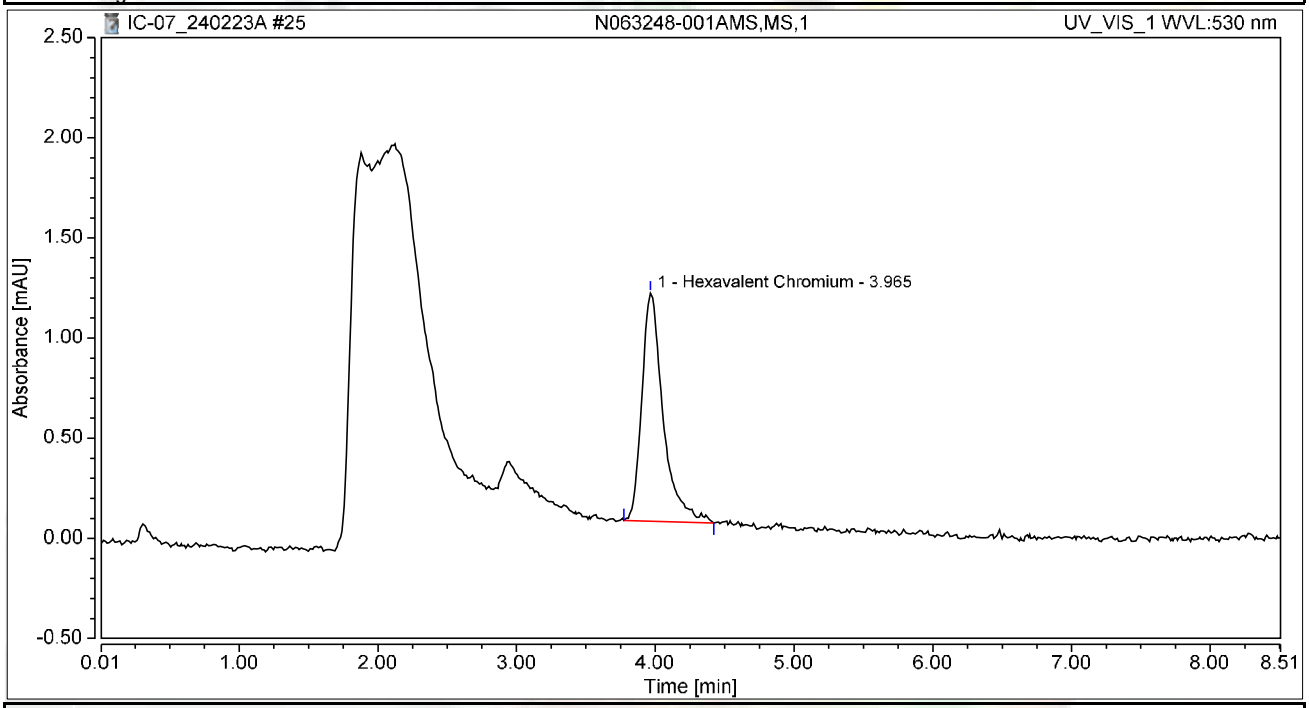
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

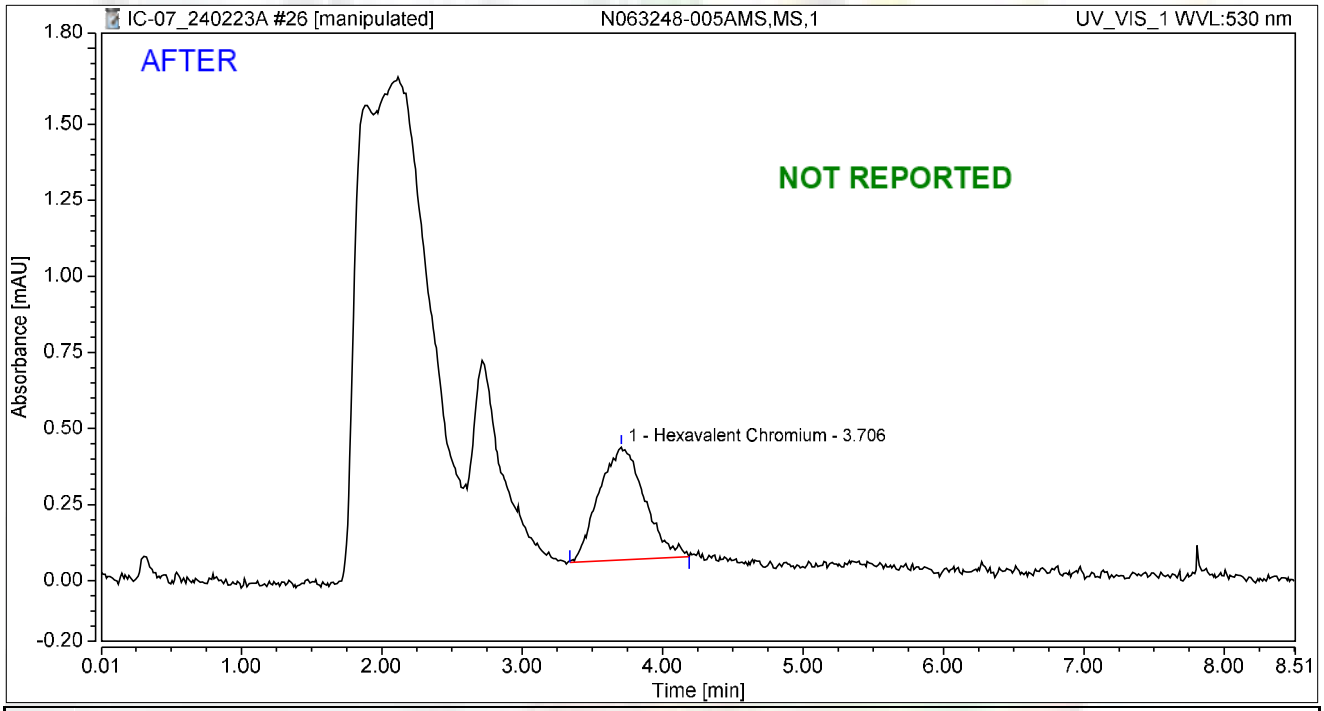
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.203	1.139	100.00	100.00	0.9445
Total:			**0.203**	**1.139**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

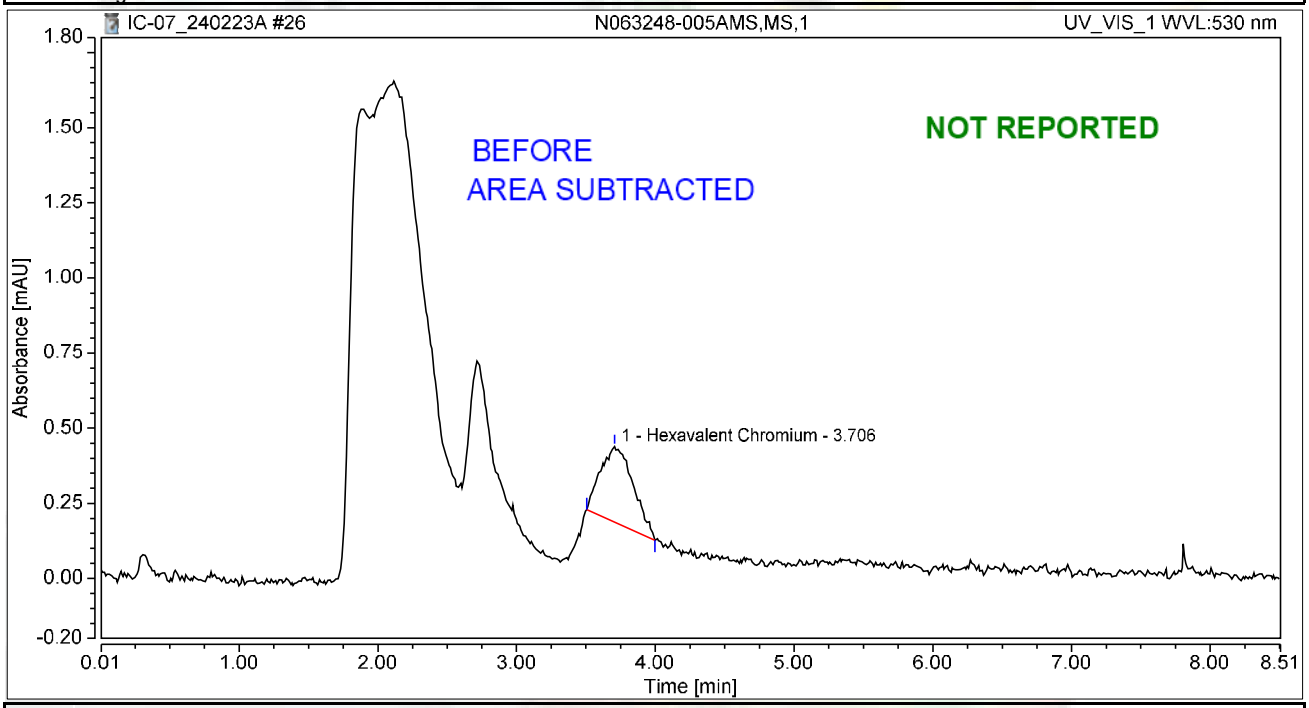
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.706	0.140	0.372	100.00	100.00	0.6496
Total:			**0.140**	**0.372**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

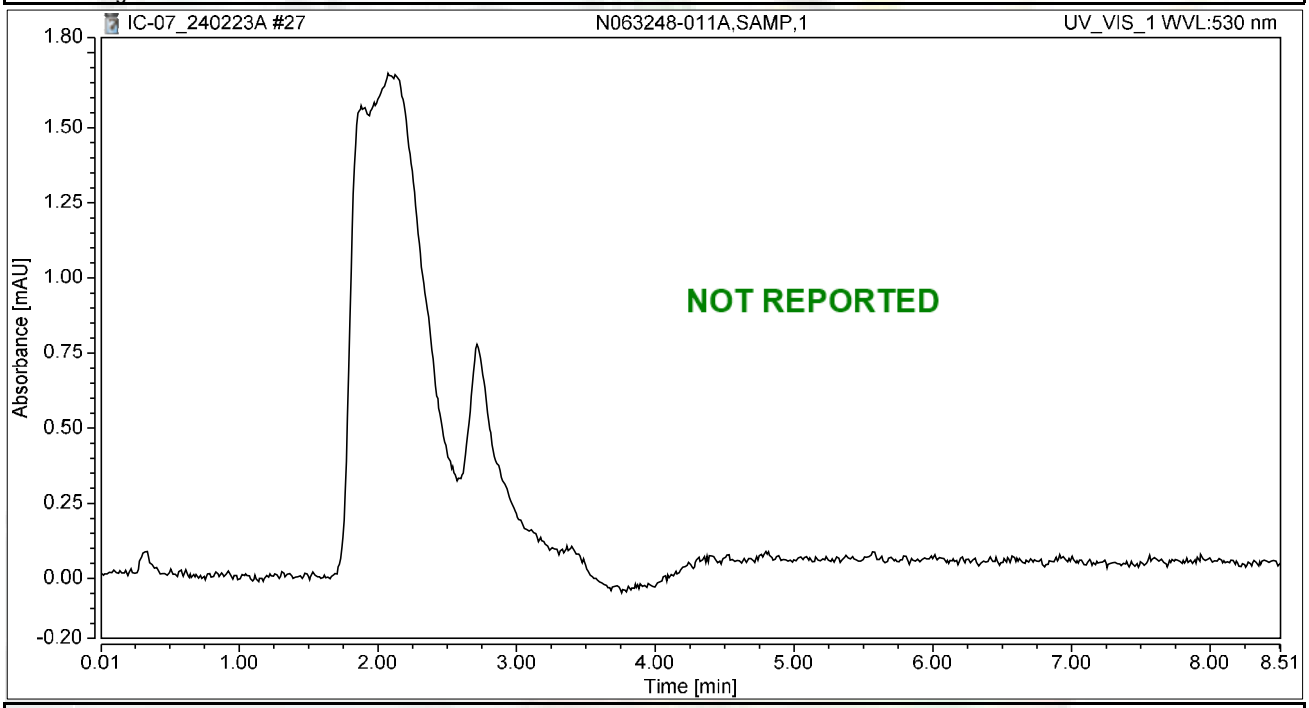
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.706	0.069	0.251	100.00	100.00	0.3207
Total:			**0.069**	**0.251**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-011A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

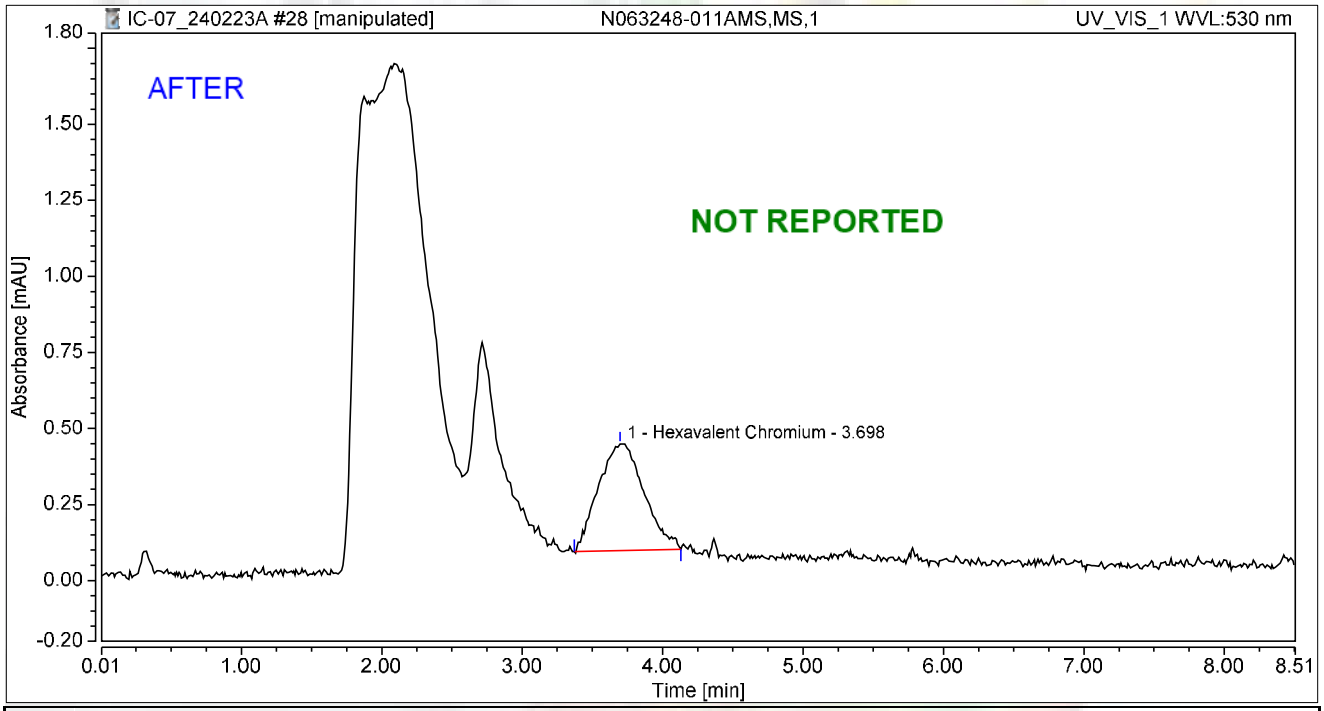
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

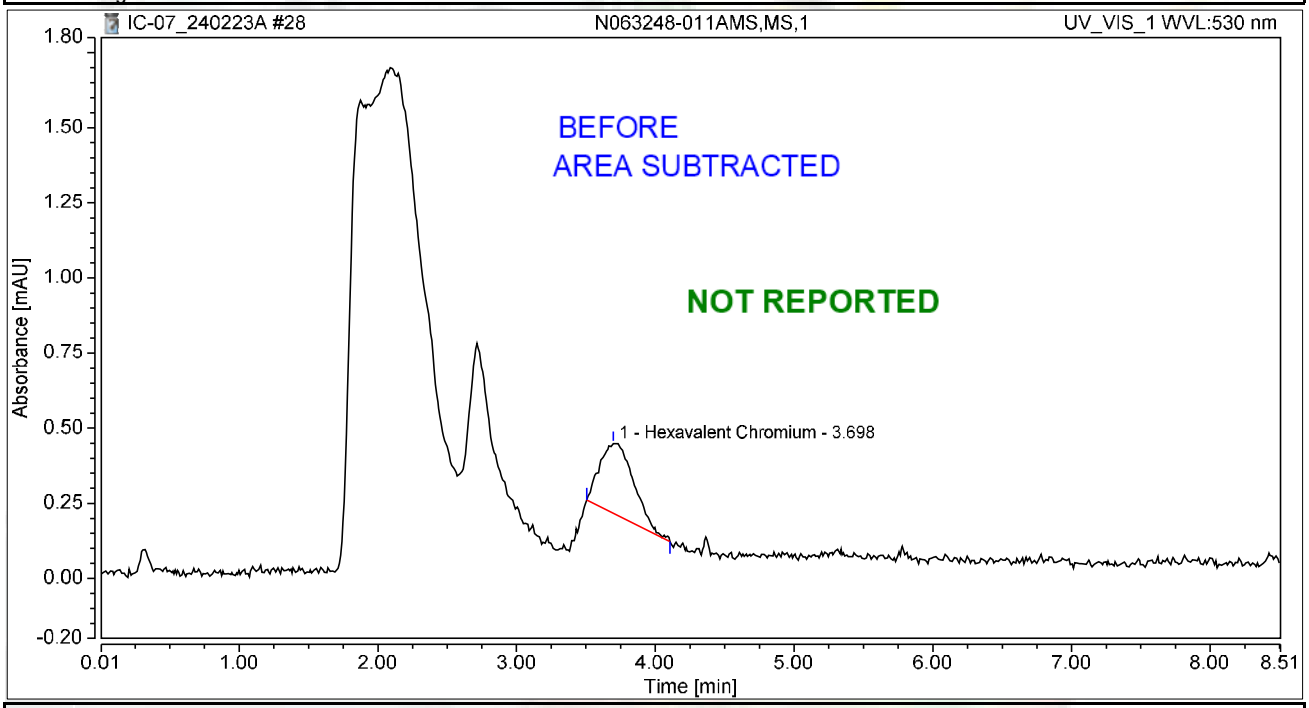
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.698	0.132	0.350	100.00	100.00	0.6137
Total:			**0.132**	**0.350**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

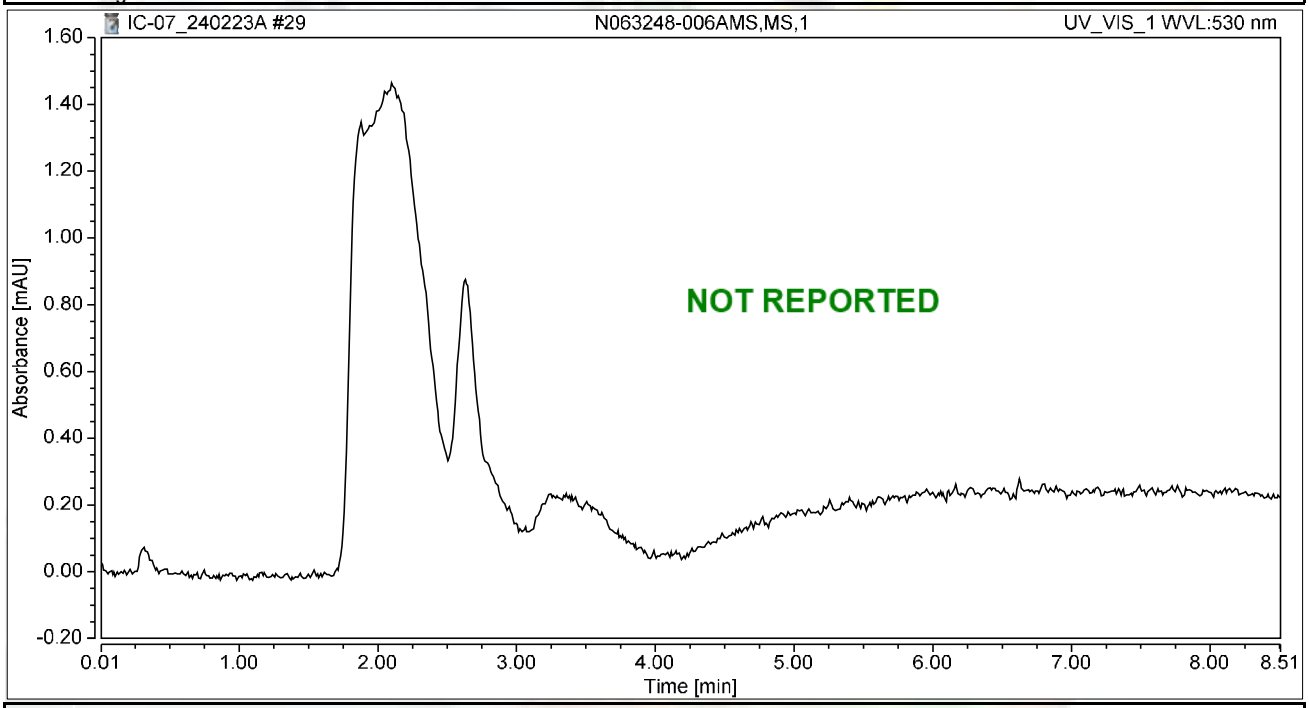
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.698	0.067	0.232	100.00	100.00	0.3105
Total:			**0.067**	**0.232**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

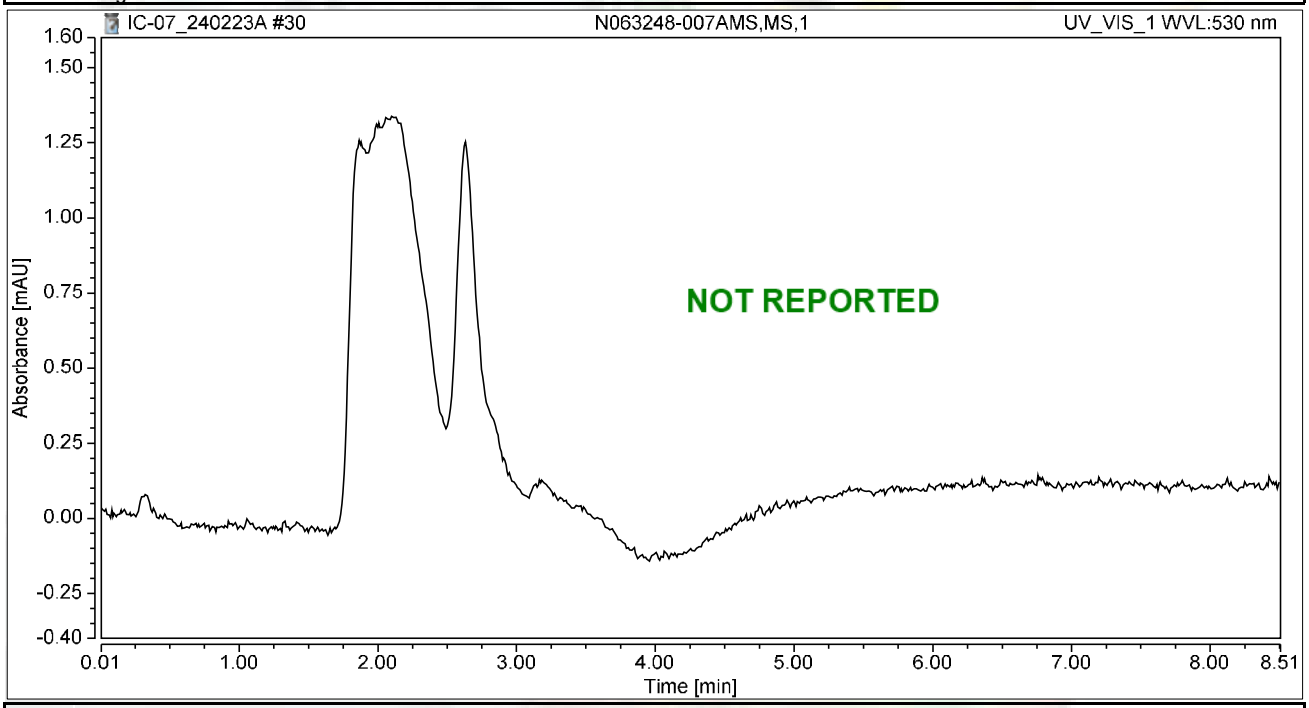
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

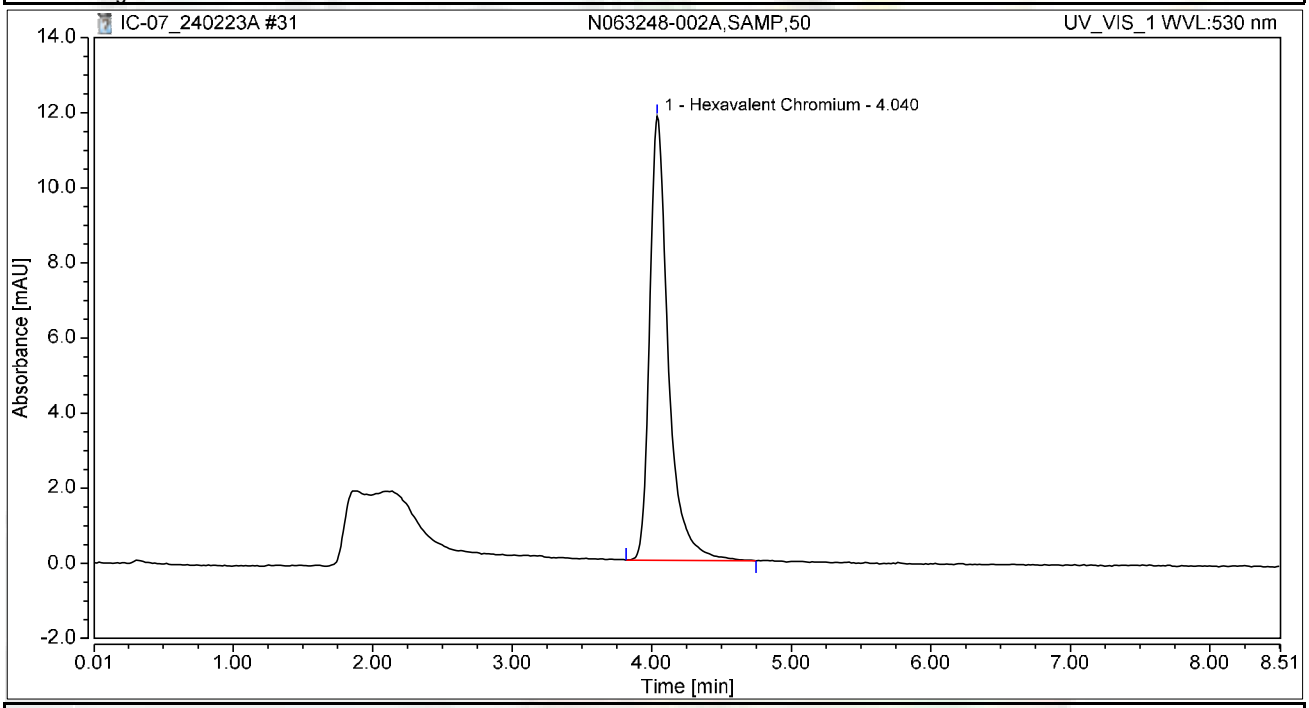
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-002A,SAMP,50**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 13:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

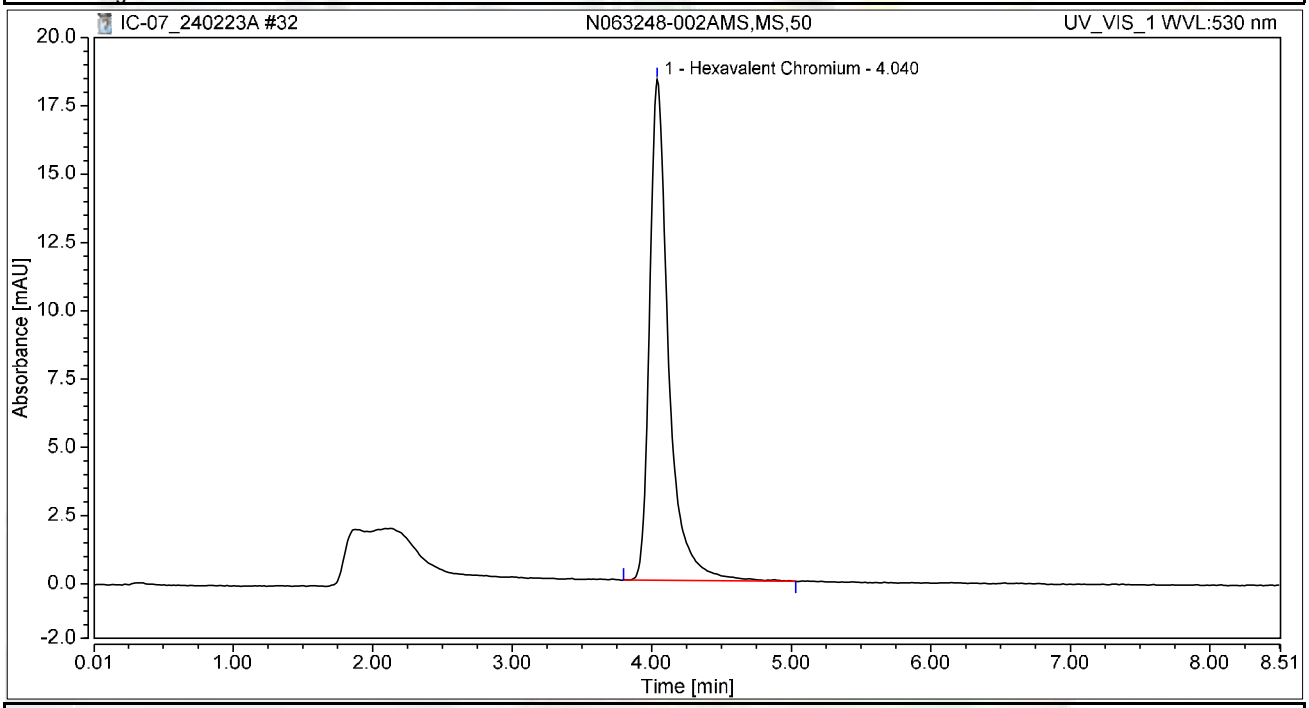
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.835	11.823	100.00	100.00	8.5302
Total:			**1.835**	**11.823**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-002AMS,MS,50**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 13:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

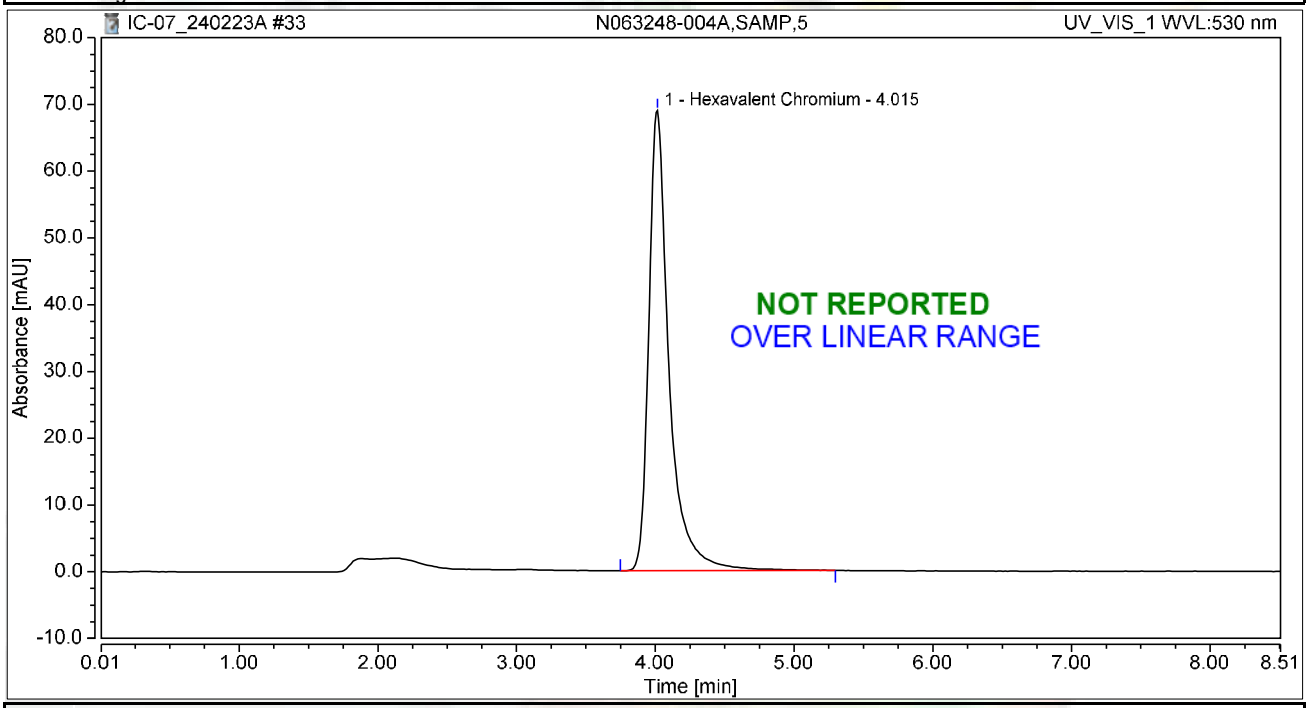
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.897	18.335	100.00	100.00	13.4692
Total:			**2.897**	**18.335**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-004A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 13:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

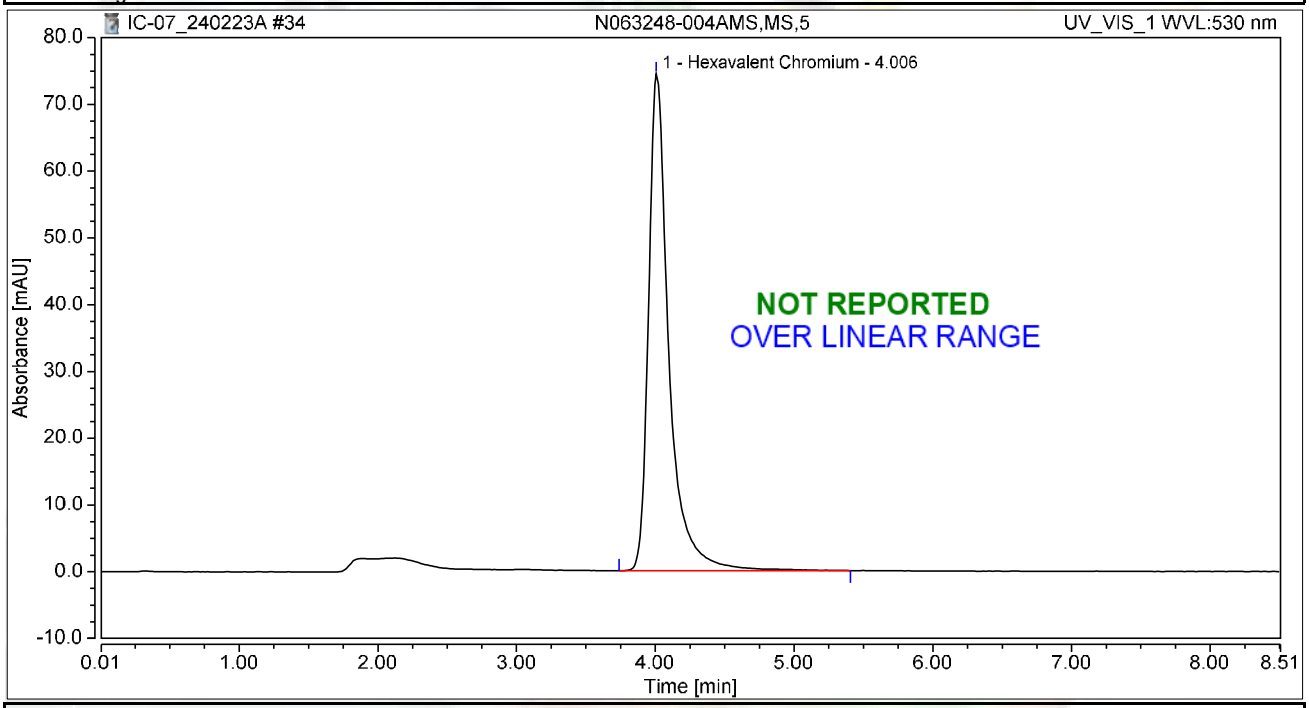
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	11.717	68.940	100.00	100.00	54.4706
Total:			**11.717**	**68.940**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-004AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 13:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

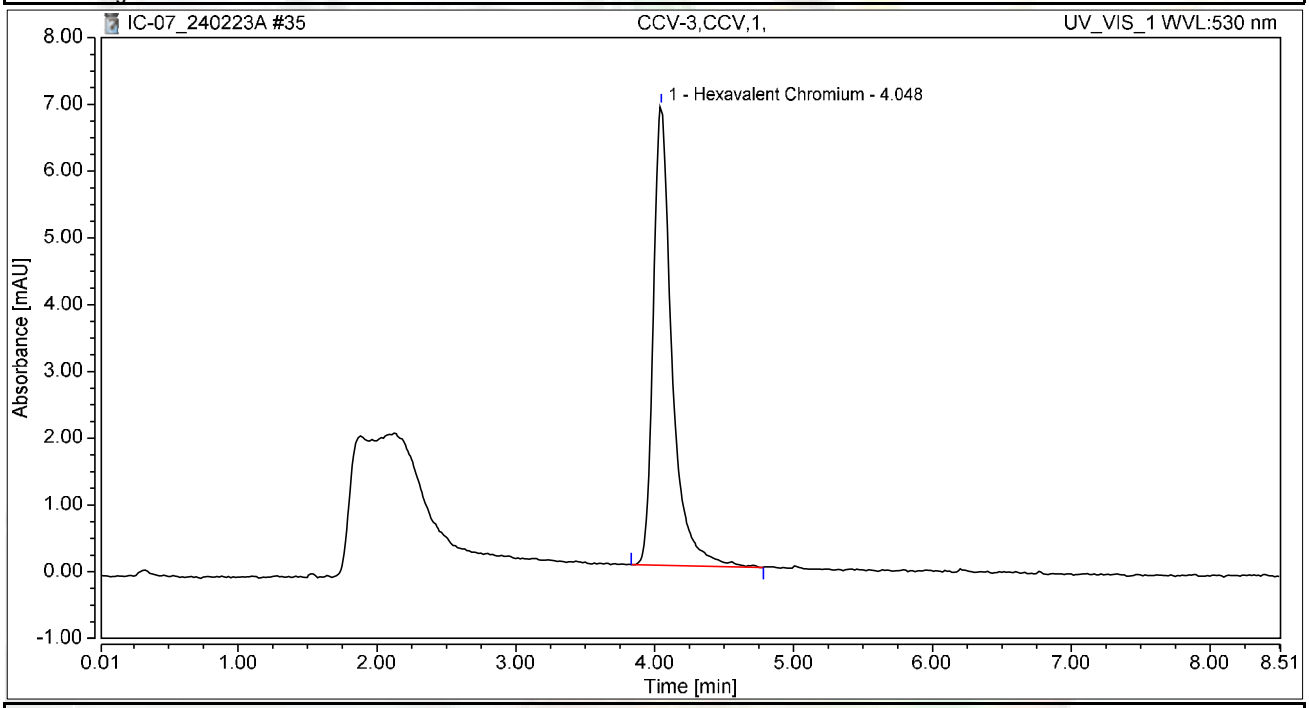
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	12.712	74.454	100.00	100.00	59.0961
Total:			**12.712**	**74.454**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 13:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

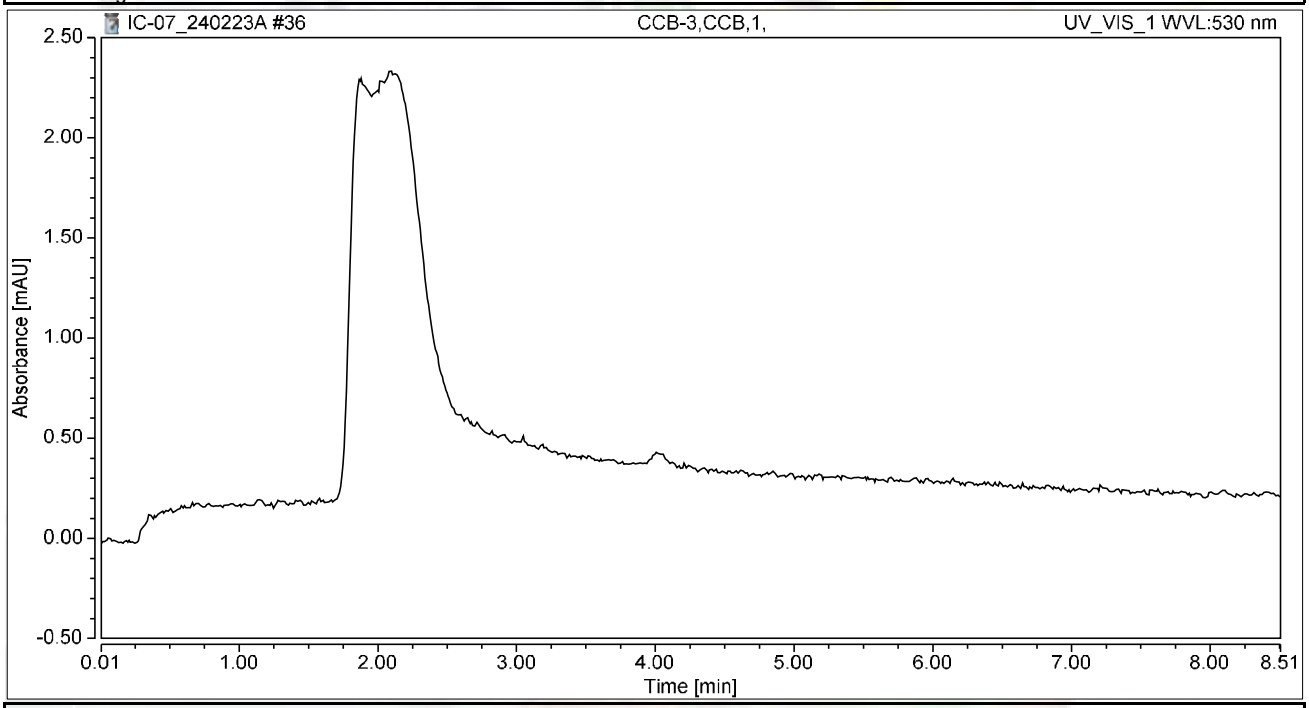
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.078	6.886	100.00	100.00	5.0096
Total:			**1.078**	**6.886**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 13:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

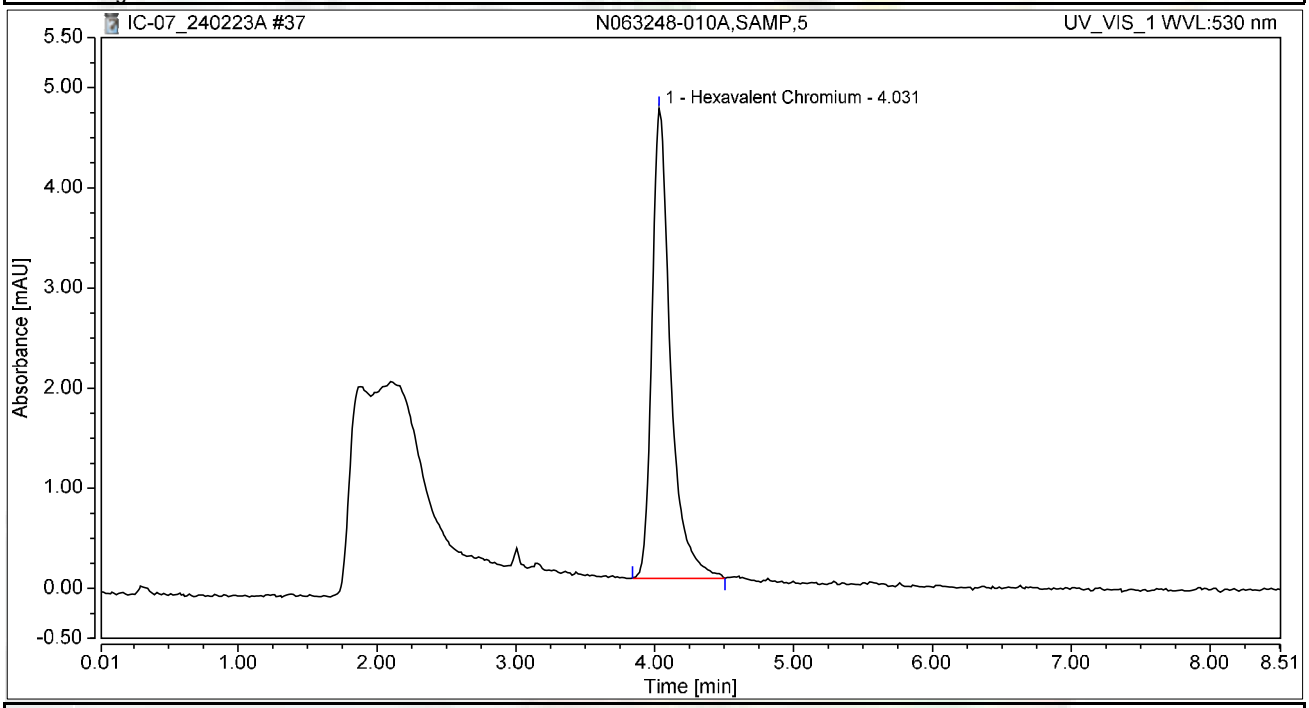
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-010A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 13:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

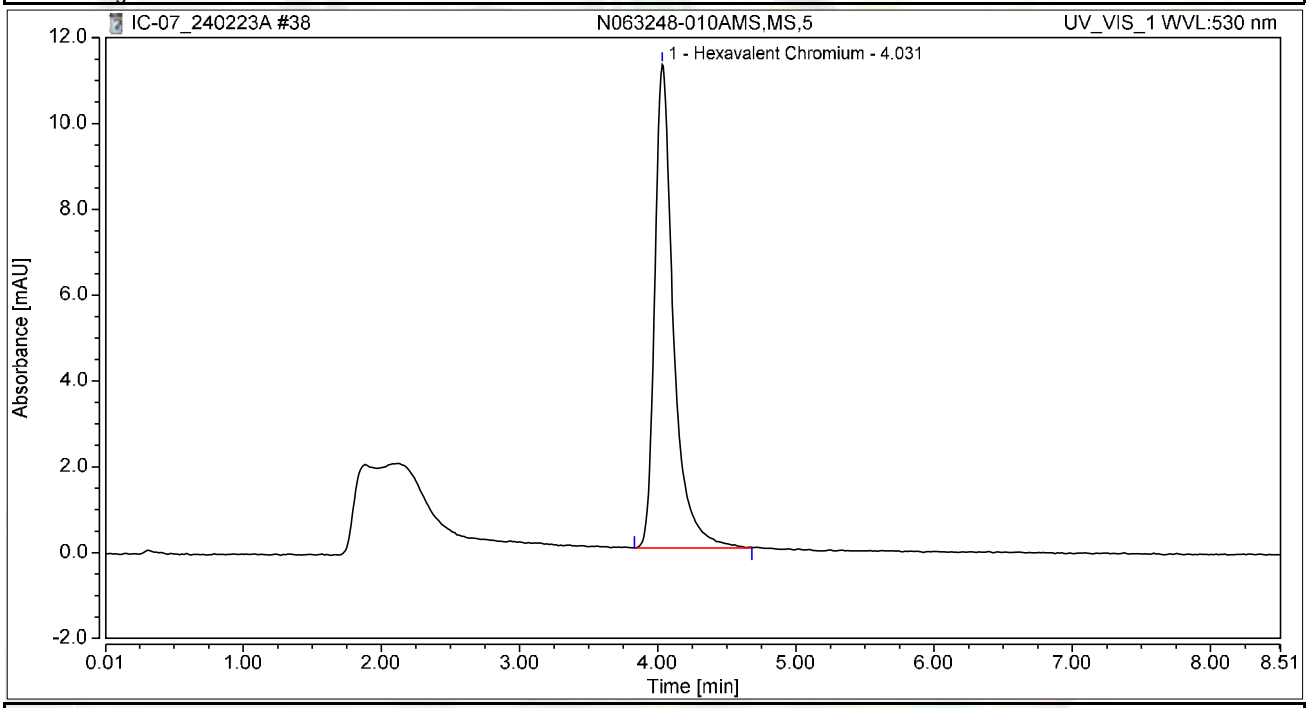
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.726	4.691	100.00	100.00	3.3729
Total:			**0.726**	**4.691**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-010AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 14:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

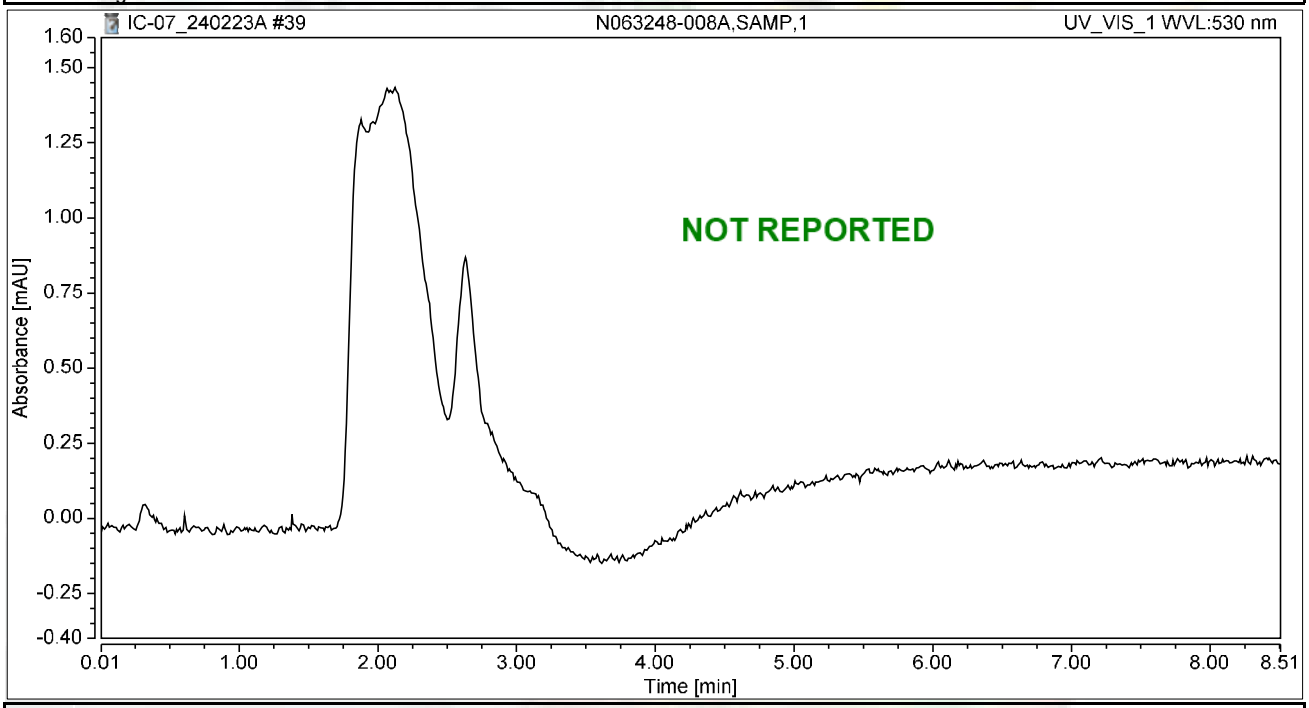
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	1.773	11.273	100.00	100.00	8.2436
Total:			**1.773**	**11.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 14:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

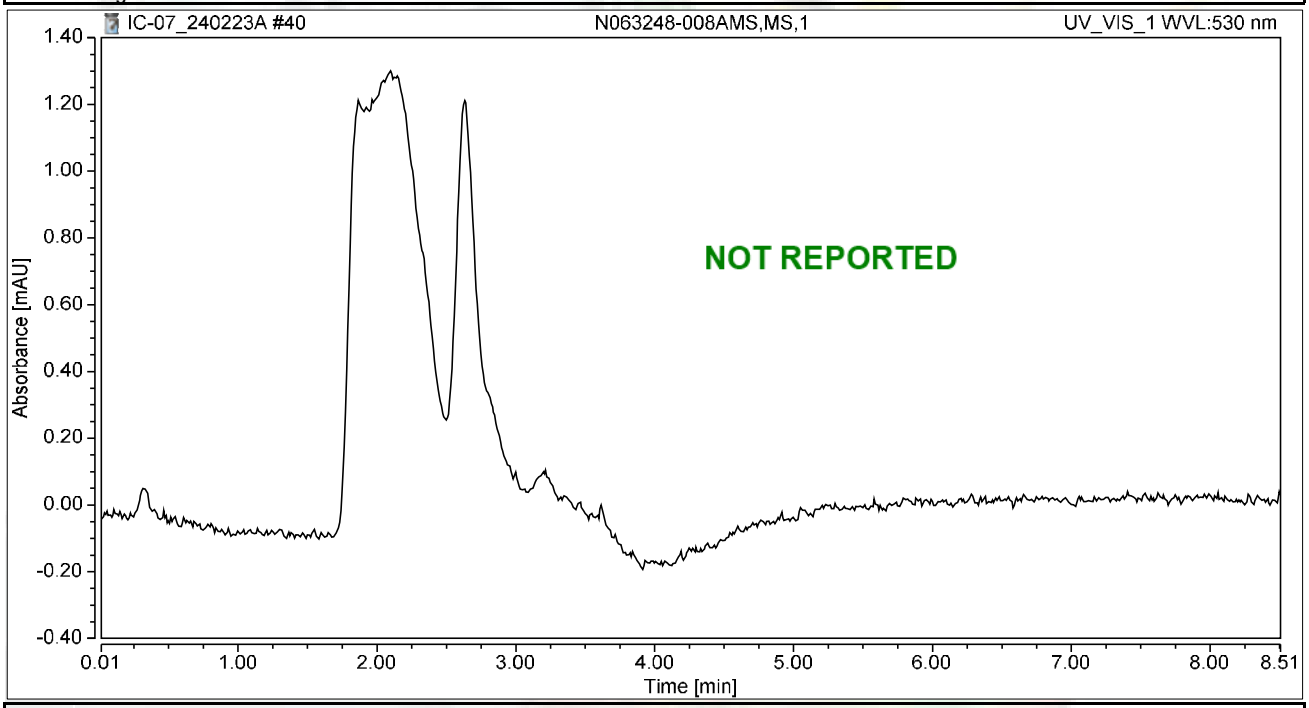
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-008AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 14:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

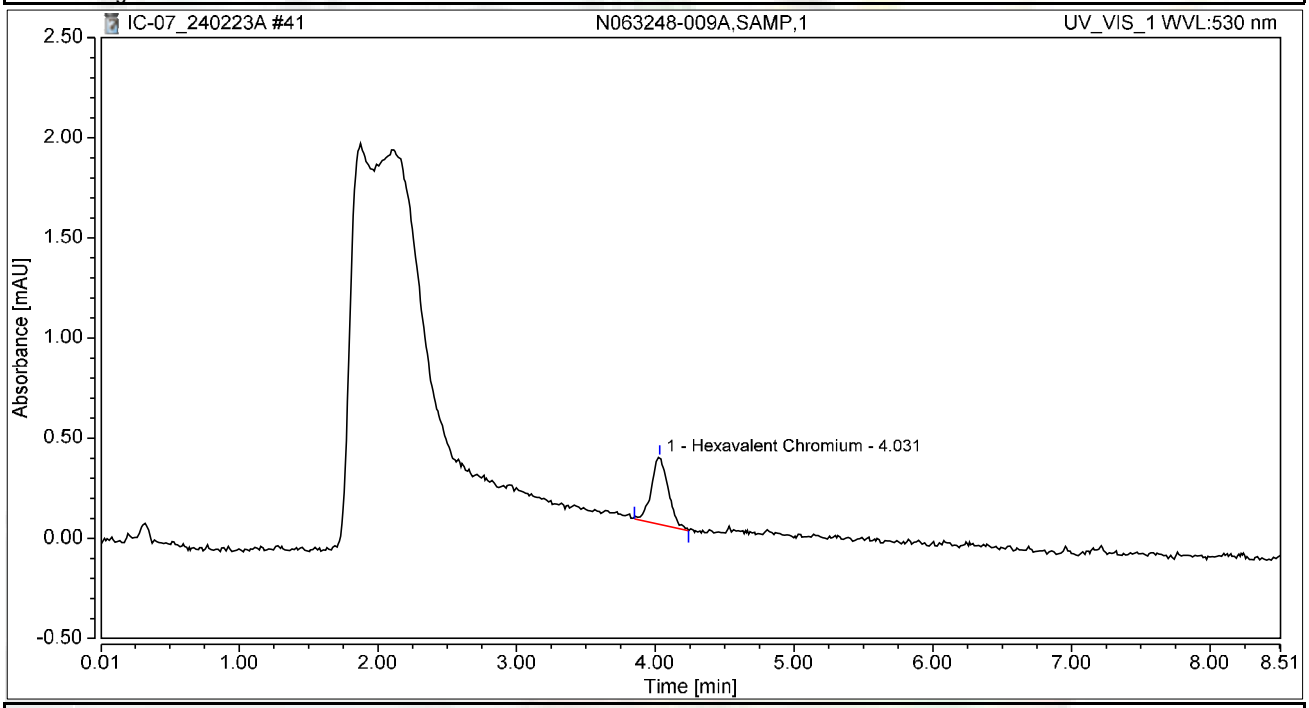
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 14:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

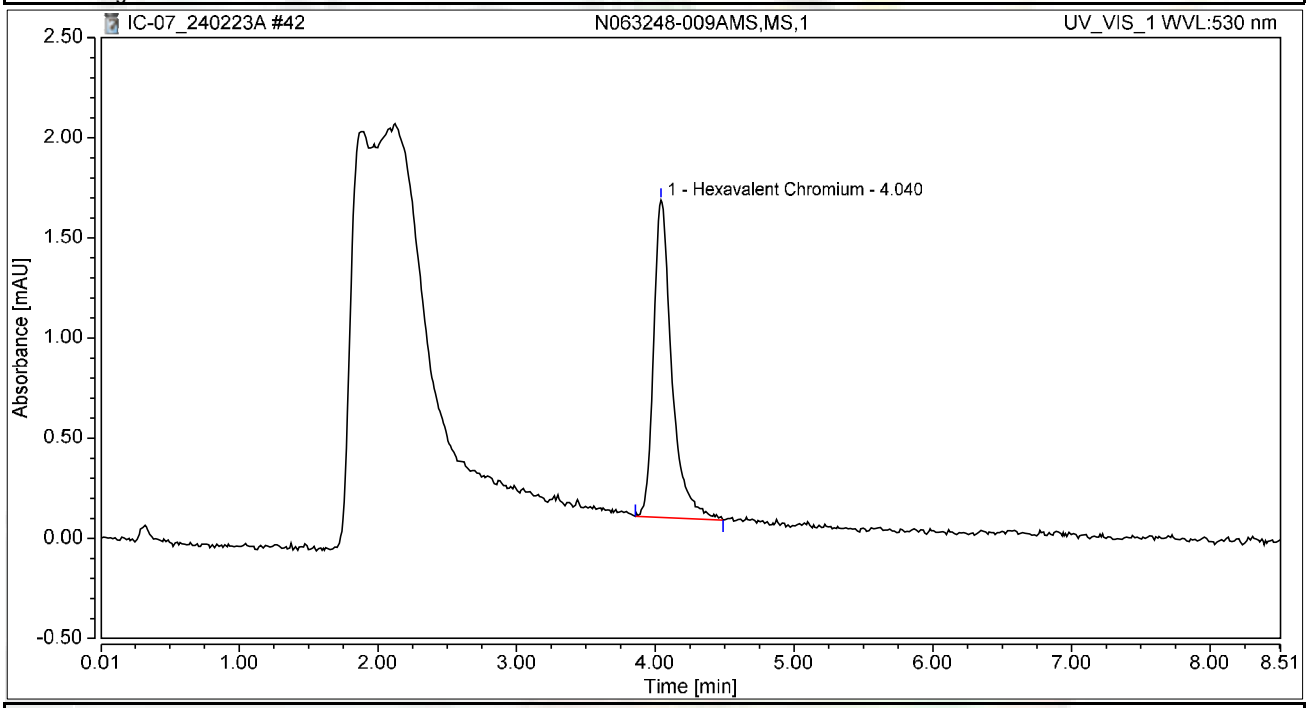
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.047	0.334	100.00	100.00	0.2206
Total:			**0.047**	**0.334**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 14:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

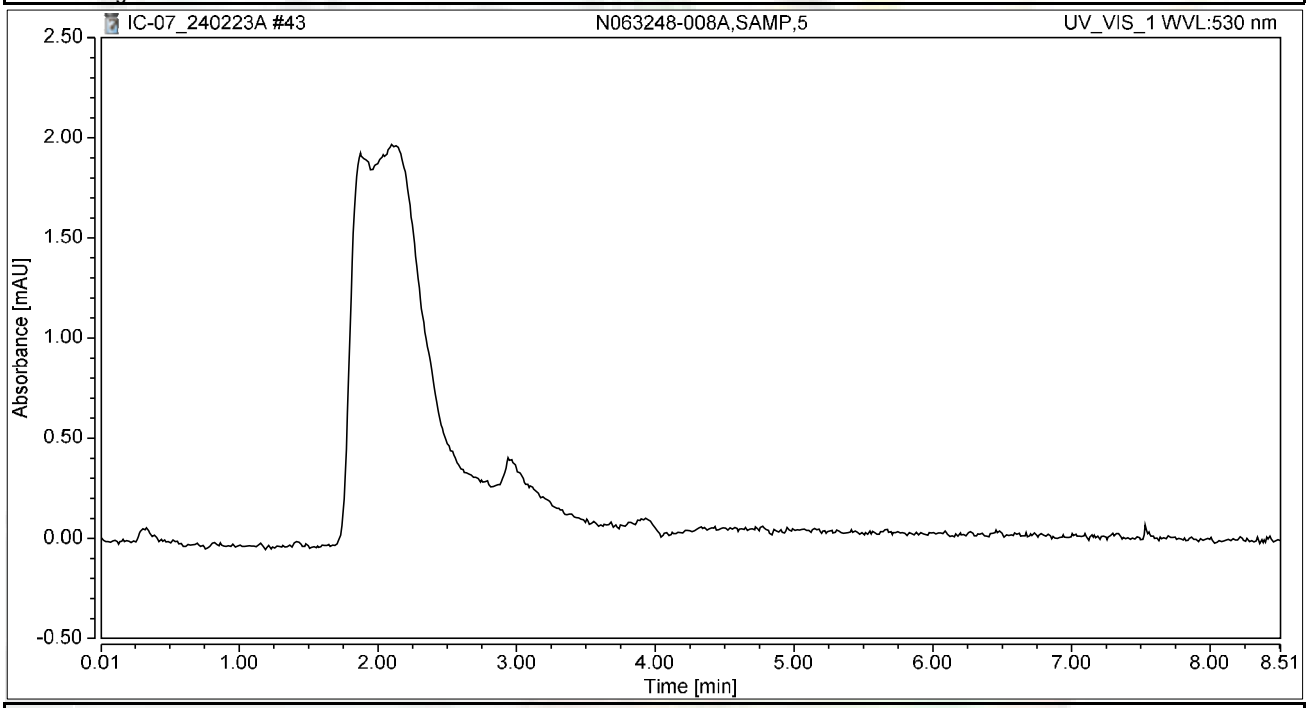
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.242	1.584	100.00	100.00	1.1257
Total:			**0.242**	**1.584**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-008A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 14:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

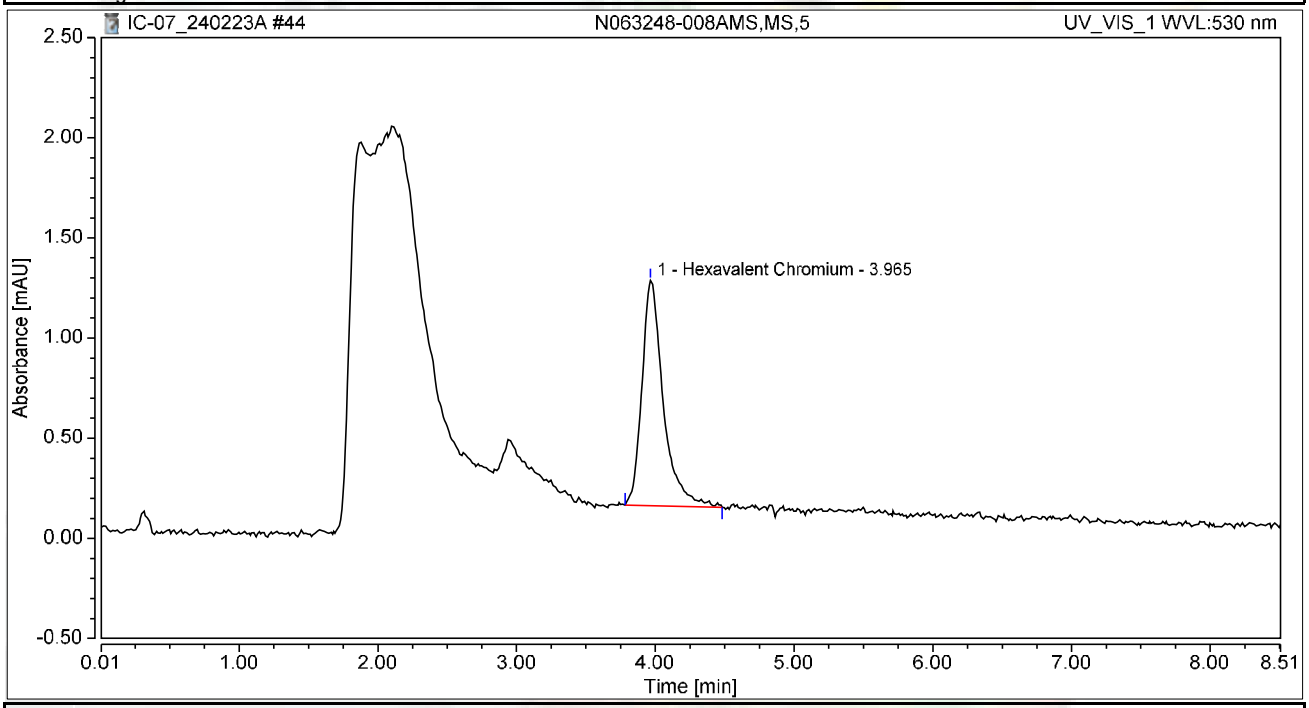
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-008AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 15:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

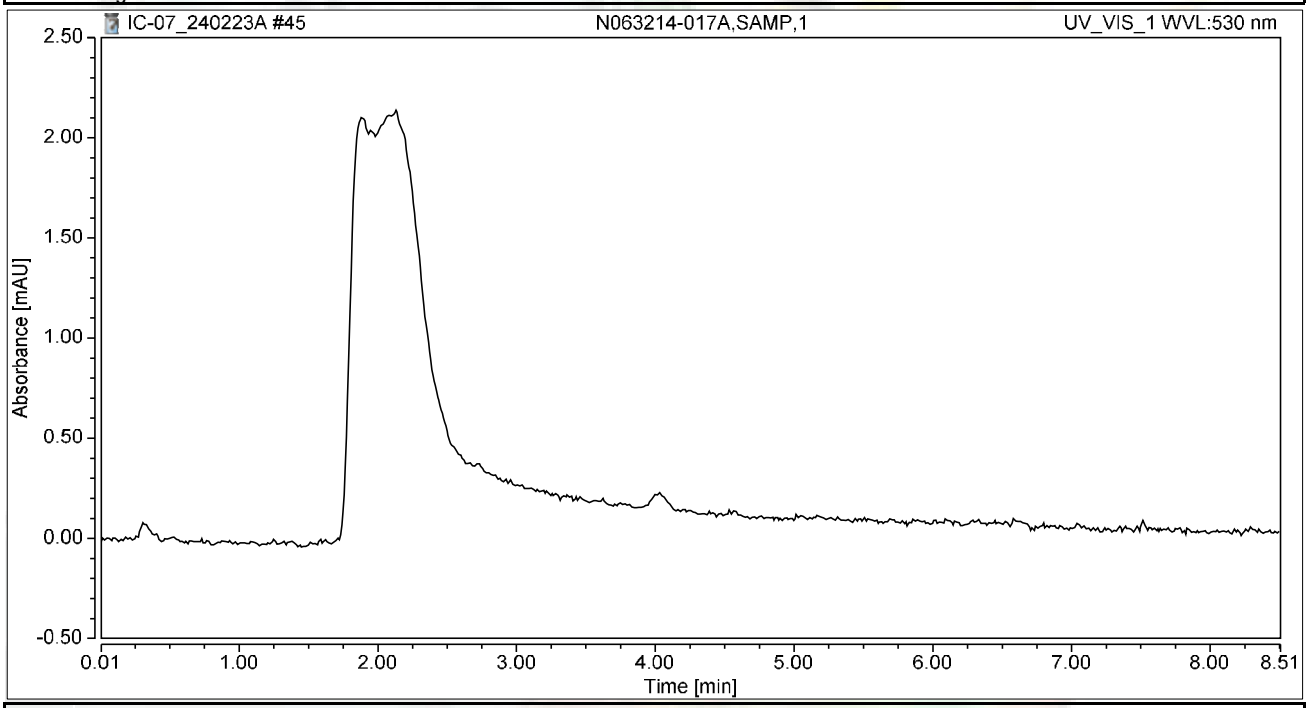
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.201	1.124	100.00	100.00	0.9342
Total:			**0.201**	**1.124**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-017A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 15:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

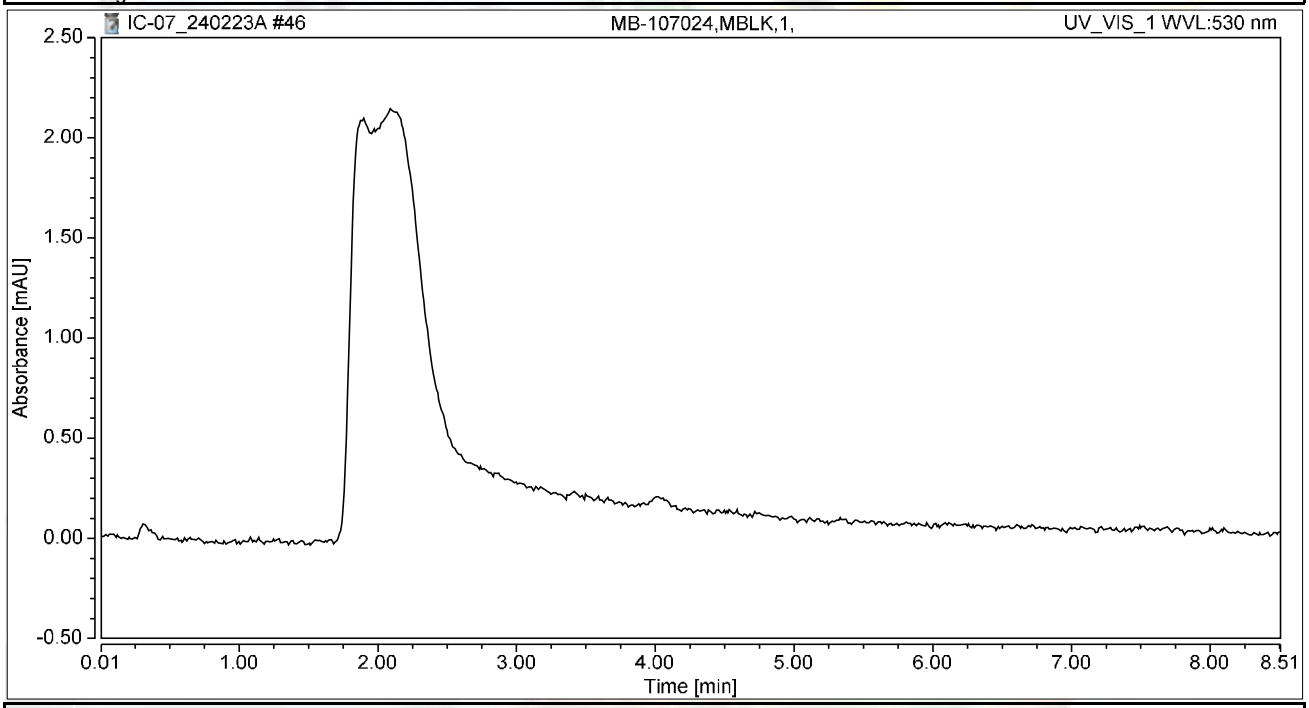
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-107024,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 15:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

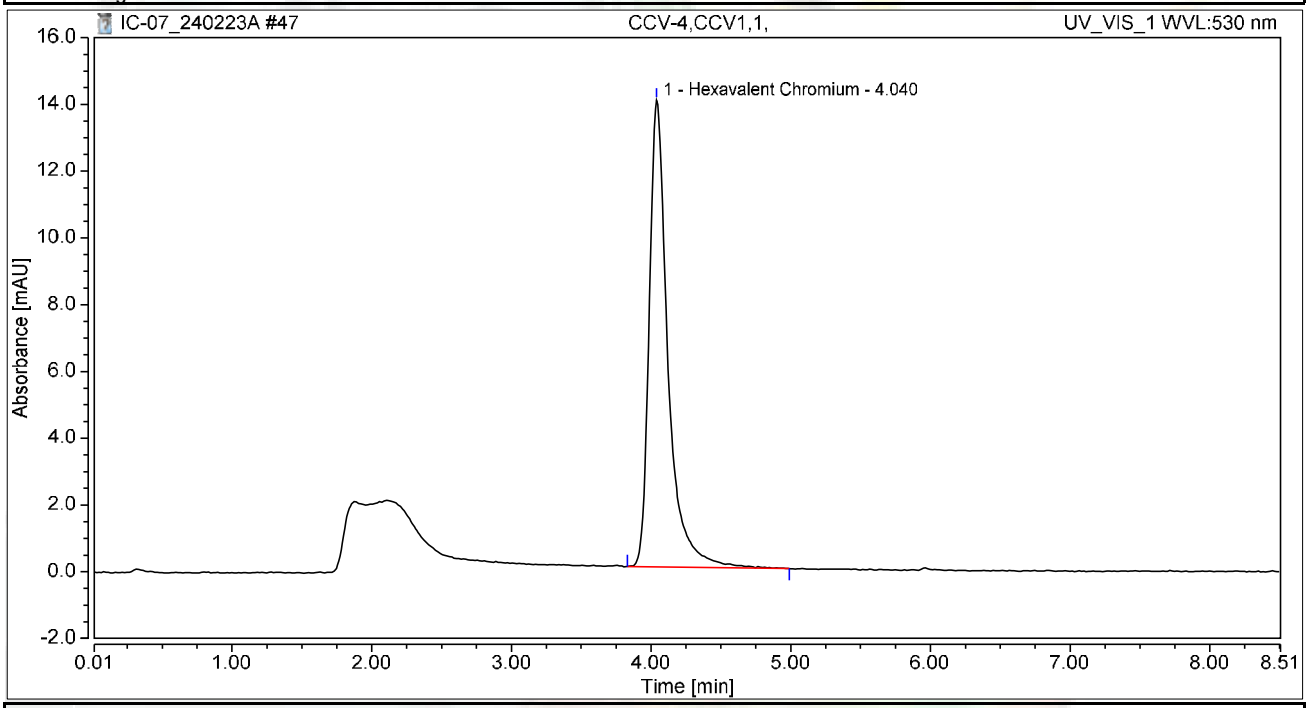
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 15:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

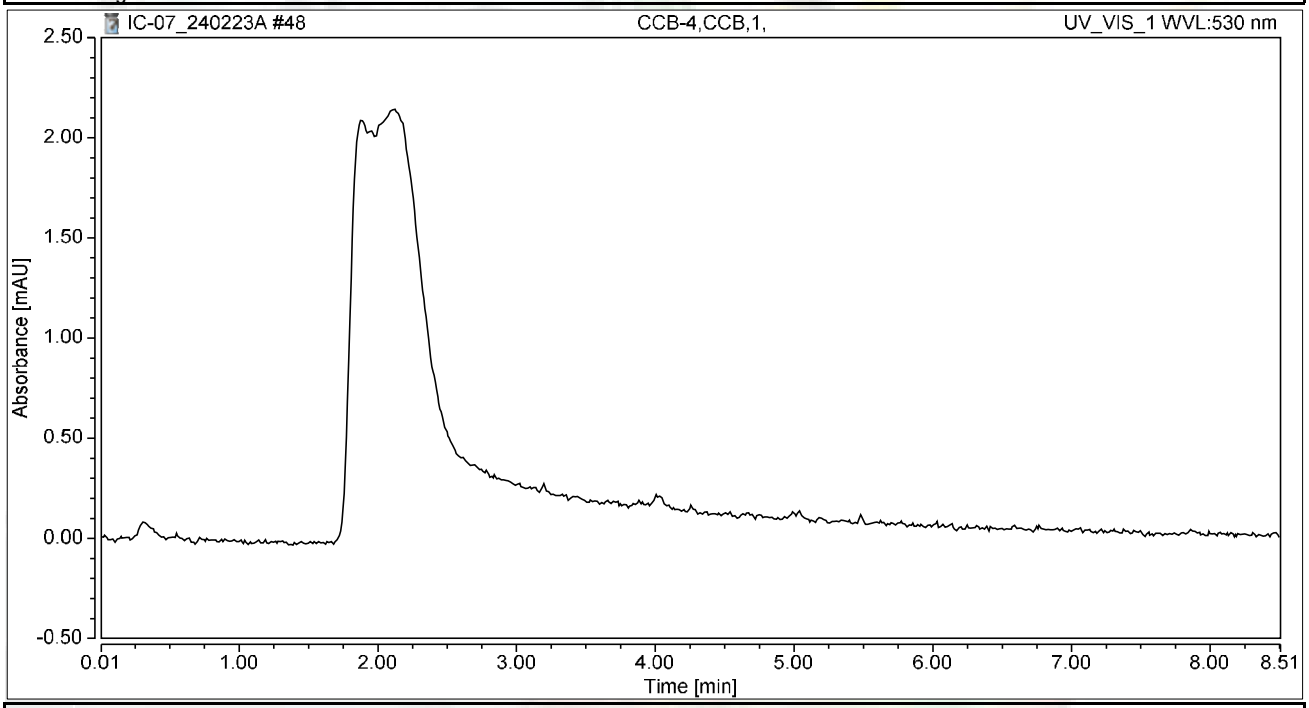
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.169	13.981	100.00	100.00	10.0853
Total:			**2.169**	**13.981**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 15:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

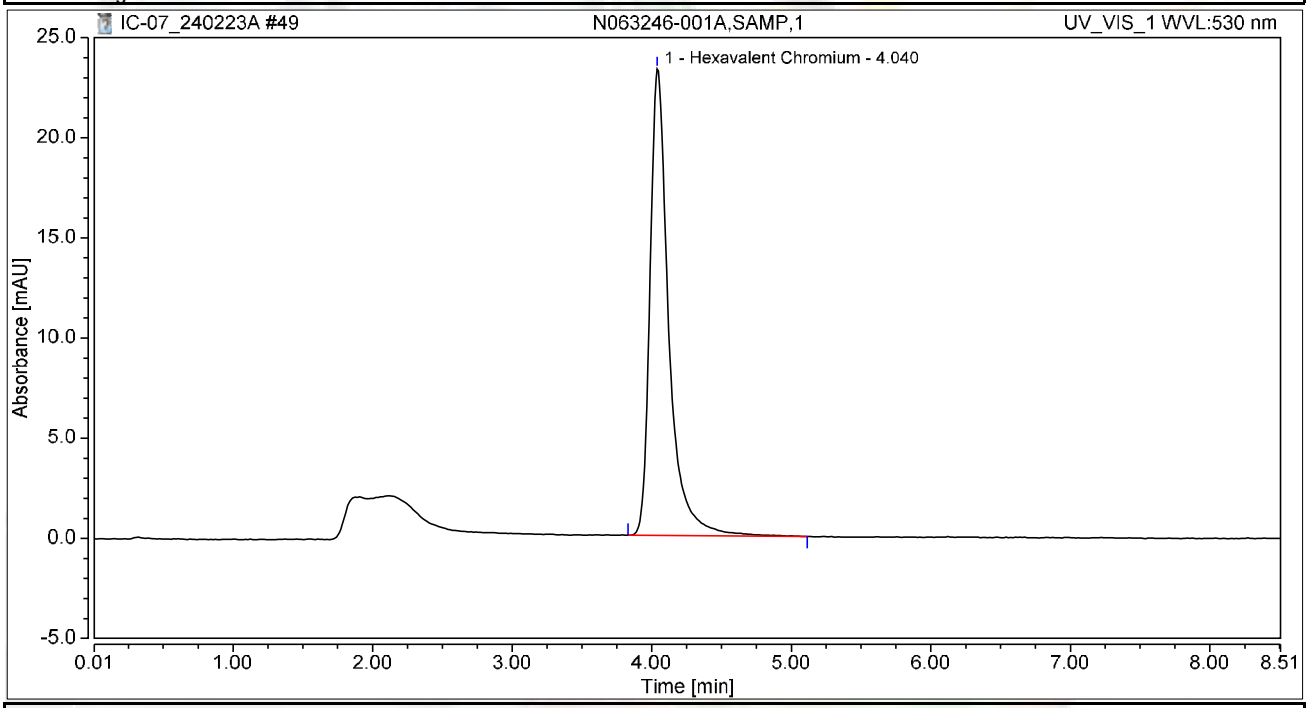
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063246-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 15:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

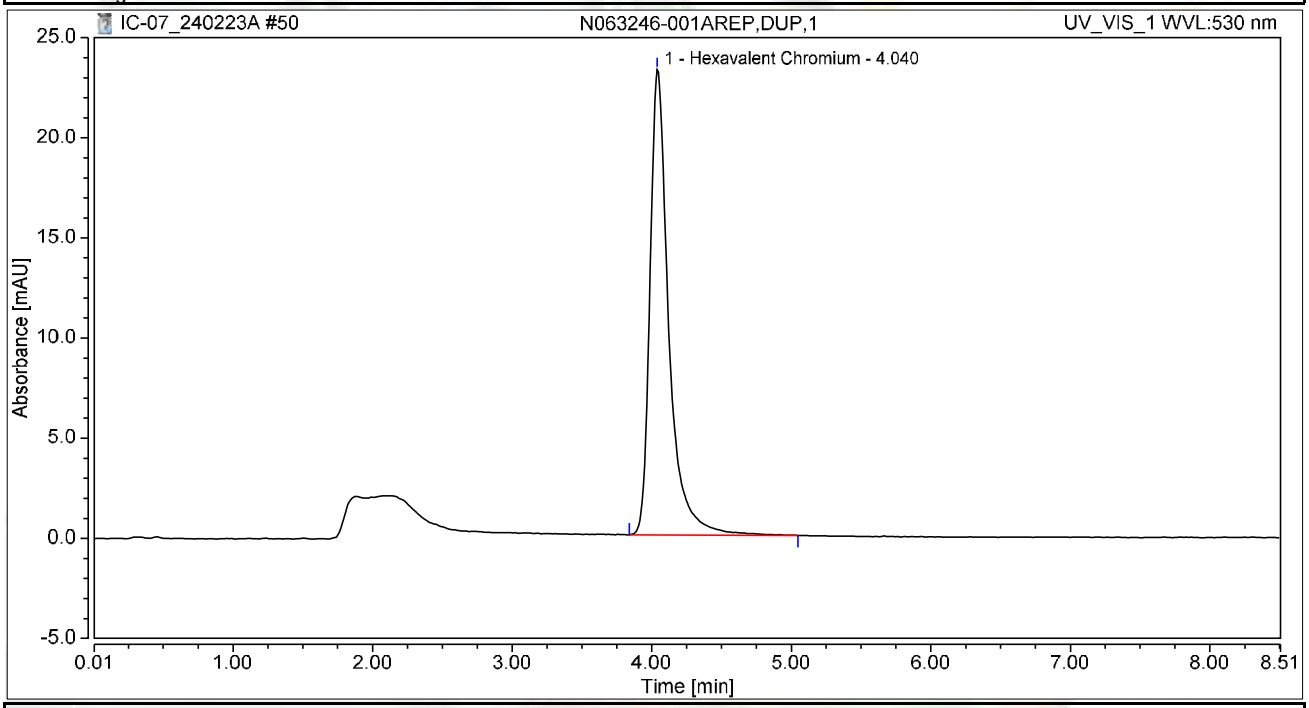
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	3.642	23.293	100.00	100.00	16.9307
Total:			**3.642**	**23.293**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063246-001AREP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 16:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

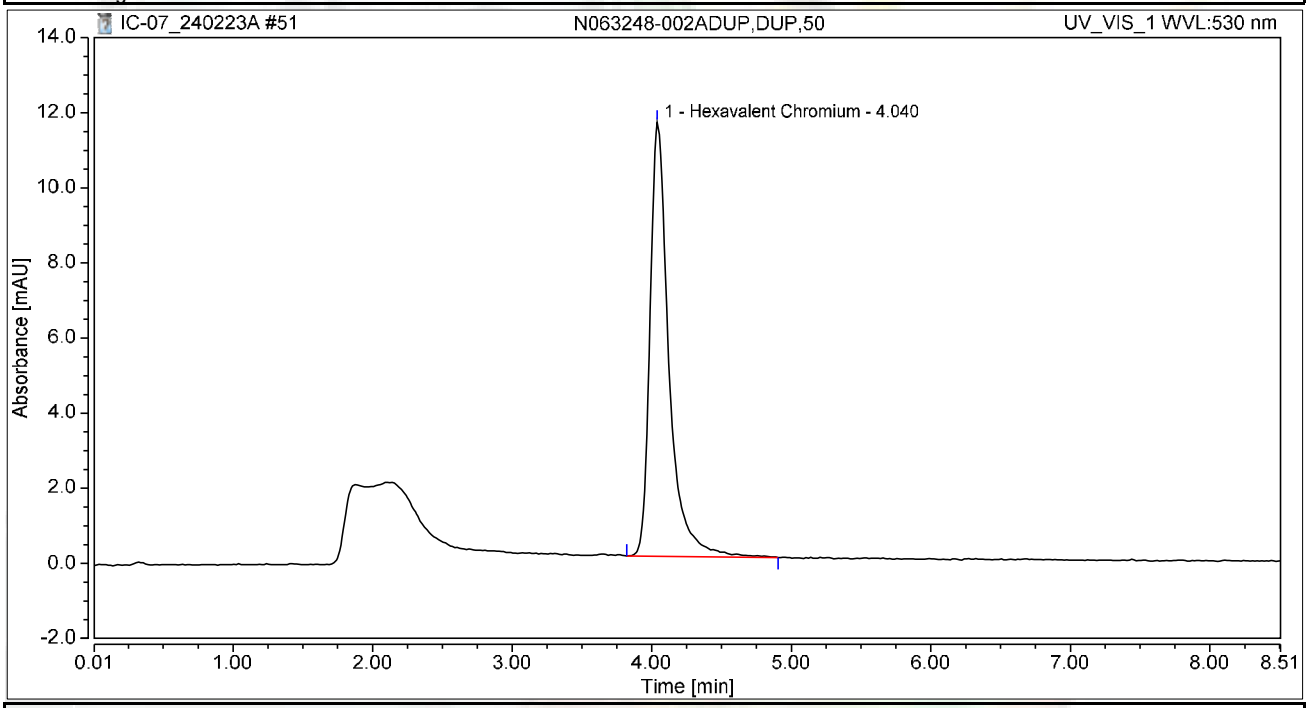
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	3.636	23.234	100.00	100.00	16.9039
Total:			**3.636**	**23.234**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-002ADUP,DUP,50**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 16:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

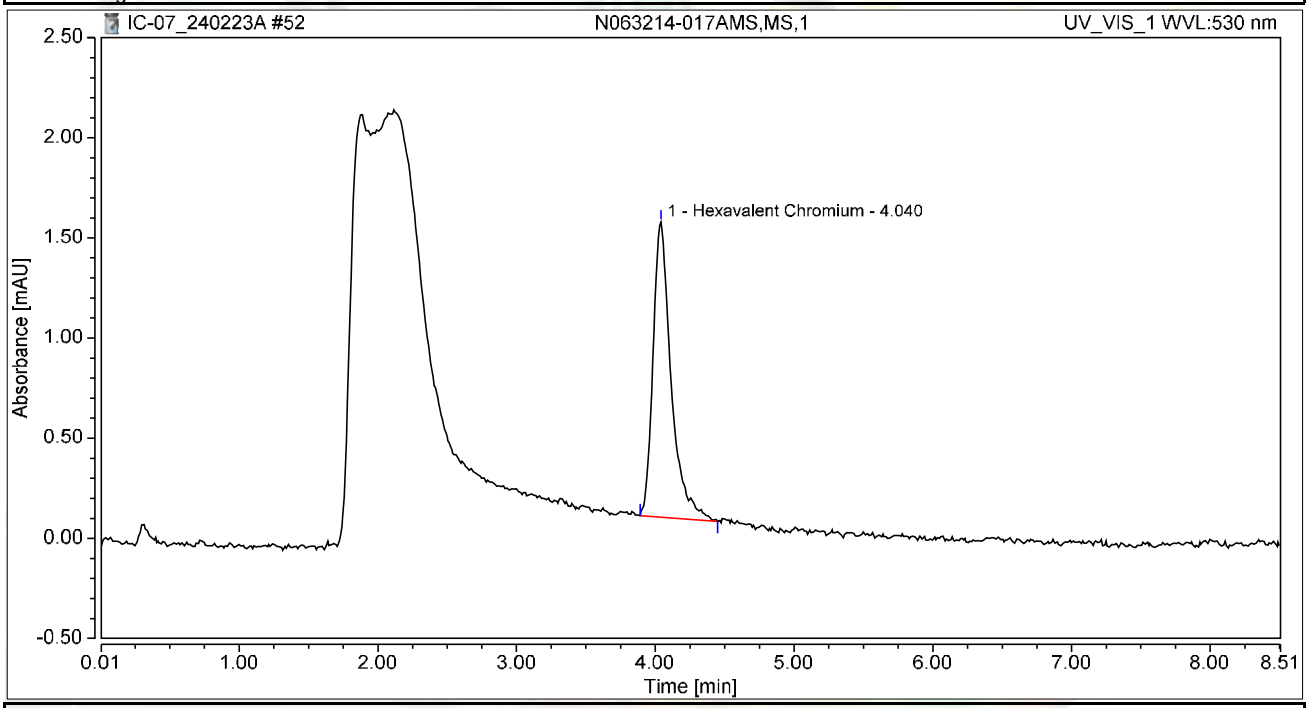
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.825	11.557	100.00	100.00	8.4841
Total:			**1.825**	**11.557**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-017AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 16:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

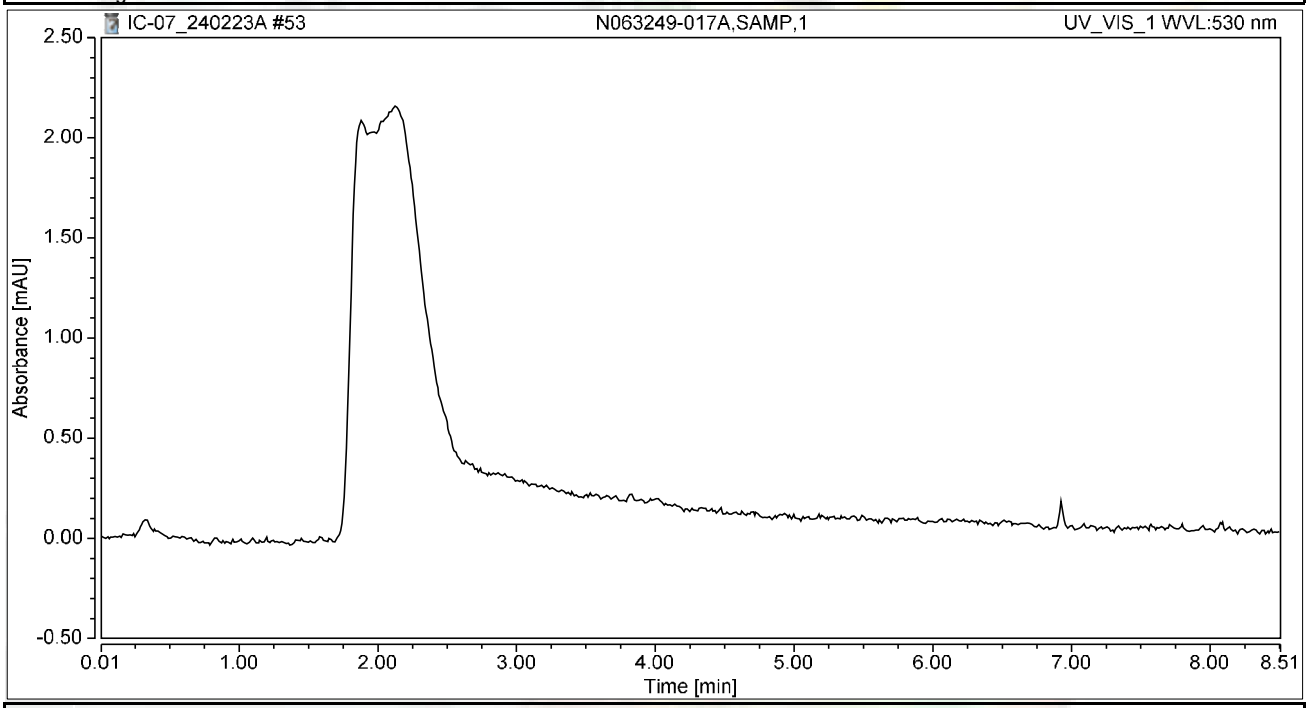
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.223	1.475	100.00	100.00	1.0359
Total:			**0.223**	**1.475**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-017A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 16:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

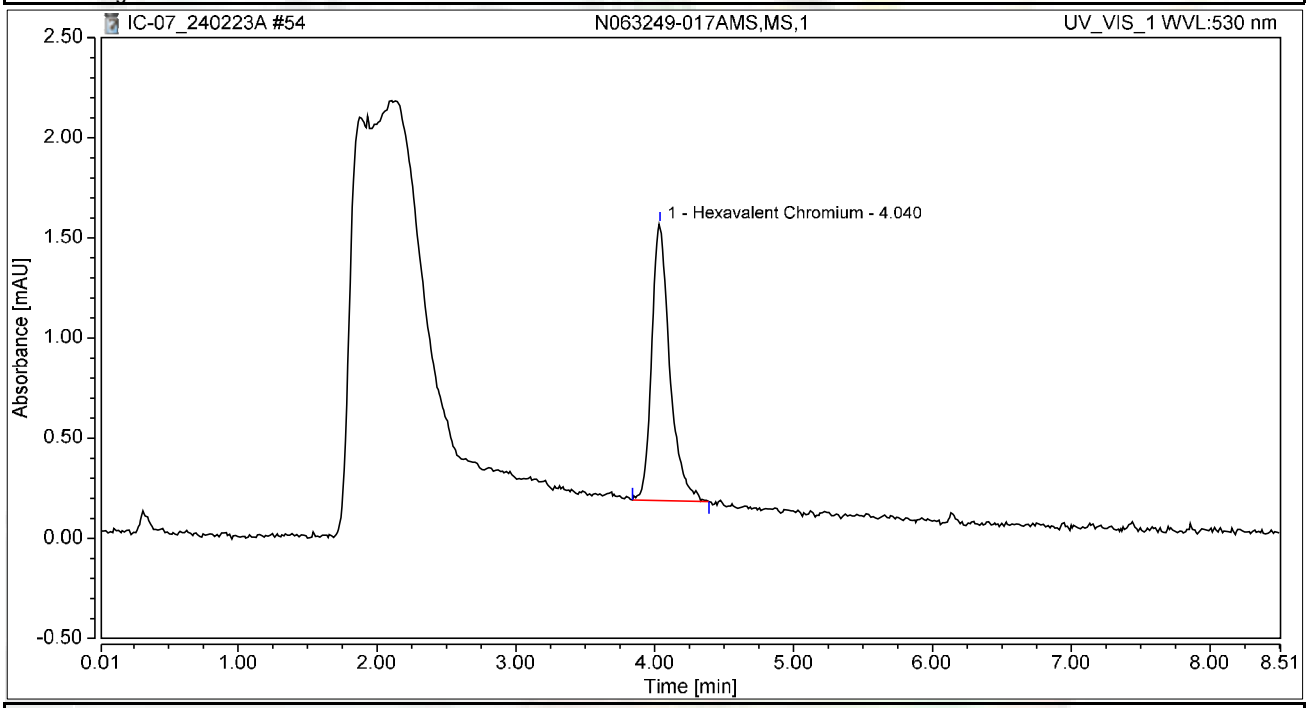
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-017AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 16:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

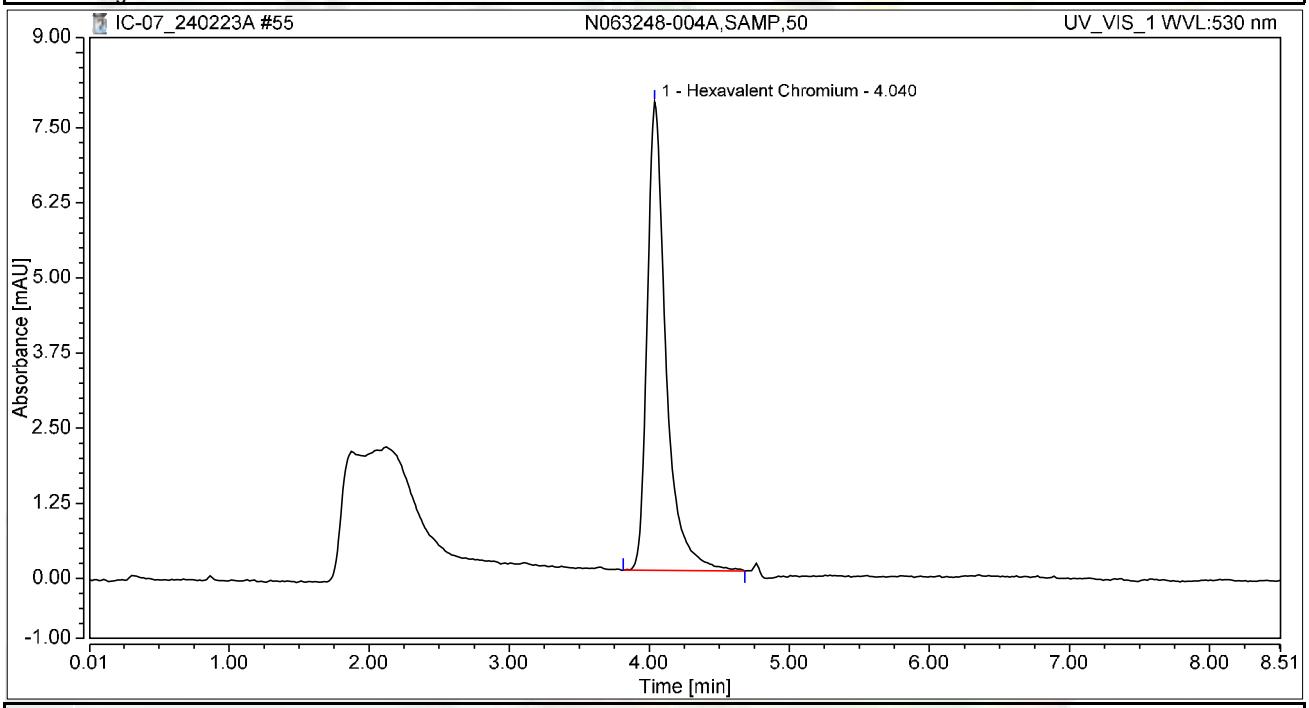
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.208	1.380	100.00	100.00	0.9682
Total:			**0.208**	**1.380**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-004A,SAMP,50**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 16:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

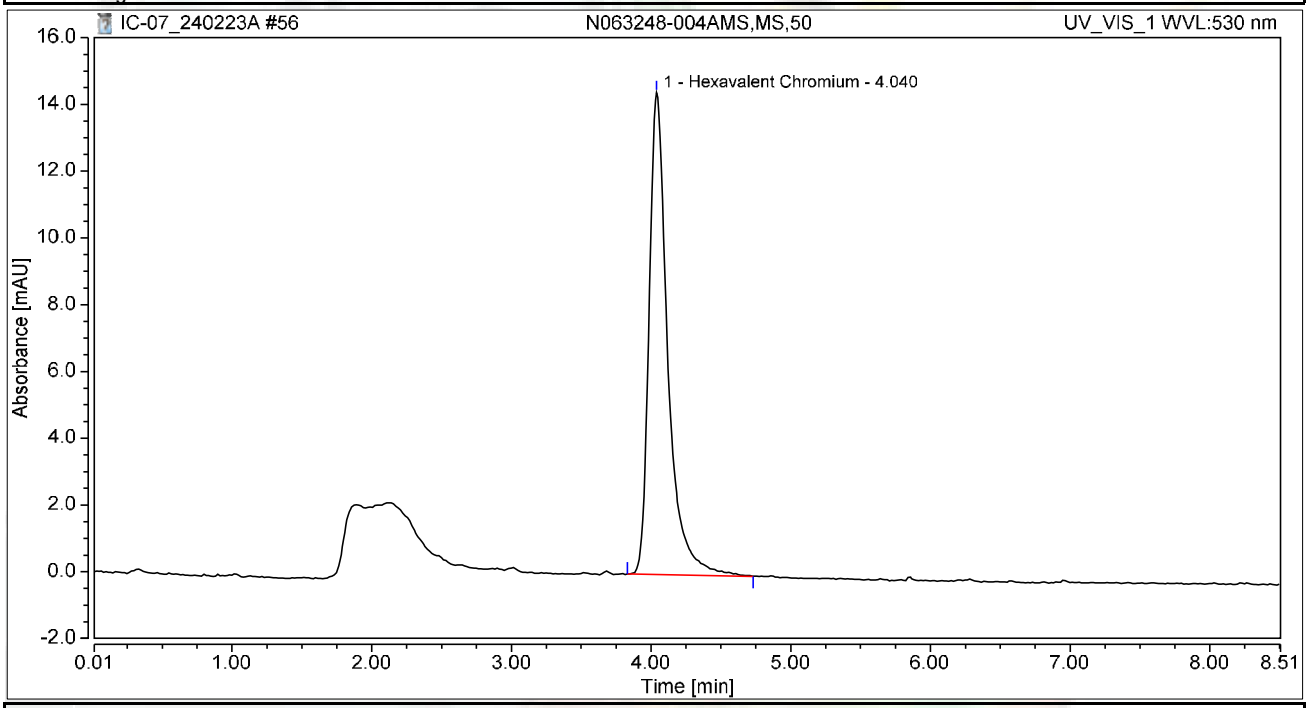
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.210	7.795	100.00	100.00	5.6268
Total:			**1.210**	**7.795**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-004AMS,MS,50**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 17:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

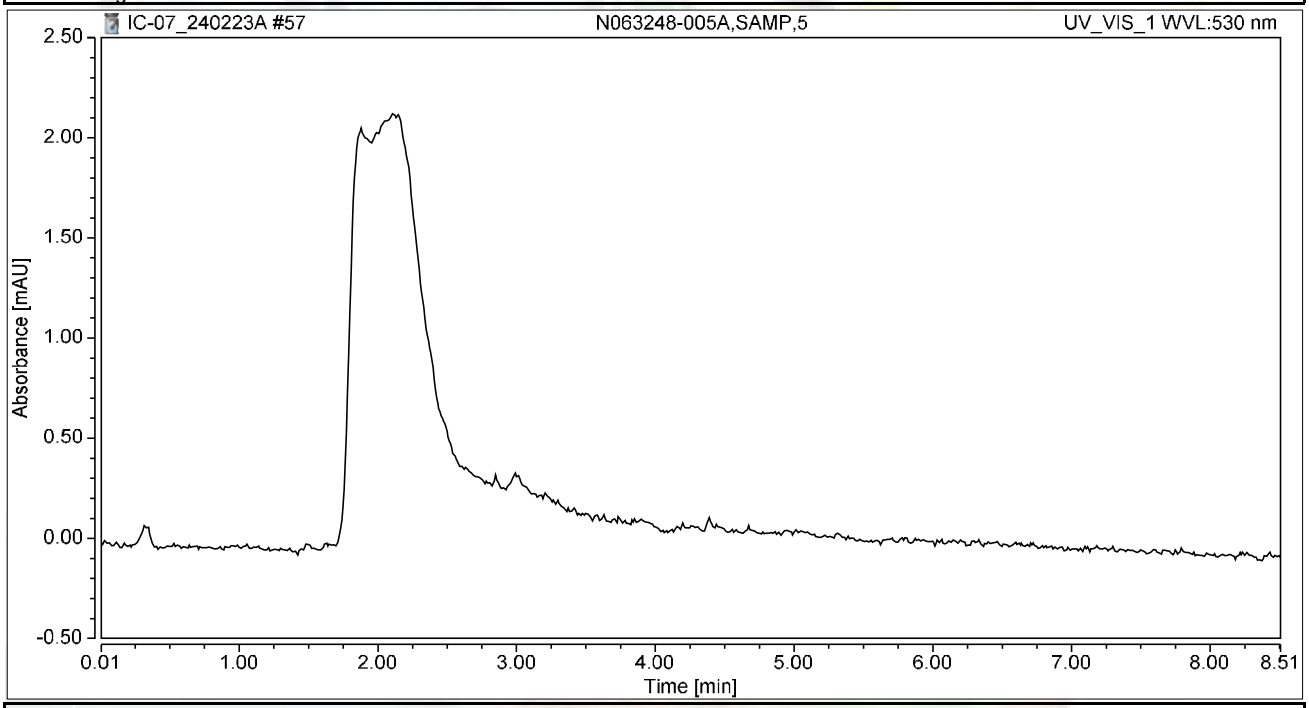
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.241	14.433	100.00	100.00	10.4175
Total:			**2.241**	**14.433**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 17:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

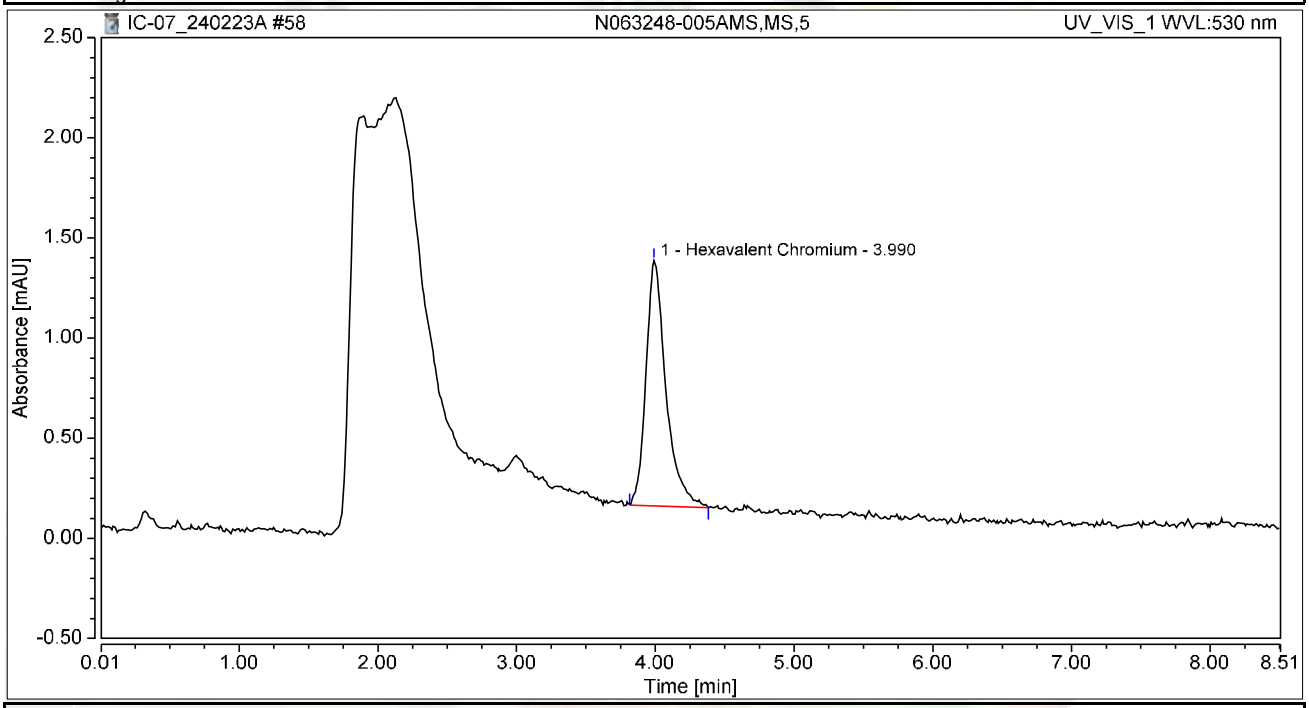
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-005AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 17:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

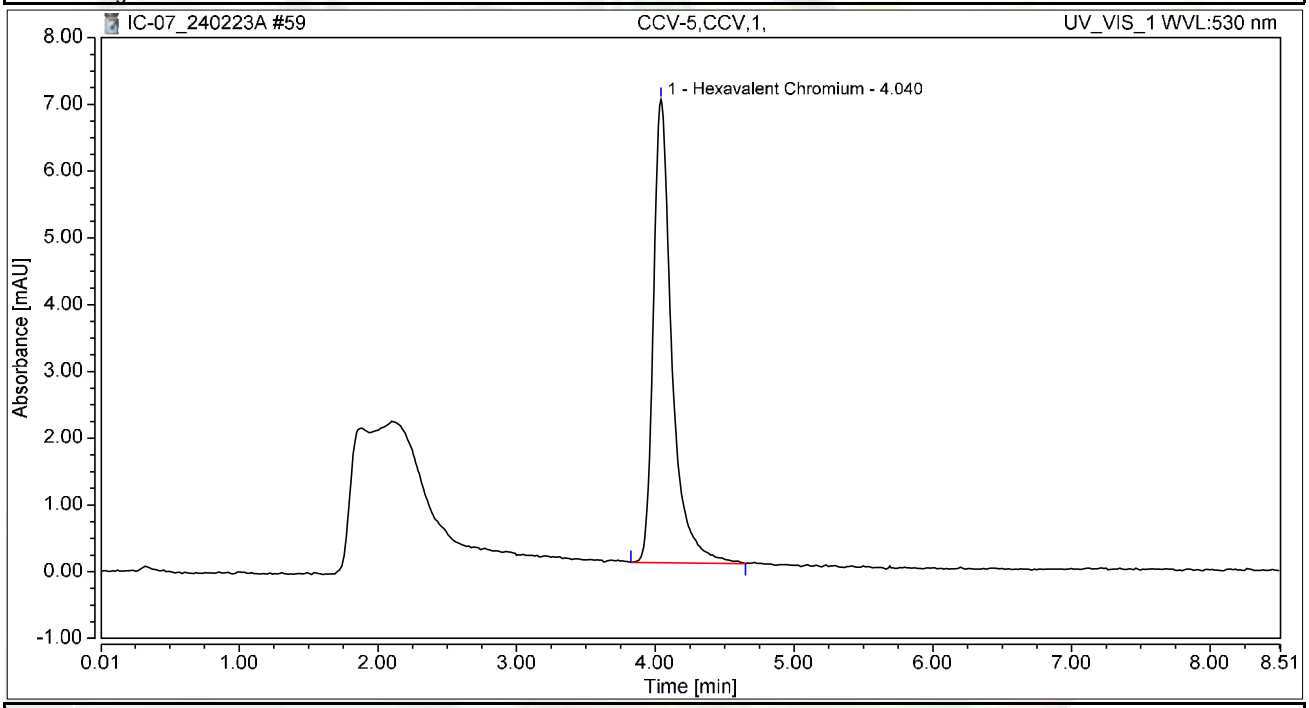
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.206	1.226	100.00	100.00	0.9571
Total:			**0.206**	**1.226**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 17:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

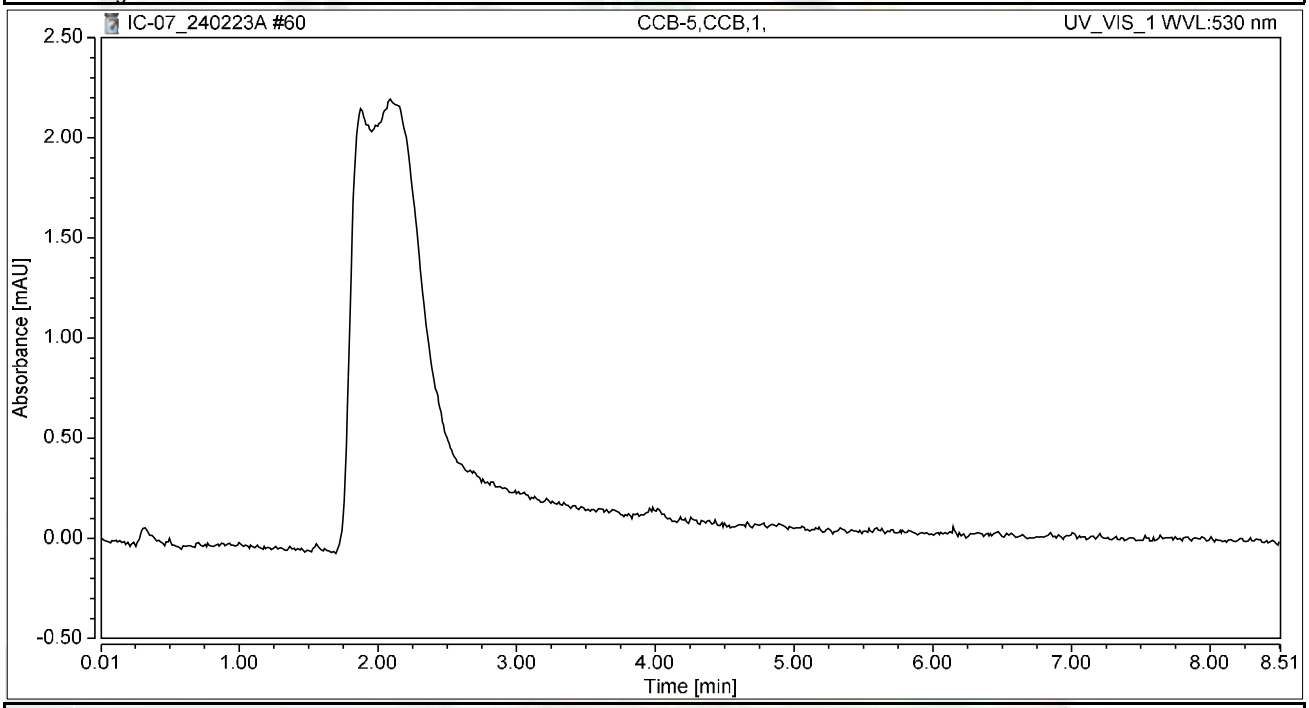
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.074	6.936	100.00	100.00	4.9917
Total:			**1.074**	**6.936**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

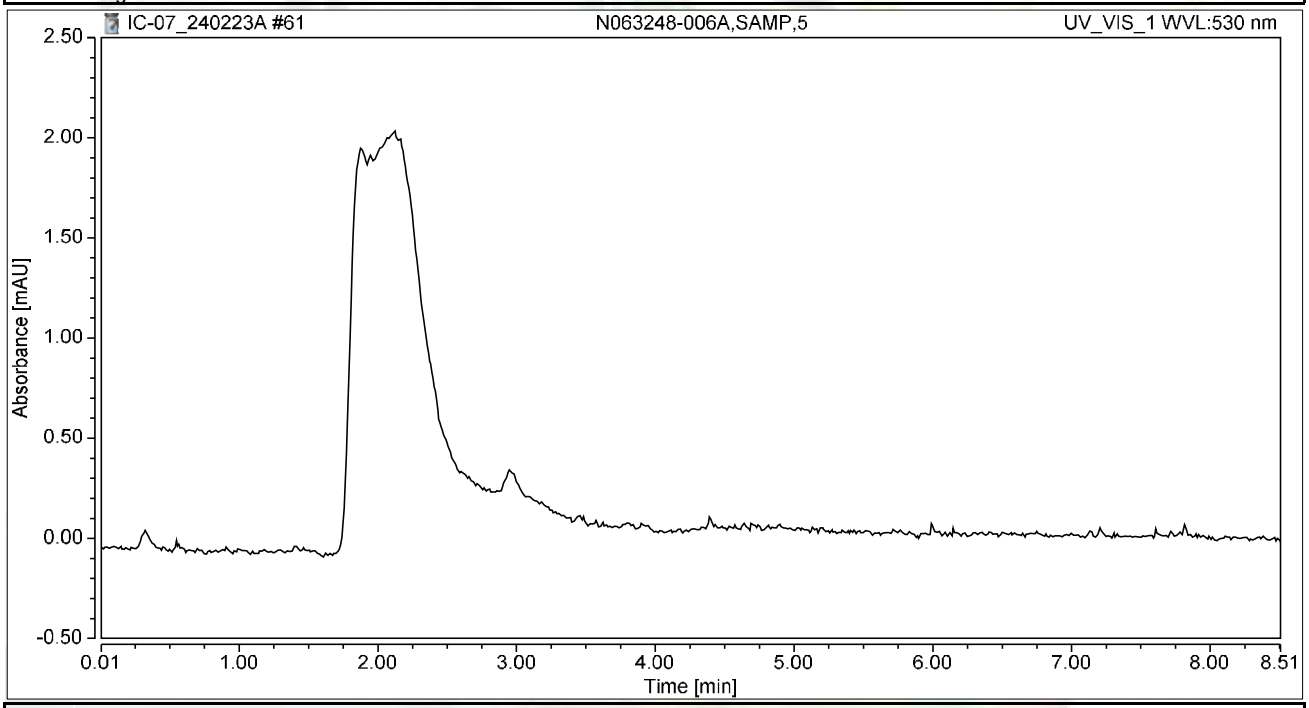
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-006A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

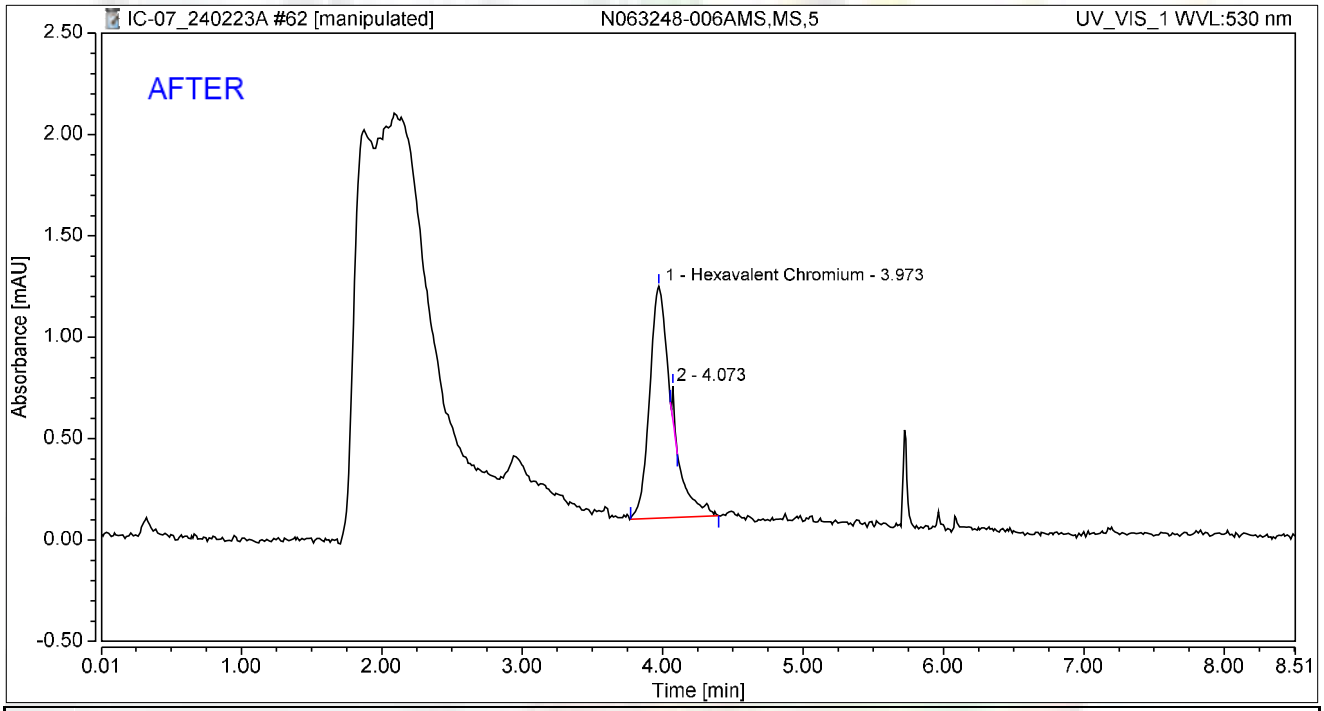
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-006AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.208	1.143	98.85	87.38	0.9686
2		4.073	0.002	0.165	1.15	12.62	n.a.
Total:			**0.211**	**1.309**	**100.00**	**100.00**	

Reviewed by:

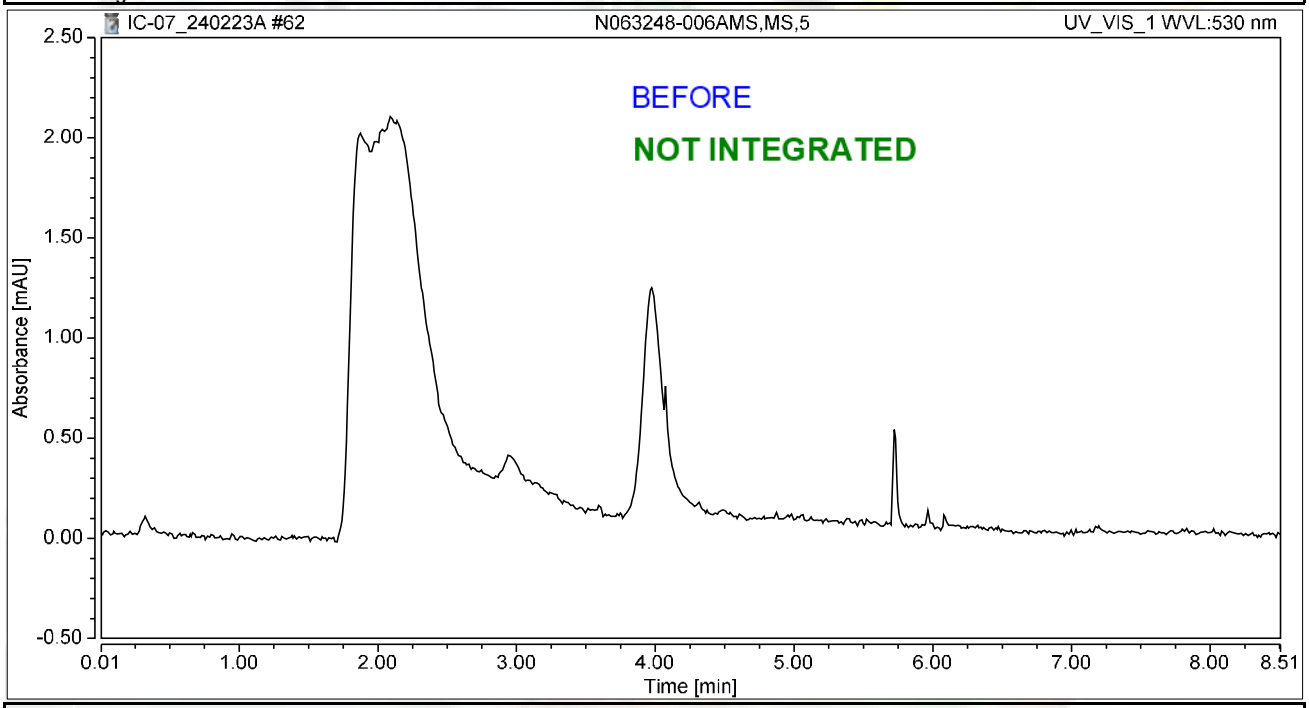
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063248-006AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

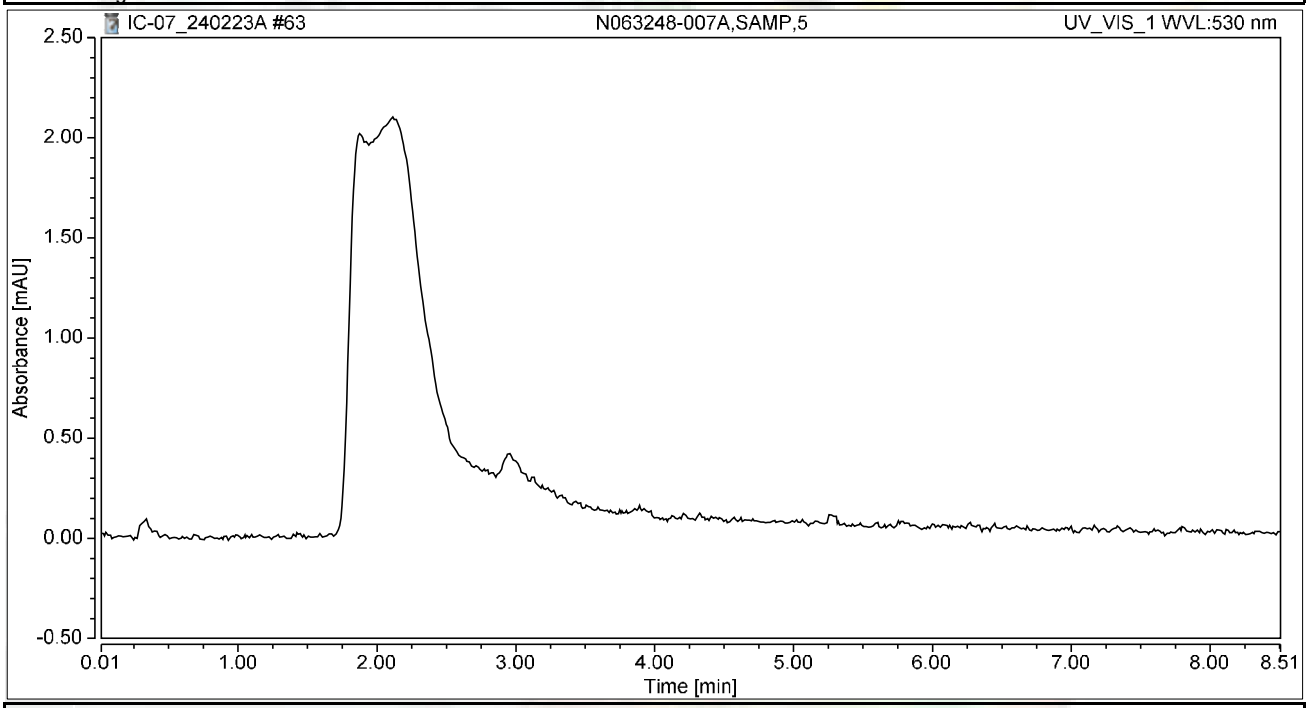
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-007A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

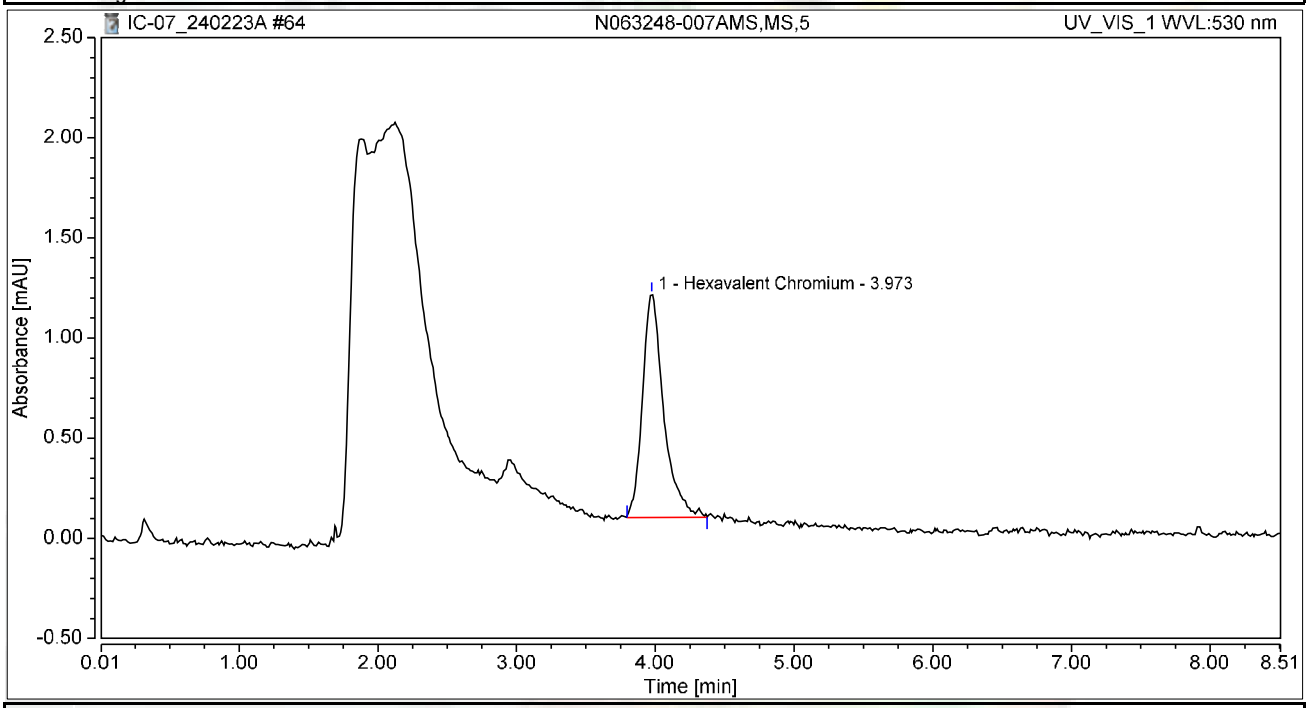
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-007AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

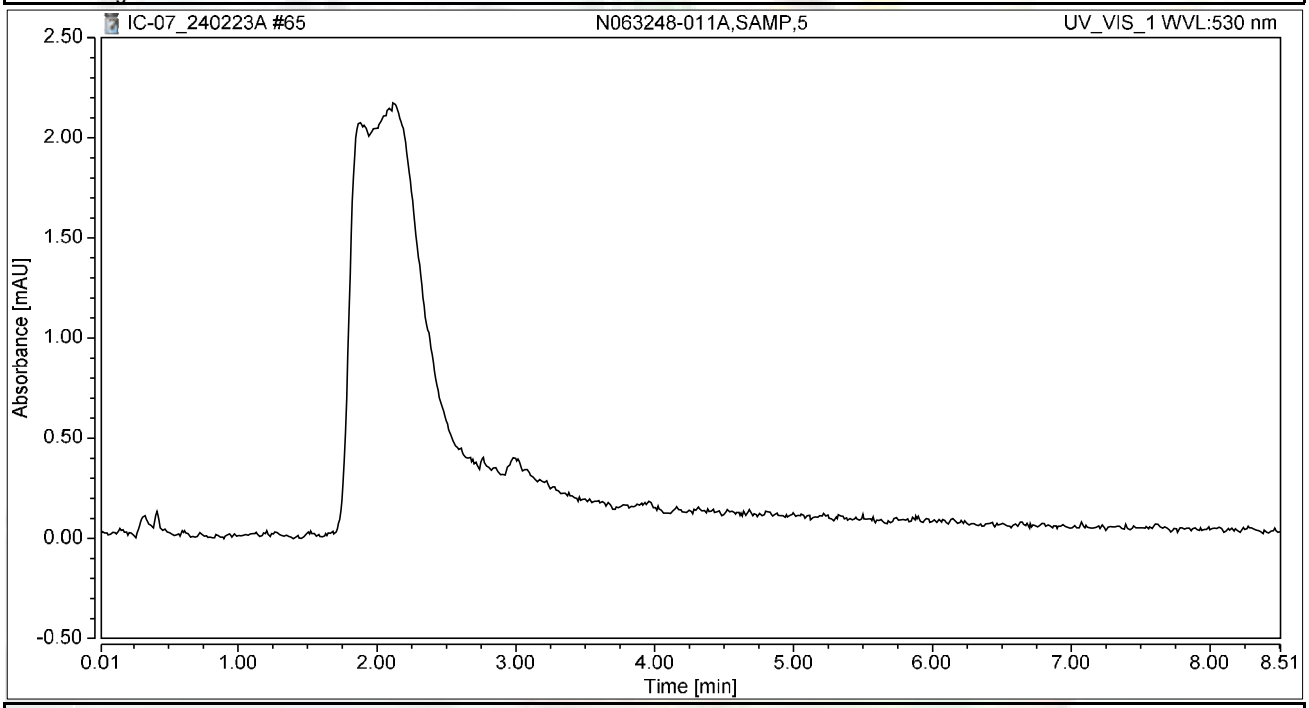
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.198	1.114	100.00	100.00	0.9207
Total:			**0.198**	**1.114**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-011A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

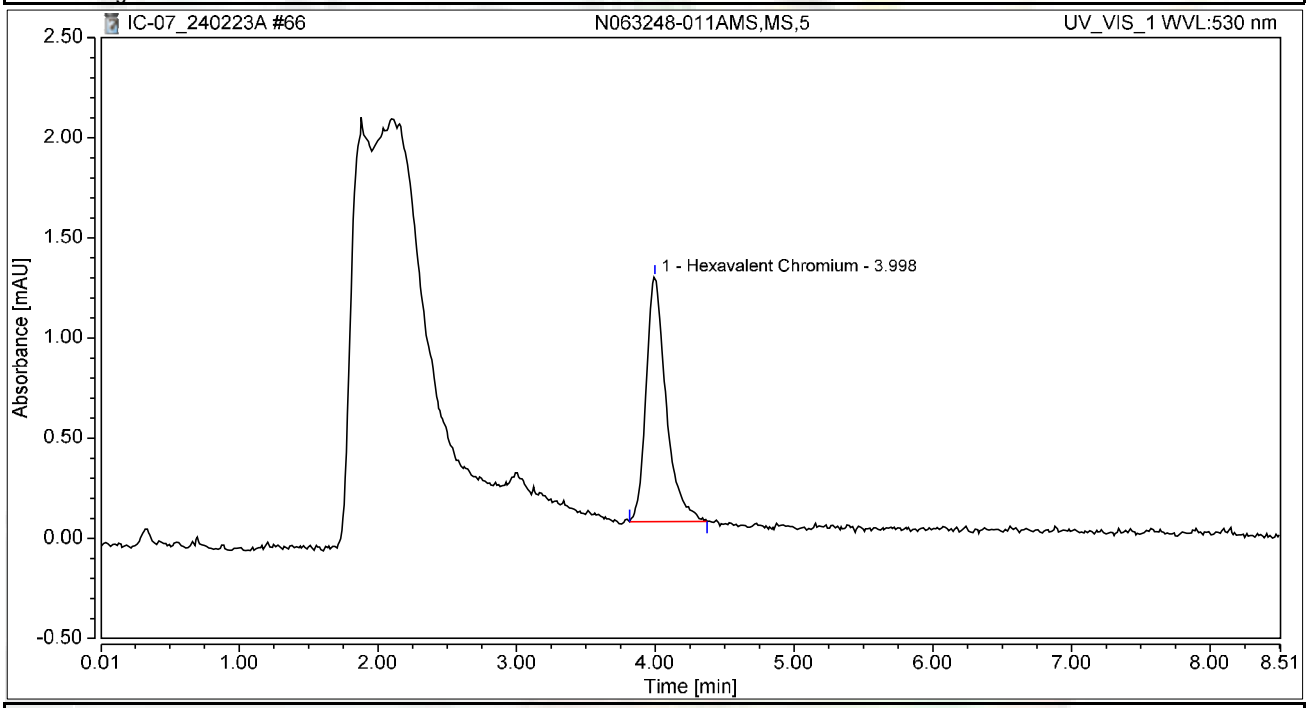
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-011AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

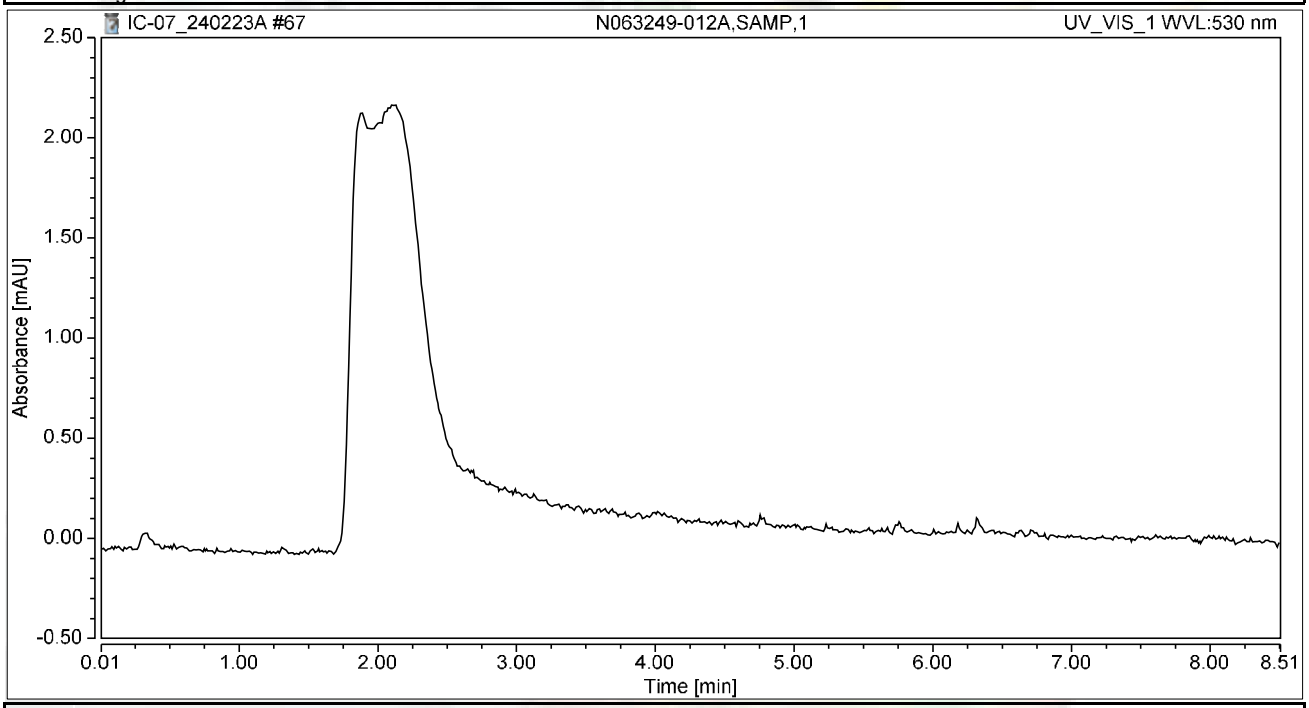
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.205	1.221	100.00	100.00	0.9540
Total:			**0.205**	**1.221**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-012A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 19:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

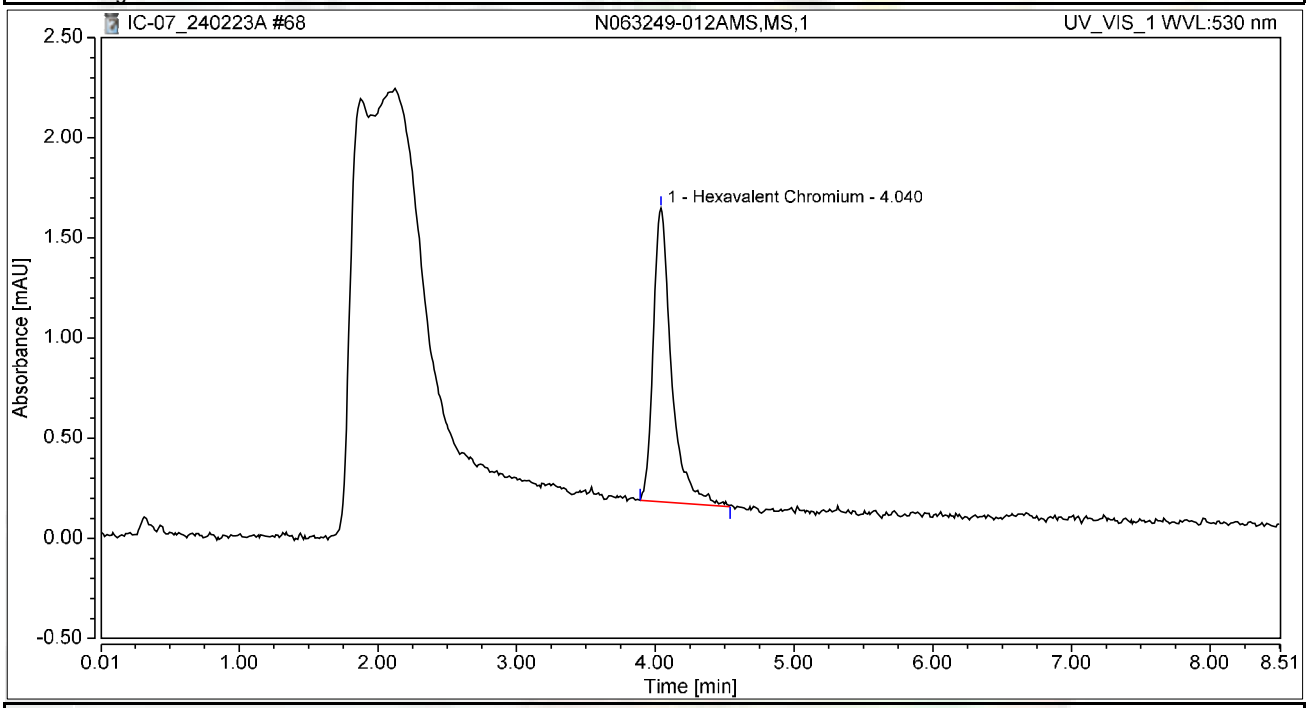
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-012AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 19:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

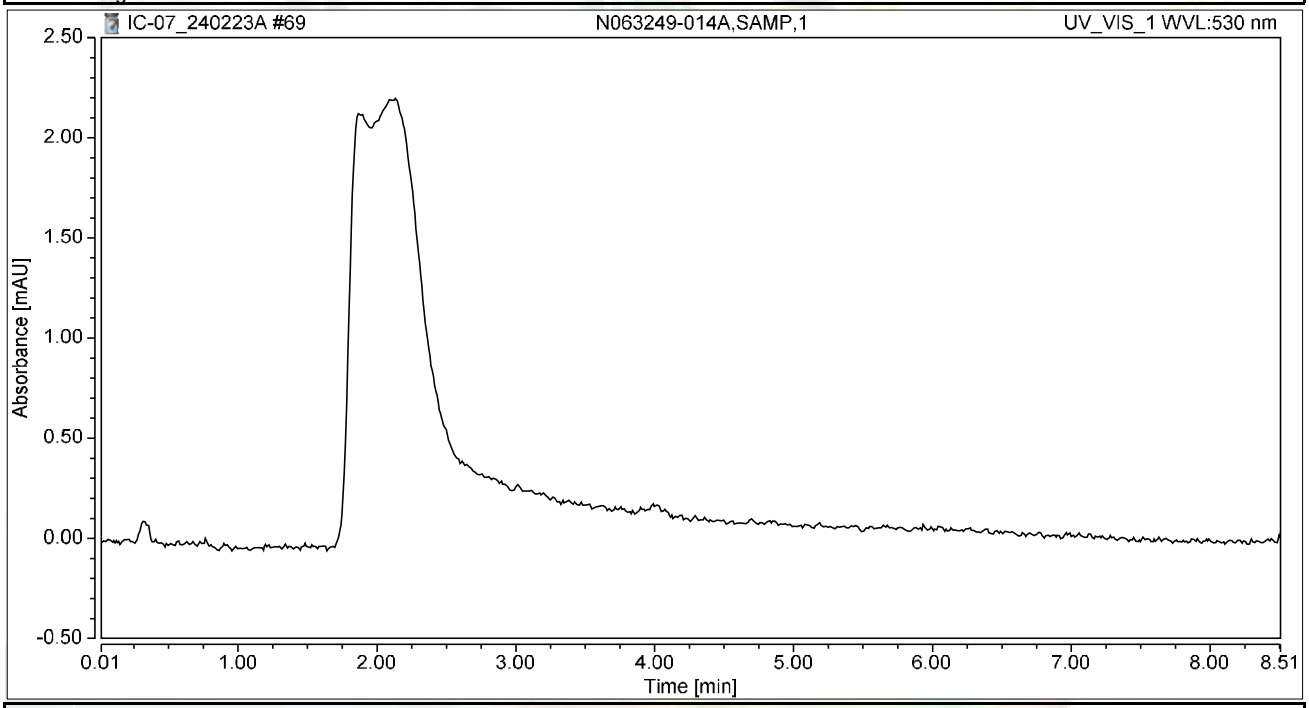
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.224	1.467	100.00	100.00	1.0436
Total:			**0.224**	**1.467**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-014A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 19:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

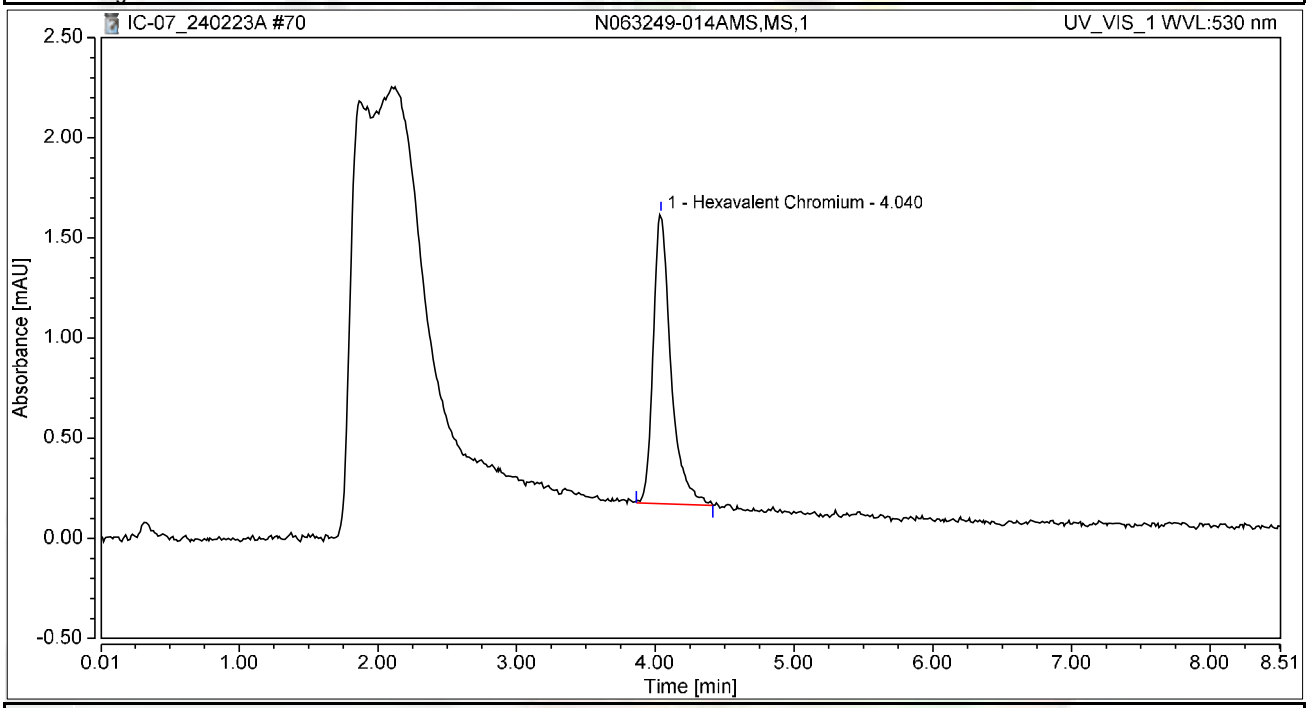
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-014AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 19:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

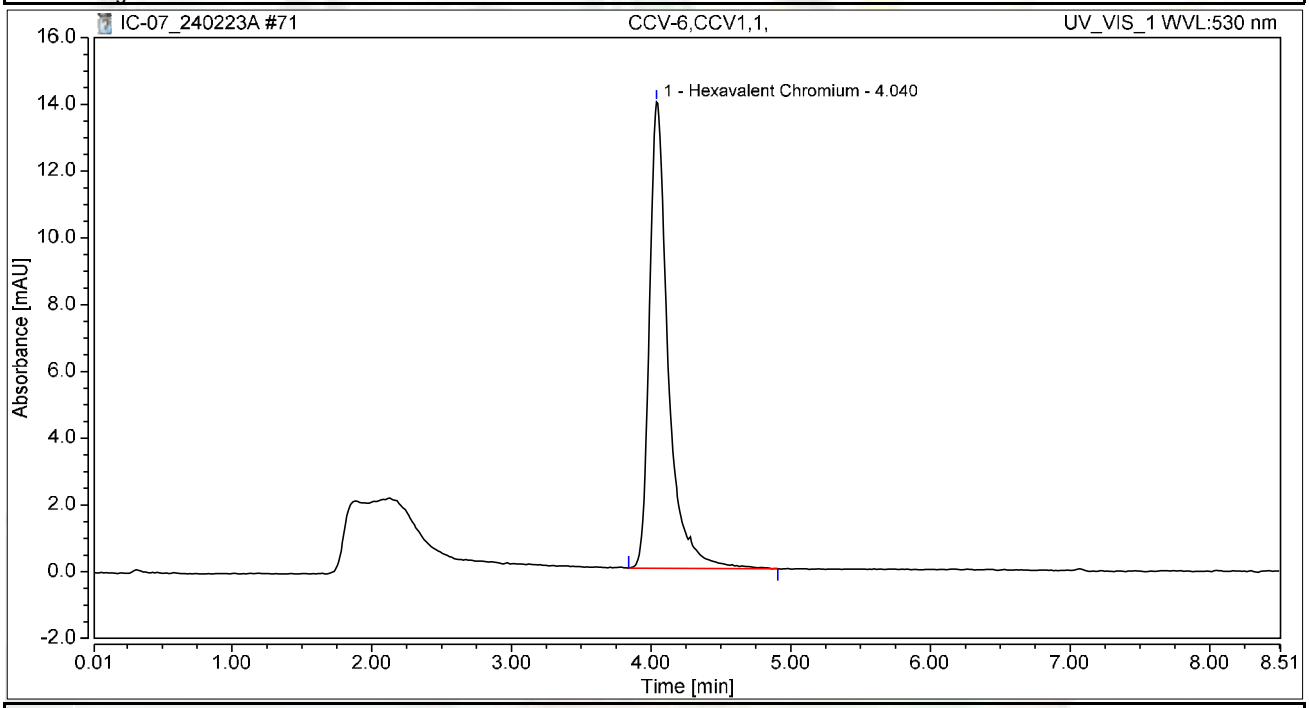
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.215	1.449	100.00	100.00	0.9993
Total:			**0.215**	**1.449**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 19:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

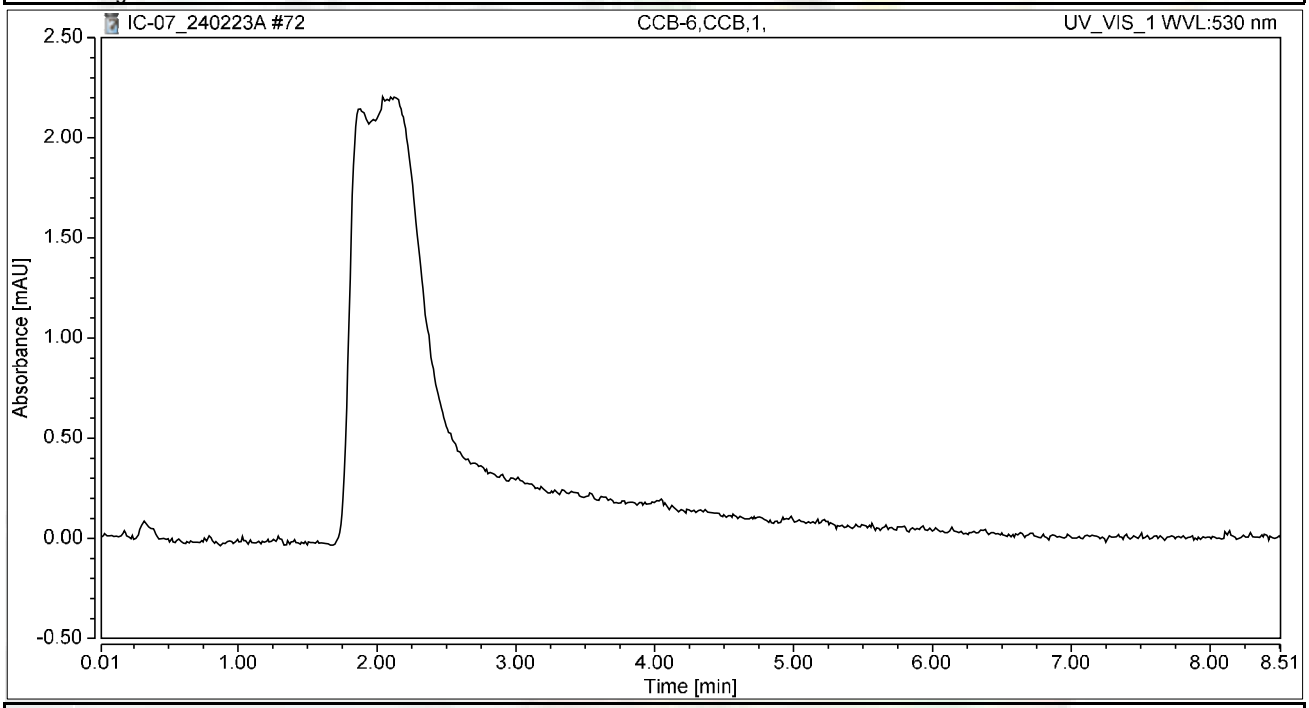
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.173	13.968	100.00	100.00	10.0999
Total:			**2.173**	**13.968**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 19:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

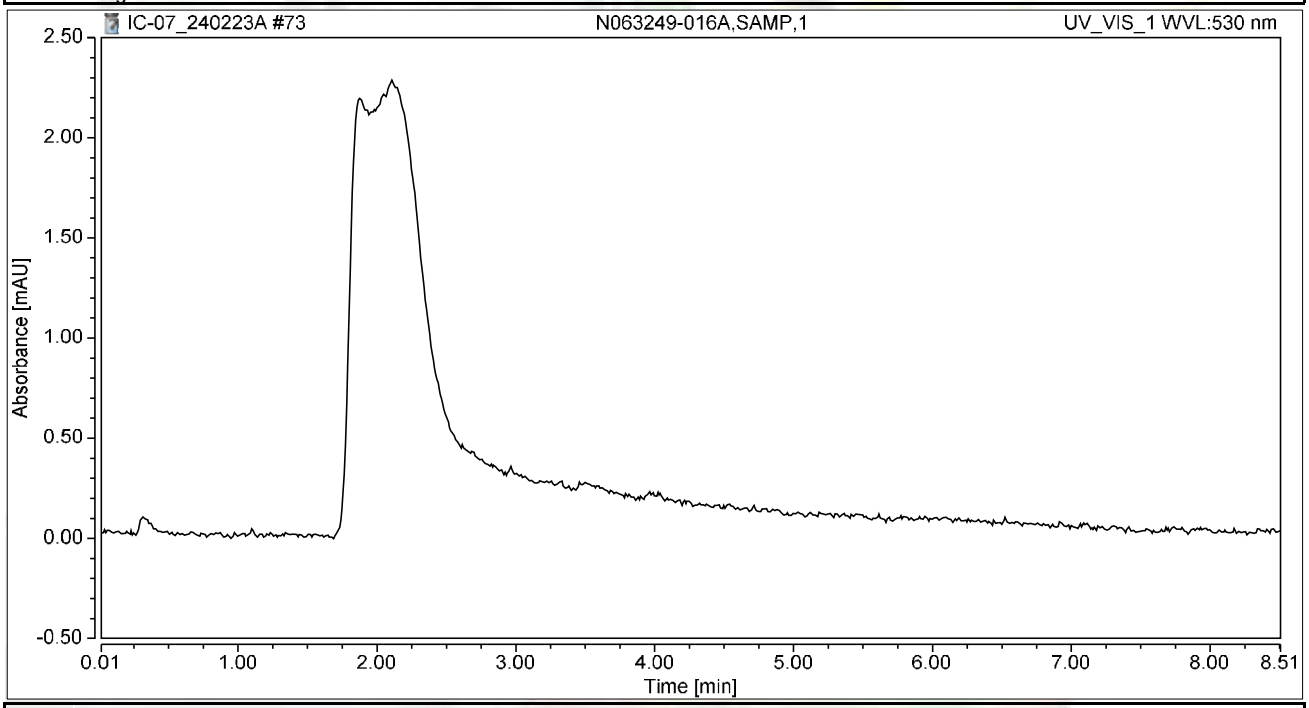
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-016A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 20:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

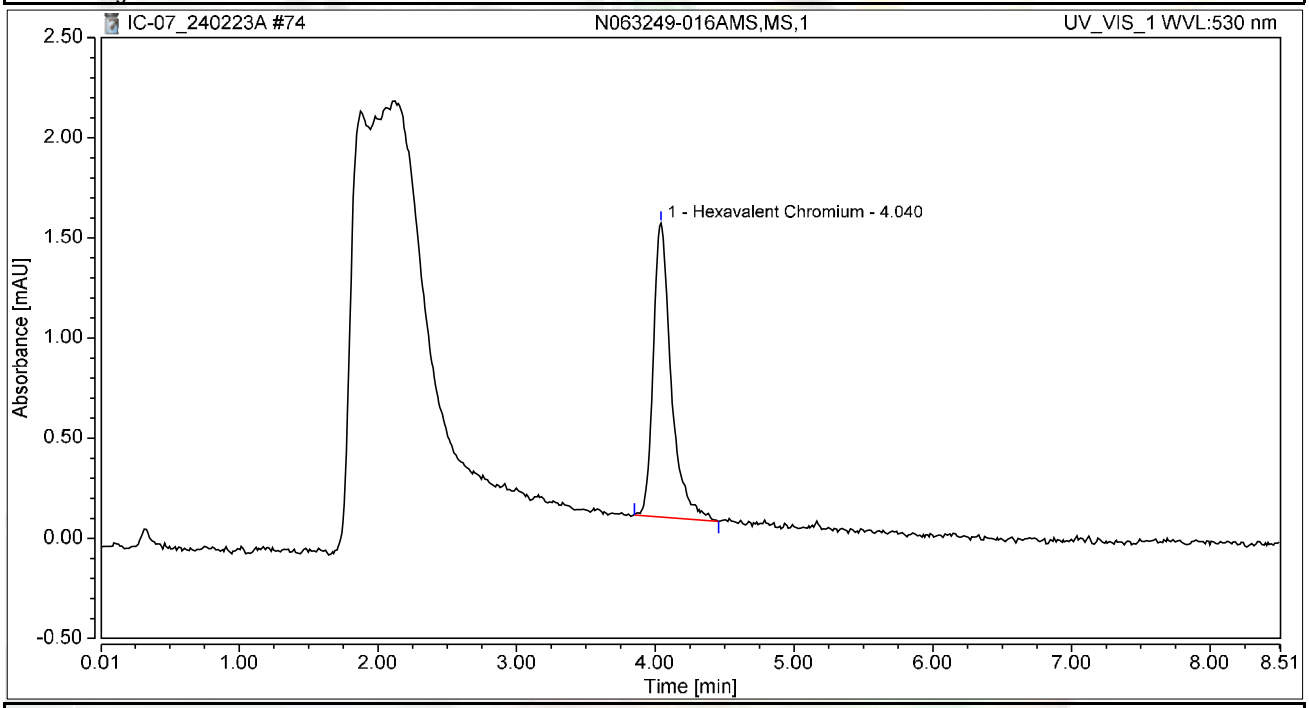
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-016AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 20:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

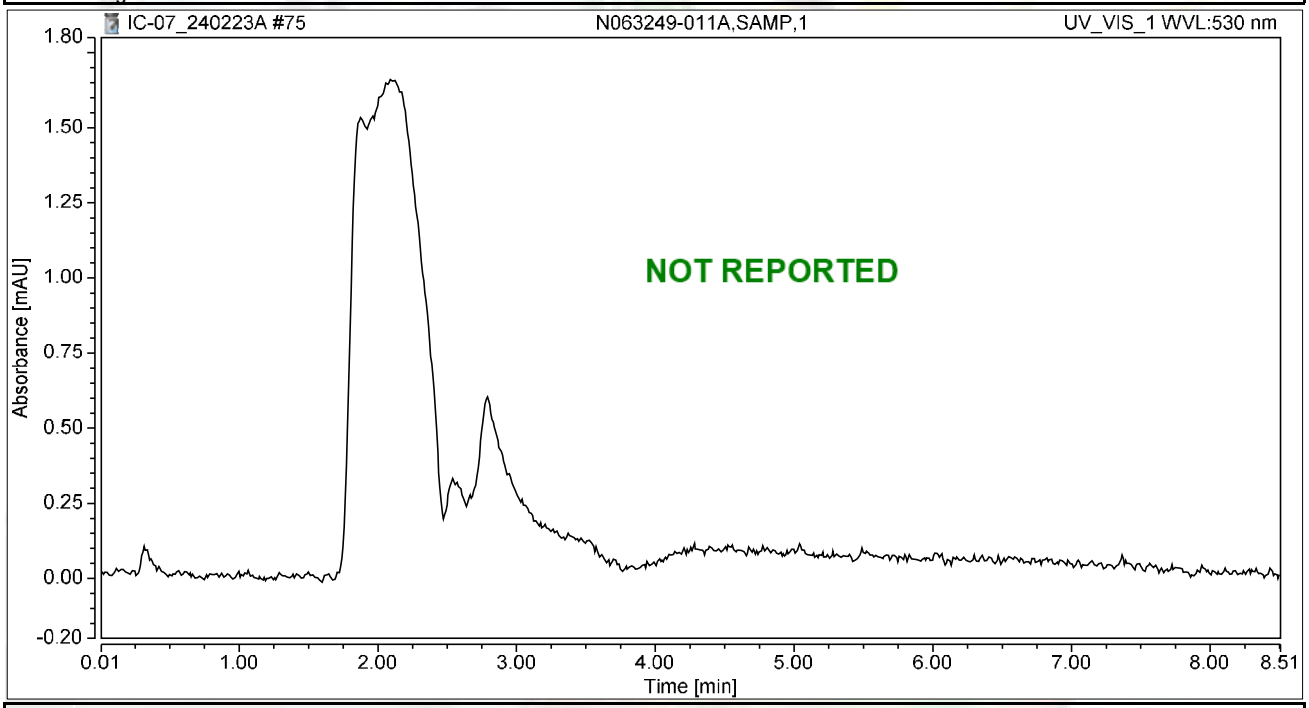
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.221	1.468	100.00	100.00	1.0262
Total:			**0.221**	**1.468**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-011A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 20:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

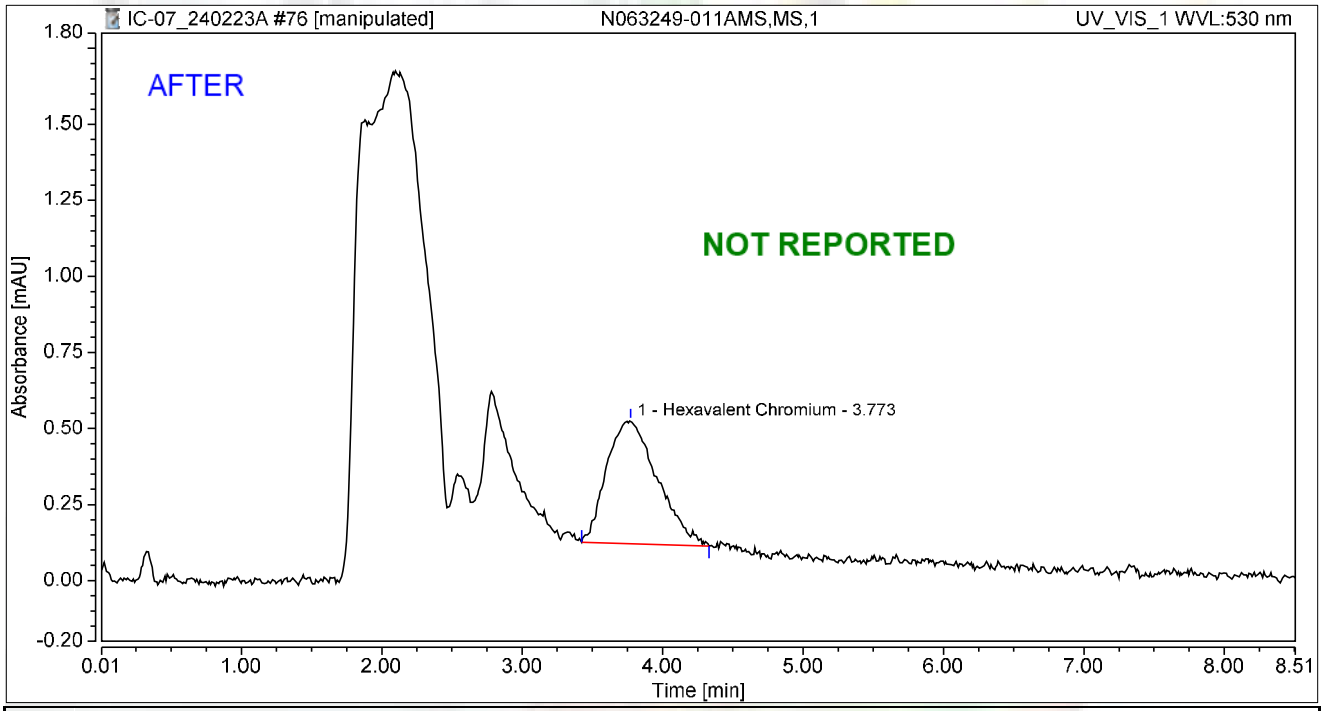
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 20:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

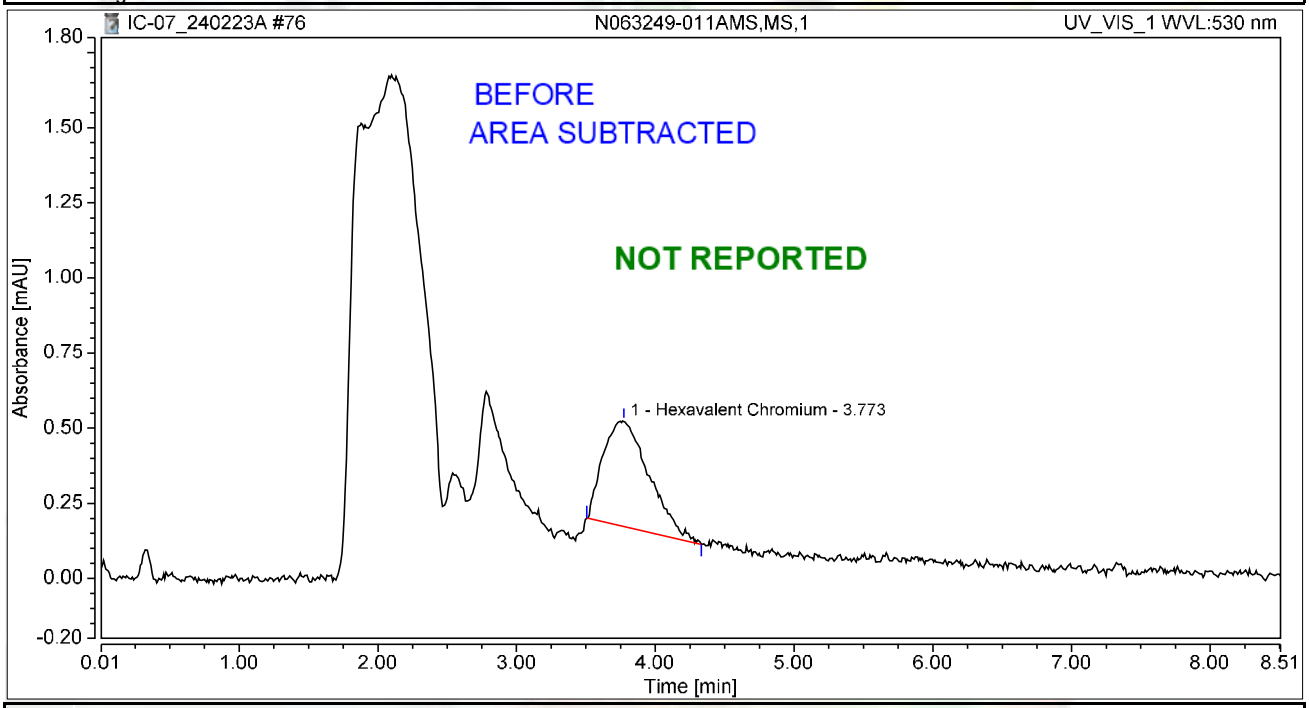
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.773	0.169	0.404	100.00	100.00	0.7870
Total:			**0.169**	**0.404**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 20:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

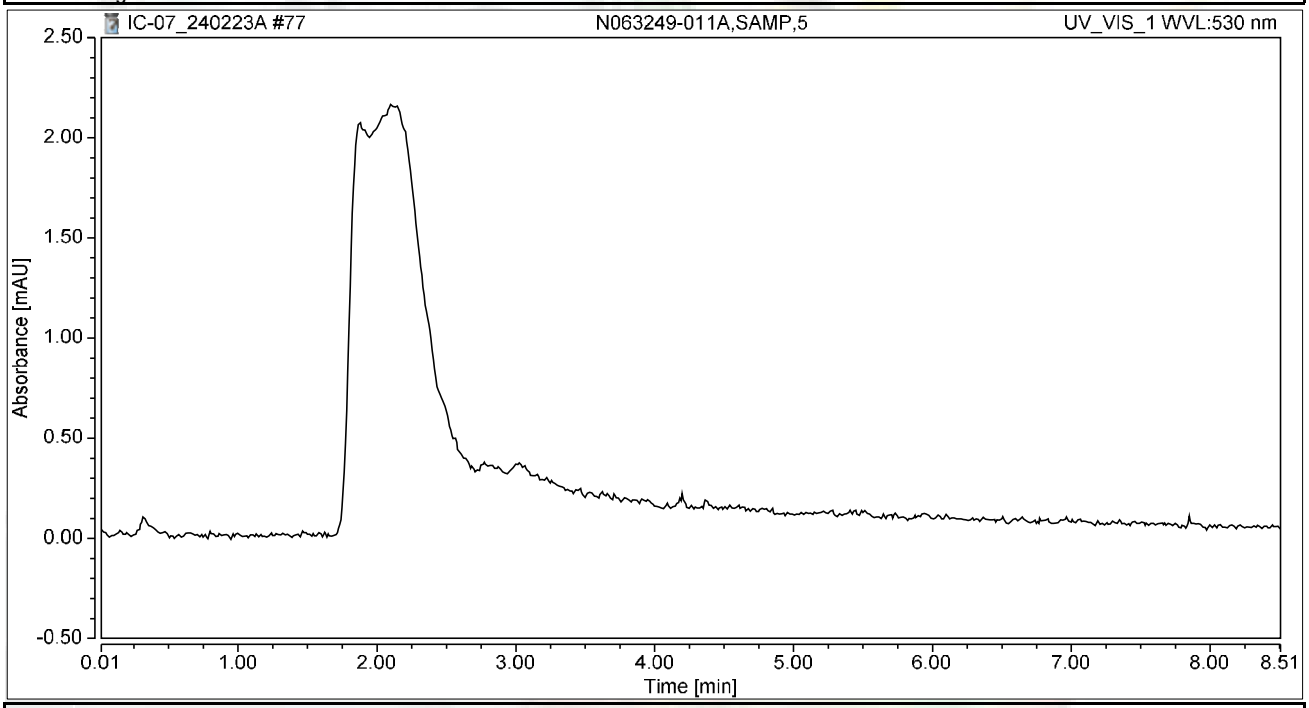
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.773	0.135	0.352	100.00	100.00	0.6282
Total:			**0.135**	**0.352**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-011A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 20:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

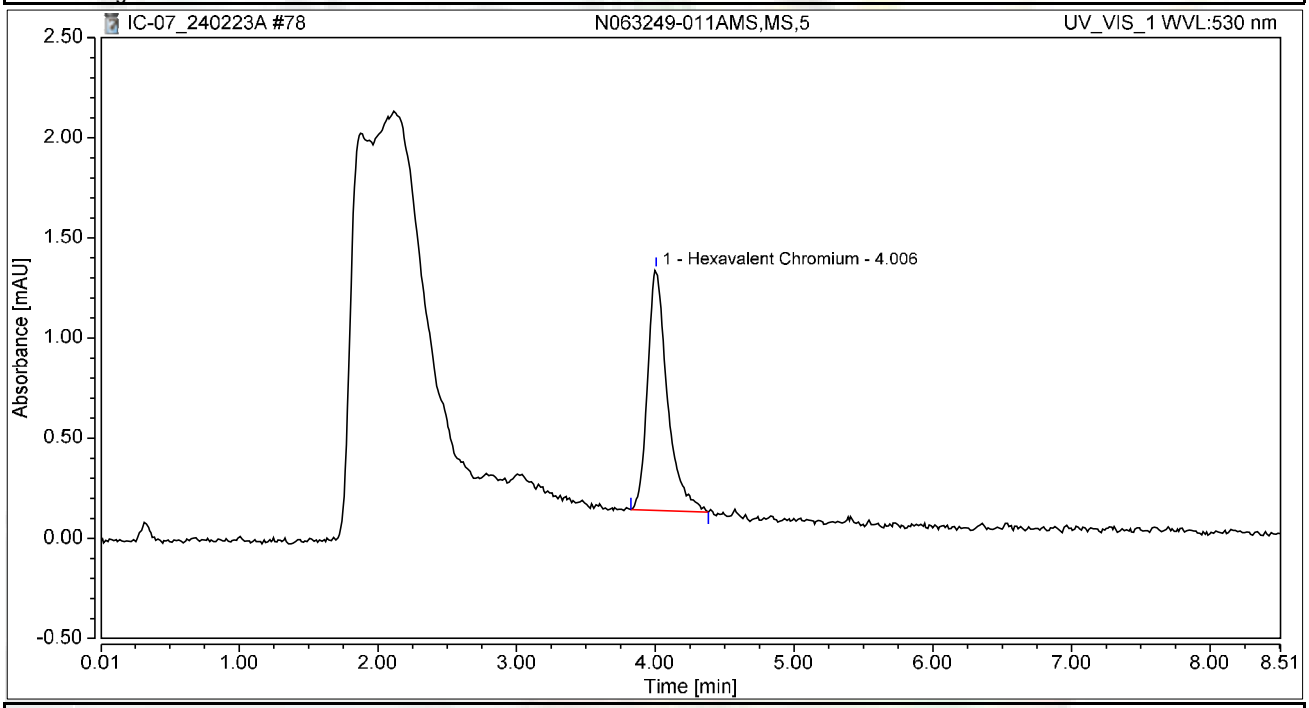
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-011AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 20:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

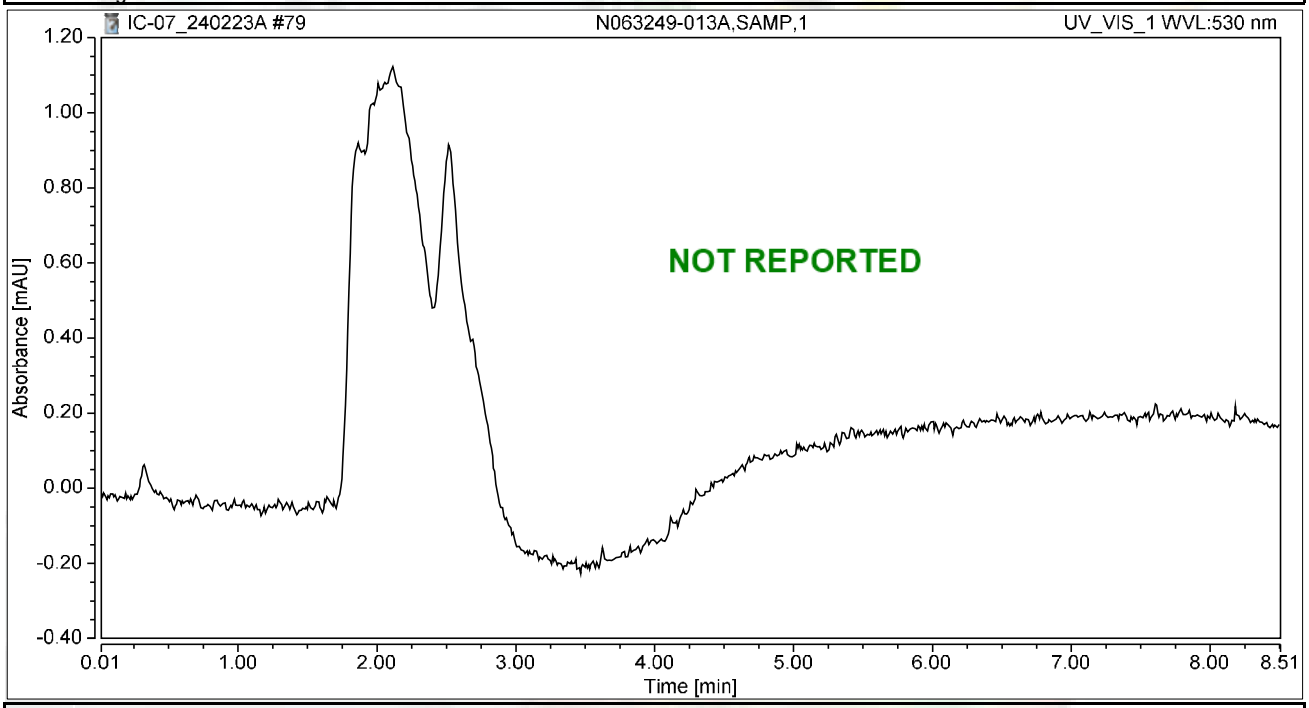
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.199	1.202	100.00	100.00	0.9273
Total:			**0.199**	**1.202**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-013A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 21:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

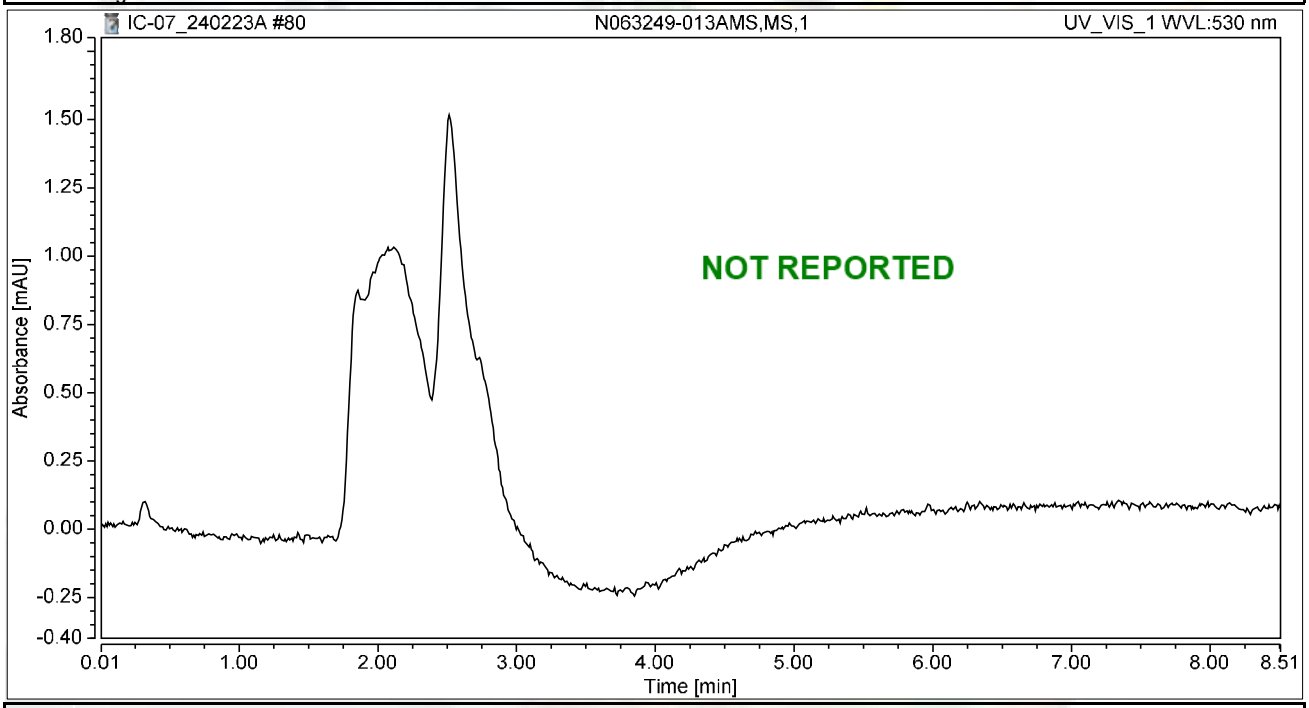
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-013AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 21:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

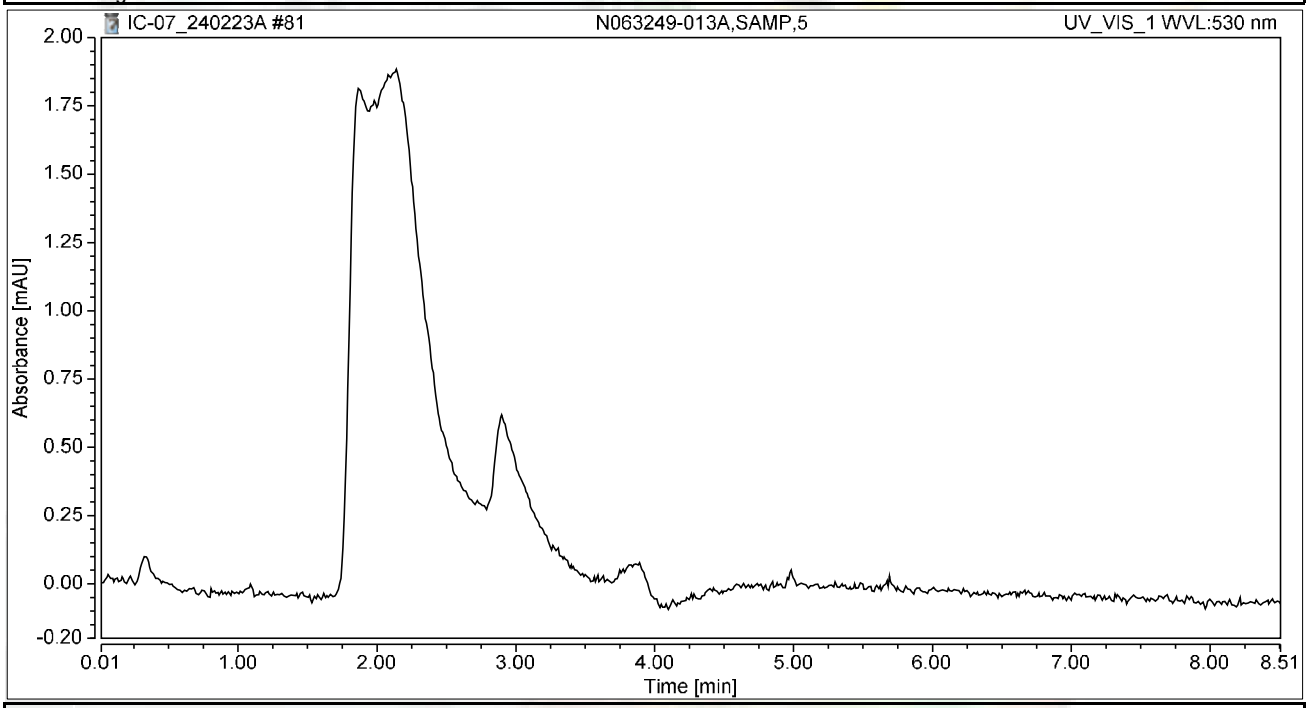
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-013A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 21:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

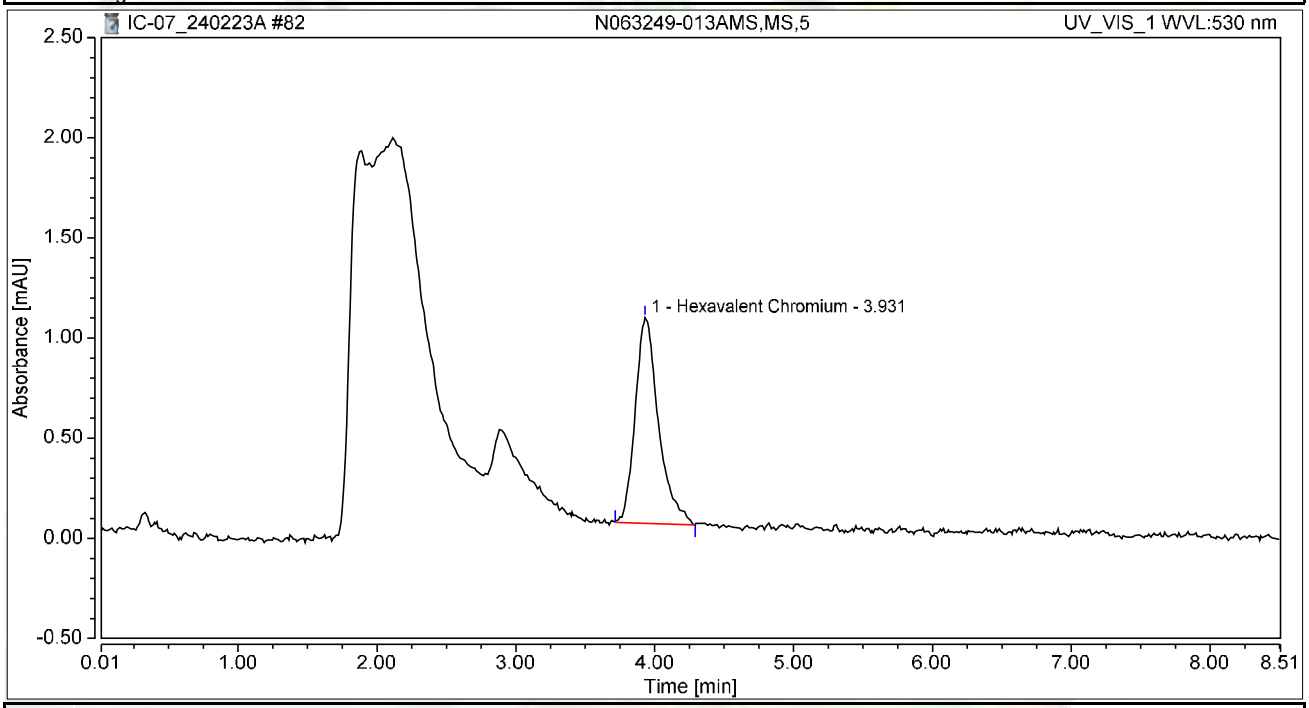
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-013AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 21:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

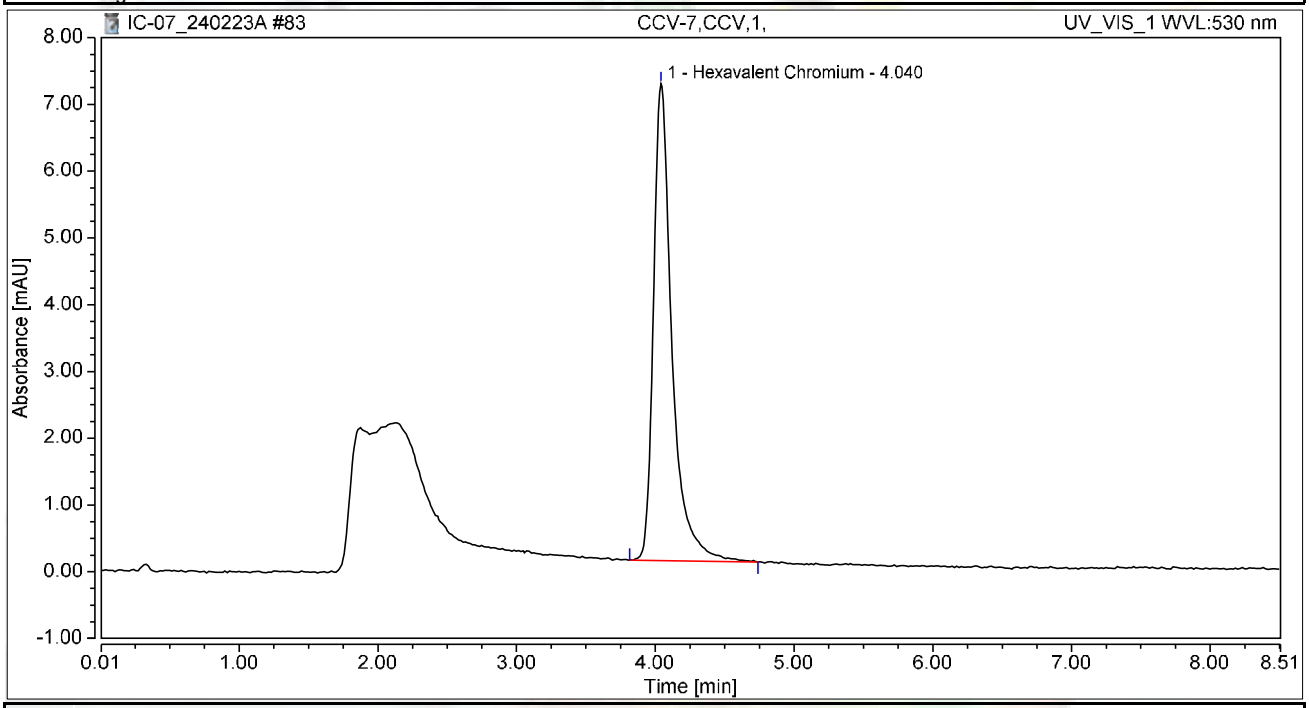
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.931	0.200	1.028	100.00	100.00	0.9304
Total:			**0.200**	**1.028**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 21:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

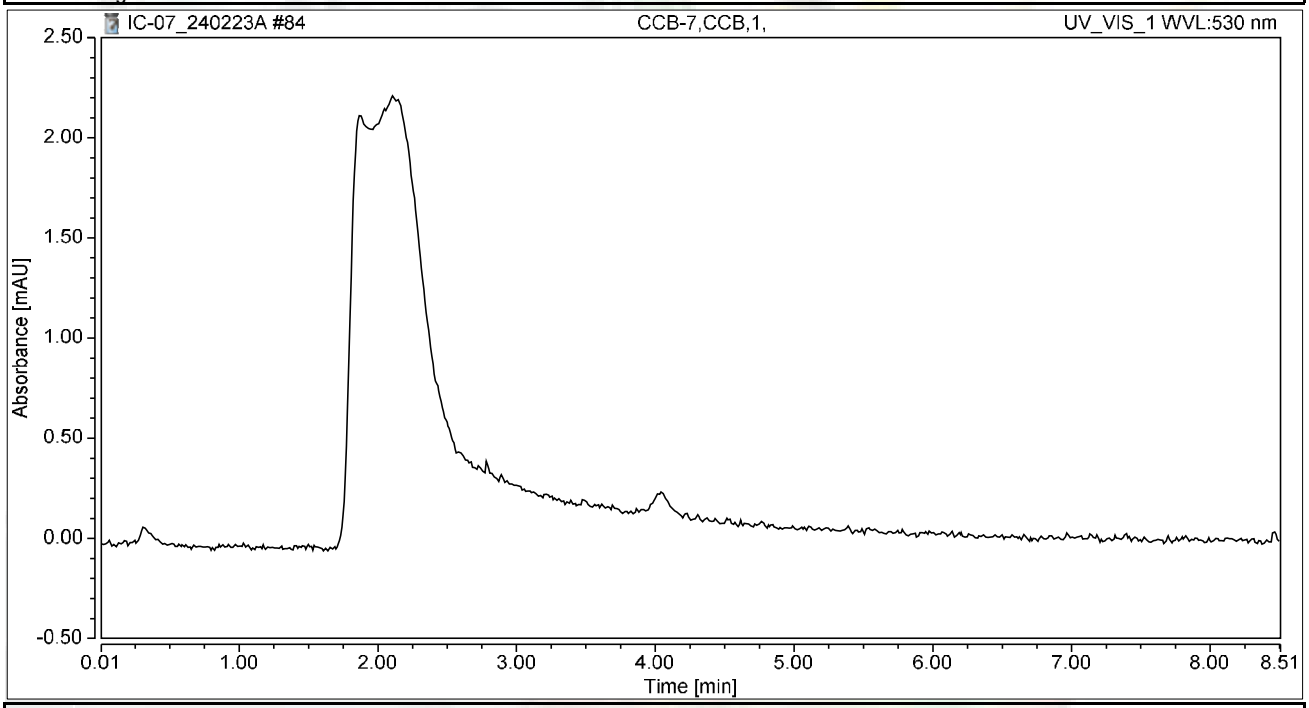
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.105	7.142	100.00	100.00	5.1365
Total:			**1.105**	**7.142**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 21:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

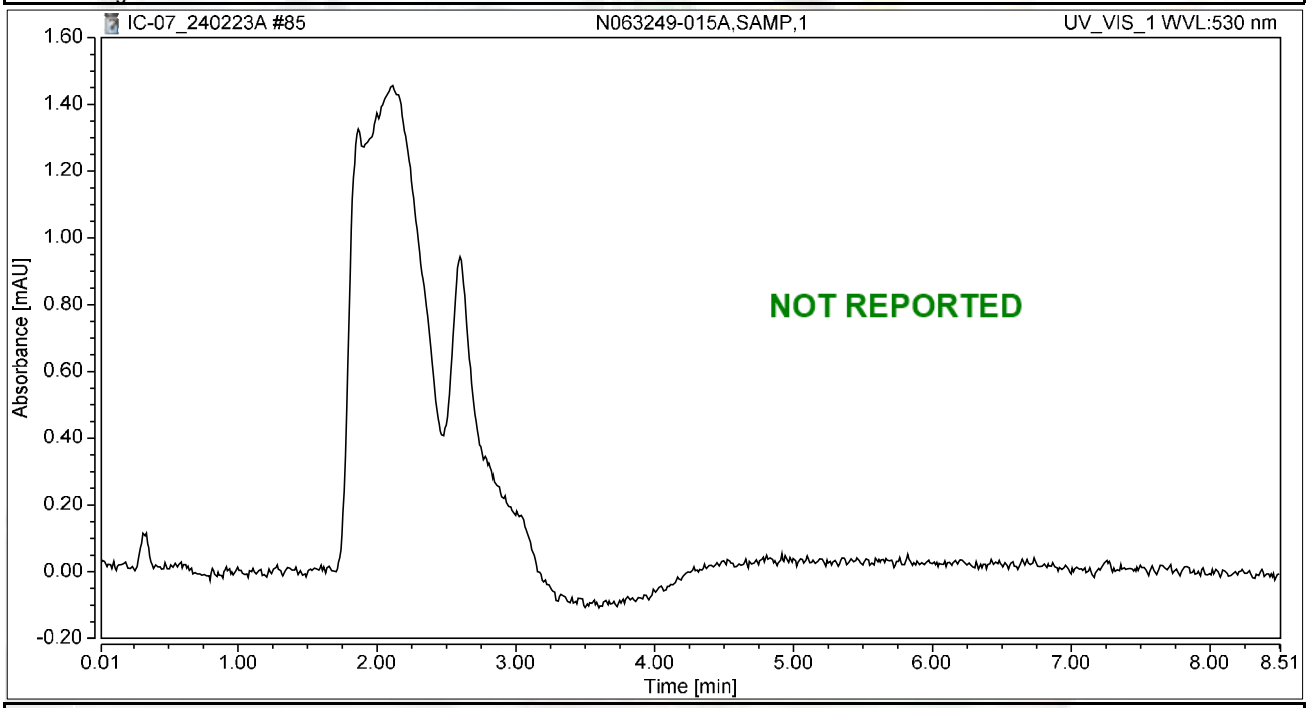
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-015A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 21:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

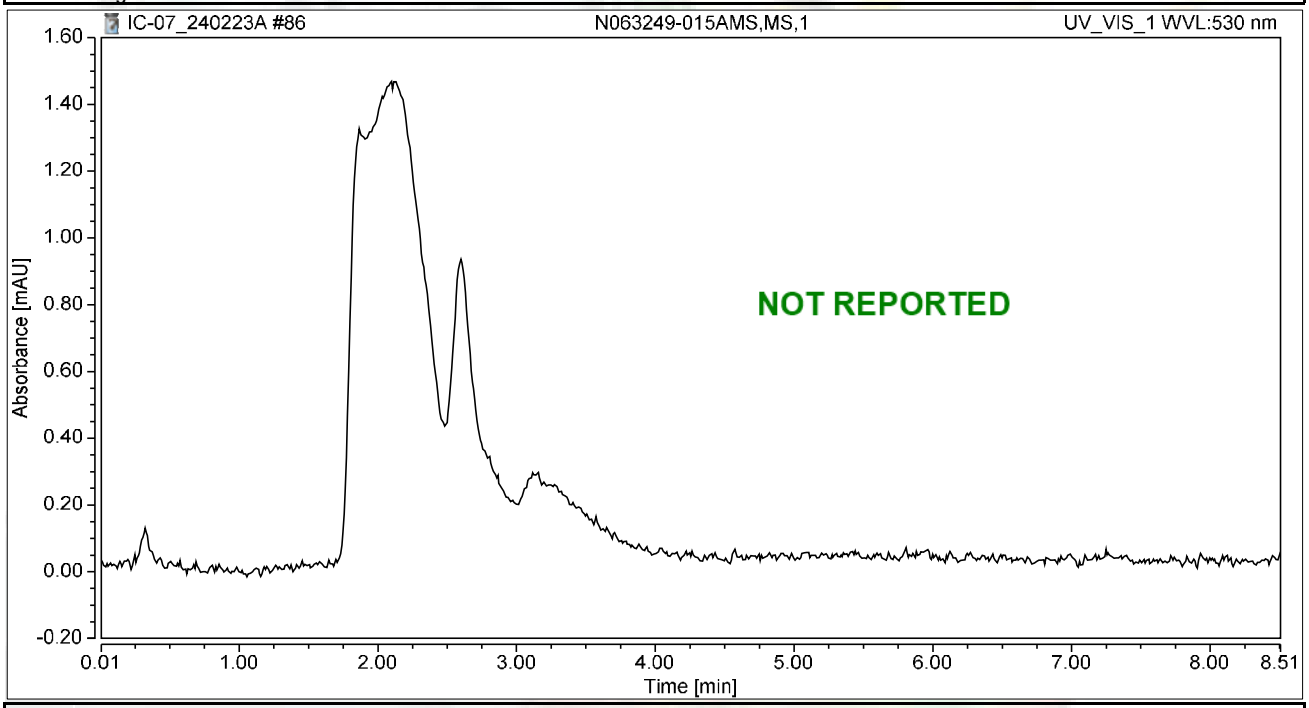
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-015AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 22:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

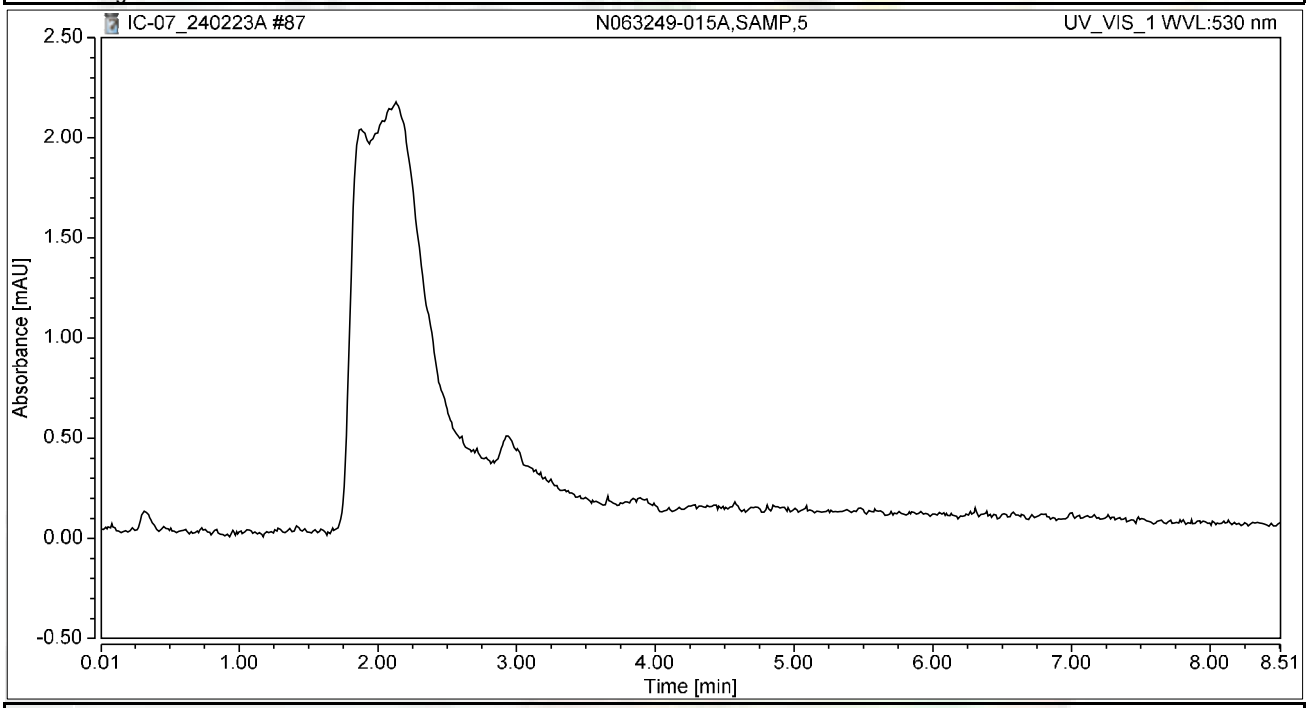
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-015A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 22:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

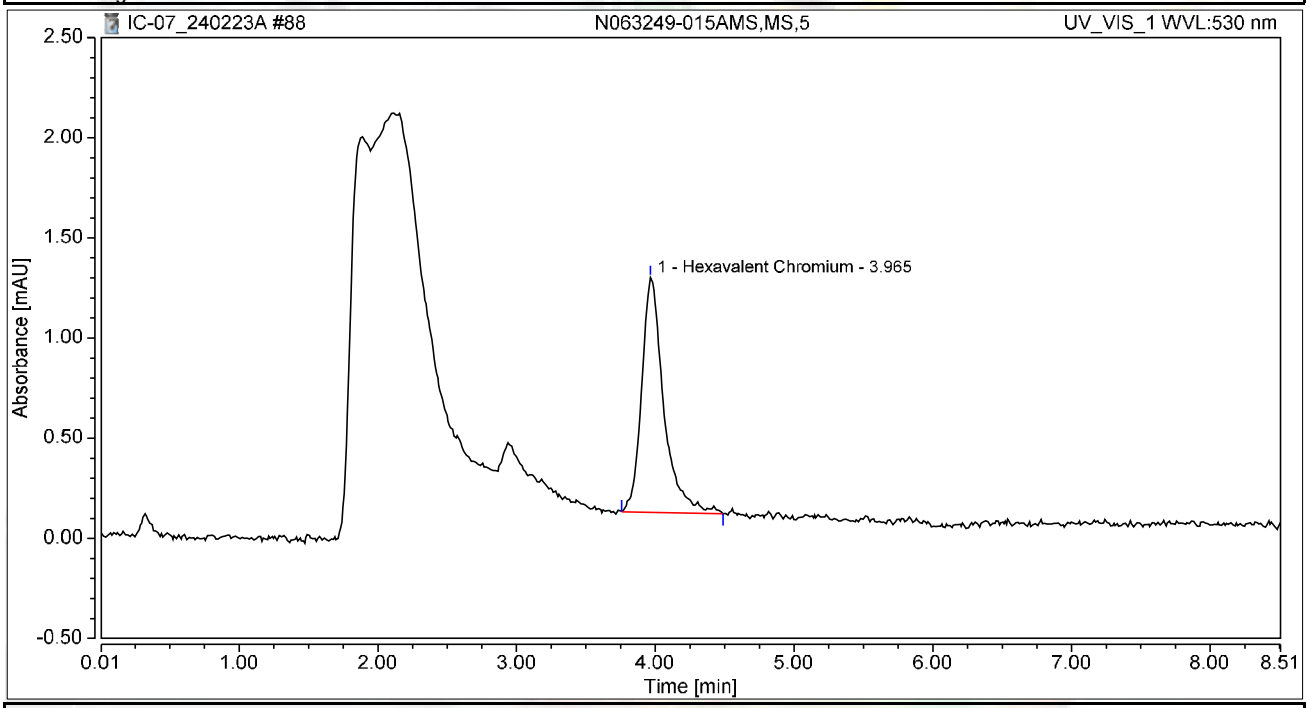
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-015AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 22:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

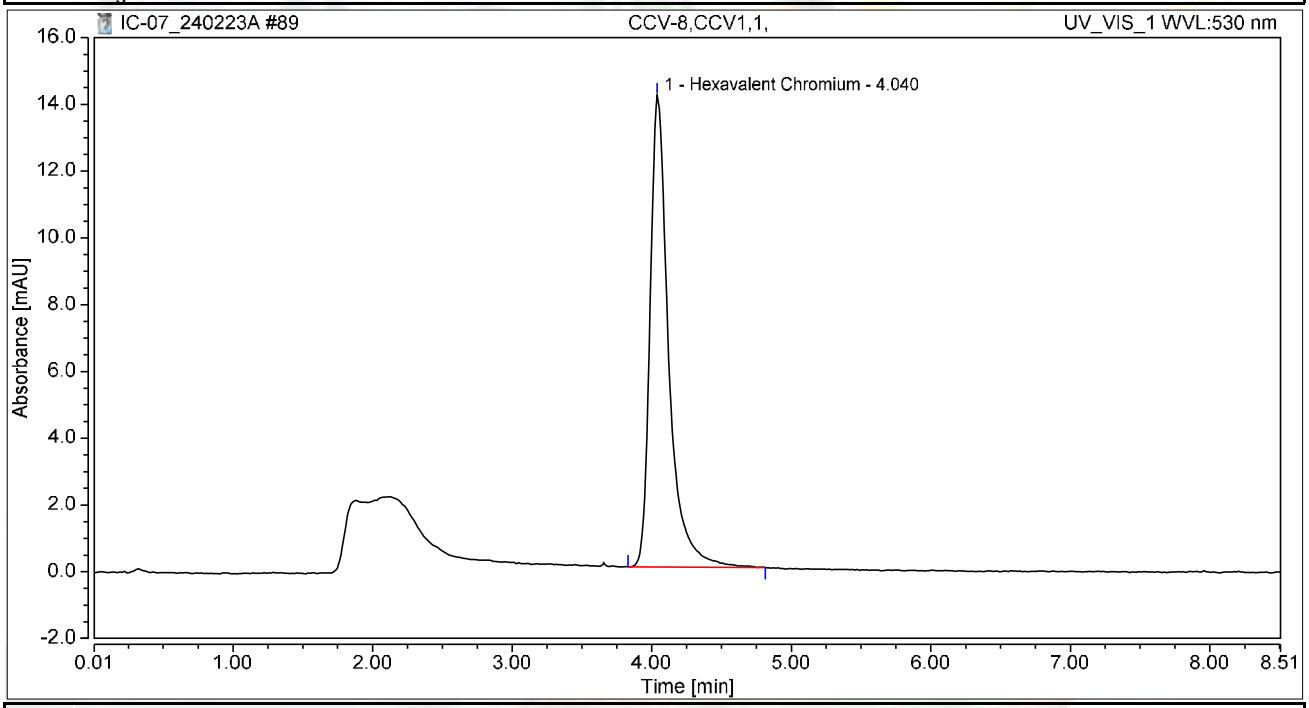
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.217	1.172	100.00	100.00	1.0073
Total:			**0.217**	**1.172**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-8,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 22:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

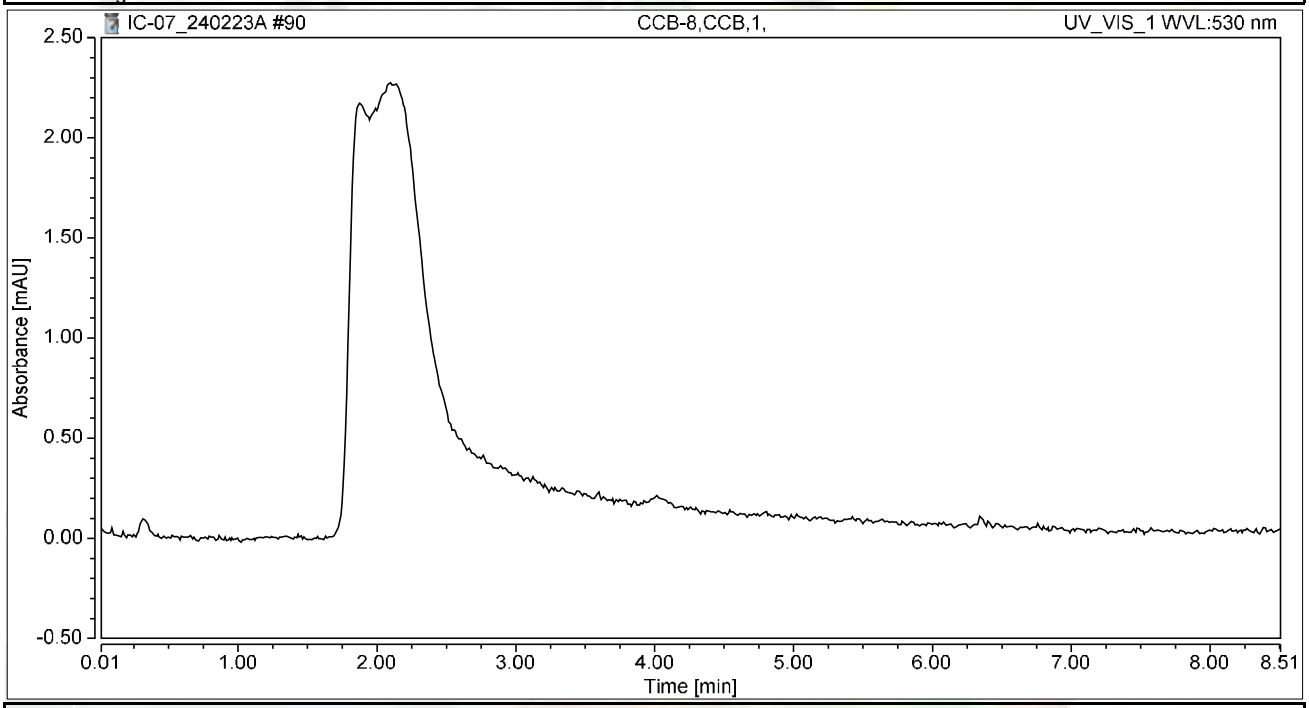
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.190	14.136	100.00	100.00	10.1795
Total:			**2.190**	**14.136**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-8,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 22:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

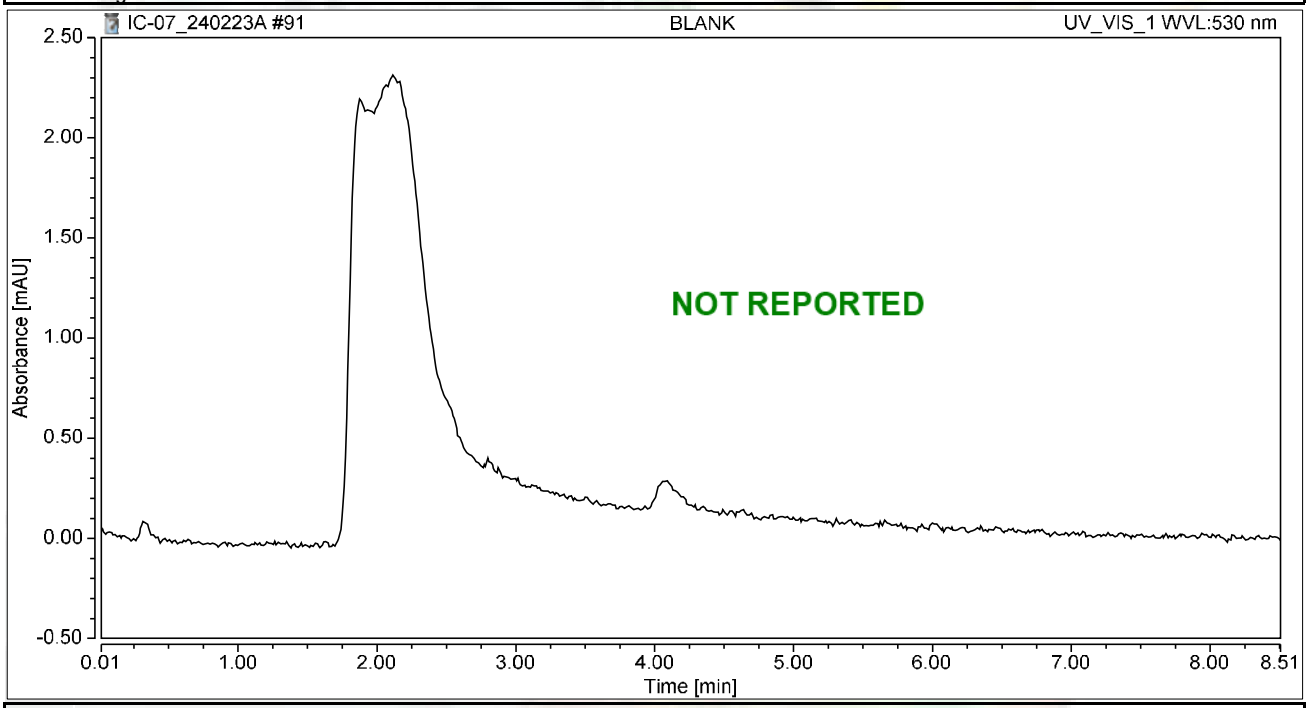
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.49**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 22:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

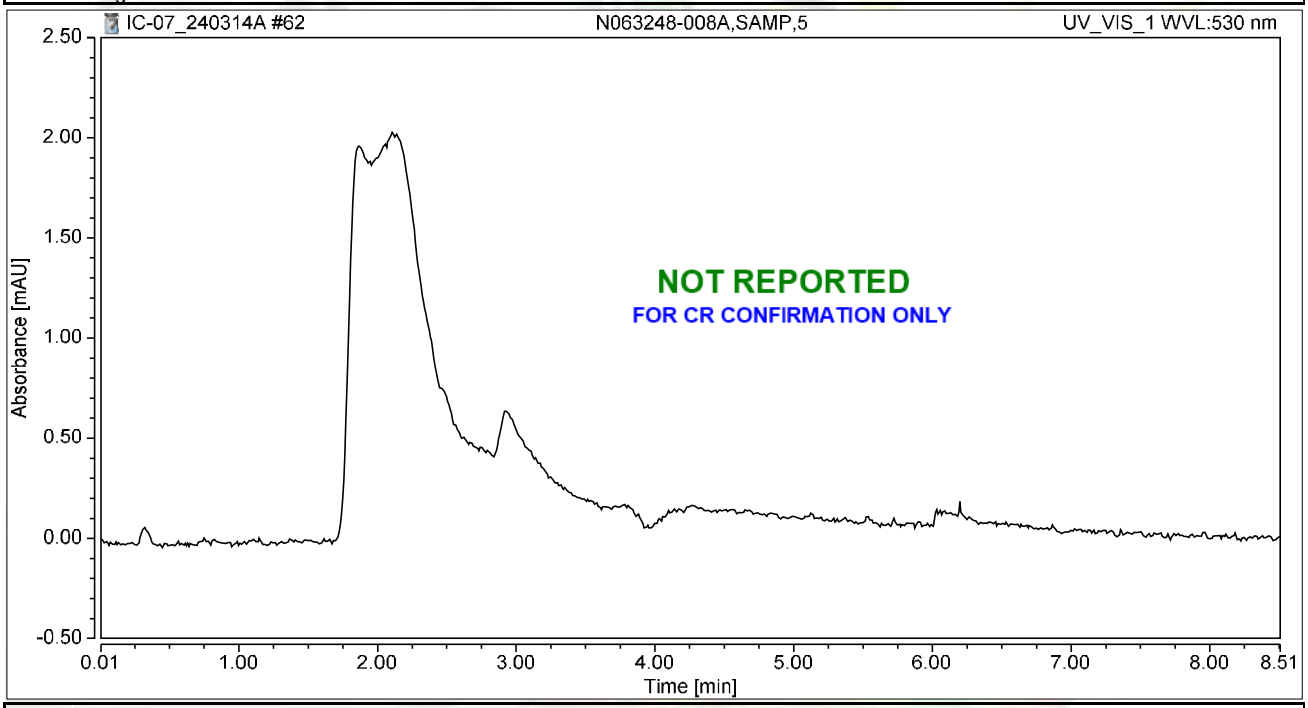
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-008A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 18:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

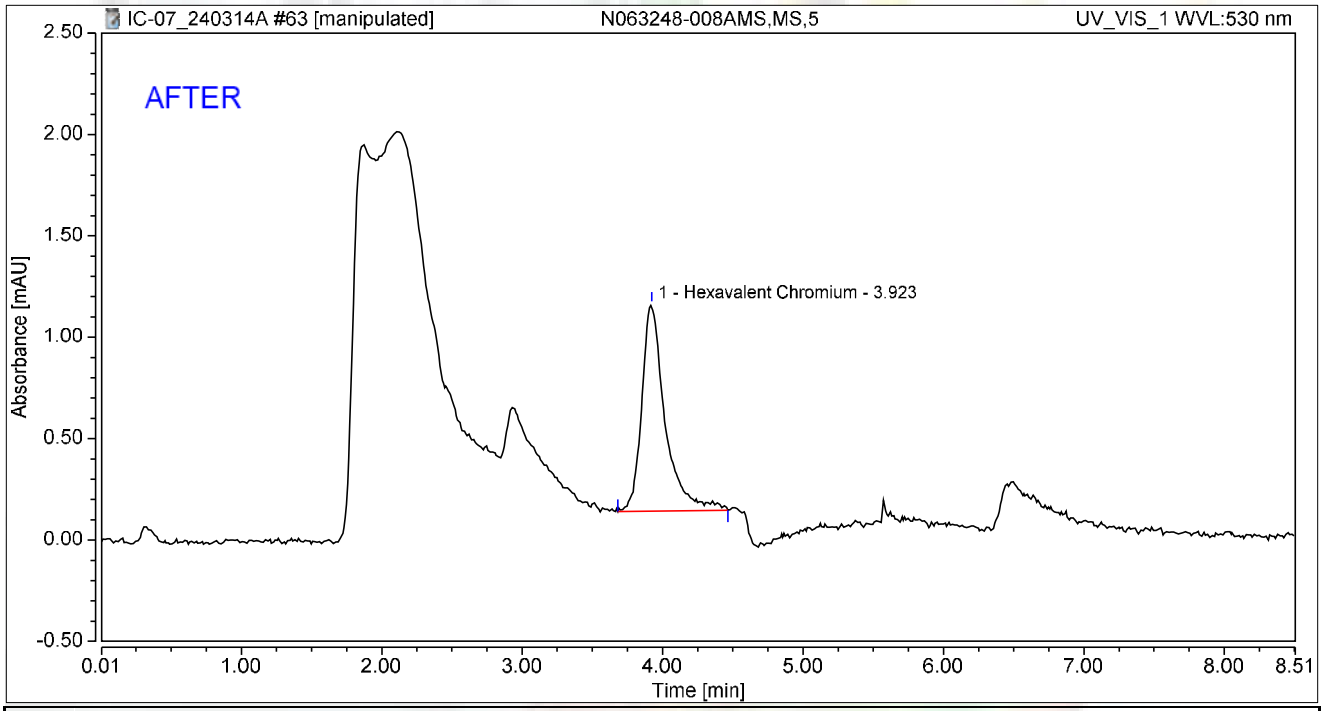
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-008AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 18:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

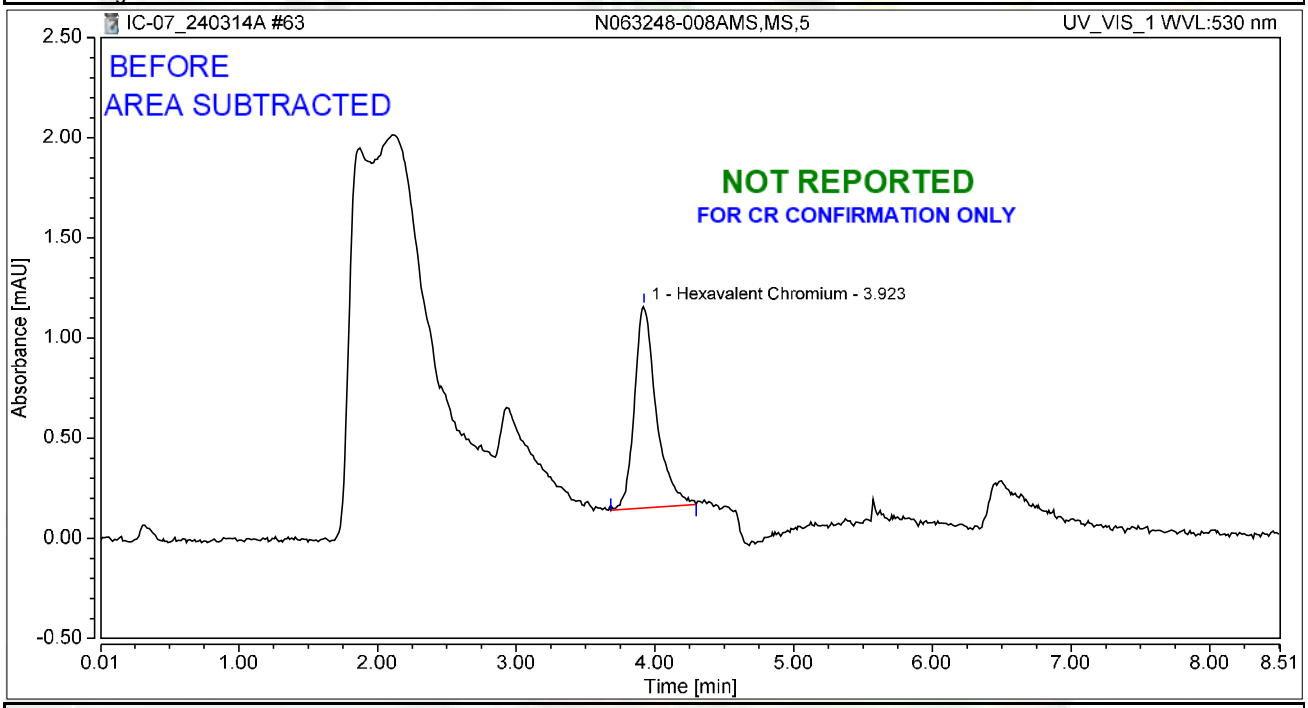
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.197	1.021	100.00	100.00	0.9242
Total:			**0.197**	**1.021**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-008AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 18:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.184	1.012	100.00	100.00	0.8652
Total:			**0.184**	**1.012**	**100.00**	**100.00**	

SM 2320 B

Wet Chemistry Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: R183092 **Analyst:** LSR

ASSET #: N063248 **Date Analyzed:** 25-Feb

Method: EPA 2320

Initial Calibration	1st Level Review Y	N	N/A	2nd Level Review Y	N	N/A
1. ICAL before initial sample analysis or every 24 hrs.			X			X
2. Does correlation coefficient,r, meet criteria ?(r = 0.995)			X			X
3. ICV within ± 15% of expected value.			X			X
Continuing Calibration						
4. CCV after every 10 samples and at the end of analysis sequence.			X			X
5. CCV within ± 15% of expected value.			X			X
6. Calibration blanks run after ICV and CCV?			X			X
7. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)			X			X
Sample Information						
8. All samples are within linear range.			X			X
9. Are all samples analyzed within hold time.	X			X		
QC Items						
10. Method blank values are below 1/2 the reporting limit.	X			X		
11. LCS compounds within control limits.	X			X		
12. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
13. Are Non-Conformances documented			X			X
14. Runlog complete and included in package.	X			X		
15. Spectrophotometer tape included (Spec work only)			X			X
16. Digestion log complete and included in package (if applicable)			X			X
Preliminary Report						
17. Does the raw data match the preliminary report?	X			X		
18. Are analytical results correct?	X			X		
19. Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer LSR Date: 3/18/2024

2nd Level Reviewer JRB 3/18/2024 Date:

SAMPLE CALCULATION

Sample ID: **N063248-005B @ pH 7.77**

A. Standardization of Sulfuric Acid (titrant):

Normality of acid = (A) (B)/ (53.00) (C)

Where:

A, grams weighed for Na_2CO_3 solution (Na_2CO_3 Standardization Solution)
B, mL Na2CO3 solution taken for titration, and
C, ml of sulfuric acid used to inflection point

Spike Standards

Na_2CO_3 Standardization Solution, ACS Grade (1.00 ml = 2500ug as $CaCO_3$): Dissolve 2.650 grams of Na_2CO_3 in distilled water and dilute to 1 liter.

LCS/MS/MSD Stock $NaHCO_3$, ACS Grade (1.00 ml = 5000 ug as $CaCO_3$): Dissolve 0.8398 grams of $NaHCO_3$ in distilled water and dilute to 1 liter.

Therefore,

Normality of Acid = (2.65 g/L) (5mL) / (53.00) (12.20 mL)

= **0.02049 N**

B. CALCULATION OF ALKALINITY (for a 50 ml sample)

Total Alkalinity (as $CaCO_3$), mg/L = $M_{vol.}$ * N H_2SO_4 * DF * 1000

Where:

$M_{vol.}$ Volume titrant used to reach pH 4.5, ml
N, Normality of H_2SO_4
DF, Dilution Factor = (50 ml) / (Vol. of Sample used)

Therefore,

Total Alkalinity (as $CaCO_3$), mg/L = (3.65 mL) (0.02049 N) (1) * 1000

= 74.7885 mg**/L**

Reporting results in two significant figures,

= **75 mg/L as CaCO3**

3/18/2024 LSR

C. SPECIATED ALKALINITY:

Phenolphthalein Alkalinity

P alkalinity, mg/L as $CaCO_3$ = $P_{vol.}$ * N H_2SO_4 * DF * 1000

= (0) (0.02049 N) (1) * 1000

= **0 mg/L**

Total Alkalinity

T alkalinity, mg/L as $CaCO_3$ = $M_{vol.}$ * N H_2SO_4 * DF * 1000

= (3.65 mL) (0.02049) (1) * 1000

= 74.7885 **mg/L** as CaCO3

Where:

$P_{vol.}$ - Volume titrant used to reach pH 8.3, ml
$M_{vol.}$ - Volume titrant used to reach pH 4.5, ml
N - Normality of H_2SO_4
DF - Dilution Factor = (50 ml) / (Vol. of Sample used)

Then OH, CO_3, HCO_3 alkalinities as $CaCO_3$ will be calculated as follows:

Result of Titration	**OH Alkalinity as $CaCO_3$**	**CO_3 Alkalinity as $CaCO_3$**	**HCO_3 Alkalinity as $CaCO_3$**
P = 0	0	0	T
P < ½ T	0	2P	T – 2P
P = ½ T	0	2P	0
P > ½ T	2P – T	2(T – P)	0
P = T	T	0	0

Therefore,

OH Alkalinity as $CaCO_3$ = **0**

CO_3 Alkalinity as $CaCO_3$ = 0

HCO_3 Alkalinity as $CaCO_3$ = 74.7885 **mg/L**

Reporting results in two significant figures,

OH Alkalinity as $CaCO_3$ = **0**

CO_3 Alkalinity as $CaCO_3$ = **0**

HCO_3 Alkalinity as $CaCO_3$ = **75 mg/L**

Reviewed by:

3/18/2024 LSR

JRB 3/26/2024

LOGBOOK DATA, QUANTITATION REPORT and/or SPECTRA

SAMPLE	PH SAMPLE	AMOUNT	V@8.3	VT TO 4.5	Sample Type
MB-1	5.39	50	0.00	0.050	MBLK
LCS-1	8.24	50	0.10	4.60	LCS
N063248-005B	7.77	50	0.00	3.65	SAMP
N063248-006B	8.28	50	0.00	1.05	SAMP
N063248-007B	8.27	50	0.00	1.10	SAMP
N063248-008B	8.26	50	0.00	1.05	SAMP
N063248-010C	7.57	50	0.00	3.50	SAMP
N063248-011C	7.78	50	0.00	3.70	SAMP
N063253-001C	5.06	50	0.00	27.40	SAMP
N063256-001C	7.42	50	0.00	12.90	SAMP
N063259-001C	7.04	50	0.00	36.90	SAMP
N063261-001C	7.13	50	0.00	14.10	SAMP
N063278-001C	7.86	50	0.00	13.00	SAMP
N063279-001C	7.59	50	0.00	13.05	SAMP
N063280-001C	7.64	50	0.00	12.20	SAMP
N063295-005B	6.93	50	0.00	1.20	SAMP
N063295-006B	7.70	50	0.00	1.10	SAMP
N063295-007B	7.67	50	0.00	1.05	SAMP
N063295-008B	7.81	50	0.00	1.10	SAMP
N063297-001B	8.08	50	0.00	8.10	SAMP
N063320-001C	7.26	50	0.00	27.30	SAMP
N063321-001C	7.45	50	0.00	11.60	SAMP
N063248-005BDUP	7.75	50	0.00	3.70	DUP
N063248-005BMS	7.92	50	0.00	8.25	MS
N063248-005BMSD	7.94	50	0.00	8.20	MSD

Standardization:

Spike amt:	**5**	ml
Titrant used:	**12.200**	ml
N H2SO4	**0.02049**	Normal
Date Analyzed:	**2/25/24**	
	11:10	
Analyzed By:	**LSR**	
Sodium Carbonate:	**CINV-220422A**	
Sodium Bicarbonate:	**CINV-210623A**	
Sulfuric Acid:	**R240225B**	

3/18/2024 LSR

Date Analyzed:	2/25/24		Reagents:					Standardization:					P = 0
Time Started:	11:10 AM			Sodium Carbonate:		CINV-220422A			Spike amt:	5	mL		P < 1/2 T
Analyzed By:	LSR			Hydrochloric Acid:		0			Titrant used:	12.2	mL		P = 1/2 T
				Sulfuric Acid:		R240225B							P > 1/2 T
									N H2SO4	0.02049	N		P = T

Sample ID	Sample Vol/Wt.	Sample pH	Std. Code	Spike Amount	Spike Conc.	Normality, Titrant	Vol. Used to pH 8.3, ml.	Vol. Used pH 8.3 to 4.5, ml.	Total Vol. Used, ml.	DF (50ml/Vsamp.)	P Alkalinity	T Alkalinity	Comments
MB-1	50	5.39				0.02049	0.00	0.05	0.05	1	0.00	1.02	
LCS-1	50	8.24				0.02049	0.10	4.50	4.60	1	2.05	94.26	
N063248-005B	50	7.77				0.02049	0.00	3.65	3.65	1	0.00	74.80	
N063248-006B	50	8.28				0.02049	0.00	1.05	1.05	1	0.00	21.52	
N063248-007B	50	8.27				0.02049	0.00	1.10	1.10	1	0.00	22.54	
N063248-008B	50	8.26				0.02049	0.00	1.05	1.05	1	0.00	21.52	
N063248-010C	50	7.57				0.02049	0.00	3.50	3.50	1	0.00	71.72	
N063248-011C	50	7.78				0.02049	0.00	3.70	3.70	1	0.00	75.82	
N063253-001C	50	5.06				0.02049	0.00	27.40	27.40	1	0.00	561.48	
N063256-001C	50	7.42				0.02049	0.00	12.90	12.90	1	0.00	264.34	
N063259-001C	50	7.04				0.02049	0.00	36.90	36.90	1	0.00	756.15	
N063261-001C	50	7.13				0.02049	0.00	14.10	14.10	1	0.00	288.93	
N063278-001C	50	7.86				0.02049	0.00	13.00	13.00	1	0.00	266.39	
N063279-001C	50	7.59				0.02049	0.00	13.05	13.05	1	0.00	267.42	
N063280-001C	50	7.64				0.02049	0.00	12.20	12.20	1	0.00	250.00	
N063295-005B	50	6.93				0.02049	0.00	1.20	1.20	1	0.00	24.59	
N063295-006B	50	7.7				0.02049	0.00	1.10	1.10	1	0.00	22.54	
N063295-007B	50	7.67				0.02049	0.00	1.05	1.05	1	0.00	21.52	
N063295-008B	50	7.81				0.02049	0.00	1.10	1.10	1	0.00	22.54	
N063297-001B	50	8.08				0.02049	0.00	8.10	8.10	1	0.00	165.98	
N063320-001C	50	7.26				0.02049	0.00	27.30	27.30	1	0.00	559.43	
N063321-001C	50	7.45				0.02049	0.00	11.60	11.60	1	0.00	237.70	
N063248-005BDU	50	7.75				0.02049	0.00	3.70	3.70	1	0.00	75.82	
N063248-005BMS	50	7.92				0.02049	0.00	8.25	8.25	1	0.00	169.06	
N063248-005BMS	50	7.94				0.02049	0.00	8.20	8.20	1	0.00	168.03	

3/18/2024 LSR

Reviewed by:

JRB 3/26/2024

Speciated, Alkalinity as CaCO3

SM 2320B

Date Analyzed:	2/25/24
Time:	11:10 AM
Analyzed By:	LSR

SAMPLE ID	OH	CO3	HCO3	TOTAL	CHECK	COMMENT	REMARKS
MB-1	0.00	0.00	1.02	1.02	1.02		P = 0
LCS-1	0.00	4.10	90.16	94.26	94.26		P < 1/2 T
N063248-005B	0.00	0.00	74.80	74.80	74.80		P = 0
N063248-006B	0.00	0.00	21.52	21.52	21.52		P = 0
N063248-007B	0.00	0.00	22.54	22.54	22.54		P = 0
N063248-008B	0.00	0.00	21.52	21.52	21.52		P = 0
N063248-010C	0.00	0.00	71.72	71.72	71.72		P = 0
N063248-011C	0.00	0.00	75.82	75.82	75.82		P = 0
N063253-001C	0.00	0.00	561.48	561.48	561.48		P = 0
N063256-001C	0.00	0.00	264.34	264.34	264.34		P = 0
N063259-001C	0.00	0.00	756.15	756.15	756.15		P = 0
N063261-001C	0.00	0.00	288.93	288.93	288.93		P = 0
N063278-001C	0.00	0.00	266.39	266.39	266.39		P = 0
N063279-001C	0.00	0.00	267.42	267.42	267.42		P = 0
N063280-001C	0.00	0.00	250.00	250.00	250.00		P = 0
N063295-005B	0.00	0.00	24.59	24.59	24.59		P = 0
N063295-006B	0.00	0.00	22.54	22.54	22.54		P = 0
N063295-007B	0.00	0.00	21.52	21.52	21.52		P = 0
N063295-008B	0.00	0.00	22.54	22.54	22.54		P = 0
N063297-001B	0.00	0.00	165.98	165.98	165.98		P = 0
N063320-001C	0.00	0.00	559.43	559.43	559.43		P = 0
N063321-001C	0.00	0.00	237.70	237.70	237.70		P = 0
N063248-005BDUP	0.00	0.00	75.82	75.82	75.82		P = 0
N063248-005BMS	0.00	0.00	169.06	169.06	169.06		P = 0
N063248-005BMSD	0.00	0.00	168.03	168.03	168.03		P = 0

3/18/2024 LSR

Alkalinity Preparation and Runlog

Matrix: H_2O

Date Extracted: 2/24/24
Time Extracted: 1700
Extracted By: LR

Date Analyzed: 2/25/24
Time Analyzed: 1110
Analyzed By: LSR

Reagent Lot # / Reagent ID
Sodium Carbonate: CINV2202237A
Hydrochloric Acid: —
Sulfuric Acid: R240275B
Sodium Bicarbonate: CINV-2102-23A

Formulas:

$P = \frac{(\text{Vol. at pH 8.3}) \times (N\ H_2SO_4) \times (50{,}000)}{\text{Vol. Sample}}$

$T = \frac{(\text{Vol. at pH 4.5}) \times (N\ H_2SO_4) \times (50{,}000)}{\text{Vol. Sample}}$

pH meter Calibration:
SLOPE: 98.2%
pH 7: 7.02 CINV2201121A
4: 4.00 " B
10: 10.05 CINV2312014F

Sample ID.	Sample Wt./Vol.	Sample pH	Std Code	Spike Amt Added	Spike Conc.	Norm. Titrant	Vol. At pH = 8.3	Vol. At pH = 4.5	Dilution (F/I)	Calculations	Comments
Standardization #1	50 mL	10.70	IWST240225A	5.0 mL	0.05 N	-	-	12.20	50/50	$N_{H2SO4} = \frac{(2.65\ \text{g } Na_2CO_3/L)\ (5mL)}{(53)\ (\text{vol. of acid mL})}$	CINV2409|8033
Standardization #2	50 mL	10.64	"	5.0 mL	0.05 N	-	-	12.20	50/50		

1)	MB LL	50 mL	5.39	-	-	-	0.02449	0	0.05	50/50		
2)	LCS		8.24	IWST240225B	1 mL	0.05N		0	4.60			
3)	NC63248-5B		7.77					0	3.65			
4)	6B		8.28					0	1.05			
5)	7B		8.27					0	1.10			
6)	8B		8.26					0	1.05			
7)	10C		7.57					0	3.50			
8)	11C		7.78					0	3.70			
9)	ND6253-1C		5.06					0	27.40			
10)	ND6256-1C		7.42					0	12.90			
11)	ND6259-1C		7.04					0	36.90			
12)	ND6261-1C		7.13					0	14.10			
13)	ND6278-1C		7.86					0	13.0			
14)	ND6279-1C		7.59					0	13.05			
15)	ND6280-1C		7.64					0	12.20			
16)	ND6295-5B		6.93					0	1.20			
17)	6B		7.70					0	1.10			
18)	7B		7.67					0	1.05			
19)	8C		7.81					0	1.10			
20)	ND6297-1B		8.08					0	8.10			
MS	ND6320-1C		7.26					0	27.70			
MSD	ND6321-1C		7.45					0	11.60			
LCS	ND6248-5B DUP		7.75	"				0	3.70	3/18/2024 LSR		
	5B MS		7.92	IWST240225B	1 mL	0.05N		0	8.25			
	5B MSD		7.94					0	8.20			

Reviewed by: JRB 3/26/2024

ASSET LABORATORIES
CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
NEVADA | P:702.307.2659 F:702.307.2691
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922

EPA 300.0

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R182813
ASSET #: N063248 / N063249

Instrument ID: IC-08
Analyst: RBA
Date Analyzed: 2/22/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.		X			X	
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

%Rec of Nitrite in N063248-005BMS/MSD failed. However, LCS passed criteria.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 2/28/2024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R182874
ASSET #: N063248 / N063295 / N063297

Instrument ID: IC-08
Analyst: RBA
Date Analyzed: 2/23/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 3/6/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: GROUNDWATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the orignal sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N063248-010C** concentration in mg/L is calculated as follows:

Nitrate, mg/L = 1.291 * 5

= 6.455

Reporting result in two significant figures,

Nitrate, mg/L = 6.5

Reviewed by:

dMocha 3/10/2024

ANALYSIS RUN LOG

Sequence: IC-08_240124A
Operator: IC-05
Printed: 1/24/2024 5:54:19 PM

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 25
Created: 1/24/2024 9:39:27 AM by IC-05
Last Update: 1/24/2024 11:49:06 AM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240124	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240124	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240124	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240124	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240124	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240124	Finished
8	ICV,ICV,1	Unknown	9	1000.0	Anions Default	EPA 300_0_240124	Finished
9	ICB,ICB,1	Unknown	10	1000.0	Anions Default	EPA 300_0_240124	Finished
10	MB-H2O,MBLK,1	Unknown	11	1000.0	Anions Default	EPA 300_0_240124	Finished
11	LCS-H2O,LCS,1	Unknown	12	1000.0	Anions Default	EPA 300_0_240124	Finished
12	N062498-007A,SAMP,5	Unknown	13	1000.0	Anions Default	EPA 300_0_240124	Finished
13	N062498-007ADUP,DUP,5	Unknown	14	1000.0	Anions Default	EPA 300_0_240124	Finished
14	N062498-007AMS,MS,5	Unknown	15	1000.0	Anions Default	EPA 300_0_240124	Finished
15	N062498-007AMSD,MSD,5	Unknown	16	1000.0	Anions Default	EPA 300_0_240124	Finished
16	LCS-2,LCS,1	Unknown	17	1000.0	Anions Default	EPA 300_0_240124	Finished
17	MB-2,MBLK,1	Unknown	18	1000.0	Anions Default	EPA 300_0_240124	Finished
18	N062498-007A,SAMP,5	Unknown	19	1000.0	Anions Default	EPA 300_0_240124	Finished
19	N062498-007ADUP,DUP,5	Unknown	20	1000.0	Anions Default	EPA 300_0_240124	Finished
20	CCV-1,CCV,1	Unknown	21	1000.0	Anions Default	EPA 300_0_240124	Finished
21	CCB-1,CCB,1	Unknown	22	1000.0	Anions Default	EPA 300_0_240124	Finished
22	N062498-007AMS,MS,5	Unknown	23	1000.0	Anions Default	EPA 300_0_240124	Finished
23	N062498-007AMSD,MSD,5	Unknown	24	1000.0	Anions Default	EPA 300_0_240124	Finished
24	CCV-2,CCV,1	Unknown	33	1000.0	Anions Default	EPA 300_0_240124	Finished
25	CCB-2,CCB,1	Unknown	34	1000.0	Anions Default	EPA 300_0_240124	Finished

reviewed by: 1/31/2024

Processed by:
Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)

1/24/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 25
Created: 1/24/2024 9:39:27 AM by IC-05
Last Update: 1/24/2024 11:49:06 AM by IC-05

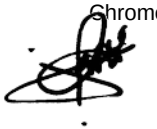
No.	Name	Inj. Date/Time	Comment
1	BLANK	1/24/2024 9:41:36 AM	BLANK
2	Std - 0	1/24/2024 9:56:54 AM	IBLANK
3	Std - 1	1/24/2024 10:32:56 AM	STD-LOW
4	Std - 2	1/24/2024 10:48:14 AM	STD
5	Std - 3	1/24/2024 11:03:32 AM	STD
6	Std - 4	1/24/2024 11:18:50 AM	STD
7	Std - 5	1/24/2024 11:34:08 AM	STD-HIGH
8	ICV,ICV,1	1/24/2024 11:49:26 AM	ICV, IWST-240123B
9	ICB,ICB,1	1/24/2024 12:04:44 PM	CCB
10	MB-H2O,MBLK,1	1/24/2024 12:20:02 PM	MB
11	LCS-H2O,LCS,1	1/24/2024 12:35:19 PM	LCS, IWST-240123B
12	N062498-007A,SAMP,5	1/24/2024 12:50:38 PM	SAMP,2>10mL,
13	N062498-007ADUP,DUP,5	1/24/2024 1:05:56 PM	DUP,2>10mL,
14	N062498-007AMS,MS,5	1/24/2024 1:21:14 PM	MS,2>10mL,
15	N062498-007AMSD,MSD,5	1/24/2024 1:36:33 PM	MSD,2>10mL,
16	LCS-2,LCS,1	1/24/2024 1:51:51 PM	LCS, IWST-240123B
17	MB-2,MBLK,1	1/24/2024 2:07:09 PM	MB
18	N062498-007A,SAMP,5	1/24/2024 2:22:27 PM	SAMP,2>10mL,
19	N062498-007ADUP,DUP,5	1/24/2024 2:37:45 PM	DUP,2>10mL,
20	CCV-1,CCV,1	1/24/2024 2:53:03 PM	CCV, IWST-240123A
21	CCB-1,CCB,1	1/24/2024 3:08:21 PM	CCB
22	N062498-007AMS,MS,5	1/24/2024 3:23:40 PM	MS,2>10mL,
23	N062498-007AMSD,MSD,5	1/24/2024 3:38:58 PM	MSD,2>10mL,
24	CCV-2,CCV,1	1/24/2024 3:54:16 PM	CCV, IWST-240123A
25	CCB-2,CCB,1	1/24/2024 4:09:34 PM	CCB

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
Created: 2/21/2024 9:56:36 AM by IC-05
#Samples: 64
(Modified, not saved)

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240124	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240124	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240124	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240124	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240124	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240124	Finished
8	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
9	CCV-1,CCV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
10	CCB-1,CCB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
11	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
12	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
13	N063248-005B,SAMP,10	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
14	N063248-006B,SAMP,10	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
15	N063248-007B,SAMP,10	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
16	N063248-008B,SAMP,10	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
17	N063249-007B,SAMP,10	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
18	N063249-009B,SAMP,10	Unknown	6	1000.0	Anions Default	EPA 300_0_240124	Interrupted
19	N063248-010C,SAMP,5	Unknown	7	1000.0	Anions Default	EPA 300_0_240124	Finished
20	N063249-013B,SAMP,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240124	Finished
21	CCV-2,CCV,1	Unknown	9	1000.0	Anions Default	EPA 300_0_240124	Finished
22	CCB-2,CCB,1	Unknown	10	1000.0	Anions Default	EPA 300_0_240124	Finished
23	N063249-015B,SAMP,10	Unknown	11	1000.0	Anions Default	EPA 300_0_240124	Finished
24	N063249-017B,SAMP,10	Unknown	12	1000.0	Anions Default	EPA 300_0_240124	Finished
25	N063249-018B,SAMP,10	Unknown	13	1000.0	Anions Default	EPA 300_0_240124	Finished
26	N063249-011B,SAMP,10	Unknown	7	1000.0	Anions Default	EPA 300_0_240124	Finished
27	N063248-011C,SAMP,10	Unknown	7	1000.0	Anions Default	EPA 300_0_240124	Finished
28	N063248-005BMS,MS,10	Unknown	16	1000.0	Anions Default	EPA 300_0_240124	Finished
29	N063248-005BMSD,MSD,10	Unknown	17	1000.0	Anions Default	EPA 300_0_240124	Finished
30	N063248-011CDUP,DUP,10	Unknown	18	1000.0	Anions Default	EPA 300_0_240124	Finished
31	N063248-010CMS,MS,5	Unknown	19	1000.0	Anions Default	EPA 300_0_240124	Finished
32	N063248-010CMSD,MSD,5	Unknown	20	1000.0	Anions Default	EPA 300_0_240124	Finished
33	CCV-3,CCV,1	Unknown	21	1000.0	Anions Default	EPA 300_0_240124	Finished
34	CCB-3,CCB,1	Unknown	22	1000.0	Anions Default	EPA 300_0_240124	Finished
35	N063248-010CDUP,DUP,5	Unknown	23	1000.0	Anions Default	EPA 300_0_240124	Finished
36	N063249-017BMS,MS,10	Unknown	24	1000.0	Anions Default	EPA 300_0_240124	Finished
37	N063248-008BMS,MS,10	Unknown	25	1000.0	Anions Default	EPA 300_0_240124	Finished
38	N063253-001C,SAMP,500	Unknown	26	1000.0	Anions Default	EPA 300_0_240124	Finished
39	BLANK	Unknown	27	1000.0	Anions Default	EPA 300_0_240124	Finished
40	N063252-001C,SAMP,100	Unknown	28	1000.0	Anions Default	EPA 300_0_240124	Finished
41	BLANK	Unknown	29	1000.0	Anions Default	EPA 300_0_240124	Finished

Processed by:

Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)



Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
Created: 2/21/2024 9:56:36 AM by IC-05
#Samples: 64
(Modified, not saved)

No.	Name	Inj. Date/Time	Comment
1	BLANK	1/24/2024 9:41:36 AM	BLANK
2	Std - 0	1/24/2024 9:56:54 AM	IBLANK
3	Std - 1	1/24/2024 10:32:56 AM	STD-LOW
4	Std - 2	1/24/2024 10:48:14 AM	STD
5	Std - 3	1/24/2024 11:03:32 AM	STD
6	Std - 4	1/24/2024 11:18:50 AM	STD
7	Std - 5	1/24/2024 11:34:08 AM	STD-HIGH
8	BLANK	2/22/2024 7:34:27 AM	BLANK
9	CCV-1,CCV,1	2/22/2024 7:49:45 AM	CCV, IWST-240216A
10	CCB-1,CCB,1	2/22/2024 8:05:03 AM	CCB
11	MB-H2O,MBLK,1	2/22/2024 8:20:21 AM	MB
12	LCS-H2O,LCS,1	2/22/2024 8:35:40 AM	LCS, IWST-240216B
13	N063248-005B,SAMP,10	2/22/2024 9:36:26 AM	SAMP,1>10mL,
14	N063248-006B,SAMP,10	2/22/2024 9:51:44 AM	SAMP,1>10mL,
15	N063248-007B,SAMP,10	2/22/2024 10:07:02 AM	SAMP,1>10mL,
16	N063248-008B,SAMP,10	2/22/2024 10:22:21 AM	SAMP,1>10mL,
17	N063249-007B,SAMP,10	2/22/2024 10:37:38 AM	SAMP,1>10mL,
18	N063249-009B,SAMP,10	2/22/2024 10:52:56 AM	SAMP,1>10mL,
19	N063248-010C,SAMP,5	2/22/2024 11:30:53 AM	SAMP,2>10mL,
20	N063249-013B,SAMP,10	2/22/2024 11:46:11 AM	SAMP,1>10mL,
21	CCV-2,CCV,1	2/22/2024 12:01:30 PM	CCV, IWST-240216A
22	CCB-2,CCB,1	2/22/2024 12:16:49 PM	CCB
23	N063249-015B,SAMP,10	2/22/2024 12:32:06 PM	SAMP,1>10mL,
24	N063249-017B,SAMP,10	2/22/2024 12:47:24 PM	SAMP,1>10mL,
25	N063249-018B,SAMP,10	2/22/2024 1:02:42 PM	SAMP,1>10mL,
26	N063249-011B,SAMP,10	2/22/2024 1:18:00 PM	SAMP,1>10mL,
27	N063248-011C,SAMP,10	2/22/2024 1:33:18 PM	SAMP,1>10mL,
28	N063248-005BMS,MS,10	2/22/2024 1:48:36 PM	MS,1>10mL,
29	N063248-005BMSD,MSD,10	2/22/2024 2:03:54 PM	MSD,1>10mL,
30	N063248-011CDUP,DUP,10	2/22/2024 2:19:12 PM	DUP,1>10mL,
31	N063248-010CMS,MS,5	2/22/2024 2:34:31 PM	MS,2>10mL,
32	N063248-010CMSD,MSD,5	2/22/2024 2:49:49 PM	MSD,2>10mL,
33	CCV-3,CCV,1	2/22/2024 3:05:07 PM	CCV, IWST-240216A
34	CCB-3,CCB,1	2/22/2024 3:20:25 PM	CCB
35	N063248-010CDUP,DUP,5	2/22/2024 3:35:44 PM	DUP,2>10mL,
36	N063249-017BMS,MS,10	2/22/2024 3:51:02 PM	MS,1>10mL,
37	N063248-008BMS,MS,10	2/22/2024 4:06:20 PM	MS,1>10mL,
38	N063253-001C,SAMP,500	2/22/2024 4:21:39 PM	SAMP,0.02>10mL,
39	BLANK	2/22/2024 4:36:57 PM	BLANK
40	N063252-001C,SAMP,100	2/22/2024 4:52:16 PM	SAMP,0.1>10mL,
41	BLANK	2/22/2024 5:07:34 PM	BLANK

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 64
Created: 2/21/2024 9:56:36 AM by IC-05
(Modified, not saved)

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	N063254-001C,SAMP,100	Unknown	30	1000.0	Anions Default	EPA 300_0_240124	Finished
43	BLANK	Unknown	31	1000.0	Anions Default	EPA 300_0_240124	Finished
44	CCV-4,CCV,1	Unknown	32	1000.0	Anions Default	EPA 300_0_240124	Finished
45	CCB-4,CCB,1	Unknown	33	1000.0	Anions Default	EPA 300_0_240124	Finished
46	N063255-001C,SAMP,100	Unknown	34	1000.0	Anions Default	EPA 300_0_240124	Finished
47	BLANK	Unknown	35	1000.0	Anions Default	EPA 300_0_240124	Finished
48	N063256-001C,SAMP,100	Unknown	36	1000.0	Anions Default	EPA 300_0_240124	Finished
49	BLANK	Unknown	37	1000.0	Anions Default	EPA 300_0_240124	Finished
50	N063257-001C,SAMP,100	Unknown	38	1000.0	Anions Default	EPA 300_0_240124	Finished
51	BLANK	Unknown	39	1000.0	Anions Default	EPA 300_0_240124	Finished
52	N063258-001C,SAMP,100	Unknown	40	1000.0	Anions Default	EPA 300_0_240124	Finished
53	BLANK	Unknown	41	1000.0	Anions Default	EPA 300_0_240124	Finished
54	MB-2,MBLK,1	Unknown	42	1000.0	Anions Default	EPA 300_0_240124	Finished
55	LCS-2,LCS,1	Unknown	43	1000.0	Anions Default	EPA 300_0_240124	Finished
56	CCV-5,CCV,1	Unknown	44	1000.0	Anions Default	EPA 300_0_240124	Finished
57	CCB-5,CCB,1	Unknown	45	1000.0	Anions Default	EPA 300_0_240124	Finished
58	N063273-001A,SAMP,1	Unknown	46	1000.0	Anions Default	EPA 300_0_240124	Finished
59	N063273-002A,SAMP,1	Unknown	47	1000.0	Anions Default	EPA 300_0_240124	Finished
60	N063273-002ADUP,DUP,1	Unknown	48	1000.0	Anions Default	EPA 300_0_240124	Finished
61	N063273-002AMS,MS,1	Unknown	49	1000.0	Anions Default	EPA 300_0_240124	Finished
62	N063273-002AMSD,MSD,1	Unknown	50	1000.0	Anions Default	EPA 300_0_240124	Finished
63	CCV-6,CCV,1	Unknown	51	1000.0	Anions Default	EPA 300_0_240124	Finished
64	CCB-6,CCB,1	Unknown	52	1000.0	Anions Default	EPA 300_0_240124	Finished

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
Created: 2/21/2024 9:56:36 AM by IC-05
#Samples: 64
(Modified, not saved)

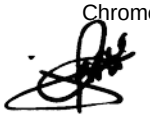
No.	Name	Inj. Date/Time	Comment
42	N063254-001C,SAMP,100	2/22/2024 5:22:52 PM	SAMP,0.1>10mL,
43	BLANK	2/22/2024 5:38:10 PM	BLANK
44	CCV-4,CCV,1	2/22/2024 5:53:28 PM	CCV, IWST-240216A
45	CCB-4,CCB,1	2/22/2024 6:08:46 PM	CCB
46	N063255-001C,SAMP,100	2/22/2024 6:24:04 PM	SAMP,0.1>10mL,
47	BLANK	2/22/2024 6:39:22 PM	BLANK
48	N063256-001C,SAMP,100	2/22/2024 6:54:40 PM	SAMP,0.1>10mL,
49	BLANK	2/22/2024 7:09:58 PM	BLANK
50	N063257-001C,SAMP,100	2/22/2024 7:25:16 PM	SAMP,0.1>10mL,
51	BLANK	2/22/2024 7:40:33 PM	BLANK
52	N063258-001C,SAMP,100	2/22/2024 7:55:51 PM	SAMP,0.1>10mL,
53	BLANK	2/22/2024 8:11:10 PM	BLANK
54	MB-2,MBLK,1	2/22/2024 8:26:29 PM	MB
55	LCS-2,LCS,1	2/22/2024 8:41:46 PM	LCS, IWST-240216B
56	CCV-5,CCV,1	2/22/2024 8:57:05 PM	CCV, IWST-240216A
57	CCB-5,CCB,1	2/22/2024 9:12:23 PM	CCB
58	N063273-001A,SAMP,1	2/22/2024 9:27:41 PM	SAMP,10mL,
59	N063273-002A,SAMP,1	2/22/2024 9:42:59 PM	SAMP,10mL,
60	N063273-002ADUP,DUP,1	2/22/2024 9:58:17 PM	DUP,10mL,
61	N063273-002AMS,MS,1	2/22/2024 10:13:35 PM	MS,10mL,
62	N063273-002AMSD,MSD,1	2/22/2024 10:28:52 PM	MSD,10mL,
63	CCV-6,CCV,1	2/22/2024 10:44:10 PM	CCV, IWST-240216A
64	CCB-6,CCB,1	2/22/2024 10:59:28 PM	CCB

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240223	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240223	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240223	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240223	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240223	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240223	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240223	Finished
8	ICV,ICV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240223	Finished
9	ICB,ICB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240223	Finished
10	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240223	Finished
11	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240223	Finished
12	N063297-001B,SAMP,10	Unknown	7	1000.0	Anions Default	EPA 300_0_240223	Finished
13	N063297-001BDUP,DUP,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240223	Finished
14	N063297-001BMS,MS,10	Unknown	9	1000.0	Anions Default	EPA 300_0_240223	Finished
15	N063297-001BMSD,MSD,10	Unknown	10	1000.0	Anions Default	EPA 300_0_240223	Finished
16	N063252-001C,SAMP,2000	Unknown	11	1000.0	Anions Default	EPA 300_0_240223	Finished
17	N063252-001CMS,MS,2000	Unknown	12	1000.0	Anions Default	EPA 300_0_240223	Finished
18	N063248-005B,SAMP,1000	Unknown	13	1000.0	Anions Default	EPA 300_0_240223	Finished
19	N063248-006B,SAMP,2000	Unknown	14	1000.0	Anions Default	EPA 300_0_240223	Finished
20	CCV-1,CCV,1	Unknown	15	1000.0	Anions Default	EPA 300_0_240223	Finished
21	CCB-1,CCB,1	Unknown	16	1000.0	Anions Default	EPA 300_0_240223	Finished
22	N063248-007B,SAMP,2000	Unknown	17	1000.0	Anions Default	EPA 300_0_240223	Finished
23	N063248-008B,SAMP,2000	Unknown	18	1000.0	Anions Default	EPA 300_0_240223	Finished
24	N063248-010C,SAMP,100	Unknown	19	1000.0	Anions Default	EPA 300_0_240223	Finished
25	N063248-011C,SAMP,1000	Unknown	20	1000.0	Anions Default	EPA 300_0_240223	Finished
26	N063248-005B,SAMP,100	Unknown	21	1000.0	Anions Default	EPA 300_0_240223	Finished
27	N063248-006B,SAMP,100	Unknown	22	1000.0	Anions Default	EPA 300_0_240223	Finished
28	N063248-007B,SAMP,100	Unknown	23	1000.0	Anions Default	EPA 300_0_240223	Finished
29	N063248-008B,SAMP,100	Unknown	24	1000.0	Anions Default	EPA 300_0_240223	Finished
30	N063248-010C,SAMP,20	Unknown	25	1000.0	Anions Default	EPA 300_0_240223	Finished
31	N063248-011C,SAMP,100	Unknown	26	1000.0	Anions Default	EPA 300_0_240223	Finished
32	CCV-2,CCV,1	Unknown	27	1000.0	Anions Default	EPA 300_0_240223	Finished
33	CCB-2,CCB,1	Unknown	28	1000.0	Anions Default	EPA 300_0_240223	Finished
34	N063295-005B,SAMP,2000	Unknown	29	1000.0	Anions Default	EPA 300_0_240223	Finished
35	N063295-006B,SAMP,2000	Unknown	30	1000.0	Anions Default	EPA 300_0_240223	Finished
36	N063295-007B,SAMP,2000	Unknown	31	1000.0	Anions Default	EPA 300_0_240223	Finished
37	N063295-008B,SAMP,2000	Unknown	32	1000.0	Anions Default	EPA 300_0_240223	Finished
38	N063295-005B,SAMP,100	Unknown	33	1000.0	Anions Default	EPA 300_0_240223	Finished
39	N063295-006B,SAMP,100	Unknown	34	1000.0	Anions Default	EPA 300_0_240223	Finished
40	N063295-007B,SAMP,100	Unknown	35	1000.0	Anions Default	EPA 300_0_240223	Finished
41	N063295-008B,SAMP,100	Unknown	36	1000.0	Anions Default	EPA 300_0_240223	Finished

Processed by:

Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)



2/25/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:07:15 AM	BLANK
2	Std - 0	2/23/2024 9:22:33 AM	IBLANK
3	Std - 1	2/23/2024 9:53:29 AM	STD-LOW
4	Std - 2	2/23/2024 10:08:47 AM	STD
5	Std - 3	2/23/2024 10:24:06 AM	STD
6	Std - 4	2/23/2024 10:39:24 AM	STD
7	Std - 5	2/23/2024 10:54:42 AM	STD-HIGH
8	ICV,ICV,1	2/23/2024 11:10:00 AM	ICV, IWST-240216B
9	ICB,ICB,1	2/23/2024 11:25:18 AM	ICB
10	MB-H2O,MBLK,1	2/23/2024 11:40:36 AM	MB
11	LCS-H2O,LCS,1	2/23/2024 11:55:54 AM	LCS, IWST-240216B
12	N063297-001B,SAMP,10	2/23/2024 1:45:16 PM	SAMP,1>10mL,
13	N063297-001BDUP,DUP,10	2/23/2024 2:00:34 PM	DUP,1>10mL,
14	N063297-001BMS,MS,10	2/23/2024 2:15:52 PM	MS,1>10mL,
15	N063297-001BMSD,MSD,10	2/23/2024 2:31:10 PM	MSD,1>10mL,
16	N063252-001C,SAMP,2000	2/23/2024 2:46:27 PM	SAMP,0.005>10mL,
17	N063252-001CMS,MS,2000	2/23/2024 3:01:45 PM	MS,0.005>10mL,
18	N063248-005B,SAMP,1000	2/23/2024 4:06:07 PM	SAMP,0.01>10mL,
19	N063248-006B,SAMP,2000	2/23/2024 4:21:25 PM	SAMP,0.005>10mL,
20	CCV-1,CCV,1	2/23/2024 4:36:43 PM	CCV, IWST-240216A
21	CCB-1,CCB,1	2/23/2024 4:52:01 PM	CCB
22	N063248-007B,SAMP,2000	2/23/2024 5:07:19 PM	SAMP,0.005>10mL,
23	N063248-008B,SAMP,2000	2/23/2024 5:22:37 PM	SAMP,0.005>10mL,
24	N063248-010C,SAMP,100	2/23/2024 5:37:54 PM	SAMP,0.1>10mL,
25	N063248-011C,SAMP,1000	2/23/2024 5:53:13 PM	SAMP,0.01>10mL,
26	N063248-005B,SAMP,100	2/23/2024 6:08:32 PM	SAMP,0.1>10mL,
27	N063248-006B,SAMP,100	2/23/2024 6:23:50 PM	SAMP,0.1>10mL,
28	N063248-007B,SAMP,100	2/23/2024 6:39:07 PM	SAMP,0.1>10mL,
29	N063248-008B,SAMP,100	2/23/2024 6:54:26 PM	SAMP,0.1>10mL,
30	N063248-010C,SAMP,20	2/23/2024 7:09:45 PM	SAMP,0.5>10mL,
31	N063248-011C,SAMP,100	2/23/2024 7:25:03 PM	SAMP,0.1>10mL,
32	CCV-2,CCV,1	2/23/2024 7:40:21 PM	CCV, IWST-240216A
33	CCB-2,CCB,1	2/23/2024 7:55:39 PM	CCB
34	N063295-005B,SAMP,2000	2/23/2024 8:10:57 PM	SAMP,0.005>10mL,
35	N063295-006B,SAMP,2000	2/23/2024 8:26:16 PM	SAMP,0.005>10mL,
36	N063295-007B,SAMP,2000	2/23/2024 8:41:34 PM	SAMP,0.005>10mL,
37	N063295-008B,SAMP,2000	2/23/2024 8:56:52 PM	SAMP,0.005>10mL,
38	N063295-005B,SAMP,100	2/23/2024 9:12:11 PM	SAMP,0.1>10mL,
39	N063295-006B,SAMP,100	2/23/2024 9:27:28 PM	SAMP,0.1>10mL,
40	N063295-007B,SAMP,100	2/23/2024 9:42:47 PM	SAMP,0.1>10mL,
41	N063295-008B,SAMP,100	2/23/2024 9:58:05 PM	SAMP,0.1>10mL,

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	N063253-001C,SAMP,5000	Unknown	37	1000.0	Anions Default	EPA 300_0_240223	Finished
43	N063253-001C,SAMP,10000	Unknown	38	1000.0	Anions Default	EPA 300_0_240223	Finished
44	CCV-3,CCV,1	Unknown	39	1000.0	Anions Default	EPA 300_0_240223	Finished
45	CCB-3,CCB,1	Unknown	40	1000.0	Anions Default	EPA 300_0_240223	Finished
46	N063256-001C,SAMP,100	Unknown	41	1000.0	Anions Default	EPA 300_0_240223	Finished
47	N063254-001C,SAMP,10000	Unknown	42	1000.0	Anions Default	EPA 300_0_240223	Finished
48	N063255-001C,SAMP,10000	Unknown	43	1000.0	Anions Default	EPA 300_0_240223	Finished
49	N063257-001C,SAMP,10000	Unknown	44	1000.0	Anions Default	EPA 300_0_240223	Finished
50	N063258-001C,SAMP,10000	Unknown	45	1000.0	Anions Default	EPA 300_0_240223	Finished
51	CCV-4,CCV,1	Unknown	46	1000.0	Anions Default	EPA 300_0_240223	Finished
52	CCB-4,CCB,1	Unknown	47	1000.0	Anions Default	EPA 300_0_240223	Finished

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	N063253-001C,SAMP,5000	2/23/2024 10:13:23 PM	SAMP,0.002>10mL,
43	N063253-001C,SAMP,10000	2/23/2024 10:28:42 PM	SAMP,0.001>10mL,
44	CCV-3,CCV,1	2/23/2024 10:43:59 PM	CCV, IWST-240216A
45	CCB-3,CCB,1	2/23/2024 10:59:17 PM	CCB
46	N063256-001C,SAMP,100	2/23/2024 11:14:35 PM	SAMP,0.1>10mL,
47	N063254-001C,SAMP,10000	2/23/2024 11:29:53 PM	SAMP,0.001>10mL,
48	N063255-001C,SAMP,10000	2/23/2024 11:45:11 PM	SAMP,0.001>10mL,
49	N063257-001C,SAMP,10000	2/24/2024 12:00:28 AM	SAMP,0.001>10mL,
50	N063258-001C,SAMP,10000	2/24/2024 12:15:46 AM	SAMP,0.001>10mL,
51	CCV-4,CCV,1	2/24/2024 12:31:04 AM	CCV, IWST-240216A
52	CCB-4,CCB,1	2/24/2024 12:46:23 AM	CCB

INITIAL CALIBRATION DATA SUMMARY

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 1/24/2024

Initial Calibration:

Bromide	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0028	0.0133	0.0271	0.0669	0.1358	1.000
Measured, in mg/L	0.000000	0.055900	0.248700	0.502400	1.236800	2.506100	
Relative Error (%RE)		11.8%		0.5%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712D

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 1/24/2024

Initial Calibration:

Fluoride	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0096	0.0439	0.0882	0.2201	0.4489	1.000
Measured, in mg/L	0.000000	0.059800	0.250700	0.497700	1.233200	2.508600	
Relative Error (%RE)		19.6%		-0.5%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712A

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 1/24/2024

Initial Calibration:

Nitrite	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0123	0.0692	0.1392	0.3529	0.7231	1.000
Measured, in mg/L	0.000000	0.058400	0.254400	0.495700	1.232400	2.509000	
Relative Error (%RE)		16.8%		-0.9%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712C

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 1/24/2024

Initial Calibration:

Nitrate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0159	0.0804	0.1690	0.4238	0.8850	1.000
Measured, in mg/L	0.000000	0.067900	0.249500	0.499300	1.217000	2.516400	
Relative Error (%RE)		35.8%		-0.1%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712E

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 2/23/2024

Initial Calibration:

Chloride	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.5	1	2	5	10	R^2
Area,mAU*min	0.0000	0.0676	0.1324	0.2669	0.6836	1.4401	0.999
Measured, in mg/L	0.000000	0.583500	1.032000	1.962000	4.844700	10.077900	
Relative Error (%RE)		16.7%		-1.9%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712B

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 2/23/2024

Initial Calibration:

Sulfate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.5	2	4	10	20	R^2
Area,mAU*min	0.0000	0.0480	0.2008	0.4077	1.0415	2.1673	1.000
Measured, in mg/L	0.000000	0.632600	2.038000	3.940700	9.768100	20.120700	
Relative Error (%RE)		26.5%		-1.5%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712G

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_BRPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300_W_BRPG**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ICV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5705936**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	1.242	0.50	1.250	0	99.4	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300_W_BRPG**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705938**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	1.211	0.50	1.250	0	96.9	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300_W_BRPG**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705943**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	1.227	0.50	1.250	0	98.2	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300_W_BRPG**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705947**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	1.231	0.50	1.250	0	98.5	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300_W_BRPG**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705950**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	1.228	0.50	1.250	0	98.2	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_BRPGE

Sample ID: **CCV-5** SampType: **CCV** TestCode: **300_W_BRPG** Units: **mg/L** Prep Date: RunNo: **182813**
Client ID: **CCV** Batch ID: **R182813** TestNo: **EPA 300.0** Analysis Date: **2/22/2024** SeqNo: **5705952**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	1.220	0.50	1.250	0	97.6	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **ICV**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711091**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.941	0.50	2.000	0	97.1	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCV**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711103**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.918	0.50	2.000	0	95.9	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCV**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711109**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.910	0.50	2.000	0	95.5	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCV**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711115**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.899	0.50	2.000	0	95.0	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCV**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/24/2024**	SeqNo: **5711117**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.912	0.50	2.000	0	95.6	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ICV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5705911**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.285	0.10	1.250	0	103	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705913**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.182	0.10	1.250	0	94.6	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705922**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.200	0.10	1.250	0	96.0	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705928**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.211	0.10	1.250	0	96.8	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705932**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.243	0.10	1.250	0	99.4	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID: **CCV-5** SampType: **CCV** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **182813**
Client ID: **CCV** Batch ID: **R182813** TestNo: **EPA 300.0** Analysis Date: **2/22/2024** SeqNo: **5705934**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.216	0.10	1.250	0	97.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_NO2PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ICV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5705954**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	1.277	0.50	1.250	0	102	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705956**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	1.216	0.50	1.250	0	97.3	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705964**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	1.233	0.50	1.250	0	98.7	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705970**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	1.234	0.50	1.250	0	98.7	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705972**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	1.228	0.50	1.250	0	98.3	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_NO2PGE

Sample ID: **CCV-5** SampType: **CCV** TestCode: **300_W_NO2P** Units: **mg/L** Prep Date: RunNo: **182813**
Client ID: **CCV** Batch ID: **R182813** TestNo: **EPA 300.0** Analysis Date: **2/22/2024** SeqNo: **5705974**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	1.229	0.50	1.250	0	98.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **ICV**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710468**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.049	0.50	4.000	0	101	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCV**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710478**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.904	0.50	4.000	0	97.6	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCV**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710486**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.864	0.50	4.000	0	96.6	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCV**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710492**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.829	0.50	4.000	0	95.7	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCV**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/24/2024**	SeqNo: **5710494**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.846	0.50	4.000	0	96.1	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ICV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5705976**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.226	0.050	1.250	0	98.1	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705978**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.209	0.050	1.250	0	96.7	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705990**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.211	0.050	1.250	0	96.9	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5706000**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.210	0.050	1.250	0	96.8	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5706004**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.216	0.050	1.250	0	97.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **CCV-5** SampType: **CCV** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **182813**
Client ID: **CCV** Batch ID: **R182813** TestNo: **EPA 300.0** Analysis Date: **2/22/2024** SeqNo: **5706006**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.227	0.050	1.250	0	98.2	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_BRPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_BRPG**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ICB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5705937**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	ND	0.50									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_BRPG**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705939**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	ND	0.50									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_BRPG**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705944**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	ND	0.50									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_BRPG**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705948**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	ND	0.50									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300_W_BRPG**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705951**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_BRPGE

Sample ID: **CCB-5** SampType: **CCB** TestCode: **300_W_BRPG** Units: **mg/L** Prep Date: RunNo: **182813**
Client ID: **CCB** Batch ID: **R182813** TestNo: **EPA 300.0** Analysis Date: **2/22/2024** SeqNo: **5705953**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **ICB**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711092**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCB**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711104**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCB**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711110**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCB**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711116**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCB**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/24/2024**	SeqNo: **5711118**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ICB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5705912**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705914**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705923**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705929**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705933**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID: **CCB-5** SampType: **CCB** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **182813**
Client ID: **CCB** Batch ID: **R182813** TestNo: **EPA 300.0** Analysis Date: **2/22/2024** SeqNo: **5705935**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_NO2PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ICB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5705955**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	ND	0.50									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705957**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	ND	0.50									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705965**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	ND	0.50									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705971**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	ND	0.50									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300_W_NO2P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705973**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_NO2PGE

Sample ID: **CCB-5** SampType: **CCB** TestCode: **300_W_NO2P** Units: **mg/L** Prep Date: RunNo: **182813**
Client ID: **CCB** Batch ID: **R182813** TestNo: **EPA 300.0** Analysis Date: **2/22/2024** SeqNo: **5705975**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrogen, Nitrite	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **ICB**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710469**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCB**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710479**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCB**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710487**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCB**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710493**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCB**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/24/2024**	SeqNo: **5710495**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ICB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5705977**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705979**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705991**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5706001**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5706005**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **CCB-5** SampType: **CCB** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **182813**
Client ID: **CCB** Batch ID: **R182813** TestNo: **EPA 300.0** Analysis Date: **2/22/2024** SeqNo: **5706007**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/22/2024

Sample Name		Retention Time	Evaluation
ICV	Fluoride	3.377	
CCV-1	Fluoride	3.377	
CCV-2	Fluoride	3.354	
CCV-3	Fluoride	3.350	
CCV-4	Fluoride	3.340	
CCV-5	Fluoride	3.367	

Average 3.358
Applied RT Window 3.158 - 3.558

MB-R182813_F	Fluoride	N.A.	N.A.
LCS-R182813_F	Fluoride	3.354	PASS
~~N063248-005B~~	~~Fluoride~~	~~3.347~~	~~PASS~~
~~N063248-006B~~	~~Fluoride~~	~~3.353~~	~~PASS~~
~~N063248-007B~~	~~Fluoride~~	~~3.377~~	~~PASS~~
N063248-008B	Fluoride	3.413	PASS
N063248-010C	Fluoride	3.327	PASS
N063248-011C	Fluoride	3.354	PASS
N063248-005BMS	Fluoride	3.343	PASS
N063248-005BMSD	Fluoride	3.357	PASS
N063248-011CDUP	Fluoride	3.354	PASS
N063248-010CDUP	Fluoride	3.363	PASS
N063248-008BMS	Fluoride	3.374	PASS

Reviewed by:

dMRocha 3/10/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/22/2024

Sample Name		Retention Time	Evaluation
ICV	Nitrite	5.247	
CCV-1	Nitrite	5.167	
CCV-2	Nitrite	5.147	
CCV-3	Nitrite	5.147	
CCV-4	Nitrite	5.140	
CCV-5	Nitrite	5.167	
	Average	5.154	
	Applied RT Window	4.954 - 5.354	
MB-R182813_NO2	Nitrite	N.A.	N.A.
LCS-R182813_NO2	Nitrite	5.147	PASS
~~N063248-005B~~	~~Nitrite~~	~~N.A.~~	~~N.A.~~
~~N063248-006B~~	~~Nitrite~~	~~N.A.~~	~~N.A.~~
~~N063248-007B~~	~~Nitrite~~	~~N.A.~~	N.A.
N063248-008B	Nitrite	N.A.	N.A.
N063248-011C	Nitrite	N.A.	N.A.
N063248-005BMS	Nitrite	5.147	PASS
N063248-005BMSD	Nitrite	5.160	PASS
N063248-011CDUP	Nitrite	N.A.	N.A.

Reviewed by:

dMocha 3/10/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/22/2024

Sample Name		Retention Time	Evaluation
ICV	Bromide	6.050	
CCV-1	Bromide	5.934	
CCV-2	Bromide	5.914	
CCV-3	Bromide	5.910	
CCV-4	Bromide	5.907	
CCV-5	Bromide	5.933	
	Average	5.920	
	Applied RT Window	5.720 - 6.120	
MB-R182813_BR	Bromide	N.A.	N.A.
LCS-R182813_BR	Bromide	5.910	PASS
N063248-010C	Bromide	5.894	PASS
N063248-010CMS	Bromide	5.910	PASS
N063248-010CMSD	Bromide	5.890	PASS
N063248-010CDUP	Bromide	5.923	PASS

Reviewed by:

dMRocha 3/10/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/22/2024

Sample Name		Retention Time	Evaluation
ICV	Nitrate	6.727	
CCV-1	Nitrate	6.577	
CCV-2	Nitrate	6.560	
CCV-3	Nitrate	6.557	
CCV-4	Nitrate	6.554	
CCV-5	Nitrate	6.580	
	Average	6.566	
	Applied RT Window	6.366 - 6.766	
MB-R182813_NO3	Nitrate	N.A.	N.A.
LCS-R182813_NO3	Nitrate	6.557	PASS
~~N063248-005B~~	~~Nitrate~~	~~N.A.~~	~~N.A.~~
~~N063248-006B~~	~~Nitrate~~	~~N.A.~~	~~N.A.~~
~~N063248-007B~~	~~Nitrate~~	~~N.A.~~	~~N.A.~~
N063248-008B	Nitrate	N.A.	N.A.
N063248-010C	Nitrate	6.540	PASS
N063248-011C	Nitrate	N.A.	N.A.
N063248-005BMS	Nitrate	6.560	PASS
N063248-005BMSD	Nitrate	6.570	PASS
N063248-011CDUP	Nitrate	N.A.	N.A.
N063248-010CDUP	Nitrate	6.573	PASS
N063249-017BMS	Nitrate	6.570	PASS

Reviewed by:

dMocha 3/10/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/23/2024

Sample Name		Retention Time	Evaluation
ICV	Chloride	4.407	
CCV-1	Chloride	4.300	
CCV-2	Chloride	4.424	
CCV-3	Chloride	4.447	
CCV-4	Chloride	4.450	

Average 4.406
Applied RT Window 4.206 - 4.606

MB-R182874_CL	Chloride	N.A.	N.A.
LCS-R182874_CL	Chloride	4.440	PASS
N063297-001BDUP	Chloride	4.417	PASS
N063297-001BMS	Chloride	4.440	PASS
N063297-001BMSD	Chloride	4.433	PASS
N063252-001CMS	Chloride	4.440	PASS
~~N063248-005B~~	~~Chloride~~	~~4.387~~	~~PASS~~
~~N063248-006B~~	~~Chloride~~	~~4.360~~	~~PASS~~
~~N063248-007B~~	~~Chloride~~	~~4.377~~	~~PASS~~
N063248-008B	Chloride	4.387	PASS
N063248-010C	Chloride	4.380	PASS
N063248-011C	Chloride	4.377	PASS

Reviewed by:

dMocha 3/10/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/23/2024

Sample Name		Retention Time	Evaluation
ICV	Sulfate	9.933	
CCV-1	Sulfate	9.847	
CCV-2	Sulfate	9.984	
CCV-3	Sulfate	10.010	
CCV-4	Sulfate	10.013	

Average 9.957

Applied RT Window 9.757 - 10.157

MB-R182874_SO4	Sulfate	N.A.	N.A.
LCS-R182874_SO4	Sulfate	9.973	PASS
N063297-001BDUP	Sulfate	9.917	PASS
N063297-001BMS	Sulfate	9.944	PASS
N063297-001BMSD	Sulfate	9.937	PASS
N063252-001CMS	Sulfate	9.937	PASS
~~N063248-005B~~	~~Sulfate~~	~~9.933~~	~~PASS~~
~~N063248-006B~~	~~Sulfate~~	~~9.950~~	~~PASS~~
~~N063248-007B~~	~~Sulfate~~	~~9.927~~	~~PASS~~
N063248-008B	Sulfate	9.960	PASS
N063248-010C	Sulfate	9.900	PASS
N063248-011C	Sulfate	9.977	PASS

Reviewed by:

dMocha 3/10/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): 10/5/2022, 12/14/2022, 3/22/2023,7/10/2023; 10/3/2023 & 11/14/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: mg/L

Instrument Name: **IC-08 & IC-09**

Datafile IC-08 221005A #24 IC-08 221214A #30 IC-08 230322A #35 IC-08 230710A #13 IC-09 231003A #14 IC-08 231114A #24 IC-09 231114A #19

Analyte	#1	#2	#3	#4	#5	#6	#7	Spike Conc., mg/L	SD	$t_{(n-1)}$ value	MDLs	MDL	PQL
Fluoride	0.100	0.103	0.108	0.118	0.110	0.098	0.126	0.10	0.0101	3.143	**0.0318**	**0.0318**	0.10
Chloride	0.480	0.418	0.472	0.653	0.624	0.587	0.622	0.50	0.0922	3.143	**0.2898**	**0.2898**	0.50
Nitrite	0.068	0.061	0.060	0.071	0.063	0.061	0.070	0.05	0.0047	3.143	**0.0149**	**0.0149**	0.05
Bromide	0.526	0.502	0.509	0.522	0.536	0.527	0.520	0.50	0.0116	3.143	**0.0364**	**0.0364**	0.50
Nitrate	0.073	0.058	0.059	0.073	0.074	0.068	0.073	0.05	0.0068	3.143	**0.0215**	**0.0240**	0.05
Phosphate	0.112	0.096	0.114	0.120	0.130	0.093	0.124	0.10	0.0138	3.143	**0.0433**	**0.0433**	0.10
Sulfate	0.501	0.609	0.638	0.401	0.704	0.620	0.697	0.50	0.1092	3.143	**0.3432**	**0.3432**	0.50

METHOD DETECTION LIMIT (Blanks)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Analyte	MDLb	# of Records
Fluoride	0	63
Chloride	0.1456	80
Nitrite	0.0147	64
Bromide	0	18
Nitrate	0.0240	132
Phosphate	0.0237	34
Sulfate	0.2579	107

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

EPA 6010B
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107026
ASSET #: N063248

Instrument ID: ICP-03
Analyst: DBJ
Date Analyzed: 2/23/2024

Method: DISSOLVED

[X] EPA 6010B / 200.7
[ ] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value?	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.	X			X		
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?	X			X		
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented	X			X		
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

%Rec of Fe/Ca in N063248-005C-PS/MSD1 failed, low bias. However, LCS passed criteria.
The first ICSA1(raw data ICSA Sequence No.:12) does not have the ICSA Standard in position. CAR#7427
Dilution test for Mg failed. However, PS passed criteria.

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG Date: 03/07/2024

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107026
ASSET #: N063248

Instrument ID: ICP-02
Analyst: DBJ
Date Analyzed: 2/26/2024

Method:

[X] EPA 6010B / 200.7 DISSOLVED
[ ] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)		X			X	
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.		X			X	
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

%Rec of Na in N063248-006C-MS @500x; K in N063248-006C-MSD @5X and K in N063248-006C-PS failed. However, LCS passed criteria.
Detection of Na in CCB2/CCB3 is >1/2 PQL. However, samples detection are 5X greater than the IQC detection.
Dilution test for Na failed. However, PS passed criteria.
Dilution test for K failed.

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG Date: 03/07/2024

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in ug/L , in the original sample as follows:

Iron , ug/L = A * DF * PF *CF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL
CF= Conversion Factor from mg/L to ug/L, 1000

For Sample **N063248-008C** , the concentration i ug/L is calculated as follows:

Iron , ug/L = 0.13062 * 1 * (25/25) * 1000

Iron , ug/L = 130.62

Reporting results in two significant figures,

Iron , ug/L = 130

REVIEWED BY: 3/19/2024

% RSD SUMMARY

RSD SUMMARY: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	B	0	3.02	15	PASS
Standard1	ICAL	1	B	0.1	0.43	15	PASS
Standard3	ICAL	1	B	1	0.46	15	PASS
Standard4	ICAL	1	B	2.5	0.87	15	PASS
Standard5	ICAL	1	B	3.75	0.9	15	PASS
Standard6	ICAL	1	B	5	0.26	15	PASS
Standard7	ICAL	1	B	10	0.59	15	PASS
ICV	ICV	1	B	4.98	0.27	15	PASS
ICB	ICB	1	B	0.01	11.68	15	PASS
LLICV1	CCV1	1	B	0.1	0.19	20	PASS
ICSA1	ICSA	1	B	100.46	10.31	15	PASS
ICSA1	ICSA	1	B	0	54.42	15	<PQL
ICSA1	ICSA	1	B	0	25.42	15	<PQL
ICSAB1	ICSAB	1	B	0.95	0.65	15	PASS
RINSE	RINSE	1	B	0.01	3.44	15	PASS
MB-107026	MBLK	1	B	0	54.46	15	<PQL
LCS1-107026	LCS	1	B	5.31	1.02	15	PASS
N063248-005C	SAMP	1	B	1.97	0.09	15	PASS
N063248-005C	SAMP	5	B	0.39	0.43	15	PASS
N063248-005C-PS	PS	1	B	7.12	0.03	15	PASS
N063248-005C-MS1	MS	1	B	7.19	0.12	15	PASS
N063248-005C-MSD1	MSD	1	B	7.05	0.2	15	PASS
N063248-006C	SAMP	1	B	2.97	0.15	15	PASS
N063248-007C	SAMP	1	B	2.78	0.07	15	PASS
CCV1	CCV	1	B	5.07	0.75	15	PASS
CCB1	CCB	1	B	0.01	12.29	15	PASS
N063248-008C	SAMP	1	B	2.94	0.16	15	PASS
N063248-010B	SAMP	1	B	0.28	0.93	15	PASS
N063248-011B	SAMP	1	B	2.1	0.29	15	PASS
N063249-007C	SAMP	1	B	2.51	0.47	15	PASS
N063249-009C	SAMP	1	B	1.72	0.15	15	PASS
N063249-011C	SAMP	1	B	1.15	0.75	15	PASS
N063249-013C	SAMP	1	B	3.43	0.1	15	PASS
N063249-015C	SAMP	1	B	1.87	0.13	15	PASS
N063249-017C	SAMP	1	B	0.16	1.04	15	PASS
N063249-018C	SAMP	1	B	1.45	0.42	15	PASS
CCV2	CCV	1	B	5.05	0.55	15	PASS
CCB2	CCB	1	B	0.01	11.54	15	PASS
CCV3	CCV	1	B	5.04	0.35	15	PASS
CCB3	CCB	1	B	0.01	12.43	15	PASS
ICSA2	ICSA	1	B	0.01	24.91	15	<PQL
ICSAB2	ICSAB	1	B	0.97	0.25	15	PASS

RSD SUMMARY: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
RINSE	RINSE	1	B	0.01	8.07	15	PASS
RINSE	RINSE	1	B	0.01	8.62	15	PASS
CCV4	CCV	1	B	5.05	0.49	15	PASS
CCB4	CCB	1	B	0.02	7.83	15	PASS
CCV5	CCV	1	B	5.04	0.48	15	PASS
CCB5	CCB	1	B	0.01	11.75	15	PASS
CCV6	CCV	1	B	5.04	0.6	15	PASS
CCB6	CCB	1	B	0.01	13.31	15	PASS
ICSA3	ICSA	1	B	0.01	29.56	15	<PQL
ICSAB3	ICSAB	1	B	0.96	0.19	15	PASS
CalBlk	IBLK	1	Ca	0	0.12	15	PASS
Standard1	ICAL	1	Ca	0.2	0.47	15	PASS
Standard2	ICAL	1	Ca	1	0.24	15	PASS
Standard3	ICAL	1	Ca	2	0.55	15	PASS
Standard4	ICAL	1	Ca	5	0.53	15	PASS
Standard5	ICAL	1	Ca	7.5	0.75	15	PASS
Standard6	ICAL	1	Ca	10	0.38	15	PASS
Standard7	ICAL	1	Ca	20	0.15	15	PASS
ICV	ICV	1	Ca	10.01	0.38	15	PASS
ICB	ICB	1	Ca	0	4056.95	15	<PQL
LLICV1	CCV1	1	Ca	0.21	0.48	20	PASS
ICSA1	ICSA	1	Ca	5.48	13.94	15	PASS
ICSA1	ICSA	1	Ca	481.13	0.21	15	PASS
ICSA1	ICSA	1	Ca	459.92	0.42	15	PASS
ICSAB1	ICSAB	1	Ca	449.36	0.53	15	PASS
RINSE	RINSE	1	Ca	0.05	19.91	15	<PQL
MB-107026	MBLK	1	Ca	0	48.38	15	<PQL
LCS1-107026	LCS	1	Ca	10.89	1.85	15	PASS
N063248-005C	SAMP	1	Ca	237.93	0.07	15	PASS
N063248-005C	SAMP	5	Ca	48.72	0.03	15	PASS
N063248-005C-PS	PS	1	Ca	244.45	0.07	15	PASS
N063248-005C-MS1	MS	1	Ca	246.94	0.27	15	PASS
N063248-005C-MSD1	MSD	1	Ca	233.62	0.61	15	PASS
N063248-006C	SAMP	1	Ca	353.75	0.24	15	PASS
N063248-007C	SAMP	1	Ca	332.07	0.39	15	PASS
CCV1	CCV	1	Ca	10.36	0.7	15	PASS
CCB1	CCB	1	Ca	0	32.4	15	<PQL
N063248-008C	SAMP	1	Ca	352.66	0.12	15	PASS
N063248-010B	SAMP	1	Ca	141.67	0.23	15	PASS
N063248-011B	SAMP	1	Ca	251.01	0.23	15	PASS
N063249-007C	SAMP	1	Ca	262.45	0.5	15	PASS
N063249-009C	SAMP	1	Ca	393.96	0.27	15	PASS

RSD SUMMARY: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
N063249-011C	SAMP	1	Ca	511.7	0.53	15	PASS
N063249-013C	SAMP	1	Ca	277.99	0.19	15	PASS
N063249-015C	SAMP	1	Ca	339.65	0.61	15	PASS
N063249-017C	SAMP	1	Ca	151.99	0.05	15	PASS
N063249-018C	SAMP	1	Ca	587.27	0.29	15	PASS
CCV2	CCV	1	Ca	10.32	0.62	15	PASS
CCB2	CCB	1	Ca	0	71.22	15	<PQL
CCV3	CCV	1	Ca	10.16	0.21	15	PASS
CCB3	CCB	1	Ca	0	379.63	15	<PQL
ICSA2	ICSA	1	Ca	452.43	0.15	15	PASS
ICSAB2	ICSAB	1	Ca	449.9	0.37	15	PASS
RINSE	RINSE	1	Ca	0.03	3.65	15	PASS
RINSE	RINSE	1	Ca	0.02	16.41	15	<PQL
CCV4	CCV	1	Ca	10.22	0.58	15	PASS
CCB4	CCB	1	Ca	0	154.89	15	<PQL
CCV5	CCV	1	Ca	10.17	0.4	15	PASS
CCB5	CCB	1	Ca	0	65.9	15	<PQL
CCV6	CCV	1	Ca	10.11	0.68	15	PASS
CCB6	CCB	1	Ca	0	89.23	15	<PQL
ICSA3	ICSA	1	Ca	451.28	0.32	15	PASS
ICSAB3	ICSAB	1	Ca	442.35	0.09	15	PASS
CalBlk	IBLK	1	Fe	0	4.79	15	PASS
Standard1	ICAL	1	Fe	0.02	3.3	15	PASS
Standard2	ICAL	1	Fe	0.05	1.26	15	PASS
Standard3	ICAL	1	Fe	2	0.37	15	PASS
Standard4	ICAL	1	Fe	5	0.7	15	PASS
Standard5	ICAL	1	Fe	7.5	0.76	15	PASS
Standard6	ICAL	1	Fe	10	0.37	15	PASS
Standard7	ICAL	1	Fe	20	0.65	15	PASS
ICV	ICV	1	Fe	10.06	0.34	15	PASS
ICB	ICB	1	Fe	0	9.12	15	PASS
LLICV1	CCV1	1	Fe	0.02	1.2	20	PASS
ICSA1	ICSA	1	Fe	26.91	22.38	15	NR!
ICSA1	ICSA	1	Fe	182.18	0.05	15	PASS
ICSA1	ICSA	1	Fe	174.62	0.07	15	PASS
ICSAB1	ICSAB	1	Fe	170.21	0.13	15	PASS
RINSE	RINSE	1	Fe	0.04	13.45	15	PASS
MB-107026	MBLK	1	Fe	0	7.08	15	PASS
LCS1-107026	LCS	1	Fe	0.09	1.13	15	PASS
N063248-005C	SAMP	1	Fe	0.36	0.29	15	PASS
N063248-005C	SAMP	5	Fe	0.1	0.39	15	PASS
N063248-005C-PS	PS	1	Fe	0.44	0.26	15	PASS

RSD SUMMARY: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
N063248-005C-MS1	MS	1	Fe	0.51	0.25	15	PASS
N063248-005C-MSD1	MSD	1	Fe	0.49	0.49	15	PASS
N063248-006C	SAMP	1	Fe	0.16	0.82	15	PASS
N063248-007C	SAMP	1	Fe	0.15	0.28	15	PASS
CCV1	CCV	1	Fe	10.31	0.73	15	PASS
CCB1	CCB	1	Fe	0	73.65	15	<PQL
N063248-008C	SAMP	1	Fe	0.13	1.17	15	PASS
N063248-010B	SAMP	1	Fe	0.02	4.1	15	PASS
N063248-011B	SAMP	1	Fe	0.35	0.36	15	PASS
N063249-007C	SAMP	1	Fe	0.61	0.57	15	PASS
N063249-009C	SAMP	1	Fe	1.04	0.3	15	PASS
N063249-011C	SAMP	1	Fe	23.08	0.61	15	PASS
N063249-013C	SAMP	1	Fe	0.28	1.21	15	PASS
N063249-015C	SAMP	1	Fe	0.84	0.42	15	PASS
N063249-017C	SAMP	1	Fe	5.07	0.58	15	PASS
N063249-018C	SAMP	1	Fe	7.24	0.2	15	PASS
CCV2	CCV	1	Fe	10.24	0.59	15	PASS
CCB2	CCB	1	Fe	0	47.78	15	<PQL
CCV3	CCV	1	Fe	10.13	0.26	15	PASS
CCB3	CCB	1	Fe	0	135.65	15	<PQL
ICSA2	ICSA	1	Fe	172.57	0.08	15	PASS
ICSAB2	ICSAB	1	Fe	169.57	0.07	15	PASS
RINSE	RINSE	1	Fe	0.02	4.66	15	PASS
RINSE	RINSE	1	Fe	0	43.94	15	<PQL
CCV4	CCV	1	Fe	10.18	0.54	15	PASS
CCB4	CCB	1	Fe	0	69.03	15	<PQL
CCV5	CCV	1	Fe	10.15	0.38	15	PASS
CCB5	CCB	1	Fe	0	356.23	15	<PQL
CCV6	CCV	1	Fe	10.09	0.65	15	PASS
CCB6	CCB	1	Fe	0	62.82	15	<PQL
ICSA3	ICSA	1	Fe	171.39	0.12	15	PASS
ICSAB3	ICSAB	1	Fe	166.83	0.02	15	PASS
CalBlk	IBLK	1	Mg	0	9.93	15	PASS
Standard1	ICAL	1	Mg	0.1	0.52	15	PASS
Standard2	ICAL	1	Mg	1	0.19	15	PASS
Standard3	ICAL	1	Mg	2	0.6	15	PASS
Standard4	ICAL	1	Mg	5	0.7	15	PASS
Standard5	ICAL	1	Mg	7.5	0.82	15	PASS
Standard6	ICAL	1	Mg	10	0.38	15	PASS
Standard7	ICAL	1	Mg	20	0.55	15	PASS
ICV	ICV	1	Mg	10.06	0.32	15	PASS
ICB	ICB	1	Mg	0	206.46	15	<PQL

RSD SUMMARY: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
LLICV1	CCV1	1	Mg	0.1	1.33	20	PASS
ICSA1	ICSA	1	Mg	162.91	21.37	15	NR!
ICSA1	ICSA	1	Mg	466.51	0.06	15	PASS
ICSA1	ICSA	1	Mg	446.02	0.02	15	PASS
ICSAB1	ICSAB	1	Mg	435.51	0	15	PASS
RINSE	RINSE	1	Mg	0.1	3.77	15	PASS
MB-107026	MBLK	1	Mg	0.01	19.26	15	<PQL
LCS1-107026	LCS	1	Mg	11.03	1.74	15	PASS
N063248-005C	SAMP	1	Mg	16.5	0.05	15	PASS
N063248-005C	SAMP	5	Mg	3.66	0.52	15	PASS
N063248-005C-PS	PS	1	Mg	25.1	0.15	15	PASS
N063248-005C-MS1	MS	1	Mg	25.68	0.12	15	PASS
N063248-005C-MSD1	MSD	1	Mg	24.77	0.05	15	PASS
N063248-006C	SAMP	1	Mg	2.89	0.33	15	PASS
N063248-007C	SAMP	1	Mg	2.7	0.07	15	PASS
CCV1	CCV	1	Mg	10.14	0.75	15	PASS
CCB1	CCB	1	Mg	0	125.18	15	<PQL
N063248-008C	SAMP	1	Mg	2.83	0.54	15	PASS
N063248-010B	SAMP	1	Mg	35.26	0.46	15	PASS
N063248-011B	SAMP	1	Mg	17	0.04	15	PASS
N063249-007C	SAMP	1	Mg	15.93	0.63	15	PASS
N063249-009C	SAMP	1	Mg	31.52	0.1	15	PASS
N063249-011C	SAMP	1	Mg	365.94	0.11	15	PASS
N063249-013C	SAMP	1	Mg	11.63	0.37	15	PASS
N063249-015C	SAMP	1	Mg	24.72	0.17	15	PASS
N063249-017C	SAMP	1	Mg	39.93	0.04	15	PASS
N063249-018C	SAMP	1	Mg	291.41	0.06	15	PASS
CCV2	CCV	1	Mg	10.16	0.68	15	PASS
CCB2	CCB	1	Mg	0.01	14.94	15	PASS
CCV3	CCV	1	Mg	10.12	0.31	15	PASS
CCB3	CCB	1	Mg	0	69.78	15	<PQL
ICSA2	ICSA	1	Mg	439.98	0.05	15	PASS
ICSAB2	ICSAB	1	Mg	431.77	0.05	15	PASS
RINSE	RINSE	1	Mg	0.06	0.13	15	PASS
RINSE	RINSE	1	Mg	0.01	12.78	15	PASS
CCV4	CCV	1	Mg	10.13	0.44	15	PASS
CCB4	CCB	1	Mg	0.01	33.32	15	<PQL
CCV5	CCV	1	Mg	10.15	0.4	15	PASS
CCB5	CCB	1	Mg	0.01	20.97	15	<PQL
CCV6	CCV	1	Mg	10.14	0.61	15	PASS
CCB6	CCB	1	Mg	0	27.32	15	<PQL
ICSA3	ICSA	1	Mg	440.13	0.05	15	PASS

RSD SUMMARY: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
ICSAB3	ICSAB	1	Mg	430.33	0.01	15	PASS

RSD SUMMARY: 240226A

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	K	0	2.2	15	PASS
Standard1	ICAL	1	K	0.1	16.92	15	<PQL
Standard2	ICAL	1	K	1	2.98	15	PASS
Standard3	ICAL	1	K	5	0.53	15	PASS
Standard4	ICAL	1	K	10	0.25	15	PASS
Standard5	ICAL	1	K	20	0.44	15	PASS
Standard6	ICAL	1	K	40	0.2	15	PASS
ICV	ICV	1	K	9.98	0.24	15	PASS
ICB	ICB	1	K	-0.01	256.99	15	<PQL
LLICV	CCV	1	K	0.49	1.36	20	PASS
ICSA1	ICSA	1	K	-0.01	272.73	15	<PQL
ICSAB1	ICSAB	1	K	9.91	0.15	15	PASS
MB-107026	MBLK	1	K	0.02	147.9	15	<PQL
LCS2-107026	LCS	1	K	19.75	0.12	15	PASS
N063248-005C	SAMP	5	K	6.96	0.29	15	PASS
N063248-006C	SAMP	5	K	8.75	0.24	15	PASS
N063248-007C	SAMP	5	K	8.26	0.52	15	PASS
N063248-008C	SAMP	5	K	8.91	0.38	15	PASS
N063248-010B	SAMP	5	K	2.16	1.97	15	PASS
N063248-011B	SAMP	5	K	7.2	0.57	15	PASS
CCV1	CCV	1	K	10.06	0.09	15	PASS
CCB1	CCB	1	K	0.04	35.78	15	<PQL
CCV2	CCV	1	K	10.25	0.29	15	PASS
CCB2	CCB	1	K	0.11	32.94	15	<PQL
N063248-005C	SAMP	500	K	0.14	1.9	15	PASS
N063248-006C	SAMP	25	K	2.54	13.59	15	PASS
N063248-006C	SAMP	500	K	0.19	12.14	15	PASS
N063248-006C	SAMP	2500	K	0.09	16.09	15	<PQL
N063248-006C-PS	PS	5	K	33.4	0.28	15	PASS
N063248-006C-PS	PS	500	K	16.03	0.15	15	PASS
CCV3	CCV	1	K	10.33	0.26	15	PASS
CCB3	CCB	1	K	0.1	19.17	15	<PQL
N063248-006C-MS2	MS	5	K	13.28	0.22	15	PASS
N063248-006C-MS2	MS	500	K	0.29	1.03	15	PASS
N063248-006C-MSD2	MSD	5	K	13.16	0.33	15	PASS
N063248-006C-MSD2	MSD	500	K	0.3	9.67	15	PASS
N063248-007C	SAMP	500	K	0.21	4.35	15	PASS
N063248-008C	SAMP	500	K	0.21	10.03	15	PASS
N063248-010B	SAMP	25	K	0.56	2.69	15	PASS
N063248-011B	SAMP	500	K	0.16	14.87	15	PASS
CCV4	CCV	1	K	10.34	0.34	15	PASS
CCB4	CCB	1	K	0.08	33.65	15	<PQL

RSD SUMMARY: 240226A

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
ICSA2	ICSA	1	K	0.07	27.51	15	<PQL
ICSAB2	ICSAB	1	K	10.34	0.22	15	PASS
CCV5	CCV	1	K	10.44	0.25	15	PASS
CCV5	CCV	1	K	10.54	0.17	15	PASS
CCB5	CCB	1	K	0.08	42.74	15	<PQL
CCV6	CCV	1	K	10.67	0.33	15	PASS
CCB6	CCB	1	K	0.13	18.56	15	<PQL
ICSA3	ICSA	1	K	0.12	18.53	15	<PQL
ICSAB3	ICSAB	1	K	10.58	0.27	15	PASS
CalBlk	IBLK	1	Na	0	8.77	15	PASS
Standard1	ICAL	1	Na	0.1	1.51	15	PASS
Standard2	ICAL	1	Na	1	0.84	15	PASS
Standard3	ICAL	1	Na	5	0.09	15	PASS
Standard4	ICAL	1	Na	10	0.16	15	PASS
Standard5	ICAL	1	Na	20	0.45	15	PASS
Standard6	ICAL	1	Na	40	0.15	15	PASS
ICV	ICV	1	Na	10.01	0.02	15	PASS
ICB	ICB	1	Na	0.01	66.16	15	<PQL
LLICV	CCV	1	Na	0.52	0.32	20	PASS
ICSA1	ICSA	1	Na	0	255.43	15	<PQL
ICSAB1	ICSAB	1	Na	10.04	0.16	15	PASS
MB-107026	MBLK	1	Na	0	127.06	15	<PQL
LCS2-107026	LCS	1	Na	19.6	0.68	15	PASS
N063248-005C	SAMP	5	Na	570.54	0.16	15	PASS
N063248-006C	SAMP	5	Na	866.76	0.84	15	PASS
N063248-007C	SAMP	5	Na	802.71	0.29	15	PASS
N063248-008C	SAMP	5	Na	867.84	0.91	15	PASS
N063248-010B	SAMP	5	Na	45.97	0.3	15	PASS
N063248-011B	SAMP	5	Na	588.21	0.36	15	PASS
CCV1	CCV	1	Na	10.18	0.04	15	PASS
CCB1	CCB	1	Na	0.09	6.95	15	PASS
CCV2	CCV	1	Na	10.7	0.43	15	PASS
CCB2	CCB	1	Na	0.38	7.56	15	PASS
N063248-005C	SAMP	500	Na	6.37	0.57	15	PASS
N063248-006C	SAMP	25	Na	264.11	14.17	15	PASS
N063248-006C	SAMP	500	Na	9	0.54	15	PASS
N063248-006C	SAMP	2500	Na	2.43	5.71	15	PASS
N063248-006C-PS	PS	5	Na	873.82	0.76	15	PASS
N063248-006C-PS	PS	500	Na	27.3	0.33	15	PASS
CCV3	CCV	1	Na	10.63	0.27	15	PASS
CCB3	CCB	1	Na	0.26	3.98	15	PASS
N063248-006C-MS2	MS	5	Na	814.85	0.63	15	PASS

RSD SUMMARY: 240226A

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
N063248-006C-MS2	MS	500	Na	9.23	0.47	15	PASS
N063248-006C-MSD2	MSD	5	Na	806.84	0.14	15	PASS
N063248-006C-MSD2	MSD	500	Na	8.92	0.55	15	PASS
N063248-007C	SAMP	500	Na	8.98	0.42	15	PASS
N063248-008C	SAMP	500	Na	9.2	0.36	15	PASS
N063248-010B	SAMP	25	Na	9.7	0.13	15	PASS
N063248-011B	SAMP	500	Na	6.58	0.17	15	PASS
CCV4	CCV	1	Na	10.49	0.16	15	PASS
CCB4	CCB	1	Na	0.2	2.5	15	PASS
ICSA2	ICSA	1	Na	0.16	3.82	15	PASS
ICSAB2	ICSAB	1	Na	10.43	0.1	15	PASS
CCV5	CCV	1	Na	10.54	0.11	15	PASS
CCV5	CCV	1	Na	10.65	0.2	15	PASS
CCB5	CCB	1	Na	0.16	5.32	15	PASS
CCV6	CCV	1	Na	11.11	0.32	15	PASS
CCB6	CCB	1	Na	0.44	8.09	15	PASS
ICSA3	ICSA	1	Na	0.36	5.49	15	PASS
ICSAB3	ICSAB	1	Na	10.73	0.26	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240223A

Instrument ID: ICP-03

STANDARD CODE	
Standard1	MWST-240105M, 0.5<50mL
Standard2	MWST-240105N
Standard3	MWST-240105O, 5<50mL
Standard4	MWST-240105O,12.5<50mL
Standard5	MWST-240105O, 15<40mL
Standard6	MWST-240105O, 25<50mL
Standard7	MWST-240105O
ICV	MWST-240105AE
CCV	MWST-240105O, 25<50mL
ICSA/ICSAB	MWST-240105P / MWST-240105Q
Int. Std. (Y)	MWST-240105B
PS Spike	MWST-240105X / Y/ Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	02/23/2024	11:44:54 AM
2	Standard1	ICAL	1	02/23/2024	11:49:07 AM
3	Standard2	ICAL	1	02/23/2024	11:52:50 AM
4	Standard3	ICAL	1	02/23/2024	11:56:34 AM
5	Standard4	ICAL	1	02/23/2024	11:59:50 AM
6	Standard5	ICAL	1	02/23/2024	12:04:04 PM
7	Standard6	ICAL	1	02/23/2024	12:08:16 PM
8	Standard7	ICAL	1	02/23/2024	12:12:29 PM
310	ICV	ICV	1	02/23/2024	12:22:17 PM
1	ICB	ICB	1	02/23/2024	12:26:37 PM
2	LLICV1	CCV1	1	02/23/2024	12:30:51 PM
9	ICSA1	ICSA	1	02/23/2024	12:35:05 PM
9	ICSA1	ICSA	1	02/23/2024	12:40:32 PM
9	ICSA1	ICSA	1	02/23/2024	12:49:27 PM
10	ICSAB1	ICSAB	1	02/23/2024	12:54:28 PM
299	RINSE	RINSE	1	02/23/2024	12:59:30 PM
11	MB-107026	MBLK	1	02/23/2024	01:07:19 PM
12	LCS1-107026	LCS	1	02/23/2024	01:14:23 PM
13	N063248-005C	SAMP	1	02/23/2024	01:19:08 PM
14	N063248-005C	SAMP	5	02/23/2024	01:24:27 PM
15	N063248-005C-PS	PS	1	02/23/2024	01:28:12 PM
16	N063248-005C-MS1	MS	1	02/23/2024	01:33:31 PM
17	N063248-005C-MSD1	MSD	1	02/23/2024	01:38:50 PM
18	N063248-006C	SAMP	1	02/23/2024	01:44:10 PM
19	N063248-007C	SAMP	1	02/23/2024	01:49:29 PM
7	CCV1	CCV	1	02/23/2024	01:54:50 PM
1	CCB1	CCB	1	02/23/2024	01:59:05 PM
20	N063248-008C	SAMP	1	02/23/2024	02:03:19 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
21	N063248-010B	SAMP	1	02/23/2024	02:08:40 PM
22	N063248-011B	SAMP	1	02/23/2024	02:13:59 PM
23	N063249-007C	SAMP	1	02/23/2024	02:19:21 PM
24	N063249-009C	SAMP	1	02/23/2024	02:24:10 PM
25	N063249-011C	SAMP	1	02/23/2024	02:29:00 PM
26	N063249-013C	SAMP	1	02/23/2024	02:33:58 PM
27	N063249-015C	SAMP	1	02/23/2024	02:39:18 PM
28	N063249-017C	SAMP	1	02/23/2024	02:44:07 PM
29	N063249-018C	SAMP	1	02/23/2024	02:48:26 PM
7	CCV2	CCV	1	02/23/2024	02:53:25 PM
1	CCB2	CCB	1	02/23/2024	02:57:39 PM
30	MB-107028	MBLK	1	02/23/2024	03:01:53 PM
31	LCS-107028	LCS	1	02/23/2024	03:08:27 PM
32	N063248-005D	SAMP	1	02/23/2024	03:13:14 PM
33	N063248-005D	SAMP	5	02/23/2024	03:18:34 PM
34	N063248-005D-PS	PS	1	02/23/2024	03:22:21 PM
35	N063248-005D-MS	MS	1	02/23/2024	03:27:13 PM
36	N063248-005D-MSD	MSD	1	02/23/2024	03:32:04 PM
37	N063248-006D	SAMP	1	02/23/2024	03:36:55 PM
38	N063248-007D	SAMP	1	02/23/2024	03:42:15 PM
39	N063248-008D	SAMP	1	02/23/2024	03:47:35 PM
7	CCV3	CCV	1	02/23/2024	03:52:56 PM
1	CCB3	CCB	1	02/23/2024	03:57:10 PM
9	ICSA2	ICSA	1	02/23/2024	04:01:24 PM
10	ICSAB2	ICSAB	1	02/23/2024	04:06:25 PM
299	RINSE	RINSE	1	02/23/2024	04:13:31 PM
40	N063248-011F	SAMP	1	02/23/2024	04:17:20 PM
300	RINSE	RINSE	1	02/23/2024	04:22:39 PM
41	MB-107062	MBLK	1	02/23/2024	04:26:58 PM
42	LCS1-107062	LCS	1	02/23/2024	04:34:52 PM
43	N063295-005C	SAMP	1	02/23/2024	04:39:39 PM
44	N063295-005C	SAMP	5	02/23/2024	04:44:59 PM
45	N063295-005C-PS	PS	1	02/23/2024	04:48:45 PM
46	N063295-005C-MS1	MS	1	02/23/2024	04:54:06 PM
47	N063295-005C-MSD1	MSD	1	02/23/2024	04:58:59 PM
7	CCV4	CCV	1	02/23/2024	05:03:48 PM
1	CCB4	CCB	1	02/23/2024	05:08:02 PM
48	N063295-006C	SAMP	1	02/23/2024	05:12:14 PM
49	N063295-007C	SAMP	1	02/23/2024	05:17:33 PM
50	N063295-008C	SAMP	1	02/23/2024	05:22:53 PM
51	N063297-001C	SAMP	1	02/23/2024	05:28:13 PM
52	N063303-001B	SAMP	1	02/23/2024	05:31:57 PM
53	N063303-002B	SAMP	1	02/23/2024	05:37:15 PM
54	N063303-006B	SAMP	1	02/23/2024	05:42:33 PM
55	N063303-008B	SAMP	1	02/23/2024	05:47:24 PM
56	MB-107067	MBLK	1	02/23/2024	05:57:03 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
57	LCS-107067	LCS	1	02/23/2024	06:01:17 PM
7	CCV5	CCV	1	02/23/2024	06:06:04 PM
1	CCB5	CCB	1	02/23/2024	06:10:19 PM
58	N063295-005D	SAMP	1	02/23/2024	06:14:32 PM
59	N063295-005D	SAMP	5	02/23/2024	06:19:53 PM
60	N063295-005D-PS	PS	1	02/23/2024	06:23:39 PM
61	N063295-005D-MS1	MS	1	02/23/2024	06:28:59 PM
62	N063295-005D-MSD1	MSD	1	02/23/2024	06:33:49 PM
63	N063295-006D	SAMP	1	02/23/2024	06:38:39 PM
64	N063295-007D	SAMP	1	02/23/2024	06:43:59 PM
65	N063295-008D	SAMP	1	02/23/2024	06:49:19 PM
7	CCV6	CCV	1	02/23/2024	06:54:39 PM
1	CCB6	CCB	1	02/23/2024	06:58:54 PM
9	ICSA3	ICSA	1	02/23/2024	07:03:06 PM
10	ICSAB3	ICSAB	1	02/23/2024	07:08:07 PM

INJECTION LOG: 240226A

Instrument ID: ICP-02

STANDARD CODE	
Standard1	MWST-240105D, 0.025<50mL
Standard2	MWST-240105D, 0.25<50mL
Standard3	MWST-240105D, 1.25<50mL
Standard4	MWST-240105D, 2.5<50mL
Standard5	MWST-240105D, 5<50mL
Standard6	MWST-240105D, 10<50mL
ICV	MWST-231222A
CCV	MWST-240105D, 2.5<50mL
ICSA/ICSAB	MWST-240105P / MWST-240105E
Int. Std. (Sc):	MWST-240105B
PS Spike	MSST-231025E/231025F/231130A

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	02/26/2024	12:11:35 PM
11	Standard1	ICAL	1	02/26/2024	12:14:30 PM
12	Standard2	ICAL	1	02/26/2024	12:17:23 PM
13	Standard3	ICAL	1	02/26/2024	12:20:16 PM
14	Standard4	ICAL	1	02/26/2024	12:23:41 PM
15	Standard5	ICAL	1	02/26/2024	12:27:08 PM
16	Standard6	ICAL	1	02/26/2024	12:30:34 PM
17	ICV	ICV	1	02/26/2024	12:33:24 PM
1	ICB	ICB	1	02/26/2024	12:36:52 PM
18	LLICV	CCV	1	02/26/2024	12:39:46 PM
19	ICSA1	ICSA	1	02/26/2024	12:42:41 PM
20	ICSAB1	ICSAB	1	02/26/2024	12:45:36 PM
23	MB-107026	MBLK	1	02/26/2024	12:53:15 PM
24	LCS2-107026	LCS	1	02/26/2024	12:56:08 PM
25	N063248-005C	SAMP	5	02/26/2024	12:59:31 PM
26	N063248-006C	SAMP	5	02/26/2024	01:04:01 PM
27	N063248-007C	SAMP	5	02/26/2024	01:08:29 PM
28	N063248-008C	SAMP	5	02/26/2024	01:12:58 PM
29	N063248-010B	SAMP	5	02/26/2024	01:17:29 PM
30	N063248-011B	SAMP	5	02/26/2024	01:20:23 PM
31	MB-107062	MBLK	1	02/26/2024	01:24:52 PM
32	LCS2-107062	LCS	1	02/26/2024	01:27:47 PM
14	CCV1	CCV	1	02/26/2024	01:31:12 PM
1	CCB1	CCB	1	02/26/2024	01:34:39 PM
33	N063295-005C	SAMP	5	02/26/2024	01:37:33 PM
34	N063295-006C	SAMP	5	02/26/2024	01:42:04 PM
35	N063295-007C	SAMP	5	02/26/2024	01:47:07 PM
36	N063295-008C	SAMP	5	02/26/2024	01:51:35 PM
14	CCV2	CCV	1	02/26/2024	01:56:04 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CCB2	CCB	1	02/26/2024	01:59:29 PM
37	N063248-005C	SAMP	500	02/26/2024	02:01:40 PM
38	N063248-006C	SAMP	25	02/26/2024	02:04:32 PM
39	N063248-006C	SAMP	500	02/26/2024	02:08:58 PM
40	N063248-006C	SAMP	2500	02/26/2024	02:11:52 PM
41	N063248-006C-PS	PS	5	02/26/2024	02:14:46 PM
42	N063248-006C-PS	PS	500	02/26/2024	02:19:15 PM
14	CCV3	CCV	1	02/26/2024	02:22:10 PM
1	CCB3	CCB	1	02/26/2024	02:25:36 PM
43	N063248-006C-MS2	MS	5	02/26/2024	02:28:30 PM
44	N063248-006C-MS2	MS	500	02/26/2024	02:33:01 PM
45	N063248-006C-MSD2	MSD	5	02/26/2024	02:35:56 PM
46	N063248-006C-MSD2	MSD	500	02/26/2024	02:40:26 PM
47	N063248-007C	SAMP	500	02/26/2024	02:43:22 PM
48	N063248-008C	SAMP	500	02/26/2024	02:46:16 PM
49	N063248-010B	SAMP	25	02/26/2024	02:49:10 PM
50	N063248-011B	SAMP	500	02/26/2024	02:52:04 PM
51	N063295-005C	SAMP	25	02/26/2024	02:55:05 PM
52	N063295-005C	SAMP	500	02/26/2024	02:59:29 PM
14	CCV4	CCV	1	02/26/2024	03:02:23 PM
1	CCB4	CCB	1	02/26/2024	03:05:48 PM
19	ICSA2	ICSA	1	02/26/2024	03:08:42 PM
20	ICSAB2	ICSAB	1	02/26/2024	03:11:38 PM
53	N063295-005C	SAMP	2500	02/26/2024	03:15:05 PM
54	N063295-005C-PS	PS	5	02/26/2024	03:17:59 PM
55	N063295-005C-PS	PS	500	02/26/2024	03:22:28 PM
56	N063295-005C-MS2	MS	5	02/26/2024	03:25:53 PM
57	N063295-005C-MS2	MS	500	02/26/2024	03:30:23 PM
58	N063295-005C-MSD2	MSD	5	02/26/2024	03:33:19 PM
59	N063295-005C-MSD2	MSD	500	02/26/2024	03:37:48 PM
60	N063295-006C	SAMP	500	02/26/2024	03:40:41 PM
61	N063295-007C	SAMP	500	02/26/2024	03:43:35 PM
62	N063295-008C	SAMP	500	02/26/2024	03:46:30 PM
62	N063295-008C	SAMP	500	02/26/2024	03:50:50 PM
62	N063295-008C	SAMP	500	02/26/2024	03:56:26 PM
14	CCV5	CCV	1	02/26/2024	03:58:28 PM
53	N063295-005C	SAMP	2500	02/26/2024	04:02:16 PM
54	N063295-005C-PS	PS	5	02/26/2024	04:05:14 PM
55	N063295-005C-PS	PS	500	02/26/2024	04:09:43 PM
56	N063295-005C-MS2	MS	5	02/26/2024	04:13:10 PM
57	N063295-005C-MS2	MS	500	02/26/2024	04:17:40 PM
58	N063295-005C-MSD2	MSD	5	02/26/2024	04:20:37 PM
59	N063295-005C-MSD2	MSD	500	02/26/2024	04:25:08 PM
60	N063295-006C	SAMP	500	02/26/2024	04:28:04 PM
61	N063295-007C	SAMP	500	02/26/2024	04:31:00 PM
70	N063295-008C	SAMP	500	02/26/2024	04:33:56 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
14	CCV5	CCV	1	02/26/2024	04:36:54 PM
1	CCB5	CCB	1	02/26/2024	04:40:22 PM
69	N063295-008C	SAMP	5	02/26/2024	04:43:19 PM
14	CCV6	CCV	1	02/26/2024	04:47:50 PM
1	CCB6	CCB	1	02/26/2024	04:51:17 PM
19	ICSA3	ICSA	1	02/26/2024	04:54:13 PM
20	ICSAB3	ICSAB	1	02/26/2024	04:57:10 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/22/2024 10:51:06 AM**
Prep End Date: **2/22/2024 3:00:00 PM**
Prep Batch **107026** Prep Code: **3010_W_DISS**

Reviewed/ Date: **KDG 3/19/2024**
Initials/ Date: _____
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-01**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS1-107026	Aqueous		25	☐	25	1.000		
LCS2-107026	Aqueous		25	☐	25	1.000		
MB-107026	Aqueous		25	☐	25	1.000		
N063248-005C	Groundwater	<2	25	☐	25	1.000		
N063248-005C-MS1	Groundwater	<2	25	☐	25	1.000		
N063248-005C-MSD1	Groundwater	<2	25	☐	25	1.000		
N063248-006C	Groundwater	<2	25	☐	25	1.000		
N063248-006C-MS2	Groundwater	<2	25	☐	25	1.000		
N063248-006C-MSD2	Groundwater	<2	25	☐	25	1.000		
N063248-007C	Groundwater	<2	25	☐	25	1.000		
N063248-008C	Groundwater	<2	25	☐	25	1.000		
N063248-010B	Groundwater	<2	25	☐	25	1.000		
N063248-011B	Groundwater	<2	25	☐	25	1.000		
N063249-007C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15258	HYDROCHLORIC ACID
16150	~~NITRIC ACID~~ NITRIC ACID

3/19/2024

Spk ID	Spike Name	SampType	AmtAdd
MSST-231025E	Sodium	LCS,MS,MSD	0.05
MSST-231025F	Potassium	LCS,MS,MSD	0.05
MSST-231130A	Strontium	LCS,MS,MSD	0.125
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/22/2024 10:51:06 AM**
Prep End Date: **2/22/2024 3:00:00 PM**
Prep Batch **107026** Prep Code:**3010_W_DISS**

Reviewed/ Date: **KDG 3/19/2024**
Initials/ Date: _____
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-01**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063249-009C	Groundwater	<2	25	☐	25	1.000		
N063249-011C	Groundwater	<2	25	☐	25	1.000		
N063249-013C	Groundwater	<2	25	☐	25	1.000		
N063249-015C	Groundwater	<2	25	☐	25	1.000		
N063249-017C	Groundwater	<2	25	☐	25	1.000		
N063249-018C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15258	HYDROCHLORIC ACID
16150	~~NITRIC ACID~~ NITRIC ACID

3/19/2024

Spk ID	Spike Name	SampType	AmtAdd
MSST-231025E	Sodium	LCS,MS,MSD	0.05
MSST-231025F	Potassium	LCS,MS,MSD	0.05
MSST-231130A	Strontium	LCS,MS,MSD	0.125
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240223A

Instrument ID: ICP-03

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Boron								
CalBlk	02/23/2024	11:44:54 AM	B	249.677	263	0.00	mg/L	
Standard1	02/23/2024	11:49:07 AM	B	249.677	1355	0.1	mg/L	
Standard3	02/23/2024	11:56:34 AM	B	249.677	13598	1.0	mg/L	
Standard4	02/23/2024	11:59:50 AM	B	249.677	34185	2.5	mg/L	
Standard5	02/23/2024	12:04:04 PM	B	249.677	51657	3.75	mg/L	
Standard6	02/23/2024	12:08:16 PM	B	249.677	69172	5.0	mg/L	
Standard7	02/23/2024	12:12:29 PM	B	249.677	139528	10.0	mg/L	1.0000
Magnesium								
CalBlk	02/23/2024	11:44:54 AM	Mg	279.077	113	0.00	mg/L	
Standard1	02/23/2024	11:49:07 AM	Mg	279.077	381	0.1	mg/L	
Standard2	02/23/2024	11:52:50 AM	Mg	279.077	3744	1.00	mg/L	
Standard3	02/23/2024	11:56:34 AM	Mg	279.077	7615	2.0	mg/L	
Standard4	02/23/2024	11:59:50 AM	Mg	279.077	19043	5.0	mg/L	
Standard5	02/23/2024	12:04:04 PM	Mg	279.077	28554	7.5	mg/L	
Standard6	02/23/2024	12:08:16 PM	Mg	279.077	38110	10.0	mg/L	
Standard7	02/23/2024	12:12:29 PM	Mg	279.077	75665	20.0	mg/L	1.0000
Calcium								
CalBlk	02/23/2024	11:44:54 AM	Ca	317.933	5528	0.00	mg/L	
Standard1	02/23/2024	11:49:07 AM	Ca	317.933	10102	0.2	mg/L	
Standard2	02/23/2024	11:52:50 AM	Ca	317.933	47523	1.00	mg/L	
Standard3	02/23/2024	11:56:34 AM	Ca	317.933	95363	2.0	mg/L	
Standard4	02/23/2024	11:59:50 AM	Ca	317.933	237007	5.0	mg/L	
Standard5	02/23/2024	12:04:04 PM	Ca	317.933	354461	7.5	mg/L	
Standard6	02/23/2024	12:08:16 PM	Ca	317.933	472404	10.0	mg/L	
Standard7	02/23/2024	12:12:29 PM	Ca	317.933	939880	20.0	mg/L	1.0000
Iron								
CalBlk	02/23/2024	11:44:54 AM	Fe	273.952	133	0.00	mg/L	
Standard1	02/23/2024	11:49:07 AM	Fe	273.952	166	0.02	mg/L	
Standard2	02/23/2024	11:52:50 AM	Fe	273.952	476	0.05	mg/L	
Standard3	02/23/2024	11:56:34 AM	Fe	273.952	15966	2.0	mg/L	
Standard4	02/23/2024	11:59:50 AM	Fe	273.952	39733	5.0	mg/L	
Standard5	02/23/2024	12:04:04 PM	Fe	273.952	59452	7.5	mg/L	
Standard6	02/23/2024	12:08:16 PM	Fe	273.952	78889	10.0	mg/L	
Standard7	02/23/2024	12:12:29 PM	Fe	273.952	155652	20.0	mg/L	1.0000

INITIAL CALIBRATION SUMMARY: 240226A

Instrument ID: ICP-02

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Sodium								
CalBlk	02/26/2024	12:11:35 PM	Na	589.61	-124	0.00	mg/L	
Standard1	02/26/2024	12:14:30 PM	Na	589.61	504	0.1000	mg/L	
Standard2	02/26/2024	12:17:23 PM	Na	589.61	4325	1.000	mg/L	
Standard3	02/26/2024	12:20:16 PM	Na	589.61	21151	5.000	mg/L	
Standard4	02/26/2024	12:23:41 PM	Na	589.61	42297	10.000	mg/L	
Standard5	02/26/2024	12:27:08 PM	Na	589.61	85911	20.000	mg/L	
Standard6	02/26/2024	12:30:34 PM	Na	589.61	167932	40.000	mg/L	1.0000
Potassium								
CalBlk	02/26/2024	12:11:35 PM	K	766.479	468	0.00	mg/L	
Standard1	02/26/2024	12:14:30 PM	K	766.479	170	0.1000	mg/L	
Standard2	02/26/2024	12:17:23 PM	K	766.479	1559	1.000	mg/L	
Standard3	02/26/2024	12:20:16 PM	K	766.479	7740	5.000	mg/L	
Standard4	02/26/2024	12:23:41 PM	K	766.479	15616	10.000	mg/L	
Standard5	02/26/2024	12:27:08 PM	K	766.479	31741	20.000	mg/L	
Standard6	02/26/2024	12:30:34 PM	K	766.479	62185	40.000	mg/L	1.0000

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **ICV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708208**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10061.140	20	10000	0	101	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **ZZZZZZ**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708210**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	19.964	20	20.00	0	99.8	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708224**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10309.918	20	10000	0	103	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708236**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10241.479	20	10000	0	102	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708248**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10133.536	20	10000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708260**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10177.476	20	10000	0	102	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708272**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10151.181	20	10000	0	102	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708282**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10093.401	20	10000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **ICV** SampType: **ICV** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **ICV** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708130**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	4.978	0.10	5.000	0	99.6	90	110				
Calcium	10.013	0.50	10.00	0	100	90	110				
Magnesium	10.064	0.10	10.00	0	101	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **ZZZZZZ** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708132**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.103	0.10	0.1000	0	103	80	120				
Calcium	0.210	0.50	0.2000	0	105	80	120				
Magnesium	0.100	0.10	0.1000	0	100	80	120				

Sample ID **CCV1** SampType: **CCV** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **CCV** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708146**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5.068	0.10	5.000	0	101	90	110				
Calcium	10.358	0.50	10.00	0	104	90	110				
Magnesium	10.144	0.10	10.00	0	101	90	110				

Sample ID **CCV2** SampType: **CCV** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **CCV** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708158**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5.047	0.10	5.000	0	101	90	110				
Calcium	10.319	0.50	10.00	0	103	90	110				
Magnesium	10.163	0.10	10.00	0	102	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **CCV3** SampType: **CCV** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **CCV** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708170**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5.037	0.10	5.000	0	101	90	110				
Calcium	10.164	0.50	10.00	0	102	90	110				
Magnesium	10.118	0.10	10.00	0	101	90	110				

Sample ID **CCV4** SampType: **CCV** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **CCV** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708182**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5.055	0.10	5.000	0	101	90	110				
Calcium	10.218	0.50	10.00	0	102	90	110				
Magnesium	10.129	0.10	10.00	0	101	90	110				

Sample ID **CCV5** SampType: **CCV** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **CCV** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708194**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5.040	0.10	5.000	0	101	90	110				
Calcium	10.168	0.50	10.00	0	102	90	110				
Magnesium	10.147	0.10	10.00	0	101	90	110				

Sample ID **CCV6** SampType: **CCV** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **CCV** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708204**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5.040	0.10	5.000	0	101	90	110				
Calcium	10.114	0.50	10.00	0	101	90	110				
Magnesium	10.137	0.10	10.00	0	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182926**
Client ID: **ICV**	Batch ID: **R182926**	TestNo: **EPA 6010B**		Analysis Date: **2/26/2024**	SeqNo: **5713390**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	9.976	0.50	10.00	0	99.8	90	110				
Sodium	10.014	0.50	10.00	0	100	90	110				

Sample ID **LLICV**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182926**
Client ID: **CCV**	Batch ID: **R182926**	TestNo: **EPA 6010B**		Analysis Date: **2/26/2024**	SeqNo: **5713392**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.491	0.50	0.5000	0	98.3	90	110				
Sodium	0.516	0.50	0.5000	0	103	90	110				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182926**
Client ID: **CCV**	Batch ID: **R182926**	TestNo: **EPA 6010B**		Analysis Date: **2/26/2024**	SeqNo: **5713405**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.064	0.50	10.00	0	101	90	110				
Sodium	10.183	0.50	10.00	0	102	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182926**
Client ID: **CCV**	Batch ID: **R182926**	TestNo: **EPA 6010B**		Analysis Date: **2/26/2024**	SeqNo: **5713411**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.254	0.50	10.00	0	103	90	110				
Sodium	10.698	0.50	10.00	0	107	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182926**
Client ID: **CCV**	Batch ID: **R182926**	TestNo: **EPA 6010B**		Analysis Date: **2/26/2024**	SeqNo: **5713419**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.334	0.50	10.00	0	103	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182926**
Client ID: **CCV**	Batch ID: **R182926**	TestNo: **EPA 6010B**		Analysis Date: **2/26/2024**	SeqNo: **5713419**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	10.635	0.50	10.00	0	106	90	110				

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182926**
Client ID: **CCV**	Batch ID: **R182926**	TestNo: **EPA 6010B**		Analysis Date: **2/26/2024**	SeqNo: **5713431**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.339	0.50	10.00	0	103	90	110				
Sodium	10.489	0.50	10.00	0	105	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **ICB**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708209**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.207	20									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCB**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708225**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.466	20									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCB**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708237**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.202	20									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCB**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708249**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.560	20									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCB**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708261**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.514	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCB**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708273**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-0.235249	20									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCB**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708283**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-1.130016	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182845**
Client ID: **ICB**	Batch ID: **R182845**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708131**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.011	0.10									
Calcium	0.000004	0.50									
Magnesium	0.001	0.10									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182845**
Client ID: **CCB**	Batch ID: **R182845**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708147**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.014	0.10									
Calcium	0.003	0.50									
Magnesium	0.001	0.10									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182845**
Client ID: **CCB**	Batch ID: **R182845**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708159**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.008	0.10									
Calcium	0.003	0.50									
Magnesium	0.006	0.10									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182845**
Client ID: **CCB**	Batch ID: **R182845**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708171**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.011	0.10									
Calcium	0.000485	0.50									
Magnesium	0.003	0.10									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182845**
Client ID: **CCB**	Batch ID: **R182845**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708183**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.015	0.10									
Calcium	0.002	0.50									
Magnesium	0.006	0.10									

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182845**
Client ID: **CCB**	Batch ID: **R182845**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708195**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.010	0.10									
Calcium	-0.001313	0.50									
Magnesium	0.007	0.10									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182845**
Client ID: **CCB**	Batch ID: **R182845**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708205**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.011	0.10									
Calcium	-0.001295	0.50									
Magnesium	0.003	0.10									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID	ICB	SampType:	ICB	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	182926
Client ID:	ICB	Batch ID:	R182926	TestNo:	EPA 6010B			Analysis Date:	2/26/2024	SeqNo:	5713391

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	-0.00681	0.50									
Sodium	0.007	0.50									

Sample ID	CCB1	SampType:	CCB	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	182926
Client ID:	CCB	Batch ID:	R182926	TestNo:	EPA 6010B			Analysis Date:	2/26/2024	SeqNo:	5713406

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.038	0.50									
Sodium	0.086	0.50									

Sample ID	CCB2	SampType:	CCB	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	182926
Client ID:	CCB	Batch ID:	R182926	TestNo:	EPA 6010B			Analysis Date:	2/26/2024	SeqNo:	5713412

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.110	0.50									
Sodium	0.376	0.50									

Sample ID	CCB3	SampType:	CCB	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	182926
Client ID:	CCB	Batch ID:	R182926	TestNo:	EPA 6010B			Analysis Date:	2/26/2024	SeqNo:	5713420

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.105	0.50									
Sodium	0.263	0.50									

Sample ID	CCB4	SampType:	CCB	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	182926
Client ID:	CCB	Batch ID:	R182926	TestNo:	EPA 6010B			Analysis Date:	2/26/2024	SeqNo:	5713432

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.078	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Detection of Na in CCB2 and CCB3 is greater than 1/2 PQL. However, detection in samples is 5x greater than the CCB detection.

3/19/2024

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182926**
Client ID: **CCB**	Batch ID: **R182926**	TestNo: **EPA 6010B**		Analysis Date: **2/26/2024**	SeqNo: **5713432**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	0.204	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ICSA** Batch ID: **R182846** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708213**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	576247.443	50	500000	0	115	80	120				
Calcium	459915.899	500	500000	0	92.0	80	120				
Iron	174616.860	20	200000	0	87.3	80	120				
Magnesium	446022.583	100	500000	0	89.2	80	120				

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ICSAB** Batch ID: **R182846** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708214**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	564316.966	50	500000	0	113	80	120				
Calcium	449363.078	500	500000	0	89.9	80	120				
Iron	170211.584	20	200000	0	85.1	80	120				
Magnesium	435511.791	100	500000	0	87.1	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ICSA** Batch ID: **R182846** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708250**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	555716.342	50	500000	0	111	80	120				
Calcium	452434.522	500	500000	0	90.5	80	120				
Iron	172573.740	20	200000	0	86.3	80	120				
Magnesium	439980.449	100	500000	0	88.0	80	120				

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ICSAB** Batch ID: **R182846** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708251**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	542214.110	50	500000	0	108	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ICSAB** Batch ID: **R182846** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708251**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	449903.261	500	500000	0	90.0	80	120				
Iron	169573.181	20	200000	0	84.8	80	120				
Magnesium	431773.625	100	500000	0	86.4	80	120				

Sample ID **ICSA3** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ICSA** Batch ID: **R182846** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708284**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	584468.181	50	500000	0	117	80	120				
Calcium	451278.962	500	500000	0	90.3	80	120				
Iron	171392.769	20	200000	0	85.7	80	120				
Magnesium	440134.747	100	500000	0	88.0	80	120				

Sample ID **ICSAB3** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ICSAB** Batch ID: **R182846** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708285**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	569749.122	50	500000	0	114	80	120				
Calcium	442346.814	500	500000	0	88.5	80	120				
Iron	166830.148	20	200000	0	83.4	80	120				
Magnesium	430330.236	100	500000	0	86.1	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **ICSA1**	SampType: **ICSA**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182845**
Client ID: **ICSA**	Batch ID: **R182845**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708135**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	576.247	0.050	500.0	0	115	80	120				
Boron	0.003	0.10									
Calcium	459.916	0.50	500.0	0	92.0	80	120				
Iron	174.617	0.020	200.0	0	87.3	80	120				
Magnesium	446.023	0.10	500.0	0	89.2	80	120				

Sample ID **ICSAB1**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182845**
Client ID: **ICSAB**	Batch ID: **R182845**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708136**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	564.317	0.050	500.0	0	113	80	120				
Boron	0.947	0.10	1.000	0	94.7	80	120				
Calcium	449.363	0.50	500.0	0	89.9	80	120				
Iron	170.212	0.020	200.0	0	85.1	80	120				
Magnesium	435.512	0.10	500.0	0	87.1	80	120				

Sample ID **ICSA2**	SampType: **ICSA**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182845**
Client ID: **ICSA**	Batch ID: **R182845**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708172**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	555.716	0.050	500.0	0	111	80	120				
Boron	0.006	0.10									
Calcium	452.435	0.50	500.0	0	90.5	80	120				
Iron	172.574	0.020	200.0	0	86.3	80	120				
Magnesium	439.980	0.10	500.0	0	88.0	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **ICSAB** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708173**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	542.214	0.050	500.0	0	108	80	120				
Boron	0.966	0.10	1.000	0	96.6	80	120				
Calcium	449.903	0.50	500.0	0	90.0	80	120				
Iron	169.573	0.020	200.0	0	84.8	80	120				
Magnesium	431.774	0.10	500.0	0	86.4	80	120				

Sample ID **ICSA3** SampType: **ICSA** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **ICSA** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708206**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	584.468	0.050	500.0	0	117	80	120				
Boron	0.010	0.10									
Calcium	451.279	0.50	500.0	0	90.3	80	120				
Iron	171.393	0.020	200.0	0	85.7	80	120				
Magnesium	440.135	0.10	500.0	0	88.0	80	120				

Sample ID **ICSAB3** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **ICSAB** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708207**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	569.749	0.050	500.0	0	114	80	120				
Boron	0.958	0.10	1.000	0	95.8	80	120				
Calcium	442.347	0.50	500.0	0	88.5	80	120				
Iron	166.830	0.020	200.0	0	83.4	80	120				
Magnesium	430.330	0.10	500.0	0	86.1	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID	ICSA1	SampType:	ICSA	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	182926
Client ID:	ICSA	Batch ID:	R182926	TestNo:	EPA 6010B			Analysis Date:	2/26/2024	SeqNo:	5713393

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	-0.005967	0.50									
Sodium	-0.001943	0.50									

Sample ID	ICSAB1	SampType:	ICSAB	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	182926
Client ID:	ICSAB	Batch ID:	R182926	TestNo:	EPA 6010B			Analysis Date:	2/26/2024	SeqNo:	5713394

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	9.908	0.50	10.00	0	99.1	80	120				
Sodium	10.043	0.50	10.00	0	100	80	120				

Sample ID	ICSA2	SampType:	ICSA	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	182926
Client ID:	ICSA	Batch ID:	R182926	TestNo:	EPA 6010B			Analysis Date:	2/26/2024	SeqNo:	5713433

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.068	0.50									
Sodium	0.161	0.50									

Sample ID	ICSAB2	SampType:	ICSAB	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	182926
Client ID:	ICSAB	Batch ID:	R182926	TestNo:	EPA 6010B			Analysis Date:	2/26/2024	SeqNo:	5713434

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.344	0.50	10.00	0	103	80	120				
Sodium	10.434	0.50	10.00	0	104	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	1	99.54	65-125	PASS
Standard2	ICAL	1	0.96	96.11	65-125	PASS
Standard3	ICAL	1	0.95	95.21	65-125	PASS
Standard4	ICAL	1	0.94	93.79	65-125	PASS
Standard5	ICAL	1	0.93	93.21	65-125	PASS
Standard6	ICAL	1	0.92	91.99	65-125	PASS
Standard7	ICAL	1	0.91	90.59	65-125	PASS
ICV	ICV	1	0.91	91.25	65-125	PASS
ICB	ICB	1	0.93	93.31	65-125	PASS
LLICV1	CCV1	1	0.93	93.05	65-125	PASS
ICSA1	ICSA	1	0	0.01	65-125	NR!
ICSA1	ICSA	1	0.79	79.4	65-125	PASS
ICSA1	ICSA	1	0.8	79.81	65-125	PASS
ICSAB1	ICSAB	1	0.81	81.01	65-125	PASS
RINSE	RINSE	1	0.78	78.14	65-125	PASS
MB-107026	MBLK	1	1.21	120.84	65-125	PASS
LCS1-107026	LCS	1	0.9	90.44	65-125	PASS
N063248-005C	SAMP	1	0.75	74.82	65-125	PASS
N063248-005C	SAMP	5	0.88	88.41	65-125	PASS
N063248-005C-PS	PS	1	0.74	73.62	65-125	PASS
N063248-005C-MS1	MS	1	0.75	74.51	65-125	PASS
N063248-005C-MSD1	MSD	1	0.77	76.8	65-125	PASS
N063248-006C	SAMP	1	0.71	70.86	65-125	PASS
N063248-007C	SAMP	1	0.74	74.4	65-125	PASS
CCV1	CCV	1	1.03	102.88	65-125	PASS
CCB1	CCB	1	1.04	103.63	65-125	PASS
N063248-008C	SAMP	1	0.73	73.43	65-125	PASS
N063248-010B	SAMP	1	0.93	93.34	65-125	PASS
N063248-011B	SAMP	1	0.79	78.66	65-125	PASS
N063249-007C	SAMP	1	0.76	75.84	65-125	PASS
N063249-009C	SAMP	1	0.76	76.46	65-125	PASS
N063249-011C	SAMP	1	0.76	76.42	65-125	PASS
N063249-013C	SAMP	1	0.69	69.43	65-125	PASS
N063249-015C	SAMP	1	0.72	72.27	65-125	PASS
N063249-017C	SAMP	1	0.95	94.77	65-125	PASS
N063249-018C	SAMP	1	0.74	73.88	65-125	PASS
CCV2	CCV	1	1.03	102.69	65-125	PASS
CCB2	CCB	1	1.02	102.2	65-125	PASS
CCV3	CCV	1	1.01	100.84	65-125	PASS
CCB3	CCB	1	1.03	103.05	65-125	PASS

INTERNAL STANDARD: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
ICSA2	ICSA	1	0.85	84.99	65-125	PASS
ICSAB2	ICSAB	1	0.88	88.33	65-125	PASS
RINSE	RINSE	1	0.83	83.18	65-125	PASS
RINSE	RINSE	1	1	100.01	65-125	PASS
CCV4	CCV	1	1.02	102.15	65-125	PASS
CCB4	CCB	1	1.04	103.81	65-125	PASS
CCV5	CCV	1	0.97	96.8	65-125	PASS
CCB5	CCB	1	0.99	99.37	65-125	PASS
CCV6	CCV	1	0.98	98.12	65-125	PASS
CCB6	CCB	1	1	99.73	65-125	PASS
ICSA3	ICSA	1	0.82	82.33	65-125	PASS
ICSAB3	ICSAB	1	0.84	83.53	65-125	PASS

INTERNAL STANDARD: 240226A

Instrument ID: ICP-02

Sample Name	Type	DF	Scandium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	0.98	97.82	65-125	PASS
Standard2	ICAL	1	0.98	97.55	65-125	PASS
Standard3	ICAL	1	0.97	97.01	65-125	PASS
Standard4	ICAL	1	0.96	96.29	65-125	PASS
Standard5	ICAL	1	0.97	96.75	65-125	PASS
Standard6	ICAL	1	0.97	97.12	65-125	PASS
ICV	ICV	1	0.98	98.07	65-125	PASS
ICB	ICB	1	1	99.93	65-125	PASS
LLICV	CCV	1	0.97	97.43	65-125	PASS
ICSA1	ICSA	1	0.98	97.73	65-125	PASS
ICSAB1	ICSAB	1	0.98	97.61	65-125	PASS
MB-107026	MBLK	1	1	100.26	65-125	PASS
LCS2-107026	LCS	1	1.02	102.5	65-125	PASS
N063248-005C	SAMP	5	0.92	92.4	65-125	PASS
N063248-006C	SAMP	5	0.89	89.19	65-125	PASS
N063248-007C	SAMP	5	0.9	89.55	65-125	PASS
N063248-008C	SAMP	5	0.89	88.87	65-125	PASS
N063248-010B	SAMP	5	0.95	95.03	65-125	PASS
N063248-011B	SAMP	5	0.91	90.81	65-125	PASS
CCV1	CCV	1	0.98	97.75	65-125	PASS
CCB1	CCB	1	1	100.3	65-125	PASS
CCV2	CCV	1	0.95	94.76	65-125	PASS
CCB2	CCB	1	0.99	98.71	65-125	PASS
N063248-005C	SAMP	500	0.99	98.71	65-125	PASS
N063248-006C	SAMP	25	0.94	94.15	65-125	PASS
N063248-006C	SAMP	500	0.96	96.32	65-125	PASS
N063248-006C	SAMP	2500	0.98	97.55	65-125	PASS
N063248-006C-PS	PS	5	0.88	88.05	65-125	PASS
N063248-006C-PS	PS	500	0.95	94.83	65-125	PASS
CCV3	CCV	1	0.94	94.44	65-125	PASS
CCB3	CCB	1	0.98	98.07	65-125	PASS
N063248-006C-MS2	MS	5	0.88	87.81	65-125	PASS
N063248-006C-MS2	MS	500	0.95	94.68	65-125	PASS
N063248-006C-MSD2	MSD	5	0.88	87.95	65-125	PASS
N063248-006C-MSD2	MSD	500	0.94	93.83	65-125	PASS
N063248-007C	SAMP	500	0.95	94.53	65-125	PASS
N063248-008C	SAMP	500	0.96	96.27	65-125	PASS
N063248-010B	SAMP	25	0.96	96.09	65-125	PASS
N063248-011B	SAMP	500	0.98	98	65-125	PASS
CCV4	CCV	1	0.94	93.82	65-125	PASS

INTERNAL STANDARD: 240226A

Instrument ID: ICP-02

Sample Name	Type	DF	Scandium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CCB4	CCB	1	0.96	96.24	65-125	PASS
ICSA2	ICSA	1	0.98	97.7	65-125	PASS
ICSAB2	ICSAB	1	0.94	94.26	65-125	PASS
CCV5	CCV	1	0.93	93.08	65-125	PASS
CCV5	CCV	1	0.93	92.73	65-125	PASS
CCB5	CCB	1	0.95	94.67	65-125	PASS
CCV6	CCV	1	0.91	91	65-125	PASS
CCB6	CCB	1	0.96	95.78	65-125	PASS
ICSA3	ICSA	1	0.95	94.81	65-125	PASS
ICSAB3	ICSAB	1	0.94	93.77	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063248
Test Method: EPA 6010B
Analysis Date: 2/23/2024

Matrix: Groundwater
Batch No.: 107026

Instrument ID: ICP-03
Instrument Description: Perkin Elmer Avio 500Max

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Fe. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063248-005C DT 5x	Iron	Fe	µg/L	495.9734	NA	357.6918	38.66%	10

REVIEWED BY: 3/19/2024

Note: NA - Not Applicable

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063248
Test Method: EPA 6010B
Analysis Date: 2/23/2024

Matrix: Groundwater
Batch No.: 107026

Instrument ID: ICP-03
Instrument Description: Perkin Elmer Avio 500Max

Comments:

Analyzed By: Diane Jetajobe

Dilution test for Mg failed. However, PS passed criteria.
Dilution test is not applicable to B. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063248-005C DT 5x	Boron	B	mg/L	1.943657	NA	1.974853	1.58%	10
N063248-005C DT 5x	Calcium	Ca	mg/L	243.5827	PASS	237.9335	2.37%	10
N063248-005C DT 5x	Magnesium	Mg	mg/L	18.31737	FAIL	16.50245	11.00%	10

REVIEWED BY: 3/19/2024

Note: NA - Not Applicable

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063248
Test Method: EPA 6010B
Analysis Date: 2/26/2024

Matrix: Groundwater
Batch No.: 107026

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima 7300DV

Comments:

Analyzed By: Diane Jetajobe

Dilution test for Na failed. However, PS passed criteria.
Dilution test for K failed.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063295-006C DT 25x	Potassium	K	mg/L	63.42434	FAIL	43.77398	44.89%	10
N063295-006C DT 2500x	Sodium	Na	mg/L	6066.201	FAIL	4497.718	34.87%	10

REVIEWED BY: 3/19/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **N063248-005C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ZZZZZZ** Batch ID: **107026** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708219**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	444.661	20	100.0	357.7	87.0	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **N063248-005C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **ZZZZZZ** Batch ID: **107026** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708141**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	7.117	0.10	5.000	1.975	103	80	120				
Calcium	244.450	0.50	10.00	237.9	65.2	80	120				S
Magnesium	25.104	0.10	10.00	16.50	86.0	80	120				

Sample ID **N063248-006C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182926**
Client ID: **ZZZZZZ** Batch ID: **107026** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/26/2024** SeqNo: **5713417**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	166.997	2.5	100.0	43.77	123	80	120				S

Sample ID **N063248-006C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182926**
Client ID: **ZZZZZZ** Batch ID: **107026** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/26/2024** SeqNo: **5713418**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	13651.189	250	10000	4498	91.5	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CORRECTIVE ACTION DOCUMENTATION

ASSET Laboratories

Corrective Action Report (CAR)

Date Initiated: 23-Feb-24 **Corrective Action Report ID:** 7427

Initiated By: Diane Jetajobe **Department:** ME-2(ICP)

Corrective Action Description

CAR Summary: ICSA was ran 3X in sequence NV00922-ICP3_~~240223C~~240223A.

Description of Nonconformance: The first ICSA1(raw data ICSA Sequence No.:12) does not have the ICSA Standard in position.

Description of Corrective Action: Analyst willl be mindful on checking the ICSA Standard in position before continuing the running IQC.

Performed By: Diane Jetajobe **Completion Date:** 23-Feb-24

Client Notification

Client Notification Required: No **Notified By:**

Comment:

Quality Assurance Review

Corrective Action: Deficiency

Further Action required by QA:

Approval and Closure

CAR Closed By: _____ Close Date: _____

QA Reviewed By: LG QA Date: 03/11/2024

Last Updated BY JohnL Updated: 11-Mar-2024 7:29 PM Reported: 11-Mar-2024 6:29 PM

MDL STUDY

LOD & PQL VERIFICATION

Analytical Method: EPA 6010B
Digestion Method: EPA 3010A
Digestion Date: 5/7/23; 5/8/23; 5/10/23
Analysis Date: 5/7-23/23
Instrument Name: ICP-03
Analyst/Technician: Nancy Sibucao / Diane Jetajobe

Matrix: WATER
Units : ppm

Analyte	MDL	LOD	ACTUAL LOD	PQL	Actual PQL	%REC
Beryllium	0.000076	0.0005	0.00047	0.001	0.00098	98
Boron	0.0086	0.05	0.04899	0.1	0.089	89
Magnesium	0.0057	0.05	0.05152	0.1	0.10	102
Silicon	0.012	0.01	0.01312	0.02	0.023	113
Chromium	0.00051	0.0005	0.00056	0.001	0.0010	102
Manganese	0.00032	0.01	0.00534	0.01	0.011	110
Iron	0.0022	0.01	0.01180	0.02	0.021	106
Cobalt	0.001	0.0013	0.00096	0.0025	0.0025	100
Nickel	0.0034	0.0025	0.00417	0.005	0.0055	110
Copper	0.0042	0.0025	0.00434	0.005	0.0044	87
Zinc	0.0007	0.005	0.00624	0.01	0.011	106
Arsenic	0.0042	0.005	0.00461	0.01	0.010	104
Selenium	0.008	0.005	0.00829	0.01	0.010	102
Molybdenum	0.0013	0.0025	0.00307	0.005	0.0053	106
Silver	0.0024	0.0013	0.00419	0.0025	0.0033	134
Cadmium	0.0016	0.0013	0.00180	0.0025	0.0026	102
Tin	0.0076	0.005	0.00563	0.010	0.0099	99
Antimony	0.0038	0.005	0.00307	0.01	0.0096	96
Barium	0.0002	0.0013	0.00124	0.0025	0.0026	104
Thallium	0.0021	0.0075	0.00656	0.015	0.015	101
Lead	0.0039	0.0025	0.00337	0.005	0.0047	94
Calcium	0.011	0.1	0.11963	0.2	0.23	113
Vanadium	0.00017	0.0013	0.00126	0.0025	0.0025	100
Aluminum	0.0089	0.025	0.02576	0.05	0.048	95
Titanium	0.004	0.005	0.00612	0.01	0.01	101

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

Method Detection Limit
Analytical Method: EPA 6010B / 200.7
Digestion Method: EPA 3010A
Date of Analysis: 6/22,24,30/2021
Instrument Name: ICP2
Analysts: DBJ

Matrix: Water
25 mL
Units: mg/L

Analyte	1	2	3	4	5	6	7	SD	Ave	AMT SPIKED	MDLs	PQL
Potassium	0.13348	0.13397	0.12506	0.12108	0.13408	0.09107	0.06999	0.02517	0.11553	0.1000	0.07902	0.5
Sodium	0.09937	0.09005	0.09138	0.12202	0.10604	0.13761	0.13949	0.02087	0.11228	0.1000	0.06553	0.5
Strontium	0.0299	0.02938	0.02907	0.03172	0.03136	0.0304	0.03017	0.00097	0.03029	0.0250	0.00306	0.05

Method Detection Limit - Blank

Start Date: 6/1/2019
End Date 6/30/2021

*Note: MDL value is from Method Blank (MB) results pooled from June 1, 2019 to June 30, 2021.

Analyte	MDLb
Potassium	0.1388
Sodium	0.3400
Strontium	-0.0004

EPA 6010B
Total

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: ~~107067~~ 107028
ASSET #: N063248

Instrument ID: ICP-03
Analyst: DBJ
Date Analyzed: 2/23/2024

Method:

[X] EPA 6010B / 200.7 total
[ ] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.	X			X		
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?	X			X		
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented	X			X		
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

%Rec of Fe in N063248-005D-MS/MSD failed, high bias. However, LCS passed criteria.
The first ICSA1(raw data ICSA Sequence No.:12) does not have the ICSA Standard in position. CAR#7427

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____
2nd Level Reviewer LG Date: 03/07/2024

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in ug/L , in the original sample as follows:

Iron , ug/L = A * DF * PF *CF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL
CF= Conversion Factor from mg/L to ug/L, 1000

For Sample **N063248-008D** , the concentration i ug/L is calculated as follows:

Iron , ug/L = 0.12442 * 1 * (25/25) * 1000

Iron , ug/L = 124.42

Reporting results in two significant figures,

Iron , ug/L = 120

REVIEWED BY: 3/19/2024

% RSD SUMMARY

RSD SUMMARY: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	Fe	0	4.79	15	PASS
Standard1	ICAL	1	Fe	0.02	3.3	15	PASS
Standard2	ICAL	1	Fe	0.05	1.26	15	PASS
Standard3	ICAL	1	Fe	2	0.37	15	PASS
Standard4	ICAL	1	Fe	5	0.7	15	PASS
Standard5	ICAL	1	Fe	7.5	0.76	15	PASS
Standard6	ICAL	1	Fe	10	0.37	15	PASS
Standard7	ICAL	1	Fe	20	0.65	15	PASS
ICV	ICV	1	Fe	10.06	0.34	15	PASS
ICB	ICB	1	Fe	0	9.12	15	PASS
LLICV1	CCV1	1	Fe	0.02	1.2	20	PASS
ICSA1	ICSA	1	Fe	26.91	22.38	15	NR!
ICSA1	ICSA	1	Fe	182.18	0.05	15	PASS
ICSA1	ICSA	1	Fe	174.62	0.07	15	PASS
ICSAB1	ICSAB	1	Fe	170.21	0.13	15	PASS
RINSE	RINSE	1	Fe	0.04	13.45	15	PASS
CCV1	CCV	1	Fe	10.31	0.73	15	PASS
CCB1	CCB	1	Fe	0	73.65	15	<PQL
CCV2	CCV	1	Fe	10.24	0.59	15	PASS
CCB2	CCB	1	Fe	0	47.78	15	<PQL
MB-107028	MBLK	1	Fe	0	99.82	15	<PQL
LCS-107028	LCS	1	Fe	0.1	0.17	15	PASS
N063248-005D	SAMP	1	Fe	0.41	1.08	15	PASS
N063248-005D	SAMP	5	Fe	0.09	1.35	15	PASS
N063248-005D-PS	PS	1	Fe	0.51	0.95	15	PASS
N063248-005D-MS	MS	1	Fe	0.55	0.45	15	PASS
N063248-005D-MSD	MSD	1	Fe	0.57	0.64	15	PASS
N063248-006D	SAMP	1	Fe	0.2	1.18	15	PASS
N063248-007D	SAMP	1	Fe	0.23	0.79	15	PASS
N063248-008D	SAMP	1	Fe	0.12	0.65	15	PASS
CCV3	CCV	1	Fe	10.13	0.26	15	PASS
CCB3	CCB	1	Fe	0	135.65	15	<PQL
ICSA2	ICSA	1	Fe	172.57	0.08	15	PASS
ICSAB2	ICSAB	1	Fe	169.57	0.07	15	PASS
RINSE	RINSE	1	Fe	0.02	4.66	15	PASS
N063248-011F	SAMP	1	Fe	0.41	0.5	15	PASS
RINSE	RINSE	1	Fe	0	43.94	15	<PQL
CCV4	CCV	1	Fe	10.18	0.54	15	PASS
CCB4	CCB	1	Fe	0	69.03	15	<PQL
CCV5	CCV	1	Fe	10.15	0.38	15	PASS
CCB5	CCB	1	Fe	0	356.23	15	<PQL
CCV6	CCV	1	Fe	10.09	0.65	15	PASS

RSD SUMMARY: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CCB6	CCB	1	Fe	0	62.82	15	<PQL
ICSA3	ICSA	1	Fe	171.39	0.12	15	PASS
ICSAB3	ICSAB	1	Fe	166.83	0.02	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240223A

Instrument ID: ICP-03

STANDARD CODE	
Standard1	MWST-240105M, 0.5<50mL
Standard2	MWST-240105N
Standard3	MWST-240105O, 5<50mL
Standard4	MWST-240105O,12.5<50mL
Standard5	MWST-240105O, 15<40mL
Standard6	MWST-240105O, 25<50mL
Standard7	MWST-240105O
ICV	MWST-240105AE
CCV	MWST-240105O, 25<50mL
ICSA/ICSAB	MWST-240105P / MWST-240105Q
Int. Std. (Y)	MWST-240105B
PS Spike	MWST-240105X / Y/ Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	02/23/2024	11:44:54 AM
2	Standard1	ICAL	1	02/23/2024	11:49:07 AM
3	Standard2	ICAL	1	02/23/2024	11:52:50 AM
4	Standard3	ICAL	1	02/23/2024	11:56:34 AM
5	Standard4	ICAL	1	02/23/2024	11:59:50 AM
6	Standard5	ICAL	1	02/23/2024	12:04:04 PM
7	Standard6	ICAL	1	02/23/2024	12:08:16 PM
8	Standard7	ICAL	1	02/23/2024	12:12:29 PM
310	ICV	ICV	1	02/23/2024	12:22:17 PM
1	ICB	ICB	1	02/23/2024	12:26:37 PM
2	LLICV1	CCV1	1	02/23/2024	12:30:51 PM
9	ICSA1	ICSA	1	02/23/2024	12:35:05 PM
9	ICSA1	ICSA	1	02/23/2024	12:40:32 PM
9	ICSA1	ICSA	1	02/23/2024	12:49:27 PM
10	ICSAB1	ICSAB	1	02/23/2024	12:54:28 PM
299	RINSE	RINSE	1	02/23/2024	12:59:30 PM
11	MB-107026	MBLK	1	02/23/2024	01:07:19 PM
12	LCS1-107026	LCS	1	02/23/2024	01:14:23 PM
13	N063248-005C	SAMP	1	02/23/2024	01:19:08 PM
14	N063248-005C	SAMP	5	02/23/2024	01:24:27 PM
15	N063248-005C-PS	PS	1	02/23/2024	01:28:12 PM
16	N063248-005C-MS1	MS	1	02/23/2024	01:33:31 PM
17	N063248-005C-MSD1	MSD	1	02/23/2024	01:38:50 PM
18	N063248-006C	SAMP	1	02/23/2024	01:44:10 PM
19	N063248-007C	SAMP	1	02/23/2024	01:49:29 PM
7	CCV1	CCV	1	02/23/2024	01:54:50 PM
1	CCB1	CCB	1	02/23/2024	01:59:05 PM
20	N063248-008C	SAMP	1	02/23/2024	02:03:19 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
21	N063248-010B	SAMP	1	02/23/2024	02:08:40 PM
22	N063248-011B	SAMP	1	02/23/2024	02:13:59 PM
23	N063249-007C	SAMP	1	02/23/2024	02:19:21 PM
24	N063249-009C	SAMP	1	02/23/2024	02:24:10 PM
25	N063249-011C	SAMP	1	02/23/2024	02:29:00 PM
26	N063249-013C	SAMP	1	02/23/2024	02:33:58 PM
27	N063249-015C	SAMP	1	02/23/2024	02:39:18 PM
28	N063249-017C	SAMP	1	02/23/2024	02:44:07 PM
29	N063249-018C	SAMP	1	02/23/2024	02:48:26 PM
7	CCV2	CCV	1	02/23/2024	02:53:25 PM
1	CCB2	CCB	1	02/23/2024	02:57:39 PM
30	MB-107028	MBLK	1	02/23/2024	03:01:53 PM
31	LCS-107028	LCS	1	02/23/2024	03:08:27 PM
32	N063248-005D	SAMP	1	02/23/2024	03:13:14 PM
33	N063248-005D	SAMP	5	02/23/2024	03:18:34 PM
34	N063248-005D-PS	PS	1	02/23/2024	03:22:21 PM
35	N063248-005D-MS	MS	1	02/23/2024	03:27:13 PM
36	N063248-005D-MSD	MSD	1	02/23/2024	03:32:04 PM
37	N063248-006D	SAMP	1	02/23/2024	03:36:55 PM
38	N063248-007D	SAMP	1	02/23/2024	03:42:15 PM
39	N063248-008D	SAMP	1	02/23/2024	03:47:35 PM
7	CCV3	CCV	1	02/23/2024	03:52:56 PM
1	CCB3	CCB	1	02/23/2024	03:57:10 PM
9	ICSA2	ICSA	1	02/23/2024	04:01:24 PM
10	ICSAB2	ICSAB	1	02/23/2024	04:06:25 PM
299	RINSE	RINSE	1	02/23/2024	04:13:31 PM
40	N063248-011F	SAMP	1	02/23/2024	04:17:20 PM
300	RINSE	RINSE	1	02/23/2024	04:22:39 PM
41	MB-107062	MBLK	1	02/23/2024	04:26:58 PM
42	LCS1-107062	LCS	1	02/23/2024	04:34:52 PM
43	N063295-005C	SAMP	1	02/23/2024	04:39:39 PM
44	N063295-005C	SAMP	5	02/23/2024	04:44:59 PM
45	N063295-005C-PS	PS	1	02/23/2024	04:48:45 PM
46	N063295-005C-MS1	MS	1	02/23/2024	04:54:06 PM
47	N063295-005C-MSD1	MSD	1	02/23/2024	04:58:59 PM
7	CCV4	CCV	1	02/23/2024	05:03:48 PM
1	CCB4	CCB	1	02/23/2024	05:08:02 PM
48	N063295-006C	SAMP	1	02/23/2024	05:12:14 PM
49	N063295-007C	SAMP	1	02/23/2024	05:17:33 PM
50	N063295-008C	SAMP	1	02/23/2024	05:22:53 PM
51	N063297-001C	SAMP	1	02/23/2024	05:28:13 PM
52	N063303-001B	SAMP	1	02/23/2024	05:31:57 PM
53	N063303-002B	SAMP	1	02/23/2024	05:37:15 PM
54	N063303-006B	SAMP	1	02/23/2024	05:42:33 PM
55	N063303-008B	SAMP	1	02/23/2024	05:47:24 PM
56	MB-107067	MBLK	1	02/23/2024	05:57:03 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
57	LCS-107067	LCS	1	02/23/2024	06:01:17 PM
7	CCV5	CCV	1	02/23/2024	06:06:04 PM
1	CCB5	CCB	1	02/23/2024	06:10:19 PM
58	N063295-005D	SAMP	1	02/23/2024	06:14:32 PM
59	N063295-005D	SAMP	5	02/23/2024	06:19:53 PM
60	N063295-005D-PS	PS	1	02/23/2024	06:23:39 PM
61	N063295-005D-MS1	MS	1	02/23/2024	06:28:59 PM
62	N063295-005D-MSD1	MSD	1	02/23/2024	06:33:49 PM
63	N063295-006D	SAMP	1	02/23/2024	06:38:39 PM
64	N063295-007D	SAMP	1	02/23/2024	06:43:59 PM
65	N063295-008D	SAMP	1	02/23/2024	06:49:19 PM
7	CCV6	CCV	1	02/23/2024	06:54:39 PM
1	CCB6	CCB	1	02/23/2024	06:58:54 PM
9	ICSA3	ICSA	1	02/23/2024	07:03:06 PM
10	ICSAB3	ICSAB	1	02/23/2024	07:08:07 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/22/2024 10:53:44 AM**
Prep End Date: **2/22/2024 3:00:00 PM**
Prep Batch **107028** Prep Code: **3010_W**

Reviewed/ Date: **KDG 3/19/2024**
Initials/ Date: _____
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-01-01**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107028	Aqueous		25	☐	25	1.000		
MB-107028	Aqueous		25	☐	25	1.000		
N063248-005D	Groundwater	<2	25	☐	25	1.000		
N063248-005D-MS	Groundwater	<2	25	☐	25	1.000		
N063248-005D-MSD	Groundwater	<2	25	☐	25	1.000		
N063248-006D	Groundwater	<2	25	☐	25	1.000		
N063248-007D	Groundwater	<2	25	☐	25	1.000		
N063248-008D	Groundwater	<2	25	☐	25	1.000		
N063248-011F	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15258	HYDROCHLORIC ACID
16150	~~NITRIC ACID~~ NITRIC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

3/19/2024

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240223A

Instrument ID: ICP-03

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Iron								
CalBlk	02/23/2024	11:44:54 AM	Fe	273.952	133	0.00	mg/L	
Standard1	02/23/2024	11:49:07 AM	Fe	273.952	166	0.02	mg/L	
Standard2	02/23/2024	11:52:50 AM	Fe	273.952	476	0.05	mg/L	
Standard3	02/23/2024	11:56:34 AM	Fe	273.952	15966	2.0	mg/L	
Standard4	02/23/2024	11:59:50 AM	Fe	273.952	39733	5.0	mg/L	
Standard5	02/23/2024	12:04:04 PM	Fe	273.952	59452	7.5	mg/L	
Standard6	02/23/2024	12:08:16 PM	Fe	273.952	78889	10.0	mg/L	
Standard7	02/23/2024	12:12:29 PM	Fe	273.952	155652	20.0	mg/L	1.0000

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182914**
Client ID: **ICV**	Batch ID: **R182914**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5712421**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10061.140	20	10000	0	101	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182914**
Client ID: **ZZZZZZ**	Batch ID: **R182914**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5712423**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	19.964	20	20.00	0	99.8	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182914**
Client ID: **CCV**	Batch ID: **R182914**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5712437**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10309.918	20	10000	0	103	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182914**
Client ID: **CCV**	Batch ID: **R182914**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5712449**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10241.479	20	10000	0	102	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182914**
Client ID: **CCV**	Batch ID: **R182914**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5712461**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10133.536	20	10000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182914**
Client ID: **CCV**	Batch ID: **R182914**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5712473**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10177.476	20	10000	0	102	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182914**
Client ID: **CCV**	Batch ID: **R182914**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5712485**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10151.181	20	10000	0	102	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182914**
Client ID: **CCV**	Batch ID: **R182914**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5712495**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10093.401	20	10000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID	**ICB**	SampType:	**ICB**	TestCode:	**6010_WPGE**	Units:	**µg/L**	Prep Date:		RunNo:	**182914**
Client ID:	**ICB**	Batch ID:	**R182914**	TestNo:	**EPA 6010B**			Analysis Date:	**2/23/2024**	SeqNo:	**5712422**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.207	20									

Sample ID	**CCB1**	SampType:	**CCB**	TestCode:	**6010_WPGE**	Units:	**µg/L**	Prep Date:		RunNo:	**182914**
Client ID:	**CCB**	Batch ID:	**R182914**	TestNo:	**EPA 6010B**			Analysis Date:	**2/23/2024**	SeqNo:	**5712438**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.466	20									

Sample ID	**CCB2**	SampType:	**CCB**	TestCode:	**6010_WPGE**	Units:	**µg/L**	Prep Date:		RunNo:	**182914**
Client ID:	**CCB**	Batch ID:	**R182914**	TestNo:	**EPA 6010B**			Analysis Date:	**2/23/2024**	SeqNo:	**5712450**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.202	20									

Sample ID	**CCB3**	SampType:	**CCB**	TestCode:	**6010_WPGE**	Units:	**µg/L**	Prep Date:		RunNo:	**182914**
Client ID:	**CCB**	Batch ID:	**R182914**	TestNo:	**EPA 6010B**			Analysis Date:	**2/23/2024**	SeqNo:	**5712462**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.560	20									

Sample ID	**CCB4**	SampType:	**CCB**	TestCode:	**6010_WPGE**	Units:	**µg/L**	Prep Date:		RunNo:	**182914**
Client ID:	**CCB**	Batch ID:	**R182914**	TestNo:	**EPA 6010B**			Analysis Date:	**2/23/2024**	SeqNo:	**5712474**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.514	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182914**
Client ID: **CCB**	Batch ID: **R182914**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5712486**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-0.235249	20									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182914**
Client ID: **CCB**	Batch ID: **R182914**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5712496**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-1.130016	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6010_WPGE** Units: **µg/L** Prep Date: RunNo: **182914**
Client ID: **ICSA** Batch ID: **R182914** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5712426**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	576247.443	50	500000	0	115	80	120				
Calcium	459915.899	500	500000	0	92.0	80	120				
Iron	174616.860	20	200000	0	87.3	80	120				
Magnesium	446022.583	100	500000	0	89.2	80	120				

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6010_WPGE** Units: **µg/L** Prep Date: RunNo: **182914**
Client ID: **ICSAB** Batch ID: **R182914** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5712427**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	564316.966	50	500000	0	113	80	120				
Calcium	449363.078	500	500000	0	89.9	80	120				
Iron	170211.584	20	200000	0	85.1	80	120				
Magnesium	435511.791	100	500000	0	87.1	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6010_WPGE** Units: **µg/L** Prep Date: RunNo: **182914**
Client ID: **ICSA** Batch ID: **R182914** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5712463**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	555716.342	50	500000	0	111	80	120				
Calcium	452434.522	500	500000	0	90.5	80	120				
Iron	172573.740	20	200000	0	86.3	80	120				
Magnesium	439980.449	100	500000	0	88.0	80	120				

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6010_WPGE** Units: **µg/L** Prep Date: RunNo: **182914**
Client ID: **ICSAB** Batch ID: **R182914** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5712464**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	542214.110	50	500000	0	108	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182914**
Client ID: **ICSAB**	Batch ID: **R182914**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5712464**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	449903.261	500	500000	0	90.0	80	120				
Iron	169573.181	20	200000	0	84.8	80	120				
Magnesium	431773.625	100	500000	0	86.4	80	120				

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182914**
Client ID: **ICSA**	Batch ID: **R182914**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5712497**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	584468.181	50	500000	0	117	80	120				
Calcium	451278.962	500	500000	0	90.3	80	120				
Iron	171392.769	20	200000	0	85.7	80	120				
Magnesium	440134.747	100	500000	0	88.0	80	120				

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182914**
Client ID: **ICSAB**	Batch ID: **R182914**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5712498**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	569749.122	50	500000	0	114	80	120				
Calcium	442346.814	500	500000	0	88.5	80	120				
Iron	166830.148	20	200000	0	83.4	80	120				
Magnesium	430330.236	100	500000	0	86.1	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	1	99.54	65-125	PASS
Standard2	ICAL	1	0.96	96.11	65-125	PASS
Standard3	ICAL	1	0.95	95.21	65-125	PASS
Standard4	ICAL	1	0.94	93.79	65-125	PASS
Standard5	ICAL	1	0.93	93.21	65-125	PASS
Standard6	ICAL	1	0.92	91.99	65-125	PASS
Standard7	ICAL	1	0.91	90.59	65-125	PASS
ICV	ICV	1	0.91	91.25	65-125	PASS
ICB	ICB	1	0.93	93.31	65-125	PASS
LLICV1	CCV1	1	0.93	93.05	65-125	PASS
ICSA1	ICSA	1	0	0.01	65-125	NR!
ICSA1	ICSA	1	0.79	79.4	65-125	PASS
ICSA1	ICSA	1	0.8	79.81	65-125	PASS
ICSAB1	ICSAB	1	0.81	81.01	65-125	PASS
RINSE	RINSE	1	0.78	78.14	65-125	PASS
CCV1	CCV	1	1.03	102.88	65-125	PASS
CCB1	CCB	1	1.04	103.63	65-125	PASS
CCV2	CCV	1	1.03	102.69	65-125	PASS
CCB2	CCB	1	1.02	102.2	65-125	PASS
MB-107028	MBLK	1	1.01	100.62	65-125	PASS
LCS-107028	LCS	1	0.94	94.32	65-125	PASS
N063248-005D	SAMP	1	0.72	72.37	65-125	PASS
N063248-005D	SAMP	5	0.89	88.88	65-125	PASS
N063248-005D-PS	PS	1	0.74	74.11	65-125	PASS
N063248-005D-MS	MS	1	0.8	79.61	65-125	PASS
N063248-005D-MSD	MSD	1	0.79	79.45	65-125	PASS
N063248-006D	SAMP	1	0.73	73.1	65-125	PASS
N063248-007D	SAMP	1	0.74	73.71	65-125	PASS
N063248-008D	SAMP	1	0.75	74.86	65-125	PASS
CCV3	CCV	1	1.01	100.84	65-125	PASS
CCB3	CCB	1	1.03	103.05	65-125	PASS
ICSA2	ICSA	1	0.85	84.99	65-125	PASS
ICSAB2	ICSAB	1	0.88	88.33	65-125	PASS
RINSE	RINSE	1	0.83	83.18	65-125	PASS
N063248-011F	SAMP	1	0.76	75.82	65-125	PASS
RINSE	RINSE	1	1	100.01	65-125	PASS
CCV4	CCV	1	1.02	102.15	65-125	PASS
CCB4	CCB	1	1.04	103.81	65-125	PASS
CCV5	CCV	1	0.97	96.8	65-125	PASS
CCB5	CCB	1	0.99	99.37	65-125	PASS

INTERNAL STANDARD: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CCV6	CCV	1	0.98	98.12	65-125	PASS
CCB6	CCB	1	1	99.73	65-125	PASS
ICSA3	ICSA	1	0.82	82.33	65-125	PASS
ICSAB3	ICSAB	1	0.84	83.53	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063248
Test Method: EPA 6010B
Analysis Date: 2/23/2024

Matrix: Groundwater
Batch No.: 107028

Instrument ID: ICP-03
Instrument Description: Perkin Elmer Avio 500Max

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Fe. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063248-005D DT 5x	Iron	Fe	µg/L	446.0352	NA	411.559	8.38%	10

REVIEWED BY: 3/19/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **N063248-005D-PS** SampType: **PS** TestCode: **6010_WPGE** Units: **µg/L** Prep Date: RunNo: **182914**
Client ID: **ZZZZZZ** Batch ID: **107028** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5712455**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	509.245	20	100.0	411.6	97.7	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CORRECTIVE ACTION DOCUMENTATION

ASSET Laboratories

Corrective Action Report (CAR)

Date Initiated: 23-Feb-24 **Corrective Action Report ID:** 7427

Initiated By: Diane Jetajobe **Department:** ME-2(ICP)

Corrective Action Description

CAR Summary: ICSA was ran 3X in sequence NV00922-ICP3_~~240223C~~240223A.

Description of Nonconformance: The first ICSA1(raw data ICSA Sequence No.:12) does not have the ICSA Standard in position.

Description of Corrective Action: Analyst willl be mindful on checking the ICSA Standard in position before continuing the running IQC.

Performed By: Diane Jetajobe **Completion Date:** 23-Feb-24

Client Notification

Client Notification Required: No **Notified By:**

Comment:

Quality Assurance Review

Corrective Action: Deficiency

Further Action required by QA:

Approval and Closure

CAR Closed By: _____ Close Date: _____

QA Reviewed By: LG QA Date: 03/11/2024

Last Updated BY JohnL Updated: 11-Mar-2024 7:29 PM Reported: 11-Mar-2024 6:29 PM

MDL STUDY

LOD & PQL VERIFICATION

Method Name: **Metals by ICP** **Matrix: SOIL**
Method Number: EPA 6010B Units: mg/Kg
Date of Analysis: 6/15/2021
Instrument Name: ICP2
Analyst: DBJ

Analyte	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% Rec
Aluminum	7.86	8.00	5.973	20.00	17.08	**85**
Antimony	0.41	0.50	0.211	1.00	0.96	**96**
Arsenic	0.44	0.50	0.262	1.00	0.71	**71**
Barium	0.22	0.50	0.150	1.00	1.16	**116**
Beryllium	0.16	0.50	0.568	1.00	0.94	**94**
Boron	1.65	5.00	0.229	10.00	9.66	**97**
Cadmium	0.14	0.50	0.466	1.00	0.88	**88**
Calcium	10.43	15.00	5.940	20.00	17.04	**85**
Chromium	0.08	0.25	0.238	1.00	1.03	**103**
Cobalt	0.17	0.50	0.454	1.00	0.97	**97**
Copper	0.17	0.50	5.402	1.00	1.01	**101**
Iron	2.95	5.00	0.506	20.00	16.35	**82**
Lead	0.23	0.50	0.494	1.00	0.99	**99**
Magnesium	7.21	7.50	0.517	20.00	13.57	**68**
Manganese	0.28	1.00	6.626	2.00	1.88	**94**
Molybdenum	0.16	0.50	0.481	1.00	0.98	**98**
Nickel	0.20	0.50	4.293	1.00	1.02	**102**
Selenium	0.63	0.75	0.513	1.00	0.66	**66**
Silicon	1.43	5.00	0.526	10.00	7.84	**78**
Silver	0.26	0.50	0.299	1.00	1.21	**121**
Thallium	0.42	0.50	0.674	1.00	0.88	**88**
Vanadium	0.14	0.50	0.508	1.00	0.90	**90**
Zinc	0.20	0.50	0.453	1.00	0.90	**90**

LOD & PQL VERIFICATION

Analytical Method: EPA 6010B
Digestion Method: EPA 3010A
Digestion Date: 5/7/23; 5/8/23; 5/10/23
Analysis Date: 5/7-23/23
Instrument Name: ICP-03
Analyst/Technician: Nancy Sibucao / Diane Jetajobe

Matrix: WATER
Units : ppm

Analyte	MDL	LOD	ACTUAL LOD	PQL	Actual PQL	%REC
Beryllium	0.000076	0.0005	0.00047	0.001	0.00098	98
Boron	0.0086	0.05	0.04899	0.1	0.089	89
Magnesium	0.0057	0.05	0.05152	0.1	0.10	102
Silicon	0.012	0.01	0.01312	0.02	0.023	113
Chromium	0.00051	0.0005	0.00056	0.001	0.0010	102
Manganese	0.00032	0.01	0.00534	0.01	0.011	110
Iron	0.0022	0.01	0.01180	0.02	0.021	106
Cobalt	0.001	0.0013	0.00096	0.0025	0.0025	100
Nickel	0.0034	0.0025	0.00417	0.005	0.0055	110
Copper	0.0042	0.0025	0.00434	0.005	0.0044	87
Zinc	0.0007	0.005	0.00624	0.01	0.011	106
Arsenic	0.0042	0.005	0.00461	0.01	0.010	104
Selenium	0.008	0.005	0.00829	0.01	0.010	102
Molybdenum	0.0013	0.0025	0.00307	0.005	0.0053	106
Silver	0.0024	0.0013	0.00419	0.0025	0.0033	134
Cadmium	0.0016	0.0013	0.00180	0.0025	0.0026	102
Tin	0.0076	0.005	0.00563	0.010	0.0099	99
Antimony	0.0038	0.005	0.00307	0.01	0.0096	96
Barium	0.0002	0.0013	0.00124	0.0025	0.0026	104
Thallium	0.0021	0.0075	0.00656	0.015	0.015	101
Lead	0.0039	0.0025	0.00337	0.005	0.0047	94
Calcium	0.011	0.1	0.11963	0.2	0.23	113
Vanadium	0.00017	0.0013	0.00126	0.0025	0.0025	100
Aluminum	0.0089	0.025	0.02576	0.05	0.048	95
Titanium	0.004	0.005	0.00612	0.01	0.01	101

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

EPA 6020
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107021
ASSET #: N063248

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/23/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?		X			X	
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.		X			X	
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.	X			X		
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?		X			X	
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?	X			X		
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

% Rec of Ba in N063248-002B-MSD, failed, high bias. However, LCS passed criteria
Cr is OLR in N063248-002B-PS/MS/ MSD/003B/004B
% Rec of Ba in several CCVs failed, high bias.N063248-005C/006C/007C/008C/01B/001B. For re run
Mn is OLR in N063248-005C/ N063248-002B-PS/MS/ MSD/ 006C/007C/008C/001B. For dilution
Dilution test for Ba failed. However, PS passed criteria.
N063248-008C (first run) = 1.0 ug/L ; confirmation: ; N063248-008A (218.6) = 0 ug/L ; confirmation:

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 3/5/2024 Date: _____

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107021
ASSET #: N063248

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/25/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.			X			X
24. LCS compounds within control limits.			X			X
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

Ba re run
Ba, Cr and Mn dilution
% Rec of Cr in N063248-002B-PS/MS/ MSD failed, high bias. However, LCS passed criteria

	Yes	No	N/A
1. All assigned sample(s) analyzed	x		
2. Matrix / units correct	x		
3. Does batch meet QC requirements?	x		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	x		
5. Is first level review correct and complete?	x		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 3/5/2024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Groundwater

FORMULA:

Calculate the Chromium concentration, in ug/L in the original sample as follows:

Chromium , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063248-002B** , the concentration in ug/L is calculated as follows:

Chromium , ug/L = 82.3956 * 5 *(25 / 25)

Chromium , ug/L = 411.978

Reporting results in two significant figures,

Chromium , ug/L = 410

Reviewed by:

JRB 3/26/2024

% RSD SUMMARY

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				51 V [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	15.646	15	<PQL	0.09	10.758	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.47	6.506	15	PASS	0.47	3.203	15	PASS
Std3-5/50 ppb	ICAL	1	4.83	1.27	15	PASS	4.84	0.596	15	PASS
Std4-10/100 ppb	ICAL	1	9.83	2.315	15	PASS	9.81	2.92	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	20.24	1.991	15	PASS	19.75	1.137	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	40.14	1.038	15	PASS	39.5	1.188	15	PASS
Std7-100/1000 ppb	ICAL	1	100.68	1.373	15	PASS	98.11	0.982	15	PASS
Std8-200/2000 ppb	ICAL	1	199.62	1.169	15	PASS	201.08	0.859	15	PASS
ICV	ICV	1	10.17	1.243	15	PASS	9.87	0.822	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	0	481.358	15	<PQL
LLICV1	LLICV	1	1.11	0.584	20	PASS	1.04	2.646	20	PASS
MLCCV	CCV	1	19.88	2.197	15	PASS	20.02	1.503	15	PASS
ICSA1	ICSA	1	0	70.954	15	<PQL	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.4	0.884	15	PASS	20.29	0.197	15	PASS
CCV1	CCV	1	19.98	1.016	15	PASS	19.51	1.768	15	PASS
CCB1	CCB	1	0.02	43.803	15	<PQL	0.02	41.232	15	<PQL
CCV2	CCV	1	19.84	1.185	15	PASS	19.99	1.026	15	PASS
CCB2	CCB	1	0.02	52.281	15	<PQL	0.08	21.083	15	<PQL
CCV3	CCV	1	19.92	1.739	15	PASS	19.9	1.347	15	PASS
CCB3	CCB	1	0.03	49.285	15	<PQL	0.09	4.493	15	PASS
CCV4	CCV	1	20.7	0.766	15	PASS	20.01	0.216	15	PASS
CCB4	CCB	1	0.02	33.478	15	<PQL	0.06	26.003	15	<PQL
CCB4	CCB	1	<0.000	N/A	15	<PQL	0.05	31.844	15	<PQL
ICSA2	ICSA	1	0.01	20.455	15	<PQL	0.05	8.712	15	PASS
ICSAB2	ICSAB	1	20.62	2.198	15	PASS	20.39	0.899	15	PASS
CCV5	CCV	1	20.65	1.318	15	PASS	20.24	0.461	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	0.03	15.799	15	<PQL
ICSA3	ICSA	1	0.01	36.4	15	<PQL	0.05	29.872	15	<PQL
ICSAB3	ICSAB	1	20.58	0.24	15	PASS	20.33	1.333	15	PASS
CCV6	CCV	1	21.35	0.969	15	PASS	19.64	1.043	15	PASS
CCB6	CCB	1	0	8860.741	15	<PQL	0.04	17.162	15	<PQL
CCV7	CCV	1	22.1	1.002	15	PASS	19.78	0.746	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	0.04	8.981	15	PASS
ICSA4	ICSA	1	0.01	61.487	15	<PQL	0.06	34.999	15	<PQL
ICSAB4	ICSAB	1	22.11	0.666	15	PASS	20.05	1.255	15	PASS
CCV8	CCV	1	20.87	1.232	15	PASS	20.45	0.784	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL	0.02	16.939	15	<PQL
CCV9	CCV	1	21.75	0.532	15	PASS	19.65	0.543	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL	0.08	4.123	15	PASS
CCV10	CCV	1	21.64	0.313	15	PASS	19.82	1.733	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				51 V [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCB10	CCB	1	<0.000	N/A	15	<PQL	0.07	20.991	15	<PQL
ICSA5	ICSA	1	0.01	90.69	15	<PQL	0.06	13.039	15	PASS
ICSAB5	ICSAB	1	21.85	0.907	15	PASS	20.22	0.241	15	PASS
MB-107021	MBLK	1	<0.000	N/A	15	<PQL	0.05	9.563	15	PASS
LCS-107021	LCS	1	10.93	1.75	15	PASS	9.8	1.742	15	PASS
N062510-015D	SAMP	5	25.08	1.706	15	PASS	1.07	4.401	15	PASS
N063248-001B	SAMP	1	64.5	1.896	15	PASS	1.33	3.719	15	PASS
N063248-002B	SAMP	1	59.79	1.217	15	PASS	1.5	1.433	15	PASS
N063248-002B	SAMP	5	13.38	1.58	15	PASS	0.35	3.85	15	PASS
N063248-002B-PS	PS	1	70.16	1.406	15	PASS	11.35	2.513	15	PASS
N063248-002B-MS	MS	1	71.6	1.395	15	PASS	11.04	1.583	15	PASS
N063248-002B-MSD	MSD	1	72.47	1.139	15	PASS	11.03	0.292	15	PASS
CCV11	CCV	1	21.74	1.753	15	PASS	19.66	1.508	15	PASS
CCB11	CCB	1	<0.000	N/A	15	<PQL	0.01	10.872	15	PASS
N063248-003B	SAMP	1	94.15	1.42	15	PASS	1.21	5.351	15	PASS
N063248-004B	SAMP	1	95.03	0.263	15	PASS	1.03	2.556	15	PASS
N063248-005C	SAMP	1	139.28	0.224	15	PASS	0.31	8.751	15	PASS
N063248-006C	SAMP	1	116.18	1.252	15	PASS	0.23	7.79	15	PASS
N063248-007C	SAMP	1	114.24	1.938	15	PASS	0.27	2.692	15	PASS
N063248-008C	SAMP	1	105.96	0.787	15	PASS	0.39	3.819	15	PASS
N063248-010B	SAMP	1	71.42	0.723	15	PASS	12.35	1.256	15	PASS
N063248-011B	SAMP	1	139.53	1.395	15	PASS	0.34	4.954	15	PASS
N063249-007C	SAMP	1	37.13	0.797	15	PASS	0.18	12.975	15	PASS
CCV12	CCV	1	22.44	1.29	15	PASS	19.58	0.808	15	PASS
CCB12	CCB	1	<0.000	N/A	15	<PQL	0.02	30.564	15	<PQL
N063249-009C	SAMP	1	61.69	1.598	15	PASS	0.2	1.235	15	PASS
N063249-011C	SAMP	1	644.7	0.375	15	PASS	1.21	2.244	15	PASS
N063249-013C	SAMP	1	44.26	1.442	15	PASS	0.17	3.984	15	PASS
N063249-015C	SAMP	1	72.33	2.073	15	PASS	0.18	10.831	15	PASS
N063249-017C	SAMP	1	211.41	0.652	15	PASS	0.3	2.534	15	PASS
N063249-018C	SAMP	5	45.49	0.581	15	PASS	0.46	1.677	15	PASS
CCV13	CCV	1	22.5	0.471	15	PASS	19.98	1.399	15	PASS
CCB13	CCB	1	<0.000	N/A	15	<PQL	0.21	6.323	15	PASS
ICSA6	ICSA	1	0.02	57.827	15	<PQL	0.25	5.341	15	PASS
ICSAB6	ICSAB	1	22.35	2.238	15	PASS	20.53	0.837	15	PASS
CCV14	CCV	1	21.97	1.107	15	PASS	19.77	1.58	15	PASS
CCB14	CCB	1	<0.000	N/A	15	<PQL	0.02	8.531	15	PASS
CCV15	CCV	1	22.62	1.187	15	PASS	19.65	0.578	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL	0.01	76.953	15	<PQL
CCV16	CCV	1	22.1	0.561	15	PASS	19.94	1.029	15	PASS
CCB16	CCB	1	<0.000	N/A	15	<PQL	0.11	5.665	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				51 V [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
ICSA7	ICSA	1	0.01	76.638	15	<PQL	0.13	5.732	15	PASS
ICSAB7	ICSAB	1	22.31	0.348	15	PASS	20.1	0.903	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	52 Cr [2]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	27.827	15	<PQL	0.1	4.971	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.47	5.773	15	PASS	0.51	3.025	15	PASS
Std3-5/50 ppb	ICAL	1	4.77	0.723	15	PASS	4.89	3.407	15	PASS
Std4-10/100 ppb	ICAL	1	9.94	1.066	15	PASS	9.86	1.399	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.89	0.288	15	PASS	19.81	1.649	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.64	0.082	15	PASS	39.51	1.262	15	PASS
Std7-100/1000 ppb	ICAL	1	99.08	1.027	15	PASS	98.5	0.438	15	PASS
Std8-200/2000 ppb	ICAL	1	200.55	1.19	15	PASS	200.88	0.335	15	PASS
ICV	ICV	1	10.18	2.082	15	PASS	101.59	0.398	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	0	258.657	15	<PQL
LLICV1	LLICV	1	1.11	4.614	20	PASS	0.55	6.234	20	PASS
MLCCV	CCV	1	19.98	1.349	15	PASS	19.94	0.442	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.29	1.068	15	PASS	20.36	0.139	15	PASS
CCV1	CCV	1	19.78	1.439	15	PASS	19.82	1.109	15	PASS
CCB1	CCB	1	1	2.109	15	PASS	0.18	6.931	15	PASS
CCV2	CCV	1	19.95	1.632	15	PASS	19.77	0.493	15	PASS
CCB2	CCB	1	1.01	4.255	15	PASS	0.19	6.321	15	PASS
CCV3	CCV	1	19.93	1.068	15	PASS	19.59	0.422	15	PASS
CCB3	CCB	1	1.03	2.12	15	PASS	0.18	13.078	15	PASS
CCV4	CCV	1	20.13	0.256	15	PASS	20	0.995	15	PASS
CCB4	CCB	1	1	1.063	15	PASS	0.18	10.217	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	0.33	4.345	15	PASS	0.07	11.023	15	PASS
ICSAB2	ICSAB	1	20.46	0.376	15	PASS	20.28	0.565	15	PASS
CCV5	CCV	1	20.37	1.139	15	PASS	20.33	0.561	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	0.33	8.05	15	PASS	0.06	16.251	15	<PQL
ICSAB3	ICSAB	1	20.28	1.359	15	PASS	20.19	1.163	15	PASS
CCV6	CCV	1	19.7	1.202	15	PASS	19.62	1.472	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV7	CCV	1	19.64	0.349	15	PASS	19.92	0.296	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	0.34	1.824	15	PASS	0.07	22.799	15	<PQL
ICSAB4	ICSAB	1	20.09	1.756	15	PASS	20.31	0.724	15	PASS
CCV8	CCV	1	20.51	1.021	15	PASS	19.91	1.192	15	PASS
CCB8	CCB	1	0	1036.098	15	<PQL	<0.000	N/A	15	<PQL
CCV9	CCV	1	19.57	0.633	15	PASS	19.71	1.201	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV10	CCV	1	19.81	1.03	15	PASS	19.6	0.332	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	52 Cr [2]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCB10	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	0.33	4.609	15	PASS	0.07	14.564	15	PASS
ICSAB5	ICSAB	1	20.04	0.07	15	PASS	20.01	1.125	15	PASS
MB-107021	MBLK	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
LCS-107021	LCS	1	10	0.658	15	PASS	98.25	1.212	15	PASS
N062510-015D	SAMP	5	161.68	0.878	15	PASS	90.55	0.29	15	PASS
N063248-001B	SAMP	1	0.54	3.726	15	PASS	58.79	0.727	15	PASS
N063248-002B	SAMP	1	404.29	1.283	15	PASS	88.94	0.398	15	PASS
N063248-002B	SAMP	5	90.26	0.359	15	PASS	19.55	0.225	15	PASS
N063248-002B-PS	PS	1	413.74	1.66	15	PASS	180.29	0.501	15	PASS
N063248-002B-MS	MS	1	420.62	0.721	15	PASS	181.31	0.894	15	PASS
N063248-002B-MSD	MSD	1	420.39	0.565	15	PASS	181.18	1.451	15	PASS
CCV11	CCV	1	19.72	1.941	15	PASS	19.59	1.17	15	PASS
CCB11	CCB	1	0.01	134.014	15	<PQL	<0.000	N/A	15	<PQL
N063248-003B	SAMP	1	752.85	0.582	15	PASS	205.85	0.525	15	PASS
N063248-004B	SAMP	1	247.97	2.914	15	PASS	313.19	2.545	15	PASS
N063248-005C	SAMP	1	0.52	3.559	15	PASS	386.18	1.283	15	PASS
N063248-006C	SAMP	1	0.26	4.381	15	PASS	757.03	0.865	15	PASS
N063248-007C	SAMP	1	0.34	2.528	15	PASS	753.47	0.679	15	PASS
N063248-008C	SAMP	1	1.01	4.472	15	PASS	720.6	0.904	15	PASS
N063248-010B	SAMP	1	17.01	1.766	15	PASS	<0.000	N/A	15	<PQL
N063248-011B	SAMP	1	0.49	2.878	15	PASS	400.65	1.225	15	PASS
N063249-007C	SAMP	1	0.08	8.788	15	PASS	230.11	1.033	15	PASS
CCV12	CCV	1	19.39	0.576	15	PASS	19.65	1.067	15	PASS
CCB12	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063249-009C	SAMP	1	0.11	7.783	15	PASS	180.74	0.634	15	PASS
N063249-011C	SAMP	1	0.24	4.073	15	PASS	1142.66	0.745	15	PASS
N063249-013C	SAMP	1	0.29	124.791	15	<PQL	802.09	1.268	15	PASS
N063249-015C	SAMP	1	0.03	24.227	15	<PQL	450.54	0.417	15	PASS
N063249-017C	SAMP	1	0	506.416	15	<PQL	1076.94	0.511	15	PASS
N063249-018C	SAMP	5	0.02	74.336	15	<PQL	114.33	1.173	15	PASS
CCV13	CCV	1	19.49	0.464	15	PASS	19.73	0.111	15	PASS
CCB13	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	0.33	4.478	15	PASS	0.06	10.678	15	PASS
ICSAB6	ICSAB	1	20.12	0.449	15	PASS	20.4	0.351	15	PASS
CCV14	CCV	1	19.61	1.985	15	PASS	19.73	1.059	15	PASS
CCB14	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV15	CCV	1	19.53	1.006	15	PASS	19.75	1.254	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV16	CCV	1	19.76	0.985	15	PASS	20.06	0.772	15	PASS
CCB16	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	52 Cr [2]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
ICSA7	ICSA	1	0.32	9.091	15	PASS	0.07	11.198	15	PASS
ICSAB7	ICSAB	1	19.91	0.754	15	PASS	20.29	1.198	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	66 Zn [2]				75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	<0.000	N/A	15	<PQL	0.1	15.379	15	FAIL
Std2-0.5/5 ppb	ICAL	1	<0.000	N/A	15	<PQL	0.46	2.776	15	PASS
Std3-5/50 ppb	ICAL	1	4.04	2.554	15	PASS	4.8	6.312	15	PASS
Std4-10/100 ppb	ICAL	1	9.39	3.994	15	PASS	9.82	2.017	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	18.98	0.41	15	PASS	19.47	2.419	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.54	0.96	15	PASS	39.93	0.817	15	PASS
Std7-100/1000 ppb	ICAL	1	98.57	0.405	15	PASS	99.51	0.783	15	PASS
Std8-200/2000 ppb	ICAL	1	200.97	0.134	15	PASS	200.33	0.784	15	PASS
ICV	ICV	1	100.57	0.528	15	PASS	10.43	1.082	15	PASS
ICB	ICB	1	0.05	49.984	15	<PQL	0.02	113.613	15	<PQL
LLICV1	LLICV	1	9.92	2.269	20	PASS	0.09	23.162	20	<PQL
MLCCV	CCV	1	19.2	2.435	15	PASS	20.04	2.149	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	19.38	1.963	15	PASS	20.6	2.753	15	PASS
CCV1	CCV	1	19.39	1.294	15	PASS	20.03	2.081	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL	0	903.97	15	<PQL
CCV2	CCV	1	19.38	2.033	15	PASS	19.84	0.388	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV3	CCV	1	19.36	1.031	15	PASS	19.77	0.594	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL	0.01	152.049	15	<PQL
CCV4	CCV	1	19.53	0.041	15	PASS	20.09	2.99	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL	0.01	119.849	15	<PQL
CCB4	CCB	1	<0.000	N/A	15	<PQL	0	291.181	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	19.5	1.804	15	PASS	20.47	0.498	15	PASS
CCV5	CCV	1	19.62	1.898	15	PASS	20.55	1.072	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	19.34	1.992	15	PASS	20.27	1.285	15	PASS
CCV6	CCV	1	19.59	1.219	15	PASS	19.76	2.022	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL	0	1214.624	15	<PQL
CCV7	CCV	1	19.57	1.397	15	PASS	20.07	1.253	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	18.91	0.589	15	PASS	20.32	0.601	15	PASS
CCV8	CCV	1	19.88	0.617	15	PASS	20.12	1.584	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV9	CCV	1	19.56	0.861	15	PASS	19.93	1.104	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV10	CCV	1	19.24	4.062	15	PASS	19.72	2.489	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	66 Zn [2]				75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCB10	CCB	1	<0.000	N/A	15	<PQL	0.02	53.568	15	<PQL
ICSA5	ICSA	1	<0.000	N/A	15	<PQL	0.01	369.683	15	<PQL
ICSAB5	ICSAB	1	19.22	1.406	15	PASS	19.98	1.177	15	PASS
MB-107021	MBLK	1	<0.000	N/A	15	<PQL	0.01	243.432	15	<PQL
LCS-107021	LCS	1	98.25	0.388	15	PASS	10.23	0.352	15	PASS
N062510-015D	SAMP	5	219.26	2.062	15	PASS	0.69	9.788	15	PASS
N063248-001B	SAMP	1	63.82	1.201	15	PASS	<0.000	N/A	15	<PQL
N063248-002B	SAMP	1	28.11	0.476	15	PASS	<0.000	N/A	15	<PQL
N063248-002B	SAMP	5	5.78	3.728	15	PASS	<0.000	N/A	15	<PQL
N063248-002B-PS	PS	1	114.8	0.845	15	PASS	8.95	1.388	15	PASS
N063248-002B-MS	MS	1	115.16	1.271	15	PASS	8.52	2.283	15	PASS
N063248-002B-MSD	MSD	1	114.2	0.508	15	PASS	8.89	2.939	15	PASS
CCV11	CCV	1	19.18	0.887	15	PASS	19.95	2.201	15	PASS
CCB11	CCB	1	<0.000	N/A	15	<PQL	0	691.193	15	<PQL
N063248-003B	SAMP	1	338.25	0.787	15	PASS	<0.000	N/A	15	<PQL
N063248-004B	SAMP	1	201.93	0.356	15	PASS	<0.000	N/A	15	<PQL
N063248-005C	SAMP	1	<0.000	N/A	15	<PQL	0.02	1199.477	15	<PQL
N063248-006C	SAMP	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063248-007C	SAMP	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063248-008C	SAMP	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063248-010B	SAMP	1	0.57	19.602	15	<PQL	0.9	1.523	15	PASS
N063248-011B	SAMP	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063249-007C	SAMP	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV12	CCV	1	18.87	1.448	15	PASS	19.61	1.699	15	PASS
CCB12	CCB	1	<0.000	N/A	15	<PQL	0	535.302	15	<PQL
N063249-009C	SAMP	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063249-011C	SAMP	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063249-013C	SAMP	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063249-015C	SAMP	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063249-017C	SAMP	1	0.78	18.865	15	<PQL	<0.000	N/A	15	<PQL
N063249-018C	SAMP	5	<0.000	N/A	15	<PQL	0.22	12.858	15	PASS
CCV13	CCV	1	18.98	1.206	15	PASS	19.79	1.82	15	PASS
CCB13	CCB	1	<0.000	N/A	15	<PQL	0.01	170.85	15	<PQL
ICSA6	ICSA	1	<0.000	N/A	15	<PQL	0.03	41.639	15	<PQL
ICSAB6	ICSAB	1	19.05	1.556	15	PASS	19.9	2.439	15	PASS
CCV14	CCV	1	19.09	1.16	15	PASS	19.66	1.198	15	PASS
CCB14	CCB	1	<0.000	N/A	15	<PQL	0	13298.147	15	<PQL
CCV15	CCV	1	19.01	2.414	15	PASS	19.42	0.935	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV16	CCV	1	18.74	0.932	15	PASS	19.87	1.357	15	PASS
CCB16	CCB	1	<0.000	N/A	15	<PQL	0	821.372	15	<PQL

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	66 Zn [2]				75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
ICSA7	ICSA	1	<0.000	N/A	15	<PQL	0.01	38.089	15	<PQL
ICSAB7	ICSAB	1	18.81	0.973	15	PASS	20.3	1.771	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	78 Se [1]				95 Mo [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.06	59.065	15	<PQL	0.09	13.336	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.52	22.291	15	FAIL	0.45	5.981	15	PASS
Std3-5/50 ppb	ICAL	1	4.8	3.503	15	PASS	4.73	1.307	15	PASS
Std4-10/100 ppb	ICAL	1	9.53	1.636	15	PASS	9.69	1.057	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.76	1.967	15	PASS	19.36	1.729	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.71	2.029	15	PASS	39.51	1.164	15	PASS
Std7-100/1000 ppb	ICAL	1	99.82	2.088	15	PASS	99.86	1.228	15	PASS
Std8-200/2000 ppb	ICAL	1	200.2	0.652	15	PASS	200.26	1.42	15	PASS
ICV	ICV	1	9.73	2.945	15	PASS	9.94	0.447	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	0.02	38.674	15	<PQL
LLICV1	LLICV	1	0.5	7.736	20	PASS	0.52	4.354	20	PASS
MLCCV	CCV	1	19.45	0.945	15	PASS	19.34	0.664	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL	0.02	37.762	15	<PQL
ICSAB1	ICSAB	1	20.31	1.142	15	PASS	19.9	0.343	15	PASS
CCV1	CCV	1	20.11	0.295	15	PASS	19.48	0.621	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL	0.02	81.165	15	<PQL
CCV2	CCV	1	19.9	4.416	15	PASS	19.48	0.612	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	0.02	42.039	15	<PQL
CCV3	CCV	1	20.18	1.305	15	PASS	19.09	0.82	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL	0.02	28.706	15	<PQL
CCV4	CCV	1	19.98	2.496	15	PASS	19.93	0.827	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL	0.02	39.662	15	<PQL
CCB4	CCB	1	<0.000	0	15	PASS	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.55	2.777	15	PASS	19.95	0.908	15	PASS
CCV5	CCV	1	19.74	1.143	15	PASS	19.7	0.457	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	0.02	45.463	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.24	0.642	15	PASS	19.59	1.013	15	PASS
CCV6	CCV	1	20.48	1.069	15	PASS	20	1.354	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL	0.03	22.124	15	<PQL
CCV7	CCV	1	19.68	0.982	15	PASS	20.35	0.327	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	0.02	38.764	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL	0	125.066	15	<PQL
ICSAB4	ICSAB	1	20.53	1.808	15	PASS	20.19	0.706	15	PASS
CCV8	CCV	1	20.28	2.093	15	PASS	19.68	0.797	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL	0.02	46.576	15	<PQL
CCV9	CCV	1	19.93	0.637	15	PASS	19.93	1.047	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL	0.02	8.862	15	PASS
CCV10	CCV	1	20.03	2.665	15	PASS	19.9	0.568	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	78 Se [1]				95 Mo [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCB10	CCB	1	<0.000	N/A	15	<PQL	0.02	4.69	15	PASS
ICSA5	ICSA	1	<0.000	N/A	15	<PQL	0	329.59	15	<PQL
ICSAB5	ICSAB	1	20.53	2.166	15	PASS	20	1.492	15	PASS
MB-107021	MBLK	1	<0.000	N/A	15	<PQL	0.01	90.067	15	<PQL
LCS-107021	LCS	1	9.62	2.163	15	PASS	9.98	1.357	15	PASS
N062510-015D	SAMP	5	0.06	7.33	15	PASS	6.02	0.568	15	PASS
N063248-001B	SAMP	1	3.15	8.87	15	PASS	25.91	0.682	15	PASS
N063248-002B	SAMP	1	2.83	1.942	15	PASS	34.62	0.886	15	PASS
N063248-002B	SAMP	5	0.64	3.901	15	PASS	7.23	1.111	15	PASS
N063248-002B-PS	PS	1	11.9	2.591	15	PASS	45.79	1.695	15	PASS
N063248-002B-MS	MS	1	12.23	2.765	15	PASS	47.11	1.336	15	PASS
N063248-002B-MSD	MSD	1	11.65	0.964	15	PASS	46.87	0.635	15	PASS
CCV11	CCV	1	20.12	1.72	15	PASS	20.18	0.955	15	PASS
CCB11	CCB	1	<0.000	N/A	15	<PQL	0.02	24.557	15	<PQL
N063248-003B	SAMP	1	2.1	10	15	PASS	26.08	0.737	15	PASS
N063248-004B	SAMP	1	1.01	7.627	15	PASS	25.89	1.867	15	PASS
N063248-005C	SAMP	1	0.01	204.344	15	<PQL	117.52	1.378	15	PASS
N063248-006C	SAMP	1	<0.000	N/A	15	<PQL	81.14	0.951	15	PASS
N063248-007C	SAMP	1	0.01	253.606	15	<PQL	83.11	0.653	15	PASS
N063248-008C	SAMP	1	0.04	60.171	15	<PQL	81.36	0.477	15	PASS
N063248-010B	SAMP	1	3.62	5.141	15	PASS	3.22	5.178	15	PASS
N063248-011B	SAMP	1	0.01	338.157	15	<PQL	117.98	0.948	15	PASS
N063249-007C	SAMP	1	0.06	48.69	15	<PQL	72.24	0.155	15	PASS
CCV12	CCV	1	19.68	2.429	15	PASS	20.25	1.458	15	PASS
CCB12	CCB	1	<0.000	N/A	15	<PQL	0.03	19.775	15	<PQL
N063249-009C	SAMP	1	0	236.911	15	<PQL	37.74	0.964	15	PASS
N063249-011C	SAMP	1	0.55	13.387	15	PASS	13.75	1.292	15	PASS
N063249-013C	SAMP	1	0.02	105.565	15	<PQL	168.38	0.81	15	PASS
N063249-015C	SAMP	1	0.01	365.182	15	<PQL	51.52	0.243	15	PASS
N063249-017C	SAMP	1	0.02	29.752	15	<PQL	2.53	1.323	15	PASS
N063249-018C	SAMP	5	0.08	34.247	15	<PQL	1.94	1.8	15	PASS
CCV13	CCV	1	19.59	2.205	15	PASS	20.17	1.297	15	PASS
CCB13	CCB	1	<0.000	N/A	15	<PQL	0.02	45.417	15	<PQL
ICSA6	ICSA	1	<0.000	N/A	15	<PQL	0	192.013	15	<PQL
ICSAB6	ICSAB	1	20.23	2.504	15	PASS	20.06	1.075	15	PASS
CCV14	CCV	1	19.82	3.674	15	PASS	19.99	1.262	15	PASS
CCB14	CCB	1	<0.000	N/A	15	<PQL	0.02	11.306	15	PASS
CCV15	CCV	1	19.61	3.363	15	PASS	20.08	1.898	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL	0.04	23.578	15	<PQL
CCV16	CCV	1	19.81	0.433	15	PASS	19.9	0.309	15	PASS
CCB16	CCB	1	<0.000	N/A	15	<PQL	0.02	33.861	15	<PQL

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	78 Se [1]				95 Mo [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
ICSA7	ICSA	1	<0.000	N/A	15	<PQL	0	71.997	15	<PQL
ICSAB7	ICSAB	1	19.95	1.408	15	PASS	19.82	1.906	15	PASS

PERCENT RSD SUMMARY: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				52 Cr [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.11	14.881	15	PASS	0.1	9.362	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.48	5.813	15	PASS	0.49	2.695	15	PASS
Std3-5/50 ppb	ICAL	1	4.82	2.112	15	PASS	4.82	2.807	15	PASS
Std4-10/100 ppb	ICAL	1	9.75	0.405	15	PASS	9.76	2.128	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.49	1.504	15	PASS	19.56	1.074	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.73	0.713	15	PASS	39.05	0.521	15	PASS
Std7-100/1000 ppb	ICAL	1	100.14	0.815	15	PASS	99.1	0.953	15	PASS
Std8-200/2000 ppb	ICAL	1	200.05	0.916	15	PASS	200.7	0.188	15	PASS
ICV	ICV	1	9.83	1.682	15	PASS	9.99	0.387	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	0	150.414	15	<PQL
LLICV1	LLICV	1	1.03	1.376	20	PASS	1.04	3.305	20	PASS
LLICV1	LLICV	1	0.98	4.633	20	PASS	0.98	2.24	20	PASS
MLCCV	CCV	1	19.62	1.316	15	PASS	19.47	0.67	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.09	1.176	15	PASS	20.39	0.897	15	PASS
CCV1	CCV	1	19.83	1.443	15	PASS	20.09	0.827	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.42	1.347	15	PASS	19.65	1.317	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV3	CCV	1	19.57	1.412	15	PASS	19.54	0.863	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20	1.05	15	PASS	20.16	1.652	15	PASS
MDL1	SAMP	1	0.52	8.926	15	PASS	0.46	3.683	15	PASS
MDL2	SAMP	1	0.5	4.645	15	PASS	0.44	2.446	15	PASS
MDL3	SAMP	1	0.48	4.506	15	PASS	0.43	2.12	15	PASS
CCV4	CCV	1	19.57	1.898	15	PASS	19.98	0.836	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV5	CCV	1	19.87	0.805	15	PASS	19.51	1.173	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV6	CCV	1	20.03	0.356	15	PASS	19.94	1.078	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.72	0.863	15	PASS	19.92	0.773	15	PASS
N063248-002B	SAMP	5	12.06	0.755	15	PASS	82.4	1.126	15	PASS
N063248-002B	SAMP	25	2.57	1.344	15	PASS	17.84	1.689	15	PASS
N063248-002B-PS	PS	5	22.62	0.823	15	PASS	96.9	0.577	15	PASS
N063248-002B-MS	MS	5	14.63	2.106	15	PASS	89.36	0.676	15	PASS
N063248-002B-MSD	MSD	5	15.43	1.594	15	PASS	95.64	1.748	15	PASS
N063248-003B	SAMP	10	9.9	0.833	15	PASS	84.26	1.085	15	PASS

PERCENT RSD SUMMARY: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				52 Cr [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063248-004B	SAMP	10	9.75	1.041	15	PASS	27.68	1.24	15	PASS
CCV7	CCV	1	20.24	1.861	15	PASS	19.3	0.666	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV8	CCV	1	19.7	1.29	15	PASS	19.71	0.766	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV9	CCV	1	19.83	0.826	15	PASS	19.63	0.758	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV10	CCV	1	19.67	0.472	15	PASS	19.71	2.028	15	PASS
CCB10	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.03	1.24	15	PASS	20.27	1.138	15	PASS
N063248-005C	SAMP	1	132.42	0.966	15	PASS	0.49	1.686	15	PASS
N063248-005C	SAMP	10	13.9	1.715	15	PASS	0.01	45.065	15	<PQL
N063248-006C	SAMP	1	111.26	0.729	15	PASS	0.22	9.527	15	PASS
N063248-006C	SAMP	10	11.85	2.519	15	PASS	<0.000	N/A	15	<PQL
N063248-007C	SAMP	1	110.52	2.408	15	PASS	0.32	5.331	15	PASS
N063248-007C	SAMP	10	11.75	1.113	15	PASS	0.01	47.815	15	<PQL
N063248-008C	SAMP	1	102.86	1.456	15	PASS	0.98	3.28	15	PASS
N063248-008C	SAMP	10	10.78	4.073	15	PASS	0.08	6.027	15	PASS
N063248-010B	SAMP	1	67.72	1.015	15	PASS	17.47	1.876	15	PASS
CCV11	CCV	1	20.18	1.144	15	PASS	18.88	2.043	15	PASS
CCB11	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063248-011B	SAMP	1	134.24	0.598	15	PASS	0.46	7.221	15	PASS
N063248-011B	SAMP	10	14.79	0.691	15	PASS	0.03	34.601	15	<PQL
N063249-007C	SAMP	1	35.88	0.715	15	PASS	0.04	52.512	15	<PQL
N063249-007C	SAMP	10	3.68	4.673	15	PASS	<0.000	N/A	15	<PQL
N063249-009C	SAMP	1	59.32	1.225	15	PASS	0.07	30.017	15	<PQL
N063249-009C	SAMP	10	6.83	0.612	15	PASS	<0.000	N/A	15	<PQL
N063249-011C	SAMP	1	615.59	0.52	15	PASS	0.29	14.691	15	PASS
N063249-011C	SAMP	10	68.35	1.705	15	PASS	0	381.402	15	<PQL
N063249-013C	SAMP	1	42.25	1.315	15	PASS	0.03	10.002	15	PASS
N063249-013C	SAMP	10	4.61	1.204	15	PASS	<0.000	N/A	15	<PQL
CCV12	CCV	1	20.93	1.315	15	PASS	18.89	0.132	15	PASS
CCB12	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063249-015C	SAMP	1	68.08	1.349	15	PASS	0	362.277	15	<PQL
N063249-015C	SAMP	10	7.64	2.106	15	PASS	<0.000	N/A	15	<PQL
N063249-017C	SAMP	1	202.4	1.23	15	PASS	<0.000	N/A	15	<PQL
N063249-017C	SAMP	10	22.36	0.604	15	PASS	<0.000	N/A	15	<PQL
N063249-018C	SAMP	5	38.44	0.598	15	PASS	0.01	164.378	15	<PQL
CCV13	CCV	1	20.46	0.595	15	PASS	19.3	1.062	15	PASS
CCB13	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				52 Cr [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
ICSA5	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB5	ICSAB	1	20.85	2.538	15	PASS	19.71	0.327	15	PASS
CCV14	CCV	1	20.52	1.496	15	PASS	19.07	2.14	15	PASS
CCB14	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV15	CCV	1	20.69	1.56	15	PASS	19.15	0.818	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV16	CCV	1	20.38	0.567	15	PASS	18.93	0.966	15	PASS
CCB16	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV17	CCV	1	20.99	2.009	15	PASS	18.76	0.591	15	PASS
CCB17	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	0	345.111	15	<PQL	<0.000	N/A	15	<PQL
ICSAB6	ICSAB	1	21.49	1.663	15	PASS	19.57	0.793	15	PASS

PERCENT RSD SUMMARY: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.1	17.358	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.48	3.002	15	PASS
Std3-5/50 ppb	ICAL	1	4.81	3.025	15	PASS
Std4-10/100 ppb	ICAL	1	9.77	2.389	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.78	1.164	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.02	1.467	15	PASS
Std7-100/1000 ppb	ICAL	1	100.2	0.669	15	PASS
Std8-200/2000 ppb	ICAL	1	200.13	1.446	15	PASS
ICV	ICV	1	100.89	0.705	15	PASS
ICB	ICB	1	0	284.11	15	<PQL
LLICV1	LLICV	1	0.55	4.582	20	PASS
LLICV1	LLICV	1	0.53	7.38	20	PASS
MLCCV	CCV	1	19.63	1.253	15	PASS
ICSA1	ICSA	1	0	270.688	15	<PQL
ICSAB1	ICSAB	1	20.5	0.625	15	PASS
CCV1	CCV	1	20.01	0.918	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.76	0.534	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL
CCV3	CCV	1	19.78	0.902	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.45	0.678	15	PASS
MDL1	SAMP	1	0.49	2.677	15	PASS
MDL2	SAMP	1	0.46	8.853	15	PASS
MDL3	SAMP	1	0.54	2.905	15	PASS
CCV4	CCV	1	20.11	2.256	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL
CCV5	CCV	1	19.72	1.046	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL
CCV6	CCV	1	20.04	0.19	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.27	0.514	15	PASS
N063248-002B	SAMP	5	18.7	1.333	15	PASS
N063248-002B	SAMP	25	4.05	1.713	15	PASS
N063248-002B-PS	PS	5	117.22	0.383	15	PASS
N063248-002B-MS	MS	5	39.52	0.845	15	PASS
N063248-002B-MSD	MSD	5	41.77	1.458	15	PASS
N063248-003B	SAMP	10	23.73	1.562	15	PASS

PERCENT RSD SUMMARY: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment
N063248-004B	SAMP	10	34.83	0.903	15	PASS
CCV7	CCV	1	19.64	0.467	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL
CCV8	CCV	1	19.67	1.135	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL
CCV9	CCV	1	19.44	1.878	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL
CCV10	CCV	1	19.83	2.27	15	PASS
CCB10	CCB	1	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.18	1.88	15	PASS
N063248-005C	SAMP	1	400.39	2.239	15	PASS
N063248-005C	SAMP	10	42.91	0.829	15	PASS
N063248-006C	SAMP	1	772.36	1.195	15	PASS
N063248-006C	SAMP	10	86.56	0.866	15	PASS
N063248-007C	SAMP	1	774.69	0.665	15	PASS
N063248-007C	SAMP	10	84.27	0.514	15	PASS
N063248-008C	SAMP	1	733.13	1.269	15	PASS
N063248-008C	SAMP	10	77.98	0.973	15	PASS
N063248-010B	SAMP	1	<0.000	N/A	15	<PQL
CCV11	CCV	1	19.4	0.854	15	PASS
CCB11	CCB	1	<0.000	N/A	15	<PQL
N063248-011B	SAMP	1	411.05	0.93	15	PASS
N063248-011B	SAMP	10	44.69	1.474	15	PASS
N063249-007C	SAMP	1	233.48	0.507	15	PASS
N063249-007C	SAMP	10	25.05	0.859	15	PASS
N063249-009C	SAMP	1	185.32	0.562	15	PASS
N063249-009C	SAMP	10	20.94	1.068	15	PASS
N063249-011C	SAMP	1	1156.4	1.092	15	PASS
N063249-011C	SAMP	10	130.07	0.282	15	PASS
N063249-013C	SAMP	1	817.09	1.363	15	PASS
N063249-013C	SAMP	10	87.76	1.327	15	PASS
CCV12	CCV	1	19.46	1.202	15	PASS
CCB12	CCB	1	<0.000	N/A	15	<PQL
N063249-015C	SAMP	1	460.62	1.841	15	PASS
N063249-015C	SAMP	10	50.92	0.206	15	PASS
N063249-017C	SAMP	1	1087.68	1.121	15	PASS
N063249-017C	SAMP	10	122.79	0.438	15	PASS
N063249-018C	SAMP	5	105.2	0.421	15	PASS
CCV13	CCV	1	19.67	1.405	15	PASS
CCB13	CCB	1	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment
ICSA5	ICSA	1	0	16.197	15	<PQL
ICSAB5	ICSAB	1	19.95	0.695	15	PASS
CCV14	CCV	1	19.62	0.724	15	PASS
CCB14	CCB	1	<0.000	N/A	15	<PQL
CCV15	CCV	1	19.66	1.092	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL
CCV16	CCV	1	19.53	0.264	15	PASS
CCB16	CCB	1	<0.000	N/A	15	<PQL
CCV17	CCV	1	19.69	1.698	15	PASS
CCB17	CCB	1	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	<0.000	N/A	15	<PQL
ICSAB6	ICSAB	1	20.11	2.277	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223001.d	RINSE	ICAL	1	02/23/24 1:22 PM
A0223002.d	Cal Blk	IBLK	1	02/23/24 1:27 PM
A0223003.d	Std1-0.1/1 ppb	ICAL	1	02/23/24 1:32 PM
A0223004.d	Std2-0.5/5 ppb	ICAL	1	02/23/24 1:36 PM
A0223005.d	Std3-5/50 ppb	ICAL	1	02/23/24 1:41 PM
A0223006.d	Std4-10/100 ppb	ICAL	1	02/23/24 1:46 PM
A0223007.d	Std5-4.0/20/200 ppb	ICAL	1	02/23/24 1:51 PM
A0223008.d	Std6-8.0/40/400 ppb	ICAL	1	02/23/24 1:55 PM
A0223009.d	Std7-100/1000 ppb	ICAL	1	02/23/24 2:00 PM
A0223010.d	Std8-200/2000 ppb	ICAL	1	02/23/24 2:05 PM
A0223011.d	ICV	ICV	1	02/23/24 2:24 PM
A0223012.d	ICB	ICB	1	02/23/24 2:29 PM
A0223013.d	LLICV1	LLICV	1	02/23/24 2:34 PM
A0223014.d	MLCCV	CCV	1	02/23/24 2:38 PM
A0223015.d	ICSA1	ICSA	1	02/23/24 2:43 PM
A0223016.d	ICSAB1	ICSAB	1	02/23/24 2:47 PM
A0223017.d	MDL 4	ICAL	1	02/23/24 3:00 PM
A0223018.d	MB-106955	MBLK	1	02/23/24 3:10 PM
A0223019.d	LCS-106955	LCS	1	02/23/24 3:15 PM
A0223020.d	N063150-001A	SAMP	1	02/23/24 3:19 PM
A0223021.d	N063150-002A	SAMP	1	02/23/24 3:24 PM
A0223022.d	N063168-002A	SAMP	1	02/23/24 3:29 PM
A0223023.d	N063168-002A	SAMP	5	02/23/24 3:33 PM
A0223024.d	N063168-002A-PS	PS	1	02/23/24 3:38 PM
A0223025.d	N063168-002A-MS	MS	1	02/23/24 3:43 PM
A0223026.d	N063168-002A-MSD	MSD	1	02/23/24 3:47 PM
A0223027.d	RINSE	ICAL	1	02/23/24 3:52 PM
A0223028.d	CCV1	CCV	1	02/23/24 3:57 PM
A0223029.d	CCB1	CCB	1	02/23/24 4:01 PM
A0223030.d	MB-107065	MBLK	1	02/23/24 4:06 PM
A0223031.d	LCS-107065	LCS	1	02/23/24 4:11 PM
A0223032.d	N063286-001A	SAMP	1	02/23/24 4:15 PM
A0223033.d	N063286-001A	SAMP	5	02/23/24 4:20 PM
A0223034.d	N063286-001A-PS	PS	1	02/23/24 4:25 PM
A0223035.d	N063286-001A-MS	MS	1	02/23/24 4:29 PM
A0223036.d	N063286-001A-MSD	MSD	1	02/23/24 4:34 PM
A0223037.d	N063287-001A	SAMP	1	02/23/24 4:38 PM
A0223038.d	N063287-002A	SAMP	1	02/23/24 4:43 PM
A0223039.d	N063287-003A	SAMP	1	02/23/24 4:48 PM
A0223040.d	CCV2	CCV	1	02/23/24 4:52 PM
A0223041.d	CCB2	CCB	1	02/23/24 4:57 PM
A0223042.d	N063289-001A	SAMP	1	02/23/24 5:02 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223043.d	N063289-002A	SAMP	1	02/23/24 5:06 PM
A0223044.d	N063289-003A	SAMP	1	02/23/24 5:11 PM
A0223045.d	N063289-004A	SAMP	1	02/23/24 5:16 PM
A0223046.d	CCV3	CCV	1	02/23/24 5:20 PM
A0223047.d	CCB3	CCB	1	02/23/24 5:25 PM
A0223048.d	N063193-004A	SAMP	5	02/23/24 5:30 PM
A0223049.d	N063193-004A	SAMP	25	02/23/24 5:34 PM
A0223050.d	N063193-004A-PS	PS	5	02/23/24 5:39 PM
A0223051.d	N063193-004A-MS	MS	5	02/23/24 5:44 PM
A0223052.d	N063193-004A-MSD	MSD	5	02/23/24 5:48 PM
A0223053.d	N063195-002A	SAMP	5	02/23/24 5:53 PM
A0223054.d	N063195-003A	SAMP	5	02/23/24 5:58 PM
A0223055.d	N063195-004A	SAMP	5	02/23/24 6:02 PM
A0223056.d	N063201-001D	SAMP	5	02/23/24 6:07 PM
A0223057.d	N063201-001D-MS	MS	5	02/23/24 6:12 PM
A0223058.d	CCV4	CCV	1	02/23/24 6:16 PM
A0223059.d	CCB4	CCB	1	02/23/24 6:21 PM
A0223060.d	CCB4	CCB	1	02/23/24 6:27 PM
A0223061.d	ICSA2	ICSA	1	02/23/24 6:32 PM
A0223062.d	ICSAB2	ICSAB	1	02/23/24 6:37 PM
A0223063.d	MB-106955	MBLK	1	02/23/24 6:42 PM
A0223064.d	LCS-106955	LCS	1	02/23/24 6:46 PM
A0223065.d	N063150-001A	SAMP	1	02/23/24 6:51 PM
A0223066.d	N063150-002A	SAMP	1	02/23/24 6:55 PM
A0223067.d	N063168-002A	SAMP	1	02/23/24 7:00 PM
A0223068.d	N063168-002A	SAMP	5	02/23/24 7:05 PM
A0223069.d	N063168-002A-PS	PS	1	02/23/24 7:09 PM
A0223070.d	N063168-002A-MS	MS	1	02/23/24 7:14 PM
A0223071.d	N063168-002A-MSD	MSD	1	02/23/24 7:19 PM
A0223072.d	RINSE	ICAL	1	02/23/24 7:23 PM
A0223073.d	CCV5	CCV	1	02/23/24 7:28 PM
A0223074.d	CCB5	CCB	1	02/23/24 7:33 PM
A0223075.d	ICSA3	ICSA	1	02/23/24 7:37 PM
A0223076.d	ICSAB3	ICSAB	1	02/23/24 7:42 PM
A0223077.d	N063181-001C	SAMP	10	02/23/24 7:47 PM
A0223078.d	N063181-002C	SAMP	10	02/23/24 7:51 PM
A0223079.d	N063182-001B	SAMP	1	02/23/24 7:56 PM
A0223080.d	N063182-003B	SAMP	1	02/23/24 8:01 PM
A0223081.d	N063182-003B	SAMP	10	02/23/24 8:05 PM
A0223082.d	N063182-005B	SAMP	1	02/23/24 8:10 PM
A0223083.d	N063182-005B	SAMP	10	02/23/24 8:15 PM
A0223084.d	N063182-008B	SAMP	1	02/23/24 8:19 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223085.d	N063182-009B	SAMP	1	02/23/24 8:24 PM
A0223086.d	N063182-009B	SAMP	10	02/23/24 8:29 PM
A0223087.d	CCV6	CCV	1	02/23/24 8:33 PM
A0223088.d	CCB6	CCB	1	02/23/24 8:38 PM
A0223089.d	N063182-009B	SAMP	1	02/23/24 8:43 PM
A0223090.d	N063182-009B	SAMP	1	02/23/24 8:47 PM
A0223091.d	N063182-009B	SAMP	1	02/23/24 8:52 PM
A0223092.d	N063182-009B	SAMP	1	02/23/24 8:57 PM
A0223093.d	N063182-010B	SAMP	10	02/23/24 9:01 PM
A0223094.d	N063182-011B	SAMP	1	02/23/24 9:06 PM
A0223095.d	N063182-011B	SAMP	100	02/23/24 9:11 PM
A0223096.d	CCV7	CCV	1	02/23/24 9:15 PM
A0223097.d	CCB7	CCB	1	02/23/24 9:20 PM
A0223098.d	ICSA4	ICSA	1	02/23/24 9:24 PM
A0223099.d	ICSAB4	ICSAB	1	02/23/24 9:29 PM
A0223100.d	MB-106992	MBLK	1	02/23/24 9:34 PM
A0223101.d	LCS-106992	LCS	1	02/23/24 9:39 PM
A0223102.d	N063211-001B	SAMP	10	02/23/24 9:43 PM
A0223103.d	N063211-002B	SAMP	10	02/23/24 9:48 PM
A0223104.d	N063211-003B	SAMP	100	02/23/24 9:52 PM
A0223105.d	N063213-001B	SAMP	10	02/23/24 9:57 PM
A0223106.d	N063213-002B	SAMP	10	02/23/24 10:02 PM
A0223107.d	N063213-003B	SAMP	10	02/23/24 10:07 PM
A0223108.d	N063213-004B	SAMP	10	02/23/24 10:11 PM
A0223109.d	N063213-007B	SAMP	10	02/23/24 10:16 PM
A0223110.d	CCV8	CCV	1	02/23/24 10:20 PM
A0223111.d	CCB8	CCB	1	02/23/24 10:25 PM
A0223112.d	N063213-008B	SAMP	1	02/23/24 10:30 PM
A0223113.d	N063213-008B	SAMP	5	02/23/24 10:34 PM
A0223114.d	N063213-008B-PS	PS	1	02/23/24 10:39 PM
A0223115.d	N063213-008BMS	MS	1	02/23/24 10:44 PM
A0223116.d	N063213-008BMSD	MSD	1	02/23/24 10:48 PM
A0223117.d	N063214-010B	SAMP	1	02/23/24 10:53 PM
A0223118.d	N063214-011B	SAMP	1	02/23/24 10:58 PM
A0223119.d	N063214-011B	SAMP	10	02/23/24 11:03 PM
A0223120.d	N063214-012B	SAMP	1	02/23/24 11:07 PM
A0223121.d	N063214-012B	SAMP	10	02/23/24 11:12 PM
A0223122.d	CCV9	CCV	1	02/23/24 11:16 PM
A0223123.d	CCB9	CCB	1	02/23/24 11:21 PM
A0223124.d	N063214-013B	SAMP	1	02/23/24 11:26 PM
A0223125.d	N063214-013B	SAMP	10	02/23/24 11:30 PM
A0223126.d	N063214-014B	SAMP	1	02/23/24 11:35 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223127.d	N063214-016B	SAMP	1	02/23/24 11:40 PM
A0223128.d	N063214-016B	SAMP	10	02/23/24 11:44 PM
A0223129.d	CCV10	CCV	1	02/23/24 11:49 PM
A0223130.d	CCB10	CCB	1	02/23/24 11:54 PM
A0223131.d	ICSA5	ICSA	1	02/23/24 11:58 PM
A0223132.d	ICSAB5	ICSAB	1	02/24/24 12:03 AM
A0223133.d	MB-107021	MBLK	1	02/24/24 12:08 AM
A0223134.d	LCS-107021	LCS	1	02/24/24 12:12 AM
A0223135.d	N062510-015D	SAMP	5	02/24/24 12:17 AM
A0223136.d	N063248-001B	SAMP	1	02/24/24 12:21 AM
A0223137.d	N063248-002B	SAMP	1	02/24/24 12:26 AM
A0223138.d	N063248-002B	SAMP	5	02/24/24 12:31 AM
A0223139.d	N063248-002B-PS	PS	1	02/24/24 12:35 AM
A0223140.d	N063248-002B-MS	MS	1	02/24/24 12:40 AM
A0223141.d	N063248-002B-MSD	MSD	1	02/24/24 12:45 AM
A0223142.d	RINSE	ICAL	1	02/24/24 12:49 AM
A0223143.d	CCV11	CCV	1	02/24/24 12:54 AM
A0223144.d	CCB11	CCB	1	02/24/24 12:59 AM
A0223145.d	N063248-003B	SAMP	1	02/24/24 1:03 AM
A0223146.d	N063248-004B	SAMP	1	02/24/24 1:08 AM
A0223147.d	N063248-005C	SAMP	1	02/24/24 1:13 AM
A0223148.d	N063248-006C	SAMP	1	02/24/24 1:17 AM
A0223149.d	N063248-007C	SAMP	1	02/24/24 1:22 AM
A0223150.d	N063248-008C	SAMP	1	02/24/24 1:27 AM
A0223151.d	N063248-010B	SAMP	1	02/24/24 1:31 AM
A0223152.d	N063248-011B	SAMP	1	02/24/24 1:36 AM
A0223153.d	N063249-007C	SAMP	1	02/24/24 1:41 AM
A0223154.d	RINSE	ICAL	1	02/24/24 1:45 AM
A0223155.d	CCV12	CCV	1	02/24/24 1:50 AM
A0223156.d	CCB12	CCB	1	02/24/24 1:54 AM
A0223157.d	N063249-009C	SAMP	1	02/24/24 1:59 AM
A0223158.d	N063249-011C	SAMP	1	02/24/24 2:04 AM
A0223159.d	N063249-013C	SAMP	1	02/24/24 2:08 AM
A0223160.d	N063249-015C	SAMP	1	02/24/24 2:13 AM
A0223161.d	N063249-017C	SAMP	1	02/24/24 2:18 AM
A0223162.d	N063249-018C	SAMP	5	02/24/24 2:22 AM
A0223163.d	RINSE	ICAL	1	02/24/24 2:27 AM
A0223164.d	CCV13	CCV	1	02/24/24 2:32 AM
A0223165.d	CCB13	CCB	1	02/24/24 2:36 AM
A0223166.d	ICSA6	ICSA	1	02/24/24 2:41 AM
A0223167.d	ICSAB6	ICSAB	1	02/24/24 2:46 AM
A0223168.d	MB-107055	MBLK	1	02/24/24 2:50 AM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223169.d	LCS-107055	LCS	1	02/24/24 2:55 AM
A0223170.d	N063295-001B	SAMP	1	02/24/24 2:59 AM
A0223171.d	N063295-002B	SAMP	1	02/24/24 3:04 AM
A0223172.d	N063295-002B	SAMP	5	02/24/24 3:09 AM
A0223173.d	N063295-002B-PS	PS	1	02/24/24 3:13 AM
A0223174.d	N063295-002B-MS	MS	1	02/24/24 3:18 AM
A0223175.d	N063295-002B-MSD	MSD	1	02/24/24 3:23 AM
A0223176.d	N063295-003B	SAMP	1	02/24/24 3:27 AM
A0223177.d	RINSE	ICAL	1	02/24/24 3:32 AM
A0223178.d	CCV14	CCV	1	02/24/24 3:37 AM
A0223179.d	CCB14	CCB	1	02/24/24 3:41 AM
A0223180.d	N063295-005C	SAMP	1	02/24/24 3:46 AM
A0223181.d	N063295-006C	SAMP	1	02/24/24 3:51 AM
A0223182.d	N063295-007C	SAMP	1	02/24/24 3:55 AM
A0223183.d	N063295-008C	SAMP	1	02/24/24 4:00 AM
A0223184.d	N063297-001C	SAMP	1	02/24/24 4:05 AM
A0223185.d	N063297-002B	SAMP	1	02/24/24 4:09 AM
A0223186.d	N063297-003B	SAMP	1	02/24/24 4:14 AM
A0223187.d	N063303-001B	SAMP	1	02/24/24 4:19 AM
A0223188.d	N063303-002B	SAMP	1	02/24/24 4:23 AM
A0223189.d	RINSE	ICAL	1	02/24/24 4:28 AM
A0223190.d	CCV15	CCV	1	02/24/24 4:32 AM
A0223191.d	CCB15	CCB	1	02/24/24 4:37 AM
A0223192.d	N063303-006B	SAMP	5	02/24/24 4:42 AM
A0223193.d	N063303-008B	SAMP	1	02/24/24 4:46 AM
A0223194.d	RINSE	ICAL	1	02/24/24 4:51 AM
A0223195.d	CCV16	CCV	1	02/24/24 4:56 AM
A0223196.d	CCB16	CCB	1	02/24/24 5:00 AM
A0223197.d	ICSA7	ICSA	1	02/24/24 5:05 AM
A0223198.d	ICSAB7	ICSAB	1	02/24/24 5:10 AM
A0223199.d	RINSE	ICAL	1	02/24/24 5:14 AM
A0223200.d	RINSE	ICAL	1	02/24/24 5:19 AM
A0223201.d	RINSE	ICAL	1	02/24/24 5:24 AM
A0223202.d	RINSE	ICAL	1	02/24/24 5:28 AM
A0223203.d	RINSE	ICAL	1	02/24/24 5:33 AM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224001.d	RINSE	ICAL	1	02/25/24 2:10 PM
A0224002.d	Cal Blk	IBLK	1	02/25/24 2:14 PM
A0224003.d	Std1-0.1/1 ppb	ICAL	1	02/25/24 2:19 PM
A0224004.d	Std2-0.5/5 ppb	ICAL	1	02/25/24 2:24 PM
A0224005.d	Std3-5/50 ppb	ICAL	1	02/25/24 2:29 PM
A0224006.d	Std4-10/100 ppb	ICAL	1	02/25/24 2:33 PM
A0224007.d	Std5-4.0/20/200 ppb	ICAL	1	02/25/24 2:38 PM
A0224008.d	Std6-8.0/40/400 ppb	ICAL	1	02/25/24 2:43 PM
A0224009.d	Std7-100/1000 ppb	ICAL	1	02/25/24 2:48 PM
A0224010.d	Std8-200/2000 ppb	ICAL	1	02/25/24 2:52 PM
A0224011.d	ICV	ICV	1	02/25/24 3:01 PM
A0224012.d	ICB	ICB	1	02/25/24 3:05 PM
A0224013.d	LLICV1	LLICV	1	02/25/24 3:10 PM
A0224014.d	LLICV1	LLICV	1	02/25/24 3:15 PM
A0224015.d	MLCCV	CCV	1	02/25/24 3:20 PM
A0224016.d	ICSA1	ICSA	1	02/25/24 3:25 PM
A0224017.d	ICSAB1	ICSAB	1	02/25/24 3:29 PM
A0224018.d	MB-107075	MBLK	1	02/25/24 3:34 PM
A0224019.d	LCS-107075	LCS	1	02/25/24 3:38 PM
A0224020.d	N063315-001A	SAMP	1	02/25/24 3:43 PM
A0224021.d	N063315-001A	SAMP	5	02/25/24 3:48 PM
A0224022.d	N063315-001A-PS	PS	1	02/25/24 3:53 PM
A0224023.d	N063315-001A-MS	MS	1	02/25/24 3:57 PM
A0224024.d	N063315-001A-MSD	MSD	1	02/25/24 4:02 PM
A0224025.d	N063316-001A	SAMP	1	02/25/24 4:06 PM
A0224026.d	N063316-002A	SAMP	1	02/25/24 4:11 PM
A0224027.d	RINSE	ICAL	1	02/25/24 4:16 PM
A0224028.d	CCV1	CCV	1	02/25/24 4:20 PM
A0224029.d	CCB1	CCB	1	02/25/24 4:25 PM
A0224030.d	N063318-001A	SAMP	1	02/25/24 4:30 PM
A0224031.d	N063318-002A	SAMP	1	02/25/24 4:34 PM
A0224032.d	N063290-001A	SAMP	1	02/25/24 4:39 PM
A0224033.d	N063308-001A	SAMP	1	02/25/24 4:44 PM
A0224034.d	N063308-002A	SAMP	1	02/25/24 4:48 PM
A0224035.d	N063308-003A	SAMP	1	02/25/24 4:53 PM
A0224036.d	N063308-004A	SAMP	1	02/25/24 4:58 PM
A0224037.d	N063308-005A	SAMP	1	02/25/24 5:02 PM
A0224038.d	N063308-006A	SAMP	1	02/25/24 5:07 PM
A0224039.d	RINSE	ICAL	1	02/25/24 5:12 PM
A0224040.d	CCV2	CCV	1	02/25/24 5:16 PM
A0224041.d	CCB2	CCB	1	02/25/24 5:21 PM
A0224042.d	N063308-007A	SAMP	1	02/25/24 5:26 PM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224043.d	N063311-001A	SAMP	1	02/25/24 5:30 PM
A0224044.d	N063311-001A-MS	MS	1	02/25/24 5:35 PM
A0224045.d	N063311-002A	SAMP	1	02/25/24 5:39 PM
A0224046.d	N063311-003A	SAMP	1	02/25/24 5:44 PM
A0224047.d	N063311-004A	SAMP	1	02/25/24 5:49 PM
A0224048.d	N063311-007A	SAMP	1	02/25/24 5:53 PM
A0224049.d	RINSE	ICAL	1	02/25/24 5:58 PM
A0224050.d	CCV3	CCV	1	02/25/24 6:03 PM
A0224051.d	CCB3	CCB	1	02/25/24 6:07 PM
A0224052.d	ICSA2	ICSA	1	02/25/24 6:12 PM
A0224053.d	ICSAB2	ICSAB	1	02/25/24 6:17 PM
A0224054.d	RINSE	ICAL	1	02/25/24 6:21 PM
A0224055.d	MB1-107081	MBLK	1	02/25/24 6:26 PM
A0224056.d	MB2-107081	MBLK	1	02/25/24 6:31 PM
A0224057.d	MB-107081	MBLK	1	02/25/24 6:35 PM
A0224058.d	LCS-107081	LCS	1	02/25/24 6:40 PM
A0224059.d	MDL1	SAMP	1	02/25/24 6:45 PM
A0224060.d	MDL2	SAMP	1	02/25/24 6:49 PM
A0224061.d	MDL3	SAMP	1	02/25/24 6:54 PM
A0224062.d	N063228-001A	SAMP	1	02/25/24 6:59 PM
A0224063.d	RINSE	ICAL	1	02/25/24 7:03 PM
A0224064.d	CCV4	CCV	1	02/25/24 7:08 PM
A0224065.d	CCB4	CCB	1	02/25/24 7:13 PM
A0224066.d	N063292-005A	SAMP	1	02/25/24 7:17 PM
A0224067.d	N063292-005A	SAMP	5	02/25/24 7:22 PM
A0224068.d	N063292-005A	SAMP	10	02/25/24 7:27 PM
A0224069.d	N063292-005A	SAMP	50	02/25/24 7:31 PM
A0224070.d	N063292-005A-PS	PS	1	02/25/24 7:36 PM
A0224071.d	N063292-005A-PS	PS	10	02/25/24 7:40 PM
A0224072.d	N063292-005A-MS	MS	1	02/25/24 7:45 PM
A0224073.d	N063292-005A-MS	MS	10	02/25/24 7:50 PM
A0224074.d	N063292-005A-MSD	MSD	1	02/25/24 7:55 PM
A0224075.d	N063292-005A-MSD	MSD	10	02/25/24 7:59 PM
A0224076.d	CCV5	CCV	1	02/25/24 8:04 PM
A0224077.d	CCB5	CCB	1	02/25/24 8:08 PM
A0224078.d	N063292-010A	SAMP	1	02/25/24 8:13 PM
A0224079.d	N063292-015A	SAMP	1	02/25/24 8:18 PM
A0224080.d	RINSE	RINSE	1	02/25/24 8:22 PM
A0224081.d	CCV6	CCV	1	02/25/24 8:27 PM
A0224082.d	CCB6	CCB	1	02/25/24 8:32 PM
A0224083.d	ICSA3	ICSA	1	02/25/24 8:36 PM
A0224084.d	ICSAB3	ICSAB	1	02/25/24 8:41 PM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224085.d	N063182-009B	SAMP	1	02/25/24 8:46 PM
A0224086.d	N063182-010B	SAMP	1	02/25/24 8:50 PM
A0224087.d	N063182-011B	SAMP	1	02/25/24 8:55 PM
A0224088.d	N063248-002B	SAMP	5	02/25/24 9:00 PM
A0224089.d	N063248-002B	SAMP	25	02/25/24 9:04 PM
A0224090.d	N063248-002B-PS	PS	5	02/25/24 9:09 PM
A0224091.d	N063248-002B-MS	MS	5	02/25/24 9:14 PM
A0224092.d	N063248-002B-MSD	MSD	5	02/25/24 9:18 PM
A0224093.d	N063248-003B	SAMP	10	02/25/24 9:23 PM
A0224094.d	N063248-004B	SAMP	10	02/25/24 9:28 PM
A0224095.d	CCV7	CCV	1	02/25/24 9:32 PM
A0224096.d	CCB7	CCB	1	02/25/24 9:37 PM
A0224097.d	N063315-001A	SAMP	100	02/25/24 9:47 PM
A0224098.d	N063315-001A	SAMP	500	02/25/24 9:51 PM
A0224099.d	N063315-001A-PS	PS	100	02/25/24 9:56 PM
A0224100.d	N063315-001A-MS	MS	100	02/25/24 10:00 PM
A0224101.d	N063315-001A-MSD	MSD	100	02/25/24 10:05 PM
A0224102.d	N063316-001A	SAMP	10	02/25/24 10:10 PM
A0224103.d	N063308-003A	SAMP	100	02/25/24 10:15 PM
A0224104.d	N063311-001A	SAMP	10	02/25/24 10:19 PM
A0224105.d	N063311-001A-MS	MS	10	02/25/24 10:24 PM
A0224106.d	N063311-002A	SAMP	10	02/25/24 10:28 PM
A0224107.d	CCV8	CCV	1	02/25/24 10:33 PM
A0224108.d	CCB8	CCB	1	02/25/24 10:38 PM
A0224109.d	N063311-003A	SAMP	10	02/25/24 10:42 PM
A0224110.d	N063311-003A	SAMP	100	02/25/24 10:47 PM
A0224111.d	N063311-004A	SAMP	10	02/25/24 10:52 PM
A0224112.d	N063311-004A	SAMP	100	02/25/24 10:56 PM
A0224113.d	N063311-007A	SAMP	10	02/25/24 11:01 PM
A0224114.d	N063292-005A	SAMP	100	02/25/24 11:06 PM
A0224115.d	N063292-005A	SAMP	500	02/25/24 11:10 PM
A0224116.d	N063292-005A	SAMP	1000	02/25/24 11:15 PM
A0224117.d	N063292-005A	SAMP	5000	02/25/24 11:20 PM
A0224118.d	CCV9	CCV	1	02/25/24 11:24 PM
A0224119.d	CCB9	CCB	1	02/25/24 11:29 PM
A0224120.d	N063292-005A-PS	PS	100	02/25/24 11:34 PM
A0224121.d	N063292-005A-PS	PS	1000	02/25/24 11:39 PM
A0224122.d	N063292-005A-MS	MS	100	02/25/24 11:43 PM
A0224123.d	N063292-005A-MS	MS	1000	02/25/24 11:48 PM
A0224124.d	N063292-005A-MSD	MSD	100	02/25/24 11:53 PM
A0224125.d	N063292-005A-MSD	MSD	1000	02/25/24 11:57 PM
A0224126.d	CCV10	CCV	1	02/26/24 12:02 AM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224127.d	CCB10	CCB	1	02/26/24 12:07 AM
A0224128.d	ICSA4	ICSA	1	02/26/24 12:11 AM
A0224129.d	ICSAB4	ICSAB	1	02/26/24 12:16 AM
A0224130.d	N063248-005C	SAMP	1	02/26/24 12:21 AM
A0224131.d	N063248-005C	SAMP	10	02/26/24 12:25 AM
A0224132.d	N063248-006C	SAMP	1	02/26/24 12:30 AM
A0224133.d	N063248-006C	SAMP	10	02/26/24 12:35 AM
A0224134.d	N063248-007C	SAMP	1	02/26/24 12:39 AM
A0224135.d	N063248-007C	SAMP	10	02/26/24 12:44 AM
A0224136.d	N063248-008C	SAMP	1	02/26/24 12:49 AM
A0224137.d	N063248-008C	SAMP	10	02/26/24 12:53 AM
A0224138.d	N063248-010B	SAMP	1	02/26/24 12:58 AM
A0224139.d	RINSE	ICAL	1	02/26/24 1:03 AM
A0224140.d	CCV11	CCV	1	02/26/24 1:07 AM
A0224141.d	CCB11	CCB	1	02/26/24 1:12 AM
A0224142.d	N063248-011B	SAMP	1	02/26/24 1:16 AM
A0224143.d	N063248-011B	SAMP	10	02/26/24 1:21 AM
A0224144.d	N063249-007C	SAMP	1	02/26/24 1:26 AM
A0224145.d	N063249-007C	SAMP	10	02/26/24 1:30 AM
A0224146.d	N063249-009C	SAMP	1	02/26/24 1:35 AM
A0224147.d	N063249-009C	SAMP	10	02/26/24 1:40 AM
A0224148.d	N063249-011C	SAMP	1	02/26/24 1:44 AM
A0224149.d	N063249-011C	SAMP	10	02/26/24 1:49 AM
A0224150.d	N063249-013C	SAMP	1	02/26/24 1:53 AM
A0224151.d	N063249-013C	SAMP	10	02/26/24 1:58 AM
A0224152.d	CCV12	CCV	1	02/26/24 2:03 AM
A0224153.d	CCB12	CCB	1	02/26/24 2:08 AM
A0224154.d	N063249-015C	SAMP	1	02/26/24 2:12 AM
A0224155.d	N063249-015C	SAMP	10	02/26/24 2:17 AM
A0224156.d	N063249-017C	SAMP	1	02/26/24 2:21 AM
A0224157.d	N063249-017C	SAMP	10	02/26/24 2:26 AM
A0224158.d	N063249-018C	SAMP	5	02/26/24 2:31 AM
A0224159.d	N063311-001A	SAMP	1	02/26/24 2:35 AM
A0224160.d	N063311-001A	SAMP	1	02/26/24 2:40 AM
A0224161.d	N063311-001A	SAMP	1	02/26/24 2:45 AM
A0224162.d	RINSE	ICAL	1	02/26/24 2:49 AM
A0224163.d	CCV13	CCV	1	02/26/24 2:54 AM
A0224164.d	CCB13	CCB	1	02/26/24 2:59 AM
A0224165.d	ICSA5	ICSA	1	02/26/24 3:03 AM
A0224166.d	ICSAB5	ICSAB	1	02/26/24 3:08 AM
A0224167.d	MB-107055	MBLK	1	02/26/24 3:13 AM
A0224168.d	LCS-107055	LCS	1	02/26/24 3:17 AM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224169.d	N063295-001B	SAMP	1	02/26/24 3:22 AM
A0224170.d	N063295-002B	SAMP	1	02/26/24 3:26 AM
A0224171.d	N063295-002B	SAMP	5	02/26/24 3:31 AM
A0224172.d	N063295-002B	SAMP	10	02/26/24 3:36 AM
A0224173.d	N063295-002B	SAMP	50	02/26/24 3:40 AM
A0224174.d	N063295-002B	SAMP	100	02/26/24 3:45 AM
A0224175.d	N063295-002B	SAMP	500	02/26/24 3:50 AM
A0224176.d	CCV14	CCV	1	02/26/24 3:54 AM
A0224177.d	CCB14	CCB	1	02/26/24 3:59 AM
A0224178.d	N063295-002B-PS	PS	1	02/26/24 4:04 AM
A0224179.d	N063295-002B-PS	PS	10	02/26/24 4:08 AM
A0224180.d	N063295-002B-PS	PS	100	02/26/24 4:13 AM
A0224181.d	N063295-002B-MS	MS	1	02/26/24 4:18 AM
A0224182.d	N063295-002B-MS	MS	10	02/26/24 4:22 AM
A0224183.d	N063295-002B-MS	MS	100	02/26/24 4:27 AM
A0224184.d	N063295-002B-MSD	MSD	1	02/26/24 4:32 AM
A0224185.d	N063295-002B-MSD	MSD	10	02/26/24 4:36 AM
A0224186.d	N063295-002B-MSD	MSD	100	02/26/24 4:41 AM
A0224187.d	CCV15	CCV	1	02/26/24 4:46 AM
A0224188.d	CCB15	CCB	1	02/26/24 4:50 AM
A0224189.d	N063295-003B	SAMP	1	02/26/24 4:55 AM
A0224190.d	N063295-005C	SAMP	1	02/26/24 4:59 AM
A0224191.d	N063295-005C	SAMP	10	02/26/24 5:04 AM
A0224192.d	N063295-006C	SAMP	1	02/26/24 5:09 AM
A0224193.d	N063295-006C	SAMP	10	02/26/24 5:14 AM
A0224194.d	N063295-007C	SAMP	1	02/26/24 5:18 AM
A0224195.d	N063295-007C	SAMP	10	02/26/24 5:23 AM
A0224196.d	N063295-008C	SAMP	1	02/26/24 5:27 AM
A0224197.d	N063295-008C	SAMP	10	02/26/24 5:32 AM
A0224198.d	CCV16	CCV	1	02/26/24 5:37 AM
A0224199.d	CCB16	CCB	1	02/26/24 5:41 AM
A0224200.d	N063297-001C	SAMP	1	02/26/24 5:46 AM
A0224201.d	N063297-002B	SAMP	1	02/26/24 5:51 AM
A0224202.d	N063297-003B	SAMP	1	02/26/24 5:55 AM
A0224203.d	N063303-001B	SAMP	1	02/26/24 6:00 AM
A0224204.d	N063303-001B	SAMP	10	02/26/24 6:05 AM
A0224205.d	N063303-002B	SAMP	1	02/26/24 6:09 AM
A0224206.d	N063303-002B	SAMP	10	02/26/24 6:14 AM
A0224207.d	N063303-006B	SAMP	5	02/26/24 6:19 AM
A0224208.d	N063303-008B	SAMP	1	02/26/24 6:23 AM
A0224209.d	N063303-008B	SAMP	10	02/26/24 6:28 AM
A0224210.d	CCV17	CCV	1	02/26/24 6:33 AM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224211.d	CCB17	CCB	1	02/26/24 6:37 AM
A0224212.d	ICSA6	ICSA	1	02/26/24 6:42 AM
A0224213.d	ICSAB6	ICSAB	1	02/26/24 6:47 AM
A0224214.d	RINSE	ICAL	1	02/26/24 6:51 AM
A0224215.d	RINSE	ICAL	1	02/26/24 6:56 AM
A0224216.d	RINSE	ICAL	1	02/26/24 7:00 AM
A0224217.d	RINSE	ICAL	1	02/26/24 7:05 AM
A0224218.d	RINSE	ICAL	1	02/26/24 7:10 AM
A0224219.d	RINSE	ICAL	1	02/26/24 7:14 AM
A0224220.d	RINSE	ICAL	1	02/26/24 7:19 AM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/22/2024 3:00:00 PM**
Prep End Date: **2/22/2024 7:00:00 PM**
Prep Batch **107021** Prep Code:**3010_W_MSDISS_TPK**

Reviewed/ Date: JRB 3/26/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-01**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107021	Aqueous		25	☐	25	1.000		
MB-107021	Aqueous		25	☐	25	1.000		
N062510-015D REDIGEST	Groundwater	<2	25	☐	25	1.000		
N063248-001B	Groundwater	<2	25	☐	25	1.000		
N063248-002B	Groundwater	<2	25	☐	25	1.000		
N063248-002B-MS	Groundwater	<2	25	☐	25	1.000		
N063248-002B-MSD	Groundwater	<2	25	☐	25	1.000		
N063248-003B	Groundwater	<2	25	☐	25	1.000		
N063248-004B	Groundwater	<2	25	☐	25	1.000		
N063248-005C	Groundwater	<2	25	☐	25	1.000		
N063248-006C	Groundwater	<2	25	☐	25	1.000		
N063248-007C	Groundwater	<2	25	☐	25	1.000		
N063248-008C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/22/2024 3:00:00 PM**
Prep End Date: **2/22/2024 7:00:00 PM**
Prep Batch **107021** Prep Code:**3010_W_MSDISS_TPK**

Reviewed/ Date: JRB 3/26/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-01**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063248-010B	Groundwater	<2	25	☐	25	1.000		
N063248-011B	Groundwater	<2	25	☐	25	1.000		
N063249-007C	Groundwater	<2	25	☐	25	1.000		
N063249-009C	Groundwater	<2	25	☐	25	1.000		
N063249-011C	Groundwater	<2	25	☐	25	1.000		
N063249-013C	Groundwater	<2	25	☐	25	1.000		
N063249-015C	Groundwater	<2	25	☐	25	1.000		
N063249-017C	Groundwater	<2	25	☐	25	1.000		
N063249-018C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240222A.b
Acq. Date-Time	2024-02-23 11:44:28
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

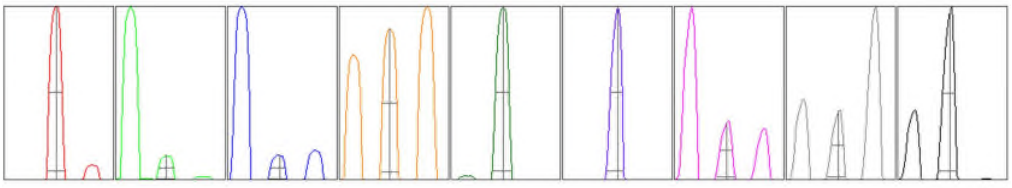
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	4742	47419.90	500.00		3.024	5.000
24	10.00	18706	187057.96	500.00		2.427	5.000
25	10.00	2512	25118.25	500.00		2.587	5.000
26	10.00	3009	30093.30	500.00		2.566	5.000
59	10.00	34030	340296.87	500.00		1.929	5.000
115	10.00	56615	566148.24	500.00		1.847	5.000
206	10.00	12089	120890.72	500.00		2.171	5.000
207	10.00	10015	100148.90	500.00		2.219	5.000
208	10.00	24886	248855.97	500.00		1.967	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.609 %
Doubly Charged	70 / 140 1.407 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	4705.05	8.95	8.90 - 9.10	
24	18796.46	23.90	23.90 - 24.10	
25	2564.26	24.95	24.90 - 25.10	
26	3120.45	25.90	25.90 - 26.10	
59	33894.52	58.95	58.90 - 59.10	
115	56031.92	115.05	114.90 - 115.10	
206	10962.65	205.95	205.90 - 206.10	
207	9673.39	206.95	206.90 - 207.10	
208	24384.42	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.486	0.900	
24	0.41	0.502	0.900	
25	0.41	0.494	0.900	
26	0.41	0.494	0.900	
59	0.38	0.531	0.900	
115	0.34	0.476	0.900	
206	0.36	0.533	0.900	
207	0.35	0.509	0.900	
208	0.35	0.525	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[H2]

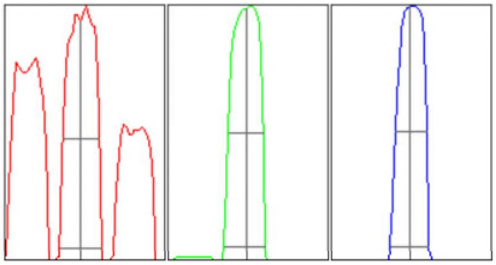
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		356	3555.77			5.984	
59		3819	38194.02			3.844	
115		59590	595903.12			2.349	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.610 %
Doubly Charged	70 / 140 0.333 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	353.80	25.95	25.90 - 26.10	
59	3912.74	59.00	58.90 - 59.10	
115	60486.49	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.70	0.791	0.900	
59	0.67	0.783	0.900	
115	0.60	0.733	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0000	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm		

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[He]

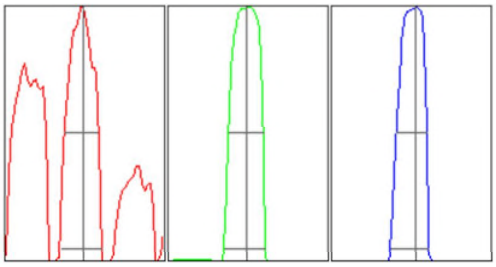
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		138	1375.06			6.914	
59		12115	121151.14			1.919	
115		13480	134797.78			1.974	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.279 %
Doubly Charged	70 / 140 0.982 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	147.01	26.00	25.90 - 26.10	
59	12098.31	59.00	58.90 - 59.10	
115	13611.92	115.10	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.65	0.789	0.900	
59	0.66	0.782	0.900	
115	0.58	0.730	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0000	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240223A1.b
Acq. Date-Time	2024-02-25 12:53:21
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

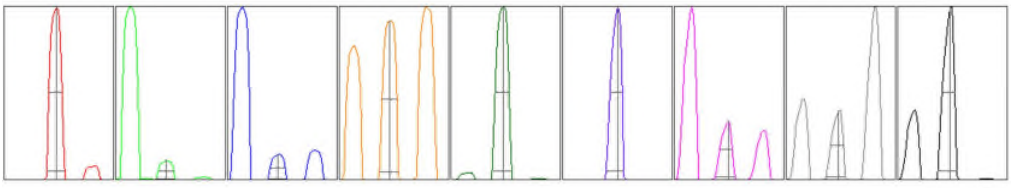
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	3372	33715.43	500.00		3.469	5.000
24	10.00	14626	146262.97	500.00		3.322	5.000
25	10.00	1964	19635.08	500.00		3.762	5.000
26	10.00	2357	23572.67	500.00		3.692	5.000
59	10.00	28829	288289.28	500.00		2.261	5.000
115	10.00	51639	516390.58	500.00		1.656	5.000
206	10.00	10629	106292.05	500.00		2.152	5.000
207	10.00	8878	88776.52	500.00		1.960	5.000
208	10.00	21919	219187.85	500.00		2.257	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.608 %
Doubly Charged	70 / 140 1.286 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	3447.05	8.95	8.90 - 9.10	
24	14643.27	23.90	23.90 - 24.10	
25	2050.22	24.90	24.90 - 25.10	
26	2445.07	25.90	25.90 - 26.10	
59	29068.40	58.95	58.90 - 59.10	
115	51964.63	115.05	114.90 - 115.10	
206	10292.73	206.00	205.90 - 206.10	
207	8538.49	206.95	206.90 - 207.10	
208	21881.25	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.487	0.900	
24	0.42	0.521	0.900	
25	0.42	0.496	0.900	
26	0.41	0.531	0.900	
59	0.39	0.533	0.900	
115	0.34	0.481	0.900	
206	0.36	0.538	0.900	
207	0.36	0.532	0.900	
208	0.36	0.531	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[H2]

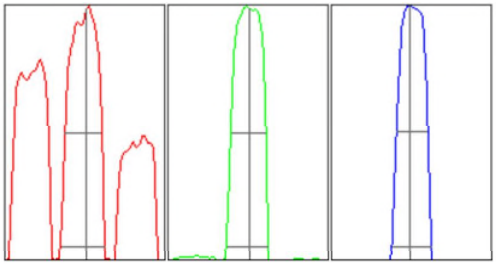
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		297	2972.06			6.951	
59		3184	31837.64			3.258	
115		53286	532857.84			2.153	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.618 %
Doubly Charged	70 / 140 0.307 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	310.04	26.05	25.90 - 26.10	
59	3327.70	59.05	58.90 - 59.10	
115	55650.78	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.70	0.831	0.900	
59	0.67	0.786	0.900	
115	0.60	0.740	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	0.9996	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.08		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[He]

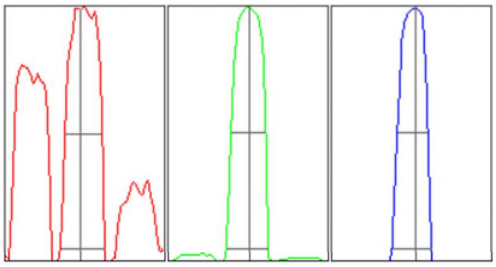
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		117	1169.24			9.238	
59		10415	104151.91			2.256	
115		10941	109408.27			2.392	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.260 %
Doubly Charged	70 / 140 0.959 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	111.76	25.95	25.90 - 26.10	
59	10524.04	59.05	58.90 - 59.10	
115	11284.17	115.10	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.71	0.832	0.900	
59	0.66	0.786	0.900	
115	0.58	0.738	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	0.9996	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.08		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240223A

Instrument ID: ICPMS-03

Analyte	Data File	A0223002.d	A0223003.d	A0223004.d	A0223005.d	A0223006.d	A0223007.d	A0223008.d	A0223009.d	A0223010.d	
	Acq. Date-Time	02/23/2024 01:27 PM	02/23/2024 01:32 PM	02/23/2024 01:36 PM	02/23/2024 01:41 PM	02/23/2024 01:46 PM	02/23/2024 01:51 PM	02/23/2024 01:55 PM	02/23/2024 02:00 PM	02/23/2024 02:05 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	72154.9		76342.4	77253.2	77475.2	76063.3	75148	75462.7	76036.5	
55 Mn [2]	CPS	69.9		1458.4	13632.3	27466	54136.3	106561.5	266690.1	547932.1	1.0000
52 Cr [2]	CPS	495.6		2850.3	24523.7	50602.4	98925.7	194285.6	486787.3	992400.4	1.0000
51 V [2]	CPS	265.6		2213.5	20410.3	41188.6	81155.8	160102.4	398908.9	823493	0.9999
72 Ge (ISTD) [1]	CPS	109961		116463.1	117054.1	117266.5	115723.5	114007.2	112333.5	115475.3	
78 Se [1]	CPS	12.2		188.9	1650.1	3270.3	6678.1	13212.1	32696.1	67412.1	1.0000
72 Ge (ISTD) [2]	CPS	45744.8	48400.3	48644.2	49579.1	49426.6	48837	47561.1	48045.9	48911.7	
75 As [2]	CPS	19.9	88.8	333.2	3303.5	6714.5	13140.5	26223.8	65989.1	135206.6	1.0000
66 Zn [2]	CPS	734		739.5	4740.7	9930.1	19037.9	37799.9	94042.4	194377.6	1.0000
103 Rh (ISTD) [2]	CPS	1010748.5		1071407.6	1083046.5	1087247.7	1064868.7	1039393.2	1040858	1066716.2	
95 Mo [2]	CPS	46.7		1307.8	13490.1	27687.1	54130.7	107817.8	272800	560603.5	1.0000
159 Tb (ISTD) [3]	CPS	2459036.8		2602116.7	2641047.9	2677129.2	2587074.5	2582202.2	2541226.8	2650892	
137 Ba [3]	CPS	50		2356.9	23978.7	49371.8	98171.7	194301.8	479469.4	991663.4	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION SUMMARY: 240225A

Instrument ID: ICPMS-03

Analyte	Data File	A0224002.d	A0224004.d	A0224005.d	A0224006.d	A0224007.d	A0224008.d	A0224009.d	A0224010.d	
	Acq. Date-Time	02/25/2024 02:14 PM	02/25/2024 02:24 PM	02/25/2024 02:29 PM	02/25/2024 02:33 PM	02/25/2024 02:38 PM	02/25/2024 02:43 PM	02/25/2024 02:48 PM	02/25/2024 02:52 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	61433.5	57887.7	60292.8	61278.6	60212.5	58594.5	58564.5	60077.5	
55 Mn [2]	CPS	54.3	1026.3	10294.1	21178.7	42083.6	80727.7	207102.3	424350.4	1.0000
52 Cr [2]	CPS	447.8	2299.1	19770.7	40201.8	78743.5	152537.1	386251.2	802085.8	1.0000
159 Tb (ISTD) [3]	CPS	2546673.9	2410356.4	2515986.1	2569262.8	2558618.2	2483709.9	2480840.2	2587686.9	
137 Ba [3]	CPS	50	2226.9	23107.4	47656.7	94804.4	187552	472079.2	983581.9	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713612**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.429	0.10	10.00	0	104	90	110				
Barium	10.174	1.0	10.00	0	102	90	110				
Manganese	101.593	0.50	100.0	0	102	90	110				
Molybdenum	9.944	0.50	10.00	0	99.4	90	110				
Selenium	9.732	0.50	10.00	0	97.3	90	110				
Vanadium	9.870	1.0	10.00	0	98.7	90	110				
Zinc	100.573	10	100.0	0	101	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ZZZZZZ** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713614**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.092	0.10	0.1000	0	91.5	80	120				
Barium	1.108	1.0	1.000	0	111	80	120				
Manganese	0.546	0.50	0.5000	0	109	80	120				
Molybdenum	0.524	0.50	0.5000	0	105	80	120				
Selenium	0.496	0.50	0.5000	0	99.2	80	120				
Vanadium	1.044	1.0	1.000	0	104	80	120				
Zinc	9.921	10	10.00	0	99.2	80	120				

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713615**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.039	0.10	20.00	0	100	90	110				
Barium	19.876	1.0	20.00	0	99.4	90	110				
Manganese	19.940	0.50	20.00	0	99.7	90	110				
Molybdenum	19.336	0.50	20.00	0	96.7	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713615**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	19.445	0.50	20.00	0	97.2	90	110				
Vanadium	20.019	1.0	20.00	0	100	90	110				
Zinc	19.203	10	20.00	0	96.0	90	110				

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713628**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.030	0.10	20.00	0	100	90	110				
Barium	19.984	1.0	20.00	0	99.9	90	110				
Manganese	19.815	0.50	20.00	0	99.1	90	110				
Molybdenum	19.484	0.50	20.00	0	97.4	90	110				
Selenium	20.109	0.50	20.00	0	101	90	110				
Vanadium	19.513	1.0	20.00	0	97.6	90	110				
Zinc	19.392	10	20.00	0	97.0	90	110				

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713640**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.842	0.10	20.00	0	99.2	90	110				
Barium	19.840	1.0	20.00	0	99.2	90	110				
Manganese	19.773	0.50	20.00	0	98.9	90	110				
Molybdenum	19.479	0.50	20.00	0	97.4	90	110				
Selenium	19.897	0.50	20.00	0	99.5	90	110				
Vanadium	19.990	1.0	20.00	0	99.9	90	110				
Zinc	19.381	10	20.00	0	96.9	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	CCV3	SampType:	CCV	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	CCV	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713646

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.766	0.10	20.00	0	98.8	90	110				
Barium	19.918	1.0	20.00	0	99.6	90	110				
Manganese	19.591	0.50	20.00	0	98.0	90	110				
Molybdenum	19.092	0.50	20.00	0	95.5	90	110				
Selenium	20.184	0.50	20.00	0	101	90	110				
Vanadium	19.904	1.0	20.00	0	99.5	90	110				
Zinc	19.356	10	20.00	0	96.8	90	110				

Sample ID	CCV4	SampType:	CCV	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	CCV	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713658

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.088	0.10	20.00	0	100	90	110				
Barium	20.699	1.0	20.00	0	103	90	110				
Manganese	20.003	0.50	20.00	0	100	90	110				
Molybdenum	19.927	0.50	20.00	0	99.6	90	110				
Selenium	19.977	0.50	20.00	0	99.9	90	110				
Vanadium	20.014	1.0	20.00	0	100	90	110				
Zinc	19.527	10	20.00	0	97.6	90	110				

Sample ID	CCV5	SampType:	CCV	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	CCV	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713672

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.546	0.10	20.00	0	103	90	110				
Barium	20.654	1.0	20.00	0	103	90	110				
Manganese	20.328	0.50	20.00	0	102	90	110				
Molybdenum	19.701	0.50	20.00	0	98.5	90	110				
Selenium	19.737	0.50	20.00	0	98.7	90	110				
Vanadium	20.241	1.0	20.00	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	CCV5	SampType:	CCV	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	CCV	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713672

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	19.616	10	20.00	0	98.1	90	110				

Sample ID	CCV6	SampType:	CCV	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	CCV	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713686

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.762	0.10	20.00	0	98.8	90	110				
Barium	21.352	1.0	20.00	0	107	90	110				
Manganese	19.623	0.50	20.00	0	98.1	90	110				
Molybdenum	20.004	0.50	20.00	0	100	90	110				
Selenium	20.478	0.50	20.00	0	102	90	110				
Vanadium	19.641	1.0	20.00	0	98.2	90	110				
Zinc	19.587	10	20.00	0	97.9	90	110				

Sample ID	CCV7	SampType:	CCV	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	CCV	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713695

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.067	0.10	20.00	0	100	90	110				
Barium	22.103	1.0	20.00	0	111	90	110				S
Manganese	19.918	0.50	20.00	0	99.6	90	110				
Molybdenum	20.352	0.50	20.00	0	102	90	110				
Selenium	19.676	0.50	20.00	0	98.4	90	110				
Vanadium	19.777	1.0	20.00	0	98.9	90	110				
Zinc	19.570	10	20.00	0	97.9	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

% Rec of Ba in several CCVs failed. However, affected samples are reported in run number 182939

3/14/2024

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV8**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCV**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713709**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.122	0.10	20.00	0	101	90	110				
Barium	20.868	1.0	20.00	0	104	90	110				
Manganese	19.912	0.50	20.00	0	99.6	90	110				
Molybdenum	19.676	0.50	20.00	0	98.4	90	110				
Selenium	20.281	0.50	20.00	0	101	90	110				
Vanadium	20.448	1.0	20.00	0	102	90	110				
Zinc	19.883	10	20.00	0	99.4	90	110				

Sample ID **CCV9**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCV**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713721**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.930	0.10	20.00	0	99.7	90	110				
Barium	21.751	1.0	20.00	0	109	90	110				
Manganese	19.706	0.50	20.00	0	98.5	90	110				
Molybdenum	19.929	0.50	20.00	0	99.6	90	110				
Selenium	19.933	0.50	20.00	0	99.7	90	110				
Vanadium	19.648	1.0	20.00	0	98.2	90	110				
Zinc	19.559	10	20.00	0	97.8	90	110				

Sample ID **CCV10**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCV**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713728**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.720	0.10	20.00	0	98.6	90	110				
Barium	21.635	1.0	20.00	0	108	90	110				
Manganese	19.596	0.50	20.00	0	98.0	90	110				
Molybdenum	19.905	0.50	20.00	0	99.5	90	110				
Selenium	20.026	0.50	20.00	0	100	90	110				
Vanadium	19.822	1.0	20.00	0	99.1	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV10**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCV**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713728**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	19.244	10	20.00	0	96.2	90	110				

Sample ID **CCV11**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCV**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713741**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.953	0.10	20.00	0	99.8	90	110				
Barium	21.740	1.0	20.00	0	109	90	110				
Manganese	19.594	0.50	20.00	0	98.0	90	110				
Molybdenum	20.177	0.50	20.00	0	101	90	110				
Selenium	20.116	0.50	20.00	0	101	90	110				
Vanadium	19.662	1.0	20.00	0	98.3	90	110				
Zinc	19.178	10	20.00	0	95.9	90	110				

Sample ID **CCV12**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCV**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713752**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.609	0.10	20.00	0	98.0	90	110				
Barium	22.443	1.0	20.00	0	112	90	110				S
Manganese	19.647	0.50	20.00	0	98.2	90	110				
Molybdenum	20.246	0.50	20.00	0	101	90	110				
Selenium	19.679	0.50	20.00	0	98.4	90	110				
Vanadium	19.579	1.0	20.00	0	97.9	90	110				
Zinc	18.872	10	20.00	0	94.4	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV13** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713760**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.787	0.10	20.00	0	98.9	90	110				
Barium	22.496	1.0	20.00	0	112	90	110				S
Manganese	19.731	0.50	20.00	0	98.7	90	110				
Molybdenum	20.168	0.50	20.00	0	101	90	110				
Selenium	19.588	0.50	20.00	0	97.9	90	110				
Vanadium	19.977	1.0	20.00	0	99.9	90	110				
Zinc	18.983	10	20.00	0	94.9	90	110				

Sample ID **CCV14** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713773**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.661	0.10	20.00	0	98.3	90	110				
Barium	21.969	1.0	20.00	0	110	90	110				
Manganese	19.733	0.50	20.00	0	98.7	90	110				
Molybdenum	19.994	0.50	20.00	0	100	90	110				
Selenium	19.819	0.50	20.00	0	99.1	90	110				
Vanadium	19.773	1.0	20.00	0	98.9	90	110				
Zinc	19.094	10	20.00	0	95.5	90	110				

Sample ID **CCV15** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713784**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.424	0.10	20.00	0	97.1	90	110				
Barium	22.620	1.0	20.00	0	113	90	110				S
Manganese	19.746	0.50	20.00	0	98.7	90	110				
Molybdenum	20.077	0.50	20.00	0	100	90	110				
Selenium	19.611	0.50	20.00	0	98.1	90	110				
Vanadium	19.653	1.0	20.00	0	98.3	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV15**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCV**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713784**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	19.009	10	20.00	0	95.0	90	110				

Sample ID **CCV16**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCV**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713788**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.868	0.10	20.00	0	99.3	90	110				
Barium	22.098	1.0	20.00	0	110	90	110				S
Manganese	20.059	0.50	20.00	0	100	90	110				
Molybdenum	19.901	0.50	20.00	0	99.5	90	110				
Selenium	19.815	0.50	20.00	0	99.1	90	110				
Vanadium	19.944	1.0	20.00	0	99.7	90	110				
Zinc	18.742	10	20.00	0	93.7	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714090**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	9.828	1.0	10.00	0	98.3	90	110				
Manganese	100.886	0.50	100.0	0	101	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ZZZZZZ** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714092**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	1.026	1.0	1.000	0	103	80	120				
Manganese	0.554	0.50	0.5000	0	111	80	120				

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714094**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.625	1.0	20.00	0	98.1	90	110				
Manganese	19.625	0.50	20.00	0	98.1	90	110				

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714106**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.833	1.0	20.00	0	99.2	90	110				
Manganese	20.008	0.50	20.00	0	100	90	110				

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714117**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.422	1.0	20.00	0	97.1	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCV**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714117**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.758	0.50	20.00	0	98.8	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCV**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714126**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.571	1.0	20.00	0	97.9	90	110				
Manganese	19.779	0.50	20.00	0	98.9	90	110				

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCV**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714138**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.567	1.0	20.00	0	97.8	90	110				
Manganese	20.113	0.50	20.00	0	101	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCV**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714150**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.871	1.0	20.00	0	99.4	90	110				
Manganese	19.723	0.50	20.00	0	98.6	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCV**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714154**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.027	1.0	20.00	0	100	90	110				
Manganese	20.041	0.50	20.00	0	100	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV7**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCV**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714168**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.241	1.0	20.00	0	101	90	110				
Manganese	19.644	0.50	20.00	0	98.2	90	110				

Sample ID **CCV8**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCV**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714180**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.696	1.0	20.00	0	98.5	90	110				
Manganese	19.665	0.50	20.00	0	98.3	90	110				

Sample ID **CCV9**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCV**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714191**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.830	1.0	20.00	0	99.2	90	110				
Manganese	19.440	0.50	20.00	0	97.2	90	110				

Sample ID **CCV10**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCV**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714199**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.669	1.0	20.00	0	98.3	90	110				
Manganese	19.832	0.50	20.00	0	99.2	90	110				

Sample ID **CCV11**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCV**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714212**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.176	1.0	20.00	0	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV11** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714212**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.405	0.50	20.00	0	97.0	90	110				

Sample ID **CCV12** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714224**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.931	1.0	20.00	0	105	90	110				
Manganese	19.457	0.50	20.00	0	97.3	90	110				

Sample ID **CCV13** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714234**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.460	1.0	20.00	0	102	90	110				
Manganese	19.672	0.50	20.00	0	98.4	90	110				

Sample ID **CCV14** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714247**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.520	1.0	20.00	0	103	90	110				
Manganese	19.622	0.50	20.00	0	98.1	90	110				

Sample ID **CCV15** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714258**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.693	1.0	20.00	0	103	90	110				
Manganese	19.657	0.50	20.00	0	98.3	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV16** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714269**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.381	1.0	20.00	0	102	90	110				
Manganese	19.525	0.50	20.00	0	97.6	90	110				

Sample ID **CCV17** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714281**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.992	1.0	20.00	0	105	90	110				
Manganese	19.685	0.50	20.00	0	98.4	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICV**	SampType: **ICV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713210**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.178	1.0	10.00	0	102	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ZZZZZZ**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713212**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	1.112	1.0	1.000	0	111	80	120				

Sample ID **MLCCV**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713213**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.983	1.0	20.00	0	99.9	90	110				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713226**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.779	1.0	20.00	0	98.9	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713238**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.949	1.0	20.00	0	99.7	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	**CCV3**	SampType:	**CCV**	TestCode:	**6020DIS_CrP**	Units:	**µg/L**	Prep Date:		RunNo:	**182925**		
Client ID:	**CCV**	Batch ID:	**R182925**	TestNo:	**EPA 6020**			Analysis Date:	**2/23/2024**	SeqNo:	**5713244**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Chromium	19.932	1.0	20.00	0	99.7	90	110						

Sample ID	**CCV4**	SampType:	**CCV**	TestCode:	**6020DIS_CrP**	Units:	**µg/L**	Prep Date:		RunNo:	**182925**		
Client ID:	**CCV**	Batch ID:	**R182925**	TestNo:	**EPA 6020**			Analysis Date:	**2/23/2024**	SeqNo:	**5713256**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Chromium	20.130	1.0	20.00	0	101	90	110						

Sample ID	**CCV5**	SampType:	**CCV**	TestCode:	**6020DIS_CrP**	Units:	**µg/L**	Prep Date:		RunNo:	**182925**		
Client ID:	**CCV**	Batch ID:	**R182925**	TestNo:	**EPA 6020**			Analysis Date:	**2/23/2024**	SeqNo:	**5713270**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Chromium	20.370	1.0	20.00	0	102	90	110						

Sample ID	**CCV6**	SampType:	**CCV**	TestCode:	**6020DIS_CrP**	Units:	**µg/L**	Prep Date:		RunNo:	**182925**		
Client ID:	**CCV**	Batch ID:	**R182925**	TestNo:	**EPA 6020**			Analysis Date:	**2/23/2024**	SeqNo:	**5713284**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Chromium	19.695	1.0	20.00	0	98.5	90	110						

Sample ID	**CCV7**	SampType:	**CCV**	TestCode:	**6020DIS_CrP**	Units:	**µg/L**	Prep Date:		RunNo:	**182925**		
Client ID:	**CCV**	Batch ID:	**R182925**	TestNo:	**EPA 6020**			Analysis Date:	**2/23/2024**	SeqNo:	**5713293**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Chromium	19.635	1.0	20.00	0	98.2	90	110						

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	CCV8	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCV	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713307

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.506	1.0	20.00	0	103	90	110				

Sample ID	CCV9	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCV	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713319

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.572	1.0	20.00	0	97.9	90	110				

Sample ID	CCV10	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCV	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713326

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.808	1.0	20.00	0	99.0	90	110				

Sample ID	CCV11	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCV	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713339

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.717	1.0	20.00	0	98.6	90	110				

Sample ID	CCV12	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCV	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713350

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.393	1.0	20.00	0	97.0	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	CCV13	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925	
Client ID:	CCV	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713358	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Chromium	19.492	1.0	20.00	0	97.5	90	110					

Sample ID	CCV14	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925	
Client ID:	CCV	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713371	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Chromium	19.610	1.0	20.00	0	98.0	90	110					

Sample ID	CCV15	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925	
Client ID:	CCV	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713382	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Chromium	19.525	1.0	20.00	0	97.6	90	110					

Sample ID	CCV16	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925	
Client ID:	CCV	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713386	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Chromium	19.757	1.0	20.00	0	98.8	90	110					

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICV	SampType:	ICV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	ICV	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714316

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	9.991	1.0	10.00	0	99.9	90	110				

Sample ID	LLICV1	SampType:	CCV1	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	ZZZZZZ	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714318

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	1.043	1.0	1.000	0	104	80	120				

Sample ID	MLCCV	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	CCV	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714320

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.474	1.0	20.00	0	97.4	90	110				

Sample ID	CCV1	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	CCV	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714332

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.085	1.0	20.00	0	100	90	110				

Sample ID	CCV2	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	CCV	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714343

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.645	1.0	20.00	0	98.2	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	CCV3	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	CCV	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714352

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.541	1.0	20.00	0	97.7	90	110				

Sample ID	CCV4	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	CCV	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714364

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.980	1.0	20.00	0	99.9	90	110				

Sample ID	CCV5	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	CCV	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714376

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.509	1.0	20.00	0	97.5	90	110				

Sample ID	CCV6	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	CCV	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714380

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.940	1.0	20.00	0	99.7	90	110				

Sample ID	CCV7	SampType:	CCV	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	CCV	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714394

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.296	1.0	20.00	0	96.5	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCV8**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182944**
Client ID: **CCV**	Batch ID: **R182944**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714406**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.705	1.0	20.00	0	98.5	90	110				

Sample ID **CCV9**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182944**
Client ID: **CCV**	Batch ID: **R182944**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714417**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.628	1.0	20.00	0	98.1	90	110				

Sample ID **CCV10**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182944**
Client ID: **CCV**	Batch ID: **R182944**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714425**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.712	1.0	20.00	0	98.6	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB** SampType: **ICB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713613**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	ND	1.0									
Zinc	ND	10									

Sample ID **CCB1** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713629**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.185	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	ND	1.0									
Zinc	ND	10									

Sample ID **CCB2** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713641**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.191	0.50									
Molybdenum	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713641**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	ND	0.50									
Vanadium	0.081	1.0									
Zinc	ND	10									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713647**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.184	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	0.092	1.0									
Zinc	ND	10									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713660**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	ND	1.0									
Zinc	ND	10									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713673**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	ND	1.0									
Zinc	ND	10									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713687**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	ND	1.0									
Zinc	ND	10									

Sample ID **CCB7**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713696**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB7**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713696**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	ND	10									

Sample ID **CCB8**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713710**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	ND	1.0									
Zinc	ND	10									

Sample ID **CCB9**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713722**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	0.084	1.0									
Zinc	ND	10									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	CCB10	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	CCB	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713729

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	0.072	1.0									
Zinc	ND	10									

Sample ID	CCB11	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	CCB	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713742

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	ND	1.0									
Zinc	ND	10									

Sample ID	CCB12	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	CCB	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713753

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB12** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713753**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	ND	10									

Sample ID **CCB13** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713761**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	0.209	1.0									
Zinc	ND	10									

Sample ID **CCB14** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713774**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	ND	1.0									
Zinc	ND	10									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB15**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713785**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	ND	1.0									
Zinc	ND	10									

Sample ID **CCB16**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713789**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	0.113	1.0									
Zinc	ND	10									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB** SampType: **ICB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714091**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB1** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714107**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB2** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714118**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB3** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714127**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB4** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714139**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714139**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714151**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714155**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB7**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714169**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB8**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714181**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	CCB9	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	CCB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714192

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID	CCB10	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	CCB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/26/2024	SeqNo:	5714200

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID	CCB11	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	CCB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/26/2024	SeqNo:	5714213

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID	CCB12	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	CCB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/26/2024	SeqNo:	5714225

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID	CCB13	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	CCB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/26/2024	SeqNo:	5714235

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	CCB13	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	CCB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/26/2024	SeqNo:	5714235

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID	CCB14	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	CCB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/26/2024	SeqNo:	5714248

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID	CCB15	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	CCB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/26/2024	SeqNo:	5714259

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID	CCB16	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	CCB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/26/2024	SeqNo:	5714270

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID	CCB17	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	CCB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/26/2024	SeqNo:	5714282

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICB	SampType:	ICB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713211

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB1	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713227

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.996	1.0									

Sample ID	CCB2	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713239

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	1.008	1.0									

Sample ID	CCB3	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713245

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	1.026	1.0									

Sample ID	CCB4	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713258

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Detect of Cr in CCB1 to CCB3 is > 1/2 PQL. However, samples are reported from CCV10/CCB10 onwards.

JRB 3/26/2024

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	CCB5	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713271

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB6	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713285

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB7	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713294

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB8	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713308

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB9	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713320

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	CCB10	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713327

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB11	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713340

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB12	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713351

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB13	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713359

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB14	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	CCB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713372

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCB15**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713383**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **CCB16**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713387**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICB	SampType:	ICB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	ICB	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714317

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB1	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	CCB	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714333

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB2	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	CCB	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714344

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB3	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	CCB	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714353

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB4	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	CCB	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714365

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	CCB5	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	CCB	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714377

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB6	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	CCB	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714381

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB7	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	CCB	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714395

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB8	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	CCB	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714407

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	CCB9	SampType:	CCB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	CCB	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714418

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **CCB10**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182944**
Client ID: **CCB**	Batch ID: **R182944**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714426**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713616**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	ND	1.0									
Zinc	ND	10									

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713617**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.604	0.10	20.00	0	103	80	120				
Barium	20.398	1.0	20.00	0	102	80	120				
Manganese	20.364	0.50	20.00	0	102	80	120				
Molybdenum	19.903	0.50	20.00	0	99.5	80	120				
Selenium	20.311	0.50	20.00	0	102	80	120				
Vanadium	20.289	1.0	20.00	0	101	80	120				
Zinc	19.384	10	20.00	0	96.9	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713661**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.070	0.50									
Molybdenum	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713661**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	ND	0.50									
Vanadium	ND	1.0									
Zinc	ND	10									

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713662**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.469	0.10	20.00	0	102	80	120				
Barium	20.619	1.0	20.00	0	103	80	120				
Manganese	20.279	0.50	20.00	0	101	80	120				
Molybdenum	19.950	0.50	20.00	0	99.7	80	120				
Selenium	20.550	0.50	20.00	0	103	80	120				
Vanadium	20.395	1.0	20.00	0	102	80	120				
Zinc	19.497	10	20.00	0	97.5	80	120				

Sample ID **ICSA3** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713674**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.060	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	ND	1.0									
Zinc	ND	10									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	ICSAB3	SampType:	ICSAB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	ICSAB	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713675

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.275	0.10	20.00	0	101	80	120				
Barium	20.581	1.0	20.00	0	103	80	120				
Manganese	20.190	0.50	20.00	0	101	80	120				
Molybdenum	19.590	0.50	20.00	0	98.0	80	120				
Selenium	20.235	0.50	20.00	0	101	80	120				
Vanadium	20.335	1.0	20.00	0	102	80	120				
Zinc	19.344	10	20.00	0	96.7	80	120				

Sample ID	ICSA4	SampType:	ICSA	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	ICSA	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713697

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.066	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	ND	1.0									
Zinc	ND	10									

Sample ID	ICSAB4	SampType:	ICSAB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	ICSAB	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713698

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.323	0.10	20.00	0	102	80	120				
Barium	22.109	1.0	20.00	0	111	80	120				
Manganese	20.315	0.50	20.00	0	102	80	120				
Molybdenum	20.187	0.50	20.00	0	101	80	120				
Selenium	20.533	0.50	20.00	0	103	80	120				
Vanadium	20.047	1.0	20.00	0	100	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	ICSAB4	SampType:	ICSAB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	ICSAB	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713698

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	18.912	10	20.00	0	94.6	80	120				

Sample ID	ICSA5	SampType:	ICSA	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	ICSA	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713730

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.072	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	ND	1.0									
Zinc	ND	10									

Sample ID	ICSAB5	SampType:	ICSAB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	ICSAB	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713731

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.984	0.10	20.00	0	99.9	80	120				
Barium	21.848	1.0	20.00	0	109	80	120				
Manganese	20.009	0.50	20.00	0	100	80	120				
Molybdenum	20.002	0.50	20.00	0	100	80	120				
Selenium	20.529	0.50	20.00	0	103	80	120				
Vanadium	20.218	1.0	20.00	0	101	80	120				
Zinc	19.220	10	20.00	0	96.1	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	ICSA6	SampType:	ICSA	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	ICSA	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713762

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.061	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	0.249	1.0									
Zinc	ND	10									

Sample ID	ICSAB6	SampType:	ICSAB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	ICSAB	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713763

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.902	0.10	20.00	0	99.5	80	120				
Barium	22.348	1.0	20.00	0	112	80	120				
Manganese	20.403	0.50	20.00	0	102	80	120				
Molybdenum	20.057	0.50	20.00	0	100	80	120				
Selenium	20.226	0.50	20.00	0	101	80	120				
Vanadium	20.530	1.0	20.00	0	103	80	120				
Zinc	19.051	10	20.00	0	95.3	80	120				

Sample ID	ICSA7	SampType:	ICSA	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182930
Client ID:	ICSA	Batch ID:	R182930	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713790

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.073	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Vanadium	0.126	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA7**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSA**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713790**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	ND	10									

Sample ID **ICSAB7**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSAB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713791**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.302	0.10	20.00	0	102	80	120				
Barium	22.309	1.0	20.00	0	112	80	120				
Manganese	20.288	0.50	20.00	0	101	80	120				
Molybdenum	19.818	0.50	20.00	0	99.1	80	120				
Selenium	19.946	0.50	20.00	0	99.7	80	120				
Vanadium	20.103	1.0	20.00	0	101	80	120				
Zinc	18.809	10	20.00	0	94.0	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714095**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB1**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSAB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714096**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.091	1.0	20.00	0	100	80	120				
Manganese	20.503	0.50	20.00	0	103	80	120				

Sample ID **ICSA2**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714128**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSAB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714129**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.003	1.0	20.00	0	100	80	120				
Manganese	20.455	0.50	20.00	0	102	80	120				

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714156**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	ICSA3	SampType:	ICSA	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	ICSA	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714156

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID	ICSAB3	SampType:	ICSAB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	ICSAB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714157

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.723	1.0	20.00	0	104	80	120				
Manganese	20.273	0.50	20.00	0	101	80	120				

Sample ID	ICSA4	SampType:	ICSA	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	ICSA	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/26/2024	SeqNo:	5714201

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID	ICSAB4	SampType:	ICSAB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	ICSAB	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/26/2024	SeqNo:	5714202

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.034	1.0	20.00	0	100	80	120				
Manganese	20.176	0.50	20.00	0	101	80	120				

Sample ID	ICSA5	SampType:	ICSA	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	182939
Client ID:	ICSA	Batch ID:	R182939	TestNo:	EPA 6020			Analysis Date:	2/26/2024	SeqNo:	5714236

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSAB5**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSAB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714237**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.853	1.0	20.00	0	104	80	120				
Manganese	19.953	0.50	20.00	0	99.8	80	120				

Sample ID **ICSA6**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714283**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB6**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSAB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714284**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	21.492	1.0	20.00	0	107	80	120				
Manganese	20.111	0.50	20.00	0	101	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICSA1	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSA	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713214

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	ICSAB1	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSAB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713215

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.286	1.0	20.00	0	101	80	120				

Sample ID	ICSA2	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSA	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713259

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.332	1.0									

Sample ID	ICSAB2	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSAB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713260

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.461	1.0	20.00	0	102	80	120				

Sample ID	ICSA3	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSA	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713272

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.331	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICSAB3	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSAB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713273

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.279	1.0	20.00	0	101	80	120				

Sample ID	ICSA4	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSA	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713295

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.336	1.0									

Sample ID	ICSAB4	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSAB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713296

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.088	1.0	20.00	0	100	80	120				

Sample ID	ICSA5	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSA	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/23/2024	SeqNo:	5713328

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.328	1.0									

Sample ID	ICSAB5	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSAB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713329

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.040	1.0	20.00	0	100	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICSA6	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSA	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713360

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.328	1.0									

Sample ID	ICSAB6	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSAB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713361

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.121	1.0	20.00	0	101	80	120				

Sample ID	ICSA7	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSA	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713388

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.319	1.0									

Sample ID	ICSAB7	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182925
Client ID:	ICSAB	Batch ID:	R182925	TestNo:	EPA 6020			Analysis Date:	2/24/2024	SeqNo:	5713389

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.910	1.0	20.00	0	99.6	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	ICSA1	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	ICSA	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714321

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	ICSAB1	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	ICSAB	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714322

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.391	1.0	20.00	0	102	80	120				

Sample ID	ICSA2	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	ICSA	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714354

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID	ICSAB2	SampType:	ICSAB	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	ICSAB	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714355

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.161	1.0	20.00	0	101	80	120				

Sample ID	ICSA3	SampType:	ICSA	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	ICSA	Batch ID:	R182944	TestNo:	EPA 6020			Analysis Date:	2/25/2024	SeqNo:	5714382

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182944**
Client ID: **ICSAB**	Batch ID: **R182944**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714383**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.916	1.0	20.00	0	99.6	80	120				

Sample ID **ICSA4**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182944**
Client ID: **ICSA**	Batch ID: **R182944**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714427**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID **ICSAB4**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182944**
Client ID: **ICSAB**	Batch ID: **R182944**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714428**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.266	1.0	20.00	0	101	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	2459036.8	2459036.8	100	PASS	30-150	72154.9	72154.9	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	2598836.2	2459036.8	105.69	PASS	30-150	75819.9	72154.9	105.08	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	2602116.7	2459036.8	105.82	PASS	30-150	76342.4	72154.9	105.8	PASS	30-150
Std3-5/50 ppb	ICAL	1	2641047.9	2459036.8	107.4	PASS	30-150	77253.2	72154.9	107.07	PASS	30-150
Std4-10/100 ppb	ICAL	1	2677129.2	2459036.8	108.87	PASS	30-150	77475.2	72154.9	107.37	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	2587074.5	2459036.8	105.21	PASS	30-150	76063.3	72154.9	105.42	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	2582202.2	2459036.8	105.01	PASS	30-150	75148	72154.9	104.15	PASS	30-150
Std7-100/1000 ppb	ICAL	1	2541226.8	2459036.8	103.34	PASS	30-150	75462.7	72154.9	104.58	PASS	30-150
Std8-200/2000 ppb	ICAL	1	2650892	2459036.8	107.8	PASS	30-150	76036.5	72154.9	105.38	PASS	30-150
ICV	ICV	1	2483190.9	2459036.8	100.98	PASS	30-150	72025.6	72154.9	99.82	PASS	30-150
ICB	ICB	1	2571855.2	2459036.8	104.59	PASS	30-150	74886.9	72154.9	103.79	PASS	30-150
LLICV1	LLICV	1	2612657.7	2459036.8	106.25	PASS	30-150	75342.3	72154.9	104.42	PASS	30-150
MLCCV	CCV	1	2664630.7	2459036.8	108.36	PASS	30-150	76073.3	72154.9	105.43	PASS	30-150
ICSA1	ICSA	1	2706916.7	2459036.8	110.08	PASS	30-150	76901.4	72154.9	106.58	PASS	30-150
ICSAB1	ICSAB	1	2593782.3	2459036.8	105.48	PASS	30-150	73937.1	72154.9	102.47	PASS	30-150
MDL 4	ICAL	1	2670548.8	2459036.8	108.6	PASS	30-150	76134.7	72154.9	105.52	PASS	30-150
CCV1	CCV	1	2685857.4	2459036.8	109.22	PASS	30-150	78633	72154.9	108.98	PASS	30-150
CCB1	CCB	1	2616529	2459036.8	106.4	PASS	30-150	75792	72154.9	105.04	PASS	30-150
CCV2	CCV	1	2692999.6	2459036.8	109.51	PASS	30-150	77108	72154.9	106.86	PASS	30-150
CCB2	CCB	1	2601268.7	2459036.8	105.78	PASS	30-150	75349	72154.9	104.43	PASS	30-150
CCV3	CCV	1	2693223.1	2459036.8	109.52	PASS	30-150	77729.8	72154.9	107.73	PASS	30-150
CCB3	CCB	1	2631123.9	2459036.8	107	PASS	30-150	76196.1	72154.9	105.6	PASS	30-150
CCV4	CCV	1	2717325.6	2459036.8	110.5	PASS	30-150	77725.3	72154.9	107.72	PASS	30-150
CCB4	CCB	1	2589231	2459036.8	105.29	PASS	30-150	74891.4	72154.9	103.79	PASS	30-150
CCB4	CCB	1	2662733.8	2459036.8	108.28	PASS	30-150	76863.5	72154.9	106.53	PASS	30-150
ICSA2	ICSA	1	2702443.6	2459036.8	109.9	PASS	30-150	78266.7	72154.9	108.47	PASS	30-150
ICSAB2	ICSAB	1	2720121.5	2459036.8	110.62	PASS	30-150	78381.7	72154.9	108.63	PASS	30-150
CCV5	CCV	1	2751728.2	2459036.8	111.9	PASS	30-150	79154.2	72154.9	109.7	PASS	30-150
CCB5	CCB	1	2725557.6	2459036.8	110.84	PASS	30-150	77605.8	72154.9	107.55	PASS	30-150
ICSA3	ICSA	1	2777216.4	2459036.8	112.94	PASS	30-150	80012.9	72154.9	110.89	PASS	30-150
ICSAB3	ICSAB	1	2801833.3	2459036.8	113.94	PASS	30-150	80477.2	72154.9	111.53	PASS	30-150
CCV6	CCV	1	2620084.7	2459036.8	106.55	PASS	30-150	90893.6	72154.9	125.97	PASS	30-150
CCB6	CCB	1	2602736.8	2459036.8	105.84	PASS	30-150	86061.5	72154.9	119.27	PASS	30-150
CCV7	CCV	1	2611394.6	2459036.8	106.2	PASS	30-150	95356	72154.9	132.15	PASS	30-150
CCB7	CCB	1	2549129.6	2459036.8	103.66	PASS	30-150	92681.1	72154.9	128.45	PASS	30-150
ICSA4	ICSA	1	2589679.3	2459036.8	105.31	PASS	30-150	92615	72154.9	128.36	PASS	30-150
ICSAB4	ICSAB	1	2610405.2	2459036.8	106.16	PASS	30-150	91494.6	72154.9	126.8	PASS	30-150
CCV8	CCV	1	2843491.6	2459036.8	115.63	PASS	30-150	83057.4	72154.9	115.11	PASS	30-150
CCB8	CCB	1	2793886	2459036.8	113.62	PASS	30-150	81017.5	72154.9	112.28	PASS	30-150
CCV9	CCV	1	2466970.5	2459036.8	100.32	PASS	30-150	95607.4	72154.9	132.5	PASS	30-150
CCB9	CCB	1	2427889.6	2459036.8	98.73	PASS	30-150	91740.5	72154.9	127.14	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
CCV10	CCV	1	2516120	2459036.8	102.32	PASS	30-150	91776.3	72154.9	127.19	PASS	30-150
CCB10	CCB	1	2478120.7	2459036.8	100.78	PASS	30-150	87906.6	72154.9	121.83	PASS	30-150
ICSA5	ICSA	1	2569346.3	2459036.8	104.49	PASS	30-150	88163.5	72154.9	122.19	PASS	30-150
ICSAB5	ICSAB	1	2581977.3	2459036.8	105	PASS	30-150	88326.5	72154.9	122.41	PASS	30-150
MB-107021	MBLK	1	2552384.2	2459036.8	103.8	PASS	30-150	84006.7	72154.9	116.43	PASS	30-150
LCS-107021	LCS	1	2640207.2	2459036.8	107.37	PASS	30-150	86065.7	72154.9	119.28	PASS	30-150
N062510-015D	SAMP	5	2622910.5	2459036.8	106.66	PASS	30-150	81789.1	72154.9	113.35	PASS	30-150
N063248-001B	SAMP	1	2416688.3	2459036.8	98.28	PASS	30-150	80769.7	72154.9	111.94	PASS	30-150
N063248-002B	SAMP	1	2052262.9	2459036.8	83.46	PASS	30-150	75672.8	72154.9	104.88	PASS	30-150
N063248-002B	SAMP	5	2337767.2	2459036.8	95.07	PASS	30-150	83335.6	72154.9	115.5	PASS	30-150
N063248-002B-PS	PS	1	2042102.7	2459036.8	83.05	PASS	30-150	76315.7	72154.9	105.77	PASS	30-150
N063248-002B-MS	MS	1	2052656.3	2459036.8	83.47	PASS	30-150	79019.3	72154.9	109.51	PASS	30-150
N063248-002B-MSD	MSD	1	2017882.5	2459036.8	82.06	PASS	30-150	79626.4	72154.9	110.35	PASS	30-150
CCV11	CCV	1	2506644.7	2459036.8	101.94	PASS	30-150	91685.6	72154.9	127.07	PASS	30-150
CCB11	CCB	1	2482422	2459036.8	100.95	PASS	30-150	88643.6	72154.9	122.85	PASS	30-150
N063248-003B	SAMP	1	2085536.6	2459036.8	84.81	PASS	30-150	78464.4	72154.9	108.74	PASS	30-150
N063248-004B	SAMP	1	2071797.2	2459036.8	84.25	PASS	30-150	78695.6	72154.9	109.07	PASS	30-150
N063248-005C	SAMP	1	1949155.9	2459036.8	79.27	PASS	30-150	77794.7	72154.9	107.82	PASS	30-150
N063248-006C	SAMP	1	1758705.1	2459036.8	71.52	PASS	30-150	75220.6	72154.9	104.25	PASS	30-150
N063248-007C	SAMP	1	1723715.1	2459036.8	70.1	PASS	30-150	74183.9	72154.9	102.81	PASS	30-150
N063248-008C	SAMP	1	1777932.3	2459036.8	72.3	PASS	30-150	76033.2	72154.9	105.37	PASS	30-150
N063248-010B	SAMP	1	2409685.1	2459036.8	97.99	PASS	30-150	87217.3	72154.9	120.88	PASS	30-150
N063248-011B	SAMP	1	1961324	2459036.8	79.76	PASS	30-150	77758.8	72154.9	107.77	PASS	30-150
N063249-007C	SAMP	1	1683326.2	2459036.8	68.45	PASS	30-150	72014.5	72154.9	99.81	PASS	30-150
CCV12	CCV	1	2529154.3	2459036.8	102.85	PASS	30-150	95484.6	72154.9	132.33	PASS	30-150
CCB12	CCB	1	2495543.3	2459036.8	101.48	PASS	30-150	92386	72154.9	128.04	PASS	30-150
N063249-009C	SAMP	1	1841852.3	2459036.8	74.9	PASS	30-150	73515.5	72154.9	101.89	PASS	30-150
N063249-011C	SAMP	1	1991115.8	2459036.8	80.97	PASS	30-150	78620.8	72154.9	108.96	PASS	30-150
N063249-013C	SAMP	1	1539333.2	2459036.8	62.6	PASS	30-150	68133.9	72154.9	94.43	PASS	30-150
N063249-015C	SAMP	1	1762192.3	2459036.8	71.66	PASS	30-150	73830	72154.9	102.32	PASS	30-150
N063249-017C	SAMP	1	2576960.6	2459036.8	104.8	PASS	30-150	89496.1	72154.9	124.03	PASS	30-150
N063249-018C	SAMP	5	2369657.7	2459036.8	96.37	PASS	30-150	84484.5	72154.9	117.09	PASS	30-150
CCV13	CCV	1	2513030.1	2459036.8	102.2	PASS	30-150	92046.4	72154.9	127.57	PASS	30-150
CCB13	CCB	1	2519036.6	2459036.8	102.44	PASS	30-150	89338.5	72154.9	123.81	PASS	30-150
ICSA6	ICSA	1	2614372	2459036.8	106.32	PASS	30-150	90478.1	72154.9	125.39	PASS	30-150
ICSAB6	ICSAB	1	2608829.3	2459036.8	106.09	PASS	30-150	89529.4	72154.9	124.08	PASS	30-150
CCV14	CCV	1	2587708.2	2459036.8	105.23	PASS	30-150	89028.2	72154.9	123.38	PASS	30-150
CCB14	CCB	1	2546233.3	2459036.8	103.55	PASS	30-150	86002.1	72154.9	119.19	PASS	30-150
CCV15	CCV	1	2561437.2	2459036.8	104.16	PASS	30-150	91992.8	72154.9	127.49	PASS	30-150
CCB15	CCB	1	2532460.5	2459036.8	102.99	PASS	30-150	89487.3	72154.9	124.02	PASS	30-150
CCV16	CCV	1	2573924.8	2459036.8	104.67	PASS	30-150	88543.2	72154.9	122.71	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
CCB16	CCB	1	2449049.4	2459036.8	99.59	PASS	30-150	86282.5	72154.9	119.58	PASS	30-150
ICSA7	ICSA	1	2592985.5	2459036.8	105.45	PASS	30-150	87350.2	72154.9	121.06	PASS	30-150
ICSAB7	ICSAB	1	2598872.3	2459036.8	105.69	PASS	30-150	87996.9	72154.9	121.96	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]					72 Ge (ISTD) [1]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	45744.8	45744.8	100	PASS	30-150	109961	109961	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	48400.3	45744.8	105.81	PASS	30-150	115895.2	109961	105.4	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	48644.2	45744.8	106.34	PASS	30-150	116463.1	109961	105.91	PASS	30-150
Std3-5/50 ppb	ICAL	1	49579.1	45744.8	108.38	PASS	30-150	117054.1	109961	106.45	PASS	30-150
Std4-10/100 ppb	ICAL	1	49426.6	45744.8	108.05	PASS	30-150	117266.5	109961	106.64	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	48837	45744.8	106.76	PASS	30-150	115723.5	109961	105.24	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	47561.1	45744.8	103.97	PASS	30-150	114007.2	109961	103.68	PASS	30-150
Std7-100/1000 ppb	ICAL	1	48045.9	45744.8	105.03	PASS	30-150	112333.5	109961	102.16	PASS	30-150
Std8-200/2000 ppb	ICAL	1	48911.7	45744.8	106.92	PASS	30-150	115475.3	109961	105.02	PASS	30-150
ICV	ICV	1	45694.7	45744.8	99.89	PASS	30-150	108793.1	109961	98.94	PASS	30-150
ICB	ICB	1	47418.4	45744.8	103.66	PASS	30-150	113113.6	109961	102.87	PASS	30-150
LLICV1	LLICV	1	47848.6	45744.8	104.6	PASS	30-150	114282.4	109961	103.93	PASS	30-150
MLCCV	CCV	1	48577.4	45744.8	106.19	PASS	30-150	116502.4	109961	105.95	PASS	30-150
ICSA1	ICSA	1	49223.8	45744.8	107.61	PASS	30-150	117882.5	109961	107.2	PASS	30-150
ICSAB1	ICSAB	1	47285.8	45744.8	103.37	PASS	30-150	112968.1	109961	102.73	PASS	30-150
MDL 4	ICAL	1	48374.5	45744.8	105.75	PASS	30-150	115776.4	109961	105.29	PASS	30-150
CCV1	CCV	1	49639.3	45744.8	108.51	PASS	30-150	117609.3	109961	106.96	PASS	30-150
CCB1	CCB	1	48172.8	45744.8	105.31	PASS	30-150	117464.7	109961	106.82	PASS	30-150
CCV2	CCV	1	49189.2	45744.8	107.53	PASS	30-150	117073.5	109961	106.47	PASS	30-150
CCB2	CCB	1	48102.5	45744.8	105.15	PASS	30-150	113660.5	109961	103.36	PASS	30-150
CCV3	CCV	1	48987.5	45744.8	107.09	PASS	30-150	118231.5	109961	107.52	PASS	30-150
CCB3	CCB	1	48038	45744.8	105.01	PASS	30-150	113802.6	109961	103.49	PASS	30-150
CCV4	CCV	1	49443.3	45744.8	108.09	PASS	30-150	117004.9	109961	106.41	PASS	30-150
CCB4	CCB	1	48802.5	45744.8	106.68	PASS	30-150	113725.6	109961	103.42	PASS	30-150
CCB4	CCB	1	49080	45744.8	107.29	PASS	30-150	116911.9	109961	106.32	PASS	30-150
ICSA2	ICSA	1	49857.9	45744.8	108.99	PASS	30-150	118346.4	109961	107.63	PASS	30-150
ICSAB2	ICSAB	1	49893.5	45744.8	109.07	PASS	30-150	119657.1	109961	108.82	PASS	30-150
CCV5	CCV	1	50337	45744.8	110.04	PASS	30-150	118913.8	109961	108.14	PASS	30-150
CCB5	CCB	1	49582.6	45744.8	108.39	PASS	30-150	117767	109961	107.1	PASS	30-150
ICSA3	ICSA	1	50856.5	45744.8	111.17	PASS	30-150	120805.5	109961	109.86	PASS	30-150
ICSAB3	ICSAB	1	51296.8	45744.8	112.14	PASS	30-150	120320.8	109961	109.42	PASS	30-150
CCV6	CCV	1	56200.5	45744.8	122.86	PASS	30-150	134160.6	109961	122.01	PASS	30-150
CCB6	CCB	1	54404.5	45744.8	118.93	PASS	30-150	128604.6	109961	116.95	PASS	30-150
CCV7	CCV	1	58732.8	45744.8	128.39	PASS	30-150	145864.2	109961	132.65	PASS	30-150
CCB7	CCB	1	57501.7	45744.8	125.7	PASS	30-150	140172.6	109961	127.47	PASS	30-150
ICSA4	ICSA	1	58294.4	45744.8	127.43	PASS	30-150	143413.8	109961	130.42	PASS	30-150
ICSAB4	ICSAB	1	57988.9	45744.8	126.77	PASS	30-150	137779.3	109961	125.3	PASS	30-150
CCV8	CCV	1	53384.5	45744.8	116.7	PASS	30-150	129130.8	109961	117.43	PASS	30-150
CCB8	CCB	1	52609.8	45744.8	115.01	PASS	30-150	123334.1	109961	112.16	PASS	30-150
CCV9	CCV	1	58132.7	45744.8	127.08	PASS	30-150	141914.1	109961	129.06	PASS	30-150
CCB9	CCB	1	57913.2	45744.8	126.6	PASS	30-150	135892.7	109961	123.58	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]					72 Ge (ISTD) [1]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
CCV10	CCV	1	57158.2	45744.8	124.95	PASS	30-150	135163.3	109961	122.92	PASS	30-150
CCB10	CCB	1	55358.9	45744.8	121.02	PASS	30-150	132704.8	109961	120.68	PASS	30-150
ICSA5	ICSA	1	55918.6	45744.8	122.24	PASS	30-150	133255.6	109961	121.18	PASS	30-150
ICSAB5	ICSAB	1	55404.5	45744.8	121.12	PASS	30-150	133193.1	109961	121.13	PASS	30-150
MB-107021	MBLK	1	53660.9	45744.8	117.3	PASS	30-150	127166.9	109961	115.65	PASS	30-150
LCS-107021	LCS	1	54552.8	45744.8	119.25	PASS	30-150	127846.2	109961	116.27	PASS	30-150
N062510-015D	SAMP	5	52216.4	45744.8	114.15	PASS	30-150	122628	109961	111.52	PASS	30-150
N063248-001B	SAMP	1	50259.2	45744.8	109.87	PASS	30-150	116885.4	109961	106.3	PASS	30-150
N063248-002B	SAMP	1	46369.9	45744.8	101.37	PASS	30-150	107107.8	109961	97.41	PASS	30-150
N063248-002B	SAMP	5	52178.4	45744.8	114.06	PASS	30-150	122851.7	109961	111.72	PASS	30-150
N063248-002B-PS	PS	1	46491.4	45744.8	101.63	PASS	30-150	109372.5	109961	99.46	PASS	30-150
N063248-002B-MS	MS	1	47344.9	45744.8	103.5	PASS	30-150	111446.7	109961	101.35	PASS	30-150
N063248-002B-MSD	MSD	1	47661.4	45744.8	104.19	PASS	30-150	111784.2	109961	101.66	PASS	30-150
CCV11	CCV	1	57334.6	45744.8	125.34	PASS	30-150	139481.5	109961	126.85	PASS	30-150
CCB11	CCB	1	55259.7	45744.8	120.8	PASS	30-150	133071.9	109961	121.02	PASS	30-150
N063248-003B	SAMP	1	47211.2	45744.8	103.21	PASS	30-150	110400.5	109961	100.4	PASS	30-150
N063248-004B	SAMP	1	47535.5	45744.8	103.91	PASS	30-150	112518.1	109961	102.33	PASS	30-150
N063248-005C	SAMP	1	45997.8	45744.8	100.55	PASS	30-150	107608.8	109961	97.86	PASS	30-150
N063248-006C	SAMP	1	44578.3	45744.8	97.45	PASS	30-150	105581.2	109961	96.02	PASS	30-150
N063248-007C	SAMP	1	44229.6	45744.8	96.69	PASS	30-150	103918.7	109961	94.51	PASS	30-150
N063248-008C	SAMP	1	44666.3	45744.8	97.64	PASS	30-150	105755	109961	96.18	PASS	30-150
N063248-010B	SAMP	1	53821.5	45744.8	117.66	PASS	30-150	129037.4	109961	117.35	PASS	30-150
N063248-011B	SAMP	1	46120.3	45744.8	100.82	PASS	30-150	108647.6	109961	98.81	PASS	30-150
N063249-007C	SAMP	1	42377	45744.8	92.64	PASS	30-150	99874.7	109961	90.83	PASS	30-150
CCV12	CCV	1	59541.2	45744.8	130.16	PASS	30-150	146172.5	109961	132.93	PASS	30-150
CCB12	CCB	1	57170.5	45744.8	124.98	PASS	30-150	141241.8	109961	128.45	PASS	30-150
N063249-009C	SAMP	1	43527.7	45744.8	95.15	PASS	30-150	103052.1	109961	93.72	PASS	30-150
N063249-011C	SAMP	1	46963.9	45744.8	102.67	PASS	30-150	109475.5	109961	99.56	PASS	30-150
N063249-013C	SAMP	1	39770.4	45744.8	86.94	PASS	30-150	92989.9	109961	84.57	PASS	30-150
N063249-015C	SAMP	1	43423	45744.8	94.92	PASS	30-150	104183.6	109961	94.75	PASS	30-150
N063249-017C	SAMP	1	56014.4	45744.8	122.45	PASS	30-150	133813.3	109961	121.69	PASS	30-150
N063249-018C	SAMP	5	51990	45744.8	113.65	PASS	30-150	126722.1	109961	115.24	PASS	30-150
CCV13	CCV	1	58137.3	45744.8	127.09	PASS	30-150	140074.4	109961	127.39	PASS	30-150
CCB13	CCB	1	56121.4	45744.8	122.68	PASS	30-150	138025.9	109961	125.52	PASS	30-150
ICSA6	ICSA	1	57407	45744.8	125.49	PASS	30-150	138980.5	109961	126.39	PASS	30-150
ICSAB6	ICSAB	1	56947.6	45744.8	124.49	PASS	30-150	137139.8	109961	124.72	PASS	30-150
CCV14	CCV	1	56052.3	45744.8	122.53	PASS	30-150	135880.6	109961	123.57	PASS	30-150
CCB14	CCB	1	54813.7	45744.8	119.82	PASS	30-150	133022.8	109961	120.97	PASS	30-150
CCV15	CCV	1	57894.2	45744.8	126.56	PASS	30-150	144437.1	109961	131.35	PASS	30-150
CCB15	CCB	1	56124.8	45744.8	122.69	PASS	30-150	137800.6	109961	125.32	PASS	30-150
CCV16	CCV	1	56385.6	45744.8	123.26	PASS	30-150	140844	109961	128.09	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]					72 Ge (ISTD) [1]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
CCB16	CCB	1	54687.6	45744.8	119.55	PASS	30-150	133314.2	109961	121.24	PASS	30-150
ICSA7	ICSA	1	56307.6	45744.8	123.09	PASS	30-150	135224	109961	122.97	PASS	30-150
ICSAB7	ICSAB	1	55771.3	45744.8	121.92	PASS	30-150	135674.4	109961	123.38	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	103 Rh (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	1010748.5	1010748.5	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	1058085.8	1010748.5	104.68	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	1071407.6	1010748.5	106	PASS	30-150
Std3-5/50 ppb	ICAL	1	1083046.5	1010748.5	107.15	PASS	30-150
Std4-10/100 ppb	ICAL	1	1087247.7	1010748.5	107.57	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	1064868.7	1010748.5	105.35	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	1039393.2	1010748.5	102.83	PASS	30-150
Std7-100/1000 ppb	ICAL	1	1040858	1010748.5	102.98	PASS	30-150
Std8-200/2000 ppb	ICAL	1	1066716.2	1010748.5	105.54	PASS	30-150
ICV	ICV	1	1005090.8	1010748.5	99.44	PASS	30-150
ICB	ICB	1	1045427.7	1010748.5	103.43	PASS	30-150
LLICV1	LLICV	1	1062063.5	1010748.5	105.08	PASS	30-150
MLCCV	CCV	1	1072229.1	1010748.5	106.08	PASS	30-150
ICSA1	ICSA	1	1085624.9	1010748.5	107.41	PASS	30-150
ICSAB1	ICSAB	1	1042472.8	1010748.5	103.14	PASS	30-150
MDL 4	ICAL	1	1067158	1010748.5	105.58	PASS	30-150
CCV1	CCV	1	1090362.6	1010748.5	107.88	PASS	30-150
CCB1	CCB	1	1073961.9	1010748.5	106.25	PASS	30-150
CCV2	CCV	1	1085591.6	1010748.5	107.4	PASS	30-150
CCB2	CCB	1	1059425.5	1010748.5	104.82	PASS	30-150
CCV3	CCV	1	1096154.5	1010748.5	108.45	PASS	30-150
CCB3	CCB	1	1072560.6	1010748.5	106.12	PASS	30-150
CCV4	CCV	1	1093875.6	1010748.5	108.22	PASS	30-150
CCB4	CCB	1	1064306.1	1010748.5	105.3	PASS	30-150
CCB4	CCB	1	1074629	1010748.5	106.32	PASS	30-150
ICSA2	ICSA	1	1099022.2	1010748.5	108.73	PASS	30-150
ICSAB2	ICSAB	1	1107453.3	1010748.5	109.57	PASS	30-150
CCV5	CCV	1	1122654.8	1010748.5	111.07	PASS	30-150
CCB5	CCB	1	1107826.1	1010748.5	109.6	PASS	30-150
ICSA3	ICSA	1	1140330.3	1010748.5	112.82	PASS	30-150
ICSAB3	ICSAB	1	1140223.3	1010748.5	112.81	PASS	30-150
CCV6	CCV	1	1181349.2	1010748.5	116.88	PASS	30-150
CCB6	CCB	1	1162826.9	1010748.5	115.05	PASS	30-150
CCV7	CCV	1	1213919.1	1010748.5	120.1	PASS	30-150
CCB7	CCB	1	1189418.9	1010748.5	117.68	PASS	30-150
ICSA4	ICSA	1	1199451.3	1010748.5	118.67	PASS	30-150
ICSAB4	ICSAB	1	1201809.3	1010748.5	118.9	PASS	30-150
CCV8	CCV	1	1189030.8	1010748.5	117.64	PASS	30-150
CCB8	CCB	1	1163251.6	1010748.5	115.09	PASS	30-150
CCV9	CCV	1	1189954.3	1010748.5	117.73	PASS	30-150
CCB9	CCB	1	1163159.9	1010748.5	115.08	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	103 Rh (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
CCV10	CCV	1	1186328.5	1010748.5	117.37	PASS	30-150
CCB10	CCB	1	1150630.2	1010748.5	113.84	PASS	30-150
ICSA5	ICSA	1	1177297.3	1010748.5	116.48	PASS	30-150
ICSAB5	ICSAB	1	1171811	1010748.5	115.93	PASS	30-150
MB-107021	MBLK	1	1147660.2	1010748.5	113.55	PASS	30-150
LCS-107021	LCS	1	1172571.2	1010748.5	116.01	PASS	30-150
N062510-015D	SAMP	5	1114880.8	1010748.5	110.3	PASS	30-150
N063248-001B	SAMP	1	1004471	1010748.5	99.38	PASS	30-150
N063248-002B	SAMP	1	884763.8	1010748.5	87.54	PASS	30-150
N063248-002B	SAMP	5	1030387.4	1010748.5	101.94	PASS	30-150
N063248-002B-PS	PS	1	885071.6	1010748.5	87.57	PASS	30-150
N063248-002B-MS	MS	1	891803.2	1010748.5	88.23	PASS	30-150
N063248-002B-MSD	MSD	1	895522.3	1010748.5	88.6	PASS	30-150
CCV11	CCV	1	1170444.1	1010748.5	115.8	PASS	30-150
CCB11	CCB	1	1156125.5	1010748.5	114.38	PASS	30-150
N063248-003B	SAMP	1	899850.9	1010748.5	89.03	PASS	30-150
N063248-004B	SAMP	1	909563.1	1010748.5	89.99	PASS	30-150
N063248-005C	SAMP	1	855919.1	1010748.5	84.68	PASS	30-150
N063248-006C	SAMP	1	800284.9	1010748.5	79.18	PASS	30-150
N063248-007C	SAMP	1	779980.2	1010748.5	77.17	PASS	30-150
N063248-008C	SAMP	1	803643.8	1010748.5	79.51	PASS	30-150
N063248-010B	SAMP	1	1021278.9	1010748.5	101.04	PASS	30-150
N063248-011B	SAMP	1	855086.7	1010748.5	84.6	PASS	30-150
N063249-007C	SAMP	1	765002.5	1010748.5	75.69	PASS	30-150
CCV12	CCV	1	1195047.9	1010748.5	118.23	PASS	30-150
CCB12	CCB	1	1168824.5	1010748.5	115.64	PASS	30-150
N063249-009C	SAMP	1	800743.8	1010748.5	79.22	PASS	30-150
N063249-011C	SAMP	1	852331.9	1010748.5	84.33	PASS	30-150
N063249-013C	SAMP	1	705811.7	1010748.5	69.83	PASS	30-150
N063249-015C	SAMP	1	784188.6	1010748.5	77.58	PASS	30-150
N063249-017C	SAMP	1	1071733.7	1010748.5	106.03	PASS	30-150
N063249-018C	SAMP	5	992986.6	1010748.5	98.24	PASS	30-150
CCV13	CCV	1	1173765.3	1010748.5	116.13	PASS	30-150
CCB13	CCB	1	1148686.7	1010748.5	113.65	PASS	30-150
ICSA6	ICSA	1	1187955	1010748.5	117.53	PASS	30-150
ICSAB6	ICSAB	1	1177971.1	1010748.5	116.54	PASS	30-150
CCV14	CCV	1	1160539.5	1010748.5	114.82	PASS	30-150
CCB14	CCB	1	1130082.5	1010748.5	111.81	PASS	30-150
CCV15	CCV	1	1173874.8	1010748.5	116.14	PASS	30-150
CCB15	CCB	1	1148745.6	1010748.5	113.65	PASS	30-150
CCV16	CCV	1	1157504.2	1010748.5	114.52	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	103 Rh (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
CCB16	CCB	1	1130113.6	1010748.5	111.81	PASS	30-150
ICSA7	ICSA	1	1166865.6	1010748.5	115.45	PASS	30-150
ICSAB7	ICSAB	1	1167181.5	1010748.5	115.48	PASS	30-150

INTERNAL STANDARD: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	2546673.9	2546673.9	100	PASS	30-150	61433.5	61433.5	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	2477141	2546673.9	97.27	PASS	30-150	59225.7	61433.5	96.41	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	2410356.4	2546673.9	94.65	PASS	30-150	57887.7	61433.5	94.23	PASS	30-150
Std3-5/50 ppb	ICAL	1	2515986.1	2546673.9	98.79	PASS	30-150	60292.8	61433.5	98.14	PASS	30-150
Std4-10/100 ppb	ICAL	1	2569262.8	2546673.9	100.89	PASS	30-150	61278.6	61433.5	99.75	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	2558618.2	2546673.9	100.47	PASS	30-150	60212.5	61433.5	98.01	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	2483709.9	2546673.9	97.53	PASS	30-150	58594.5	61433.5	95.38	PASS	30-150
Std7-100/1000 ppb	ICAL	1	2480840.2	2546673.9	97.41	PASS	30-150	58564.5	61433.5	95.33	PASS	30-150
Std8-200/2000 ppb	ICAL	1	2587686.9	2546673.9	101.61	PASS	30-150	60077.5	61433.5	97.79	PASS	30-150
ICV	ICV	1	2653524.2	2546673.9	104.2	PASS	30-150	60758.8	61433.5	98.9	PASS	30-150
ICB	ICB	1	2570474.6	2546673.9	100.93	PASS	30-150	59068.4	61433.5	96.15	PASS	30-150
LLICV1	LLICV	1	2478137.6	2546673.9	97.31	PASS	30-150	57158.5	61433.5	93.04	PASS	30-150
LLICV1	LLICV	1	2542268.2	2546673.9	99.83	PASS	30-150	59921.4	61433.5	97.54	PASS	30-150
MLCCV	CCV	1	2630585.4	2546673.9	103.29	PASS	30-150	61355.5	61433.5	99.87	PASS	30-150
ICSA1	ICSA	1	2627480	2546673.9	103.17	PASS	30-150	61002.1	61433.5	99.3	PASS	30-150
ICSAB1	ICSAB	1	2638963.2	2546673.9	103.62	PASS	30-150	60490.1	61433.5	98.46	PASS	30-150
CCV1	CCV	1	2694587.4	2546673.9	105.81	PASS	30-150	59938.1	61433.5	97.57	PASS	30-150
CCB1	CCB	1	2724865	2546673.9	107	PASS	30-150	59985.1	61433.5	97.64	PASS	30-150
CCV2	CCV	1	2796445	2546673.9	109.81	PASS	30-150	62680.5	61433.5	102.03	PASS	30-150
CCB2	CCB	1	2784034.1	2546673.9	109.32	PASS	30-150	61849.5	61433.5	100.68	PASS	30-150
CCV3	CCV	1	2883421	2546673.9	113.22	PASS	30-150	64275.3	61433.5	104.63	PASS	30-150
CCB3	CCB	1	2848797.5	2546673.9	111.86	PASS	30-150	63643.9	61433.5	103.6	PASS	30-150
ICSA2	ICSA	1	2873243.9	2546673.9	112.82	PASS	30-150	63704.3	61433.5	103.7	PASS	30-150
ICSAB2	ICSAB	1	2879704.4	2546673.9	113.08	PASS	30-150	64191.6	61433.5	104.49	PASS	30-150
MDL1	SAMP	1	2864470.5	2546673.9	112.48	PASS	30-150	63286	61433.5	103.02	PASS	30-150
MDL2	SAMP	1	2859825.8	2546673.9	112.3	PASS	30-150	63170.1	61433.5	102.83	PASS	30-150
MDL3	SAMP	1	2844272.4	2546673.9	111.69	PASS	30-150	64057.8	61433.5	104.27	PASS	30-150
CCV4	CCV	1	2906215	2546673.9	114.12	PASS	30-150	63655.2	61433.5	103.62	PASS	30-150
CCB4	CCB	1	2905314.5	2546673.9	114.08	PASS	30-150	63350.5	61433.5	103.12	PASS	30-150
CCV5	CCV	1	2917051.4	2546673.9	114.54	PASS	30-150	67781.3	61433.5	110.33	PASS	30-150
CCB5	CCB	1	2923013.9	2546673.9	114.78	PASS	30-150	66637.8	61433.5	108.47	PASS	30-150
CCV6	CCV	1	2936579	2546673.9	115.31	PASS	30-150	66786.3	61433.5	108.71	PASS	30-150
CCB6	CCB	1	2950049.1	2546673.9	115.84	PASS	30-150	66684.7	61433.5	108.55	PASS	30-150
ICSA3	ICSA	1	2910365	2546673.9	114.28	PASS	30-150	67075	61433.5	109.18	PASS	30-150
ICSAB3	ICSAB	1	2944783	2546673.9	115.63	PASS	30-150	67519.1	61433.5	109.91	PASS	30-150
N063248-002B	SAMP	5	2633404.2	2546673.9	103.41	PASS	30-150	75676.1	61433.5	123.18	PASS	30-150
N063248-002B	SAMP	25	2785706.1	2546673.9	109.39	PASS	30-150	74948.3	61433.5	122	PASS	30-150
N063248-002B-PS	PS	5	2615014.9	2546673.9	102.68	PASS	30-150	70433.3	61433.5	114.65	PASS	30-150
N063248-002B-MS	MS	5	2598603.7	2546673.9	102.04	PASS	30-150	70645.3	61433.5	114.99	PASS	30-150
N063248-002B-MSD	MSD	5	2643307.7	2546673.9	103.79	PASS	30-150	70651	61433.5	115	PASS	30-150
N063248-003B	SAMP	10	2737461	2546673.9	107.49	PASS	30-150	71859.3	61433.5	116.97	PASS	30-150

INTERNAL STANDARD: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
N063248-004B	SAMP	10	2801935.2	2546673.9	110.02	PASS	30-150	71197.5	61433.5	115.89	PASS	30-150
CCV7	CCV	1	2853126.7	2546673.9	112.03	PASS	30-150	73089	61433.5	118.97	PASS	30-150
CCB7	CCB	1	2887302.8	2546673.9	113.38	PASS	30-150	70703.3	61433.5	115.09	PASS	30-150
CCV8	CCV	1	2805939.3	2546673.9	110.18	PASS	30-150	65871.4	61433.5	107.22	PASS	30-150
CCB8	CCB	1	2825101.7	2546673.9	110.93	PASS	30-150	64372.3	61433.5	104.78	PASS	30-150
CCV9	CCV	1	2856275	2546673.9	112.16	PASS	30-150	66203.8	61433.5	107.76	PASS	30-150
CCB9	CCB	1	2876861.9	2546673.9	112.97	PASS	30-150	65294.7	61433.5	106.29	PASS	30-150
CCV10	CCV	1	2834268.2	2546673.9	111.29	PASS	30-150	64824.2	61433.5	105.52	PASS	30-150
CCB10	CCB	1	2771600.1	2546673.9	108.83	PASS	30-150	63577.2	61433.5	103.49	PASS	30-150
ICSA4	ICSA	1	2750438.3	2546673.9	108	PASS	30-150	62897.9	61433.5	102.38	PASS	30-150
ICSAB4	ICSAB	1	2769002.9	2546673.9	108.73	PASS	30-150	63064	61433.5	102.65	PASS	30-150
N063248-005C	SAMP	1	2041175.6	2546673.9	80.15	PASS	30-150	62204.3	61433.5	101.25	PASS	30-150
N063248-005C	SAMP	10	2491339.4	2546673.9	97.83	PASS	30-150	67445.6	61433.5	109.79	PASS	30-150
N063248-006C	SAMP	1	1873174.3	2546673.9	73.55	PASS	30-150	60479	61433.5	98.45	PASS	30-150
N063248-006C	SAMP	10	2385057.2	2546673.9	93.65	PASS	30-150	67458.9	61433.5	109.81	PASS	30-150
N063248-007C	SAMP	1	1805722.5	2546673.9	70.91	PASS	30-150	57665.8	61433.5	93.87	PASS	30-150
N063248-007C	SAMP	10	2323884.7	2546673.9	91.25	PASS	30-150	67931.9	61433.5	110.58	PASS	30-150
N063248-008C	SAMP	1	1819448.7	2546673.9	71.44	PASS	30-150	58995.9	61433.5	96.03	PASS	30-150
N063248-008C	SAMP	10	2253240.6	2546673.9	88.48	PASS	30-150	68690.5	61433.5	111.81	PASS	30-150
N063248-010B	SAMP	1	2346720.9	2546673.9	92.15	PASS	30-150	66026.7	61433.5	107.48	PASS	30-150
CCV11	CCV	1	2408928.8	2546673.9	94.59	PASS	30-150	68077	61433.5	110.81	PASS	30-150
CCB11	CCB	1	2344078.1	2546673.9	92.05	PASS	30-150	66050	61433.5	107.51	PASS	30-150
N063248-011B	SAMP	1	1883380.5	2546673.9	73.95	PASS	30-150	57385.9	61433.5	93.41	PASS	30-150
N063248-011B	SAMP	10	2250064.3	2546673.9	88.35	PASS	30-150	66034.3	61433.5	107.49	PASS	30-150
N063249-007C	SAMP	1	1712206.3	2546673.9	67.23	PASS	30-150	57854.3	61433.5	94.17	PASS	30-150
N063249-007C	SAMP	10	2305235	2546673.9	90.52	PASS	30-150	70356.4	61433.5	114.52	PASS	30-150
N063249-009C	SAMP	1	1893373.5	2546673.9	74.35	PASS	30-150	62168.5	61433.5	101.2	PASS	30-150
N063249-009C	SAMP	10	2487704.4	2546673.9	97.68	PASS	30-150	75106.7	61433.5	122.26	PASS	30-150
N063249-011C	SAMP	1	2172651.2	2546673.9	85.31	PASS	30-150	68338	61433.5	111.24	PASS	30-150
N063249-011C	SAMP	10	2524753.6	2546673.9	99.14	PASS	30-150	75578.9	61433.5	123.03	PASS	30-150
N063249-013C	SAMP	1	1708349.2	2546673.9	67.08	PASS	30-150	61317.6	61433.5	99.81	PASS	30-150
N063249-013C	SAMP	10	2409083.8	2546673.9	94.6	PASS	30-150	76187.2	61433.5	124.02	PASS	30-150
CCV12	CCV	1	2693374.4	2546673.9	105.76	PASS	30-150	80619	61433.5	131.23	PASS	30-150
CCB12	CCB	1	2682960.7	2546673.9	105.35	PASS	30-150	79285.9	61433.5	129.06	PASS	30-150
N063249-015C	SAMP	1	2003329.1	2546673.9	78.66	PASS	30-150	64507.3	61433.5	105	PASS	30-150
N063249-015C	SAMP	10	2493228.6	2546673.9	97.9	PASS	30-150	74946.2	61433.5	122	PASS	30-150
N063249-017C	SAMP	1	2693844.9	2546673.9	105.78	PASS	30-150	75845.7	61433.5	123.46	PASS	30-150
N063249-017C	SAMP	10	2643345.1	2546673.9	103.8	PASS	30-150	73555.5	61433.5	119.73	PASS	30-150
N063249-018C	SAMP	5	2452391.9	2546673.9	96.3	PASS	30-150	71072.7	61433.5	115.69	PASS	30-150
CCV13	CCV	1	2463267.7	2546673.9	96.72	PASS	30-150	68730.6	61433.5	111.88	PASS	30-150
CCB13	CCB	1	2489019.8	2546673.9	97.74	PASS	30-150	67533.6	61433.5	109.93	PASS	30-150

INTERNAL STANDARD: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
ICSA5	ICSA	1	2449915.3	2546673.9	96.2	PASS	30-150	66756.1	61433.5	108.66	PASS	30-150
ICSAB5	ICSAB	1	2460970.8	2546673.9	96.63	PASS	30-150	67277.1	61433.5	109.51	PASS	30-150
CCV14	CCV	1	2719386.9	2546673.9	106.78	PASS	30-150	72932.9	61433.5	118.72	PASS	30-150
CCB14	CCB	1	2717829.1	2546673.9	106.72	PASS	30-150	71177.5	61433.5	115.86	PASS	30-150
CCV15	CCV	1	2647392.6	2546673.9	103.95	PASS	30-150	71849.2	61433.5	116.95	PASS	30-150
CCB15	CCB	1	2610951.7	2546673.9	102.52	PASS	30-150	69650	61433.5	113.37	PASS	30-150
CCV16	CCV	1	2409816.1	2546673.9	94.63	PASS	30-150	70028.3	61433.5	113.99	PASS	30-150
CCB16	CCB	1	2381204.5	2546673.9	93.5	PASS	30-150	67870.6	61433.5	110.48	PASS	30-150
CCV17	CCV	1	2666795.9	2546673.9	104.72	PASS	30-150	77699.6	61433.5	126.48	PASS	30-150
CCB17	CCB	1	2632176.7	2546673.9	103.36	PASS	30-150	76961.8	61433.5	125.28	PASS	30-150
ICSA6	ICSA	1	2662092.9	2546673.9	104.53	PASS	30-150	77080.2	61433.5	125.47	PASS	30-150
ICSAB6	ICSAB	1	2670912.4	2546673.9	104.88	PASS	30-150	76997.4	61433.5	125.33	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.: N063248
Test Method: EPA 6020
Analysis Date: 2/23,25/2024

Matrix: Groundwater
Batch No.: 107021

Instrument ID: ICPMS-03
Instrument Description: Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Dilution test for Ba failed. However, PS passed criteria.
Dilution test is not applicable to As & Zn. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063248-002B DT 5x	Arsenic	As	µg/L	0	NA	0		10
N063248-002B DT 5x	Barium	Ba	µg/L	66.90102	FAIL	59.79465	11.88%	10
N063248-002B DT 5x	Molybdenum	Mo	µg/L	36.15815	PASS	34.62105	4.44%	10
N063248-002B DT 5x	Zinc	Zn	µg/L	28.89482	NA	28.11335	2.78%	10
N063248-002B DT 5x	Manganese	Mn	µg/L	101.2074	PASS	93.50368	8.24%	10
N063248-002B DT 5x	Chromium	Cr	µg/L	446.0309	PASS	411.9782	8.27%	10

Reviewed by:

JRB 3/26/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **N063248-002B-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ZZZZZZ** Batch ID: **107021** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/24/2024** SeqNo: **5713738**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	8.948	0.10	10.00	0	89.5	80	120				
Barium	70.158	1.0	10.00	59.79	104	80	120				
Molybdenum	45.791	0.50	10.00	34.62	112	80	120				
Selenium	11.905	0.50	10.00	2.827	90.8	80	120				
Vanadium	11.353	1.0	10.00	1.497	98.6	80	120				
Zinc	114.802	10	100.0	28.11	86.7	80	120				

Sample ID **N063248-002B-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ZZZZZZ** Batch ID: **107021** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/25/2024** SeqNo: **5714163**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	586.103	2.5	500.0	93.50	98.5	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063248
Project: PG&E Topock - non routine, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID	N063248-002B-PS	SampType:	PS	TestCode:	6020DIS_CrP	Units:	µg/L	Prep Date:		RunNo:	182944
Client ID:	ZZZZZZ	Batch ID:	107021	TestNo:	EPA 6020	EPA 3010A		Analysis Date:	2/25/2024	SeqNo:	5714389

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	484.502	5.0	50.00	412.0	145	80	120				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

ARCADIS

Project: PG&E Topock - PCM

Project No.: 30211191

ASSET Laboratories Work Order:

N063249

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063249

Item	Page
Cover Page	1-7
Analytical Result/QC Summary Reports	8-68
Sample Receiving Items	69-79
List of Analysts	80
Raw Data	
EPA 218.6	81-432
EPA 300.0	433-455
EPA 6010B_Dissolved	456-492
EPA 6020_Dissolved	493-584

March 08, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063249

RE: PG&E Topock - PCM, 30211191

Attention: Dan Bush

Enclosed are the results for sample(s) received on February 21, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063249

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Nitrate/Nitrite was subcontracted to BC Labs - Bakersfield, CA.

Analytical Comments for EPA 218.6:

Dilution was necessary for several samples due to matrix interference. Samples were analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Samples were reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Analytical Comments for EPA 300.0:

Dilution was necessary due to precipitation of sample upon addition of eluent.

Analytical Comments for EPA 6010B:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Iron in QC samples N063248-005C-MS1 and N063248-005C-MSD1 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020:

Matrix Spike Duplicate (MSD) is outside recovery criteria for Barium in QC sample N063248-002B-MSD possibly due to matrix interference. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

ASSET Laboratories

Date: *08-Mar-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063249
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063249-001A	MW-33-040-Q124	Groundwater	2/21/2024 12:46:00 PM	2/21/2024	3/8/2024
N063249-002A	MW-33-040-EB-Q124	Groundwater	2/21/2024 12:15:00 PM	2/21/2024	3/8/2024
N063249-003A	MW-33-090-Q124	Groundwater	2/21/2024 12:00:00 PM	2/21/2024	3/8/2024
N063249-004A	MW-33-150-Q124	Groundwater	2/21/2024 11:22:00 AM	2/21/2024	3/8/2024
N063249-005A	MW-33-210-Q124	Groundwater	2/21/2024 10:36:00 AM	2/21/2024	3/8/2024
N063249-006A	EB-733-Q124	Groundwater	2/21/2024 1:00:00 PM	2/21/2024	3/8/2024
N063249-007A	MW-52D-Q124	Groundwater	2/21/2024 12:36:00 PM	2/21/2024	3/8/2024
N063249-007B	MW-52D-Q124	Groundwater	2/21/2024 12:36:00 PM	2/21/2024	3/8/2024
N063249-007C	MW-52D-Q124	Groundwater	2/21/2024 12:36:00 PM	2/21/2024	3/8/2024
N063249-008A	MW-52D-EB-Q124	Groundwater	2/21/2024 12:13:00 PM	2/21/2024	3/8/2024
N063249-009A	MW-52M-Q124	Groundwater	2/21/2024 11:30:00 AM	2/21/2024	3/8/2024
N063249-009B	MW-52M-Q124	Groundwater	2/21/2024 11:30:00 AM	2/21/2024	3/8/2024
N063249-009C	MW-52M-Q124	Groundwater	2/21/2024 11:30:00 AM	2/21/2024	3/8/2024
N063249-010A	MW-52M-EB-Q124	Groundwater	2/21/2024 11:09:00 AM	2/21/2024	3/8/2024
N063249-011A	MW-52S-Q124	Groundwater	2/21/2024 11:58:00 AM	2/21/2024	3/8/2024
N063249-011B	MW-52S-Q124	Groundwater	2/21/2024 11:58:00 AM	2/21/2024	3/8/2024
N063249-011C	MW-52S-Q124	Groundwater	2/21/2024 11:58:00 AM	2/21/2024	3/8/2024
N063249-012A	MW-52S-EB-Q124	Groundwater	2/21/2024 11:38:00 AM	2/21/2024	3/8/2024
N063249-013A	MW-53D-Q124	Groundwater	2/21/2024 10:47:00 AM	2/21/2024	3/8/2024
N063249-013B	MW-53D-Q124	Groundwater	2/21/2024 10:47:00 AM	2/21/2024	3/8/2024
N063249-013C	MW-53D-Q124	Groundwater	2/21/2024 10:47:00 AM	2/21/2024	3/8/2024
N063249-014A	MW-53D-EB-Q124	Groundwater	2/21/2024 10:23:00 AM	2/21/2024	3/8/2024
N063249-015A	MW-53M-Q124	Groundwater	2/21/2024 9:52:00 AM	2/21/2024	3/8/2024
N063249-015B	MW-53M-Q124	Groundwater	2/21/2024 9:52:00 AM	2/21/2024	3/8/2024
N063249-015C	MW-53M-Q124	Groundwater	2/21/2024 9:52:00 AM	2/21/2024	3/8/2024
N063249-016A	MW-53M-EB-Q124	Groundwater	2/21/2024 9:30:00 AM	2/21/2024	3/8/2024
N063249-017A	MW-53S-Q124	Groundwater	2/21/2024 10:20:00 AM	2/21/2024	3/8/2024
N063249-017B	MW-53S-Q124	Groundwater	2/21/2024 10:20:00 AM	2/21/2024	3/8/2024
N063249-017C	MW-53S-Q124	Groundwater	2/21/2024 10:20:00 AM	2/21/2024	3/8/2024

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063249
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063249-018A	MW-90-031-Q124	Groundwater	2/21/2024 2:47:00 PM	2/21/2024	3/8/2024
N063249-018B	MW-90-031-Q124	Groundwater	2/21/2024 2:47:00 PM	2/21/2024	3/8/2024
N063249-018C	MW-90-031-Q124	Groundwater	2/21/2024 2:47:00 PM	2/21/2024	3/8/2024
N063249-018D	MW-90-031-Q124	Groundwater	2/21/2024 2:47:00 PM	2/21/2024	3/8/2024
N063249-019A	EB-735-Q124	Groundwater	2/21/2024 2:20:00 PM	2/21/2024	3/8/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-33-040-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 12:46:00 PM
Lab ID:	N063249-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240222A**	QC Batch: **R182897**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/22/2024 07:57 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-33-040-EB-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 12:15:00 PM
Lab ID:	N063249-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240222A**	QC Batch: **R182897**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/22/2024 06:20 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-33-090-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 12:00:00 PM
Lab ID:	N063249-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240222A**	QC Batch: **R182897**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/22/2024 08:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-33-150-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 11:22:00 AM
Lab ID:	N063249-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240222A**	QC Batch: **R182897**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	11	0.19	1.0		µg/L	5	2/22/2024 08:35 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-33-210-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 10:36:00 AM
Lab ID:	N063249-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240222A**	QC Batch: **R182897**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	4.8	0.19	1.0		µg/L	5	2/22/2024 08:54 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-733-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 1:00:00 PM
Lab ID:	N063249-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240222A**	QC Batch: **R182897**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/22/2024 06:42 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-52D-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 12:36:00 PM
Lab ID:	N063249-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240222A**	QC Batch: **R182897**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/22/2024 09:13 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-52D-EB-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 12:13:00 PM
Lab ID:	N063249-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240222A**	QC Batch: **R182897**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/22/2024 07:01 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-52M-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 11:30:00 AM
Lab ID:	N063249-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240222A**	QC Batch: **R182897**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/22/2024 09:51 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-52M-EB-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 11:09:00 AM
Lab ID:	N063249-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240222A**	QC Batch: **R182897**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/22/2024 07:20 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-52S-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 11:58:00 AM
Lab ID:	N063249-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240223A**	QC Batch: **R182899**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/23/2024 08:43 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-52S-EB-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 11:38:00 AM
Lab ID:	N063249-012	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240223A**	QC Batch: **R182899**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/23/2024 07:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-53D-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 10:47:00 AM
Lab ID:	N063249-013	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240223A**	QC Batch: **R182899**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/23/2024 09:21 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-53D-EB-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 10:23:00 AM
Lab ID:	N063249-014	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240223A**	QC Batch: **R182899**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/23/2024 07:27 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-53M-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 9:52:00 AM
Lab ID:	N063249-015	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240223A**	QC Batch: **R182899**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/23/2024 10:18 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-53M-EB-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 9:30:00 AM
Lab ID:	N063249-016	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240223A**	QC Batch: **R182899**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/23/2024 08:05 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-53S-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 10:20:00 AM
Lab ID:	N063249-017	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240223A**	QC Batch: **R182899**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/23/2024 04:35 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-90-031-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 2:47:00 PM
Lab ID:	N063249-018	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240226A**	QC Batch: **R182953**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/26/2024 07:36 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-735-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 2:20:00 PM
Lab ID:	N063249-019	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240226A**	QC Batch: **R182953**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/26/2024 08:33 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R182897**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **PBW**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711903**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R182897**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **LCSW**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711904**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.967	0.20	5.000	0	99.3	90	110				

Sample ID: **N063214-010AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711906**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.061	0.20	1.000	0.08110	97.9	90	110				

Sample ID: **N063214-014AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711908**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.988	0.20	1.000	0	98.8	90	110				

Sample ID: **N063214-016AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711910**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.957	0.20	1.000	0	95.7	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063214-014AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711911**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.975	0.20	1.000	0	97.5	90	110	0.9884	1.34	20	

Sample ID: **N063214-010ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711912**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.090	0.20						0.08110	0	20	

Sample ID: **N063214-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711916**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.927	0.20	1.000	0	92.7	90	110				

Sample ID: **N063214-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711918**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.046	0.20	1.000	0	105	90	110				

Sample ID: **N063214-015AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711920**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.977	0.20	1.000	0	97.7	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063214-018AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711924**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.969	0.20	1.000	0	96.9	90	110				

Sample ID: **N063214-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711928**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.829	1.0	5.000	0	96.6	90	110				

Sample ID: **N063214-013AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711930**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.685	1.0	5.000	0.7440	98.8	90	110				

Sample ID: **N063249-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711936**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.971	0.20	1.000	0	97.1	90	110				

Sample ID: **N063249-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711938**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.996	0.20	1.000	0	99.6	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063249-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711940**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.956	0.20	1.000	0	95.6	90	110				

Sample ID: **N063249-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711942**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.974	0.20	1.000	0	97.4	90	110				

Sample ID: **N063249-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711946**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.425	1.0	5.000	0.4640	99.2	90	110				

Sample ID: **N063249-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711948**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.454	1.0	5.000	0.2780	104	90	110				

Sample ID: **N063249-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182897**
Client ID: **ZZZZZZ** Batch ID: **R182897** TestNo: **EPA 218.6** Analysis Date: **2/22/2024** SeqNo: **5711950**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	15.142	1.0	5.000	10.63	90.2	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063249-005AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711952**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.978	1.0	5.000	4.815	103	90	110				

Sample ID: **N063249-007AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711954**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.691	1.0	5.000	0	93.8	90	110				

Sample ID: **N063249-009AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711958**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.930	1.0	5.000	0	98.6	90	110				

Sample ID: **N063214-008AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711960**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.010	0.20	1.000	0	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R182899**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **PBW**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711969**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R182899**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **LCSW**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711970**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.884	0.20	5.000	0	97.7	90	110				

Sample ID: **N063248-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711973**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1285.610	20	500.0	781.4	101	90	110				

Sample ID: **N063248-003AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711974**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1292.340	20	500.0	781.4	102	90	110	1286	0.522	20	

Sample ID: **N063248-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711977**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.945	0.20	1.000	0	94.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063248-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5711979**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	673.460	10	250.0	426.5	98.8	90	110				

Sample ID: **N063248-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5711983**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	41.218	1.0	25.00	16.86	97.4	90	110				

Sample ID: **N063248-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5711985**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.126	0.20	1.000	0.2206	90.5	90	110				

Sample ID: **N063248-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5711987**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.671	1.0	5.000	0	93.4	90	110				

Sample ID: **N063214-017AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5711995**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.036	0.20	1.000	0	104	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063249-017AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711997**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.968	0.20	1.000	0	96.8	90	110				

Sample ID: **N063248-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711999**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	520.875	10	250.0	281.3	95.8	90	110				

Sample ID: **N063248-005AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712001**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.786	1.0	5.000	0	95.7	90	110				

Sample ID: **N063248-006AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712005**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.843	1.0	5.000	0	96.9	90	110				

Sample ID: **N063248-007AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712007**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.604	1.0	5.000	0	92.1	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063248-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712009**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.770	1.0	5.000	0	95.4	90	110				

Sample ID: **N063249-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712011**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.044	0.20	1.000	0	104	90	110				

Sample ID: **N063249-014AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712013**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.999	0.20	1.000	0	99.9	90	110				

Sample ID: **N063249-016AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712017**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.026	0.20	1.000	0	103	90	110				

Sample ID: **N063249-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182899**
Client ID: **ZZZZZZ** Batch ID: **R182899** TestNo: **EPA 218.6** Analysis Date: **2/23/2024** SeqNo: **5712019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.637	1.0	5.000	0	92.7	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063249-013AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712021**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.652	1.0	5.000	0	93.0	90	110				

Sample ID: **N063249-015AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712025**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.037	1.0	5.000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R182953**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **PBW**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714780**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R182953**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **LCSW**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714781**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.913	0.20	5.000	0	98.3	90	110				

Sample ID: **N063214-007AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714783**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.661	1.0	5.000	0	93.2	90	110				

Sample ID: **N063295-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714787**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	58.337	1.0	25.00	34.17	96.7	90	110				

Sample ID: **N063295-001AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714788**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	58.670	1.0	25.00	34.17	98.0	90	110	58.34	0.570	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063295-003ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182953**
Client ID: **ZZZZZZ** Batch ID: **R182953** TestNo: **EPA 218.6** Analysis Date: **2/26/2024** SeqNo: **5714790**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	24.591	1.0						23.94	2.70	20	

Sample ID: **N063295-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182953**
Client ID: **ZZZZZZ** Batch ID: **R182953** TestNo: **EPA 218.6** Analysis Date: **2/26/2024** SeqNo: **5714791**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	48.490	1.0	25.00	23.94	98.2	90	110				

Sample ID: **N063295-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182953**
Client ID: **ZZZZZZ** Batch ID: **R182953** TestNo: **EPA 218.6** Analysis Date: **2/26/2024** SeqNo: **5714795**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.543	1.0	5.000	0	90.9	90	110				

Sample ID: **N063295-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182953**
Client ID: **ZZZZZZ** Batch ID: **R182953** TestNo: **EPA 218.6** Analysis Date: **2/26/2024** SeqNo: **5714797**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.556	1.0	5.000	0	91.1	90	110				

Sample ID: **N063295-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182953**
Client ID: **ZZZZZZ** Batch ID: **R182953** TestNo: **EPA 218.6** Analysis Date: **2/26/2024** SeqNo: **5714799**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.867	1.0	5.000	0	97.3	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063295-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714801**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.020	0.20	1.000	0	102	90	110				

Sample ID: **N063295-008AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714805**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.779	1.0	5.000	0	95.6	90	110				

Sample ID: **N063249-018AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714807**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.706	1.0	5.000	0	94.1	90	110				

Sample ID: **N063249-019AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714813**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.035	0.20	1.000	0	103	90	110				

Sample ID: **N063297-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714815**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	45.034	1.0	25.00	21.25	95.1	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063297-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182953**
Client ID: **ZZZZZZ** Batch ID: **R182953** TestNo: **EPA 218.6** Analysis Date: **2/26/2024** SeqNo: **5714817**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	20.054	4.0	20.00	0	100	90	110				

Sample ID: **N063297-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182953**
Client ID: **ZZZZZZ** Batch ID: **R182953** TestNo: **EPA 218.6** Analysis Date: **2/26/2024** SeqNo: **5714819**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	51.159	1.0	25.00	26.42	98.9	90	110				

Sample ID: **N063297-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182953**
Client ID: **ZZZZZZ** Batch ID: **R182953** TestNo: **EPA 218.6** Analysis Date: **2/26/2024** SeqNo: **5714823**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.989	0.20	1.000	0	98.9	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *08-Mar-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-52D-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 12:36:00 PM
Lab ID:	N063249-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240222A**	QC Batch: **R182813**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/22/2024 10:37 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-52M-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 11:30:00 AM
Lab ID:	N063249-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240222A**	QC Batch: **R182813**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/22/2024 10:52 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-52S-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 11:58:00 AM
Lab ID:	N063249-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240222A**	QC Batch: **R182813**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/22/2024 01:18 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-53D-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 10:47:00 AM
Lab ID:	N063249-013	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240222A**	QC Batch: **R182813**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/22/2024 11:46 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *08-Mar-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-53M-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 9:52:00 AM
Lab ID:	N063249-015	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240222A**	QC Batch: **R182813**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/22/2024 12:32 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-53S-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 10:20:00 AM
Lab ID:	N063249-017	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240222A**	QC Batch: **R182813**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/22/2024 12:47 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-90-031-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 2:47:00 PM
Lab ID:	N063249-018	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240222A**	QC Batch: **R182813**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/22/2024 01:02 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **MB-R182813_NO3** SampType: **MBLK** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182813**
Client ID: **PBW** Batch ID: **R182813** TestNo: **EPA 300.0** Analysis Date: **2/22/2024** SeqNo: **5705980**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **LCS-R182813_NO3** SampType: **LCS** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182813**
Client ID: **LCSW** Batch ID: **R182813** TestNo: **EPA 300.0** Analysis Date: **2/22/2024** SeqNo: **5705981**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.238	0.050	1.250	0	99.1	90	110				

Sample ID: **N063248-005BMS** SampType: **MS** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182813**
Client ID: **ZZZZZZ** Batch ID: **R182813** TestNo: **EPA 300.0** Analysis Date: **2/22/2024** SeqNo: **5705997**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	11.782	0.50	12.50	0	94.3	80	120				

Sample ID: **N063248-005BMSD** SampType: **MSD** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182813**
Client ID: **ZZZZZZ** Batch ID: **R182813** TestNo: **EPA 300.0** Analysis Date: **2/22/2024** SeqNo: **5705998**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.238	0.50	12.50	0	97.9	80	120	11.78	3.80	20	

Sample ID: **N063248-011CDUP** SampType: **DUP** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182813**
Client ID: **ZZZZZZ** Batch ID: **R182813** TestNo: **EPA 300.0** Analysis Date: **2/22/2024** SeqNo: **5705999**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.50						0	0	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **N063248-010CDUP**	SampType: **DUP**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ZZZZZZ**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5706002**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	6.370	0.25						6.455	1.33	20	

Sample ID: **N063249-017BMS**	SampType: **MS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ZZZZZZ**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5706003**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	11.838	0.50	12.50	0	94.7	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-52D-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 12:36:00 PM
Lab ID:	N063249-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240223B**	QC Batch: **107026**				PrepDate:	**2/22/2024**	Analyst: **DJ**
Iron	610	13	20		µg/L	1	2/23/2024 02:19 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Client Sample ID: MW-52M-Q124
Lab Order: N063249
Project: PG&E Topock - PCM, 30211191
Collection Date: 2/21/2024 11:30:00 AM
Lab ID: N063249-009
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240223B**	QC Batch: **107026**				PrepDate:	**2/22/2024**	Analyst: **DJ**
Iron	1000	13	20		µg/L	1	2/23/2024 02:24 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT: ARCADIS U.S., Inc. - California
Client Sample ID: MW-52S-Q124
Lab Order: N063249
Project: PG&E Topock - PCM, 30211191
Collection Date: 2/21/2024 11:58:00 AM
Lab ID: N063249-011
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240223B**	QC Batch: **107026**			PrepDate:	**2/22/2024**	Analyst: **DJ**	
Iron	23000	13	20		µg/L	1	2/23/2024 02:29 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-53D-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 10:47:00 AM
Lab ID:	N063249-013	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240223B**	QC Batch: **107026**				PrepDate:	**2/22/2024**	Analyst: **DJ**
Iron	280	13	20		µg/L	1	2/23/2024 02:33 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *08-Mar-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-53M-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 9:52:00 AM
Lab ID:	N063249-015	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240223B**	QC Batch: **107026**				PrepDate:	**2/22/2024**	Analyst: **DJ**
Iron	840	13	20		µg/L	1	2/23/2024 02:39 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-53S-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 10:20:00 AM
Lab ID:	N063249-017	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240223B**	QC Batch: **107026**			PrepDate:		**2/22/2024**	Analyst: **DJ**
Iron	5100	13	20		µg/L	1	2/23/2024 02:44 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-90-031-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 2:47:00 PM
Lab ID:	N063249-018	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240223B**	QC Batch: **107026**				PrepDate:	**2/22/2024**	Analyst: **DJ**
Iron	7200	13	20		µg/L	1	2/23/2024 02:48 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-107026**	SampType: **MBLK**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/22/2024**	RunNo: **182846**
Client ID: **PBW**	Batch ID: **107026**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708215**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS1-107026**	SampType: **LCS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/22/2024**	RunNo: **182846**
Client ID: **LCSW**	Batch ID: **107026**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708216**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	86.185	20	100.0	0	86.2	85	115				

Sample ID: **N063248-005C-MS1**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/22/2024**	RunNo: **182846**
Client ID: **ZZZZZZ**	Batch ID: **107026**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708220**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	512.940	20	100.0	357.7	155	75	125				S

Sample ID: **N063248-005C-MSD**	SampType: **MSD**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/22/2024**	RunNo: **182846**
Client ID: **ZZZZZZ**	Batch ID: **107026**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708221**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	488.087	20	100.0	357.7	130	75	125	512.9	4.97	20	S

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N063248-005C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ZZZZZZ** Batch ID: **107026** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708219**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	444.661	20	100.0	357.7	87.0	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-52D-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 12:36:00 PM
Lab ID:	N063249-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240223D**	QC Batch: **107021**			PrepDate:		**2/22/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/24/2024 01:41 AM
Barium	36	0.083	1.0		µg/L	1	2/26/2024 01:26 AM
Manganese	250	0.26	5.0		µg/L	10	2/26/2024 01:30 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-52M-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 11:30:00 AM
Lab ID:	N063249-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240223D**	QC Batch: **107021**			PrepDate:		**2/22/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/24/2024 01:59 AM
Barium	59	0.083	1.0		µg/L	1	2/26/2024 01:35 AM
Manganese	210	0.26	5.0		µg/L	10	2/26/2024 01:40 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *08-Mar-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-52S-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 11:58:00 AM
Lab ID:	N063249-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240223D**	QC Batch: **107021**			PrepDate:	**2/22/2024**	Analyst: **DJ**	
Arsenic	ND	0.050	0.10		µg/L	1	2/24/2024 02:04 AM
Barium	680	0.83	10		µg/L	10	2/26/2024 01:49 AM
Manganese	1300	0.26	5.0		µg/L	10	2/26/2024 01:49 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit	
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified	
	DO	Surrogate Diluted Out			

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-53D-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 10:47:00 AM
Lab ID:	N063249-013	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240223D**	QC Batch: **107021**			PrepDate:		**2/22/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/24/2024 02:08 AM
Barium	42	0.083	1.0		µg/L	1	2/26/2024 01:53 AM
Manganese	880	0.26	5.0		µg/L	10	2/26/2024 01:58 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-53M-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 9:52:00 AM
Lab ID:	N063249-015	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240223D**	QC Batch: **107021**			PrepDate:		**2/22/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/24/2024 02:13 AM
Barium	68	0.083	1.0		µg/L	1	2/26/2024 02:12 AM
Manganese	510	0.26	5.0		µg/L	10	2/26/2024 02:17 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-53S-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 10:20:00 AM
Lab ID:	N063249-017	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240223D**	QC Batch: **107021**			PrepDate:	**2/22/2024**	Analyst: **DJ**	
Arsenic	ND	0.050	0.10		µg/L	1	2/24/2024 02:18 AM
Barium	220	0.83	10		µg/L	10	2/26/2024 02:26 AM
Manganese	1200	0.26	5.0		µg/L	10	2/26/2024 02:26 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-90-031-Q124
Lab Order:	N063249		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/21/2024 2:47:00 PM
Lab ID:	N063249-018	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240223D**	QC Batch: **107021**			PrepDate:		**2/22/2024**	Analyst: **DJ**
Arsenic	1.1	0.25	0.50		µg/L	5	2/24/2024 02:22 AM
Barium	190	0.42	5.0		µg/L	5	2/26/2024 02:31 AM
Manganese	570	0.13	2.5		µg/L	5	2/24/2024 02:22 AM
Selenium	ND	0.22	2.5		µg/L	5	2/24/2024 02:22 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **MB-107021** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/22/2024** RunNo: **182930**
Client ID: **PBW** Batch ID: **107021** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/24/2024** SeqNo: **5713732**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Selenium	ND	0.50									

Sample ID: **LCS-107021** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/22/2024** RunNo: **182930**
Client ID: **LCSW** Batch ID: **107021** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/24/2024** SeqNo: **5713733**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.228	0.10	10.00	0	102	85	115				
Barium	10.933	1.0	10.00	0	109	85	115				
Manganese	98.248	0.50	100.0	0	98.2	85	115				
Selenium	9.623	0.50	10.00	0	96.2	85	115				

Sample ID: **N063248-002B-MS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/22/2024** RunNo: **182930**
Client ID: **ZZZZZZ** Batch ID: **107021** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/24/2024** SeqNo: **5713739**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	8.522	0.10	10.00	0	85.2	75	125				
Barium	71.602	1.0	10.00	59.79	118	75	125				
Selenium	12.228	0.50	10.00	2.827	94.0	75	125				

Sample ID: **N063248-002B-MSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/22/2024** RunNo: **182930**
Client ID: **ZZZZZZ** Batch ID: **107021** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/24/2024** SeqNo: **5713740**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	8.891	0.10	10.00	0	88.9	75	125	8.522	4.23	20	
Barium	72.472	1.0	10.00	59.79	127	75	125	71.60	1.21	20	S

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063248-002B-MSD**	SampType: **MSD**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/22/2024**	RunNo: **182930**
Client ID: **ZZZZZZ**	Batch ID: **107021**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/24/2024**	SeqNo: **5713740**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	11.648	0.50	10.00	2.827	88.2	75	125	12.23	4.86	20	

Sample ID: **N063248-002B-MS**	SampType: **MS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/22/2024**	RunNo: **182939**
Client ID: **ZZZZZZ**	Batch ID: **107021**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/25/2024**	SeqNo: **5714164**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	197.619	2.5	100.0	93.50	104	75	125				

Sample ID: **N063248-002B-MSD**	SampType: **MSD**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/22/2024**	RunNo: **182939**
Client ID: **ZZZZZZ**	Batch ID: **107021**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/25/2024**	SeqNo: **5714165**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	208.873	2.5	100.0	93.50	115	75	125	197.6	5.54	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063248-002B-PS**	SampType: **PS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ZZZZZZ**	Batch ID: **107021**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/24/2024**	SeqNo: **5713738**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	8.948	0.10	10.00	0	89.5	80	120				
Barium	70.158	1.0	10.00	59.79	104	80	120				
Selenium	11.905	0.50	10.00	2.827	90.8	80	120				

Sample ID: **N063248-002B-PS**	SampType: **PS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ZZZZZZ**	Batch ID: **107021**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/25/2024**	SeqNo: **5714163**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	586.103	2.5	500.0	93.50	98.5	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SAMPLE RECEIVING ITEMS

N063249

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

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Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement	QA/QC	Sample Receipt Condition
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	Excel EDD	RTNE	Y N
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.moore@critigen.com	Address:	Geotracker	RWQCB ✓	1. Chilled ✓
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com P.O.#	Labspec	CalTrans	2. Headspace
Submitted By: Riggie Tap			Others ✓	LEVEL III	3. Container Intact ✓
Title: Field Tech	Phone: 916-786-3302 Fax:	Phone: 949-727-1400, ext 200 Fax:	Specify: RWQCB	LEVEL IV	4. Seal Present ✓
Signature: Date: 02/21/24	Sampled By: Riggie Tap		Global ID:	Regulatory	5. IR number 3
I hereby authorize ASSET Labs to perform the tests indicated below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for			Specify State:	6. Method of Cooling: Ice
Project Name: PG&E Topock - PCM	Signature: Date: 02/21/24				Sample Temp: 2.8°C / 4.2°C
Project Number: 30211191					Courier: ASSET
					Tracking No.:

Matrix: Ground X, Sediment; Potable, Soil; NPDES, Other Solid; Surface

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly)	Nitrate, sulfate (EPA 300.0) (1 L poly)	Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Selenium, Molybdenum (500mL poly)	Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOA)	Ammonia as Nitrogen (SM4500NH3D); H2SO4 (1 L poly)	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 (125 mL poly)	Nitrate (EPA 300.0) (1 L poly)	(1 L poly)	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063249-001	MW-33-040-Q124	2/21/2024	12:46		X										E	1	P	BNS	
2	-002	MW-33-040-EB-Q124	2/21/2024	12:15		X										E	1	P	BNS	
3	-003	MW-33-090-Q124	2/21/2024	12:00		X										E	1	P	BNS	
4	-004	MW-33-150-Q124	2/21/2024	11:22		X										E	1	P	BNS	
5	-005	MW-33-210-Q124	2/21/2024	10:36		X										E	1	P	BNS	
6	-006	EB-733-Q124	2/21/2024	13:00		X										E	1	P	BNS	
7	-007	MW-52D-Q124	2/21/2024	12:36		X		X						X		E	3	P	BNS	
8	-008	MW-52D-EB-Q124	2/21/2024	12:13												E	1	P	BNS	
9	-009	MW-52M-Q124	2/21/2024	11:30		X		X						X		E	3	P	BNS	
10	-010	MW-52M-EB-Q124	2/21/2024	11:09												E	1	P	BNS	
11	-011	MW-52S-Q124	2/21/2024	11:58		X		X						X		E	3	P	BNS	
12	-012	MW-52S-EB-Q124	2/21/2024	11:38												E	1	P	BNS	
13	-013	MW-53D-Q124	2/21/2024	10:47		X		X						X		E	3	P	BNS	
14	-014	MW-53D-EB-Q124	2/21/2024	10:23												E	1	P	BNS	

Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:
Riggie Tap	02/21/24 1505		2/21/24 1505
	2/21/24 1750	Yolanda Rodriguez	2/21/24 1750

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives: H=HCl; N=HNO_3; S=H_2SO_4; C=4°C; Z=$Zn(AC)_2$; O=NaOH; T=$Na_2S_2O_3$; Others/Specify: B (NH4)2SO4/NH4OH

Container Type: T=Tube; V=VOA; P=Pint; J=Jar; B=Tedlar; G=Glass; M=Metal; M=Metal; C=Can

White=Laboratory Copy

Yellow=Customer's Copy

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

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California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

CHAIN OF CUSTODY RECORD

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement	QA/QC	Sample Receipt Condition
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	Excel EDD	RTNE	Y N
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com daniel.moore@arcadis.com	Address:	Geotracker	RWQCB ✓	1. Chilled ✓
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com P.O.#	Labspec	CalTrans	2. Headspace
Submitted By: Ryan Tep			Others ✓	LEVEL III	3. Container Intact ✓
Title: Field Tech	Phone: 916-786-3302 Fax:	Phone: 949-727-1400, ext 200 Fax:	Specify: RWQCB	LEVEL IV	4. Seal Present /
Signature: Date: 02/21/24	Sampled By: Ryan Tep		Global ID:	Regulatory	5. IR number 3
I hereby authorize ASSET Labs to perform the tests indicated below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for			Specify State:	6. Method of Cooling: Ice
Project Name: PG&E Topock - PCM	Signature: Date: 02/21/24				Sample Temp: 2.9°C / 4.2°C
Project Number: 30211191					Courier: Tracking No.:

Matrix			
Ground	X	Sediment	
Potable		Soil	
NPDES		Other Solid	
Surface			

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly)	Nitrate, sulfate (EPA 300.0) (1 L poly)	Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Selenium (500mL poly)	Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOA)	Ammonia as Nitrogen (SM4500NH3D); H2SO4 1 L poly	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 (125 mL poly)	Nitrate (EPA 300.0) (1 L poly)	1 L poly				Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063249-015	✓ MW-53M-Q124	2/21/2024	9:52		X		X						X					E	3	P	BNS	
2	-016	✓ MW-53M-EB-Q124	2/21/2024	9:30		X													E	1	P	BNS	
3	-017	✓ MW-53S-Q124	2/21/2024	10:20		X		X						X					E	3	P	BNS	
4	-018	✓ MW-90-031-Q124	2/21/2024	14:47		X		X		X			X	X					E	4	P	BNS	
5	-019	✓ EB-735-Q124	2/21/2024	14:20		X													E	1	P	BNS	
6																			E	1	P	BNS	(4)
7																			E	1	P	BNS	
8																							
9																							
10																							
11																							
12																							
13																							
14																							

Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:
M. Ryan Tep	02/21/24 1505	[signature]	2/21/24 1505
[signature]	2/21/24 1750	Yesenia Rodriguez	2/21/24
Relinquished by: Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time: 1750

Turn Around Time (TAT)

	A	< 24 Hrs or Same Day TAT
	B	= Next Workday
	C	= 2 Workdays
	D	= 3 Workdays
X	E	= Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

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Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are not 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:				Container Type:		
H=HCL	N=HNO_3	S=H_2SO_4	C=4°C	T=Tube	V=VOA	P=Pint
Z=$Zn(AC)_2$	O=NaOH	T=$Na_2S_2O_3$		J=Jar	B=Tedlar	G=Glass
Others/Specify:	B (NH4)2SO4/NH4OH			M=Metal	M=Metal	C=Can

White=Laboratory Copy
Yellow=Customer's Copy

ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F: 562.219.7436
www.assetlaboratories.com

Page 1 of 1

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement: Excel EDD; Geotracker; Labspec; Others ✓ (Specify: RWQCB); Global ID:	QA/QC: RTNE; RWQCB ✓; CalTrans; LEVEL III; LEVEL IV; Regulatory; Specify State:
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:		
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.moore@crrllgen.com	Address:		
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com PO #		
Submitted By: Riggie Tap	Phone: 916-786-3302 Fax:	Phone: 949-727-1400, ext 200 Fax:		
Title: Field Tech				
Signature: Date: 02/21/24	Sampled By: Riggie Tap			
I hereby authorize ASSET Labs to perform the tests indicated below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for			
Project Name: PG&E Topock - PCM	Signature: Date: 02/21/24			
Project Number: 30211191				

Sample Receipt Condition

	Y	N
1. Chilled		
2. Headspace		
3. Container Intact		
4. Seal Present		
5. IR number		
6. Method of Cooling:		

Sample Temp:

Courier:

Tracking No:

Matrix: Ground X; Potable; NPDES; Surface; Sediment; Soil; Other Solid

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 250 mL poly	Nitrate, sulfate (EPA 300.0) 1 L poly	Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese 500mL poly	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium 500mL poly	Dissolved metals (SW6020) FF; HNO3 Selenium, Molybdenum 500mL poly	Total Organic Carbon (SM5310C); H2SO4 3x40 mL VOA	Ammonia as Nitrogen (SM4500NH3D); H2SO4 1 L poly	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 125 mL poly	Nitrate (EPA 300.0) 1 L poly	1 L poly				Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063249-001	MW-33-040-Q124	2/21/2024	12:46		X													E	1	P	BNS	
2	-002	MW-33-040-EB-Q124	2/21/2024	12:15		X													E	1	P	BNS	
3	-003	MW-33-090-Q124	2/21/2024	12:00		X													E	1	P	BNS	
4	-004	MW-33-150-Q124	2/21/2024	11:22		X													E	1	P	BNS	
5	-005	MW-33-210-Q124	2/21/2024	10:36		X													E	1	P	BNS	
6	-006	EB-733-Q124	2/21/2024	13:00		X													E	1	P	BNS	
7	-007	MW-52D-Q124	2/21/2024	12:36		X		X						X					E	3	P	BNS	
8	-008	MW-52D-EB-Q124	2/21/2024	12:13		X													E	1	P	BNS	
9	-009	MW-52M-Q124	2/21/2024	11:30		X		X						X					E	3	P	BNS	
10	-010	MW-52M-EB-Q124	2/21/2024	11:09		X													E	1	P	BNS	
11	-011	MW-52S-Q124	2/21/2024	11:58		X		X						X					E	3	P	BNS	
12	-012	MW-52S-EB-Q124	2/21/2024	11:38		X													E	1	P	BNS	
13	-013	MW-53D-Q124	2/21/2024	10:47		X		X						X					E	3	P	BNS	
14	-014	MW-53D-EB-Q124	2/21/2024	10:23		X													E	1	P	BNS	

Relinquished by (Signature and Printed Name): Riggie Tap 02/21/24 1505 Date/Time:

Relinquished by (Signature and Printed Name): Date/Time:

Relinquished by (Signature and Printed Name): Date/Time:

Relinquished by (Signature and Printed Name): Date/Time: 2/21/24 1505

Relinquished by (Signature and Printed Name): Date/Time:

Relinquished by (Signature and Printed Name): Date/Time:

Turn Around Time (TAT)

- [ ] A = <24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis:
   Less than 24 Hrs =200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:

H=HCL	N=HNO_3	S=H_2SO_4	C=4°C
Z=$Zn(AC)_2$	O=NaOH	T=$Na_2S_2O_3$	
Others/Specify:	B (NH4)2SO4/NH4OH		

Container Type:

T=Tube	V=VOA	P=Pint	
J=Jar	T=Tedlar	G=Glass	
M=Metal	B=Me	C=Can	

White=Laboratory Copy

Yellow=Customer's Copy

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement		QA/QC		Sample Receipt Condition
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	Excel EDD		RTNE		Y N
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com daniel.moore@critigen.com	Address:	Geotracker		RWQCB	✓	1. Chilled
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com P.O.#	Labspec		CalTrans		2. Headspace
Submitted By: Riggs Tod			Others	✓	LEVEL III		3. Container Intact
Title: Field Tech	Phone: 916-786-3302 Fax:	Phone: 949-727-1400, ext 200 Fax:	Specify: RWQCB		LEVEL IV		4. Seal Present
Signature: Date: 02/21/24	Sampled By: Riggs Tod				Regulatory		5. IR number
I hereby authorize ASSET Labs to perform the tests indicated below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for		Global ID		Specify State		6. Method of Cooling:
Project Name: PG&E Topock - PCM	Signature:	Date: 02/21/24					Sample Temp:
Project Number: 30211191							Courier: Tracking No.:

Matrix: Ground X | Sediment | Potable | Soil | NPDES | Other Solid | Surface

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218 6) (NH4)2. SO4, NH4, OH 250 mL poly	Nitrate, sulfate (EPA 300 0) 1 L poly	Dissolved metals (SW6020) FF: HNO3 Arsenic, Iron, Barium, Manganese 500mL poly	Dissolved metals (SW6020) FF: HNO3 Total Dissolved Chromium, 500mL poly	Dissolved metals (SW6020) FF: HNO3 Selenium 500mL poly	Total Organic Carbon (SM5310C): H2SO4 3x40 mL VOA	Ammonia as Nitrogen (SM4500NH3D): H2SO4 1 L poly	Nitrate/Nitrite as Nitrogen (SM4500NH3): H2SO4 125 mL poly	Nitrate (EPA 300 0) 1 L poly	1 L poly	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063249-015	✓ MW-53M-Q124	2/21/2024	9:52		X		X						X		E	3	P	BNS	
2	-016	✓ MW-53M-EB-Q124	2/21/2024	9:30		X										E	1	P	BNS	
3	-017	✓ MW-53S-Q124	2/21/2024	10:20		X		X						X		E	3	P	BNS	
4	-018	✓ MW-90-031-Q124	2/21/2024	14:47		X		X		X			X	X		E	4	P	BNS	
5	-019	✓ EB-735-Q124	2/21/2024	14:20		X										E	1	P	BNS	
6																E	1	P	BNS	(1)
7																E	1	P	BNS	
8																				
9																				
10																				
11																				
12																				
13																				
14																				

Reliquished by (Signature and Printed Name): Riggs Tod 02/21/24 1505 Date/Time:
Reliquished by (Signature and Printed Name): [signature] 2/21/24, 1505 Date/Time:
Reliquished by (Signature and Printed Name): Date/Time:
Reliquished by (Signature and Printed Name): Date/Time:
Reliquished by (Signature and Printed Name): Date/Time:
Reliquished by (Signature and Printed Name): Date/Time:

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

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Preservatives: H=HCL | N=HNO_3 | S=H_2SO_4 | C=4°C | Z=Zn$(AC)_2$ | O=NaOH | T=$Na_2S_2O_3$ | Others/Specify: B (NH4)2SO4/NH4OH

Container Type: T=Tube | P=Pint | J=Jar | G=Glass | M=Metal | C=Can

White=Laboratory Copy
Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	2/21/2024	Workorder:	N063249
Rep sample Temp (Deg C):	2.9 / 4.2	IR Gun ID:	3
Temp Blank:	☑ Yes ☐ No		
Carrier name:	ASSET		
Last 4 digits of Tracking No.:	NA	Packing Material Used:	None
Cooling process:	☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None		

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By: CC Chara Cintron 2/23/2024

Reviewed By: for: MBC 02/23/2024

Subject: COC errors for samples 2/21 Topock
From: "Madsen, Laura" <Laura.Madsen@arcadis.com>
Date: 2/22/2024, 7:40 AM
To: "yoandra@assetlaboratories.com" <yoandra@assetlaboratories.com>, "marlon@assetlaboratories.com" <marlon@assetlaboratories.com>, AssetLabs Sample Control <samplecontrol@assetlaboratories.com>
CC: Nara Tep <Ntep@blainetech.com>

Hi Yoandra,
The COC files sent to the field team were incorrect versions and missing a few items. WE marked up the COCs attached and corrected them. The corrections are below too. Can you please use these versions for the login?

For MW-15, dissolved zinc is missing. There is hardness on there but I didn't see that on the PST so I replaced it with dissolved zinc.

The rest I filled in with a blue X.

- Missing metals – Dissolved metals: Chromium, Arsenic, Barium, Boron, Calcium, Potassium, Sodium, Iron, Manganese, Magnesium
  - ER-03-LF10-Q124
  - ER-03-LF30-Q124
  - ER-03-LF50-Q124
  - ER-03-Q124
  - MW-926-Q124

- Missing Cr(VI) 218.6
  - MW-52D-EB-Q124
  - MW-52M-EB-Q124
  - MW-52S-EB-Q124
  - MW-53D-EB-Q124

Thanks!

Laura Madsen PG
Project Geologist
Arcadis U.S., Inc.
121 N Washington Ave #337 | Minneapolis, MN | 55401 | USA
T +1 720 344 3771
M +1 303 653 5749
www.arcadis.com

Professional Geologist / PG-TN, # 5574

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ASSET Laboratories

WORK ORDER Summary

05-Mar-24

WorkOrder: N063249

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 2/21/2024 5:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063249-001A	MW-33-040-Q124	2/21/2024 12:46:00 PM	3/7/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063249-002A	MW-33-040-EB-Q124	2/21/2024 12:15:00 PM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063249-003A	MW-33-090-Q124	2/21/2024 12:00:00 PM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063249-004A	MW-33-150-Q124	2/21/2024 11:22:00 AM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063249-005A	MW-33-210-Q124	2/21/2024 10:36:00 AM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063249-006A	EB-733-Q124	2/21/2024 1:00:00 PM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063249-007A	MW-52D-Q124	2/21/2024 12:36:00 PM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063249-007B			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063249-007C			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063249-008A	MW-52D-EB-Q124	2/21/2024 12:13:00 PM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063249-009A	MW-52M-Q124	2/21/2024 11:30:00 AM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063249-009B			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063249-009C			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063249-010A	MW-52M-EB-Q124	2/21/2024 11:09:00 AM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063249-011A	MW-52S-Q124	2/21/2024 11:58:00 AM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063249-011B			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW

WORK ORDER Summary

05-Mar-24

WorkOrder: N063249

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 2/21/2024 5:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063249-011C	MW-52S-Q124	2/21/2024 11:58:00 AM	3/7/2024	Groundwater	EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063249-012A	MW-52S-EB-Q124	2/21/2024 11:38:00 AM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063249-013A	MW-53D-Q124	2/21/2024 10:47:00 AM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063249-013B			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063249-013C			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063249-014A	MW-53D-EB-Q124	2/21/2024 10:23:00 AM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063249-015A	MW-53M-Q124	2/21/2024 9:52:00 AM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063249-015B			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063249-015C			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063249-016A	MW-53M-EB-Q124	2/21/2024 9:30:00 AM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063249-017A	MW-53S-Q124	2/21/2024 10:20:00 AM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063249-017B			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063249-017C			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW

WORK ORDER Summary

05-Mar-24

WorkOrder: N063249

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 2/21/2024 5:50 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063249-017C	MW-53S-Q124	2/21/2024 10:20:00 AM	3/7/2024	Groundwater	EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063249-018A	MW-90-031-Q124	2/21/2024 2:47:00 PM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063249-018B			3/7/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063249-018C			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/7/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/7/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063249-018D			3/7/2024		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	☐	☐	☑	SUB
N063249-019A	EB-735-Q124	2/21/2024 2:20:00 PM	3/7/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063249-020A	FOLDER	3/7/2024	3/7/2024		Folder	Folder	☐	☐	☐	LAB
			3/7/2024		Folder	Level IV Report	☐	☐	☐	LAB
			3/7/2024		Folder	Folder	☐	☐	☐	LAB

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

Field Sampler: Riggie Tep

22-Feb-24

				Nitrate/Nitrite	Requested Tests	
Sample ID	**Matrix**	**Date Collected**	**Bottle Type**	~~SM4500-NO3F~~		
N063249-018D / MW-90-031-Q124	Groundwater	2/21/2024 2:47:00 PM	8OZP	1		

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N63249A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for Nitrate/~~Nitrat~~e. EDD requirement Labspec7 edata.
Nitrite

GLS #: 560988385

		Date/Time			Date/Time
Relinquished by:	YRodriguez	2/22/2024 16:30	**Received by:**		
Relinquished by:			**Received by:**		

List of Analysts

ASSET Laboratories Work Order: N063249

NAME	TEST METHOD
Ria Abes	EPA 218.6, EPA 300.0
Diane Jetajobe	EPA 6010B_Dissolved, EPA 6020_Dissolved

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R182897
ASSET #: N063249

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/22/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments: Dilution was necessary for several samples due to matrix interference.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer RB 02282024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R182899
ASSET #: N063249

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/23/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments: Dilution was necessary for several samples due to matrix interference.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer: RBA Date: _____

2nd Level Reviewer: RB 02272024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R182953
ASSET #: N063249

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/26/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments: Dilution was necessary for N063249-018A due to matrix interference.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer: RBA Date: _____

2nd Level Reviewer: RB 02292024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063249-004A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 2.1265 * 5$$

$$Cr^{+6}, \mu g/L = 10.6325$$

Reporting results in two significant figures,

$$\mathbf{Cr^{+6}, \mu g/L = 11.0}$$

Reviewed by:

dMocha 3/10/2024

ANALYSIS RUN LOG

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240222A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/22/24 8:37 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/22/24 8:51 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/22/24 9:00 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/22/24 9:10 AM	Reported
13	MB-R182897	MBLK	1	Hexavalent Chromium	02/22/24 9:19 AM	Reported
14	LCS-R182897	LCS	1	Hexavalent Chromium	02/22/24 9:29 AM	Reported
15	N063214-010A	SAMP	1	Hexavalent Chromium	02/22/24 9:38 AM	Reported
16	N063214-010AMS	MS	1	Hexavalent Chromium	02/22/24 9:48 AM	Reported
17	N063214-014A	SAMP	1	Hexavalent Chromium	02/22/24 9:57 AM	Reported
18	N063214-014AMS	MS	1	Hexavalent Chromium	02/22/24 10:07 AM	Reported
19	N063214-016A	SAMP	1	Hexavalent Chromium	02/22/24 10:16 AM	Reported
20	N063214-016AMS	MS	1	Hexavalent Chromium	02/22/24 10:26 AM	Reported
21	N063214-014AMSD	MSD	1	Hexavalent Chromium	02/22/24 10:35 AM	Reported
22	N063214-010ADUP	DUP	1	Hexavalent Chromium	02/22/24 10:45 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/22/24 10:54 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/22/24 11:03 AM	Reported
25	N063214-011A	SAMP	1	Hexavalent Chromium	02/22/24 11:13 AM	Reported
26	N063214-011AMS	MS	1	Hexavalent Chromium	02/22/24 11:22 AM	Reported
27	N063214-012A	SAMP	1	Hexavalent Chromium	02/22/24 11:32 AM	Not Reported
28	N063214-012AMS	MS	1	Hexavalent Chromium	02/22/24 11:41 AM	Not Reported
29	N063214-013A	SAMP	1	Hexavalent Chromium	02/22/24 11:51 AM	Not Reported
30	N063214-013AMS	MS	1	Hexavalent Chromium	02/22/24 12:00 PM	Not Reported
31	N063214-009A	SAMP	1	Hexavalent Chromium	02/22/24 12:10 PM	Reported
32	N063214-009AMS	MS	1	Hexavalent Chromium	02/22/24 12:19 PM	Reported
33	N063214-015A	SAMP	1	Hexavalent Chromium	02/22/24 12:29 PM	Reported
34	N063214-015AMS	MS	1	Hexavalent Chromium	02/22/24 12:38 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/22/24 12:47 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/22/24 12:57 PM	Reported
37	N063214-017A	SAMP	1	Hexavalent Chromium	02/22/24 1:06 PM	Not Reported
38	N063214-017AMS	MS	1	Hexavalent Chromium	02/22/24 1:16 PM	Not Reported
39	N063214-018A	SAMP	1	Hexavalent Chromium	02/22/24 2:14 PM	Reported
40	N063214-018AMS	MS	1	Hexavalent Chromium	02/22/24 2:24 PM	Reported
41	N063214-011A	SAMP	5	Hexavalent Chromium	02/22/24 2:34 PM	Not Reported
42	N063214-011AMS	MS	5	Hexavalent Chromium	02/22/24 2:43 PM	Not Reported

INJECTION LOG: 240222A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063214-012A	SAMP	5	Hexavalent Chromium	02/22/24 2:53 PM	Reported
44	N063214-012AMS	MS	5	Hexavalent Chromium	02/22/24 3:02 PM	Reported
45	N063214-013A	SAMP	5	Hexavalent Chromium	02/22/24 3:12 PM	Reported
46	N063214-013AMS	MS	5	Hexavalent Chromium	02/22/24 3:21 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/22/24 3:31 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/22/24 3:40 PM	Reported
49	N063249-001A	SAMP	1	Hexavalent Chromium	02/22/24 4:02 PM	Not Reported
50	N063249-001AMS	MS	1	Hexavalent Chromium	02/22/24 4:13 PM	Not Reported
51	N063249-003A	SAMP	1	Hexavalent Chromium	02/22/24 4:22 PM	Not Reported
52	N063249-003AMS	MS	1	Hexavalent Chromium	02/22/24 4:32 PM	Not Reported
53	N063249-004A	SAMP	1	Hexavalent Chromium	02/22/24 4:41 PM	Not Reported
54	N063249-004AMS	MS	1	Hexavalent Chromium	02/22/24 4:51 PM	Not Reported
55	N063249-005A	SAMP	1	Hexavalent Chromium	02/22/24 5:00 PM	Not Reported
56	N063249-005AMS	MS	1	Hexavalent Chromium	02/22/24 5:10 PM	Not Reported
57	N063249-007A	SAMP	1	Hexavalent Chromium	02/22/24 5:19 PM	Not Reported
58	N063249-007AMS	MS	1	Hexavalent Chromium	02/22/24 5:29 PM	Not Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/22/24 5:38 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/22/24 5:47 PM	Reported
61	N063249-009A	SAMP	1	Hexavalent Chromium	02/22/24 5:57 PM	Not Reported
62	N063249-009AMS	MS	1	Hexavalent Chromium	02/22/24 6:10 PM	Not Reported
63	N063249-002A	SAMP	1	Hexavalent Chromium	02/22/24 6:20 PM	Reported
64	N063249-002AMS	MS	1	Hexavalent Chromium	02/22/24 6:29 PM	Reported
65	N063249-006A	SAMP	1	Hexavalent Chromium	02/22/24 6:42 PM	Reported
66	N063249-006AMS	MS	1	Hexavalent Chromium	02/22/24 6:51 PM	Reported
67	N063249-008A	SAMP	1	Hexavalent Chromium	02/22/24 7:01 PM	Reported
68	N063249-008AMS	MS	1	Hexavalent Chromium	02/22/24 7:10 PM	Reported
69	N063249-010A	SAMP	1	Hexavalent Chromium	02/22/24 7:20 PM	Reported
70	N063249-010AMS	MS	1	Hexavalent Chromium	02/22/24 7:29 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/22/24 7:39 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/22/24 7:48 PM	Reported
73	N063249-001A	SAMP	5	Hexavalent Chromium	02/22/24 7:57 PM	Reported
74	N063249-001AMS	MS	5	Hexavalent Chromium	02/22/24 8:07 PM	Reported
75	N063249-003A	SAMP	5	Hexavalent Chromium	02/22/24 8:16 PM	Reported
76	N063249-003AMS	MS	5	Hexavalent Chromium	02/22/24 8:26 PM	Reported
77	N063249-004A	SAMP	5	Hexavalent Chromium	02/22/24 8:35 PM	Reported
78	N063249-004AMS	MS	5	Hexavalent Chromium	02/22/24 8:45 PM	Reported
79	N063249-005A	SAMP	5	Hexavalent Chromium	02/22/24 8:54 PM	Reported
80	N063249-005AMS	MS	5	Hexavalent Chromium	02/22/24 9:04 PM	Reported
81	N063249-007A	SAMP	5	Hexavalent Chromium	02/22/24 9:13 PM	Reported
82	N063249-007AMS	MS	5	Hexavalent Chromium	02/22/24 9:23 PM	Reported
83	CCV-7	CCV	1	Hexavalent Chromium	02/22/24 9:32 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	02/22/24 9:41 PM	Reported

INJECTION LOG: 240222A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063249-009A	SAMP	5	Hexavalent Chromium	02/22/24 9:51 PM	Reported
86	N063249-009AMS	MS	5	Hexavalent Chromium	02/22/24 10:00 PM	Reported
87	N063214-008A	SAMP	1	Hexavalent Chromium	02/22/24 10:10 PM	Reported
88	N063214-008AMS	MS	1	Hexavalent Chromium	02/22/24 10:19 PM	Reported
89	CCV-8	CCV1	1	Hexavalent Chromium	02/22/24 10:29 PM	Reported
90	CCB-8	CCB	1	Hexavalent Chromium	02/22/24 10:38 PM	Reported
91	BLANK	BLANK	1	Hexavalent Chromium	02/22/24 10:48 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240222A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**22/Feb/24 23:18:26**
No. of Injections:	**94**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/22/2024 08:37	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/22/2024 08:51	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/22/2024 09:00	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/22/2024 09:10	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/22/2024 09:19	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/22/2024 09:29	Finished	LCS @5ppb, IWST-231228B
15	N063214-010A,SAMF	7	1000	Unknown		02/22/2024 09:38	Finished	SAMP,10 mL
16	N063214-010AMS,MS	8	1000	Unknown		02/22/2024 09:48	Finished	MS (1ppb), IWST-231228B,10r
17	N063214-014A,SAMF	9	1000	Unknown		02/22/2024 09:57	Finished	SAMP,10 mL
18	N063214-014AMS,MS	10	1000	Unknown		02/22/2024 10:07	Finished	MS (1ppb), IWST-231228B,10r
19	N063214-016A,SAMF	11	1000	Unknown		02/22/2024 10:16	Finished	SAMP,10 mL
20	N063214-016AMS,MS	12	1000	Unknown		02/22/2024 10:26	Finished	MS (1ppb), IWST-231228B,10r
21	N063214-014AMSD,M	13	1000	Unknown		02/22/2024 10:35	Finished	MSD (1ppb), IWST-231228B,1(
22	N063214-010ADUP,D	14	1000	Unknown		02/22/2024 10:45	Finished	DUP,10 mL
23	CCV-2,CCV1,1,	15	1000	Unknown		02/22/2024 10:54	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		02/22/2024 11:03	Finished	CCB R240129C
25	N063214-011A,SAMF	17	1000	Unknown		02/22/2024 11:13	Finished	SAMP,10 mL
26	N063214-011AMS,MS	18	1000	Unknown		02/22/2024 11:22	Finished	MS (1ppb), IWST-231228B,10r
27	N063214-012A,SAMF	19	1000	Unknown		02/22/2024 11:32	Finished	SAMP,10 mL
28	N063214-012AMS,MS	20	1000	Unknown		02/22/2024 11:41	Finished	MS (1ppb), IWST-231228B,10r
29	N063214-013A,SAMF	21	1000	Unknown		02/22/2024 11:51	Finished	SAMP,10 mL
30	N063214-013AMS,MS	22	1000	Unknown		02/22/2024 12:00	Finished	MS (1ppb), IWST-231228B,10r
31	N063214-009A,SAMF	23	1000	Unknown		02/22/2024 12:10	Finished	SAMP,10 mL
32	N063214-009AMS,MS	24	1000	Unknown		02/22/2024 12:19	Finished	MS (1ppb), IWST-231228B,10r
33	N063214-015A,SAMF	25	1000	Unknown		02/22/2024 12:29	Finished	SAMP,10 mL
34	N063214-015AMS,MS	26	1000	Unknown		02/22/2024 12:38	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	27	1000	Unknown		02/22/2024 12:47	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	28	1000	Unknown		02/22/2024 12:57	Finished	CCB R240129C
37	N063214-017A,SAMF	29	1000	Unknown		02/22/2024 13:06	Finished	SAMP,10 mL
38	N063214-017AMS,MS	30	1000	Unknown		02/22/2024 13:16	Interrupted	MS (1ppb), IWST-231228B,10r
39	N063214-018A,SAMF	1	1000	Unknown		02/22/2024 14:14	Finished	SAMP,10 mL
40	N063214-018AMS,MS	2	1000	Unknown		02/22/2024 14:24	Finished	MS (1ppb), IWST-231228B,10r
41	N063214-011A,SAMF	3	1000	Unknown		02/22/2024 14:34	Finished	SAMP,2>10 mL
42	N063214-011AMS,MS	4	1000	Unknown		02/22/2024 14:43	Finished	MS (1ppb), IWST-231228B,2>1
43	N063214-012A,SAMF	5	1000	Unknown		02/22/2024 14:53	Finished	SAMP,2>10 mL
44	N063214-012AMS,MS	6	1000	Unknown		02/22/2024 15:02	Finished	MS (1ppb), IWST-231228B,2>1
45	N063214-013A,SAMF	7	1000	Unknown		02/22/2024 15:12	Finished	SAMP,2>10 mL
46	N063214-013AMS,MS	8	1000	Unknown		02/22/2024 15:21	Finished	MS (1ppb), IWST-231228B,2>1
47	CCV-4,CCV1,1,	9	1000	Unknown		02/22/2024 15:31	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	10	1000	Unknown		02/22/2024 15:40	Finished	CCB R240129C
49	N063249-001A,SAMF	1	1000	Unknown		02/22/2024 16:02	Finished	SAMP,10 mL
50	N063249-001AMS,MS	2	1000	Unknown		02/22/2024 16:13	Finished	MS (1ppb), IWST-231228B,10r
51	N063249-003A,SAMF	3	1000	Unknown		02/22/2024 16:22	Finished	SAMP,10 mL
52	N063249-003AMS,MS	4	1000	Unknown		02/22/2024 16:32	Finished	MS (1ppb), IWST-231228B,10r
53	N063249-004A,SAMF	5	1000	Unknown		02/22/2024 16:41	Finished	SAMP,10 mL
54	N063249-004AMS,MS	6	1000	Unknown		02/22/2024 16:51	Finished	MS (1ppb), IWST-231228B,10r
55	N063249-005A,SAMF	7	1000	Unknown		02/22/2024 17:00	Finished	SAMP,10 mL
56	N063249-005AMS,MS	8	1000	Unknown		02/22/2024 17:10	Finished	MS (1ppb), IWST-231228B,10r
57	N063249-007A,SAMF	9	1000	Unknown		02/22/2024 17:19	Finished	SAMP,10 mL
58	N063249-007AMS,MS	10	1000	Unknown		02/22/2024 17:29	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	11	1000	Unknown		02/22/2024 17:38	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	12	1000	Unknown		02/22/2024 17:47	Finished	CCB R240129C

61	N063249-009A,SAMP	13	1000	Unknown		02/22/2024 17:57	Finished	SAMP,10 mL
62	N063249-009AMS,MS	14	1000	Unknown		02/22/2024 18:10	Finished	MS (1ppb), IWST-231228B,10r
63	N063249-002A,SAMP	15	1000	Unknown		02/22/2024 18:20	Finished	SAMP,10 mL
64	N063249-002AMS,MS	16	1000	Unknown		02/22/2024 18:29	Finished	MS (1ppb), IWST-231228B,10r
65	N063249-006A,SAMP	17	1000	Unknown		02/22/2024 18:42	Finished	SAMP,10 mL
66	N063249-006AMS,MS	18	1000	Unknown		02/22/2024 18:51	Finished	MS (1ppb), IWST-231228B,10r
67	N063249-008A,SAMP	19	1000	Unknown		02/22/2024 19:01	Finished	SAMP,10 mL
68	N063249-008AMS,MS	20	1000	Unknown		02/22/2024 19:10	Finished	MS (1ppb), IWST-231228B,10r
69	N063249-010A,SAMP	21	1000	Unknown		02/22/2024 19:20	Finished	SAMP,10 mL
70	N063249-010AMS,MS	22	1000	Unknown		02/22/2024 19:29	Finished	MS (1ppb), IWST-231228B,10r
71	CCV-6,CCV1,1,	23	1000	Unknown		02/22/2024 19:39	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	24	1000	Unknown		02/22/2024 19:48	Finished	CCB R240129C
73	N063249-001A,SAMP	25	1000	Unknown		02/22/2024 19:57	Finished	SAMP,2>10 mL
74	N063249-001AMS,MS	26	1000	Unknown		02/22/2024 20:07	Finished	MS (1ppb), IWST-231228B,2>1
75	N063249-003A,SAMP	27	1000	Unknown		02/22/2024 20:16	Finished	SAMP,2>10 mL
76	N063249-003AMS,MS	28	1000	Unknown		02/22/2024 20:26	Finished	MS (1ppb), IWST-231228B,2>1
77	N063249-004A,SAMP	29	1000	Unknown		02/22/2024 20:35	Finished	SAMP,2>10 mL
78	N063249-004AMS,MS	30	1000	Unknown		02/22/2024 20:45	Finished	MS (1ppb), IWST-231228B,2>1
79	N063249-005A,SAMP	31	1000	Unknown		02/22/2024 20:54	Finished	SAMP,2>10 mL
80	N063249-005AMS,MS	32	1000	Unknown		02/22/2024 21:04	Finished	MS (1ppb), IWST-231228B,2>1
81	N063249-007A,SAMP	33	1000	Unknown		02/22/2024 21:13	Finished	SAMP,2>10 mL
82	N063249-007AMS,MS	34	1000	Unknown		02/22/2024 21:23	Finished	MS (1ppb), IWST-231228B,2>1
83	CCV-7,CCV,1,	35	1000	Unknown		02/22/2024 21:32	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	36	1000	Unknown		02/22/2024 21:41	Finished	CCB R240129C
85	N063249-009A,SAMP	37	1000	Unknown		02/22/2024 21:51	Finished	SAMP,2>10 mL
86	N063249-009AMS,MS	38	1000	Unknown		02/22/2024 22:00	Finished	MS (1ppb), IWST-231228B,2>1
87	N063214-008A,SAMP	39	1000	Unknown		02/22/2024 22:10	Finished	SAMP,10 mL
88	N063214-008AMS,MS	40	1000	Unknown		02/22/2024 22:19	Finished	MS (1ppb), IWST-231228B,10r
89	CCV-8,CCV1,1,	41	1000	Unknown		02/22/2024 22:29	Finished	CCV @10ppb, IWST-231228A
90	CCB-8,CCB,1,	42	1000	Unknown		02/22/2024 22:38	Finished	CCB R240129C
91	BLANK	43	1000	Unknown		02/22/2024 22:48	Finished	BLANK
92	SHUTDOWN	44	1000	Unknown		02/22/2024 22:57	Finished	
93	Eluent: R240222A	45	1000	Unknown		n.a.	Finished	
94	PCR: R240222B	46	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240223A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/23/24 9:11 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/23/24 9:24 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/23/24 9:34 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/23/24 9:43 AM	Reported
13	MB-R182899	MBLK	1	Hexavalent Chromium	02/23/24 9:53 AM	Reported
14	LCS-R182899	LCS	1	Hexavalent Chromium	02/23/24 10:02 AM	Reported
15	N063248-001A	SAMP	1	Hexavalent Chromium	02/23/24 10:27 AM	Reported
16	N063248-003A	SAMP	1	Hexavalent Chromium	02/23/24 10:39 AM	Not Reported
17	N063248-005A	SAMP	1	Hexavalent Chromium	02/23/24 10:48 AM	Not Reported
18	N063248-006A	SAMP	1	Hexavalent Chromium	02/23/24 10:58 AM	Not Reported
19	N063248-007A	SAMP	1	Hexavalent Chromium	02/23/24 11:07 AM	Not Reported
20	N063248-003A	SAMP	100	Hexavalent Chromium	02/23/24 11:17 AM	Reported
21	N063248-003AMS	MS	100	Hexavalent Chromium	02/23/24 11:26 AM	Reported
22	N063248-003AMSD	MSD	100	Hexavalent Chromium	02/23/24 11:36 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/23/24 11:45 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/23/24 11:54 AM	Reported
25	N063248-001AMS	MS	1	Hexavalent Chromium	02/23/24 12:04 PM	Reported
26	N063248-005AMS	MS	1	Hexavalent Chromium	02/23/24 12:13 PM	Not Reported
27	N063248-011A	SAMP	1	Hexavalent Chromium	02/23/24 12:23 PM	Not Reported
28	N063248-011AMS	MS	1	Hexavalent Chromium	02/23/24 12:32 PM	Not Reported
29	N063248-006AMS	MS	1	Hexavalent Chromium	02/23/24 12:42 PM	Not Reported
30	N063248-007AMS	MS	1	Hexavalent Chromium	02/23/24 12:51 PM	Not Reported
31	N063248-002A	SAMP	50	Hexavalent Chromium	02/23/24 1:01 PM	Reported
32	N063248-002AMS	MS	50	Hexavalent Chromium	02/23/24 1:10 PM	Reported
33	N063248-004A	SAMP	5	Hexavalent Chromium	02/23/24 1:20 PM	Not Reported
34	N063248-004AMS	MS	5	Hexavalent Chromium	02/23/24 1:29 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/23/24 1:39 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/23/24 1:48 PM	Reported
37	N063248-010A	SAMP	5	Hexavalent Chromium	02/23/24 1:57 PM	Reported
38	N063248-010AMS	MS	5	Hexavalent Chromium	02/23/24 2:07 PM	Reported
39	N063248-008A	SAMP	1	Hexavalent Chromium	02/23/24 2:16 PM	Not Reported
40	N063248-008AMS	MS	1	Hexavalent Chromium	02/23/24 2:26 PM	Not Reported
41	N063248-009A	SAMP	1	Hexavalent Chromium	02/23/24 2:35 PM	Reported
42	N063248-009AMS	MS	1	Hexavalent Chromium	02/23/24 2:45 PM	Reported

INJECTION LOG: 240223A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063248-008A	SAMP	5	Hexavalent Chromium	02/23/24 2:54 PM	Reported
44	N063248-008AMS	MS	5	Hexavalent Chromium	02/23/24 3:04 PM	Reported
45	N063214-017A	SAMP	1	Hexavalent Chromium	02/23/24 3:13 PM	Reported
46	MB-107024	MBLK	1	Hexavalent Chromium	02/23/24 3:23 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/23/24 3:32 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/23/24 3:42 PM	Reported
49	N063246-001A	SAMP	1	Hexavalent Chromium	02/23/24 3:51 PM	Reported
50	N063246-001AREP	DUP	1	Hexavalent Chromium	02/23/24 4:00 PM	Reported
51	N063248-002ADUP	DUP	50	Hexavalent Chromium	02/23/24 4:14 PM	Reported
52	N063214-017AMS	MS	1	Hexavalent Chromium	02/23/24 4:26 PM	Reported
53	N063249-017A	SAMP	1	Hexavalent Chromium	02/23/24 4:35 PM	Reported
54	N063249-017AMS	MS	1	Hexavalent Chromium	02/23/24 4:45 PM	Reported
55	N063248-004A	SAMP	50	Hexavalent Chromium	02/23/24 4:54 PM	Reported
56	N063248-004AMS	MS	50	Hexavalent Chromium	02/23/24 5:23 PM	Reported
57	N063248-005A	SAMP	5	Hexavalent Chromium	02/23/24 5:34 PM	Reported
58	N063248-005AMS	MS	5	Hexavalent Chromium	02/23/24 5:43 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/23/24 5:53 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/23/24 6:02 PM	Reported
61	N063248-006A	SAMP	5	Hexavalent Chromium	02/23/24 6:12 PM	Reported
62	N063248-006AMS	MS	5	Hexavalent Chromium	02/23/24 6:21 PM	Reported
63	N063248-007A	SAMP	5	Hexavalent Chromium	02/23/24 6:31 PM	Reported
64	N063248-007AMS	MS	5	Hexavalent Chromium	02/23/24 6:40 PM	Reported
65	N063248-011A	SAMP	5	Hexavalent Chromium	02/23/24 6:50 PM	Reported
66	N063248-011AMS	MS	5	Hexavalent Chromium	02/23/24 6:59 PM	Reported
67	N063249-012A	SAMP	1	Hexavalent Chromium	02/23/24 7:09 PM	Reported
68	N063249-012AMS	MS	1	Hexavalent Chromium	02/23/24 7:18 PM	Reported
69	N063249-014A	SAMP	1	Hexavalent Chromium	02/23/24 7:27 PM	Reported
70	N063249-014AMS	MS	1	Hexavalent Chromium	02/23/24 7:37 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/23/24 7:46 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/23/24 7:56 PM	Reported
73	N063249-016A	SAMP	1	Hexavalent Chromium	02/23/24 8:05 PM	Reported
74	N063249-016AMS	MS	1	Hexavalent Chromium	02/23/24 8:15 PM	Reported
75	N063249-011A	SAMP	1	Hexavalent Chromium	02/23/24 8:24 PM	Not Reported
76	N063249-011AMS	MS	1	Hexavalent Chromium	02/23/24 8:34 PM	Not Reported
77	N063249-011A	SAMP	5	Hexavalent Chromium	02/23/24 8:43 PM	Reported
78	N063249-011AMS	MS	5	Hexavalent Chromium	02/23/24 8:53 PM	Reported
79	N063249-013A	SAMP	1	Hexavalent Chromium	02/23/24 9:02 PM	Not Reported
80	N063249-013AMS	MS	1	Hexavalent Chromium	02/23/24 9:12 PM	Not Reported
81	N063249-013A	SAMP	5	Hexavalent Chromium	02/23/24 9:21 PM	Reported
82	N063249-013AMS	MS	5	Hexavalent Chromium	02/23/24 9:30 PM	Reported
83	CCV-7	CCV	1	Hexavalent Chromium	02/23/24 9:40 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	02/23/24 9:49 PM	Reported

INJECTION LOG: 240223A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063249-015A	SAMP	1	Hexavalent Chromium	02/23/24 9:59 PM	Not Reported
86	N063249-015AMS	MS	1	Hexavalent Chromium	02/23/24 10:08 PM	Not Reported
87	N063249-015A	SAMP	5	Hexavalent Chromium	02/23/24 10:18 PM	Reported
88	N063249-015AMS	MS	5	Hexavalent Chromium	02/23/24 10:27 PM	Reported
89	CCV-8	CCV1	1	Hexavalent Chromium	02/23/24 10:37 PM	Reported
90	CCB-8	CCB	1	Hexavalent Chromium	02/23/24 10:46 PM	Reported
91	BLANK	BLANK	1	Hexavalent Chromium	02/23/24 10:56 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240223A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**23/Feb/24 23:26:19**
No. of Injections:	**94**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/23/2024 09:11	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/23/2024 09:24	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/23/2024 09:34	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/23/2024 09:43	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/23/2024 09:53	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/23/2024 10:02	Finished	LCS @5ppb, IWST-231228B
15	N063248-001A,SAMF	1	1000	Unknown		02/23/2024 10:27	Finished	SAMP,10 mL
16	N063248-003A,SAMF	2	1000	Unknown		02/23/2024 10:39	Finished	SAMP,10 mL
17	N063248-005A,SAMF	3	1000	Unknown		02/23/2024 10:48	Finished	SAMP,10 mL
18	N063248-006A,SAMF	4	1000	Unknown		02/23/2024 10:58	Finished	SAMP,10 mL
19	N063248-007A,SAMF	5	1000	Unknown		02/23/2024 11:07	Finished	SAMP,10 mL
20	N063248-003A,SAMF	6	1000	Unknown		02/23/2024 11:17	Finished	SAMP,0.1>10 mL
21	N063248-003AMS,MS	7	1000	Unknown		02/23/2024 11:26	Finished	MS (5ppb), IWST-231228B,0.1
22	N063248-003AMSD,M	8	1000	Unknown		02/23/2024 11:36	Finished	MSD (5ppb), IWST-231228B,0
23	CCV-2,CCV1,1,	9	1000	Unknown		02/23/2024 11:45	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		02/23/2024 11:54	Finished	CCB R240129C
25	N063248-001AMS,MS	11	1000	Unknown		02/23/2024 12:04	Finished	MS (1ppb), IWST-231228B,10r
26	N063248-005AMS,MS	12	1000	Unknown		02/23/2024 12:13	Finished	MS (1ppb), IWST-231228B,10r
27	N063248-011A,SAMF	13	1000	Unknown		02/23/2024 12:23	Finished	SAMP,10 mL
28	N063248-011AMS,MS	14	1000	Unknown		02/23/2024 12:32	Finished	MS (1ppb), IWST-231228B,10r
29	N063248-006AMS,MS	15	1000	Unknown		02/23/2024 12:42	Finished	MS (1ppb), IWST-231228B,10r
30	N063248-007AMS,MS	16	1000	Unknown		02/23/2024 12:51	Finished	MS (1ppb), IWST-231228B,10r
31	N063248-002A,SAMF	17	1000	Unknown		02/23/2024 13:01	Finished	SAMP,0.2>10 mL
32	N063248-002AMS,MS	18	1000	Unknown		02/23/2024 13:10	Finished	MS (5ppb), IWST-231228B,0.2
33	N063248-004A,SAMF	19	1000	Unknown		02/23/2024 13:20	Finished	SAMP,2>10 mL
34	N063248-004AMS,MS	20	1000	Unknown		02/23/2024 13:29	Finished	MS (5ppb), IWST-231228B,2>1
35	CCV-3,CCV,1,	21	1000	Unknown		02/23/2024 13:39	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	22	1000	Unknown		02/23/2024 13:48	Finished	CCB R240129C
37	N063248-010A,SAMF	23	1000	Unknown		02/23/2024 13:57	Finished	SAMP,2>10 mL
38	N063248-010AMS,MS	24	1000	Unknown		02/23/2024 14:07	Finished	MS (5ppb), IWST-231228B,2>1
39	N063248-008A,SAMF	25	1000	Unknown		02/23/2024 14:16	Finished	SAMP,10 mL
40	N063248-008AMS,MS	26	1000	Unknown		02/23/2024 14:26	Finished	MS (1ppb), IWST-231228B,10r
41	N063248-009A,SAMF	27	1000	Unknown		02/23/2024 14:35	Finished	SAMP,10 mL
42	N063248-009AMS,MS	28	1000	Unknown		02/23/2024 14:45	Finished	MS (1ppb), IWST-231228B,10r
43	N063248-008A,SAMF	29	1000	Unknown		02/23/2024 14:54	Finished	SAMP,2>10 mL
44	N063248-008AMS,MS	30	1000	Unknown		02/23/2024 15:04	Finished	MS (1ppb), IWST-231228B,2>1
45	N063214-017A,SAMF	31	1000	Unknown		02/23/2024 15:13	Finished	SAMP,10 mL
46	MB-107024,MBLK,1,	32	1000	Unknown		02/23/2024 15:23	Finished	MB TCLP
47	CCV-4,CCV1,1,	33	1000	Unknown		02/23/2024 15:32	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	34	1000	Unknown		02/23/2024 15:42	Finished	CCB R240129C
49	N063246-001A,SAMF	35	1000	Unknown		02/23/2024 15:51	Finished	SAMP,10 mL
50	N063246-001AREP,D	36	1000	Unknown		02/23/2024 16:00	Finished	REP,10 mL
51	N063248-002ADUP,D	1	1000	Unknown		02/23/2024 16:14	Finished	DUP,0.2>10 mL
52	N063214-017AMS,MS	2	1000	Unknown		02/23/2024 16:26	Finished	MS (1ppb), IWST-231228B,10r
53	N063249-017A,SAMF	3	1000	Unknown		02/23/2024 16:35	Finished	SAMP,10 mL
54	N063249-017AMS,MS	4	1000	Unknown		02/23/2024 16:45	Finished	MS (1ppb), IWST-231228B,10r
55	N063248-004A,SAMF	5	1000	Unknown		02/23/2024 16:54	Finished	SAMP,0.2>10 mL
56	N063248-004AMS,MS	1	1000	Unknown		02/23/2024 17:23	Finished	MS (5ppb), IWST-231228B,0.2
57	N063248-005A,SAMF	2	1000	Unknown		02/23/2024 17:34	Finished	SAMP,2>10 mL
58	N063248-005AMS,MS	3	1000	Unknown		02/23/2024 17:43	Finished	MS (1ppb), IWST-231228B,2>1
59	CCV-5,CCV,1,	4	1000	Unknown		02/23/2024 17:53	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	5	1000	Unknown		02/23/2024 18:02	Finished	CCB R240129C

61	N063248-006A,SAMF	6	1000	Unknown		02/23/2024 18:12	Finished	SAMP,2>10 mL
62	N063248-006AMS,MS	7	1000	Unknown		02/23/2024 18:21	Finished	MS (1ppb), IWST-231228B,2>1
63	N063248-007A,SAMF	8	1000	Unknown		02/23/2024 18:31	Finished	SAMP,2>10 mL
64	N063248-007AMS,MS	9	1000	Unknown		02/23/2024 18:40	Finished	MS (1ppb), IWST-231228B,2>1
65	N063248-011A,SAMF	10	1000	Unknown		02/23/2024 18:50	Finished	SAMP,2>10 mL
66	N063248-011AMS,MS	11	1000	Unknown		02/23/2024 18:59	Finished	MS (1ppb), IWST-231228B,2>1
67	N063249-012A,SAMF	12	1000	Unknown		02/23/2024 19:09	Finished	SAMP,10 mL
68	N063249-012AMS,MS	13	1000	Unknown		02/23/2024 19:18	Finished	MS (1ppb), IWST-231228B,10r
69	N063249-014A,SAMF	14	1000	Unknown		02/23/2024 19:27	Finished	SAMP,10 mL
70	N063249-014AMS,MS	15	1000	Unknown		02/23/2024 19:37	Finished	MS (1ppb), IWST-231228B,10r
71	CCV-6,CCV1,1,	16	1000	Unknown		02/23/2024 19:46	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	17	1000	Unknown		02/23/2024 19:56	Finished	CCB R240129C
73	N063249-016A,SAMF	18	1000	Unknown		02/23/2024 20:05	Finished	SAMP,10 mL
74	N063249-016AMS,MS	19	1000	Unknown		02/23/2024 20:15	Finished	MS (1ppb), IWST-231228B,10r
75	N063249-011A,SAMF	20	1000	Unknown		02/23/2024 20:24	Finished	SAMP,10 mL
76	N063249-011AMS,MS	21	1000	Unknown		02/23/2024 20:34	Finished	MS (1ppb), IWST-231228B,10r
77	N063249-011A,SAMF	22	1000	Unknown		02/23/2024 20:43	Finished	SAMP,2>10 mL
78	N063249-011AMS,MS	23	1000	Unknown		02/23/2024 20:53	Finished	MS (1ppb), IWST-231228B,2>1
79	N063249-013A,SAMF	24	1000	Unknown		02/23/2024 21:02	Finished	SAMP,10 mL
80	N063249-013AMS,MS	25	1000	Unknown		02/23/2024 21:12	Finished	MS (1ppb), IWST-231228B,10r
81	N063249-013A,SAMF	26	1000	Unknown		02/23/2024 21:21	Finished	SAMP,2>10 mL
82	N063249-013AMS,MS	27	1000	Unknown		02/23/2024 21:30	Finished	MS (1ppb), IWST-231228B,2>1
83	CCV-7,CCV,1,	28	1000	Unknown		02/23/2024 21:40	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	29	1000	Unknown		02/23/2024 21:49	Finished	CCB R240129C
85	N063249-015A,SAMF	30	1000	Unknown		02/23/2024 21:59	Finished	SAMP,10 mL
86	N063249-015AMS,MS	31	1000	Unknown		02/23/2024 22:08	Finished	MS (1ppb), IWST-231228B,10r
87	N063249-015A,SAMF	32	1000	Unknown		02/23/2024 22:18	Finished	SAMP,2>10 mL
88	N063249-015AMS,MS	33	1000	Unknown		02/23/2024 22:27	Finished	MS (1ppb), IWST-231228B,2>1
89	CCV-8,CCV1,1,	34	1000	Unknown		02/23/2024 22:37	Finished	CCV @10ppb, IWST-231228A
90	CCB-8,CCB,1,	35	1000	Unknown		02/23/2024 22:46	Finished	CCB R240129C
91	BLANK	36	1000	Unknown		02/23/2024 22:56	Finished	BLANK
92	SHUTDOWN R240221A	37	1000	Unknown		02/23/2024 23:05	Finished	
93	Eluent: ~~R240220A~~	38	1000	Unknown		n.a.	Finished	
94	PCR: ~~R240220B~~ R240221B	39	1000	Unknown		n.a.	Finished	

dMocha 3/3/2024
for RBA

INJECTION LOG: 240226A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/26/24 10:02 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/26/24 10:15 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/26/24 10:25 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/26/24 10:34 AM	Reported
13	MB-R182953	MBLK	1	Hexavalent Chromium	02/26/24 10:44 AM	Reported
14	LCS-R182953	LCS	1	Hexavalent Chromium	02/26/24 10:53 AM	Reported
15	N063295-001A	SAMP	1	Hexavalent Chromium	02/26/24 11:55 AM	Not Reported
16	N063295-003A	SAMP	1	Hexavalent Chromium	02/26/24 12:08 PM	Not Reported
17	N063295-005A	SAMP	1	Hexavalent Chromium	02/26/24 1:04 PM	Not Reported
18	N063295-006A	SAMP	1	Hexavalent Chromium	02/26/24 1:15 PM	Not Reported
19	N063295-007A	SAMP	1	Hexavalent Chromium	02/26/24 1:24 PM	Not Reported
20	N063214-007A	SAMP	5	Hexavalent Chromium	02/26/24 1:34 PM	Reported
21	N063214-007AMS	MS	5	Hexavalent Chromium	02/26/24 1:43 PM	Reported
22	N063295-001AMS	MS	1	Hexavalent Chromium	02/26/24 1:53 PM	Not Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/26/24 2:02 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/26/24 2:12 PM	Reported
25	N063295-003AMS	MS	1	Hexavalent Chromium	02/26/24 2:21 PM	Not Reported
26	N063295-005AMS	MS	1	Hexavalent Chromium	02/26/24 2:30 PM	Not Reported
27	N063295-006AMS	MS	1	Hexavalent Chromium	02/26/24 2:40 PM	Not Reported
28	N063295-007AMS	MS	1	Hexavalent Chromium	02/26/24 2:49 PM	Not Reported
29	N063295-001A	SAMP	5	Hexavalent Chromium	02/26/24 2:59 PM	Reported
30	N063295-001AMS	MS	5	Hexavalent Chromium	02/26/24 3:08 PM	Reported
31	N063295-001AMSD	MSD	5	Hexavalent Chromium	02/26/24 3:18 PM	Reported
32	N063295-003A	SAMP	5	Hexavalent Chromium	02/26/24 3:27 PM	Reported
33	N063295-003ADUP	DUP	5	Hexavalent Chromium	02/26/24 3:37 PM	Reported
34	N063295-003AMS	MS	5	Hexavalent Chromium	02/26/24 3:46 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/26/24 4:07 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/26/24 4:18 PM	Reported
37	N063295-005A	SAMP	5	Hexavalent Chromium	02/26/24 4:27 PM	Reported
38	N063295-005AMS	MS	5	Hexavalent Chromium	02/26/24 4:37 PM	Reported
39	N063295-006A	SAMP	5	Hexavalent Chromium	02/26/24 4:46 PM	Reported
40	N063295-006AMS	MS	5	Hexavalent Chromium	02/26/24 4:56 PM	Reported
41	N063295-007A	SAMP	5	Hexavalent Chromium	02/26/24 5:05 PM	Reported
42	N063295-007AMS	MS	5	Hexavalent Chromium	02/26/24 5:15 PM	Reported

INJECTION LOG: 240226A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063295-004A	SAMP	1	Hexavalent Chromium	02/26/24 5:24 PM	Reported
44	N063295-004AMS	MS	1	Hexavalent Chromium	02/26/24 5:33 PM	Reported
45	N063295-002A	SAMP	1	Hexavalent Chromium	02/26/24 5:43 PM	Not Reported
46	N063295-002AMS	MS	1	Hexavalent Chromium	02/26/24 5:52 PM	Not Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/26/24 6:02 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/26/24 6:11 PM	Reported
49	N063295-002A	SAMP	5	Hexavalent Chromium	02/26/24 6:21 PM	Not Reported
50	N063295-002AMS	MS	5	Hexavalent Chromium	02/26/24 6:30 PM	Not Reported
51	N063295-008A	SAMP	1	Hexavalent Chromium	02/26/24 6:40 PM	Not Reported
52	N063295-008AMS	MS	1	Hexavalent Chromium	02/26/24 6:49 PM	Not Reported
53	N063295-008A	SAMP	5	Hexavalent Chromium	02/26/24 6:59 PM	Reported
54	N063295-008AMS	MS	5	Hexavalent Chromium	02/26/24 7:08 PM	Reported
55	N063249-018A	SAMP	1	Hexavalent Chromium	02/26/24 7:18 PM	Not Reported
56	N063249-018AMS	MS	1	Hexavalent Chromium	02/26/24 7:27 PM	Not Reported
57	N063249-018A	SAMP	5	Hexavalent Chromium	02/26/24 7:36 PM	Reported
58	N063249-018AMS	MS	5	Hexavalent Chromium	02/26/24 7:46 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/26/24 7:55 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/26/24 8:05 PM	Reported
61	N063249-010A	SAMP	1	Hexavalent Chromium	02/26/24 8:14 PM	Not Reported
62	N063249-010AMS	MS	1	Hexavalent Chromium	02/26/24 8:24 PM	Not Reported
63	N063249-019A	SAMP	1	Hexavalent Chromium	02/26/24 8:33 PM	Reported
64	N063249-019AMS	MS	1	Hexavalent Chromium	02/26/24 8:43 PM	Reported
65	N063297-001A	SAMP	5	Hexavalent Chromium	02/26/24 8:52 PM	Reported
66	N063297-001AMS	MS	5	Hexavalent Chromium	02/26/24 9:02 PM	Reported
67	N063297-002A	SAMP	20	Hexavalent Chromium	02/26/24 9:11 PM	Reported
68	N063297-002AMS	MS	20	Hexavalent Chromium	02/26/24 9:21 PM	Reported
69	N063297-003A	SAMP	5	Hexavalent Chromium	02/26/24 9:30 PM	Reported
70	N063297-003AMS	MS	5	Hexavalent Chromium	02/26/24 9:39 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/26/24 9:49 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/26/24 9:58 PM	Reported
73	N063295-001A	SAMP	1	Hexavalent Chromium	02/26/24 10:08 PM	Not Reported
74	N063295-003A	SAMP	1	Hexavalent Chromium	02/26/24 10:17 PM	Not Reported
75	N063297-004A	SAMP	1	Hexavalent Chromium	02/26/24 10:27 PM	Reported
76	N063297-004AMS	MS	1	Hexavalent Chromium	02/26/24 10:36 PM	Reported
77	CCV-7	CCV	1	Hexavalent Chromium	02/26/24 10:46 PM	Reported
78	CCB-7	CCB	1	Hexavalent Chromium	02/26/24 10:55 PM	Reported
79	BLANK	BLANK	1	Hexavalent Chromium	02/26/24 11:04 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240226A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**26/Feb/24 23:35:17**
No. of Injections:	**82**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/26/2024 10:02	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/26/2024 10:15	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/26/2024 10:25	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/26/2024 10:34	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/26/2024 10:44	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/26/2024 10:53	Finished	LCS @5ppb, IWST-231228B
15	N063295-001A,SAMP	1	1000	Unknown		02/26/2024 11:55	Finished	SAMP,10 mL
16	N063295-003A,SAMP	2	1000	Unknown		02/26/2024 12:08	Finished	SAMP,10 mL
17	N063295-005A,SAMP	1	1000	Unknown		02/26/2024 13:04	Finished	SAMP,10 mL
18	N063295-006A,SAMP	2	1000	Unknown		02/26/2024 13:15	Finished	SAMP,10 mL
19	N063295-007A,SAMP	3	1000	Unknown		02/26/2024 13:24	Finished	SAMP,10 mL
20	N063214-007A,SAMP	4	1000	Unknown		02/26/2024 13:34	Finished	SAMP,2>10 mL
21	N063214-007AMS,MS	5	1000	Unknown		02/26/2024 13:43	Finished	MS (1ppb), IWST-231228B,2>
22	N063295-001AMS,MS	6	1000	Unknown		02/26/2024 13:53	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	7	1000	Unknown		02/26/2024 14:02	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	8	1000	Unknown		02/26/2024 14:12	Finished	CCB R240129C
25	N063295-003AMS,MS	9	1000	Unknown		02/26/2024 14:21	Finished	MS (1ppb), IWST-231228B,10r
26	N063295-005AMS,MS	10	1000	Unknown		02/26/2024 14:30	Finished	MS (1ppb), IWST-231228B,10r
27	N063295-006AMS,MS	11	1000	Unknown		02/26/2024 14:40	Finished	MS (1ppb), IWST-231228B,10r
28	N063295-007AMS,MS	12	1000	Unknown		02/26/2024 14:49	Finished	MS (1ppb), IWST-231228B,10r
29	N063295-001A,SAMP	13	1000	Unknown		02/26/2024 14:59	Finished	SAMP,2>10 mL
30	N063295-001AMS,MS	14	1000	Unknown		02/26/2024 15:08	Finished	MS (5ppb), IWST-231228B,2>
31	N063295-001AMSD,M	15	1000	Unknown		02/26/2024 15:18	Finished	MSD (5ppb), IWST-231228B,2
32	N063295-003A,SAMP	16	1000	Unknown		02/26/2024 15:27	Finished	SAMP,2>10 mL
33	N063295-003ADUP,D	17	1000	Unknown		02/26/2024 15:37	Finished	DUP,2>10 mL
34	N063295-003AMS,MS	18	1000	Unknown		02/26/2024 15:46	Finished	MS (5ppb), IWST-231228B,2>
35	CCV-3,CCV,1,	1	1000	Unknown		02/26/2024 16:07	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	2	1000	Unknown		02/26/2024 16:18	Finished	CCB R240129C
37	N063295-005A,SAMP	3	1000	Unknown		02/26/2024 16:27	Finished	SAMP,2>10 mL
38	N063295-005AMS,MS	4	1000	Unknown		02/26/2024 16:37	Finished	MS (1ppb), IWST-231228B,2>
39	N063295-006A,SAMP	5	1000	Unknown		02/26/2024 16:46	Finished	SAMP,2>10 mL
40	N063295-006AMS,MS	6	1000	Unknown		02/26/2024 16:56	Finished	MS (1ppb), IWST-231228B,2>
41	N063295-007A,SAMP	7	1000	Unknown		02/26/2024 17:05	Finished	SAMP,2>10 mL
42	N063295-007AMS,MS	8	1000	Unknown		02/26/2024 17:15	Finished	MS (1ppb), IWST-231228B,2>
43	N063295-004A,SAMP	9	1000	Unknown		02/26/2024 17:24	Finished	SAMP,10 mL
44	N063295-004AMS,MS	10	1000	Unknown		02/26/2024 17:33	Finished	MS (1ppb), IWST-231228B,10r
45	N063295-002A,SAMP	11	1000	Unknown		02/26/2024 17:43	Finished	SAMP,10 mL
46	N063295-002AMS,MS	12	1000	Unknown		02/26/2024 17:52	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	13	1000	Unknown		02/26/2024 18:02	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	14	1000	Unknown		02/26/2024 18:11	Finished	CCB R240129C
49	N063295-002A,SAMP	15	1000	Unknown		02/26/2024 18:21	Finished	SAMP,2>10 mL
50	N063295-002AMS,MS	16	1000	Unknown		02/26/2024 18:30	Finished	MS (1ppb), IWST-231228B,2>
51	N063295-008A,SAMP	17	1000	Unknown		02/26/2024 18:40	Finished	SAMP,10 mL
52	N063295-008AMS,MS	18	1000	Unknown		02/26/2024 18:49	Finished	MS (1ppb), IWST-231228B,10r
53	N063295-008A,SAMP	19	1000	Unknown		02/26/2024 18:59	Finished	SAMP,2>10 mL
54	N063295-008AMS,MS	20	1000	Unknown		02/26/2024 19:08	Finished	MS (1ppb), IWST-231228B,2>
55	N063249-018A,SAMP	21	1000	Unknown		02/26/2024 19:18	Finished	SAMP,10 mL
56	N063249-018AMS,MS	22	1000	Unknown		02/26/2024 19:27	Finished	MS (1ppb), IWST-231228B,10r
57	N063249-018A,SAMP	23	1000	Unknown		02/26/2024 19:36	Finished	SAMP,2>10 mL
58	N063249-018AMS,MS	24	1000	Unknown		02/26/2024 19:46	Finished	MS (1ppb), IWST-231228B,2>
59	CCV-5,CCV,1,	25	1000	Unknown		02/26/2024 19:55	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	26	1000	Unknown		02/26/2024 20:05	Finished	CCB R240129C

61	N063249-010A,SAMP	27	1000	Unknown		02/26/2024 20:14	Finished	SAMP,10 mL
62	N063249-010AMS,MS	28	1000	Unknown		02/26/2024 20:24	Finished	MS (1ppb), IWST-231228B,10r
63	N063249-019A,SAMP	29	1000	Unknown		02/26/2024 20:33	Finished	SAMP,10 mL
64	N063249-019AMS,MS	30	1000	Unknown		02/26/2024 20:43	Finished	MS (1ppb), IWST-231228B,10r
65	N063297-001A,SAMP	31	1000	Unknown		02/26/2024 20:52	Finished	SAMP,2>10 mL
66	N063297-001AMS,MS	32	1000	Unknown		02/26/2024 21:02	Finished	MS (5ppb), IWST-231228B,2>1
67	N063297-002A,SAMP	33	1000	Unknown		02/26/2024 21:11	Finished	SAMP,0.5>10 mL
68	N063297-002AMS,MS	34	1000	Unknown		02/26/2024 21:21	Finished	MS (1ppb), IWST-231228B,0.5
69	N063297-003A,SAMP	35	1000	Unknown		02/26/2024 21:30	Finished	SAMP,2>10 mL
70	N063297-003AMS,MS	36	1000	Unknown		02/26/2024 21:39	Finished	MS (5ppb), IWST-231228B,2>1
71	CCV-6,CCV1,1,	37	1000	Unknown		02/26/2024 21:49	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	38	1000	Unknown		02/26/2024 21:58	Finished	CCB R240129C
73	N063295-001A,SAMP	39	1000	Unknown		02/26/2024 22:08	Finished	SAMP,10 mL
74	N063295-003A,SAMP	40	1000	Unknown		02/26/2024 22:17	Finished	SAMP,10 mL
75	N063297-004A,SAMP	41	1000	Unknown		02/26/2024 22:27	Finished	SAMP,10 mL
76	N063297-004AMS,MS	42	1000	Unknown		02/26/2024 22:36	Finished	MS (1ppb), IWST-231228B,10r
77	CCV-7,CCV,1,	43	1000	Unknown		02/26/2024 22:46	Finished	CCV @5ppb, IWST-231228A
78	CCB-7,CCB,1,	44	1000	Unknown		02/26/2024 22:55	Finished	CCB R240129C
79	BLANK	45	1000	Unknown		02/26/2024 23:04	Finished	BLANK
80	SHUTDOWN R240226A	46	1000	Unknown		02/26/2024 23:14	Finished	
81	Eluent: ~~R240228A~~	47	1000	Unknown		n.a.	Finished	
82	PCR: ~~R240228B~~ R240226B	48	1000	Unknown		n.a.	Finished	

dMocha 3/10/2024
for RBA

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 2/22/24
Time Prepared: 1035H
Prepared By: MA

Reagent ID:
Sulfuric Acid: 143135
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: M240222A
NH4OH + NH4SO4 buffer: M240124C

6N NaOH: M031228C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW7248-1A	9.34	-	~250 mL	~250 mL		
2)	2A	9.36	-				
3)	3A	9.44	-				
4)	4A	9.42	-				
5)	5A	9.38	-				
6)	6A	9.32	-				
7)	7A	9.36	-				
8)	8A	8.90	9.48			+4	
9)	9A	9.71	-				
10)	10A	8.80	9.52			+6	
11)	11A	9.40	-				
12)	MW7249-1A	9.28	-				
13)	2A	9.68	-				
14)	3A	9.20	9.40			+3	
15)	4A	9.11	9.49			+5	
	5A	9.16	9.54			+5	

Sample Preparation

Date Prepared: 2/22/24
Time Prepared: 1037H
Prepared By: MA

Reagent ID:
Sulfuric Acid: 143135
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: M240222A
NH4OH + NH4SO4 buffer: M240124C

6N NaOH: M031228C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW7249-6A	9.66	-	~250 mL	~250 mL		
2)	7A	8.59	9.68			+8	
3)	8A	9.74	-				
4)	9A	8.68	9.69			+8	
5)	10A	9.75	-				
6)	11A	8.70	9.63			+7	
7)	12A	9.76	-				
8)	13A	8.84	9.58			+6	
9)	14A	9.70	-				
10)	15A	9.72	-				
11)	16A	9.68	-				
12)	17A	9.30	-				
13)	18A	9.21	-				
14)	19B	9.71	-				
15)							

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 2/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0427	0.2063	1.0639	2.1157	3.2270	4.3227	0.9999
Measured, in ug/L	0.198500	0.959200	4.946100	9.835700	15.002300	20.095900	
Relative Error (%RE)	-0.8%		-1.1%				

	Stock	Working
Standard Concentration:	1,000,000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ICV**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5711897**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5711898**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCV**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711900**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.965	0.20	5.000	0	99.3	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711901**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.202	0.20	0.2000	0	101	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711913**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.127	0.20	10.00	0	101	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCV**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711921**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.018	0.20	5.000	0	100	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711931**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.004	0.20	10.00	0	100	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCV**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711933**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.947	0.20	5.000	0	98.9	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711943**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.880	0.20	10.00	0	98.8	95	105				

Sample ID: **CCV-7**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCV**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711955**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.046	0.20	5.000	0	101	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-8**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ZZZZZZ**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711961**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.973	0.20	10.00	0	99.7	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ICV**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5711963**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5711964**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCV**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711966**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.911	0.20	5.000	0	98.2	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711967**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.195	0.20	0.2000	0	97.3	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711975**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.928	0.20	10.00	0	99.3	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCV**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711980**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.010	0.20	5.000	0	100	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711990**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.085	0.20	10.00	0	101	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCV**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712002**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.992	0.20	5.000	0	99.8	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712014**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.100	0.20	10.00	0	101	95	105				

Sample ID: **CCV-7**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCV**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712022**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.137	0.20	5.000	0	103	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-8**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ZZZZZZ**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712026**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.180	0.20	10.00	0	102	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ICV**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5714774**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5714775**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCV**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714777**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.984	0.20	5.000	0	99.7	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714778**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.189	0.20	0.2000	0	94.7	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714784**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.988	0.20	10.00	0	99.9	95	105				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCV**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714792**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.875	0.20	5.000	0	97.5	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714802**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.791	0.20	10.00	0	97.9	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCV**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714808**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.964	0.20	5.000	0	99.3	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714820**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.066	0.20	10.00	0	101	95	105				

Sample ID: **CCV-7**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCV**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714824**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.009	0.20	5.000	0	100	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **ICB**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5711899**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCB**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711902**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCB**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711914**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCB**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711922**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCB**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711932**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCB**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711934**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCB**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711944**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-7**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCB**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711956**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-8**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182897**
Client ID: **CCB**	Batch ID: **R182897**	TestNo: **EPA 218.6**		Analysis Date: **2/22/2024**	SeqNo: **5711962**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **ICB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5711965**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711968**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711976**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711981**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5711991**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712003**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712015**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-7**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-8**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182899**
Client ID: **CCB**	Batch ID: **R182899**	TestNo: **EPA 218.6**		Analysis Date: **2/23/2024**	SeqNo: **5712027**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ICB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5714776**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714779**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714785**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714793**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714803**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714809**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714821**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-7**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714825**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/22/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.056	
CCV-2	4.048	
CCV-3	4.056	
CCV-4	4.048	
CCV-5	4.056	
CCV-6	4.048	
CCV-7	4.048	
CCV-8	4.048	

Average	4.051
Actual RT Window	3.971 - 4.131
Applied RT Window	3.851 - 4.251

MB-R182897	N.A.	N.A.
LCS-R182897	4.056	PASS
N063214-010A	4.056	PASS
N063214-010AMS	4.048	PASS
N063214-014A	N.A.	N.A.
N063214-014AMS	4.048	PASS
N063214-016A	N.A.	N.A.
N063214-016AMS	3.898	PASS
N063214-014AMSD	4.048	PASS
N063214-010ADUP	4.040	PASS
N063214-011A	N.A.	N.A.
N063214-011AMS	3.890	PASS
N063214-012A	N.A.	N.A.
N063214-009A	N.A.	N.A.
N063214-009AMS	4.048	PASS
N063214-015A	N.A.	N.A.
N063214-015AMS	4.048	PASS
N063214-017A	N.A.	N.A.
N063214-017AMS	N.A.	N.A.
N063214-018A	N.A.	N.A.

Reviewed by:

dlRocha 3/10/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/22/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.056	
CCV-2	4.048	
CCV-3	4.056	
CCV-4	4.048	
CCV-5	4.056	
CCV-6	4.048	
CCV-7	4.048	
CCV-8	4.048	
Average	4.051	
Actual RT Window	3.971 - 4.131	
Applied RT Window	3.851 - 4.251	
N063214-018AMS	4.056	PASS
N063214-011A	N.A.	N.A.
N063214-011AMS	4.023	PASS
N063214-012A	N.A.	N.A.
N063214-012AMS	4.015	PASS
N063214-013A	4.006	PASS
N063214-013AMS	4.006	PASS
N063249-003AMS	3.856	PASS
N063249-004A	N.A.	N.A.
N063249-004AMS	N.A.	N.A.
N063249-007A	N.A.	N.A.
N063249-007AMS	N.A.	N.A.
N063249-009A	N.A.	N.A.
N063249-009AMS	N.A.	N.A.
N063249-002A	N.A.	N.A.
N063249-002AMS	4.056	PASS
N063249-006A	N.A.	N.A.
N063249-006AMS	4.048	PASS
N063249-008A	N.A.	N.A.
N063249-008AMS	4.048	PASS

Reviewed by:

dlRocha 3/10/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/22/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.056	
CCV-2	4.048	
CCV-3	4.056	
CCV-4	4.048	
CCV-5	4.056	
CCV-6	4.048	
CCV-7	4.048	
CCV-8	4.048	

Average	4.051	
Actual RT Window	3.971 -	4.131
Applied RT Window	3.851 -	4.251

~~N063249-009A~~ N063249-010A	N.A.	N.A.
~~N063249-009AMS~~ N063249-010AMS	4.048	PASS
N063249-001A	4.023	PASS
N063249-001AMS	4.023	PASS
N063249-003A	4.023	PASS
N063249-003AMS	4.031	PASS
N063249-004A	3.990	PASS
N063249-004AMS	3.998	PASS
N063249-005A	4.015	PASS
N063249-005AMS	4.023	PASS
N063249-007A	N.A.	N.A.
N063249-007AMS	3.965	PASS
N063249-009A	N.A.	N.A.
N063249-009AMS	3.981	PASS
N063214-008A	N.A.	N.A.
N063214-008AMS	4.048	PASS

Reviewed by:

dMocha 3/10/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/23/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.048	
CCV-2	4.048	
CCV-3	4.048	
CCV-4	4.040	
CCV-5	4.040	
CCV-6	4.040	
CCV-7	4.040	
CCV-8	4.040	

Average	4.043	
Actual RT Window	3.963 -	4.123
Applied RT Window	3.843 -	4.243

MB-R182899	N.A.	N.A.
LCS-R182899	4.040	PASS
N063248-001A	N.A.	N.A.
N063248-003A	3.848	PASS
N063248-005A	N.A.	N.A.
N063248-006A	N.A.	N.A.
N063248-007A	N.A.	N.A.
N063248-003A	4.048	PASS
N063248-003AMS	4.040	PASS
N063248-003AMSD	4.040	PASS
N063248-001AMS	3.965	PASS
N063248-011A	N.A.	N.A.
N063248-006AMS	N.A.	N.A.
N063248-007AMS	N.A.	N.A.
N063248-002A	4.040	PASS
N063248-002AMS	4.040	PASS
N063248-004A	4.015	PASS
N063248-004AMS	4.006	PASS
N063248-010A	4.031	PASS
N063248-010AMS	4.031	PASS

Reviewed by:

dlRocha 3/10/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/23/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.048	
CCV-2	4.048	
CCV-3	4.048	
CCV-4	4.040	
CCV-5	4.040	
CCV-6	4.040	
CCV-7	4.040	
CCV-8	4.040	
Average	4.043	
Actual RT Window	3.963 - 4.123	
Applied RT Window	3.843 - 4.243	
N063248-008A	N.A.	N.A.
N063248-008AMS	N.A.	N.A.
N063248-009A	4.031	PASS
N063248-009AMS	4.040	PASS
N063248-008A	N.A.	N.A.
N063248-008AMS	3.965	PASS
N063214-017A	N.A.	N.A.
MB-107024	N.A.	N.A.
N063246-001A	4.040	PASS
N063246-001AREP	4.040	PASS
N063248-002ADUP	4.040	PASS
N063214-017AMS	4.040	PASS
N063249-017A	N.A.	N.A.
N063249-017AMS	4.040	PASS
N063248-004A	4.040	PASS
N063248-004AMS	4.040	PASS
N063248-005A	N.A.	N.A.
N063248-005AMS	3.990	PASS
N063248-006A	N.A.	N.A.
N063248-006AMS	3.973	PASS

Reviewed by:

dMocha 3/10/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/23/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.048	
CCV-2	4.048	
CCV-3	4.048	
CCV-4	4.040	
CCV-5	4.040	
CCV-6	4.040	
CCV-7	4.040	
CCV-8	4.040	
Average	4.043	
Actual RT Window	3.963 - 4.123	
Applied RT Window	3.843 - 4.243	
N063248-007A	N.A.	N.A.
N063248-007AMS	3.973	PASS
N063248-011A	N.A.	N.A.
N063248-011AMS	3.998	PASS
N063249-012A	N.A.	N.A.
N063249-012AMS	4.040	PASS
N063249-014A	N.A.	N.A.
N063249-014AMS	4.040	PASS
N063249-016A	N.A.	N.A.
N063249-016AMS	4.040	PASS
N063249-011A	N.A.	N.A.
N063249-011A	N.A.	N.A.
N063249-011AMS	4.006	PASS
N063249-013A	N.A.	N.A.
N063249-013AMS	N.A.	N.A.
N063249-013A	N.A.	N.A.
N063249-013AMS	3.931	PASS
N063249-015A	N.A.	N.A.
N063249-015AMS	N.A.	N.A.
N063249-015A	N.A.	N.A.

Reviewed by:

dlRocha 3/10/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/23/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.048	
CCV-2	4.048	
CCV-3	4.048	
CCV-4	4.040	
CCV-5	4.040	
CCV-6	4.040	
CCV-7	4.040	
CCV-8	4.040	
Average	4.043	
Actual RT Window	3.963 - 4.123	
Applied RT Window	3.843 - 4.243	
N063249-015AMS	3.965	PASS

Reviewed by:

dlRocha 3/10/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/26/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.048	
CCV-3	4.040	
CCV-4	4.048	
CCV-5	4.040	
CCV-6	4.040	
CCV-7	4.040	

Average	4.042
Actual RT Window	3.962 - 4.122
Applied RT Window	3.842 - 4.242

MB-R182953	N.A.	N.A.
LCS-R182953	4.040	PASS
N063295-001A	N.A.	N.A.
N063295-003A	N.A.	N.A.
N063295-005A	N.A.	N.A.
N063295-006A	N.A.	N.A.
N063295-007A	N.A.	N.A.
N063214-007A	N.A.	N.A.
N063214-007AMS	3.931	PASS
N063295-001AMS	3.915	PASS
N063295-003AMS	3.906	PASS
N063295-005AMS	N.A.	N.A.
N063295-006AMS	N.A.	N.A.
N063295-007AMS	N.A.	N.A.
N063295-001A	4.023	PASS
N063295-001AMS	4.023	PASS
N063295-001AMSD	4.015	PASS
N063295-003A	4.015	PASS
N063295-003ADUP	4.015	PASS
N063295-003AMS	4.015	PASS
N063295-005A	N.A.	N.A.

Reviewed by:

dMRocha 3/10/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/26/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.048	
CCV-3	4.040	
CCV-4	4.048	
CCV-5	4.040	
CCV-6	4.040	
CCV-7	4.040	
Average	4.042	
Actual RT Window	3.962 - 4.122	
Applied RT Window	3.842 - 4.242	
N063295-005AMS	3.981	PASS
N063295-006A	N.A.	N.A.
N063295-006AMS	3.965	PASS
N063295-007A	N.A.	N.A.
N063295-007AMS	3.973	PASS
N063295-004A	N.A.	N.A.
N063295-004AMS	4.040	PASS
N063295-002A	N.A.	N.A.
N063295-002AMS	N.A.	N.A.
N063295-002A	3.981	PASS
N063295-002AMS	3.981	PASS
N063295-008A	N.A.	N.A.
N063295-008AMS	N.A.	N.A.
N063295-008A	N.A.	N.A.
N063295-008AMS	3.973	PASS
N063249-018A	N.A.	N.A.
N063249-018AMS	N.A.	N.A.
N063249-018A	N.A.	N.A.
N063249-018AMS	3.973	PASS
N063249-010A	N.A.	N.A.
N063249-010AMS	4.040	PASS

Reviewed by:

dMRocha 3/10/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/26/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.048	
CCV-3	4.040	
CCV-4	4.048	
CCV-5	4.040	
CCV-6	4.040	
CCV-7	4.040	
Average	4.042	
Actual RT Window	3.962 - 4.122	
Applied RT Window	3.842 - 4.242	
N063249-019A	N.A.	N.A.
N063249-019AMS	4.031	PASS
N063297-001A	4.040	PASS
N063297-001AMS	4.040	PASS
N063297-002A	N.A.	N.A.
N063297-002AMS	4.023	PASS
N063297-003A	4.031	PASS
N063297-003AMS	4.031	PASS
N063295-001A	3.906	PASS
N063295-003A	3.906	PASS
N063297-004A	N.A.	N.A.
N063297-004AMS	4.031	PASS

Reviewed by:

dMocha 3/10/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

Reviewed by:

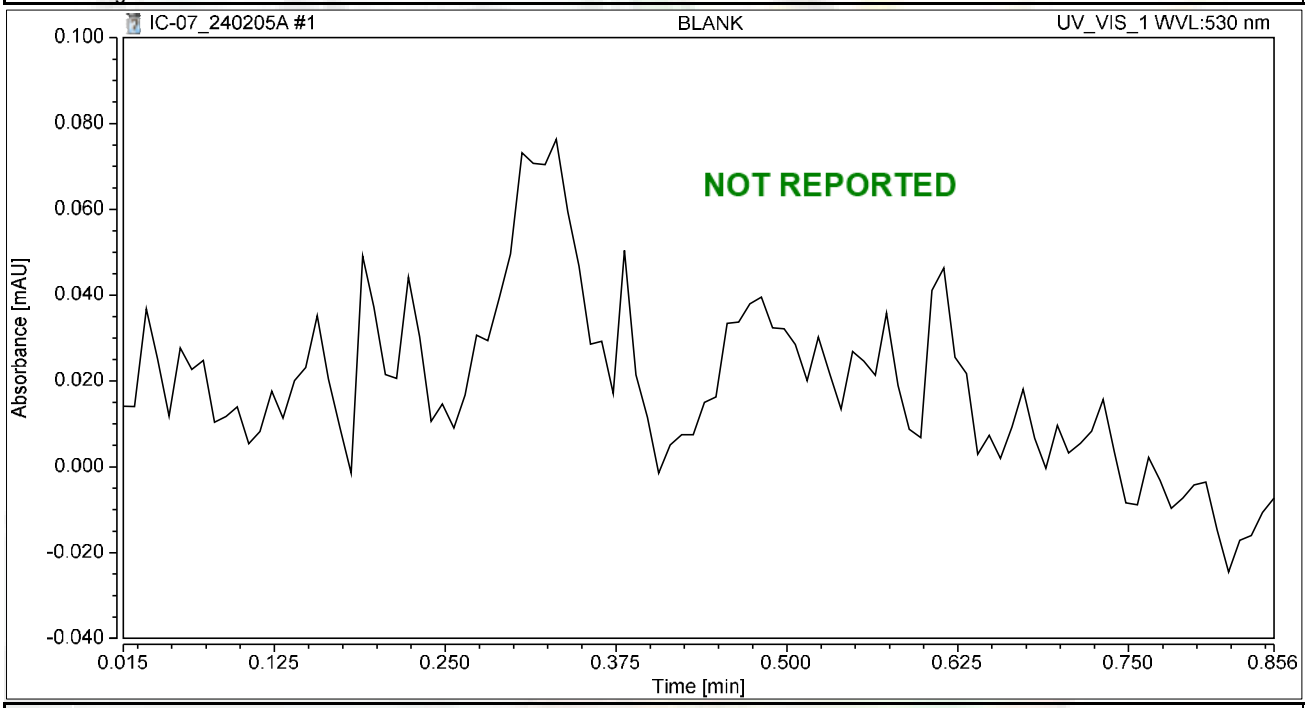
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**0.84**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 11:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

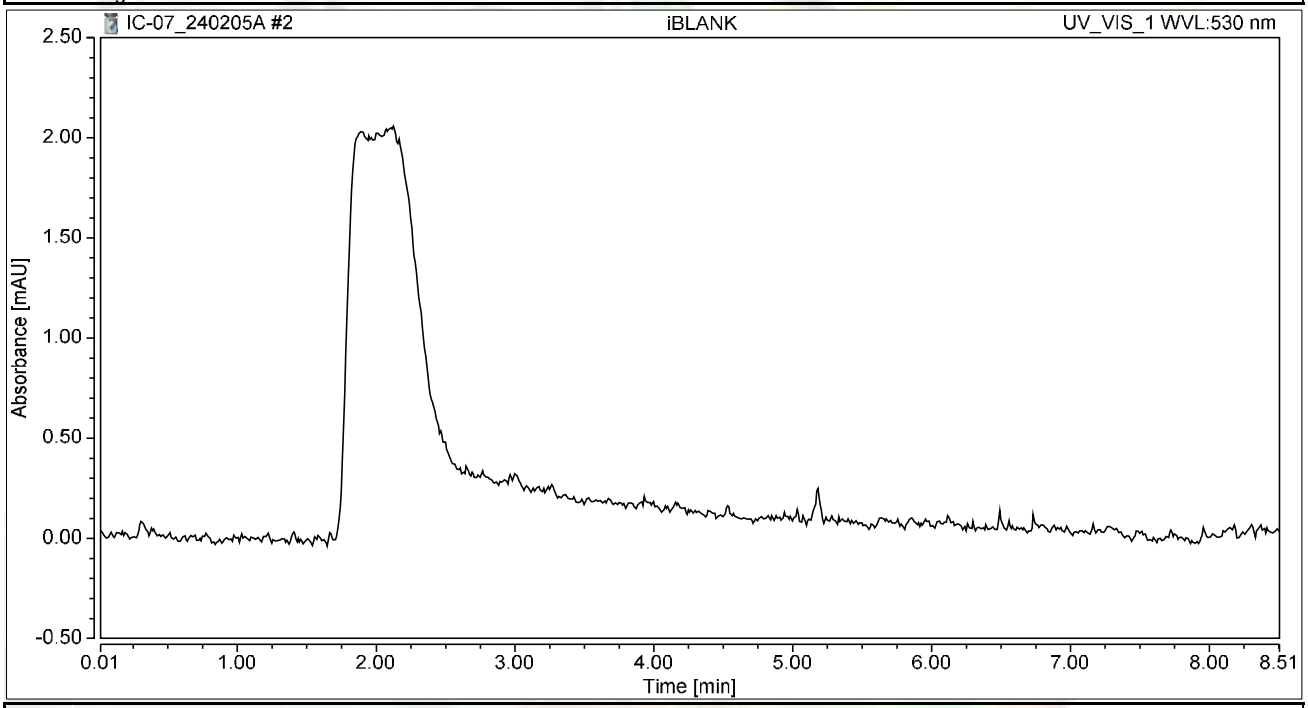
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Reviewed by:

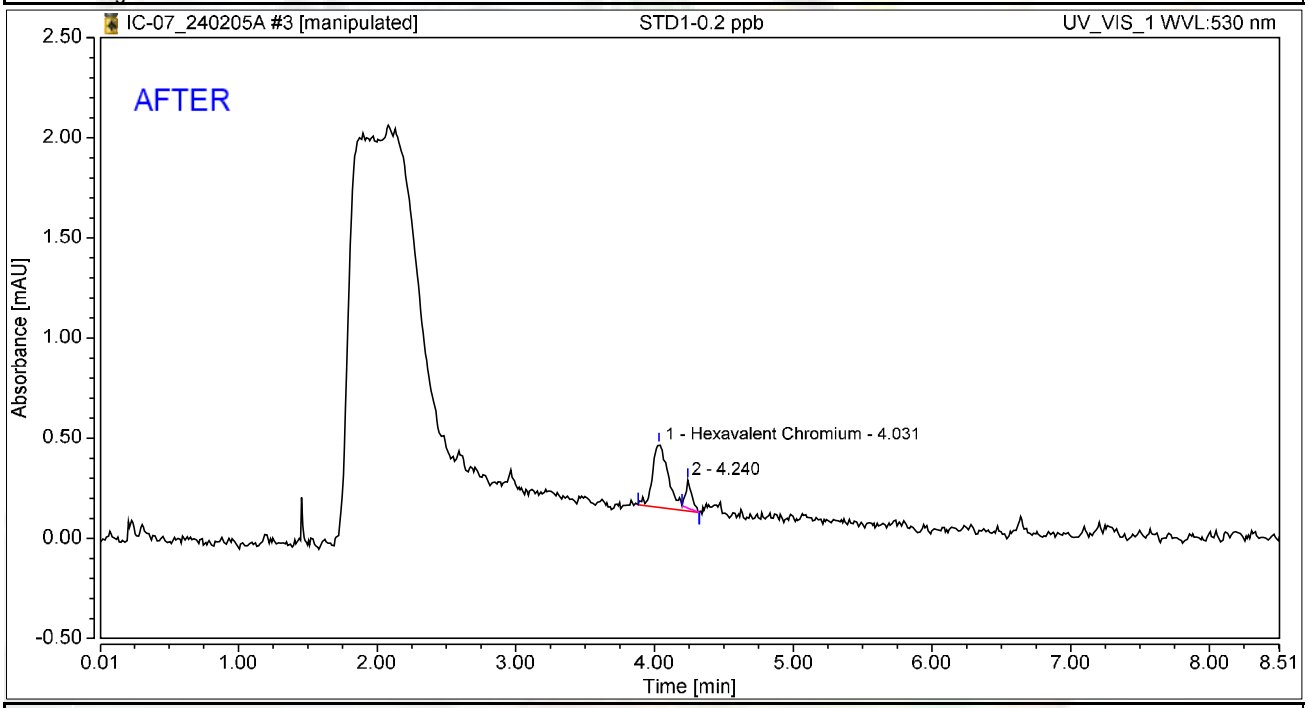
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.043	0.313	85.65	69.19	0.1985
2		4.240	0.007	0.139	14.35	30.81	n.a.
Total:			**0.050**	**0.452**	**100.00**	**100.00**	

Reviewed by:

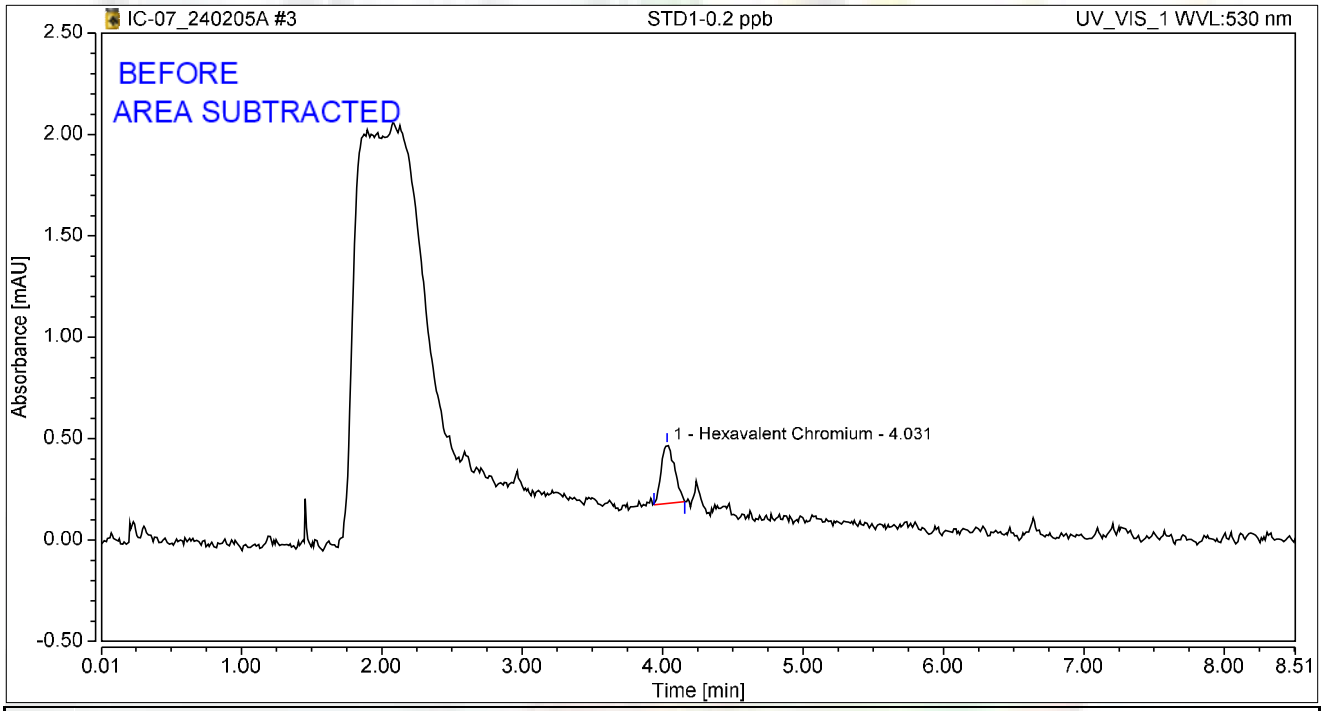
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

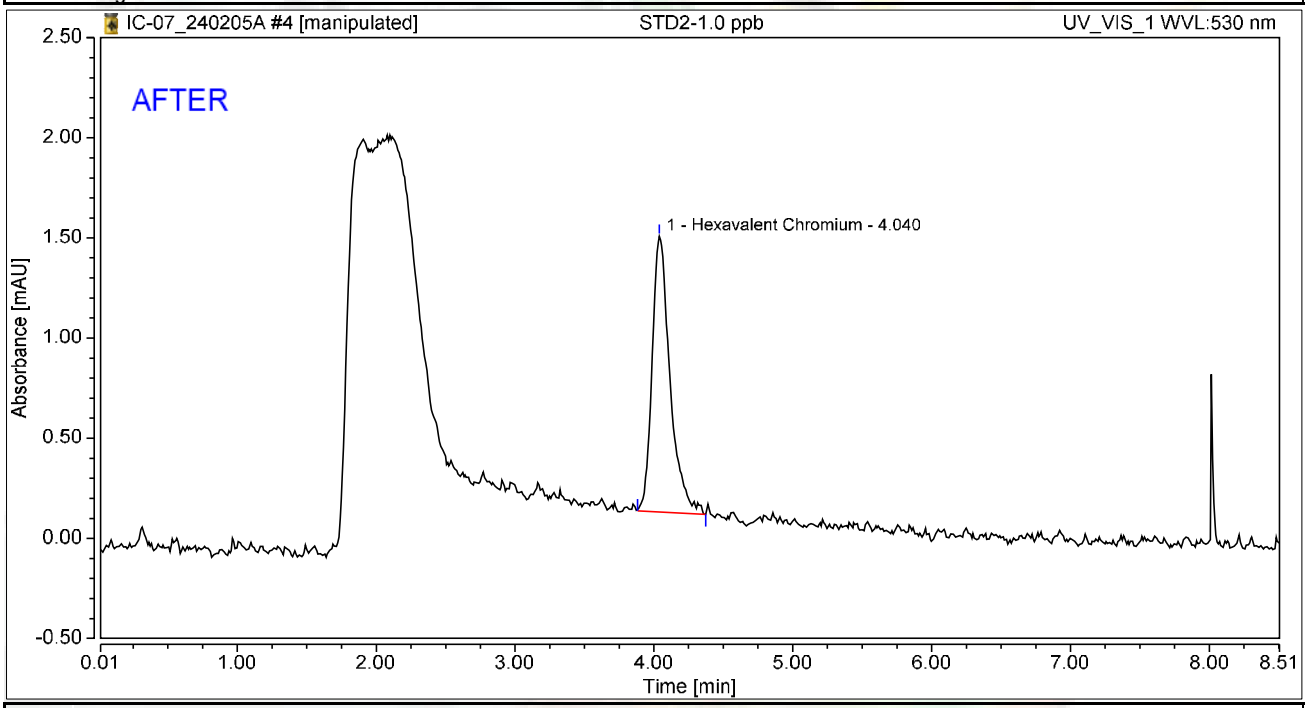
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.032	0.288	100.00	100.00	0.1502
Total:			**0.032**	**0.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.206	1.377	100.00	100.00	0.9592
Total:			**0.206**	**1.377**	**100.00**	**100.00**	

Reviewed by:

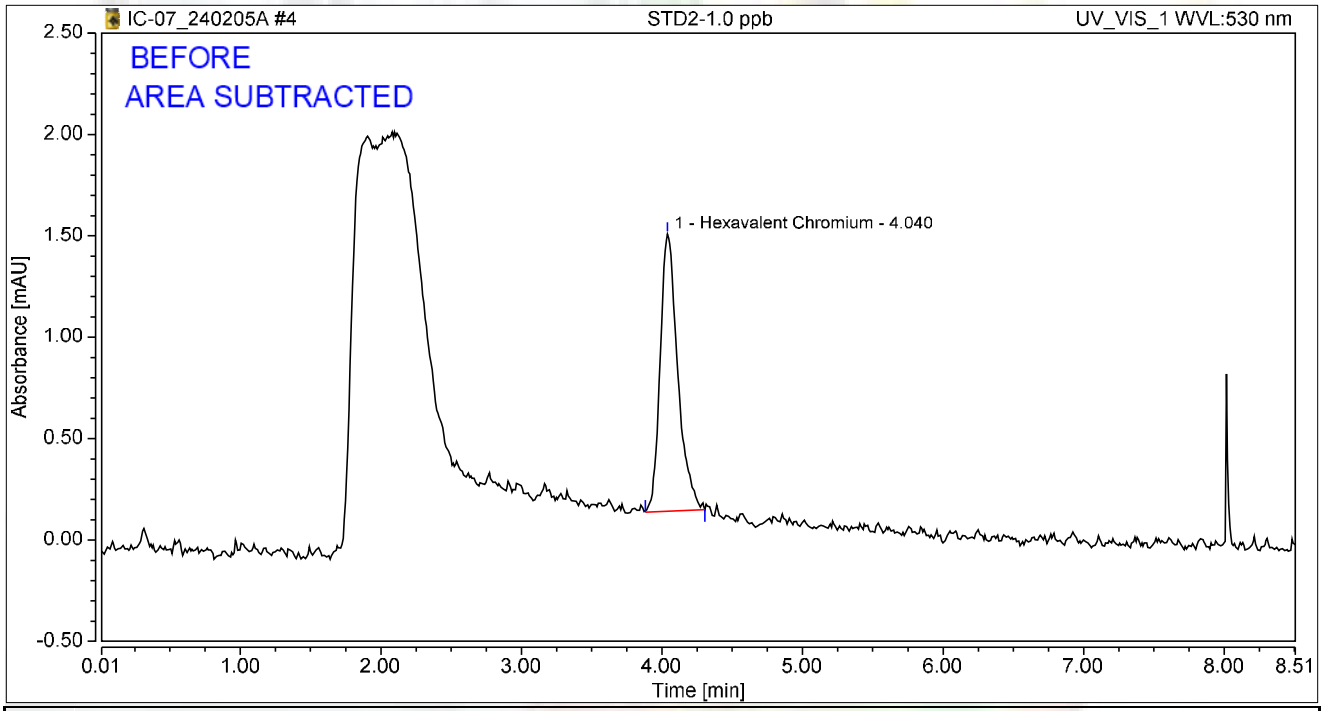
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

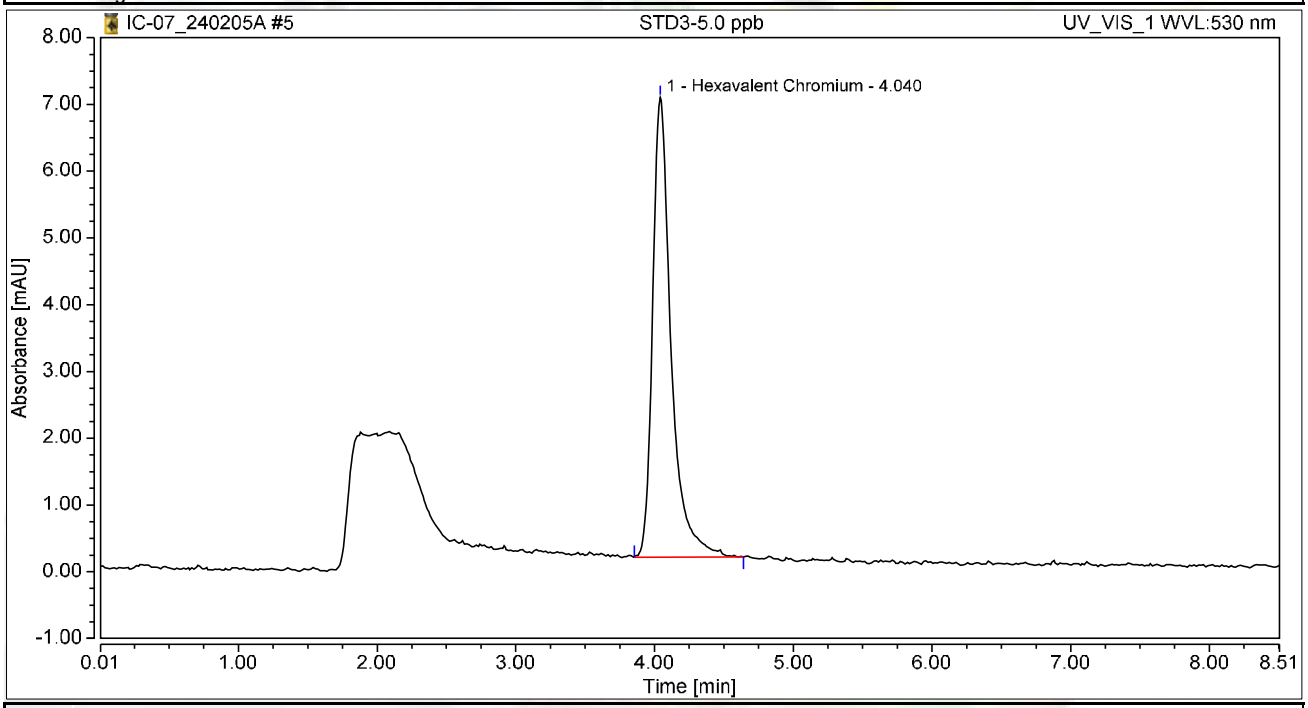
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.198	1.367	100.00	100.00	0.9223
Total:			**0.198**	**1.367**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

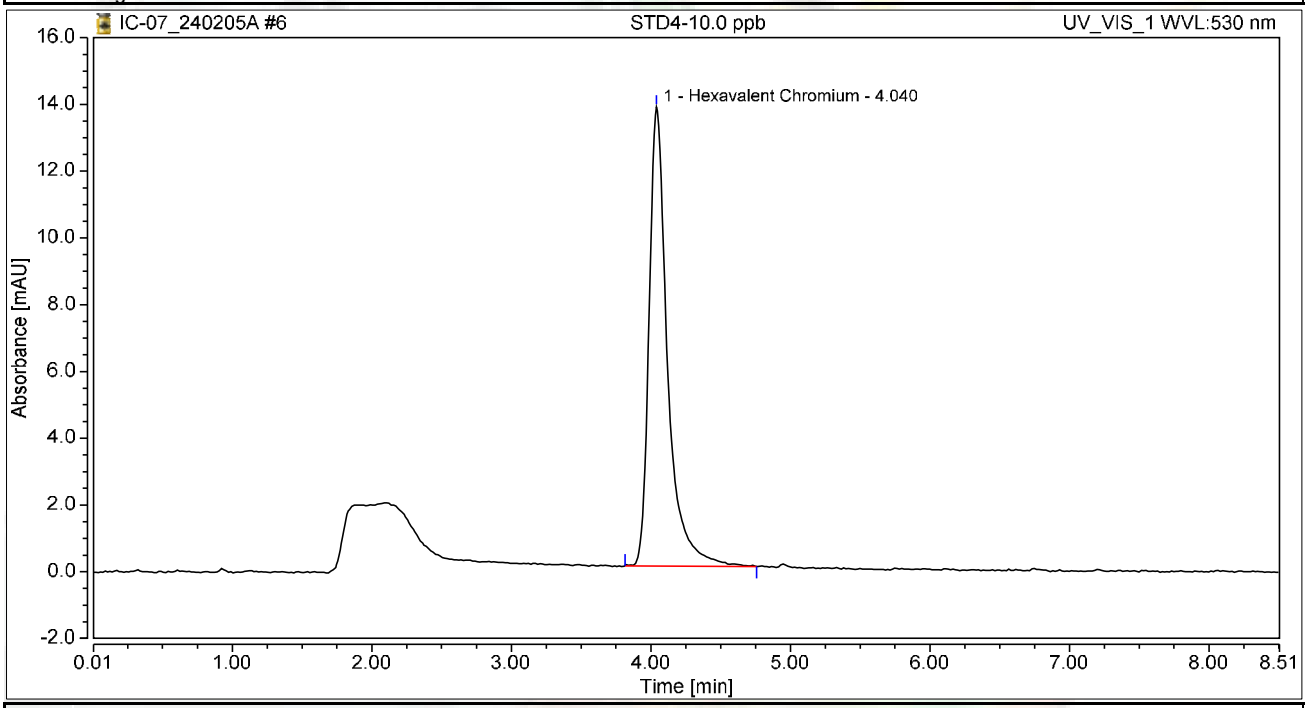
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.064	6.885	100.00	100.00	4.9461
Total:			**1.064**	**6.885**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

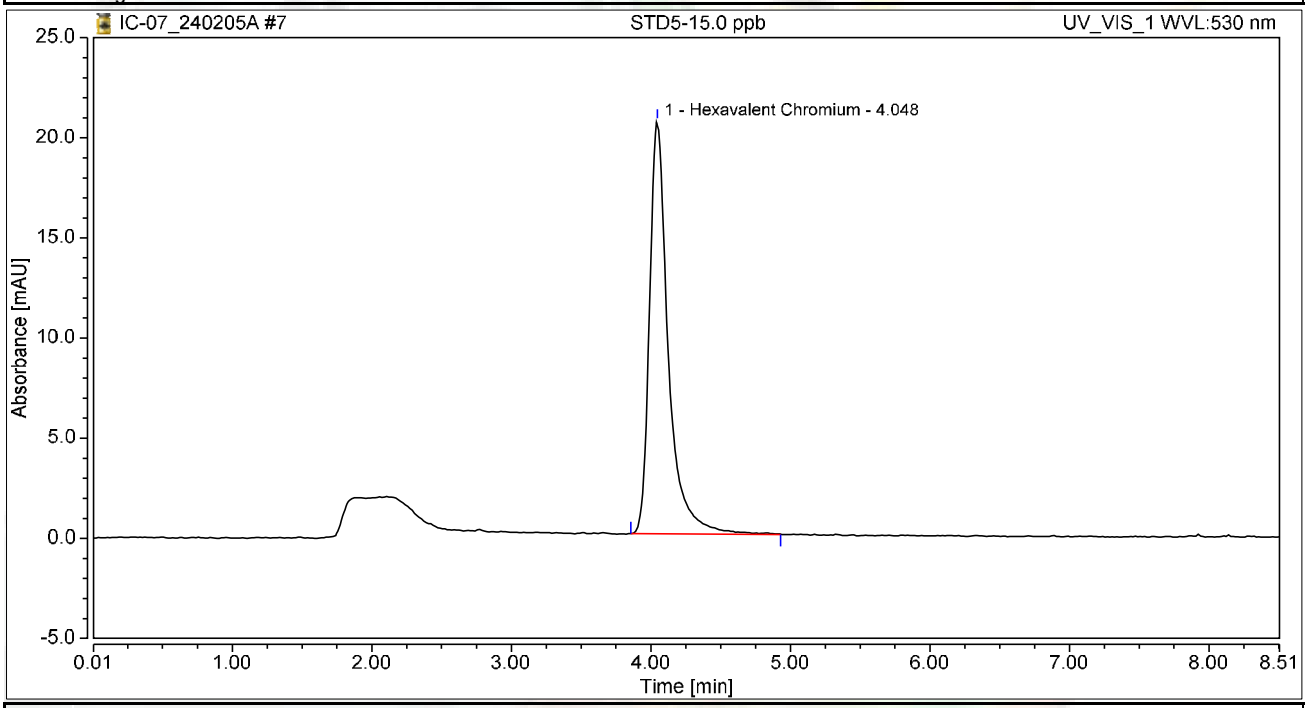
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.116	13.748	100.00	100.00	9.8357
Total:			**2.116**	**13.748**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

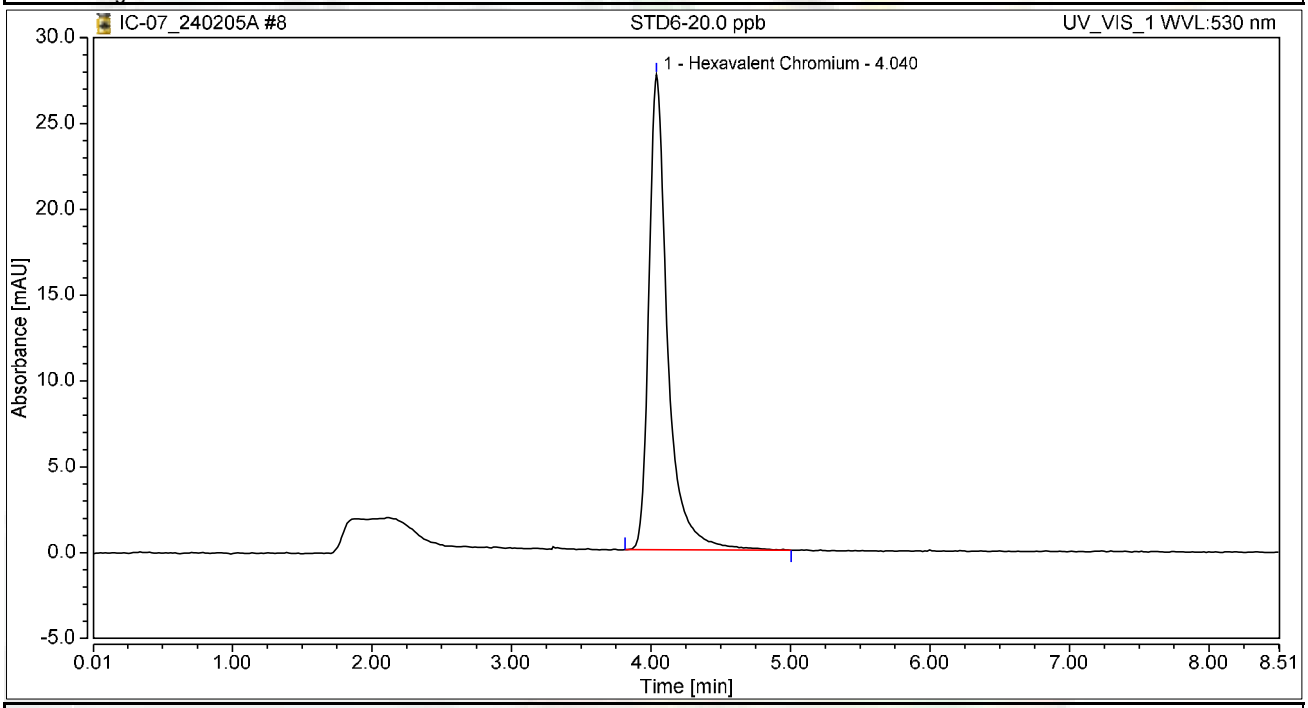
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	3.227	20.605	100.00	100.00	15.0023
Total:			**3.227**	**20.605**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:08**	*Sample Weight:*	**1.0000**

Chromatogram



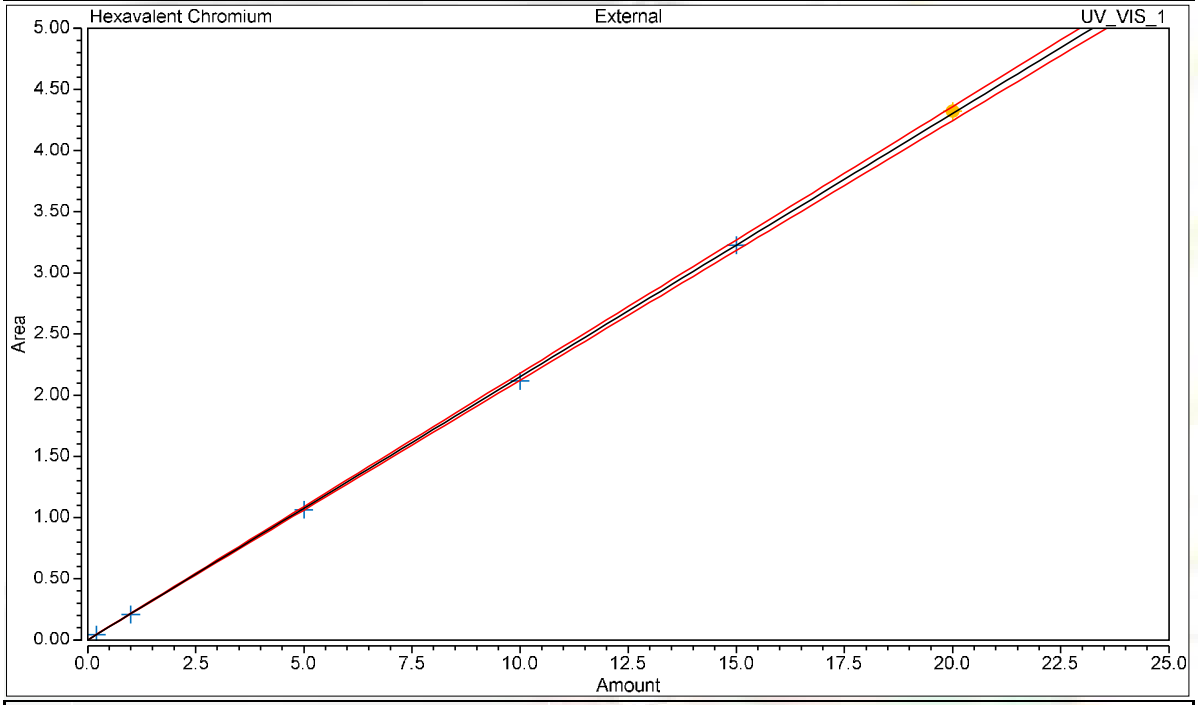
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	4.323	27.676	100.00	100.00	20.0959
Total:			**4.323**	**27.676**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2151
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99987

Calibration Plot — Hexavalent Chromium



Calibration Results — Hexavalent Chromium

No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0427	0.043	0.313
4	STD2-1.0 ppb	02	1.0000	0.2063	0.206	1.377
5	STD3-5.0 ppb	03	5.0000	1.0639	1.064	6.885
6	STD4-10.0 ppb	04	10.0000	2.1157	2.116	13.748
7	STD5-15.0 ppb	05	15.0000	3.2270	3.227	20.605
8	STD6-20.0 ppb	06	20.0000	4.3227	4.323	27.676

Reviewed by:

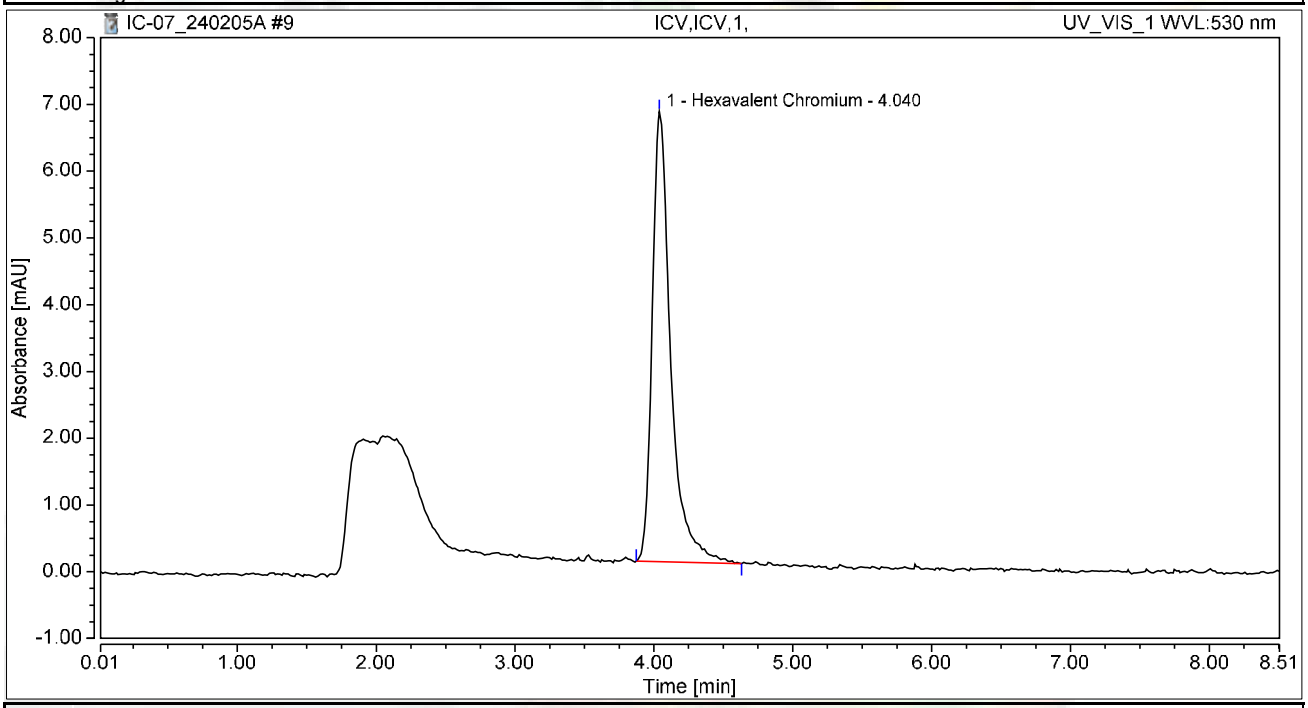
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

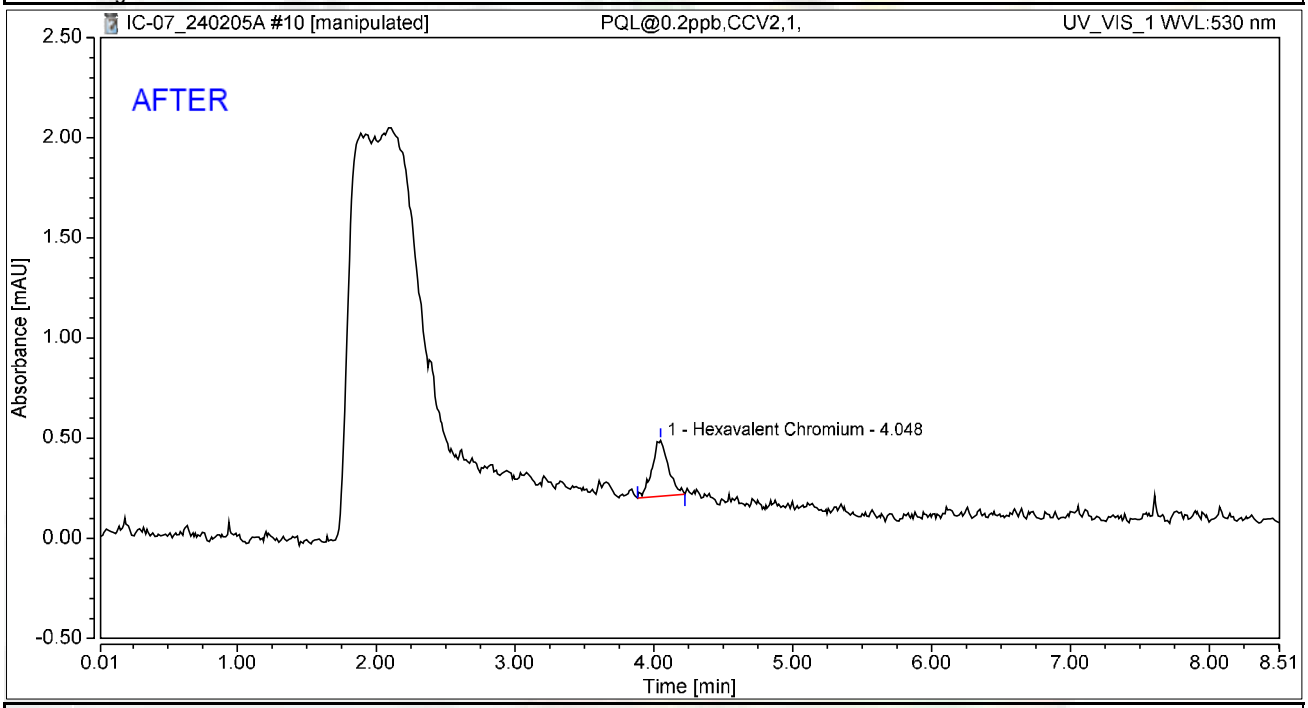
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.040	6.743	100.00	100.00	4.8342
Total:			**1.040**	**6.743**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.039	0.279	100.00	100.00	0.1802
Total:			**0.039**	**0.279**	**100.00**	**100.00**	

Reviewed by:

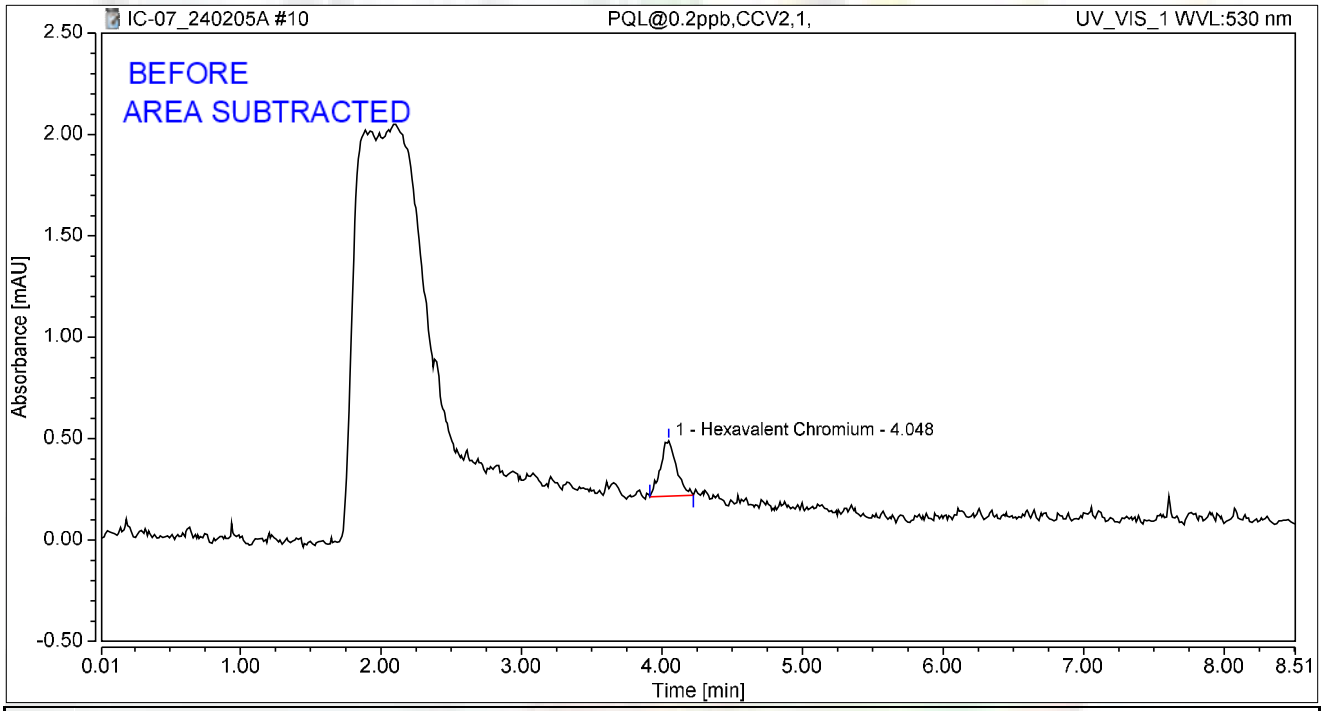
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

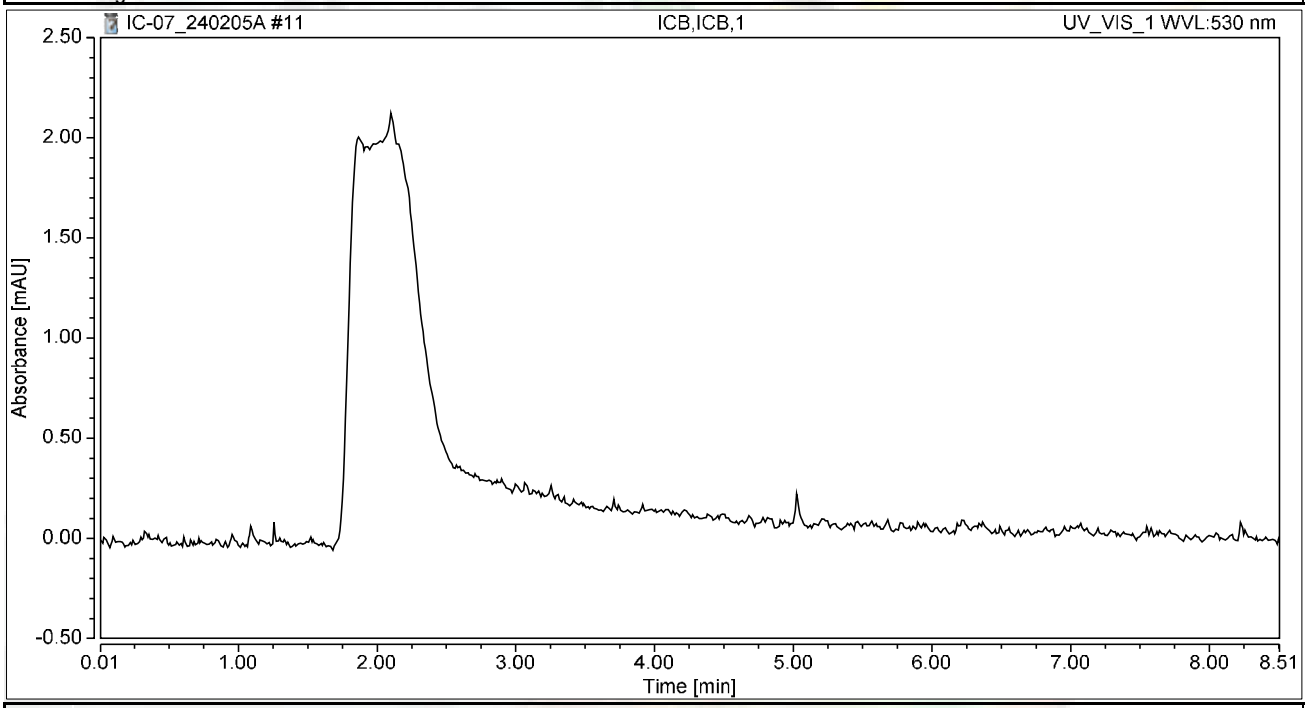
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.036	0.273	100.00	100.00	0.1694
Total:			**0.036**	**0.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

JRB 2/19/2024

RAW DATA

INJECTION LOG: 240222A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/22/24 8:37 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/22/24 8:51 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/22/24 9:00 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/22/24 9:10 AM	Reported
13	MB-R182897	MBLK	1	Hexavalent Chromium	02/22/24 9:19 AM	Reported
14	LCS-R182897	LCS	1	Hexavalent Chromium	02/22/24 9:29 AM	Reported
15	N063214-010A	SAMP	1	Hexavalent Chromium	02/22/24 9:38 AM	Reported
16	N063214-010AMS	MS	1	Hexavalent Chromium	02/22/24 9:48 AM	Reported
17	N063214-014A	SAMP	1	Hexavalent Chromium	02/22/24 9:57 AM	Reported
18	N063214-014AMS	MS	1	Hexavalent Chromium	02/22/24 10:07 AM	Reported
19	N063214-016A	SAMP	1	Hexavalent Chromium	02/22/24 10:16 AM	Reported
20	N063214-016AMS	MS	1	Hexavalent Chromium	02/22/24 10:26 AM	Reported
21	N063214-014AMSD	MSD	1	Hexavalent Chromium	02/22/24 10:35 AM	Reported
22	N063214-010ADUP	DUP	1	Hexavalent Chromium	02/22/24 10:45 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/22/24 10:54 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/22/24 11:03 AM	Reported
25	N063214-011A	SAMP	1	Hexavalent Chromium	02/22/24 11:13 AM	Reported
26	N063214-011AMS	MS	1	Hexavalent Chromium	02/22/24 11:22 AM	Reported
27	N063214-012A	SAMP	1	Hexavalent Chromium	02/22/24 11:32 AM	Not Reported
28	N063214-012AMS	MS	1	Hexavalent Chromium	02/22/24 11:41 AM	Not Reported
29	N063214-013A	SAMP	1	Hexavalent Chromium	02/22/24 11:51 AM	Not Reported
30	N063214-013AMS	MS	1	Hexavalent Chromium	02/22/24 12:00 PM	Not Reported
31	N063214-009A	SAMP	1	Hexavalent Chromium	02/22/24 12:10 PM	Reported
32	N063214-009AMS	MS	1	Hexavalent Chromium	02/22/24 12:19 PM	Reported
33	N063214-015A	SAMP	1	Hexavalent Chromium	02/22/24 12:29 PM	Reported
34	N063214-015AMS	MS	1	Hexavalent Chromium	02/22/24 12:38 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/22/24 12:47 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/22/24 12:57 PM	Reported
37	N063214-017A	SAMP	1	Hexavalent Chromium	02/22/24 1:06 PM	Not Reported
38	N063214-017AMS	MS	1	Hexavalent Chromium	02/22/24 1:16 PM	Not Reported
39	N063214-018A	SAMP	1	Hexavalent Chromium	02/22/24 2:14 PM	Reported
40	N063214-018AMS	MS	1	Hexavalent Chromium	02/22/24 2:24 PM	Reported
41	N063214-011A	SAMP	5	Hexavalent Chromium	02/22/24 2:34 PM	Not Reported
42	N063214-011AMS	MS	5	Hexavalent Chromium	02/22/24 2:43 PM	Not Reported

Reviewed by:

RB 2/28/2024

INJECTION LOG: 240222A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063214-012A	SAMP	5	Hexavalent Chromium	02/22/24 2:53 PM	Reported
44	N063214-012AMS	MS	5	Hexavalent Chromium	02/22/24 3:02 PM	Reported
45	N063214-013A	SAMP	5	Hexavalent Chromium	02/22/24 3:12 PM	Reported
46	N063214-013AMS	MS	5	Hexavalent Chromium	02/22/24 3:21 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/22/24 3:31 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/22/24 3:40 PM	Reported
49	N063249-001A	SAMP	1	Hexavalent Chromium	02/22/24 4:02 PM	Not Reported
50	N063249-001AMS	MS	1	Hexavalent Chromium	02/22/24 4:13 PM	Not Reported
51	N063249-003A	SAMP	1	Hexavalent Chromium	02/22/24 4:22 PM	Not Reported
52	N063249-003AMS	MS	1	Hexavalent Chromium	02/22/24 4:32 PM	Not Reported
53	N063249-004A	SAMP	1	Hexavalent Chromium	02/22/24 4:41 PM	Not Reported
54	N063249-004AMS	MS	1	Hexavalent Chromium	02/22/24 4:51 PM	Not Reported
55	N063249-005A	SAMP	1	Hexavalent Chromium	02/22/24 5:00 PM	Not Reported
56	N063249-005AMS	MS	1	Hexavalent Chromium	02/22/24 5:10 PM	Not Reported
57	N063249-007A	SAMP	1	Hexavalent Chromium	02/22/24 5:19 PM	Not Reported
58	N063249-007AMS	MS	1	Hexavalent Chromium	02/22/24 5:29 PM	Not Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/22/24 5:38 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/22/24 5:47 PM	Reported
61	N063249-009A	SAMP	1	Hexavalent Chromium	02/22/24 5:57 PM	Not Reported
62	N063249-009AMS	MS	1	Hexavalent Chromium	02/22/24 6:10 PM	Not Reported
63	N063249-002A	SAMP	1	Hexavalent Chromium	02/22/24 6:20 PM	Reported
64	N063249-002AMS	MS	1	Hexavalent Chromium	02/22/24 6:29 PM	Reported
65	N063249-006A	SAMP	1	Hexavalent Chromium	02/22/24 6:42 PM	Reported
66	N063249-006AMS	MS	1	Hexavalent Chromium	02/22/24 6:51 PM	Reported
67	N063249-008A	SAMP	1	Hexavalent Chromium	02/22/24 7:01 PM	Reported
68	N063249-008AMS	MS	1	Hexavalent Chromium	02/22/24 7:10 PM	Reported
69	N063249-010A	SAMP	1	Hexavalent Chromium	02/22/24 7:20 PM	Reported
70	N063249-010AMS	MS	1	Hexavalent Chromium	02/22/24 7:29 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/22/24 7:39 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/22/24 7:48 PM	Reported
73	N063249-001A	SAMP	5	Hexavalent Chromium	02/22/24 7:57 PM	Reported
74	N063249-001AMS	MS	5	Hexavalent Chromium	02/22/24 8:07 PM	Reported
75	N063249-003A	SAMP	5	Hexavalent Chromium	02/22/24 8:16 PM	Reported
76	N063249-003AMS	MS	5	Hexavalent Chromium	02/22/24 8:26 PM	Reported
77	N063249-004A	SAMP	5	Hexavalent Chromium	02/22/24 8:35 PM	Reported
78	N063249-004AMS	MS	5	Hexavalent Chromium	02/22/24 8:45 PM	Reported
79	N063249-005A	SAMP	5	Hexavalent Chromium	02/22/24 8:54 PM	Reported
80	N063249-005AMS	MS	5	Hexavalent Chromium	02/22/24 9:04 PM	Reported
81	N063249-007A	SAMP	5	Hexavalent Chromium	02/22/24 9:13 PM	Reported
82	N063249-007AMS	MS	5	Hexavalent Chromium	02/22/24 9:23 PM	Reported
83	CCV-7	CCV	1	Hexavalent Chromium	02/22/24 9:32 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	02/22/24 9:41 PM	Reported

INJECTION LOG: 240222A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063249-009A	SAMP	5	Hexavalent Chromium	02/22/24 9:51 PM	Reported
86	N063249-009AMS	MS	5	Hexavalent Chromium	02/22/24 10:00 PM	Reported
87	N063214-008A	SAMP	1	Hexavalent Chromium	02/22/24 10:10 PM	Reported
88	N063214-008AMS	MS	1	Hexavalent Chromium	02/22/24 10:19 PM	Reported
89	CCV-8	CCV1	1	Hexavalent Chromium	02/22/24 10:29 PM	Reported
90	CCB-8	CCB	1	Hexavalent Chromium	02/22/24 10:38 PM	Reported
91	BLANK	BLANK	1	Hexavalent Chromium	02/22/24 10:48 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240222A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**22/Feb/24 23:18:26**
No. of Injections:	**94**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/22/2024 08:37	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/22/2024 08:51	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/22/2024 09:00	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/22/2024 09:10	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/22/2024 09:19	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/22/2024 09:29	Finished	LCS @5ppb, IWST-231228B
15	N063214-010A,SAMP	7	1000	Unknown		02/22/2024 09:38	Finished	SAMP,10 mL
16	N063214-010AMS,MS	8	1000	Unknown		02/22/2024 09:48	Finished	MS (1ppb), IWST-231228B,10r
17	N063214-014A,SAMP	9	1000	Unknown		02/22/2024 09:57	Finished	SAMP,10 mL
18	N063214-014AMS,MS	10	1000	Unknown		02/22/2024 10:07	Finished	MS (1ppb), IWST-231228B,10r
19	N063214-016A,SAMP	11	1000	Unknown		02/22/2024 10:16	Finished	SAMP,10 mL
20	N063214-016AMS,MS	12	1000	Unknown		02/22/2024 10:26	Finished	MS (1ppb), IWST-231228B,10r
21	N063214-014AMSD,M	13	1000	Unknown		02/22/2024 10:35	Finished	MSD (1ppb), IWST-231228B,1(
22	N063214-010ADUP,D	14	1000	Unknown		02/22/2024 10:45	Finished	DUP,10 mL
23	CCV-2,CCV1,1,	15	1000	Unknown		02/22/2024 10:54	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		02/22/2024 11:03	Finished	CCB R240129C
25	N063214-011A,SAMP	17	1000	Unknown		02/22/2024 11:13	Finished	SAMP,10 mL
26	N063214-011AMS,MS	18	1000	Unknown		02/22/2024 11:22	Finished	MS (1ppb), IWST-231228B,10r
27	N063214-012A,SAMP	19	1000	Unknown		02/22/2024 11:32	Finished	SAMP,10 mL
28	N063214-012AMS,MS	20	1000	Unknown		02/22/2024 11:41	Finished	MS (1ppb), IWST-231228B,10r
29	N063214-013A,SAMP	21	1000	Unknown		02/22/2024 11:51	Finished	SAMP,10 mL
30	N063214-013AMS,MS	22	1000	Unknown		02/22/2024 12:00	Finished	MS (1ppb), IWST-231228B,10r
31	N063214-009A,SAMP	23	1000	Unknown		02/22/2024 12:10	Finished	SAMP,10 mL
32	N063214-009AMS,MS	24	1000	Unknown		02/22/2024 12:19	Finished	MS (1ppb), IWST-231228B,10r
33	N063214-015A,SAMP	25	1000	Unknown		02/22/2024 12:29	Finished	SAMP,10 mL
34	N063214-015AMS,MS	26	1000	Unknown		02/22/2024 12:38	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	27	1000	Unknown		02/22/2024 12:47	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	28	1000	Unknown		02/22/2024 12:57	Finished	CCB R240129C
37	N063214-017A,SAMP	29	1000	Unknown		02/22/2024 13:06	Finished	SAMP,10 mL
38	N063214-017AMS,MS	30	1000	Unknown		02/22/2024 13:16	Interrupted	MS (1ppb), IWST-231228B,10r
39	N063214-018A,SAMP	1	1000	Unknown		02/22/2024 14:14	Finished	SAMP,10 mL
40	N063214-018AMS,MS	2	1000	Unknown		02/22/2024 14:24	Finished	MS (1ppb), IWST-231228B,10r
41	N063214-011A,SAMP	3	1000	Unknown		02/22/2024 14:34	Finished	SAMP,2>10 mL
42	N063214-011AMS,MS	4	1000	Unknown		02/22/2024 14:43	Finished	MS (1ppb), IWST-231228B,2>1
43	N063214-012A,SAMP	5	1000	Unknown		02/22/2024 14:53	Finished	SAMP,2>10 mL
44	N063214-012AMS,MS	6	1000	Unknown		02/22/2024 15:02	Finished	MS (1ppb), IWST-231228B,2>1
45	N063214-013A,SAMP	7	1000	Unknown		02/22/2024 15:12	Finished	SAMP,2>10 mL
46	N063214-013AMS,MS	8	1000	Unknown		02/22/2024 15:21	Finished	MS (1ppb), IWST-231228B,2>1
47	CCV-4,CCV1,1,	9	1000	Unknown		02/22/2024 15:31	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	10	1000	Unknown		02/22/2024 15:40	Finished	CCB R240129C
49	N063249-001A,SAMP	1	1000	Unknown		02/22/2024 16:02	Finished	SAMP,10 mL
50	N063249-001AMS,MS	2	1000	Unknown		02/22/2024 16:13	Finished	MS (1ppb), IWST-231228B,10r
51	N063249-003A,SAMP	3	1000	Unknown		02/22/2024 16:22	Finished	SAMP,10 mL
52	N063249-003AMS,MS	4	1000	Unknown		02/22/2024 16:32	Finished	MS (1ppb), IWST-231228B,10r
53	N063249-004A,SAMP	5	1000	Unknown		02/22/2024 16:41	Finished	SAMP,10 mL
54	N063249-004AMS,MS	6	1000	Unknown		02/22/2024 16:51	Finished	MS (1ppb), IWST-231228B,10r
55	N063249-005A,SAMP	7	1000	Unknown		02/22/2024 17:00	Finished	SAMP,10 mL
56	N063249-005AMS,MS	8	1000	Unknown		02/22/2024 17:10	Finished	MS (1ppb), IWST-231228B,10r
57	N063249-007A,SAMP	9	1000	Unknown		02/22/2024 17:19	Finished	SAMP,10 mL
58	N063249-007AMS,MS	10	1000	Unknown		02/22/2024 17:29	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	11	1000	Unknown		02/22/2024 17:38	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	12	1000	Unknown		02/22/2024 17:47	Finished	CCB R240129C

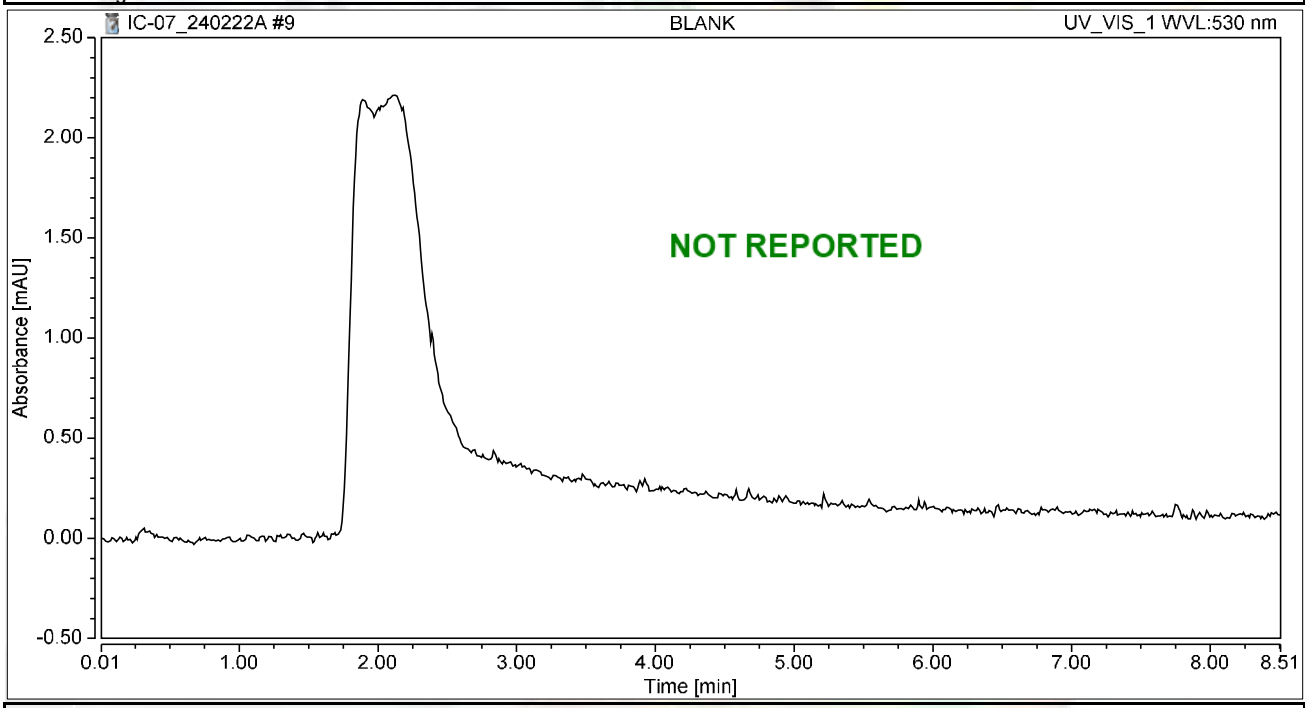
61	N063249-009A,SAMP	13	1000	Unknown		02/22/2024 17:57	Finished	SAMP,10 mL
62	N063249-009AMS,MS	14	1000	Unknown		02/22/2024 18:10	Finished	MS (1ppb), IWST-231228B,10r
63	N063249-002A,SAMP	15	1000	Unknown		02/22/2024 18:20	Finished	SAMP,10 mL
64	N063249-002AMS,MS	16	1000	Unknown		02/22/2024 18:29	Finished	MS (1ppb), IWST-231228B,10r
65	N063249-006A,SAMP	17	1000	Unknown		02/22/2024 18:42	Finished	SAMP,10 mL
66	N063249-006AMS,MS	18	1000	Unknown		02/22/2024 18:51	Finished	MS (1ppb), IWST-231228B,10r
67	N063249-008A,SAMP	19	1000	Unknown		02/22/2024 19:01	Finished	SAMP,10 mL
68	N063249-008AMS,MS	20	1000	Unknown		02/22/2024 19:10	Finished	MS (1ppb), IWST-231228B,10r
69	N063249-010A,SAMP	21	1000	Unknown		02/22/2024 19:20	Finished	SAMP,10 mL
70	N063249-010AMS,MS	22	1000	Unknown		02/22/2024 19:29	Finished	MS (1ppb), IWST-231228B,10r
71	CCV-6,CCV1,1,	23	1000	Unknown		02/22/2024 19:39	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	24	1000	Unknown		02/22/2024 19:48	Finished	CCB R240129C
73	N063249-001A,SAMP	25	1000	Unknown		02/22/2024 19:57	Finished	SAMP,2>10 mL
74	N063249-001AMS,MS	26	1000	Unknown		02/22/2024 20:07	Finished	MS (1ppb), IWST-231228B,2>1
75	N063249-003A,SAMP	27	1000	Unknown		02/22/2024 20:16	Finished	SAMP,2>10 mL
76	N063249-003AMS,MS	28	1000	Unknown		02/22/2024 20:26	Finished	MS (1ppb), IWST-231228B,2>1
77	N063249-004A,SAMP	29	1000	Unknown		02/22/2024 20:35	Finished	SAMP,2>10 mL
78	N063249-004AMS,MS	30	1000	Unknown		02/22/2024 20:45	Finished	MS (1ppb), IWST-231228B,2>1
79	N063249-005A,SAMP	31	1000	Unknown		02/22/2024 20:54	Finished	SAMP,2>10 mL
80	N063249-005AMS,MS	32	1000	Unknown		02/22/2024 21:04	Finished	MS (1ppb), IWST-231228B,2>1
81	N063249-007A,SAMP	33	1000	Unknown		02/22/2024 21:13	Finished	SAMP,2>10 mL
82	N063249-007AMS,MS	34	1000	Unknown		02/22/2024 21:23	Finished	MS (1ppb), IWST-231228B,2>1
83	CCV-7,CCV,1,	35	1000	Unknown		02/22/2024 21:32	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	36	1000	Unknown		02/22/2024 21:41	Finished	CCB R240129C
85	N063249-009A,SAMP	37	1000	Unknown		02/22/2024 21:51	Finished	SAMP,2>10 mL
86	N063249-009AMS,MS	38	1000	Unknown		02/22/2024 22:00	Finished	MS (1ppb), IWST-231228B,2>1
87	N063214-008A,SAMP	39	1000	Unknown		02/22/2024 22:10	Finished	SAMP,10 mL
88	N063214-008AMS,MS	40	1000	Unknown		02/22/2024 22:19	Finished	MS (1ppb), IWST-231228B,10r
89	CCV-8,CCV1,1,	41	1000	Unknown		02/22/2024 22:29	Finished	CCV @10ppb, IWST-231228A
90	CCB-8,CCB,1,	42	1000	Unknown		02/22/2024 22:38	Finished	CCB R240129C
91	BLANK	43	1000	Unknown		02/22/2024 22:48	Finished	BLANK
92	SHUTDOWN	44	1000	Unknown		02/22/2024 22:57	Finished	
93	Eluent: R240222A	45	1000	Unknown		n.a.	Finished	
94	PCR: R240222B	46	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 08:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

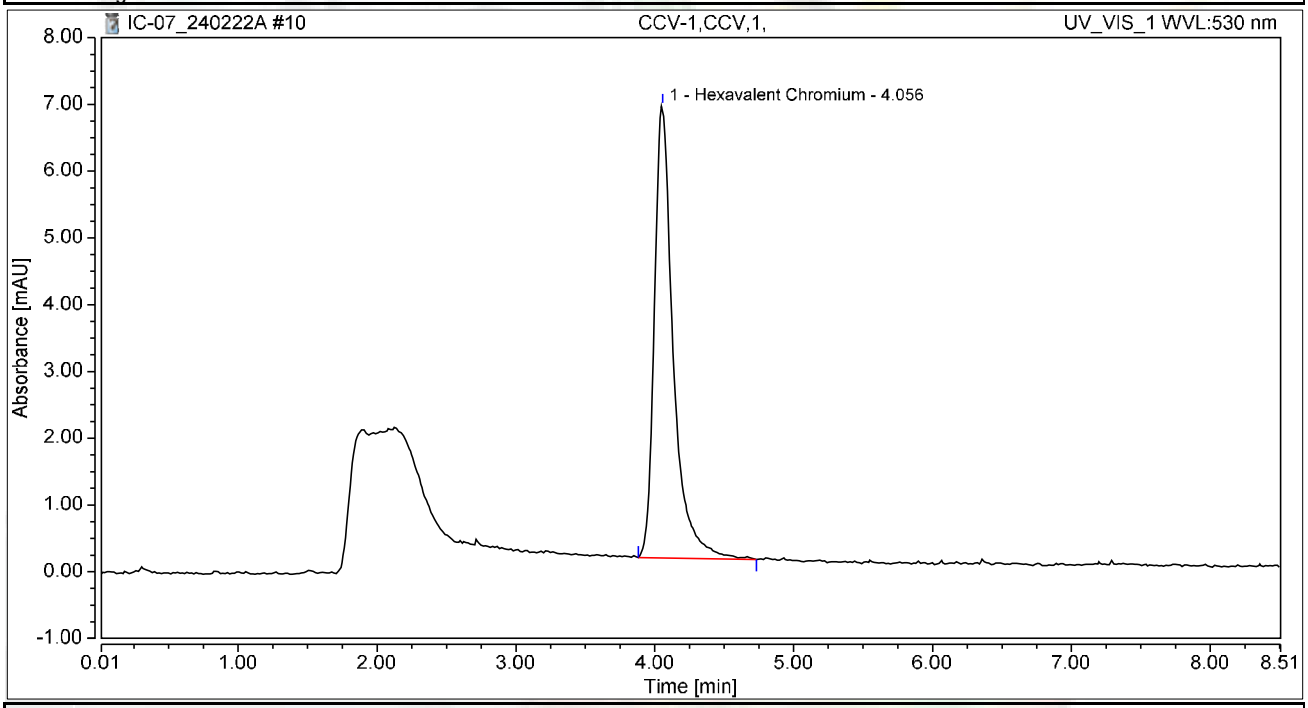
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 08:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.068	6.773	100.00	100.00	4.9648
Total:			**1.068**	**6.773**	**100.00**	**100.00**	

Reviewed by:

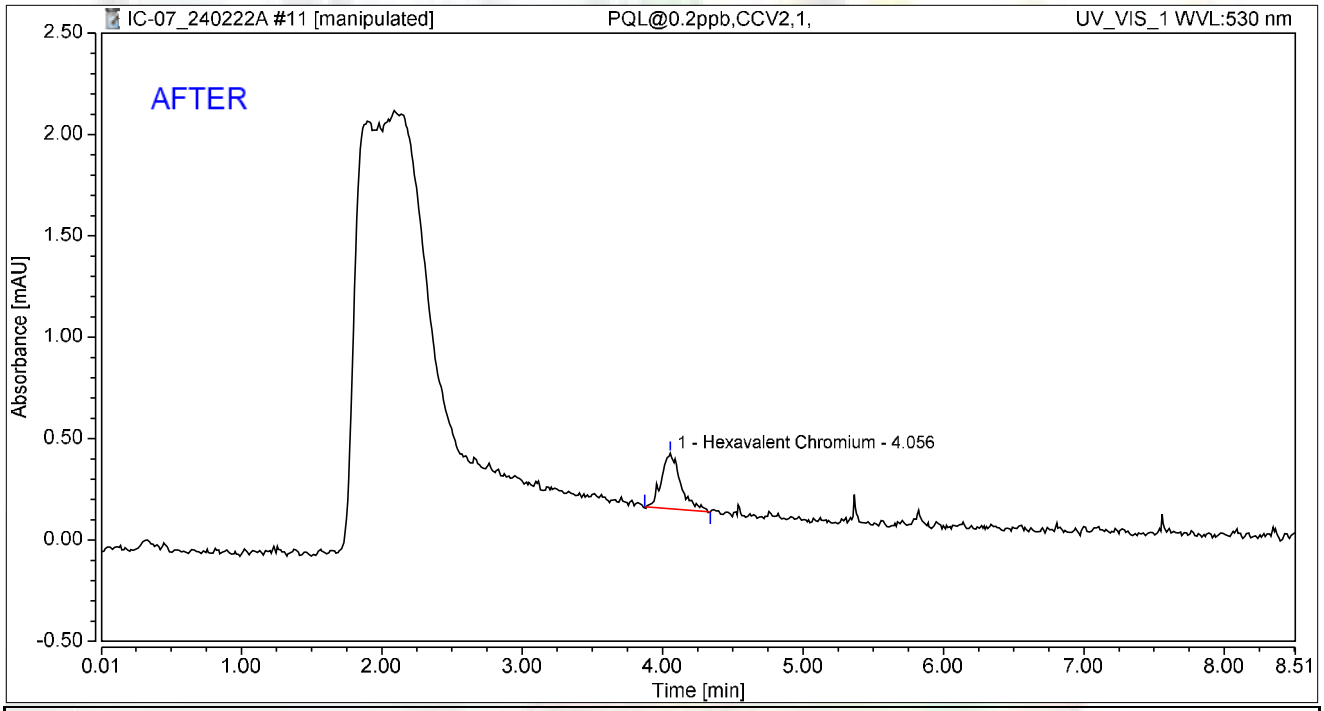
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 09:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.044	0.274	100.00	100.00	0.2023
Total:			**0.044**	**0.274**	**100.00**	**100.00**	

Reviewed by:

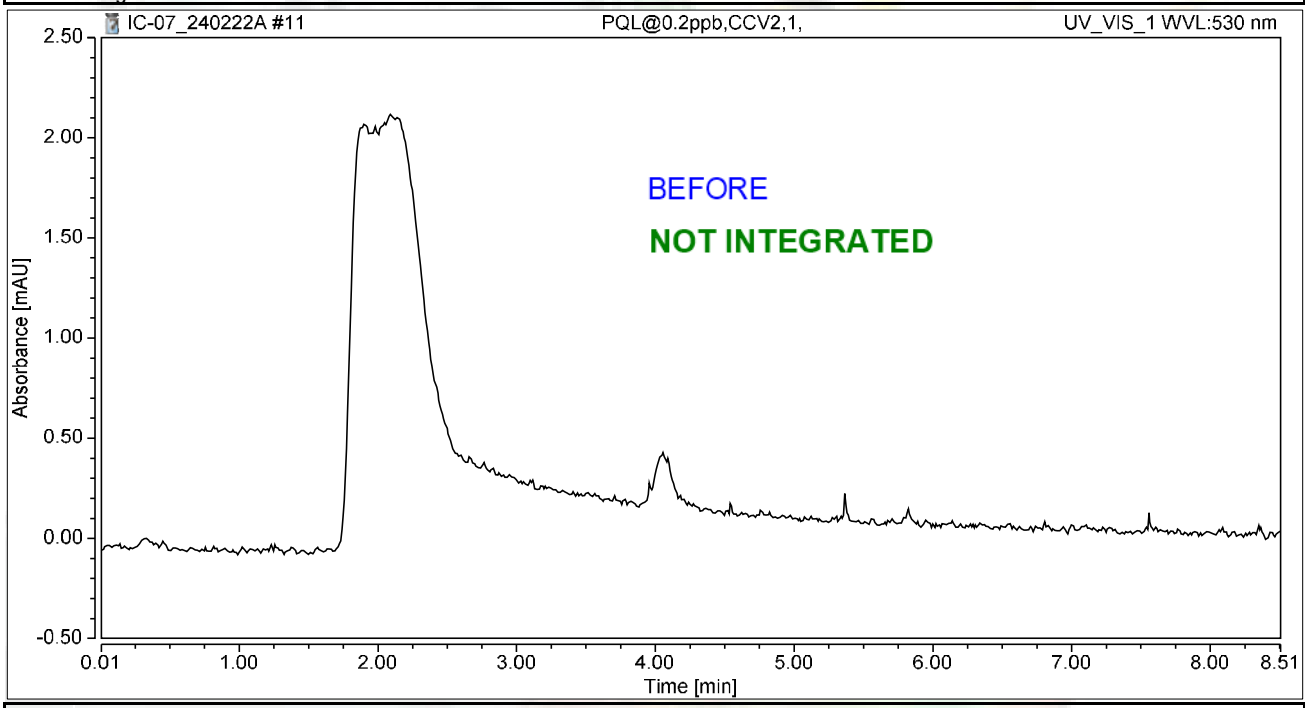
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 09:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

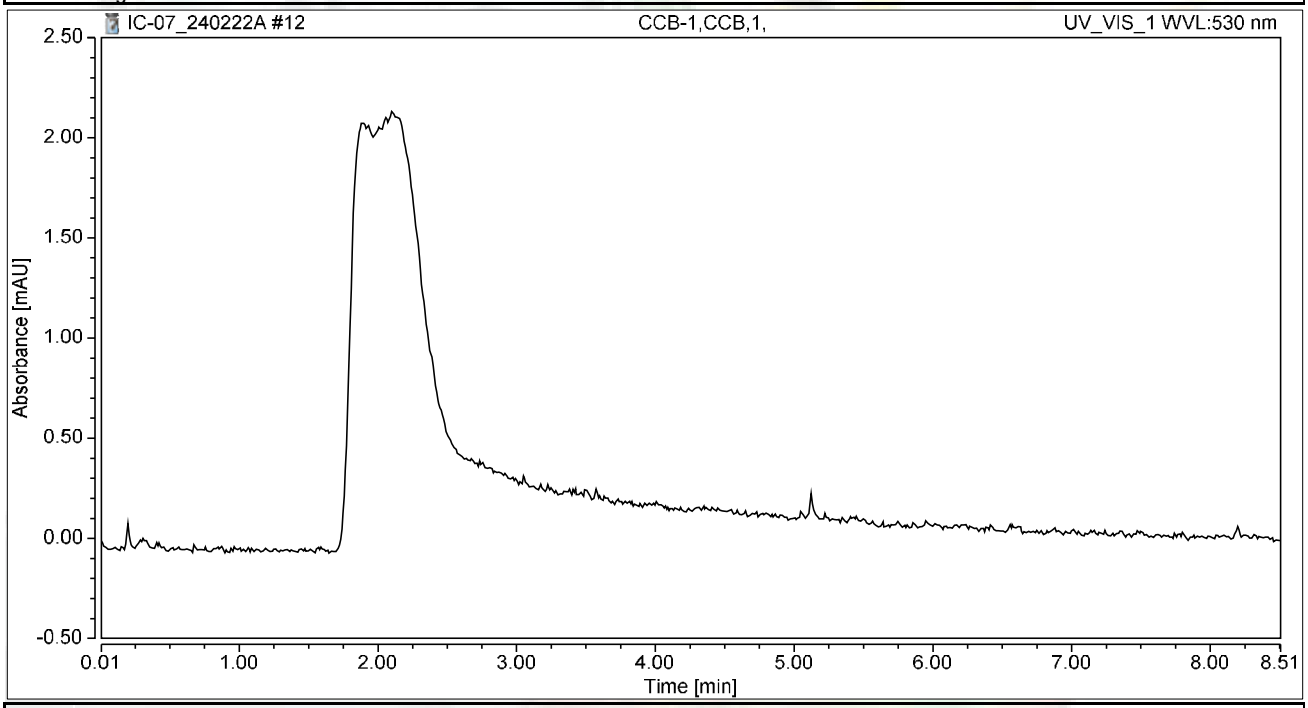
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 09:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

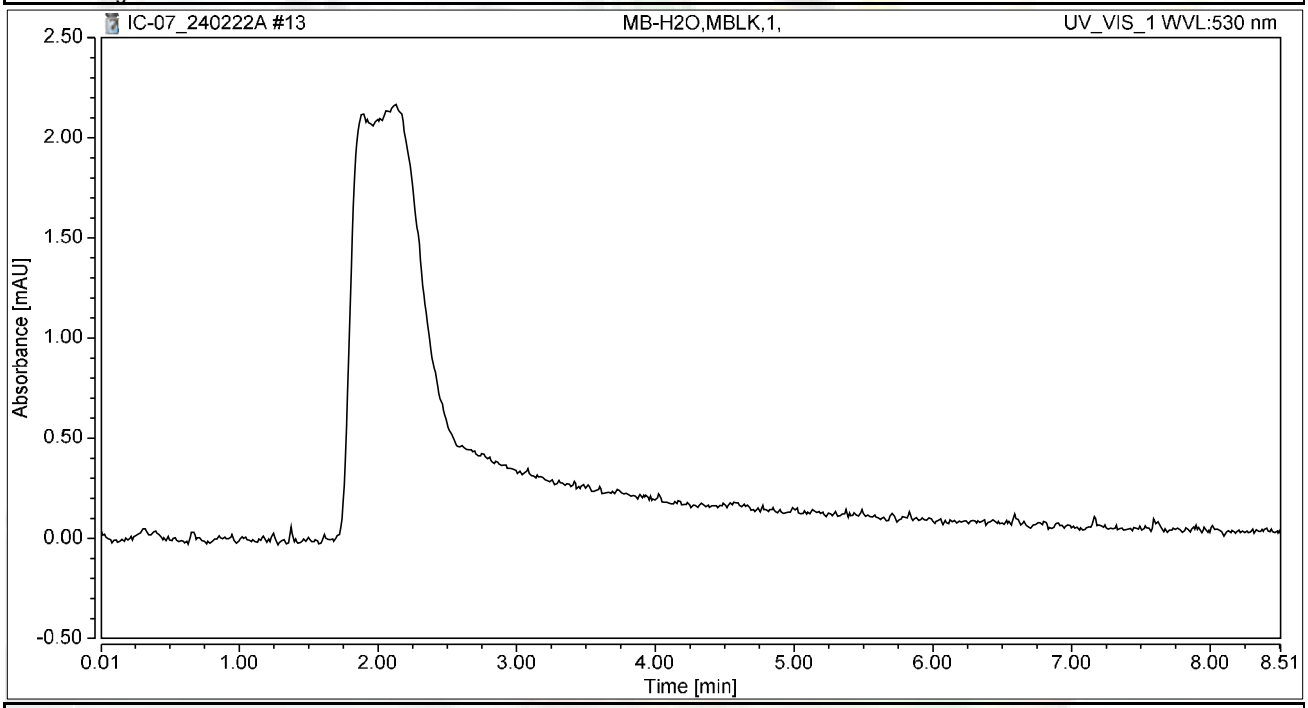
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 09:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

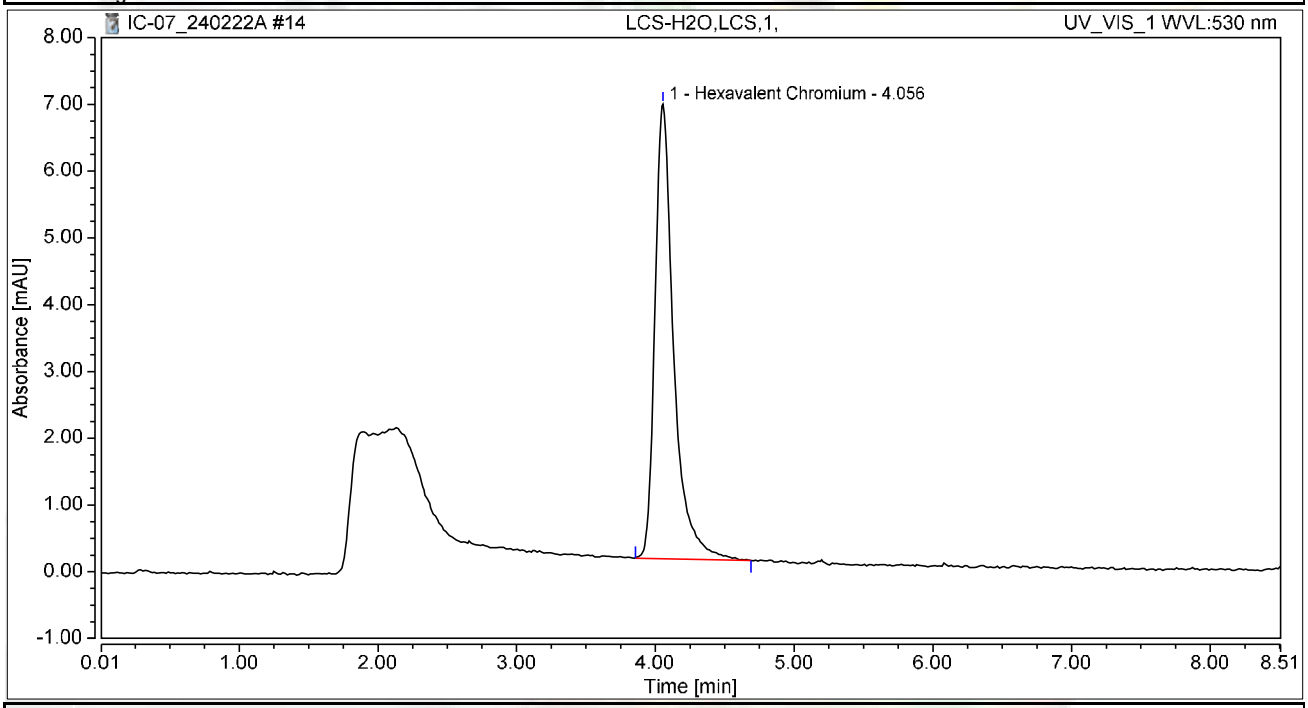
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 09:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

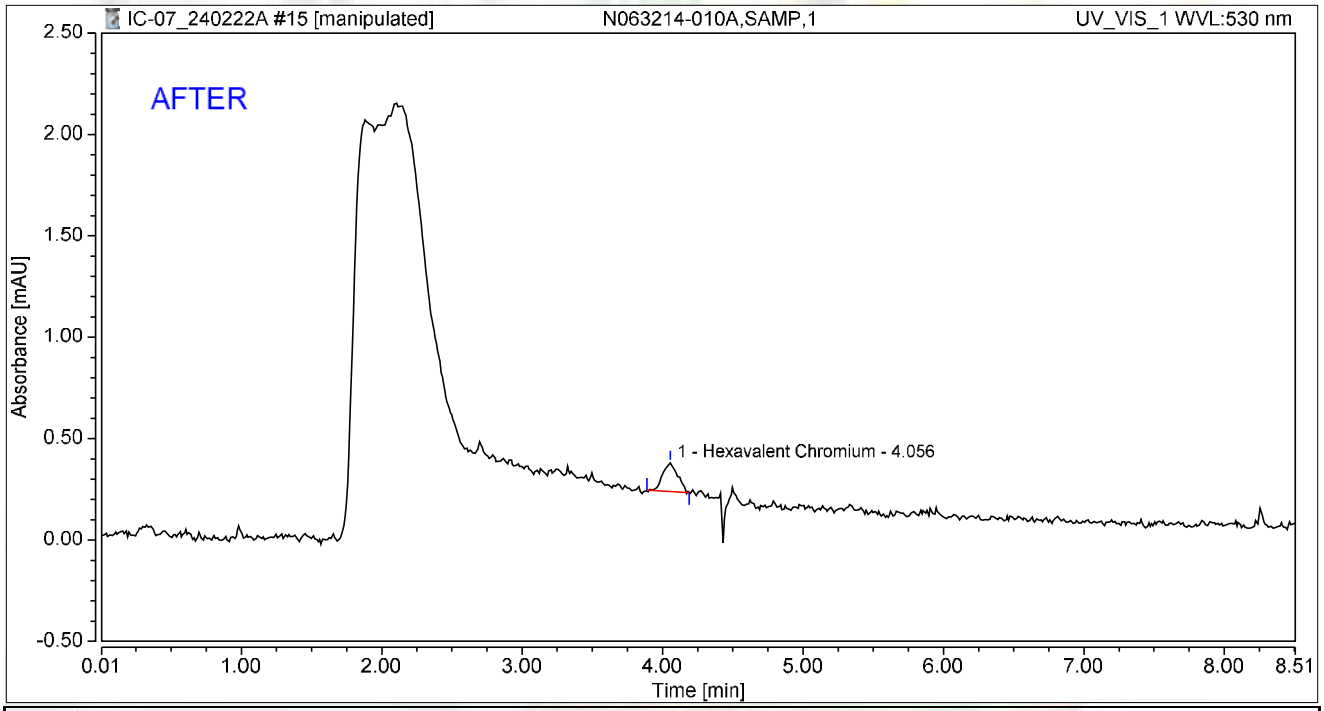
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.068	6.810	100.00	100.00	4.9673
Total:			**1.068**	**6.810**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-010A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 09:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.017	0.141	100.00	100.00	0.0811
Total:			**0.017**	**0.141**	**100.00**	**100.00**	

Reviewed by:

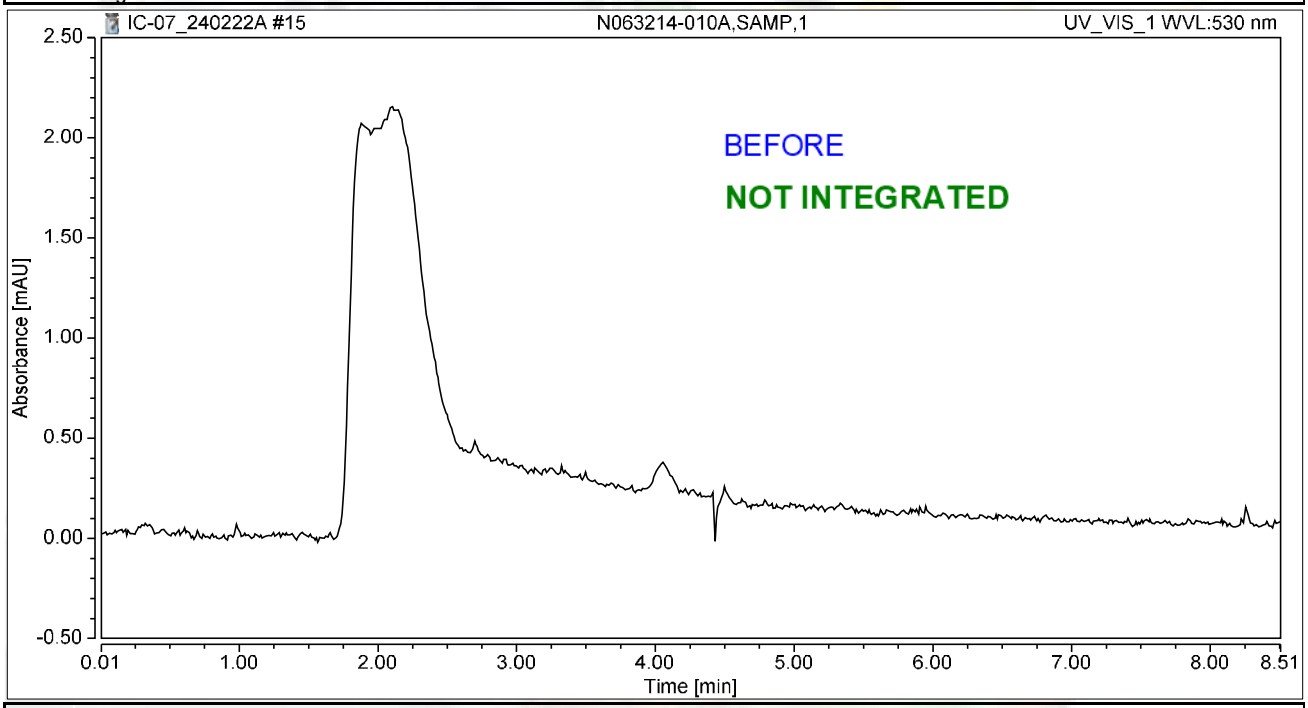
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063214-010A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 09:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

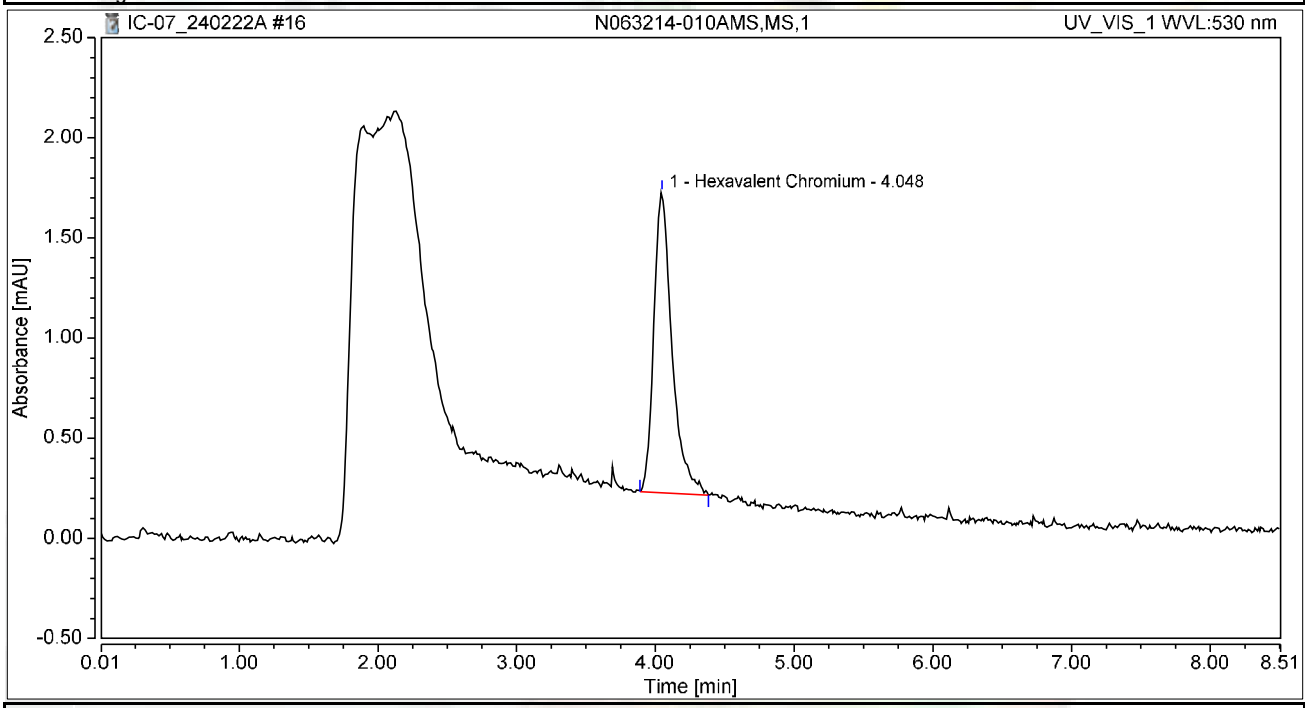
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-010AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 09:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

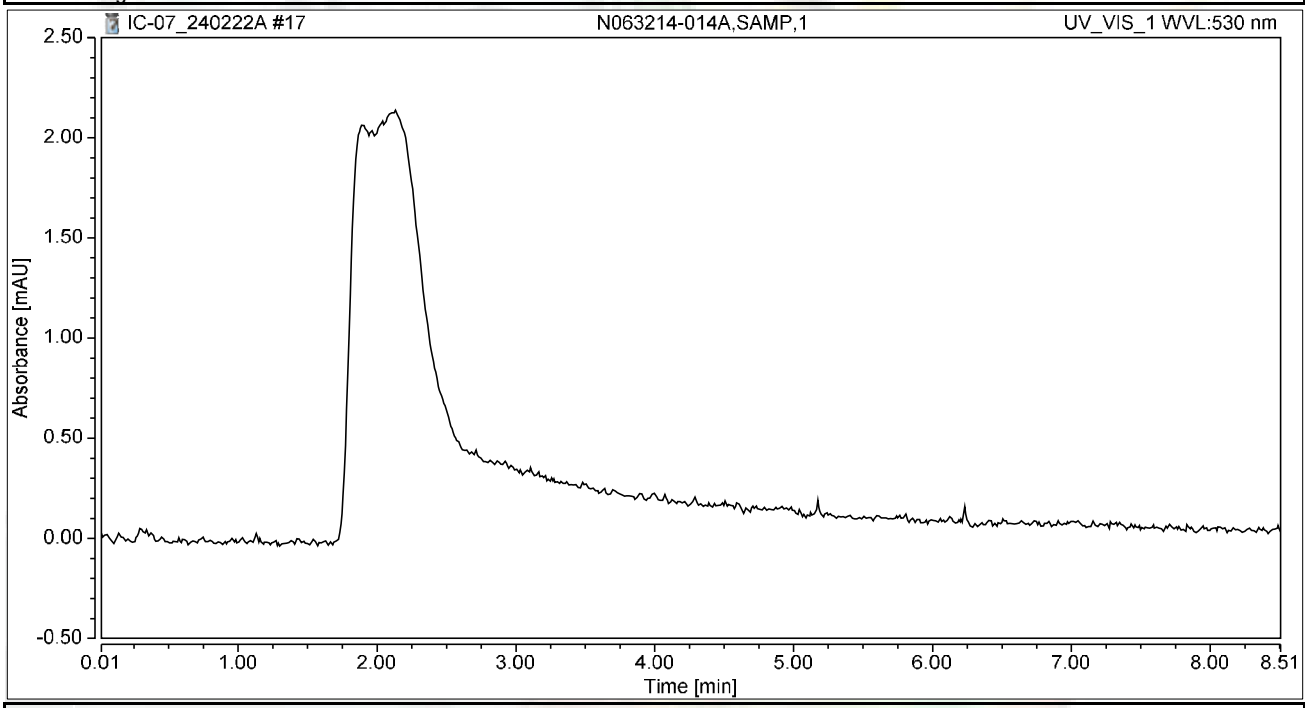
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.228	1.501	100.00	100.00	1.0605
Total:			**0.228**	**1.501**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-014A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 09:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

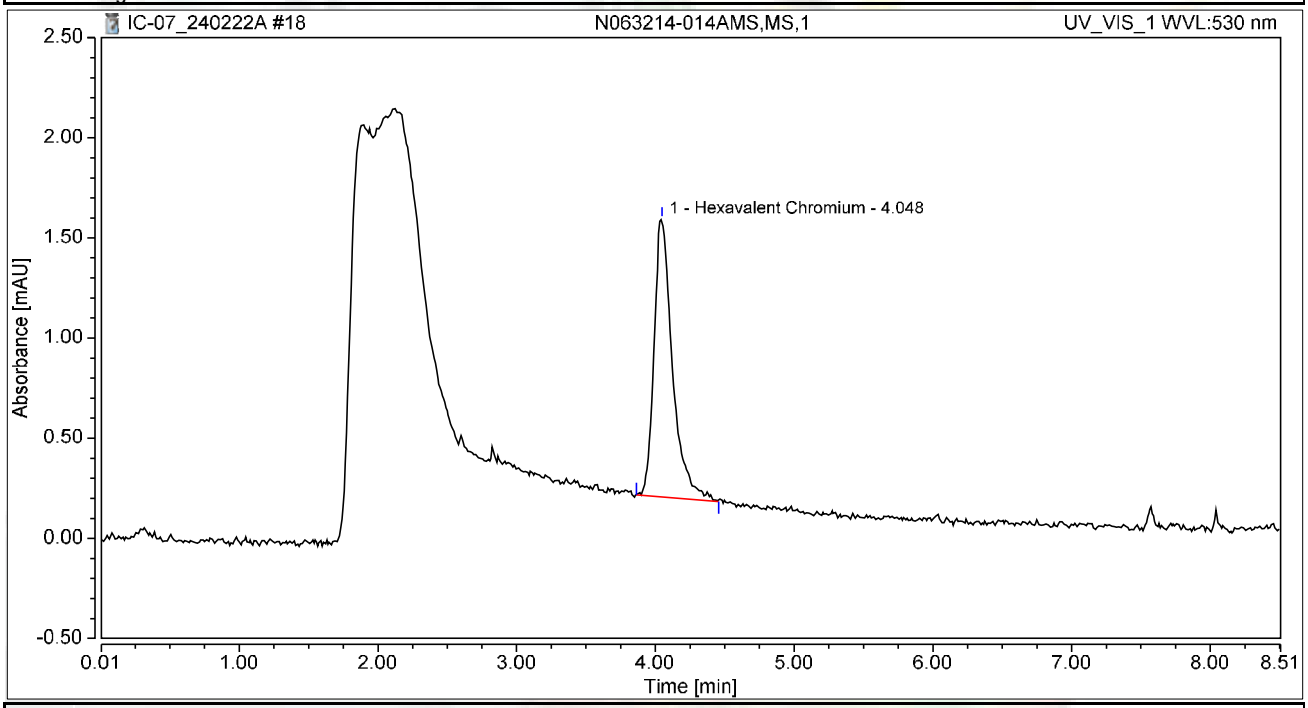
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-014AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 10:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

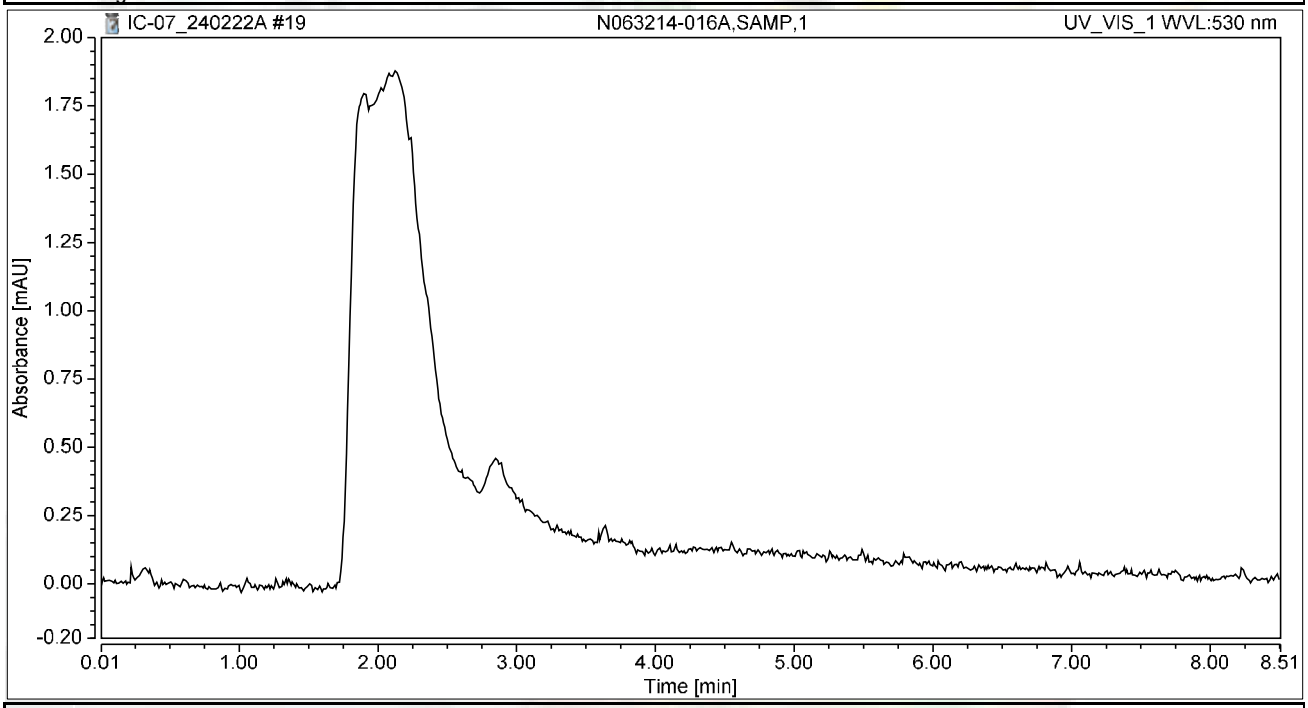
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.213	1.386	100.00	100.00	0.9884
Total:			**0.213**	**1.386**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-016A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 10:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

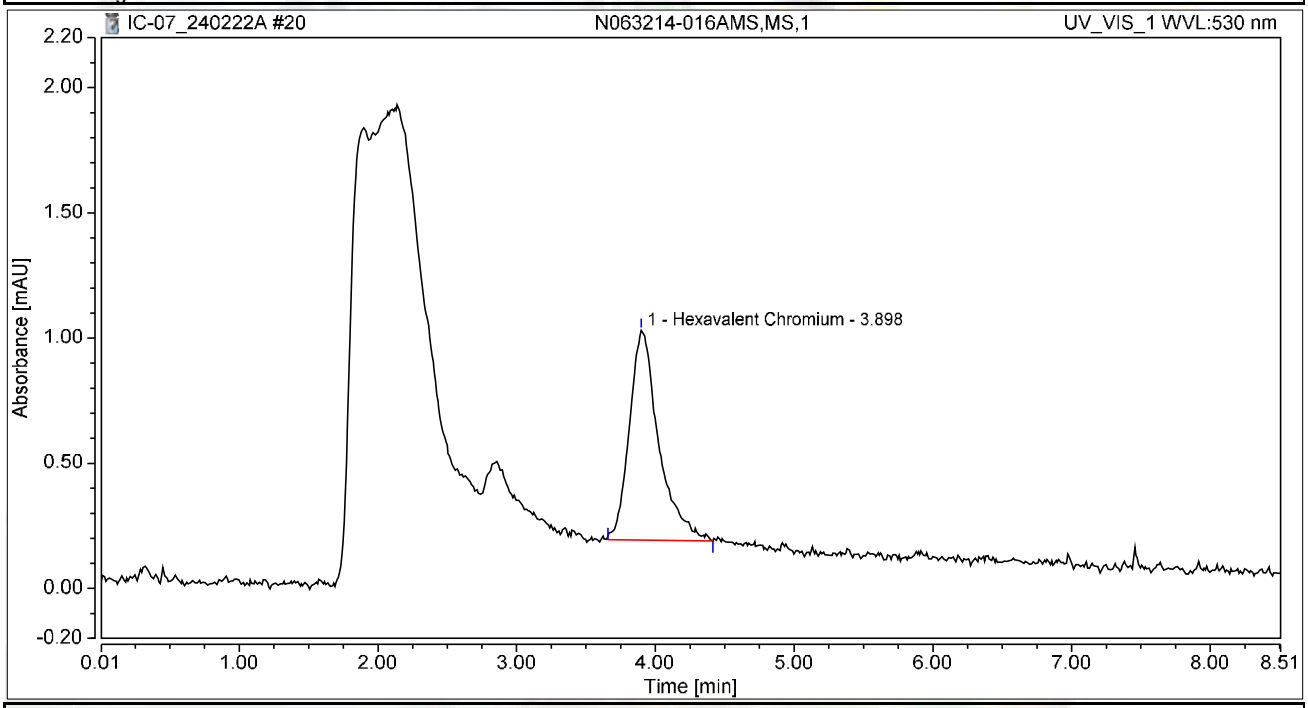
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-016AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 10:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

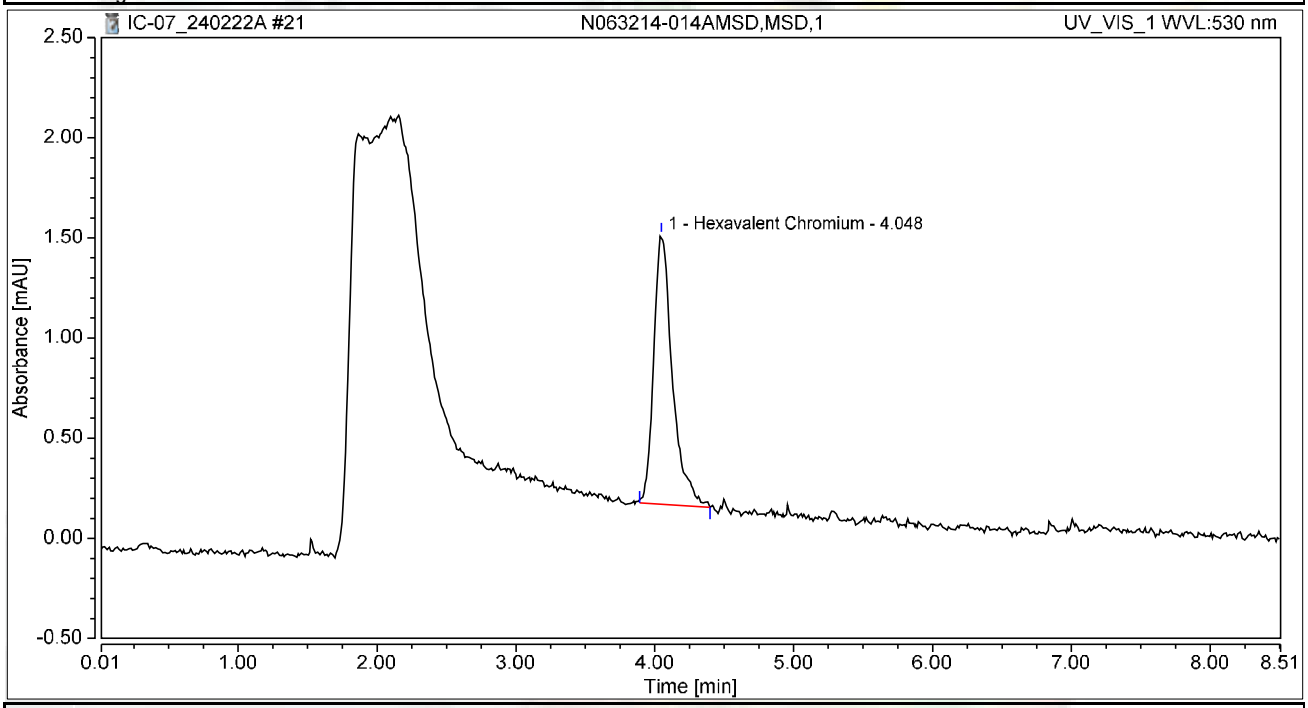
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.898	0.206	0.837	100.00	100.00	0.9570
Total:			**0.206**	**0.837**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-014AMSD,MSD,1**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 10:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

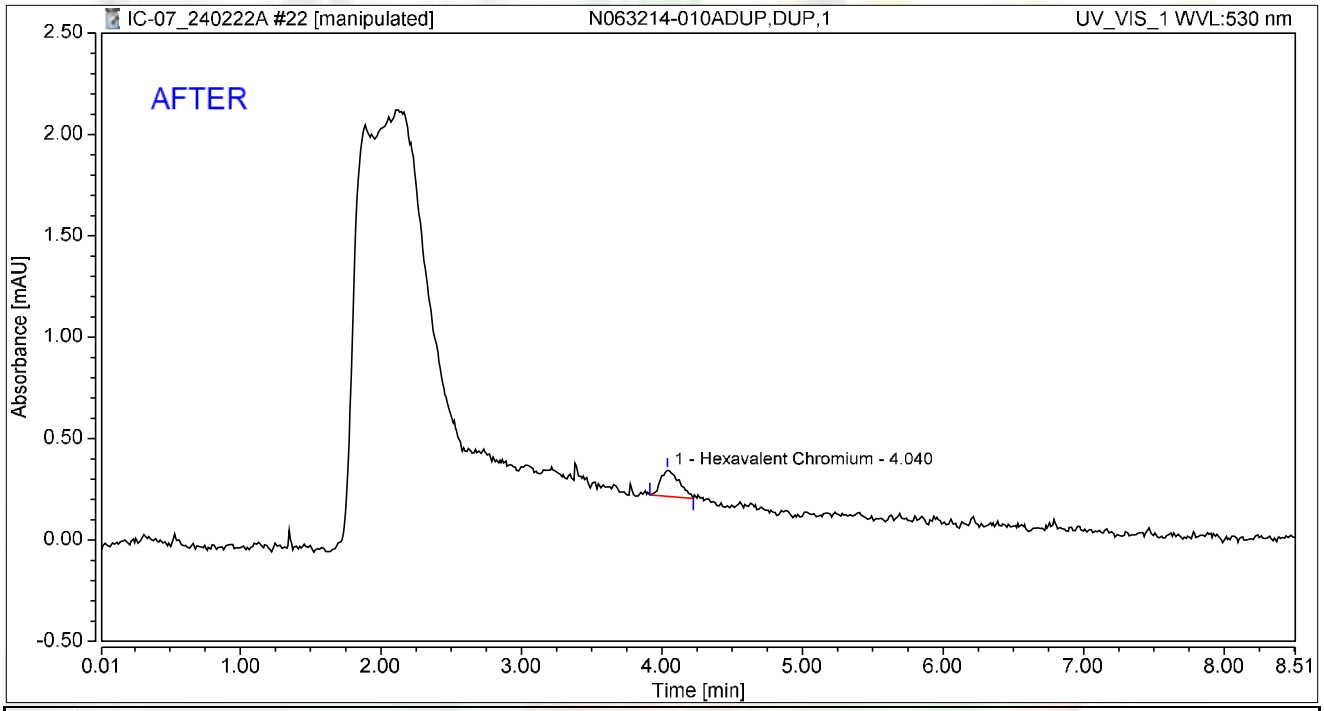
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.210	1.346	100.00	100.00	0.9752
Total:			**0.210**	**1.346**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-010ADUP,DUP,1**	*Run Time (min):*	**8.49**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 10:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.019	0.129	100.00	100.00	0.0903
Total:			**0.019**	**0.129**	**100.00**	**100.00**	

Reviewed by:

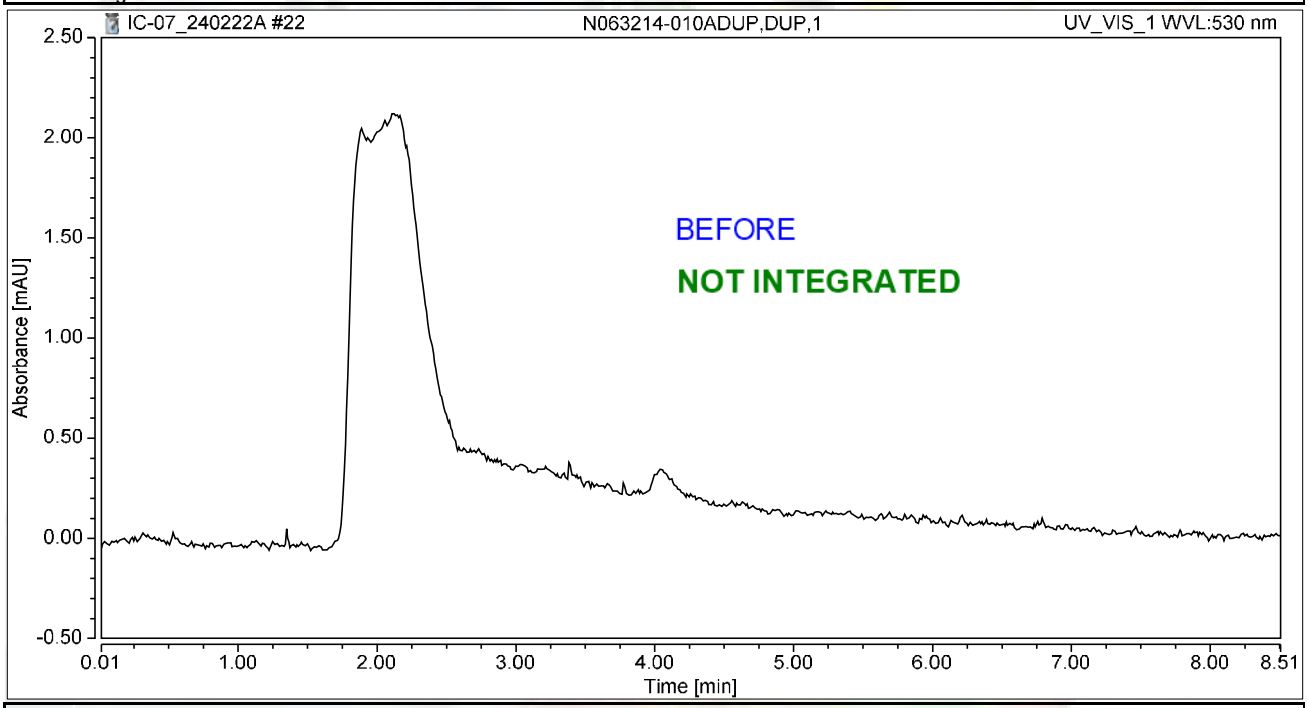
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063214-010ADUP,DUP,1**	*Run Time (min):*	**8.49**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 10:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

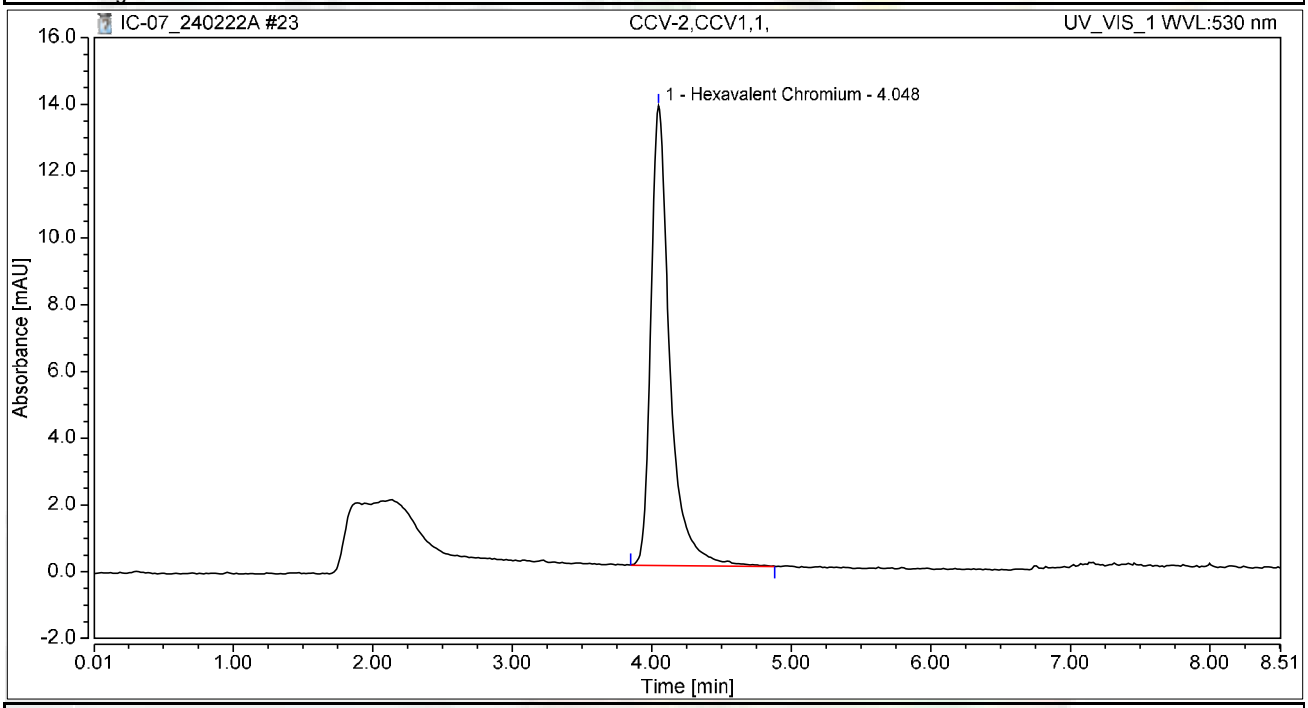
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 10:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

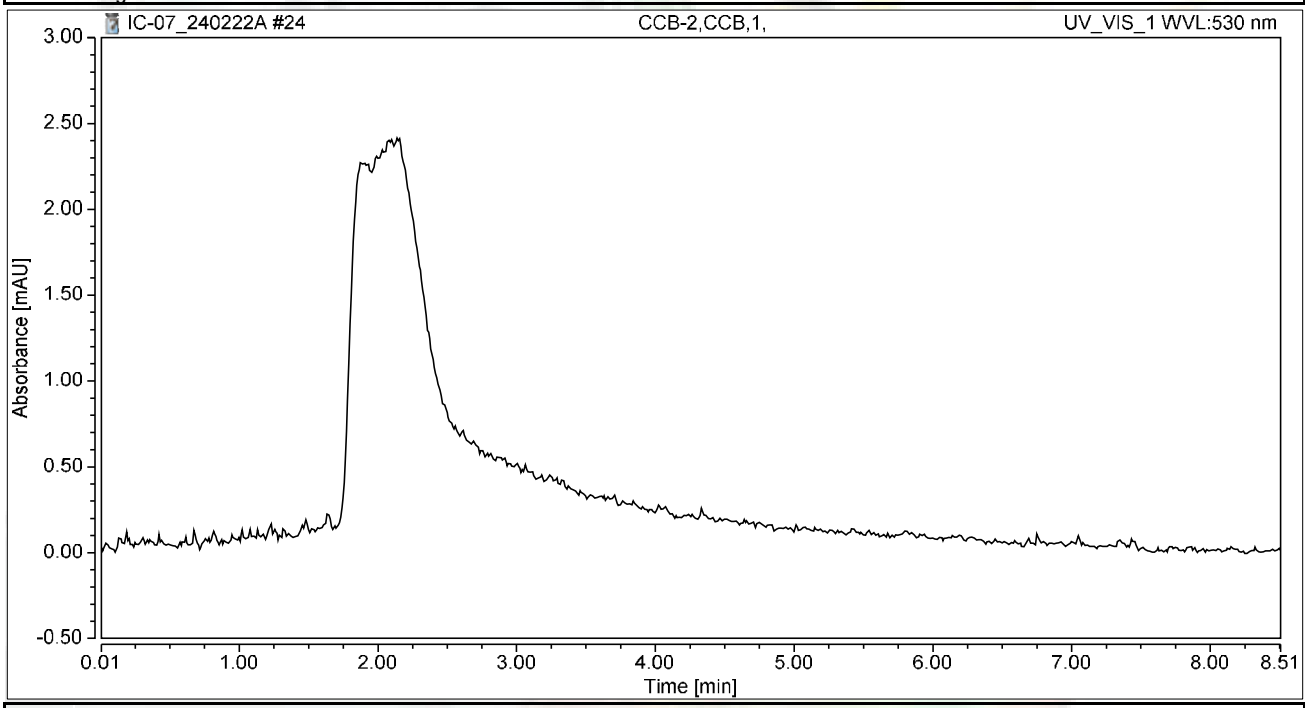
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.178	13.774	100.00	100.00	10.1274
Total:			**2.178**	**13.774**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 11:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

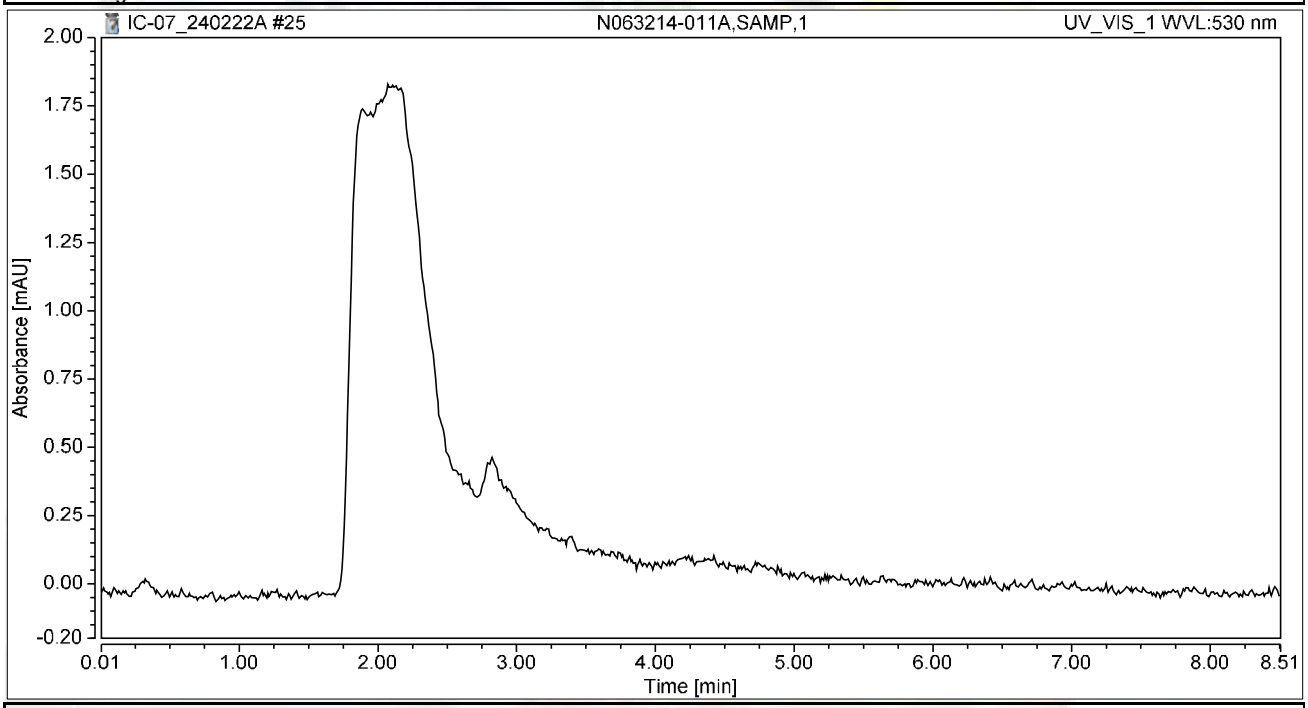
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-011A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 11:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

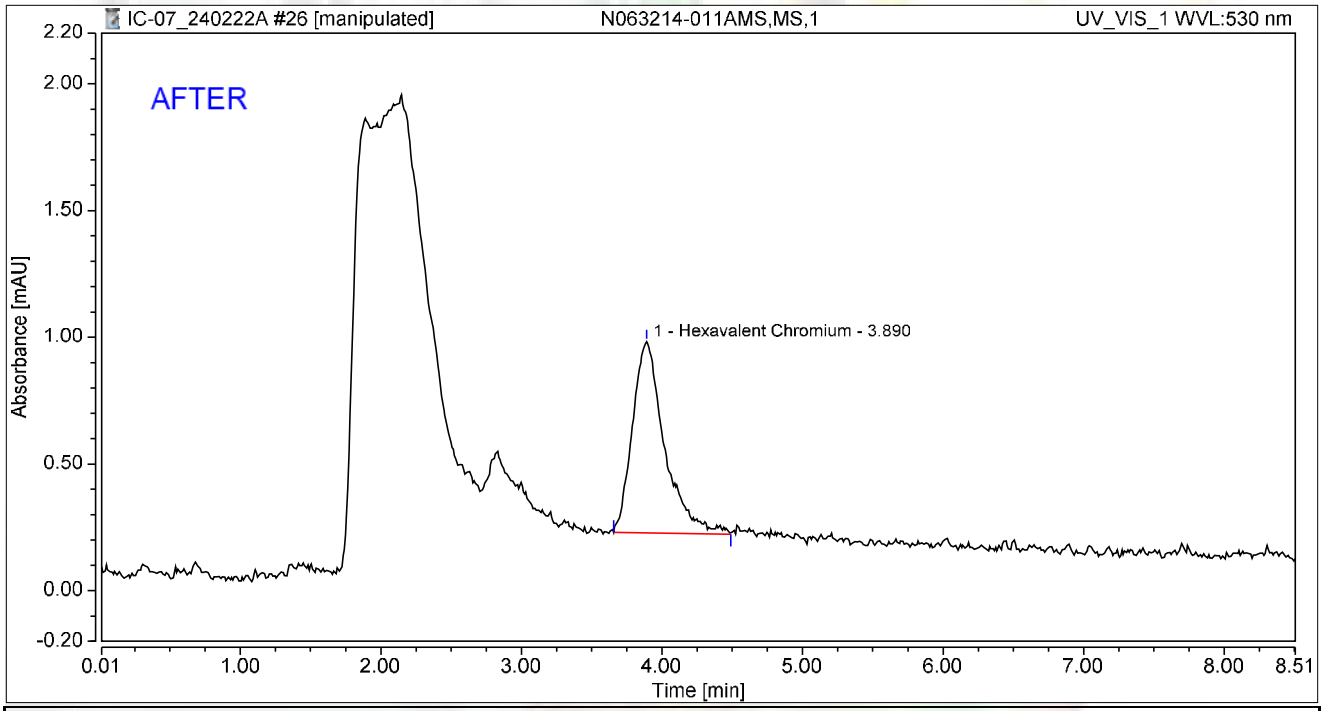
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-011AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 11:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.890	0.199	0.754	100.00	100.00	0.9268
Total:			**0.199**	**0.754**	**100.00**	**100.00**	

Reviewed by:

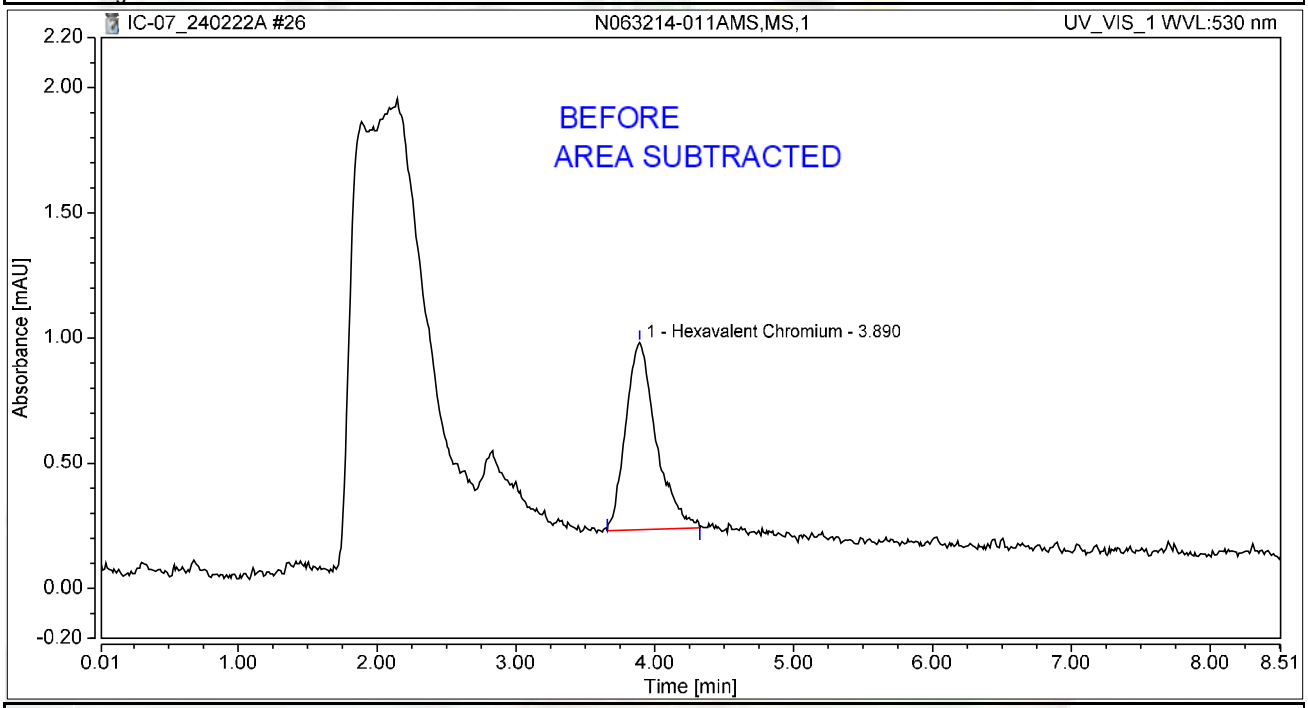
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063214-011AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 11:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

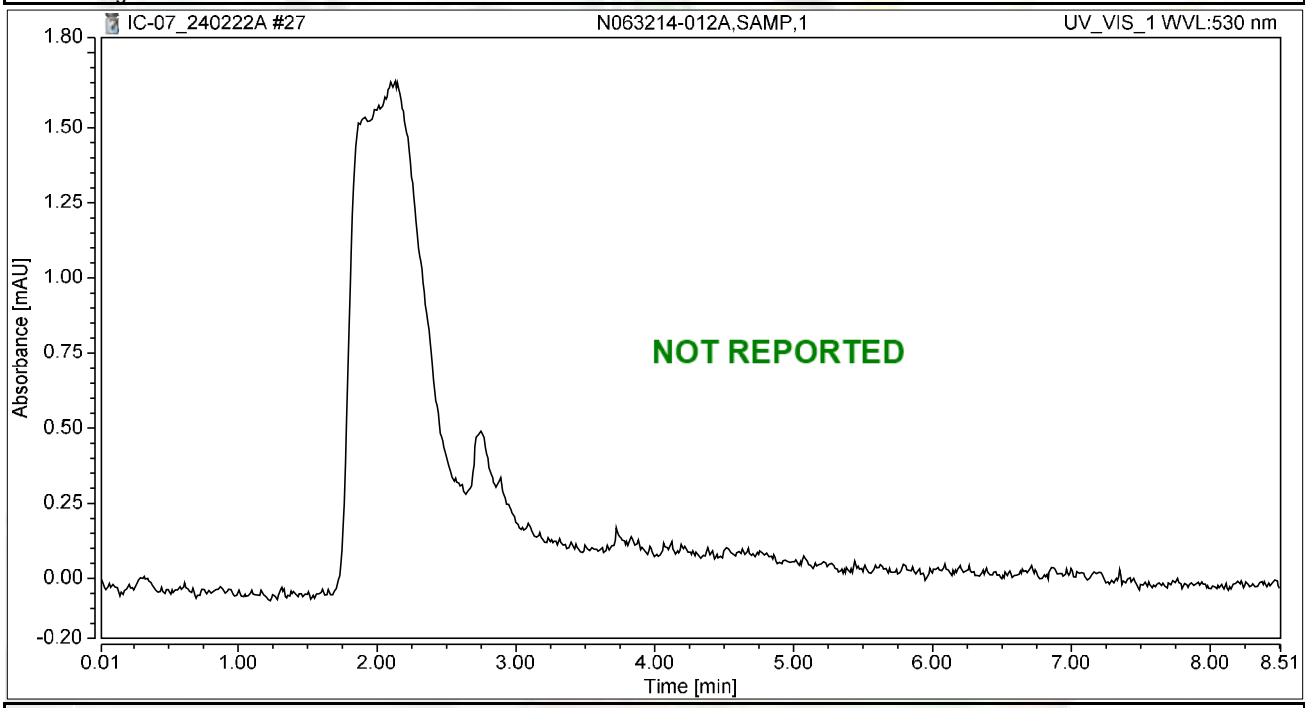
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.890	0.190	0.748	100.00	100.00	0.8830
Total:			**0.190**	**0.748**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-012A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 11:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

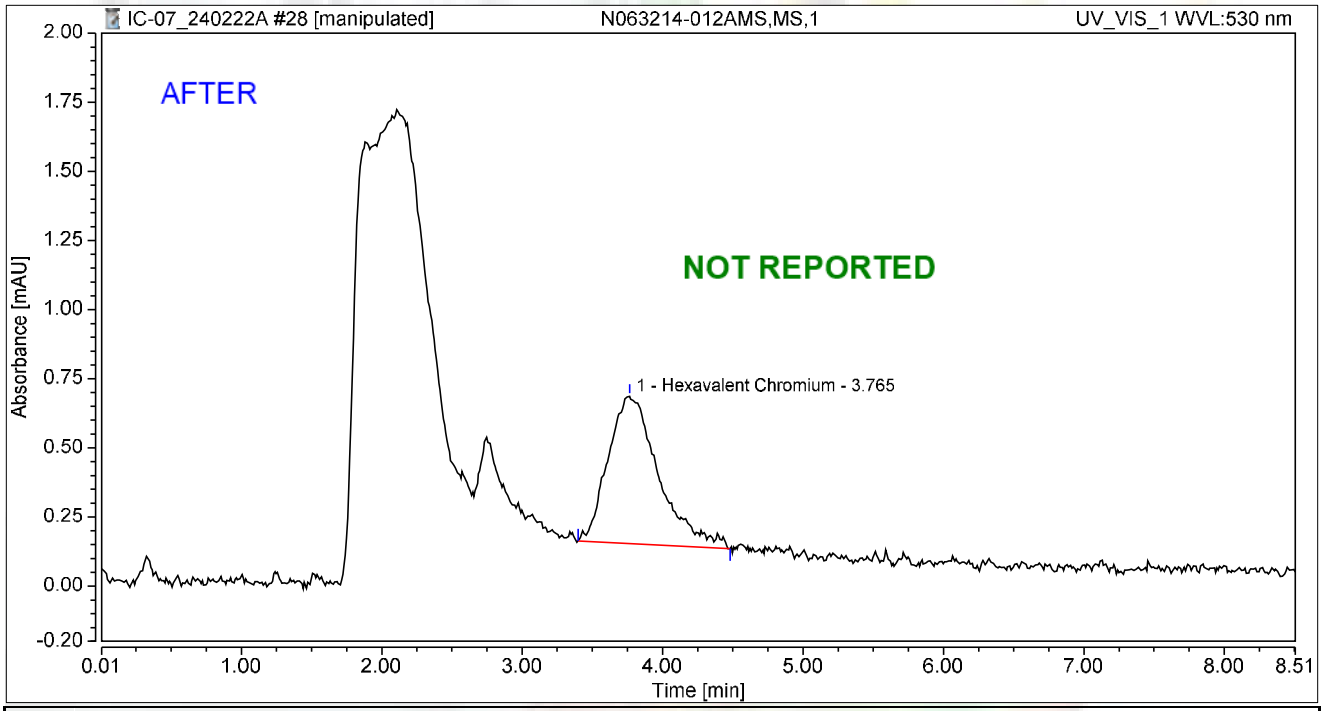
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-012AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 11:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

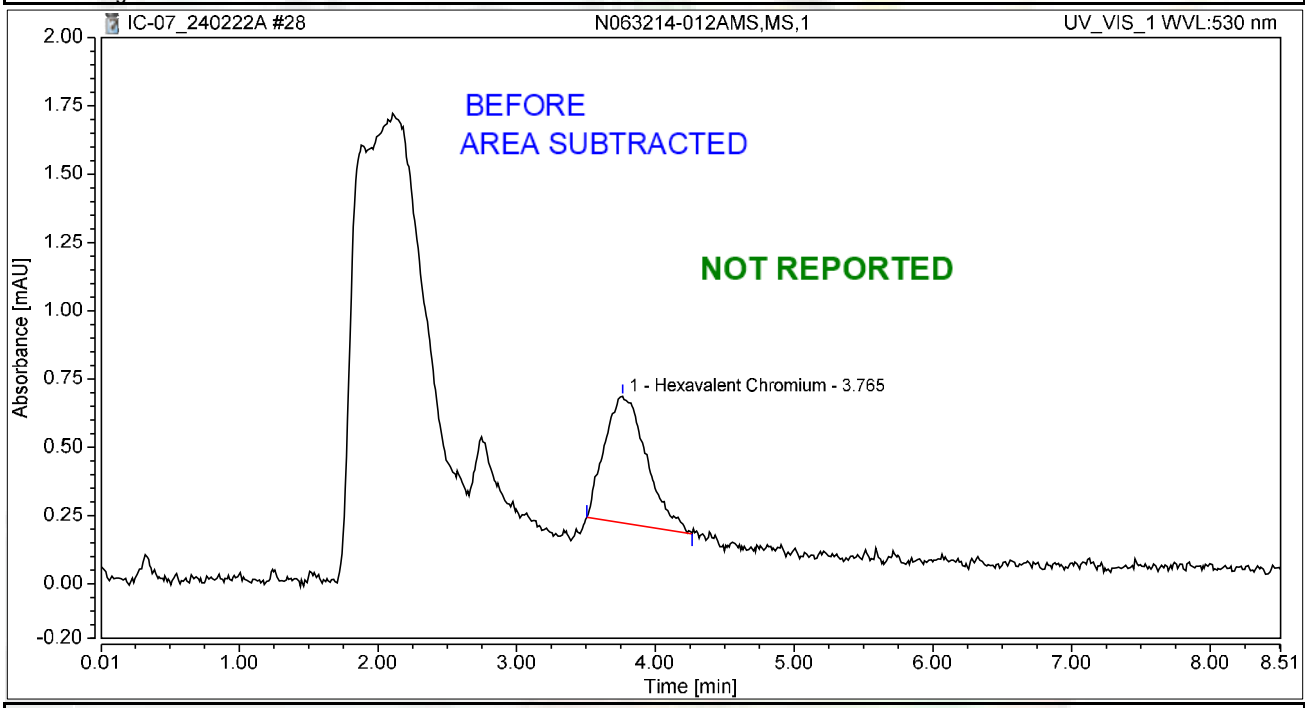
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.765	0.222	0.533	100.00	100.00	1.0324
Total:			**0.222**	**0.533**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-012AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 11:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

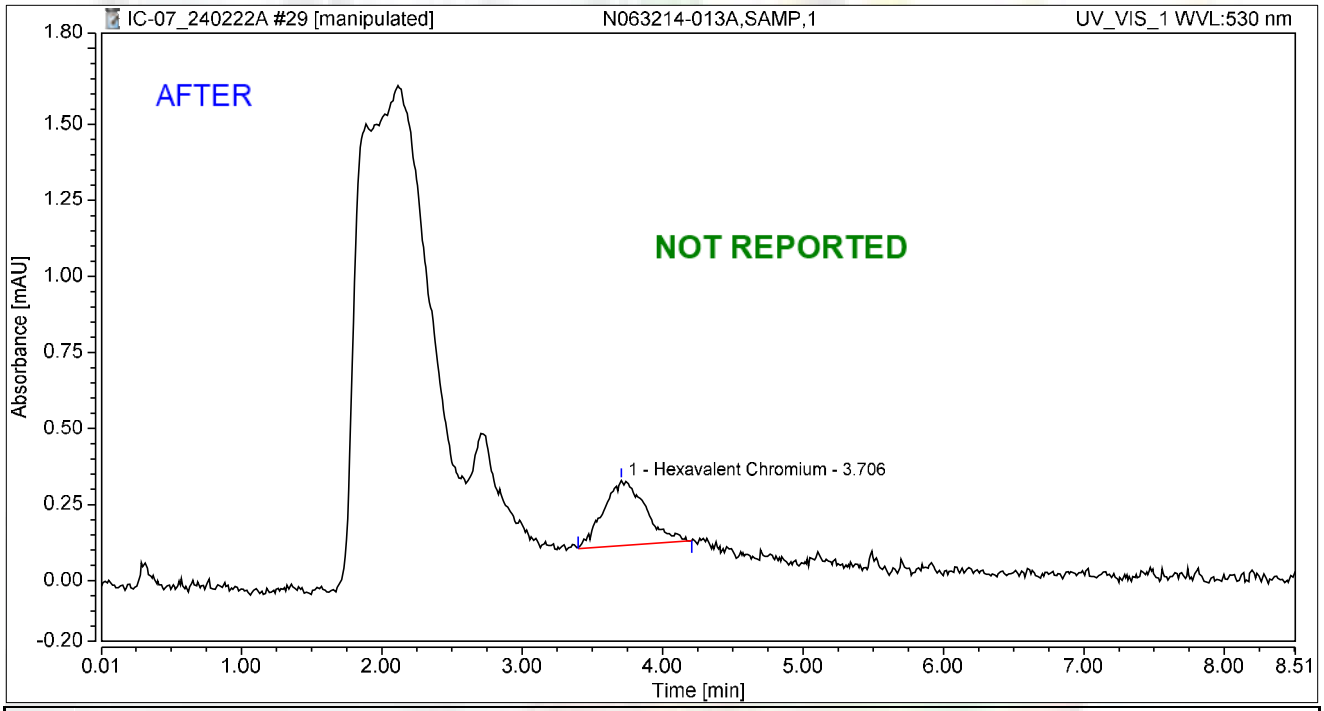
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.765	0.163	0.463	100.00	100.00	0.7589
Total:			**0.163**	**0.463**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-013A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 11:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

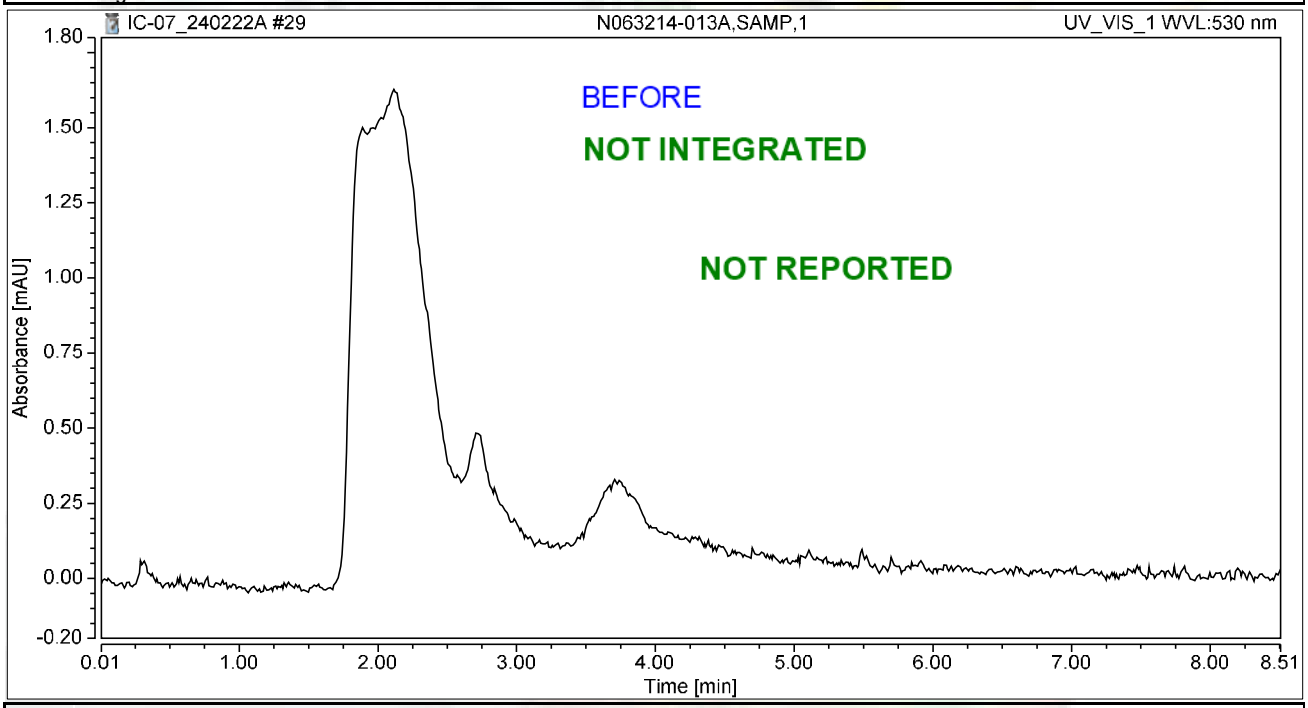
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.706	0.074	0.215	100.00	100.00	0.3450
Total:			**0.074**	**0.215**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-013A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 11:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

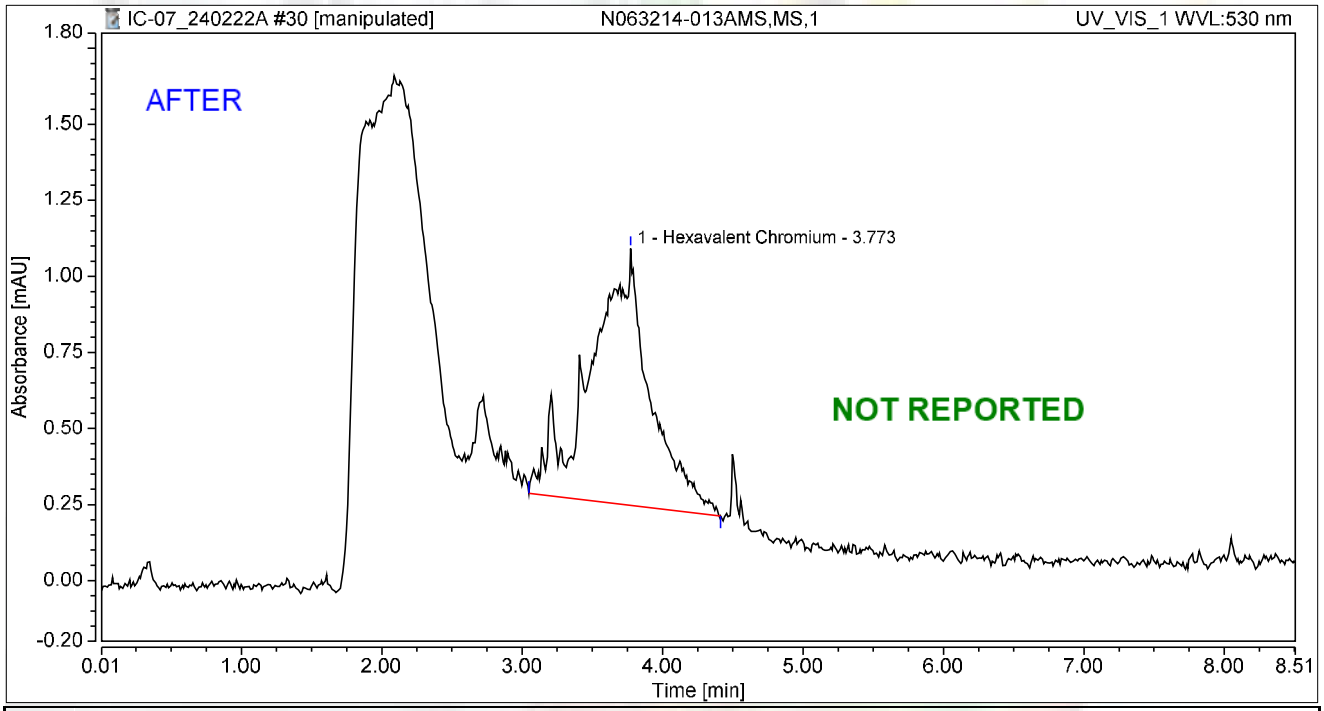
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-013AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 12:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

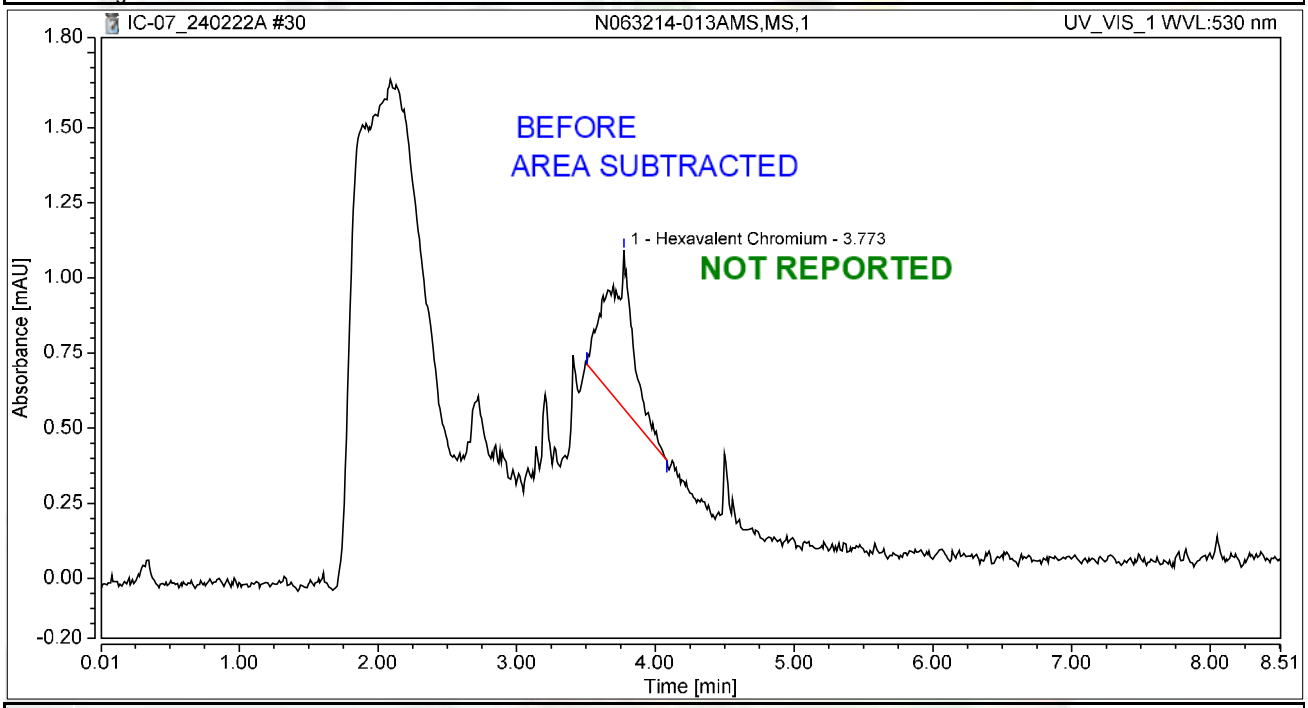
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.773	0.407	0.845	100.00	100.00	1.8899
Total:			**0.407**	**0.845**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-013AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 12:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

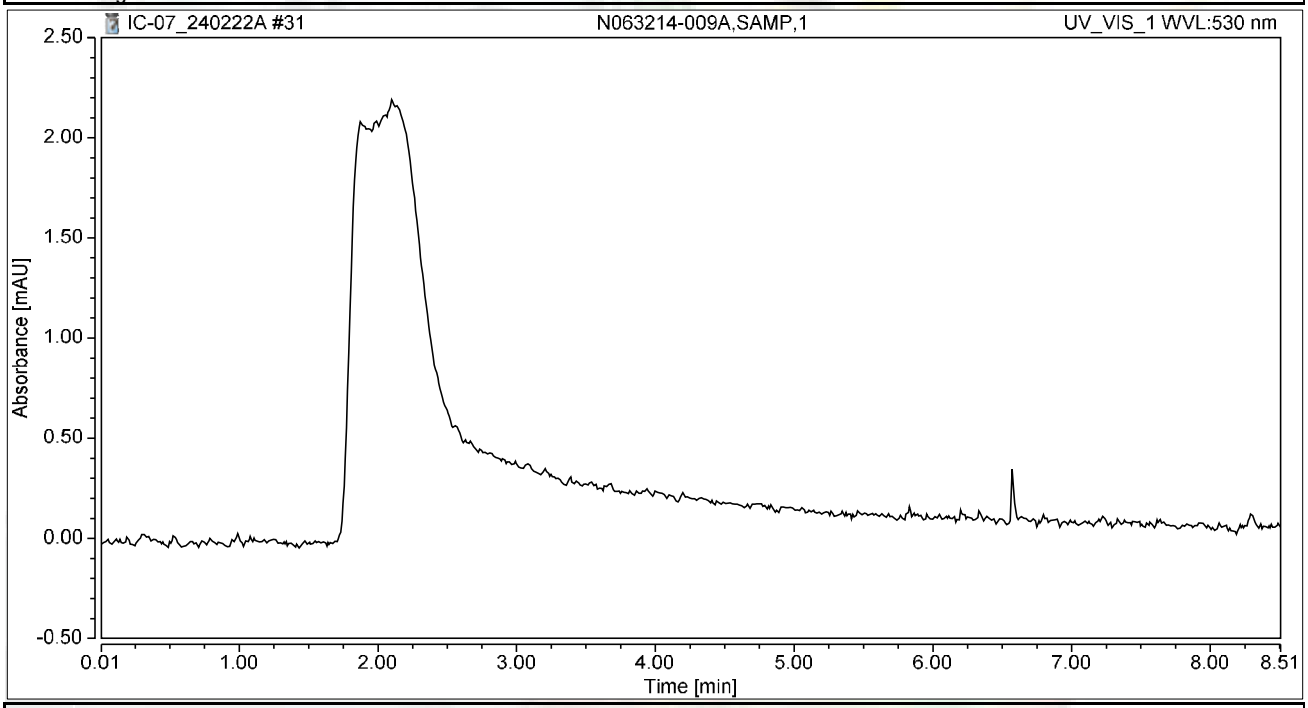
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.773	0.113	0.527	100.00	100.00	0.5255
Total:			**0.113**	**0.527**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 12:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

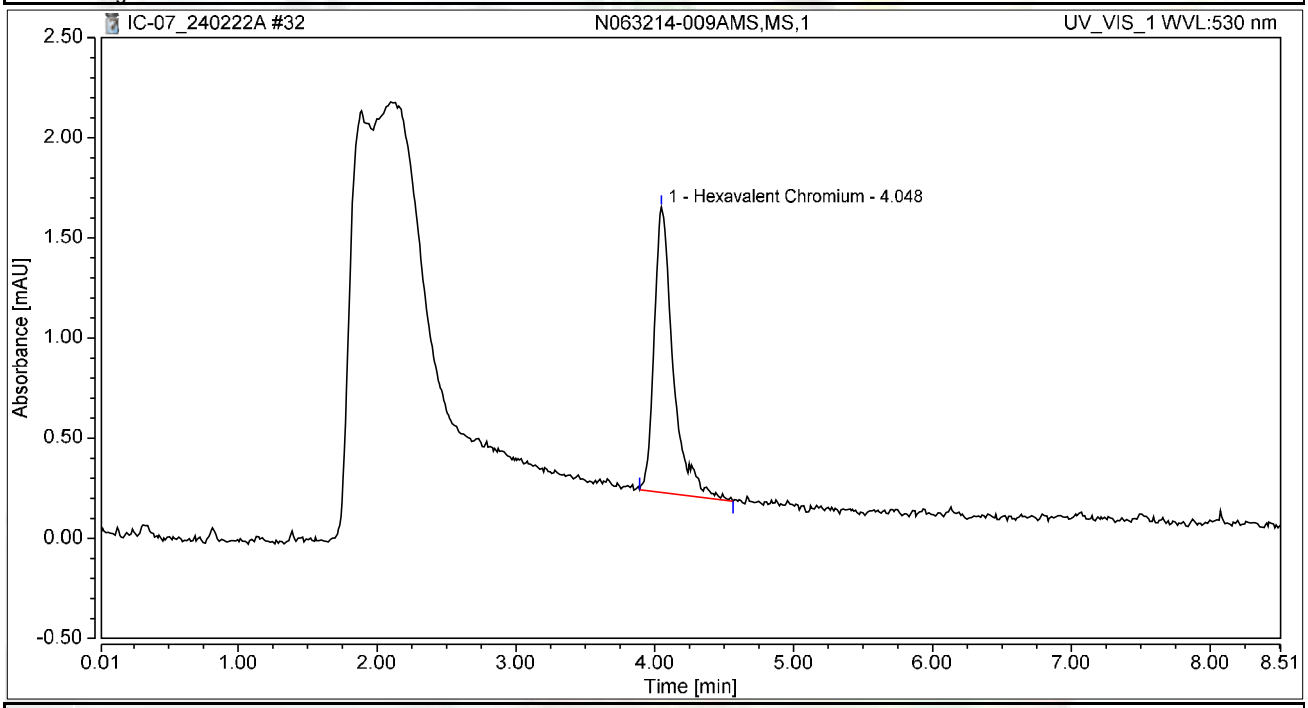
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-009AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

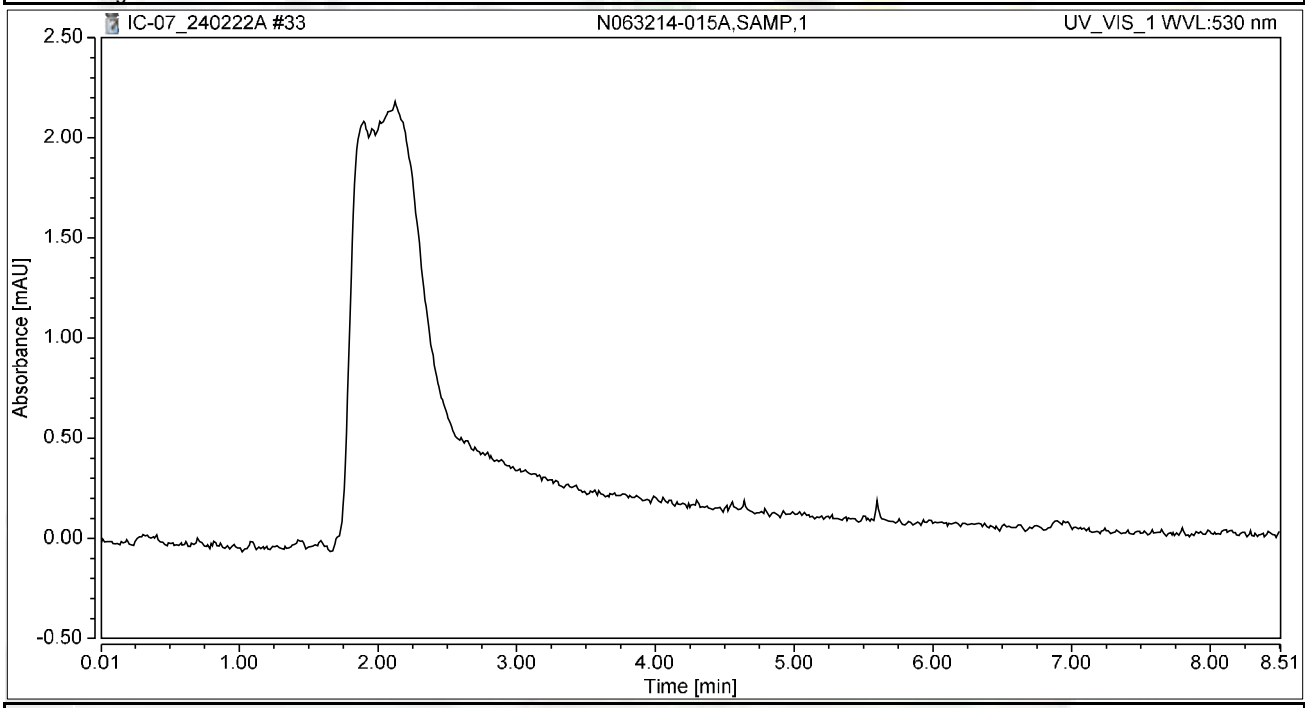
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.225	1.422	100.00	100.00	1.0464
Total:			**0.225**	**1.422**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-015A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 12:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

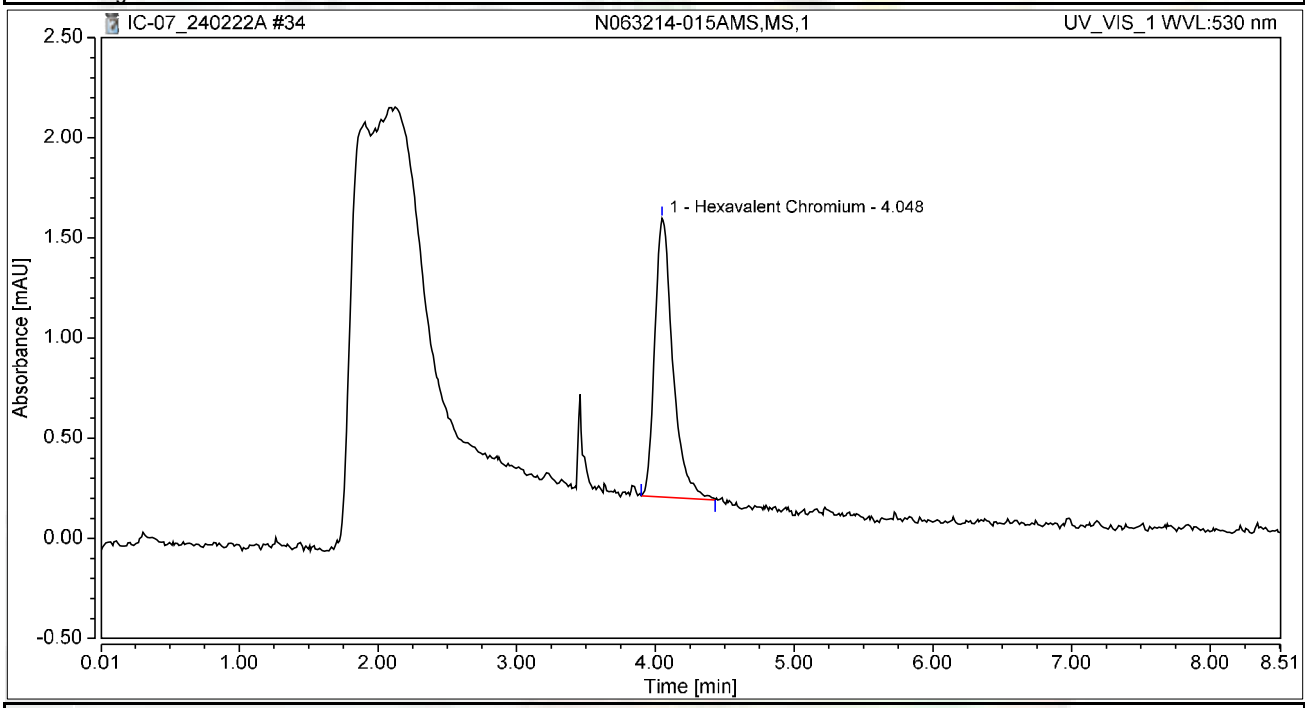
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-015AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

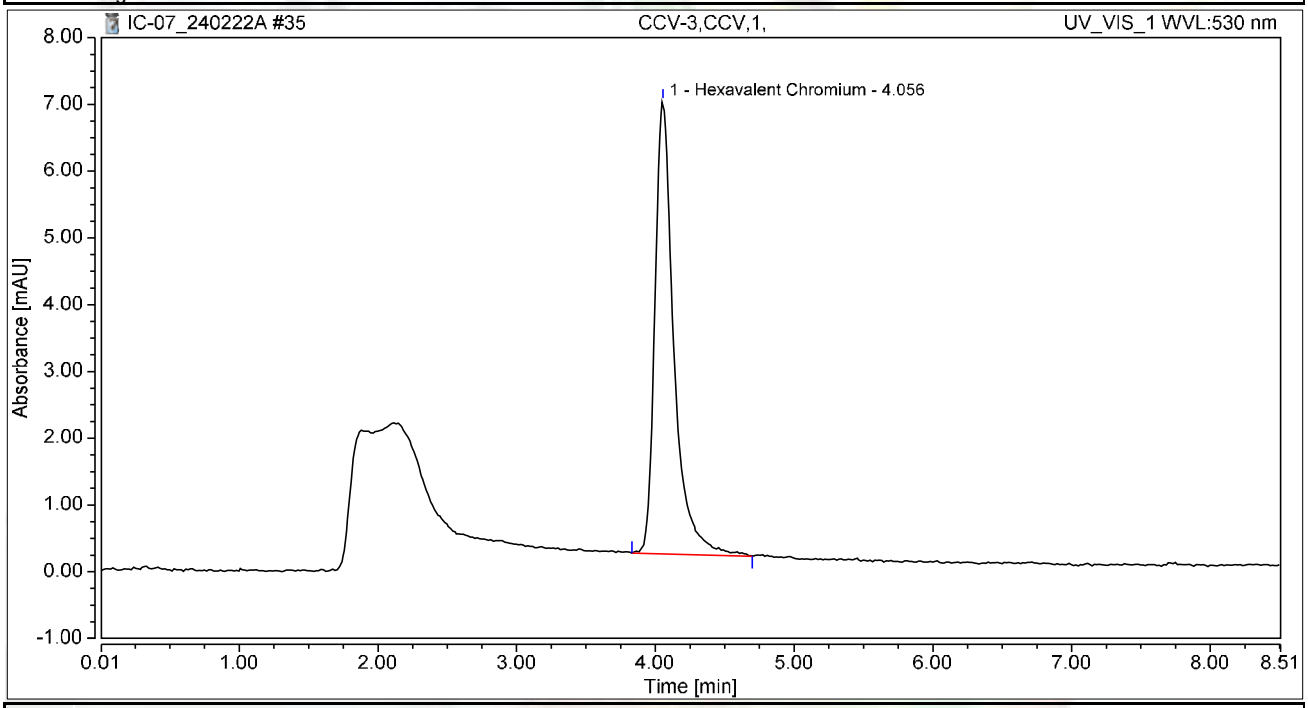
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.210	1.392	100.00	100.00	0.9766
Total:			**0.210**	**1.392**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

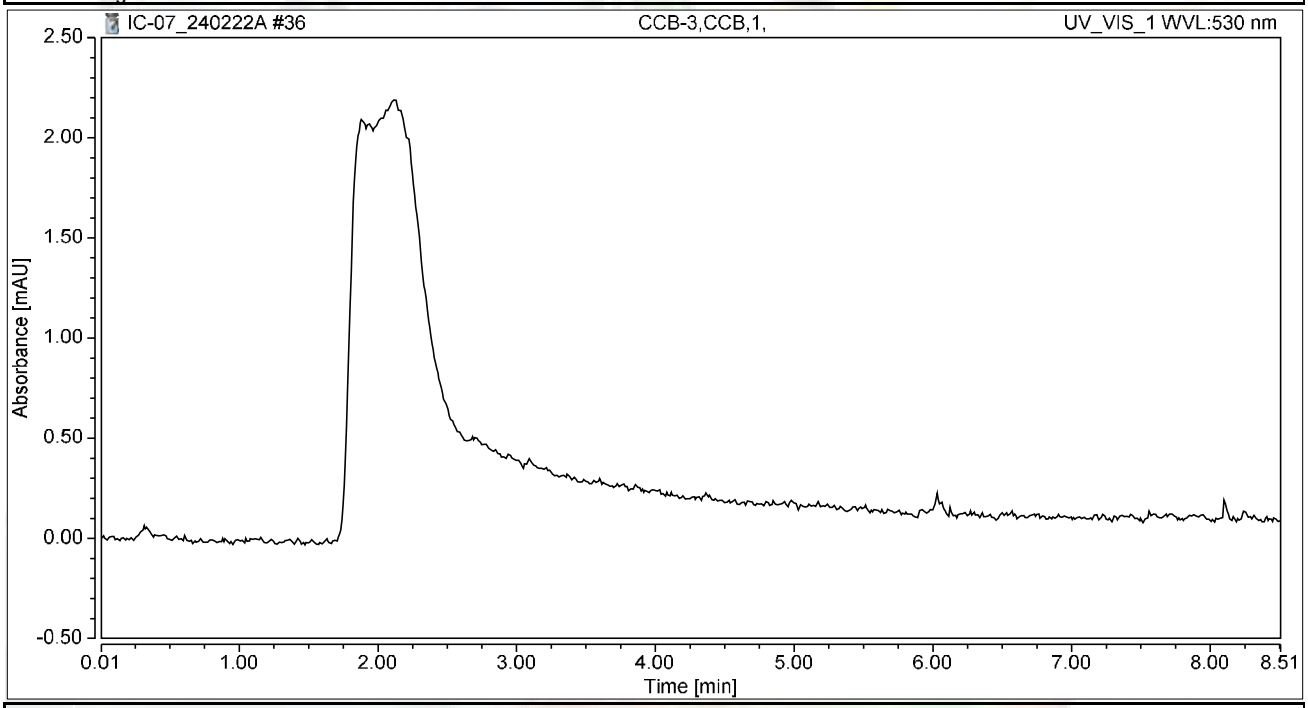
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.079	6.785	100.00	100.00	5.0179
Total:			**1.079**	**6.785**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

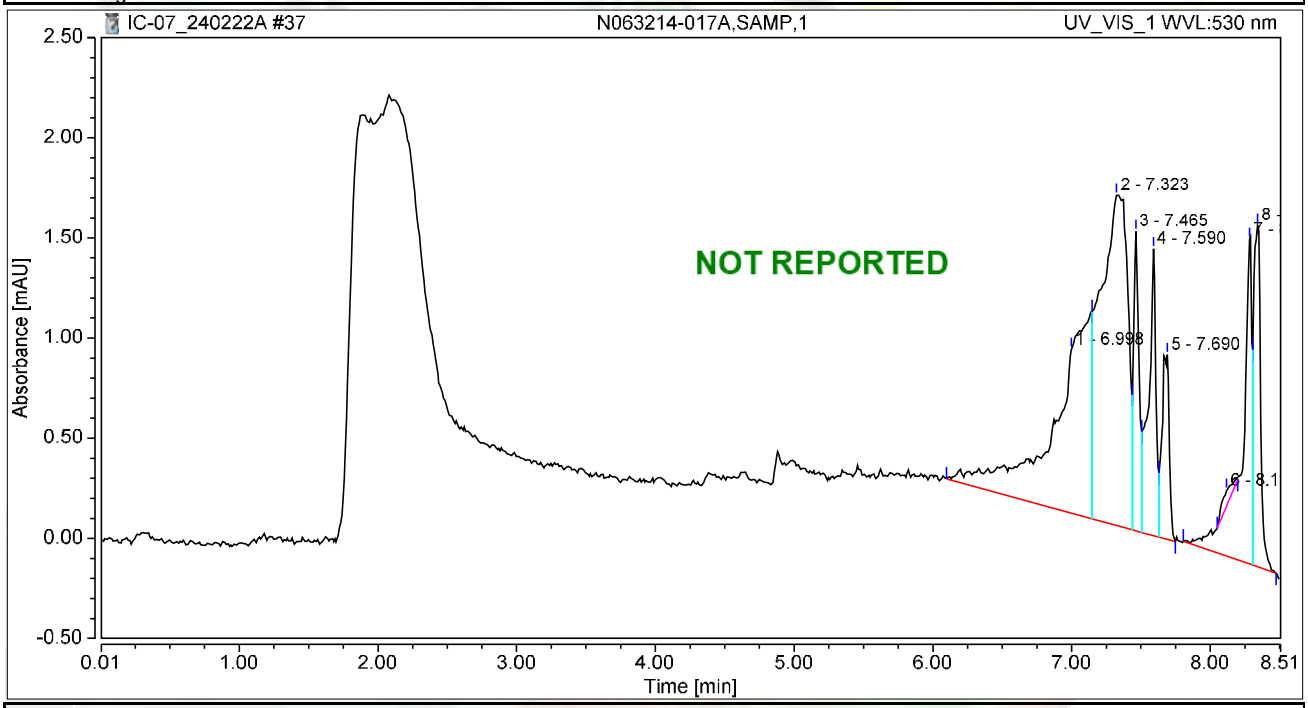
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-017A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 13:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

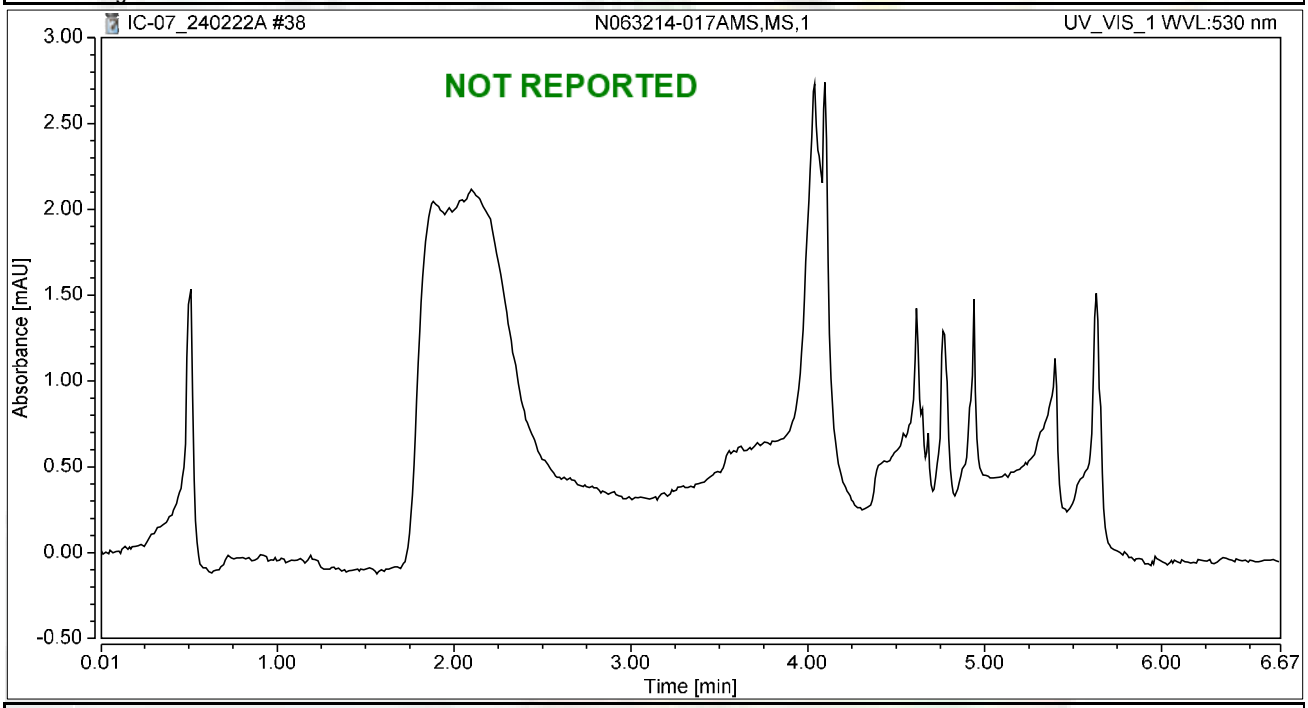
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		6.998	0.313	0.816	27.06	8.40	n.a.
2		7.323	0.379	1.648	32.77	16.97	n.a.
3		7.465	0.065	1.495	5.65	15.39	n.a.
4		7.590	0.091	1.432	7.85	14.73	n.a.
5		7.690	0.057	0.921	4.91	9.48	n.a.
6		8.115	0.007	0.081	0.62	0.83	n.a.
7		8.281	0.146	1.619	12.67	16.67	n.a.
8		8.340	0.098	1.704	8.47	17.53	n.a.
Total:			**1.155**	**9.716**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-017AMS,MS,1**	*Run Time (min):*	**6.67**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 13:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

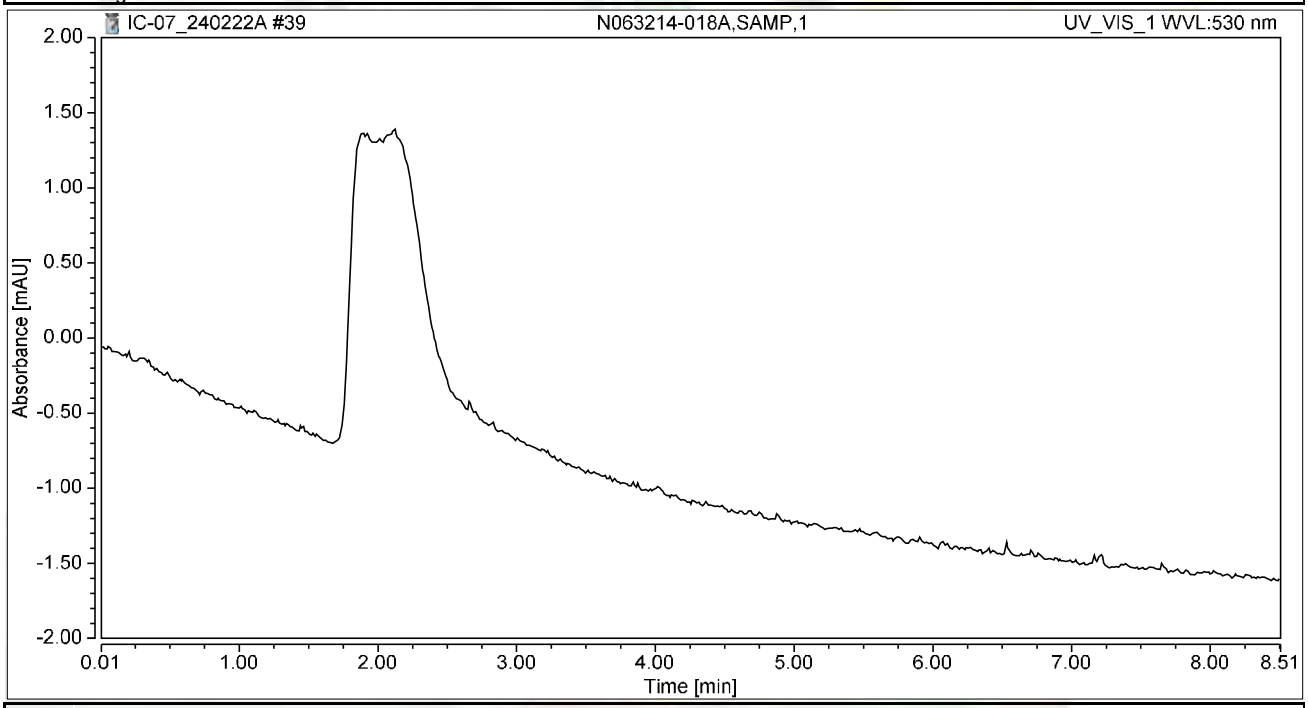
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-018A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 14:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

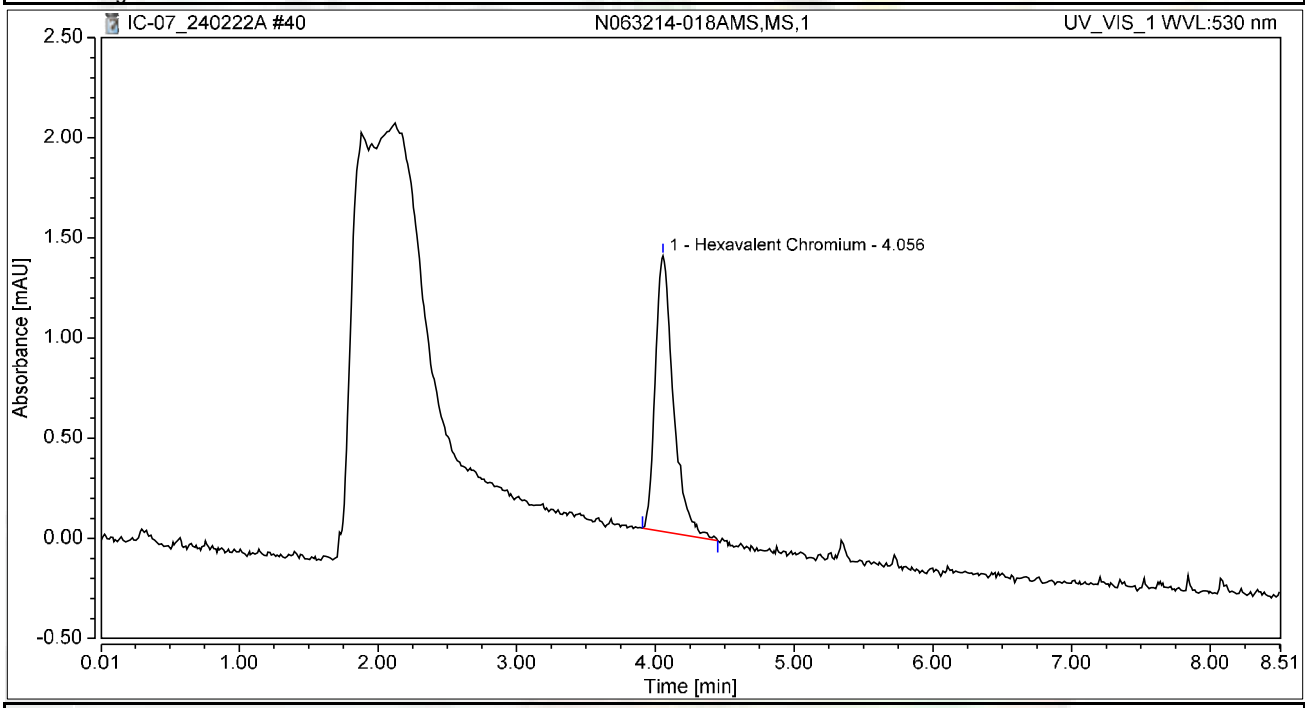
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-018AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 14:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

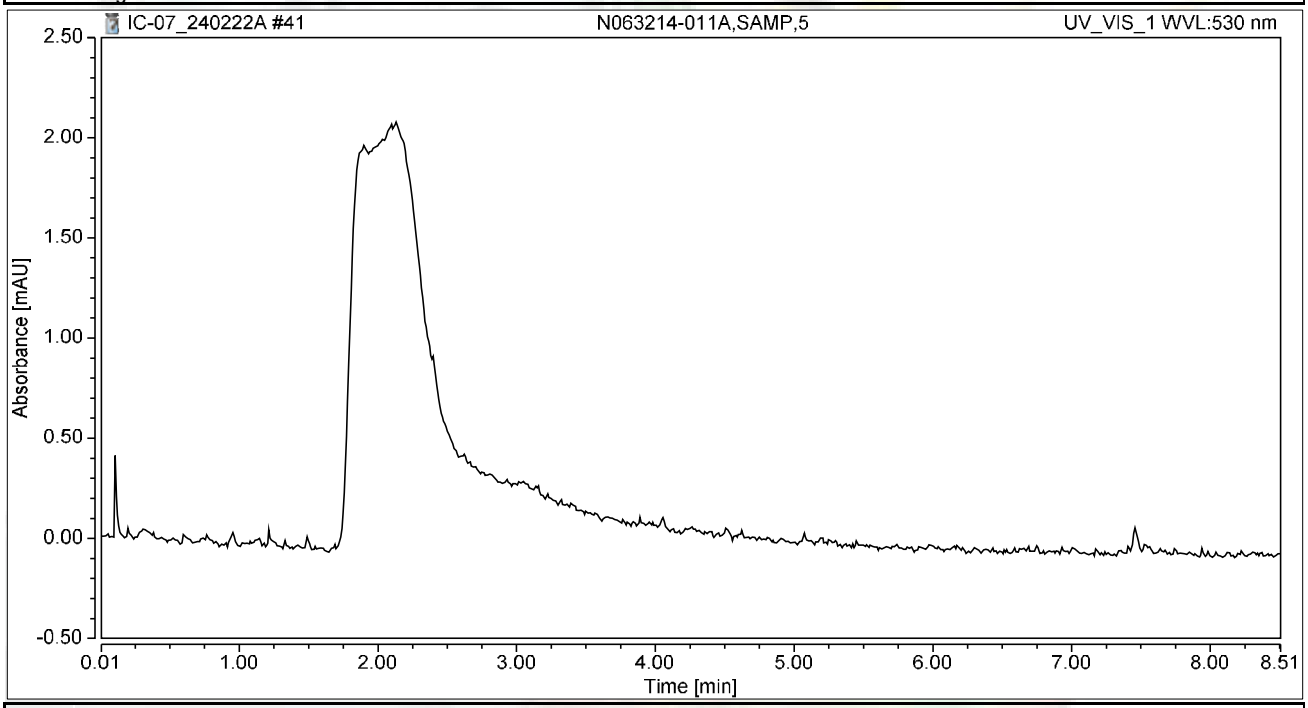
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.208	1.377	100.00	100.00	0.9692
Total:			**0.208**	**1.377**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-011A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 14:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

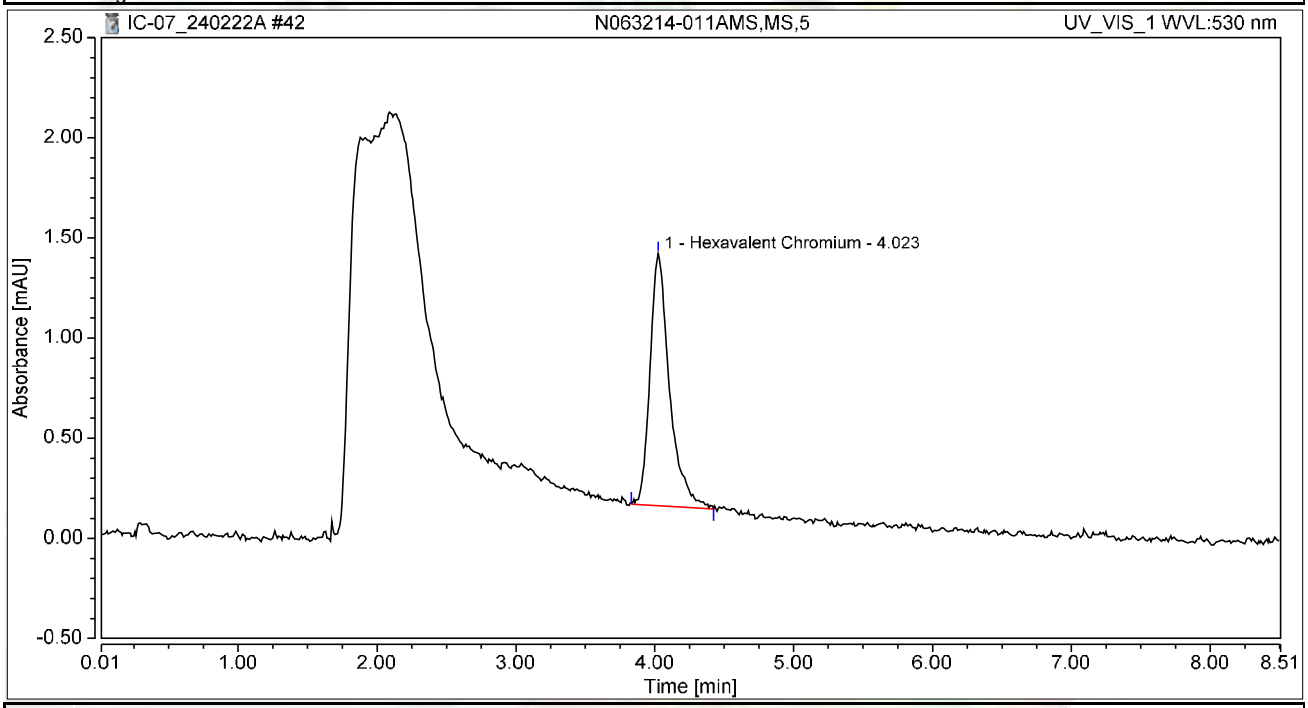
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-011AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 14:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

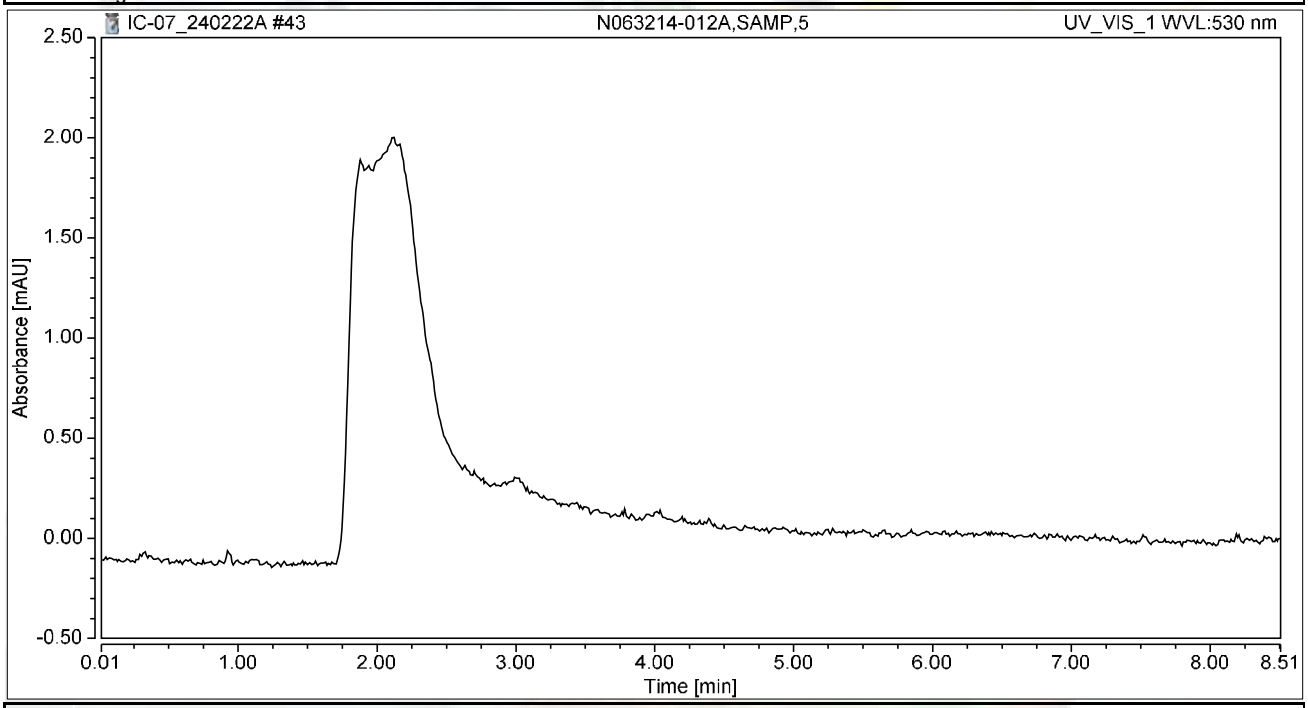
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.204	1.257	100.00	100.00	0.9494
Total:			**0.204**	**1.257**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-012A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 14:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

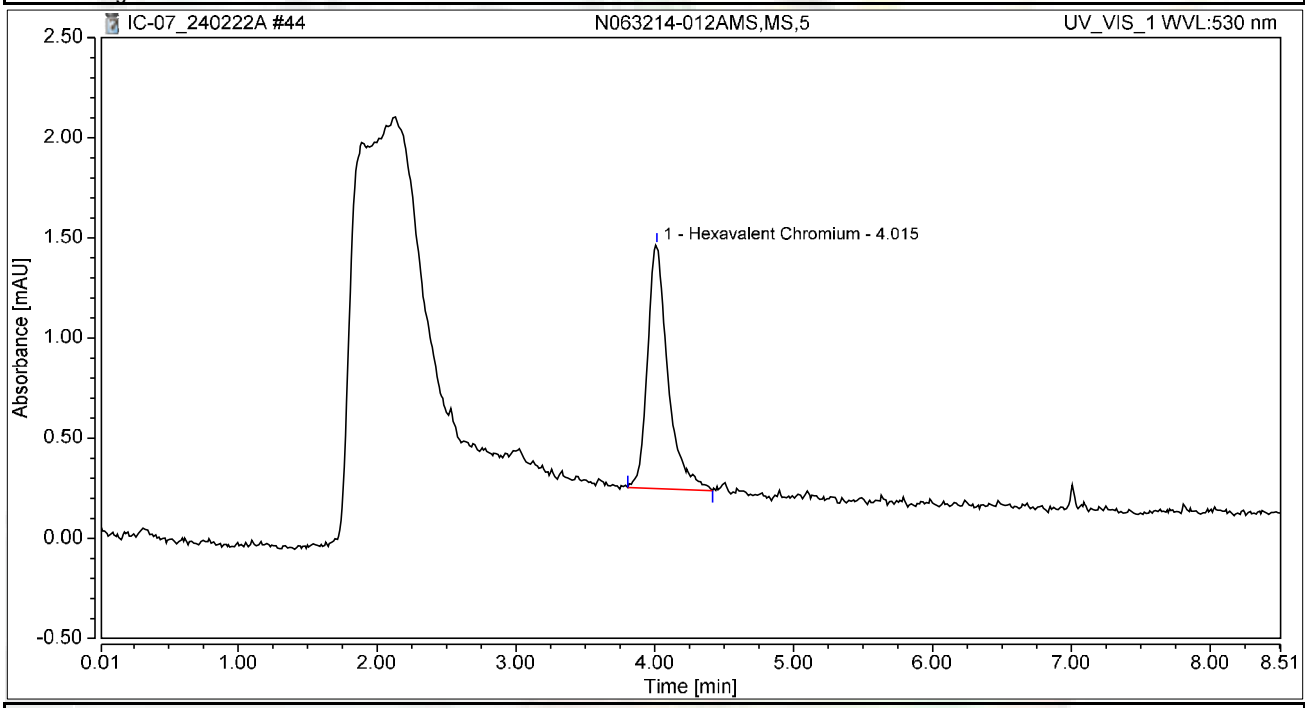
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-012AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 15:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

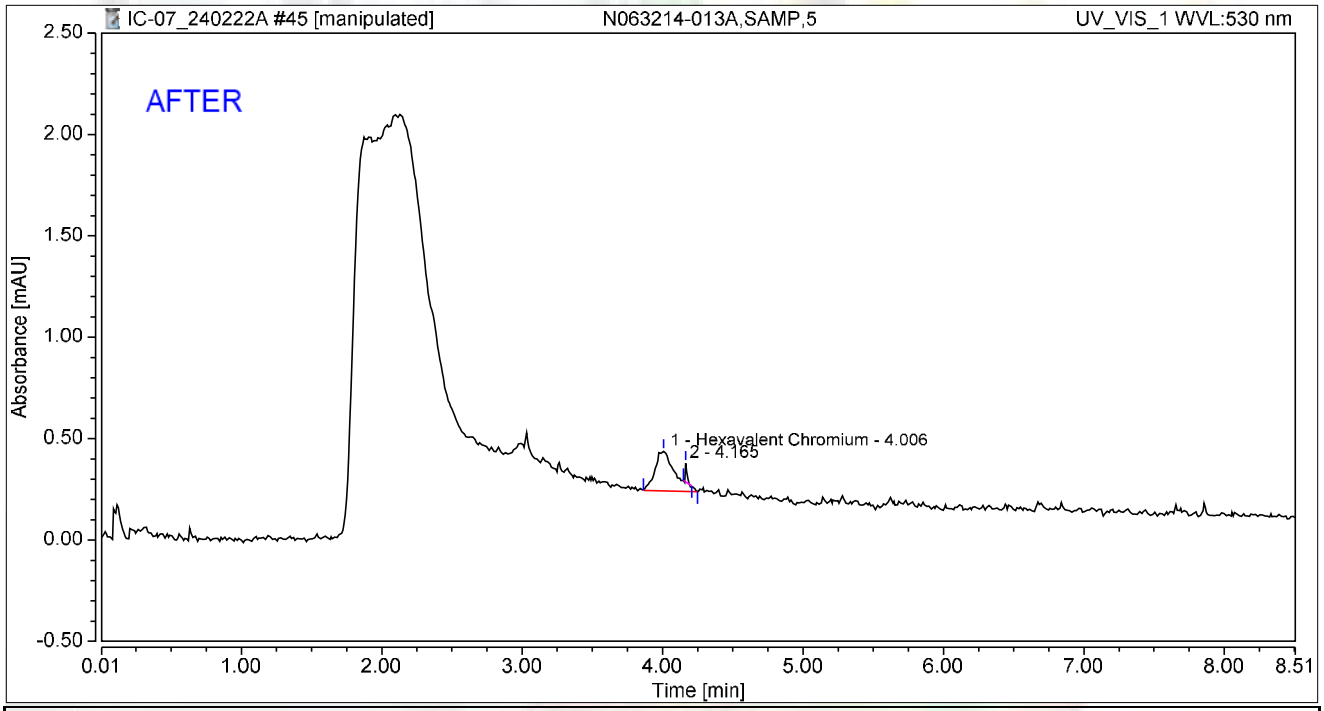
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.208	1.217	100.00	100.00	0.9658
Total:			**0.208**	**1.217**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-013A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 15:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.032	0.195	96.15	67.95	0.1488
2		4.165	0.001	0.092	3.85	32.05	n.a.
Total:			**0.033**	**0.287**	**100.00**	**100.00**	

Reviewed by:

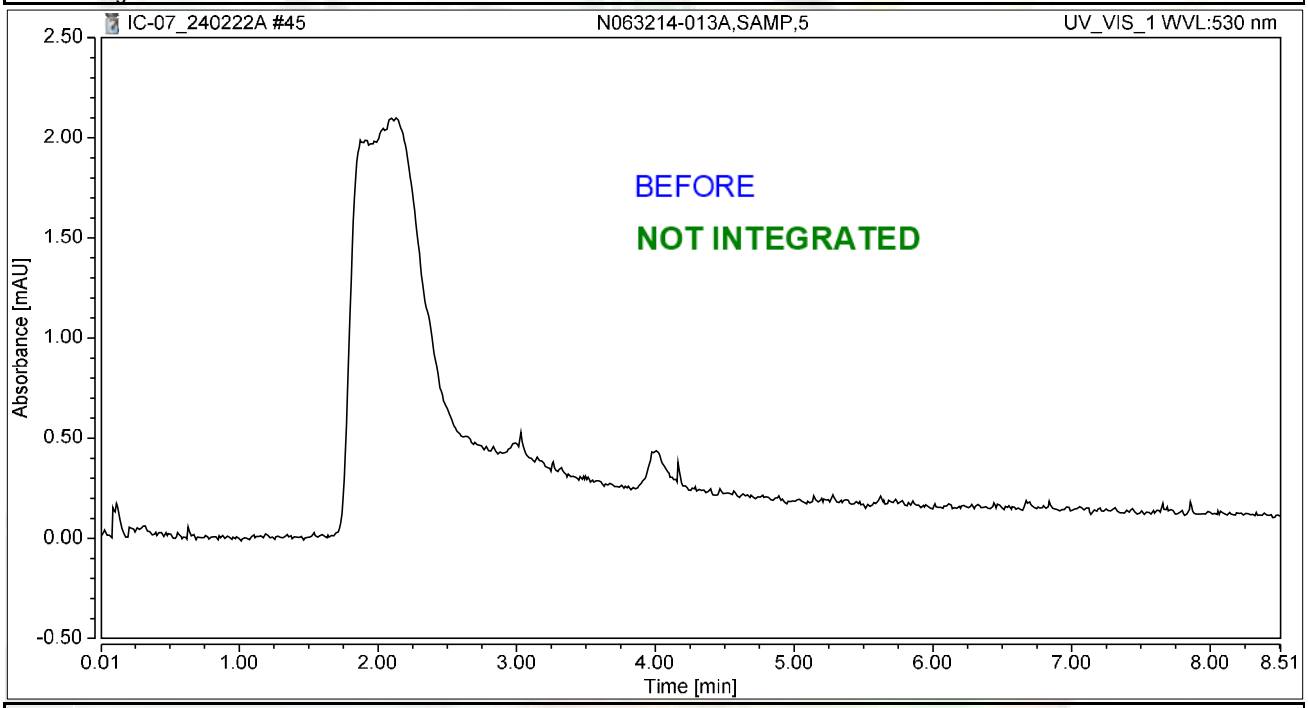
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063214-013A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 15:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

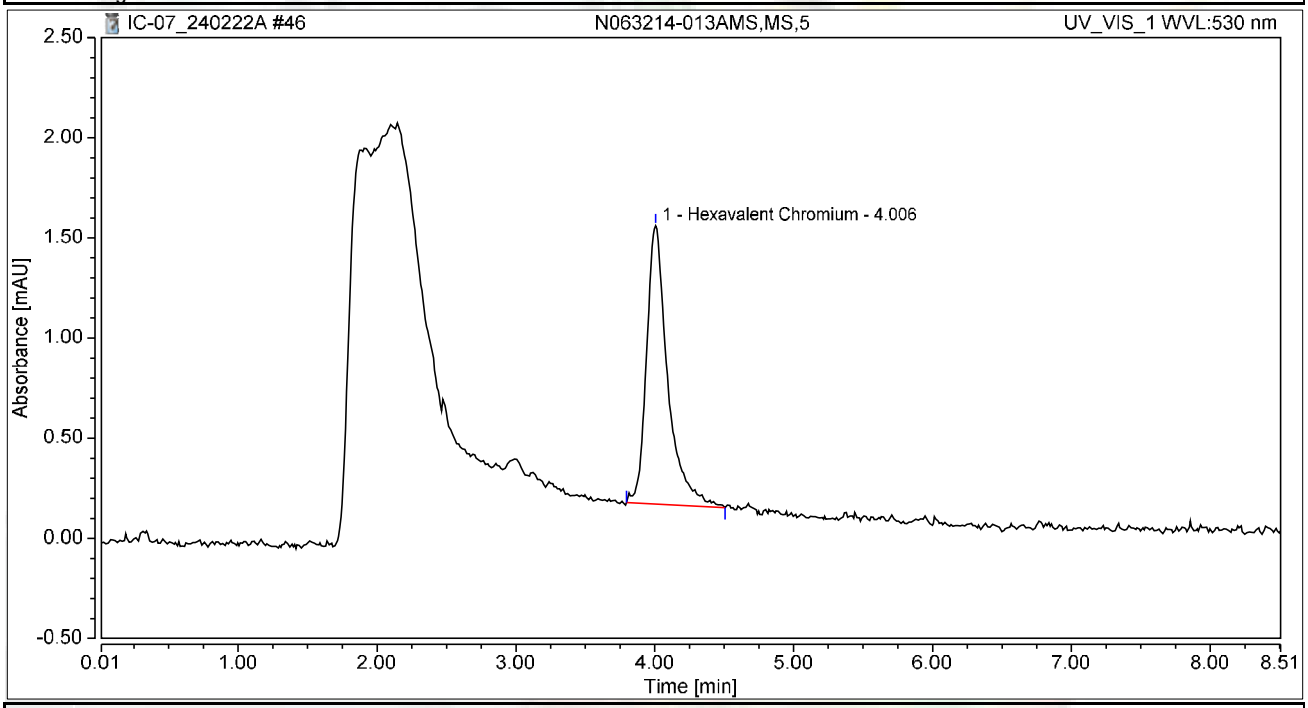
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-013AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 15:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

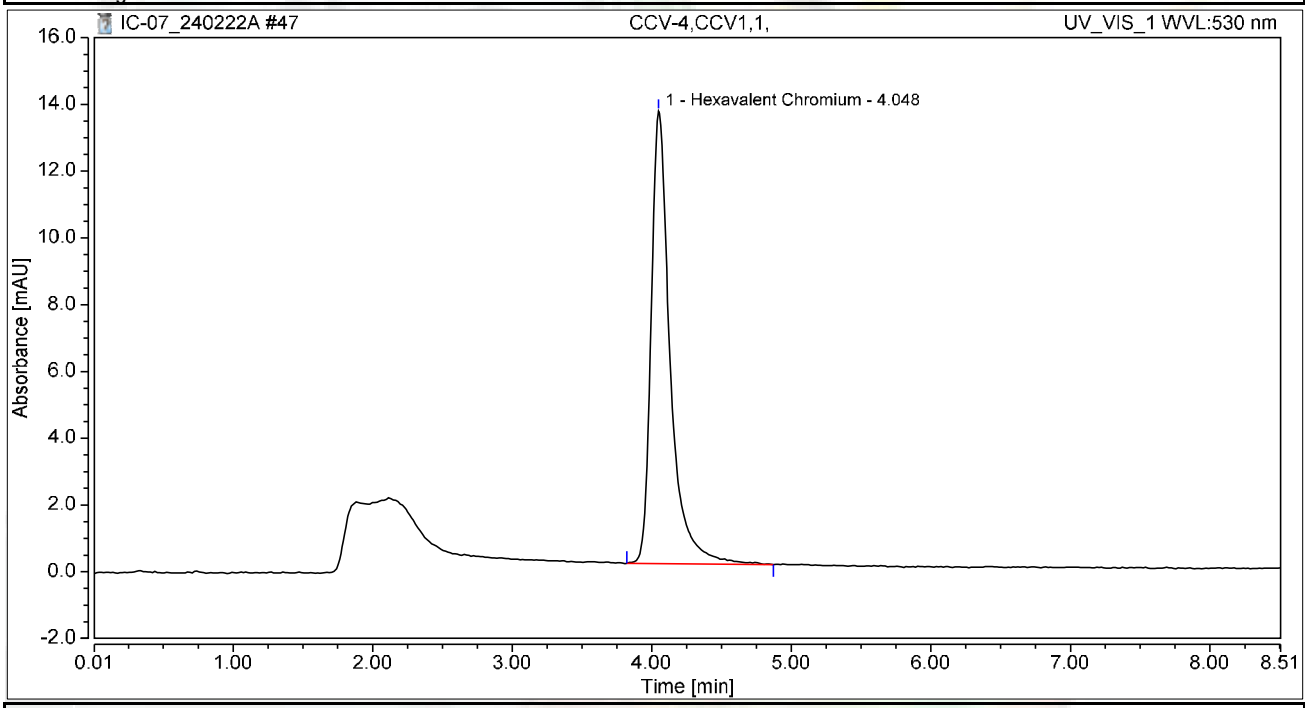
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.245	1.389	100.00	100.00	1.1370
Total:			**0.245**	**1.389**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 15:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

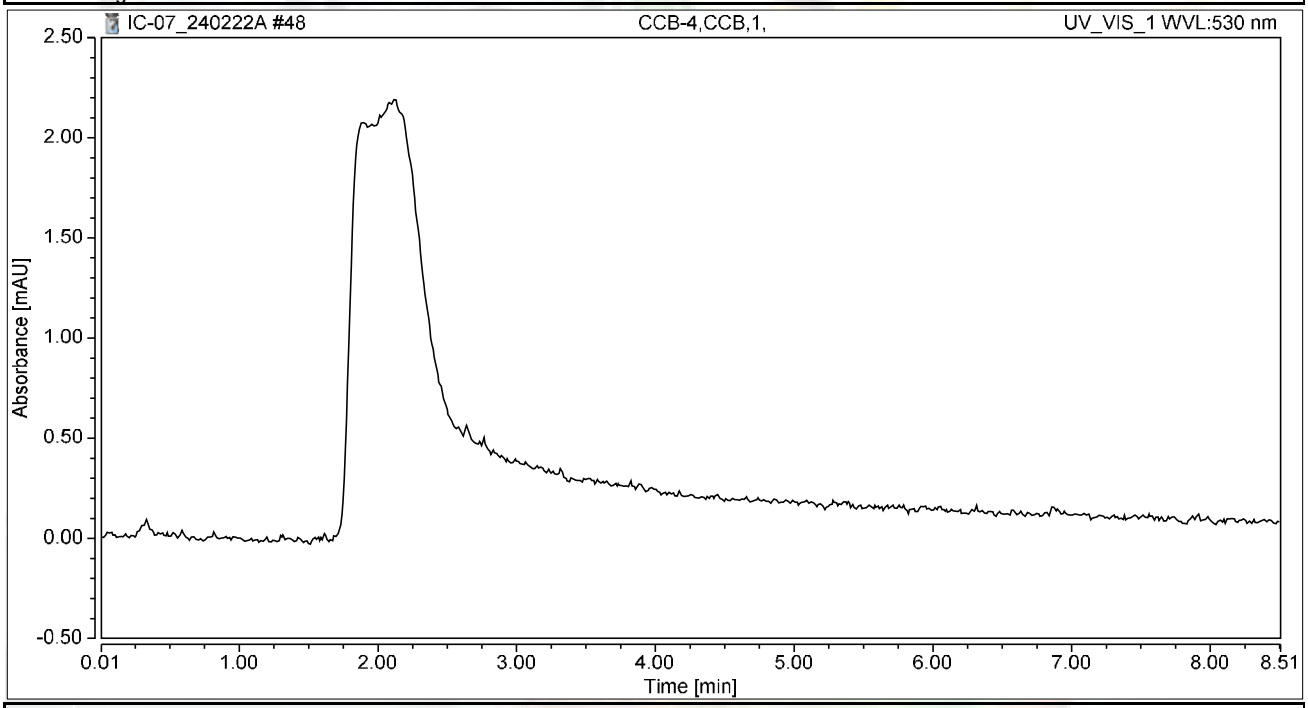
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.152	13.549	100.00	100.00	10.0043
Total:			**2.152**	**13.549**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 15:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

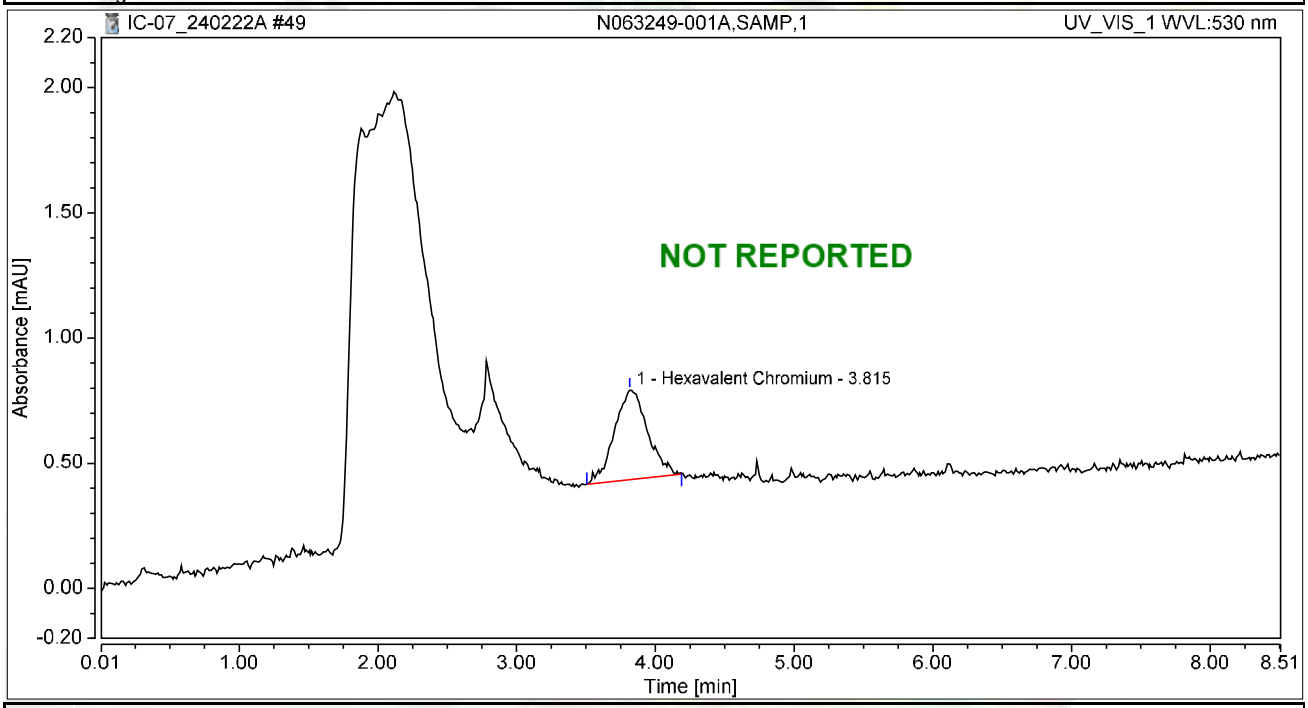
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 16:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

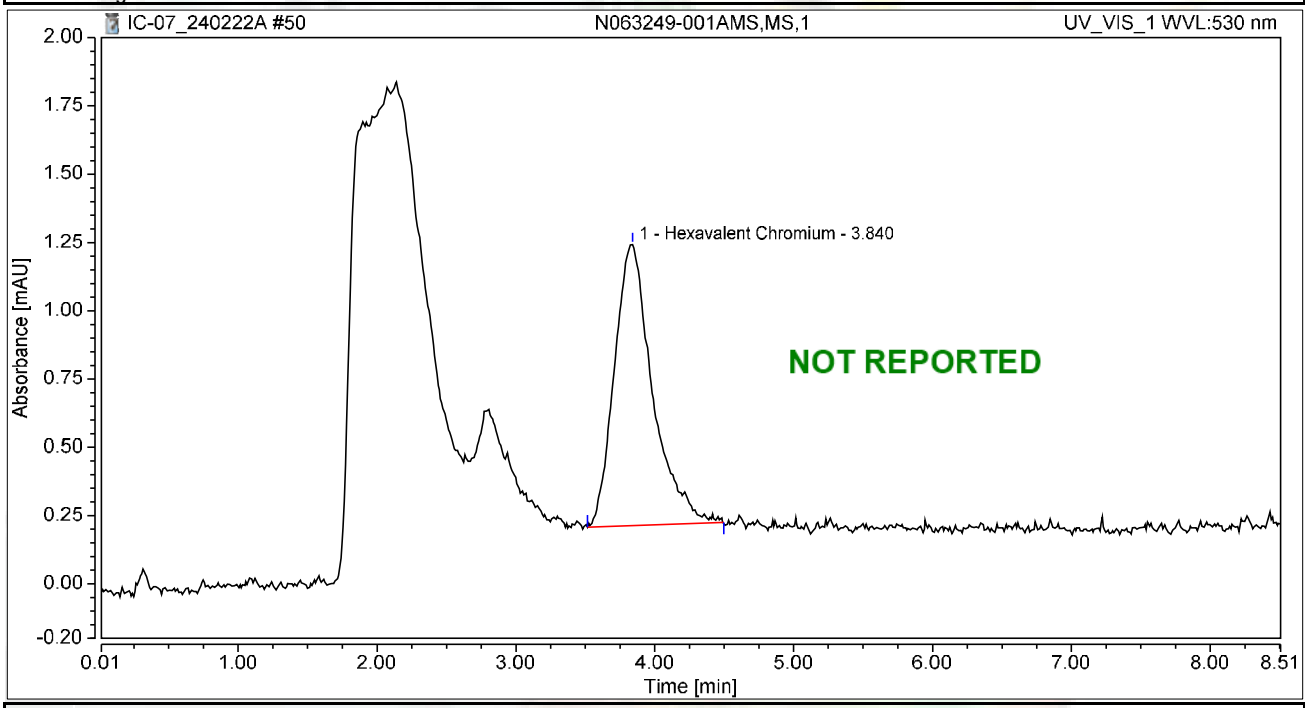
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	0.099	0.358	100.00	100.00	0.4601
Total:			**0.099**	**0.358**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 16:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

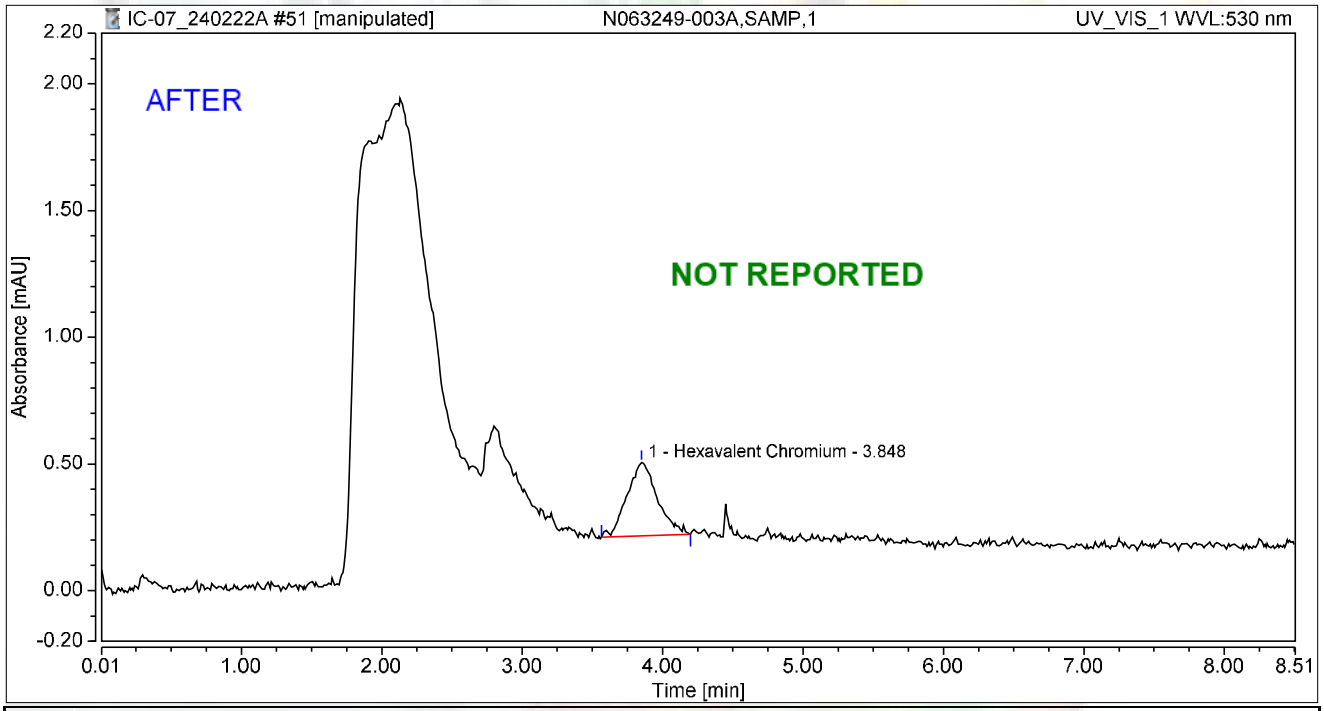
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.840	0.327	1.028	100.00	100.00	1.5212
Total:			**0.327**	**1.028**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 16:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

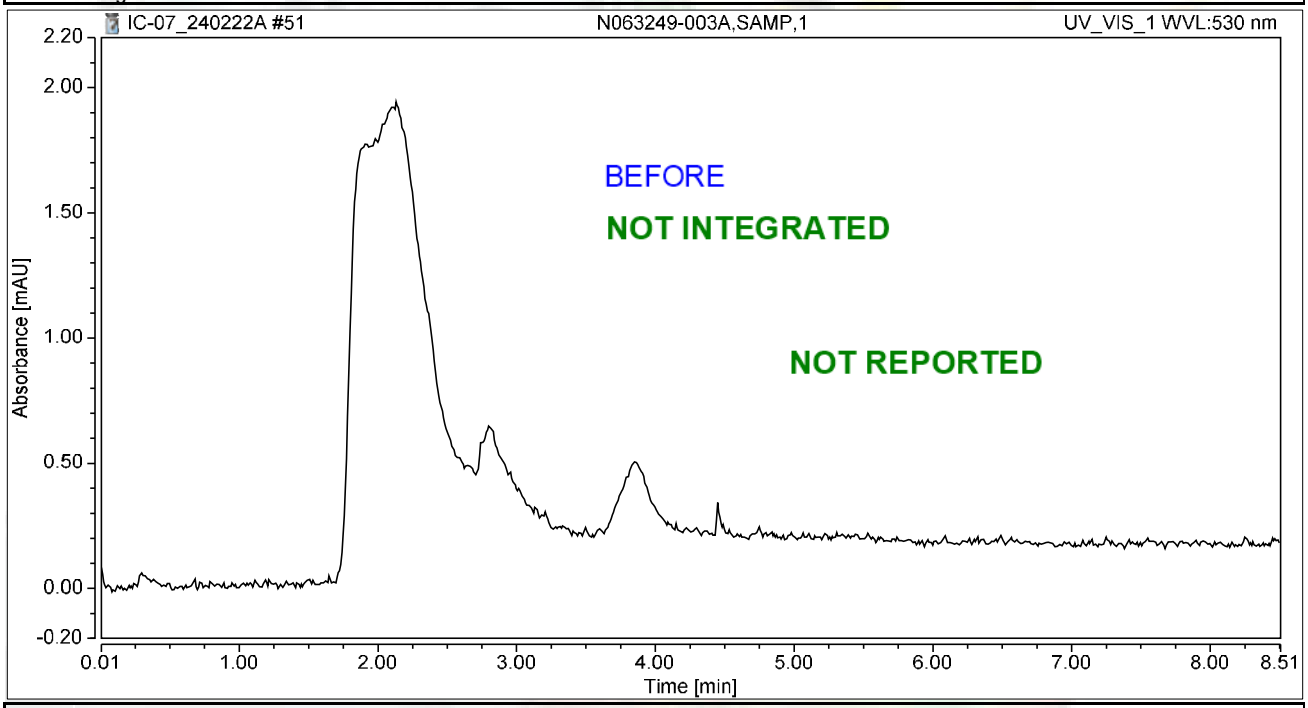
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.848	0.073	0.290	100.00	100.00	0.3375
Total:			**0.073**	**0.290**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 16:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

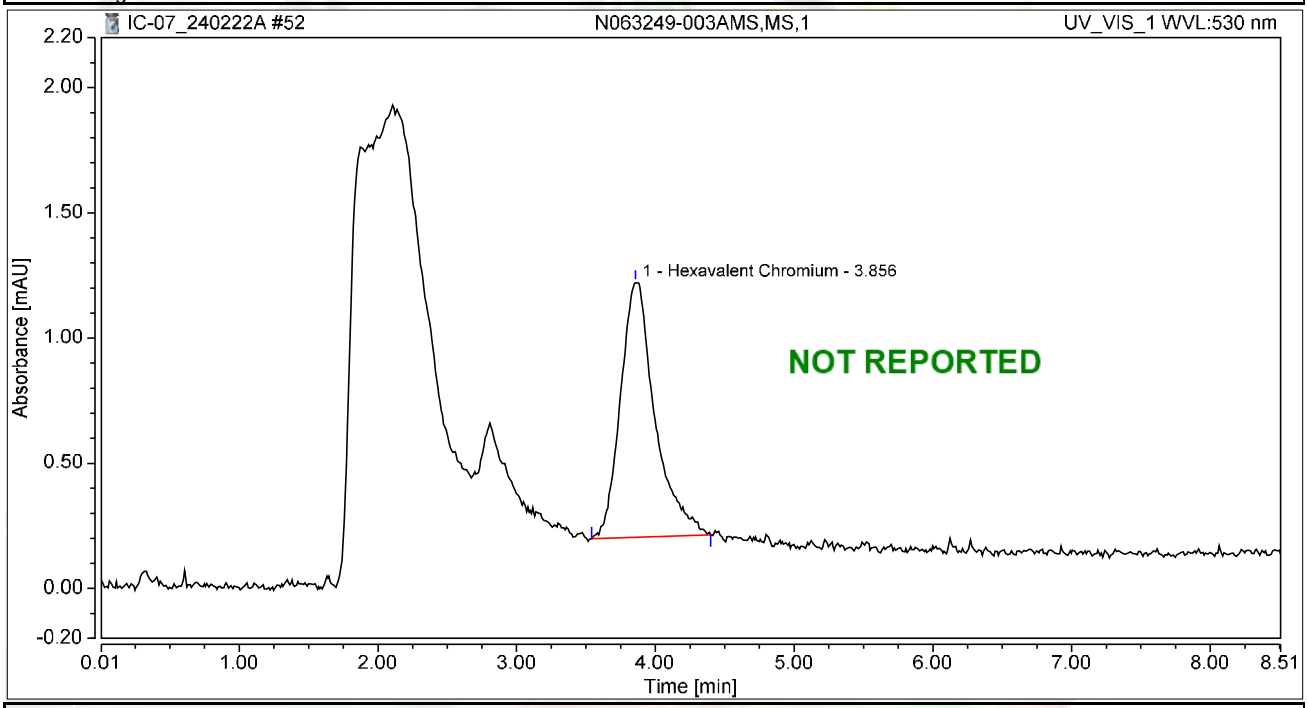
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 16:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

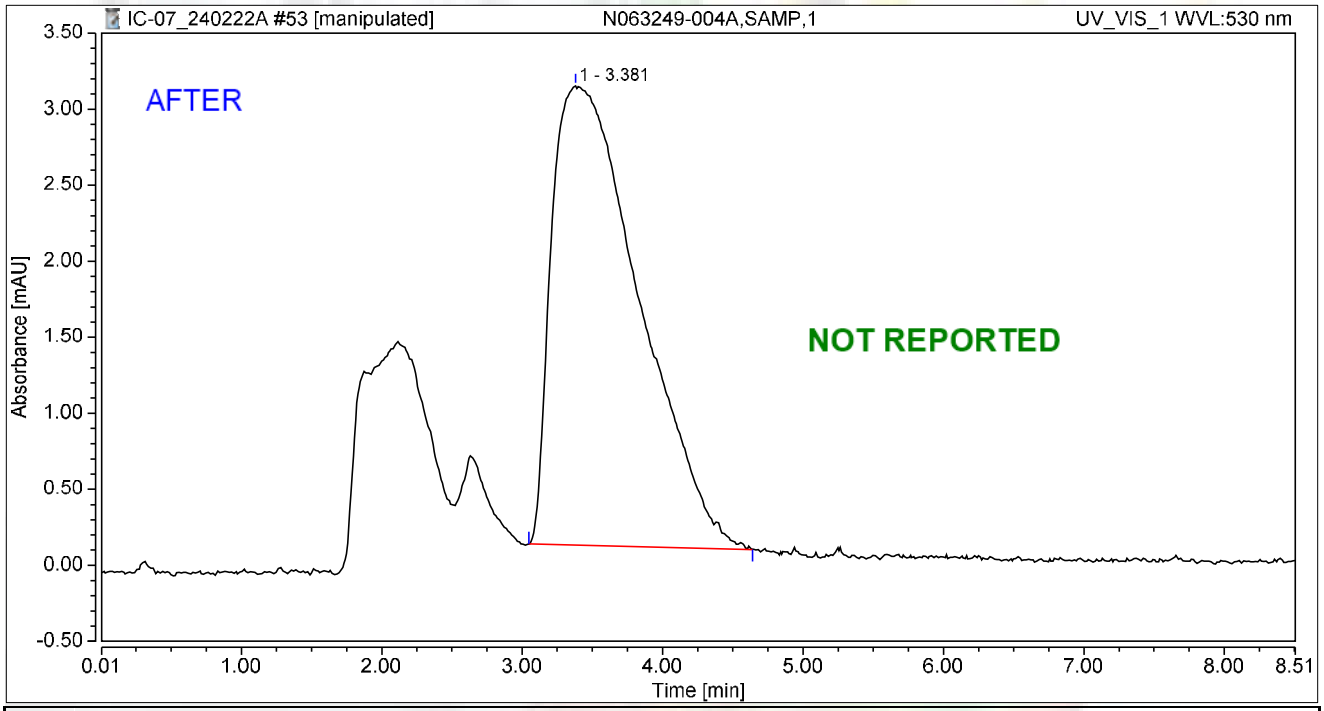
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.294	1.019	100.00	100.00	1.3662
Total:			**0.294**	**1.019**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 16:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

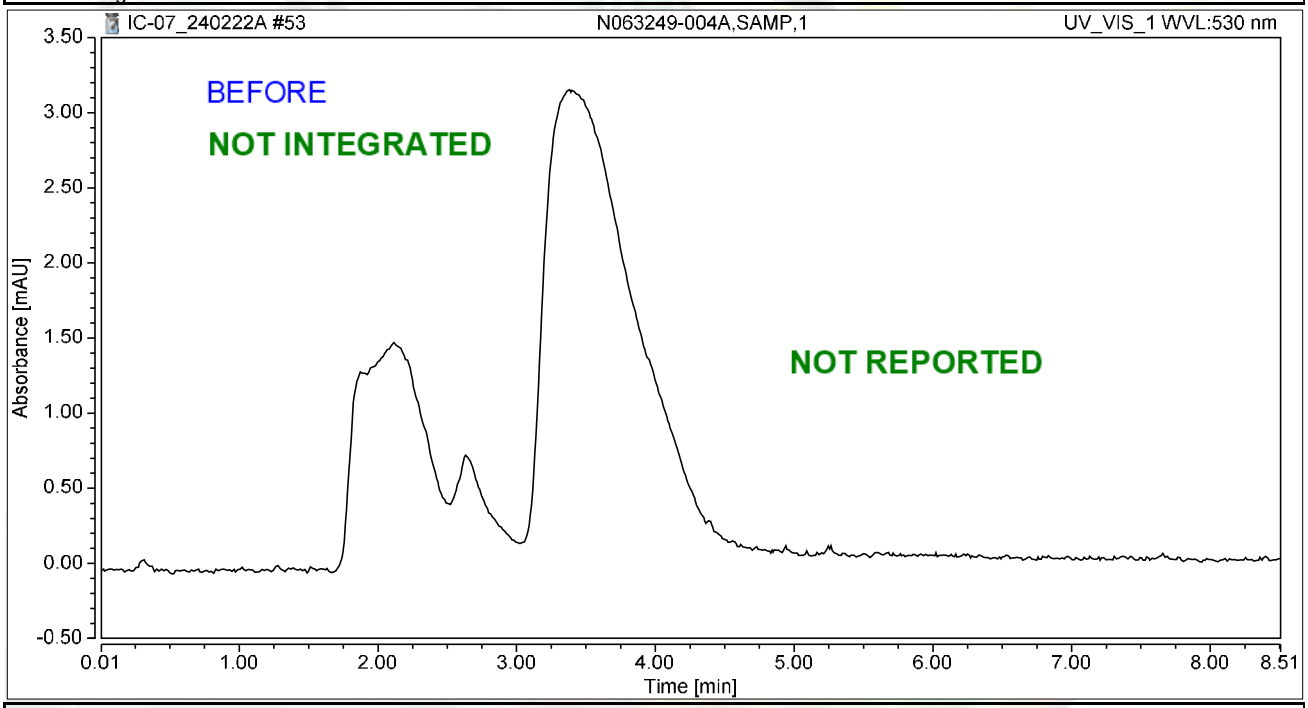
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.381	2.179	3.019	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**2.179**	**3.019**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 16:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

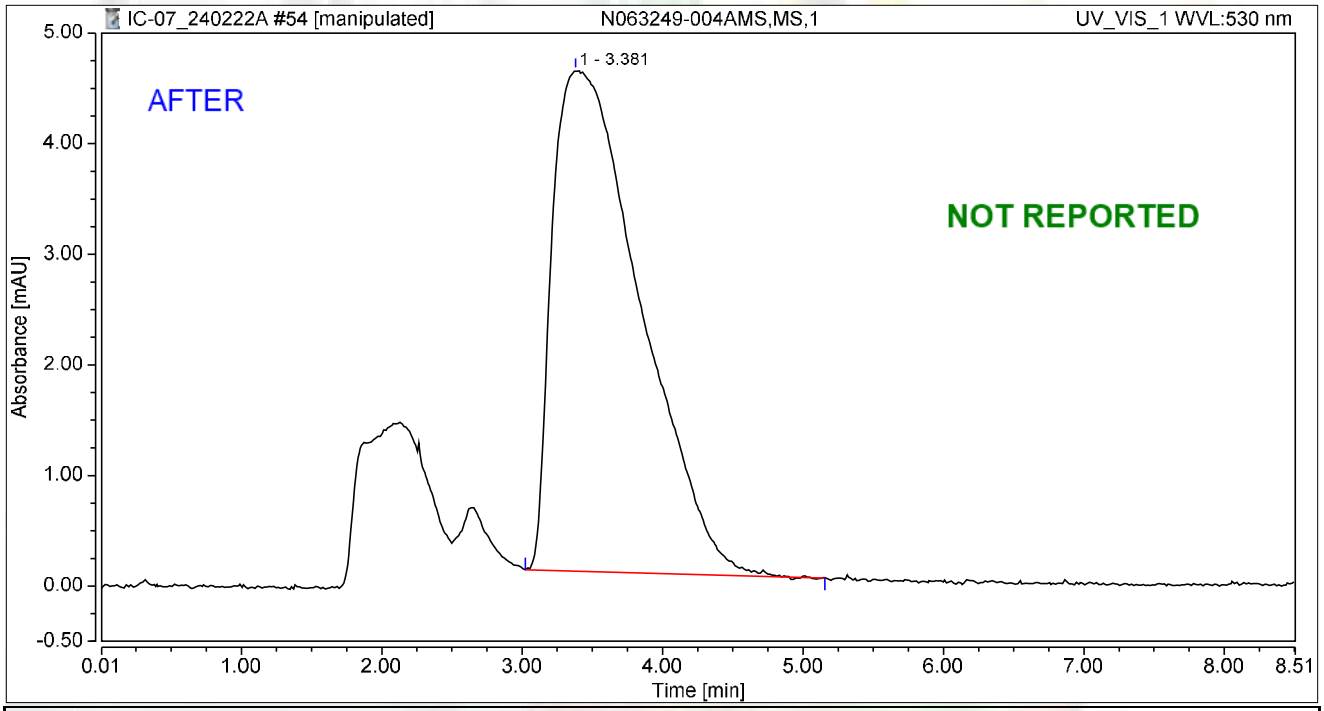
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 16:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

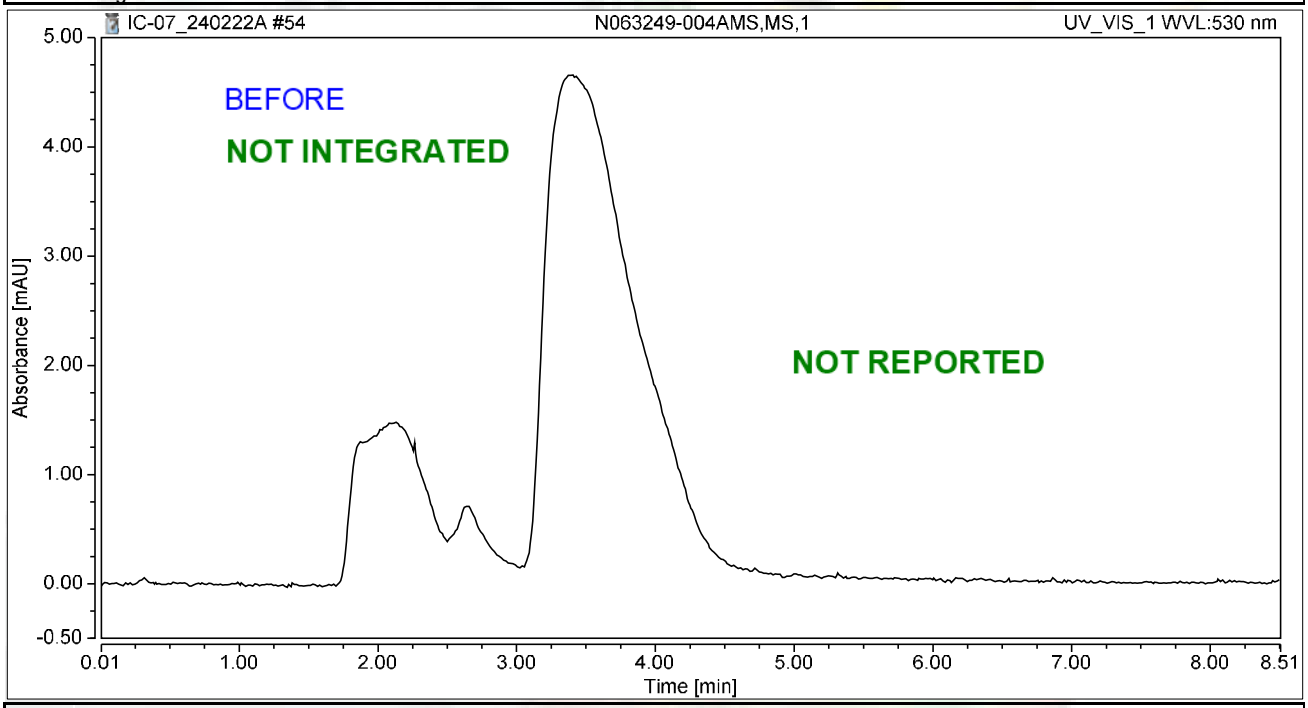
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.381	3.295	4.528	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**3.295**	**4.528**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 16:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

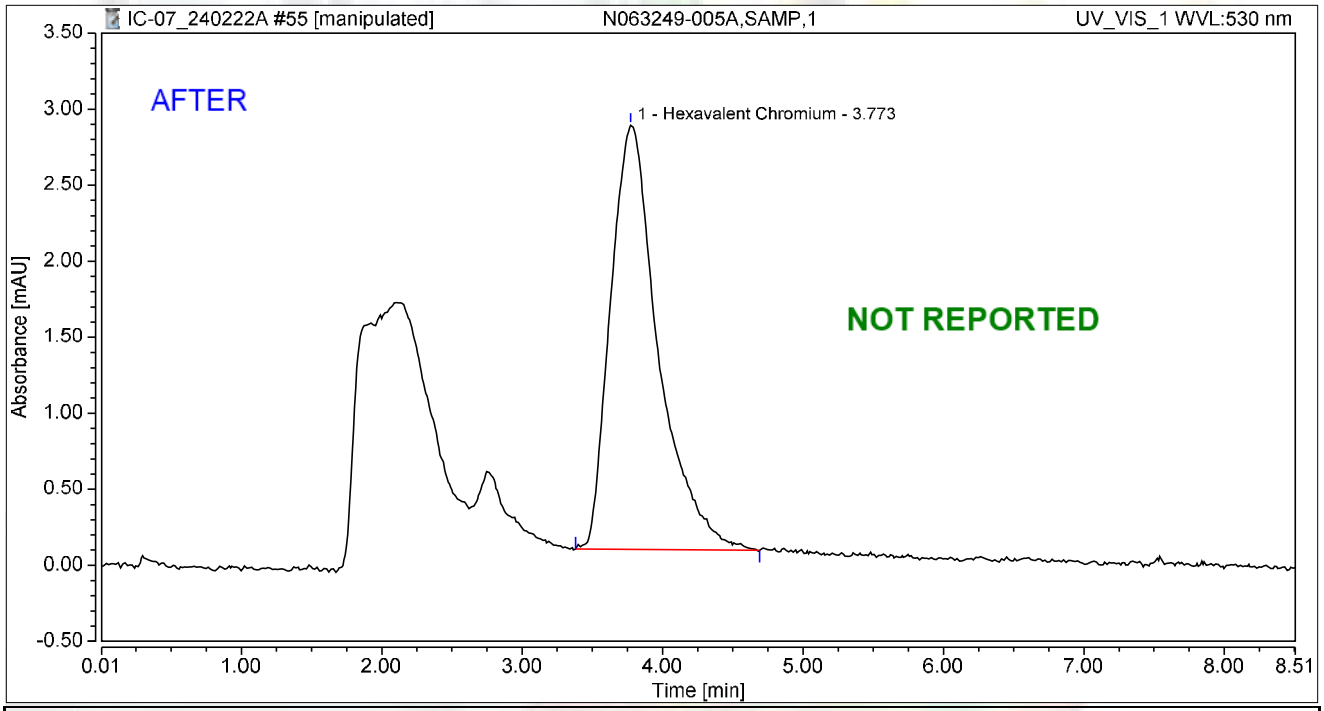
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 17:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

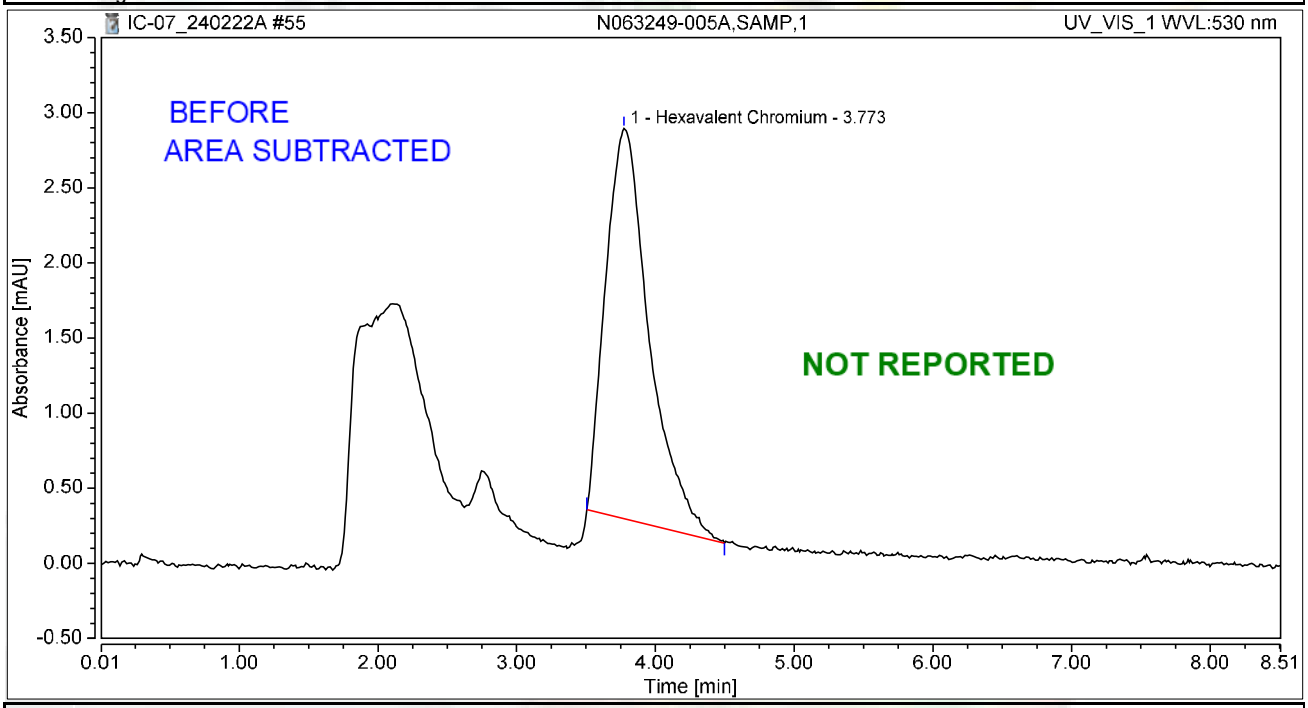
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.773	1.099	2.789	100.00	100.00	5.1081
Total:			**1.099**	**2.789**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 17:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

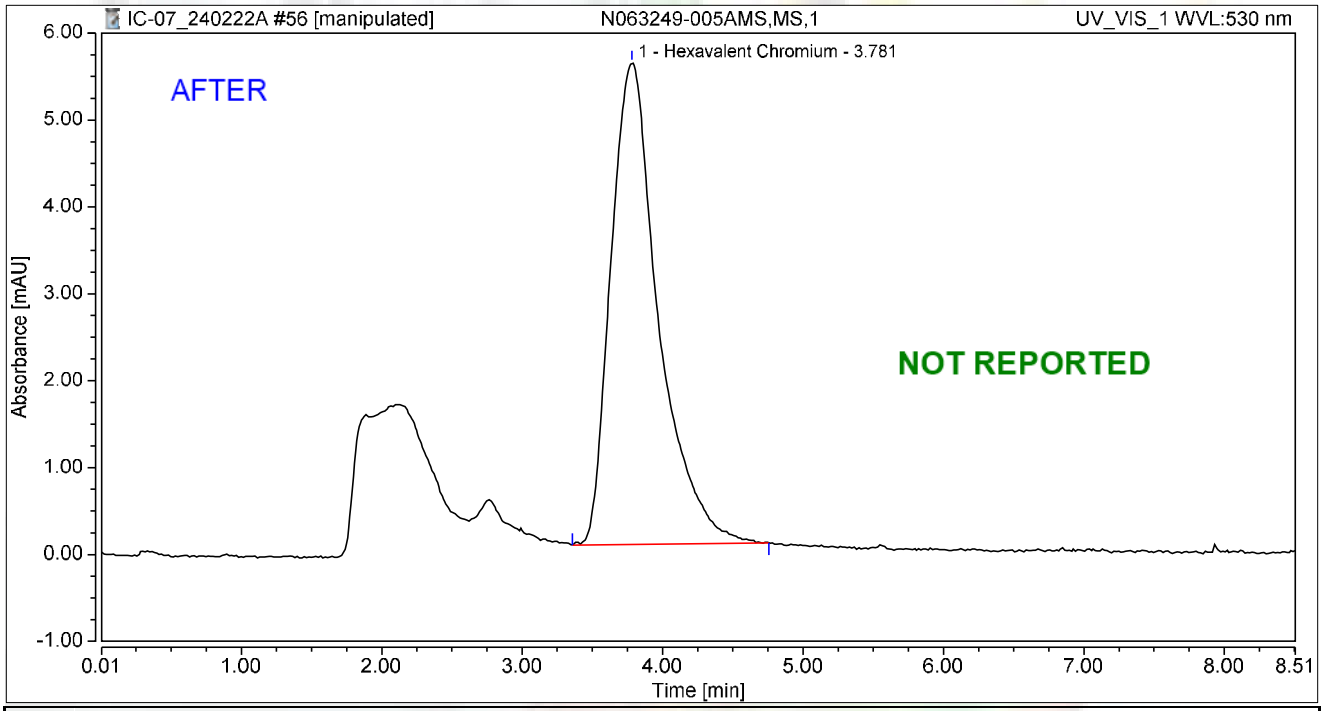
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.773	0.946	2.597	100.00	100.00	4.3996
Total:			**0.946**	**2.597**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 17:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

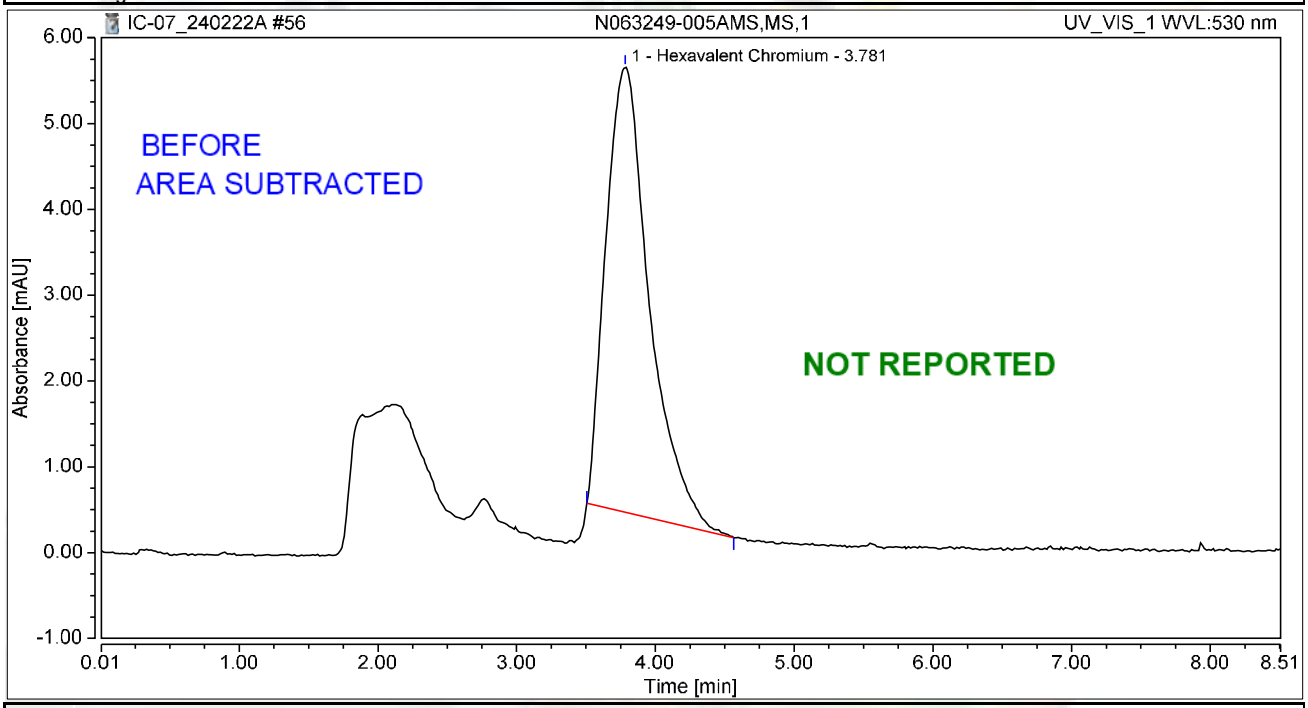
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.781	2.179	5.544	100.00	100.00	10.1280
Total:			**2.179**	**5.544**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 17:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

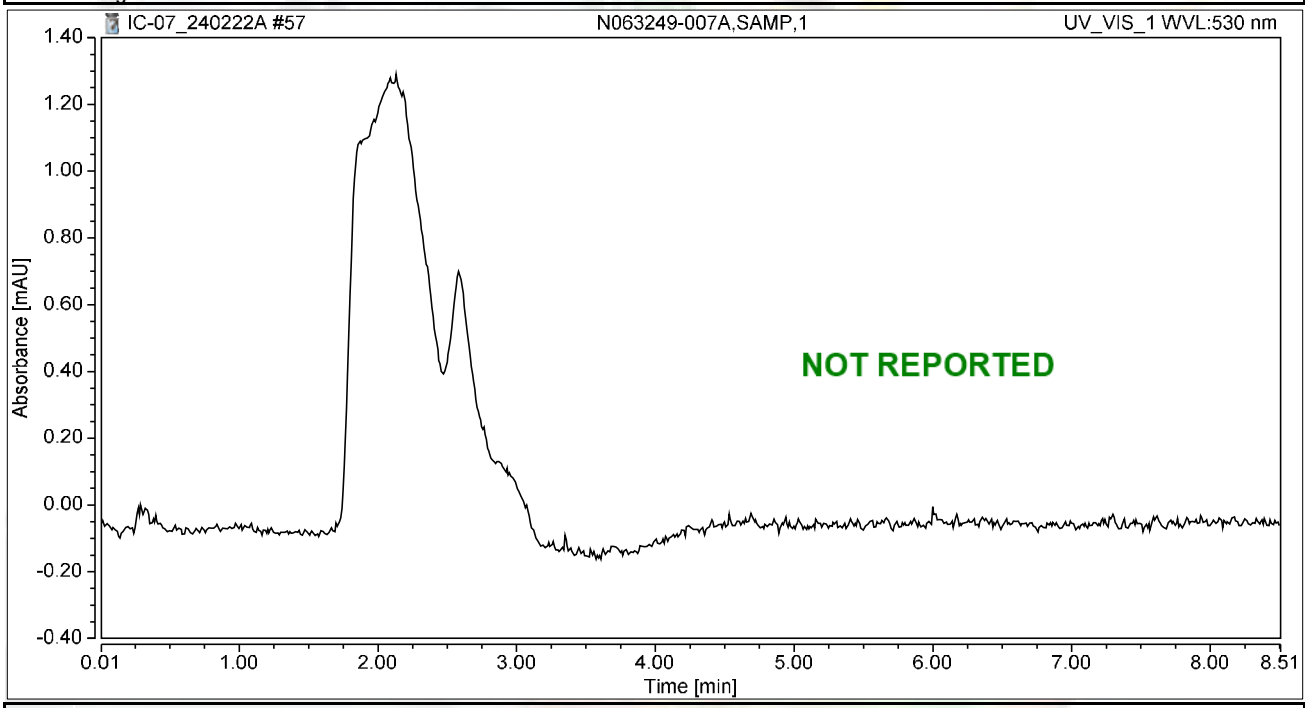
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.781	1.888	5.185	100.00	100.00	8.7768
Total:			**1.888**	**5.185**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-007A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 17:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

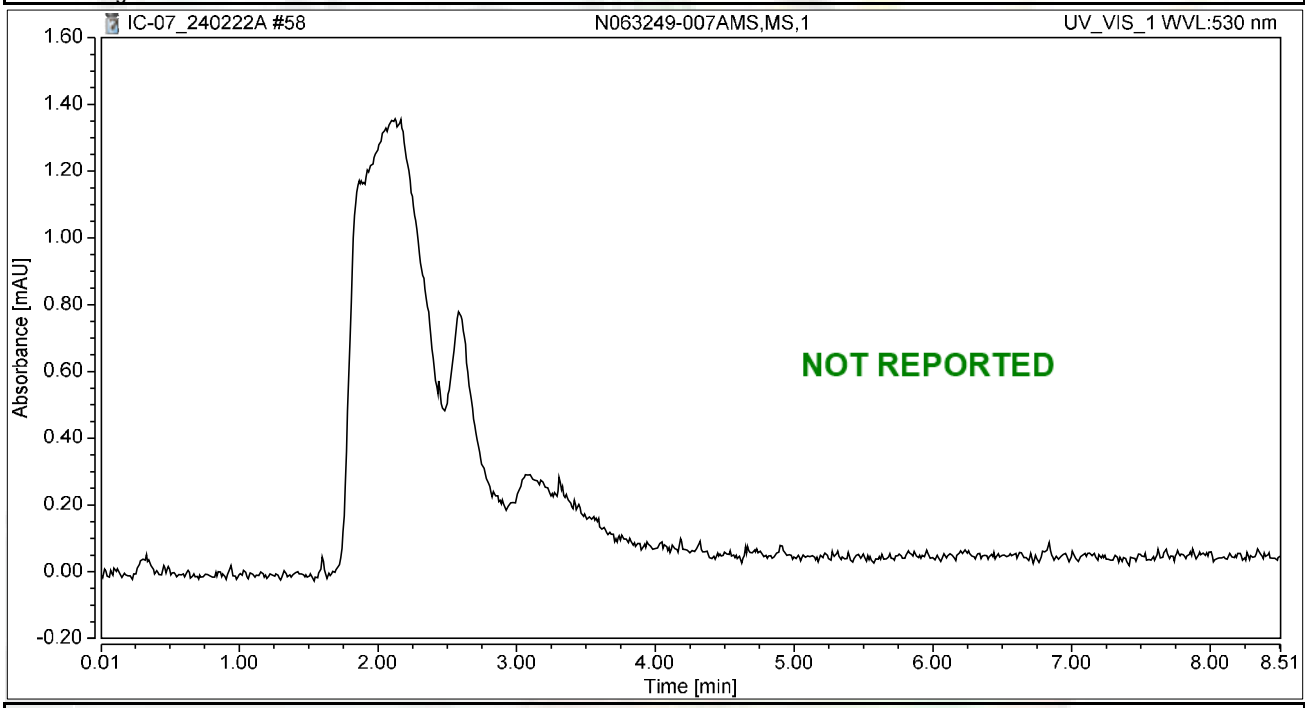
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 17:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

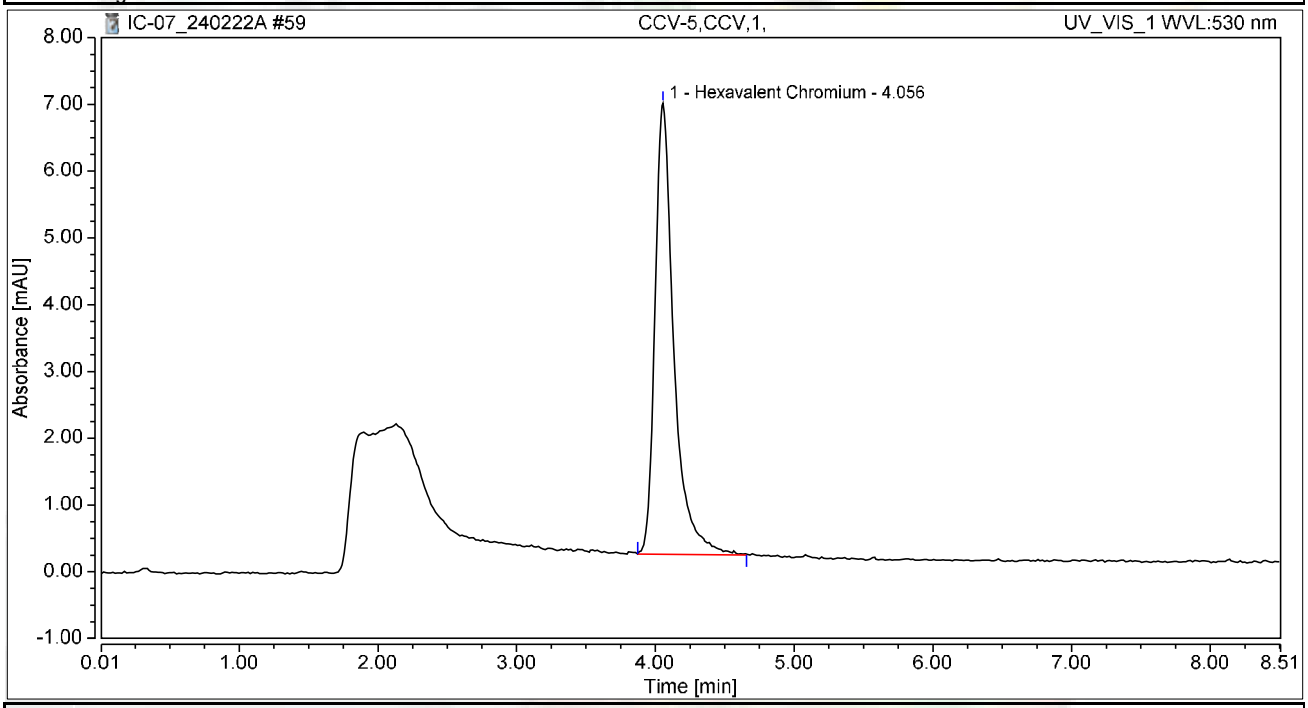
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 17:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

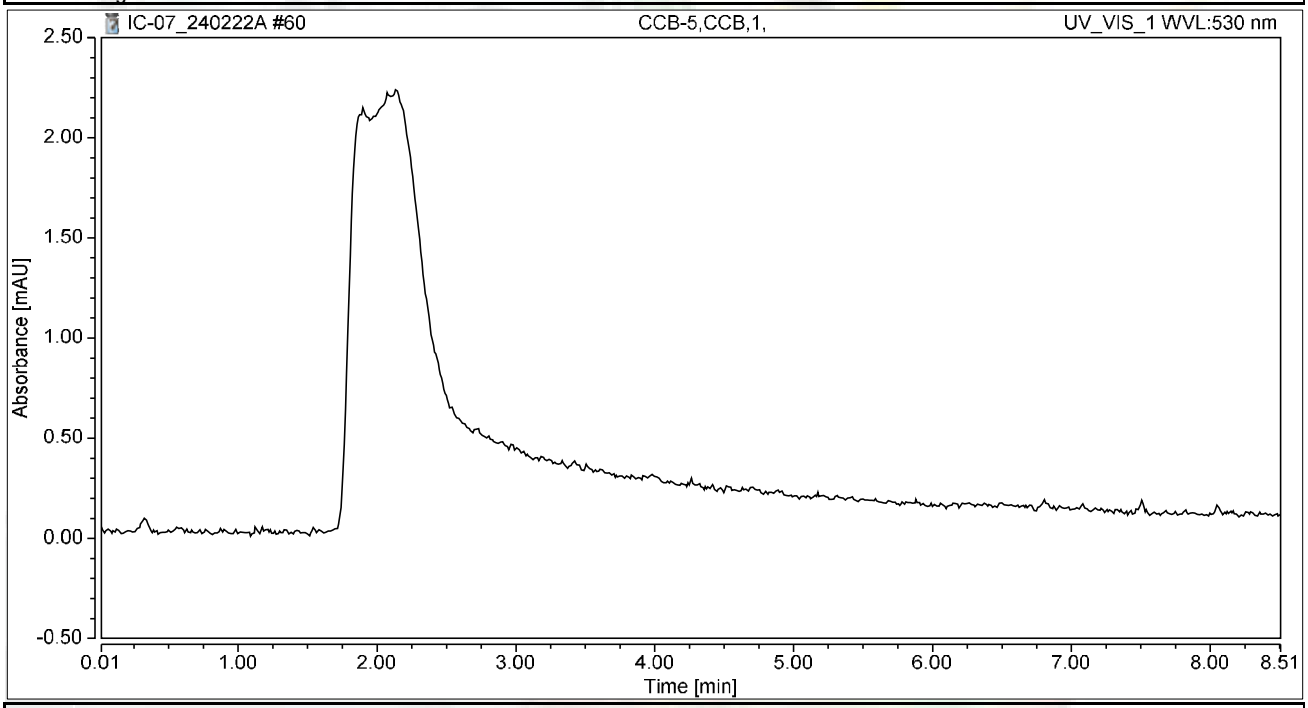
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	1.064	6.755	100.00	100.00	4.9466
Total:			**1.064**	**6.755**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 17:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

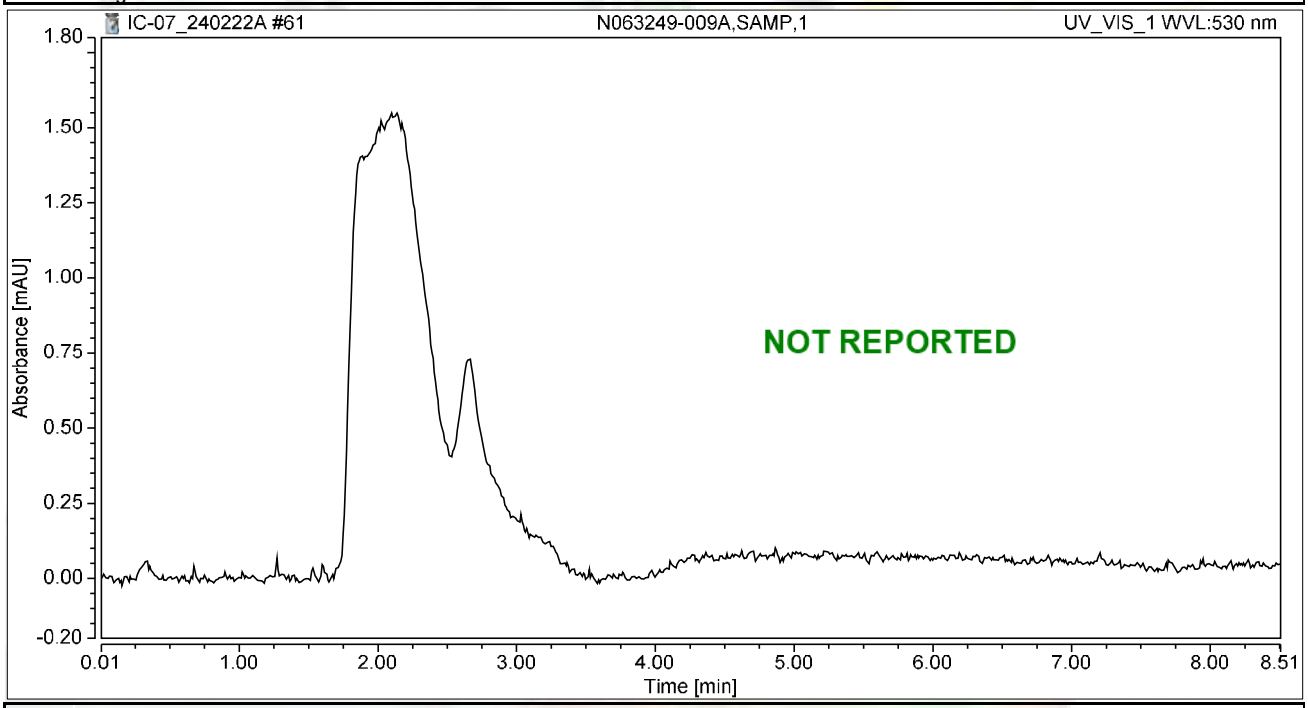
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 17:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

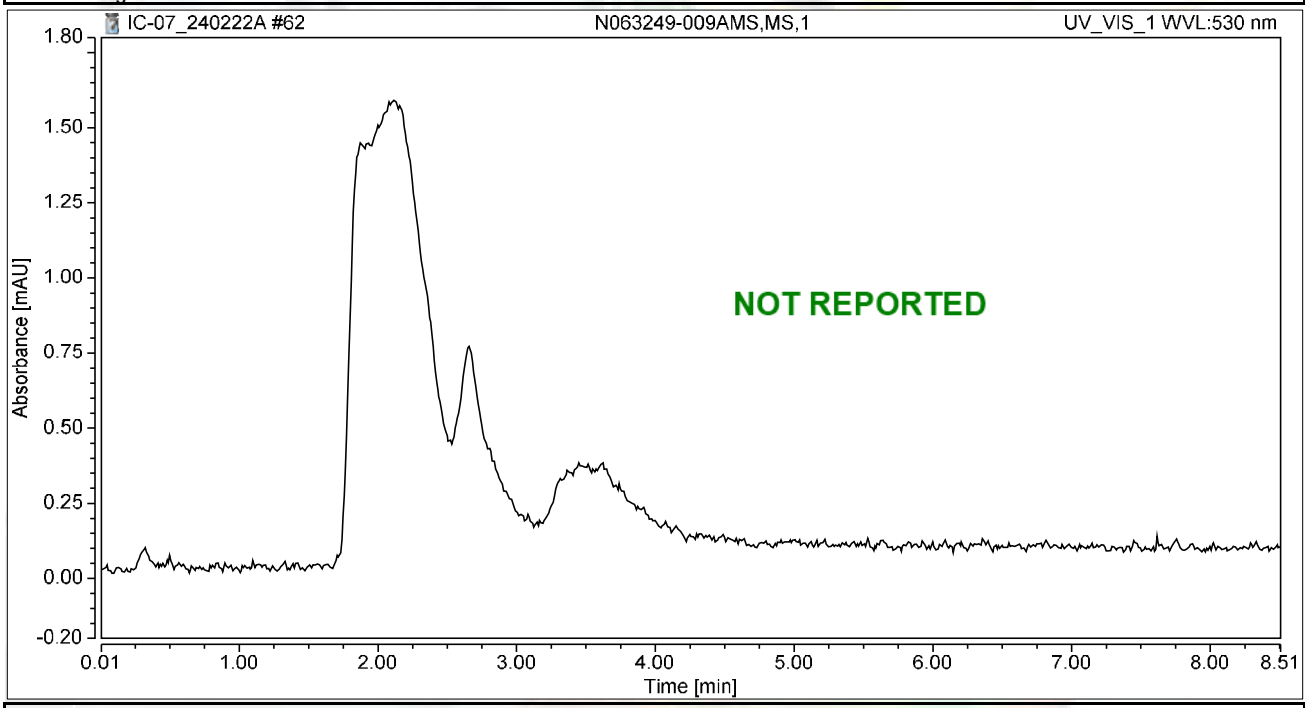
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 18:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

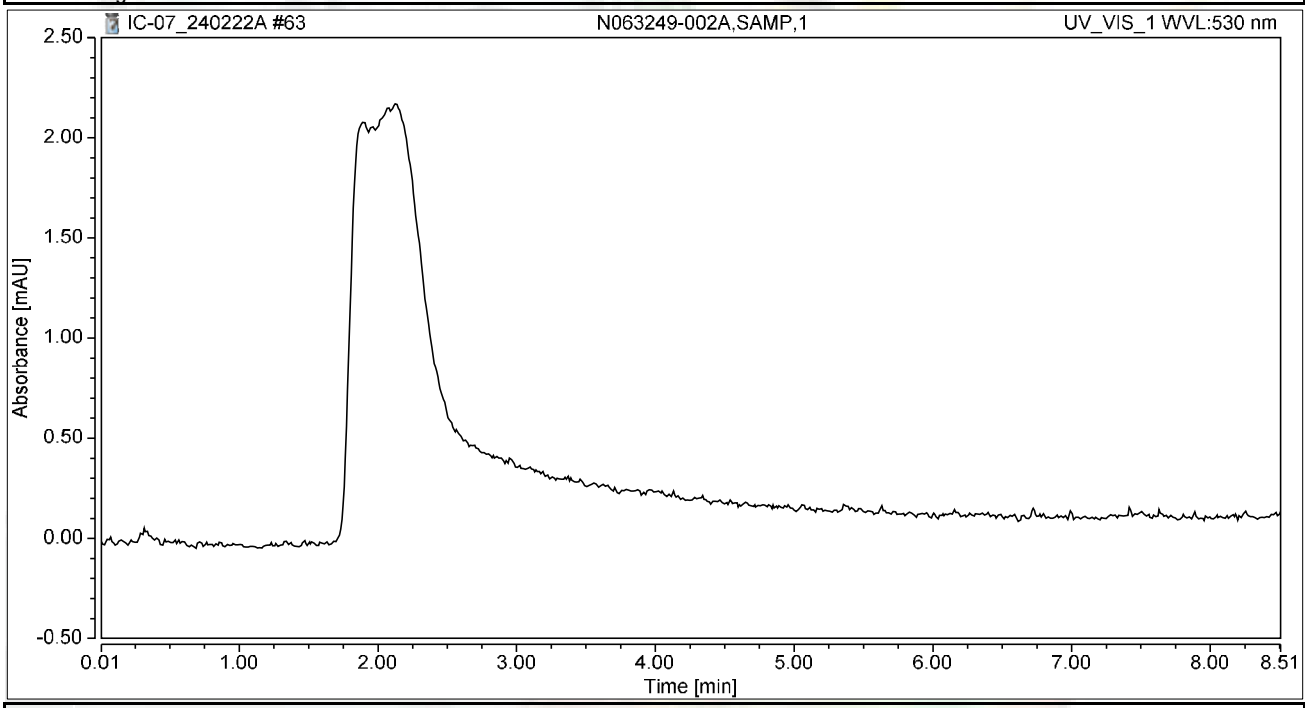
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 18:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

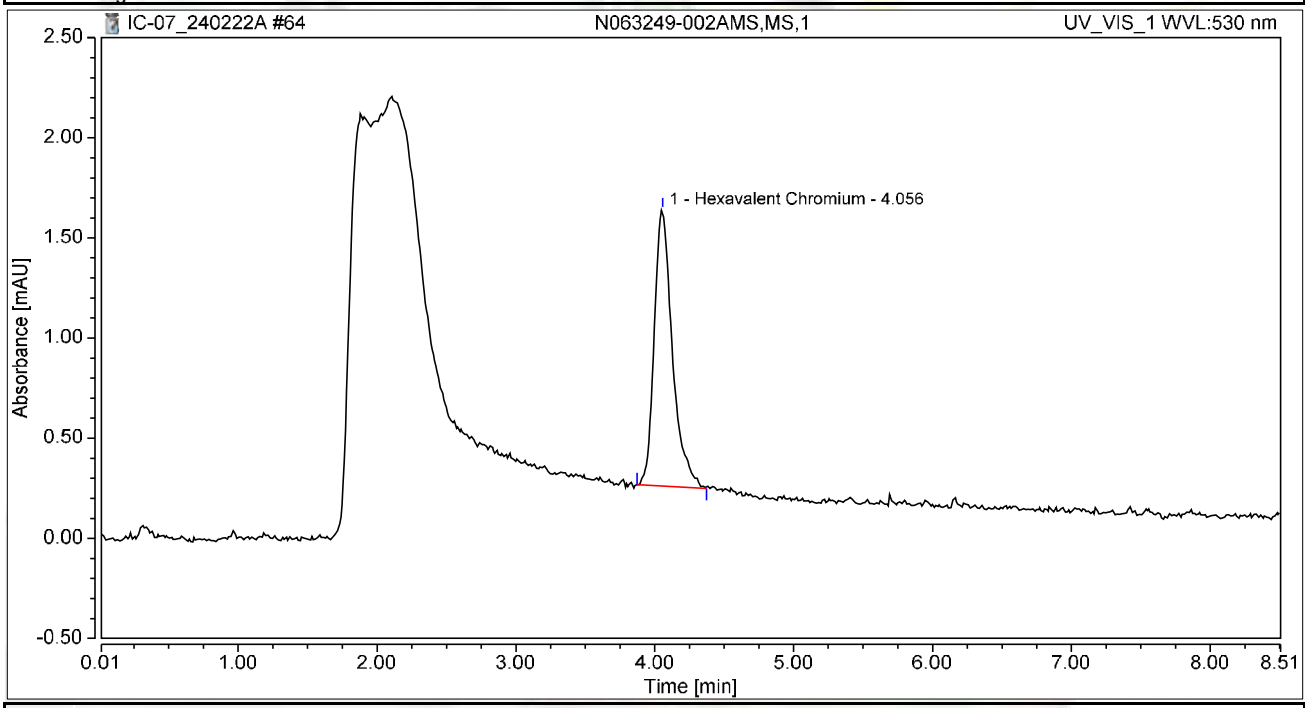
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 18:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

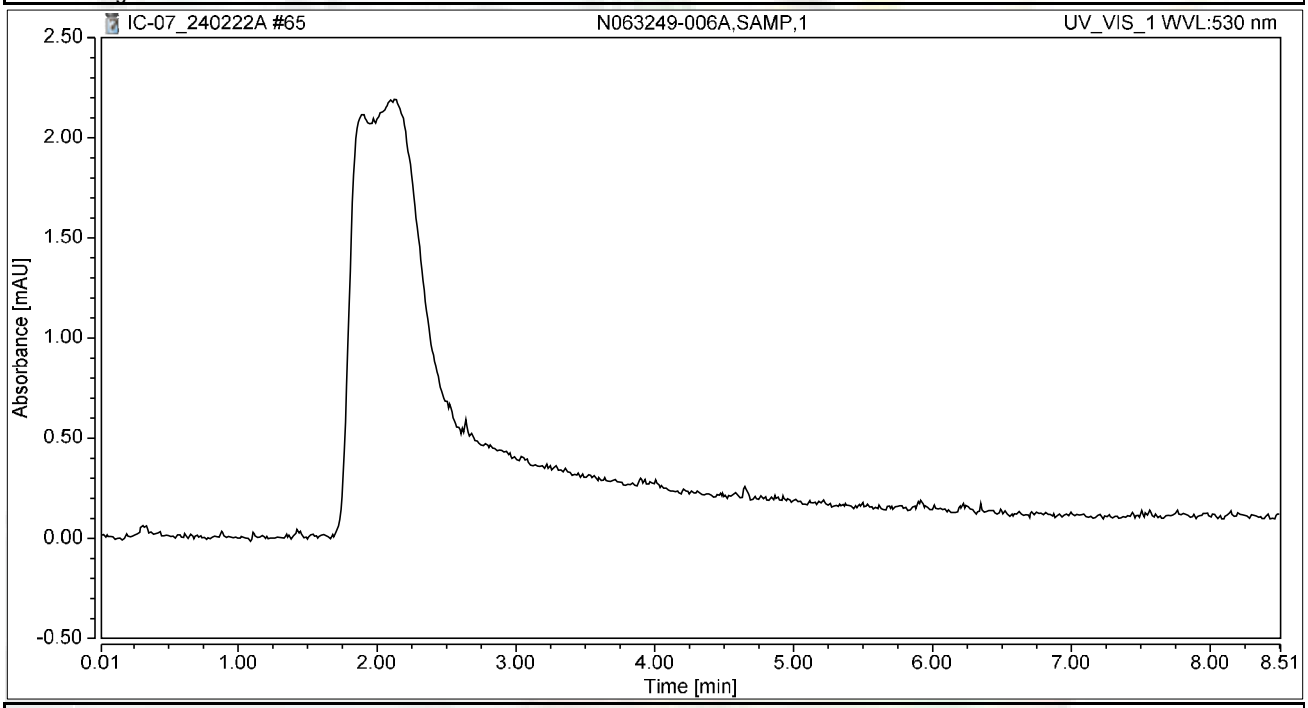
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.056	0.209	1.379	100.00	100.00	0.9714
Total:			**0.209**	**1.379**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-006A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 18:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

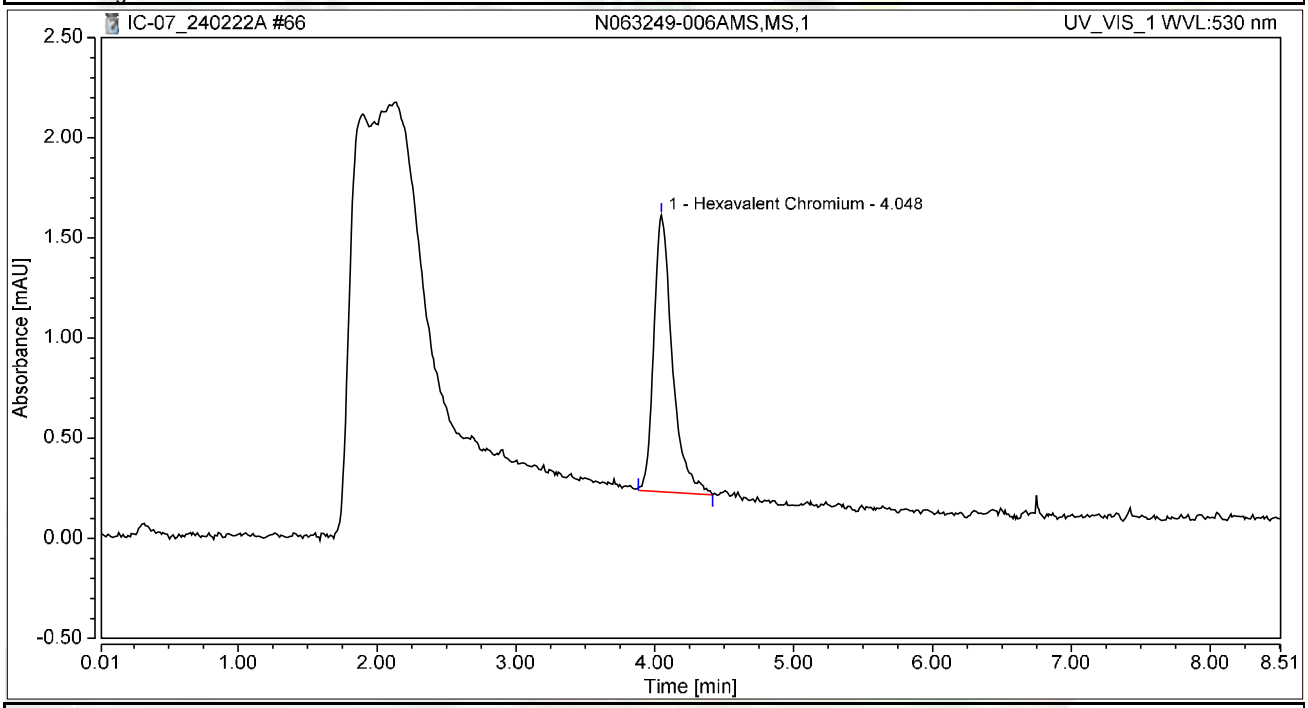
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-006AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 18:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

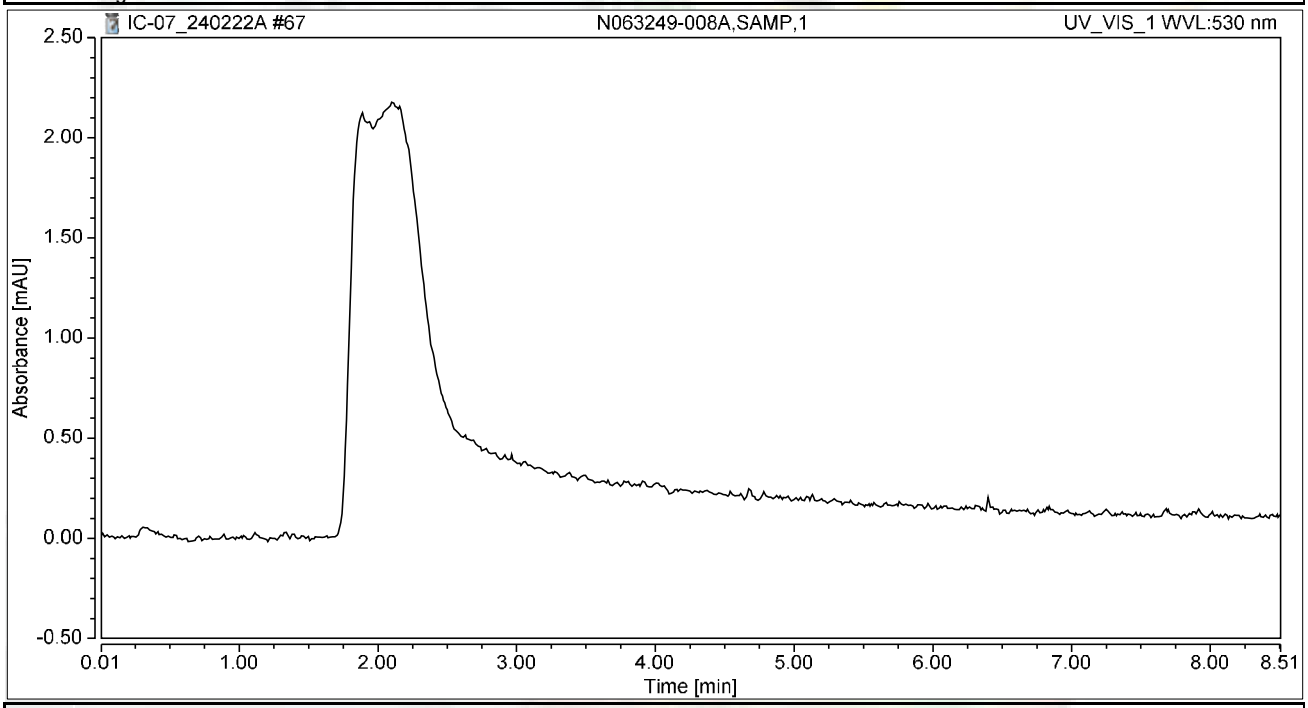
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.214	1.381	100.00	100.00	0.9956
Total:			**0.214**	**1.381**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 19:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

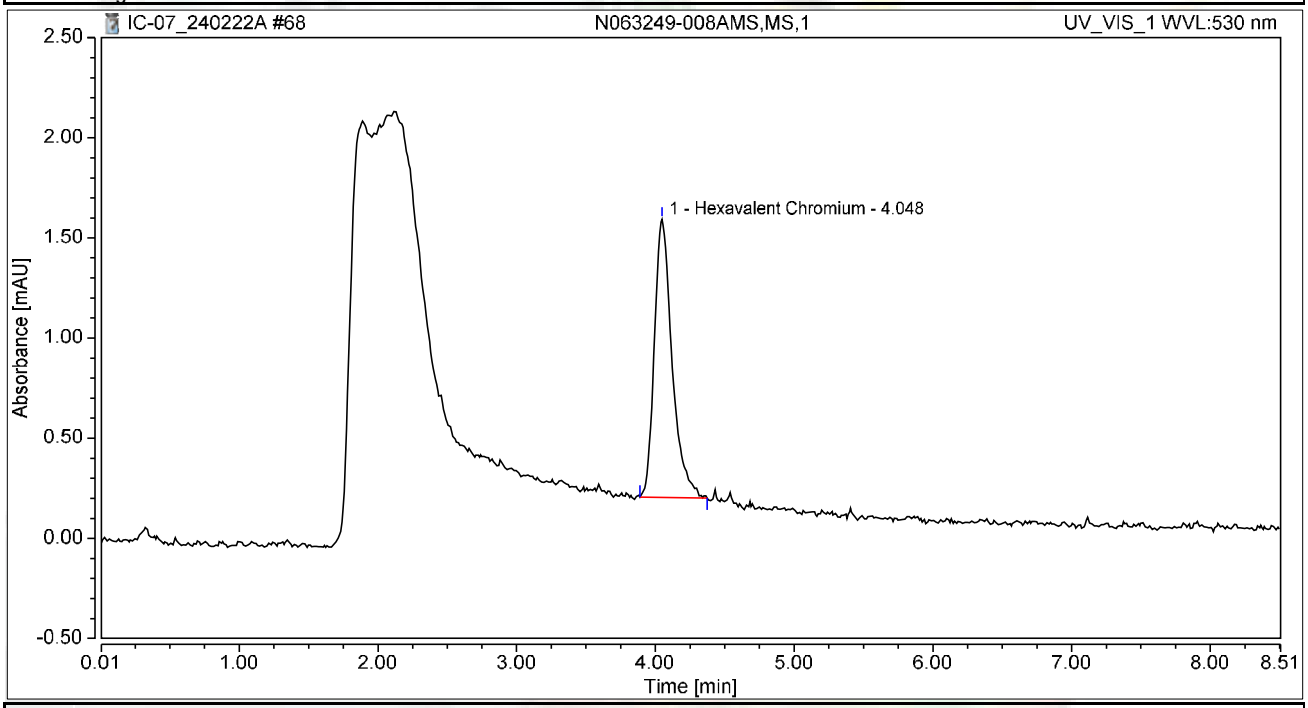
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 19:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.206	1.388	100.00	100.00	0.9562
Total:			**0.206**	**1.388**	**100.00**	**100.00**	

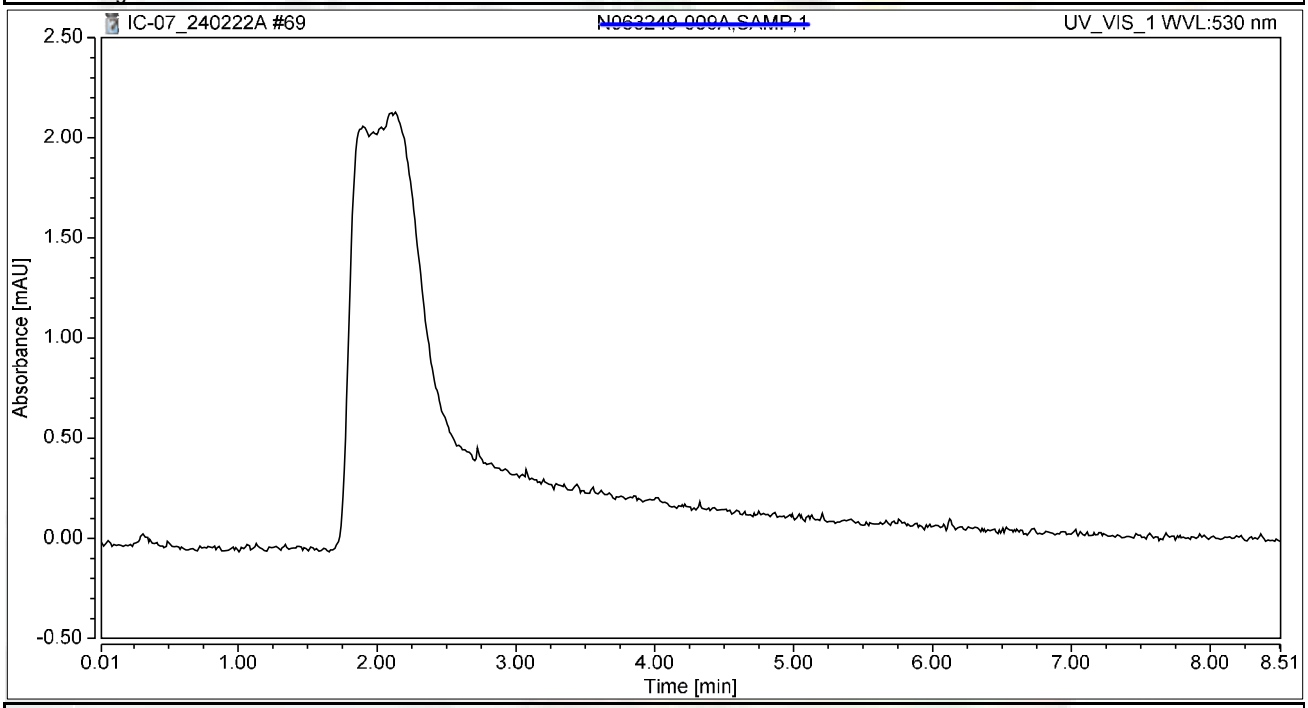
Chromatogram and Results

Injection Details

Injection Name:	~~N063249-009A,SAMP,1~~ N063249-010A,SAMP,1	*Run Time (min):*	**8.49**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 19:20**	*Sample Weight:*	**1.0000**

Chromatogram

N063249-010A,SAMP,1



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

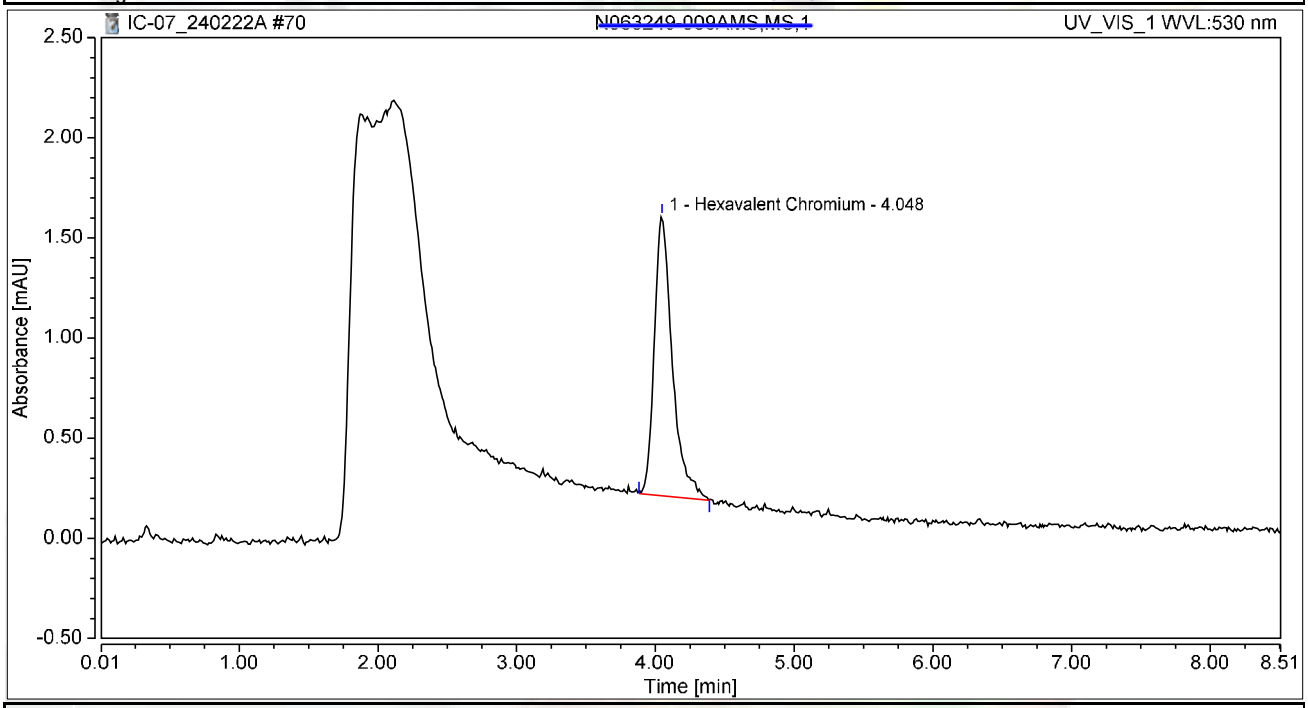
Chromatogram and Results

Injection Details

Injection Name:	~~N063249-009AMS,MS,1~~ N063249-010AMS,MS,1	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 19:29**	*Sample Weight:*	**1.0000**

Chromatogram

N063249-010AMS,MS,1



Integration Results

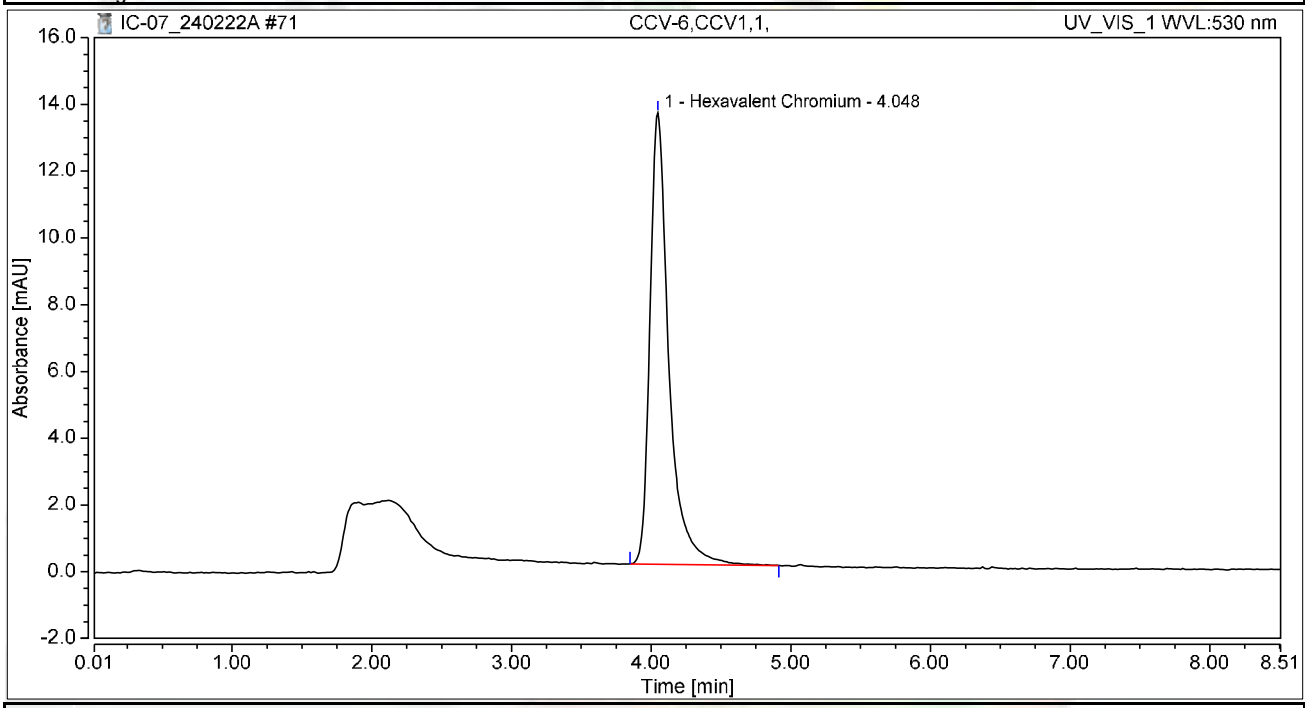
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.210	1.397	100.00	100.00	0.9740
Total:			**0.210**	**1.397**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 19:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

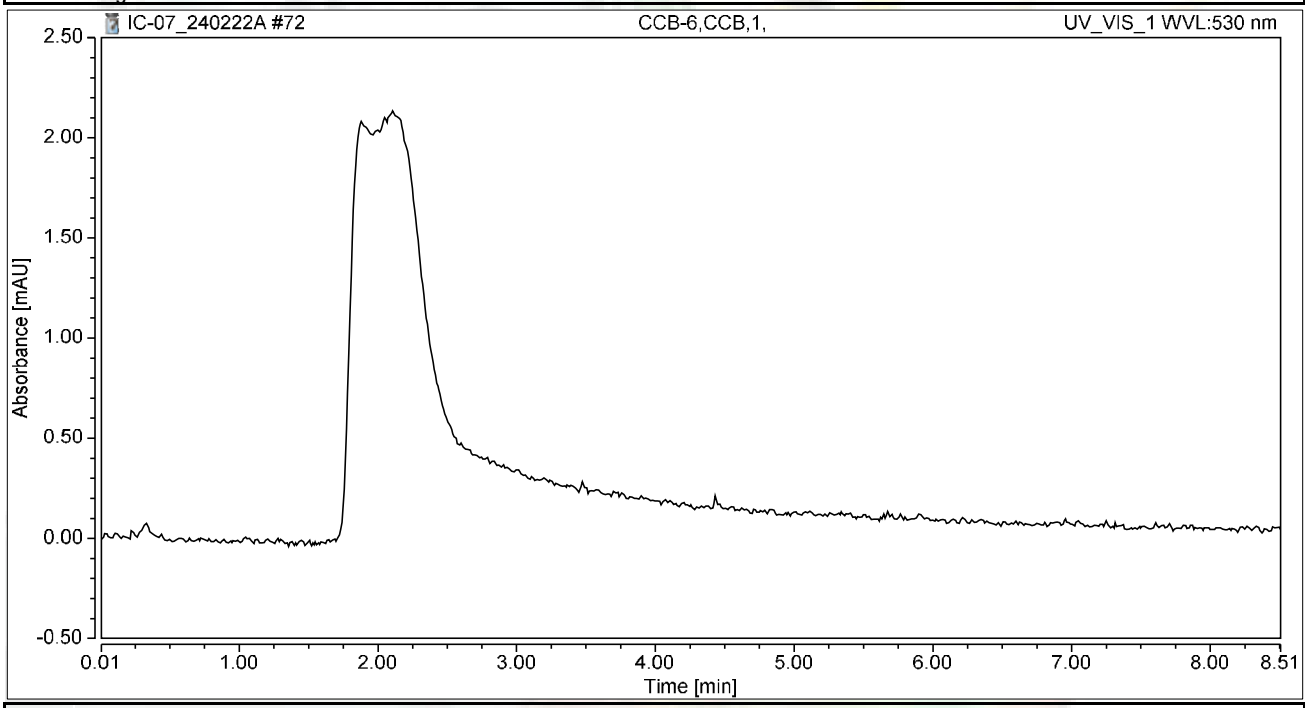
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.125	13.531	100.00	100.00	9.8795
Total:			**2.125**	**13.531**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 19:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

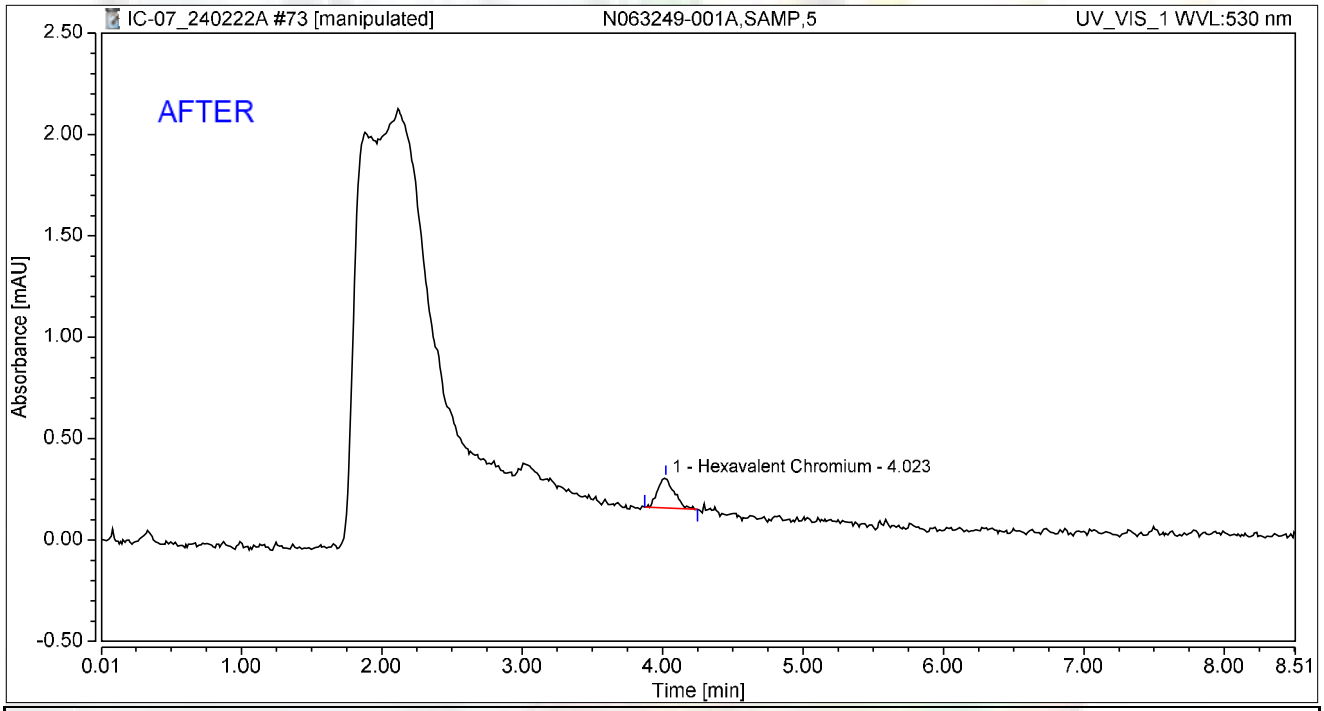
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 19:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.020	0.149	100.00	100.00	0.0928
Total:			**0.020**	**0.149**	**100.00**	**100.00**	

Reviewed by:

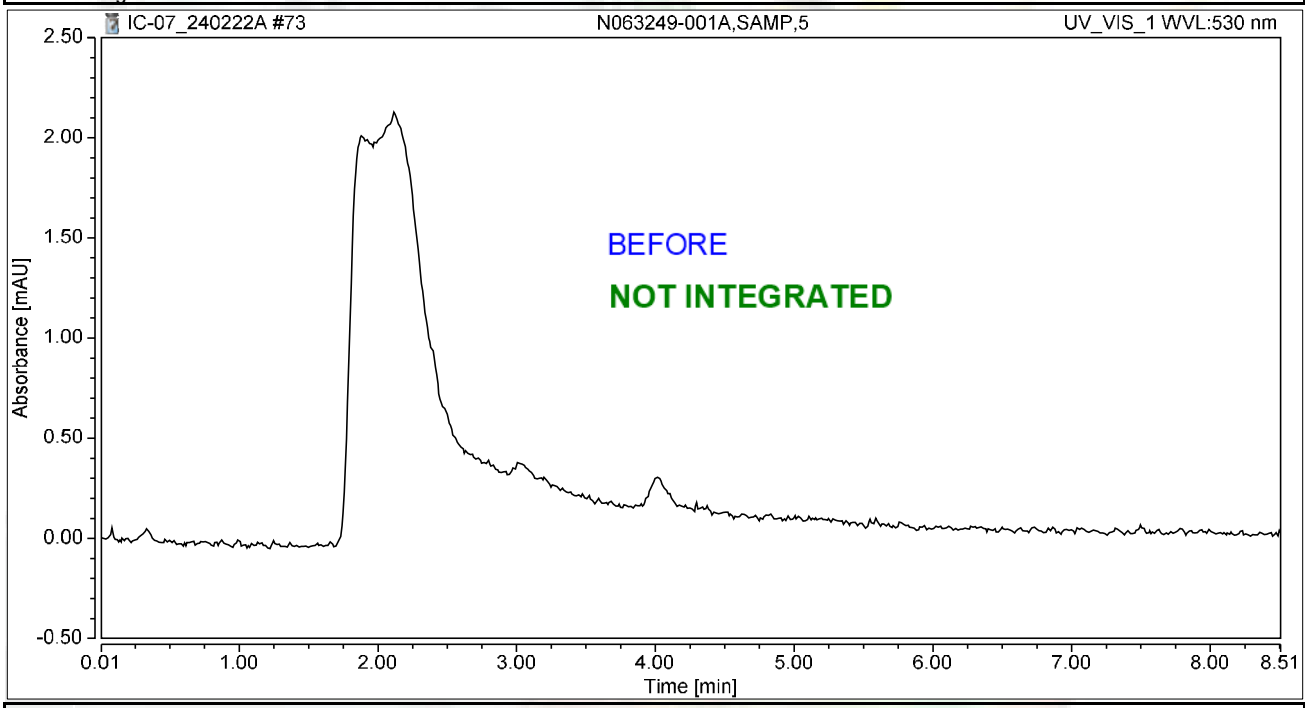
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063249-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 19:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

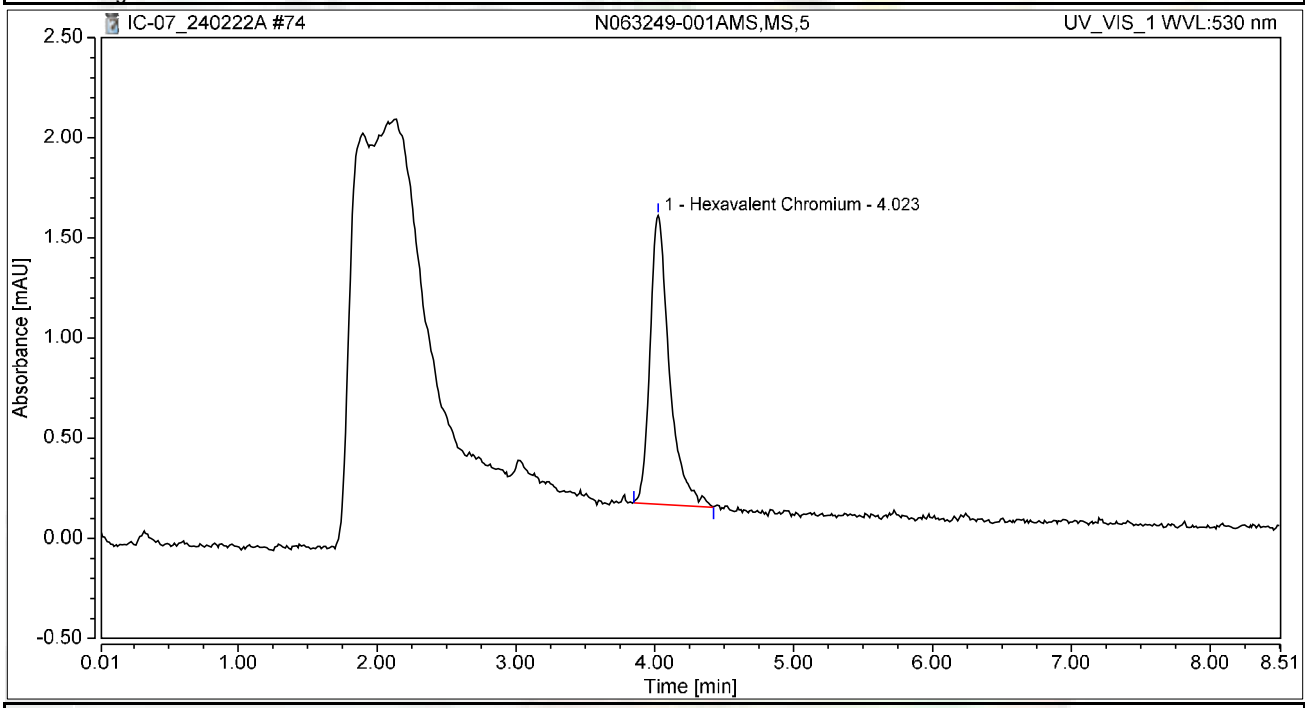
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-001AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 20:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

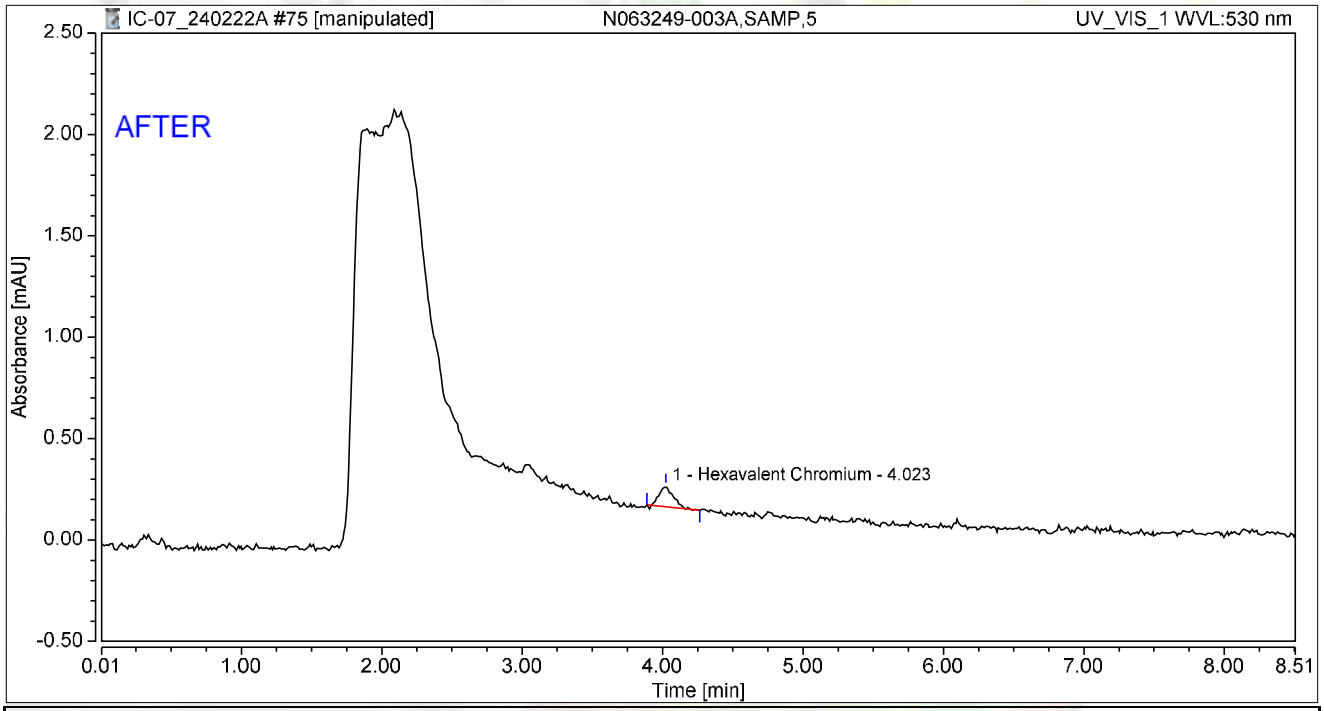
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.233	1.442	100.00	100.00	1.0850
Total:			**0.233**	**1.442**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 20:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.012	0.103	100.00	100.00	0.0556
Total:			**0.012**	**0.103**	**100.00**	**100.00**	

Reviewed by:

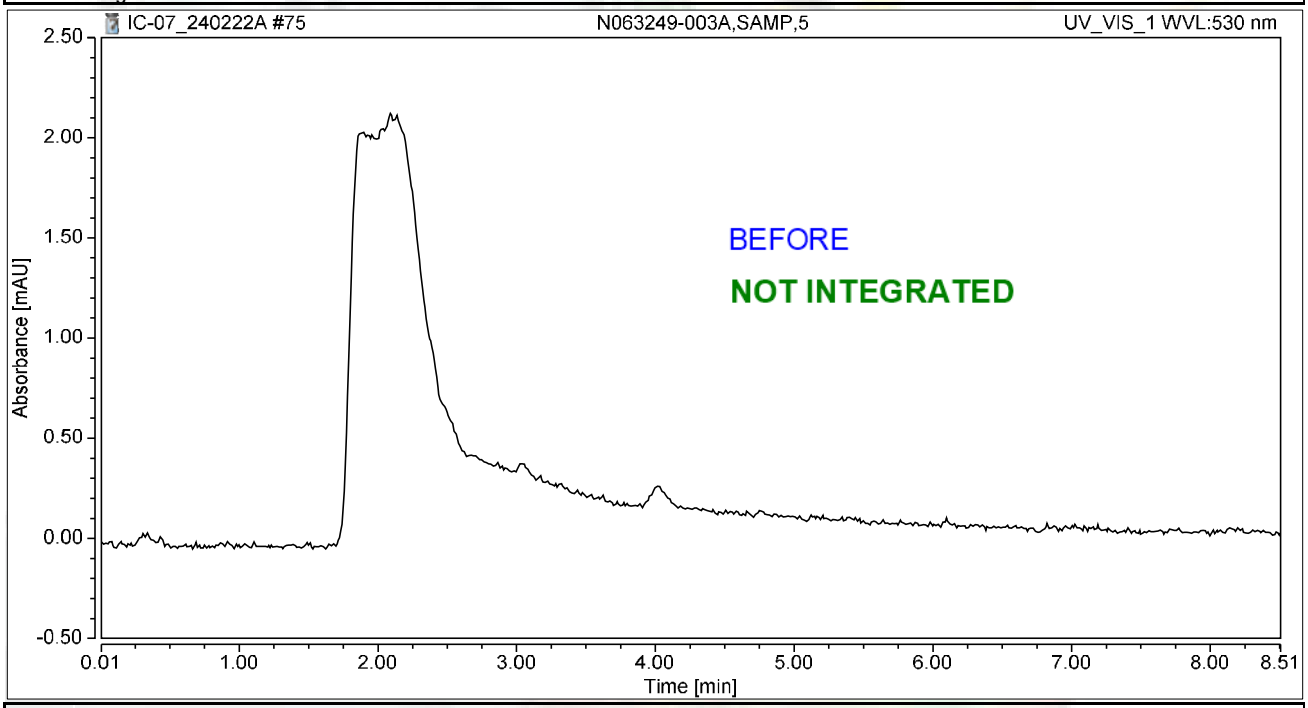
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063249-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 20:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

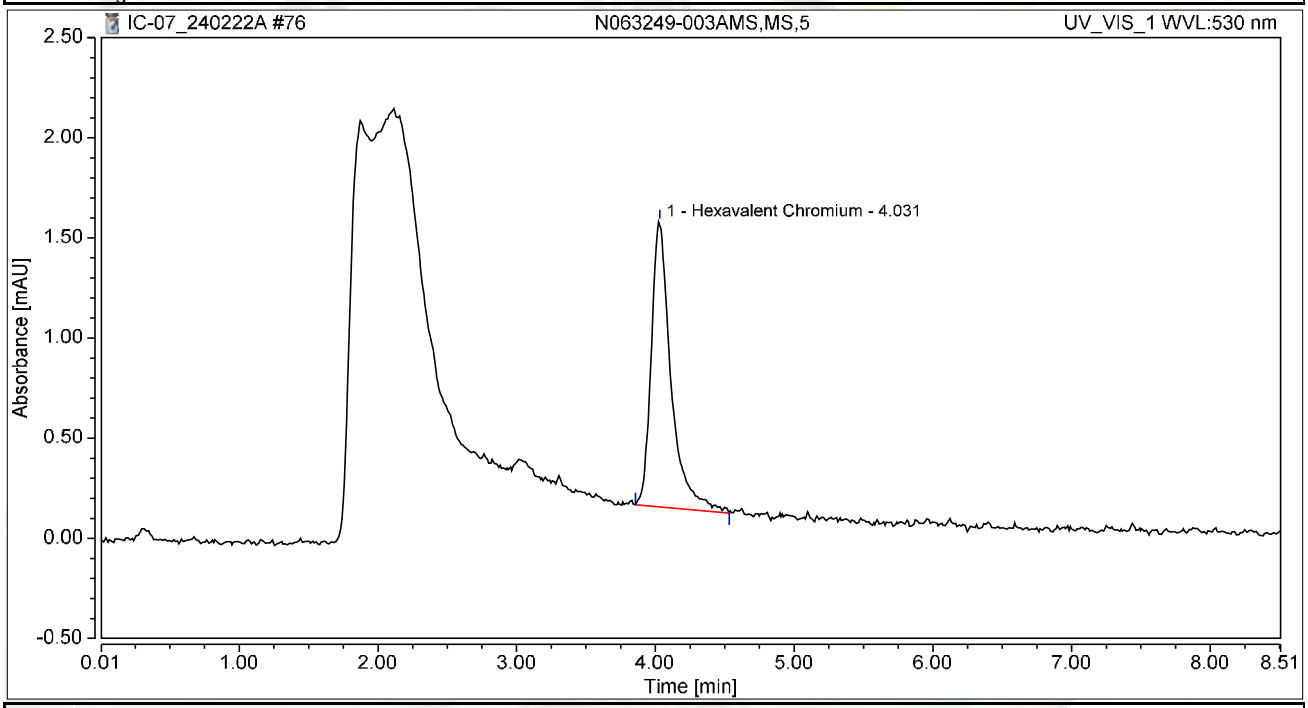
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 20:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

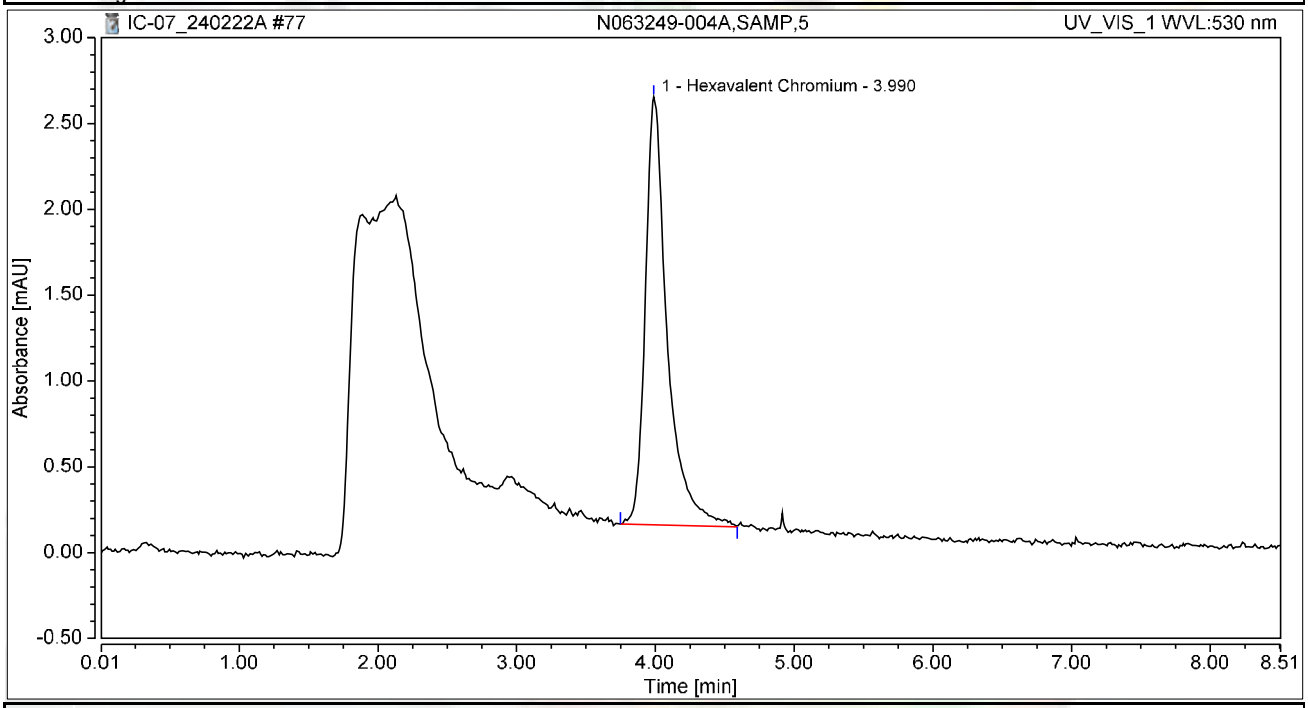
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.235	1.423	100.00	100.00	1.0908
Total:			**0.235**	**1.423**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-004A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 20:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

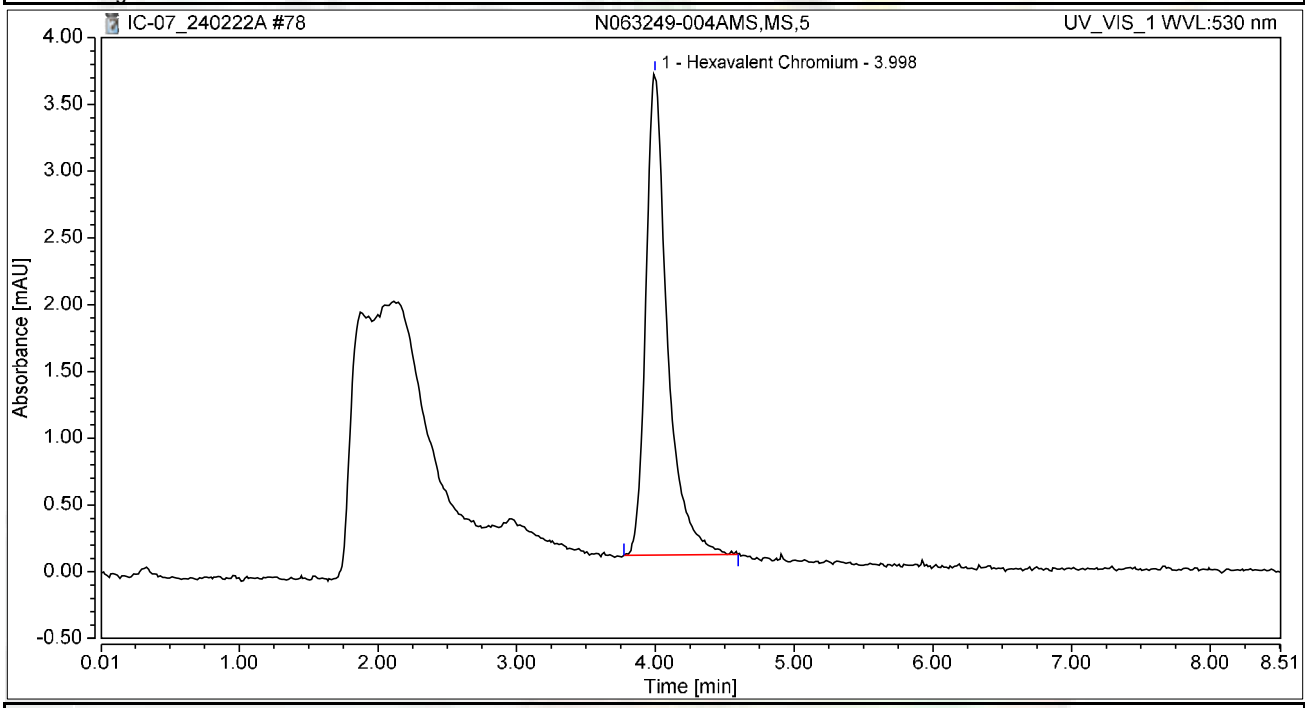
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.457	2.492	100.00	100.00	2.1265
Total:			**0.457**	**2.492**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-004AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 20:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

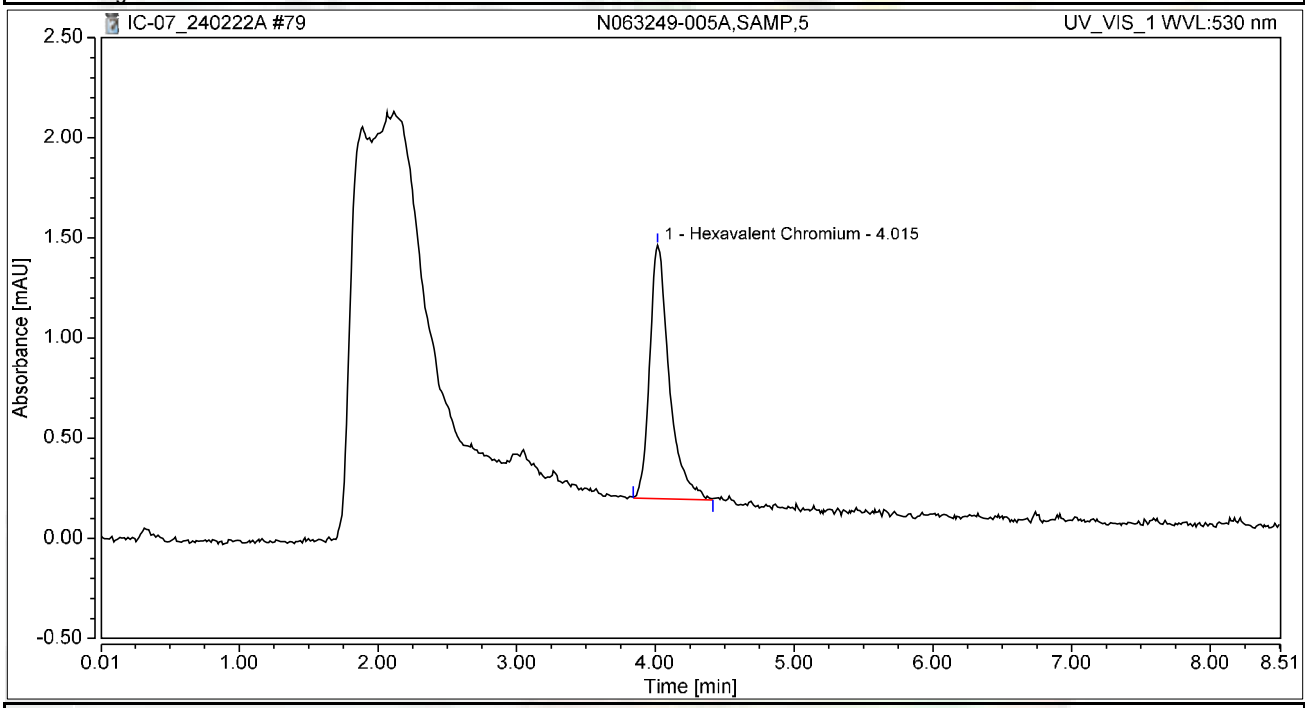
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.651	3.609	100.00	100.00	3.0284
Total:			**0.651**	**3.609**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 20:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

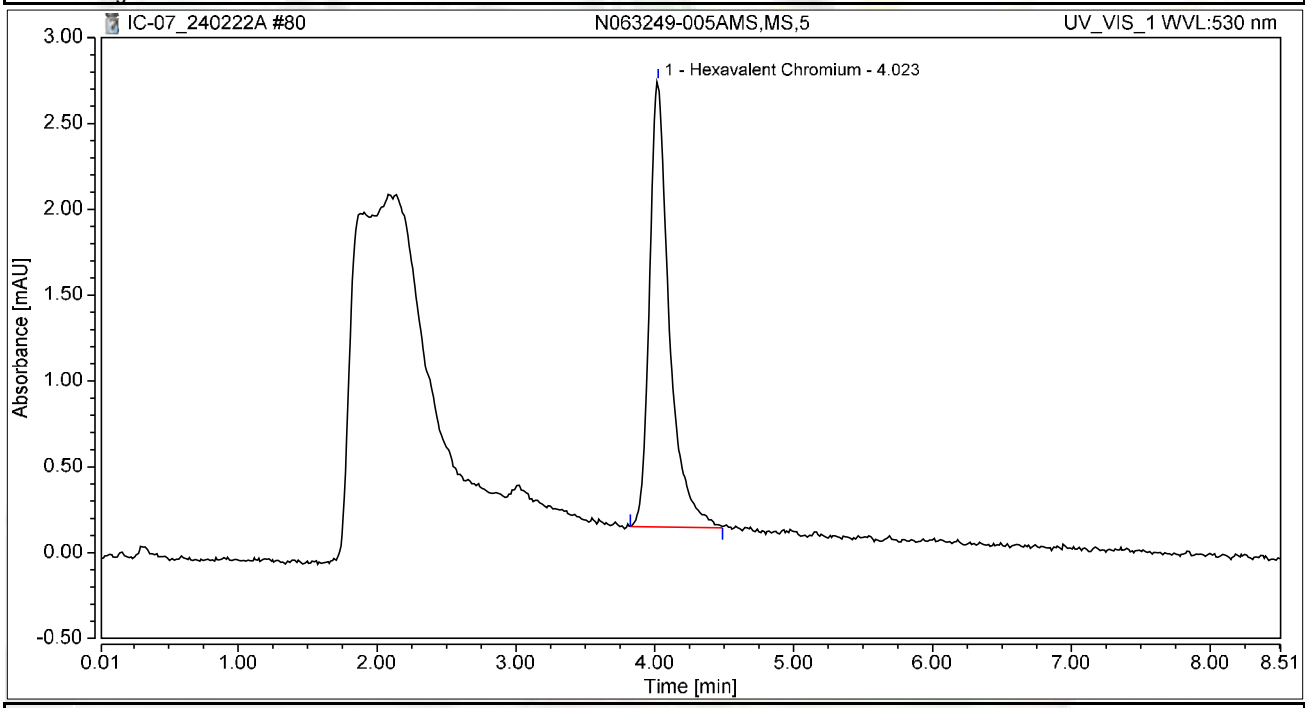
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	0.207	1.265	100.00	100.00	0.9630
Total:			**0.207**	**1.265**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-005AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 21:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

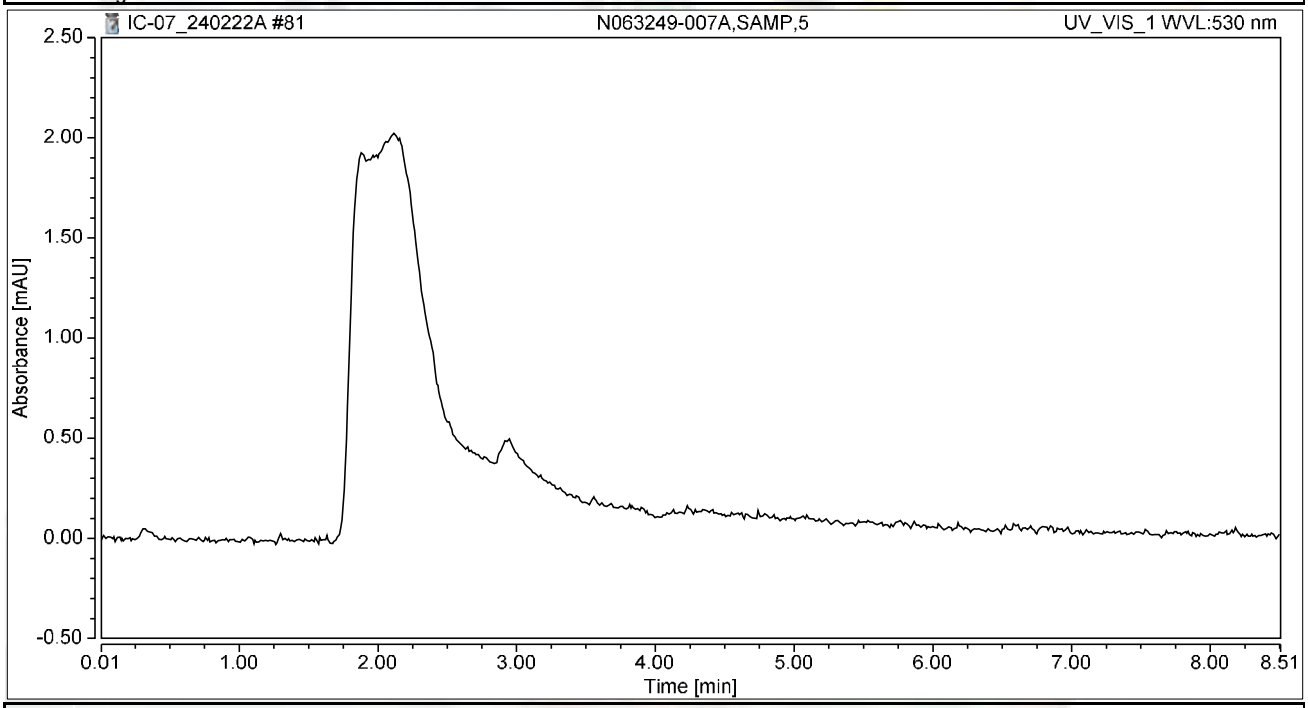
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.429	2.596	100.00	100.00	1.9956
Total:			**0.429**	**2.596**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-007A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 21:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

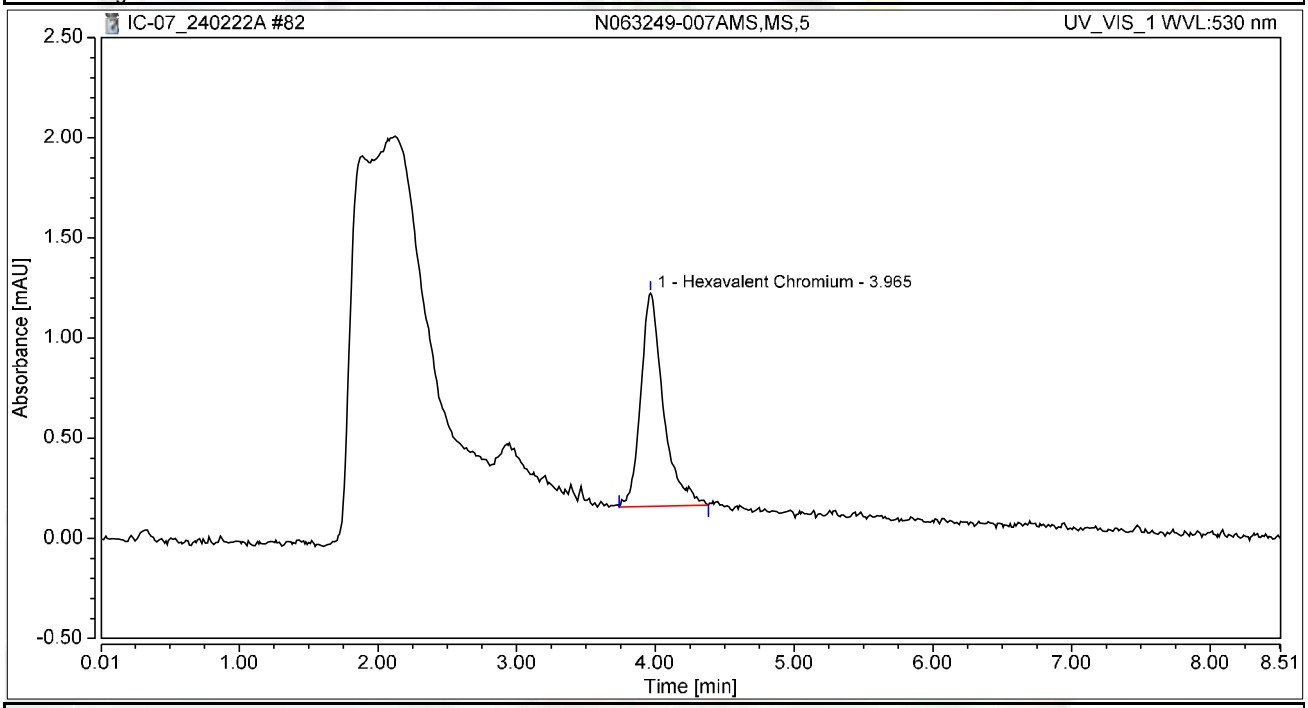
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-007AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 21:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

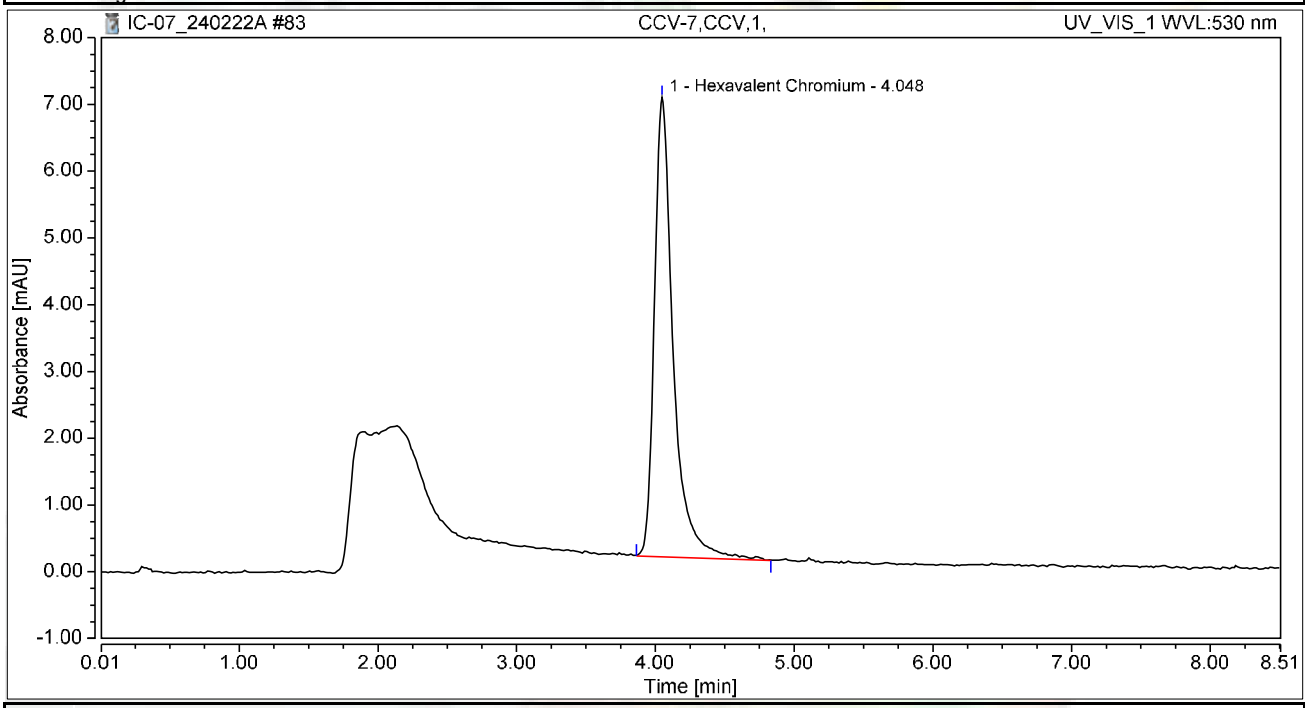
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.202	1.065	100.00	100.00	0.9382
Total:			**0.202**	**1.065**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 21:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

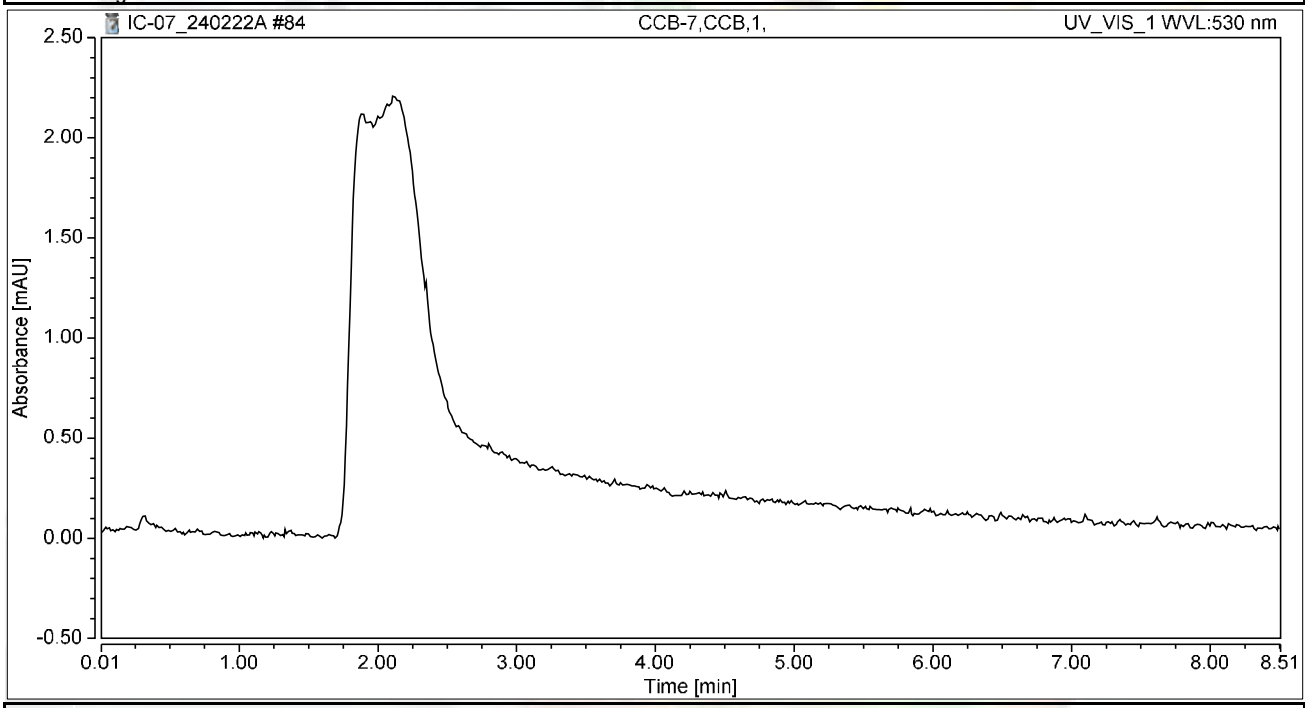
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.085	6.885	100.00	100.00	5.0456
Total:			**1.085**	**6.885**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 21:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

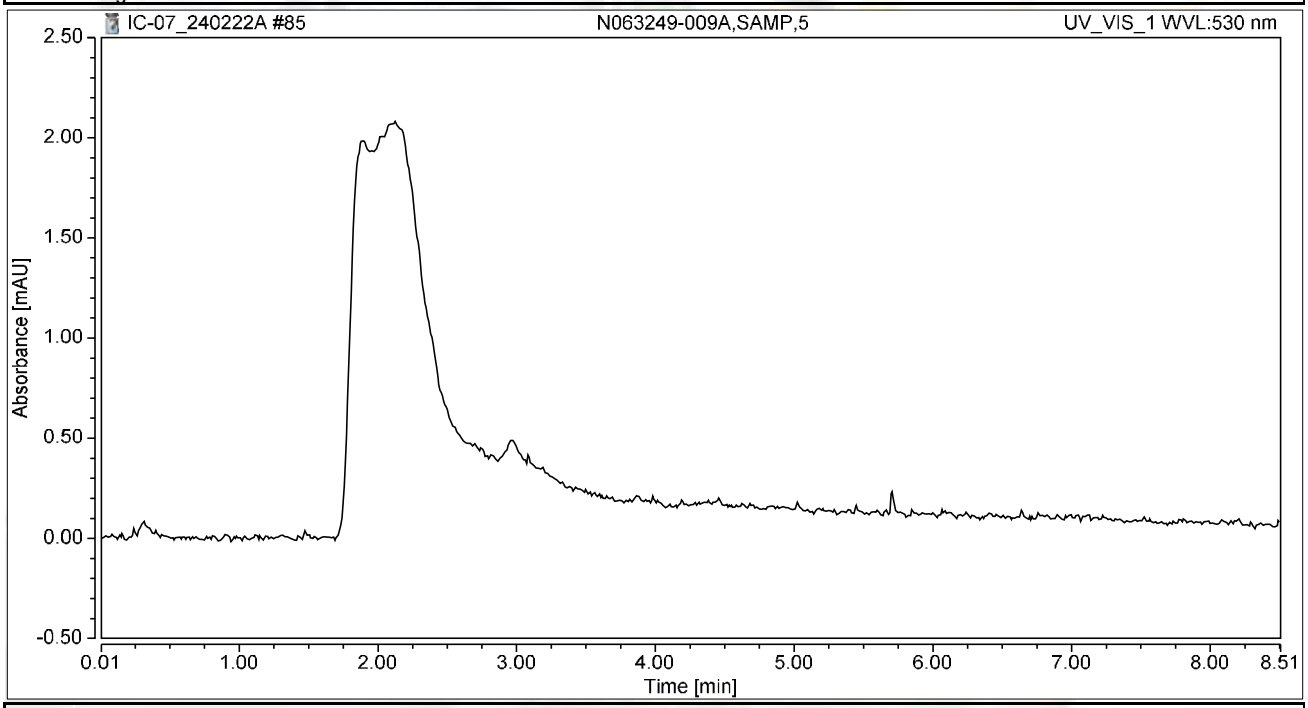
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-009A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 21:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

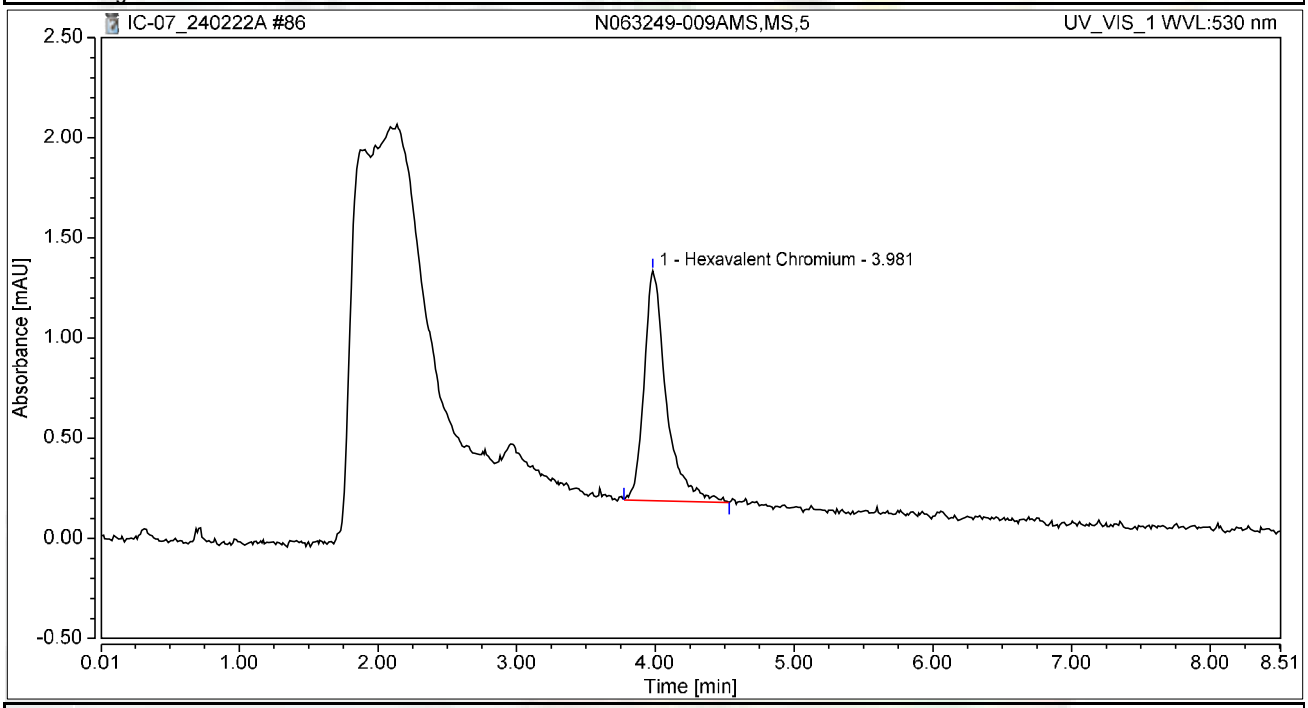
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-009AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 22:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

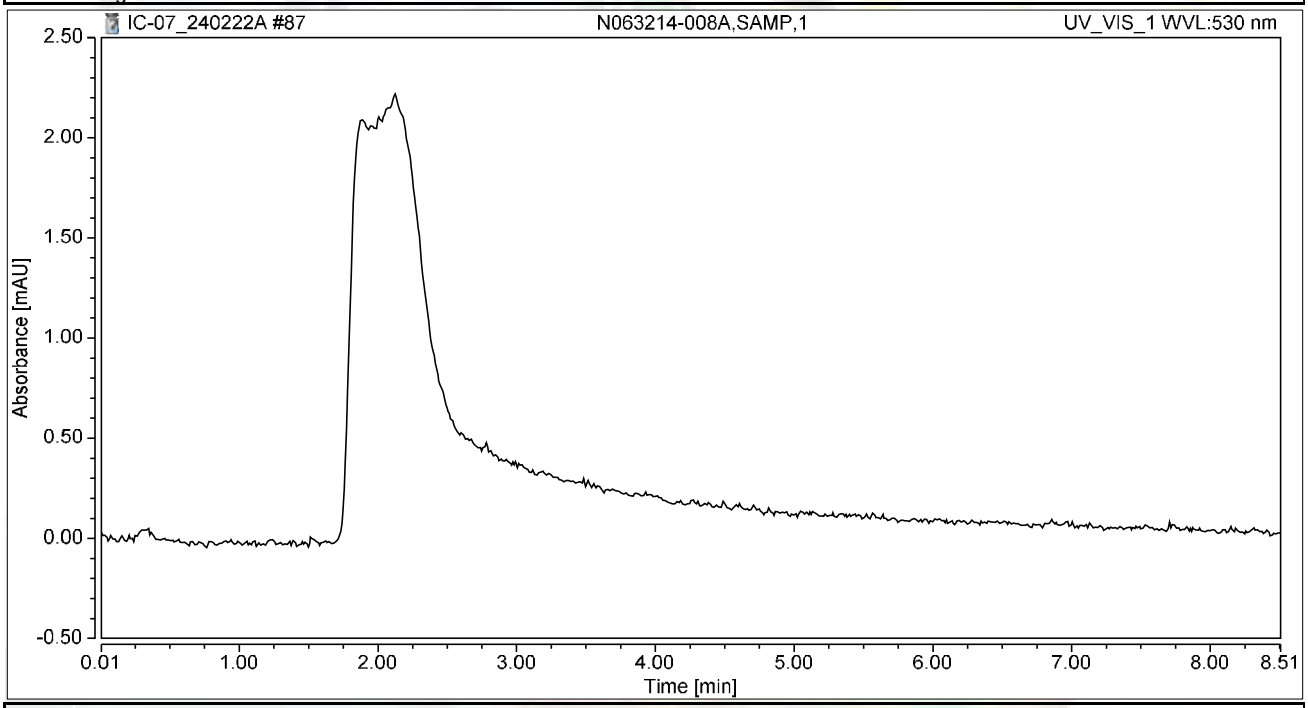
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.212	1.147	100.00	100.00	0.9859
Total:			**0.212**	**1.147**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 22:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

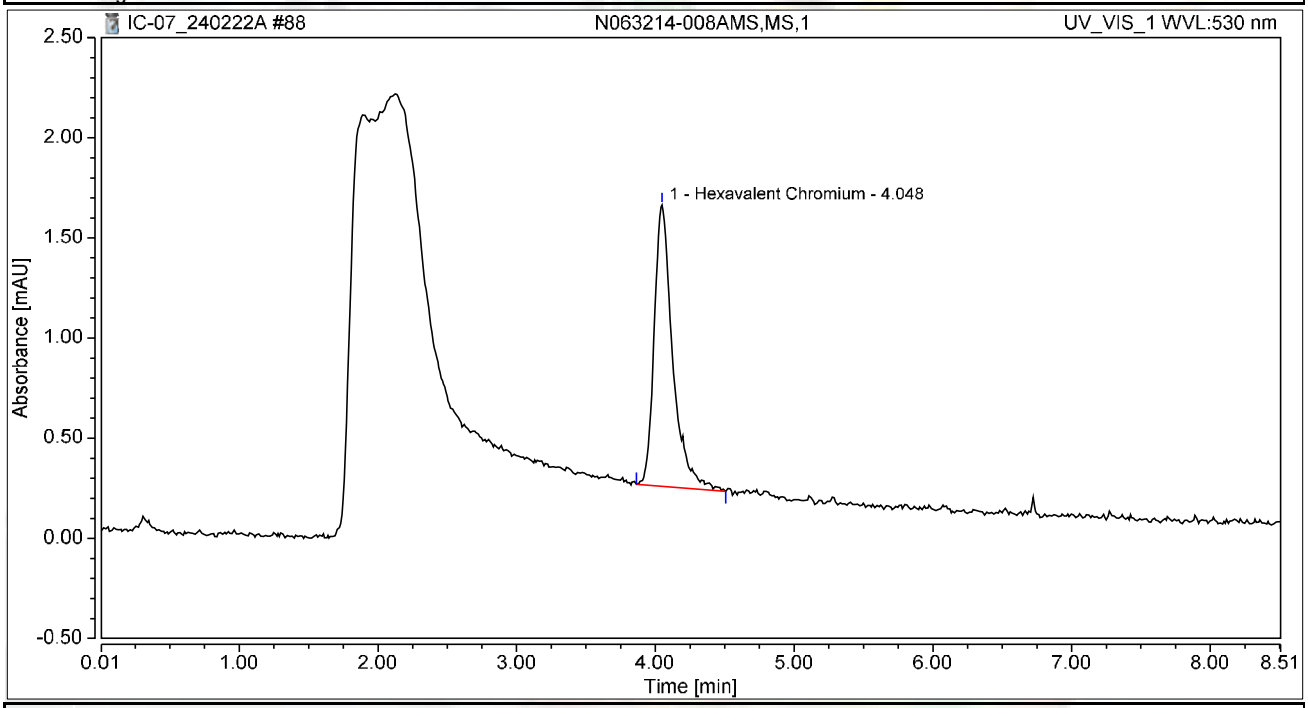
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 22:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

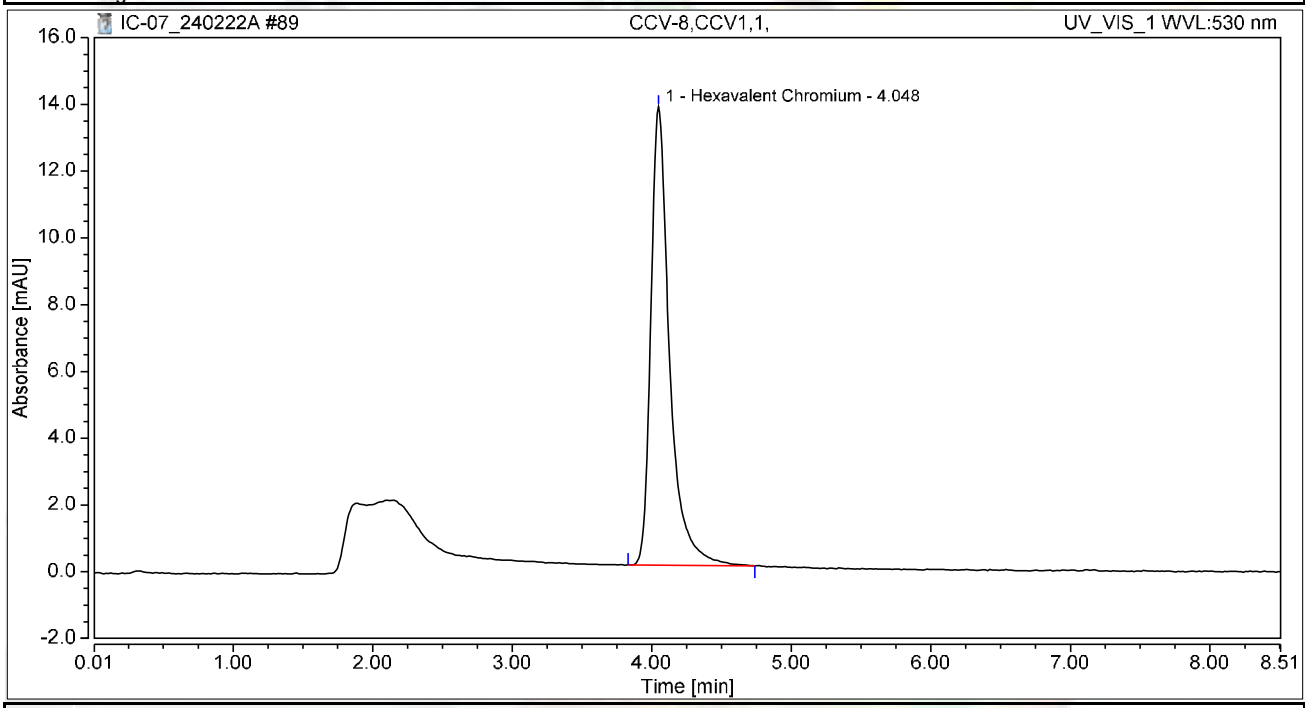
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.217	1.405	100.00	100.00	1.0101
Total:			**0.217**	**1.405**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-8,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 22:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

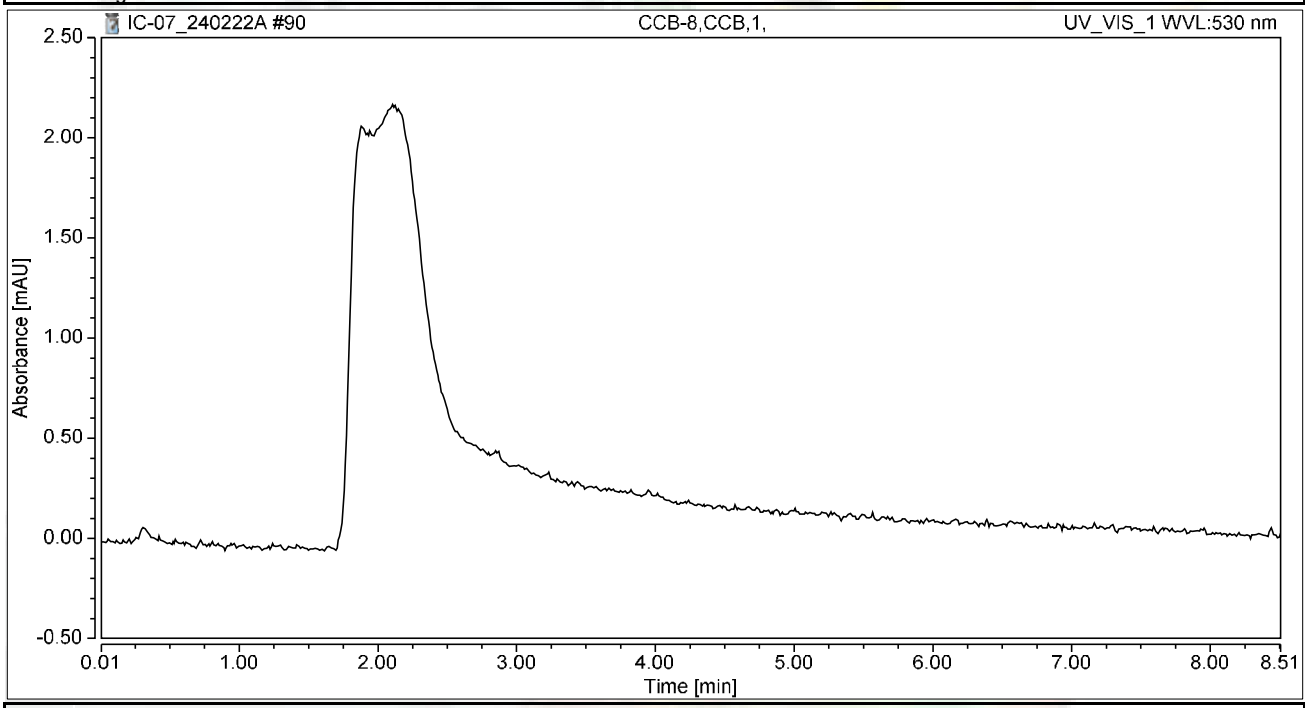
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.145	13.732	100.00	100.00	9.9728
Total:			**2.145**	**13.732**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-8,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 22:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

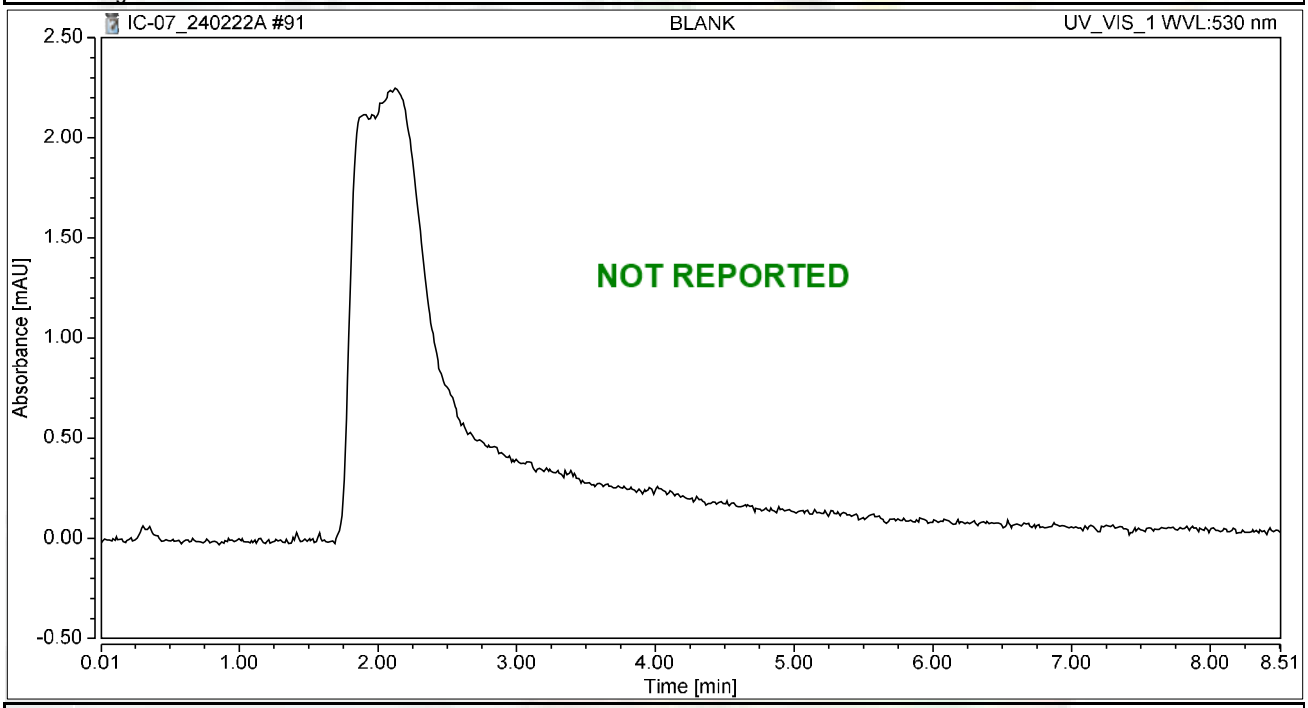
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**22/Feb/24 22:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240223A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/23/24 9:11 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/23/24 9:24 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/23/24 9:34 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/23/24 9:43 AM	Reported
13	MB-R182899	MBLK	1	Hexavalent Chromium	02/23/24 9:53 AM	Reported
14	LCS-R182899	LCS	1	Hexavalent Chromium	02/23/24 10:02 AM	Reported
15	N063248-001A	SAMP	1	Hexavalent Chromium	02/23/24 10:27 AM	Reported
16	N063248-003A	SAMP	1	Hexavalent Chromium	02/23/24 10:39 AM	Not Reported
17	N063248-005A	SAMP	1	Hexavalent Chromium	02/23/24 10:48 AM	Not Reported
18	N063248-006A	SAMP	1	Hexavalent Chromium	02/23/24 10:58 AM	Not Reported
19	N063248-007A	SAMP	1	Hexavalent Chromium	02/23/24 11:07 AM	Not Reported
20	N063248-003A	SAMP	100	Hexavalent Chromium	02/23/24 11:17 AM	Reported
21	N063248-003AMS	MS	100	Hexavalent Chromium	02/23/24 11:26 AM	Reported
22	N063248-003AMSD	MSD	100	Hexavalent Chromium	02/23/24 11:36 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/23/24 11:45 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/23/24 11:54 AM	Reported
25	N063248-001AMS	MS	1	Hexavalent Chromium	02/23/24 12:04 PM	Reported
26	N063248-005AMS	MS	1	Hexavalent Chromium	02/23/24 12:13 PM	Not Reported
27	N063248-011A	SAMP	1	Hexavalent Chromium	02/23/24 12:23 PM	Not Reported
28	N063248-011AMS	MS	1	Hexavalent Chromium	02/23/24 12:32 PM	Not Reported
29	N063248-006AMS	MS	1	Hexavalent Chromium	02/23/24 12:42 PM	Not Reported
30	N063248-007AMS	MS	1	Hexavalent Chromium	02/23/24 12:51 PM	Not Reported
31	N063248-002A	SAMP	50	Hexavalent Chromium	02/23/24 1:01 PM	Reported
32	N063248-002AMS	MS	50	Hexavalent Chromium	02/23/24 1:10 PM	Reported
33	N063248-004A	SAMP	5	Hexavalent Chromium	02/23/24 1:20 PM	Not Reported
34	N063248-004AMS	MS	5	Hexavalent Chromium	02/23/24 1:29 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/23/24 1:39 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/23/24 1:48 PM	Reported
37	N063248-010A	SAMP	5	Hexavalent Chromium	02/23/24 1:57 PM	Reported
38	N063248-010AMS	MS	5	Hexavalent Chromium	02/23/24 2:07 PM	Reported
39	N063248-008A	SAMP	1	Hexavalent Chromium	02/23/24 2:16 PM	Not Reported
40	N063248-008AMS	MS	1	Hexavalent Chromium	02/23/24 2:26 PM	Not Reported
41	N063248-009A	SAMP	1	Hexavalent Chromium	02/23/24 2:35 PM	Reported
42	N063248-009AMS	MS	1	Hexavalent Chromium	02/23/24 2:45 PM	Reported

Reviewed by:

JRB 2/27/2024

INJECTION LOG: 240223A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063248-008A	SAMP	5	Hexavalent Chromium	02/23/24 2:54 PM	Reported
44	N063248-008AMS	MS	5	Hexavalent Chromium	02/23/24 3:04 PM	Reported
45	N063214-017A	SAMP	1	Hexavalent Chromium	02/23/24 3:13 PM	Reported
46	MB-107024	MBLK	1	Hexavalent Chromium	02/23/24 3:23 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/23/24 3:32 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/23/24 3:42 PM	Reported
49	N063246-001A	SAMP	1	Hexavalent Chromium	02/23/24 3:51 PM	Reported
50	N063246-001AREP	DUP	1	Hexavalent Chromium	02/23/24 4:00 PM	Reported
51	N063248-002ADUP	DUP	50	Hexavalent Chromium	02/23/24 4:14 PM	Reported
52	N063214-017AMS	MS	1	Hexavalent Chromium	02/23/24 4:26 PM	Reported
53	N063249-017A	SAMP	1	Hexavalent Chromium	02/23/24 4:35 PM	Reported
54	N063249-017AMS	MS	1	Hexavalent Chromium	02/23/24 4:45 PM	Reported
55	N063248-004A	SAMP	50	Hexavalent Chromium	02/23/24 4:54 PM	Reported
56	N063248-004AMS	MS	50	Hexavalent Chromium	02/23/24 5:23 PM	Reported
57	N063248-005A	SAMP	5	Hexavalent Chromium	02/23/24 5:34 PM	Reported
58	N063248-005AMS	MS	5	Hexavalent Chromium	02/23/24 5:43 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/23/24 5:53 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/23/24 6:02 PM	Reported
61	N063248-006A	SAMP	5	Hexavalent Chromium	02/23/24 6:12 PM	Reported
62	N063248-006AMS	MS	5	Hexavalent Chromium	02/23/24 6:21 PM	Reported
63	N063248-007A	SAMP	5	Hexavalent Chromium	02/23/24 6:31 PM	Reported
64	N063248-007AMS	MS	5	Hexavalent Chromium	02/23/24 6:40 PM	Reported
65	N063248-011A	SAMP	5	Hexavalent Chromium	02/23/24 6:50 PM	Reported
66	N063248-011AMS	MS	5	Hexavalent Chromium	02/23/24 6:59 PM	Reported
67	N063249-012A	SAMP	1	Hexavalent Chromium	02/23/24 7:09 PM	Reported
68	N063249-012AMS	MS	1	Hexavalent Chromium	02/23/24 7:18 PM	Reported
69	N063249-014A	SAMP	1	Hexavalent Chromium	02/23/24 7:27 PM	Reported
70	N063249-014AMS	MS	1	Hexavalent Chromium	02/23/24 7:37 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/23/24 7:46 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/23/24 7:56 PM	Reported
73	N063249-016A	SAMP	1	Hexavalent Chromium	02/23/24 8:05 PM	Reported
74	N063249-016AMS	MS	1	Hexavalent Chromium	02/23/24 8:15 PM	Reported
75	N063249-011A	SAMP	1	Hexavalent Chromium	02/23/24 8:24 PM	Not Reported
76	N063249-011AMS	MS	1	Hexavalent Chromium	02/23/24 8:34 PM	Not Reported
77	N063249-011A	SAMP	5	Hexavalent Chromium	02/23/24 8:43 PM	Reported
78	N063249-011AMS	MS	5	Hexavalent Chromium	02/23/24 8:53 PM	Reported
79	N063249-013A	SAMP	1	Hexavalent Chromium	02/23/24 9:02 PM	Not Reported
80	N063249-013AMS	MS	1	Hexavalent Chromium	02/23/24 9:12 PM	Not Reported
81	N063249-013A	SAMP	5	Hexavalent Chromium	02/23/24 9:21 PM	Reported
82	N063249-013AMS	MS	5	Hexavalent Chromium	02/23/24 9:30 PM	Reported
83	CCV-7	CCV	1	Hexavalent Chromium	02/23/24 9:40 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	02/23/24 9:49 PM	Reported

INJECTION LOG: 240223A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063249-015A	SAMP	1	Hexavalent Chromium	02/23/24 9:59 PM	Not Reported
86	N063249-015AMS	MS	1	Hexavalent Chromium	02/23/24 10:08 PM	Not Reported
87	N063249-015A	SAMP	5	Hexavalent Chromium	02/23/24 10:18 PM	Reported
88	N063249-015AMS	MS	5	Hexavalent Chromium	02/23/24 10:27 PM	Reported
89	CCV-8	CCV1	1	Hexavalent Chromium	02/23/24 10:37 PM	Reported
90	CCB-8	CCB	1	Hexavalent Chromium	02/23/24 10:46 PM	Reported
91	BLANK	BLANK	1	Hexavalent Chromium	02/23/24 10:56 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240223A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**23/Feb/24 23:26:19**
No. of Injections:	**94**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/23/2024 09:11	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/23/2024 09:24	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/23/2024 09:34	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/23/2024 09:43	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/23/2024 09:53	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/23/2024 10:02	Finished	LCS @5ppb, IWST-231228B
15	N063248-001A,SAMF	1	1000	Unknown		02/23/2024 10:27	Finished	SAMP,10 mL
16	N063248-003A,SAMF	2	1000	Unknown		02/23/2024 10:39	Finished	SAMP,10 mL
17	N063248-005A,SAMF	3	1000	Unknown		02/23/2024 10:48	Finished	SAMP,10 mL
18	N063248-006A,SAMF	4	1000	Unknown		02/23/2024 10:58	Finished	SAMP,10 mL
19	N063248-007A,SAMF	5	1000	Unknown		02/23/2024 11:07	Finished	SAMP,10 mL
20	N063248-003A,SAMF	6	1000	Unknown		02/23/2024 11:17	Finished	SAMP,0.1>10 mL
21	N063248-003AMS,MS	7	1000	Unknown		02/23/2024 11:26	Finished	MS (5ppb), IWST-231228B,0.1
22	N063248-003AMSD,M	8	1000	Unknown		02/23/2024 11:36	Finished	MSD (5ppb), IWST-231228B,0
23	CCV-2,CCV1,1,	9	1000	Unknown		02/23/2024 11:45	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		02/23/2024 11:54	Finished	CCB R240129C
25	N063248-001AMS,MS	11	1000	Unknown		02/23/2024 12:04	Finished	MS (1ppb), IWST-231228B,10r
26	N063248-005AMS,MS	12	1000	Unknown		02/23/2024 12:13	Finished	MS (1ppb), IWST-231228B,10r
27	N063248-011A,SAMF	13	1000	Unknown		02/23/2024 12:23	Finished	SAMP,10 mL
28	N063248-011AMS,MS	14	1000	Unknown		02/23/2024 12:32	Finished	MS (1ppb), IWST-231228B,10r
29	N063248-006AMS,MS	15	1000	Unknown		02/23/2024 12:42	Finished	MS (1ppb), IWST-231228B,10r
30	N063248-007AMS,MS	16	1000	Unknown		02/23/2024 12:51	Finished	MS (1ppb), IWST-231228B,10r
31	N063248-002A,SAMF	17	1000	Unknown		02/23/2024 13:01	Finished	SAMP,0.2>10 mL
32	N063248-002AMS,MS	18	1000	Unknown		02/23/2024 13:10	Finished	MS (5ppb), IWST-231228B,0.2
33	N063248-004A,SAMF	19	1000	Unknown		02/23/2024 13:20	Finished	SAMP,2>10 mL
34	N063248-004AMS,MS	20	1000	Unknown		02/23/2024 13:29	Finished	MS (5ppb), IWST-231228B,2>1
35	CCV-3,CCV,1,	21	1000	Unknown		02/23/2024 13:39	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	22	1000	Unknown		02/23/2024 13:48	Finished	CCB R240129C
37	N063248-010A,SAMF	23	1000	Unknown		02/23/2024 13:57	Finished	SAMP,2>10 mL
38	N063248-010AMS,MS	24	1000	Unknown		02/23/2024 14:07	Finished	MS (5ppb), IWST-231228B,2>1
39	N063248-008A,SAMF	25	1000	Unknown		02/23/2024 14:16	Finished	SAMP,10 mL
40	N063248-008AMS,MS	26	1000	Unknown		02/23/2024 14:26	Finished	MS (1ppb), IWST-231228B,10r
41	N063248-009A,SAMF	27	1000	Unknown		02/23/2024 14:35	Finished	SAMP,10 mL
42	N063248-009AMS,MS	28	1000	Unknown		02/23/2024 14:45	Finished	MS (1ppb), IWST-231228B,10r
43	N063248-008A,SAMF	29	1000	Unknown		02/23/2024 14:54	Finished	SAMP,2>10 mL
44	N063248-008AMS,MS	30	1000	Unknown		02/23/2024 15:04	Finished	MS (1ppb), IWST-231228B,2>1
45	N063214-017A,SAMF	31	1000	Unknown		02/23/2024 15:13	Finished	SAMP,10 mL
46	MB-107024,MBLK,1,	32	1000	Unknown		02/23/2024 15:23	Finished	MB TCLP
47	CCV-4,CCV1,1,	33	1000	Unknown		02/23/2024 15:32	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	34	1000	Unknown		02/23/2024 15:42	Finished	CCB R240129C
49	N063246-001A,SAMF	35	1000	Unknown		02/23/2024 15:51	Finished	SAMP,10 mL
50	N063246-001AREP,D	36	1000	Unknown		02/23/2024 16:00	Finished	REP,10 mL
51	N063248-002ADUP,D	1	1000	Unknown		02/23/2024 16:14	Finished	DUP,0.2>10 mL
52	N063214-017AMS,MS	2	1000	Unknown		02/23/2024 16:26	Finished	MS (1ppb), IWST-231228B,10r
53	N063249-017A,SAMF	3	1000	Unknown		02/23/2024 16:35	Finished	SAMP,10 mL
54	N063249-017AMS,MS	4	1000	Unknown		02/23/2024 16:45	Finished	MS (1ppb), IWST-231228B,10r
55	N063248-004A,SAMF	5	1000	Unknown		02/23/2024 16:54	Finished	SAMP,0.2>10 mL
56	N063248-004AMS,MS	1	1000	Unknown		02/23/2024 17:23	Finished	MS (5ppb), IWST-231228B,0.2
57	N063248-005A,SAMF	2	1000	Unknown		02/23/2024 17:34	Finished	SAMP,2>10 mL
58	N063248-005AMS,MS	3	1000	Unknown		02/23/2024 17:43	Finished	MS (1ppb), IWST-231228B,2>1
59	CCV-5,CCV,1,	4	1000	Unknown		02/23/2024 17:53	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	5	1000	Unknown		02/23/2024 18:02	Finished	CCB R240129C

61	N063248-006A,SAMP	6	1000	Unknown		02/23/2024 18:12	Finished	SAMP,2>10 mL
62	N063248-006AMS,MS	7	1000	Unknown		02/23/2024 18:21	Finished	MS (1ppb), IWST-231228B,2>1
63	N063248-007A,SAMP	8	1000	Unknown		02/23/2024 18:31	Finished	SAMP,2>10 mL
64	N063248-007AMS,MS	9	1000	Unknown		02/23/2024 18:40	Finished	MS (1ppb), IWST-231228B,2>1
65	N063248-011A,SAMP	10	1000	Unknown		02/23/2024 18:50	Finished	SAMP,2>10 mL
66	N063248-011AMS,MS	11	1000	Unknown		02/23/2024 18:59	Finished	MS (1ppb), IWST-231228B,2>1
67	N063249-012A,SAMP	12	1000	Unknown		02/23/2024 19:09	Finished	SAMP,10 mL
68	N063249-012AMS,MS	13	1000	Unknown		02/23/2024 19:18	Finished	MS (1ppb), IWST-231228B,10r
69	N063249-014A,SAMP	14	1000	Unknown		02/23/2024 19:27	Finished	SAMP,10 mL
70	N063249-014AMS,MS	15	1000	Unknown		02/23/2024 19:37	Finished	MS (1ppb), IWST-231228B,10r
71	CCV-6,CCV1,1,	16	1000	Unknown		02/23/2024 19:46	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	17	1000	Unknown		02/23/2024 19:56	Finished	CCB R240129C
73	N063249-016A,SAMP	18	1000	Unknown		02/23/2024 20:05	Finished	SAMP,10 mL
74	N063249-016AMS,MS	19	1000	Unknown		02/23/2024 20:15	Finished	MS (1ppb), IWST-231228B,10r
75	N063249-011A,SAMP	20	1000	Unknown		02/23/2024 20:24	Finished	SAMP,10 mL
76	N063249-011AMS,MS	21	1000	Unknown		02/23/2024 20:34	Finished	MS (1ppb), IWST-231228B,10r
77	N063249-011A,SAMP	22	1000	Unknown		02/23/2024 20:43	Finished	SAMP,2>10 mL
78	N063249-011AMS,MS	23	1000	Unknown		02/23/2024 20:53	Finished	MS (1ppb), IWST-231228B,2>1
79	N063249-013A,SAMP	24	1000	Unknown		02/23/2024 21:02	Finished	SAMP,10 mL
80	N063249-013AMS,MS	25	1000	Unknown		02/23/2024 21:12	Finished	MS (1ppb), IWST-231228B,10r
81	N063249-013A,SAMP	26	1000	Unknown		02/23/2024 21:21	Finished	SAMP,2>10 mL
82	N063249-013AMS,MS	27	1000	Unknown		02/23/2024 21:30	Finished	MS (1ppb), IWST-231228B,2>1
83	CCV-7,CCV,1,	28	1000	Unknown		02/23/2024 21:40	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	29	1000	Unknown		02/23/2024 21:49	Finished	CCB R240129C
85	N063249-015A,SAMP	30	1000	Unknown		02/23/2024 21:59	Finished	SAMP,10 mL
86	N063249-015AMS,MS	31	1000	Unknown		02/23/2024 22:08	Finished	MS (1ppb), IWST-231228B,10r
87	N063249-015A,SAMP	32	1000	Unknown		02/23/2024 22:18	Finished	SAMP,2>10 mL
88	N063249-015AMS,MS	33	1000	Unknown		02/23/2024 22:27	Finished	MS (1ppb), IWST-231228B,2>1
89	CCV-8,CCV1,1,	34	1000	Unknown		02/23/2024 22:37	Finished	CCV @10ppb, IWST-231228A
90	CCB-8,CCB,1,	35	1000	Unknown		02/23/2024 22:46	Finished	CCB R240129C
91	BLANK	36	1000	Unknown		02/23/2024 22:56	Finished	BLANK
92	SHUTDOWN R240221A	37	1000	Unknown		02/23/2024 23:05	Finished	
93	Eluent: ~~R240220A~~	38	1000	Unknown		n.a.	Finished	
94	PCR: ~~R240220B~~ R240221B	39	1000	Unknown		n.a.	Finished	

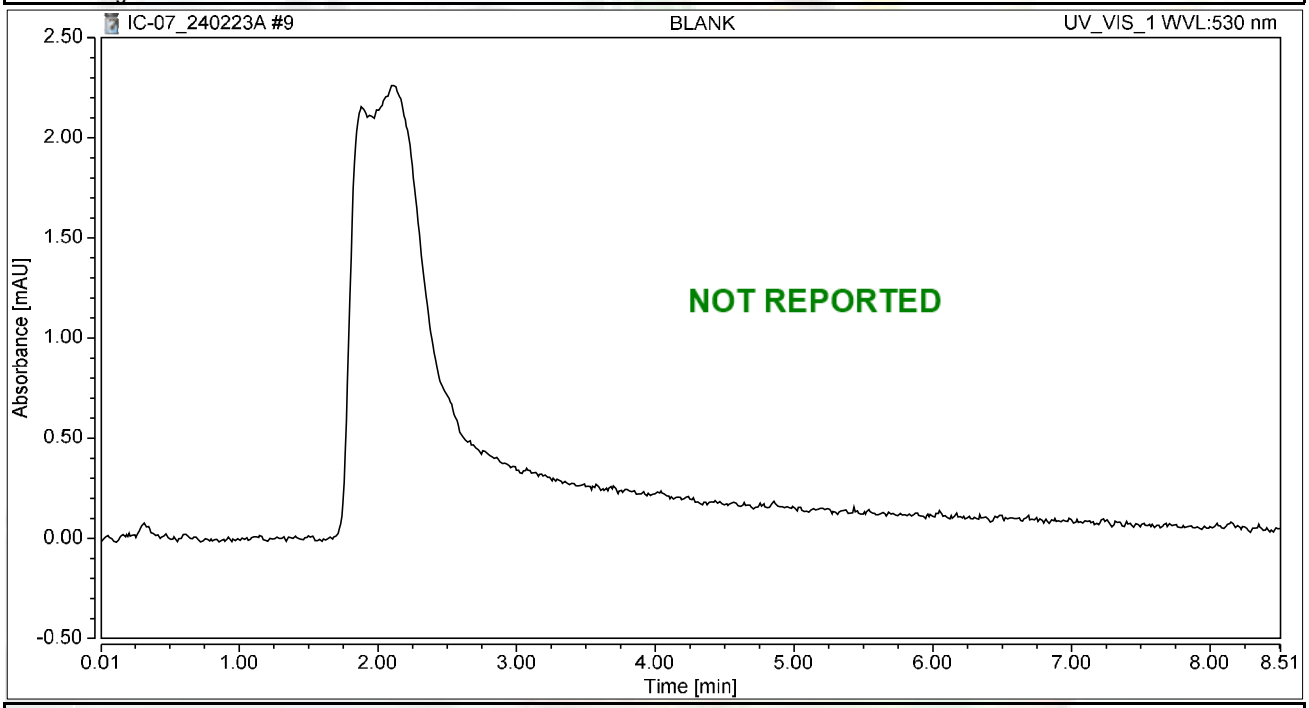
dlRocha 3/3/2024
for RBA

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 09:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

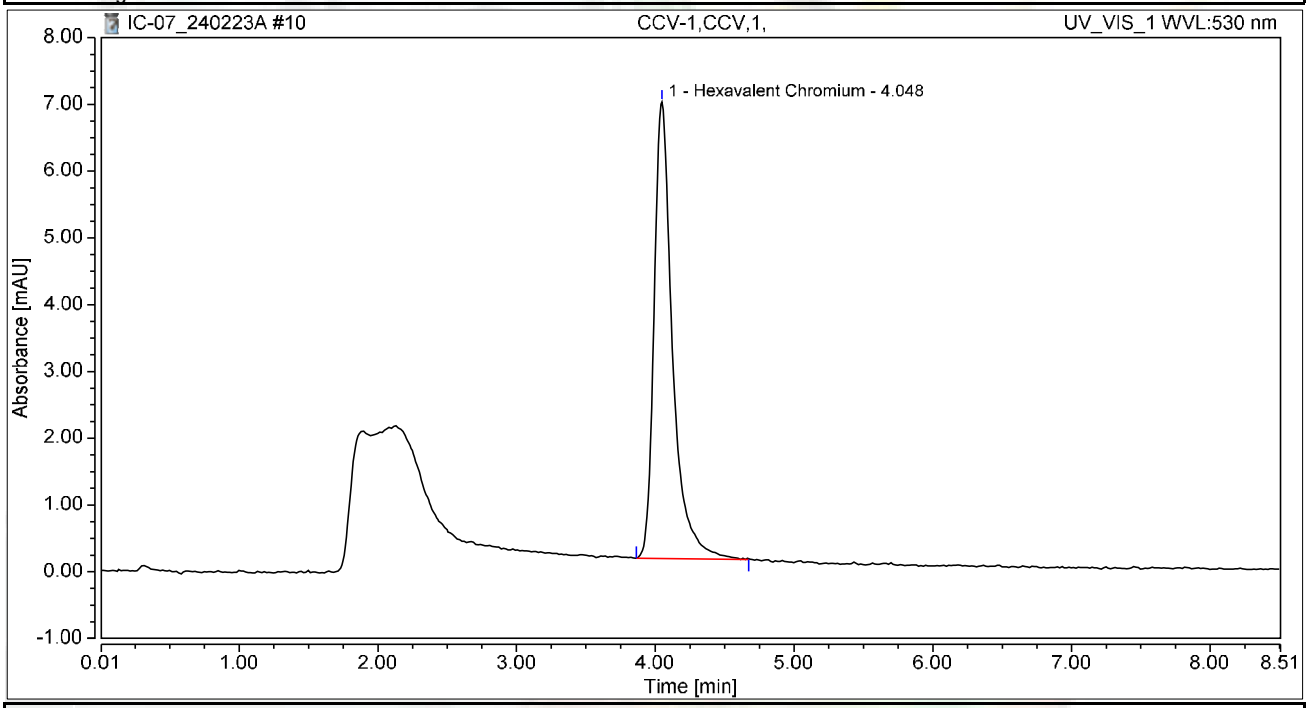
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 09:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.056	6.840	100.00	100.00	4.9105
Total:			**1.056**	**6.840**	**100.00**	**100.00**	

Reviewed by:

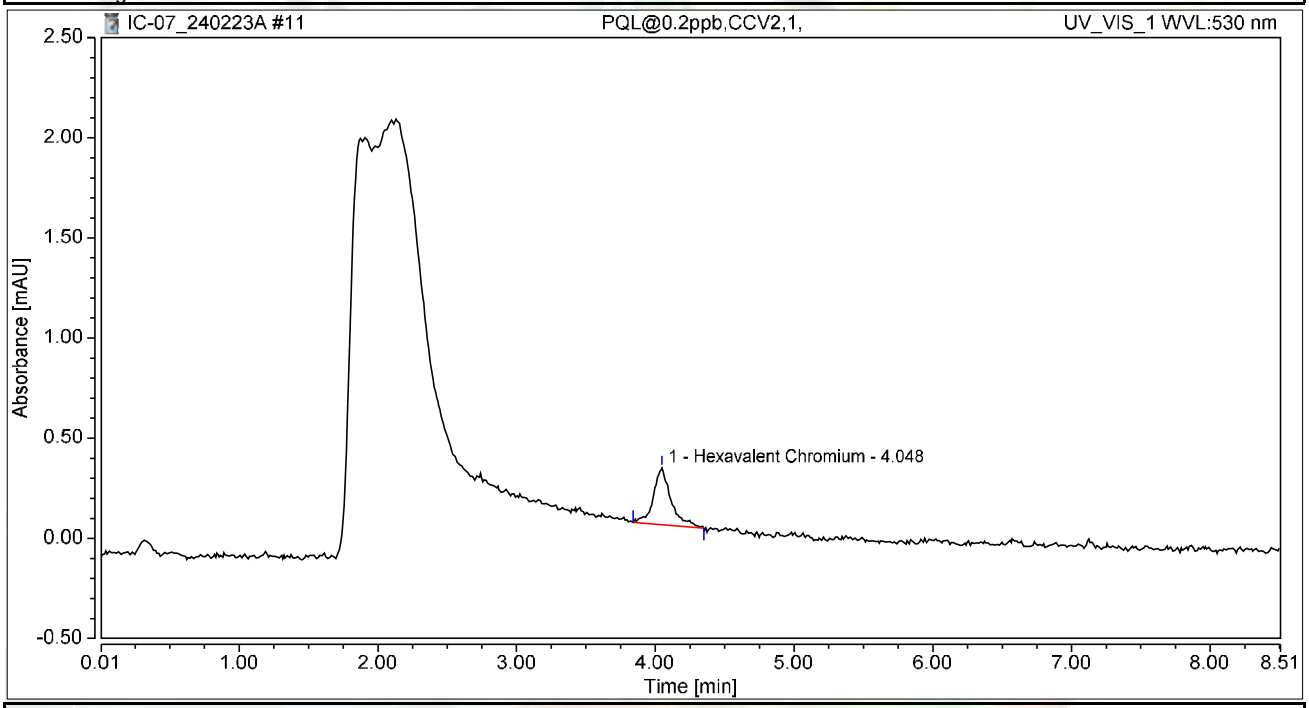
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 09:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

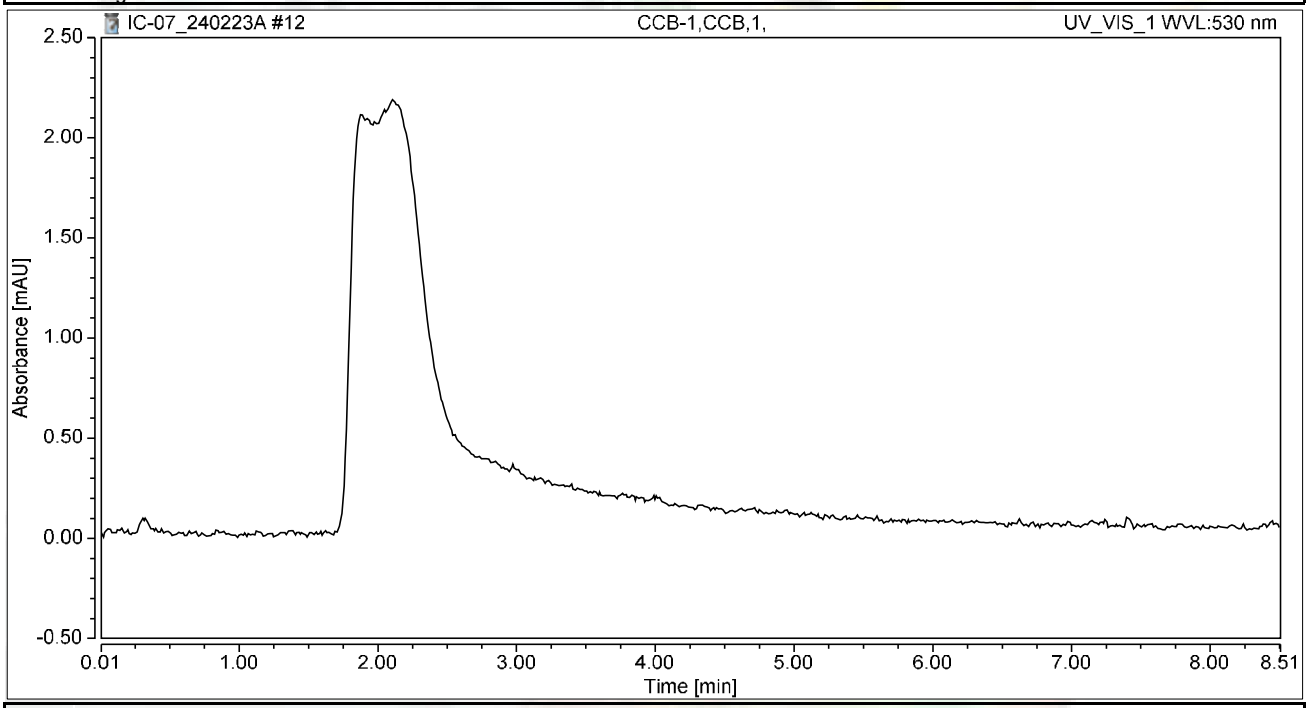
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.042	0.285	100.00	100.00	0.1946
Total:			**0.042**	**0.285**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 09:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

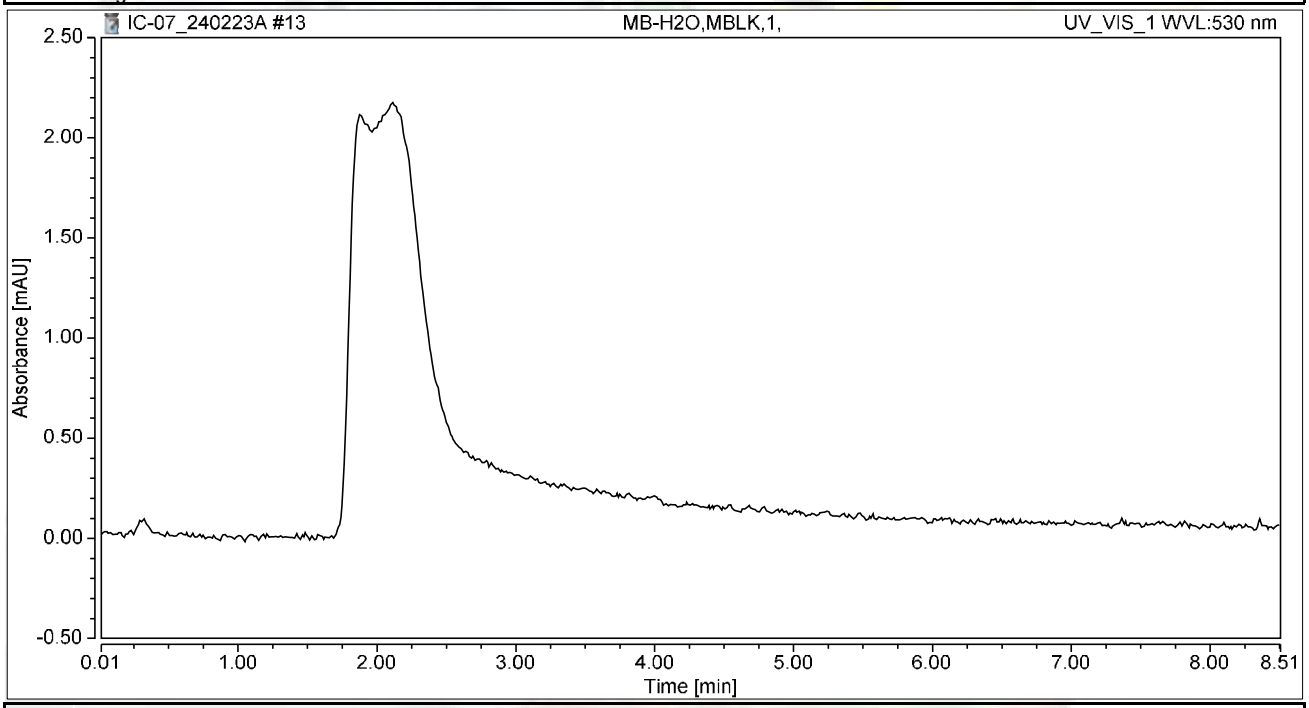
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 09:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

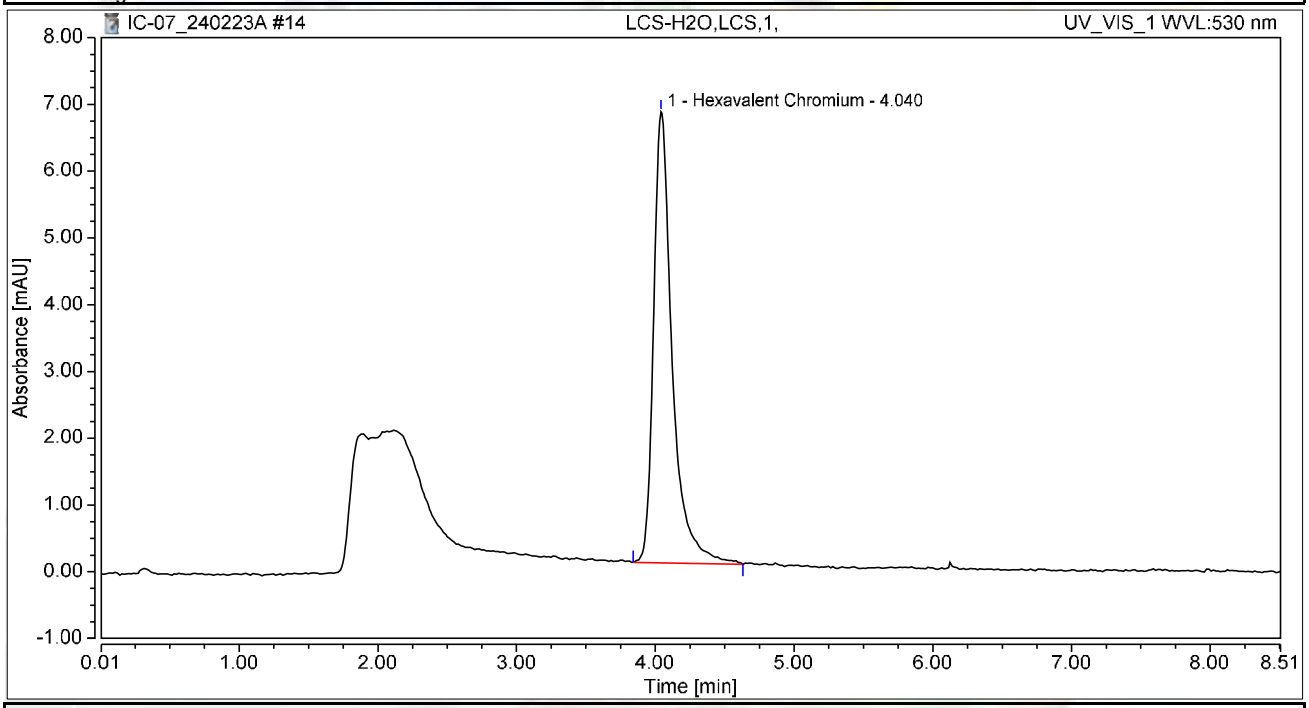
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 10:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

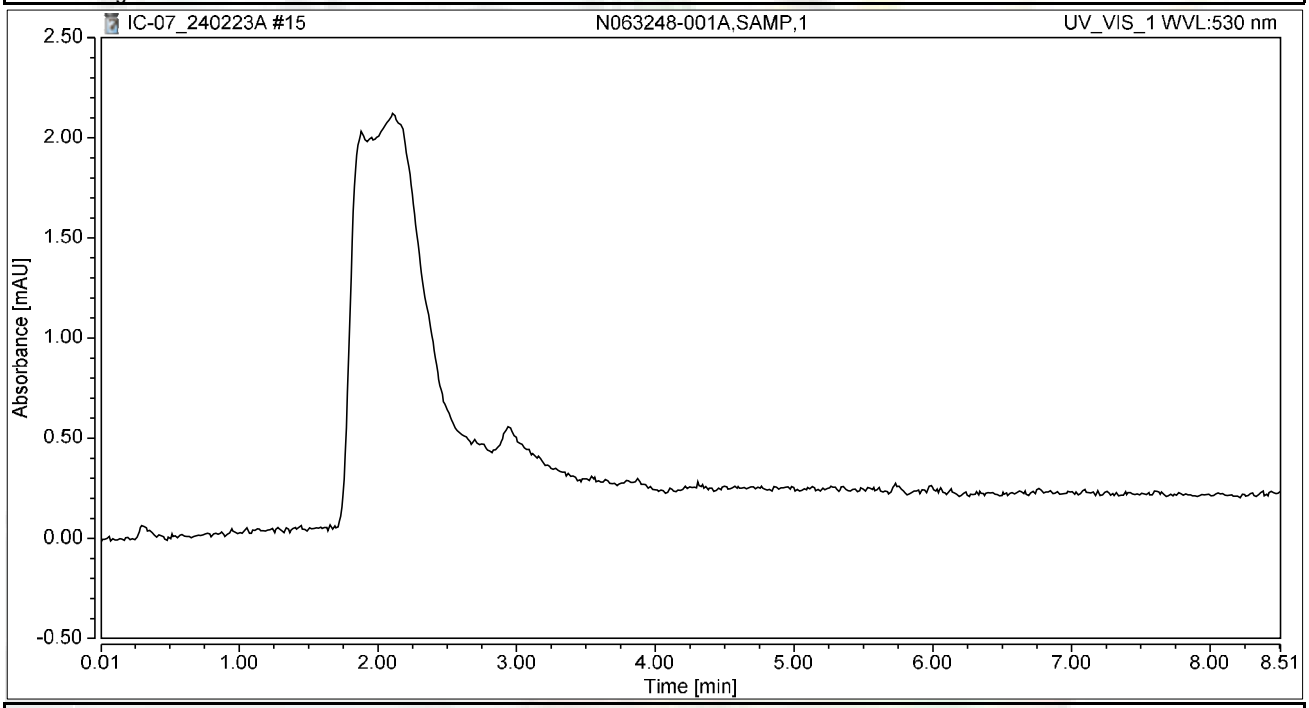
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.050	6.754	100.00	100.00	4.8836
Total:			**1.050**	**6.754**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 10:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

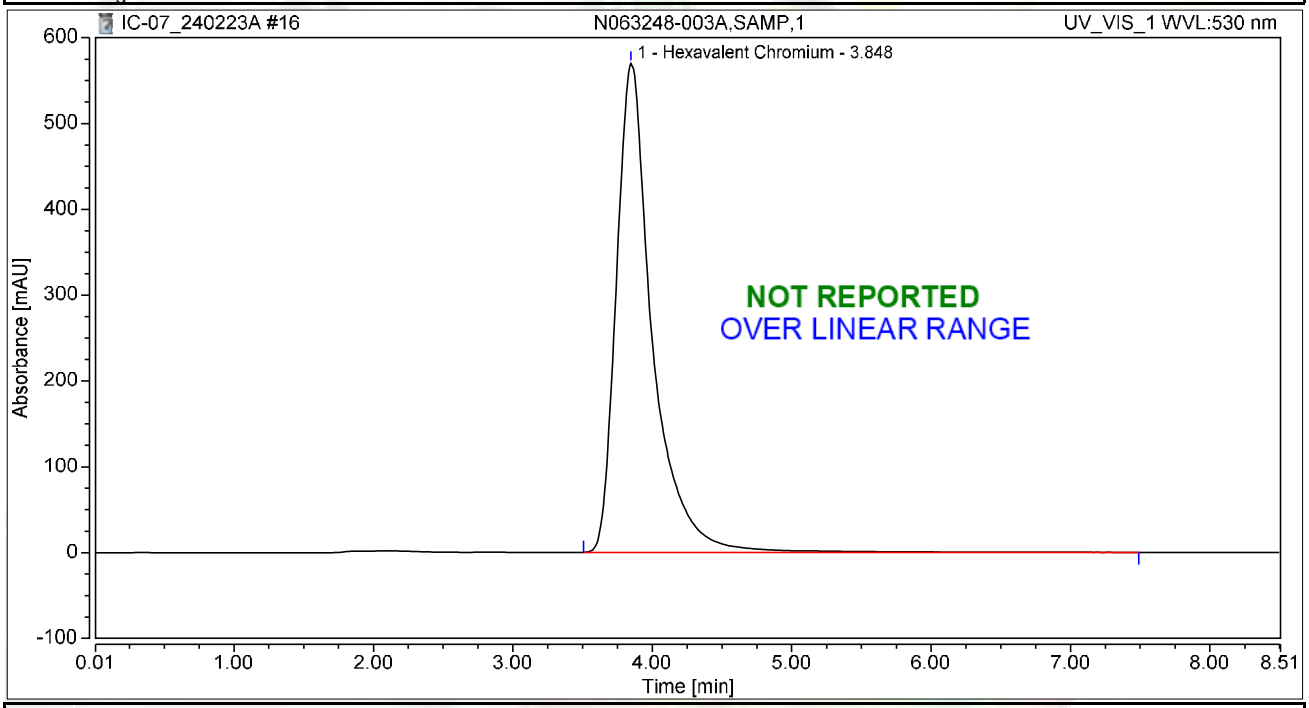
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 10:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

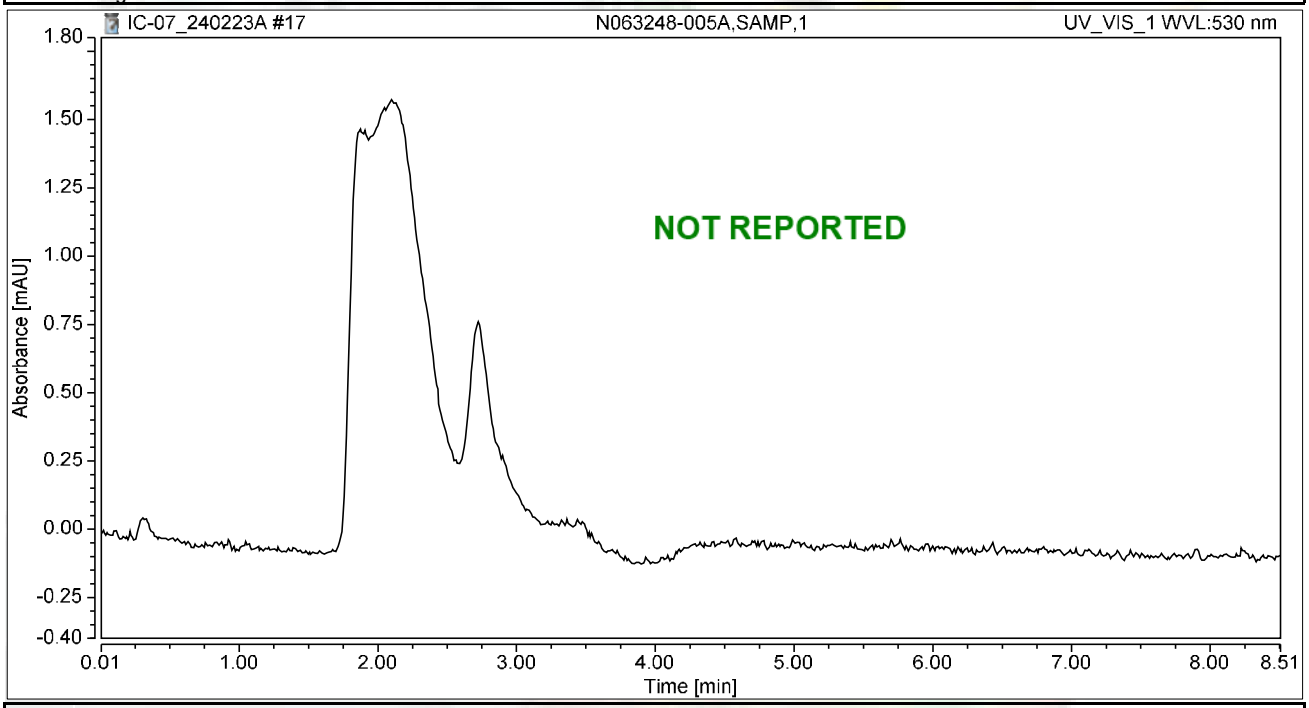
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.848	171.021	569.893	100.00	100.00	795.0688
Total:			**171.021**	**569.893**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 10:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

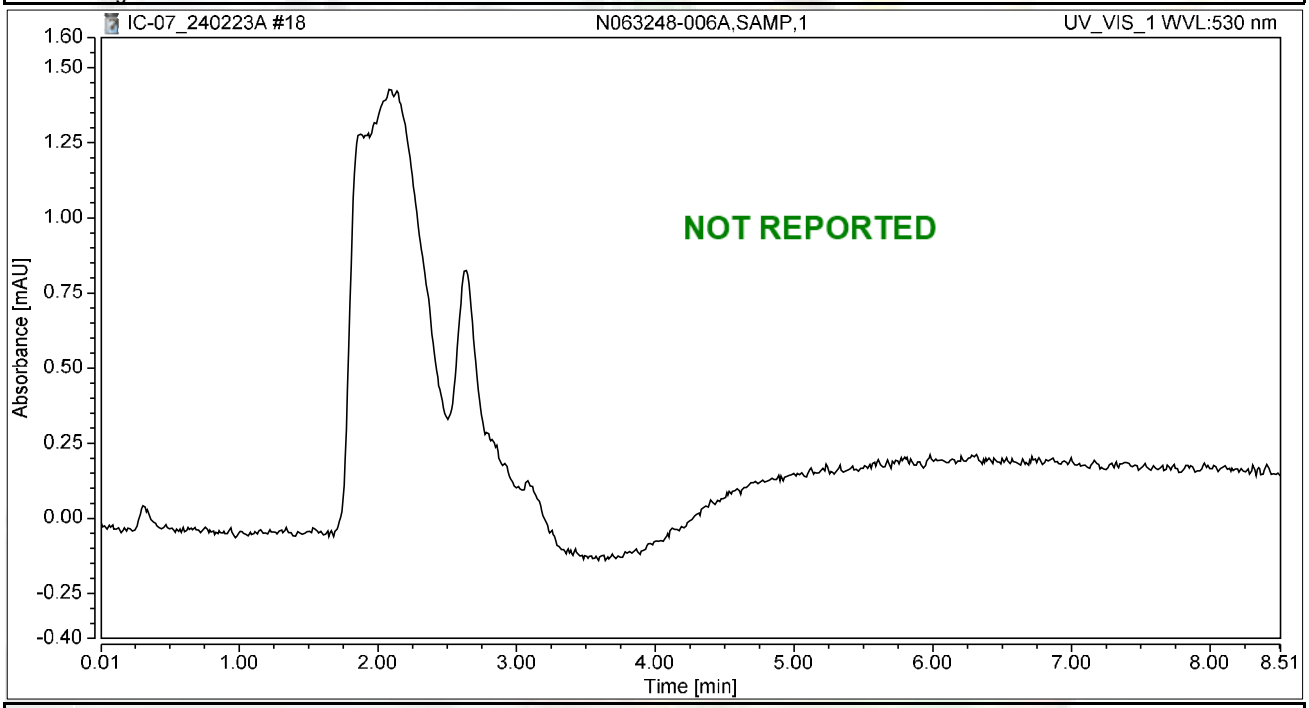
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 10:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

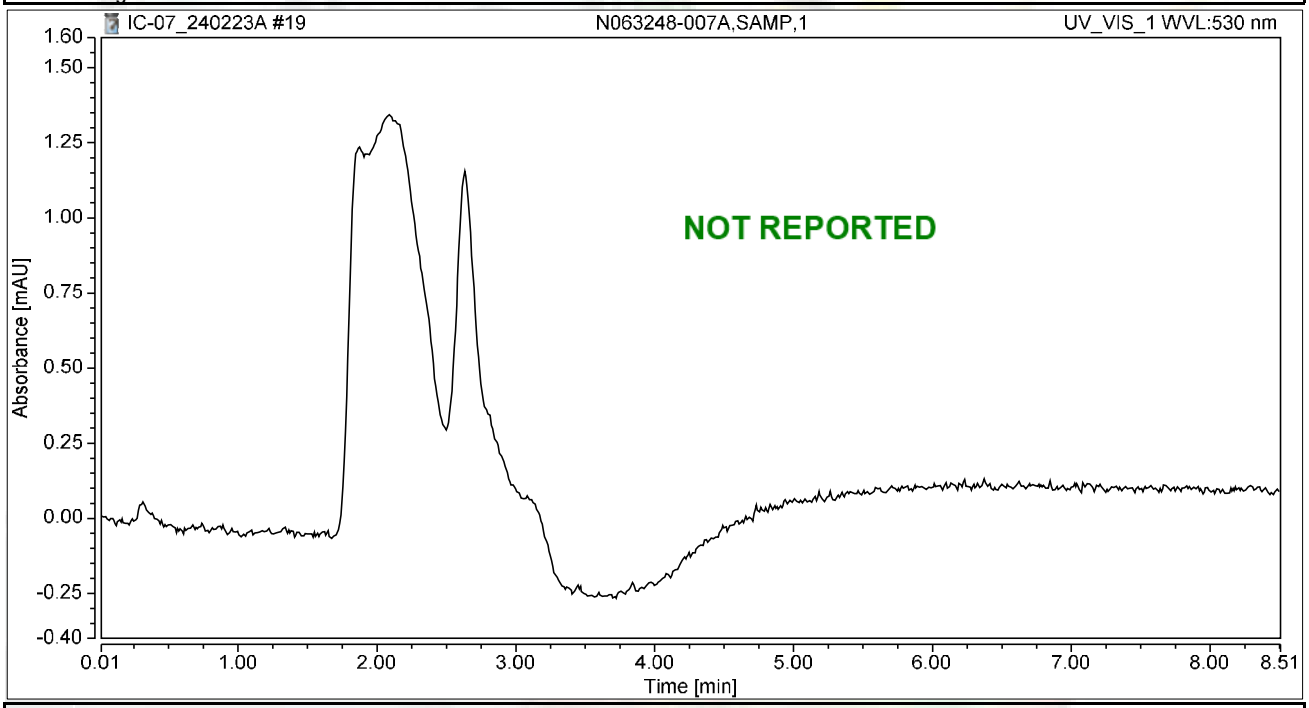
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-007A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 11:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

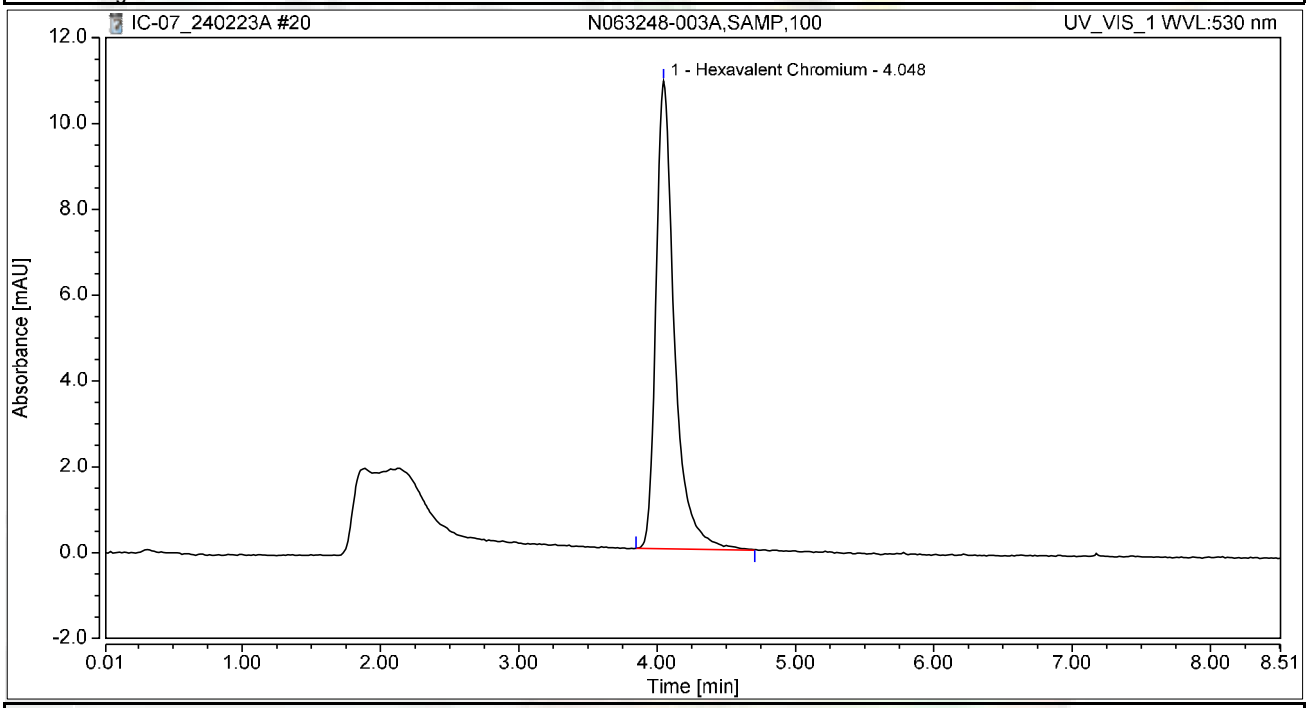
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-003A,SAMP,100**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 11:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

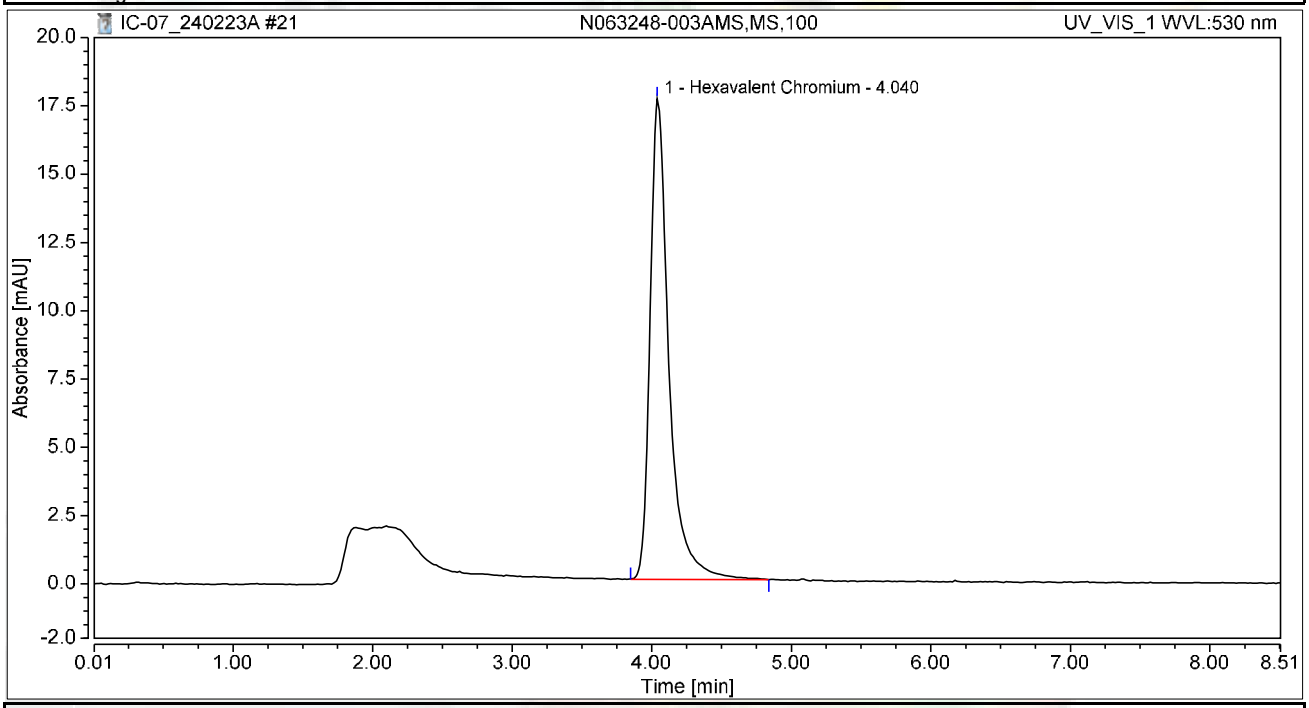
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.681	10.896	100.00	100.00	7.8137
Total:			**1.681**	**10.896**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-003AMS,MS,100**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 11:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

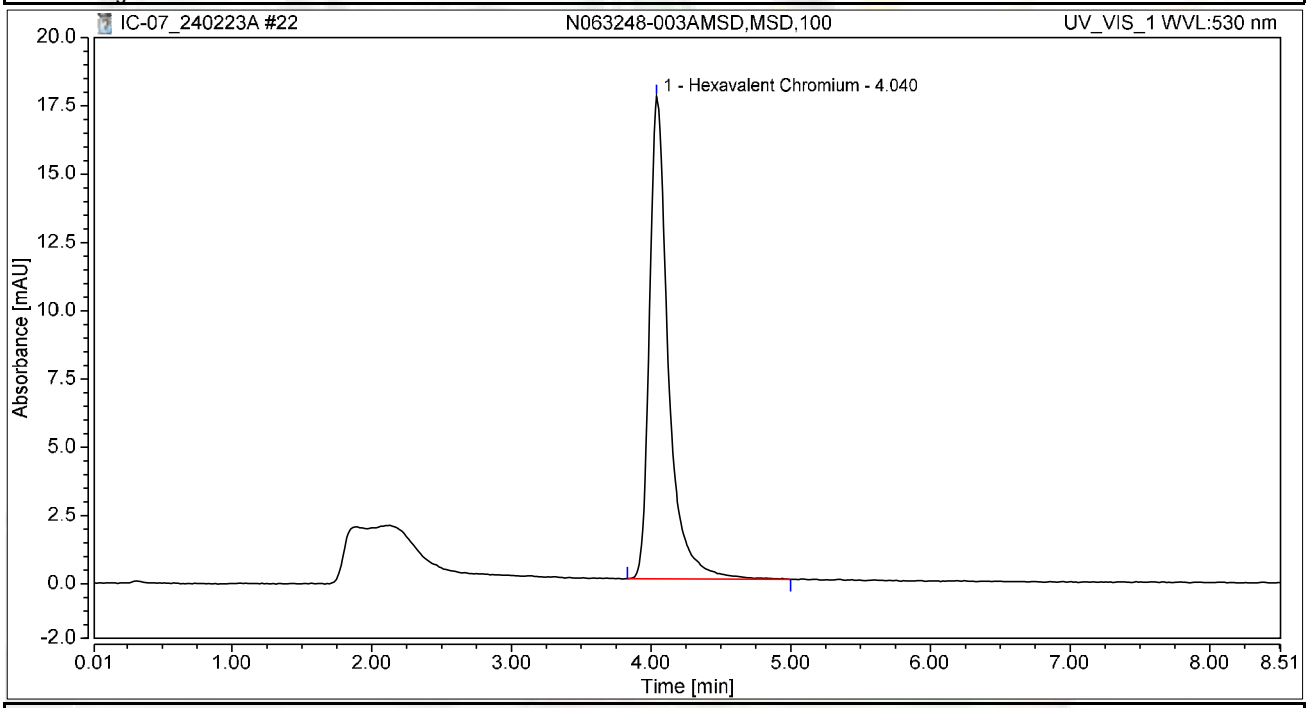
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.765	17.608	100.00	100.00	12.8561
Total:			**2.765**	**17.608**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-003AMSD,MSD,100**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 11:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

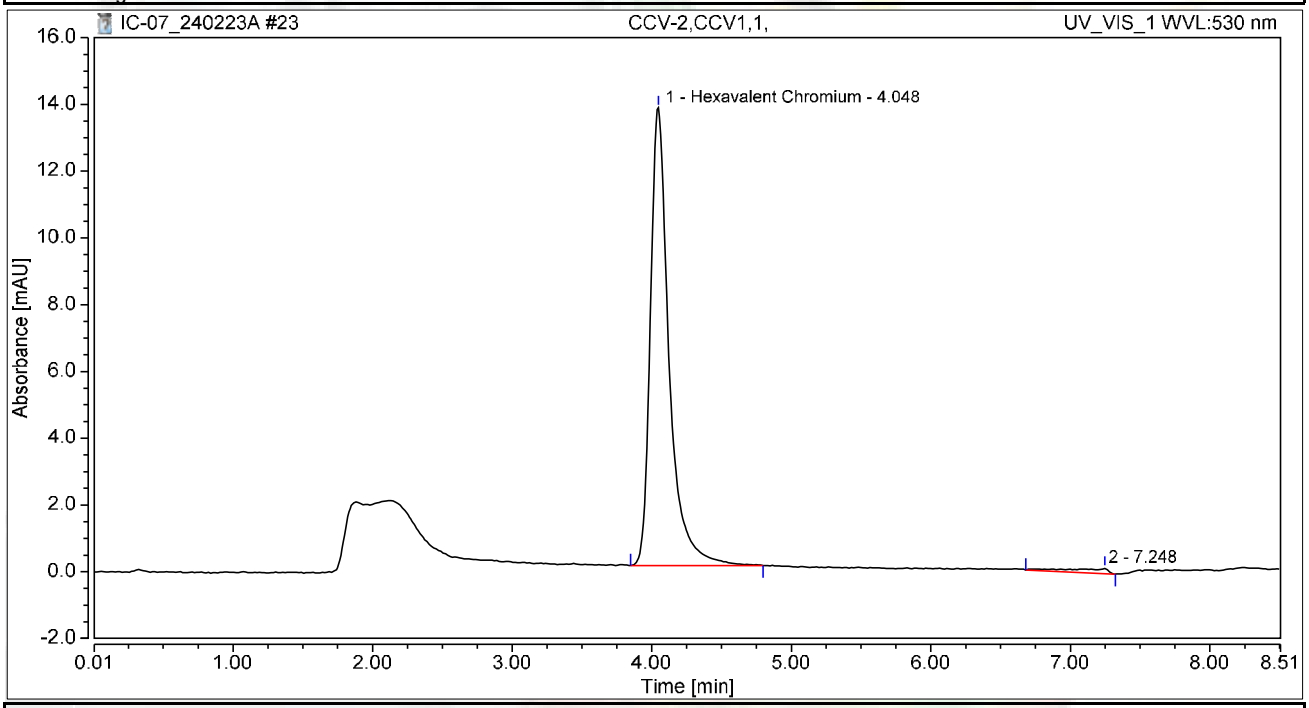
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.780	17.665	100.00	100.00	12.9234
Total:			**2.780**	**17.665**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 11:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

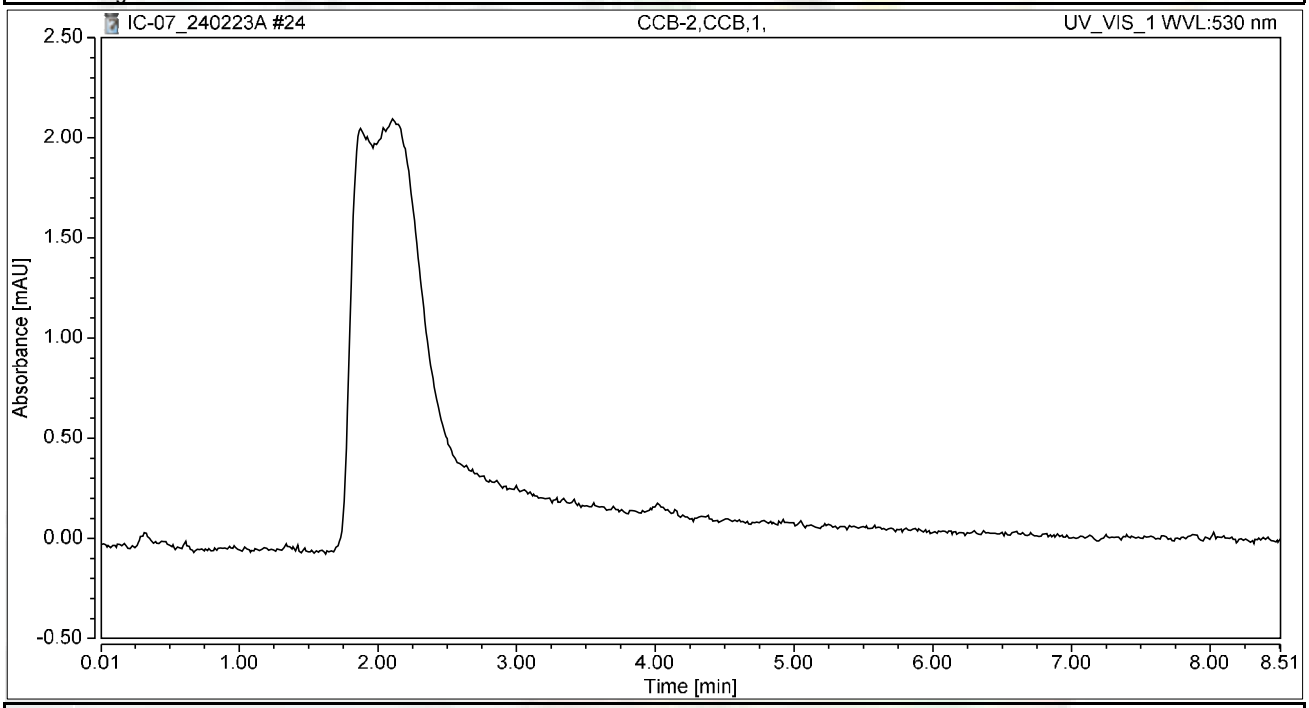
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.136	13.716	97.76	98.82	9.9284
2		7.248	0.049	0.164	2.24	1.18	n.a.
Total:			**2.185**	**13.880**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 11:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

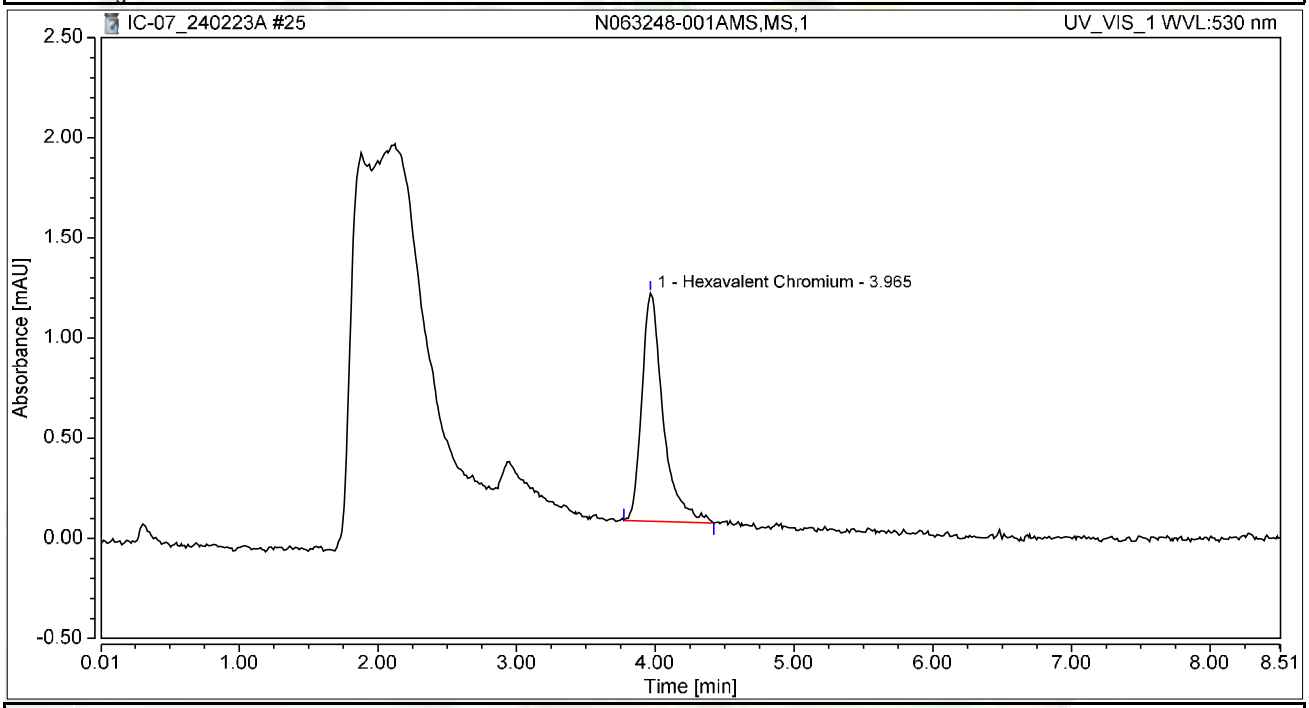
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

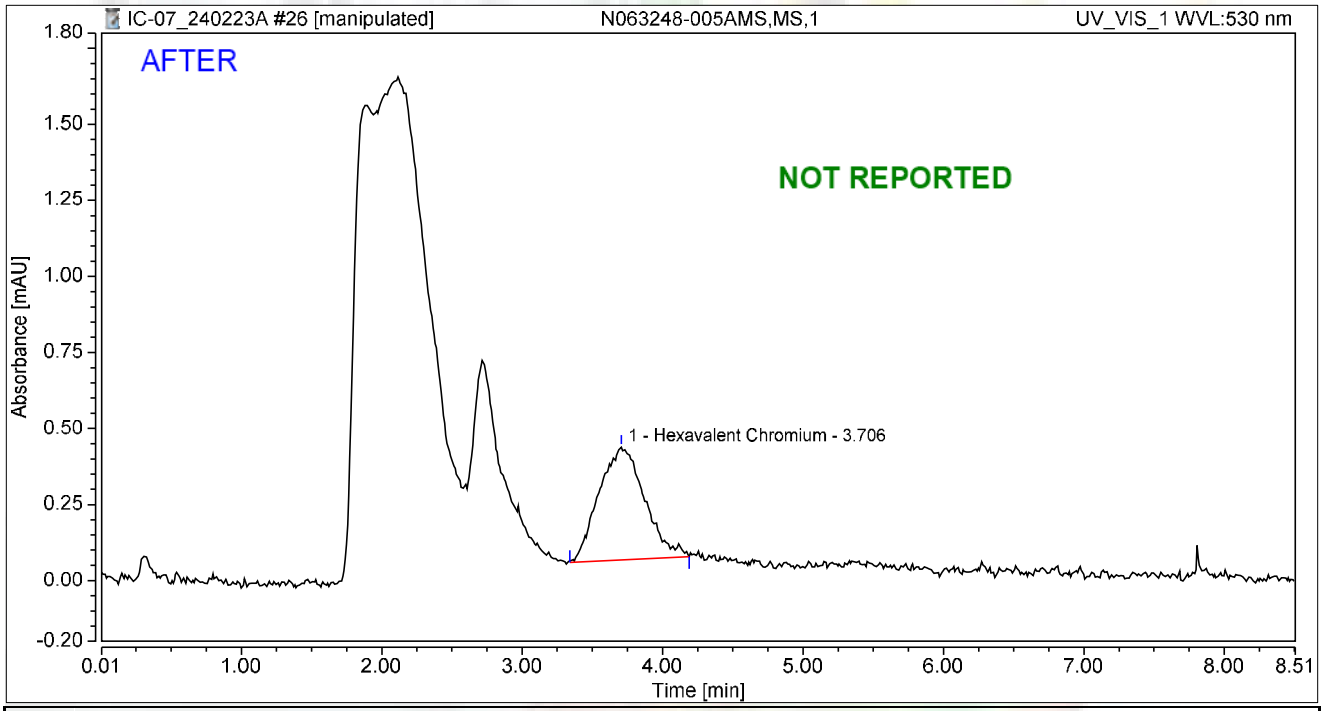
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.203	1.139	100.00	100.00	0.9445
Total:			**0.203**	**1.139**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

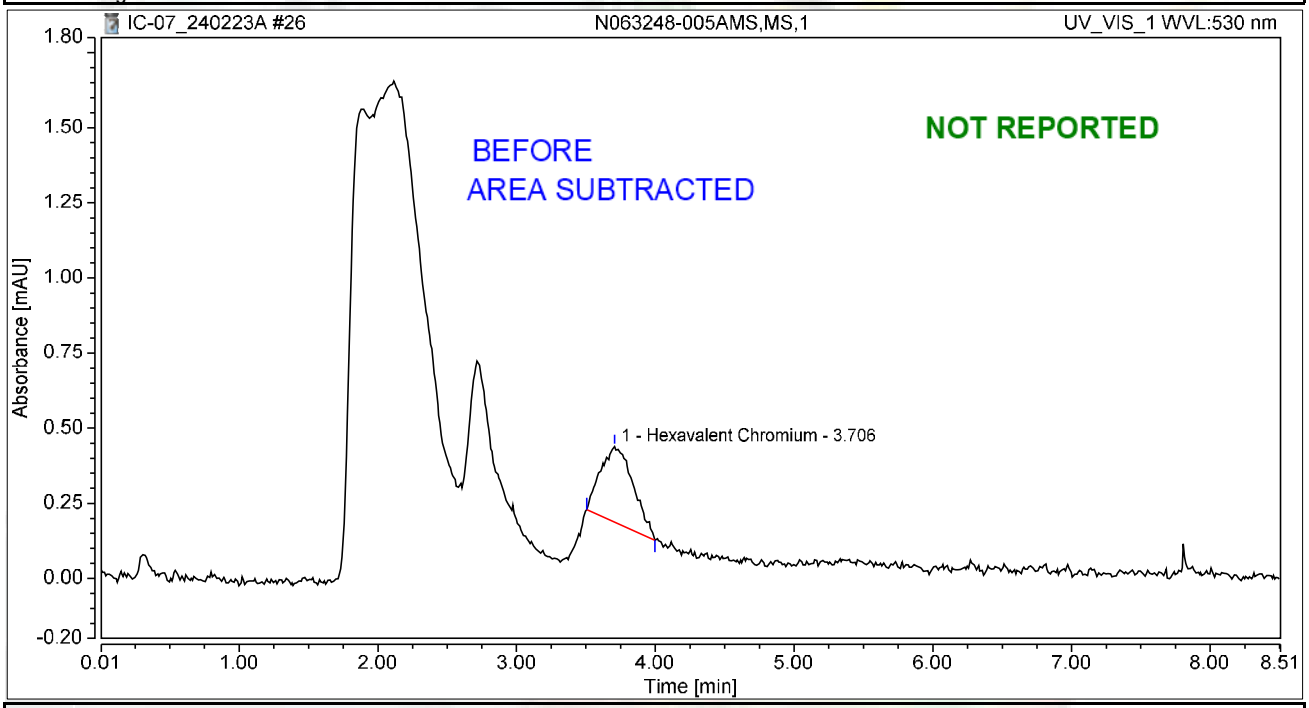
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.706	0.140	0.372	100.00	100.00	0.6496
Total:			**0.140**	**0.372**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

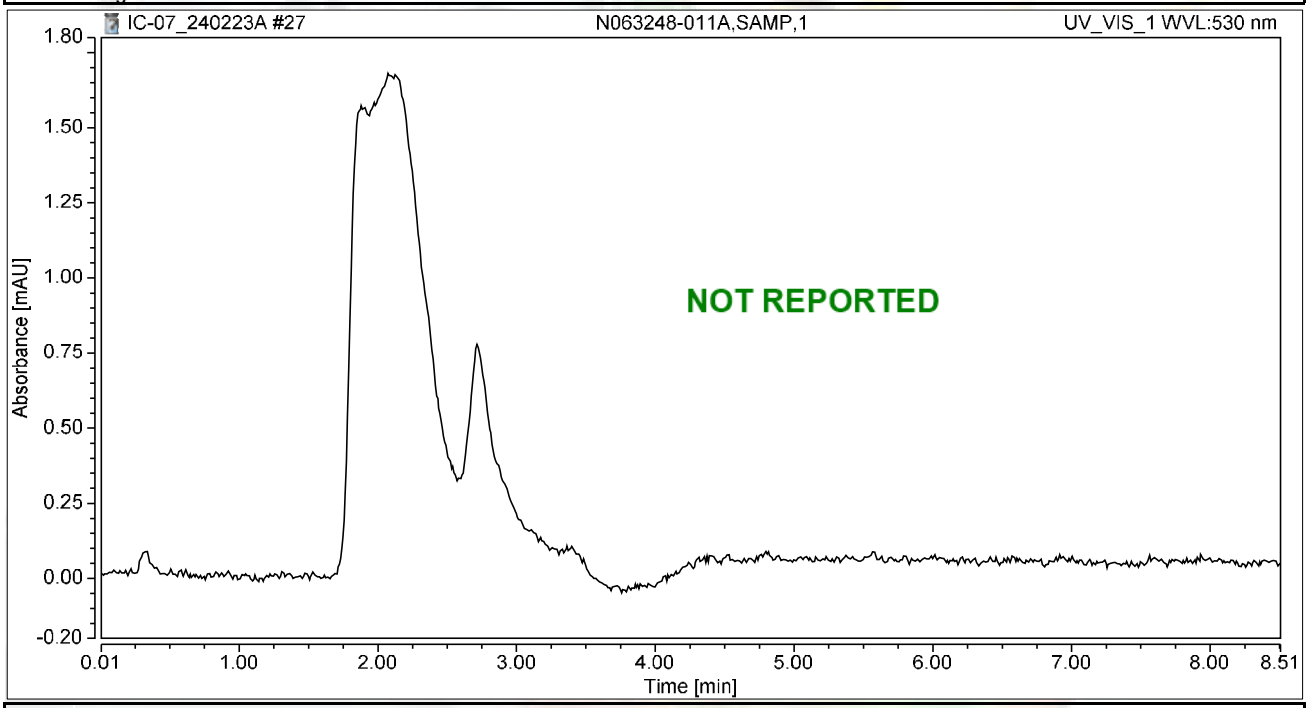
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.706	0.069	0.251	100.00	100.00	0.3207
Total:			**0.069**	**0.251**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-011A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

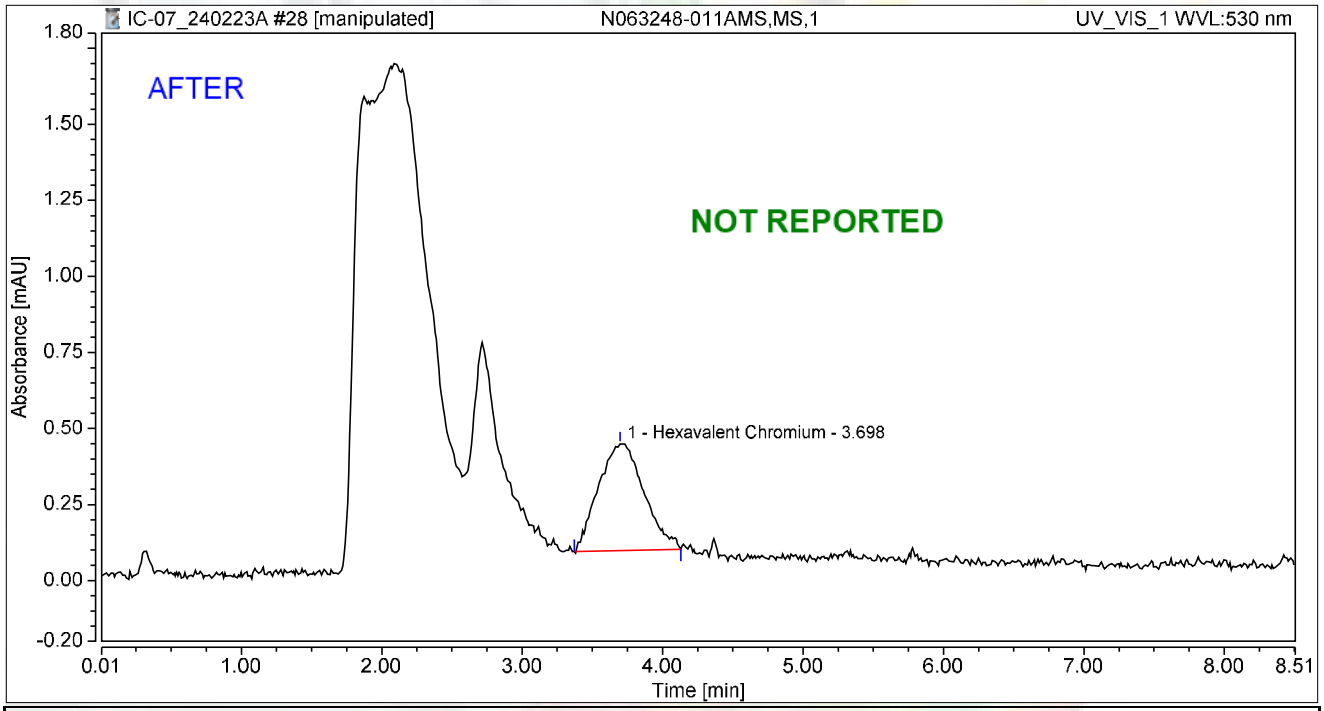
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

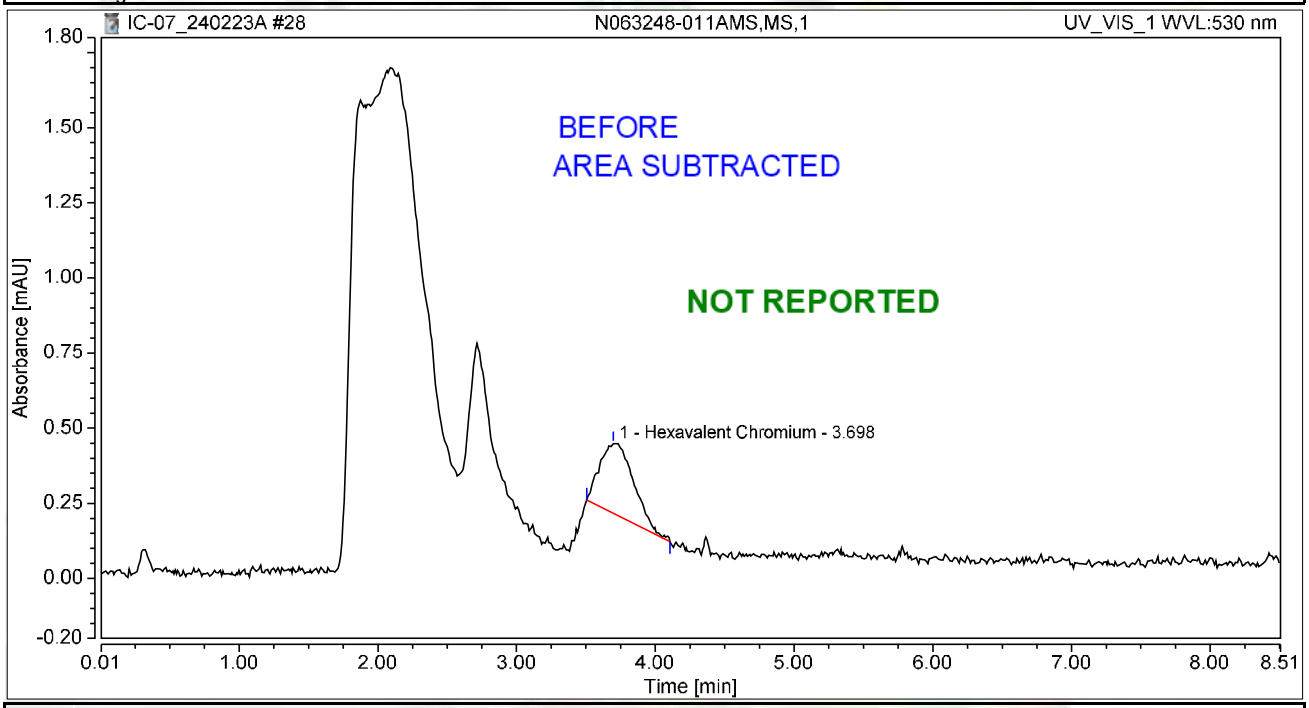
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.698	0.132	0.350	100.00	100.00	0.6137
Total:			**0.132**	**0.350**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

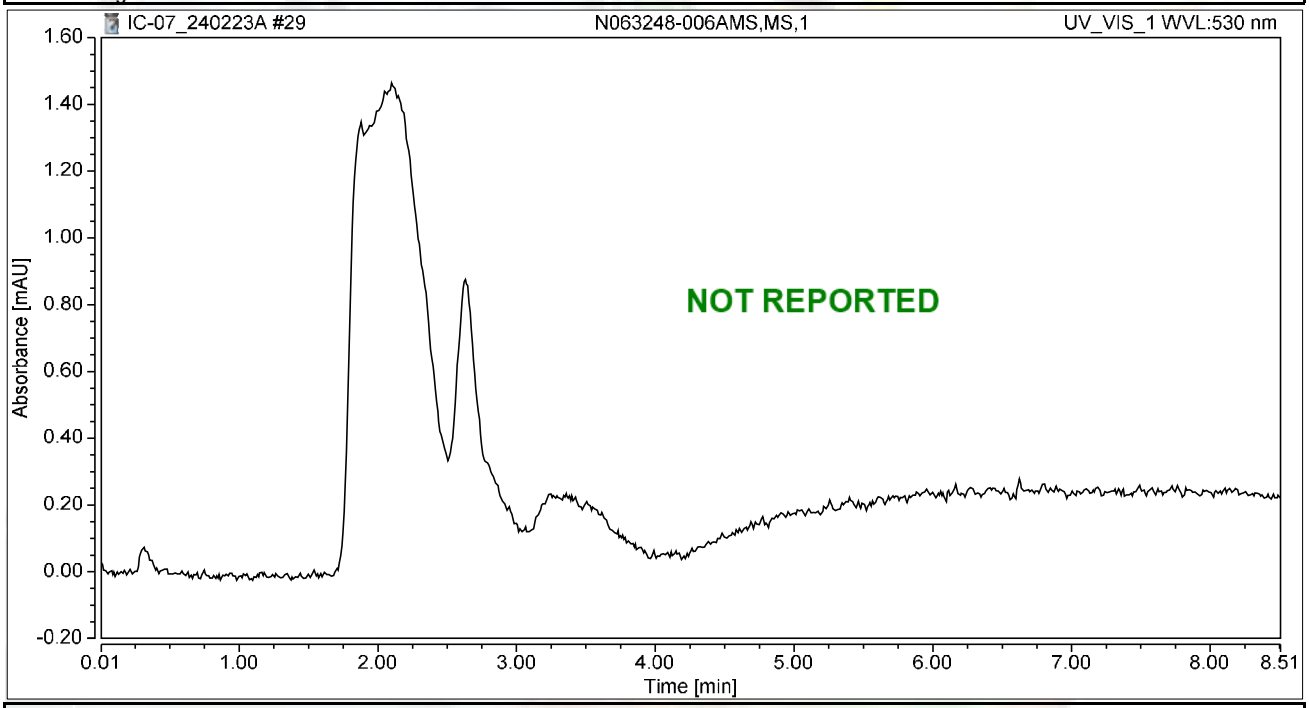
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.698	0.067	0.232	100.00	100.00	0.3105
Total:			**0.067**	**0.232**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

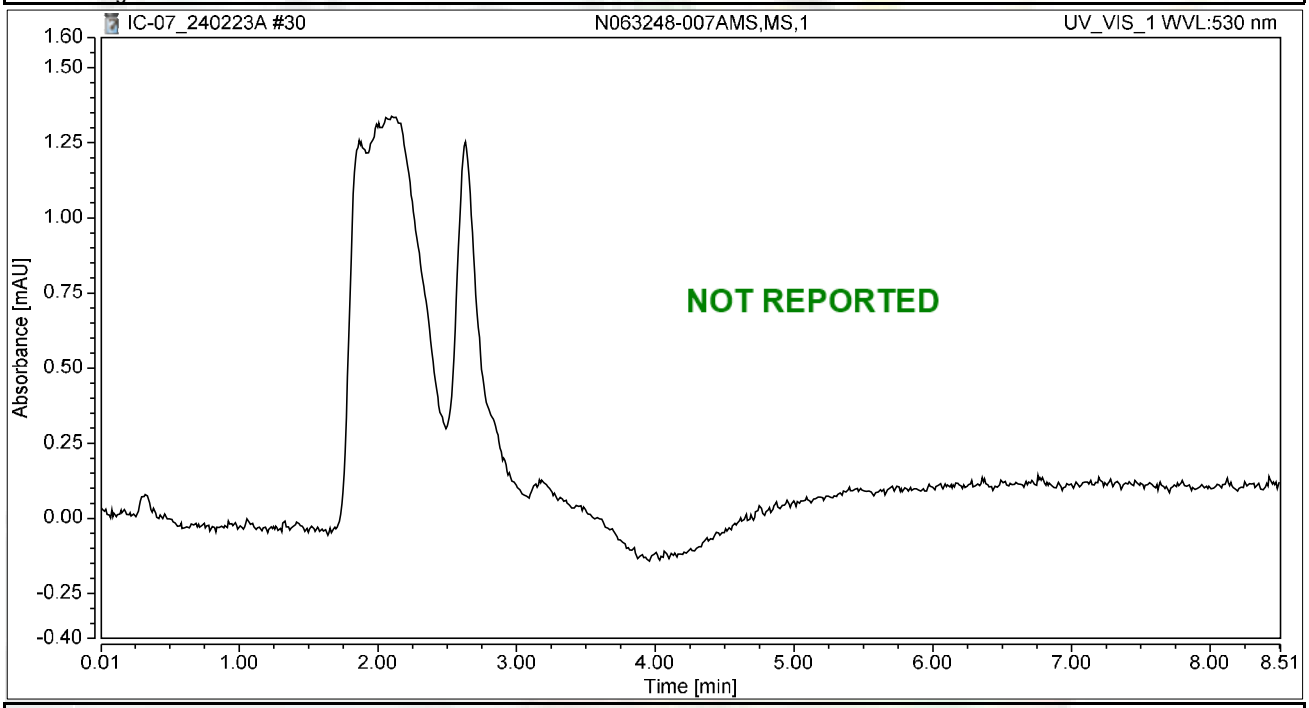
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 12:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

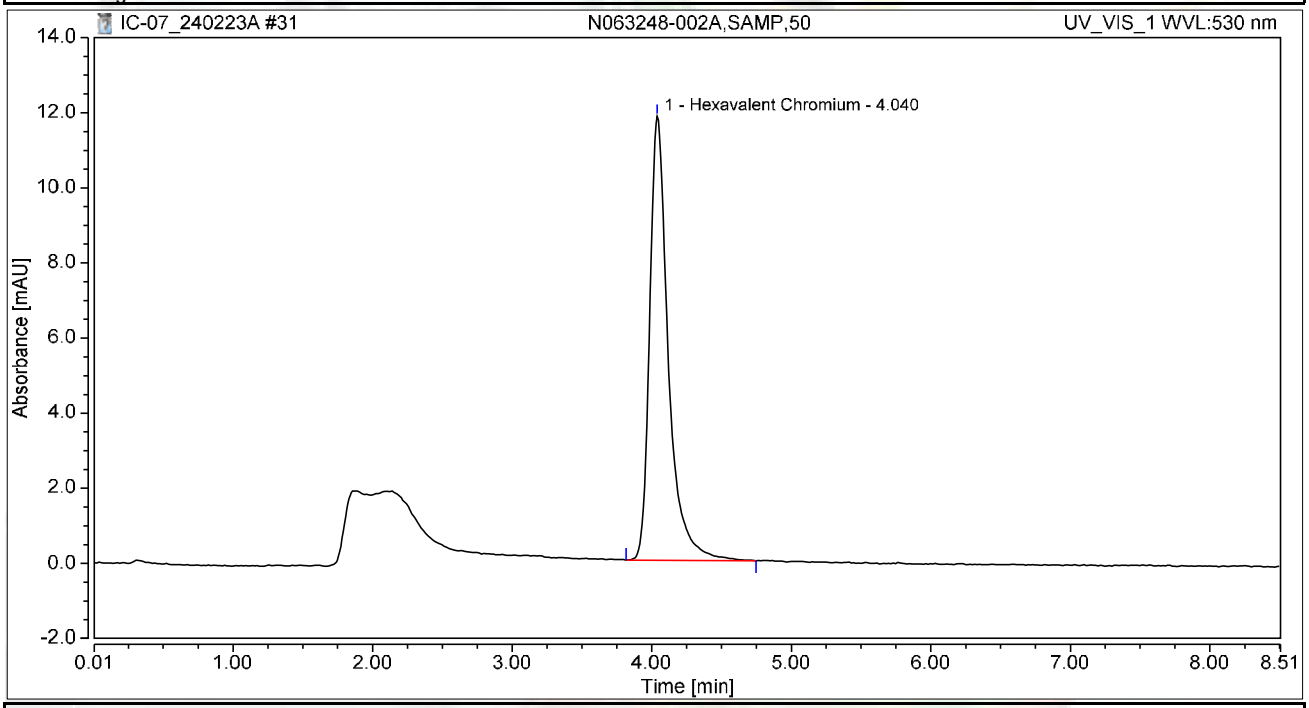
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-002A,SAMP,50**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 13:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

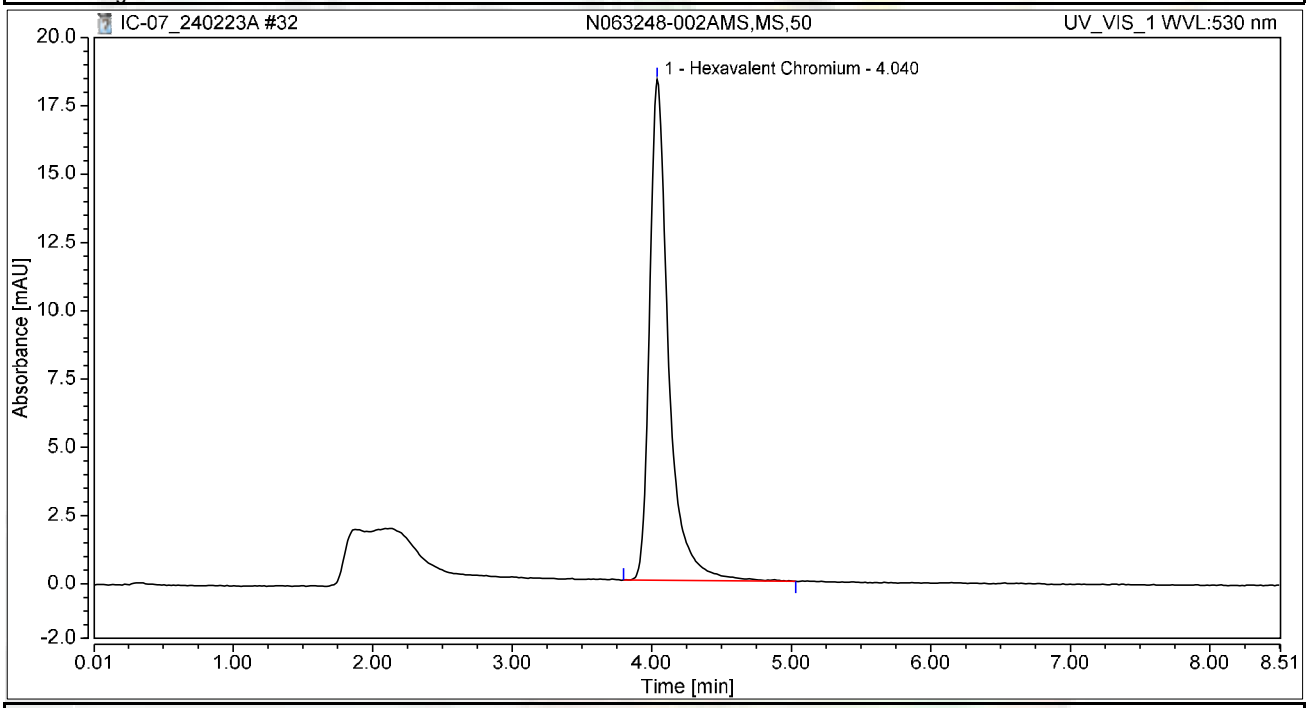
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.835	11.823	100.00	100.00	8.5302
Total:			**1.835**	**11.823**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-002AMS,MS,50**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 13:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

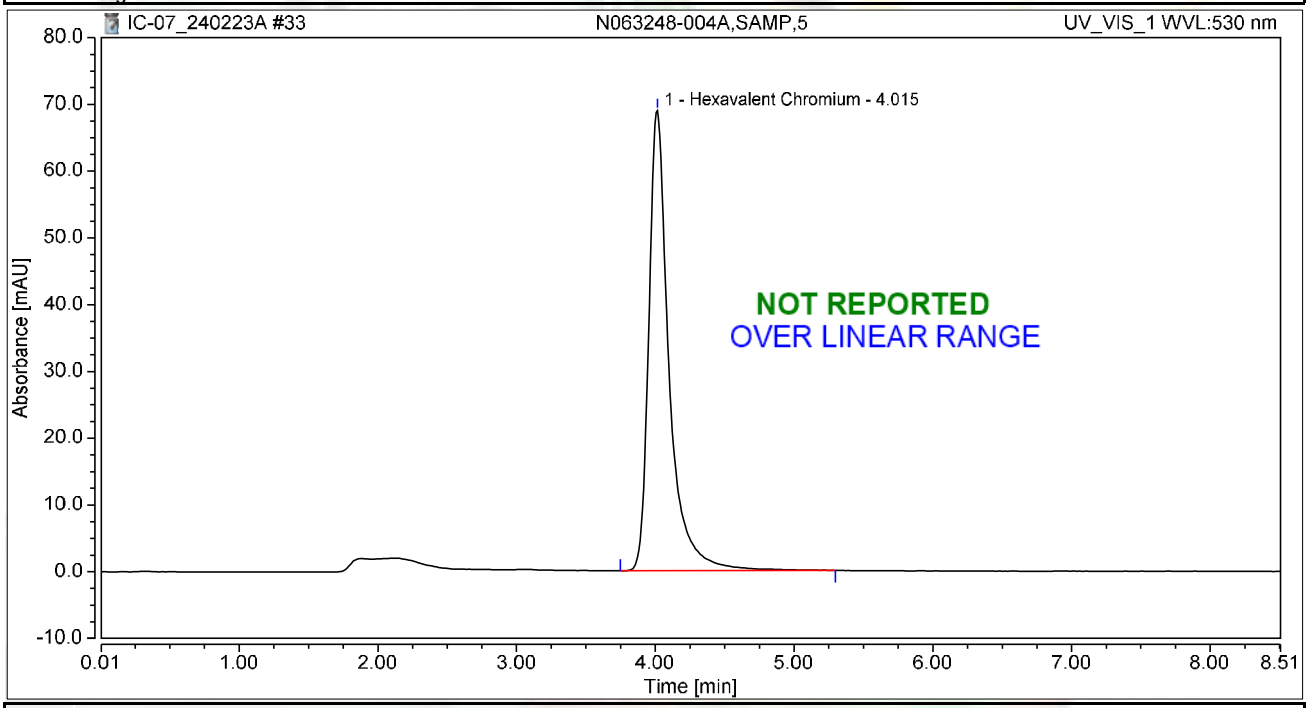
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.897	18.335	100.00	100.00	13.4692
Total:			**2.897**	**18.335**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-004A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 13:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

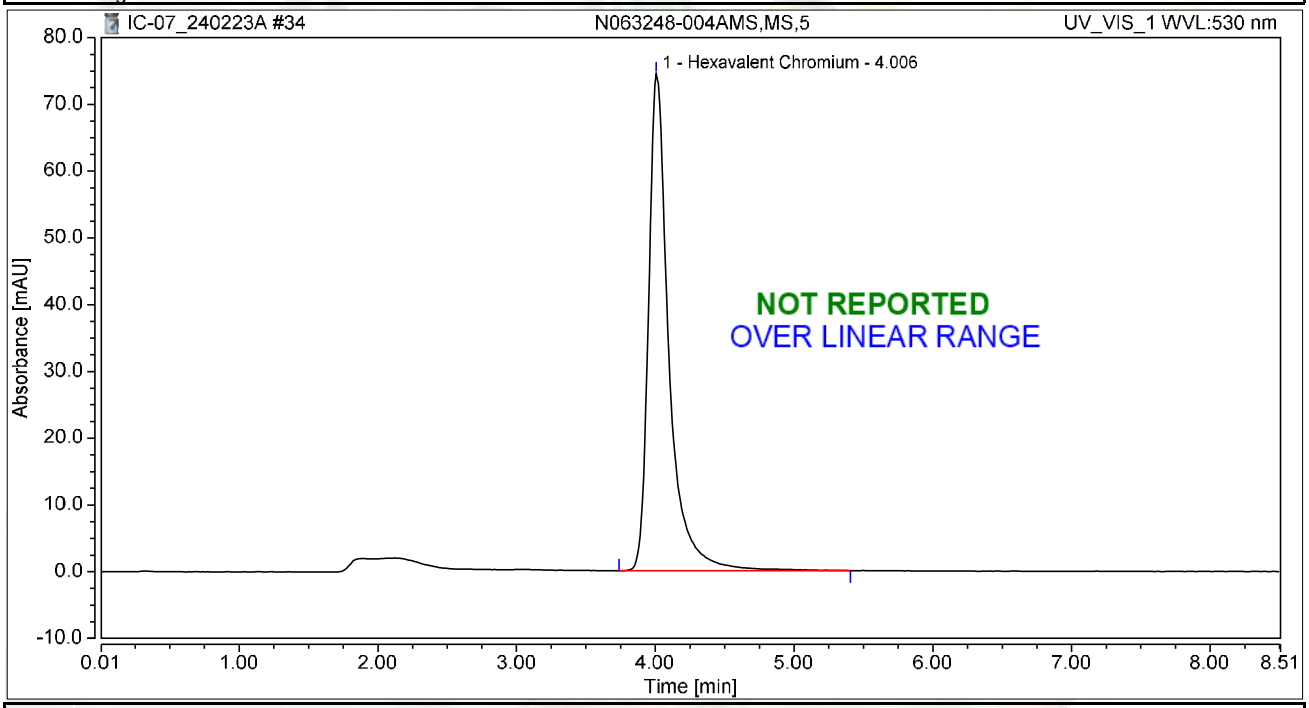
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	11.717	68.940	100.00	100.00	54.4706
Total:			**11.717**	**68.940**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-004AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 13:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

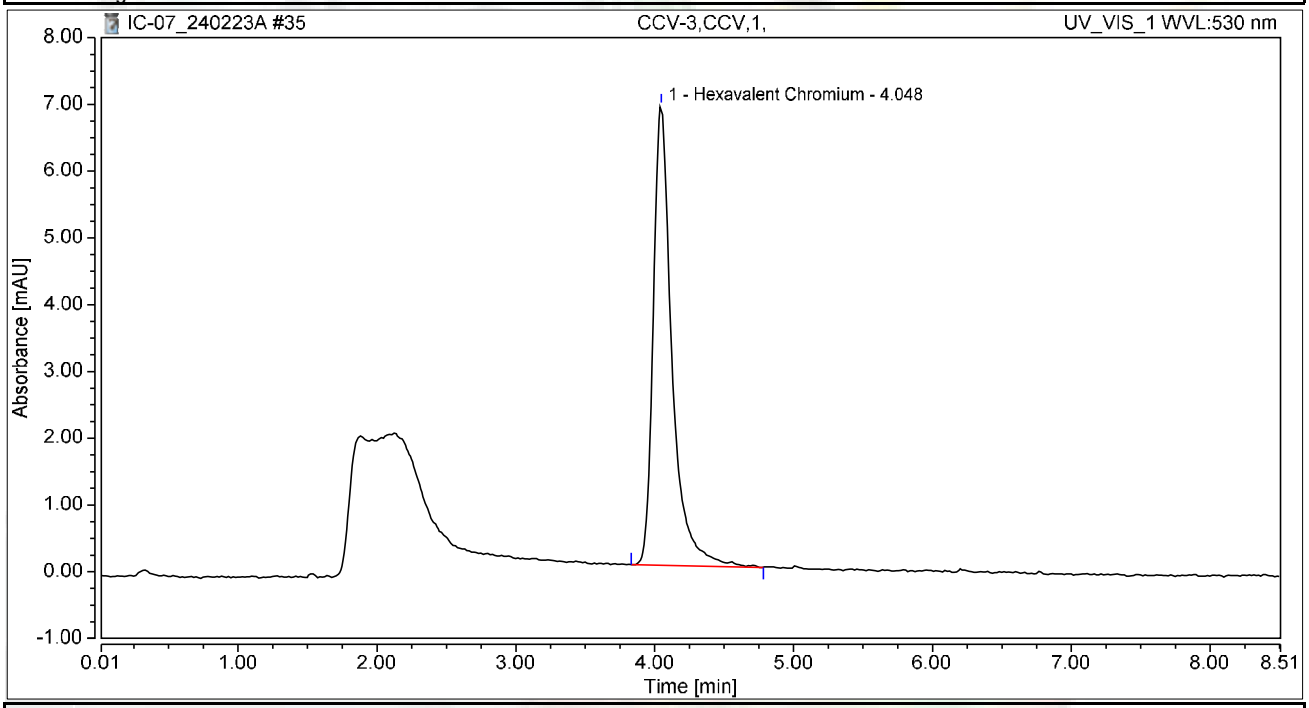
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	12.712	74.454	100.00	100.00	59.0961
Total:			**12.712**	**74.454**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 13:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

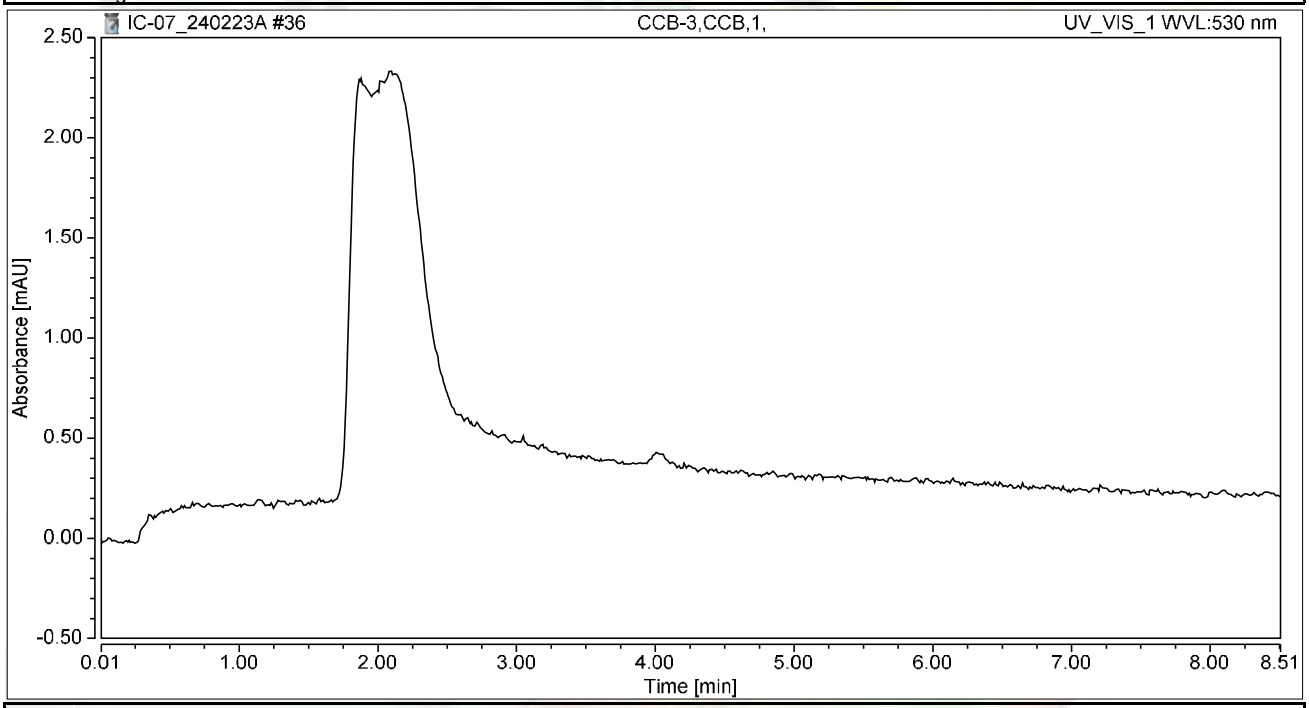
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.078	6.886	100.00	100.00	5.0096
Total:			**1.078**	**6.886**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 13:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

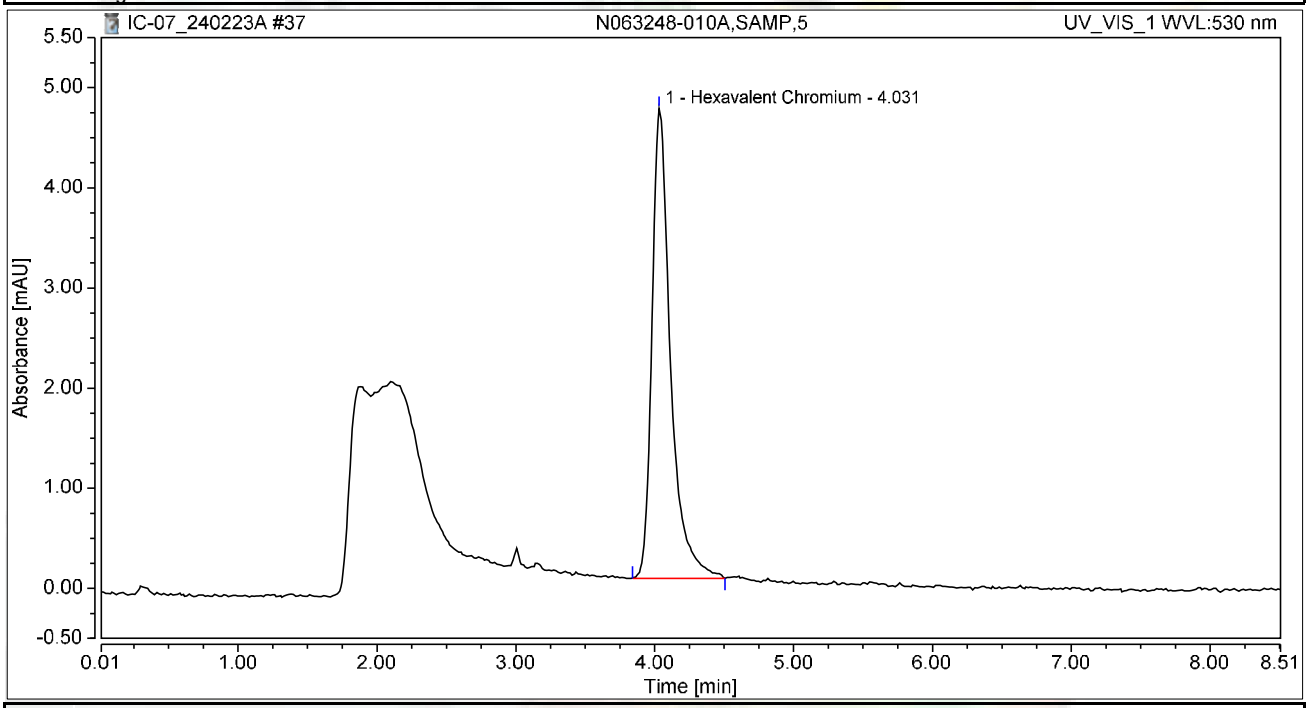
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-010A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 13:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

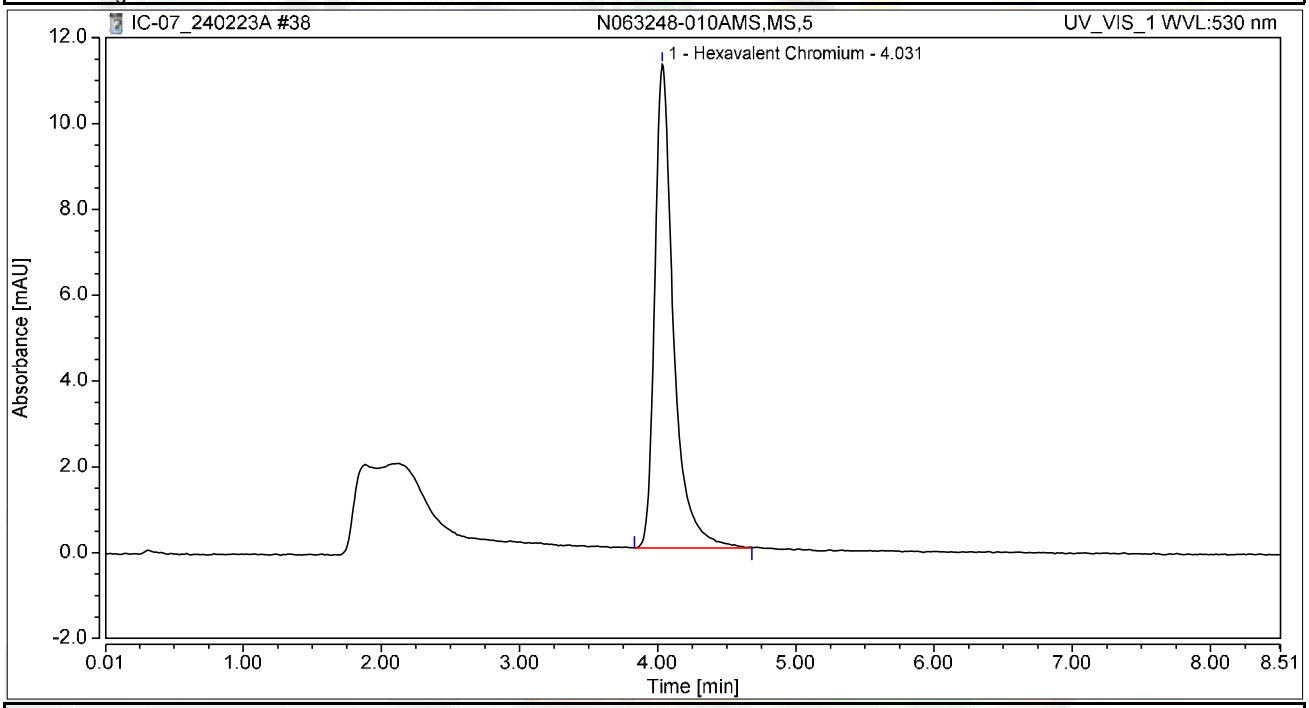
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.726	4.691	100.00	100.00	3.3729
Total:			**0.726**	**4.691**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-010AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 14:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

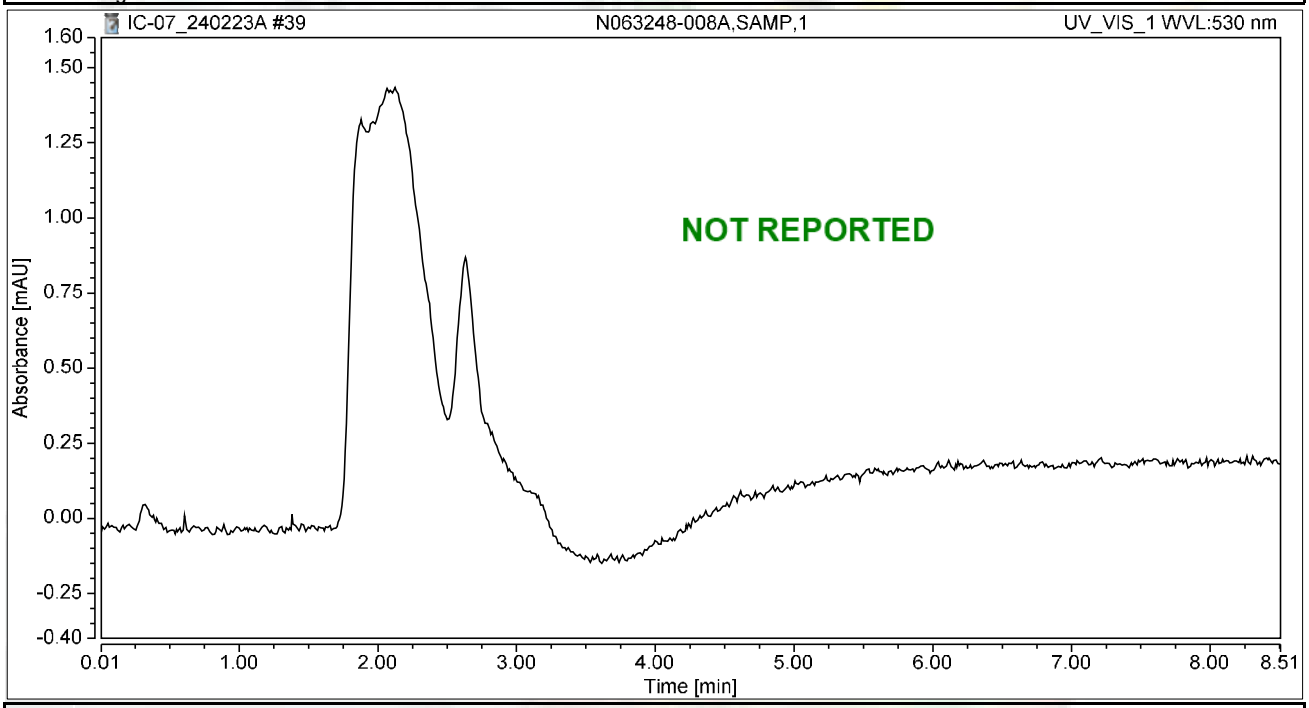
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	1.773	11.273	100.00	100.00	8.2436
Total:			**1.773**	**11.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 14:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

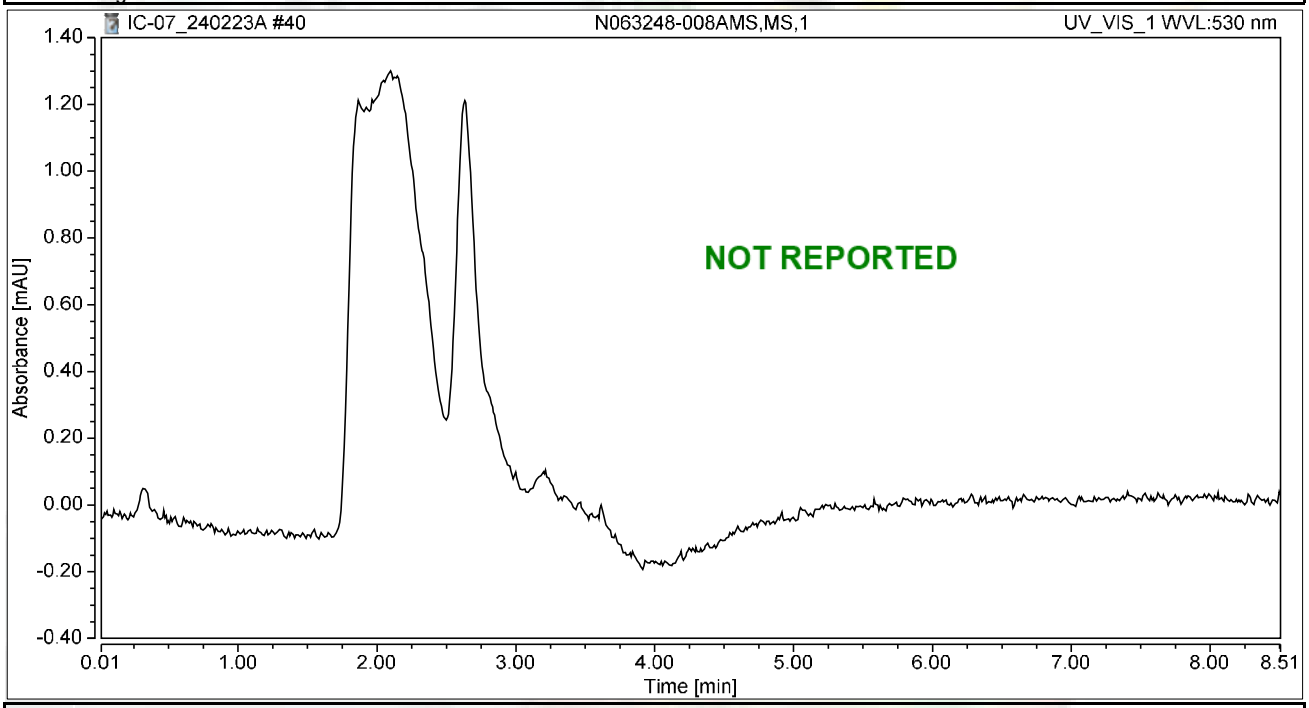
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-008AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 14:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

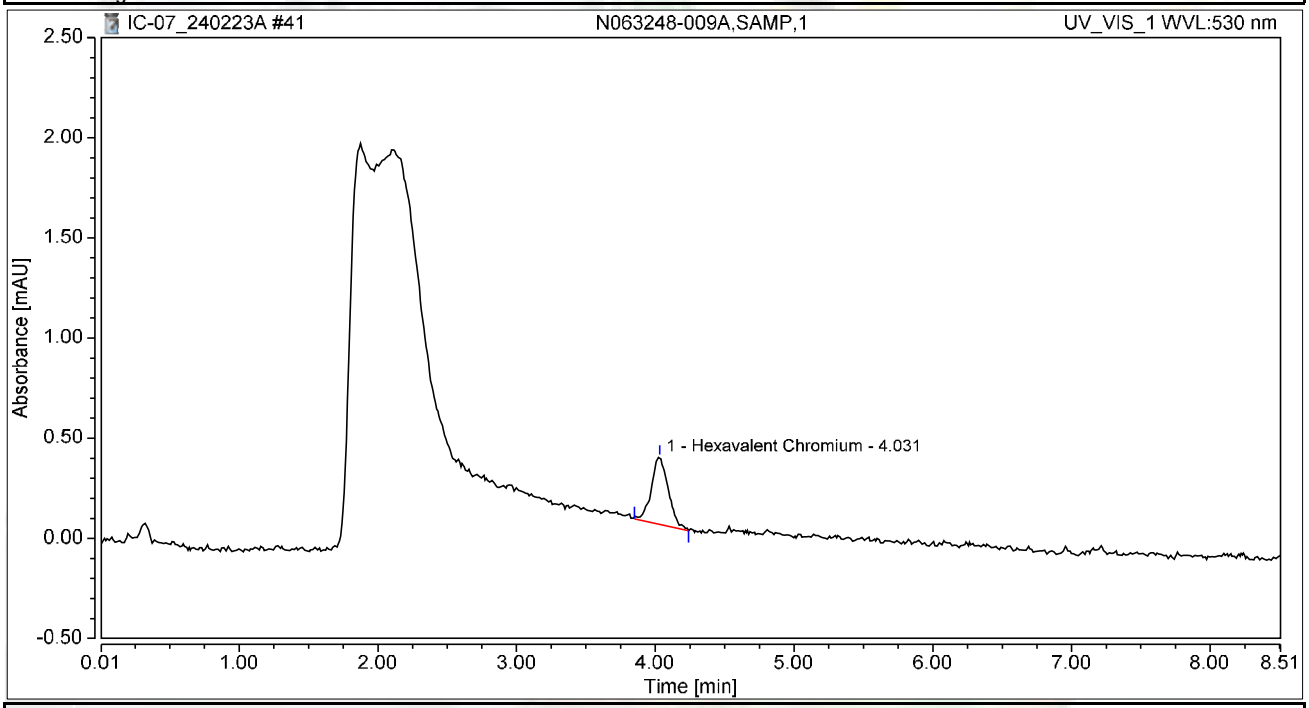
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 14:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

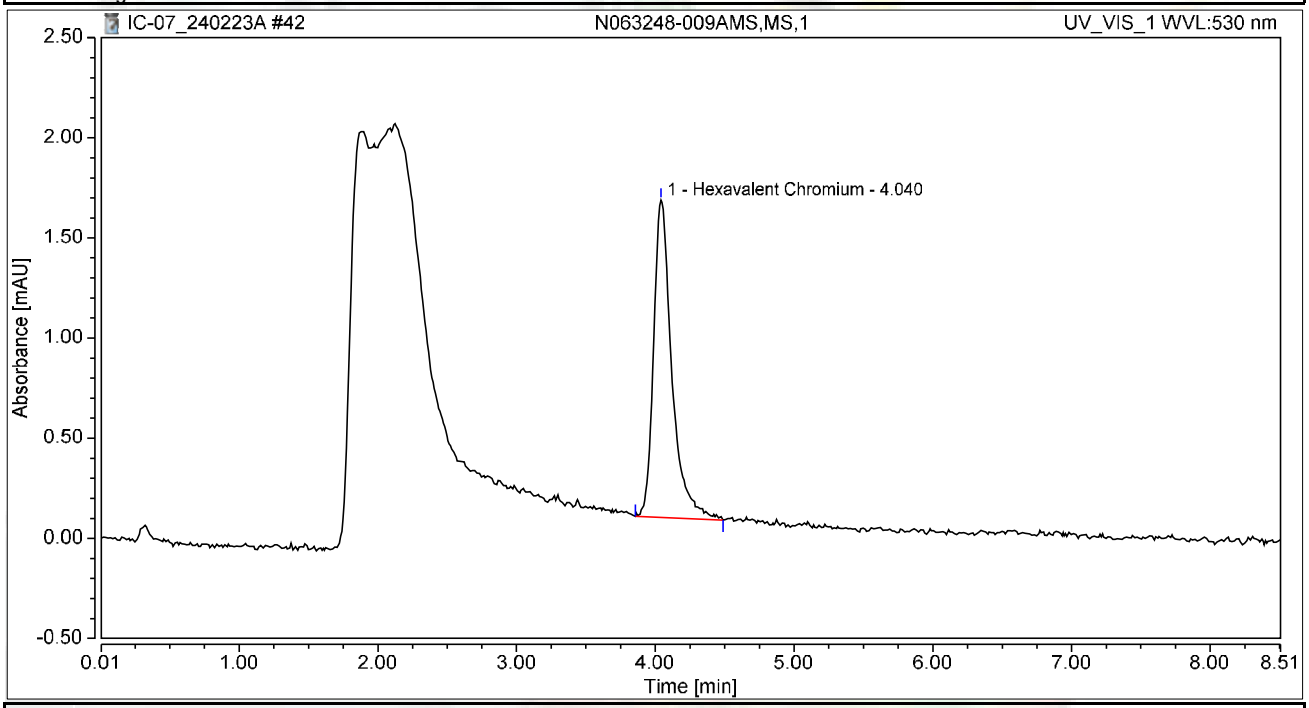
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.047	0.334	100.00	100.00	0.2206
Total:			**0.047**	**0.334**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 14:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

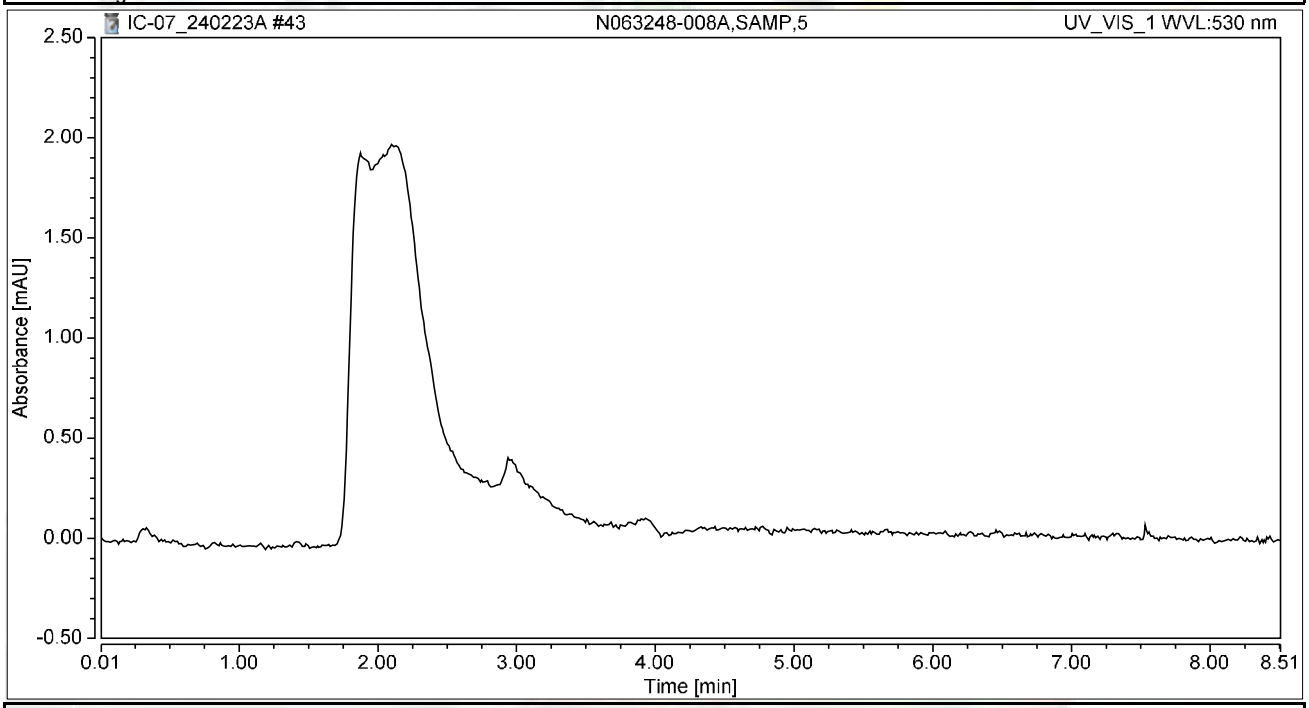
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.242	1.584	100.00	100.00	1.1257
Total:			**0.242**	**1.584**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-008A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 14:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

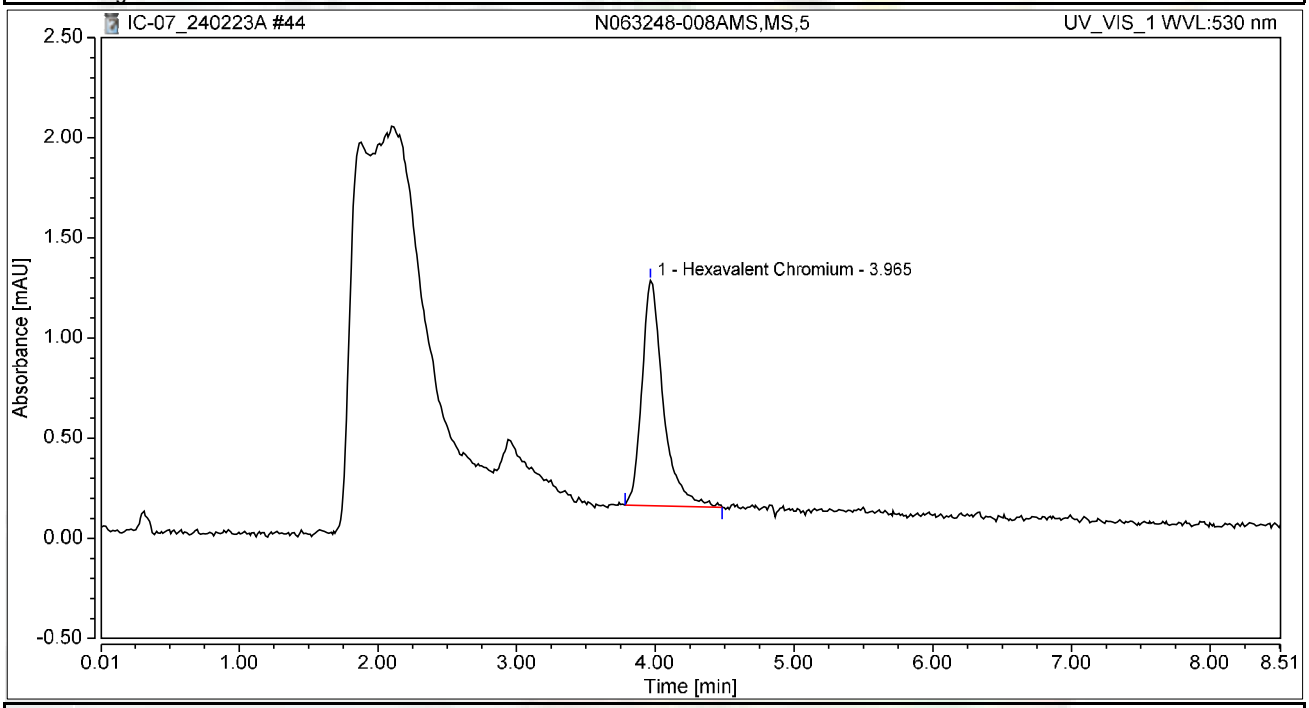
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-008AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 15:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

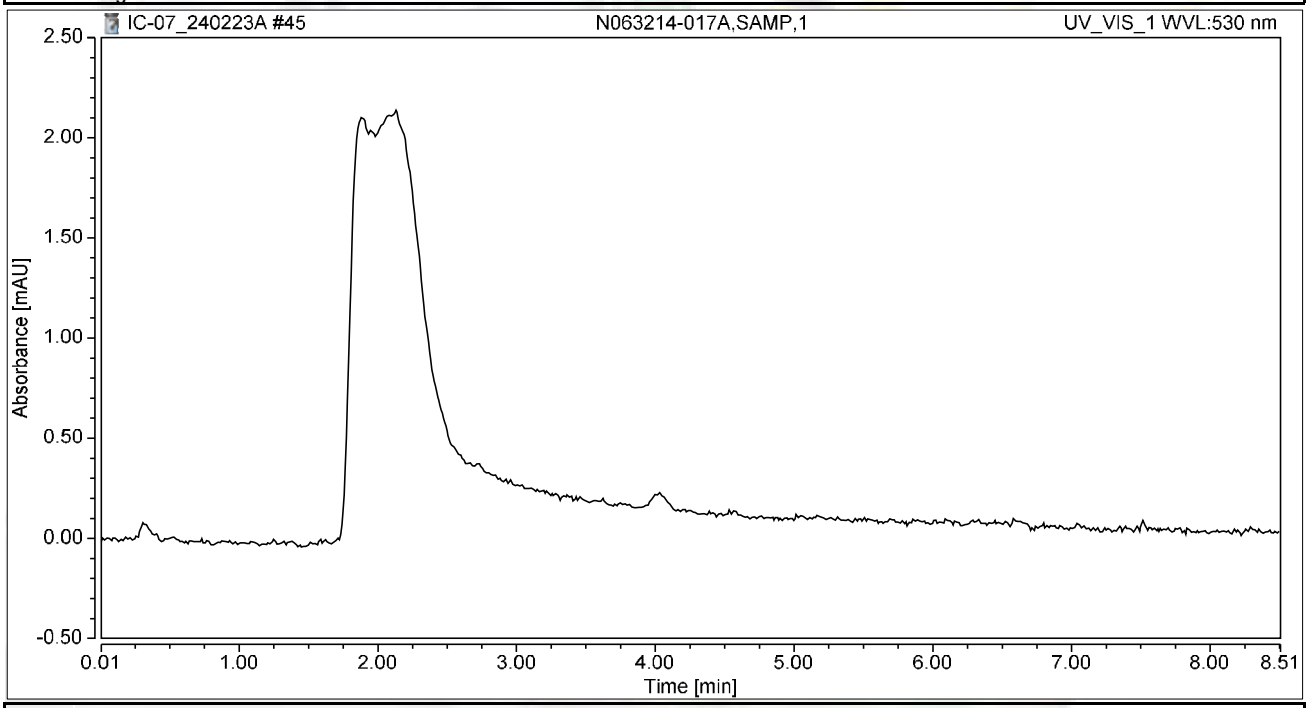
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.201	1.124	100.00	100.00	0.9342
Total:			**0.201**	**1.124**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-017A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 15:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

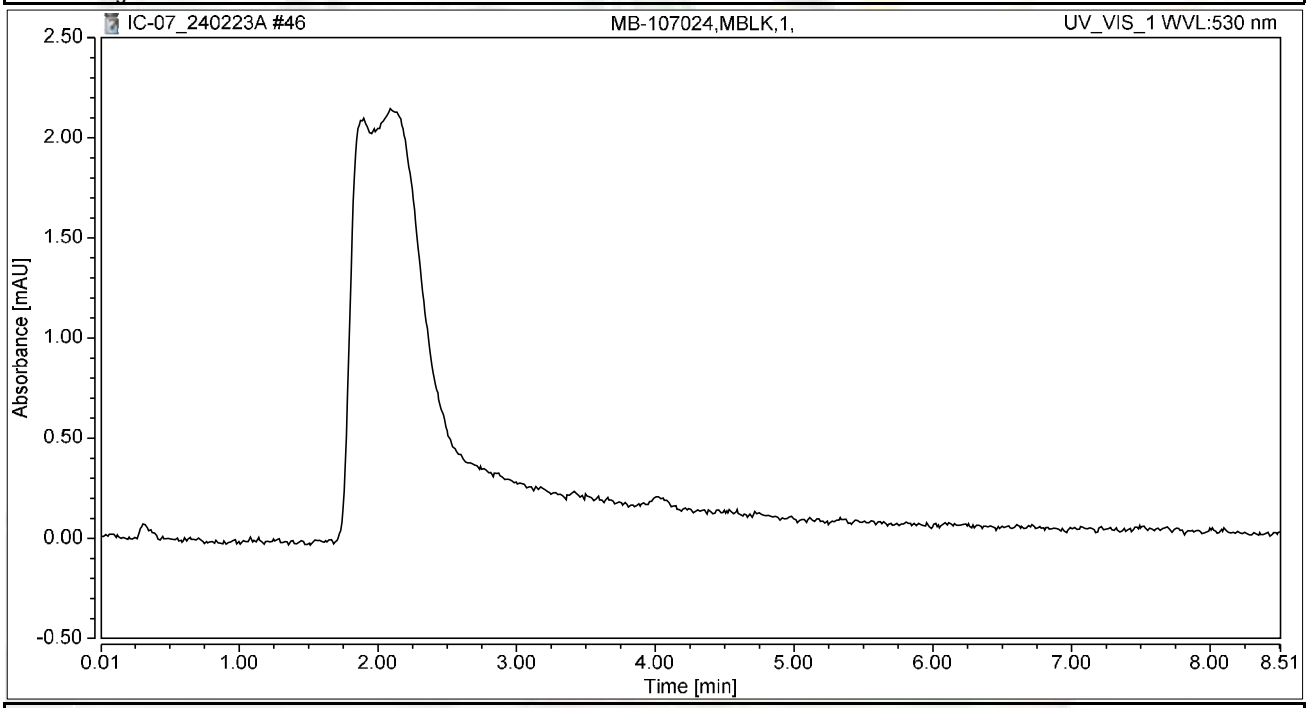
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-107024,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 15:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

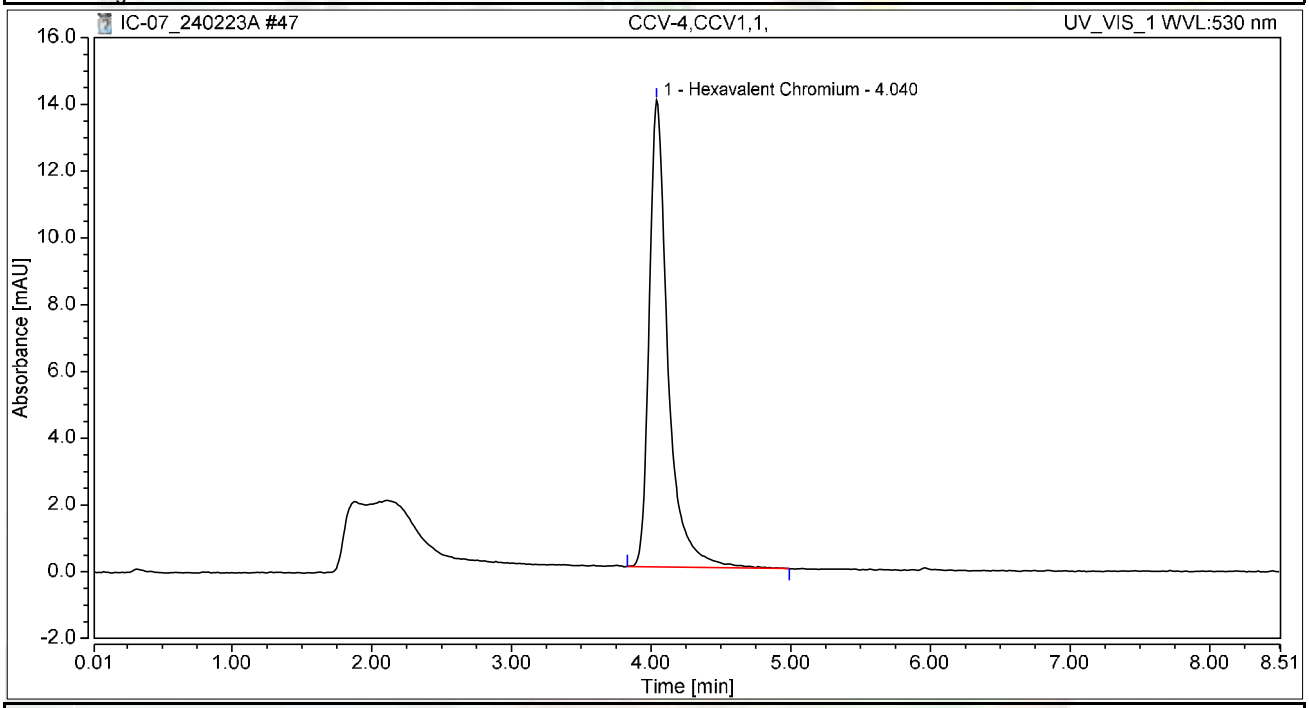
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 15:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

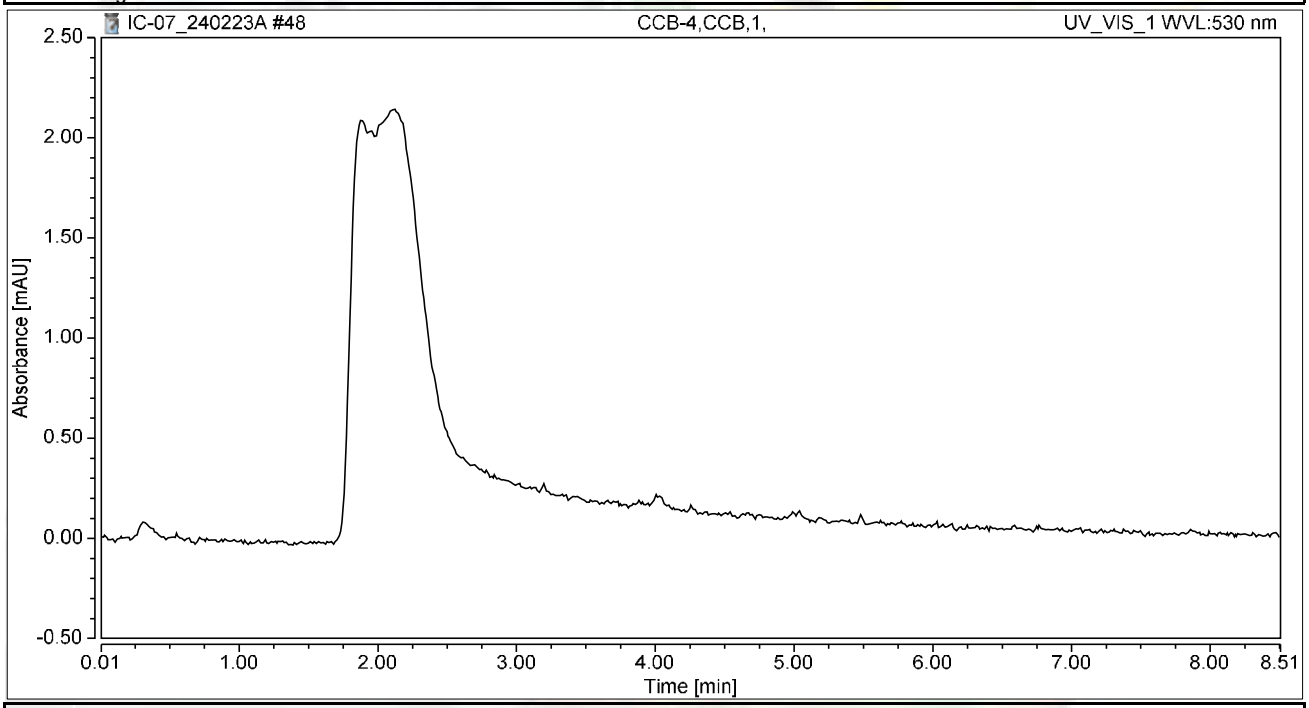
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.169	13.981	100.00	100.00	10.0853
Total:			**2.169**	**13.981**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 15:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

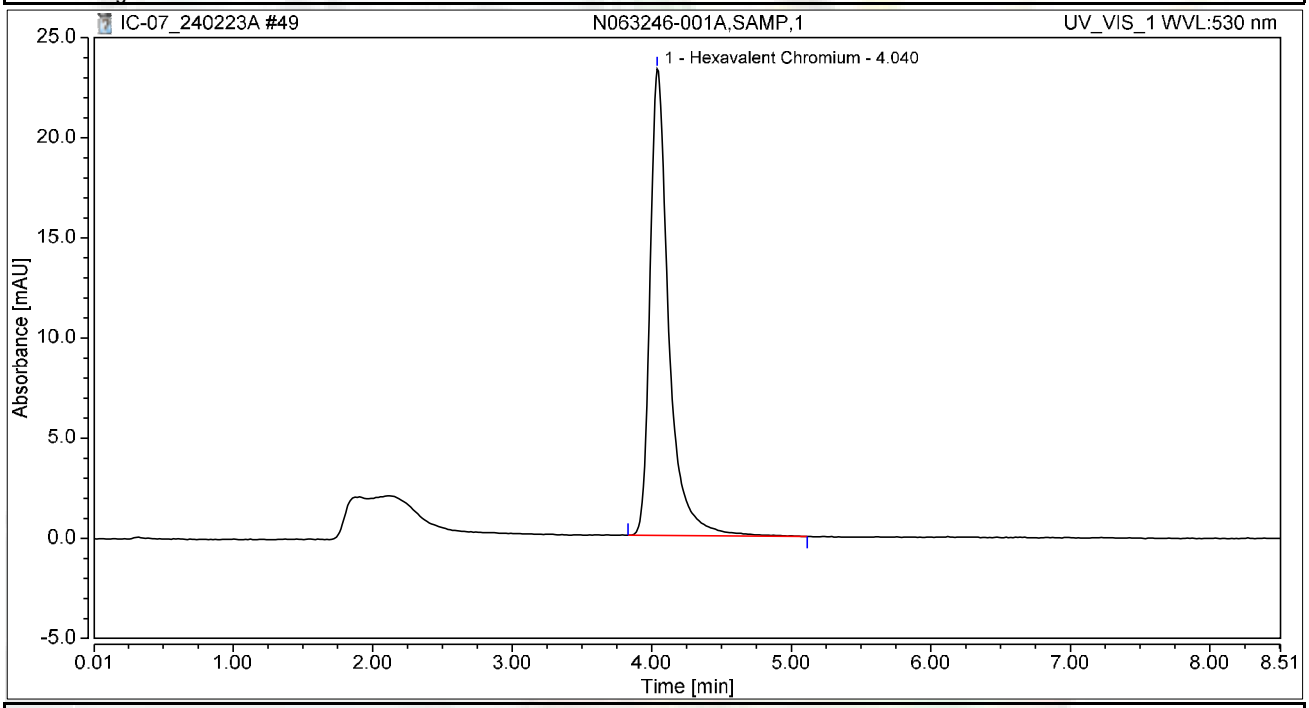
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063246-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 15:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

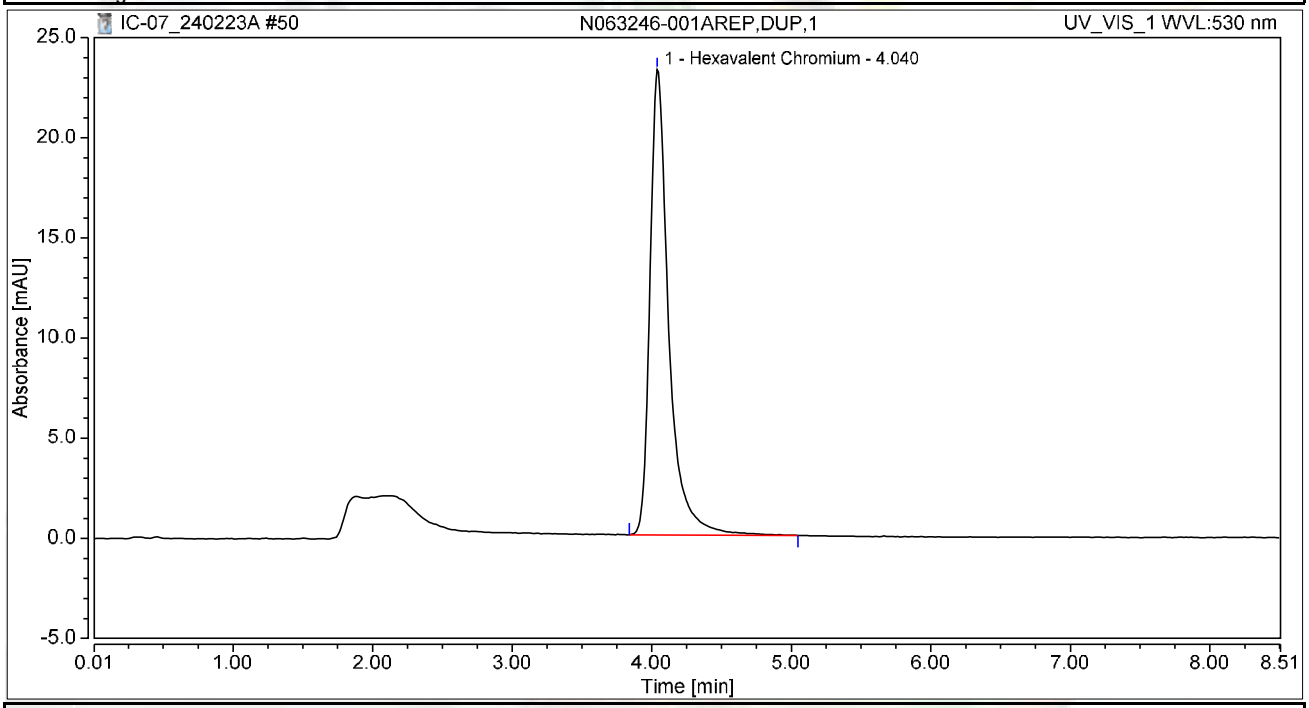
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	3.642	23.293	100.00	100.00	16.9307
Total:			**3.642**	**23.293**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063246-001AREP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 16:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

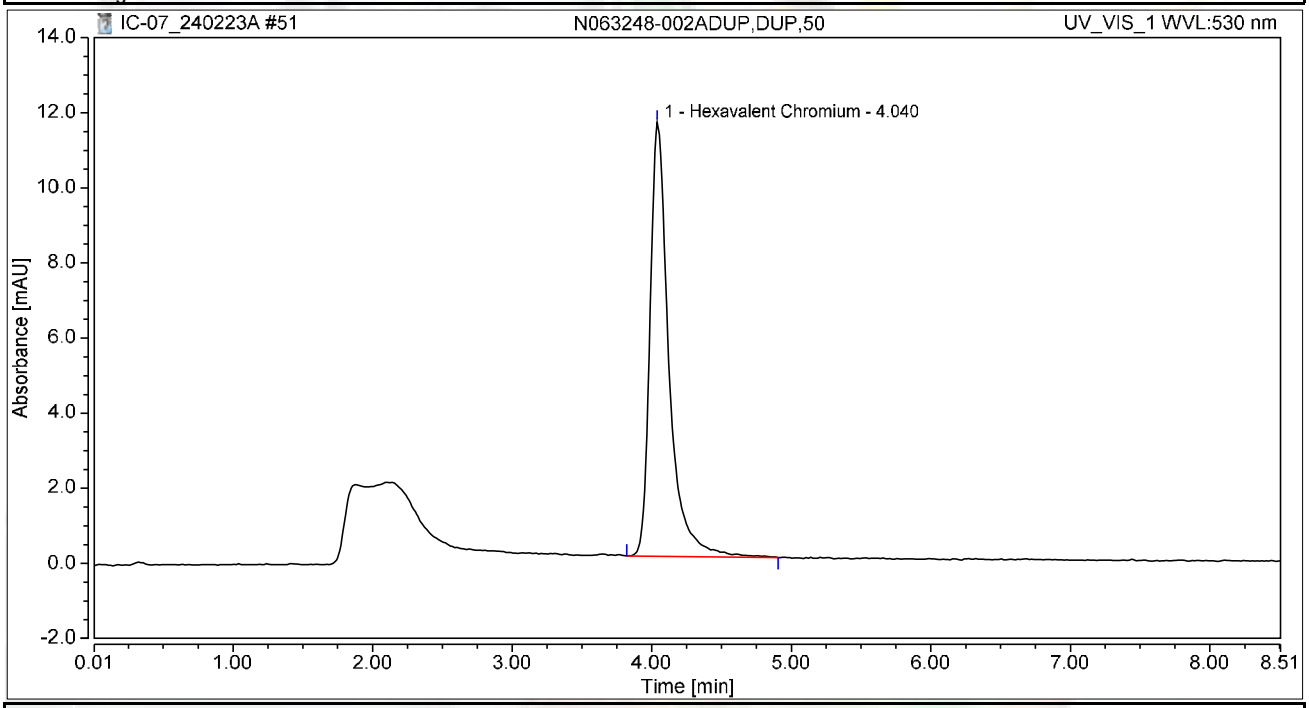
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	3.636	23.234	100.00	100.00	16.9039
Total:			**3.636**	**23.234**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-002ADUP,DUP,50**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 16:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

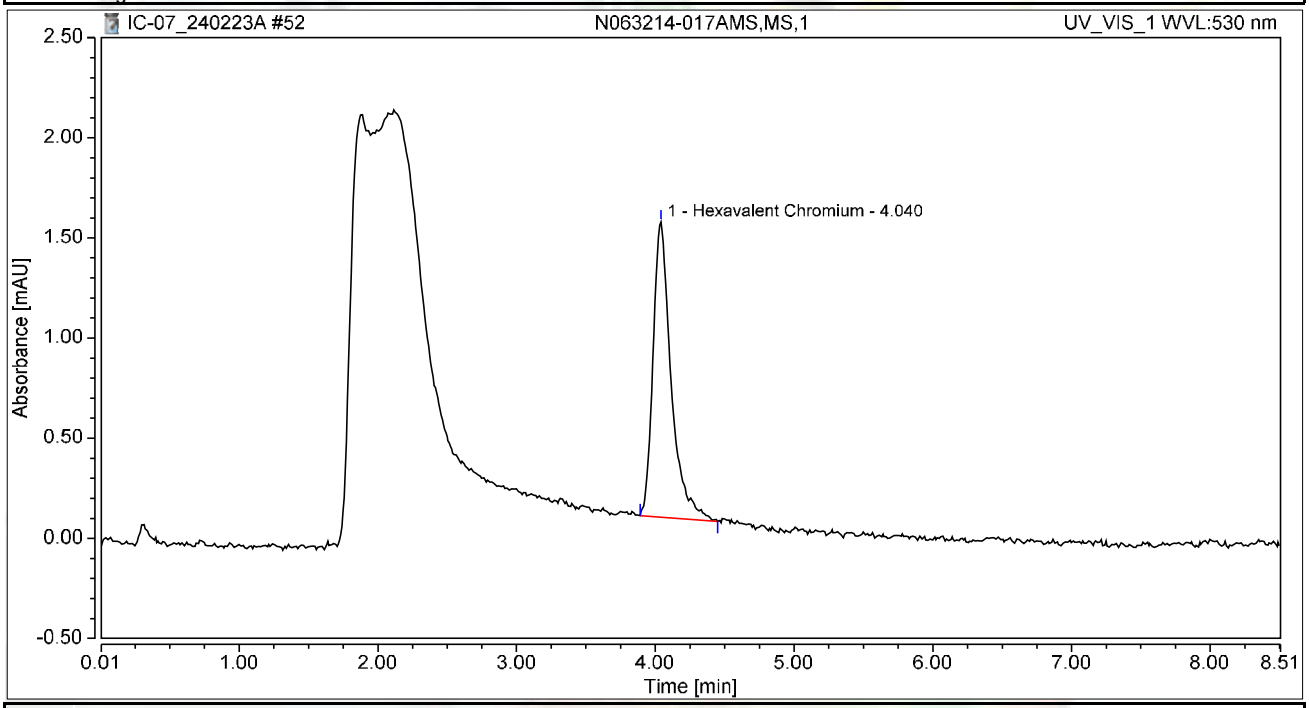
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.825	11.557	100.00	100.00	8.4841
Total:			**1.825**	**11.557**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-017AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 16:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

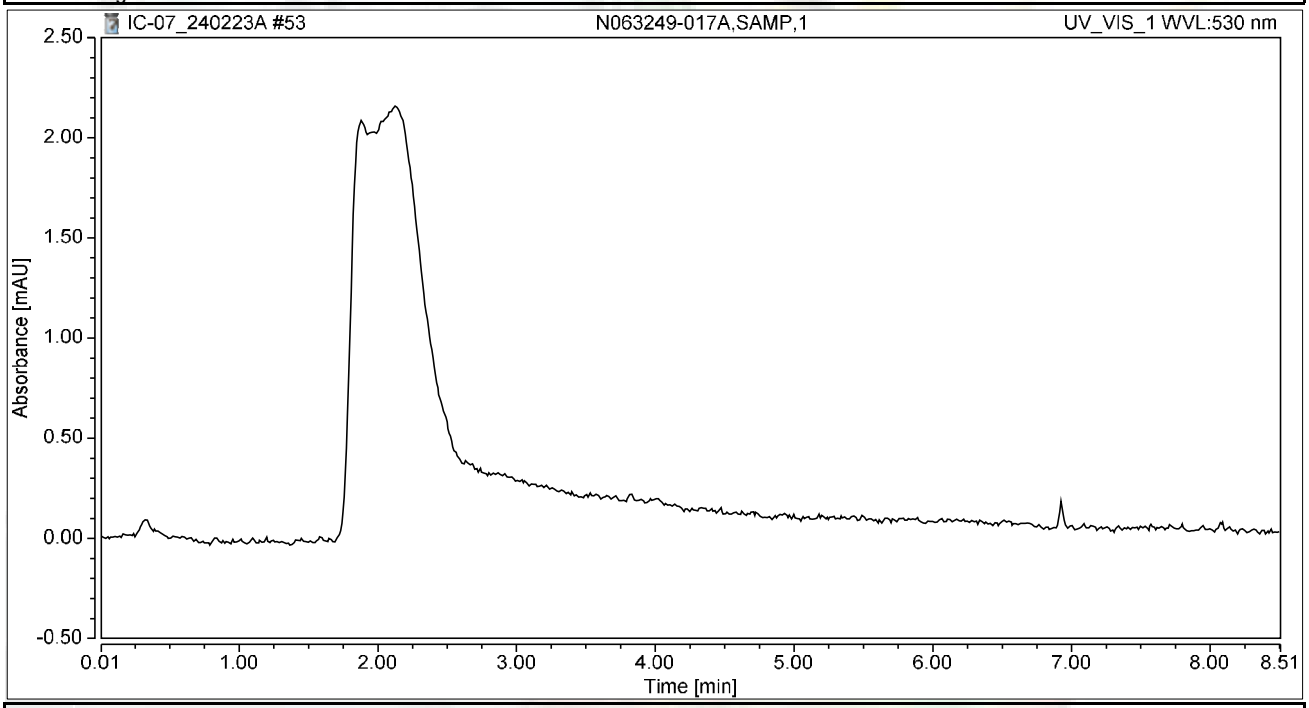
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.223	1.475	100.00	100.00	1.0359
Total:			**0.223**	**1.475**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-017A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 16:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

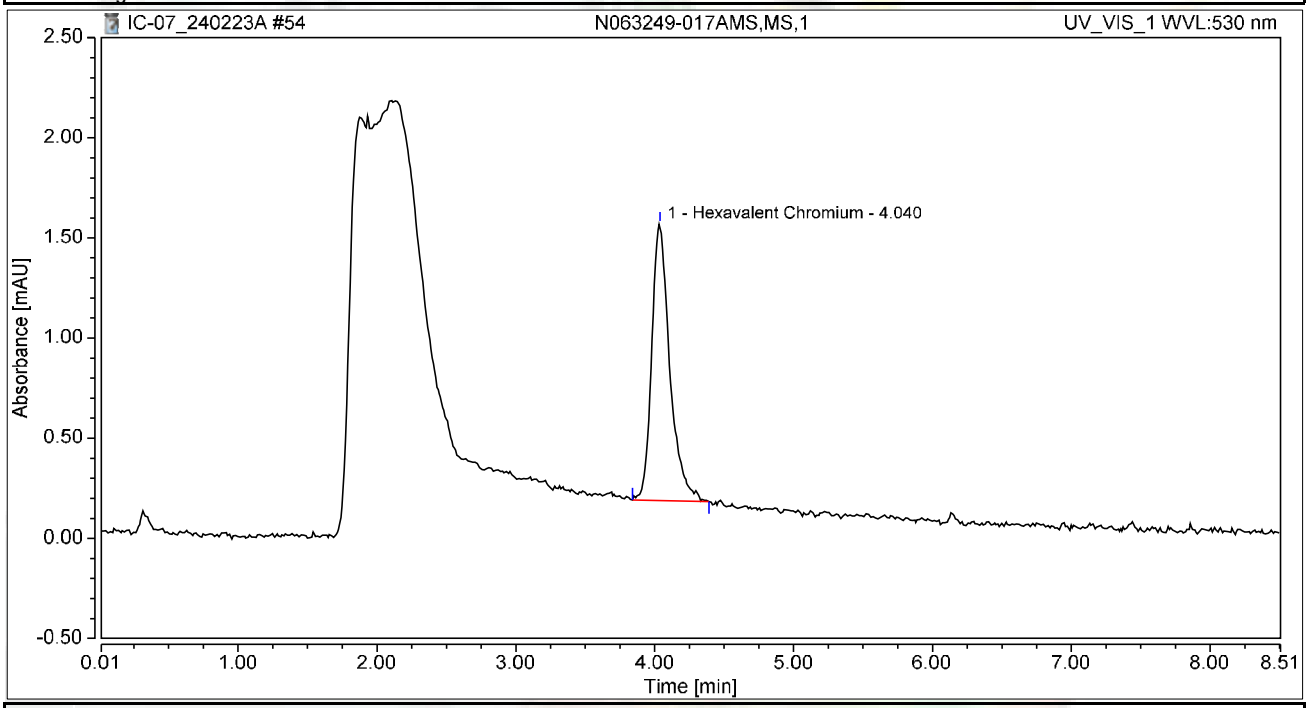
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-017AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 16:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

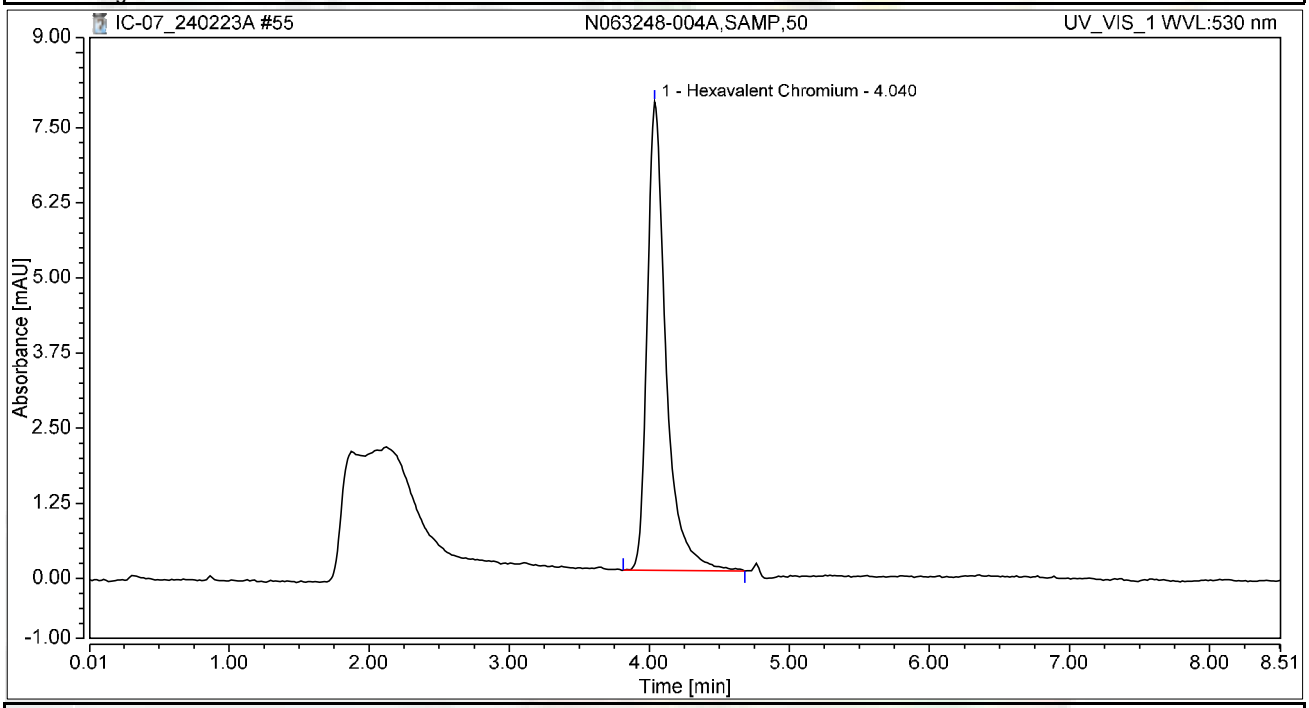
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.208	1.380	100.00	100.00	0.9682
Total:			**0.208**	**1.380**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-004A,SAMP,50**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 16:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

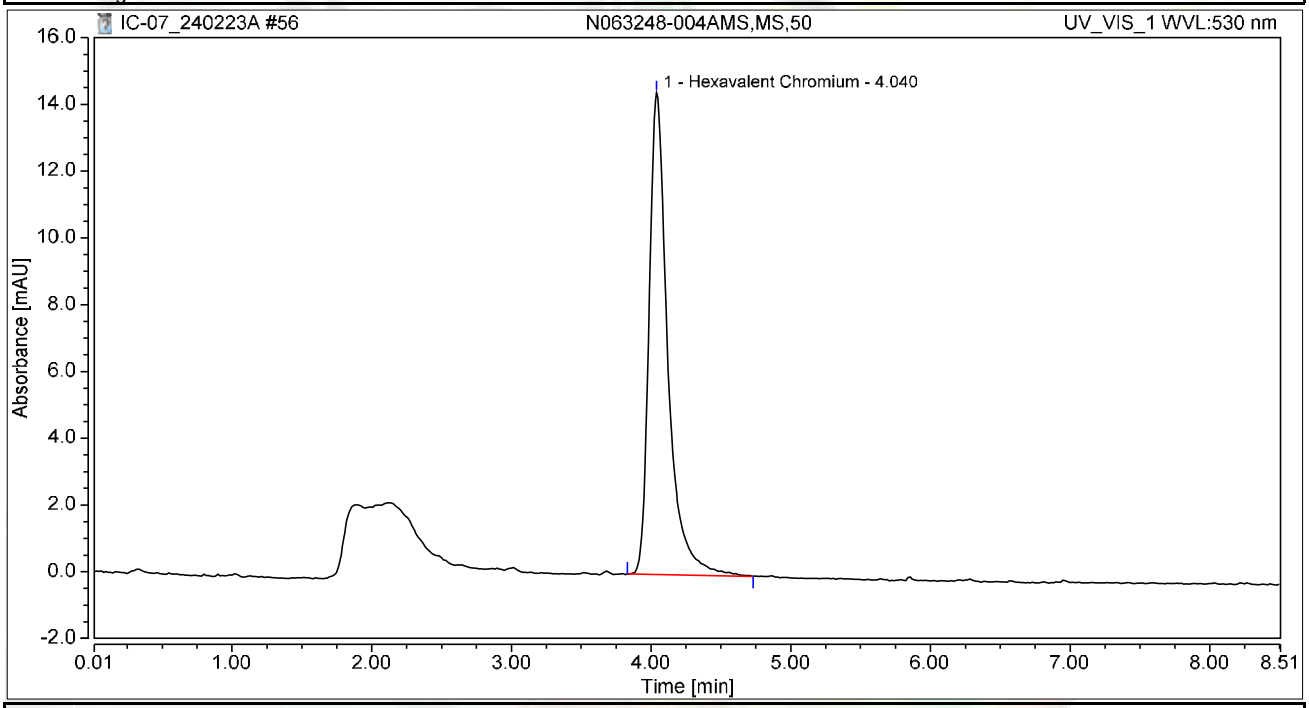
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.210	7.795	100.00	100.00	5.6268
Total:			**1.210**	**7.795**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-004AMS,MS,50**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 17:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

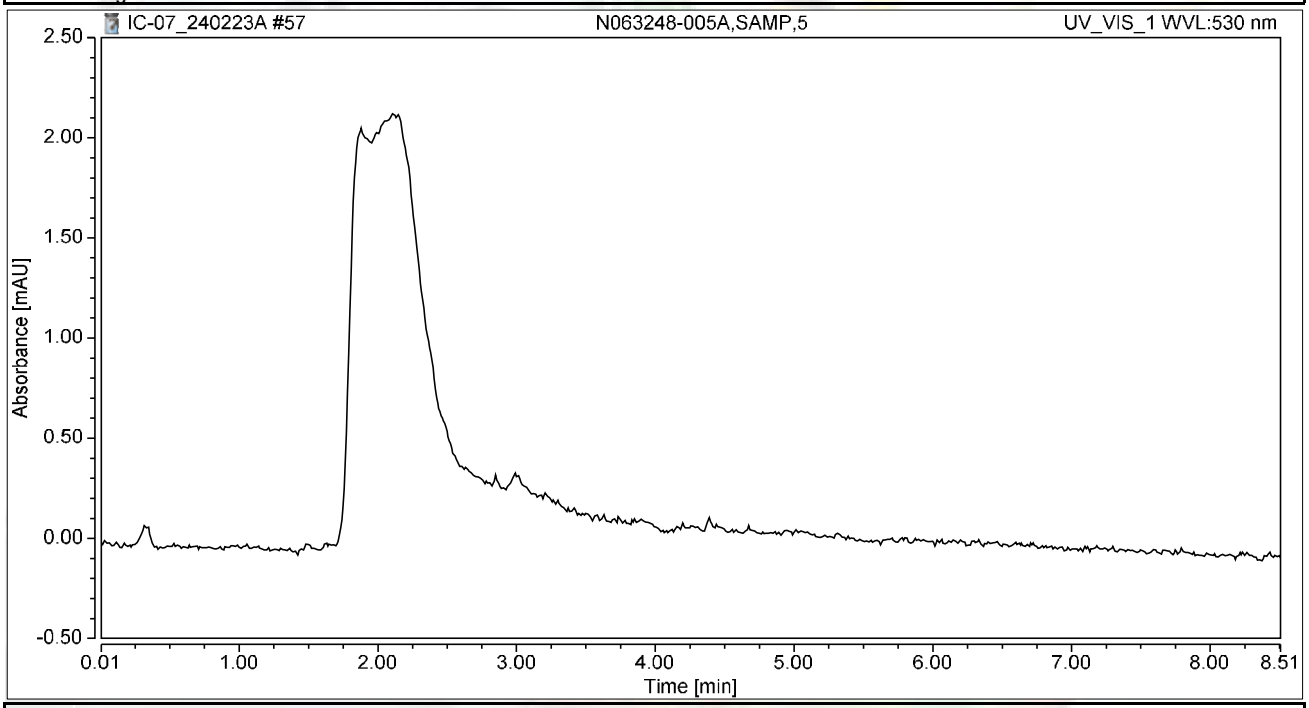
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.241	14.433	100.00	100.00	10.4175
Total:			**2.241**	**14.433**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 17:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

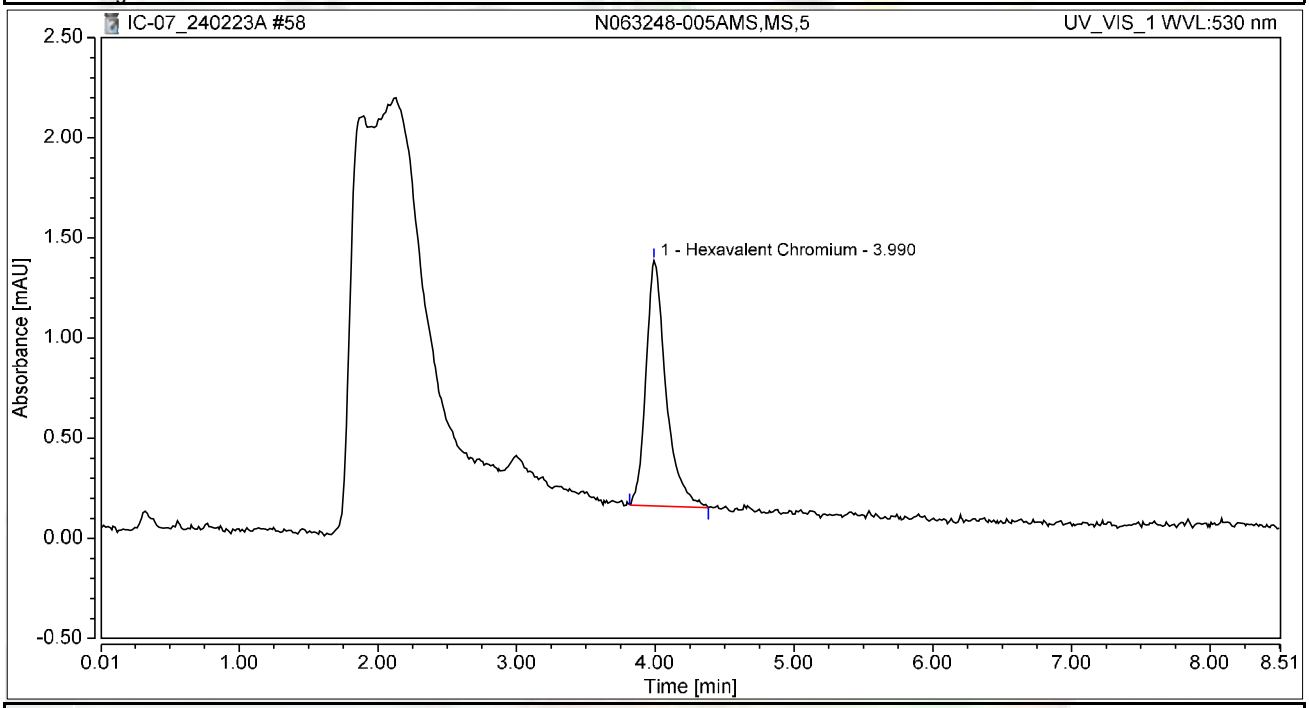
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-005AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 17:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

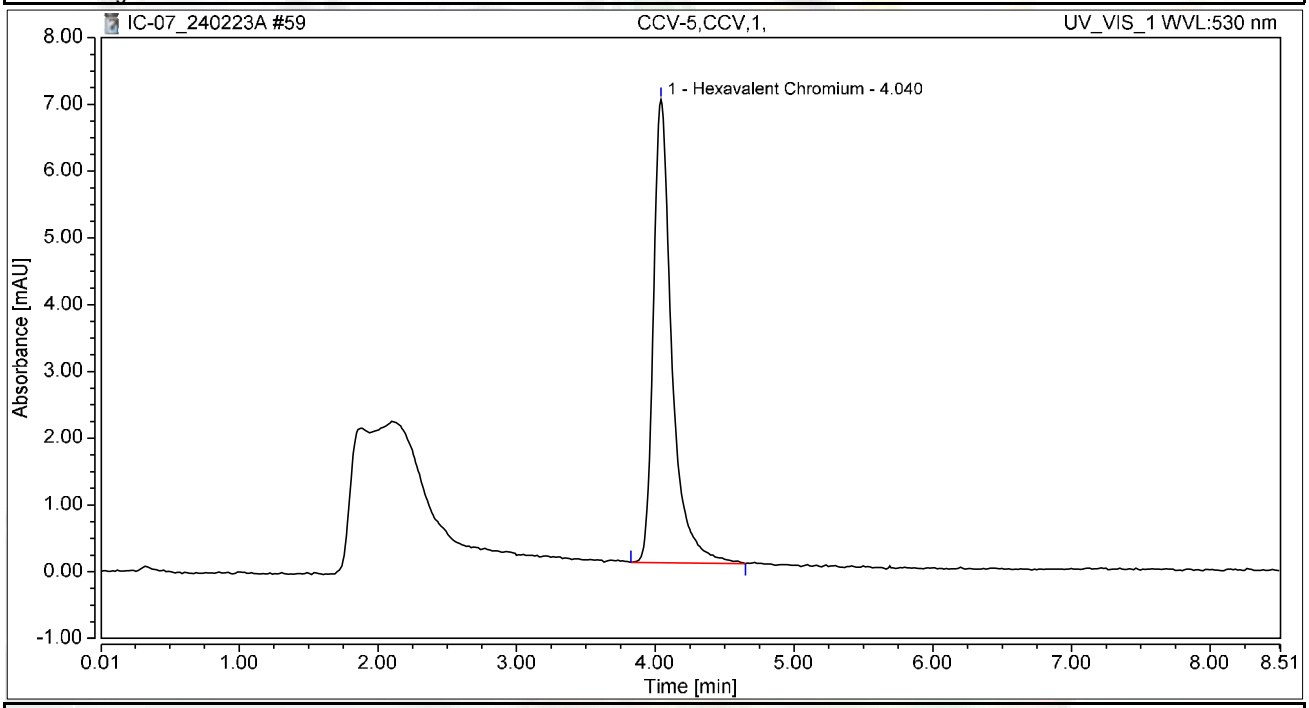
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.206	1.226	100.00	100.00	0.9571
Total:			**0.206**	**1.226**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 17:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

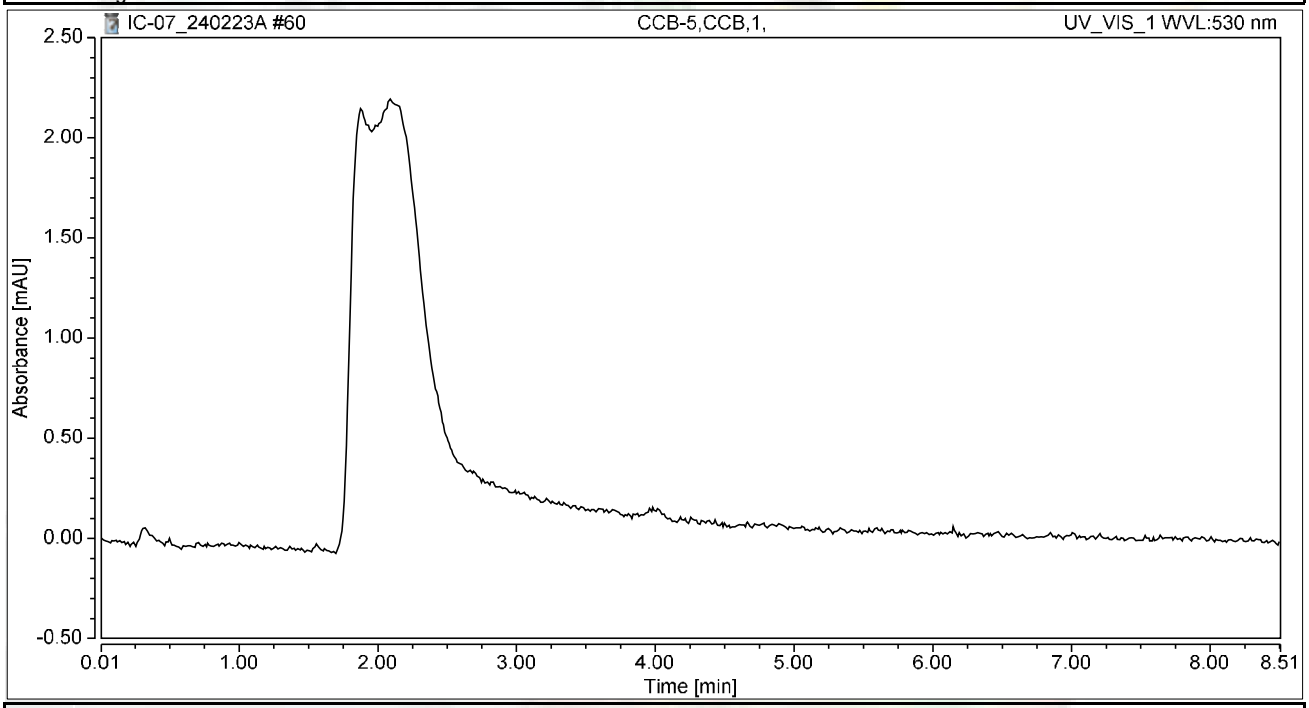
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.074	6.936	100.00	100.00	4.9917
Total:			**1.074**	**6.936**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

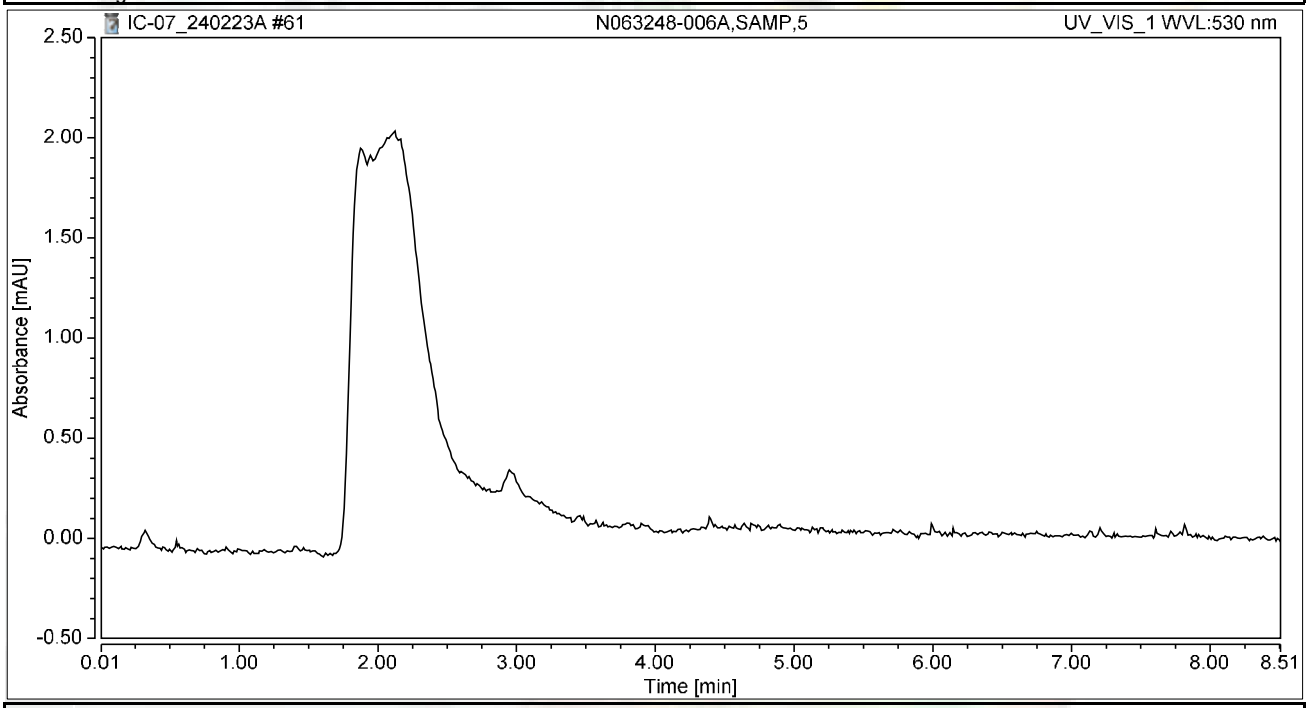
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-006A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

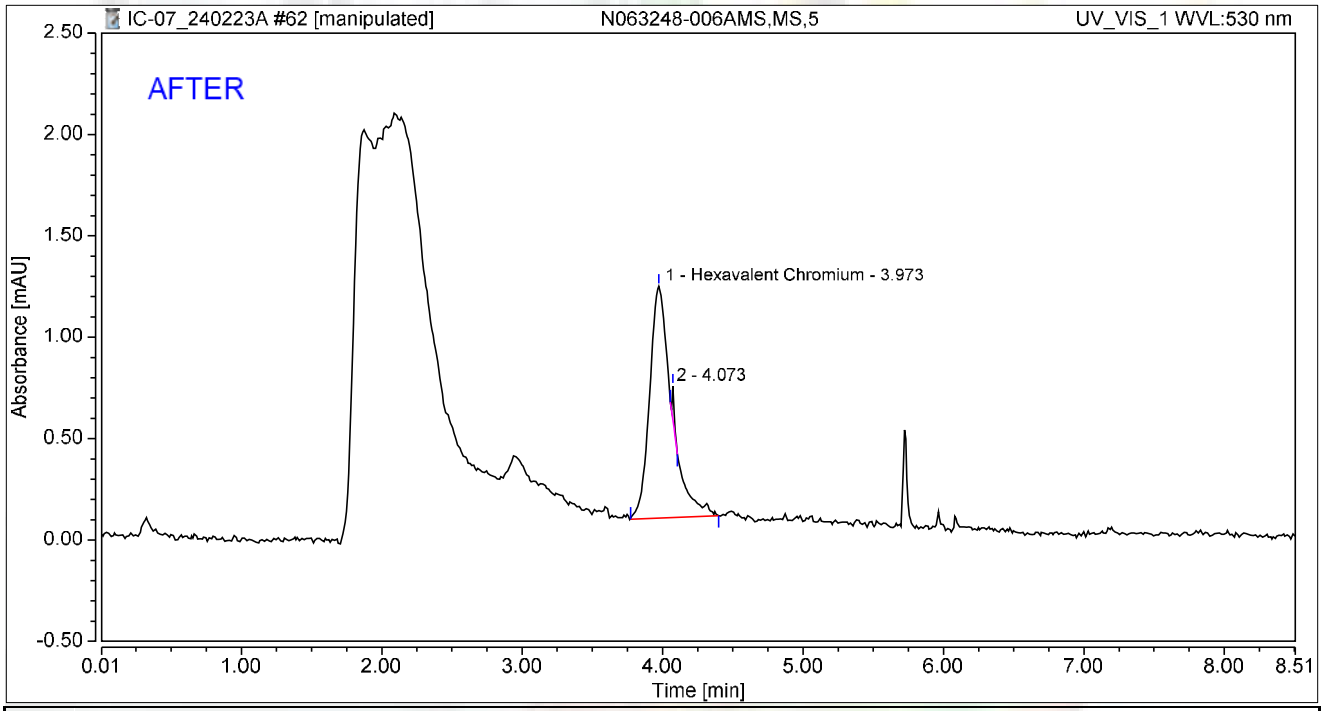
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-006AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.208	1.143	98.85	87.38	0.9686
2		4.073	0.002	0.165	1.15	12.62	n.a.
Total:			**0.211**	**1.309**	**100.00**	**100.00**	

Reviewed by:

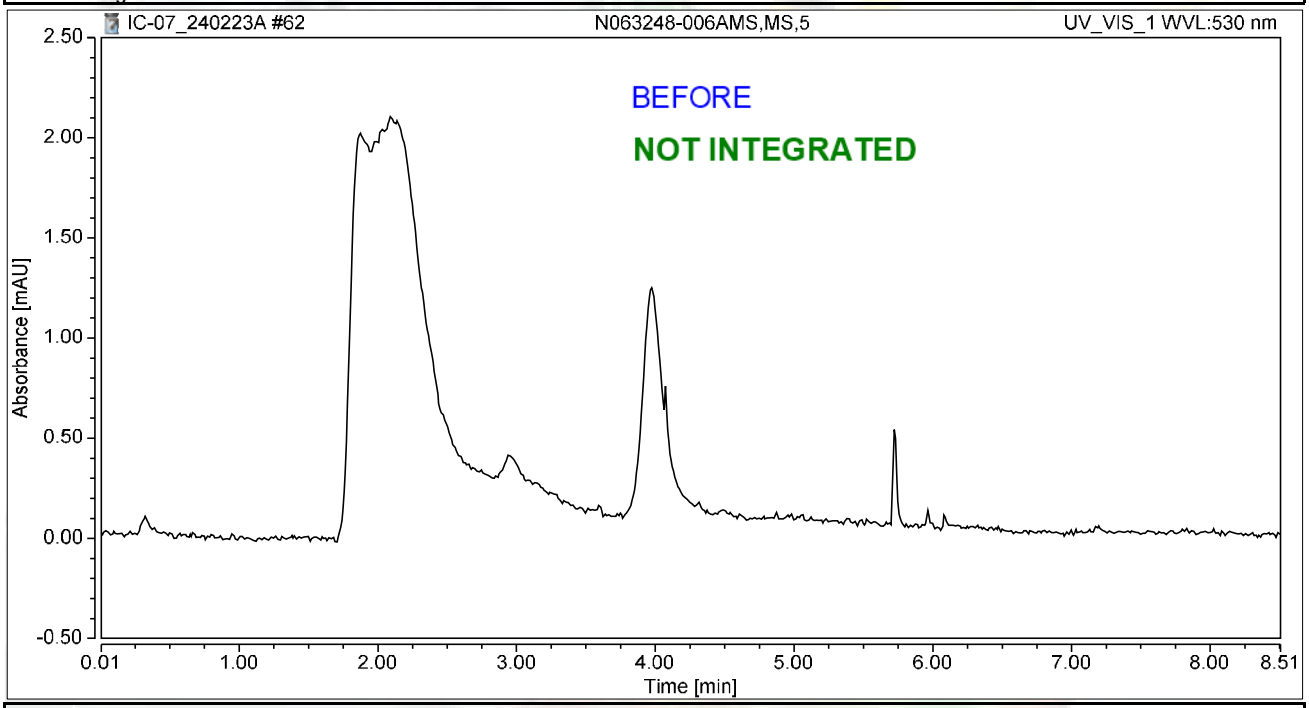
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063248-006AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

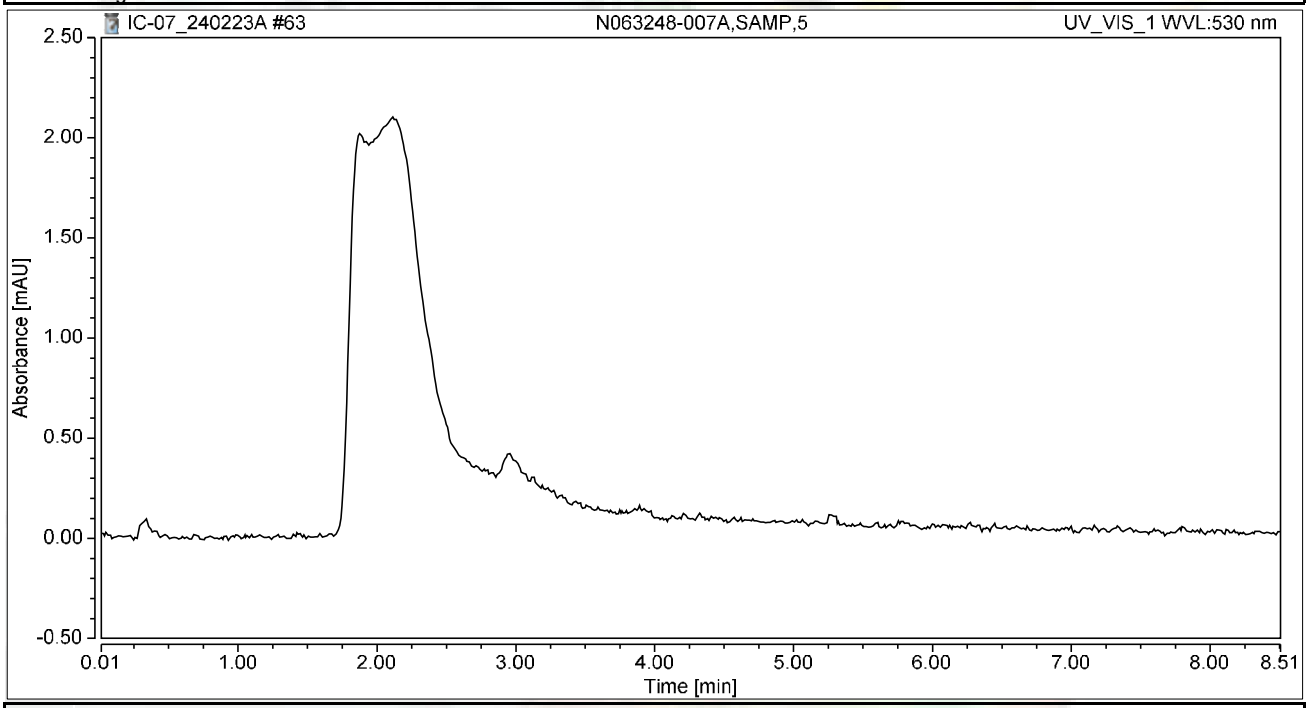
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-007A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

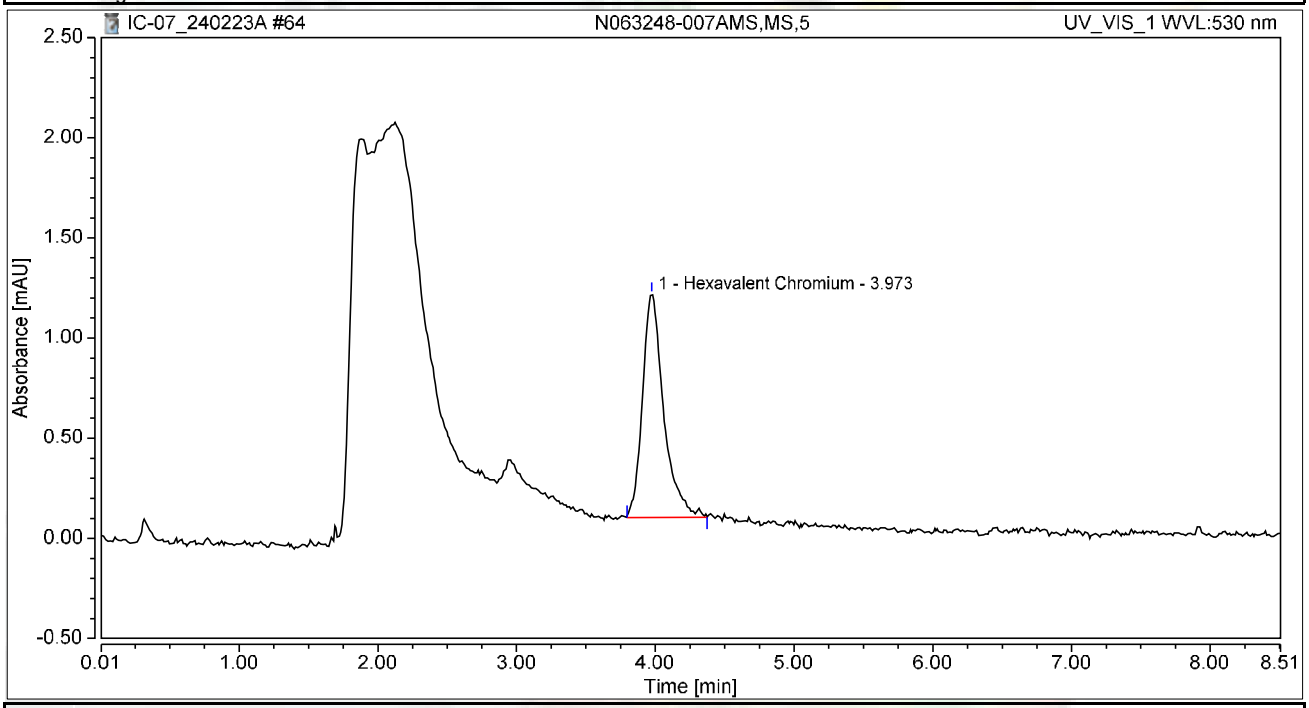
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-007AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

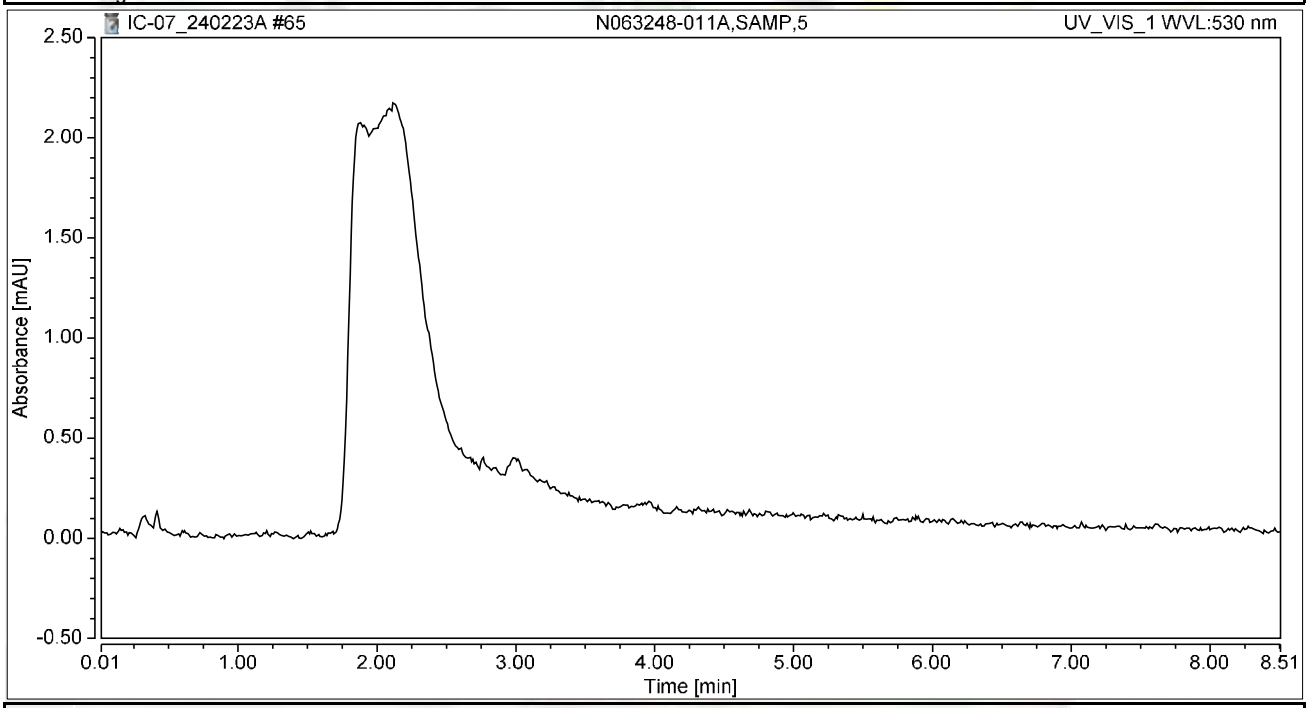
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.198	1.114	100.00	100.00	0.9207
Total:			**0.198**	**1.114**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-011A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

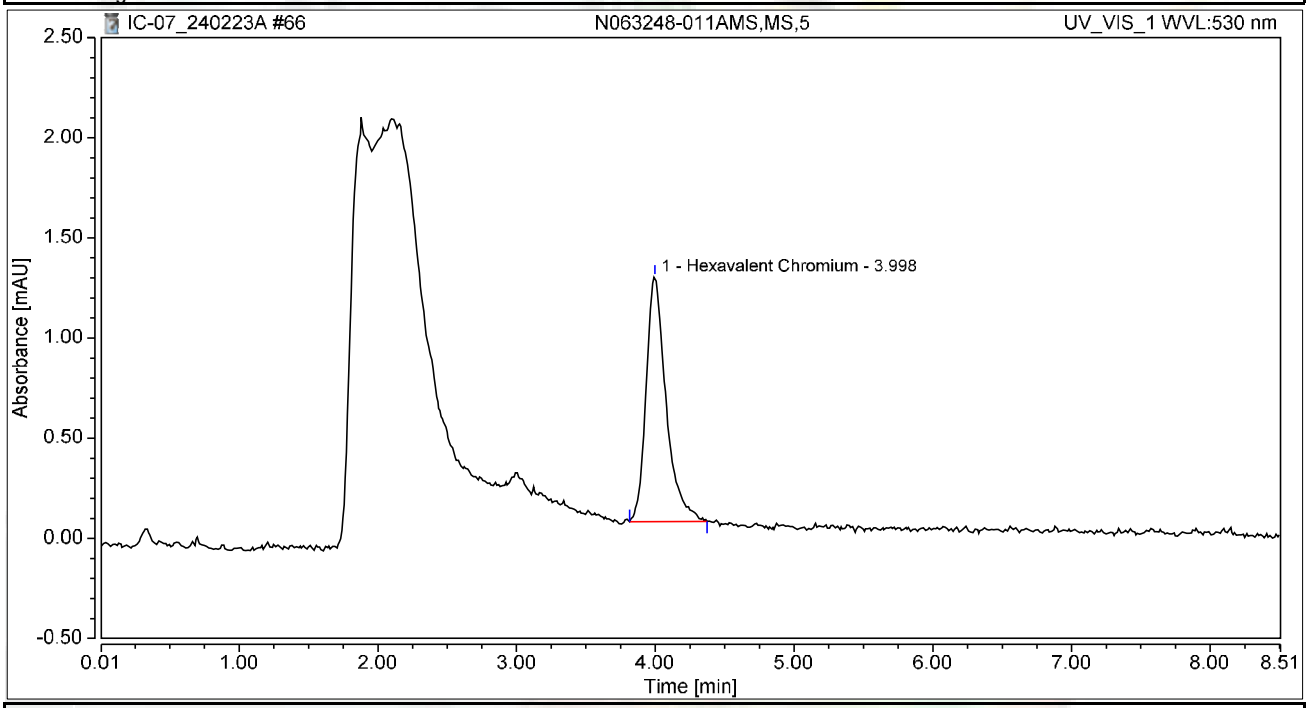
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-011AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 18:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

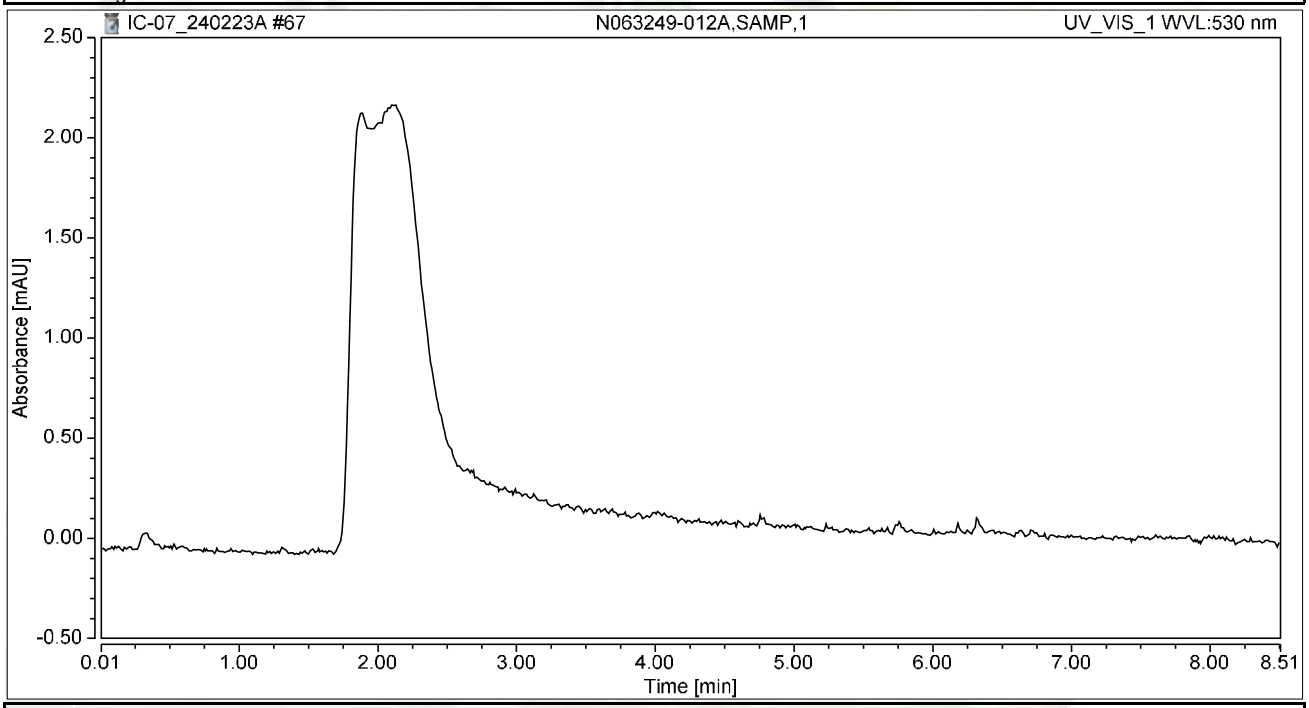
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.205	1.221	100.00	100.00	0.9540
Total:			**0.205**	**1.221**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-012A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 19:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

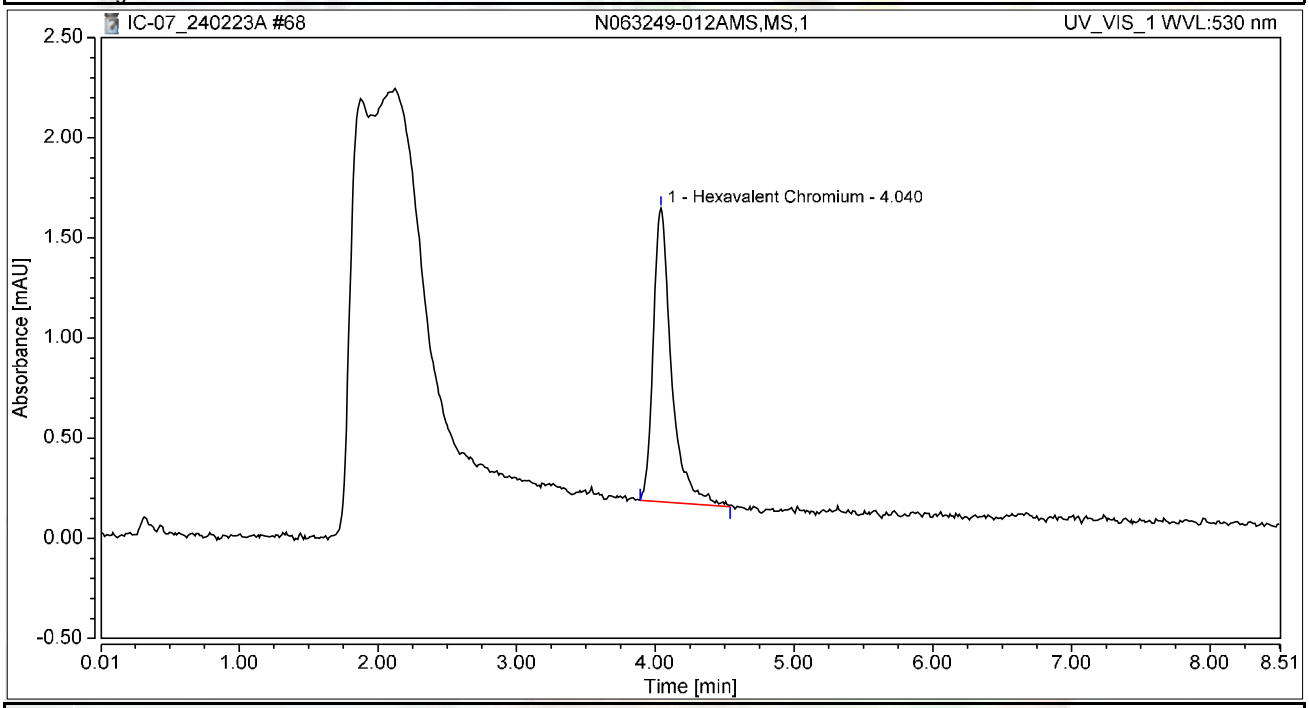
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-012AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 19:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

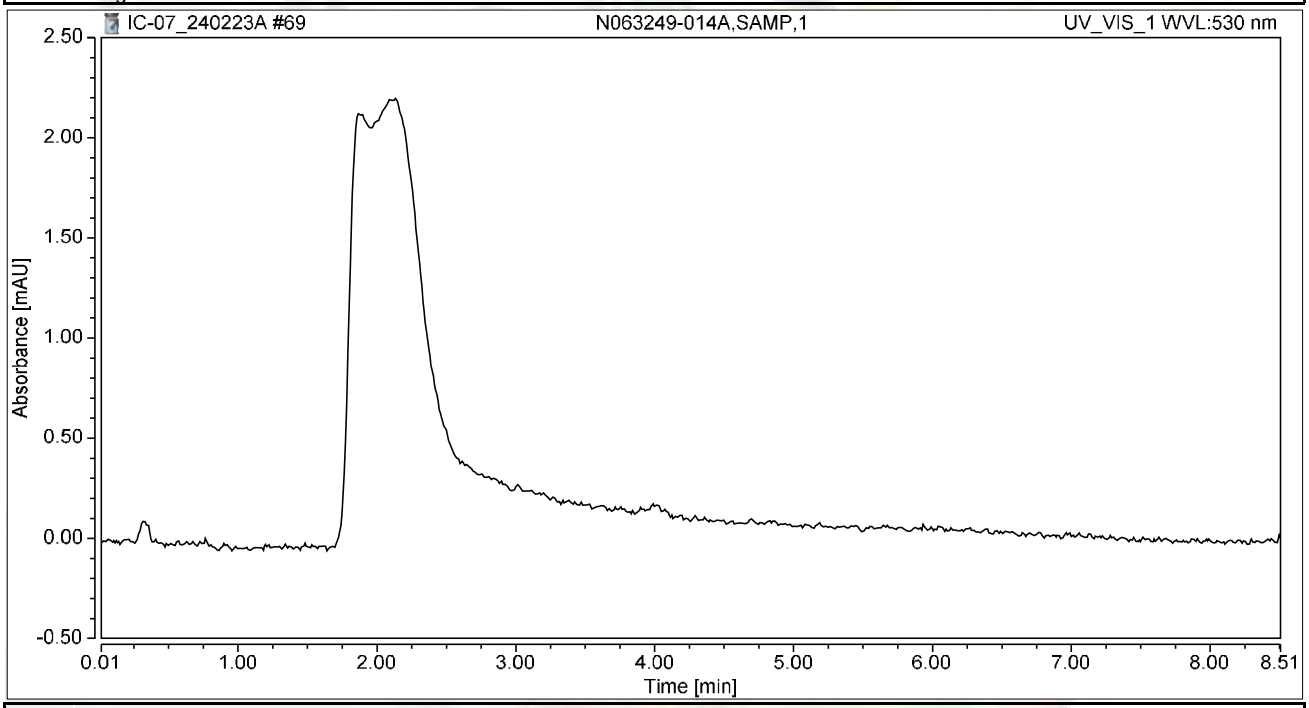
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.224	1.467	100.00	100.00	1.0436
Total:			**0.224**	**1.467**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-014A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 19:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

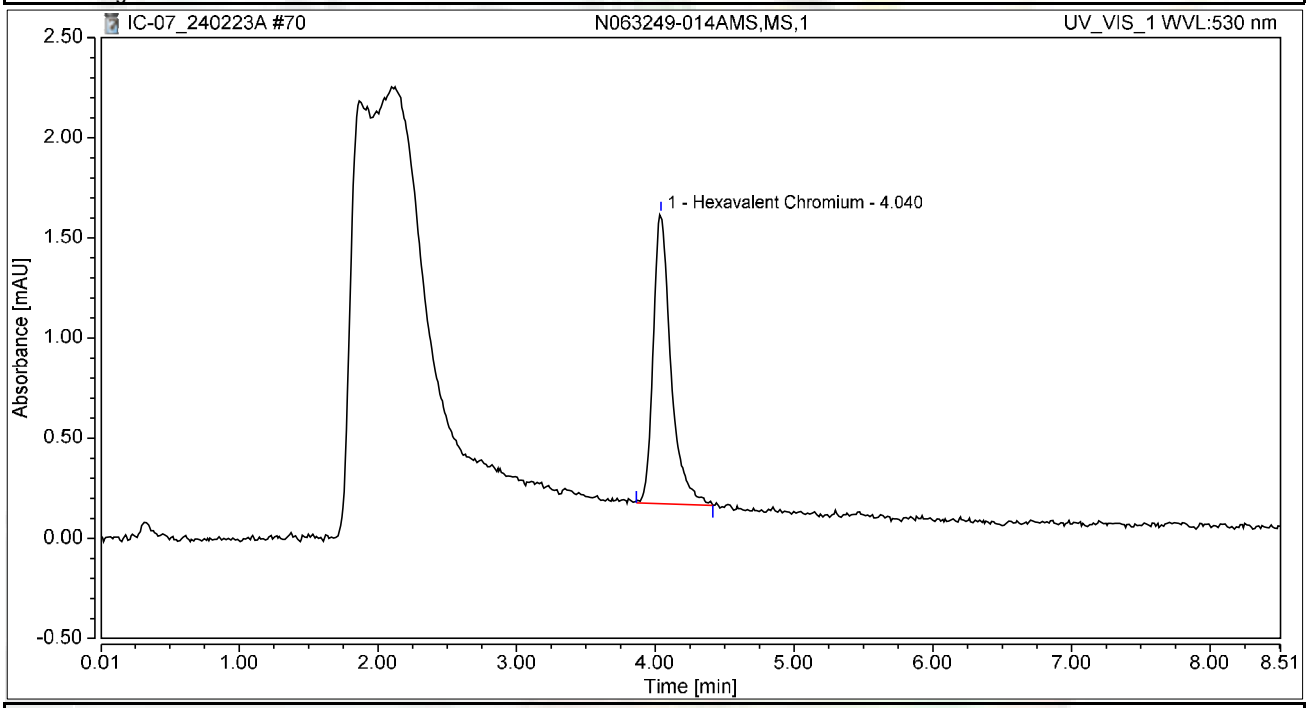
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-014AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 19:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

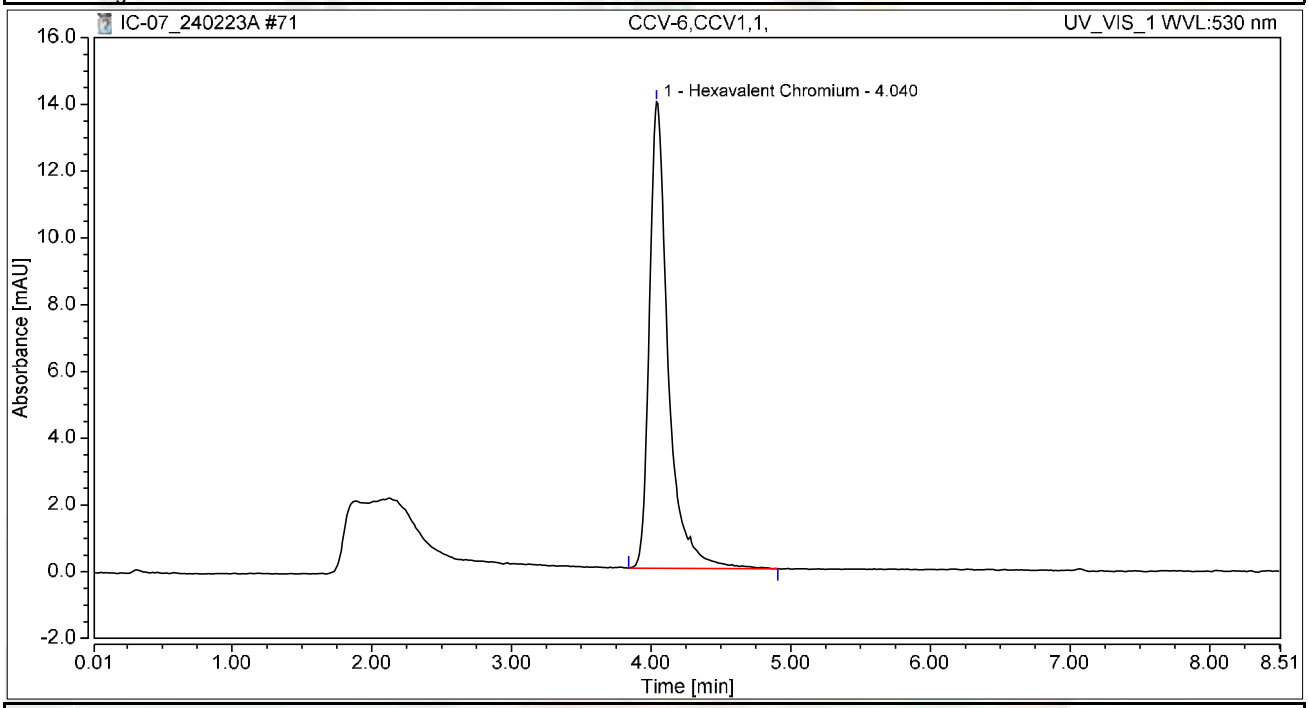
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.215	1.449	100.00	100.00	0.9993
Total:			**0.215**	**1.449**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 19:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

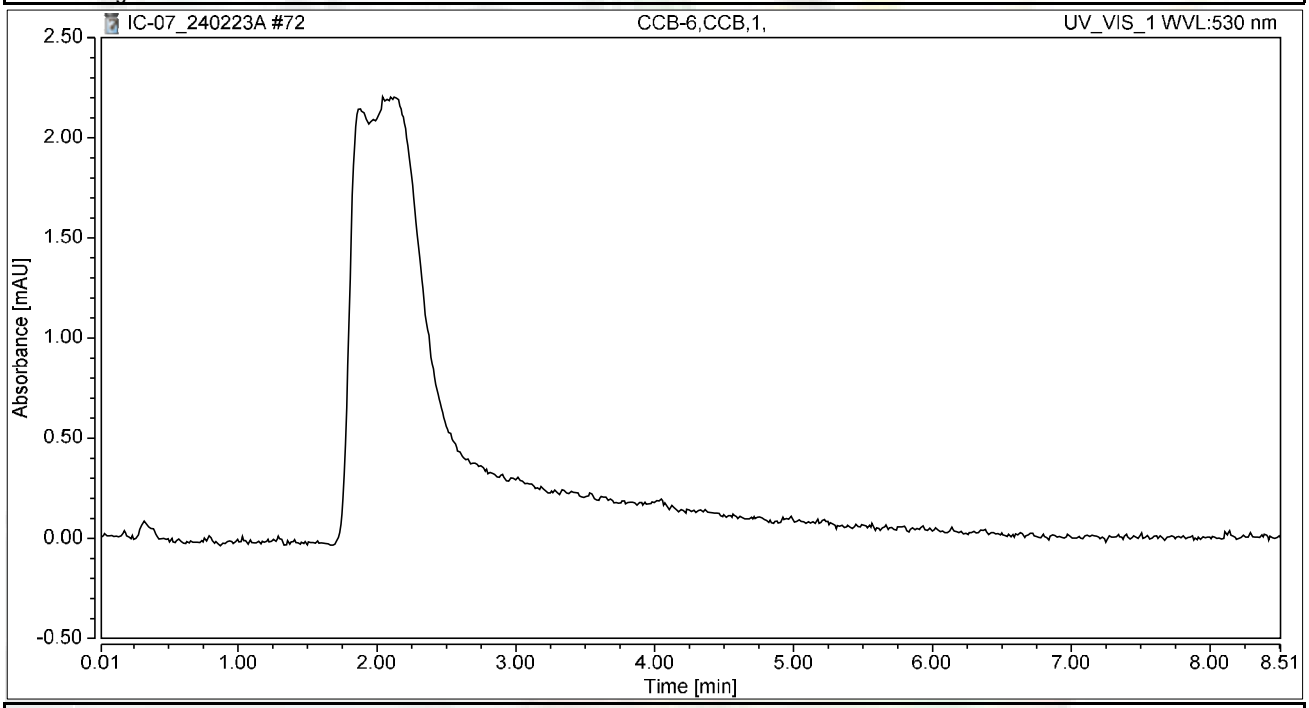
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.173	13.968	100.00	100.00	10.0999
Total:			**2.173**	**13.968**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 19:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

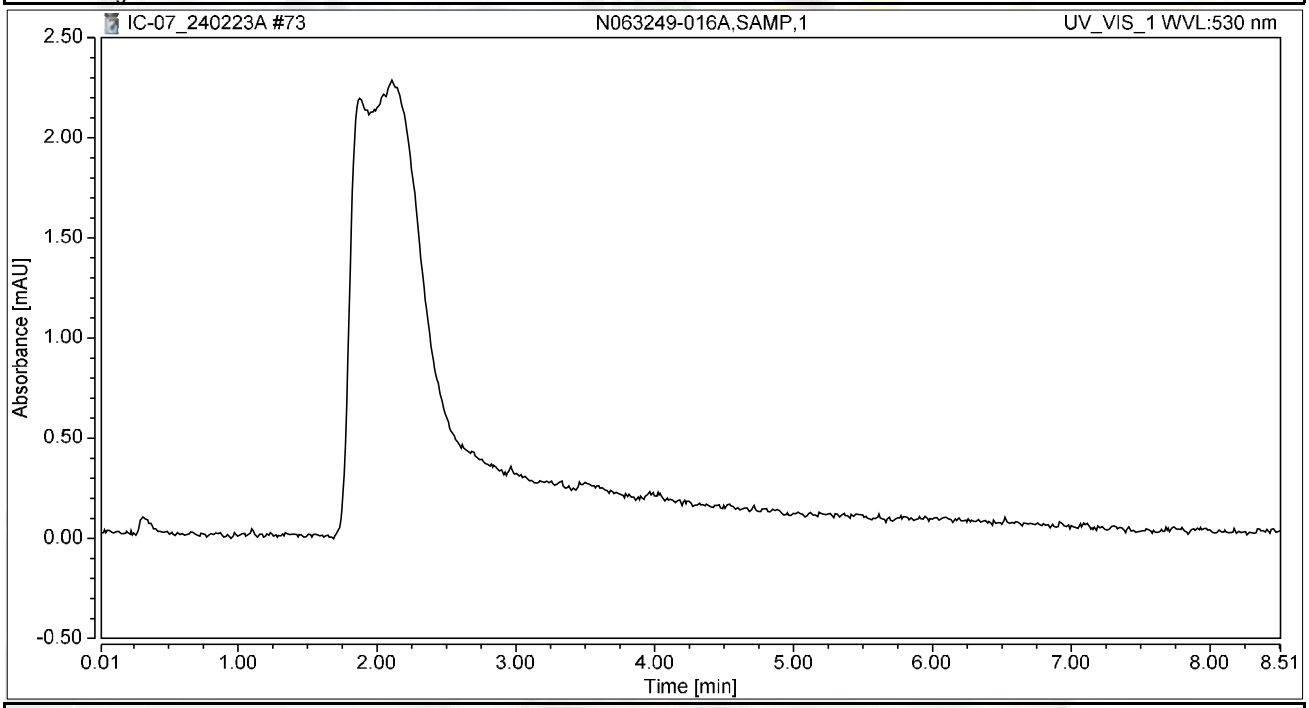
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-016A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 20:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

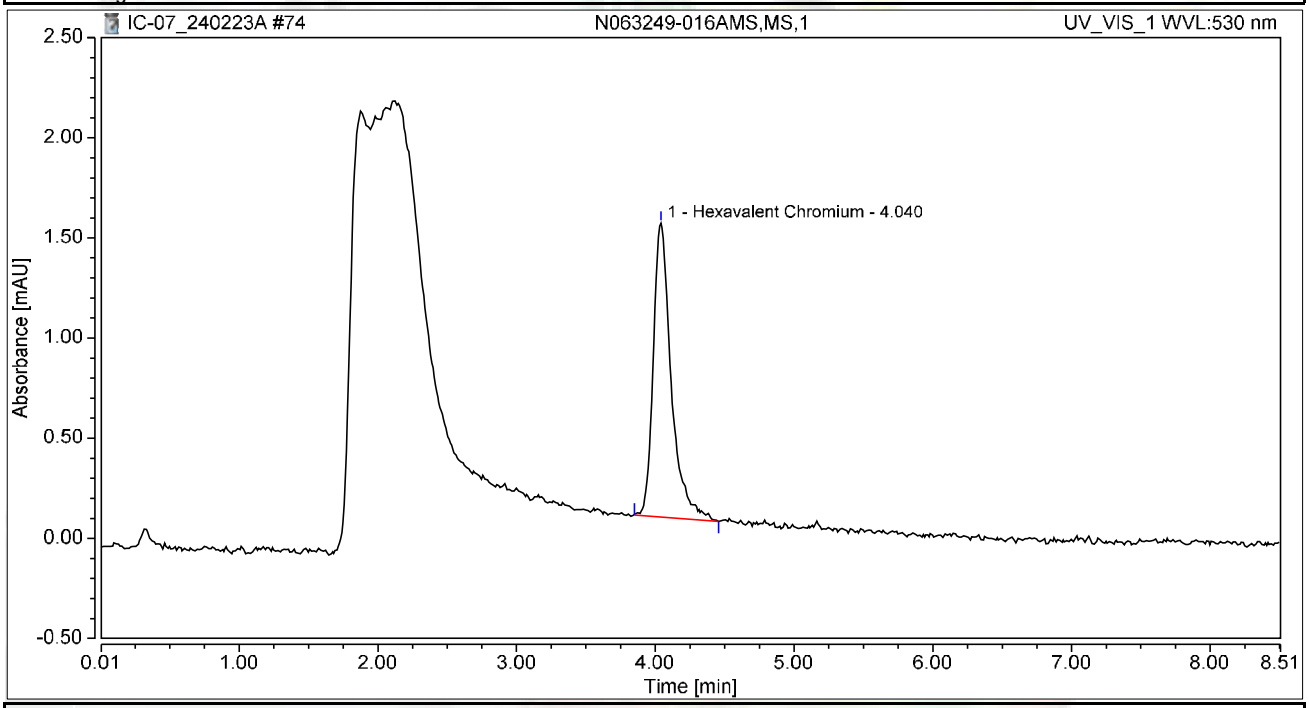
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-016AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 20:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

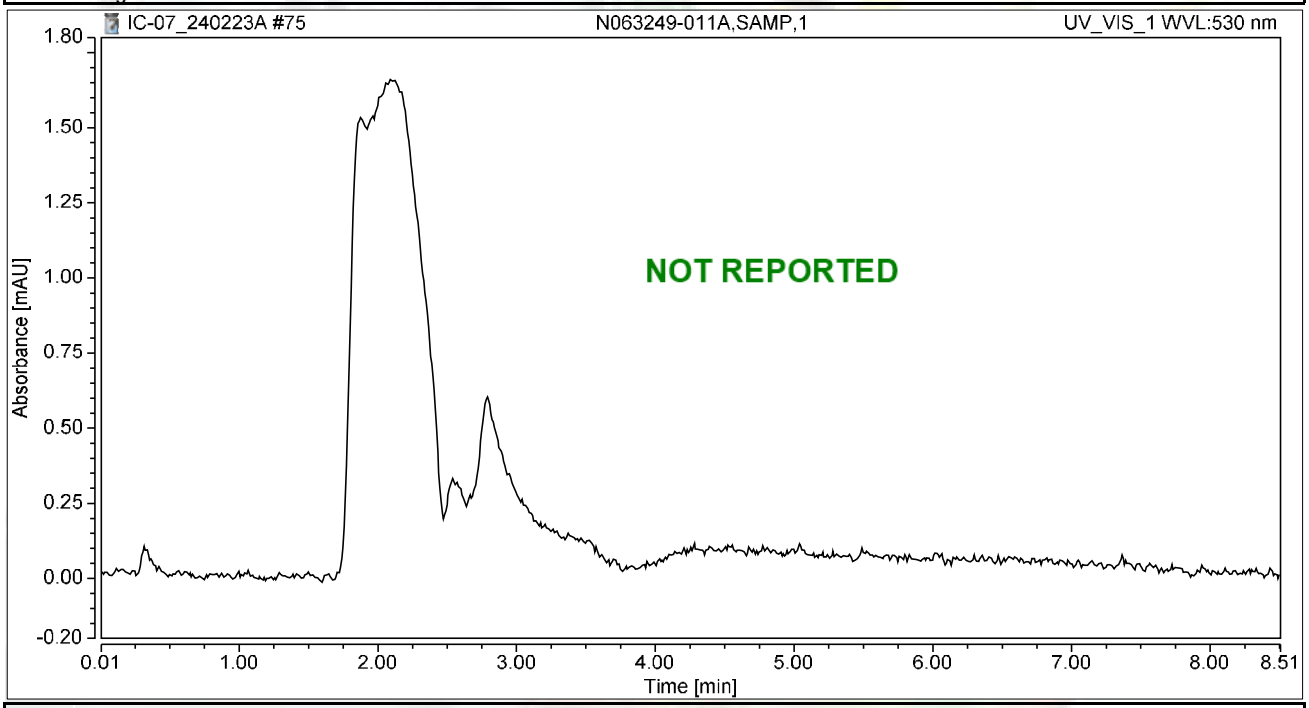
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.221	1.468	100.00	100.00	1.0262
Total:			**0.221**	**1.468**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-011A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 20:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

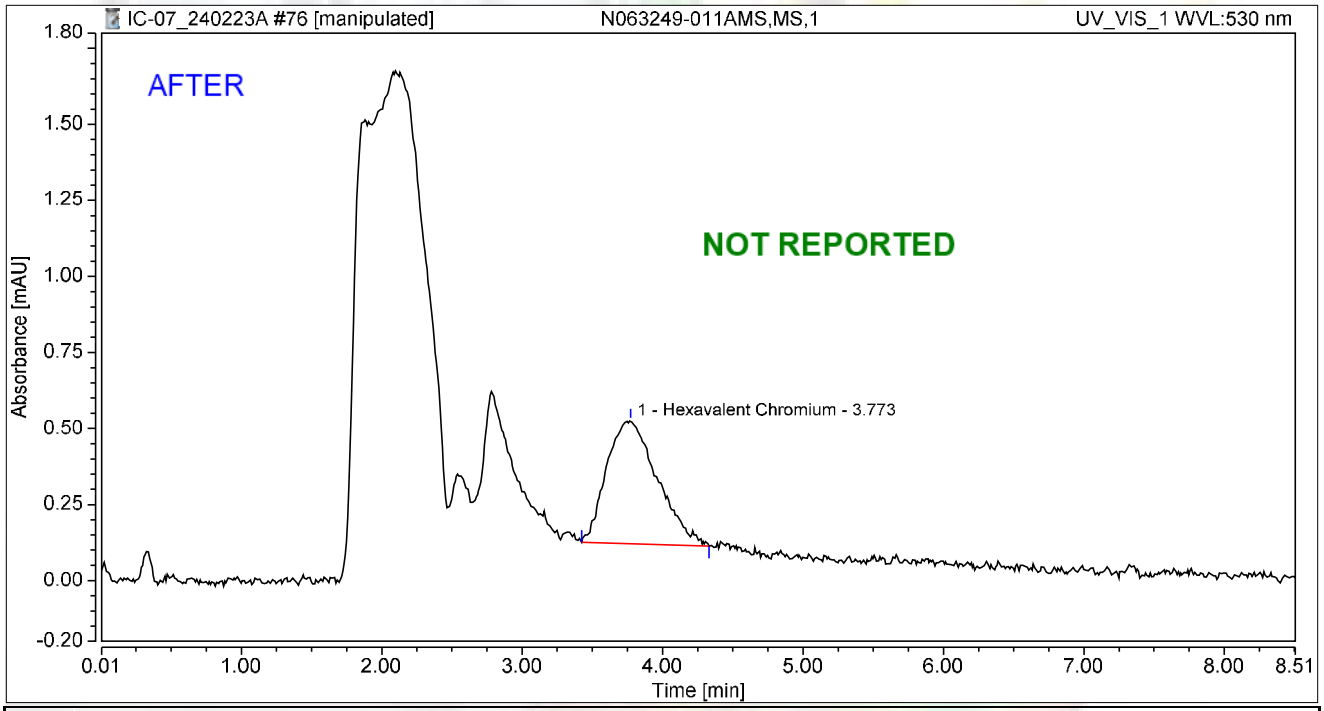
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 20:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

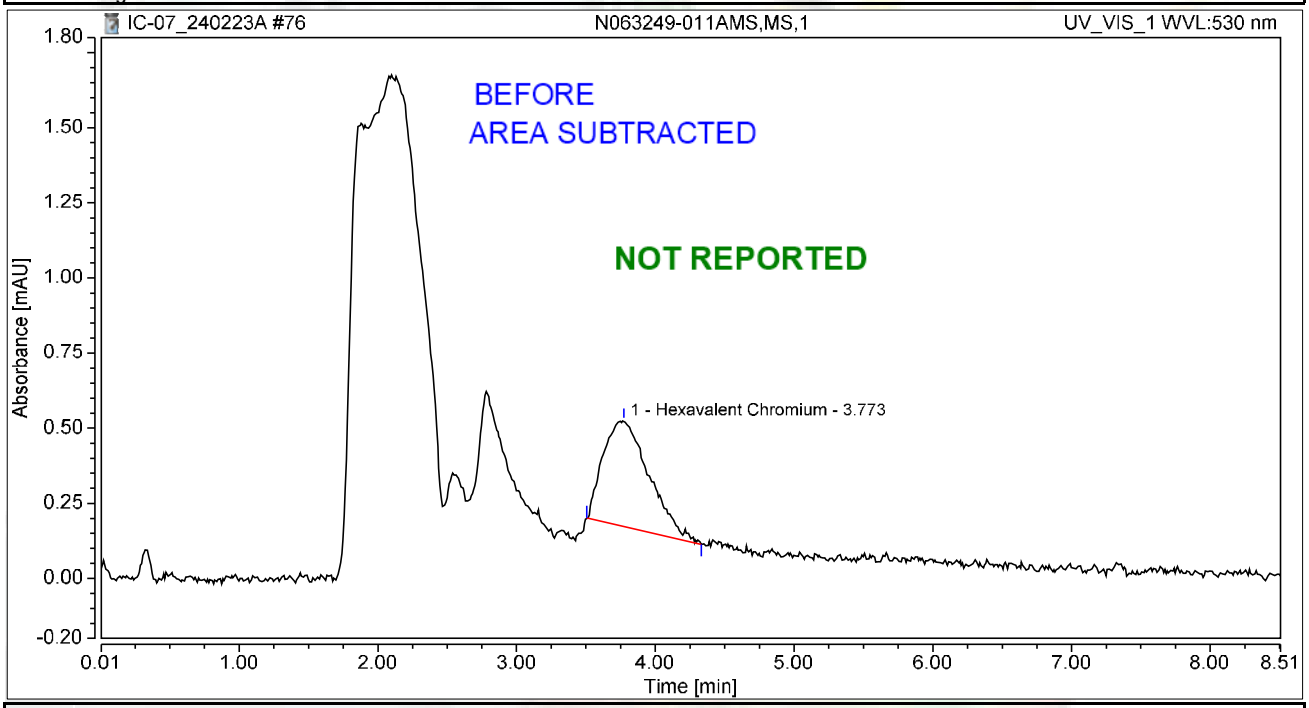
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.773	0.169	0.404	100.00	100.00	0.7870
Total:			**0.169**	**0.404**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 20:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

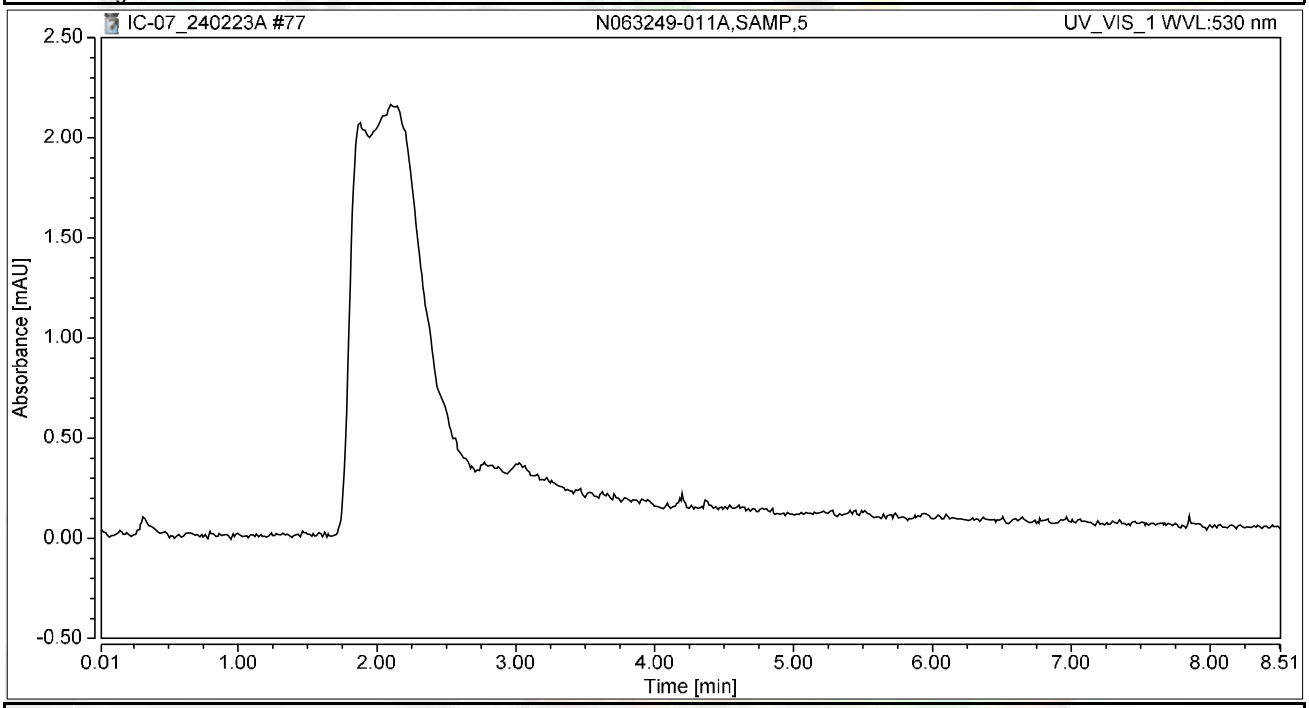
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.773	0.135	0.352	100.00	100.00	0.6282
Total:			**0.135**	**0.352**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-011A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 20:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

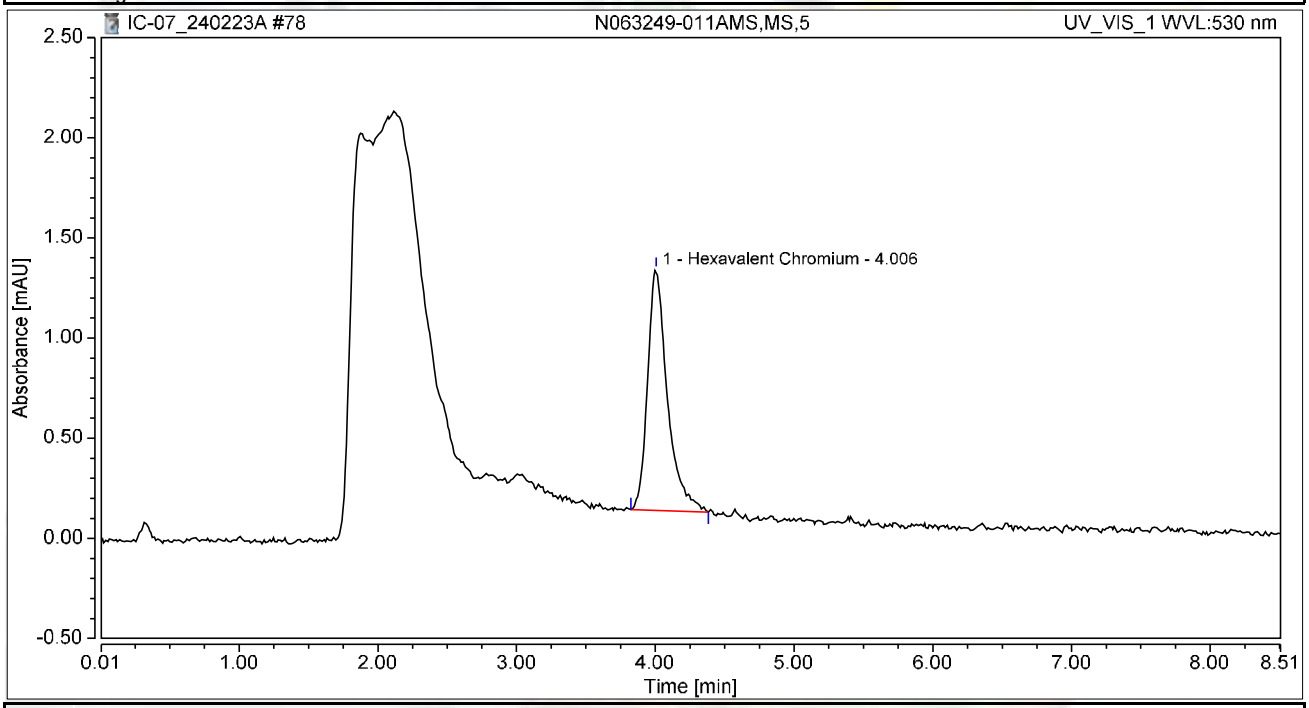
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-011AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 20:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

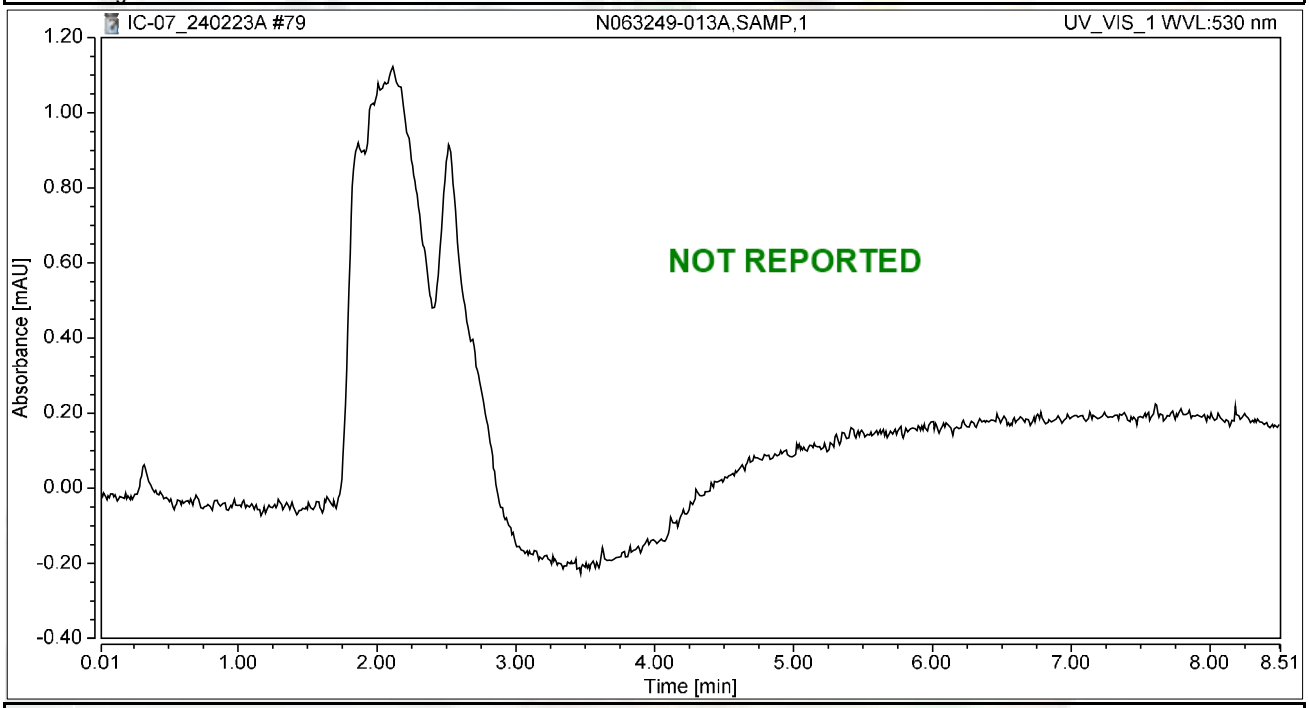
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.199	1.202	100.00	100.00	0.9273
Total:			**0.199**	**1.202**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-013A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 21:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

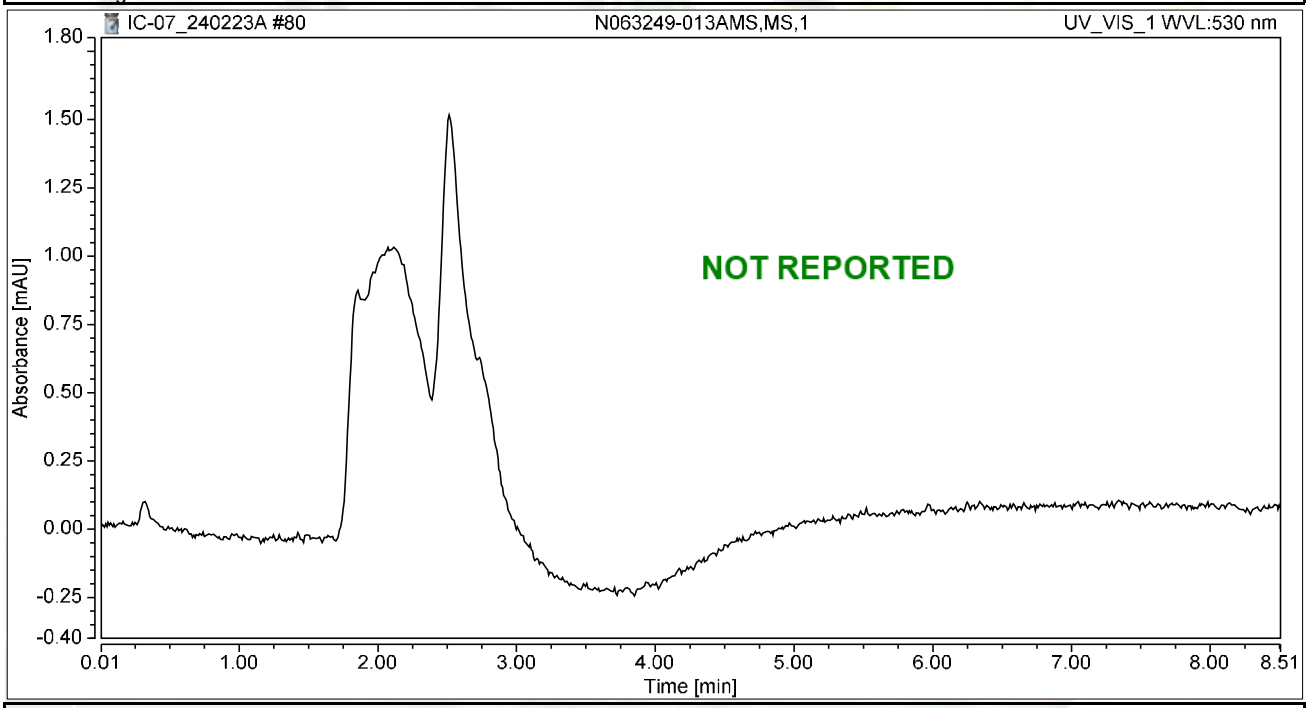
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-013AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 21:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

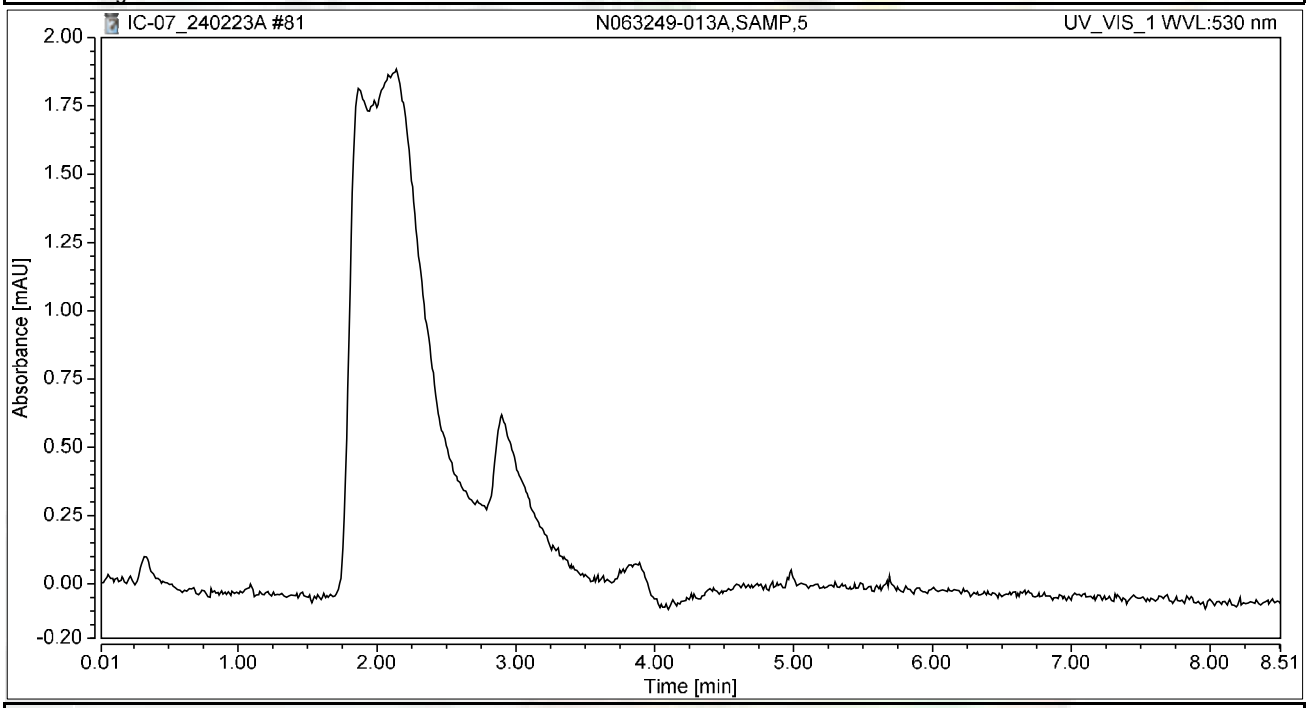
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-013A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 21:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

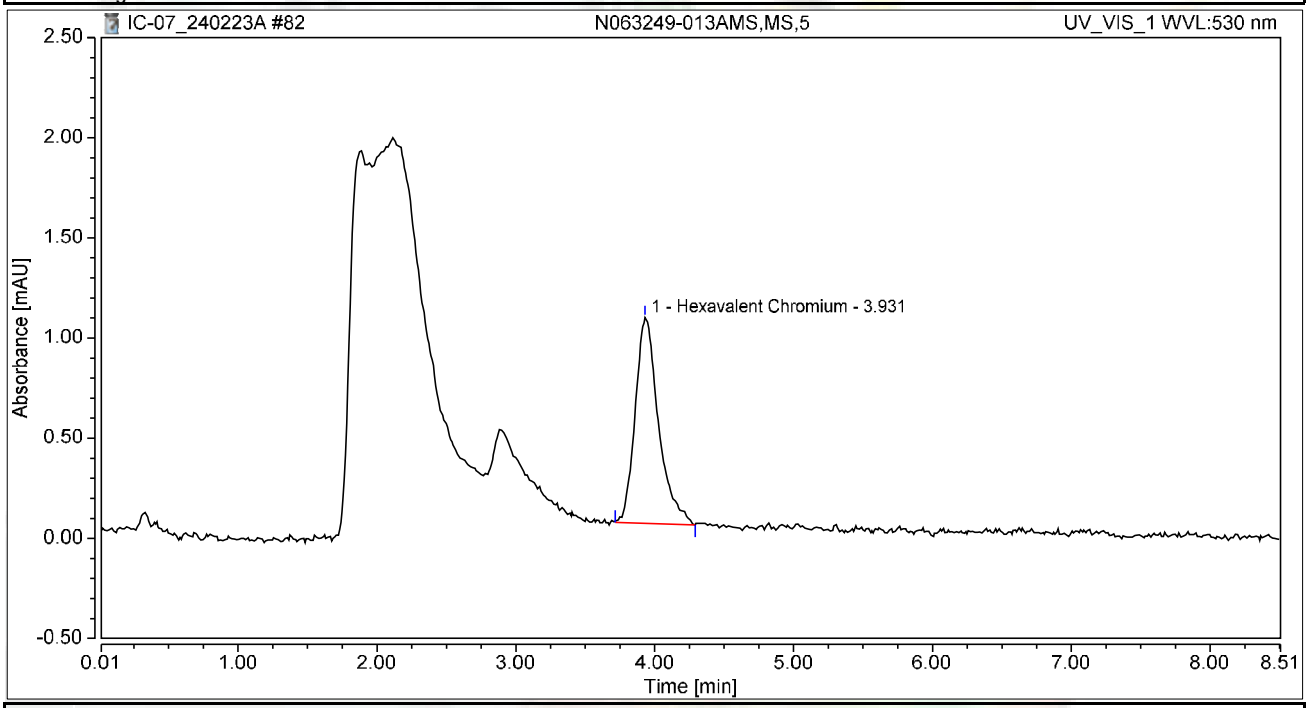
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-013AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 21:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

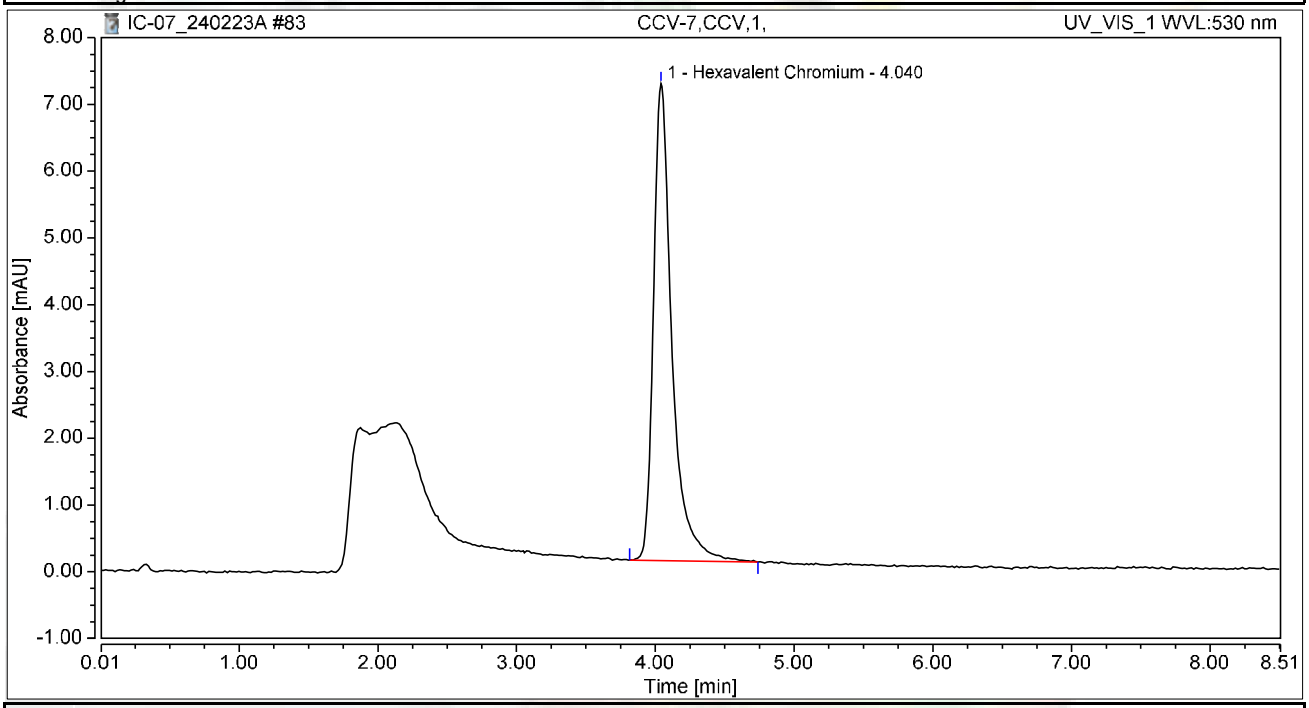
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.931	0.200	1.028	100.00	100.00	0.9304
Total:			**0.200**	**1.028**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 21:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

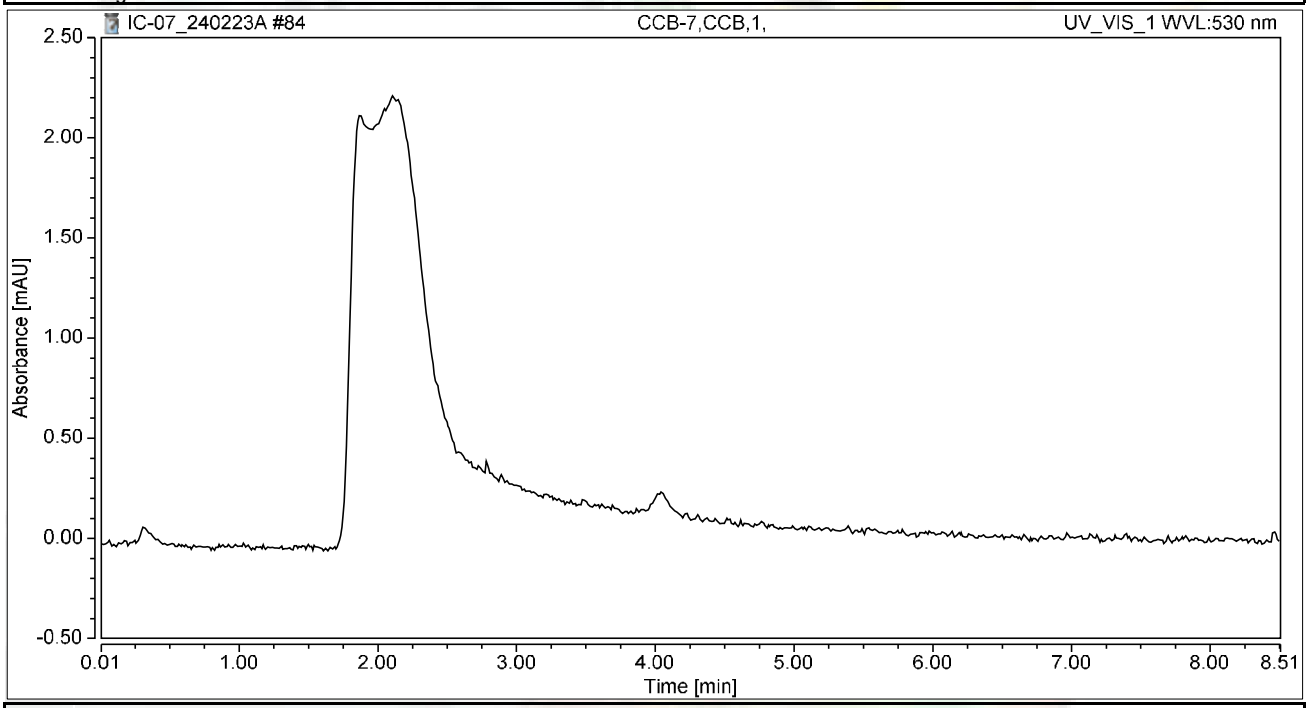
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.105	7.142	100.00	100.00	5.1365
Total:			**1.105**	**7.142**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 21:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

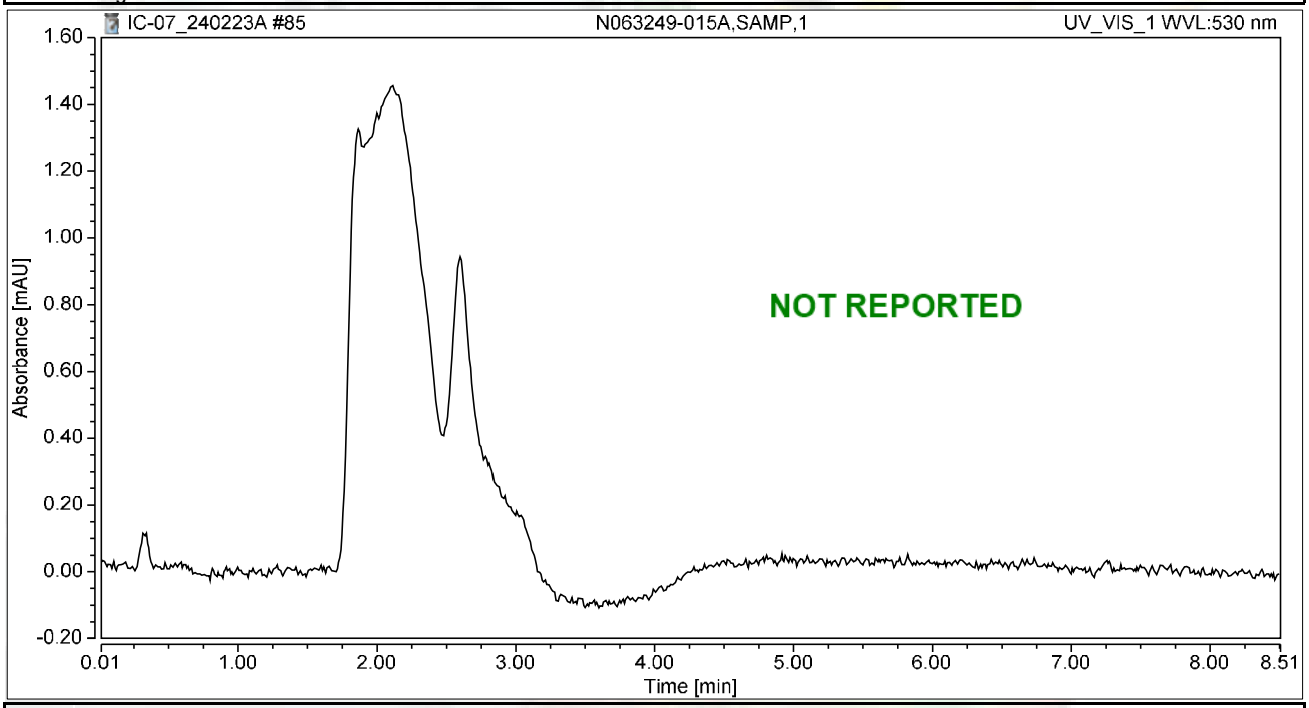
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-015A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 21:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

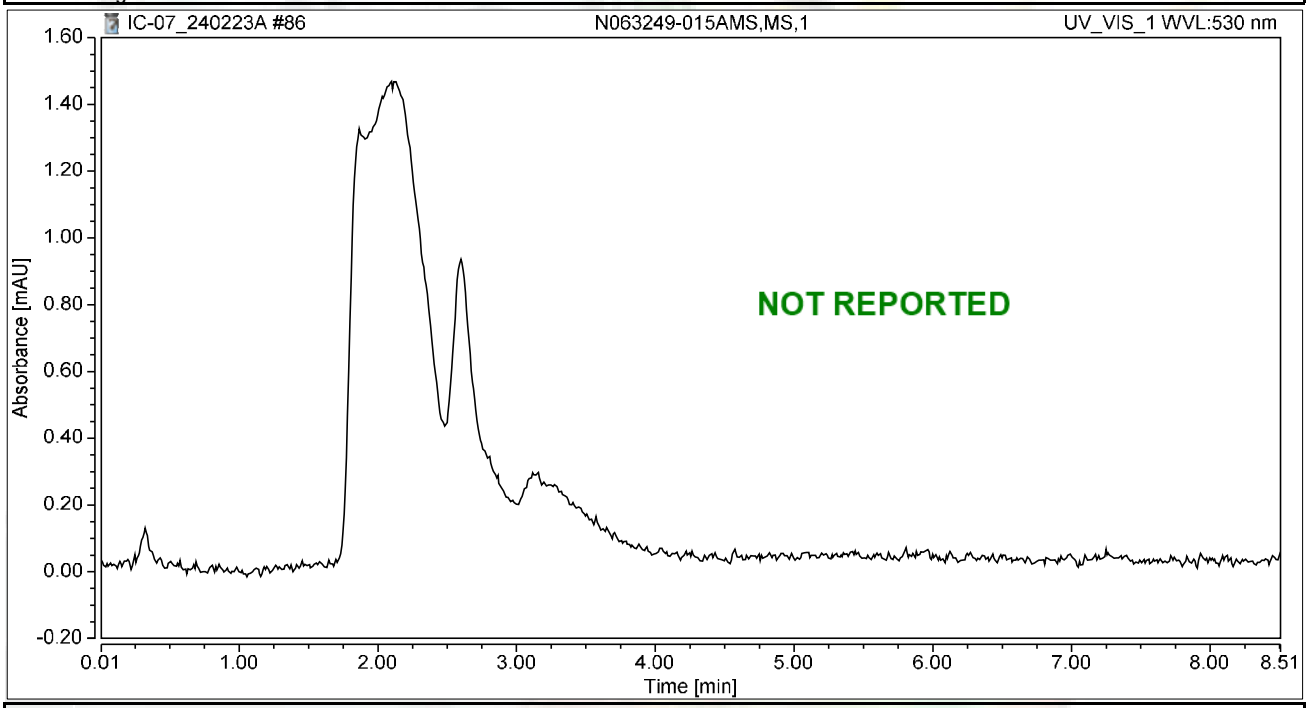
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-015AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 22:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

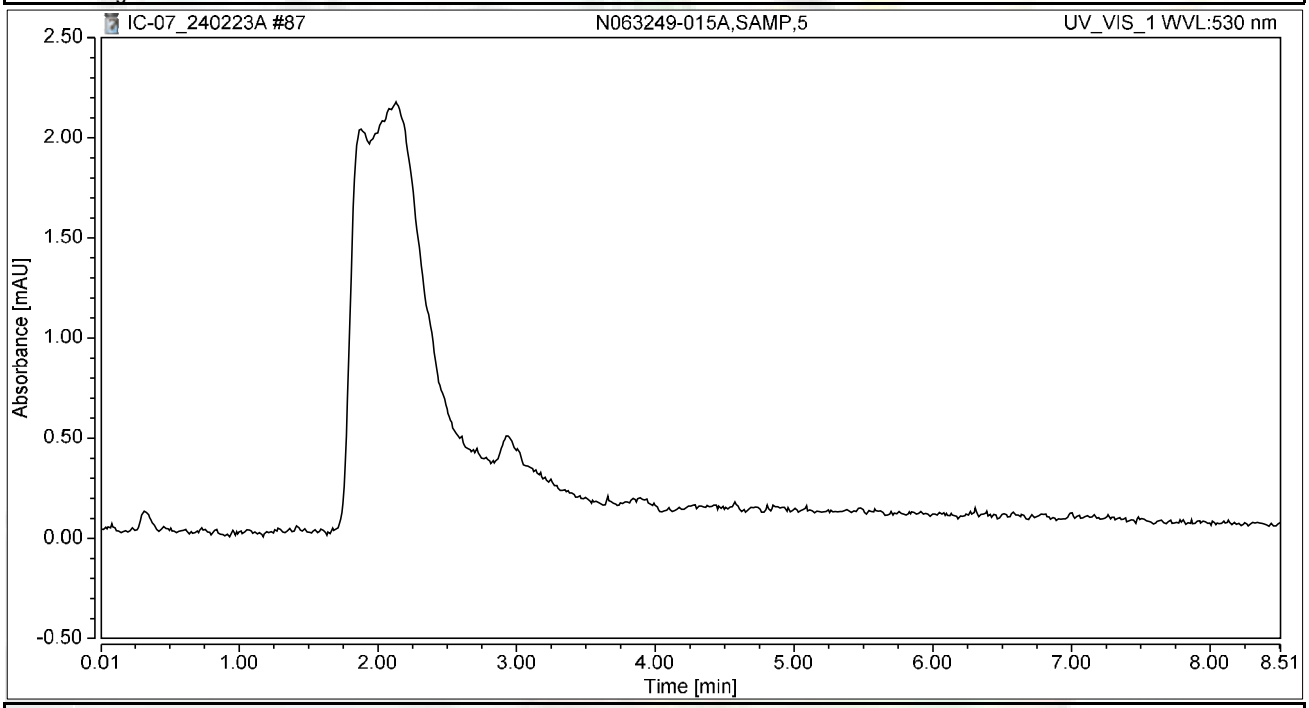
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-015A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 22:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

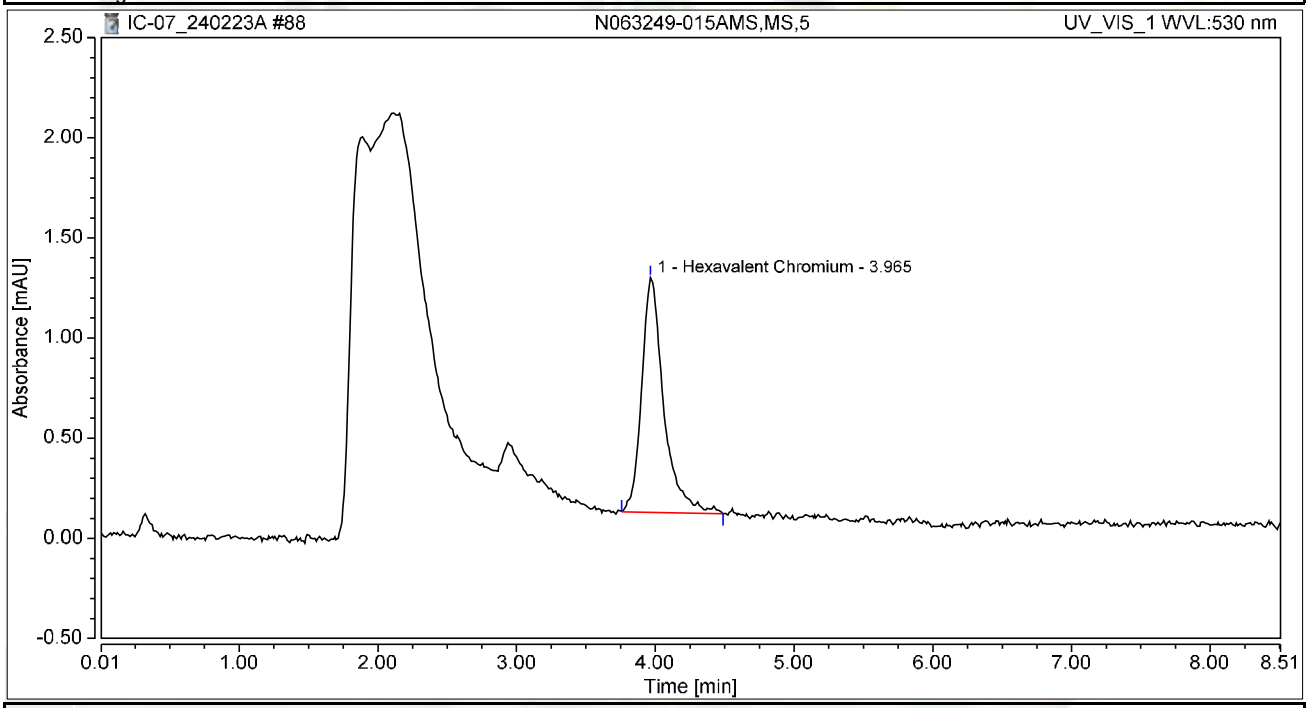
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-015AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 22:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

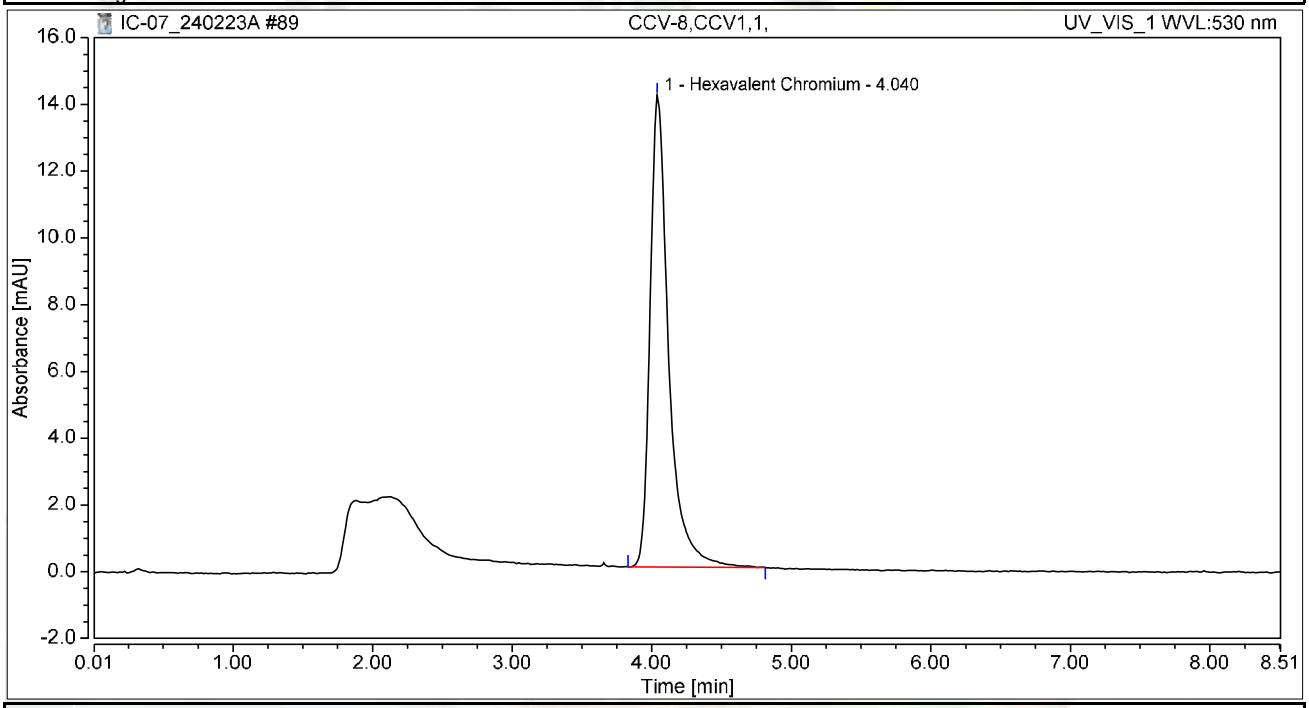
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.217	1.172	100.00	100.00	1.0073
Total:			**0.217**	**1.172**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-8,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 22:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

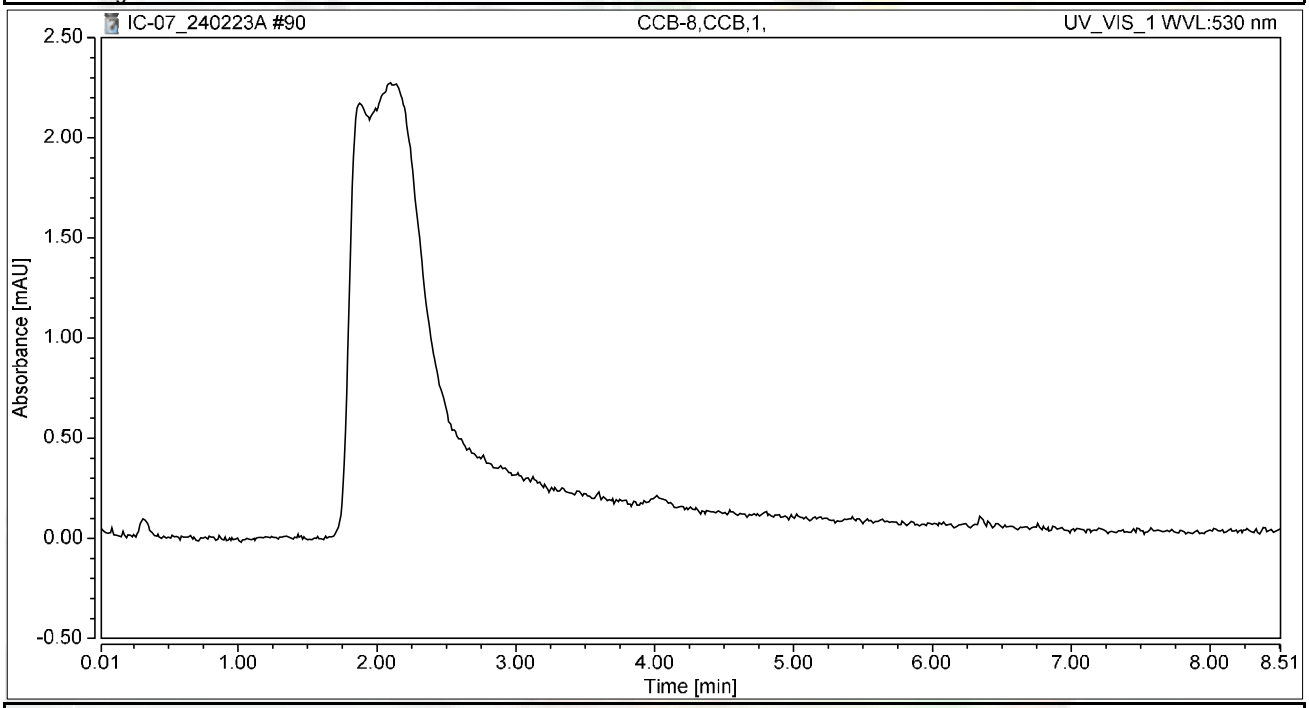
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.190	14.136	100.00	100.00	10.1795
Total:			**2.190**	**14.136**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-8,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 22:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

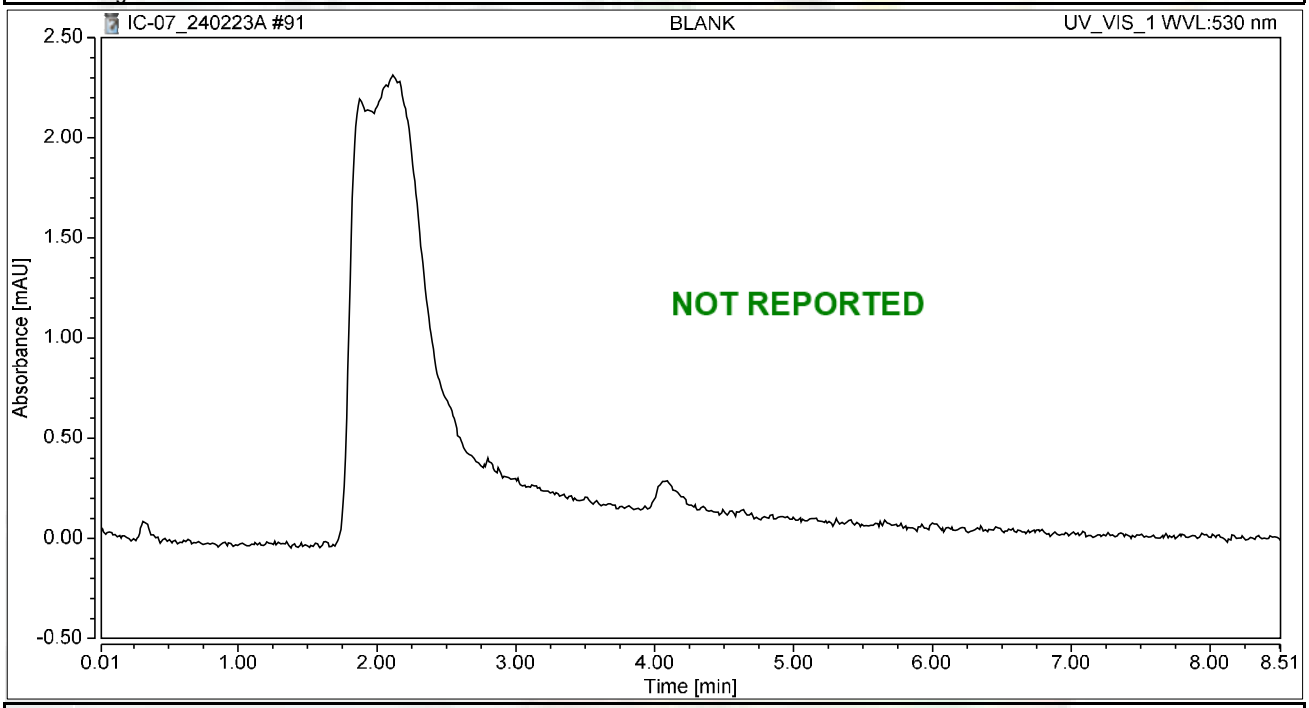
JRB 2/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.49**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**23/Feb/24 22:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240226A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/26/24 10:02 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/26/24 10:15 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/26/24 10:25 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/26/24 10:34 AM	Reported
13	MB-R182953	MBLK	1	Hexavalent Chromium	02/26/24 10:44 AM	Reported
14	LCS-R182953	LCS	1	Hexavalent Chromium	02/26/24 10:53 AM	Reported
15	N063295-001A	SAMP	1	Hexavalent Chromium	02/26/24 11:55 AM	Not Reported
16	N063295-003A	SAMP	1	Hexavalent Chromium	02/26/24 12:08 PM	Not Reported
17	N063295-005A	SAMP	1	Hexavalent Chromium	02/26/24 1:04 PM	Not Reported
18	N063295-006A	SAMP	1	Hexavalent Chromium	02/26/24 1:15 PM	Not Reported
19	N063295-007A	SAMP	1	Hexavalent Chromium	02/26/24 1:24 PM	Not Reported
20	N063214-007A	SAMP	5	Hexavalent Chromium	02/26/24 1:34 PM	Reported
21	N063214-007AMS	MS	5	Hexavalent Chromium	02/26/24 1:43 PM	Reported
22	N063295-001AMS	MS	1	Hexavalent Chromium	02/26/24 1:53 PM	Not Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/26/24 2:02 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/26/24 2:12 PM	Reported
25	N063295-003AMS	MS	1	Hexavalent Chromium	02/26/24 2:21 PM	Not Reported
26	N063295-005AMS	MS	1	Hexavalent Chromium	02/26/24 2:30 PM	Not Reported
27	N063295-006AMS	MS	1	Hexavalent Chromium	02/26/24 2:40 PM	Not Reported
28	N063295-007AMS	MS	1	Hexavalent Chromium	02/26/24 2:49 PM	Not Reported
29	N063295-001A	SAMP	5	Hexavalent Chromium	02/26/24 2:59 PM	Reported
30	N063295-001AMS	MS	5	Hexavalent Chromium	02/26/24 3:08 PM	Reported
31	N063295-001AMSD	MSD	5	Hexavalent Chromium	02/26/24 3:18 PM	Reported
32	N063295-003A	SAMP	5	Hexavalent Chromium	02/26/24 3:27 PM	Reported
33	N063295-003ADUP	DUP	5	Hexavalent Chromium	02/26/24 3:37 PM	Reported
34	N063295-003AMS	MS	5	Hexavalent Chromium	02/26/24 3:46 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/26/24 4:07 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/26/24 4:18 PM	Reported
37	N063295-005A	SAMP	5	Hexavalent Chromium	02/26/24 4:27 PM	Reported
38	N063295-005AMS	MS	5	Hexavalent Chromium	02/26/24 4:37 PM	Reported
39	N063295-006A	SAMP	5	Hexavalent Chromium	02/26/24 4:46 PM	Reported
40	N063295-006AMS	MS	5	Hexavalent Chromium	02/26/24 4:56 PM	Reported
41	N063295-007A	SAMP	5	Hexavalent Chromium	02/26/24 5:05 PM	Reported
42	N063295-007AMS	MS	5	Hexavalent Chromium	02/26/24 5:15 PM	Reported

Reviewed by:

RB 2/29/2024

INJECTION LOG: 240226A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063295-004A	SAMP	1	Hexavalent Chromium	02/26/24 5:24 PM	Reported
44	N063295-004AMS	MS	1	Hexavalent Chromium	02/26/24 5:33 PM	Reported
45	N063295-002A	SAMP	1	Hexavalent Chromium	02/26/24 5:43 PM	Not Reported
46	N063295-002AMS	MS	1	Hexavalent Chromium	02/26/24 5:52 PM	Not Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/26/24 6:02 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/26/24 6:11 PM	Reported
49	N063295-002A	SAMP	5	Hexavalent Chromium	02/26/24 6:21 PM	Not Reported
50	N063295-002AMS	MS	5	Hexavalent Chromium	02/26/24 6:30 PM	Not Reported
51	N063295-008A	SAMP	1	Hexavalent Chromium	02/26/24 6:40 PM	Not Reported
52	N063295-008AMS	MS	1	Hexavalent Chromium	02/26/24 6:49 PM	Not Reported
53	N063295-008A	SAMP	5	Hexavalent Chromium	02/26/24 6:59 PM	Reported
54	N063295-008AMS	MS	5	Hexavalent Chromium	02/26/24 7:08 PM	Reported
55	N063249-018A	SAMP	1	Hexavalent Chromium	02/26/24 7:18 PM	Not Reported
56	N063249-018AMS	MS	1	Hexavalent Chromium	02/26/24 7:27 PM	Not Reported
57	N063249-018A	SAMP	5	Hexavalent Chromium	02/26/24 7:36 PM	Reported
58	N063249-018AMS	MS	5	Hexavalent Chromium	02/26/24 7:46 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/26/24 7:55 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/26/24 8:05 PM	Reported
61	N063249-010A	SAMP	1	Hexavalent Chromium	02/26/24 8:14 PM	Not Reported
62	N063249-010AMS	MS	1	Hexavalent Chromium	02/26/24 8:24 PM	Not Reported
63	N063249-019A	SAMP	1	Hexavalent Chromium	02/26/24 8:33 PM	Reported
64	N063249-019AMS	MS	1	Hexavalent Chromium	02/26/24 8:43 PM	Reported
65	N063297-001A	SAMP	5	Hexavalent Chromium	02/26/24 8:52 PM	Reported
66	N063297-001AMS	MS	5	Hexavalent Chromium	02/26/24 9:02 PM	Reported
67	N063297-002A	SAMP	20	Hexavalent Chromium	02/26/24 9:11 PM	Reported
68	N063297-002AMS	MS	20	Hexavalent Chromium	02/26/24 9:21 PM	Reported
69	N063297-003A	SAMP	5	Hexavalent Chromium	02/26/24 9:30 PM	Reported
70	N063297-003AMS	MS	5	Hexavalent Chromium	02/26/24 9:39 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/26/24 9:49 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/26/24 9:58 PM	Reported
73	N063295-001A	SAMP	1	Hexavalent Chromium	02/26/24 10:08 PM	Not Reported
74	N063295-003A	SAMP	1	Hexavalent Chromium	02/26/24 10:17 PM	Not Reported
75	N063297-004A	SAMP	1	Hexavalent Chromium	02/26/24 10:27 PM	Reported
76	N063297-004AMS	MS	1	Hexavalent Chromium	02/26/24 10:36 PM	Reported
77	CCV-7	CCV	1	Hexavalent Chromium	02/26/24 10:46 PM	Reported
78	CCB-7	CCB	1	Hexavalent Chromium	02/26/24 10:55 PM	Reported
79	BLANK	BLANK	1	Hexavalent Chromium	02/26/24 11:04 PM	Not Reported

dMocha 3/10/2024
for RBA

Injection Log Summary

Sequence Details

Name:	**IC-07_240226A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**26/Feb/24 23:35:17**
No. of Injections:	**82**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/26/2024 10:02	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/26/2024 10:15	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/26/2024 10:25	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/26/2024 10:34	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/26/2024 10:44	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/26/2024 10:53	Finished	LCS @5ppb, IWST-231228B
15	N063295-001A,SAMP	1	1000	Unknown		02/26/2024 11:55	Finished	SAMP,10 mL
16	N063295-003A,SAMP	2	1000	Unknown		02/26/2024 12:08	Finished	SAMP,10 mL
17	N063295-005A,SAMP	1	1000	Unknown		02/26/2024 13:04	Finished	SAMP,10 mL
18	N063295-006A,SAMP	2	1000	Unknown		02/26/2024 13:15	Finished	SAMP,10 mL
19	N063295-007A,SAMP	3	1000	Unknown		02/26/2024 13:24	Finished	SAMP,10 mL
20	N063214-007A,SAMP	4	1000	Unknown		02/26/2024 13:34	Finished	SAMP,2>10 mL
21	N063214-007AMS,MS	5	1000	Unknown		02/26/2024 13:43	Finished	MS (1ppb), IWST-231228B,2>
22	N063295-001AMS,MS	6	1000	Unknown		02/26/2024 13:53	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	7	1000	Unknown		02/26/2024 14:02	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	8	1000	Unknown		02/26/2024 14:12	Finished	CCB R240129C
25	N063295-003AMS,MS	9	1000	Unknown		02/26/2024 14:21	Finished	MS (1ppb), IWST-231228B,10r
26	N063295-005AMS,MS	10	1000	Unknown		02/26/2024 14:30	Finished	MS (1ppb), IWST-231228B,10r
27	N063295-006AMS,MS	11	1000	Unknown		02/26/2024 14:40	Finished	MS (1ppb), IWST-231228B,10r
28	N063295-007AMS,MS	12	1000	Unknown		02/26/2024 14:49	Finished	MS (1ppb), IWST-231228B,10r
29	N063295-001A,SAMP	13	1000	Unknown		02/26/2024 14:59	Finished	SAMP,2>10 mL
30	N063295-001AMS,MS	14	1000	Unknown		02/26/2024 15:08	Finished	MS (5ppb), IWST-231228B,2>
31	N063295-001AMSD,M	15	1000	Unknown		02/26/2024 15:18	Finished	MSD (5ppb), IWST-231228B,2
32	N063295-003A,SAMP	16	1000	Unknown		02/26/2024 15:27	Finished	SAMP,2>10 mL
33	N063295-003ADUP,D	17	1000	Unknown		02/26/2024 15:37	Finished	DUP,2>10 mL
34	N063295-003AMS,MS	18	1000	Unknown		02/26/2024 15:46	Finished	MS (5ppb), IWST-231228B,2>
35	CCV-3,CCV,1,	1	1000	Unknown		02/26/2024 16:07	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	2	1000	Unknown		02/26/2024 16:18	Finished	CCB R240129C
37	N063295-005A,SAMP	3	1000	Unknown		02/26/2024 16:27	Finished	SAMP,2>10 mL
38	N063295-005AMS,MS	4	1000	Unknown		02/26/2024 16:37	Finished	MS (1ppb), IWST-231228B,2>
39	N063295-006A,SAMP	5	1000	Unknown		02/26/2024 16:46	Finished	SAMP,2>10 mL
40	N063295-006AMS,MS	6	1000	Unknown		02/26/2024 16:56	Finished	MS (1ppb), IWST-231228B,2>
41	N063295-007A,SAMP	7	1000	Unknown		02/26/2024 17:05	Finished	SAMP,2>10 mL
42	N063295-007AMS,MS	8	1000	Unknown		02/26/2024 17:15	Finished	MS (1ppb), IWST-231228B,2>
43	N063295-004A,SAMP	9	1000	Unknown		02/26/2024 17:24	Finished	SAMP,10 mL
44	N063295-004AMS,MS	10	1000	Unknown		02/26/2024 17:33	Finished	MS (1ppb), IWST-231228B,10r
45	N063295-002A,SAMP	11	1000	Unknown		02/26/2024 17:43	Finished	SAMP,10 mL
46	N063295-002AMS,MS	12	1000	Unknown		02/26/2024 17:52	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	13	1000	Unknown		02/26/2024 18:02	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	14	1000	Unknown		02/26/2024 18:11	Finished	CCB R240129C
49	N063295-002A,SAMP	15	1000	Unknown		02/26/2024 18:21	Finished	SAMP,2>10 mL
50	N063295-002AMS,MS	16	1000	Unknown		02/26/2024 18:30	Finished	MS (1ppb), IWST-231228B,2>
51	N063295-008A,SAMP	17	1000	Unknown		02/26/2024 18:40	Finished	SAMP,10 mL
52	N063295-008AMS,MS	18	1000	Unknown		02/26/2024 18:49	Finished	MS (1ppb), IWST-231228B,10r
53	N063295-008A,SAMP	19	1000	Unknown		02/26/2024 18:59	Finished	SAMP,2>10 mL
54	N063295-008AMS,MS	20	1000	Unknown		02/26/2024 19:08	Finished	MS (1ppb), IWST-231228B,2>
55	N063249-018A,SAMP	21	1000	Unknown		02/26/2024 19:18	Finished	SAMP,10 mL
56	N063249-018AMS,MS	22	1000	Unknown		02/26/2024 19:27	Finished	MS (1ppb), IWST-231228B,10r
57	N063249-018A,SAMP	23	1000	Unknown		02/26/2024 19:36	Finished	SAMP,2>10 mL
58	N063249-018AMS,MS	24	1000	Unknown		02/26/2024 19:46	Finished	MS (1ppb), IWST-231228B,2>
59	CCV-5,CCV,1,	25	1000	Unknown		02/26/2024 19:55	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	26	1000	Unknown		02/26/2024 20:05	Finished	CCB R240129C

61	N063249-010A,SAMP	27	1000	Unknown		02/26/2024 20:14	Finished	SAMP,10 mL
62	N063249-010AMS,MS	28	1000	Unknown		02/26/2024 20:24	Finished	MS (1ppb), IWST-231228B,10r
63	N063249-019A,SAMP	29	1000	Unknown		02/26/2024 20:33	Finished	SAMP,10 mL
64	N063249-019AMS,MS	30	1000	Unknown		02/26/2024 20:43	Finished	MS (1ppb), IWST-231228B,10r
65	N063297-001A,SAMP	31	1000	Unknown		02/26/2024 20:52	Finished	SAMP,2>10 mL
66	N063297-001AMS,MS	32	1000	Unknown		02/26/2024 21:02	Finished	MS (5ppb), IWST-231228B,2>1
67	N063297-002A,SAMP	33	1000	Unknown		02/26/2024 21:11	Finished	SAMP,0.5>10 mL
68	N063297-002AMS,MS	34	1000	Unknown		02/26/2024 21:21	Finished	MS (1ppb), IWST-231228B,0.5
69	N063297-003A,SAMP	35	1000	Unknown		02/26/2024 21:30	Finished	SAMP,2>10 mL
70	N063297-003AMS,MS	36	1000	Unknown		02/26/2024 21:39	Finished	MS (5ppb), IWST-231228B,2>1
71	CCV-6,CCV1,1,	37	1000	Unknown		02/26/2024 21:49	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	38	1000	Unknown		02/26/2024 21:58	Finished	CCB R240129C
73	N063295-001A,SAMP	39	1000	Unknown		02/26/2024 22:08	Finished	SAMP,10 mL
74	N063295-003A,SAMP	40	1000	Unknown		02/26/2024 22:17	Finished	SAMP,10 mL
75	N063297-004A,SAMP	41	1000	Unknown		02/26/2024 22:27	Finished	SAMP,10 mL
76	N063297-004AMS,MS	42	1000	Unknown		02/26/2024 22:36	Finished	MS (1ppb), IWST-231228B,10r
77	CCV-7,CCV,1,	43	1000	Unknown		02/26/2024 22:46	Finished	CCV @5ppb, IWST-231228A
78	CCB-7,CCB,1,	44	1000	Unknown		02/26/2024 22:55	Finished	CCB R240129C
79	BLANK	45	1000	Unknown		02/26/2024 23:04	Finished	BLANK
80	SHUTDOWN R240226A	46	1000	Unknown		02/26/2024 23:14	Finished	
81	Eluent: ~~R240228A~~	47	1000	Unknown		n.a.	Finished	
82	PCR: ~~R240228B~~ R240226B	48	1000	Unknown		n.a.	Finished	

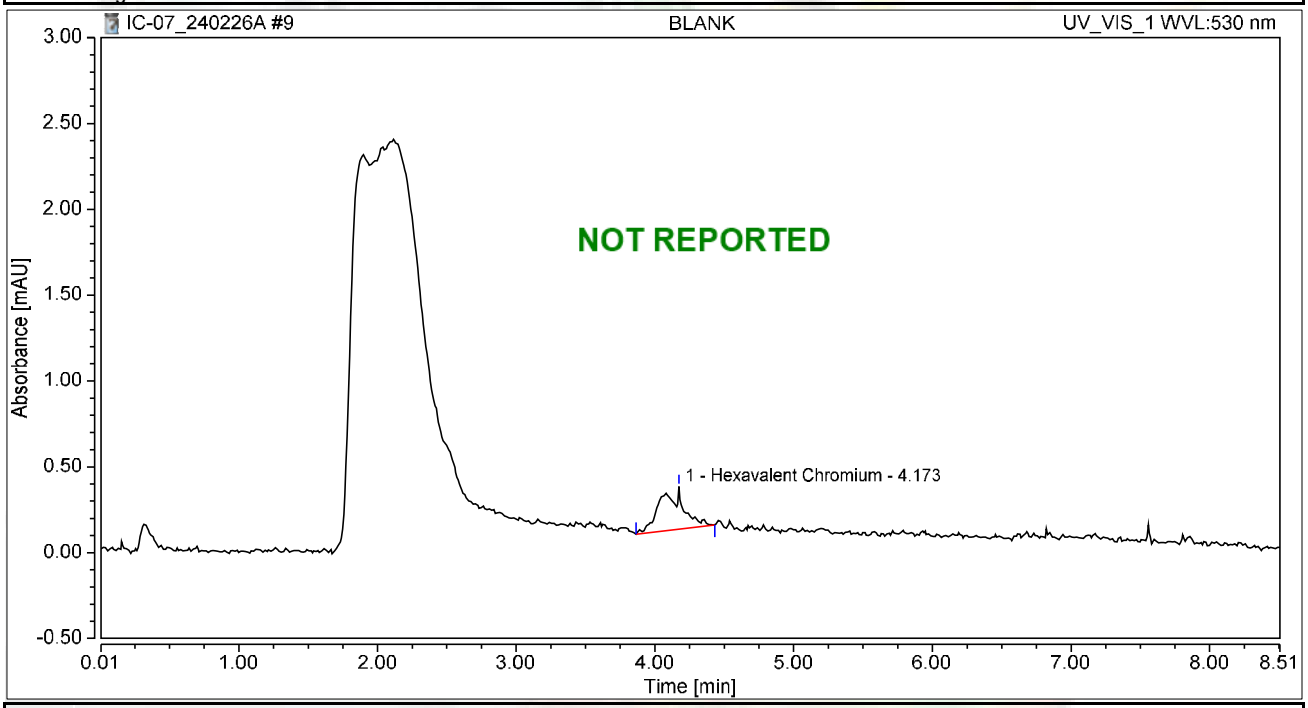
dMocha 3/10/2024
for RBA

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 10:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

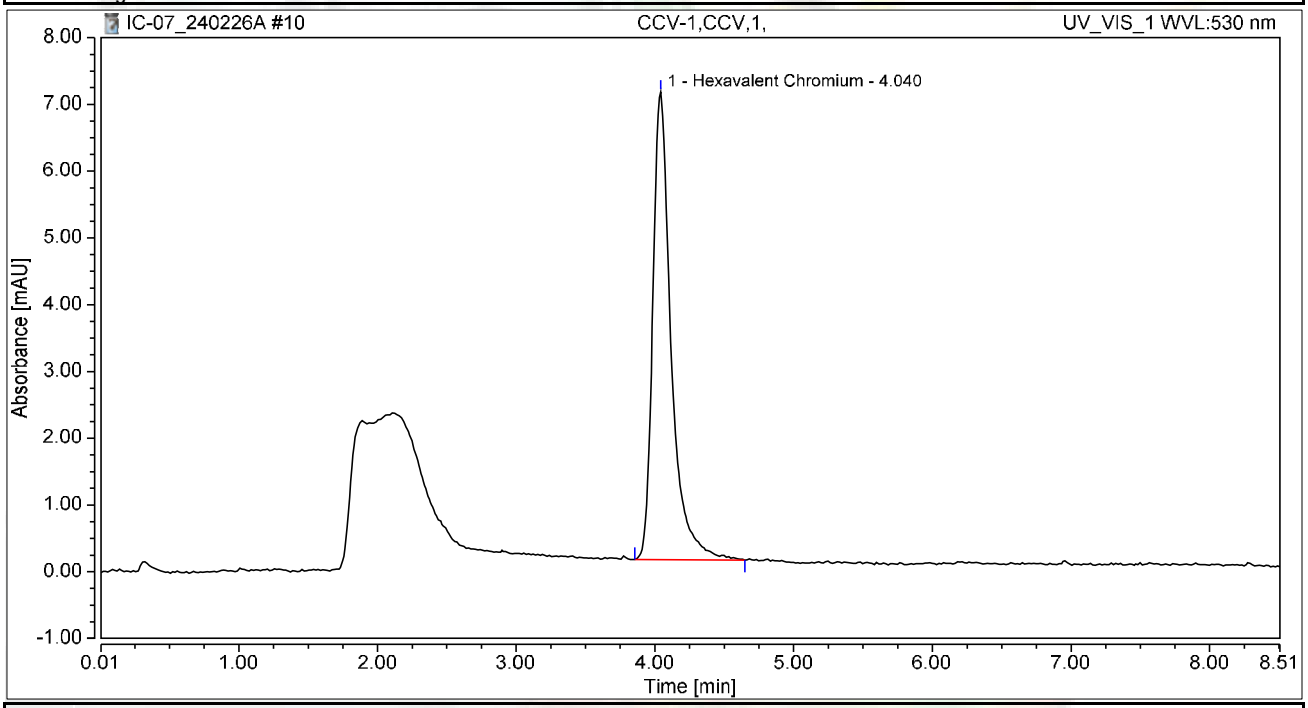
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.173	0.050	0.248	100.00	100.00	0.2323
Total:			**0.050**	**0.248**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 10:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.072	7.003	100.00	100.00	4.9840
Total:			**1.072**	**7.003**	**100.00**	**100.00**	

Reviewed by:

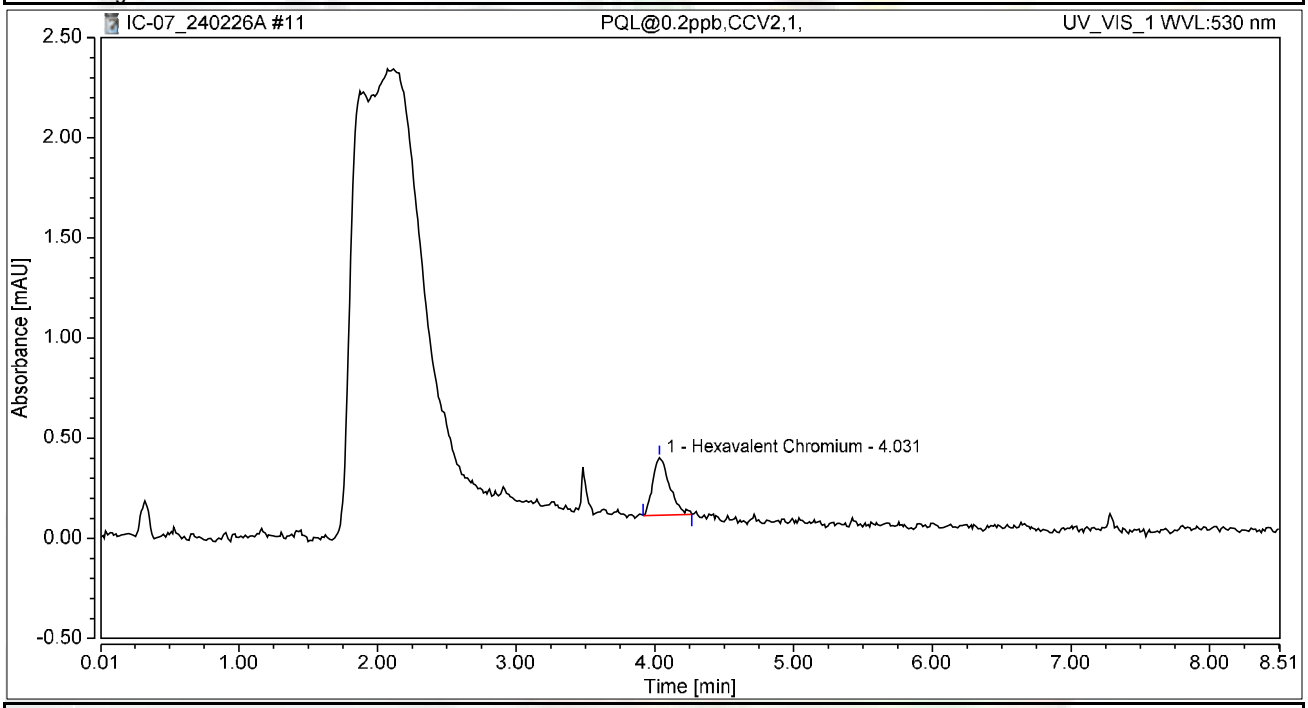
JRB 2/29/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 10:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

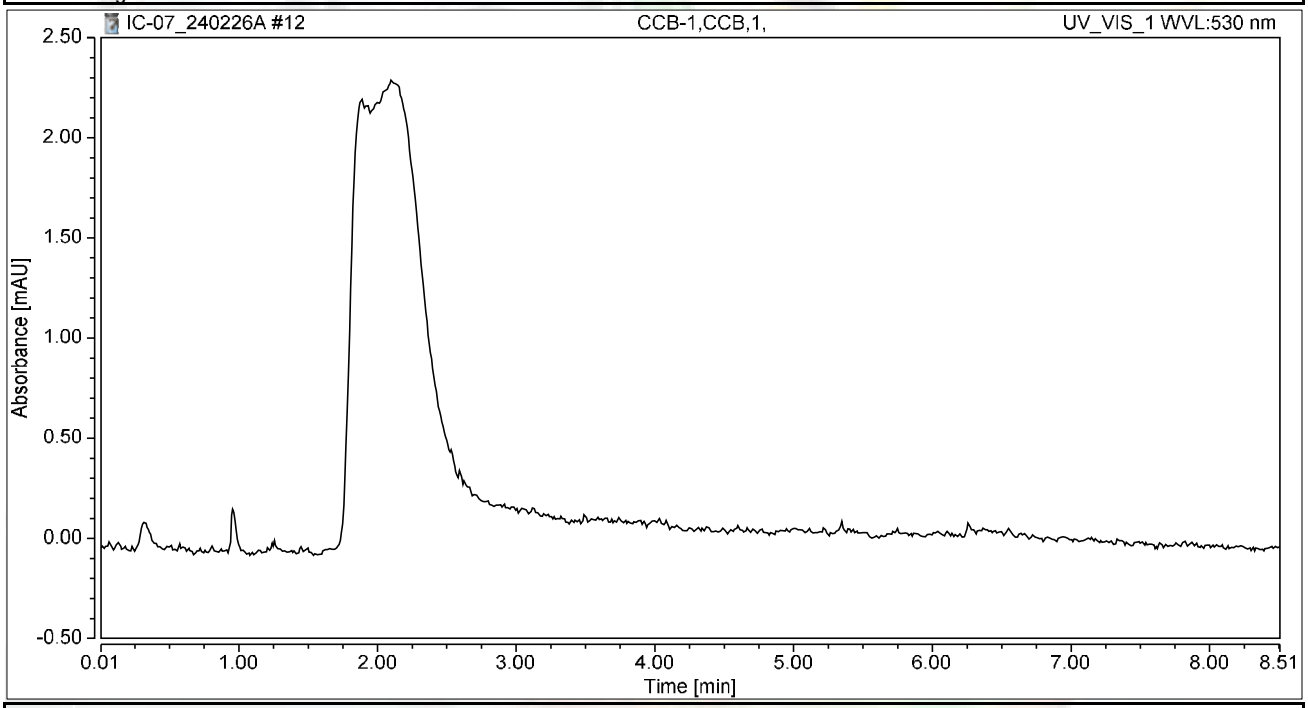
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.041	0.288	100.00	100.00	0.1893
Total:			**0.041**	**0.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 10:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

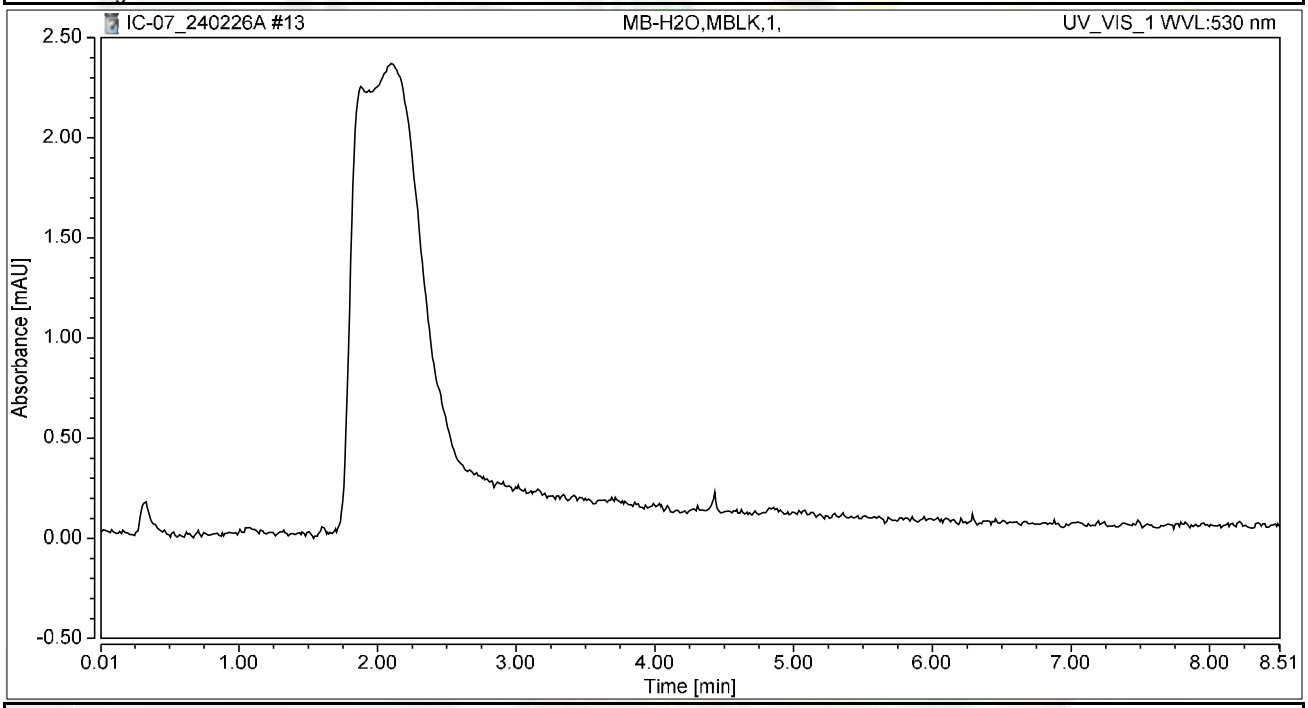
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 10:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

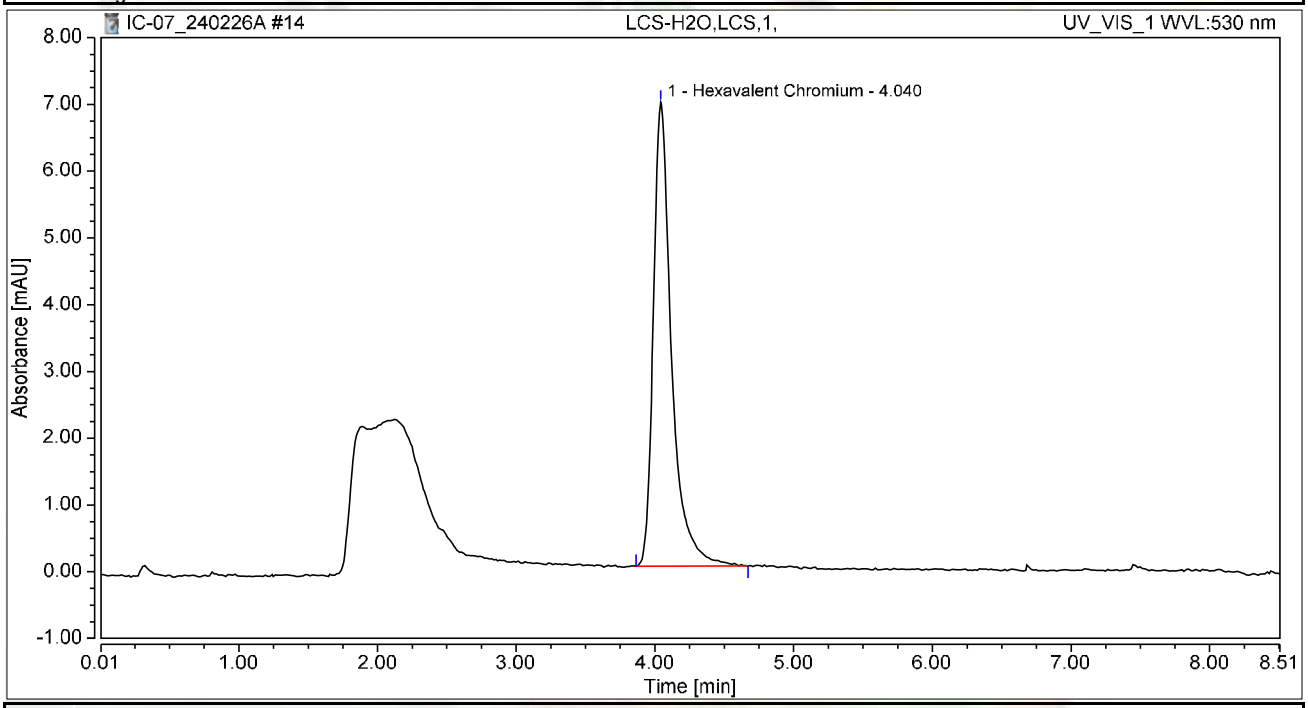
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 10:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

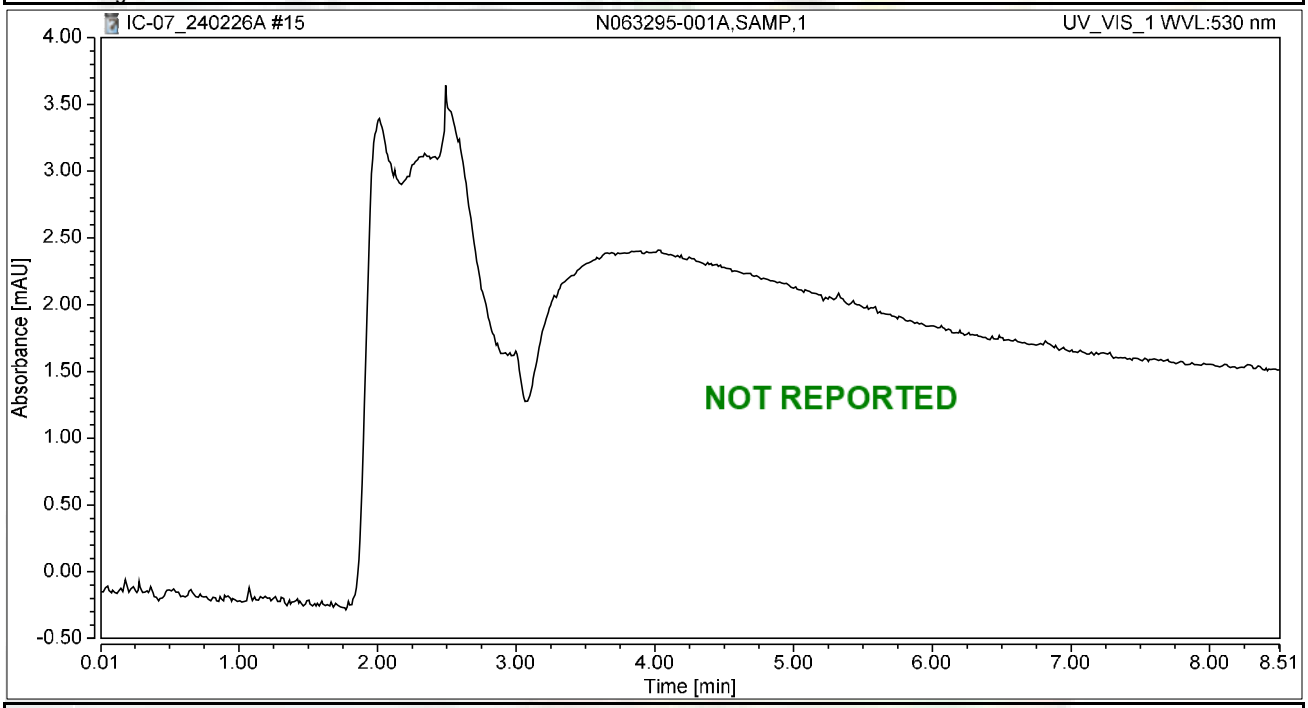
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.057	6.951	100.00	100.00	4.9128
Total:			**1.057**	**6.951**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 11:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

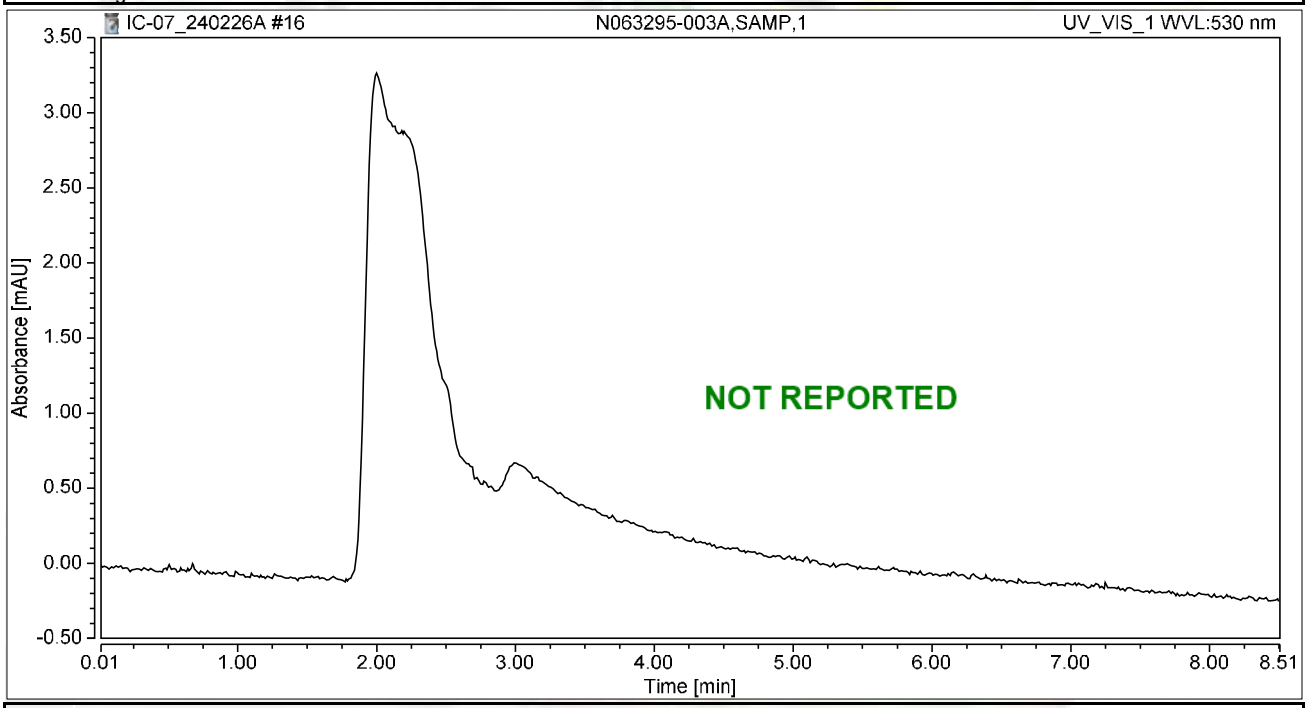
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 12:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

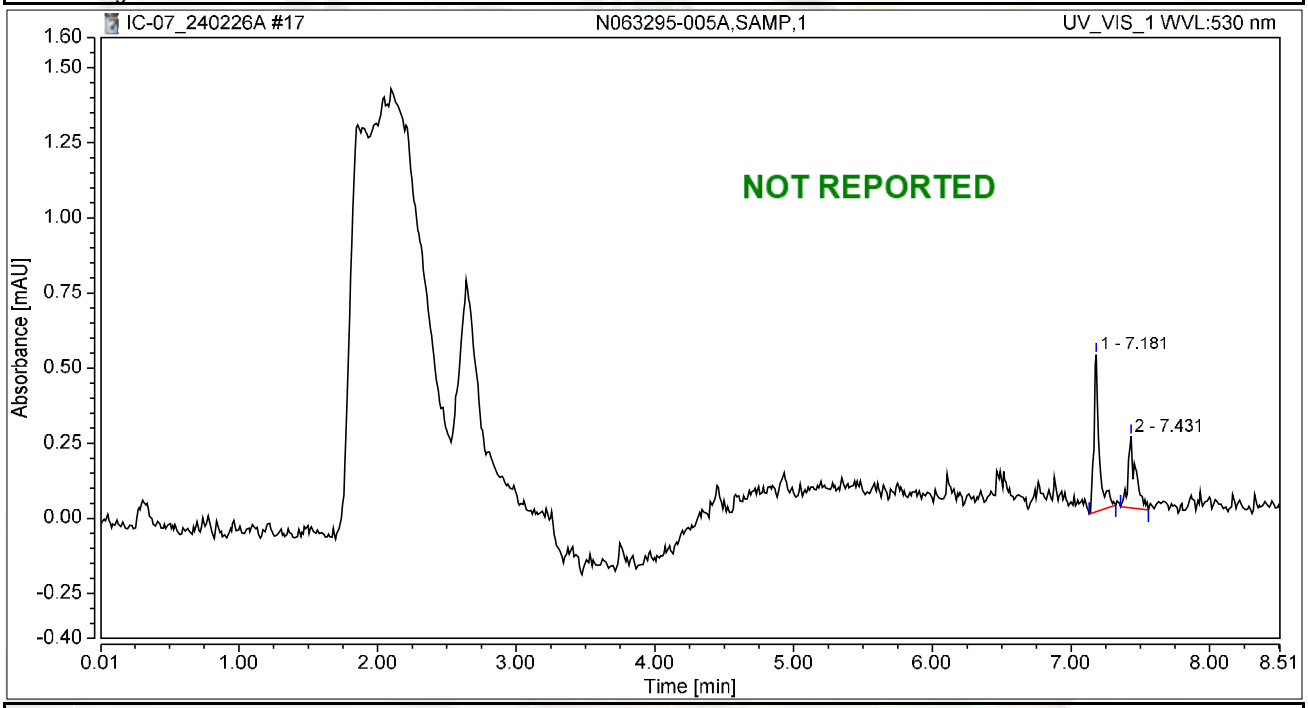
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 13:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

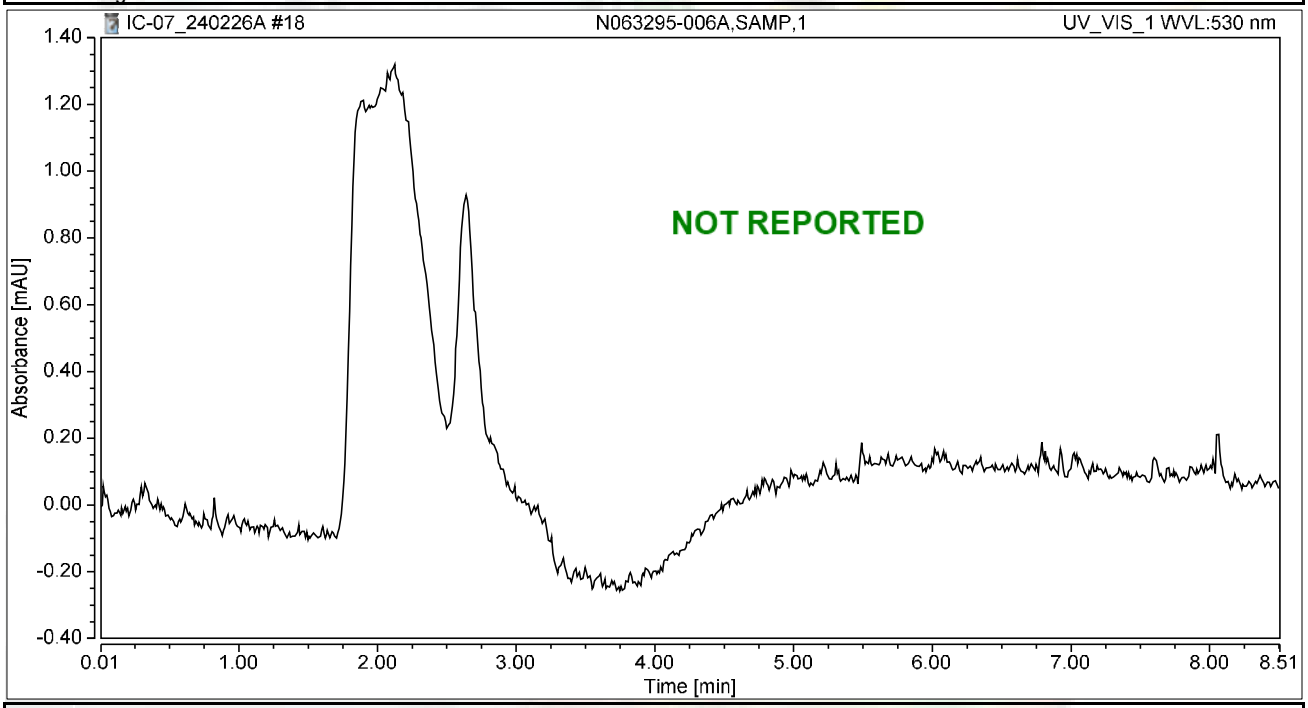
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		7.181	0.024	0.523	60.57	68.74	n.a.
2		7.431	0.015	0.238	39.43	31.26	n.a.
Total:			**0.039**	**0.761**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 13:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

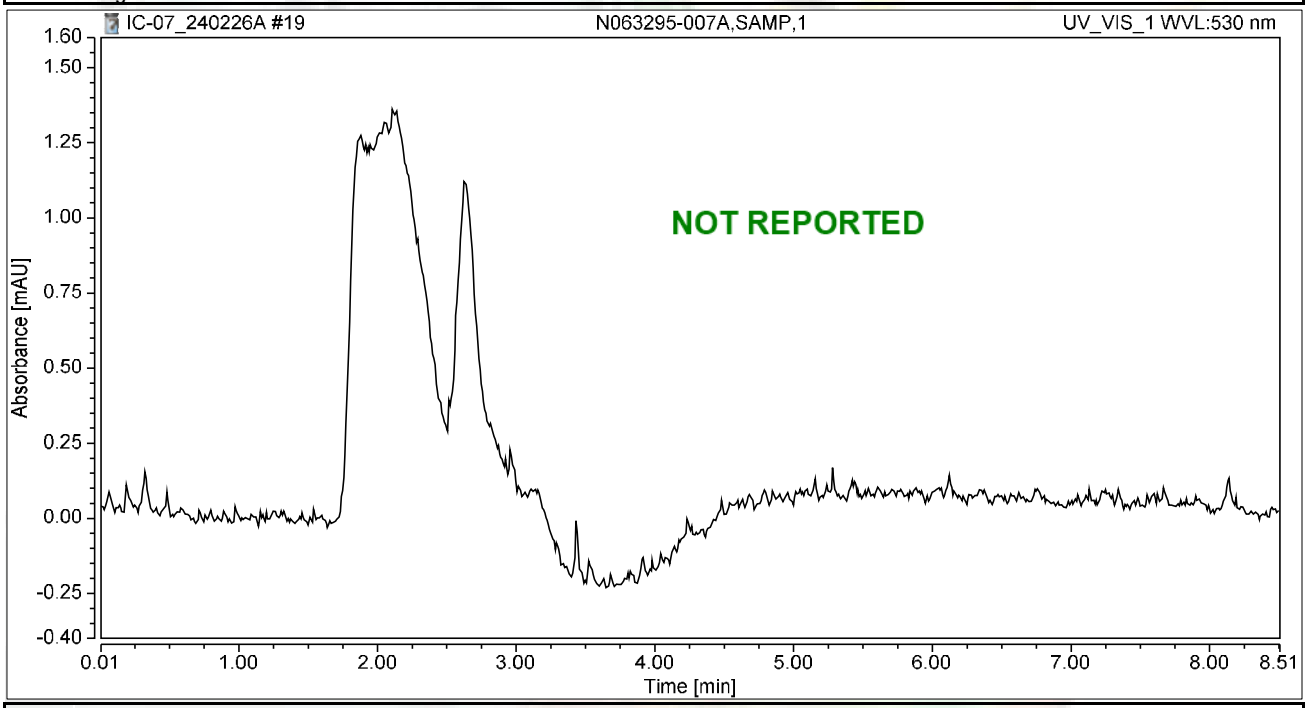
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-007A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 13:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

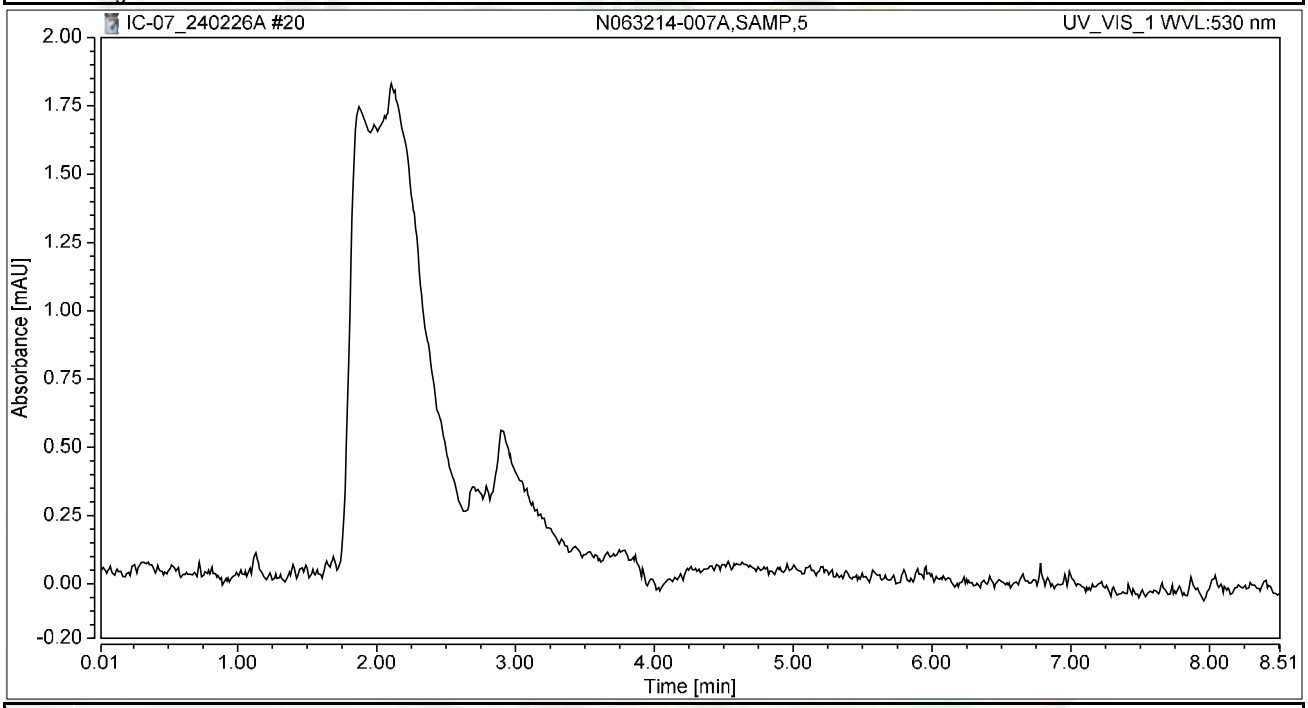
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-007A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 13:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

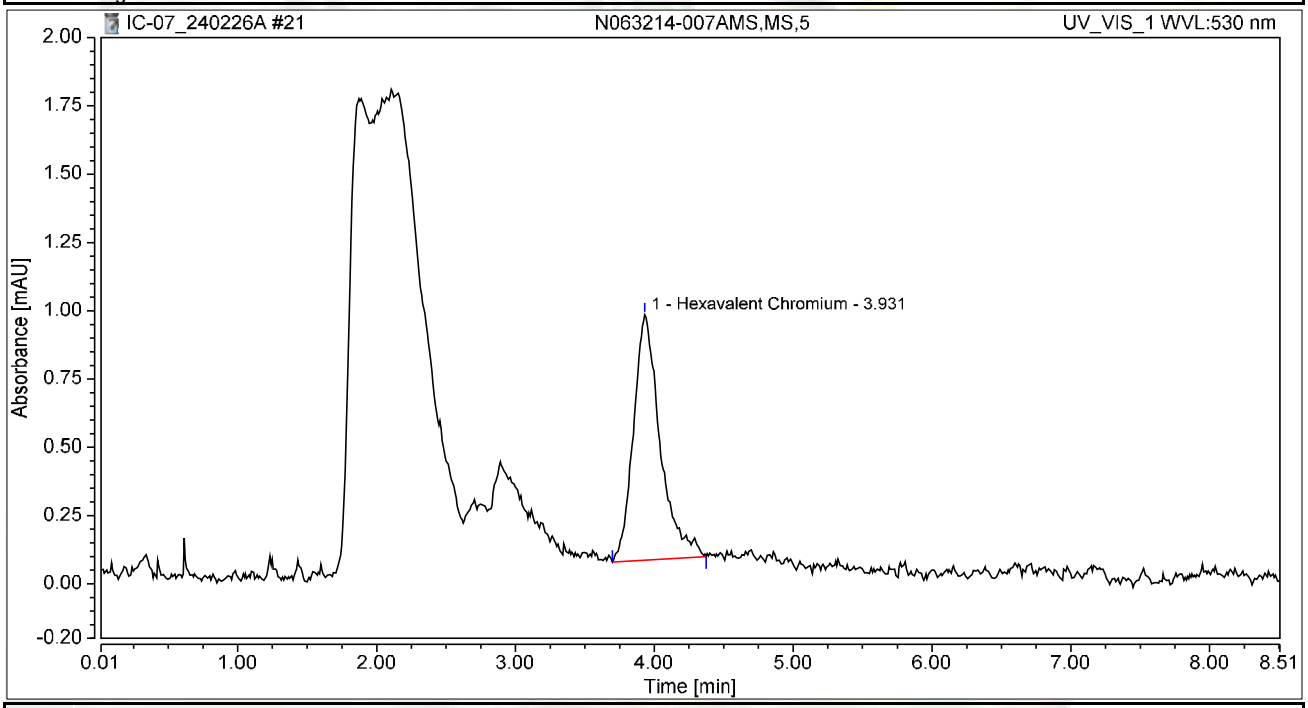
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-007AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 13:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

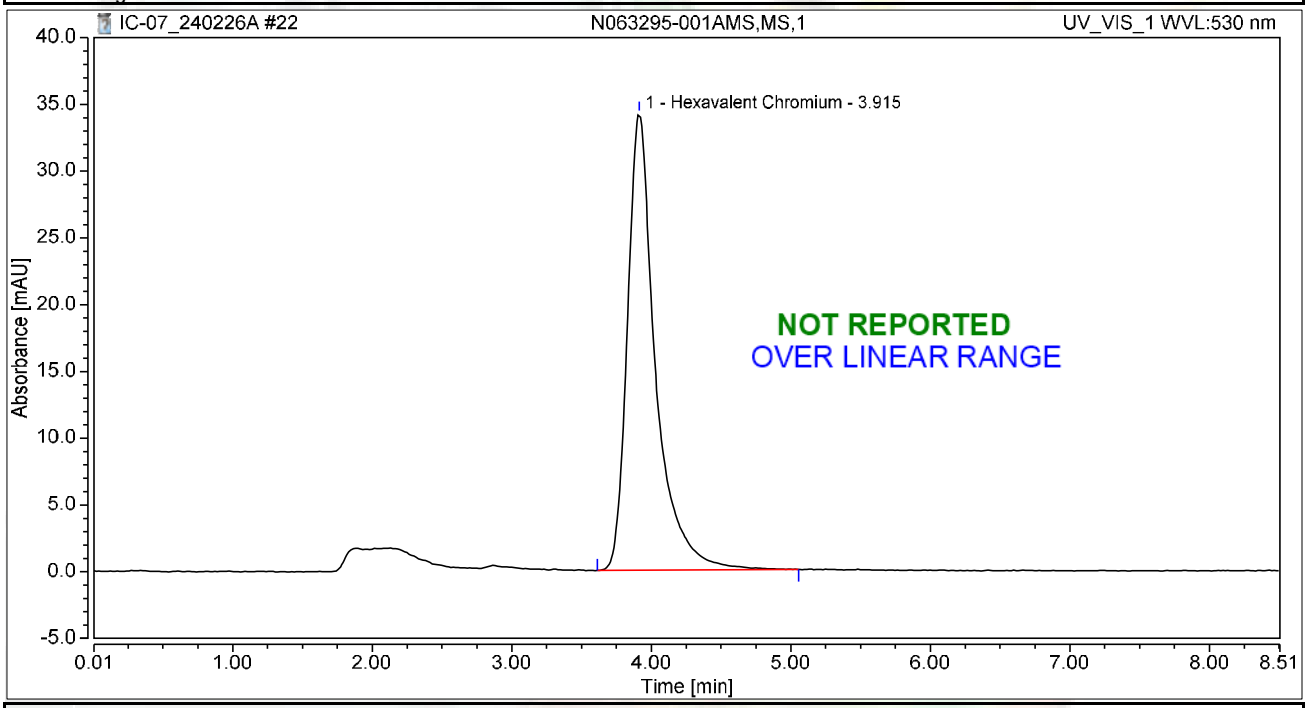
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.931	0.200	0.899	100.00	100.00	0.9321
Total:			**0.200**	**0.899**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 13:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

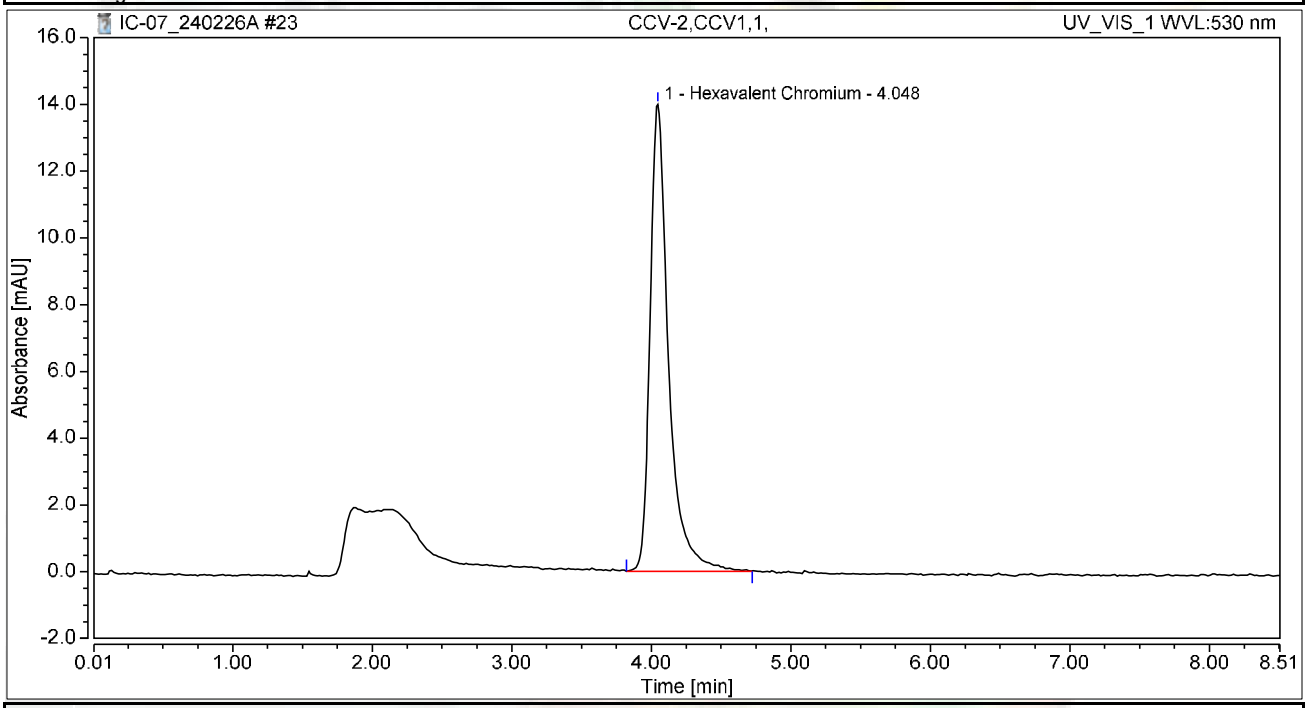
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.915	7.991	34.212	100.00	100.00	37.1510
Total:			**7.991**	**34.212**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

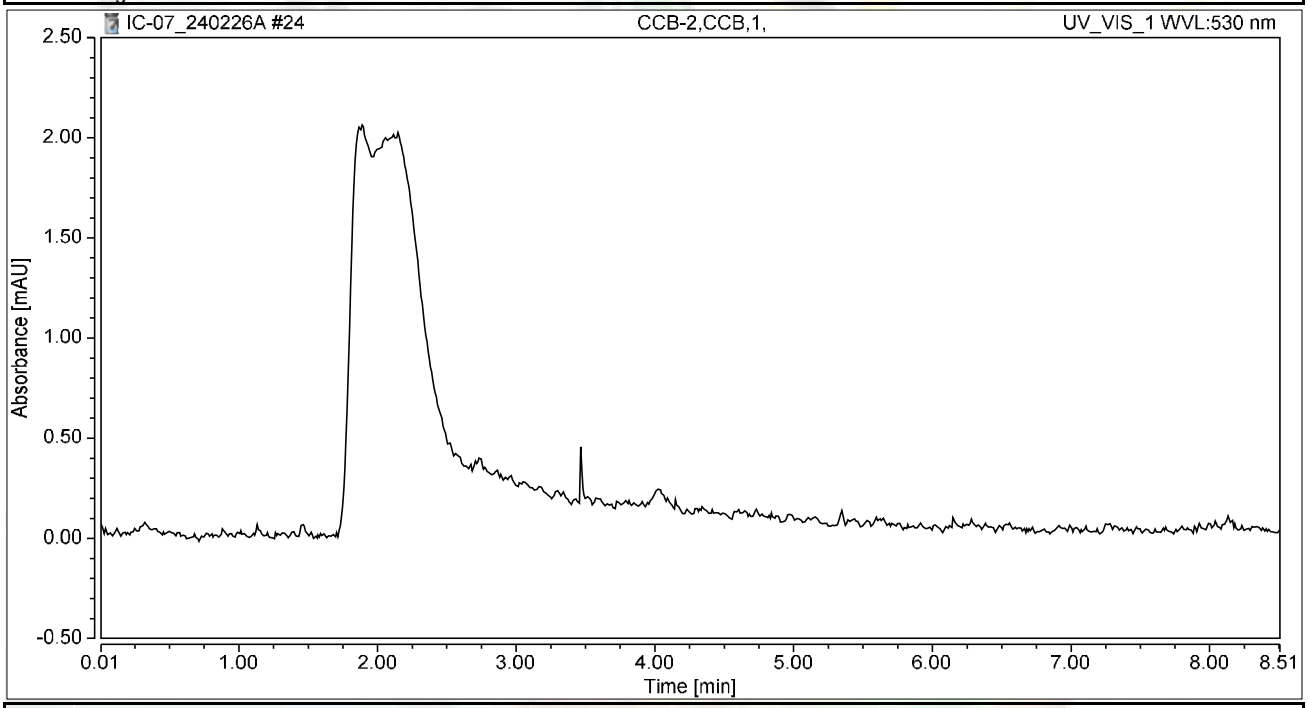
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.148	13.984	100.00	100.00	9.9881
Total:			**2.148**	**13.984**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

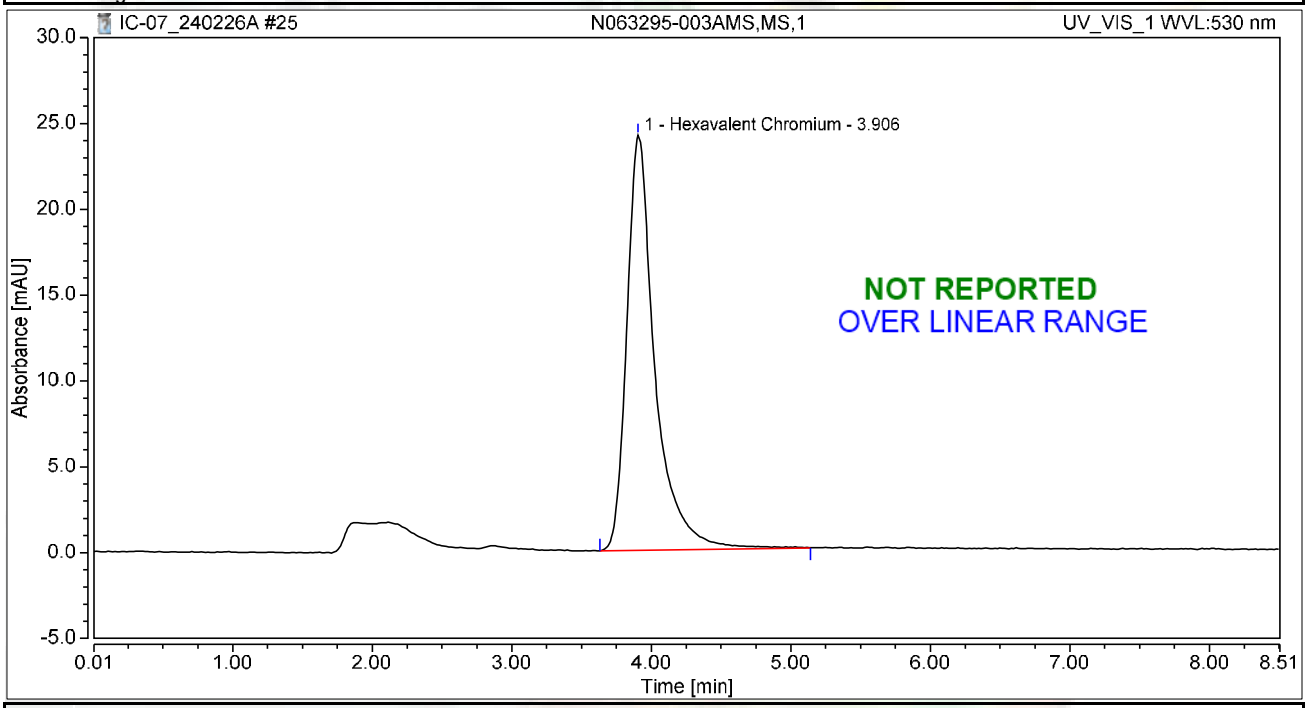
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

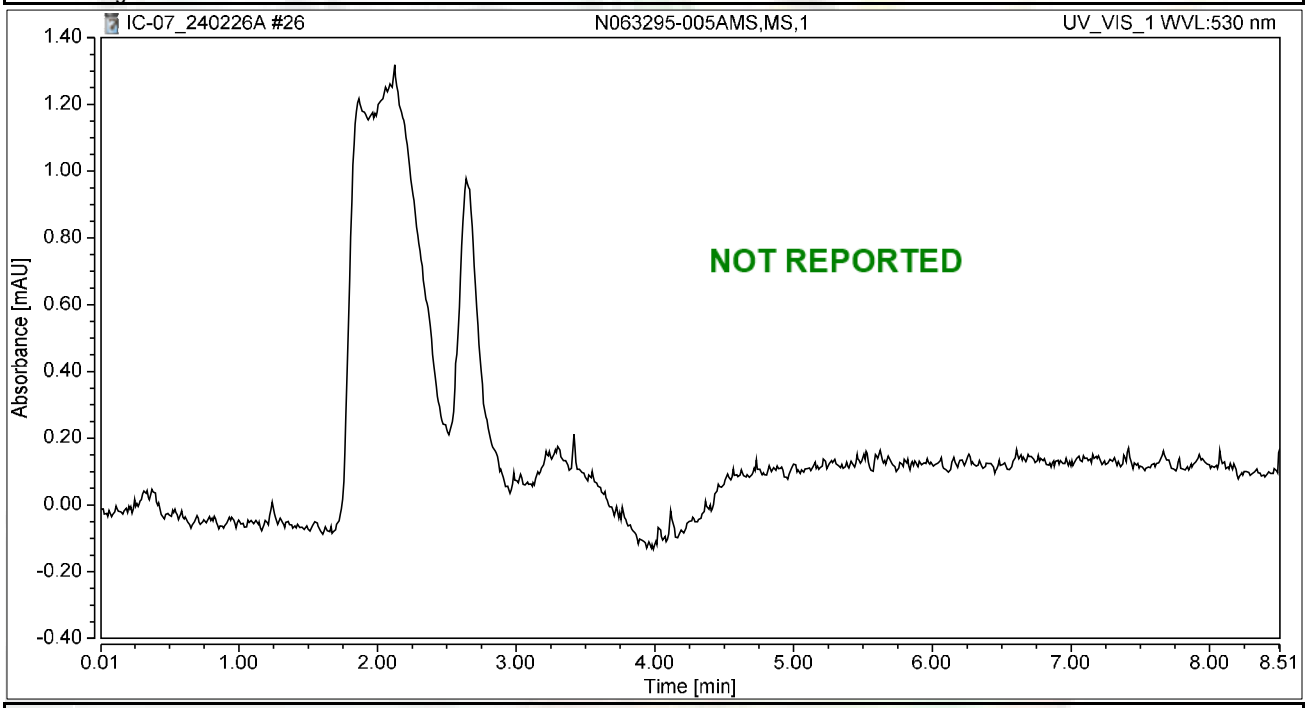
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.906	5.637	24.161	100.00	100.00	26.2075
Total:			**5.637**	**24.161**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

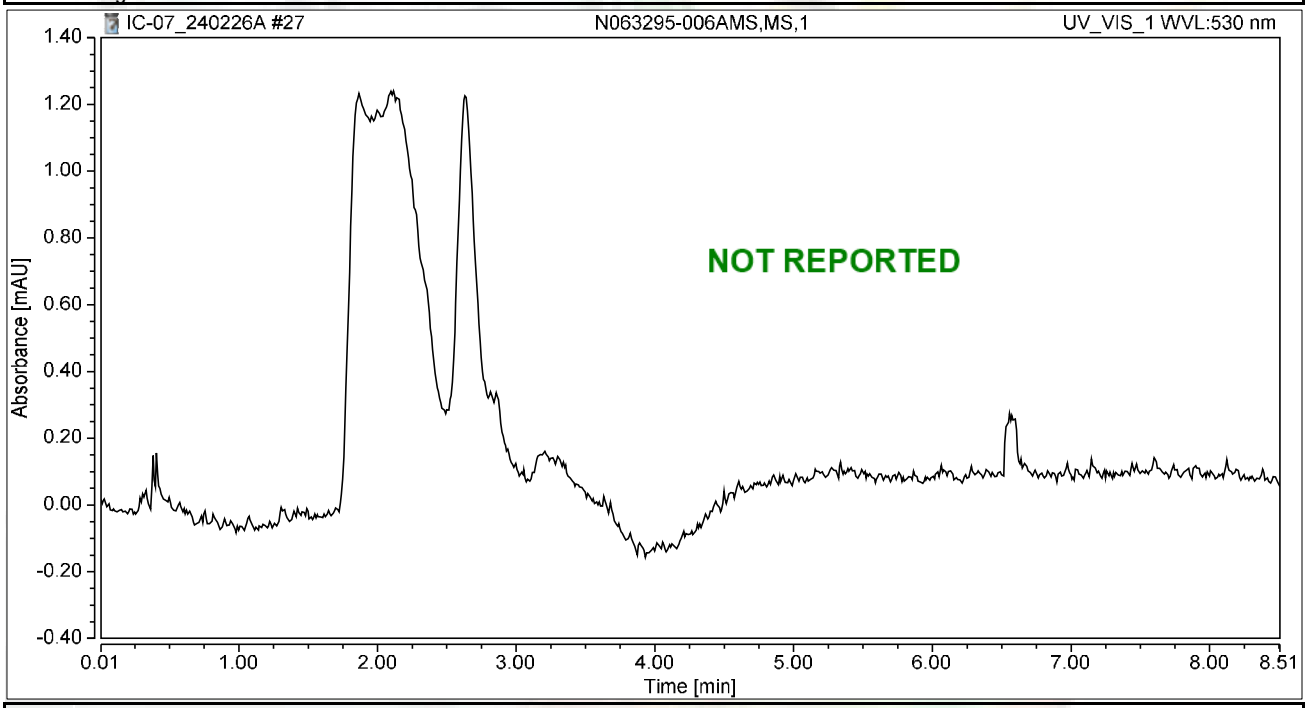
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

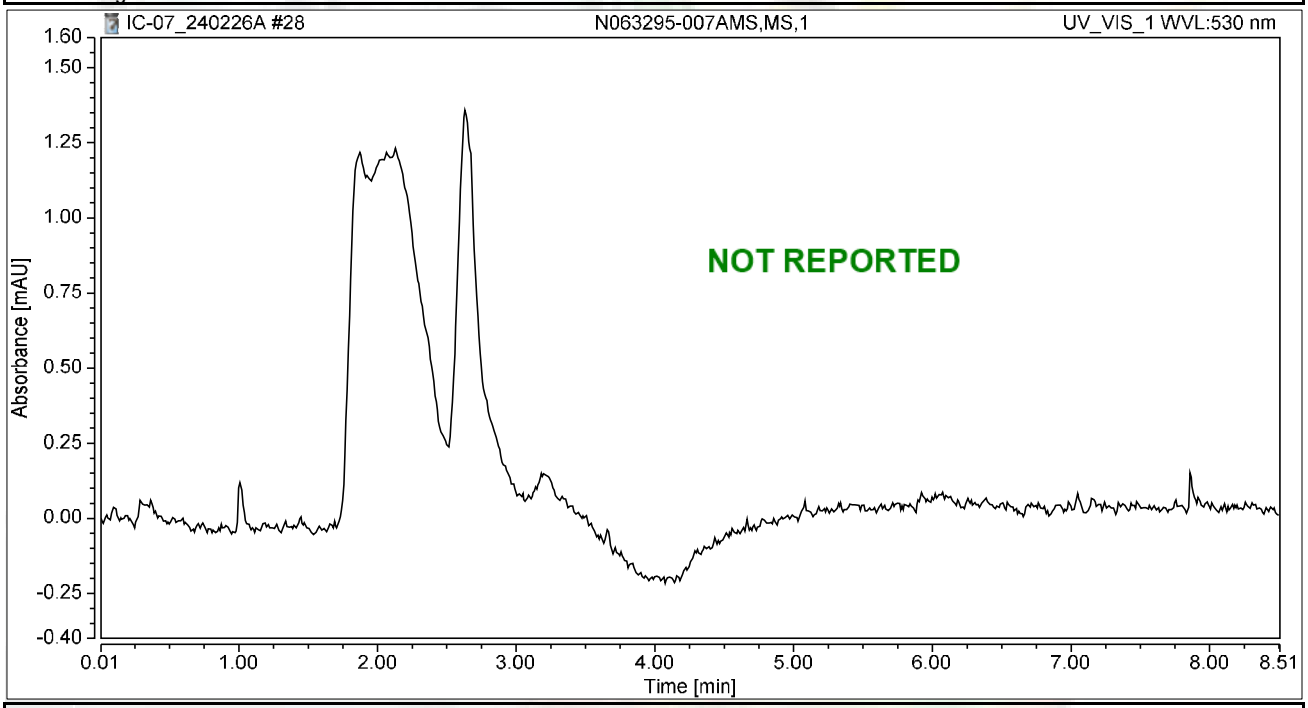
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

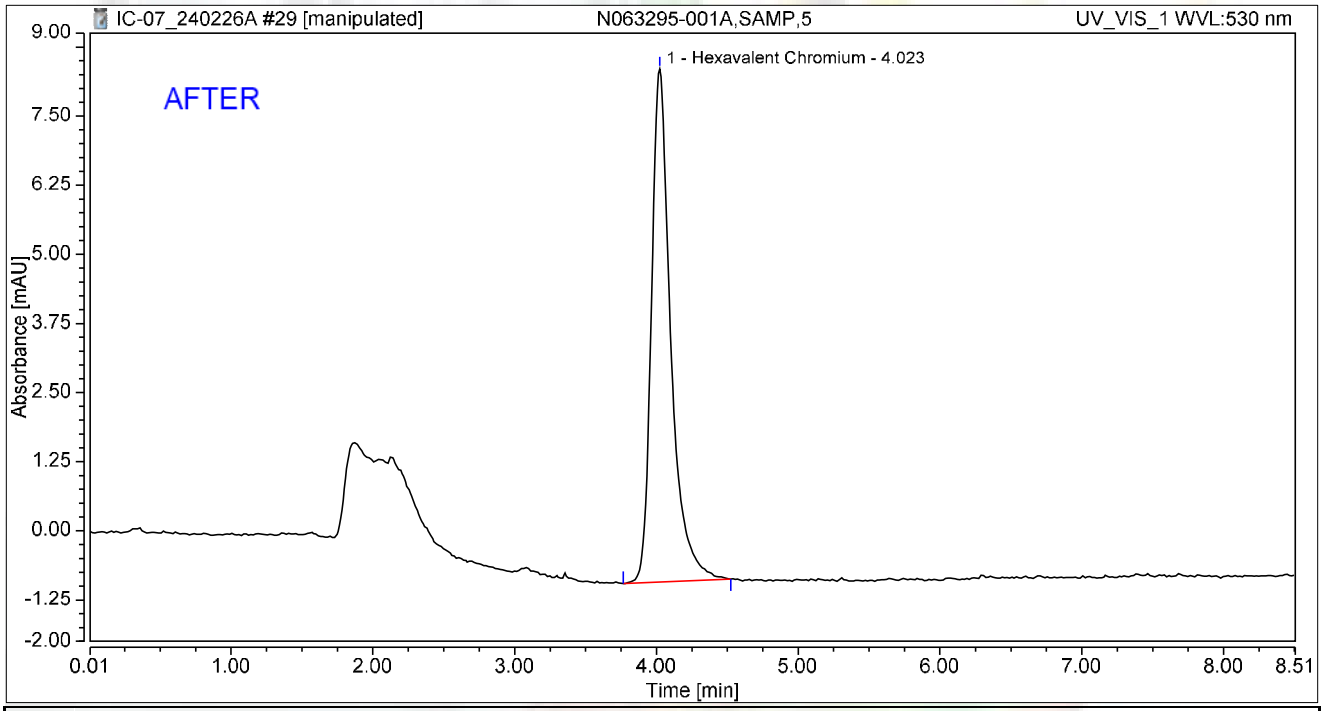
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	1.470	9.276	100.00	100.00	6.8342
Total:			**1.470**	**9.276**	**100.00**	**100.00**	

Reviewed by:

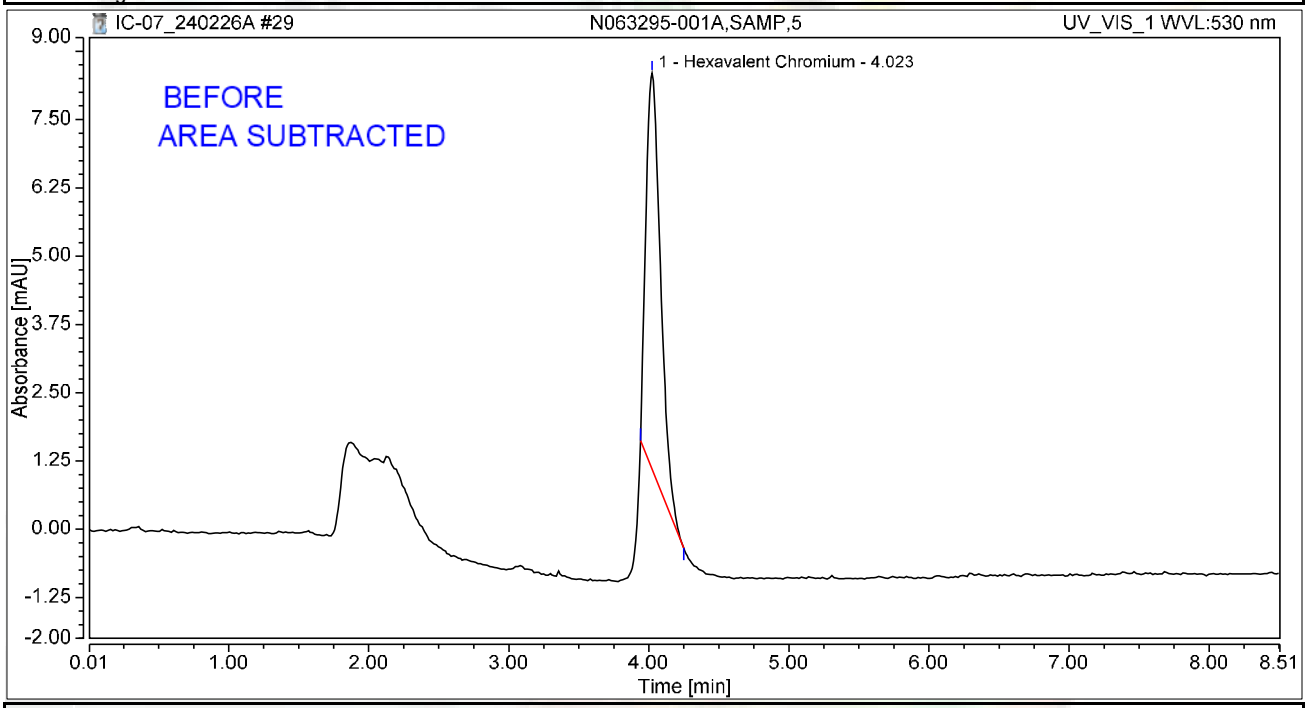
JRB 2/29/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063295-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

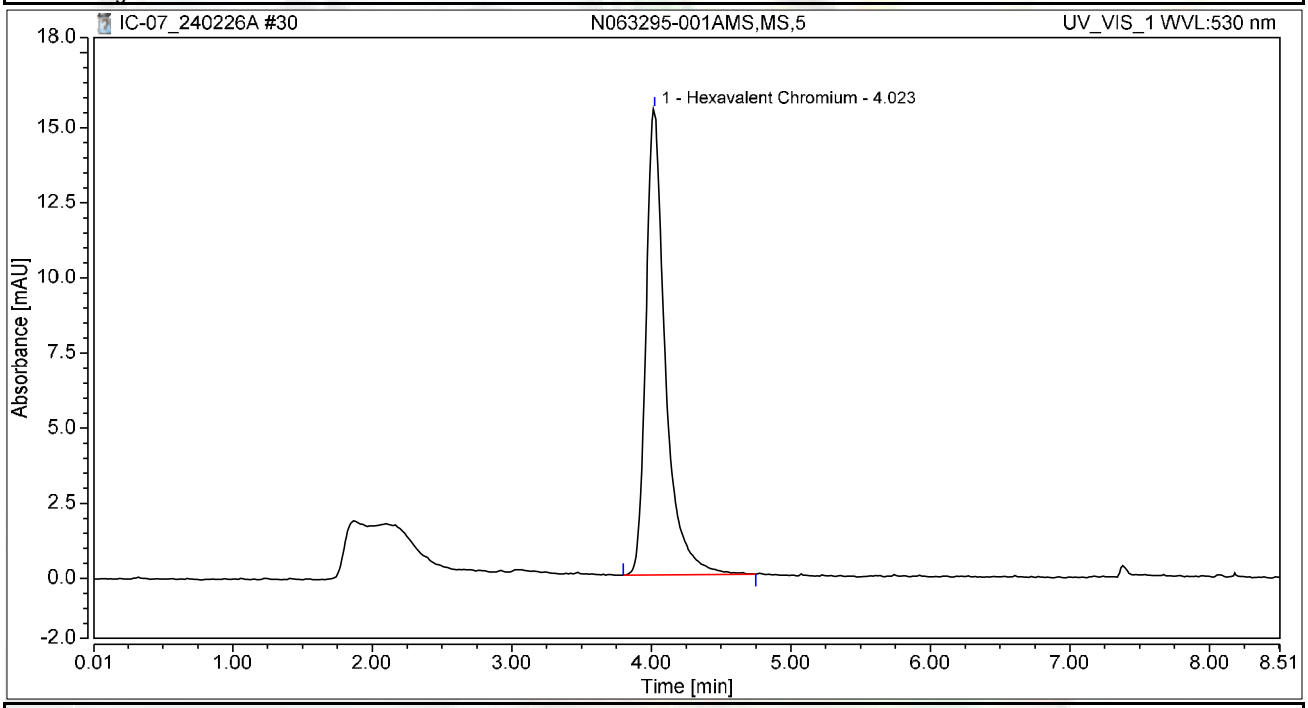
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.878	7.255	100.00	100.00	4.0818
Total:			**0.878**	**7.255**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 15:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

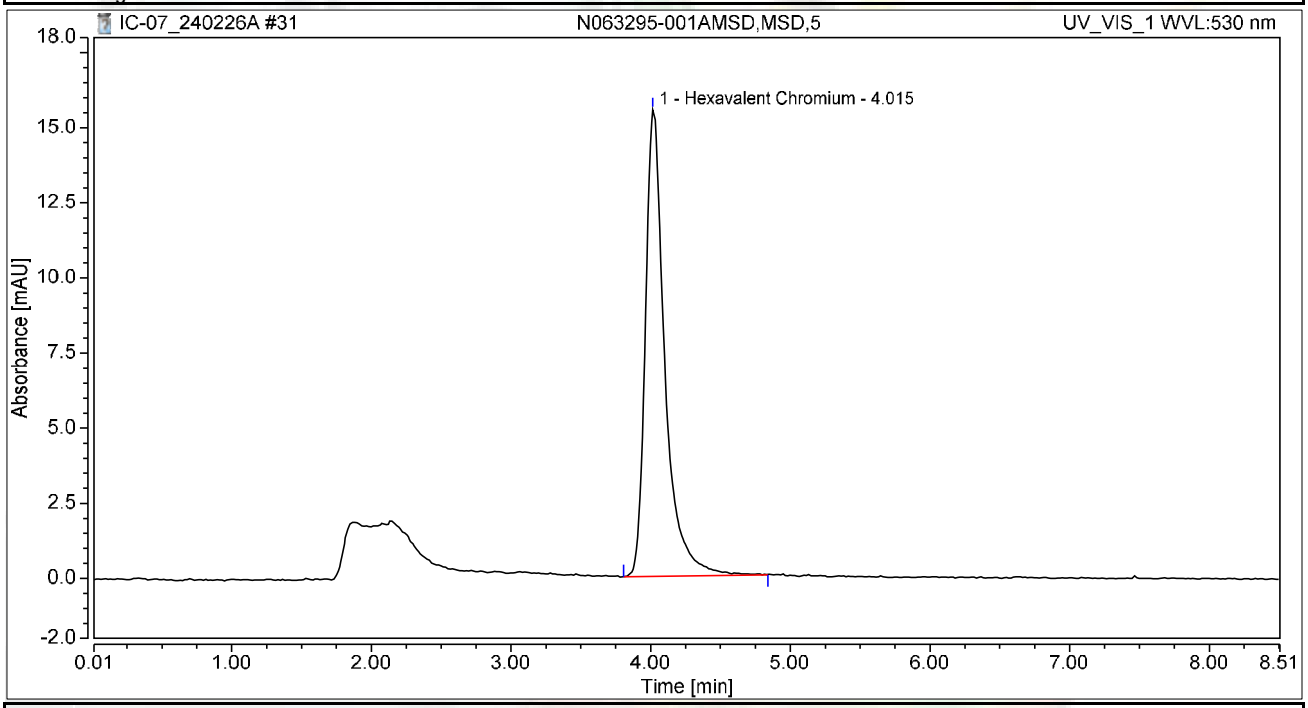
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	2.510	15.510	100.00	100.00	11.6673
Total:			**2.510**	**15.510**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-001AMSD,MSD,5**	*Run Time (min):*	**8.49**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 15:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

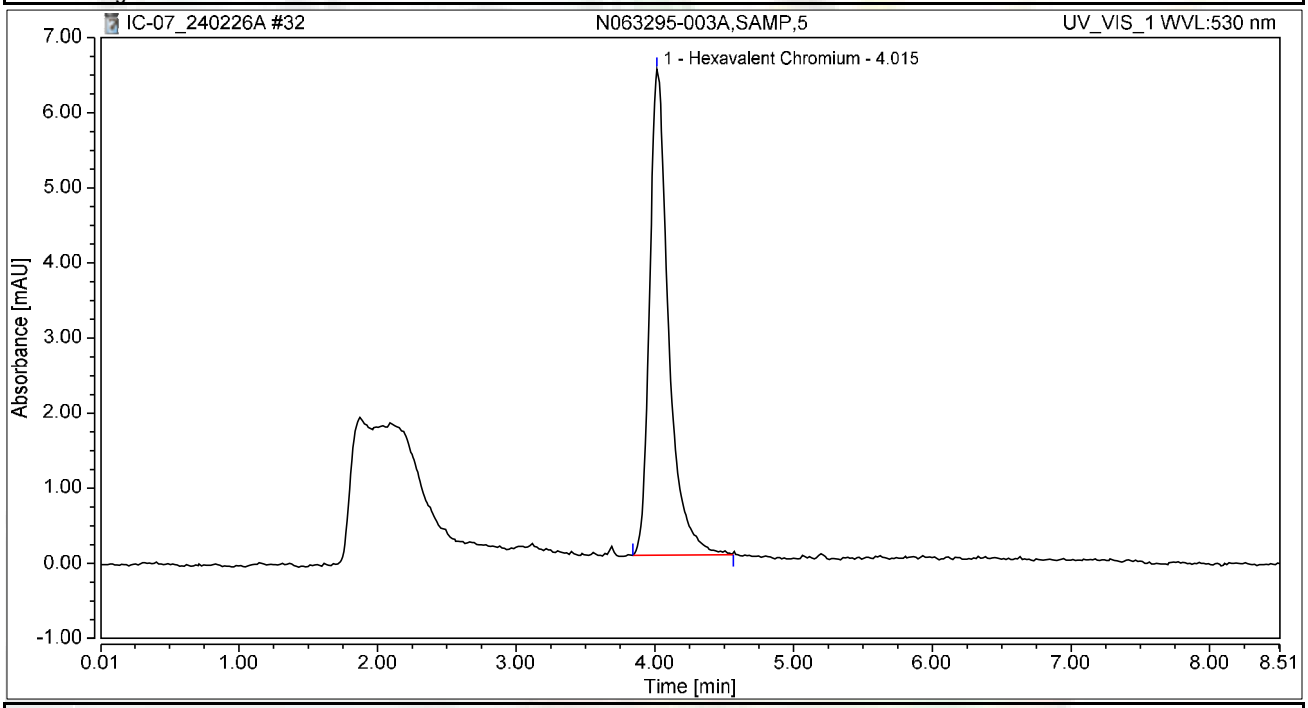
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	2.524	15.529	100.00	100.00	11.7340
Total:			**2.524**	**15.529**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 15:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

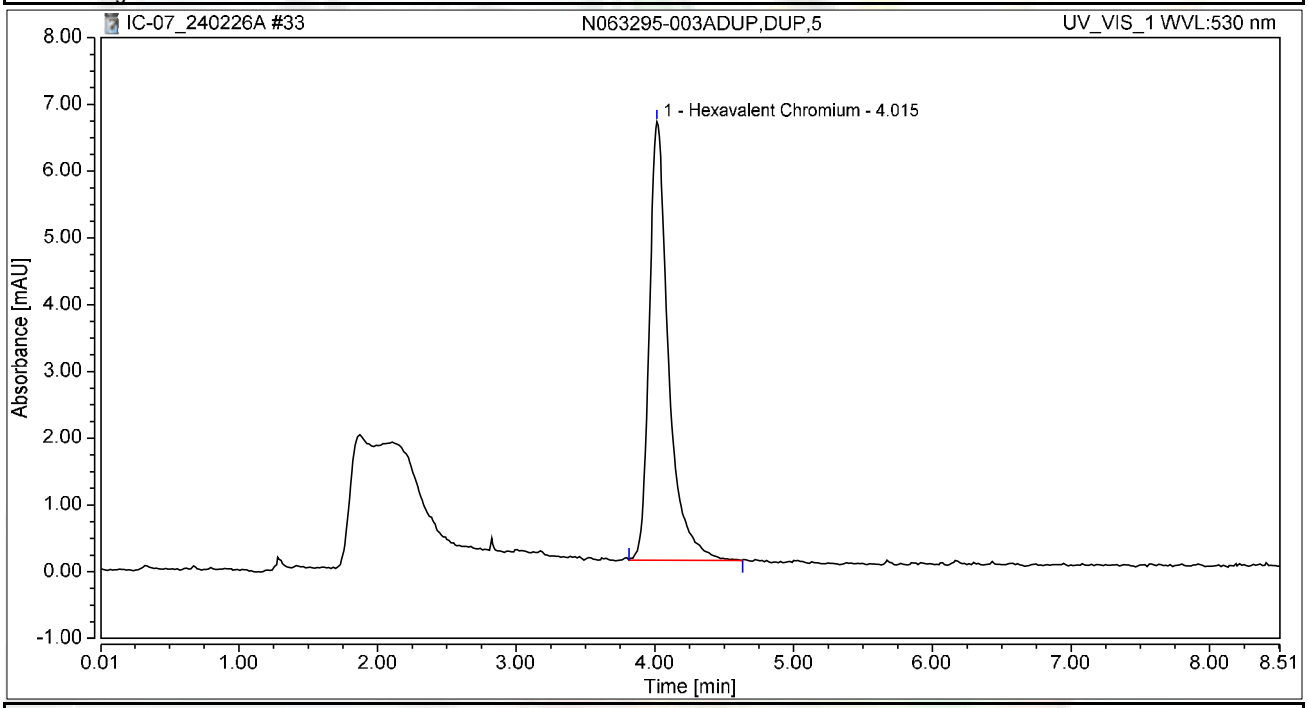
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.030	6.472	100.00	100.00	4.7872
Total:			**1.030**	**6.472**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003ADUP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 15:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

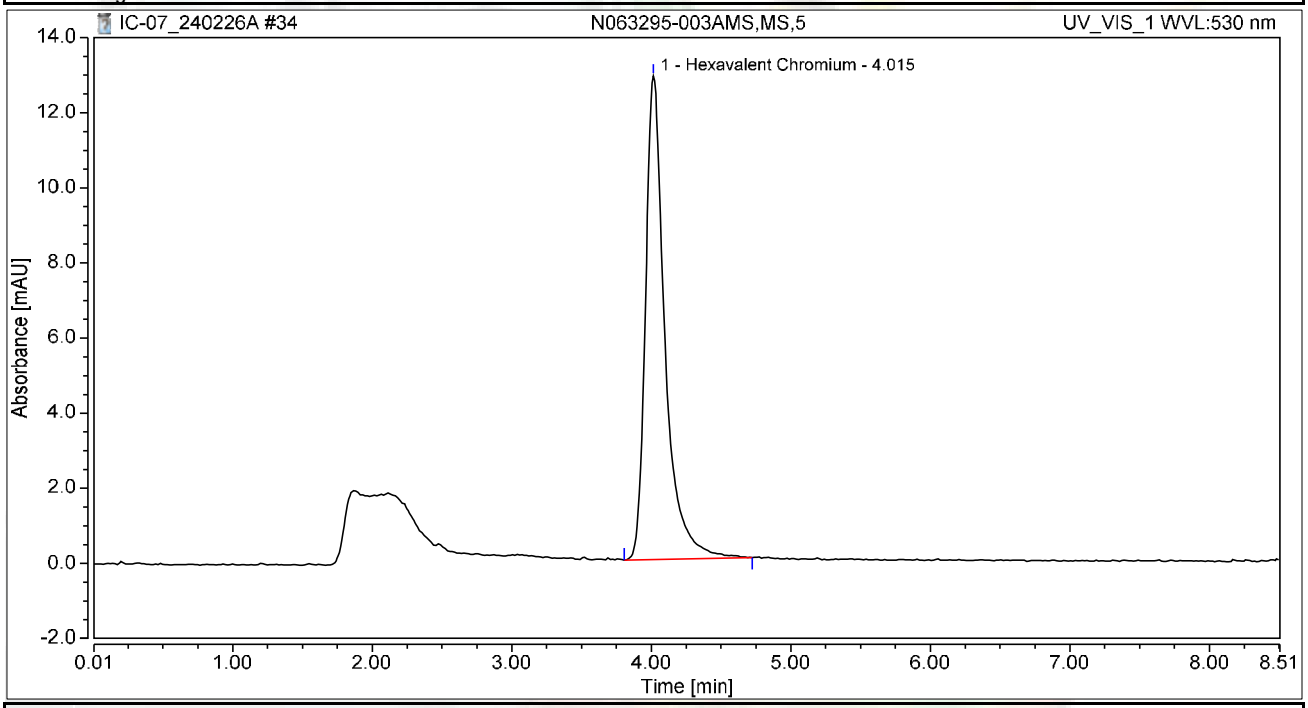
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.058	6.567	100.00	100.00	4.9182
Total:			**1.058**	**6.567**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 15:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

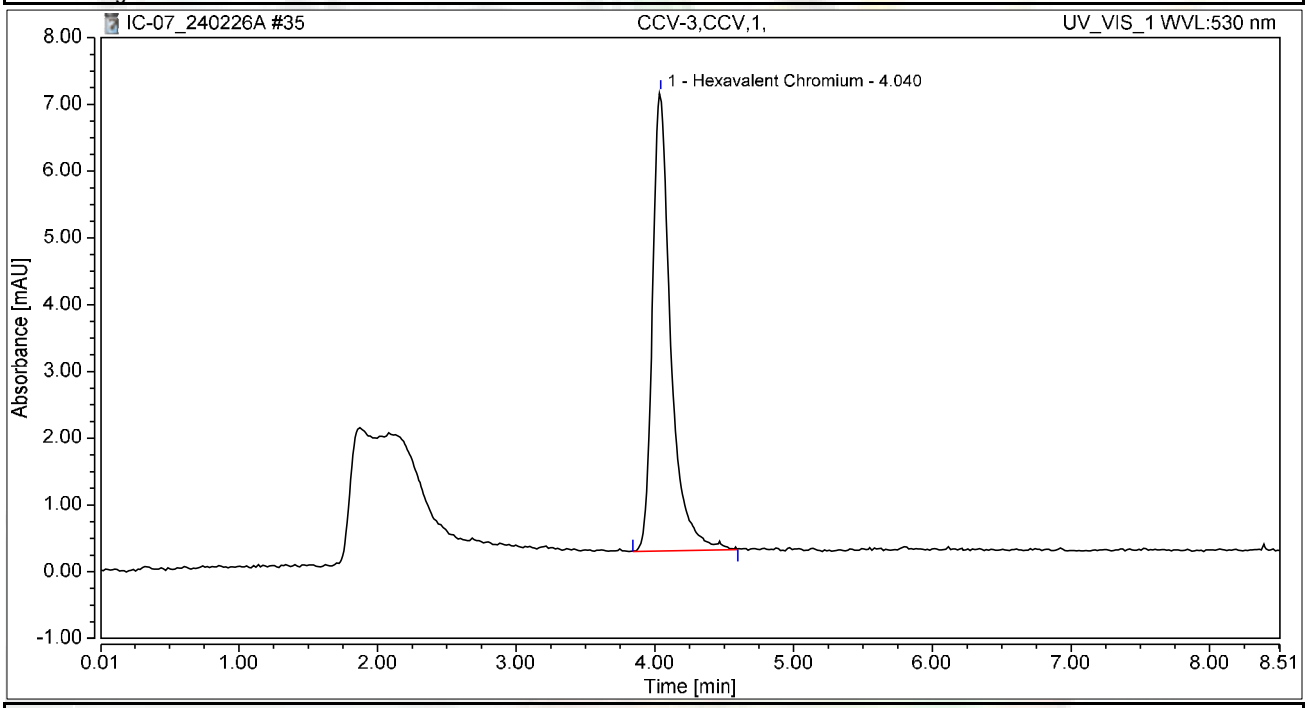
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	2.086	12.876	100.00	100.00	9.6979
Total:			**2.086**	**12.876**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 16:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

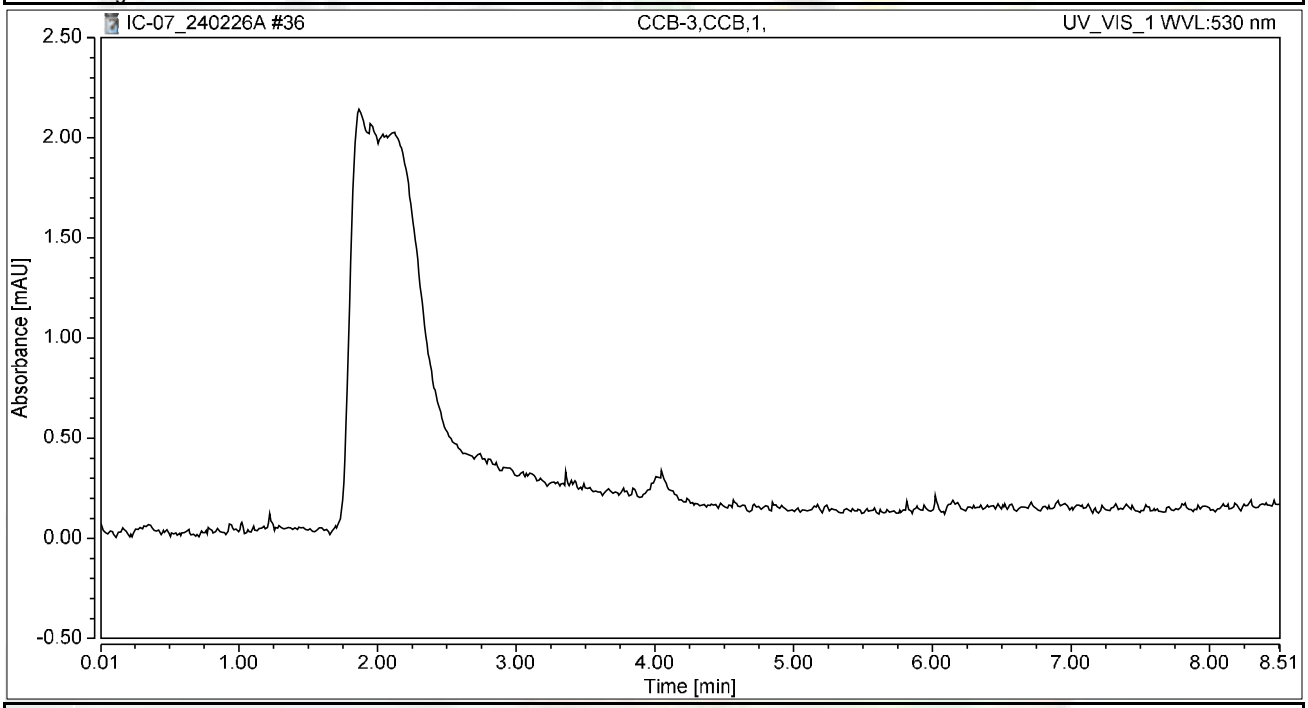
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.049	6.875	100.00	100.00	4.8750
Total:			**1.049**	**6.875**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 16:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

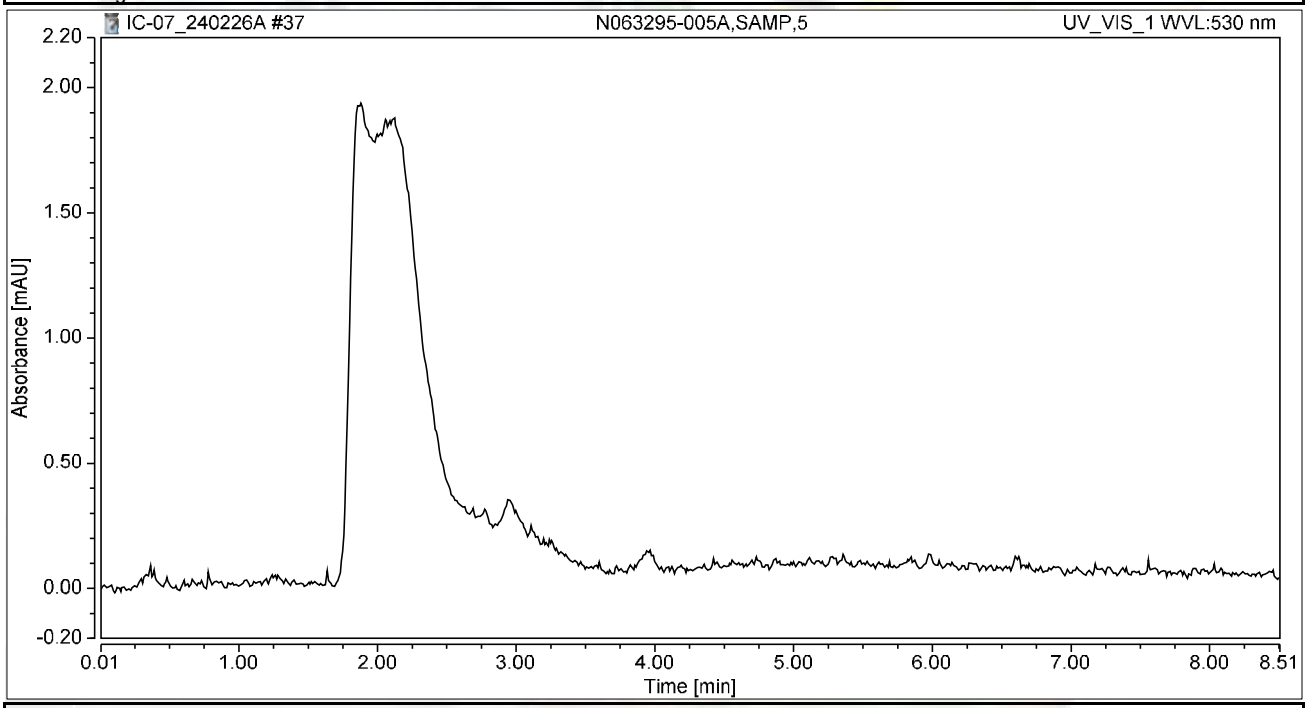
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 16:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

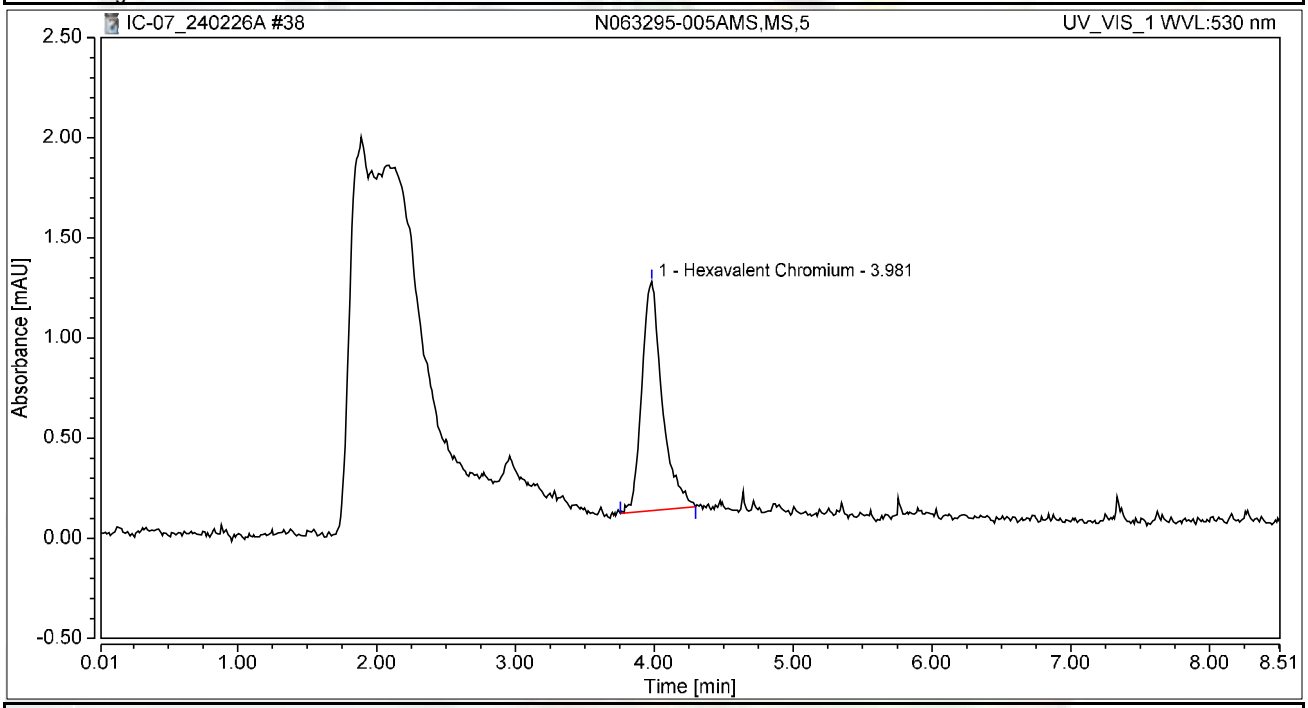
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-005AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 16:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

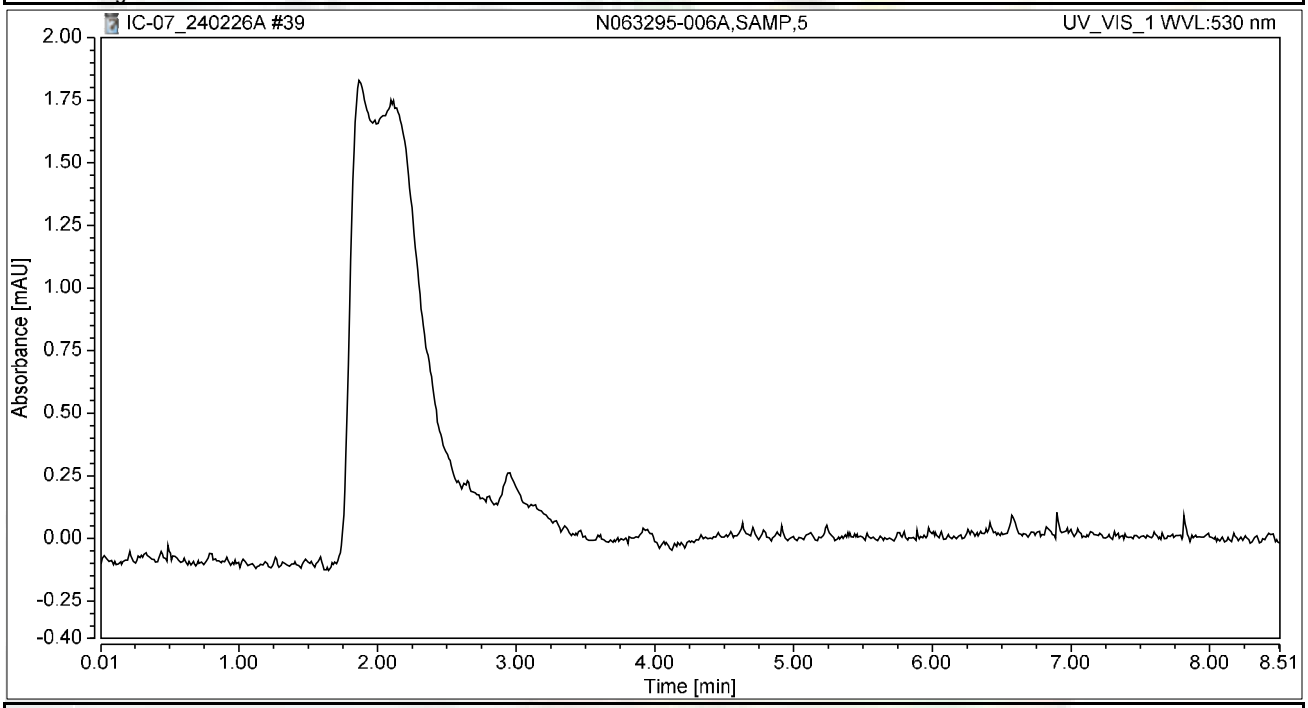
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.195	1.144	100.00	100.00	0.9085
Total:			**0.195**	**1.144**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-006A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 16:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

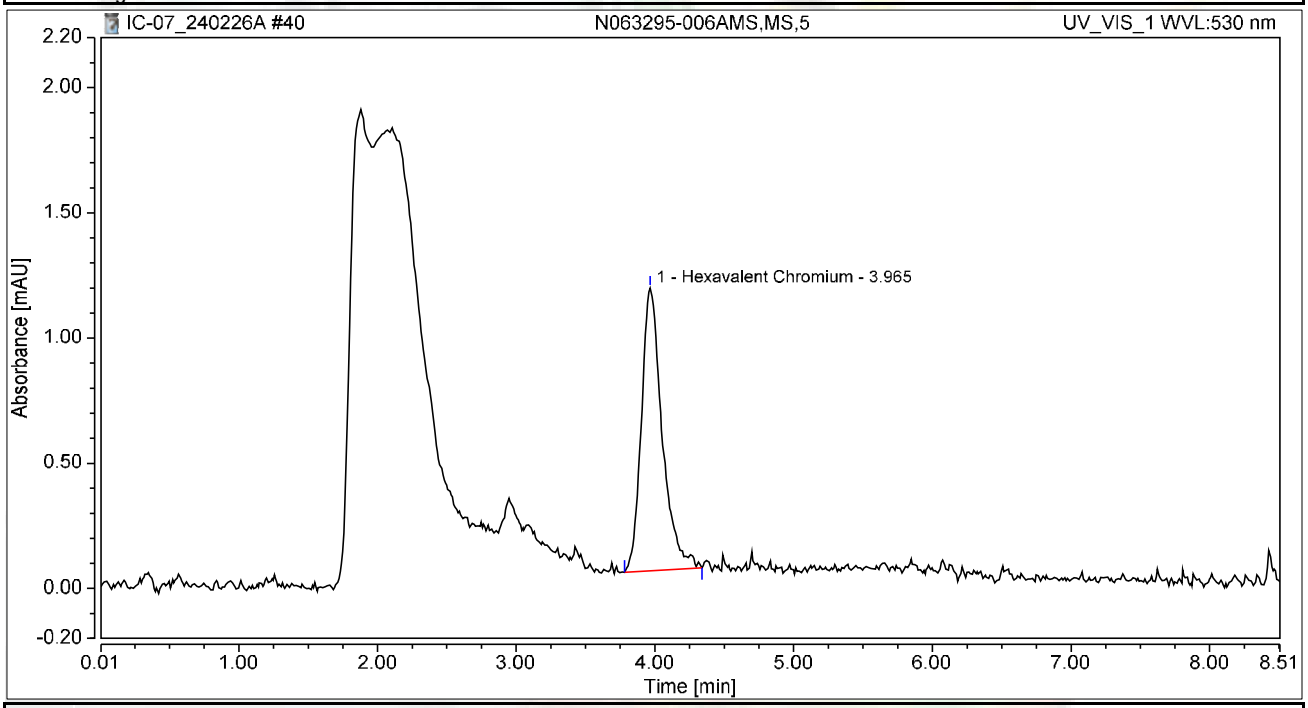
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-006AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 16:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

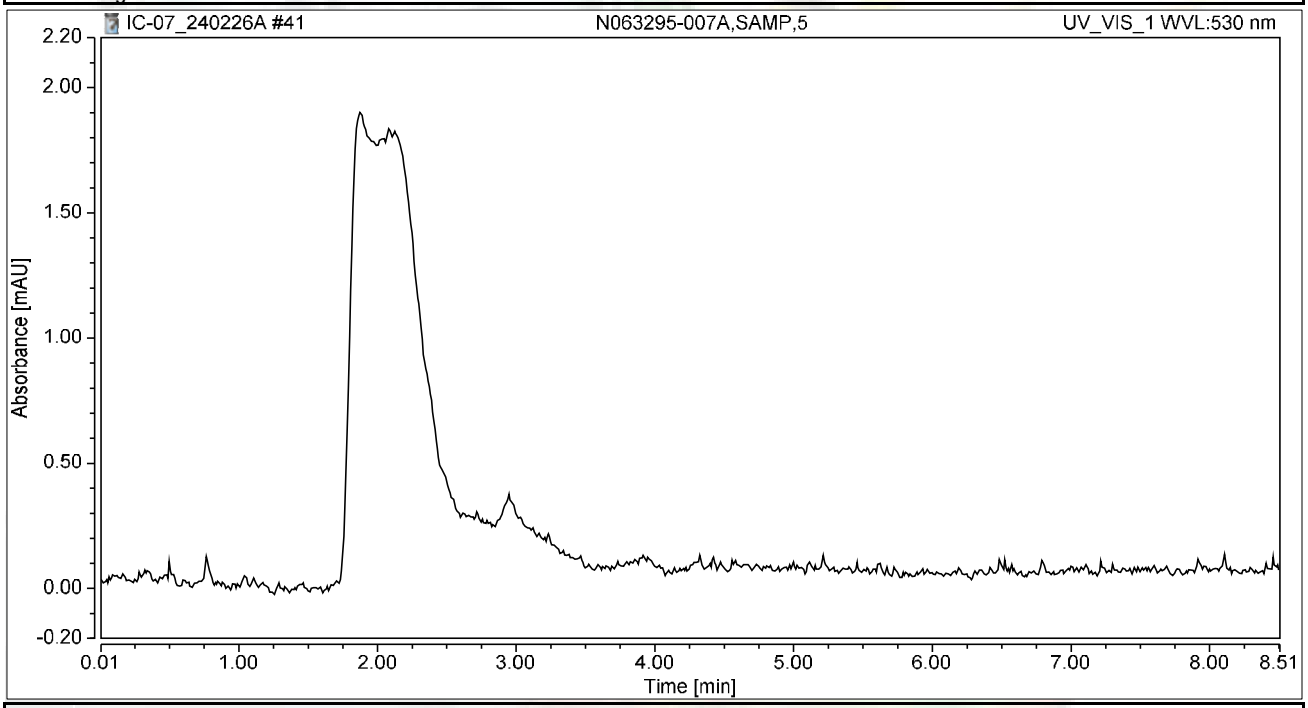
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.196	1.130	100.00	100.00	0.9111
Total:			**0.196**	**1.130**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-007A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

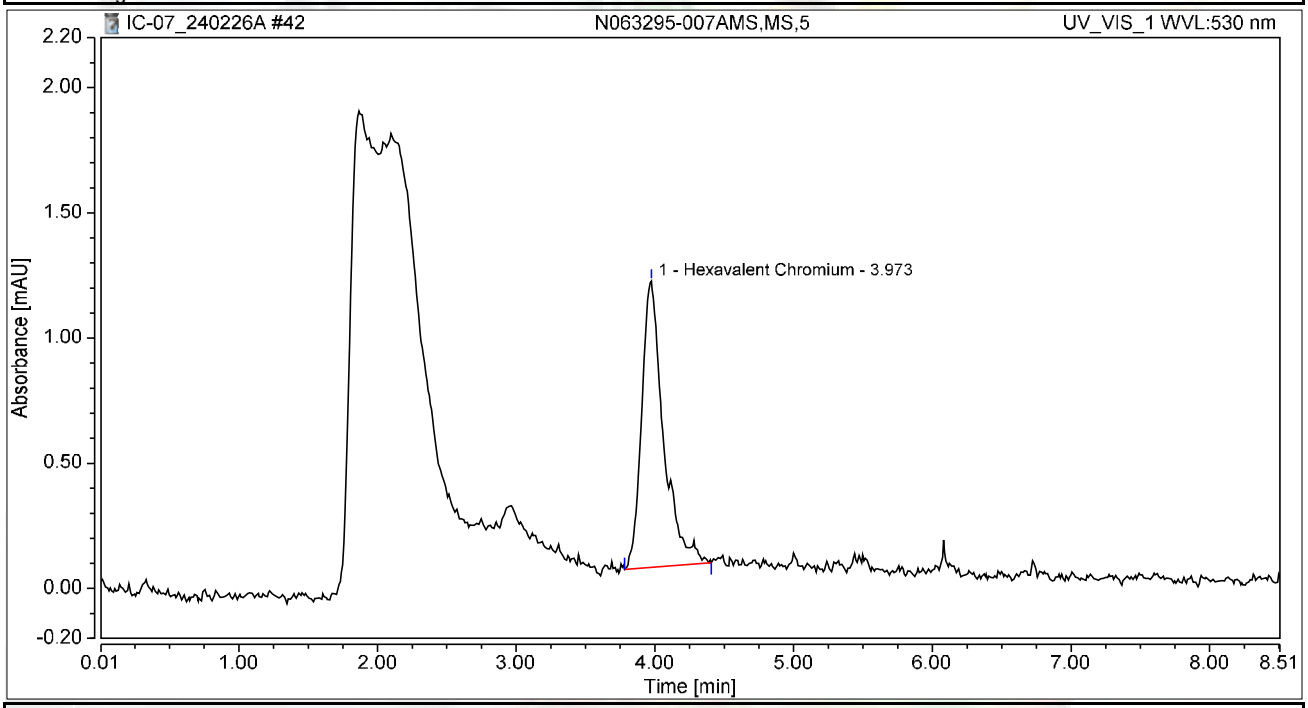
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-007AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

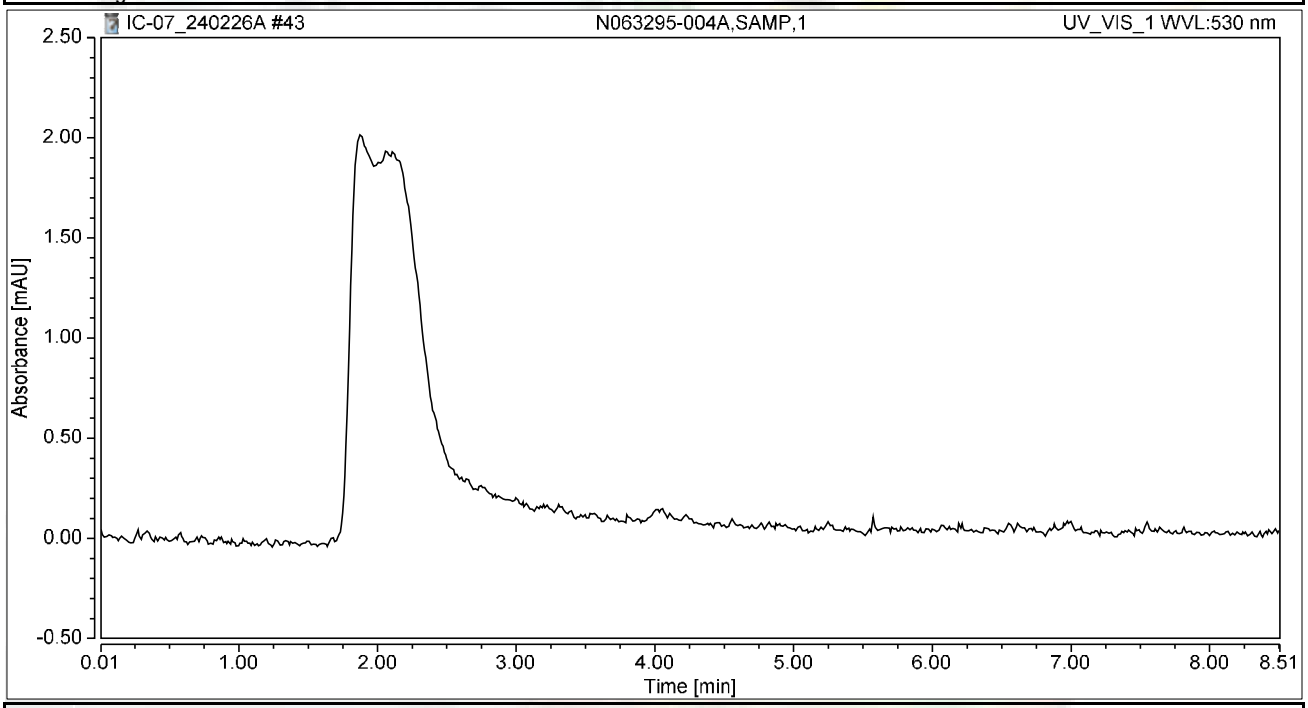
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.209	1.143	100.00	100.00	0.9734
Total:			**0.209**	**1.143**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

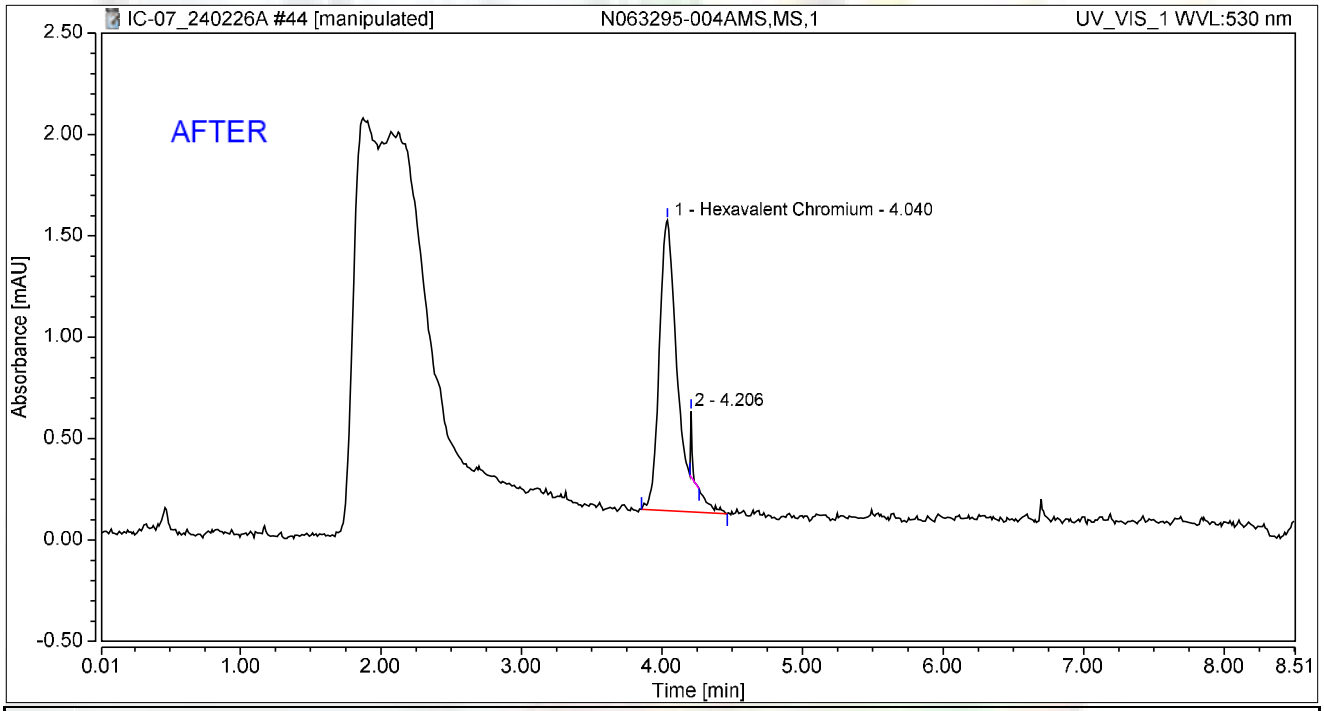
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-004AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.219	1.431	98.11	81.61	1.0195
2		4.206	0.004	0.323	1.89	18.39	n.a.
Total:			**0.224**	**1.754**	**100.00**	**100.00**	

Reviewed by:

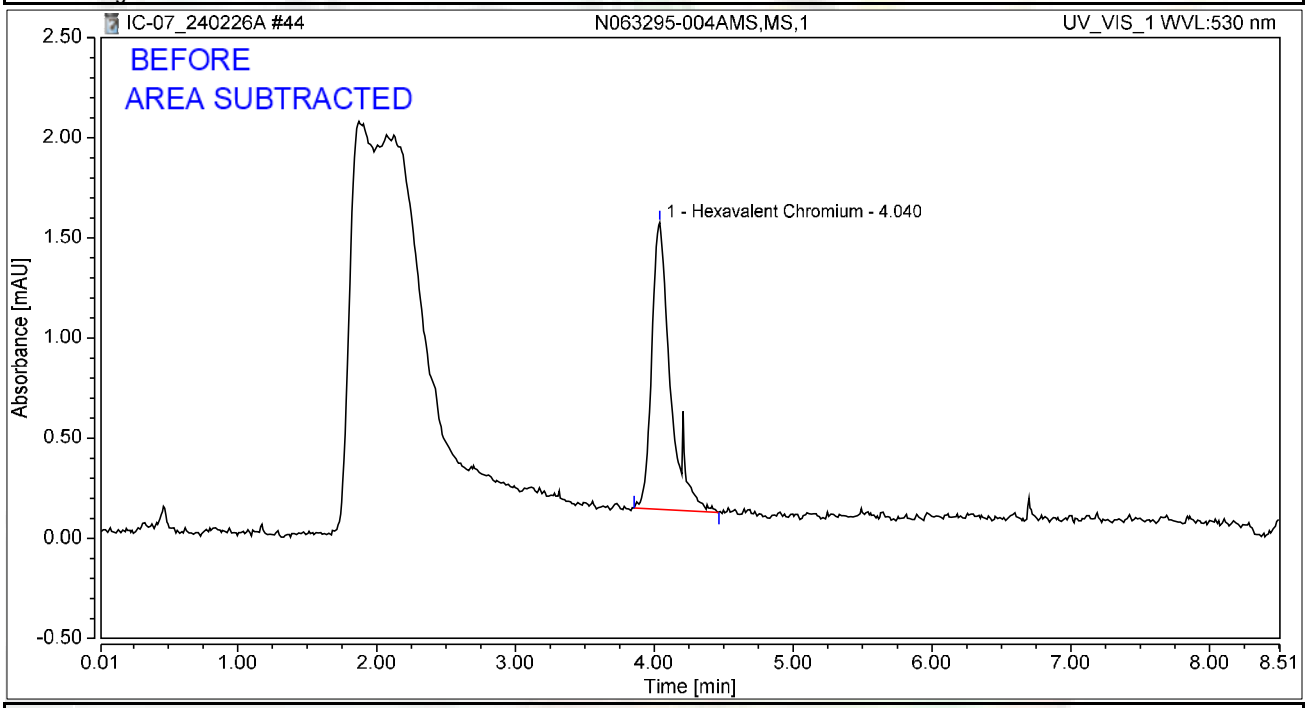
JRB 2/29/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063295-004AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

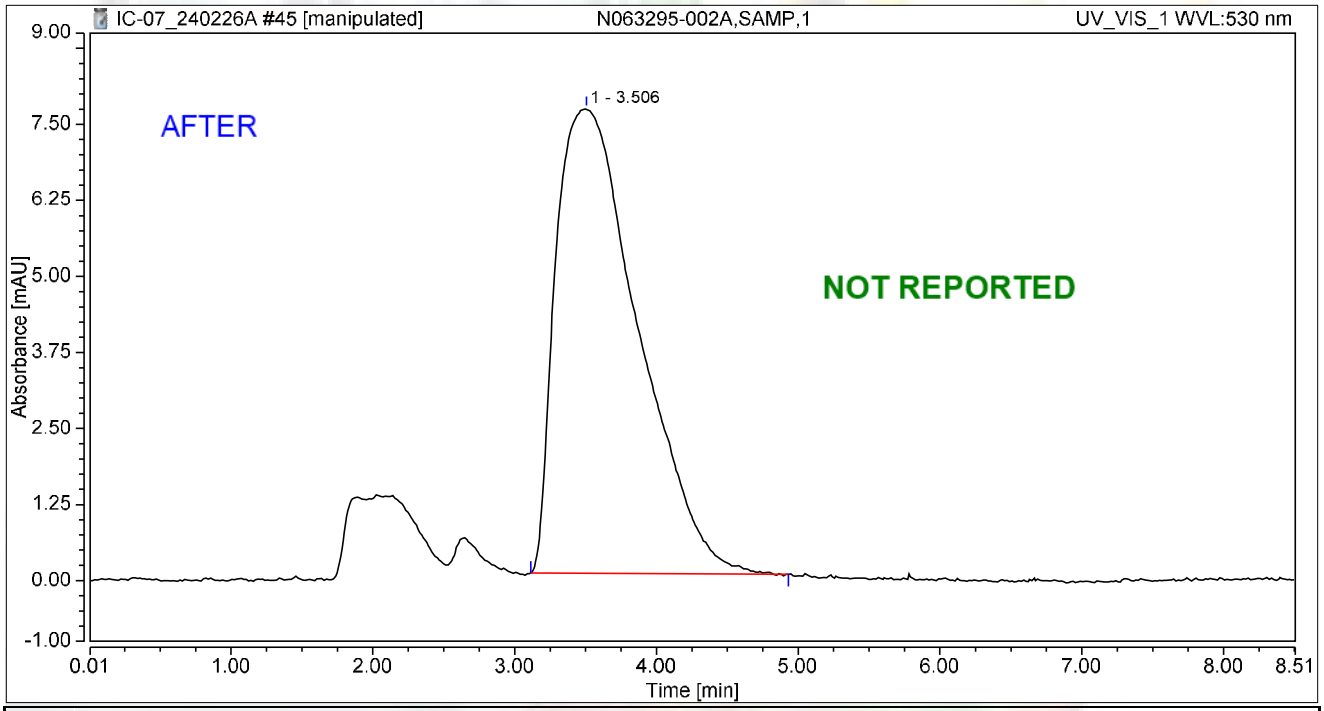
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.224	1.431	100.00	100.00	1.0391
Total:			**0.224**	**1.431**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

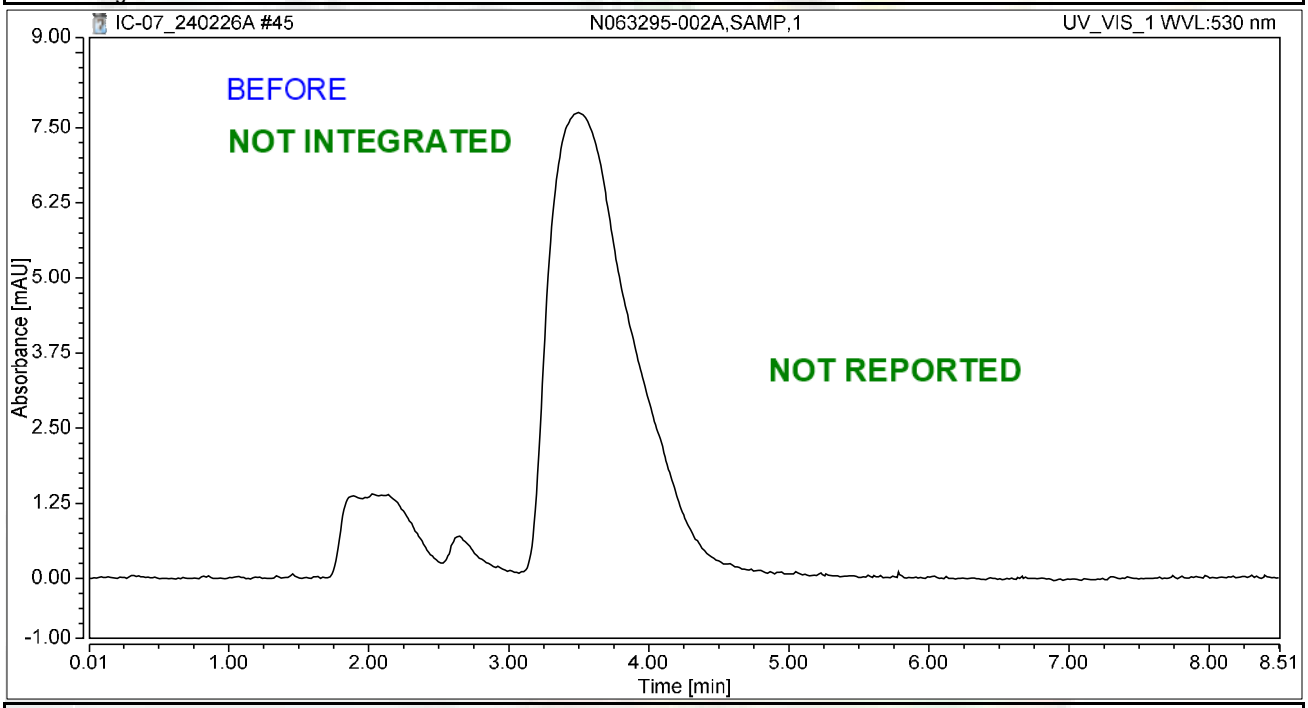
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.506	5.137	7.645	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**5.137**	**7.645**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

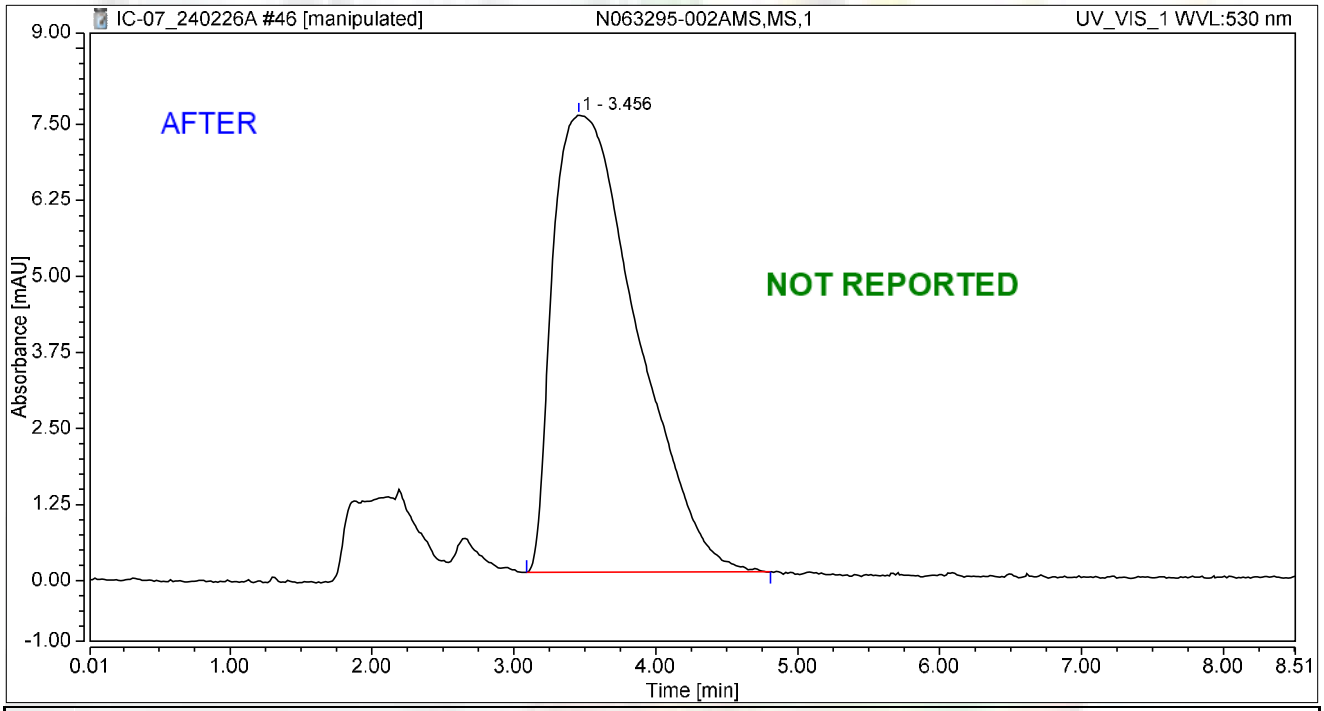
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

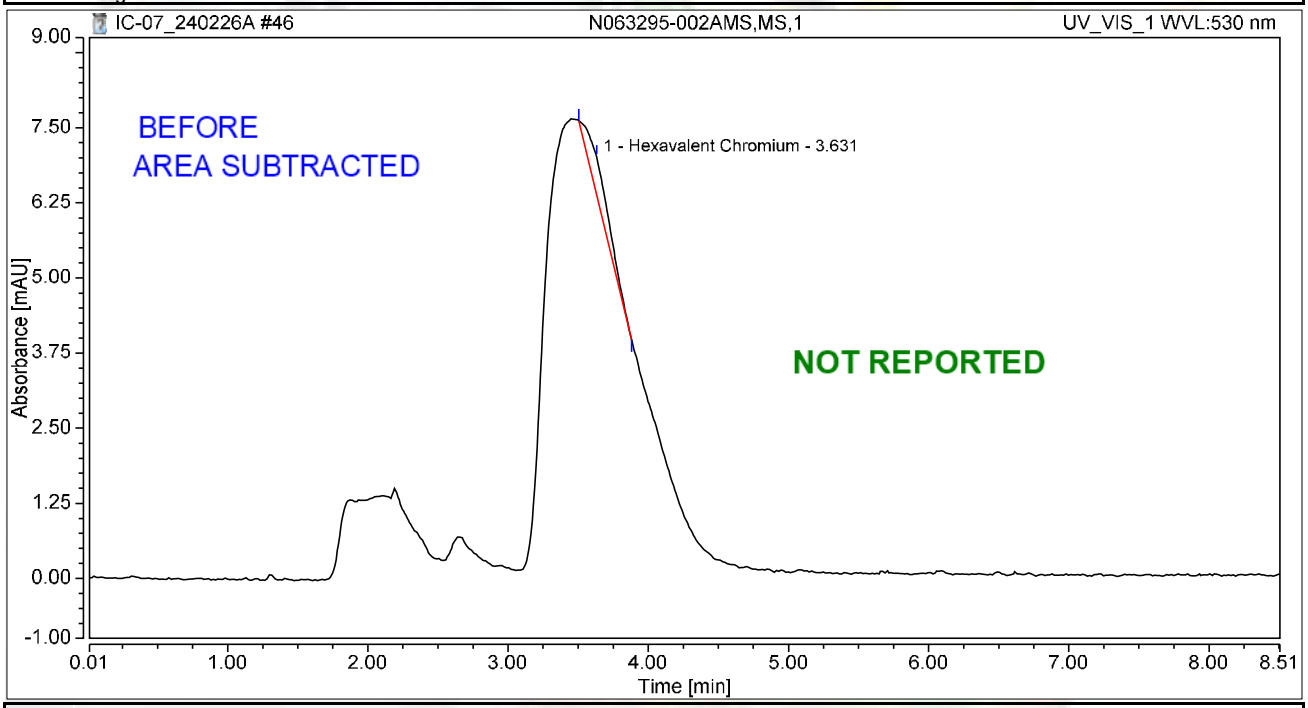
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.456	5.153	7.514	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**5.153**	**7.514**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

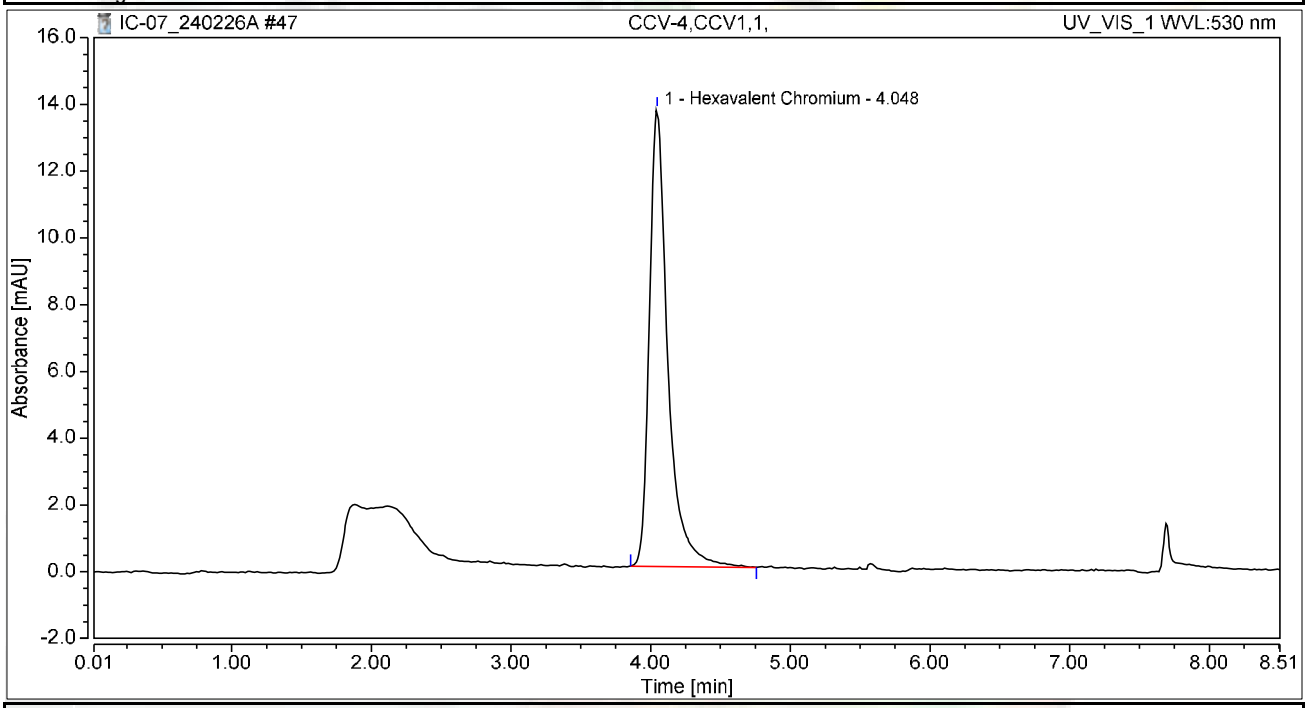
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.631	0.118	0.612	100.00	100.00	0.5478
Total:			**0.118**	**0.612**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 18:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

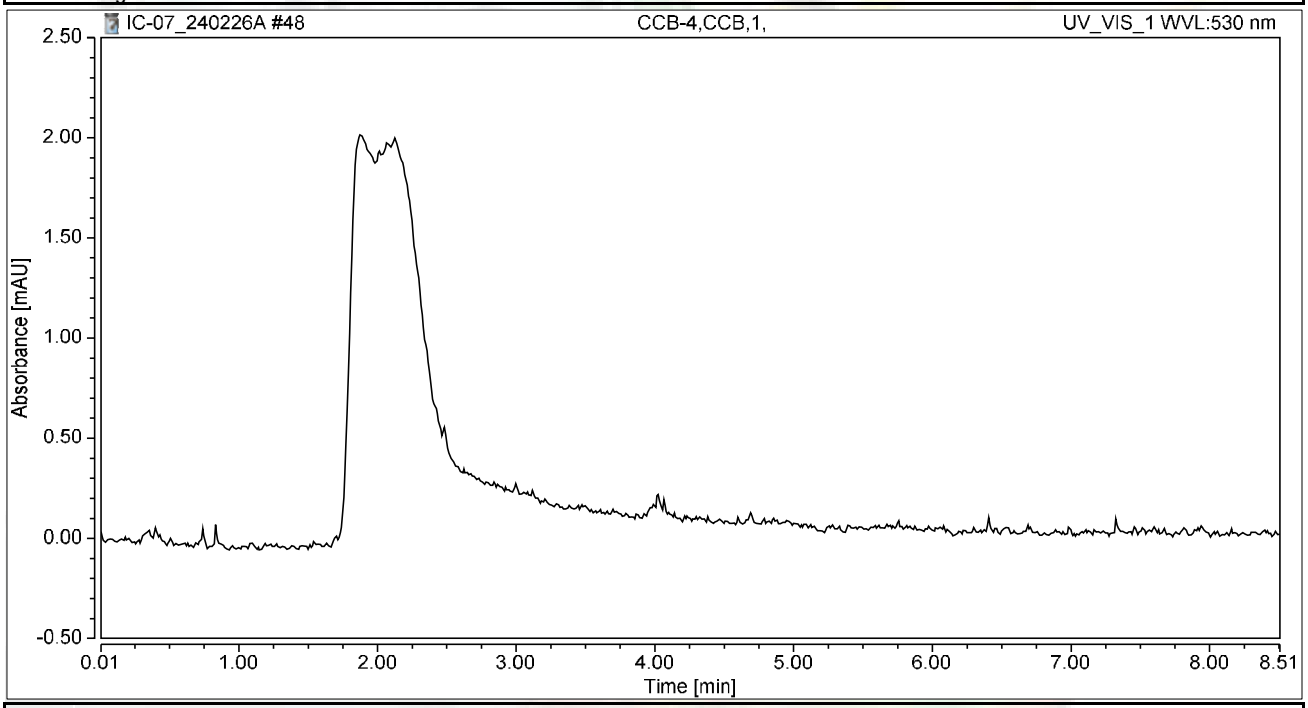
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.106	13.699	100.00	100.00	9.7906
Total:			**2.106**	**13.699**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 18:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

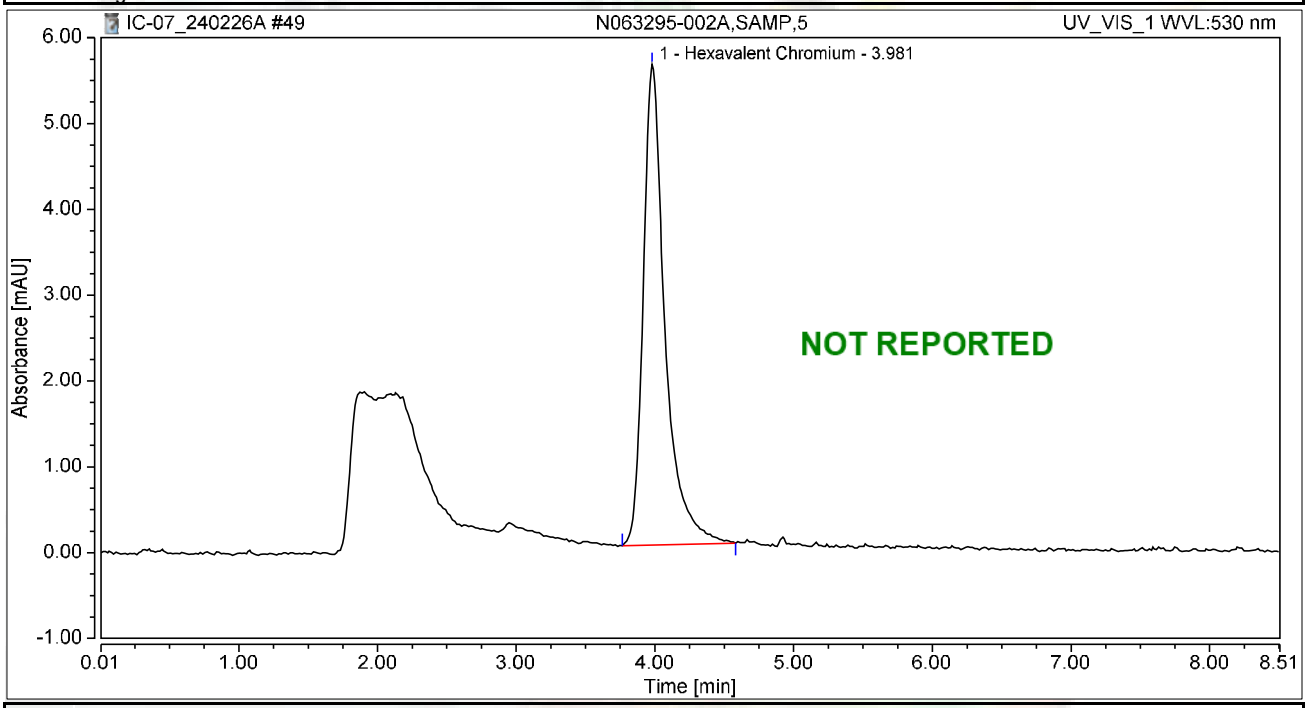
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 18:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

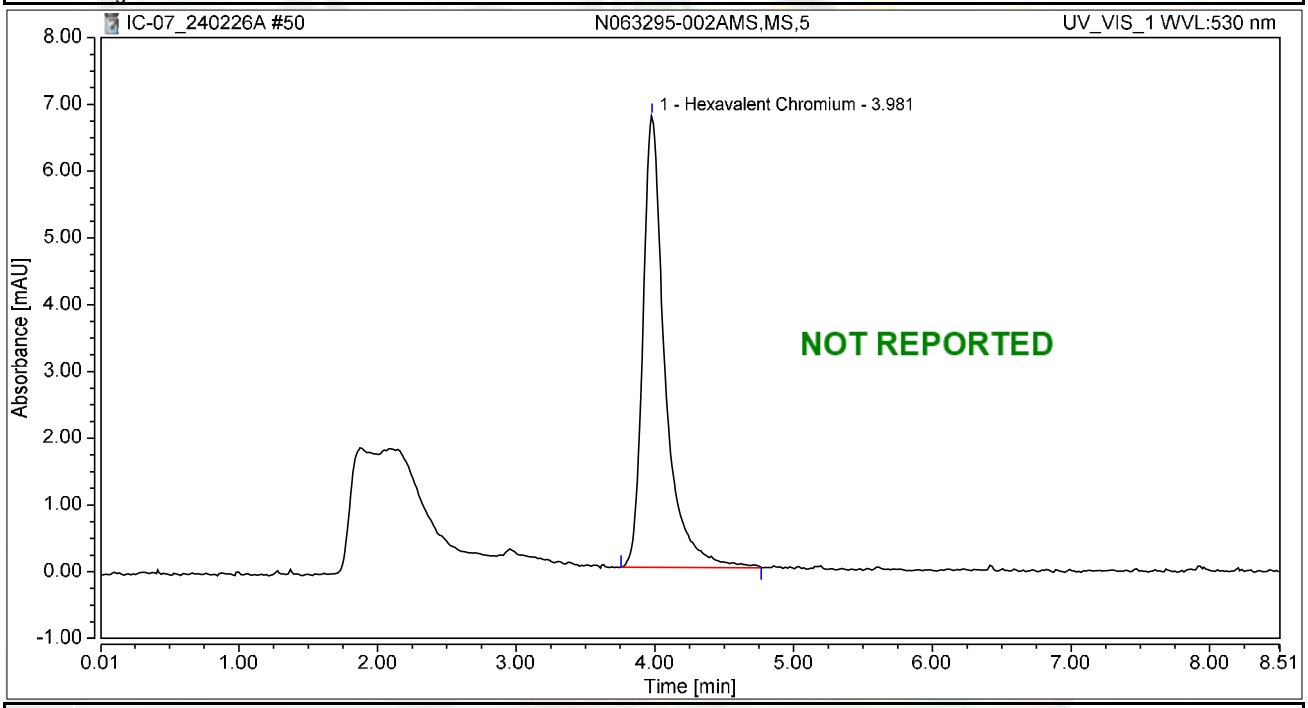
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.018	5.597	100.00	100.00	4.7311
Total:			**1.018**	**5.597**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 18:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

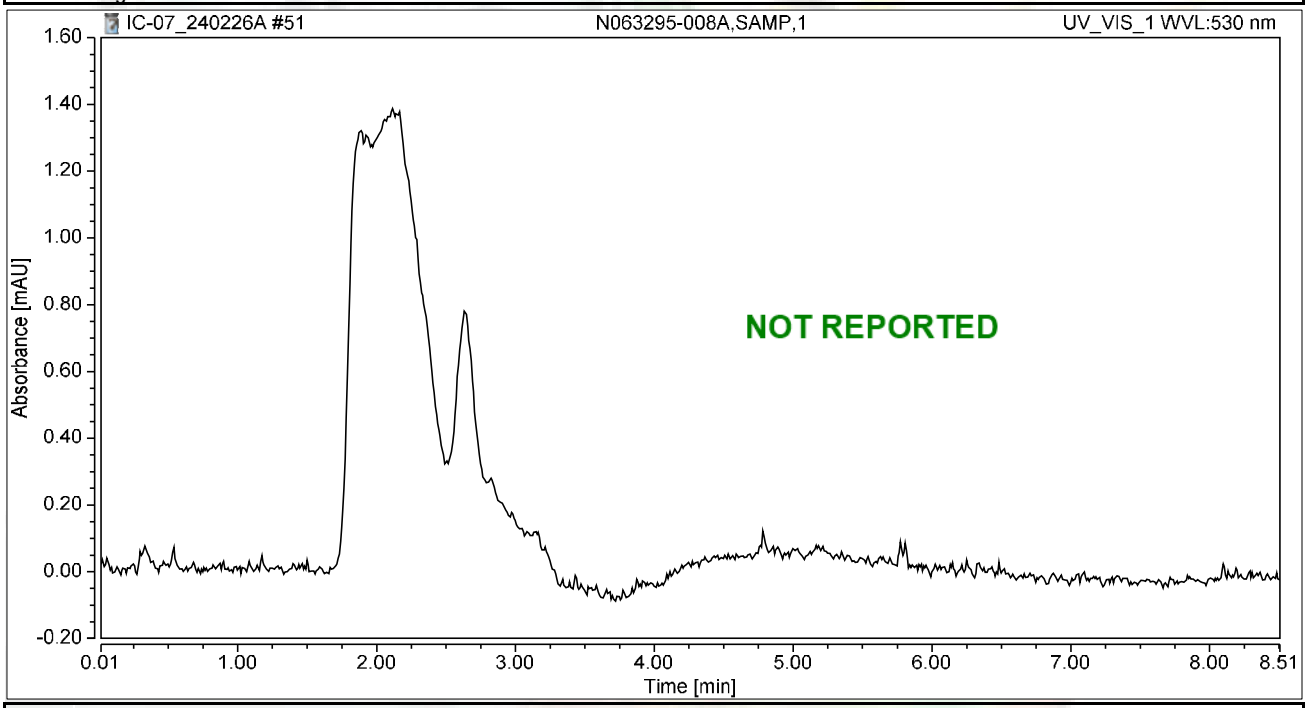
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.250	6.768	100.00	100.00	5.8122
Total:			**1.250**	**6.768**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-008A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 18:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

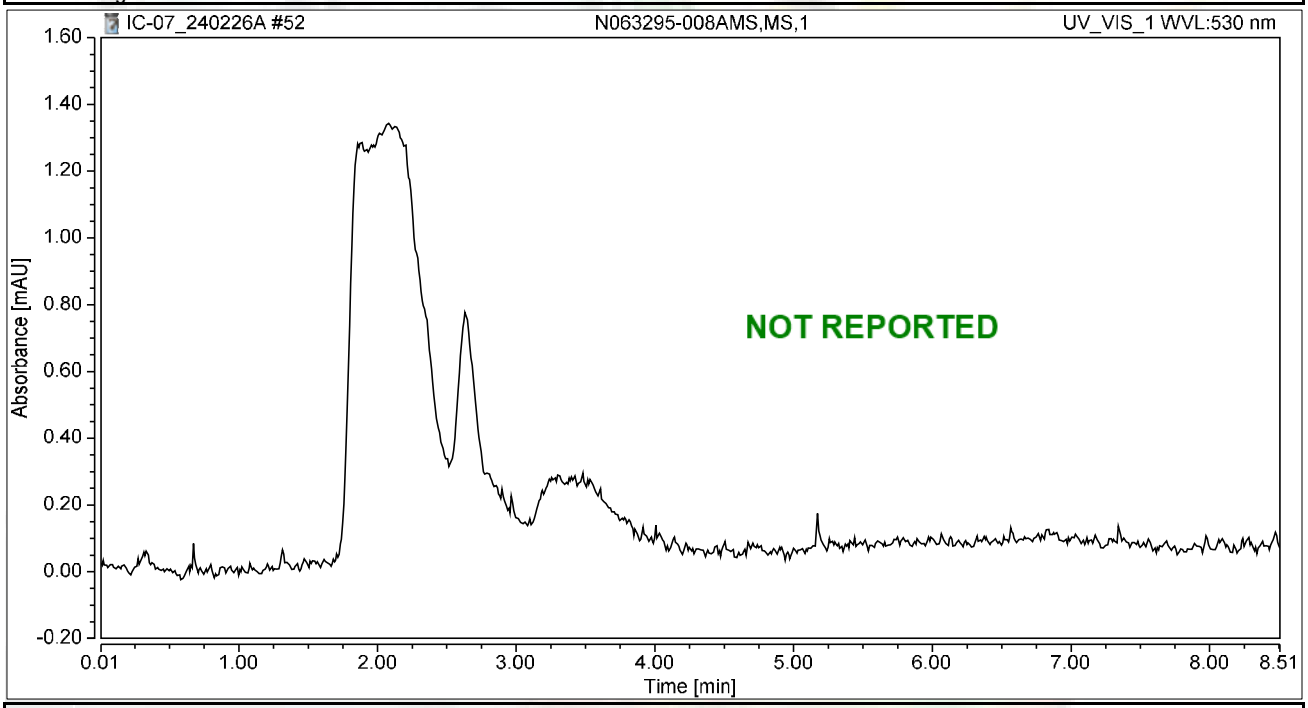
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 18:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

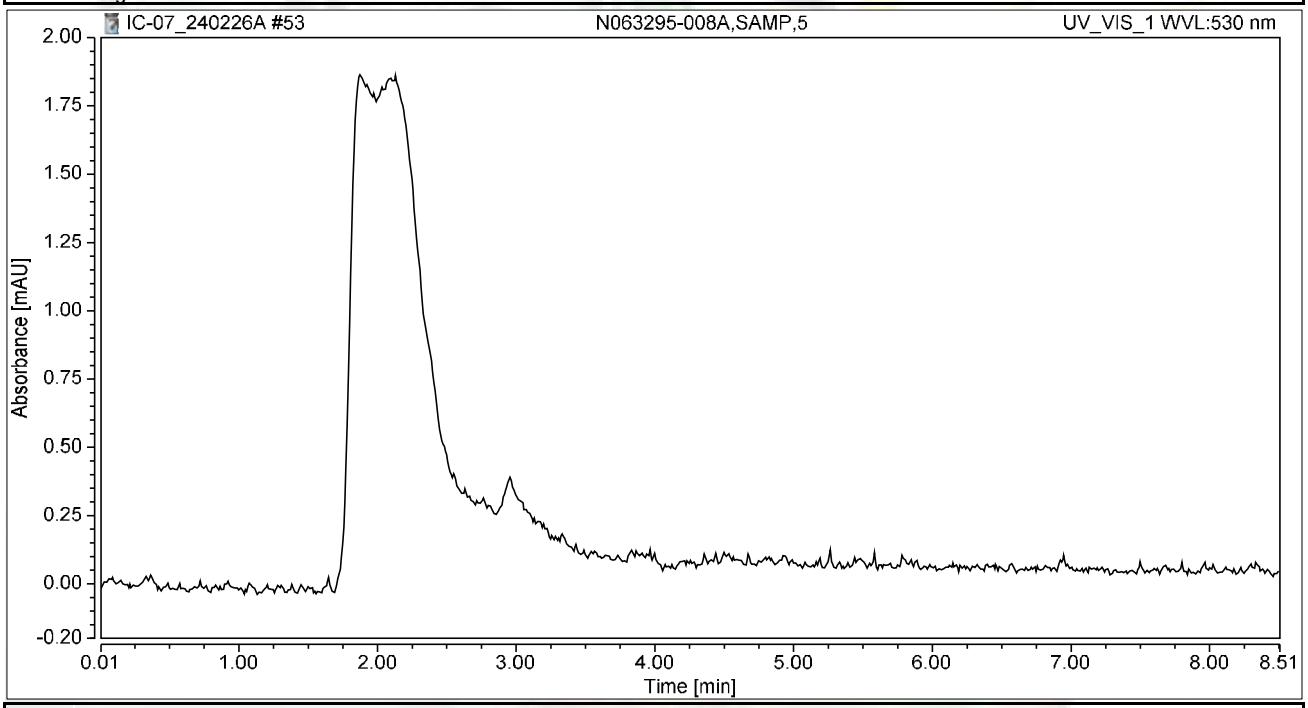
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-008A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 18:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

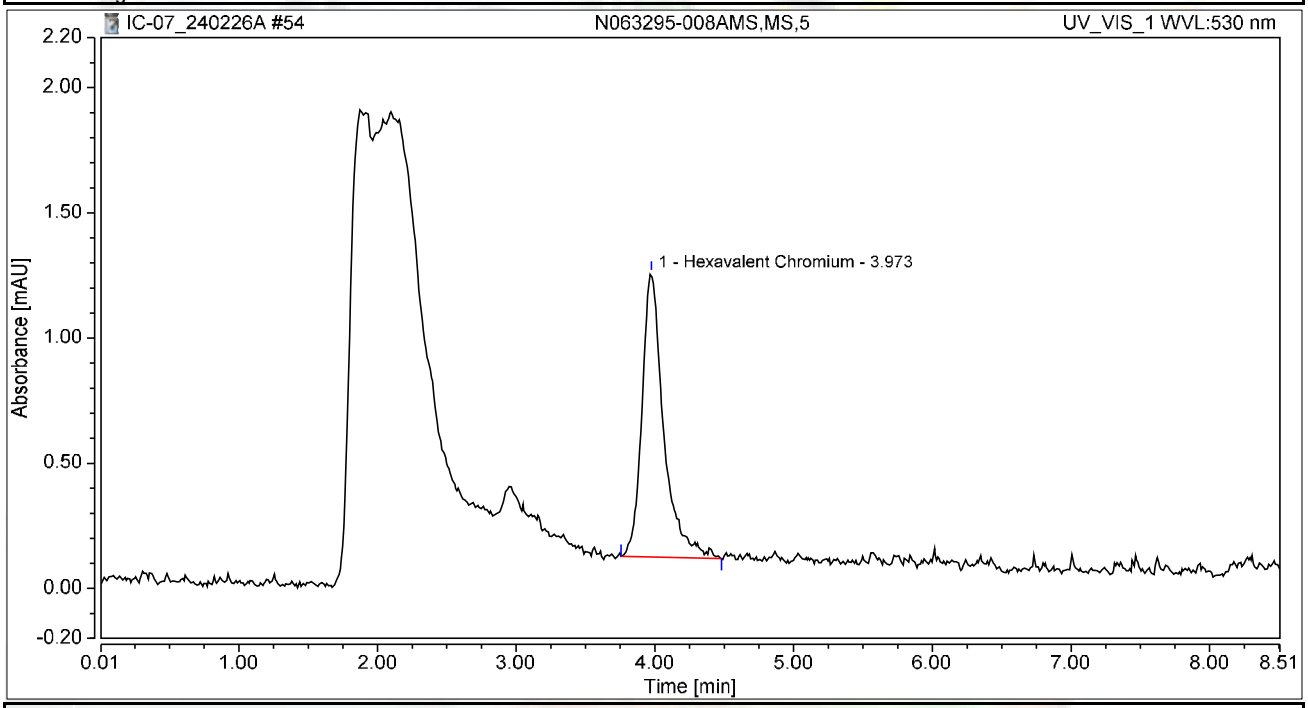
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-008AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 19:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

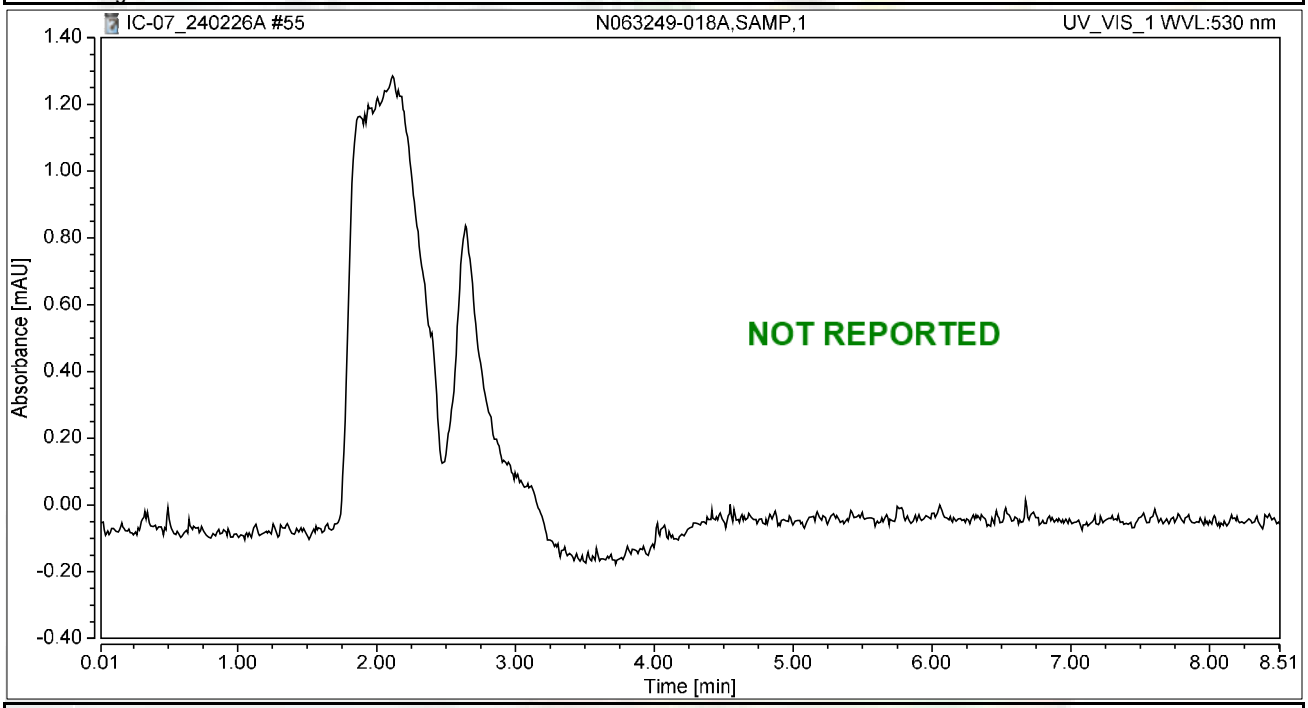
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.206	1.134	100.00	100.00	0.9557
Total:			**0.206**	**1.134**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-018A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 19:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

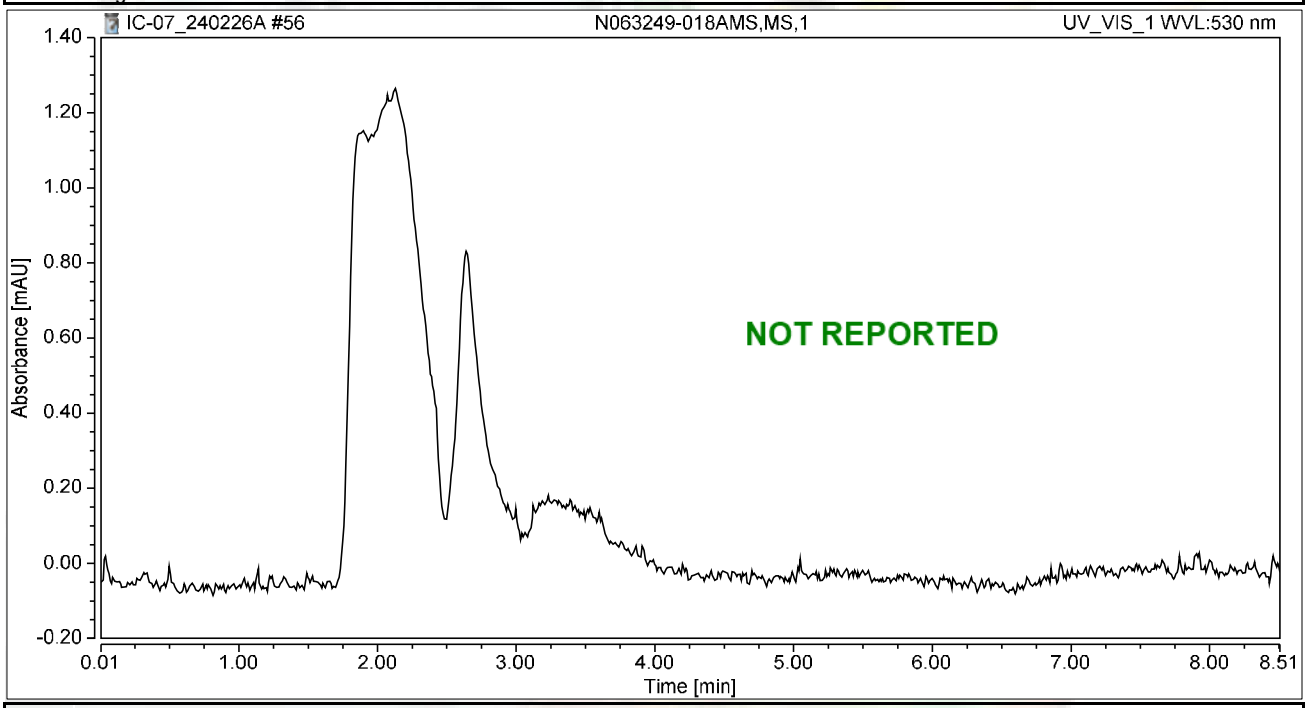
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-018AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 19:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

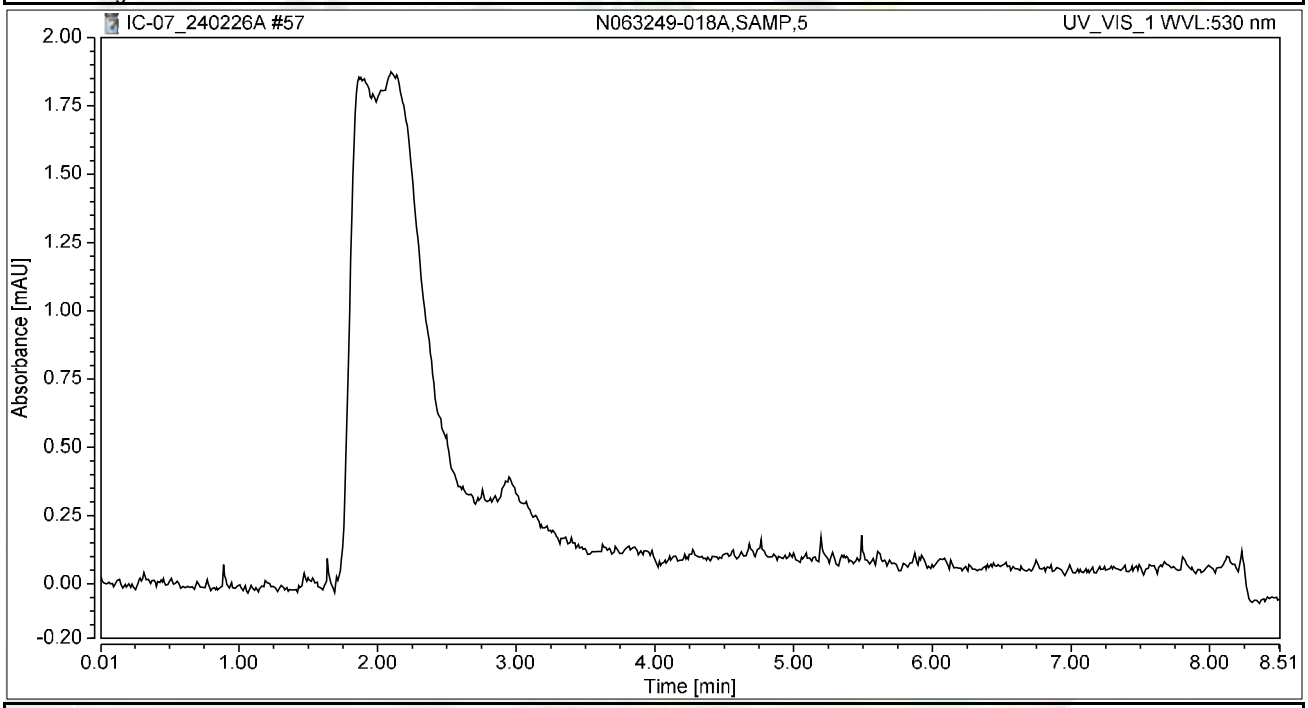
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-018A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 19:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

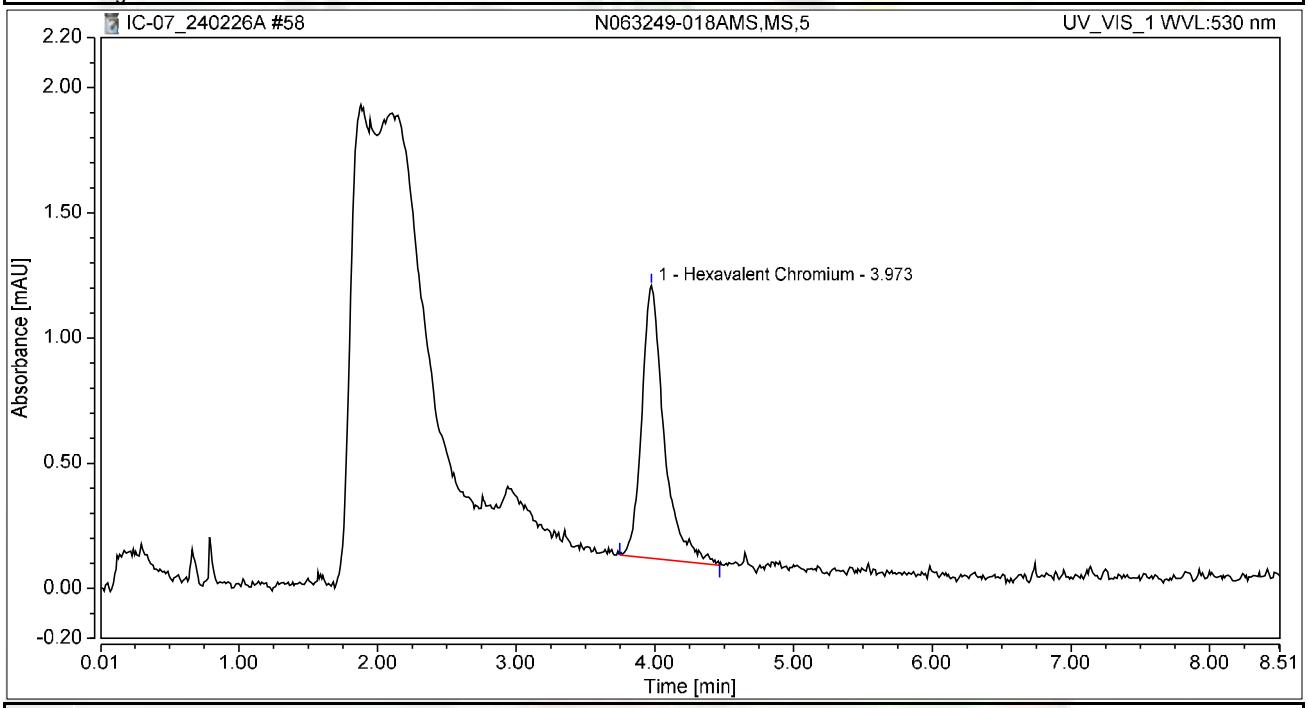
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-018AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 19:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

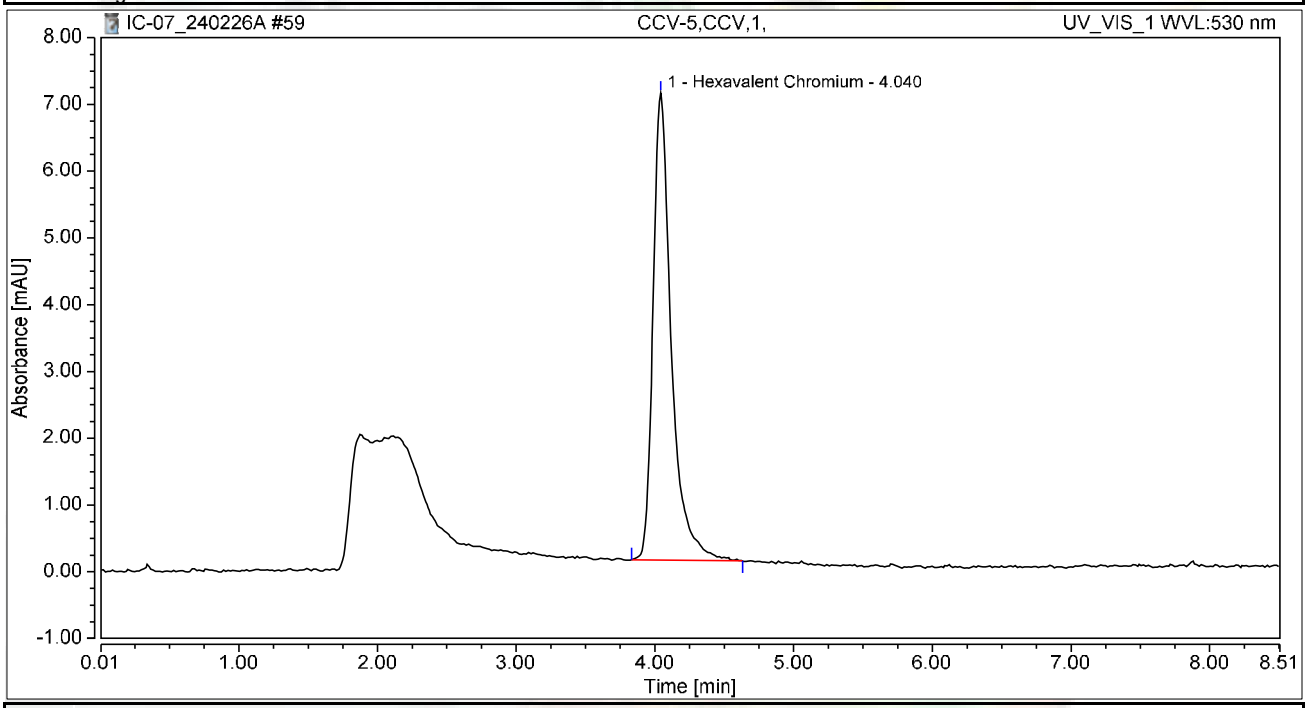
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.202	1.089	100.00	100.00	0.9411
Total:			**0.202**	**1.089**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 19:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

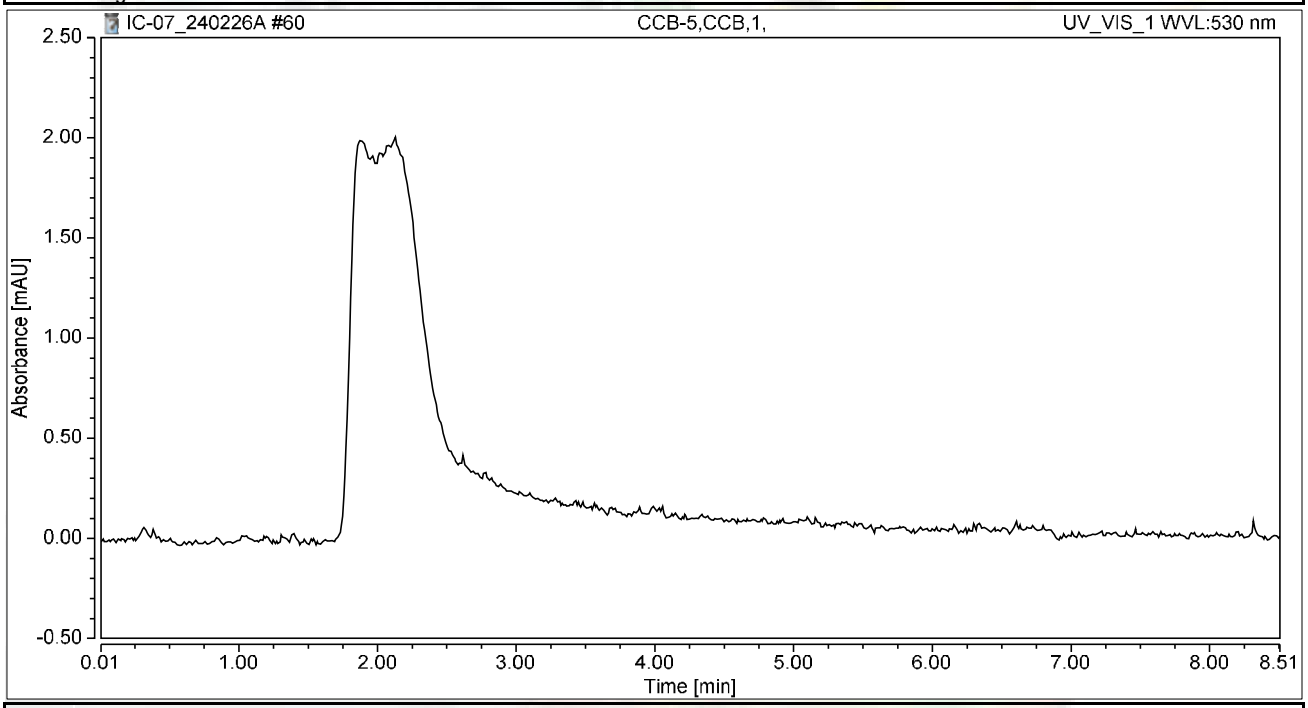
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.068	6.997	100.00	100.00	4.9638
Total:			**1.068**	**6.997**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 20:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

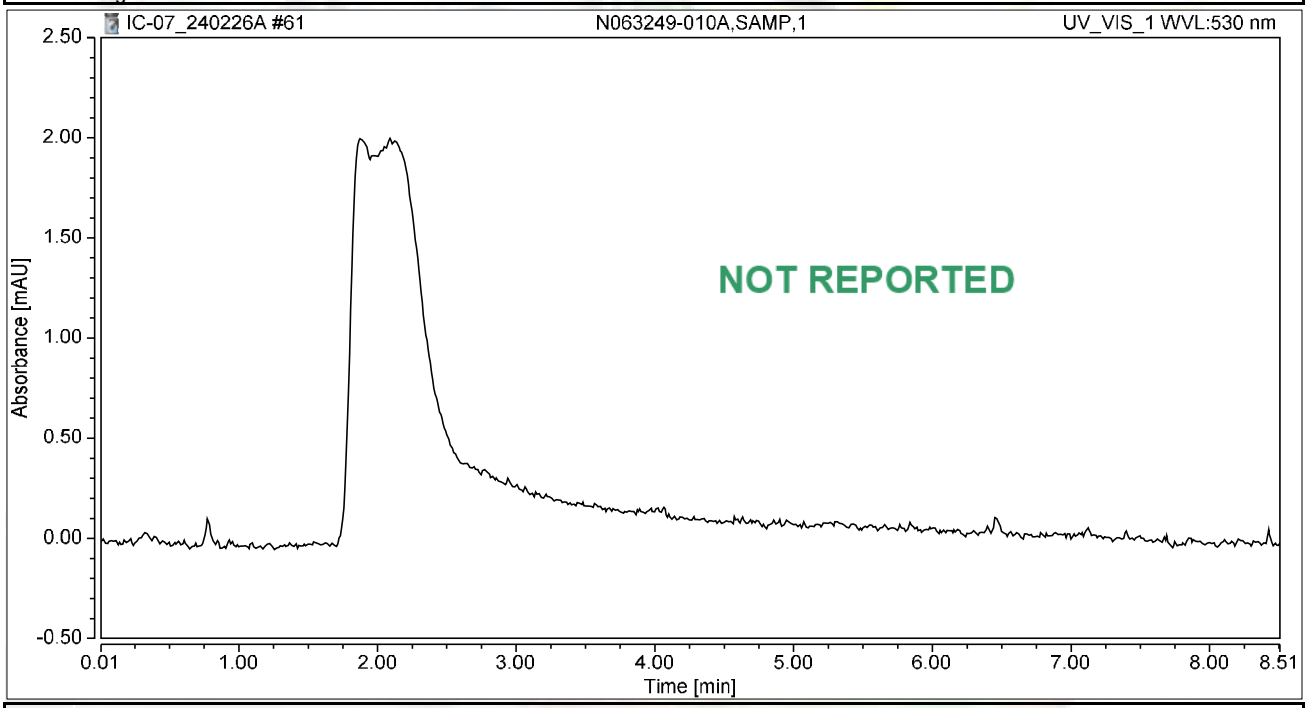
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-010A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 20:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

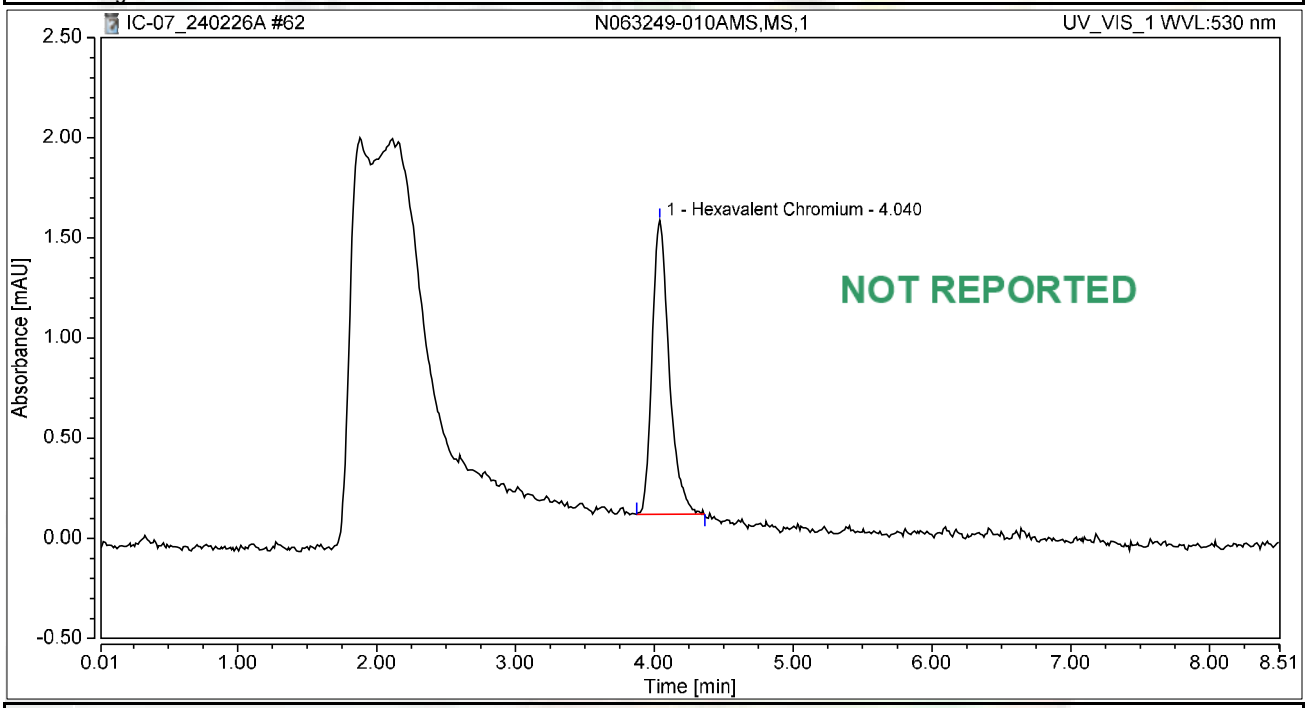
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-010AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 20:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

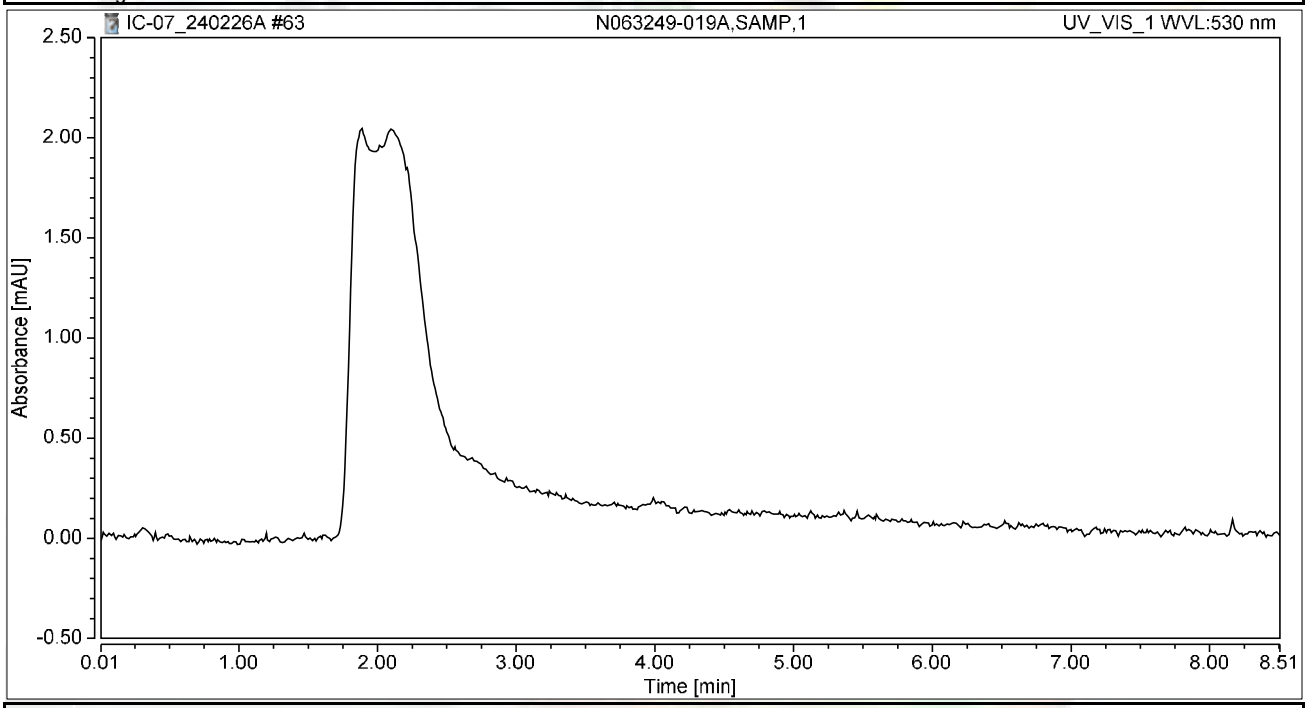
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.210	1.468	100.00	100.00	0.9750
Total:			**0.210**	**1.468**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-019A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 20:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

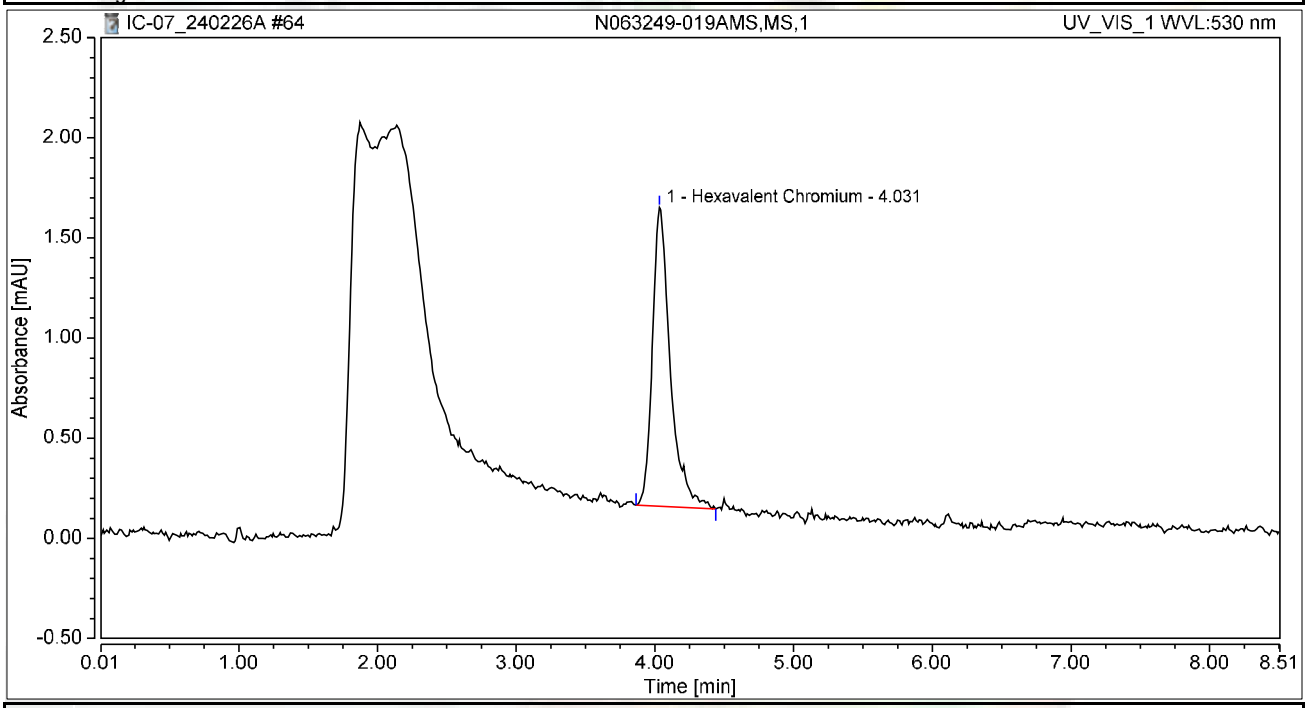
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-019AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 20:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

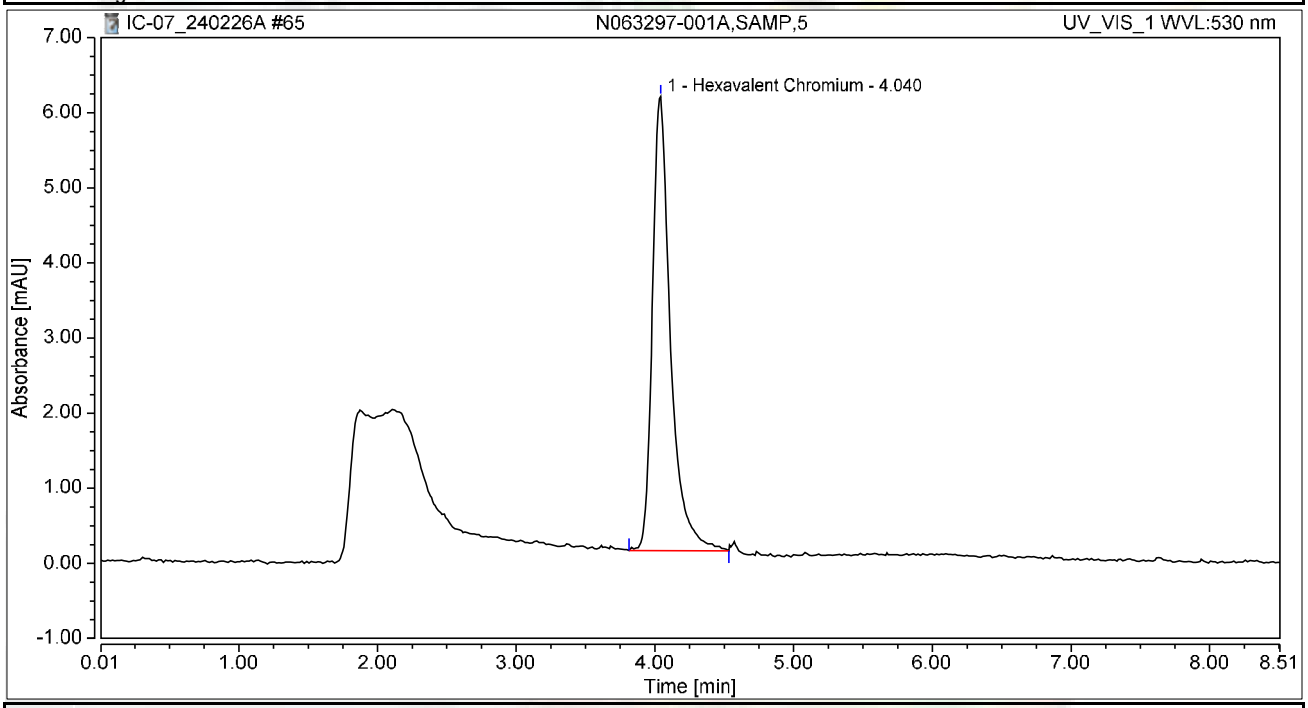
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.223	1.492	100.00	100.00	1.0345
Total:			**0.223**	**1.492**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 20:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

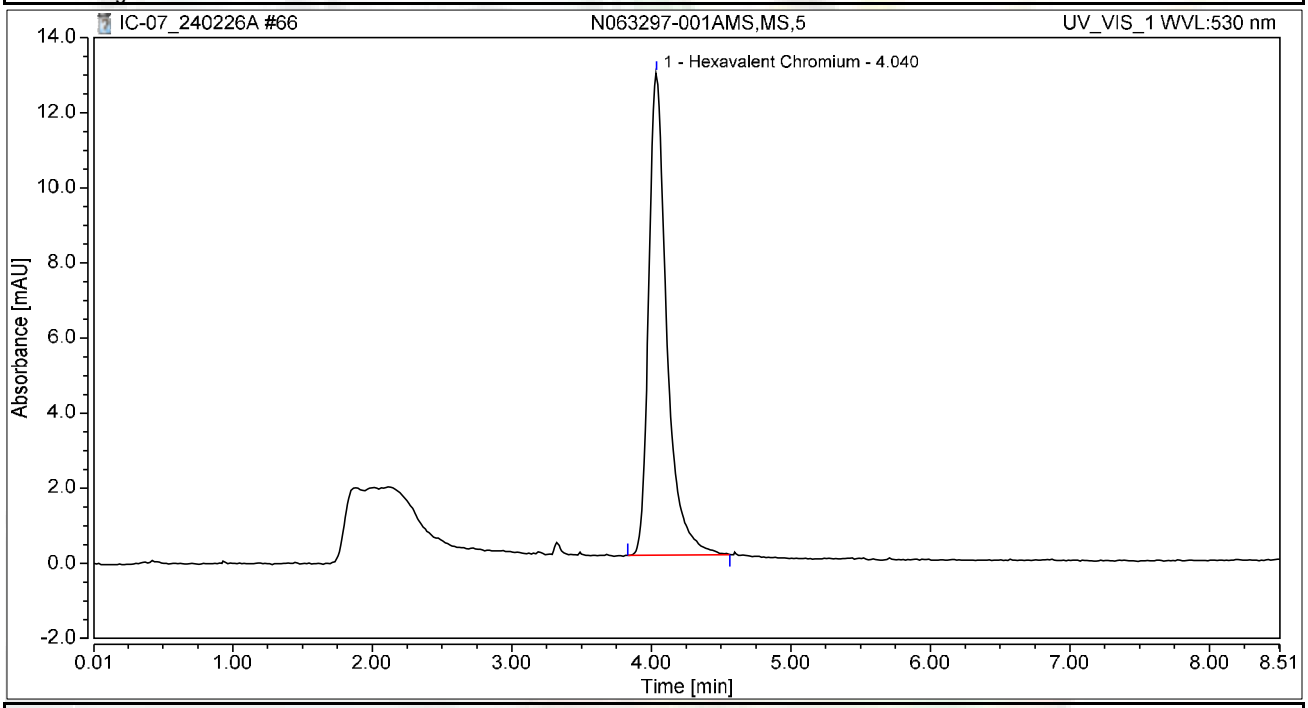
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.914	6.042	100.00	100.00	4.2497
Total:			**0.914**	**6.042**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 21:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

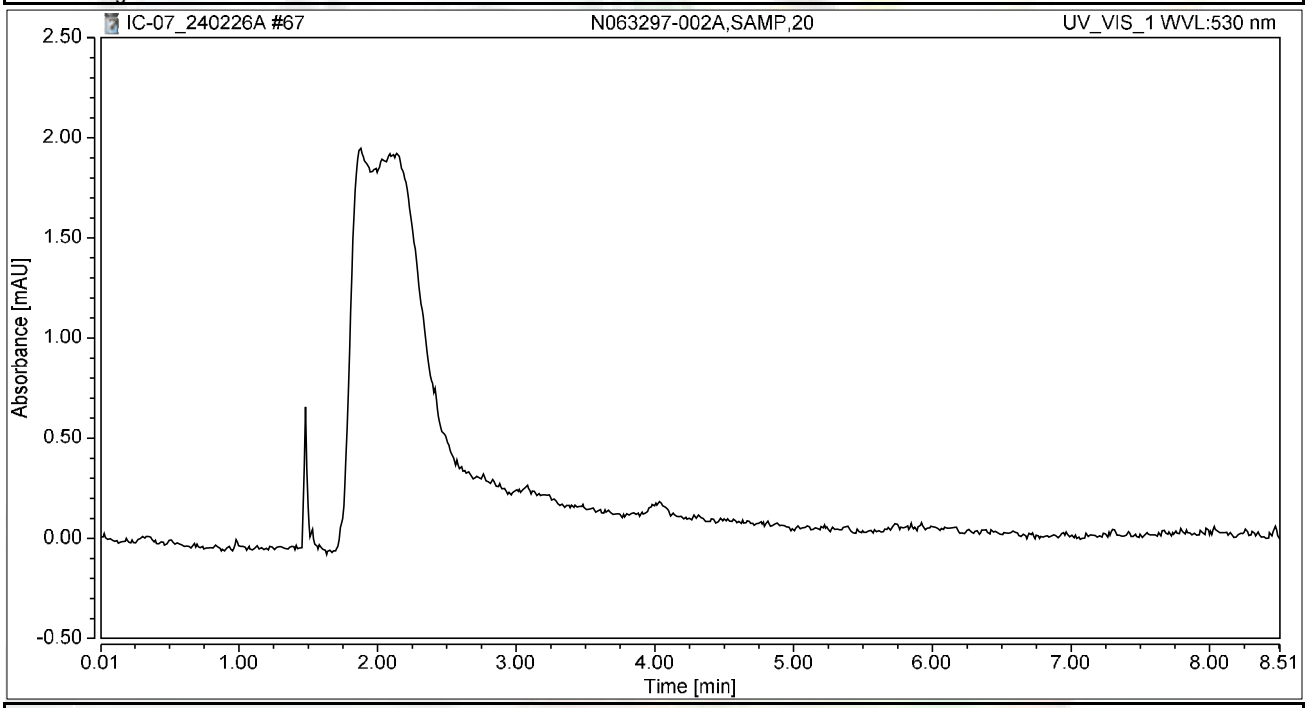
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.937	12.842	100.00	100.00	9.0067
Total:			**1.937**	**12.842**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-002A,SAMP,20**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 21:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

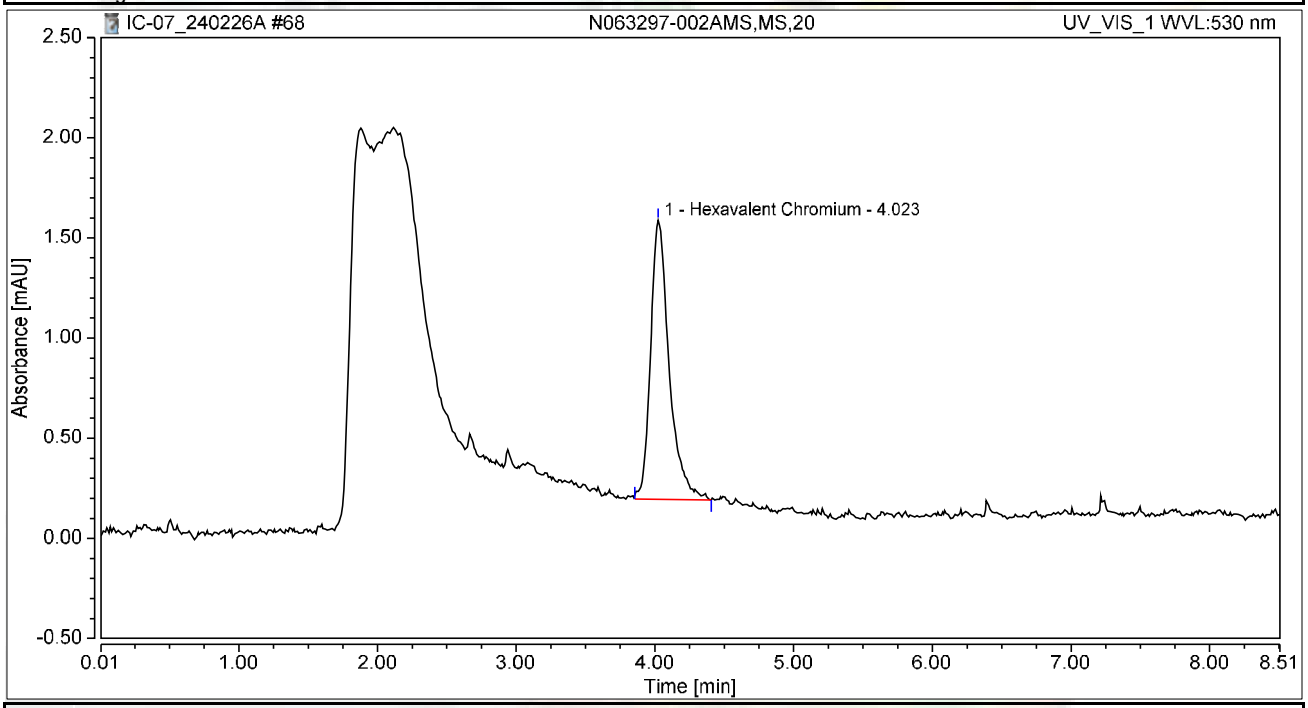
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-002AMS,MS,20**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 21:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

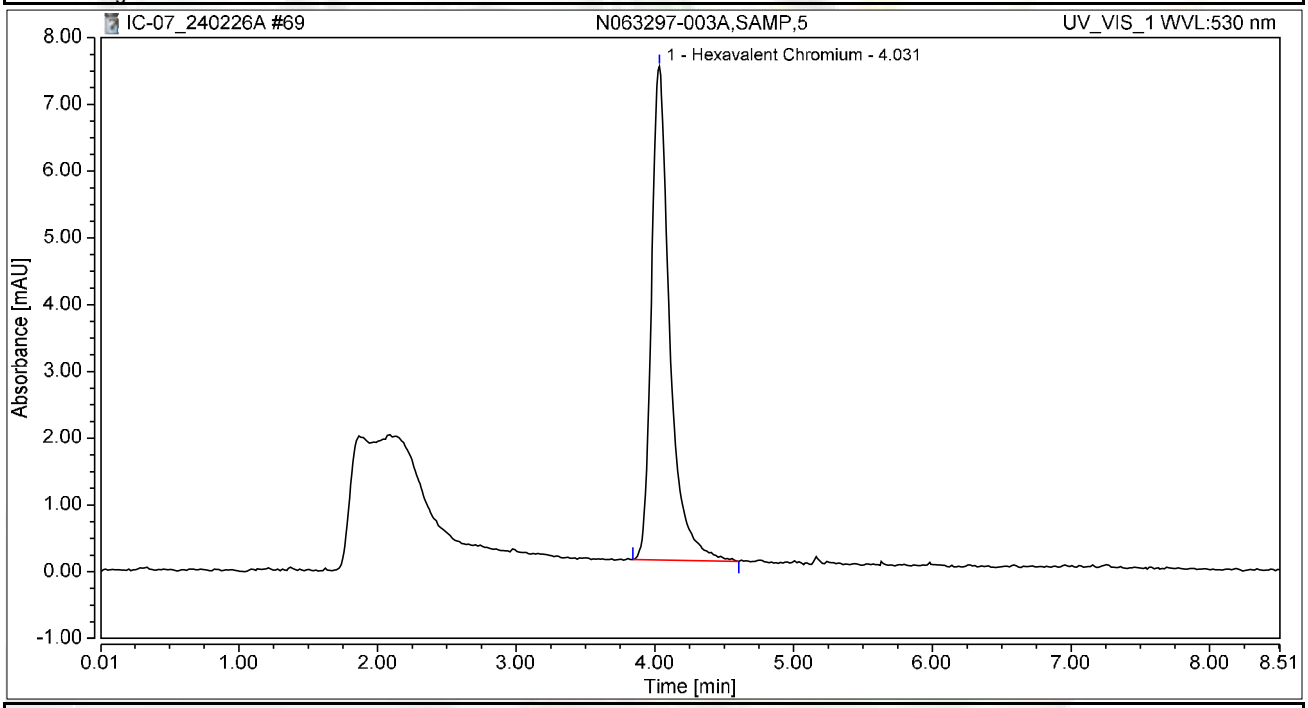
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.216	1.392	100.00	100.00	1.0027
Total:			**0.216**	**1.392**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 21:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

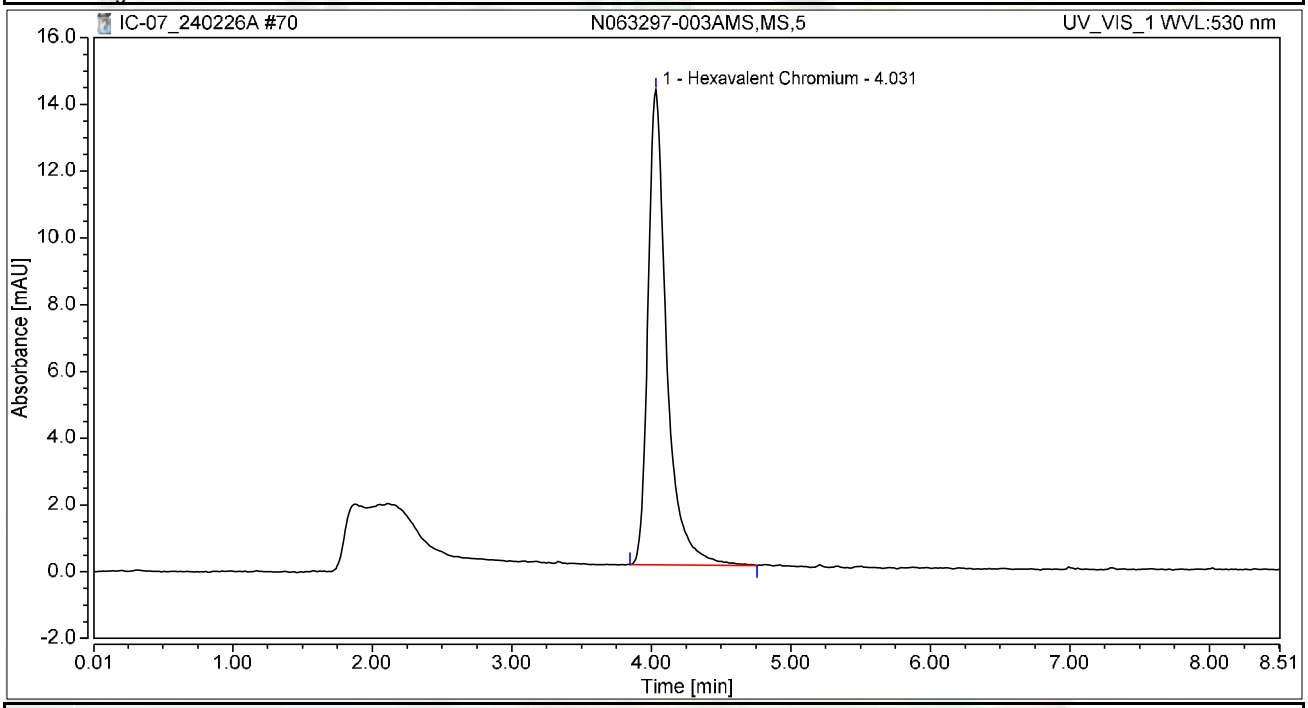
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	1.137	7.392	100.00	100.00	5.2846
Total:			**1.137**	**7.392**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 21:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

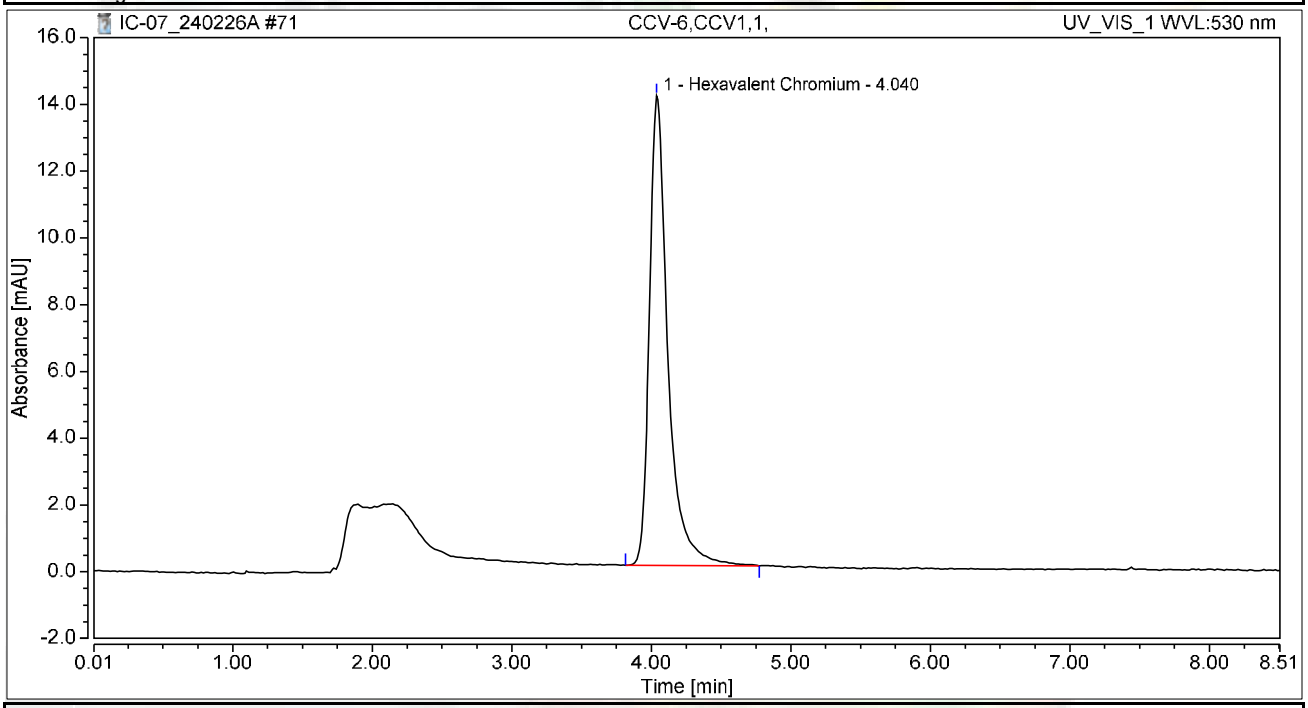
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	2.201	14.235	100.00	100.00	10.2317
Total:			**2.201**	**14.235**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 21:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

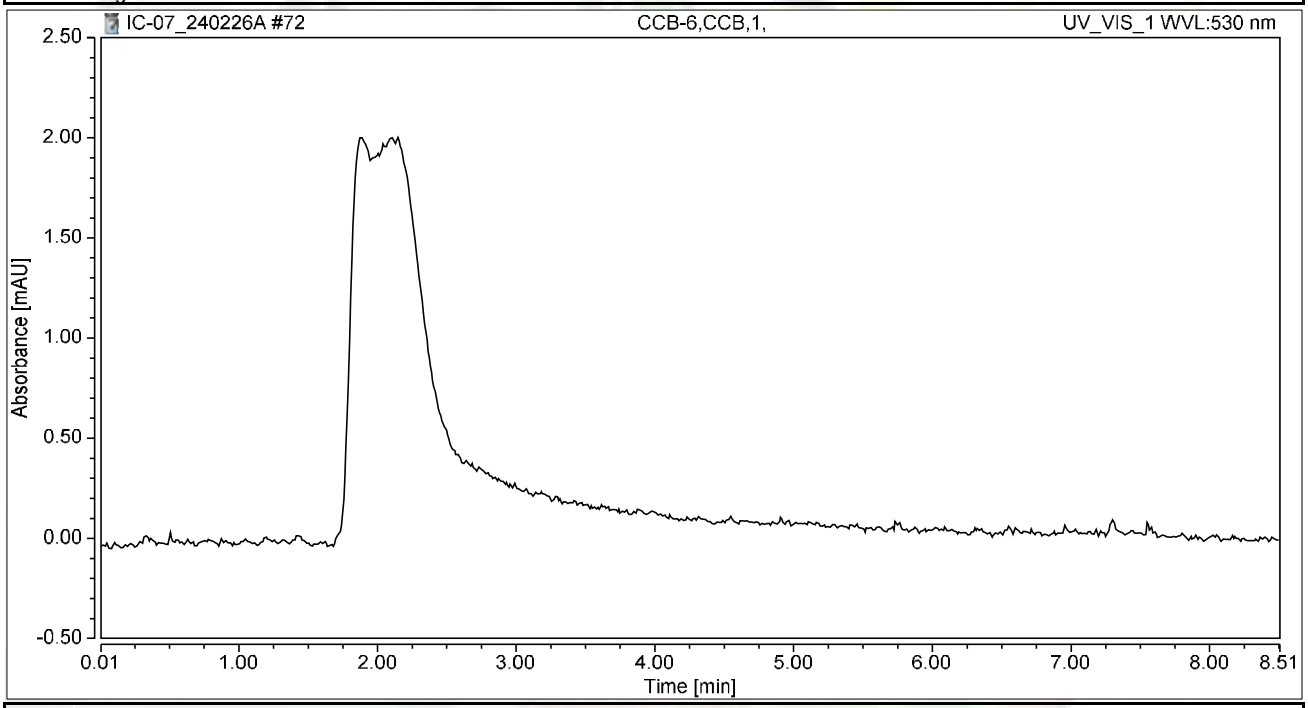
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.165	14.074	100.00	100.00	10.0661
Total:			**2.165**	**14.074**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 21:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

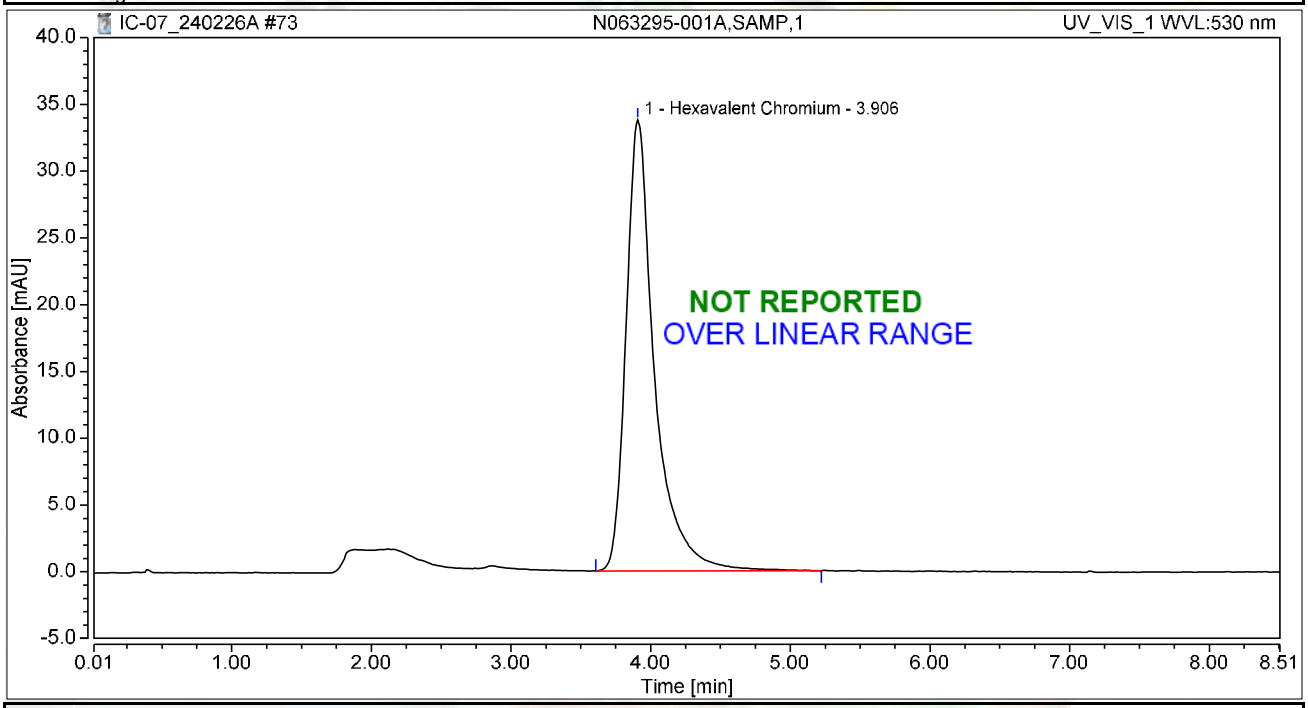
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-001A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 22:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

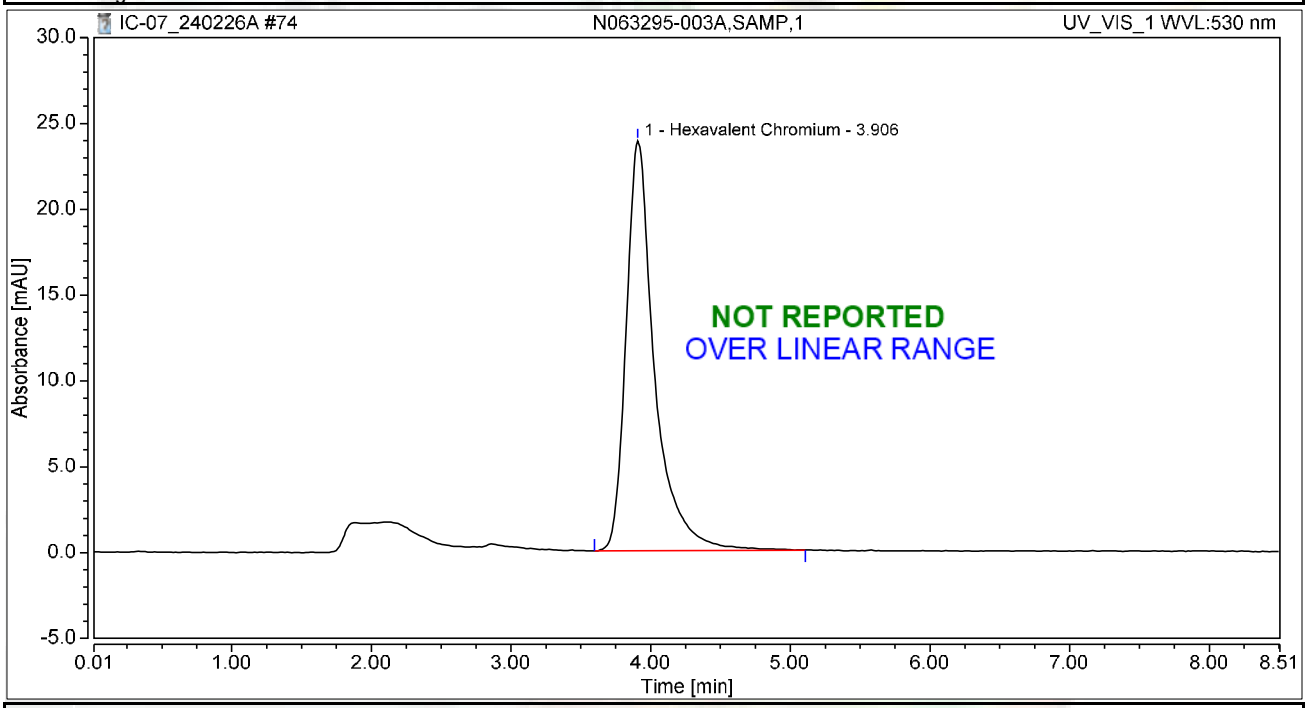
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.906	7.987	33.781	100.00	100.00	37.1333
Total:			**7.987**	**33.781**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 22:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

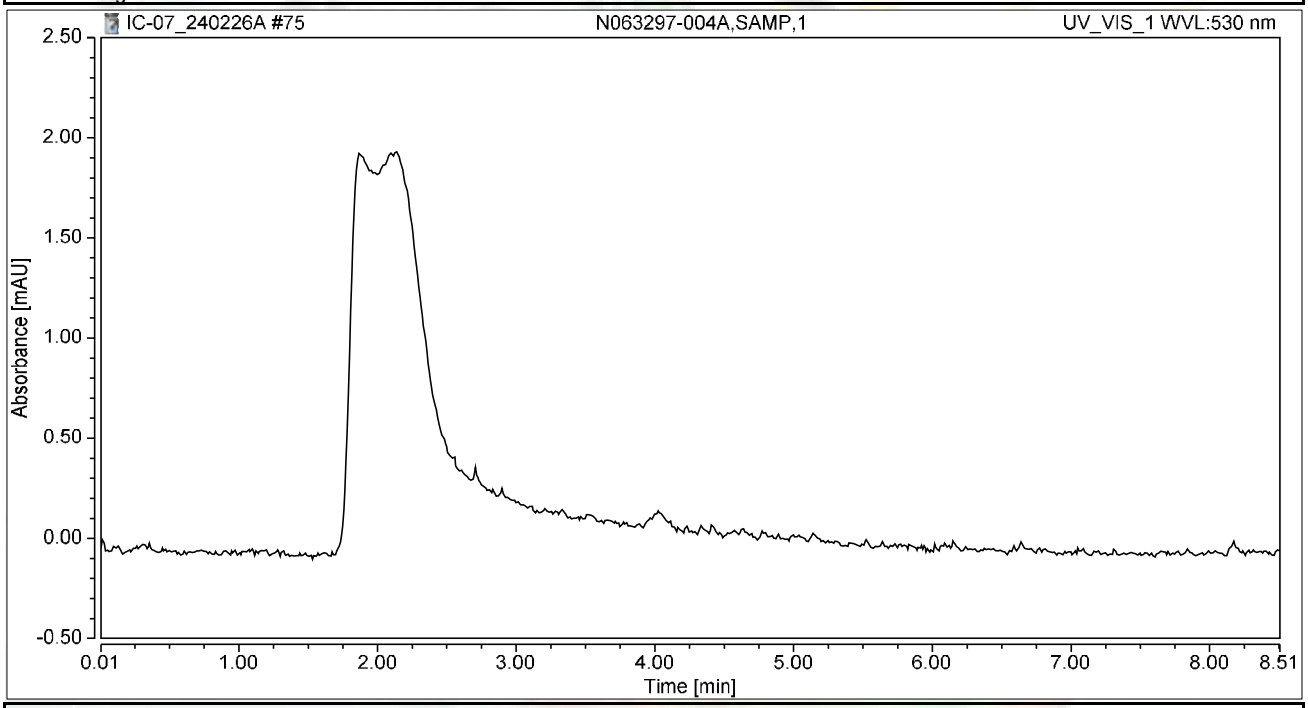
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.906	5.632	23.868	100.00	100.00	26.1840
Total:			**5.632**	**23.868**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 22:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

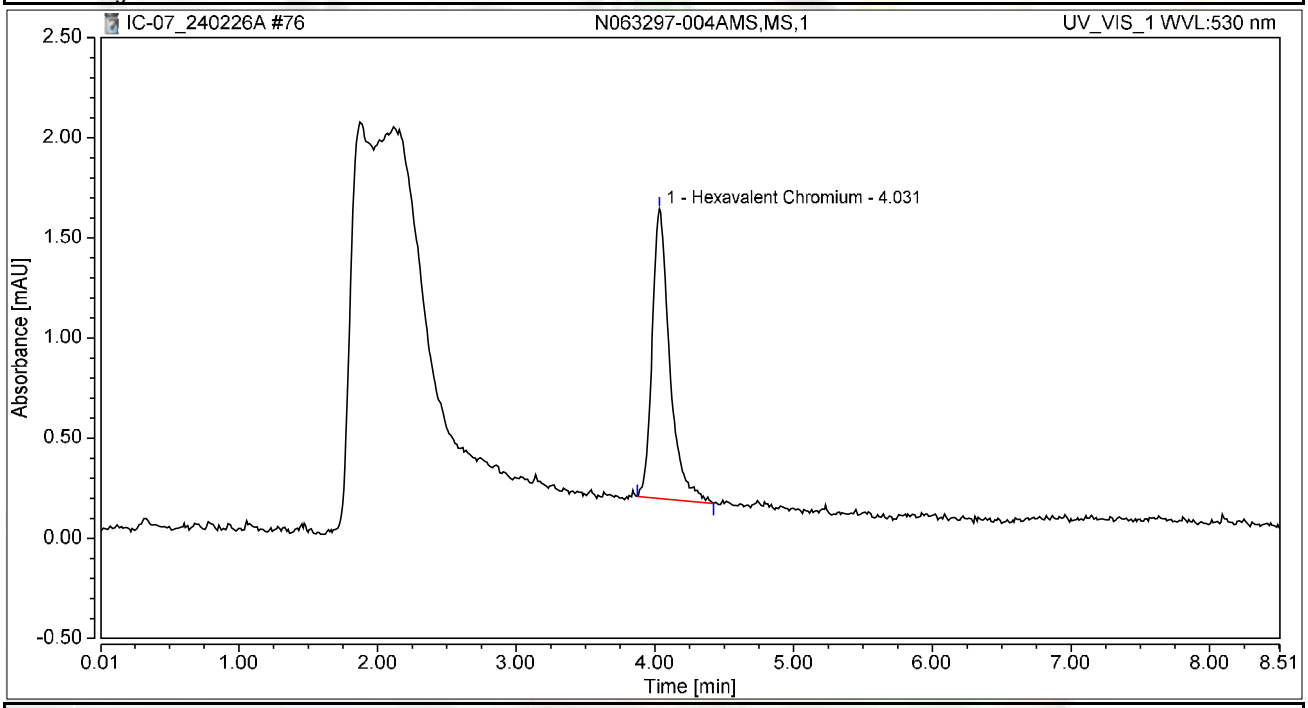
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 22:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

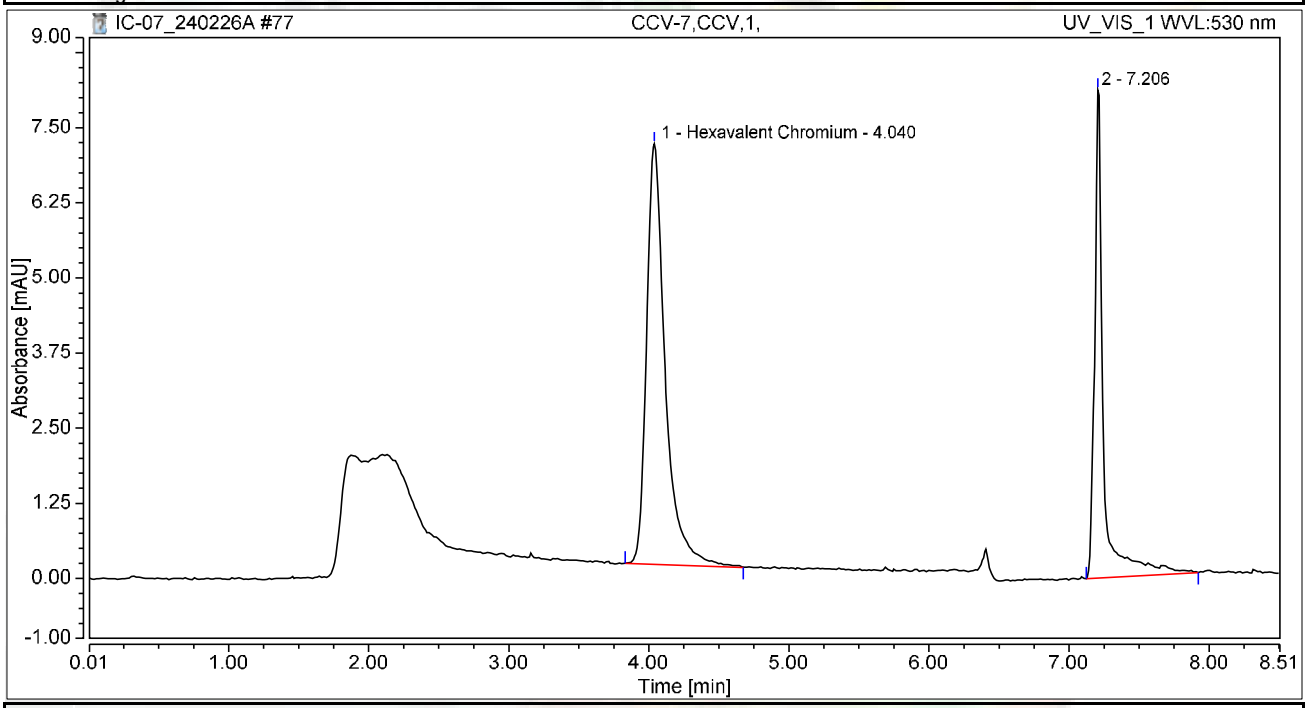
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.213	1.447	100.00	100.00	0.9887
Total:			**0.213**	**1.447**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 22:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

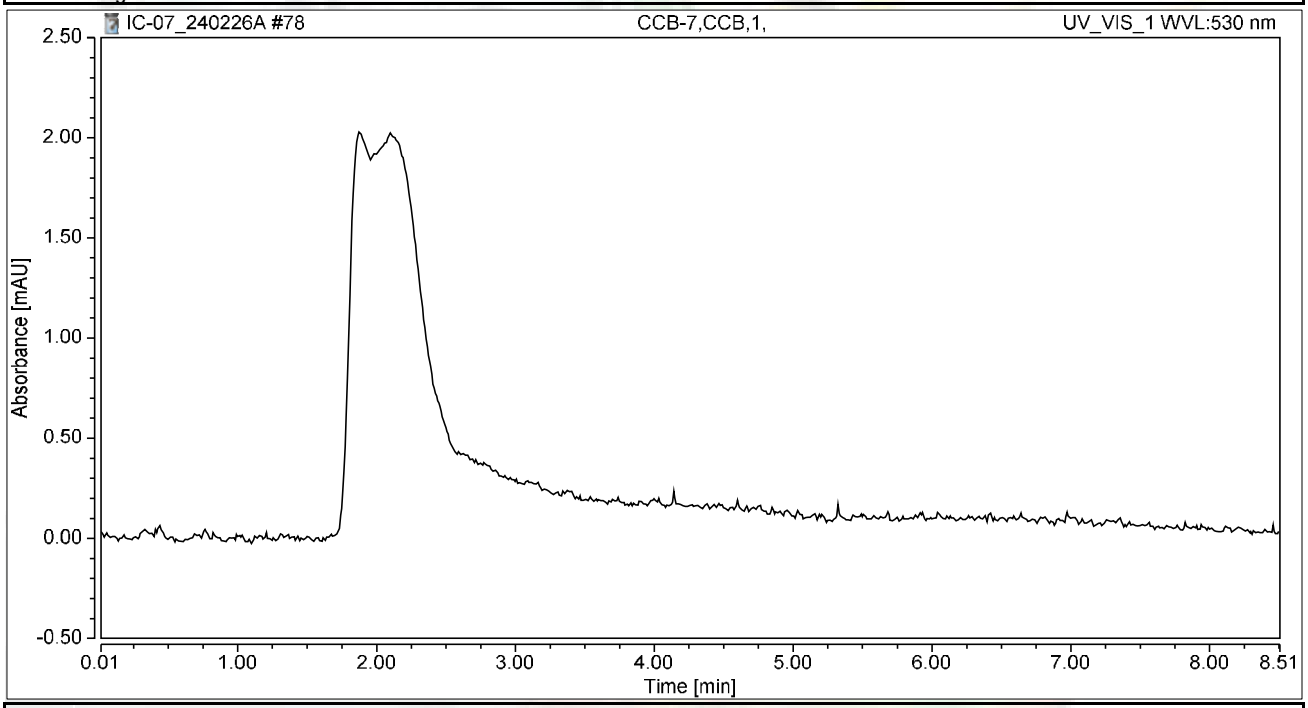
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.077	6.999	64.62	46.28	5.0091
2		7.206	0.590	8.124	35.38	53.72	n.a.
Total:			**1.667**	**15.123**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**44**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 22:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

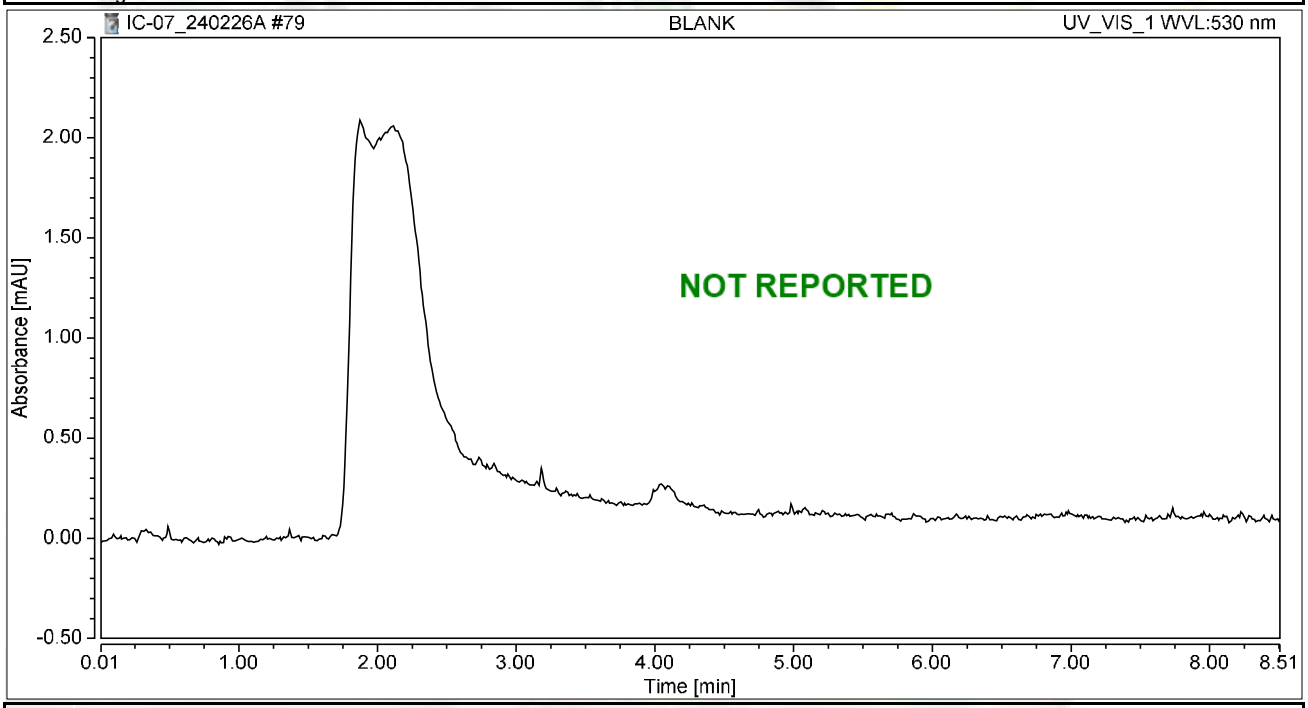
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**45**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 23:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

JRB 2/29/2024

EPA 300.0

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R182813
ASSET #: N063248 / N063249

Instrument ID: IC-08
Analyst: RBA
Date Analyzed: 2/22/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.		X			X	
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

%Rec of Nitrite in N063248-005BMS/MSD failed. However, LCS passed criteria.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 2/28/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: GROUNDWATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the orignal sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N063249-007B** concentration in mg/L is calculated as follows:

Nitrate, mg/L = 0.0273 * 10

= 0.273

Since the Reporting limit is 0.5,

~~Reporting result in two significant figures~~,

Nitrate, mg/L = ND

Reviewed by:

dlRocha 3/10/2024

ANALYSIS RUN LOG

Sequence: IC-08_240124A
Operator: IC-05
Printed: 1/24/2024 5:54:19 PM

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 25
Created: 1/24/2024 9:39:27 AM by IC-05
Last Update: 1/24/2024 11:49:06 AM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240124	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240124	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240124	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240124	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240124	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240124	Finished
8	ICV,ICV,1	Unknown	9	1000.0	Anions Default	EPA 300_0_240124	Finished
9	ICB,ICB,1	Unknown	10	1000.0	Anions Default	EPA 300_0_240124	Finished
10	MB-H2O,MBLK,1	Unknown	11	1000.0	Anions Default	EPA 300_0_240124	Finished
11	LCS-H2O,LCS,1	Unknown	12	1000.0	Anions Default	EPA 300_0_240124	Finished
12	N062498-007A,SAMP,5	Unknown	13	1000.0	Anions Default	EPA 300_0_240124	Finished
13	N062498-007ADUP,DUP,5	Unknown	14	1000.0	Anions Default	EPA 300_0_240124	Finished
14	N062498-007AMS,MS,5	Unknown	15	1000.0	Anions Default	EPA 300_0_240124	Finished
15	N062498-007AMSD,MSD,5	Unknown	16	1000.0	Anions Default	EPA 300_0_240124	Finished
16	LCS-2,LCS,1	Unknown	17	1000.0	Anions Default	EPA 300_0_240124	Finished
17	MB-2,MBLK,1	Unknown	18	1000.0	Anions Default	EPA 300_0_240124	Finished
18	N062498-007A,SAMP,5	Unknown	19	1000.0	Anions Default	EPA 300_0_240124	Finished
19	N062498-007ADUP,DUP,5	Unknown	20	1000.0	Anions Default	EPA 300_0_240124	Finished
20	CCV-1,CCV,1	Unknown	21	1000.0	Anions Default	EPA 300_0_240124	Finished
21	CCB-1,CCB,1	Unknown	22	1000.0	Anions Default	EPA 300_0_240124	Finished
22	N062498-007AMS,MS,5	Unknown	23	1000.0	Anions Default	EPA 300_0_240124	Finished
23	N062498-007AMSD,MSD,5	Unknown	24	1000.0	Anions Default	EPA 300_0_240124	Finished
24	CCV-2,CCV,1	Unknown	33	1000.0	Anions Default	EPA 300_0_240124	Finished
25	CCB-2,CCB,1	Unknown	34	1000.0	Anions Default	EPA 300_0_240124	Finished

reviewed by: 1/31/2024

Processed by:
Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)

1/24/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 25
Created: 1/24/2024 9:39:27 AM by IC-05
Last Update: 1/24/2024 11:49:06 AM by IC-05

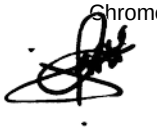
No.	Name	Inj. Date/Time	Comment
1	BLANK	1/24/2024 9:41:36 AM	BLANK
2	Std - 0	1/24/2024 9:56:54 AM	IBLANK
3	Std - 1	1/24/2024 10:32:56 AM	STD-LOW
4	Std - 2	1/24/2024 10:48:14 AM	STD
5	Std - 3	1/24/2024 11:03:32 AM	STD
6	Std - 4	1/24/2024 11:18:50 AM	STD
7	Std - 5	1/24/2024 11:34:08 AM	STD-HIGH
8	ICV,ICV,1	1/24/2024 11:49:26 AM	ICV, IWST-240123B
9	ICB,ICB,1	1/24/2024 12:04:44 PM	CCB
10	MB-H2O,MBLK,1	1/24/2024 12:20:02 PM	MB
11	LCS-H2O,LCS,1	1/24/2024 12:35:19 PM	LCS, IWST-240123B
12	N062498-007A,SAMP,5	1/24/2024 12:50:38 PM	SAMP,2>10mL,
13	N062498-007ADUP,DUP,5	1/24/2024 1:05:56 PM	DUP,2>10mL,
14	N062498-007AMS,MS,5	1/24/2024 1:21:14 PM	MS,2>10mL,
15	N062498-007AMSD,MSD,5	1/24/2024 1:36:33 PM	MSD,2>10mL,
16	LCS-2,LCS,1	1/24/2024 1:51:51 PM	LCS, IWST-240123B
17	MB-2,MBLK,1	1/24/2024 2:07:09 PM	MB
18	N062498-007A,SAMP,5	1/24/2024 2:22:27 PM	SAMP,2>10mL,
19	N062498-007ADUP,DUP,5	1/24/2024 2:37:45 PM	DUP,2>10mL,
20	CCV-1,CCV,1	1/24/2024 2:53:03 PM	CCV, IWST-240123A
21	CCB-1,CCB,1	1/24/2024 3:08:21 PM	CCB
22	N062498-007AMS,MS,5	1/24/2024 3:23:40 PM	MS,2>10mL,
23	N062498-007AMSD,MSD,5	1/24/2024 3:38:58 PM	MSD,2>10mL,
24	CCV-2,CCV,1	1/24/2024 3:54:16 PM	CCV, IWST-240123A
25	CCB-2,CCB,1	1/24/2024 4:09:34 PM	CCB

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
Created: 2/21/2024 9:56:36 AM by IC-05
#Samples: 64
(Modified, not saved)

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240124	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240124	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240124	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240124	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240124	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240124	Finished
8	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
9	CCV-1,CCV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
10	CCB-1,CCB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
11	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
12	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
13	N063248-005B,SAMP,10	Unknown	1	1000.0	Anions Default	EPA 300_0_240124	Finished
14	N063248-006B,SAMP,10	Unknown	2	1000.0	Anions Default	EPA 300_0_240124	Finished
15	N063248-007B,SAMP,10	Unknown	3	1000.0	Anions Default	EPA 300_0_240124	Finished
16	N063248-008B,SAMP,10	Unknown	4	1000.0	Anions Default	EPA 300_0_240124	Finished
17	N063249-007B,SAMP,10	Unknown	5	1000.0	Anions Default	EPA 300_0_240124	Finished
18	N063249-009B,SAMP,10	Unknown	6	1000.0	Anions Default	EPA 300_0_240124	Interrupted
19	N063248-010C,SAMP,5	Unknown	7	1000.0	Anions Default	EPA 300_0_240124	Finished
20	N063249-013B,SAMP,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240124	Finished
21	CCV-2,CCV,1	Unknown	9	1000.0	Anions Default	EPA 300_0_240124	Finished
22	CCB-2,CCB,1	Unknown	10	1000.0	Anions Default	EPA 300_0_240124	Finished
23	N063249-015B,SAMP,10	Unknown	11	1000.0	Anions Default	EPA 300_0_240124	Finished
24	N063249-017B,SAMP,10	Unknown	12	1000.0	Anions Default	EPA 300_0_240124	Finished
25	N063249-018B,SAMP,10	Unknown	13	1000.0	Anions Default	EPA 300_0_240124	Finished
26	N063249-011B,SAMP,10	Unknown	7	1000.0	Anions Default	EPA 300_0_240124	Finished
27	N063248-011C,SAMP,10	Unknown	7	1000.0	Anions Default	EPA 300_0_240124	Finished
28	N063248-005BMS,MS,10	Unknown	16	1000.0	Anions Default	EPA 300_0_240124	Finished
29	N063248-005BMSD,MSD,10	Unknown	17	1000.0	Anions Default	EPA 300_0_240124	Finished
30	N063248-011CDUP,DUP,10	Unknown	18	1000.0	Anions Default	EPA 300_0_240124	Finished
31	N063248-010CMS,MS,5	Unknown	19	1000.0	Anions Default	EPA 300_0_240124	Finished
32	N063248-010CMSD,MSD,5	Unknown	20	1000.0	Anions Default	EPA 300_0_240124	Finished
33	CCV-3,CCV,1	Unknown	21	1000.0	Anions Default	EPA 300_0_240124	Finished
34	CCB-3,CCB,1	Unknown	22	1000.0	Anions Default	EPA 300_0_240124	Finished
35	N063248-010CDUP,DUP,5	Unknown	23	1000.0	Anions Default	EPA 300_0_240124	Finished
36	N063249-017BMS,MS,10	Unknown	24	1000.0	Anions Default	EPA 300_0_240124	Finished
37	N063248-008BMS,MS,10	Unknown	25	1000.0	Anions Default	EPA 300_0_240124	Finished
38	N063253-001C,SAMP,500	Unknown	26	1000.0	Anions Default	EPA 300_0_240124	Finished
39	BLANK	Unknown	27	1000.0	Anions Default	EPA 300_0_240124	Finished
40	N063252-001C,SAMP,100	Unknown	28	1000.0	Anions Default	EPA 300_0_240124	Finished
41	BLANK	Unknown	29	1000.0	Anions Default	EPA 300_0_240124	Finished

Processed by:

Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)



Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
Created: 2/21/2024 9:56:36 AM by IC-05
#Samples: 64
(Modified, not saved)

No.	Name	Inj. Date/Time	Comment
1	BLANK	1/24/2024 9:41:36 AM	BLANK
2	Std - 0	1/24/2024 9:56:54 AM	IBLANK
3	Std - 1	1/24/2024 10:32:56 AM	STD-LOW
4	Std - 2	1/24/2024 10:48:14 AM	STD
5	Std - 3	1/24/2024 11:03:32 AM	STD
6	Std - 4	1/24/2024 11:18:50 AM	STD
7	Std - 5	1/24/2024 11:34:08 AM	STD-HIGH
8	BLANK	2/22/2024 7:34:27 AM	BLANK
9	CCV-1,CCV,1	2/22/2024 7:49:45 AM	CCV, IWST-240216A
10	CCB-1,CCB,1	2/22/2024 8:05:03 AM	CCB
11	MB-H2O,MBLK,1	2/22/2024 8:20:21 AM	MB
12	LCS-H2O,LCS,1	2/22/2024 8:35:40 AM	LCS, IWST-240216B
13	N063248-005B,SAMP,10	2/22/2024 9:36:26 AM	SAMP,1>10mL,
14	N063248-006B,SAMP,10	2/22/2024 9:51:44 AM	SAMP,1>10mL,
15	N063248-007B,SAMP,10	2/22/2024 10:07:02 AM	SAMP,1>10mL,
16	N063248-008B,SAMP,10	2/22/2024 10:22:21 AM	SAMP,1>10mL,
17	N063249-007B,SAMP,10	2/22/2024 10:37:38 AM	SAMP,1>10mL,
18	N063249-009B,SAMP,10	2/22/2024 10:52:56 AM	SAMP,1>10mL,
19	N063248-010C,SAMP,5	2/22/2024 11:30:53 AM	SAMP,2>10mL,
20	N063249-013B,SAMP,10	2/22/2024 11:46:11 AM	SAMP,1>10mL,
21	CCV-2,CCV,1	2/22/2024 12:01:30 PM	CCV, IWST-240216A
22	CCB-2,CCB,1	2/22/2024 12:16:49 PM	CCB
23	N063249-015B,SAMP,10	2/22/2024 12:32:06 PM	SAMP,1>10mL,
24	N063249-017B,SAMP,10	2/22/2024 12:47:24 PM	SAMP,1>10mL,
25	N063249-018B,SAMP,10	2/22/2024 1:02:42 PM	SAMP,1>10mL,
26	N063249-011B,SAMP,10	2/22/2024 1:18:00 PM	SAMP,1>10mL,
27	N063248-011C,SAMP,10	2/22/2024 1:33:18 PM	SAMP,1>10mL,
28	N063248-005BMS,MS,10	2/22/2024 1:48:36 PM	MS,1>10mL,
29	N063248-005BMSD,MSD,10	2/22/2024 2:03:54 PM	MSD,1>10mL,
30	N063248-011CDUP,DUP,10	2/22/2024 2:19:12 PM	DUP,1>10mL,
31	N063248-010CMS,MS,5	2/22/2024 2:34:31 PM	MS,2>10mL,
32	N063248-010CMSD,MSD,5	2/22/2024 2:49:49 PM	MSD,2>10mL,
33	CCV-3,CCV,1	2/22/2024 3:05:07 PM	CCV, IWST-240216A
34	CCB-3,CCB,1	2/22/2024 3:20:25 PM	CCB
35	N063248-010CDUP,DUP,5	2/22/2024 3:35:44 PM	DUP,2>10mL,
36	N063249-017BMS,MS,10	2/22/2024 3:51:02 PM	MS,1>10mL,
37	N063248-008BMS,MS,10	2/22/2024 4:06:20 PM	MS,1>10mL,
38	N063253-001C,SAMP,500	2/22/2024 4:21:39 PM	SAMP,0.02>10mL,
39	BLANK	2/22/2024 4:36:57 PM	BLANK
40	N063252-001C,SAMP,100	2/22/2024 4:52:16 PM	SAMP,0.1>10mL,
41	BLANK	2/22/2024 5:07:34 PM	BLANK

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 64
Created: 2/21/2024 9:56:36 AM by IC-05
(Modified, not saved)

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	N063254-001C,SAMP,100	Unknown	30	1000.0	Anions Default	EPA 300_0_240124	Finished
43	BLANK	Unknown	31	1000.0	Anions Default	EPA 300_0_240124	Finished
44	CCV-4,CCV,1	Unknown	32	1000.0	Anions Default	EPA 300_0_240124	Finished
45	CCB-4,CCB,1	Unknown	33	1000.0	Anions Default	EPA 300_0_240124	Finished
46	N063255-001C,SAMP,100	Unknown	34	1000.0	Anions Default	EPA 300_0_240124	Finished
47	BLANK	Unknown	35	1000.0	Anions Default	EPA 300_0_240124	Finished
48	N063256-001C,SAMP,100	Unknown	36	1000.0	Anions Default	EPA 300_0_240124	Finished
49	BLANK	Unknown	37	1000.0	Anions Default	EPA 300_0_240124	Finished
50	N063257-001C,SAMP,100	Unknown	38	1000.0	Anions Default	EPA 300_0_240124	Finished
51	BLANK	Unknown	39	1000.0	Anions Default	EPA 300_0_240124	Finished
52	N063258-001C,SAMP,100	Unknown	40	1000.0	Anions Default	EPA 300_0_240124	Finished
53	BLANK	Unknown	41	1000.0	Anions Default	EPA 300_0_240124	Finished
54	MB-2,MBLK,1	Unknown	42	1000.0	Anions Default	EPA 300_0_240124	Finished
55	LCS-2,LCS,1	Unknown	43	1000.0	Anions Default	EPA 300_0_240124	Finished
56	CCV-5,CCV,1	Unknown	44	1000.0	Anions Default	EPA 300_0_240124	Finished
57	CCB-5,CCB,1	Unknown	45	1000.0	Anions Default	EPA 300_0_240124	Finished
58	N063273-001A,SAMP,1	Unknown	46	1000.0	Anions Default	EPA 300_0_240124	Finished
59	N063273-002A,SAMP,1	Unknown	47	1000.0	Anions Default	EPA 300_0_240124	Finished
60	N063273-002ADUP,DUP,1	Unknown	48	1000.0	Anions Default	EPA 300_0_240124	Finished
61	N063273-002AMS,MS,1	Unknown	49	1000.0	Anions Default	EPA 300_0_240124	Finished
62	N063273-002AMSD,MSD,1	Unknown	50	1000.0	Anions Default	EPA 300_0_240124	Finished
63	CCV-6,CCV,1	Unknown	51	1000.0	Anions Default	EPA 300_0_240124	Finished
64	CCB-6,CCB,1	Unknown	52	1000.0	Anions Default	EPA 300_0_240124	Finished

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
Created: 2/21/2024 9:56:36 AM by IC-05
#Samples: 64
(Modified, not saved)

No.	Name	Inj. Date/Time	Comment
42	N063254-001C,SAMP,100	2/22/2024 5:22:52 PM	SAMP,0.1>10mL,
43	BLANK	2/22/2024 5:38:10 PM	BLANK
44	CCV-4,CCV,1	2/22/2024 5:53:28 PM	CCV, IWST-240216A
45	CCB-4,CCB,1	2/22/2024 6:08:46 PM	CCB
46	N063255-001C,SAMP,100	2/22/2024 6:24:04 PM	SAMP,0.1>10mL,
47	BLANK	2/22/2024 6:39:22 PM	BLANK
48	N063256-001C,SAMP,100	2/22/2024 6:54:40 PM	SAMP,0.1>10mL,
49	BLANK	2/22/2024 7:09:58 PM	BLANK
50	N063257-001C,SAMP,100	2/22/2024 7:25:16 PM	SAMP,0.1>10mL,
51	BLANK	2/22/2024 7:40:33 PM	BLANK
52	N063258-001C,SAMP,100	2/22/2024 7:55:51 PM	SAMP,0.1>10mL,
53	BLANK	2/22/2024 8:11:10 PM	BLANK
54	MB-2,MBLK,1	2/22/2024 8:26:29 PM	MB
55	LCS-2,LCS,1	2/22/2024 8:41:46 PM	LCS, IWST-240216B
56	CCV-5,CCV,1	2/22/2024 8:57:05 PM	CCV, IWST-240216A
57	CCB-5,CCB,1	2/22/2024 9:12:23 PM	CCB
58	N063273-001A,SAMP,1	2/22/2024 9:27:41 PM	SAMP,10mL,
59	N063273-002A,SAMP,1	2/22/2024 9:42:59 PM	SAMP,10mL,
60	N063273-002ADUP,DUP,1	2/22/2024 9:58:17 PM	DUP,10mL,
61	N063273-002AMS,MS,1	2/22/2024 10:13:35 PM	MS,10mL,
62	N063273-002AMSD,MSD,1	2/22/2024 10:28:52 PM	MSD,10mL,
63	CCV-6,CCV,1	2/22/2024 10:44:10 PM	CCV, IWST-240216A
64	CCB-6,CCB,1	2/22/2024 10:59:28 PM	CCB

INITIAL CALIBRATION DATA SUMMARY

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 1/24/2024

Initial Calibration:

Nitrate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0159	0.0804	0.1690	0.4238	0.8850	1.000
Measured, in mg/L	0.000000	0.067900	0.249500	0.499300	1.217000	2.516400	
Relative Error (%RE)		35.8%		-0.1%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712E

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ICV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5705976**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.226	0.050	1.250	0	98.1	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705978**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.209	0.050	1.250	0	96.7	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705990**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.211	0.050	1.250	0	96.9	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5706000**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.210	0.050	1.250	0	96.8	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCV**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5706004**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.216	0.050	1.250	0	97.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **CCV-5** SampType: **CCV** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **182813**
Client ID: **CCV** Batch ID: **R182813** TestNo: **EPA 300.0** Analysis Date: **2/22/2024** SeqNo: **5706006**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.227	0.050	1.250	0	98.2	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **ICB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **1/24/2024**	SeqNo: **5705977**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705979**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5705991**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5706001**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182813**
Client ID: **CCB**	Batch ID: **R182813**	TestNo: **EPA 300.0**		Analysis Date: **2/22/2024**	SeqNo: **5706005**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **CCB-5** SampType: **CCB** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **182813**
Client ID: **CCB** Batch ID: **R182813** TestNo: **EPA 300.0** Analysis Date: **2/22/2024** SeqNo: **5706007**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/22/2024

Sample Name		Retention Time	Evaluation
ICV	Nitrate	6.727	
CCV-1	Nitrate	6.577	
CCV-2	Nitrate	6.560	
CCV-3	Nitrate	6.557	
CCV-4	Nitrate	6.554	
CCV-5	Nitrate	6.580	
	Average	6.566	
	Applied RT Window	6.366 - 6.766	
MB-R182813_NO3	Nitrate	N.A.	N.A.
LCS-R182813_NO3	Nitrate	6.557	PASS
N063249-007B	Nitrate	6.570	PASS
N063249-009B	Nitrate	N.A.	N.A.
N063249-013B	Nitrate	N.A.	N.A.
N063249-015B	Nitrate	N.A.	N.A.
N063249-017B	Nitrate	N.A.	N.A.
N063249-018B	Nitrate	N.A.	N.A.
N063249-011B	Nitrate	N.A.	N.A.
N063248-005BMS	Nitrate	6.560	PASS
N063248-005BMSD	Nitrate	6.570	PASS
N063248-011CDUP	Nitrate	N.A.	N.A.
N063248-010CDUP	Nitrate	6.573	PASS
N063249-017BMS	Nitrate	6.570	PASS

Reviewed by:

dMocha 3/10/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): 10/5/2022, 12/14/2022, 3/22/2023,7/10/2023; 10/3/2023 & 11/14/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: mg/L

Instrument Name: **IC-08 & IC-09**

Datafile IC-08 221005A #24 IC-08 221214A #30 IC-08 230322A #35 IC-08 230710A #13 IC-09 231003A #14 IC-08 231114A #24 IC-09 231114A #19

Analyte	#1	#2	#3	#4	#5	#6	#7	Spike Conc., mg/L	SD	$t_{(n-1)}$ value	MDLs	MDL	PQL
Fluoride	0.100	0.103	0.108	0.118	0.110	0.098	0.126	0.10	0.0101	3.143	**0.0318**	**0.0318**	0.10
Chloride	0.480	0.418	0.472	0.653	0.624	0.587	0.622	0.50	0.0922	3.143	**0.2898**	**0.2898**	0.50
Nitrite	0.068	0.061	0.060	0.071	0.063	0.061	0.070	0.05	0.0047	3.143	**0.0149**	**0.0149**	0.05
Bromide	0.526	0.502	0.509	0.522	0.536	0.527	0.520	0.50	0.0116	3.143	**0.0364**	**0.0364**	0.50
Nitrate	0.073	0.058	0.059	0.073	0.074	0.068	0.073	0.05	0.0068	3.143	**0.0215**	**0.0240**	0.05
Phosphate	0.112	0.096	0.114	0.120	0.130	0.093	0.124	0.10	0.0138	3.143	**0.0433**	**0.0433**	0.10
Sulfate	0.501	0.609	0.638	0.401	0.704	0.620	0.697	0.50	0.1092	3.143	**0.3432**	**0.3432**	0.50

METHOD DETECTION LIMIT (Blanks)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Analyte	MDLb	# of Records
Fluoride	0	63
Chloride	0.1456	80
Nitrite	0.0147	64
Bromide	0	18
Nitrate	0.0240	132
Phosphate	0.0237	34
Sulfate	0.2579	107

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

EPA 6010B
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107026
ASSET #: N063249

Instrument ID: ICP-03
Analyst: DBJ
Date Analyzed: 2/23/2024

Method:

[X] EPA 6010B / 200.7
[ ] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.	X			X		
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented	X			X		
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

%Rec of Fe in N063248-005C-MS1/MSD1 failed, high bias. However, LCS passed criteria.
The first ICSA1(raw data ICSA Sequence No.:12) does not have the ICSA Standard in position. CAR#7427

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 03072024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in ug/L , in the original sample as follows:

Iron , ug/L = A * DF * PF *CF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL
CF= Conversion Factor from mg/L to ug/L, 1000

For Sample **N063249-007C** , the concentration i ug/L is calculated as follows:

Iron , ug/L = 0.6111 * 1 * (25/25) * 1000

Iron , ug/L = 611.1

Reporting results in two significant figures,

Iron , ug/L = 610

Reviewed by:

dMocha 3/13/2024

% RSD SUMMARY

RSD SUMMARY: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	Fe	0	4.79	15	PASS
Standard1	ICAL	1	Fe	0.02	3.3	15	PASS
Standard2	ICAL	1	Fe	0.05	1.26	15	PASS
Standard3	ICAL	1	Fe	2	0.37	15	PASS
Standard4	ICAL	1	Fe	5	0.7	15	PASS
Standard5	ICAL	1	Fe	7.5	0.76	15	PASS
Standard6	ICAL	1	Fe	10	0.37	15	PASS
Standard7	ICAL	1	Fe	20	0.65	15	PASS
ICV	ICV	1	Fe	10.06	0.34	15	PASS
ICB	ICB	1	Fe	0	9.12	15	PASS
LLICV1	CCV1	1	Fe	0.02	1.2	20	PASS
ICSA1	ICSA	1	Fe	26.91	22.38	15	NR!
ICSA1	ICSA	1	Fe	182.18	0.05	15	PASS
ICSA1	ICSA	1	Fe	174.62	0.07	15	PASS
ICSAB1	ICSAB	1	Fe	170.21	0.13	15	PASS
RINSE	RINSE	1	Fe	0.04	13.45	15	PASS
MB-107026	MBLK	1	Fe	0	7.08	15	PASS
LCS1-107026	LCS	1	Fe	0.09	1.13	15	PASS
N063248-005C	SAMP	1	Fe	0.36	0.29	15	PASS
N063248-005C	SAMP	5	Fe	0.1	0.39	15	PASS
N063248-005C-PS	PS	1	Fe	0.44	0.26	15	PASS
N063248-005C-MS1	MS	1	Fe	0.51	0.25	15	PASS
N063248-005C-MSD1	MSD	1	Fe	0.49	0.49	15	PASS
N063248-006C	SAMP	1	Fe	0.16	0.82	15	PASS
N063248-007C	SAMP	1	Fe	0.15	0.28	15	PASS
CCV1	CCV	1	Fe	10.31	0.73	15	PASS
CCB1	CCB	1	Fe	0	73.65	15	<PQL
N063248-008C	SAMP	1	Fe	0.13	1.17	15	PASS
N063248-010B	SAMP	1	Fe	0.02	4.1	15	PASS
N063248-011B	SAMP	1	Fe	0.35	0.36	15	PASS
N063249-007C	SAMP	1	Fe	0.61	0.57	15	PASS
N063249-009C	SAMP	1	Fe	1.04	0.3	15	PASS
N063249-011C	SAMP	1	Fe	23.08	0.61	15	PASS
N063249-013C	SAMP	1	Fe	0.28	1.21	15	PASS
N063249-015C	SAMP	1	Fe	0.84	0.42	15	PASS
N063249-017C	SAMP	1	Fe	5.07	0.58	15	PASS
N063249-018C	SAMP	1	Fe	7.24	0.2	15	PASS
CCV2	CCV	1	Fe	10.24	0.59	15	PASS
CCB2	CCB	1	Fe	0	47.78	15	<PQL
CCV3	CCV	1	Fe	10.13	0.26	15	PASS
CCB3	CCB	1	Fe	0	135.65	15	<PQL
ICSA2	ICSA	1	Fe	172.57	0.08	15	PASS

RSD SUMMARY: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
ICSAB2	ICSAB	1	Fe	169.57	0.07	15	PASS
RINSE	RINSE	1	Fe	0.02	4.66	15	PASS
RINSE	RINSE	1	Fe	0	43.94	15	<PQL
CCV4	CCV	1	Fe	10.18	0.54	15	PASS
CCB4	CCB	1	Fe	0	69.03	15	<PQL
CCV5	CCV	1	Fe	10.15	0.38	15	PASS
CCB5	CCB	1	Fe	0	356.23	15	<PQL
CCV6	CCV	1	Fe	10.09	0.65	15	PASS
CCB6	CCB	1	Fe	0	62.82	15	<PQL
ICSA3	ICSA	1	Fe	171.39	0.12	15	PASS
ICSAB3	ICSAB	1	Fe	166.83	0.02	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240223A

Instrument ID: ICP-03

STANDARD CODE	
Standard1	MWST-240105M, 0.5<50mL
Standard2	MWST-240105N
Standard3	MWST-240105O, 5<50mL
Standard4	MWST-240105O,12.5<50mL
Standard5	MWST-240105O, 15<40mL
Standard6	MWST-240105O, 25<50mL
Standard7	MWST-240105O
ICV	MWST-240105AE
CCV	MWST-240105O, 25<50mL
ICSA/ICSAB	MWST-240105P / MWST-240105Q
Int. Std. (Y)	MWST-240105B
PS Spike	MWST-240105X / Y/ Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	02/23/2024	11:44:54 AM
2	Standard1	ICAL	1	02/23/2024	11:49:07 AM
3	Standard2	ICAL	1	02/23/2024	11:52:50 AM
4	Standard3	ICAL	1	02/23/2024	11:56:34 AM
5	Standard4	ICAL	1	02/23/2024	11:59:50 AM
6	Standard5	ICAL	1	02/23/2024	12:04:04 PM
7	Standard6	ICAL	1	02/23/2024	12:08:16 PM
8	Standard7	ICAL	1	02/23/2024	12:12:29 PM
310	ICV	ICV	1	02/23/2024	12:22:17 PM
1	ICB	ICB	1	02/23/2024	12:26:37 PM
2	LLICV1	CCV1	1	02/23/2024	12:30:51 PM
9	ICSA1	ICSA	1	02/23/2024	12:35:05 PM
9	ICSA1	ICSA	1	02/23/2024	12:40:32 PM
9	ICSA1	ICSA	1	02/23/2024	12:49:27 PM
10	ICSAB1	ICSAB	1	02/23/2024	12:54:28 PM
299	RINSE	RINSE	1	02/23/2024	12:59:30 PM
11	MB-107026	MBLK	1	02/23/2024	01:07:19 PM
12	LCS1-107026	LCS	1	02/23/2024	01:14:23 PM
13	N063248-005C	SAMP	1	02/23/2024	01:19:08 PM
14	N063248-005C	SAMP	5	02/23/2024	01:24:27 PM
15	N063248-005C-PS	PS	1	02/23/2024	01:28:12 PM
16	N063248-005C-MS1	MS	1	02/23/2024	01:33:31 PM
17	N063248-005C-MSD1	MSD	1	02/23/2024	01:38:50 PM
18	N063248-006C	SAMP	1	02/23/2024	01:44:10 PM
19	N063248-007C	SAMP	1	02/23/2024	01:49:29 PM
7	CCV1	CCV	1	02/23/2024	01:54:50 PM
1	CCB1	CCB	1	02/23/2024	01:59:05 PM
20	N063248-008C	SAMP	1	02/23/2024	02:03:19 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
21	N063248-010B	SAMP	1	02/23/2024	02:08:40 PM
22	N063248-011B	SAMP	1	02/23/2024	02:13:59 PM
23	N063249-007C	SAMP	1	02/23/2024	02:19:21 PM
24	N063249-009C	SAMP	1	02/23/2024	02:24:10 PM
25	N063249-011C	SAMP	1	02/23/2024	02:29:00 PM
26	N063249-013C	SAMP	1	02/23/2024	02:33:58 PM
27	N063249-015C	SAMP	1	02/23/2024	02:39:18 PM
28	N063249-017C	SAMP	1	02/23/2024	02:44:07 PM
29	N063249-018C	SAMP	1	02/23/2024	02:48:26 PM
7	CCV2	CCV	1	02/23/2024	02:53:25 PM
1	CCB2	CCB	1	02/23/2024	02:57:39 PM
30	MB-107028	MBLK	1	02/23/2024	03:01:53 PM
31	LCS-107028	LCS	1	02/23/2024	03:08:27 PM
32	N063248-005D	SAMP	1	02/23/2024	03:13:14 PM
33	N063248-005D	SAMP	5	02/23/2024	03:18:34 PM
34	N063248-005D-PS	PS	1	02/23/2024	03:22:21 PM
35	N063248-005D-MS	MS	1	02/23/2024	03:27:13 PM
36	N063248-005D-MSD	MSD	1	02/23/2024	03:32:04 PM
37	N063248-006D	SAMP	1	02/23/2024	03:36:55 PM
38	N063248-007D	SAMP	1	02/23/2024	03:42:15 PM
39	N063248-008D	SAMP	1	02/23/2024	03:47:35 PM
7	CCV3	CCV	1	02/23/2024	03:52:56 PM
1	CCB3	CCB	1	02/23/2024	03:57:10 PM
9	ICSA2	ICSA	1	02/23/2024	04:01:24 PM
10	ICSAB2	ICSAB	1	02/23/2024	04:06:25 PM
299	RINSE	RINSE	1	02/23/2024	04:13:31 PM
40	N063248-011F	SAMP	1	02/23/2024	04:17:20 PM
300	RINSE	RINSE	1	02/23/2024	04:22:39 PM
41	MB-107062	MBLK	1	02/23/2024	04:26:58 PM
42	LCS1-107062	LCS	1	02/23/2024	04:34:52 PM
43	N063295-005C	SAMP	1	02/23/2024	04:39:39 PM
44	N063295-005C	SAMP	5	02/23/2024	04:44:59 PM
45	N063295-005C-PS	PS	1	02/23/2024	04:48:45 PM
46	N063295-005C-MS1	MS	1	02/23/2024	04:54:06 PM
47	N063295-005C-MSD1	MSD	1	02/23/2024	04:58:59 PM
7	CCV4	CCV	1	02/23/2024	05:03:48 PM
1	CCB4	CCB	1	02/23/2024	05:08:02 PM
48	N063295-006C	SAMP	1	02/23/2024	05:12:14 PM
49	N063295-007C	SAMP	1	02/23/2024	05:17:33 PM
50	N063295-008C	SAMP	1	02/23/2024	05:22:53 PM
51	N063297-001C	SAMP	1	02/23/2024	05:28:13 PM
52	N063303-001B	SAMP	1	02/23/2024	05:31:57 PM
53	N063303-002B	SAMP	1	02/23/2024	05:37:15 PM
54	N063303-006B	SAMP	1	02/23/2024	05:42:33 PM
55	N063303-008B	SAMP	1	02/23/2024	05:47:24 PM
56	MB-107067	MBLK	1	02/23/2024	05:57:03 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
57	LCS-107067	LCS	1	02/23/2024	06:01:17 PM
7	CCV5	CCV	1	02/23/2024	06:06:04 PM
1	CCB5	CCB	1	02/23/2024	06:10:19 PM
58	N063295-005D	SAMP	1	02/23/2024	06:14:32 PM
59	N063295-005D	SAMP	5	02/23/2024	06:19:53 PM
60	N063295-005D-PS	PS	1	02/23/2024	06:23:39 PM
61	N063295-005D-MS1	MS	1	02/23/2024	06:28:59 PM
62	N063295-005D-MSD1	MSD	1	02/23/2024	06:33:49 PM
63	N063295-006D	SAMP	1	02/23/2024	06:38:39 PM
64	N063295-007D	SAMP	1	02/23/2024	06:43:59 PM
65	N063295-008D	SAMP	1	02/23/2024	06:49:19 PM
7	CCV6	CCV	1	02/23/2024	06:54:39 PM
1	CCB6	CCB	1	02/23/2024	06:58:54 PM
9	ICSA3	ICSA	1	02/23/2024	07:03:06 PM
10	ICSAB3	ICSAB	1	02/23/2024	07:08:07 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/22/2024 10:51:06 AM**
Prep End Date: **2/22/2024 3:00:00 PM**
Prep Batch **107026** Prep Code:**3010_W_DISS**

Reviewed/ Date: dMocha 3/13/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-01**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS1-107026	Aqueous		25	☐	25	1.000		
LCS2-107026	Aqueous		25	☐	25	1.000		
MB-107026	Aqueous		25	☐	25	1.000		
N063248-005C	Groundwater	<2	25	☐	25	1.000		
N063248-005C-MS1	Groundwater	<2	25	☐	25	1.000		
N063248-005C-MSD1	Groundwater	<2	25	☐	25	1.000		
N063248-006C	Groundwater	<2	25	☐	25	1.000		
N063248-006C-MS2	Groundwater	<2	25	☐	25	1.000		
N063248-006C-MSD2	Groundwater	<2	25	☐	25	1.000		
N063248-007C	Groundwater	<2	25	☐	25	1.000		
N063248-008C	Groundwater	<2	25	☐	25	1.000		
N063248-010B	Groundwater	<2	25	☐	25	1.000		
N063248-011B	Groundwater	<2	25	☐	25	1.000		
N063249-007C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15258	HYDROCHLORIC ACID
16150	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MSST-231025E	Sodium	LCS,MS,MSD	0.05
MSST-231025F	Potassium	LCS,MS,MSD	0.05
MSST-231130A	Strontium	LCS,MS,MSD	0.125
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/22/2024 10:51:06 AM**
Prep End Date: **2/22/2024 3:00:00 PM**
Prep Batch **107026** Prep Code:**3010_W_DISS**

Reviewed/ Date: dlRocha 3/13/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-01**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063249-009C	Groundwater	<2	25	☐	25	1.000		
N063249-011C	Groundwater	<2	25	☐	25	1.000		
N063249-013C	Groundwater	<2	25	☐	25	1.000		
N063249-015C	Groundwater	<2	25	☐	25	1.000		
N063249-017C	Groundwater	<2	25	☐	25	1.000		
N063249-018C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15258	HYDROCHLORIC ACID
16150	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MSST-231025E	Sodium	LCS,MS,MSD	0.05
MSST-231025F	Potassium	LCS,MS,MSD	0.05
MSST-231130A	Strontium	LCS,MS,MSD	0.125
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240223A

Instrument ID: ICP-03

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Iron								
CalBlk	02/23/2024	11:44:54 AM	Fe	273.952	133	0.00	mg/L	
Standard1	02/23/2024	11:49:07 AM	Fe	273.952	166	0.02	mg/L	
Standard2	02/23/2024	11:52:50 AM	Fe	273.952	476	0.05	mg/L	
Standard3	02/23/2024	11:56:34 AM	Fe	273.952	15966	2.0	mg/L	
Standard4	02/23/2024	11:59:50 AM	Fe	273.952	39733	5.0	mg/L	
Standard5	02/23/2024	12:04:04 PM	Fe	273.952	59452	7.5	mg/L	
Standard6	02/23/2024	12:08:16 PM	Fe	273.952	78889	10.0	mg/L	
Standard7	02/23/2024	12:12:29 PM	Fe	273.952	155652	20.0	mg/L	1.0000

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **ICV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708208**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10061.140	20	10000	0	101	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **ZZZZZZ**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708210**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	19.964	20	20.00	0	99.8	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708224**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10309.918	20	10000	0	103	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708236**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10241.479	20	10000	0	102	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708248**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10133.536	20	10000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708260**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10177.476	20	10000	0	102	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708272**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10151.181	20	10000	0	102	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708282**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10093.401	20	10000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID	**ICB**	SampType:	**ICB**	TestCode:	**6010_WDPG**	Units:	**µg/L**	Prep Date:		RunNo:	**182846**
Client ID:	**ICB**	Batch ID:	**R182846**	TestNo:	**EPA 6010B**			Analysis Date:	**2/23/2024**	SeqNo:	**5708209**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.207	20									

Sample ID	**CCB1**	SampType:	**CCB**	TestCode:	**6010_WDPG**	Units:	**µg/L**	Prep Date:		RunNo:	**182846**
Client ID:	**CCB**	Batch ID:	**R182846**	TestNo:	**EPA 6010B**			Analysis Date:	**2/23/2024**	SeqNo:	**5708225**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.466	20									

Sample ID	**CCB2**	SampType:	**CCB**	TestCode:	**6010_WDPG**	Units:	**µg/L**	Prep Date:		RunNo:	**182846**
Client ID:	**CCB**	Batch ID:	**R182846**	TestNo:	**EPA 6010B**			Analysis Date:	**2/23/2024**	SeqNo:	**5708237**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.202	20									

Sample ID	**CCB3**	SampType:	**CCB**	TestCode:	**6010_WDPG**	Units:	**µg/L**	Prep Date:		RunNo:	**182846**
Client ID:	**CCB**	Batch ID:	**R182846**	TestNo:	**EPA 6010B**			Analysis Date:	**2/23/2024**	SeqNo:	**5708249**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.560	20									

Sample ID	**CCB4**	SampType:	**CCB**	TestCode:	**6010_WDPG**	Units:	**µg/L**	Prep Date:		RunNo:	**182846**
Client ID:	**CCB**	Batch ID:	**R182846**	TestNo:	**EPA 6010B**			Analysis Date:	**2/23/2024**	SeqNo:	**5708261**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.514	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID	**CCB5**	SampType:	**CCB**	TestCode:	**6010_WDPG**	Units:	**µg/L**	Prep Date:		RunNo:	**182846**
Client ID:	**CCB**	Batch ID:	**R182846**	TestNo:	**EPA 6010B**			Analysis Date:	**2/23/2024**	SeqNo:	**5708273**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-0.235249	20									

Sample ID	**CCB6**	SampType:	**CCB**	TestCode:	**6010_WDPG**	Units:	**µg/L**	Prep Date:		RunNo:	**182846**
Client ID:	**CCB**	Batch ID:	**R182846**	TestNo:	**EPA 6010B**			Analysis Date:	**2/23/2024**	SeqNo:	**5708283**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-1.130016	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ICSA** Batch ID: **R182846** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708213**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	576247.443	50	500000	0	115	80	120				
Calcium	459915.899	500	500000	0	92.0	80	120				
Iron	174616.860	20	200000	0	87.3	80	120				
Magnesium	446022.583	100	500000	0	89.2	80	120				

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ICSAB** Batch ID: **R182846** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708214**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	564316.966	50	500000	0	113	80	120				
Calcium	449363.078	500	500000	0	89.9	80	120				
Iron	170211.584	20	200000	0	85.1	80	120				
Magnesium	435511.791	100	500000	0	87.1	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ICSA** Batch ID: **R182846** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708250**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	555716.342	50	500000	0	111	80	120				
Calcium	452434.522	500	500000	0	90.5	80	120				
Iron	172573.740	20	200000	0	86.3	80	120				
Magnesium	439980.449	100	500000	0	88.0	80	120				

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ICSAB** Batch ID: **R182846** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708251**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	542214.110	50	500000	0	108	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **ICSAB**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708251**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	449903.261	500	500000	0	90.0	80	120				
Iron	169573.181	20	200000	0	84.8	80	120				
Magnesium	431773.625	100	500000	0	86.4	80	120				

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **ICSA**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708284**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	584468.181	50	500000	0	117	80	120				
Calcium	451278.962	500	500000	0	90.3	80	120				
Iron	171392.769	20	200000	0	85.7	80	120				
Magnesium	440134.747	100	500000	0	88.0	80	120				

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **ICSAB**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708285**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	569749.122	50	500000	0	114	80	120				
Calcium	442346.814	500	500000	0	88.5	80	120				
Iron	166830.148	20	200000	0	83.4	80	120				
Magnesium	430330.236	100	500000	0	86.1	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	1	99.54	65-125	PASS
Standard2	ICAL	1	0.96	96.11	65-125	PASS
Standard3	ICAL	1	0.95	95.21	65-125	PASS
Standard4	ICAL	1	0.94	93.79	65-125	PASS
Standard5	ICAL	1	0.93	93.21	65-125	PASS
Standard6	ICAL	1	0.92	91.99	65-125	PASS
Standard7	ICAL	1	0.91	90.59	65-125	PASS
ICV	ICV	1	0.91	91.25	65-125	PASS
ICB	ICB	1	0.93	93.31	65-125	PASS
LLICV1	CCV1	1	0.93	93.05	65-125	PASS
ICSA1	ICSA	1	0	0.01	65-125	NR!
ICSA1	ICSA	1	0.79	79.4	65-125	PASS
ICSA1	ICSA	1	0.8	79.81	65-125	PASS
ICSAB1	ICSAB	1	0.81	81.01	65-125	PASS
RINSE	RINSE	1	0.78	78.14	65-125	PASS
MB-107026	MBLK	1	1.21	120.84	65-125	PASS
LCS1-107026	LCS	1	0.9	90.44	65-125	PASS
N063248-005C	SAMP	1	0.75	74.82	65-125	PASS
N063248-005C	SAMP	5	0.88	88.41	65-125	PASS
N063248-005C-PS	PS	1	0.74	73.62	65-125	PASS
N063248-005C-MS1	MS	1	0.75	74.51	65-125	PASS
N063248-005C-MSD1	MSD	1	0.77	76.8	65-125	PASS
N063248-006C	SAMP	1	0.71	70.86	65-125	PASS
N063248-007C	SAMP	1	0.74	74.4	65-125	PASS
CCV1	CCV	1	1.03	102.88	65-125	PASS
CCB1	CCB	1	1.04	103.63	65-125	PASS
N063248-008C	SAMP	1	0.73	73.43	65-125	PASS
N063248-010B	SAMP	1	0.93	93.34	65-125	PASS
N063248-011B	SAMP	1	0.79	78.66	65-125	PASS
N063249-007C	SAMP	1	0.76	75.84	65-125	PASS
N063249-009C	SAMP	1	0.76	76.46	65-125	PASS
N063249-011C	SAMP	1	0.76	76.42	65-125	PASS
N063249-013C	SAMP	1	0.69	69.43	65-125	PASS
N063249-015C	SAMP	1	0.72	72.27	65-125	PASS
N063249-017C	SAMP	1	0.95	94.77	65-125	PASS
N063249-018C	SAMP	1	0.74	73.88	65-125	PASS
CCV2	CCV	1	1.03	102.69	65-125	PASS
CCB2	CCB	1	1.02	102.2	65-125	PASS
CCV3	CCV	1	1.01	100.84	65-125	PASS
CCB3	CCB	1	1.03	103.05	65-125	PASS

INTERNAL STANDARD: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
ICSA2	ICSA	1	0.85	84.99	65-125	PASS
ICSAB2	ICSAB	1	0.88	88.33	65-125	PASS
RINSE	RINSE	1	0.83	83.18	65-125	PASS
RINSE	RINSE	1	1	100.01	65-125	PASS
CCV4	CCV	1	1.02	102.15	65-125	PASS
CCB4	CCB	1	1.04	103.81	65-125	PASS
CCV5	CCV	1	0.97	96.8	65-125	PASS
CCB5	CCB	1	0.99	99.37	65-125	PASS
CCV6	CCV	1	0.98	98.12	65-125	PASS
CCB6	CCB	1	1	99.73	65-125	PASS
ICSA3	ICSA	1	0.82	82.33	65-125	PASS
ICSAB3	ICSAB	1	0.84	83.53	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063249
Test Method: EPA 6010B
Analysis Date: 2/23/2024

Matrix: Groundwater
Batch No.: 107026

Instrument ID: ICP-03
Instrument Description: Perkin Elmer Avio 500Max

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Fe. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063248-005C DT 5x	Iron	Fe	µg/L	495.9734	NA	357.6918	38.66%	10

Reviewed by:

dlRocha 3/13/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **N063248-005C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ZZZZZZ** Batch ID: **107026** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708219**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	444.661	20	100.0	357.7	87.0	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CORRECTIVE ACTION DOCUMENTATION

ASSET Laboratories

Corrective Action Report (CAR)

Date Initiated: 23-Feb-24 **Corrective Action Report ID:** 7427

Initiated By: Diane Jetajobe **Department:** ME-2(ICP)

Corrective Action Description

CAR Summary: ICSA was ran 3X in sequence NV00922-ICP3_240223C^A.

Description of Nonconformance: The first ICSA1(raw data ICSA Sequence No.:12) does not have the ICSA Standard in position.

Description of Corrective Action: Analyst willl be mindful on checking the ICSA Standard in position before continuing the running IQC.

Performed By: Diane Jetajobe **Completion Date:** 23-Feb-24

Client Notification

Client Notification Required: No **Notified By:**

Comment:

Quality Assurance Review

Corrective Action: Deficiency

Further Action required by QA:

Approval and Closure

CAR Closed By: _____ Close Date: _____

QA Reviewed By: LG QA Date: 03/11/2024

Last Updated BY JohnL Updated: 11-Mar-2024 7:29 PM Reported: 11-Mar-2024 6:29 PM

MDL STUDY

LOD & PQL VERIFICATION

Analytical Method: EPA 6010B
Digestion Method: EPA 3010A
Digestion Date: 5/7/23; 5/8/23; 5/10/23
Analysis Date: 5/7-23/23
Instrument Name: ICP-03
Analyst/Technician: Nancy Sibucao / Diane Jetajobe

Matrix: WATER
Units : ppm

Analyte	MDL	LOD	ACTUAL LOD	PQL	Actual PQL	%REC
Beryllium	0.000076	0.0005	0.00047	0.001	0.00098	98
Boron	0.0086	0.05	0.04899	0.1	0.089	89
Magnesium	0.0057	0.05	0.05152	0.1	0.10	102
Silicon	0.012	0.01	0.01312	0.02	0.023	113
Chromium	0.00051	0.0005	0.00056	0.001	0.0010	102
Manganese	0.00032	0.01	0.00534	0.01	0.011	110
Iron	0.0022	0.01	0.01180	0.02	0.021	106
Cobalt	0.001	0.0013	0.00096	0.0025	0.0025	100
Nickel	0.0034	0.0025	0.00417	0.005	0.0055	110
Copper	0.0042	0.0025	0.00434	0.005	0.0044	87
Zinc	0.0007	0.005	0.00624	0.01	0.011	106
Arsenic	0.0042	0.005	0.00461	0.01	0.010	104
Selenium	0.008	0.005	0.00829	0.01	0.010	102
Molybdenum	0.0013	0.0025	0.00307	0.005	0.0053	106
Silver	0.0024	0.0013	0.00419	0.0025	0.0033	134
Cadmium	0.0016	0.0013	0.00180	0.0025	0.0026	102
Tin	0.0076	0.005	0.00563	0.010	0.0099	99
Antimony	0.0038	0.005	0.00307	0.01	0.0096	96
Barium	0.0002	0.0013	0.00124	0.0025	0.0026	104
Thallium	0.0021	0.0075	0.00656	0.015	0.015	101
Lead	0.0039	0.0025	0.00337	0.005	0.0047	94
Calcium	0.011	0.1	0.11963	0.2	0.23	113
Vanadium	0.00017	0.0013	0.00126	0.0025	0.0025	100
Aluminum	0.0089	0.025	0.02576	0.05	0.048	95
Titanium	0.004	0.005	0.00612	0.01	0.01	101

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

EPA 6020
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107021
ASSET #: N063249

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/23/2024

Method:

[ ] EPA 6010B / 200.7
[X] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?		X			X	
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.		X			X	
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.	X			X		
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

% Rec of Ba in N063248-002B- MSD failed. However, LCS passed criteria
Mn is OLR in N063248-002B-PS/MS/ MSD/N063249-007C/009C/011C/013C/015C/017C. For dilution
Ba is OLR in N063249-011C/017C. For dilution
% Rec of Ba in several CCVs failed, high bias. Samples are for re run
Dilution test for Ba failed. However, PS passed criteria

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: —

2nd Level Reviewer LG 3/5/2024 Date:

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107021
ASSET #: N063249

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/25/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.			X			X
24. LCS compounds within control limits.			X			X
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

Ba re run
Mn dilution

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: —

2nd Level Reviewer LG 3/5/2024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Groundwater

FORMULA:

Calculate the Barium concentration, in ug/L in the original sample as follows:

Barium , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063249-007C** , the concentration in ug/L is calculated as follows:

Barium , ug/L = 35.8778 * 1 *(25 / 25)

Barium , ug/L = 35.8778

Reporting results in two significant figures,

Barium , ug/L = 36

Reviewed by:

JRB 3/17/2024

% RSD SUMMARY

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	15.646	15	<PQL	0.1	4.971	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.47	6.506	15	PASS	0.51	3.025	15	PASS
Std3-5/50 ppb	ICAL	1	4.83	1.27	15	PASS	4.89	3.407	15	PASS
Std4-10/100 ppb	ICAL	1	9.83	2.315	15	PASS	9.86	1.399	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	20.24	1.991	15	PASS	19.81	1.649	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	40.14	1.038	15	PASS	39.51	1.262	15	PASS
Std7-100/1000 ppb	ICAL	1	100.68	1.373	15	PASS	98.5	0.438	15	PASS
Std8-200/2000 ppb	ICAL	1	199.62	1.169	15	PASS	200.88	0.335	15	PASS
ICV	ICV	1	10.17	1.243	15	PASS	101.59	0.398	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	0	258.657	15	<PQL
LLICV1	LLICV	1	1.11	0.584	20	PASS	0.55	6.234	20	PASS
MLCCV	CCV	1	19.88	2.197	15	PASS	19.94	0.442	15	PASS
ICSA1	ICSA	1	0	70.954	15	<PQL	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.4	0.884	15	PASS	20.36	0.139	15	PASS
MDL 4	ICAL	1	1.07	0.459	15	PASS	0.51	4.031	15	PASS
CCV1	CCV	1	19.98	1.016	15	PASS	19.82	1.109	15	PASS
CCB1	CCB	1	0.02	43.803	15	<PQL	0.18	6.931	15	PASS
CCV2	CCV	1	19.84	1.185	15	PASS	19.77	0.493	15	PASS
CCB2	CCB	1	0.02	52.281	15	<PQL	0.19	6.321	15	PASS
CCV3	CCV	1	19.92	1.739	15	PASS	19.59	0.422	15	PASS
CCB3	CCB	1	0.03	49.285	15	<PQL	0.18	13.078	15	PASS
CCV4	CCV	1	20.7	0.766	15	PASS	20	0.995	15	PASS
CCB4	CCB	1	0.02	33.478	15	<PQL	0.18	10.217	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	0.01	20.455	15	<PQL	0.07	11.023	15	PASS
ICSAB2	ICSAB	1	20.62	2.198	15	PASS	20.28	0.565	15	PASS
CCV5	CCV	1	20.65	1.318	15	PASS	20.33	0.561	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	0.01	36.4	15	<PQL	0.06	16.251	15	<PQL
ICSAB3	ICSAB	1	20.58	0.24	15	PASS	20.19	1.163	15	PASS
CCV6	CCV	1	21.35	0.969	15	PASS	19.62	1.472	15	PASS
CCB6	CCB	1	0	8860.741	15	<PQL	<0.000	N/A	15	<PQL
CCV7	CCV	1	22.1	1.002	15	PASS	19.92	0.296	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	0.01	61.487	15	<PQL	0.07	22.799	15	<PQL
ICSAB4	ICSAB	1	22.11	0.666	15	PASS	20.31	0.724	15	PASS
CCV8	CCV	1	20.87	1.232	15	PASS	19.91	1.192	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV9	CCV	1	21.75	0.532	15	PASS	19.71	1.201	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCV10	CCV	1	21.64	0.313	15	PASS	19.6	0.332	15	PASS
CCB10	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	0.01	90.69	15	<PQL	0.07	14.564	15	PASS
ICSAB5	ICSAB	1	21.85	0.907	15	PASS	20.01	1.125	15	PASS
MB-107021	MBLK	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
LCS-107021	LCS	1	10.93	1.75	15	PASS	98.25	1.212	15	PASS
N062510-015D	SAMP	5	25.08	1.706	15	PASS	90.55	0.29	15	PASS
N063248-001B	SAMP	1	64.5	1.896	15	PASS	58.79	0.727	15	PASS
N063248-002B	SAMP	1	59.79	1.217	15	PASS	88.94	0.398	15	PASS
N063248-002B	SAMP	5	13.38	1.58	15	PASS	19.55	0.225	15	PASS
N063248-002B-PS	PS	1	70.16	1.406	15	PASS	180.29	0.501	15	PASS
N063248-002B-MS	MS	1	71.6	1.395	15	PASS	181.31	0.894	15	PASS
N063248-002B-MSD	MSD	1	72.47	1.139	15	PASS	181.18	1.451	15	PASS
CCV11	CCV	1	21.74	1.753	15	PASS	19.59	1.17	15	PASS
CCB11	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063248-003B	SAMP	1	94.15	1.42	15	PASS	205.85	0.525	15	PASS
N063248-004B	SAMP	1	95.03	0.263	15	PASS	313.19	2.545	15	PASS
N063248-005C	SAMP	1	139.28	0.224	15	PASS	386.18	1.283	15	PASS
N063248-006C	SAMP	1	116.18	1.252	15	PASS	757.03	0.865	15	PASS
N063248-007C	SAMP	1	114.24	1.938	15	PASS	753.47	0.679	15	PASS
N063248-008C	SAMP	1	105.96	0.787	15	PASS	720.6	0.904	15	PASS
N063248-010B	SAMP	1	71.42	0.723	15	PASS	<0.000	N/A	15	<PQL
N063248-011B	SAMP	1	139.53	1.395	15	PASS	400.65	1.225	15	PASS
N063249-007C	SAMP	1	37.13	0.797	15	PASS	230.11	1.033	15	PASS
CCV12	CCV	1	22.44	1.29	15	PASS	19.65	1.067	15	PASS
CCB12	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063249-009C	SAMP	1	61.69	1.598	15	PASS	180.74	0.634	15	PASS
N063249-011C	SAMP	1	644.7	0.375	15	PASS	1142.66	0.745	15	PASS
N063249-013C	SAMP	1	44.26	1.442	15	PASS	802.09	1.268	15	PASS
N063249-015C	SAMP	1	72.33	2.073	15	PASS	450.54	0.417	15	PASS
N063249-017C	SAMP	1	211.41	0.652	15	PASS	1076.94	0.511	15	PASS
N063249-018C	SAMP	5	45.49	0.581	15	PASS	114.33	1.173	15	PASS
CCV13	CCV	1	22.5	0.471	15	PASS	19.73	0.111	15	PASS
CCB13	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	0.02	57.827	15	<PQL	0.06	10.678	15	PASS
ICSAB6	ICSAB	1	22.35	2.238	15	PASS	20.4	0.351	15	PASS
CCV14	CCV	1	21.97	1.107	15	PASS	19.73	1.059	15	PASS
CCB14	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV15	CCV	1	22.62	1.187	15	PASS	19.75	1.254	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV16	CCV	1	22.1	0.561	15	PASS	20.06	0.772	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCB16	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA7	ICSA	1	0.01	76.638	15	<PQL	0.07	11.198	15	PASS
ICSAB7	ICSAB	1	22.31	0.348	15	PASS	20.29	1.198	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]				78 Se [1]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.1	15.379	15	FAIL	0.06	59.065	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.46	2.776	15	PASS	0.52	22.291	15	FAIL
Std3-5/50 ppb	ICAL	1	4.8	6.312	15	PASS	4.8	3.503	15	PASS
Std4-10/100 ppb	ICAL	1	9.82	2.017	15	PASS	9.53	1.636	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.47	2.419	15	PASS	19.76	1.967	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.93	0.817	15	PASS	39.71	2.029	15	PASS
Std7-100/1000 ppb	ICAL	1	99.51	0.783	15	PASS	99.82	2.088	15	PASS
Std8-200/2000 ppb	ICAL	1	200.33	0.784	15	PASS	200.2	0.652	15	PASS
ICV	ICV	1	10.43	1.082	15	PASS	9.73	2.945	15	PASS
ICB	ICB	1	0.02	113.613	15	<PQL	<0.000	N/A	15	<PQL
LLICV1	LLICV	1	0.09	23.162	20	<PQL	0.5	7.736	20	PASS
MLCCV	CCV	1	20.04	2.149	15	PASS	19.45	0.945	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.6	2.753	15	PASS	20.31	1.142	15	PASS
MDL 4	ICAL	1	0.1	7.053	15	PASS	0.5	16.516	15	FAIL
CCV1	CCV	1	20.03	2.081	15	PASS	20.11	0.295	15	PASS
CCB1	CCB	1	0	903.97	15	<PQL	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.84	0.388	15	PASS	19.9	4.416	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV3	CCV	1	19.77	0.594	15	PASS	20.18	1.305	15	PASS
CCB3	CCB	1	0.01	152.049	15	<PQL	<0.000	N/A	15	<PQL
CCV4	CCV	1	20.09	2.99	15	PASS	19.98	2.496	15	PASS
CCB4	CCB	1	0.01	119.849	15	<PQL	<0.000	N/A	15	<PQL
CCB4	CCB	1	0	291.181	15	<PQL	<0.000	0	15	PASS
ICSA2	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.47	0.498	15	PASS	20.55	2.777	15	PASS
CCV5	CCV	1	20.55	1.072	15	PASS	19.74	1.143	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.27	1.285	15	PASS	20.24	0.642	15	PASS
CCV6	CCV	1	19.76	2.022	15	PASS	20.48	1.069	15	PASS
CCB6	CCB	1	0	1214.624	15	<PQL	<0.000	N/A	15	<PQL
CCV7	CCV	1	20.07	1.253	15	PASS	19.68	0.982	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.32	0.601	15	PASS	20.53	1.808	15	PASS
CCV8	CCV	1	20.12	1.584	15	PASS	20.28	2.093	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV9	CCV	1	19.93	1.104	15	PASS	19.93	0.637	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]				78 Se [1]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCV10	CCV	1	19.72	2.489	15	PASS	20.03	2.665	15	PASS
CCB10	CCB	1	0.02	53.568	15	<PQL	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	0.01	369.683	15	<PQL	<0.000	N/A	15	<PQL
ICSAB5	ICSAB	1	19.98	1.177	15	PASS	20.53	2.166	15	PASS
MB-107021	MBLK	1	0.01	243.432	15	<PQL	<0.000	N/A	15	<PQL
LCS-107021	LCS	1	10.23	0.352	15	PASS	9.62	2.163	15	PASS
N062510-015D	SAMP	5	0.69	9.788	15	PASS	0.06	7.33	15	PASS
N063248-001B	SAMP	1	<0.000	N/A	15	<PQL	3.15	8.87	15	PASS
N063248-002B	SAMP	1	<0.000	N/A	15	<PQL	2.83	1.942	15	PASS
N063248-002B	SAMP	5	<0.000	N/A	15	<PQL	0.64	3.901	15	PASS
N063248-002B-PS	PS	1	8.95	1.388	15	PASS	11.9	2.591	15	PASS
N063248-002B-MS	MS	1	8.52	2.283	15	PASS	12.23	2.765	15	PASS
N063248-002B-MSD	MSD	1	8.89	2.939	15	PASS	11.65	0.964	15	PASS
CCV11	CCV	1	19.95	2.201	15	PASS	20.12	1.72	15	PASS
CCB11	CCB	1	0	691.193	15	<PQL	<0.000	N/A	15	<PQL
N063248-003B	SAMP	1	<0.000	N/A	15	<PQL	2.1	10	15	PASS
N063248-004B	SAMP	1	<0.000	N/A	15	<PQL	1.01	7.627	15	PASS
N063248-005C	SAMP	1	0.02	1199.477	15	<PQL	0.01	204.344	15	<PQL
N063248-006C	SAMP	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063248-007C	SAMP	1	<0.000	N/A	15	<PQL	0.01	253.606	15	<PQL
N063248-008C	SAMP	1	<0.000	N/A	15	<PQL	0.04	60.171	15	<PQL
N063248-010B	SAMP	1	0.9	1.523	15	PASS	3.62	5.141	15	PASS
N063248-011B	SAMP	1	<0.000	N/A	15	<PQL	0.01	338.157	15	<PQL
N063249-007C	SAMP	1	<0.000	N/A	15	<PQL	0.06	48.69	15	<PQL
CCV12	CCV	1	19.61	1.699	15	PASS	19.68	2.429	15	PASS
CCB12	CCB	1	0	535.302	15	<PQL	<0.000	N/A	15	<PQL
N063249-009C	SAMP	1	<0.000	N/A	15	<PQL	0	236.911	15	<PQL
N063249-011C	SAMP	1	<0.000	N/A	15	<PQL	0.55	13.387	15	PASS
N063249-013C	SAMP	1	<0.000	N/A	15	<PQL	0.02	105.565	15	<PQL
N063249-015C	SAMP	1	<0.000	N/A	15	<PQL	0.01	365.182	15	<PQL
N063249-017C	SAMP	1	<0.000	N/A	15	<PQL	0.02	29.752	15	<PQL
N063249-018C	SAMP	5	0.22	12.858	15	PASS	0.08	34.247	15	<PQL
CCV13	CCV	1	19.79	1.82	15	PASS	19.59	2.205	15	PASS
CCB13	CCB	1	0.01	170.85	15	<PQL	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	0.03	41.639	15	<PQL	<0.000	N/A	15	<PQL
ICSAB6	ICSAB	1	19.9	2.439	15	PASS	20.23	2.504	15	PASS
CCV14	CCV	1	19.66	1.198	15	PASS	19.82	3.674	15	PASS
CCB14	CCB	1	0	13298.147	15	<PQL	<0.000	N/A	15	<PQL
CCV15	CCV	1	19.42	0.935	15	PASS	19.61	3.363	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV16	CCV	1	19.87	1.357	15	PASS	19.81	0.433	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]				78 Se [1]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCB16	CCB	1	0	821.372	15	<PQL	<0.000	N/A	15	<PQL
ICSA7	ICSA	1	0.01	38.089	15	<PQL	<0.000	N/A	15	<PQL
ICSAB7	ICSAB	1	20.3	1.771	15	PASS	19.95	1.408	15	PASS

PERCENT RSD SUMMARY: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.11	14.881	15	PASS	0.1	17.358	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.48	5.813	15	PASS	0.48	3.002	15	PASS
Std3-5/50 ppb	ICAL	1	4.82	2.112	15	PASS	4.81	3.025	15	PASS
Std4-10/100 ppb	ICAL	1	9.75	0.405	15	PASS	9.77	2.389	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.49	1.504	15	PASS	19.78	1.164	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.73	0.713	15	PASS	39.02	1.467	15	PASS
Std7-100/1000 ppb	ICAL	1	100.14	0.815	15	PASS	100.2	0.669	15	PASS
Std8-200/2000 ppb	ICAL	1	200.05	0.916	15	PASS	200.13	1.446	15	PASS
ICV	ICV	1	9.83	1.682	15	PASS	100.89	0.705	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	0	284.11	15	<PQL
LLICV1	LLICV	1	1.03	1.376	20	PASS	0.55	4.582	20	PASS
LLICV1	LLICV	1	0.98	4.633	20	PASS	0.53	7.38	20	PASS
MLCCV	CCV	1	19.62	1.316	15	PASS	19.63	1.253	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL	0	270.688	15	<PQL
ICSAB1	ICSAB	1	20.09	1.176	15	PASS	20.5	0.625	15	PASS
CCV1	CCV	1	19.83	1.443	15	PASS	20.01	0.918	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.42	1.347	15	PASS	19.76	0.534	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV3	CCV	1	19.57	1.412	15	PASS	19.78	0.902	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20	1.05	15	PASS	20.45	0.678	15	PASS
CCV4	CCV	1	19.57	1.898	15	PASS	20.11	2.256	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV5	CCV	1	19.87	0.805	15	PASS	19.72	1.046	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV6	CCV	1	20.03	0.356	15	PASS	20.04	0.19	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.72	0.863	15	PASS	20.27	0.514	15	PASS
N063248-002B	SAMP	5	12.06	0.755	15	PASS	18.7	1.333	15	PASS
N063248-002B	SAMP	25	2.57	1.344	15	PASS	4.05	1.713	15	PASS
N063248-002B-PS	PS	5	22.62	0.823	15	PASS	117.22	0.383	15	PASS
N063248-002B-MS	MS	5	14.63	2.106	15	PASS	39.52	0.845	15	PASS
N063248-002B-MSD	MSD	5	15.43	1.594	15	PASS	41.77	1.458	15	PASS
N063248-003B	SAMP	10	9.9	0.833	15	PASS	23.73	1.562	15	PASS
N063248-004B	SAMP	10	9.75	1.041	15	PASS	34.83	0.903	15	PASS
CCV7	CCV	1	20.24	1.861	15	PASS	19.64	0.467	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCV8	CCV	1	19.7	1.29	15	PASS	19.67	1.135	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV9	CCV	1	19.83	0.826	15	PASS	19.44	1.878	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV10	CCV	1	19.67	0.472	15	PASS	19.83	2.27	15	PASS
CCB10	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.03	1.24	15	PASS	20.18	1.88	15	PASS
N063248-005C	SAMP	1	132.42	0.966	15	PASS	400.39	2.239	15	PASS
N063248-005C	SAMP	10	13.9	1.715	15	PASS	42.91	0.829	15	PASS
N063248-006C	SAMP	1	111.26	0.729	15	PASS	772.36	1.195	15	PASS
N063248-006C	SAMP	10	11.85	2.519	15	PASS	86.56	0.866	15	PASS
N063248-007C	SAMP	1	110.52	2.408	15	PASS	774.69	0.665	15	PASS
N063248-007C	SAMP	10	11.75	1.113	15	PASS	84.27	0.514	15	PASS
N063248-008C	SAMP	1	102.86	1.456	15	PASS	733.13	1.269	15	PASS
N063248-008C	SAMP	10	10.78	4.073	15	PASS	77.98	0.973	15	PASS
N063248-010B	SAMP	1	67.72	1.015	15	PASS	<0.000	N/A	15	<PQL
CCV11	CCV	1	20.18	1.144	15	PASS	19.4	0.854	15	PASS
CCB11	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063248-011B	SAMP	1	134.24	0.598	15	PASS	411.05	0.93	15	PASS
N063248-011B	SAMP	10	14.79	0.691	15	PASS	44.69	1.474	15	PASS
N063249-007C	SAMP	1	35.88	0.715	15	PASS	233.48	0.507	15	PASS
N063249-007C	SAMP	10	3.68	4.673	15	PASS	25.05	0.859	15	PASS
N063249-009C	SAMP	1	59.32	1.225	15	PASS	185.32	0.562	15	PASS
N063249-009C	SAMP	10	6.83	0.612	15	PASS	20.94	1.068	15	PASS
N063249-011C	SAMP	1	615.59	0.52	15	PASS	1156.4	1.092	15	PASS
N063249-011C	SAMP	10	68.35	1.705	15	PASS	130.07	0.282	15	PASS
N063249-013C	SAMP	1	42.25	1.315	15	PASS	817.09	1.363	15	PASS
N063249-013C	SAMP	10	4.61	1.204	15	PASS	87.76	1.327	15	PASS
CCV12	CCV	1	20.93	1.315	15	PASS	19.46	1.202	15	PASS
CCB12	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063249-015C	SAMP	1	68.08	1.349	15	PASS	460.62	1.841	15	PASS
N063249-015C	SAMP	10	7.64	2.106	15	PASS	50.92	0.206	15	PASS
N063249-017C	SAMP	1	202.4	1.23	15	PASS	1087.68	1.121	15	PASS
N063249-017C	SAMP	10	22.36	0.604	15	PASS	122.79	0.438	15	PASS
N063249-018C	SAMP	5	38.44	0.598	15	PASS	105.2	0.421	15	PASS
CCV13	CCV	1	20.46	0.595	15	PASS	19.67	1.405	15	PASS
CCB13	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	<0.000	N/A	15	<PQL	0	16.197	15	<PQL
ICSAB5	ICSAB	1	20.85	2.538	15	PASS	19.95	0.695	15	PASS
CCV14	CCV	1	20.52	1.496	15	PASS	19.62	0.724	15	PASS

PERCENT RSD SUMMARY: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCB14	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV15	CCV	1	20.69	1.56	15	PASS	19.66	1.092	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV16	CCV	1	20.38	0.567	15	PASS	19.53	0.264	15	PASS
CCB16	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV17	CCV	1	20.99	2.009	15	PASS	19.69	1.698	15	PASS
CCB17	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	0	345.111	15	<PQL	<0.000	N/A	15	<PQL
ICSAB6	ICSAB	1	21.49	1.663	15	PASS	20.11	2.277	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223001.d	RINSE	ICAL	1	02/23/24 1:22 PM
A0223002.d	Cal Blk	IBLK	1	02/23/24 1:27 PM
A0223003.d	Std1-0.1/1 ppb	ICAL	1	02/23/24 1:32 PM
A0223004.d	Std2-0.5/5 ppb	ICAL	1	02/23/24 1:36 PM
A0223005.d	Std3-5/50 ppb	ICAL	1	02/23/24 1:41 PM
A0223006.d	Std4-10/100 ppb	ICAL	1	02/23/24 1:46 PM
A0223007.d	Std5-4.0/20/200 ppb	ICAL	1	02/23/24 1:51 PM
A0223008.d	Std6-8.0/40/400 ppb	ICAL	1	02/23/24 1:55 PM
A0223009.d	Std7-100/1000 ppb	ICAL	1	02/23/24 2:00 PM
A0223010.d	Std8-200/2000 ppb	ICAL	1	02/23/24 2:05 PM
A0223011.d	ICV	ICV	1	02/23/24 2:24 PM
A0223012.d	ICB	ICB	1	02/23/24 2:29 PM
A0223013.d	LLICV1	LLICV	1	02/23/24 2:34 PM
A0223014.d	MLCCV	CCV	1	02/23/24 2:38 PM
A0223015.d	ICSA1	ICSA	1	02/23/24 2:43 PM
A0223016.d	ICSAB1	ICSAB	1	02/23/24 2:47 PM
A0223017.d	MDL 4	ICAL	1	02/23/24 3:00 PM
A0223018.d	MB-106955	MBLK	1	02/23/24 3:10 PM
A0223019.d	LCS-106955	LCS	1	02/23/24 3:15 PM
A0223020.d	N063150-001A	SAMP	1	02/23/24 3:19 PM
A0223021.d	N063150-002A	SAMP	1	02/23/24 3:24 PM
A0223022.d	N063168-002A	SAMP	1	02/23/24 3:29 PM
A0223023.d	N063168-002A	SAMP	5	02/23/24 3:33 PM
A0223024.d	N063168-002A-PS	PS	1	02/23/24 3:38 PM
A0223025.d	N063168-002A-MS	MS	1	02/23/24 3:43 PM
A0223026.d	N063168-002A-MSD	MSD	1	02/23/24 3:47 PM
A0223027.d	RINSE	ICAL	1	02/23/24 3:52 PM
A0223028.d	CCV1	CCV	1	02/23/24 3:57 PM
A0223029.d	CCB1	CCB	1	02/23/24 4:01 PM
A0223030.d	MB-107065	MBLK	1	02/23/24 4:06 PM
A0223031.d	LCS-107065	LCS	1	02/23/24 4:11 PM
A0223032.d	N063286-001A	SAMP	1	02/23/24 4:15 PM
A0223033.d	N063286-001A	SAMP	5	02/23/24 4:20 PM
A0223034.d	N063286-001A-PS	PS	1	02/23/24 4:25 PM
A0223035.d	N063286-001A-MS	MS	1	02/23/24 4:29 PM
A0223036.d	N063286-001A-MSD	MSD	1	02/23/24 4:34 PM
A0223037.d	N063287-001A	SAMP	1	02/23/24 4:38 PM
A0223038.d	N063287-002A	SAMP	1	02/23/24 4:43 PM
A0223039.d	N063287-003A	SAMP	1	02/23/24 4:48 PM
A0223040.d	CCV2	CCV	1	02/23/24 4:52 PM
A0223041.d	CCB2	CCB	1	02/23/24 4:57 PM
A0223042.d	N063289-001A	SAMP	1	02/23/24 5:02 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223043.d	N063289-002A	SAMP	1	02/23/24 5:06 PM
A0223044.d	N063289-003A	SAMP	1	02/23/24 5:11 PM
A0223045.d	N063289-004A	SAMP	1	02/23/24 5:16 PM
A0223046.d	CCV3	CCV	1	02/23/24 5:20 PM
A0223047.d	CCB3	CCB	1	02/23/24 5:25 PM
A0223048.d	N063193-004A	SAMP	5	02/23/24 5:30 PM
A0223049.d	N063193-004A	SAMP	25	02/23/24 5:34 PM
A0223050.d	N063193-004A-PS	PS	5	02/23/24 5:39 PM
A0223051.d	N063193-004A-MS	MS	5	02/23/24 5:44 PM
A0223052.d	N063193-004A-MSD	MSD	5	02/23/24 5:48 PM
A0223053.d	N063195-002A	SAMP	5	02/23/24 5:53 PM
A0223054.d	N063195-003A	SAMP	5	02/23/24 5:58 PM
A0223055.d	N063195-004A	SAMP	5	02/23/24 6:02 PM
A0223056.d	N063201-001D	SAMP	5	02/23/24 6:07 PM
A0223057.d	N063201-001D-MS	MS	5	02/23/24 6:12 PM
A0223058.d	CCV4	CCV	1	02/23/24 6:16 PM
A0223059.d	CCB4	CCB	1	02/23/24 6:21 PM
A0223060.d	CCB4	CCB	1	02/23/24 6:27 PM
A0223061.d	ICSA2	ICSA	1	02/23/24 6:32 PM
A0223062.d	ICSAB2	ICSAB	1	02/23/24 6:37 PM
A0223063.d	MB-106955	MBLK	1	02/23/24 6:42 PM
A0223064.d	LCS-106955	LCS	1	02/23/24 6:46 PM
A0223065.d	N063150-001A	SAMP	1	02/23/24 6:51 PM
A0223066.d	N063150-002A	SAMP	1	02/23/24 6:55 PM
A0223067.d	N063168-002A	SAMP	1	02/23/24 7:00 PM
A0223068.d	N063168-002A	SAMP	5	02/23/24 7:05 PM
A0223069.d	N063168-002A-PS	PS	1	02/23/24 7:09 PM
A0223070.d	N063168-002A-MS	MS	1	02/23/24 7:14 PM
A0223071.d	N063168-002A-MSD	MSD	1	02/23/24 7:19 PM
A0223072.d	RINSE	ICAL	1	02/23/24 7:23 PM
A0223073.d	CCV5	CCV	1	02/23/24 7:28 PM
A0223074.d	CCB5	CCB	1	02/23/24 7:33 PM
A0223075.d	ICSA3	ICSA	1	02/23/24 7:37 PM
A0223076.d	ICSAB3	ICSAB	1	02/23/24 7:42 PM
A0223077.d	N063181-001C	SAMP	10	02/23/24 7:47 PM
A0223078.d	N063181-002C	SAMP	10	02/23/24 7:51 PM
A0223079.d	N063182-001B	SAMP	1	02/23/24 7:56 PM
A0223080.d	N063182-003B	SAMP	1	02/23/24 8:01 PM
A0223081.d	N063182-003B	SAMP	10	02/23/24 8:05 PM
A0223082.d	N063182-005B	SAMP	1	02/23/24 8:10 PM
A0223083.d	N063182-005B	SAMP	10	02/23/24 8:15 PM
A0223084.d	N063182-008B	SAMP	1	02/23/24 8:19 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223085.d	N063182-009B	SAMP	1	02/23/24 8:24 PM
A0223086.d	N063182-009B	SAMP	10	02/23/24 8:29 PM
A0223087.d	CCV6	CCV	1	02/23/24 8:33 PM
A0223088.d	CCB6	CCB	1	02/23/24 8:38 PM
A0223089.d	N063182-009B	SAMP	1	02/23/24 8:43 PM
A0223090.d	N063182-009B	SAMP	1	02/23/24 8:47 PM
A0223091.d	N063182-009B	SAMP	1	02/23/24 8:52 PM
A0223092.d	N063182-009B	SAMP	1	02/23/24 8:57 PM
A0223093.d	N063182-010B	SAMP	10	02/23/24 9:01 PM
A0223094.d	N063182-011B	SAMP	1	02/23/24 9:06 PM
A0223095.d	N063182-011B	SAMP	100	02/23/24 9:11 PM
A0223096.d	CCV7	CCV	1	02/23/24 9:15 PM
A0223097.d	CCB7	CCB	1	02/23/24 9:20 PM
A0223098.d	ICSA4	ICSA	1	02/23/24 9:24 PM
A0223099.d	ICSAB4	ICSAB	1	02/23/24 9:29 PM
A0223100.d	MB-106992	MBLK	1	02/23/24 9:34 PM
A0223101.d	LCS-106992	LCS	1	02/23/24 9:39 PM
A0223102.d	N063211-001B	SAMP	10	02/23/24 9:43 PM
A0223103.d	N063211-002B	SAMP	10	02/23/24 9:48 PM
A0223104.d	N063211-003B	SAMP	100	02/23/24 9:52 PM
A0223105.d	N063213-001B	SAMP	10	02/23/24 9:57 PM
A0223106.d	N063213-002B	SAMP	10	02/23/24 10:02 PM
A0223107.d	N063213-003B	SAMP	10	02/23/24 10:07 PM
A0223108.d	N063213-004B	SAMP	10	02/23/24 10:11 PM
A0223109.d	N063213-007B	SAMP	10	02/23/24 10:16 PM
A0223110.d	CCV8	CCV	1	02/23/24 10:20 PM
A0223111.d	CCB8	CCB	1	02/23/24 10:25 PM
A0223112.d	N063213-008B	SAMP	1	02/23/24 10:30 PM
A0223113.d	N063213-008B	SAMP	5	02/23/24 10:34 PM
A0223114.d	N063213-008B-PS	PS	1	02/23/24 10:39 PM
A0223115.d	N063213-008BMS	MS	1	02/23/24 10:44 PM
A0223116.d	N063213-008BMSD	MSD	1	02/23/24 10:48 PM
A0223117.d	N063214-010B	SAMP	1	02/23/24 10:53 PM
A0223118.d	N063214-011B	SAMP	1	02/23/24 10:58 PM
A0223119.d	N063214-011B	SAMP	10	02/23/24 11:03 PM
A0223120.d	N063214-012B	SAMP	1	02/23/24 11:07 PM
A0223121.d	N063214-012B	SAMP	10	02/23/24 11:12 PM
A0223122.d	CCV9	CCV	1	02/23/24 11:16 PM
A0223123.d	CCB9	CCB	1	02/23/24 11:21 PM
A0223124.d	N063214-013B	SAMP	1	02/23/24 11:26 PM
A0223125.d	N063214-013B	SAMP	10	02/23/24 11:30 PM
A0223126.d	N063214-014B	SAMP	1	02/23/24 11:35 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
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A0223128.d	N063214-016B	SAMP	10	02/23/24 11:44 PM
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A0223130.d	CCB10	CCB	1	02/23/24 11:54 PM
A0223131.d	ICSA5	ICSA	1	02/23/24 11:58 PM
A0223132.d	ICSAB5	ICSAB	1	02/24/24 12:03 AM
A0223133.d	MB-107021	MBLK	1	02/24/24 12:08 AM
A0223134.d	LCS-107021	LCS	1	02/24/24 12:12 AM
A0223135.d	N062510-015D	SAMP	5	02/24/24 12:17 AM
A0223136.d	N063248-001B	SAMP	1	02/24/24 12:21 AM
A0223137.d	N063248-002B	SAMP	1	02/24/24 12:26 AM
A0223138.d	N063248-002B	SAMP	5	02/24/24 12:31 AM
A0223139.d	N063248-002B-PS	PS	1	02/24/24 12:35 AM
A0223140.d	N063248-002B-MS	MS	1	02/24/24 12:40 AM
A0223141.d	N063248-002B-MSD	MSD	1	02/24/24 12:45 AM
A0223142.d	RINSE	ICAL	1	02/24/24 12:49 AM
A0223143.d	CCV11	CCV	1	02/24/24 12:54 AM
A0223144.d	CCB11	CCB	1	02/24/24 12:59 AM
A0223145.d	N063248-003B	SAMP	1	02/24/24 1:03 AM
A0223146.d	N063248-004B	SAMP	1	02/24/24 1:08 AM
A0223147.d	N063248-005C	SAMP	1	02/24/24 1:13 AM
A0223148.d	N063248-006C	SAMP	1	02/24/24 1:17 AM
A0223149.d	N063248-007C	SAMP	1	02/24/24 1:22 AM
A0223150.d	N063248-008C	SAMP	1	02/24/24 1:27 AM
A0223151.d	N063248-010B	SAMP	1	02/24/24 1:31 AM
A0223152.d	N063248-011B	SAMP	1	02/24/24 1:36 AM
A0223153.d	N063249-007C	SAMP	1	02/24/24 1:41 AM
A0223154.d	RINSE	ICAL	1	02/24/24 1:45 AM
A0223155.d	CCV12	CCV	1	02/24/24 1:50 AM
A0223156.d	CCB12	CCB	1	02/24/24 1:54 AM
A0223157.d	N063249-009C	SAMP	1	02/24/24 1:59 AM
A0223158.d	N063249-011C	SAMP	1	02/24/24 2:04 AM
A0223159.d	N063249-013C	SAMP	1	02/24/24 2:08 AM
A0223160.d	N063249-015C	SAMP	1	02/24/24 2:13 AM
A0223161.d	N063249-017C	SAMP	1	02/24/24 2:18 AM
A0223162.d	N063249-018C	SAMP	5	02/24/24 2:22 AM
A0223163.d	RINSE	ICAL	1	02/24/24 2:27 AM
A0223164.d	CCV13	CCV	1	02/24/24 2:32 AM
A0223165.d	CCB13	CCB	1	02/24/24 2:36 AM
A0223166.d	ICSA6	ICSA	1	02/24/24 2:41 AM
A0223167.d	ICSAB6	ICSAB	1	02/24/24 2:46 AM
A0223168.d	MB-107055	MBLK	1	02/24/24 2:50 AM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
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A0223170.d	N063295-001B	SAMP	1	02/24/24 2:59 AM
A0223171.d	N063295-002B	SAMP	1	02/24/24 3:04 AM
A0223172.d	N063295-002B	SAMP	5	02/24/24 3:09 AM
A0223173.d	N063295-002B-PS	PS	1	02/24/24 3:13 AM
A0223174.d	N063295-002B-MS	MS	1	02/24/24 3:18 AM
A0223175.d	N063295-002B-MSD	MSD	1	02/24/24 3:23 AM
A0223176.d	N063295-003B	SAMP	1	02/24/24 3:27 AM
A0223177.d	RINSE	ICAL	1	02/24/24 3:32 AM
A0223178.d	CCV14	CCV	1	02/24/24 3:37 AM
A0223179.d	CCB14	CCB	1	02/24/24 3:41 AM
A0223180.d	N063295-005C	SAMP	1	02/24/24 3:46 AM
A0223181.d	N063295-006C	SAMP	1	02/24/24 3:51 AM
A0223182.d	N063295-007C	SAMP	1	02/24/24 3:55 AM
A0223183.d	N063295-008C	SAMP	1	02/24/24 4:00 AM
A0223184.d	N063297-001C	SAMP	1	02/24/24 4:05 AM
A0223185.d	N063297-002B	SAMP	1	02/24/24 4:09 AM
A0223186.d	N063297-003B	SAMP	1	02/24/24 4:14 AM
A0223187.d	N063303-001B	SAMP	1	02/24/24 4:19 AM
A0223188.d	N063303-002B	SAMP	1	02/24/24 4:23 AM
A0223189.d	RINSE	ICAL	1	02/24/24 4:28 AM
A0223190.d	CCV15	CCV	1	02/24/24 4:32 AM
A0223191.d	CCB15	CCB	1	02/24/24 4:37 AM
A0223192.d	N063303-006B	SAMP	5	02/24/24 4:42 AM
A0223193.d	N063303-008B	SAMP	1	02/24/24 4:46 AM
A0223194.d	RINSE	ICAL	1	02/24/24 4:51 AM
A0223195.d	CCV16	CCV	1	02/24/24 4:56 AM
A0223196.d	CCB16	CCB	1	02/24/24 5:00 AM
A0223197.d	ICSA7	ICSA	1	02/24/24 5:05 AM
A0223198.d	ICSAB7	ICSAB	1	02/24/24 5:10 AM
A0223199.d	RINSE	ICAL	1	02/24/24 5:14 AM
A0223200.d	RINSE	ICAL	1	02/24/24 5:19 AM
A0223201.d	RINSE	ICAL	1	02/24/24 5:24 AM
A0223202.d	RINSE	ICAL	1	02/24/24 5:28 AM
A0223203.d	RINSE	ICAL	1	02/24/24 5:33 AM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224001.d	RINSE	ICAL	1	02/25/24 2:10 PM
A0224002.d	Cal Blk	IBLK	1	02/25/24 2:14 PM
A0224003.d	Std1-0.1/1 ppb	ICAL	1	02/25/24 2:19 PM
A0224004.d	Std2-0.5/5 ppb	ICAL	1	02/25/24 2:24 PM
A0224005.d	Std3-5/50 ppb	ICAL	1	02/25/24 2:29 PM
A0224006.d	Std4-10/100 ppb	ICAL	1	02/25/24 2:33 PM
A0224007.d	Std5-4.0/20/200 ppb	ICAL	1	02/25/24 2:38 PM
A0224008.d	Std6-8.0/40/400 ppb	ICAL	1	02/25/24 2:43 PM
A0224009.d	Std7-100/1000 ppb	ICAL	1	02/25/24 2:48 PM
A0224010.d	Std8-200/2000 ppb	ICAL	1	02/25/24 2:52 PM
A0224011.d	ICV	ICV	1	02/25/24 3:01 PM
A0224012.d	ICB	ICB	1	02/25/24 3:05 PM
A0224013.d	LLICV1	LLICV	1	02/25/24 3:10 PM
A0224014.d	LLICV1	LLICV	1	02/25/24 3:15 PM
A0224015.d	MLCCV	CCV	1	02/25/24 3:20 PM
A0224016.d	ICSA1	ICSA	1	02/25/24 3:25 PM
A0224017.d	ICSAB1	ICSAB	1	02/25/24 3:29 PM
A0224018.d	MB-107075	MBLK	1	02/25/24 3:34 PM
A0224019.d	LCS-107075	LCS	1	02/25/24 3:38 PM
A0224020.d	N063315-001A	SAMP	1	02/25/24 3:43 PM
A0224021.d	N063315-001A	SAMP	5	02/25/24 3:48 PM
A0224022.d	N063315-001A-PS	PS	1	02/25/24 3:53 PM
A0224023.d	N063315-001A-MS	MS	1	02/25/24 3:57 PM
A0224024.d	N063315-001A-MSD	MSD	1	02/25/24 4:02 PM
A0224025.d	N063316-001A	SAMP	1	02/25/24 4:06 PM
A0224026.d	N063316-002A	SAMP	1	02/25/24 4:11 PM
A0224027.d	RINSE	ICAL	1	02/25/24 4:16 PM
A0224028.d	CCV1	CCV	1	02/25/24 4:20 PM
A0224029.d	CCB1	CCB	1	02/25/24 4:25 PM
A0224030.d	N063318-001A	SAMP	1	02/25/24 4:30 PM
A0224031.d	N063318-002A	SAMP	1	02/25/24 4:34 PM
A0224032.d	N063290-001A	SAMP	1	02/25/24 4:39 PM
A0224033.d	N063308-001A	SAMP	1	02/25/24 4:44 PM
A0224034.d	N063308-002A	SAMP	1	02/25/24 4:48 PM
A0224035.d	N063308-003A	SAMP	1	02/25/24 4:53 PM
A0224036.d	N063308-004A	SAMP	1	02/25/24 4:58 PM
A0224037.d	N063308-005A	SAMP	1	02/25/24 5:02 PM
A0224038.d	N063308-006A	SAMP	1	02/25/24 5:07 PM
A0224039.d	RINSE	ICAL	1	02/25/24 5:12 PM
A0224040.d	CCV2	CCV	1	02/25/24 5:16 PM
A0224041.d	CCB2	CCB	1	02/25/24 5:21 PM
A0224042.d	N063308-007A	SAMP	1	02/25/24 5:26 PM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
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A0224045.d	N063311-002A	SAMP	1	02/25/24 5:39 PM
A0224046.d	N063311-003A	SAMP	1	02/25/24 5:44 PM
A0224047.d	N063311-004A	SAMP	1	02/25/24 5:49 PM
A0224048.d	N063311-007A	SAMP	1	02/25/24 5:53 PM
A0224049.d	RINSE	ICAL	1	02/25/24 5:58 PM
A0224050.d	CCV3	CCV	1	02/25/24 6:03 PM
A0224051.d	CCB3	CCB	1	02/25/24 6:07 PM
A0224052.d	ICSA2	ICSA	1	02/25/24 6:12 PM
A0224053.d	ICSAB2	ICSAB	1	02/25/24 6:17 PM
A0224054.d	RINSE	ICAL	1	02/25/24 6:21 PM
A0224055.d	MB1-107081	MBLK	1	02/25/24 6:26 PM
A0224056.d	MB2-107081	MBLK	1	02/25/24 6:31 PM
A0224057.d	MB-107081	MBLK	1	02/25/24 6:35 PM
A0224058.d	LCS-107081	LCS	1	02/25/24 6:40 PM
A0224059.d	MDL1	SAMP	1	02/25/24 6:45 PM
A0224060.d	MDL2	SAMP	1	02/25/24 6:49 PM
A0224061.d	MDL3	SAMP	1	02/25/24 6:54 PM
A0224062.d	N063228-001A	SAMP	1	02/25/24 6:59 PM
A0224063.d	RINSE	ICAL	1	02/25/24 7:03 PM
A0224064.d	CCV4	CCV	1	02/25/24 7:08 PM
A0224065.d	CCB4	CCB	1	02/25/24 7:13 PM
A0224066.d	N063292-005A	SAMP	1	02/25/24 7:17 PM
A0224067.d	N063292-005A	SAMP	5	02/25/24 7:22 PM
A0224068.d	N063292-005A	SAMP	10	02/25/24 7:27 PM
A0224069.d	N063292-005A	SAMP	50	02/25/24 7:31 PM
A0224070.d	N063292-005A-PS	PS	1	02/25/24 7:36 PM
A0224071.d	N063292-005A-PS	PS	10	02/25/24 7:40 PM
A0224072.d	N063292-005A-MS	MS	1	02/25/24 7:45 PM
A0224073.d	N063292-005A-MS	MS	10	02/25/24 7:50 PM
A0224074.d	N063292-005A-MSD	MSD	1	02/25/24 7:55 PM
A0224075.d	N063292-005A-MSD	MSD	10	02/25/24 7:59 PM
A0224076.d	CCV5	CCV	1	02/25/24 8:04 PM
A0224077.d	CCB5	CCB	1	02/25/24 8:08 PM
A0224078.d	N063292-010A	SAMP	1	02/25/24 8:13 PM
A0224079.d	N063292-015A	SAMP	1	02/25/24 8:18 PM
A0224080.d	RINSE	RINSE	1	02/25/24 8:22 PM
A0224081.d	CCV6	CCV	1	02/25/24 8:27 PM
A0224082.d	CCB6	CCB	1	02/25/24 8:32 PM
A0224083.d	ICSA3	ICSA	1	02/25/24 8:36 PM
A0224084.d	ICSAB3	ICSAB	1	02/25/24 8:41 PM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
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A0224087.d	N063182-011B	SAMP	1	02/25/24 8:55 PM
A0224088.d	N063248-002B	SAMP	5	02/25/24 9:00 PM
A0224089.d	N063248-002B	SAMP	25	02/25/24 9:04 PM
A0224090.d	N063248-002B-PS	PS	5	02/25/24 9:09 PM
A0224091.d	N063248-002B-MS	MS	5	02/25/24 9:14 PM
A0224092.d	N063248-002B-MSD	MSD	5	02/25/24 9:18 PM
A0224093.d	N063248-003B	SAMP	10	02/25/24 9:23 PM
A0224094.d	N063248-004B	SAMP	10	02/25/24 9:28 PM
A0224095.d	CCV7	CCV	1	02/25/24 9:32 PM
A0224096.d	CCB7	CCB	1	02/25/24 9:37 PM
A0224097.d	N063315-001A	SAMP	100	02/25/24 9:47 PM
A0224098.d	N063315-001A	SAMP	500	02/25/24 9:51 PM
A0224099.d	N063315-001A-PS	PS	100	02/25/24 9:56 PM
A0224100.d	N063315-001A-MS	MS	100	02/25/24 10:00 PM
A0224101.d	N063315-001A-MSD	MSD	100	02/25/24 10:05 PM
A0224102.d	N063316-001A	SAMP	10	02/25/24 10:10 PM
A0224103.d	N063308-003A	SAMP	100	02/25/24 10:15 PM
A0224104.d	N063311-001A	SAMP	10	02/25/24 10:19 PM
A0224105.d	N063311-001A-MS	MS	10	02/25/24 10:24 PM
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A0224108.d	CCB8	CCB	1	02/25/24 10:38 PM
A0224109.d	N063311-003A	SAMP	10	02/25/24 10:42 PM
A0224110.d	N063311-003A	SAMP	100	02/25/24 10:47 PM
A0224111.d	N063311-004A	SAMP	10	02/25/24 10:52 PM
A0224112.d	N063311-004A	SAMP	100	02/25/24 10:56 PM
A0224113.d	N063311-007A	SAMP	10	02/25/24 11:01 PM
A0224114.d	N063292-005A	SAMP	100	02/25/24 11:06 PM
A0224115.d	N063292-005A	SAMP	500	02/25/24 11:10 PM
A0224116.d	N063292-005A	SAMP	1000	02/25/24 11:15 PM
A0224117.d	N063292-005A	SAMP	5000	02/25/24 11:20 PM
A0224118.d	CCV9	CCV	1	02/25/24 11:24 PM
A0224119.d	CCB9	CCB	1	02/25/24 11:29 PM
A0224120.d	N063292-005A-PS	PS	100	02/25/24 11:34 PM
A0224121.d	N063292-005A-PS	PS	1000	02/25/24 11:39 PM
A0224122.d	N063292-005A-MS	MS	100	02/25/24 11:43 PM
A0224123.d	N063292-005A-MS	MS	1000	02/25/24 11:48 PM
A0224124.d	N063292-005A-MSD	MSD	100	02/25/24 11:53 PM
A0224125.d	N063292-005A-MSD	MSD	1000	02/25/24 11:57 PM
A0224126.d	CCV10	CCV	1	02/26/24 12:02 AM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
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A0224129.d	ICSAB4	ICSAB	1	02/26/24 12:16 AM
A0224130.d	N063248-005C	SAMP	1	02/26/24 12:21 AM
A0224131.d	N063248-005C	SAMP	10	02/26/24 12:25 AM
A0224132.d	N063248-006C	SAMP	1	02/26/24 12:30 AM
A0224133.d	N063248-006C	SAMP	10	02/26/24 12:35 AM
A0224134.d	N063248-007C	SAMP	1	02/26/24 12:39 AM
A0224135.d	N063248-007C	SAMP	10	02/26/24 12:44 AM
A0224136.d	N063248-008C	SAMP	1	02/26/24 12:49 AM
A0224137.d	N063248-008C	SAMP	10	02/26/24 12:53 AM
A0224138.d	N063248-010B	SAMP	1	02/26/24 12:58 AM
A0224139.d	RINSE	ICAL	1	02/26/24 1:03 AM
A0224140.d	CCV11	CCV	1	02/26/24 1:07 AM
A0224141.d	CCB11	CCB	1	02/26/24 1:12 AM
A0224142.d	N063248-011B	SAMP	1	02/26/24 1:16 AM
A0224143.d	N063248-011B	SAMP	10	02/26/24 1:21 AM
A0224144.d	N063249-007C	SAMP	1	02/26/24 1:26 AM
A0224145.d	N063249-007C	SAMP	10	02/26/24 1:30 AM
A0224146.d	N063249-009C	SAMP	1	02/26/24 1:35 AM
A0224147.d	N063249-009C	SAMP	10	02/26/24 1:40 AM
A0224148.d	N063249-011C	SAMP	1	02/26/24 1:44 AM
A0224149.d	N063249-011C	SAMP	10	02/26/24 1:49 AM
A0224150.d	N063249-013C	SAMP	1	02/26/24 1:53 AM
A0224151.d	N063249-013C	SAMP	10	02/26/24 1:58 AM
A0224152.d	CCV12	CCV	1	02/26/24 2:03 AM
A0224153.d	CCB12	CCB	1	02/26/24 2:08 AM
A0224154.d	N063249-015C	SAMP	1	02/26/24 2:12 AM
A0224155.d	N063249-015C	SAMP	10	02/26/24 2:17 AM
A0224156.d	N063249-017C	SAMP	1	02/26/24 2:21 AM
A0224157.d	N063249-017C	SAMP	10	02/26/24 2:26 AM
A0224158.d	N063249-018C	SAMP	5	02/26/24 2:31 AM
A0224159.d	N063311-001A	SAMP	1	02/26/24 2:35 AM
A0224160.d	N063311-001A	SAMP	1	02/26/24 2:40 AM
A0224161.d	N063311-001A	SAMP	1	02/26/24 2:45 AM
A0224162.d	RINSE	ICAL	1	02/26/24 2:49 AM
A0224163.d	CCV13	CCV	1	02/26/24 2:54 AM
A0224164.d	CCB13	CCB	1	02/26/24 2:59 AM
A0224165.d	ICSA5	ICSA	1	02/26/24 3:03 AM
A0224166.d	ICSAB5	ICSAB	1	02/26/24 3:08 AM
A0224167.d	MB-107055	MBLK	1	02/26/24 3:13 AM
A0224168.d	LCS-107055	LCS	1	02/26/24 3:17 AM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224169.d	N063295-001B	SAMP	1	02/26/24 3:22 AM
A0224170.d	N063295-002B	SAMP	1	02/26/24 3:26 AM
A0224171.d	N063295-002B	SAMP	5	02/26/24 3:31 AM
A0224172.d	N063295-002B	SAMP	10	02/26/24 3:36 AM
A0224173.d	N063295-002B	SAMP	50	02/26/24 3:40 AM
A0224174.d	N063295-002B	SAMP	100	02/26/24 3:45 AM
A0224175.d	N063295-002B	SAMP	500	02/26/24 3:50 AM
A0224176.d	CCV14	CCV	1	02/26/24 3:54 AM
A0224177.d	CCB14	CCB	1	02/26/24 3:59 AM
A0224178.d	N063295-002B-PS	PS	1	02/26/24 4:04 AM
A0224179.d	N063295-002B-PS	PS	10	02/26/24 4:08 AM
A0224180.d	N063295-002B-PS	PS	100	02/26/24 4:13 AM
A0224181.d	N063295-002B-MS	MS	1	02/26/24 4:18 AM
A0224182.d	N063295-002B-MS	MS	10	02/26/24 4:22 AM
A0224183.d	N063295-002B-MS	MS	100	02/26/24 4:27 AM
A0224184.d	N063295-002B-MSD	MSD	1	02/26/24 4:32 AM
A0224185.d	N063295-002B-MSD	MSD	10	02/26/24 4:36 AM
A0224186.d	N063295-002B-MSD	MSD	100	02/26/24 4:41 AM
A0224187.d	CCV15	CCV	1	02/26/24 4:46 AM
A0224188.d	CCB15	CCB	1	02/26/24 4:50 AM
A0224189.d	N063295-003B	SAMP	1	02/26/24 4:55 AM
A0224190.d	N063295-005C	SAMP	1	02/26/24 4:59 AM
A0224191.d	N063295-005C	SAMP	10	02/26/24 5:04 AM
A0224192.d	N063295-006C	SAMP	1	02/26/24 5:09 AM
A0224193.d	N063295-006C	SAMP	10	02/26/24 5:14 AM
A0224194.d	N063295-007C	SAMP	1	02/26/24 5:18 AM
A0224195.d	N063295-007C	SAMP	10	02/26/24 5:23 AM
A0224196.d	N063295-008C	SAMP	1	02/26/24 5:27 AM
A0224197.d	N063295-008C	SAMP	10	02/26/24 5:32 AM
A0224198.d	CCV16	CCV	1	02/26/24 5:37 AM
A0224199.d	CCB16	CCB	1	02/26/24 5:41 AM
A0224200.d	N063297-001C	SAMP	1	02/26/24 5:46 AM
A0224201.d	N063297-002B	SAMP	1	02/26/24 5:51 AM
A0224202.d	N063297-003B	SAMP	1	02/26/24 5:55 AM
A0224203.d	N063303-001B	SAMP	1	02/26/24 6:00 AM
A0224204.d	N063303-001B	SAMP	10	02/26/24 6:05 AM
A0224205.d	N063303-002B	SAMP	1	02/26/24 6:09 AM
A0224206.d	N063303-002B	SAMP	10	02/26/24 6:14 AM
A0224207.d	N063303-006B	SAMP	5	02/26/24 6:19 AM
A0224208.d	N063303-008B	SAMP	1	02/26/24 6:23 AM
A0224209.d	N063303-008B	SAMP	10	02/26/24 6:28 AM
A0224210.d	CCV17	CCV	1	02/26/24 6:33 AM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224211.d	CCB17	CCB	1	02/26/24 6:37 AM
A0224212.d	ICSA6	ICSA	1	02/26/24 6:42 AM
A0224213.d	ICSAB6	ICSAB	1	02/26/24 6:47 AM
A0224214.d	RINSE	ICAL	1	02/26/24 6:51 AM
A0224215.d	RINSE	ICAL	1	02/26/24 6:56 AM
A0224216.d	RINSE	ICAL	1	02/26/24 7:00 AM
A0224217.d	RINSE	ICAL	1	02/26/24 7:05 AM
A0224218.d	RINSE	ICAL	1	02/26/24 7:10 AM
A0224219.d	RINSE	ICAL	1	02/26/24 7:14 AM
A0224220.d	RINSE	ICAL	1	02/26/24 7:19 AM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/22/2024 3:00:00 PM**
Prep End Date: **2/22/2024 7:00:00 PM**

Reviewed/ Date: JRB 3/17/2024

Initials/ Date: for

Prep Batch **107021** Prep Code:**3010_W_MSDISS_TPK** Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-01**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107021	Aqueous		25	☐	25	1.000		
MB-107021	Aqueous		25	☐	25	1.000		
N062510-015D REDIGEST	Groundwater	<2	25	☐	25	1.000		
N063248-001B	Groundwater	<2	25	☐	25	1.000		
N063248-002B	Groundwater	<2	25	☐	25	1.000		
N063248-002B-MS	Groundwater	<2	25	☐	25	1.000		
N063248-002B-MSD	Groundwater	<2	25	☐	25	1.000		
N063248-003B	Groundwater	<2	25	☐	25	1.000		
N063248-004B	Groundwater	<2	25	☐	25	1.000		
N063248-005C	Groundwater	<2	25	☐	25	1.000		
N063248-006C	Groundwater	<2	25	☐	25	1.000		
N063248-007C	Groundwater	<2	25	☐	25	1.000		
N063248-008C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/22/2024 3:00:00 PM**
Prep End Date: **2/22/2024 7:00:00 PM**
Prep Batch **107021** Prep Code:**3010_W_MSDISS_TPK**

Reviewed/ Date: JRB 3/17/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-01**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063248-010B	Groundwater	<2	25	☐	25	1.000		
N063248-011B	Groundwater	<2	25	☐	25	1.000		
N063249-007C	Groundwater	<2	25	☐	25	1.000		
N063249-009C	Groundwater	<2	25	☐	25	1.000		
N063249-011C	Groundwater	<2	25	☐	25	1.000		
N063249-013C	Groundwater	<2	25	☐	25	1.000		
N063249-015C	Groundwater	<2	25	☐	25	1.000		
N063249-017C	Groundwater	<2	25	☐	25	1.000		
N063249-018C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240222A.b
Acq. Date-Time	2024-02-23 11:44:28
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

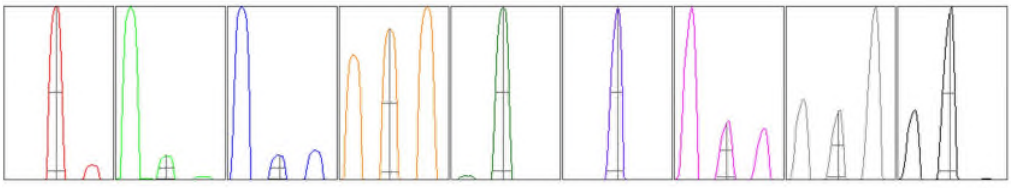
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	4742	47419.90	500.00		3.024	5.000
24	10.00	18706	187057.96	500.00		2.427	5.000
25	10.00	2512	25118.25	500.00		2.587	5.000
26	10.00	3009	30093.30	500.00		2.566	5.000
59	10.00	34030	340296.87	500.00		1.929	5.000
115	10.00	56615	566148.24	500.00		1.847	5.000
206	10.00	12089	120890.72	500.00		2.171	5.000
207	10.00	10015	100148.90	500.00		2.219	5.000
208	10.00	24886	248855.97	500.00		1.967	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.609 %
Doubly Charged	70 / 140 1.407 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	4705.05	8.95	8.90 - 9.10	
24	18796.46	23.90	23.90 - 24.10	
25	2564.26	24.95	24.90 - 25.10	
26	3120.45	25.90	25.90 - 26.10	
59	33894.52	58.95	58.90 - 59.10	
115	56031.92	115.05	114.90 - 115.10	
206	10962.65	205.95	205.90 - 206.10	
207	9673.39	206.95	206.90 - 207.10	
208	24384.42	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.486	0.900	
24	0.41	0.502	0.900	
25	0.41	0.494	0.900	
26	0.41	0.494	0.900	
59	0.38	0.531	0.900	
115	0.34	0.476	0.900	
206	0.36	0.533	0.900	
207	0.35	0.509	0.900	
208	0.35	0.525	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[H2]

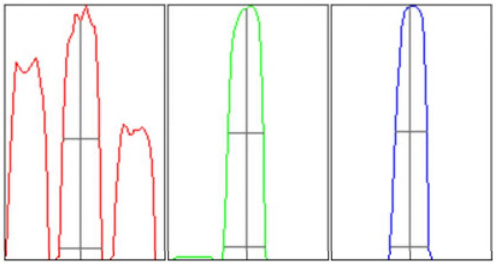
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		356	3555.77			5.984	
59		3819	38194.02			3.844	
115		59590	595903.12			2.349	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.610 %
Doubly Charged	70 / 140 0.333 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	353.80	25.95	25.90 - 26.10	
59	3912.74	59.00	58.90 - 59.10	
115	60486.49	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.70	0.791	0.900	
59	0.67	0.783	0.900	
115	0.60	0.733	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0000	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm		

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[He]

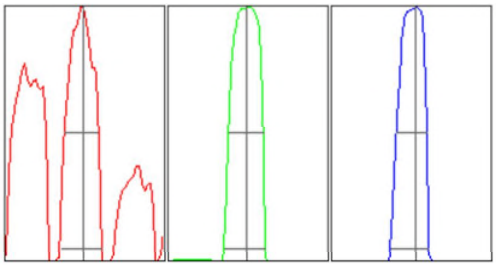
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		138	1375.06			6.914	
59		12115	121151.14			1.919	
115		13480	134797.78			1.974	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.279 %
Doubly Charged	70 / 140 0.982 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	147.01	26.00	25.90 - 26.10	
59	12098.31	59.00	58.90 - 59.10	
115	13611.92	115.10	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.65	0.789	0.900	
59	0.66	0.782	0.900	
115	0.58	0.730	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0000	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240223A1.b
Acq. Date-Time	2024-02-25 12:53:21
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

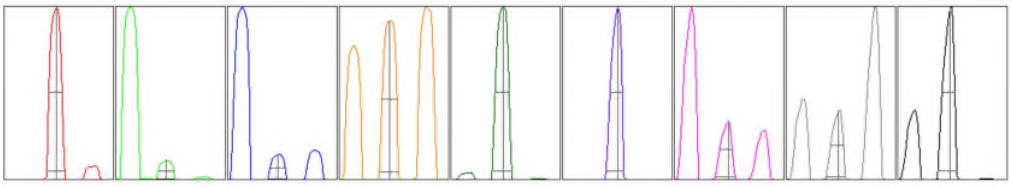
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	3372	33715.43	500.00		3.469	5.000
24	10.00	14626	146262.97	500.00		3.322	5.000
25	10.00	1964	19635.08	500.00		3.762	5.000
26	10.00	2357	23572.67	500.00		3.692	5.000
59	10.00	28829	288289.28	500.00		2.261	5.000
115	10.00	51639	516390.58	500.00		1.656	5.000
206	10.00	10629	106292.05	500.00		2.152	5.000
207	10.00	8878	88776.52	500.00		1.960	5.000
208	10.00	21919	219187.85	500.00		2.257	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.608 %
Doubly Charged	70 / 140 1.286 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	3447.05	8.95	8.90 - 9.10	
24	14643.27	23.90	23.90 - 24.10	
25	2050.22	24.90	24.90 - 25.10	
26	2445.07	25.90	25.90 - 26.10	
59	29068.40	58.95	58.90 - 59.10	
115	51964.63	115.05	114.90 - 115.10	
206	10292.73	206.00	205.90 - 206.10	
207	8538.49	206.95	206.90 - 207.10	
208	21881.25	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.487	0.900	
24	0.42	0.521	0.900	
25	0.42	0.496	0.900	
26	0.41	0.531	0.900	
59	0.39	0.533	0.900	
115	0.34	0.481	0.900	
206	0.36	0.538	0.900	
207	0.36	0.532	0.900	
208	0.36	0.531	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[H2]

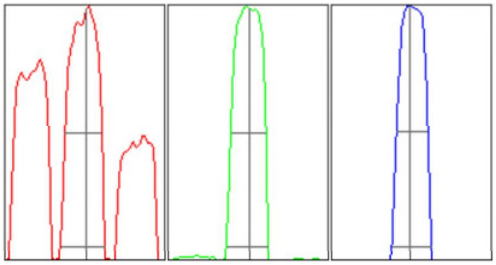
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		297	2972.06			6.951	
59		3184	31837.64			3.258	
115		53286	532857.84			2.153	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.618 %
Doubly Charged	70 / 140 0.307 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	310.04	26.05	25.90 - 26.10	
59	3327.70	59.05	58.90 - 59.10	
115	55650.78	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.70	0.831	0.900	
59	0.67	0.786	0.900	
115	0.60	0.740	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	0.9996	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.08		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm		

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[He]

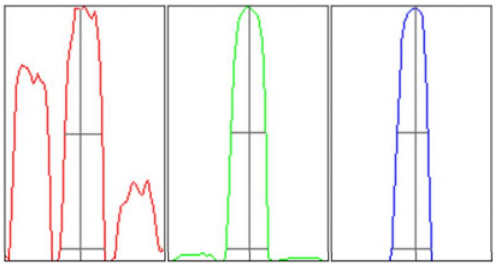
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		117	1169.24			9.238	
59		10415	104151.91			2.256	
115		10941	109408.27			2.392	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.260 %
Doubly Charged	70 / 140 0.959 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	111.76	25.95	25.90 - 26.10	
59	10524.04	59.05	58.90 - 59.10	
115	11284.17	115.10	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.71	0.832	0.900	
59	0.66	0.786	0.900	
115	0.58	0.738	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	0.9996	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.08		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240223A

Instrument ID: ICPMS-03

Analyte	Data File	A0223002.d	A0223003.d	A0223004.d	A0223005.d	A0223006.d	A0223007.d	A0223008.d	A0223009.d	A0223010.d	
	Acq. Date-Time	02/23/2024 01:27 PM	02/23/2024 01:32 PM	02/23/2024 01:36 PM	02/23/2024 01:41 PM	02/23/2024 01:46 PM	02/23/2024 01:51 PM	02/23/2024 01:55 PM	02/23/2024 02:00 PM	02/23/2024 02:05 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	72154.9		76342.4	77253.2	77475.2	76063.3	75148	75462.7	76036.5	
55 Mn [2]	CPS	69.9		1458.4	13632.3	27466	54136.3	106561.5	266690.1	547932.1	1.0000
72 Ge (ISTD) [1]	CPS	109961		116463.1	117054.1	117266.5	115723.5	114007.2	112333.5	115475.3	
78 Se [1]	CPS	12.2		188.9	1650.1	3270.3	6678.1	13212.1	32696.1	67412.1	1.0000
72 Ge (ISTD) [2]	CPS	45744.8	48400.3	48644.2	49579.1	49426.6	48837	47561.1	48045.9	48911.7	
75 As [2]	CPS	19.9	88.8	333.2	3303.5	6714.5	13140.5	26223.8	65989.1	135206.6	1.0000
159 Tb (ISTD) [3]	CPS	2459036.8		2602116.7	2641047.9	2677129.2	2587074.5	2582202.2	2541226.8	2650892	
137 Ba [3]	CPS	50		2356.9	23978.7	49371.8	98171.7	194301.8	479469.4	991663.4	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION SUMMARY: 240225A

Instrument ID: ICPMS-03

Analyte	Data File	A0224002.d	A0224004.d	A0224005.d	A0224006.d	A0224007.d	A0224008.d	A0224009.d	A0224010.d	
	Acq. Date-Time	02/25/2024 02:14 PM	02/25/2024 02:24 PM	02/25/2024 02:29 PM	02/25/2024 02:33 PM	02/25/2024 02:38 PM	02/25/2024 02:43 PM	02/25/2024 02:48 PM	02/25/2024 02:52 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	61433.5	57887.7	60292.8	61278.6	60212.5	58594.5	58564.5	60077.5	
55 Mn [2]	CPS	54.3	1026.3	10294.1	21178.7	42083.6	80727.7	207102.3	424350.4	1.0000
159 Tb (ISTD) [3]	CPS	2546673.9	2410356.4	2515986.1	2569262.8	2558618.2	2483709.9	2480840.2	2587686.9	
137 Ba [3]	CPS	50	2226.9	23107.4	47656.7	94804.4	187552	472079.2	983581.9	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713612**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.429	0.10	10.00	0	104	90	110				
Barium	10.174	1.0	10.00	0	102	90	110				
Manganese	101.593	0.50	100.0	0	102	90	110				
Selenium	9.732	0.50	10.00	0	97.3	90	110				

Sample ID: **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ZZZZZZ** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713614**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.092	0.10	0.1000	0	91.5	80	120				
Barium	1.108	1.0	1.000	0	111	80	120				
Manganese	0.546	0.50	0.5000	0	109	80	120				
Selenium	0.496	0.50	0.5000	0	99.2	80	120				

Sample ID: **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713615**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.039	0.10	20.00	0	100	90	110				
Barium	19.876	1.0	20.00	0	99.4	90	110				
Manganese	19.940	0.50	20.00	0	99.7	90	110				
Selenium	19.445	0.50	20.00	0	97.2	90	110				

Sample ID: **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713628**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.030	0.10	20.00	0	100	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713628**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.984	1.0	20.00	0	99.9	90	110				
Manganese	19.815	0.50	20.00	0	99.1	90	110				
Selenium	20.109	0.50	20.00	0	101	90	110				

Sample ID: **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713640**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.842	0.10	20.00	0	99.2	90	110				
Barium	19.840	1.0	20.00	0	99.2	90	110				
Manganese	19.773	0.50	20.00	0	98.9	90	110				
Selenium	19.897	0.50	20.00	0	99.5	90	110				

Sample ID: **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713646**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.766	0.10	20.00	0	98.8	90	110				
Barium	19.918	1.0	20.00	0	99.6	90	110				
Manganese	19.591	0.50	20.00	0	98.0	90	110				
Selenium	20.184	0.50	20.00	0	101	90	110				

Sample ID: **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713658**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.088	0.10	20.00	0	100	90	110				
Barium	20.699	1.0	20.00	0	103	90	110				
Manganese	20.003	0.50	20.00	0	100	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713658**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	19.977	0.50	20.00	0	99.9	90	110				

Sample ID: **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713672**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.546	0.10	20.00	0	103	90	110				
Barium	20.654	1.0	20.00	0	103	90	110				
Manganese	20.328	0.50	20.00	0	102	90	110				
Selenium	19.737	0.50	20.00	0	98.7	90	110				

Sample ID: **CCV6** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713686**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.762	0.10	20.00	0	98.8	90	110				
Barium	21.352	1.0	20.00	0	107	90	110				
Manganese	19.623	0.50	20.00	0	98.1	90	110				
Selenium	20.478	0.50	20.00	0	102	90	110				

Sample ID: **CCV7** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713695**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.067	0.10	20.00	0	100	90	110				
Barium	22.103	1.0	20.00	0	111	90	110				S
Manganese	19.918	0.50	20.00	0	99.6	90	110				
Selenium	19.676	0.50	20.00	0	98.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

% Rec of Ba in several CCVs failed. However,affected samples are reported at run number 182939

3/13/2024

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV8** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713709**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.122	0.10	20.00	0	101	90	110				
Barium	20.868	1.0	20.00	0	104	90	110				
Manganese	19.912	0.50	20.00	0	99.6	90	110				
Selenium	20.281	0.50	20.00	0	101	90	110				

Sample ID: **CCV9** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713721**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.930	0.10	20.00	0	99.7	90	110				
Barium	21.751	1.0	20.00	0	109	90	110				
Manganese	19.706	0.50	20.00	0	98.5	90	110				
Selenium	19.933	0.50	20.00	0	99.7	90	110				

Sample ID: **CCV10** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713728**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.720	0.10	20.00	0	98.6	90	110				
Barium	21.635	1.0	20.00	0	108	90	110				
Manganese	19.596	0.50	20.00	0	98.0	90	110				
Selenium	20.026	0.50	20.00	0	100	90	110				

Sample ID: **CCV11** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713741**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.953	0.10	20.00	0	99.8	90	110				
Barium	21.740	1.0	20.00	0	109	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV11** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713741**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.594	0.50	20.00	0	98.0	90	110				
Selenium	20.116	0.50	20.00	0	101	90	110				

Sample ID: **CCV12** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713752**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.609	0.10	20.00	0	98.0	90	110				
Barium	22.443	1.0	20.00	0	112	90	110				S
Manganese	19.647	0.50	20.00	0	98.2	90	110				
Selenium	19.679	0.50	20.00	0	98.4	90	110				

Sample ID: **CCV13** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713760**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.787	0.10	20.00	0	98.9	90	110				
Barium	22.496	1.0	20.00	0	112	90	110				S
Manganese	19.731	0.50	20.00	0	98.7	90	110				
Selenium	19.588	0.50	20.00	0	97.9	90	110				

Sample ID: **CCV14** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713773**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.661	0.10	20.00	0	98.3	90	110				
Barium	21.969	1.0	20.00	0	110	90	110				
Manganese	19.733	0.50	20.00	0	98.7	90	110				
Selenium	19.819	0.50	20.00	0	99.1	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV15** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713784**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.424	0.10	20.00	0	97.1	90	110				
Barium	22.620	1.0	20.00	0	113	90	110				S
Manganese	19.746	0.50	20.00	0	98.7	90	110				
Selenium	19.611	0.50	20.00	0	98.1	90	110				

Sample ID: **CCV16** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713788**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.868	0.10	20.00	0	99.3	90	110				
Barium	22.098	1.0	20.00	0	110	90	110				S
Manganese	20.059	0.50	20.00	0	100	90	110				
Selenium	19.815	0.50	20.00	0	99.1	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714090**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	9.828	1.0	10.00	0	98.3	90	110				
Manganese	100.886	0.50	100.0	0	101	90	110				

Sample ID: **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ZZZZZZ** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714092**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	1.026	1.0	1.000	0	103	80	120				
Manganese	0.554	0.50	0.5000	0	111	80	120				

Sample ID: **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714094**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.625	1.0	20.00	0	98.1	90	110				
Manganese	19.625	0.50	20.00	0	98.1	90	110				

Sample ID: **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714106**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.833	1.0	20.00	0	99.2	90	110				
Manganese	20.008	0.50	20.00	0	100	90	110				

Sample ID: **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714117**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.422	1.0	20.00	0	97.1	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714117**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.758	0.50	20.00	0	98.8	90	110				

Sample ID: **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714126**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.571	1.0	20.00	0	97.9	90	110				
Manganese	19.779	0.50	20.00	0	98.9	90	110				

Sample ID: **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714138**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.567	1.0	20.00	0	97.8	90	110				
Manganese	20.113	0.50	20.00	0	101	90	110				

Sample ID: **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714150**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.871	1.0	20.00	0	99.4	90	110				
Manganese	19.723	0.50	20.00	0	98.6	90	110				

Sample ID: **CCV6** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714154**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.027	1.0	20.00	0	100	90	110				
Manganese	20.041	0.50	20.00	0	100	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV7** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714168**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.241	1.0	20.00	0	101	90	110				
Manganese	19.644	0.50	20.00	0	98.2	90	110				

Sample ID: **CCV8** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714180**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.696	1.0	20.00	0	98.5	90	110				
Manganese	19.665	0.50	20.00	0	98.3	90	110				

Sample ID: **CCV9** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714191**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.830	1.0	20.00	0	99.2	90	110				
Manganese	19.440	0.50	20.00	0	97.2	90	110				

Sample ID: **CCV10** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714199**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.669	1.0	20.00	0	98.3	90	110				
Manganese	19.832	0.50	20.00	0	99.2	90	110				

Sample ID: **CCV11** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714212**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.176	1.0	20.00	0	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV11** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714212**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.405	0.50	20.00	0	97.0	90	110				

Sample ID: **CCV12** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714224**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.931	1.0	20.00	0	105	90	110				
Manganese	19.457	0.50	20.00	0	97.3	90	110				

Sample ID: **CCV13** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714234**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.460	1.0	20.00	0	102	90	110				
Manganese	19.672	0.50	20.00	0	98.4	90	110				

Sample ID: **CCV14** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714247**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.520	1.0	20.00	0	103	90	110				
Manganese	19.622	0.50	20.00	0	98.1	90	110				

Sample ID: **CCV15** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714258**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.693	1.0	20.00	0	103	90	110				
Manganese	19.657	0.50	20.00	0	98.3	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV16** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714269**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.381	1.0	20.00	0	102	90	110				
Manganese	19.525	0.50	20.00	0	97.6	90	110				

Sample ID: **CCV17** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714281**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.992	1.0	20.00	0	105	90	110				
Manganese	19.685	0.50	20.00	0	98.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICB** SampType: **ICB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713613**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Selenium	ND	0.50									

Sample ID: **CCB1** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713629**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.185	0.50									
Selenium	ND	0.50									

Sample ID: **CCB2** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713641**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.191	0.50									
Selenium	ND	0.50									

Sample ID: **CCB3** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713647**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB3**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713647**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	0.184	0.50									
Selenium	ND	0.50									

Sample ID: **CCB4**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713660**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Selenium	ND	0.50									

Sample ID: **CCB5**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713673**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Selenium	ND	0.50									

Sample ID: **CCB6**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713687**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB6**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713687**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	ND	0.50									

Sample ID: **CCB7**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713696**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Selenium	ND	0.50									

Sample ID: **CCB8**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713710**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Selenium	ND	0.50									

Sample ID: **CCB9**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713722**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB10** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713729**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Selenium	ND	0.50									

Sample ID: **CCB11** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713742**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Selenium	ND	0.50									

Sample ID: **CCB12** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713753**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Selenium	ND	0.50									

Sample ID: **CCB13** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713761**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB13**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713761**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									
Selenium	ND	0.50									

Sample ID: **CCB14**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713774**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Selenium	ND	0.50									

Sample ID: **CCB15**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713785**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Selenium	ND	0.50									

Sample ID: **CCB16**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713789**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Selenium	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICB**	SampType: **ICB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714091**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB1**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714107**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB2**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714118**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB3**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714127**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB4**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714139**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB4** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714139**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID: **CCB5** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714151**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB6** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714155**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB7** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714169**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB8** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714181**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB9**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714192**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB10**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714200**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB11**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714213**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB12**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714225**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB13**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714235**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB13**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714235**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID: **CCB14**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714248**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB15**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714259**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB16**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714270**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB17**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714282**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSA1** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713616**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Selenium	ND	0.50									

Sample ID: **ICSAB1** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713617**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.604	0.10	20.00	0	103	80	120				
Barium	20.398	1.0	20.00	0	102	80	120				
Manganese	20.364	0.50	20.00	0	102	80	120				
Selenium	20.311	0.50	20.00	0	102	80	120				

Sample ID: **ICSA2** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713661**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.070	0.50									
Selenium	ND	0.50									

Sample ID: **ICSAB2** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713662**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.469	0.10	20.00	0	102	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSAB2** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713662**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.619	1.0	20.00	0	103	80	120				
Manganese	20.279	0.50	20.00	0	101	80	120				
Selenium	20.550	0.50	20.00	0	103	80	120				

Sample ID: **ICSA3** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713674**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.060	0.50									
Selenium	ND	0.50									

Sample ID: **ICSAB3** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713675**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.275	0.10	20.00	0	101	80	120				
Barium	20.581	1.0	20.00	0	103	80	120				
Manganese	20.190	0.50	20.00	0	101	80	120				
Selenium	20.235	0.50	20.00	0	101	80	120				

Sample ID: **ICSA4** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713697**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.066	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSA4**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSA**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713697**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Selenium	ND	0.50									

Sample ID: **ICSAB4**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSAB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713698**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.323	0.10	20.00	0	102	80	120				
Barium	22.109	1.0	20.00	0	111	80	120				
Manganese	20.315	0.50	20.00	0	102	80	120				
Selenium	20.533	0.50	20.00	0	103	80	120				

Sample ID: **ICSA5**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSA**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713730**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.072	0.50									
Selenium	ND	0.50									

Sample ID: **ICSAB5**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSAB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713731**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.984	0.10	20.00	0	99.9	80	120				
Barium	21.848	1.0	20.00	0	109	80	120				
Manganese	20.009	0.50	20.00	0	100	80	120				
Selenium	20.529	0.50	20.00	0	103	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSA6** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713762**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.061	0.50									
Selenium	ND	0.50									

Sample ID: **ICSAB6** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713763**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.902	0.10	20.00	0	99.5	80	120				
Barium	22.348	1.0	20.00	0	112	80	120				
Manganese	20.403	0.50	20.00	0	102	80	120				
Selenium	20.226	0.50	20.00	0	101	80	120				

Sample ID: **ICSA7** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713790**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.073	0.50									
Selenium	ND	0.50									

Sample ID: **ICSAB7** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713791**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.302	0.10	20.00	0	102	80	120				
Barium	22.309	1.0	20.00	0	112	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSAB7** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713791**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	20.288	0.50	20.00	0	101	80	120				
Selenium	19.946	0.50	20.00	0	99.7	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSA1** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICSA** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714095**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **ICSAB1** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICSAB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714096**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.091	1.0	20.00	0	100	80	120				
Manganese	20.503	0.50	20.00	0	103	80	120				

Sample ID: **ICSA2** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICSA** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714128**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **ICSAB2** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICSAB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714129**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.003	1.0	20.00	0	100	80	120				
Manganese	20.455	0.50	20.00	0	102	80	120				

Sample ID: **ICSA3** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICSA** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714156**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSA3** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICSA** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714156**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID: **ICSAB3** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICSAB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714157**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.723	1.0	20.00	0	104	80	120				
Manganese	20.273	0.50	20.00	0	101	80	120				

Sample ID: **ICSA4** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICSA** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714201**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **ICSAB4** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICSAB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714202**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.034	1.0	20.00	0	100	80	120				
Manganese	20.176	0.50	20.00	0	101	80	120				

Sample ID: **ICSA5** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICSA** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714236**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSAB5** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICSAB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714237**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.853	1.0	20.00	0	104	80	120				
Manganese	19.953	0.50	20.00	0	99.8	80	120				

Sample ID: **ICSA6** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICSA** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714283**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **ICSAB6** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICSAB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714284**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	21.492	1.0	20.00	0	107	80	120				
Manganese	20.111	0.50	20.00	0	101	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	2459036.8	2459036.8	100	PASS	30-150	72154.9	72154.9	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	2598836.2	2459036.8	105.69	PASS	30-150	75819.9	72154.9	105.08	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	2602116.7	2459036.8	105.82	PASS	30-150	76342.4	72154.9	105.8	PASS	30-150
Std3-5/50 ppb	ICAL	1	2641047.9	2459036.8	107.4	PASS	30-150	77253.2	72154.9	107.07	PASS	30-150
Std4-10/100 ppb	ICAL	1	2677129.2	2459036.8	108.87	PASS	30-150	77475.2	72154.9	107.37	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	2587074.5	2459036.8	105.21	PASS	30-150	76063.3	72154.9	105.42	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	2582202.2	2459036.8	105.01	PASS	30-150	75148	72154.9	104.15	PASS	30-150
Std7-100/1000 ppb	ICAL	1	2541226.8	2459036.8	103.34	PASS	30-150	75462.7	72154.9	104.58	PASS	30-150
Std8-200/2000 ppb	ICAL	1	2650892	2459036.8	107.8	PASS	30-150	76036.5	72154.9	105.38	PASS	30-150
ICV	ICV	1	2483190.9	2459036.8	100.98	PASS	30-150	72025.6	72154.9	99.82	PASS	30-150
ICB	ICB	1	2571855.2	2459036.8	104.59	PASS	30-150	74886.9	72154.9	103.79	PASS	30-150
LLICV1	LLICV	1	2612657.7	2459036.8	106.25	PASS	30-150	75342.3	72154.9	104.42	PASS	30-150
MLCCV	CCV	1	2664630.7	2459036.8	108.36	PASS	30-150	76073.3	72154.9	105.43	PASS	30-150
ICSA1	ICSA	1	2706916.7	2459036.8	110.08	PASS	30-150	76901.4	72154.9	106.58	PASS	30-150
ICSAB1	ICSAB	1	2593782.3	2459036.8	105.48	PASS	30-150	73937.1	72154.9	102.47	PASS	30-150
MDL 4	ICAL	1	2670548.8	2459036.8	108.6	PASS	30-150	76134.7	72154.9	105.52	PASS	30-150
CCV1	CCV	1	2685857.4	2459036.8	109.22	PASS	30-150	78633	72154.9	108.98	PASS	30-150
CCB1	CCB	1	2616529	2459036.8	106.4	PASS	30-150	75792	72154.9	105.04	PASS	30-150
CCV2	CCV	1	2692999.6	2459036.8	109.51	PASS	30-150	77108	72154.9	106.86	PASS	30-150
CCB2	CCB	1	2601268.7	2459036.8	105.78	PASS	30-150	75349	72154.9	104.43	PASS	30-150
CCV3	CCV	1	2693223.1	2459036.8	109.52	PASS	30-150	77729.8	72154.9	107.73	PASS	30-150
CCB3	CCB	1	2631123.9	2459036.8	107	PASS	30-150	76196.1	72154.9	105.6	PASS	30-150
CCV4	CCV	1	2717325.6	2459036.8	110.5	PASS	30-150	77725.3	72154.9	107.72	PASS	30-150
CCB4	CCB	1	2589231	2459036.8	105.29	PASS	30-150	74891.4	72154.9	103.79	PASS	30-150
CCB4	CCB	1	2662733.8	2459036.8	108.28	PASS	30-150	76863.5	72154.9	106.53	PASS	30-150
ICSA2	ICSA	1	2702443.6	2459036.8	109.9	PASS	30-150	78266.7	72154.9	108.47	PASS	30-150
ICSAB2	ICSAB	1	2720121.5	2459036.8	110.62	PASS	30-150	78381.7	72154.9	108.63	PASS	30-150
CCV5	CCV	1	2751728.2	2459036.8	111.9	PASS	30-150	79154.2	72154.9	109.7	PASS	30-150
CCB5	CCB	1	2725557.6	2459036.8	110.84	PASS	30-150	77605.8	72154.9	107.55	PASS	30-150
ICSA3	ICSA	1	2777216.4	2459036.8	112.94	PASS	30-150	80012.9	72154.9	110.89	PASS	30-150
ICSAB3	ICSAB	1	2801833.3	2459036.8	113.94	PASS	30-150	80477.2	72154.9	111.53	PASS	30-150
CCV6	CCV	1	2620084.7	2459036.8	106.55	PASS	30-150	90893.6	72154.9	125.97	PASS	30-150
CCB6	CCB	1	2602736.8	2459036.8	105.84	PASS	30-150	86061.5	72154.9	119.27	PASS	30-150
CCV7	CCV	1	2611394.6	2459036.8	106.2	PASS	30-150	95356	72154.9	132.15	PASS	30-150
CCB7	CCB	1	2549129.6	2459036.8	103.66	PASS	30-150	92681.1	72154.9	128.45	PASS	30-150
ICSA4	ICSA	1	2589679.3	2459036.8	105.31	PASS	30-150	92615	72154.9	128.36	PASS	30-150
ICSAB4	ICSAB	1	2610405.2	2459036.8	106.16	PASS	30-150	91494.6	72154.9	126.8	PASS	30-150
CCV8	CCV	1	2843491.6	2459036.8	115.63	PASS	30-150	83057.4	72154.9	115.11	PASS	30-150
CCB8	CCB	1	2793886	2459036.8	113.62	PASS	30-150	81017.5	72154.9	112.28	PASS	30-150
CCV9	CCV	1	2466970.5	2459036.8	100.32	PASS	30-150	95607.4	72154.9	132.5	PASS	30-150
CCB9	CCB	1	2427889.6	2459036.8	98.73	PASS	30-150	91740.5	72154.9	127.14	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
CCV10	CCV	1	2516120	2459036.8	102.32	PASS	30-150	91776.3	72154.9	127.19	PASS	30-150
CCB10	CCB	1	2478120.7	2459036.8	100.78	PASS	30-150	87906.6	72154.9	121.83	PASS	30-150
ICSA5	ICSA	1	2569346.3	2459036.8	104.49	PASS	30-150	88163.5	72154.9	122.19	PASS	30-150
ICSAB5	ICSAB	1	2581977.3	2459036.8	105	PASS	30-150	88326.5	72154.9	122.41	PASS	30-150
MB-107021	MBLK	1	2552384.2	2459036.8	103.8	PASS	30-150	84006.7	72154.9	116.43	PASS	30-150
LCS-107021	LCS	1	2640207.2	2459036.8	107.37	PASS	30-150	86065.7	72154.9	119.28	PASS	30-150
N062510-015D	SAMP	5	2622910.5	2459036.8	106.66	PASS	30-150	81789.1	72154.9	113.35	PASS	30-150
N063248-001B	SAMP	1	2416688.3	2459036.8	98.28	PASS	30-150	80769.7	72154.9	111.94	PASS	30-150
N063248-002B	SAMP	1	2052262.9	2459036.8	83.46	PASS	30-150	75672.8	72154.9	104.88	PASS	30-150
N063248-002B	SAMP	5	2337767.2	2459036.8	95.07	PASS	30-150	83335.6	72154.9	115.5	PASS	30-150
N063248-002B-PS	PS	1	2042102.7	2459036.8	83.05	PASS	30-150	76315.7	72154.9	105.77	PASS	30-150
N063248-002B-MS	MS	1	2052656.3	2459036.8	83.47	PASS	30-150	79019.3	72154.9	109.51	PASS	30-150
N063248-002B-MSD	MSD	1	2017882.5	2459036.8	82.06	PASS	30-150	79626.4	72154.9	110.35	PASS	30-150
CCV11	CCV	1	2506644.7	2459036.8	101.94	PASS	30-150	91685.6	72154.9	127.07	PASS	30-150
CCB11	CCB	1	2482422	2459036.8	100.95	PASS	30-150	88643.6	72154.9	122.85	PASS	30-150
N063248-003B	SAMP	1	2085536.6	2459036.8	84.81	PASS	30-150	78464.4	72154.9	108.74	PASS	30-150
N063248-004B	SAMP	1	2071797.2	2459036.8	84.25	PASS	30-150	78695.6	72154.9	109.07	PASS	30-150
N063248-005C	SAMP	1	1949155.9	2459036.8	79.27	PASS	30-150	77794.7	72154.9	107.82	PASS	30-150
N063248-006C	SAMP	1	1758705.1	2459036.8	71.52	PASS	30-150	75220.6	72154.9	104.25	PASS	30-150
N063248-007C	SAMP	1	1723715.1	2459036.8	70.1	PASS	30-150	74183.9	72154.9	102.81	PASS	30-150
N063248-008C	SAMP	1	1777932.3	2459036.8	72.3	PASS	30-150	76033.2	72154.9	105.37	PASS	30-150
N063248-010B	SAMP	1	2409685.1	2459036.8	97.99	PASS	30-150	87217.3	72154.9	120.88	PASS	30-150
N063248-011B	SAMP	1	1961324	2459036.8	79.76	PASS	30-150	77758.8	72154.9	107.77	PASS	30-150
N063249-007C	SAMP	1	1683326.2	2459036.8	68.45	PASS	30-150	72014.5	72154.9	99.81	PASS	30-150
CCV12	CCV	1	2529154.3	2459036.8	102.85	PASS	30-150	95484.6	72154.9	132.33	PASS	30-150
CCB12	CCB	1	2495543.3	2459036.8	101.48	PASS	30-150	92386	72154.9	128.04	PASS	30-150
N063249-009C	SAMP	1	1841852.3	2459036.8	74.9	PASS	30-150	73515.5	72154.9	101.89	PASS	30-150
N063249-011C	SAMP	1	1991115.8	2459036.8	80.97	PASS	30-150	78620.8	72154.9	108.96	PASS	30-150
N063249-013C	SAMP	1	1539333.2	2459036.8	62.6	PASS	30-150	68133.9	72154.9	94.43	PASS	30-150
N063249-015C	SAMP	1	1762192.3	2459036.8	71.66	PASS	30-150	73830	72154.9	102.32	PASS	30-150
N063249-017C	SAMP	1	2576960.6	2459036.8	104.8	PASS	30-150	89496.1	72154.9	124.03	PASS	30-150
N063249-018C	SAMP	5	2369657.7	2459036.8	96.37	PASS	30-150	84484.5	72154.9	117.09	PASS	30-150
CCV13	CCV	1	2513030.1	2459036.8	102.2	PASS	30-150	92046.4	72154.9	127.57	PASS	30-150
CCB13	CCB	1	2519036.6	2459036.8	102.44	PASS	30-150	89338.5	72154.9	123.81	PASS	30-150
ICSA6	ICSA	1	2614372	2459036.8	106.32	PASS	30-150	90478.1	72154.9	125.39	PASS	30-150
ICSAB6	ICSAB	1	2608829.3	2459036.8	106.09	PASS	30-150	89529.4	72154.9	124.08	PASS	30-150
CCV14	CCV	1	2587708.2	2459036.8	105.23	PASS	30-150	89028.2	72154.9	123.38	PASS	30-150
CCB14	CCB	1	2546233.3	2459036.8	103.55	PASS	30-150	86002.1	72154.9	119.19	PASS	30-150
CCV15	CCV	1	2561437.2	2459036.8	104.16	PASS	30-150	91992.8	72154.9	127.49	PASS	30-150
CCB15	CCB	1	2532460.5	2459036.8	102.99	PASS	30-150	89487.3	72154.9	124.02	PASS	30-150
CCV16	CCV	1	2573924.8	2459036.8	104.67	PASS	30-150	88543.2	72154.9	122.71	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
CCB16	CCB	1	2449049.4	2459036.8	99.59	PASS	30-150	86282.5	72154.9	119.58	PASS	30-150
ICSA7	ICSA	1	2592985.5	2459036.8	105.45	PASS	30-150	87350.2	72154.9	121.06	PASS	30-150
ICSAB7	ICSAB	1	2598872.3	2459036.8	105.69	PASS	30-150	87996.9	72154.9	121.96	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]					72 Ge (ISTD) [1]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	45744.8	45744.8	100	PASS	30-150	109961	109961	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	48400.3	45744.8	105.81	PASS	30-150	115895.2	109961	105.4	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	48644.2	45744.8	106.34	PASS	30-150	116463.1	109961	105.91	PASS	30-150
Std3-5/50 ppb	ICAL	1	49579.1	45744.8	108.38	PASS	30-150	117054.1	109961	106.45	PASS	30-150
Std4-10/100 ppb	ICAL	1	49426.6	45744.8	108.05	PASS	30-150	117266.5	109961	106.64	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	48837	45744.8	106.76	PASS	30-150	115723.5	109961	105.24	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	47561.1	45744.8	103.97	PASS	30-150	114007.2	109961	103.68	PASS	30-150
Std7-100/1000 ppb	ICAL	1	48045.9	45744.8	105.03	PASS	30-150	112333.5	109961	102.16	PASS	30-150
Std8-200/2000 ppb	ICAL	1	48911.7	45744.8	106.92	PASS	30-150	115475.3	109961	105.02	PASS	30-150
ICV	ICV	1	45694.7	45744.8	99.89	PASS	30-150	108793.1	109961	98.94	PASS	30-150
ICB	ICB	1	47418.4	45744.8	103.66	PASS	30-150	113113.6	109961	102.87	PASS	30-150
LLICV1	LLICV	1	47848.6	45744.8	104.6	PASS	30-150	114282.4	109961	103.93	PASS	30-150
MLCCV	CCV	1	48577.4	45744.8	106.19	PASS	30-150	116502.4	109961	105.95	PASS	30-150
ICSA1	ICSA	1	49223.8	45744.8	107.61	PASS	30-150	117882.5	109961	107.2	PASS	30-150
ICSAB1	ICSAB	1	47285.8	45744.8	103.37	PASS	30-150	112968.1	109961	102.73	PASS	30-150
MDL 4	ICAL	1	48374.5	45744.8	105.75	PASS	30-150	115776.4	109961	105.29	PASS	30-150
CCV1	CCV	1	49639.3	45744.8	108.51	PASS	30-150	117609.3	109961	106.96	PASS	30-150
CCB1	CCB	1	48172.8	45744.8	105.31	PASS	30-150	117464.7	109961	106.82	PASS	30-150
CCV2	CCV	1	49189.2	45744.8	107.53	PASS	30-150	117073.5	109961	106.47	PASS	30-150
CCB2	CCB	1	48102.5	45744.8	105.15	PASS	30-150	113660.5	109961	103.36	PASS	30-150
CCV3	CCV	1	48987.5	45744.8	107.09	PASS	30-150	118231.5	109961	107.52	PASS	30-150
CCB3	CCB	1	48038	45744.8	105.01	PASS	30-150	113802.6	109961	103.49	PASS	30-150
CCV4	CCV	1	49443.3	45744.8	108.09	PASS	30-150	117004.9	109961	106.41	PASS	30-150
CCB4	CCB	1	48802.5	45744.8	106.68	PASS	30-150	113725.6	109961	103.42	PASS	30-150
CCB4	CCB	1	49080	45744.8	107.29	PASS	30-150	116911.9	109961	106.32	PASS	30-150
ICSA2	ICSA	1	49857.9	45744.8	108.99	PASS	30-150	118346.4	109961	107.63	PASS	30-150
ICSAB2	ICSAB	1	49893.5	45744.8	109.07	PASS	30-150	119657.1	109961	108.82	PASS	30-150
CCV5	CCV	1	50337	45744.8	110.04	PASS	30-150	118913.8	109961	108.14	PASS	30-150
CCB5	CCB	1	49582.6	45744.8	108.39	PASS	30-150	117767	109961	107.1	PASS	30-150
ICSA3	ICSA	1	50856.5	45744.8	111.17	PASS	30-150	120805.5	109961	109.86	PASS	30-150
ICSAB3	ICSAB	1	51296.8	45744.8	112.14	PASS	30-150	120320.8	109961	109.42	PASS	30-150
CCV6	CCV	1	56200.5	45744.8	122.86	PASS	30-150	134160.6	109961	122.01	PASS	30-150
CCB6	CCB	1	54404.5	45744.8	118.93	PASS	30-150	128604.6	109961	116.95	PASS	30-150
CCV7	CCV	1	58732.8	45744.8	128.39	PASS	30-150	145864.2	109961	132.65	PASS	30-150
CCB7	CCB	1	57501.7	45744.8	125.7	PASS	30-150	140172.6	109961	127.47	PASS	30-150
ICSA4	ICSA	1	58294.4	45744.8	127.43	PASS	30-150	143413.8	109961	130.42	PASS	30-150
ICSAB4	ICSAB	1	57988.9	45744.8	126.77	PASS	30-150	137779.3	109961	125.3	PASS	30-150
CCV8	CCV	1	53384.5	45744.8	116.7	PASS	30-150	129130.8	109961	117.43	PASS	30-150
CCB8	CCB	1	52609.8	45744.8	115.01	PASS	30-150	123334.1	109961	112.16	PASS	30-150
CCV9	CCV	1	58132.7	45744.8	127.08	PASS	30-150	141914.1	109961	129.06	PASS	30-150
CCB9	CCB	1	57913.2	45744.8	126.6	PASS	30-150	135892.7	109961	123.58	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]					72 Ge (ISTD) [1]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
CCV10	CCV	1	57158.2	45744.8	124.95	PASS	30-150	135163.3	109961	122.92	PASS	30-150
CCB10	CCB	1	55358.9	45744.8	121.02	PASS	30-150	132704.8	109961	120.68	PASS	30-150
ICSA5	ICSA	1	55918.6	45744.8	122.24	PASS	30-150	133255.6	109961	121.18	PASS	30-150
ICSAB5	ICSAB	1	55404.5	45744.8	121.12	PASS	30-150	133193.1	109961	121.13	PASS	30-150
MB-107021	MBLK	1	53660.9	45744.8	117.3	PASS	30-150	127166.9	109961	115.65	PASS	30-150
LCS-107021	LCS	1	54552.8	45744.8	119.25	PASS	30-150	127846.2	109961	116.27	PASS	30-150
N062510-015D	SAMP	5	52216.4	45744.8	114.15	PASS	30-150	122628	109961	111.52	PASS	30-150
N063248-001B	SAMP	1	50259.2	45744.8	109.87	PASS	30-150	116885.4	109961	106.3	PASS	30-150
N063248-002B	SAMP	1	46369.9	45744.8	101.37	PASS	30-150	107107.8	109961	97.41	PASS	30-150
N063248-002B	SAMP	5	52178.4	45744.8	114.06	PASS	30-150	122851.7	109961	111.72	PASS	30-150
N063248-002B-PS	PS	1	46491.4	45744.8	101.63	PASS	30-150	109372.5	109961	99.46	PASS	30-150
N063248-002B-MS	MS	1	47344.9	45744.8	103.5	PASS	30-150	111446.7	109961	101.35	PASS	30-150
N063248-002B-MSD	MSD	1	47661.4	45744.8	104.19	PASS	30-150	111784.2	109961	101.66	PASS	30-150
CCV11	CCV	1	57334.6	45744.8	125.34	PASS	30-150	139481.5	109961	126.85	PASS	30-150
CCB11	CCB	1	55259.7	45744.8	120.8	PASS	30-150	133071.9	109961	121.02	PASS	30-150
N063248-003B	SAMP	1	47211.2	45744.8	103.21	PASS	30-150	110400.5	109961	100.4	PASS	30-150
N063248-004B	SAMP	1	47535.5	45744.8	103.91	PASS	30-150	112518.1	109961	102.33	PASS	30-150
N063248-005C	SAMP	1	45997.8	45744.8	100.55	PASS	30-150	107608.8	109961	97.86	PASS	30-150
N063248-006C	SAMP	1	44578.3	45744.8	97.45	PASS	30-150	105581.2	109961	96.02	PASS	30-150
N063248-007C	SAMP	1	44229.6	45744.8	96.69	PASS	30-150	103918.7	109961	94.51	PASS	30-150
N063248-008C	SAMP	1	44666.3	45744.8	97.64	PASS	30-150	105755	109961	96.18	PASS	30-150
N063248-010B	SAMP	1	53821.5	45744.8	117.66	PASS	30-150	129037.4	109961	117.35	PASS	30-150
N063248-011B	SAMP	1	46120.3	45744.8	100.82	PASS	30-150	108647.6	109961	98.81	PASS	30-150
N063249-007C	SAMP	1	42377	45744.8	92.64	PASS	30-150	99874.7	109961	90.83	PASS	30-150
CCV12	CCV	1	59541.2	45744.8	130.16	PASS	30-150	146172.5	109961	132.93	PASS	30-150
CCB12	CCB	1	57170.5	45744.8	124.98	PASS	30-150	141241.8	109961	128.45	PASS	30-150
N063249-009C	SAMP	1	43527.7	45744.8	95.15	PASS	30-150	103052.1	109961	93.72	PASS	30-150
N063249-011C	SAMP	1	46963.9	45744.8	102.67	PASS	30-150	109475.5	109961	99.56	PASS	30-150
N063249-013C	SAMP	1	39770.4	45744.8	86.94	PASS	30-150	92989.9	109961	84.57	PASS	30-150
N063249-015C	SAMP	1	43423	45744.8	94.92	PASS	30-150	104183.6	109961	94.75	PASS	30-150
N063249-017C	SAMP	1	56014.4	45744.8	122.45	PASS	30-150	133813.3	109961	121.69	PASS	30-150
N063249-018C	SAMP	5	51990	45744.8	113.65	PASS	30-150	126722.1	109961	115.24	PASS	30-150
CCV13	CCV	1	58137.3	45744.8	127.09	PASS	30-150	140074.4	109961	127.39	PASS	30-150
CCB13	CCB	1	56121.4	45744.8	122.68	PASS	30-150	138025.9	109961	125.52	PASS	30-150
ICSA6	ICSA	1	57407	45744.8	125.49	PASS	30-150	138980.5	109961	126.39	PASS	30-150
ICSAB6	ICSAB	1	56947.6	45744.8	124.49	PASS	30-150	137139.8	109961	124.72	PASS	30-150
CCV14	CCV	1	56052.3	45744.8	122.53	PASS	30-150	135880.6	109961	123.57	PASS	30-150
CCB14	CCB	1	54813.7	45744.8	119.82	PASS	30-150	133022.8	109961	120.97	PASS	30-150
CCV15	CCV	1	57894.2	45744.8	126.56	PASS	30-150	144437.1	109961	131.35	PASS	30-150
CCB15	CCB	1	56124.8	45744.8	122.69	PASS	30-150	137800.6	109961	125.32	PASS	30-150
CCV16	CCV	1	56385.6	45744.8	123.26	PASS	30-150	140844	109961	128.09	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]					72 Ge (ISTD) [1]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
CCB16	CCB	1	54687.6	45744.8	119.55	PASS	30-150	133314.2	109961	121.24	PASS	30-150
ICSA7	ICSA	1	56307.6	45744.8	123.09	PASS	30-150	135224	109961	122.97	PASS	30-150
ICSAB7	ICSAB	1	55771.3	45744.8	121.92	PASS	30-150	135674.4	109961	123.38	PASS	30-150

INTERNAL STANDARD: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	2546673.9	2546673.9	100	PASS	30-150	61433.5	61433.5	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	2477141	2546673.9	97.27	PASS	30-150	59225.7	61433.5	96.41	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	2410356.4	2546673.9	94.65	PASS	30-150	57887.7	61433.5	94.23	PASS	30-150
Std3-5/50 ppb	ICAL	1	2515986.1	2546673.9	98.79	PASS	30-150	60292.8	61433.5	98.14	PASS	30-150
Std4-10/100 ppb	ICAL	1	2569262.8	2546673.9	100.89	PASS	30-150	61278.6	61433.5	99.75	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	2558618.2	2546673.9	100.47	PASS	30-150	60212.5	61433.5	98.01	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	2483709.9	2546673.9	97.53	PASS	30-150	58594.5	61433.5	95.38	PASS	30-150
Std7-100/1000 ppb	ICAL	1	2480840.2	2546673.9	97.41	PASS	30-150	58564.5	61433.5	95.33	PASS	30-150
Std8-200/2000 ppb	ICAL	1	2587686.9	2546673.9	101.61	PASS	30-150	60077.5	61433.5	97.79	PASS	30-150
ICV	ICV	1	2653524.2	2546673.9	104.2	PASS	30-150	60758.8	61433.5	98.9	PASS	30-150
ICB	ICB	1	2570474.6	2546673.9	100.93	PASS	30-150	59068.4	61433.5	96.15	PASS	30-150
LLICV1	LLICV	1	2478137.6	2546673.9	97.31	PASS	30-150	57158.5	61433.5	93.04	PASS	30-150
LLICV1	LLICV	1	2542268.2	2546673.9	99.83	PASS	30-150	59921.4	61433.5	97.54	PASS	30-150
MLCCV	CCV	1	2630585.4	2546673.9	103.29	PASS	30-150	61355.5	61433.5	99.87	PASS	30-150
ICSA1	ICSA	1	2627480	2546673.9	103.17	PASS	30-150	61002.1	61433.5	99.3	PASS	30-150
ICSAB1	ICSAB	1	2638963.2	2546673.9	103.62	PASS	30-150	60490.1	61433.5	98.46	PASS	30-150
CCV1	CCV	1	2694587.4	2546673.9	105.81	PASS	30-150	59938.1	61433.5	97.57	PASS	30-150
CCB1	CCB	1	2724865	2546673.9	107	PASS	30-150	59985.1	61433.5	97.64	PASS	30-150
CCV2	CCV	1	2796445	2546673.9	109.81	PASS	30-150	62680.5	61433.5	102.03	PASS	30-150
CCB2	CCB	1	2784034.1	2546673.9	109.32	PASS	30-150	61849.5	61433.5	100.68	PASS	30-150
CCV3	CCV	1	2883421	2546673.9	113.22	PASS	30-150	64275.3	61433.5	104.63	PASS	30-150
CCB3	CCB	1	2848797.5	2546673.9	111.86	PASS	30-150	63643.9	61433.5	103.6	PASS	30-150
ICSA2	ICSA	1	2873243.9	2546673.9	112.82	PASS	30-150	63704.3	61433.5	103.7	PASS	30-150
ICSAB2	ICSAB	1	2879704.4	2546673.9	113.08	PASS	30-150	64191.6	61433.5	104.49	PASS	30-150
CCV4	CCV	1	2906215	2546673.9	114.12	PASS	30-150	63655.2	61433.5	103.62	PASS	30-150
CCB4	CCB	1	2905314.5	2546673.9	114.08	PASS	30-150	63350.5	61433.5	103.12	PASS	30-150
CCV5	CCV	1	2917051.4	2546673.9	114.54	PASS	30-150	67781.3	61433.5	110.33	PASS	30-150
CCB5	CCB	1	2923013.9	2546673.9	114.78	PASS	30-150	66637.8	61433.5	108.47	PASS	30-150
CCV6	CCV	1	2936579	2546673.9	115.31	PASS	30-150	66786.3	61433.5	108.71	PASS	30-150
CCB6	CCB	1	2950049.1	2546673.9	115.84	PASS	30-150	66684.7	61433.5	108.55	PASS	30-150
ICSA3	ICSA	1	2910365	2546673.9	114.28	PASS	30-150	67075	61433.5	109.18	PASS	30-150
ICSAB3	ICSAB	1	2944783	2546673.9	115.63	PASS	30-150	67519.1	61433.5	109.91	PASS	30-150
N063248-002B	SAMP	5	2633404.2	2546673.9	103.41	PASS	30-150	75676.1	61433.5	123.18	PASS	30-150
N063248-002B	SAMP	25	2785706.1	2546673.9	109.39	PASS	30-150	74948.3	61433.5	122	PASS	30-150
N063248-002B-PS	PS	5	2615014.9	2546673.9	102.68	PASS	30-150	70433.3	61433.5	114.65	PASS	30-150
N063248-002B-MS	MS	5	2598603.7	2546673.9	102.04	PASS	30-150	70645.3	61433.5	114.99	PASS	30-150
N063248-002B-MSD	MSD	5	2643307.7	2546673.9	103.79	PASS	30-150	70651	61433.5	115	PASS	30-150
N063248-003B	SAMP	10	2737461	2546673.9	107.49	PASS	30-150	71859.3	61433.5	116.97	PASS	30-150
N063248-004B	SAMP	10	2801935.2	2546673.9	110.02	PASS	30-150	71197.5	61433.5	115.89	PASS	30-150
CCV7	CCV	1	2853126.7	2546673.9	112.03	PASS	30-150	73089	61433.5	118.97	PASS	30-150
CCB7	CCB	1	2887302.8	2546673.9	113.38	PASS	30-150	70703.3	61433.5	115.09	PASS	30-150

INTERNAL STANDARD: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
CCV8	CCV	1	2805939.3	2546673.9	110.18	PASS	30-150	65871.4	61433.5	107.22	PASS	30-150
CCB8	CCB	1	2825101.7	2546673.9	110.93	PASS	30-150	64372.3	61433.5	104.78	PASS	30-150
CCV9	CCV	1	2856275	2546673.9	112.16	PASS	30-150	66203.8	61433.5	107.76	PASS	30-150
CCB9	CCB	1	2876861.9	2546673.9	112.97	PASS	30-150	65294.7	61433.5	106.29	PASS	30-150
CCV10	CCV	1	2834268.2	2546673.9	111.29	PASS	30-150	64824.2	61433.5	105.52	PASS	30-150
CCB10	CCB	1	2771600.1	2546673.9	108.83	PASS	30-150	63577.2	61433.5	103.49	PASS	30-150
ICSA4	ICSA	1	2750438.3	2546673.9	108	PASS	30-150	62897.9	61433.5	102.38	PASS	30-150
ICSAB4	ICSAB	1	2769002.9	2546673.9	108.73	PASS	30-150	63064	61433.5	102.65	PASS	30-150
N063248-005C	SAMP	1	2041175.6	2546673.9	80.15	PASS	30-150	62204.3	61433.5	101.25	PASS	30-150
N063248-005C	SAMP	10	2491339.4	2546673.9	97.83	PASS	30-150	67445.6	61433.5	109.79	PASS	30-150
N063248-006C	SAMP	1	1873174.3	2546673.9	73.55	PASS	30-150	60479	61433.5	98.45	PASS	30-150
N063248-006C	SAMP	10	2385057.2	2546673.9	93.65	PASS	30-150	67458.9	61433.5	109.81	PASS	30-150
N063248-007C	SAMP	1	1805722.5	2546673.9	70.91	PASS	30-150	57665.8	61433.5	93.87	PASS	30-150
N063248-007C	SAMP	10	2323884.7	2546673.9	91.25	PASS	30-150	67931.9	61433.5	110.58	PASS	30-150
N063248-008C	SAMP	1	1819448.7	2546673.9	71.44	PASS	30-150	58995.9	61433.5	96.03	PASS	30-150
N063248-008C	SAMP	10	2253240.6	2546673.9	88.48	PASS	30-150	68690.5	61433.5	111.81	PASS	30-150
N063248-010B	SAMP	1	2346720.9	2546673.9	92.15	PASS	30-150	66026.7	61433.5	107.48	PASS	30-150
CCV11	CCV	1	2408928.8	2546673.9	94.59	PASS	30-150	68077	61433.5	110.81	PASS	30-150
CCB11	CCB	1	2344078.1	2546673.9	92.05	PASS	30-150	66050	61433.5	107.51	PASS	30-150
N063248-011B	SAMP	1	1883380.5	2546673.9	73.95	PASS	30-150	57385.9	61433.5	93.41	PASS	30-150
N063248-011B	SAMP	10	2250064.3	2546673.9	88.35	PASS	30-150	66034.3	61433.5	107.49	PASS	30-150
N063249-007C	SAMP	1	1712206.3	2546673.9	67.23	PASS	30-150	57854.3	61433.5	94.17	PASS	30-150
N063249-007C	SAMP	10	2305235	2546673.9	90.52	PASS	30-150	70356.4	61433.5	114.52	PASS	30-150
N063249-009C	SAMP	1	1893373.5	2546673.9	74.35	PASS	30-150	62168.5	61433.5	101.2	PASS	30-150
N063249-009C	SAMP	10	2487704.4	2546673.9	97.68	PASS	30-150	75106.7	61433.5	122.26	PASS	30-150
N063249-011C	SAMP	1	2172651.2	2546673.9	85.31	PASS	30-150	68338	61433.5	111.24	PASS	30-150
N063249-011C	SAMP	10	2524753.6	2546673.9	99.14	PASS	30-150	75578.9	61433.5	123.03	PASS	30-150
N063249-013C	SAMP	1	1708349.2	2546673.9	67.08	PASS	30-150	61317.6	61433.5	99.81	PASS	30-150
N063249-013C	SAMP	10	2409083.8	2546673.9	94.6	PASS	30-150	76187.2	61433.5	124.02	PASS	30-150
CCV12	CCV	1	2693374.4	2546673.9	105.76	PASS	30-150	80619	61433.5	131.23	PASS	30-150
CCB12	CCB	1	2682960.7	2546673.9	105.35	PASS	30-150	79285.9	61433.5	129.06	PASS	30-150
N063249-015C	SAMP	1	2003329.1	2546673.9	78.66	PASS	30-150	64507.3	61433.5	105	PASS	30-150
N063249-015C	SAMP	10	2493228.6	2546673.9	97.9	PASS	30-150	74946.2	61433.5	122	PASS	30-150
N063249-017C	SAMP	1	2693844.9	2546673.9	105.78	PASS	30-150	75845.7	61433.5	123.46	PASS	30-150
N063249-017C	SAMP	10	2643345.1	2546673.9	103.8	PASS	30-150	73555.5	61433.5	119.73	PASS	30-150
N063249-018C	SAMP	5	2452391.9	2546673.9	96.3	PASS	30-150	71072.7	61433.5	115.69	PASS	30-150
CCV13	CCV	1	2463267.7	2546673.9	96.72	PASS	30-150	68730.6	61433.5	111.88	PASS	30-150
CCB13	CCB	1	2489019.8	2546673.9	97.74	PASS	30-150	67533.6	61433.5	109.93	PASS	30-150
ICSA5	ICSA	1	2449915.3	2546673.9	96.2	PASS	30-150	66756.1	61433.5	108.66	PASS	30-150
ICSAB5	ICSAB	1	2460970.8	2546673.9	96.63	PASS	30-150	67277.1	61433.5	109.51	PASS	30-150
CCV14	CCV	1	2719386.9	2546673.9	106.78	PASS	30-150	72932.9	61433.5	118.72	PASS	30-150

INTERNAL STANDARD: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
CCB14	CCB	1	2717829.1	2546673.9	106.72	PASS	30-150	71177.5	61433.5	115.86	PASS	30-150
CCV15	CCV	1	2647392.6	2546673.9	103.95	PASS	30-150	71849.2	61433.5	116.95	PASS	30-150
CCB15	CCB	1	2610951.7	2546673.9	102.52	PASS	30-150	69650	61433.5	113.37	PASS	30-150
CCV16	CCV	1	2409816.1	2546673.9	94.63	PASS	30-150	70028.3	61433.5	113.99	PASS	30-150
CCB16	CCB	1	2381204.5	2546673.9	93.5	PASS	30-150	67870.6	61433.5	110.48	PASS	30-150
CCV17	CCV	1	2666795.9	2546673.9	104.72	PASS	30-150	77699.6	61433.5	126.48	PASS	30-150
CCB17	CCB	1	2632176.7	2546673.9	103.36	PASS	30-150	76961.8	61433.5	125.28	PASS	30-150
ICSA6	ICSA	1	2662092.9	2546673.9	104.53	PASS	30-150	77080.2	61433.5	125.47	PASS	30-150
ICSAB6	ICSAB	1	2670912.4	2546673.9	104.88	PASS	30-150	76997.4	61433.5	125.33	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.: N063249
Test Method: EPA 6020
Analysis Date: 2/23,25/2024

Matrix: Groundwater
Batch No.: 107021

Instrument ID: ICPMS-03
Instrument Description: Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Dilution test for Ba failed. However, PS passed criteria.
Dilution test is not applicable to As & Se. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063248-002B DT 5x	Arsenic	As	µg/L	0	NA	0		10
N063248-002B DT 5x	Barium	Ba	µg/L	66.90102	FAIL	59.79465	11.88%	10
N063248-002B DT 5x	Selenium	Se	µg/L	3.192554	NA	2.826648	12.94%	10
N063248-002B DT 25x	Manganese	Mn	µg/L	101.2074	PASS	93.50368	8.24%	10

Reviewed by:

JRB 3/17/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063249
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063248-002B-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ZZZZZZ** Batch ID: **107021** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/24/2024** SeqNo: **5713738**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	8.948	0.10	10.00	0	89.5	80	120				
Barium	70.158	1.0	10.00	59.79	104	80	120				
Selenium	11.905	0.50	10.00	2.827	90.8	80	120				

Sample ID: **N063248-002B-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ZZZZZZ** Batch ID: **107021** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/25/2024** SeqNo: **5714163**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	586.103	2.5	500.0	93.50	98.5	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number : 503251
Report Level : II
Report Date : 03/13/2024

Analytical Report *prepared for:*

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Location: N063296

Authorized for release by:

Quynhgiao Le

Quynhgiao Le, Project Manager
714-7716900
quynhgiao.le@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Sonny Lorenzo
Asset Laboratories
11110 Artersia
Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 503251
Location: N063296
Date Received: 02/27/24

Sample ID	Lab ID	Collected	Matrix
N063296-001A / ER-04-LF10-Q124	503251-001	02/22/24 08:55	Water
N063296-002A / ER-04-LF30-Q124	503251-002	02/22/24 09:23	Water
N063296-003A / ER-04-LF50-Q124	503251-003	02/22/24 09:51	Water
N063296-004A / ER-04-Q124	503251-004	02/22/24 10:47	Water
N063296-005A / MW-46-175-Q124	503251-005	02/22/24 13:52	Water
N063296-006A / MW-46-205-Q124	503251-006	02/22/24 13:00	Water
N063296-007A / MW-32-020-Q124	503251-007	02/22/24 09:21	Water
N063296-008A / MW-32-035-Q124	503251-008	02/22/24 08:54	Water

Case Narrative

Asset Laboratories 11110 Artersia Blvd, Suite B Cerritos, CA 90703 Sonny Lorenzo	Lab Job Number: 503251 Location: N063296 Date Received: 02/27/24

This data package contains sample and QC results for eight water samples, requested for the above referenced project on 02/27/24. The samples were received cold and intact.

Total Organic Carbon by IR (SM 5310B):

- Level II is also requested.
- No analytical problems were encountered.

503251

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Enthalpy Analytical
931 W. Barkley Ave.
Orange, CA 92868

TEL: (714) 771-6900
FAX: (714) 538-1209
Acct #:

Field Sampler: Riggie Tep

26-Feb-24

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				SM5310B		
N063296-001A / ER-04-LF10-Q124	Groundwater	2/22/2024 8:55:00 AM	8OZA	1		
N063296-002A / ER-04-LF30-Q124	Groundwater	2/22/2024 9:23:00 AM	8OZA	1		
N063296-003A / ER-04-LF50-Q124	Groundwater	2/22/2024 9:51:00 AM	8OZA	1		
N063296-004A / ER-04-Q124	Groundwater	2/22/2024 10:47:00 AM	8OZA	1		
N063296-005A / MW-46-175-Q124	Groundwater	2/22/2024 1:52:00 PM	8OZA	1		
N063296-006A / MW-46-205-Q124	Groundwater	2/22/2024 1:00:00 PM	8OZA	1		
N063296-007A / MW-32-020-Q124	Groundwater	2/22/2024 9:21:00 AM	8OZA	1		
N063296-008A / MW-32-035-Q124	Groundwater	2/22/2024 8:54:00 AM	8OZA	1		

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N63296A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for TOC by SM5310B. EDD requirement Labspec7 edata.

GLS #: 560999246

		Date/Time			Date/Time
Relinquished by:	YRodriguez	2/26/2024 1630	**Received by:**	Heena Sylvestre	2/27/24 12:13
Relinquished by:			**Received by:**		

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Asset Labs. Project: N063296

Date Received: 2/27/24 Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 3.6 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☑ Ice ☐ Ice Packs ☑ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 1.6 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____ ☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: Deena Sylvestri Date: FEB 27 2024

GLS.

800-322-5555
www.gls-us.com

Ship From
ADVANCED TECHNOLOGY
LABORATORIES, INC.
MARLON CARTIN
3151 W. POST RD.
LAS VEGAS, NV 89118

Ship To
ENHALPY ANALYTICAL
SAMPLE RECEIVING
806 N. BATAVIA
ORANGE, CA 92868

COD: $0.00
Weight: 0 lb(s)
Reference:

Delivery Instructions:

Signature Type: STANDARD

Tracking #: 560999246

PDS

ORANGE

S10219D

4409139

ORC CA927-RD0

Print Date: 2/26/2024 9:44 AM

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.
Step 2: Fold this page in half.
Step 3: Securely attach this label to your package and do not cover the barcode.

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all of the General Logistics Systems US, Inc. (GLS) service terms & conditions including, but not limited to; limits of liability, declared value conditions, and claim procedures which are available on our website at www.gls-us.com.

3.6/1.6

ENTHALPY ANALYTICAL

Analysis Results for 503251

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 503251
Location: N063296
Date Received: 02/27/24

Sample ID: N063296-001A / ER-04-LF10-Q124 **Lab ID:** 503251-001 **Matrix:** Water **Collected:** 02/22/24 08:55

503251-001 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.2**		mg/L	1.0	1	335072	03/11/24	03/11/24	EPL

Sample ID: N063296-002A / ER-04-LF30-Q124 **Lab ID:** 503251-002 **Matrix:** Water **Collected:** 02/22/24 09:23

503251-002 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	ND		mg/L	1.0	1	335072	03/11/24	03/11/24	EPL

Sample ID: N063296-003A / ER-04-LF50-Q124 **Lab ID:** 503251-003 **Matrix:** Water **Collected:** 02/22/24 09:51

503251-003 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	ND		mg/L	1.0	1	335072	03/11/24	03/11/24	EPL

Sample ID: N063296-004A / ER-04-Q124 **Lab ID:** 503251-004 **Matrix:** Water **Collected:** 02/22/24 10:47

503251-004 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	ND		mg/L	1.0	1	335072	03/11/24	03/11/24	EPL

Sample ID: N063296-005A / MW-46-175-Q124 **Lab ID:** 503251-005 **Matrix:** Water **Collected:** 02/22/24 13:52

503251-005 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	ND		mg/L	1.0	1	335072	03/11/24	03/11/24	EPL

Sample ID: N063296-006A / MW-46-205-Q124 **Lab ID:** 503251-006 **Matrix:** Water **Collected:** 02/22/24 13:00

503251-006 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	ND		mg/L	1.0	1	335072	03/11/24	03/11/24	EPL

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 503251

Sample ID:	Lab ID: 503251-007	Collected: 02/22/24 09:21
N063296-007A / MW-32-020-Q124	Matrix: Water	

503251-007 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**55**		mg/L	2.0	2	335072	03/12/24	03/12/24	EPL

Sample ID:	Lab ID: 503251-008	Collected: 02/22/24 08:54
N063296-008A / MW-32-035-Q124	Matrix: Water	

503251-008 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**21**		mg/L	1.0	1	335072	03/11/24	03/11/24	EPL

ND Not Detected

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type: Blank	**Lab ID: QC1135452**	**Batch: 335072**
Matrix: Water	**Method: SM 5310B**	

QC1135452 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Total Organic Carbon	ND		mg/L	1.0	03/11/24	03/11/24

Type: Lab Control Sample	**Lab ID: QC1135453**	**Batch: 335072**
Matrix: Water	**Method: SM 5310B**	

QC1135453 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Total Organic Carbon	24.33	25.00	mg/L	97%		80-120

Type: Matrix Spike	**Lab ID: QC1135454**	**Batch: 335072**
Matrix (Source ID): Water (503758-004)	**Method: SM 5310B**	

QC1135454 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Total Organic Carbon	56.76	28.09	25.00	mg/L	115%		80-120	2

Type: Matrix Spike Duplicate	**Lab ID: QC1135455**	**Batch: 335072**
Matrix (Source ID): Water (503758-004)	**Method: SM 5310B**	

QC1135455 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Total Organic Carbon	54.76	28.09	25.00	mg/L	107%		80-120	4	20	2

ND Not Detected

ARCADIS

Project: PG&E Topock - RCM

Project No.: 30211191

ASSET Laboratories Work Order:

N063297

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063297

Item	Page
Cover Page	1-6
Analytical Result/QC Summary Reports	7-46
Sample Receiving Items	47-51
List of Analysts	52
Raw Data	
SM 2540C	53-62
EPA 218.6	63-188
SM 2320 B	189-198
EPA 300.0	199-238
EPA 6010B_Dissolved	239-319
EPA 6020_Dissolved	320-427

March 08, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063297

RE: PG&E Topock - RCM, 30211191

Attention: Dan Bush

Enclosed are the results for sample(s) received on February 22, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - RCM, 30211191
Lab Order: N063297

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 300:

Dilution was necessary due to precipitation of sample upon addition of eluent.

Analytical Comments for EPA 6010B:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Iron in QC samples N063295-005C-MS1, N063295-005C-MSD1, N063295-005C-MS2 and N063295-005C-MSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Calcium in QC samples N063295-005C-MS1 and N063295-005C-MSD1 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Chromium in QC samples N063295-002B-MS and N063295-002B-MSD possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Arsenic and Zinc in QC samples N063295-002B-MS and N063295-002B-MSD possibly due to matrix interference.

Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N063295-002B-MS and N063295-002B-MSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

ASSET Laboratories

Date: *08-Mar-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - RCM, 30211191
Lab Order: N063297
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063297-001A	MW-88-107-Q124	Groundwater	2/22/2024 8:58:00 AM	2/22/2024	3/8/2024
N063297-001B	MW-88-107-Q124	Groundwater	2/22/2024 8:58:00 AM	2/22/2024	3/8/2024
N063297-001C	MW-88-107-Q124	Groundwater	2/22/2024 8:58:00 AM	2/22/2024	3/8/2024
N063297-002A	MW-38D-Q124	Groundwater	2/22/2024 10:52:00 AM	2/22/2024	3/8/2024
N063297-002B	MW-38D-Q124	Groundwater	2/22/2024 10:52:00 AM	2/22/2024	3/8/2024
N063297-002C	MW-38D-Q124	Groundwater	2/22/2024 10:52:00 AM	2/22/2024	3/8/2024
N063297-003A	MW-38S-Q124	Groundwater	2/22/2024 11:30:00 AM	2/22/2024	3/8/2024
N063297-003B	MW-38S-Q124	Groundwater	2/22/2024 11:30:00 AM	2/22/2024	3/8/2024
N063297-003C	MW-38S-Q124	Groundwater	2/22/2024 11:30:00 AM	2/22/2024	3/8/2024
N063297-004A	EB-738-Q124	Groundwater	2/22/2024 1:10:00 PM	2/22/2024	3/8/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-88-107-Q124
Lab Order:	N063297		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/22/2024 8:58:00 AM
Lab ID:	N063297-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTERABLE RESIDUE							
			SM2540C				
RunID: **NV00922-WC_240223A**	QC Batch: **107063**				PrepDate:	**2/23/2024**	Analyst: **LR**
Total Dissolved Solids (Residue, Filterable)	440	10	10		mg/L	1	2/23/2024 11:16 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 160.1_2540C_WPGE

Sample ID: **LCS-107063**	SampType: **LCS**	TestCode: **160.1_2540C**	Units: **mg/L**	Prep Date: **2/23/2024**	RunNo: **182910**
Client ID: **LCSW**	Batch ID: **107063**	TestNo: **SM2540C**		Analysis Date: **2/23/2024**	SeqNo: **5712357**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	973.000	10	1000	0	97.3	80	120				

Sample ID: **MB-107063**	SampType: **MBLK**	TestCode: **160.1_2540C**	Units: **mg/L**	Prep Date: **2/23/2024**	RunNo: **182910**
Client ID: **PBW**	Batch ID: **107063**	TestNo: **SM2540C**		Analysis Date: **2/23/2024**	SeqNo: **5712358**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	ND	10									

Sample ID: **N063295-008BDUP**	SampType: **DUP**	TestCode: **160.1_2540C**	Units: **mg/L**	Prep Date: **2/23/2024**	RunNo: **182910**
Client ID: **ZZZZZZ**	Batch ID: **107063**	TestNo: **SM2540C**		Analysis Date: **2/23/2024**	SeqNo: **5712368**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids (Residue, Filtera	11010.000	100						10640	3.42	5	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Client Sample ID: MW-88-107-Q124
Lab Order: N063297
Project: PG&E Topock - RCM, 30211191
Collection Date: 2/22/2024 8:58:00 AM
Lab ID: N063297-001
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240226A** QC Batch: **R182953**				PrepDate:			Analyst: **RAB**
Hexavalent Chromium	21	0.19	1.0		µg/L	5	2/26/2024 08:52 PM
DISSOLVED METALS BY ICP-MS							
			EPA 3010A		**EPA 6020**		
RunID: **NV00922-ICP8_240223E** QC Batch: **107055**				PrepDate:	**2/23/2024**		Analyst: **DJ**
Chromium	20	0.035	1.0		µg/L	1	2/24/2024 04:05 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-38D-Q124
Lab Order:	N063297		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/22/2024 10:52:00 AM
Lab ID:	N063297-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240226A**	QC Batch: **R182953**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.77	4.0		µg/L	20	2/26/2024 09:11 PM
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240223E**	QC Batch: **107055**			PrepDate:	**2/23/2024**		Analyst: **DJ**
Chromium	ND	0.035	1.0		µg/L	1	2/24/2024 04:09 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-38S-Q124
Lab Order:	N063297		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/22/2024 11:30:00 AM
Lab ID:	N063297-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
EPA 218.6							
RunID: **NV00922-IC7_240226A** QC Batch: **R182953** PrepDate: Analyst: **RAB**							
Hexavalent Chromium	26	0.19	1.0		µg/L	5	2/26/2024 09:30 PM
DISSOLVED METALS BY ICP-MS							
EPA 3010A **EPA 6020**							
RunID: **NV00922-ICP8_240223E** QC Batch: **107055** PrepDate: **2/23/2024** Analyst: **DJ**							
Chromium	25	0.035	1.0		µg/L	1	2/24/2024 04:14 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-738-Q124
Lab Order:	N063297		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/22/2024 1:10:00 PM
Lab ID:	N063297-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240226A**	QC Batch: **R182953**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/26/2024 10:27 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R182953**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **PBW**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714780**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R182953**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **LCSW**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714781**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.913	0.20	5.000	0	98.3	90	110				

Sample ID: **N063214-007AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714783**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.661	1.0	5.000	0	93.2	90	110				

Sample ID: **N063295-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714787**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	58.337	1.0	25.00	34.17	96.7	90	110				

Sample ID: **N063295-001AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714788**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	58.670	1.0	25.00	34.17	98.0	90	110	58.34	0.570	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063295-003ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **182953**			
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**			SeqNo: **5714790**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	24.591	1.0						23.94	2.70	20	

Sample ID: **N063295-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **182953**			
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**			SeqNo: **5714791**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	48.490	1.0	25.00	23.94	98.2	90	110				

Sample ID: **N063295-005AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **182953**			
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**			SeqNo: **5714795**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.543	1.0	5.000	0	90.9	90	110				

Sample ID: **N063295-006AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **182953**			
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**			SeqNo: **5714797**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.556	1.0	5.000	0	91.1	90	110				

Sample ID: **N063295-007AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **182953**			
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**			SeqNo: **5714799**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.867	1.0	5.000	0	97.3	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063295-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182953**
Client ID: **ZZZZZZ** Batch ID: **R182953** TestNo: **EPA 218.6** Analysis Date: **2/26/2024** SeqNo: **5714801**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.020	0.20	1.000	0	102	90	110				

Sample ID: **N063295-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182953**
Client ID: **ZZZZZZ** Batch ID: **R182953** TestNo: **EPA 218.6** Analysis Date: **2/26/2024** SeqNo: **5714805**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.779	1.0	5.000	0	95.6	90	110				

Sample ID: **N063249-018AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182953**
Client ID: **ZZZZZZ** Batch ID: **R182953** TestNo: **EPA 218.6** Analysis Date: **2/26/2024** SeqNo: **5714807**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.706	1.0	5.000	0	94.1	90	110				

Sample ID: **N063249-019AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182953**
Client ID: **ZZZZZZ** Batch ID: **R182953** TestNo: **EPA 218.6** Analysis Date: **2/26/2024** SeqNo: **5714813**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.035	0.20	1.000	0	103	90	110				

Sample ID: **N063297-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182953**
Client ID: **ZZZZZZ** Batch ID: **R182953** TestNo: **EPA 218.6** Analysis Date: **2/26/2024** SeqNo: **5714815**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	45.034	1.0	25.00	21.25	95.1	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063297-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182953**
Client ID: **ZZZZZZ** Batch ID: **R182953** TestNo: **EPA 218.6** Analysis Date: **2/26/2024** SeqNo: **5714817**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	20.054	4.0	20.00	0	100	90	110				

Sample ID: **N063297-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182953**
Client ID: **ZZZZZZ** Batch ID: **R182953** TestNo: **EPA 218.6** Analysis Date: **2/26/2024** SeqNo: **5714819**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	51.159	1.0	25.00	26.42	98.9	90	110				

Sample ID: **N063297-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **182953**
Client ID: **ZZZZZZ** Batch ID: **R182953** TestNo: **EPA 218.6** Analysis Date: **2/26/2024** SeqNo: **5714823**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.989	0.20	1.000	0	98.9	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **MB-107055**	SampType: **MBLK**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/23/2024**	RunNo: **182925**
Client ID: **PBW**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/24/2024**	SeqNo: **5713362**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID: **LCS-107055**	SampType: **LCS**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/23/2024**	RunNo: **182925**
Client ID: **LCSW**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/24/2024**	SeqNo: **5713363**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	9.794	1.0	10.00	0	97.9	85	115				

Sample ID: **N063295-002B-MS**	SampType: **MS**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/23/2024**	RunNo: **182925**
Client ID: **ZZZZZZ**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/24/2024**	SeqNo: **5713368**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	79.507	1.0	10.00	72.62	68.8	75	125				S

Sample ID: **N063295-002B-MSD**	SampType: **MSD**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date: **2/23/2024**	RunNo: **182925**
Client ID: **ZZZZZZ**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/24/2024**	SeqNo: **5713369**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	79.117	1.0	10.00	72.62	64.9	75	125	79.51	0.492	20	S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **N063295-002B-PS** SampType: **PS** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **ZZZZZZ** Batch ID: **107055** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/24/2024** SeqNo: **5713367**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	80.348	1.0	10.00	72.62	77.2	80	120				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-88-107-Q124
Lab Order:	N063297		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/22/2024 8:58:00 AM
Lab ID:	N063297-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ALKALINITY, SPECIATED							
			SM 2320 B				
RunID: **NV00922-WC_240225B**	QC Batch: **R183092**			PrepDate:			Analyst: **LR**
Alkalinity, Total (As CaCO3)	170	5.0	5.0		mg/L	1	2/25/2024 11:10 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 2320_W_SP

Sample ID: **LCS-R183092**	SampType: **LCS**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **183092**
Client ID: **LCSW**	Batch ID: **R183092**	TestNo: **SM 2320 B**		Analysis Date: **2/25/2024**	SeqNo: **5721613**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	94.262	5.0	100.0	0	94.3	85	115				

Sample ID: **MB-R183092**	SampType: **MBLK**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **183092**
Client ID: **PBW**	Batch ID: **R183092**	TestNo: **SM 2320 B**		Analysis Date: **2/25/2024**	SeqNo: **5721614**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	ND	5.0									

Sample ID: **N063248-005BDUP**	SampType: **DUP**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **183092**
Client ID: **ZZZZZZ**	Batch ID: **R183092**	TestNo: **SM 2320 B**		Analysis Date: **2/25/2024**	SeqNo: **5721616**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	75.820	5.0						74.80	1.36	30	

Sample ID: **N063248-005BMS**	SampType: **MS**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **183092**
Client ID: **ZZZZZZ**	Batch ID: **R183092**	TestNo: **SM 2320 B**		Analysis Date: **2/25/2024**	SeqNo: **5721617**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	169.057	5.0	100.0	74.80	94.3	75	125				

Sample ID: **N063248-005BMSD**	SampType: **MSD**	TestCode: **2320_W_SP**	Units: **mg/L**	Prep Date:	RunNo: **183092**
Client ID: **ZZZZZZ**	Batch ID: **R183092**	TestNo: **SM 2320 B**		Analysis Date: **2/25/2024**	SeqNo: **5721618**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	168.033	5.0	100.0	74.80	93.2	75	125	169.1	0.608	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-88-107-Q124
Lab Order:	N063297		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/22/2024 8:58:00 AM
Lab ID:	N063297-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240223A** QC Batch: **R182887**				PrepDate:			Analyst: **RAB**
Bromide	ND	0.18	2.5		mg/L	5	2/23/2024 12:17 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240223A** QC Batch: **R182874**				PrepDate:			Analyst: **RAB**
Chloride	55	2.9	5.0		mg/L	10	2/23/2024 01:45 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240223A** QC Batch: **R182887**				PrepDate:			Analyst: **RAB**
Fluoride	0.96	0.16	0.50		mg/L	5	2/23/2024 12:17 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240223A** QC Batch: **R182874**				PrepDate:			Analyst: **RAB**
Sulfate	74	3.4	5.0		mg/L	10	2/23/2024 01:45 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240223A** QC Batch: **R182887**				PrepDate:			Analyst: **RAB**
Nitrate as N	11	0.24	0.50		mg/L	10	2/23/2024 04:21 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-38D-Q124
Lab Order:	N063297		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/22/2024 10:52:00 AM
Lab ID:	N063297-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240223A**	QC Batch: **R182887**			PrepDate:			Analyst: **RAB**
Nitrate as N	1.3	0.48	1.0		mg/L	20	2/23/2024 12:33 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-38S-Q124
Lab Order:	N063297		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/22/2024 11:30:00 AM
Lab ID:	N063297-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240223A**	QC Batch: **R182887**			PrepDate:			Analyst: **RAB**
Nitrate as N	5.8	0.24	0.50		mg/L	10	2/23/2024 12:48 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_BRPGE

Sample ID: **MB-R182887_BR** SampType: **MBLK** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **182887**
Client ID: **PBW** Batch ID: **R182887** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5711027**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	ND	0.50									

Sample ID: **LCS-R182887_BR** SampType: **LCS** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **182887**
Client ID: **LCSW** Batch ID: **R182887** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5711028**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	1.251	0.50	1.250	0	100	90	110				

Sample ID: **N063297-001BMS** SampType: **MS** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **182887**
Client ID: **ZZZZZZ** Batch ID: **R182887** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5711032**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	6.078	2.5	6.250	0	97.2	80	120				

Sample ID: **N063297-001BMSD** SampType: **MSD** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **182887**
Client ID: **ZZZZZZ** Batch ID: **R182887** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5711033**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	6.217	2.5	6.250	0	99.5	80	120	6.078	2.27	20	

Sample ID: **N063297-001BDUP** SampType: **DUP** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **182887**
Client ID: **ZZZZZZ** Batch ID: **R182887** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5711034**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	ND	2.5						0	0	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID: **MB-R182874_CL**	SampType: **MBLK**	TestCode: **300_W_CLP**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **PBW**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711093**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID: **LCS-R182874_CL**	SampType: **LCS**	TestCode: **300_W_CLP**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **LCSW**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711094**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.931	0.50	2.000	0	96.6	90	110				

Sample ID: **N063297-001BDUP**	SampType: **DUP**	TestCode: **300_W_CLP**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **ZZZZZZ**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711096**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	54.921	5.0						54.82	0.193	20	

Sample ID: **N063297-001BMS**	SampType: **MS**	TestCode: **300_W_CLP**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **ZZZZZZ**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711097**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	75.102	5.0	20.00	54.82	101	80	120				

Sample ID: **N063297-001BMSD**	SampType: **MSD**	TestCode: **300_W_CLP**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **ZZZZZZ**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711098**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	75.046	5.0	20.00	54.82	101	80	120	75.10	0.0746	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID: **N063252-001CMS**	SampType: **MS**	TestCode: **300_W_CLP**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **ZZZZZZ**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711100**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	14573.600	1000	4000	10420	104	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID: **MB-R182887_F**	SampType: **MBLK**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **PBW**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711006**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Sample ID: **LCS-R182887_F**	SampType: **LCS**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **LCSW**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711007**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.226	0.10	1.250	0	98.1	90	110				

Sample ID: **N063295-008BMS**	SampType: **MS**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **ZZZZZZ**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711012**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	17.672	1.0	12.50	5.502	97.4	80	120				

Sample ID: **N063295-008BMSD**	SampType: **MSD**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **ZZZZZZ**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711013**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	17.745	1.0	12.50	5.502	97.9	80	120	17.67	0.412	20	

Sample ID: **N063295-008BDUP**	SampType: **DUP**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **ZZZZZZ**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711019**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	5.356	1.0						5.502	2.69	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID: **N063297-001BDUP** SampType: **DUP** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **182887**
Client ID: **ZZZZZZ** Batch ID: **R182887** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5711020**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	0.921	0.50						0.9560	3.78	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **MB-R182874_SO4** SampType: **MBLK** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **182874**
Client ID: **PBW** Batch ID: **R182874** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5710470**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **LCS-R182874_SO4** SampType: **LCS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **182874**
Client ID: **LCSW** Batch ID: **R182874** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5710471**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.018	0.50	4.000	0	100	90	110				

Sample ID: **N063297-001BDUP** SampType: **DUP** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **182874**
Client ID: **ZZZZZZ** Batch ID: **R182874** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5710473**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	73.427	5.0						73.66	0.315	20	

Sample ID: **N063297-001BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **182874**
Client ID: **ZZZZZZ** Batch ID: **R182874** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5710474**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	112.140	5.0	40.00	73.66	96.2	80	120				

Sample ID: **N063297-001BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **182874**
Client ID: **ZZZZZZ** Batch ID: **R182874** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5710475**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	112.875	5.0	40.00	73.66	98.0	80	120	112.1	0.653	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **N063252-001CMS**	SampType: **MS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **ZZZZZZ**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710477**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	21537.400	1000	8000	13600	99.2	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **MB-R182887_NO3**	SampType: **MBLK**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **PBW**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711058**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **LCS-R182887_NO3**	SampType: **LCS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **LCSW**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711059**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.261	0.050	1.250	0	101	90	110				

Sample ID: **N063295-008BMS**	SampType: **MS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **ZZZZZZ**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711063**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.311	0.50	12.50	0	98.5	80	120				

Sample ID: **N063295-008BMSD**	SampType: **MSD**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **ZZZZZZ**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711064**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.287	0.50	12.50	0	98.3	80	120	12.31	0.195	20	

Sample ID: **N063295-008BDUP**	SampType: **DUP**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **ZZZZZZ**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711070**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.50						0	0	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **N063297-003BMS**	SampType: **MS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:					RunNo: **182887**			
Client ID: **ZZZZZZ**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**					SeqNo: **5711078**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Nitrate as N	17.918	0.50	12.50	5.789	97.0	80	120					

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-88-107-Q124
Lab Order:	N063297		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/22/2024 8:58:00 AM
Lab ID:	N063297-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240223B**	QC Batch: **107062**			PrepDate:	**2/23/2024**		Analyst: **DJ**
Iron	ND	13	20		µg/L	1	2/23/2024 05:28 PM
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240223A**	QC Batch: **107062**			PrepDate:	**2/23/2024**		Analyst: **DJ**
Boron	0.24	0.035	0.10		mg/L	1	2/23/2024 05:28 PM
Calcium	19	0.18	0.50		mg/L	1	2/23/2024 05:28 PM
Magnesium	2.7	0.017	0.10		mg/L	1	2/23/2024 05:28 PM
Potassium	4.4	0.14	0.50		mg/L	1	3/1/2024 04:51 PM
Sodium	140	1.7	2.5		mg/L	5	3/1/2024 04:48 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-107062** SampType: **MBLK** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **2/23/2024** RunNo: **182846**
Client ID: **PBW** Batch ID: **107062** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708253**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS1-107062** SampType: **LCS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **2/23/2024** RunNo: **182846**
Client ID: **LCSW** Batch ID: **107062** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708254**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	96.627	20	100.0	0	96.6	85	115				

Sample ID: **N063295-005C-MS1** SampType: **MS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **2/23/2024** RunNo: **182846**
Client ID: **ZZZZZZ** Batch ID: **107062** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708258**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	477.707	20	100.0	315.1	163	75	125				S

Sample ID: **N063295-005C-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **2/23/2024** RunNo: **182846**
Client ID: **ZZZZZZ** Batch ID: **107062** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708259**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	492.921	20	100.0	315.1	178	75	125	477.7	3.13	20	S

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID: **MB-107062**	SampType: **MBLK**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date: **2/23/2024**	RunNo: **182845**
Client ID: **PBW**	Batch ID: **107062**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708175**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	ND	0.10									
Calcium	ND	0.50									
Magnesium	ND	0.10									

Sample ID: **LCS1-107062**	SampType: **LCS**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date: **2/23/2024**	RunNo: **182845**
Client ID: **LCSW**	Batch ID: **107062**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708176**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5.280	0.10	5.000	0	106	85	115				
Calcium	10.810	0.50	10.00	0	108	85	115				
Magnesium	10.950	0.10	10.00	0	110	85	115				

Sample ID: **N063295-005C-MS1**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date: **2/23/2024**	RunNo: **182845**
Client ID: **ZZZZZZ**	Batch ID: **107062**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708180**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	7.579	0.10	5.000	2.353	105	75	125				
Calcium	306.641	0.50	10.00	306.6	0.422	75	125				S
Magnesium	14.801	0.10	10.00	5.964	88.4	75	125				

Sample ID: **N063295-005C-MSD**	SampType: **MSD**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date: **2/23/2024**	RunNo: **182845**
Client ID: **ZZZZZZ**	Batch ID: **107062**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708181**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	7.638	0.10	5.000	2.353	106	75	125	7.579	0.783	20	
Calcium	310.980	0.50	10.00	306.6	43.8	75	125	306.6	1.41	20	S
Magnesium	14.964	0.10	10.00	5.964	90.0	75	125	14.80	1.10	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID: **MB-107062** SampType: **MBLK** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: **2/23/2024** RunNo: **182926**
Client ID: **PBW** Batch ID: **107062** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/26/2024** SeqNo: **5713403**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	ND	0.50									
Sodium	ND	0.50									

Sample ID: **LCS2-107062** SampType: **LCS** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: **2/23/2024** RunNo: **182926**
Client ID: **LCSW** Batch ID: **107062** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/26/2024** SeqNo: **5713404**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	19.561	0.50	20.00	0	97.8	85	115				
Sodium	19.636	0.50	20.00	0	98.2	85	115				

Sample ID: **N063295-005C-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: **2/23/2024** RunNo: **183142**
Client ID: **ZZZZZZ** Batch ID: **107062** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/1/2024** SeqNo: **5724673**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	67.438	2.5	20.00	39.53	140	75	125	63.08	6.68	20	S

Sample ID: **N063295-005C-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: **2/23/2024** RunNo: **183142**
Client ID: **ZZZZZZ** Batch ID: **107062** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/1/2024** SeqNo: **5724674**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	3747.938	250	20.00	3929	-905	75	125	3827	2.08	20	S

Sample ID: **N063295-005C-MS2** SampType: **MS** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: **2/23/2024** RunNo: **183142**
Client ID: **ZZZZZZ** Batch ID: **107062** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/1/2024** SeqNo: **5725091**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	63.081	2.5	20.00	39.53	118	75	125				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID: **N063295-005C-MS2**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date: **2/23/2024**	RunNo: **183142**
Client ID: **ZZZZZZ**	Batch ID: **107062**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/1/2024**	SeqNo: **5725092**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	3826.859	250	20.00	3929	-510	75	125				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N063295-005C-PS**	SampType: **PS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **ZZZZZZ**	Batch ID: **107062**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708257**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	405.937	20	100.0	315.1	90.9	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID: **N063295-005C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **ZZZZZZ** Batch ID: **107062** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708179**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	7.887	0.10	5.000	2.353	111	80	120				
Calcium	314.338	0.50	10.00	306.6	77.4	80	120				S
Magnesium	15.038	0.10	10.00	5.964	90.7	80	120				

Sample ID: **N063295-005C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **183142**
Client ID: **ZZZZZZ** Batch ID: **107062** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/1/2024** SeqNo: **5724669**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	127.039	2.5	100.0	39.53	87.5	80	120				

Sample ID: **N063295-005C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **183142**
Client ID: **ZZZZZZ** Batch ID: **107062** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/1/2024** SeqNo: **5724670**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	12216.540	250	10000	3929	82.9	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-88-107-Q124
Lab Order:	N063297		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/22/2024 8:58:00 AM
Lab ID:	N063297-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240223D**	QC Batch: **107055**				PrepDate:	**2/23/2024**	Analyst: **DJ**
Arsenic	5.8	0.050	0.10		µg/L	1	2/24/2024 04:05 AM
Barium	30	0.083	1.0		µg/L	1	2/26/2024 05:46 AM
Manganese	3.6	0.026	0.50		µg/L	1	2/24/2024 04:05 AM
Zinc	ND	0.26	10		µg/L	1	2/24/2024 04:05 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-38D-Q124
Lab Order:	N063297		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/22/2024 10:52:00 AM
Lab ID:	N063297-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A			**EPA 6020**			
RunID: **NV00922-ICP8_240223D**	QC Batch: **107055**			PrepDate:		**2/23/2024**	Analyst: **DJ**
Molybdenum	32	0.12	0.50		µg/L	1	2/24/2024 04:09 AM
Selenium	0.52	0.044	0.50		µg/L	1	2/24/2024 04:09 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-38S-Q124
Lab Order:	N063297		
Project:	PG&E Topock - RCM, 30211191	**Collection Date:**	2/22/2024 11:30:00 AM
Lab ID:	N063297-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240223D**	QC Batch: **107055**			PrepDate:		**2/23/2024**	Analyst: **DJ**
Molybdenum	8.7	0.12	0.50		µg/L	1	2/24/2024 04:14 AM
Selenium	4.9	0.044	0.50		µg/L	1	2/24/2024 04:14 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **MB-107055** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/23/2024** RunNo: **182930**
Client ID: **PBW** Batch ID: **107055** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/24/2024** SeqNo: **5713764**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Sample ID: **LCS-107055** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/23/2024** RunNo: **182930**
Client ID: **LCSW** Batch ID: **107055** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/24/2024** SeqNo: **5713765**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	9.650	0.10	10.00	0	96.5	85	115				
Manganese	97.815	0.50	100.0	0	97.8	85	115				
Molybdenum	9.783	0.50	10.00	0	97.8	85	115				
Selenium	9.701	0.50	10.00	0	97.0	85	115				
Zinc	93.762	10	100.0	0	93.8	85	115				

Sample ID: **N063295-002B-MS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/23/2024** RunNo: **182930**
Client ID: **ZZZZZZ** Batch ID: **107055** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/24/2024** SeqNo: **5713770**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	6.226	0.10	10.00	0	62.3	75	125				S
Molybdenum	45.192	0.50	10.00	34.82	104	75	125				
Selenium	8.624	0.50	10.00	0.2194	84.0	75	125				
Zinc	67.427	10	100.0	0	67.4	75	125				S

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063295-002B-MSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/23/2024** RunNo: **182930**
Client ID: **ZZZZZZ** Batch ID: **107055** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/24/2024** SeqNo: **5713771**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	6.332	0.10	10.00	0	63.3	75	125	6.226	1.69	20	S
Molybdenum	45.231	0.50	10.00	34.82	104	75	125	45.19	0.0864	20	
Selenium	8.183	0.50	10.00	0.2194	79.6	75	125	8.624	5.25	20	
Zinc	67.034	10	100.0	0	67.0	75	125	67.43	0.584	20	S

Sample ID: **MB-107055** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/23/2024** RunNo: **182939**
Client ID: **PBW** Batch ID: **107055** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/26/2024** SeqNo: **5714238**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									

Sample ID: **LCS-107055** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/23/2024** RunNo: **182939**
Client ID: **LCSW** Batch ID: **107055** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/26/2024** SeqNo: **5714239**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	10.332	1.0	10.00	0	103	85	115				

Sample ID: **N063295-002B-MS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/23/2024** RunNo: **182939**
Client ID: **ZZZZZZ** Batch ID: **107055** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/26/2024** SeqNo: **5714253**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	198.420	10	10.00	190.7	76.9	75	125				

Sample ID: **N063295-002B-MS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **2/23/2024** RunNo: **182939**
Client ID: **ZZZZZZ** Batch ID: **107055** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/26/2024** SeqNo: **5714254**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	2141.362	50	100.0	2142	-1.06	75	125				S

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063295-002B-MSD**	SampType: **MSD**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/23/2024**	RunNo: **182939**
Client ID: **ZZZZZZ**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/26/2024**	SeqNo: **5714256**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	195.231	10	10.00	190.7	45.0	75	125	198.4	1.62	20	S

Sample ID: **N063295-002B-MSD**	SampType: **MSD**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/23/2024**	RunNo: **182939**
Client ID: **ZZZZZZ**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/26/2024**	SeqNo: **5714257**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	2309.977	50	100.0	2142	168	75	125	2141	7.58	20	S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063295-002B-PS**	SampType: **PS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ZZZZZZ**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/24/2024**	SeqNo: **5713769**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	6.410	0.10	10.00	0	64.1	80	120				S
Molybdenum	46.077	0.50	10.00	34.82	113	80	120				
Selenium	8.796	0.50	10.00	0.2194	85.8	80	120				
Zinc	68.518	10	100.0	0	68.5	80	120				S

Sample ID: **N063295-002B-PS**	SampType: **PS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ZZZZZZ**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/26/2024**	SeqNo: **5714250**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	293.790	10	100.0	190.7	103	80	120				

Sample ID: **N063295-002B-PS**	SampType: **PS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ZZZZZZ**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/26/2024**	SeqNo: **5714251**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	12122.702	50	10000	2142	99.8	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SAMPLE RECEIVING ITEMS

N063297

ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

Page 1 of 1

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement: Excel EDD; Geotracker; Labspec; Others ✓ Specify: RWQCB; Global ID:
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	QA/QC: RTNE; RWQCB ✓; CalTrans; LEVEL III; LEVEL IV; Regulatory; Specify State:
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.moore@critigen.com	Address:	Sample Receipt Condition (Y / N): 1. Chilled Y; 2. Headspace; 3. Container Intact Y; 4. Seal Present N; 5. IR number 3; 6. Method of Cooling: Ice
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivot.com P.O.#	Sample Temp: 4.2°C
Submitted By: Riggie Top	Phone: 916-786-3302 Fax:	Phone: 949-727-1400, ext 200 Fax:	Courier: ASSET
Title: Field Tech	Sampled By: Riggie Top		Tracking No.:
Signature: Date: 02/22/24	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for		
I hereby authorize ASSET Labs to perform the tests indicated below.	Signature: Date: 02/22/24		
Project Name: PG&E Topock - RCM			
Project Number: 30211191			

Matrix: Ground X; Sediment; Potable; Soil; NPDES; Other Solid; Surface

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly)	Nitrate, sulfate, bromide, chloride, fluoride (EPA 300.0) (1 L poly)	Dissolved metals (SW6020) FF; HNO3 Arsenic, iron, Barium, Manganese, magnesium, boron, calcium, potassium, sodium, zinc (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Selenium, molybdenum (500mL poly)	Alkalinity, Total as CaCO3 (SM2320B) (1 liter poly)	Total Dissolved Solids (SM92540) (1 liter poly)	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 (125 mL poly)	Nitrate (EPA 300.0) (1 L poly)	(1 L poly)	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063297-001	✓ MW-88-107-Q124	2/22/2024	8:58		X	X	X	X		X	X				E	3	P	BNS	
2	-002	✓ MW-38D-Q124	2/22/2024	10:52		X			X	X				X		E	3	P	BNS	
3	-003	✓ MW-38S-Q124	2/22/2024	11:30		X			X	X				X		E	3	P	BNS	
4	-004	✓ EB-738-Q124	2/22/2024	13:10		X										E	1	P	BNS	
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				

Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:
Riggie Top	02/22/24 1540	MBCARTHY	2/22/24 @1540
MBCARTHY	2/22/24 @1745	Yesenia Rodriguez	2/22/24
Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time: 1745

Turn Around Time (TAT)

- A = < 24 Hrs or Same Day TAT
- B = Next Workday
- C = 2 Workdays
- D = 3 Workdays
- X E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Preservatives: H=HCL; N=HNO_3; S=H_2SO_4; C=4°C; Z=$Zn(AC)_2$; O=NaOH; T=$Na_2S_2O_3$; Others/Specify: B (NH4)2SO4/NH4OH

Container Type: T=Tube; V=VOA; P=Pint; J=Jar; B=Tedlar; G=Glass; M=Metal; M=Metal; C=Can

Terms

1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
   Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

White=Laboratory Copy

Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	2/22/2024	Workorder:	N063297
Rep sample Temp (Deg C):	4.2	IR Gun ID:	3
Temp Blank:	☑ Yes ☐ No		
Carrier name:	ASSET		
Last 4 digits of Tracking No.:	NA	Packing Material Used:	None
Cooling process:	☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None		

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By: YR YRodriguez
2/23/2024

Reviewed By: for: MBC 02/23/2024

ASSET Laboratories

WORK ORDER Summary

24-Feb-24

WorkOrder: N063297

Client ID: ARCUS02

Project: PG&E Topock - RCM, 30211191 **QC Level:** Level IV **Date Received:** 2/22/2024 5:45 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063297-001A	MW-88-107-Q124	2/22/2024 8:58:00 AM	3/8/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063297-001B			3/8/2024		SM2540C	TOTAL FILTERABLE RESIDUE	☐	☐	☐	LSR
			3/8/2024			Total Dissolved Solids Prep	☐	☐	☐	LSR
			3/8/2024		SM 2320 B	ALKALINITY, SPECIATED	☐	☐	☐	LSR
			3/8/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			3/8/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			3/8/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			3/8/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			3/8/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	LSR
			3/8/2024		SM 1030F1	Cation-Anion Balance Calculation	☐	☐	☐	LSR
N063297-001C			3/8/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/8/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/8/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/8/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/8/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			3/8/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063297-002A	MW-38D-Q124	2/22/2024 10:52:00 AM	3/8/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063297-002B			3/8/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/8/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			3/8/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063297-002C			3/8/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063297-003A	MW-38S-Q124	2/22/2024 11:30:00 AM	3/8/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW

WORK ORDER Summary

24-Feb-24

WorkOrder: N063297

Client ID: ARCUS02

Project: PG&E Topock - RCM, 30211191 **QC Level:** Level IV **Date Received:** 2/22/2024 5:45 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063297-003B	MW-38S-Q124	2/22/2024 11:30:00 AM	3/8/2024	Groundwater	EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/8/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
			3/8/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063297-003C			3/8/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063297-004A	EB-738-Q124	2/22/2024 1:10:00 PM	3/8/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063297-005A	FOLDER	3/8/2024	3/8/2024		Folder	Folder	☐	☐	☐	LAB
			3/8/2024		Folder	Level IV Report	☐	☐	☐	LAB
			3/8/2024		Folder	Folder	☐	☐	☐	LAB

List of Analysts

ASSET Laboratories Work Order: N063297

NAME	TEST METHOD
Lilia Ramit	SM 2540C, SM 2320 B
Ria Abes	EPA 218.6, EPA 300.0
Diane Jetajobe	EPA 6010B_Dissolved, EPA 6020_Dissolved

SM 2540C

Wet Chemistry Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107063 **Analyst:** LSR

ASSET #: N063297 **Date Analyzed:** 23-Feb

Method: **EPA 160.1** / SM 2540C

Initial Calibration	1st Level Review Y	N	N/A	2nd Level Review Y	N	N/A
1. ICAL before initial sample analysis or every 24 hrs.			X			X
2. Does correlation coefficient,r, meet criteria ?(r = 0.995)			X			X
3. ICV within ± 15% of expected value.			X			X
Continuing Calibration						
4. CCV after every 10 samples and at the end of analysis sequence.			X			X
5. CCV within ± 15% of expected value.			X			X
6. Calibration blanks run after ICV and CCV?			X			X
7. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)			X			X
Sample Information						
8. All samples are within linear range.			X			X
9. Are all samples analyzed within hold time.	X			X		
QC Items						
10. Method blank values are below 1/2 the reporting limit.	X			X		
11. LCS compounds within control limits.	X			X		
12. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
13. Are Non-Conformances documented			X			X
14. Runlog complete and included in package.	X			X		
15. Spectrophotometer tape included (Spec work only)			X			X
16. Digestion log complete and included in package (if applicable)			X			X
Preliminary Report						
17. Does the raw data match the preliminary report?	X			X		
18. Are analytical results correct?	X			X		
19. Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer LSR Date: 3/5/2024

2nd Level Reviewer JRB 3/5/2024 Date:

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: SM 2540C
TEST NAME: Total Filterable Residue
MATRIX: Water

FORMULA:

Calculate TDS concentration in mg/L, in the original sample as follows:

$$\text{TDS, mg/L} = \frac{(A-B)*1000000}{C}$$

Where:

A = weight in g of dish + residue after drying
B = weight of dish in g
C = volume of sample used in mL

For **N063297-001B,** TDS concentration in mg/L is calculated as follows:

$$\text{TDS, mg/L} = \frac{(65.1242. - 565.0800)*1000000}{100}$$

$$= 442 \text{ mg/L}$$

Reporting result in two significant figures,

TDS= 440 mg/L

3/5/2024 LSR

Reviewed by:

JRB 3/5/2024

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/23/2024 11:16:56 AM**
Prep End Date: **2/24/2024 1:30:00 PM**
Prep Batch **107063** Prep Code:**160.1_W_PREP**

Reviewed/ Date: JRB 3/5/2024
Initials/ Date: 3/5/2024 LSR
Technician: **Lilia Ramit**

Prep Factor Units: **mL / mL**
Temp. (°C): **180**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107063	Water		100	☐	100	1.000		
MB-107063	Water		100	☐	100	1.000		
N063257-001C	Leachate		1	☐	100	100.000		
N063260-001C	Leachate		1	☐	100	100.000		
N063278-001C	Ground Water		100	☐	100	1.000		
N063279-001C	Groundwater		100	☐	100	1.000		
N063280-001C	Groundwater		100	☐	100	1.000		
N063295-005B	Groundwater		10	☐	100	10.000		
N063295-006B	Groundwater		10	☐	100	10.000		
N063295-007B	Groundwater		10	☐	100	10.000		
N063295-008B	Groundwater		10	☐	100	10.000		
N063295-008B-DUP	Groundwater		10	☐	100	10.000		
N063297-001B	Groundwater		100	☐	100	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15937	Glass Fiber Filter, 47mm

Spk ID	Spike Name	SampType	AmtAdd
IWST240122A	1000 ppm NaCl	LCS	100

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/23/2024 11:16:56 AM**
Prep End Date:

Reviewed/ Date: _____
Initials/ Date: 3/5/2024 LSR
Technician: **Lilia Ramit**

Prep Factor Units: **mL / mL**

Prep Batch **107063** Prep Code: **160.1_W_PREP**

Sample ID	Matrix	~~pH~~ cm	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107063	Water	[illegible]	100	☐	100	1.000		
MB-107063	Water		100	☐	100	1.000		
N063257-001C	Leachate	10890	100 /1	☐	100	1.000		
N063260-001C	Leachate	10790	100 /1	☐	100	1.000		
N063278-001C	Ground Water	1075	✓100	☐	100	1.000		
N063279-001C	Groundwater	1053	✓100	☐	100	1.000		
N063280-001C	Groundwater	1092	✓100	☐	100	1.000		
N063295-005B	Groundwater	16760	100 /10	☐	100	1.000		
N063295-006B	Groundwater	16650	100 /10	☐	100	1.000		
N063295-007B	Groundwater	17410	100 /10	☐	100	1.000		
N063295-008B	Groundwater	17330	100 /10	☐	100	1.000		
N063295-008B-DUP	Groundwater	1	100 /10	☐	100	1.000		
N063297-001B	Groundwater	707	✓100	☐	100	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

17937

LOGBOOK DATA, QUANTITATION REPORT and/or SPECTRA

TSS / TS / TDS Preparation and Runlog

Name of Test: TDS

QC Batch No.: 107063

		1	2	3
Date Prepared: 2/23/24	In Oven Date:	2/24/24	2/24/24	
Time Prepared: 1116	Time:	1000	1145	
Prepared By: KM	Temp°C:	178	178	
	Out Oven Date:	2/24/24	2/24/24	
	Time:	1100	1241	
	Temp°C:	178	178	

Date	Sample ID	Sample Vol. (ml)	Crucible + Filter (TSS)	Crucible + Filter+Sample (TSS)	Comments
2/23/24 G	MB - 107063	100	63.4841 63.4843	63.4841 63.4844	
E1	LCS - 107063	100	74.2050 74.2047	74.3016 74.3020	
X1	NO63257-1C	1	47.7770 47.7766	47.9337 47.9340	confirmation
P1	NO63260-1C	1	52.3026 52.3023	52.4232 52.4225	1
D	NO63278-1C	100	65.5174 65.5178	65.5902 65.5905	
L	NO63279-1C	100	67.0135 67.0139	67.0805 67.0808	
B	NO63280-1C	100	66.7939 66.7942	66.8638 66.8640	
P	NO63295-5B	10	53.0443 53.0446	53.1538 53.1542	
10	6B	10	52.6687 52.6689	52.7792 52.7796	
81	7B	10	51.1390 51.1393	51.2497 51.2501	
12	8B	10	53.5903 53.5907	53.6968 53.6971	3/5/2024 LSR
6	8B DUP	10	51.7852 51.7855	51.8953 51.8956	Reviewed by:
J	NO63297-1B	100	65.0796 65.0800	65.1239 65.1242	JRB 3/5/2024

Logbook#27 49.9993 e 1300

ASSET LABORATORIES
CALIFORNIA | P:562.219.7435 F:562.219.7436
11110 Artesia Blvd., Ste B, Cerritos, CA 90703
ELAP Cert 2921
NEVADA | P:702.307.2659 F:702.307.2691
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922

TOTAL DISSOLVED SOLIDS, TDS

TDS, mg/L = (A-B) X 10000*PF

where:
A = weight in grams of dish + residue after drying
B = weight of dish in grams
PF = 100/volume of sample used in mL

Date Finished:	vol of sample (mL)	weight of dish in grams (B)	weight in grams of dish + residue after drying (A)	(A-B)*10000	prep fact (PF)	TDS, mg/L	CONDUCTIVITY	RATIO	Sample Type
2/24/2024									
MB-107063	100	63.4843	63.4844	1	1	1			MBLK
LCS-107063	100	74.2047	74.302	973	1	973			LCS
N063257-001C	1	47.7766	47.934	1574	100	157400	108900	1.445	SAMP
N063260-001C	1	52.3023	52.4225	1202	100	120200	100900	1.191	SAMP
N063278-001C	100	65.5178	65.5905	727	1	727	1075	0.676	SAMP
N063279-001C	100	67.0139	67.0808	669	1	669	1053	0.635	SAMP
N063280-001C	100	66.7942	66.864	698	1	698	1092	0.639	SAMP
N063295-005B	10	53.0446	53.1542	1096	10	10960	16760	0.654	SAMP
N063295-006B	10	52.6689	52.7796	1107	10	11070	16850	0.657	SAMP
N063295-007B	10	51.1393	51.2501	1108	10	11080	17410	0.636	SAMP
N063295-008B	10	53.5907	53.6971	1064	10	10640	17330	0.614	SAMP
N063295-008BDUP	10	51.7855	51.8956	1101	10	11010	17330	0.635	DUP
N063297-001B	100	65.08	65.1242	442	1	442	707	0.625	SAMP

3/5/2024 LSR

Reviewed by:

JRB 3/5/2024

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R182953
ASSET #: N063297

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/26/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?	X			X		
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?	X			X		
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments: Dilution was necessary for sample N063297-02A, due to matrix interference.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer: RBA Date: _____

2nd Level Reviewer: RB 02292024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063297-001A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 4.2497 * 5$$

$$Cr^{+6}, \mu g/L = 21.2485$$

Reporting results in two significant figures,

$$\mathbf{Cr^{+6}, \mu g/L = 21}$$

Reviewed by:

dMocha 3/10/2024

ANALYSIS RUN LOG

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240226A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/26/24 10:02 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/26/24 10:15 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/26/24 10:25 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/26/24 10:34 AM	Reported
13	MB-R182953	MBLK	1	Hexavalent Chromium	02/26/24 10:44 AM	Reported
14	LCS-R182953	LCS	1	Hexavalent Chromium	02/26/24 10:53 AM	Reported
15	N063295-001A	SAMP	1	Hexavalent Chromium	02/26/24 11:55 AM	Not Reported
16	N063295-003A	SAMP	1	Hexavalent Chromium	02/26/24 12:08 PM	Not Reported
17	N063295-005A	SAMP	1	Hexavalent Chromium	02/26/24 1:04 PM	Not Reported
18	N063295-006A	SAMP	1	Hexavalent Chromium	02/26/24 1:15 PM	Not Reported
19	N063295-007A	SAMP	1	Hexavalent Chromium	02/26/24 1:24 PM	Not Reported
20	N063214-007A	SAMP	5	Hexavalent Chromium	02/26/24 1:34 PM	Reported
21	N063214-007AMS	MS	5	Hexavalent Chromium	02/26/24 1:43 PM	Reported
22	N063295-001AMS	MS	1	Hexavalent Chromium	02/26/24 1:53 PM	Not Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/26/24 2:02 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/26/24 2:12 PM	Reported
25	N063295-003AMS	MS	1	Hexavalent Chromium	02/26/24 2:21 PM	Not Reported
26	N063295-005AMS	MS	1	Hexavalent Chromium	02/26/24 2:30 PM	Not Reported
27	N063295-006AMS	MS	1	Hexavalent Chromium	02/26/24 2:40 PM	Not Reported
28	N063295-007AMS	MS	1	Hexavalent Chromium	02/26/24 2:49 PM	Not Reported
29	N063295-001A	SAMP	5	Hexavalent Chromium	02/26/24 2:59 PM	Reported
30	N063295-001AMS	MS	5	Hexavalent Chromium	02/26/24 3:08 PM	Reported
31	N063295-001AMSD	MSD	5	Hexavalent Chromium	02/26/24 3:18 PM	Reported
32	N063295-003A	SAMP	5	Hexavalent Chromium	02/26/24 3:27 PM	Reported
33	N063295-003ADUP	DUP	5	Hexavalent Chromium	02/26/24 3:37 PM	Reported
34	N063295-003AMS	MS	5	Hexavalent Chromium	02/26/24 3:46 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/26/24 4:07 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/26/24 4:18 PM	Reported
37	N063295-005A	SAMP	5	Hexavalent Chromium	02/26/24 4:27 PM	Reported
38	N063295-005AMS	MS	5	Hexavalent Chromium	02/26/24 4:37 PM	Reported
39	N063295-006A	SAMP	5	Hexavalent Chromium	02/26/24 4:46 PM	Reported
40	N063295-006AMS	MS	5	Hexavalent Chromium	02/26/24 4:56 PM	Reported
41	N063295-007A	SAMP	5	Hexavalent Chromium	02/26/24 5:05 PM	Reported
42	N063295-007AMS	MS	5	Hexavalent Chromium	02/26/24 5:15 PM	Reported

INJECTION LOG: 240226A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063295-004A	SAMP	1	Hexavalent Chromium	02/26/24 5:24 PM	Reported
44	N063295-004AMS	MS	1	Hexavalent Chromium	02/26/24 5:33 PM	Reported
45	N063295-002A	SAMP	1	Hexavalent Chromium	02/26/24 5:43 PM	Not Reported
46	N063295-002AMS	MS	1	Hexavalent Chromium	02/26/24 5:52 PM	Not Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/26/24 6:02 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/26/24 6:11 PM	Reported
49	N063295-002A	SAMP	5	Hexavalent Chromium	02/26/24 6:21 PM	Not Reported
50	N063295-002AMS	MS	5	Hexavalent Chromium	02/26/24 6:30 PM	Not Reported
51	N063295-008A	SAMP	1	Hexavalent Chromium	02/26/24 6:40 PM	Not Reported
52	N063295-008AMS	MS	1	Hexavalent Chromium	02/26/24 6:49 PM	Not Reported
53	N063295-008A	SAMP	5	Hexavalent Chromium	02/26/24 6:59 PM	Reported
54	N063295-008AMS	MS	5	Hexavalent Chromium	02/26/24 7:08 PM	Reported
55	N063249-018A	SAMP	1	Hexavalent Chromium	02/26/24 7:18 PM	Not Reported
56	N063249-018AMS	MS	1	Hexavalent Chromium	02/26/24 7:27 PM	Not Reported
57	N063249-018A	SAMP	5	Hexavalent Chromium	02/26/24 7:36 PM	Reported
58	N063249-018AMS	MS	5	Hexavalent Chromium	02/26/24 7:46 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/26/24 7:55 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/26/24 8:05 PM	Reported
61	N063249-010A	SAMP	1	Hexavalent Chromium	02/26/24 8:14 PM	Not Reported
62	N063249-010AMS	MS	1	Hexavalent Chromium	02/26/24 8:24 PM	Not Reported
63	N063249-019A	SAMP	1	Hexavalent Chromium	02/26/24 8:33 PM	Reported
64	N063249-019AMS	MS	1	Hexavalent Chromium	02/26/24 8:43 PM	Reported
65	N063297-001A	SAMP	5	Hexavalent Chromium	02/26/24 8:52 PM	Reported
66	N063297-001AMS	MS	5	Hexavalent Chromium	02/26/24 9:02 PM	Reported
67	N063297-002A	SAMP	20	Hexavalent Chromium	02/26/24 9:11 PM	Reported
68	N063297-002AMS	MS	20	Hexavalent Chromium	02/26/24 9:21 PM	Reported
69	N063297-003A	SAMP	5	Hexavalent Chromium	02/26/24 9:30 PM	Reported
70	N063297-003AMS	MS	5	Hexavalent Chromium	02/26/24 9:39 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/26/24 9:49 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/26/24 9:58 PM	Reported
73	N063295-001A	SAMP	1	Hexavalent Chromium	02/26/24 10:08 PM	Not Reported
74	N063295-003A	SAMP	1	Hexavalent Chromium	02/26/24 10:17 PM	Not Reported
75	N063297-004A	SAMP	1	Hexavalent Chromium	02/26/24 10:27 PM	Reported
76	N063297-004AMS	MS	1	Hexavalent Chromium	02/26/24 10:36 PM	Reported
77	CCV-7	CCV	1	Hexavalent Chromium	02/26/24 10:46 PM	Reported
78	CCB-7	CCB	1	Hexavalent Chromium	02/26/24 10:55 PM	Reported
79	BLANK	BLANK	1	Hexavalent Chromium	02/26/24 11:04 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240226A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**26/Feb/24 23:35:17**
No. of Injections:	**82**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/26/2024 10:02	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/26/2024 10:15	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/26/2024 10:25	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/26/2024 10:34	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/26/2024 10:44	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/26/2024 10:53	Finished	LCS @5ppb, IWST-231228B
15	N063295-001A,SAMF	1	1000	Unknown		02/26/2024 11:55	Finished	SAMP,10 mL
16	N063295-003A,SAMF	2	1000	Unknown		02/26/2024 12:08	Finished	SAMP,10 mL
17	N063295-005A,SAMF	1	1000	Unknown		02/26/2024 13:04	Finished	SAMP,10 mL
18	N063295-006A,SAMF	2	1000	Unknown		02/26/2024 13:15	Finished	SAMP,10 mL
19	N063295-007A,SAMF	3	1000	Unknown		02/26/2024 13:24	Finished	SAMP,10 mL
20	N063214-007A,SAMF	4	1000	Unknown		02/26/2024 13:34	Finished	SAMP,2>10 mL
21	N063214-007AMS,MS	5	1000	Unknown		02/26/2024 13:43	Finished	MS (1ppb), IWST-231228B,2>
22	N063295-001AMS,MS	6	1000	Unknown		02/26/2024 13:53	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	7	1000	Unknown		02/26/2024 14:02	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	8	1000	Unknown		02/26/2024 14:12	Finished	CCB R240129C
25	N063295-003AMS,MS	9	1000	Unknown		02/26/2024 14:21	Finished	MS (1ppb), IWST-231228B,10r
26	N063295-005AMS,MS	10	1000	Unknown		02/26/2024 14:30	Finished	MS (1ppb), IWST-231228B,10r
27	N063295-006AMS,MS	11	1000	Unknown		02/26/2024 14:40	Finished	MS (1ppb), IWST-231228B,10r
28	N063295-007AMS,MS	12	1000	Unknown		02/26/2024 14:49	Finished	MS (1ppb), IWST-231228B,10r
29	N063295-001A,SAMF	13	1000	Unknown		02/26/2024 14:59	Finished	SAMP,2>10 mL
30	N063295-001AMS,MS	14	1000	Unknown		02/26/2024 15:08	Finished	MS (5ppb), IWST-231228B,2>
31	N063295-001AMSD,M	15	1000	Unknown		02/26/2024 15:18	Finished	MSD (5ppb), IWST-231228B,2
32	N063295-003A,SAMF	16	1000	Unknown		02/26/2024 15:27	Finished	SAMP,2>10 mL
33	N063295-003ADUP,D	17	1000	Unknown		02/26/2024 15:37	Finished	DUP,2>10 mL
34	N063295-003AMS,MS	18	1000	Unknown		02/26/2024 15:46	Finished	MS (5ppb), IWST-231228B,2>
35	CCV-3,CCV,1,	1	1000	Unknown		02/26/2024 16:07	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	2	1000	Unknown		02/26/2024 16:18	Finished	CCB R240129C
37	N063295-005A,SAMF	3	1000	Unknown		02/26/2024 16:27	Finished	SAMP,2>10 mL
38	N063295-005AMS,MS	4	1000	Unknown		02/26/2024 16:37	Finished	MS (1ppb), IWST-231228B,2>
39	N063295-006A,SAMF	5	1000	Unknown		02/26/2024 16:46	Finished	SAMP,2>10 mL
40	N063295-006AMS,MS	6	1000	Unknown		02/26/2024 16:56	Finished	MS (1ppb), IWST-231228B,2>
41	N063295-007A,SAMF	7	1000	Unknown		02/26/2024 17:05	Finished	SAMP,2>10 mL
42	N063295-007AMS,MS	8	1000	Unknown		02/26/2024 17:15	Finished	MS (1ppb), IWST-231228B,2>
43	N063295-004A,SAMF	9	1000	Unknown		02/26/2024 17:24	Finished	SAMP,10 mL
44	N063295-004AMS,MS	10	1000	Unknown		02/26/2024 17:33	Finished	MS (1ppb), IWST-231228B,10r
45	N063295-002A,SAMF	11	1000	Unknown		02/26/2024 17:43	Finished	SAMP,10 mL
46	N063295-002AMS,MS	12	1000	Unknown		02/26/2024 17:52	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	13	1000	Unknown		02/26/2024 18:02	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	14	1000	Unknown		02/26/2024 18:11	Finished	CCB R240129C
49	N063295-002A,SAMF	15	1000	Unknown		02/26/2024 18:21	Finished	SAMP,2>10 mL
50	N063295-002AMS,MS	16	1000	Unknown		02/26/2024 18:30	Finished	MS (1ppb), IWST-231228B,2>
51	N063295-008A,SAMF	17	1000	Unknown		02/26/2024 18:40	Finished	SAMP,10 mL
52	N063295-008AMS,MS	18	1000	Unknown		02/26/2024 18:49	Finished	MS (1ppb), IWST-231228B,10r
53	N063295-008A,SAMF	19	1000	Unknown		02/26/2024 18:59	Finished	SAMP,2>10 mL
54	N063295-008AMS,MS	20	1000	Unknown		02/26/2024 19:08	Finished	MS (1ppb), IWST-231228B,2>
55	N063249-018A,SAMF	21	1000	Unknown		02/26/2024 19:18	Finished	SAMP,10 mL
56	N063249-018AMS,MS	22	1000	Unknown		02/26/2024 19:27	Finished	MS (1ppb), IWST-231228B,10r
57	N063249-018A,SAMF	23	1000	Unknown		02/26/2024 19:36	Finished	SAMP,2>10 mL
58	N063249-018AMS,MS	24	1000	Unknown		02/26/2024 19:46	Finished	MS (1ppb), IWST-231228B,2>
59	CCV-5,CCV,1,	25	1000	Unknown		02/26/2024 19:55	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	26	1000	Unknown		02/26/2024 20:05	Finished	CCB R240129C

61	N063249-010A,SAMP	27	1000	Unknown		02/26/2024 20:14	Finished	SAMP,10 mL
62	N063249-010AMS,MS	28	1000	Unknown		02/26/2024 20:24	Finished	MS (1ppb), IWST-231228B,10r
63	N063249-019A,SAMP	29	1000	Unknown		02/26/2024 20:33	Finished	SAMP,10 mL
64	N063249-019AMS,MS	30	1000	Unknown		02/26/2024 20:43	Finished	MS (1ppb), IWST-231228B,10r
65	N063297-001A,SAMP	31	1000	Unknown		02/26/2024 20:52	Finished	SAMP,2>10 mL
66	N063297-001AMS,MS	32	1000	Unknown		02/26/2024 21:02	Finished	MS (5ppb), IWST-231228B,2>1
67	N063297-002A,SAMP	33	1000	Unknown		02/26/2024 21:11	Finished	SAMP,0.5>10 mL
68	N063297-002AMS,MS	34	1000	Unknown		02/26/2024 21:21	Finished	MS (1ppb), IWST-231228B,0.5
69	N063297-003A,SAMP	35	1000	Unknown		02/26/2024 21:30	Finished	SAMP,2>10 mL
70	N063297-003AMS,MS	36	1000	Unknown		02/26/2024 21:39	Finished	MS (5ppb), IWST-231228B,2>1
71	CCV-6,CCV1,1,	37	1000	Unknown		02/26/2024 21:49	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	38	1000	Unknown		02/26/2024 21:58	Finished	CCB R240129C
73	N063295-001A,SAMP	39	1000	Unknown		02/26/2024 22:08	Finished	SAMP,10 mL
74	N063295-003A,SAMP	40	1000	Unknown		02/26/2024 22:17	Finished	SAMP,10 mL
75	N063297-004A,SAMP	41	1000	Unknown		02/26/2024 22:27	Finished	SAMP,10 mL
76	N063297-004AMS,MS	42	1000	Unknown		02/26/2024 22:36	Finished	MS (1ppb), IWST-231228B,10r
77	CCV-7,CCV,1,	43	1000	Unknown		02/26/2024 22:46	Finished	CCV @5ppb, IWST-231228A
78	CCB-7,CCB,1,	44	1000	Unknown		02/26/2024 22:55	Finished	CCB R240129C
79	BLANK	45	1000	Unknown		02/26/2024 23:04	Finished	BLANK
80	SHUTDOWN R240226A	46	1000	Unknown		02/26/2024 23:14	Finished	
81	Eluent: ~~R240228A~~	47	1000	Unknown		n.a.	Finished	
82	PCR: ~~R240228B~~	48	1000	Unknown		n.a.	Finished	

R240226B

dRocha 3/10/2024
for RBA

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 2/23/24
Time Prepared: 0912H
Prepared By: [illegible]

Reagent ID:
Sulfuric Acid: 14377
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: NW402224A
NH4OH + NH4SO4 buffer: NW401756

6N NaOH NW21256

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW23295-1A	9.30	-	~250mL	~250mL		
2)	2A	9.29	-				
3)	3A	9.38	-				
4)	4A	9.66	-				
5)	5A	9.31	-				
6)	6A	9.32	-				
7)	7A	9.34	-				
8)	8A	9.30	-				
9)	MW23297-1A	9.08	9.39			+3	
10)	2A	9.31	-				
11)	3A	9.36	-				
12)	4A	9.72	-				
13)	MW23303-1A	8.74	9.55			+6	
14)	2A	9.32	-				
15)	3A	8.65	9.50			+6	
	4A	8.71	9.52			+6	

Sample Preparation

Date Prepared: 2/24/24
Time Prepared: 0912H / 1400H
Prepared By: MA

Reagent ID:
Sulfuric Acid: 14377
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: NW402224A
NH4OH + NH4SO4 buffer: NW401756

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW23304-5A	9.70	-	~250mL	~250mL		
2)	6A	9.38	-				
3)	7A	9.68	-				
4)	8A	9.45	-				
5)	9A	9.72	-				
6)	10A	9.46	-				
7)	11A	9.48	-				
8)	MB-102724	7.81	9.60	~2L	~2L	+0.2mL NW401756	TCLP
9)	MW23246-1A	9.08	9.28	1	1	12N HNO3	
10)							
11)							
12)							
13)							
14)							
15)							

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 2/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0427	0.2063	1.0639	2.1157	3.2270	4.3227	0.9999
Measured, in ug/L	0.198500	0.959200	4.946100	9.835700	15.002300	20.095900	
Relative Error (%RE)	-0.8%		-1.1%				

	Stock	Working
Standard Concentration:	1,000,000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ICV**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5714774**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5714775**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCV**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714777**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.984	0.20	5.000	0	99.7	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714778**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.189	0.20	0.2000	0	94.7	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714784**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.988	0.20	10.00	0	99.9	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCV**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714792**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.875	0.20	5.000	0	97.5	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714802**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.791	0.20	10.00	0	97.9	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCV**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714808**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.964	0.20	5.000	0	99.3	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ZZZZZZ**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714820**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.066	0.20	10.00	0	101	95	105				

Sample ID: **CCV-7**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCV**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714824**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.009	0.20	5.000	0	100	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **ICB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5714776**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714779**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714785**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714793**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714803**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714809**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714821**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-7**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182953**
Client ID: **CCB**	Batch ID: **R182953**	TestNo: **EPA 218.6**		Analysis Date: **2/26/2024**	SeqNo: **5714825**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/26/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.048	
CCV-3	4.040	
CCV-4	4.048	
CCV-5	4.040	
CCV-6	4.040	
CCV-7	4.040	

Average	4.042
Actual RT Window	3.962 - 4.122
Applied RT Window	3.842 - 4.242

MB-R182953	N.A.	N.A.
LCS-R182953	4.040	PASS
N063295-001A	N.A.	N.A.
N063295-003A	N.A.	N.A.
N063295-005A	N.A.	N.A.
N063295-006A	N.A.	N.A.
N063295-007A	N.A.	N.A.
N063214-007A	N.A.	N.A.
N063214-007AMS	3.931	PASS
N063295-001AMS	3.915	PASS
N063295-003AMS	3.906	PASS
N063295-005AMS	N.A.	N.A.
N063295-006AMS	N.A.	N.A.
N063295-007AMS	N.A.	N.A.
N063295-001A	4.023	PASS
N063295-001AMS	4.023	PASS
N063295-001AMSD	4.015	PASS
N063295-003A	4.015	PASS
N063295-003ADUP	4.015	PASS
N063295-003AMS	4.015	PASS
N063295-005A	N.A.	N.A.

Reviewed by:

dMRocha 3/10/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/26/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.048	
CCV-3	4.040	
CCV-4	4.048	
CCV-5	4.040	
CCV-6	4.040	
CCV-7	4.040	
Average	4.042	
Actual RT Window	3.962 - 4.122	
Applied RT Window	3.842 - 4.242	
N063295-005AMS	3.981	PASS
N063295-006A	N.A.	N.A.
N063295-006AMS	3.965	PASS
N063295-007A	N.A.	N.A.
N063295-007AMS	3.973	PASS
N063295-004A	N.A.	N.A.
N063295-004AMS	4.040	PASS
N063295-002A	N.A.	N.A.
N063295-002AMS	N.A.	N.A.
N063295-002A	3.981	PASS
N063295-002AMS	3.981	PASS
N063295-008A	N.A.	N.A.
N063295-008AMS	N.A.	N.A.
N063295-008A	N.A.	N.A.
N063295-008AMS	3.973	PASS
N063249-018A	N.A.	N.A.
N063249-018AMS	N.A.	N.A.
N063249-018A	N.A.	N.A.
N063249-018AMS	3.973	PASS
N063249-010A	N.A.	N.A.
N063249-010AMS	4.040	PASS

Reviewed by:

dMocha 3/10/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/26/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.040	
CCV-2	4.048	
CCV-3	4.040	
CCV-4	4.048	
CCV-5	4.040	
CCV-6	4.040	
CCV-7	4.040	
Average	4.042	
Actual RT Window	3.962 - 4.122	
Applied RT Window	3.842 - 4.242	
N063249-019A	N.A.	N.A.
N063249-019AMS	4.031	PASS
N063297-001A	4.040	PASS
N063297-001AMS	4.040	PASS
N063297-002A	N.A.	N.A.
N063297-002AMS	4.023	PASS
N063297-003A	4.031	PASS
N063297-003AMS	4.031	PASS
N063295-001A	3.906	PASS
N063295-003A	3.906	PASS
N063297-004A	N.A.	N.A.
N063297-004AMS	4.031	PASS

Reviewed by:

dMocha 3/10/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

Reviewed by:

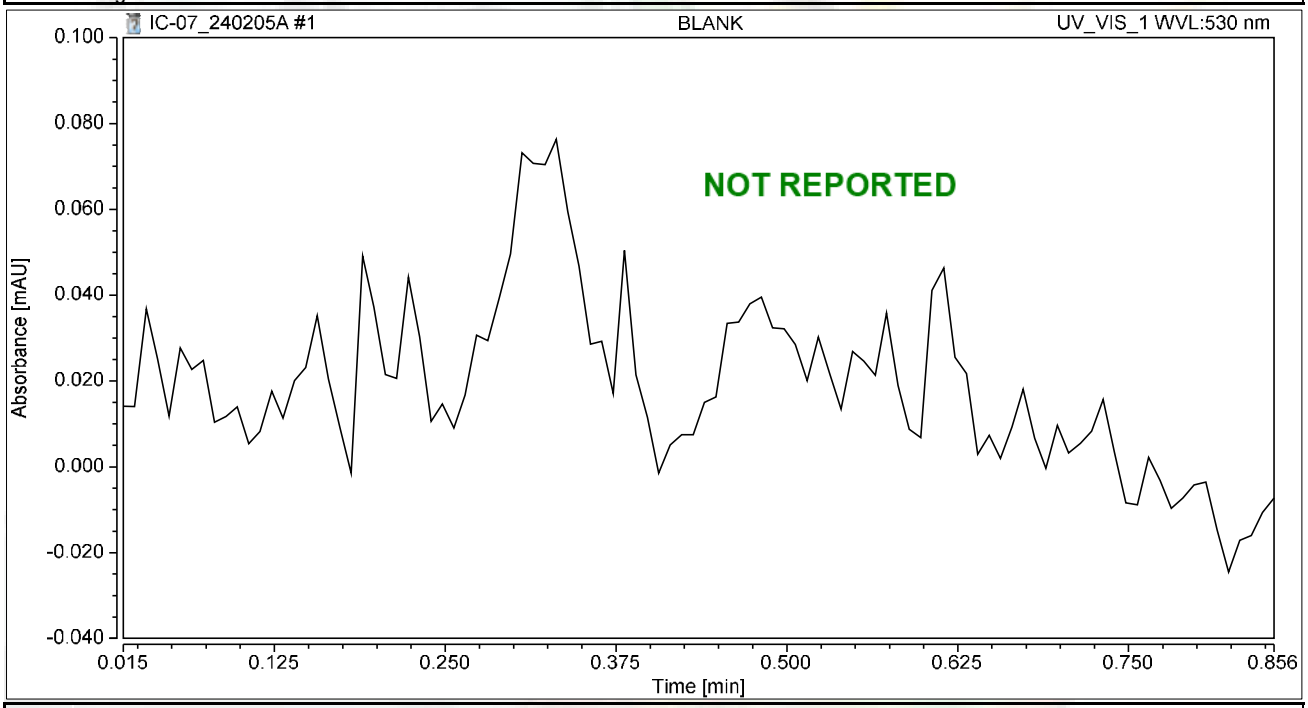
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**0.84**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 11:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

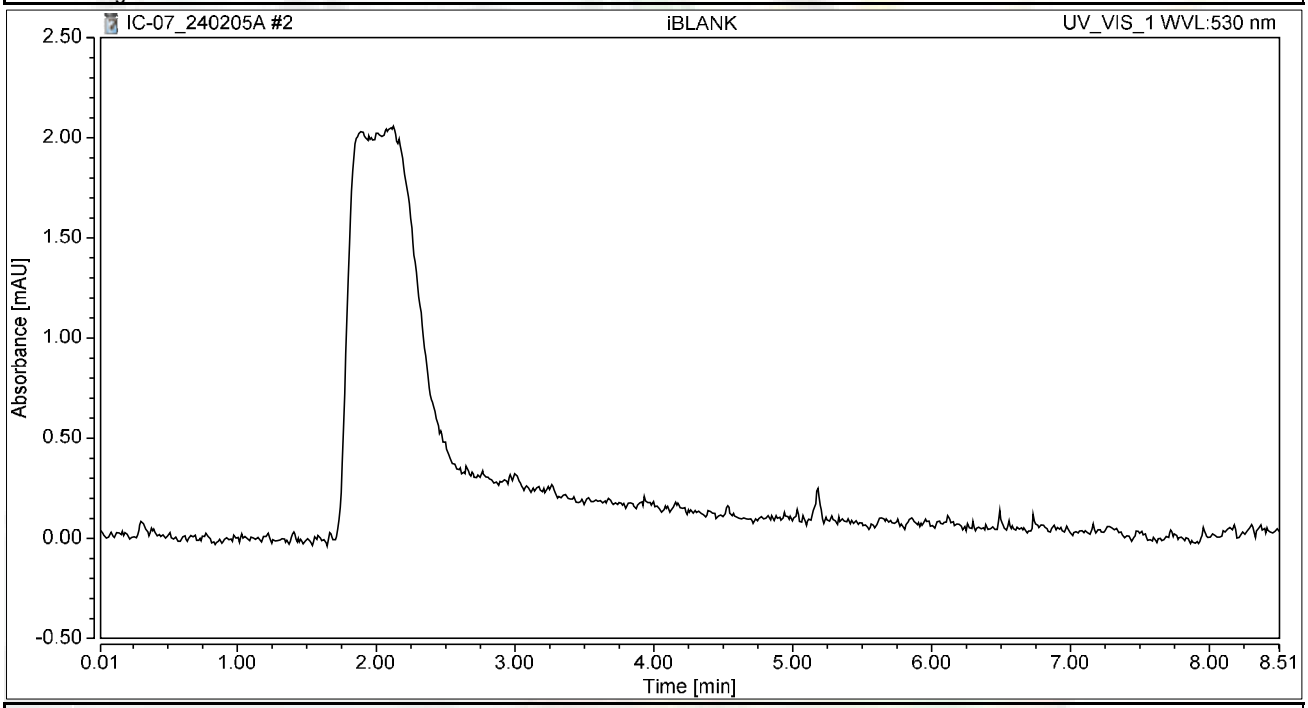
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

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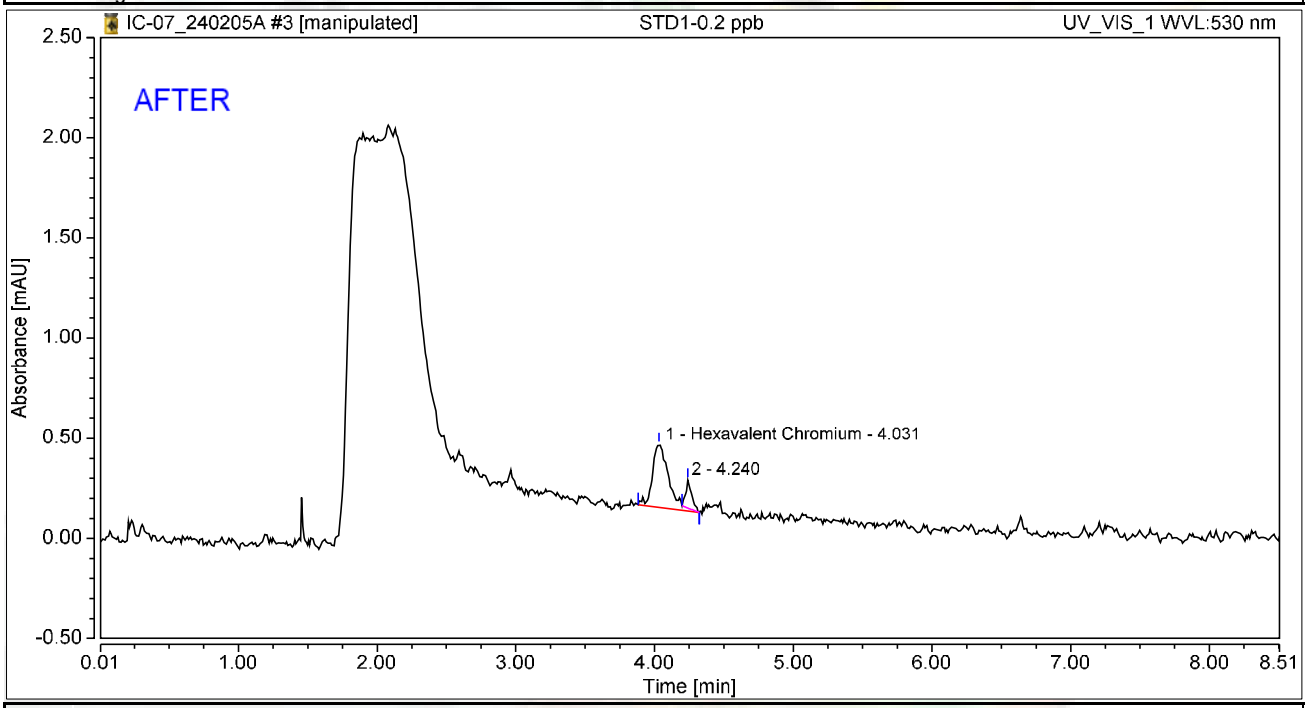
Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.043	0.313	85.65	69.19	0.1985
2		4.240	0.007	0.139	14.35	30.81	n.a.
Total:			**0.050**	**0.452**	**100.00**	**100.00**	

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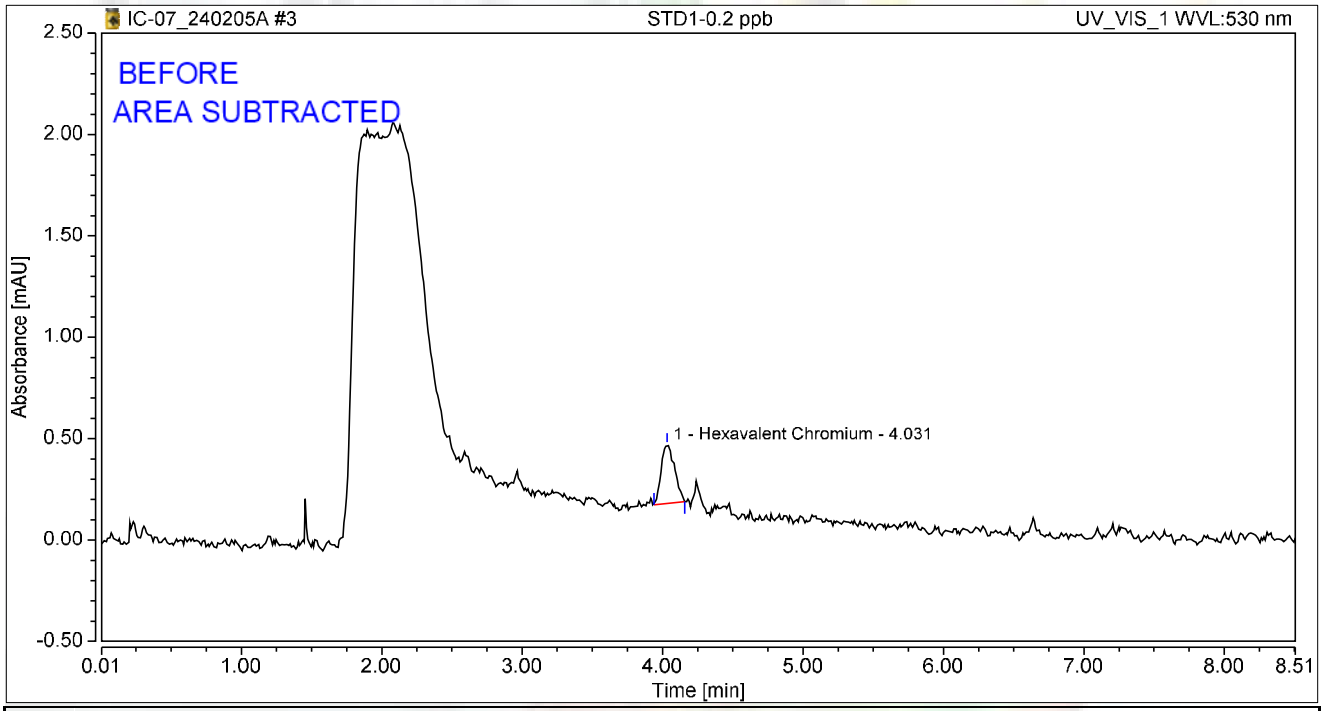
Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

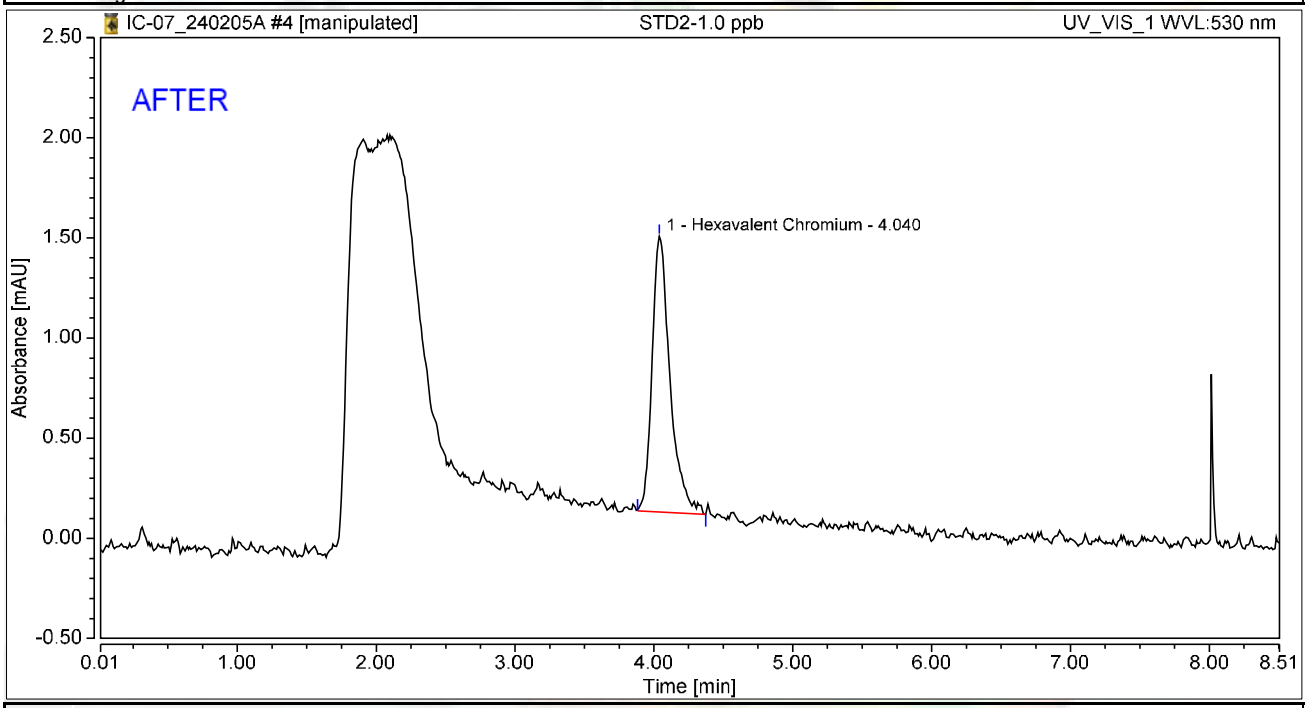
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.032	0.288	100.00	100.00	0.1502
Total:			**0.032**	**0.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.206	1.377	100.00	100.00	0.9592
Total:			**0.206**	**1.377**	**100.00**	**100.00**	

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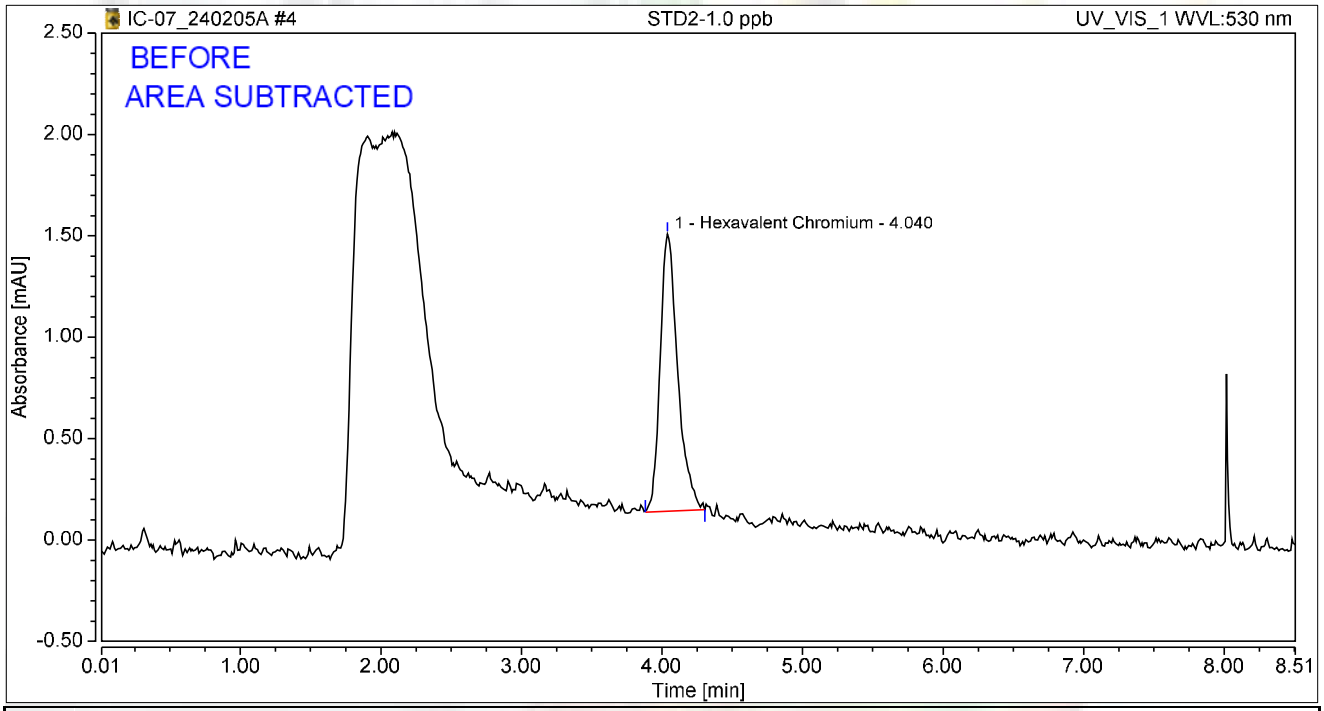
Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

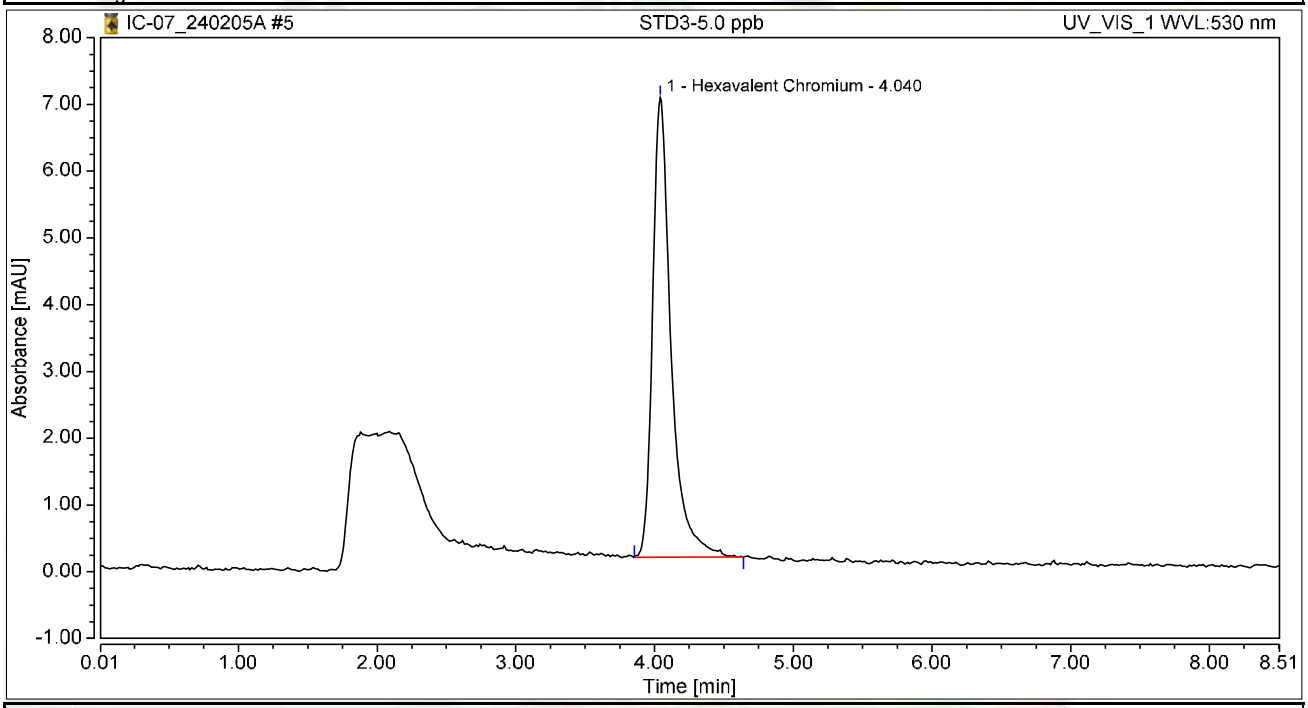
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.198	1.367	100.00	100.00	0.9223
Total:			**0.198**	**1.367**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

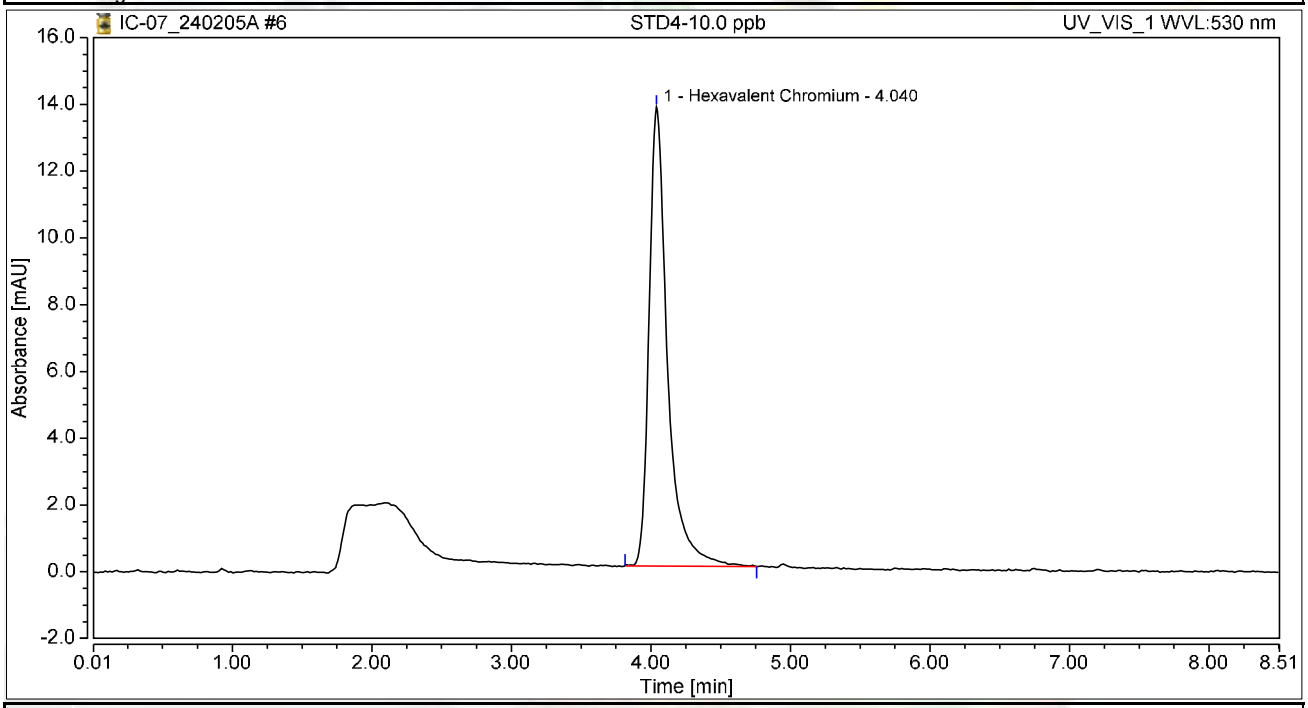
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.064	6.885	100.00	100.00	4.9461
Total:			**1.064**	**6.885**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

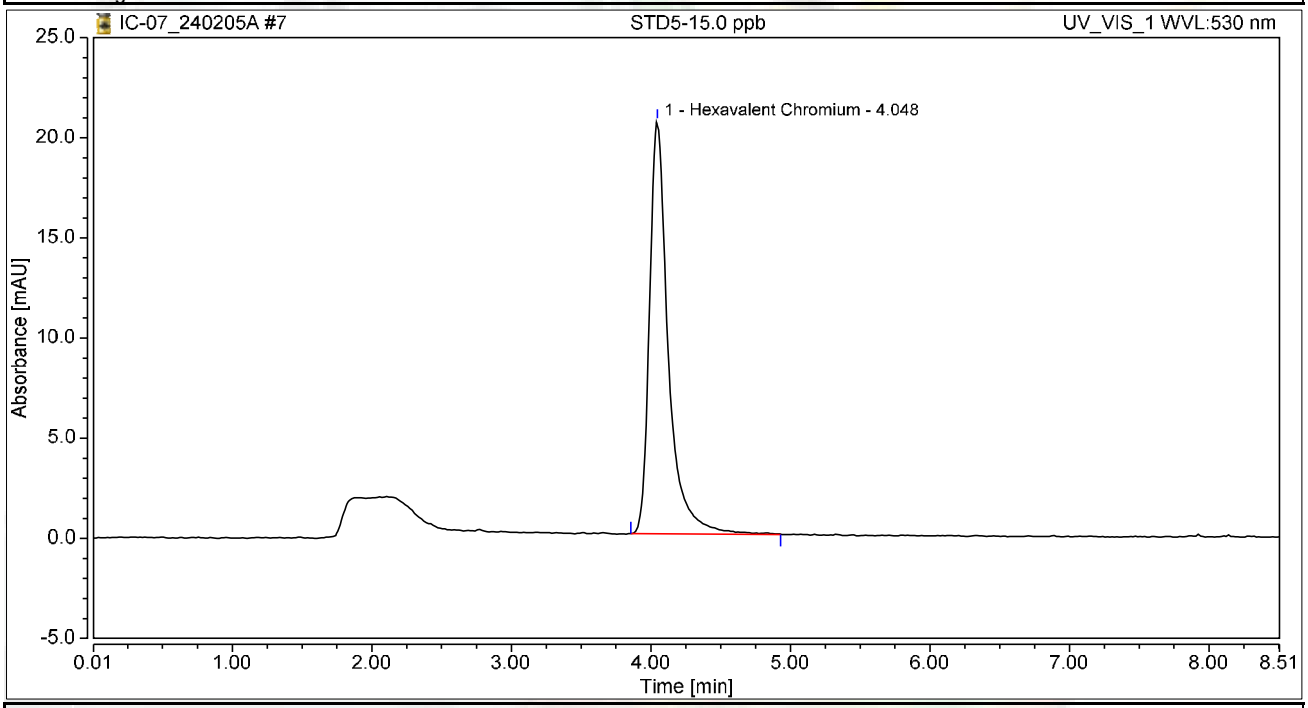
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.116	13.748	100.00	100.00	9.8357
Total:			**2.116**	**13.748**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

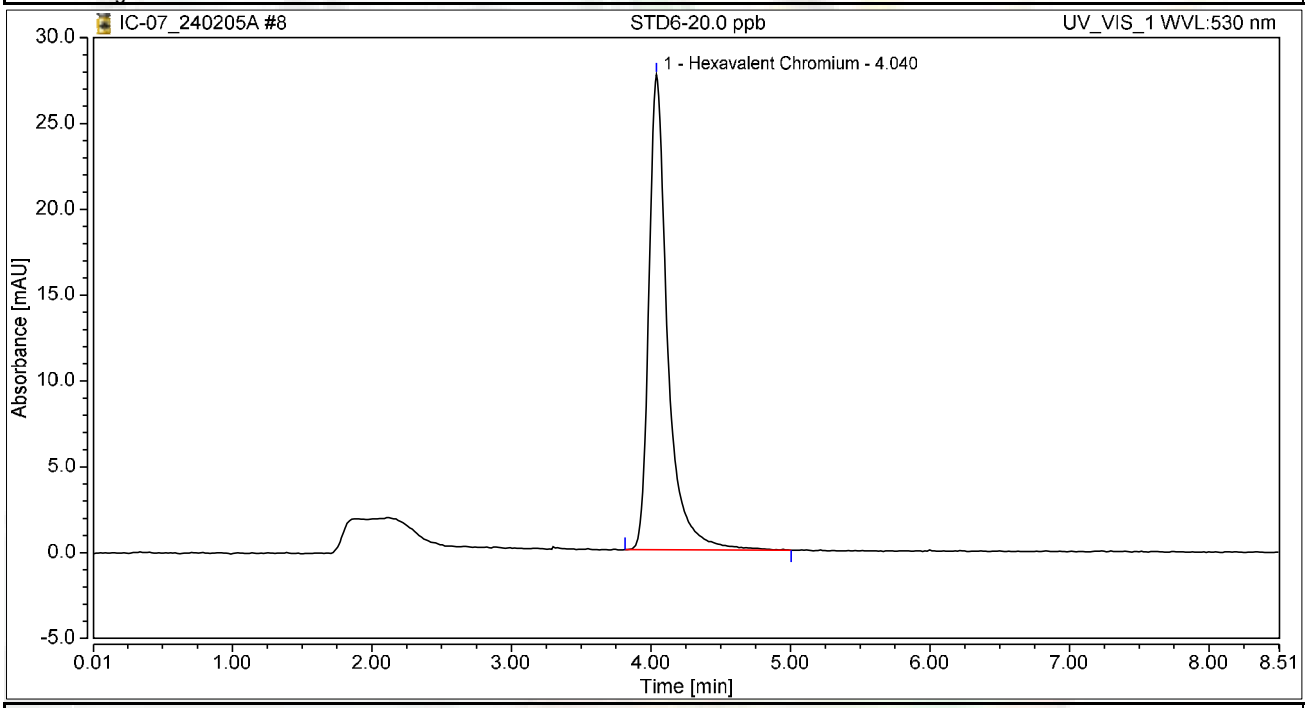
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	3.227	20.605	100.00	100.00	15.0023
Total:			**3.227**	**20.605**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:08**	*Sample Weight:*	**1.0000**

Chromatogram



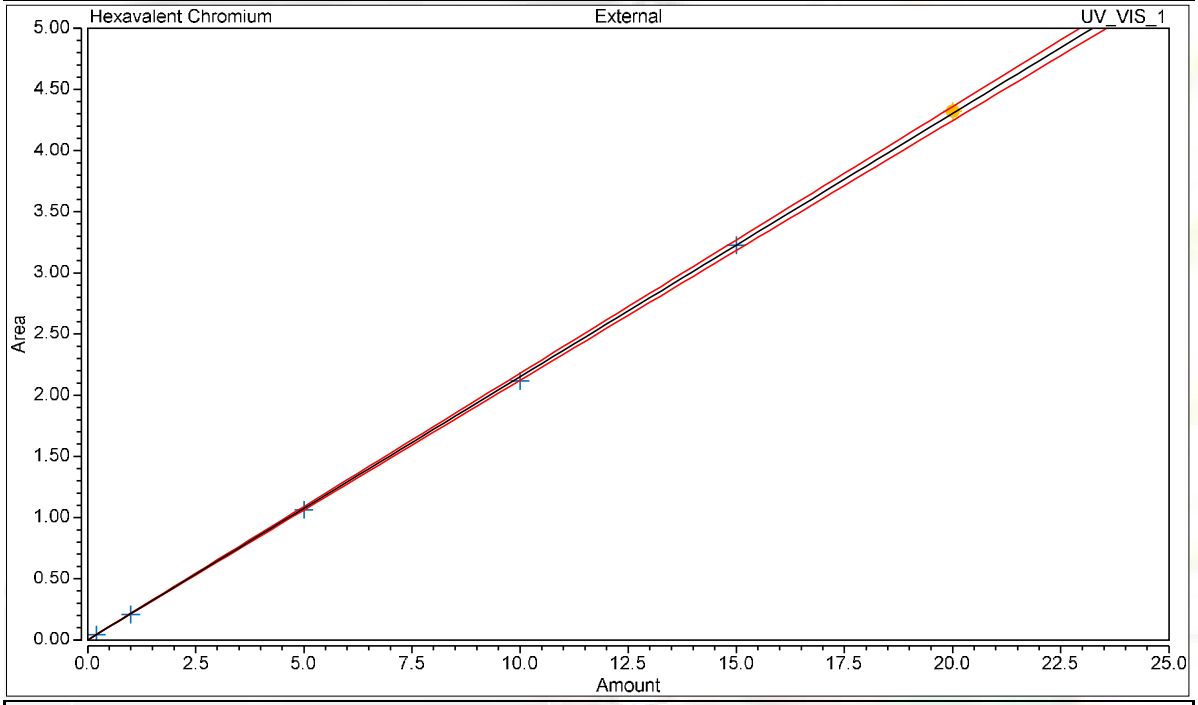
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	4.323	27.676	100.00	100.00	20.0959
Total:			**4.323**	**27.676**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2151
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99987

Calibration Plot — Hexavalent Chromium



Calibration Results — Hexavalent Chromium

No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0427	0.043	0.313
4	STD2-1.0 ppb	02	1.0000	0.2063	0.206	1.377
5	STD3-5.0 ppb	03	5.0000	1.0639	1.064	6.885
6	STD4-10.0 ppb	04	10.0000	2.1157	2.116	13.748
7	STD5-15.0 ppb	05	15.0000	3.2270	3.227	20.605
8	STD6-20.0 ppb	06	20.0000	4.3227	4.323	27.676

Reviewed by:

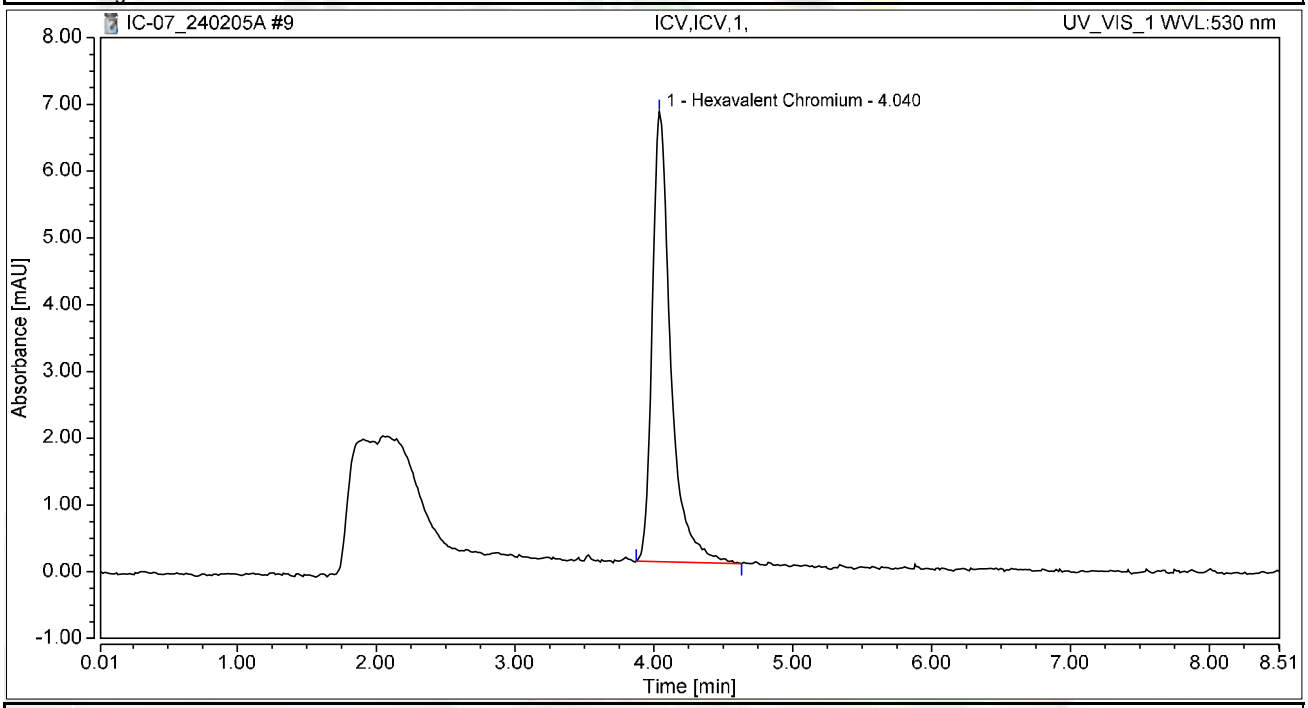
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

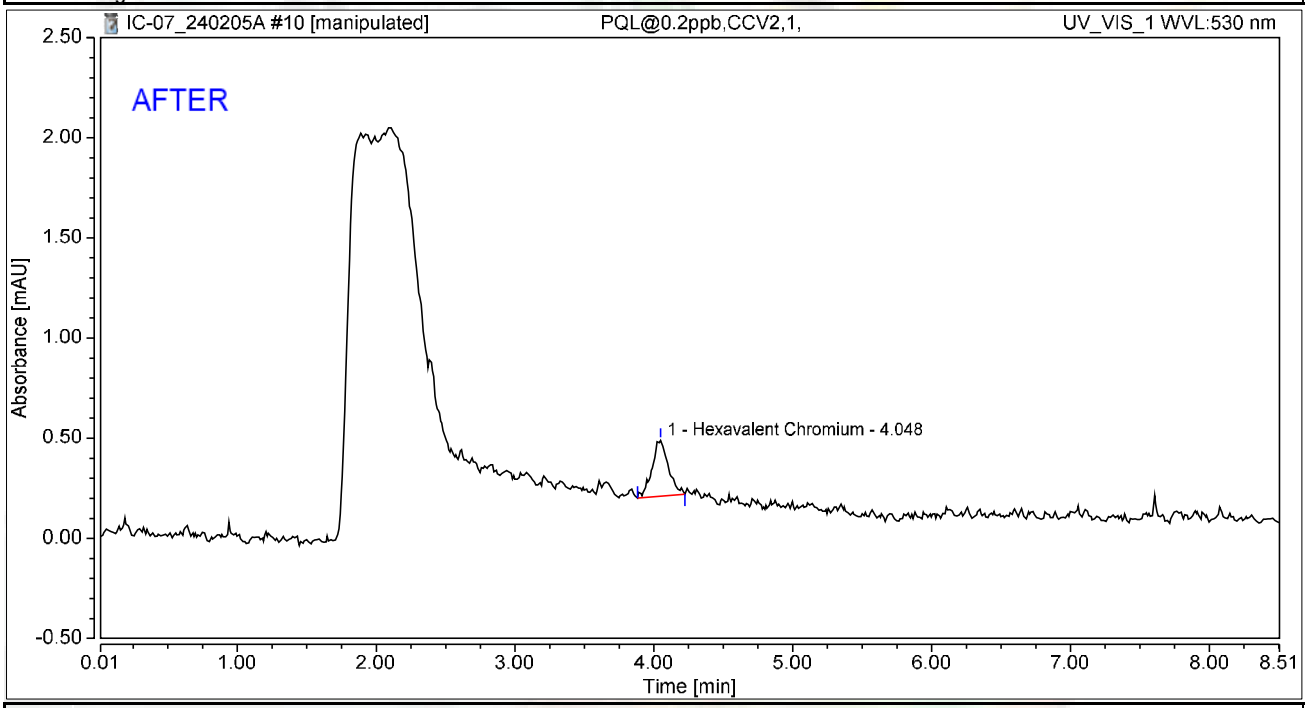
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.040	6.743	100.00	100.00	4.8342
Total:			**1.040**	**6.743**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.039	0.279	100.00	100.00	0.1802
Total:			**0.039**	**0.279**	**100.00**	**100.00**	

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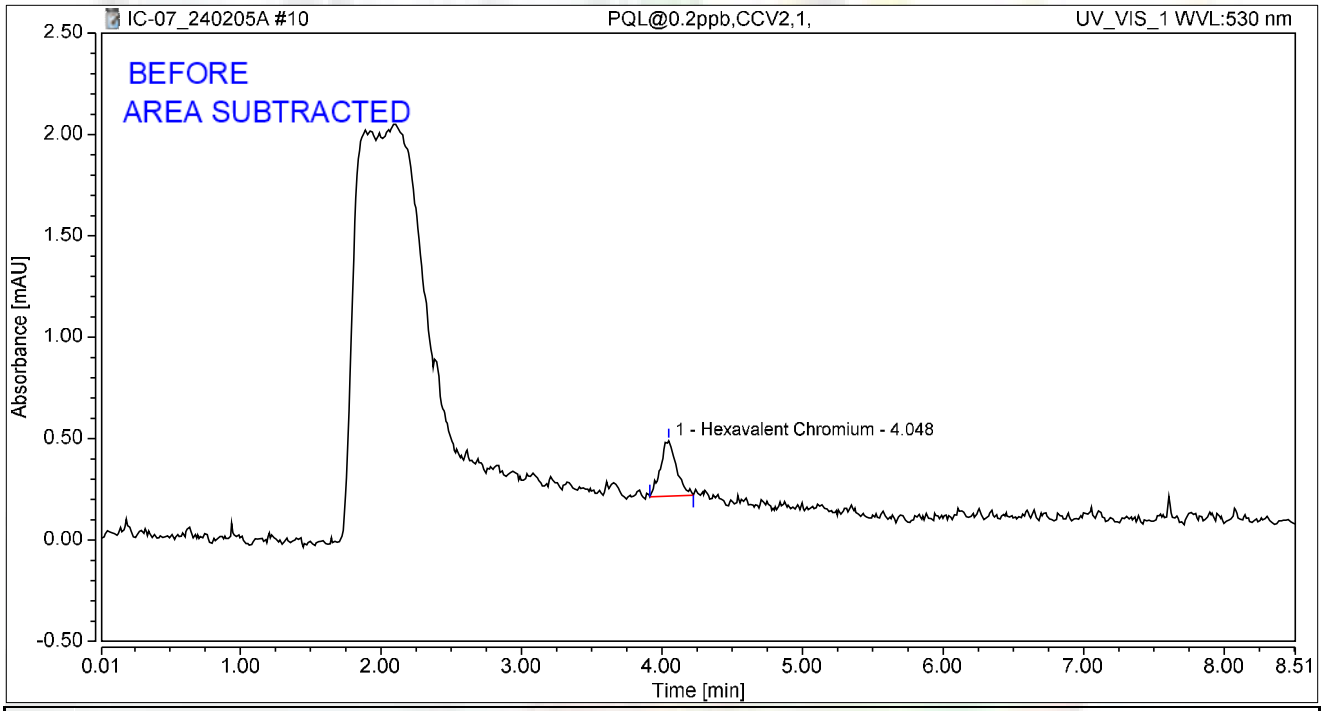
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

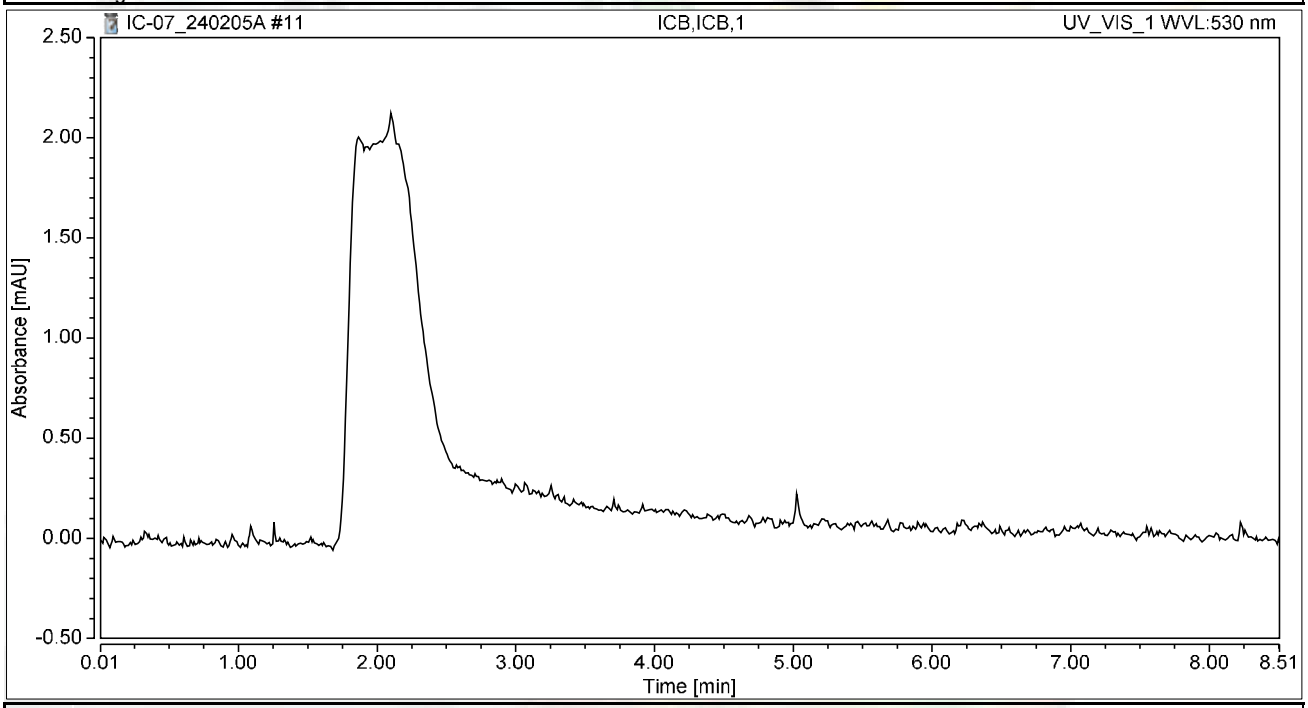
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.036	0.273	100.00	100.00	0.1694
Total:			**0.036**	**0.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

JRB 2/19/2024

RAW DATA

INJECTION LOG: 240226A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/26/24 10:02 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/26/24 10:15 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/26/24 10:25 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/26/24 10:34 AM	Reported
13	MB-R182953	MBLK	1	Hexavalent Chromium	02/26/24 10:44 AM	Reported
14	LCS-R182953	LCS	1	Hexavalent Chromium	02/26/24 10:53 AM	Reported
15	N063295-001A	SAMP	1	Hexavalent Chromium	02/26/24 11:55 AM	Not Reported
16	N063295-003A	SAMP	1	Hexavalent Chromium	02/26/24 12:08 PM	Not Reported
17	N063295-005A	SAMP	1	Hexavalent Chromium	02/26/24 1:04 PM	Not Reported
18	N063295-006A	SAMP	1	Hexavalent Chromium	02/26/24 1:15 PM	Not Reported
19	N063295-007A	SAMP	1	Hexavalent Chromium	02/26/24 1:24 PM	Not Reported
20	N063214-007A	SAMP	5	Hexavalent Chromium	02/26/24 1:34 PM	Reported
21	N063214-007AMS	MS	5	Hexavalent Chromium	02/26/24 1:43 PM	Reported
22	N063295-001AMS	MS	1	Hexavalent Chromium	02/26/24 1:53 PM	Not Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/26/24 2:02 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/26/24 2:12 PM	Reported
25	N063295-003AMS	MS	1	Hexavalent Chromium	02/26/24 2:21 PM	Not Reported
26	N063295-005AMS	MS	1	Hexavalent Chromium	02/26/24 2:30 PM	Not Reported
27	N063295-006AMS	MS	1	Hexavalent Chromium	02/26/24 2:40 PM	Not Reported
28	N063295-007AMS	MS	1	Hexavalent Chromium	02/26/24 2:49 PM	Not Reported
29	N063295-001A	SAMP	5	Hexavalent Chromium	02/26/24 2:59 PM	Reported
30	N063295-001AMS	MS	5	Hexavalent Chromium	02/26/24 3:08 PM	Reported
31	N063295-001AMSD	MSD	5	Hexavalent Chromium	02/26/24 3:18 PM	Reported
32	N063295-003A	SAMP	5	Hexavalent Chromium	02/26/24 3:27 PM	Reported
33	N063295-003ADUP	DUP	5	Hexavalent Chromium	02/26/24 3:37 PM	Reported
34	N063295-003AMS	MS	5	Hexavalent Chromium	02/26/24 3:46 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	02/26/24 4:07 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	02/26/24 4:18 PM	Reported
37	N063295-005A	SAMP	5	Hexavalent Chromium	02/26/24 4:27 PM	Reported
38	N063295-005AMS	MS	5	Hexavalent Chromium	02/26/24 4:37 PM	Reported
39	N063295-006A	SAMP	5	Hexavalent Chromium	02/26/24 4:46 PM	Reported
40	N063295-006AMS	MS	5	Hexavalent Chromium	02/26/24 4:56 PM	Reported
41	N063295-007A	SAMP	5	Hexavalent Chromium	02/26/24 5:05 PM	Reported
42	N063295-007AMS	MS	5	Hexavalent Chromium	02/26/24 5:15 PM	Reported

Reviewed by:

RB 2/29/2024

IC-07 / RBA / 2/27/2024 3:51 PM

INJECTION LOG: 240226A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063295-004A	SAMP	1	Hexavalent Chromium	02/26/24 5:24 PM	Reported
44	N063295-004AMS	MS	1	Hexavalent Chromium	02/26/24 5:33 PM	Reported
45	N063295-002A	SAMP	1	Hexavalent Chromium	02/26/24 5:43 PM	Not Reported
46	N063295-002AMS	MS	1	Hexavalent Chromium	02/26/24 5:52 PM	Not Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	02/26/24 6:02 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	02/26/24 6:11 PM	Reported
49	N063295-002A	SAMP	5	Hexavalent Chromium	02/26/24 6:21 PM	Not Reported
50	N063295-002AMS	MS	5	Hexavalent Chromium	02/26/24 6:30 PM	Not Reported
51	N063295-008A	SAMP	1	Hexavalent Chromium	02/26/24 6:40 PM	Not Reported
52	N063295-008AMS	MS	1	Hexavalent Chromium	02/26/24 6:49 PM	Not Reported
53	N063295-008A	SAMP	5	Hexavalent Chromium	02/26/24 6:59 PM	Reported
54	N063295-008AMS	MS	5	Hexavalent Chromium	02/26/24 7:08 PM	Reported
55	N063249-018A	SAMP	1	Hexavalent Chromium	02/26/24 7:18 PM	Not Reported
56	N063249-018AMS	MS	1	Hexavalent Chromium	02/26/24 7:27 PM	Not Reported
57	N063249-018A	SAMP	5	Hexavalent Chromium	02/26/24 7:36 PM	Reported
58	N063249-018AMS	MS	5	Hexavalent Chromium	02/26/24 7:46 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	02/26/24 7:55 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	02/26/24 8:05 PM	Reported
61	N063249-010A	SAMP	1	Hexavalent Chromium	02/26/24 8:14 PM	Not Reported
62	N063249-010AMS	MS	1	Hexavalent Chromium	02/26/24 8:24 PM	Not Reported
63	N063249-019A	SAMP	1	Hexavalent Chromium	02/26/24 8:33 PM	Reported
64	N063249-019AMS	MS	1	Hexavalent Chromium	02/26/24 8:43 PM	Reported
65	N063297-001A	SAMP	5	Hexavalent Chromium	02/26/24 8:52 PM	Reported
66	N063297-001AMS	MS	5	Hexavalent Chromium	02/26/24 9:02 PM	Reported
67	N063297-002A	SAMP	20	Hexavalent Chromium	02/26/24 9:11 PM	Reported
68	N063297-002AMS	MS	20	Hexavalent Chromium	02/26/24 9:21 PM	Reported
69	N063297-003A	SAMP	5	Hexavalent Chromium	02/26/24 9:30 PM	Reported
70	N063297-003AMS	MS	5	Hexavalent Chromium	02/26/24 9:39 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	02/26/24 9:49 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	02/26/24 9:58 PM	Reported
73	N063295-001A	SAMP	1	Hexavalent Chromium	02/26/24 10:08 PM	Not Reported
74	N063295-003A	SAMP	1	Hexavalent Chromium	02/26/24 10:17 PM	Not Reported
75	N063297-004A	SAMP	1	Hexavalent Chromium	02/26/24 10:27 PM	Reported
76	N063297-004AMS	MS	1	Hexavalent Chromium	02/26/24 10:36 PM	Reported
77	CCV-7	CCV	1	Hexavalent Chromium	02/26/24 10:46 PM	Reported
78	CCB-7	CCB	1	Hexavalent Chromium	02/26/24 10:55 PM	Reported
79	BLANK	BLANK	1	Hexavalent Chromium	02/26/24 11:04 PM	Not Reported

dMRocha 3/10/2024
for RBA

Injection Log Summary

Sequence Details

Name:	**IC-07_240226A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**26/Feb/24 23:35:17**
No. of Injections:	**82**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/26/2024 10:02	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/26/2024 10:15	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/26/2024 10:25	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/26/2024 10:34	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/26/2024 10:44	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/26/2024 10:53	Finished	LCS @5ppb, IWST-231228B
15	N063295-001A,SAMP	1	1000	Unknown		02/26/2024 11:55	Finished	SAMP,10 mL
16	N063295-003A,SAMP	2	1000	Unknown		02/26/2024 12:08	Finished	SAMP,10 mL
17	N063295-005A,SAMP	1	1000	Unknown		02/26/2024 13:04	Finished	SAMP,10 mL
18	N063295-006A,SAMP	2	1000	Unknown		02/26/2024 13:15	Finished	SAMP,10 mL
19	N063295-007A,SAMP	3	1000	Unknown		02/26/2024 13:24	Finished	SAMP,10 mL
20	N063214-007A,SAMP	4	1000	Unknown		02/26/2024 13:34	Finished	SAMP,2>10 mL
21	N063214-007AMS,MS	5	1000	Unknown		02/26/2024 13:43	Finished	MS (1ppb), IWST-231228B,2>
22	N063295-001AMS,MS	6	1000	Unknown		02/26/2024 13:53	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	7	1000	Unknown		02/26/2024 14:02	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	8	1000	Unknown		02/26/2024 14:12	Finished	CCB R240129C
25	N063295-003AMS,MS	9	1000	Unknown		02/26/2024 14:21	Finished	MS (1ppb), IWST-231228B,10r
26	N063295-005AMS,MS	10	1000	Unknown		02/26/2024 14:30	Finished	MS (1ppb), IWST-231228B,10r
27	N063295-006AMS,MS	11	1000	Unknown		02/26/2024 14:40	Finished	MS (1ppb), IWST-231228B,10r
28	N063295-007AMS,MS	12	1000	Unknown		02/26/2024 14:49	Finished	MS (1ppb), IWST-231228B,10r
29	N063295-001A,SAMP	13	1000	Unknown		02/26/2024 14:59	Finished	SAMP,2>10 mL
30	N063295-001AMS,MS	14	1000	Unknown		02/26/2024 15:08	Finished	MS (5ppb), IWST-231228B,2>
31	N063295-001AMSD,M	15	1000	Unknown		02/26/2024 15:18	Finished	MSD (5ppb), IWST-231228B,2
32	N063295-003A,SAMP	16	1000	Unknown		02/26/2024 15:27	Finished	SAMP,2>10 mL
33	N063295-003ADUP,D	17	1000	Unknown		02/26/2024 15:37	Finished	DUP,2>10 mL
34	N063295-003AMS,MS	18	1000	Unknown		02/26/2024 15:46	Finished	MS (5ppb), IWST-231228B,2>
35	CCV-3,CCV,1,	1	1000	Unknown		02/26/2024 16:07	Finished	CCV @5ppb, IWST-231228A
36	CCB-3,CCB,1,	2	1000	Unknown		02/26/2024 16:18	Finished	CCB R240129C
37	N063295-005A,SAMP	3	1000	Unknown		02/26/2024 16:27	Finished	SAMP,2>10 mL
38	N063295-005AMS,MS	4	1000	Unknown		02/26/2024 16:37	Finished	MS (1ppb), IWST-231228B,2>
39	N063295-006A,SAMP	5	1000	Unknown		02/26/2024 16:46	Finished	SAMP,2>10 mL
40	N063295-006AMS,MS	6	1000	Unknown		02/26/2024 16:56	Finished	MS (1ppb), IWST-231228B,2>
41	N063295-007A,SAMP	7	1000	Unknown		02/26/2024 17:05	Finished	SAMP,2>10 mL
42	N063295-007AMS,MS	8	1000	Unknown		02/26/2024 17:15	Finished	MS (1ppb), IWST-231228B,2>
43	N063295-004A,SAMP	9	1000	Unknown		02/26/2024 17:24	Finished	SAMP,10 mL
44	N063295-004AMS,MS	10	1000	Unknown		02/26/2024 17:33	Finished	MS (1ppb), IWST-231228B,10r
45	N063295-002A,SAMP	11	1000	Unknown		02/26/2024 17:43	Finished	SAMP,10 mL
46	N063295-002AMS,MS	12	1000	Unknown		02/26/2024 17:52	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	13	1000	Unknown		02/26/2024 18:02	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	14	1000	Unknown		02/26/2024 18:11	Finished	CCB R240129C
49	N063295-002A,SAMP	15	1000	Unknown		02/26/2024 18:21	Finished	SAMP,2>10 mL
50	N063295-002AMS,MS	16	1000	Unknown		02/26/2024 18:30	Finished	MS (1ppb), IWST-231228B,2>
51	N063295-008A,SAMP	17	1000	Unknown		02/26/2024 18:40	Finished	SAMP,10 mL
52	N063295-008AMS,MS	18	1000	Unknown		02/26/2024 18:49	Finished	MS (1ppb), IWST-231228B,10r
53	N063295-008A,SAMP	19	1000	Unknown		02/26/2024 18:59	Finished	SAMP,2>10 mL
54	N063295-008AMS,MS	20	1000	Unknown		02/26/2024 19:08	Finished	MS (1ppb), IWST-231228B,2>
55	N063249-018A,SAMP	21	1000	Unknown		02/26/2024 19:18	Finished	SAMP,10 mL
56	N063249-018AMS,MS	22	1000	Unknown		02/26/2024 19:27	Finished	MS (1ppb), IWST-231228B,10r
57	N063249-018A,SAMP	23	1000	Unknown		02/26/2024 19:36	Finished	SAMP,2>10 mL
58	N063249-018AMS,MS	24	1000	Unknown		02/26/2024 19:46	Finished	MS (1ppb), IWST-231228B,2>
59	CCV-5,CCV,1,	25	1000	Unknown		02/26/2024 19:55	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	26	1000	Unknown		02/26/2024 20:05	Finished	CCB R240129C

61	N063249-010A,SAMP	27	1000	Unknown		02/26/2024 20:14	Finished	SAMP,10 mL
62	N063249-010AMS,MS	28	1000	Unknown		02/26/2024 20:24	Finished	MS (1ppb), IWST-231228B,10r
63	N063249-019A,SAMP	29	1000	Unknown		02/26/2024 20:33	Finished	SAMP,10 mL
64	N063249-019AMS,MS	30	1000	Unknown		02/26/2024 20:43	Finished	MS (1ppb), IWST-231228B,10r
65	N063297-001A,SAMP	31	1000	Unknown		02/26/2024 20:52	Finished	SAMP,2>10 mL
66	N063297-001AMS,MS	32	1000	Unknown		02/26/2024 21:02	Finished	MS (5ppb), IWST-231228B,2>1
67	N063297-002A,SAMP	33	1000	Unknown		02/26/2024 21:11	Finished	SAMP,0.5>10 mL
68	N063297-002AMS,MS	34	1000	Unknown		02/26/2024 21:21	Finished	MS (1ppb), IWST-231228B,0.5
69	N063297-003A,SAMP	35	1000	Unknown		02/26/2024 21:30	Finished	SAMP,2>10 mL
70	N063297-003AMS,MS	36	1000	Unknown		02/26/2024 21:39	Finished	MS (5ppb), IWST-231228B,2>1
71	CCV-6,CCV1,1,	37	1000	Unknown		02/26/2024 21:49	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	38	1000	Unknown		02/26/2024 21:58	Finished	CCB R240129C
73	N063295-001A,SAMP	39	1000	Unknown		02/26/2024 22:08	Finished	SAMP,10 mL
74	N063295-003A,SAMP	40	1000	Unknown		02/26/2024 22:17	Finished	SAMP,10 mL
75	N063297-004A,SAMP	41	1000	Unknown		02/26/2024 22:27	Finished	SAMP,10 mL
76	N063297-004AMS,MS	42	1000	Unknown		02/26/2024 22:36	Finished	MS (1ppb), IWST-231228B,10r
77	CCV-7,CCV,1,	43	1000	Unknown		02/26/2024 22:46	Finished	CCV @5ppb, IWST-231228A
78	CCB-7,CCB,1,	44	1000	Unknown		02/26/2024 22:55	Finished	CCB R240129C
79	BLANK	45	1000	Unknown		02/26/2024 23:04	Finished	BLANK
80	SHUTDOWN R240226A	46	1000	Unknown		02/26/2024 23:14	Finished	
81	Eluent: ~~R240228A~~	47	1000	Unknown		n.a.	Finished	
82	PCR: ~~R240228B~~	48	1000	Unknown		n.a.	Finished	

R240226B

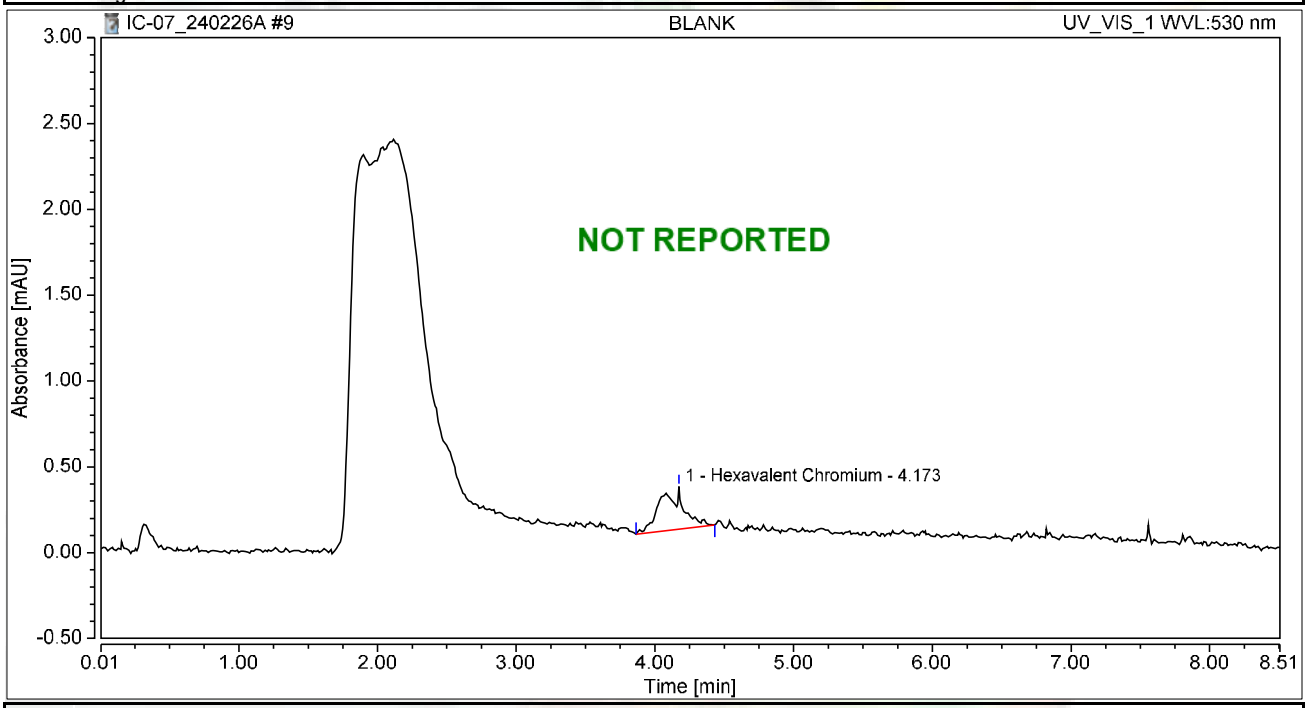
dlRocha 3/10/2024
for RBA

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 10:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

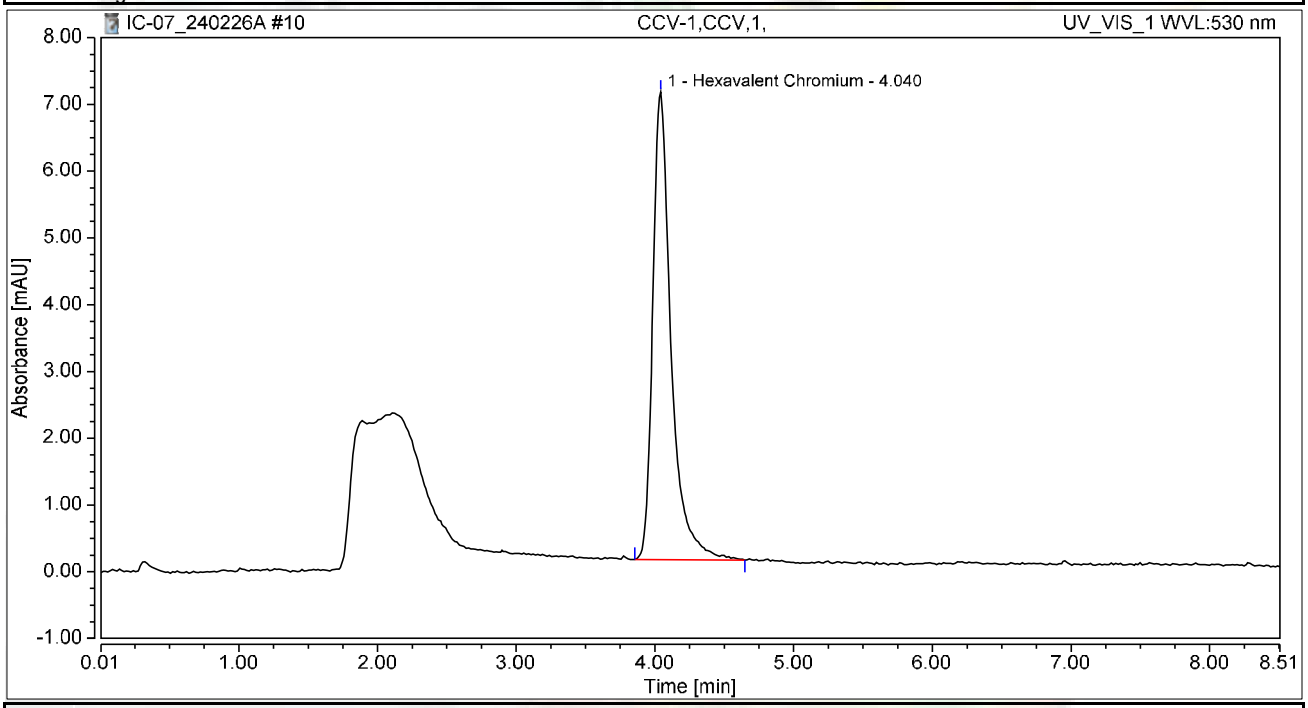
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.173	0.050	0.248	100.00	100.00	0.2323
Total:			**0.050**	**0.248**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 10:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.072	7.003	100.00	100.00	4.9840
Total:			**1.072**	**7.003**	**100.00**	**100.00**	

Reviewed by:

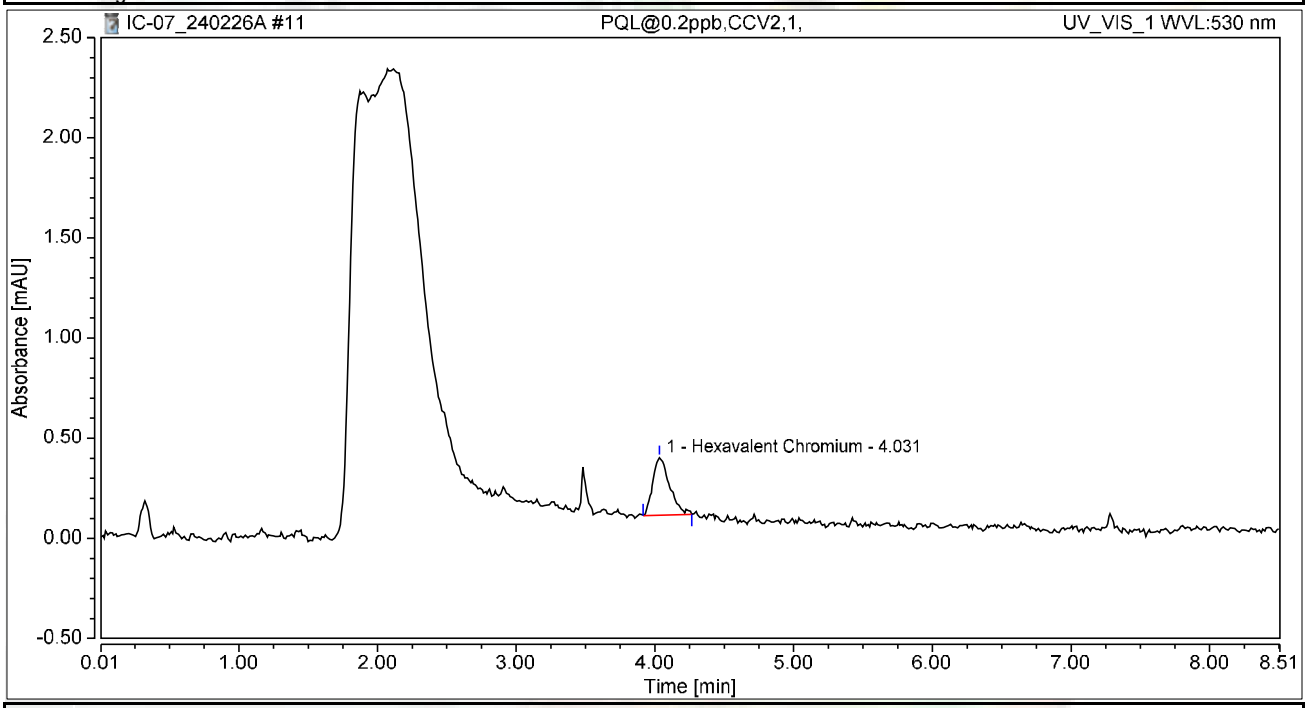
JRB 2/29/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 10:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

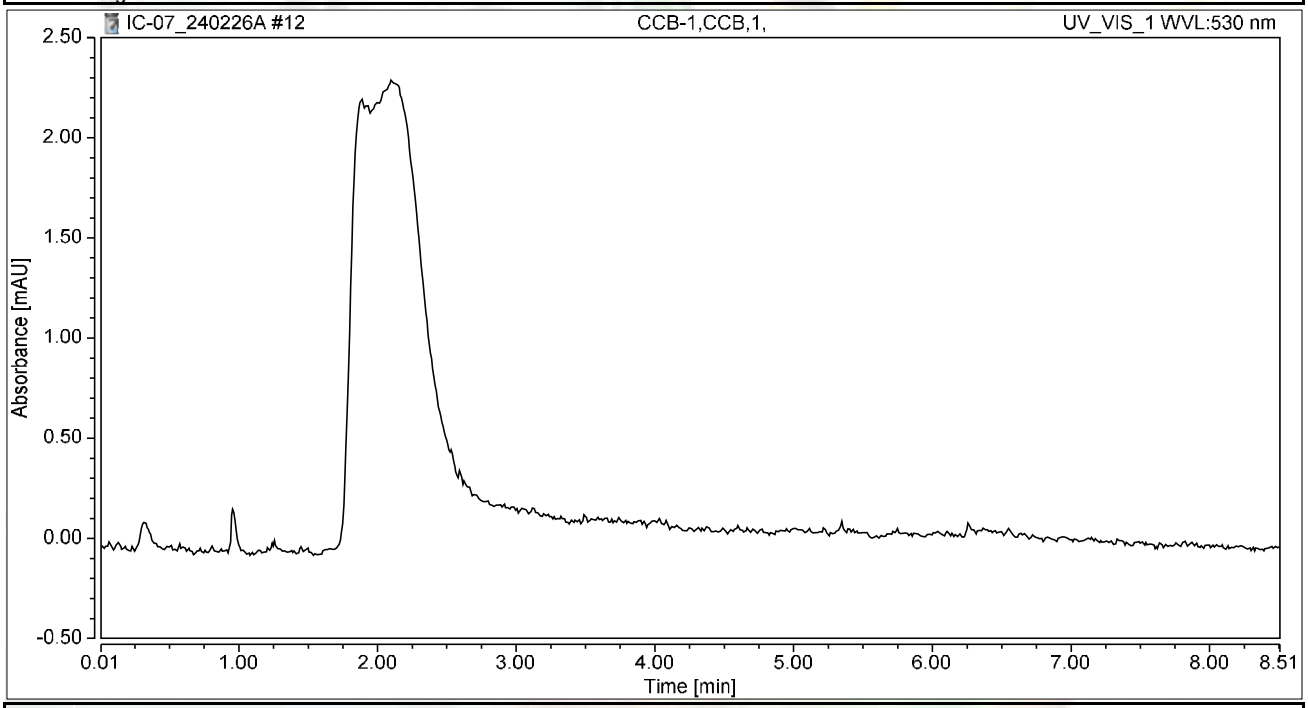
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.041	0.288	100.00	100.00	0.1893
Total:			**0.041**	**0.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 10:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

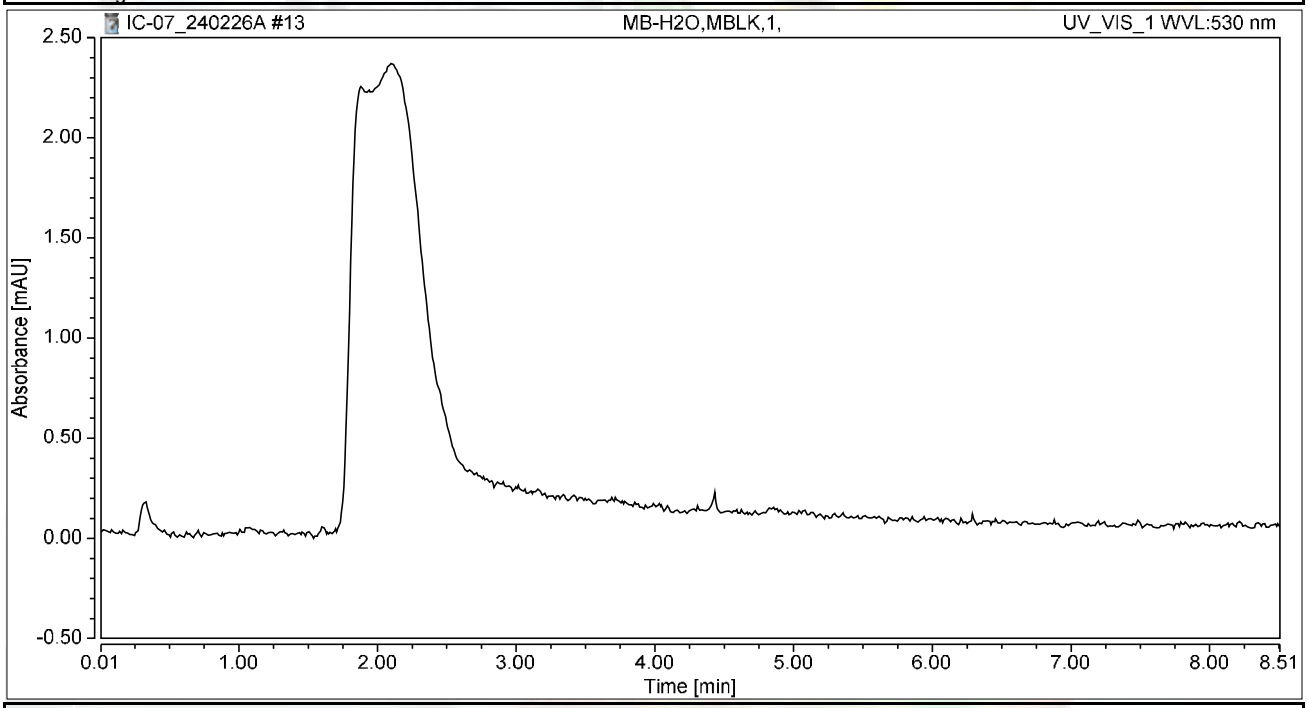
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 10:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

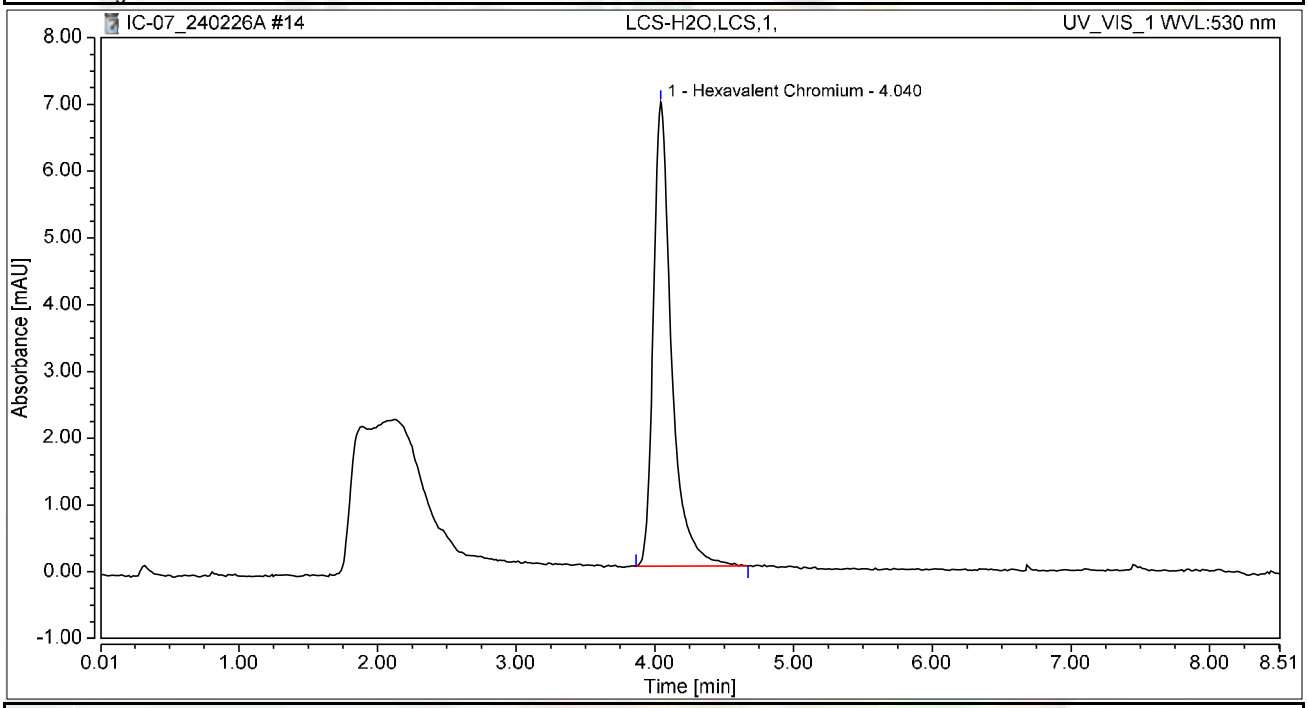
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 10:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

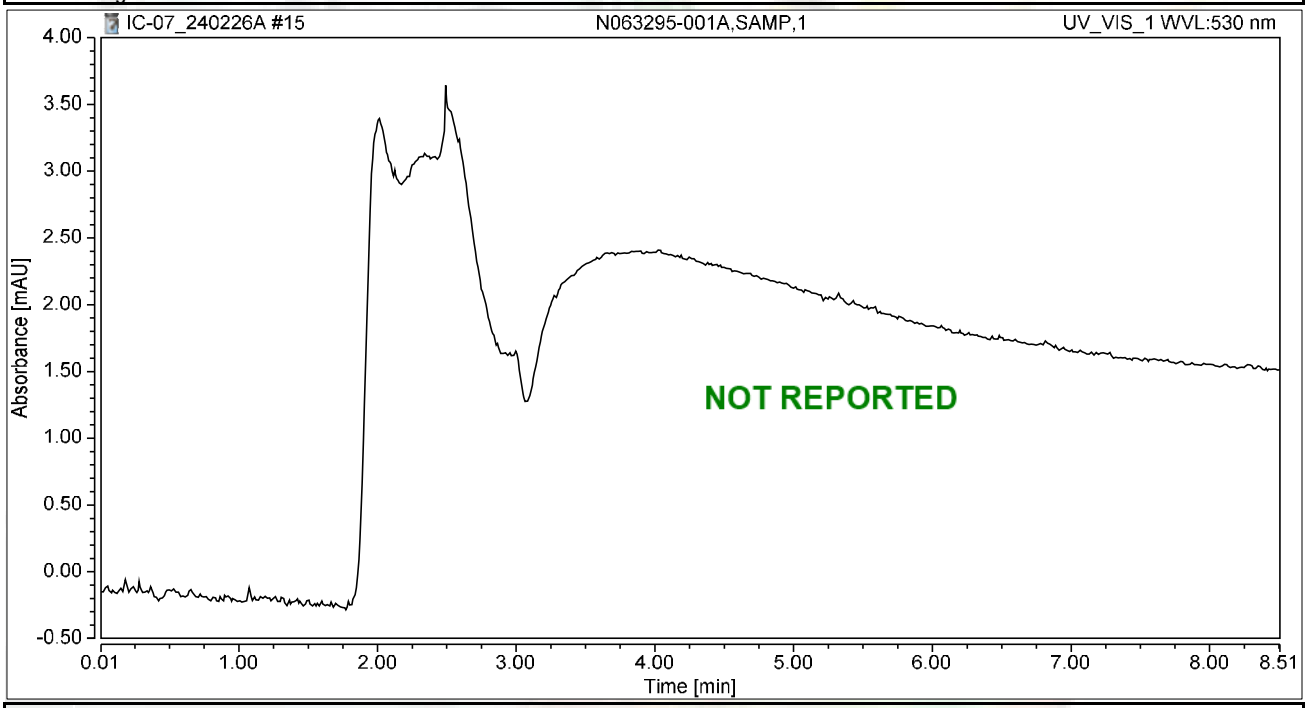
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.057	6.951	100.00	100.00	4.9128
Total:			**1.057**	**6.951**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 11:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

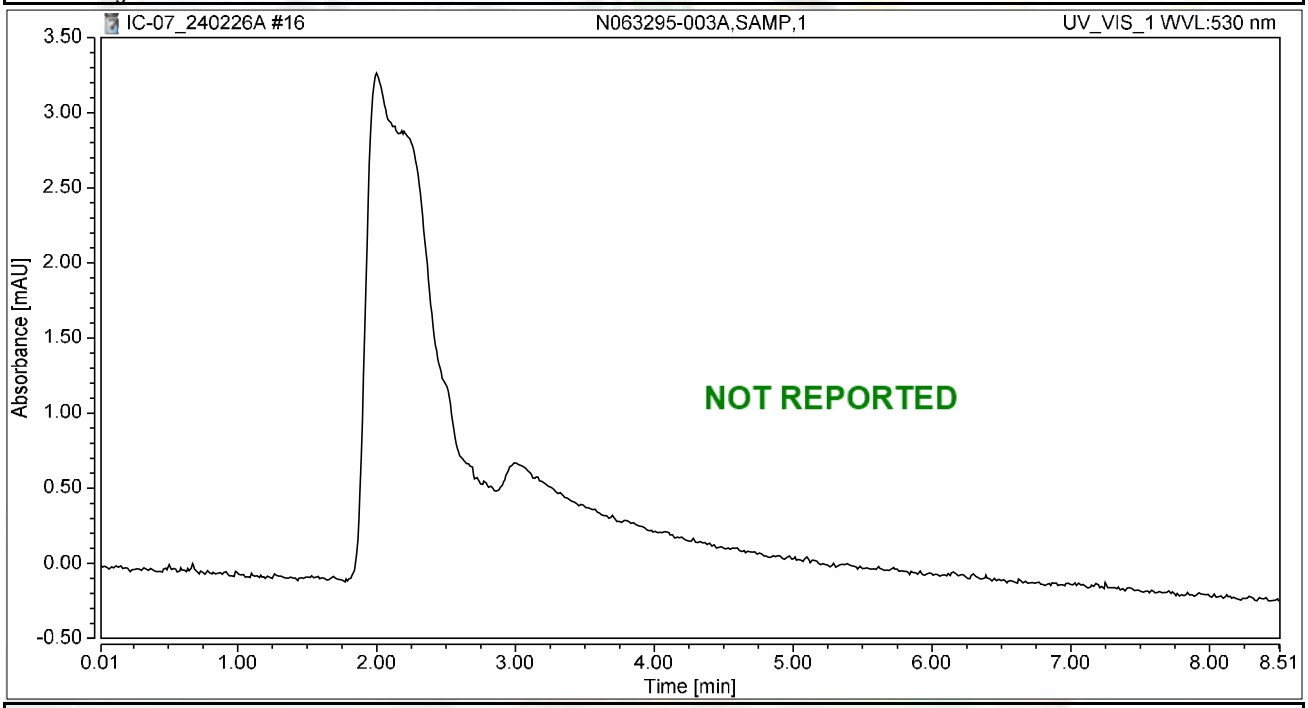
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 12:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

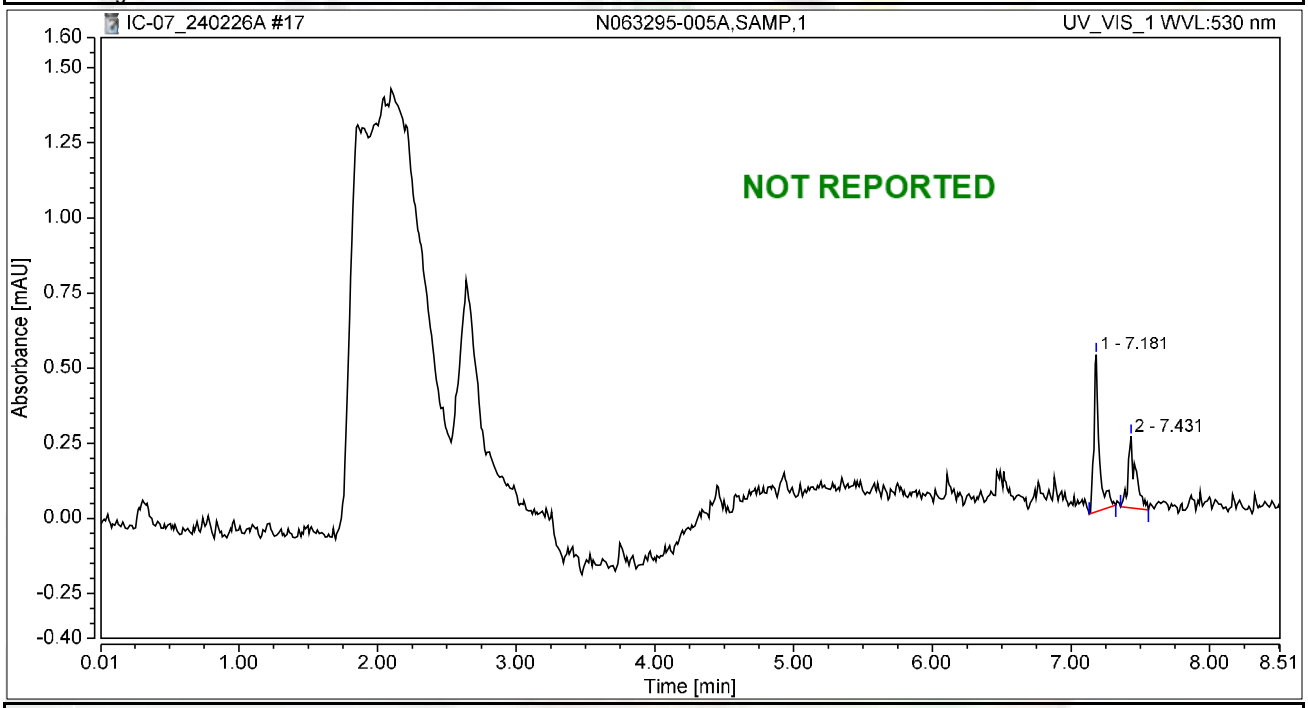
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 13:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

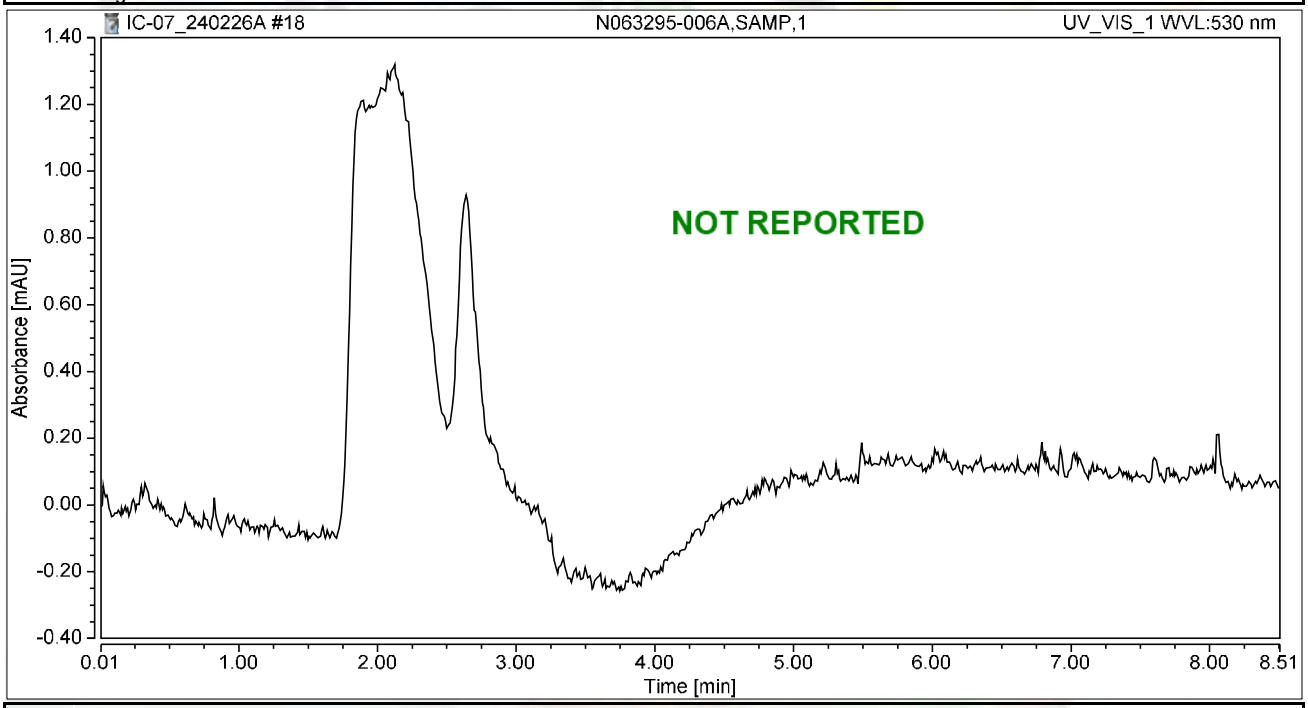
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		7.181	0.024	0.523	60.57	68.74	n.a.
2		7.431	0.015	0.238	39.43	31.26	n.a.
Total:			**0.039**	**0.761**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 13:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

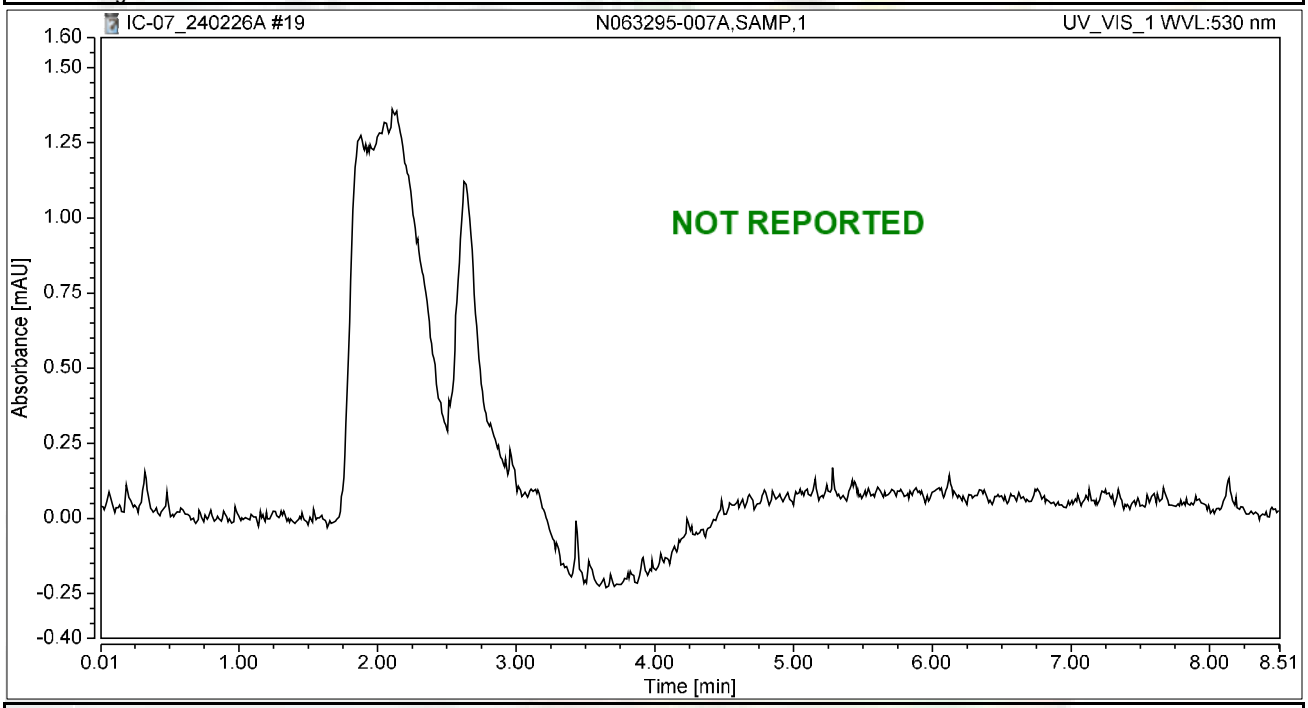
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-007A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 13:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

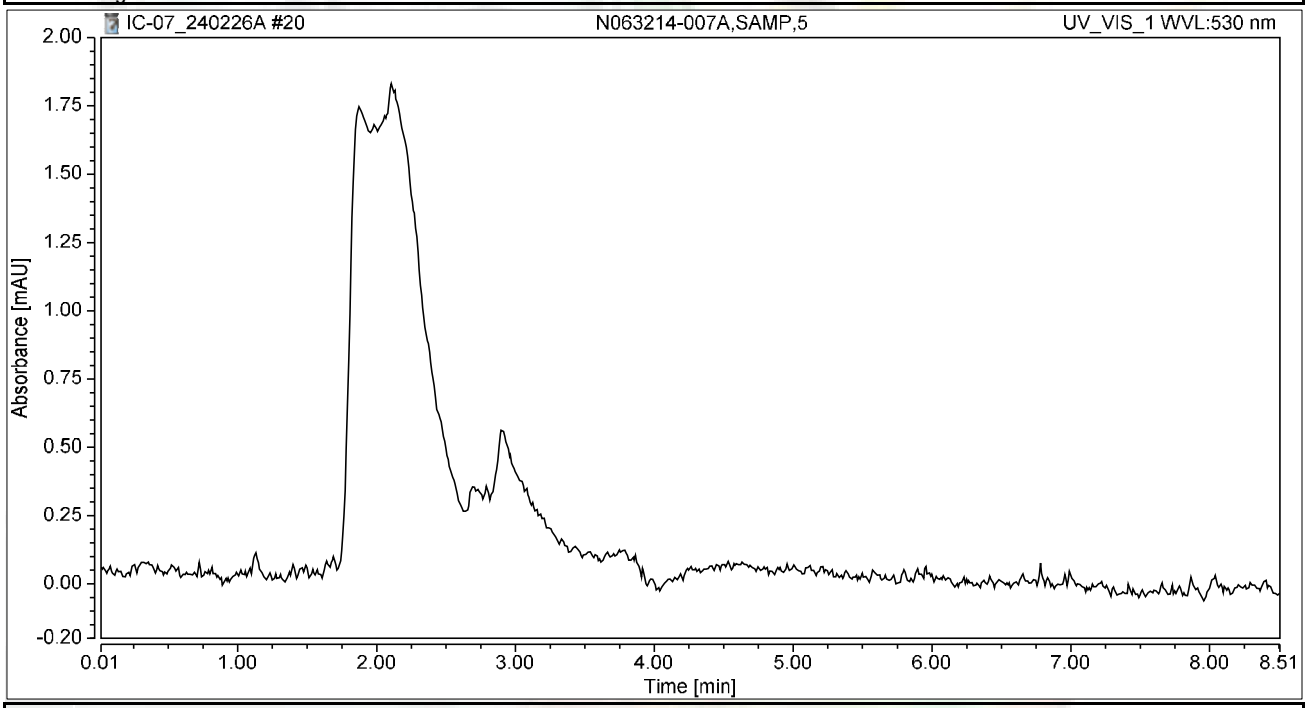
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-007A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 13:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

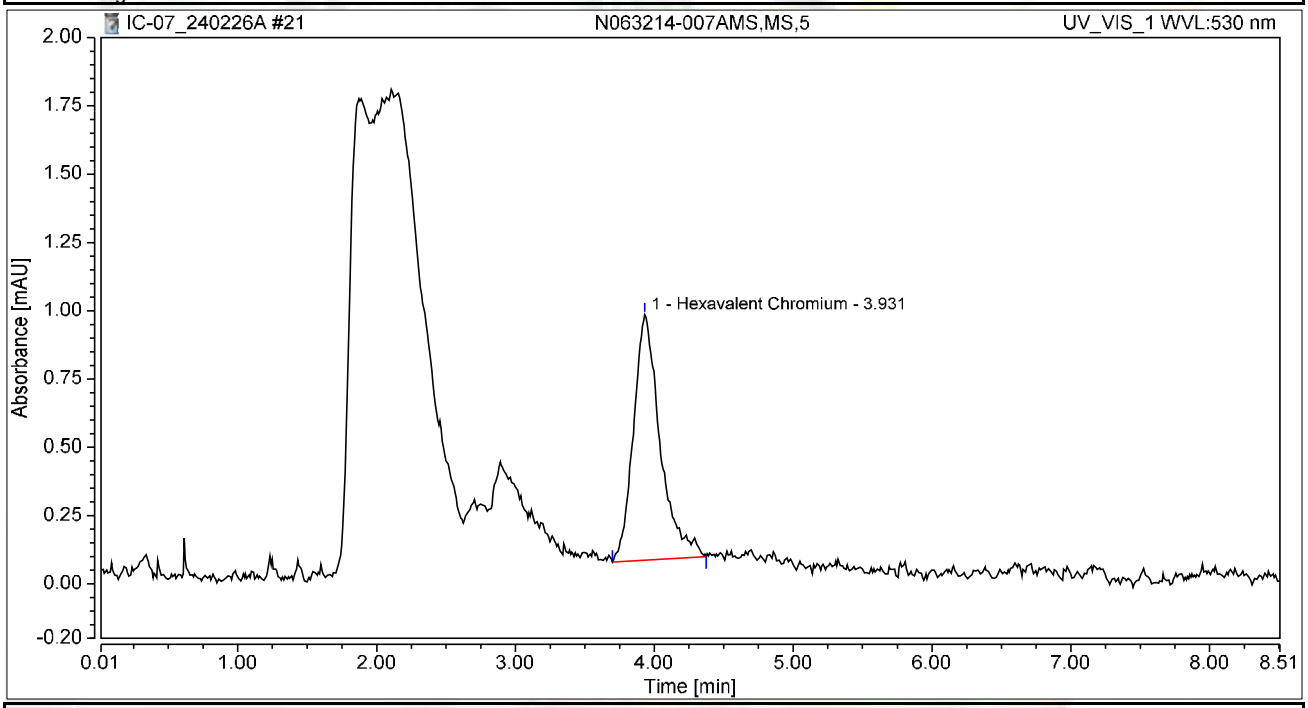
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063214-007AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 13:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

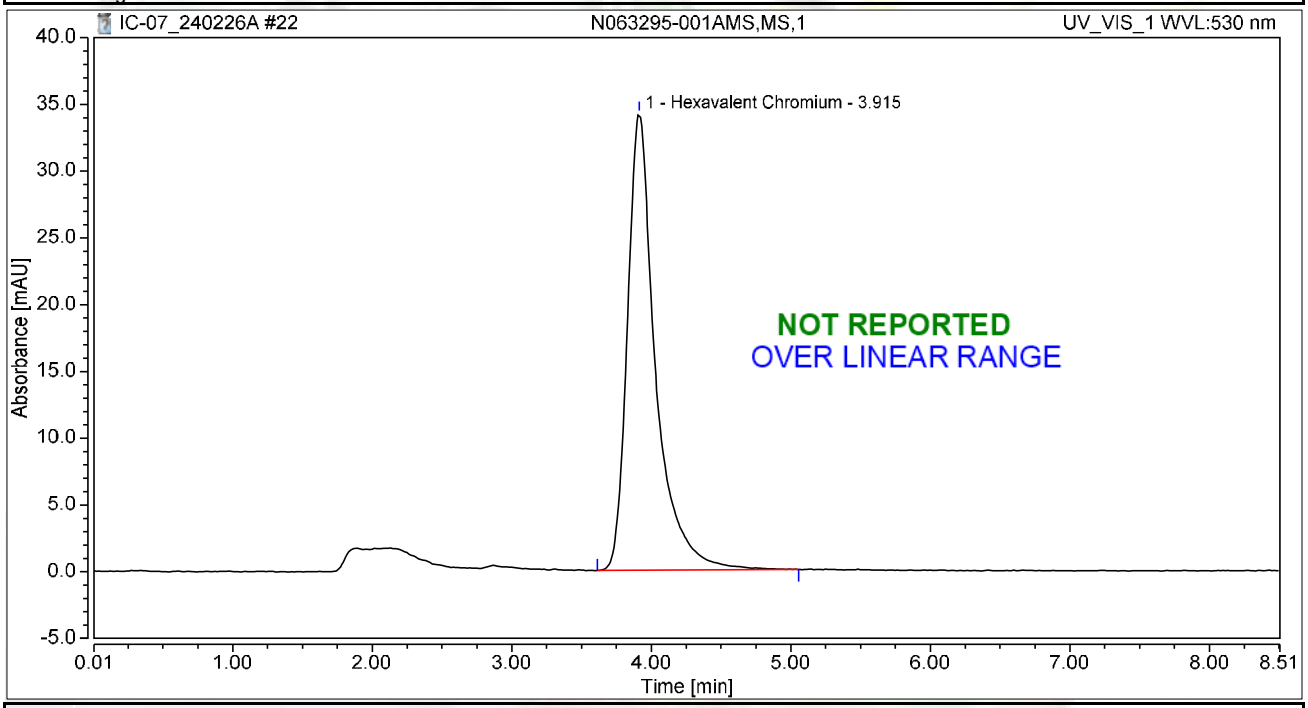
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.931	0.200	0.899	100.00	100.00	0.9321
Total:			**0.200**	**0.899**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 13:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

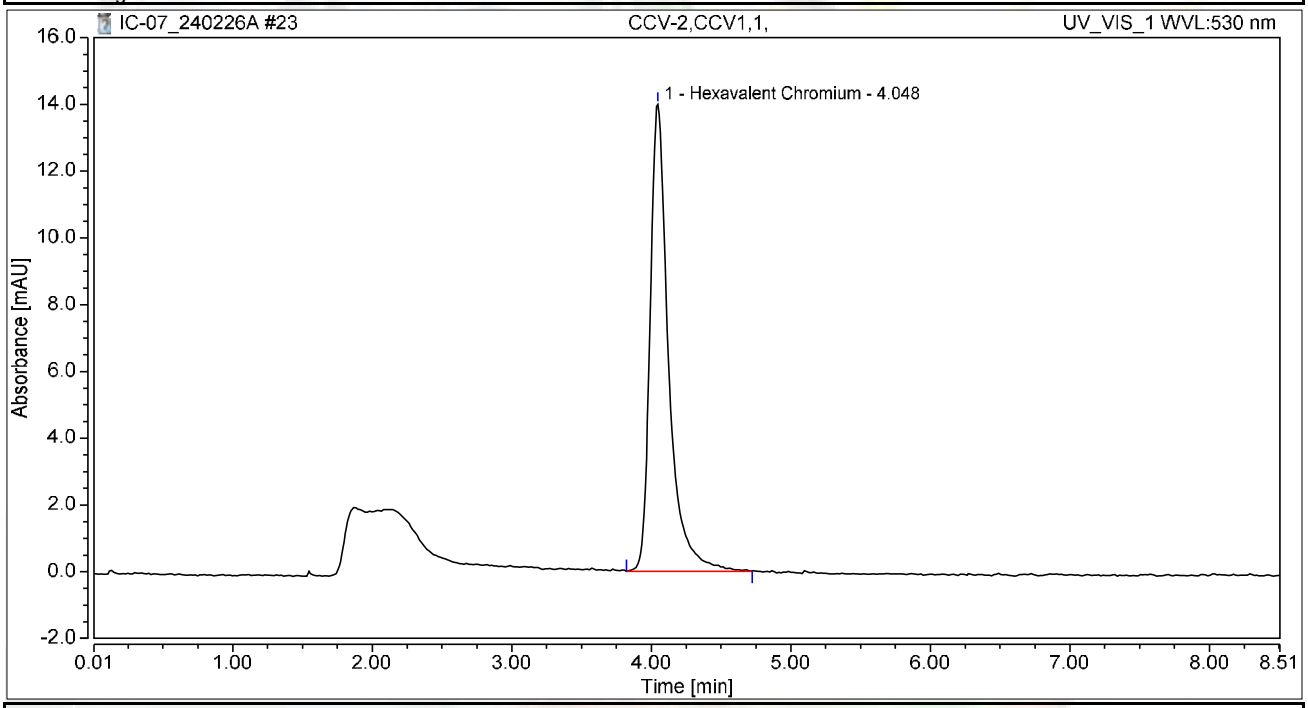
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.915	7.991	34.212	100.00	100.00	37.1510
Total:			**7.991**	**34.212**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

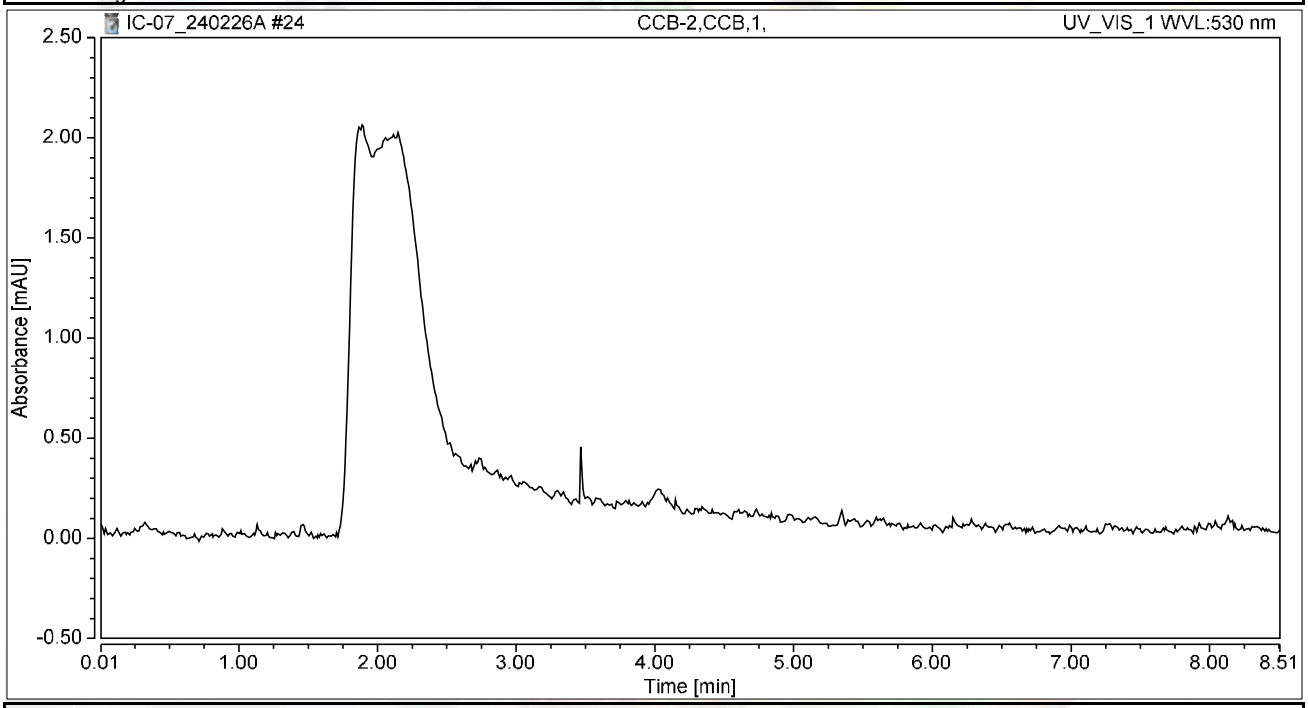
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.148	13.984	100.00	100.00	9.9881
Total:			**2.148**	**13.984**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

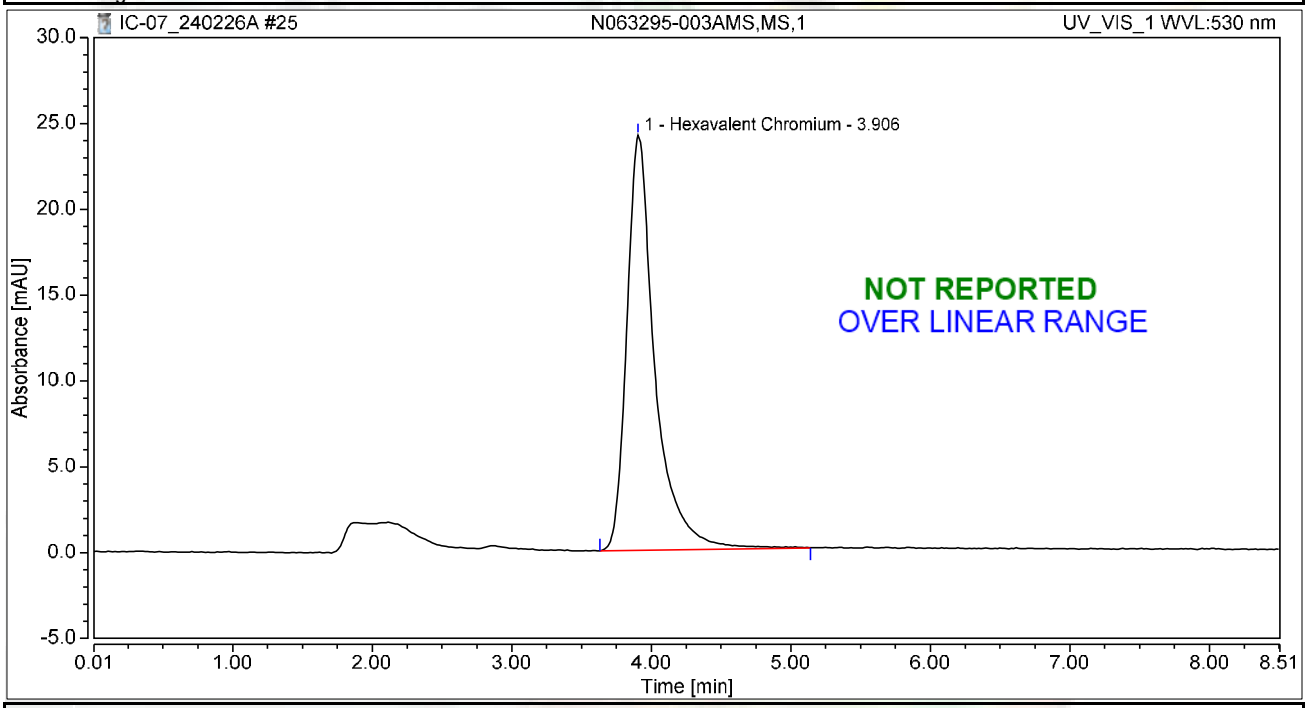
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

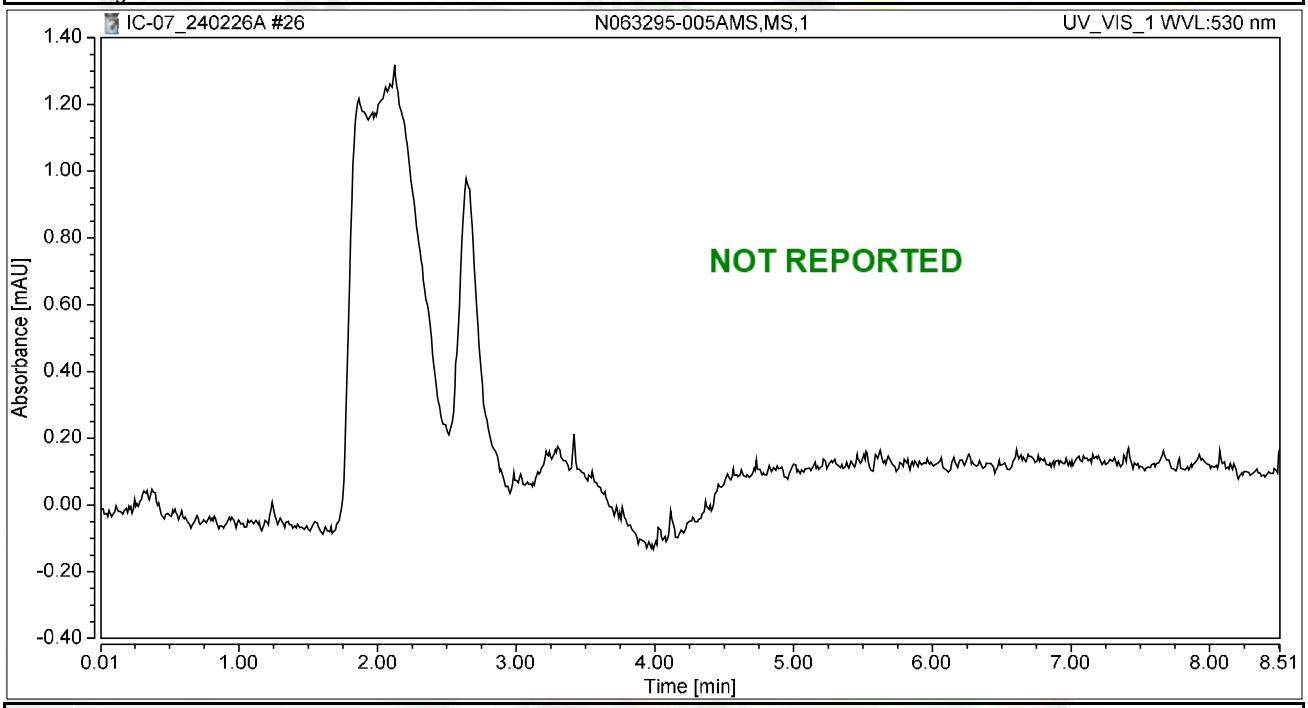
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.906	5.637	24.161	100.00	100.00	26.2075
Total:			**5.637**	**24.161**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

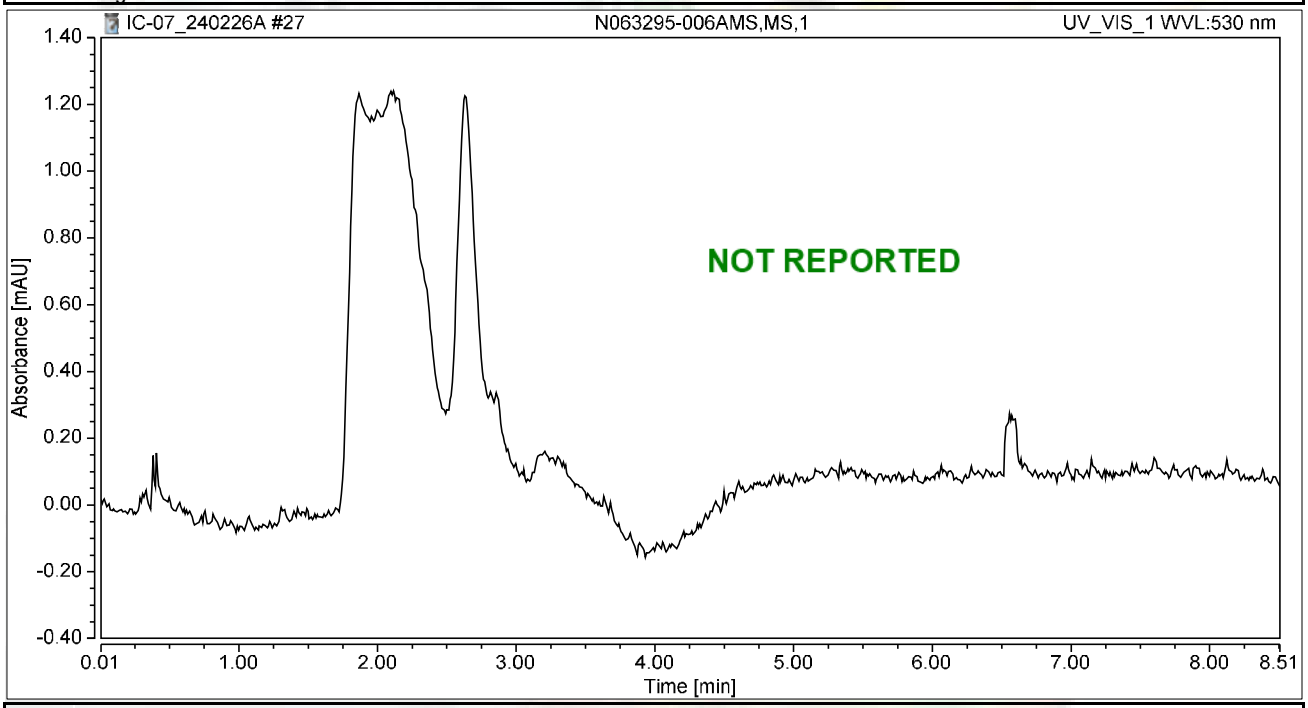
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

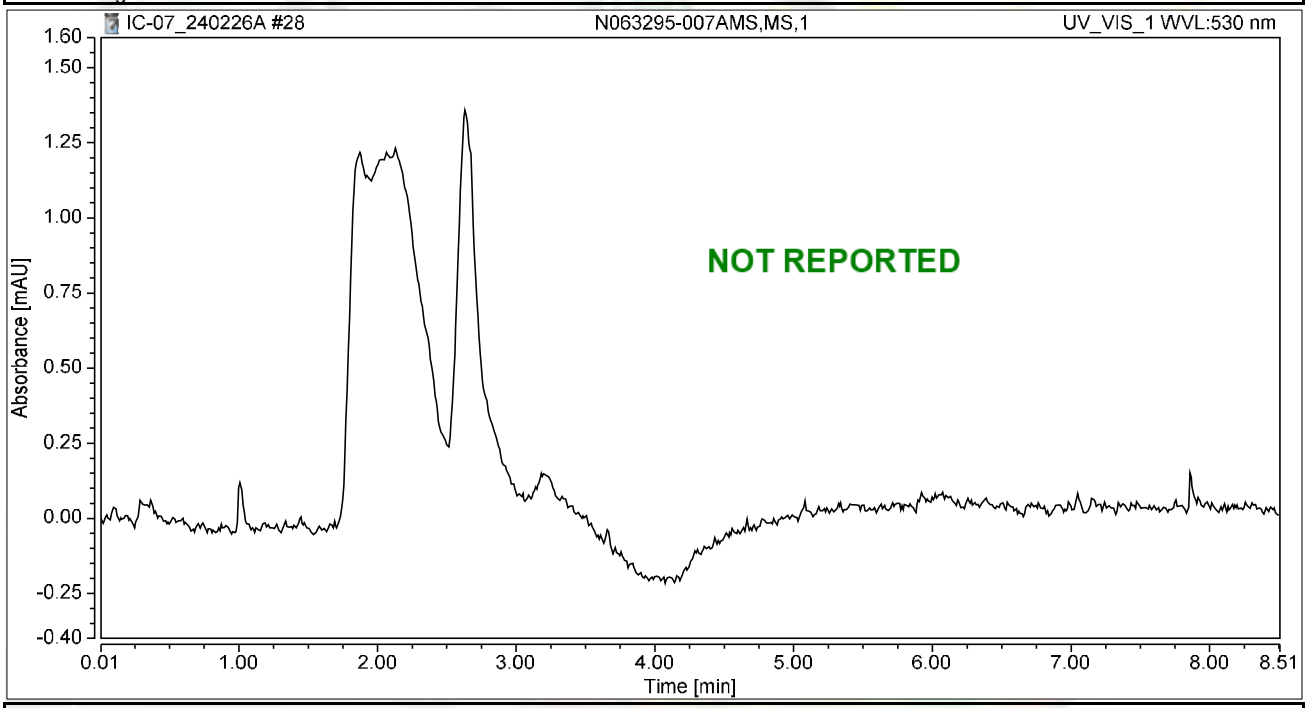
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

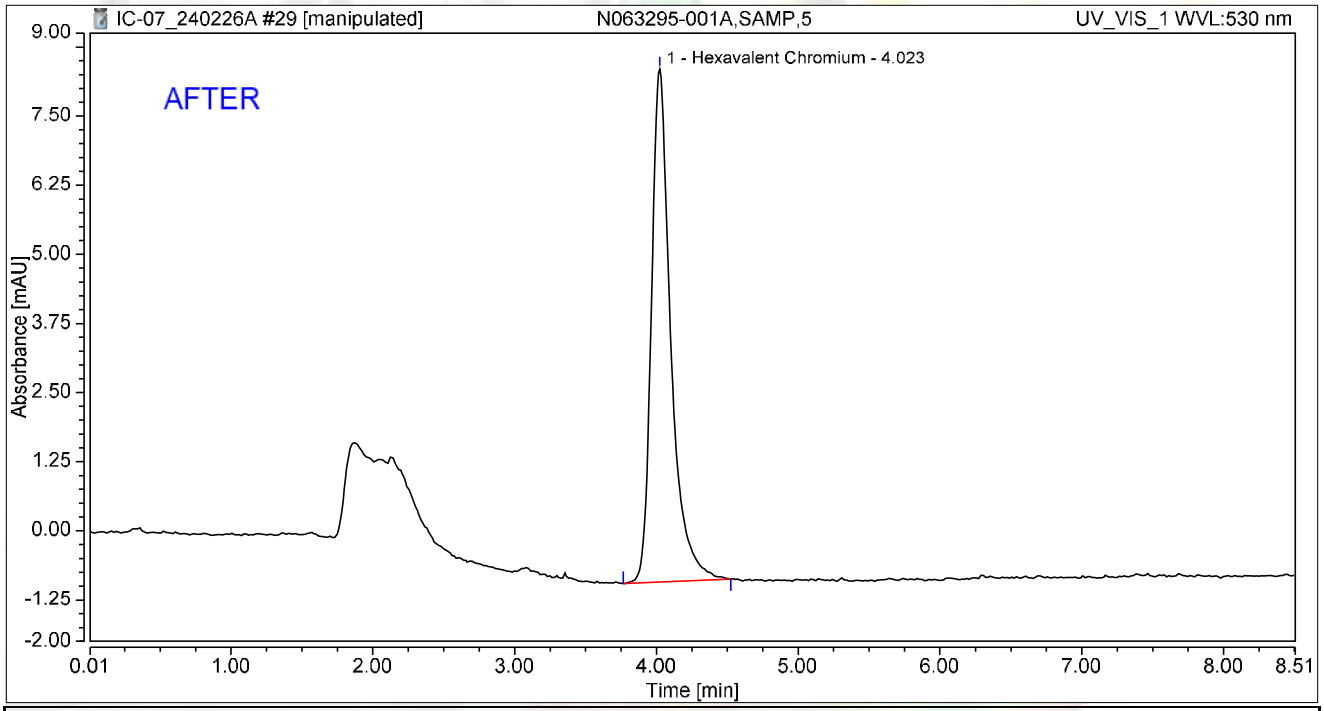
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	1.470	9.276	100.00	100.00	6.8342
Total:			**1.470**	**9.276**	**100.00**	**100.00**	

Reviewed by:

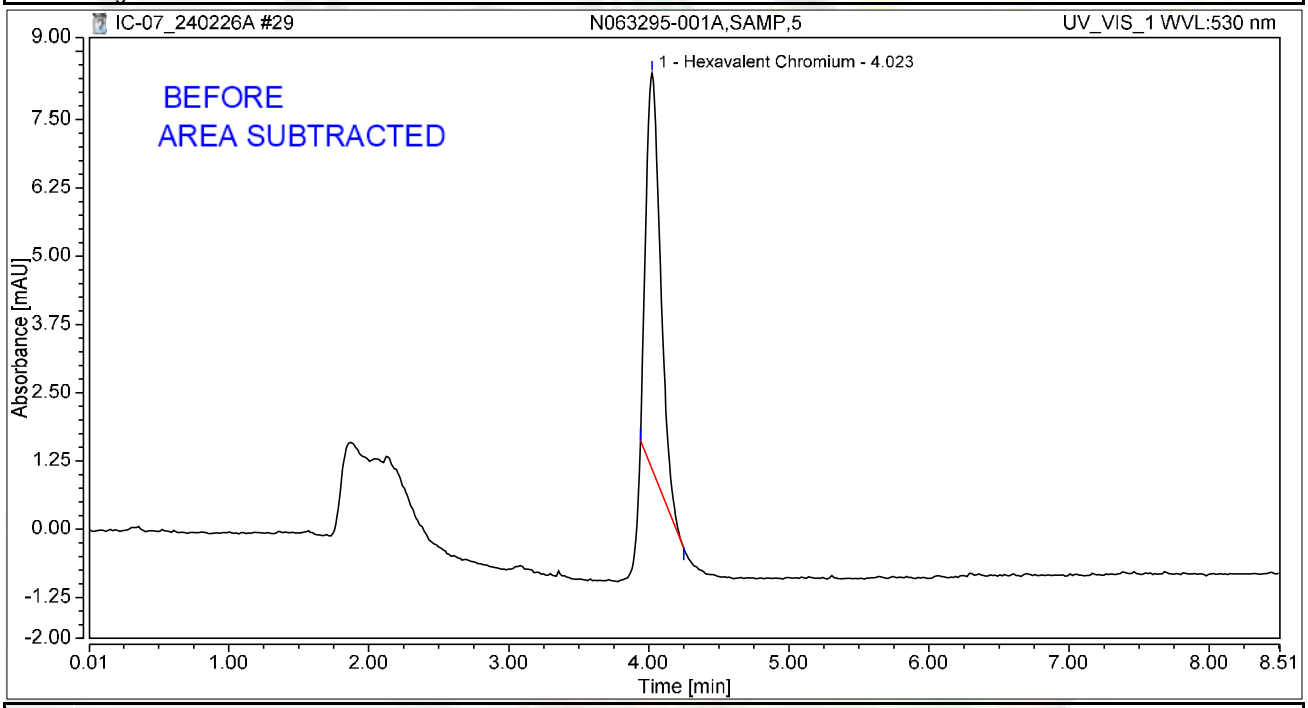
JRB 2/29/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063295-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 14:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

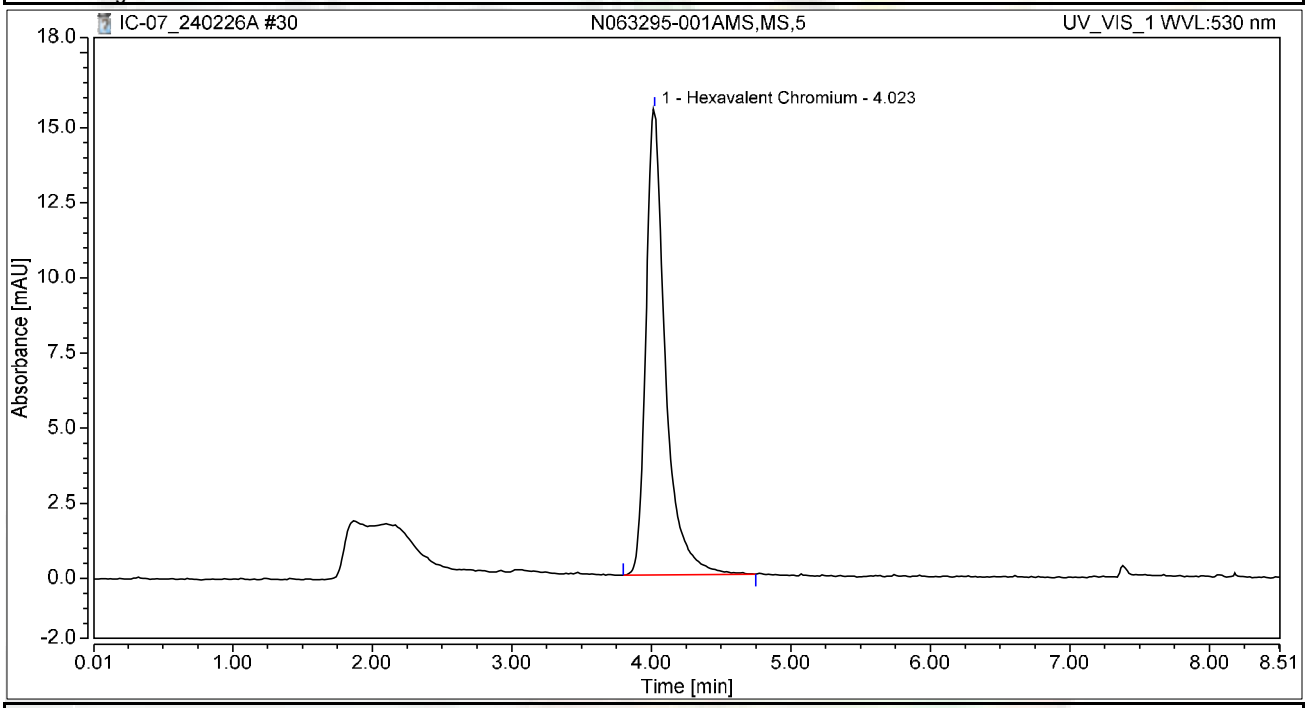
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.878	7.255	100.00	100.00	4.0818
Total:			**0.878**	**7.255**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 15:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

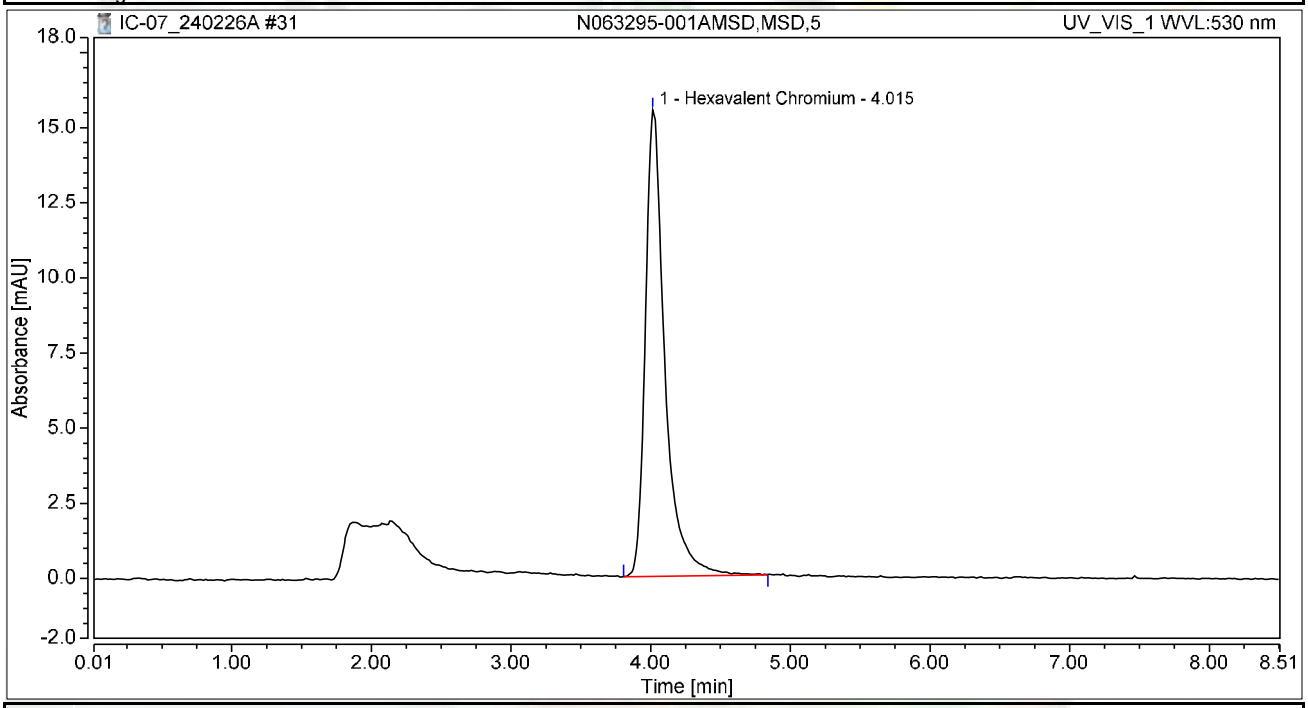
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	2.510	15.510	100.00	100.00	11.6673
Total:			**2.510**	**15.510**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-001AMSD,MSD,5**	*Run Time (min):*	**8.49**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 15:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

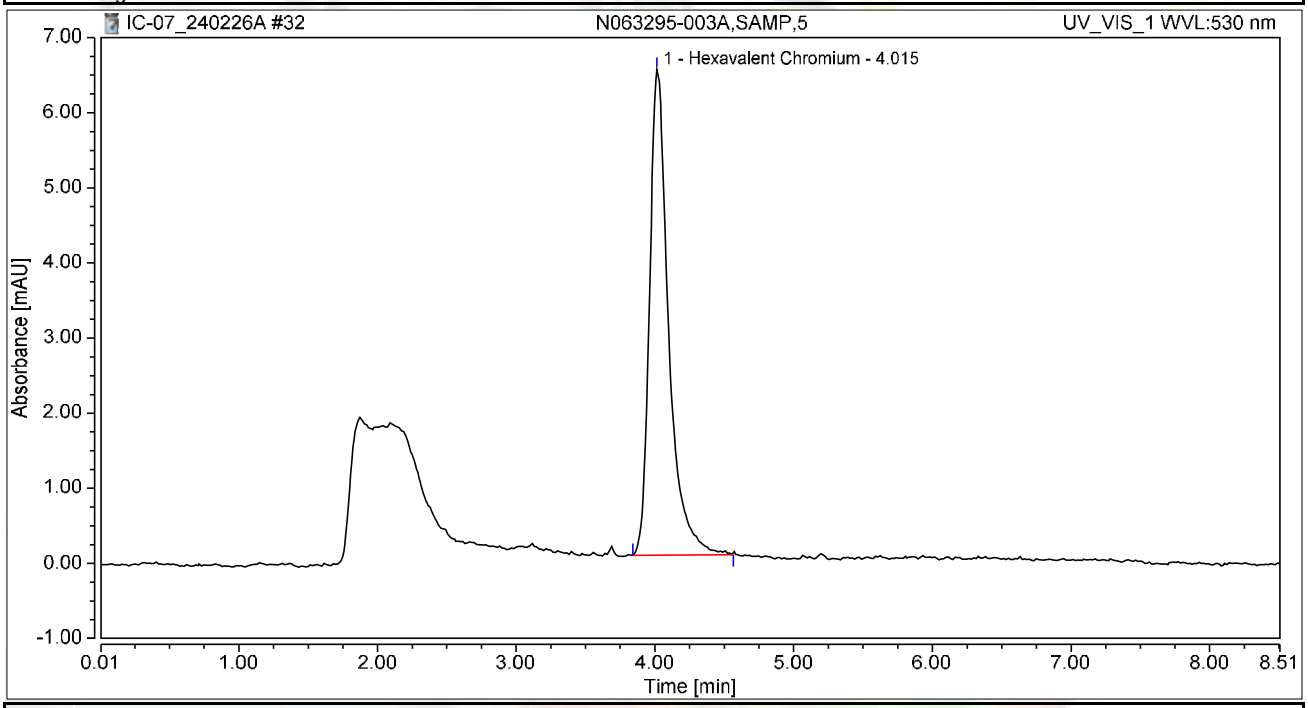
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	2.524	15.529	100.00	100.00	11.7340
Total:			**2.524**	**15.529**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 15:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

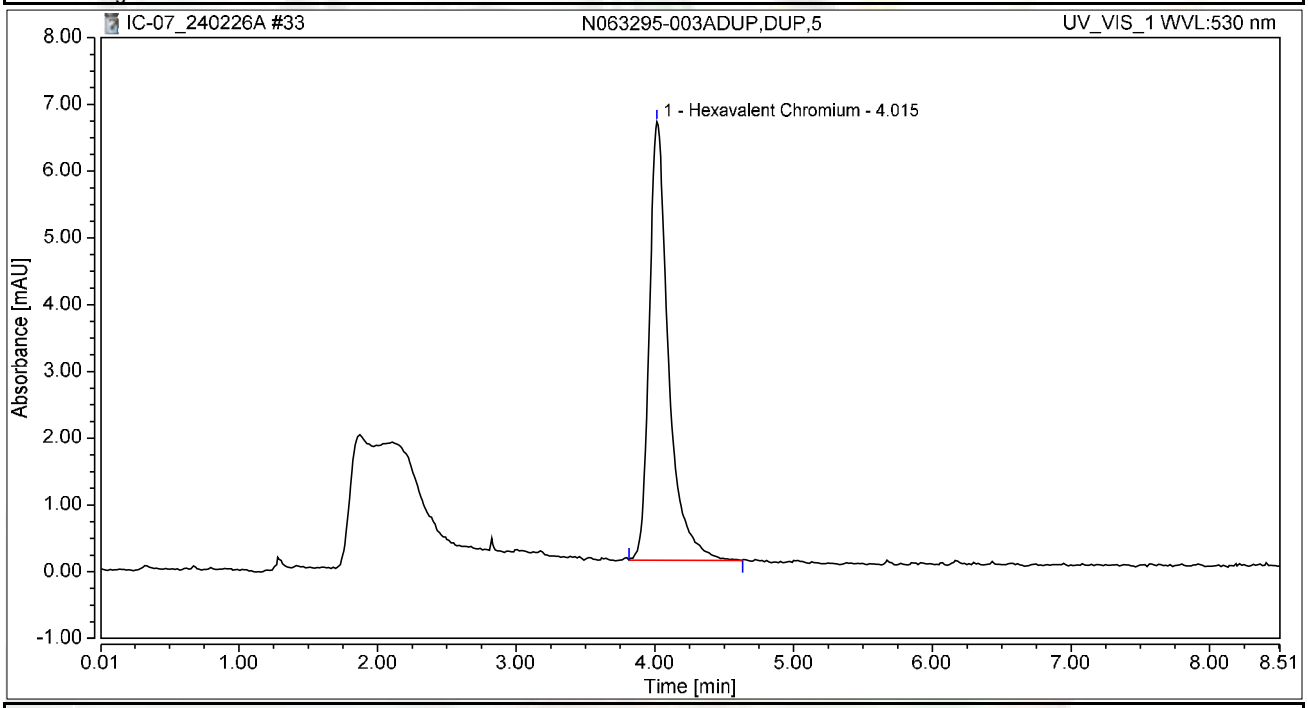
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.030	6.472	100.00	100.00	4.7872
Total:			**1.030**	**6.472**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003ADUP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 15:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

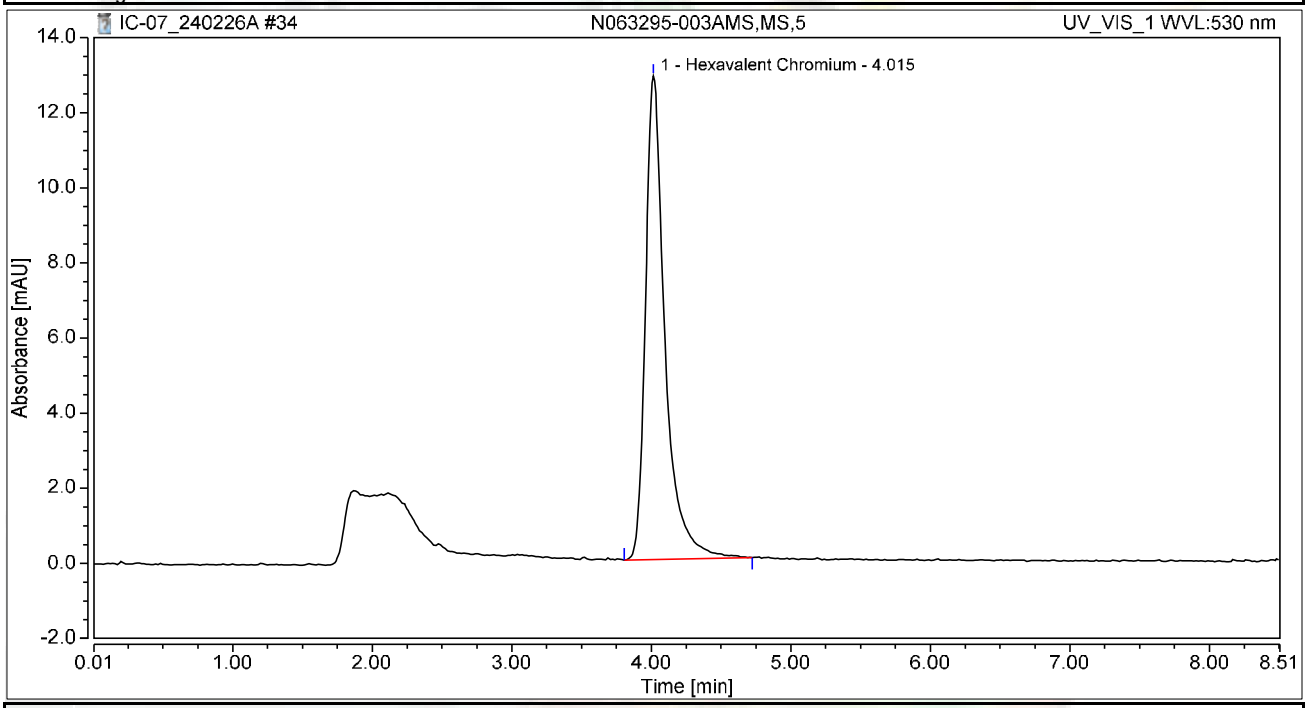
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.058	6.567	100.00	100.00	4.9182
Total:			**1.058**	**6.567**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 15:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

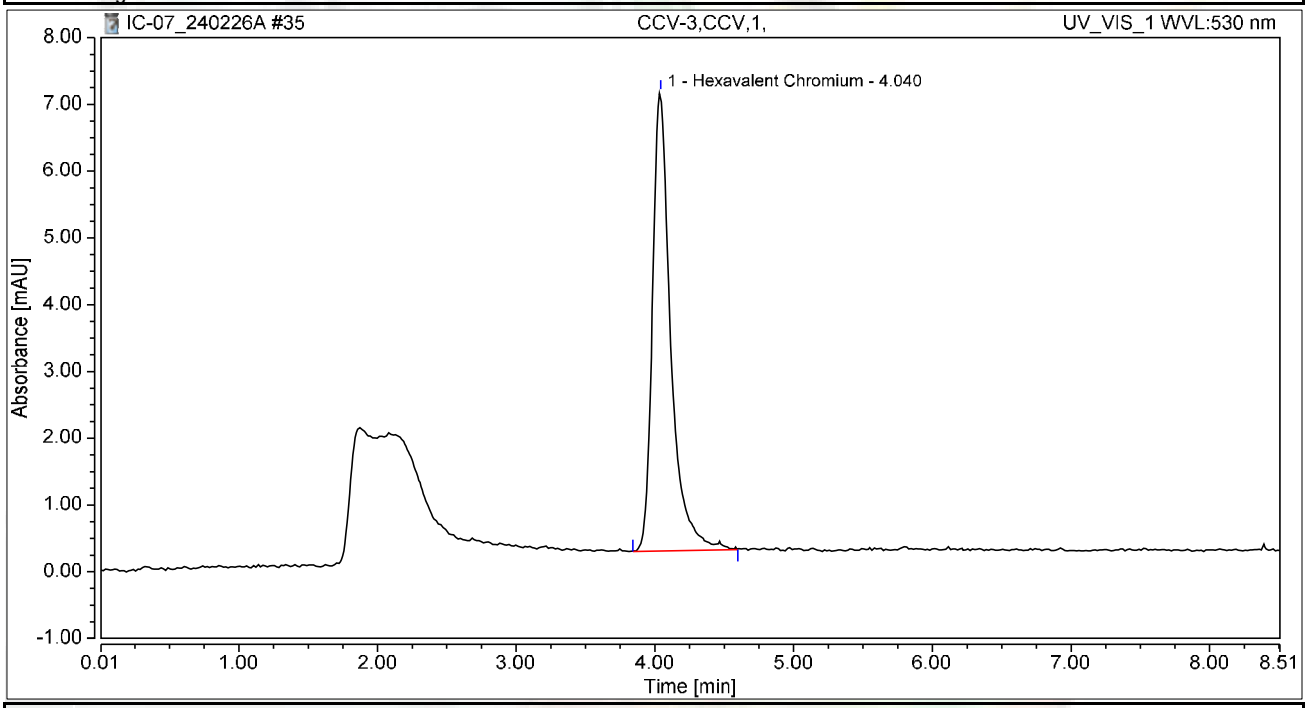
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	2.086	12.876	100.00	100.00	9.6979
Total:			**2.086**	**12.876**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 16:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

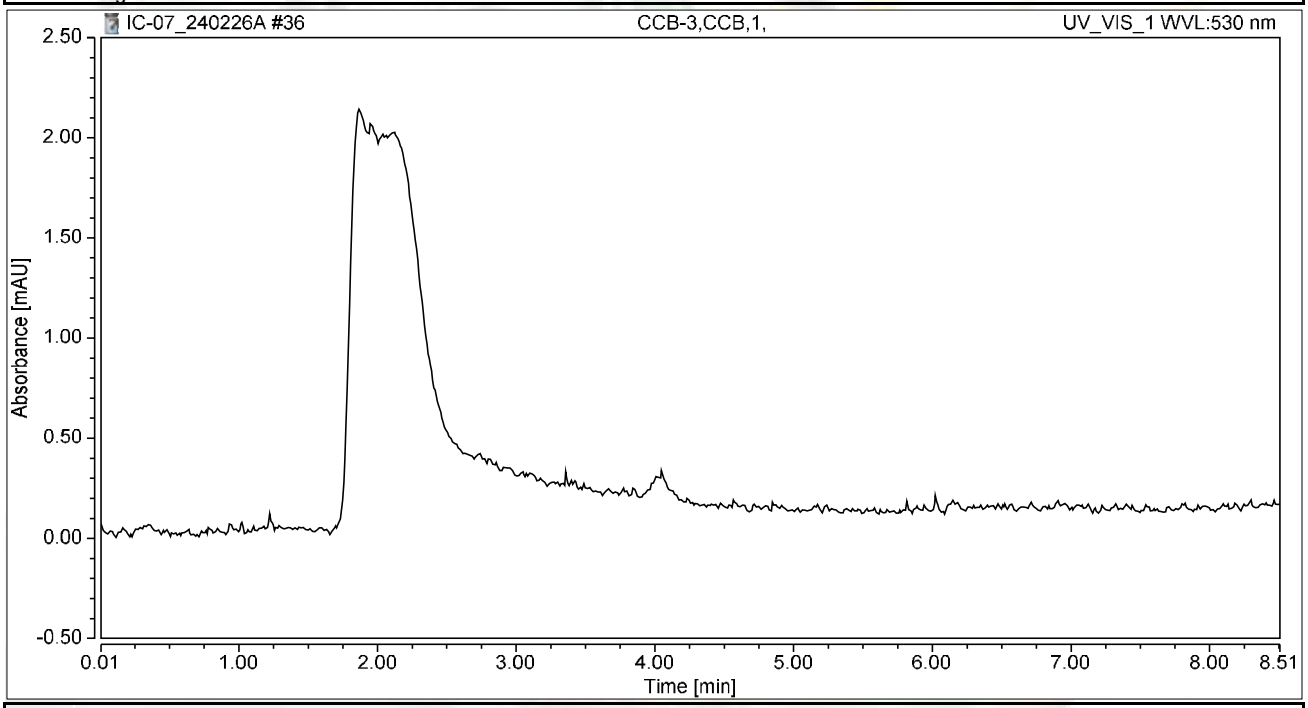
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.049	6.875	100.00	100.00	4.8750
Total:			**1.049**	**6.875**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 16:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

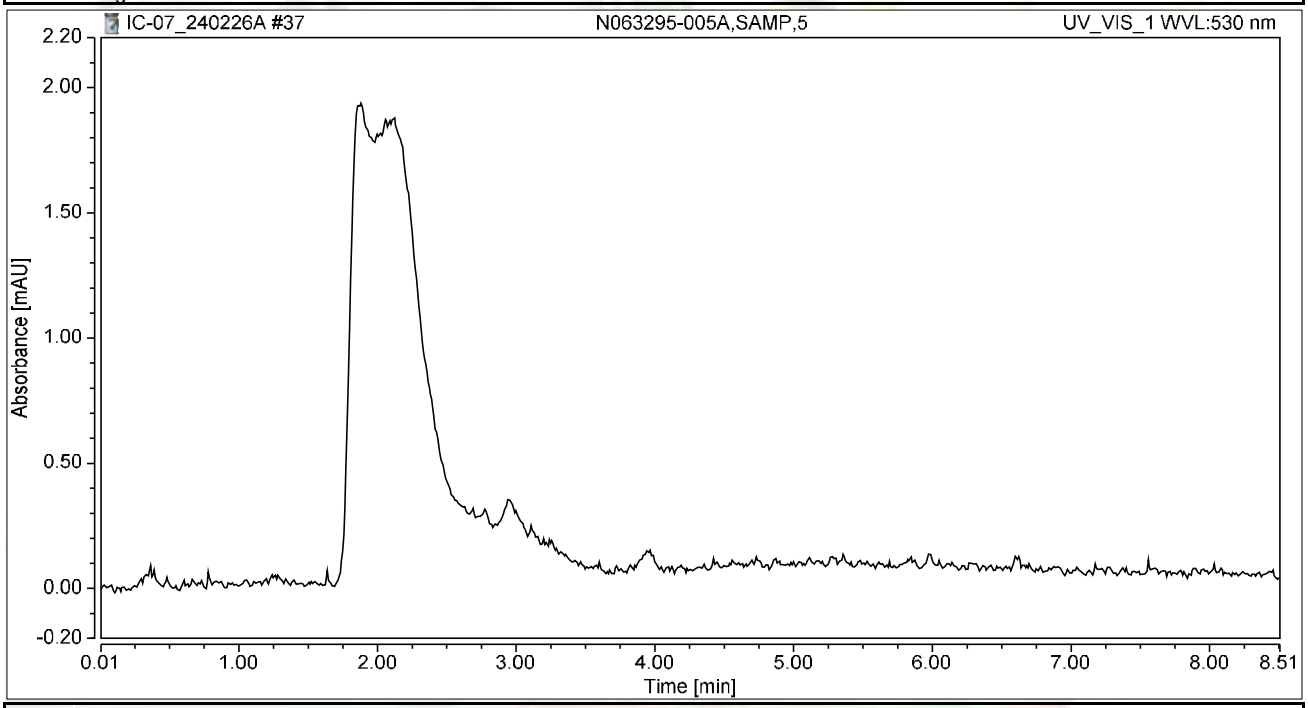
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 16:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

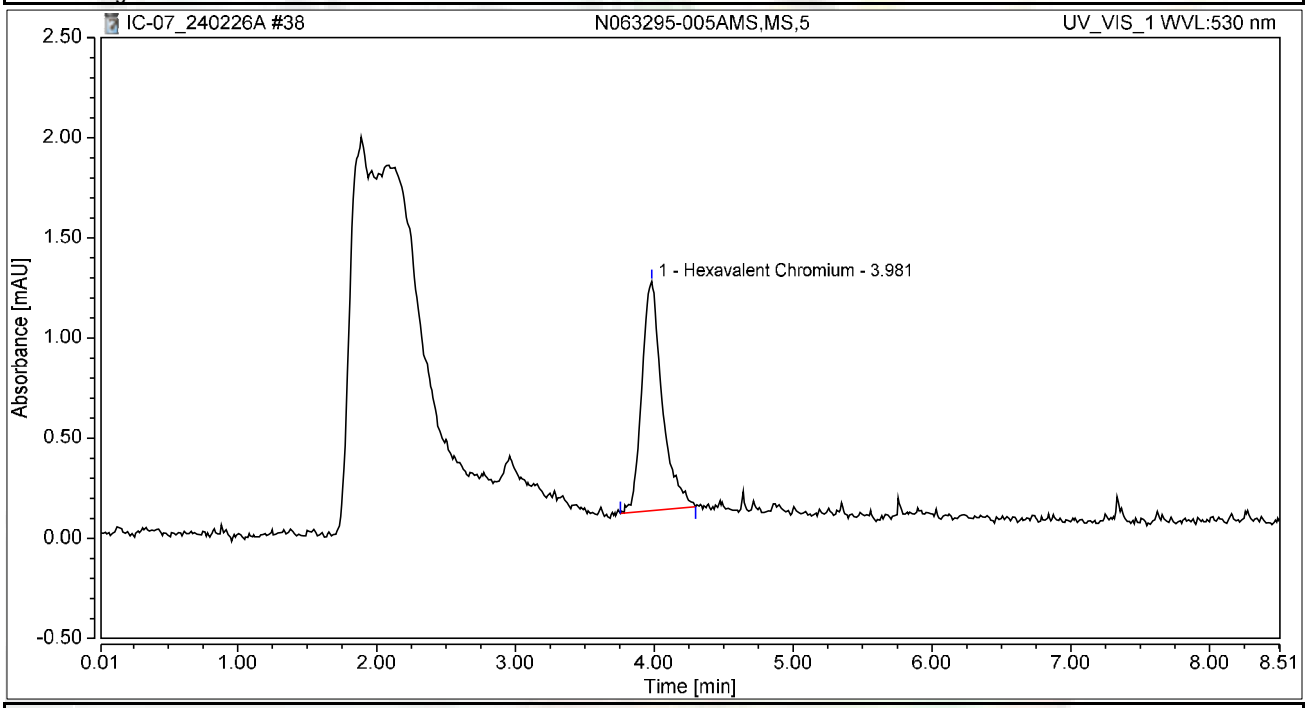
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-005AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 16:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

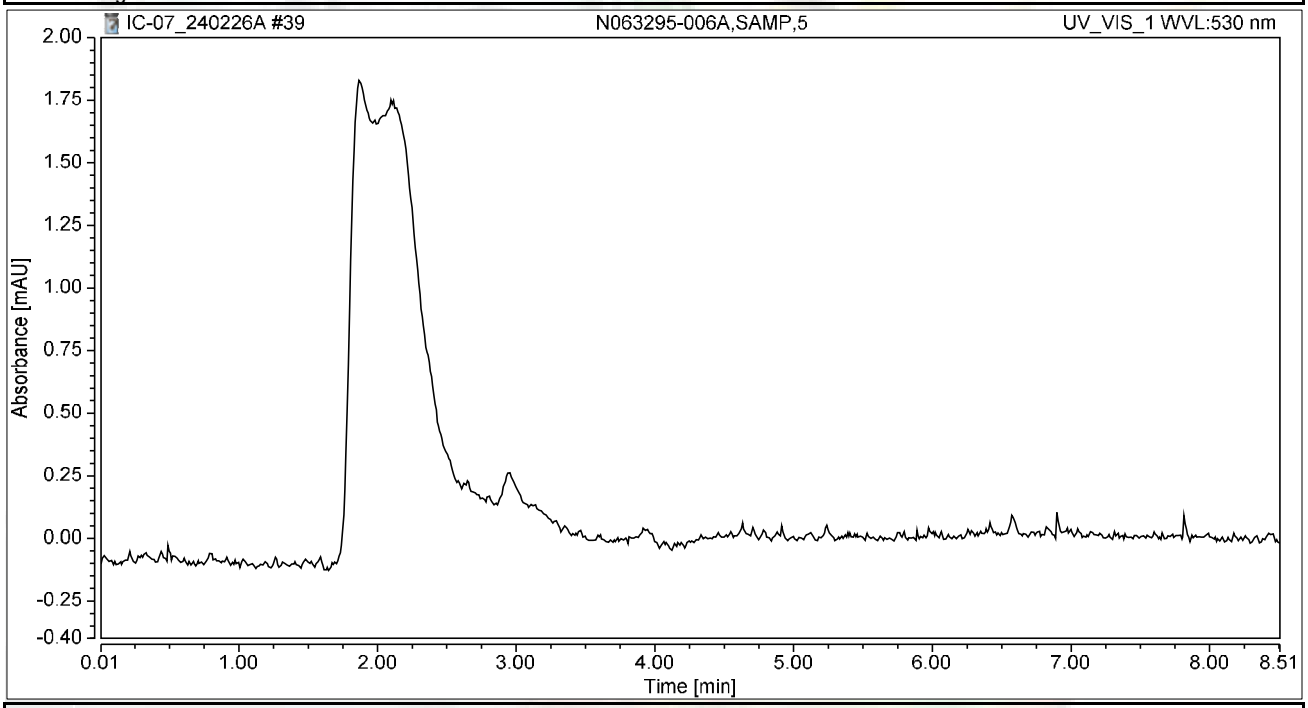
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.195	1.144	100.00	100.00	0.9085
Total:			**0.195**	**1.144**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-006A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 16:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

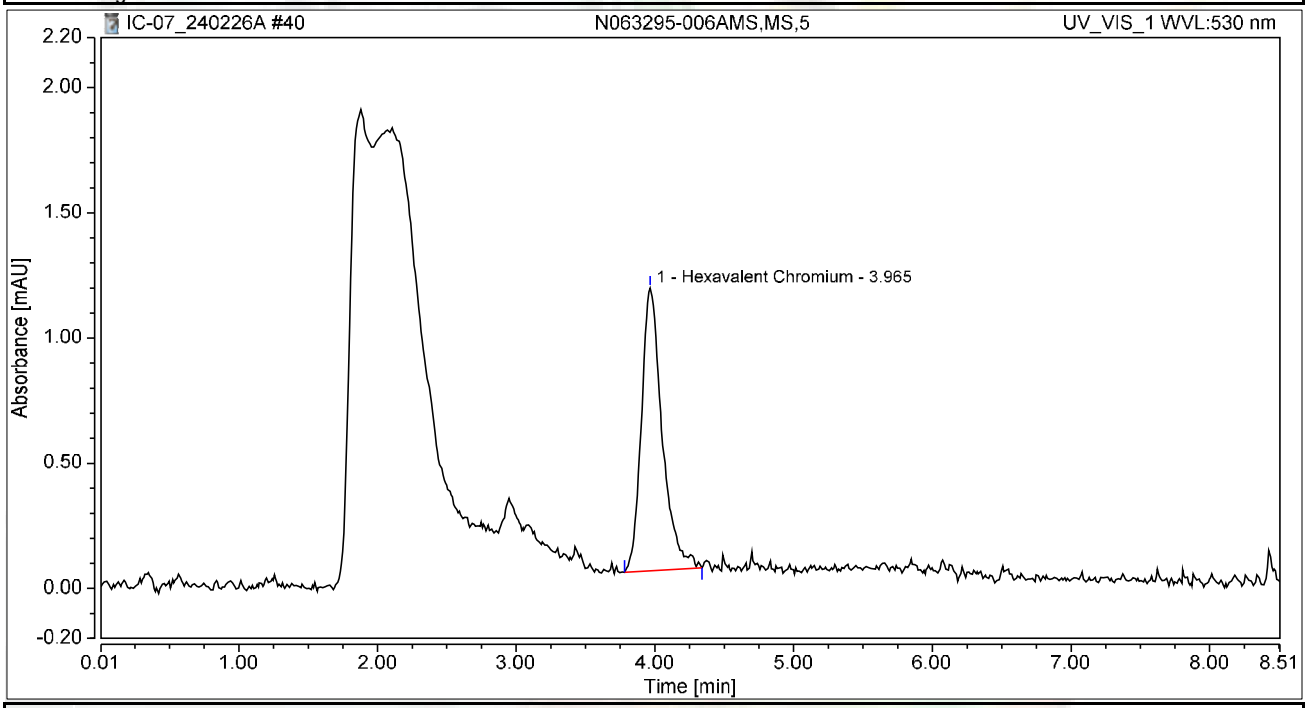
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-006AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 16:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

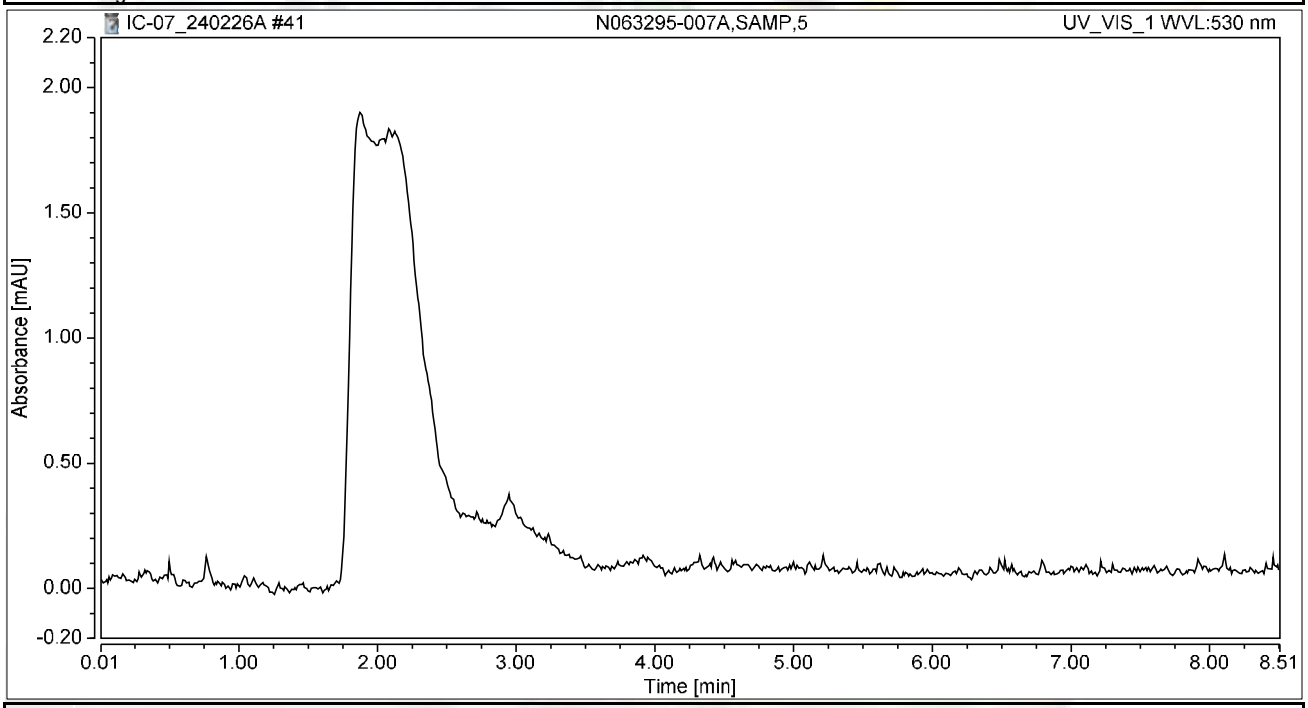
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.196	1.130	100.00	100.00	0.9111
Total:			**0.196**	**1.130**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-007A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

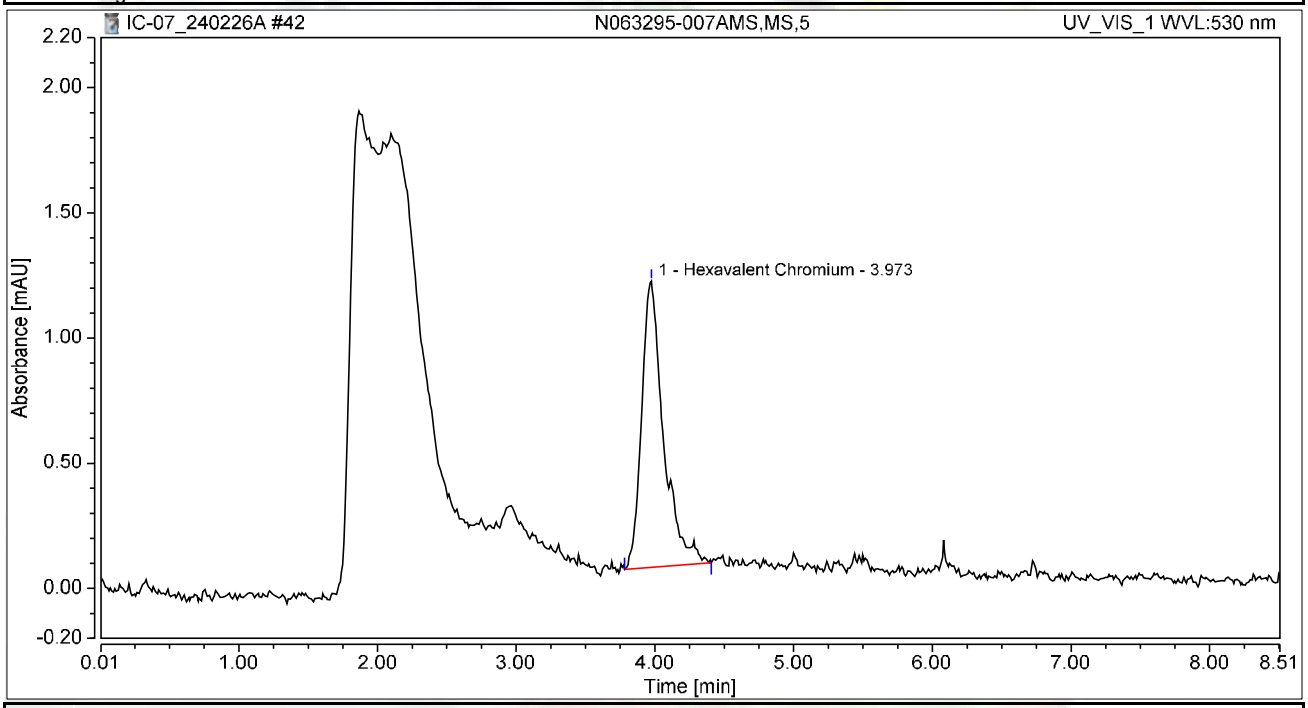
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-007AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

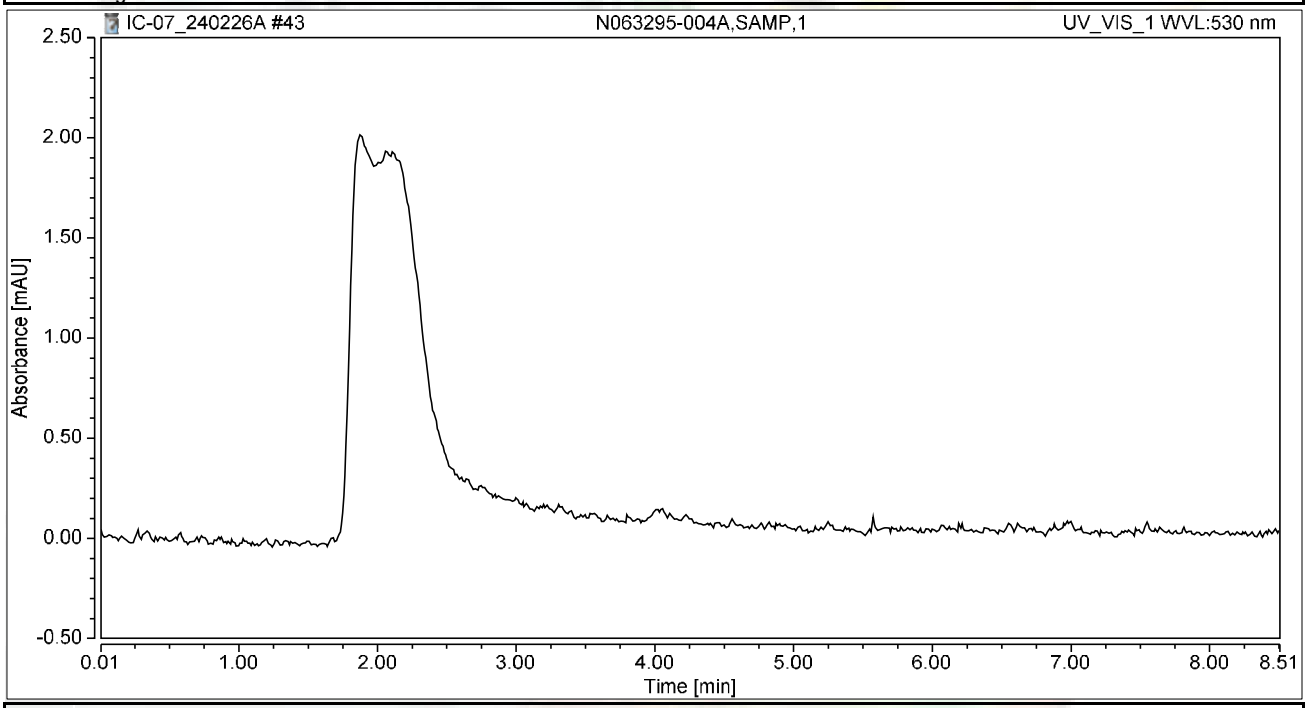
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.209	1.143	100.00	100.00	0.9734
Total:			**0.209**	**1.143**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

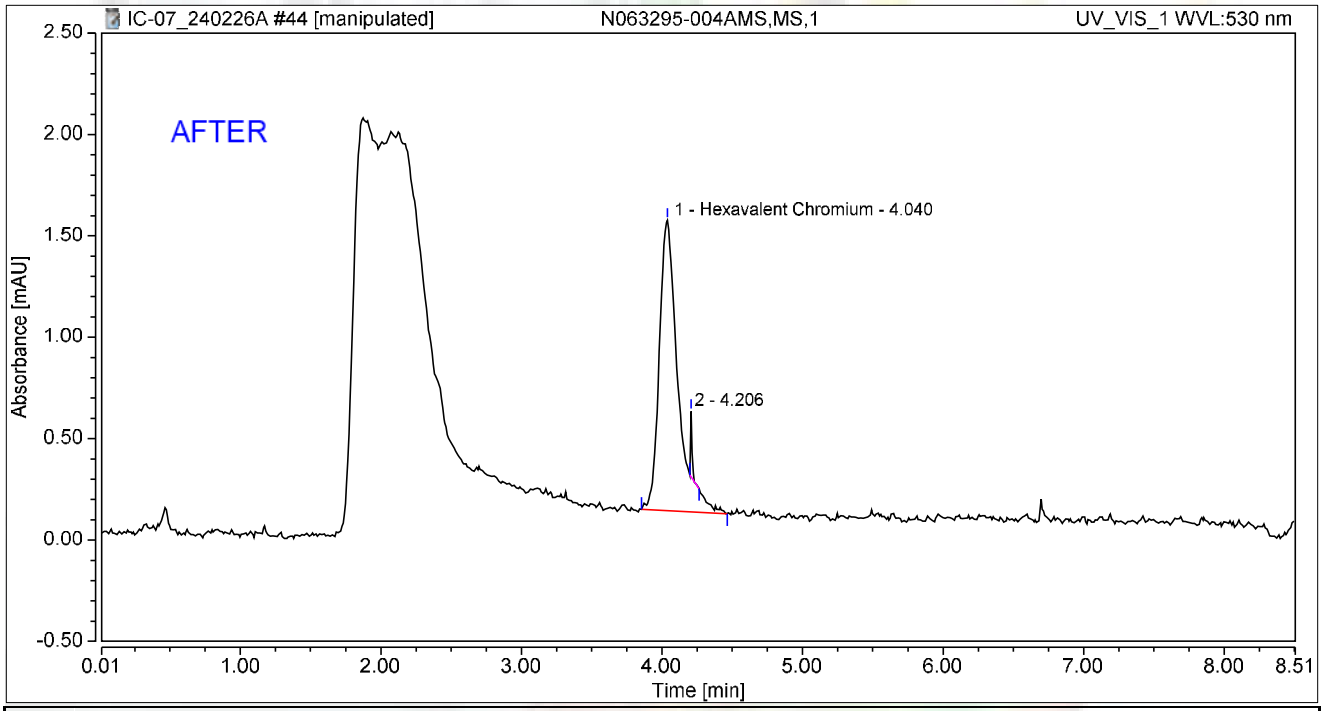
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-004AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.219	1.431	98.11	81.61	1.0195
2		4.206	0.004	0.323	1.89	18.39	n.a.
Total:			**0.224**	**1.754**	**100.00**	**100.00**	

Reviewed by:

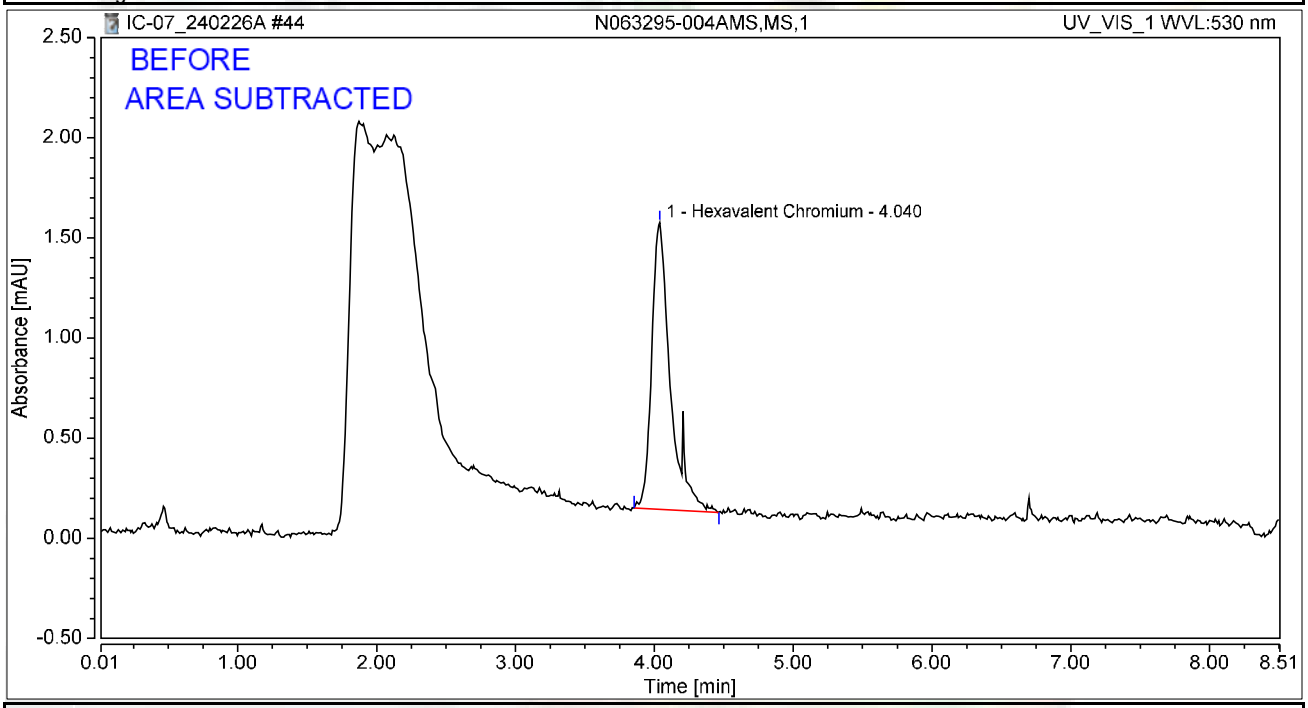
JRB 2/29/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063295-004AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

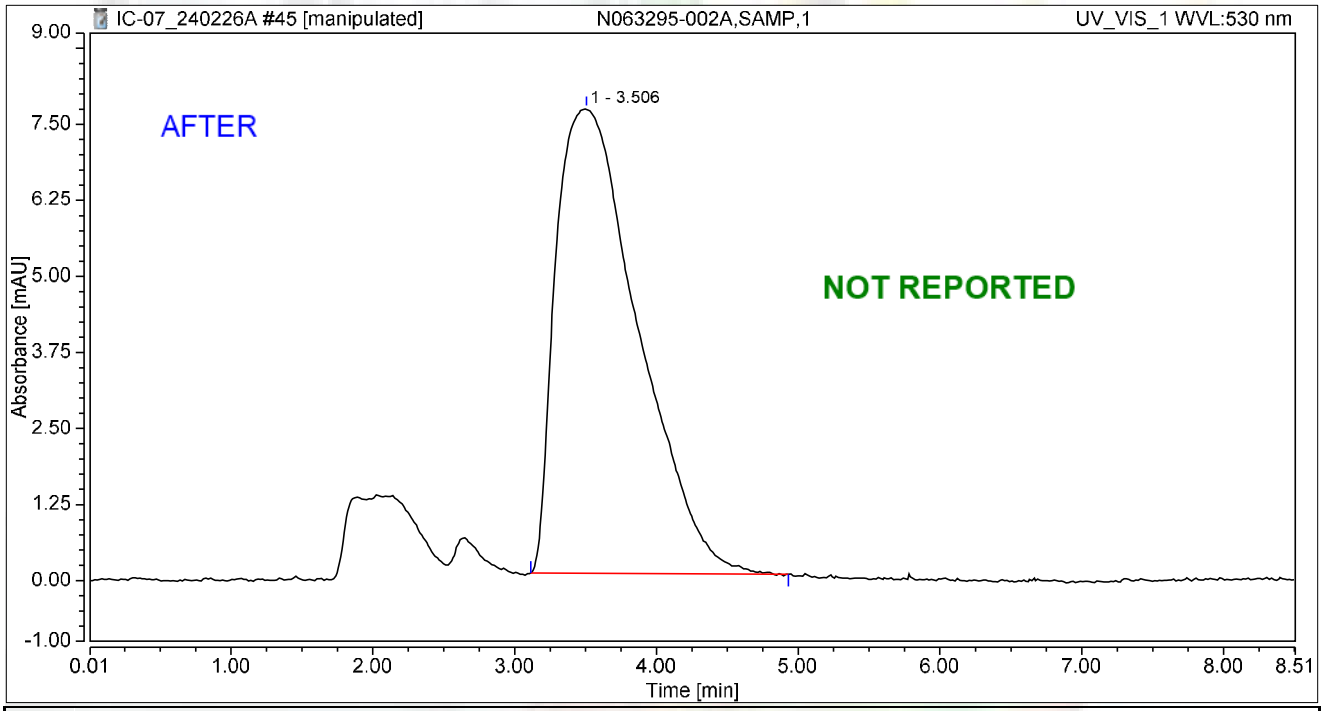
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.224	1.431	100.00	100.00	1.0391
Total:			**0.224**	**1.431**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

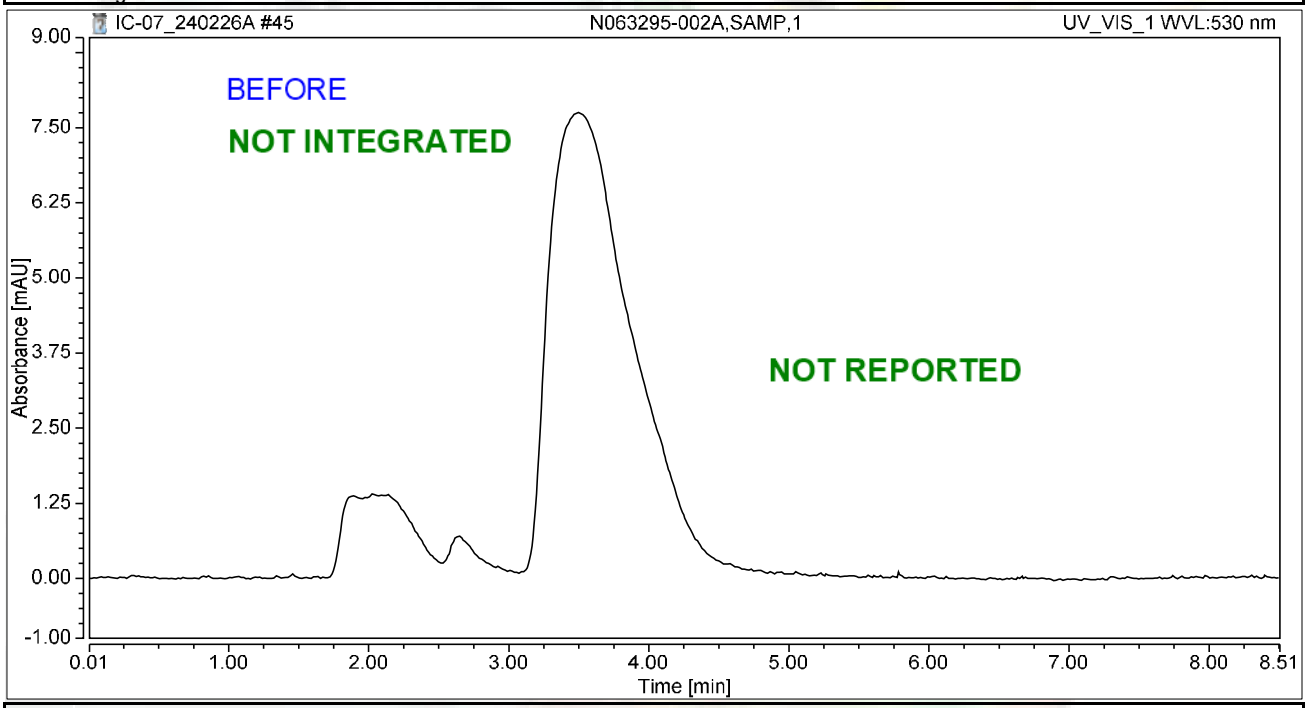
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.506	5.137	7.645	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**5.137**	**7.645**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

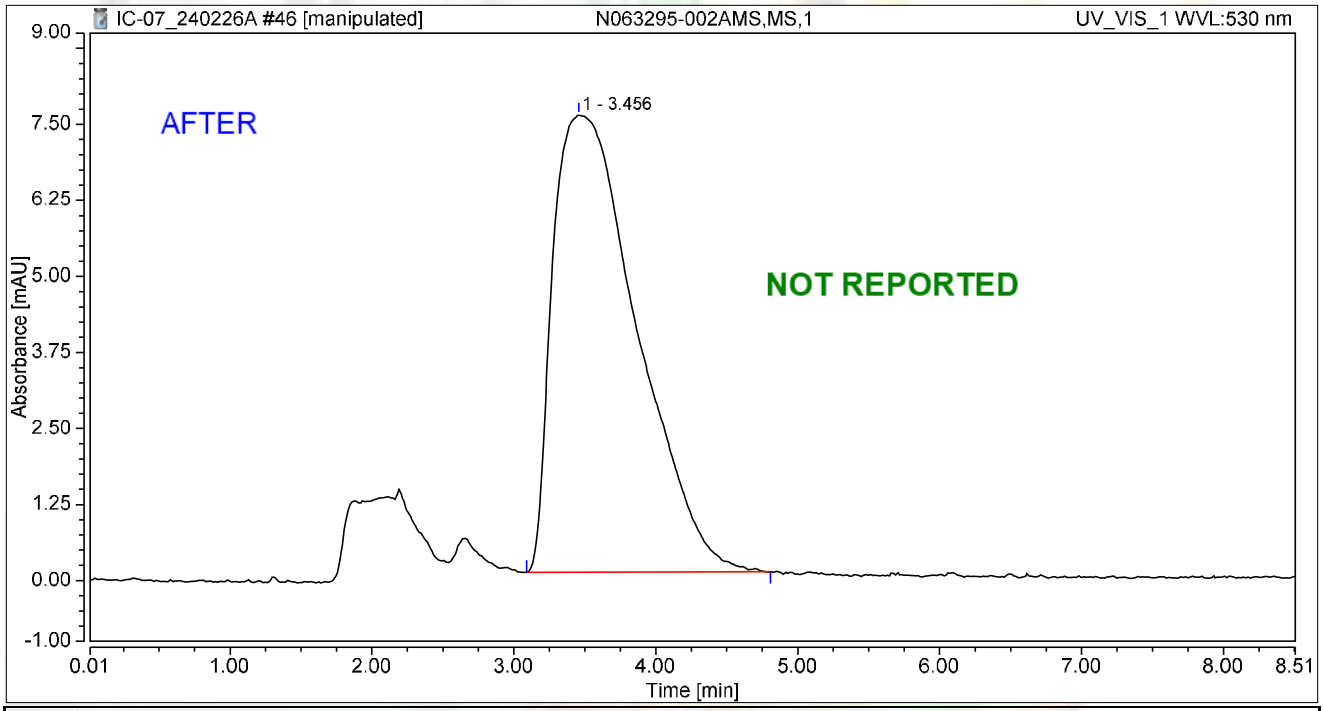
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

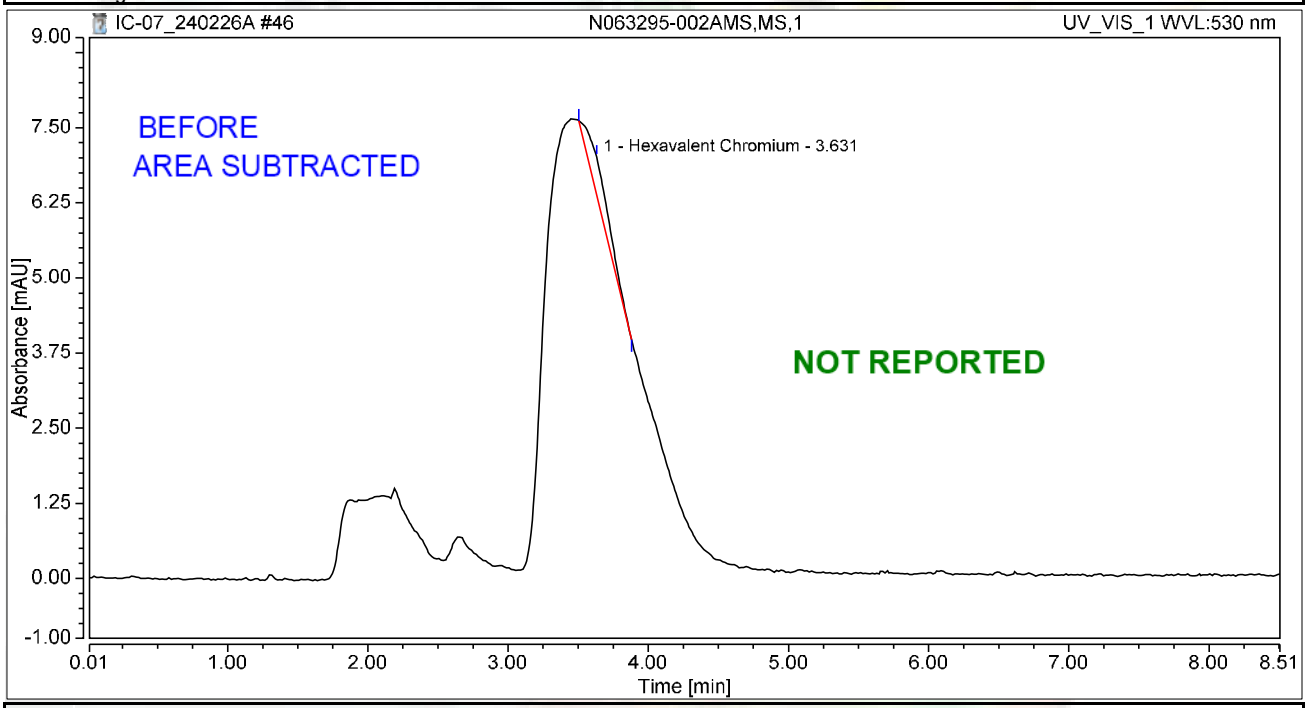
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.456	5.153	7.514	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**5.153**	**7.514**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 17:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

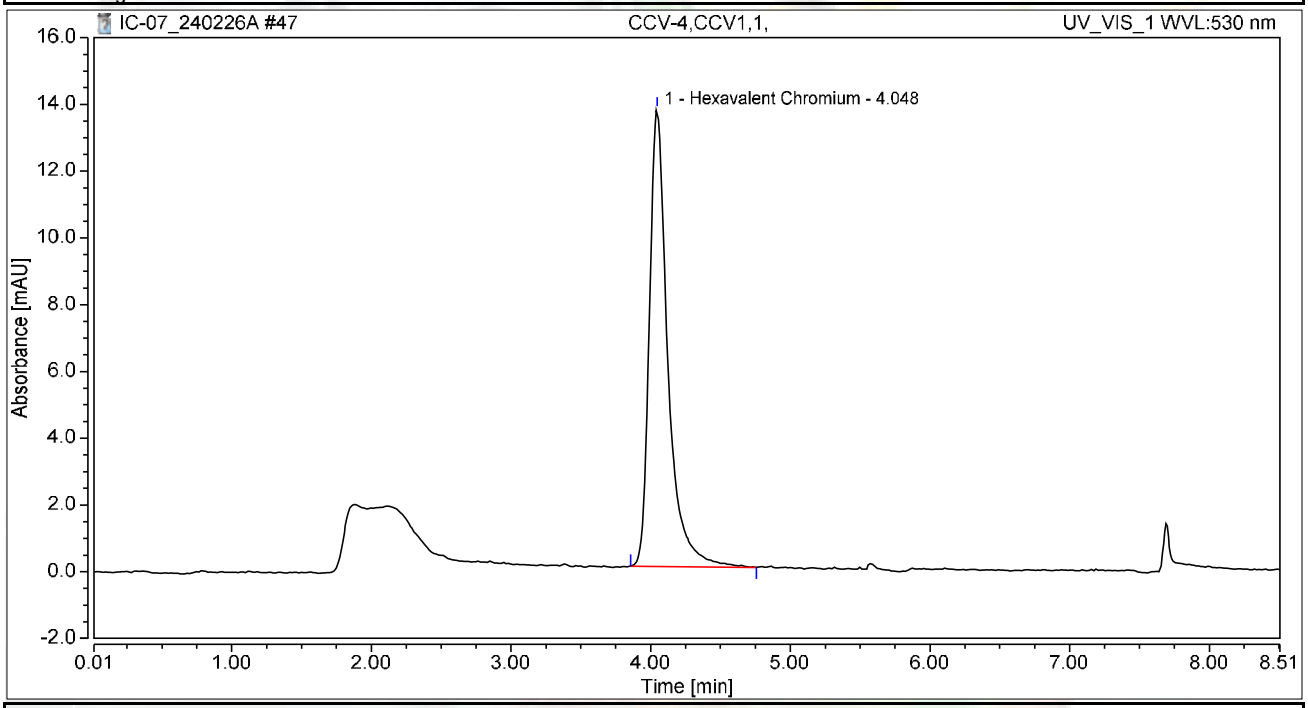
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.631	0.118	0.612	100.00	100.00	0.5478
Total:			**0.118**	**0.612**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 18:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

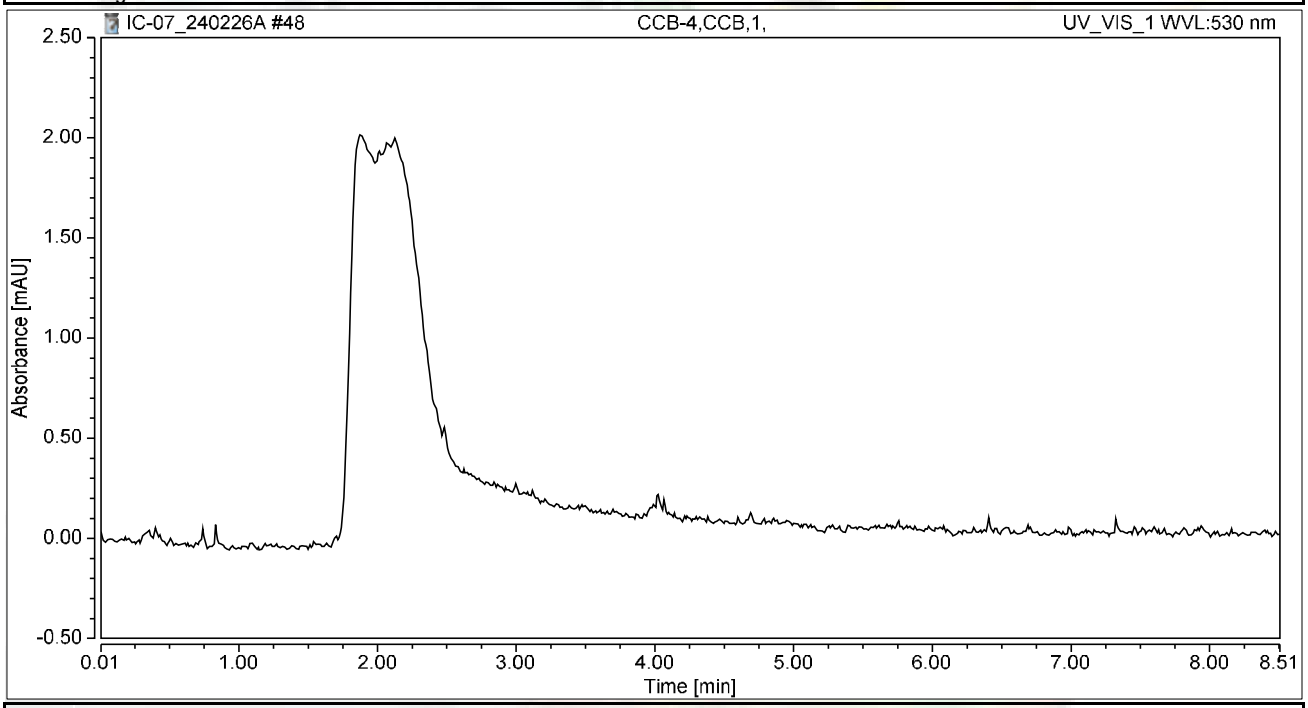
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	2.106	13.699	100.00	100.00	9.7906
Total:			**2.106**	**13.699**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 18:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

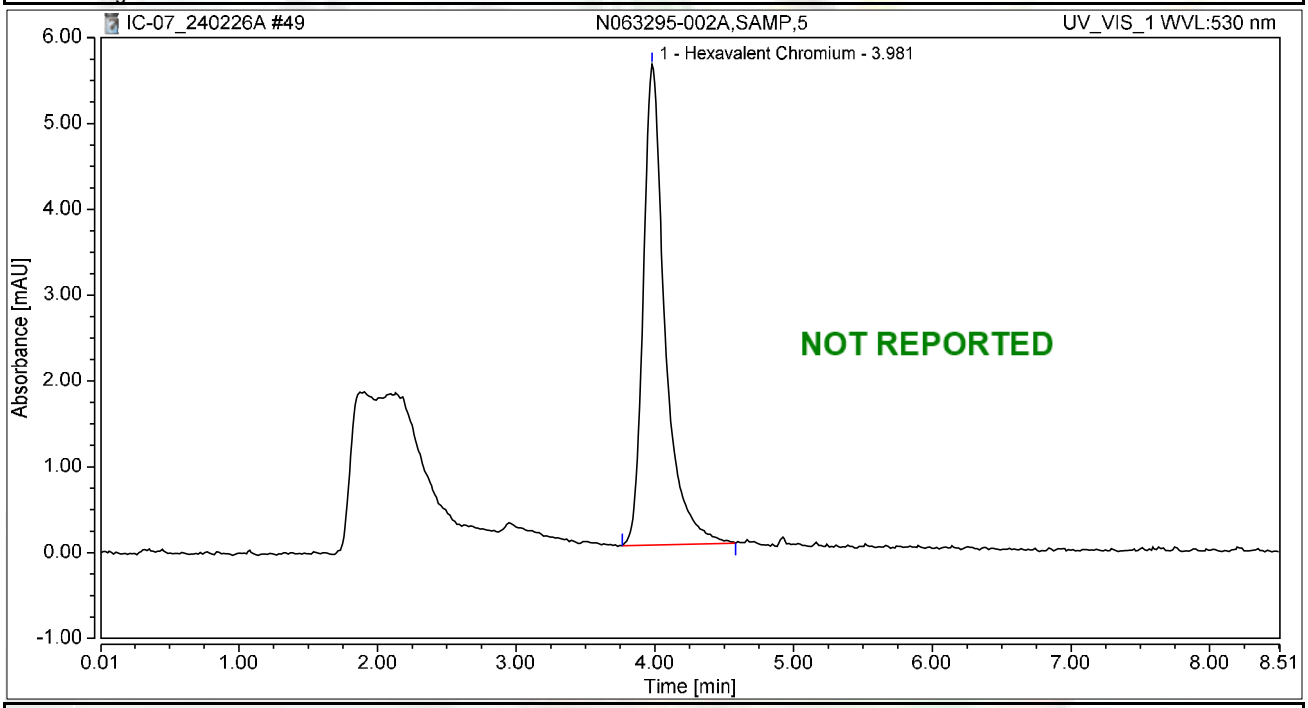
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 18:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

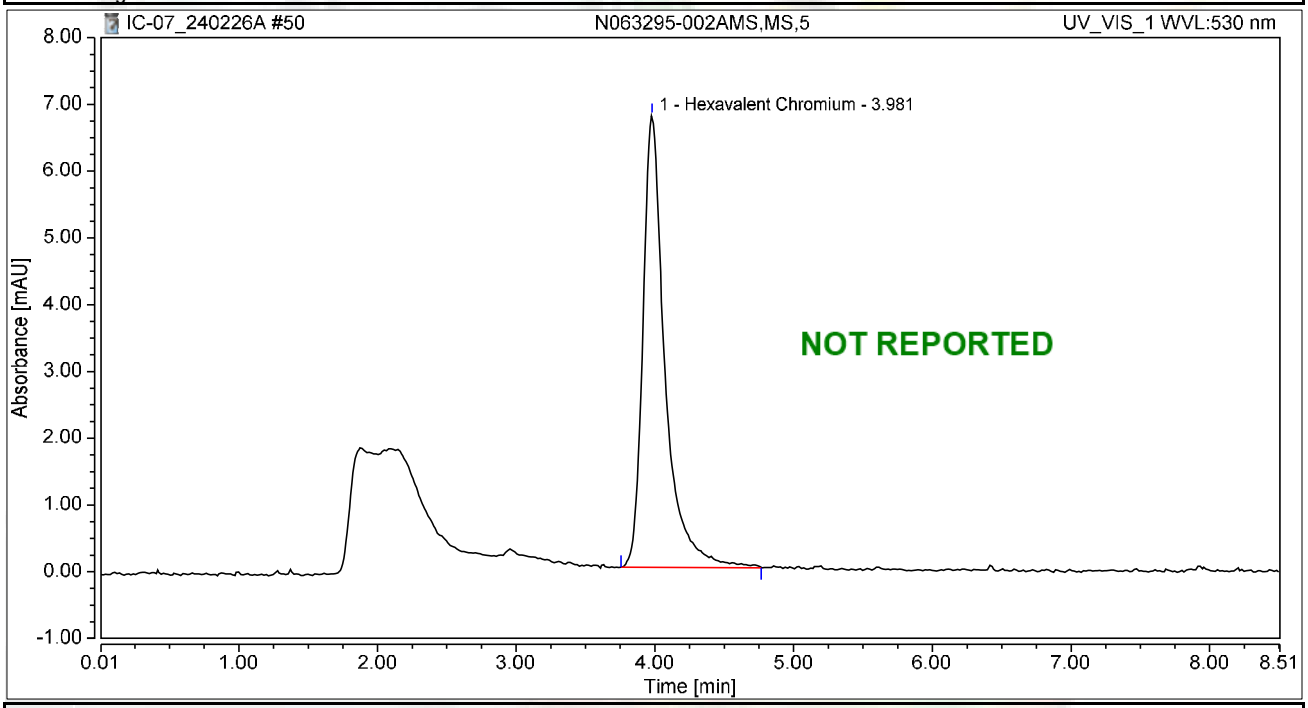
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.018	5.597	100.00	100.00	4.7311
Total:			**1.018**	**5.597**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 18:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

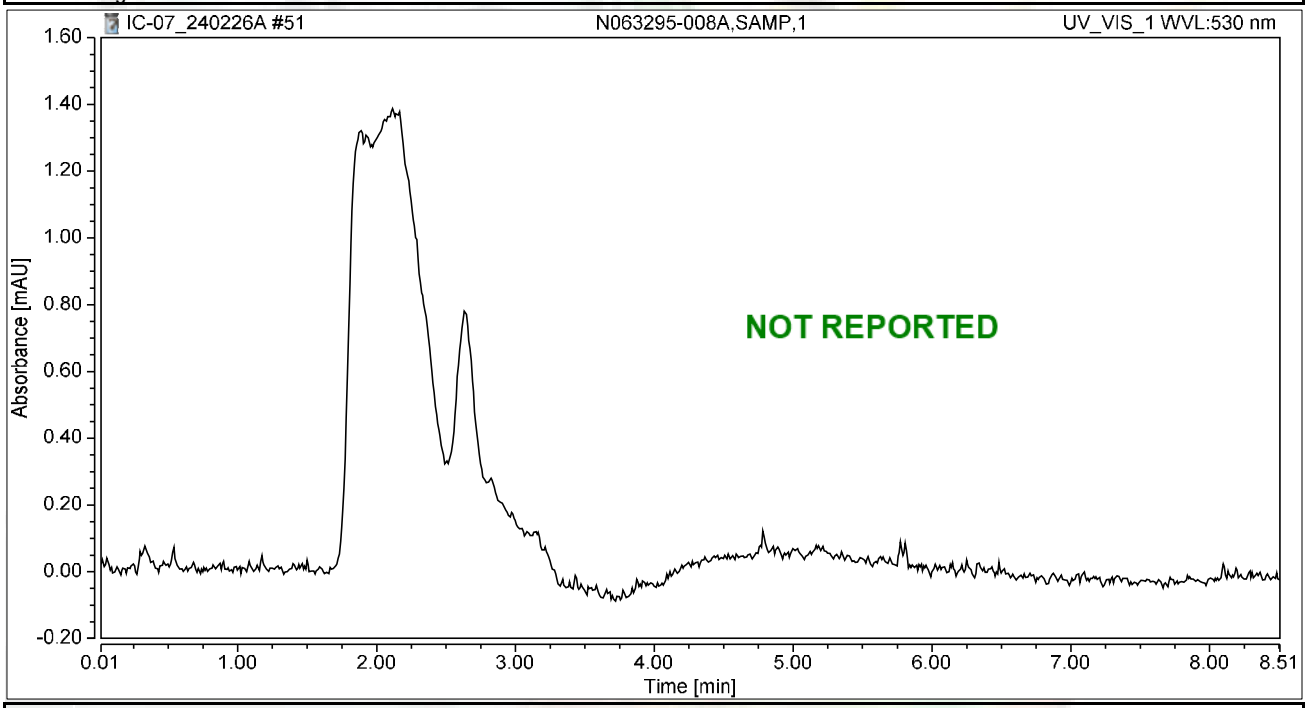
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.250	6.768	100.00	100.00	5.8122
Total:			**1.250**	**6.768**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-008A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 18:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

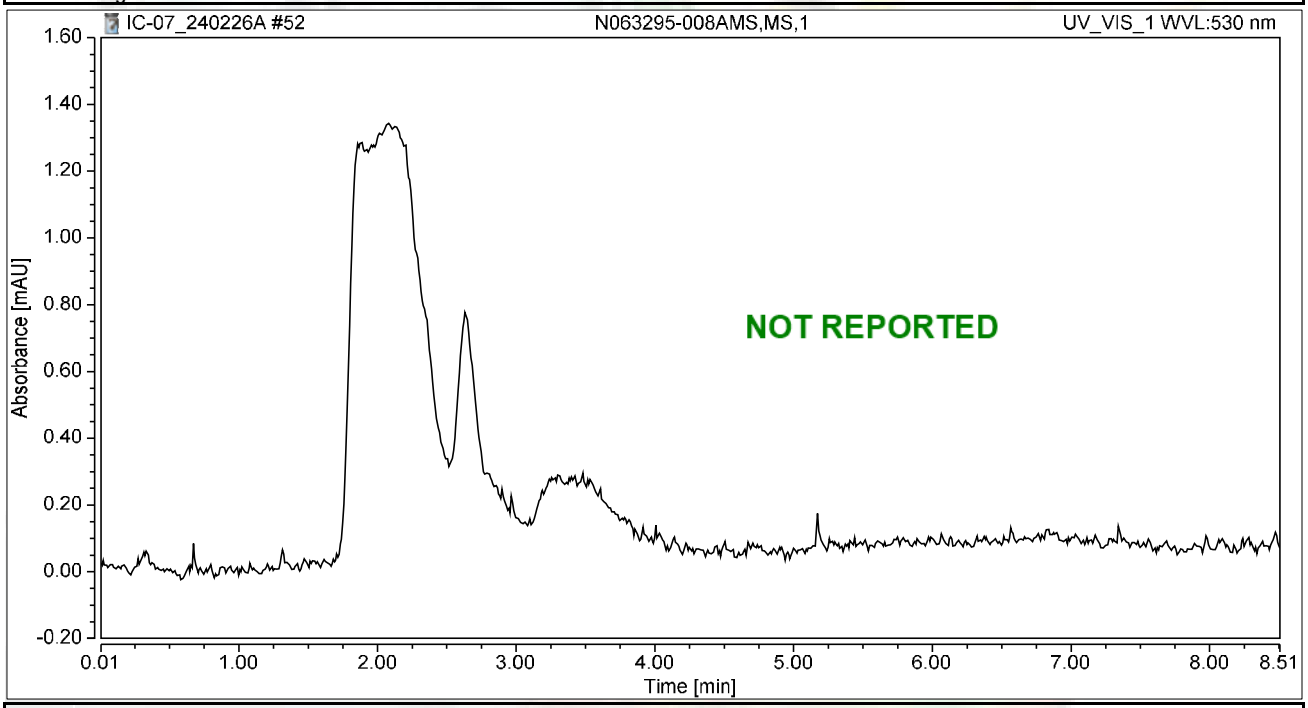
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 18:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

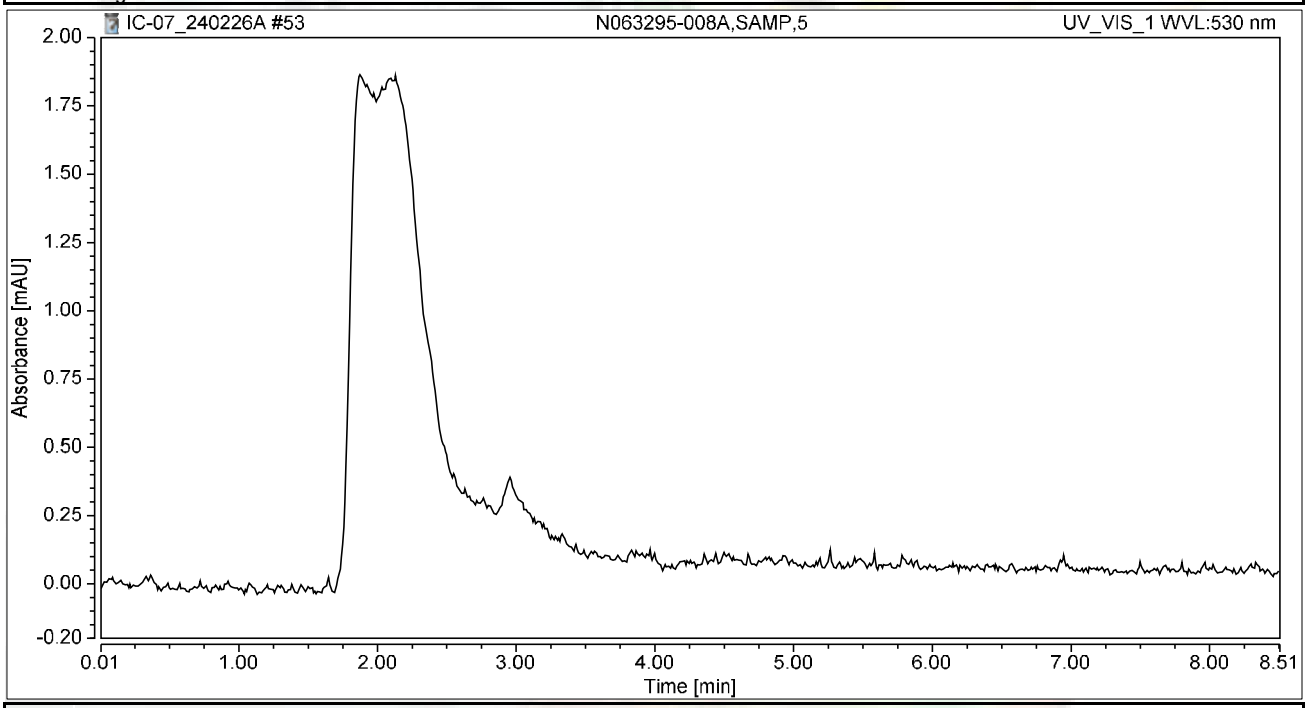
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-008A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 18:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

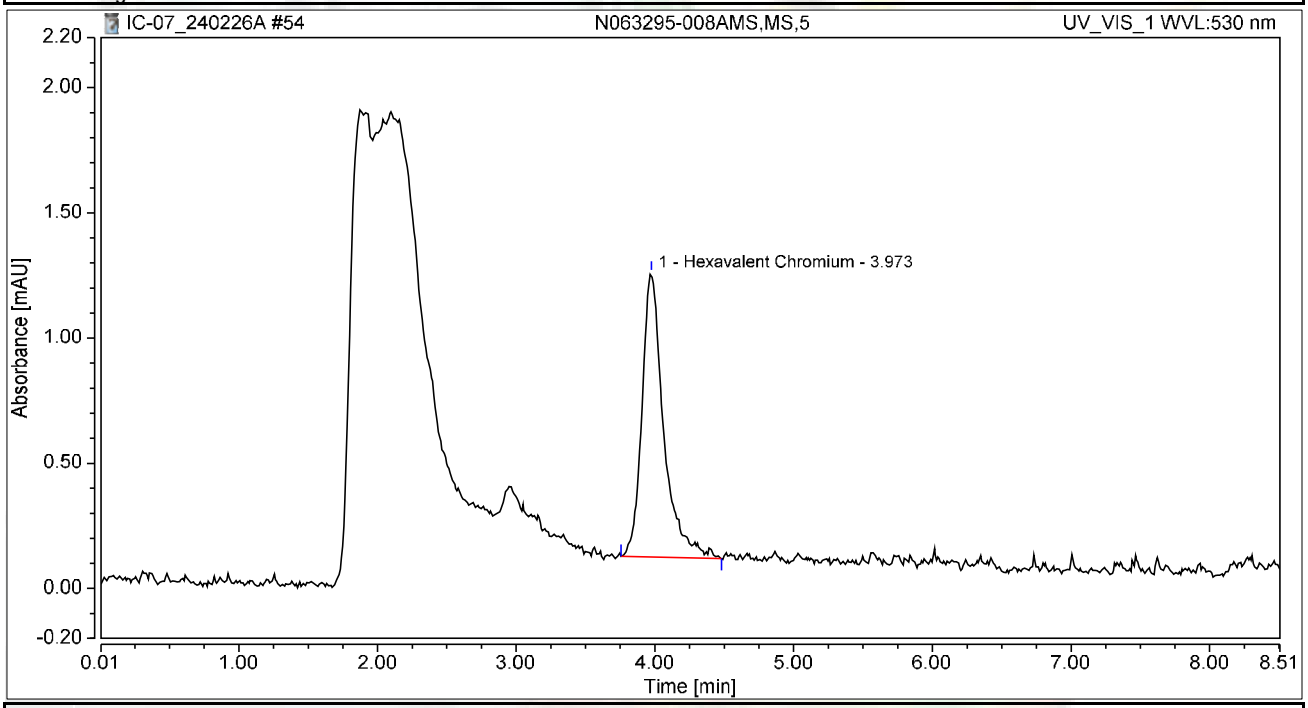
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-008AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 19:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

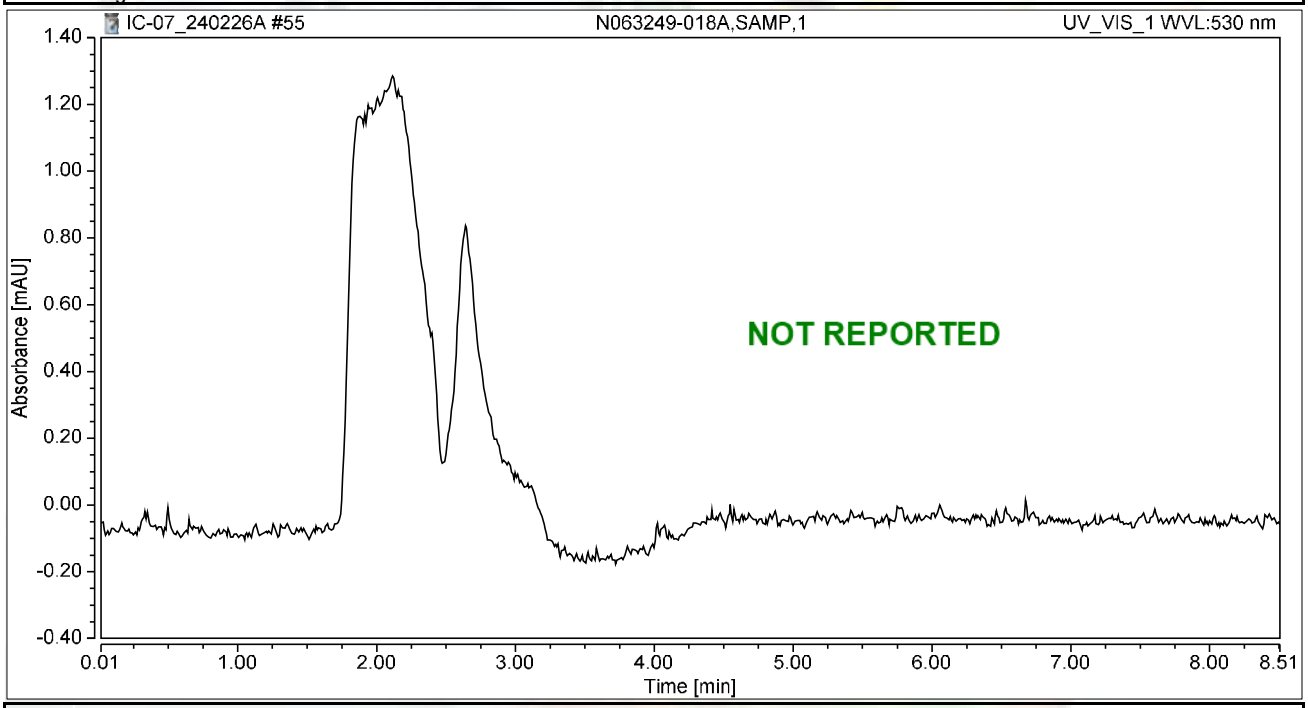
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.206	1.134	100.00	100.00	0.9557
Total:			**0.206**	**1.134**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-018A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 19:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

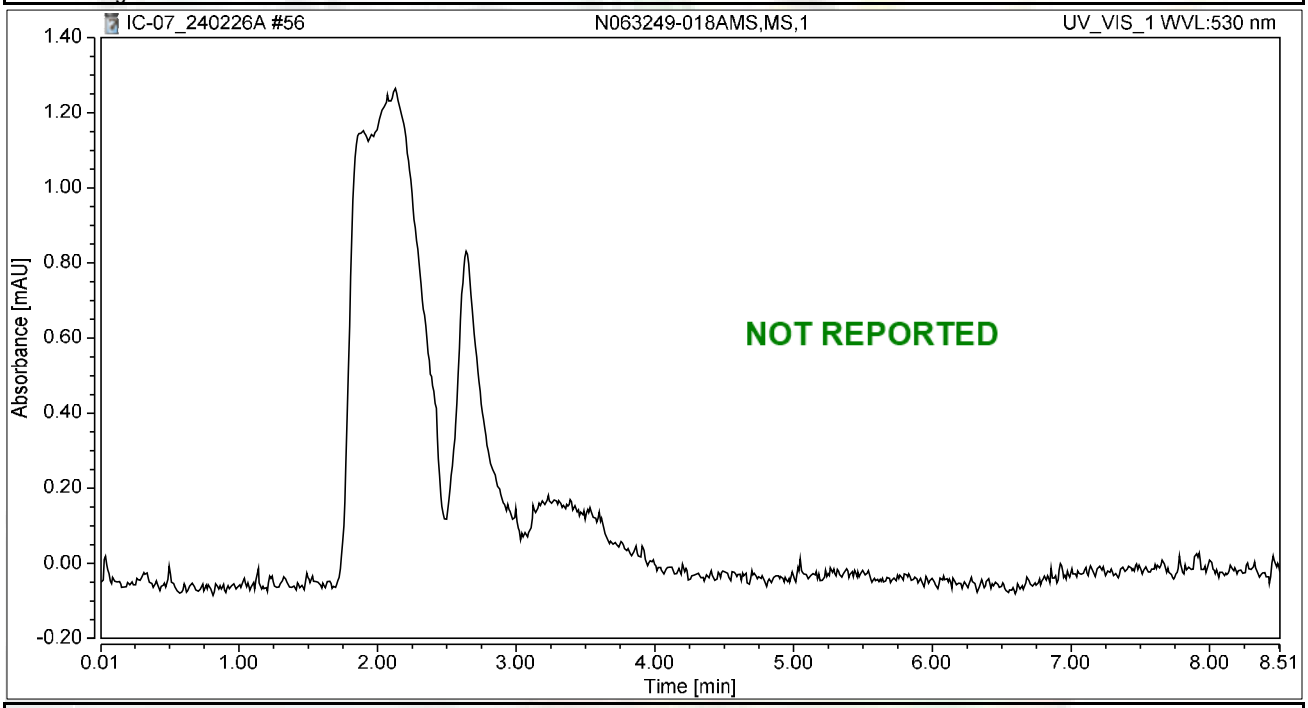
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-018AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 19:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

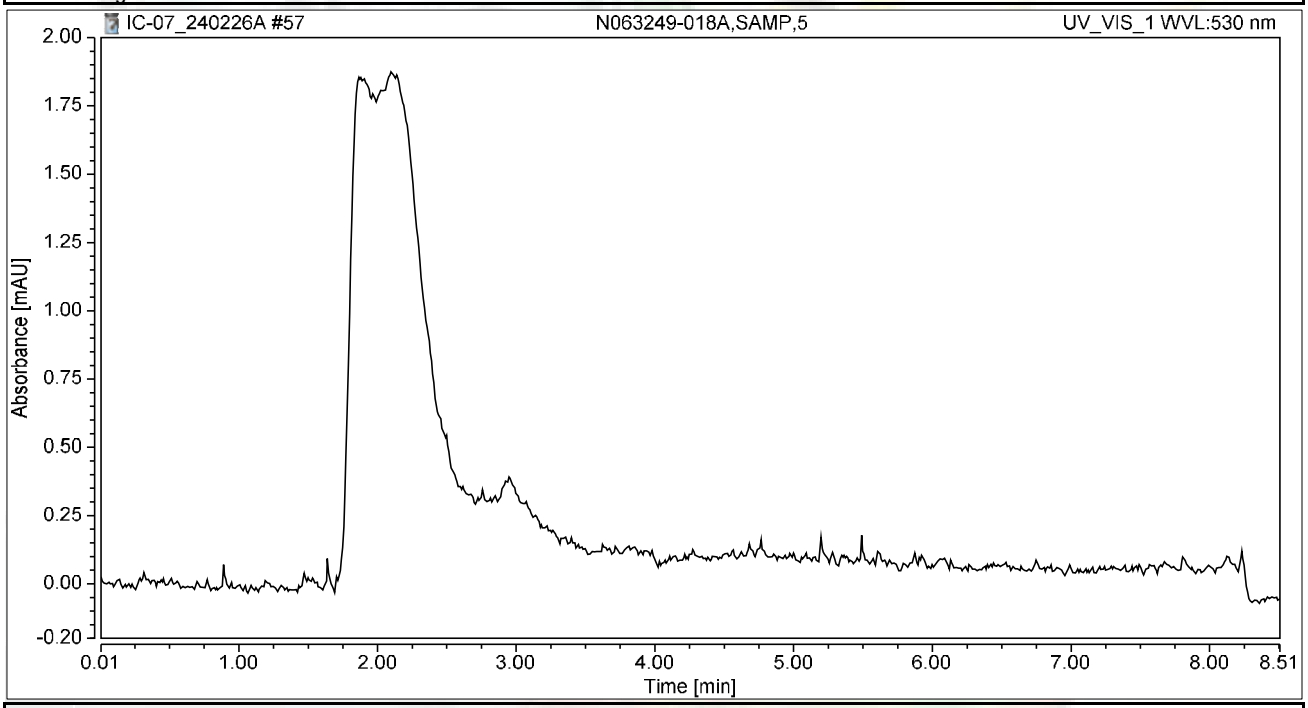
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-018A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 19:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

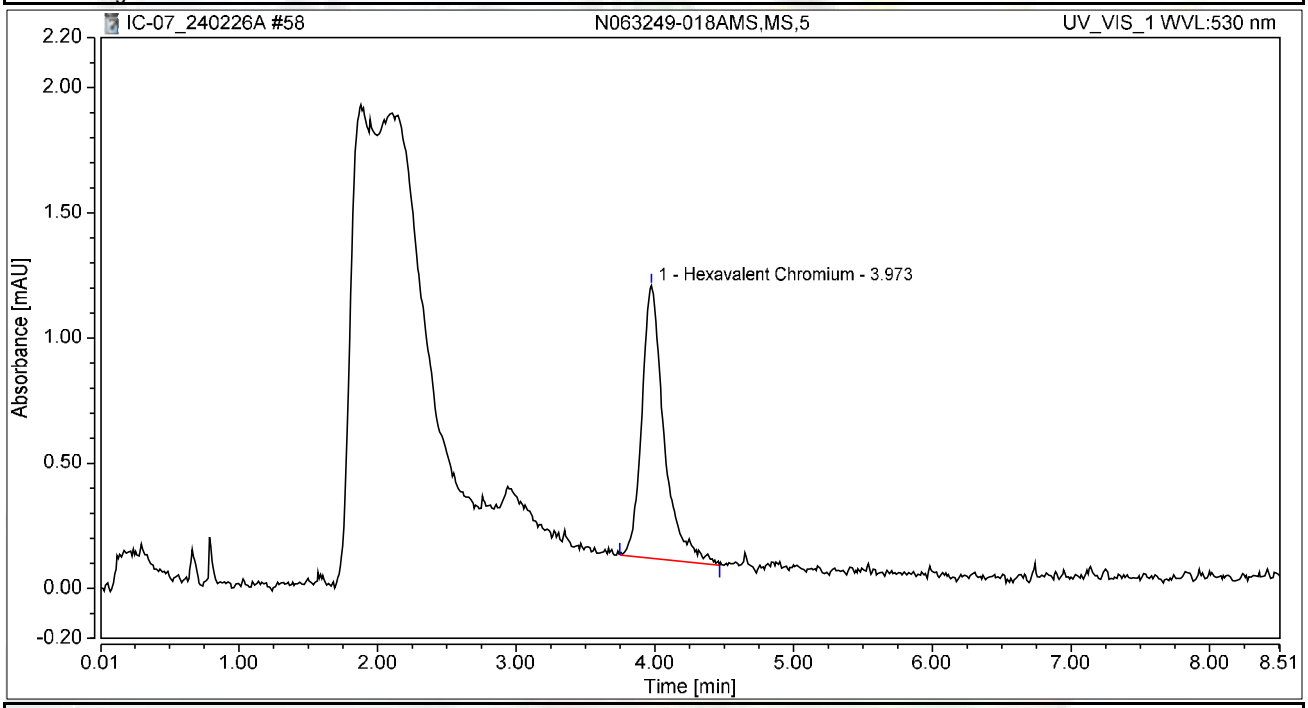
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-018AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 19:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

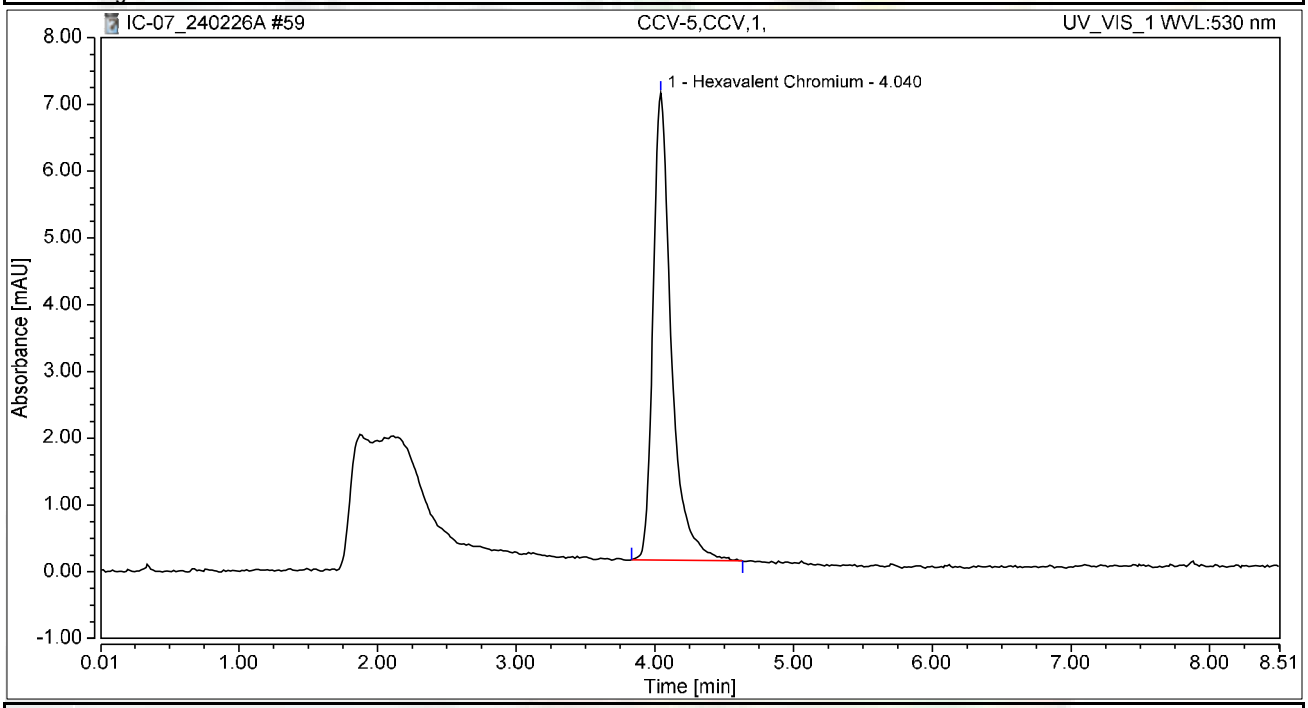
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.202	1.089	100.00	100.00	0.9411
Total:			**0.202**	**1.089**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 19:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

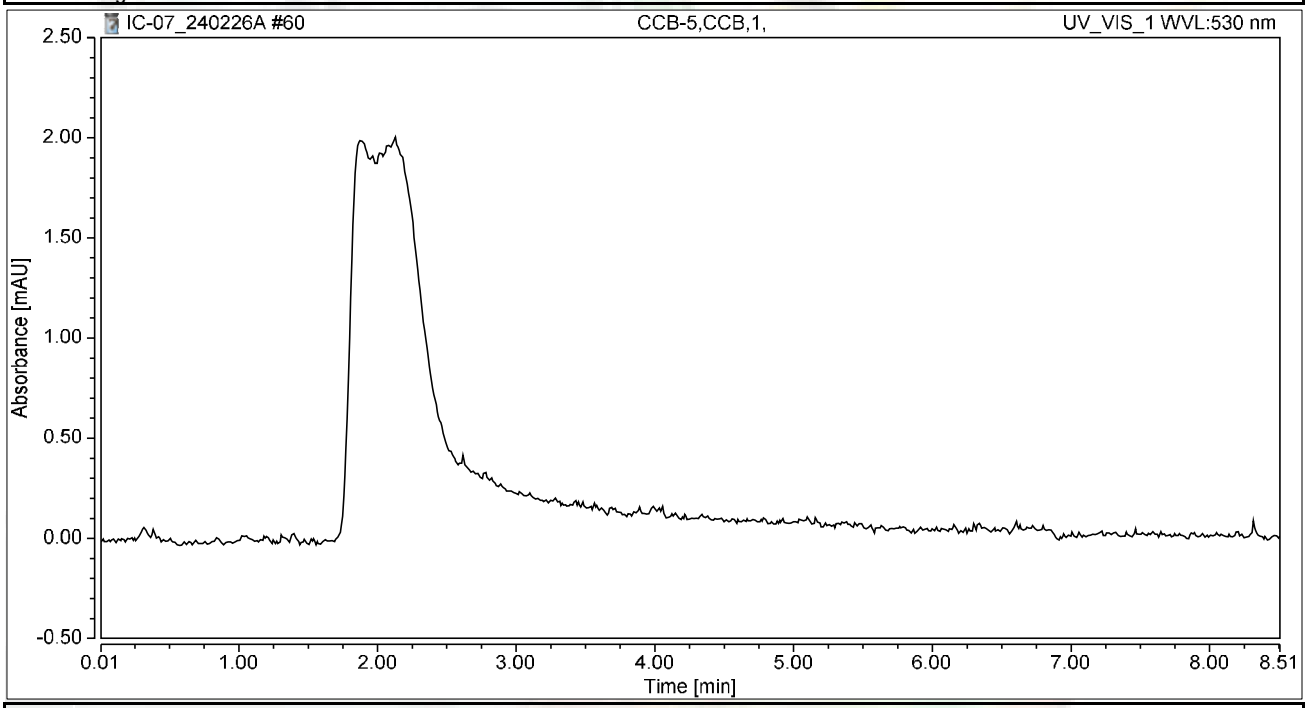
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.068	6.997	100.00	100.00	4.9638
Total:			**1.068**	**6.997**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 20:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

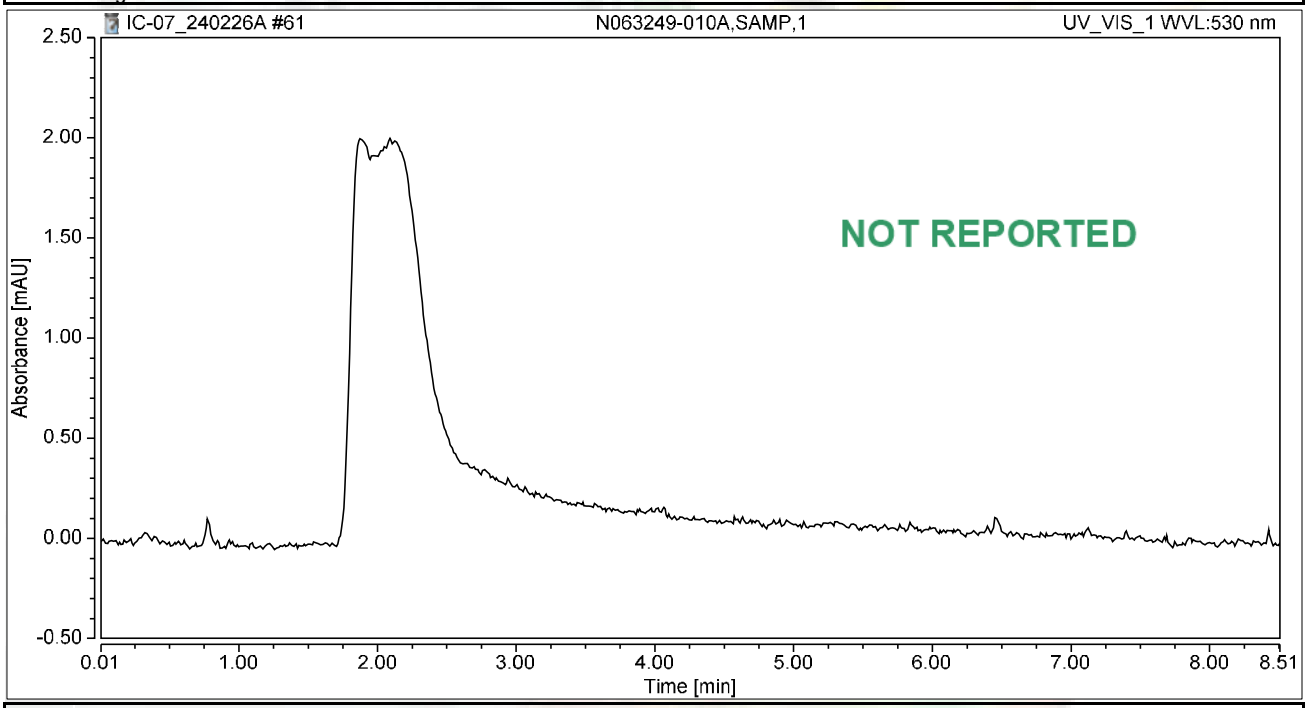
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-010A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 20:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

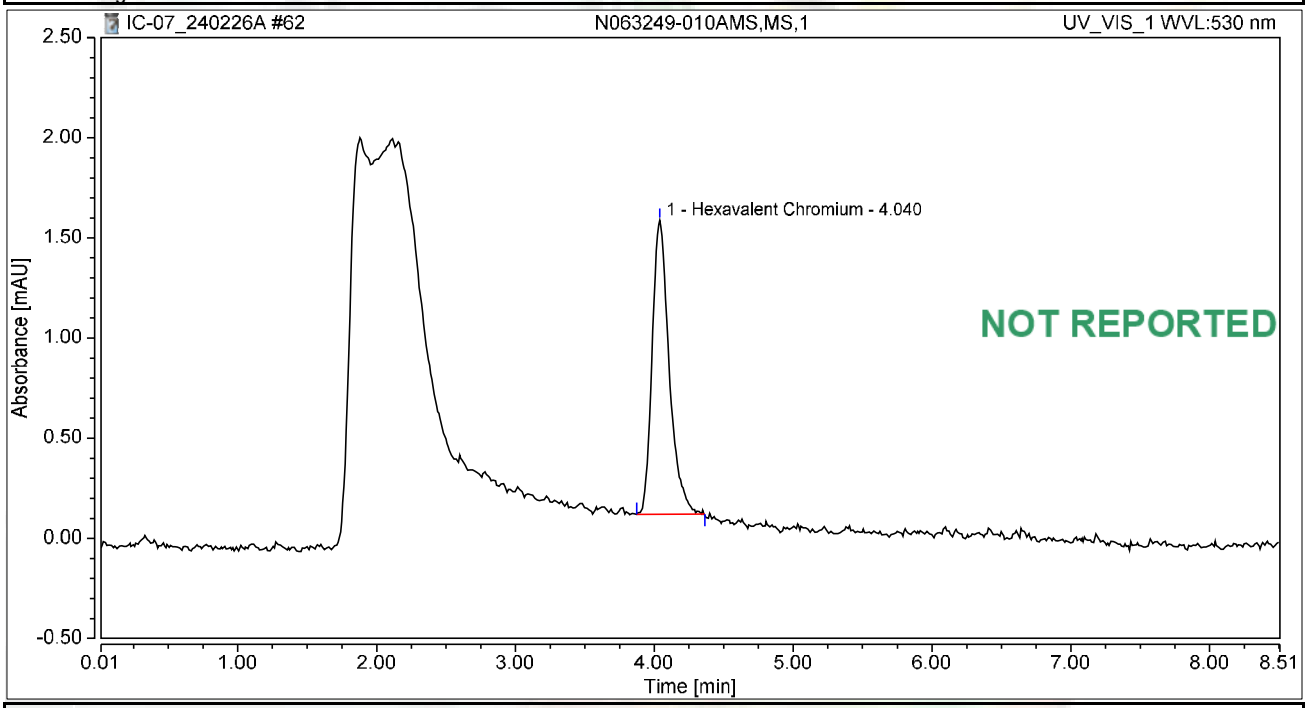
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-010AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 20:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

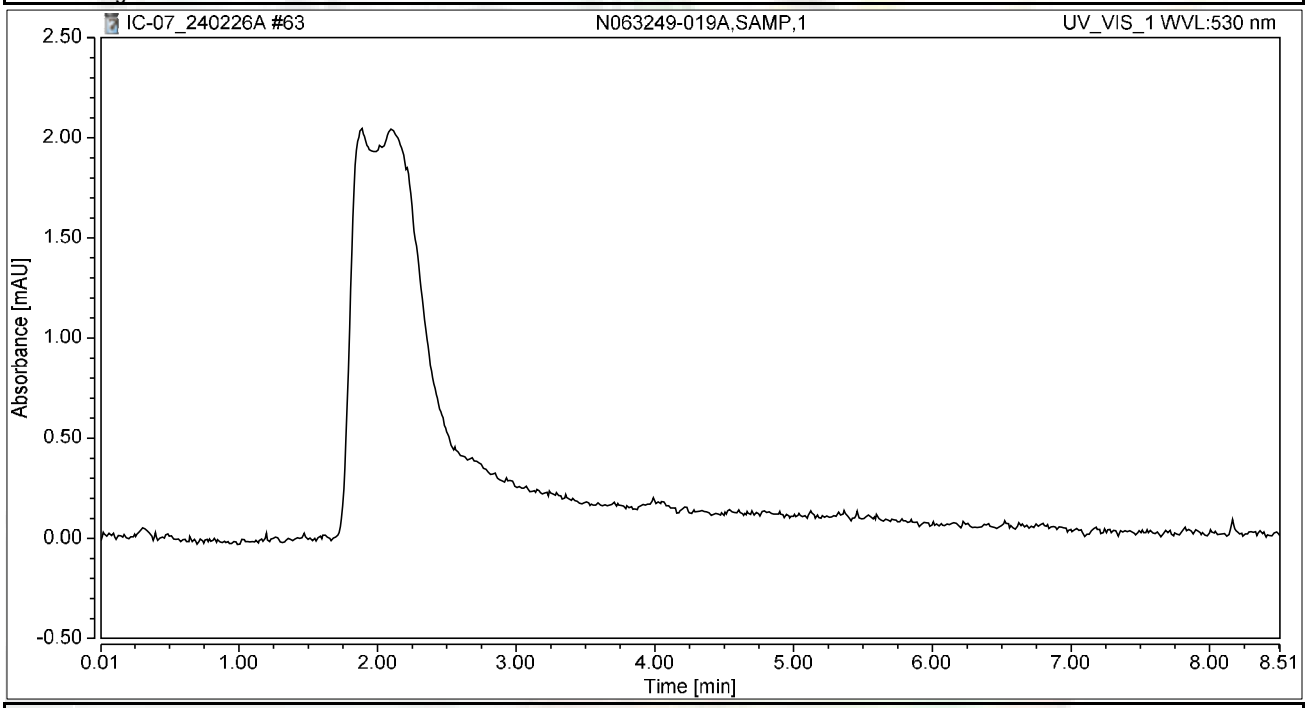
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.210	1.468	100.00	100.00	0.9750
Total:			**0.210**	**1.468**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-019A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 20:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

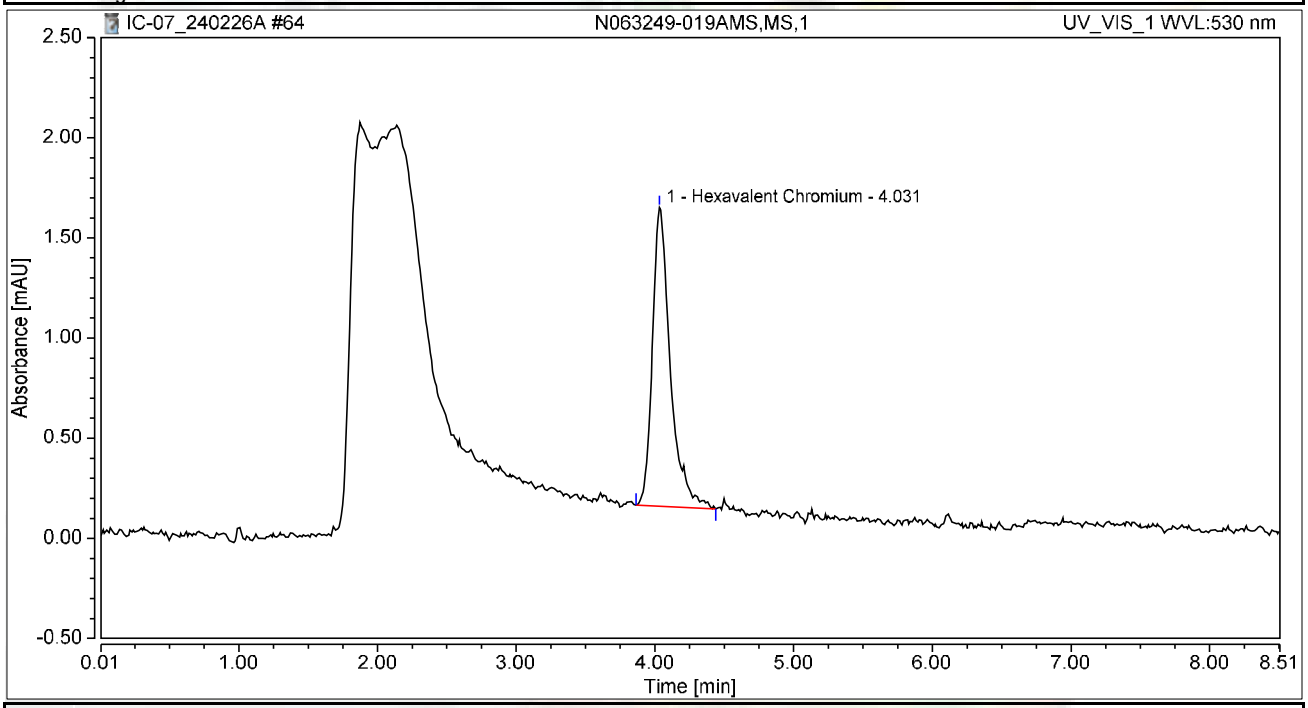
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063249-019AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 20:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

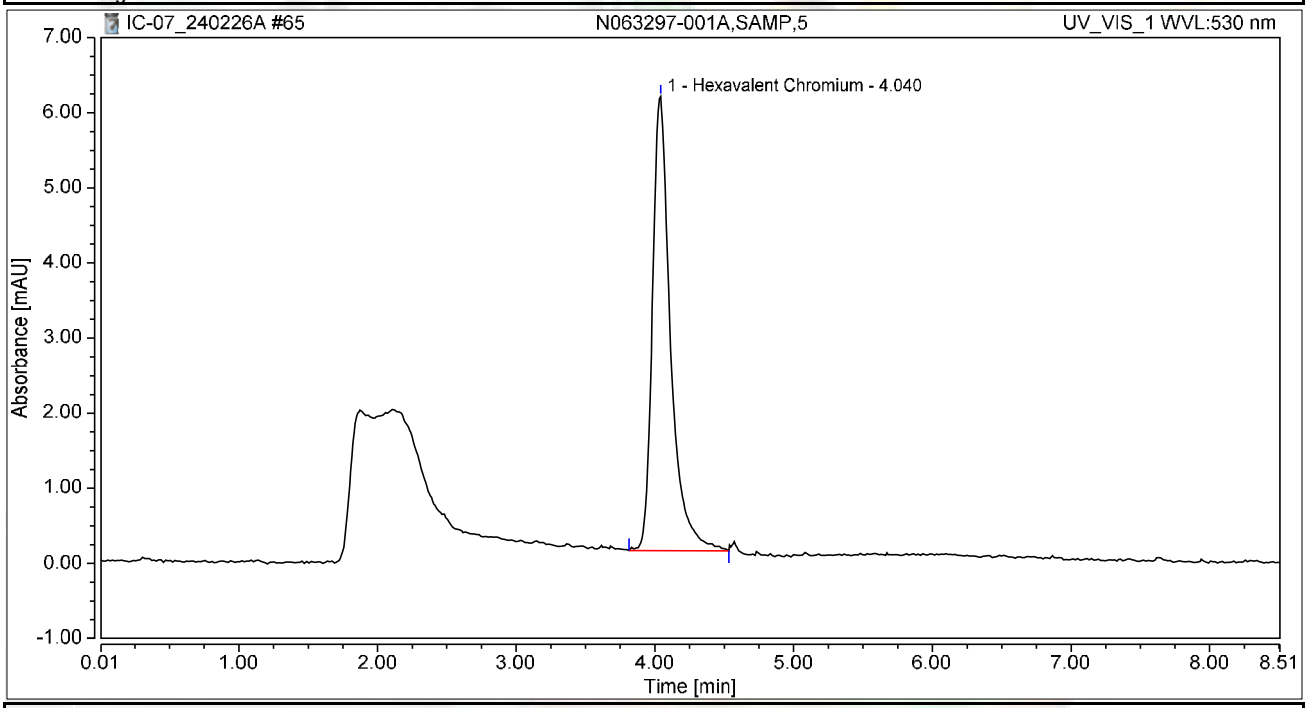
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.223	1.492	100.00	100.00	1.0345
Total:			**0.223**	**1.492**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 20:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

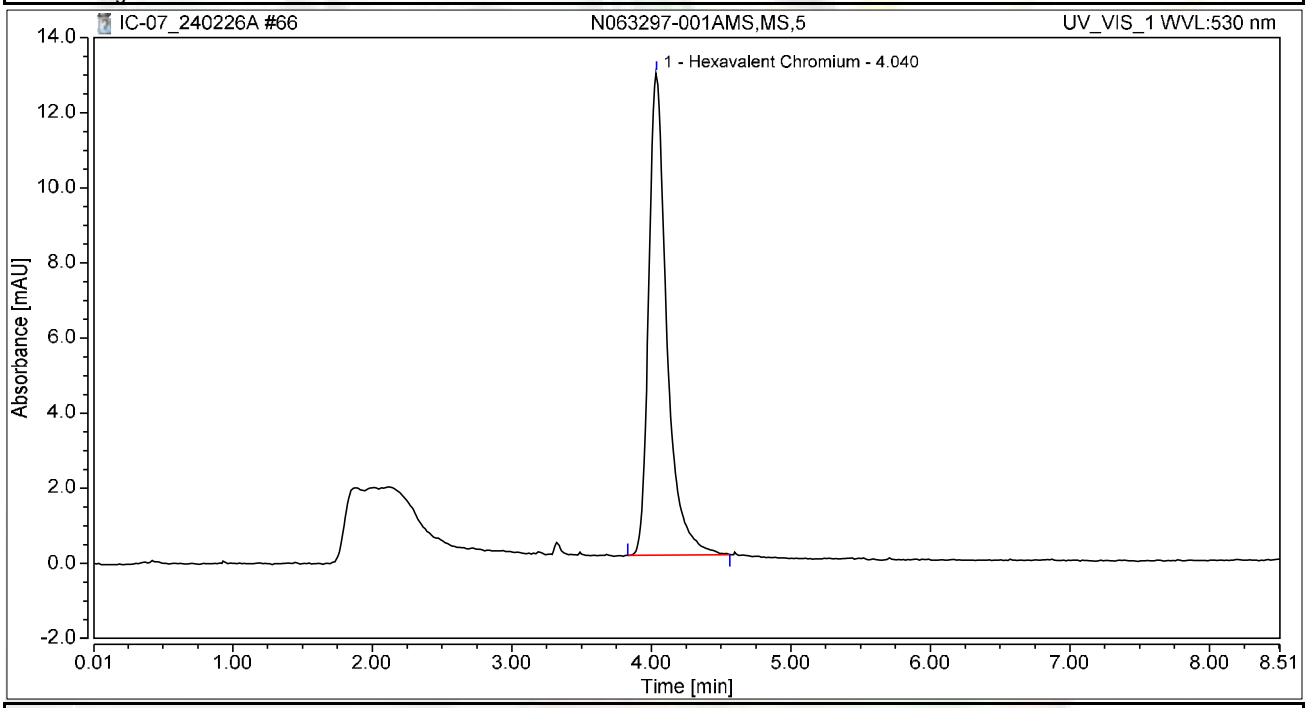
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.914	6.042	100.00	100.00	4.2497
Total:			**0.914**	**6.042**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 21:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

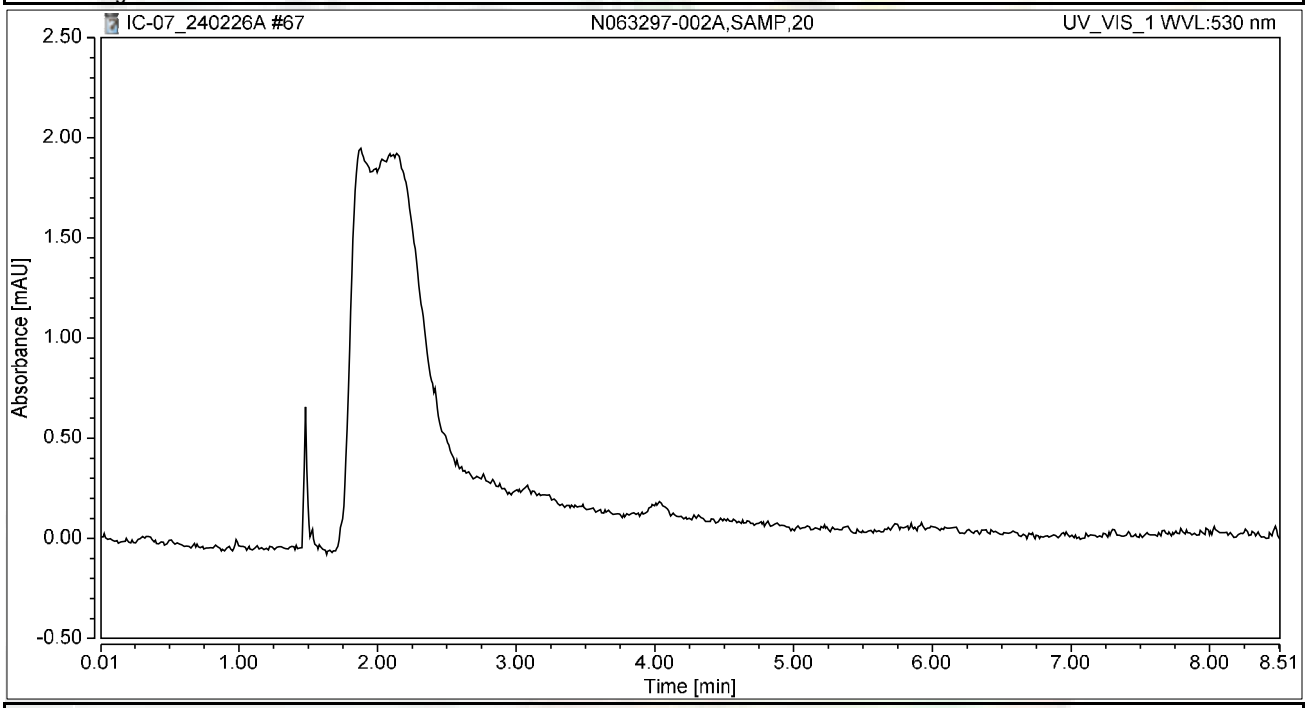
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.937	12.842	100.00	100.00	9.0067
Total:			**1.937**	**12.842**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-002A,SAMP,20**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 21:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

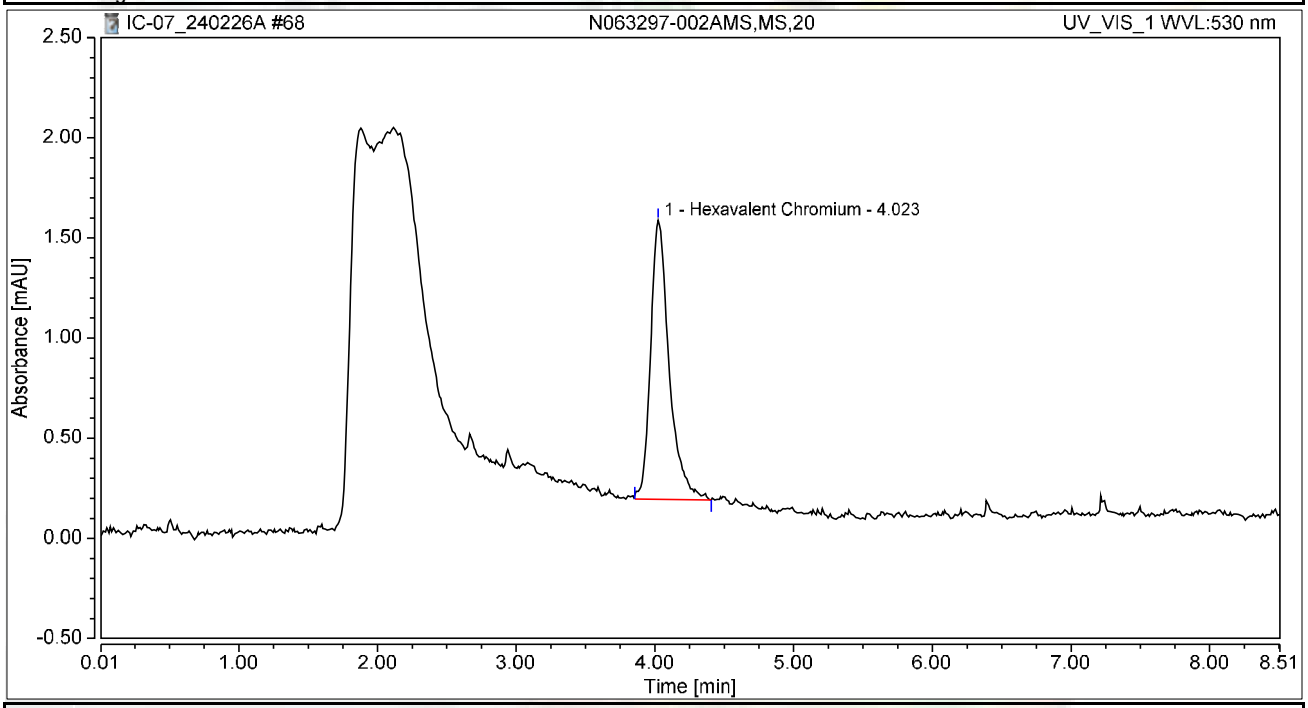
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-002AMS,MS,20**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 21:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

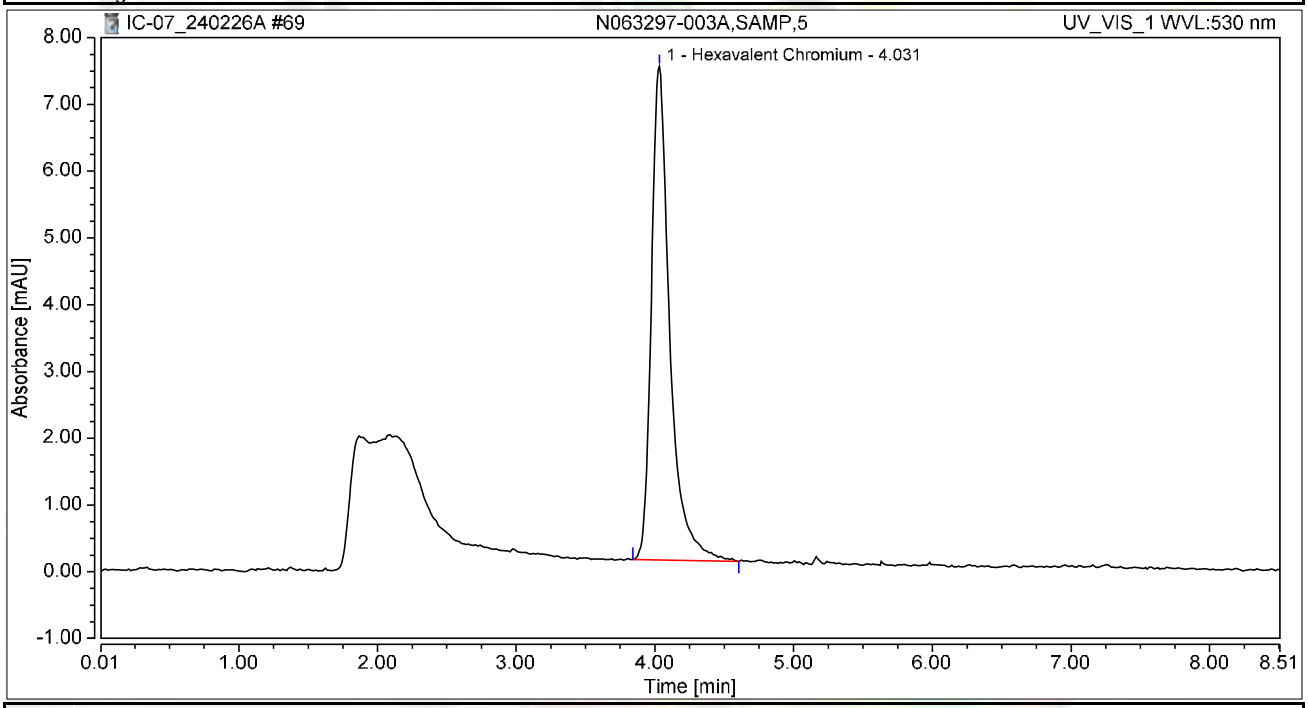
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.216	1.392	100.00	100.00	1.0027
Total:			**0.216**	**1.392**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 21:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

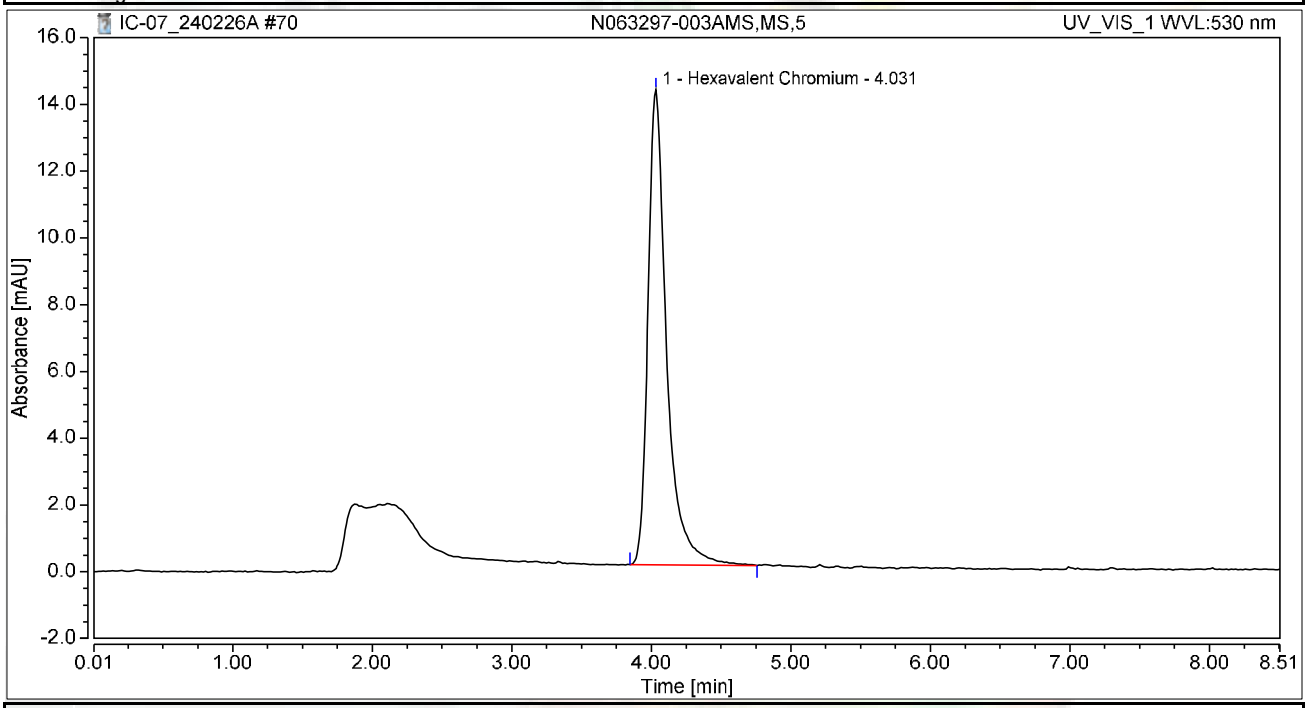
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	1.137	7.392	100.00	100.00	5.2846
Total:			**1.137**	**7.392**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 21:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

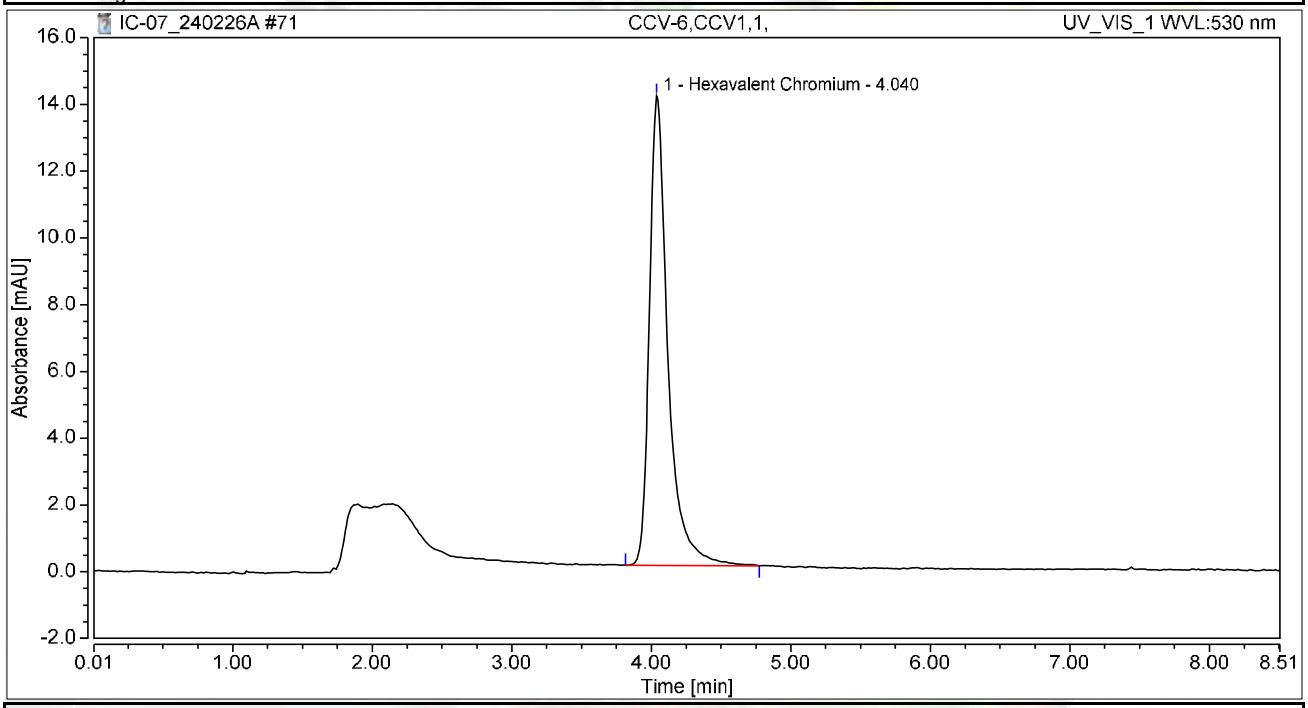
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	2.201	14.235	100.00	100.00	10.2317
Total:			**2.201**	**14.235**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 21:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

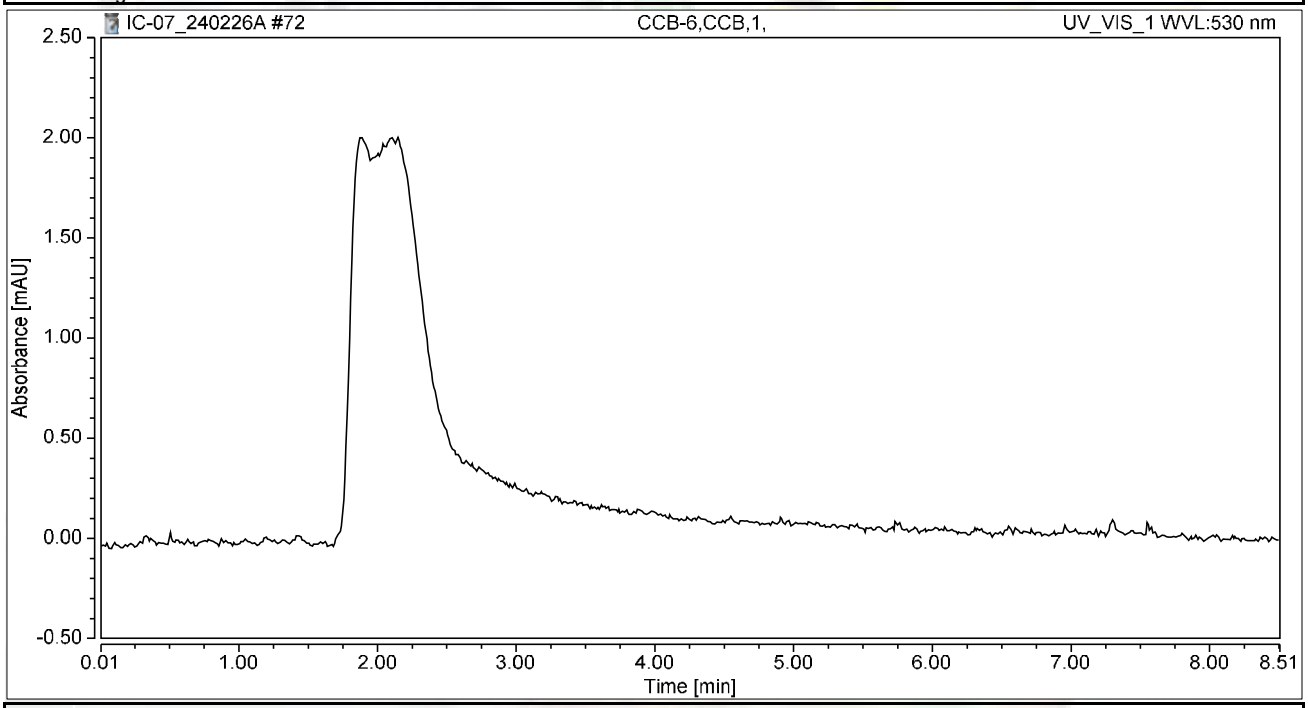
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.165	14.074	100.00	100.00	10.0661
Total:			**2.165**	**14.074**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 21:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

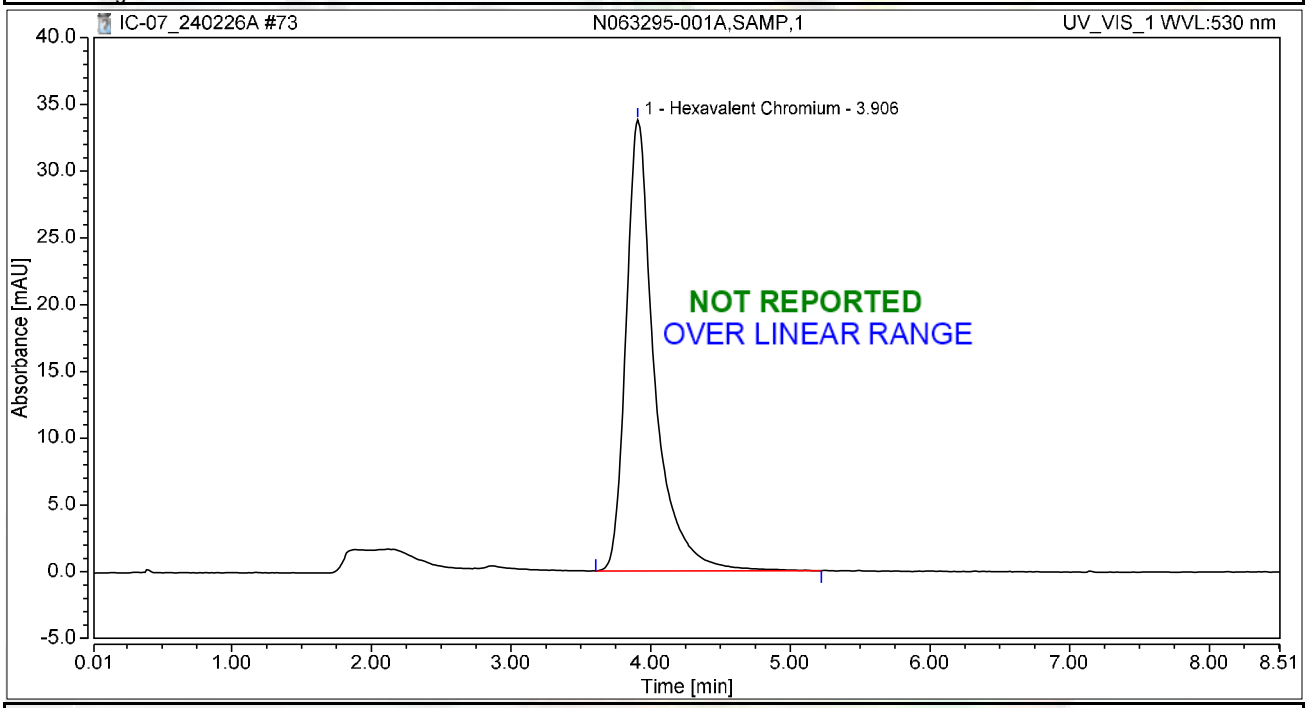
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-001A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 22:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

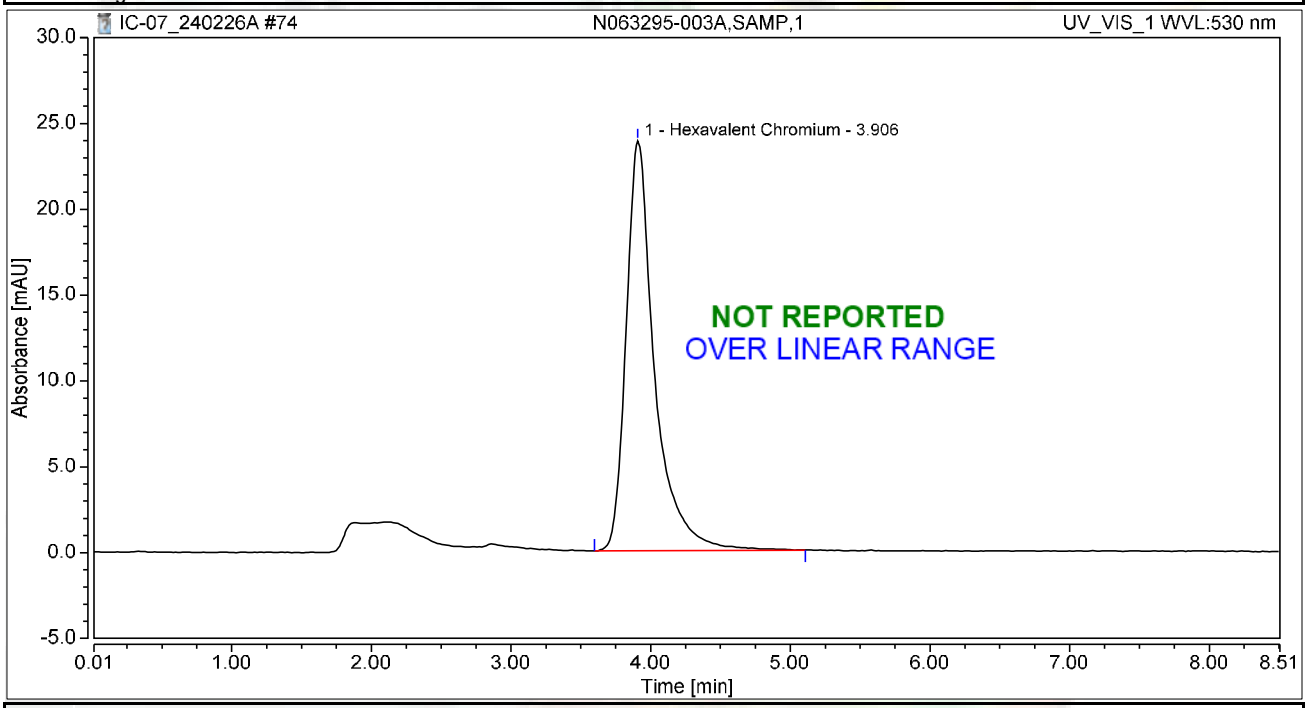
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.906	7.987	33.781	100.00	100.00	37.1333
Total:			**7.987**	**33.781**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 22:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

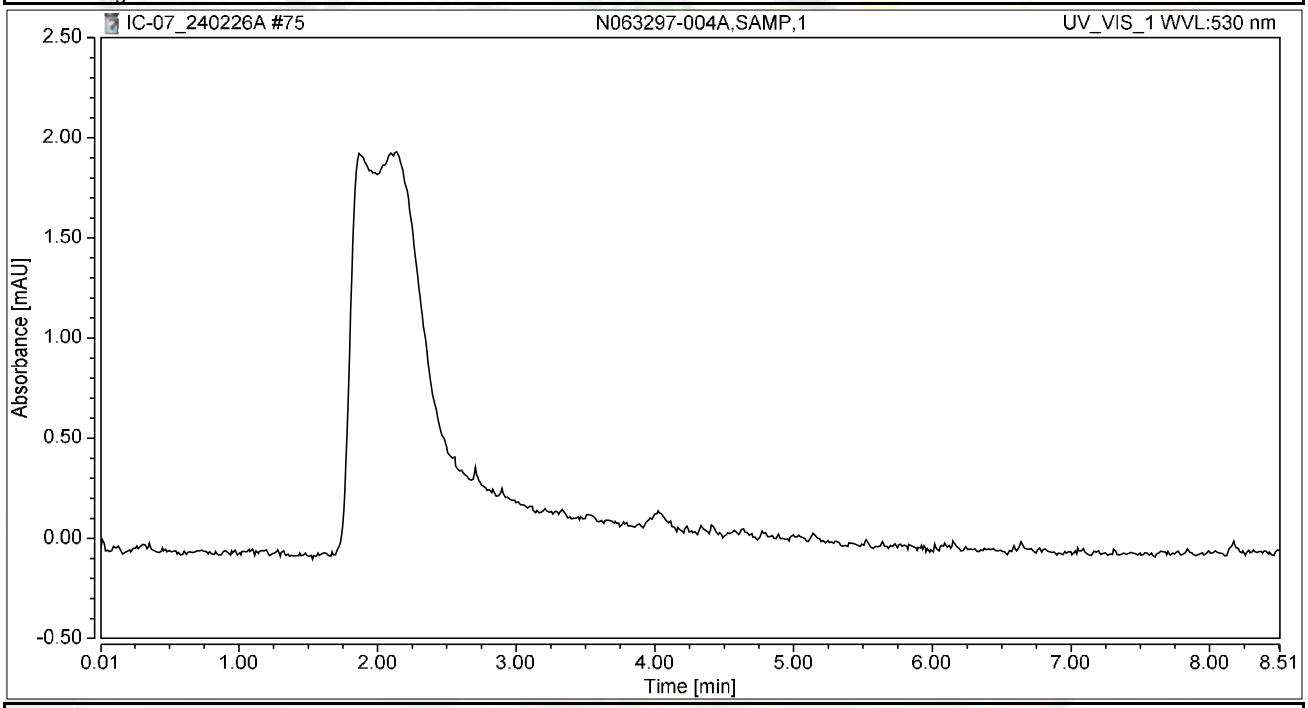
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.906	5.632	23.868	100.00	100.00	26.1840
Total:			**5.632**	**23.868**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 22:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

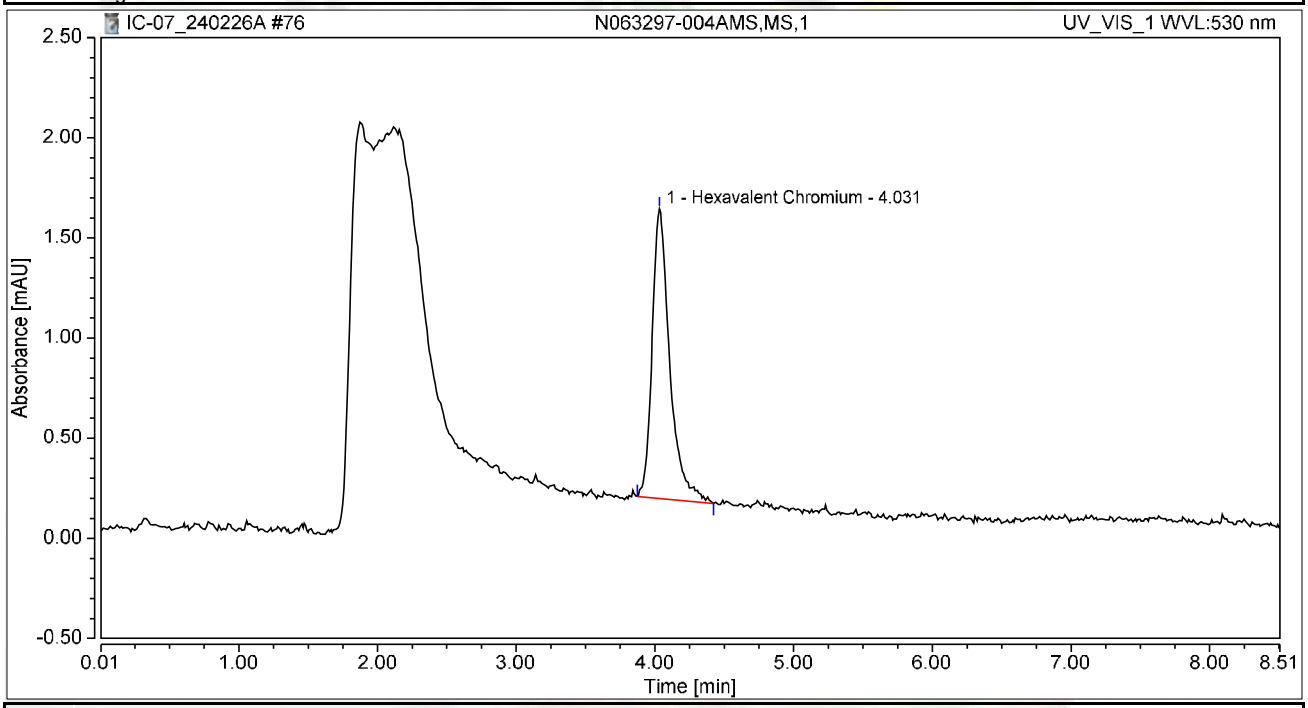
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063297-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 22:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

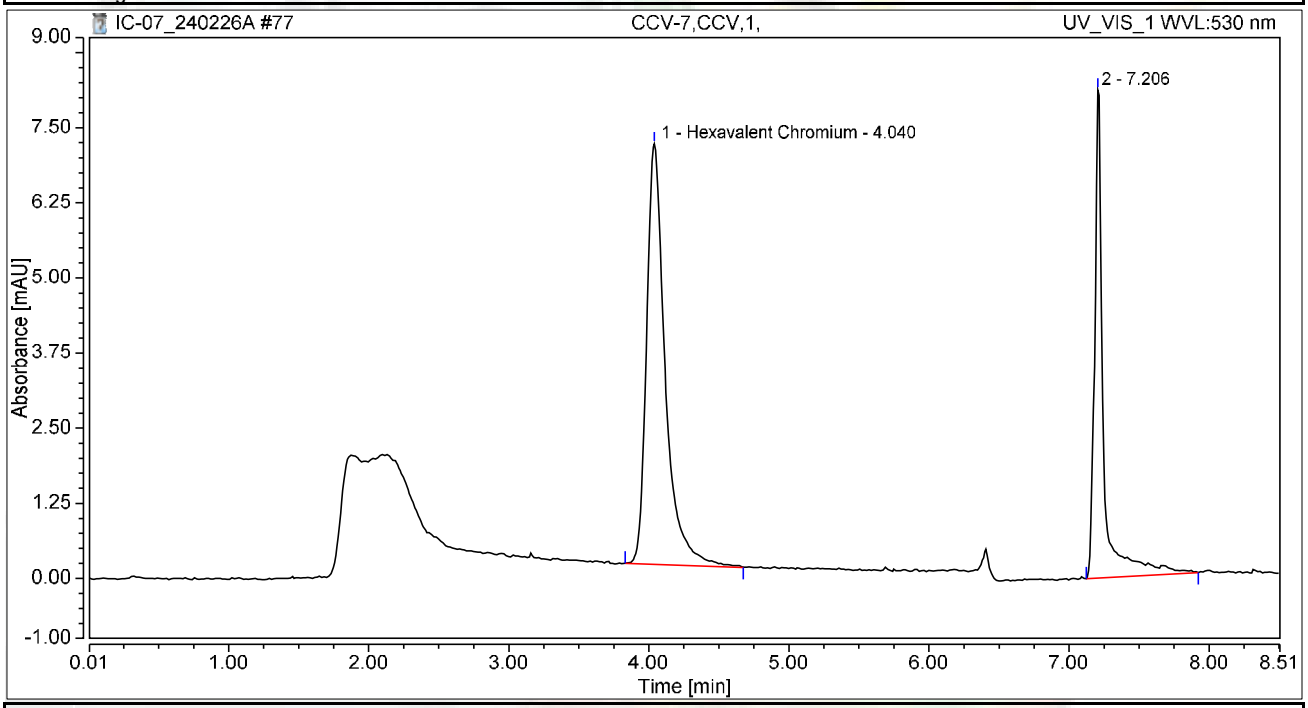
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.213	1.447	100.00	100.00	0.9887
Total:			**0.213**	**1.447**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 22:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

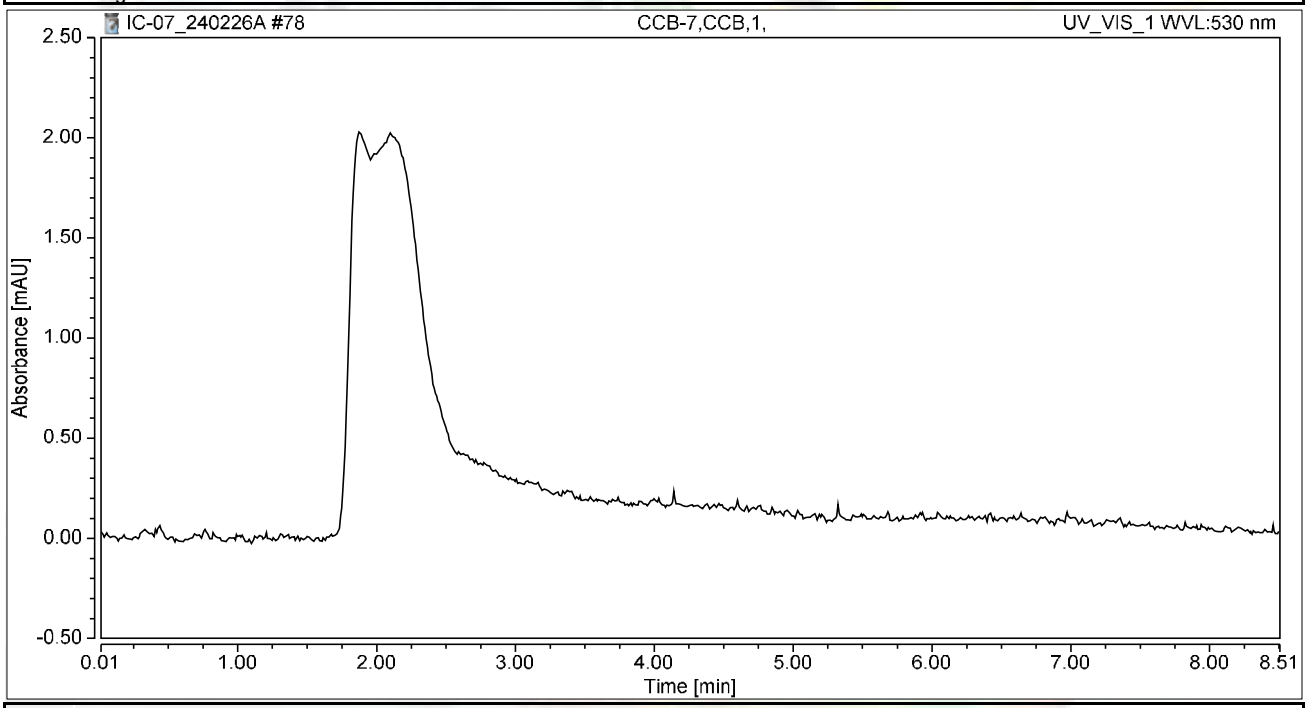
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.077	6.999	64.62	46.28	5.0091
2		7.206	0.590	8.124	35.38	53.72	n.a.
Total:			**1.667**	**15.123**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**44**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 22:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

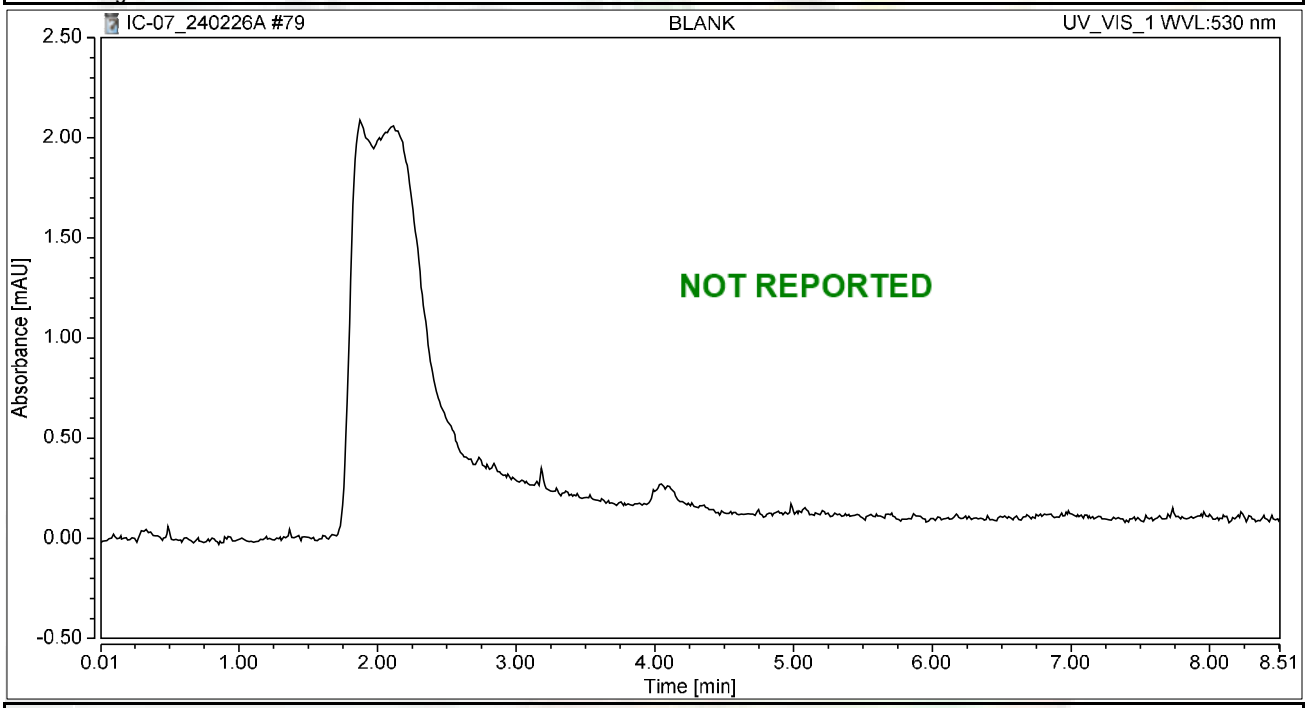
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**45**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Feb/24 23:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

JRB 2/29/2024

SM 2320 B

Wet Chemistry Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: R183092 **Analyst:** LSR

ASSET #: N063297 **Date Analyzed:** 25-Feb

Method: EPA 2320

Initial Calibration	1st Level Review Y	N	N/A	2nd Level Review Y	N	N/A
1. ICAL before initial sample analysis or every 24 hrs.			X			X
2. Does correlation coefficient,r, meet criteria ?(r = 0.995)			X			X
3. ICV within ± 15% of expected value.			X			X
Continuing Calibration						
4. CCV after every 10 samples and at the end of analysis sequence.			X			X
5. CCV within ± 15% of expected value.			X			X
6. Calibration blanks run after ICV and CCV?			X			X
7. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)			X			X
Sample Information						
8. All samples are within linear range.			X			X
9. Are all samples analyzed within hold time.	X			X		
QC Items						
10. Method blank values are below 1/2 the reporting limit.	X			X		
11. LCS compounds within control limits.	X			X		
12. MS/MSD, RPD's are within control limits	X					
Raw Data and Miscellaneous Information						
13. Are Non-Conformances documented			X			X
14. Runlog complete and included in package.	X			X		
15. Spectrophotometer tape included (Spec work only)			X			X
16. Digestion log complete and included in package (if applicable)			X			X
Preliminary Report						
17. Does the raw data match the preliminary report?	X			X		
18. Are analytical results correct?	X			X		
19. Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer LSR Date: 3/18/2024

2nd Level Reviewer JRB 3/18/2024 Date:

SAMPLE CALCULATION

Sample ID: **N063297-001B @ pH 8.08**

A. Standardization of Sulfuric Acid (titrant):

Normality of acid = (A) (B)/ (53.00) (C)

Where:

A, grams weighed for Na_2CO_3 solution (Na_2CO_3 Standardization Solution)
B, mL Na2CO3 solution taken for titration, and
C, ml of sulfuric acid used to inflection point

Spike Standards

Na_2CO_3 Standardization Solution, ACS Grade (1.00 ml = 2500ug as $CaCO_3$): Dissolve 2.650 grams of Na_2CO_3 in distilled water and dilute to 1 liter.

LCS/MS/MSD Stock $NaHCO_3$, ACS Grade (1.00 ml = 5000 ug as $CaCO_3$): Dissolve 0.8398 grams of $NaHCO_3$ in distilled water and dilute to 1 liter.

Therefore,

Normality of Acid = (2.65 g/L) (5mL) / (53.00) (12.20 mL)

= **0.02049 N**

B. CALCULATION OF ALKALINITY (for a 50 ml sample)

Total Alkalinity (as $CaCO_3$), mg/L = $M_{vol.}$ * N H_2SO_4 * DF * 1000

Where:

$M_{vol.}$ Volume titrant used to reach pH 4.5, ml
N, Normality of H_2SO_4
DF, Dilution Factor = (50 ml) / (Vol. of Sample used)

Therefore,

Total Alkalinity (as $CaCO_3$), mg/L = (8.10 mL) (0.02049 N) (1) * 1000

= 165.9690 mg**/L**

Reporting results in two significant figures,

= **170 mg/L as CaCO3**

3/18/2024 LSR

Reviewed by:

JRB 3/26/2024

C. SPECIATED ALKALINITY:

Phenolphthalein Alkalinity

P alkalinity, mg/L as $CaCO_3$ = $P_{vol.}$ * N H_2SO_4 * DF * 1000

= (0) (0.02049 N) (1) * 1000

= **0 mg/L**

Total Alkalinity

T alkalinity, mg/L as $CaCO_3$ = $M_{vol.}$ * N H_2SO_4 * DF * 1000

= (8.10 mL) (0.02049) (1) * 1000

= 165.9690 **mg/L** as CaCO3

Where:

$P_{vol.}$ - Volume titrant used to reach pH 8.3, ml
$M_{vol.}$ - Volume titrant used to reach pH 4.5, ml
N - Normality of H_2SO_4
DF - Dilution Factor = (50 ml) / (Vol. of Sample used)

Then OH, CO_3, HCO_3 alkalinities as $CaCO_3$ will be calculated as follows:

Result of Titration	**OH Alkalinity as $CaCO_3$**	**CO_3 Alkalinity as $CaCO_3$**	**HCO_3 Alkalinity as $CaCO_3$**
P = 0	0	0	T
P < ½ T	0	2P	T – 2P
P = ½ T	0	2P	0
P > ½ T	2P – T	2(T – P)	0
P = T	T	0	0

Therefore,

OH Alkalinity as $CaCO_3$ = **0**

CO_3 Alkalinity as $CaCO_3$ = 0

HCO_3 Alkalinity as $CaCO_3$ = 165.9690 **mg/L**

Reporting results in two significant figures,

OH Alkalinity as $CaCO_3$ = **0**

CO_3 Alkalinity as $CaCO_3$ = **0**

HCO_3 Alkalinity as $CaCO_3$ = **170 mg/L**

3/18/2024 LSR

LOGBOOK DATA, QUANTITATION REPORT and/or SPECTRA

SAMPLE	PH SAMPLE	AMOUNT	V@8.3	VT TO 4.5	Sample Type
MB-1	5.39	50	0.00	0.050	MBLK
LCS-1	8.24	50	0.10	4.60	LCS
N063248-005B	7.77	50	0.00	3.65	SAMP
N063248-006B	8.28	50	0.00	1.05	SAMP
N063248-007B	8.27	50	0.00	1.10	SAMP
N063248-008B	8.26	50	0.00	1.05	SAMP
N063248-010C	7.57	50	0.00	3.50	SAMP
N063248-011C	7.78	50	0.00	3.70	SAMP
N063253-001C	5.06	50	0.00	27.40	SAMP
N063256-001C	7.42	50	0.00	12.90	SAMP
N063259-001C	7.04	50	0.00	36.90	SAMP
N063261-001C	7.13	50	0.00	14.10	SAMP
N063278-001C	7.86	50	0.00	13.00	SAMP
N063279-001C	7.59	50	0.00	13.05	SAMP
N063280-001C	7.64	50	0.00	12.20	SAMP
N063295-005B	6.93	50	0.00	1.20	SAMP
N063295-006B	7.70	50	0.00	1.10	SAMP
N063295-007B	7.67	50	0.00	1.05	SAMP
N063295-008B	7.81	50	0.00	1.10	SAMP
N063297-001B	8.08	50	0.00	8.10	SAMP
N063320-001C	7.26	50	0.00	27.30	SAMP
N063321-001C	7.45	50	0.00	11.60	SAMP
N063248-005BDUP	7.75	50	0.00	3.70	DUP
N063248-005BMS	7.92	50	0.00	8.25	MS
N063248-005BMSD	7.94	50	0.00	8.20	MSD

Standardization:

Spike amt:	**5**	ml
Titrant used:	**12.200**	ml
N H2SO4	**0.02049**	Normal
Date Analyzed:	**2/25/24**	
	11:10	
Analyzed By:	**LSR**	
Sodium Carbonate:	**CINV-220422A**	
Sodium Bicarbonate:	**CINV-210623A**	
Sulfuric Acid:	**R240225B**	

3/18/2024 LSR

Date Analyzed:	2/25/24		Reagents:					Standardization:					P = 0
Time Started:	11:10 AM			Sodium Carbonate:		CINV-220422A			Spike amt:	5	mL		P < 1/2 T
Analyzed By:	LSR			Hydrochloric Acid:		0			Titrant used:	12.2	mL		P = 1/2 T
				Sulfuric Acid:		R240225B							P > 1/2 T
									N H2SO4	0.02049	N		P = T

Sample ID	Sample Vol/Wt.	Sample pH	Std. Code	Spike Amount	Spike Conc.	Normality, Titrant	Vol. Used to pH 8.3, ml.	Vol. Used pH 8.3 to 4.5, ml.	Total Vol. Used, ml.	DF (50ml/Vsamp.)	P Alkalinity	T Alkalinity	Comments
MB-1	50	5.39				0.02049	0.00	0.05	0.05	1	0.00	1.02	
LCS-1	50	8.24				0.02049	0.10	4.50	4.60	1	2.05	94.26	
N063248-005B	50	7.77				0.02049	0.00	3.65	3.65	1	0.00	74.80	
N063248-006B	50	8.28				0.02049	0.00	1.05	1.05	1	0.00	21.52	
N063248-007B	50	8.27				0.02049	0.00	1.10	1.10	1	0.00	22.54	
N063248-008B	50	8.26				0.02049	0.00	1.05	1.05	1	0.00	21.52	
N063248-010C	50	7.57				0.02049	0.00	3.50	3.50	1	0.00	71.72	
N063248-011C	50	7.78				0.02049	0.00	3.70	3.70	1	0.00	75.82	
N063253-001C	50	5.06				0.02049	0.00	27.40	27.40	1	0.00	561.48	
N063256-001C	50	7.42				0.02049	0.00	12.90	12.90	1	0.00	264.34	
N063259-001C	50	7.04				0.02049	0.00	36.90	36.90	1	0.00	756.15	
N063261-001C	50	7.13				0.02049	0.00	14.10	14.10	1	0.00	288.93	
N063278-001C	50	7.86				0.02049	0.00	13.00	13.00	1	0.00	266.39	
N063279-001C	50	7.59				0.02049	0.00	13.05	13.05	1	0.00	267.42	
N063280-001C	50	7.64				0.02049	0.00	12.20	12.20	1	0.00	250.00	
N063295-005B	50	6.93				0.02049	0.00	1.20	1.20	1	0.00	24.59	
N063295-006B	50	7.7				0.02049	0.00	1.10	1.10	1	0.00	22.54	
N063295-007B	50	7.67				0.02049	0.00	1.05	1.05	1	0.00	21.52	
N063295-008B	50	7.81				0.02049	0.00	1.10	1.10	1	0.00	22.54	
N063297-001B	50	8.08				0.02049	0.00	8.10	8.10	1	0.00	165.98	
N063320-001C	50	7.26				0.02049	0.00	27.30	27.30	1	0.00	559.43	
N063321-001C	50	7.45				0.02049	0.00	11.60	11.60	1	0.00	237.70	
N063248-005BDU	50	7.75				0.02049	0.00	3.70	3.70	1	0.00	75.82	
N063248-005BMS	50	7.92				0.02049	0.00	8.25	8.25	1	0.00	169.06	
N063248-005BMS	50	7.94				0.02049	0.00	8.20	8.20	1	0.00	168.03	

3/18/2024 LSR

Reviewed by:

JRB 3/26/2024

Speciated, Alkalinity as CaCO3

SM 2320B

Date Analyzed:	2/25/24
Time:	11:10 AM
Analyzed By:	LSR

SAMPLE ID	OH	CO3	HCO3	TOTAL	CHECK	COMMENT	REMARKS
MB-1	0.00	0.00	1.02	1.02	1.02		P = 0
LCS-1	0.00	4.10	90.16	94.26	94.26		P < 1/2 T
N063248-005B	0.00	0.00	74.80	74.80	74.80		P = 0
N063248-006B	0.00	0.00	21.52	21.52	21.52		P = 0
N063248-007B	0.00	0.00	22.54	22.54	22.54		P = 0
N063248-008B	0.00	0.00	21.52	21.52	21.52		P = 0
N063248-010C	0.00	0.00	71.72	71.72	71.72		P = 0
N063248-011C	0.00	0.00	75.82	75.82	75.82		P = 0
N063253-001C	0.00	0.00	561.48	561.48	561.48		P = 0
N063256-001C	0.00	0.00	264.34	264.34	264.34		P = 0
N063259-001C	0.00	0.00	756.15	756.15	756.15		P = 0
N063261-001C	0.00	0.00	288.93	288.93	288.93		P = 0
N063278-001C	0.00	0.00	266.39	266.39	266.39		P = 0
N063279-001C	0.00	0.00	267.42	267.42	267.42		P = 0
N063280-001C	0.00	0.00	250.00	250.00	250.00		P = 0
N063295-005B	0.00	0.00	24.59	24.59	24.59		P = 0
N063295-006B	0.00	0.00	22.54	22.54	22.54		P = 0
N063295-007B	0.00	0.00	21.52	21.52	21.52		P = 0
N063295-008B	0.00	0.00	22.54	22.54	22.54		P = 0
N063297-001B	0.00	0.00	165.98	165.98	165.98		P = 0
N063320-001C	0.00	0.00	559.43	559.43	559.43		P = 0
N063321-001C	0.00	0.00	237.70	237.70	237.70		P = 0
N063248-005BDUP	0.00	0.00	75.82	75.82	75.82		P = 0
N063248-005BMS	0.00	0.00	169.06	169.06	169.06		P = 0
N063248-005BMSD	0.00	0.00	168.03	168.03	168.03		P = 0

3/18/2024 LSR

Alkalinity Preparation and Runlog

Matrix: H_2O

Date Extracted: 2/24/24
Time Extracted: 1700
Extracted By: LN

Date Analyzed: 2/25/24
Time Analyzed: 1110
Analyzed By: LSR

Reagent Lot # / Reagent ID
Sodium Carbonate: CINV2202237A
Hydrochloric Acid: —
Sulfuric Acid: R240275B
Sodium Bicarbonate: CINV-2102-23A

Formulas:

$P = \frac{(\text{Vol. at pH 8.3}) \times (N\ H_2SO_4) \times (50{,}000)}{\text{Vol. Sample}}$

$T = \frac{(\text{Vol. at pH 4.5}) \times (N\ H_2SO_4) \times (50{,}000)}{\text{Vol. Sample}}$

pH meter Calibration:
SLOPE: 98.2%
pH 7: 7.02 CINV2204121A
4: 4.00 ! B
10: 10.05 CINV2312014F

	Sample ID.	Sample Wt./Vol.	Sample pH	Std Code	Spike Amt Added	Spike Conc.	Norm. Titrant	Vol. At pH = 8.3	Vol. At pH = 4.5	Dilution (F/I)	Calculations	Comments
	Standardization #1	50 mL	10.70	IWST240225A	5.0 mL	0.05 N	-	-	12.20	50/50	$N_{H2SO4} = \frac{(2.65\ \text{g } Na_2CO_3/L)\ (5mL)}{(53)\ (\text{vol. of acid mL})}$	CINV2409180033
	Standardization #2	50 mL	10.64	1	5.0 mL	0.05 N	-	-	12.20	50/50		
1)	MB LL	50 mL	5.39	-	-	-	0.02149	0	0.05	50/50		
2)	LCS		8.24	IWST240225B	1 mL	0.05N		0	4.60			
3)	NC63248-5B		7.77					0	3.65			
4)	6B		8.28					0	1.05			
5)	7B		8.27					0	1.10			
6)	8B		8.26					0	1.05			
7)	10C		7.57					0	3.50			
8)	11C		7.78					0	3.70			
9)	NC63253-1C		5.06					0	27.40			
10)	NC63256-1C		7.42					0	12.90			
11)	NC63259-1C		7.04					0	36.90			
12)	NC63261-1C		7.13					0	14.10			
13)	NC63278-1C		7.86					0	13.0			
14)	NC63279-1C		7.59					0	13.05			
15)	NC63280-1C		7.64					0	12.20			
16)	NC63295-5B		6.93					0	1.20			
17)	6B		7.70					0	1.10			
18)	7B		7.67					0	1.05			
19)	8C		7.81					0	1.10			
20)	NC63297-1B		8.08					0	8.10			
MS	NC63320-1C		7.26					0	27.70			
MSD	NC63321-1C		7.45					0	11.60			
LCS	NC63248-5B DUP		7.75	1				0	3.70		3/18/2024 LSR	
	5B MS		7.92	IWST240225B	1 mL	0.05N		0	8.25			
	5B MSD		7.94					0	8.20			

Reviewed by: JRB 3/26/2024

EPA 300.0

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R182874
ASSET #: N063248 / N063295 / N063297

Instrument ID: IC-08
Analyst: RBA
Date Analyzed: 2/23/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 3/6/2024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R182887
ASSET #: N063295 / N063297 / N063303

Instrument ID: IC-09
Analyst: RBA
Date Analyzed: 2/23 ~~2/13~~/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			~~X~~	X	
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.		X			X	
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments: Detection of NO3 was > 1/2PQL in CCB1. However, affected samples were >5x the CCB detection.

%Rec of Nitrite in N063295-008BMS/MSD failed. However, LCS passed criteria.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	x		
2. Matrix / units correct	x		
3. Is QC present and complete?	x		
4. Are analytical results correct? (dilutions,calculations)	x		
5. Is first level review correct and complete?	x		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 3/6/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: GROUNDWATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the orignal sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N063297-001B** concentration in mg/L is calculated as follows:

Nitrate, mg/L = 1.0768 * 10

= 10.768

Reporting result in two significant figures,

Nitrate, mg/L = 11

Reviewed by:

dlRocha 3/10/2024

ANALYSIS RUN LOG

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240223	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240223	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240223	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240223	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240223	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240223	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240223	Finished
8	ICV,ICV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240223	Finished
9	ICB,ICB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240223	Finished
10	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240223	Finished
11	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240223	Finished
12	N063297-001B,SAMP,10	Unknown	7	1000.0	Anions Default	EPA 300_0_240223	Finished
13	N063297-001BDUP,DUP,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240223	Finished
14	N063297-001BMS,MS,10	Unknown	9	1000.0	Anions Default	EPA 300_0_240223	Finished
15	N063297-001BMSD,MSD,10	Unknown	10	1000.0	Anions Default	EPA 300_0_240223	Finished
16	N063252-001C,SAMP,2000	Unknown	11	1000.0	Anions Default	EPA 300_0_240223	Finished
17	N063252-001CMS,MS,2000	Unknown	12	1000.0	Anions Default	EPA 300_0_240223	Finished
18	N063248-005B,SAMP,1000	Unknown	13	1000.0	Anions Default	EPA 300_0_240223	Finished
19	N063248-006B,SAMP,2000	Unknown	14	1000.0	Anions Default	EPA 300_0_240223	Finished
20	CCV-1,CCV,1	Unknown	15	1000.0	Anions Default	EPA 300_0_240223	Finished
21	CCB-1,CCB,1	Unknown	16	1000.0	Anions Default	EPA 300_0_240223	Finished
22	N063248-007B,SAMP,2000	Unknown	17	1000.0	Anions Default	EPA 300_0_240223	Finished
23	N063248-008B,SAMP,2000	Unknown	18	1000.0	Anions Default	EPA 300_0_240223	Finished
24	N063248-010C,SAMP,100	Unknown	19	1000.0	Anions Default	EPA 300_0_240223	Finished
25	N063248-011C,SAMP,1000	Unknown	20	1000.0	Anions Default	EPA 300_0_240223	Finished
26	N063248-005B,SAMP,100	Unknown	21	1000.0	Anions Default	EPA 300_0_240223	Finished
27	N063248-006B,SAMP,100	Unknown	22	1000.0	Anions Default	EPA 300_0_240223	Finished
28	N063248-007B,SAMP,100	Unknown	23	1000.0	Anions Default	EPA 300_0_240223	Finished
29	N063248-008B,SAMP,100	Unknown	24	1000.0	Anions Default	EPA 300_0_240223	Finished
30	N063248-010C,SAMP,20	Unknown	25	1000.0	Anions Default	EPA 300_0_240223	Finished
31	N063248-011C,SAMP,100	Unknown	26	1000.0	Anions Default	EPA 300_0_240223	Finished
32	CCV-2,CCV,1	Unknown	27	1000.0	Anions Default	EPA 300_0_240223	Finished
33	CCB-2,CCB,1	Unknown	28	1000.0	Anions Default	EPA 300_0_240223	Finished
34	N063295-005B,SAMP,2000	Unknown	29	1000.0	Anions Default	EPA 300_0_240223	Finished
35	N063295-006B,SAMP,2000	Unknown	30	1000.0	Anions Default	EPA 300_0_240223	Finished
36	N063295-007B,SAMP,2000	Unknown	31	1000.0	Anions Default	EPA 300_0_240223	Finished
37	N063295-008B,SAMP,2000	Unknown	32	1000.0	Anions Default	EPA 300_0_240223	Finished
38	N063295-005B,SAMP,100	Unknown	33	1000.0	Anions Default	EPA 300_0_240223	Finished
39	N063295-006B,SAMP,100	Unknown	34	1000.0	Anions Default	EPA 300_0_240223	Finished
40	N063295-007B,SAMP,100	Unknown	35	1000.0	Anions Default	EPA 300_0_240223	Finished
41	N063295-008B,SAMP,100	Unknown	36	1000.0	Anions Default	EPA 300_0_240223	Finished

Processed by:
Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)
reviewed by: 3/4/2024
2/25/2024
IC8 RBA 2/25/2024 4:51:54 PM

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:07:15 AM	BLANK
2	Std - 0	2/23/2024 9:22:33 AM	IBLANK
3	Std - 1	2/23/2024 9:53:29 AM	STD-LOW
4	Std - 2	2/23/2024 10:08:47 AM	STD
5	Std - 3	2/23/2024 10:24:06 AM	STD
6	Std - 4	2/23/2024 10:39:24 AM	STD
7	Std - 5	2/23/2024 10:54:42 AM	STD-HIGH
8	ICV,ICV,1	2/23/2024 11:10:00 AM	ICV, IWST-240216B
9	ICB,ICB,1	2/23/2024 11:25:18 AM	ICB
10	MB-H2O,MBLK,1	2/23/2024 11:40:36 AM	MB
11	LCS-H2O,LCS,1	2/23/2024 11:55:54 AM	LCS, IWST-240216B
12	N063297-001B,SAMP,10	2/23/2024 1:45:16 PM	SAMP,1>10mL,
13	N063297-001BDUP,DUP,10	2/23/2024 2:00:34 PM	DUP,1>10mL,
14	N063297-001BMS,MS,10	2/23/2024 2:15:52 PM	MS,1>10mL,
15	N063297-001BMSD,MSD,10	2/23/2024 2:31:10 PM	MSD,1>10mL,
16	N063252-001C,SAMP,2000	2/23/2024 2:46:27 PM	SAMP,0.005>10mL,
17	N063252-001CMS,MS,2000	2/23/2024 3:01:45 PM	MS,0.005>10mL,
18	N063248-005B,SAMP,1000	2/23/2024 4:06:07 PM	SAMP,0.01>10mL,
19	N063248-006B,SAMP,2000	2/23/2024 4:21:25 PM	SAMP,0.005>10mL,
20	CCV-1,CCV,1	2/23/2024 4:36:43 PM	CCV, IWST-240216A
21	CCB-1,CCB,1	2/23/2024 4:52:01 PM	CCB
22	N063248-007B,SAMP,2000	2/23/2024 5:07:19 PM	SAMP,0.005>10mL,
23	N063248-008B,SAMP,2000	2/23/2024 5:22:37 PM	SAMP,0.005>10mL,
24	N063248-010C,SAMP,100	2/23/2024 5:37:54 PM	SAMP,0.1>10mL,
25	N063248-011C,SAMP,1000	2/23/2024 5:53:13 PM	SAMP,0.01>10mL,
26	N063248-005B,SAMP,100	2/23/2024 6:08:32 PM	SAMP,0.1>10mL,
27	N063248-006B,SAMP,100	2/23/2024 6:23:50 PM	SAMP,0.1>10mL,
28	N063248-007B,SAMP,100	2/23/2024 6:39:07 PM	SAMP,0.1>10mL,
29	N063248-008B,SAMP,100	2/23/2024 6:54:26 PM	SAMP,0.1>10mL,
30	N063248-010C,SAMP,20	2/23/2024 7:09:45 PM	SAMP,0.5>10mL,
31	N063248-011C,SAMP,100	2/23/2024 7:25:03 PM	SAMP,0.1>10mL,
32	CCV-2,CCV,1	2/23/2024 7:40:21 PM	CCV, IWST-240216A
33	CCB-2,CCB,1	2/23/2024 7:55:39 PM	CCB
34	N063295-005B,SAMP,2000	2/23/2024 8:10:57 PM	SAMP,0.005>10mL,
35	N063295-006B,SAMP,2000	2/23/2024 8:26:16 PM	SAMP,0.005>10mL,
36	N063295-007B,SAMP,2000	2/23/2024 8:41:34 PM	SAMP,0.005>10mL,
37	N063295-008B,SAMP,2000	2/23/2024 8:56:52 PM	SAMP,0.005>10mL,
38	N063295-005B,SAMP,100	2/23/2024 9:12:11 PM	SAMP,0.1>10mL,
39	N063295-006B,SAMP,100	2/23/2024 9:27:28 PM	SAMP,0.1>10mL,
40	N063295-007B,SAMP,100	2/23/2024 9:42:47 PM	SAMP,0.1>10mL,
41	N063295-008B,SAMP,100	2/23/2024 9:58:05 PM	SAMP,0.1>10mL,

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	N063253-001C,SAMP,5000	Unknown	37	1000.0	Anions Default	EPA 300_0_240223	Finished
43	N063253-001C,SAMP,10000	Unknown	38	1000.0	Anions Default	EPA 300_0_240223	Finished
44	CCV-3,CCV,1	Unknown	39	1000.0	Anions Default	EPA 300_0_240223	Finished
45	CCB-3,CCB,1	Unknown	40	1000.0	Anions Default	EPA 300_0_240223	Finished
46	N063256-001C,SAMP,100	Unknown	41	1000.0	Anions Default	EPA 300_0_240223	Finished
47	N063254-001C,SAMP,10000	Unknown	42	1000.0	Anions Default	EPA 300_0_240223	Finished
48	N063255-001C,SAMP,10000	Unknown	43	1000.0	Anions Default	EPA 300_0_240223	Finished
49	N063257-001C,SAMP,10000	Unknown	44	1000.0	Anions Default	EPA 300_0_240223	Finished
50	N063258-001C,SAMP,10000	Unknown	45	1000.0	Anions Default	EPA 300_0_240223	Finished
51	CCV-4,CCV,1	Unknown	46	1000.0	Anions Default	EPA 300_0_240223	Finished
52	CCB-4,CCB,1	Unknown	47	1000.0	Anions Default	EPA 300_0_240223	Finished

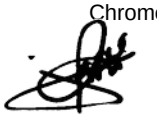
Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	N063253-001C,SAMP,5000	2/23/2024 10:13:23 PM	SAMP,0.002>10mL,
43	N063253-001C,SAMP,10000	2/23/2024 10:28:42 PM	SAMP,0.001>10mL,
44	CCV-3,CCV,1	2/23/2024 10:43:59 PM	CCV, IWST-240216A
45	CCB-3,CCB,1	2/23/2024 10:59:17 PM	CCB
46	N063256-001C,SAMP,100	2/23/2024 11:14:35 PM	SAMP,0.1>10mL,
47	N063254-001C,SAMP,10000	2/23/2024 11:29:53 PM	SAMP,0.001>10mL,
48	N063255-001C,SAMP,10000	2/23/2024 11:45:11 PM	SAMP,0.001>10mL,
49	N063257-001C,SAMP,10000	2/24/2024 12:00:28 AM	SAMP,0.001>10mL,
50	N063258-001C,SAMP,10000	2/24/2024 12:15:46 AM	SAMP,0.001>10mL,
51	CCV-4,CCV,1	2/24/2024 12:31:04 AM	CCV, IWST-240216A
52	CCB-4,CCB,1	2/24/2024 12:46:23 AM	CCB

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/23/2024 9:04:47 AM by IC-05
Last Update: 2/25/2024 7:08:17 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
2	Std - 0	Standard	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
3	Std - 1	Standard	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
4	Std - 2	Standard	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
5	Std - 3	Standard	3	1000.0	Anions_Default	EPA 300_0_240223A	Finished
6	Std - 4	Standard	4	1000.0	Anions_Default	EPA 300_0_240223A	Finished
7	Std - 5	Standard	5	1000.0	Anions_Default	EPA 300_0_240223A	Finished
8	ICV,ICV,1	Unknown	6	1000.0	Anions_Default	EPA 300_0_240223A	Finished
9	ICB,ICB,1	Unknown	7	1000.0	Anions_Default	EPA 300_0_240223A	Finished
10	MB-H2O,MBLK,1	Unknown	8	1000.0	Anions_Default	EPA 300_0_240223A	Finished
11	LCS-H2O,LCS,1	Unknown	9	1000.0	Anions_Default	EPA 300_0_240223A	Finished
12	N063297-001B,SAMP,5	Unknown	11	1000.0	Anions_Default	EPA 300_0_240223A	Finished
13	N063297-002C,SAMP,20	Unknown	12	1000.0	Anions_Default	EPA 300_0_240223A	Finished
14	N063297-003C,SAMP,10	Unknown	13	1000.0	Anions_Default	EPA 300_0_240223A	Finished
15	N063295-008B,SAMP,10	Unknown	14	1000.0	Anions_Default	EPA 300_0_240223A	Finished
16	N063295-008BMS,MS,10	Unknown	15	1000.0	Anions_Default	EPA 300_0_240223A	Finished
17	N063295-008BMSD,MSD,10	Unknown	16	1000.0	Anions_Default	EPA 300_0_240223A	Finished
18	N063295-005B,SAMP,10	Unknown	17	1000.0	Anions_Default	EPA 300_0_240223A	Finished
19	N063295-006B,SAMP,10	Unknown	18	1000.0	Anions_Default	EPA 300_0_240223A	Finished
20	CCV-1,CCV,1	Unknown	19	1000.0	Anions_Default	EPA 300_0_240223A	Finished
21	CCB-1,CCB,1	Unknown	20	1000.0	Anions_Default	EPA 300_0_240223A	Finished
22	N063295-007B,SAMP,10	Unknown	21	1000.0	Anions_Default	EPA 300_0_240223A	Finished
23	N063295-008BDUP,DUP,10	Unknown	22	1000.0	Anions_Default	EPA 300_0_240223A	Finished
24	N063297-001BMS,MS,5	Unknown	23	1000.0	Anions_Default	EPA 300_0_240223A	Finished
25	N063297-001BMSD,MSD,5	Unknown	24	1000.0	Anions_Default	EPA 300_0_240223A	Finished
26	N063297-001BDUP,DUP,5	Unknown	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
27	N063297-001B,SAMP,10	Unknown	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
28	N063303-001C,SAMP,10	Unknown	3	1000.0	Anions_Default	EPA 300_0_240223A	Finished
29	N063303-002C,SAMP,10	Unknown	4	1000.0	Anions_Default	EPA 300_0_240223A	Finished
30	N063303-006C,SAMP,10	Unknown	5	1000.0	Anions_Default	EPA 300_0_240223A	Finished
31	N063303-008C,SAMP,10	Unknown	6	1000.0	Anions_Default	EPA 300_0_240223A	Finished
32	CCV-2,CCV,1	Unknown	7	1000.0	Anions_Default	EPA 300_0_240223A	Finished
33	CCB-2,CCB,1	Unknown	8	1000.0	Anions_Default	EPA 300_0_240223A	Finished
34	N063297-003BMS,MS,10	Unknown	9	1000.0	Anions_Default	EPA 300_0_240223A	Finished
35	N063256-001C,SAMP,20	Unknown	10	1000.0	Anions_Default	EPA 300_0_240223A	Finished
36	BLANK	Unknown	11	1000.0	Anions_Default	EPA 300_0_240223A	Finished
37	N063259-001C,SAMP,50	Unknown	12	1000.0	Anions_Default	EPA 300_0_240223A	Finished
38	BLANK	Unknown	13	1000.0	Anions_Default	EPA 300_0_240223A	Finished
39	N063260-001C,SAMP,100	Unknown	14	1000.0	Anions_Default	EPA 300_0_240223A	Finished
40	BLANK	Unknown	15	1000.0	Anions_Default	EPA 300_0_240223A	Finished
41	N063261-001C,SAMP,100	Unknown	16	1000.0	Anions_Default	EPA 300_0_240223A	Finished

Processed by:
Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)



2/25/2024

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/23/2024 9:04:47 AM by IC-05
Last Update: 2/25/2024 7:08:17 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:06:35 AM	BLANK
2	Std - 0	2/23/2024 9:21:54 AM	IBLANK
3	Std - 1	2/23/2024 9:54:20 AM	STD-LOW
4	Std - 2	2/23/2024 10:09:39 AM	STD
5	Std - 3	2/23/2024 10:25:35 AM	STD
6	Std - 4	2/23/2024 10:41:31 AM	STD
7	Std - 5	2/23/2024 10:57:27 AM	STD-HIGH 240216B
8	ICV,ICV,1	2/23/2024 11:13:23 AM	ICV, IWST-~~240131B~~
9	ICB,ICB,1	2/23/2024 11:29:18 AM	ICB
10	MB-H2O,MBLK,1	2/23/2024 11:45:14 AM	MB 240216B
11	LCS-H2O,LCS,1	2/23/2024 12:01:09 PM	LCS IWST-~~240131B~~
12	N063297-001B,SAMP,5	2/23/2024 12:17:04 PM	SAMP,2>10mL,
13	N063297-002C,SAMP,20	2/23/2024 12:33:00 PM	SAMP,0.5>10mL,
14	N063297-003C,SAMP,10	2/23/2024 12:48:55 PM	SAMP,1>10mL,
15	N063295-008B,SAMP,10	2/23/2024 1:04:51 PM	SAMP,1>10mL,
16	N063295-008BMS,MS,10	2/23/2024 1:20:46 PM	MS,1>10mL,
17	N063295-008BMSD,MSD,10	2/23/2024 1:36:43 PM	MSD,1>10mL,
18	N063295-005B,SAMP,10	2/23/2024 1:52:37 PM	SAMP,1>10mL,
19	N063295-006B,SAMP,10	2/23/2024 2:08:33 PM	SAMP,1>10mL,240216A
20	CCV-1,CCV,1	2/23/2024 2:24:29 PM	CCV, IWST-~~240131A~~
21	CCB-1,CCB,1	2/23/2024 2:40:25 PM	CCB
22	N063295-007B,SAMP,10	2/23/2024 2:56:21 PM	SAMP,1>10mL,
23	N063295-008BDUP,DUP,10	2/23/2024 3:12:16 PM	DUP,1>10mL,
24	N063297-001BMS,MS,5	2/23/2024 3:28:11 PM	MS,2>10mL,
25	N063297-001BMSD,MSD,5	2/23/2024 3:44:07 PM	MSD,2>10mL,
26	N063297-001BDUP,DUP,5	2/23/2024 4:05:45 PM	DUP,2>10mL,
27	N063297-001B,SAMP,10	2/23/2024 4:21:04 PM	SAMP,1>10mL,
28	N063303-001C,SAMP,10	2/23/2024 4:37:00 PM	SAMP,1>10mL,
29	N063303-002C,SAMP,10	2/23/2024 4:52:55 PM	SAMP,1>10mL,
30	N063303-006C,SAMP,10	2/23/2024 5:08:51 PM	SAMP,1>10mL,
31	N063303-008C,SAMP,10	2/23/2024 5:24:46 PM	SAMP,1>10mL,240216A
32	CCV-2,CCV,1	2/23/2024 5:40:42 PM	CCV, IWST-~~240131A~~
33	CCB-2,CCB,1	2/23/2024 5:56:38 PM	CCB
34	N063297-003BMS,MS,10	2/23/2024 6:12:34 PM	MS,1>10mL,
35	N063256-001C,SAMP,20	2/23/2024 6:28:29 PM	SAMP,0.5>10mL,
36	BLANK	2/23/2024 6:44:25 PM	BLANK
37	N063259-001C,SAMP,50	2/23/2024 7:00:22 PM	SAMP,0.2>10mL,
38	BLANK	2/23/2024 7:16:17 PM	BLANK
39	N063260-001C,SAMP,100	2/23/2024 7:32:13 PM	SAMP,0.1>10mL,
40	BLANK	2/23/2024 7:48:10 PM	BLANK
41	N063261-001C,SAMP,100	2/23/2024 8:04:05 PM	SAMP,0.1>10mL,

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/23/2024 9:04:47 AM by IC-05
Last Update: 2/25/2024 7:08:17 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	BLANK	Unknown	17	1000.0	Anions_Default	EPA 300_0_240223A	Finished
43	CCV-3,CCV,1	Unknown	18	1000.0	Anions_Default	EPA 300_0_240223A	Finished
44	CCB-3,CCB,1	Unknown	19	1000.0	Anions_Default	EPA 300_0_240223A	Finished

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/23/2024 9:04:47 AM by IC-05
Last Update: 2/25/2024 7:08:17 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	BLANK	2/23/2024 8:20:01 PM	BLANK 240216A
43	CCV-3,CCV,1	2/23/2024 8:35:57 PM	CCV, IWST-~~240131A~~
44	CCB-3,CCB,1	2/23/2024 8:51:53 PM	CCB

dMocha 3/10/2024
for RBA

INITIAL CALIBRATION DATA SUMMARY

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-09
Date Calibrated: 2/23/2024

Initial Calibration:

Fluoride	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0108	0.0536	0.1161	0.2854	0.5884	1.000
Measured, in mg/L	0.000000	0.061600	0.243400	0.508100	1.226200	2.510700	
Relative Error (%RE)		23.2%		1.6%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712A

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-09
Date Calibrated: 2/23/2024

Initial Calibration:

Bromide	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0032	0.0162	0.0323	0.0800	0.1637	1.000
Measured, in mg/L	0.000000	0.055600	0.255000	0.500100	1.230000	2.509400	
Relative Error (%RE)		11.2%		0.0%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712D

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-09
Date Calibrated: 2/23/2024

Initial Calibration:

Nitrate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0190	0.0943	0.1907	0.4801	0.9920	1.000
Measured, in mg/L	0.000000	0.063600	0.253100	0.495800	1.224500	2.513000	
Relative Error (%RE)		27.2%		-0.8%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712E

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 2/23/2024

Initial Calibration:

Chloride	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.5	1	2	5	10	R^2
Area,mAU*min	0.0000	0.0676	0.1324	0.2669	0.6836	1.4401	0.999
Measured, in mg/L	0.000000	0.583500	1.032000	1.962000	4.844700	10.077900	
Relative Error (%RE)		16.7%		-1.9%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712B

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 2/23/2024

Initial Calibration:

Sulfate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.5	2	4	10	20	R^2
Area,mAU*min	0.0000	0.0480	0.2008	0.4077	1.0415	2.1673	1.000
Measured, in mg/L	0.000000	0.632600	2.038000	3.940700	9.768100	20.120700	
Relative Error (%RE)		26.5%		-1.5%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712G

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_BRPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300_W_BRPG**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **ICV**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711025**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	1.229	0.50	1.250	0	98.3	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300_W_BRPG**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **CCV**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711030**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	1.225	0.50	1.250	0	98.0	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300_W_BRPG**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **CCV**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711035**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	1.217	0.50	1.250	0	97.3	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300_W_BRPG**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **CCV**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711037**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	1.250	0.50	1.250	0	100	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID: **ICV** SampType: **ICV** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **182874**
Client ID: **ICV** Batch ID: **R182874** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5711091**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.941	0.50	2.000	0	97.1	90	110				

Sample ID: **CCV-1** SampType: **CCV** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **182874**
Client ID: **CCV** Batch ID: **R182874** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5711103**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.918	0.50	2.000	0	95.9	90	110				

Sample ID: **CCV-2** SampType: **CCV** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **182874**
Client ID: **CCV** Batch ID: **R182874** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5711109**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.910	0.50	2.000	0	95.5	90	110				

Sample ID: **CCV-3** SampType: **CCV** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **182874**
Client ID: **CCV** Batch ID: **R182874** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5711115**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.899	0.50	2.000	0	95.0	90	110				

Sample ID: **CCV-4** SampType: **CCV** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **182874**
Client ID: **CCV** Batch ID: **R182874** TestNo: **EPA 300.0** Analysis Date: **2/24/2024** SeqNo: **5711117**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	1.912	0.50	2.000	0	95.6	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID: **ICV** SampType: **ICV** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **182887**
Client ID: **ICV** Batch ID: **R182887** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5711004**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.230	0.10	1.250	0	98.4	90	110				

Sample ID: **CCV-1** SampType: **CCV** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **182887**
Client ID: **CCV** Batch ID: **R182887** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5711016**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.235	0.10	1.250	0	98.8	90	110				

Sample ID: **CCV-2** SampType: **CCV** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **182887**
Client ID: **CCV** Batch ID: **R182887** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5711021**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.239	0.10	1.250	0	99.1	90	110				

Sample ID: **CCV-3** SampType: **CCV** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **182887**
Client ID: **CCV** Batch ID: **R182887** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5711023**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.216	0.10	1.250	0	97.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **ICV**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710468**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.049	0.50	4.000	0	101	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCV**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710478**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.904	0.50	4.000	0	97.6	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCV**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710486**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.864	0.50	4.000	0	96.6	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCV**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710492**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.829	0.50	4.000	0	95.7	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCV**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/24/2024**	SeqNo: **5710494**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.846	0.50	4.000	0	96.1	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **ICV**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711056**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.260	0.050	1.250	0	101	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **CCV**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711067**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.234	0.050	1.250	0	98.7	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **CCV**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711076**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.248	0.050	1.250	0	99.8	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **CCV**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711079**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.226	0.050	1.250	0	98.1	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_BRPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_BRPG**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **ICB**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711026**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	ND	0.50									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_BRPG**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **CCB**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711031**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	ND	0.50									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_BRPG**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **CCB**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711036**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	ND	0.50									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_BRPG**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **CCB**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711038**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromide	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_CLPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **ICB**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711092**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCB**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711104**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCB**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711110**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCB**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711116**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300_W_CLPG**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCB**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/24/2024**	SeqNo: **5711118**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_FPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **ICB**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711005**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **CCB**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711017**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **CCB**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711022**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_FPGE**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **CCB**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711024**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.10									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **ICB**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710469**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCB**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710479**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCB**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710487**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCB**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5710493**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **182874**
Client ID: **CCB**	Batch ID: **R182874**	TestNo: **EPA 300.0**		Analysis Date: **2/24/2024**	SeqNo: **5710495**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICB** SampType: **ICB** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **182887**
Client ID: **ICB** Batch ID: **R182887** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5711057**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-1** SampType: **CCB** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **182887**
Client ID: **CCB** Batch ID: **R182887** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5711068**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	0.025	0.050									

Sample ID: **CCB-2** SampType: **CCB** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **182887**
Client ID: **CCB** Batch ID: **R182887** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5711077**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-3** SampType: **CCB** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **182887**
Client ID: **CCB** Batch ID: **R182887** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5711080**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Detection of NO3 was > 1/2PQL in CCB1. However, affected samples were >5x the CCB detection.

dMocha 3/10/2024

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-09

Analytical Sequence

Date Analyzed: 2/23/2024

Sample Name		Retention Time	Evaluation
ICV	Fluoride	3.217	
CCV-1	Fluoride	3.211	
CCV-2	Fluoride	3.214	
CCV-3	Fluoride	3.214	

Average 3.214
Applied RT Window 3.014 - 3.414

MB-R182887_F	Fluoride	N.A.	N.A.
LCS-R182887_F	Fluoride	3.214	PASS
N063297-001B	Fluoride	3.214	PASS
~~N063297-002C~~	~~Fluoride~~	~~3.207~~	~~PASS~~
~~N063297-003B~~	~~Fluoride~~	~~3.214~~	~~PASS~~
N063295-008BMS	Fluoride	3.207	PASS
N063295-008BMSD	Fluoride	3.204	PASS
N063295-008BDUP	Fluoride	3.201	PASS
N063297-001BDUP	Fluoride	3.210	PASS

Reviewed by:

dMocha 3/10/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-09

Analytical Sequence

Date Analyzed: 2/23/2024

Sample Name		Retention Time	Evaluation
ICV	Bromide	6.524	
CCV-1	Bromide	6.484	
CCV-2	Bromide	6.454	
CCV-3	Bromide	6.424	
	Average	6.472	
	Applied RT Window	6.272 - 6.672	
MB-R182887_BR	Bromide	N.A.	N.A.
LCS-R182887_BR	Bromide	6.521	PASS
N063297-001B	Bromide	6.507	PASS
N063297-001BMS	Bromide	6.477	PASS
N063297-001BMSD	Bromide	6.484	PASS
N063297-001BDUP	Bromide	N.A.	N.A.

Reviewed by:

dMocha 3/10/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-09

Analytical Sequence

Date Analyzed: 2/23/2024

Sample Name		Retention Time	Evaluation
ICV	Nitrate	7.317	
CCV-1	Nitrate	7.254	
CCV-2	Nitrate	7.227	
CCV-3	Nitrate	7.191	
	Average	7.247	
	Applied RT Window	7.047 - 7.447	
MB-R182887_NO3	Nitrate	7.251	PASS
LCS-R182887_NO3	Nitrate	7.314	PASS
N063297-002C	Nitrate	7.287	PASS
N063297-003C	Nitrate	7.284	PASS
N063295-008BMS	Nitrate	7.277	PASS
N063295-008BMSD	Nitrate	7.274	PASS
N063295-008BDUP	Nitrate	N.A.	N.A.
N063297-001B	Nitrate	7.247	PASS
N063297-003BMS	Nitrate	7.221	PASS

Reviewed by:

dMocha 3/11/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/23/2024

Sample Name		Retention Time	Evaluation
ICV	Chloride	4.407	
CCV-1	Chloride	4.300	
CCV-2	Chloride	4.424	
CCV-3	Chloride	4.447	
CCV-4	Chloride	4.450	

Average 4.406

Applied RT Window 4.206 - 4.606

MB-R182874_CL	Chloride	N.A.	N.A.
LCS-R182874_CL	Chloride	4.440	PASS
N063297-001B	Chloride	4.440	PASS
N063297-001BDUP	Chloride	4.417	PASS
N063297-001BMS	Chloride	4.440	PASS
N063297-001BMSD	Chloride	4.433	PASS
N063252-001CMS	Chloride	4.440	PASS

Reviewed by:

dMocha 3/10/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 2/23/2024

Sample Name		Retention Time	Evaluation
ICV	Sulfate	9.933	
CCV-1	Sulfate	9.847	
CCV-2	Sulfate	9.984	
CCV-3	Sulfate	10.010	
CCV-4	Sulfate	10.013	

Average 9.957

Applied RT Window 9.757 - 10.157

MB-R182874_SO4	Sulfate	N.A.	N.A.
LCS-R182874_SO4	Sulfate	9.973	PASS
N063297-001B	Sulfate	9.940	PASS
N063297-001BDUP	Sulfate	9.917	PASS
N063297-001BMS	Sulfate	9.944	PASS
N063297-001BMSD	Sulfate	9.937	PASS
N063252-001CMS	Sulfate	9.937	PASS

Reviewed by:

dMocha 3/10/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): 10/5/2022, 12/14/2022, 3/22/2023,7/10/2023; 10/3/2023 & 11/14/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: mg/L

Instrument Name: **IC-08 & IC-09**

Datafile IC-08 221005A #24 IC-08 221214A #30 IC-08 230322A #35 IC-08 230710A #13 IC-09 231003A #14 IC-08 231114A #24 IC-09 231114A #19

Analyte	#1	#2	#3	#4	#5	#6	#7	Spike Conc., mg/L	SD	$t_{(n-1)}$ value	MDLs	MDL	PQL
Fluoride	0.100	0.103	0.108	0.118	0.110	0.098	0.126	0.10	0.0101	3.143	**0.0318**	**0.0318**	0.10
Chloride	0.480	0.418	0.472	0.653	0.624	0.587	0.622	0.50	0.0922	3.143	**0.2898**	**0.2898**	0.50
Nitrite	0.068	0.061	0.060	0.071	0.063	0.061	0.070	0.05	0.0047	3.143	**0.0149**	**0.0149**	0.05
Bromide	0.526	0.502	0.509	0.522	0.536	0.527	0.520	0.50	0.0116	3.143	**0.0364**	**0.0364**	0.50
Nitrate	0.073	0.058	0.059	0.073	0.074	0.068	0.073	0.05	0.0068	3.143	**0.0215**	**0.0240**	0.05
Phosphate	0.112	0.096	0.114	0.120	0.130	0.093	0.124	0.10	0.0138	3.143	**0.0433**	**0.0433**	0.10
Sulfate	0.501	0.609	0.638	0.401	0.704	0.620	0.697	0.50	0.1092	3.143	**0.3432**	**0.3432**	0.50

METHOD DETECTION LIMIT (Blanks)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Analyte	MDLb	# of Records
Fluoride	0	63
Chloride	0.1456	80
Nitrite	0.0147	64
Bromide	0	18
Nitrate	0.0240	132
Phosphate	0.0237	34
Sulfate	0.2579	107

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

EPA 6010B
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107062
ASSET #: N063297

Instrument ID: ICP-03
Analyst: DBJ
Date Analyzed: 2/23/2024

Method:

[X] EPA 6010B / 200.7
[ ] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.		X			X	
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented	X			X		
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

%Rec of Fe/Ca in N063295-005C-PS/MS/MSD failed, low bias. However, LCS passed criteria.
The first ICSA1(raw data ICSA Sequence No.:12) does not have the ICSA Standard in position. CAR#7427
Dilution test for Mg failed. However, PS passed criteria.
Dilution test for Ca failed.

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 03072024 Date: _____

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107062
ASSET #: N063297

Instrument ID: ICP-02
Analyst: DBJ
Date Analyzed: 2/26/2024

Method:

[X] EPA 6010B / 200.7
[ ] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.	X			X		
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 03072024 Date: _____

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107062
ASSET #: N063297

Instrument ID: ICP-02
Analyst: DBJ
Date Analyzed: 3/1/2024

Method:

[X] EPA 6010B / 200.7
[ ] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.	X			X		
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.			X			X
24. LCS compounds within control limits.			X			X
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

K and Na re run
% Rec of K and Na in N063295-005C-MS2/MSD2 failed. Howwever, LCS passed criteria
Dilution test for Na failed. However, PS passed criteria

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 03072024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Groundwater

FORMULA:

Calculate the Boron concentration, in mg/L in the original sample as follows:

Boron , mg/L = A * DF * PF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063297-001C** , the concentration in mg/L is calculated as follows:

Boron , mg/L = 0.23679 * 1 * (25/25)

Reporting results in two significant figures,

Boron , mg/L = 0.24

Reviewed by:

dMocha 3/19/2024

% RSD SUMMARY

RSD SUMMARY: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	B	0	3.02	15	PASS
Standard1	ICAL	1	B	0.1	0.43	15	PASS
Standard3	ICAL	1	B	1	0.46	15	PASS
Standard4	ICAL	1	B	2.5	0.87	15	PASS
Standard5	ICAL	1	B	3.75	0.9	15	PASS
Standard6	ICAL	1	B	5	0.26	15	PASS
Standard7	ICAL	1	B	10	0.59	15	PASS
ICV	ICV	1	B	4.98	0.27	15	PASS
ICB	ICB	1	B	0.01	11.68	15	PASS
LLICV1	CCV1	1	B	0.1	0.19	20	PASS
ICSA1	ICSA	1	B	100.46	10.31	15	PASS
ICSA1	ICSA	1	B	0	54.42	15	<PQL
ICSA1	ICSA	1	B	0	25.42	15	<PQL
ICSAB1	ICSAB	1	B	0.95	0.65	15	PASS
RINSE	RINSE	1	B	0.01	3.44	15	PASS
CCV1	CCV	1	B	5.07	0.75	15	PASS
CCB1	CCB	1	B	0.01	12.29	15	PASS
CCV2	CCV	1	B	5.05	0.55	15	PASS
CCB2	CCB	1	B	0.01	11.54	15	PASS
CCV3	CCV	1	B	5.04	0.35	15	PASS
CCB3	CCB	1	B	0.01	12.43	15	PASS
ICSA2	ICSA	1	B	0.01	24.91	15	<PQL
ICSAB2	ICSAB	1	B	0.97	0.25	15	PASS
RINSE	RINSE	1	B	0.01	8.07	15	PASS
RINSE	RINSE	1	B	0.01	8.62	15	PASS
MB-107062	MBLK	1	B	0.02	1.3	15	PASS
LCS1-107062	LCS	1	B	5.28	0.21	15	PASS
N063295-005C	SAMP	1	B	2.35	0.03	15	PASS
N063295-005C	SAMP	5	B	0.5	0.19	15	PASS
N063295-005C-PS	PS	1	B	7.89	0.22	15	PASS
N063295-005C-MS1	MS	1	B	7.58	0.12	15	PASS
N063295-005C-MSD1	MSD	1	B	7.64	0.1	15	PASS
CCV4	CCV	1	B	5.05	0.49	15	PASS
CCB4	CCB	1	B	0.02	7.83	15	PASS
N063295-006C	SAMP	1	B	2.63	0.06	15	PASS
N063295-007C	SAMP	1	B	2.6	0	15	PASS
N063295-008C	SAMP	1	B	2.68	0.02	15	PASS
N063297-001C	SAMP	1	B	0.24	0.53	15	PASS
N063303-001B	SAMP	1	B	2.26	0.55	15	PASS
N063303-002B	SAMP	1	B	3.44	0.66	15	PASS
N063303-006B	SAMP	1	B	4.49	0.62	15	PASS
N063303-008B	SAMP	1	B	1.18	0.32	15	PASS

RSD SUMMARY: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CCV5	CCV	1	B	5.04	0.48	15	PASS
CCB5	CCB	1	B	0.01	11.75	15	PASS
CCV6	CCV	1	B	5.04	0.6	15	PASS
CCB6	CCB	1	B	0.01	13.31	15	PASS
ICSA3	ICSA	1	B	0.01	29.56	15	<PQL
ICSAB3	ICSAB	1	B	0.96	0.19	15	PASS
CalBlk	IBLK	1	Ca	0	0.12	15	PASS
Standard1	ICAL	1	Ca	0.2	0.47	15	PASS
Standard2	ICAL	1	Ca	1	0.24	15	PASS
Standard3	ICAL	1	Ca	2	0.55	15	PASS
Standard4	ICAL	1	Ca	5	0.53	15	PASS
Standard5	ICAL	1	Ca	7.5	0.75	15	PASS
Standard6	ICAL	1	Ca	10	0.38	15	PASS
Standard7	ICAL	1	Ca	20	0.15	15	PASS
ICV	ICV	1	Ca	10.01	0.38	15	PASS
ICB	ICB	1	Ca	0	4056.95	15	<PQL
LLICV1	CCV1	1	Ca	0.21	0.48	20	PASS
ICSA1	ICSA	1	Ca	5.48	13.94	15	PASS
ICSA1	ICSA	1	Ca	481.13	0.21	15	PASS
ICSA1	ICSA	1	Ca	459.92	0.42	15	PASS
ICSAB1	ICSAB	1	Ca	449.36	0.53	15	PASS
RINSE	RINSE	1	Ca	0.05	19.91	15	<PQL
CCV1	CCV	1	Ca	10.36	0.7	15	PASS
CCB1	CCB	1	Ca	0	32.4	15	<PQL
CCV2	CCV	1	Ca	10.32	0.62	15	PASS
CCB2	CCB	1	Ca	0	71.22	15	<PQL
CCV3	CCV	1	Ca	10.16	0.21	15	PASS
CCB3	CCB	1	Ca	0	379.63	15	<PQL
ICSA2	ICSA	1	Ca	452.43	0.15	15	PASS
ICSAB2	ICSAB	1	Ca	449.9	0.37	15	PASS
RINSE	RINSE	1	Ca	0.03	3.65	15	PASS
RINSE	RINSE	1	Ca	0.02	16.41	15	<PQL
MB-107062	MBLK	1	Ca	0.08	1.48	15	PASS
LCS1-107062	LCS	1	Ca	10.81	0.22	15	PASS
N063295-005C	SAMP	1	Ca	306.6	0.19	15	PASS
N063295-005C	SAMP	5	Ca	69.03	0.19	15	PASS
N063295-005C-PS	PS	1	Ca	314.34	0.48	15	PASS
N063295-005C-MS1	MS	1	Ca	306.64	0.74	15	PASS
N063295-005C-MSD1	MSD	1	Ca	310.98	0.51	15	PASS
CCV4	CCV	1	Ca	10.22	0.58	15	PASS
CCB4	CCB	1	Ca	0	154.89	15	<PQL
N063295-006C	SAMP	1	Ca	311.32	0.38	15	PASS

RSD SUMMARY: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
N063295-007C	SAMP	1	Ca	304.35	0.43	15	PASS
N063295-008C	SAMP	1	Ca	320.99	0.28	15	PASS
N063297-001C	SAMP	1	Ca	19.22	0.18	15	PASS
N063303-001B	SAMP	1	Ca	120.96	0.39	15	PASS
N063303-002B	SAMP	1	Ca	109.87	0.4	15	PASS
N063303-006B	SAMP	1	Ca	399.23	0.58	15	PASS
N063303-008B	SAMP	1	Ca	454.67	0.26	15	PASS
CCV5	CCV	1	Ca	10.17	0.4	15	PASS
CCB5	CCB	1	Ca	0	65.9	15	<PQL
CCV6	CCV	1	Ca	10.11	0.68	15	PASS
CCB6	CCB	1	Ca	0	89.23	15	<PQL
ICSA3	ICSA	1	Ca	451.28	0.32	15	PASS
ICSAB3	ICSAB	1	Ca	442.35	0.09	15	PASS
CalBlk	IBLK	1	Fe	0	4.79	15	PASS
Standard1	ICAL	1	Fe	0.02	3.3	15	PASS
Standard2	ICAL	1	Fe	0.05	1.26	15	PASS
Standard3	ICAL	1	Fe	2	0.37	15	PASS
Standard4	ICAL	1	Fe	5	0.7	15	PASS
Standard5	ICAL	1	Fe	7.5	0.76	15	PASS
Standard6	ICAL	1	Fe	10	0.37	15	PASS
Standard7	ICAL	1	Fe	20	0.65	15	PASS
ICV	ICV	1	Fe	10.06	0.34	15	PASS
ICB	ICB	1	Fe	0	9.12	15	PASS
LLICV1	CCV1	1	Fe	0.02	1.2	20	PASS
ICSA1	ICSA	1	Fe	26.91	22.38	15	NR!
ICSA1	ICSA	1	Fe	182.18	0.05	15	PASS
ICSA1	ICSA	1	Fe	174.62	0.07	15	PASS
ICSAB1	ICSAB	1	Fe	170.21	0.13	15	PASS
RINSE	RINSE	1	Fe	0.04	13.45	15	PASS
CCV1	CCV	1	Fe	10.31	0.73	15	PASS
CCB1	CCB	1	Fe	0	73.65	15	<PQL
CCV2	CCV	1	Fe	10.24	0.59	15	PASS
CCB2	CCB	1	Fe	0	47.78	15	<PQL
CCV3	CCV	1	Fe	10.13	0.26	15	PASS
CCB3	CCB	1	Fe	0	135.65	15	<PQL
ICSA2	ICSA	1	Fe	172.57	0.08	15	PASS
ICSAB2	ICSAB	1	Fe	169.57	0.07	15	PASS
RINSE	RINSE	1	Fe	0.02	4.66	15	PASS
RINSE	RINSE	1	Fe	0	43.94	15	<PQL
MB-107062	MBLK	1	Fe	0	312.39	15	<PQL
LCS1-107062	LCS	1	Fe	0.1	0.34	15	PASS
N063295-005C	SAMP	1	Fe	0.32	0.57	15	PASS

RSD SUMMARY: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
N063295-005C	SAMP	5	Fe	0.07	1.9	15	PASS
N063295-005C-PS	PS	1	Fe	0.41	1.11	15	PASS
N063295-005C-MS1	MS	1	Fe	0.48	0.88	15	PASS
N063295-005C-MSD1	MSD	1	Fe	0.49	0.76	15	PASS
CCV4	CCV	1	Fe	10.18	0.54	15	PASS
CCB4	CCB	1	Fe	0	69.03	15	<PQL
N063295-006C	SAMP	1	Fe	0.31	0.29	15	PASS
N063295-007C	SAMP	1	Fe	0.2	1.15	15	PASS
N063295-008C	SAMP	1	Fe	0.28	0.32	15	PASS
N063297-001C	SAMP	1	Fe	0.02	5.83	15	PASS
N063303-001B	SAMP	1	Fe	0.02	4.85	15	PASS
N063303-002B	SAMP	1	Fe	0.01	21.54	15	<PQL
N063303-006B	SAMP	1	Fe	3.64	0.6	15	PASS
N063303-008B	SAMP	1	Fe	15.36	0.22	15	PASS
CCV5	CCV	1	Fe	10.15	0.38	15	PASS
CCB5	CCB	1	Fe	0	356.23	15	<PQL
CCV6	CCV	1	Fe	10.09	0.65	15	PASS
CCB6	CCB	1	Fe	0	62.82	15	<PQL
ICSA3	ICSA	1	Fe	171.39	0.12	15	PASS
ICSAB3	ICSAB	1	Fe	166.83	0.02	15	PASS
CalBlk	IBLK	1	Mg	0	9.93	15	PASS
Standard1	ICAL	1	Mg	0.1	0.52	15	PASS
Standard2	ICAL	1	Mg	1	0.19	15	PASS
Standard3	ICAL	1	Mg	2	0.6	15	PASS
Standard4	ICAL	1	Mg	5	0.7	15	PASS
Standard5	ICAL	1	Mg	7.5	0.82	15	PASS
Standard6	ICAL	1	Mg	10	0.38	15	PASS
Standard7	ICAL	1	Mg	20	0.55	15	PASS
ICV	ICV	1	Mg	10.06	0.32	15	PASS
ICB	ICB	1	Mg	0	206.46	15	<PQL
LLICV1	CCV1	1	Mg	0.1	1.33	20	PASS
ICSA1	ICSA	1	Mg	162.91	21.37	15	NR!
ICSA1	ICSA	1	Mg	466.51	0.06	15	PASS
ICSA1	ICSA	1	Mg	446.02	0.02	15	PASS
ICSAB1	ICSAB	1	Mg	435.51	0	15	PASS
RINSE	RINSE	1	Mg	0.1	3.77	15	PASS
CCV1	CCV	1	Mg	10.14	0.75	15	PASS
CCB1	CCB	1	Mg	0	125.18	15	<PQL
CCV2	CCV	1	Mg	10.16	0.68	15	PASS
CCB2	CCB	1	Mg	0.01	14.94	15	PASS
CCV3	CCV	1	Mg	10.12	0.31	15	PASS
CCB3	CCB	1	Mg	0	69.78	15	<PQL

RSD SUMMARY: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
ICSA2	ICSA	1	Mg	439.98	0.05	15	PASS
ICSAB2	ICSAB	1	Mg	431.77	0.05	15	PASS
RINSE	RINSE	1	Mg	0.06	0.13	15	PASS
RINSE	RINSE	1	Mg	0.01	12.78	15	PASS
MB-107062	MBLK	1	Mg	0.02	10.84	15	PASS
LCS1-107062	LCS	1	Mg	10.95	0.21	15	PASS
N063295-005C	SAMP	1	Mg	5.96	0.32	15	PASS
N063295-005C	SAMP	5	Mg	1.47	0.16	15	PASS
N063295-005C-PS	PS	1	Mg	15.04	0.22	15	PASS
N063295-005C-MS1	MS	1	Mg	14.8	0.31	15	PASS
N063295-005C-MSD1	MSD	1	Mg	14.96	0.57	15	PASS
CCV4	CCV	1	Mg	10.13	0.44	15	PASS
CCB4	CCB	1	Mg	0.01	33.32	15	<PQL
N063295-006C	SAMP	1	Mg	3.46	0.23	15	PASS
N063295-007C	SAMP	1	Mg	3.19	0.36	15	PASS
N063295-008C	SAMP	1	Mg	3.75	0.57	15	PASS
N063297-001C	SAMP	1	Mg	2.66	0.57	15	PASS
N063303-001B	SAMP	1	Mg	3.1	0.71	15	PASS
N063303-002B	SAMP	1	Mg	2.64	0.19	15	PASS
N063303-006B	SAMP	1	Mg	350.9	0.16	15	PASS
N063303-008B	SAMP	1	Mg	241.91	0.02	15	PASS
CCV5	CCV	1	Mg	10.15	0.4	15	PASS
CCB5	CCB	1	Mg	0.01	20.97	15	<PQL
CCV6	CCV	1	Mg	10.14	0.61	15	PASS
CCB6	CCB	1	Mg	0	27.32	15	<PQL
ICSA3	ICSA	1	Mg	440.13	0.05	15	PASS
ICSAB3	ICSAB	1	Mg	430.33	0.01	15	PASS

RSD SUMMARY: 240226A

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	K	0	2.2	15	PASS
Standard1	ICAL	1	K	0.1	16.92	15	<PQL
Standard2	ICAL	1	K	1	2.98	15	PASS
Standard3	ICAL	1	K	5	0.53	15	PASS
Standard4	ICAL	1	K	10	0.25	15	PASS
Standard5	ICAL	1	K	20	0.44	15	PASS
Standard6	ICAL	1	K	40	0.2	15	PASS
ICV	ICV	1	K	9.98	0.24	15	PASS
ICB	ICB	1	K	-0.01	256.99	15	<PQL
LLICV	CCV	1	K	0.49	1.36	20	PASS
ICSA1	ICSA	1	K	-0.01	272.73	15	<PQL
ICSAB1	ICSAB	1	K	9.91	0.15	15	PASS
MB-107062	MBLK	1	K	0.03	65.67	15	<PQL
LCS2-107062	LCS	1	K	19.56	0.3	15	PASS
CCV1	CCV	1	K	10.06	0.09	15	PASS
CCB1	CCB	1	K	0.04	35.78	15	<PQL
N063295-005C	SAMP	5	K	7.91	0.31	15	PASS
N063295-006C	SAMP	5	K	10.97	21.61	15	NR!
N063295-007C	SAMP	5	K	8.53	3.28	15	PASS
N063295-008C	SAMP	5	K	8	0.33	15	PASS
CCV2	CCV	1	K	10.25	0.29	15	PASS
CCB2	CCB	1	K	0.11	32.94	15	<PQL
CCV3	CCV	1	K	10.33	0.26	15	PASS
CCB3	CCB	1	K	0.1	19.17	15	<PQL
N063295-005C	SAMP	25	K	1.7	1.59	15	PASS
N063295-005C	SAMP	500	K	0.15	21.12	15	<PQL
CCV4	CCV	1	K	10.34	0.34	15	PASS
CCB4	CCB	1	K	0.08	33.65	15	<PQL
ICSA2	ICSA	1	K	0.07	27.51	15	<PQL
ICSAB2	ICSAB	1	K	10.34	0.22	15	PASS
N063295-005C	SAMP	2500	K	0.14	27.91	15	<PQL
N063295-005C-PS	PS	5	K	24.93	0.34	15	PASS
N063295-005C-PS	PS	500	K	22.13	0.11	15	PASS
N063295-005C-MS2	MS	5	K	13.64	0.37	15	PASS
N063295-005C-MS2	MS	500	K	0.29	5.41	15	PASS
N063295-005C-MSD2	MSD	5	K	13.52	0.32	15	PASS
N063295-005C-MSD2	MSD	500	K	0.28	7.39	15	PASS
N063295-006C	SAMP	500	K	0.2	7.26	15	PASS
N063295-007C	SAMP	500	K	0.19	5.89	15	PASS
N063295-008C	SAMP	500	K	174.18	11.12	15	PASS
N063295-008C	SAMP	500	K	0.11	18.93	15	<PQL
N063295-008C	SAMP	500	K	0.1	22.46	15	<PQL

RSD SUMMARY: 240226A

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CCV5	CCV	1	K	10.44	0.25	15	PASS
N063295-005C	SAMP	2500	K	0.14	10.84	15	PASS
N063295-005C-PS	PS	5	K	25.11	0.39	15	PASS
N063295-005C-PS	PS	500	K	22.28	0.08	15	PASS
N063295-005C-MS2	MS	5	K	13.41	0.14	15	PASS
N063295-005C-MS2	MS	500	K	0.3	6.11	15	PASS
N063295-005C-MSD2	MSD	5	K	13.28	0.27	15	PASS
N063295-005C-MSD2	MSD	500	K	0.26	8.95	15	PASS
N063295-006C	SAMP	500	K	0.19	1.56	15	PASS
N063295-007C	SAMP	500	K	0.18	7.37	15	PASS
N063295-008C	SAMP	500	K	0.18	10.53	15	PASS
CCV5	CCV	1	K	10.54	0.17	15	PASS
CCB5	CCB	1	K	0.08	42.74	15	<PQL
N063295-008C	SAMP	5	K	11.41	6.07	15	PASS
CCV6	CCV	1	K	10.67	0.33	15	PASS
CCB6	CCB	1	K	0.13	18.56	15	<PQL
ICSA3	ICSA	1	K	0.12	18.53	15	<PQL
ICSAB3	ICSAB	1	K	10.58	0.27	15	PASS
CalBlk	IBLK	1	Na	0	8.77	15	PASS
Standard1	ICAL	1	Na	0.1	1.51	15	PASS
Standard2	ICAL	1	Na	1	0.84	15	PASS
Standard3	ICAL	1	Na	5	0.09	15	PASS
Standard4	ICAL	1	Na	10	0.16	15	PASS
Standard5	ICAL	1	Na	20	0.45	15	PASS
Standard6	ICAL	1	Na	40	0.15	15	PASS
ICV	ICV	1	Na	10.01	0.02	15	PASS
ICB	ICB	1	Na	0.01	66.16	15	<PQL
LLICV	CCV	1	Na	0.52	0.32	20	PASS
ICSA1	ICSA	1	Na	0	255.43	15	<PQL
ICSAB1	ICSAB	1	Na	10.04	0.16	15	PASS
MB-107062	MBLK	1	Na	0.19	17.13	15	<PQL
LCS2-107062	LCS	1	Na	19.64	1.03	15	PASS
CCV1	CCV	1	Na	10.18	0.04	15	PASS
CCB1	CCB	1	Na	0.09	6.95	15	PASS
N063295-005C	SAMP	5	Na	693.08	0.61	15	PASS
N063295-006C	SAMP	5	Na	1157	19.44	15	NR!
N063295-007C	SAMP	5	Na	834.16	3.49	15	PASS
N063295-008C	SAMP	5	Na	775.75	0.96	15	PASS
CCV2	CCV	1	Na	10.7	0.43	15	PASS
CCB2	CCB	1	Na	0.38	7.56	15	PASS
CCV3	CCV	1	Na	10.63	0.27	15	PASS
CCB3	CCB	1	Na	0.26	3.98	15	PASS

RSD SUMMARY: 240226A

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
N063295-005C	SAMP	25	Na	148.69	0.43	15	PASS
N063295-005C	SAMP	500	Na	7.86	0.58	15	PASS
CCV4	CCV	1	Na	10.49	0.16	15	PASS
CCB4	CCB	1	Na	0.2	2.5	15	PASS
ICSA2	ICSA	1	Na	0.16	3.82	15	PASS
ICSAB2	ICSAB	1	Na	10.43	0.1	15	PASS
N063295-005C	SAMP	2500	Na	2.3	0.69	15	PASS
N063295-005C-PS	PS	5	Na	727.05	0.87	15	PASS
N063295-005C-PS	PS	500	Na	26.11	0.26	15	PASS
N063295-005C-MS2	MS	5	Na	767.49	1.01	15	PASS
N063295-005C-MS2	MS	500	Na	8.27	0.56	15	PASS
N063295-005C-MSD2	MSD	5	Na	760.04	1.42	15	PASS
N063295-005C-MSD2	MSD	500	Na	8.24	0.56	15	PASS
N063295-006C	SAMP	500	Na	6.27	0.56	15	PASS
N063295-007C	SAMP	500	Na	7.65	0.46	15	PASS
N063295-008C	SAMP	500	Na	863.57	18.52	15	NR!
N063295-008C	SAMP	500	Na	0.32	5.87	15	PASS
N063295-008C	SAMP	500	Na	0.29	7.72	15	PASS
CCV5	CCV	1	Na	10.54	0.11	15	PASS
N063295-005C	SAMP	2500	Na	2.46	2.07	15	PASS
N063295-005C-PS	PS	5	Na	735.36	0.71	15	PASS
N063295-005C-PS	PS	500	Na	25.97	0.73	15	PASS
N063295-005C-MS2	MS	5	Na	752.31	0.59	15	PASS
N063295-005C-MS2	MS	500	Na	8.37	0.86	15	PASS
N063295-005C-MSD2	MSD	5	Na	745.11	0.74	15	PASS
N063295-005C-MSD2	MSD	500	Na	8.3	0.67	15	PASS
N063295-006C	SAMP	500	Na	6.31	0.74	15	PASS
N063295-007C	SAMP	500	Na	7.71	0.29	15	PASS
N063295-008C	SAMP	500	Na	7.11	0.11	15	PASS
CCV5	CCV	1	Na	10.65	0.2	15	PASS
CCB5	CCB	1	Na	0.16	5.32	15	PASS
N063295-008C	SAMP	5	Na	1101.6	5.96	15	PASS
CCV6	CCV	1	Na	11.11	0.32	15	PASS
CCB6	CCB	1	Na	0.44	8.09	15	PASS
ICSA3	ICSA	1	Na	0.36	5.49	15	PASS
ICSAB3	ICSAB	1	Na	10.73	0.26	15	PASS

RSD SUMMARY: 240301B

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	K	0	13.93	15	PASS
Standard1	ICAL	1	K	0.1	7	15	PASS
Standard2	ICAL	1	K	1	1.82	15	PASS
Standard3	ICAL	1	K	5	0.43	15	PASS
Standard4	ICAL	1	K	10	0.44	15	PASS
Standard5	ICAL	1	K	20	0.18	15	PASS
Standard6	ICAL	1	K	40	0.11	15	PASS
ICV	ICV	1	K	7.75	0.23	15	PASS
ICV	ICV	1	K	10.09	0.52	15	PASS
ICB	ICB	1	K	-0.01	149.39	15	<PQL
LLICV	CCV	1	K	0.53	4.05	20	PASS
ICSA1	ICSA	1	K	0.01	105.18	15	<PQL
ICSAB1	ICSAB	1	K	10.08	0.19	15	PASS
N063295-005C	SAMP	2500	K	0.05	21.06	15	<PQL
N063295-005C-PS	PS	5	K	25.41	0.28	15	PASS
N063295-005C-PS	PS	500	K	18.6	0.99	15	PASS
N063295-005C-MS2	MS	5	K	18.42	8.95	15	PASS
N063295-005C-MS2	MS	500	K	0.12	13.51	15	PASS
N063295-005C-MSD2	MSD	5	K	13.49	4.29	15	PASS
N063295-005C-MSD2	MSD	500	K	0.16	15.25	15	<PQL
N063295-006C	SAMP	500	K	0.08	6.47	15	PASS
N063295-007C	SAMP	500	K	0.09	23.98	15	<PQL
N063295-008C	SAMP	500	K	0.08	51.81	15	<PQL
CCV1	CCV	1	K	10.14	0.25	15	PASS
CCB1	CCB	1	K	0.02	172.23	15	<PQL
N063297-001C	SAMP	5	K	0.94	2.62	15	PASS
N063297-001C	SAMP	1	K	4.44	0.13	15	PASS
CCV2	CCV	1	K	10.15	0.2	15	PASS
CCB2	CCB	1	K	0	573.62	15	<PQL
CCV3	CCV	1	K	10.29	0.21	15	PASS
CCB3	CCB	1	K	0.03	21.95	15	<PQL
ICSA2	ICSA	1	K	0	496.39	15	<PQL
ICSAB2	ICSAB	1	K	10.31	0.06	15	PASS
N063295-005C-MS2	MS	5	K	12.62	0.54	15	PASS
N063295-005C-MS2	MS	500	K	0.17	15.12	15	<PQL
CCV4	CCV	1	K	10.19	1.26	15	PASS
CCB4	CCB	1	K	0.11	4.5	15	PASS
CCV5	CCV	1	K	10.59	0.19	15	PASS
CCB5	CCB	1	K	0.06	20.71	15	<PQL
CCV6	CCV	1	K	10.58	0.36	15	PASS
CCB6	CCB	1	K	0.05	45.91	15	<PQL
ICSA3	ICSA	1	K	0.06	25.23	15	<PQL

RSD SUMMARY: 240301B

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
ICSAB3	ICSAB	1	K	10.61	0.14	15	PASS
CCV7	CCV	1	K	10.62	0.25	15	PASS
CCB7	CCB	1	K	0.06	25.05	15	<PQL
CCV8	CCV	1	K	10.58	0.09	15	PASS
CCB8	CCB	1	K	0.08	12.58	15	PASS
CCV9	CCV	1	K	10.54	0.08	15	PASS
CCB9	CCB	1	K	0.07	15.53	15	<PQL
ICSA4	ICSA	1	K	0.07	12.13	15	PASS
ICSAB4	ICSAB	1	K	10.55	0.1	15	PASS
CalBlk	IBLK	1	Na	0	36.46	15	<PQL
Standard1	ICAL	1	Na	0.1	2.12	15	PASS
Standard2	ICAL	1	Na	1	0.41	15	PASS
Standard3	ICAL	1	Na	5	0.09	15	PASS
Standard4	ICAL	1	Na	10	0.23	15	PASS
Standard5	ICAL	1	Na	20	0.16	15	PASS
Standard6	ICAL	1	Na	40	0.05	15	PASS
ICV	ICV	1	Na	771.93	0.4	15	PASS
ICV	ICV	1	Na	10.2	0.06	15	PASS
ICB	ICB	1	Na	0.03	16.35	15	<PQL
LLICV	CCV	1	Na	0.53	0.64	20	PASS
ICSA1	ICSA	1	Na	0.02	6.78	15	PASS
ICSAB1	ICSAB	1	Na	10.18	0.06	15	PASS
N063295-005C	SAMP	2500	Na	1.94	0.35	15	PASS
N063295-005C-PS	PS	5	Na	725.84	0.37	15	PASS
N063295-005C-PS	PS	500	Na	24.43	0.62	15	PASS
N063295-005C-MS2	MS	5	Na	1071.9	7.14	15	PASS
N063295-005C-MS2	MS	500	Na	6	0.88	15	PASS
N063295-005C-MSD2	MSD	5	Na	784.71	4.35	15	PASS
N063295-005C-MSD2	MSD	500	Na	7.5	0.43	15	PASS
N063295-006C	SAMP	500	Na	6.65	0.45	15	PASS
N063295-007C	SAMP	500	Na	7.05	0.46	15	PASS
N063295-008C	SAMP	500	Na	7.27	0.22	15	PASS
CCV1	CCV	1	Na	10.24	0.14	15	PASS
CCB1	CCB	1	Na	0.03	3.97	15	PASS
N063297-001C	SAMP	5	Na	28.19	0.29	15	PASS
N063297-001C	SAMP	1	Na	133.69	0.27	15	PASS
CCV2	CCV	1	Na	10.22	0.08	15	PASS
CCB2	CCB	1	Na	0.01	10.52	15	PASS
CCV3	CCV	1	Na	10.39	0.14	15	PASS
CCB3	CCB	1	Na	0.07	10.05	15	PASS
ICSA2	ICSA	1	Na	0.05	28.94	15	<PQL
ICSAB2	ICSAB	1	Na	10.31	0.2	15	PASS

RSD SUMMARY: 240301B

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
N063295-005C-MS2	MS	5	Na	722.57	0.81	15	PASS
N063295-005C-MS2	MS	500	Na	7.65	0.35	15	PASS
CCV4	CCV	1	Na	10.56	2.39	15	PASS
CCB4	CCB	1	Na	0.02	36.91	15	<PQL
CCV5	CCV	1	Na	10.5	0.12	15	PASS
CCB5	CCB	1	Na	0.02	24.07	15	<PQL
CCV6	CCV	1	Na	10.53	0.01	15	PASS
CCB6	CCB	1	Na	0.02	5.66	15	PASS
ICSA3	ICSA	1	Na	0.02	13.06	15	PASS
ICSAB3	ICSAB	1	Na	10.54	0.12	15	PASS
CCV7	CCV	1	Na	10.55	0.07	15	PASS
CCB7	CCB	1	Na	0.02	19.65	15	<PQL
CCV8	CCV	1	Na	10.49	0.12	15	PASS
CCB8	CCB	1	Na	0.02	8.32	15	PASS
CCV9	CCV	1	Na	10.46	0.17	15	PASS
CCB9	CCB	1	Na	0.02	17.92	15	<PQL
ICSA4	ICSA	1	Na	0.02	28.52	15	<PQL
ICSAB4	ICSAB	1	Na	10.43	0.11	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240223A

Instrument ID: ICP-03

STANDARD CODE	
Standard1	MWST-240105M, 0.5<50mL
Standard2	MWST-240105N
Standard3	MWST-240105O, 5<50mL
Standard4	MWST-240105O,12.5<50mL
Standard5	MWST-240105O, 15<40mL
Standard6	MWST-240105O, 25<50mL
Standard7	MWST-240105O
ICV	MWST-240105AE
CCV	MWST-240105O, 25<50mL
ICSA/ICSAB	MWST-240105P / MWST-240105Q
Int. Std. (Y)	MWST-240105B
PS Spike	MWST-240105X / Y/ Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	02/23/2024	11:44:54 AM
2	Standard1	ICAL	1	02/23/2024	11:49:07 AM
3	Standard2	ICAL	1	02/23/2024	11:52:50 AM
4	Standard3	ICAL	1	02/23/2024	11:56:34 AM
5	Standard4	ICAL	1	02/23/2024	11:59:50 AM
6	Standard5	ICAL	1	02/23/2024	12:04:04 PM
7	Standard6	ICAL	1	02/23/2024	12:08:16 PM
8	Standard7	ICAL	1	02/23/2024	12:12:29 PM
310	ICV	ICV	1	02/23/2024	12:22:17 PM
1	ICB	ICB	1	02/23/2024	12:26:37 PM
2	LLICV1	CCV1	1	02/23/2024	12:30:51 PM
9	ICSA1	ICSA	1	02/23/2024	12:35:05 PM
9	ICSA1	ICSA	1	02/23/2024	12:40:32 PM
9	ICSA1	ICSA	1	02/23/2024	12:49:27 PM
10	ICSAB1	ICSAB	1	02/23/2024	12:54:28 PM
299	RINSE	RINSE	1	02/23/2024	12:59:30 PM
11	MB-107026	MBLK	1	02/23/2024	01:07:19 PM
12	LCS1-107026	LCS	1	02/23/2024	01:14:23 PM
13	N063248-005C	SAMP	1	02/23/2024	01:19:08 PM
14	N063248-005C	SAMP	5	02/23/2024	01:24:27 PM
15	N063248-005C-PS	PS	1	02/23/2024	01:28:12 PM
16	N063248-005C-MS1	MS	1	02/23/2024	01:33:31 PM
17	N063248-005C-MSD1	MSD	1	02/23/2024	01:38:50 PM
18	N063248-006C	SAMP	1	02/23/2024	01:44:10 PM
19	N063248-007C	SAMP	1	02/23/2024	01:49:29 PM
7	CCV1	CCV	1	02/23/2024	01:54:50 PM
1	CCB1	CCB	1	02/23/2024	01:59:05 PM
20	N063248-008C	SAMP	1	02/23/2024	02:03:19 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
21	N063248-010B	SAMP	1	02/23/2024	02:08:40 PM
22	N063248-011B	SAMP	1	02/23/2024	02:13:59 PM
23	N063249-007C	SAMP	1	02/23/2024	02:19:21 PM
24	N063249-009C	SAMP	1	02/23/2024	02:24:10 PM
25	N063249-011C	SAMP	1	02/23/2024	02:29:00 PM
26	N063249-013C	SAMP	1	02/23/2024	02:33:58 PM
27	N063249-015C	SAMP	1	02/23/2024	02:39:18 PM
28	N063249-017C	SAMP	1	02/23/2024	02:44:07 PM
29	N063249-018C	SAMP	1	02/23/2024	02:48:26 PM
7	CCV2	CCV	1	02/23/2024	02:53:25 PM
1	CCB2	CCB	1	02/23/2024	02:57:39 PM
30	MB-107028	MBLK	1	02/23/2024	03:01:53 PM
31	LCS-107028	LCS	1	02/23/2024	03:08:27 PM
32	N063248-005D	SAMP	1	02/23/2024	03:13:14 PM
33	N063248-005D	SAMP	5	02/23/2024	03:18:34 PM
34	N063248-005D-PS	PS	1	02/23/2024	03:22:21 PM
35	N063248-005D-MS	MS	1	02/23/2024	03:27:13 PM
36	N063248-005D-MSD	MSD	1	02/23/2024	03:32:04 PM
37	N063248-006D	SAMP	1	02/23/2024	03:36:55 PM
38	N063248-007D	SAMP	1	02/23/2024	03:42:15 PM
39	N063248-008D	SAMP	1	02/23/2024	03:47:35 PM
7	CCV3	CCV	1	02/23/2024	03:52:56 PM
1	CCB3	CCB	1	02/23/2024	03:57:10 PM
9	ICSA2	ICSA	1	02/23/2024	04:01:24 PM
10	ICSAB2	ICSAB	1	02/23/2024	04:06:25 PM
299	RINSE	RINSE	1	02/23/2024	04:13:31 PM
40	N063248-011F	SAMP	1	02/23/2024	04:17:20 PM
300	RINSE	RINSE	1	02/23/2024	04:22:39 PM
41	MB-107062	MBLK	1	02/23/2024	04:26:58 PM
42	LCS1-107062	LCS	1	02/23/2024	04:34:52 PM
43	N063295-005C	SAMP	1	02/23/2024	04:39:39 PM
44	N063295-005C	SAMP	5	02/23/2024	04:44:59 PM
45	N063295-005C-PS	PS	1	02/23/2024	04:48:45 PM
46	N063295-005C-MS1	MS	1	02/23/2024	04:54:06 PM
47	N063295-005C-MSD1	MSD	1	02/23/2024	04:58:59 PM
7	CCV4	CCV	1	02/23/2024	05:03:48 PM
1	CCB4	CCB	1	02/23/2024	05:08:02 PM
48	N063295-006C	SAMP	1	02/23/2024	05:12:14 PM
49	N063295-007C	SAMP	1	02/23/2024	05:17:33 PM
50	N063295-008C	SAMP	1	02/23/2024	05:22:53 PM
51	N063297-001C	SAMP	1	02/23/2024	05:28:13 PM
52	N063303-001B	SAMP	1	02/23/2024	05:31:57 PM
53	N063303-002B	SAMP	1	02/23/2024	05:37:15 PM
54	N063303-006B	SAMP	1	02/23/2024	05:42:33 PM
55	N063303-008B	SAMP	1	02/23/2024	05:47:24 PM
56	MB-107067	MBLK	1	02/23/2024	05:57:03 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
57	LCS-107067	LCS	1	02/23/2024	06:01:17 PM
7	CCV5	CCV	1	02/23/2024	06:06:04 PM
1	CCB5	CCB	1	02/23/2024	06:10:19 PM
58	N063295-005D	SAMP	1	02/23/2024	06:14:32 PM
59	N063295-005D	SAMP	5	02/23/2024	06:19:53 PM
60	N063295-005D-PS	PS	1	02/23/2024	06:23:39 PM
61	N063295-005D-MS1	MS	1	02/23/2024	06:28:59 PM
62	N063295-005D-MSD1	MSD	1	02/23/2024	06:33:49 PM
63	N063295-006D	SAMP	1	02/23/2024	06:38:39 PM
64	N063295-007D	SAMP	1	02/23/2024	06:43:59 PM
65	N063295-008D	SAMP	1	02/23/2024	06:49:19 PM
7	CCV6	CCV	1	02/23/2024	06:54:39 PM
1	CCB6	CCB	1	02/23/2024	06:58:54 PM
9	ICSA3	ICSA	1	02/23/2024	07:03:06 PM
10	ICSAB3	ICSAB	1	02/23/2024	07:08:07 PM

INJECTION LOG: 240226A

Instrument ID: ICP-02

STANDARD CODE	
Standard1	MWST-240105D, 0.025<50mL
Standard2	MWST-240105D, 0.25<50mL
Standard3	MWST-240105D, 1.25<50mL
Standard4	MWST-240105D, 2.5<50mL
Standard5	MWST-240105D, 5<50mL
Standard6	MWST-240105D, 10<50mL
ICV	MWST-231222A
CCV	MWST-240105D, 2.5<50mL
ICSA/ICSAB	MWST-240105P / MWST-240105E
Int. Std. (Sc):	MWST-240105B
PS Spike	MSST-231025E/231025F/231130A

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	02/26/2024	12:11:35 PM
11	Standard1	ICAL	1	02/26/2024	12:14:30 PM
12	Standard2	ICAL	1	02/26/2024	12:17:23 PM
13	Standard3	ICAL	1	02/26/2024	12:20:16 PM
14	Standard4	ICAL	1	02/26/2024	12:23:41 PM
15	Standard5	ICAL	1	02/26/2024	12:27:08 PM
16	Standard6	ICAL	1	02/26/2024	12:30:34 PM
17	ICV	ICV	1	02/26/2024	12:33:24 PM
1	ICB	ICB	1	02/26/2024	12:36:52 PM
18	LLICV	CCV	1	02/26/2024	12:39:46 PM
19	ICSA1	ICSA	1	02/26/2024	12:42:41 PM
20	ICSAB1	ICSAB	1	02/26/2024	12:45:36 PM
23	MB-107026	MBLK	1	02/26/2024	12:53:15 PM
24	LCS2-107026	LCS	1	02/26/2024	12:56:08 PM
25	N063248-005C	SAMP	5	02/26/2024	12:59:31 PM
26	N063248-006C	SAMP	5	02/26/2024	01:04:01 PM
27	N063248-007C	SAMP	5	02/26/2024	01:08:29 PM
28	N063248-008C	SAMP	5	02/26/2024	01:12:58 PM
29	N063248-010B	SAMP	5	02/26/2024	01:17:29 PM
30	N063248-011B	SAMP	5	02/26/2024	01:20:23 PM
31	MB-107062	MBLK	1	02/26/2024	01:24:52 PM
32	LCS2-107062	LCS	1	02/26/2024	01:27:47 PM
14	CCV1	CCV	1	02/26/2024	01:31:12 PM
1	CCB1	CCB	1	02/26/2024	01:34:39 PM
33	N063295-005C	SAMP	5	02/26/2024	01:37:33 PM
34	N063295-006C	SAMP	5	02/26/2024	01:42:04 PM
35	N063295-007C	SAMP	5	02/26/2024	01:47:07 PM
36	N063295-008C	SAMP	5	02/26/2024	01:51:35 PM
14	CCV2	CCV	1	02/26/2024	01:56:04 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CCB2	CCB	1	02/26/2024	01:59:29 PM
37	N063248-005C	SAMP	500	02/26/2024	02:01:40 PM
38	N063248-006C	SAMP	25	02/26/2024	02:04:32 PM
39	N063248-006C	SAMP	500	02/26/2024	02:08:58 PM
40	N063248-006C	SAMP	2500	02/26/2024	02:11:52 PM
41	N063248-006C-PS	PS	5	02/26/2024	02:14:46 PM
42	N063248-006C-PS	PS	500	02/26/2024	02:19:15 PM
14	CCV3	CCV	1	02/26/2024	02:22:10 PM
1	CCB3	CCB	1	02/26/2024	02:25:36 PM
43	N063248-006C-MS2	MS	5	02/26/2024	02:28:30 PM
44	N063248-006C-MS2	MS	500	02/26/2024	02:33:01 PM
45	N063248-006C-MSD2	MSD	5	02/26/2024	02:35:56 PM
46	N063248-006C-MSD2	MSD	500	02/26/2024	02:40:26 PM
47	N063248-007C	SAMP	500	02/26/2024	02:43:22 PM
48	N063248-008C	SAMP	500	02/26/2024	02:46:16 PM
49	N063248-010B	SAMP	25	02/26/2024	02:49:10 PM
50	N063248-011B	SAMP	500	02/26/2024	02:52:04 PM
51	N063295-005C	SAMP	25	02/26/2024	02:55:05 PM
52	N063295-005C	SAMP	500	02/26/2024	02:59:29 PM
14	CCV4	CCV	1	02/26/2024	03:02:23 PM
1	CCB4	CCB	1	02/26/2024	03:05:48 PM
19	ICSA2	ICSA	1	02/26/2024	03:08:42 PM
20	ICSAB2	ICSAB	1	02/26/2024	03:11:38 PM
53	N063295-005C	SAMP	2500	02/26/2024	03:15:05 PM
54	N063295-005C-PS	PS	5	02/26/2024	03:17:59 PM
55	N063295-005C-PS	PS	500	02/26/2024	03:22:28 PM
56	N063295-005C-MS2	MS	5	02/26/2024	03:25:53 PM
57	N063295-005C-MS2	MS	500	02/26/2024	03:30:23 PM
58	N063295-005C-MSD2	MSD	5	02/26/2024	03:33:19 PM
59	N063295-005C-MSD2	MSD	500	02/26/2024	03:37:48 PM
60	N063295-006C	SAMP	500	02/26/2024	03:40:41 PM
61	N063295-007C	SAMP	500	02/26/2024	03:43:35 PM
62	N063295-008C	SAMP	500	02/26/2024	03:46:30 PM
62	N063295-008C	SAMP	500	02/26/2024	03:50:50 PM
62	N063295-008C	SAMP	500	02/26/2024	03:56:26 PM
14	CCV5	CCV	1	02/26/2024	03:58:28 PM
53	N063295-005C	SAMP	2500	02/26/2024	04:02:16 PM
54	N063295-005C-PS	PS	5	02/26/2024	04:05:14 PM
55	N063295-005C-PS	PS	500	02/26/2024	04:09:43 PM
56	N063295-005C-MS2	MS	5	02/26/2024	04:13:10 PM
57	N063295-005C-MS2	MS	500	02/26/2024	04:17:40 PM
58	N063295-005C-MSD2	MSD	5	02/26/2024	04:20:37 PM
59	N063295-005C-MSD2	MSD	500	02/26/2024	04:25:08 PM
60	N063295-006C	SAMP	500	02/26/2024	04:28:04 PM
61	N063295-007C	SAMP	500	02/26/2024	04:31:00 PM
70	N063295-008C	SAMP	500	02/26/2024	04:33:56 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
14	CCV5	CCV	1	02/26/2024	04:36:54 PM
1	CCB5	CCB	1	02/26/2024	04:40:22 PM
69	N063295-008C	SAMP	5	02/26/2024	04:43:19 PM
14	CCV6	CCV	1	02/26/2024	04:47:50 PM
1	CCB6	CCB	1	02/26/2024	04:51:17 PM
19	ICSA3	ICSA	1	02/26/2024	04:54:13 PM
20	ICSAB3	ICSAB	1	02/26/2024	04:57:10 PM

INJECTION LOG: 240301B

Instrument ID: ICP-02

STANDARD CODE	
Standard1	MWST-240105D, 0.025<50mL
Standard2	MWST-240105D, 0.25<50mL
Standard3	MWST-240105D, 1.25<50mL
Standard4	MWST-240105D, 2.5<50mL
Standard5	MWST-240105D, 5<50mL
Standard6	MWST-240105D, 10<50mL
ICV	MWST-231222A
CCV	MWST-240105D, 2.5<50mL
ICSA/ICSAB	MWST-240105P / MWST-240105E
Int. Std. (Sc):	MWST-240105B
PS Spike	MSST-231025E/231025F/231130A

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	03/01/2024	02:28:30 PM
11	Standard1	ICAL	1	03/01/2024	02:31:25 PM
1	CalBlk	IBLK	1	03/01/2024	03:18:50 PM
11	Standard1	ICAL	1	03/01/2024	03:21:47 PM
12	Standard2	ICAL	1	03/01/2024	03:24:43 PM
13	Standard3	ICAL	1	03/01/2024	03:27:38 PM
14	Standard4	ICAL	1	03/01/2024	03:31:04 PM
15	Standard5	ICAL	1	03/01/2024	03:34:31 PM
16	Standard6	ICAL	1	03/01/2024	03:37:58 PM
17	ICV	ICV	1	03/01/2024	03:40:53 PM
17	ICV	ICV	1	03/01/2024	03:51:15 PM
1	ICB	ICB	1	03/01/2024	03:54:44 PM
18	LLICV	CCV	1	03/01/2024	03:57:38 PM
19	ICSA1	ICSA	1	03/01/2024	04:00:36 PM
20	ICSAB1	ICSAB	1	03/01/2024	04:03:32 PM
53	N063295-005C	SAMP	2500	03/01/2024	04:07:01 PM
54	N063295-005C-PS	PS	5	03/01/2024	04:09:57 PM
55	N063295-005C-PS	PS	500	03/01/2024	04:14:29 PM
56	N063295-005C-MS2	MS	5	03/01/2024	04:17:56 PM
57	N063295-005C-MS2	MS	500	03/01/2024	04:22:28 PM
58	N063295-005C-MSD2	MSD	5	03/01/2024	04:25:26 PM
59	N063295-005C-MSD2	MSD	500	03/01/2024	04:30:00 PM
60	N063295-006C	SAMP	500	03/01/2024	04:32:55 PM
61	N063295-007C	SAMP	500	03/01/2024	04:35:50 PM
70	N063295-008C	SAMP	500	03/01/2024	04:38:47 PM
14	CCV1	CCV	1	03/01/2024	04:41:44 PM
1	CCB1	CCB	1	03/01/2024	04:45:09 PM
63	N063297-001C	SAMP	5	03/01/2024	04:48:04 PM
64	N063297-001C	SAMP	1	03/01/2024	04:51:44 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
73	N063278-001B	SAMP	10	03/01/2024	05:03:57 PM
74	N063279-001B	SAMP	10	03/01/2024	05:06:53 PM
75	N063280-001B	SAMP	10	03/01/2024	05:09:49 PM
76	N063320-001B	SAMP	10	03/01/2024	05:12:45 PM
77	N063321-001B	SAMP	10	03/01/2024	05:15:41 PM
78	N063322-001B	SAMP	10	03/01/2024	05:18:37 PM
14	CCV2	CCV	1	03/01/2024	05:21:33 PM
1	CCB2	CCB	1	03/01/2024	05:25:00 PM
79	N063323-001B	SAMP	10	03/01/2024	05:27:55 PM
80	N063324-001B	SAMP	10	03/01/2024	05:30:52 PM
81	N063252-001B	SAMP	10	03/01/2024	05:33:49 PM
82	N063253-001B	SAMP	10	03/01/2024	05:38:20 PM
83	N063254-001B	SAMP	10	03/01/2024	05:42:50 PM
84	N063255-001B	SAMP	10	03/01/2024	05:47:19 PM
85	N063256-001B	SAMP	10	03/01/2024	05:51:48 PM
86	N063257-001B	SAMP	10	03/01/2024	05:54:45 PM
87	N063258-001B	SAMP	10	03/01/2024	05:59:15 PM
88	N063259-001B	SAMP	10	03/01/2024	06:03:44 PM
14	CCV3	CCV	1	03/01/2024	06:06:40 PM
1	CCB3	CCB	1	03/01/2024	06:10:07 PM
19	ICSA2	ICSA	1	03/01/2024	06:13:02 PM
20	ICSAB2	ICSAB	1	03/01/2024	06:16:00 PM
89	N063260-001B	SAMP	10	03/01/2024	06:37:12 PM
90	N063261-001B	SAMP	10	03/01/2024	06:41:41 PM
56	N063295-005C-MS2	MS	5	03/01/2024	06:46:10 PM
57	N063295-005C-MS2	MS	500	03/01/2024	06:50:40 PM
91	N063279-001B	SAMP	50	03/01/2024	06:53:36 PM
92	N063279-001B	SAMP	250	03/01/2024	06:56:30 PM
93	N063279-001B-PS	PS	10	03/01/2024	06:59:26 PM
94	N063279-001B-PS	PS	50	03/01/2024	07:02:22 PM
95	N063279-001B-MS2	MS	10	03/01/2024	07:05:49 PM
96	N063279-001B-MS2	MS	50	03/01/2024	07:08:43 PM
14	CCV4	CCV	1	03/01/2024	07:11:37 PM
1	CCB4	CCB	1	03/01/2024	07:16:44 PM
97	N063279-001B-MSD2	MSD	10	03/01/2024	07:19:39 PM
98	N063279-001B-MSD2	MSD	50	03/01/2024	07:22:35 PM
99	N063252-001B	SAMP	100	03/01/2024	07:25:31 PM
100	N063253-001B	SAMP	100	03/01/2024	07:28:57 PM
101	N063253-001B	SAMP	1000	03/01/2024	07:33:23 PM
102	N063254-001B	SAMP	100	03/01/2024	07:36:20 PM
103	N063254-001B	SAMP	1000	03/01/2024	07:40:46 PM
104	N063255-001B	SAMP	100	03/01/2024	07:44:13 PM
105	N063255-001B	SAMP	1000	03/01/2024	07:48:40 PM
106	N063256-001B	SAMP	1	03/01/2024	07:52:07 PM
14	CCV5	CCV	1	03/01/2024	07:56:36 PM
1	CCB5	CCB	1	03/01/2024	08:00:02 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
107	N063257-001B	SAMP	100	03/01/2024	08:02:05 PM
108	N063257-001B	SAMP	1000	03/01/2024	08:06:31 PM
109	N063258-001B	SAMP	100	03/01/2024	08:09:27 PM
110	N063258-001B	SAMP	1000	03/01/2024	08:13:55 PM
111	N063259-001B	SAMP	100	03/01/2024	08:17:21 PM
112	N063260-001B	SAMP	100	03/01/2024	08:20:17 PM
113	N063260-001B	SAMP	1000	03/01/2024	08:24:43 PM
114	N063261-001B	SAMP	1000	03/01/2024	08:27:39 PM
131	MB-107082	MBLK	1	03/01/2024	08:30:35 PM
132	LCS2-107082	LCS	1	03/01/2024	08:33:32 PM
14	CCV6	CCV	1	03/01/2024	08:36:59 PM
1	CCB6	CCB	1	03/01/2024	08:40:27 PM
19	ICSA3	ICSA	1	03/01/2024	08:43:23 PM
20	ICSAB3	ICSAB	1	03/01/2024	08:46:20 PM
133	N063278-001A	SAMP	25	03/01/2024	08:49:48 PM
134	N063279-001A	SAMP	25	03/01/2024	08:52:45 PM
135	N063279-001A	SAMP	125	03/01/2024	08:55:43 PM
136	N063279-001A-PS	PS	25	03/01/2024	08:58:39 PM
137	N063279-001A-MS2	MS	25	03/01/2024	09:02:07 PM
138	N063279-001A-MSD2	MSD	25	03/01/2024	09:05:04 PM
139	N063280-001A	SAMP	25	03/01/2024	09:08:01 PM
140	N063320-001A	SAMP	25	03/01/2024	09:10:58 PM
141	N063321-001A	SAMP	25	03/01/2024	09:13:55 PM
142	N063322-001A	SAMP	25	03/01/2024	09:16:52 PM
14	CCV7	CCV	1	03/01/2024	09:19:50 PM
1	CCB7	CCB	1	03/01/2024	09:23:16 PM
143	N063323-001A	SAMP	25	03/01/2024	09:26:11 PM
144	N063324-001A	SAMP	25	03/01/2024	09:29:09 PM
145	N063252-001A	SAMP	1000	03/01/2024	09:32:06 PM
146	N063253-001A	SAMP	1000	03/01/2024	09:35:03 PM
147	N063254-001A	SAMP	1000	03/01/2024	09:38:00 PM
148	N063255-001A	SAMP	1000	03/01/2024	09:41:28 PM
149	N063256-001A	SAMP	10	03/01/2024	09:44:25 PM
150	N063257-001A	SAMP	1000	03/01/2024	09:47:22 PM
151	N063258-001A	SAMP	1000	03/01/2024	09:50:19 PM
152	N063259-001A	SAMP	100	03/01/2024	09:53:46 PM
14	CCV8	CCV	1	03/01/2024	09:56:43 PM
1	CCB8	CCB	1	03/01/2024	10:00:09 PM
153	N063260-001A	SAMP	1000	03/01/2024	10:03:04 PM
154	N063261-001A	SAMP	1000	03/01/2024	10:06:01 PM
14	CCV9	CCV	1	03/01/2024	10:08:59 PM
1	CCB9	CCB	1	03/01/2024	10:12:25 PM
19	ICSA4	ICSA	1	03/01/2024	10:15:21 PM
20	ICSAB4	ICSAB	1	03/01/2024	10:18:18 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/23/2024 10:11:32 AM**
Prep End Date: **2/23/2024 4:00:00 PM**
Prep Batch **107062** Prep Code:**3010_W_DISS**

Reviewed/ Date: dlRocha 3/19/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-01-02**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS1-107062	Aqueous		25	☐	25	1.000		
LCS2-107062	Aqueous		25	☐	25	1.000		
MB-107062	Aqueous		25	☐	25	1.000		
N063295-005C	Groundwater	<2	25	☐	25	1.000		
N063295-005C-MS1	Groundwater	<2	25	☐	25	1.000		
N063295-005C-MS2	Groundwater	<2	25	☐	25	1.000		
N063295-005C-MSD1	Groundwater	<2	25	☐	25	1.000		
N063295-005C-MSD2	Groundwater	<2	25	☐	25	1.000		
N063295-006C	Groundwater	<2	25	☐	25	1.000		
N063295-007C	Groundwater	<2	25	☐	25	1.000		
N063295-008C	Groundwater	<2	25	☐	25	1.000		
N063297-001C	Groundwater	<2	25	☐	25	1.000		
N063303-001B	Groundwater	<2	25	☐	25	1.000		
N063303-002B	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15258	HYDROCHLORIC ACID
16150	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MSST-231025E	Sodium	LCS,MS,MSD	0.05
MSST-231025F	Potassium	LCS,MS,MSD	0.05
MSST-231130A	Strontium	LCS,MS,MSD	0.125
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/23/2024 10:11:32 AM**
Prep End Date: **2/23/2024 4:00:00 PM**
Prep Batch **107062** Prep Code:**3010_W_DISS**

Reviewed/ Date: dMocha for 3/19/2024
Initials/ Date: _____
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-01-02**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063303-006B	Groundwater	<2	25	☐	25	1.000		
sample color is light yellow								
N063303-008B	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15258	HYDROCHLORIC ACID
16150	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MSST-231025E	Sodium	LCS,MS,MSD	0.05
MSST-231025F	Potassium	LCS,MS,MSD	0.05
MSST-231130A	Strontium	LCS,MS,MSD	0.125
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240223A

Instrument ID: ICP-03

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Boron								
CalBlk	02/23/2024	11:44:54 AM	B	249.677	263	0.00	mg/L	
Standard1	02/23/2024	11:49:07 AM	B	249.677	1355	0.1	mg/L	
Standard3	02/23/2024	11:56:34 AM	B	249.677	13598	1.0	mg/L	
Standard4	02/23/2024	11:59:50 AM	B	249.677	34185	2.5	mg/L	
Standard5	02/23/2024	12:04:04 PM	B	249.677	51657	3.75	mg/L	
Standard6	02/23/2024	12:08:16 PM	B	249.677	69172	5.0	mg/L	
Standard7	02/23/2024	12:12:29 PM	B	249.677	139528	10.0	mg/L	1.0000
Magnesium								
CalBlk	02/23/2024	11:44:54 AM	Mg	279.077	113	0.00	mg/L	
Standard1	02/23/2024	11:49:07 AM	Mg	279.077	381	0.1	mg/L	
Standard2	02/23/2024	11:52:50 AM	Mg	279.077	3744	1.00	mg/L	
Standard3	02/23/2024	11:56:34 AM	Mg	279.077	7615	2.0	mg/L	
Standard4	02/23/2024	11:59:50 AM	Mg	279.077	19043	5.0	mg/L	
Standard5	02/23/2024	12:04:04 PM	Mg	279.077	28554	7.5	mg/L	
Standard6	02/23/2024	12:08:16 PM	Mg	279.077	38110	10.0	mg/L	
Standard7	02/23/2024	12:12:29 PM	Mg	279.077	75665	20.0	mg/L	1.0000
Calcium								
CalBlk	02/23/2024	11:44:54 AM	Ca	317.933	5528	0.00	mg/L	
Standard1	02/23/2024	11:49:07 AM	Ca	317.933	10102	0.2	mg/L	
Standard2	02/23/2024	11:52:50 AM	Ca	317.933	47523	1.00	mg/L	
Standard3	02/23/2024	11:56:34 AM	Ca	317.933	95363	2.0	mg/L	
Standard4	02/23/2024	11:59:50 AM	Ca	317.933	237007	5.0	mg/L	
Standard5	02/23/2024	12:04:04 PM	Ca	317.933	354461	7.5	mg/L	
Standard6	02/23/2024	12:08:16 PM	Ca	317.933	472404	10.0	mg/L	
Standard7	02/23/2024	12:12:29 PM	Ca	317.933	939880	20.0	mg/L	1.0000
Iron								
CalBlk	02/23/2024	11:44:54 AM	Fe	273.952	133	0.00	mg/L	
Standard1	02/23/2024	11:49:07 AM	Fe	273.952	166	0.02	mg/L	
Standard2	02/23/2024	11:52:50 AM	Fe	273.952	476	0.05	mg/L	
Standard3	02/23/2024	11:56:34 AM	Fe	273.952	15966	2.0	mg/L	
Standard4	02/23/2024	11:59:50 AM	Fe	273.952	39733	5.0	mg/L	
Standard5	02/23/2024	12:04:04 PM	Fe	273.952	59452	7.5	mg/L	
Standard6	02/23/2024	12:08:16 PM	Fe	273.952	78889	10.0	mg/L	
Standard7	02/23/2024	12:12:29 PM	Fe	273.952	155652	20.0	mg/L	1.0000

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION SUMMARY: 240226A

Instrument ID: ICP-02

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Sodium								
CalBlk	02/26/2024	12:11:35 PM	Na	589.61	-124	0.00	mg/L	
Standard1	02/26/2024	12:14:30 PM	Na	589.61	504	0.1000	mg/L	
Standard2	02/26/2024	12:17:23 PM	Na	589.61	4325	1.000	mg/L	
Standard3	02/26/2024	12:20:16 PM	Na	589.61	21151	5.000	mg/L	
Standard4	02/26/2024	12:23:41 PM	Na	589.61	42297	10.000	mg/L	
Standard5	02/26/2024	12:27:08 PM	Na	589.61	85911	20.000	mg/L	
Standard6	02/26/2024	12:30:34 PM	Na	589.61	167932	40.000	mg/L	1.0000
Potassium								
CalBlk	02/26/2024	12:11:35 PM	K	766.479	468	0.00	mg/L	
Standard1	02/26/2024	12:14:30 PM	K	766.479	170	0.1000	mg/L	
Standard2	02/26/2024	12:17:23 PM	K	766.479	1559	1.000	mg/L	
Standard3	02/26/2024	12:20:16 PM	K	766.479	7740	5.000	mg/L	
Standard4	02/26/2024	12:23:41 PM	K	766.479	15616	10.000	mg/L	
Standard5	02/26/2024	12:27:08 PM	K	766.479	31741	20.000	mg/L	
Standard6	02/26/2024	12:30:34 PM	K	766.479	62185	40.000	mg/L	1.0000

INITIAL CALIBRATION SUMMARY: 240301B

Instrument ID: ICP-02

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Sodium								
CalBlk	03/01/2024	03:18:50 PM	Na	589.61	53	0.00	mg/L	
Standard1	03/01/2024	03:21:47 PM	Na	589.61	509	0.1000	mg/L	
Standard2	03/01/2024	03:24:43 PM	Na	589.61	4456	1.000	mg/L	
Standard3	03/01/2024	03:27:38 PM	Na	589.61	21882	5.000	mg/L	
Standard4	03/01/2024	03:31:04 PM	Na	589.61	43564	10.000	mg/L	
Standard5	03/01/2024	03:34:31 PM	Na	589.61	85366	20.000	mg/L	
Standard6	03/01/2024	03:37:58 PM	Na	589.61	172233	40.000	mg/L	1.0000
Potassium								
CalBlk	03/01/2024	03:18:50 PM	K	766.479	340	0.00	mg/L	
Standard1	03/01/2024	03:21:47 PM	K	766.479	198	0.1000	mg/L	
Standard2	03/01/2024	03:24:43 PM	K	766.479	1596	1.000	mg/L	
Standard3	03/01/2024	03:27:38 PM	K	766.479	7812	5.000	mg/L	
Standard4	03/01/2024	03:31:04 PM	K	766.479	15632	10.000	mg/L	
Standard5	03/01/2024	03:34:31 PM	K	766.479	30943	20.000	mg/L	
Standard6	03/01/2024	03:37:58 PM	K	766.479	62497	40.000	mg/L	1.0000

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **ICV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708208**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10061.140	20	10000	0	101	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **ZZZZZZ**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708210**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	19.964	20	20.00	0	99.8	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708224**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10309.918	20	10000	0	103	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708236**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10241.479	20	10000	0	102	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708248**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10133.536	20	10000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708260**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10177.476	20	10000	0	102	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708272**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10151.181	20	10000	0	102	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708282**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10093.401	20	10000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **ICV** SampType: **ICV** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **ICV** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708130**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	4.978	0.10	5.000	0	99.6	90	110				
Calcium	10.013	0.50	10.00	0	100	90	110				
Magnesium	10.064	0.10	10.00	0	101	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **ZZZZZZ** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708132**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.103	0.10	0.1000	0	103	80	120				
Calcium	0.210	0.50	0.2000	0	105	80	120				
Magnesium	0.100	0.10	0.1000	0	100	80	120				

Sample ID **CCV1** SampType: **CCV** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **CCV** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708146**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5.068	0.10	5.000	0	101	90	110				
Calcium	10.358	0.50	10.00	0	104	90	110				
Magnesium	10.144	0.10	10.00	0	101	90	110				

Sample ID **CCV2** SampType: **CCV** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **CCV** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708158**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5.047	0.10	5.000	0	101	90	110				
Calcium	10.319	0.50	10.00	0	103	90	110				
Magnesium	10.163	0.10	10.00	0	102	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **CCV3** SampType: **CCV** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **CCV** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708170**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5.037	0.10	5.000	0	101	90	110				
Calcium	10.164	0.50	10.00	0	102	90	110				
Magnesium	10.118	0.10	10.00	0	101	90	110				

Sample ID **CCV4** SampType: **CCV** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **CCV** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708182**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5.055	0.10	5.000	0	101	90	110				
Calcium	10.218	0.50	10.00	0	102	90	110				
Magnesium	10.129	0.10	10.00	0	101	90	110				

Sample ID **CCV5** SampType: **CCV** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **CCV** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708194**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5.040	0.10	5.000	0	101	90	110				
Calcium	10.168	0.50	10.00	0	102	90	110				
Magnesium	10.147	0.10	10.00	0	101	90	110				

Sample ID **CCV6** SampType: **CCV** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **CCV** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708204**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	5.040	0.10	5.000	0	101	90	110				
Calcium	10.114	0.50	10.00	0	101	90	110				
Magnesium	10.137	0.10	10.00	0	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182926**
Client ID: **ICV**	Batch ID: **R182926**	TestNo: **EPA 6010B**		Analysis Date: **2/26/2024**	SeqNo: **5713390**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	9.976	0.50	10.00	0	99.8	90	110				
Sodium	10.014	0.50	10.00	0	100	90	110				

Sample ID **LLICV**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182926**
Client ID: **CCV**	Batch ID: **R182926**	TestNo: **EPA 6010B**		Analysis Date: **2/26/2024**	SeqNo: **5713392**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.491	0.50	0.5000	0	98.3	90	110				
Sodium	0.516	0.50	0.5000	0	103	90	110				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182926**
Client ID: **CCV**	Batch ID: **R182926**	TestNo: **EPA 6010B**		Analysis Date: **2/26/2024**	SeqNo: **5713405**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.064	0.50	10.00	0	101	90	110				
Sodium	10.183	0.50	10.00	0	102	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182926**
Client ID: **CCV**	Batch ID: **R182926**	TestNo: **EPA 6010B**		Analysis Date: **2/26/2024**	SeqNo: **5713411**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.254	0.50	10.00	0	103	90	110				
Sodium	10.698	0.50	10.00	0	107	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182926**
Client ID: **CCV**	Batch ID: **R182926**	TestNo: **EPA 6010B**		Analysis Date: **2/26/2024**	SeqNo: **5713419**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.334	0.50	10.00	0	103	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182926**
Client ID: **CCV**	Batch ID: **R182926**	TestNo: **EPA 6010B**		Analysis Date: **2/26/2024**	SeqNo: **5713419**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	10.635	0.50	10.00	0	106	90	110				

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182926**
Client ID: **CCV**	Batch ID: **R182926**	TestNo: **EPA 6010B**		Analysis Date: **2/26/2024**	SeqNo: **5713431**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.339	0.50	10.00	0	103	90	110				
Sodium	10.489	0.50	10.00	0	105	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **183142**
Client ID: **ICV**	Batch ID: **R183142**	TestNo: **EPA 6010B**		Analysis Date: **3/1/2024**	SeqNo: **5724663**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.094	0.50	10.00	0	101	90	110				
Sodium	10.198	0.50	10.00	0	102	90	110				

Sample ID **LLICV**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **183142**
Client ID: **CCV**	Batch ID: **R183142**	TestNo: **EPA 6010B**		Analysis Date: **3/1/2024**	SeqNo: **5724665**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.525	0.50	0.5000	0	105	80	120				
Sodium	0.534	0.50	0.5000	0	107	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **183142**
Client ID: **CCV**	Batch ID: **R183142**	TestNo: **EPA 6010B**		Analysis Date: **3/1/2024**	SeqNo: **5724678**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.143	0.50	10.00	0	101	90	110				
Sodium	10.244	0.50	10.00	0	102	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **183142**
Client ID: **CCV**	Batch ID: **R183142**	TestNo: **EPA 6010B**		Analysis Date: **3/1/2024**	SeqNo: **5724690**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.151	0.50	10.00	0	102	90	110				
Sodium	10.225	0.50	10.00	0	102	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **183142**
Client ID: **CCV**	Batch ID: **R183142**	TestNo: **EPA 6010B**		Analysis Date: **3/1/2024**	SeqNo: **5724702**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.295	0.50	10.00	0	103	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID	CCV3	SampType:	CCV	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	183142
Client ID:	CCV	Batch ID:	R183142	TestNo:	EPA 6010B			Analysis Date:	3/1/2024	SeqNo:	5724702

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	10.392	0.50	10.00	0	104	90	110				

Sample ID	CCV4	SampType:	CCV	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	183142
Client ID:	CCV	Batch ID:	R183142	TestNo:	EPA 6010B			Analysis Date:	3/1/2024	SeqNo:	5725099

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.186	0.50	10.00	0	102	90	110				
Sodium	10.563	0.50	10.00	0	106	90	110				

Sample ID	CCV5	SampType:	CCV	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	183142
Client ID:	CCV	Batch ID:	R183142	TestNo:	EPA 6010B			Analysis Date:	3/1/2024	SeqNo:	5725111

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.594	0.50	10.00	0	106	90	110				
Sodium	10.503	0.50	10.00	0	105	90	110				

Sample ID	CCV6	SampType:	CCV	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	183142
Client ID:	CCV	Batch ID:	R183142	TestNo:	EPA 6010B			Analysis Date:	3/1/2024	SeqNo:	5725123

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.579	0.50	10.00	0	106	90	110				
Sodium	10.528	0.50	10.00	0	105	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **ICB**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708209**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.207	20									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCB**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708225**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.466	20									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCB**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708237**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.202	20									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCB**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708249**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.560	20									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCB**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708261**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.514	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCB**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708273**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-0.235249	20									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCB**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708283**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-1.130016	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182845**
Client ID: **ICB**	Batch ID: **R182845**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708131**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.011	0.10									
Calcium	0.000004	0.50									
Magnesium	0.001	0.10									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182845**
Client ID: **CCB**	Batch ID: **R182845**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708147**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.014	0.10									
Calcium	0.003	0.50									
Magnesium	0.001	0.10									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182845**
Client ID: **CCB**	Batch ID: **R182845**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708159**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.008	0.10									
Calcium	0.003	0.50									
Magnesium	0.006	0.10									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182845**
Client ID: **CCB**	Batch ID: **R182845**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708171**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.011	0.10									
Calcium	0.000485	0.50									
Magnesium	0.003	0.10									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182845**
Client ID: **CCB**	Batch ID: **R182845**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708183**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.015	0.10									
Calcium	0.002	0.50									
Magnesium	0.006	0.10									

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182845**
Client ID: **CCB**	Batch ID: **R182845**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708195**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.010	0.10									
Calcium	-0.001313	0.50									
Magnesium	0.007	0.10									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182845**
Client ID: **CCB**	Batch ID: **R182845**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708205**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	0.011	0.10									
Calcium	-0.001295	0.50									
Magnesium	0.003	0.10									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID	ICB	SampType:	ICB	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	182926
Client ID:	ICB	Batch ID:	R182926	TestNo:	EPA 6010B			Analysis Date:	2/26/2024	SeqNo:	5713391

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	-0.00681	0.50									
Sodium	0.007	0.50									

Sample ID	CCB1	SampType:	CCB	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	182926
Client ID:	CCB	Batch ID:	R182926	TestNo:	EPA 6010B			Analysis Date:	2/26/2024	SeqNo:	5713406

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.038	0.50									
Sodium	0.086	0.50									

Sample ID	CCB2	SampType:	CCB	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	182926
Client ID:	CCB	Batch ID:	R182926	TestNo:	EPA 6010B			Analysis Date:	2/26/2024	SeqNo:	5713412

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.110	0.50									
Sodium	0.376	0.50									

Sample ID	CCB3	SampType:	CCB	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	182926
Client ID:	CCB	Batch ID:	R182926	TestNo:	EPA 6010B			Analysis Date:	2/26/2024	SeqNo:	5713420

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.105	0.50									
Sodium	0.263	0.50									

Sample ID	CCB4	SampType:	CCB	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	182926
Client ID:	CCB	Batch ID:	R182926	TestNo:	EPA 6010B			Analysis Date:	2/26/2024	SeqNo:	5713432

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.078	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182926**
Client ID: **CCB**	Batch ID: **R182926**	TestNo: **EPA 6010B**		Analysis Date: **2/26/2024**	SeqNo: **5713432**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	0.204	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **183142**
Client ID: **ICB**	Batch ID: **R183142**	TestNo: **EPA 6010B**		Analysis Date: **3/1/2024**	SeqNo: **5724664**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	-0.006151	0.50									
Sodium	0.029	0.50									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **183142**
Client ID: **CCB**	Batch ID: **R183142**	TestNo: **EPA 6010B**		Analysis Date: **3/1/2024**	SeqNo: **5724679**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.016	0.50									
Sodium	0.027	0.50									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **183142**
Client ID: **CCB**	Batch ID: **R183142**	TestNo: **EPA 6010B**		Analysis Date: **3/1/2024**	SeqNo: **5724691**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.002	0.50									
Sodium	0.014	0.50									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **183142**
Client ID: **CCB**	Batch ID: **R183142**	TestNo: **EPA 6010B**		Analysis Date: **3/1/2024**	SeqNo: **5724703**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.033	0.50									
Sodium	0.066	0.50									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **183142**
Client ID: **CCB**	Batch ID: **R183142**	TestNo: **EPA 6010B**		Analysis Date: **3/1/2024**	SeqNo: **5725100**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.108	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **183142**
Client ID: **CCB**	Batch ID: **R183142**	TestNo: **EPA 6010B**		Analysis Date: **3/1/2024**	SeqNo: **5725100**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	0.023	0.50									

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **183142**
Client ID: **CCB**	Batch ID: **R183142**	TestNo: **EPA 6010B**		Analysis Date: **3/1/2024**	SeqNo: **5725112**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.064	0.50									
Sodium	0.022	0.50									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **183142**
Client ID: **CCB**	Batch ID: **R183142**	TestNo: **EPA 6010B**		Analysis Date: **3/1/2024**	SeqNo: **5725124**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.048	0.50									
Sodium	0.021	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ICSA** Batch ID: **R182846** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708213**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	576247.443	50	500000	0	115	80	120				
Calcium	459915.899	500	500000	0	92.0	80	120				
Iron	174616.860	20	200000	0	87.3	80	120				
Magnesium	446022.583	100	500000	0	89.2	80	120				

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ICSAB** Batch ID: **R182846** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708214**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	564316.966	50	500000	0	113	80	120				
Calcium	449363.078	500	500000	0	89.9	80	120				
Iron	170211.584	20	200000	0	85.1	80	120				
Magnesium	435511.791	100	500000	0	87.1	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ICSA** Batch ID: **R182846** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708250**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	555716.342	50	500000	0	111	80	120				
Calcium	452434.522	500	500000	0	90.5	80	120				
Iron	172573.740	20	200000	0	86.3	80	120				
Magnesium	439980.449	100	500000	0	88.0	80	120				

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ICSAB** Batch ID: **R182846** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708251**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	542214.110	50	500000	0	108	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID	ICSAB2	SampType:	ICSAB	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	182846
Client ID:	ICSAB	Batch ID:	R182846	TestNo:	EPA 6010B			Analysis Date:	2/23/2024	SeqNo:	5708251

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	449903.261	500	500000	0	90.0	80	120				
Iron	169573.181	20	200000	0	84.8	80	120				
Magnesium	431773.625	100	500000	0	86.4	80	120				

Sample ID	ICSA3	SampType:	ICSA	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	182846
Client ID:	ICSA	Batch ID:	R182846	TestNo:	EPA 6010B			Analysis Date:	2/23/2024	SeqNo:	5708284

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	584468.181	50	500000	0	117	80	120				
Calcium	451278.962	500	500000	0	90.3	80	120				
Iron	171392.769	20	200000	0	85.7	80	120				
Magnesium	440134.747	100	500000	0	88.0	80	120				

Sample ID	ICSAB3	SampType:	ICSAB	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	182846
Client ID:	ICSAB	Batch ID:	R182846	TestNo:	EPA 6010B			Analysis Date:	2/23/2024	SeqNo:	5708285

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	569749.122	50	500000	0	114	80	120				
Calcium	442346.814	500	500000	0	88.5	80	120				
Iron	166830.148	20	200000	0	83.4	80	120				
Magnesium	430330.236	100	500000	0	86.1	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **ICSA** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708135**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	576.247	0.050	500.0	0	115	80	120				
Boron	0.003	0.10									
Calcium	459.916	0.50	500.0	0	92.0	80	120				
Iron	174.617	0.020	200.0	0	87.3	80	120				
Magnesium	446.023	0.10	500.0	0	89.2	80	120				

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **ICSAB** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708136**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	564.317	0.050	500.0	0	113	80	120				
Boron	0.947	0.10	1.000	0	94.7	80	120				
Calcium	449.363	0.50	500.0	0	89.9	80	120				
Iron	170.212	0.020	200.0	0	85.1	80	120				
Magnesium	435.512	0.10	500.0	0	87.1	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **ICSA** Batch ID: **R182845** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708172**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	555.716	0.050	500.0	0	111	80	120				
Boron	0.006	0.10									
Calcium	452.435	0.50	500.0	0	90.5	80	120				
Iron	172.574	0.020	200.0	0	86.3	80	120				
Magnesium	439.980	0.10	500.0	0	88.0	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182845**
Client ID: **ICSAB**	Batch ID: **R182845**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708173**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	542.214	0.050	500.0	0	108	80	120				
Boron	0.966	0.10	1.000	0	96.6	80	120				
Calcium	449.903	0.50	500.0	0	90.0	80	120				
Iron	169.573	0.020	200.0	0	84.8	80	120				
Magnesium	431.774	0.10	500.0	0	86.4	80	120				

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182845**
Client ID: **ICSA**	Batch ID: **R182845**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708206**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	584.468	0.050	500.0	0	117	80	120				
Boron	0.010	0.10									
Calcium	451.279	0.50	500.0	0	90.3	80	120				
Iron	171.393	0.020	200.0	0	85.7	80	120				
Magnesium	440.135	0.10	500.0	0	88.0	80	120				

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182845**
Client ID: **ICSAB**	Batch ID: **R182845**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708207**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	569.749	0.050	500.0	0	114	80	120				
Boron	0.958	0.10	1.000	0	95.8	80	120				
Calcium	442.347	0.50	500.0	0	88.5	80	120				
Iron	166.830	0.020	200.0	0	83.4	80	120				
Magnesium	430.330	0.10	500.0	0	86.1	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **ICSA1**	SampType: **ICSA**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182926**
Client ID: **ICSA**	Batch ID: **R182926**	TestNo: **EPA 6010B**		Analysis Date: **2/26/2024**	SeqNo: **5713393**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	-0.005967	0.50									
Sodium	-0.001943	0.50									

Sample ID **ICSAB1**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182926**
Client ID: **ICSAB**	Batch ID: **R182926**	TestNo: **EPA 6010B**		Analysis Date: **2/26/2024**	SeqNo: **5713394**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	9.908	0.50	10.00	0	99.1	80	120				
Sodium	10.043	0.50	10.00	0	100	80	120				

Sample ID **ICSA2**	SampType: **ICSA**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182926**
Client ID: **ICSA**	Batch ID: **R182926**	TestNo: **EPA 6010B**		Analysis Date: **2/26/2024**	SeqNo: **5713433**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.068	0.50									
Sodium	0.161	0.50									

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **182926**
Client ID: **ICSAB**	Batch ID: **R182926**	TestNo: **EPA 6010B**		Analysis Date: **2/26/2024**	SeqNo: **5713434**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.344	0.50	10.00	0	103	80	120				
Sodium	10.434	0.50	10.00	0	104	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID	ICSA1	SampType:	ICSA	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	183142
Client ID:	ICSA	Batch ID:	R183142	TestNo:	EPA 6010B			Analysis Date:	3/1/2024	SeqNo:	5724666

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.006	0.50									
Sodium	0.016	0.50									

Sample ID	ICSAB1	SampType:	ICSAB	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	183142
Client ID:	ICSAB	Batch ID:	R183142	TestNo:	EPA 6010B			Analysis Date:	3/1/2024	SeqNo:	5724667

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.084	0.50	10.00	0	101	80	120				
Sodium	10.184	0.50	10.00	0	102	80	120				

Sample ID	ICSA2	SampType:	ICSA	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	183142
Client ID:	ICSA	Batch ID:	R183142	TestNo:	EPA 6010B			Analysis Date:	3/1/2024	SeqNo:	5724704

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.004	0.50									
Sodium	0.051	0.50									

Sample ID	ICSAB2	SampType:	ICSAB	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	183142
Client ID:	ICSAB	Batch ID:	R183142	TestNo:	EPA 6010B			Analysis Date:	3/1/2024	SeqNo:	5724705

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.313	0.50	10.00	0	103	80	120				
Sodium	10.308	0.50	10.00	0	103	80	120				

Sample ID	ICSA3	SampType:	ICSA	TestCode:	6010_WDPG	Units:	mg/L	Prep Date:		RunNo:	183142
Client ID:	ICSA	Batch ID:	R183142	TestNo:	EPA 6010B			Analysis Date:	3/1/2024	SeqNo:	5725125

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	0.061	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **183142**
Client ID: **ICSA**	Batch ID: **R183142**	TestNo: **EPA 6010B**		Analysis Date: **3/1/2024**	SeqNo: **5725125**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	0.024	0.50									

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **mg/L**	Prep Date:	RunNo: **183142**
Client ID: **ICSAB**	Batch ID: **R183142**	TestNo: **EPA 6010B**		Analysis Date: **3/1/2024**	SeqNo: **5725126**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	10.613	0.50	10.00	0	106	80	120				
Sodium	10.539	0.50	10.00	0	105	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	1	99.54	65-125	PASS
Standard2	ICAL	1	0.96	96.11	65-125	PASS
Standard3	ICAL	1	0.95	95.21	65-125	PASS
Standard4	ICAL	1	0.94	93.79	65-125	PASS
Standard5	ICAL	1	0.93	93.21	65-125	PASS
Standard6	ICAL	1	0.92	91.99	65-125	PASS
Standard7	ICAL	1	0.91	90.59	65-125	PASS
ICV	ICV	1	0.91	91.25	65-125	PASS
ICB	ICB	1	0.93	93.31	65-125	PASS
LLICV1	CCV1	1	0.93	93.05	65-125	PASS
ICSA1	ICSA	1	0	0.01	65-125	NR!
ICSA1	ICSA	1	0.79	79.4	65-125	PASS
ICSA1	ICSA	1	0.8	79.81	65-125	PASS
ICSAB1	ICSAB	1	0.81	81.01	65-125	PASS
RINSE	RINSE	1	0.78	78.14	65-125	PASS
CCV1	CCV	1	1.03	102.88	65-125	PASS
CCB1	CCB	1	1.04	103.63	65-125	PASS
CCV2	CCV	1	1.03	102.69	65-125	PASS
CCB2	CCB	1	1.02	102.2	65-125	PASS
CCV3	CCV	1	1.01	100.84	65-125	PASS
CCB3	CCB	1	1.03	103.05	65-125	PASS
ICSA2	ICSA	1	0.85	84.99	65-125	PASS
ICSAB2	ICSAB	1	0.88	88.33	65-125	PASS
RINSE	RINSE	1	0.83	83.18	65-125	PASS
RINSE	RINSE	1	1	100.01	65-125	PASS
MB-107062	MBLK	1	1.03	103.1	65-125	PASS
LCS1-107062	LCS	1	0.97	96.86	65-125	PASS
N063295-005C	SAMP	1	0.73	73.1	65-125	PASS
N063295-005C	SAMP	5	0.88	87.89	65-125	PASS
N063295-005C-PS	PS	1	0.72	72.48	65-125	PASS
N063295-005C-MS1	MS	1	0.76	75.85	65-125	PASS
N063295-005C-MSD1	MSD	1	0.75	74.53	65-125	PASS
CCV4	CCV	1	1.02	102.15	65-125	PASS
CCB4	CCB	1	1.04	103.81	65-125	PASS
N063295-006C	SAMP	1	0.74	74	65-125	PASS
N063295-007C	SAMP	1	0.74	73.94	65-125	PASS
N063295-008C	SAMP	1	0.73	73.19	65-125	PASS
N063297-001C	SAMP	1	0.98	97.82	65-125	PASS
N063303-001B	SAMP	1	0.74	74.37	65-125	PASS
N063303-002B	SAMP	1	0.71	71.47	65-125	PASS

INTERNAL STANDARD: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
N063303-006B	SAMP	1	0.67	67.36	65-125	PASS
N063303-008B	SAMP	1	0.77	76.7	65-125	PASS
CCV5	CCV	1	0.97	96.8	65-125	PASS
CCB5	CCB	1	0.99	99.37	65-125	PASS
CCV6	CCV	1	0.98	98.12	65-125	PASS
CCB6	CCB	1	1	99.73	65-125	PASS
ICSA3	ICSA	1	0.82	82.33	65-125	PASS
ICSAB3	ICSAB	1	0.84	83.53	65-125	PASS

INTERNAL STANDARD: 240226A

Instrument ID: ICP-02

Sample Name	Type	DF	Scandium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	0.98	97.82	65-125	PASS
Standard2	ICAL	1	0.98	97.55	65-125	PASS
Standard3	ICAL	1	0.97	97.01	65-125	PASS
Standard4	ICAL	1	0.96	96.29	65-125	PASS
Standard5	ICAL	1	0.97	96.75	65-125	PASS
Standard6	ICAL	1	0.97	97.12	65-125	PASS
ICV	ICV	1	0.98	98.07	65-125	PASS
ICB	ICB	1	1	99.93	65-125	PASS
LLICV	CCV	1	0.97	97.43	65-125	PASS
ICSA1	ICSA	1	0.98	97.73	65-125	PASS
ICSAB1	ICSAB	1	0.98	97.61	65-125	PASS
MB-107062	MBLK	1	0.99	99.05	65-125	PASS
LCS2-107062	LCS	1	1	99.54	65-125	PASS
CCV1	CCV	1	0.98	97.75	65-125	PASS
CCB1	CCB	1	1	100.3	65-125	PASS
N063295-005C	SAMP	5	0.92	91.65	65-125	PASS
N063295-006C	SAMP	5	0.88	87.77	65-125	PASS
N063295-007C	SAMP	5	0.89	89.26	65-125	PASS
N063295-008C	SAMP	5	0.89	89.02	65-125	PASS
CCV2	CCV	1	0.95	94.76	65-125	PASS
CCB2	CCB	1	0.99	98.71	65-125	PASS
CCV3	CCV	1	0.94	94.44	65-125	PASS
CCB3	CCB	1	0.98	98.07	65-125	PASS
N063295-005C	SAMP	25	0.93	93.43	65-125	PASS
N063295-005C	SAMP	500	0.96	96.2	65-125	PASS
CCV4	CCV	1	0.94	93.82	65-125	PASS
CCB4	CCB	1	0.96	96.24	65-125	PASS
ICSA2	ICSA	1	0.98	97.7	65-125	PASS
ICSAB2	ICSAB	1	0.94	94.26	65-125	PASS
N063295-005C	SAMP	2500	0.95	95.38	65-125	PASS
N063295-005C-PS	PS	5	0.88	87.63	65-125	PASS
N063295-005C-PS	PS	500	0.94	93.65	65-125	PASS
N063295-005C-MS2	MS	5	0.87	86.81	65-125	PASS
N063295-005C-MS2	MS	500	0.94	94.19	65-125	PASS
N063295-005C-MSD2	MSD	5	0.87	86.73	65-125	PASS
N063295-005C-MSD2	MSD	500	0.96	95.52	65-125	PASS
N063295-006C	SAMP	500	0.96	96.32	65-125	PASS
N063295-007C	SAMP	500	0.97	96.64	65-125	PASS
N063295-008C	SAMP	500	0	0.18	65-125	NR!
N063295-008C	SAMP	500	0.98	97.88	65-125	PASS

INTERNAL STANDARD: 240226A

Instrument ID: ICP-02

Sample Name	Type	DF	Scandium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
N063295-008C	SAMP	500	0.96	96.39	65-125	PASS
CCV5	CCV	1	0.93	93.08	65-125	PASS
N063295-005C	SAMP	2500	0.95	95.09	65-125	PASS
N063295-005C-PS	PS	5	0.87	87.08	65-125	PASS
N063295-005C-PS	PS	500	0.94	93.73	65-125	PASS
N063295-005C-MS2	MS	5	0.86	86.11	65-125	PASS
N063295-005C-MS2	MS	500	0.93	93.03	65-125	PASS
N063295-005C-MSD2	MSD	5	0.86	85.89	65-125	PASS
N063295-005C-MSD2	MSD	500	0.95	94.91	65-125	PASS
N063295-006C	SAMP	500	0.96	95.69	65-125	PASS
N063295-007C	SAMP	500	0.96	95.61	65-125	PASS
N063295-008C	SAMP	500	0.95	94.87	65-125	PASS
CCV5	CCV	1	0.93	92.73	65-125	PASS
CCB5	CCB	1	0.95	94.67	65-125	PASS
N063295-008C	SAMP	5	0.85	84.73	65-125	PASS
CCV6	CCV	1	0.91	91	65-125	PASS
CCB6	CCB	1	0.96	95.78	65-125	PASS
ICSA3	ICSA	1	0.95	94.81	65-125	PASS
ICSAB3	ICSAB	1	0.94	93.77	65-125	PASS

INTERNAL STANDARD: 240301B

Instrument ID: ICP-02

Sample Name	Type	DF	Scandium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	0.95	95.49	65-125	PASS
Standard2	ICAL	1	0.97	97.41	65-125	PASS
Standard3	ICAL	1	0.98	97.83	65-125	PASS
Standard4	ICAL	1	0.95	95.07	65-125	PASS
Standard5	ICAL	1	0.97	97.42	65-125	PASS
Standard6	ICAL	1	0.97	96.83	65-125	PASS
ICV	ICV	1	0.92	91.57	65-125	PASS
ICV	ICV	1	0.93	92.61	65-125	PASS
ICB	ICB	1	1	99.64	65-125	PASS
LLICV	CCV	1	0.99	98.51	65-125	PASS
ICSA1	ICSA	1	0.99	98.56	65-125	PASS
ICSAB1	ICSAB	1	0.95	95.11	65-125	PASS
N063295-005C	SAMP	2500	0.97	97.09	65-125	PASS
N063295-005C-PS	PS	5	0.89	89.09	65-125	PASS
N063295-005C-PS	PS	500	0.95	94.96	65-125	PASS
N063295-005C-MS2	MS	5	0.85	85.29	65-125	PASS
N063295-005C-MS2	MS	500	0.93	93.15	65-125	PASS
N063295-005C-MSD2	MSD	5	0.86	85.74	65-125	PASS
N063295-005C-MSD2	MSD	500	0.93	92.82	65-125	PASS
N063295-006C	SAMP	500	0.95	94.71	65-125	PASS
N063295-007C	SAMP	500	0.95	95.04	65-125	PASS
N063295-008C	SAMP	500	0.95	95.37	65-125	PASS
CCV1	CCV	1	0.92	92.09	65-125	PASS
CCB1	CCB	1	0.99	99	65-125	PASS
N063297-001C	SAMP	5	0.92	91.96	65-125	PASS
N063297-001C	SAMP	1	0.92	92.01	65-125	PASS
CCV2	CCV	1	0.92	92.39	65-125	PASS
CCB2	CCB	1	0.97	97.12	65-125	PASS
CCV3	CCV	1	0.92	91.9	65-125	PASS
CCB3	CCB	1	0.96	96.47	65-125	PASS
ICSA2	ICSA	1	0.98	98.3	65-125	PASS
ICSAB2	ICSAB	1	0.96	95.73	65-125	PASS
N063295-005C-MS2	MS	5	0.87	87.24	65-125	PASS
N063295-005C-MS2	MS	500	0.96	96.3	65-125	PASS
CCV4	CCV	1	0.88	87.82	65-125	PASS
CCB4	CCB	1	0.83	83.1	65-125	PASS
CCV5	CCV	1	0.88	88.46	65-125	PASS
CCB5	CCB	1	0.93	93.35	65-125	PASS
CCV6	CCV	1	0.89	88.59	65-125	PASS
CCB6	CCB	1	0.93	92.62	65-125	PASS

INTERNAL STANDARD: 240301B

Instrument ID: ICP-02

Sample Name	Type	DF	Scandium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
ICSA3	ICSA	1	0.92	91.76	65-125	PASS
ICSAB3	ICSAB	1	0.89	88.51	65-125	PASS
CCV7	CCV	1	0.87	86.87	65-125	PASS
CCB7	CCB	1	0.92	91.85	65-125	PASS
CCV8	CCV	1	0.89	88.53	65-125	PASS
CCB8	CCB	1	0.93	93.36	65-125	PASS
CCV9	CCV	1	0.9	89.85	65-125	PASS
CCB9	CCB	1	0.95	95.01	65-125	PASS
ICSA4	ICSA	1	0.94	94.29	65-125	PASS
ICSAB4	ICSAB	1	0.91	90.79	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063297
Test Method: EPA 6010B
Analysis Date: 2/23/2024

Matrix: Groundwater
Batch No.: 107062

Instrument ID: ICP-03
Instrument Description: Perkin Elmer Avio 500Max

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Fe. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063295-005C DT 5x	Iron	Fe	µg/L	368.5977	NA	315.0688	16.99%	10

Reviewed by:

dMocha 3/19/2024

Note: NA - Not Applicable

03/13/24 00:13

DT_EPA 6010B_N063297_107062

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063297
Test Method: EPA 6010B
Analysis Date: 2/23/2024

Matrix: Groundwater
Batch No.: 107062

Instrument ID: ICP-03
Instrument Description: Perkin Elmer Avio 500Max

Comments:

Analyzed By: Diane Jetajobe

Dilution test for Mg failed. However, PS passed criteria.
Dilution test for Ca failed.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063295-005C DT 5x	Boron	B	mg/L	2.501878	NA	2.352937	6.33%	10
N063295-005C DT 5x	Calcium	Ca	mg/L	345.1453	FAIL	306.5987	12.57%	10
N063295-005C DT 5x	Magnesium	Mg	mg/L	7.332184	FAIL	5.964054	22.94%	10

Reviewed by:

dMRocha 3/19/2024

Note: NA - Not Applicable

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063297
Test Method: EPA 6010B
Analysis Date: 3/1/2024

Matrix: Groundwater
Batch No.: 107062

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima 7300DV

Comments:

Analyzed By: Diane Jetajobe

Dilution test for Na failed. However, PS passed criteria.
Dilution test is not applicable to K. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063295-005C DT 5x	Potassium	K	mg/L	42.61085	NA	39.53331	7.78%	10
N063295-005C DT 2500x	Sodium	Na	mg/L	4847.517	FAIL	3928.865	23.38%	10

Reviewed by:

dMocha 3/19/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **N063295-005C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ZZZZZZ** Batch ID: **107062** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708257**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	405.937	20	100.0	315.1	90.9	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPM

Sample ID **N063295-005C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **182845**
Client ID: **ZZZZZZ** Batch ID: **107062** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708179**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron	7.887	0.10	5.000	2.353	111	80	120				
Calcium	314.338	0.50	10.00	306.6	77.4	80	120				S
Magnesium	15.038	0.10	10.00	5.964	90.7	80	120				

Sample ID **N063295-005C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **183142**
Client ID: **ZZZZZZ** Batch ID: **107062** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/1/2024** SeqNo: **5724669**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	127.039	2.5	100.0	39.53	87.5	80	120				

Sample ID **N063295-005C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **mg/L** Prep Date: RunNo: **183142**
Client ID: **ZZZZZZ** Batch ID: **107062** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/1/2024** SeqNo: **5724670**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	12216.540	250	10000	3929	82.9	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CORRECTIVE ACTION DOCUMENTATION

ASSET Laboratories

Corrective Action Report (CAR)

Date Initiated: 23-Feb-24 **Corrective Action Report ID:** 7427

Initiated By: Diane Jetajobe **Department:** ME-2(ICP)

Corrective Action Description

CAR Summary: ICSA was ran 3X in sequence NV00922-ICP3_~~240223C~~240223A.

Description of Nonconformance: The first ICSA1(raw data ICSA Sequence No.:12) does not have the ICSA Standard in position.

Description of Corrective Action: Analyst willl be mindful on checking the ICSA Standard in position before continuing the running IQC.

Performed By: Diane Jetajobe **Completion Date:** 23-Feb-24

Client Notification

Client Notification Required: No **Notified By:**

Comment:

Quality Assurance Review

Corrective Action: Deficiency

Further Action required by QA:

Approval and Closure

CAR Closed By: _____ Close Date: _____

QA Reviewed By: LG QA Date: 03/11/2024

Last Updated BY JohnL Updated: 11-Mar-2024 7:29 PM Reported: 11-Mar-2024 6:29 PM

MDL STUDY

LOD & PQL VERIFICATION

Analytical Method: EPA 6010B
Digestion Method: EPA 3010A
Digestion Date: 5/7/23; 5/8/23; 5/10/23
Analysis Date: 5/7-23/23
Instrument Name: ICP-03
Analyst/Technician: Nancy Sibucao / Diane Jetajobe

Matrix: WATER
Units : ppm

Analyte	MDL	LOD	ACTUAL LOD	PQL	Actual PQL	%REC
Beryllium	0.000076	0.0005	0.00047	0.001	0.00098	98
Boron	0.0086	0.05	0.04899	0.1	0.089	89
Magnesium	0.0057	0.05	0.05152	0.1	0.10	102
Silicon	0.012	0.01	0.01312	0.02	0.023	113
Chromium	0.00051	0.0005	0.00056	0.001	0.0010	102
Manganese	0.00032	0.01	0.00534	0.01	0.011	110
Iron	0.0022	0.01	0.01180	0.02	0.021	106
Cobalt	0.001	0.0013	0.00096	0.0025	0.0025	100
Nickel	0.0034	0.0025	0.00417	0.005	0.0055	110
Copper	0.0042	0.0025	0.00434	0.005	0.0044	87
Zinc	0.0007	0.005	0.00624	0.01	0.011	106
Arsenic	0.0042	0.005	0.00461	0.01	0.010	104
Selenium	0.008	0.005	0.00829	0.01	0.010	102
Molybdenum	0.0013	0.0025	0.00307	0.005	0.0053	106
Silver	0.0024	0.0013	0.00419	0.0025	0.0033	134
Cadmium	0.0016	0.0013	0.00180	0.0025	0.0026	102
Tin	0.0076	0.005	0.00563	0.010	0.0099	99
Antimony	0.0038	0.005	0.00307	0.01	0.0096	96
Barium	0.0002	0.0013	0.00124	0.0025	0.0026	104
Thallium	0.0021	0.0075	0.00656	0.015	0.015	101
Lead	0.0039	0.0025	0.00337	0.005	0.0047	94
Calcium	0.011	0.1	0.11963	0.2	0.23	113
Vanadium	0.00017	0.0013	0.00126	0.0025	0.0025	100
Aluminum	0.0089	0.025	0.02576	0.05	0.048	95
Titanium	0.004	0.005	0.00612	0.01	0.01	101

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

Method Detection Limit

Analytical Method: EPA 6010B / 200.7 **Matrix: Water**

Digestion Method: EPA 3010A 25 mL

Date of Analysis: 6/22,24,30/2021 Units: mg/L

Instrument Name: ICP2

Analysts: DBJ

Analyte	1	2	3	4	5	6	7	SD	Ave	AMT SPIKED	MDLs	PQL
Potassium	0.13348	0.13397	0.12506	0.12108	0.13408	0.09107	0.06999	0.02517	0.11553	0.1000	0.07902	0.5
Sodium	0.09937	0.09005	0.09138	0.12202	0.10604	0.13761	0.13949	0.02087	0.11228	0.1000	0.06553	0.5
Strontium	0.0299	0.02938	0.02907	0.03172	0.03136	0.0304	0.03017	0.00097	0.03029	0.0250	0.00306	0.05

Method Detection Limit - Blank

Start Date: 6/1/2019

End Date 6/30/2021

*Note: MDL value is from Method Blank (MB) results pooled from June 1, 2019 to June 30, 2021.

Analyte	MDLb
Potassium	0.1388
Sodium	0.3400
Strontium	-0.0004

EPA 6020
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107055
ASSET #: N063297

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/23/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

% Rec of several analytes in in N063295-002B-PS/MS/ MSD, failed, low bias. However, LCS passed criteria
% Rec of Ba in several CCVs failed, high bias. For re run
Mn is OLR in N063295-002B-PS/MS/ MSD. For dilution

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 3/5/2024 Date: _____

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107055
ASSET #: N063297

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/25/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.	X			X		
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

Ba re run
Mn dilution
Dilution test for Ba anf Mn failed. However, PS passed criteria

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 3/5/2024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Groundwater

FORMULA:

Calculate the Barium concentration, in ug/L in the original sample as follows:

Barium , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063297-001C** , the concentration in ug/L is calculated as follows:

Barium , ug/L = 29.5699 * 1 *(25 / 25)

Barium , ug/L = 29.5699

Reporting results in two significant figures,

Barium , ug/L = 30

Reviewed by:

JRB 3/26/2024

% RSD SUMMARY

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				52 Cr [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	15.646	15	<PQL	0.09	27.827	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.47	6.506	15	PASS	0.47	5.773	15	PASS
Std3-5/50 ppb	ICAL	1	4.83	1.27	15	PASS	4.77	0.723	15	PASS
Std4-10/100 ppb	ICAL	1	9.83	2.315	15	PASS	9.94	1.066	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	20.24	1.991	15	PASS	19.89	0.288	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	40.14	1.038	15	PASS	39.64	0.082	15	PASS
Std7-100/1000 ppb	ICAL	1	100.68	1.373	15	PASS	99.08	1.027	15	PASS
Std8-200/2000 ppb	ICAL	1	199.62	1.169	15	PASS	200.55	1.19	15	PASS
ICV	ICV	1	10.17	1.243	15	PASS	10.18	2.082	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
LLICV1	LLICV	1	1.11	0.584	20	PASS	1.11	4.614	20	PASS
MLCCV	CCV	1	19.88	2.197	15	PASS	19.98	1.349	15	PASS
ICSA1	ICSA	1	0	70.954	15	<PQL	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.4	0.884	15	PASS	20.29	1.068	15	PASS
MDL 4	ICAL	1	1.07	0.459	15	PASS	1.12	4.927	15	PASS
CCV1	CCV	1	19.98	1.016	15	PASS	19.78	1.439	15	PASS
CCB1	CCB	1	0.02	43.803	15	<PQL	1	2.109	15	PASS
CCV2	CCV	1	19.84	1.185	15	PASS	19.95	1.632	15	PASS
CCB2	CCB	1	0.02	52.281	15	<PQL	1.01	4.255	15	PASS
CCV3	CCV	1	19.92	1.739	15	PASS	19.93	1.068	15	PASS
CCB3	CCB	1	0.03	49.285	15	<PQL	1.03	2.12	15	PASS
CCV4	CCV	1	20.7	0.766	15	PASS	20.13	0.256	15	PASS
CCB4	CCB	1	0.02	33.478	15	<PQL	1	1.063	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	0.01	20.455	15	<PQL	0.33	4.345	15	PASS
ICSAB2	ICSAB	1	20.62	2.198	15	PASS	20.46	0.376	15	PASS
CCV5	CCV	1	20.65	1.318	15	PASS	20.37	1.139	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	0.01	36.4	15	<PQL	0.33	8.05	15	PASS
ICSAB3	ICSAB	1	20.58	0.24	15	PASS	20.28	1.359	15	PASS
CCV6	CCV	1	21.35	0.969	15	PASS	19.7	1.202	15	PASS
CCB6	CCB	1	0	8860.741	15	<PQL	<0.000	N/A	15	<PQL
CCV7	CCV	1	22.1	1.002	15	PASS	19.64	0.349	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	0.01	61.487	15	<PQL	0.34	1.824	15	PASS
ICSAB4	ICSAB	1	22.11	0.666	15	PASS	20.09	1.756	15	PASS
CCV8	CCV	1	20.87	1.232	15	PASS	20.51	1.021	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL	0	1036.098	15	<PQL
CCV9	CCV	1	21.75	0.532	15	PASS	19.57	0.633	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				52 Cr [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCV10	CCV	1	21.64	0.313	15	PASS	19.81	1.03	15	PASS
CCB10	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	0.01	90.69	15	<PQL	0.33	4.609	15	PASS
ICSAB5	ICSAB	1	21.85	0.907	15	PASS	20.04	0.07	15	PASS
CCV11	CCV	1	21.74	1.753	15	PASS	19.72	1.941	15	PASS
CCB11	CCB	1	<0.000	N/A	15	<PQL	0.01	134.014	15	<PQL
CCV12	CCV	1	22.44	1.29	15	PASS	19.39	0.576	15	PASS
CCB12	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV13	CCV	1	22.5	0.471	15	PASS	19.49	0.464	15	PASS
CCB13	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	0.02	57.827	15	<PQL	0.33	4.478	15	PASS
ICSAB6	ICSAB	1	22.35	2.238	15	PASS	20.12	0.449	15	PASS
MB-107055	MBLK	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
LCS-107055	LCS	1	10.65	1.234	15	PASS	9.79	1.252	15	PASS
N063295-001B	SAMP	1	86.33	1.515	15	PASS	65.13	1.214	15	PASS
N063295-002B	SAMP	1	183.76	0.34	15	PASS	72.62	1.433	15	PASS
N063295-002B	SAMP	5	39.69	2.083	15	PASS	15.82	1.004	15	PASS
N063295-002B-PS	PS	1	198.02	0.79	15	PASS	80.35	0.063	15	PASS
N063295-002B-MS	MS	1	195.01	1.251	15	PASS	79.51	2.041	15	PASS
N063295-002B-MSD	MSD	1	192.91	0.532	15	PASS	79.12	0.809	15	PASS
N063295-003B	SAMP	1	86.53	1.087	15	PASS	57.83	1.272	15	PASS
CCV14	CCV	1	21.97	1.107	15	PASS	19.61	1.985	15	PASS
CCB14	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063295-005C	SAMP	1	191.77	0.664	15	PASS	0.32	9.909	15	PASS
N063295-006C	SAMP	1	125.97	0.728	15	PASS	0.2	8.685	15	PASS
N063295-007C	SAMP	1	115.94	0.712	15	PASS	0.15	2.606	15	PASS
N063295-008C	SAMP	1	135.16	0.846	15	PASS	0.06	12.291	15	PASS
N063297-001C	SAMP	1	30.95	1.23	15	PASS	20.35	2.347	15	PASS
N063297-002B	SAMP	1	178.64	0.654	15	PASS	0.19	3.895	15	PASS
N063297-003B	SAMP	1	49.67	1.196	15	PASS	25.18	1.43	15	PASS
N063303-001B	SAMP	1	30.42	0.957	15	PASS	13.98	1.914	15	PASS
N063303-002B	SAMP	1	37.73	0.896	15	PASS	0.86	0.284	15	PASS
CCV15	CCV	1	22.62	1.187	15	PASS	19.53	1.006	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063303-006B	SAMP	5	20.12	0.946	15	PASS	0.11	5.682	15	PASS
N063303-008B	SAMP	1	839.88	1.073	15	PASS	0.36	4.422	15	PASS
CCV16	CCV	1	22.1	0.561	15	PASS	19.76	0.985	15	PASS
CCB16	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA7	ICSA	1	0.01	76.638	15	<PQL	0.32	9.091	15	PASS
ICSAB7	ICSAB	1	22.31	0.348	15	PASS	19.91	0.754	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]				66 Zn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.1	4.971	15	PASS	<0.000	N/A	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.51	3.025	15	PASS	<0.000	N/A	15	<PQL
Std3-5/50 ppb	ICAL	1	4.89	3.407	15	PASS	4.04	2.554	15	PASS
Std4-10/100 ppb	ICAL	1	9.86	1.399	15	PASS	9.39	3.994	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.81	1.649	15	PASS	18.98	0.41	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.51	1.262	15	PASS	39.54	0.96	15	PASS
Std7-100/1000 ppb	ICAL	1	98.5	0.438	15	PASS	98.57	0.405	15	PASS
Std8-200/2000 ppb	ICAL	1	200.88	0.335	15	PASS	200.97	0.134	15	PASS
ICV	ICV	1	101.59	0.398	15	PASS	100.57	0.528	15	PASS
ICB	ICB	1	0	258.657	15	<PQL	0.05	49.984	15	<PQL
LLICV1	LLICV	1	0.55	6.234	20	PASS	9.92	2.269	20	PASS
MLCCV	CCV	1	19.94	0.442	15	PASS	19.2	2.435	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.36	0.139	15	PASS	19.38	1.963	15	PASS
MDL 4	ICAL	1	0.51	4.031	15	PASS	9.95	0.246	15	PASS
CCV1	CCV	1	19.82	1.109	15	PASS	19.39	1.294	15	PASS
CCB1	CCB	1	0.18	6.931	15	PASS	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.77	0.493	15	PASS	19.38	2.033	15	PASS
CCB2	CCB	1	0.19	6.321	15	PASS	<0.000	N/A	15	<PQL
CCV3	CCV	1	19.59	0.422	15	PASS	19.36	1.031	15	PASS
CCB3	CCB	1	0.18	13.078	15	PASS	<0.000	N/A	15	<PQL
CCV4	CCV	1	20	0.995	15	PASS	19.53	0.041	15	PASS
CCB4	CCB	1	0.18	10.217	15	PASS	<0.000	N/A	15	<PQL
CCB4	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	0.07	11.023	15	PASS	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.28	0.565	15	PASS	19.5	1.804	15	PASS
CCV5	CCV	1	20.33	0.561	15	PASS	19.62	1.898	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	0.06	16.251	15	<PQL	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.19	1.163	15	PASS	19.34	1.992	15	PASS
CCV6	CCV	1	19.62	1.472	15	PASS	19.59	1.219	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV7	CCV	1	19.92	0.296	15	PASS	19.57	1.397	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	0.07	22.799	15	<PQL	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.31	0.724	15	PASS	18.91	0.589	15	PASS
CCV8	CCV	1	19.91	1.192	15	PASS	19.88	0.617	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV9	CCV	1	19.71	1.201	15	PASS	19.56	0.861	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]				66 Zn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCV10	CCV	1	19.6	0.332	15	PASS	19.24	4.062	15	PASS
CCB10	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	0.07	14.564	15	PASS	<0.000	N/A	15	<PQL
ICSAB5	ICSAB	1	20.01	1.125	15	PASS	19.22	1.406	15	PASS
CCV11	CCV	1	19.59	1.17	15	PASS	19.18	0.887	15	PASS
CCB11	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV12	CCV	1	19.65	1.067	15	PASS	18.87	1.448	15	PASS
CCB12	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV13	CCV	1	19.73	0.111	15	PASS	18.98	1.206	15	PASS
CCB13	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	0.06	10.678	15	PASS	<0.000	N/A	15	<PQL
ICSAB6	ICSAB	1	20.4	0.351	15	PASS	19.05	1.556	15	PASS
MB-107055	MBLK	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
LCS-107055	LCS	1	97.81	0.598	15	PASS	93.76	0.929	15	PASS
N063295-001B	SAMP	1	994.92	0.772	15	PASS	4.71	3.508	15	PASS
N063295-002B	SAMP	1	1869.08	0.411	15	PASS	<0.000	N/A	15	<PQL
N063295-002B	SAMP	5	402.54	1.323	15	PASS	<0.000	N/A	15	<PQL
N063295-002B-PS	PS	1	1949.1	1.171	15	PASS	68.52	3.072	15	PASS
N063295-002B-MS	MS	1	1923.1	2.893	15	PASS	67.43	0.783	15	PASS
N063295-002B-MSD	MSD	1	1916.54	0.381	15	PASS	67.03	1.417	15	PASS
N063295-003B	SAMP	1	1001.48	0.666	15	PASS	5.01	5.39	15	PASS
CCV14	CCV	1	19.73	1.059	15	PASS	19.09	1.16	15	PASS
CCB14	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063295-005C	SAMP	1	592.66	0.454	15	PASS	<0.000	N/A	15	<PQL
N063295-006C	SAMP	1	621.02	0.484	15	PASS	<0.000	N/A	15	<PQL
N063295-007C	SAMP	1	534.65	0.114	15	PASS	<0.000	N/A	15	<PQL
N063295-008C	SAMP	1	734.96	0.961	15	PASS	<0.000	N/A	15	<PQL
N063297-001C	SAMP	1	3.56	3.545	15	PASS	4.16	2.13	15	PASS
N063297-002B	SAMP	1	0.98	3.628	15	PASS	<0.000	N/A	15	<PQL
N063297-003B	SAMP	1	17.12	2.431	15	PASS	0.18	79.278	15	<PQL
N063303-001B	SAMP	1	12.74	1.924	15	PASS	<0.000	N/A	15	<PQL
N063303-002B	SAMP	1	37.76	0.972	15	PASS	<0.000	N/A	15	<PQL
CCV15	CCV	1	19.75	1.254	15	PASS	19.01	2.414	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063303-006B	SAMP	5	65.02	1.431	15	PASS	<0.000	N/A	15	<PQL
N063303-008B	SAMP	1	997.78	0.578	15	PASS	<0.000	N/A	15	<PQL
CCV16	CCV	1	20.06	0.772	15	PASS	18.74	0.932	15	PASS
CCB16	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA7	ICSA	1	0.07	11.198	15	PASS	<0.000	N/A	15	<PQL
ICSAB7	ICSAB	1	20.29	1.198	15	PASS	18.81	0.973	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]				78 Se [1]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.1	15.379	15	FAIL	0.06	59.065	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.46	2.776	15	PASS	0.52	22.291	15	FAIL
Std3-5/50 ppb	ICAL	1	4.8	6.312	15	PASS	4.8	3.503	15	PASS
Std4-10/100 ppb	ICAL	1	9.82	2.017	15	PASS	9.53	1.636	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.47	2.419	15	PASS	19.76	1.967	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.93	0.817	15	PASS	39.71	2.029	15	PASS
Std7-100/1000 ppb	ICAL	1	99.51	0.783	15	PASS	99.82	2.088	15	PASS
Std8-200/2000 ppb	ICAL	1	200.33	0.784	15	PASS	200.2	0.652	15	PASS
ICV	ICV	1	10.43	1.082	15	PASS	9.73	2.945	15	PASS
ICB	ICB	1	0.02	113.613	15	<PQL	<0.000	N/A	15	<PQL
LLICV1	LLICV	1	0.09	23.162	20	<PQL	0.5	7.736	20	PASS
MLCCV	CCV	1	20.04	2.149	15	PASS	19.45	0.945	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.6	2.753	15	PASS	20.31	1.142	15	PASS
MDL 4	ICAL	1	0.1	7.053	15	PASS	0.5	16.516	15	FAIL
CCV1	CCV	1	20.03	2.081	15	PASS	20.11	0.295	15	PASS
CCB1	CCB	1	0	903.97	15	<PQL	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.84	0.388	15	PASS	19.9	4.416	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV3	CCV	1	19.77	0.594	15	PASS	20.18	1.305	15	PASS
CCB3	CCB	1	0.01	152.049	15	<PQL	<0.000	N/A	15	<PQL
CCV4	CCV	1	20.09	2.99	15	PASS	19.98	2.496	15	PASS
CCB4	CCB	1	0.01	119.849	15	<PQL	<0.000	N/A	15	<PQL
CCB4	CCB	1	0	291.181	15	<PQL	<0.000	0	15	PASS
ICSA2	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.47	0.498	15	PASS	20.55	2.777	15	PASS
CCV5	CCV	1	20.55	1.072	15	PASS	19.74	1.143	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.27	1.285	15	PASS	20.24	0.642	15	PASS
CCV6	CCV	1	19.76	2.022	15	PASS	20.48	1.069	15	PASS
CCB6	CCB	1	0	1214.624	15	<PQL	<0.000	N/A	15	<PQL
CCV7	CCV	1	20.07	1.253	15	PASS	19.68	0.982	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.32	0.601	15	PASS	20.53	1.808	15	PASS
CCV8	CCV	1	20.12	1.584	15	PASS	20.28	2.093	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV9	CCV	1	19.93	1.104	15	PASS	19.93	0.637	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]				78 Se [1]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCV10	CCV	1	19.72	2.489	15	PASS	20.03	2.665	15	PASS
CCB10	CCB	1	0.02	53.568	15	<PQL	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	0.01	369.683	15	<PQL	<0.000	N/A	15	<PQL
ICSAB5	ICSAB	1	19.98	1.177	15	PASS	20.53	2.166	15	PASS
CCV11	CCV	1	19.95	2.201	15	PASS	20.12	1.72	15	PASS
CCB11	CCB	1	0	691.193	15	<PQL	<0.000	N/A	15	<PQL
CCV12	CCV	1	19.61	1.699	15	PASS	19.68	2.429	15	PASS
CCB12	CCB	1	0	535.302	15	<PQL	<0.000	N/A	15	<PQL
CCV13	CCV	1	19.79	1.82	15	PASS	19.59	2.205	15	PASS
CCB13	CCB	1	0.01	170.85	15	<PQL	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	0.03	41.639	15	<PQL	<0.000	N/A	15	<PQL
ICSAB6	ICSAB	1	19.9	2.439	15	PASS	20.23	2.504	15	PASS
MB-107055	MBLK	1	0	1730.836	15	<PQL	<0.000	N/A	15	<PQL
LCS-107055	LCS	1	9.65	1.809	15	PASS	9.7	3.383	15	PASS
N063295-001B	SAMP	1	<0.000	N/A	15	<PQL	2.71	4.581	15	PASS
N063295-002B	SAMP	1	<0.000	N/A	15	<PQL	0.22	6.255	15	PASS
N063295-002B	SAMP	5	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063295-002B-PS	PS	1	6.41	4.091	15	PASS	8.8	2.049	15	PASS
N063295-002B-MS	MS	1	6.23	0.566	15	PASS	8.62	2.8	15	PASS
N063295-002B-MSD	MSD	1	6.33	2.081	15	PASS	8.18	3.074	15	PASS
N063295-003B	SAMP	1	<0.000	N/A	15	<PQL	2.6	7.057	15	PASS
CCV14	CCV	1	19.66	1.198	15	PASS	19.82	3.674	15	PASS
CCB14	CCB	1	0	13298.147	15	<PQL	<0.000	N/A	15	<PQL
N063295-005C	SAMP	1	<0.000	N/A	15	<PQL	0.02	104.437	15	<PQL
N063295-006C	SAMP	1	<0.000	N/A	15	<PQL	0.01	57.109	15	<PQL
N063295-007C	SAMP	1	<0.000	N/A	15	<PQL	0.01	290.49	15	<PQL
N063295-008C	SAMP	1	<0.000	N/A	15	<PQL	0.02	145.588	15	<PQL
N063297-001C	SAMP	1	5.79	4.069	15	PASS	1.08	8.034	15	PASS
N063297-002B	SAMP	1	<0.000	N/A	15	<PQL	0.52	7.912	15	PASS
N063297-003B	SAMP	1	4.15	3.075	15	PASS	4.88	2.675	15	PASS
N063303-001B	SAMP	1	<0.000	N/A	15	<PQL	0.47	11.661	15	PASS
N063303-002B	SAMP	1	<0.000	N/A	15	<PQL	0.78	5.466	15	PASS
CCV15	CCV	1	19.42	0.935	15	PASS	19.61	3.363	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063303-006B	SAMP	5	<0.000	N/A	15	<PQL	0.19	11.928	15	PASS
N063303-008B	SAMP	1	14.69	4.6	15	PASS	0.27	34.444	15	<PQL
CCV16	CCV	1	19.87	1.357	15	PASS	19.81	0.433	15	PASS
CCB16	CCB	1	0	821.372	15	<PQL	<0.000	N/A	15	<PQL
ICSA7	ICSA	1	0.01	38.089	15	<PQL	<0.000	N/A	15	<PQL
ICSAB7	ICSAB	1	20.3	1.771	15	PASS	19.95	1.408	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	95 Mo [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	13.336	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.45	5.981	15	PASS
Std3-5/50 ppb	ICAL	1	4.73	1.307	15	PASS
Std4-10/100 ppb	ICAL	1	9.69	1.057	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.36	1.729	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.51	1.164	15	PASS
Std7-100/1000 ppb	ICAL	1	99.86	1.228	15	PASS
Std8-200/2000 ppb	ICAL	1	200.26	1.42	15	PASS
ICV	ICV	1	9.94	0.447	15	PASS
ICB	ICB	1	0.02	38.674	15	<PQL
LLICV1	LLICV	1	0.52	4.354	20	PASS
MLCCV	CCV	1	19.34	0.664	15	PASS
ICSA1	ICSA	1	0.02	37.762	15	<PQL
ICSAB1	ICSAB	1	19.9	0.343	15	PASS
MDL 4	ICAL	1	0.52	2.472	15	PASS
CCV1	CCV	1	19.48	0.621	15	PASS
CCB1	CCB	1	0.02	81.165	15	<PQL
CCV2	CCV	1	19.48	0.612	15	PASS
CCB2	CCB	1	0.02	42.039	15	<PQL
CCV3	CCV	1	19.09	0.82	15	PASS
CCB3	CCB	1	0.02	28.706	15	<PQL
CCV4	CCV	1	19.93	0.827	15	PASS
CCB4	CCB	1	0.02	39.662	15	<PQL
CCB4	CCB	1	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	19.95	0.908	15	PASS
CCV5	CCV	1	19.7	0.457	15	PASS
CCB5	CCB	1	0.02	45.463	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	19.59	1.013	15	PASS
CCV6	CCV	1	20	1.354	15	PASS
CCB6	CCB	1	0.03	22.124	15	<PQL
CCV7	CCV	1	20.35	0.327	15	PASS
CCB7	CCB	1	0.02	38.764	15	<PQL
ICSA4	ICSA	1	0	125.066	15	<PQL
ICSAB4	ICSAB	1	20.19	0.706	15	PASS
CCV8	CCV	1	19.68	0.797	15	PASS
CCB8	CCB	1	0.02	46.576	15	<PQL
CCV9	CCV	1	19.93	1.047	15	PASS
CCB9	CCB	1	0.02	8.862	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	95 Mo [2]			
			Conc. [ppb]	RSD	Criteria	Comment
CCV10	CCV	1	19.9	0.568	15	PASS
CCB10	CCB	1	0.02	4.69	15	PASS
ICSA5	ICSA	1	0	329.59	15	<PQL
ICSAB5	ICSAB	1	20	1.492	15	PASS
CCV11	CCV	1	20.18	0.955	15	PASS
CCB11	CCB	1	0.02	24.557	15	<PQL
CCV12	CCV	1	20.25	1.458	15	PASS
CCB12	CCB	1	0.03	19.775	15	<PQL
CCV13	CCV	1	20.17	1.297	15	PASS
CCB13	CCB	1	0.02	45.417	15	<PQL
ICSA6	ICSA	1	0	192.013	15	<PQL
ICSAB6	ICSAB	1	20.06	1.075	15	PASS
MB-107055	MBLK	1	0.02	20.881	15	<PQL
LCS-107055	LCS	1	9.78	1.658	15	PASS
N063295-001B	SAMP	1	36.01	1.091	15	PASS
N063295-002B	SAMP	1	34.82	0.152	15	PASS
N063295-002B	SAMP	5	7.07	1.632	15	PASS
N063295-002B-PS	PS	1	46.08	1.376	15	PASS
N063295-002B-MS	MS	1	45.19	0.443	15	PASS
N063295-002B-MSD	MSD	1	45.23	0.628	15	PASS
N063295-003B	SAMP	1	36.41	0.076	15	PASS
CCV14	CCV	1	19.99	1.262	15	PASS
CCB14	CCB	1	0.02	11.306	15	PASS
N063295-005C	SAMP	1	129.59	1.263	15	PASS
N063295-006C	SAMP	1	89.77	1.21	15	PASS
N063295-007C	SAMP	1	87.06	0.687	15	PASS
N063295-008C	SAMP	1	96.14	0.573	15	PASS
N063297-001C	SAMP	1	6.63	2.172	15	PASS
N063297-002B	SAMP	1	31.79	0.848	15	PASS
N063297-003B	SAMP	1	8.66	0.455	15	PASS
N063303-001B	SAMP	1	185.44	0.199	15	PASS
N063303-002B	SAMP	1	331.09	0.447	15	PASS
CCV15	CCV	1	20.08	1.898	15	PASS
CCB15	CCB	1	0.04	23.578	15	<PQL
N063303-006B	SAMP	5	11.74	0.951	15	PASS
N063303-008B	SAMP	1	9.58	0.326	15	PASS
CCV16	CCV	1	19.9	0.309	15	PASS
CCB16	CCB	1	0.02	33.861	15	<PQL
ICSA7	ICSA	1	0	71.997	15	<PQL
ICSAB7	ICSAB	1	19.82	1.906	15	PASS

PERCENT RSD SUMMARY: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.11	14.881	15	PASS	0.1	17.358	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.48	5.813	15	PASS	0.48	3.002	15	PASS
Std3-5/50 ppb	ICAL	1	4.82	2.112	15	PASS	4.81	3.025	15	PASS
Std4-10/100 ppb	ICAL	1	9.75	0.405	15	PASS	9.77	2.389	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.49	1.504	15	PASS	19.78	1.164	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.73	0.713	15	PASS	39.02	1.467	15	PASS
Std7-100/1000 ppb	ICAL	1	100.14	0.815	15	PASS	100.2	0.669	15	PASS
Std8-200/2000 ppb	ICAL	1	200.05	0.916	15	PASS	200.13	1.446	15	PASS
ICV	ICV	1	9.83	1.682	15	PASS	100.89	0.705	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	0	284.11	15	<PQL
LLICV1	LLICV	1	1.03	1.376	20	PASS	0.55	4.582	20	PASS
LLICV1	LLICV	1	0.98	4.633	20	PASS	0.53	7.38	20	PASS
MLCCV	CCV	1	19.62	1.316	15	PASS	19.63	1.253	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL	0	270.688	15	<PQL
ICSAB1	ICSAB	1	20.09	1.176	15	PASS	20.5	0.625	15	PASS
CCV1	CCV	1	19.83	1.443	15	PASS	20.01	0.918	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.42	1.347	15	PASS	19.76	0.534	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV3	CCV	1	19.57	1.412	15	PASS	19.78	0.902	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20	1.05	15	PASS	20.45	0.678	15	PASS
CCV4	CCV	1	19.57	1.898	15	PASS	20.11	2.256	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV5	CCV	1	19.87	0.805	15	PASS	19.72	1.046	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV6	CCV	1	20.03	0.356	15	PASS	20.04	0.19	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.72	0.863	15	PASS	20.27	0.514	15	PASS
CCV7	CCV	1	20.24	1.861	15	PASS	19.64	0.467	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV8	CCV	1	19.7	1.29	15	PASS	19.67	1.135	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV9	CCV	1	19.83	0.826	15	PASS	19.44	1.878	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV10	CCV	1	19.67	0.472	15	PASS	19.83	2.27	15	PASS
CCB10	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
ICSAB4	ICSAB	1	20.03	1.24	15	PASS	20.18	1.88	15	PASS
CCV11	CCV	1	20.18	1.144	15	PASS	19.4	0.854	15	PASS
CCB11	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV12	CCV	1	20.93	1.315	15	PASS	19.46	1.202	15	PASS
CCB12	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV13	CCV	1	20.46	0.595	15	PASS	19.67	1.405	15	PASS
CCB13	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	<0.000	N/A	15	<PQL	0	16.197	15	<PQL
ICSAB5	ICSAB	1	20.85	2.538	15	PASS	19.95	0.695	15	PASS
MB-107055	MBLK	1	0.01	101.499	15	<PQL	<0.000	N/A	15	<PQL
LCS-107055	LCS	1	10.33	1.557	15	PASS	99.38	0.816	15	PASS
N063295-001B	SAMP	1	82.11	0.721	15	PASS	1020.91	0.073	15	PASS
N063295-002B	SAMP	1	176.44	1.026	15	PASS	1916.23	0.801	15	PASS
N063295-002B	SAMP	5	36.39	0.845	15	PASS	391.55	0.279	15	PASS
N063295-002B	SAMP	10	19.07	1.122	15	PASS	207.02	1.598	15	PASS
N063295-002B	SAMP	50	4.53	3.667	15	PASS	51.39	1.722	15	PASS
N063295-002B	SAMP	100	1.9	4.905	15	PASS	21.42	1.404	15	PASS
N063295-002B	SAMP	500	0.4	11.469	15	PASS	4.79	1.601	15	PASS
CCV14	CCV	1	20.52	1.496	15	PASS	19.62	0.724	15	PASS
CCB14	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063295-002B-PS	PS	1	187.08	1.718	15	PASS	1996.4	1.437	15	PASS
N063295-002B-PS	PS	10	29.38	0.995	15	PASS	301.38	0.691	15	PASS
N063295-002B-PS	PS	100	12.33	0.663	15	PASS	121.23	1.766	15	PASS
N063295-002B-MS	MS	1	183.3	0.964	15	PASS	1963.71	2.052	15	PASS
N063295-002B-MS	MS	10	19.84	1.015	15	PASS	212.34	0.742	15	PASS
N063295-002B-MS	MS	100	1.92	0.885	15	PASS	21.41	0.598	15	PASS
N063295-002B-MSD	MSD	1	185.77	1.45	15	PASS	1947.2	1.331	15	PASS
N063295-002B-MSD	MSD	10	19.52	2.17	15	PASS	212.67	0.919	15	PASS
N063295-002B-MSD	MSD	100	2.11	3.862	15	PASS	23.1	2.16	15	PASS
CCV15	CCV	1	20.69	1.56	15	PASS	19.66	1.092	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063295-003B	SAMP	1	82.27	0.423	15	PASS	1016.09	1.041	15	PASS
N063295-005C	SAMP	1	186.55	0.22	15	PASS	615.1	0.84	15	PASS
N063295-005C	SAMP	10	19.89	1.073	15	PASS	66.28	0.713	15	PASS
N063295-006C	SAMP	1	122.3	0.973	15	PASS	634.52	0.673	15	PASS
N063295-006C	SAMP	10	12.59	1.827	15	PASS	67.19	0.873	15	PASS
N063295-007C	SAMP	1	110.95	1.037	15	PASS	545.06	1.027	15	PASS
N063295-007C	SAMP	10	11.51	3.536	15	PASS	57.06	0.756	15	PASS
N063295-008C	SAMP	1	126.51	0.858	15	PASS	736.94	0.539	15	PASS
N063295-008C	SAMP	10	13.74	1.45	15	PASS	82.88	0.577	15	PASS
CCV16	CCV	1	20.38	0.567	15	PASS	19.53	0.264	15	PASS

PERCENT RSD SUMMARY: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCB16	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063297-001C	SAMP	1	29.57	1.159	15	PASS	3.56	1.071	15	PASS
N063297-002B	SAMP	1	171.99	1.008	15	PASS	1.02	4.978	15	PASS
N063297-003B	SAMP	1	48.16	1.171	15	PASS	17.43	2.298	15	PASS
N063303-001B	SAMP	1	28.81	0.946	15	PASS	12.85	2.245	15	PASS
N063303-001B	SAMP	10	3.03	0.77	15	PASS	1.35	0.53	15	PASS
N063303-002B	SAMP	1	35.87	0.506	15	PASS	38.41	0.602	15	PASS
N063303-002B	SAMP	10	3.66	3.022	15	PASS	4.1	1.267	15	PASS
N063303-006B	SAMP	5	18.36	0.848	15	PASS	63.3	1.204	15	PASS
N063303-008B	SAMP	1	832.81	1.546	15	PASS	1000.63	0.9	15	PASS
N063303-008B	SAMP	10	88.47	1.674	15	PASS	109.92	0.489	15	PASS
CCV17	CCV	1	20.99	2.009	15	PASS	19.69	1.698	15	PASS
CCB17	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	0	345.111	15	<PQL	<0.000	N/A	15	<PQL
ICSAB6	ICSAB	1	21.49	1.663	15	PASS	20.11	2.277	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223001.d	RINSE	ICAL	1	02/23/24 1:22 PM
A0223002.d	Cal Blk	IBLK	1	02/23/24 1:27 PM
A0223003.d	Std1-0.1/1 ppb	ICAL	1	02/23/24 1:32 PM
A0223004.d	Std2-0.5/5 ppb	ICAL	1	02/23/24 1:36 PM
A0223005.d	Std3-5/50 ppb	ICAL	1	02/23/24 1:41 PM
A0223006.d	Std4-10/100 ppb	ICAL	1	02/23/24 1:46 PM
A0223007.d	Std5-4.0/20/200 ppb	ICAL	1	02/23/24 1:51 PM
A0223008.d	Std6-8.0/40/400 ppb	ICAL	1	02/23/24 1:55 PM
A0223009.d	Std7-100/1000 ppb	ICAL	1	02/23/24 2:00 PM
A0223010.d	Std8-200/2000 ppb	ICAL	1	02/23/24 2:05 PM
A0223011.d	ICV	ICV	1	02/23/24 2:24 PM
A0223012.d	ICB	ICB	1	02/23/24 2:29 PM
A0223013.d	LLICV1	LLICV	1	02/23/24 2:34 PM
A0223014.d	MLCCV	CCV	1	02/23/24 2:38 PM
A0223015.d	ICSA1	ICSA	1	02/23/24 2:43 PM
A0223016.d	ICSAB1	ICSAB	1	02/23/24 2:47 PM
A0223017.d	MDL 4	ICAL	1	02/23/24 3:00 PM
A0223018.d	MB-106955	MBLK	1	02/23/24 3:10 PM
A0223019.d	LCS-106955	LCS	1	02/23/24 3:15 PM
A0223020.d	N063150-001A	SAMP	1	02/23/24 3:19 PM
A0223021.d	N063150-002A	SAMP	1	02/23/24 3:24 PM
A0223022.d	N063168-002A	SAMP	1	02/23/24 3:29 PM
A0223023.d	N063168-002A	SAMP	5	02/23/24 3:33 PM
A0223024.d	N063168-002A-PS	PS	1	02/23/24 3:38 PM
A0223025.d	N063168-002A-MS	MS	1	02/23/24 3:43 PM
A0223026.d	N063168-002A-MSD	MSD	1	02/23/24 3:47 PM
A0223027.d	RINSE	ICAL	1	02/23/24 3:52 PM
A0223028.d	CCV1	CCV	1	02/23/24 3:57 PM
A0223029.d	CCB1	CCB	1	02/23/24 4:01 PM
A0223030.d	MB-107065	MBLK	1	02/23/24 4:06 PM
A0223031.d	LCS-107065	LCS	1	02/23/24 4:11 PM
A0223032.d	N063286-001A	SAMP	1	02/23/24 4:15 PM
A0223033.d	N063286-001A	SAMP	5	02/23/24 4:20 PM
A0223034.d	N063286-001A-PS	PS	1	02/23/24 4:25 PM
A0223035.d	N063286-001A-MS	MS	1	02/23/24 4:29 PM
A0223036.d	N063286-001A-MSD	MSD	1	02/23/24 4:34 PM
A0223037.d	N063287-001A	SAMP	1	02/23/24 4:38 PM
A0223038.d	N063287-002A	SAMP	1	02/23/24 4:43 PM
A0223039.d	N063287-003A	SAMP	1	02/23/24 4:48 PM
A0223040.d	CCV2	CCV	1	02/23/24 4:52 PM
A0223041.d	CCB2	CCB	1	02/23/24 4:57 PM
A0223042.d	N063289-001A	SAMP	1	02/23/24 5:02 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223043.d	N063289-002A	SAMP	1	02/23/24 5:06 PM
A0223044.d	N063289-003A	SAMP	1	02/23/24 5:11 PM
A0223045.d	N063289-004A	SAMP	1	02/23/24 5:16 PM
A0223046.d	CCV3	CCV	1	02/23/24 5:20 PM
A0223047.d	CCB3	CCB	1	02/23/24 5:25 PM
A0223048.d	N063193-004A	SAMP	5	02/23/24 5:30 PM
A0223049.d	N063193-004A	SAMP	25	02/23/24 5:34 PM
A0223050.d	N063193-004A-PS	PS	5	02/23/24 5:39 PM
A0223051.d	N063193-004A-MS	MS	5	02/23/24 5:44 PM
A0223052.d	N063193-004A-MSD	MSD	5	02/23/24 5:48 PM
A0223053.d	N063195-002A	SAMP	5	02/23/24 5:53 PM
A0223054.d	N063195-003A	SAMP	5	02/23/24 5:58 PM
A0223055.d	N063195-004A	SAMP	5	02/23/24 6:02 PM
A0223056.d	N063201-001D	SAMP	5	02/23/24 6:07 PM
A0223057.d	N063201-001D-MS	MS	5	02/23/24 6:12 PM
A0223058.d	CCV4	CCV	1	02/23/24 6:16 PM
A0223059.d	CCB4	CCB	1	02/23/24 6:21 PM
A0223060.d	CCB4	CCB	1	02/23/24 6:27 PM
A0223061.d	ICSA2	ICSA	1	02/23/24 6:32 PM
A0223062.d	ICSAB2	ICSAB	1	02/23/24 6:37 PM
A0223063.d	MB-106955	MBLK	1	02/23/24 6:42 PM
A0223064.d	LCS-106955	LCS	1	02/23/24 6:46 PM
A0223065.d	N063150-001A	SAMP	1	02/23/24 6:51 PM
A0223066.d	N063150-002A	SAMP	1	02/23/24 6:55 PM
A0223067.d	N063168-002A	SAMP	1	02/23/24 7:00 PM
A0223068.d	N063168-002A	SAMP	5	02/23/24 7:05 PM
A0223069.d	N063168-002A-PS	PS	1	02/23/24 7:09 PM
A0223070.d	N063168-002A-MS	MS	1	02/23/24 7:14 PM
A0223071.d	N063168-002A-MSD	MSD	1	02/23/24 7:19 PM
A0223072.d	RINSE	ICAL	1	02/23/24 7:23 PM
A0223073.d	CCV5	CCV	1	02/23/24 7:28 PM
A0223074.d	CCB5	CCB	1	02/23/24 7:33 PM
A0223075.d	ICSA3	ICSA	1	02/23/24 7:37 PM
A0223076.d	ICSAB3	ICSAB	1	02/23/24 7:42 PM
A0223077.d	N063181-001C	SAMP	10	02/23/24 7:47 PM
A0223078.d	N063181-002C	SAMP	10	02/23/24 7:51 PM
A0223079.d	N063182-001B	SAMP	1	02/23/24 7:56 PM
A0223080.d	N063182-003B	SAMP	1	02/23/24 8:01 PM
A0223081.d	N063182-003B	SAMP	10	02/23/24 8:05 PM
A0223082.d	N063182-005B	SAMP	1	02/23/24 8:10 PM
A0223083.d	N063182-005B	SAMP	10	02/23/24 8:15 PM
A0223084.d	N063182-008B	SAMP	1	02/23/24 8:19 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223085.d	N063182-009B	SAMP	1	02/23/24 8:24 PM
A0223086.d	N063182-009B	SAMP	10	02/23/24 8:29 PM
A0223087.d	CCV6	CCV	1	02/23/24 8:33 PM
A0223088.d	CCB6	CCB	1	02/23/24 8:38 PM
A0223089.d	N063182-009B	SAMP	1	02/23/24 8:43 PM
A0223090.d	N063182-009B	SAMP	1	02/23/24 8:47 PM
A0223091.d	N063182-009B	SAMP	1	02/23/24 8:52 PM
A0223092.d	N063182-009B	SAMP	1	02/23/24 8:57 PM
A0223093.d	N063182-010B	SAMP	10	02/23/24 9:01 PM
A0223094.d	N063182-011B	SAMP	1	02/23/24 9:06 PM
A0223095.d	N063182-011B	SAMP	100	02/23/24 9:11 PM
A0223096.d	CCV7	CCV	1	02/23/24 9:15 PM
A0223097.d	CCB7	CCB	1	02/23/24 9:20 PM
A0223098.d	ICSA4	ICSA	1	02/23/24 9:24 PM
A0223099.d	ICSAB4	ICSAB	1	02/23/24 9:29 PM
A0223100.d	MB-106992	MBLK	1	02/23/24 9:34 PM
A0223101.d	LCS-106992	LCS	1	02/23/24 9:39 PM
A0223102.d	N063211-001B	SAMP	10	02/23/24 9:43 PM
A0223103.d	N063211-002B	SAMP	10	02/23/24 9:48 PM
A0223104.d	N063211-003B	SAMP	100	02/23/24 9:52 PM
A0223105.d	N063213-001B	SAMP	10	02/23/24 9:57 PM
A0223106.d	N063213-002B	SAMP	10	02/23/24 10:02 PM
A0223107.d	N063213-003B	SAMP	10	02/23/24 10:07 PM
A0223108.d	N063213-004B	SAMP	10	02/23/24 10:11 PM
A0223109.d	N063213-007B	SAMP	10	02/23/24 10:16 PM
A0223110.d	CCV8	CCV	1	02/23/24 10:20 PM
A0223111.d	CCB8	CCB	1	02/23/24 10:25 PM
A0223112.d	N063213-008B	SAMP	1	02/23/24 10:30 PM
A0223113.d	N063213-008B	SAMP	5	02/23/24 10:34 PM
A0223114.d	N063213-008B-PS	PS	1	02/23/24 10:39 PM
A0223115.d	N063213-008BMS	MS	1	02/23/24 10:44 PM
A0223116.d	N063213-008BMSD	MSD	1	02/23/24 10:48 PM
A0223117.d	N063214-010B	SAMP	1	02/23/24 10:53 PM
A0223118.d	N063214-011B	SAMP	1	02/23/24 10:58 PM
A0223119.d	N063214-011B	SAMP	10	02/23/24 11:03 PM
A0223120.d	N063214-012B	SAMP	1	02/23/24 11:07 PM
A0223121.d	N063214-012B	SAMP	10	02/23/24 11:12 PM
A0223122.d	CCV9	CCV	1	02/23/24 11:16 PM
A0223123.d	CCB9	CCB	1	02/23/24 11:21 PM
A0223124.d	N063214-013B	SAMP	1	02/23/24 11:26 PM
A0223125.d	N063214-013B	SAMP	10	02/23/24 11:30 PM
A0223126.d	N063214-014B	SAMP	1	02/23/24 11:35 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223127.d	N063214-016B	SAMP	1	02/23/24 11:40 PM
A0223128.d	N063214-016B	SAMP	10	02/23/24 11:44 PM
A0223129.d	CCV10	CCV	1	02/23/24 11:49 PM
A0223130.d	CCB10	CCB	1	02/23/24 11:54 PM
A0223131.d	ICSA5	ICSA	1	02/23/24 11:58 PM
A0223132.d	ICSAB5	ICSAB	1	02/24/24 12:03 AM
A0223133.d	MB-107021	MBLK	1	02/24/24 12:08 AM
A0223134.d	LCS-107021	LCS	1	02/24/24 12:12 AM
A0223135.d	N062510-015D	SAMP	5	02/24/24 12:17 AM
A0223136.d	N063248-001B	SAMP	1	02/24/24 12:21 AM
A0223137.d	N063248-002B	SAMP	1	02/24/24 12:26 AM
A0223138.d	N063248-002B	SAMP	5	02/24/24 12:31 AM
A0223139.d	N063248-002B-PS	PS	1	02/24/24 12:35 AM
A0223140.d	N063248-002B-MS	MS	1	02/24/24 12:40 AM
A0223141.d	N063248-002B-MSD	MSD	1	02/24/24 12:45 AM
A0223142.d	RINSE	ICAL	1	02/24/24 12:49 AM
A0223143.d	CCV11	CCV	1	02/24/24 12:54 AM
A0223144.d	CCB11	CCB	1	02/24/24 12:59 AM
A0223145.d	N063248-003B	SAMP	1	02/24/24 1:03 AM
A0223146.d	N063248-004B	SAMP	1	02/24/24 1:08 AM
A0223147.d	N063248-005C	SAMP	1	02/24/24 1:13 AM
A0223148.d	N063248-006C	SAMP	1	02/24/24 1:17 AM
A0223149.d	N063248-007C	SAMP	1	02/24/24 1:22 AM
A0223150.d	N063248-008C	SAMP	1	02/24/24 1:27 AM
A0223151.d	N063248-010B	SAMP	1	02/24/24 1:31 AM
A0223152.d	N063248-011B	SAMP	1	02/24/24 1:36 AM
A0223153.d	N063249-007C	SAMP	1	02/24/24 1:41 AM
A0223154.d	RINSE	ICAL	1	02/24/24 1:45 AM
A0223155.d	CCV12	CCV	1	02/24/24 1:50 AM
A0223156.d	CCB12	CCB	1	02/24/24 1:54 AM
A0223157.d	N063249-009C	SAMP	1	02/24/24 1:59 AM
A0223158.d	N063249-011C	SAMP	1	02/24/24 2:04 AM
A0223159.d	N063249-013C	SAMP	1	02/24/24 2:08 AM
A0223160.d	N063249-015C	SAMP	1	02/24/24 2:13 AM
A0223161.d	N063249-017C	SAMP	1	02/24/24 2:18 AM
A0223162.d	N063249-018C	SAMP	5	02/24/24 2:22 AM
A0223163.d	RINSE	ICAL	1	02/24/24 2:27 AM
A0223164.d	CCV13	CCV	1	02/24/24 2:32 AM
A0223165.d	CCB13	CCB	1	02/24/24 2:36 AM
A0223166.d	ICSA6	ICSA	1	02/24/24 2:41 AM
A0223167.d	ICSAB6	ICSAB	1	02/24/24 2:46 AM
A0223168.d	MB-107055	MBLK	1	02/24/24 2:50 AM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223169.d	LCS-107055	LCS	1	02/24/24 2:55 AM
A0223170.d	N063295-001B	SAMP	1	02/24/24 2:59 AM
A0223171.d	N063295-002B	SAMP	1	02/24/24 3:04 AM
A0223172.d	N063295-002B	SAMP	5	02/24/24 3:09 AM
A0223173.d	N063295-002B-PS	PS	1	02/24/24 3:13 AM
A0223174.d	N063295-002B-MS	MS	1	02/24/24 3:18 AM
A0223175.d	N063295-002B-MSD	MSD	1	02/24/24 3:23 AM
A0223176.d	N063295-003B	SAMP	1	02/24/24 3:27 AM
A0223177.d	RINSE	ICAL	1	02/24/24 3:32 AM
A0223178.d	CCV14	CCV	1	02/24/24 3:37 AM
A0223179.d	CCB14	CCB	1	02/24/24 3:41 AM
A0223180.d	N063295-005C	SAMP	1	02/24/24 3:46 AM
A0223181.d	N063295-006C	SAMP	1	02/24/24 3:51 AM
A0223182.d	N063295-007C	SAMP	1	02/24/24 3:55 AM
A0223183.d	N063295-008C	SAMP	1	02/24/24 4:00 AM
A0223184.d	N063297-001C	SAMP	1	02/24/24 4:05 AM
A0223185.d	N063297-002B	SAMP	1	02/24/24 4:09 AM
A0223186.d	N063297-003B	SAMP	1	02/24/24 4:14 AM
A0223187.d	N063303-001B	SAMP	1	02/24/24 4:19 AM
A0223188.d	N063303-002B	SAMP	1	02/24/24 4:23 AM
A0223189.d	RINSE	ICAL	1	02/24/24 4:28 AM
A0223190.d	CCV15	CCV	1	02/24/24 4:32 AM
A0223191.d	CCB15	CCB	1	02/24/24 4:37 AM
A0223192.d	N063303-006B	SAMP	5	02/24/24 4:42 AM
A0223193.d	N063303-008B	SAMP	1	02/24/24 4:46 AM
A0223194.d	RINSE	ICAL	1	02/24/24 4:51 AM
A0223195.d	CCV16	CCV	1	02/24/24 4:56 AM
A0223196.d	CCB16	CCB	1	02/24/24 5:00 AM
A0223197.d	ICSA7	ICSA	1	02/24/24 5:05 AM
A0223198.d	ICSAB7	ICSAB	1	02/24/24 5:10 AM
A0223199.d	RINSE	ICAL	1	02/24/24 5:14 AM
A0223200.d	RINSE	ICAL	1	02/24/24 5:19 AM
A0223201.d	RINSE	ICAL	1	02/24/24 5:24 AM
A0223202.d	RINSE	ICAL	1	02/24/24 5:28 AM
A0223203.d	RINSE	ICAL	1	02/24/24 5:33 AM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224001.d	RINSE	ICAL	1	02/25/24 2:10 PM
A0224002.d	Cal Blk	IBLK	1	02/25/24 2:14 PM
A0224003.d	Std1-0.1/1 ppb	ICAL	1	02/25/24 2:19 PM
A0224004.d	Std2-0.5/5 ppb	ICAL	1	02/25/24 2:24 PM
A0224005.d	Std3-5/50 ppb	ICAL	1	02/25/24 2:29 PM
A0224006.d	Std4-10/100 ppb	ICAL	1	02/25/24 2:33 PM
A0224007.d	Std5-4.0/20/200 ppb	ICAL	1	02/25/24 2:38 PM
A0224008.d	Std6-8.0/40/400 ppb	ICAL	1	02/25/24 2:43 PM
A0224009.d	Std7-100/1000 ppb	ICAL	1	02/25/24 2:48 PM
A0224010.d	Std8-200/2000 ppb	ICAL	1	02/25/24 2:52 PM
A0224011.d	ICV	ICV	1	02/25/24 3:01 PM
A0224012.d	ICB	ICB	1	02/25/24 3:05 PM
A0224013.d	LLICV1	LLICV	1	02/25/24 3:10 PM
A0224014.d	LLICV1	LLICV	1	02/25/24 3:15 PM
A0224015.d	MLCCV	CCV	1	02/25/24 3:20 PM
A0224016.d	ICSA1	ICSA	1	02/25/24 3:25 PM
A0224017.d	ICSAB1	ICSAB	1	02/25/24 3:29 PM
A0224018.d	MB-107075	MBLK	1	02/25/24 3:34 PM
A0224019.d	LCS-107075	LCS	1	02/25/24 3:38 PM
A0224020.d	N063315-001A	SAMP	1	02/25/24 3:43 PM
A0224021.d	N063315-001A	SAMP	5	02/25/24 3:48 PM
A0224022.d	N063315-001A-PS	PS	1	02/25/24 3:53 PM
A0224023.d	N063315-001A-MS	MS	1	02/25/24 3:57 PM
A0224024.d	N063315-001A-MSD	MSD	1	02/25/24 4:02 PM
A0224025.d	N063316-001A	SAMP	1	02/25/24 4:06 PM
A0224026.d	N063316-002A	SAMP	1	02/25/24 4:11 PM
A0224027.d	RINSE	ICAL	1	02/25/24 4:16 PM
A0224028.d	CCV1	CCV	1	02/25/24 4:20 PM
A0224029.d	CCB1	CCB	1	02/25/24 4:25 PM
A0224030.d	N063318-001A	SAMP	1	02/25/24 4:30 PM
A0224031.d	N063318-002A	SAMP	1	02/25/24 4:34 PM
A0224032.d	N063290-001A	SAMP	1	02/25/24 4:39 PM
A0224033.d	N063308-001A	SAMP	1	02/25/24 4:44 PM
A0224034.d	N063308-002A	SAMP	1	02/25/24 4:48 PM
A0224035.d	N063308-003A	SAMP	1	02/25/24 4:53 PM
A0224036.d	N063308-004A	SAMP	1	02/25/24 4:58 PM
A0224037.d	N063308-005A	SAMP	1	02/25/24 5:02 PM
A0224038.d	N063308-006A	SAMP	1	02/25/24 5:07 PM
A0224039.d	RINSE	ICAL	1	02/25/24 5:12 PM
A0224040.d	CCV2	CCV	1	02/25/24 5:16 PM
A0224041.d	CCB2	CCB	1	02/25/24 5:21 PM
A0224042.d	N063308-007A	SAMP	1	02/25/24 5:26 PM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224043.d	N063311-001A	SAMP	1	02/25/24 5:30 PM
A0224044.d	N063311-001A-MS	MS	1	02/25/24 5:35 PM
A0224045.d	N063311-002A	SAMP	1	02/25/24 5:39 PM
A0224046.d	N063311-003A	SAMP	1	02/25/24 5:44 PM
A0224047.d	N063311-004A	SAMP	1	02/25/24 5:49 PM
A0224048.d	N063311-007A	SAMP	1	02/25/24 5:53 PM
A0224049.d	RINSE	ICAL	1	02/25/24 5:58 PM
A0224050.d	CCV3	CCV	1	02/25/24 6:03 PM
A0224051.d	CCB3	CCB	1	02/25/24 6:07 PM
A0224052.d	ICSA2	ICSA	1	02/25/24 6:12 PM
A0224053.d	ICSAB2	ICSAB	1	02/25/24 6:17 PM
A0224054.d	RINSE	ICAL	1	02/25/24 6:21 PM
A0224055.d	MB1-107081	MBLK	1	02/25/24 6:26 PM
A0224056.d	MB2-107081	MBLK	1	02/25/24 6:31 PM
A0224057.d	MB-107081	MBLK	1	02/25/24 6:35 PM
A0224058.d	LCS-107081	LCS	1	02/25/24 6:40 PM
A0224059.d	MDL1	SAMP	1	02/25/24 6:45 PM
A0224060.d	MDL2	SAMP	1	02/25/24 6:49 PM
A0224061.d	MDL3	SAMP	1	02/25/24 6:54 PM
A0224062.d	N063228-001A	SAMP	1	02/25/24 6:59 PM
A0224063.d	RINSE	ICAL	1	02/25/24 7:03 PM
A0224064.d	CCV4	CCV	1	02/25/24 7:08 PM
A0224065.d	CCB4	CCB	1	02/25/24 7:13 PM
A0224066.d	N063292-005A	SAMP	1	02/25/24 7:17 PM
A0224067.d	N063292-005A	SAMP	5	02/25/24 7:22 PM
A0224068.d	N063292-005A	SAMP	10	02/25/24 7:27 PM
A0224069.d	N063292-005A	SAMP	50	02/25/24 7:31 PM
A0224070.d	N063292-005A-PS	PS	1	02/25/24 7:36 PM
A0224071.d	N063292-005A-PS	PS	10	02/25/24 7:40 PM
A0224072.d	N063292-005A-MS	MS	1	02/25/24 7:45 PM
A0224073.d	N063292-005A-MS	MS	10	02/25/24 7:50 PM
A0224074.d	N063292-005A-MSD	MSD	1	02/25/24 7:55 PM
A0224075.d	N063292-005A-MSD	MSD	10	02/25/24 7:59 PM
A0224076.d	CCV5	CCV	1	02/25/24 8:04 PM
A0224077.d	CCB5	CCB	1	02/25/24 8:08 PM
A0224078.d	N063292-010A	SAMP	1	02/25/24 8:13 PM
A0224079.d	N063292-015A	SAMP	1	02/25/24 8:18 PM
A0224080.d	RINSE	RINSE	1	02/25/24 8:22 PM
A0224081.d	CCV6	CCV	1	02/25/24 8:27 PM
A0224082.d	CCB6	CCB	1	02/25/24 8:32 PM
A0224083.d	ICSA3	ICSA	1	02/25/24 8:36 PM
A0224084.d	ICSAB3	ICSAB	1	02/25/24 8:41 PM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224085.d	N063182-009B	SAMP	1	02/25/24 8:46 PM
A0224086.d	N063182-010B	SAMP	1	02/25/24 8:50 PM
A0224087.d	N063182-011B	SAMP	1	02/25/24 8:55 PM
A0224088.d	N063248-002B	SAMP	5	02/25/24 9:00 PM
A0224089.d	N063248-002B	SAMP	25	02/25/24 9:04 PM
A0224090.d	N063248-002B-PS	PS	5	02/25/24 9:09 PM
A0224091.d	N063248-002B-MS	MS	5	02/25/24 9:14 PM
A0224092.d	N063248-002B-MSD	MSD	5	02/25/24 9:18 PM
A0224093.d	N063248-003B	SAMP	10	02/25/24 9:23 PM
A0224094.d	N063248-004B	SAMP	10	02/25/24 9:28 PM
A0224095.d	CCV7	CCV	1	02/25/24 9:32 PM
A0224096.d	CCB7	CCB	1	02/25/24 9:37 PM
A0224097.d	N063315-001A	SAMP	100	02/25/24 9:47 PM
A0224098.d	N063315-001A	SAMP	500	02/25/24 9:51 PM
A0224099.d	N063315-001A-PS	PS	100	02/25/24 9:56 PM
A0224100.d	N063315-001A-MS	MS	100	02/25/24 10:00 PM
A0224101.d	N063315-001A-MSD	MSD	100	02/25/24 10:05 PM
A0224102.d	N063316-001A	SAMP	10	02/25/24 10:10 PM
A0224103.d	N063308-003A	SAMP	100	02/25/24 10:15 PM
A0224104.d	N063311-001A	SAMP	10	02/25/24 10:19 PM
A0224105.d	N063311-001A-MS	MS	10	02/25/24 10:24 PM
A0224106.d	N063311-002A	SAMP	10	02/25/24 10:28 PM
A0224107.d	CCV8	CCV	1	02/25/24 10:33 PM
A0224108.d	CCB8	CCB	1	02/25/24 10:38 PM
A0224109.d	N063311-003A	SAMP	10	02/25/24 10:42 PM
A0224110.d	N063311-003A	SAMP	100	02/25/24 10:47 PM
A0224111.d	N063311-004A	SAMP	10	02/25/24 10:52 PM
A0224112.d	N063311-004A	SAMP	100	02/25/24 10:56 PM
A0224113.d	N063311-007A	SAMP	10	02/25/24 11:01 PM
A0224114.d	N063292-005A	SAMP	100	02/25/24 11:06 PM
A0224115.d	N063292-005A	SAMP	500	02/25/24 11:10 PM
A0224116.d	N063292-005A	SAMP	1000	02/25/24 11:15 PM
A0224117.d	N063292-005A	SAMP	5000	02/25/24 11:20 PM
A0224118.d	CCV9	CCV	1	02/25/24 11:24 PM
A0224119.d	CCB9	CCB	1	02/25/24 11:29 PM
A0224120.d	N063292-005A-PS	PS	100	02/25/24 11:34 PM
A0224121.d	N063292-005A-PS	PS	1000	02/25/24 11:39 PM
A0224122.d	N063292-005A-MS	MS	100	02/25/24 11:43 PM
A0224123.d	N063292-005A-MS	MS	1000	02/25/24 11:48 PM
A0224124.d	N063292-005A-MSD	MSD	100	02/25/24 11:53 PM
A0224125.d	N063292-005A-MSD	MSD	1000	02/25/24 11:57 PM
A0224126.d	CCV10	CCV	1	02/26/24 12:02 AM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224127.d	CCB10	CCB	1	02/26/24 12:07 AM
A0224128.d	ICSA4	ICSA	1	02/26/24 12:11 AM
A0224129.d	ICSAB4	ICSAB	1	02/26/24 12:16 AM
A0224130.d	N063248-005C	SAMP	1	02/26/24 12:21 AM
A0224131.d	N063248-005C	SAMP	10	02/26/24 12:25 AM
A0224132.d	N063248-006C	SAMP	1	02/26/24 12:30 AM
A0224133.d	N063248-006C	SAMP	10	02/26/24 12:35 AM
A0224134.d	N063248-007C	SAMP	1	02/26/24 12:39 AM
A0224135.d	N063248-007C	SAMP	10	02/26/24 12:44 AM
A0224136.d	N063248-008C	SAMP	1	02/26/24 12:49 AM
A0224137.d	N063248-008C	SAMP	10	02/26/24 12:53 AM
A0224138.d	N063248-010B	SAMP	1	02/26/24 12:58 AM
A0224139.d	RINSE	ICAL	1	02/26/24 1:03 AM
A0224140.d	CCV11	CCV	1	02/26/24 1:07 AM
A0224141.d	CCB11	CCB	1	02/26/24 1:12 AM
A0224142.d	N063248-011B	SAMP	1	02/26/24 1:16 AM
A0224143.d	N063248-011B	SAMP	10	02/26/24 1:21 AM
A0224144.d	N063249-007C	SAMP	1	02/26/24 1:26 AM
A0224145.d	N063249-007C	SAMP	10	02/26/24 1:30 AM
A0224146.d	N063249-009C	SAMP	1	02/26/24 1:35 AM
A0224147.d	N063249-009C	SAMP	10	02/26/24 1:40 AM
A0224148.d	N063249-011C	SAMP	1	02/26/24 1:44 AM
A0224149.d	N063249-011C	SAMP	10	02/26/24 1:49 AM
A0224150.d	N063249-013C	SAMP	1	02/26/24 1:53 AM
A0224151.d	N063249-013C	SAMP	10	02/26/24 1:58 AM
A0224152.d	CCV12	CCV	1	02/26/24 2:03 AM
A0224153.d	CCB12	CCB	1	02/26/24 2:08 AM
A0224154.d	N063249-015C	SAMP	1	02/26/24 2:12 AM
A0224155.d	N063249-015C	SAMP	10	02/26/24 2:17 AM
A0224156.d	N063249-017C	SAMP	1	02/26/24 2:21 AM
A0224157.d	N063249-017C	SAMP	10	02/26/24 2:26 AM
A0224158.d	N063249-018C	SAMP	5	02/26/24 2:31 AM
A0224159.d	N063311-001A	SAMP	1	02/26/24 2:35 AM
A0224160.d	N063311-001A	SAMP	1	02/26/24 2:40 AM
A0224161.d	N063311-001A	SAMP	1	02/26/24 2:45 AM
A0224162.d	RINSE	ICAL	1	02/26/24 2:49 AM
A0224163.d	CCV13	CCV	1	02/26/24 2:54 AM
A0224164.d	CCB13	CCB	1	02/26/24 2:59 AM
A0224165.d	ICSA5	ICSA	1	02/26/24 3:03 AM
A0224166.d	ICSAB5	ICSAB	1	02/26/24 3:08 AM
A0224167.d	MB-107055	MBLK	1	02/26/24 3:13 AM
A0224168.d	LCS-107055	LCS	1	02/26/24 3:17 AM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224169.d	N063295-001B	SAMP	1	02/26/24 3:22 AM
A0224170.d	N063295-002B	SAMP	1	02/26/24 3:26 AM
A0224171.d	N063295-002B	SAMP	5	02/26/24 3:31 AM
A0224172.d	N063295-002B	SAMP	10	02/26/24 3:36 AM
A0224173.d	N063295-002B	SAMP	50	02/26/24 3:40 AM
A0224174.d	N063295-002B	SAMP	100	02/26/24 3:45 AM
A0224175.d	N063295-002B	SAMP	500	02/26/24 3:50 AM
A0224176.d	CCV14	CCV	1	02/26/24 3:54 AM
A0224177.d	CCB14	CCB	1	02/26/24 3:59 AM
A0224178.d	N063295-002B-PS	PS	1	02/26/24 4:04 AM
A0224179.d	N063295-002B-PS	PS	10	02/26/24 4:08 AM
A0224180.d	N063295-002B-PS	PS	100	02/26/24 4:13 AM
A0224181.d	N063295-002B-MS	MS	1	02/26/24 4:18 AM
A0224182.d	N063295-002B-MS	MS	10	02/26/24 4:22 AM
A0224183.d	N063295-002B-MS	MS	100	02/26/24 4:27 AM
A0224184.d	N063295-002B-MSD	MSD	1	02/26/24 4:32 AM
A0224185.d	N063295-002B-MSD	MSD	10	02/26/24 4:36 AM
A0224186.d	N063295-002B-MSD	MSD	100	02/26/24 4:41 AM
A0224187.d	CCV15	CCV	1	02/26/24 4:46 AM
A0224188.d	CCB15	CCB	1	02/26/24 4:50 AM
A0224189.d	N063295-003B	SAMP	1	02/26/24 4:55 AM
A0224190.d	N063295-005C	SAMP	1	02/26/24 4:59 AM
A0224191.d	N063295-005C	SAMP	10	02/26/24 5:04 AM
A0224192.d	N063295-006C	SAMP	1	02/26/24 5:09 AM
A0224193.d	N063295-006C	SAMP	10	02/26/24 5:14 AM
A0224194.d	N063295-007C	SAMP	1	02/26/24 5:18 AM
A0224195.d	N063295-007C	SAMP	10	02/26/24 5:23 AM
A0224196.d	N063295-008C	SAMP	1	02/26/24 5:27 AM
A0224197.d	N063295-008C	SAMP	10	02/26/24 5:32 AM
A0224198.d	CCV16	CCV	1	02/26/24 5:37 AM
A0224199.d	CCB16	CCB	1	02/26/24 5:41 AM
A0224200.d	N063297-001C	SAMP	1	02/26/24 5:46 AM
A0224201.d	N063297-002B	SAMP	1	02/26/24 5:51 AM
A0224202.d	N063297-003B	SAMP	1	02/26/24 5:55 AM
A0224203.d	N063303-001B	SAMP	1	02/26/24 6:00 AM
A0224204.d	N063303-001B	SAMP	10	02/26/24 6:05 AM
A0224205.d	N063303-002B	SAMP	1	02/26/24 6:09 AM
A0224206.d	N063303-002B	SAMP	10	02/26/24 6:14 AM
A0224207.d	N063303-006B	SAMP	5	02/26/24 6:19 AM
A0224208.d	N063303-008B	SAMP	1	02/26/24 6:23 AM
A0224209.d	N063303-008B	SAMP	10	02/26/24 6:28 AM
A0224210.d	CCV17	CCV	1	02/26/24 6:33 AM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224211.d	CCB17	CCB	1	02/26/24 6:37 AM
A0224212.d	ICSA6	ICSA	1	02/26/24 6:42 AM
A0224213.d	ICSAB6	ICSAB	1	02/26/24 6:47 AM
A0224214.d	RINSE	ICAL	1	02/26/24 6:51 AM
A0224215.d	RINSE	ICAL	1	02/26/24 6:56 AM
A0224216.d	RINSE	ICAL	1	02/26/24 7:00 AM
A0224217.d	RINSE	ICAL	1	02/26/24 7:05 AM
A0224218.d	RINSE	ICAL	1	02/26/24 7:10 AM
A0224219.d	RINSE	ICAL	1	02/26/24 7:14 AM
A0224220.d	RINSE	ICAL	1	02/26/24 7:19 AM

SAMPLE PREPARATION LOG

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240222A.b
Acq. Date-Time	2024-02-23 11:44:28
Report Comment	---
Instrument Name	G8421A SG19193757

[No Gas]

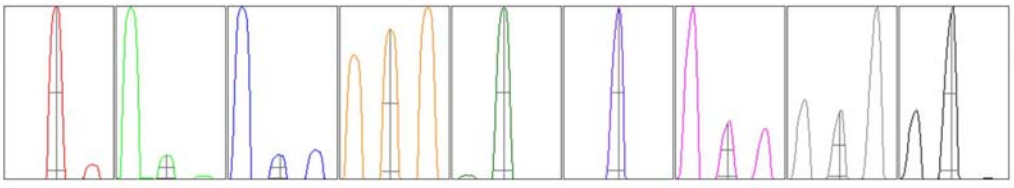
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	4742	47419.90	500.00		3.024	5.000
24	10.00	18706	187057.96	500.00		2.427	5.000
25	10.00	2512	25118.25	500.00		2.587	5.000
26	10.00	3009	30093.30	500.00		2.566	5.000
59	10.00	34030	340296.87	500.00		1.929	5.000
115	10.00	56615	566148.24	500.00		1.847	5.000
206	10.00	12089	120890.72	500.00		2.171	5.000
207	10.00	10015	100148.90	500.00		2.219	5.000
208	10.00	24886	248855.97	500.00		1.967	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.609 %
Doubly Charged	70 / 140 1.407 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	4705.05	8.95	8.90 - 9.10	
24	18796.46	23.90	23.90 - 24.10	
25	2564.26	24.95	24.90 - 25.10	
26	3120.45	25.90	25.90 - 26.10	
59	33894.52	58.95	58.90 - 59.10	
115	56031.92	115.05	114.90 - 115.10	
206	10962.65	205.95	205.90 - 206.10	
207	9673.39	206.95	206.90 - 207.10	
208	24384.42	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.486	0.900	
24	0.41	0.502	0.900	
25	0.41	0.494	0.900	
26	0.41	0.494	0.900	
59	0.38	0.531	0.900	
115	0.34	0.476	0.900	
206	0.36	0.533	0.900	
207	0.35	0.509	0.900	
208	0.35	0.525	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[H2]

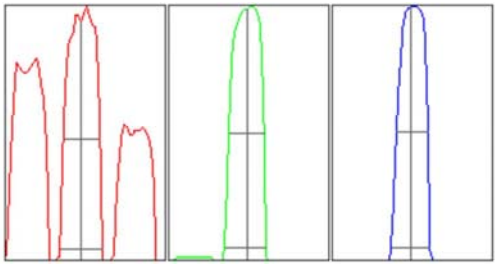
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		356	3555.77			5.984	
59		3819	38194.02			3.844	
115		59590	595903.12			2.349	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.610 %
Doubly Charged	70 / 140 0.333 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	353.80	25.95	25.90 - 26.10	
59	3912.74	59.00	58.90 - 59.10	
115	60486.49	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.70	0.791	0.900	
59	0.67	0.783	0.900	
115	0.60	0.733	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0000	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm		

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[He]

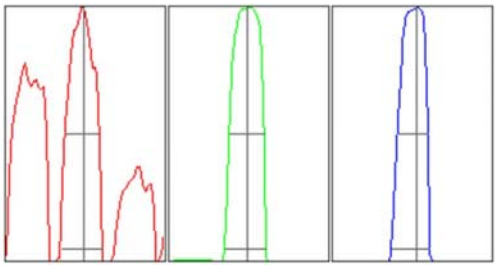
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		138	1375.06			6.914	
59		12115	121151.14			1.919	
115		13480	134797.78			1.974	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.279 %
Doubly Charged	70 / 140 0.982 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	147.01	26.00	25.90 - 26.10	
59	12098.31	59.00	58.90 - 59.10	
115	13611.92	115.10	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.65	0.789	0.900	
59	0.66	0.782	0.900	
115	0.58	0.730	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0000	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240223A1.b
Acq. Date-Time	2024-02-25 12:53:21
Report Comment	---
Instrument Name	G8421A SG19193757

[No Gas]

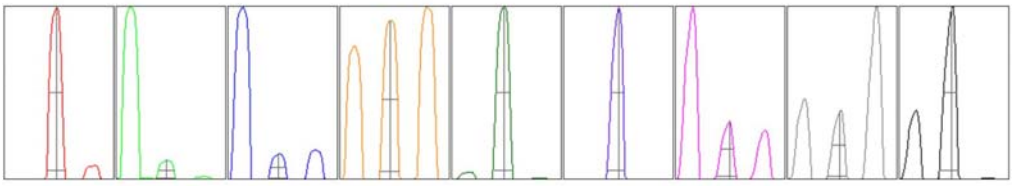
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	3372	33715.43	500.00		3.469	5.000
24	10.00	14626	146262.97	500.00		3.322	5.000
25	10.00	1964	19635.08	500.00		3.762	5.000
26	10.00	2357	23572.67	500.00		3.692	5.000
59	10.00	28829	288289.28	500.00		2.261	5.000
115	10.00	51639	516390.58	500.00		1.656	5.000
206	10.00	10629	106292.05	500.00		2.152	5.000
207	10.00	8878	88776.52	500.00		1.960	5.000
208	10.00	21919	219187.85	500.00		2.257	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.608 %
Doubly Charged	70 / 140 1.286 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	3447.05	8.95	8.90 - 9.10	
24	14643.27	23.90	23.90 - 24.10	
25	2050.22	24.90	24.90 - 25.10	
26	2445.07	25.90	25.90 - 26.10	
59	29068.40	58.95	58.90 - 59.10	
115	51964.63	115.05	114.90 - 115.10	
206	10292.73	206.00	205.90 - 206.10	
207	8538.49	206.95	206.90 - 207.10	
208	21881.25	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.487	0.900	
24	0.42	0.521	0.900	
25	0.42	0.496	0.900	
26	0.41	0.531	0.900	
59	0.39	0.533	0.900	
115	0.34	0.481	0.900	
206	0.36	0.538	0.900	
207	0.36	0.532	0.900	
208	0.36	0.531	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[H2]

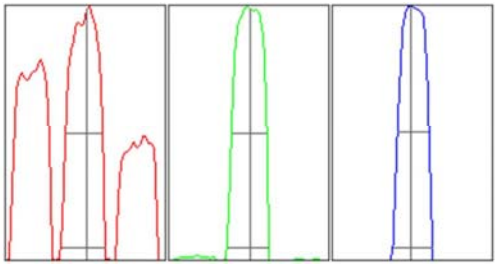
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		297	2972.06			6.951	
59		3184	31837.64			3.258	
115		53286	532857.84			2.153	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.618 %
Doubly Charged	70 / 140 0.307 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	310.04	26.05	25.90 - 26.10	
59	3327.70	59.05	58.90 - 59.10	
115	55650.78	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.70	0.831	0.900	
59	0.67	0.786	0.900	
115	0.60	0.740	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	0.9996	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.08		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm		

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[He]

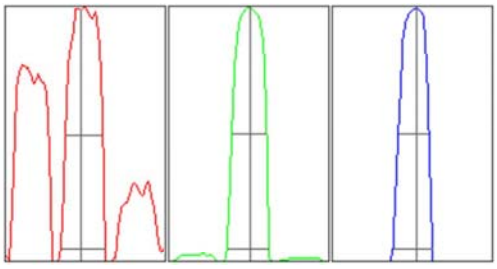
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		117	1169.24			9.238	
59		10415	104151.91			2.256	
115		10941	109408.27			2.392	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.260 %
Doubly Charged	70 / 140 0.959 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	111.76	25.95	25.90 - 26.10	
59	10524.04	59.05	58.90 - 59.10	
115	11284.17	115.10	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.71	0.832	0.900	
59	0.66	0.786	0.900	
115	0.58	0.738	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	0.9996	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.08		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

INSTRUMENT TUNING CHECK

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/23/2024 9:38:51 AM**
Prep End Date: **2/23/2024 2:00:00 PM**
Prep Batch **107055** Prep Code:**3010_W_MSDISS_TPK**

Reviewed/ Date: JRB 3/26/2024
Initials/ Date: for
Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-02**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107055	Aqueous		25	☐	25	1.000		
MB-107055	Aqueous		25	☐	25	1.000		
N063295-001B	Groundwater	<2	25	☐	25	1.000		
N063295-002B	Groundwater	<2	25	☐	25	1.000		
N063295-002B-MS	Groundwater	<2	25	☐	25	1.000		
N063295-002B-MSD	Groundwater	<2	25	☐	25	1.000		
N063295-003B	Groundwater	<2	25	☐	25	1.000		
N063295-005C	Groundwater	<2	25	☐	25	1.000		
N063295-006C	Groundwater	<2	25	☐	25	1.000		
N063295-007C	Groundwater	<2	25	☐	25	1.000		
N063295-008C	Groundwater	<2	25	☐	25	1.000		
N063297-001C	Groundwater	<2	25	☐	25	1.000		
N063297-002B	Groundwater	<2	25	☐	25	1.000		
sample color is yellow								

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/23/2024 9:38:51 AM**
Prep End Date: **2/23/2024 2:00:00 PM**
Prep Batch **107055** Prep Code:**3010_W_MSDISS_TPK**

Reviewed/ Date: JRB 3/26/2024
Initials/ Date: for
Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-02**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063297-003B	Groundwater	<2	25	☐	25	1.000		
N063303-001B	Groundwater	<2	25	☐	25	1.000		
N063303-002B	Groundwater	<2	25	☐	25	1.000		
N063303-006B	Groundwater	<2	25	☐	25	1.000		
sample color is light yellow								
N063303-008B	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240223A

Instrument ID: ICPMS-03

Analyte	Data File	A0223002.d	A0223003.d	A0223004.d	A0223005.d	A0223006.d	A0223007.d	A0223008.d	A0223009.d	A0223010.d	
	Acq. Date-Time	02/23/2024 01:27 PM	02/23/2024 01:32 PM	02/23/2024 01:36 PM	02/23/2024 01:41 PM	02/23/2024 01:46 PM	02/23/2024 01:51 PM	02/23/2024 01:55 PM	02/23/2024 02:00 PM	02/23/2024 02:05 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	72154.9		76342.4	77253.2	77475.2	76063.3	75148	75462.7	76036.5	
55 Mn [2]	CPS	69.9		1458.4	13632.3	27466	54136.3	106561.5	266690.1	547932.1	1.0000
52 Cr [2]	CPS	495.6		2850.3	24523.7	50602.4	98925.7	194285.6	486787.3	992400.4	1.0000
72 Ge (ISTD) [1]	CPS	109961		116463.1	117054.1	117266.5	115723.5	114007.2	112333.5	115475.3	
78 Se [1]	CPS	12.2		188.9	1650.1	3270.3	6678.1	13212.1	32696.1	67412.1	1.0000
72 Ge (ISTD) [2]	CPS	45744.8	48400.3	48644.2	49579.1	49426.6	48837	47561.1	48045.9	48911.7	
75 As [2]	CPS	19.9	88.8	333.2	3303.5	6714.5	13140.5	26223.8	65989.1	135206.6	1.0000
66 Zn [2]	CPS	734		739.5	4740.7	9930.1	19037.9	37799.9	94042.4	194377.6	1.0000
103 Rh (ISTD) [2]	CPS	1010748.5		1071407.6	1083046.5	1087247.7	1064868.7	1039393.2	1040858	1066716.2	
95 Mo [2]	CPS	46.7		1307.8	13490.1	27687.1	54130.7	107817.8	272800	560603.5	1.0000
159 Tb (ISTD) [3]	CPS	2459036.8		2602116.7	2641047.9	2677129.2	2587074.5	2582202.2	2541226.8	2650892	
137 Ba [3]	CPS	50		2356.9	23978.7	49371.8	98171.7	194301.8	479469.4	991663.4	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION SUMMARY: 240225A

Instrument ID: ICPMS-03

Analyte	Data File	A0224002.d	A0224004.d	A0224005.d	A0224006.d	A0224007.d	A0224008.d	A0224009.d	A0224010.d	
	Acq. Date-Time	02/25/2024 02:14 PM	02/25/2024 02:24 PM	02/25/2024 02:29 PM	02/25/2024 02:33 PM	02/25/2024 02:38 PM	02/25/2024 02:43 PM	02/25/2024 02:48 PM	02/25/2024 02:52 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	61433.5	57887.7	60292.8	61278.6	60212.5	58594.5	58564.5	60077.5	
55 Mn [2]	CPS	54.3	1026.3	10294.1	21178.7	42083.6	80727.7	207102.3	424350.4	1.0000
159 Tb (ISTD) [3]	CPS	2546673.9	2410356.4	2515986.1	2569262.8	2558618.2	2483709.9	2480840.2	2587686.9	
137 Ba [3]	CPS	50	2226.9	23107.4	47656.7	94804.4	187552	472079.2	983581.9	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713612**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.429	0.10	10.00	0	104	90	110				
Barium	10.174	1.0	10.00	0	102	90	110				
Manganese	101.593	0.50	100.0	0	102	90	110				
Molybdenum	9.944	0.50	10.00	0	99.4	90	110				
Selenium	9.732	0.50	10.00	0	97.3	90	110				
Zinc	100.573	10	100.0	0	101	90	110				

Sample ID: **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ZZZZZZ** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713614**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.092	0.10	0.1000	0	91.5	80	120				
Barium	1.108	1.0	1.000	0	111	80	120				
Manganese	0.546	0.50	0.5000	0	109	80	120				
Molybdenum	0.524	0.50	0.5000	0	105	80	120				
Selenium	0.496	0.50	0.5000	0	99.2	80	120				
Zinc	9.921	10	10.00	0	99.2	80	120				

Sample ID: **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713615**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.039	0.10	20.00	0	100	90	110				
Barium	19.876	1.0	20.00	0	99.4	90	110				
Manganese	19.940	0.50	20.00	0	99.7	90	110				
Molybdenum	19.336	0.50	20.00	0	96.7	90	110				
Selenium	19.445	0.50	20.00	0	97.2	90	110				
Zinc	19.203	10	20.00	0	96.0	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713628**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.030	0.10	20.00	0	100	90	110				
Barium	19.984	1.0	20.00	0	99.9	90	110				
Manganese	19.815	0.50	20.00	0	99.1	90	110				
Molybdenum	19.484	0.50	20.00	0	97.4	90	110				
Selenium	20.109	0.50	20.00	0	101	90	110				
Zinc	19.392	10	20.00	0	97.0	90	110				

Sample ID: **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713640**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.842	0.10	20.00	0	99.2	90	110				
Barium	19.840	1.0	20.00	0	99.2	90	110				
Manganese	19.773	0.50	20.00	0	98.9	90	110				
Molybdenum	19.479	0.50	20.00	0	97.4	90	110				
Selenium	19.897	0.50	20.00	0	99.5	90	110				
Zinc	19.381	10	20.00	0	96.9	90	110				

Sample ID: **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713646**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.766	0.10	20.00	0	98.8	90	110				
Barium	19.918	1.0	20.00	0	99.6	90	110				
Manganese	19.591	0.50	20.00	0	98.0	90	110				
Molybdenum	19.092	0.50	20.00	0	95.5	90	110				
Selenium	20.184	0.50	20.00	0	101	90	110				
Zinc	19.356	10	20.00	0	96.8	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713658**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.088	0.10	20.00	0	100	90	110				
Barium	20.699	1.0	20.00	0	103	90	110				
Manganese	20.003	0.50	20.00	0	100	90	110				
Molybdenum	19.927	0.50	20.00	0	99.6	90	110				
Selenium	19.977	0.50	20.00	0	99.9	90	110				
Zinc	19.527	10	20.00	0	97.6	90	110				

Sample ID: **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713672**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.546	0.10	20.00	0	103	90	110				
Barium	20.654	1.0	20.00	0	103	90	110				
Manganese	20.328	0.50	20.00	0	102	90	110				
Molybdenum	19.701	0.50	20.00	0	98.5	90	110				
Selenium	19.737	0.50	20.00	0	98.7	90	110				
Zinc	19.616	10	20.00	0	98.1	90	110				

Sample ID: **CCV6** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713686**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.762	0.10	20.00	0	98.8	90	110				
Barium	21.352	1.0	20.00	0	107	90	110				
Manganese	19.623	0.50	20.00	0	98.1	90	110				
Molybdenum	20.004	0.50	20.00	0	100	90	110				
Selenium	20.478	0.50	20.00	0	102	90	110				
Zinc	19.587	10	20.00	0	97.9	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV7** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713695**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.067	0.10	20.00	0	100	90	110				
Barium	22.103	1.0	20.00	0	111	90	110				S
Manganese	19.918	0.50	20.00	0	99.6	90	110				
Molybdenum	20.352	0.50	20.00	0	102	90	110				
Selenium	19.676	0.50	20.00	0	98.4	90	110				
Zinc	19.570	10	20.00	0	97.9	90	110				

Sample ID: **CCV8** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713709**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.122	0.10	20.00	0	101	90	110				
Barium	20.868	1.0	20.00	0	104	90	110				
Manganese	19.912	0.50	20.00	0	99.6	90	110				
Molybdenum	19.676	0.50	20.00	0	98.4	90	110				
Selenium	20.281	0.50	20.00	0	101	90	110				
Zinc	19.883	10	20.00	0	99.4	90	110				

Sample ID: **CCV9** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713721**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.930	0.10	20.00	0	99.7	90	110				
Barium	21.751	1.0	20.00	0	109	90	110				
Manganese	19.706	0.50	20.00	0	98.5	90	110				
Molybdenum	19.929	0.50	20.00	0	99.6	90	110				
Selenium	19.933	0.50	20.00	0	99.7	90	110				
Zinc	19.559	10	20.00	0	97.8	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

%Rec of Ba in several CCVs failed, However, Ba is reported at 182939 sequence.

3/12/2024

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV10** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713728**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.720	0.10	20.00	0	98.6	90	110				
Barium	21.635	1.0	20.00	0	108	90	110				
Manganese	19.596	0.50	20.00	0	98.0	90	110				
Molybdenum	19.905	0.50	20.00	0	99.5	90	110				
Selenium	20.026	0.50	20.00	0	100	90	110				
Zinc	19.244	10	20.00	0	96.2	90	110				

Sample ID: **CCV11** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713741**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.953	0.10	20.00	0	99.8	90	110				
Barium	21.740	1.0	20.00	0	109	90	110				
Manganese	19.594	0.50	20.00	0	98.0	90	110				
Molybdenum	20.177	0.50	20.00	0	101	90	110				
Selenium	20.116	0.50	20.00	0	101	90	110				
Zinc	19.178	10	20.00	0	95.9	90	110				

Sample ID: **CCV12** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713752**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.609	0.10	20.00	0	98.0	90	110				
Barium	22.443	1.0	20.00	0	112	90	110				S
Manganese	19.647	0.50	20.00	0	98.2	90	110				
Molybdenum	20.246	0.50	20.00	0	101	90	110				
Selenium	19.679	0.50	20.00	0	98.4	90	110				
Zinc	18.872	10	20.00	0	94.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV13** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713760**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.787	0.10	20.00	0	98.9	90	110				
Barium	22.496	1.0	20.00	0	112	90	110				S
Manganese	19.731	0.50	20.00	0	98.7	90	110				
Molybdenum	20.168	0.50	20.00	0	101	90	110				
Selenium	19.588	0.50	20.00	0	97.9	90	110				
Zinc	18.983	10	20.00	0	94.9	90	110				

Sample ID: **CCV14** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713773**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.661	0.10	20.00	0	98.3	90	110				
Barium	21.969	1.0	20.00	0	110	90	110				
Manganese	19.733	0.50	20.00	0	98.7	90	110				
Molybdenum	19.994	0.50	20.00	0	100	90	110				
Selenium	19.819	0.50	20.00	0	99.1	90	110				
Zinc	19.094	10	20.00	0	95.5	90	110				

Sample ID: **CCV15** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713784**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.424	0.10	20.00	0	97.1	90	110				
Barium	22.620	1.0	20.00	0	113	90	110				S
Manganese	19.746	0.50	20.00	0	98.7	90	110				
Molybdenum	20.077	0.50	20.00	0	100	90	110				
Selenium	19.611	0.50	20.00	0	98.1	90	110				
Zinc	19.009	10	20.00	0	95.0	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV16**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCV**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713788**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.868	0.10	20.00	0	99.3	90	110				
Barium	22.098	1.0	20.00	0	110	90	110				S
Manganese	20.059	0.50	20.00	0	100	90	110				
Molybdenum	19.901	0.50	20.00	0	99.5	90	110				
Selenium	19.815	0.50	20.00	0	99.1	90	110				
Zinc	18.742	10	20.00	0	93.7	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714090**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	9.828	1.0	10.00	0	98.3	90	110				
Manganese	100.886	0.50	100.0	0	101	90	110				

Sample ID: **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ZZZZZZ** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714092**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	1.026	1.0	1.000	0	103	80	120				
Manganese	0.554	0.50	0.5000	0	111	80	120				

Sample ID: **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714094**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.625	1.0	20.00	0	98.1	90	110				
Manganese	19.625	0.50	20.00	0	98.1	90	110				

Sample ID: **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714106**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.833	1.0	20.00	0	99.2	90	110				
Manganese	20.008	0.50	20.00	0	100	90	110				

Sample ID: **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714117**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.422	1.0	20.00	0	97.1	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714117**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.758	0.50	20.00	0	98.8	90	110				

Sample ID: **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714126**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.571	1.0	20.00	0	97.9	90	110				
Manganese	19.779	0.50	20.00	0	98.9	90	110				

Sample ID: **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714138**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.567	1.0	20.00	0	97.8	90	110				
Manganese	20.113	0.50	20.00	0	101	90	110				

Sample ID: **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714150**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.871	1.0	20.00	0	99.4	90	110				
Manganese	19.723	0.50	20.00	0	98.6	90	110				

Sample ID: **CCV6** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714154**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.027	1.0	20.00	0	100	90	110				
Manganese	20.041	0.50	20.00	0	100	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV7** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714168**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.241	1.0	20.00	0	101	90	110				
Manganese	19.644	0.50	20.00	0	98.2	90	110				

Sample ID: **CCV8** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714180**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.696	1.0	20.00	0	98.5	90	110				
Manganese	19.665	0.50	20.00	0	98.3	90	110				

Sample ID: **CCV9** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714191**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.830	1.0	20.00	0	99.2	90	110				
Manganese	19.440	0.50	20.00	0	97.2	90	110				

Sample ID: **CCV10** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714199**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.669	1.0	20.00	0	98.3	90	110				
Manganese	19.832	0.50	20.00	0	99.2	90	110				

Sample ID: **CCV11** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714212**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.176	1.0	20.00	0	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV11** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714212**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.405	0.50	20.00	0	97.0	90	110				

Sample ID: **CCV12** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714224**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.931	1.0	20.00	0	105	90	110				
Manganese	19.457	0.50	20.00	0	97.3	90	110				

Sample ID: **CCV13** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714234**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.460	1.0	20.00	0	102	90	110				
Manganese	19.672	0.50	20.00	0	98.4	90	110				

Sample ID: **CCV14** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714247**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.520	1.0	20.00	0	103	90	110				
Manganese	19.622	0.50	20.00	0	98.1	90	110				

Sample ID: **CCV15** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714258**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.693	1.0	20.00	0	103	90	110				
Manganese	19.657	0.50	20.00	0	98.3	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV16** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714269**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.381	1.0	20.00	0	102	90	110				
Manganese	19.525	0.50	20.00	0	97.6	90	110				

Sample ID: **CCV17** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714281**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.992	1.0	20.00	0	105	90	110				
Manganese	19.685	0.50	20.00	0	98.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **ICV**	SampType: **ICV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713210**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	10.178	1.0	10.00	0	102	90	110				

Sample ID: **LLICV1**	SampType: **CCV1**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ZZZZZZ**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713212**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	1.112	1.0	1.000	0	111	80	120				

Sample ID: **MLCCV**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713213**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.983	1.0	20.00	0	99.9	90	110				

Sample ID: **CCV1**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713226**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.779	1.0	20.00	0	98.9	90	110				

Sample ID: **CCV2**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713238**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.949	1.0	20.00	0	99.7	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **CCV3**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713244**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.932	1.0	20.00	0	99.7	90	110				

Sample ID: **CCV4**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713256**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.130	1.0	20.00	0	101	90	110				

Sample ID: **CCV5**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713270**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.370	1.0	20.00	0	102	90	110				

Sample ID: **CCV6**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713284**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.695	1.0	20.00	0	98.5	90	110				

Sample ID: **CCV7**	SampType: **CCV**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCV**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713293**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.635	1.0	20.00	0	98.2	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **CCV8** SampType: **CCV** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCV** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713307**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.506	1.0	20.00	0	103	90	110				

Sample ID: **CCV9** SampType: **CCV** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCV** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713319**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.572	1.0	20.00	0	97.9	90	110				

Sample ID: **CCV10** SampType: **CCV** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCV** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713326**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.808	1.0	20.00	0	99.0	90	110				

Sample ID: **CCV11** SampType: **CCV** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCV** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713339**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.717	1.0	20.00	0	98.6	90	110				

Sample ID: **CCV12** SampType: **CCV** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCV** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713350**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.393	1.0	20.00	0	97.0	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **CCV13** SampType: **CCV** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCV** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713358**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.492	1.0	20.00	0	97.5	90	110				

Sample ID: **CCV14** SampType: **CCV** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCV** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713371**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.610	1.0	20.00	0	98.0	90	110				

Sample ID: **CCV15** SampType: **CCV** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCV** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713382**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.525	1.0	20.00	0	97.6	90	110				

Sample ID: **CCV16** SampType: **CCV** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCV** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713386**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.757	1.0	20.00	0	98.8	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICB** SampType: **ICB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713613**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Sample ID: **CCB1** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713629**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.185	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Sample ID: **CCB2** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713641**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.191	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB3** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713647**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.184	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Sample ID: **CCB4** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713660**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Sample ID: **CCB5** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713673**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB6** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713687**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Sample ID: **CCB7** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713696**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Sample ID: **CCB8** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713710**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB9** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713722**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Sample ID: **CCB10** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713729**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Sample ID: **CCB11** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713742**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB12** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713753**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Sample ID: **CCB13** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713761**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Sample ID: **CCB14** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713774**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB15**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713785**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Sample ID: **CCB16**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713789**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICB** SampType: **ICB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714091**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB1** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714107**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB2** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714118**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB3** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714127**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB4** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714139**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB4** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714139**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID: **CCB5** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714151**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB6** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714155**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB7** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714169**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB8** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714181**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB9** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714192**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB10** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714200**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB11** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714213**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB12** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714225**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB13** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714235**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB13**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714235**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID: **CCB14**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714248**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB15**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714259**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB16**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714270**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB17**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714282**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **ICB** SampType: **ICB** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **ICB** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713211**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID: **CCB1** SampType: **CCB** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCB** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713227**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.996	1.0									

Sample ID: **CCB2** SampType: **CCB** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCB** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713239**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	1.008	1.0									

Sample ID: **CCB3** SampType: **CCB** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCB** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713245**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	1.026	1.0									

Sample ID: **CCB4** SampType: **CCB** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCB** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713258**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **CCB5**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713271**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID: **CCB6**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713285**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID: **CCB7**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713294**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID: **CCB8**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713308**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID: **CCB9**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713320**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **CCB10** SampType: **CCB** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCB** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713327**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID: **CCB11** SampType: **CCB** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCB** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713340**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID: **CCB12** SampType: **CCB** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCB** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713351**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID: **CCB13** SampType: **CCB** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCB** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713359**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID: **CCB14** SampType: **CCB** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **182925**
Client ID: **CCB** Batch ID: **R182925** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713372**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **CCB15**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713383**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID: **CCB16**	SampType: **CCB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **CCB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713387**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSA1** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713616**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Sample ID: **ICSAB1** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713617**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.604	0.10	20.00	0	103	80	120				
Barium	20.398	1.0	20.00	0	102	80	120				
Manganese	20.364	0.50	20.00	0	102	80	120				
Molybdenum	19.903	0.50	20.00	0	99.5	80	120				
Selenium	20.311	0.50	20.00	0	102	80	120				
Zinc	19.384	10	20.00	0	96.9	80	120				

Sample ID: **ICSA2** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713661**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.070	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSAB2** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713662**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.469	0.10	20.00	0	102	80	120				
Barium	20.619	1.0	20.00	0	103	80	120				
Manganese	20.279	0.50	20.00	0	101	80	120				
Molybdenum	19.950	0.50	20.00	0	99.7	80	120				
Selenium	20.550	0.50	20.00	0	103	80	120				
Zinc	19.497	10	20.00	0	97.5	80	120				

Sample ID: **ICSA3** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713674**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.060	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Sample ID: **ICSAB3** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713675**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.275	0.10	20.00	0	101	80	120				
Barium	20.581	1.0	20.00	0	103	80	120				
Manganese	20.190	0.50	20.00	0	101	80	120				
Molybdenum	19.590	0.50	20.00	0	98.0	80	120				
Selenium	20.235	0.50	20.00	0	101	80	120				
Zinc	19.344	10	20.00	0	96.7	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSA4** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713697**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.066	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Sample ID: **ICSAB4** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713698**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.323	0.10	20.00	0	102	80	120				
Barium	22.109	1.0	20.00	0	111	80	120				
Manganese	20.315	0.50	20.00	0	102	80	120				
Molybdenum	20.187	0.50	20.00	0	101	80	120				
Selenium	20.533	0.50	20.00	0	103	80	120				
Zinc	18.912	10	20.00	0	94.6	80	120				

Sample ID: **ICSA5** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713730**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.072	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSAB5** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713731**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.984	0.10	20.00	0	99.9	80	120				
Barium	21.848	1.0	20.00	0	109	80	120				
Manganese	20.009	0.50	20.00	0	100	80	120				
Molybdenum	20.002	0.50	20.00	0	100	80	120				
Selenium	20.529	0.50	20.00	0	103	80	120				
Zinc	19.220	10	20.00	0	96.1	80	120				

Sample ID: **ICSA6** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713762**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.061	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Sample ID: **ICSAB6** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713763**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.902	0.10	20.00	0	99.5	80	120				
Barium	22.348	1.0	20.00	0	112	80	120				
Manganese	20.403	0.50	20.00	0	102	80	120				
Molybdenum	20.057	0.50	20.00	0	100	80	120				
Selenium	20.226	0.50	20.00	0	101	80	120				
Zinc	19.051	10	20.00	0	95.3	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSA7** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713790**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.073	0.50									
Molybdenum	ND	0.50									
Selenium	ND	0.50									
Zinc	ND	10									

Sample ID: **ICSAB7** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713791**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.302	0.10	20.00	0	102	80	120				
Barium	22.309	1.0	20.00	0	112	80	120				
Manganese	20.288	0.50	20.00	0	101	80	120				
Molybdenum	19.818	0.50	20.00	0	99.1	80	120				
Selenium	19.946	0.50	20.00	0	99.7	80	120				
Zinc	18.809	10	20.00	0	94.0	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSA1**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714095**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **ICSAB1**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSAB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714096**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.091	1.0	20.00	0	100	80	120				
Manganese	20.503	0.50	20.00	0	103	80	120				

Sample ID: **ICSA2**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714128**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **ICSAB2**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSAB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714129**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.003	1.0	20.00	0	100	80	120				
Manganese	20.455	0.50	20.00	0	102	80	120				

Sample ID: **ICSA3**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714156**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSA3**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714156**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID: **ICSAB3**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSAB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714157**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.723	1.0	20.00	0	104	80	120				
Manganese	20.273	0.50	20.00	0	101	80	120				

Sample ID: **ICSA4**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714201**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **ICSAB4**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSAB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714202**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.034	1.0	20.00	0	100	80	120				
Manganese	20.176	0.50	20.00	0	101	80	120				

Sample ID: **ICSA5**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714236**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSAB5**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSAB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714237**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.853	1.0	20.00	0	104	80	120				
Manganese	19.953	0.50	20.00	0	99.8	80	120				

Sample ID: **ICSA6**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714283**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **ICSAB6**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSAB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714284**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	21.492	1.0	20.00	0	107	80	120				
Manganese	20.111	0.50	20.00	0	101	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **ICSA1**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSA**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713214**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	ND	1.0									

Sample ID: **ICSAB1**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSAB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713215**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.286	1.0	20.00	0	101	80	120				

Sample ID: **ICSA2**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSA**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713259**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.332	1.0									

Sample ID: **ICSAB2**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSAB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713260**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.461	1.0	20.00	0	102	80	120				

Sample ID: **ICSA3**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSA**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713272**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.331	1.0									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **ICSAB3**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSAB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713273**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.279	1.0	20.00	0	101	80	120				

Sample ID: **ICSA4**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSA**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713295**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.336	1.0									

Sample ID: **ICSAB4**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSAB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713296**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.088	1.0	20.00	0	100	80	120				

Sample ID: **ICSA5**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSA**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713328**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.328	1.0									

Sample ID: **ICSAB5**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSAB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713329**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.040	1.0	20.00	0	100	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **ICSA6**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSA**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713360**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.328	1.0									

Sample ID: **ICSAB6**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSAB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713361**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	20.121	1.0	20.00	0	101	80	120				

Sample ID: **ICSA7**	SampType: **ICSA**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSA**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713388**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	0.319	1.0									

Sample ID: **ICSAB7**	SampType: **ICSAB**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ICSAB**	Batch ID: **R182925**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713389**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.910	1.0	20.00	0	99.6	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	2459036.8	2459036.8	100	PASS	30-150	72154.9	72154.9	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	2598836.2	2459036.8	105.69	PASS	30-150	75819.9	72154.9	105.08	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	2602116.7	2459036.8	105.82	PASS	30-150	76342.4	72154.9	105.8	PASS	30-150
Std3-5/50 ppb	ICAL	1	2641047.9	2459036.8	107.4	PASS	30-150	77253.2	72154.9	107.07	PASS	30-150
Std4-10/100 ppb	ICAL	1	2677129.2	2459036.8	108.87	PASS	30-150	77475.2	72154.9	107.37	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	2587074.5	2459036.8	105.21	PASS	30-150	76063.3	72154.9	105.42	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	2582202.2	2459036.8	105.01	PASS	30-150	75148	72154.9	104.15	PASS	30-150
Std7-100/1000 ppb	ICAL	1	2541226.8	2459036.8	103.34	PASS	30-150	75462.7	72154.9	104.58	PASS	30-150
Std8-200/2000 ppb	ICAL	1	2650892	2459036.8	107.8	PASS	30-150	76036.5	72154.9	105.38	PASS	30-150
ICV	ICV	1	2483190.9	2459036.8	100.98	PASS	30-150	72025.6	72154.9	99.82	PASS	30-150
ICB	ICB	1	2571855.2	2459036.8	104.59	PASS	30-150	74886.9	72154.9	103.79	PASS	30-150
LLICV1	LLICV	1	2612657.7	2459036.8	106.25	PASS	30-150	75342.3	72154.9	104.42	PASS	30-150
MLCCV	CCV	1	2664630.7	2459036.8	108.36	PASS	30-150	76073.3	72154.9	105.43	PASS	30-150
ICSA1	ICSA	1	2706916.7	2459036.8	110.08	PASS	30-150	76901.4	72154.9	106.58	PASS	30-150
ICSAB1	ICSAB	1	2593782.3	2459036.8	105.48	PASS	30-150	73937.1	72154.9	102.47	PASS	30-150
MDL 4	ICAL	1	2670548.8	2459036.8	108.6	PASS	30-150	76134.7	72154.9	105.52	PASS	30-150
CCV1	CCV	1	2685857.4	2459036.8	109.22	PASS	30-150	78633	72154.9	108.98	PASS	30-150
CCB1	CCB	1	2616529	2459036.8	106.4	PASS	30-150	75792	72154.9	105.04	PASS	30-150
CCV2	CCV	1	2692999.6	2459036.8	109.51	PASS	30-150	77108	72154.9	106.86	PASS	30-150
CCB2	CCB	1	2601268.7	2459036.8	105.78	PASS	30-150	75349	72154.9	104.43	PASS	30-150
CCV3	CCV	1	2693223.1	2459036.8	109.52	PASS	30-150	77729.8	72154.9	107.73	PASS	30-150
CCB3	CCB	1	2631123.9	2459036.8	107	PASS	30-150	76196.1	72154.9	105.6	PASS	30-150
CCV4	CCV	1	2717325.6	2459036.8	110.5	PASS	30-150	77725.3	72154.9	107.72	PASS	30-150
CCB4	CCB	1	2589231	2459036.8	105.29	PASS	30-150	74891.4	72154.9	103.79	PASS	30-150
CCB4	CCB	1	2662733.8	2459036.8	108.28	PASS	30-150	76863.5	72154.9	106.53	PASS	30-150
ICSA2	ICSA	1	2702443.6	2459036.8	109.9	PASS	30-150	78266.7	72154.9	108.47	PASS	30-150
ICSAB2	ICSAB	1	2720121.5	2459036.8	110.62	PASS	30-150	78381.7	72154.9	108.63	PASS	30-150
CCV5	CCV	1	2751728.2	2459036.8	111.9	PASS	30-150	79154.2	72154.9	109.7	PASS	30-150
CCB5	CCB	1	2725557.6	2459036.8	110.84	PASS	30-150	77605.8	72154.9	107.55	PASS	30-150
ICSA3	ICSA	1	2777216.4	2459036.8	112.94	PASS	30-150	80012.9	72154.9	110.89	PASS	30-150
ICSAB3	ICSAB	1	2801833.3	2459036.8	113.94	PASS	30-150	80477.2	72154.9	111.53	PASS	30-150
CCV6	CCV	1	2620084.7	2459036.8	106.55	PASS	30-150	90893.6	72154.9	125.97	PASS	30-150
CCB6	CCB	1	2602736.8	2459036.8	105.84	PASS	30-150	86061.5	72154.9	119.27	PASS	30-150
CCV7	CCV	1	2611394.6	2459036.8	106.2	PASS	30-150	95356	72154.9	132.15	PASS	30-150
CCB7	CCB	1	2549129.6	2459036.8	103.66	PASS	30-150	92681.1	72154.9	128.45	PASS	30-150
ICSA4	ICSA	1	2589679.3	2459036.8	105.31	PASS	30-150	92615	72154.9	128.36	PASS	30-150
ICSAB4	ICSAB	1	2610405.2	2459036.8	106.16	PASS	30-150	91494.6	72154.9	126.8	PASS	30-150
CCV8	CCV	1	2843491.6	2459036.8	115.63	PASS	30-150	83057.4	72154.9	115.11	PASS	30-150
CCB8	CCB	1	2793886	2459036.8	113.62	PASS	30-150	81017.5	72154.9	112.28	PASS	30-150
CCV9	CCV	1	2466970.5	2459036.8	100.32	PASS	30-150	95607.4	72154.9	132.5	PASS	30-150
CCB9	CCB	1	2427889.6	2459036.8	98.73	PASS	30-150	91740.5	72154.9	127.14	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
CCV10	CCV	1	2516120	2459036.8	102.32	PASS	30-150	91776.3	72154.9	127.19	PASS	30-150
CCB10	CCB	1	2478120.7	2459036.8	100.78	PASS	30-150	87906.6	72154.9	121.83	PASS	30-150
ICSA5	ICSA	1	2569346.3	2459036.8	104.49	PASS	30-150	88163.5	72154.9	122.19	PASS	30-150
ICSAB5	ICSAB	1	2581977.3	2459036.8	105	PASS	30-150	88326.5	72154.9	122.41	PASS	30-150
CCV11	CCV	1	2506644.7	2459036.8	101.94	PASS	30-150	91685.6	72154.9	127.07	PASS	30-150
CCB11	CCB	1	2482422	2459036.8	100.95	PASS	30-150	88643.6	72154.9	122.85	PASS	30-150
CCV12	CCV	1	2529154.3	2459036.8	102.85	PASS	30-150	95484.6	72154.9	132.33	PASS	30-150
CCB12	CCB	1	2495543.3	2459036.8	101.48	PASS	30-150	92386	72154.9	128.04	PASS	30-150
CCV13	CCV	1	2513030.1	2459036.8	102.2	PASS	30-150	92046.4	72154.9	127.57	PASS	30-150
CCB13	CCB	1	2519036.6	2459036.8	102.44	PASS	30-150	89338.5	72154.9	123.81	PASS	30-150
ICSA6	ICSA	1	2614372	2459036.8	106.32	PASS	30-150	90478.1	72154.9	125.39	PASS	30-150
ICSAB6	ICSAB	1	2608829.3	2459036.8	106.09	PASS	30-150	89529.4	72154.9	124.08	PASS	30-150
MB-107055	MBLK	1	2549784.7	2459036.8	103.69	PASS	30-150	86479.2	72154.9	119.85	PASS	30-150
LCS-107055	LCS	1	2634997.9	2459036.8	107.16	PASS	30-150	86791.9	72154.9	120.29	PASS	30-150
N063295-001B	SAMP	1	2259937	2459036.8	91.9	PASS	30-150	78140.6	72154.9	108.3	PASS	30-150
N063295-002B	SAMP	1	1905311.7	2459036.8	77.48	PASS	30-150	70402	72154.9	97.57	PASS	30-150
N063295-002B	SAMP	5	2320674.8	2459036.8	94.37	PASS	30-150	81053.3	72154.9	112.33	PASS	30-150
N063295-002B-PS	PS	1	1828826.2	2459036.8	74.37	PASS	30-150	70201.2	72154.9	97.29	PASS	30-150
N063295-002B-MS	MS	1	1892954.6	2459036.8	76.98	PASS	30-150	72557.8	72154.9	100.56	PASS	30-150
N063295-002B-MSD	MSD	1	1897872.2	2459036.8	77.18	PASS	30-150	72788.9	72154.9	100.88	PASS	30-150
N063295-003B	SAMP	1	2200868.7	2459036.8	89.5	PASS	30-150	79154.2	72154.9	109.7	PASS	30-150
CCV14	CCV	1	2587708.2	2459036.8	105.23	PASS	30-150	89028.2	72154.9	123.38	PASS	30-150
CCB14	CCB	1	2546233.3	2459036.8	103.55	PASS	30-150	86002.1	72154.9	119.19	PASS	30-150
N063295-005C	SAMP	1	1871842.1	2459036.8	76.12	PASS	30-150	69949.2	72154.9	96.94	PASS	30-150
N063295-006C	SAMP	1	1850692	2459036.8	75.26	PASS	30-150	71103.9	72154.9	98.54	PASS	30-150
N063295-007C	SAMP	1	1776380.2	2459036.8	72.24	PASS	30-150	69935.6	72154.9	96.92	PASS	30-150
N063295-008C	SAMP	1	1833364	2459036.8	74.56	PASS	30-150	71942.9	72154.9	99.71	PASS	30-150
N063297-001C	SAMP	1	2583071.9	2459036.8	105.04	PASS	30-150	86110.8	72154.9	119.34	PASS	30-150
N063297-002B	SAMP	1	1807706.4	2459036.8	73.51	PASS	30-150	71549.1	72154.9	99.16	PASS	30-150
N063297-003B	SAMP	1	2455479.2	2459036.8	99.86	PASS	30-150	83695	72154.9	115.99	PASS	30-150
N063303-001B	SAMP	1	1785330.9	2459036.8	72.6	PASS	30-150	69342.2	72154.9	96.1	PASS	30-150
N063303-002B	SAMP	1	1677377.2	2459036.8	68.21	PASS	30-150	68324.6	72154.9	94.69	PASS	30-150
CCV15	CCV	1	2561437.2	2459036.8	104.16	PASS	30-150	91992.8	72154.9	127.49	PASS	30-150
CCB15	CCB	1	2532460.5	2459036.8	102.99	PASS	30-150	89487.3	72154.9	124.02	PASS	30-150
N063303-006B	SAMP	5	2218370.9	2459036.8	90.21	PASS	30-150	79032.6	72154.9	109.53	PASS	30-150
N063303-008B	SAMP	1	1990174.2	2459036.8	80.93	PASS	30-150	74529.8	72154.9	103.29	PASS	30-150
CCV16	CCV	1	2573924.8	2459036.8	104.67	PASS	30-150	88543.2	72154.9	122.71	PASS	30-150
CCB16	CCB	1	2449049.4	2459036.8	99.59	PASS	30-150	86282.5	72154.9	119.58	PASS	30-150
ICSA7	ICSA	1	2592985.5	2459036.8	105.45	PASS	30-150	87350.2	72154.9	121.06	PASS	30-150
ICSAB7	ICSAB	1	2598872.3	2459036.8	105.69	PASS	30-150	87996.9	72154.9	121.96	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]					72 Ge (ISTD) [1]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	45744.8	45744.8	100	PASS	30-150	109961	109961	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	48400.3	45744.8	105.81	PASS	30-150	115895.2	109961	105.4	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	48644.2	45744.8	106.34	PASS	30-150	116463.1	109961	105.91	PASS	30-150
Std3-5/50 ppb	ICAL	1	49579.1	45744.8	108.38	PASS	30-150	117054.1	109961	106.45	PASS	30-150
Std4-10/100 ppb	ICAL	1	49426.6	45744.8	108.05	PASS	30-150	117266.5	109961	106.64	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	48837	45744.8	106.76	PASS	30-150	115723.5	109961	105.24	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	47561.1	45744.8	103.97	PASS	30-150	114007.2	109961	103.68	PASS	30-150
Std7-100/1000 ppb	ICAL	1	48045.9	45744.8	105.03	PASS	30-150	112333.5	109961	102.16	PASS	30-150
Std8-200/2000 ppb	ICAL	1	48911.7	45744.8	106.92	PASS	30-150	115475.3	109961	105.02	PASS	30-150
ICV	ICV	1	45694.7	45744.8	99.89	PASS	30-150	108793.1	109961	98.94	PASS	30-150
ICB	ICB	1	47418.4	45744.8	103.66	PASS	30-150	113113.6	109961	102.87	PASS	30-150
LLICV1	LLICV	1	47848.6	45744.8	104.6	PASS	30-150	114282.4	109961	103.93	PASS	30-150
MLCCV	CCV	1	48577.4	45744.8	106.19	PASS	30-150	116502.4	109961	105.95	PASS	30-150
ICSA1	ICSA	1	49223.8	45744.8	107.61	PASS	30-150	117882.5	109961	107.2	PASS	30-150
ICSAB1	ICSAB	1	47285.8	45744.8	103.37	PASS	30-150	112968.1	109961	102.73	PASS	30-150
MDL 4	ICAL	1	48374.5	45744.8	105.75	PASS	30-150	115776.4	109961	105.29	PASS	30-150
CCV1	CCV	1	49639.3	45744.8	108.51	PASS	30-150	117609.3	109961	106.96	PASS	30-150
CCB1	CCB	1	48172.8	45744.8	105.31	PASS	30-150	117464.7	109961	106.82	PASS	30-150
CCV2	CCV	1	49189.2	45744.8	107.53	PASS	30-150	117073.5	109961	106.47	PASS	30-150
CCB2	CCB	1	48102.5	45744.8	105.15	PASS	30-150	113660.5	109961	103.36	PASS	30-150
CCV3	CCV	1	48987.5	45744.8	107.09	PASS	30-150	118231.5	109961	107.52	PASS	30-150
CCB3	CCB	1	48038	45744.8	105.01	PASS	30-150	113802.6	109961	103.49	PASS	30-150
CCV4	CCV	1	49443.3	45744.8	108.09	PASS	30-150	117004.9	109961	106.41	PASS	30-150
CCB4	CCB	1	48802.5	45744.8	106.68	PASS	30-150	113725.6	109961	103.42	PASS	30-150
CCB4	CCB	1	49080	45744.8	107.29	PASS	30-150	116911.9	109961	106.32	PASS	30-150
ICSA2	ICSA	1	49857.9	45744.8	108.99	PASS	30-150	118346.4	109961	107.63	PASS	30-150
ICSAB2	ICSAB	1	49893.5	45744.8	109.07	PASS	30-150	119657.1	109961	108.82	PASS	30-150
CCV5	CCV	1	50337	45744.8	110.04	PASS	30-150	118913.8	109961	108.14	PASS	30-150
CCB5	CCB	1	49582.6	45744.8	108.39	PASS	30-150	117767	109961	107.1	PASS	30-150
ICSA3	ICSA	1	50856.5	45744.8	111.17	PASS	30-150	120805.5	109961	109.86	PASS	30-150
ICSAB3	ICSAB	1	51296.8	45744.8	112.14	PASS	30-150	120320.8	109961	109.42	PASS	30-150
CCV6	CCV	1	56200.5	45744.8	122.86	PASS	30-150	134160.6	109961	122.01	PASS	30-150
CCB6	CCB	1	54404.5	45744.8	118.93	PASS	30-150	128604.6	109961	116.95	PASS	30-150
CCV7	CCV	1	58732.8	45744.8	128.39	PASS	30-150	145864.2	109961	132.65	PASS	30-150
CCB7	CCB	1	57501.7	45744.8	125.7	PASS	30-150	140172.6	109961	127.47	PASS	30-150
ICSA4	ICSA	1	58294.4	45744.8	127.43	PASS	30-150	143413.8	109961	130.42	PASS	30-150
ICSAB4	ICSAB	1	57988.9	45744.8	126.77	PASS	30-150	137779.3	109961	125.3	PASS	30-150
CCV8	CCV	1	53384.5	45744.8	116.7	PASS	30-150	129130.8	109961	117.43	PASS	30-150
CCB8	CCB	1	52609.8	45744.8	115.01	PASS	30-150	123334.1	109961	112.16	PASS	30-150
CCV9	CCV	1	58132.7	45744.8	127.08	PASS	30-150	141914.1	109961	129.06	PASS	30-150
CCB9	CCB	1	57913.2	45744.8	126.6	PASS	30-150	135892.7	109961	123.58	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]					72 Ge (ISTD) [1]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
CCV10	CCV	1	57158.2	45744.8	124.95	PASS	30-150	135163.3	109961	122.92	PASS	30-150
CCB10	CCB	1	55358.9	45744.8	121.02	PASS	30-150	132704.8	109961	120.68	PASS	30-150
ICSA5	ICSA	1	55918.6	45744.8	122.24	PASS	30-150	133255.6	109961	121.18	PASS	30-150
ICSAB5	ICSAB	1	55404.5	45744.8	121.12	PASS	30-150	133193.1	109961	121.13	PASS	30-150
CCV11	CCV	1	57334.6	45744.8	125.34	PASS	30-150	139481.5	109961	126.85	PASS	30-150
CCB11	CCB	1	55259.7	45744.8	120.8	PASS	30-150	133071.9	109961	121.02	PASS	30-150
CCV12	CCV	1	59541.2	45744.8	130.16	PASS	30-150	146172.5	109961	132.93	PASS	30-150
CCB12	CCB	1	57170.5	45744.8	124.98	PASS	30-150	141241.8	109961	128.45	PASS	30-150
CCV13	CCV	1	58137.3	45744.8	127.09	PASS	30-150	140074.4	109961	127.39	PASS	30-150
CCB13	CCB	1	56121.4	45744.8	122.68	PASS	30-150	138025.9	109961	125.52	PASS	30-150
ICSA6	ICSA	1	57407	45744.8	125.49	PASS	30-150	138980.5	109961	126.39	PASS	30-150
ICSAB6	ICSAB	1	56947.6	45744.8	124.49	PASS	30-150	137139.8	109961	124.72	PASS	30-150
MB-107055	MBLK	1	54705.5	45744.8	119.59	PASS	30-150	133520.1	109961	121.42	PASS	30-150
LCS-107055	LCS	1	55671	45744.8	121.7	PASS	30-150	131999	109961	120.04	PASS	30-150
N063295-001B	SAMP	1	47582.2	45744.8	104.02	PASS	30-150	111391.6	109961	101.3	PASS	30-150
N063295-002B	SAMP	1	42772.4	45744.8	93.5	PASS	30-150	99199.4	109961	90.21	PASS	30-150
N063295-002B	SAMP	5	50684.9	45744.8	110.8	PASS	30-150	121212.9	109961	110.23	PASS	30-150
N063295-002B-PS	PS	1	42101.8	45744.8	92.04	PASS	30-150	97887.2	109961	89.02	PASS	30-150
N063295-002B-MS	MS	1	43584.5	45744.8	95.28	PASS	30-150	101027.1	109961	91.88	PASS	30-150
N063295-002B-MSD	MSD	1	43748.3	45744.8	95.64	PASS	30-150	101681.1	109961	92.47	PASS	30-150
N063295-003B	SAMP	1	48588.6	45744.8	106.22	PASS	30-150	116367.1	109961	105.83	PASS	30-150
CCV14	CCV	1	56052.3	45744.8	122.53	PASS	30-150	135880.6	109961	123.57	PASS	30-150
CCB14	CCB	1	54813.7	45744.8	119.82	PASS	30-150	133022.8	109961	120.97	PASS	30-150
N063295-005C	SAMP	1	42014.9	45744.8	91.85	PASS	30-150	95577	109961	86.92	PASS	30-150
N063295-006C	SAMP	1	42823.7	45744.8	93.61	PASS	30-150	99524.8	109961	90.51	PASS	30-150
N063295-007C	SAMP	1	42590.9	45744.8	93.11	PASS	30-150	98867.5	109961	89.91	PASS	30-150
N063295-008C	SAMP	1	43577.9	45744.8	95.26	PASS	30-150	100488.4	109961	91.39	PASS	30-150
N063297-001C	SAMP	1	54614.1	45744.8	119.39	PASS	30-150	129333.5	109961	117.62	PASS	30-150
N063297-002B	SAMP	1	42671	45744.8	93.28	PASS	30-150	100383.3	109961	91.29	PASS	30-150
N063297-003B	SAMP	1	52642.1	45744.8	115.08	PASS	30-150	125951.4	109961	114.54	PASS	30-150
N063303-001B	SAMP	1	41981.5	45744.8	91.77	PASS	30-150	99161.6	109961	90.18	PASS	30-150
N063303-002B	SAMP	1	40759.5	45744.8	89.1	PASS	30-150	95758	109961	87.08	PASS	30-150
CCV15	CCV	1	57894.2	45744.8	126.56	PASS	30-150	144437.1	109961	131.35	PASS	30-150
CCB15	CCB	1	56124.8	45744.8	122.69	PASS	30-150	137800.6	109961	125.32	PASS	30-150
N063303-006B	SAMP	5	48808.1	45744.8	106.7	PASS	30-150	116142.2	109961	105.62	PASS	30-150
N063303-008B	SAMP	1	44870.2	45744.8	98.09	PASS	30-150	105487.5	109961	95.93	PASS	30-150
CCV16	CCV	1	56385.6	45744.8	123.26	PASS	30-150	140844	109961	128.09	PASS	30-150
CCB16	CCB	1	54687.6	45744.8	119.55	PASS	30-150	133314.2	109961	121.24	PASS	30-150
ICSA7	ICSA	1	56307.6	45744.8	123.09	PASS	30-150	135224	109961	122.97	PASS	30-150
ICSAB7	ICSAB	1	55771.3	45744.8	121.92	PASS	30-150	135674.4	109961	123.38	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	103 Rh (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	1010748.5	1010748.5	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	1058085.8	1010748.5	104.68	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	1071407.6	1010748.5	106	PASS	30-150
Std3-5/50 ppb	ICAL	1	1083046.5	1010748.5	107.15	PASS	30-150
Std4-10/100 ppb	ICAL	1	1087247.7	1010748.5	107.57	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	1064868.7	1010748.5	105.35	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	1039393.2	1010748.5	102.83	PASS	30-150
Std7-100/1000 ppb	ICAL	1	1040858	1010748.5	102.98	PASS	30-150
Std8-200/2000 ppb	ICAL	1	1066716.2	1010748.5	105.54	PASS	30-150
ICV	ICV	1	1005090.8	1010748.5	99.44	PASS	30-150
ICB	ICB	1	1045427.7	1010748.5	103.43	PASS	30-150
LLICV1	LLICV	1	1062063.5	1010748.5	105.08	PASS	30-150
MLCCV	CCV	1	1072229.1	1010748.5	106.08	PASS	30-150
ICSA1	ICSA	1	1085624.9	1010748.5	107.41	PASS	30-150
ICSAB1	ICSAB	1	1042472.8	1010748.5	103.14	PASS	30-150
MDL 4	ICAL	1	1067158	1010748.5	105.58	PASS	30-150
CCV1	CCV	1	1090362.6	1010748.5	107.88	PASS	30-150
CCB1	CCB	1	1073961.9	1010748.5	106.25	PASS	30-150
CCV2	CCV	1	1085591.6	1010748.5	107.4	PASS	30-150
CCB2	CCB	1	1059425.5	1010748.5	104.82	PASS	30-150
CCV3	CCV	1	1096154.5	1010748.5	108.45	PASS	30-150
CCB3	CCB	1	1072560.6	1010748.5	106.12	PASS	30-150
CCV4	CCV	1	1093875.6	1010748.5	108.22	PASS	30-150
CCB4	CCB	1	1064306.1	1010748.5	105.3	PASS	30-150
CCB4	CCB	1	1074629	1010748.5	106.32	PASS	30-150
ICSA2	ICSA	1	1099022.2	1010748.5	108.73	PASS	30-150
ICSAB2	ICSAB	1	1107453.3	1010748.5	109.57	PASS	30-150
CCV5	CCV	1	1122654.8	1010748.5	111.07	PASS	30-150
CCB5	CCB	1	1107826.1	1010748.5	109.6	PASS	30-150
ICSA3	ICSA	1	1140330.3	1010748.5	112.82	PASS	30-150
ICSAB3	ICSAB	1	1140223.3	1010748.5	112.81	PASS	30-150
CCV6	CCV	1	1181349.2	1010748.5	116.88	PASS	30-150
CCB6	CCB	1	1162826.9	1010748.5	115.05	PASS	30-150
CCV7	CCV	1	1213919.1	1010748.5	120.1	PASS	30-150
CCB7	CCB	1	1189418.9	1010748.5	117.68	PASS	30-150
ICSA4	ICSA	1	1199451.3	1010748.5	118.67	PASS	30-150
ICSAB4	ICSAB	1	1201809.3	1010748.5	118.9	PASS	30-150
CCV8	CCV	1	1189030.8	1010748.5	117.64	PASS	30-150
CCB8	CCB	1	1163251.6	1010748.5	115.09	PASS	30-150
CCV9	CCV	1	1189954.3	1010748.5	117.73	PASS	30-150
CCB9	CCB	1	1163159.9	1010748.5	115.08	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	103 Rh (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
CCV10	CCV	1	1186328.5	1010748.5	117.37	PASS	30-150
CCB10	CCB	1	1150630.2	1010748.5	113.84	PASS	30-150
ICSA5	ICSA	1	1177297.3	1010748.5	116.48	PASS	30-150
ICSAB5	ICSAB	1	1171811	1010748.5	115.93	PASS	30-150
CCV11	CCV	1	1170444.1	1010748.5	115.8	PASS	30-150
CCB11	CCB	1	1156125.5	1010748.5	114.38	PASS	30-150
CCV12	CCV	1	1195047.9	1010748.5	118.23	PASS	30-150
CCB12	CCB	1	1168824.5	1010748.5	115.64	PASS	30-150
CCV13	CCV	1	1173765.3	1010748.5	116.13	PASS	30-150
CCB13	CCB	1	1148686.7	1010748.5	113.65	PASS	30-150
ICSA6	ICSA	1	1187955	1010748.5	117.53	PASS	30-150
ICSAB6	ICSAB	1	1177971.1	1010748.5	116.54	PASS	30-150
MB-107055	MBLK	1	1150929.5	1010748.5	113.87	PASS	30-150
LCS-107055	LCS	1	1158857.5	1010748.5	114.65	PASS	30-150
N063295-001B	SAMP	1	934763.7	1010748.5	92.48	PASS	30-150
N063295-002B	SAMP	1	798647.4	1010748.5	79.02	PASS	30-150
N063295-002B	SAMP	5	984858.1	1010748.5	97.44	PASS	30-150
N063295-002B-PS	PS	1	784866.2	1010748.5	77.65	PASS	30-150
N063295-002B-MS	MS	1	811811.9	1010748.5	80.32	PASS	30-150
N063295-002B-MSD	MSD	1	806972.4	1010748.5	79.84	PASS	30-150
N063295-003B	SAMP	1	924925.5	1010748.5	91.51	PASS	30-150
CCV14	CCV	1	1160539.5	1010748.5	114.82	PASS	30-150
CCB14	CCB	1	1130082.5	1010748.5	111.81	PASS	30-150
N063295-005C	SAMP	1	787565.5	1010748.5	77.92	PASS	30-150
N063295-006C	SAMP	1	796112.6	1010748.5	78.76	PASS	30-150
N063295-007C	SAMP	1	778171.4	1010748.5	76.99	PASS	30-150
N063295-008C	SAMP	1	799647.7	1010748.5	79.11	PASS	30-150
N063297-001C	SAMP	1	1068293.4	1010748.5	105.69	PASS	30-150
N063297-002B	SAMP	1	788803.1	1010748.5	78.04	PASS	30-150
N063297-003B	SAMP	1	1021981	1010748.5	101.11	PASS	30-150
N063303-001B	SAMP	1	779924.4	1010748.5	77.16	PASS	30-150
N063303-002B	SAMP	1	743153.9	1010748.5	73.53	PASS	30-150
CCV15	CCV	1	1173874.8	1010748.5	116.14	PASS	30-150
CCB15	CCB	1	1148745.6	1010748.5	113.65	PASS	30-150
N063303-006B	SAMP	5	931515.3	1010748.5	92.16	PASS	30-150
N063303-008B	SAMP	1	839779.5	1010748.5	83.09	PASS	30-150
CCV16	CCV	1	1157504.2	1010748.5	114.52	PASS	30-150
CCB16	CCB	1	1130113.6	1010748.5	111.81	PASS	30-150
ICSA7	ICSA	1	1166865.6	1010748.5	115.45	PASS	30-150
ICSAB7	ICSAB	1	1167181.5	1010748.5	115.48	PASS	30-150

INTERNAL STANDARD: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	2546673.9	2546673.9	100	PASS	30-150	61433.5	61433.5	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	2477141	2546673.9	97.27	PASS	30-150	59225.7	61433.5	96.41	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	2410356.4	2546673.9	94.65	PASS	30-150	57887.7	61433.5	94.23	PASS	30-150
Std3-5/50 ppb	ICAL	1	2515986.1	2546673.9	98.79	PASS	30-150	60292.8	61433.5	98.14	PASS	30-150
Std4-10/100 ppb	ICAL	1	2569262.8	2546673.9	100.89	PASS	30-150	61278.6	61433.5	99.75	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	2558618.2	2546673.9	100.47	PASS	30-150	60212.5	61433.5	98.01	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	2483709.9	2546673.9	97.53	PASS	30-150	58594.5	61433.5	95.38	PASS	30-150
Std7-100/1000 ppb	ICAL	1	2480840.2	2546673.9	97.41	PASS	30-150	58564.5	61433.5	95.33	PASS	30-150
Std8-200/2000 ppb	ICAL	1	2587686.9	2546673.9	101.61	PASS	30-150	60077.5	61433.5	97.79	PASS	30-150
ICV	ICV	1	2653524.2	2546673.9	104.2	PASS	30-150	60758.8	61433.5	98.9	PASS	30-150
ICB	ICB	1	2570474.6	2546673.9	100.93	PASS	30-150	59068.4	61433.5	96.15	PASS	30-150
LLICV1	LLICV	1	2478137.6	2546673.9	97.31	PASS	30-150	57158.5	61433.5	93.04	PASS	30-150
LLICV1	LLICV	1	2542268.2	2546673.9	99.83	PASS	30-150	59921.4	61433.5	97.54	PASS	30-150
MLCCV	CCV	1	2630585.4	2546673.9	103.29	PASS	30-150	61355.5	61433.5	99.87	PASS	30-150
ICSA1	ICSA	1	2627480	2546673.9	103.17	PASS	30-150	61002.1	61433.5	99.3	PASS	30-150
ICSAB1	ICSAB	1	2638963.2	2546673.9	103.62	PASS	30-150	60490.1	61433.5	98.46	PASS	30-150
CCV1	CCV	1	2694587.4	2546673.9	105.81	PASS	30-150	59938.1	61433.5	97.57	PASS	30-150
CCB1	CCB	1	2724865	2546673.9	107	PASS	30-150	59985.1	61433.5	97.64	PASS	30-150
CCV2	CCV	1	2796445	2546673.9	109.81	PASS	30-150	62680.5	61433.5	102.03	PASS	30-150
CCB2	CCB	1	2784034.1	2546673.9	109.32	PASS	30-150	61849.5	61433.5	100.68	PASS	30-150
CCV3	CCV	1	2883421	2546673.9	113.22	PASS	30-150	64275.3	61433.5	104.63	PASS	30-150
CCB3	CCB	1	2848797.5	2546673.9	111.86	PASS	30-150	63643.9	61433.5	103.6	PASS	30-150
ICSA2	ICSA	1	2873243.9	2546673.9	112.82	PASS	30-150	63704.3	61433.5	103.7	PASS	30-150
ICSAB2	ICSAB	1	2879704.4	2546673.9	113.08	PASS	30-150	64191.6	61433.5	104.49	PASS	30-150
CCV4	CCV	1	2906215	2546673.9	114.12	PASS	30-150	63655.2	61433.5	103.62	PASS	30-150
CCB4	CCB	1	2905314.5	2546673.9	114.08	PASS	30-150	63350.5	61433.5	103.12	PASS	30-150
CCV5	CCV	1	2917051.4	2546673.9	114.54	PASS	30-150	67781.3	61433.5	110.33	PASS	30-150
CCB5	CCB	1	2923013.9	2546673.9	114.78	PASS	30-150	66637.8	61433.5	108.47	PASS	30-150
CCV6	CCV	1	2936579	2546673.9	115.31	PASS	30-150	66786.3	61433.5	108.71	PASS	30-150
CCB6	CCB	1	2950049.1	2546673.9	115.84	PASS	30-150	66684.7	61433.5	108.55	PASS	30-150
ICSA3	ICSA	1	2910365	2546673.9	114.28	PASS	30-150	67075	61433.5	109.18	PASS	30-150
ICSAB3	ICSAB	1	2944783	2546673.9	115.63	PASS	30-150	67519.1	61433.5	109.91	PASS	30-150
CCV7	CCV	1	2853126.7	2546673.9	112.03	PASS	30-150	73089	61433.5	118.97	PASS	30-150
CCB7	CCB	1	2887302.8	2546673.9	113.38	PASS	30-150	70703.3	61433.5	115.09	PASS	30-150
CCV8	CCV	1	2805939.3	2546673.9	110.18	PASS	30-150	65871.4	61433.5	107.22	PASS	30-150
CCB8	CCB	1	2825101.7	2546673.9	110.93	PASS	30-150	64372.3	61433.5	104.78	PASS	30-150
CCV9	CCV	1	2856275	2546673.9	112.16	PASS	30-150	66203.8	61433.5	107.76	PASS	30-150
CCB9	CCB	1	2876861.9	2546673.9	112.97	PASS	30-150	65294.7	61433.5	106.29	PASS	30-150
CCV10	CCV	1	2834268.2	2546673.9	111.29	PASS	30-150	64824.2	61433.5	105.52	PASS	30-150
CCB10	CCB	1	2771600.1	2546673.9	108.83	PASS	30-150	63577.2	61433.5	103.49	PASS	30-150
ICSA4	ICSA	1	2750438.3	2546673.9	108	PASS	30-150	62897.9	61433.5	102.38	PASS	30-150

INTERNAL STANDARD: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
ICSAB4	ICSAB	1	2769002.9	2546673.9	108.73	PASS	30-150	63064	61433.5	102.65	PASS	30-150
CCV11	CCV	1	2408928.8	2546673.9	94.59	PASS	30-150	68077	61433.5	110.81	PASS	30-150
CCB11	CCB	1	2344078.1	2546673.9	92.05	PASS	30-150	66050	61433.5	107.51	PASS	30-150
CCV12	CCV	1	2693374.4	2546673.9	105.76	PASS	30-150	80619	61433.5	131.23	PASS	30-150
CCB12	CCB	1	2682960.7	2546673.9	105.35	PASS	30-150	79285.9	61433.5	129.06	PASS	30-150
CCV13	CCV	1	2463267.7	2546673.9	96.72	PASS	30-150	68730.6	61433.5	111.88	PASS	30-150
CCB13	CCB	1	2489019.8	2546673.9	97.74	PASS	30-150	67533.6	61433.5	109.93	PASS	30-150
ICSA5	ICSA	1	2449915.3	2546673.9	96.2	PASS	30-150	66756.1	61433.5	108.66	PASS	30-150
ICSAB5	ICSAB	1	2460970.8	2546673.9	96.63	PASS	30-150	67277.1	61433.5	109.51	PASS	30-150
MB-107055	MBLK	1	2487938.1	2546673.9	97.69	PASS	30-150	66905.5	61433.5	108.91	PASS	30-150
LCS-107055	LCS	1	2484976.6	2546673.9	97.58	PASS	30-150	66225.1	61433.5	107.8	PASS	30-150
N063295-001B	SAMP	1	2141113	2546673.9	84.08	PASS	30-150	58521	61433.5	95.26	PASS	30-150
N063295-002B	SAMP	1	1859425.4	2546673.9	73.01	PASS	30-150	54227.7	61433.5	88.27	PASS	30-150
N063295-002B	SAMP	5	2251562.7	2546673.9	88.41	PASS	30-150	63567.1	61433.5	103.47	PASS	30-150
N063295-002B	SAMP	10	2298449.4	2546673.9	90.25	PASS	30-150	65106.3	61433.5	105.98	PASS	30-150
N063295-002B	SAMP	50	2552382.7	2546673.9	100.22	PASS	30-150	69684.7	61433.5	113.43	PASS	30-150
N063295-002B	SAMP	100	2588755.5	2546673.9	101.65	PASS	30-150	71147.4	61433.5	115.81	PASS	30-150
N063295-002B	SAMP	500	2664957.8	2546673.9	104.64	PASS	30-150	71648.4	61433.5	116.63	PASS	30-150
CCV14	CCV	1	2719386.9	2546673.9	106.78	PASS	30-150	72932.9	61433.5	118.72	PASS	30-150
CCB14	CCB	1	2717829.1	2546673.9	106.72	PASS	30-150	71177.5	61433.5	115.86	PASS	30-150
N063295-002B-PS	PS	1	2090219.2	2546673.9	82.08	PASS	30-150	59855.6	61433.5	97.43	PASS	30-150
N063295-002B-PS	PS	10	2582545.7	2546673.9	101.41	PASS	30-150	70438.9	61433.5	114.66	PASS	30-150
N063295-002B-PS	PS	100	2744069.5	2546673.9	107.75	PASS	30-150	73054.5	61433.5	118.92	PASS	30-150
N063295-002B-MS	MS	1	2114841.1	2546673.9	83.04	PASS	30-150	62485.7	61433.5	101.71	PASS	30-150
N063295-002B-MS	MS	10	2602630.7	2546673.9	102.2	PASS	30-150	72930.5	61433.5	118.71	PASS	30-150
N063295-002B-MS	MS	100	2729587.9	2546673.9	107.18	PASS	30-150	73920.4	61433.5	120.33	PASS	30-150
N063295-002B-MSD	MSD	1	2121611.1	2546673.9	83.31	PASS	30-150	62986	61433.5	102.53	PASS	30-150
N063295-002B-MSD	MSD	10	2559422.9	2546673.9	100.5	PASS	30-150	71609.5	61433.5	116.56	PASS	30-150
N063295-002B-MSD	MSD	100	2607661.7	2546673.9	102.39	PASS	30-150	72089.2	61433.5	117.35	PASS	30-150
CCV15	CCV	1	2647392.6	2546673.9	103.95	PASS	30-150	71849.2	61433.5	116.95	PASS	30-150
CCB15	CCB	1	2610951.7	2546673.9	102.52	PASS	30-150	69650	61433.5	113.37	PASS	30-150
N063295-003B	SAMP	1	2276720.6	2546673.9	89.4	PASS	30-150	62148.3	61433.5	101.16	PASS	30-150
N063295-005C	SAMP	1	1944140.5	2546673.9	76.34	PASS	30-150	59249.1	61433.5	96.44	PASS	30-150
N063295-005C	SAMP	10	2394938.5	2546673.9	94.04	PASS	30-150	68016.6	61433.5	110.72	PASS	30-150
N063295-006C	SAMP	1	1878055.1	2546673.9	73.75	PASS	30-150	59053.9	61433.5	96.13	PASS	30-150
N063295-006C	SAMP	10	2358135.1	2546673.9	92.6	PASS	30-150	68236.6	61433.5	111.07	PASS	30-150
N063295-007C	SAMP	1	1805769.2	2546673.9	70.91	PASS	30-150	56076.1	61433.5	91.28	PASS	30-150
N063295-007C	SAMP	10	2322575.2	2546673.9	91.2	PASS	30-150	67390.8	61433.5	109.7	PASS	30-150
N063295-008C	SAMP	1	1831892.9	2546673.9	71.93	PASS	30-150	58271.3	61433.5	94.85	PASS	30-150
N063295-008C	SAMP	10	2300060.7	2546673.9	90.32	PASS	30-150	66144.8	61433.5	107.67	PASS	30-150
CCV16	CCV	1	2409816.1	2546673.9	94.63	PASS	30-150	70028.3	61433.5	113.99	PASS	30-150

INTERNAL STANDARD: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
CCB16	CCB	1	2381204.5	2546673.9	93.5	PASS	30-150	67870.6	61433.5	110.48	PASS	30-150
N063297-001C	SAMP	1	2391113.4	2546673.9	93.89	PASS	30-150	66183.9	61433.5	107.73	PASS	30-150
N063297-002B	SAMP	1	1753290.8	2546673.9	68.85	PASS	30-150	55775	61433.5	90.79	PASS	30-150
N063297-003B	SAMP	1	2265576.5	2546673.9	88.96	PASS	30-150	65137.5	61433.5	106.03	PASS	30-150
N063303-001B	SAMP	1	1734879.2	2546673.9	68.12	PASS	30-150	54873.2	61433.5	89.32	PASS	30-150
N063303-001B	SAMP	10	2286690.2	2546673.9	89.79	PASS	30-150	69236.1	61433.5	112.7	PASS	30-150
N063303-002B	SAMP	1	1730180.1	2546673.9	67.94	PASS	30-150	56293.6	61433.5	91.63	PASS	30-150
N063303-002B	SAMP	10	2331823.8	2546673.9	91.56	PASS	30-150	70724.6	61433.5	115.12	PASS	30-150
N063303-006B	SAMP	5	2379376.1	2546673.9	93.43	PASS	30-150	70559.2	61433.5	114.85	PASS	30-150
N063303-008B	SAMP	1	2167665.3	2546673.9	85.12	PASS	30-150	67188.8	61433.5	109.37	PASS	30-150
N063303-008B	SAMP	10	2581061.8	2546673.9	101.35	PASS	30-150	74330.1	61433.5	120.99	PASS	30-150
CCV17	CCV	1	2666795.9	2546673.9	104.72	PASS	30-150	77699.6	61433.5	126.48	PASS	30-150
CCB17	CCB	1	2632176.7	2546673.9	103.36	PASS	30-150	76961.8	61433.5	125.28	PASS	30-150
ICSA6	ICSA	1	2662092.9	2546673.9	104.53	PASS	30-150	77080.2	61433.5	125.47	PASS	30-150
ICSAB6	ICSAB	1	2670912.4	2546673.9	104.88	PASS	30-150	76997.4	61433.5	125.33	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.: N063297
Test Method: EPA 6020
Analysis Date: 2/23,25/2024

Matrix: Groundwater
Batch No.: 107055

Instrument ID: ICPMS-03
Instrument Description: Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Dilution test for Ba & Mn failed. However, PS passed criteria.
Dilution test is not applicable to As, Se, Zn. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063295-002B DT 5x	Arsenic	As	µg/L	0	NA	0		10
N063295-002B DT 5x	Molybdenum	Mo	µg/L	35.32913	PASS	34.82324	1.45%	10
N063295-002B DT 5x	Selenium	Se	µg/L	0	NA	0.2193986	100.00%	10
N063295-002B DT 5x	Zinc	Zn	µg/L	0	NA	0		10
N063295-002B DT 5x	Chromium	Cr	µg/L	79.12291	PASS	72.62468	8.95%	10
N063295-002B DT 50x	Barium	Ba	µg/L	226.2652	FAIL	190.7318	18.63%	10
N063295-002B DT 500x	Manganese	Mn	µg/L	2395.052	FAIL	2142.418	11.79%	10

Reviewed by:

JRB 3/26/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063295-002B-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ZZZZZZ** Batch ID: **107055** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/24/2024** SeqNo: **5713769**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	6.410	0.10	10.00	0	64.1	80	120				S
Molybdenum	46.077	0.50	10.00	34.82	113	80	120				
Selenium	8.796	0.50	10.00	0.2194	85.8	80	120				
Zinc	68.518	10	100.0	0	68.5	80	120				S

Sample ID: **N063295-002B-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ZZZZZZ** Batch ID: **107055** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/26/2024** SeqNo: **5714250**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	293.790	10	100.0	190.7	103	80	120				

Sample ID: **N063295-002B-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ZZZZZZ** Batch ID: **107055** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **2/26/2024** SeqNo: **5714251**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	12122.702	50	10000	2142	99.8	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063297
Project: PG&E Topock - RCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020DIS_CrPGE_TPK

Sample ID: **N063295-002B-PS**	SampType: **PS**	TestCode: **6020DIS_CrP**	Units: **µg/L**	Prep Date:	RunNo: **182925**
Client ID: **ZZZZZZ**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/24/2024**	SeqNo: **5713367**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	80.348	1.0	10.00	72.62	77.2	80	120				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

ARCADIS

Project: PG&E Topock - PCM

Project No.: 30211191

ASSET Laboratories Work Order:

N063303

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063303

Item	Page
Cover Page	1-6
Analytical Result/QC Summary Reports	7-40
Sample Receiving Items	41-45
List of Analysts	46
Raw Data	
EPA 218.6	47-159
EPA 300.0	160-178
EPA 6010B_Dissolved	179-215
EPA 6020_Dissolved	216-301

March 08, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063303

RE: PG&E Topock - PCM, 30211191

Attention: Dan Bush

Enclosed are the results for sample(s) received on February 22, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063303

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 218.6:

Initial dilution for sample N063303-006 was necessary due to matrix. Sample is colored.

Dilution was necessary for some samples due to matrix interference. Samples were analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Samples were reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Analytical Comments for EPA 300.0:

Dilution was necessary due to precipitation of sample upon addition of eluent.

Analytical Comments for EPA 6010B:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Iron in QC samples N063295-005C-MS1 and N063295-005C-MSD1 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020:

Initial dilution for sample N063303-006 was necessary due to matrix. Sample is colored.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Arsenic in QC

samples N063295-002B-MS and N063295-002B-MSD possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N063295-002B-MS and N063295-002B-MSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

ASSET Laboratories

Date: *08-Mar-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063303
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063303-001A	MW-46-175-Q124	Groundwater	2/22/2024 1:52:00 PM	2/22/2024	3/8/2024
N063303-001B	MW-46-175-Q124	Groundwater	2/22/2024 1:52:00 PM	2/22/2024	3/8/2024
N063303-001C	MW-46-175-Q124	Groundwater	2/22/2024 1:52:00 PM	2/22/2024	3/8/2024
N063303-002A	MW-46-205-Q124	Groundwater	2/22/2024 1:00:00 PM	2/22/2024	3/8/2024
N063303-002B	MW-46-205-Q124	Groundwater	2/22/2024 1:00:00 PM	2/22/2024	3/8/2024
N063303-002C	MW-46-205-Q124	Groundwater	2/22/2024 1:00:00 PM	2/22/2024	3/8/2024
N063303-003A	MW-96-045-Q124	Groundwater	2/22/2024 11:38:00 AM	2/22/2024	3/8/2024
N063303-004A	MW-96-217-Q124	Groundwater	2/22/2024 10:52:00 AM	2/22/2024	3/8/2024
N063303-005A	EB-736-Q124	Groundwater	2/22/2024 2:10:00 PM	2/22/2024	3/8/2024
N063303-006A	MW-32-020-Q124	Groundwater	2/22/2024 9:21:00 AM	2/22/2024	3/8/2024
N063303-006B	MW-32-020-Q124	Groundwater	2/22/2024 9:21:00 AM	2/22/2024	3/8/2024
N063303-006C	MW-32-020-Q124	Groundwater	2/22/2024 9:21:00 AM	2/22/2024	3/8/2024
N063303-007A	MW-32-020-EB-Q124	Groundwater	2/22/2024 8:58:00 AM	2/22/2024	3/8/2024
N063303-008A	MW-32-035-Q124	Groundwater	2/22/2024 8:54:00 AM	2/22/2024	3/8/2024
N063303-008B	MW-32-035-Q124	Groundwater	2/22/2024 8:54:00 AM	2/22/2024	3/8/2024
N063303-008C	MW-32-035-Q124	Groundwater	2/22/2024 8:54:00 AM	2/22/2024	3/8/2024
N063303-009A	MW-32-035-EB-Q124	Groundwater	2/22/2024 8:31:00 AM	2/22/2024	3/8/2024
N063303-010A	MW-47-055-Q124	Groundwater	2/22/2024 12:22:00 PM	2/22/2024	3/8/2024
N063303-011A	MW-47-115-Q124	Groundwater	2/22/2024 12:53:00 PM	2/22/2024	3/8/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-46-175-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 1:52:00 PM
Lab ID:	N063303-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240227A**	QC Batch: **R182996**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	14	0.19	1.0		µg/L	5	2/27/2024 02:14 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-46-205-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 1:00:00 PM
Lab ID:	N063303-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240227A**	QC Batch: **R182996**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/27/2024 05:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-96-045-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 11:38:00 AM
Lab ID:	N063303-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240227A**	QC Batch: **R182996**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/27/2024 05:53 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-96-217-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 10:52:00 AM
Lab ID:	N063303-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240227A**	QC Batch: **R182996**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/27/2024 06:12 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-736-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 2:10:00 PM
Lab ID:	N063303-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240227A**	QC Batch: **R182996**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/27/2024 06:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-32-020-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 9:21:00 AM
Lab ID:	N063303-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240227A**	QC Batch: **R182996**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/27/2024 04:38 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-32-020-EB-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 8:58:00 AM
Lab ID:	N063303-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240227A**	QC Batch: **R182996**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/27/2024 07:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-32-035-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 8:54:00 AM
Lab ID:	N063303-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240227A**	QC Batch: **R182996**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	2/27/2024 06:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-32-035-EB-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 8:31:00 AM
Lab ID:	N063303-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240227A**	QC Batch: **R182996**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	2/27/2024 07:47 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-47-055-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 12:22:00 PM
Lab ID:	N063303-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240227A**	QC Batch: **R182996**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	17	0.19	1.0		µg/L	5	2/27/2024 02:42 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-47-115-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 12:53:00 PM
Lab ID:	N063303-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240227A**	QC Batch: **R182996**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	14	0.19	1.0		µg/L	5	2/27/2024 03:03 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R182996**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **PBW**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716851**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R182996**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **LCSW**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716852**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.806	0.20	5.000	0	96.1	90	110				

Sample ID: **N063295-002ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **ZZZZZZ**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716857**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	23.984	1.0						24.09	0.437	20	

Sample ID: **N063295-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **ZZZZZZ**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716858**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	48.752	1.0	25.00	24.09	98.7	90	110				

Sample ID: **N063303-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **ZZZZZZ**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716862**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	37.872	1.0	25.00	14.21	94.6	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063303-001AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **ZZZZZZ**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716863**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	39.071	1.0	25.00	14.21	99.4	90	110	37.87	3.12	20	

Sample ID: **N063303-010AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **ZZZZZZ**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716865**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	41.199	1.0	25.00	16.51	98.8	90	110				

Sample ID: **N063303-011AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **ZZZZZZ**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716867**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	39.364	1.0	25.00	14.42	99.8	90	110				

Sample ID: **N063303-006AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **ZZZZZZ**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716871**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.719	1.0	5.000	0	94.4	90	110				

Sample ID: **N063303-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **ZZZZZZ**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716873**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.490	1.0	5.000	0.7950	93.9	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063303-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **ZZZZZZ**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716877**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.671	1.0	5.000	0	93.4	90	110				

Sample ID: **N063303-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **ZZZZZZ**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716879**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.360	1.0	5.000	0	107	90	110				

Sample ID: **N063303-008AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **ZZZZZZ**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716881**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.651	1.0	5.000	0	93.0	90	110				

Sample ID: **N063303-005AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **ZZZZZZ**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716883**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.984	0.20	1.000	0	98.4	90	110				

Sample ID: **N063303-007AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **ZZZZZZ**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716885**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.975	0.20	1.000	0	97.5	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063303-009AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **ZZZZZZ**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716889**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.976	0.20	1.000	0	97.6	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-46-175-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 1:52:00 PM
Lab ID:	N063303-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240223A**	QC Batch: **R182887**			PrepDate:			Analyst: **RAB**
Nitrate as N	1.2	0.24	0.50		mg/L	10	2/23/2024 04:37 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-46-205-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 1:00:00 PM
Lab ID:	N063303-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240223A**	QC Batch: **R182887**			PrepDate:			Analyst: **RAB**
Nitrate as N	0.93	0.24	0.50		mg/L	10	2/23/2024 04:52 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-32-020-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 9:21:00 AM
Lab ID:	N063303-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240223A**	QC Batch: **R182887**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/23/2024 05:08 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-32-035-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 8:54:00 AM
Lab ID:	N063303-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240223A**	QC Batch: **R182887**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	2/23/2024 05:24 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **MB-R182887_NO3**	SampType: **MBLK**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **PBW**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711058**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **LCS-R182887_NO3**	SampType: **LCS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **LCSW**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711059**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.261	0.050	1.250	0	101	90	110				

Sample ID: **N063295-008BMS**	SampType: **MS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **ZZZZZZ**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711063**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.311	0.50	12.50	0	98.5	80	120				

Sample ID: **N063295-008BMSD**	SampType: **MSD**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **ZZZZZZ**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711064**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.287	0.50	12.50	0	98.3	80	120	12.31	0.195	20	

Sample ID: **N063295-008BDUP**	SampType: **DUP**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **ZZZZZZ**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711070**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.50						0	0	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **N063297-003BMS** SampType: **MS** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **182887**
Client ID: **ZZZZZZ** Batch ID: **R182887** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5711078**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	17.918	0.50	12.50	5.789	97.0	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-46-175-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 1:52:00 PM
Lab ID:	N063303-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240223B**	QC Batch: **107062**				PrepDate:	**2/23/2024**	Analyst: **DJ**
Iron	24	13	20		µg/L	1	2/23/2024 05:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-46-205-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 1:00:00 PM
Lab ID:	N063303-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
EPA 3010A			**EPA 6010B**				
RunID: **NV00922-ICP3_240223B**	QC Batch: **107062**			PrepDate:	**2/23/2024**		Analyst: **DJ**
Iron	ND	13	20		µg/L	1	2/23/2024 05:37 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-32-020-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 9:21:00 AM
Lab ID:	N063303-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240223B**	QC Batch: **107062**				PrepDate:	**2/23/2024**	Analyst: **DJ**
Iron	3600	13	20		µg/L	1	2/23/2024 05:42 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-32-035-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 8:54:00 AM
Lab ID:	N063303-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP3_240223B**	QC Batch: **107062**				PrepDate:	**2/23/2024**	Analyst: **DJ**
Iron	15000	13	20		µg/L	1	2/23/2024 05:47 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-107062**	SampType: **MBLK**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/23/2024**	RunNo: **182846**
Client ID: **PBW**	Batch ID: **107062**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708253**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS1-107062**	SampType: **LCS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/23/2024**	RunNo: **182846**
Client ID: **LCSW**	Batch ID: **107062**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708254**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	96.627	20	100.0	0	96.6	85	115				

Sample ID: **N063295-005C-MS1**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/23/2024**	RunNo: **182846**
Client ID: **ZZZZZZ**	Batch ID: **107062**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708258**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	477.707	20	100.0	315.1	163	75	125				S

Sample ID: **N063295-005C-MSD**	SampType: **MSD**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **2/23/2024**	RunNo: **182846**
Client ID: **ZZZZZZ**	Batch ID: **107062**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **2/23/2024**	SeqNo: **5708259**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	492.921	20	100.0	315.1	178	75	125	477.7	3.13	20	S

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N063295-005C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ZZZZZZ** Batch ID: **107062** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708257**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	405.937	20	100.0	315.1	90.9	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-46-175-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 1:52:00 PM
Lab ID:	N063303-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240223D**	QC Batch: **107055**				PrepDate:	**2/23/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/24/2024 04:19 AM
Barium	29	0.083	1.0		µg/L	1	2/26/2024 06:00 AM
Manganese	13	0.026	0.50		µg/L	1	2/24/2024 04:19 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-46-205-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 1:00:00 PM
Lab ID:	N063303-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240223D**	QC Batch: **107055**				PrepDate:	**2/23/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	2/24/2024 04:23 AM
Barium	36	0.083	1.0		µg/L	1	2/26/2024 06:09 AM
Manganese	38	0.026	0.50		µg/L	1	2/24/2024 04:23 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-32-020-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 9:21:00 AM
Lab ID:	N063303-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A			**EPA 6020**			
RunID: **NV00922-ICP8_240223D**	QC Batch: **107055**			PrepDate:	**2/23/2024**		Analyst: **DJ**
Arsenic	ND	0.25	0.50		µg/L	5	2/24/2024 04:42 AM
Barium	92	0.42	5.0		µg/L	5	2/26/2024 06:19 AM
Manganese	330	0.13	2.5		µg/L	5	2/24/2024 04:42 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-32-035-Q124
Lab Order:	N063303		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	2/22/2024 8:54:00 AM
Lab ID:	N063303-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240223D**	QC Batch: **107055**				PrepDate:	**2/23/2024**	Analyst: **DJ**
Arsenic	15	0.050	0.10		µg/L	1	2/24/2024 04:46 AM
Barium	880	0.83	10		µg/L	10	2/26/2024 06:28 AM
Manganese	1100	0.26	5.0		µg/L	10	2/26/2024 06:28 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **MB-107055**	SampType: **MBLK**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/23/2024**	RunNo: **182930**
Client ID: **PBW**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/24/2024**	SeqNo: **5713764**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID: **LCS-107055**	SampType: **LCS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/23/2024**	RunNo: **182930**
Client ID: **LCSW**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/24/2024**	SeqNo: **5713765**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	9.650	0.10	10.00	0	96.5	85	115				
Manganese	97.815	0.50	100.0	0	97.8	85	115				

Sample ID: **N063295-002B-MS**	SampType: **MS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/23/2024**	RunNo: **182930**
Client ID: **ZZZZZZ**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/24/2024**	SeqNo: **5713770**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	6.226	0.10	10.00	0	62.3	75	125				S

Sample ID: **N063295-002B-MSD**	SampType: **MSD**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/23/2024**	RunNo: **182930**
Client ID: **ZZZZZZ**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/24/2024**	SeqNo: **5713771**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	6.332	0.10	10.00	0	63.3	75	125	6.226	1.69	20	S

Sample ID: **MB-107055**	SampType: **MBLK**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/23/2024**	RunNo: **182939**
Client ID: **PBW**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/26/2024**	SeqNo: **5714238**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **LCS-107055**	SampType: **LCS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/23/2024**	RunNo: **182939**
Client ID: **LCSW**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/26/2024**	SeqNo: **5714239**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	10.332	1.0	10.00	0	103	85	115				

Sample ID: **N063295-002B-MS**	SampType: **MS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/23/2024**	RunNo: **182939**
Client ID: **ZZZZZZ**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/26/2024**	SeqNo: **5714253**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	198.420	10	10.00	190.7	76.9	75	125				

Sample ID: **N063295-002B-MS**	SampType: **MS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/23/2024**	RunNo: **182939**
Client ID: **ZZZZZZ**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/26/2024**	SeqNo: **5714254**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	2141.362	50	100.0	2142	-1.06	75	125				S

Sample ID: **N063295-002B-MSD**	SampType: **MSD**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/23/2024**	RunNo: **182939**
Client ID: **ZZZZZZ**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/26/2024**	SeqNo: **5714256**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	195.231	10	10.00	190.7	45.0	75	125	198.4	1.62	20	S

Sample ID: **N063295-002B-MSD**	SampType: **MSD**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **2/23/2024**	RunNo: **182939**
Client ID: **ZZZZZZ**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/26/2024**	SeqNo: **5714257**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	2309.977	50	100.0	2142	168	75	125	2141	7.58	20	S

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063295-002B-PS**	SampType: **PS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:				RunNo: **182930**		
Client ID: **ZZZZZZ**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/24/2024**				SeqNo: **5713769**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	6.410	0.10	10.00	0	64.1	80	120				S

Sample ID: **N063295-002B-PS**	SampType: **PS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:				RunNo: **182939**		
Client ID: **ZZZZZZ**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/26/2024**				SeqNo: **5714250**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	293.790	10	100.0	190.7	103	80	120				

Sample ID: **N063295-002B-PS**	SampType: **PS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:				RunNo: **182939**		
Client ID: **ZZZZZZ**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/26/2024**				SeqNo: **5714251**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	12122.702	50	10000	2142	99.8	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SAMPLE RECEIVING ITEMS

N063303

ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

Page 1 of 1

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement	QA/QC	Sample Receipt Condition
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	Excel EDD	RTNE	Y N
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com daniel.moore@arcadis.com	Address:	Geotracker	RWQCB ✓	1. Chilled
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com P.O.#	Labspec	CalTrans	2. Headspace
Submitted By: Riggie Tep		Phone: 949-727-1400, ext 200 Fax:	Others ✓	LEVEL III	3. Container Intact
Title: Field Tech	Phone: 916-786-3302 Fax:		Specify: RWQCB	LEVEL IV	4. Seal Present
Signature: Date: 02/22/24	Sampled By: Riggie Tep		Global ID:	Regulatory	5. IR number 3
I hereby authorize ASSET Labs to perform the tests indicated below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for			Specify State:	6. Method of Cooling: 4°C
Project Name: PG&E Topock - PCM	Signature: Date: 02/22/24				Sample Temp: 3.9°C
Project Number: 30211191					Courier: ASSET Tracking No.:

Matrix: Ground X | Sediment | Potable | Soil | NPDES | Other Solid | Surface

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly)	Nitrate, sulfate (EPA 300.0) (1 L poly)	Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Selenium, Molybdenum (500mL poly)	Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOA)	Ammonia as Nitrogen (SM4500NH3D); H2SO4 (1 L poly)	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 (125 mL poly)	Nitrate (EPA 300.0) (1 L poly)	(1 L poly)	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063303-001	MW-46-175-Q124	2/22/2024	13:52		X		X						X		E	3	P	BNS	
2	-002	MW-46-205-Q124	2/22/2024	13:00		X		X						X		E	3	P	BNS	
3	-003	MW-96-045-Q124	2/22/2024	11:38		X										E	1	P	BNS	
4	-004	MW-96-217-Q124	2/22/2024	10:52		X										E	1	P	BNS	
5	-005	EB-736-Q124	2/22/2024	14:10		X										E	1	P	BNS	
6	-003	MW-32-020-Q124	2/22/2024	9:21		X		X						X		E	3	P	BNS	
7	-007	MW-32-020-EB-Q124	2/22/2024	8:58		X										E	1	P	BNS	
8	-008	MW-32-035-Q124	2/22/2024	8:54		X		X						X		E	3	P	BNS	
9	-009	MW-32-035-EB-Q124	2/22/2024	8:31		X										E	1	P	BNS	
10	-010	MW-47-055-Q124	2/22/2024	12:22		X										E	1	P	BNS	
11	-011	MW-47-115-Q124	2/22/2024	12:53		X										E	1	P	BNS	
12																E	1	P	BNS	
13																				
14																				

Relinquished by (Signature and Printed Name)	Date/Time	Received by (Signature and Printed Name)	Date/Time
M. Riggie Tep	02/22/24 1540	MSCARTIN	2/22/24 1540
MSCARTIN	2/22/24 @1745	Yoanna Rodriguez	2/22/24 1745

Turn Around Time (TAT)

- A = < 24 Hrs or Same Day TAT
- B = Next Workday
- C = 2 Workdays
- D = 3 Workdays
- X E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Preservatives: H=HCL; N=HNO_3; S=H_2SO_4; C=4°C; Z=$Zn(AC)_2$; O=NaOH; T=$Na_2S_2O_3$; Others/Specify: B (NH4)2SO4/NH4OH

Container Type: T=Tube; V=VOA; P=Pint; J=Jar; B=Tedlar; G=Glass; M=Metal; M=Metal; C=Can

Terms

1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
   Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

White=Laboratory Copy

Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	2/22/2024	Workorder:	N063303
Rep sample Temp (Deg C):	3.8	IR Gun ID:	3
Temp Blank:	☑ Yes ☐ No		
Carrier name:	ASSET		
Last 4 digits of Tracking No.:	NA	Packing Material Used:	None
Cooling process:	☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None		

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By: YR YRodriguez 2/26/2024

Reviewed By: for: MBC 03/01/2024

ASSET Laboratories

WORK ORDER Summary

01-Mar-24

WorkOrder: N063303

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 2/22/2024 5:45 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063303-001A	MW-46-175-Q124	2/22/2024 1:52:00 PM	3/8/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063303-001B			3/8/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/8/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/8/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/8/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063303-001C			3/8/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063303-002A	MW-46-205-Q124	2/22/2024 1:00:00 PM	3/8/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063303-002B			3/8/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/8/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/8/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/8/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063303-002C			3/8/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063303-003A	MW-96-045-Q124	2/22/2024 11:38:00 AM	3/8/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063303-004A	MW-96-217-Q124	2/22/2024 10:52:00 AM	3/8/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063303-005A	EB-736-Q124	2/22/2024 2:10:00 PM	3/8/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063303-006A	MW-32-020-Q124	2/22/2024 9:21:00 AM	3/8/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063303-006B			3/8/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/8/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/8/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/8/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063303-006C			3/8/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063303-007A	MW-32-020-EB-Q124	2/22/2024 8:58:00 AM	3/8/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW

WORK ORDER Summary

01-Mar-24

WorkOrder: N063303

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 2/22/2024 5:45 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063303-008A	MW-32-035-Q124	2/22/2024 8:54:00 AM	3/8/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063303-008B			3/8/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/8/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/8/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/8/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063303-008C			3/8/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063303-009A	MW-32-035-EB-Q124	2/22/2024 8:31:00 AM	3/8/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063303-010A	MW-47-055-Q124	2/22/2024 12:22:00 PM	3/8/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063303-011A	MW-47-115-Q124	2/22/2024 12:53:00 PM	3/8/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063303-012A	FOLDER	3/8/2024	3/8/2024		Folder	Folder	☐	☐	☐	LAB
			3/8/2024		Folder	Level IV Report	☐	☐	☐	LAB
			3/8/2024		Folder	Folder	☐	☐	☐	LAB

List of Analysts

ASSET Laboratories Work Order: N063303

NAME	TEST METHOD
Ria Abes	EPA 218.6, EPA 300.0
Diane Jetajobe	EPA 6010B_Dissolved, EPA 6020_Dissolved

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R182996
ASSET #: N063303

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 2/27/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments: Dilution was necessary for some samples due to matrix interference.
Initial dilution for sample N063303-006 was necessary due to matrix. Sample is colored.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer: RBA Date: _____

2nd Level Reviewer: RB 02282024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063303-001A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 2.8421 * 5$$

$$Cr^{+6}, \mu g/L = 14.2105$$

Reporting results in two significant figures,

$$\mathbf{Cr^{+6}, \mu g/L = 14}$$

Reviewed by:

dMocha 3/10/2024

ANALYSIS RUN LOG

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240227A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/27/24 10:29 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/27/24 10:39 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/27/24 10:49 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/27/24 10:58 AM	Reported
13	MB-R182996	MBLK	1	Hexavalent Chromium	02/27/24 11:08 AM	Reported
14	LCS-R182996	LCS	1	Hexavalent Chromium	02/27/24 11:17 AM	Reported
15	MB-107059	MBLK	1	Hexavalent Chromium	02/27/24 11:27 AM	Reported
16	N063246-001B	SAMP	1	Hexavalent Chromium	02/27/24 11:36 AM	Reported
17	N063246-001BREP	DUP	1	Hexavalent Chromium	02/27/24 11:46 AM	Reported
18	N063246-001B	SAMP	5	Hexavalent Chromium	02/27/24 12:09 PM	Not Reported
19	N063246-001BREP	DUP	5	Hexavalent Chromium	02/27/24 12:21 PM	Not Reported
20	N063295-002A	SAMP	5	Hexavalent Chromium	02/27/24 1:26 PM	Reported
21	N063295-002ADUP	DUP	5	Hexavalent Chromium	02/27/24 1:36 PM	Reported
22	N063295-002AMS	MS	5	Hexavalent Chromium	02/27/24 1:45 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/27/24 1:55 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/27/24 2:04 PM	Reported
25	N063303-001A	SAMP	5	Hexavalent Chromium	02/27/24 2:14 PM	Reported
26	N063303-001AMS	MS	5	Hexavalent Chromium	02/27/24 2:23 PM	Reported
27	N063303-001AMSD	MSD	5	Hexavalent Chromium	02/27/24 2:32 PM	Reported
28	N063303-010A	SAMP	5	Hexavalent Chromium	02/27/24 2:42 PM	Reported
29	N063303-010AMS	MS	5	Hexavalent Chromium	02/27/24 2:54 PM	Reported
30	N063303-011A	SAMP	5	Hexavalent Chromium	02/27/24 3:03 PM	Reported
31	N063303-011AMS	MS	5	Hexavalent Chromium	02/27/24 3:13 PM	Reported
32	N063303-002A	SAMP	1	Hexavalent Chromium	02/27/24 3:22 PM	Not Reported
33	N063303-002AMS	MS	1	Hexavalent Chromium	02/27/24 3:32 PM	Not Reported
34	CCV-3	CCV	1	Hexavalent Chromium	02/27/24 3:41 PM	Reported
35	CCB-3	CCB	1	Hexavalent Chromium	02/27/24 3:51 PM	Reported
36	N063303-003A	SAMP	1	Hexavalent Chromium	02/27/24 4:00 PM	Not Reported
37	N063303-003AMS	MS	1	Hexavalent Chromium	02/27/24 4:09 PM	Not Reported
38	N063303-004A	SAMP	1	Hexavalent Chromium	02/27/24 4:19 PM	Not Reported
39	N063303-004AMS	MS	1	Hexavalent Chromium	02/27/24 4:28 PM	Not Reported
40	N063303-006A	SAMP	5	Hexavalent Chromium	02/27/24 4:38 PM	Reported
41	N063303-006AMS	MS	5	Hexavalent Chromium	02/27/24 4:47 PM	Reported
42	N063303-008A	SAMP	1	Hexavalent Chromium	02/27/24 4:57 PM	Not Reported

INJECTION LOG: 240227A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063303-008AMS	MS	1	Hexavalent Chromium	02/27/24 5:06 PM	Not Reported
44	N063303-002A	SAMP	5	Hexavalent Chromium	02/27/24 5:16 PM	Reported
45	N063303-002AMS	MS	5	Hexavalent Chromium	02/27/24 5:25 PM	Reported
46	CCV-4	CCV1	1	Hexavalent Chromium	02/27/24 5:35 PM	Reported
47	CCB-4	CCB	1	Hexavalent Chromium	02/27/24 5:44 PM	Reported
48	N063303-003A	SAMP	5	Hexavalent Chromium	02/27/24 5:53 PM	Reported
49	N063303-003AMS	MS	5	Hexavalent Chromium	02/27/24 6:03 PM	Reported
50	N063303-004A	SAMP	5	Hexavalent Chromium	02/27/24 6:12 PM	Reported
51	N063303-004AMS	MS	5	Hexavalent Chromium	02/27/24 6:22 PM	Reported
52	N063303-008A	SAMP	5	Hexavalent Chromium	02/27/24 6:31 PM	Reported
53	N063303-008AMS	MS	5	Hexavalent Chromium	02/27/24 6:41 PM	Reported
54	N063303-005A	SAMP	1	Hexavalent Chromium	02/27/24 6:50 PM	Reported
55	N063303-005AMS	MS	1	Hexavalent Chromium	02/27/24 7:00 PM	Reported
56	N063303-007A	SAMP	1	Hexavalent Chromium	02/27/24 7:09 PM	Reported
57	N063303-007AMS	MS	1	Hexavalent Chromium	02/27/24 7:19 PM	Reported
58	CCV-5	CCV	1	Hexavalent Chromium	02/27/24 7:28 PM	Reported
59	CCB-5	CCB	1	Hexavalent Chromium	02/27/24 7:37 PM	Reported
60	N063303-009A	SAMP	1	Hexavalent Chromium	02/27/24 7:47 PM	Reported
61	N063303-009AMS	MS	1	Hexavalent Chromium	02/27/24 7:56 PM	Reported
62	CCV-6	CCV1	1	Hexavalent Chromium	02/27/24 8:06 PM	Reported
63	CCB-6	CCB	1	Hexavalent Chromium	02/27/24 8:15 PM	Reported
64	BLANK	BLANK	1	Hexavalent Chromium	02/27/24 8:25 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240227A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**28/Feb/24 11:38:53**
No. of Injections:	**67**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/27/2024 10:29	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/27/2024 10:39	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/27/2024 10:49	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/27/2024 10:58	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/27/2024 11:08	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/27/2024 11:17	Finished	LCS @5ppb, IWST-231228B
15	MB-107059,MBLK,1,	7	1000	Unknown		02/27/2024 11:27	Finished	MB STLC
16	N063246-001B,SAMF	8	1000	Unknown		02/27/2024 11:36	Finished	SAMP,10 mL
17	N063246-001BREP,D	9	1000	Unknown		02/27/2024 11:46	Finished	REP,10 mL
18	N063246-001B,SAMF	1	1000	Unknown		02/27/2024 12:09	Finished	SAMP,2>10 mL
19	N063246-001BREP,D	2	1000	Unknown		02/27/2024 12:21	Finished	REP,2>10 mL
20	N063295-002A,SAMF	2	1000	Unknown		02/27/2024 13:26	Finished	SAMP,2>10 mL
21	N063295-002ADUP,D	3	1000	Unknown		02/27/2024 13:36	Finished	DUP,2>10 mL
22	N063295-002AMS,MS	4	1000	Unknown		02/27/2024 13:45	Finished	MS (5ppb), IWST-231228B,2>
23	CCV-2,CCV1,1,	5	1000	Unknown		02/27/2024 13:55	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	6	1000	Unknown		02/27/2024 14:04	Finished	CCB R240129C
25	N063303-001A,SAMF	7	1000	Unknown		02/27/2024 14:14	Finished	SAMP,2>10 mL
26	N063303-001AMS,MS	8	1000	Unknown		02/27/2024 14:23	Finished	MS (5ppb), IWST-231228B,2>
27	N063303-001AMSD,M	9	1000	Unknown		02/27/2024 14:32	Finished	MSD (5ppb), IWST-231228B,2
28	N063303-010A,SAMF	10	1000	Unknown		02/27/2024 14:42	Finished	SAMP,2>10 mL
29	N063303-010AMS,MS	11	1000	Unknown		02/27/2024 14:54	Finished	MS (5ppb), IWST-231228B,2>
30	N063303-011A,SAMF	12	1000	Unknown		02/27/2024 15:03	Finished	SAMP,2>10 mL
31	N063303-011AMS,MS	13	1000	Unknown		02/27/2024 15:13	Finished	MS (5ppb), IWST-231228B,2>
32	N063303-002A,SAMF	14	1000	Unknown		02/27/2024 15:22	Finished	SAMP,10 mL
33	N063303-002AMS,MS	15	1000	Unknown		02/27/2024 15:32	Finished	MS (1ppb), IWST-231228B,10r
34	CCV-3,CCV,1,	16	1000	Unknown		02/27/2024 15:41	Finished	CCV @5ppb, IWST-231228A
35	CCB-3,CCB,1,	17	1000	Unknown		02/27/2024 15:51	Finished	CCB R240129C
36	N063303-003A,SAMF	18	1000	Unknown		02/27/2024 16:00	Finished	SAMP,10 mL
37	N063303-003AMS,MS	19	1000	Unknown		02/27/2024 16:09	Finished	MS (1ppb), IWST-231228B,10r
38	N063303-004A,SAMF	20	1000	Unknown		02/27/2024 16:19	Finished	SAMP,10 mL
39	N063303-004AMS,MS	21	1000	Unknown		02/27/2024 16:28	Finished	MS (1ppb), IWST-231228B,10r
40	N063303-006A,SAMF	22	1000	Unknown		02/27/2024 16:38	Finished	SAMP,2>10 mL
41	N063303-006AMS,MS	23	1000	Unknown		02/27/2024 16:47	Finished	MS (1ppb), IWST-231228B,2>
42	N063303-008A,SAMF	24	1000	Unknown		02/27/2024 16:57	Finished	SAMP,10 mL
43	N063303-008AMS,MS	25	1000	Unknown		02/27/2024 17:06	Finished	MS (1ppb), IWST-231228B,10r
44	N063303-002A,SAMF	26	1000	Unknown		02/27/2024 17:16	Finished	SAMP,2>10 mL
45	N063303-002AMS,MS	27	1000	Unknown		02/27/2024 17:25	Finished	MS (1ppb), IWST-231228B,2>
46	CCV-4,CCV1,1,	28	1000	Unknown		02/27/2024 17:35	Finished	CCV @10ppb, IWST-231228A
47	CCB-4,CCB,1,	29	1000	Unknown		02/27/2024 17:44	Finished	CCB R240129C
48	N063303-003A,SAMF	30	1000	Unknown		02/27/2024 17:53	Finished	SAMP,2>10 mL
49	N063303-003AMS,MS	31	1000	Unknown		02/27/2024 18:03	Finished	MS (1ppb), IWST-231228B,2>
50	N063303-004A,SAMF	32	1000	Unknown		02/27/2024 18:12	Finished	SAMP,2>10 mL
51	N063303-004AMS,MS	33	1000	Unknown		02/27/2024 18:22	Finished	MS (1ppb), IWST-231228B,2>
52	N063303-008A,SAMF	34	1000	Unknown		02/27/2024 18:31	Finished	SAMP,2>10 mL
53	N063303-008AMS,MS	35	1000	Unknown		02/27/2024 18:41	Finished	MS (1ppb), IWST-231228B,2>
54	N063303-005A,SAMF	36	1000	Unknown		02/27/2024 18:50	Finished	SAMP,10 mL
55	N063303-005AMS,MS	37	1000	Unknown		02/27/2024 19:00	Finished	MS (1ppb), IWST-231228B,10r
56	N063303-007A,SAMF	38	1000	Unknown		02/27/2024 19:09	Finished	SAMP,10 mL
57	N063303-007AMS,MS	39	1000	Unknown		02/27/2024 19:19	Finished	MS (1ppb), IWST-231228B,10r
58	CCV-5,CCV,1,	40	1000	Unknown		02/27/2024 19:28	Finished	CCV @5ppb, IWST-231228A
59	CCB-5,CCB,1,	41	1000	Unknown		02/27/2024 19:37	Finished	CCB R240129C
60	N063303-009A,SAMF	42	1000	Unknown		02/27/2024 19:47	Finished	SAMP,10 mL

61	N063303-009AMS,MS	43	1000	Unknown		02/27/2024 19:56	Finished	MS (1ppb), IWST-231228B,10r
62	CCV-6,CCV1,1,	44	1000	Unknown		02/27/2024 20:06	Finished	CCV @10ppb, IWST-231228A
63	CCB-6,CCB,1,	45	1000	Unknown		02/27/2024 20:15	Finished	CCB R240129C
64	BLANK	46	1000	Unknown		02/27/2024 20:25	Finished	BLANK
65	SHUTDOWN	47	1000	Unknown		02/27/2024 20:34	Finished	
66	Eluent: R240226A	48	1000	Unknown		n.a.	Finished	
67	PCR: R240226B	49	1000	Unknown		n.a.	Finished	

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 7/23/24
Time Prepared: 0915H
Prepared By: [illegible]

Reagent ID:
Sulfuric Acid: 14377
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: N240222A
NH4OH + NH4SO4 buffer: N240126C

6N NaOH N231125C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW23295-1A	9.30	-	~250mL	~250mL		
2)	2A	9.29	-				
3)	3A	9.38	-				
4)	4A	9.66	-				
5)	5A	9.31	-				
6)	6A	9.32	-				
7)	7A	9.34	-				
8)	8A	9.30	-				
9)	MW23297-1A	9.08	9.39			+3	
10)	2A	9.31	-				
11)	3A	9.36	-				
12)	4A	9.72	-				
13)	MW23303-1A	8.74	9.55			+6	
14)	2A	9.32	-				
15)	3A	8.65	9.50			+6	
	4A	8.71	9.52			+6	

Sample Preparation

Date Prepared: 7/24/24
Time Prepared: 0912H / 1400H
Prepared By: MA

Reagent ID:
Sulfuric Acid: 14377
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: N240222A
NH4OH + NH4SO4 buffer: N240126C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW23304-5A	9.70	-	~250mL	~250mL		
2)	6A	9.38	-				
3)	7A	9.68	-				
4)	8A	9.45	-				
5)	9A	9.72	-				
6)	10A	9.46	-				
7)	11A	9.48	-				
8)	MB-107024	7.81	9.60	~2L	~2L	+0.2mL N240126C	TCLP
9)	MW23246-1A	9.08	9.28	1	1	12N HNO3	
10)							
11)							
12)							
13)							
14)							
15)							

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 2/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0427	0.2063	1.0639	2.1157	3.2270	4.3227	0.9999
Measured, in ug/L	0.198500	0.959200	4.946100	9.835700	15.002300	20.095900	
Relative Error (%RE)	-0.8%		-1.1%				

	Stock	Working
Standard Concentration:	1,000,000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **ICV**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5716845**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.834	0.20	5.000	0	96.7	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **ZZZZZZ**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5716846**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.180	0.20	0.2000	0	90.1	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **CCV**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716848**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.923	0.20	5.000	0	98.5	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **ZZZZZZ**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716849**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.199	0.20	0.2000	0	99.2	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **ZZZZZZ**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716859**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.978	0.20	10.00	0	99.8	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **CCV**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716868**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.999	0.20	5.000	0	100	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **ZZZZZZ**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716874**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.740	0.20	10.00	0	97.4	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **CCV**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716886**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.872	0.20	5.000	0	97.4	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **ZZZZZZ**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716890**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.898	0.20	10.00	0	99.0	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **ICB**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/5/2024**	SeqNo: **5716847**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **CCB**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716850**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **CCB**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716860**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **CCB**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716869**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **CCB**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716875**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **CCB**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716887**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **182996**
Client ID: **CCB**	Batch ID: **R182996**	TestNo: **EPA 218.6**		Analysis Date: **2/27/2024**	SeqNo: **5716891**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/27/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.031	
CCV-2	4.031	
CCV-3	4.040	
CCV-4	4.031	
CCV-5	4.031	
CCV-6	4.031	
Average	4.033	
Actual RT Window	3.953 - 4.113	
Applied RT Window	3.833 - 4.233	
MB-R182996	N.A.	N.A.
LCS-R182996	4.031	PASS
MB-107059	N.A.	N.A.
N063246-001B	N.A.	N.A.
N063246-001BREP	N.A.	N.A.
N063246-001B	N.A.	N.A.
N063246-001BREP	N.A.	N.A.
N063295-002A	3.973	PASS
N063295-002ADUP	3.973	PASS
N063295-002AMS	3.973	PASS
N063303-001A	3.965	PASS
N063303-001AMS	3.965	PASS
N063303-001AMSD	3.965	PASS
N063303-010A	4.023	PASS
N063303-010AMS	4.015	PASS
N063303-011A	3.981	PASS
N063303-011AMS	3.981	PASS
N063303-002A	N.A.	N.A.
N063303-002AMS	N.A.	N.A.
N063303-003A	N.A.	N.A.
N063303-004A	N.A.	N.A.
N063303-004AMS	N.A.	N.A.

Reviewed by:

dMocha 3/10/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 2/27/2024

Sample Name	Retention Time	Evaluation
ICV	4.040	
CCV-1	4.031	
CCV-2	4.031	
CCV-3	4.040	
CCV-4	4.031	
CCV-5	4.031	
CCV-6	4.031	
Average	4.033	
Actual RT Window	3.953 - 4.113	
Applied RT Window	3.833 - 4.233	
N063303-006A	N.A.	N.A.
N063303-006AMS	3.948	PASS
N063303-008A	N.A.	N.A.
N063303-002A	3.931	PASS
N063303-002AMS	3.948	PASS
N063303-003A	N.A.	N.A.
N063303-003AMS	3.998	PASS
N063303-004A	N.A.	N.A.
N063303-004AMS	3.956	PASS
N063303-008A	N.A.	N.A.
N063303-008AMS	3.981	PASS
N063303-005A	N.A.	N.A.
N063303-005AMS	4.023	PASS
N063303-007A	N.A.	N.A.
N063303-007AMS	4.023	PASS
N063303-009A	N.A.	N.A.
N063303-009AMS	4.023	PASS

Reviewed by:

dMocha 3/10/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240205A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	02/05/24 1:21 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/05/24 1:30 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	02/05/24 1:40 PM	Reported
12	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 1:49 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240205A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**06/Feb/24 09:32:43**
No. of Injections:	**15**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	9	1000	Unknown		02/05/2024 13:21	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	10	1000	Unknown		02/05/2024 13:30	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	11	1000	Unknown		02/05/2024 13:40	Finished	ICB R240103B
12	BLANK	12	1000	Unknown		02/05/2024 13:49	Finished	BLANK
13	SHUTDOWN	13	1000	Unknown		02/05/2024 13:59	Finished	
14	Eluent: R240205A	14	1000	Unknown		n.a.	Finished	
15	PCR: R240205B	15	1000	Unknown		n.a.	Finished	

Reviewed by:

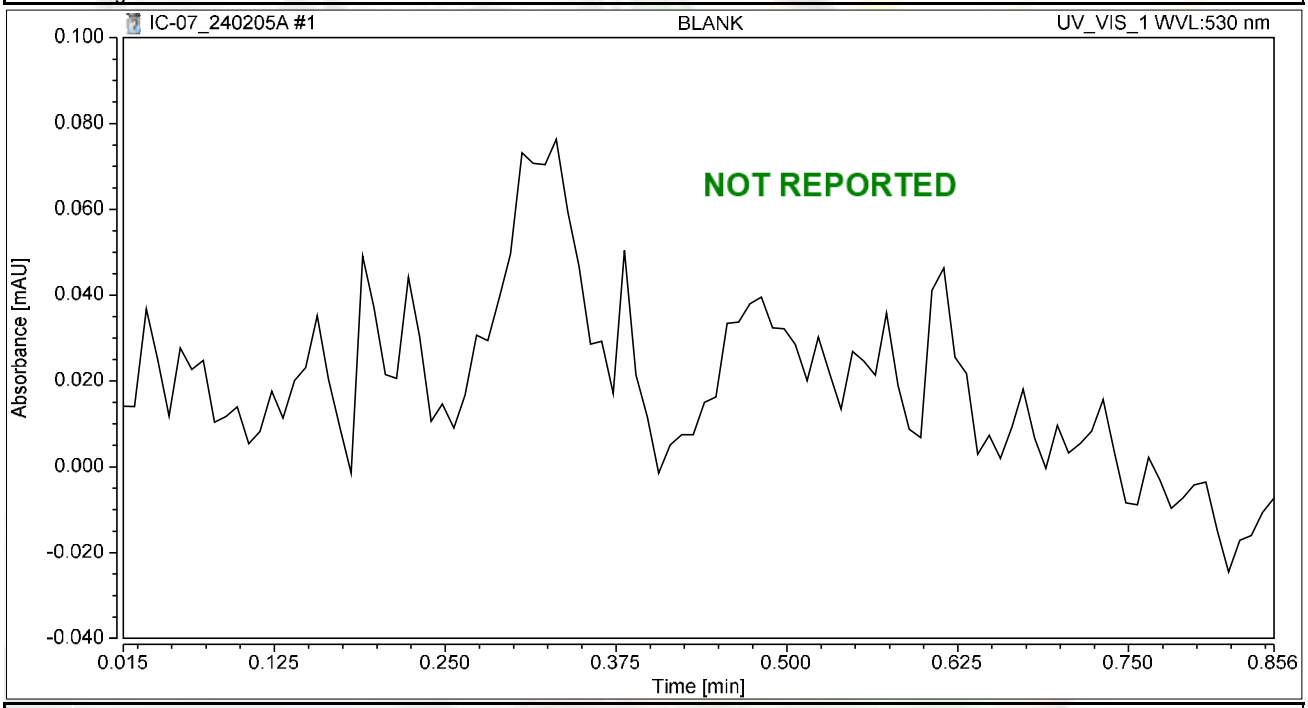
JRB 2/19/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**0.84**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 11:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

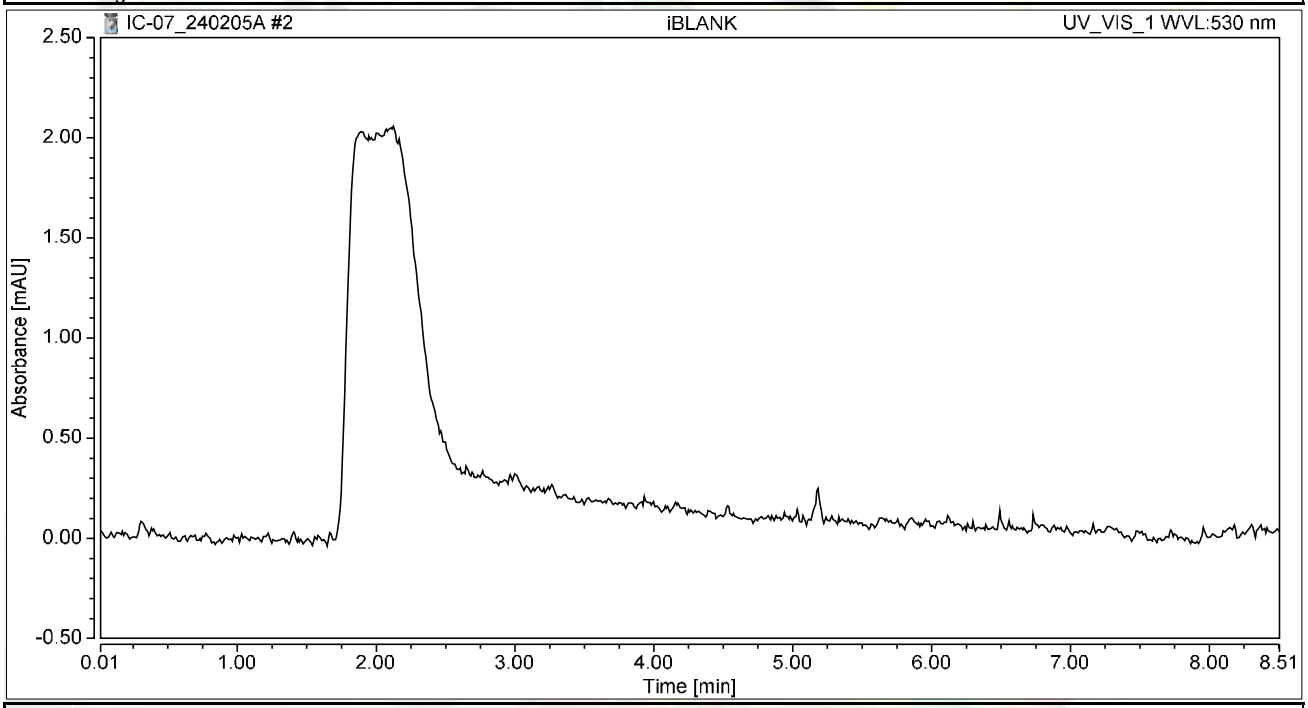
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

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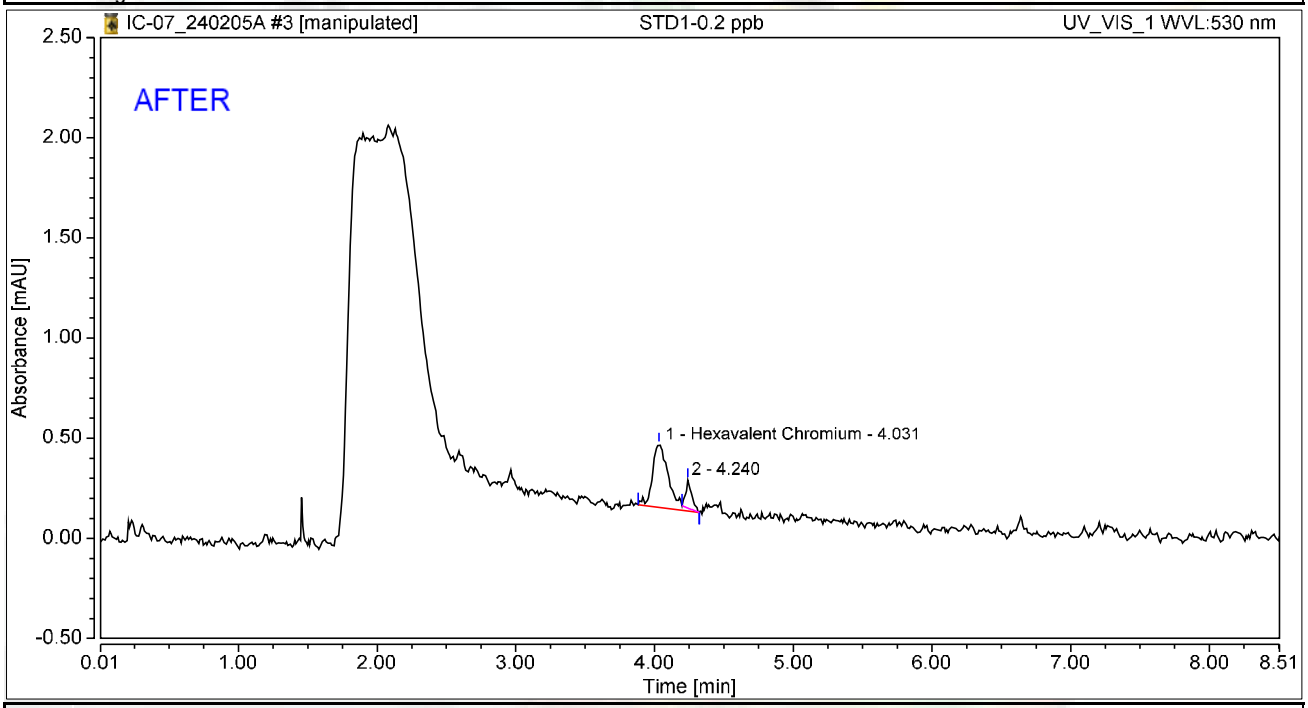
Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.043	0.313	85.65	69.19	0.1985
2		4.240	0.007	0.139	14.35	30.81	n.a.
Total:			**0.050**	**0.452**	**100.00**	**100.00**	

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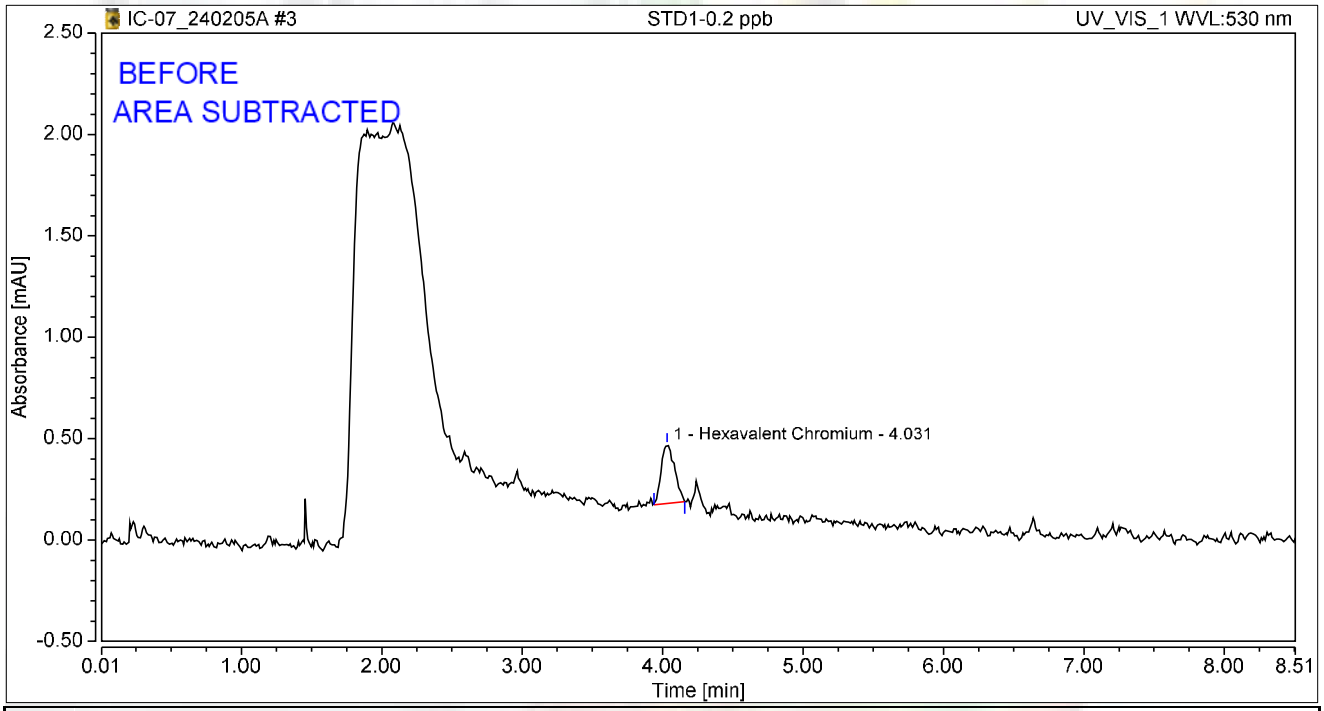
Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

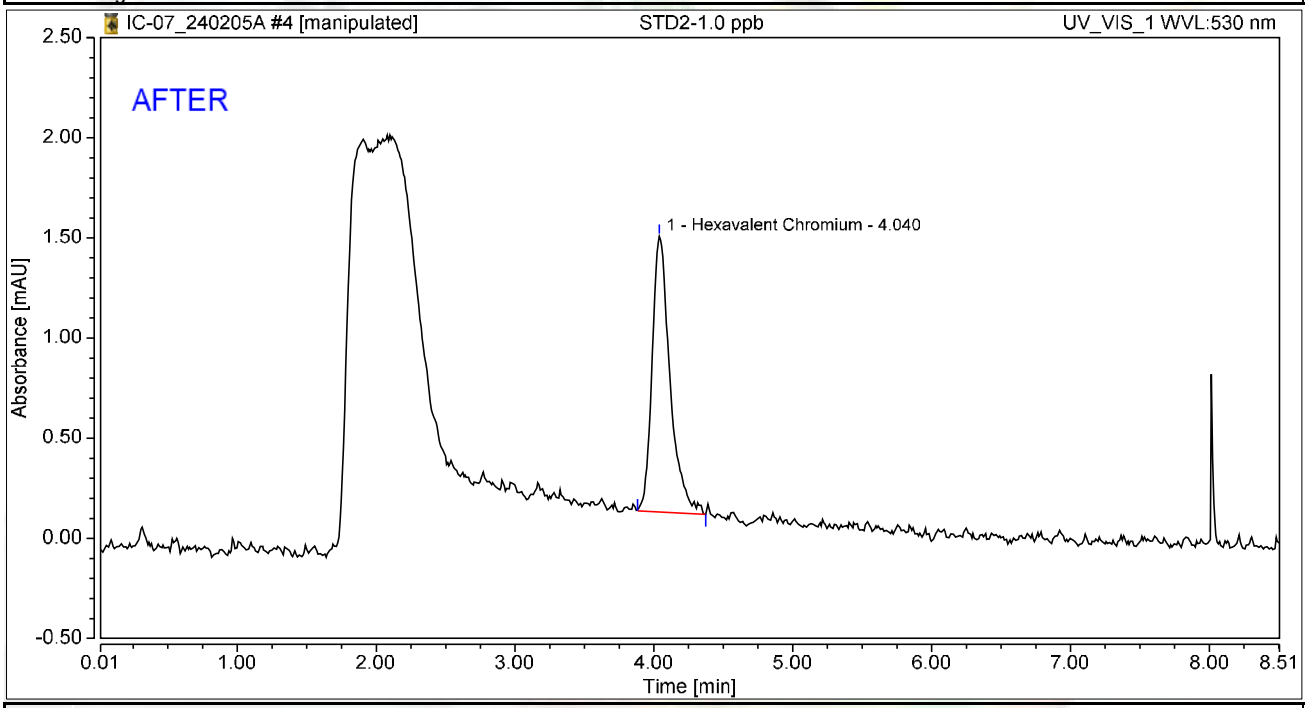
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.032	0.288	100.00	100.00	0.1502
Total:			**0.032**	**0.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.206	1.377	100.00	100.00	0.9592
Total:			**0.206**	**1.377**	**100.00**	**100.00**	

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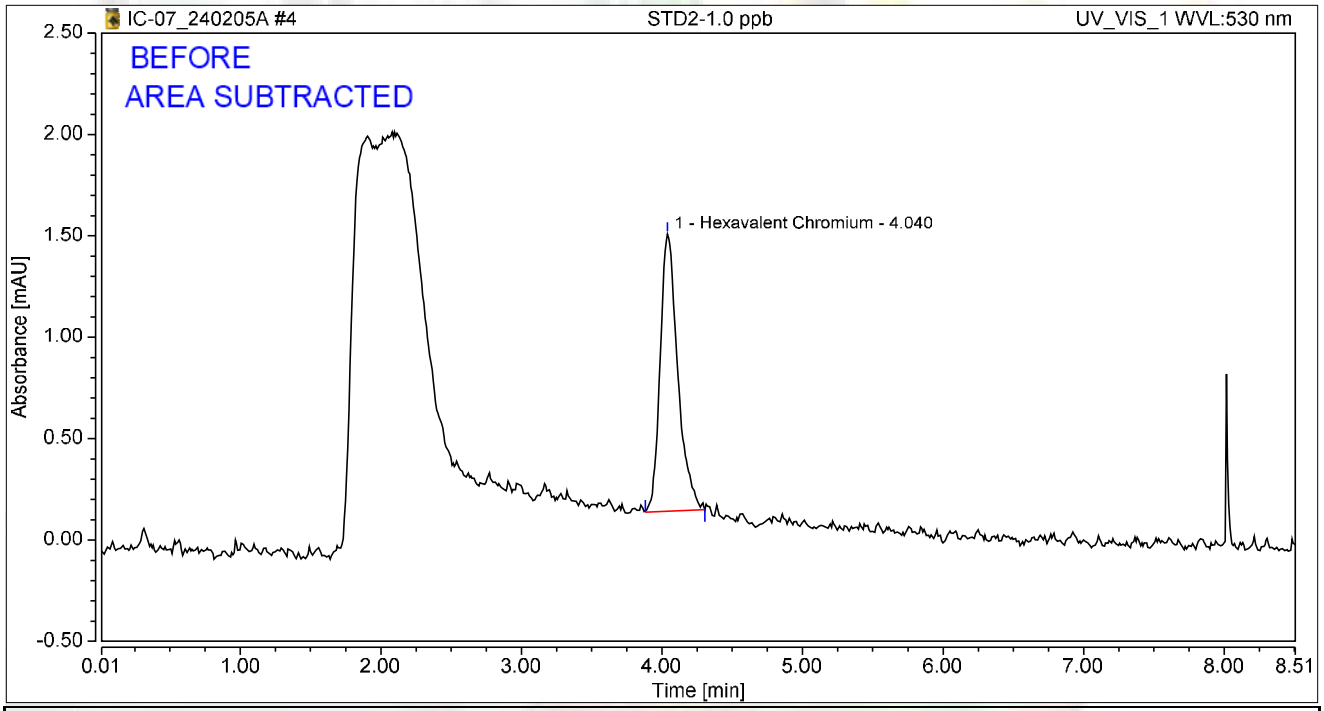
Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

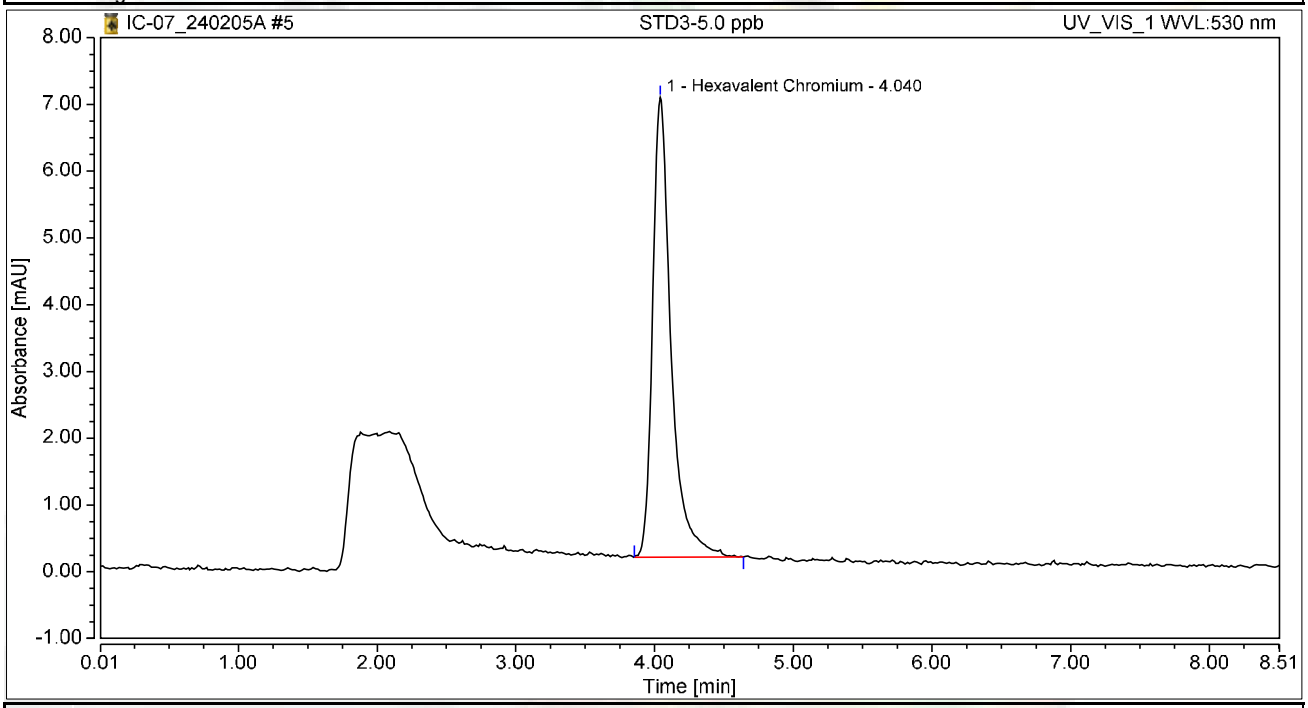
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	0.198	1.367	100.00	100.00	0.9223
Total:			**0.198**	**1.367**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

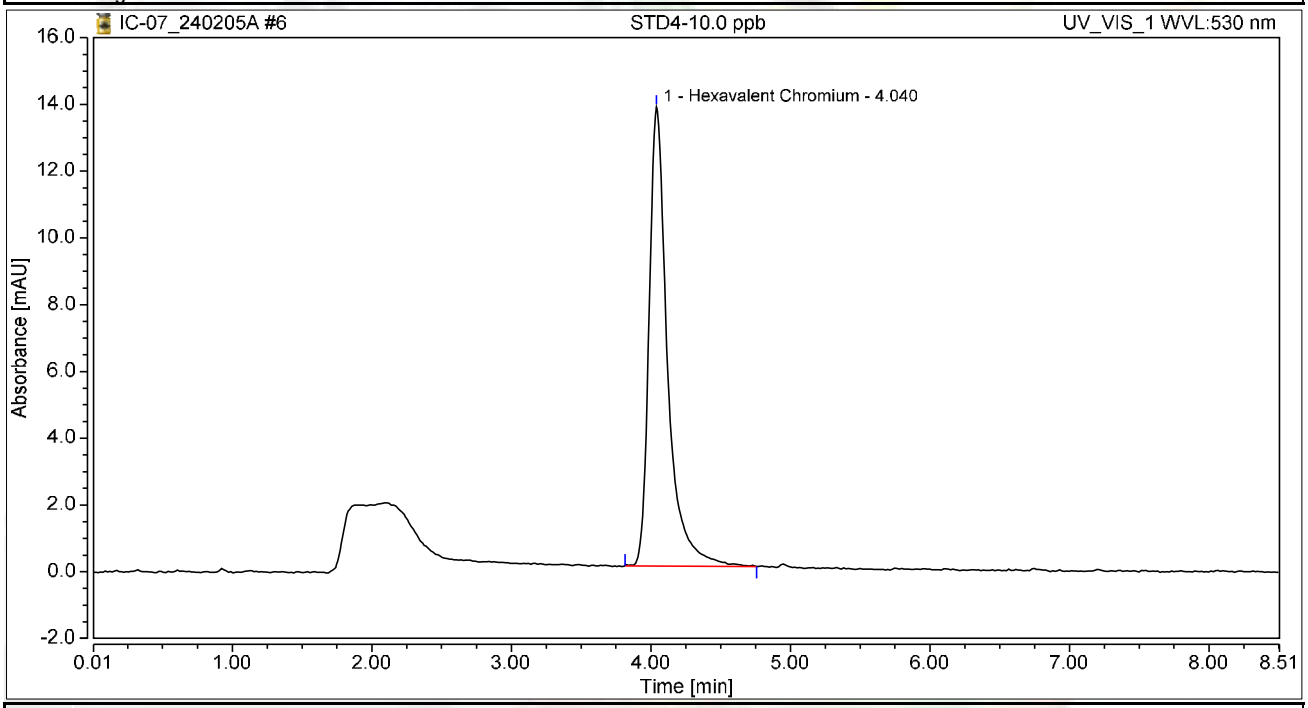
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.064	6.885	100.00	100.00	4.9461
Total:			**1.064**	**6.885**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

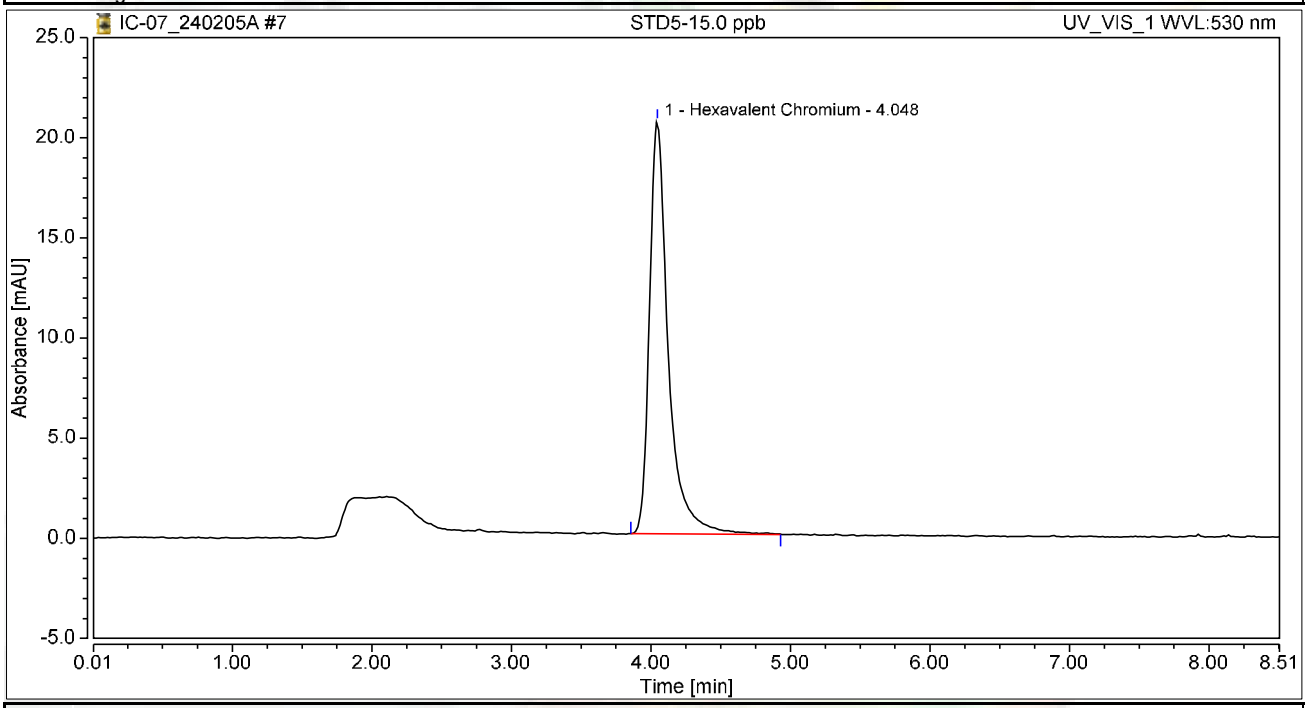
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	2.116	13.748	100.00	100.00	9.8357
Total:			**2.116**	**13.748**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

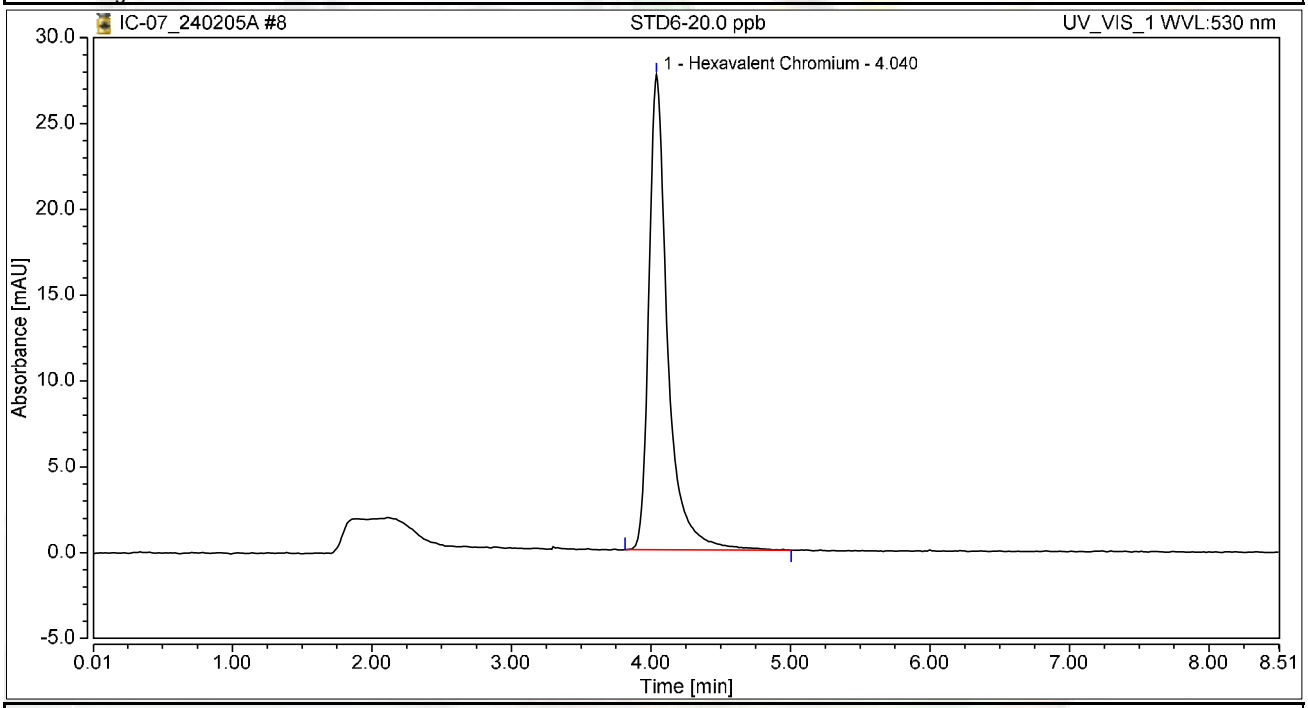
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	3.227	20.605	100.00	100.00	15.0023
Total:			**3.227**	**20.605**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:08**	*Sample Weight:*	**1.0000**

Chromatogram



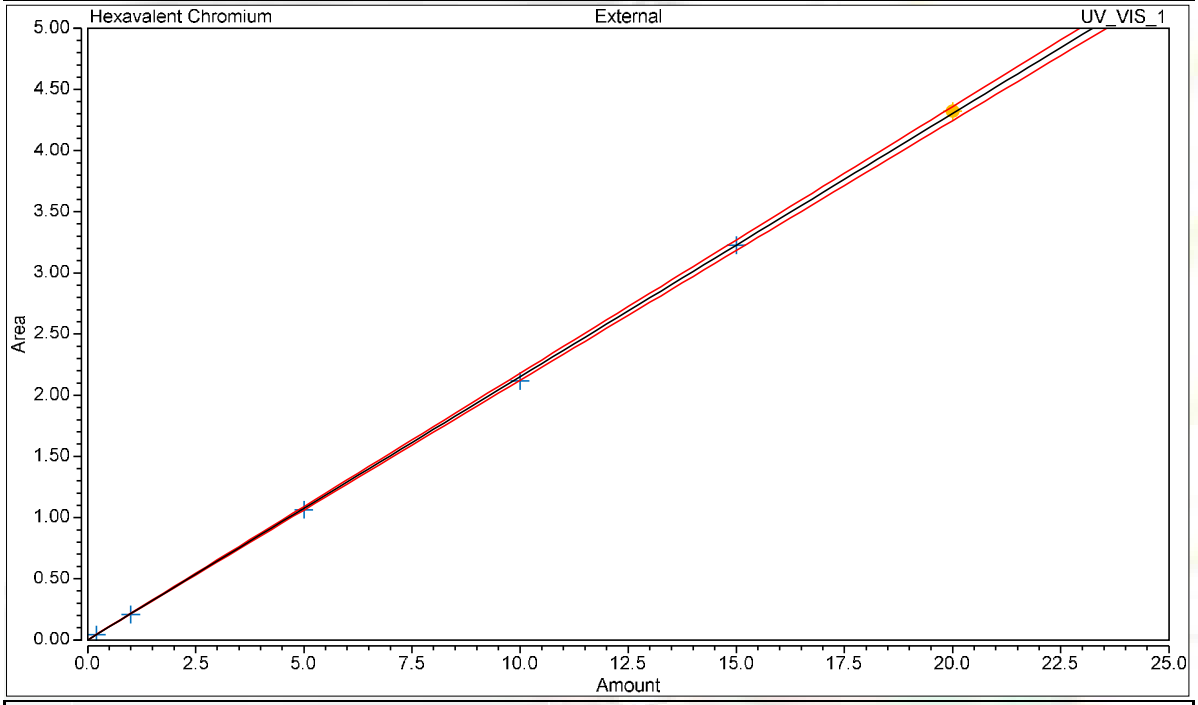
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	4.323	27.676	100.00	100.00	20.0959
Total:			**4.323**	**27.676**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2151
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99987

Calibration Plot — Hexavalent Chromium



Calibration Results — Hexavalent Chromium

No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0427	0.043	0.313
4	STD2-1.0 ppb	02	1.0000	0.2063	0.206	1.377
5	STD3-5.0 ppb	03	5.0000	1.0639	1.064	6.885
6	STD4-10.0 ppb	04	10.0000	2.1157	2.116	13.748
7	STD5-15.0 ppb	05	15.0000	3.2270	3.227	20.605
8	STD6-20.0 ppb	06	20.0000	4.3227	4.323	27.676

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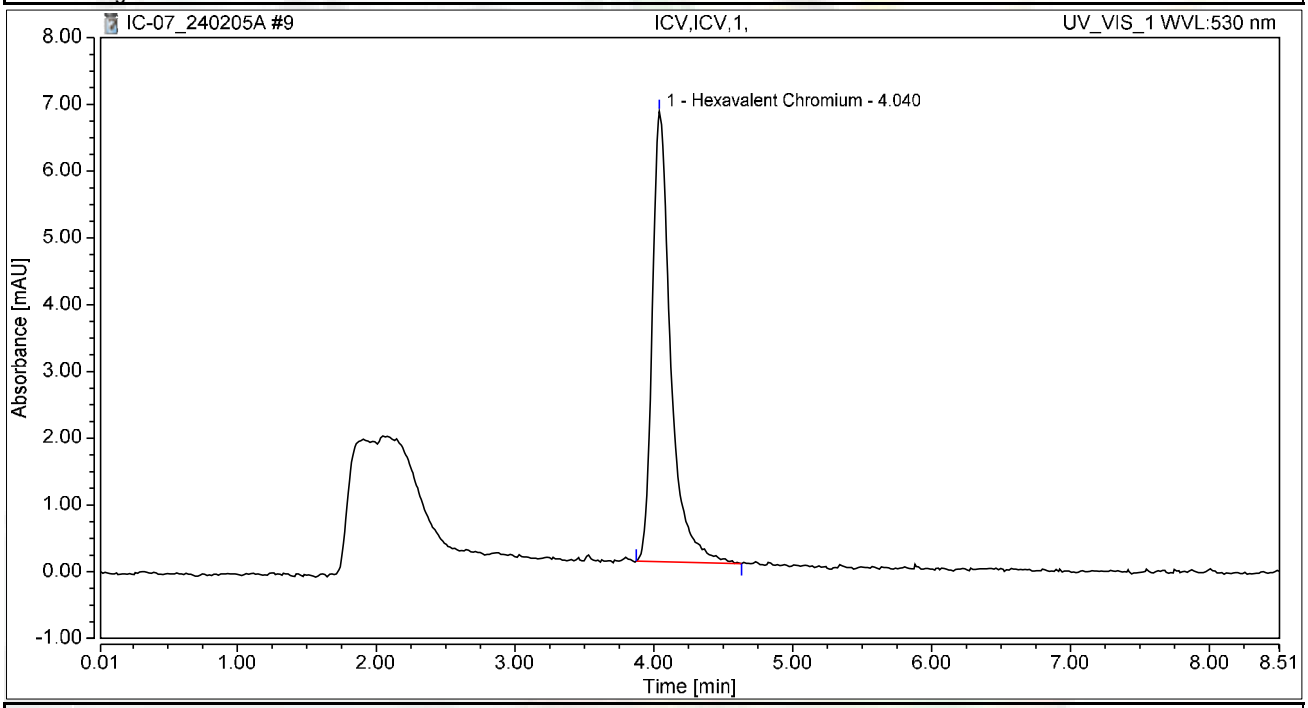
Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

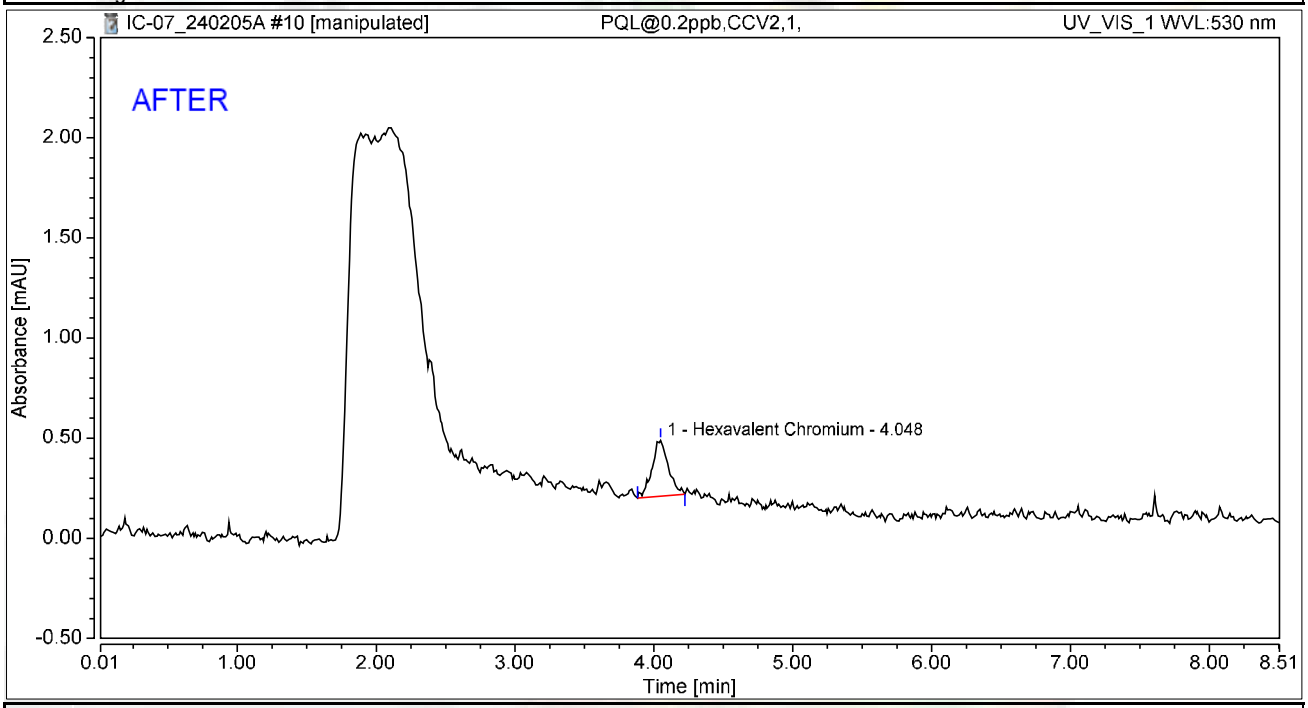
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.040	6.743	100.00	100.00	4.8342
Total:			**1.040**	**6.743**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.039	0.279	100.00	100.00	0.1802
Total:			**0.039**	**0.279**	**100.00**	**100.00**	

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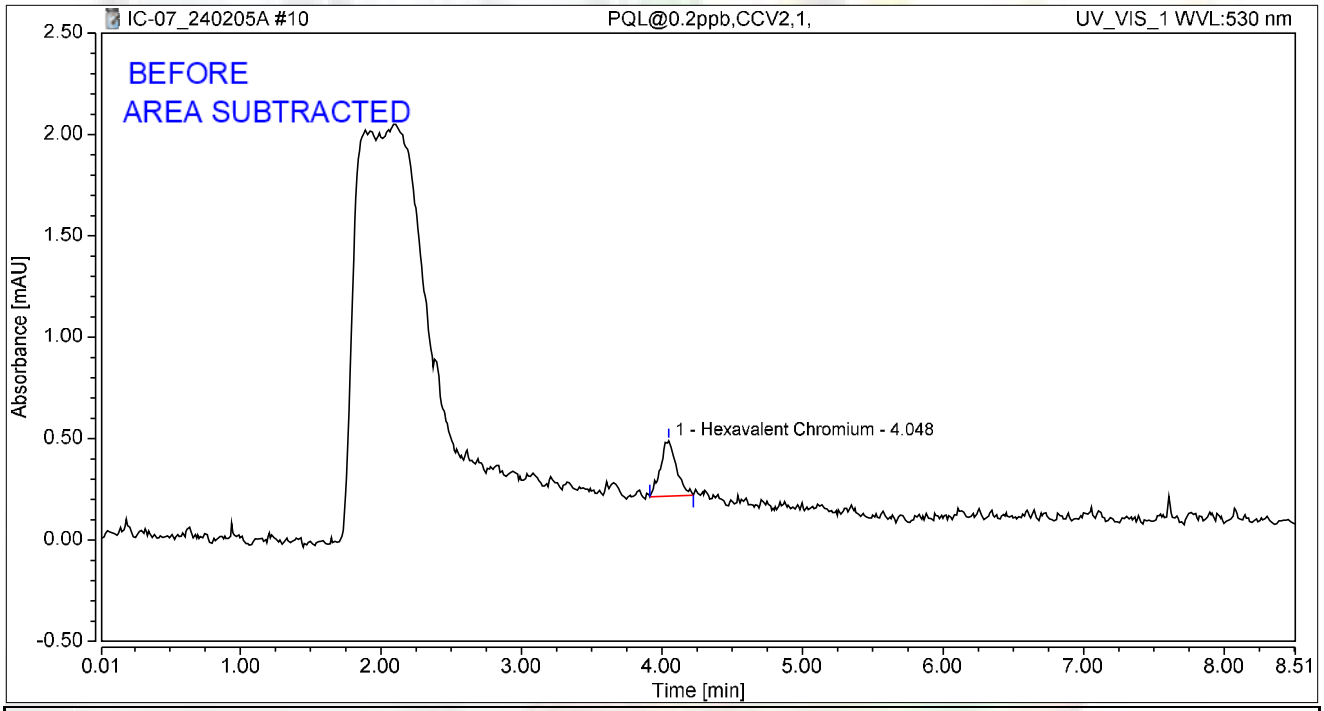
Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

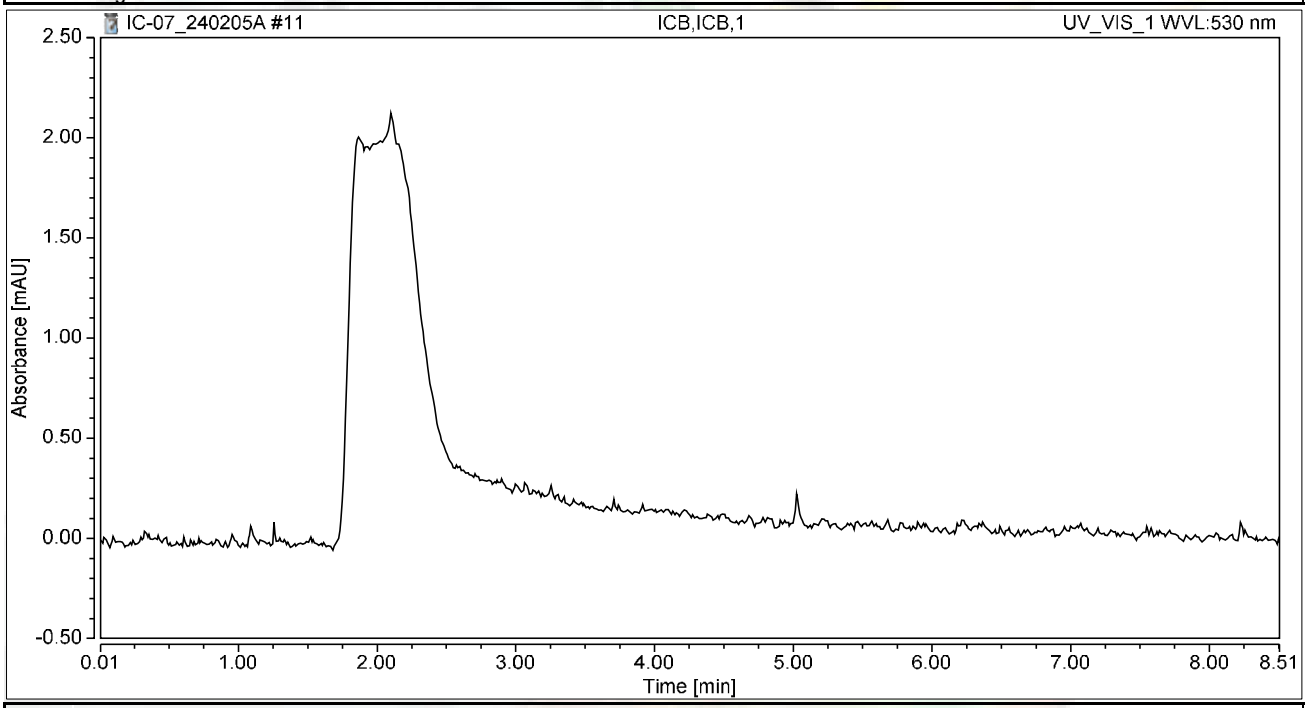
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	0.036	0.273	100.00	100.00	0.1694
Total:			**0.036**	**0.273**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Feb/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

JRB 2/19/2024

RAW DATA

INJECTION LOG: 240227A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	02/05/24 11:59 AM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	02/05/24 12:09 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:19 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:28 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:38 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:47 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 12:57 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	02/05/24 1:08 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	02/27/24 10:29 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	02/27/24 10:39 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	02/27/24 10:49 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	02/27/24 10:58 AM	Reported
13	MB-R182996	MBLK	1	Hexavalent Chromium	02/27/24 11:08 AM	Reported
14	LCS-R182996	LCS	1	Hexavalent Chromium	02/27/24 11:17 AM	Reported
15	MB-107059	MBLK	1	Hexavalent Chromium	02/27/24 11:27 AM	Reported
16	N063246-001B	SAMP	1	Hexavalent Chromium	02/27/24 11:36 AM	Reported
17	N063246-001BREP	DUP	1	Hexavalent Chromium	02/27/24 11:46 AM	Reported
18	N063246-001B	SAMP	5	Hexavalent Chromium	02/27/24 12:09 PM	Not Reported
19	N063246-001BREP	DUP	5	Hexavalent Chromium	02/27/24 12:21 PM	Not Reported
20	N063295-002A	SAMP	5	Hexavalent Chromium	02/27/24 1:26 PM	Reported
21	N063295-002ADUP	DUP	5	Hexavalent Chromium	02/27/24 1:36 PM	Reported
22	N063295-002AMS	MS	5	Hexavalent Chromium	02/27/24 1:45 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	02/27/24 1:55 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	02/27/24 2:04 PM	Reported
25	N063303-001A	SAMP	5	Hexavalent Chromium	02/27/24 2:14 PM	Reported
26	N063303-001AMS	MS	5	Hexavalent Chromium	02/27/24 2:23 PM	Reported
27	N063303-001AMSD	MSD	5	Hexavalent Chromium	02/27/24 2:32 PM	Reported
28	N063303-010A	SAMP	5	Hexavalent Chromium	02/27/24 2:42 PM	Reported
29	N063303-010AMS	MS	5	Hexavalent Chromium	02/27/24 2:54 PM	Reported
30	N063303-011A	SAMP	5	Hexavalent Chromium	02/27/24 3:03 PM	Reported
31	N063303-011AMS	MS	5	Hexavalent Chromium	02/27/24 3:13 PM	Reported
32	N063303-002A	SAMP	1	Hexavalent Chromium	02/27/24 3:22 PM	Not Reported
33	N063303-002AMS	MS	1	Hexavalent Chromium	02/27/24 3:32 PM	Not Reported
34	CCV-3	CCV	1	Hexavalent Chromium	02/27/24 3:41 PM	Reported
35	CCB-3	CCB	1	Hexavalent Chromium	02/27/24 3:51 PM	Reported
36	N063303-003A	SAMP	1	Hexavalent Chromium	02/27/24 4:00 PM	Not Reported
37	N063303-003AMS	MS	1	Hexavalent Chromium	02/27/24 4:09 PM	Not Reported
38	N063303-004A	SAMP	1	Hexavalent Chromium	02/27/24 4:19 PM	Not Reported
39	N063303-004AMS	MS	1	Hexavalent Chromium	02/27/24 4:28 PM	Not Reported
40	N063303-006A	SAMP	5	Hexavalent Chromium	02/27/24 4:38 PM	Reported
41	N063303-006AMS	MS	5	Hexavalent Chromium	02/27/24 4:47 PM	Reported
42	N063303-008A	SAMP	1	Hexavalent Chromium	02/27/24 4:57 PM	Not Reported

Reviewed by:

JRB 2/28/2024

INJECTION LOG: 240227A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063303-008AMS	MS	1	Hexavalent Chromium	02/27/24 5:06 PM	Not Reported
44	N063303-002A	SAMP	5	Hexavalent Chromium	02/27/24 5:16 PM	Reported
45	N063303-002AMS	MS	5	Hexavalent Chromium	02/27/24 5:25 PM	Reported
46	CCV-4	CCV1	1	Hexavalent Chromium	02/27/24 5:35 PM	Reported
47	CCB-4	CCB	1	Hexavalent Chromium	02/27/24 5:44 PM	Reported
48	N063303-003A	SAMP	5	Hexavalent Chromium	02/27/24 5:53 PM	Reported
49	N063303-003AMS	MS	5	Hexavalent Chromium	02/27/24 6:03 PM	Reported
50	N063303-004A	SAMP	5	Hexavalent Chromium	02/27/24 6:12 PM	Reported
51	N063303-004AMS	MS	5	Hexavalent Chromium	02/27/24 6:22 PM	Reported
52	N063303-008A	SAMP	5	Hexavalent Chromium	02/27/24 6:31 PM	Reported
53	N063303-008AMS	MS	5	Hexavalent Chromium	02/27/24 6:41 PM	Reported
54	N063303-005A	SAMP	1	Hexavalent Chromium	02/27/24 6:50 PM	Reported
55	N063303-005AMS	MS	1	Hexavalent Chromium	02/27/24 7:00 PM	Reported
56	N063303-007A	SAMP	1	Hexavalent Chromium	02/27/24 7:09 PM	Reported
57	N063303-007AMS	MS	1	Hexavalent Chromium	02/27/24 7:19 PM	Reported
58	CCV-5	CCV	1	Hexavalent Chromium	02/27/24 7:28 PM	Reported
59	CCB-5	CCB	1	Hexavalent Chromium	02/27/24 7:37 PM	Reported
60	N063303-009A	SAMP	1	Hexavalent Chromium	02/27/24 7:47 PM	Reported
61	N063303-009AMS	MS	1	Hexavalent Chromium	02/27/24 7:56 PM	Reported
62	CCV-6	CCV1	1	Hexavalent Chromium	02/27/24 8:06 PM	Reported
63	CCB-6	CCB	1	Hexavalent Chromium	02/27/24 8:15 PM	Reported
64	BLANK	BLANK	1	Hexavalent Chromium	02/27/24 8:25 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240227A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**28/Feb/24 11:38:53**
No. of Injections:	**67**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		02/05/2024 11:59	Finished	BLANK
2	iBLANK	2	1000	Unknown		02/05/2024 12:09	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	3	1000	Calibration Standard	01	02/05/2024 12:19	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	4	1000	Calibration Standard	02	02/05/2024 12:28	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	5	1000	Calibration Standard	03	02/05/2024 12:38	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	6	1000	Calibration Standard	04	02/05/2024 12:47	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	7	1000	Calibration Standard	05	02/05/2024 12:57	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	8	1000	Calibration Standard	06	02/05/2024 13:08	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		02/27/2024 10:29	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		02/27/2024 10:39	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		02/27/2024 10:49	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1,	4	1000	Unknown		02/27/2024 10:58	Finished	CCB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		02/27/2024 11:08	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		02/27/2024 11:17	Finished	LCS @5ppb, IWST-231228B
15	MB-107059,MBLK,1,	7	1000	Unknown		02/27/2024 11:27	Finished	MB STLC
16	N063246-001B,SAMF	8	1000	Unknown		02/27/2024 11:36	Finished	SAMP,10 mL
17	N063246-001BREP,D	9	1000	Unknown		02/27/2024 11:46	Finished	REP,10 mL
18	N063246-001B,SAMF	1	1000	Unknown		02/27/2024 12:09	Finished	SAMP,2>10 mL
19	N063246-001BREP,D	2	1000	Unknown		02/27/2024 12:21	Finished	REP,2>10 mL
20	N063295-002A,SAMF	2	1000	Unknown		02/27/2024 13:26	Finished	SAMP,2>10 mL
21	N063295-002ADUP,D	3	1000	Unknown		02/27/2024 13:36	Finished	DUP,2>10 mL
22	N063295-002AMS,MS	4	1000	Unknown		02/27/2024 13:45	Finished	MS (5ppb), IWST-231228B,2>1
23	CCV-2,CCV1,1,	5	1000	Unknown		02/27/2024 13:55	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	6	1000	Unknown		02/27/2024 14:04	Finished	CCB R240129C
25	N063303-001A,SAMF	7	1000	Unknown		02/27/2024 14:14	Finished	SAMP,2>10 mL
26	N063303-001AMS,MS	8	1000	Unknown		02/27/2024 14:23	Finished	MS (5ppb), IWST-231228B,2>1
27	N063303-001AMSD,M	9	1000	Unknown		02/27/2024 14:32	Finished	MSD (5ppb), IWST-231228B,2
28	N063303-010A,SAMF	10	1000	Unknown		02/27/2024 14:42	Finished	SAMP,2>10 mL
29	N063303-010AMS,MS	11	1000	Unknown		02/27/2024 14:54	Finished	MS (5ppb), IWST-231228B,2>1
30	N063303-011A,SAMF	12	1000	Unknown		02/27/2024 15:03	Finished	SAMP,2>10 mL
31	N063303-011AMS,MS	13	1000	Unknown		02/27/2024 15:13	Finished	MS (5ppb), IWST-231228B,2>1
32	N063303-002A,SAMF	14	1000	Unknown		02/27/2024 15:22	Finished	SAMP,10 mL
33	N063303-002AMS,MS	15	1000	Unknown		02/27/2024 15:32	Finished	MS (1ppb), IWST-231228B,10r
34	CCV-3,CCV,1,	16	1000	Unknown		02/27/2024 15:41	Finished	CCV @5ppb, IWST-231228A
35	CCB-3,CCB,1,	17	1000	Unknown		02/27/2024 15:51	Finished	CCB R240129C
36	N063303-003A,SAMF	18	1000	Unknown		02/27/2024 16:00	Finished	SAMP,10 mL
37	N063303-003AMS,MS	19	1000	Unknown		02/27/2024 16:09	Finished	MS (1ppb), IWST-231228B,10r
38	N063303-004A,SAMF	20	1000	Unknown		02/27/2024 16:19	Finished	SAMP,10 mL
39	N063303-004AMS,MS	21	1000	Unknown		02/27/2024 16:28	Finished	MS (1ppb), IWST-231228B,10r
40	N063303-006A,SAMF	22	1000	Unknown		02/27/2024 16:38	Finished	SAMP,2>10 mL
41	N063303-006AMS,MS	23	1000	Unknown		02/27/2024 16:47	Finished	MS (1ppb), IWST-231228B,2>1
42	N063303-008A,SAMF	24	1000	Unknown		02/27/2024 16:57	Finished	SAMP,10 mL
43	N063303-008AMS,MS	25	1000	Unknown		02/27/2024 17:06	Finished	MS (1ppb), IWST-231228B,10r
44	N063303-002A,SAMF	26	1000	Unknown		02/27/2024 17:16	Finished	SAMP,2>10 mL
45	N063303-002AMS,MS	27	1000	Unknown		02/27/2024 17:25	Finished	MS (1ppb), IWST-231228B,2>1
46	CCV-4,CCV1,1,	28	1000	Unknown		02/27/2024 17:35	Finished	CCV @10ppb, IWST-231228A
47	CCB-4,CCB,1,	29	1000	Unknown		02/27/2024 17:44	Finished	CCB R240129C
48	N063303-003A,SAMF	30	1000	Unknown		02/27/2024 17:53	Finished	SAMP,2>10 mL
49	N063303-003AMS,MS	31	1000	Unknown		02/27/2024 18:03	Finished	MS (1ppb), IWST-231228B,2>1
50	N063303-004A,SAMF	32	1000	Unknown		02/27/2024 18:12	Finished	SAMP,2>10 mL
51	N063303-004AMS,MS	33	1000	Unknown		02/27/2024 18:22	Finished	MS (1ppb), IWST-231228B,2>1
52	N063303-008A,SAMF	34	1000	Unknown		02/27/2024 18:31	Finished	SAMP,2>10 mL
53	N063303-008AMS,MS	35	1000	Unknown		02/27/2024 18:41	Finished	MS (1ppb), IWST-231228B,2>1
54	N063303-005A,SAMF	36	1000	Unknown		02/27/2024 18:50	Finished	SAMP,10 mL
55	N063303-005AMS,MS	37	1000	Unknown		02/27/2024 19:00	Finished	MS (1ppb), IWST-231228B,10r
56	N063303-007A,SAMF	38	1000	Unknown		02/27/2024 19:09	Finished	SAMP,10 mL
57	N063303-007AMS,MS	39	1000	Unknown		02/27/2024 19:19	Finished	MS (1ppb), IWST-231228B,10r
58	CCV-5,CCV,1,	40	1000	Unknown		02/27/2024 19:28	Finished	CCV @5ppb, IWST-231228A
59	CCB-5,CCB,1,	41	1000	Unknown		02/27/2024 19:37	Finished	CCB R240129C
60	N063303-009A,SAMF	42	1000	Unknown		02/27/2024 19:47	Finished	SAMP,10 mL

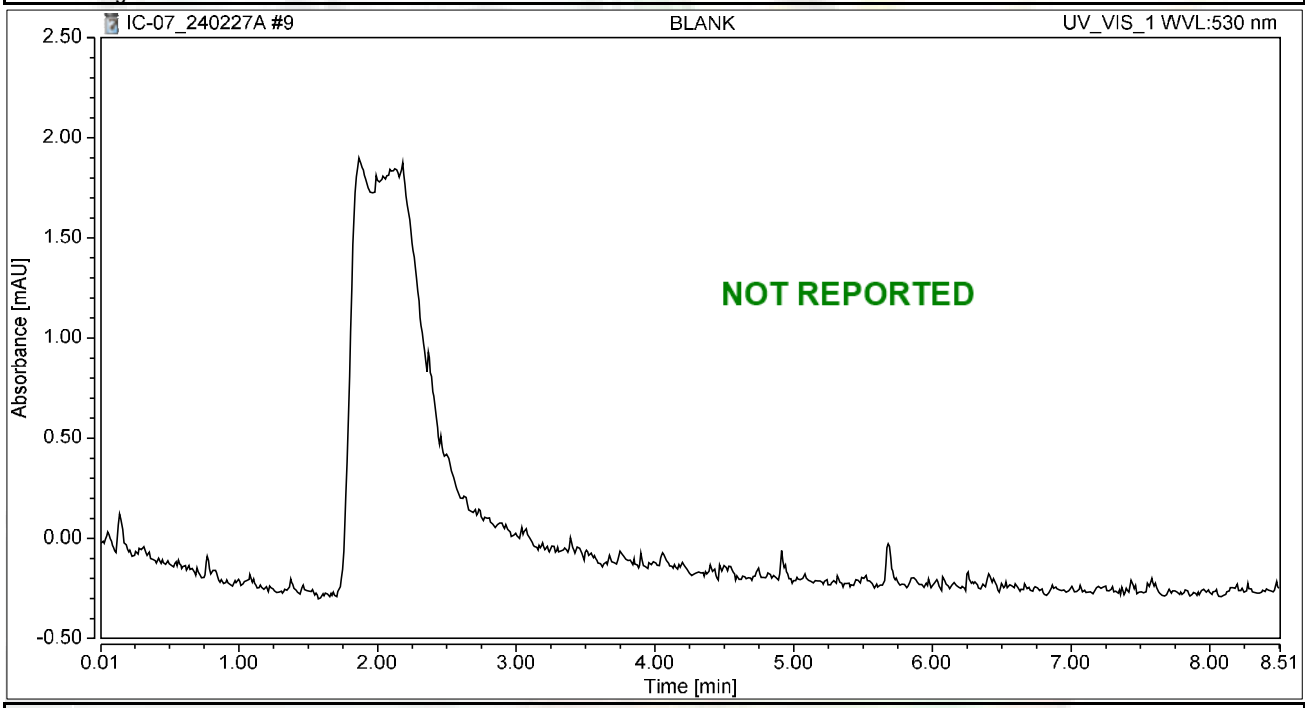
61	N063303-009AMS,MS	43	1000	Unknown		02/27/2024 19:56	Finished	MS (1ppb), IWST-231228B,10r
62	CCV-6,CCV1,1,	44	1000	Unknown		02/27/2024 20:06	Finished	CCV @10ppb, IWST-231228A
63	CCB-6,CCB,1,	45	1000	Unknown		02/27/2024 20:15	Finished	CCB R240129C
64	BLANK	46	1000	Unknown		02/27/2024 20:25	Finished	BLANK
65	SHUTDOWN	47	1000	Unknown		02/27/2024 20:34	Finished	
66	Eluent: R240226A	48	1000	Unknown		n.a.	Finished	
67	PCR: R240226B	49	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 10:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

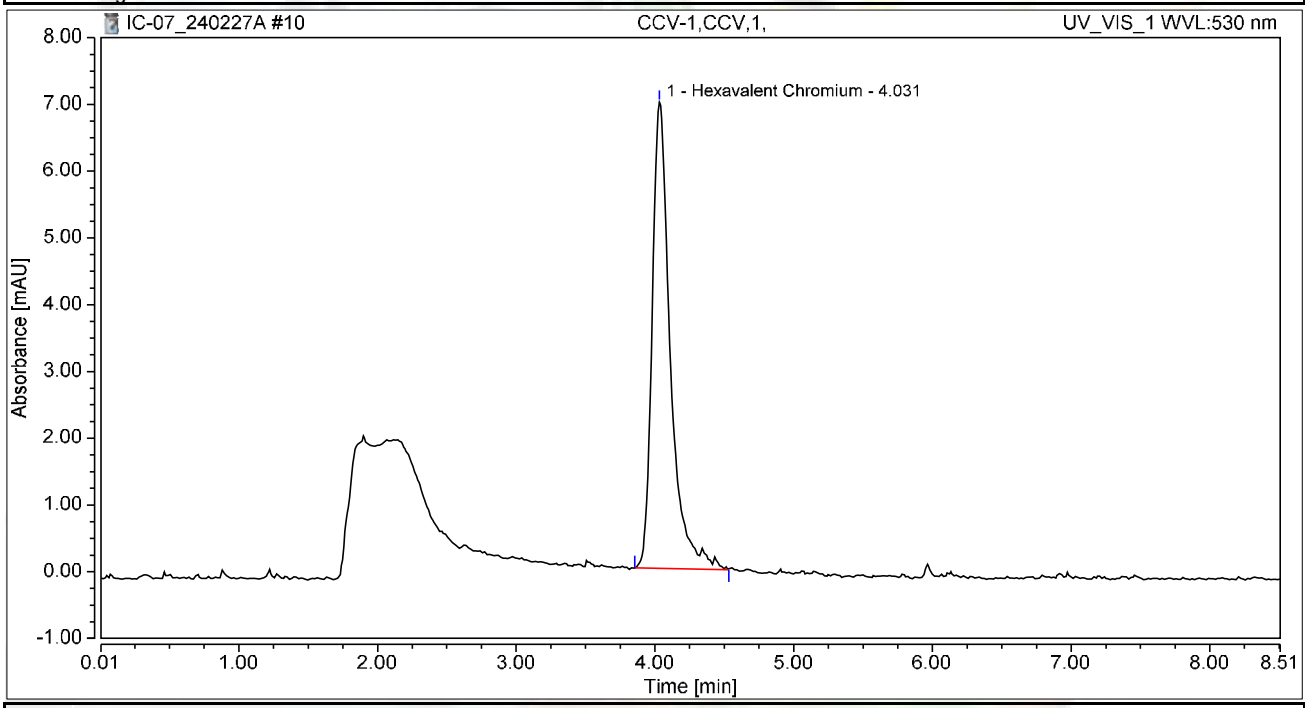
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 10:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	1.059	6.981	100.00	100.00	4.9231
Total:			**1.059**	**6.981**	**100.00**	**100.00**	

Reviewed by:

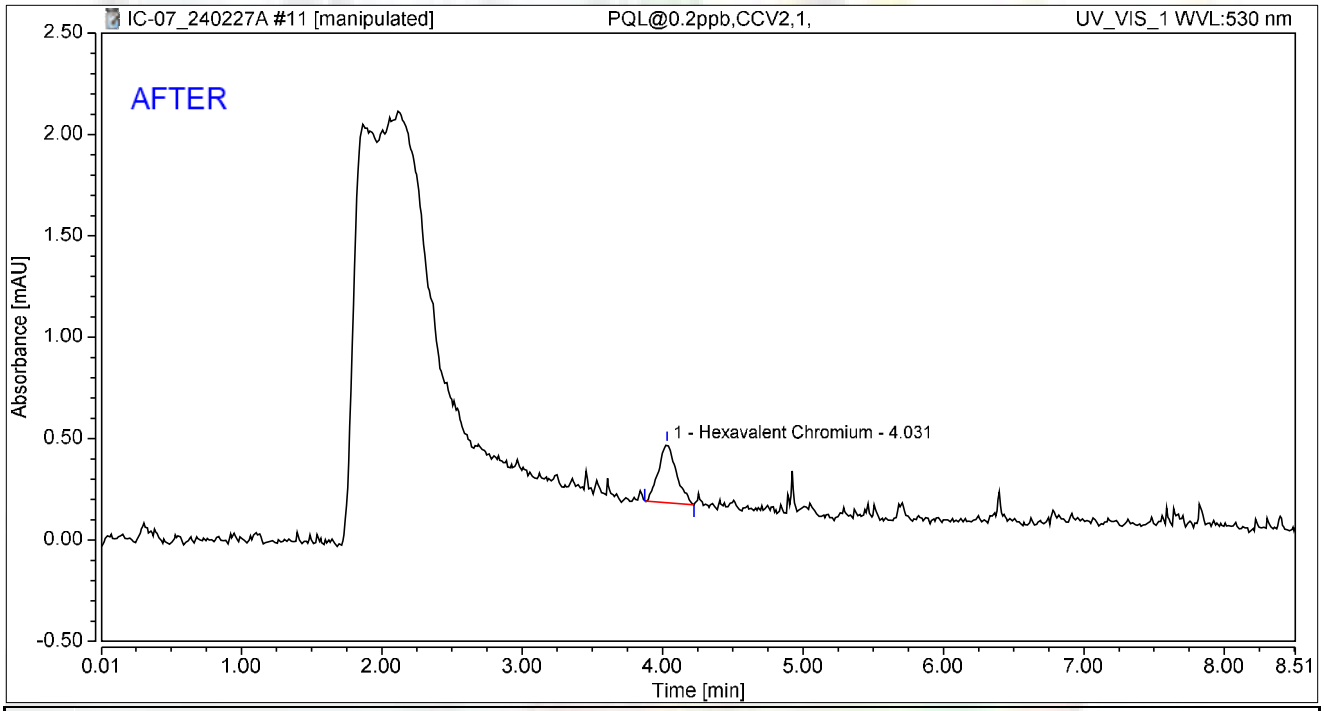
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 10:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.043	0.290	100.00	100.00	0.1985
Total:			**0.043**	**0.290**	**100.00**	**100.00**	

Reviewed by:

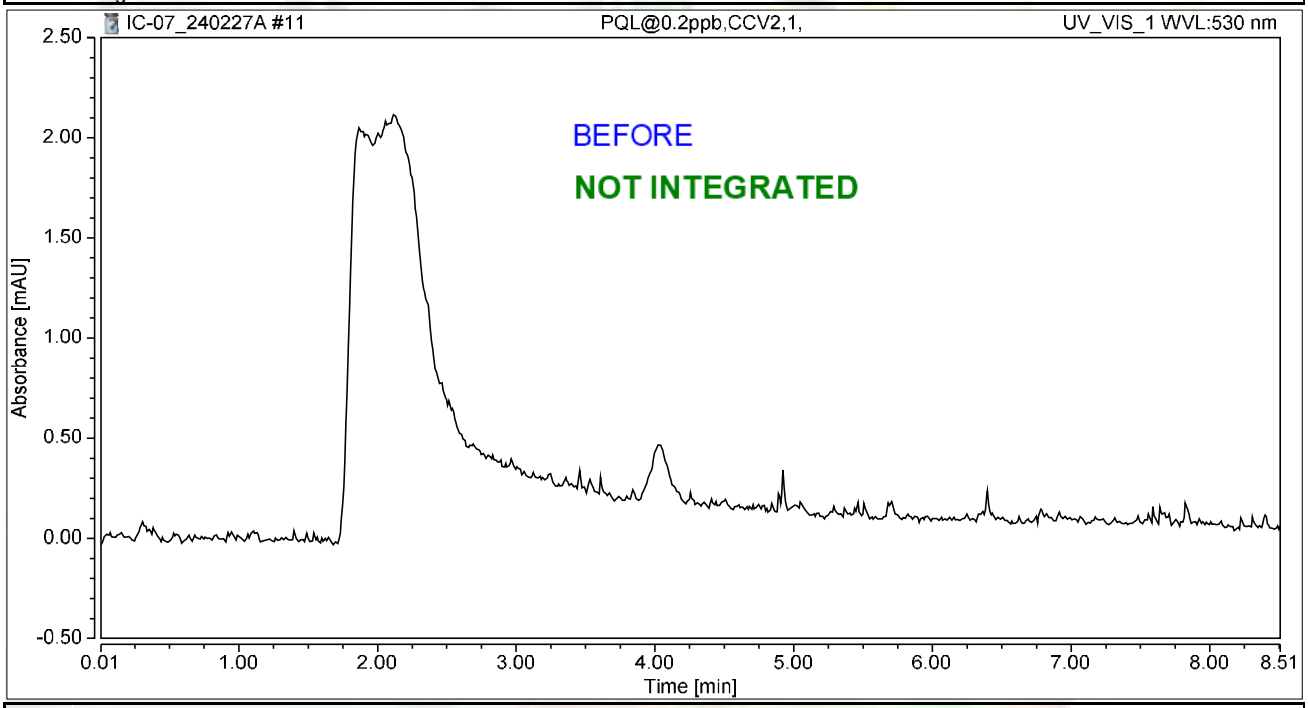
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 10:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

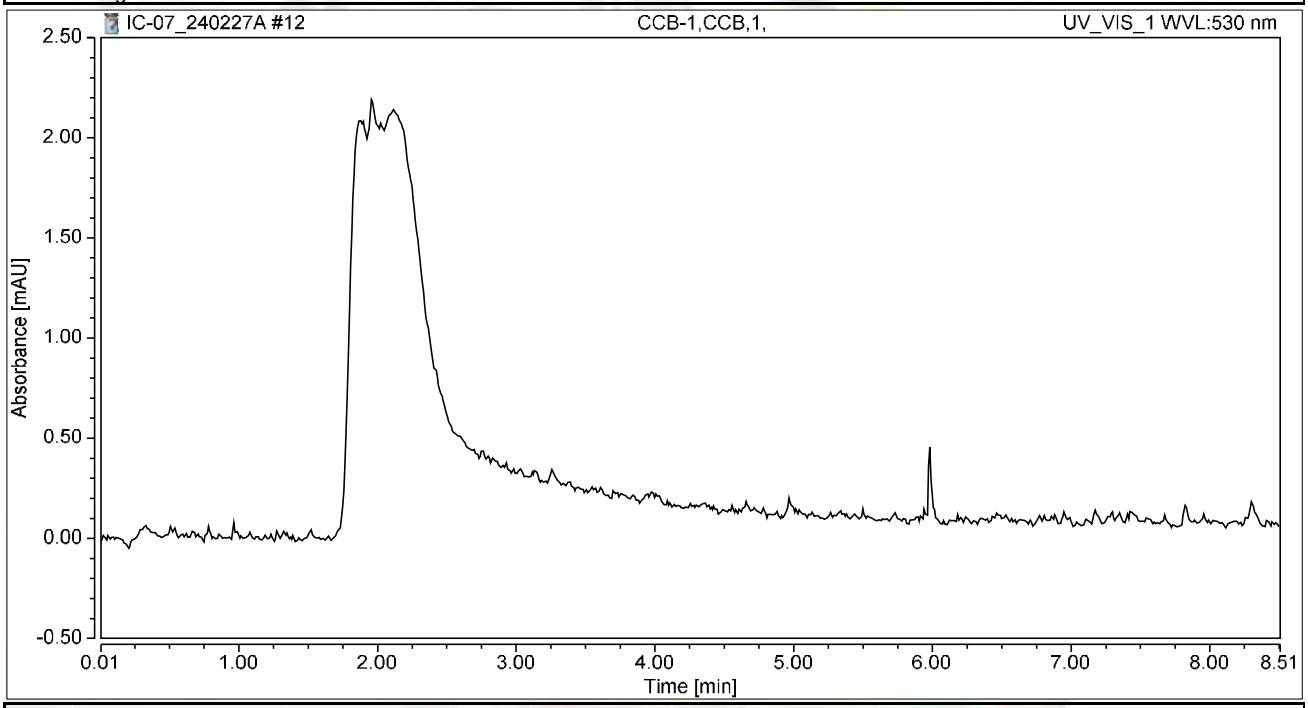
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 10:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

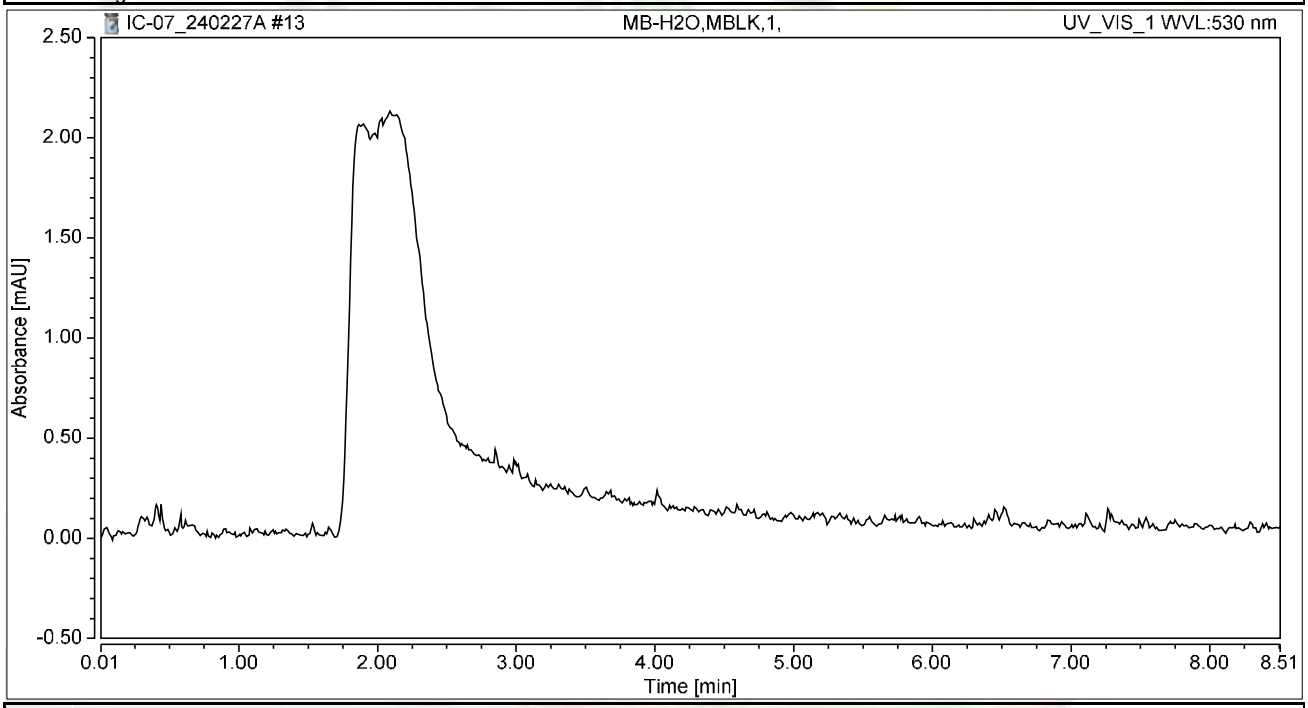
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 11:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

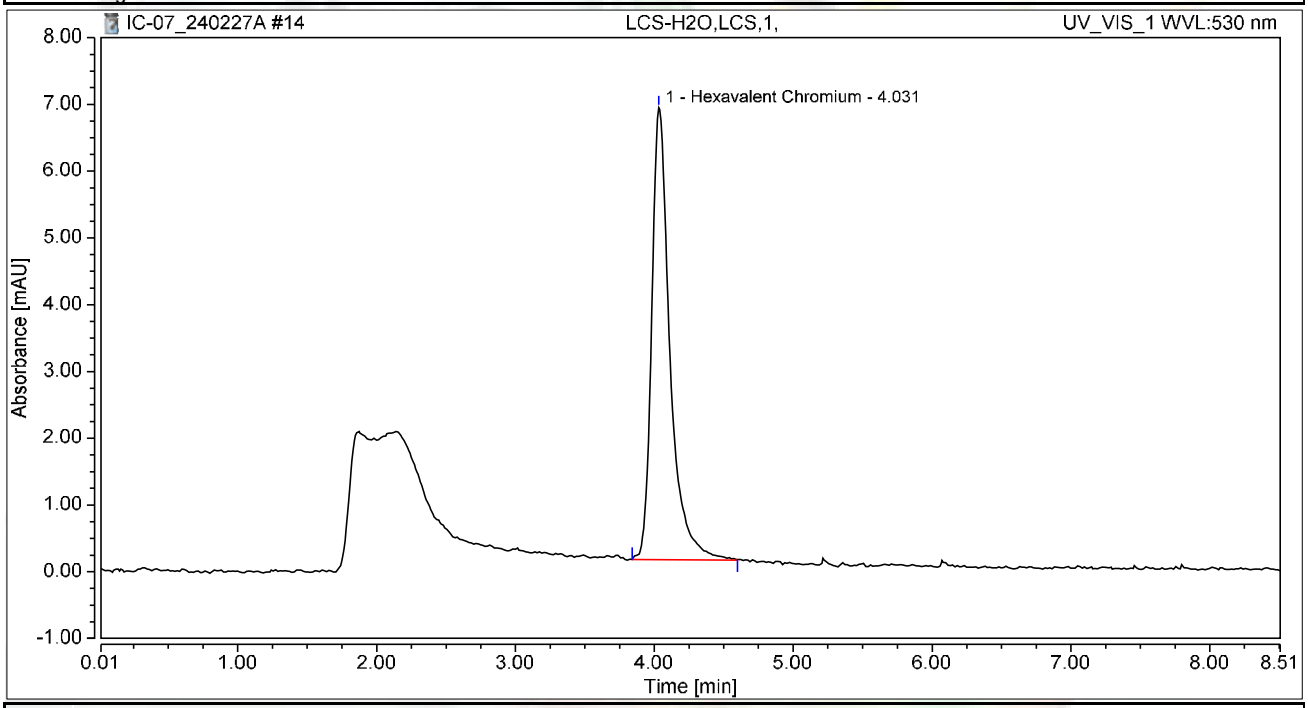
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 11:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

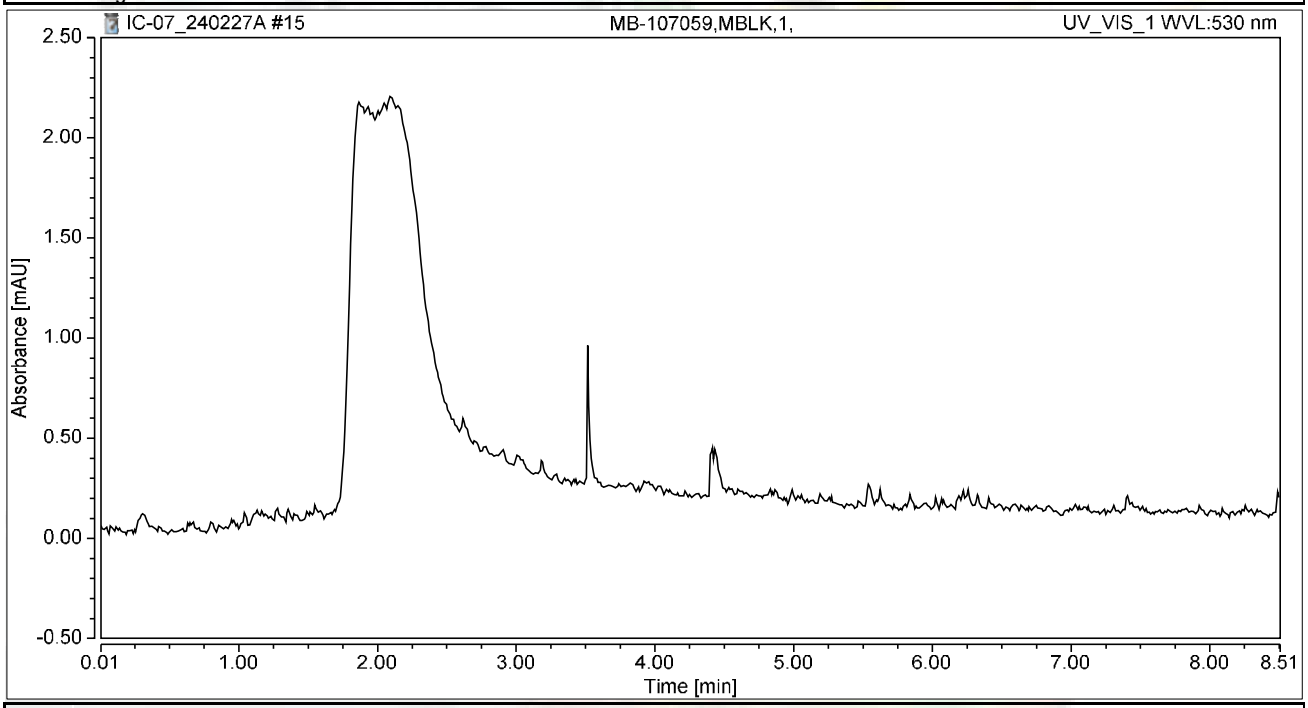
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	1.034	6.767	100.00	100.00	4.8056
Total:			**1.034**	**6.767**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-107059,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 11:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

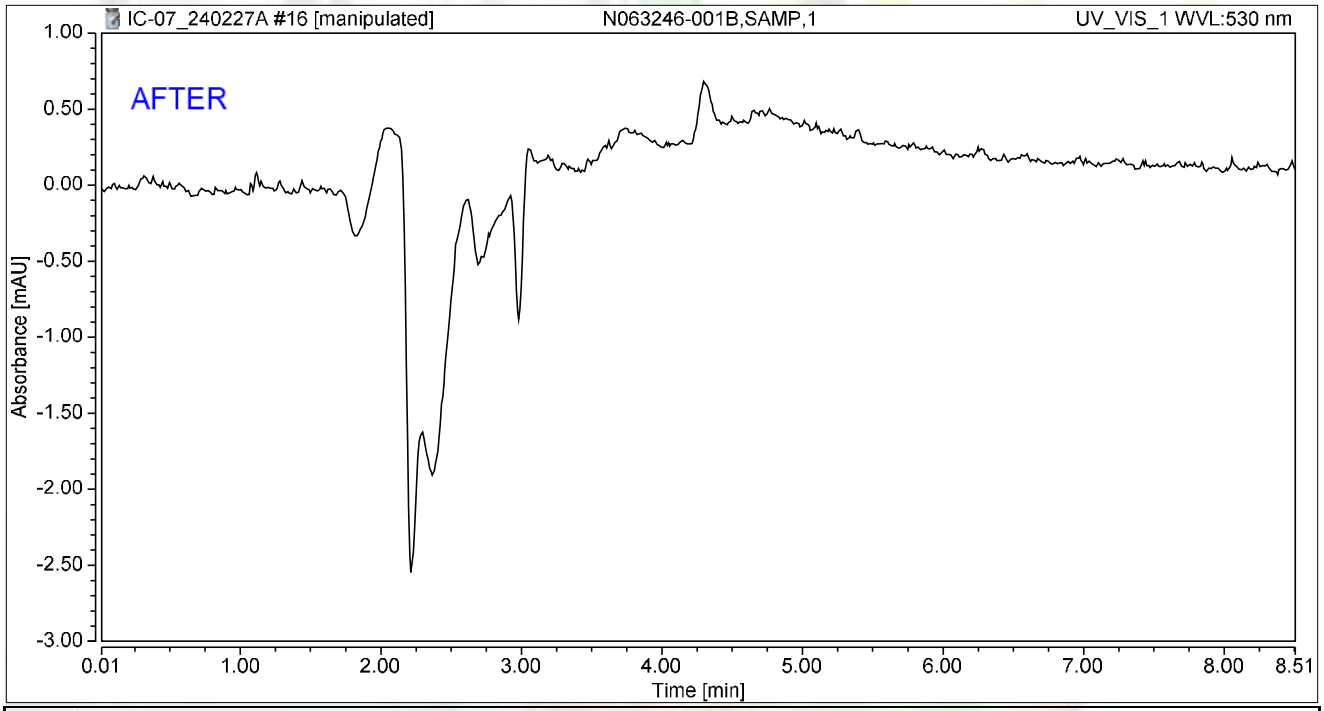
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063246-001B,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 11:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Reviewed by:

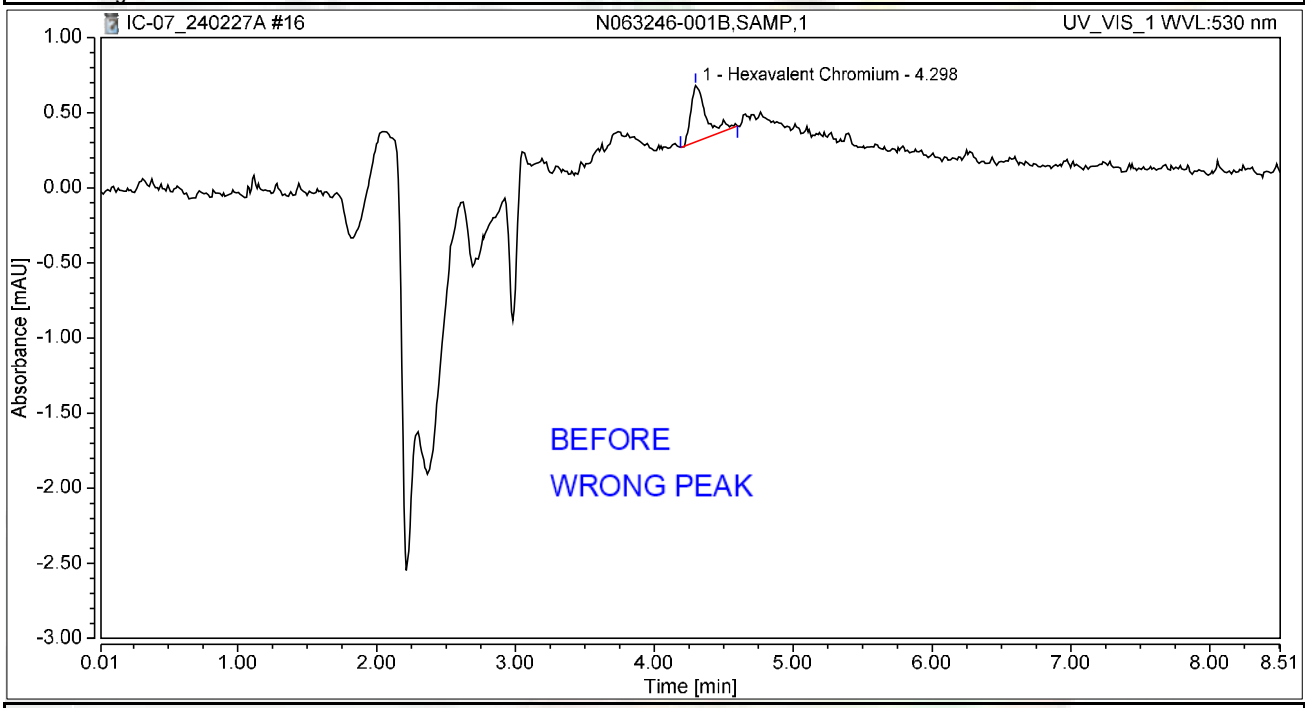
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063246-001B,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 11:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

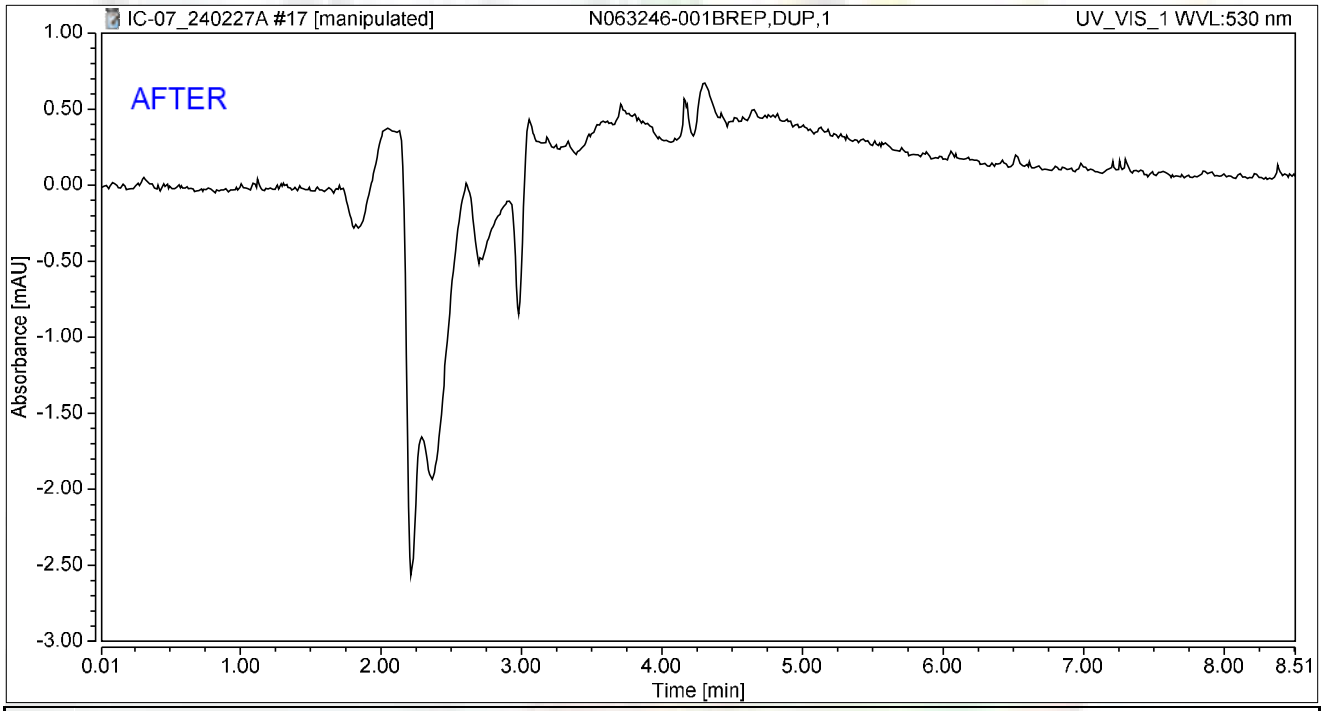
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.298	0.047	0.377	100.00	100.00	0.2175
Total:			**0.047**	**0.377**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063246-001BREP,DUP,1**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 11:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Reviewed by:

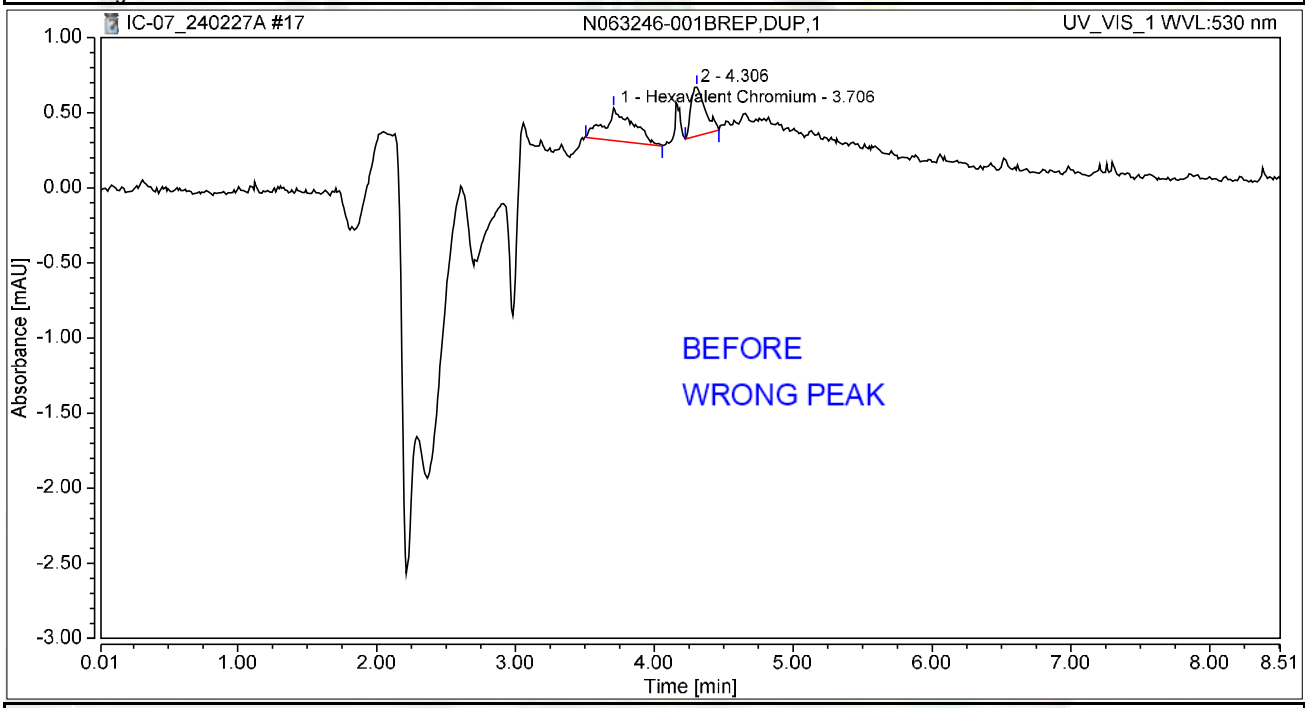
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063246-001BREP,DUP,1**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 11:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

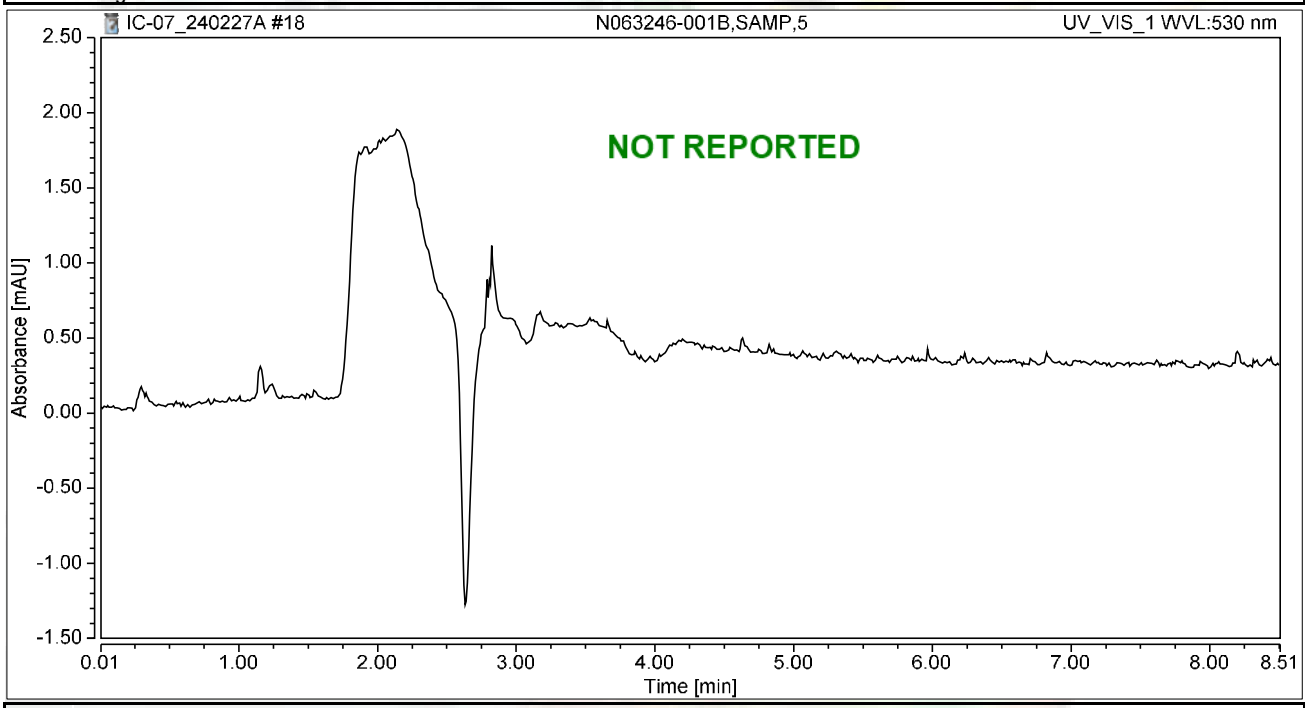
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.706	0.051	0.217	56.75	39.96	0.2369
2		4.306	0.039	0.325	43.25	60.04	n.a.
Total:			**0.090**	**0.542**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063246-001B,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

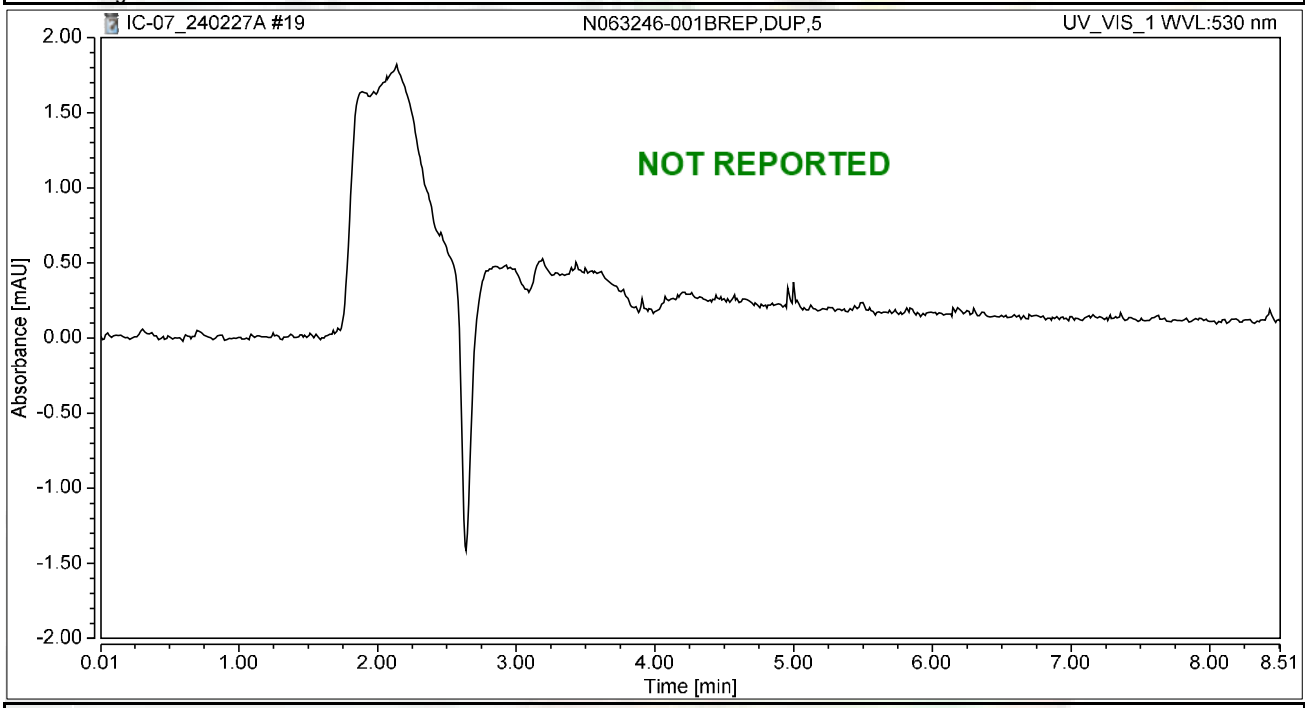
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063246-001BREP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 12:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

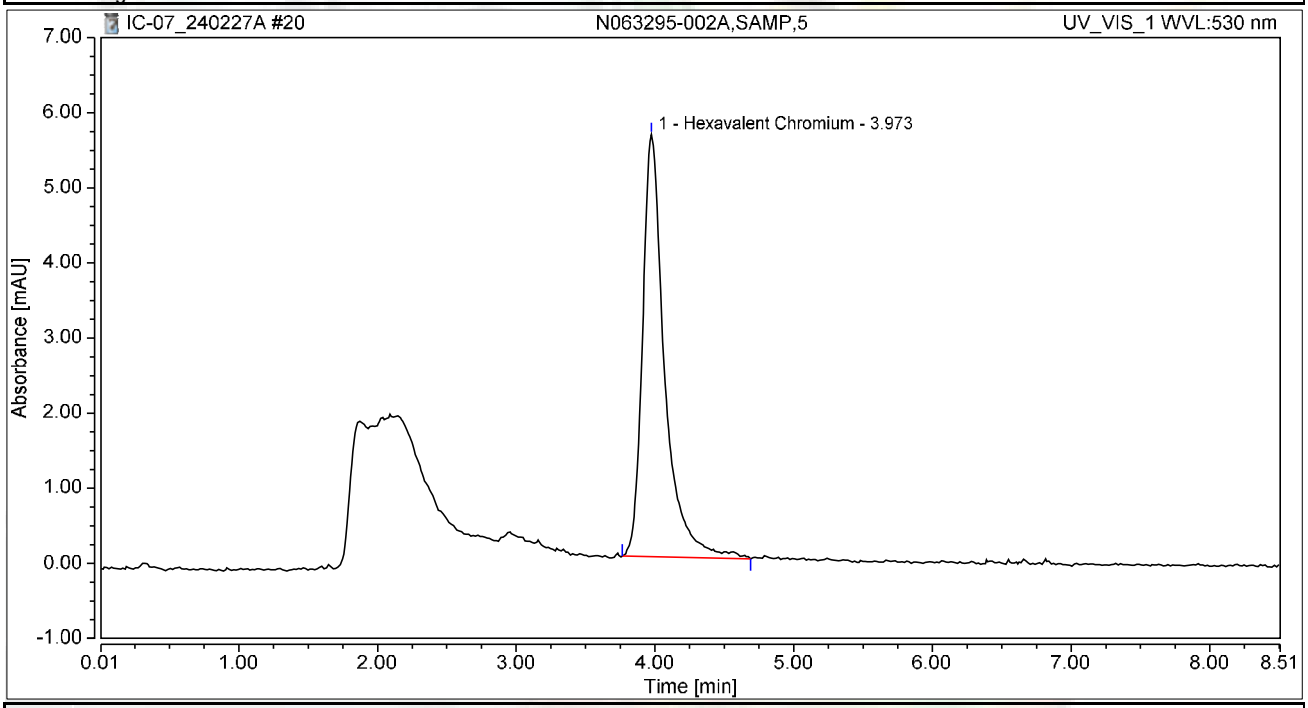
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 13:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

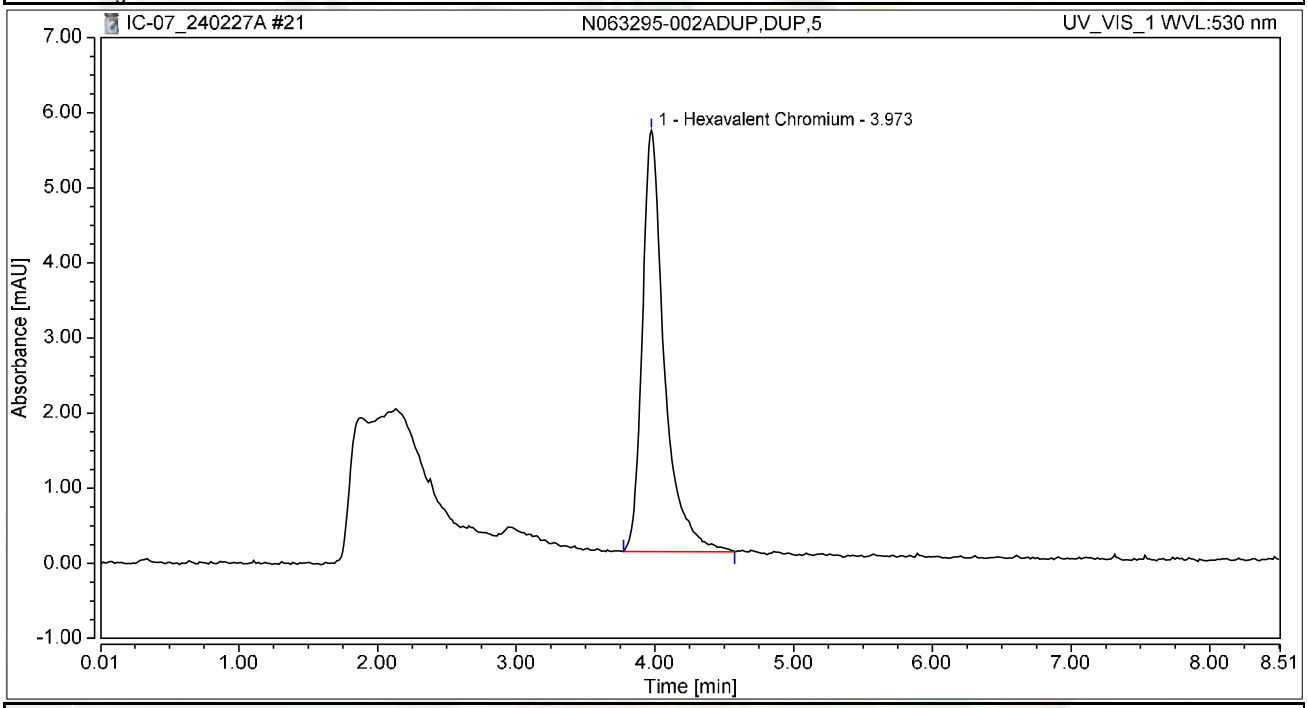
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	1.036	5.621	100.00	100.00	4.8177
Total:			**1.036**	**5.621**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002ADUP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 13:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

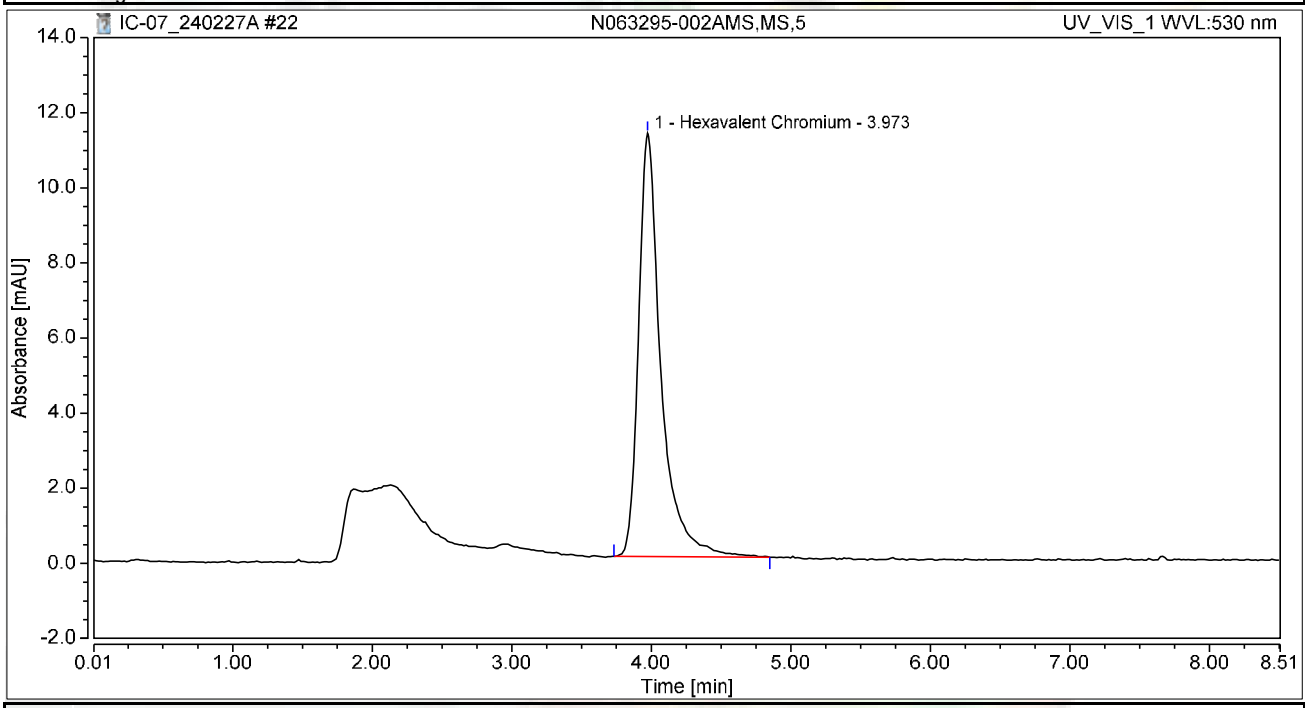
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	1.032	5.607	100.00	100.00	4.7967
Total:			**1.032**	**5.607**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 13:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

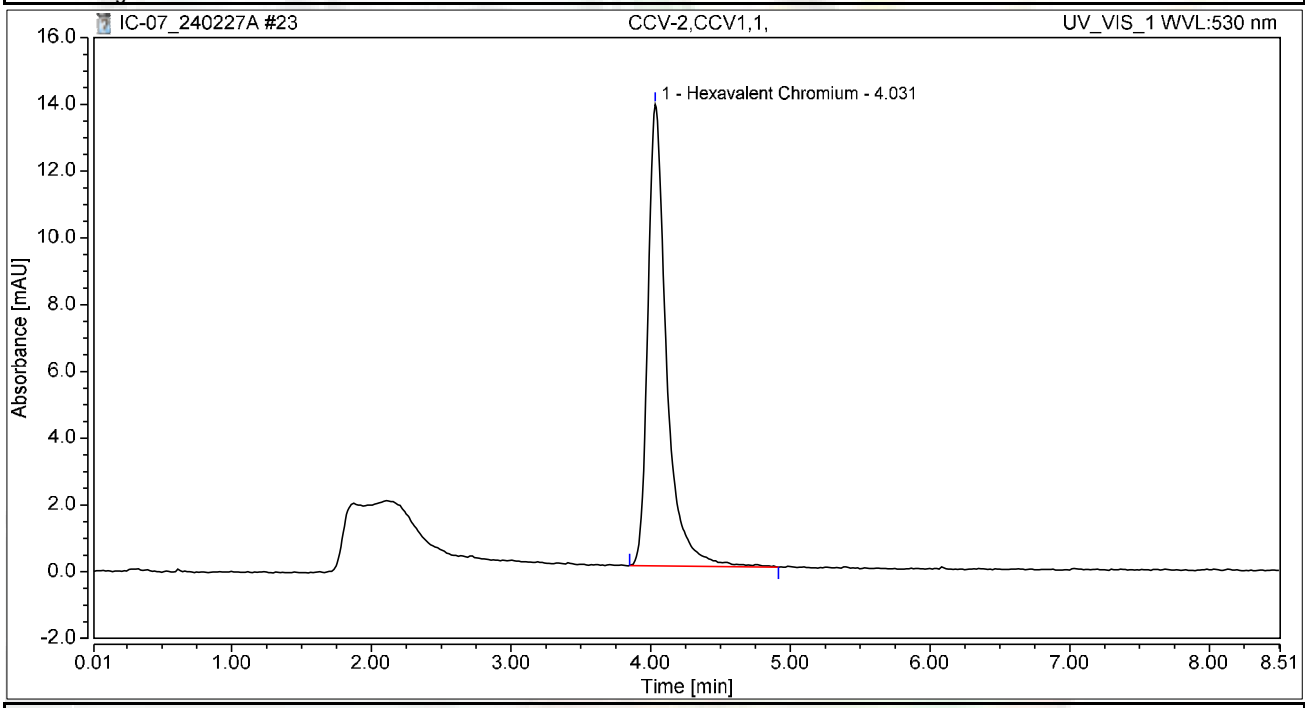
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	2.097	11.270	100.00	100.00	9.7504
Total:			**2.097**	**11.270**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 13:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

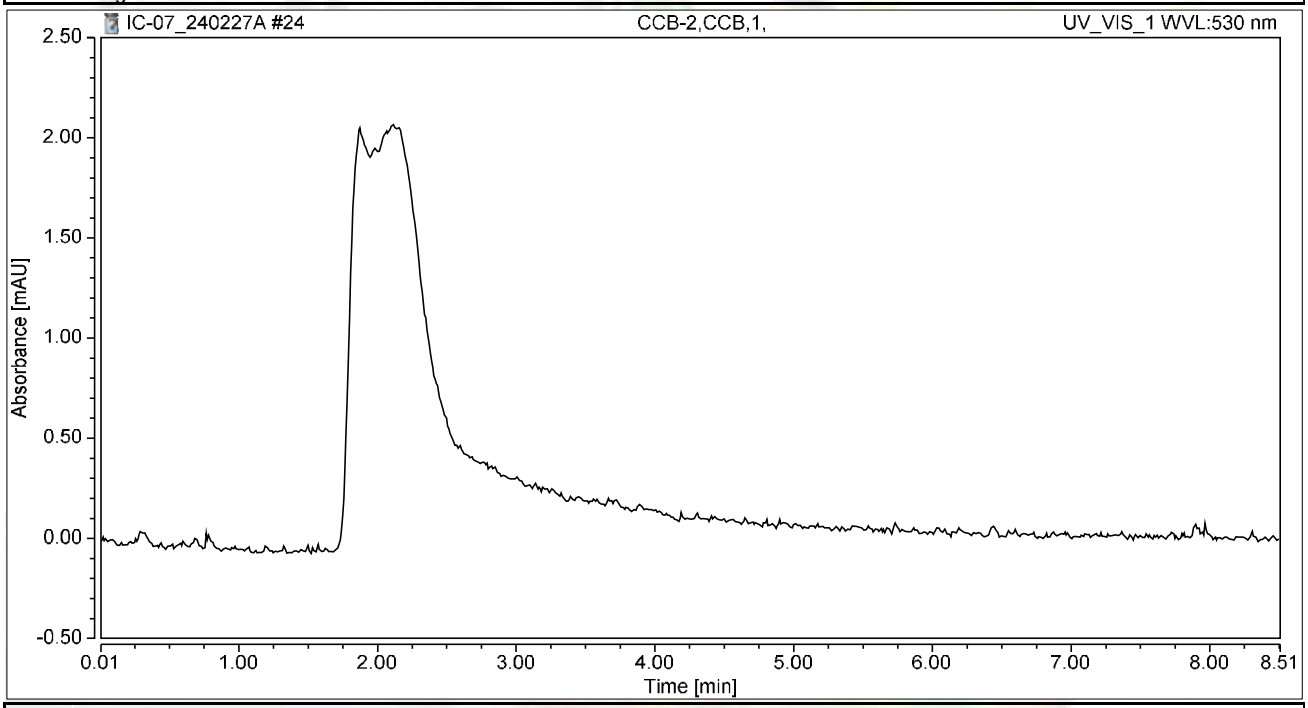
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	2.146	13.823	100.00	100.00	9.9783
Total:			**2.146**	**13.823**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 14:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

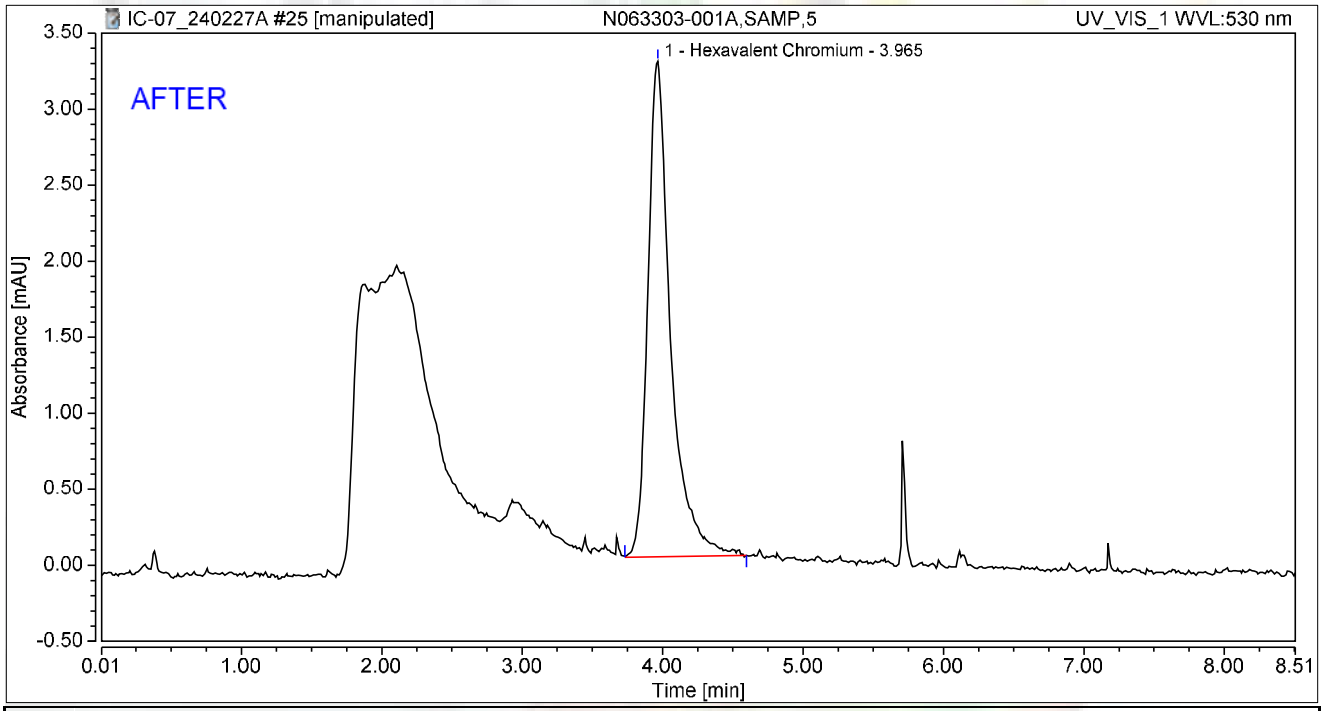
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 14:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.611	3.258	100.00	100.00	2.8421
Total:			**0.611**	**3.258**	**100.00**	**100.00**	

Reviewed by:

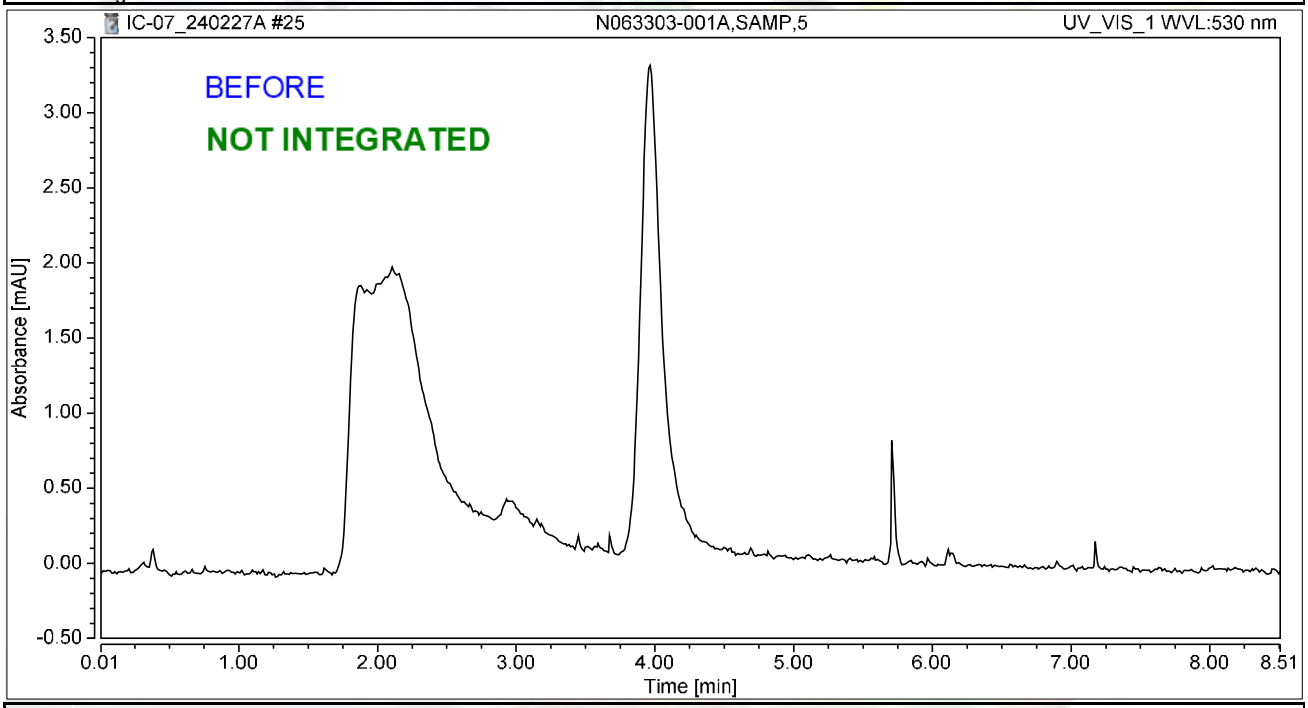
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063303-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 14:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

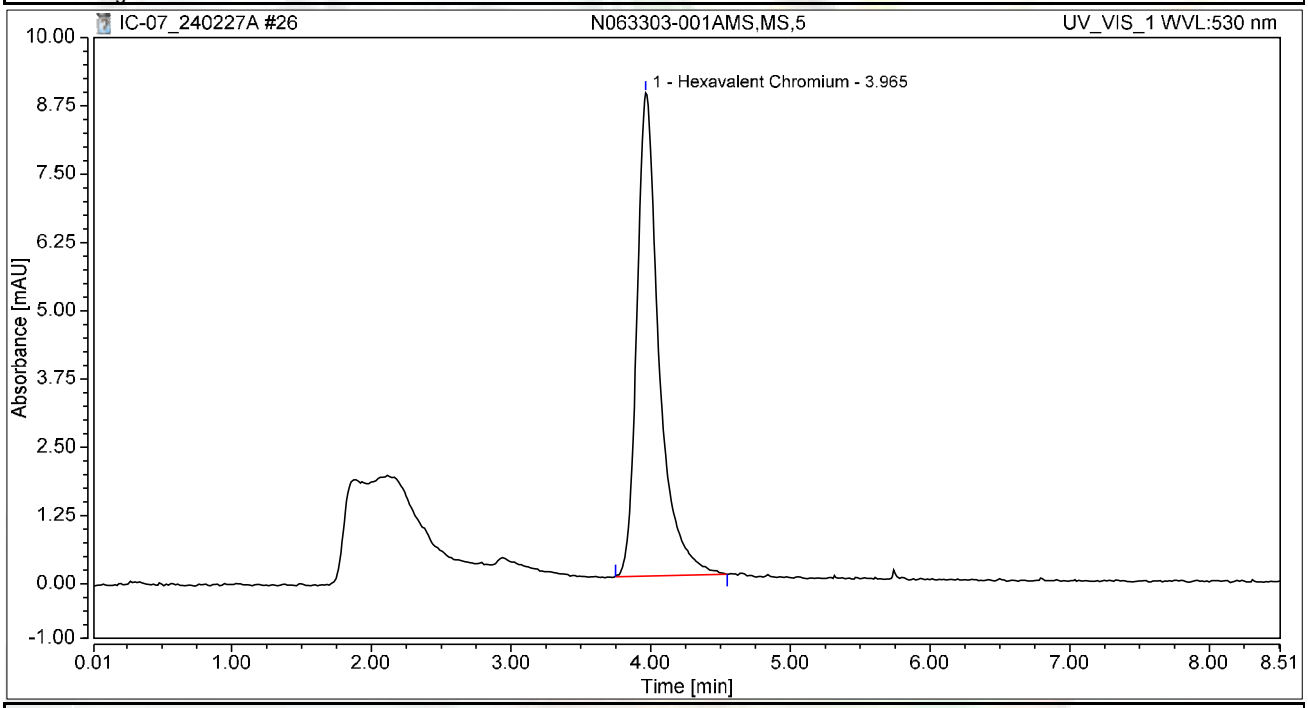
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-001AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 14:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

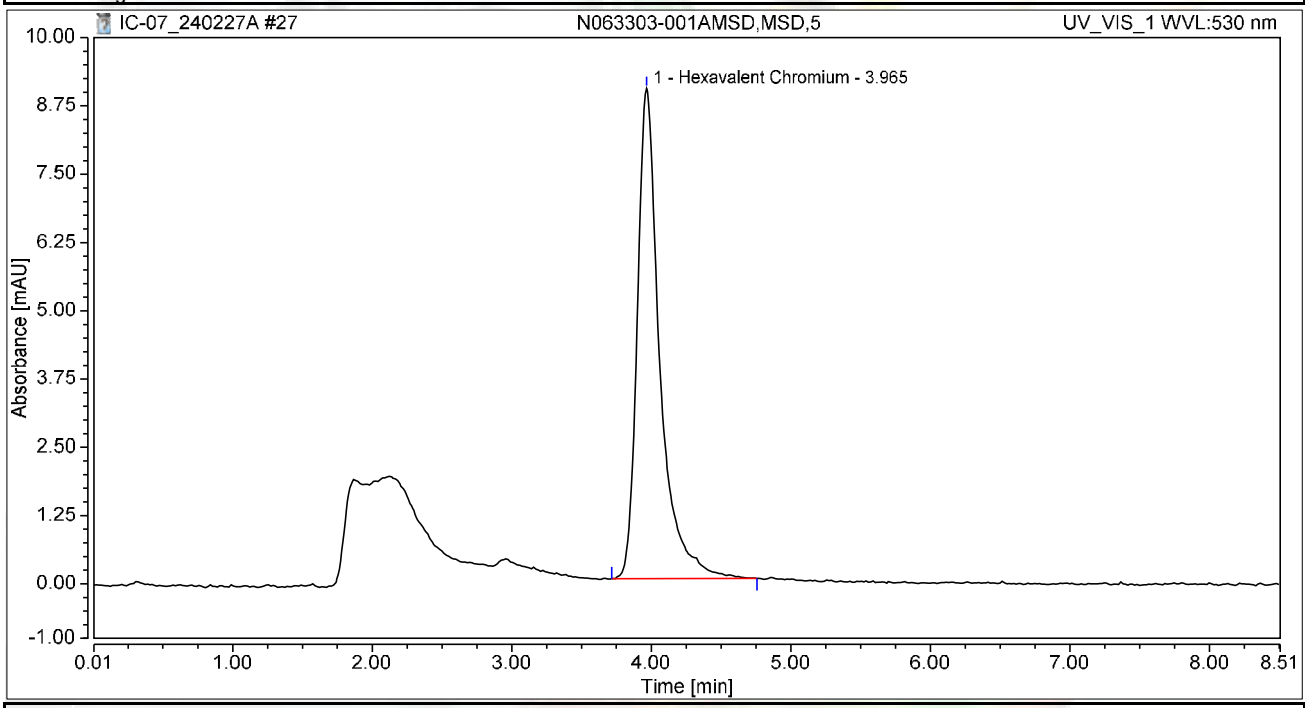
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	1.629	8.844	100.00	100.00	7.5743
Total:			**1.629**	**8.844**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-001AMSD,MSD,5**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 14:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

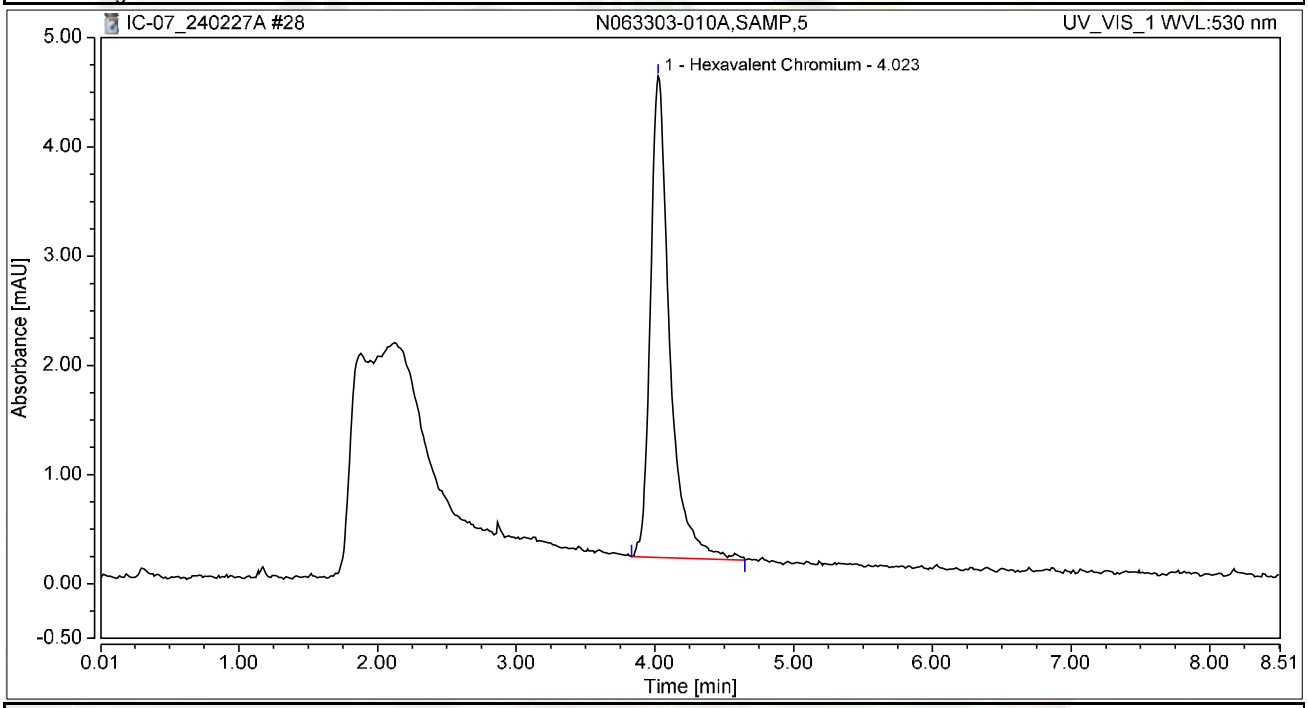
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	1.681	8.974	100.00	100.00	7.8141
Total:			**1.681**	**8.974**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-010A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 14:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

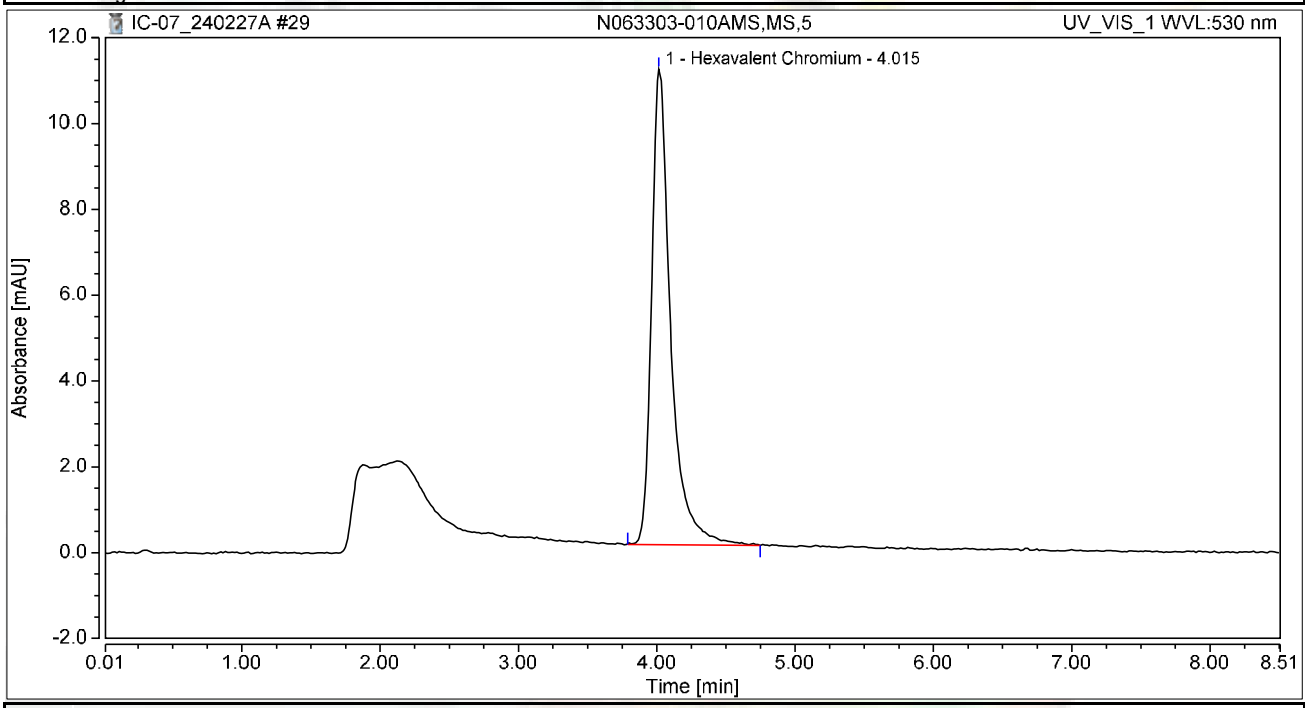
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.710	4.406	100.00	100.00	3.3017
Total:			**0.710**	**4.406**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-010AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 14:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

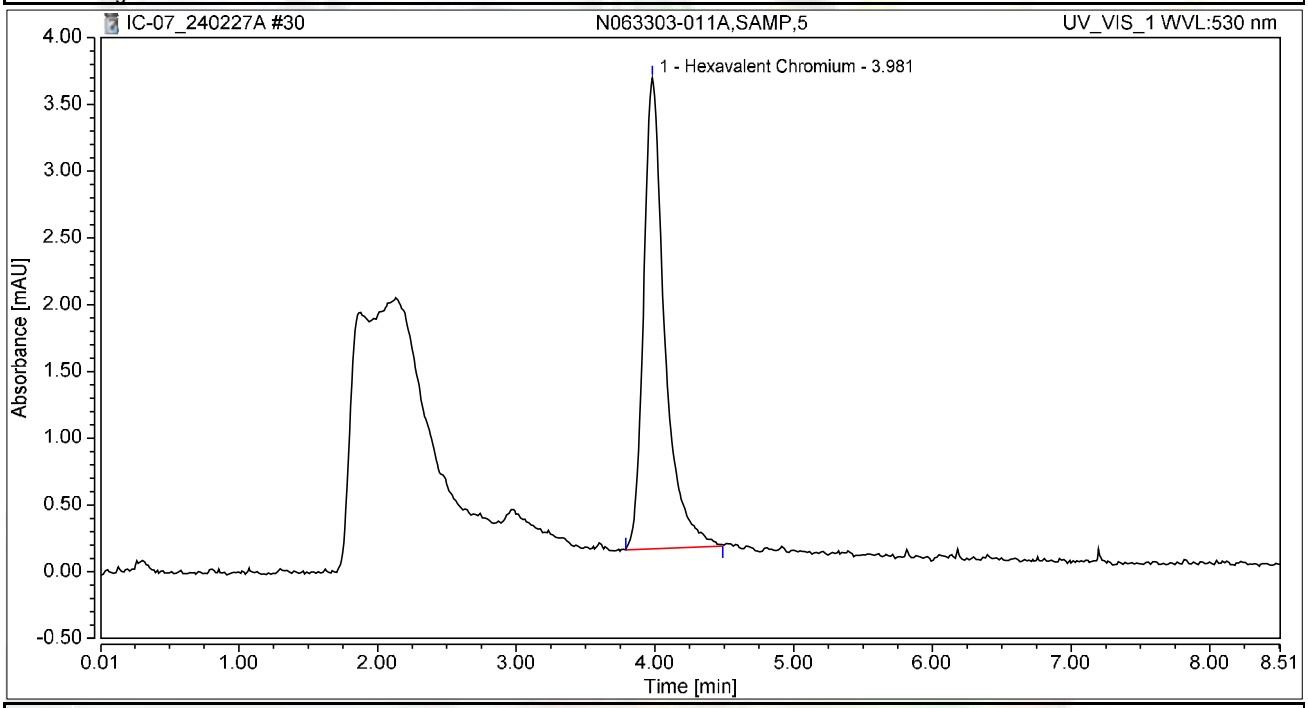
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.772	11.074	100.00	100.00	8.2397
Total:			**1.772**	**11.074**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-011A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 15:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

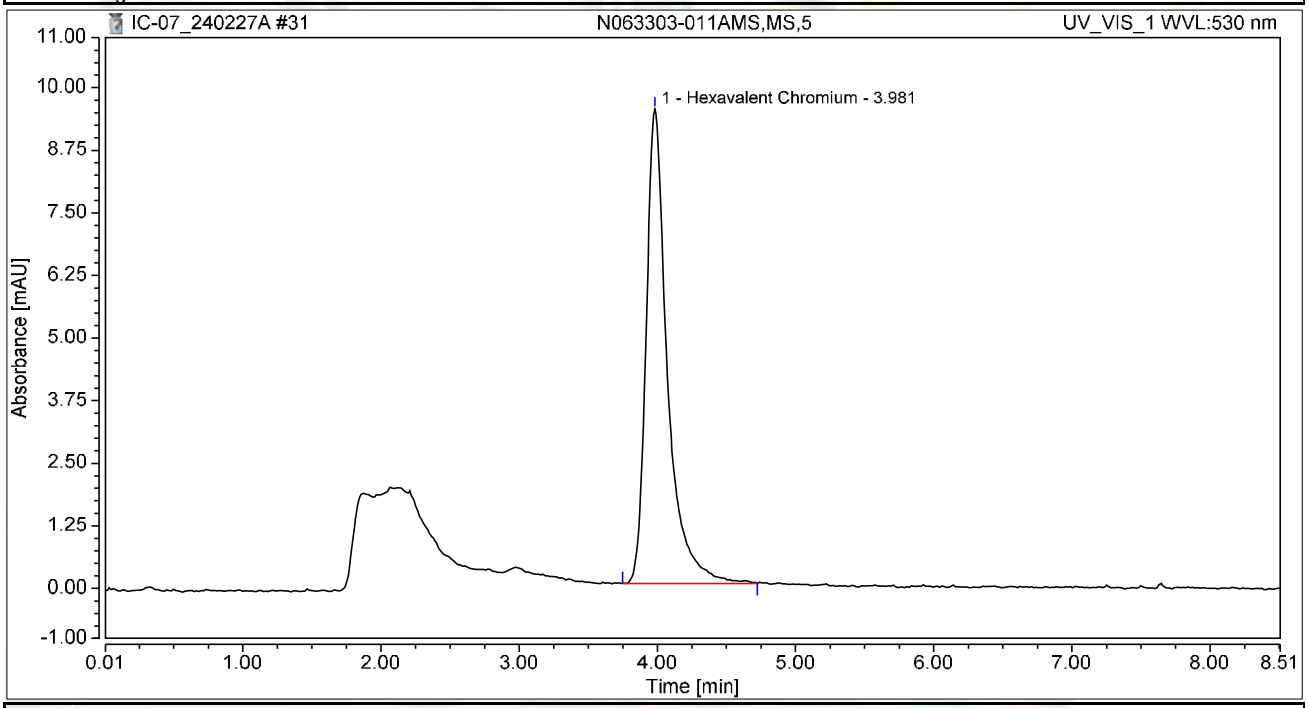
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.620	3.526	100.00	100.00	2.8837
Total:			**0.620**	**3.526**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-011AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 15:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

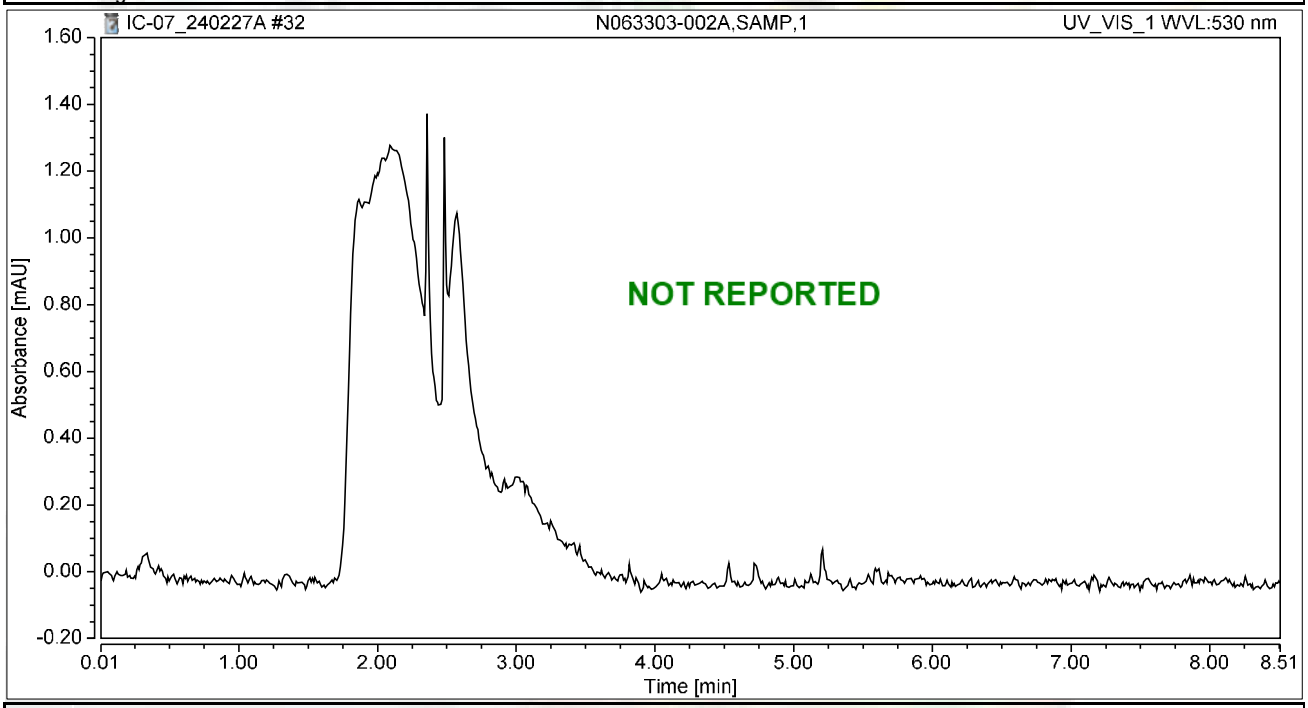
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.693	9.475	100.00	100.00	7.8728
Total:			**1.693**	**9.475**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 15:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

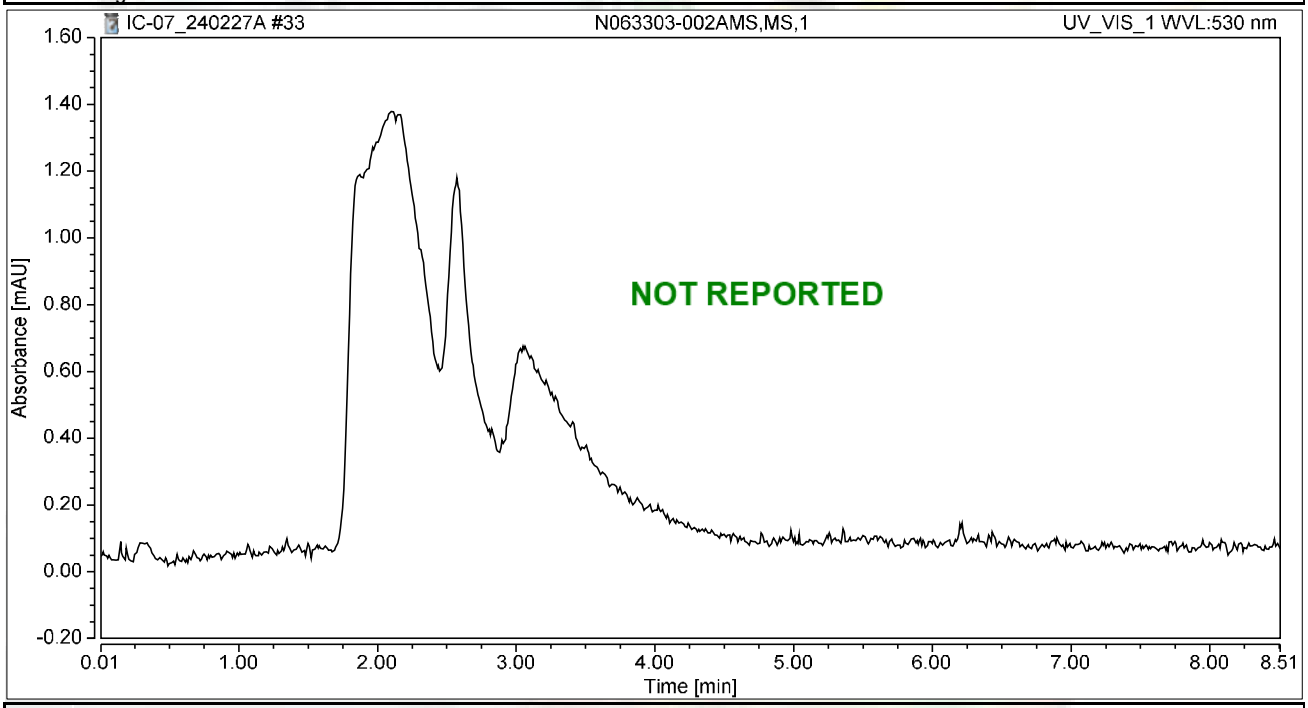
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 15:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

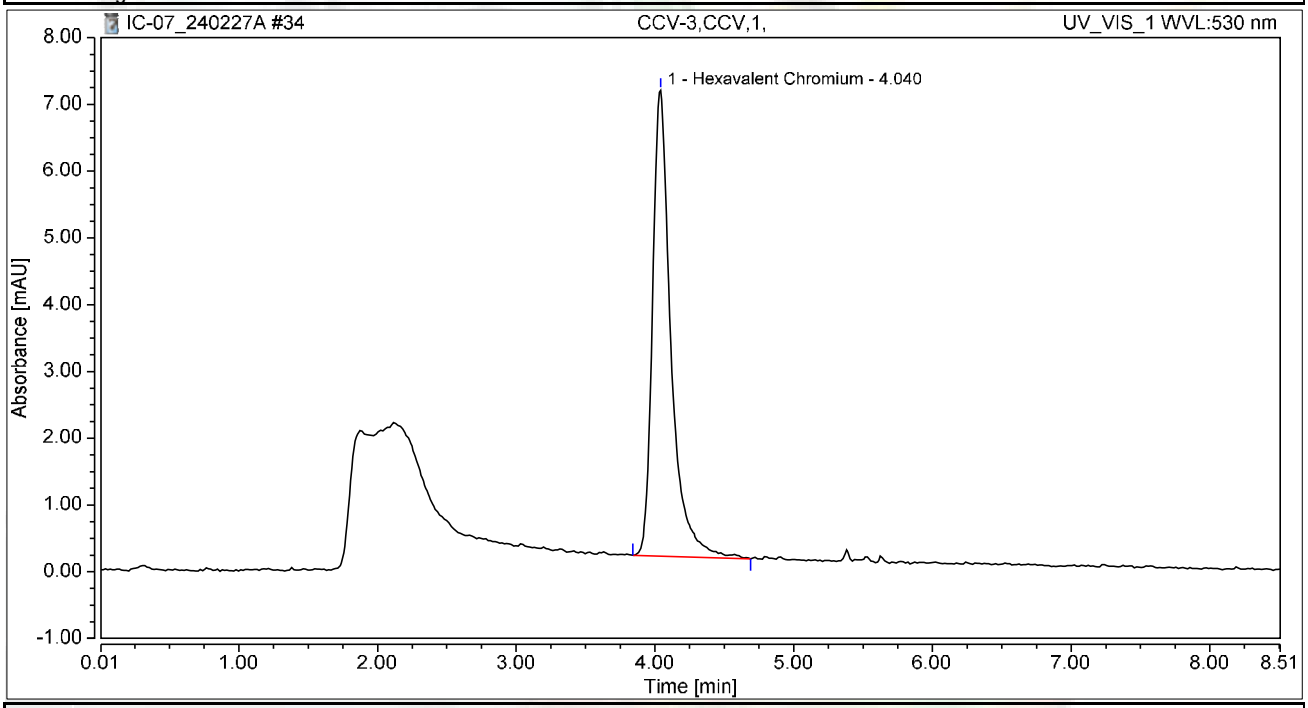
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 15:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

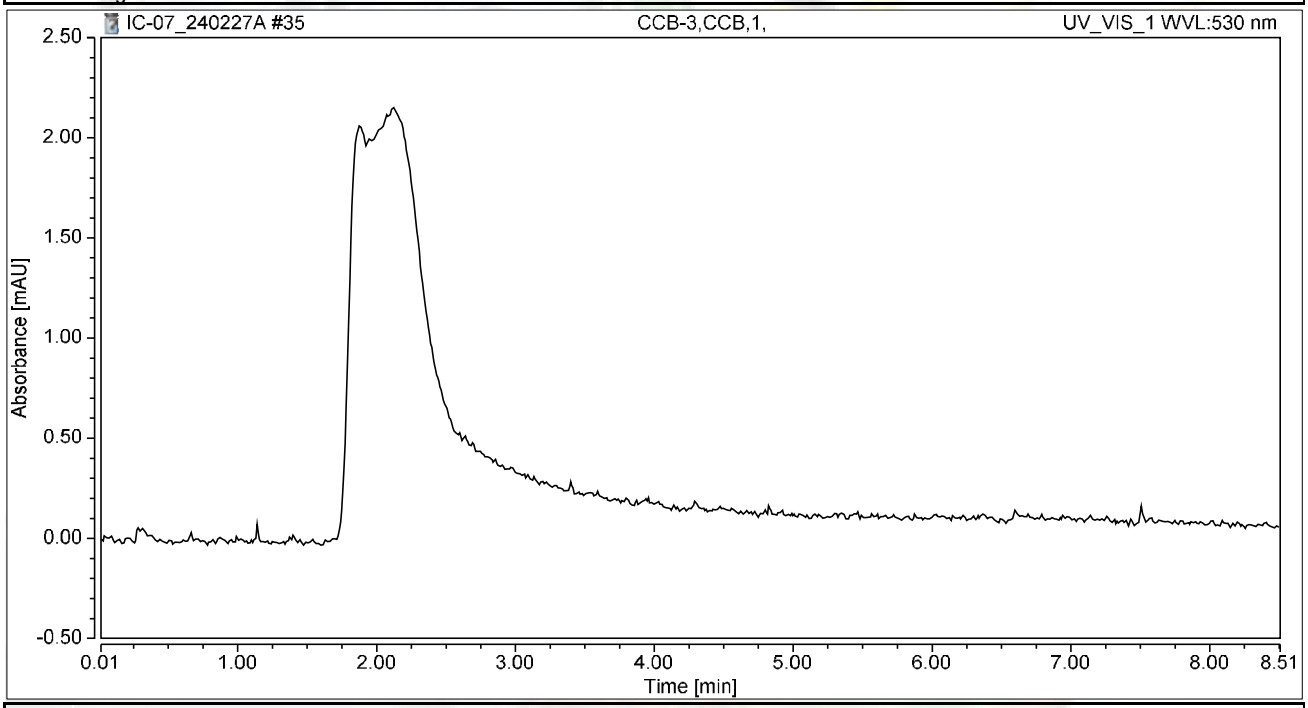
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.040	1.075	6.980	100.00	100.00	4.9988
Total:			**1.075**	**6.980**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 15:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

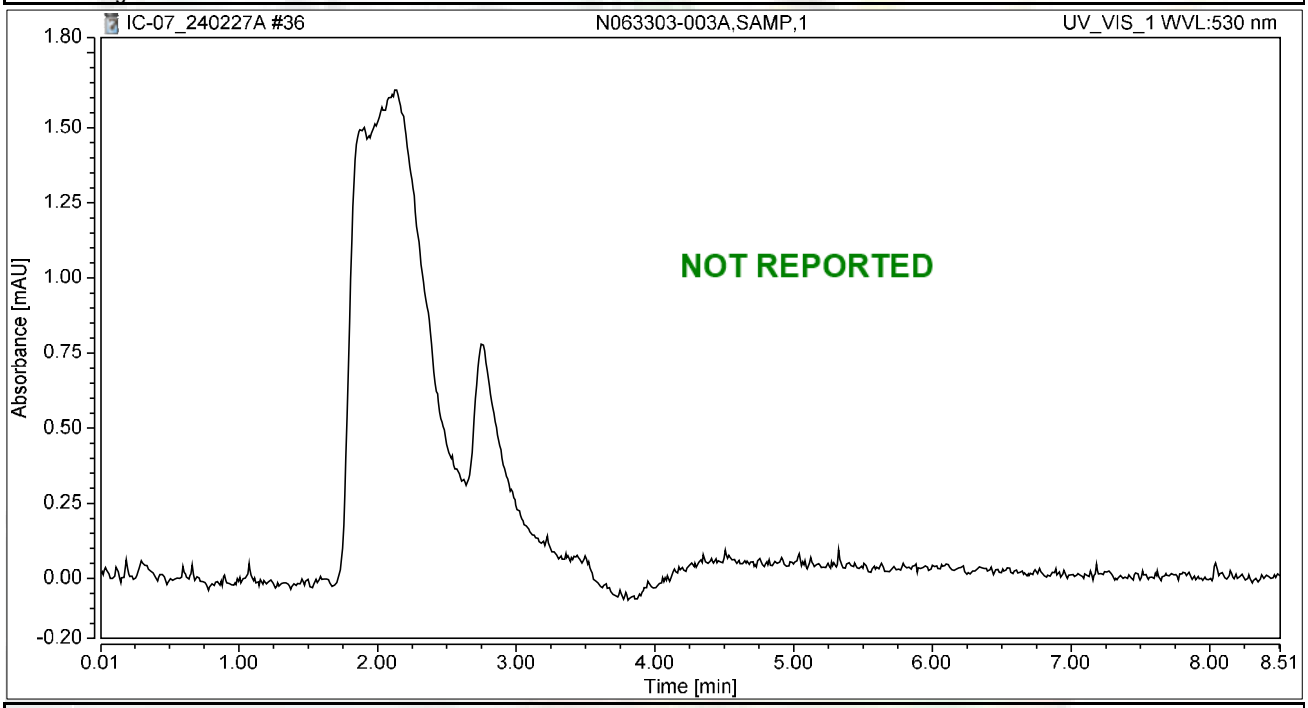
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 16:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

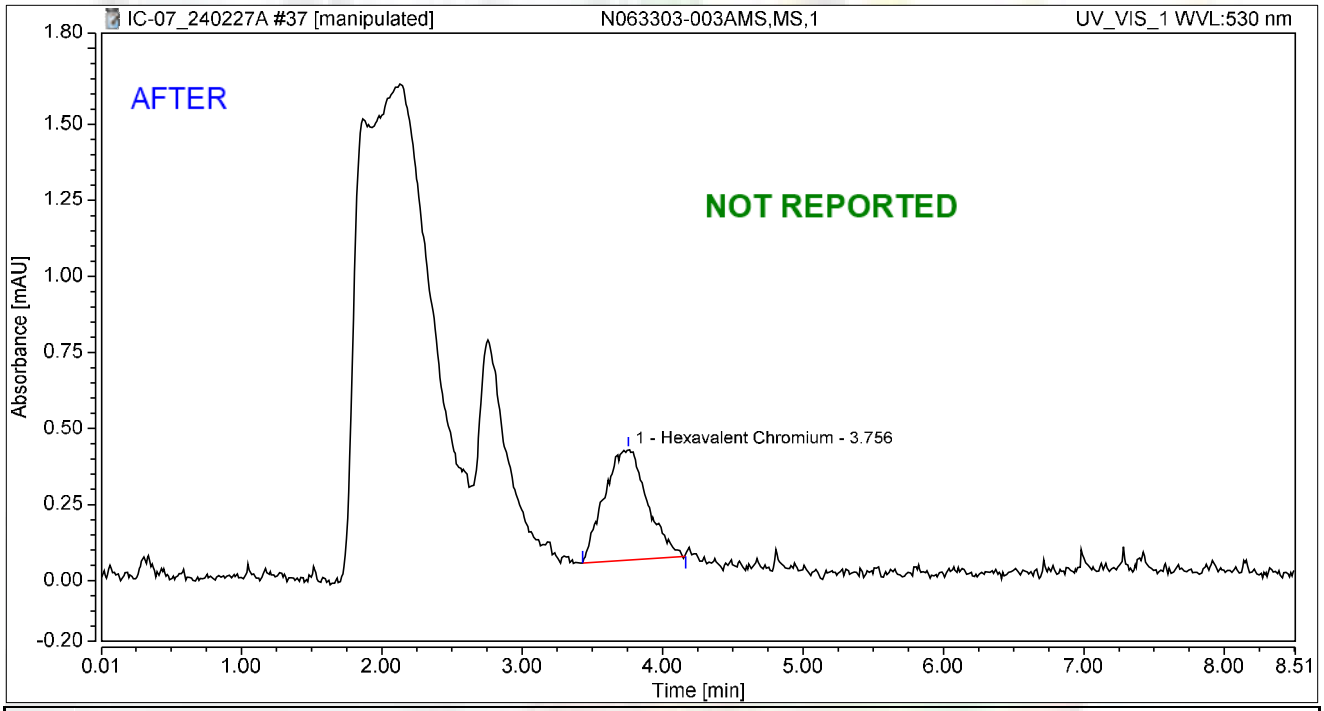
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 16:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

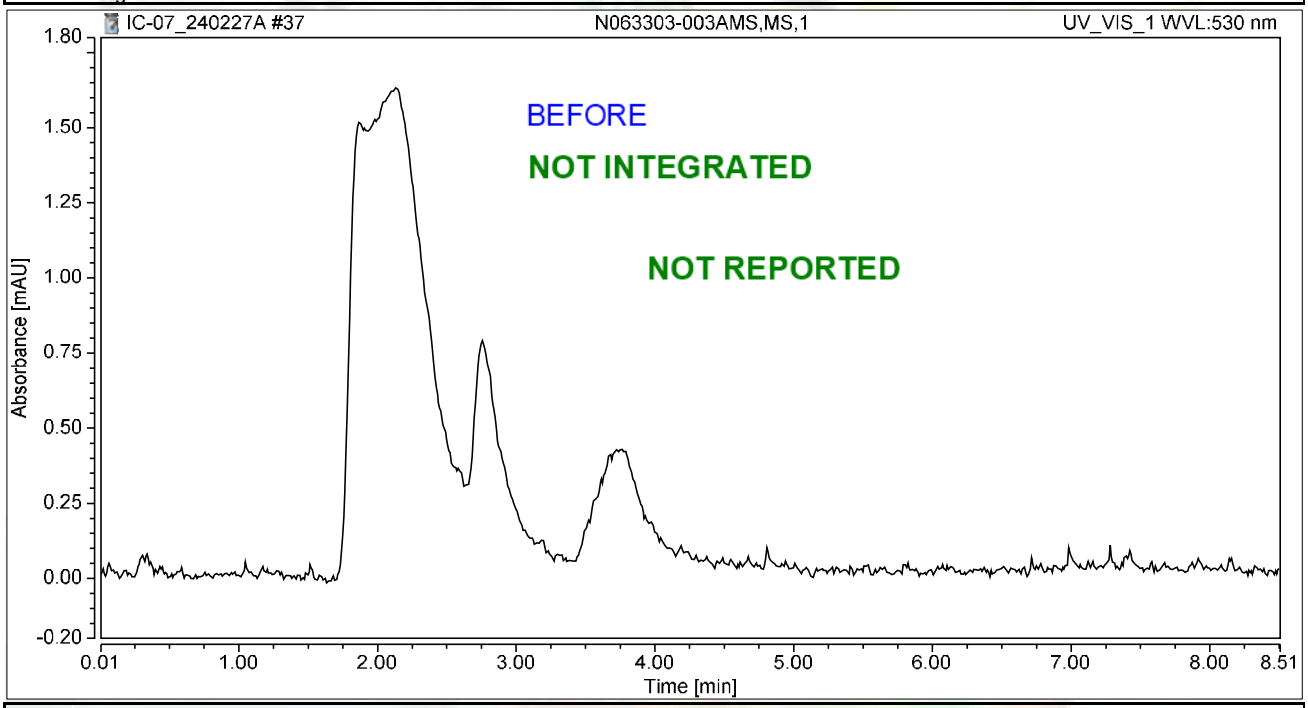
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.756	0.130	0.365	100.00	100.00	0.6040
Total:			**0.130**	**0.365**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 16:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

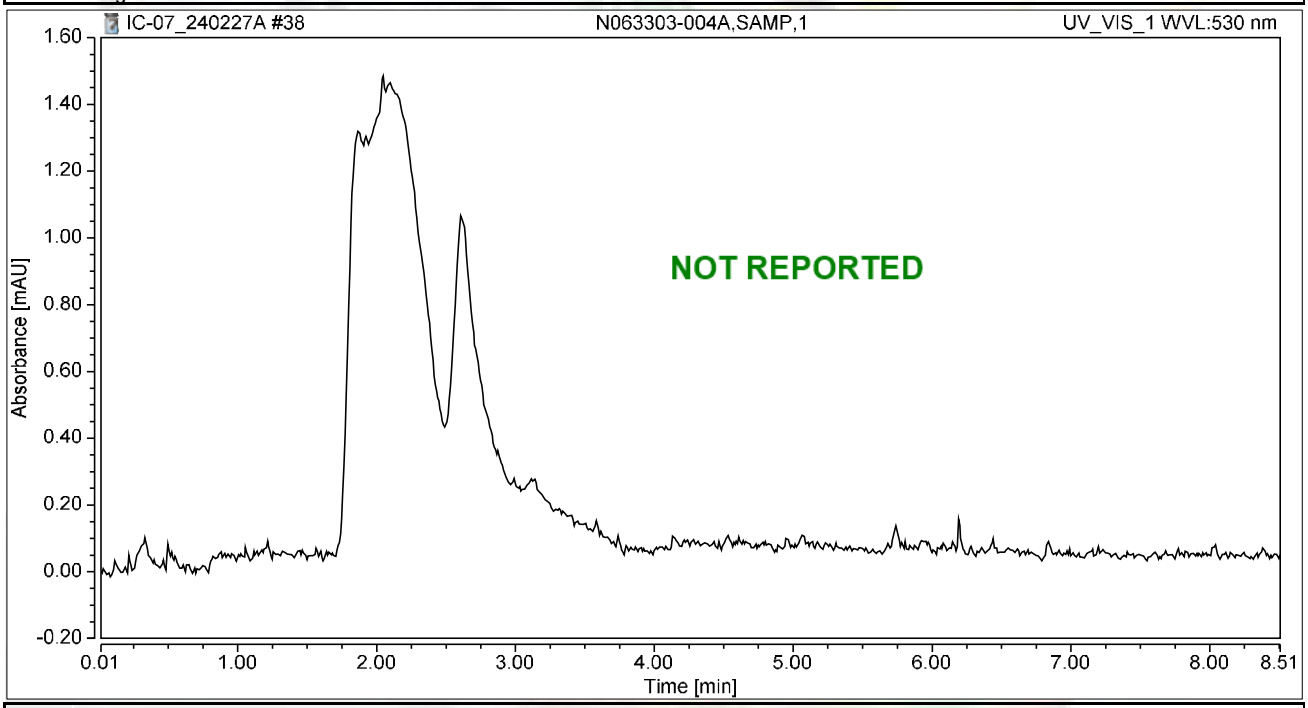
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-004A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 16:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

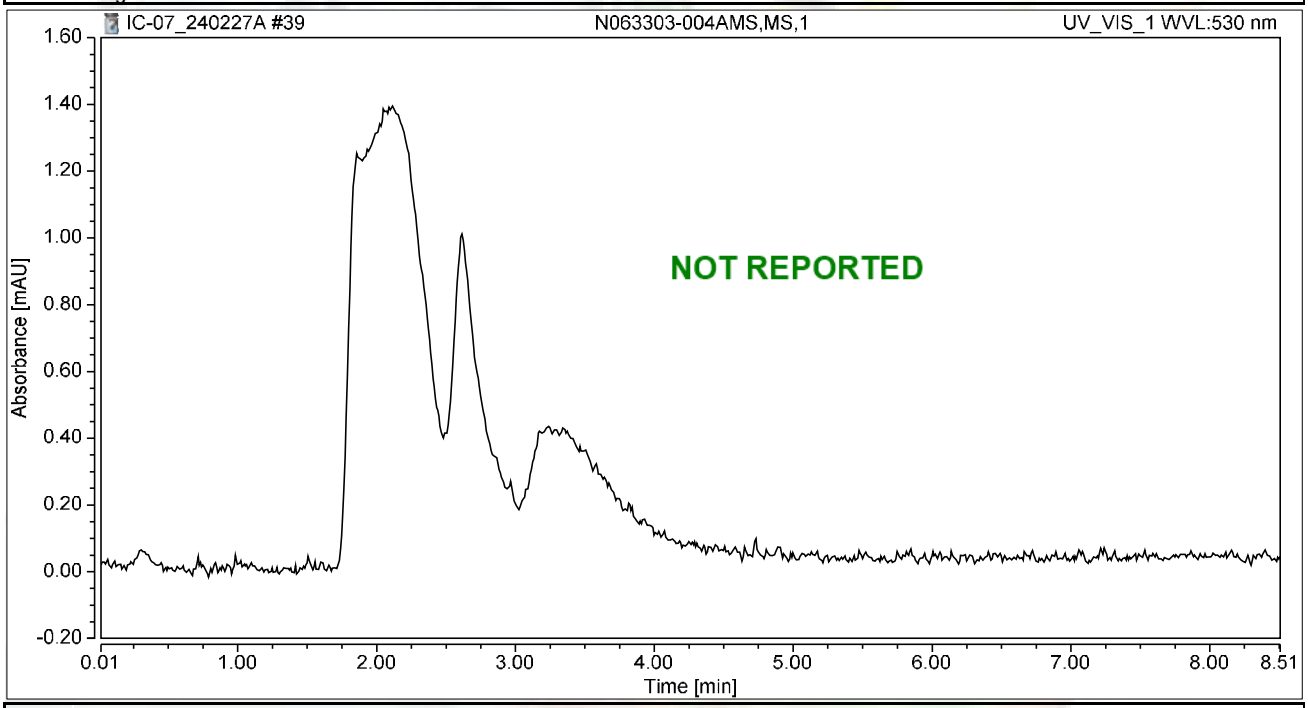
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-004AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 16:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

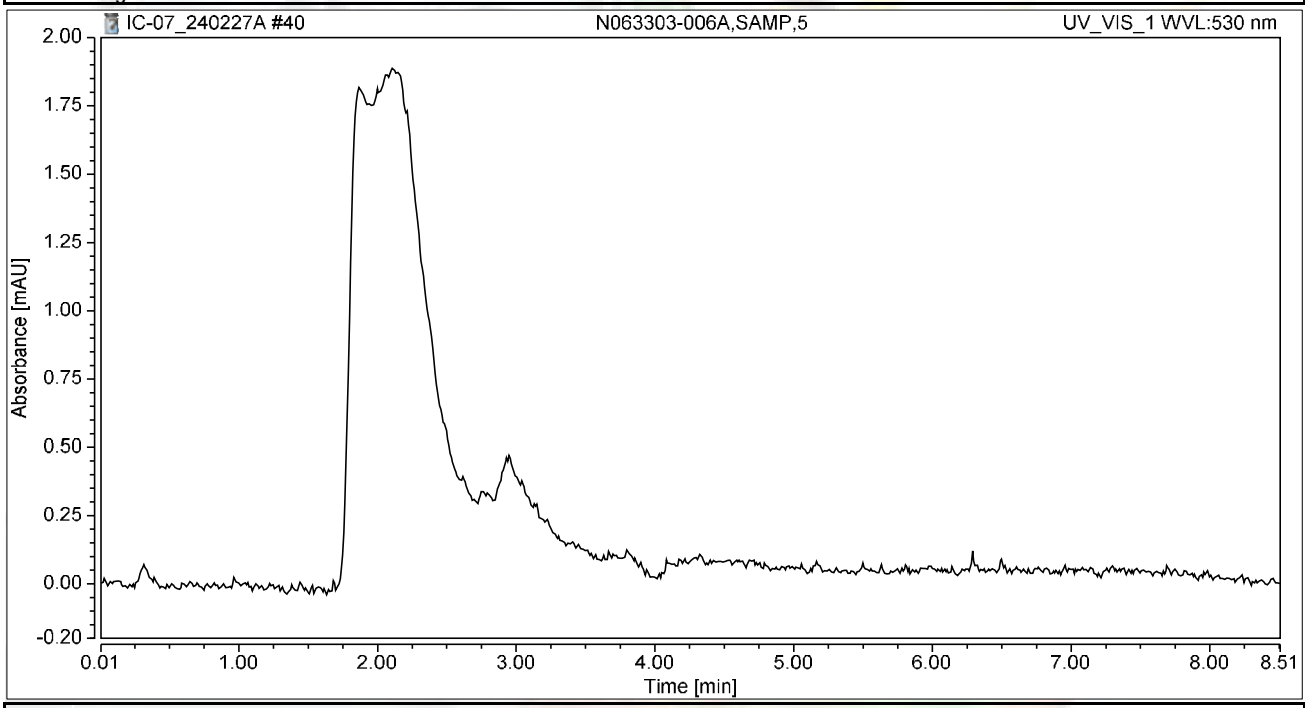
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-006A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 16:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

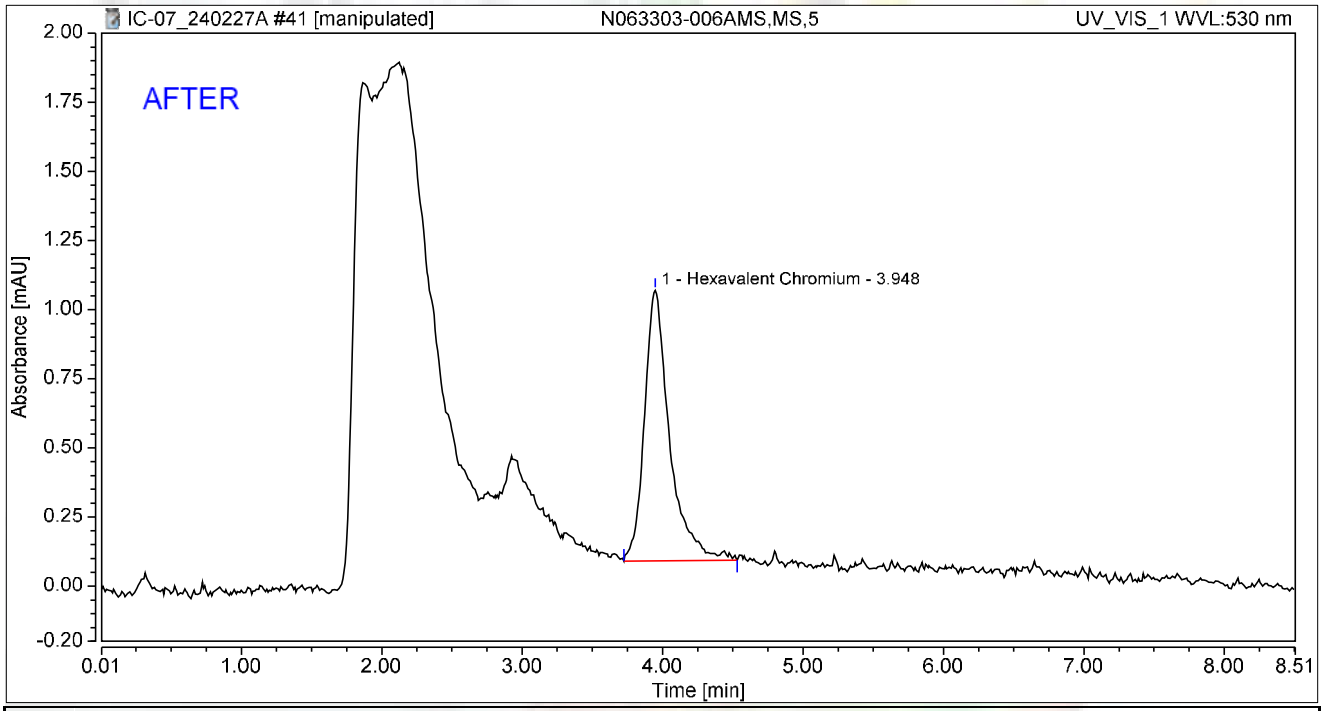
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-006AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 16:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.203	0.979	100.00	100.00	0.9438
Total:			**0.203**	**0.979**	**100.00**	**100.00**	

Reviewed by:

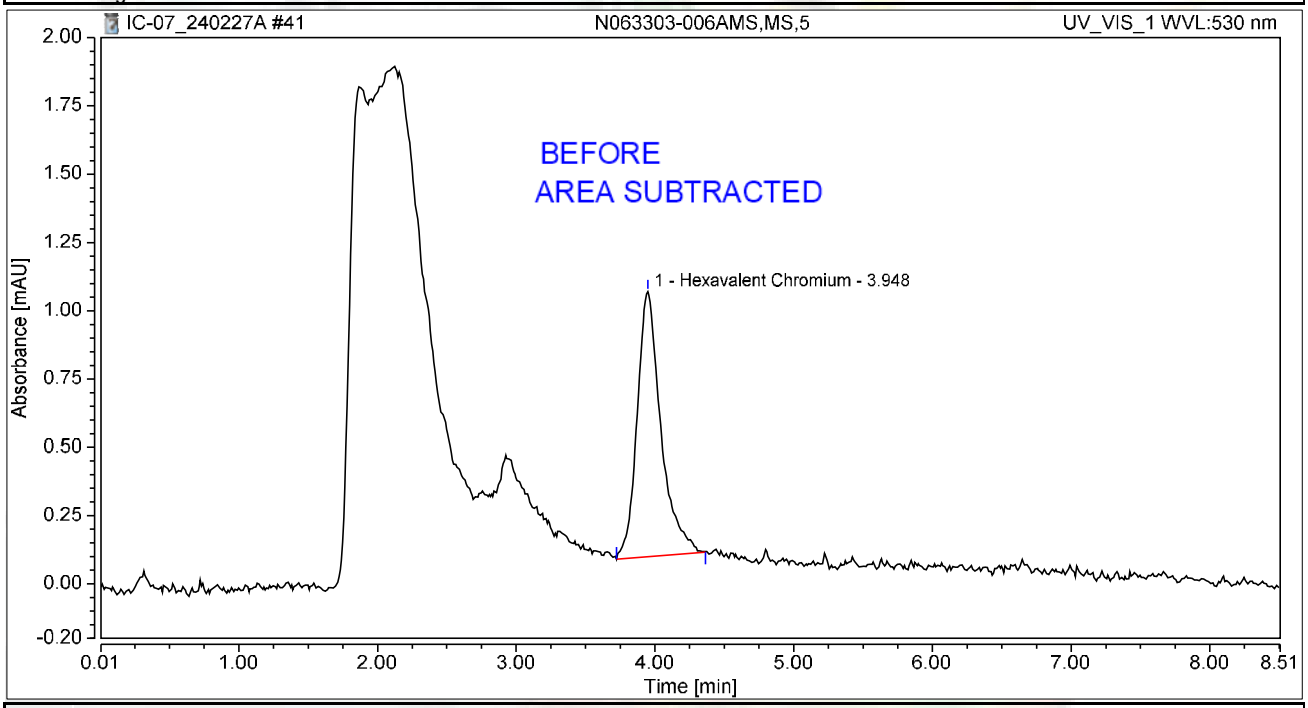
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063303-006AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 16:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

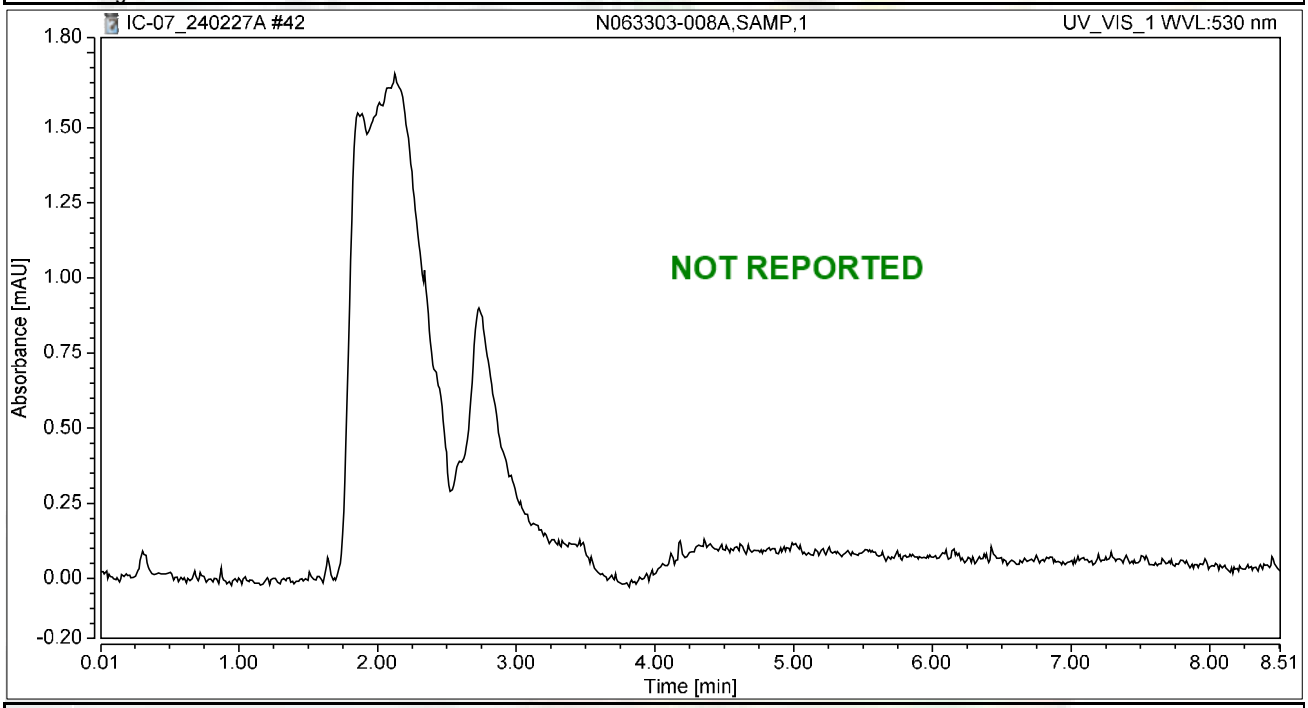
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.192	0.971	100.00	100.00	0.8947
Total:			**0.192**	**0.971**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 16:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

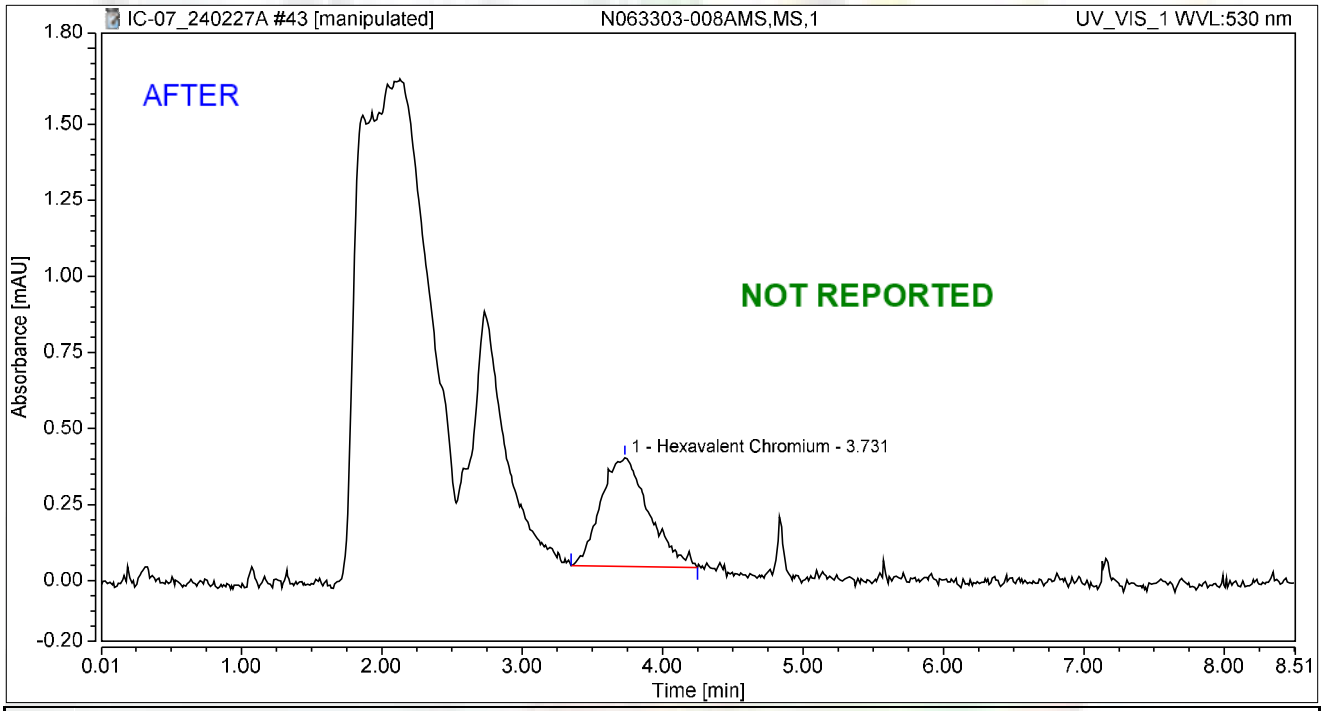
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 17:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

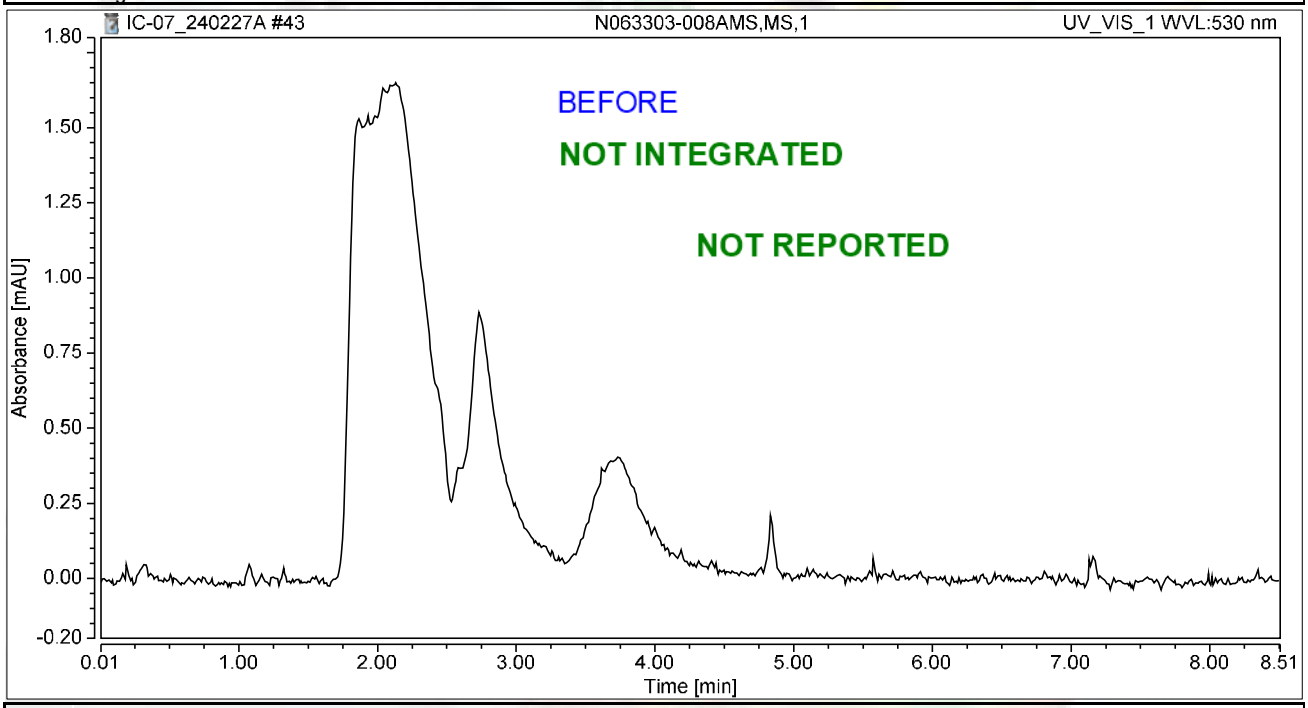
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.731	0.142	0.357	100.00	100.00	0.6586
Total:			**0.142**	**0.357**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 17:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

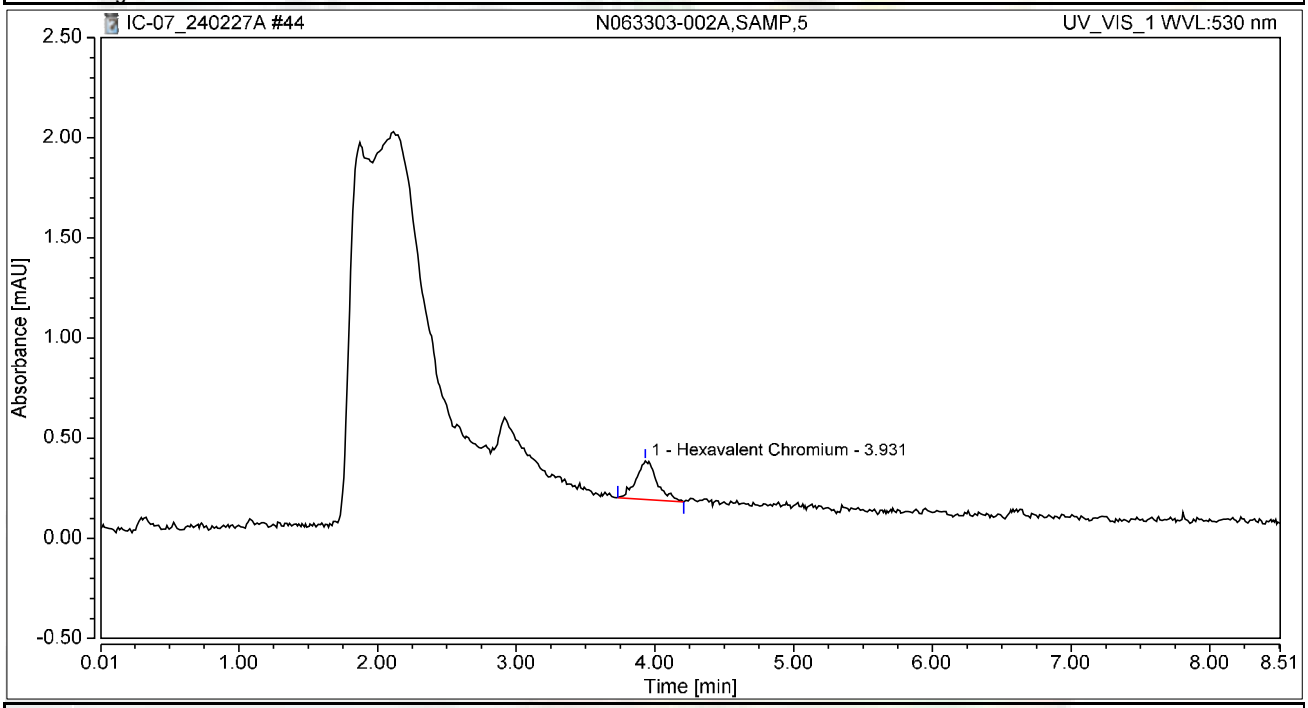
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 17:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

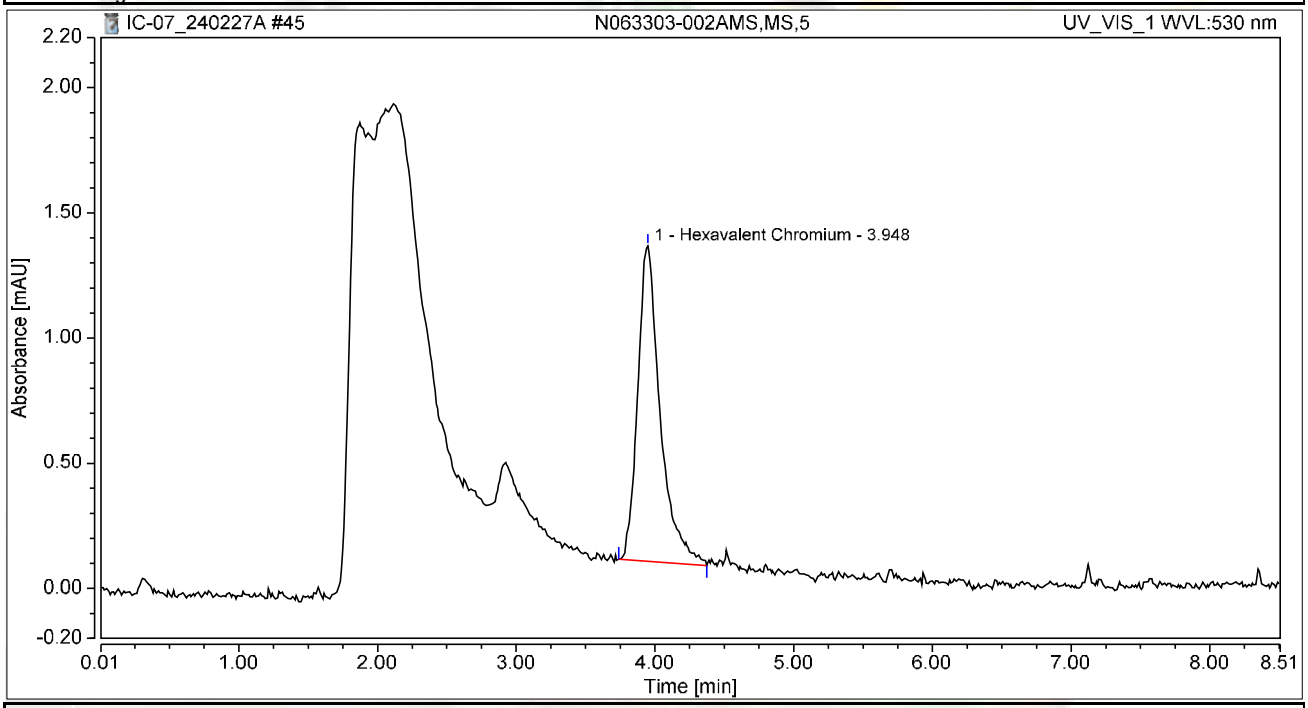
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.931	0.034	0.192	100.00	100.00	0.1590
Total:			**0.034**	**0.192**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 17:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

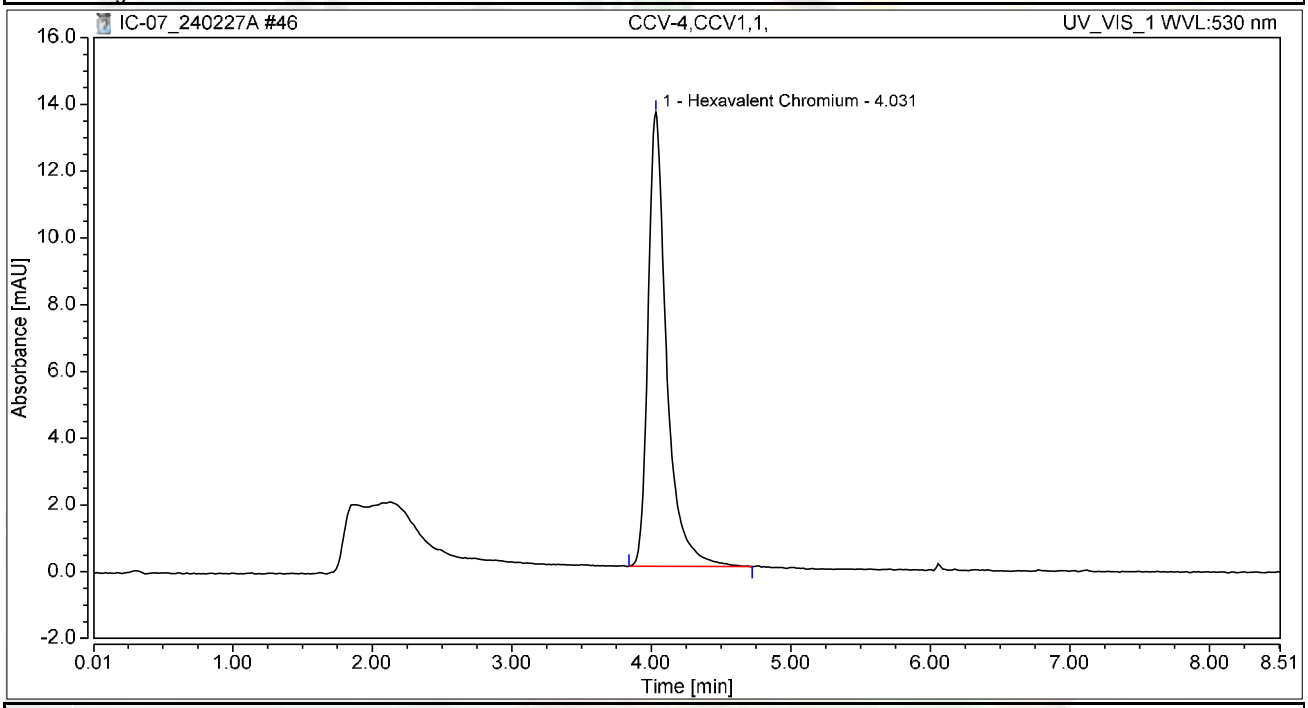
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.236	1.259	100.00	100.00	1.0980
Total:			**0.236**	**1.259**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 17:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

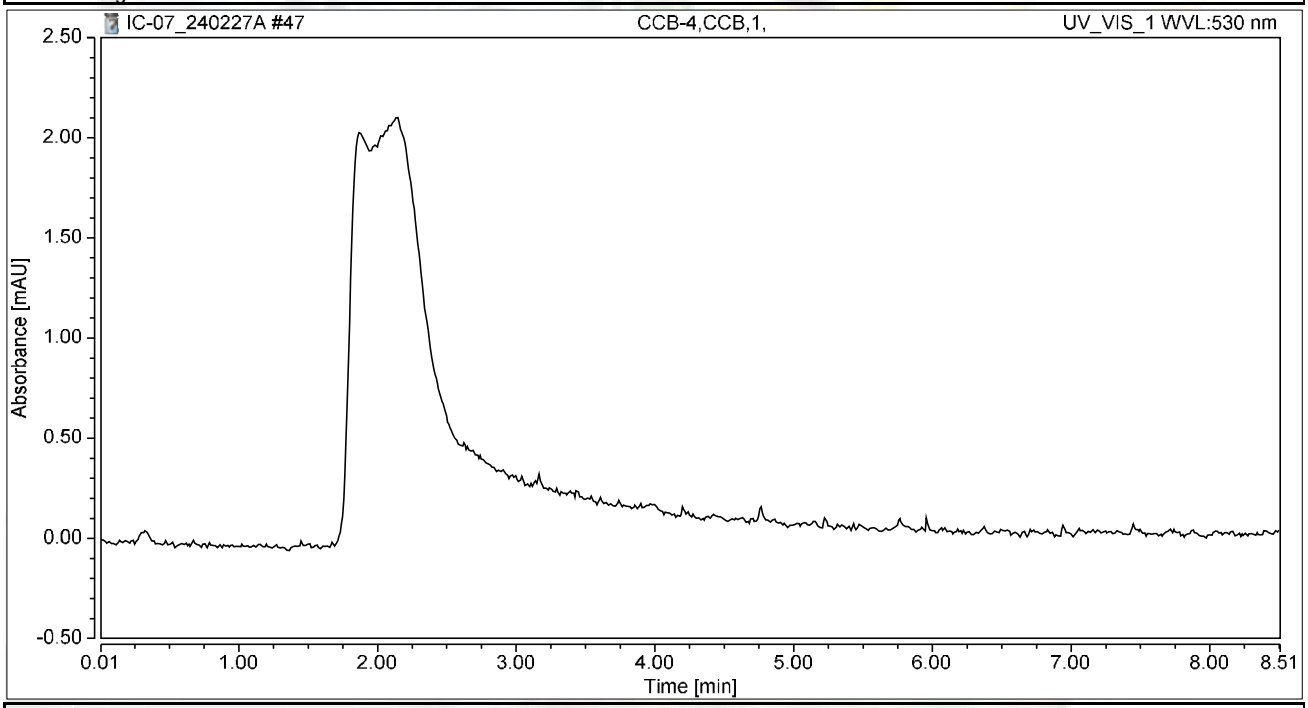
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	2.095	13.608	100.00	100.00	9.7403
Total:			**2.095**	**13.608**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 17:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

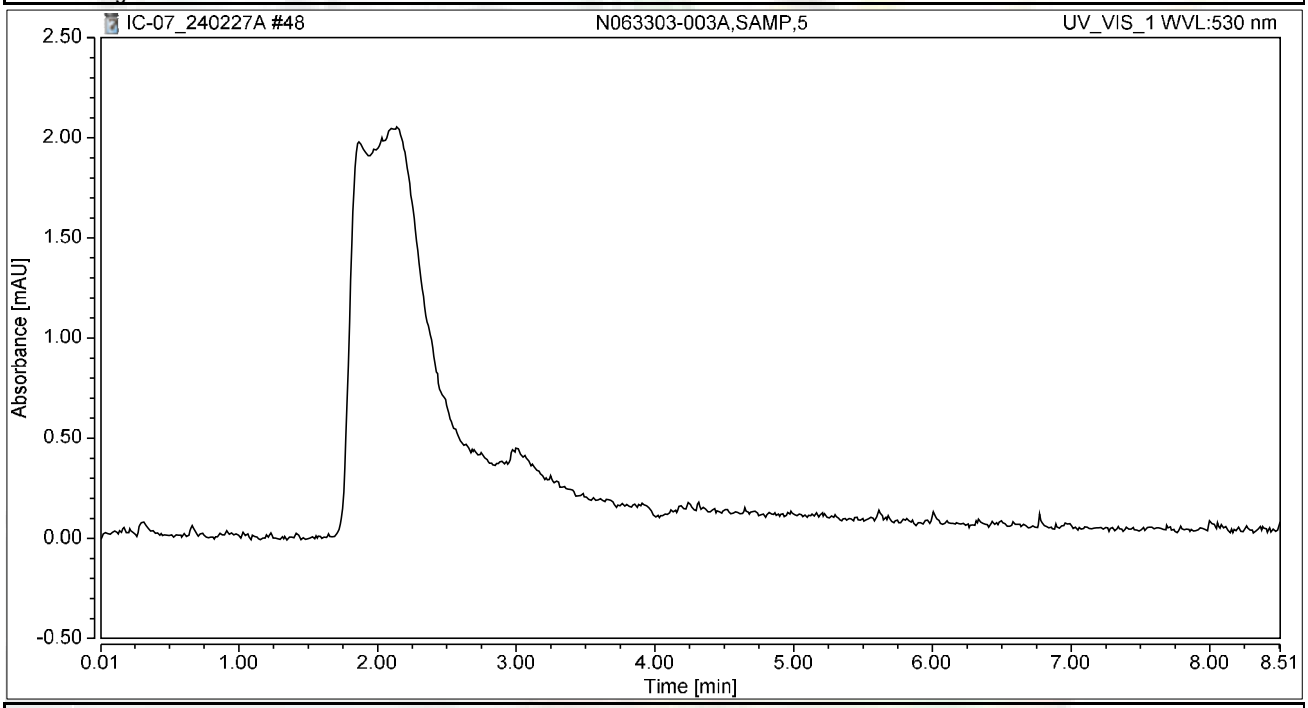
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-003A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 17:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

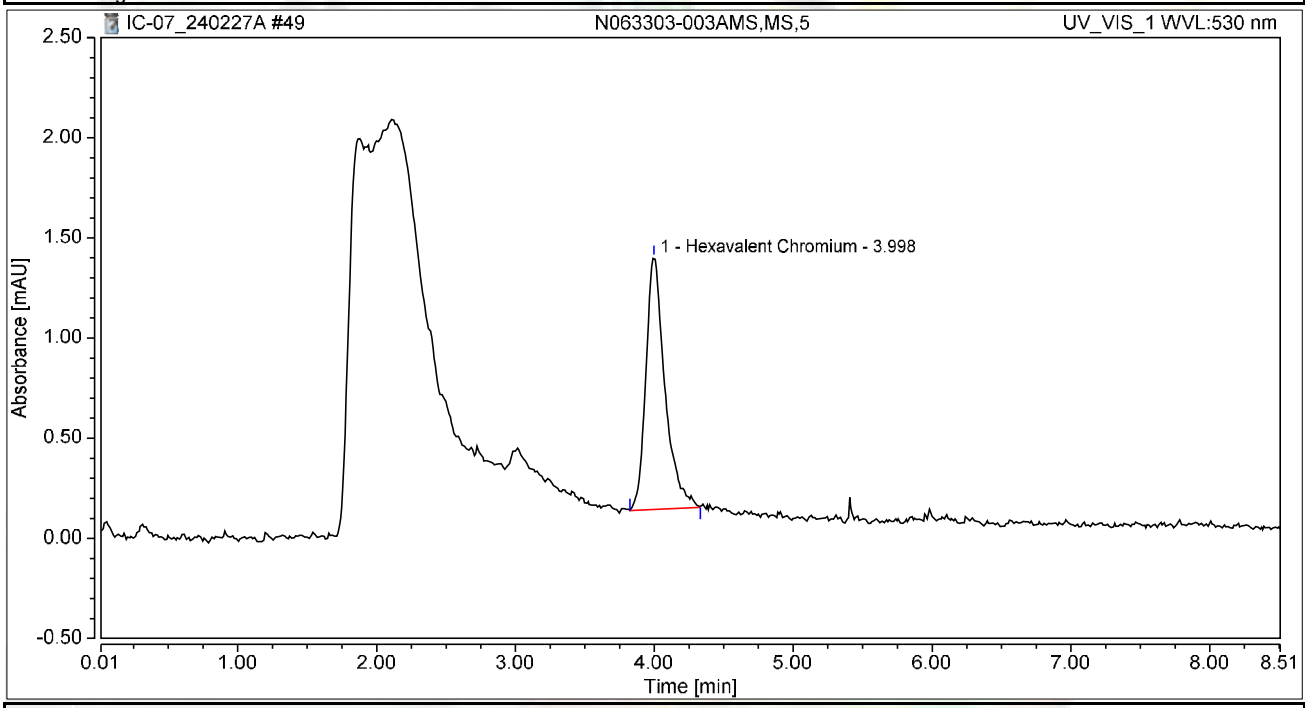
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-003AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 18:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

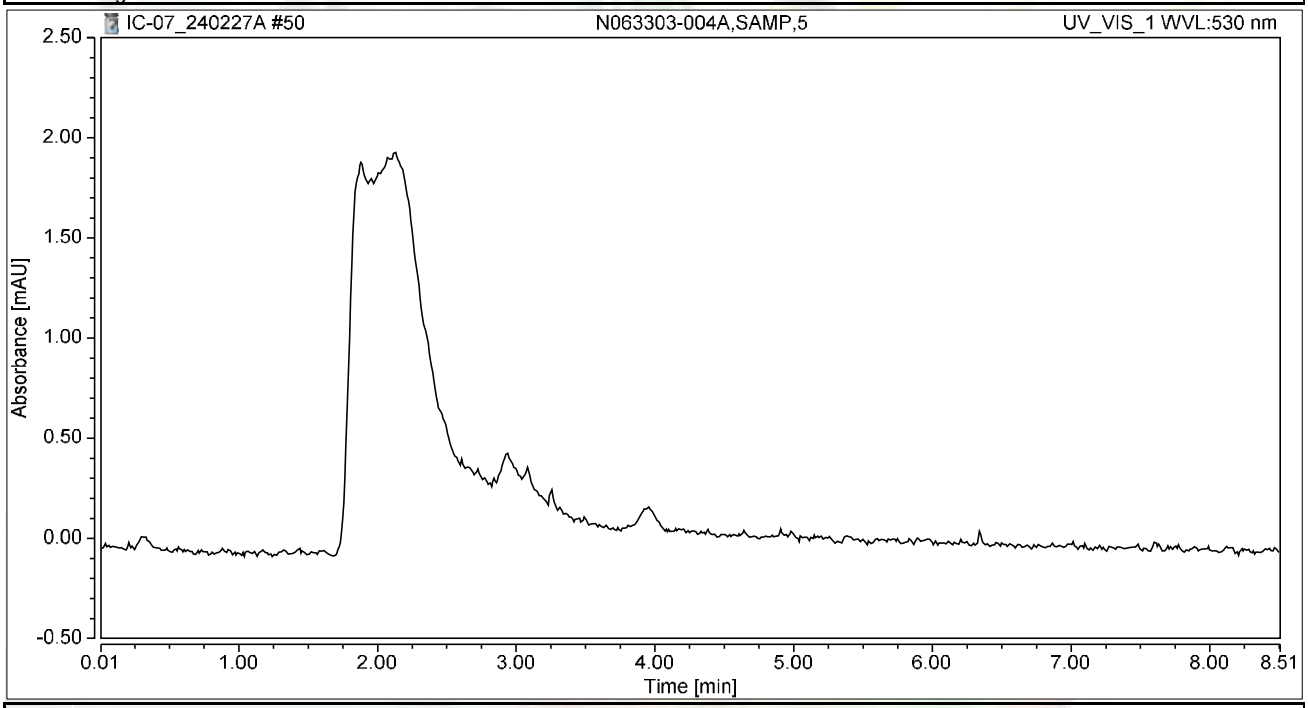
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.201	1.257	100.00	100.00	0.9342
Total:			**0.201**	**1.257**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-004A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 18:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

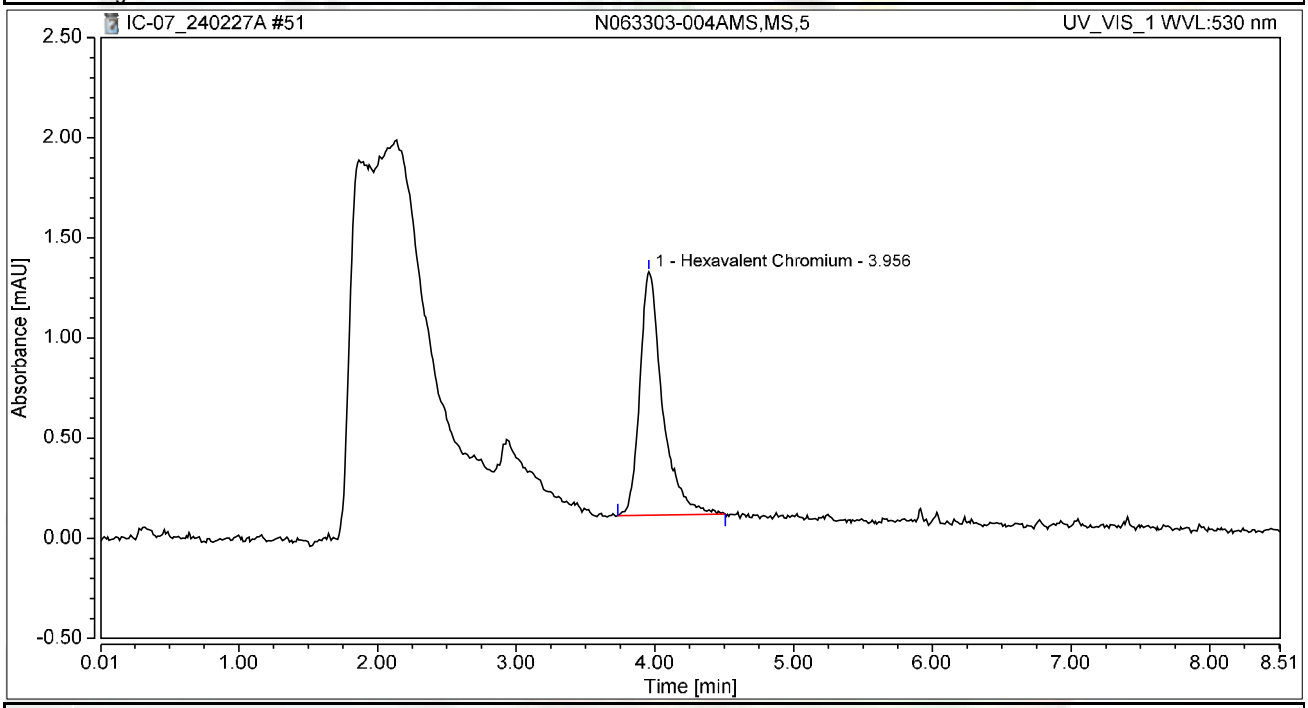
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-004AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 18:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

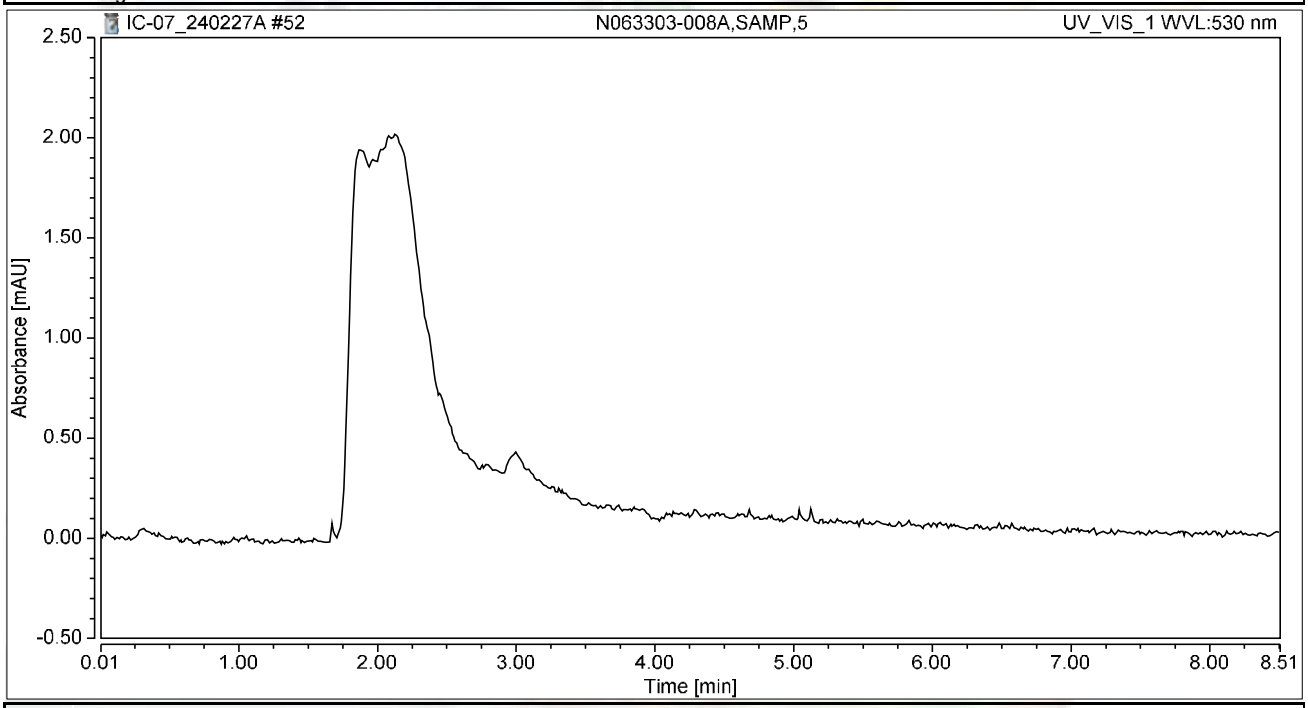
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.231	1.215	100.00	100.00	1.0720
Total:			**0.231**	**1.215**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-008A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 18:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

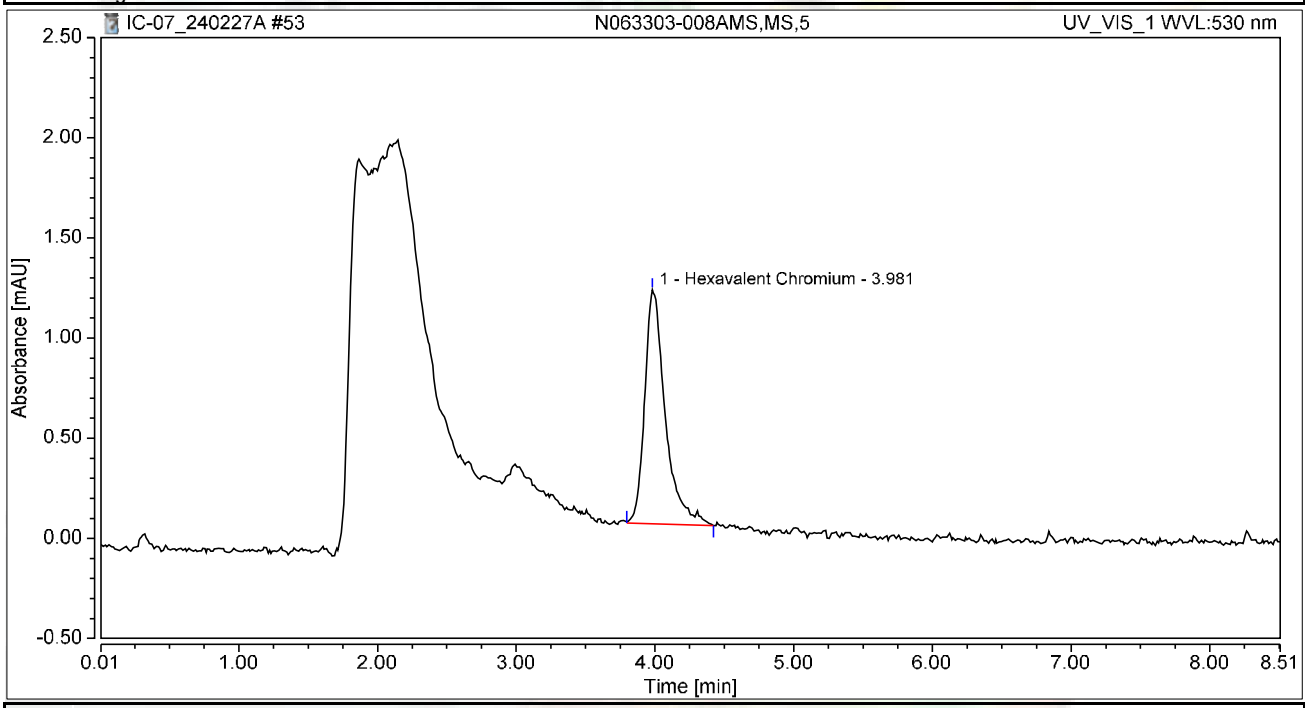
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-008AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 18:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

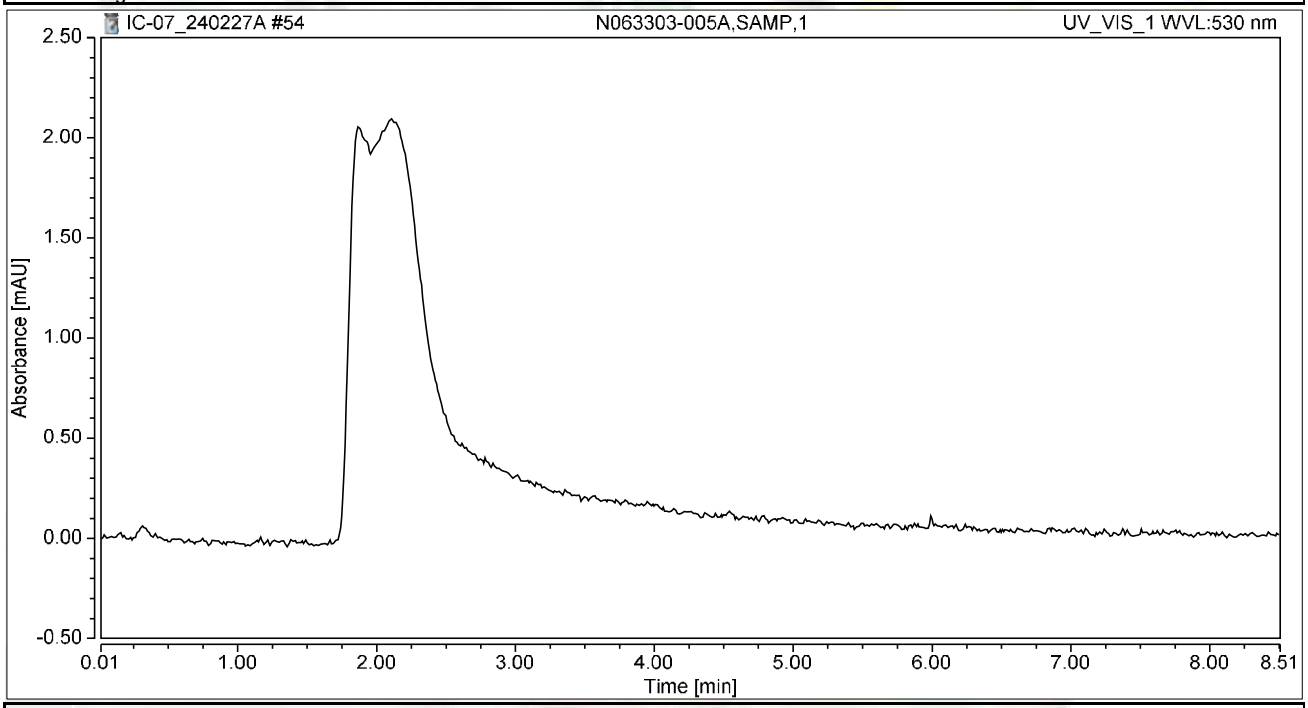
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.200	1.167	100.00	100.00	0.9302
Total:			**0.200**	**1.167**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-005A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 18:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

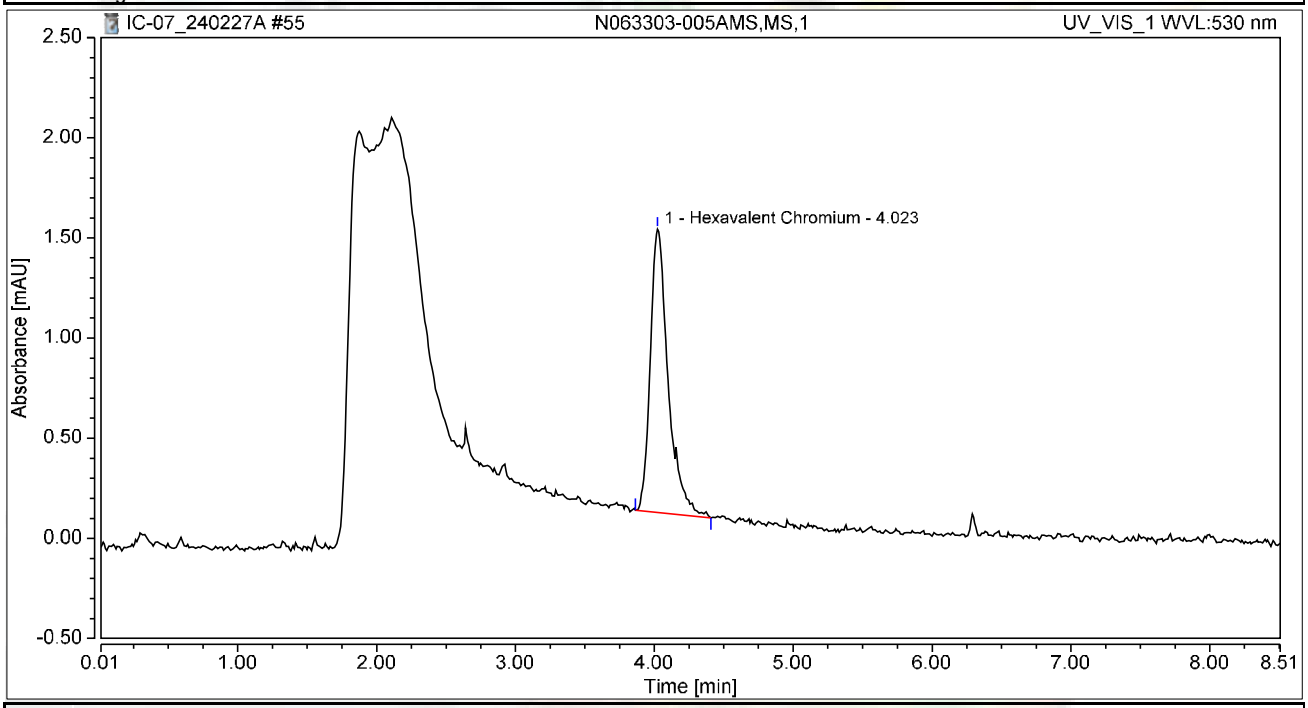
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-005AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 19:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

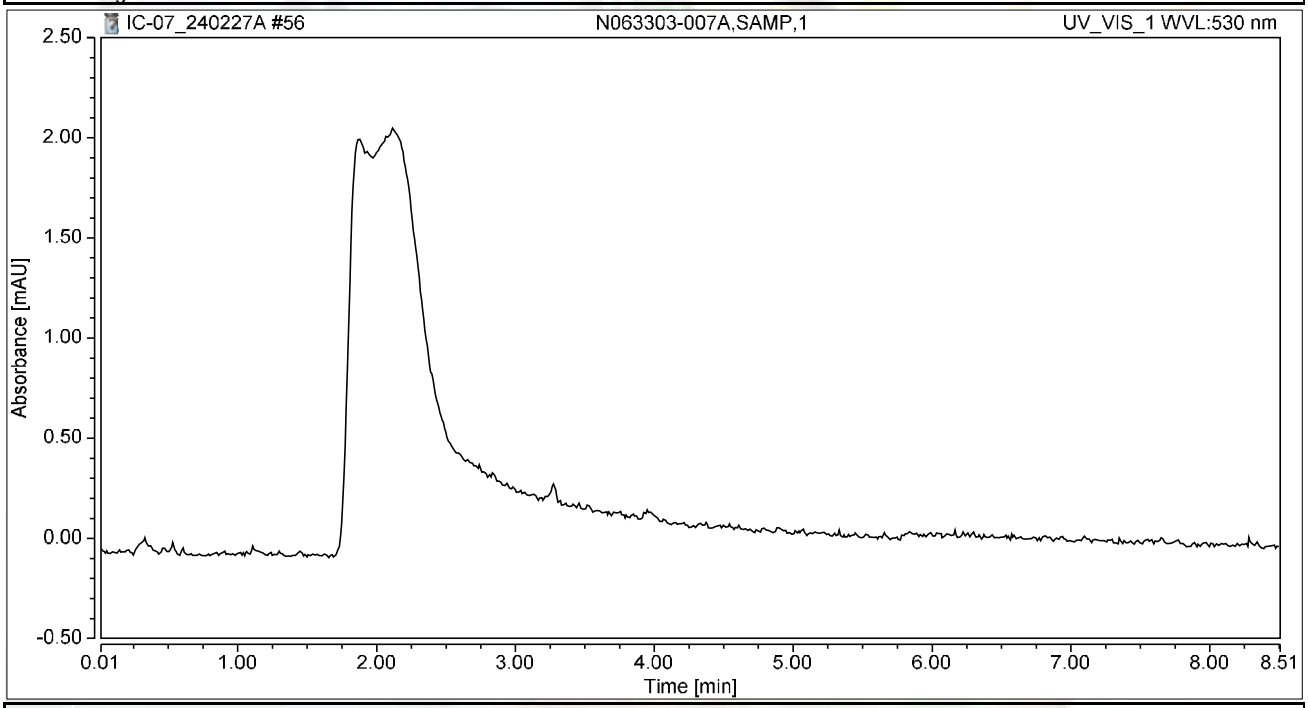
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.212	1.415	100.00	100.00	0.9842
Total:			**0.212**	**1.415**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-007A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 19:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

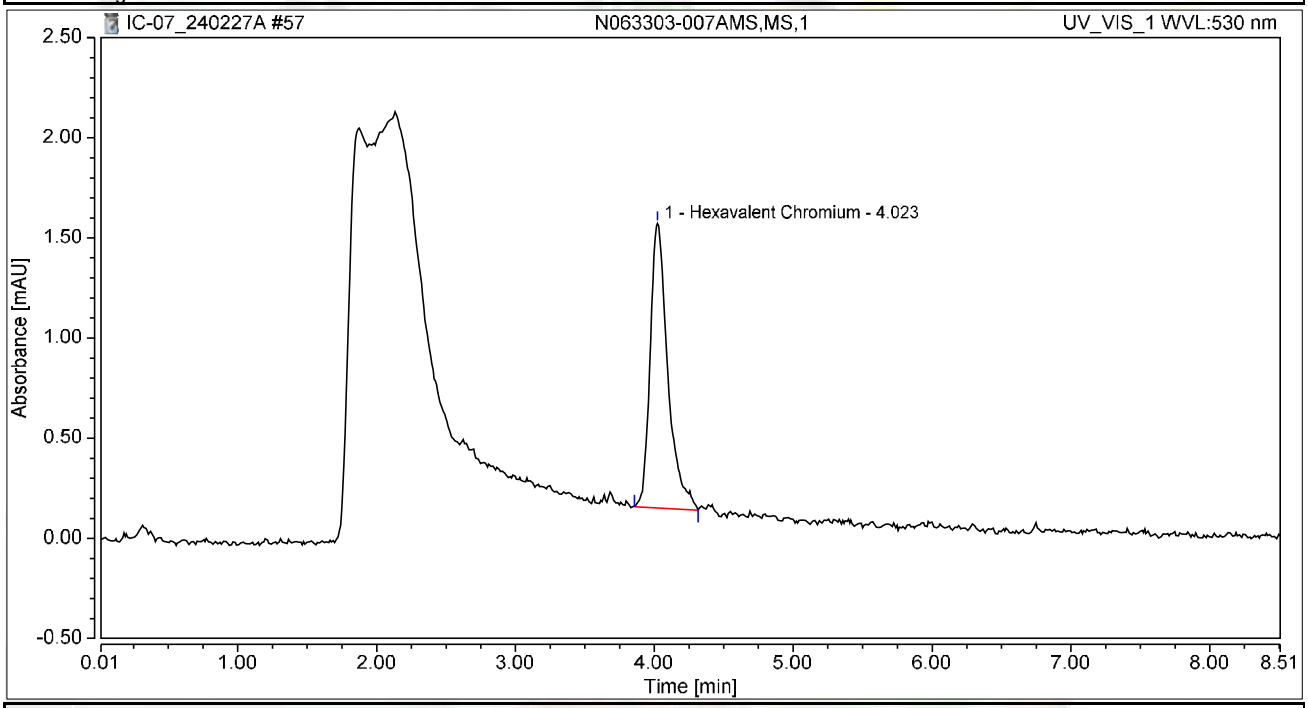
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-007AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 19:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

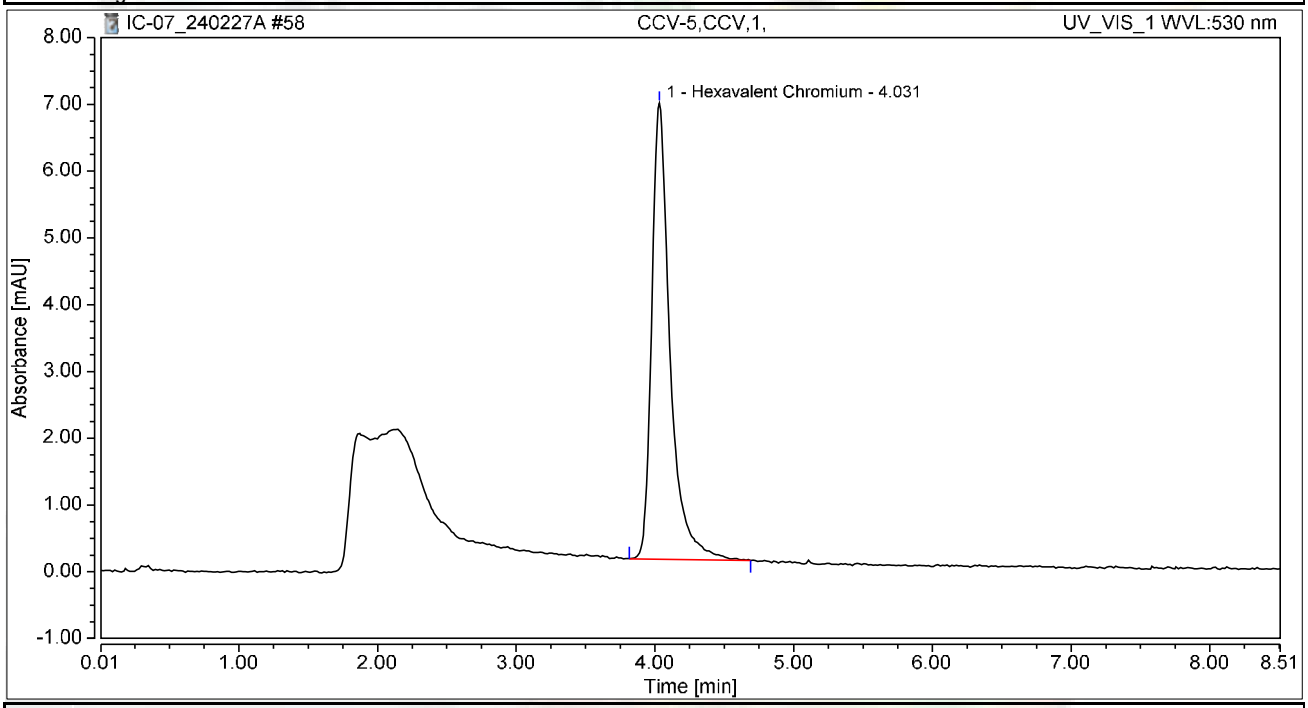
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.210	1.421	100.00	100.00	0.9749
Total:			**0.210**	**1.421**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 19:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

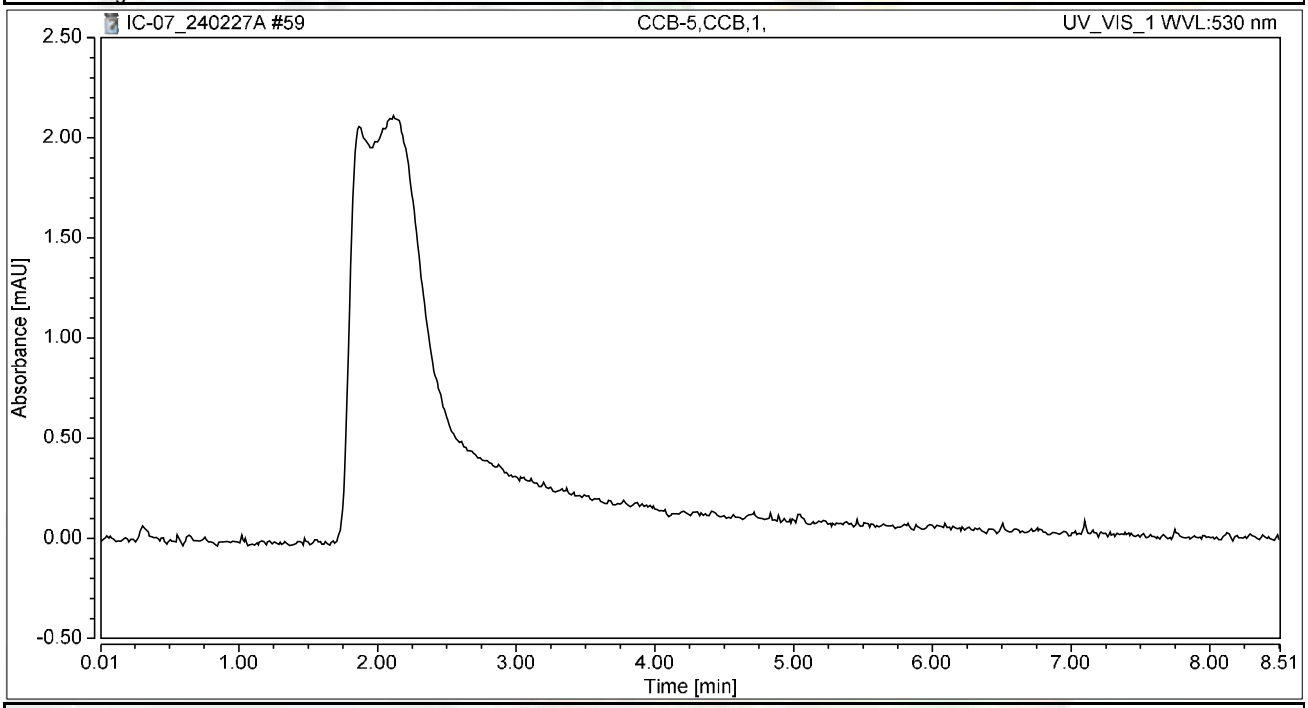
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	1.048	6.832	100.00	100.00	4.8719
Total:			**1.048**	**6.832**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 19:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

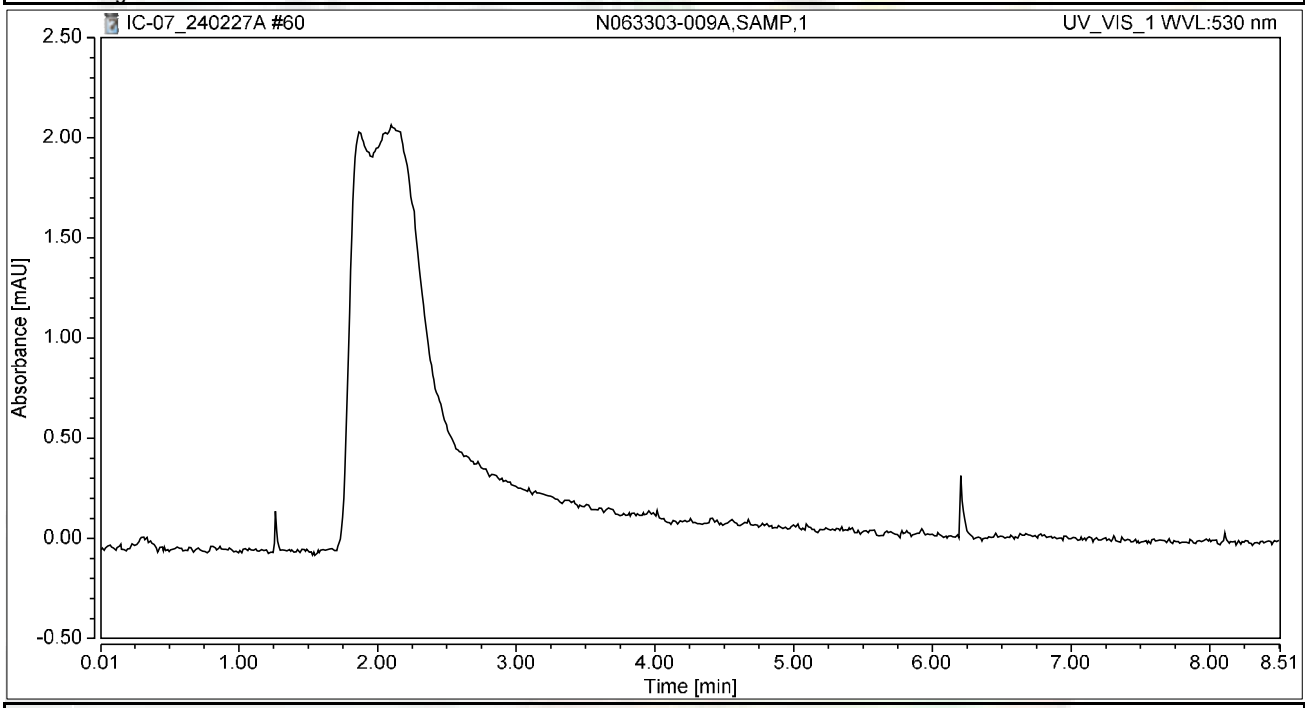
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 19:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

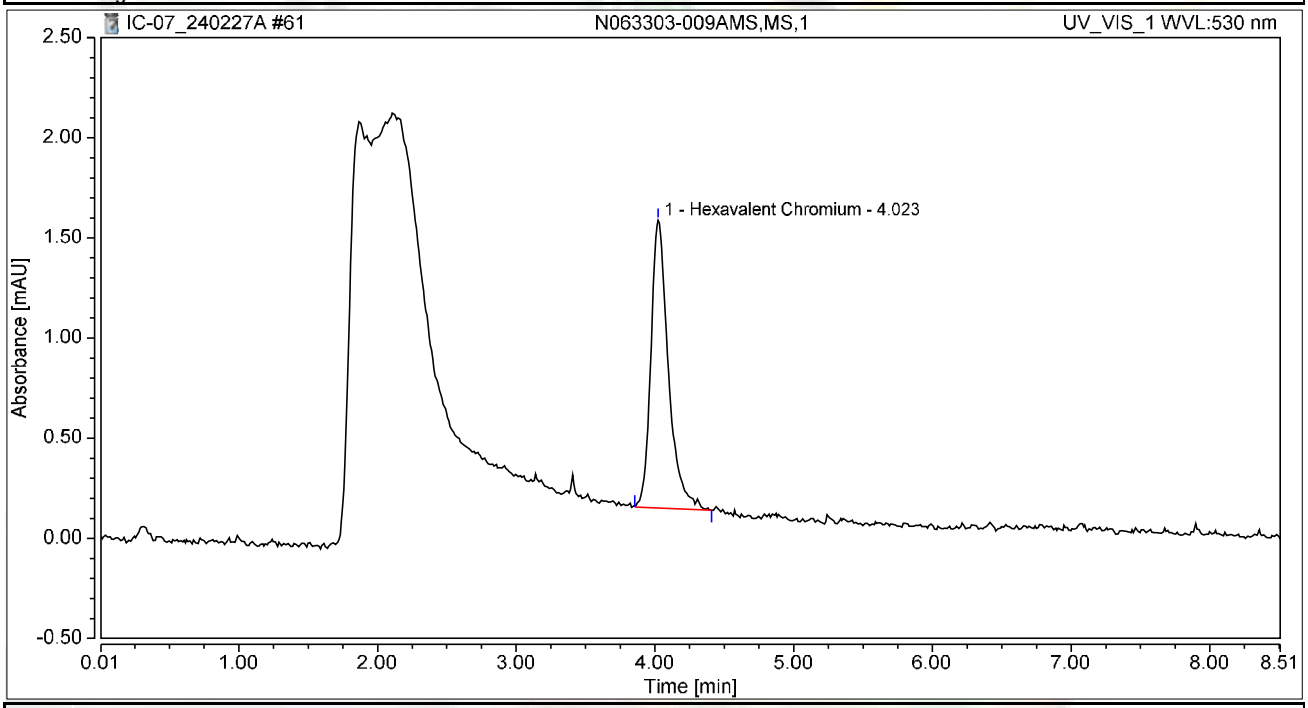
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063303-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 19:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

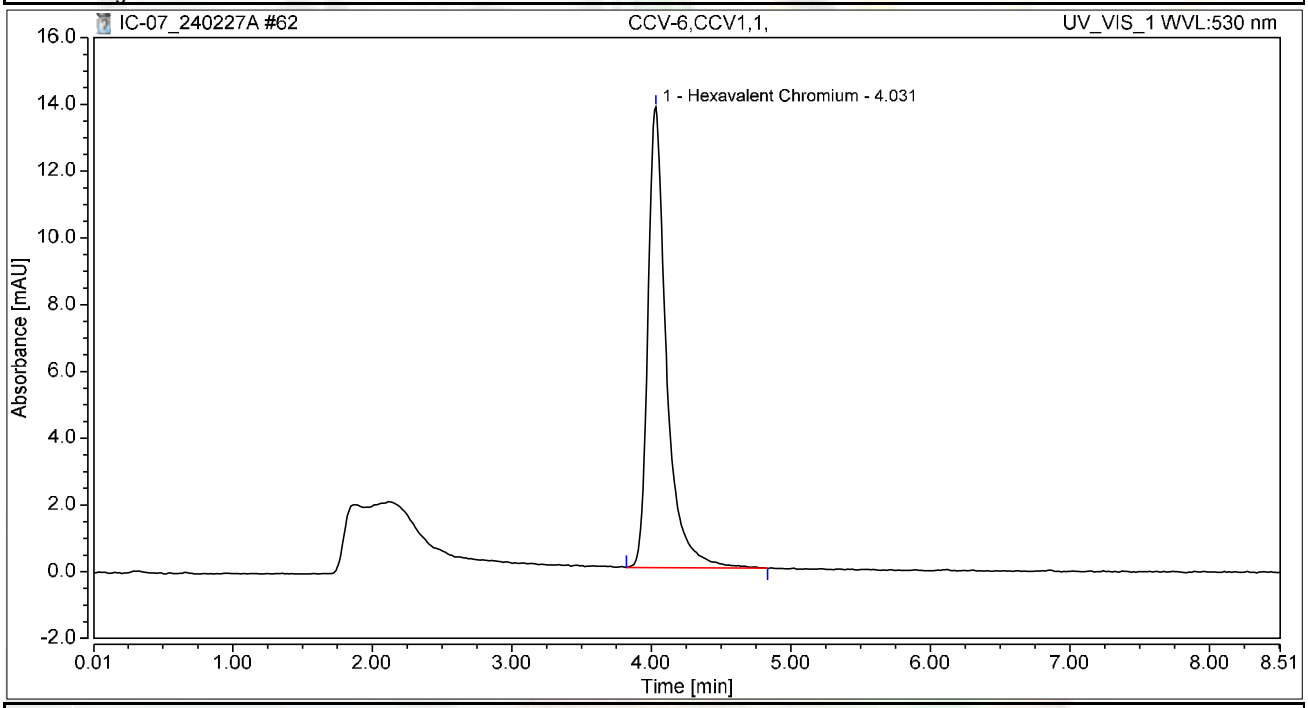
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.210	1.435	100.00	100.00	0.9756
Total:			**0.210**	**1.435**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**44**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 20:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

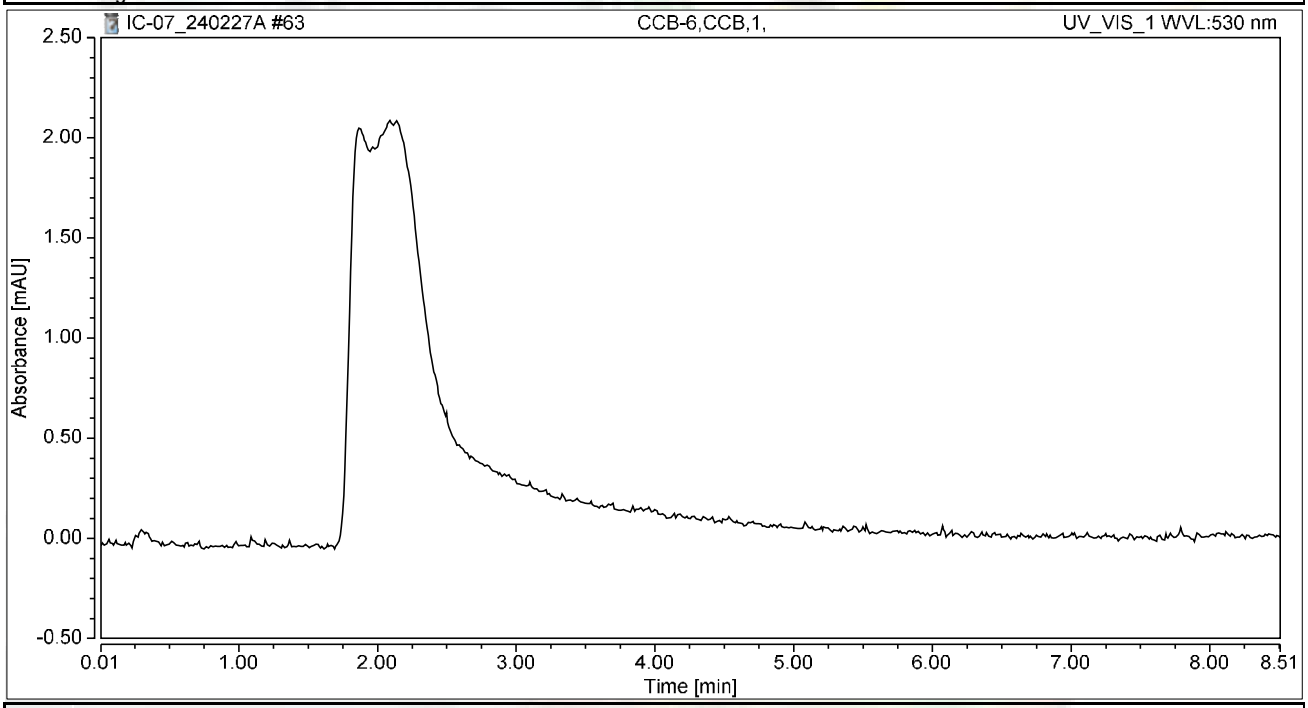
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	2.129	13.798	100.00	100.00	9.8983
Total:			**2.129**	**13.798**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**45**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 20:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

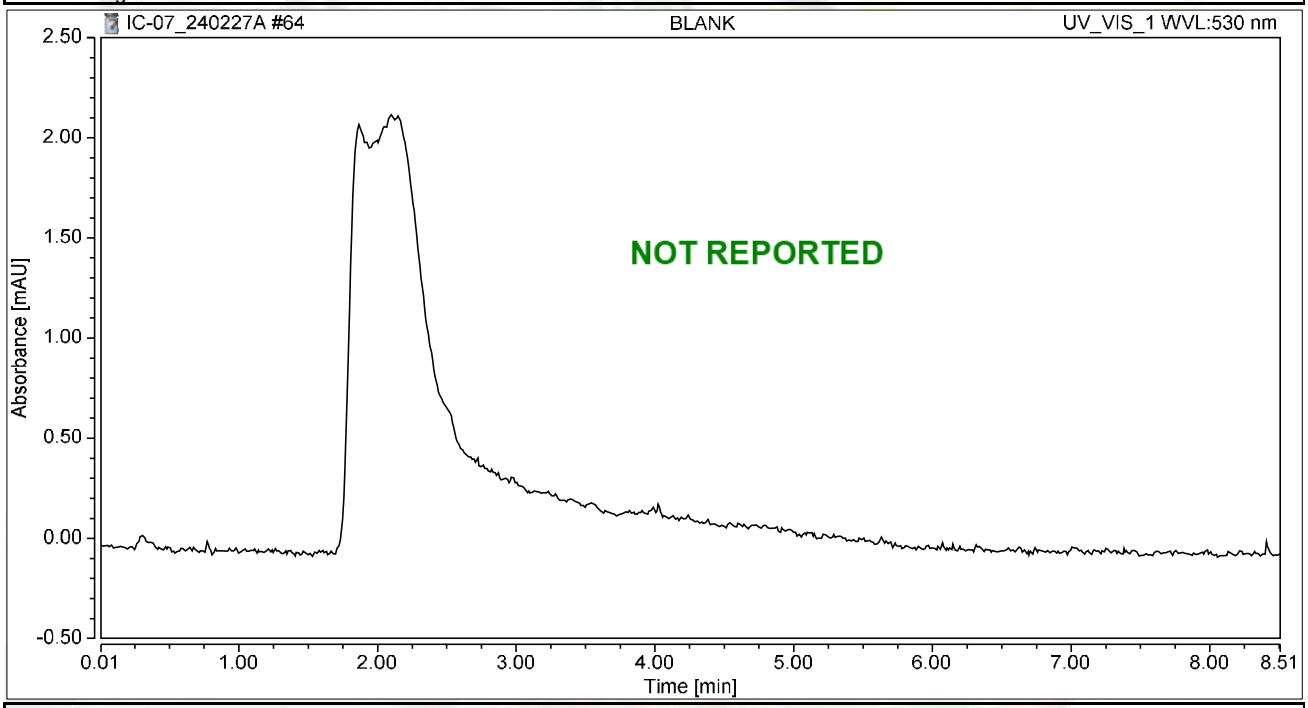
JRB 2/28/2024

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**46**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240205_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**27/Feb/24 20:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

EPA 300.0

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R182887
ASSET #: N063295 / N063297 / N063303

Instrument ID: IC-09
Analyst: RBA
Date Analyzed: 2/13/2024 23

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.		X			X	
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

%Rec of Nitrite in N063295-008BMS/MSD failed. However, LCS passed criteria.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 3/6/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: GROUNDWATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the orignal sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N063303-001C** concentration in mg/L is calculated as follows:

Nitrate, mg/L = 0.118 * 10

= 1.18

Reporting result in two significant figures,

Nitrate, mg/L = 1.2

Reviewed by:

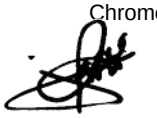
dMocha 3/12/2024

ANALYSIS RUN LOG

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/23/2024 9:04:47 AM by IC-05
Last Update: 2/25/2024 7:08:17 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
2	Std - 0	Standard	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
3	Std - 1	Standard	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
4	Std - 2	Standard	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
5	Std - 3	Standard	3	1000.0	Anions_Default	EPA 300_0_240223A	Finished
6	Std - 4	Standard	4	1000.0	Anions_Default	EPA 300_0_240223A	Finished
7	Std - 5	Standard	5	1000.0	Anions_Default	EPA 300_0_240223A	Finished
8	ICV,ICV,1	Unknown	6	1000.0	Anions_Default	EPA 300_0_240223A	Finished
9	ICB,ICB,1	Unknown	7	1000.0	Anions_Default	EPA 300_0_240223A	Finished
10	MB-H2O,MBLK,1	Unknown	8	1000.0	Anions_Default	EPA 300_0_240223A	Finished
11	LCS-H2O,LCS,1	Unknown	9	1000.0	Anions_Default	EPA 300_0_240223A	Finished
12	N063297-001B,SAMP,5	Unknown	11	1000.0	Anions_Default	EPA 300_0_240223A	Finished
13	N063297-002C,SAMP,20	Unknown	12	1000.0	Anions_Default	EPA 300_0_240223A	Finished
14	N063297-003C,SAMP,10	Unknown	13	1000.0	Anions_Default	EPA 300_0_240223A	Finished
15	N063295-008B,SAMP,10	Unknown	14	1000.0	Anions_Default	EPA 300_0_240223A	Finished
16	N063295-008BMS,MS,10	Unknown	15	1000.0	Anions_Default	EPA 300_0_240223A	Finished
17	N063295-008BMSD,MSD,10	Unknown	16	1000.0	Anions_Default	EPA 300_0_240223A	Finished
18	N063295-005B,SAMP,10	Unknown	17	1000.0	Anions_Default	EPA 300_0_240223A	Finished
19	N063295-006B,SAMP,10	Unknown	18	1000.0	Anions_Default	EPA 300_0_240223A	Finished
20	CCV-1,CCV,1	Unknown	19	1000.0	Anions_Default	EPA 300_0_240223A	Finished
21	CCB-1,CCB,1	Unknown	20	1000.0	Anions_Default	EPA 300_0_240223A	Finished
22	N063295-007B,SAMP,10	Unknown	21	1000.0	Anions_Default	EPA 300_0_240223A	Finished
23	N063295-008BDUP,DUP,10	Unknown	22	1000.0	Anions_Default	EPA 300_0_240223A	Finished
24	N063297-001BMS,MS,5	Unknown	23	1000.0	Anions_Default	EPA 300_0_240223A	Finished
25	N063297-001BMSD,MSD,5	Unknown	24	1000.0	Anions_Default	EPA 300_0_240223A	Finished
26	N063297-001BDUP,DUP,5	Unknown	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
27	N063297-001B,SAMP,10	Unknown	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
28	N063303-001C,SAMP,10	Unknown	3	1000.0	Anions_Default	EPA 300_0_240223A	Finished
29	N063303-002C,SAMP,10	Unknown	4	1000.0	Anions_Default	EPA 300_0_240223A	Finished
30	N063303-006C,SAMP,10	Unknown	5	1000.0	Anions_Default	EPA 300_0_240223A	Finished
31	N063303-008C,SAMP,10	Unknown	6	1000.0	Anions_Default	EPA 300_0_240223A	Finished
32	CCV-2,CCV,1	Unknown	7	1000.0	Anions_Default	EPA 300_0_240223A	Finished
33	CCB-2,CCB,1	Unknown	8	1000.0	Anions_Default	EPA 300_0_240223A	Finished
34	N063297-003BMS,MS,10	Unknown	9	1000.0	Anions_Default	EPA 300_0_240223A	Finished
35	N063256-001C,SAMP,20	Unknown	10	1000.0	Anions_Default	EPA 300_0_240223A	Finished
36	BLANK	Unknown	11	1000.0	Anions_Default	EPA 300_0_240223A	Finished
37	N063259-001C,SAMP,50	Unknown	12	1000.0	Anions_Default	EPA 300_0_240223A	Finished
38	BLANK	Unknown	13	1000.0	Anions_Default	EPA 300_0_240223A	Finished
39	N063260-001C,SAMP,100	Unknown	14	1000.0	Anions_Default	EPA 300_0_240223A	Finished
40	BLANK	Unknown	15	1000.0	Anions_Default	EPA 300_0_240223A	Finished
41	N063261-001C,SAMP,100	Unknown	16	1000.0	Anions_Default	EPA 300_0_240223A	Finished

Processed by:
Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)



2/25/2024

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/23/2024 9:04:47 AM by IC-05
Last Update: 2/25/2024 7:08:17 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:06:35 AM	BLANK
2	Std - 0	2/23/2024 9:21:54 AM	IBLANK
3	Std - 1	2/23/2024 9:54:20 AM	STD-LOW
4	Std - 2	2/23/2024 10:09:39 AM	STD
5	Std - 3	2/23/2024 10:25:35 AM	STD
6	Std - 4	2/23/2024 10:41:31 AM	STD
7	Std - 5	2/23/2024 10:57:27 AM	STD-HIGH 240216B
8	ICV,ICV,1	2/23/2024 11:13:23 AM	ICV, IWST-~~240131B~~
9	ICB,ICB,1	2/23/2024 11:29:18 AM	ICB
10	MB-H2O,MBLK,1	2/23/2024 11:45:14 AM	MB 240216B
11	LCS-H2O,LCS,1	2/23/2024 12:01:09 PM	LCS IWST-~~240131B~~
12	N063297-001B,SAMP,5	2/23/2024 12:17:04 PM	SAMP,2>10mL,
13	N063297-002C,SAMP,20	2/23/2024 12:33:00 PM	SAMP,0.5>10mL,
14	N063297-003C,SAMP,10	2/23/2024 12:48:55 PM	SAMP,1>10mL,
15	N063295-008B,SAMP,10	2/23/2024 1:04:51 PM	SAMP,1>10mL,
16	N063295-008BMS,MS,10	2/23/2024 1:20:46 PM	MS,1>10mL,
17	N063295-008BMSD,MSD,10	2/23/2024 1:36:43 PM	MSD,1>10mL,
18	N063295-005B,SAMP,10	2/23/2024 1:52:37 PM	SAMP,1>10mL,
19	N063295-006B,SAMP,10	2/23/2024 2:08:33 PM	SAMP,1>10mL,240216A
20	CCV-1,CCV,1	2/23/2024 2:24:29 PM	CCV, IWST-~~240131A~~
21	CCB-1,CCB,1	2/23/2024 2:40:25 PM	CCB
22	N063295-007B,SAMP,10	2/23/2024 2:56:21 PM	SAMP,1>10mL,
23	N063295-008BDUP,DUP,10	2/23/2024 3:12:16 PM	DUP,1>10mL,
24	N063297-001BMS,MS,5	2/23/2024 3:28:11 PM	MS,2>10mL,
25	N063297-001BMSD,MSD,5	2/23/2024 3:44:07 PM	MSD,2>10mL,
26	N063297-001BDUP,DUP,5	2/23/2024 4:05:45 PM	DUP,2>10mL,
27	N063297-001B,SAMP,10	2/23/2024 4:21:04 PM	SAMP,1>10mL,
28	N063303-001C,SAMP,10	2/23/2024 4:37:00 PM	SAMP,1>10mL,
29	N063303-002C,SAMP,10	2/23/2024 4:52:55 PM	SAMP,1>10mL,
30	N063303-006C,SAMP,10	2/23/2024 5:08:51 PM	SAMP,1>10mL,
31	N063303-008C,SAMP,10	2/23/2024 5:24:46 PM	SAMP,1>10mL,240216A
32	CCV-2,CCV,1	2/23/2024 5:40:42 PM	CCV, IWST-~~240131A~~
33	CCB-2,CCB,1	2/23/2024 5:56:38 PM	CCB
34	N063297-003BMS,MS,10	2/23/2024 6:12:34 PM	MS,1>10mL,
35	N063256-001C,SAMP,20	2/23/2024 6:28:29 PM	SAMP,0.5>10mL,
36	BLANK	2/23/2024 6:44:25 PM	BLANK
37	N063259-001C,SAMP,50	2/23/2024 7:00:22 PM	SAMP,0.2>10mL,
38	BLANK	2/23/2024 7:16:17 PM	BLANK
39	N063260-001C,SAMP,100	2/23/2024 7:32:13 PM	SAMP,0.1>10mL,
40	BLANK	2/23/2024 7:48:10 PM	BLANK
41	N063261-001C,SAMP,100	2/23/2024 8:04:05 PM	SAMP,0.1>10mL,

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/23/2024 9:04:47 AM by IC-05
Last Update: 2/25/2024 7:08:17 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	BLANK	Unknown	17	1000.0	Anions_Default	EPA 300_0_240223A	Finished
43	CCV-3,CCV,1	Unknown	18	1000.0	Anions_Default	EPA 300_0_240223A	Finished
44	CCB-3,CCB,1	Unknown	19	1000.0	Anions_Default	EPA 300_0_240223A	Finished

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/23/2024 9:04:47 AM by IC-05
Last Update: 2/25/2024 7:08:17 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	BLANK	2/23/2024 8:20:01 PM	BLANK 240216A
43	CCV-3,CCV,1	2/23/2024 8:35:57 PM	CCV, IWST-~~240131A~~
44	CCB-3,CCB,1	2/23/2024 8:51:53 PM	CCB

dMocha 3/10/2024
for RBA

INITIAL CALIBRATION DATA SUMMARY

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-09
Date Calibrated: 2/23/2024

Initial Calibration:

Nitrate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0190	0.0943	0.1907	0.4801	0.9920	1.000
Measured, in mg/L	0.000000	0.063600	0.253100	0.495800	1.224500	2.513000	
Relative Error (%RE)		27.2%		-0.8%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712E

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **ICV**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711056**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.260	0.050	1.250	0	101	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **CCV**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711067**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.234	0.050	1.250	0	98.7	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **CCV**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711076**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.248	0.050	1.250	0	99.8	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **CCV**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711079**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.226	0.050	1.250	0	98.1	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **ICB**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711057**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **CCB**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711068**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	0.025	0.050									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **CCB**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711077**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **182887**
Client ID: **CCB**	Batch ID: **R182887**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5711080**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Detection of NO3 in CCB1 was >1/2PQL. However, samples are either ND or >5x the CCB detection.

dMocha 3/12/2024

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-09

Analytical Sequence

Date Analyzed: 2/23/2024

Sample Name		Retention Time	Evaluation
ICV	Nitrate	7.317	
CCV-1	Nitrate	7.254	
CCV-2	Nitrate	7.227	
CCV-3	Nitrate	7.191	
	Average	7.247	
	Applied RT Window	7.047 - 7.447	
MB-R182887_NO3	Nitrate	7.251	PASS
LCS-R182887_NO3	Nitrate	7.314	PASS
N063295-008BMS	Nitrate	7.277	PASS
N063295-008BMSD	Nitrate	7.274	PASS
N063295-008BDUP	Nitrate	N.A.	N.A.
N063303-001C	Nitrate	7.237	PASS
N063303-002C	Nitrate	7.241	PASS
N063303-006C	Nitrate	N.A.	N.A.
N063303-008C	Nitrate	N.A.	N.A.
N063297-003BMS	Nitrate	7.221	PASS

Reviewed by:

dlRocha 3/12/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): 10/5/2022, 12/14/2022, 3/22/2023,7/10/2023; 10/3/2023 & 11/14/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: mg/L

Instrument Name: **IC-08 & IC-09**

Datafile IC-08 221005A #24 IC-08 221214A #30 IC-08 230322A #35 IC-08 230710A #13 IC-09 231003A #14 IC-08 231114A #24 IC-09 231114A #19

Analyte	#1	#2	#3	#4	#5	#6	#7	Spike Conc., mg/L	SD	$t_{(n-1)}$ value	MDLs	MDL	PQL
Fluoride	0.100	0.103	0.108	0.118	0.110	0.098	0.126	0.10	0.0101	3.143	**0.0318**	**0.0318**	0.10
Chloride	0.480	0.418	0.472	0.653	0.624	0.587	0.622	0.50	0.0922	3.143	**0.2898**	**0.2898**	0.50
Nitrite	0.068	0.061	0.060	0.071	0.063	0.061	0.070	0.05	0.0047	3.143	**0.0149**	**0.0149**	0.05
Bromide	0.526	0.502	0.509	0.522	0.536	0.527	0.520	0.50	0.0116	3.143	**0.0364**	**0.0364**	0.50
Nitrate	0.073	0.058	0.059	0.073	0.074	0.068	0.073	0.05	0.0068	3.143	**0.0215**	**0.0240**	0.05
Phosphate	0.112	0.096	0.114	0.120	0.130	0.093	0.124	0.10	0.0138	3.143	**0.0433**	**0.0433**	0.10
Sulfate	0.501	0.609	0.638	0.401	0.704	0.620	0.697	0.50	0.1092	3.143	**0.3432**	**0.3432**	0.50

METHOD DETECTION LIMIT (Blanks)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Analyte	MDLb	# of Records
Fluoride	0	63
Chloride	0.1456	80
Nitrite	0.0147	64
Bromide	0	18
Nitrate	0.0240	132
Phosphate	0.0237	34
Sulfate	0.2579	107

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

EPA 6010B
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107062
ASSET #: N063303

Instrument ID: ICP-03
Analyst: DBJ
Date Analyzed: 2/23/2024

Method:

[X] EPA 6010B / 200.7
[ ] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.	X			X		
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented	X			X		
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

%Rec of Fe/Ca in N063295-005C-PS/MS/MSD failed, low bias. However, LCS passed criteria.
The first ICSA1(raw data ICSA Sequence No.:12) does not have the ICSA Standard in position. CAR#7427

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 03072024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in ug/L , in the original sample as follows:

Iron , ug/L = A * DF * PF *CF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL
CF= Conversion Factor from mg/L to ug/L, 1000

For Sample **N063303-001B** , the concentration i ug/L is calculated as follows:

Iron , ug/L = 0.02359 * 1 * (25/25) * 1000

Iron , ug/L = 23.59

Reporting results in two significant figures,

Iron , ug/L = 24

Reviewed by:

dlRocha 3/14/2024

% RSD SUMMARY

RSD SUMMARY: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	Fe	0	4.79	15	PASS
Standard1	ICAL	1	Fe	0.02	3.3	15	PASS
Standard2	ICAL	1	Fe	0.05	1.26	15	PASS
Standard3	ICAL	1	Fe	2	0.37	15	PASS
Standard4	ICAL	1	Fe	5	0.7	15	PASS
Standard5	ICAL	1	Fe	7.5	0.76	15	PASS
Standard6	ICAL	1	Fe	10	0.37	15	PASS
Standard7	ICAL	1	Fe	20	0.65	15	PASS
ICV	ICV	1	Fe	10.06	0.34	15	PASS
ICB	ICB	1	Fe	0	9.12	15	PASS
LLICV1	CCV1	1	Fe	0.02	1.2	20	PASS
ICSA1	ICSA	1	Fe	26.91	22.38	15	NR!
ICSA1	ICSA	1	Fe	182.18	0.05	15	PASS
ICSA1	ICSA	1	Fe	174.62	0.07	15	PASS
ICSAB1	ICSAB	1	Fe	170.21	0.13	15	PASS
RINSE	RINSE	1	Fe	0.04	13.45	15	PASS
CCV1	CCV	1	Fe	10.31	0.73	15	PASS
CCB1	CCB	1	Fe	0	73.65	15	<PQL
CCV2	CCV	1	Fe	10.24	0.59	15	PASS
CCB2	CCB	1	Fe	0	47.78	15	<PQL
CCV3	CCV	1	Fe	10.13	0.26	15	PASS
CCB3	CCB	1	Fe	0	135.65	15	<PQL
ICSA2	ICSA	1	Fe	172.57	0.08	15	PASS
ICSAB2	ICSAB	1	Fe	169.57	0.07	15	PASS
RINSE	RINSE	1	Fe	0.02	4.66	15	PASS
RINSE	RINSE	1	Fe	0	43.94	15	<PQL
MB-107062	MBLK	1	Fe	0	312.39	15	<PQL
LCS1-107062	LCS	1	Fe	0.1	0.34	15	PASS
N063295-005C	SAMP	1	Fe	0.32	0.57	15	PASS
N063295-005C	SAMP	5	Fe	0.07	1.9	15	PASS
N063295-005C-PS	PS	1	Fe	0.41	1.11	15	PASS
N063295-005C-MS1	MS	1	Fe	0.48	0.88	15	PASS
N063295-005C-MSD1	MSD	1	Fe	0.49	0.76	15	PASS
CCV4	CCV	1	Fe	10.18	0.54	15	PASS
CCB4	CCB	1	Fe	0	69.03	15	<PQL
N063295-006C	SAMP	1	Fe	0.31	0.29	15	PASS
N063295-007C	SAMP	1	Fe	0.2	1.15	15	PASS
N063295-008C	SAMP	1	Fe	0.28	0.32	15	PASS
N063297-001C	SAMP	1	Fe	0.02	5.83	15	PASS
N063303-001B	SAMP	1	Fe	0.02	4.85	15	PASS
N063303-002B	SAMP	1	Fe	0.01	21.54	15	<PQL
N063303-006B	SAMP	1	Fe	3.64	0.6	15	PASS

RSD SUMMARY: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
N063303-008B	SAMP	1	Fe	15.36	0.22	15	PASS
CCV5	CCV	1	Fe	10.15	0.38	15	PASS
CCB5	CCB	1	Fe	0	356.23	15	<PQL
CCV6	CCV	1	Fe	10.09	0.65	15	PASS
CCB6	CCB	1	Fe	0	62.82	15	<PQL
ICSA3	ICSA	1	Fe	171.39	0.12	15	PASS
ICSAB3	ICSAB	1	Fe	166.83	0.02	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240223A

Instrument ID: ICP-03

STANDARD CODE	
Standard1	MWST-240105M, 0.5<50mL
Standard2	MWST-240105N
Standard3	MWST-240105O, 5<50mL
Standard4	MWST-240105O,12.5<50mL
Standard5	MWST-240105O, 15<40mL
Standard6	MWST-240105O, 25<50mL
Standard7	MWST-240105O
ICV	MWST-240105AE
CCV	MWST-240105O, 25<50mL
ICSA/ICSAB	MWST-240105P / MWST-240105Q
Int. Std. (Y)	MWST-240105B
PS Spike	MWST-240105X / Y/ Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	02/23/2024	11:44:54 AM
2	Standard1	ICAL	1	02/23/2024	11:49:07 AM
3	Standard2	ICAL	1	02/23/2024	11:52:50 AM
4	Standard3	ICAL	1	02/23/2024	11:56:34 AM
5	Standard4	ICAL	1	02/23/2024	11:59:50 AM
6	Standard5	ICAL	1	02/23/2024	12:04:04 PM
7	Standard6	ICAL	1	02/23/2024	12:08:16 PM
8	Standard7	ICAL	1	02/23/2024	12:12:29 PM
310	ICV	ICV	1	02/23/2024	12:22:17 PM
1	ICB	ICB	1	02/23/2024	12:26:37 PM
2	LLICV1	CCV1	1	02/23/2024	12:30:51 PM
9	ICSA1	ICSA	1	02/23/2024	12:35:05 PM
9	ICSA1	ICSA	1	02/23/2024	12:40:32 PM
9	ICSA1	ICSA	1	02/23/2024	12:49:27 PM
10	ICSAB1	ICSAB	1	02/23/2024	12:54:28 PM
299	RINSE	RINSE	1	02/23/2024	12:59:30 PM
11	MB-107026	MBLK	1	02/23/2024	01:07:19 PM
12	LCS1-107026	LCS	1	02/23/2024	01:14:23 PM
13	N063248-005C	SAMP	1	02/23/2024	01:19:08 PM
14	N063248-005C	SAMP	5	02/23/2024	01:24:27 PM
15	N063248-005C-PS	PS	1	02/23/2024	01:28:12 PM
16	N063248-005C-MS1	MS	1	02/23/2024	01:33:31 PM
17	N063248-005C-MSD1	MSD	1	02/23/2024	01:38:50 PM
18	N063248-006C	SAMP	1	02/23/2024	01:44:10 PM
19	N063248-007C	SAMP	1	02/23/2024	01:49:29 PM
7	CCV1	CCV	1	02/23/2024	01:54:50 PM
1	CCB1	CCB	1	02/23/2024	01:59:05 PM
20	N063248-008C	SAMP	1	02/23/2024	02:03:19 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
21	N063248-010B	SAMP	1	02/23/2024	02:08:40 PM
22	N063248-011B	SAMP	1	02/23/2024	02:13:59 PM
23	N063249-007C	SAMP	1	02/23/2024	02:19:21 PM
24	N063249-009C	SAMP	1	02/23/2024	02:24:10 PM
25	N063249-011C	SAMP	1	02/23/2024	02:29:00 PM
26	N063249-013C	SAMP	1	02/23/2024	02:33:58 PM
27	N063249-015C	SAMP	1	02/23/2024	02:39:18 PM
28	N063249-017C	SAMP	1	02/23/2024	02:44:07 PM
29	N063249-018C	SAMP	1	02/23/2024	02:48:26 PM
7	CCV2	CCV	1	02/23/2024	02:53:25 PM
1	CCB2	CCB	1	02/23/2024	02:57:39 PM
30	MB-107028	MBLK	1	02/23/2024	03:01:53 PM
31	LCS-107028	LCS	1	02/23/2024	03:08:27 PM
32	N063248-005D	SAMP	1	02/23/2024	03:13:14 PM
33	N063248-005D	SAMP	5	02/23/2024	03:18:34 PM
34	N063248-005D-PS	PS	1	02/23/2024	03:22:21 PM
35	N063248-005D-MS	MS	1	02/23/2024	03:27:13 PM
36	N063248-005D-MSD	MSD	1	02/23/2024	03:32:04 PM
37	N063248-006D	SAMP	1	02/23/2024	03:36:55 PM
38	N063248-007D	SAMP	1	02/23/2024	03:42:15 PM
39	N063248-008D	SAMP	1	02/23/2024	03:47:35 PM
7	CCV3	CCV	1	02/23/2024	03:52:56 PM
1	CCB3	CCB	1	02/23/2024	03:57:10 PM
9	ICSA2	ICSA	1	02/23/2024	04:01:24 PM
10	ICSAB2	ICSAB	1	02/23/2024	04:06:25 PM
299	RINSE	RINSE	1	02/23/2024	04:13:31 PM
40	N063248-011F	SAMP	1	02/23/2024	04:17:20 PM
300	RINSE	RINSE	1	02/23/2024	04:22:39 PM
41	MB-107062	MBLK	1	02/23/2024	04:26:58 PM
42	LCS1-107062	LCS	1	02/23/2024	04:34:52 PM
43	N063295-005C	SAMP	1	02/23/2024	04:39:39 PM
44	N063295-005C	SAMP	5	02/23/2024	04:44:59 PM
45	N063295-005C-PS	PS	1	02/23/2024	04:48:45 PM
46	N063295-005C-MS1	MS	1	02/23/2024	04:54:06 PM
47	N063295-005C-MSD1	MSD	1	02/23/2024	04:58:59 PM
7	CCV4	CCV	1	02/23/2024	05:03:48 PM
1	CCB4	CCB	1	02/23/2024	05:08:02 PM
48	N063295-006C	SAMP	1	02/23/2024	05:12:14 PM
49	N063295-007C	SAMP	1	02/23/2024	05:17:33 PM
50	N063295-008C	SAMP	1	02/23/2024	05:22:53 PM
51	N063297-001C	SAMP	1	02/23/2024	05:28:13 PM
52	N063303-001B	SAMP	1	02/23/2024	05:31:57 PM
53	N063303-002B	SAMP	1	02/23/2024	05:37:15 PM
54	N063303-006B	SAMP	1	02/23/2024	05:42:33 PM
55	N063303-008B	SAMP	1	02/23/2024	05:47:24 PM
56	MB-107067	MBLK	1	02/23/2024	05:57:03 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
57	LCS-107067	LCS	1	02/23/2024	06:01:17 PM
7	CCV5	CCV	1	02/23/2024	06:06:04 PM
1	CCB5	CCB	1	02/23/2024	06:10:19 PM
58	N063295-005D	SAMP	1	02/23/2024	06:14:32 PM
59	N063295-005D	SAMP	5	02/23/2024	06:19:53 PM
60	N063295-005D-PS	PS	1	02/23/2024	06:23:39 PM
61	N063295-005D-MS1	MS	1	02/23/2024	06:28:59 PM
62	N063295-005D-MSD1	MSD	1	02/23/2024	06:33:49 PM
63	N063295-006D	SAMP	1	02/23/2024	06:38:39 PM
64	N063295-007D	SAMP	1	02/23/2024	06:43:59 PM
65	N063295-008D	SAMP	1	02/23/2024	06:49:19 PM
7	CCV6	CCV	1	02/23/2024	06:54:39 PM
1	CCB6	CCB	1	02/23/2024	06:58:54 PM
9	ICSA3	ICSA	1	02/23/2024	07:03:06 PM
10	ICSAB3	ICSAB	1	02/23/2024	07:08:07 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/23/2024 10:11:32 AM**
Prep End Date: **2/23/2024 4:00:00 PM**
Prep Batch **107062** Prep Code:**3010_W_DISS**

Reviewed/ Date: dMorcha 3/14/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-01-02**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS1-107062	Aqueous		25	☐	25	1.000		
LCS2-107062	Aqueous		25	☐	25	1.000		
MB-107062	Aqueous		25	☐	25	1.000		
N063295-005C	Groundwater	<2	25	☐	25	1.000		
N063295-005C-MS1	Groundwater	<2	25	☐	25	1.000		
N063295-005C-MS2	Groundwater	<2	25	☐	25	1.000		
N063295-005C-MSD1	Groundwater	<2	25	☐	25	1.000		
N063295-005C-MSD2	Groundwater	<2	25	☐	25	1.000		
N063295-006C	Groundwater	<2	25	☐	25	1.000		
N063295-007C	Groundwater	<2	25	☐	25	1.000		
N063295-008C	Groundwater	<2	25	☐	25	1.000		
N063297-001C	Groundwater	<2	25	☐	25	1.000		
N063303-001B	Groundwater	<2	25	☐	25	1.000		
N063303-002B	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15258	HYDROCHLORIC ACID
16150	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MSST-231025E	Sodium	LCS,MS,MSD	0.05
MSST-231025F	Potassium	LCS,MS,MSD	0.05
MSST-231130A	Strontium	LCS,MS,MSD	0.125
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/23/2024 10:11:32 AM**
Prep End Date: **2/23/2024 4:00:00 PM**
Prep Batch **107062** Prep Code:**3010_W_DISS**

Reviewed/ Date: dlRocha 3/14/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-01-02**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063303-006B	Groundwater	<2	25	☐	25	1.000		
sample color is light yellow								
N063303-008B	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15258	HYDROCHLORIC ACID
16150	NITIRC ACID

Spk ID	Spike Name	SampType	AmtAdd
MSST-231025E	Sodium	LCS,MS,MSD	0.05
MSST-231025F	Potassium	LCS,MS,MSD	0.05
MSST-231130A	Strontium	LCS,MS,MSD	0.125
MWST-240105X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240105Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240105Z	ICP Solution C	LCS,MS,MSD	0.5

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240223A

Instrument ID: ICP-03

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Iron								
CalBlk	02/23/2024	11:44:54 AM	Fe	273.952	133	0.00	mg/L	
Standard1	02/23/2024	11:49:07 AM	Fe	273.952	166	0.02	mg/L	
Standard2	02/23/2024	11:52:50 AM	Fe	273.952	476	0.05	mg/L	
Standard3	02/23/2024	11:56:34 AM	Fe	273.952	15966	2.0	mg/L	
Standard4	02/23/2024	11:59:50 AM	Fe	273.952	39733	5.0	mg/L	
Standard5	02/23/2024	12:04:04 PM	Fe	273.952	59452	7.5	mg/L	
Standard6	02/23/2024	12:08:16 PM	Fe	273.952	78889	10.0	mg/L	
Standard7	02/23/2024	12:12:29 PM	Fe	273.952	155652	20.0	mg/L	1.0000

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **ICV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708208**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10061.140	20	10000	0	101	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **ZZZZZZ**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708210**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	19.964	20	20.00	0	99.8	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708224**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10309.918	20	10000	0	103	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708236**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10241.479	20	10000	0	102	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708248**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10133.536	20	10000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708260**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10177.476	20	10000	0	102	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708272**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10151.181	20	10000	0	102	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCV**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708282**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10093.401	20	10000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **ICB**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708209**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.207	20									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCB**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708225**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.466	20									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCB**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708237**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.202	20									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCB**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708249**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.560	20									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **182846**
Client ID: **CCB**	Batch ID: **R182846**	TestNo: **EPA 6010B**		Analysis Date: **2/23/2024**	SeqNo: **5708261**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.514	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID	CCB5	SampType:	CCB	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	182846
Client ID:	CCB	Batch ID:	R182846	TestNo:	EPA 6010B			Analysis Date:	2/23/2024	SeqNo:	5708273

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-0.235249	20									

Sample ID	CCB6	SampType:	CCB	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	182846
Client ID:	CCB	Batch ID:	R182846	TestNo:	EPA 6010B			Analysis Date:	2/23/2024	SeqNo:	5708283

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-1.130016	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ICSA** Batch ID: **R182846** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708213**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	576247.443	50	500000	0	115	80	120				
Calcium	459915.899	500	500000	0	92.0	80	120				
Iron	174616.860	20	200000	0	87.3	80	120				
Magnesium	446022.583	100	500000	0	89.2	80	120				

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ICSAB** Batch ID: **R182846** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708214**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	564316.966	50	500000	0	113	80	120				
Calcium	449363.078	500	500000	0	89.9	80	120				
Iron	170211.584	20	200000	0	85.1	80	120				
Magnesium	435511.791	100	500000	0	87.1	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ICSA** Batch ID: **R182846** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708250**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	555716.342	50	500000	0	111	80	120				
Calcium	452434.522	500	500000	0	90.5	80	120				
Iron	172573.740	20	200000	0	86.3	80	120				
Magnesium	439980.449	100	500000	0	88.0	80	120				

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ICSAB** Batch ID: **R182846** TestNo: **EPA 6010B** Analysis Date: **2/23/2024** SeqNo: **5708251**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	542214.110	50	500000	0	108	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID	ICSAB2	SampType:	ICSAB	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	182846
Client ID:	ICSAB	Batch ID:	R182846	TestNo:	EPA 6010B			Analysis Date:	2/23/2024	SeqNo:	5708251

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	449903.261	500	500000	0	90.0	80	120				
Iron	169573.181	20	200000	0	84.8	80	120				
Magnesium	431773.625	100	500000	0	86.4	80	120				

Sample ID	ICSA3	SampType:	ICSA	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	182846
Client ID:	ICSA	Batch ID:	R182846	TestNo:	EPA 6010B			Analysis Date:	2/23/2024	SeqNo:	5708284

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	584468.181	50	500000	0	117	80	120				
Calcium	451278.962	500	500000	0	90.3	80	120				
Iron	171392.769	20	200000	0	85.7	80	120				
Magnesium	440134.747	100	500000	0	88.0	80	120				

Sample ID	ICSAB3	SampType:	ICSAB	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	182846
Client ID:	ICSAB	Batch ID:	R182846	TestNo:	EPA 6010B			Analysis Date:	2/23/2024	SeqNo:	5708285

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	569749.122	50	500000	0	114	80	120				
Calcium	442346.814	500	500000	0	88.5	80	120				
Iron	166830.148	20	200000	0	83.4	80	120				
Magnesium	430330.236	100	500000	0	86.1	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	1	99.54	65-125	PASS
Standard2	ICAL	1	0.96	96.11	65-125	PASS
Standard3	ICAL	1	0.95	95.21	65-125	PASS
Standard4	ICAL	1	0.94	93.79	65-125	PASS
Standard5	ICAL	1	0.93	93.21	65-125	PASS
Standard6	ICAL	1	0.92	91.99	65-125	PASS
Standard7	ICAL	1	0.91	90.59	65-125	PASS
ICV	ICV	1	0.91	91.25	65-125	PASS
ICB	ICB	1	0.93	93.31	65-125	PASS
LLICV1	CCV1	1	0.93	93.05	65-125	PASS
ICSA1	ICSA	1	0	0.01	65-125	NR!
ICSA1	ICSA	1	0.79	79.4	65-125	PASS
ICSA1	ICSA	1	0.8	79.81	65-125	PASS
ICSAB1	ICSAB	1	0.81	81.01	65-125	PASS
RINSE	RINSE	1	0.78	78.14	65-125	PASS
CCV1	CCV	1	1.03	102.88	65-125	PASS
CCB1	CCB	1	1.04	103.63	65-125	PASS
CCV2	CCV	1	1.03	102.69	65-125	PASS
CCB2	CCB	1	1.02	102.2	65-125	PASS
CCV3	CCV	1	1.01	100.84	65-125	PASS
CCB3	CCB	1	1.03	103.05	65-125	PASS
ICSA2	ICSA	1	0.85	84.99	65-125	PASS
ICSAB2	ICSAB	1	0.88	88.33	65-125	PASS
RINSE	RINSE	1	0.83	83.18	65-125	PASS
RINSE	RINSE	1	1	100.01	65-125	PASS
MB-107062	MBLK	1	1.03	103.1	65-125	PASS
LCS1-107062	LCS	1	0.97	96.86	65-125	PASS
N063295-005C	SAMP	1	0.73	73.1	65-125	PASS
N063295-005C	SAMP	5	0.88	87.89	65-125	PASS
N063295-005C-PS	PS	1	0.72	72.48	65-125	PASS
N063295-005C-MS1	MS	1	0.76	75.85	65-125	PASS
N063295-005C-MSD1	MSD	1	0.75	74.53	65-125	PASS
CCV4	CCV	1	1.02	102.15	65-125	PASS
CCB4	CCB	1	1.04	103.81	65-125	PASS
N063295-006C	SAMP	1	0.74	74	65-125	PASS
N063295-007C	SAMP	1	0.74	73.94	65-125	PASS
N063295-008C	SAMP	1	0.73	73.19	65-125	PASS
N063297-001C	SAMP	1	0.98	97.82	65-125	PASS
N063303-001B	SAMP	1	0.74	74.37	65-125	PASS
N063303-002B	SAMP	1	0.71	71.47	65-125	PASS

INTERNAL STANDARD: 240223A

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
N063303-006B	SAMP	1	0.67	67.36	65-125	PASS
N063303-008B	SAMP	1	0.77	76.7	65-125	PASS
CCV5	CCV	1	0.97	96.8	65-125	PASS
CCB5	CCB	1	0.99	99.37	65-125	PASS
CCV6	CCV	1	0.98	98.12	65-125	PASS
CCB6	CCB	1	1	99.73	65-125	PASS
ICSA3	ICSA	1	0.82	82.33	65-125	PASS
ICSAB3	ICSAB	1	0.84	83.53	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063303
Test Method: EPA 6010B
Analysis Date: 2/23/2024

Matrix: Groundwater
Batch No.: 107062

Instrument ID: ICP-03
Instrument Description: Perkin Elmer Avio 500Max

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Fe. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063295-005C DT 5x	Iron	Fe	µg/L	368.5977	NA	315.0688	16.99%	10

Reviewed by:

dMocha 3/14/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **N063295-005C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **182846**
Client ID: **ZZZZZZ** Batch ID: **107062** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **2/23/2024** SeqNo: **5708257**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	405.937	20	100.0	315.1	90.9	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CORRECTIVE ACTION DOCUMENTATION

ASSET Laboratories

Corrective Action Report (CAR)

Date Initiated: 23-Feb-24 **Corrective Action Report ID:** 7427

Initiated By: Diane Jetajobe **Department:** ME-2(ICP)

Corrective Action Description

CAR Summary: ICSA was ran 3X in sequence NV00922-ICP3_240223C.A

Description of Nonconformance: The first ICSA1(raw data ICSA Sequence No.:12) does not have the ICSA Standard in position.

Description of Corrective Action: Analyst willl be mindful on checking the ICSA Standard in position before continuing the running IQC.

Performed By: Diane Jetajobe **Completion Date:** 23-Feb-24

Client Notification

Client Notification Required: No **Notified By:**

Comment:

Quality Assurance Review

Corrective Action: Deficiency

Further Action required by QA:

Approval and Closure

CAR Closed By: _____ Close Date: _____

QA Reviewed By: LG QA Date: 03/11/2024

Last Updated BY JohnL Updated: 11-Mar-2024 7:29 PM Reported: 11-Mar-2024 6:29 PM

MDL STUDY

LOD & PQL VERIFICATION

Analytical Method: EPA 6010B
Digestion Method: EPA 3010A
Digestion Date: 5/7/23; 5/8/23; 5/10/23
Analysis Date: 5/7-23/23
Instrument Name: ICP-03
Analyst/Technician: Nancy Sibucao / Diane Jetajobe

Matrix: WATER
Units : ppm

Analyte	MDL	LOD	ACTUAL LOD	PQL	Actual PQL	%REC
Beryllium	0.000076	0.0005	0.00047	0.001	0.00098	98
Boron	0.0086	0.05	0.04899	0.1	0.089	89
Magnesium	0.0057	0.05	0.05152	0.1	0.10	102
Silicon	0.012	0.01	0.01312	0.02	0.023	113
Chromium	0.00051	0.0005	0.00056	0.001	0.0010	102
Manganese	0.00032	0.01	0.00534	0.01	0.011	110
Iron	0.0022	0.01	0.01180	0.02	0.021	106
Cobalt	0.001	0.0013	0.00096	0.0025	0.0025	100
Nickel	0.0034	0.0025	0.00417	0.005	0.0055	110
Copper	0.0042	0.0025	0.00434	0.005	0.0044	87
Zinc	0.0007	0.005	0.00624	0.01	0.011	106
Arsenic	0.0042	0.005	0.00461	0.01	0.010	104
Selenium	0.008	0.005	0.00829	0.01	0.010	102
Molybdenum	0.0013	0.0025	0.00307	0.005	0.0053	106
Silver	0.0024	0.0013	0.00419	0.0025	0.0033	134
Cadmium	0.0016	0.0013	0.00180	0.0025	0.0026	102
Tin	0.0076	0.005	0.00563	0.010	0.0099	99
Antimony	0.0038	0.005	0.00307	0.01	0.0096	96
Barium	0.0002	0.0013	0.00124	0.0025	0.0026	104
Thallium	0.0021	0.0075	0.00656	0.015	0.015	101
Lead	0.0039	0.0025	0.00337	0.005	0.0047	94
Calcium	0.011	0.1	0.11963	0.2	0.23	113
Vanadium	0.00017	0.0013	0.00126	0.0025	0.0025	100
Aluminum	0.0089	0.025	0.02576	0.05	0.048	95
Titanium	0.004	0.005	0.00612	0.01	0.01	101

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

EPA 6020
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107055
ASSET #: N063303

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/23/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

% Rec of several analytes in in N063295-002B-PS/MS/ MSD, failed, low bias. However, LCS passed criteria
% Rec of Ba in several CCVs failed, high bias. For re run
Mn is OLR in N063295-002B-PS/MS/ MSD/ N063303-008B. For dilution
Ba is OLR in N063303-008B. For dilution

	Yes	No	N/A
1. All assigned sample(s) analyzed	x		
2. Matrix / units correct	x		
3. Does batch meet QC requirements?	x		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	x		
5. Is first level review correct and complete?	x		

1st Level Reviewer DBJ Date: —

2nd Level Reviewer LG 3/5/2024 Date:

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107055
ASSET #: N063303

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 2/25/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.	X			X		
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

Ba re run
Mn dilution
Dilution test for Ba anf Mn failed. However, PS passed criteria

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: —

2nd Level Reviewer LG 3/5/2024 Date:

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Groundwater

FORMULA:

Calculate the Mnaganese concentration, in ug/L in the original sample as follows:

Mnaganese , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063303-001B** , the concentration in ug/L is calculated as follows:

Mnaganese , ug/L = 12.7423 * 1 *(25 / 25)

Mnaganese , ug/L = 12.7423

Reporting results in two significant figures,

Mnaganese , ug/L = 13

Reviewed by:

JRB 3/17/2024

% RSD SUMMARY

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	15.646	15	<PQL	0.1	4.971	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.47	6.506	15	PASS	0.51	3.025	15	PASS
Std3-5/50 ppb	ICAL	1	4.83	1.27	15	PASS	4.89	3.407	15	PASS
Std4-10/100 ppb	ICAL	1	9.83	2.315	15	PASS	9.86	1.399	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	20.24	1.991	15	PASS	19.81	1.649	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	40.14	1.038	15	PASS	39.51	1.262	15	PASS
Std7-100/1000 ppb	ICAL	1	100.68	1.373	15	PASS	98.5	0.438	15	PASS
Std8-200/2000 ppb	ICAL	1	199.62	1.169	15	PASS	200.88	0.335	15	PASS
ICV	ICV	1	10.17	1.243	15	PASS	101.59	0.398	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	0	258.657	15	<PQL
LLICV1	LLICV	1	1.11	0.584	20	PASS	0.55	6.234	20	PASS
MLCCV	CCV	1	19.88	2.197	15	PASS	19.94	0.442	15	PASS
ICSA1	ICSA	1	0	70.954	15	<PQL	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.4	0.884	15	PASS	20.36	0.139	15	PASS
MDL 4	ICAL	1	1.07	0.459	15	PASS	0.51	4.031	15	PASS
CCV1	CCV	1	19.98	1.016	15	PASS	19.82	1.109	15	PASS
CCB1	CCB	1	0.02	43.803	15	<PQL	0.18	6.931	15	PASS
CCV2	CCV	1	19.84	1.185	15	PASS	19.77	0.493	15	PASS
CCB2	CCB	1	0.02	52.281	15	<PQL	0.19	6.321	15	PASS
CCV3	CCV	1	19.92	1.739	15	PASS	19.59	0.422	15	PASS
CCB3	CCB	1	0.03	49.285	15	<PQL	0.18	13.078	15	PASS
CCV4	CCV	1	20.7	0.766	15	PASS	20	0.995	15	PASS
CCB4	CCB	1	0.02	33.478	15	<PQL	0.18	10.217	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	0.01	20.455	15	<PQL	0.07	11.023	15	PASS
ICSAB2	ICSAB	1	20.62	2.198	15	PASS	20.28	0.565	15	PASS
CCV5	CCV	1	20.65	1.318	15	PASS	20.33	0.561	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	0.01	36.4	15	<PQL	0.06	16.251	15	<PQL
ICSAB3	ICSAB	1	20.58	0.24	15	PASS	20.19	1.163	15	PASS
CCV6	CCV	1	21.35	0.969	15	PASS	19.62	1.472	15	PASS
CCB6	CCB	1	0	8860.741	15	<PQL	<0.000	N/A	15	<PQL
CCV7	CCV	1	22.1	1.002	15	PASS	19.92	0.296	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	0.01	61.487	15	<PQL	0.07	22.799	15	<PQL
ICSAB4	ICSAB	1	22.11	0.666	15	PASS	20.31	0.724	15	PASS
CCV8	CCV	1	20.87	1.232	15	PASS	19.91	1.192	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV9	CCV	1	21.75	0.532	15	PASS	19.71	1.201	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCV10	CCV	1	21.64	0.313	15	PASS	19.6	0.332	15	PASS
CCB10	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	0.01	90.69	15	<PQL	0.07	14.564	15	PASS
ICSAB5	ICSAB	1	21.85	0.907	15	PASS	20.01	1.125	15	PASS
CCV11	CCV	1	21.74	1.753	15	PASS	19.59	1.17	15	PASS
CCB11	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV12	CCV	1	22.44	1.29	15	PASS	19.65	1.067	15	PASS
CCB12	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV13	CCV	1	22.5	0.471	15	PASS	19.73	0.111	15	PASS
CCB13	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	0.02	57.827	15	<PQL	0.06	10.678	15	PASS
ICSAB6	ICSAB	1	22.35	2.238	15	PASS	20.4	0.351	15	PASS
MB-107055	MBLK	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
LCS-107055	LCS	1	10.65	1.234	15	PASS	97.81	0.598	15	PASS
N063295-001B	SAMP	1	86.33	1.515	15	PASS	994.92	0.772	15	PASS
N063295-002B	SAMP	1	183.76	0.34	15	PASS	1869.08	0.411	15	PASS
N063295-002B	SAMP	5	39.69	2.083	15	PASS	402.54	1.323	15	PASS
N063295-002B-PS	PS	1	198.02	0.79	15	PASS	1949.1	1.171	15	PASS
N063295-002B-MS	MS	1	195.01	1.251	15	PASS	1923.1	2.893	15	PASS
N063295-002B-MSD	MSD	1	192.91	0.532	15	PASS	1916.54	0.381	15	PASS
N063295-003B	SAMP	1	86.53	1.087	15	PASS	1001.48	0.666	15	PASS
CCV14	CCV	1	21.97	1.107	15	PASS	19.73	1.059	15	PASS
CCB14	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063295-005C	SAMP	1	191.77	0.664	15	PASS	592.66	0.454	15	PASS
N063295-006C	SAMP	1	125.97	0.728	15	PASS	621.02	0.484	15	PASS
N063295-007C	SAMP	1	115.94	0.712	15	PASS	534.65	0.114	15	PASS
N063295-008C	SAMP	1	135.16	0.846	15	PASS	734.96	0.961	15	PASS
N063297-001C	SAMP	1	30.95	1.23	15	PASS	3.56	3.545	15	PASS
N063297-002B	SAMP	1	178.64	0.654	15	PASS	0.98	3.628	15	PASS
N063297-003B	SAMP	1	49.67	1.196	15	PASS	17.12	2.431	15	PASS
N063303-001B	SAMP	1	30.42	0.957	15	PASS	12.74	1.924	15	PASS
N063303-002B	SAMP	1	37.73	0.896	15	PASS	37.76	0.972	15	PASS
CCV15	CCV	1	22.62	1.187	15	PASS	19.75	1.254	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063303-006B	SAMP	5	20.12	0.946	15	PASS	65.02	1.431	15	PASS
N063303-008B	SAMP	1	839.88	1.073	15	PASS	997.78	0.578	15	PASS
CCV16	CCV	1	22.1	0.561	15	PASS	20.06	0.772	15	PASS
CCB16	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA7	ICSA	1	0.01	76.638	15	<PQL	0.07	11.198	15	PASS
ICSAB7	ICSAB	1	22.31	0.348	15	PASS	20.29	1.198	15	PASS

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.1	15.379	15	FAIL
Std2-0.5/5 ppb	ICAL	1	0.46	2.776	15	PASS
Std3-5/50 ppb	ICAL	1	4.8	6.312	15	PASS
Std4-10/100 ppb	ICAL	1	9.82	2.017	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.47	2.419	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.93	0.817	15	PASS
Std7-100/1000 ppb	ICAL	1	99.51	0.783	15	PASS
Std8-200/2000 ppb	ICAL	1	200.33	0.784	15	PASS
ICV	ICV	1	10.43	1.082	15	PASS
ICB	ICB	1	0.02	113.613	15	<PQL
LLICV1	LLICV	1	0.09	23.162	20	<PQL
MLCCV	CCV	1	20.04	2.149	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.6	2.753	15	PASS
MDL 4	ICAL	1	0.1	7.053	15	PASS
CCV1	CCV	1	20.03	2.081	15	PASS
CCB1	CCB	1	0	903.97	15	<PQL
CCV2	CCV	1	19.84	0.388	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL
CCV3	CCV	1	19.77	0.594	15	PASS
CCB3	CCB	1	0.01	152.049	15	<PQL
CCV4	CCV	1	20.09	2.99	15	PASS
CCB4	CCB	1	0.01	119.849	15	<PQL
CCB4	CCB	1	0	291.181	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.47	0.498	15	PASS
CCV5	CCV	1	20.55	1.072	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.27	1.285	15	PASS
CCV6	CCV	1	19.76	2.022	15	PASS
CCB6	CCB	1	0	1214.624	15	<PQL
CCV7	CCV	1	20.07	1.253	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.32	0.601	15	PASS
CCV8	CCV	1	20.12	1.584	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL
CCV9	CCV	1	19.93	1.104	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
CCV10	CCV	1	19.72	2.489	15	PASS
CCB10	CCB	1	0.02	53.568	15	<PQL
ICSA5	ICSA	1	0.01	369.683	15	<PQL
ICSAB5	ICSAB	1	19.98	1.177	15	PASS
CCV11	CCV	1	19.95	2.201	15	PASS
CCB11	CCB	1	0	691.193	15	<PQL
CCV12	CCV	1	19.61	1.699	15	PASS
CCB12	CCB	1	0	535.302	15	<PQL
CCV13	CCV	1	19.79	1.82	15	PASS
CCB13	CCB	1	0.01	170.85	15	<PQL
ICSA6	ICSA	1	0.03	41.639	15	<PQL
ICSAB6	ICSAB	1	19.9	2.439	15	PASS
MB-107055	MBLK	1	0	1730.836	15	<PQL
LCS-107055	LCS	1	9.65	1.809	15	PASS
N063295-001B	SAMP	1	<0.000	N/A	15	<PQL
N063295-002B	SAMP	1	<0.000	N/A	15	<PQL
N063295-002B	SAMP	5	<0.000	N/A	15	<PQL
N063295-002B-PS	PS	1	6.41	4.091	15	PASS
N063295-002B-MS	MS	1	6.23	0.566	15	PASS
N063295-002B-MSD	MSD	1	6.33	2.081	15	PASS
N063295-003B	SAMP	1	<0.000	N/A	15	<PQL
CCV14	CCV	1	19.66	1.198	15	PASS
CCB14	CCB	1	0	13298.147	15	<PQL
N063295-005C	SAMP	1	<0.000	N/A	15	<PQL
N063295-006C	SAMP	1	<0.000	N/A	15	<PQL
N063295-007C	SAMP	1	<0.000	N/A	15	<PQL
N063295-008C	SAMP	1	<0.000	N/A	15	<PQL
N063297-001C	SAMP	1	5.79	4.069	15	PASS
N063297-002B	SAMP	1	<0.000	N/A	15	<PQL
N063297-003B	SAMP	1	4.15	3.075	15	PASS
N063303-001B	SAMP	1	<0.000	N/A	15	<PQL
N063303-002B	SAMP	1	<0.000	N/A	15	<PQL
CCV15	CCV	1	19.42	0.935	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL
N063303-006B	SAMP	5	<0.000	N/A	15	<PQL
N063303-008B	SAMP	1	14.69	4.6	15	PASS
CCV16	CCV	1	19.87	1.357	15	PASS
CCB16	CCB	1	0	821.372	15	<PQL
ICSA7	ICSA	1	0.01	38.089	15	<PQL
ICSAB7	ICSAB	1	20.3	1.771	15	PASS

PERCENT RSD SUMMARY: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.11	14.881	15	PASS	0.1	17.358	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.48	5.813	15	PASS	0.48	3.002	15	PASS
Std3-5/50 ppb	ICAL	1	4.82	2.112	15	PASS	4.81	3.025	15	PASS
Std4-10/100 ppb	ICAL	1	9.75	0.405	15	PASS	9.77	2.389	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.49	1.504	15	PASS	19.78	1.164	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.73	0.713	15	PASS	39.02	1.467	15	PASS
Std7-100/1000 ppb	ICAL	1	100.14	0.815	15	PASS	100.2	0.669	15	PASS
Std8-200/2000 ppb	ICAL	1	200.05	0.916	15	PASS	200.13	1.446	15	PASS
ICV	ICV	1	9.83	1.682	15	PASS	100.89	0.705	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	0	284.11	15	<PQL
LLICV1	LLICV	1	1.03	1.376	20	PASS	0.55	4.582	20	PASS
LLICV1	LLICV	1	0.98	4.633	20	PASS	0.53	7.38	20	PASS
MLCCV	CCV	1	19.62	1.316	15	PASS	19.63	1.253	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL	0	270.688	15	<PQL
ICSAB1	ICSAB	1	20.09	1.176	15	PASS	20.5	0.625	15	PASS
CCV1	CCV	1	19.83	1.443	15	PASS	20.01	0.918	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.42	1.347	15	PASS	19.76	0.534	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV3	CCV	1	19.57	1.412	15	PASS	19.78	0.902	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20	1.05	15	PASS	20.45	0.678	15	PASS
CCV4	CCV	1	19.57	1.898	15	PASS	20.11	2.256	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV5	CCV	1	19.87	0.805	15	PASS	19.72	1.046	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV6	CCV	1	20.03	0.356	15	PASS	20.04	0.19	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.72	0.863	15	PASS	20.27	0.514	15	PASS
CCV7	CCV	1	20.24	1.861	15	PASS	19.64	0.467	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV8	CCV	1	19.7	1.29	15	PASS	19.67	1.135	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV9	CCV	1	19.83	0.826	15	PASS	19.44	1.878	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV10	CCV	1	19.67	0.472	15	PASS	19.83	2.27	15	PASS
CCB10	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
ICSAB4	ICSAB	1	20.03	1.24	15	PASS	20.18	1.88	15	PASS
CCV11	CCV	1	20.18	1.144	15	PASS	19.4	0.854	15	PASS
CCB11	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV12	CCV	1	20.93	1.315	15	PASS	19.46	1.202	15	PASS
CCB12	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV13	CCV	1	20.46	0.595	15	PASS	19.67	1.405	15	PASS
CCB13	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA5	ICSA	1	<0.000	N/A	15	<PQL	0	16.197	15	<PQL
ICSAB5	ICSAB	1	20.85	2.538	15	PASS	19.95	0.695	15	PASS
MB-107055	MBLK	1	0.01	101.499	15	<PQL	<0.000	N/A	15	<PQL
LCS-107055	LCS	1	10.33	1.557	15	PASS	99.38	0.816	15	PASS
N063295-001B	SAMP	1	82.11	0.721	15	PASS	1020.91	0.073	15	PASS
N063295-002B	SAMP	1	176.44	1.026	15	PASS	1916.23	0.801	15	PASS
N063295-002B	SAMP	5	36.39	0.845	15	PASS	391.55	0.279	15	PASS
N063295-002B	SAMP	10	19.07	1.122	15	PASS	207.02	1.598	15	PASS
N063295-002B	SAMP	50	4.53	3.667	15	PASS	51.39	1.722	15	PASS
N063295-002B	SAMP	100	1.9	4.905	15	PASS	21.42	1.404	15	PASS
N063295-002B	SAMP	500	0.4	11.469	15	PASS	4.79	1.601	15	PASS
CCV14	CCV	1	20.52	1.496	15	PASS	19.62	0.724	15	PASS
CCB14	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063295-002B-PS	PS	1	187.08	1.718	15	PASS	1996.4	1.437	15	PASS
N063295-002B-PS	PS	10	29.38	0.995	15	PASS	301.38	0.691	15	PASS
N063295-002B-PS	PS	100	12.33	0.663	15	PASS	121.23	1.766	15	PASS
N063295-002B-MS	MS	1	183.3	0.964	15	PASS	1963.71	2.052	15	PASS
N063295-002B-MS	MS	10	19.84	1.015	15	PASS	212.34	0.742	15	PASS
N063295-002B-MS	MS	100	1.92	0.885	15	PASS	21.41	0.598	15	PASS
N063295-002B-MSD	MSD	1	185.77	1.45	15	PASS	1947.2	1.331	15	PASS
N063295-002B-MSD	MSD	10	19.52	2.17	15	PASS	212.67	0.919	15	PASS
N063295-002B-MSD	MSD	100	2.11	3.862	15	PASS	23.1	2.16	15	PASS
CCV15	CCV	1	20.69	1.56	15	PASS	19.66	1.092	15	PASS
CCB15	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063295-003B	SAMP	1	82.27	0.423	15	PASS	1016.09	1.041	15	PASS
N063295-005C	SAMP	1	186.55	0.22	15	PASS	615.1	0.84	15	PASS
N063295-005C	SAMP	10	19.89	1.073	15	PASS	66.28	0.713	15	PASS
N063295-006C	SAMP	1	122.3	0.973	15	PASS	634.52	0.673	15	PASS
N063295-006C	SAMP	10	12.59	1.827	15	PASS	67.19	0.873	15	PASS
N063295-007C	SAMP	1	110.95	1.037	15	PASS	545.06	1.027	15	PASS
N063295-007C	SAMP	10	11.51	3.536	15	PASS	57.06	0.756	15	PASS
N063295-008C	SAMP	1	126.51	0.858	15	PASS	736.94	0.539	15	PASS
N063295-008C	SAMP	10	13.74	1.45	15	PASS	82.88	0.577	15	PASS
CCV16	CCV	1	20.38	0.567	15	PASS	19.53	0.264	15	PASS

PERCENT RSD SUMMARY: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCB16	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063297-001C	SAMP	1	29.57	1.159	15	PASS	3.56	1.071	15	PASS
N063297-002B	SAMP	1	171.99	1.008	15	PASS	1.02	4.978	15	PASS
N063297-003B	SAMP	1	48.16	1.171	15	PASS	17.43	2.298	15	PASS
N063303-001B	SAMP	1	28.81	0.946	15	PASS	12.85	2.245	15	PASS
N063303-001B	SAMP	10	3.03	0.77	15	PASS	1.35	0.53	15	PASS
N063303-002B	SAMP	1	35.87	0.506	15	PASS	38.41	0.602	15	PASS
N063303-002B	SAMP	10	3.66	3.022	15	PASS	4.1	1.267	15	PASS
N063303-006B	SAMP	5	18.36	0.848	15	PASS	63.3	1.204	15	PASS
N063303-008B	SAMP	1	832.81	1.546	15	PASS	1000.63	0.9	15	PASS
N063303-008B	SAMP	10	88.47	1.674	15	PASS	109.92	0.489	15	PASS
CCV17	CCV	1	20.99	2.009	15	PASS	19.69	1.698	15	PASS
CCB17	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA6	ICSA	1	0	345.111	15	<PQL	<0.000	N/A	15	<PQL
ICSAB6	ICSAB	1	21.49	1.663	15	PASS	20.11	2.277	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223001.d	RINSE	ICAL	1	02/23/24 1:22 PM
A0223002.d	Cal Blk	IBLK	1	02/23/24 1:27 PM
A0223003.d	Std1-0.1/1 ppb	ICAL	1	02/23/24 1:32 PM
A0223004.d	Std2-0.5/5 ppb	ICAL	1	02/23/24 1:36 PM
A0223005.d	Std3-5/50 ppb	ICAL	1	02/23/24 1:41 PM
A0223006.d	Std4-10/100 ppb	ICAL	1	02/23/24 1:46 PM
A0223007.d	Std5-4.0/20/200 ppb	ICAL	1	02/23/24 1:51 PM
A0223008.d	Std6-8.0/40/400 ppb	ICAL	1	02/23/24 1:55 PM
A0223009.d	Std7-100/1000 ppb	ICAL	1	02/23/24 2:00 PM
A0223010.d	Std8-200/2000 ppb	ICAL	1	02/23/24 2:05 PM
A0223011.d	ICV	ICV	1	02/23/24 2:24 PM
A0223012.d	ICB	ICB	1	02/23/24 2:29 PM
A0223013.d	LLICV1	LLICV	1	02/23/24 2:34 PM
A0223014.d	MLCCV	CCV	1	02/23/24 2:38 PM
A0223015.d	ICSA1	ICSA	1	02/23/24 2:43 PM
A0223016.d	ICSAB1	ICSAB	1	02/23/24 2:47 PM
A0223017.d	MDL 4	ICAL	1	02/23/24 3:00 PM
A0223018.d	MB-106955	MBLK	1	02/23/24 3:10 PM
A0223019.d	LCS-106955	LCS	1	02/23/24 3:15 PM
A0223020.d	N063150-001A	SAMP	1	02/23/24 3:19 PM
A0223021.d	N063150-002A	SAMP	1	02/23/24 3:24 PM
A0223022.d	N063168-002A	SAMP	1	02/23/24 3:29 PM
A0223023.d	N063168-002A	SAMP	5	02/23/24 3:33 PM
A0223024.d	N063168-002A-PS	PS	1	02/23/24 3:38 PM
A0223025.d	N063168-002A-MS	MS	1	02/23/24 3:43 PM
A0223026.d	N063168-002A-MSD	MSD	1	02/23/24 3:47 PM
A0223027.d	RINSE	ICAL	1	02/23/24 3:52 PM
A0223028.d	CCV1	CCV	1	02/23/24 3:57 PM
A0223029.d	CCB1	CCB	1	02/23/24 4:01 PM
A0223030.d	MB-107065	MBLK	1	02/23/24 4:06 PM
A0223031.d	LCS-107065	LCS	1	02/23/24 4:11 PM
A0223032.d	N063286-001A	SAMP	1	02/23/24 4:15 PM
A0223033.d	N063286-001A	SAMP	5	02/23/24 4:20 PM
A0223034.d	N063286-001A-PS	PS	1	02/23/24 4:25 PM
A0223035.d	N063286-001A-MS	MS	1	02/23/24 4:29 PM
A0223036.d	N063286-001A-MSD	MSD	1	02/23/24 4:34 PM
A0223037.d	N063287-001A	SAMP	1	02/23/24 4:38 PM
A0223038.d	N063287-002A	SAMP	1	02/23/24 4:43 PM
A0223039.d	N063287-003A	SAMP	1	02/23/24 4:48 PM
A0223040.d	CCV2	CCV	1	02/23/24 4:52 PM
A0223041.d	CCB2	CCB	1	02/23/24 4:57 PM
A0223042.d	N063289-001A	SAMP	1	02/23/24 5:02 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223043.d	N063289-002A	SAMP	1	02/23/24 5:06 PM
A0223044.d	N063289-003A	SAMP	1	02/23/24 5:11 PM
A0223045.d	N063289-004A	SAMP	1	02/23/24 5:16 PM
A0223046.d	CCV3	CCV	1	02/23/24 5:20 PM
A0223047.d	CCB3	CCB	1	02/23/24 5:25 PM
A0223048.d	N063193-004A	SAMP	5	02/23/24 5:30 PM
A0223049.d	N063193-004A	SAMP	25	02/23/24 5:34 PM
A0223050.d	N063193-004A-PS	PS	5	02/23/24 5:39 PM
A0223051.d	N063193-004A-MS	MS	5	02/23/24 5:44 PM
A0223052.d	N063193-004A-MSD	MSD	5	02/23/24 5:48 PM
A0223053.d	N063195-002A	SAMP	5	02/23/24 5:53 PM
A0223054.d	N063195-003A	SAMP	5	02/23/24 5:58 PM
A0223055.d	N063195-004A	SAMP	5	02/23/24 6:02 PM
A0223056.d	N063201-001D	SAMP	5	02/23/24 6:07 PM
A0223057.d	N063201-001D-MS	MS	5	02/23/24 6:12 PM
A0223058.d	CCV4	CCV	1	02/23/24 6:16 PM
A0223059.d	CCB4	CCB	1	02/23/24 6:21 PM
A0223060.d	CCB4	CCB	1	02/23/24 6:27 PM
A0223061.d	ICSA2	ICSA	1	02/23/24 6:32 PM
A0223062.d	ICSAB2	ICSAB	1	02/23/24 6:37 PM
A0223063.d	MB-106955	MBLK	1	02/23/24 6:42 PM
A0223064.d	LCS-106955	LCS	1	02/23/24 6:46 PM
A0223065.d	N063150-001A	SAMP	1	02/23/24 6:51 PM
A0223066.d	N063150-002A	SAMP	1	02/23/24 6:55 PM
A0223067.d	N063168-002A	SAMP	1	02/23/24 7:00 PM
A0223068.d	N063168-002A	SAMP	5	02/23/24 7:05 PM
A0223069.d	N063168-002A-PS	PS	1	02/23/24 7:09 PM
A0223070.d	N063168-002A-MS	MS	1	02/23/24 7:14 PM
A0223071.d	N063168-002A-MSD	MSD	1	02/23/24 7:19 PM
A0223072.d	RINSE	ICAL	1	02/23/24 7:23 PM
A0223073.d	CCV5	CCV	1	02/23/24 7:28 PM
A0223074.d	CCB5	CCB	1	02/23/24 7:33 PM
A0223075.d	ICSA3	ICSA	1	02/23/24 7:37 PM
A0223076.d	ICSAB3	ICSAB	1	02/23/24 7:42 PM
A0223077.d	N063181-001C	SAMP	10	02/23/24 7:47 PM
A0223078.d	N063181-002C	SAMP	10	02/23/24 7:51 PM
A0223079.d	N063182-001B	SAMP	1	02/23/24 7:56 PM
A0223080.d	N063182-003B	SAMP	1	02/23/24 8:01 PM
A0223081.d	N063182-003B	SAMP	10	02/23/24 8:05 PM
A0223082.d	N063182-005B	SAMP	1	02/23/24 8:10 PM
A0223083.d	N063182-005B	SAMP	10	02/23/24 8:15 PM
A0223084.d	N063182-008B	SAMP	1	02/23/24 8:19 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223085.d	N063182-009B	SAMP	1	02/23/24 8:24 PM
A0223086.d	N063182-009B	SAMP	10	02/23/24 8:29 PM
A0223087.d	CCV6	CCV	1	02/23/24 8:33 PM
A0223088.d	CCB6	CCB	1	02/23/24 8:38 PM
A0223089.d	N063182-009B	SAMP	1	02/23/24 8:43 PM
A0223090.d	N063182-009B	SAMP	1	02/23/24 8:47 PM
A0223091.d	N063182-009B	SAMP	1	02/23/24 8:52 PM
A0223092.d	N063182-009B	SAMP	1	02/23/24 8:57 PM
A0223093.d	N063182-010B	SAMP	10	02/23/24 9:01 PM
A0223094.d	N063182-011B	SAMP	1	02/23/24 9:06 PM
A0223095.d	N063182-011B	SAMP	100	02/23/24 9:11 PM
A0223096.d	CCV7	CCV	1	02/23/24 9:15 PM
A0223097.d	CCB7	CCB	1	02/23/24 9:20 PM
A0223098.d	ICSA4	ICSA	1	02/23/24 9:24 PM
A0223099.d	ICSAB4	ICSAB	1	02/23/24 9:29 PM
A0223100.d	MB-106992	MBLK	1	02/23/24 9:34 PM
A0223101.d	LCS-106992	LCS	1	02/23/24 9:39 PM
A0223102.d	N063211-001B	SAMP	10	02/23/24 9:43 PM
A0223103.d	N063211-002B	SAMP	10	02/23/24 9:48 PM
A0223104.d	N063211-003B	SAMP	100	02/23/24 9:52 PM
A0223105.d	N063213-001B	SAMP	10	02/23/24 9:57 PM
A0223106.d	N063213-002B	SAMP	10	02/23/24 10:02 PM
A0223107.d	N063213-003B	SAMP	10	02/23/24 10:07 PM
A0223108.d	N063213-004B	SAMP	10	02/23/24 10:11 PM
A0223109.d	N063213-007B	SAMP	10	02/23/24 10:16 PM
A0223110.d	CCV8	CCV	1	02/23/24 10:20 PM
A0223111.d	CCB8	CCB	1	02/23/24 10:25 PM
A0223112.d	N063213-008B	SAMP	1	02/23/24 10:30 PM
A0223113.d	N063213-008B	SAMP	5	02/23/24 10:34 PM
A0223114.d	N063213-008B-PS	PS	1	02/23/24 10:39 PM
A0223115.d	N063213-008BMS	MS	1	02/23/24 10:44 PM
A0223116.d	N063213-008BMSD	MSD	1	02/23/24 10:48 PM
A0223117.d	N063214-010B	SAMP	1	02/23/24 10:53 PM
A0223118.d	N063214-011B	SAMP	1	02/23/24 10:58 PM
A0223119.d	N063214-011B	SAMP	10	02/23/24 11:03 PM
A0223120.d	N063214-012B	SAMP	1	02/23/24 11:07 PM
A0223121.d	N063214-012B	SAMP	10	02/23/24 11:12 PM
A0223122.d	CCV9	CCV	1	02/23/24 11:16 PM
A0223123.d	CCB9	CCB	1	02/23/24 11:21 PM
A0223124.d	N063214-013B	SAMP	1	02/23/24 11:26 PM
A0223125.d	N063214-013B	SAMP	10	02/23/24 11:30 PM
A0223126.d	N063214-014B	SAMP	1	02/23/24 11:35 PM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223127.d	N063214-016B	SAMP	1	02/23/24 11:40 PM
A0223128.d	N063214-016B	SAMP	10	02/23/24 11:44 PM
A0223129.d	CCV10	CCV	1	02/23/24 11:49 PM
A0223130.d	CCB10	CCB	1	02/23/24 11:54 PM
A0223131.d	ICSA5	ICSA	1	02/23/24 11:58 PM
A0223132.d	ICSAB5	ICSAB	1	02/24/24 12:03 AM
A0223133.d	MB-107021	MBLK	1	02/24/24 12:08 AM
A0223134.d	LCS-107021	LCS	1	02/24/24 12:12 AM
A0223135.d	N062510-015D	SAMP	5	02/24/24 12:17 AM
A0223136.d	N063248-001B	SAMP	1	02/24/24 12:21 AM
A0223137.d	N063248-002B	SAMP	1	02/24/24 12:26 AM
A0223138.d	N063248-002B	SAMP	5	02/24/24 12:31 AM
A0223139.d	N063248-002B-PS	PS	1	02/24/24 12:35 AM
A0223140.d	N063248-002B-MS	MS	1	02/24/24 12:40 AM
A0223141.d	N063248-002B-MSD	MSD	1	02/24/24 12:45 AM
A0223142.d	RINSE	ICAL	1	02/24/24 12:49 AM
A0223143.d	CCV11	CCV	1	02/24/24 12:54 AM
A0223144.d	CCB11	CCB	1	02/24/24 12:59 AM
A0223145.d	N063248-003B	SAMP	1	02/24/24 1:03 AM
A0223146.d	N063248-004B	SAMP	1	02/24/24 1:08 AM
A0223147.d	N063248-005C	SAMP	1	02/24/24 1:13 AM
A0223148.d	N063248-006C	SAMP	1	02/24/24 1:17 AM
A0223149.d	N063248-007C	SAMP	1	02/24/24 1:22 AM
A0223150.d	N063248-008C	SAMP	1	02/24/24 1:27 AM
A0223151.d	N063248-010B	SAMP	1	02/24/24 1:31 AM
A0223152.d	N063248-011B	SAMP	1	02/24/24 1:36 AM
A0223153.d	N063249-007C	SAMP	1	02/24/24 1:41 AM
A0223154.d	RINSE	ICAL	1	02/24/24 1:45 AM
A0223155.d	CCV12	CCV	1	02/24/24 1:50 AM
A0223156.d	CCB12	CCB	1	02/24/24 1:54 AM
A0223157.d	N063249-009C	SAMP	1	02/24/24 1:59 AM
A0223158.d	N063249-011C	SAMP	1	02/24/24 2:04 AM
A0223159.d	N063249-013C	SAMP	1	02/24/24 2:08 AM
A0223160.d	N063249-015C	SAMP	1	02/24/24 2:13 AM
A0223161.d	N063249-017C	SAMP	1	02/24/24 2:18 AM
A0223162.d	N063249-018C	SAMP	5	02/24/24 2:22 AM
A0223163.d	RINSE	ICAL	1	02/24/24 2:27 AM
A0223164.d	CCV13	CCV	1	02/24/24 2:32 AM
A0223165.d	CCB13	CCB	1	02/24/24 2:36 AM
A0223166.d	ICSA6	ICSA	1	02/24/24 2:41 AM
A0223167.d	ICSAB6	ICSAB	1	02/24/24 2:46 AM
A0223168.d	MB-107055	MBLK	1	02/24/24 2:50 AM

INJECTION LOG: 240223A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0223169.d	LCS-107055	LCS	1	02/24/24 2:55 AM
A0223170.d	N063295-001B	SAMP	1	02/24/24 2:59 AM
A0223171.d	N063295-002B	SAMP	1	02/24/24 3:04 AM
A0223172.d	N063295-002B	SAMP	5	02/24/24 3:09 AM
A0223173.d	N063295-002B-PS	PS	1	02/24/24 3:13 AM
A0223174.d	N063295-002B-MS	MS	1	02/24/24 3:18 AM
A0223175.d	N063295-002B-MSD	MSD	1	02/24/24 3:23 AM
A0223176.d	N063295-003B	SAMP	1	02/24/24 3:27 AM
A0223177.d	RINSE	ICAL	1	02/24/24 3:32 AM
A0223178.d	CCV14	CCV	1	02/24/24 3:37 AM
A0223179.d	CCB14	CCB	1	02/24/24 3:41 AM
A0223180.d	N063295-005C	SAMP	1	02/24/24 3:46 AM
A0223181.d	N063295-006C	SAMP	1	02/24/24 3:51 AM
A0223182.d	N063295-007C	SAMP	1	02/24/24 3:55 AM
A0223183.d	N063295-008C	SAMP	1	02/24/24 4:00 AM
A0223184.d	N063297-001C	SAMP	1	02/24/24 4:05 AM
A0223185.d	N063297-002B	SAMP	1	02/24/24 4:09 AM
A0223186.d	N063297-003B	SAMP	1	02/24/24 4:14 AM
A0223187.d	N063303-001B	SAMP	1	02/24/24 4:19 AM
A0223188.d	N063303-002B	SAMP	1	02/24/24 4:23 AM
A0223189.d	RINSE	ICAL	1	02/24/24 4:28 AM
A0223190.d	CCV15	CCV	1	02/24/24 4:32 AM
A0223191.d	CCB15	CCB	1	02/24/24 4:37 AM
A0223192.d	N063303-006B	SAMP	5	02/24/24 4:42 AM
A0223193.d	N063303-008B	SAMP	1	02/24/24 4:46 AM
A0223194.d	RINSE	ICAL	1	02/24/24 4:51 AM
A0223195.d	CCV16	CCV	1	02/24/24 4:56 AM
A0223196.d	CCB16	CCB	1	02/24/24 5:00 AM
A0223197.d	ICSA7	ICSA	1	02/24/24 5:05 AM
A0223198.d	ICSAB7	ICSAB	1	02/24/24 5:10 AM
A0223199.d	RINSE	ICAL	1	02/24/24 5:14 AM
A0223200.d	RINSE	ICAL	1	02/24/24 5:19 AM
A0223201.d	RINSE	ICAL	1	02/24/24 5:24 AM
A0223202.d	RINSE	ICAL	1	02/24/24 5:28 AM
A0223203.d	RINSE	ICAL	1	02/24/24 5:33 AM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224001.d	RINSE	ICAL	1	02/25/24 2:10 PM
A0224002.d	Cal Blk	IBLK	1	02/25/24 2:14 PM
A0224003.d	Std1-0.1/1 ppb	ICAL	1	02/25/24 2:19 PM
A0224004.d	Std2-0.5/5 ppb	ICAL	1	02/25/24 2:24 PM
A0224005.d	Std3-5/50 ppb	ICAL	1	02/25/24 2:29 PM
A0224006.d	Std4-10/100 ppb	ICAL	1	02/25/24 2:33 PM
A0224007.d	Std5-4.0/20/200 ppb	ICAL	1	02/25/24 2:38 PM
A0224008.d	Std6-8.0/40/400 ppb	ICAL	1	02/25/24 2:43 PM
A0224009.d	Std7-100/1000 ppb	ICAL	1	02/25/24 2:48 PM
A0224010.d	Std8-200/2000 ppb	ICAL	1	02/25/24 2:52 PM
A0224011.d	ICV	ICV	1	02/25/24 3:01 PM
A0224012.d	ICB	ICB	1	02/25/24 3:05 PM
A0224013.d	LLICV1	LLICV	1	02/25/24 3:10 PM
A0224014.d	LLICV1	LLICV	1	02/25/24 3:15 PM
A0224015.d	MLCCV	CCV	1	02/25/24 3:20 PM
A0224016.d	ICSA1	ICSA	1	02/25/24 3:25 PM
A0224017.d	ICSAB1	ICSAB	1	02/25/24 3:29 PM
A0224018.d	MB-107075	MBLK	1	02/25/24 3:34 PM
A0224019.d	LCS-107075	LCS	1	02/25/24 3:38 PM
A0224020.d	N063315-001A	SAMP	1	02/25/24 3:43 PM
A0224021.d	N063315-001A	SAMP	5	02/25/24 3:48 PM
A0224022.d	N063315-001A-PS	PS	1	02/25/24 3:53 PM
A0224023.d	N063315-001A-MS	MS	1	02/25/24 3:57 PM
A0224024.d	N063315-001A-MSD	MSD	1	02/25/24 4:02 PM
A0224025.d	N063316-001A	SAMP	1	02/25/24 4:06 PM
A0224026.d	N063316-002A	SAMP	1	02/25/24 4:11 PM
A0224027.d	RINSE	ICAL	1	02/25/24 4:16 PM
A0224028.d	CCV1	CCV	1	02/25/24 4:20 PM
A0224029.d	CCB1	CCB	1	02/25/24 4:25 PM
A0224030.d	N063318-001A	SAMP	1	02/25/24 4:30 PM
A0224031.d	N063318-002A	SAMP	1	02/25/24 4:34 PM
A0224032.d	N063290-001A	SAMP	1	02/25/24 4:39 PM
A0224033.d	N063308-001A	SAMP	1	02/25/24 4:44 PM
A0224034.d	N063308-002A	SAMP	1	02/25/24 4:48 PM
A0224035.d	N063308-003A	SAMP	1	02/25/24 4:53 PM
A0224036.d	N063308-004A	SAMP	1	02/25/24 4:58 PM
A0224037.d	N063308-005A	SAMP	1	02/25/24 5:02 PM
A0224038.d	N063308-006A	SAMP	1	02/25/24 5:07 PM
A0224039.d	RINSE	ICAL	1	02/25/24 5:12 PM
A0224040.d	CCV2	CCV	1	02/25/24 5:16 PM
A0224041.d	CCB2	CCB	1	02/25/24 5:21 PM
A0224042.d	N063308-007A	SAMP	1	02/25/24 5:26 PM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
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A0224044.d	N063311-001A-MS	MS	1	02/25/24 5:35 PM
A0224045.d	N063311-002A	SAMP	1	02/25/24 5:39 PM
A0224046.d	N063311-003A	SAMP	1	02/25/24 5:44 PM
A0224047.d	N063311-004A	SAMP	1	02/25/24 5:49 PM
A0224048.d	N063311-007A	SAMP	1	02/25/24 5:53 PM
A0224049.d	RINSE	ICAL	1	02/25/24 5:58 PM
A0224050.d	CCV3	CCV	1	02/25/24 6:03 PM
A0224051.d	CCB3	CCB	1	02/25/24 6:07 PM
A0224052.d	ICSA2	ICSA	1	02/25/24 6:12 PM
A0224053.d	ICSAB2	ICSAB	1	02/25/24 6:17 PM
A0224054.d	RINSE	ICAL	1	02/25/24 6:21 PM
A0224055.d	MB1-107081	MBLK	1	02/25/24 6:26 PM
A0224056.d	MB2-107081	MBLK	1	02/25/24 6:31 PM
A0224057.d	MB-107081	MBLK	1	02/25/24 6:35 PM
A0224058.d	LCS-107081	LCS	1	02/25/24 6:40 PM
A0224059.d	MDL1	SAMP	1	02/25/24 6:45 PM
A0224060.d	MDL2	SAMP	1	02/25/24 6:49 PM
A0224061.d	MDL3	SAMP	1	02/25/24 6:54 PM
A0224062.d	N063228-001A	SAMP	1	02/25/24 6:59 PM
A0224063.d	RINSE	ICAL	1	02/25/24 7:03 PM
A0224064.d	CCV4	CCV	1	02/25/24 7:08 PM
A0224065.d	CCB4	CCB	1	02/25/24 7:13 PM
A0224066.d	N063292-005A	SAMP	1	02/25/24 7:17 PM
A0224067.d	N063292-005A	SAMP	5	02/25/24 7:22 PM
A0224068.d	N063292-005A	SAMP	10	02/25/24 7:27 PM
A0224069.d	N063292-005A	SAMP	50	02/25/24 7:31 PM
A0224070.d	N063292-005A-PS	PS	1	02/25/24 7:36 PM
A0224071.d	N063292-005A-PS	PS	10	02/25/24 7:40 PM
A0224072.d	N063292-005A-MS	MS	1	02/25/24 7:45 PM
A0224073.d	N063292-005A-MS	MS	10	02/25/24 7:50 PM
A0224074.d	N063292-005A-MSD	MSD	1	02/25/24 7:55 PM
A0224075.d	N063292-005A-MSD	MSD	10	02/25/24 7:59 PM
A0224076.d	CCV5	CCV	1	02/25/24 8:04 PM
A0224077.d	CCB5	CCB	1	02/25/24 8:08 PM
A0224078.d	N063292-010A	SAMP	1	02/25/24 8:13 PM
A0224079.d	N063292-015A	SAMP	1	02/25/24 8:18 PM
A0224080.d	RINSE	RINSE	1	02/25/24 8:22 PM
A0224081.d	CCV6	CCV	1	02/25/24 8:27 PM
A0224082.d	CCB6	CCB	1	02/25/24 8:32 PM
A0224083.d	ICSA3	ICSA	1	02/25/24 8:36 PM
A0224084.d	ICSAB3	ICSAB	1	02/25/24 8:41 PM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224085.d	N063182-009B	SAMP	1	02/25/24 8:46 PM
A0224086.d	N063182-010B	SAMP	1	02/25/24 8:50 PM
A0224087.d	N063182-011B	SAMP	1	02/25/24 8:55 PM
A0224088.d	N063248-002B	SAMP	5	02/25/24 9:00 PM
A0224089.d	N063248-002B	SAMP	25	02/25/24 9:04 PM
A0224090.d	N063248-002B-PS	PS	5	02/25/24 9:09 PM
A0224091.d	N063248-002B-MS	MS	5	02/25/24 9:14 PM
A0224092.d	N063248-002B-MSD	MSD	5	02/25/24 9:18 PM
A0224093.d	N063248-003B	SAMP	10	02/25/24 9:23 PM
A0224094.d	N063248-004B	SAMP	10	02/25/24 9:28 PM
A0224095.d	CCV7	CCV	1	02/25/24 9:32 PM
A0224096.d	CCB7	CCB	1	02/25/24 9:37 PM
A0224097.d	N063315-001A	SAMP	100	02/25/24 9:47 PM
A0224098.d	N063315-001A	SAMP	500	02/25/24 9:51 PM
A0224099.d	N063315-001A-PS	PS	100	02/25/24 9:56 PM
A0224100.d	N063315-001A-MS	MS	100	02/25/24 10:00 PM
A0224101.d	N063315-001A-MSD	MSD	100	02/25/24 10:05 PM
A0224102.d	N063316-001A	SAMP	10	02/25/24 10:10 PM
A0224103.d	N063308-003A	SAMP	100	02/25/24 10:15 PM
A0224104.d	N063311-001A	SAMP	10	02/25/24 10:19 PM
A0224105.d	N063311-001A-MS	MS	10	02/25/24 10:24 PM
A0224106.d	N063311-002A	SAMP	10	02/25/24 10:28 PM
A0224107.d	CCV8	CCV	1	02/25/24 10:33 PM
A0224108.d	CCB8	CCB	1	02/25/24 10:38 PM
A0224109.d	N063311-003A	SAMP	10	02/25/24 10:42 PM
A0224110.d	N063311-003A	SAMP	100	02/25/24 10:47 PM
A0224111.d	N063311-004A	SAMP	10	02/25/24 10:52 PM
A0224112.d	N063311-004A	SAMP	100	02/25/24 10:56 PM
A0224113.d	N063311-007A	SAMP	10	02/25/24 11:01 PM
A0224114.d	N063292-005A	SAMP	100	02/25/24 11:06 PM
A0224115.d	N063292-005A	SAMP	500	02/25/24 11:10 PM
A0224116.d	N063292-005A	SAMP	1000	02/25/24 11:15 PM
A0224117.d	N063292-005A	SAMP	5000	02/25/24 11:20 PM
A0224118.d	CCV9	CCV	1	02/25/24 11:24 PM
A0224119.d	CCB9	CCB	1	02/25/24 11:29 PM
A0224120.d	N063292-005A-PS	PS	100	02/25/24 11:34 PM
A0224121.d	N063292-005A-PS	PS	1000	02/25/24 11:39 PM
A0224122.d	N063292-005A-MS	MS	100	02/25/24 11:43 PM
A0224123.d	N063292-005A-MS	MS	1000	02/25/24 11:48 PM
A0224124.d	N063292-005A-MSD	MSD	100	02/25/24 11:53 PM
A0224125.d	N063292-005A-MSD	MSD	1000	02/25/24 11:57 PM
A0224126.d	CCV10	CCV	1	02/26/24 12:02 AM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224127.d	CCB10	CCB	1	02/26/24 12:07 AM
A0224128.d	ICSA4	ICSA	1	02/26/24 12:11 AM
A0224129.d	ICSAB4	ICSAB	1	02/26/24 12:16 AM
A0224130.d	N063248-005C	SAMP	1	02/26/24 12:21 AM
A0224131.d	N063248-005C	SAMP	10	02/26/24 12:25 AM
A0224132.d	N063248-006C	SAMP	1	02/26/24 12:30 AM
A0224133.d	N063248-006C	SAMP	10	02/26/24 12:35 AM
A0224134.d	N063248-007C	SAMP	1	02/26/24 12:39 AM
A0224135.d	N063248-007C	SAMP	10	02/26/24 12:44 AM
A0224136.d	N063248-008C	SAMP	1	02/26/24 12:49 AM
A0224137.d	N063248-008C	SAMP	10	02/26/24 12:53 AM
A0224138.d	N063248-010B	SAMP	1	02/26/24 12:58 AM
A0224139.d	RINSE	ICAL	1	02/26/24 1:03 AM
A0224140.d	CCV11	CCV	1	02/26/24 1:07 AM
A0224141.d	CCB11	CCB	1	02/26/24 1:12 AM
A0224142.d	N063248-011B	SAMP	1	02/26/24 1:16 AM
A0224143.d	N063248-011B	SAMP	10	02/26/24 1:21 AM
A0224144.d	N063249-007C	SAMP	1	02/26/24 1:26 AM
A0224145.d	N063249-007C	SAMP	10	02/26/24 1:30 AM
A0224146.d	N063249-009C	SAMP	1	02/26/24 1:35 AM
A0224147.d	N063249-009C	SAMP	10	02/26/24 1:40 AM
A0224148.d	N063249-011C	SAMP	1	02/26/24 1:44 AM
A0224149.d	N063249-011C	SAMP	10	02/26/24 1:49 AM
A0224150.d	N063249-013C	SAMP	1	02/26/24 1:53 AM
A0224151.d	N063249-013C	SAMP	10	02/26/24 1:58 AM
A0224152.d	CCV12	CCV	1	02/26/24 2:03 AM
A0224153.d	CCB12	CCB	1	02/26/24 2:08 AM
A0224154.d	N063249-015C	SAMP	1	02/26/24 2:12 AM
A0224155.d	N063249-015C	SAMP	10	02/26/24 2:17 AM
A0224156.d	N063249-017C	SAMP	1	02/26/24 2:21 AM
A0224157.d	N063249-017C	SAMP	10	02/26/24 2:26 AM
A0224158.d	N063249-018C	SAMP	5	02/26/24 2:31 AM
A0224159.d	N063311-001A	SAMP	1	02/26/24 2:35 AM
A0224160.d	N063311-001A	SAMP	1	02/26/24 2:40 AM
A0224161.d	N063311-001A	SAMP	1	02/26/24 2:45 AM
A0224162.d	RINSE	ICAL	1	02/26/24 2:49 AM
A0224163.d	CCV13	CCV	1	02/26/24 2:54 AM
A0224164.d	CCB13	CCB	1	02/26/24 2:59 AM
A0224165.d	ICSA5	ICSA	1	02/26/24 3:03 AM
A0224166.d	ICSAB5	ICSAB	1	02/26/24 3:08 AM
A0224167.d	MB-107055	MBLK	1	02/26/24 3:13 AM
A0224168.d	LCS-107055	LCS	1	02/26/24 3:17 AM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224169.d	N063295-001B	SAMP	1	02/26/24 3:22 AM
A0224170.d	N063295-002B	SAMP	1	02/26/24 3:26 AM
A0224171.d	N063295-002B	SAMP	5	02/26/24 3:31 AM
A0224172.d	N063295-002B	SAMP	10	02/26/24 3:36 AM
A0224173.d	N063295-002B	SAMP	50	02/26/24 3:40 AM
A0224174.d	N063295-002B	SAMP	100	02/26/24 3:45 AM
A0224175.d	N063295-002B	SAMP	500	02/26/24 3:50 AM
A0224176.d	CCV14	CCV	1	02/26/24 3:54 AM
A0224177.d	CCB14	CCB	1	02/26/24 3:59 AM
A0224178.d	N063295-002B-PS	PS	1	02/26/24 4:04 AM
A0224179.d	N063295-002B-PS	PS	10	02/26/24 4:08 AM
A0224180.d	N063295-002B-PS	PS	100	02/26/24 4:13 AM
A0224181.d	N063295-002B-MS	MS	1	02/26/24 4:18 AM
A0224182.d	N063295-002B-MS	MS	10	02/26/24 4:22 AM
A0224183.d	N063295-002B-MS	MS	100	02/26/24 4:27 AM
A0224184.d	N063295-002B-MSD	MSD	1	02/26/24 4:32 AM
A0224185.d	N063295-002B-MSD	MSD	10	02/26/24 4:36 AM
A0224186.d	N063295-002B-MSD	MSD	100	02/26/24 4:41 AM
A0224187.d	CCV15	CCV	1	02/26/24 4:46 AM
A0224188.d	CCB15	CCB	1	02/26/24 4:50 AM
A0224189.d	N063295-003B	SAMP	1	02/26/24 4:55 AM
A0224190.d	N063295-005C	SAMP	1	02/26/24 4:59 AM
A0224191.d	N063295-005C	SAMP	10	02/26/24 5:04 AM
A0224192.d	N063295-006C	SAMP	1	02/26/24 5:09 AM
A0224193.d	N063295-006C	SAMP	10	02/26/24 5:14 AM
A0224194.d	N063295-007C	SAMP	1	02/26/24 5:18 AM
A0224195.d	N063295-007C	SAMP	10	02/26/24 5:23 AM
A0224196.d	N063295-008C	SAMP	1	02/26/24 5:27 AM
A0224197.d	N063295-008C	SAMP	10	02/26/24 5:32 AM
A0224198.d	CCV16	CCV	1	02/26/24 5:37 AM
A0224199.d	CCB16	CCB	1	02/26/24 5:41 AM
A0224200.d	N063297-001C	SAMP	1	02/26/24 5:46 AM
A0224201.d	N063297-002B	SAMP	1	02/26/24 5:51 AM
A0224202.d	N063297-003B	SAMP	1	02/26/24 5:55 AM
A0224203.d	N063303-001B	SAMP	1	02/26/24 6:00 AM
A0224204.d	N063303-001B	SAMP	10	02/26/24 6:05 AM
A0224205.d	N063303-002B	SAMP	1	02/26/24 6:09 AM
A0224206.d	N063303-002B	SAMP	10	02/26/24 6:14 AM
A0224207.d	N063303-006B	SAMP	5	02/26/24 6:19 AM
A0224208.d	N063303-008B	SAMP	1	02/26/24 6:23 AM
A0224209.d	N063303-008B	SAMP	10	02/26/24 6:28 AM
A0224210.d	CCV17	CCV	1	02/26/24 6:33 AM

INJECTION LOG: 240225A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0224211.d	CCB17	CCB	1	02/26/24 6:37 AM
A0224212.d	ICSA6	ICSA	1	02/26/24 6:42 AM
A0224213.d	ICSAB6	ICSAB	1	02/26/24 6:47 AM
A0224214.d	RINSE	ICAL	1	02/26/24 6:51 AM
A0224215.d	RINSE	ICAL	1	02/26/24 6:56 AM
A0224216.d	RINSE	ICAL	1	02/26/24 7:00 AM
A0224217.d	RINSE	ICAL	1	02/26/24 7:05 AM
A0224218.d	RINSE	ICAL	1	02/26/24 7:10 AM
A0224219.d	RINSE	ICAL	1	02/26/24 7:14 AM
A0224220.d	RINSE	ICAL	1	02/26/24 7:19 AM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/23/2024 9:38:51 AM**
Prep End Date: **2/23/2024 2:00:00 PM**
Prep Batch **107055** Prep Code:**3010_W_MSDISS_TPK**

Reviewed/ Date: JRB 3/17/2024
Initials/ Date: for
Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-02**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107055	Aqueous		25	☐	25	1.000		
MB-107055	Aqueous		25	☐	25	1.000		
N063295-001B	Groundwater	<2	25	☐	25	1.000		
N063295-002B	Groundwater	<2	25	☐	25	1.000		
N063295-002B-MS	Groundwater	<2	25	☐	25	1.000		
N063295-002B-MSD	Groundwater	<2	25	☐	25	1.000		
N063295-003B	Groundwater	<2	25	☐	25	1.000		
N063295-005C	Groundwater	<2	25	☐	25	1.000		
N063295-006C	Groundwater	<2	25	☐	25	1.000		
N063295-007C	Groundwater	<2	25	☐	25	1.000		
N063295-008C	Groundwater	<2	25	☐	25	1.000		
N063297-001C	Groundwater	<2	25	☐	25	1.000		
N063297-002B	Groundwater	<2	25	☐	25	1.000		
sample color is yellow								

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **2/23/2024 9:38:51 AM**
Prep End Date: **2/23/2024 2:00:00 PM**
Prep Batch **107055** Prep Code:**3010_W_MSDISS_TPK**

Reviewed/ Date: JRB 3/17/2024
Initials/ Date: for
Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-04-02**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063297-003B	Groundwater	<2	25	☐	25	1.000		
N063303-001B	Groundwater	<2	25	☐	25	1.000		
N063303-002B	Groundwater	<2	25	☐	25	1.000		
N063303-006B	Groundwater	<2	25	☐	25	1.000		
sample color is light yellow								
N063303-008B	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240222A.b
Acq. Date-Time	2024-02-23 11:44:28
Report Comment	---
Instrument Name	G8421A SG19193757

[No Gas]

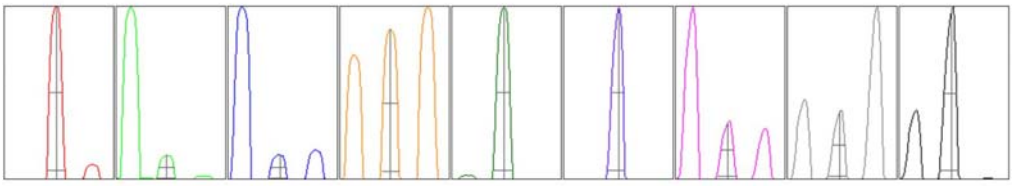
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	4742	47419.90	500.00		3.024	5.000
24	10.00	18706	187057.96	500.00		2.427	5.000
25	10.00	2512	25118.25	500.00		2.587	5.000
26	10.00	3009	30093.30	500.00		2.566	5.000
59	10.00	34030	340296.87	500.00		1.929	5.000
115	10.00	56615	566148.24	500.00		1.847	5.000
206	10.00	12089	120890.72	500.00		2.171	5.000
207	10.00	10015	100148.90	500.00		2.219	5.000
208	10.00	24886	248855.97	500.00		1.967	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.609 %
Doubly Charged	70 / 140 1.407 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	4705.05	8.95	8.90 - 9.10	
24	18796.46	23.90	23.90 - 24.10	
25	2564.26	24.95	24.90 - 25.10	
26	3120.45	25.90	25.90 - 26.10	
59	33894.52	58.95	58.90 - 59.10	
115	56031.92	115.05	114.90 - 115.10	
206	10962.65	205.95	205.90 - 206.10	
207	9673.39	206.95	206.90 - 207.10	
208	24384.42	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.486	0.900	
24	0.41	0.502	0.900	
25	0.41	0.494	0.900	
26	0.41	0.494	0.900	
59	0.38	0.531	0.900	
115	0.34	0.476	0.900	
206	0.36	0.533	0.900	
207	0.35	0.509	0.900	
208	0.35	0.525	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[H2]

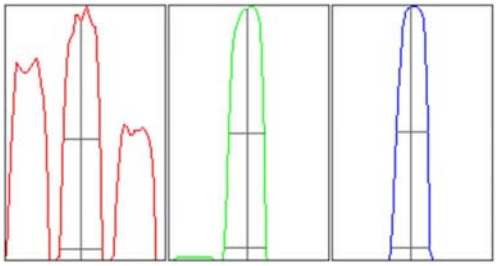
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		356	3555.77			5.984	
59		3819	38194.02			3.844	
115		59590	595903.12			2.349	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.610 %
Doubly Charged	70 / 140 0.333 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	353.80	25.95	25.90 - 26.10	
59	3912.74	59.00	58.90 - 59.10	
115	60486.49	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.70	0.791	0.900	
59	0.67	0.783	0.900	
115	0.60	0.733	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0000	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm		

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[He]

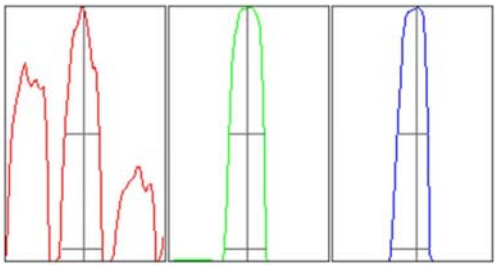
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		138	1375.06			6.914	
59		12115	121151.14			1.919	
115		13480	134797.78			1.974	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.279 %
Doubly Charged	70 / 140 0.982 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	147.01	26.00	25.90 - 26.10	
59	12098.31	59.00	58.90 - 59.10	
115	13611.92	115.10	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.65	0.789	0.900	
59	0.66	0.782	0.900	
115	0.58	0.730	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0000	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240223A1.b
Acq. Date-Time	2024-02-25 12:53:21
Report Comment	---
Instrument Name	G8421A SG19193757

[No Gas]

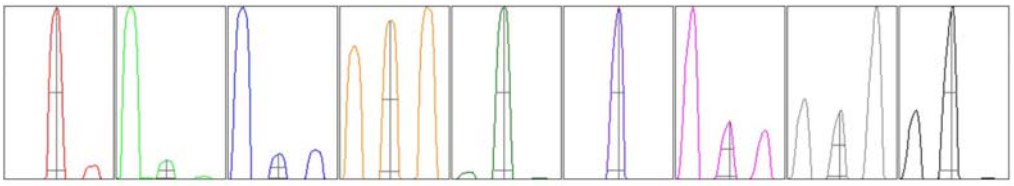
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	3372	33715.43	500.00		3.469	5.000
24	10.00	14626	146262.97	500.00		3.322	5.000
25	10.00	1964	19635.08	500.00		3.762	5.000
26	10.00	2357	23572.67	500.00		3.692	5.000
59	10.00	28829	288289.28	500.00		2.261	5.000
115	10.00	51639	516390.58	500.00		1.656	5.000
206	10.00	10629	106292.05	500.00		2.152	5.000
207	10.00	8878	88776.52	500.00		1.960	5.000
208	10.00	21919	219187.85	500.00		2.257	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.608 %
Doubly Charged	70 / 140 1.286 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	3447.05	8.95	8.90 - 9.10	
24	14643.27	23.90	23.90 - 24.10	
25	2050.22	24.90	24.90 - 25.10	
26	2445.07	25.90	25.90 - 26.10	
59	29068.40	58.95	58.90 - 59.10	
115	51964.63	115.05	114.90 - 115.10	
206	10292.73	206.00	205.90 - 206.10	
207	8538.49	206.95	206.90 - 207.10	
208	21881.25	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.487	0.900	
24	0.42	0.521	0.900	
25	0.42	0.496	0.900	
26	0.41	0.531	0.900	
59	0.39	0.533	0.900	
115	0.34	0.481	0.900	
206	0.36	0.538	0.900	
207	0.36	0.532	0.900	
208	0.36	0.531	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[H2]

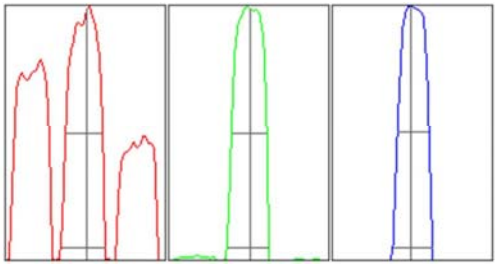
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		297	2972.06			6.951	
59		3184	31837.64			3.258	
115		53286	532857.84			2.153	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.618 %
Doubly Charged	70 / 140 0.307 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	310.04	26.05	25.90 - 26.10	
59	3327.70	59.05	58.90 - 59.10	
115	55650.78	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.70	0.831	0.900	
59	0.67	0.786	0.900	
115	0.60	0.740	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	0.9996	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.08		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm		

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

[He]

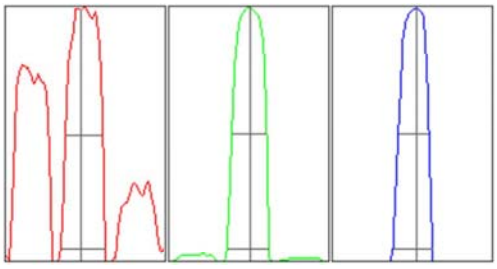
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		117	1169.24			9.238	
59		10415	104151.91			2.256	
115		10941	109408.27			2.392	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.260 %
Doubly Charged	70 / 140 0.959 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	111.76	25.95	25.90 - 26.10	
59	10524.04	59.05	58.90 - 59.10	
115	11284.17	115.10	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.71	0.832	0.900	
59	0.66	0.786	0.900	
115	0.58	0.738	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	0.9996	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.08		

Hardware Settings

Torch

Torch H	1.7 mm	Torch V	1.2 mm

EM

Discriminator	4.5 mV	Analog HV	2527 V	Pulse HV	1610 V

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240223A

Instrument ID: ICPMS-03

Analyte	Data File	A0223002.d	A0223003.d	A0223004.d	A0223005.d	A0223006.d	A0223007.d	A0223008.d	A0223009.d	A0223010.d	
	Acq. Date-Time	02/23/2024 01:27 PM	02/23/2024 01:32 PM	02/23/2024 01:36 PM	02/23/2024 01:41 PM	02/23/2024 01:46 PM	02/23/2024 01:51 PM	02/23/2024 01:55 PM	02/23/2024 02:00 PM	02/23/2024 02:05 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	72154.9		76342.4	77253.2	77475.2	76063.3	75148	75462.7	76036.5	
55 Mn [2]	CPS	69.9		1458.4	13632.3	27466	54136.3	106561.5	266690.1	547932.1	1.0000
72 Ge (ISTD) [2]	CPS	45744.8	48400.3	48644.2	49579.1	49426.6	48837	47561.1	48045.9	48911.7	
75 As [2]	CPS	19.9	88.8	333.2	3303.5	6714.5	13140.5	26223.8	65989.1	135206.6	1.0000
159 Tb (ISTD) [3]	CPS	2459036.8		2602116.7	2641047.9	2677129.2	2587074.5	2582202.2	2541226.8	2650892	
137 Ba [3]	CPS	50		2356.9	23978.7	49371.8	98171.7	194301.8	479469.4	991663.4	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION SUMMARY: 240225A

Instrument ID: ICPMS-03

Analyte	Data File	A0224002.d	A0224004.d	A0224005.d	A0224006.d	A0224007.d	A0224008.d	A0224009.d	A0224010.d	
	Acq. Date-Time	02/25/2024 02:14 PM	02/25/2024 02:24 PM	02/25/2024 02:29 PM	02/25/2024 02:33 PM	02/25/2024 02:38 PM	02/25/2024 02:43 PM	02/25/2024 02:48 PM	02/25/2024 02:52 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	61433.5	57887.7	60292.8	61278.6	60212.5	58594.5	58564.5	60077.5	
55 Mn [2]	CPS	54.3	1026.3	10294.1	21178.7	42083.6	80727.7	207102.3	424350.4	1.0000
159 Tb (ISTD) [3]	CPS	2546673.9	2410356.4	2515986.1	2569262.8	2558618.2	2483709.9	2480840.2	2587686.9	
137 Ba [3]	CPS	50	2226.9	23107.4	47656.7	94804.4	187552	472079.2	983581.9	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713612**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.429	0.10	10.00	0	104	90	110				
Barium	10.174	1.0	10.00	0	102	90	110				
Manganese	101.593	0.50	100.0	0	102	90	110				

Sample ID: **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ZZZZZZ** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713614**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.092	0.10	0.1000	0	91.5	80	120				
Barium	1.108	1.0	1.000	0	111	80	120				
Manganese	0.546	0.50	0.5000	0	109	80	120				

Sample ID: **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713615**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.039	0.10	20.00	0	100	90	110				
Barium	19.876	1.0	20.00	0	99.4	90	110				
Manganese	19.940	0.50	20.00	0	99.7	90	110				

Sample ID: **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713628**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.030	0.10	20.00	0	100	90	110				
Barium	19.984	1.0	20.00	0	99.9	90	110				
Manganese	19.815	0.50	20.00	0	99.1	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713640**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.842	0.10	20.00	0	99.2	90	110				
Barium	19.840	1.0	20.00	0	99.2	90	110				
Manganese	19.773	0.50	20.00	0	98.9	90	110				

Sample ID: **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713646**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.766	0.10	20.00	0	98.8	90	110				
Barium	19.918	1.0	20.00	0	99.6	90	110				
Manganese	19.591	0.50	20.00	0	98.0	90	110				

Sample ID: **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713658**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.088	0.10	20.00	0	100	90	110				
Barium	20.699	1.0	20.00	0	103	90	110				
Manganese	20.003	0.50	20.00	0	100	90	110				

Sample ID: **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713672**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.546	0.10	20.00	0	103	90	110				
Barium	20.654	1.0	20.00	0	103	90	110				
Manganese	20.328	0.50	20.00	0	102	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV6** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713686**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.762	0.10	20.00	0	98.8	90	110				
Barium	21.352	1.0	20.00	0	107	90	110				
Manganese	19.623	0.50	20.00	0	98.1	90	110				

Sample ID: **CCV7** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713695**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.067	0.10	20.00	0	100	90	110				
Barium	22.103	1.0	20.00	0	111	90	110				S
Manganese	19.918	0.50	20.00	0	99.6	90	110				

Sample ID: **CCV8** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713709**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.122	0.10	20.00	0	101	90	110				
Barium	20.868	1.0	20.00	0	104	90	110				
Manganese	19.912	0.50	20.00	0	99.6	90	110				

Sample ID: **CCV9** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713721**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.930	0.10	20.00	0	99.7	90	110				
Barium	21.751	1.0	20.00	0	109	90	110				
Manganese	19.706	0.50	20.00	0	98.5	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

%Rec of Ba in several CCVs failed, high bias. However, Ba is reported at 182939 seqeunce.

3/12/2024

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV10** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713728**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.720	0.10	20.00	0	98.6	90	110				
Barium	21.635	1.0	20.00	0	108	90	110				
Manganese	19.596	0.50	20.00	0	98.0	90	110				

Sample ID: **CCV11** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713741**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.953	0.10	20.00	0	99.8	90	110				
Barium	21.740	1.0	20.00	0	109	90	110				
Manganese	19.594	0.50	20.00	0	98.0	90	110				

Sample ID: **CCV12** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713752**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.609	0.10	20.00	0	98.0	90	110				
Barium	22.443	1.0	20.00	0	112	90	110				S
Manganese	19.647	0.50	20.00	0	98.2	90	110				

Sample ID: **CCV13** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713760**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.787	0.10	20.00	0	98.9	90	110				
Barium	22.496	1.0	20.00	0	112	90	110				S
Manganese	19.731	0.50	20.00	0	98.7	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV14** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713773**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.661	0.10	20.00	0	98.3	90	110				
Barium	21.969	1.0	20.00	0	110	90	110				
Manganese	19.733	0.50	20.00	0	98.7	90	110				

Sample ID: **CCV15** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713784**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.424	0.10	20.00	0	97.1	90	110				
Barium	22.620	1.0	20.00	0	113	90	110				S
Manganese	19.746	0.50	20.00	0	98.7	90	110				

Sample ID: **CCV16** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCV** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713788**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.868	0.10	20.00	0	99.3	90	110				
Barium	22.098	1.0	20.00	0	110	90	110				S
Manganese	20.059	0.50	20.00	0	100	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714090**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	9.828	1.0	10.00	0	98.3	90	110				
Manganese	100.886	0.50	100.0	0	101	90	110				

Sample ID: **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ZZZZZZ** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714092**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	1.026	1.0	1.000	0	103	80	120				
Manganese	0.554	0.50	0.5000	0	111	80	120				

Sample ID: **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714094**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.625	1.0	20.00	0	98.1	90	110				
Manganese	19.625	0.50	20.00	0	98.1	90	110				

Sample ID: **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714106**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.833	1.0	20.00	0	99.2	90	110				
Manganese	20.008	0.50	20.00	0	100	90	110				

Sample ID: **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714117**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.422	1.0	20.00	0	97.1	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714117**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.758	0.50	20.00	0	98.8	90	110				

Sample ID: **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714126**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.571	1.0	20.00	0	97.9	90	110				
Manganese	19.779	0.50	20.00	0	98.9	90	110				

Sample ID: **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714138**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.567	1.0	20.00	0	97.8	90	110				
Manganese	20.113	0.50	20.00	0	101	90	110				

Sample ID: **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714150**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.871	1.0	20.00	0	99.4	90	110				
Manganese	19.723	0.50	20.00	0	98.6	90	110				

Sample ID: **CCV6** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714154**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.027	1.0	20.00	0	100	90	110				
Manganese	20.041	0.50	20.00	0	100	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV7** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714168**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.241	1.0	20.00	0	101	90	110				
Manganese	19.644	0.50	20.00	0	98.2	90	110				

Sample ID: **CCV8** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714180**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.696	1.0	20.00	0	98.5	90	110				
Manganese	19.665	0.50	20.00	0	98.3	90	110				

Sample ID: **CCV9** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714191**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.830	1.0	20.00	0	99.2	90	110				
Manganese	19.440	0.50	20.00	0	97.2	90	110				

Sample ID: **CCV10** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714199**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	19.669	1.0	20.00	0	98.3	90	110				
Manganese	19.832	0.50	20.00	0	99.2	90	110				

Sample ID: **CCV11** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714212**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.176	1.0	20.00	0	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV11** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714212**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.405	0.50	20.00	0	97.0	90	110				

Sample ID: **CCV12** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714224**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.931	1.0	20.00	0	105	90	110				
Manganese	19.457	0.50	20.00	0	97.3	90	110				

Sample ID: **CCV13** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714234**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.460	1.0	20.00	0	102	90	110				
Manganese	19.672	0.50	20.00	0	98.4	90	110				

Sample ID: **CCV14** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714247**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.520	1.0	20.00	0	103	90	110				
Manganese	19.622	0.50	20.00	0	98.1	90	110				

Sample ID: **CCV15** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCV** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714258**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.693	1.0	20.00	0	103	90	110				
Manganese	19.657	0.50	20.00	0	98.3	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCV16**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCV**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714269**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.381	1.0	20.00	0	102	90	110				
Manganese	19.525	0.50	20.00	0	97.6	90	110				

Sample ID: **CCV17**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCV**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714281**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.992	1.0	20.00	0	105	90	110				
Manganese	19.685	0.50	20.00	0	98.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICB** SampType: **ICB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713613**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB1** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713629**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.185	0.50									

Sample ID: **CCB2** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713641**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.191	0.50									

Sample ID: **CCB3** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713647**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.184	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB4** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713660**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB5** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713673**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB6** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713687**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB7** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713696**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB8** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713710**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB9** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713722**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB10** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713729**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB11** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713742**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB12** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713753**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB13** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713761**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB14** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713774**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB15** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **CCB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713785**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB16**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **CCB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713789**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICB** SampType: **ICB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714091**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB1** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714107**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB2** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714118**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB3** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714127**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB4** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714139**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB4**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714139**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID: **CCB5**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714151**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB6**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714155**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB7**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714169**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB8**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714181**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB9** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/25/2024** SeqNo: **5714192**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB10** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714200**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB11** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714213**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB12** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714225**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB13** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **CCB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714235**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **CCB13**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714235**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID: **CCB14**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714248**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB15**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714259**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB16**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714270**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **CCB17**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **CCB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714282**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSA1** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713616**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **ICSAB1** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713617**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.604	0.10	20.00	0	103	80	120				
Barium	20.398	1.0	20.00	0	102	80	120				
Manganese	20.364	0.50	20.00	0	102	80	120				

Sample ID: **ICSA2** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713661**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.070	0.50									

Sample ID: **ICSAB2** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713662**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.469	0.10	20.00	0	102	80	120				
Barium	20.619	1.0	20.00	0	103	80	120				
Manganese	20.279	0.50	20.00	0	101	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSA3**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSA**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713674**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.060	0.50									

Sample ID: **ICSAB3**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSAB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713675**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.275	0.10	20.00	0	101	80	120				
Barium	20.581	1.0	20.00	0	103	80	120				
Manganese	20.190	0.50	20.00	0	101	80	120				

Sample ID: **ICSA4**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSA**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713697**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.066	0.50									

Sample ID: **ICSAB4**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSAB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/23/2024**	SeqNo: **5713698**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.323	0.10	20.00	0	102	80	120				
Barium	22.109	1.0	20.00	0	111	80	120				
Manganese	20.315	0.50	20.00	0	102	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSA5** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/23/2024** SeqNo: **5713730**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.072	0.50									

Sample ID: **ICSAB5** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713731**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.984	0.10	20.00	0	99.9	80	120				
Barium	21.848	1.0	20.00	0	109	80	120				
Manganese	20.009	0.50	20.00	0	100	80	120				

Sample ID: **ICSA6** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSA** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713762**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.061	0.50									

Sample ID: **ICSAB6** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182930**
Client ID: **ICSAB** Batch ID: **R182930** TestNo: **EPA 6020** Analysis Date: **2/24/2024** SeqNo: **5713763**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.902	0.10	20.00	0	99.5	80	120				
Barium	22.348	1.0	20.00	0	112	80	120				
Manganese	20.403	0.50	20.00	0	102	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSA7**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSA**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713790**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	0.073	0.50									

Sample ID: **ICSAB7**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ICSAB**	Batch ID: **R182930**	TestNo: **EPA 6020**		Analysis Date: **2/24/2024**	SeqNo: **5713791**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.302	0.10	20.00	0	102	80	120				
Barium	22.309	1.0	20.00	0	112	80	120				
Manganese	20.288	0.50	20.00	0	101	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSA1**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714095**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **ICSAB1**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSAB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714096**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.091	1.0	20.00	0	100	80	120				
Manganese	20.503	0.50	20.00	0	103	80	120				

Sample ID: **ICSA2**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714128**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **ICSAB2**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSAB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714129**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.003	1.0	20.00	0	100	80	120				
Manganese	20.455	0.50	20.00	0	102	80	120				

Sample ID: **ICSA3**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714156**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSA3**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714156**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID: **ICSAB3**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSAB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/25/2024**	SeqNo: **5714157**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.723	1.0	20.00	0	104	80	120				
Manganese	20.273	0.50	20.00	0	101	80	120				

Sample ID: **ICSA4**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714201**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **ICSAB4**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSAB**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714202**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.034	1.0	20.00	0	100	80	120				
Manganese	20.176	0.50	20.00	0	101	80	120				

Sample ID: **ICSA5**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ICSA**	Batch ID: **R182939**	TestNo: **EPA 6020**		Analysis Date: **2/26/2024**	SeqNo: **5714236**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **ICSAB5** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICSAB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714237**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	20.853	1.0	20.00	0	104	80	120				
Manganese	19.953	0.50	20.00	0	99.8	80	120				

Sample ID: **ICSA6** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICSA** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714283**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **ICSAB6** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **182939**
Client ID: **ICSAB** Batch ID: **R182939** TestNo: **EPA 6020** Analysis Date: **2/26/2024** SeqNo: **5714284**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	21.492	1.0	20.00	0	107	80	120				
Manganese	20.111	0.50	20.00	0	101	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	2459036.8	2459036.8	100	PASS	30-150	72154.9	72154.9	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	2598836.2	2459036.8	105.69	PASS	30-150	75819.9	72154.9	105.08	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	2602116.7	2459036.8	105.82	PASS	30-150	76342.4	72154.9	105.8	PASS	30-150
Std3-5/50 ppb	ICAL	1	2641047.9	2459036.8	107.4	PASS	30-150	77253.2	72154.9	107.07	PASS	30-150
Std4-10/100 ppb	ICAL	1	2677129.2	2459036.8	108.87	PASS	30-150	77475.2	72154.9	107.37	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	2587074.5	2459036.8	105.21	PASS	30-150	76063.3	72154.9	105.42	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	2582202.2	2459036.8	105.01	PASS	30-150	75148	72154.9	104.15	PASS	30-150
Std7-100/1000 ppb	ICAL	1	2541226.8	2459036.8	103.34	PASS	30-150	75462.7	72154.9	104.58	PASS	30-150
Std8-200/2000 ppb	ICAL	1	2650892	2459036.8	107.8	PASS	30-150	76036.5	72154.9	105.38	PASS	30-150
ICV	ICV	1	2483190.9	2459036.8	100.98	PASS	30-150	72025.6	72154.9	99.82	PASS	30-150
ICB	ICB	1	2571855.2	2459036.8	104.59	PASS	30-150	74886.9	72154.9	103.79	PASS	30-150
LLICV1	LLICV	1	2612657.7	2459036.8	106.25	PASS	30-150	75342.3	72154.9	104.42	PASS	30-150
MLCCV	CCV	1	2664630.7	2459036.8	108.36	PASS	30-150	76073.3	72154.9	105.43	PASS	30-150
ICSA1	ICSA	1	2706916.7	2459036.8	110.08	PASS	30-150	76901.4	72154.9	106.58	PASS	30-150
ICSAB1	ICSAB	1	2593782.3	2459036.8	105.48	PASS	30-150	73937.1	72154.9	102.47	PASS	30-150
MDL 4	ICAL	1	2670548.8	2459036.8	108.6	PASS	30-150	76134.7	72154.9	105.52	PASS	30-150
CCV1	CCV	1	2685857.4	2459036.8	109.22	PASS	30-150	78633	72154.9	108.98	PASS	30-150
CCB1	CCB	1	2616529	2459036.8	106.4	PASS	30-150	75792	72154.9	105.04	PASS	30-150
CCV2	CCV	1	2692999.6	2459036.8	109.51	PASS	30-150	77108	72154.9	106.86	PASS	30-150
CCB2	CCB	1	2601268.7	2459036.8	105.78	PASS	30-150	75349	72154.9	104.43	PASS	30-150
CCV3	CCV	1	2693223.1	2459036.8	109.52	PASS	30-150	77729.8	72154.9	107.73	PASS	30-150
CCB3	CCB	1	2631123.9	2459036.8	107	PASS	30-150	76196.1	72154.9	105.6	PASS	30-150
CCV4	CCV	1	2717325.6	2459036.8	110.5	PASS	30-150	77725.3	72154.9	107.72	PASS	30-150
CCB4	CCB	1	2589231	2459036.8	105.29	PASS	30-150	74891.4	72154.9	103.79	PASS	30-150
CCB4	CCB	1	2662733.8	2459036.8	108.28	PASS	30-150	76863.5	72154.9	106.53	PASS	30-150
ICSA2	ICSA	1	2702443.6	2459036.8	109.9	PASS	30-150	78266.7	72154.9	108.47	PASS	30-150
ICSAB2	ICSAB	1	2720121.5	2459036.8	110.62	PASS	30-150	78381.7	72154.9	108.63	PASS	30-150
CCV5	CCV	1	2751728.2	2459036.8	111.9	PASS	30-150	79154.2	72154.9	109.7	PASS	30-150
CCB5	CCB	1	2725557.6	2459036.8	110.84	PASS	30-150	77605.8	72154.9	107.55	PASS	30-150
ICSA3	ICSA	1	2777216.4	2459036.8	112.94	PASS	30-150	80012.9	72154.9	110.89	PASS	30-150
ICSAB3	ICSAB	1	2801833.3	2459036.8	113.94	PASS	30-150	80477.2	72154.9	111.53	PASS	30-150
CCV6	CCV	1	2620084.7	2459036.8	106.55	PASS	30-150	90893.6	72154.9	125.97	PASS	30-150
CCB6	CCB	1	2602736.8	2459036.8	105.84	PASS	30-150	86061.5	72154.9	119.27	PASS	30-150
CCV7	CCV	1	2611394.6	2459036.8	106.2	PASS	30-150	95356	72154.9	132.15	PASS	30-150
CCB7	CCB	1	2549129.6	2459036.8	103.66	PASS	30-150	92681.1	72154.9	128.45	PASS	30-150
ICSA4	ICSA	1	2589679.3	2459036.8	105.31	PASS	30-150	92615	72154.9	128.36	PASS	30-150
ICSAB4	ICSAB	1	2610405.2	2459036.8	106.16	PASS	30-150	91494.6	72154.9	126.8	PASS	30-150
CCV8	CCV	1	2843491.6	2459036.8	115.63	PASS	30-150	83057.4	72154.9	115.11	PASS	30-150
CCB8	CCB	1	2793886	2459036.8	113.62	PASS	30-150	81017.5	72154.9	112.28	PASS	30-150
CCV9	CCV	1	2466970.5	2459036.8	100.32	PASS	30-150	95607.4	72154.9	132.5	PASS	30-150
CCB9	CCB	1	2427889.6	2459036.8	98.73	PASS	30-150	91740.5	72154.9	127.14	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
CCV10	CCV	1	2516120	2459036.8	102.32	PASS	30-150	91776.3	72154.9	127.19	PASS	30-150
CCB10	CCB	1	2478120.7	2459036.8	100.78	PASS	30-150	87906.6	72154.9	121.83	PASS	30-150
ICSA5	ICSA	1	2569346.3	2459036.8	104.49	PASS	30-150	88163.5	72154.9	122.19	PASS	30-150
ICSAB5	ICSAB	1	2581977.3	2459036.8	105	PASS	30-150	88326.5	72154.9	122.41	PASS	30-150
CCV11	CCV	1	2506644.7	2459036.8	101.94	PASS	30-150	91685.6	72154.9	127.07	PASS	30-150
CCB11	CCB	1	2482422	2459036.8	100.95	PASS	30-150	88643.6	72154.9	122.85	PASS	30-150
CCV12	CCV	1	2529154.3	2459036.8	102.85	PASS	30-150	95484.6	72154.9	132.33	PASS	30-150
CCB12	CCB	1	2495543.3	2459036.8	101.48	PASS	30-150	92386	72154.9	128.04	PASS	30-150
CCV13	CCV	1	2513030.1	2459036.8	102.2	PASS	30-150	92046.4	72154.9	127.57	PASS	30-150
CCB13	CCB	1	2519036.6	2459036.8	102.44	PASS	30-150	89338.5	72154.9	123.81	PASS	30-150
ICSA6	ICSA	1	2614372	2459036.8	106.32	PASS	30-150	90478.1	72154.9	125.39	PASS	30-150
ICSAB6	ICSAB	1	2608829.3	2459036.8	106.09	PASS	30-150	89529.4	72154.9	124.08	PASS	30-150
MB-107055	MBLK	1	2549784.7	2459036.8	103.69	PASS	30-150	86479.2	72154.9	119.85	PASS	30-150
LCS-107055	LCS	1	2634997.9	2459036.8	107.16	PASS	30-150	86791.9	72154.9	120.29	PASS	30-150
N063295-001B	SAMP	1	2259937	2459036.8	91.9	PASS	30-150	78140.6	72154.9	108.3	PASS	30-150
N063295-002B	SAMP	1	1905311.7	2459036.8	77.48	PASS	30-150	70402	72154.9	97.57	PASS	30-150
N063295-002B	SAMP	5	2320674.8	2459036.8	94.37	PASS	30-150	81053.3	72154.9	112.33	PASS	30-150
N063295-002B-PS	PS	1	1828826.2	2459036.8	74.37	PASS	30-150	70201.2	72154.9	97.29	PASS	30-150
N063295-002B-MS	MS	1	1892954.6	2459036.8	76.98	PASS	30-150	72557.8	72154.9	100.56	PASS	30-150
N063295-002B-MSD	MSD	1	1897872.2	2459036.8	77.18	PASS	30-150	72788.9	72154.9	100.88	PASS	30-150
N063295-003B	SAMP	1	2200868.7	2459036.8	89.5	PASS	30-150	79154.2	72154.9	109.7	PASS	30-150
CCV14	CCV	1	2587708.2	2459036.8	105.23	PASS	30-150	89028.2	72154.9	123.38	PASS	30-150
CCB14	CCB	1	2546233.3	2459036.8	103.55	PASS	30-150	86002.1	72154.9	119.19	PASS	30-150
N063295-005C	SAMP	1	1871842.1	2459036.8	76.12	PASS	30-150	69949.2	72154.9	96.94	PASS	30-150
N063295-006C	SAMP	1	1850692	2459036.8	75.26	PASS	30-150	71103.9	72154.9	98.54	PASS	30-150
N063295-007C	SAMP	1	1776380.2	2459036.8	72.24	PASS	30-150	69935.6	72154.9	96.92	PASS	30-150
N063295-008C	SAMP	1	1833364	2459036.8	74.56	PASS	30-150	71942.9	72154.9	99.71	PASS	30-150
N063297-001C	SAMP	1	2583071.9	2459036.8	105.04	PASS	30-150	86110.8	72154.9	119.34	PASS	30-150
N063297-002B	SAMP	1	1807706.4	2459036.8	73.51	PASS	30-150	71549.1	72154.9	99.16	PASS	30-150
N063297-003B	SAMP	1	2455479.2	2459036.8	99.86	PASS	30-150	83695	72154.9	115.99	PASS	30-150
N063303-001B	SAMP	1	1785330.9	2459036.8	72.6	PASS	30-150	69342.2	72154.9	96.1	PASS	30-150
N063303-002B	SAMP	1	1677377.2	2459036.8	68.21	PASS	30-150	68324.6	72154.9	94.69	PASS	30-150
CCV15	CCV	1	2561437.2	2459036.8	104.16	PASS	30-150	91992.8	72154.9	127.49	PASS	30-150
CCB15	CCB	1	2532460.5	2459036.8	102.99	PASS	30-150	89487.3	72154.9	124.02	PASS	30-150
N063303-006B	SAMP	5	2218370.9	2459036.8	90.21	PASS	30-150	79032.6	72154.9	109.53	PASS	30-150
N063303-008B	SAMP	1	1990174.2	2459036.8	80.93	PASS	30-150	74529.8	72154.9	103.29	PASS	30-150
CCV16	CCV	1	2573924.8	2459036.8	104.67	PASS	30-150	88543.2	72154.9	122.71	PASS	30-150
CCB16	CCB	1	2449049.4	2459036.8	99.59	PASS	30-150	86282.5	72154.9	119.58	PASS	30-150
ICSA7	ICSA	1	2592985.5	2459036.8	105.45	PASS	30-150	87350.2	72154.9	121.06	PASS	30-150
ICSAB7	ICSAB	1	2598872.3	2459036.8	105.69	PASS	30-150	87996.9	72154.9	121.96	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	45744.8	45744.8	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	48400.3	45744.8	105.81	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	48644.2	45744.8	106.34	PASS	30-150
Std3-5/50 ppb	ICAL	1	49579.1	45744.8	108.38	PASS	30-150
Std4-10/100 ppb	ICAL	1	49426.6	45744.8	108.05	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	48837	45744.8	106.76	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	47561.1	45744.8	103.97	PASS	30-150
Std7-100/1000 ppb	ICAL	1	48045.9	45744.8	105.03	PASS	30-150
Std8-200/2000 ppb	ICAL	1	48911.7	45744.8	106.92	PASS	30-150
ICV	ICV	1	45694.7	45744.8	99.89	PASS	30-150
ICB	ICB	1	47418.4	45744.8	103.66	PASS	30-150
LLICV1	LLICV	1	47848.6	45744.8	104.6	PASS	30-150
MLCCV	CCV	1	48577.4	45744.8	106.19	PASS	30-150
ICSA1	ICSA	1	49223.8	45744.8	107.61	PASS	30-150
ICSAB1	ICSAB	1	47285.8	45744.8	103.37	PASS	30-150
MDL 4	ICAL	1	48374.5	45744.8	105.75	PASS	30-150
CCV1	CCV	1	49639.3	45744.8	108.51	PASS	30-150
CCB1	CCB	1	48172.8	45744.8	105.31	PASS	30-150
CCV2	CCV	1	49189.2	45744.8	107.53	PASS	30-150
CCB2	CCB	1	48102.5	45744.8	105.15	PASS	30-150
CCV3	CCV	1	48987.5	45744.8	107.09	PASS	30-150
CCB3	CCB	1	48038	45744.8	105.01	PASS	30-150
CCV4	CCV	1	49443.3	45744.8	108.09	PASS	30-150
CCB4	CCB	1	48802.5	45744.8	106.68	PASS	30-150
CCB4	CCB	1	49080	45744.8	107.29	PASS	30-150
ICSA2	ICSA	1	49857.9	45744.8	108.99	PASS	30-150
ICSAB2	ICSAB	1	49893.5	45744.8	109.07	PASS	30-150
CCV5	CCV	1	50337	45744.8	110.04	PASS	30-150
CCB5	CCB	1	49582.6	45744.8	108.39	PASS	30-150
ICSA3	ICSA	1	50856.5	45744.8	111.17	PASS	30-150
ICSAB3	ICSAB	1	51296.8	45744.8	112.14	PASS	30-150
CCV6	CCV	1	56200.5	45744.8	122.86	PASS	30-150
CCB6	CCB	1	54404.5	45744.8	118.93	PASS	30-150
CCV7	CCV	1	58732.8	45744.8	128.39	PASS	30-150
CCB7	CCB	1	57501.7	45744.8	125.7	PASS	30-150
ICSA4	ICSA	1	58294.4	45744.8	127.43	PASS	30-150
ICSAB4	ICSAB	1	57988.9	45744.8	126.77	PASS	30-150
CCV8	CCV	1	53384.5	45744.8	116.7	PASS	30-150
CCB8	CCB	1	52609.8	45744.8	115.01	PASS	30-150
CCV9	CCV	1	58132.7	45744.8	127.08	PASS	30-150
CCB9	CCB	1	57913.2	45744.8	126.6	PASS	30-150

INTERNAL STANDARD: 240223A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
CCV10	CCV	1	57158.2	45744.8	124.95	PASS	30-150
CCB10	CCB	1	55358.9	45744.8	121.02	PASS	30-150
ICSA5	ICSA	1	55918.6	45744.8	122.24	PASS	30-150
ICSAB5	ICSAB	1	55404.5	45744.8	121.12	PASS	30-150
CCV11	CCV	1	57334.6	45744.8	125.34	PASS	30-150
CCB11	CCB	1	55259.7	45744.8	120.8	PASS	30-150
CCV12	CCV	1	59541.2	45744.8	130.16	PASS	30-150
CCB12	CCB	1	57170.5	45744.8	124.98	PASS	30-150
CCV13	CCV	1	58137.3	45744.8	127.09	PASS	30-150
CCB13	CCB	1	56121.4	45744.8	122.68	PASS	30-150
ICSA6	ICSA	1	57407	45744.8	125.49	PASS	30-150
ICSAB6	ICSAB	1	56947.6	45744.8	124.49	PASS	30-150
MB-107055	MBLK	1	54705.5	45744.8	119.59	PASS	30-150
LCS-107055	LCS	1	55671	45744.8	121.7	PASS	30-150
N063295-001B	SAMP	1	47582.2	45744.8	104.02	PASS	30-150
N063295-002B	SAMP	1	42772.4	45744.8	93.5	PASS	30-150
N063295-002B	SAMP	5	50684.9	45744.8	110.8	PASS	30-150
N063295-002B-PS	PS	1	42101.8	45744.8	92.04	PASS	30-150
N063295-002B-MS	MS	1	43584.5	45744.8	95.28	PASS	30-150
N063295-002B-MSD	MSD	1	43748.3	45744.8	95.64	PASS	30-150
N063295-003B	SAMP	1	48588.6	45744.8	106.22	PASS	30-150
CCV14	CCV	1	56052.3	45744.8	122.53	PASS	30-150
CCB14	CCB	1	54813.7	45744.8	119.82	PASS	30-150
N063295-005C	SAMP	1	42014.9	45744.8	91.85	PASS	30-150
N063295-006C	SAMP	1	42823.7	45744.8	93.61	PASS	30-150
N063295-007C	SAMP	1	42590.9	45744.8	93.11	PASS	30-150
N063295-008C	SAMP	1	43577.9	45744.8	95.26	PASS	30-150
N063297-001C	SAMP	1	54614.1	45744.8	119.39	PASS	30-150
N063297-002B	SAMP	1	42671	45744.8	93.28	PASS	30-150
N063297-003B	SAMP	1	52642.1	45744.8	115.08	PASS	30-150
N063303-001B	SAMP	1	41981.5	45744.8	91.77	PASS	30-150
N063303-002B	SAMP	1	40759.5	45744.8	89.1	PASS	30-150
CCV15	CCV	1	57894.2	45744.8	126.56	PASS	30-150
CCB15	CCB	1	56124.8	45744.8	122.69	PASS	30-150
N063303-006B	SAMP	5	48808.1	45744.8	106.7	PASS	30-150
N063303-008B	SAMP	1	44870.2	45744.8	98.09	PASS	30-150
CCV16	CCV	1	56385.6	45744.8	123.26	PASS	30-150
CCB16	CCB	1	54687.6	45744.8	119.55	PASS	30-150
ICSA7	ICSA	1	56307.6	45744.8	123.09	PASS	30-150
ICSAB7	ICSAB	1	55771.3	45744.8	121.92	PASS	30-150

INTERNAL STANDARD: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	2546673.9	2546673.9	100	PASS	30-150	61433.5	61433.5	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	2477141	2546673.9	97.27	PASS	30-150	59225.7	61433.5	96.41	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	2410356.4	2546673.9	94.65	PASS	30-150	57887.7	61433.5	94.23	PASS	30-150
Std3-5/50 ppb	ICAL	1	2515986.1	2546673.9	98.79	PASS	30-150	60292.8	61433.5	98.14	PASS	30-150
Std4-10/100 ppb	ICAL	1	2569262.8	2546673.9	100.89	PASS	30-150	61278.6	61433.5	99.75	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	2558618.2	2546673.9	100.47	PASS	30-150	60212.5	61433.5	98.01	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	2483709.9	2546673.9	97.53	PASS	30-150	58594.5	61433.5	95.38	PASS	30-150
Std7-100/1000 ppb	ICAL	1	2480840.2	2546673.9	97.41	PASS	30-150	58564.5	61433.5	95.33	PASS	30-150
Std8-200/2000 ppb	ICAL	1	2587686.9	2546673.9	101.61	PASS	30-150	60077.5	61433.5	97.79	PASS	30-150
ICV	ICV	1	2653524.2	2546673.9	104.2	PASS	30-150	60758.8	61433.5	98.9	PASS	30-150
ICB	ICB	1	2570474.6	2546673.9	100.93	PASS	30-150	59068.4	61433.5	96.15	PASS	30-150
LLICV1	LLICV	1	2478137.6	2546673.9	97.31	PASS	30-150	57158.5	61433.5	93.04	PASS	30-150
LLICV1	LLICV	1	2542268.2	2546673.9	99.83	PASS	30-150	59921.4	61433.5	97.54	PASS	30-150
MLCCV	CCV	1	2630585.4	2546673.9	103.29	PASS	30-150	61355.5	61433.5	99.87	PASS	30-150
ICSA1	ICSA	1	2627480	2546673.9	103.17	PASS	30-150	61002.1	61433.5	99.3	PASS	30-150
ICSAB1	ICSAB	1	2638963.2	2546673.9	103.62	PASS	30-150	60490.1	61433.5	98.46	PASS	30-150
CCV1	CCV	1	2694587.4	2546673.9	105.81	PASS	30-150	59938.1	61433.5	97.57	PASS	30-150
CCB1	CCB	1	2724865	2546673.9	107	PASS	30-150	59985.1	61433.5	97.64	PASS	30-150
CCV2	CCV	1	2796445	2546673.9	109.81	PASS	30-150	62680.5	61433.5	102.03	PASS	30-150
CCB2	CCB	1	2784034.1	2546673.9	109.32	PASS	30-150	61849.5	61433.5	100.68	PASS	30-150
CCV3	CCV	1	2883421	2546673.9	113.22	PASS	30-150	64275.3	61433.5	104.63	PASS	30-150
CCB3	CCB	1	2848797.5	2546673.9	111.86	PASS	30-150	63643.9	61433.5	103.6	PASS	30-150
ICSA2	ICSA	1	2873243.9	2546673.9	112.82	PASS	30-150	63704.3	61433.5	103.7	PASS	30-150
ICSAB2	ICSAB	1	2879704.4	2546673.9	113.08	PASS	30-150	64191.6	61433.5	104.49	PASS	30-150
CCV4	CCV	1	2906215	2546673.9	114.12	PASS	30-150	63655.2	61433.5	103.62	PASS	30-150
CCB4	CCB	1	2905314.5	2546673.9	114.08	PASS	30-150	63350.5	61433.5	103.12	PASS	30-150
CCV5	CCV	1	2917051.4	2546673.9	114.54	PASS	30-150	67781.3	61433.5	110.33	PASS	30-150
CCB5	CCB	1	2923013.9	2546673.9	114.78	PASS	30-150	66637.8	61433.5	108.47	PASS	30-150
CCV6	CCV	1	2936579	2546673.9	115.31	PASS	30-150	66786.3	61433.5	108.71	PASS	30-150
CCB6	CCB	1	2950049.1	2546673.9	115.84	PASS	30-150	66684.7	61433.5	108.55	PASS	30-150
ICSA3	ICSA	1	2910365	2546673.9	114.28	PASS	30-150	67075	61433.5	109.18	PASS	30-150
ICSAB3	ICSAB	1	2944783	2546673.9	115.63	PASS	30-150	67519.1	61433.5	109.91	PASS	30-150
CCV7	CCV	1	2853126.7	2546673.9	112.03	PASS	30-150	73089	61433.5	118.97	PASS	30-150
CCB7	CCB	1	2887302.8	2546673.9	113.38	PASS	30-150	70703.3	61433.5	115.09	PASS	30-150
CCV8	CCV	1	2805939.3	2546673.9	110.18	PASS	30-150	65871.4	61433.5	107.22	PASS	30-150
CCB8	CCB	1	2825101.7	2546673.9	110.93	PASS	30-150	64372.3	61433.5	104.78	PASS	30-150
CCV9	CCV	1	2856275	2546673.9	112.16	PASS	30-150	66203.8	61433.5	107.76	PASS	30-150
CCB9	CCB	1	2876861.9	2546673.9	112.97	PASS	30-150	65294.7	61433.5	106.29	PASS	30-150
CCV10	CCV	1	2834268.2	2546673.9	111.29	PASS	30-150	64824.2	61433.5	105.52	PASS	30-150
CCB10	CCB	1	2771600.1	2546673.9	108.83	PASS	30-150	63577.2	61433.5	103.49	PASS	30-150
ICSA4	ICSA	1	2750438.3	2546673.9	108	PASS	30-150	62897.9	61433.5	102.38	PASS	30-150

INTERNAL STANDARD: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
ICSAB4	ICSAB	1	2769002.9	2546673.9	108.73	PASS	30-150	63064	61433.5	102.65	PASS	30-150
CCV11	CCV	1	2408928.8	2546673.9	94.59	PASS	30-150	68077	61433.5	110.81	PASS	30-150
CCB11	CCB	1	2344078.1	2546673.9	92.05	PASS	30-150	66050	61433.5	107.51	PASS	30-150
CCV12	CCV	1	2693374.4	2546673.9	105.76	PASS	30-150	80619	61433.5	131.23	PASS	30-150
CCB12	CCB	1	2682960.7	2546673.9	105.35	PASS	30-150	79285.9	61433.5	129.06	PASS	30-150
CCV13	CCV	1	2463267.7	2546673.9	96.72	PASS	30-150	68730.6	61433.5	111.88	PASS	30-150
CCB13	CCB	1	2489019.8	2546673.9	97.74	PASS	30-150	67533.6	61433.5	109.93	PASS	30-150
ICSA5	ICSA	1	2449915.3	2546673.9	96.2	PASS	30-150	66756.1	61433.5	108.66	PASS	30-150
ICSAB5	ICSAB	1	2460970.8	2546673.9	96.63	PASS	30-150	67277.1	61433.5	109.51	PASS	30-150
MB-107055	MBLK	1	2487938.1	2546673.9	97.69	PASS	30-150	66905.5	61433.5	108.91	PASS	30-150
LCS-107055	LCS	1	2484976.6	2546673.9	97.58	PASS	30-150	66225.1	61433.5	107.8	PASS	30-150
N063295-001B	SAMP	1	2141113	2546673.9	84.08	PASS	30-150	58521	61433.5	95.26	PASS	30-150
N063295-002B	SAMP	1	1859425.4	2546673.9	73.01	PASS	30-150	54227.7	61433.5	88.27	PASS	30-150
N063295-002B	SAMP	5	2251562.7	2546673.9	88.41	PASS	30-150	63567.1	61433.5	103.47	PASS	30-150
N063295-002B	SAMP	10	2298449.4	2546673.9	90.25	PASS	30-150	65106.3	61433.5	105.98	PASS	30-150
N063295-002B	SAMP	50	2552382.7	2546673.9	100.22	PASS	30-150	69684.7	61433.5	113.43	PASS	30-150
N063295-002B	SAMP	100	2588755.5	2546673.9	101.65	PASS	30-150	71147.4	61433.5	115.81	PASS	30-150
N063295-002B	SAMP	500	2664957.8	2546673.9	104.64	PASS	30-150	71648.4	61433.5	116.63	PASS	30-150
CCV14	CCV	1	2719386.9	2546673.9	106.78	PASS	30-150	72932.9	61433.5	118.72	PASS	30-150
CCB14	CCB	1	2717829.1	2546673.9	106.72	PASS	30-150	71177.5	61433.5	115.86	PASS	30-150
N063295-002B-PS	PS	1	2090219.2	2546673.9	82.08	PASS	30-150	59855.6	61433.5	97.43	PASS	30-150
N063295-002B-PS	PS	10	2582545.7	2546673.9	101.41	PASS	30-150	70438.9	61433.5	114.66	PASS	30-150
N063295-002B-PS	PS	100	2744069.5	2546673.9	107.75	PASS	30-150	73054.5	61433.5	118.92	PASS	30-150
N063295-002B-MS	MS	1	2114841.1	2546673.9	83.04	PASS	30-150	62485.7	61433.5	101.71	PASS	30-150
N063295-002B-MS	MS	10	2602630.7	2546673.9	102.2	PASS	30-150	72930.5	61433.5	118.71	PASS	30-150
N063295-002B-MS	MS	100	2729587.9	2546673.9	107.18	PASS	30-150	73920.4	61433.5	120.33	PASS	30-150
N063295-002B-MSD	MSD	1	2121611.1	2546673.9	83.31	PASS	30-150	62986	61433.5	102.53	PASS	30-150
N063295-002B-MSD	MSD	10	2559422.9	2546673.9	100.5	PASS	30-150	71609.5	61433.5	116.56	PASS	30-150
N063295-002B-MSD	MSD	100	2607661.7	2546673.9	102.39	PASS	30-150	72089.2	61433.5	117.35	PASS	30-150
CCV15	CCV	1	2647392.6	2546673.9	103.95	PASS	30-150	71849.2	61433.5	116.95	PASS	30-150
CCB15	CCB	1	2610951.7	2546673.9	102.52	PASS	30-150	69650	61433.5	113.37	PASS	30-150
N063295-003B	SAMP	1	2276720.6	2546673.9	89.4	PASS	30-150	62148.3	61433.5	101.16	PASS	30-150
N063295-005C	SAMP	1	1944140.5	2546673.9	76.34	PASS	30-150	59249.1	61433.5	96.44	PASS	30-150
N063295-005C	SAMP	10	2394938.5	2546673.9	94.04	PASS	30-150	68016.6	61433.5	110.72	PASS	30-150
N063295-006C	SAMP	1	1878055.1	2546673.9	73.75	PASS	30-150	59053.9	61433.5	96.13	PASS	30-150
N063295-006C	SAMP	10	2358135.1	2546673.9	92.6	PASS	30-150	68236.6	61433.5	111.07	PASS	30-150
N063295-007C	SAMP	1	1805769.2	2546673.9	70.91	PASS	30-150	56076.1	61433.5	91.28	PASS	30-150
N063295-007C	SAMP	10	2322575.2	2546673.9	91.2	PASS	30-150	67390.8	61433.5	109.7	PASS	30-150
N063295-008C	SAMP	1	1831892.9	2546673.9	71.93	PASS	30-150	58271.3	61433.5	94.85	PASS	30-150
N063295-008C	SAMP	10	2300060.7	2546673.9	90.32	PASS	30-150	66144.8	61433.5	107.67	PASS	30-150
CCV16	CCV	1	2409816.1	2546673.9	94.63	PASS	30-150	70028.3	61433.5	113.99	PASS	30-150

INTERNAL STANDARD: 240225A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
CCB16	CCB	1	2381204.5	2546673.9	93.5	PASS	30-150	67870.6	61433.5	110.48	PASS	30-150
N063297-001C	SAMP	1	2391113.4	2546673.9	93.89	PASS	30-150	66183.9	61433.5	107.73	PASS	30-150
N063297-002B	SAMP	1	1753290.8	2546673.9	68.85	PASS	30-150	55775	61433.5	90.79	PASS	30-150
N063297-003B	SAMP	1	2265576.5	2546673.9	88.96	PASS	30-150	65137.5	61433.5	106.03	PASS	30-150
N063303-001B	SAMP	1	1734879.2	2546673.9	68.12	PASS	30-150	54873.2	61433.5	89.32	PASS	30-150
N063303-001B	SAMP	10	2286690.2	2546673.9	89.79	PASS	30-150	69236.1	61433.5	112.7	PASS	30-150
N063303-002B	SAMP	1	1730180.1	2546673.9	67.94	PASS	30-150	56293.6	61433.5	91.63	PASS	30-150
N063303-002B	SAMP	10	2331823.8	2546673.9	91.56	PASS	30-150	70724.6	61433.5	115.12	PASS	30-150
N063303-006B	SAMP	5	2379376.1	2546673.9	93.43	PASS	30-150	70559.2	61433.5	114.85	PASS	30-150
N063303-008B	SAMP	1	2167665.3	2546673.9	85.12	PASS	30-150	67188.8	61433.5	109.37	PASS	30-150
N063303-008B	SAMP	10	2581061.8	2546673.9	101.35	PASS	30-150	74330.1	61433.5	120.99	PASS	30-150
CCV17	CCV	1	2666795.9	2546673.9	104.72	PASS	30-150	77699.6	61433.5	126.48	PASS	30-150
CCB17	CCB	1	2632176.7	2546673.9	103.36	PASS	30-150	76961.8	61433.5	125.28	PASS	30-150
ICSA6	ICSA	1	2662092.9	2546673.9	104.53	PASS	30-150	77080.2	61433.5	125.47	PASS	30-150
ICSAB6	ICSAB	1	2670912.4	2546673.9	104.88	PASS	30-150	76997.4	61433.5	125.33	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.: N063303
Test Method: EPA 6020
Analysis Date: 2/23,25/2024

Matrix: Groundwater
Batch No.: 107055

Instrument ID: ICPMS-03
Instrument Description: Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Dilution test for Ba & Mn failed. However, PS passed criteria.
Dilution test is not applicable to As. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063295-002B DT 5x	Arsenic	As	µg/L	0	NA	0		10
N063295-002B DT 50x	Barium	Ba	µg/L	226.2652	FAIL	190.7318	18.63%	10
N063295-002B DT 500x	Manganese	Mn	µg/L	2395.052	FAIL	2142.418	11.79%	10

Reviewed by:

JRB 3/17/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063303
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063295-002B-PS**	SampType: **PS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182930**
Client ID: **ZZZZZZ**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/24/2024**	SeqNo: **5713769**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	6.410	0.10	10.00	0	64.1	80	120				S

Sample ID: **N063295-002B-PS**	SampType: **PS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ZZZZZZ**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/26/2024**	SeqNo: **5714250**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	293.790	10	100.0	190.7	103	80	120				

Sample ID: **N063295-002B-PS**	SampType: **PS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **182939**
Client ID: **ZZZZZZ**	Batch ID: **107055**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **2/26/2024**	SeqNo: **5714251**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	12122.702	50	10000	2142	99.8	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

ARCADIS

Project: PG&E Topock - PCM

Project No.: 30211191

ASSET Laboratories Work Order:

N063705

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063705

Item	Page
Cover Page	1-5
Analytical Result/QC Summary Reports	6-32
Sample Receiving Items	33-38
List of Analysts	39
Raw Data	
EPA 218.6	40-148
EPA 300.0	149-173
EPA 6010B_Dissolved	174-202
EPA 6020_Dissolved	203-245

March 13, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063705

RE: PG&E Topock - PCM, 30211191

Attention: Dan Bush

Enclosed are the results for sample(s) received on March 11, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063705

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 300:

Dilution was necessary due to precipitation of sample upon addition of eluent.

Analytical Comments for EPA 6010B:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Iron in QC samples N063705-002C-MS and N063705-002C-MSD possibly due to matrix interference. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

ASSET Laboratories

Date: *13-Mar-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063705
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063705-001A	PT5D-0324	Groundwater	3/11/2024 2:29:00 PM	3/11/2024	3/13/2024
N063705-001B	PT5D-0324	Groundwater	3/11/2024 2:29:00 PM	3/11/2024	3/13/2024
N063705-001C	PT5D-0324	Groundwater	3/11/2024 2:29:00 PM	3/11/2024	3/13/2024
N063705-002A	PT6D-0324	Groundwater	3/11/2024 1:53:00 PM	3/11/2024	3/13/2024
N063705-002B	PT6D-0324	Groundwater	3/11/2024 1:53:00 PM	3/11/2024	3/13/2024
N063705-002C	PT6D-0324	Groundwater	3/11/2024 1:53:00 PM	3/11/2024	3/13/2024
N063705-003A	MW-931-Q124	Groundwater	3/11/2024 2:03:00 PM	3/11/2024	3/13/2024
N063705-003B	MW-931-Q124	Groundwater	3/11/2024 2:03:00 PM	3/11/2024	3/13/2024
N063705-003C	MW-931-Q124	Groundwater	3/11/2024 2:03:00 PM	3/11/2024	3/13/2024
N063705-004A	MW-44-115-0324	Groundwater	3/11/2024 12:41:00 PM	3/11/2024	3/13/2024
N063705-004B	MW-44-115-0324	Groundwater	3/11/2024 12:41:00 PM	3/11/2024	3/13/2024
N063705-004C	MW-44-115-0324	Groundwater	3/11/2024 12:41:00 PM	3/11/2024	3/13/2024
N063705-005A	MW-928-Q124	Groundwater	3/11/2024 12:51:00 PM	3/11/2024	3/13/2024
N063705-005B	MW-928-Q124	Groundwater	3/11/2024 12:51:00 PM	3/11/2024	3/13/2024
N063705-005C	MW-928-Q124	Groundwater	3/11/2024 12:51:00 PM	3/11/2024	3/13/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT5D-0324
Lab Order:	N063705		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/11/2024 2:29:00 PM
Lab ID:	N063705-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240312A**	QC Batch: **R183530**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	9.6	0.19	1.0		µg/L	5	3/12/2024 03:52 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT6D-0324
Lab Order:	N063705		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/11/2024 1:53:00 PM
Lab ID:	N063705-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240312A**	QC Batch: **R183530**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	1.1	0.039	0.20		µg/L	1	3/12/2024 11:56 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-931-Q124
Lab Order:	N063705		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/11/2024 2:03:00 PM
Lab ID:	N063705-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240312A**	QC Batch: **R183530**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	1.2	0.039	0.20		µg/L	1	3/12/2024 12:05 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-44-115-0324
Lab Order:	N063705		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/11/2024 12:41:00 PM
Lab ID:	N063705-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240312A**	QC Batch: **R183530**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	33	0.19	1.0		µg/L	5	3/12/2024 12:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-928-Q124
Lab Order:	N063705		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/11/2024 12:51:00 PM
Lab ID:	N063705-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240312A**	QC Batch: **R183530**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	33	0.19	1.0		µg/L	5	3/12/2024 12:24 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R183530**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **PBW**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743068**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R183530**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **LCSW**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743069**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.796	0.20	5.000	0	95.9	90	110				

Sample ID: **N063705-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **ZZZZZZ**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743079**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	57.633	1.0	25.00	33.12	98.1	90	110				

Sample ID: **N063705-004AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **ZZZZZZ**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743080**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	58.966	1.0	25.00	33.12	103	90	110	57.63	2.29	20	

Sample ID: **N063705-005ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **ZZZZZZ**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743081**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	33.198	1.0						33.20	0.0105	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063705-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183530**
Client ID: **ZZZZZZ** Batch ID: **R183530** TestNo: **EPA 218.6** Analysis Date: **3/12/2024** SeqNo: **5743082**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	57.573	1.0	25.00	33.20	97.5	90	110				

Sample ID: **N063705-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183530**
Client ID: **ZZZZZZ** Batch ID: **R183530** TestNo: **EPA 218.6** Analysis Date: **3/12/2024** SeqNo: **5743083**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.094	0.20	1.000	1.101	99.3	90	110				

Sample ID: **N063705-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183530**
Client ID: **ZZZZZZ** Batch ID: **R183530** TestNo: **EPA 218.6** Analysis Date: **3/12/2024** SeqNo: **5743086**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.135	0.20	1.000	1.160	97.5	90	110				

Sample ID: **N063706-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183530**
Client ID: **ZZZZZZ** Batch ID: **R183530** TestNo: **EPA 218.6** Analysis Date: **3/12/2024** SeqNo: **5743088**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.447	1.0	5.000	5.628	96.4	90	110				

Sample ID: **N063705-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183530**
Client ID: **ZZZZZZ** Batch ID: **R183530** TestNo: **EPA 218.6** Analysis Date: **3/12/2024** SeqNo: **5743093**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	34.622	1.0	25.00	9.565	100	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT5D-0324
Lab Order:	N063705		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/11/2024 2:29:00 PM
Lab ID:	N063705-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240312A**	QC Batch: **R183502**			PrepDate:			Analyst: **RAB**
Sulfate	660	34	50		mg/L	100	3/12/2024 12:32 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240312A**	QC Batch: **R183502**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/12/2024 09:44 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT6D-0324
Lab Order:	N063705		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/11/2024 1:53:00 PM
Lab ID:	N063705-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240312A**	QC Batch: **R183502**			PrepDate:			Analyst: **RAB**
Sulfate	430	17	25		mg/L	50	3/12/2024 01:18 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240312A**	QC Batch: **R183502**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/12/2024 09:59 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-931-Q124
Lab Order:	N063705		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/11/2024 2:03:00 PM
Lab ID:	N063705-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240312A**	QC Batch: **R183502**			PrepDate:			Analyst: **RAB**
Sulfate	430	17	25		mg/L	50	3/12/2024 01:49 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240312A**	QC Batch: **R183502**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/12/2024 10:14 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-44-115-0324
Lab Order:	N063705		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/11/2024 12:41:00 PM
Lab ID:	N063705-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240312A**	QC Batch: **R183502**			PrepDate:			Analyst: **RAB**
Sulfate	940	34	50		mg/L	100	3/12/2024 02:04 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240312A**	QC Batch: **R183502**			PrepDate:			Analyst: **RAB**
Nitrate as N	0.76	0.24	0.50		mg/L	10	3/12/2024 10:30 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-928-Q124
Lab Order:	N063705		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/11/2024 12:51:00 PM
Lab ID:	N063705-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240312A**	QC Batch: **R183502**			PrepDate:			Analyst: **RAB**
Sulfate	940	34	50		mg/L	100	3/12/2024 02:19 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240312A**	QC Batch: **R183502**			PrepDate:			Analyst: **RAB**
Nitrate as N	0.76	0.24	0.50		mg/L	10	3/12/2024 10:45 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **MB-R183502_SO4**	SampType: **MBLK**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **183502**			
Client ID: **PBW**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**			SeqNo: **5742340**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **LCS-R183502_SO4**	SampType: **LCS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **183502**			
Client ID: **LCSW**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**			SeqNo: **5742341**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.919	0.50	4.000	0	98.0	90	110				

Sample ID: **N063705-001BMS**	SampType: **MS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **183502**			
Client ID: **ZZZZZZ**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**			SeqNo: **5742345**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	1053.100	50	400.0	662.0	97.8	80	120				

Sample ID: **N063705-001BMSD**	SampType: **MSD**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **183502**			
Client ID: **ZZZZZZ**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**			SeqNo: **5742346**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	1056.380	50	400.0	662.0	98.6	80	120	1053	0.311	20	

Sample ID: **N063705-002BDUP**	SampType: **DUP**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **183502**			
Client ID: **ZZZZZZ**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**			SeqNo: **5742348**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	432.355	25						425.6	1.57	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **MB-R183502_NO3**	SampType: **MBLK**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **PBW**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742321**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **LCS-R183502_NO3**	SampType: **LCS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **LCSW**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742322**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.219	0.050	1.250	0	97.5	90	110				

Sample ID: **N063705-001BMS**	SampType: **MS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **ZZZZZZ**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742329**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.079	0.50	12.50	0	96.6	80	120				

Sample ID: **N063705-001BMSD**	SampType: **MSD**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **ZZZZZZ**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742330**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.061	0.50	12.50	0	96.5	80	120	12.08	0.149	20	

Sample ID: **N063705-002BDUP**	SampType: **DUP**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **ZZZZZZ**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742333**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	0.353	0.50						0.3360	0	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT5D-0324
Lab Order:	N063705		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/11/2024 2:29:00 PM
Lab ID:	N063705-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240312B**	QC Batch: **107482**				PrepDate:	**3/12/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	3/12/2024 06:28 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT6D-0324
Lab Order:	N063705		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/11/2024 1:53:00 PM
Lab ID:	N063705-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240312B**	QC Batch: **107482**				PrepDate:	**3/12/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	3/12/2024 05:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-931-Q124
Lab Order:	N063705		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/11/2024 2:03:00 PM
Lab ID:	N063705-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240312B**	QC Batch: **107482**				PrepDate:	**3/12/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	3/12/2024 05:44 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-44-115-0324
Lab Order:	N063705		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/11/2024 12:41:00 PM
Lab ID:	N063705-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240312B**	QC Batch: **107482**				PrepDate:	**3/12/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	3/12/2024 05:51 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-928-Q124
Lab Order:	N063705		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/11/2024 12:51:00 PM
Lab ID:	N063705-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240312B**	QC Batch: **107482**				PrepDate:	**3/12/2024**	Analyst: **DJ**
Iron	32	13	20		µg/L	1	3/12/2024 06:05 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-107482**	SampType: **MBLK**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/12/2024**	RunNo: **183506**
Client ID: **PBW**	Batch ID: **107482**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/12/2024**	SeqNo: **5742361**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS-107482**	SampType: **LCS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/12/2024**	RunNo: **183506**
Client ID: **LCSW**	Batch ID: **107482**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/12/2024**	SeqNo: **5742362**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	104.616	20	100.0	0	105	85	115				

Sample ID: **N063705-002C-MS**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/12/2024**	RunNo: **183506**
Client ID: **ZZZZZZ**	Batch ID: **107482**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/12/2024**	SeqNo: **5742367**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	206.017	20	100.0	13.69	192	75	125				S

Sample ID: **N063705-002C-MSD**	SampType: **MSD**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/12/2024**	RunNo: **183506**
Client ID: **ZZZZZZ**	Batch ID: **107482**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/12/2024**	SeqNo: **5742368**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	201.854	20	100.0	13.69	188	75	125	206.0	2.04	20	S

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N063705-002C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **183506**
Client ID: **ZZZZZZ** Batch ID: **107482** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/12/2024** SeqNo: **5742366**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	103.733	20	100.0	13.69	90.0	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT5D-0324
Lab Order:	N063705		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/11/2024 2:29:00 PM
Lab ID:	N063705-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240312A**	QC Batch: **107478**			PrepDate:		**3/12/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/12/2024 06:38 PM
Barium	20	0.083	1.0		µg/L	1	3/12/2024 06:38 PM
Manganese	6.7	0.026	0.50		µg/L	1	3/12/2024 06:38 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PT6D-0324
Lab Order:	N063705		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/11/2024 1:53:00 PM
Lab ID:	N063705-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240312A**	QC Batch: **107478**				PrepDate:	**3/12/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/12/2024 07:01 PM
Barium	38	0.083	1.0		µg/L	1	3/12/2024 07:01 PM
Manganese	11	0.026	0.50		µg/L	1	3/12/2024 07:01 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-931-Q124
Lab Order:	N063705		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/11/2024 2:03:00 PM
Lab ID:	N063705-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240312A**	QC Batch: **107478**				PrepDate:	**3/12/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/12/2024 07:06 PM
Barium	37	0.083	1.0		µg/L	1	3/12/2024 07:06 PM
Manganese	6.9	0.026	0.50		µg/L	1	3/12/2024 07:06 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-44-115-0324
Lab Order:	N063705		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/11/2024 12:41:00 PM
Lab ID:	N063705-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240312A**	QC Batch: **107478**			PrepDate:		**3/12/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/12/2024 07:24 PM
Barium	29	0.083	1.0		µg/L	1	3/12/2024 07:24 PM
Manganese	5.8	0.026	0.50		µg/L	1	3/12/2024 07:24 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-928-Q124
Lab Order:	N063705		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/11/2024 12:51:00 PM
Lab ID:	N063705-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240312A**	QC Batch: **107478**				PrepDate:	**3/12/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/12/2024 07:29 PM
Barium	30	0.083	1.0		µg/L	1	3/12/2024 07:29 PM
Manganese	5.8	0.026	0.50		µg/L	1	3/12/2024 07:29 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **MB-107478** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/12/2024** RunNo: **183503**
Client ID: **PBW** Batch ID: **107478** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/12/2024** SeqNo: **5742183**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **LCS-107478** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/12/2024** RunNo: **183503**
Client ID: **LCSW** Batch ID: **107478** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/12/2024** SeqNo: **5742184**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	9.952	0.10	10.00	0	99.5	85	115				
Barium	10.029	1.0	10.00	0	100	85	115				
Manganese	101.224	0.50	100.0	0	101	85	115				

Sample ID: **N063705-001C-MS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/12/2024** RunNo: **183503**
Client ID: **ZZZZZZ** Batch ID: **107478** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/12/2024** SeqNo: **5742188**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.398	0.10	10.00	0	104	75	125				
Barium	30.141	1.0	10.00	20.27	98.7	75	125				
Manganese	101.139	0.50	100.0	6.732	94.4	75	125				

Sample ID: **N063705-001C-MSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/12/2024** RunNo: **183503**
Client ID: **ZZZZZZ** Batch ID: **107478** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/12/2024** SeqNo: **5742189**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.193	0.10	10.00	0	102	75	125	10.40	1.99	20	
Barium	30.087	1.0	10.00	20.27	98.1	75	125	30.14	0.181	20	
Manganese	101.182	0.50	100.0	6.732	94.4	75	125	101.1	0.0419	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

SAMPLE RECEIVING ITEMS

ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

Page 1 of 1

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.moore@cridgen.com	Address:	
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com	P.O.#
Submitted By: Riggie Top	Phone: 916-786-3302 Fax:	Phone: 949-727-1400, ext 200	Fax:
Title: Field Tech	Sampled By: Riggie Top		
Signature: Date: 03/11/24	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for		
I hereby authorize ASSET Labs to perform the tests indicated below.	Signature: Date: 03/11/24		
Project Name: PG&E Topock - PCM			
Project Number: 30211191			

EDD Requirement		QA/QC	
Excel EDD		RTNE	
Geotracker		RWQCB	✓
Labspec		CalTrans	
Others	✓	LEVEL III	
Specify: RWQCB		LEVEL IV	
Global ID:		Regulatory	
		Specify State:	

Sample Receipt Condition	Y	N
1. Chilled	✓	
2. Headspace		✓
3. Container Intact	✓	
4. Seal Present		✓
5. IR number	3	
6. Method of Cooling: ICE		
Sample Temp: 1.9°C		
Courier: ASSET		
Tracking No.:		

Matrix			
Ground	X	Sediment	
Potable		Soil	
NPDES		Other Solid	
Surface			

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 250 mL poly	Nitrate, sulfate (EPA 300.0) 1 L poly	Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese 500mL poly	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, 500mL poly	Dissolved metals (SW6020) FF; HNO3 Selenium, Molybdenum 500mL poly	Total Organic Carbon (SM5310C); H2SO4 3x40 mL VOA	Ammonia as Nitrogen (SM4500NH3D); H2SO4 1 L poly	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 125 mL poly	Nitrate (EPA 300.0) 1 L poly	1 L poly	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063705-001	PT5D-0324	3/11/2024	14:29		X	X	X						X	(1)	B	3	P	BNS	
2	-002	PT6D-0324	3/11/2024	13:53		X	X	X						X	(1)	B	3	P	BNS	
3	-003	MW-931-Q124	3/11/2024	14:03		X	X	X								B	3	P	BNS	
4	-004	MW-44-115-0324	3/11/2024	12:41		X	X	X								B	3	P	BNS	
5	-005	MW-928-Q124	3/11/2024	12:51		X	X	X								B	3	P	BNS	
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				

Relinquished by (Signature and Printed Name): Riggie Top 03/11/24 Date/Time: 1830
Relinquished by (Signature and Printed Name): Michael McCanton 3/11/24 Date/Time: 2107
Relinquished by (Signature and Printed Name):

Relinquished by (Signature and Printed Name): Michael McCanton 3/11/24 Date/Time: 1830
Relinquished by (Signature and Printed Name): Michael McCanton 3/11/24 Date/Time: 2107
Relinquished by (Signature and Printed Name):

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [X] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [ ] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days. surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day= 100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:			
H=HCL	N=HNO_3	S=H_2SO_4	C=4°C
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$	
Others/Specify:	B	(NH4)2SO4/NH4OH	

Container Type:		
T=Tube	V=VOA	P=Pint
J=Jar	B=Tedlar	G=Glass
M=Metal	M=Metal	C=Can

White=Laboratory Copy
Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	3/11/2024	Workorder:	N063705
Rep sample Temp (Deg C):	1.9	IR Gun ID:	3
Temp Blank:	☑ Yes ☐ No		
Carrier name:	ASSET		
Last 4 digits of Tracking No.:	NA	Packing Material Used:	None
Cooling process:	☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None		

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

For:

Checklist Completed By: CC YRodriguez

3/12/2024

for:

Reviewed By: MBC 03/12/2024

Subject: Topock fast TAT samples today and tomorrow
From: "Madsen, Laura" <Laura.Madsen@arcadis.com>
Date: 3/11/2024, 11:46 AM
To: "yoandra@assetlaboratories.com" <yoandra@assetlaboratories.com>, "marlon@assetlaboratories.com" <marlon@assetlaboratories.com>

Hi Yoandra and Marlon,
This is notification of fast TAT needed for some samples this week. We will be submitting 7 samples for 24 hr TAT. Half will be today and the rest tomorrow. The analysis will be: Cr6, 4 dissolved metals, sulfate, and nitrate. TOC will also be submitted but will be standard TAT.

Thanks,
Laura

Laura Madsen PG
Project Geologist
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ARCADIS

Professional Geologist / PG-TN, # 5574

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ASSET Laboratories

WORK ORDER Summary

12-Mar-24

WorkOrder: N063705

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 3/11/2024 9:07 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063705-001A	PT5D-0324	3/11/2024 2:29:00 PM	3/12/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063705-001B			3/12/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/12/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063705-001C			3/12/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/12/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/12/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/12/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063705-002A	PT6D-0324	3/11/2024 1:53:00 PM	3/12/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063705-002B			3/12/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/12/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063705-002C			3/12/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/12/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/12/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/12/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063705-003A	MW-931-Q124	3/11/2024 2:03:00 PM	3/12/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063705-003B			3/12/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/12/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063705-003C			3/12/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/12/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/12/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/12/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063705-004A	MW-44-115-0324	3/11/2024 12:41:00 PM	3/12/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

12-Mar-24

WorkOrder: N063705

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 3/11/2024 9:07 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063705-004B	MW-44-115-0324	3/11/2024 12:41:00 PM	3/12/2024	Groundwater	EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/12/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063705-004C			3/12/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/12/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/12/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/12/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063705-005A	MW-928-Q124	3/11/2024 12:51:00 PM	3/12/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063705-005B			3/12/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/12/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063705-005C			3/12/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/12/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/12/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/12/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063705-006A	FOLDER	3/12/2024	3/12/2024		Folder	Folder	☐	☐	☐	LAB
			3/12/2024		Folder	Level IV Report	☐	☐	☐	LAB
			3/12/2024		Folder	Folder	☐	☐	☐	LAB

List of Analysts

ASSET Laboratories Work Order: N063705

NAME	TEST METHOD
Ria Abes	EPA 218.6, EPA 300.0
Diane Jetajobe	EPA 6010B_Dissolved, EPA 6020_Dissolved

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R183530
ASSET #: N063705

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 3/12/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X					
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X	X		
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			
29. All manual integrations initialed, date and reasons included.	X			X		X
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer RB 03132024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063705-001A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 1.9130 * 5$$

$$Cr^{+6}, \mu g/L = 9.5650$$

Reporting results in two significant figures,

$$\mathbf{Cr^{+6}, \mu g/L = 9.6}$$

Reviewed by:

dMocha 3/26/2024

ANALYSIS RUN LOG

INJECTION LOG: 240305A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	03/05/24 4:07 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/05/24 4:16 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	03/05/24 4:26 PM	Reported
12	MB-R183315	MBLK	1	Hexavalent Chromium	03/05/24 4:35 PM	Reported
13	LCS-R183315	LCS	1	Hexavalent Chromium	03/05/24 4:45 PM	Reported
14	MB-107277	MBLK	1	Hexavalent Chromium	03/05/24 4:54 PM	Reported
15	N063472-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:04 PM	Reported
16	N063472-001ADUP	DUP	1	Hexavalent Chromium	03/05/24 5:13 PM	Reported
17	N063535-006A	SAMP	1	Hexavalent Chromium	03/05/24 5:23 PM	Reported
18	N063535-006AMS	MS	1	Hexavalent Chromium	03/05/24 5:32 PM	Reported
19	N063535-006AMSD	MSD	1	Hexavalent Chromium	03/05/24 5:42 PM	Reported
20	N063534-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:51 PM	Reported
21	N063534-001AMS	MS	1	Hexavalent Chromium	03/05/24 6:00 PM	Reported
22	CCV-1	CCV1	1	Hexavalent Chromium	03/05/24 6:10 PM	Reported
23	CCB-1	CCB	1	Hexavalent Chromium	03/05/24 6:20 PM	Reported
24	N063534-002A	SAMP	1	Hexavalent Chromium	03/05/24 6:30 PM	Reported
25	N063534-002AMS	MS	1	Hexavalent Chromium	03/05/24 6:38 PM	Reported
26	N063534-003A	SAMP	1	Hexavalent Chromium	03/05/24 6:48 PM	Reported
27	N063534-003AMS	MS	1	Hexavalent Chromium	03/05/24 6:57 PM	Reported
28	N063535-001A	SAMP	1	Hexavalent Chromium	03/05/24 7:07 PM	Reported
29	N063535-002A	SAMP	1	Hexavalent Chromium	03/05/24 7:16 PM	Reported
30	N063535-003A	SAMP	1	Hexavalent Chromium	03/05/24 7:26 PM	Reported
31	N063535-004A	SAMP	1	Hexavalent Chromium	03/05/24 7:35 PM	Reported
32	N063535-005A	SAMP	1	Hexavalent Chromium	03/05/24 7:48 PM	Reported
33	CCV-2	CCV	1	Hexavalent Chromium	03/05/24 7:57 PM	Reported
34	CCB-2	CCB	1	Hexavalent Chromium	03/05/24 8:07 PM	Reported
35	N063535-007A	SAMP	1	Hexavalent Chromium	03/05/24 8:16 PM	Reported
36	N063535-008A	SAMP	1	Hexavalent Chromium	03/05/24 8:25 PM	Reported
37	CCV-3	CCV1	1	Hexavalent Chromium	03/05/24 8:35 PM	Reported
38	CCB-3	CCB	1	Hexavalent Chromium	03/05/24 8:46 PM	Reported
39	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 8:55 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240305A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**07/Mar/24 08:03:58**
No. of Injections:	**42**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	8	1000	Unknown		03/05/2024 16:07	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	9	1000	Unknown		03/05/2024 16:16	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	10	1000	Unknown		03/05/2024 16:26	Finished	ICB R240129C
12	MB-H2O,MBLK,1,	11	1000	Unknown		03/05/2024 16:35	Finished	MB R240129C
13	LCS-H2O,LCS,1,	12	1000	Unknown		03/05/2024 16:45	Finished	LCS @5ppb, IWST-231228B
14	MB-107277,MBLK,1,	13	1000	Unknown		03/05/2024 16:54	Finished	MB TCLP
15	N063472-001A,SAMP	14	1000	Unknown		03/05/2024 17:04	Finished	SAMP,10 mL
16	N063472-001ADUP,D	15	1000	Unknown		03/05/2024 17:13	Finished	REP,10 mL
17	N063535-006A,SAMP	16	1000	Unknown		03/05/2024 17:23	Finished	SAMP,10 mL
18	N063535-006AMS,MS	17	1000	Unknown		03/05/2024 17:32	Finished	MS (5ppb), IWST-231228B,10r
19	N063535-006AMSD,M	18	1000	Unknown		03/05/2024 17:42	Finished	MSD (5ppb), IWST-231228B,1
20	N063534-001A,SAMP	19	1000	Unknown		03/05/2024 17:51	Finished	SAMP,10 mL
21	N063534-001AMS,MS	20	1000	Unknown		03/05/2024 18:00	Finished	MS (1ppb), IWST-231228B,10r
22	CCV-1,CCV1,1,	21	1000	Unknown		03/05/2024 18:10	Finished	CCV @10ppb, IWST-231228A
23	CCB-1,CCB,1,	22	1000	Unknown		03/05/2024 18:20	Finished	CCB R240129C
24	N063534-002A,SAMP	23	1000	Unknown		03/05/2024 18:30	Finished	SAMP,10 mL
25	N063534-002AMS,MS	24	1000	Unknown		03/05/2024 18:38	Finished	MS (1ppb), IWST-231228B,10r
26	N063534-003A,SAMP	25	1000	Unknown		03/05/2024 18:48	Finished	SAMP,10 mL
27	N063534-003AMS,MS	26	1000	Unknown		03/05/2024 18:57	Finished	MS (1ppb), IWST-231228B,10r
28	N063535-001A,SAMP	27	1000	Unknown		03/05/2024 19:07	Finished	SAMP,10 mL
29	N063535-002A,SAMP	28	1000	Unknown		03/05/2024 19:16	Finished	SAMP,10 mL
30	N063535-003A,SAMP	29	1000	Unknown		03/05/2024 19:26	Finished	SAMP,10 mL
31	N063535-004A,SAMP	30	1000	Unknown		03/05/2024 19:35	Finished	SAMP,10 mL
32	N063535-005A,SAMP	31	1000	Unknown		03/05/2024 19:48	Finished	SAMP,10 mL
33	CCV-2,CCV,1,	32	1000	Unknown		03/05/2024 19:57	Finished	CCV @5ppb, IWST-231228A
34	CCB-2,CCB,1,	33	1000	Unknown		03/05/2024 20:07	Finished	CCB R240129C
35	N063535-007A,SAMP	34	1000	Unknown		03/05/2024 20:16	Finished	SAMP,10 mL
36	N063535-008A,SAMP	35	1000	Unknown		03/05/2024 20:25	Finished	SAMP,10 mL
37	CCV-3,CCV1,1,	37	1000	Unknown		03/05/2024 20:35	Finished	CCV @10ppb, IWST-231228A
38	CCB-3,CCB,1,	38	1000	Unknown		03/05/2024 20:46	Finished	CCB R240129C
39	BLANK	39	1000	Unknown		03/05/2024 20:55	Finished	BLANK
40	SHUTDOWN	40	1000	Unknown		03/05/2024 21:05	Finished	
41	Eluent: R240305B	41	1000	Unknown		n.a.	Finished	
42	PCR: R240305C	42	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240312A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/12/24 8:32 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/12/24 8:45 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/12/24 8:55 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/12/24 9:04 AM	Reported
13	MB-R183530	MBLK	1	Hexavalent Chromium	03/12/24 9:14 AM	Reported
14	LCS-R183530	LCS	1	Hexavalent Chromium	03/12/24 9:23 AM	Reported
15	MB-107451	MBLK	1	Hexavalent Chromium	03/12/24 11:13 AM	Not Reported
16	N063472-001A	SAMP	1	Hexavalent Chromium	03/12/24 11:28 AM	Not Reported
17	N063472-001ADUP	DUP	1	Hexavalent Chromium	03/12/24 11:37 AM	Not Reported
18	N063705-001A	SAMP	10	Hexavalent Chromium	03/12/24 11:47 AM	Not Reported
19	N063705-002A	SAMP	1	Hexavalent Chromium	03/12/24 11:56 AM	Reported
20	N063705-003A	SAMP	1	Hexavalent Chromium	03/12/24 12:05 PM	Reported
21	N063705-004A	SAMP	5	Hexavalent Chromium	03/12/24 12:15 PM	Reported
22	N063705-005A	SAMP	5	Hexavalent Chromium	03/12/24 12:24 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/12/24 12:34 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/12/24 12:43 PM	Reported
25	N063706-001A	SAMP	1	Hexavalent Chromium	03/12/24 12:53 PM	Not Reported
26	N063706-001AMS	MS	1	Hexavalent Chromium	03/12/24 1:02 PM	Not Reported
27	N063705-001A	SAMP	1	Hexavalent Chromium	03/12/24 1:12 PM	Not Reported
28	N063705-001AMS	MS	1	Hexavalent Chromium	03/12/24 1:21 PM	Not Reported
29	N063705-004AMS	MS	5	Hexavalent Chromium	03/12/24 1:31 PM	Reported
30	N063705-004AMSD	MSD	5	Hexavalent Chromium	03/12/24 1:40 PM	Reported
31	N063705-005ADUP	DUP	5	Hexavalent Chromium	03/12/24 1:49 PM	Reported
32	N063705-005AMS	MS	5	Hexavalent Chromium	03/12/24 1:59 PM	Reported
33	N063705-002AMS	MS	1	Hexavalent Chromium	03/12/24 2:08 PM	Reported
34	CCV-3	CCV1	1	Hexavalent Chromium	03/12/24 2:18 PM	Reported
35	CCB-3	CCB	1	Hexavalent Chromium	03/12/24 2:27 PM	Reported
36	N063705-003AMS	MS	1	Hexavalent Chromium	03/12/24 2:37 PM	Reported
37	N063706-001A	SAMP	5	Hexavalent Chromium	03/12/24 2:46 PM	Reported
38	N063706-001AMS	MS	5	Hexavalent Chromium	03/12/24 2:56 PM	Reported
39	N063559-001A	SAMP	1	Hexavalent Chromium	03/12/24 3:05 PM	Not Reported
40	N063559-002A	SAMP	1	Hexavalent Chromium	03/12/24 3:15 PM	Not Reported
41	N063642-009A	SAMP	1	Hexavalent Chromium	03/12/24 3:24 PM	Reported
42	N063642-010A	SAMP	1	Hexavalent Chromium	03/12/24 3:33 PM	Reported

INJECTION LOG: 240312A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063642-011A	SAMP	1	Hexavalent Chromium	03/12/24 3:43 PM	Reported
44	N063705-001A	SAMP	5	Hexavalent Chromium	03/12/24 3:52 PM	Reported
45	N063705-001AMS	MS	5	Hexavalent Chromium	03/12/24 4:02 PM	Reported
46	CCV-4	CCV1	1	Hexavalent Chromium	03/12/24 4:11 PM	Reported
47	CCB-4	CCB	1	Hexavalent Chromium	03/12/24 4:21 PM	Reported
48	N063706-002A	SAMP	1	Hexavalent Chromium	03/12/24 4:38 PM	Not Reported
49	N063706-002AMS	MS	1	Hexavalent Chromium	03/12/24 4:50 PM	Not Reported
50	N063617-002A	SAMP	5	Hexavalent Chromium	03/12/24 5:00 PM	Not Reported
51	N063617-011A	SAMP	20	Hexavalent Chromium	03/12/24 5:09 PM	Not Reported
52	N063617-012A	SAMP	20	Hexavalent Chromium	03/12/24 5:19 PM	Not Reported
53	N063642-001A	SAMP	5	Hexavalent Chromium	03/12/24 5:28 PM	Not Reported
54	N063642-002A	SAMP	5	Hexavalent Chromium	03/12/24 5:38 PM	Not Reported
55	N063559-001AMS	MS	1	Hexavalent Chromium	03/12/24 5:47 PM	Not Reported
56	N063559-002AMS	MS	1	Hexavalent Chromium	03/12/24 8:27 PM	Not Reported
57	CCV-5	CCV	1	Hexavalent Chromium	03/12/24 8:28 PM	Not Reported
58	CCB-5	CCB	1	Hexavalent Chromium	03/12/24 8:39 PM	Not Reported
59	N063559-001A	SAMP	5	Hexavalent Chromium	03/12/24 8:48 PM	Not Reported
60	N063559-001AMS	MS	5	Hexavalent Chromium	03/12/24 8:58 PM	Not Reported
61	N063559-002A	SAMP	5	Hexavalent Chromium	03/12/24 9:07 PM	Not Reported
62	N063559-002AMS	MS	5	Hexavalent Chromium	03/12/24 9:17 PM	Not Reported
63	CCV-6	CCV1	1	Hexavalent Chromium	03/12/24 9:26 PM	Not Reported
64	CCB-6	CCB	1	Hexavalent Chromium	03/12/24 9:36 PM	Not Reported
65	BLANK	BLANK	1	Hexavalent Chromium	03/12/24 9:45 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240312A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**12/Mar/24 22:16:00**
No. of Injections:	**68**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/12/2024 08:32	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/12/2024 08:45	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/12/2024 08:55	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/12/2024 09:04	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/12/2024 09:14	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/12/2024 09:23	Finished	LCS @5ppb, IWST-231228B
15	MB-107451,MBLK,1,	1	1000	Unknown		03/12/2024 11:13	Finished	MB TC 10mL
16	N063472-001A,SAMF	2	1000	Unknown		03/12/2024 11:28	Finished	SAMP,10 mL
17	N063472-001ADUP,D	3	1000	Unknown		03/12/2024 11:37	Finished	DUP,10 mL
18	N063705-001A,SAMF	4	1000	Unknown		03/12/2024 11:47	Finished	SAMP,1>10 mL
19	N063705-002A,SAMF	5	1000	Unknown		03/12/2024 11:56	Finished	SAMP,10 mL
20	N063705-003A,SAMF	6	1000	Unknown		03/12/2024 12:05	Finished	SAMP,10 mL
21	N063705-004A,SAMF	7	1000	Unknown		03/12/2024 12:15	Finished	SAMP,2>10 mL
22	N063705-005A,SAMF	8	1000	Unknown		03/12/2024 12:24	Finished	SAMP,2>10 mL
23	CCV-2,CCV1,1,	9	1000	Unknown		03/12/2024 12:34	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		03/12/2024 12:43	Finished	CCB R240129C
25	N063706-001A,SAMF	11	1000	Unknown		03/12/2024 12:53	Finished	SAMP,10 mL
26	N063706-001AMS,MS	12	1000	Unknown		03/12/2024 13:02	Finished	MS (1ppb), IWST-231228B,10r
27	N063705-001A,SAMF	13	1000	Unknown		03/12/2024 13:12	Finished	SAMP,10 mL
28	N063705-001AMS,MS	14	1000	Unknown		03/12/2024 13:21	Finished	MS (5ppb), IWST-231228B,10r
29	N063705-004AMS,MS	15	1000	Unknown		03/12/2024 13:31	Finished	MS (5ppb), IWST-231228B,2>1
30	N063705-004AMSD,M	16	1000	Unknown		03/12/2024 13:40	Finished	MSD (5ppb), IWST-231228B,2
31	N063705-005ADUP,D	17	1000	Unknown		03/12/2024 13:49	Finished	DUP,2>10 mL
32	N063705-005AMS,MS	18	1000	Unknown		03/12/2024 13:59	Finished	MS (5ppb), IWST-231228B,2>1
33	N063705-002AMS,MS	19	1000	Unknown		03/12/2024 14:08	Finished	MS (1ppb), IWST-231228B,10r
34	CCV-3,CCV1,1,	20	1000	Unknown		03/12/2024 14:18	Finished	CCV @10ppb, IWST-231228A
35	CCB-3,CCB,1,	21	1000	Unknown		03/12/2024 14:27	Finished	CCB R240129C
36	N063705-003AMS,MS	22	1000	Unknown		03/12/2024 14:37	Finished	MS (1ppb), IWST-231228B,10r
37	N063706-001A,SAMF	23	1000	Unknown		03/12/2024 14:46	Finished	SAMP,2>10 mL
38	N063706-001AMS,MS	24	1000	Unknown		03/12/2024 14:56	Finished	MS (1ppb), IWST-231228B,2>1
39	N063559-001A,SAMF	25	1000	Unknown		03/12/2024 15:05	Finished	SAMP,10 mL
40	N063559-002A,SAMF	26	1000	Unknown		03/12/2024 15:15	Finished	SAMP,10 mL
41	N063642-009A,SAMF	27	1000	Unknown		03/12/2024 15:24	Finished	SAMP,10 mL
42	N063642-010A,SAMF	28	1000	Unknown		03/12/2024 15:33	Finished	SAMP,10 mL
43	N063642-011A,SAMF	29	1000	Unknown		03/12/2024 15:43	Finished	SAMP,10 mL
44	N063705-001A,SAMF	30	1000	Unknown		03/12/2024 15:52	Finished	SAMP,2>10 mL
45	N063705-001AMS,MS	31	1000	Unknown		03/12/2024 16:02	Finished	MS (5ppb), IWST-231228B,2>1
46	CCV-4,CCV1,1,	32	1000	Unknown		03/12/2024 16:11	Finished	CCV @10ppb, IWST-231228A
47	CCB-4,CCB,1,	33	1000	Unknown		03/12/2024 16:21	Finished	CCB R240129C
48	N063706-002A,SAMF	1	1000	Unknown		03/12/2024 16:38	Finished	SAMP,10 mL
49	N063706-002AMS,MS	2	1000	Unknown		03/12/2024 16:50	Finished	MS (1ppb), IWST-231228B,10r
50	N063617-002A,SAMF	3	1000	Unknown		03/12/2024 17:00	Finished	SAMP,2>10 mL
51	N063617-011A,SAMF	4	1000	Unknown		03/12/2024 17:09	Finished	SAMP,0.5>10 mL
52	N063617-012A,SAMF	5	1000	Unknown		03/12/2024 17:19	Finished	SAMP,0.5>10 mL
53	N063642-001A,SAMF	6	1000	Unknown		03/12/2024 17:28	Finished	SAMP,2>10 mL
54	N063642-002A,SAMF	7	1000	Unknown		03/12/2024 17:38	Finished	SAMP,2>10 mL
55	N063559-001AMS,MS	8	1000	Unknown		03/12/2024 17:47	Interrupted	MS (1ppb), IWST-231228B,10r
56	N063559-002AMS,MS	9	1000	Unknown		03/12/2024 20:27	Interrupted	MS (1ppb), IWST-231228B,10r
57	CCV-5,CCV,1,	10	1000	Unknown		03/12/2024 20:28	Finished	CCV @5ppb, IWST-231228A
58	CCB-5,CCB,1,	11	1000	Unknown		03/12/2024 20:39	Finished	CCB R240129C
59	N063559-001A,SAMF	12	1000	Unknown		03/12/2024 20:48	Finished	SAMP,2>10 mL
60	N063559-001AMS,MS	13	1000	Unknown		03/12/2024 20:58	Finished	MS (1ppb), IWST-231228B,2>1

61	N063559-002A,SAMP	14	1000	Unknown		03/12/2024 21:07	Finished	SAMP,2>10 mL
62	N063559-002AMS,MS	15	1000	Unknown		03/12/2024 21:17	Finished	MS (1ppb), IWST-231228B,2>
63	CCV-6,CCV1,1,	16	1000	Unknown		03/12/2024 21:26	Finished	CCV @10ppb, IWST-231228A
64	CCB-6,CCB,1,	17	1000	Unknown		03/12/2024 21:36	Finished	CCB R240129C
65	BLANK	18	1000	Unknown		03/12/2024 21:45	Finished	BLANK
66	SHUTDOWN	19	1000	Unknown		03/12/2024 21:55	Finished	
67	Eluent: R240311C	20	1000	Unknown		n.a.	Finished	
68	PCR: R240311D	21	1000	Unknown		n.a.	Finished	

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 3/12/24
Time Prepared: 1055H
Prepared By: MA

Reagent ID:
Sulfuric Acid: 15735
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: NH4031E
NH4OH + NH4SO4 buffer: NH4012C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MB-107451	7.70	9.48	2L	~2L	+0.2mL NH4012C	JC
2)	N63472-1A	9.34	9.37	1		10mL	
3)	N63705-1A	9.40	–	~250mL	~250mL		
4)	2A	9.32	–				
5)	3A	9.34	–				
6)	4B	9.48	–				
7)	5A	9.46	–				
8)	N63706[illegible]1A	9.31	–				
9)	2MS	9.66	–				
10)							
11)							
12)							
13)							
14)							
15)							

Sample Preparation

Date Prepared: 3/13/24
Time Prepared: 0956H
Prepared By: MT

Reagent ID:
Sulfuric Acid: 15405
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: NH4031BA
NH4OH + NH4SO4 buffer: NH4012C

6N NaOH. N23122C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	N63734-1A	9.33	–	~250mL	~250mL		
2)	2MS	9.35	–				
3)	N63735-1A	9.11	9.40			+4	
4)	2A	8.48	9.47			+7	
5)	3B	9.32	–				
6)	4A	9.39	–				
7)	5A	9.34	–				
8)	6A	9.36	–				
9)	7B	9.47	–				
10)	8A	9.74	–				
11)	9A	9.31	–				
12)	10A	9.31	–				
13)	11A	9.38	–				
14)	MD	9.46	–				
15)	13A	9.41	–				
	14B	9.70	–				

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 3/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0412	0.2259	1.0754	2.1395	3.1834	4.2546	1.0000
Measured, in ug/L	0.193700	1.061600	5.052800	10.052000	14.957000	19.990000	
Relative Error (%RE)	-3.2%		1.1%				

	Stock	Working
Standard Concentration:	1,000,000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **ICV**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5743062**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.874	0.20	5.000	0	97.5	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **ZZZZZZ**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5743063**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.20	0.2000	0	109	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **CCV**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743065**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.965	0.20	5.000	0	99.3	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **ZZZZZZ**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743066**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.188	0.20	0.2000	0	93.8	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **ZZZZZZ**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743077**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.069	0.20	10.00	0	101	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **CCV**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743084**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.985	0.20	5.000	0	99.7	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **ZZZZZZ**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743094**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.923	0.20	10.00	0	99.2	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **ICB**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5743064**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **CCB**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743067**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **CCB**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743078**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **CCB**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743085**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **CCB**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743095**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/12/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	4.048	
CCV-2	4.015	
CCV-3	4.006	
CCV-4	4.006	
Average	4.019	
Actual RT Window	3.939 - 4.099	
Applied RT Window	3.819 - 4.219	
MB-R183530	N.A.	N.A.
LCS-R183530	4.031	PASS
MB-107451	N.A.	N.A.
N063472-001A	4.015	PASS
N063472-001ADUP	4.015	PASS
N063705-001A	3.998	PASS
N063705-002A	3.873	PASS
N063705-003A	3.881	PASS
N063705-004A	3.956	PASS
N063705-005A	3.956	PASS
N063706-001A	N.A.	N.A.
N063706-001AMS	N.A.	N.A.
N063705-001A	3.823	PASS
N063705-001AMS	3.823	PASS
N063705-004AMS	3.956	PASS
N063705-004AMSD	3.956	PASS
N063705-005ADUP	3.956	PASS
N063705-005AMS	3.956	PASS
N063705-002AMS	3.881	PASS
N063705-003AMS	3.873	PASS
N063706-001A	3.956	PASS
N063706-001AMS	3.948	PASS
N063559-001A	3.823	PASS
N063642-009A	3.990	PASS

Reviewed by:

dlPocha 3/26/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/12/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	4.048	
CCV-2	4.015	
CCV-3	4.006	
CCV-4	4.006	
Average	4.019	
Actual RT Window	3.939 - 4.099	
Applied RT Window	3.819 - 4.219	
N063642-010A	N.A.	N.A.
N063642-011A	N.A.	N.A.
N063705-001A	3.973	PASS
N063705-001AMS	3.973	PASS
N063706-002A	N.A.	N.A.
N063706-002AMS	3.998	PASS
N063617-002A	4.006	PASS
N063617-011A	4.006	PASS
N063617-012A	4.006	PASS
N063642-001A	3.998	PASS
N063642-002A	3.998	PASS
N063559-002AMS	N.A.	N.A.
N063559-001A	N.A.	N.A.
N063559-001AMS	3.973	PASS
N063559-002A	N.A.	N.A.
N063559-002AMS	3.973	PASS

Reviewed by:

dMocha 3/26/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240305A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	03/05/24 4:07 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/05/24 4:16 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	03/05/24 4:26 PM	Reported
12	MB-R183315	MBLK	1	Hexavalent Chromium	03/05/24 4:35 PM	Reported
13	LCS-R183315	LCS	1	Hexavalent Chromium	03/05/24 4:45 PM	Reported
14	MB-107277	MBLK	1	Hexavalent Chromium	03/05/24 4:54 PM	Reported
15	N063472-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:04 PM	Reported
16	N063472-001ADUP	DUP	1	Hexavalent Chromium	03/05/24 5:13 PM	Reported
17	N063535-006A	SAMP	1	Hexavalent Chromium	03/05/24 5:23 PM	Reported
18	N063535-006AMS	MS	1	Hexavalent Chromium	03/05/24 5:32 PM	Reported
19	N063535-006AMSD	MSD	1	Hexavalent Chromium	03/05/24 5:42 PM	Reported
20	N063534-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:51 PM	Reported
21	N063534-001AMS	MS	1	Hexavalent Chromium	03/05/24 6:00 PM	Reported
22	CCV-1	CCV1	1	Hexavalent Chromium	03/05/24 6:10 PM	Reported
23	CCB-1	CCB	1	Hexavalent Chromium	03/05/24 6:20 PM	Reported
24	N063534-002A	SAMP	1	Hexavalent Chromium	03/05/24 6:30 PM	Reported
25	N063534-002AMS	MS	1	Hexavalent Chromium	03/05/24 6:38 PM	Reported
26	N063534-003A	SAMP	1	Hexavalent Chromium	03/05/24 6:48 PM	Reported
27	N063534-003AMS	MS	1	Hexavalent Chromium	03/05/24 6:57 PM	Reported
28	N063535-001A	SAMP	1	Hexavalent Chromium	03/05/24 7:07 PM	Reported
29	N063535-002A	SAMP	1	Hexavalent Chromium	03/05/24 7:16 PM	Reported
30	N063535-003A	SAMP	1	Hexavalent Chromium	03/05/24 7:26 PM	Reported
31	N063535-004A	SAMP	1	Hexavalent Chromium	03/05/24 7:35 PM	Reported
32	N063535-005A	SAMP	1	Hexavalent Chromium	03/05/24 7:48 PM	Reported
33	CCV-2	CCV	1	Hexavalent Chromium	03/05/24 7:57 PM	Reported
34	CCB-2	CCB	1	Hexavalent Chromium	03/05/24 8:07 PM	Reported
35	N063535-007A	SAMP	1	Hexavalent Chromium	03/05/24 8:16 PM	Reported
36	N063535-008A	SAMP	1	Hexavalent Chromium	03/05/24 8:25 PM	Reported
37	CCV-3	CCV1	1	Hexavalent Chromium	03/05/24 8:35 PM	Reported
38	CCB-3	CCB	1	Hexavalent Chromium	03/05/24 8:46 PM	Reported
39	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 8:55 PM	Not Reported

INJECTION LOG: 240305A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
9	ICV	ICV	1	Hexavalent Chromium	03/05/24 4:07 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/05/24 4:16 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	03/05/24 4:26 PM	Reported
12	MB-R183315	MBLK	1	Hexavalent Chromium	03/05/24 4:35 PM	Reported
13	LCS-R183315	LCS	1	Hexavalent Chromium	03/05/24 4:45 PM	Reported
14	MB-107277	MBLK	1	Hexavalent Chromium	03/05/24 4:54 PM	Reported
15	N063472-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:04 PM	Reported
16	N063472-001ADUP	DUP	1	Hexavalent Chromium	03/05/24 5:13 PM	Reported
17	N063535-006A	SAMP	1	Hexavalent Chromium	03/05/24 5:23 PM	Reported
18	N063535-006AMS	MS	1	Hexavalent Chromium	03/05/24 5:32 PM	Reported
19	N063535-006AMSD	MSD	1	Hexavalent Chromium	03/05/24 5:42 PM	Reported
20	N063534-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:51 PM	Reported
21	N063534-001AMS	MS	1	Hexavalent Chromium	03/05/24 6:00 PM	Reported
22	CCV-1	CCV1	1	Hexavalent Chromium	03/05/24 6:10 PM	Reported
23	CCB-1	CCB	1	Hexavalent Chromium	03/05/24 6:20 PM	Reported
24	N063534-002A	SAMP	1	Hexavalent Chromium	03/05/24 6:30 PM	Reported
25	N063534-002AMS	MS	1	Hexavalent Chromium	03/05/24 6:38 PM	Reported
26	N063534-003A	SAMP	1	Hexavalent Chromium	03/05/24 6:48 PM	Reported
27	N063534-003AMS	MS	1	Hexavalent Chromium	03/05/24 6:57 PM	Reported
28	N063535-001A	SAMP	1	Hexavalent Chromium	03/05/24 7:07 PM	Reported
29	N063535-002A	SAMP	1	Hexavalent Chromium	03/05/24 7:16 PM	Reported
30	N063535-003A	SAMP	1	Hexavalent Chromium	03/05/24 7:26 PM	Reported
31	N063535-004A	SAMP	1	Hexavalent Chromium	03/05/24 7:35 PM	Reported
32	N063535-005A	SAMP	1	Hexavalent Chromium	03/05/24 7:48 PM	Reported
33	CCV-2	CCV	1	Hexavalent Chromium	03/05/24 7:57 PM	Reported
34	CCB-2	CCB	1	Hexavalent Chromium	03/05/24 8:07 PM	Reported
35	N063535-007A	SAMP	1	Hexavalent Chromium	03/05/24 8:16 PM	Reported
36	N063535-008A	SAMP	1	Hexavalent Chromium	03/05/24 8:25 PM	Reported
37	CCV-3	CCV1	1	Hexavalent Chromium	03/05/24 8:35 PM	Reported
38	CCB-3	CCB	1	Hexavalent Chromium	03/05/24 8:46 PM	Reported
39	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 8:55 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240305A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**07/Mar/24 08:03:58**
No. of Injections:	**42**	*Updated By:*	**ics 5000**

Injection Details

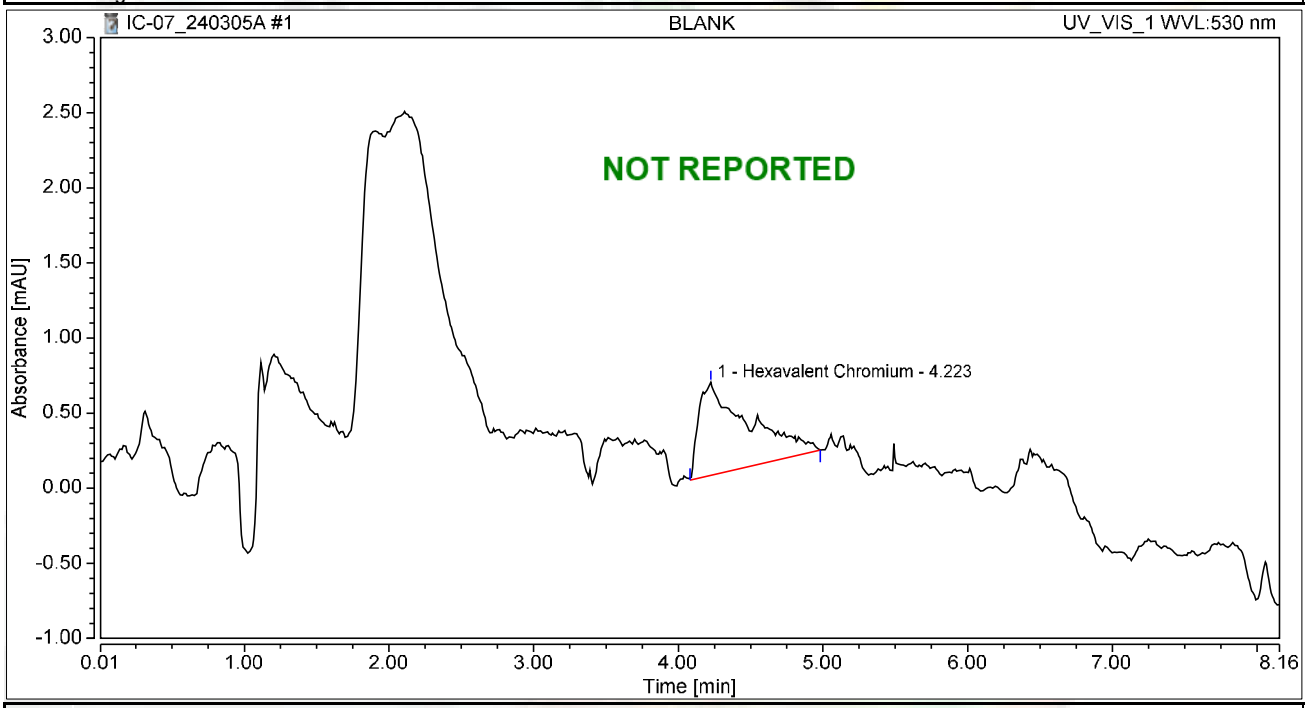
No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	8	1000	Unknown		03/05/2024 16:07	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	9	1000	Unknown		03/05/2024 16:16	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	10	1000	Unknown		03/05/2024 16:26	Finished	ICB R240129C
12	MB-H2O,MBLK,1,	11	1000	Unknown		03/05/2024 16:35	Finished	MB R240129C
13	LCS-H2O,LCS,1,	12	1000	Unknown		03/05/2024 16:45	Finished	LCS @5ppb, IWST-231228B
14	MB-107277,MBLK,1,	13	1000	Unknown		03/05/2024 16:54	Finished	MB TCLP
15	N063472-001A,SAMP	14	1000	Unknown		03/05/2024 17:04	Finished	SAMP,10 mL
16	N063472-001ADUP,D	15	1000	Unknown		03/05/2024 17:13	Finished	REP,10 mL
17	N063535-006A,SAMP	16	1000	Unknown		03/05/2024 17:23	Finished	SAMP,10 mL
18	N063535-006AMS,MS	17	1000	Unknown		03/05/2024 17:32	Finished	MS (5ppb), IWST-231228B,10r
19	N063535-006AMSD,M	18	1000	Unknown		03/05/2024 17:42	Finished	MSD (5ppb), IWST-231228B,1(
20	N063534-001A,SAMP	19	1000	Unknown		03/05/2024 17:51	Finished	SAMP,10 mL
21	N063534-001AMS,MS	20	1000	Unknown		03/05/2024 18:00	Finished	MS (1ppb), IWST-231228B,10r
22	CCV-1,CCV1,1,	21	1000	Unknown		03/05/2024 18:10	Finished	CCV @10ppb, IWST-231228A
23	CCB-1,CCB,1,	22	1000	Unknown		03/05/2024 18:20	Finished	CCB R240129C
24	N063534-002A,SAMP	23	1000	Unknown		03/05/2024 18:30	Finished	SAMP,10 mL
25	N063534-002AMS,MS	24	1000	Unknown		03/05/2024 18:38	Finished	MS (1ppb), IWST-231228B,10r
26	N063534-003A,SAMP	25	1000	Unknown		03/05/2024 18:48	Finished	SAMP,10 mL
27	N063534-003AMS,MS	26	1000	Unknown		03/05/2024 18:57	Finished	MS (1ppb), IWST-231228B,10r
28	N063535-001A,SAMP	27	1000	Unknown		03/05/2024 19:07	Finished	SAMP,10 mL
29	N063535-002A,SAMP	28	1000	Unknown		03/05/2024 19:16	Finished	SAMP,10 mL
30	N063535-003A,SAMP	29	1000	Unknown		03/05/2024 19:26	Finished	SAMP,10 mL
31	N063535-004A,SAMP	30	1000	Unknown		03/05/2024 19:35	Finished	SAMP,10 mL
32	N063535-005A,SAMP	31	1000	Unknown		03/05/2024 19:48	Finished	SAMP,10 mL
33	CCV-2,CCV,1,	32	1000	Unknown		03/05/2024 19:57	Finished	CCV @5ppb, IWST-231228A
34	CCB-2,CCB,1,	33	1000	Unknown		03/05/2024 20:07	Finished	CCB R240129C
35	N063535-007A,SAMP	34	1000	Unknown		03/05/2024 20:16	Finished	SAMP,10 mL
36	N063535-008A,SAMP	35	1000	Unknown		03/05/2024 20:25	Finished	SAMP,10 mL
37	CCV-3,CCV1,1,	37	1000	Unknown		03/05/2024 20:35	Finished	CCV @10ppb, IWST-231228A
38	CCB-3,CCB,1,	38	1000	Unknown		03/05/2024 20:46	Finished	CCB R240129C
39	BLANK	39	1000	Unknown		03/05/2024 20:55	Finished	BLANK
40	SHUTDOWN	40	1000	Unknown		03/05/2024 21:05	Finished	
41	Eluent: R240305B	41	1000	Unknown		n.a.	Finished	
42	PCR: R240305C	42	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.15**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 13:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

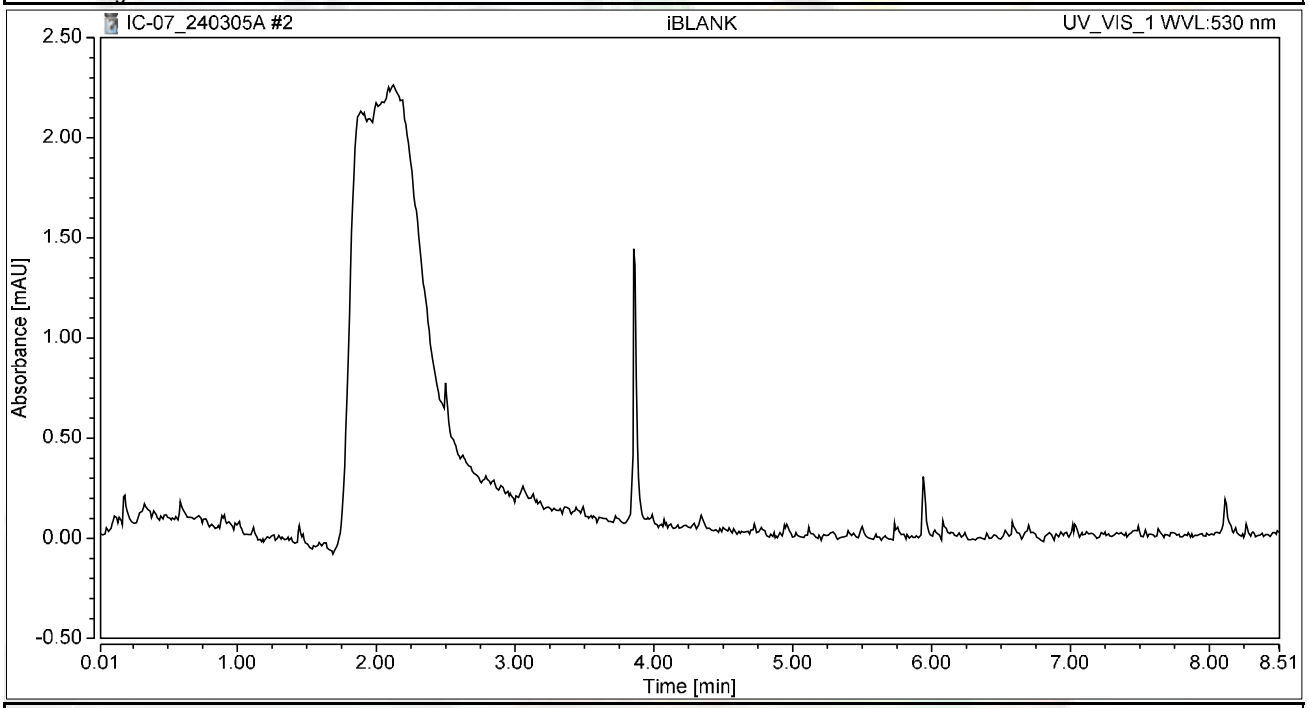
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.223	0.243	0.620	100.00	100.00	1.1440
Total:			**0.243**	**0.620**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 14:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

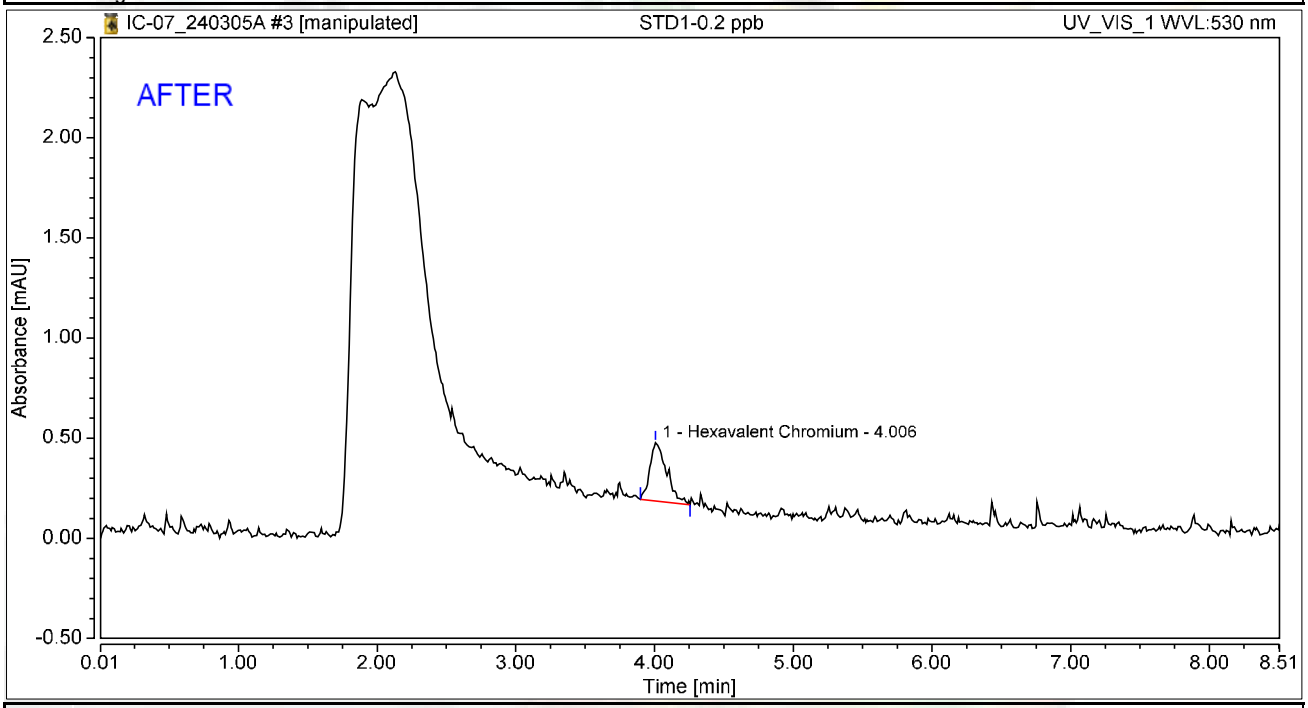
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.041	0.290	100.00	100.00	0.1937
Total:			**0.041**	**0.290**	**100.00**	**100.00**	

Reviewed by:

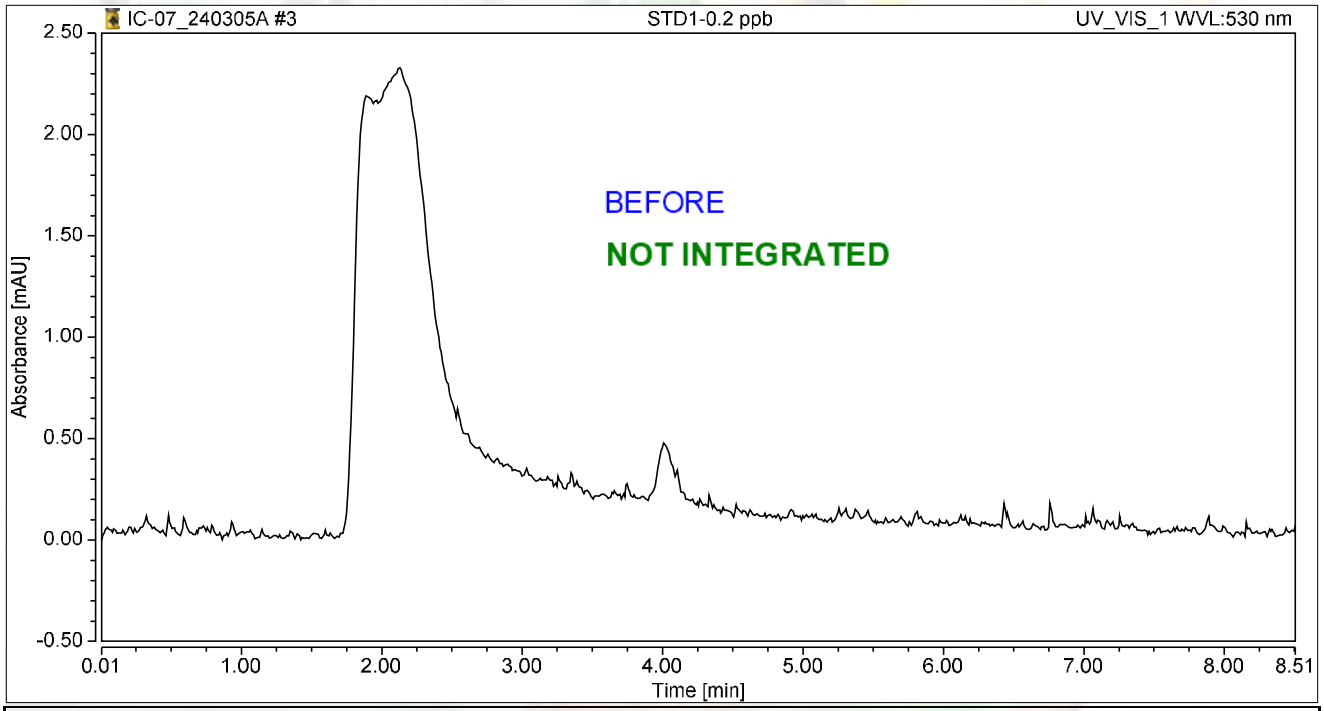
dMocha 3/11/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

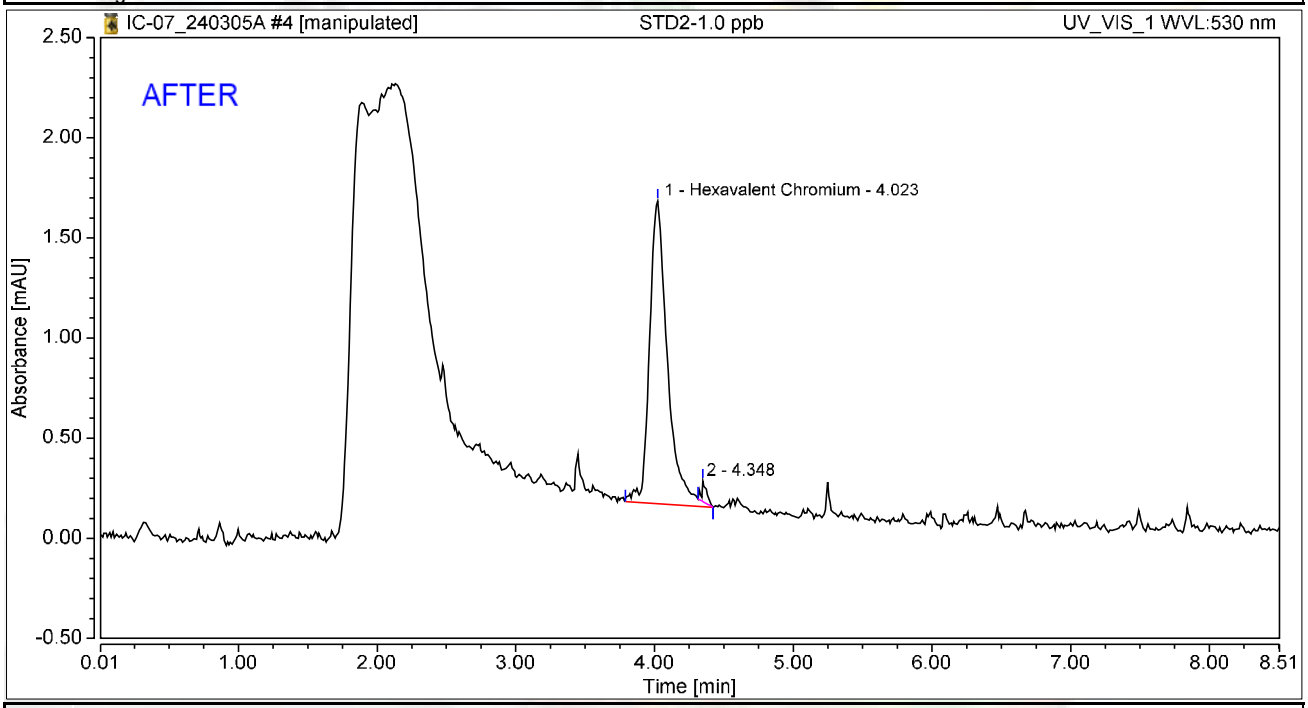
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.226	1.511	98.02	93.66	1.0616
2		4.348	0.005	0.102	1.98	6.34	n.a.
Total:			**0.231**	**1.614**	**100.00**	**100.00**	

Reviewed by:

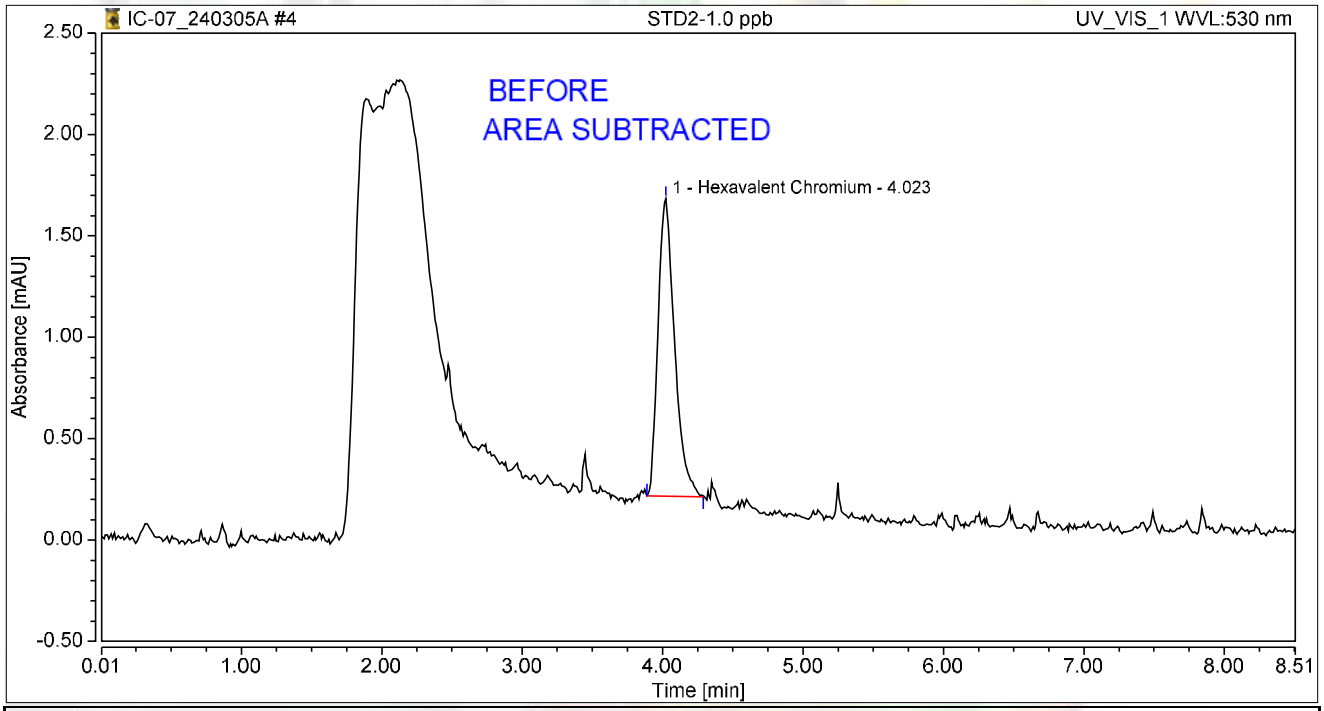
dlRocha 3/11/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

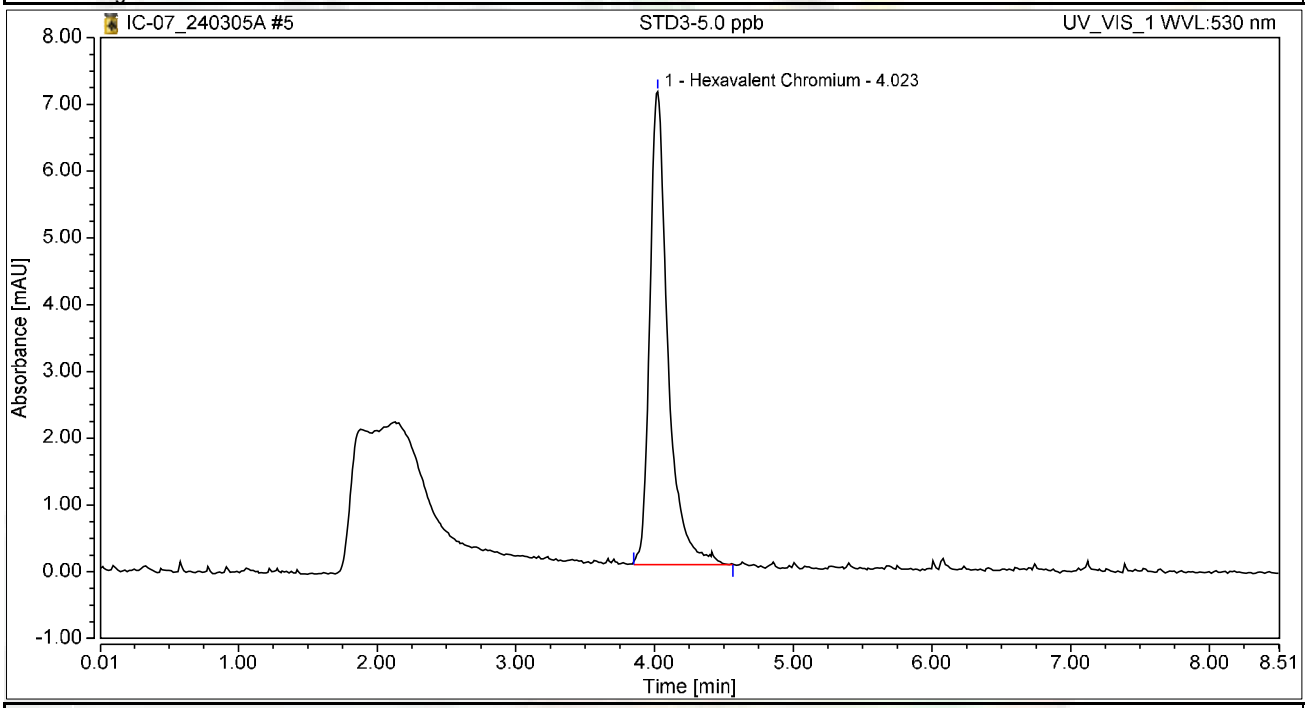
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.201	1.469	100.00	100.00	0.9426
Total:			**0.201**	**1.469**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

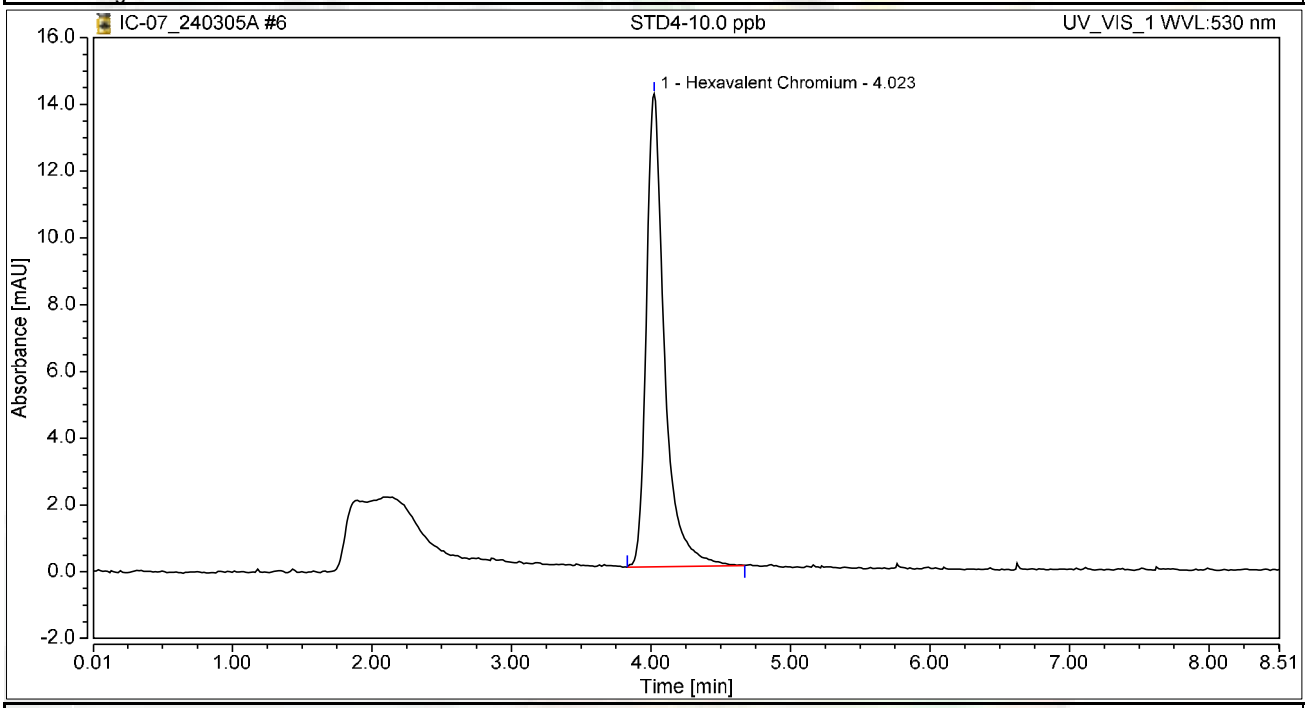
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	1.075	7.087	100.00	100.00	5.0528
Total:			**1.075**	**7.087**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

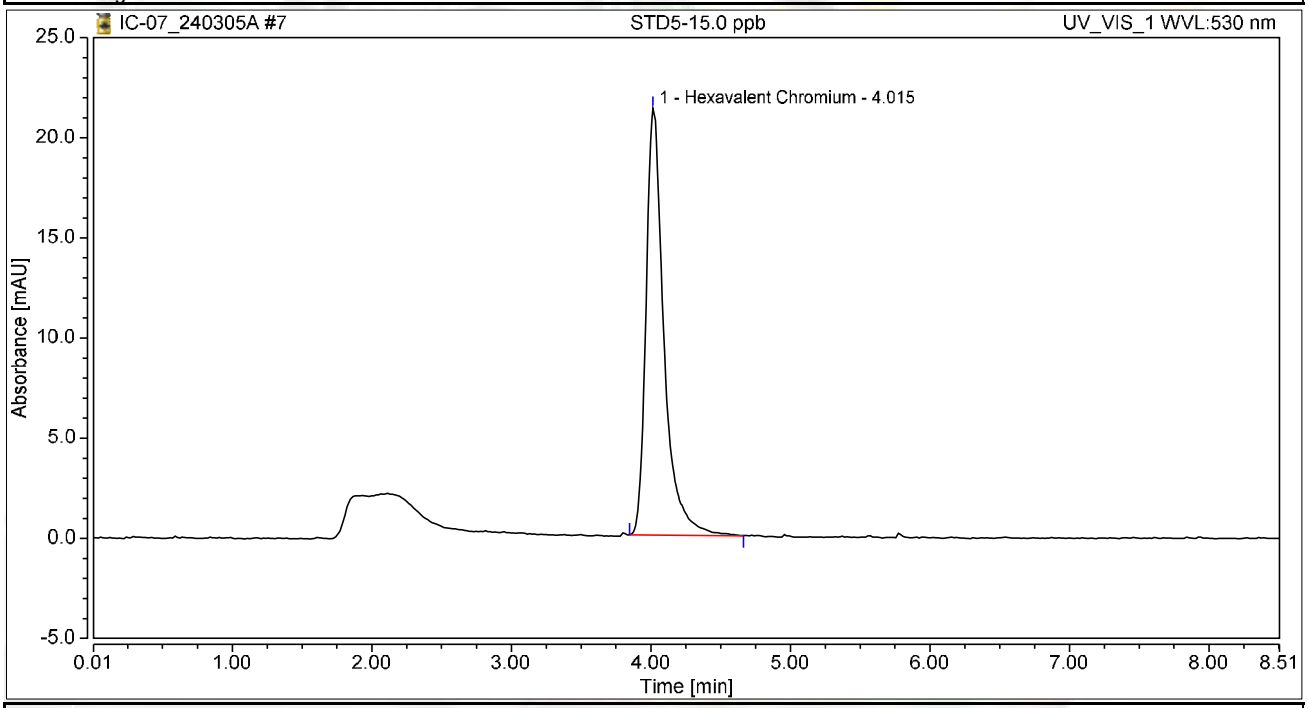
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	2.139	14.164	100.00	100.00	10.0520
Total:			**2.139**	**14.164**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

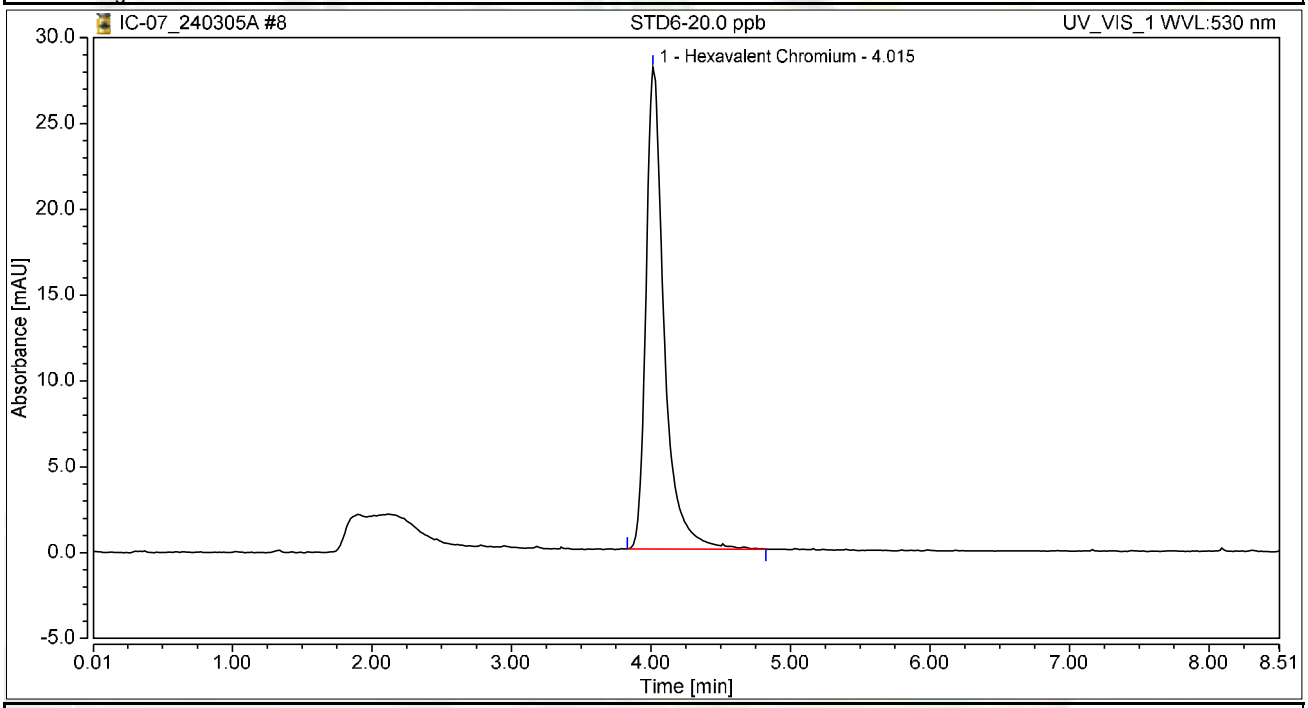
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	3.183	21.307	100.00	100.00	14.9570
Total:			**3.183**	**21.307**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:58**	*Sample Weight:*	**1.0000**

Chromatogram



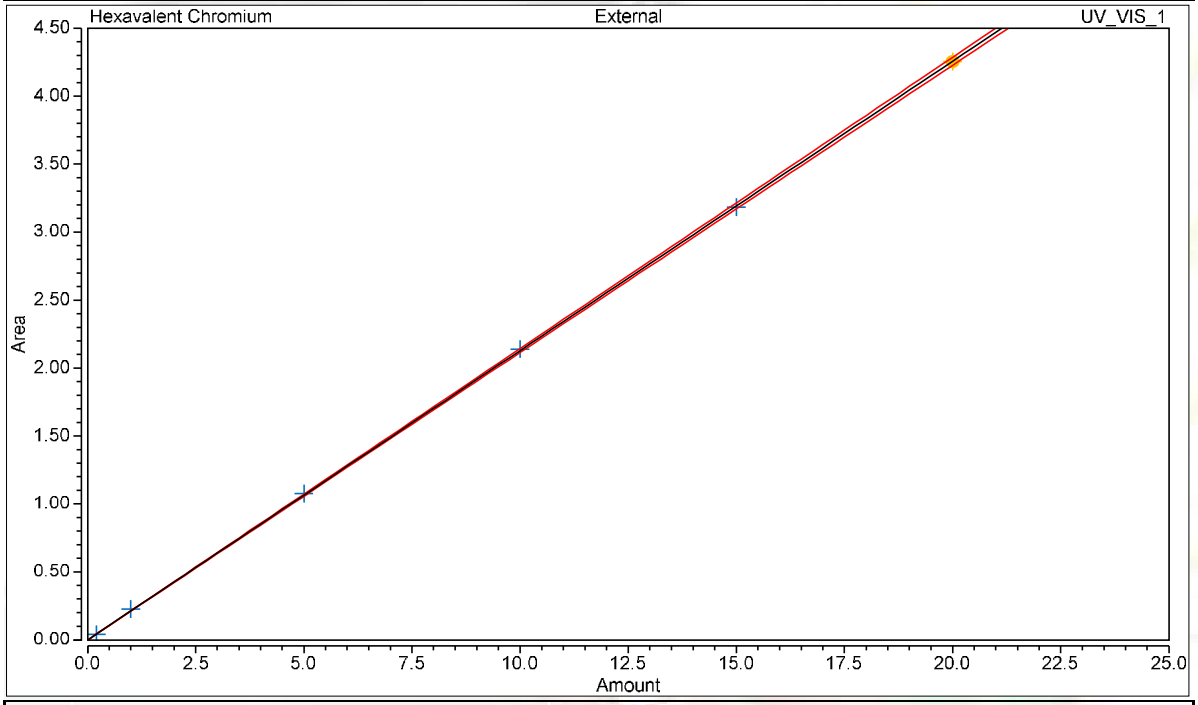
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	4.255	28.050	100.00	100.00	19.9900
Total:			**4.255**	**28.050**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2128
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99996

Calibration Plot Hexavalent Chromium



Calibration Results Hexavalent Chromium

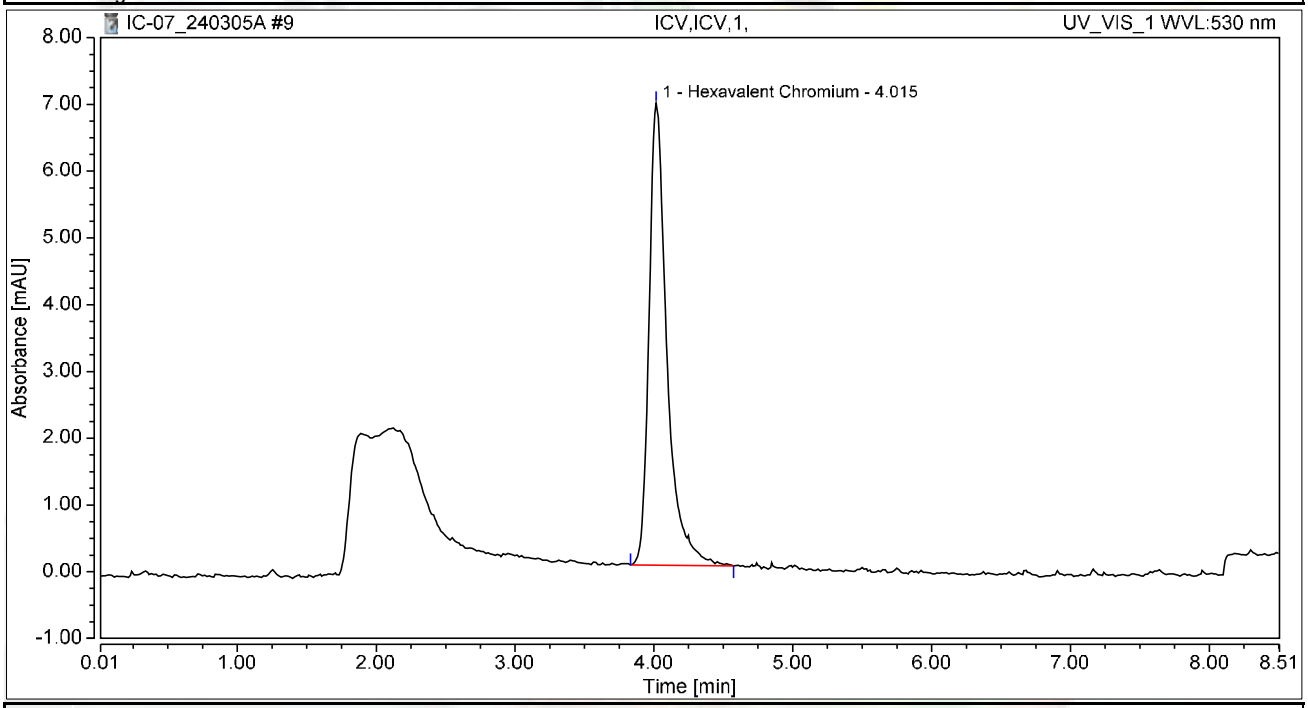
No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0412	0.041	0.290
4	STD2-1.0 ppb	02	1.0000	0.2259	0.226	1.511
5	STD3-5.0 ppb	03	5.0000	1.0754	1.075	7.087
6	STD4-10.0 ppb	04	10.0000	2.1395	2.139	14.164
7	STD5-15.0 ppb	05	15.0000	3.1834	3.183	21.307
8	STD6-20.0 ppb	06	20.0000	4.2546	4.255	28.050

Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

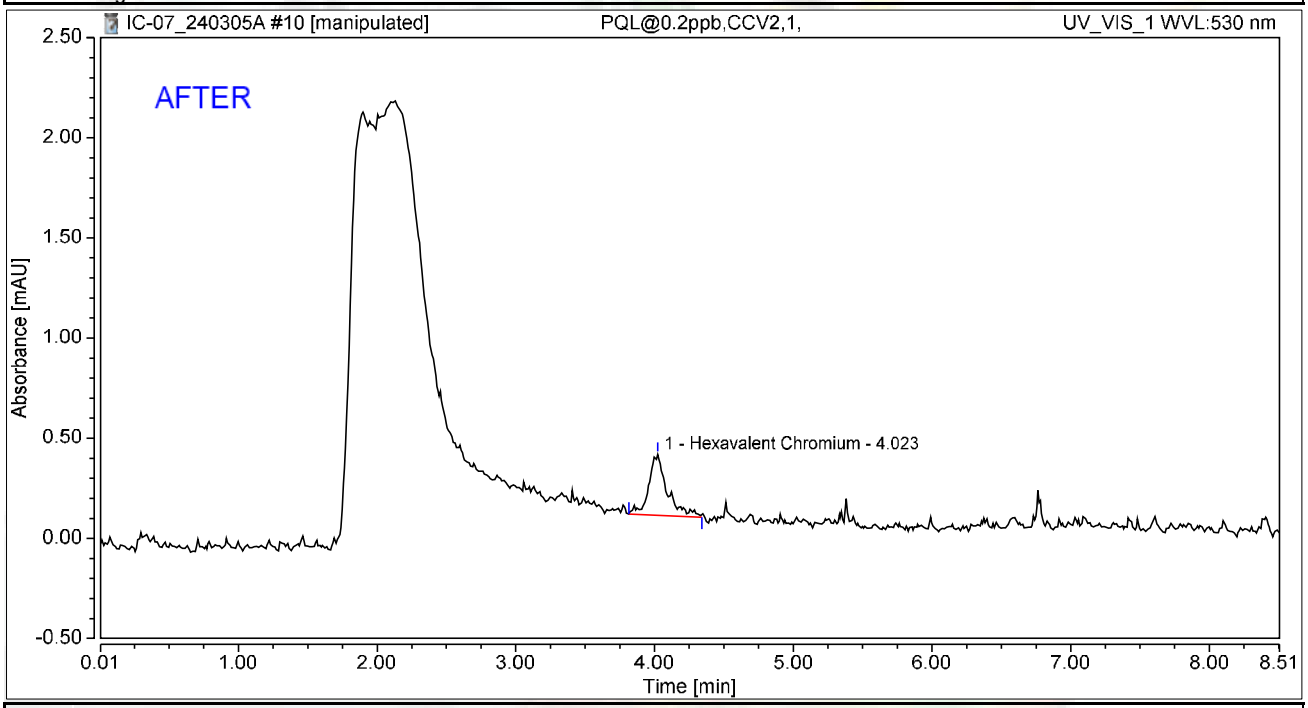
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.037	6.923	100.00	100.00	4.8744
Total:			**1.037**	**6.923**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.047	0.304	100.00	100.00	0.2189
Total:			**0.047**	**0.304**	**100.00**	**100.00**	

Reviewed by:

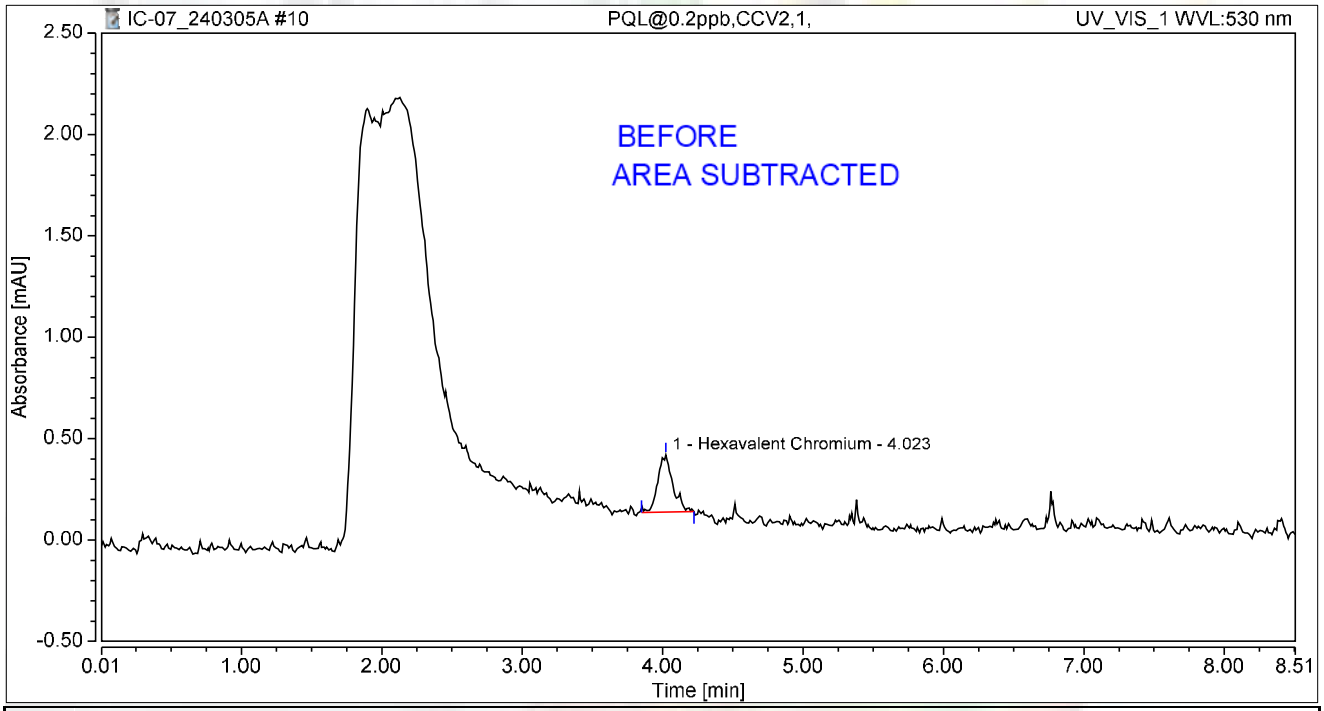
dMocha 3/11/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

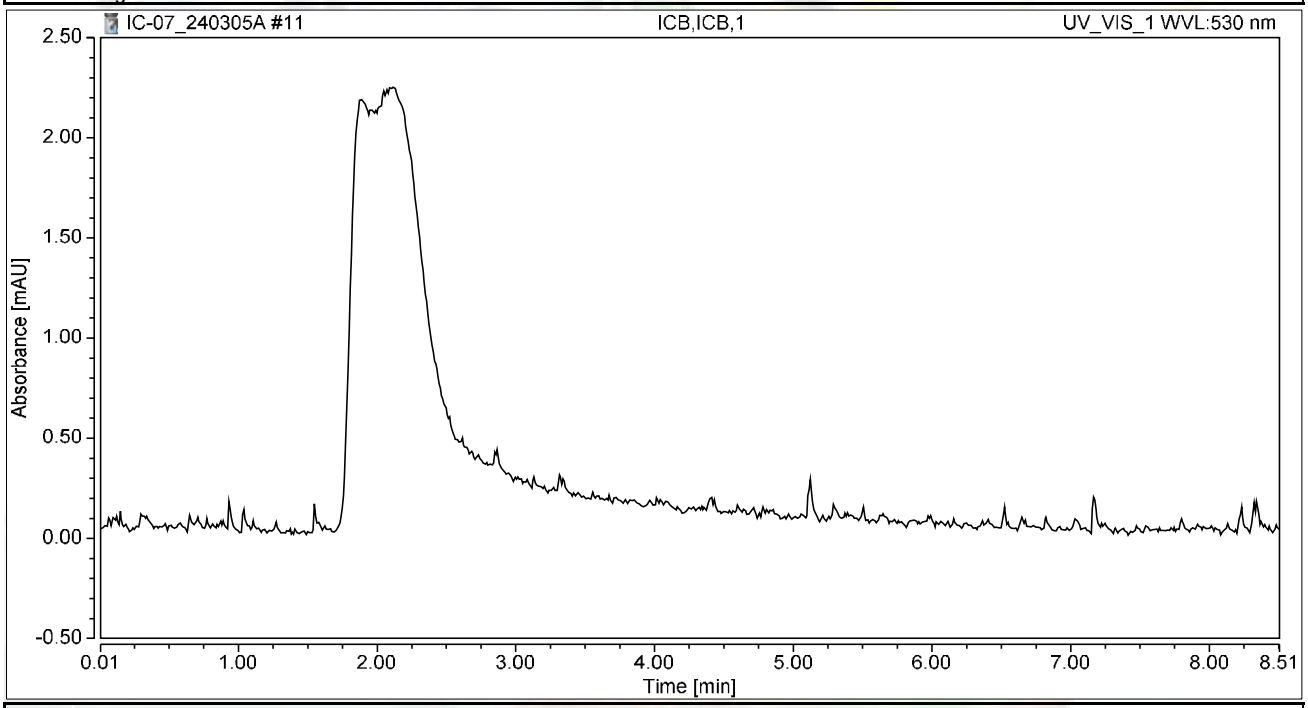
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.035	0.282	100.00	100.00	0.1646
Total:			**0.035**	**0.282**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240312A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/12/24 8:32 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/12/24 8:45 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/12/24 8:55 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/12/24 9:04 AM	Reported
13	MB-R183530	MBLK	1	Hexavalent Chromium	03/12/24 9:14 AM	Reported
14	LCS-R183530	LCS	1	Hexavalent Chromium	03/12/24 9:23 AM	Reported
15	MB-107451	MBLK	1	Hexavalent Chromium	03/12/24 11:13 AM	Not Reported
16	N063472-001A	SAMP	1	Hexavalent Chromium	03/12/24 11:28 AM	Not Reported
17	N063472-001ADUP	DUP	1	Hexavalent Chromium	03/12/24 11:37 AM	Not Reported
18	N063705-001A	SAMP	10	Hexavalent Chromium	03/12/24 11:47 AM	Not Reported
19	N063705-002A	SAMP	1	Hexavalent Chromium	03/12/24 11:56 AM	Reported
20	N063705-003A	SAMP	1	Hexavalent Chromium	03/12/24 12:05 PM	Reported
21	N063705-004A	SAMP	5	Hexavalent Chromium	03/12/24 12:15 PM	Reported
22	N063705-005A	SAMP	5	Hexavalent Chromium	03/12/24 12:24 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/12/24 12:34 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/12/24 12:43 PM	Reported
25	N063706-001A	SAMP	1	Hexavalent Chromium	03/12/24 12:53 PM	Not Reported
26	N063706-001AMS	MS	1	Hexavalent Chromium	03/12/24 1:02 PM	Not Reported
27	N063705-001A	SAMP	1	Hexavalent Chromium	03/12/24 1:12 PM	Not Reported
28	N063705-001AMS	MS	1	Hexavalent Chromium	03/12/24 1:21 PM	Not Reported
29	N063705-004AMS	MS	5	Hexavalent Chromium	03/12/24 1:31 PM	Reported
30	N063705-004AMSD	MSD	5	Hexavalent Chromium	03/12/24 1:40 PM	Reported
31	N063705-005ADUP	DUP	5	Hexavalent Chromium	03/12/24 1:49 PM	Reported
32	N063705-005AMS	MS	5	Hexavalent Chromium	03/12/24 1:59 PM	Reported
33	N063705-002AMS	MS	1	Hexavalent Chromium	03/12/24 2:08 PM	Reported
34	CCV-3	CCV1	1	Hexavalent Chromium	03/12/24 2:18 PM	Reported
35	CCB-3	CCB	1	Hexavalent Chromium	03/12/24 2:27 PM	Reported
36	N063705-003AMS	MS	1	Hexavalent Chromium	03/12/24 2:37 PM	Reported
37	N063706-001A	SAMP	5	Hexavalent Chromium	03/12/24 2:46 PM	Reported
38	N063706-001AMS	MS	5	Hexavalent Chromium	03/12/24 2:56 PM	Reported
39	N063559-001A	SAMP	1	Hexavalent Chromium	03/12/24 3:05 PM	Not Reported
40	N063559-002A	SAMP	1	Hexavalent Chromium	03/12/24 3:15 PM	Not Reported
41	N063642-009A	SAMP	1	Hexavalent Chromium	03/12/24 3:24 PM	Reported
42	N063642-010A	SAMP	1	Hexavalent Chromium	03/12/24 3:33 PM	Reported

INJECTION LOG: 240312A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063642-011A	SAMP	1	Hexavalent Chromium	03/12/24 3:43 PM	Reported
44	N063705-001A	SAMP	5	Hexavalent Chromium	03/12/24 3:52 PM	Reported
45	N063705-001AMS	MS	5	Hexavalent Chromium	03/12/24 4:02 PM	Reported
46	CCV-4	CCV1	1	Hexavalent Chromium	03/12/24 4:11 PM	Reported
47	CCB-4	CCB	1	Hexavalent Chromium	03/12/24 4:21 PM	Reported
48	N063706-002A	SAMP	1	Hexavalent Chromium	03/12/24 4:38 PM	Not Reported
49	N063706-002AMS	MS	1	Hexavalent Chromium	03/12/24 4:50 PM	Not Reported
50	N063617-002A	SAMP	5	Hexavalent Chromium	03/12/24 5:00 PM	Not Reported
51	N063617-011A	SAMP	20	Hexavalent Chromium	03/12/24 5:09 PM	Not Reported
52	N063617-012A	SAMP	20	Hexavalent Chromium	03/12/24 5:19 PM	Not Reported
53	N063642-001A	SAMP	5	Hexavalent Chromium	03/12/24 5:28 PM	Not Reported
54	N063642-002A	SAMP	5	Hexavalent Chromium	03/12/24 5:38 PM	Not Reported
55	N063559-001AMS	MS	1	Hexavalent Chromium	03/12/24 5:47 PM	Not Reported
56	N063559-002AMS	MS	1	Hexavalent Chromium	03/12/24 8:27 PM	Not Reported
57	CCV-5	CCV	1	Hexavalent Chromium	03/12/24 8:28 PM	Not Reported
58	CCB-5	CCB	1	Hexavalent Chromium	03/12/24 8:39 PM	Not Reported
59	N063559-001A	SAMP	5	Hexavalent Chromium	03/12/24 8:48 PM	Not Reported
60	N063559-001AMS	MS	5	Hexavalent Chromium	03/12/24 8:58 PM	Not Reported
61	N063559-002A	SAMP	5	Hexavalent Chromium	03/12/24 9:07 PM	Not Reported
62	N063559-002AMS	MS	5	Hexavalent Chromium	03/12/24 9:17 PM	Not Reported
63	CCV-6	CCV1	1	Hexavalent Chromium	03/12/24 9:26 PM	Not Reported
64	CCB-6	CCB	1	Hexavalent Chromium	03/12/24 9:36 PM	Not Reported
65	BLANK	BLANK	1	Hexavalent Chromium	03/12/24 9:45 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240312A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**12/Mar/24 22:16:00**
No. of Injections:	**68**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/12/2024 08:32	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/12/2024 08:45	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/12/2024 08:55	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/12/2024 09:04	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/12/2024 09:14	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/12/2024 09:23	Finished	LCS @5ppb, IWST-231228B
15	MB-107451,MBLK,1,	1	1000	Unknown		03/12/2024 11:13	Finished	MB TC 10mL
16	N063472-001A,SAMF	2	1000	Unknown		03/12/2024 11:28	Finished	SAMP,10 mL
17	N063472-001ADUP,D	3	1000	Unknown		03/12/2024 11:37	Finished	DUP,10 mL
18	N063705-001A,SAMF	4	1000	Unknown		03/12/2024 11:47	Finished	SAMP,1>10 mL
19	N063705-002A,SAMF	5	1000	Unknown		03/12/2024 11:56	Finished	SAMP,10 mL
20	N063705-003A,SAMF	6	1000	Unknown		03/12/2024 12:05	Finished	SAMP,10 mL
21	N063705-004A,SAMF	7	1000	Unknown		03/12/2024 12:15	Finished	SAMP,2>10 mL
22	N063705-005A,SAMF	8	1000	Unknown		03/12/2024 12:24	Finished	SAMP,2>10 mL
23	CCV-2,CCV1,1,	9	1000	Unknown		03/12/2024 12:34	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		03/12/2024 12:43	Finished	CCB R240129C
25	N063706-001A,SAMF	11	1000	Unknown		03/12/2024 12:53	Finished	SAMP,10 mL
26	N063706-001AMS,MS	12	1000	Unknown		03/12/2024 13:02	Finished	MS (1ppb), IWST-231228B,10r
27	N063705-001A,SAMF	13	1000	Unknown		03/12/2024 13:12	Finished	SAMP,10 mL
28	N063705-001AMS,MS	14	1000	Unknown		03/12/2024 13:21	Finished	MS (5ppb), IWST-231228B,10r
29	N063705-004AMS,MS	15	1000	Unknown		03/12/2024 13:31	Finished	MS (5ppb), IWST-231228B,2>1
30	N063705-004AMSD,M	16	1000	Unknown		03/12/2024 13:40	Finished	MSD (5ppb), IWST-231228B,2
31	N063705-005ADUP,D	17	1000	Unknown		03/12/2024 13:49	Finished	DUP,2>10 mL
32	N063705-005AMS,MS	18	1000	Unknown		03/12/2024 13:59	Finished	MS (5ppb), IWST-231228B,2>1
33	N063705-002AMS,MS	19	1000	Unknown		03/12/2024 14:08	Finished	MS (1ppb), IWST-231228B,10r
34	CCV-3,CCV1,1,	20	1000	Unknown		03/12/2024 14:18	Finished	CCV @10ppb, IWST-231228A
35	CCB-3,CCB,1,	21	1000	Unknown		03/12/2024 14:27	Finished	CCB R240129C
36	N063705-003AMS,MS	22	1000	Unknown		03/12/2024 14:37	Finished	MS (1ppb), IWST-231228B,10r
37	N063706-001A,SAMF	23	1000	Unknown		03/12/2024 14:46	Finished	SAMP,2>10 mL
38	N063706-001AMS,MS	24	1000	Unknown		03/12/2024 14:56	Finished	MS (1ppb), IWST-231228B,2>1
39	N063559-001A,SAMF	25	1000	Unknown		03/12/2024 15:05	Finished	SAMP,10 mL
40	N063559-002A,SAMF	26	1000	Unknown		03/12/2024 15:15	Finished	SAMP,10 mL
41	N063642-009A,SAMF	27	1000	Unknown		03/12/2024 15:24	Finished	SAMP,10 mL
42	N063642-010A,SAMF	28	1000	Unknown		03/12/2024 15:33	Finished	SAMP,10 mL
43	N063642-011A,SAMF	29	1000	Unknown		03/12/2024 15:43	Finished	SAMP,10 mL
44	N063705-001A,SAMF	30	1000	Unknown		03/12/2024 15:52	Finished	SAMP,2>10 mL
45	N063705-001AMS,MS	31	1000	Unknown		03/12/2024 16:02	Finished	MS (5ppb), IWST-231228B,2>1
46	CCV-4,CCV1,1,	32	1000	Unknown		03/12/2024 16:11	Finished	CCV @10ppb, IWST-231228A
47	CCB-4,CCB,1,	33	1000	Unknown		03/12/2024 16:21	Finished	CCB R240129C
48	N063706-002A,SAMF	1	1000	Unknown		03/12/2024 16:38	Finished	SAMP,10 mL
49	N063706-002AMS,MS	2	1000	Unknown		03/12/2024 16:50	Finished	MS (1ppb), IWST-231228B,10r
50	N063617-002A,SAMF	3	1000	Unknown		03/12/2024 17:00	Finished	SAMP,2>10 mL
51	N063617-011A,SAMF	4	1000	Unknown		03/12/2024 17:09	Finished	SAMP,0.5>10 mL
52	N063617-012A,SAMF	5	1000	Unknown		03/12/2024 17:19	Finished	SAMP,0.5>10 mL
53	N063642-001A,SAMF	6	1000	Unknown		03/12/2024 17:28	Finished	SAMP,2>10 mL
54	N063642-002A,SAMF	7	1000	Unknown		03/12/2024 17:38	Finished	SAMP,2>10 mL
55	N063559-001AMS,MS	8	1000	Unknown		03/12/2024 17:47	Interrupted	MS (1ppb), IWST-231228B,10r
56	N063559-002AMS,MS	9	1000	Unknown		03/12/2024 20:27	Interrupted	MS (1ppb), IWST-231228B,10r
57	CCV-5,CCV,1,	10	1000	Unknown		03/12/2024 20:28	Finished	CCV @5ppb, IWST-231228A
58	CCB-5,CCB,1,	11	1000	Unknown		03/12/2024 20:39	Finished	CCB R240129C
59	N063559-001A,SAMF	12	1000	Unknown		03/12/2024 20:48	Finished	SAMP,2>10 mL
60	N063559-001AMS,MS	13	1000	Unknown		03/12/2024 20:58	Finished	MS (1ppb), IWST-231228B,2>1

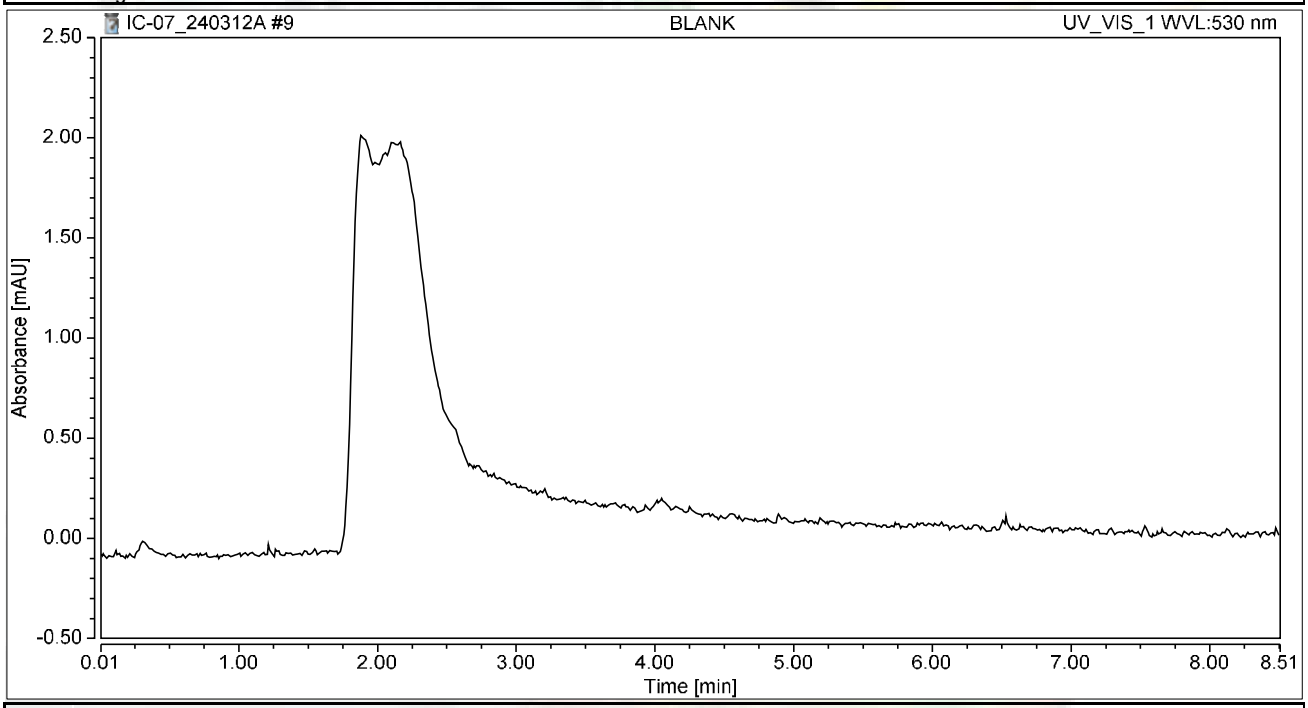
61	N063559-002A,SAMP	14	1000	Unknown		03/12/2024 21:07	Finished	SAMP,2>10 mL
62	N063559-002AMS,MS	15	1000	Unknown		03/12/2024 21:17	Finished	MS (1ppb), IWST-231228B,2>
63	CCV-6,CCV1,1,	16	1000	Unknown		03/12/2024 21:26	Finished	CCV @10ppb, IWST-231228A
64	CCB-6,CCB,1,	17	1000	Unknown		03/12/2024 21:36	Finished	CCB R240129C
65	BLANK	18	1000	Unknown		03/12/2024 21:45	Finished	BLANK
66	SHUTDOWN	19	1000	Unknown		03/12/2024 21:55	Finished	
67	Eluent: R240311C	20	1000	Unknown		n.a.	Finished	
68	PCR: R240311D	21	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 08:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

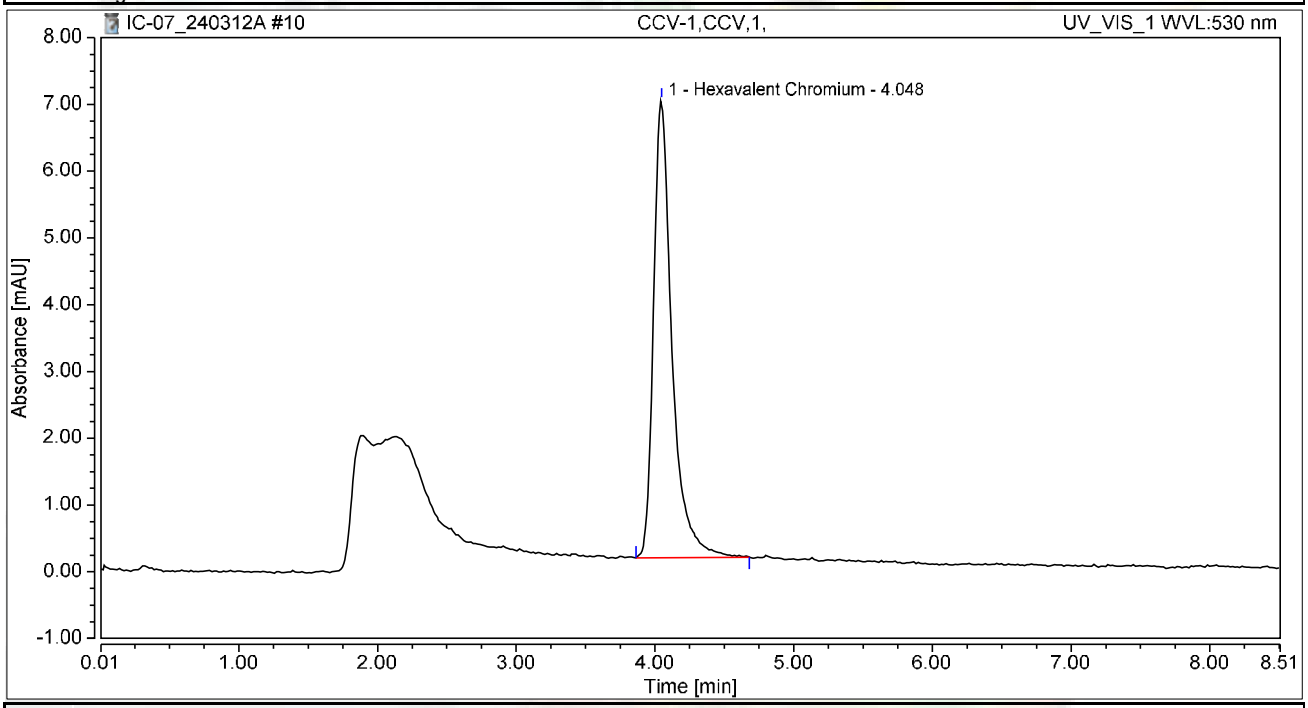
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 08:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.057	6.852	100.00	100.00	4.9649
Total:			**1.057**	**6.852**	**100.00**	**100.00**	

Reviewed by:

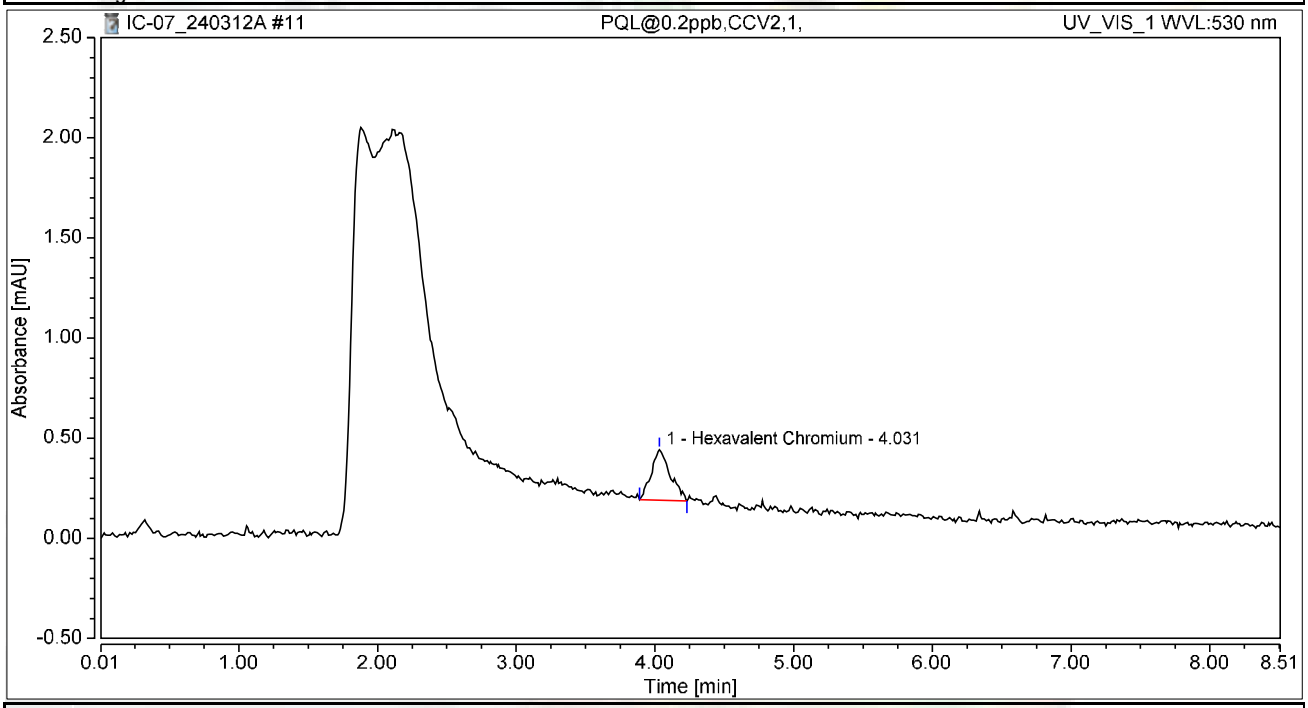
JRB 3/13/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 08:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

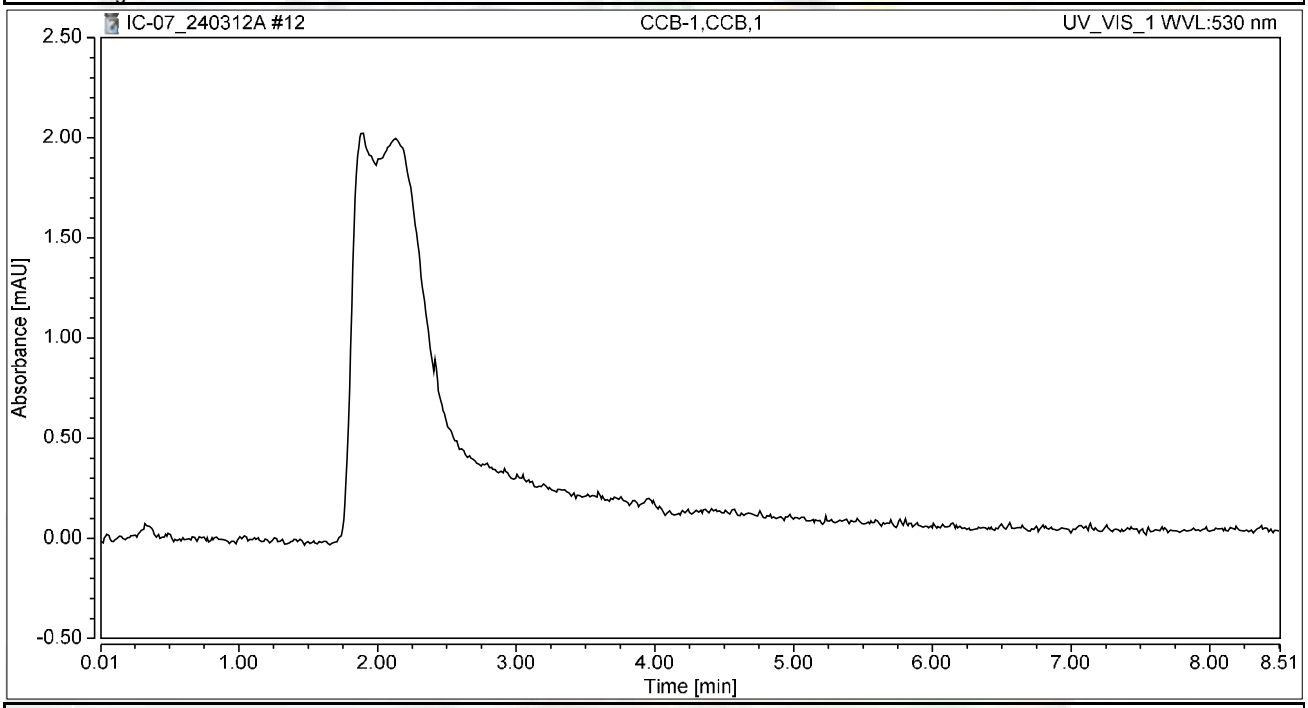
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.040	0.253	100.00	100.00	0.1877
Total:			**0.040**	**0.253**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 09:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

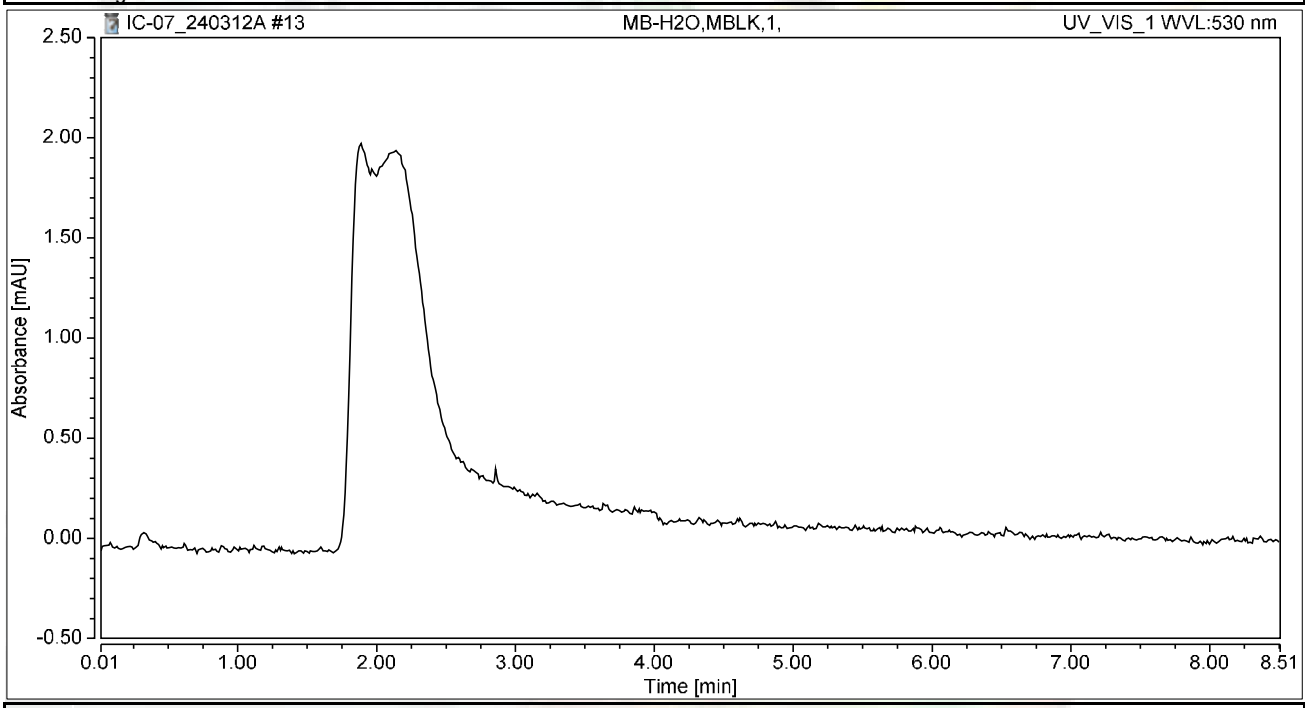
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 09:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

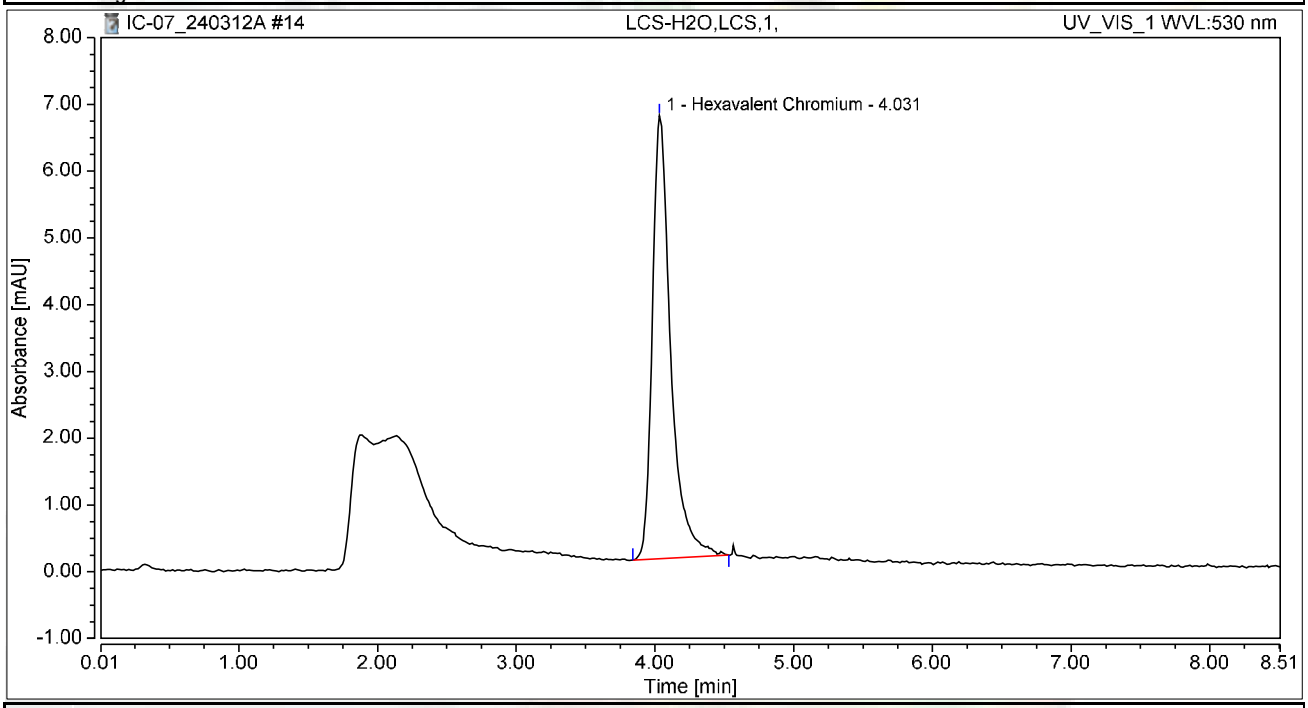
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 09:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

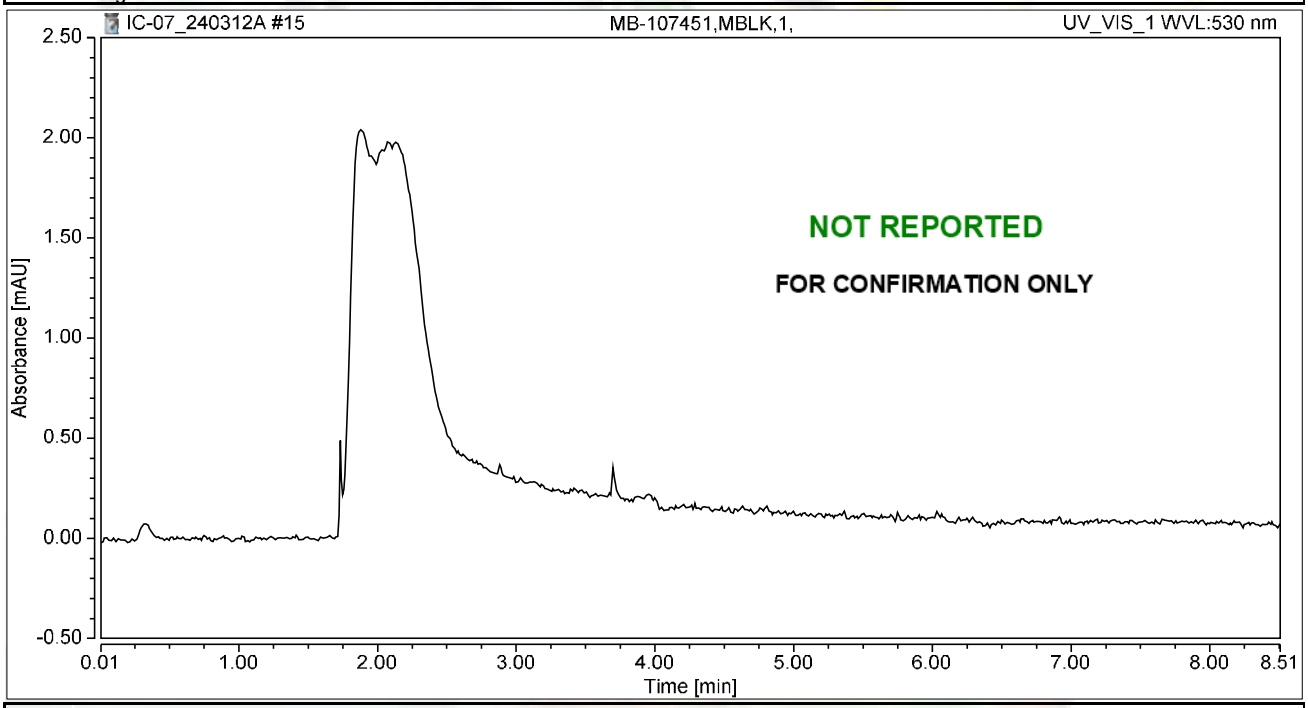
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	1.021	6.637	100.00	100.00	4.7963
Total:			**1.021**	**6.637**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-107451,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 11:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

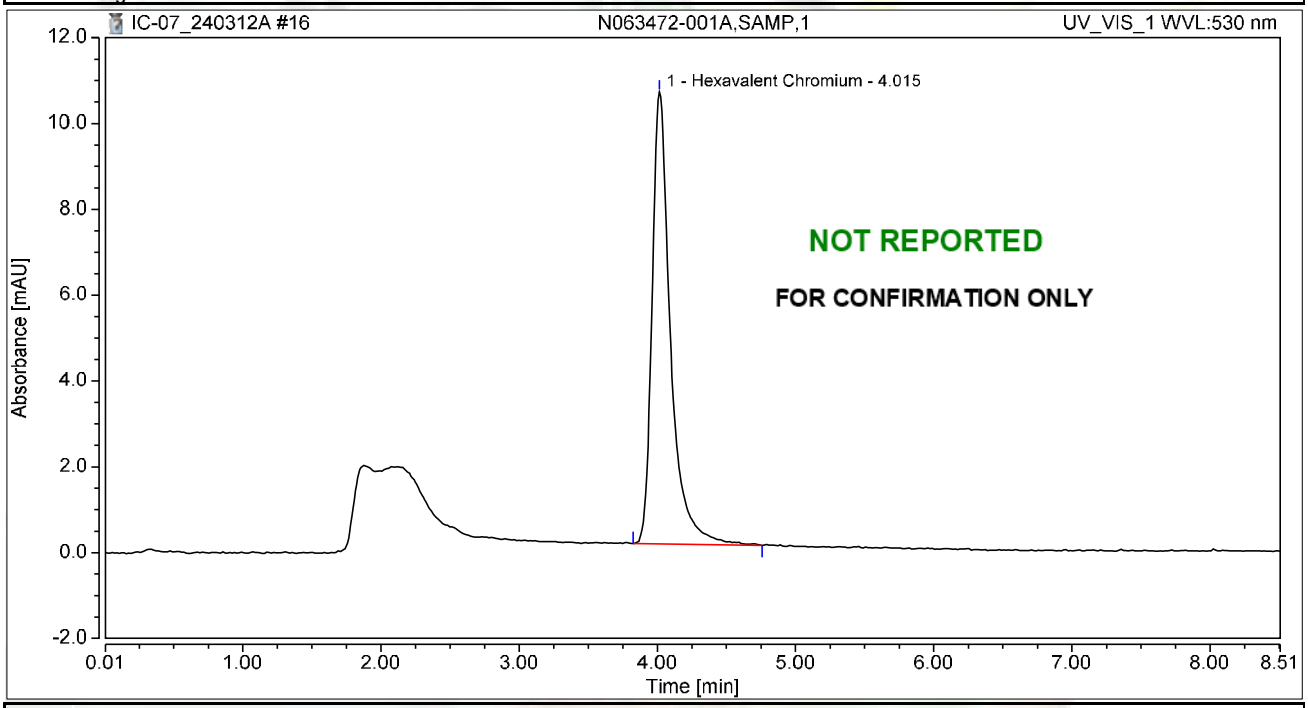
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063472-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 11:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

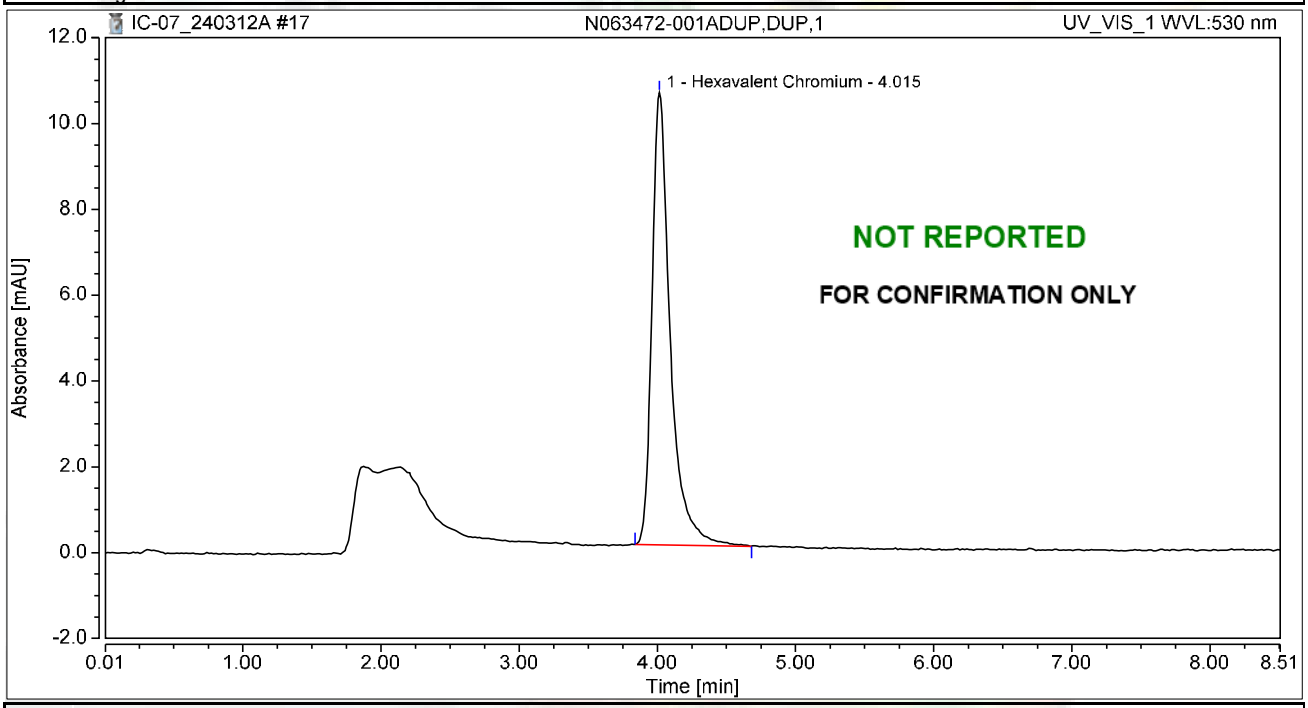
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.627	10.529	100.00	100.00	7.6437
Total:			**1.627**	**10.529**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063472-001ADUP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 11:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

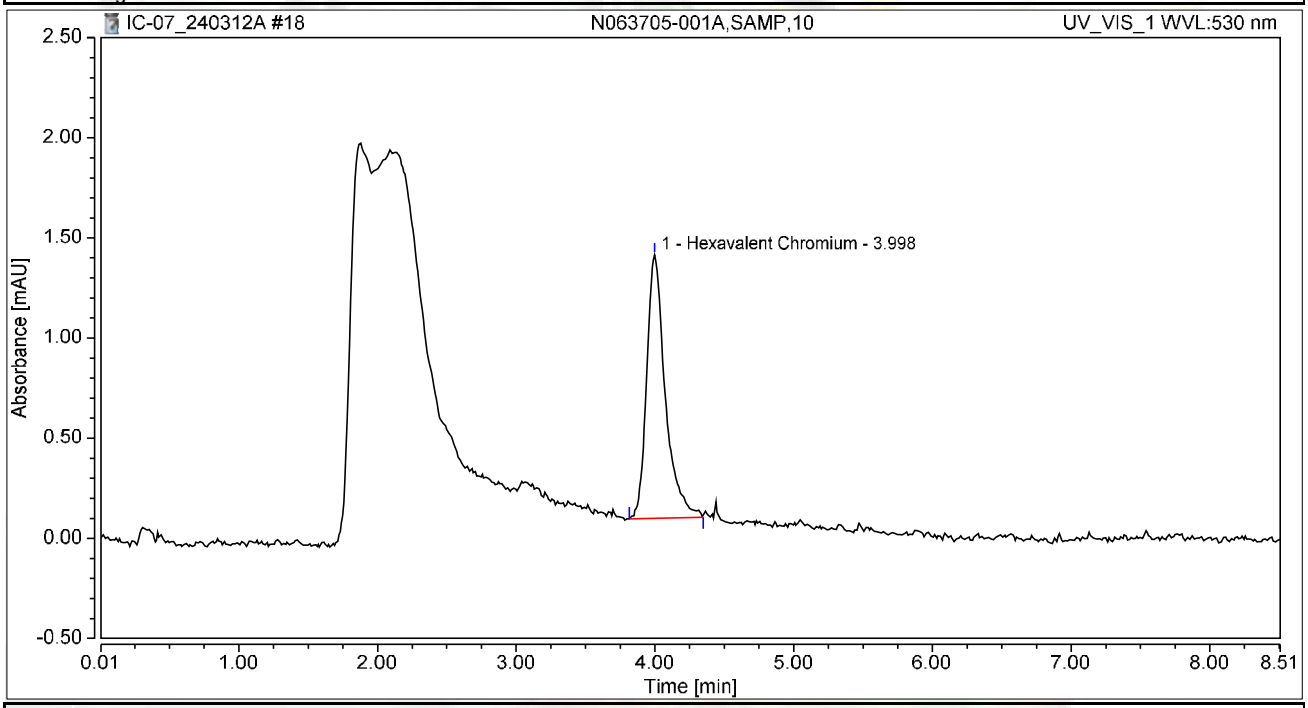
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.615	10.534	100.00	100.00	7.5860
Total:			**1.615**	**10.534**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-001A,SAMP,10**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 11:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

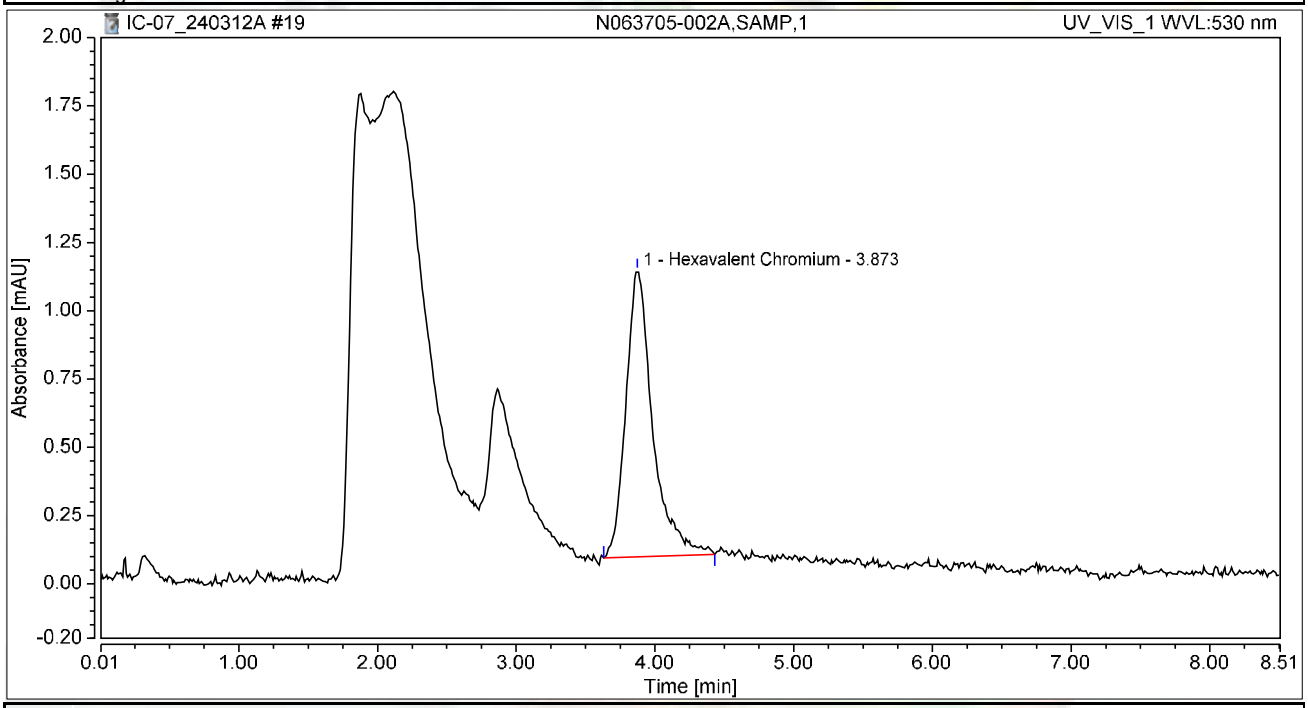
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.204	1.316	100.00	100.00	0.9565
Total:			**0.204**	**1.316**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 11:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

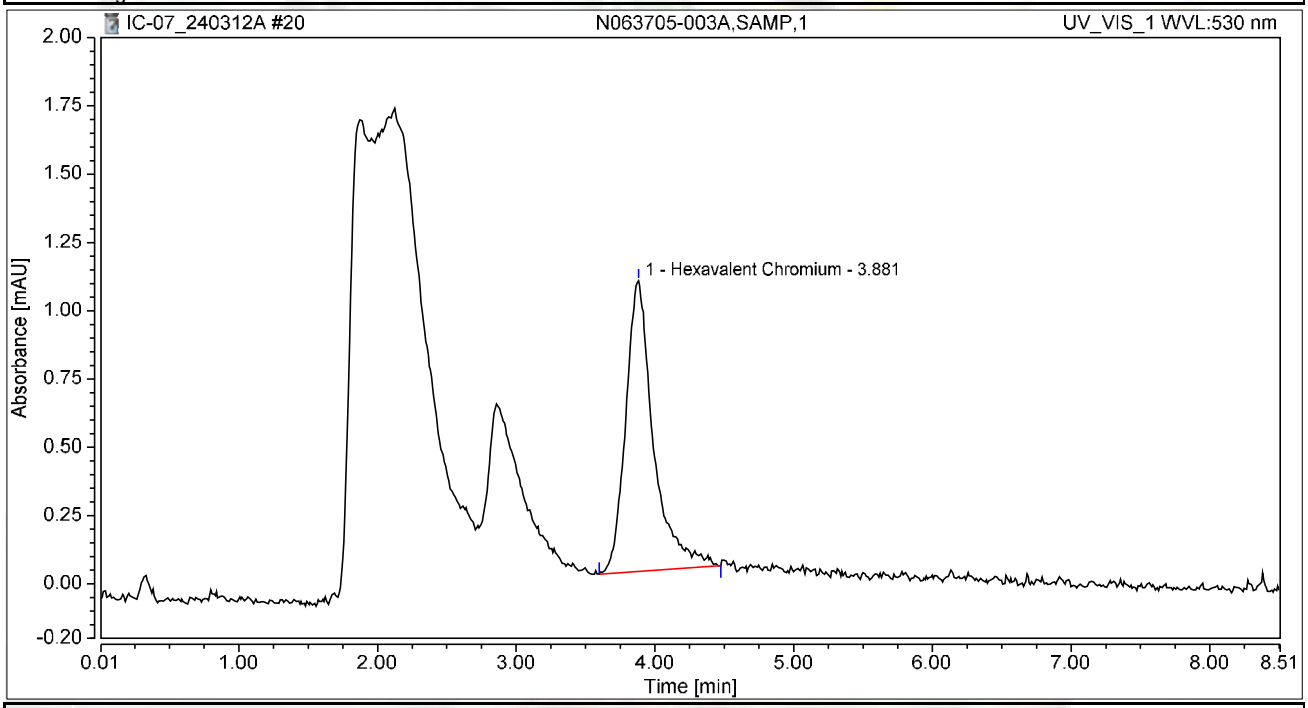
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.873	0.234	1.047	100.00	100.00	1.1006
Total:			**0.234**	**1.047**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 12:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

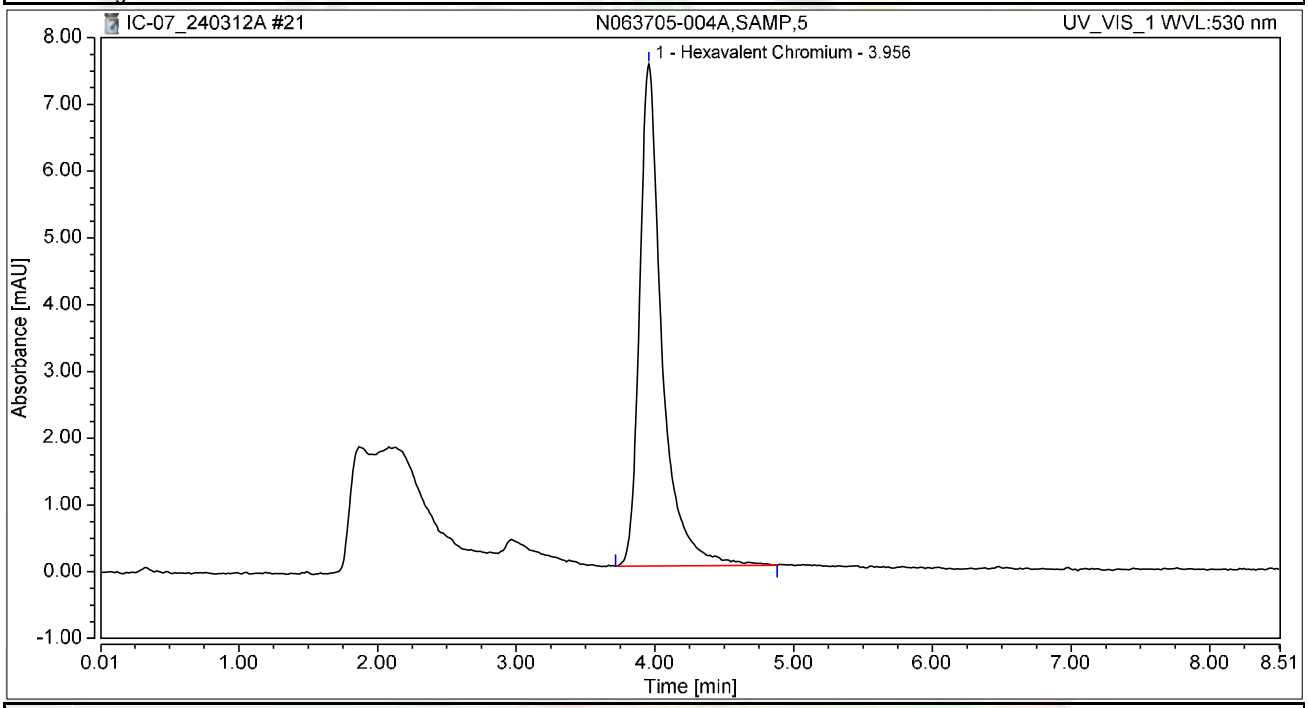
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.881	0.247	1.065	100.00	100.00	1.1597
Total:			**0.247**	**1.065**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-004A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 12:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

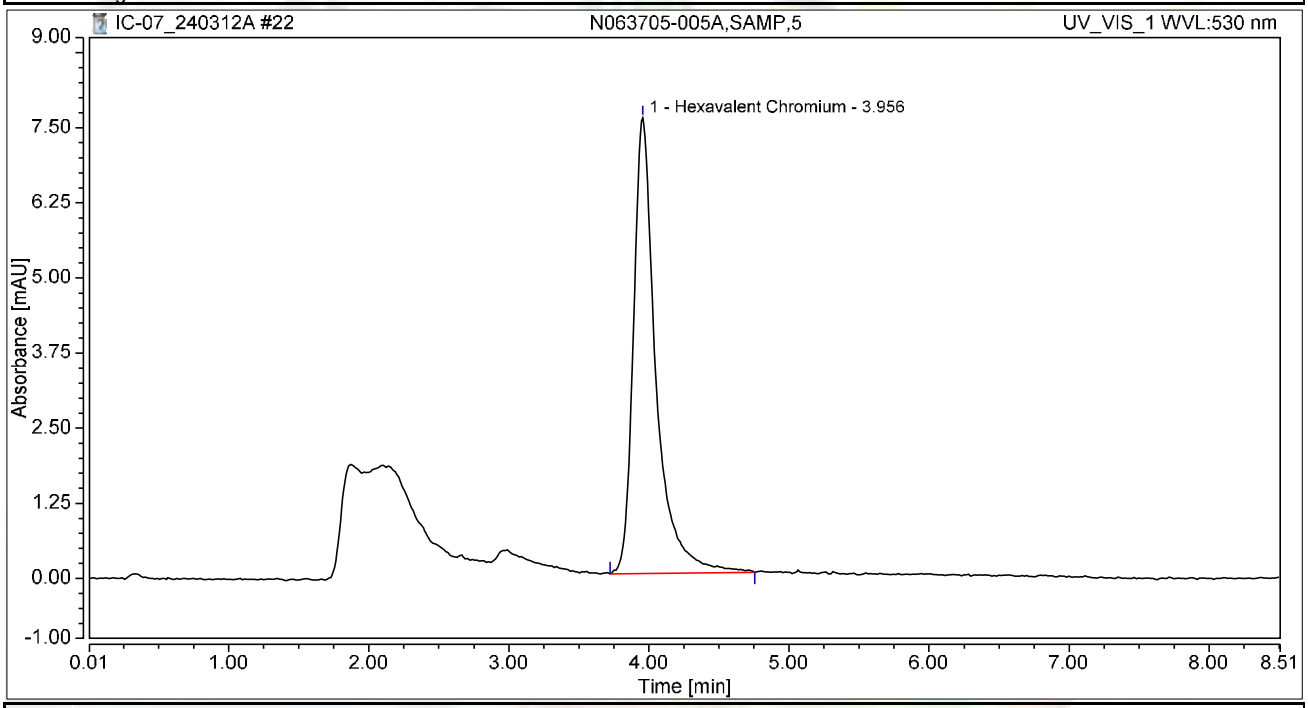
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	1.410	7.523	100.00	100.00	6.6233
Total:			**1.410**	**7.523**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 12:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

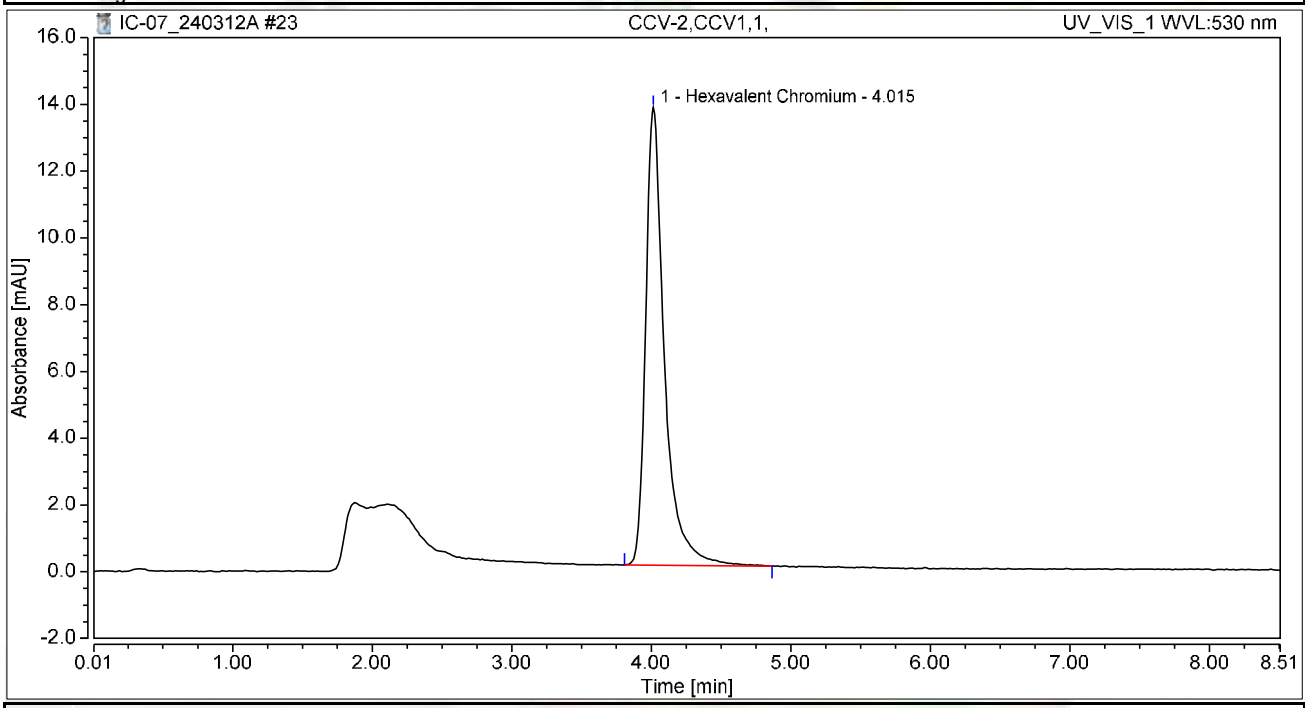
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	1.413	7.583	100.00	100.00	6.6402
Total:			**1.413**	**7.583**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 12:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

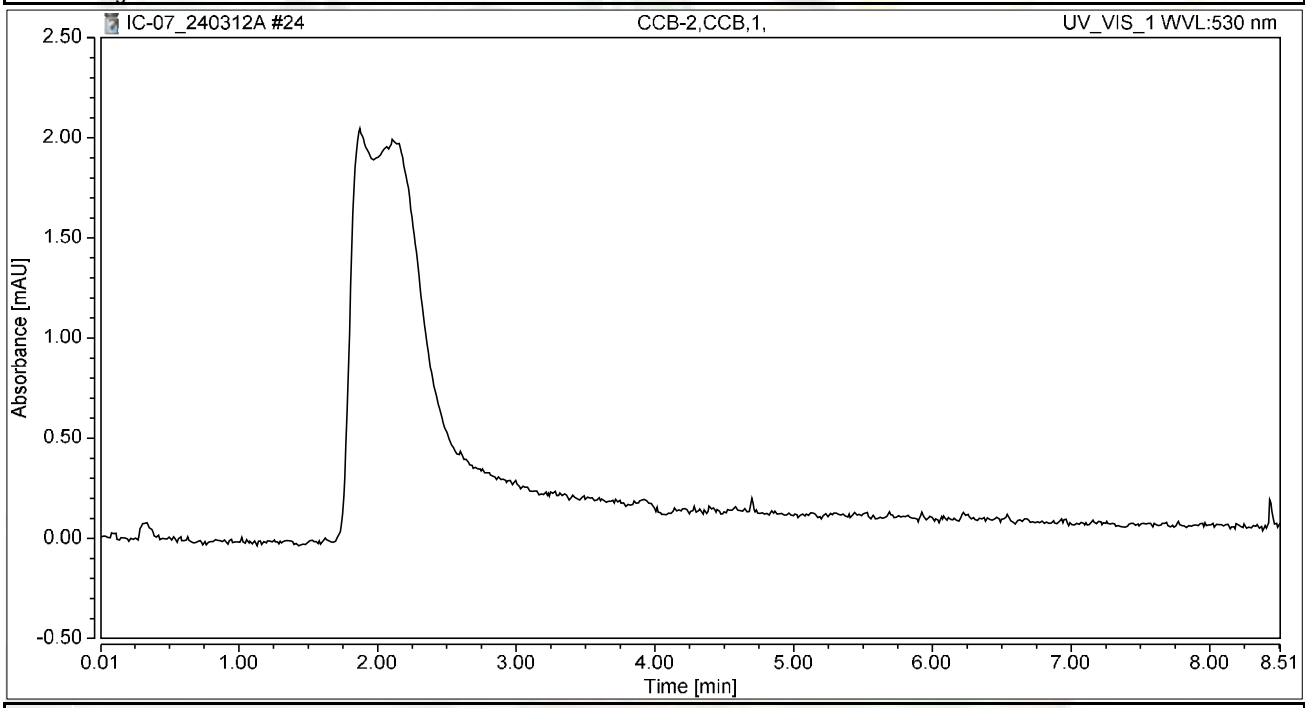
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	2.143	13.720	100.00	100.00	10.0687
Total:			**2.143**	**13.720**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 12:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

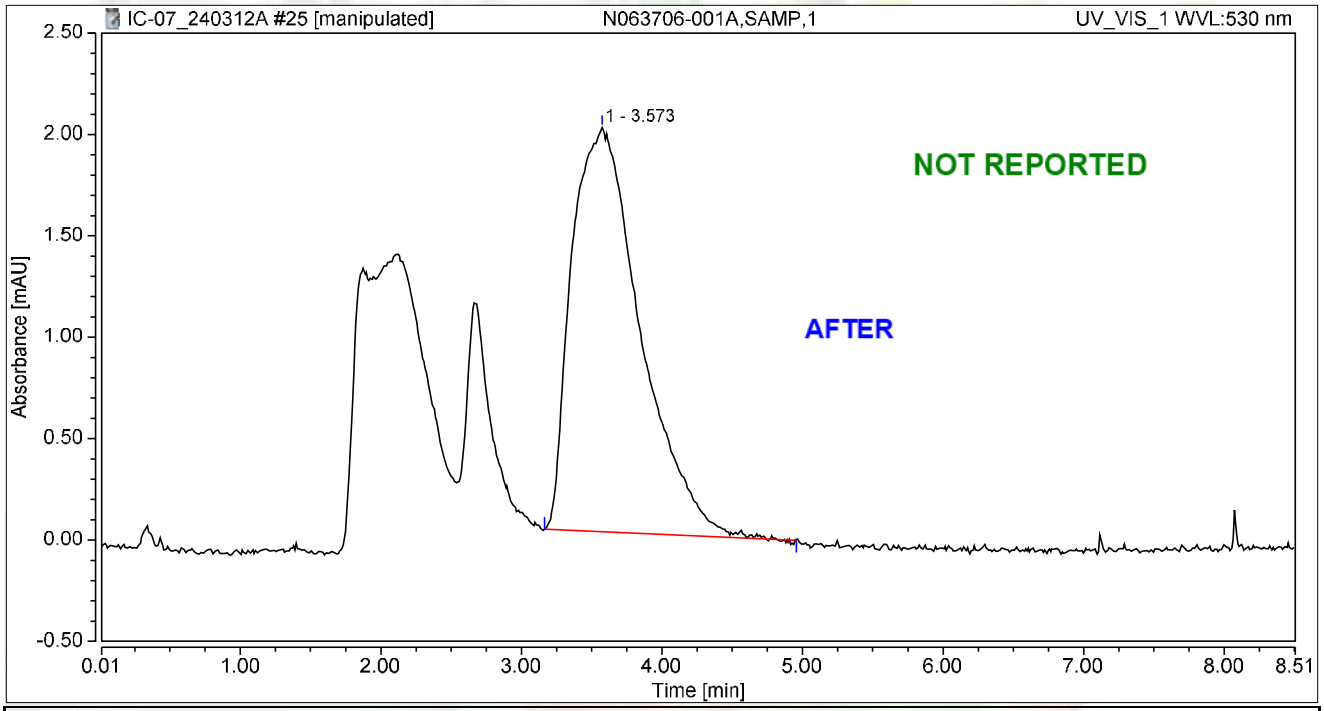
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063706-001A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 12:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

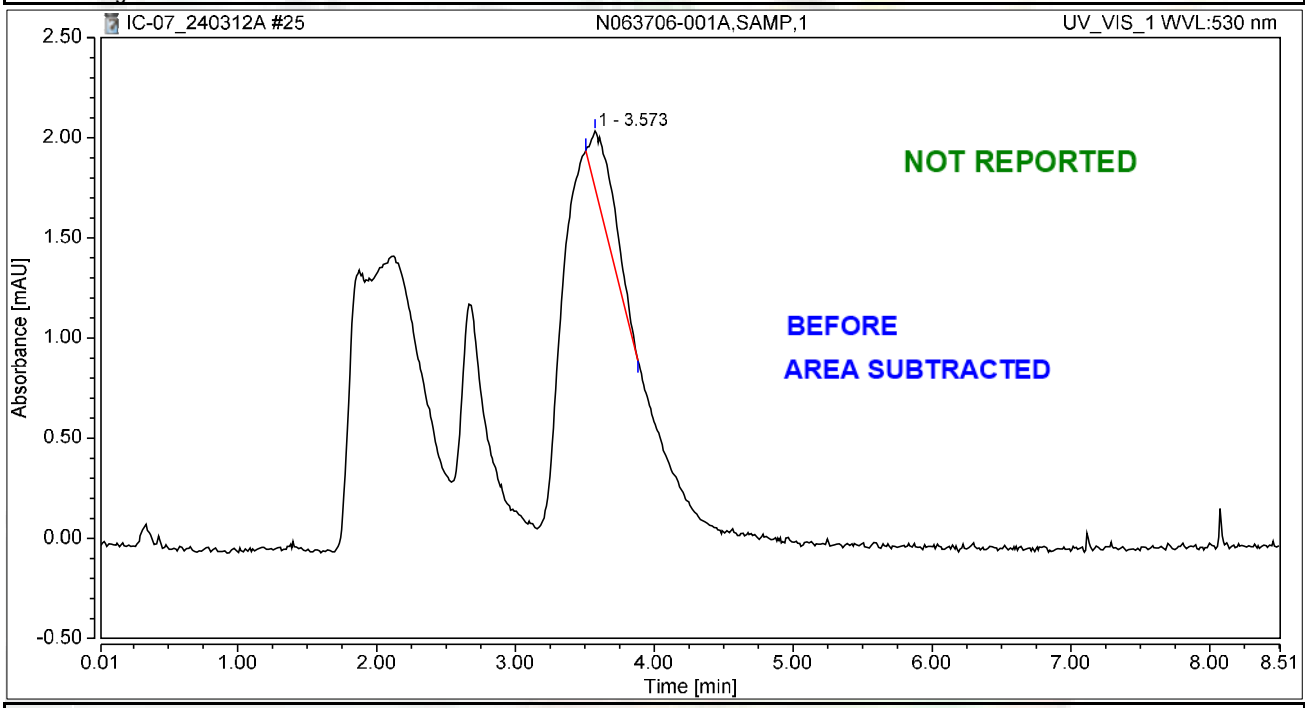
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.573	1.128	1.993	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**1.128**	**1.993**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063706-001A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 12:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

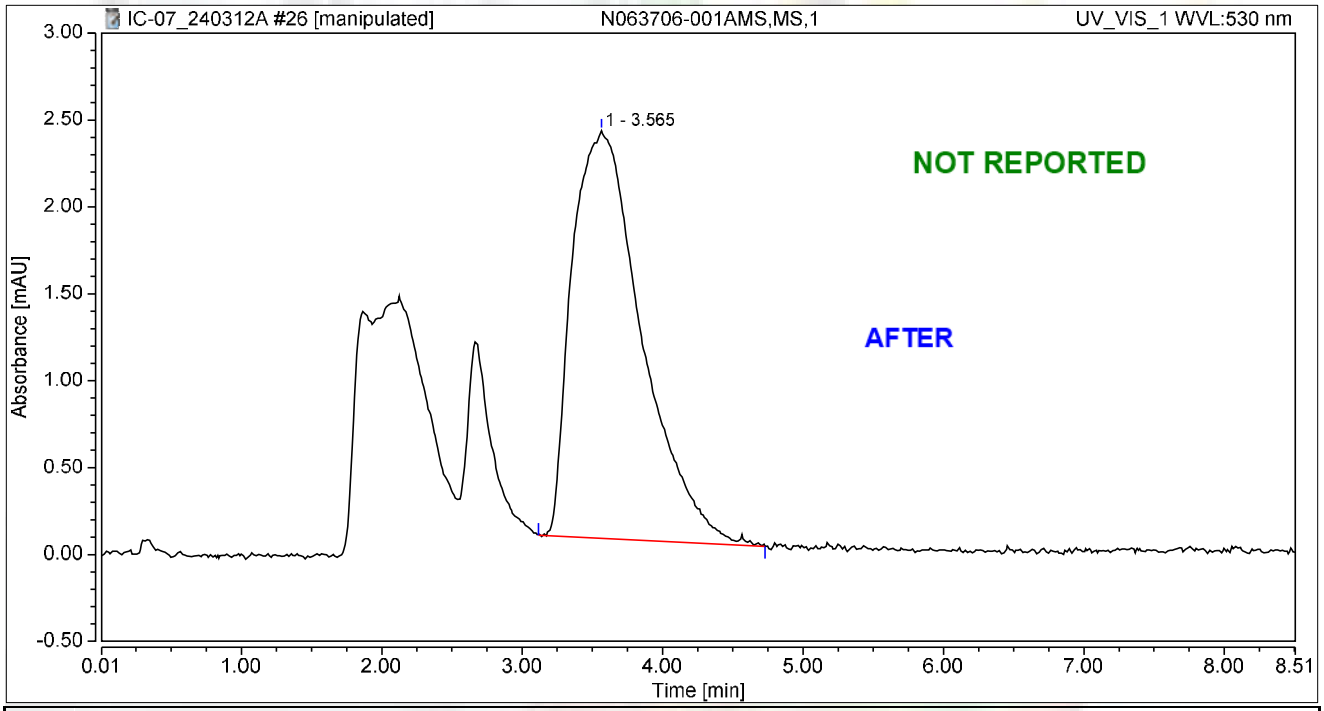
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.573	0.076	0.284	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.076**	**0.284**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063706-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 13:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

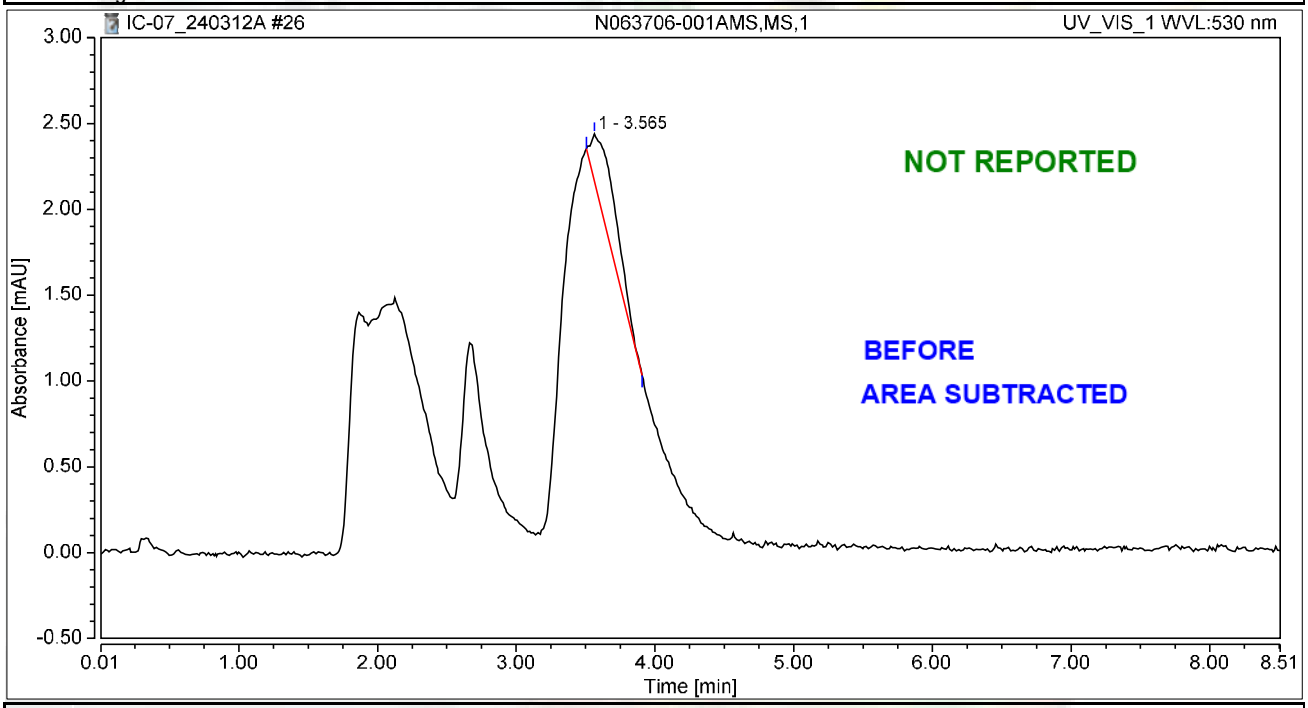
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.565	1.350	2.346	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**1.350**	**2.346**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063706-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 13:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

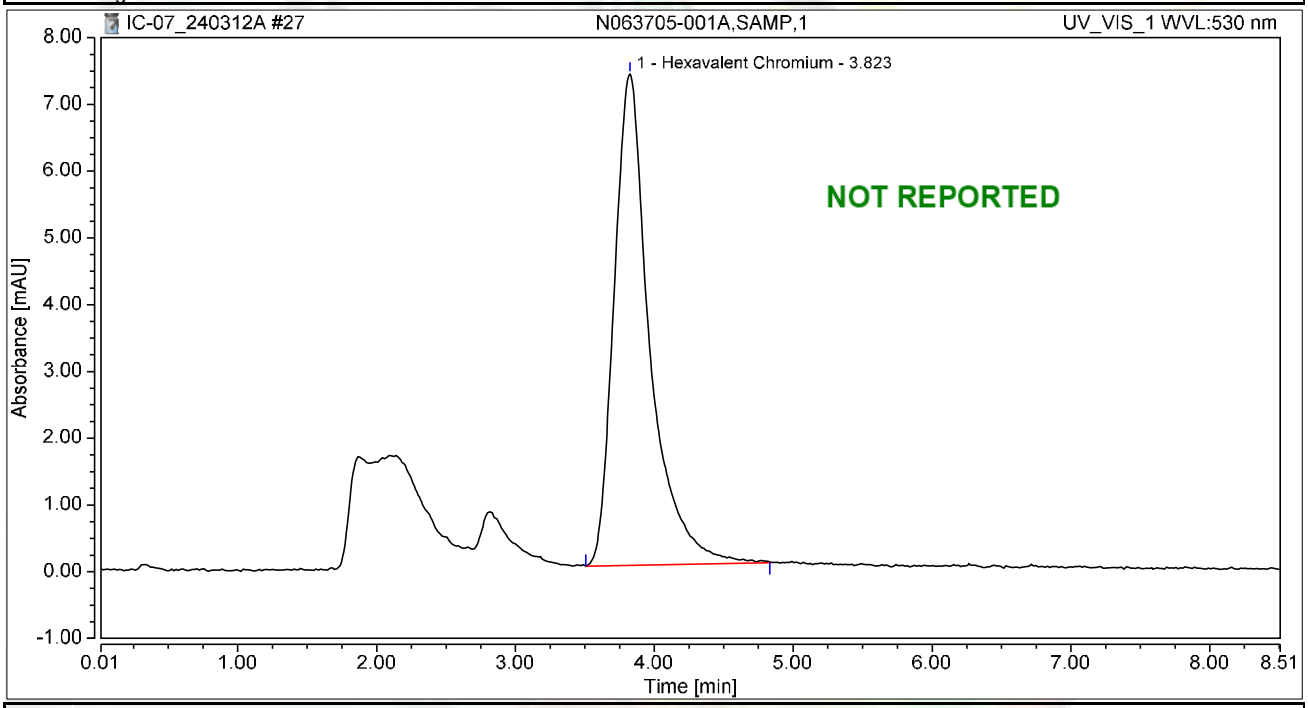
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.565	0.085	0.277	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.085**	**0.277**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-001A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 13:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

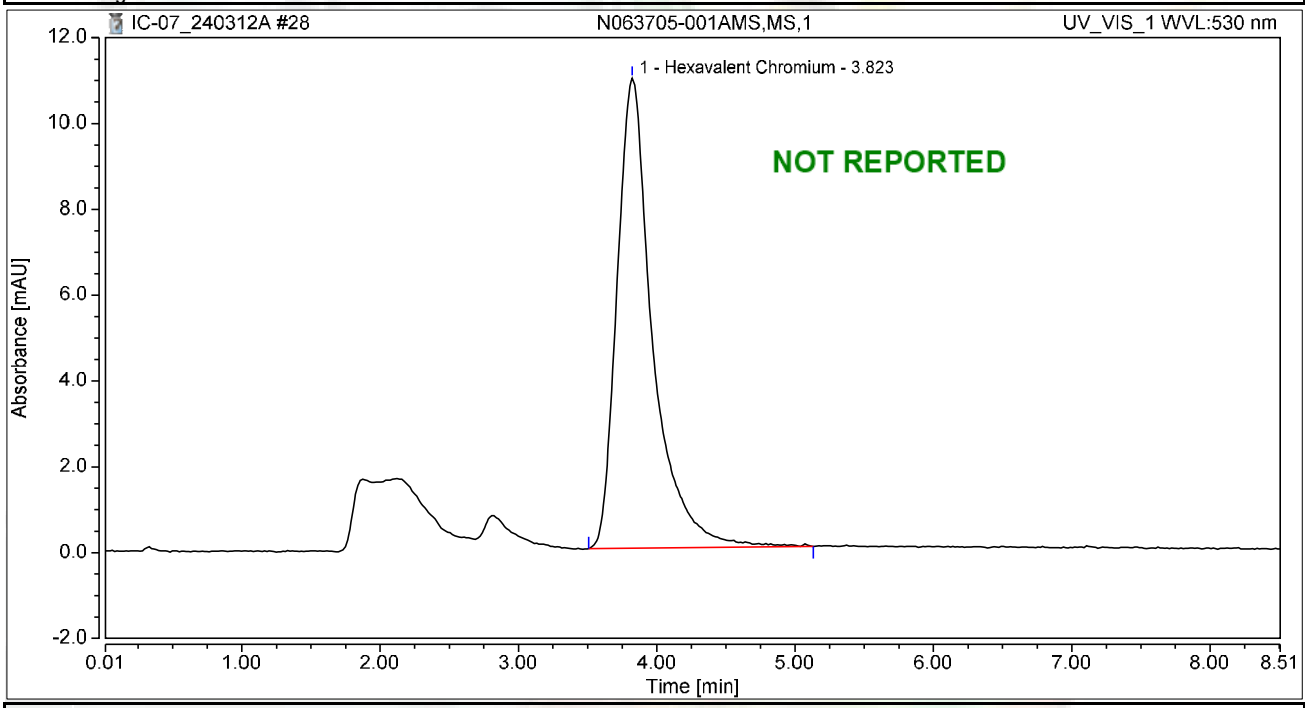
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.823	2.194	7.361	100.00	100.00	10.3069
Total:			**2.194**	**7.361**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 13:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

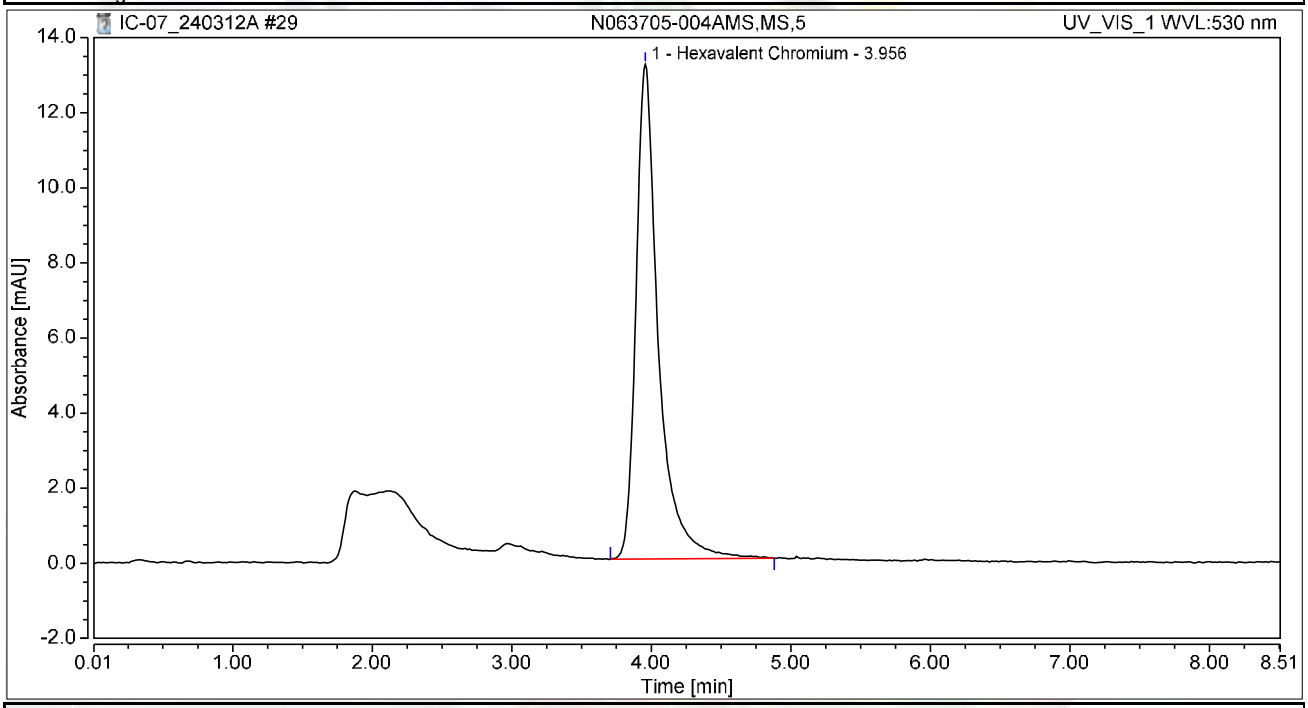
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.823	3.274	10.943	100.00	100.00	15.3815
Total:			**3.274**	**10.943**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-004AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 13:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

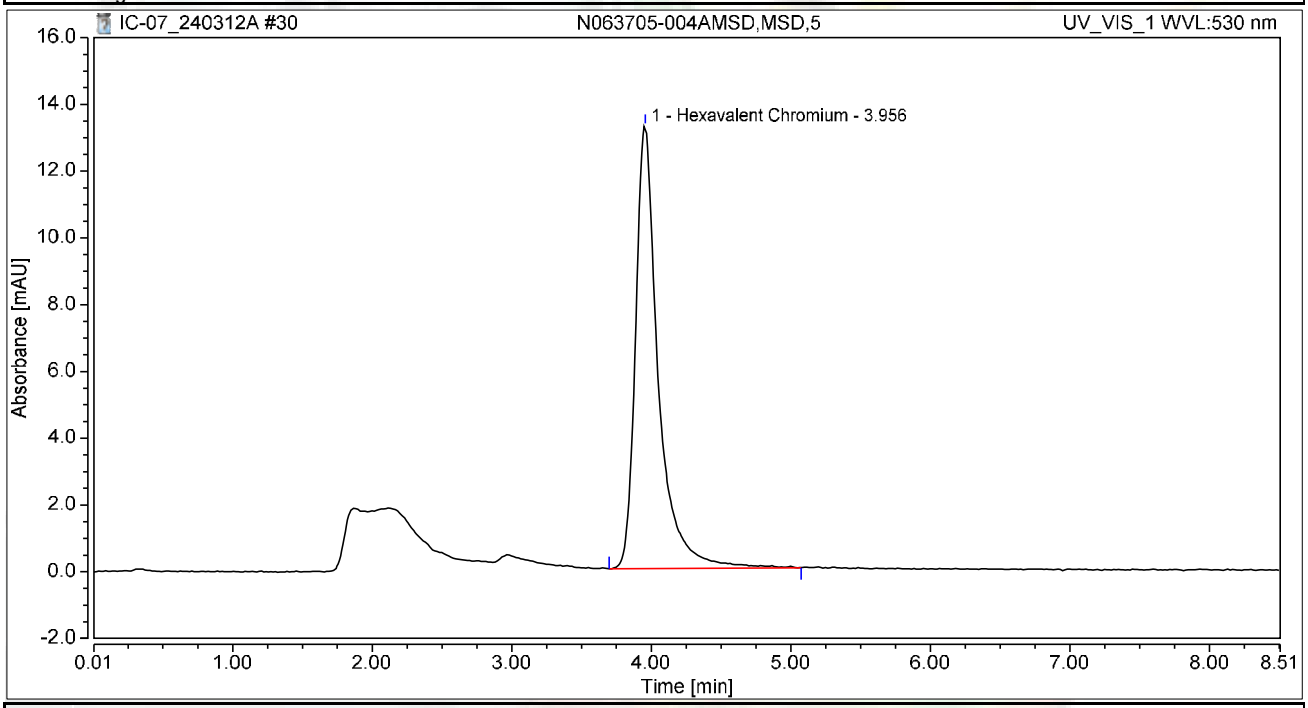
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	2.453	13.173	100.00	100.00	11.5265
Total:			**2.453**	**13.173**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-004AMSD,MSD,5**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

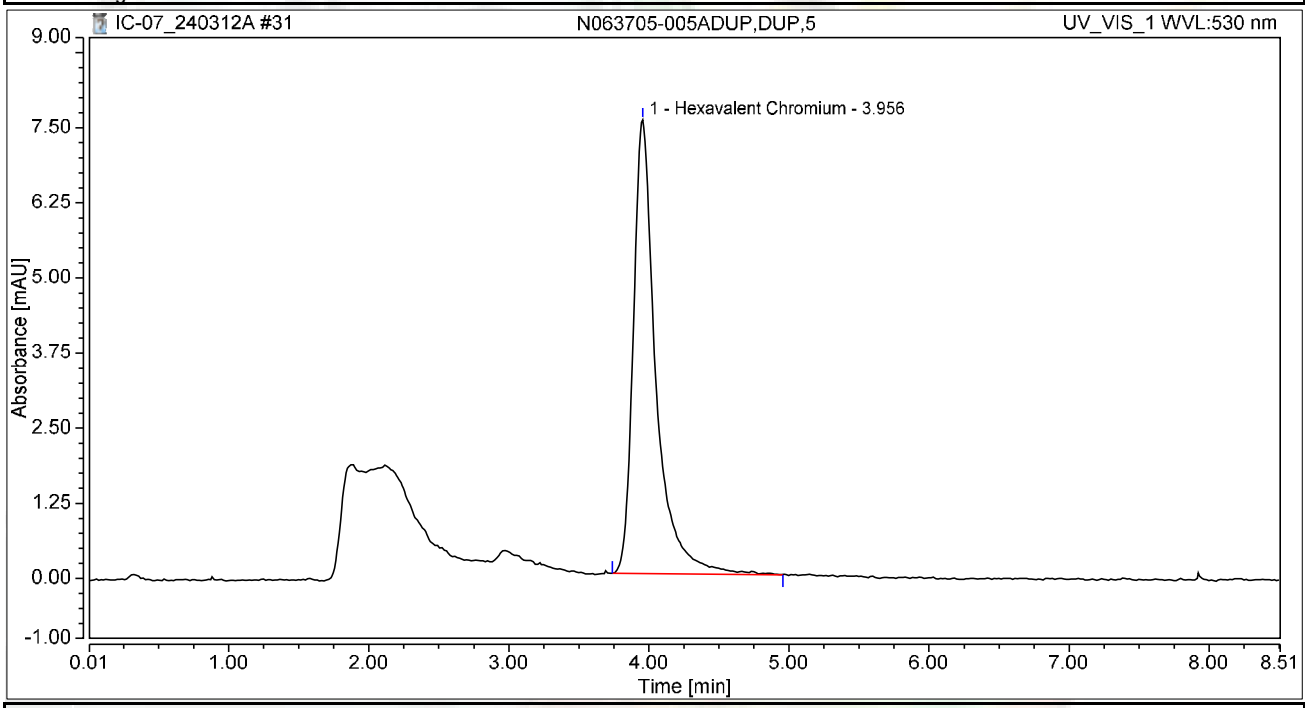
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	2.510	13.251	100.00	100.00	11.7932
Total:			**2.510**	**13.251**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-005ADUP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 13:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

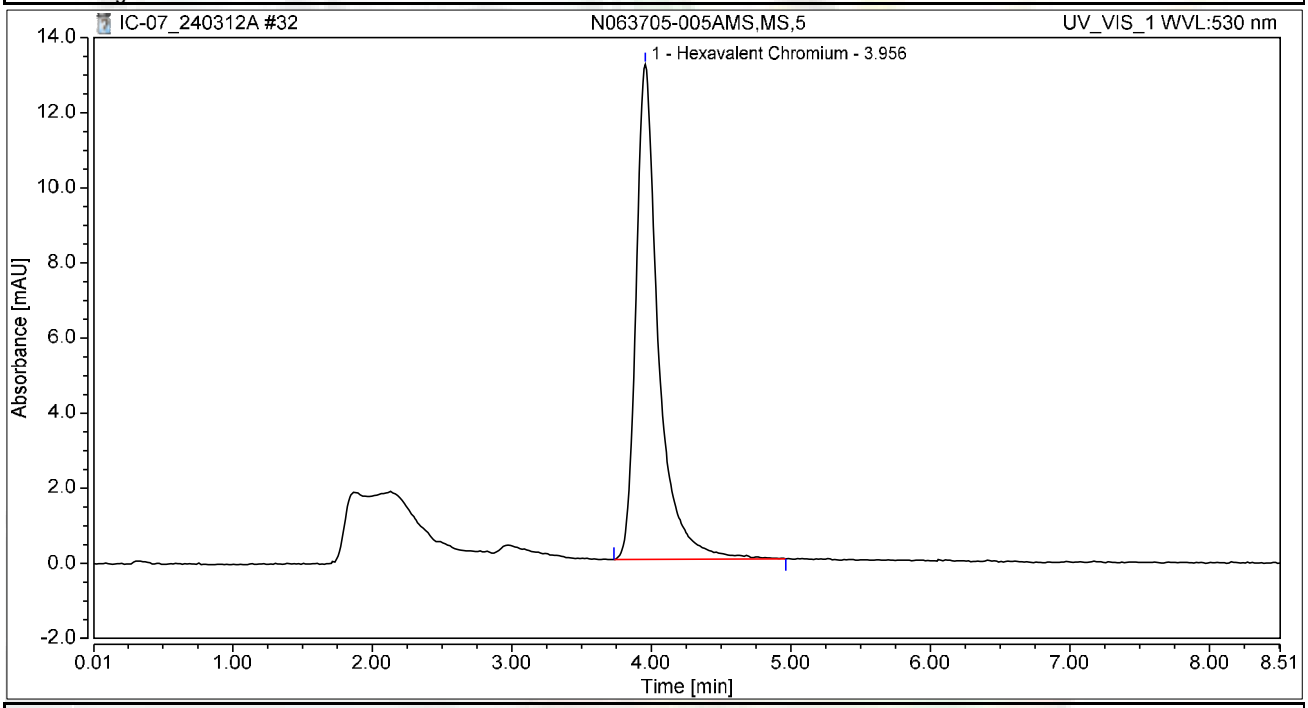
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	1.413	7.550	100.00	100.00	6.6395
Total:			**1.413**	**7.550**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-005AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 13:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

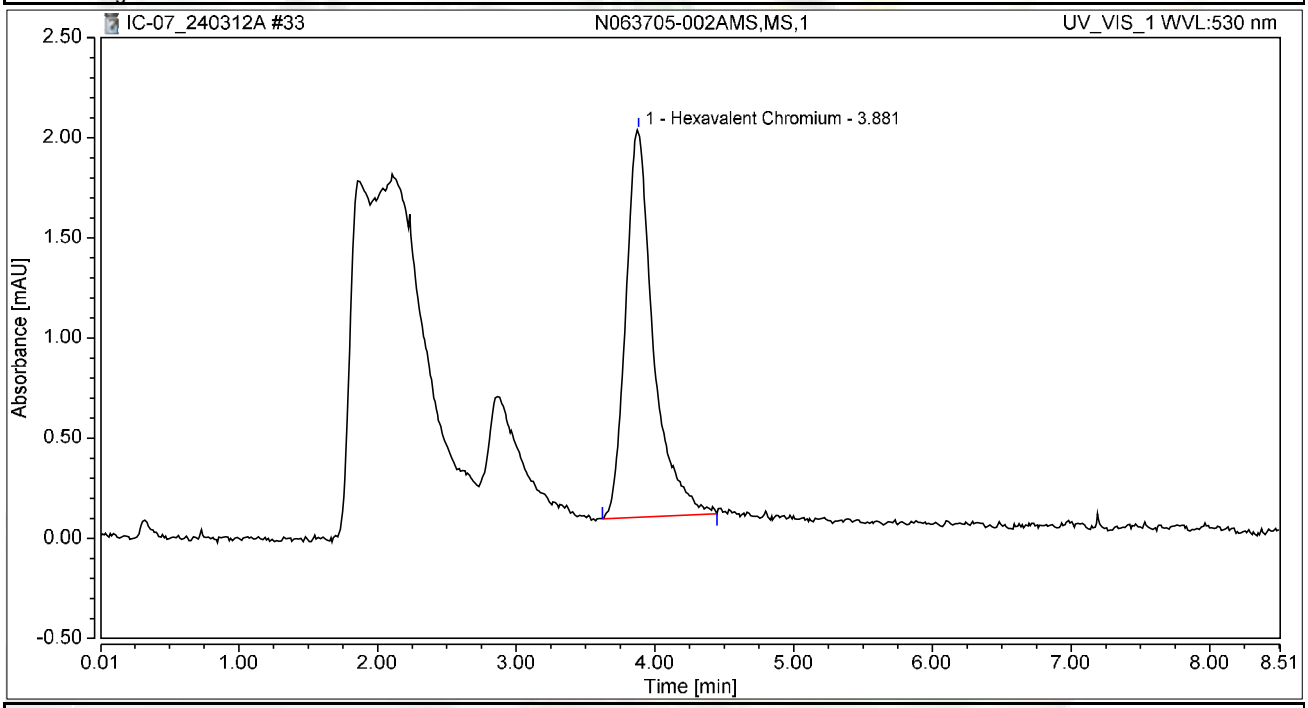
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	2.451	13.170	100.00	100.00	11.5145
Total:			**2.451**	**13.170**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 14:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

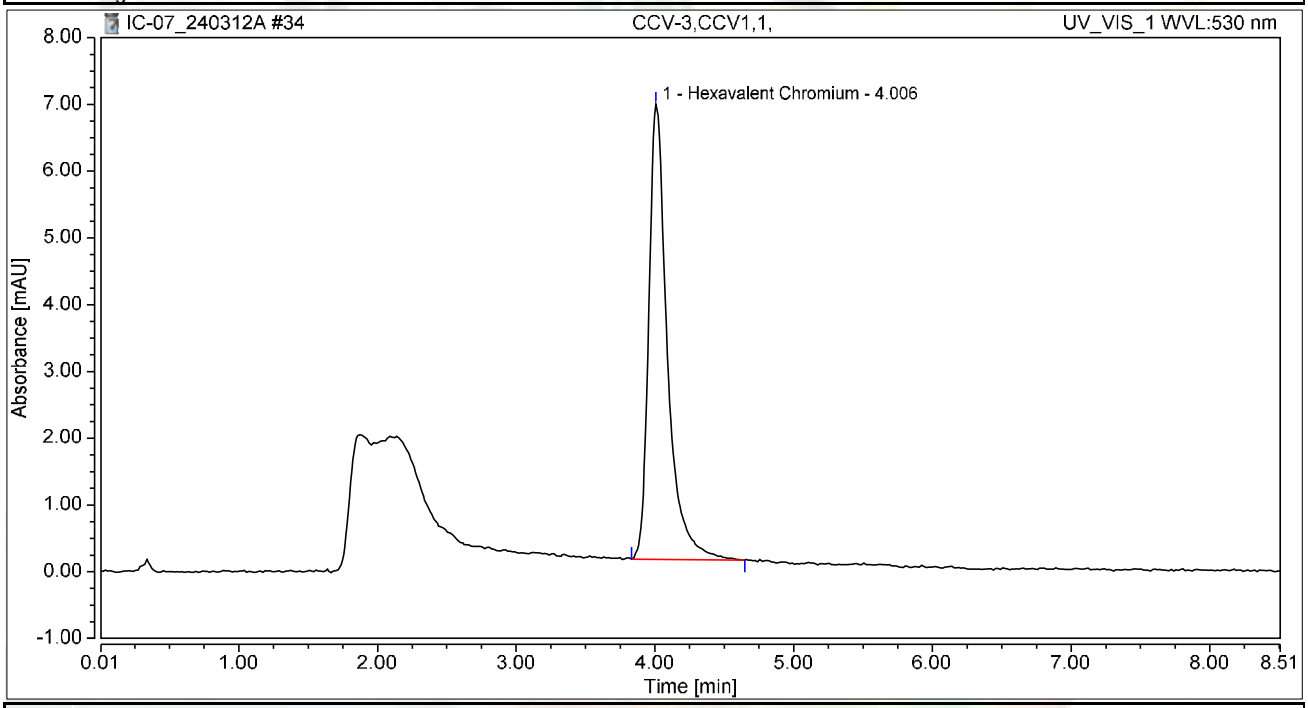
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.881	0.446	1.936	100.00	100.00	2.0939
Total:			**0.446**	**1.936**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 14:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

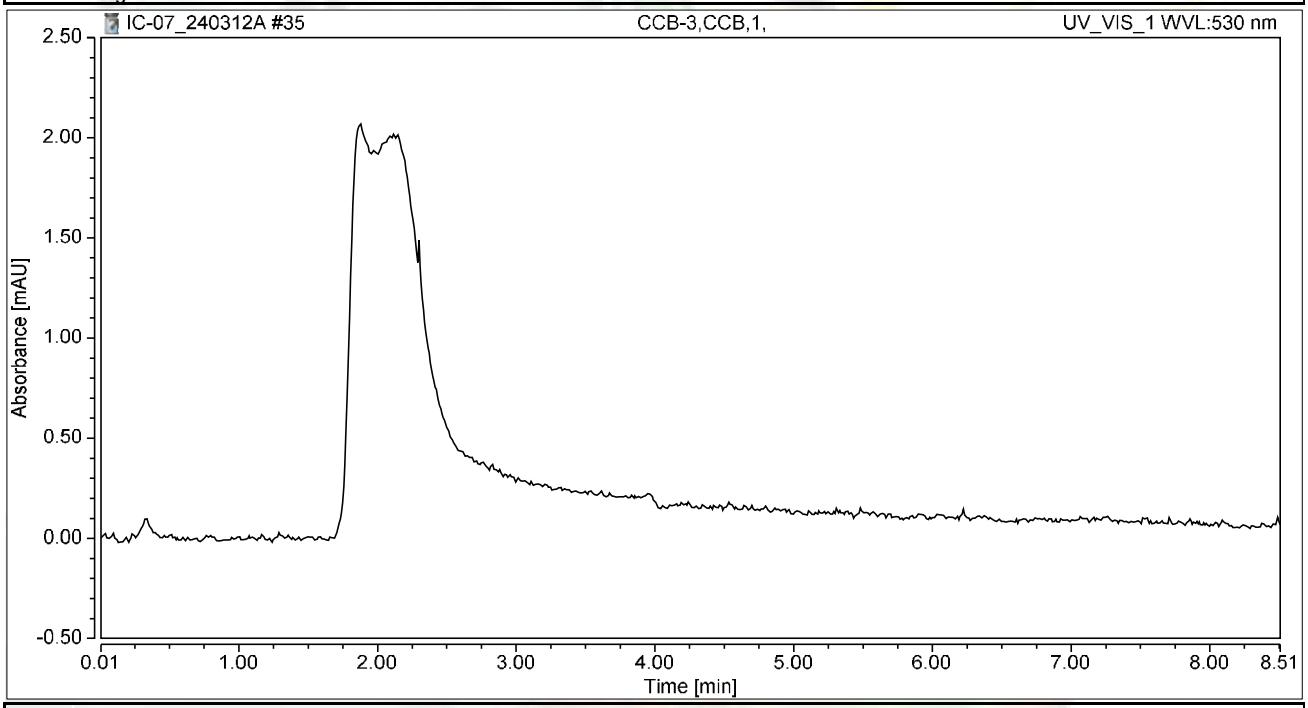
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.061	6.816	100.00	100.00	4.9847
Total:			**1.061**	**6.816**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 14:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

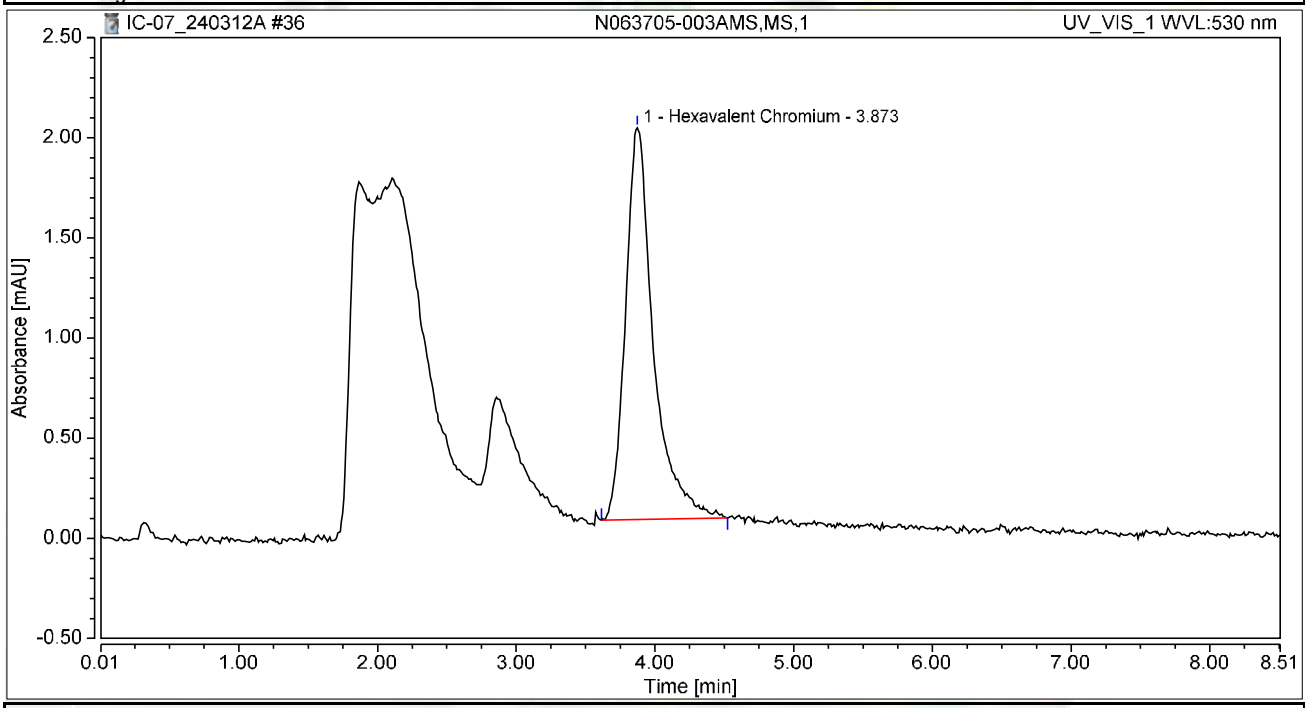
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 14:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

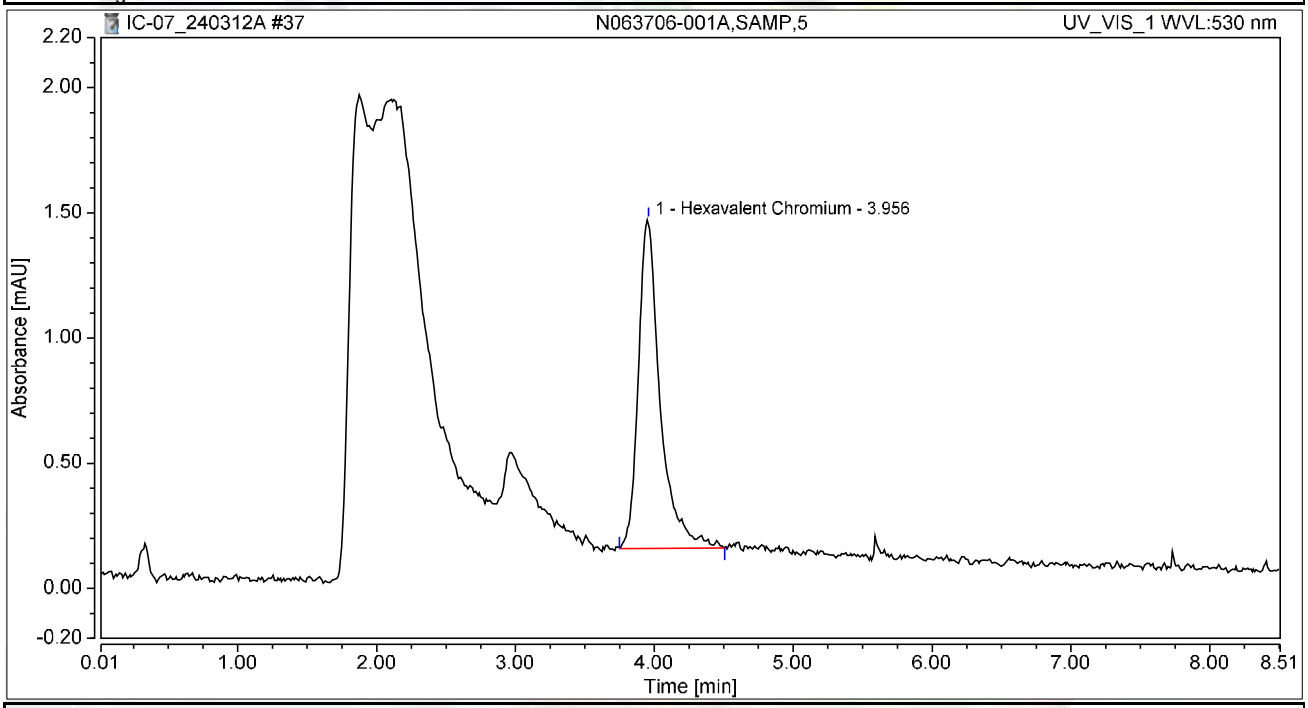
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.873	0.454	1.956	100.00	100.00	2.1346
Total:			**0.454**	**1.956**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063706-001A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 14:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

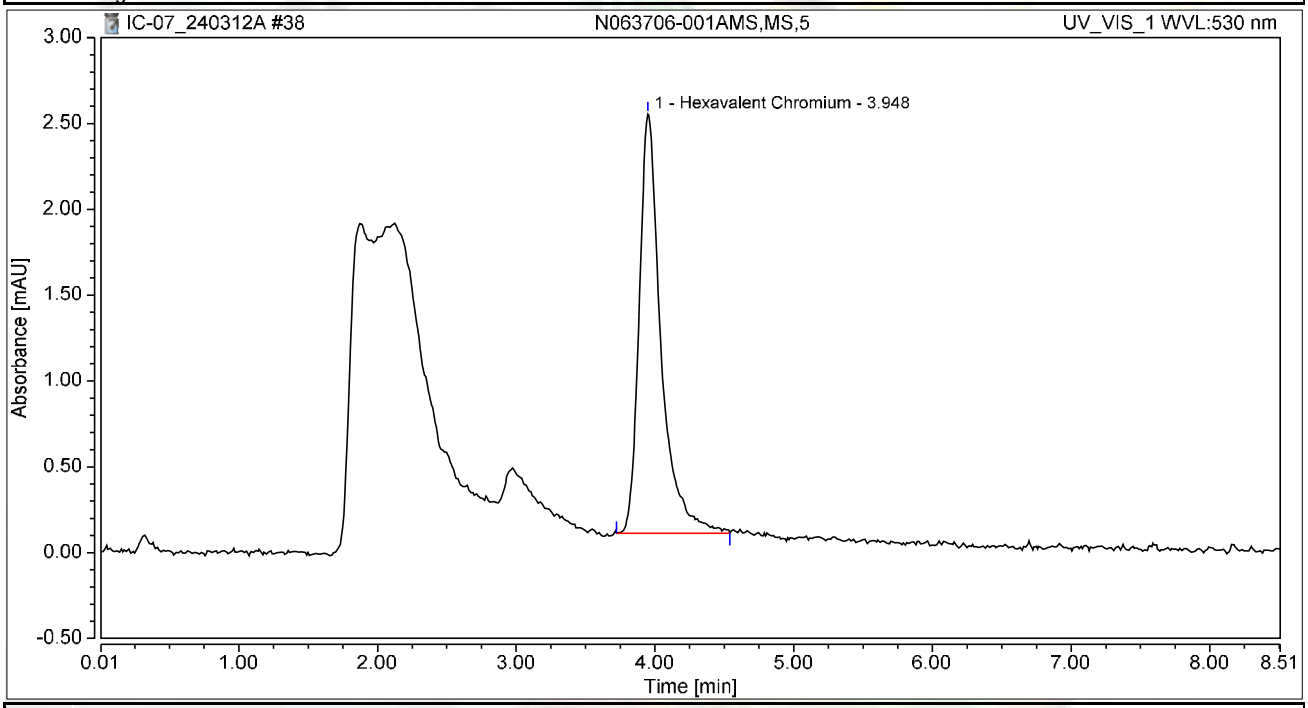
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.240	1.313	100.00	100.00	1.1257
Total:			**0.240**	**1.313**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063706-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 14:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

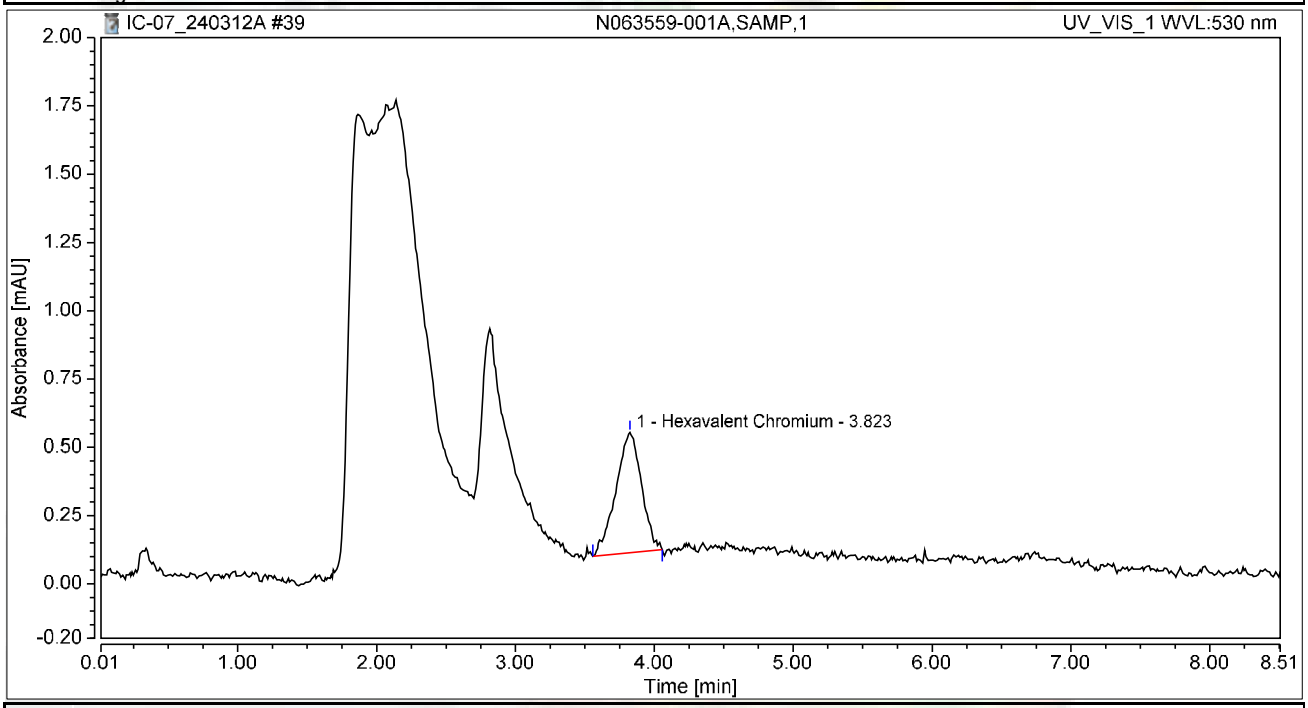
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.445	2.444	100.00	100.00	2.0894
Total:			**0.445**	**2.444**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-001A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 15:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

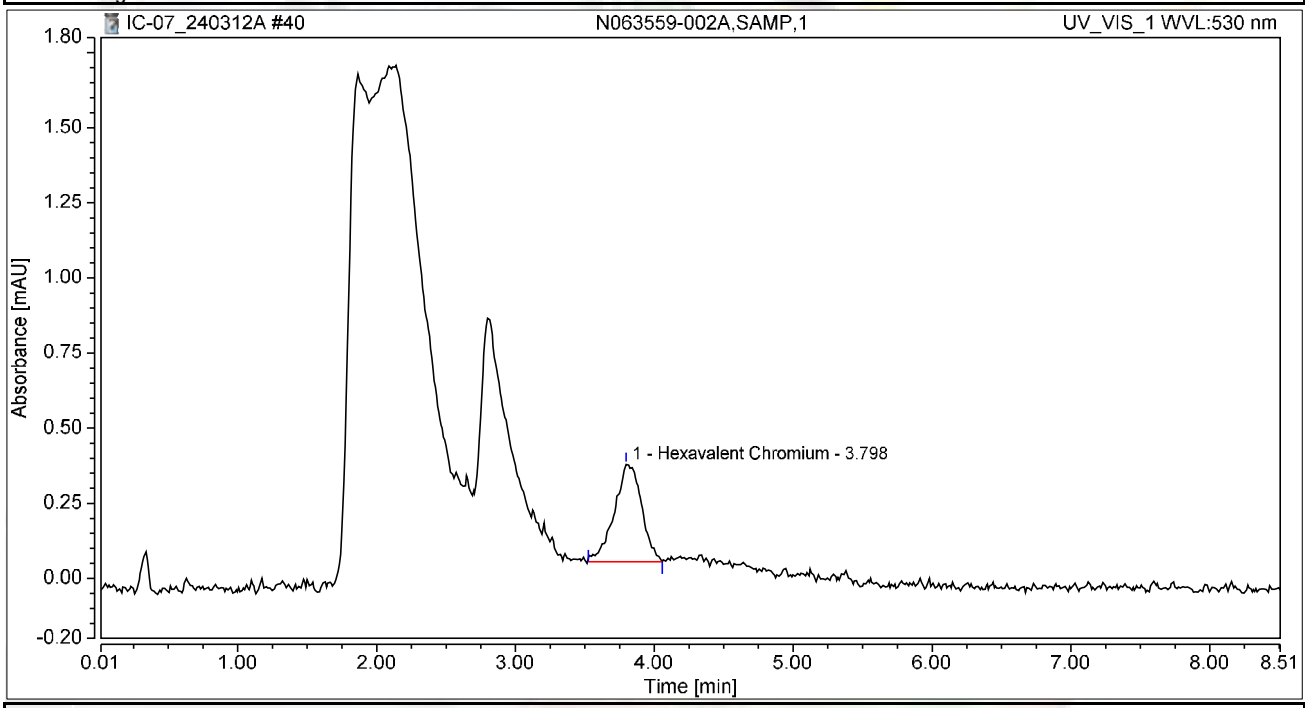
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.823	0.094	0.440	100.00	100.00	0.4413
Total:			**0.094**	**0.440**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-002A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 15:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

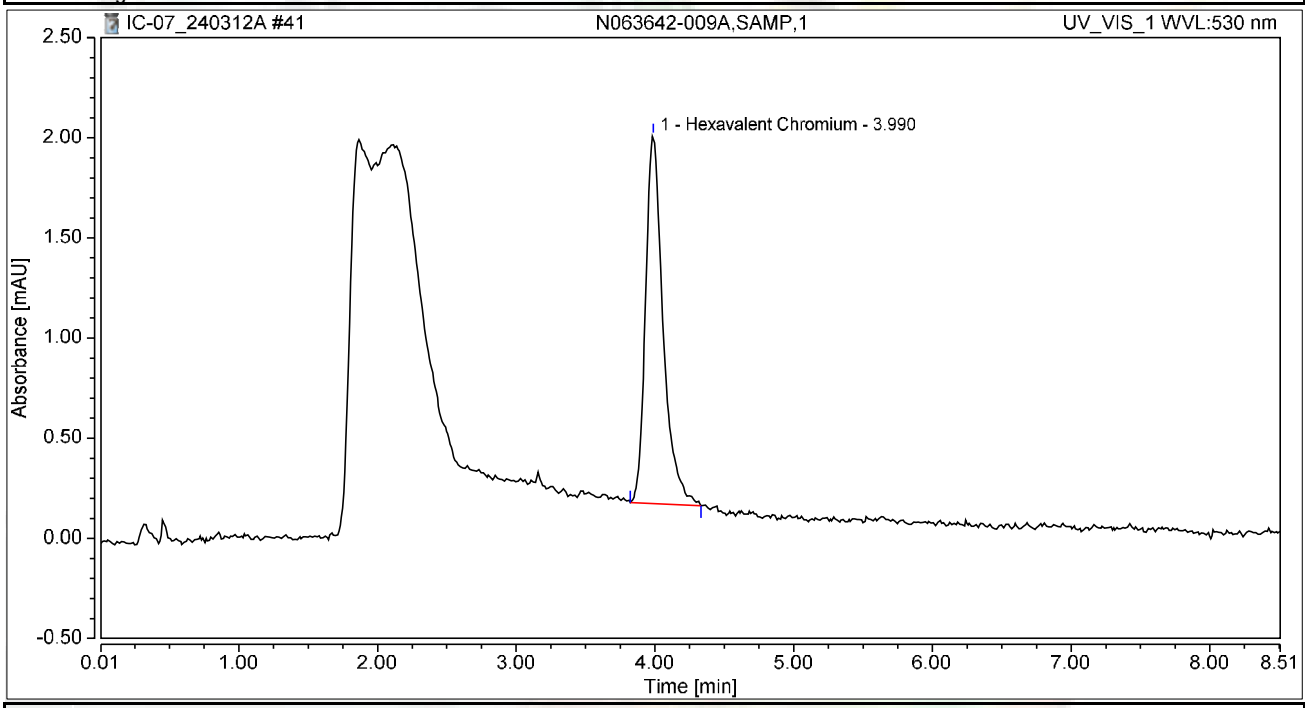
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.798	0.074	0.323	100.00	100.00	0.3475
Total:			**0.074**	**0.323**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 15:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

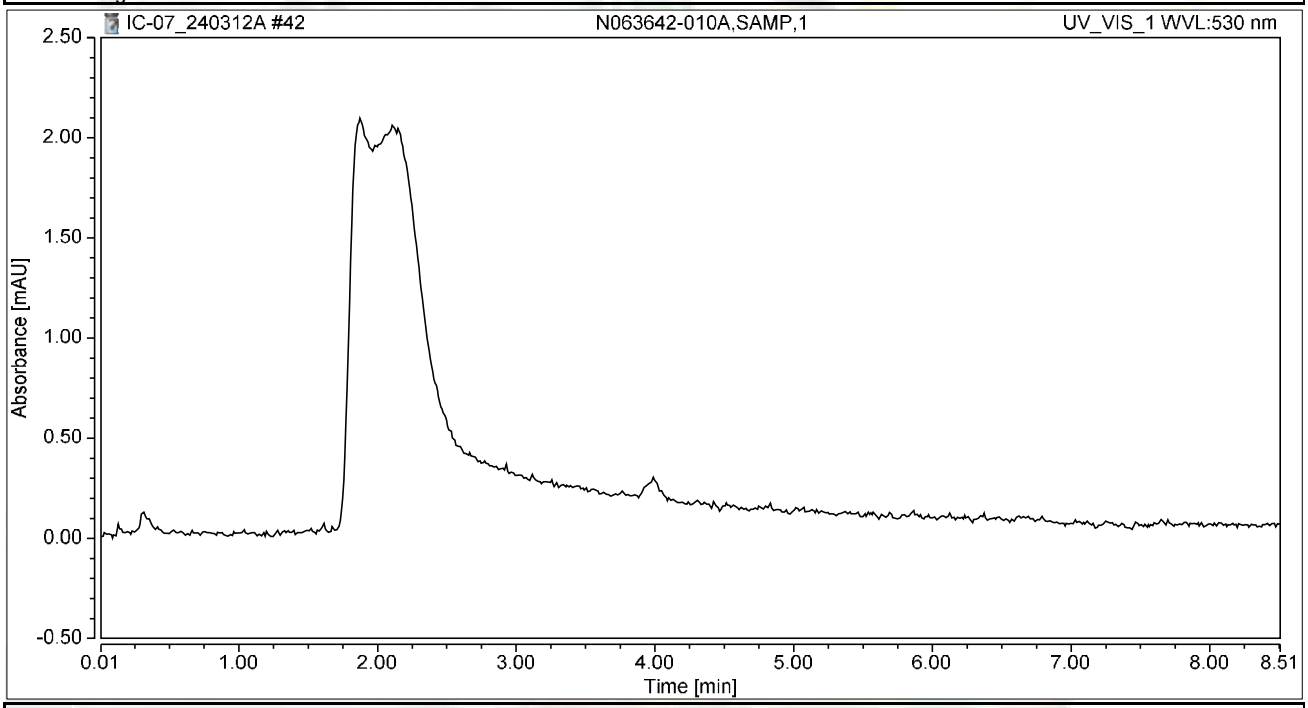
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.270	1.839	100.00	100.00	1.2695
Total:			**0.270**	**1.839**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-010A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 15:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

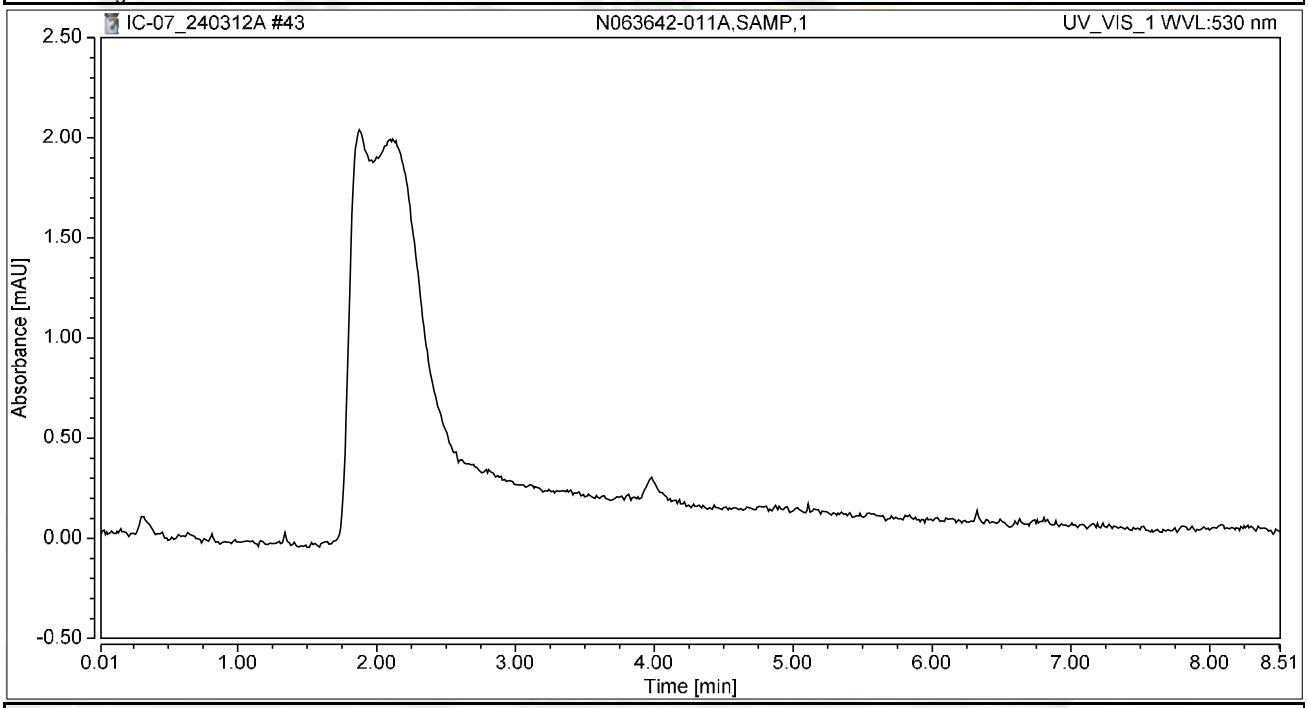
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-011A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 15:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

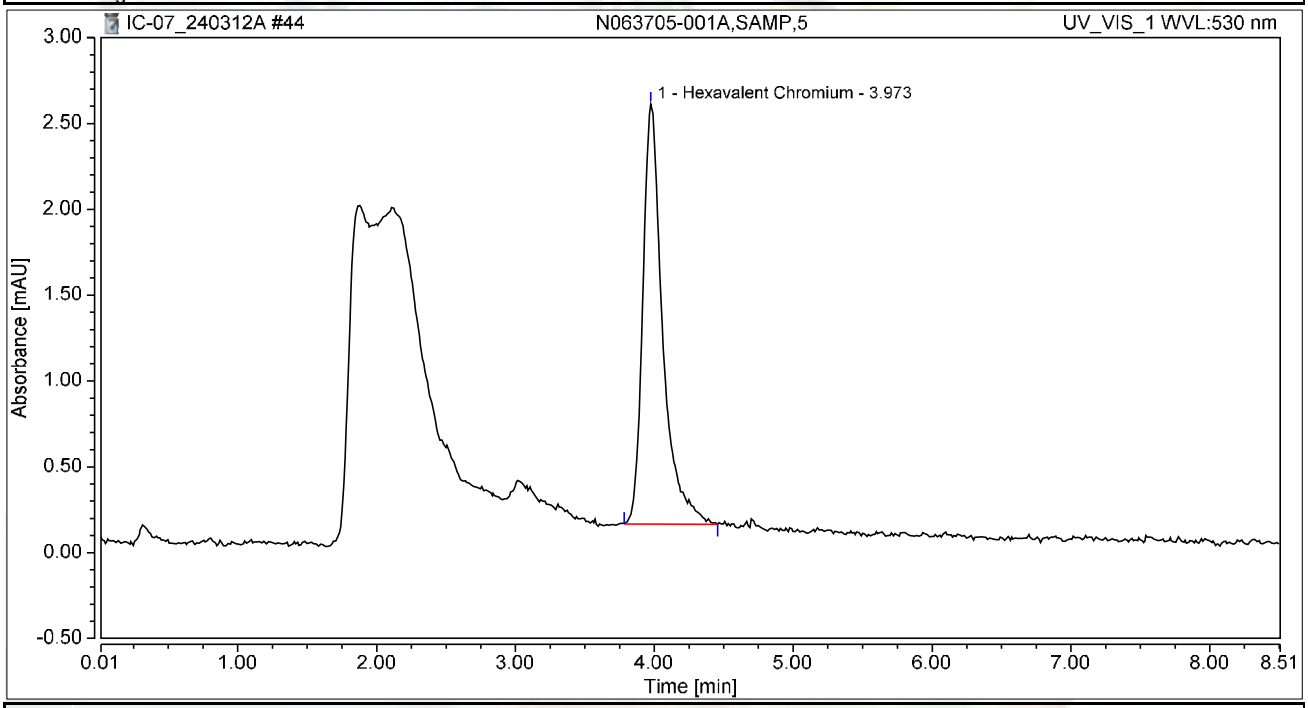
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-001A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 15:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

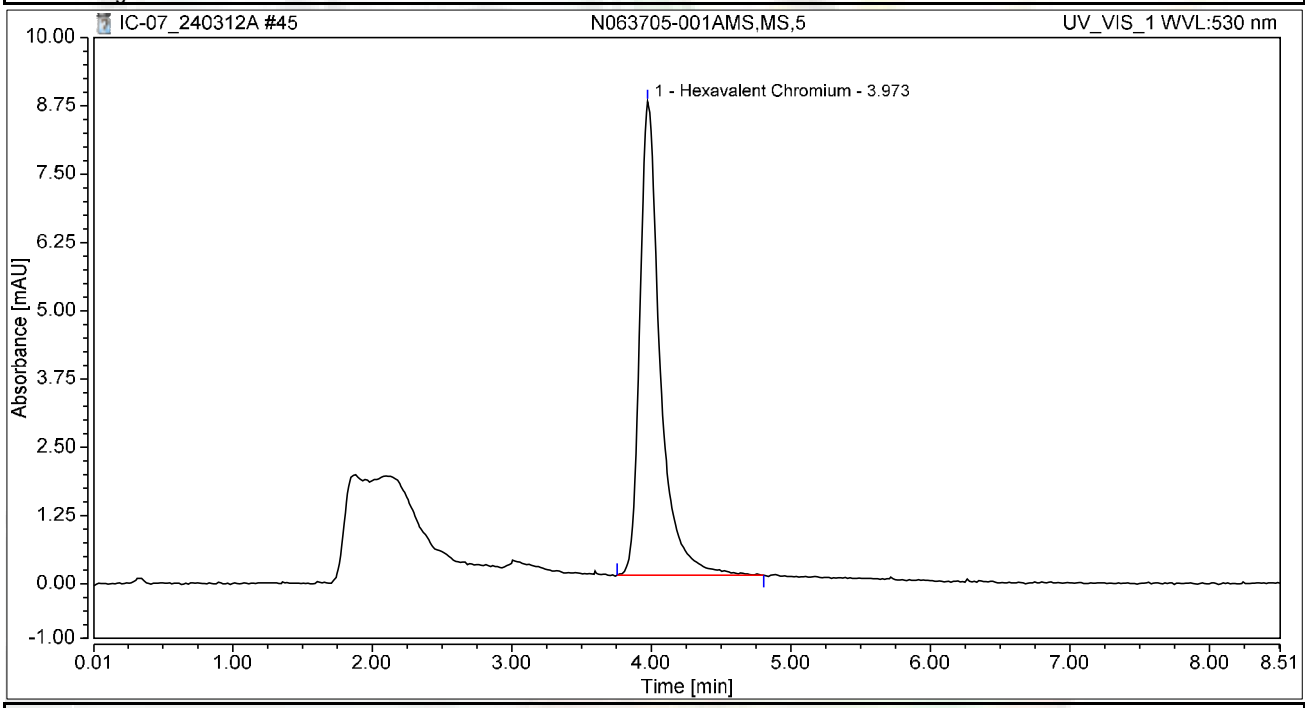
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.407	2.448	100.00	100.00	1.9130
Total:			**0.407**	**2.448**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 16:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

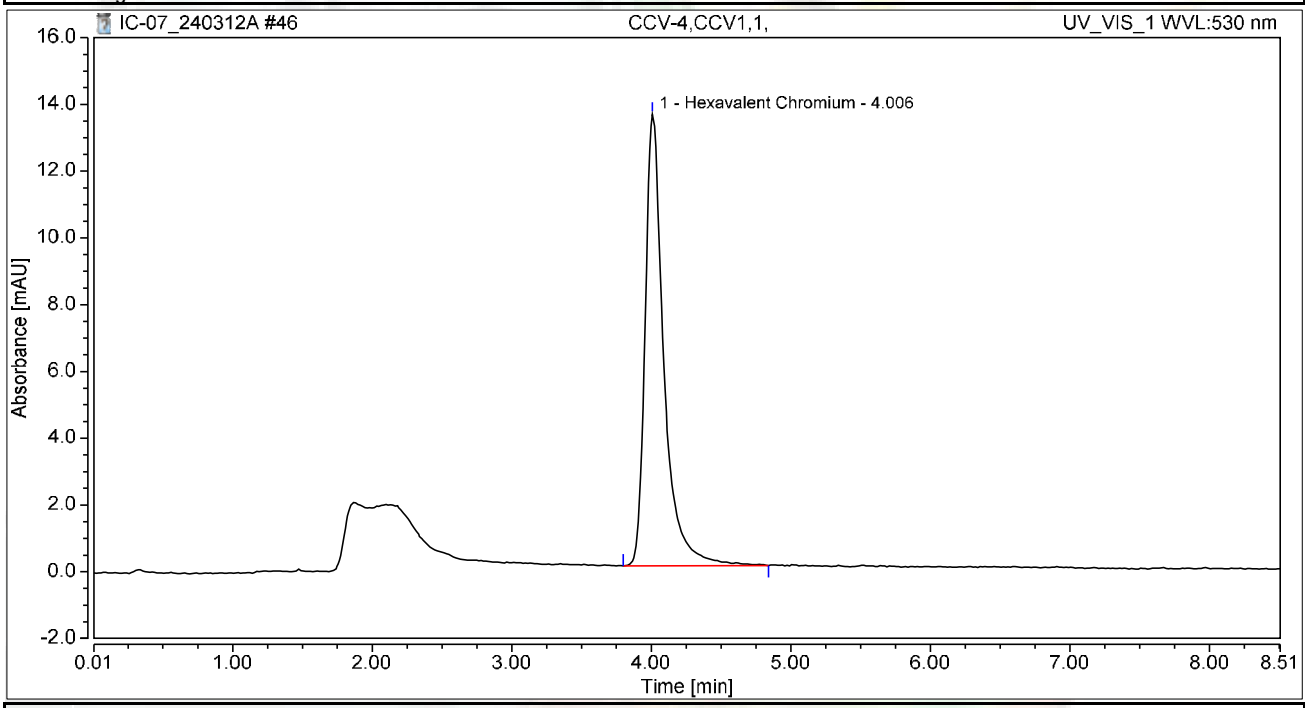
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	1.474	8.671	100.00	100.00	6.9244
Total:			**1.474**	**8.671**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 16:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

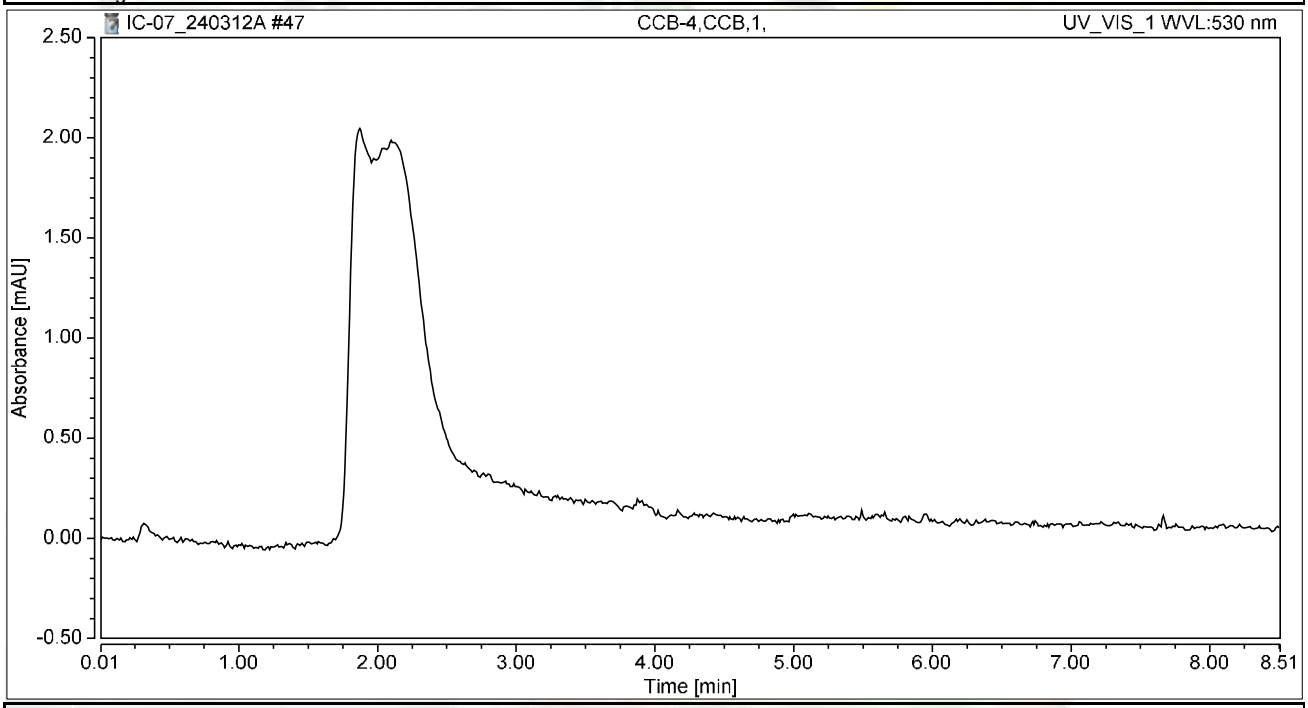
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	2.112	13.532	100.00	100.00	9.9232
Total:			**2.112**	**13.532**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 16:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

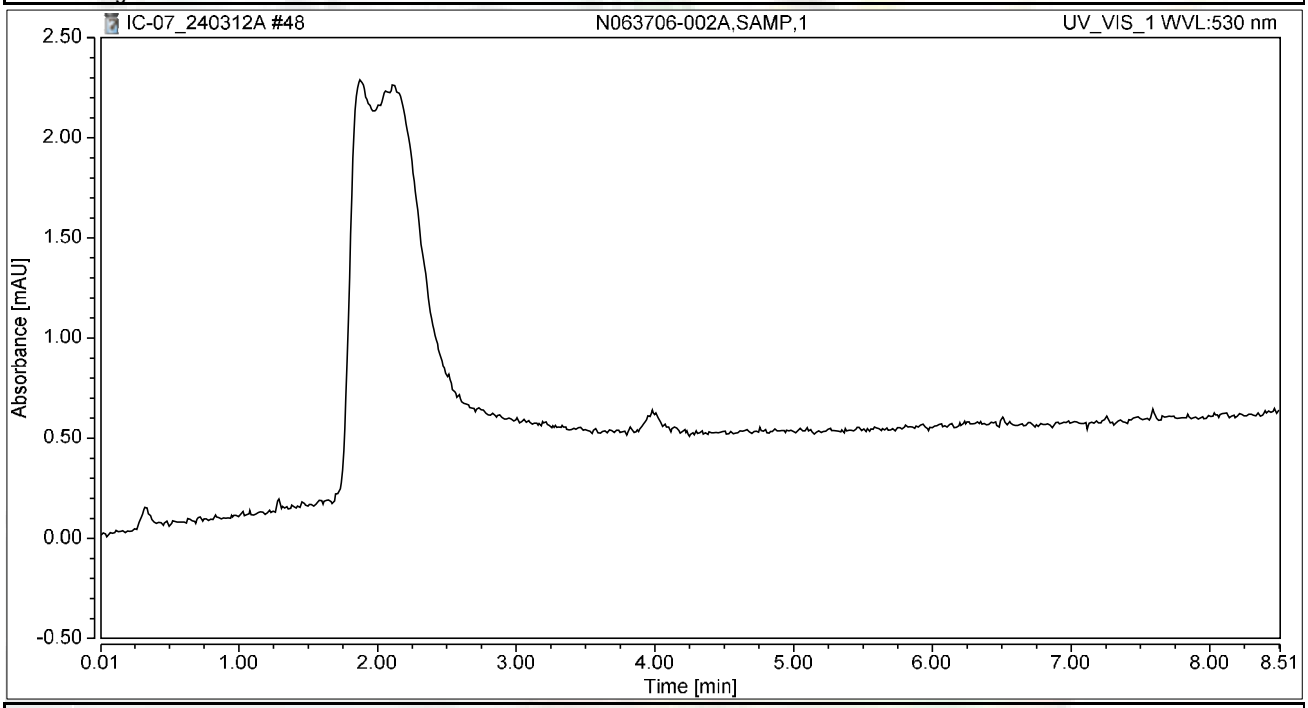
JRB 3/13/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063706-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 16:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

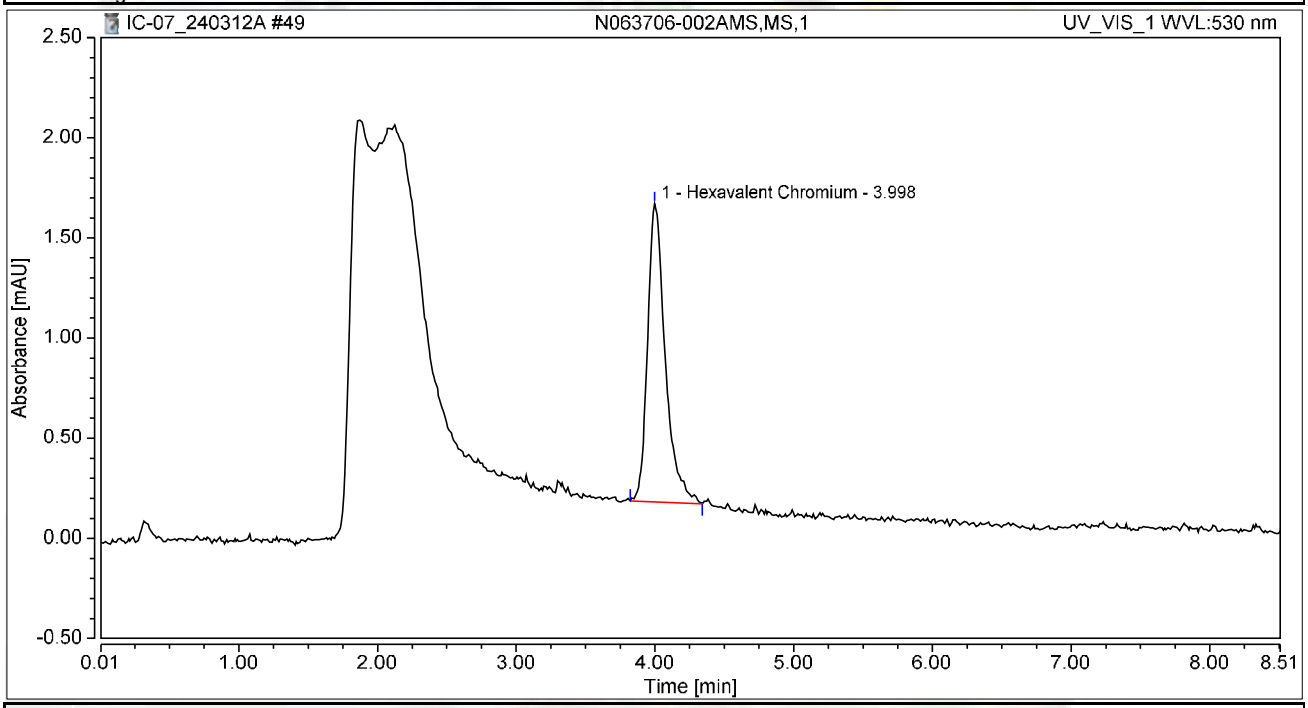
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063706-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 16:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

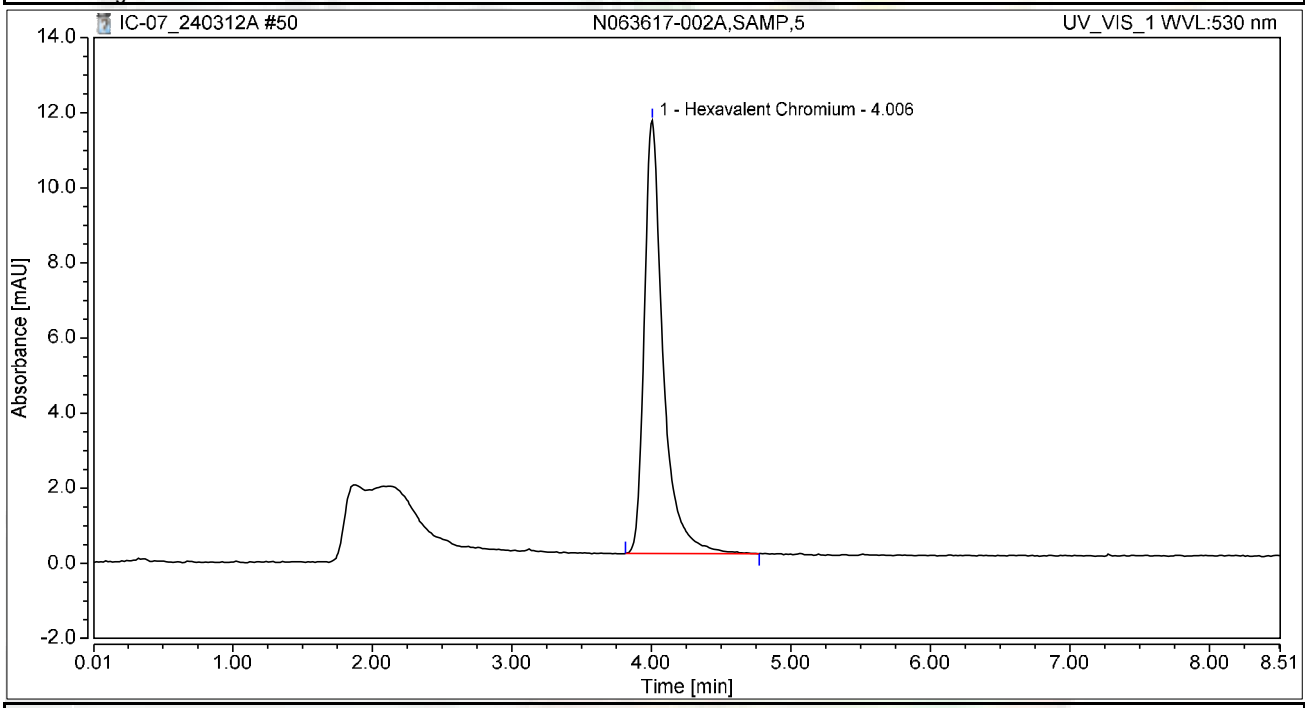
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.220	1.490	100.00	100.00	1.0347
Total:			**0.220**	**1.490**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 17:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

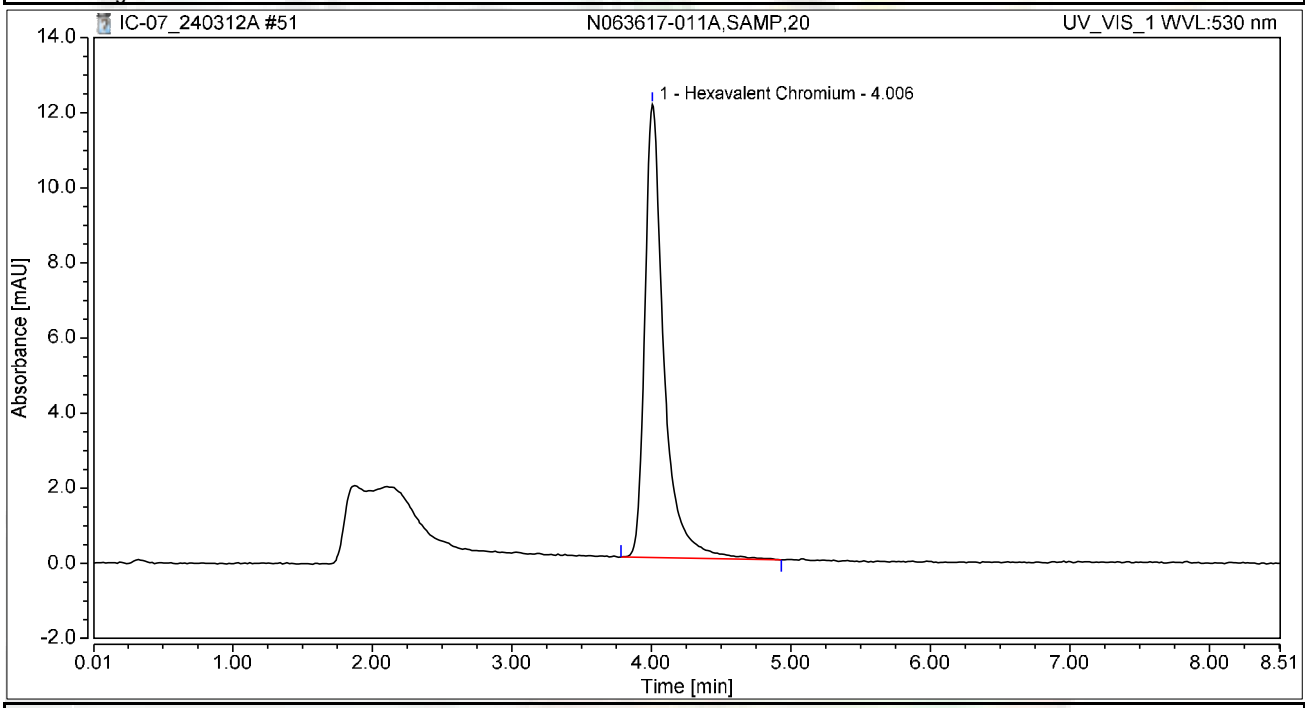
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.803	11.526	100.00	100.00	8.4714
Total:			**1.803**	**11.526**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-011A,SAMP,20**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 17:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

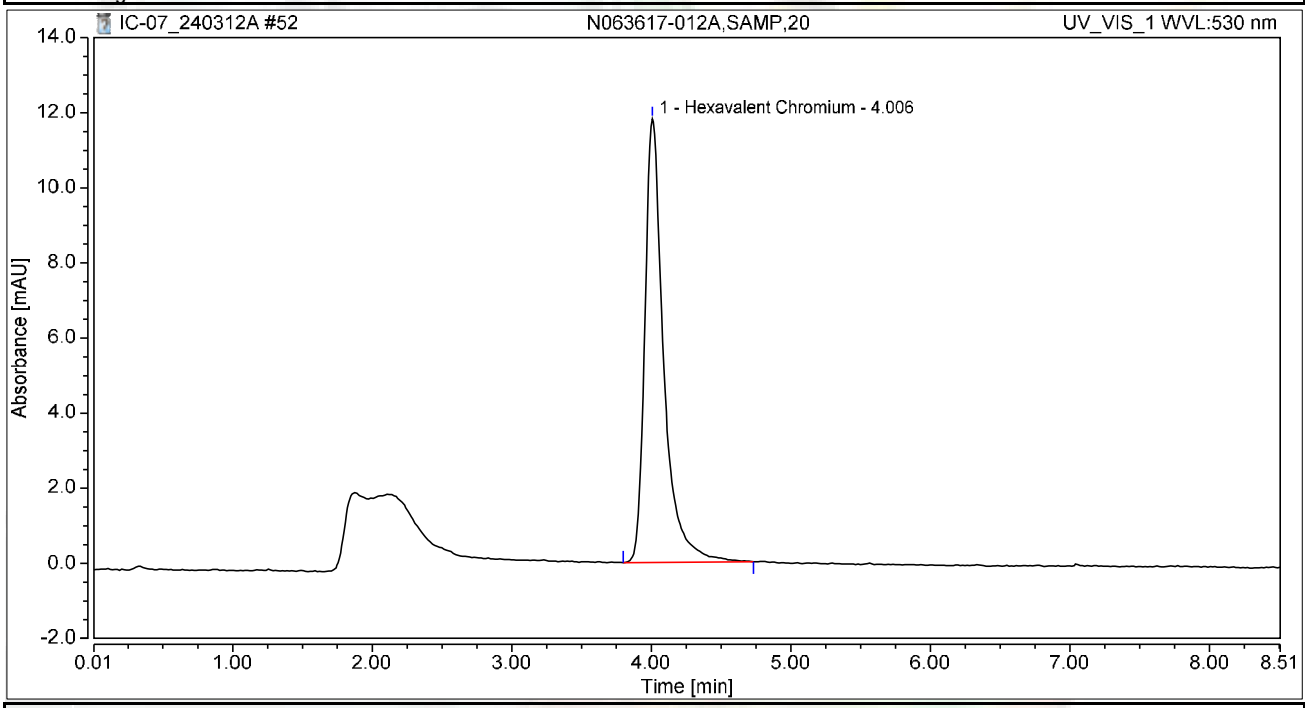
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.910	12.068	100.00	100.00	8.9719
Total:			**1.910**	**12.068**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-012A,SAMP,20**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 17:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

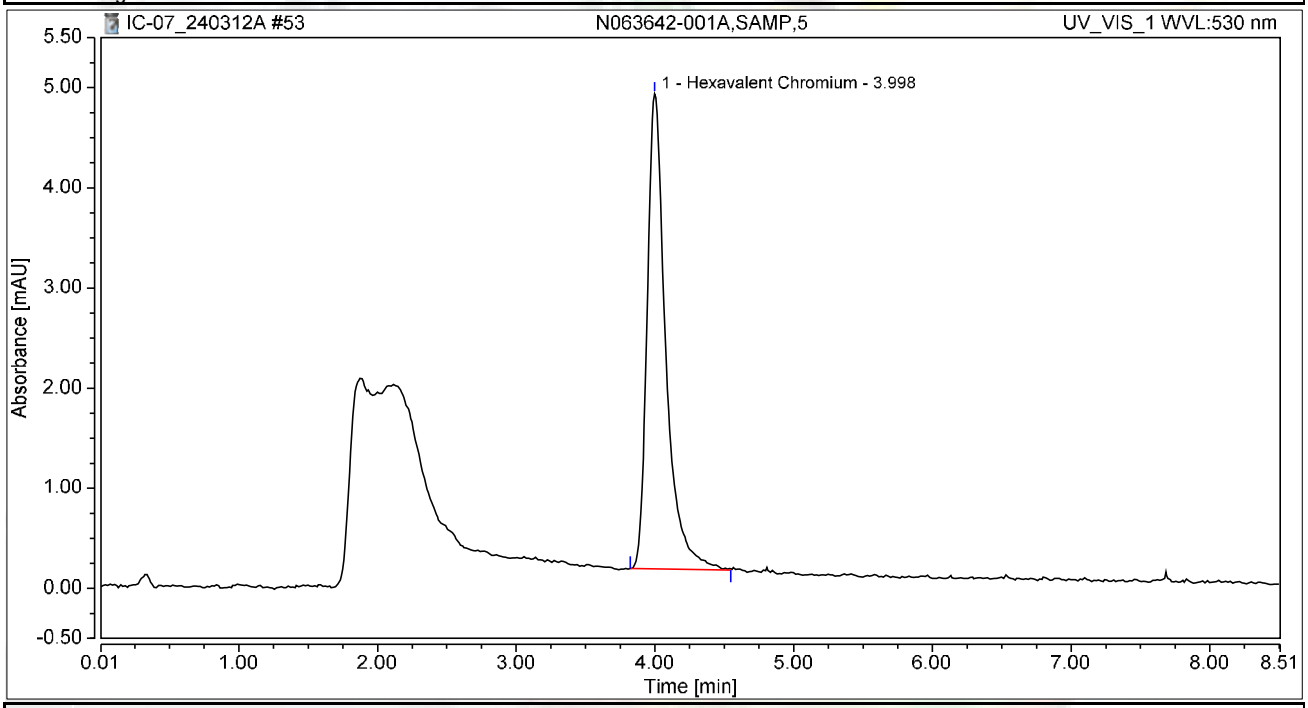
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.855	11.817	100.00	100.00	8.7145
Total:			**1.855**	**11.817**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 17:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

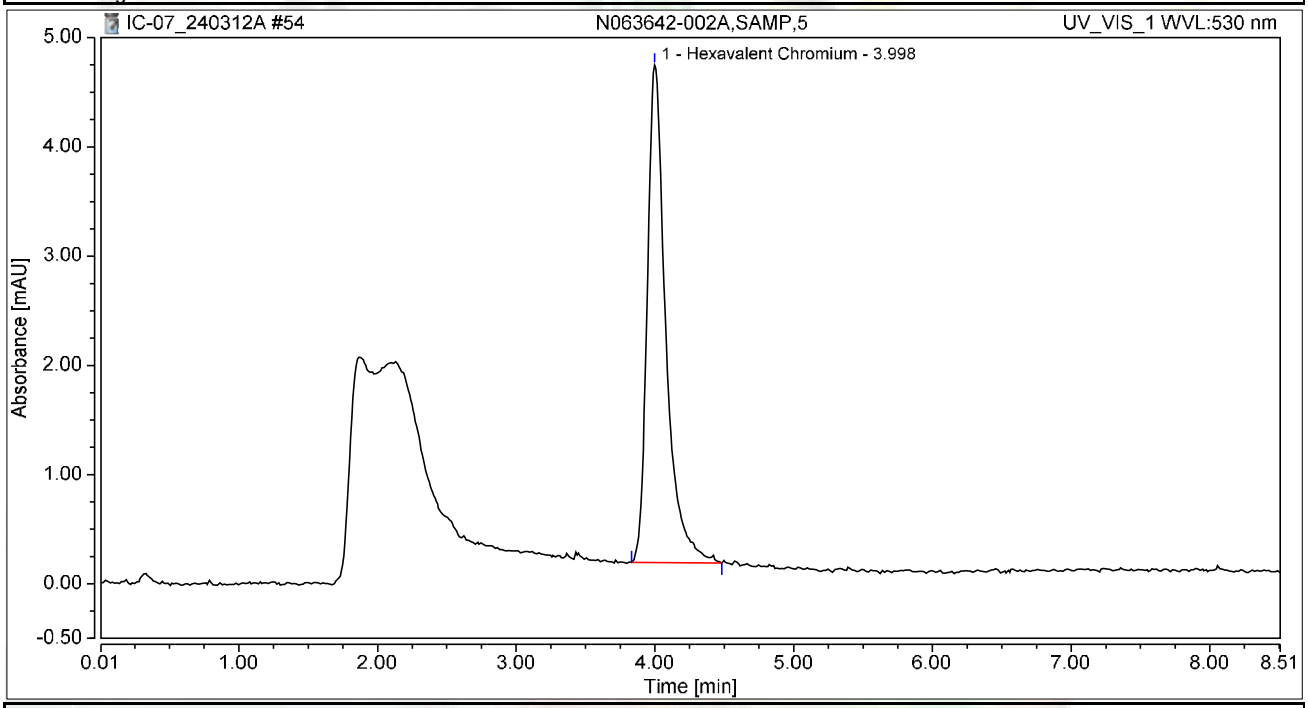
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.737	4.743	100.00	100.00	3.4606
Total:			**0.737**	**4.743**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 17:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

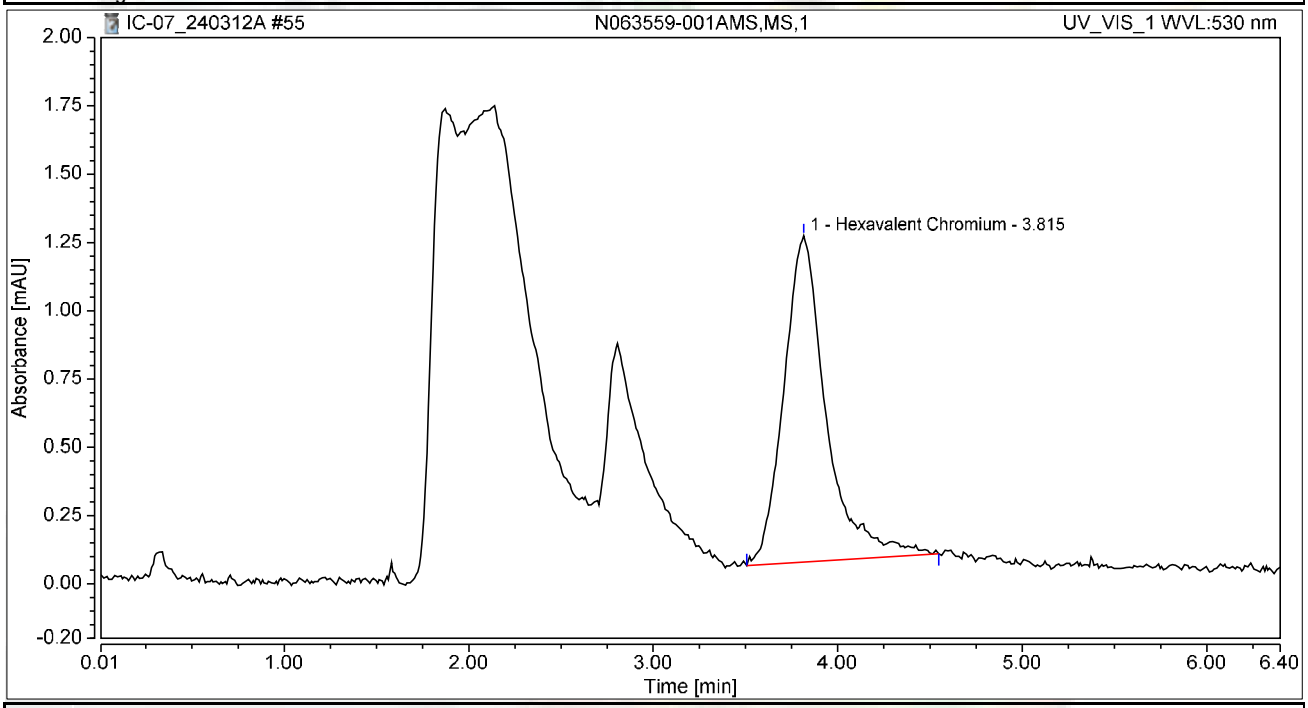
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.705	4.554	100.00	100.00	3.3146
Total:			**0.705**	**4.554**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-001AMS,MS,1**	*Run Time (min):*	**6.39**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 17:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	0.319	1.196	100.00	100.00	1.4982
Total:			**0.319**	**1.196**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-002AMS,MS,1**	*Run Time (min):*	**n.a.**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**n.a.**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 20:27**	*Sample Weight:*	**1.0000**

Chromatogram

Can't read channel UV_VIS_1 from injection #56 - N063559-002AMS,MS,1.
Channel is not available.

Integration Results

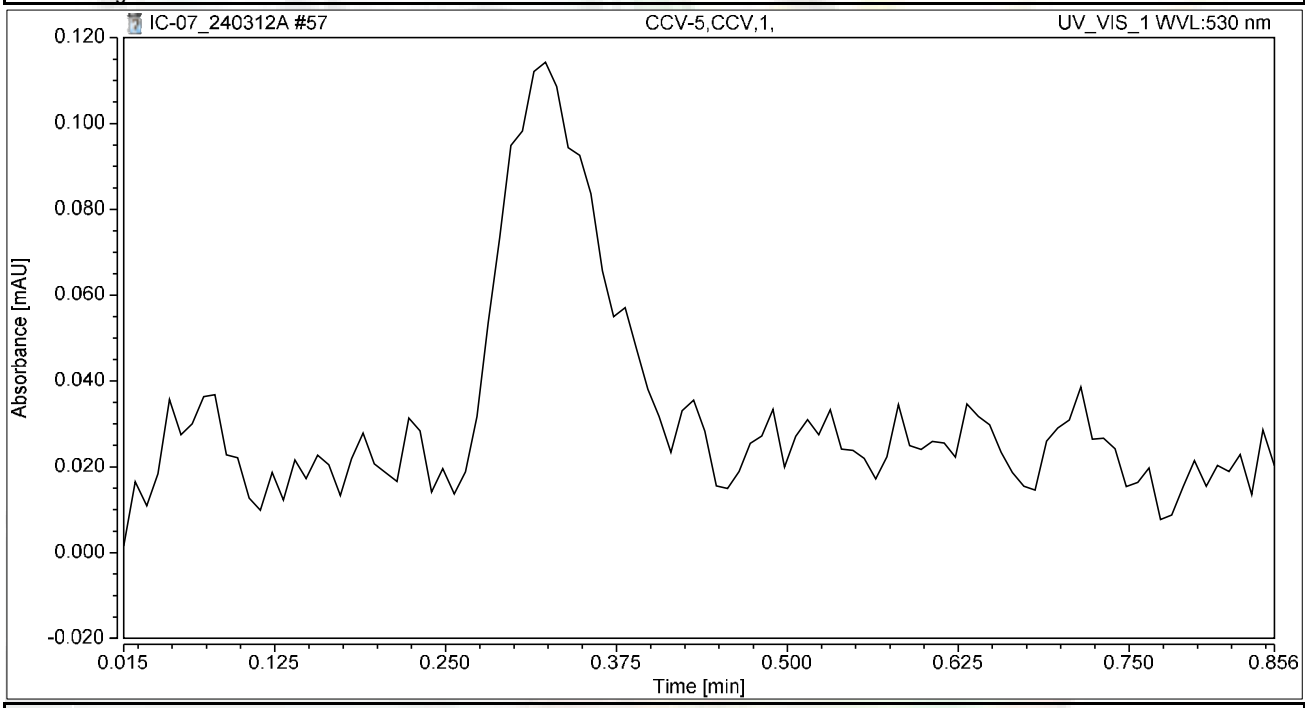
No.	Peak Name	Retention Time min	Area n.a.	Height n.a.	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**0.84**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 20:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

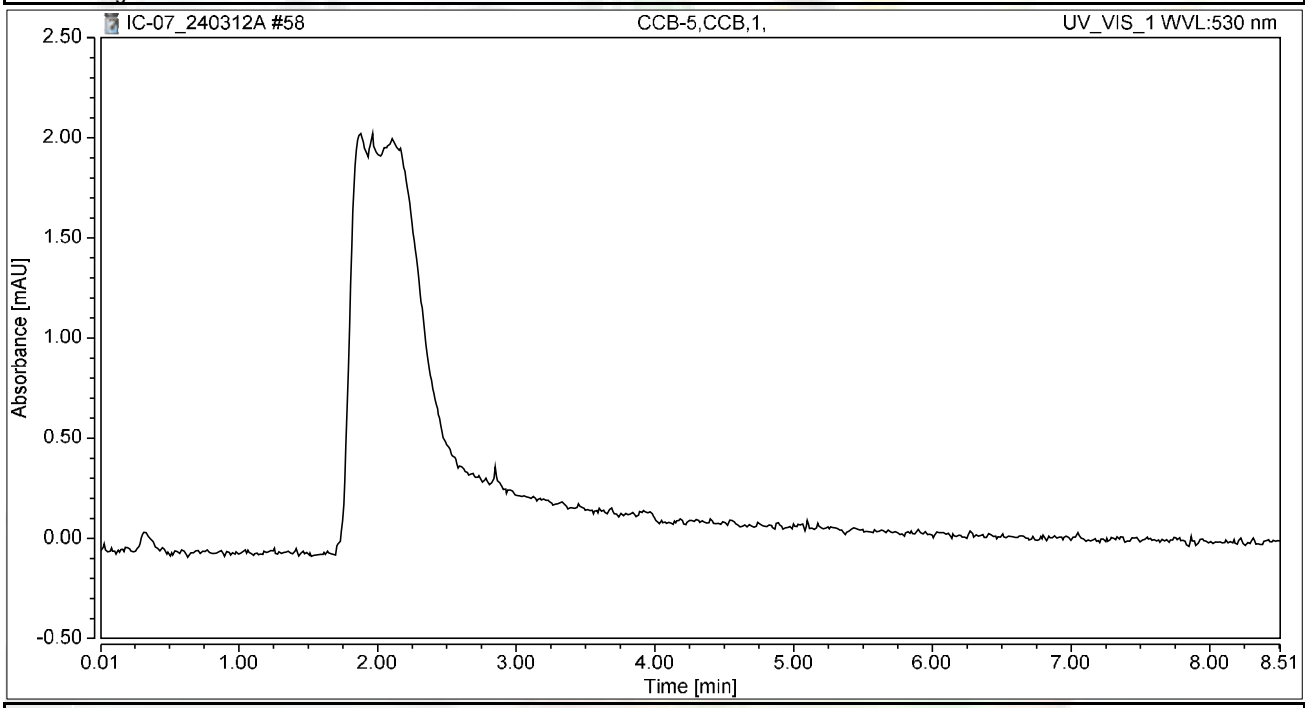
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 20:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

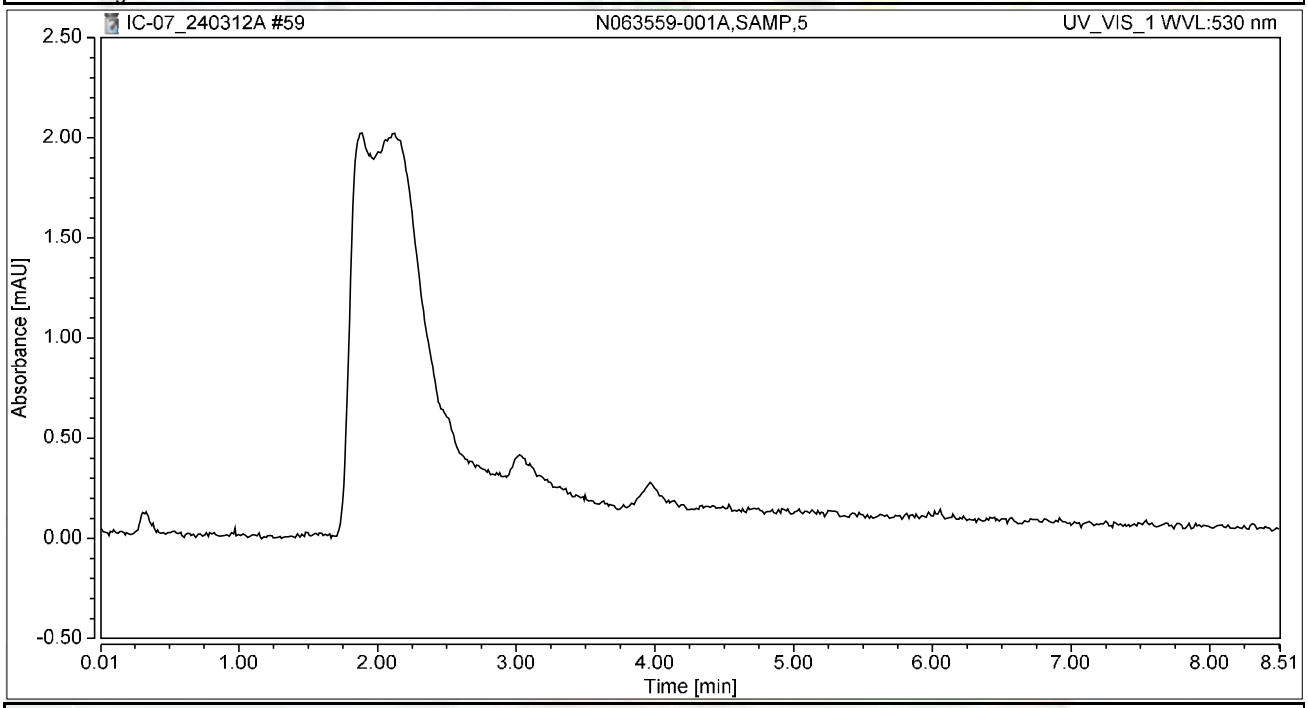
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 20:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

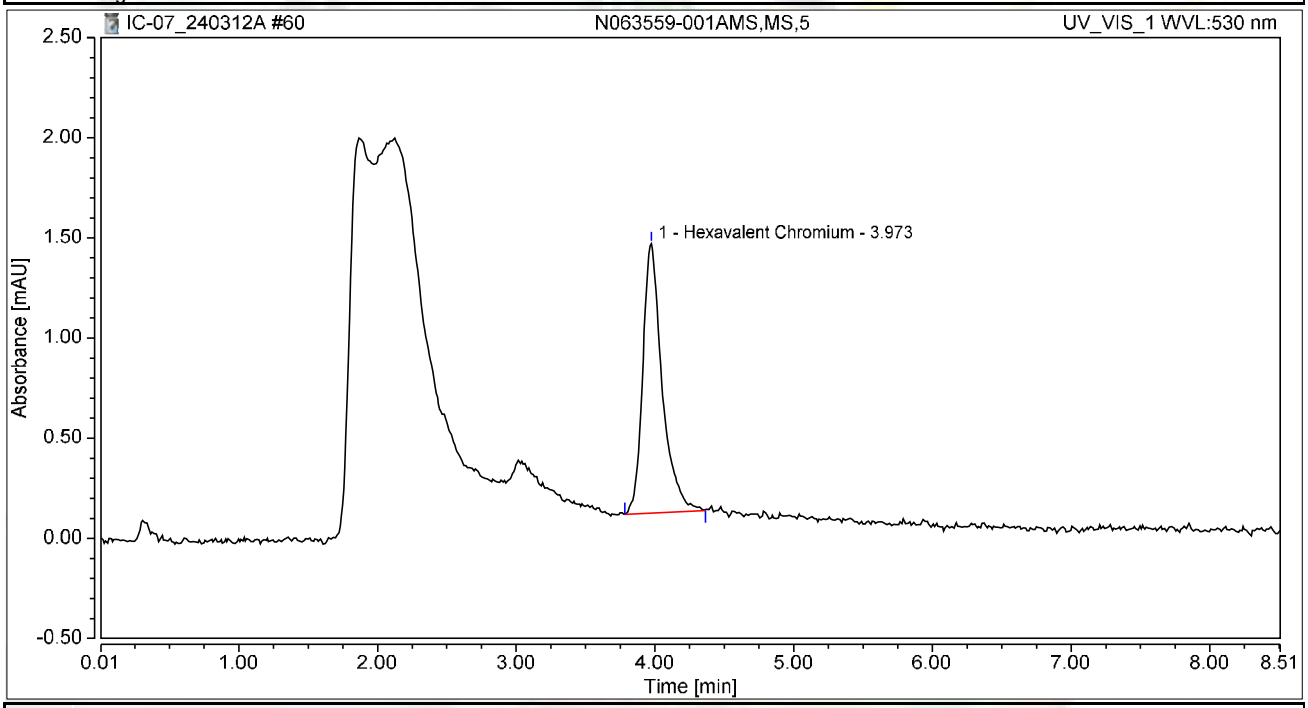
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 20:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

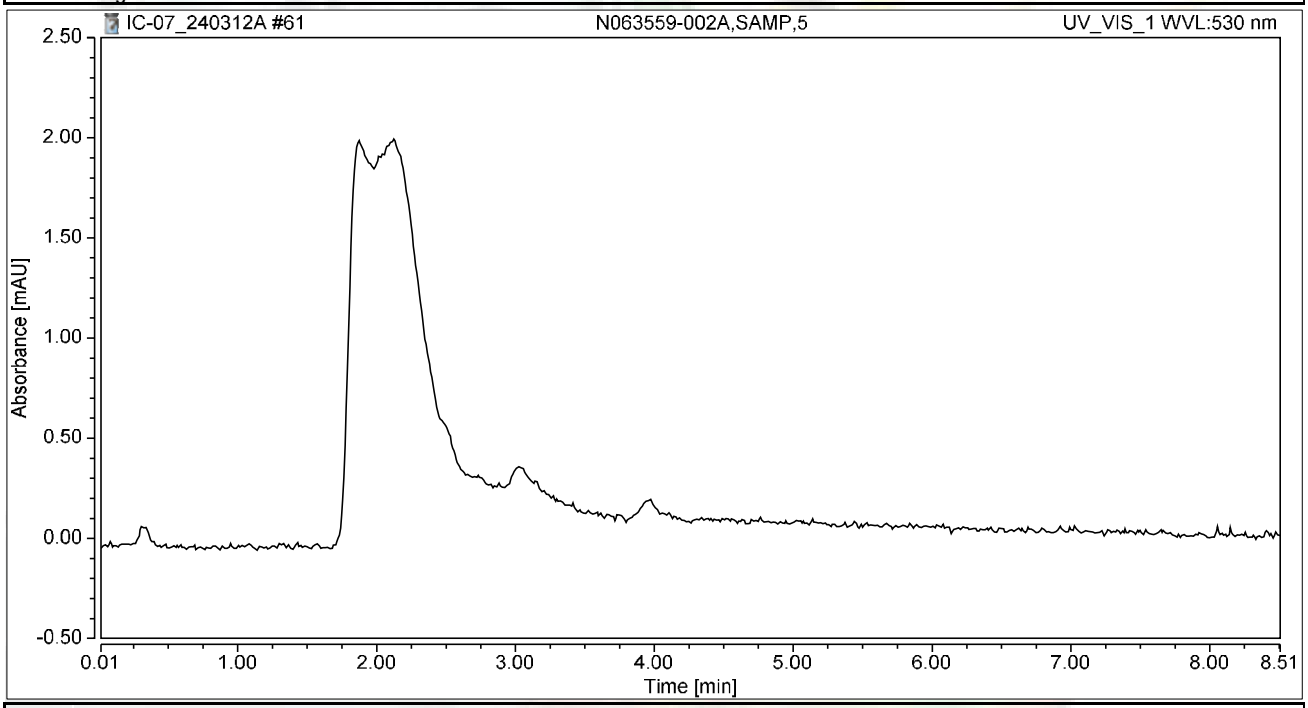
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.218	1.346	100.00	100.00	1.0239
Total:			**0.218**	**1.346**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-002A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 21:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

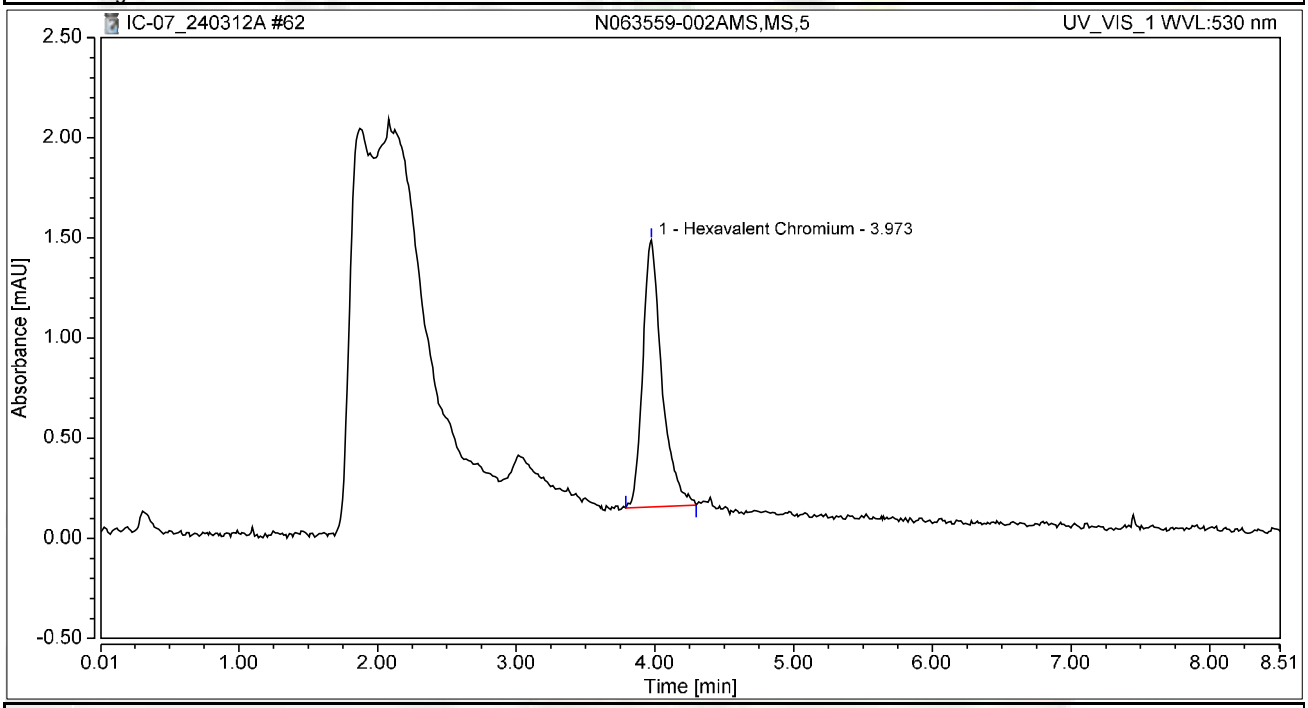
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 21:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

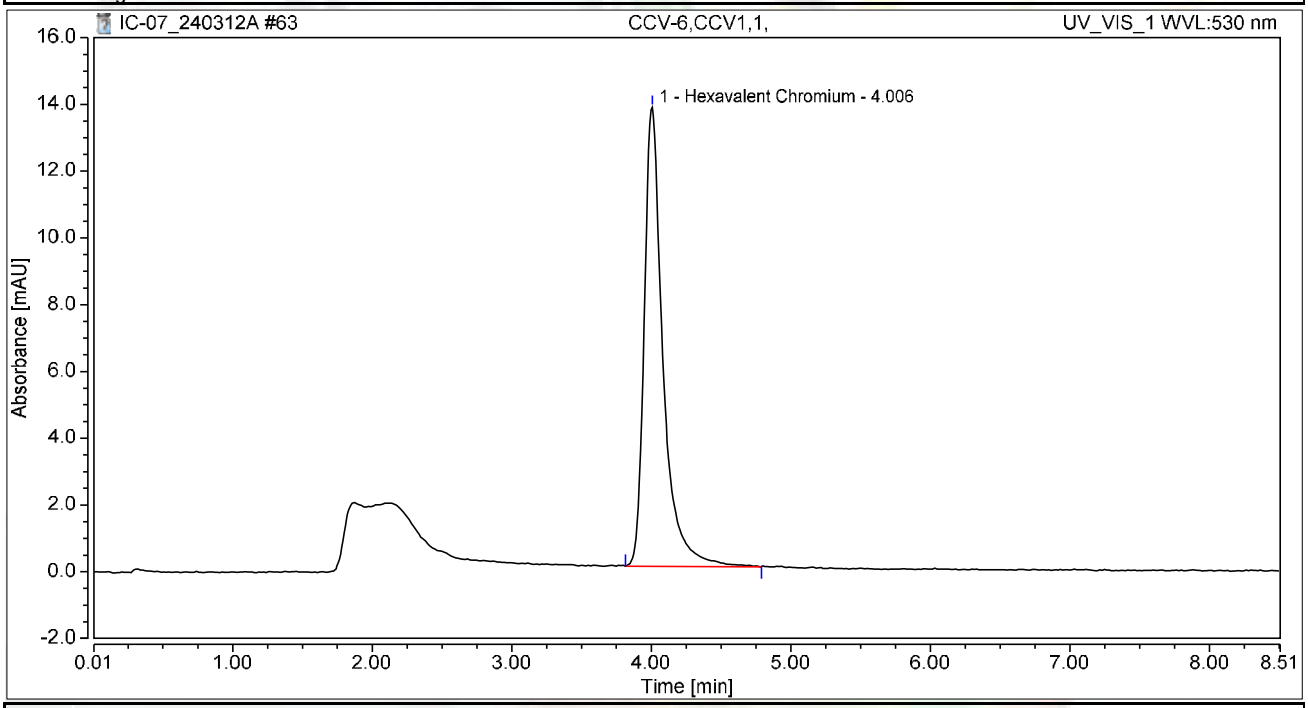
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.214	1.332	100.00	100.00	1.0035
Total:			**0.214**	**1.332**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 21:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

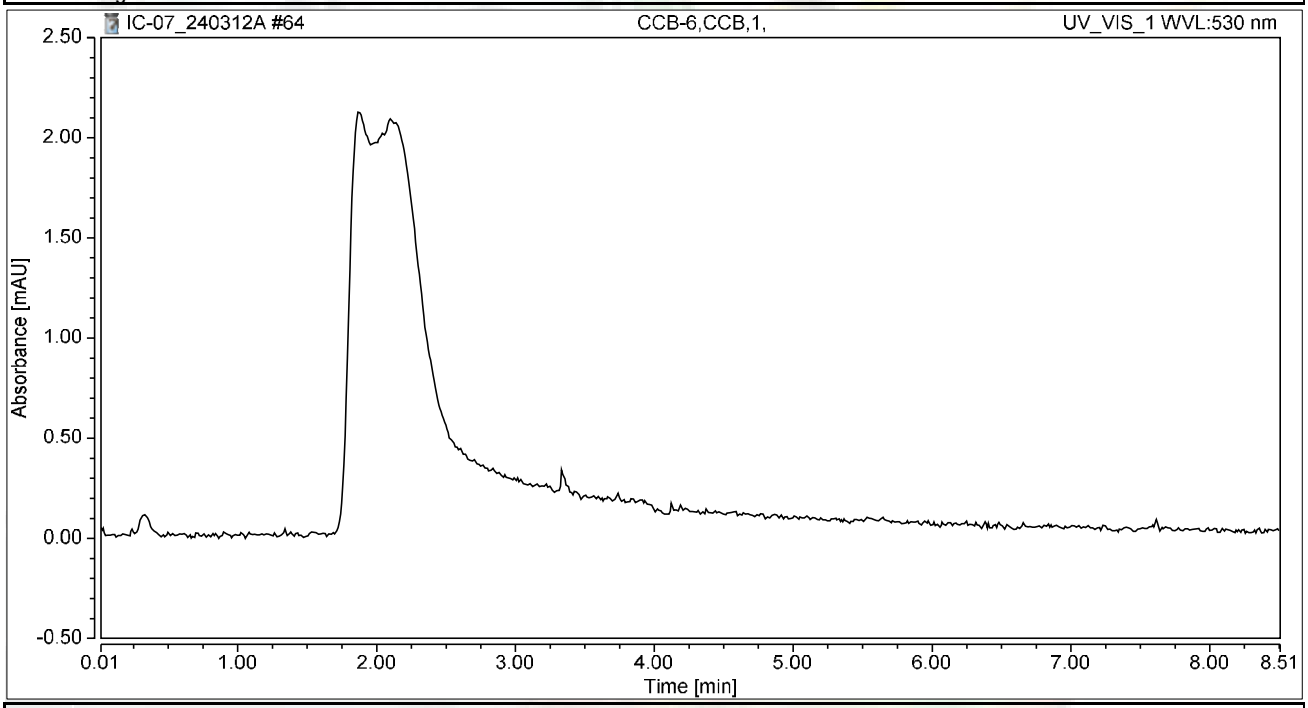
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	2.145	13.746	100.00	100.00	10.0767
Total:			**2.145**	**13.746**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 21:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

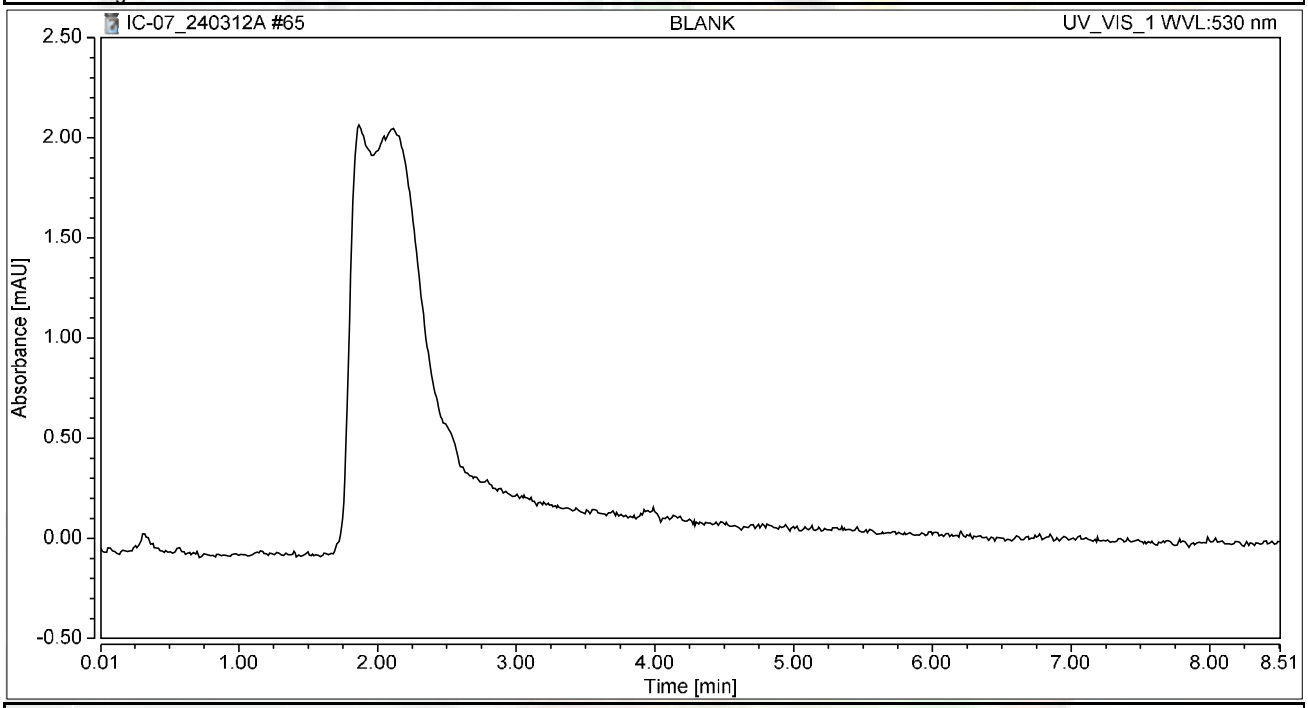
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 21:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

EPA 300.0

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R183502
ASSET #: N063705 / N063706

Instrument ID: IC-08
Analyst: RBA
Date Analyzed: 3/12/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)		X			X	
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

~~Detection of Sulfate in CCB1/MB was >1/2PQL. However, N063705/N063706 samples were >5X the CCB detection.~~

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 3/13/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: GROUNDWATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the orignal sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N063705-004B** concentration in mg/L is calculated as follows:

Nitrate, mg/L = 0.0759 * 10

= 0.759

Reporting result in two significant figures,

Nitrate, mg/L = 0.76

Reviewed by:

dlRocha 3/19/2024

ANALYSIS RUN LOG

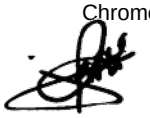
Sequence: IC-08_240223A
Operator: IC-05
Printed: 2/25/2024 4:50:56 PM

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240223	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240223	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240223	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240223	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240223	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240223	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240223	Finished
8	ICV,ICV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240223	Finished
9	ICB,ICB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240223	Finished
10	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240223	Finished
11	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240223	Finished
12	N063297-001B,SAMP,10	Unknown	7	1000.0	Anions Default	EPA 300_0_240223	Finished
13	N063297-001BDUP,DUP,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240223	Finished
14	N063297-001BMS,MS,10	Unknown	9	1000.0	Anions Default	EPA 300_0_240223	Finished
15	N063297-001BMSD,MSD,10	Unknown	10	1000.0	Anions Default	EPA 300_0_240223	Finished
16	N063252-001C,SAMP,2000	Unknown	11	1000.0	Anions Default	EPA 300_0_240223	Finished
17	N063252-001CMS,MS,2000	Unknown	12	1000.0	Anions Default	EPA 300_0_240223	Finished
18	N063248-005B,SAMP,1000	Unknown	13	1000.0	Anions Default	EPA 300_0_240223	Finished
19	N063248-006B,SAMP,2000	Unknown	14	1000.0	Anions Default	EPA 300_0_240223	Finished
20	CCV-1,CCV,1	Unknown	15	1000.0	Anions Default	EPA 300_0_240223	Finished
21	CCB-1,CCB,1	Unknown	16	1000.0	Anions Default	EPA 300_0_240223	Finished
22	N063248-007B,SAMP,2000	Unknown	17	1000.0	Anions Default	EPA 300_0_240223	Finished
23	N063248-008B,SAMP,2000	Unknown	18	1000.0	Anions Default	EPA 300_0_240223	Finished
24	N063248-010C,SAMP,100	Unknown	19	1000.0	Anions Default	EPA 300_0_240223	Finished
25	N063248-011C,SAMP,1000	Unknown	20	1000.0	Anions Default	EPA 300_0_240223	Finished
26	N063248-005B,SAMP,100	Unknown	21	1000.0	Anions Default	EPA 300_0_240223	Finished
27	N063248-006B,SAMP,100	Unknown	22	1000.0	Anions Default	EPA 300_0_240223	Finished
28	N063248-007B,SAMP,100	Unknown	23	1000.0	Anions Default	EPA 300_0_240223	Finished
29	N063248-008B,SAMP,100	Unknown	24	1000.0	Anions Default	EPA 300_0_240223	Finished
30	N063248-010C,SAMP,20	Unknown	25	1000.0	Anions Default	EPA 300_0_240223	Finished
31	N063248-011C,SAMP,100	Unknown	26	1000.0	Anions Default	EPA 300_0_240223	Finished
32	CCV-2,CCV,1	Unknown	27	1000.0	Anions Default	EPA 300_0_240223	Finished
33	CCB-2,CCB,1	Unknown	28	1000.0	Anions Default	EPA 300_0_240223	Finished
34	N063295-005B,SAMP,2000	Unknown	29	1000.0	Anions Default	EPA 300_0_240223	Finished
35	N063295-006B,SAMP,2000	Unknown	30	1000.0	Anions Default	EPA 300_0_240223	Finished
36	N063295-007B,SAMP,2000	Unknown	31	1000.0	Anions Default	EPA 300_0_240223	Finished
37	N063295-008B,SAMP,2000	Unknown	32	1000.0	Anions Default	EPA 300_0_240223	Finished
38	N063295-005B,SAMP,100	Unknown	33	1000.0	Anions Default	EPA 300_0_240223	Finished
39	N063295-006B,SAMP,100	Unknown	34	1000.0	Anions Default	EPA 300_0_240223	Finished
40	N063295-007B,SAMP,100	Unknown	35	1000.0	Anions Default	EPA 300_0_240223	Finished
41	N063295-008B,SAMP,100	Unknown	36	1000.0	Anions Default	EPA 300_0_240223	Finished

Processed by:

Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)



2/25/2024

IC8 RBA 2/25/2024 4:51:54 PM

reviewed by: 2/27/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:07:15 AM	BLANK
2	Std - 0	2/23/2024 9:22:33 AM	IBLANK
3	Std - 1	2/23/2024 9:53:29 AM	STD-LOW
4	Std - 2	2/23/2024 10:08:47 AM	STD
5	Std - 3	2/23/2024 10:24:06 AM	STD
6	Std - 4	2/23/2024 10:39:24 AM	STD
7	Std - 5	2/23/2024 10:54:42 AM	STD-HIGH
8	ICV,ICV,1	2/23/2024 11:10:00 AM	ICV, IWST-240216B
9	ICB,ICB,1	2/23/2024 11:25:18 AM	ICB
10	MB-H2O,MBLK,1	2/23/2024 11:40:36 AM	MB
11	LCS-H2O,LCS,1	2/23/2024 11:55:54 AM	LCS, IWST-240216B
12	N063297-001B,SAMP,10	2/23/2024 1:45:16 PM	SAMP,1>10mL,
13	N063297-001BDUP,DUP,10	2/23/2024 2:00:34 PM	DUP,1>10mL,
14	N063297-001BMS,MS,10	2/23/2024 2:15:52 PM	MS,1>10mL,
15	N063297-001BMSD,MSD,10	2/23/2024 2:31:10 PM	MSD,1>10mL,
16	N063252-001C,SAMP,2000	2/23/2024 2:46:27 PM	SAMP,0.005>10mL,
17	N063252-001CMS,MS,2000	2/23/2024 3:01:45 PM	MS,0.005>10mL,
18	N063248-005B,SAMP,1000	2/23/2024 4:06:07 PM	SAMP,0.01>10mL,
19	N063248-006B,SAMP,2000	2/23/2024 4:21:25 PM	SAMP,0.005>10mL,
20	CCV-1,CCV,1	2/23/2024 4:36:43 PM	CCV, IWST-240216A
21	CCB-1,CCB,1	2/23/2024 4:52:01 PM	CCB
22	N063248-007B,SAMP,2000	2/23/2024 5:07:19 PM	SAMP,0.005>10mL,
23	N063248-008B,SAMP,2000	2/23/2024 5:22:37 PM	SAMP,0.005>10mL,
24	N063248-010C,SAMP,100	2/23/2024 5:37:54 PM	SAMP,0.1>10mL,
25	N063248-011C,SAMP,1000	2/23/2024 5:53:13 PM	SAMP,0.01>10mL,
26	N063248-005B,SAMP,100	2/23/2024 6:08:32 PM	SAMP,0.1>10mL,
27	N063248-006B,SAMP,100	2/23/2024 6:23:50 PM	SAMP,0.1>10mL,
28	N063248-007B,SAMP,100	2/23/2024 6:39:07 PM	SAMP,0.1>10mL,
29	N063248-008B,SAMP,100	2/23/2024 6:54:26 PM	SAMP,0.1>10mL,
30	N063248-010C,SAMP,20	2/23/2024 7:09:45 PM	SAMP,0.5>10mL,
31	N063248-011C,SAMP,100	2/23/2024 7:25:03 PM	SAMP,0.1>10mL,
32	CCV-2,CCV,1	2/23/2024 7:40:21 PM	CCV, IWST-240216A
33	CCB-2,CCB,1	2/23/2024 7:55:39 PM	CCB
34	N063295-005B,SAMP,2000	2/23/2024 8:10:57 PM	SAMP,0.005>10mL,
35	N063295-006B,SAMP,2000	2/23/2024 8:26:16 PM	SAMP,0.005>10mL,
36	N063295-007B,SAMP,2000	2/23/2024 8:41:34 PM	SAMP,0.005>10mL,
37	N063295-008B,SAMP,2000	2/23/2024 8:56:52 PM	SAMP,0.005>10mL,
38	N063295-005B,SAMP,100	2/23/2024 9:12:11 PM	SAMP,0.1>10mL,
39	N063295-006B,SAMP,100	2/23/2024 9:27:28 PM	SAMP,0.1>10mL,
40	N063295-007B,SAMP,100	2/23/2024 9:42:47 PM	SAMP,0.1>10mL,
41	N063295-008B,SAMP,100	2/23/2024 9:58:05 PM	SAMP,0.1>10mL,

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	N063253-001C,SAMP,5000	Unknown	37	1000.0	Anions Default	EPA 300_0_240223	Finished
43	N063253-001C,SAMP,10000	Unknown	38	1000.0	Anions Default	EPA 300_0_240223	Finished
44	CCV-3,CCV,1	Unknown	39	1000.0	Anions Default	EPA 300_0_240223	Finished
45	CCB-3,CCB,1	Unknown	40	1000.0	Anions Default	EPA 300_0_240223	Finished
46	N063256-001C,SAMP,100	Unknown	41	1000.0	Anions Default	EPA 300_0_240223	Finished
47	N063254-001C,SAMP,10000	Unknown	42	1000.0	Anions Default	EPA 300_0_240223	Finished
48	N063255-001C,SAMP,10000	Unknown	43	1000.0	Anions Default	EPA 300_0_240223	Finished
49	N063257-001C,SAMP,10000	Unknown	44	1000.0	Anions Default	EPA 300_0_240223	Finished
50	N063258-001C,SAMP,10000	Unknown	45	1000.0	Anions Default	EPA 300_0_240223	Finished
51	CCV-4,CCV,1	Unknown	46	1000.0	Anions Default	EPA 300_0_240223	Finished
52	CCB-4,CCB,1	Unknown	47	1000.0	Anions Default	EPA 300_0_240223	Finished

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	N063253-001C,SAMP,5000	2/23/2024 10:13:23 PM	SAMP,0.002>10mL,
43	N063253-001C,SAMP,10000	2/23/2024 10:28:42 PM	SAMP,0.001>10mL,
44	CCV-3,CCV,1	2/23/2024 10:43:59 PM	CCV, IWST-240216A
45	CCB-3,CCB,1	2/23/2024 10:59:17 PM	CCB
46	N063256-001C,SAMP,100	2/23/2024 11:14:35 PM	SAMP,0.1>10mL,
47	N063254-001C,SAMP,10000	2/23/2024 11:29:53 PM	SAMP,0.001>10mL,
48	N063255-001C,SAMP,10000	2/23/2024 11:45:11 PM	SAMP,0.001>10mL,
49	N063257-001C,SAMP,10000	2/24/2024 12:00:28 AM	SAMP,0.001>10mL,
50	N063258-001C,SAMP,10000	2/24/2024 12:15:46 AM	SAMP,0.001>10mL,
51	CCV-4,CCV,1	2/24/2024 12:31:04 AM	CCV, IWST-240216A
52	CCB-4,CCB,1	2/24/2024 12:46:23 AM	CCB

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 34
Created: 3/11/2024 12:32:20 PM by IC-05
Last Update: 3/12/2024 9:57:30 AM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240223	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240223	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240223	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240223	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240223	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240223	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240223	Finished
8	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240223	Finished
9	CCV-1,CCV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240223	Finished
10	CCB-1,CCB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240223	Finished
11	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240223	Finished
12	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240223	Finished
13	N063705-001B,SAMP,10	Unknown	6	1000.0	Anions Default	EPA 300_0_240223	Finished
14	N063705-002B,SAMP,10	Unknown	7	1000.0	Anions Default	EPA 300_0_240223	Finished
15	N063705-003B,SAMP,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240223	Finished
16	N063705-004B,SAMP,10	Unknown	9	1000.0	Anions Default	EPA 300_0_240223	Finished
17	N063705-005B,SAMP,10	Unknown	10	1000.0	Anions Default	EPA 300_0_240223	Finished
18	N063706-001B,SAMP,10	Unknown	11	1000.0	Anions Default	EPA 300_0_240223	Finished
19	N063705-001BMS,MS,10	Unknown	12	1000.0	Anions Default	EPA 300_0_240223	Finished
20	N063705-001BMSD,MSD,10	Unknown	13	1000.0	Anions Default	EPA 300_0_240223	Finished
21	CCV-2,CCV,1	Unknown	14	1000.0	Anions Default	EPA 300_0_240223	Finished
22	CCB-2,CCB,1	Unknown	15	1000.0	Anions Default	EPA 300_0_240223	Finished
23	N063705-002BDUP,DUP,10	Unknown	16	1000.0	Anions Default	EPA 300_0_240223	Finished
24	N063705-001B,SAMP,100	Unknown	17	1000.0	Anions Default	EPA 300_0_240223	Finished
25	N063705-001BMS,MS,100	Unknown	18	1000.0	Anions Default	EPA 300_0_240223	Finished
26	N063705-001BMSD,MSD,100	Unknown	19	1000.0	Anions Default	EPA 300_0_240223	Finished
27	N063705-002B,SAMP,50	Unknown	20	1000.0	Anions Default	EPA 300_0_240223	Finished
28	N063705-002BDUP,DUP,50	Unknown	21	1000.0	Anions Default	EPA 300_0_240223	Finished
29	N063705-003B,SAMP,50	Unknown	22	1000.0	Anions Default	EPA 300_0_240223	Finished
30	N063705-004B,SAMP,100	Unknown	23	1000.0	Anions Default	EPA 300_0_240223	Finished
31	N063705-005B,SAMP,100	Unknown	24	1000.0	Anions Default	EPA 300_0_240223	Finished
32	N063706-001B,SAMP,100	Unknown	25	1000.0	Anions Default	EPA 300_0_240223	Finished
33	CCV-3,CCV,1	Unknown	26	1000.0	Anions Default	EPA 300_0_240223	Finished
34	CCB-3,CCB,1	Unknown	27	1000.0	Anions Default	EPA 300_0_240223	Finished

Processed by:
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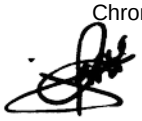


3/12/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 34
Created: 3/11/2024 12:32:20 PM by IC-05
Last Update: 3/12/2024 9:57:30 AM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:07:15 AM	BLANK
2	Std - 0	2/23/2024 9:22:33 AM	IBLANK
3	Std - 1	2/23/2024 9:53:29 AM	STD-LOW
4	Std - 2	2/23/2024 10:08:47 AM	STD
5	Std - 3	2/23/2024 10:24:06 AM	STD
6	Std - 4	2/23/2024 10:39:24 AM	STD
7	Std - 5	2/23/2024 10:54:42 AM	STD-HIGH
8	BLANK	3/12/2024 7:24:04 AM	BLANK
9	CCV-1,CCV,1	3/12/2024 7:39:21 AM	CCV, IWST-240308A
10	CCB-1,CCB,1	3/12/2024 7:54:39 AM	CCB
11	MB-H2O,MBLK,1	3/12/2024 8:09:57 AM	MB
12	LCS-H2O,LCS,1	3/12/2024 8:25:15 AM	LCS, IWST-240308B
13	N063705-001B,SAMP,10	3/12/2024 9:44:11 AM	SAMP,1>10mL,
14	N063705-002B,SAMP,10	3/12/2024 9:59:30 AM	SAMP,1>10mL,
15	N063705-003B,SAMP,10	3/12/2024 10:14:48 AM	SAMP,1>10mL,
16	N063705-004B,SAMP,10	3/12/2024 10:30:05 AM	SAMP,1>10mL,
17	N063705-005B,SAMP,10	3/12/2024 10:45:23 AM	SAMP,1>10mL,
18	N063706-001B,SAMP,10	3/12/2024 11:00:42 AM	SAMP,1>10mL,
19	N063705-001BMS,MS,10	3/12/2024 11:15:59 AM	MS,1>10mL,
20	N063705-001BMSD,MSD,10	3/12/2024 11:31:18 AM	MSD,1>10mL,
21	CCV-2,CCV,1	3/12/2024 11:46:36 AM	CCV, IWST-240308A
22	CCB-2,CCB,1	3/12/2024 12:01:54 PM	CCB
23	N063705-002BDUP,DUP,10	3/12/2024 12:17:12 PM	DUP,1>10mL,
24	N063705-001B,SAMP,100	3/12/2024 12:32:31 PM	SAMP,0.1>10mL,
25	N063705-001BMS,MS,100	3/12/2024 12:47:49 PM	MS,0.1>10mL,
26	N063705-001BMSD,MSD,100	3/12/2024 1:03:07 PM	MSD,0.1>10mL,
27	N063705-002B,SAMP,50	3/12/2024 1:18:26 PM	SAMP,0.2>10mL,
28	N063705-002BDUP,DUP,50	3/12/2024 1:33:44 PM	DUP,0.2>10mL,
29	N063705-003B,SAMP,50	3/12/2024 1:49:01 PM	SAMP,0.2>10mL,
30	N063705-004B,SAMP,100	3/12/2024 2:04:20 PM	SAMP,0.1>10mL,
31	N063705-005B,SAMP,100	3/12/2024 2:19:38 PM	SAMP,0.1>10mL,
32	N063706-001B,SAMP,100	3/12/2024 2:34:56 PM	SAMP,0.1>10mL,
33	CCV-3,CCV,1	3/12/2024 2:50:14 PM	CCV, IWST-240308A
34	CCB-3,CCB,1	3/12/2024 3:05:32 PM	CCB

INITIAL CALIBRATION DATA SUMMARY

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 2/23/2024

Initial Calibration:

Nitrate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0201	0.0879	0.1672	0.4214	0.8656	1.000
Measured, in mg/L	0.000000	0.062700	0.259300	0.489100	1.225800	2.513100	
Relative Error (%RE)		25.4%		-2.2%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712E

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 2/23/2024

Initial Calibration:

Sulfate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.5	2	4	10	20	R^2
Area,mAU*min	0.0000	0.0480	0.2008	0.4077	1.0415	2.1673	1.000
Measured, in mg/L	0.000000	0.632600	2.038000	3.940700	9.768100	20.120700	
Relative Error (%RE)		26.5%		-1.5%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712G

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **ICV**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5742336**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.049	0.50	4.000	0	101	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCV**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742338**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.907	0.50	4.000	0	97.7	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCV**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742342**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.832	0.50	4.000	0	95.8	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCV**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742353**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.825	0.50	4.000	0	95.6	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **ICV**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5742317**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.269	0.050	1.250	0	102	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCV**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742319**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.206	0.050	1.250	0	96.5	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCV**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742331**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.322	0.050	1.250	0	106	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCV**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742334**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.204	0.050	1.250	0	96.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **ICB**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5742337**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCB**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742339**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCB**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742343**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCB**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742354**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **ICB**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5742318**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCB**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742320**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCB**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742332**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCB**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742335**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 3/12/2024

Sample Name		Retention Time	Evaluation
ICV	Nitrate	6.540	
CCV-1	Nitrate	6.450	
CCV-2	Nitrate	6.440	
CCV-3	Nitrate	6.447	
	Average	6.446	
	Applied RT Window	6.246 - 6.646	
MB-R183502_NO3	Nitrate	N.A.	N.A.
LCS-R183502_NO3	Nitrate	6.443	PASS
N063705-001B	Nitrate	N.A.	N.A.
N063705-002B	Nitrate	6.437	PASS
N063705-003B	Nitrate	6.420	PASS
N063705-004B	Nitrate	6.440	PASS
N063705-005B	Nitrate	6.437	PASS
N063705-001BMS	Nitrate	6.450	PASS
N063705-001BMSD	Nitrate	6.454	PASS
N063705-002BDUP	Nitrate	6.453	PASS

Reviewed by:

dMocha 3/19/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 3/12/2024

Sample Name		Retention Time	Evaluation
ICV	Sulfate	9.933	
CCV-1	Sulfate	9.734	
CCV-2	Sulfate	9.717	
CCV-3	Sulfate	9.717	
	Average	9.723	
	Applied RT Window	9.523 - 9.923	
MB-R183502_SO4	Sulfate	9.890	PASS
LCS-R183502_SO4	Sulfate	9.737	PASS
N063705-001B	Sulfate	9.730	PASS
N063705-001BMS	Sulfate	9.740	PASS
N063705-001BMSD	Sulfate	9.740	PASS
N063705-002B	Sulfate	9.754	PASS
N063705-002BDUP	Sulfate	9.697	PASS
N063705-003B	Sulfate	9.694	PASS
N063705-004B	Sulfate	9.700	PASS
N063705-005B	Sulfate	9.680	PASS

Reviewed by:

dMocha 3/19/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): 10/5/2022, 12/14/2022, 3/22/2023,7/10/2023; 10/3/2023 & 11/14/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: mg/L

Instrument Name: **IC-08 & IC-09**

Datafile IC-08 221005A #24 IC-08 221214A #30 IC-08 230322A #35 IC-08 230710A #13 IC-09 231003A #14 IC-08 231114A #24 IC-09 231114A #19

Analyte	#1	#2	#3	#4	#5	#6	#7	Spike Conc., mg/L	SD	$t_{(n-1)}$ value	MDLs	MDL	PQL
Fluoride	0.100	0.103	0.108	0.118	0.110	0.098	0.126	0.10	0.0101	3.143	**0.0318**	**0.0318**	0.10
Chloride	0.480	0.418	0.472	0.653	0.624	0.587	0.622	0.50	0.0922	3.143	**0.2898**	**0.2898**	0.50
Nitrite	0.068	0.061	0.060	0.071	0.063	0.061	0.070	0.05	0.0047	3.143	**0.0149**	**0.0149**	0.05
Bromide	0.526	0.502	0.509	0.522	0.536	0.527	0.520	0.50	0.0116	3.143	**0.0364**	**0.0364**	0.50
Nitrate	0.073	0.058	0.059	0.073	0.074	0.068	0.073	0.05	0.0068	3.143	**0.0215**	**0.0240**	0.05
Phosphate	0.112	0.096	0.114	0.120	0.130	0.093	0.124	0.10	0.0138	3.143	**0.0433**	**0.0433**	0.10
Sulfate	0.501	0.609	0.638	0.401	0.704	0.620	0.697	0.50	0.1092	3.143	**0.3432**	**0.3432**	0.50

METHOD DETECTION LIMIT (Blanks)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Analyte	MDLb	# of Records
Fluoride	0	63
Chloride	0.1456	80
Nitrite	0.0147	64
Bromide	0	18
Nitrate	0.0240	132
Phosphate	0.0237	34
Sulfate	0.2579	107

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

EPA 6010B
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107482
ASSET #: N063705
Instrument ID: ICP-02
Analyst: DBJ
Date Analyzed: 3/12/2024

Method:

[X] EPA 6010B / 200.7
[ ] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X	X	
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments: Detection of Fe was > 1/2PQL in CCB4 . However, samples were closed by CCV2/CCB2.
%Rec of Fe in N063705-002C-MS/MSD failed, high bias. However, LCS passed criteria.

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____
2nd Level Reviewer LG 03122024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in ug/L , in the original sample as follows:

Iron , ug/L = A * DF * PF *CF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL
CF= Conversion Factor from mg/L to ug/L, 1000

For Sample **N063705-005C** , the concentration i ug/L is calculated as follows:

Iron , ug/L = 0.03195 * 1 * (25/25) * 1000

Iron , ug/L = 31.95

Reporting results in two significant figures,

Iron , ug/L = 32

Reviewed by:

dlRocha 3/26/2024

% RSD SUMMARY

RSD SUMMARY: 240312B

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	Fe	0	51.38	15	<PQL
Standard1	ICAL	1	Fe	0.02	28.38	15	NR!
Standard2	ICAL	1	Fe	0.05	3.9	15	PASS
Standard3	ICAL	1	Fe	2	0.09	15	PASS
Standard4	ICAL	1	Fe	5	0.15	15	PASS
Standard5	ICAL	1	Fe	7.5	0.15	15	PASS
Standard6	ICAL	1	Fe	10	0.1	15	PASS
Standard7	ICAL	1	Fe	20	0.12	15	PASS
ICV	ICV	1	Fe	10.07	0.16	15	PASS
ICB	ICB	1	Fe	-0.01	20.9	15	<PQL
LLICV	CCV1	1	Fe	0.02	10.86	20	PASS
LLICV	CCV1	1	Fe	0.02	2.43	20	PASS
ICSA1	ICSA	1	Fe	191.46	0.07	15	PASS
ICSAB1	ICSAB	1	Fe	188.9	0.12	15	PASS
MB-107482	MBLK	1	Fe	-0.01	40.03	15	<PQL
LCS-107482	LCS	1	Fe	0.1	8.88	15	PASS
N063705-001C	SAMP	1	Fe	0.04	26.29	15	NR!
N063705-002C	SAMP	1	Fe	0.01	20.61	15	<PQL
N063705-002C	SAMP	5	Fe	0	31.85	15	<PQL
N063705-002C-PS	PS	1	Fe	0.1	1.66	15	PASS
N063705-002C-MS	MS	1	Fe	0.21	0.47	15	PASS
N063705-002C-MSD	MSD	1	Fe	0.2	0.81	15	PASS
N063705-003C	SAMP	1	Fe	0.01	35.58	15	<PQL
N063705-004C	SAMP	1	Fe	0.01	9.26	15	PASS
CCV1	CCV	1	Fe	10.01	0.03	15	PASS
CCB1	CCB	1	Fe	0	95.17	15	<PQL
N063705-005C	SAMP	1	Fe	0.03	6	15	PASS
N063706-001C	SAMP	1	Fe	0	60.85	15	<PQL
N063642-008E	SAMP	1	Fe	0.03	2.74	15	PASS
N063642-009E	SAMP	1	Fe	0.03	4.17	15	PASS
N063705-001C	SAMP	1	Fe	0.01	2.56	15	PASS
CCV2	CCV	1	Fe	9.98	0.15	15	PASS
CCB2	CCB	1	Fe	-0.01	1.61	15	PASS
CCV3	CCV	1	Fe	9.96	0.11	15	PASS
CCB3	CCB	1	Fe	-0.01	6.33	15	PASS
CCV4	CCV	1	Fe	10.01	0.19	15	PASS
CCB4	CCB	1	Fe	0.02	4.5	15	PASS
ICSA2	ICSA	1	Fe	191.86	0.01	15	PASS
ICSAB2	ICSAB	1	Fe	188.18	0.09	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240312B

Instrument ID: ICP-02

STANDARD CODE	
Standard1	MWST-240311M, 0.5<50mL
Standard2	MWST-240311N
Standard3	MWST-240311O, 5<50mL
Standard4	MWST-240311O,12.5<50mL
Standard5	MWST-240311O, 15<40mL
Standard6	MWST-240311O, 25<50mL
Standard7	MWST-243011O
ICV	MWST-240311AF
CCV	MWST-240311O, 25<50mL
ICSA/ICSAB	MWST-240311P / MWST-240311Q
Int. Std. (Y)	MWST-240311B
PS Spike	MWST-240311X/Y/Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	03/12/2024	03:34:44 PM
2	Standard1	ICAL	1	03/12/2024	03:38:50 PM
3	Standard2	ICAL	1	03/12/2024	03:42:56 PM
4	Standard3	ICAL	1	03/12/2024	03:47:01 PM
5	Standard4	ICAL	1	03/12/2024	03:51:07 PM
6	Standard5	ICAL	1	03/12/2024	03:55:14 PM
7	Standard6	ICAL	1	03/12/2024	03:59:22 PM
8	Standard7	ICAL	1	03/12/2024	04:03:30 PM
250	ICV	ICV	1	03/12/2024	04:08:47 PM
1	ICB	ICB	1	03/12/2024	04:12:57 PM
2	LLICV	CCV1	1	03/12/2024	04:17:02 PM
2	LLICV	CCV1	1	03/12/2024	04:29:15 PM
9	ICSA1	ICSA	1	03/12/2024	04:33:22 PM
10	ICSAB1	ICSAB	1	03/12/2024	04:39:06 PM
131	MB-107482	MBLK	1	03/12/2024	05:01:43 PM
132	LCS-107482	LCS	1	03/12/2024	05:05:52 PM
133	N063705-001C	SAMP	1	03/12/2024	05:09:59 PM
134	N063705-002C	SAMP	1	03/12/2024	05:16:08 PM
135	N063705-002C	SAMP	5	03/12/2024	05:22:17 PM
136	N063705-002C-PS	PS	1	03/12/2024	05:26:25 PM
137	N063705-002C-MS	MS	1	03/12/2024	05:32:34 PM
138	N063705-002C-MSD	MSD	1	03/12/2024	05:38:43 PM
139	N063705-003C	SAMP	1	03/12/2024	05:44:51 PM
140	N063705-004C	SAMP	1	03/12/2024	05:51:00 PM
7	CCV1	CCV	1	03/12/2024	05:57:07 PM
1	CCB1	CCB	1	03/12/2024	06:01:16 PM
141	N063705-005C	SAMP	1	03/12/2024	06:05:22 PM
142	N063706-001C	SAMP	1	03/12/2024	06:11:30 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
143	N063642-008E	SAMP	1	03/12/2024	06:17:38 PM
144	N063642-009E	SAMP	1	03/12/2024	06:23:47 PM
133	N063705-001C	SAMP	1	03/12/2024	06:28:47 PM
145	MB-107440	MBLK	1	03/12/2024	06:34:56 PM
146	LCS1-107440	LCS	1	03/12/2024	06:39:05 PM
147	N063659-001A	SAMP	1	03/12/2024	06:43:14 PM
148	N063659-001A	SAMP	5	03/12/2024	06:47:22 PM
149	N063659-001A-PS	PS	1	03/12/2024	06:51:32 PM
7	CCV2	CCV	1	03/12/2024	06:55:41 PM
1	CCB2	CCB	1	03/12/2024	06:59:52 PM
150	N063659-001A-MS	MS	1	03/12/2024	07:03:58 PM
151	N063659-001A-MSD	MSD	1	03/12/2024	07:08:07 PM
152	N063659-002A	SAMP	1	03/12/2024	07:12:16 PM
153	N063659-003A	SAMP	1	03/12/2024	07:16:25 PM
154	N063659-004A	SAMP	1	03/12/2024	07:20:34 PM
155	N063660-001A	SAMP	1	03/12/2024	07:24:43 PM
156	N063660-002A	SAMP	1	03/12/2024	07:28:52 PM
157	N063660-003A	SAMP	1	03/12/2024	07:33:01 PM
158	N063660-004A	SAMP	1	03/12/2024	07:37:09 PM
159	N063660-005A	SAMP	1	03/12/2024	07:41:19 PM
7	CCV3	CCV	1	03/12/2024	07:45:28 PM
1	CCB3	CCB	1	03/12/2024	07:49:37 PM
160	N063660-006A	SAMP	1	03/12/2024	07:53:44 PM
161	N063661-001A	SAMP	1	03/12/2024	07:57:53 PM
7	CCV4	CCV	1	03/12/2024	08:02:02 PM
1	CCB4	CCB	1	03/12/2024	08:06:12 PM
9	ICSA2	ICSA	1	03/12/2024	08:10:18 PM
10	ICSAB2	ICSAB	1	03/12/2024	08:16:03 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/12/2024 12:30:00 PM**
Prep End Date: **3/12/2024 4:30:00 PM**
Prep Batch **107482** Prep Code:**3010_W_DISS**

Reviewed/ Date: dMocha 4/1/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units
mL / mL

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107482	Aqueous		25	☐	25	1.000		
MB-107482	Aqueous		25	☐	25	1.000		
N063642-008E	Groundwater	<2	25	☐	25	1.000		
N063642-009E	Groundwater	<2	25	☐	25	1.000		
N063705-001C	Groundwater	<2	25	☐	25	1.000		
N063705-002C	Groundwater	<2	25	☐	25	1.000		
N063705-002C-MS	Groundwater	<2	25	☐	25	1.000		
N063705-002C-MSD	Groundwater	<2	25	☐	25	1.000		
N063705-003C	Groundwater	<2	25	☐	25	1.000		
N063705-004C	Groundwater	<2	25	☐	25	1.000		
N063705-005C	Groundwater	<2	25	☐	25	1.000		
N063706-001C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15448	HYDROCHLORIC ACID
16152	NITRIC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240311X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240311Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240311Z	ICP Solution C	LCS,MS,MSD	0.5

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240312B

Instrument ID: ICP-02

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Iron								
CalBlk	03/12/2024	03:34:44 PM	Fe	273.953	81	0.00	mg/L	
Standard1	03/12/2024	03:38:50 PM	Fe	273.953	160	0.0200	mg/L	
Standard2	03/12/2024	03:42:56 PM	Fe	273.953	340	0.050	mg/L	
Standard3	03/12/2024	03:47:01 PM	Fe	273.953	11116	2.000	mg/L	
Standard4	03/12/2024	03:51:07 PM	Fe	273.953	28007	5.000	mg/L	
Standard5	03/12/2024	03:55:14 PM	Fe	273.953	42413	7.500	mg/L	
Standard6	03/12/2024	03:59:22 PM	Fe	273.953	56708	10.000	mg/L	
Standard7	03/12/2024	04:03:30 PM	Fe	273.953	113298	20.000	mg/L	1.0000

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **ICV**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742355**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10074.401	20	10000	0	101	90	110				

Sample ID **LLICV**	SampType: **CCV1**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **ZZZZZZ**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742358**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	16.342	20	20.00	0	81.7	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **CCV**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742371**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10007.977	20	10000	0	100	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **CCV**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742383**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	9978.550	20	10000	0	99.8	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **CCV**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742395**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	9959.718	20	10000	0	99.6	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **CCV**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742399**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10007.006	20	10000	0	100	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **ICB**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742356**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-5.613799	20									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **CCB**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742372**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-1.070269	20									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **CCB**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742384**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-8.318882	20									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **CCB**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742396**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-10.542343	20									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **CCB**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742400**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	20.812	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Detection of Fe was > PQL in CCB4 . However, samples were closed by CCV2/CCB2.

dMocha 3/26/2024

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **183506**
Client ID: **ICSA** Batch ID: **R183506** TestNo: **EPA 6010B** Analysis Date: **3/12/2024** SeqNo: **5742359**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	525618.509	50	500000	0	105	80	120				
Calcium	574685.746	500	500000	0	115	80	120				
Iron	191463.430	20	200000	0	95.7	80	120				
Magnesium	536992.777	100	500000	0	107	80	120				

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **183506**
Client ID: **ICSAB** Batch ID: **R183506** TestNo: **EPA 6010B** Analysis Date: **3/12/2024** SeqNo: **5742360**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	514636.432	50	500000	0	103	80	120				
Calcium	564181.906	500	500000	0	113	80	120				
Iron	188901.094	20	200000	0	94.5	80	120				
Magnesium	527873.510	100	500000	0	106	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **183506**
Client ID: **ICSA** Batch ID: **R183506** TestNo: **EPA 6010B** Analysis Date: **3/12/2024** SeqNo: **5742401**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	525620.240	50	500000	0	105	80	120				
Calcium	573396.075	500	500000	0	115	80	120				
Iron	191859.044	20	200000	0	95.9	80	120				
Magnesium	539303.040	100	500000	0	108	80	120				

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **183506**
Client ID: **ICSAB** Batch ID: **R183506** TestNo: **EPA 6010B** Analysis Date: **3/12/2024** SeqNo: **5742402**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	513530.300	50	500000	0	103	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **ICSAB**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742402**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	560857.001	500	500000	0	112	80	120				
Iron	188176.626	20	200000	0	94.1	80	120				
Magnesium	525937.007	100	500000	0	105	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240312B

Instrument ID: ICP-02

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	1	99.77	65-125	PASS
Standard2	ICAL	1	1.01	101.14	65-125	PASS
Standard3	ICAL	1	1.01	101.1	65-125	PASS
Standard4	ICAL	1	1.01	100.66	65-125	PASS
Standard5	ICAL	1	1	100.16	65-125	PASS
Standard6	ICAL	1	0.99	99.39	65-125	PASS
Standard7	ICAL	1	0.98	98.23	65-125	PASS
ICV	ICV	1	1.01	100.69	65-125	PASS
ICB	ICB	1	1	99.55	65-125	PASS
LLICV	CCV1	1	1	99.73	65-125	PASS
LLICV	CCV1	1	1.01	101.16	65-125	PASS
ICSA1	ICSA	1	0.87	87.19	65-125	PASS
ICSAB1	ICSAB	1	0.87	87.17	65-125	PASS
MB-107482	MBLK	1	1.01	101.1	65-125	PASS
LCS-107482	LCS	1	0.96	96.3	65-125	PASS
N063705-001C	SAMP	1	0.8	80.15	65-125	PASS
N063705-002C	SAMP	1	0.82	82.21	65-125	PASS
N063705-002C	SAMP	5	0.92	91.99	65-125	PASS
N063705-002C-PS	PS	1	0.79	79.09	65-125	PASS
N063705-002C-MS	MS	1	0.85	85.49	65-125	PASS
N063705-002C-MSD	MSD	1	0.82	81.79	65-125	PASS
N063705-003C	SAMP	1	0.83	82.94	65-125	PASS
N063705-004C	SAMP	1	0.74	74.29	65-125	PASS
CCV1	CCV	1	0.99	98.98	65-125	PASS
CCB1	CCB	1	1	100.16	65-125	PASS
N063705-005C	SAMP	1	0.74	74.47	65-125	PASS
N063706-001C	SAMP	1	0.75	75.25	65-125	PASS
N063642-008E	SAMP	1	0.93	92.86	65-125	PASS
N063642-009E	SAMP	1	0.9	90.38	65-125	PASS
N063705-001C	SAMP	1	0.8	80.26	65-125	PASS
CCV2	CCV	1	1	99.56	65-125	PASS
CCB2	CCB	1	1	100.14	65-125	PASS
CCV3	CCV	1	0.99	98.68	65-125	PASS
CCB3	CCB	1	1	100.03	65-125	PASS
CCV4	CCV	1	1	100.26	65-125	PASS
CCB4	CCB	1	1.02	101.89	65-125	PASS
ICSA2	ICSA	1	0.87	87.43	65-125	PASS
ICSAB2	ICSAB	1	0.87	86.64	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063705
Test Method: EPA 6010B
Analysis Date: 3/12/2024

Matrix: Groundwater
Batch No.: 107482

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima 7300DV

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Fe. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063705-002C DT 5x	Iron	Fe	µg/L	0	NA	13.68658	100.00%	10

Reviewed by:

dMocha 3/26/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **N063705-002C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **183506**
Client ID: **ZZZZZZ** Batch ID: **107482** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/12/2024** SeqNo: **5742366**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	103.733	20	100.0	13.69	90.0	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

EPA 6020
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107478
ASSET #: N063705

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 3/12/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 3/12/2024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Groundwater

FORMULA:

Calculate the Barium concentration, in ug/L in the original sample as follows:

Barium , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063705-001C** , the concentration in ug/L is calculated as follows:

Barium , ug/L = 20.2749 * 1 *(25 / 25)

Barium , ug/L = 20.2749

Reporting results in two significant figures,

Barium , ug/L = 20

Reviewed by:

JRB 4/5/2024

% RSD SUMMARY

PERCENT RSD SUMMARY: 240312A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	21.573	15	<PQL	0.03	11.301	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.47	6.798	15	PASS	0.41	2.274	15	PASS
Std3-5/50 ppb	ICAL	1	4.67	0.377	15	PASS	4.77	1.271	15	PASS
Std4-10/100 ppb	ICAL	1	9.74	2.679	15	PASS	9.72	1.63	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.63	0.654	15	PASS	19.76	1.057	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.56	0.32	15	PASS	39.04	0.96	15	PASS
Std7-100/1000 ppb	ICAL	1	99.1	0.412	15	PASS	99.67	1.517	15	PASS
Std8-200/2000 ppb	ICAL	1	200.6	0.926	15	PASS	200.4	0.774	15	PASS
ICV	ICV	1	10.28	1.305	15	PASS	104.87	0.289	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
LLICV1	CCV1	1	1.1	5.297	20	PASS	0.51	4.389	20	PASS
MLCCV	CCV	1	19.52	1.746	15	PASS	19.69	2.132	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.73	0.665	15	PASS	20.64	1.205	15	PASS
CCV1	CCV	1	19.69	0.918	15	PASS	19.31	1.176	15	PASS
CCB1	CCB	1	0	126.212	15	<PQL	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.39	1.219	15	PASS	19.53	0.445	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV3	CCV	1	19.5	0.202	15	PASS	19.61	0.778	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.84	1.706	15	PASS	20.69	1.831	15	PASS
MB-107478	MBLK	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
LCS-107478	LCS	1	10.03	0.694	15	PASS	101.22	0.919	15	PASS
N063705-001C	SAMP	1	20.27	1.439	15	PASS	6.73	3.985	15	PASS
N063705-001C	SAMP	5	4.51	3.732	15	PASS	1.38	1.304	15	PASS
N063705-001C-PS	PS	1	29.28	0.56	15	PASS	99.79	1.586	15	PASS
N063705-001C-MS	MS	1	30.14	0.851	15	PASS	101.14	1.225	15	PASS
N063705-001C-MSD	MSD	1	30.09	1.434	15	PASS	101.18	0.66	15	PASS
N063705-002C	SAMP	1	37.84	2.651	15	PASS	10.62	3.232	15	PASS
N063705-003C	SAMP	1	37.49	1.588	15	PASS	6.91	1.622	15	PASS
CCV4	CCV	1	20.2	1.099	15	PASS	19.48	0.137	15	PASS
CCB4	CCB	1	0	191.265	15	<PQL	<0.000	N/A	15	<PQL
N063705-004C	SAMP	1	29.44	2.18	15	PASS	5.76	0.238	15	PASS
N063705-005C	SAMP	1	29.67	0.599	15	PASS	5.81	2.069	15	PASS
N063706-001C	SAMP	1	47.86	2.155	15	PASS	346.29	1.574	15	PASS
N063706-001C	SAMP	10	5.2	1.141	15	PASS	39.1	0.987	15	PASS
CCV5	CCV	1	20.32	0.506	15	PASS	19.37	0.998	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	0	53.174	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240312A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
ICSAB3	ICSAB	1	21.39	0.541	15	PASS	20.3	1.627	15	PASS

PERCENT RSD SUMMARY: 240312A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.06	40.926	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.48	5.798	15	PASS
Std3-5/50 ppb	ICAL	1	4.93	4.884	15	PASS
Std4-10/100 ppb	ICAL	1	9.6	1.432	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.57	1.712	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.67	0.69	15	PASS
Std7-100/1000 ppb	ICAL	1	99.32	0.965	15	PASS
Std8-200/2000 ppb	ICAL	1	200.47	0.96	15	PASS
ICV	ICV	1	10.26	0.562	15	PASS
ICB	ICB	1	0	1843.484	15	<PQL
LLICV1	CCV1	1	0.1	27.847	20	<PQL
MLCCV	CCV	1	19.53	0.888	15	PASS
ICSA1	ICSA	1	0	1230.608	15	<PQL
ICSAB1	ICSAB	1	20.62	0.688	15	PASS
CCV1	CCV	1	19.45	2.003	15	PASS
CCB1	CCB	1	0.01	93.594	15	<PQL
CCV2	CCV	1	19.3	0.915	15	PASS
CCB2	CCB	1	0.01	92.742	15	<PQL
CCV3	CCV	1	19.44	2.042	15	PASS
CCB3	CCB	1	0.01	71.127	15	<PQL
ICSA2	ICSA	1	0.03	56.698	15	<PQL
ICSAB2	ICSAB	1	20.75	0.711	15	PASS
MB-107478	MBLK	1	0.01	74.983	15	<PQL
LCS-107478	LCS	1	9.95	3.401	15	PASS
N063705-001C	SAMP	1	<0.000	N/A	15	<PQL
N063705-001C	SAMP	5	<0.000	N/A	15	<PQL
N063705-001C-PS	PS	1	10.28	3.397	15	PASS
N063705-001C-MS	MS	1	10.4	4.094	15	PASS
N063705-001C-MSD	MSD	1	10.19	1.352	15	PASS
N063705-002C	SAMP	1	<0.000	N/A	15	<PQL
N063705-003C	SAMP	1	<0.000	N/A	15	<PQL
CCV4	CCV	1	19.52	0.25	15	PASS
CCB4	CCB	1	0.02	23.522	15	<PQL
N063705-004C	SAMP	1	<0.000	N/A	15	<PQL
N063705-005C	SAMP	1	<0.000	N/A	15	<PQL
N063706-001C	SAMP	1	<0.000	N/A	15	<PQL
N063706-001C	SAMP	10	<0.000	N/A	15	<PQL
CCV5	CCV	1	19.82	1.204	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240312A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
ICSAB3	ICSAB	1	20.59	2.53	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240312A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0312001.d	RINSE	ICAL	1	03/12/24 2:37 PM
A0312002.d	Cal Blk	IBLK	1	03/12/24 2:41 PM
A0312003.d	Std1-0.1/1 ppb	ICAL	1	03/12/24 2:46 PM
A0312004.d	Std2-0.5/5 ppb	ICAL	1	03/12/24 2:51 PM
A0312005.d	Std3-5/50 ppb	ICAL	1	03/12/24 2:56 PM
A0312006.d	Std4-10/100 ppb	ICAL	1	03/12/24 3:00 PM
A0312007.d	Std5-4.0/20/200 ppb	ICAL	1	03/12/24 3:05 PM
A0312008.d	Std6-8.0/40/400 ppb	ICAL	1	03/12/24 3:10 PM
A0312009.d	Std7-100/1000 ppb	ICAL	1	03/12/24 3:15 PM
A0312010.d	Std8-200/2000 ppb	ICAL	1	03/12/24 3:19 PM
A0312011.d	ICV	ICV	1	03/12/24 3:34 PM
A0312012.d	ICB	ICB	1	03/12/24 3:38 PM
A0312013.d	LLICV1	CCV1	1	03/12/24 3:43 PM
A0312014.d	MLCCV	CCV	1	03/12/24 3:48 PM
A0312015.d	ICSA1	ICSA	1	03/12/24 3:52 PM
A0312016.d	ICSAB1	ICSAB	1	03/12/24 3:57 PM
A0312017.d	MB-107466	MBLK	1	03/12/24 4:09 PM
A0312018.d	LCS-107466	LCS	1	03/12/24 4:14 PM
A0312019.d	N063687-001A	SAMP	1	03/12/24 4:19 PM
A0312020.d	N063687-001A	SAMP	5	03/12/24 4:23 PM
A0312021.d	N063687-001A-PS	PS	1	03/12/24 4:28 PM
A0312022.d	N063687-001A-MS	MS	1	03/12/24 4:32 PM
A0312023.d	N063687-001A-MSD	MSD	1	03/12/24 4:37 PM
A0312024.d	N063687-002A	SAMP	1	03/12/24 4:42 PM
A0312025.d	N063700-001A	SAMP	1	03/12/24 4:46 PM
A0312026.d	N063701-001A	SAMP	1	03/12/24 4:51 PM
A0312027.d	CCV1	CCV	1	03/12/24 4:56 PM
A0312028.d	CCB1	CCB	1	03/12/24 5:00 PM
A0312029.d	N063702-001A	SAMP	1	03/12/24 5:05 PM
A0312030.d	N063703-001A	SAMP	1	03/12/24 5:10 PM
A0312031.d	N063687-001A	SAMP	1	03/12/24 5:14 PM
A0312032.d	N063687-001A	SAMP	1	03/12/24 5:19 PM
A0312033.d	N063687-001A	SAMP	1	03/12/24 5:24 PM
A0312034.d	CCV2	CCV	1	03/12/24 5:28 PM
A0312035.d	CCB2	CCB	1	03/12/24 5:33 PM
A0312036.d	MB-107476	MBLK	1	03/12/24 5:37 PM
A0312037.d	LCS-107476	LCS	1	03/12/24 5:42 PM
A0312038.d	N063688-001A	SAMP	1	03/12/24 5:47 PM
A0312039.d	N063688-001A	SAMP	5	03/12/24 5:51 PM
A0312040.d	N063688-001A-PS	PS	1	03/12/24 5:56 PM
A0312041.d	N063688-001A-MS	MS	1	03/12/24 6:01 PM
A0312042.d	N063688-001A-MSD	MSD	1	03/12/24 6:05 PM

INJECTION LOG: 240312A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0312043.d	CCV3	CCV	1	03/12/24 6:10 PM
A0312044.d	CCB3	CCB	1	03/12/24 6:15 PM
A0312045.d	ICSA2	ICSA	1	03/12/24 6:19 PM
A0312046.d	ICSAB2	ICSAB	1	03/12/24 6:24 PM
A0312047.d	MB-107478	MBLK	1	03/12/24 6:29 PM
A0312048.d	LCS-107478	LCS	1	03/12/24 6:33 PM
A0312049.d	N063705-001C	SAMP	1	03/12/24 6:38 PM
A0312050.d	N063705-001C	SAMP	5	03/12/24 6:42 PM
A0312051.d	N063705-001C-PS	PS	1	03/12/24 6:47 PM
A0312052.d	N063705-001C-MS	MS	1	03/12/24 6:52 PM
A0312053.d	N063705-001C-MSD	MSD	1	03/12/24 6:56 PM
A0312054.d	N063705-002C	SAMP	1	03/12/24 7:01 PM
A0312055.d	N063705-003C	SAMP	1	03/12/24 7:06 PM
A0312056.d	RINSE	ICAL	1	03/12/24 7:10 PM
A0312057.d	CCV4	CCV	1	03/12/24 7:15 PM
A0312058.d	CCB4	CCB	1	03/12/24 7:20 PM
A0312059.d	N063705-004C	SAMP	1	03/12/24 7:24 PM
A0312060.d	N063705-005C	SAMP	1	03/12/24 7:29 PM
A0312061.d	N063706-001C	SAMP	1	03/12/24 7:34 PM
A0312062.d	N063706-001C	SAMP	10	03/12/24 7:43 PM
A0312063.d	CCV5	CCV	1	03/12/24 7:48 PM
A0312064.d	CCB5	CCB	1	03/12/24 7:52 PM
A0312065.d	ICSA3	ICSA	1	03/12/24 7:57 PM
A0312066.d	ICSAB3	ICSAB	1	03/12/24 8:02 PM
A0312067.d	RINSE	ICAL	1	03/12/24 8:06 PM
A0312068.d	RINSE	ICAL	1	03/12/24 8:11 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/12/2024 11:31:18 AM**
Prep End Date: **3/12/2024 3:30:00 PM**

Reviewed/ Date: JRB 4/5/2024
Initials/ Date: for

Prep Batch **107478** Prep Code:**3010_W_MSDISS_TPK** Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-1-16**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107478	Aqueous		25	☐	25	1.000		
MB-107478	Aqueous		25	☐	25	1.000		
N063705-001C	Groundwater	<2	25	☐	25	1.000		
N063705-001C-MS	Groundwater	<2	25	☐	25	1.000		
N063705-001C-MSD	Groundwater	<2	25	☐	25	1.000		
N063705-002C	Groundwater	<2	25	☐	25	1.000		
N063705-003C	Groundwater	<2	25	☐	25	1.000		
N063705-004C	Groundwater	<2	25	☐	25	1.000		
N063705-005C	Groundwater	<2	25	☐	25	1.000		
N063706-001C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240311B.b
Acq. Date-Time	2024-03-12 13:48:49
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

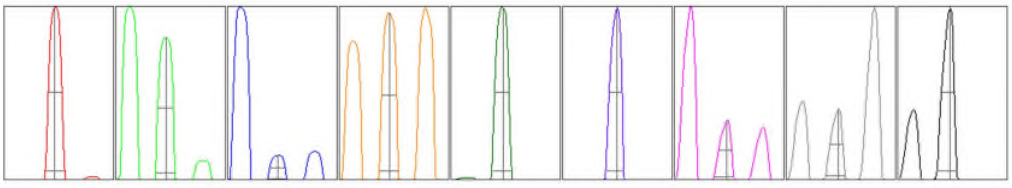
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	7480	74800.53	500.00		2.616	5.000
24	10.00	22346	223463.66	500.00		2.448	5.000
25	10.00	3014	30144.78	500.00		3.148	5.000
26	10.00	3496	34956.56	500.00		2.759	5.000
59	10.00	35897	358973.97	500.00		1.958	5.000
115	10.00	53931	539311.37	500.00		1.998	5.000
206	10.00	11019	110187.45	500.00		1.918	5.000
207	10.00	9137	91373.28	500.00		1.797	5.000
208	10.00	22678	226777.84	500.00		1.824	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.558 %
Doubly Charged	70 / 140 1.095 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	7502.73	8.90	8.90 - 9.10	
24	22331.58	23.90	23.90 - 24.10	
25	3014.51	24.90	24.90 - 25.10	
26	3620.45	25.90	25.90 - 26.10	
59	35835.13	58.95	58.90 - 59.10	
115	52662.28	115.00	114.90 - 115.10	
206	10634.45	205.95	205.90 - 206.10	
207	9513.91	206.95	206.90 - 207.10	
208	23658.59	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.38	0.528	0.900	
24	0.43	0.539	0.900	
25	0.42	0.526	0.900	
26	0.42	0.536	0.900	
59	0.40	0.536	0.900	
115	0.36	0.488	0.900	
206	0.37	0.539	0.900	
207	0.36	0.543	0.900	
208	0.36	0.558	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.4 mm	Torch V	1.1 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2521 V	Pulse HV	1595 V

[H2]

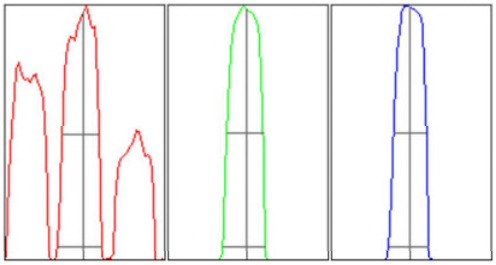
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		289	2894.65			7.603	
59		3457	34573.69			2.713	
115		49850	498503.75			2.301	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.511 %
Doubly Charged	70 / 140 0.327 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	306.04	26.00	25.90 - 26.10	
59	3610.31	59.00	58.90 - 59.10	
115	51031.09	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.70	0.832	0.900	
59	0.68	0.792	0.900	
115	0.62	0.757	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	0.9999	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.4 mm	Torch V	1.1 mm		

EM

Discriminator	4.5 mV	Analog HV	2521 V	Pulse HV	1595 V

[He]

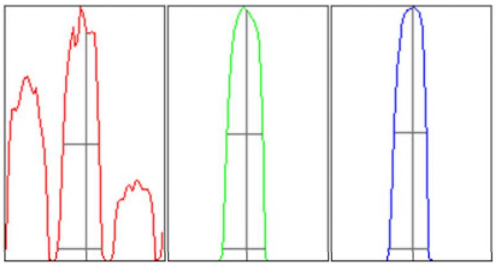
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		116	1159.04			10.300	
59		10115	101147.80			1.749	
115		10885	108853.04			2.046	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.210 %
Doubly Charged	70 / 140 1.038 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	120.76	26.05	25.90 - 26.10	
59	10227.46	59.00	58.90 - 59.10	
115	10984.10	115.05	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.68	0.827	0.900	
59	0.68	0.792	0.900	
115	0.62	0.741	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	0.9999	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.4 mm	Torch V	1.1 mm

EM

Discriminator	4.5 mV	Analog HV	2521 V	Pulse HV	1595 V

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240312A

Instrument ID: ICPMS-03

Analyte	Data File	A0312002.d	A0312003.d	A0312004.d	A0312005.d	A0312006.d	A0312007.d	A0312008.d	A0312009.d	A0312010.d	
	Acq. Date-Time	03/12/2024 02:41 PM	03/12/2024 02:46 PM	03/12/2024 02:51 PM	03/12/2024 02:56 PM	03/12/2024 03:00 PM	03/12/2024 03:05 PM	03/12/2024 03:10 PM	03/12/2024 03:15 PM	03/12/2024 03:19 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	66096.8		66122.4	65582.6	65801.2	65427.5	66876.6	66091.2	66231.7	
55 Mn [2]	CPS	175.5		1118.5	11070.7	22475.3	45231.3	91205.2	229825.9	462877.8	1.0000
72 Ge (ISTD) [2]	CPS	40727.2	40256.1	40237.1	40233.7	40026.7	40241.6	40525.7	40379.6	40419.8	
75 As [2]	CPS	13.3	45.5	280	2737.9	5286.3	10817.8	22074.5	55052.4	111207.8	1.0000
159 Tb (ISTD) [3]	CPS	2440785.4		2418930.5	2429558.9	2434133	2413182.7	2418850.8	2447523.6	2445038.7	
137 Ba [3]	CPS	73.3		2280.2	22059.2	46054.9	91967.3	185690.7	470500.7	951332.3	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **ICV** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742147**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.255	0.10	10.00	0	103	90	110				
Barium	10.283	1.0	10.00	0	103	90	110				
Manganese	104.872	0.50	100.0	0	105	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **ZZZZZZ** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742149**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.095	0.10	0.1000	0	95.2	80	120				
Barium	1.105	1.0	1.000	0	110	80	120				
Manganese	0.508	0.50	0.5000	0	102	80	120				

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **CCV** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742150**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.534	0.10	20.00	0	97.7	90	110				
Barium	19.521	1.0	20.00	0	97.6	90	110				
Manganese	19.686	0.50	20.00	0	98.4	90	110				

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **CCV** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742163**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.445	0.10	20.00	0	97.2	90	110				
Barium	19.691	1.0	20.00	0	98.5	90	110				
Manganese	19.311	0.50	20.00	0	96.6	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **CCV** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742170**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.296	0.10	20.00	0	96.5	90	110				
Barium	19.388	1.0	20.00	0	96.9	90	110				
Manganese	19.532	0.50	20.00	0	97.7	90	110				

Sample ID **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **CCV** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742179**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.443	0.10	20.00	0	97.2	90	110				
Barium	19.502	1.0	20.00	0	97.5	90	110				
Manganese	19.610	0.50	20.00	0	98.1	90	110				

Sample ID **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **CCV** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742192**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.516	0.10	20.00	0	97.6	90	110				
Barium	20.205	1.0	20.00	0	101	90	110				
Manganese	19.485	0.50	20.00	0	97.4	90	110				

Sample ID **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **CCV** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742198**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.819	0.10	20.00	0	99.1	90	110				
Barium	20.323	1.0	20.00	0	102	90	110				
Manganese	19.369	0.50	20.00	0	96.8	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB** SampType: **ICB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **ICB** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742148**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB1** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **CCB** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742164**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB2** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **CCB** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742171**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB3** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **CCB** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742180**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183503**
Client ID: **CCB**	Batch ID: **R183503**	TestNo: **EPA 6020**		Analysis Date: **3/12/2024**	SeqNo: **5742193**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183503**
Client ID: **CCB**	Batch ID: **R183503**	TestNo: **EPA 6020**		Analysis Date: **3/12/2024**	SeqNo: **5742199**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **ICSA** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742151**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **ICSAB** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742152**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.624	0.10	20.00	0	103	80	120				
Barium	20.730	1.0	20.00	0	104	80	120				
Manganese	20.637	0.50	20.00	0	103	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **ICSA** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742181**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **ICSAB** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742182**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.749	0.10	20.00	0	104	80	120				
Barium	20.838	1.0	20.00	0	104	80	120				
Manganese	20.687	0.50	20.00	0	103	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183503**
Client ID: **ICSA**	Batch ID: **R183503**	TestNo: **EPA 6020**		Analysis Date: **3/12/2024**	SeqNo: **5742200**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183503**
Client ID: **ICSAB**	Batch ID: **R183503**	TestNo: **EPA 6020**		Analysis Date: **3/12/2024**	SeqNo: **5742201**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.594	0.10	20.00	0	103	80	120				
Barium	21.388	1.0	20.00	0	107	80	120				
Manganese	20.299	0.50	20.00	0	101	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240312A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	2440785.4	2440785.4	100	PASS	30-150	66096.8	66096.8	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	2460721.8	2440785.4	100.82	PASS	30-150	65820.1	66096.8	99.58	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	2418930.5	2440785.4	99.1	PASS	30-150	66122.4	66096.8	100.04	PASS	30-150
Std3-5/50 ppb	ICAL	1	2429558.9	2440785.4	99.54	PASS	30-150	65582.6	66096.8	99.22	PASS	30-150
Std4-10/100 ppb	ICAL	1	2434133	2440785.4	99.73	PASS	30-150	65801.2	66096.8	99.55	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	2413182.7	2440785.4	98.87	PASS	30-150	65427.5	66096.8	98.99	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	2418850.8	2440785.4	99.1	PASS	30-150	66876.6	66096.8	101.18	PASS	30-150
Std7-100/1000 ppb	ICAL	1	2447523.6	2440785.4	100.28	PASS	30-150	66091.2	66096.8	99.99	PASS	30-150
Std8-200/2000 ppb	ICAL	1	2445038.7	2440785.4	100.17	PASS	30-150	66231.7	66096.8	100.2	PASS	30-150
ICV	ICV	1	2459332.3	2440785.4	100.76	PASS	30-150	65556.9	66096.8	99.18	PASS	30-150
ICB	ICB	1	2418480.9	2440785.4	99.09	PASS	30-150	65092.9	66096.8	98.48	PASS	30-150
LLICV1	CCV1	1	2397352.4	2440785.4	98.22	PASS	30-150	64307.6	66096.8	97.29	PASS	30-150
MLCCV	CCV	1	2445039.1	2440785.4	100.17	PASS	30-150	64990.2	66096.8	98.33	PASS	30-150
ICSA1	ICSA	1	2403496.6	2440785.4	98.47	PASS	30-150	63901.5	66096.8	96.68	PASS	30-150
ICSAB1	ICSAB	1	2392764.2	2440785.4	98.03	PASS	30-150	64609.8	66096.8	97.75	PASS	30-150
CCV1	CCV	1	2470026	2440785.4	101.2	PASS	30-150	66347.9	66096.8	100.38	PASS	30-150
CCB1	CCB	1	2458752.7	2440785.4	100.74	PASS	30-150	65717.5	66096.8	99.43	PASS	30-150
CCV2	CCV	1	2493188.9	2440785.4	102.15	PASS	30-150	65588.2	66096.8	99.23	PASS	30-150
CCB2	CCB	1	2494484.9	2440785.4	102.2	PASS	30-150	64973.4	66096.8	98.3	PASS	30-150
CCV3	CCV	1	2528748.8	2440785.4	103.6	PASS	30-150	65565.9	66096.8	99.2	PASS	30-150
CCB3	CCB	1	2515953.7	2440785.4	103.08	PASS	30-150	66113.5	66096.8	100.03	PASS	30-150
ICSA2	ICSA	1	2470130.8	2440785.4	101.2	PASS	30-150	65623.8	66096.8	99.28	PASS	30-150
ICSAB2	ICSAB	1	2436151.8	2440785.4	99.81	PASS	30-150	64030.9	66096.8	96.87	PASS	30-150
MB-107478	MBLK	1	2252555.5	2440785.4	92.29	PASS	30-150	58536.5	66096.8	88.56	PASS	30-150
LCS-107478	LCS	1	2274313.7	2440785.4	93.18	PASS	30-150	59121.9	66096.8	89.45	PASS	30-150
N063705-001C	SAMP	1	1883379.1	2440785.4	77.16	PASS	30-150	56621.2	66096.8	85.66	PASS	30-150
N063705-001C	SAMP	5	2146253.5	2440785.4	87.93	PASS	30-150	62389.4	66096.8	94.39	PASS	30-150
N063705-001C-PS	PS	1	1934388.6	2440785.4	79.25	PASS	30-150	58927.9	66096.8	89.15	PASS	30-150
N063705-001C-MS	MS	1	1930835.5	2440785.4	79.11	PASS	30-150	57804	66096.8	87.45	PASS	30-150
N063705-001C-MSD	MSD	1	1919631.1	2440785.4	78.65	PASS	30-150	57855.4	66096.8	87.53	PASS	30-150
N063705-002C	SAMP	1	2000082	2440785.4	81.94	PASS	30-150	58637.9	66096.8	88.72	PASS	30-150
N063705-003C	SAMP	1	2008850.5	2440785.4	82.3	PASS	30-150	57775	66096.8	87.41	PASS	30-150
CCV4	CCV	1	2417234	2440785.4	99.04	PASS	30-150	68119.2	66096.8	103.06	PASS	30-150
CCB4	CCB	1	2343050.2	2440785.4	96	PASS	30-150	66137.1	66096.8	100.06	PASS	30-150
N063705-004C	SAMP	1	1670492.4	2440785.4	68.44	PASS	30-150	52114.3	66096.8	78.85	PASS	30-150
N063705-005C	SAMP	1	1652164.6	2440785.4	67.69	PASS	30-150	51927.1	66096.8	78.56	PASS	30-150
N063706-001C	SAMP	1	1680871.5	2440785.4	68.87	PASS	30-150	54217.7	66096.8	82.03	PASS	30-150
N063706-001C	SAMP	10	2121331	2440785.4	86.91	PASS	30-150	62852.2	66096.8	95.09	PASS	30-150
CCV5	CCV	1	2348194.5	2440785.4	96.21	PASS	30-150	69006.5	66096.8	104.4	PASS	30-150
CCB5	CCB	1	2345109.9	2440785.4	96.08	PASS	30-150	67422	66096.8	102	PASS	30-150
ICSA3	ICSA	1	2295585.3	2440785.4	94.05	PASS	30-150	67167.8	66096.8	101.62	PASS	30-150

INTERNAL STANDARD: 240312A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
ICSAB3	ICSAB	1	2254769	2440785.4	92.38	PASS	30-150	64697	66096.8	97.88	PASS	30-150

INTERNAL STANDARD: 240312A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	40727.2	40727.2	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	40256.1	40727.2	98.84	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	40237.1	40727.2	98.8	PASS	30-150
Std3-5/50 ppb	ICAL	1	40233.7	40727.2	98.79	PASS	30-150
Std4-10/100 ppb	ICAL	1	40026.7	40727.2	98.28	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	40241.6	40727.2	98.81	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	40525.7	40727.2	99.51	PASS	30-150
Std7-100/1000 ppb	ICAL	1	40379.6	40727.2	99.15	PASS	30-150
Std8-200/2000 ppb	ICAL	1	40419.8	40727.2	99.25	PASS	30-150
ICV	ICV	1	40093.4	40727.2	98.44	PASS	30-150
ICB	ICB	1	39730.3	40727.2	97.55	PASS	30-150
LLICV1	CCV1	1	39544.3	40727.2	97.1	PASS	30-150
MLCCV	CCV	1	39888.5	40727.2	97.94	PASS	30-150
ICSA1	ICSA	1	39465.2	40727.2	96.9	PASS	30-150
ICSAB1	ICSAB	1	39408.4	40727.2	96.76	PASS	30-150
CCV1	CCV	1	40760.6	40727.2	100.08	PASS	30-150
CCB1	CCB	1	40608	40727.2	99.71	PASS	30-150
CCV2	CCV	1	40068.9	40727.2	98.38	PASS	30-150
CCB2	CCB	1	40253.8	40727.2	98.84	PASS	30-150
CCV3	CCV	1	40602.4	40727.2	99.69	PASS	30-150
CCB3	CCB	1	41072.5	40727.2	100.85	PASS	30-150
ICSA2	ICSA	1	40329.6	40727.2	99.02	PASS	30-150
ICSAB2	ICSAB	1	38878.3	40727.2	95.46	PASS	30-150
MB-107478	MBLK	1	36524	40727.2	89.68	PASS	30-150
LCS-107478	LCS	1	36431.6	40727.2	89.45	PASS	30-150
N063705-001C	SAMP	1	33807.1	40727.2	83.01	PASS	30-150
N063705-001C	SAMP	5	37421.5	40727.2	91.88	PASS	30-150
N063705-001C-PS	PS	1	33980.8	40727.2	83.44	PASS	30-150
N063705-001C-MS	MS	1	33917.3	40727.2	83.28	PASS	30-150
N063705-001C-MSD	MSD	1	33598.9	40727.2	82.5	PASS	30-150
N063705-002C	SAMP	1	34204.6	40727.2	83.98	PASS	30-150
N063705-003C	SAMP	1	33414.1	40727.2	82.04	PASS	30-150
CCV4	CCV	1	41333.2	40727.2	101.49	PASS	30-150
CCB4	CCB	1	40189.3	40727.2	98.68	PASS	30-150
N063705-004C	SAMP	1	29968.5	40727.2	73.58	PASS	30-150
N063705-005C	SAMP	1	30060.9	40727.2	73.81	PASS	30-150
N063706-001C	SAMP	1	30810.1	40727.2	75.65	PASS	30-150
N063706-001C	SAMP	10	37920.5	40727.2	93.11	PASS	30-150
CCV5	CCV	1	41239.6	40727.2	101.26	PASS	30-150
CCB5	CCB	1	41505.9	40727.2	101.91	PASS	30-150
ICSA3	ICSA	1	40318.4	40727.2	99	PASS	30-150

INTERNAL STANDARD: 240312A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
ICSAB3	ICSAB	1	39464.1	40727.2	96.9	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.:	N063705
Test Method:	EPA 6020
Analysis Date:	3/12/2024
Matrix:	Groundwater
Batch No.:	107478
Instrument ID:	ICPMS-03
Instrument Description:	Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to As, Ba, Mn. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063705-001C DT 5x	Arsenic	As	µg/L	0	NA	0		10
N063705-001C DT 5x	Barium	Ba	µg/L	22.54131	NA	20.2749	11.18%	10
N063705-001C DT 5x	Manganese	Mn	µg/L	6.898722	NA	6.731893	2.48%	10

Reviewed by:

JRB 4/5/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063705
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **N063705-001C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **ZZZZZZ** Batch ID: **107478** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/12/2024** SeqNo: **5742187**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.278	0.10	10.00	0	103	80	120				
Barium	29.282	1.0	10.00	20.27	90.1	80	120				
Manganese	99.794	0.50	100.0	6.732	93.1	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

ARCADIS

Project: PG&E Topock - PCM

Project No.: 30121866.1Q23GW

ASSET Laboratories Work Order:

N063706

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063706

Item	Page
Cover Page	1-5
Analytical Result/QC Summary Reports	6-20
Sample Receiving Items	21-24
List of Analysts	25
Raw Data	
EPA 218.6	26-242
EPA 300.0	243-267
EPA 6010B_Dissolved	268-296
EPA 6020_Dissolved	297-339

March 18, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063706

RE: PG&E Topock - PCM, 30121866.1Q23GW

Attention: Dan Bush

Enclosed are the results for sample(s) received on March 11, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30121866.1Q23GW
Lab Order: N063706

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 218.6:

Dilution was necessary for sample N063706-001 due to matrix interference. Sample was analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Sample was reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Analytical Comments for EPA 300:

Dilution was necessary due to precipitation of sample upon addition of eluent.

Analytical Comments for EPA 6010B:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Iron in QC samples N063705-002C-MS and N063705-002C-MSD possibly due to matrix interference. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

ASSET Laboratories

Date: *18-Mar-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30121866.1Q23GW
Lab Order: N063706
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063706-001A	MW-44-125-0324	Groundwater	3/11/2024 12:03:00 PM	3/11/2024	3/18/2024
N063706-001B	MW-44-125-0324	Groundwater	3/11/2024 12:03:00 PM	3/11/2024	3/18/2024
N063706-001C	MW-44-125-0324	Groundwater	3/11/2024 12:03:00 PM	3/11/2024	3/18/2024
N063706-002A	EB-739-Q124	Groundwater	3/11/2024 2:45:00 PM	3/11/2024	3/18/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-44-125-0324
Lab Order:	N063706		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/11/2024 12:03:00 PM
Lab ID:	N063706-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240312A**	QC Batch: **R183530**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	5.6	0.19	1.0		µg/L	5	3/12/2024 02:46 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-739-Q124
Lab Order:	N063706		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/11/2024 2:45:00 PM
Lab ID:	N063706-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240313A**	QC Batch: **R183577**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	3/13/2024 03:58 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R183530**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **PBW**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743068**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R183530**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **LCSW**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743069**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.796	0.20	5.000	0	95.9	90	110				

Sample ID: **N063705-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **ZZZZZZ**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743079**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	57.633	1.0	25.00	33.12	98.1	90	110				

Sample ID: **N063705-004AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **ZZZZZZ**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743080**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	58.966	1.0	25.00	33.12	103	90	110	57.63	2.29	20	

Sample ID: **N063705-005ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **ZZZZZZ**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743081**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	33.198	1.0						33.20	0.0105	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063705-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183530**
Client ID: **ZZZZZZ** Batch ID: **R183530** TestNo: **EPA 218.6** Analysis Date: **3/12/2024** SeqNo: **5743082**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	57.573	1.0	25.00	33.20	97.5	90	110				

Sample ID: **N063705-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183530**
Client ID: **ZZZZZZ** Batch ID: **R183530** TestNo: **EPA 218.6** Analysis Date: **3/12/2024** SeqNo: **5743083**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.094	0.20	1.000	1.101	99.3	90	110				

Sample ID: **N063705-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183530**
Client ID: **ZZZZZZ** Batch ID: **R183530** TestNo: **EPA 218.6** Analysis Date: **3/12/2024** SeqNo: **5743086**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.135	0.20	1.000	1.160	97.5	90	110				

Sample ID: **N063706-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183530**
Client ID: **ZZZZZZ** Batch ID: **R183530** TestNo: **EPA 218.6** Analysis Date: **3/12/2024** SeqNo: **5743088**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.447	1.0	5.000	5.628	96.4	90	110				

Sample ID: **N063705-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183530**
Client ID: **ZZZZZZ** Batch ID: **R183530** TestNo: **EPA 218.6** Analysis Date: **3/12/2024** SeqNo: **5743093**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	34.622	1.0	25.00	9.565	100	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R183577**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **PBW**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745756**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R183577**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **LCSW**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745757**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.936	0.20	5.000	0	98.7	90	110				

Sample ID: **N063562-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745760**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.368	0.20	1.000	0.3777	99.1	90	110				

Sample ID: **N063618-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745761**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.345	0.20	1.000	1.292	105	90	110				

Sample ID: **N063562-001ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745768**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.352	0.20						0.3777	7.07	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063736-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745769**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	11.594	0.20	5.000	6.522	101	90	110				

Sample ID: **N063736-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745770**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	202.404	4.0	100.0	100.6	102	90	110				

Sample ID: **N063736-004AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745771**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	201.716	4.0	100.0	100.6	101	90	110	202.4	0.340	20	

Sample ID: **N063736-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745772**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	85.658	2.0	50.00	34.90	102	90	110				

Sample ID: **N063736-005AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745774**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.138	0.20	1.000	0.09750	104	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063736-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745777**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.116	1.0	5.000	4.022	102	90	110				

Sample ID: **N063559-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745779**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.439	0.20	1.000	0.4311	101	90	110				

Sample ID: **N063706-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745786**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.038	0.20	1.000	0	104	90	110				

Sample ID: **N063559-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745790**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.830	1.0	5.000	0	96.6	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California **Client Sample ID:** MW-44-125-0324
Lab Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW **Collection Date:** 3/11/2024 12:03:00 PM
Lab ID: N063706-001 **Matrix:** GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240312A** QC Batch: **R183502**				PrepDate:			Analyst: **RAB**
Sulfate	920	34	50		mg/L	100	3/12/2024 02:34 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240312A** QC Batch: **R183502**				PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/12/2024 11:00 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **MB-R183502_SO4**	SampType: **MBLK**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **PBW**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742340**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **LCS-R183502_SO4**	SampType: **LCS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **LCSW**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742341**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.919	0.50	4.000	0	98.0	90	110				

Sample ID: **N063705-001BMS**	SampType: **MS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **ZZZZZZ**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742345**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	1053.100	50	400.0	662.0	97.8	80	120				

Sample ID: **N063705-001BMSD**	SampType: **MSD**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **ZZZZZZ**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742346**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	1056.380	50	400.0	662.0	98.6	80	120	1053	0.311	20	

Sample ID: **N063705-002BDUP**	SampType: **DUP**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **ZZZZZZ**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742348**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	432.355	25						425.6	1.57	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **MB-R183502_NO3**	SampType: **MBLK**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **PBW**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742321**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **LCS-R183502_NO3**	SampType: **LCS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **LCSW**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742322**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.219	0.050	1.250	0	97.5	90	110				

Sample ID: **N063705-001BMS**	SampType: **MS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **ZZZZZZ**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742329**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.079	0.50	12.50	0	96.6	80	120				

Sample ID: **N063705-001BMSD**	SampType: **MSD**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **ZZZZZZ**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742330**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.061	0.50	12.50	0	96.5	80	120	12.08	0.149	20	

Sample ID: **N063705-002BDUP**	SampType: **DUP**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **ZZZZZZ**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742333**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	0.353	0.50						0.3360	0	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-44-125-0324
Lab Order:	N063706		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/11/2024 12:03:00 PM
Lab ID:	N063706-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240312B**	QC Batch: **107482**				PrepDate:	**3/12/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	3/12/2024 06:11 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-107482**	SampType: **MBLK**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/12/2024**	RunNo: **183506**
Client ID: **PBW**	Batch ID: **107482**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/12/2024**	SeqNo: **5742361**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS-107482**	SampType: **LCS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/12/2024**	RunNo: **183506**
Client ID: **LCSW**	Batch ID: **107482**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/12/2024**	SeqNo: **5742362**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	104.616	20	100.0	0	105	85	115				

Sample ID: **N063705-002C-MS**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/12/2024**	RunNo: **183506**
Client ID: **ZZZZZZ**	Batch ID: **107482**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/12/2024**	SeqNo: **5742367**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	206.017	20	100.0	13.69	192	75	125				S

Sample ID: **N063705-002C-MSD**	SampType: **MSD**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/12/2024**	RunNo: **183506**
Client ID: **ZZZZZZ**	Batch ID: **107482**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/12/2024**	SeqNo: **5742368**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	201.854	20	100.0	13.69	188	75	125	206.0	2.04	20	S

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N063705-002C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **183506**
Client ID: **ZZZZZZ** Batch ID: **107482** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/12/2024** SeqNo: **5742366**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	103.733	20	100.0	13.69	90.0	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-44-125-0324
Lab Order:	N063706		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/11/2024 12:03:00 PM
Lab ID:	N063706-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240312A**	QC Batch: **107478**			PrepDate:	**3/12/2024**		Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/12/2024 07:34 PM
Barium	48	0.083	1.0		µg/L	1	3/12/2024 07:34 PM
Manganese	390	0.26	5.0		µg/L	10	3/12/2024 07:43 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **MB-107478** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/12/2024** RunNo: **183503**
Client ID: **PBW** Batch ID: **107478** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/12/2024** SeqNo: **5742183**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **LCS-107478** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/12/2024** RunNo: **183503**
Client ID: **LCSW** Batch ID: **107478** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/12/2024** SeqNo: **5742184**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	9.952	0.10	10.00	0	99.5	85	115				
Barium	10.029	1.0	10.00	0	100	85	115				
Manganese	101.224	0.50	100.0	0	101	85	115				

Sample ID: **N063705-001C-MS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/12/2024** RunNo: **183503**
Client ID: **ZZZZZZ** Batch ID: **107478** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/12/2024** SeqNo: **5742188**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.398	0.10	10.00	0	104	75	125				
Barium	30.141	1.0	10.00	20.27	98.7	75	125				
Manganese	101.139	0.50	100.0	6.732	94.4	75	125				

Sample ID: **N063705-001C-MSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/12/2024** RunNo: **183503**
Client ID: **ZZZZZZ** Batch ID: **107478** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/12/2024** SeqNo: **5742189**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.193	0.10	10.00	0	102	75	125	10.40	1.99	20	
Barium	30.087	1.0	10.00	20.27	98.1	75	125	30.14	0.181	20	
Manganese	101.182	0.50	100.0	6.732	94.4	75	125	101.1	0.0419	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

SAMPLE RECEIVING ITEMS

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement	QA/QC	Sample Receipt Condition
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	Excel EDD	RTNE	Y N
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.ancore@eritigen.com	Address:	Geotracker	RWQCB ✓	1. Chilled ✓
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com P.O.#	Labspec	CalTrans	2. Headspace
Submitted By: Riggie Tap			Others ✓	LEVEL III	3. Container Intact ✓
Title: Field Tech	Phone: 916-786-3302 Fax:	Phone: 949-727-1400, ext 200 Fax:	Specify: RWQCB	LEVEL IV	4. Seal Present ✓
Signature: Date: 03/11/24	Sampled By: Riggie Tap		Global ID:	Regulatory	5. IR number 3
I hereby authorize ASSET Labs to perform the tests indicated below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for			Specify State:	6. Method of Cooling: ICE
Project Name: PG&E Topock - PCM	Signature: Date: 03/11/24				Sample Temp: 1.9°C
Project Number: 30121866.1Q23GW					Courier: ASSET Tracking No.:

Matrix: Ground | X | Sediment | Potable | | Soil | NPDES | | Other Solid | Surface | |

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly)	Nitrate, sulfate (EPA 300.0) (1 L poly)	Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Molybdenum, Selenium (500mL poly)	Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOA)	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 (125 mL poly)	Ammonia as Nitrogen (SM4500NH3); H2SO4 (1 L poly)	Nitrate, sulfate (EPA 300.0) (1 L poly)	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063706-001	MW-44-125-0324	3/11/2024	12:03		X	X	X							E	3	P	BNS	
2	-002	EB-739-Q124	3/11/2024	14:45		X									E	1	P	BNS	
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			

Relinquished by (Signature and Printed Name): Riggie Tap 03/11/24 1830 — Date/Time:
Relinquished by (Signature and Printed Name): Michael Mcanton 3/11/24 2107 — Date/Time:
Relinquished by (Signature and Printed Name): — Date/Time:

Received by (Signature and Printed Name): Michael Mcanton 3/11/24 1830 — Date/Time:
Received by (Signature and Printed Name): Michael Mcanton 3/11/24 2107 — Date/Time:
Received by (Signature and Printed Name): — Date/Time:

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days. surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages. 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:

H=HCL	N=HNO_3	S=H_2SO_4	C=4°C	
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$		
Others/Specify:	B	(NH4)2SO4/NH4OH		

Container Type:

T=Tube	V=VOA	P=Pint
J=Jar	B=Tedlar	G=Glass
M=Metal	M=Metal	C=Can

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	3/11/2024	Workorder:	N063706
Rep sample Temp (Deg C):	1.9	IR Gun ID:	3

Temp Blank: ☑ Yes ☐ No

Carrier name: ASSET

Last 4 digits of Tracking No.: NA Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By: CC Chara Cintron
3/12/2024

Reviewed By: for: MBC 03/12/2024

ASSET Laboratories

WORK ORDER Summary

11-Mar-24

WorkOrder: N063706

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30121866.1Q23GW **QC Level:** Level IV **Date Received:** 3/11/2024 9:07 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063706-001A	MW-44-125-0324	3/11/2024 12:03:00 PM	3/26/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063706-001B			3/26/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/26/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063706-001C			3/26/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/26/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/26/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/26/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063706-002A	EB-739-Q124	3/11/2024 2:45:00 PM	3/26/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063706-003A	FOLDER	3/26/2024	3/26/2024		Folder	Folder	☐	☐	☐	LAB
			3/26/2024		Folder	Level IV Report	☐	☐	☐	LAB
			3/26/2024		Folder	Folder	☐	☐	☐	LAB

List of Analysts

ASSET Laboratories Work Order: N063706

NAME	TEST METHOD
Ria Abes	EPA 218.6, EPA 300.0
Diane Jetajobe	EPA 6010B_Dissolved, EPA 6020_Dissolved

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R183530
ASSET #: N063706

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 3/12/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments: Dilution was necessary for sample N063706-001 due to matrix interference.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer RB 03132024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R183577
ASSET #: N063706

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 3/13/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer RB 03142024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063706-001A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 1.1257 * 5$$

$$Cr^{+6}, \mu g/L = 5.6285$$

Reporting results in two significant figures,

$$\mathbf{Cr^{+6}, \mu g/L = 5.6}$$

Reviewed by:

dMocha 3/26/2024

ANALYSIS RUN LOG

INJECTION LOG: 240305A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	03/05/24 4:07 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/05/24 4:16 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	03/05/24 4:26 PM	Reported
12	MB-R183315	MBLK	1	Hexavalent Chromium	03/05/24 4:35 PM	Reported
13	LCS-R183315	LCS	1	Hexavalent Chromium	03/05/24 4:45 PM	Reported
14	MB-107277	MBLK	1	Hexavalent Chromium	03/05/24 4:54 PM	Reported
15	N063472-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:04 PM	Reported
16	N063472-001ADUP	DUP	1	Hexavalent Chromium	03/05/24 5:13 PM	Reported
17	N063535-006A	SAMP	1	Hexavalent Chromium	03/05/24 5:23 PM	Reported
18	N063535-006AMS	MS	1	Hexavalent Chromium	03/05/24 5:32 PM	Reported
19	N063535-006AMSD	MSD	1	Hexavalent Chromium	03/05/24 5:42 PM	Reported
20	N063534-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:51 PM	Reported
21	N063534-001AMS	MS	1	Hexavalent Chromium	03/05/24 6:00 PM	Reported
22	CCV-1	CCV1	1	Hexavalent Chromium	03/05/24 6:10 PM	Reported
23	CCB-1	CCB	1	Hexavalent Chromium	03/05/24 6:20 PM	Reported
24	N063534-002A	SAMP	1	Hexavalent Chromium	03/05/24 6:30 PM	Reported
25	N063534-002AMS	MS	1	Hexavalent Chromium	03/05/24 6:38 PM	Reported
26	N063534-003A	SAMP	1	Hexavalent Chromium	03/05/24 6:48 PM	Reported
27	N063534-003AMS	MS	1	Hexavalent Chromium	03/05/24 6:57 PM	Reported
28	N063535-001A	SAMP	1	Hexavalent Chromium	03/05/24 7:07 PM	Reported
29	N063535-002A	SAMP	1	Hexavalent Chromium	03/05/24 7:16 PM	Reported
30	N063535-003A	SAMP	1	Hexavalent Chromium	03/05/24 7:26 PM	Reported
31	N063535-004A	SAMP	1	Hexavalent Chromium	03/05/24 7:35 PM	Reported
32	N063535-005A	SAMP	1	Hexavalent Chromium	03/05/24 7:48 PM	Reported
33	CCV-2	CCV	1	Hexavalent Chromium	03/05/24 7:57 PM	Reported
34	CCB-2	CCB	1	Hexavalent Chromium	03/05/24 8:07 PM	Reported
35	N063535-007A	SAMP	1	Hexavalent Chromium	03/05/24 8:16 PM	Reported
36	N063535-008A	SAMP	1	Hexavalent Chromium	03/05/24 8:25 PM	Reported
37	CCV-3	CCV1	1	Hexavalent Chromium	03/05/24 8:35 PM	Reported
38	CCB-3	CCB	1	Hexavalent Chromium	03/05/24 8:46 PM	Reported
39	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 8:55 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240305A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**07/Mar/24 08:03:58**
No. of Injections:	**42**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	8	1000	Unknown		03/05/2024 16:07	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	9	1000	Unknown		03/05/2024 16:16	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	10	1000	Unknown		03/05/2024 16:26	Finished	ICB R240129C
12	MB-H2O,MBLK,1,	11	1000	Unknown		03/05/2024 16:35	Finished	MB R240129C
13	LCS-H2O,LCS,1,	12	1000	Unknown		03/05/2024 16:45	Finished	LCS @5ppb, IWST-231228B
14	MB-107277,MBLK,1,	13	1000	Unknown		03/05/2024 16:54	Finished	MB TCLP
15	N063472-001A,SAMP	14	1000	Unknown		03/05/2024 17:04	Finished	SAMP,10 mL
16	N063472-001ADUP,D	15	1000	Unknown		03/05/2024 17:13	Finished	REP,10 mL
17	N063535-006A,SAMP	16	1000	Unknown		03/05/2024 17:23	Finished	SAMP,10 mL
18	N063535-006AMS,MS	17	1000	Unknown		03/05/2024 17:32	Finished	MS (5ppb), IWST-231228B,10r
19	N063535-006AMSD,M	18	1000	Unknown		03/05/2024 17:42	Finished	MSD (5ppb), IWST-231228B,1
20	N063534-001A,SAMP	19	1000	Unknown		03/05/2024 17:51	Finished	SAMP,10 mL
21	N063534-001AMS,MS	20	1000	Unknown		03/05/2024 18:00	Finished	MS (1ppb), IWST-231228B,10r
22	CCV-1,CCV1,1,	21	1000	Unknown		03/05/2024 18:10	Finished	CCV @10ppb, IWST-231228A
23	CCB-1,CCB,1,	22	1000	Unknown		03/05/2024 18:20	Finished	CCB R240129C
24	N063534-002A,SAMP	23	1000	Unknown		03/05/2024 18:30	Finished	SAMP,10 mL
25	N063534-002AMS,MS	24	1000	Unknown		03/05/2024 18:38	Finished	MS (1ppb), IWST-231228B,10r
26	N063534-003A,SAMP	25	1000	Unknown		03/05/2024 18:48	Finished	SAMP,10 mL
27	N063534-003AMS,MS	26	1000	Unknown		03/05/2024 18:57	Finished	MS (1ppb), IWST-231228B,10r
28	N063535-001A,SAMP	27	1000	Unknown		03/05/2024 19:07	Finished	SAMP,10 mL
29	N063535-002A,SAMP	28	1000	Unknown		03/05/2024 19:16	Finished	SAMP,10 mL
30	N063535-003A,SAMP	29	1000	Unknown		03/05/2024 19:26	Finished	SAMP,10 mL
31	N063535-004A,SAMP	30	1000	Unknown		03/05/2024 19:35	Finished	SAMP,10 mL
32	N063535-005A,SAMP	31	1000	Unknown		03/05/2024 19:48	Finished	SAMP,10 mL
33	CCV-2,CCV,1,	32	1000	Unknown		03/05/2024 19:57	Finished	CCV @5ppb, IWST-231228A
34	CCB-2,CCB,1,	33	1000	Unknown		03/05/2024 20:07	Finished	CCB R240129C
35	N063535-007A,SAMP	34	1000	Unknown		03/05/2024 20:16	Finished	SAMP,10 mL
36	N063535-008A,SAMP	35	1000	Unknown		03/05/2024 20:25	Finished	SAMP,10 mL
37	CCV-3,CCV1,1,	37	1000	Unknown		03/05/2024 20:35	Finished	CCV @10ppb, IWST-231228A
38	CCB-3,CCB,1,	38	1000	Unknown		03/05/2024 20:46	Finished	CCB R240129C
39	BLANK	39	1000	Unknown		03/05/2024 20:55	Finished	BLANK
40	SHUTDOWN	40	1000	Unknown		03/05/2024 21:05	Finished	
41	Eluent: R240305B	41	1000	Unknown		n.a.	Finished	
42	PCR: R240305C	42	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240312A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/12/24 8:32 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/12/24 8:45 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/12/24 8:55 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/12/24 9:04 AM	Reported
13	MB-R183530	MBLK	1	Hexavalent Chromium	03/12/24 9:14 AM	Reported
14	LCS-R183530	LCS	1	Hexavalent Chromium	03/12/24 9:23 AM	Reported
15	MB-107451	MBLK	1	Hexavalent Chromium	03/12/24 11:13 AM	Not Reported
16	N063472-001A	SAMP	1	Hexavalent Chromium	03/12/24 11:28 AM	Not Reported
17	N063472-001ADUP	DUP	1	Hexavalent Chromium	03/12/24 11:37 AM	Not Reported
18	N063705-001A	SAMP	10	Hexavalent Chromium	03/12/24 11:47 AM	Not Reported
19	N063705-002A	SAMP	1	Hexavalent Chromium	03/12/24 11:56 AM	Reported
20	N063705-003A	SAMP	1	Hexavalent Chromium	03/12/24 12:05 PM	Reported
21	N063705-004A	SAMP	5	Hexavalent Chromium	03/12/24 12:15 PM	Reported
22	N063705-005A	SAMP	5	Hexavalent Chromium	03/12/24 12:24 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/12/24 12:34 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/12/24 12:43 PM	Reported
25	N063706-001A	SAMP	1	Hexavalent Chromium	03/12/24 12:53 PM	Not Reported
26	N063706-001AMS	MS	1	Hexavalent Chromium	03/12/24 1:02 PM	Not Reported
27	N063705-001A	SAMP	1	Hexavalent Chromium	03/12/24 1:12 PM	Not Reported
28	N063705-001AMS	MS	1	Hexavalent Chromium	03/12/24 1:21 PM	Not Reported
29	N063705-004AMS	MS	5	Hexavalent Chromium	03/12/24 1:31 PM	Reported
30	N063705-004AMSD	MSD	5	Hexavalent Chromium	03/12/24 1:40 PM	Reported
31	N063705-005ADUP	DUP	5	Hexavalent Chromium	03/12/24 1:49 PM	Reported
32	N063705-005AMS	MS	5	Hexavalent Chromium	03/12/24 1:59 PM	Reported
33	N063705-002AMS	MS	1	Hexavalent Chromium	03/12/24 2:08 PM	Reported
34	CCV-3	CCV1	1	Hexavalent Chromium	03/12/24 2:18 PM	Reported
35	CCB-3	CCB	1	Hexavalent Chromium	03/12/24 2:27 PM	Reported
36	N063705-003AMS	MS	1	Hexavalent Chromium	03/12/24 2:37 PM	Reported
37	N063706-001A	SAMP	5	Hexavalent Chromium	03/12/24 2:46 PM	Reported
38	N063706-001AMS	MS	5	Hexavalent Chromium	03/12/24 2:56 PM	Reported
39	N063559-001A	SAMP	1	Hexavalent Chromium	03/12/24 3:05 PM	Not Reported
40	N063559-002A	SAMP	1	Hexavalent Chromium	03/12/24 3:15 PM	Not Reported
41	N063642-009A	SAMP	1	Hexavalent Chromium	03/12/24 3:24 PM	Reported
42	N063642-010A	SAMP	1	Hexavalent Chromium	03/12/24 3:33 PM	Reported

INJECTION LOG: 240312A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063642-011A	SAMP	1	Hexavalent Chromium	03/12/24 3:43 PM	Reported
44	N063705-001A	SAMP	5	Hexavalent Chromium	03/12/24 3:52 PM	Reported
45	N063705-001AMS	MS	5	Hexavalent Chromium	03/12/24 4:02 PM	Reported
46	CCV-4	CCV1	1	Hexavalent Chromium	03/12/24 4:11 PM	Reported
47	CCB-4	CCB	1	Hexavalent Chromium	03/12/24 4:21 PM	Reported
48	N063706-002A	SAMP	1	Hexavalent Chromium	03/12/24 4:38 PM	Not Reported
49	N063706-002AMS	MS	1	Hexavalent Chromium	03/12/24 4:50 PM	Not Reported
50	N063617-002A	SAMP	5	Hexavalent Chromium	03/12/24 5:00 PM	Not Reported
51	N063617-011A	SAMP	20	Hexavalent Chromium	03/12/24 5:09 PM	Not Reported
52	N063617-012A	SAMP	20	Hexavalent Chromium	03/12/24 5:19 PM	Not Reported
53	N063642-001A	SAMP	5	Hexavalent Chromium	03/12/24 5:28 PM	Not Reported
54	N063642-002A	SAMP	5	Hexavalent Chromium	03/12/24 5:38 PM	Not Reported
55	N063559-001AMS	MS	1	Hexavalent Chromium	03/12/24 5:47 PM	Not Reported
56	N063559-002AMS	MS	1	Hexavalent Chromium	03/12/24 8:27 PM	Not Reported
57	CCV-5	CCV	1	Hexavalent Chromium	03/12/24 8:28 PM	Not Reported
58	CCB-5	CCB	1	Hexavalent Chromium	03/12/24 8:39 PM	Not Reported
59	N063559-001A	SAMP	5	Hexavalent Chromium	03/12/24 8:48 PM	Not Reported
60	N063559-001AMS	MS	5	Hexavalent Chromium	03/12/24 8:58 PM	Not Reported
61	N063559-002A	SAMP	5	Hexavalent Chromium	03/12/24 9:07 PM	Not Reported
62	N063559-002AMS	MS	5	Hexavalent Chromium	03/12/24 9:17 PM	Not Reported
63	CCV-6	CCV1	1	Hexavalent Chromium	03/12/24 9:26 PM	Not Reported
64	CCB-6	CCB	1	Hexavalent Chromium	03/12/24 9:36 PM	Not Reported
65	BLANK	BLANK	1	Hexavalent Chromium	03/12/24 9:45 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240312A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**12/Mar/24 22:16:00**
No. of Injections:	**68**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/12/2024 08:32	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/12/2024 08:45	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/12/2024 08:55	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/12/2024 09:04	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/12/2024 09:14	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/12/2024 09:23	Finished	LCS @5ppb, IWST-231228B
15	MB-107451,MBLK,1,	1	1000	Unknown		03/12/2024 11:13	Finished	MB TC 10mL
16	N063472-001A,SAMP	2	1000	Unknown		03/12/2024 11:28	Finished	SAMP,10 mL
17	N063472-001ADUP,D	3	1000	Unknown		03/12/2024 11:37	Finished	DUP,10 mL
18	N063705-001A,SAMP	4	1000	Unknown		03/12/2024 11:47	Finished	SAMP,1>10 mL
19	N063705-002A,SAMP	5	1000	Unknown		03/12/2024 11:56	Finished	SAMP,10 mL
20	N063705-003A,SAMP	6	1000	Unknown		03/12/2024 12:05	Finished	SAMP,10 mL
21	N063705-004A,SAMP	7	1000	Unknown		03/12/2024 12:15	Finished	SAMP,2>10 mL
22	N063705-005A,SAMP	8	1000	Unknown		03/12/2024 12:24	Finished	SAMP,2>10 mL
23	CCV-2,CCV1,1,	9	1000	Unknown		03/12/2024 12:34	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		03/12/2024 12:43	Finished	CCB R240129C
25	N063706-001A,SAMP	11	1000	Unknown		03/12/2024 12:53	Finished	SAMP,10 mL
26	N063706-001AMS,MS	12	1000	Unknown		03/12/2024 13:02	Finished	MS (1ppb), IWST-231228B,10r
27	N063705-001A,SAMP	13	1000	Unknown		03/12/2024 13:12	Finished	SAMP,10 mL
28	N063705-001AMS,MS	14	1000	Unknown		03/12/2024 13:21	Finished	MS (5ppb), IWST-231228B,10r
29	N063705-004AMS,MS	15	1000	Unknown		03/12/2024 13:31	Finished	MS (5ppb), IWST-231228B,2>1
30	N063705-004AMSD,M	16	1000	Unknown		03/12/2024 13:40	Finished	MSD (5ppb), IWST-231228B,2
31	N063705-005ADUP,D	17	1000	Unknown		03/12/2024 13:49	Finished	DUP,2>10 mL
32	N063705-005AMS,MS	18	1000	Unknown		03/12/2024 13:59	Finished	MS (5ppb), IWST-231228B,2>1
33	N063705-002AMS,MS	19	1000	Unknown		03/12/2024 14:08	Finished	MS (1ppb), IWST-231228B,10r
34	CCV-3,CCV1,1,	20	1000	Unknown		03/12/2024 14:18	Finished	CCV @10ppb, IWST-231228A
35	CCB-3,CCB,1,	21	1000	Unknown		03/12/2024 14:27	Finished	CCB R240129C
36	N063705-003AMS,MS	22	1000	Unknown		03/12/2024 14:37	Finished	MS (1ppb), IWST-231228B,10r
37	N063706-001A,SAMP	23	1000	Unknown		03/12/2024 14:46	Finished	SAMP,2>10 mL
38	N063706-001AMS,MS	24	1000	Unknown		03/12/2024 14:56	Finished	MS (1ppb), IWST-231228B,2>1
39	N063559-001A,SAMP	25	1000	Unknown		03/12/2024 15:05	Finished	SAMP,10 mL
40	N063559-002A,SAMP	26	1000	Unknown		03/12/2024 15:15	Finished	SAMP,10 mL
41	N063642-009A,SAMP	27	1000	Unknown		03/12/2024 15:24	Finished	SAMP,10 mL
42	N063642-010A,SAMP	28	1000	Unknown		03/12/2024 15:33	Finished	SAMP,10 mL
43	N063642-011A,SAMP	29	1000	Unknown		03/12/2024 15:43	Finished	SAMP,10 mL
44	N063705-001A,SAMP	30	1000	Unknown		03/12/2024 15:52	Finished	SAMP,2>10 mL
45	N063705-001AMS,MS	31	1000	Unknown		03/12/2024 16:02	Finished	MS (5ppb), IWST-231228B,2>1
46	CCV-4,CCV1,1,	32	1000	Unknown		03/12/2024 16:11	Finished	CCV @10ppb, IWST-231228A
47	CCB-4,CCB,1,	33	1000	Unknown		03/12/2024 16:21	Finished	CCB R240129C
48	N063706-002A,SAMP	1	1000	Unknown		03/12/2024 16:38	Finished	SAMP,10 mL
49	N063706-002AMS,MS	2	1000	Unknown		03/12/2024 16:50	Finished	MS (1ppb), IWST-231228B,10r
50	N063617-002A,SAMP	3	1000	Unknown		03/12/2024 17:00	Finished	SAMP,2>10 mL
51	N063617-011A,SAMP	4	1000	Unknown		03/12/2024 17:09	Finished	SAMP,0.5>10 mL
52	N063617-012A,SAMP	5	1000	Unknown		03/12/2024 17:19	Finished	SAMP,0.5>10 mL
53	N063642-001A,SAMP	6	1000	Unknown		03/12/2024 17:28	Finished	SAMP,2>10 mL
54	N063642-002A,SAMP	7	1000	Unknown		03/12/2024 17:38	Finished	SAMP,2>10 mL
55	N063559-001AMS,MS	8	1000	Unknown		03/12/2024 17:47	Interrupted	MS (1ppb), IWST-231228B,10r
56	N063559-002AMS,MS	9	1000	Unknown		03/12/2024 20:27	Interrupted	MS (1ppb), IWST-231228B,10r
57	CCV-5,CCV,1,	10	1000	Unknown		03/12/2024 20:28	Finished	CCV @5ppb, IWST-231228A
58	CCB-5,CCB,1,	11	1000	Unknown		03/12/2024 20:39	Finished	CCB R240129C
59	N063559-001A,SAMP	12	1000	Unknown		03/12/2024 20:48	Finished	SAMP,2>10 mL
60	N063559-001AMS,MS	13	1000	Unknown		03/12/2024 20:58	Finished	MS (1ppb), IWST-231228B,2>1

61	N063559-002A,SAMP	14	1000	Unknown		03/12/2024 21:07	Finished	SAMP,2>10 mL
62	N063559-002AMS,MS	15	1000	Unknown		03/12/2024 21:17	Finished	MS (1ppb), IWST-231228B,2>
63	CCV-6,CCV1,1,	16	1000	Unknown		03/12/2024 21:26	Finished	CCV @10ppb, IWST-231228A
64	CCB-6,CCB,1,	17	1000	Unknown		03/12/2024 21:36	Finished	CCB R240129C
65	BLANK	18	1000	Unknown		03/12/2024 21:45	Finished	BLANK
66	SHUTDOWN	19	1000	Unknown		03/12/2024 21:55	Finished	
67	Eluent: R240311C	20	1000	Unknown		n.a.	Finished	
68	PCR: R240311D	21	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240313A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/13/24 9:23 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/13/24 9:37 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/13/24 9:46 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/13/24 9:56 AM	Reported
13	MB-R183577	MBLK	1	Hexavalent Chromium	03/13/24 10:05 AM	Reported
14	LCS-R183577	LCS	1	Hexavalent Chromium	03/13/24 10:14 AM	Reported
15	N063562-001A	SAMP	1	Hexavalent Chromium	03/13/24 10:24 AM	Reported
16	N063618-001A	SAMP	1	Hexavalent Chromium	03/13/24 10:33 AM	Reported
17	N063562-001AMS	MS	1	Hexavalent Chromium	03/13/24 10:43 AM	Reported
18	N063618-001AMS	MS	1	Hexavalent Chromium	03/13/24 10:52 AM	Reported
19	N063736-001A	SAMP	1	Hexavalent Chromium	03/13/24 11:02 AM	Reported
20	N063736-002A	SAMP	5	Hexavalent Chromium	03/13/24 11:11 AM	Reported
21	N063736-003A	SAMP	10	Hexavalent Chromium	03/13/24 11:21 AM	Reported
22	N063736-004A	SAMP	20	Hexavalent Chromium	03/13/24 11:30 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/13/24 11:40 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/13/24 11:49 AM	Reported
25	N063562-001ADUP	DUP	1	Hexavalent Chromium	03/13/24 11:58 AM	Reported
26	N063736-001AMS	MS	1	Hexavalent Chromium	03/13/24 12:08 PM	Reported
27	N063736-002A	SAMP	1	Hexavalent Chromium	03/13/24 12:17 PM	Not Reported
28	N063736-002AMS	MS	1	Hexavalent Chromium	03/13/24 12:27 PM	Not Reported
29	N063736-004AMS	MS	20	Hexavalent Chromium	03/13/24 12:36 PM	Reported
30	N063736-004AMSD	MSD	20	Hexavalent Chromium	03/13/24 12:46 PM	Reported
31	N063736-003AMS	MS	10	Hexavalent Chromium	03/13/24 12:55 PM	Reported
32	N063736-005A	SAMP	1	Hexavalent Chromium	03/13/24 1:05 PM	Reported
33	N063736-005AMS	MS	1	Hexavalent Chromium	03/13/24 1:14 PM	Reported
34	CCV-3	CCV	1	Hexavalent Chromium	03/13/24 1:24 PM	Reported
35	CCB-3	CCB	1	Hexavalent Chromium	03/13/24 1:33 PM	Reported
36	N063736-002AMS	MS	5	Hexavalent Chromium	03/13/24 1:43 PM	Reported
37	N063736-001A	SAMP	5	Hexavalent Chromium	03/13/24 1:52 PM	Not Reported
38	N063736-001AMS	MS	5	Hexavalent Chromium	03/13/24 2:01 PM	Not Reported
39	N063642-003A	SAMP	1	Hexavalent Chromium	03/13/24 2:11 PM	Reported
40	N063559-002A	SAMP	1	Hexavalent Chromium	03/13/24 2:20 PM	Not Reported
41	N063559-001AMS	MS	1	Hexavalent Chromium	03/13/24 2:30 PM	Reported
42	N063559-002AMS	MS	1	Hexavalent Chromium	03/13/24 2:39 PM	Not Reported

INJECTION LOG: 240313A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063617-002A	SAMP	5	Hexavalent Chromium	03/13/24 2:49 PM	Reported
44	N063617-011A	SAMP	20	Hexavalent Chromium	03/13/24 2:58 PM	Reported
45	N063617-012A	SAMP	20	Hexavalent Chromium	03/13/24 3:26 PM	Reported
46	CCV-4	CCV1	1	Hexavalent Chromium	03/13/24 3:39 PM	Reported
47	CCB-4	CCB	1	Hexavalent Chromium	03/13/24 3:48 PM	Reported
48	N063706-002A	SAMP	1	Hexavalent Chromium	03/13/24 3:58 PM	Reported
49	N063706-002AMS	MS	1	Hexavalent Chromium	03/13/24 4:07 PM	Reported
50	N063642-001A	SAMP	5	Hexavalent Chromium	03/13/24 4:17 PM	Reported
51	N063642-002A	SAMP	5	Hexavalent Chromium	03/13/24 4:26 PM	Reported
52	N063559-001A	SAMP	5	Hexavalent Chromium	03/13/24 4:36 PM	Not Reported
53	N063559-001AMS	MS	5	Hexavalent Chromium	03/13/24 4:45 PM	Not Reported
54	N063559-002A	SAMP	5	Hexavalent Chromium	03/13/24 4:54 PM	Reported
55	N063559-002AMS	MS	5	Hexavalent Chromium	03/13/24 5:04 PM	Reported
56	N063559-001A	SAMP	1	Hexavalent Chromium	03/13/24 5:13 PM	Reported
57	CCV-5	CCV	1	Hexavalent Chromium	03/13/24 5:23 PM	Reported
58	CCB-5	CCB	1	Hexavalent Chromium	03/13/24 5:32 PM	Reported
59	N063735-001A	SAMP	1	Hexavalent Chromium	03/13/24 5:42 PM	Not Reported
60	N063735-001AMS	MS	1	Hexavalent Chromium	03/13/24 5:51 PM	Not Reported
61	N063735-003A	SAMP	1	Hexavalent Chromium	03/13/24 6:01 PM	Not Reported
62	N063735-003AMS	MS	1	Hexavalent Chromium	03/13/24 6:10 PM	Not Reported
63	N063735-008A	SAMP	1	Hexavalent Chromium	03/13/24 6:20 PM	Not Reported
64	N063735-008AMS	MS	1	Hexavalent Chromium	03/13/24 6:29 PM	Not Reported
65	N063735-014A	SAMP	1	Hexavalent Chromium	03/13/24 6:39 PM	Not Reported
66	N063735-014AMS	MS	1	Hexavalent Chromium	03/13/24 6:48 PM	Not Reported
67	MB-2	MBLK	1	Hexavalent Chromium	03/13/24 6:57 PM	Not Reported
68	LCS-2	LCS	1	Hexavalent Chromium	03/13/24 7:07 PM	Not Reported
69	CCV-6	CCV1	1	Hexavalent Chromium	03/13/24 7:16 PM	Not Reported
70	CCB-6	CCB	1	Hexavalent Chromium	03/13/24 7:26 PM	Not Reported
71	N063295-002A	SAMP	5	Hexavalent Chromium	03/13/24 7:35 PM	Not Reported
72	N063295-002AMS	MS	5	Hexavalent Chromium	03/13/24 7:45 PM	Not Reported
73	N063295-003A	SAMP	5	Hexavalent Chromium	03/13/24 7:54 PM	Not Reported
74	N063295-003AMS	MS	5	Hexavalent Chromium	03/13/24 8:04 PM	Not Reported
75	N063562-001A	SAMP	1	Hexavalent Chromium	03/13/24 8:13 PM	Not Reported
76	N063562-001AMS	MS	1	Hexavalent Chromium	03/13/24 8:23 PM	Not Reported
77	N063617-007A	SAMP	1	Hexavalent Chromium	03/13/24 8:32 PM	Not Reported
78	N063617-007AMS	MS	1	Hexavalent Chromium	03/13/24 8:42 PM	Not Reported
79	N063617-013A	SAMP	1	Hexavalent Chromium	03/13/24 8:51 PM	Not Reported
80	N063617-013AMS	MS	1	Hexavalent Chromium	03/13/24 9:00 PM	Not Reported
81	CCV-7	CCV	1	Hexavalent Chromium	03/13/24 9:10 PM	Not Reported
82	CCB-7	CCB	1	Hexavalent Chromium	03/13/24 9:19 PM	Not Reported
83	N063642-003A	SAMP	1	Hexavalent Chromium	03/13/24 9:29 PM	Not Reported
84	N063642-003AMS	MS	1	Hexavalent Chromium	03/13/24 9:38 PM	Not Reported

INJECTION LOG: 240313A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063642-004A	SAMP	1	Hexavalent Chromium	03/13/24 9:48 PM	Not Reported
86	N063642-004AMS	MS	1	Hexavalent Chromium	03/13/24 9:57 PM	Not Reported
87	N063642-007A	SAMP	1	Hexavalent Chromium	03/13/24 10:07 PM	Not Reported
88	N063642-007AMS	MS	1	Hexavalent Chromium	03/13/24 10:16 PM	Not Reported
89	CCV-8	CCV1	1	Hexavalent Chromium	03/13/24 10:26 PM	Not Reported
90	CCB-8	CCB	1	Hexavalent Chromium	03/13/24 10:35 PM	Not Reported
91	BLANK	BLANK	1	Hexavalent Chromium	03/13/24 10:44 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240313A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**13/Mar/24 23:15:14**
No. of Injections:	**94**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/13/2024 09:23	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/13/2024 09:37	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/13/2024 09:46	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/13/2024 09:56	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/13/2024 10:05	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/13/2024 10:14	Finished	LCS @5ppb, IWST-231228B
15	N063562-001A,SAMF	7	1000	Unknown		03/13/2024 10:24	Finished	SAMP,10 mL
16	N063618-001A,SAMF	8	1000	Unknown		03/13/2024 10:33	Finished	SAMP,10 mL
17	N063562-001AMS,MS	9	1000	Unknown		03/13/2024 10:43	Finished	MS (1ppb), IWST-231228B,10r
18	N063618-001AMS,MS	10	1000	Unknown		03/13/2024 10:52	Finished	MS (1ppb), IWST-231228B,10r
19	N063736-001A,SAMF	11	1000	Unknown		03/13/2024 11:02	Finished	SAMP,10 mL
20	N063736-002A,SAMF	12	1000	Unknown		03/13/2024 11:11	Finished	SAMP,2>10 mL
21	N063736-003A,SAMF	13	1000	Unknown		03/13/2024 11:21	Finished	SAMP,1>10 mL
22	N063736-004A,SAMF	14	1000	Unknown		03/13/2024 11:30	Finished	SAMP,0.5>10 mL
23	CCV-2,CCV1,1,	15	1000	Unknown		03/13/2024 11:40	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		03/13/2024 11:49	Finished	CCB R240129C
25	N063562-001ADUP,D	17	1000	Unknown		03/13/2024 11:58	Finished	DUP,10 mL
26	N063736-001AMS,MS	18	1000	Unknown		03/13/2024 12:08	Finished	MS (5ppb), IWST-231228B,10r
27	N063736-002A,SAMF	19	1000	Unknown		03/13/2024 12:17	Finished	SAMP,10 mL
28	N063736-002AMS,MS	20	1000	Unknown		03/13/2024 12:27	Finished	MS (1ppb), IWST-231228B,10r
29	N063736-004AMS,MS	21	1000	Unknown		03/13/2024 12:36	Finished	MS (5ppb), IWST-231228B,0.5
30	N063736-004AMSD,M	22	1000	Unknown		03/13/2024 12:46	Finished	MSD (5ppb), IWST-231228B,0.
31	N063736-003AMS,MS	23	1000	Unknown		03/13/2024 12:55	Finished	MS (5ppb), IWST-231228B,1>1
32	N063736-005A,SAMF	24	1000	Unknown		03/13/2024 13:05	Finished	SAMP,10 mL
33	N063736-005AMS,MS	25	1000	Unknown		03/13/2024 13:14	Finished	MS (1ppb), IWST-231228B,10r
34	CCV-3,CCV,1,	26	1000	Unknown		03/13/2024 13:24	Finished	CCV @10ppb, IWST-231228A
35	CCB-3,CCB,1,	27	1000	Unknown		03/13/2024 13:33	Finished	CCB R240129C
36	N063736-002AMS,MS	28	1000	Unknown		03/13/2024 13:43	Finished	MS (1ppb), IWST-231228B,2>1
37	N063736-001A,SAMF	29	1000	Unknown		03/13/2024 13:52	Finished	SAMP,2>10 mL
38	N063736-001AMS,MS	30	1000	Unknown		03/13/2024 14:01	Finished	MS (1ppb), IWST-231228B,2>1
39	N063642-003A,SAMF	31	1000	Unknown		03/13/2024 14:11	Finished	SAMP,10 mL
40	N063559-002A,SAMF	32	1000	Unknown		03/13/2024 14:20	Finished	SAMP,10 mL
41	N063559-001AMS,MS	33	1000	Unknown		03/13/2024 14:30	Finished	MS (1ppb), IWST-231228B,10r
42	N063559-002AMS,MS	34	1000	Unknown		03/13/2024 14:39	Finished	MS (1ppb), IWST-231228B,10r
43	N063617-002A,SAMF	35	1000	Unknown		03/13/2024 14:49	Finished	SAMP,2>10 mL
44	N063617-011A,SAMF	36	1000	Unknown		03/13/2024 14:58	Finished	SAMP,0.5>10 mL
45	N063617-012A,SAMF	1	1000	Unknown		03/13/2024 15:26	Finished	SAMP,0.5>10 mL
46	CCV-4,CCV1,1,	2	1000	Unknown		03/13/2024 15:39	Finished	CCV @10ppb, IWST-231228A
47	CCB-4,CCB,1,	3	1000	Unknown		03/13/2024 15:48	Finished	CCB R240129C
48	N063706-002A,SAMF	4	1000	Unknown		03/13/2024 15:58	Finished	SAMP,10 mL
49	N063706-002AMS,MS	5	1000	Unknown		03/13/2024 16:07	Finished	MS (1ppb), IWST-231228B,10r
50	N063642-001A,SAMF	6	1000	Unknown		03/13/2024 16:17	Finished	SAMP,2>10 mL
51	N063642-002A,SAMF	7	1000	Unknown		03/13/2024 16:26	Finished	SAMP,2>10 mL
52	N063559-001A,SAMF	8	1000	Unknown		03/13/2024 16:36	Finished	SAMP,2>10 mL
53	N063559-001AMS,MS	9	1000	Unknown		03/13/2024 16:45	Finished	MS (1ppb), IWST-231228B,2>1
54	N063559-002A,SAMF	10	1000	Unknown		03/13/2024 16:54	Finished	SAMP,2>10 mL
55	N063559-002AMS,MS	11	1000	Unknown		03/13/2024 17:04	Finished	MS (1ppb), IWST-231228B,2>1
56	N063559-001A,SAMF	12	1000	Unknown		03/13/2024 17:13	Finished	SAMP,10 mL
57	CCV-5,CCV,1,	13	1000	Unknown		03/13/2024 17:23	Finished	CCV @5ppb, IWST-231228A
58	CCB-5,CCB,1,	14	1000	Unknown		03/13/2024 17:32	Finished	CCB R240129C
59	N063735-001A,SAMF	15	1000	Unknown		03/13/2024 17:42	Finished	SAMP,10 mL
60	N063735-001AMS,MS	16	1000	Unknown		03/13/2024 17:51	Finished	MS (1ppb), IWST-231228B,10r

61	N063735-003A,SAMF	17	1000	Unknown		03/13/2024 18:01	Finished	SAMP,10 mL
62	N063735-003AMS,MS	18	1000	Unknown		03/13/2024 18:10	Finished	MS (1ppb), IWST-231228B,10r
63	N063735-008A,SAMF	19	1000	Unknown		03/13/2024 18:20	Finished	SAMP,10 mL
64	N063735-008AMS,MS	20	1000	Unknown		03/13/2024 18:29	Finished	MS (1ppb), IWST-231228B,10r
65	N063735-014A,SAMF	21	1000	Unknown		03/13/2024 18:39	Finished	SAMP,10 mL
66	N063735-014AMS,MS	22	1000	Unknown		03/13/2024 18:48	Finished	MS (1ppb), IWST-231228B,10r
67	MB-2,MBLK,1,	23	1000	Unknown		03/13/2024 18:57	Finished	MB R240129C
68	LCS-2,LCS,1,	24	1000	Unknown		03/13/2024 19:07	Finished	LCS @5ppb, IWST-231228B
69	CCV-6,CCV1,1,	25	1000	Unknown		03/13/2024 19:16	Finished	CCV @10ppb, IWST-231228A
70	CCB-6,CCB,1,	26	1000	Unknown		03/13/2024 19:26	Finished	CCB R240129C
71	N063295-002A,SAMF	27	1000	Unknown		03/13/2024 19:35	Finished	SAMP,2>10 mL
72	N063295-002AMS,MS	28	1000	Unknown		03/13/2024 19:45	Finished	MS (1ppb), IWST-231228B,2>1
73	N063295-003A,SAMF	29	1000	Unknown		03/13/2024 19:54	Finished	SAMP,2>10 mL
74	N063295-003AMS,MS	30	1000	Unknown		03/13/2024 20:04	Finished	MS (1ppb), IWST-231228B,2>1
75	N063562-001A,SAMF	31	1000	Unknown		03/13/2024 20:13	Finished	SAMP,10 mL
76	N063562-001AMS,MS	32	1000	Unknown		03/13/2024 20:23	Finished	MS (1ppb), IWST-231228B,10r
77	N063617-007A,SAMF	33	1000	Unknown		03/13/2024 20:32	Finished	SAMP,10 mL
78	N063617-007AMS,MS	34	1000	Unknown		03/13/2024 20:42	Finished	MS (1ppb), IWST-231228B,10r
79	N063617-013A,SAMF	35	1000	Unknown		03/13/2024 20:51	Finished	SAMP,10 mL
80	N063617-013AMS,MS	36	1000	Unknown		03/13/2024 21:00	Finished	MS (1ppb), IWST-231228B,10r
81	CCV-7,CCV,1,	37	1000	Unknown		03/13/2024 21:10	Finished	CCV @5ppb, IWST-231228A
82	CCB-7,CCB,1,	38	1000	Unknown		03/13/2024 21:19	Finished	CCB R240129C
83	N063642-003A,SAMF	39	1000	Unknown		03/13/2024 21:29	Finished	SAMP,10 mL
84	N063642-003AMS,MS	40	1000	Unknown		03/13/2024 21:38	Finished	MS (1ppb), IWST-231228B,10r
85	N063642-004A,SAMF	41	1000	Unknown		03/13/2024 21:48	Finished	SAMP,10 mL
86	N063642-004AMS,MS	42	1000	Unknown		03/13/2024 21:57	Finished	MS (1ppb), IWST-231228B,10r
87	N063642-007A,SAMF	43	1000	Unknown		03/13/2024 22:07	Finished	SAMP,10 mL
88	N063642-007AMS,MS	44	1000	Unknown		03/13/2024 22:16	Finished	MS (1ppb), IWST-231228B,10r
89	CCV-8,CCV1,1,	45	1000	Unknown		03/13/2024 22:26	Finished	CCV @10ppb, IWST-231228A
90	CCB-8,CCB,1,	46	1000	Unknown		03/13/2024 22:35	Finished	CCB R240129C
91	BLANK	47	1000	Unknown		03/13/2024 22:44	Finished	BLANK
92	SHUTDOWN	48	1000	Unknown		03/13/2024 22:54	Finished	
93	Eluent: R240311C	49	1000	Unknown		n.a.	Finished	
94	PCR: R240311D	50	1000	Unknown		n.a.	Finished	

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 3/12/24
Time Prepared: 1055H
Prepared By: MA

Reagent ID:
Sulfuric Acid: 14335
Diphenylcarbazide: 15209
NH4OH + NH4SO4 eluent: NH4031E
NH4OH + NH4SO4 buffer: NH4012C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MB-107451	7.70	9.48	2L	~2L	+0.2mL NH4012C / 10mL	JC
2)	MW3472-1A	9.34	9.37	1			
3)	MW3705-1A	9.40	—	~250mL	~250mL		
4)	2A	9.32	—				
5)	3A	9.34	—				
6)	4B	9.48	—				
7)	5A	9.46	—				
8)	MW3706[illegible] 1A	9.31	—				
9)	2MS	9.66	—				
10)							
11)							
12)							
13)							
14)							
15)							

Sample Preparation

Date Prepared: 3/13/24
Time Prepared: 0956H
Prepared By: MT

Reagent ID:
Sulfuric Acid: 15405
Diphenylcarbazide: 15209
NH4OH + NH4SO4 eluent: NH4031BA
NH4OH + NH4SO4 buffer: NH4012C

6N NaOH. NH2312C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW3734-1A	9.33	—	~250mL	~250mL		
2)	2MS	9.35	—				
3)	MW3735-1A	9.11	9.40			+4	
4)	2A	8.48	9.47			+7	
5)	3B	9.32	—				
6)	4A	9.39	—				
7)	5A	9.34	—				
8)	6A	9.36	—				
9)	7B	9.47	—				
10)	8A	9.74	—				
11)	9A	9.31	—				
12)	10A	9.31	—				
13)	11A	9.38	—				
14)	MD	9.46	—				
15)	13A	9.41	—				
	14B	9.70	—				

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 3/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0412	0.2259	1.0754	2.1395	3.1834	4.2546	1.0000
Measured, in ug/L	0.193700	1.061600	5.052800	10.052000	14.957000	19.990000	
Relative Error (%RE)	-3.2%		1.1%				

	Stock	Working
Standard Concentration:	1,000,000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **ICV**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5743062**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.874	0.20	5.000	0	97.5	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **ZZZZZZ**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5743063**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.20	0.2000	0	109	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **CCV**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743065**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.965	0.20	5.000	0	99.3	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **ZZZZZZ**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743066**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.188	0.20	0.2000	0	93.8	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **ZZZZZZ**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743077**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.069	0.20	10.00	0	101	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **CCV**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743084**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.985	0.20	5.000	0	99.7	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **ZZZZZZ**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743094**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.923	0.20	10.00	0	99.2	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ICV**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5745750**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.874	0.20	5.000	0	97.5	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5745751**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.20	0.2000	0	109	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **CCV**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745753**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.142	0.20	5.000	0	103	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745754**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.167	0.20	0.2000	0	83.6	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745766**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.183	0.20	10.00	0	102	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **CCV**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745775**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.095	0.20	5.000	0	102	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745783**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.050	0.20	10.00	0	100	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **CCV**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745792**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.870	0.20	5.000	0	97.4	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **ICB**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5743064**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **CCB**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743067**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **CCB**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743078**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **CCB**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743085**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183530**
Client ID: **CCB**	Batch ID: **R183530**	TestNo: **EPA 218.6**		Analysis Date: **3/12/2024**	SeqNo: **5743095**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ICB**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5745752**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **CCB**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745755**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **CCB**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745767**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **CCB**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745776**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **CCB**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745784**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **CCB**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745793**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/12/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	4.048	
CCV-2	4.015	
CCV-3	4.006	
CCV-4	4.006	

Average	4.019
Actual RT Window	3.939 - 4.099
Applied RT Window	3.819 - 4.219

MB-R183530	N.A.	N.A.
LCS-R183530	4.031	PASS
MB-107451	N.A.	N.A.
N063472-001A	4.015	PASS
N063472-001ADUP	4.015	PASS
N063705-001A	3.998	PASS
N063705-002A	3.873	PASS
N063705-003A	3.881	PASS
N063705-004A	3.956	PASS
N063705-005A	3.956	PASS
N063706-001A	N.A.	N.A.
N063706-001AMS	N.A.	N.A.
N063705-001A	3.823	PASS
N063705-001AMS	3.823	PASS
N063705-004AMS	3.956	PASS
N063705-004AMSD	3.956	PASS
N063705-005ADUP	3.956	PASS
N063705-005AMS	3.956	PASS
N063705-002AMS	3.881	PASS
N063705-003AMS	3.873	PASS
N063706-001A	3.956	PASS
N063706-001AMS	3.948	PASS
N063559-001A	3.823	PASS
N063642-009A	3.990	PASS

Reviewed by:

dMocha 3/26/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/12/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	4.048	
CCV-2	4.015	
CCV-3	4.006	
CCV-4	4.006	
Average	4.019	
Actual RT Window	3.939 - 4.099	
Applied RT Window	3.819 - 4.219	
N063642-010A	N.A.	N.A.
N063642-011A	N.A.	N.A.
N063705-001A	3.973	PASS
N063705-001AMS	3.973	PASS
N063706-002A	N.A.	N.A.
N063706-002AMS	3.998	PASS
N063617-002A	4.006	PASS
N063617-011A	4.006	PASS
N063617-012A	4.006	PASS
N063642-001A	3.998	PASS
N063642-002A	3.998	PASS
N063559-002AMS	N.A.	N.A.
N063559-001A	N.A.	N.A.
N063559-001AMS	3.973	PASS
N063559-002A	N.A.	N.A.
N063559-002AMS	3.973	PASS

Reviewed by:

dMRocha 3/26/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/13/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	4.006	
CCV-2	3.998	
CCV-3	4.006	
CCV-4	3.998	
CCV-5	3.998	
Average	4.001	
Actual RT Window	3.921 - 4.081	
Applied RT Window	3.801 - 4.201	
MB-R183577	N.A.	N.A.
LCS-R183577	4.006	PASS
N063562-001A	3.998	PASS
N063618-001A	3.981	PASS
N063562-001AMS	3.990	PASS
N063618-001AMS	3.981	PASS
N063736-001A	3.815	PASS
N063736-002A	3.956	PASS
N063736-003A	3.990	PASS
N063736-004A	3.990	PASS
N063562-001ADUP	3.981	PASS
N063736-001AMS	3.815	PASS
N063736-004AMS	3.990	PASS
N063736-004AMSD	3.990	PASS
N063736-003AMS	3.990	PASS
N063736-005A	3.973	PASS
N063736-005AMS	3.998	PASS
N063736-002AMS	3.956	PASS
N063736-001A	3.973	PASS
N063736-001AMS	3.973	PASS
N063642-003A	N.A.	N.A.
N063559-002A	3.815	PASS
N063559-001AMS	3.815	PASS

Reviewed by:

dMRocha 3/26/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/13/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	4.006	
CCV-2	3.998	
CCV-3	4.006	
CCV-4	3.998	
CCV-5	3.998	
Average	4.001	
Actual RT Window	3.921 - 4.081	
Applied RT Window	3.801 - 4.201	
N063617-002A	4.006	PASS
N063617-011A	3.998	PASS
N063617-012A	4.006	PASS
N063706-002A	N.A.	N.A.
N063706-002AMS	3.990	PASS
N063642-001A	3.990	PASS
N063642-002A	3.990	PASS
N063559-001A	N.A.	N.A.
N063559-001AMS	3.965	PASS
N063559-002A	N.A.	N.A.
N063559-002AMS	3.965	PASS
N063559-001A	3.806	PASS
N063735-001A	N.A.	N.A.
N063735-001AMS	3.815	PASS
N063735-003A	N.A.	N.A.
N063735-003AMS	3.990	PASS
N063735-008A	N.A.	N.A.
N063735-008AMS	3.990	PASS
N063735-014A	N.A.	N.A.
N063735-014AMS	3.981	PASS
MB-2	N.A.	N.A.
LCS-2	3.998	PASS
N063295-002A	3.940	PASS

Reviewed by:

dMocha 3/26/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/13/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	4.006	
CCV-2	3.998	
CCV-3	4.006	
CCV-4	3.998	
CCV-5	3.998	
Average	4.001	
Actual RT Window	3.921 - 4.081	
Applied RT Window	3.801 - 4.201	
N063295-002AMS	3.940	PASS
N063295-003A	3.981	PASS
N063295-003AMS	3.973	PASS
N063562-001A	3.981	PASS
N063562-001AMS	3.990	PASS
N063617-007A	3.948	PASS
N063617-007AMS	3.956	PASS
N063617-013A	3.965	PASS
N063617-013AMS	3.990	PASS
N063642-003A	N.A.	N.A.
N063642-003AMS	3.956	PASS
N063642-004A	N.A.	N.A.
N063642-004AMS	3.981	PASS
N063642-007A	N.A.	N.A.
N063642-007AMS	3.981	PASS

Reviewed by:

dMocha 3/26/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240305A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	03/05/24 4:07 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/05/24 4:16 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	03/05/24 4:26 PM	Reported
12	MB-R183315	MBLK	1	Hexavalent Chromium	03/05/24 4:35 PM	Reported
13	LCS-R183315	LCS	1	Hexavalent Chromium	03/05/24 4:45 PM	Reported
14	MB-107277	MBLK	1	Hexavalent Chromium	03/05/24 4:54 PM	Reported
15	N063472-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:04 PM	Reported
16	N063472-001ADUP	DUP	1	Hexavalent Chromium	03/05/24 5:13 PM	Reported
17	N063535-006A	SAMP	1	Hexavalent Chromium	03/05/24 5:23 PM	Reported
18	N063535-006AMS	MS	1	Hexavalent Chromium	03/05/24 5:32 PM	Reported
19	N063535-006AMSD	MSD	1	Hexavalent Chromium	03/05/24 5:42 PM	Reported
20	N063534-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:51 PM	Reported
21	N063534-001AMS	MS	1	Hexavalent Chromium	03/05/24 6:00 PM	Reported
22	CCV-1	CCV1	1	Hexavalent Chromium	03/05/24 6:10 PM	Reported
23	CCB-1	CCB	1	Hexavalent Chromium	03/05/24 6:20 PM	Reported
24	N063534-002A	SAMP	1	Hexavalent Chromium	03/05/24 6:30 PM	Reported
25	N063534-002AMS	MS	1	Hexavalent Chromium	03/05/24 6:38 PM	Reported
26	N063534-003A	SAMP	1	Hexavalent Chromium	03/05/24 6:48 PM	Reported
27	N063534-003AMS	MS	1	Hexavalent Chromium	03/05/24 6:57 PM	Reported
28	N063535-001A	SAMP	1	Hexavalent Chromium	03/05/24 7:07 PM	Reported
29	N063535-002A	SAMP	1	Hexavalent Chromium	03/05/24 7:16 PM	Reported
30	N063535-003A	SAMP	1	Hexavalent Chromium	03/05/24 7:26 PM	Reported
31	N063535-004A	SAMP	1	Hexavalent Chromium	03/05/24 7:35 PM	Reported
32	N063535-005A	SAMP	1	Hexavalent Chromium	03/05/24 7:48 PM	Reported
33	CCV-2	CCV	1	Hexavalent Chromium	03/05/24 7:57 PM	Reported
34	CCB-2	CCB	1	Hexavalent Chromium	03/05/24 8:07 PM	Reported
35	N063535-007A	SAMP	1	Hexavalent Chromium	03/05/24 8:16 PM	Reported
36	N063535-008A	SAMP	1	Hexavalent Chromium	03/05/24 8:25 PM	Reported
37	CCV-3	CCV1	1	Hexavalent Chromium	03/05/24 8:35 PM	Reported
38	CCB-3	CCB	1	Hexavalent Chromium	03/05/24 8:46 PM	Reported
39	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 8:55 PM	Not Reported

INJECTION LOG: 240305A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
9	ICV	ICV	1	Hexavalent Chromium	03/05/24 4:07 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/05/24 4:16 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	03/05/24 4:26 PM	Reported
12	MB-R183315	MBLK	1	Hexavalent Chromium	03/05/24 4:35 PM	Reported
13	LCS-R183315	LCS	1	Hexavalent Chromium	03/05/24 4:45 PM	Reported
14	MB-107277	MBLK	1	Hexavalent Chromium	03/05/24 4:54 PM	Reported
15	N063472-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:04 PM	Reported
16	N063472-001ADUP	DUP	1	Hexavalent Chromium	03/05/24 5:13 PM	Reported
17	N063535-006A	SAMP	1	Hexavalent Chromium	03/05/24 5:23 PM	Reported
18	N063535-006AMS	MS	1	Hexavalent Chromium	03/05/24 5:32 PM	Reported
19	N063535-006AMSD	MSD	1	Hexavalent Chromium	03/05/24 5:42 PM	Reported
20	N063534-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:51 PM	Reported
21	N063534-001AMS	MS	1	Hexavalent Chromium	03/05/24 6:00 PM	Reported
22	CCV-1	CCV1	1	Hexavalent Chromium	03/05/24 6:10 PM	Reported
23	CCB-1	CCB	1	Hexavalent Chromium	03/05/24 6:20 PM	Reported
24	N063534-002A	SAMP	1	Hexavalent Chromium	03/05/24 6:30 PM	Reported
25	N063534-002AMS	MS	1	Hexavalent Chromium	03/05/24 6:38 PM	Reported
26	N063534-003A	SAMP	1	Hexavalent Chromium	03/05/24 6:48 PM	Reported
27	N063534-003AMS	MS	1	Hexavalent Chromium	03/05/24 6:57 PM	Reported
28	N063535-001A	SAMP	1	Hexavalent Chromium	03/05/24 7:07 PM	Reported
29	N063535-002A	SAMP	1	Hexavalent Chromium	03/05/24 7:16 PM	Reported
30	N063535-003A	SAMP	1	Hexavalent Chromium	03/05/24 7:26 PM	Reported
31	N063535-004A	SAMP	1	Hexavalent Chromium	03/05/24 7:35 PM	Reported
32	N063535-005A	SAMP	1	Hexavalent Chromium	03/05/24 7:48 PM	Reported
33	CCV-2	CCV	1	Hexavalent Chromium	03/05/24 7:57 PM	Reported
34	CCB-2	CCB	1	Hexavalent Chromium	03/05/24 8:07 PM	Reported
35	N063535-007A	SAMP	1	Hexavalent Chromium	03/05/24 8:16 PM	Reported
36	N063535-008A	SAMP	1	Hexavalent Chromium	03/05/24 8:25 PM	Reported
37	CCV-3	CCV1	1	Hexavalent Chromium	03/05/24 8:35 PM	Reported
38	CCB-3	CCB	1	Hexavalent Chromium	03/05/24 8:46 PM	Reported
39	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 8:55 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240305A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**07/Mar/24 08:03:58**
No. of Injections:	**42**	*Updated By:*	**ics 5000**

Injection Details

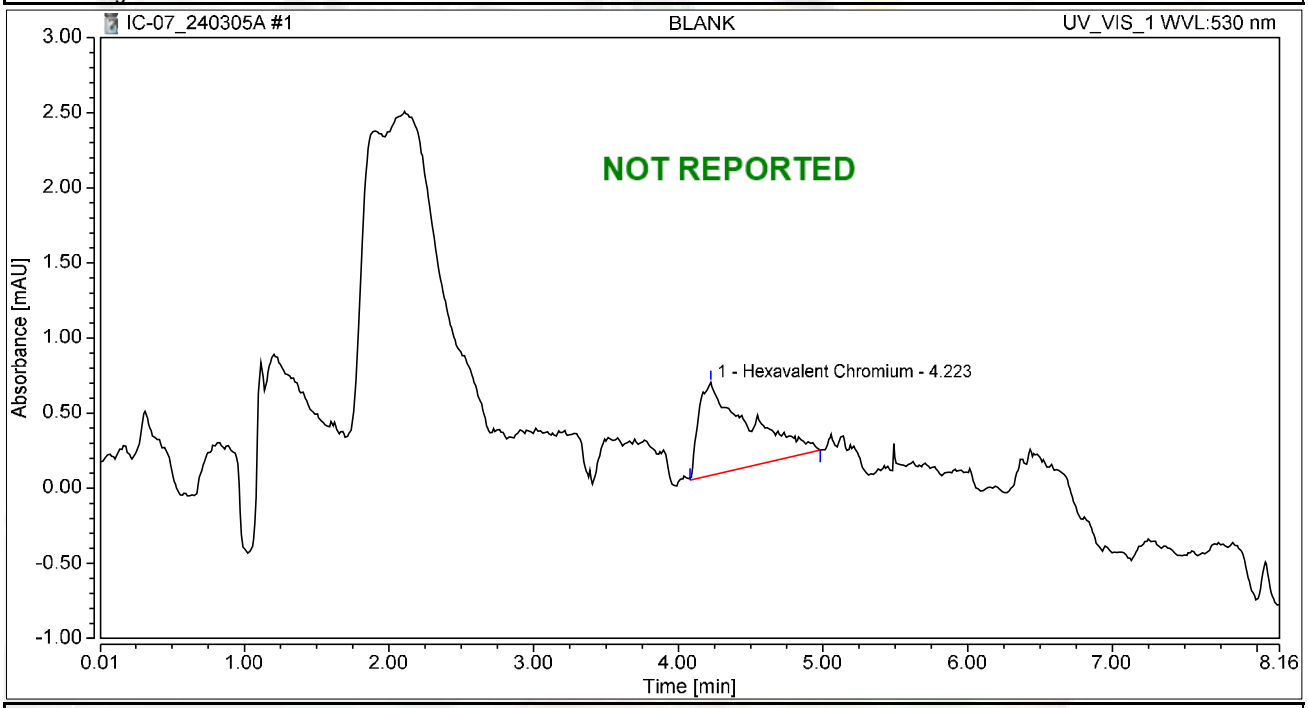
No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	8	1000	Unknown		03/05/2024 16:07	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	9	1000	Unknown		03/05/2024 16:16	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	10	1000	Unknown		03/05/2024 16:26	Finished	ICB R240129C
12	MB-H2O,MBLK,1,	11	1000	Unknown		03/05/2024 16:35	Finished	MB R240129C
13	LCS-H2O,LCS,1,	12	1000	Unknown		03/05/2024 16:45	Finished	LCS @5ppb, IWST-231228B
14	MB-107277,MBLK,1,	13	1000	Unknown		03/05/2024 16:54	Finished	MB TCLP
15	N063472-001A,SAMP	14	1000	Unknown		03/05/2024 17:04	Finished	SAMP,10 mL
16	N063472-001ADUP,D	15	1000	Unknown		03/05/2024 17:13	Finished	REP,10 mL
17	N063535-006A,SAMP	16	1000	Unknown		03/05/2024 17:23	Finished	SAMP,10 mL
18	N063535-006AMS,MS	17	1000	Unknown		03/05/2024 17:32	Finished	MS (5ppb), IWST-231228B,10r
19	N063535-006AMSD,M	18	1000	Unknown		03/05/2024 17:42	Finished	MSD (5ppb), IWST-231228B,1(
20	N063534-001A,SAMP	19	1000	Unknown		03/05/2024 17:51	Finished	SAMP,10 mL
21	N063534-001AMS,MS	20	1000	Unknown		03/05/2024 18:00	Finished	MS (1ppb), IWST-231228B,10r
22	CCV-1,CCV1,1,	21	1000	Unknown		03/05/2024 18:10	Finished	CCV @10ppb, IWST-231228A
23	CCB-1,CCB,1,	22	1000	Unknown		03/05/2024 18:20	Finished	CCB R240129C
24	N063534-002A,SAMP	23	1000	Unknown		03/05/2024 18:30	Finished	SAMP,10 mL
25	N063534-002AMS,MS	24	1000	Unknown		03/05/2024 18:38	Finished	MS (1ppb), IWST-231228B,10r
26	N063534-003A,SAMP	25	1000	Unknown		03/05/2024 18:48	Finished	SAMP,10 mL
27	N063534-003AMS,MS	26	1000	Unknown		03/05/2024 18:57	Finished	MS (1ppb), IWST-231228B,10r
28	N063535-001A,SAMP	27	1000	Unknown		03/05/2024 19:07	Finished	SAMP,10 mL
29	N063535-002A,SAMP	28	1000	Unknown		03/05/2024 19:16	Finished	SAMP,10 mL
30	N063535-003A,SAMP	29	1000	Unknown		03/05/2024 19:26	Finished	SAMP,10 mL
31	N063535-004A,SAMP	30	1000	Unknown		03/05/2024 19:35	Finished	SAMP,10 mL
32	N063535-005A,SAMP	31	1000	Unknown		03/05/2024 19:48	Finished	SAMP,10 mL
33	CCV-2,CCV,1,	32	1000	Unknown		03/05/2024 19:57	Finished	CCV @5ppb, IWST-231228A
34	CCB-2,CCB,1,	33	1000	Unknown		03/05/2024 20:07	Finished	CCB R240129C
35	N063535-007A,SAMP	34	1000	Unknown		03/05/2024 20:16	Finished	SAMP,10 mL
36	N063535-008A,SAMP	35	1000	Unknown		03/05/2024 20:25	Finished	SAMP,10 mL
37	CCV-3,CCV1,1,	37	1000	Unknown		03/05/2024 20:35	Finished	CCV @10ppb, IWST-231228A
38	CCB-3,CCB,1,	38	1000	Unknown		03/05/2024 20:46	Finished	CCB R240129C
39	BLANK	39	1000	Unknown		03/05/2024 20:55	Finished	BLANK
40	SHUTDOWN	40	1000	Unknown		03/05/2024 21:05	Finished	
41	Eluent: R240305B	41	1000	Unknown		n.a.	Finished	
42	PCR: R240305C	42	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.15**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 13:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

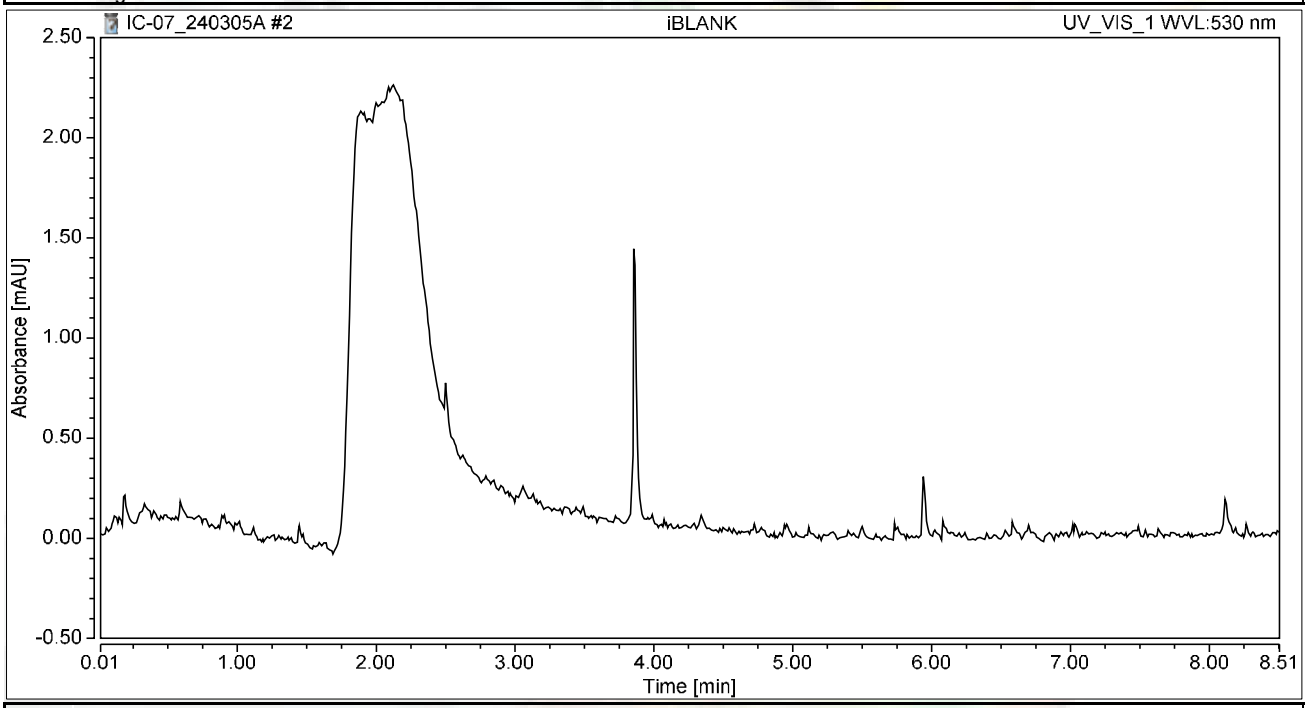
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.223	0.243	0.620	100.00	100.00	1.1440
Total:			**0.243**	**0.620**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 14:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

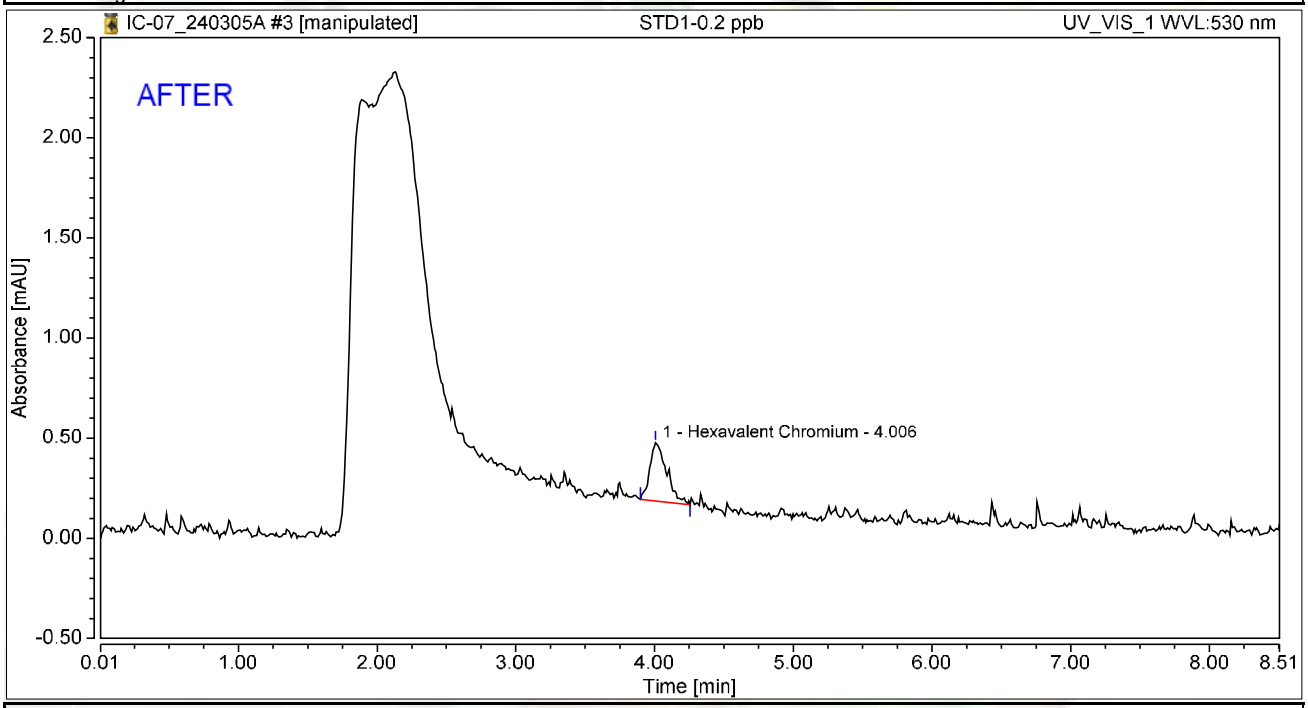
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.041	0.290	100.00	100.00	0.1937
Total:			**0.041**	**0.290**	**100.00**	**100.00**	

Reviewed by:

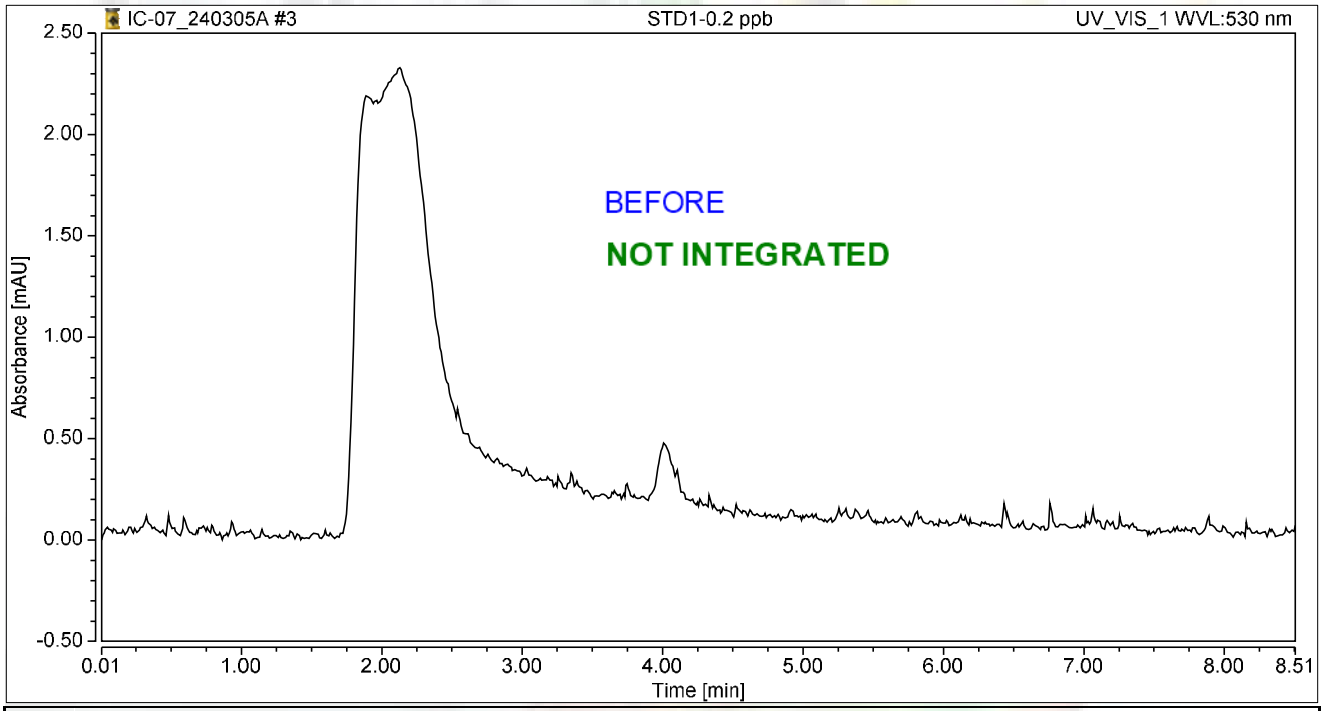
dMocha 3/11/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

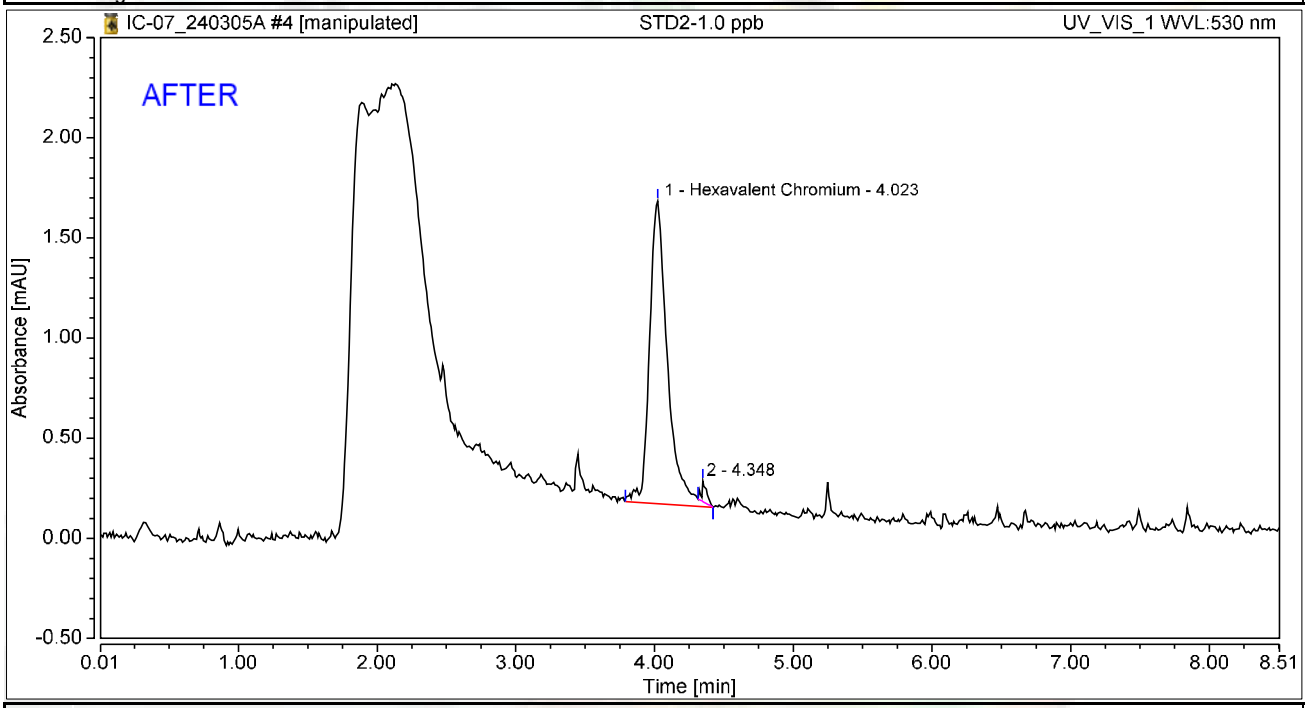
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.226	1.511	98.02	93.66	1.0616
2		4.348	0.005	0.102	1.98	6.34	n.a.
Total:			**0.231**	**1.614**	**100.00**	**100.00**	

Reviewed by:

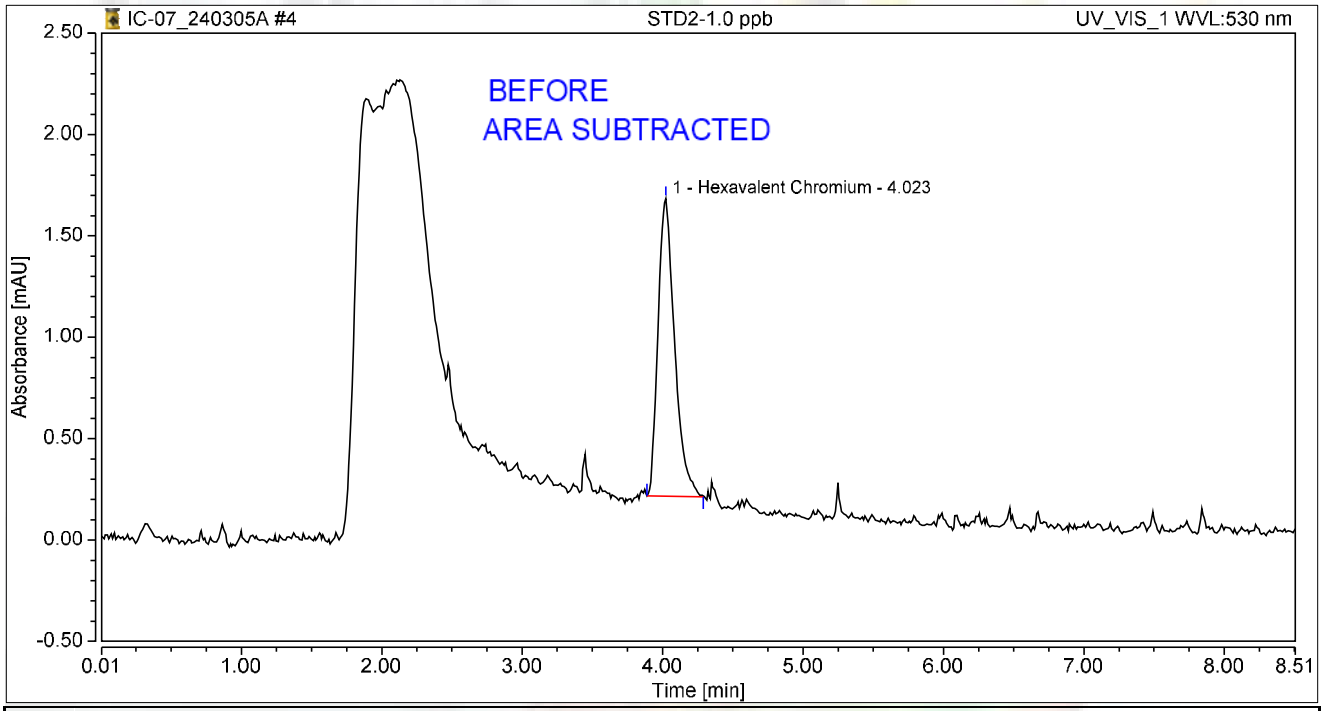
dlRocha 3/11/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

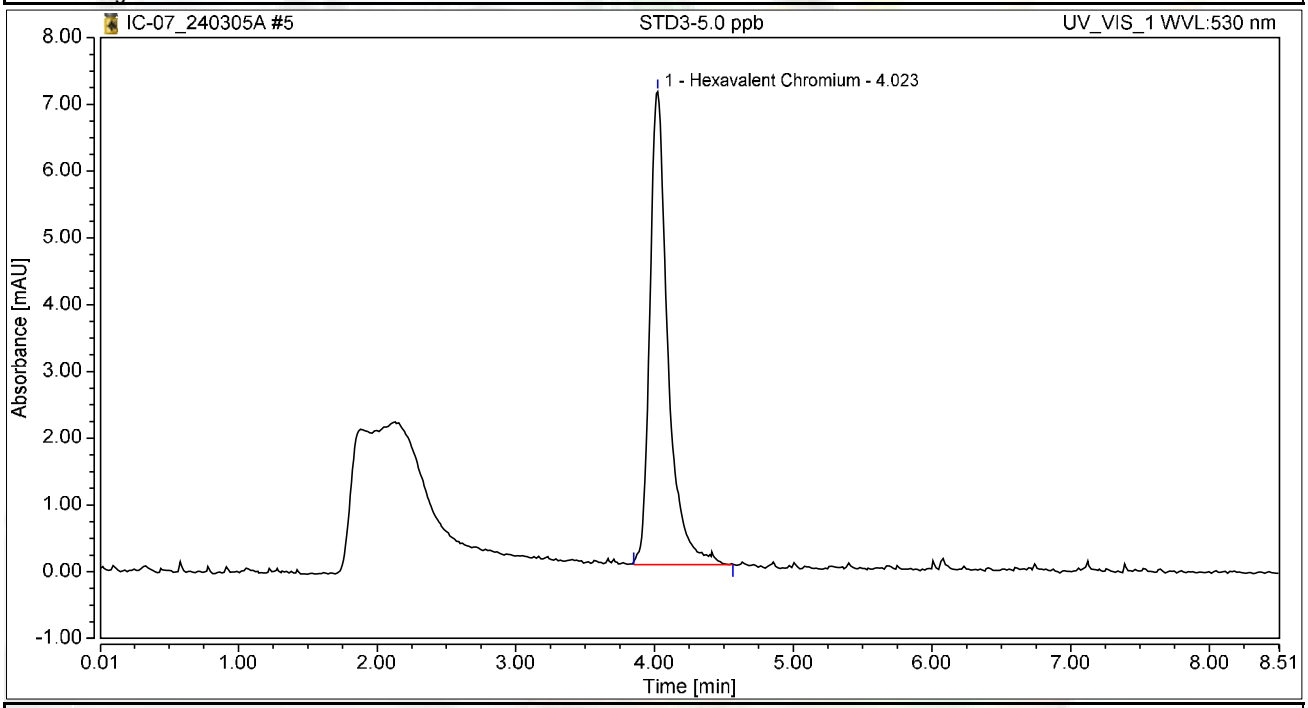
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.201	1.469	100.00	100.00	0.9426
Total:			**0.201**	**1.469**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

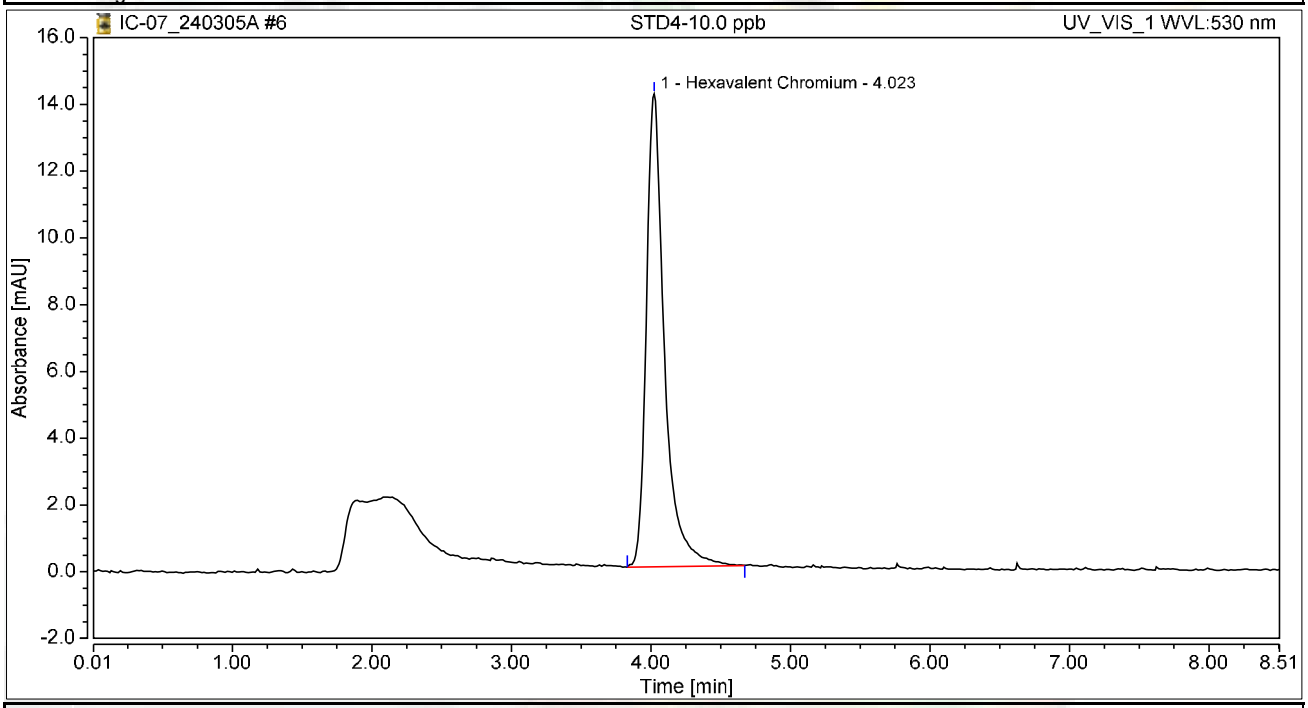
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	1.075	7.087	100.00	100.00	5.0528
Total:			**1.075**	**7.087**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

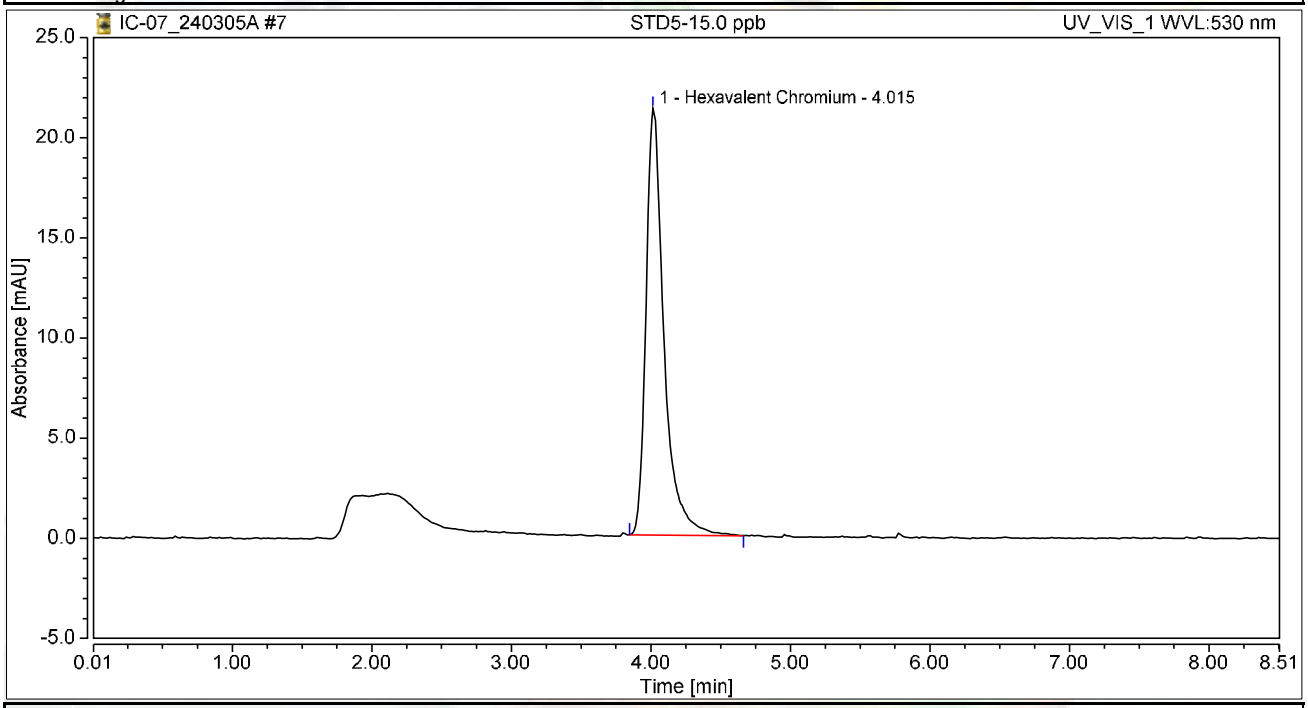
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	2.139	14.164	100.00	100.00	10.0520
Total:			**2.139**	**14.164**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

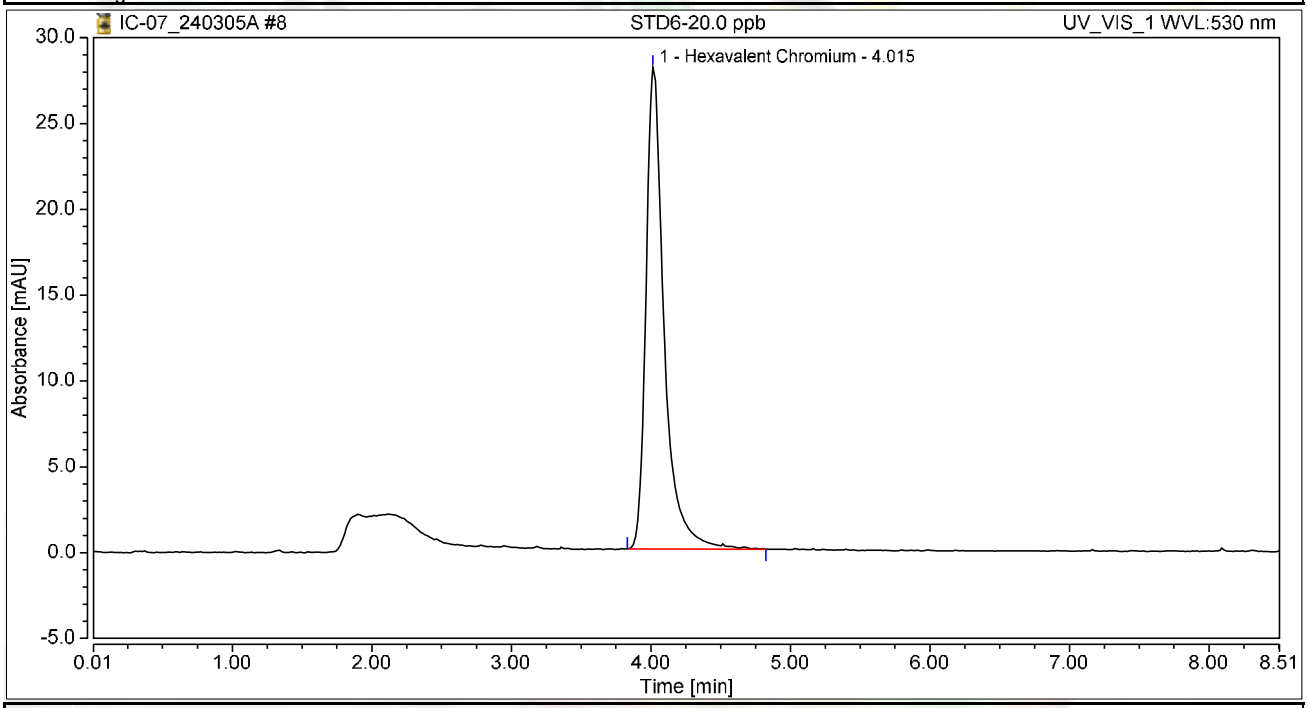
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	3.183	21.307	100.00	100.00	14.9570
Total:			**3.183**	**21.307**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:58**	*Sample Weight:*	**1.0000**

Chromatogram



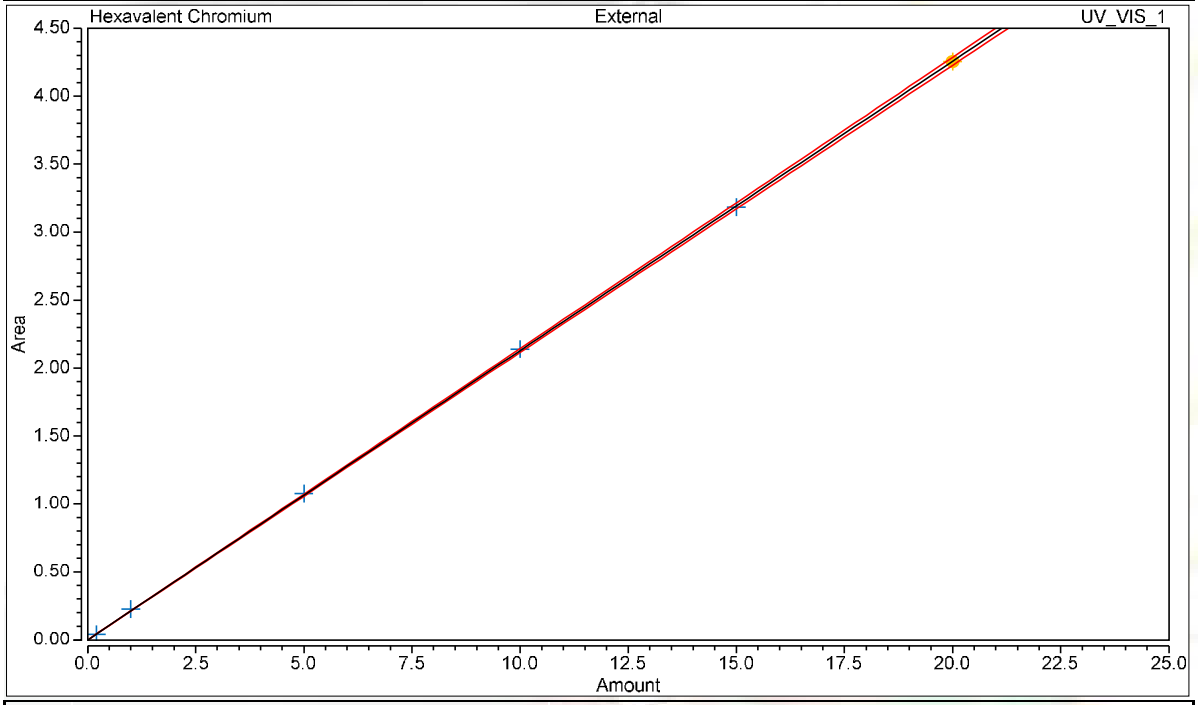
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	4.255	28.050	100.00	100.00	19.9900
Total:			**4.255**	**28.050**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2128
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99996

Calibration Plot Hexavalent Chromium



Calibration Results Hexavalent Chromium

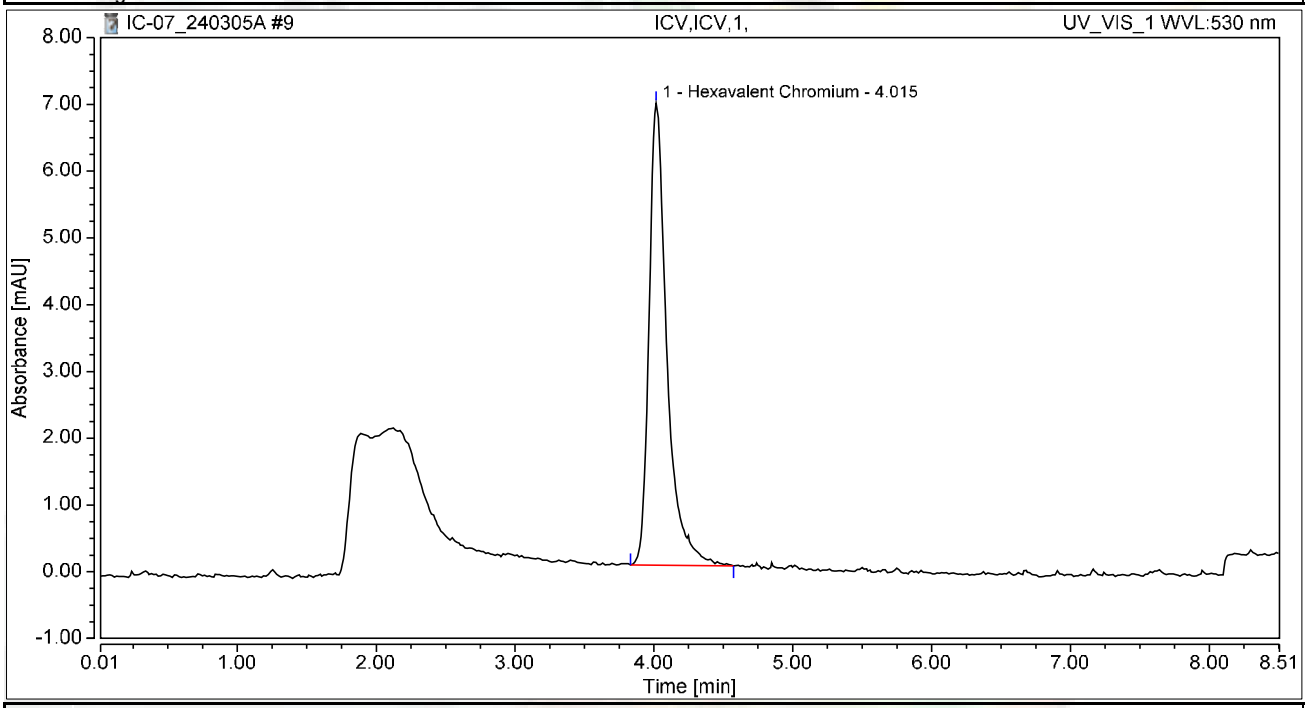
No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0412	0.041	0.290
4	STD2-1.0 ppb	02	1.0000	0.2259	0.226	1.511
5	STD3-5.0 ppb	03	5.0000	1.0754	1.075	7.087
6	STD4-10.0 ppb	04	10.0000	2.1395	2.139	14.164
7	STD5-15.0 ppb	05	15.0000	3.1834	3.183	21.307
8	STD6-20.0 ppb	06	20.0000	4.2546	4.255	28.050

Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

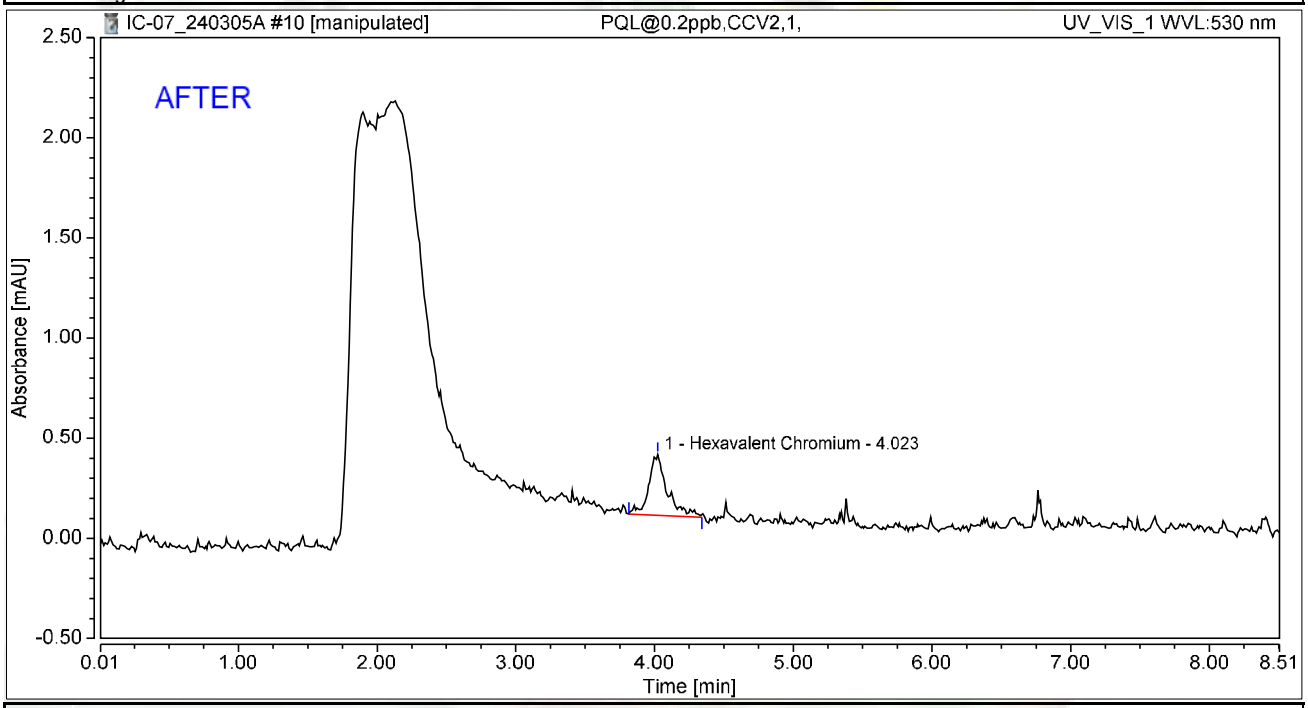
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.037	6.923	100.00	100.00	4.8744
Total:			**1.037**	**6.923**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.047	0.304	100.00	100.00	0.2189
Total:			**0.047**	**0.304**	**100.00**	**100.00**	

Reviewed by:

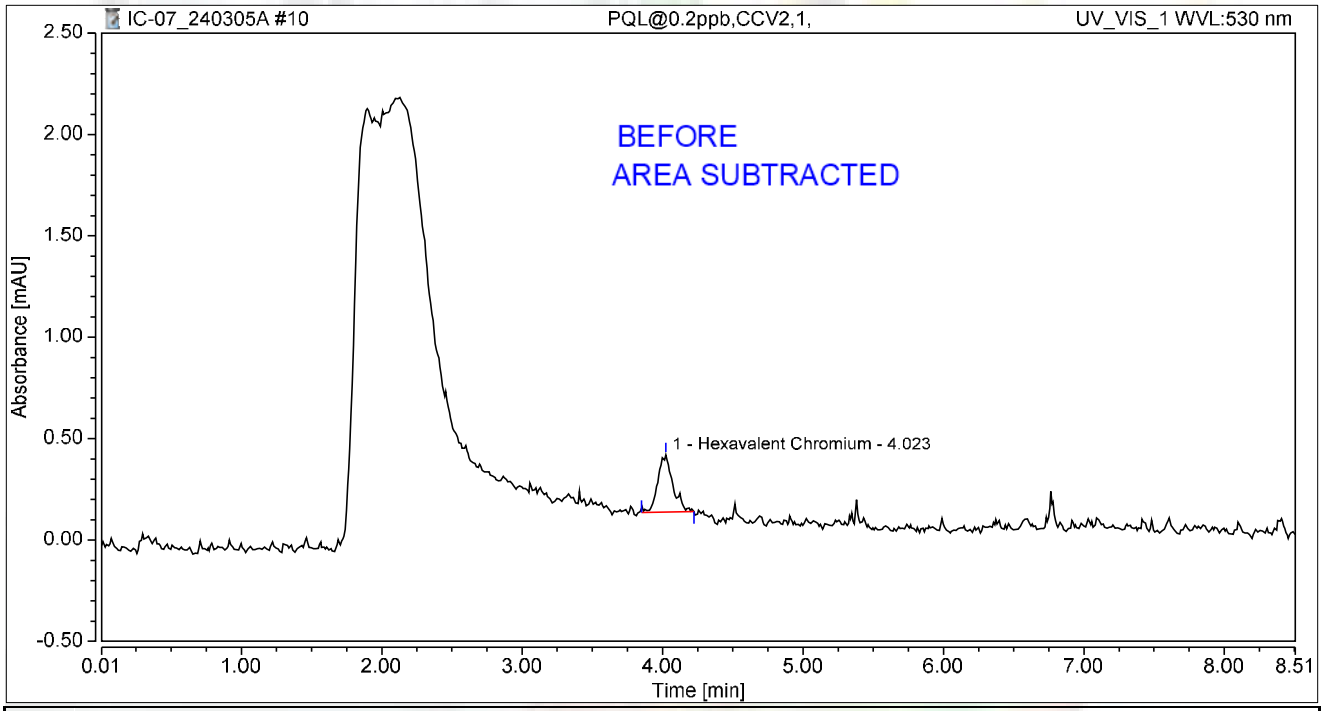
dMocha 3/11/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

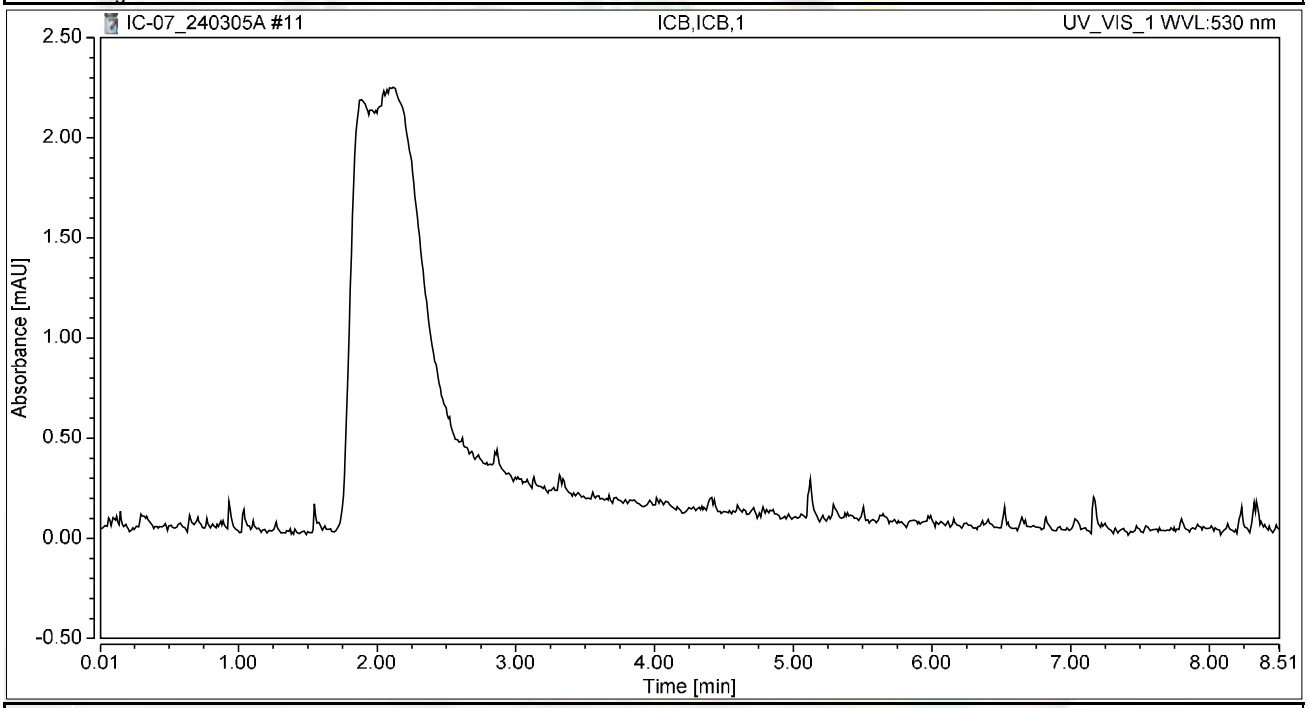
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.035	0.282	100.00	100.00	0.1646
Total:			**0.035**	**0.282**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240312A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/12/24 8:32 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/12/24 8:45 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/12/24 8:55 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/12/24 9:04 AM	Reported
13	MB-R183530	MBLK	1	Hexavalent Chromium	03/12/24 9:14 AM	Reported
14	LCS-R183530	LCS	1	Hexavalent Chromium	03/12/24 9:23 AM	Reported
15	MB-107451	MBLK	1	Hexavalent Chromium	03/12/24 11:13 AM	Not Reported
16	N063472-001A	SAMP	1	Hexavalent Chromium	03/12/24 11:28 AM	Not Reported
17	N063472-001ADUP	DUP	1	Hexavalent Chromium	03/12/24 11:37 AM	Not Reported
18	N063705-001A	SAMP	10	Hexavalent Chromium	03/12/24 11:47 AM	Not Reported
19	N063705-002A	SAMP	1	Hexavalent Chromium	03/12/24 11:56 AM	Reported
20	N063705-003A	SAMP	1	Hexavalent Chromium	03/12/24 12:05 PM	Reported
21	N063705-004A	SAMP	5	Hexavalent Chromium	03/12/24 12:15 PM	Reported
22	N063705-005A	SAMP	5	Hexavalent Chromium	03/12/24 12:24 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/12/24 12:34 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/12/24 12:43 PM	Reported
25	N063706-001A	SAMP	1	Hexavalent Chromium	03/12/24 12:53 PM	Not Reported
26	N063706-001AMS	MS	1	Hexavalent Chromium	03/12/24 1:02 PM	Not Reported
27	N063705-001A	SAMP	1	Hexavalent Chromium	03/12/24 1:12 PM	Not Reported
28	N063705-001AMS	MS	1	Hexavalent Chromium	03/12/24 1:21 PM	Not Reported
29	N063705-004AMS	MS	5	Hexavalent Chromium	03/12/24 1:31 PM	Reported
30	N063705-004AMSD	MSD	5	Hexavalent Chromium	03/12/24 1:40 PM	Reported
31	N063705-005ADUP	DUP	5	Hexavalent Chromium	03/12/24 1:49 PM	Reported
32	N063705-005AMS	MS	5	Hexavalent Chromium	03/12/24 1:59 PM	Reported
33	N063705-002AMS	MS	1	Hexavalent Chromium	03/12/24 2:08 PM	Reported
34	CCV-3	CCV1	1	Hexavalent Chromium	03/12/24 2:18 PM	Reported
35	CCB-3	CCB	1	Hexavalent Chromium	03/12/24 2:27 PM	Reported
36	N063705-003AMS	MS	1	Hexavalent Chromium	03/12/24 2:37 PM	Reported
37	N063706-001A	SAMP	5	Hexavalent Chromium	03/12/24 2:46 PM	Reported
38	N063706-001AMS	MS	5	Hexavalent Chromium	03/12/24 2:56 PM	Reported
39	N063559-001A	SAMP	1	Hexavalent Chromium	03/12/24 3:05 PM	Not Reported
40	N063559-002A	SAMP	1	Hexavalent Chromium	03/12/24 3:15 PM	Not Reported
41	N063642-009A	SAMP	1	Hexavalent Chromium	03/12/24 3:24 PM	Reported
42	N063642-010A	SAMP	1	Hexavalent Chromium	03/12/24 3:33 PM	Reported

INJECTION LOG: 240312A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063642-011A	SAMP	1	Hexavalent Chromium	03/12/24 3:43 PM	Reported
44	N063705-001A	SAMP	5	Hexavalent Chromium	03/12/24 3:52 PM	Reported
45	N063705-001AMS	MS	5	Hexavalent Chromium	03/12/24 4:02 PM	Reported
46	CCV-4	CCV1	1	Hexavalent Chromium	03/12/24 4:11 PM	Reported
47	CCB-4	CCB	1	Hexavalent Chromium	03/12/24 4:21 PM	Reported
48	N063706-002A	SAMP	1	Hexavalent Chromium	03/12/24 4:38 PM	Not Reported
49	N063706-002AMS	MS	1	Hexavalent Chromium	03/12/24 4:50 PM	Not Reported
50	N063617-002A	SAMP	5	Hexavalent Chromium	03/12/24 5:00 PM	Not Reported
51	N063617-011A	SAMP	20	Hexavalent Chromium	03/12/24 5:09 PM	Not Reported
52	N063617-012A	SAMP	20	Hexavalent Chromium	03/12/24 5:19 PM	Not Reported
53	N063642-001A	SAMP	5	Hexavalent Chromium	03/12/24 5:28 PM	Not Reported
54	N063642-002A	SAMP	5	Hexavalent Chromium	03/12/24 5:38 PM	Not Reported
55	N063559-001AMS	MS	1	Hexavalent Chromium	03/12/24 5:47 PM	Not Reported
56	N063559-002AMS	MS	1	Hexavalent Chromium	03/12/24 8:27 PM	Not Reported
57	CCV-5	CCV	1	Hexavalent Chromium	03/12/24 8:28 PM	Not Reported
58	CCB-5	CCB	1	Hexavalent Chromium	03/12/24 8:39 PM	Not Reported
59	N063559-001A	SAMP	5	Hexavalent Chromium	03/12/24 8:48 PM	Not Reported
60	N063559-001AMS	MS	5	Hexavalent Chromium	03/12/24 8:58 PM	Not Reported
61	N063559-002A	SAMP	5	Hexavalent Chromium	03/12/24 9:07 PM	Not Reported
62	N063559-002AMS	MS	5	Hexavalent Chromium	03/12/24 9:17 PM	Not Reported
63	CCV-6	CCV1	1	Hexavalent Chromium	03/12/24 9:26 PM	Not Reported
64	CCB-6	CCB	1	Hexavalent Chromium	03/12/24 9:36 PM	Not Reported
65	BLANK	BLANK	1	Hexavalent Chromium	03/12/24 9:45 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240312A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**12/Mar/24 22:16:00**
No. of Injections:	**68**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/12/2024 08:32	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/12/2024 08:45	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/12/2024 08:55	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/12/2024 09:04	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/12/2024 09:14	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/12/2024 09:23	Finished	LCS @5ppb, IWST-231228B
15	MB-107451,MBLK,1,	1	1000	Unknown		03/12/2024 11:13	Finished	MB TC 10mL
16	N063472-001A,SAMP	2	1000	Unknown		03/12/2024 11:28	Finished	SAMP,10 mL
17	N063472-001ADUP,D	3	1000	Unknown		03/12/2024 11:37	Finished	DUP,10 mL
18	N063705-001A,SAMP	4	1000	Unknown		03/12/2024 11:47	Finished	SAMP,1>10 mL
19	N063705-002A,SAMP	5	1000	Unknown		03/12/2024 11:56	Finished	SAMP,10 mL
20	N063705-003A,SAMP	6	1000	Unknown		03/12/2024 12:05	Finished	SAMP,10 mL
21	N063705-004A,SAMP	7	1000	Unknown		03/12/2024 12:15	Finished	SAMP,2>10 mL
22	N063705-005A,SAMP	8	1000	Unknown		03/12/2024 12:24	Finished	SAMP,2>10 mL
23	CCV-2,CCV1,1,	9	1000	Unknown		03/12/2024 12:34	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		03/12/2024 12:43	Finished	CCB R240129C
25	N063706-001A,SAMP	11	1000	Unknown		03/12/2024 12:53	Finished	SAMP,10 mL
26	N063706-001AMS,MS	12	1000	Unknown		03/12/2024 13:02	Finished	MS (1ppb), IWST-231228B,10r
27	N063705-001A,SAMP	13	1000	Unknown		03/12/2024 13:12	Finished	SAMP,10 mL
28	N063705-001AMS,MS	14	1000	Unknown		03/12/2024 13:21	Finished	MS (5ppb), IWST-231228B,10r
29	N063705-004AMS,MS	15	1000	Unknown		03/12/2024 13:31	Finished	MS (5ppb), IWST-231228B,2>1
30	N063705-004AMSD,M	16	1000	Unknown		03/12/2024 13:40	Finished	MSD (5ppb), IWST-231228B,2
31	N063705-005ADUP,D	17	1000	Unknown		03/12/2024 13:49	Finished	DUP,2>10 mL
32	N063705-005AMS,MS	18	1000	Unknown		03/12/2024 13:59	Finished	MS (5ppb), IWST-231228B,2>1
33	N063705-002AMS,MS	19	1000	Unknown		03/12/2024 14:08	Finished	MS (1ppb), IWST-231228B,10r
34	CCV-3,CCV1,1,	20	1000	Unknown		03/12/2024 14:18	Finished	CCV @10ppb, IWST-231228A
35	CCB-3,CCB,1,	21	1000	Unknown		03/12/2024 14:27	Finished	CCB R240129C
36	N063705-003AMS,MS	22	1000	Unknown		03/12/2024 14:37	Finished	MS (1ppb), IWST-231228B,10r
37	N063706-001A,SAMP	23	1000	Unknown		03/12/2024 14:46	Finished	SAMP,2>10 mL
38	N063706-001AMS,MS	24	1000	Unknown		03/12/2024 14:56	Finished	MS (1ppb), IWST-231228B,2>1
39	N063559-001A,SAMP	25	1000	Unknown		03/12/2024 15:05	Finished	SAMP,10 mL
40	N063559-002A,SAMP	26	1000	Unknown		03/12/2024 15:15	Finished	SAMP,10 mL
41	N063642-009A,SAMP	27	1000	Unknown		03/12/2024 15:24	Finished	SAMP,10 mL
42	N063642-010A,SAMP	28	1000	Unknown		03/12/2024 15:33	Finished	SAMP,10 mL
43	N063642-011A,SAMP	29	1000	Unknown		03/12/2024 15:43	Finished	SAMP,10 mL
44	N063705-001A,SAMP	30	1000	Unknown		03/12/2024 15:52	Finished	SAMP,2>10 mL
45	N063705-001AMS,MS	31	1000	Unknown		03/12/2024 16:02	Finished	MS (5ppb), IWST-231228B,2>1
46	CCV-4,CCV1,1,	32	1000	Unknown		03/12/2024 16:11	Finished	CCV @10ppb, IWST-231228A
47	CCB-4,CCB,1,	33	1000	Unknown		03/12/2024 16:21	Finished	CCB R240129C
48	N063706-002A,SAMP	1	1000	Unknown		03/12/2024 16:38	Finished	SAMP,10 mL
49	N063706-002AMS,MS	2	1000	Unknown		03/12/2024 16:50	Finished	MS (1ppb), IWST-231228B,10r
50	N063617-002A,SAMP	3	1000	Unknown		03/12/2024 17:00	Finished	SAMP,2>10 mL
51	N063617-011A,SAMP	4	1000	Unknown		03/12/2024 17:09	Finished	SAMP,0.5>10 mL
52	N063617-012A,SAMP	5	1000	Unknown		03/12/2024 17:19	Finished	SAMP,0.5>10 mL
53	N063642-001A,SAMP	6	1000	Unknown		03/12/2024 17:28	Finished	SAMP,2>10 mL
54	N063642-002A,SAMP	7	1000	Unknown		03/12/2024 17:38	Finished	SAMP,2>10 mL
55	N063559-001AMS,MS	8	1000	Unknown		03/12/2024 17:47	Interrupted	MS (1ppb), IWST-231228B,10r
56	N063559-002AMS,MS	9	1000	Unknown		03/12/2024 20:27	Interrupted	MS (1ppb), IWST-231228B,10r
57	CCV-5,CCV,1,	10	1000	Unknown		03/12/2024 20:28	Finished	CCV @5ppb, IWST-231228A
58	CCB-5,CCB,1,	11	1000	Unknown		03/12/2024 20:39	Finished	CCB R240129C
59	N063559-001A,SAMP	12	1000	Unknown		03/12/2024 20:48	Finished	SAMP,2>10 mL
60	N063559-001AMS,MS	13	1000	Unknown		03/12/2024 20:58	Finished	MS (1ppb), IWST-231228B,2>1

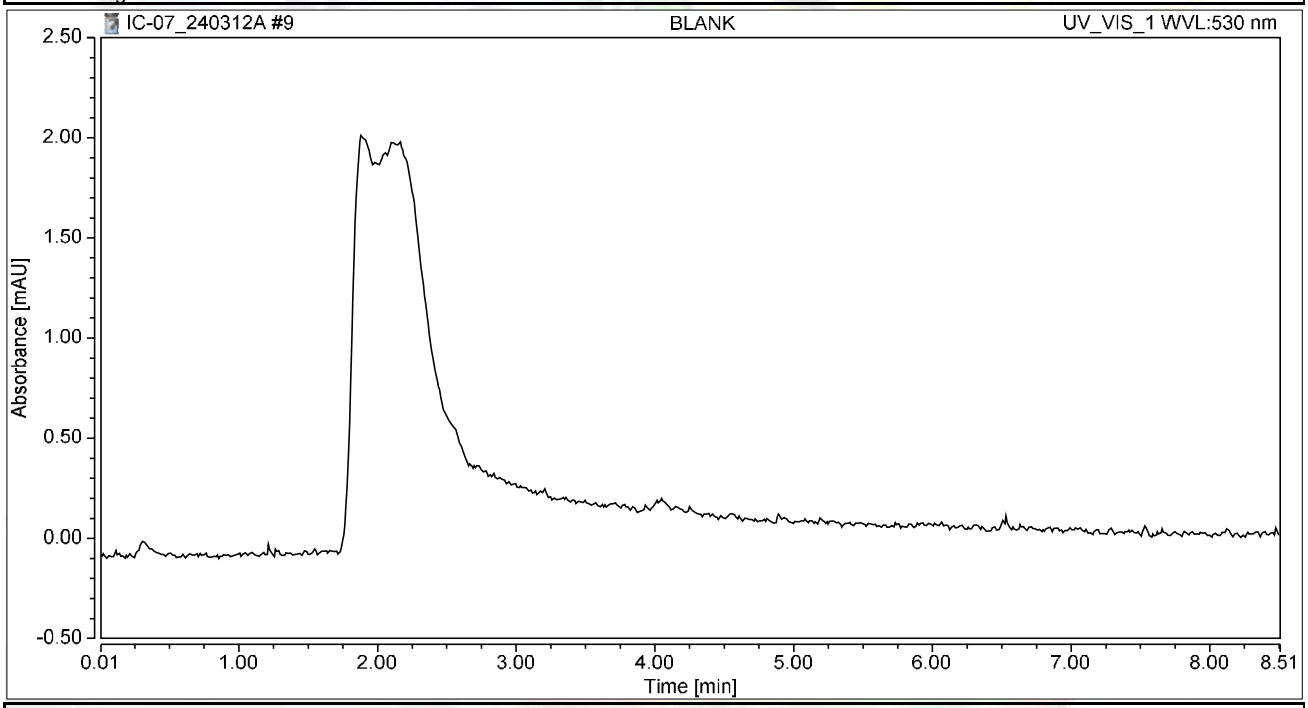
61	N063559-002A,SAMP	14	1000	Unknown		03/12/2024 21:07	Finished	SAMP,2>10 mL
62	N063559-002AMS,MS	15	1000	Unknown		03/12/2024 21:17	Finished	MS (1ppb), IWST-231228B,2>
63	CCV-6,CCV1,1,	16	1000	Unknown		03/12/2024 21:26	Finished	CCV @10ppb, IWST-231228A
64	CCB-6,CCB,1,	17	1000	Unknown		03/12/2024 21:36	Finished	CCB R240129C
65	BLANK	18	1000	Unknown		03/12/2024 21:45	Finished	BLANK
66	SHUTDOWN	19	1000	Unknown		03/12/2024 21:55	Finished	
67	Eluent: R240311C	20	1000	Unknown		n.a.	Finished	
68	PCR: R240311D	21	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 08:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

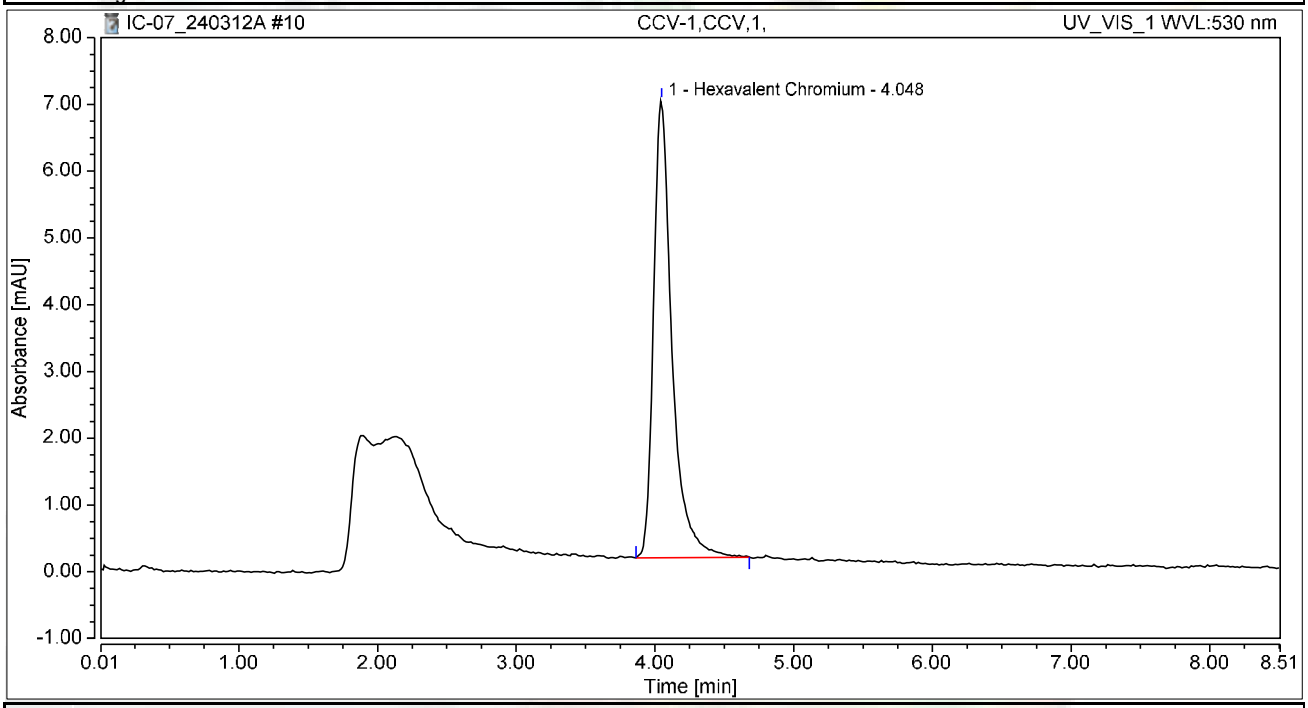
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 08:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.048	1.057	6.852	100.00	100.00	4.9649
Total:			**1.057**	**6.852**	**100.00**	**100.00**	

Reviewed by:

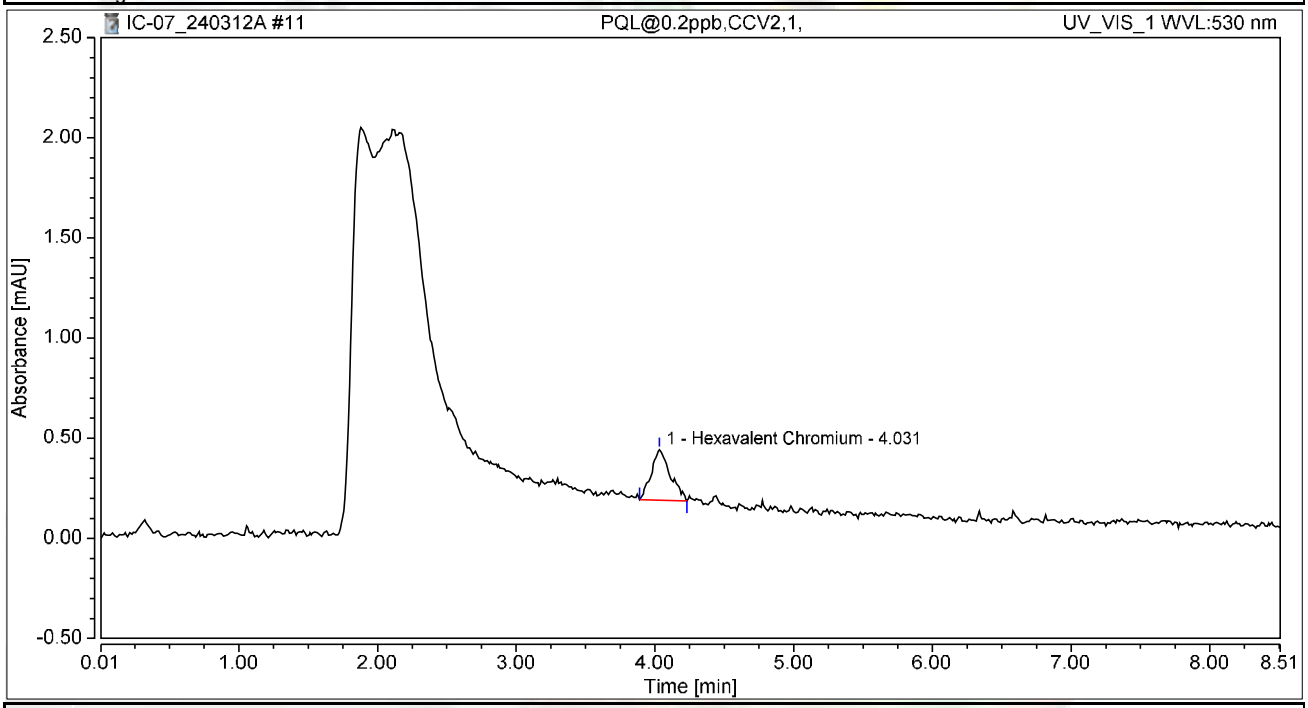
JRB 3/13/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 08:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

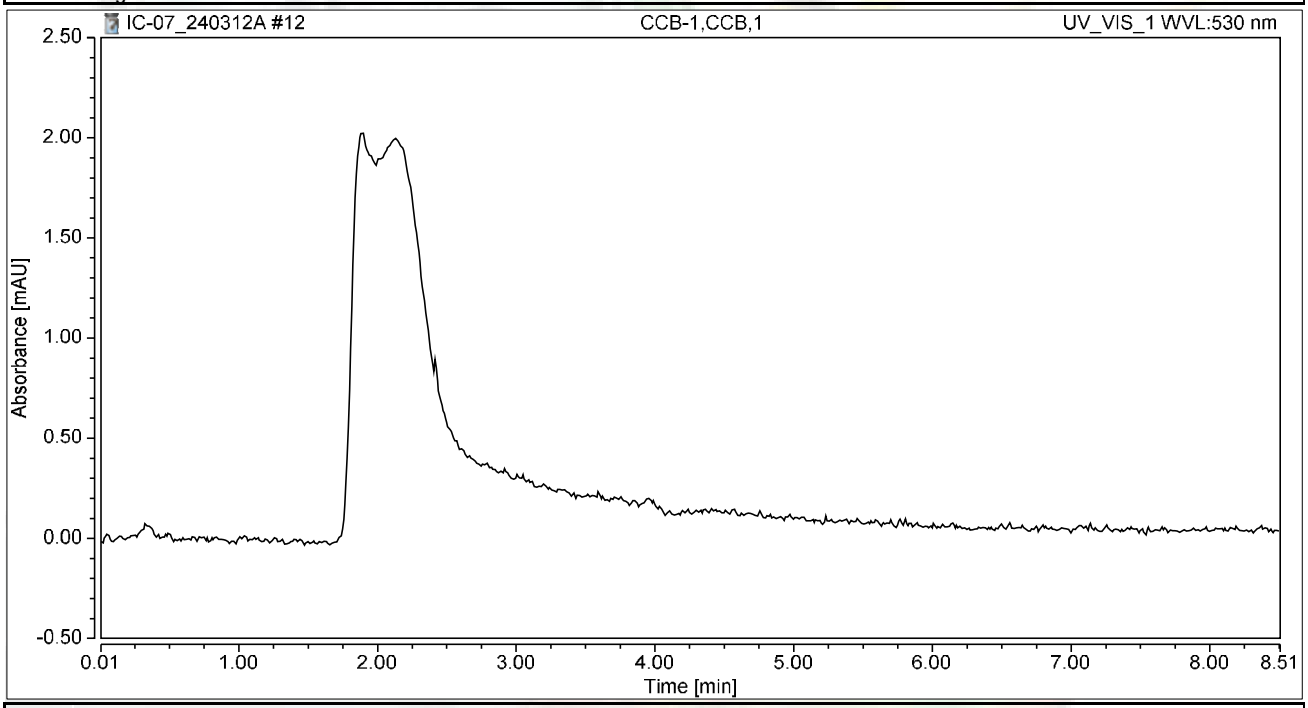
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	0.040	0.253	100.00	100.00	0.1877
Total:			**0.040**	**0.253**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 09:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

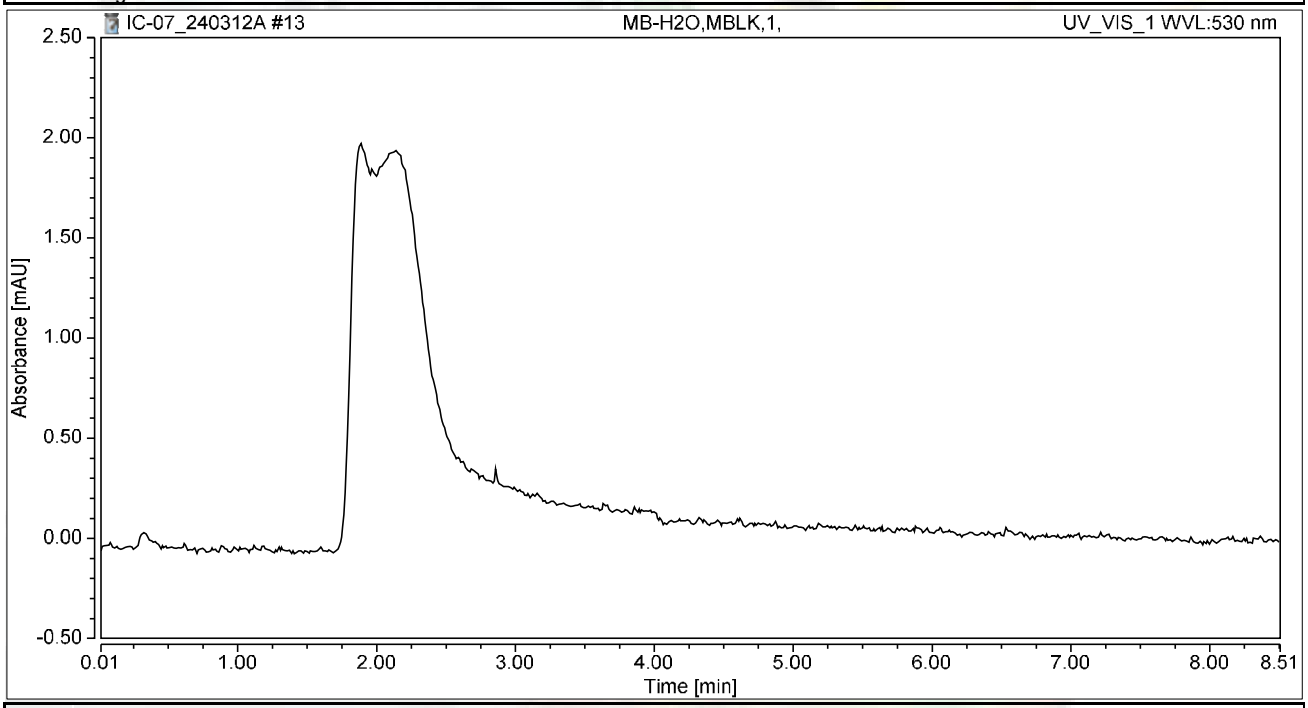
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 09:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

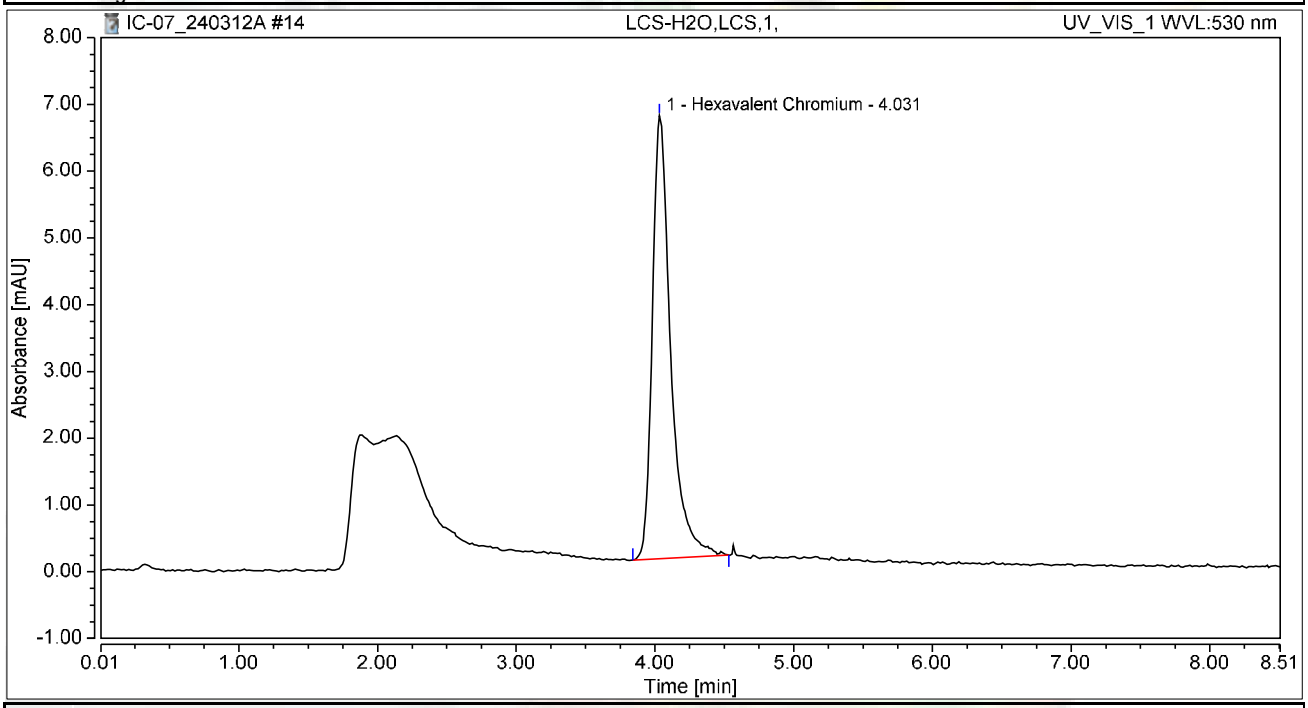
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 09:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

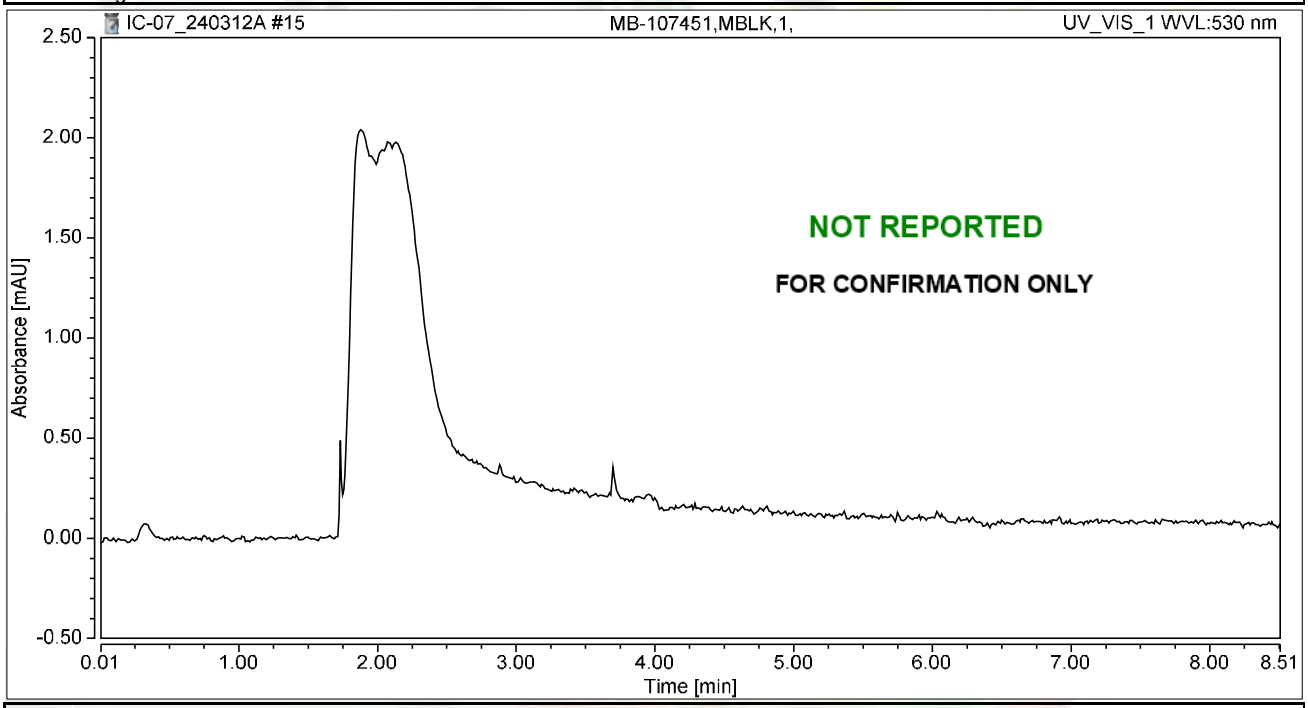
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.031	1.021	6.637	100.00	100.00	4.7963
Total:			**1.021**	**6.637**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-107451,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 11:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

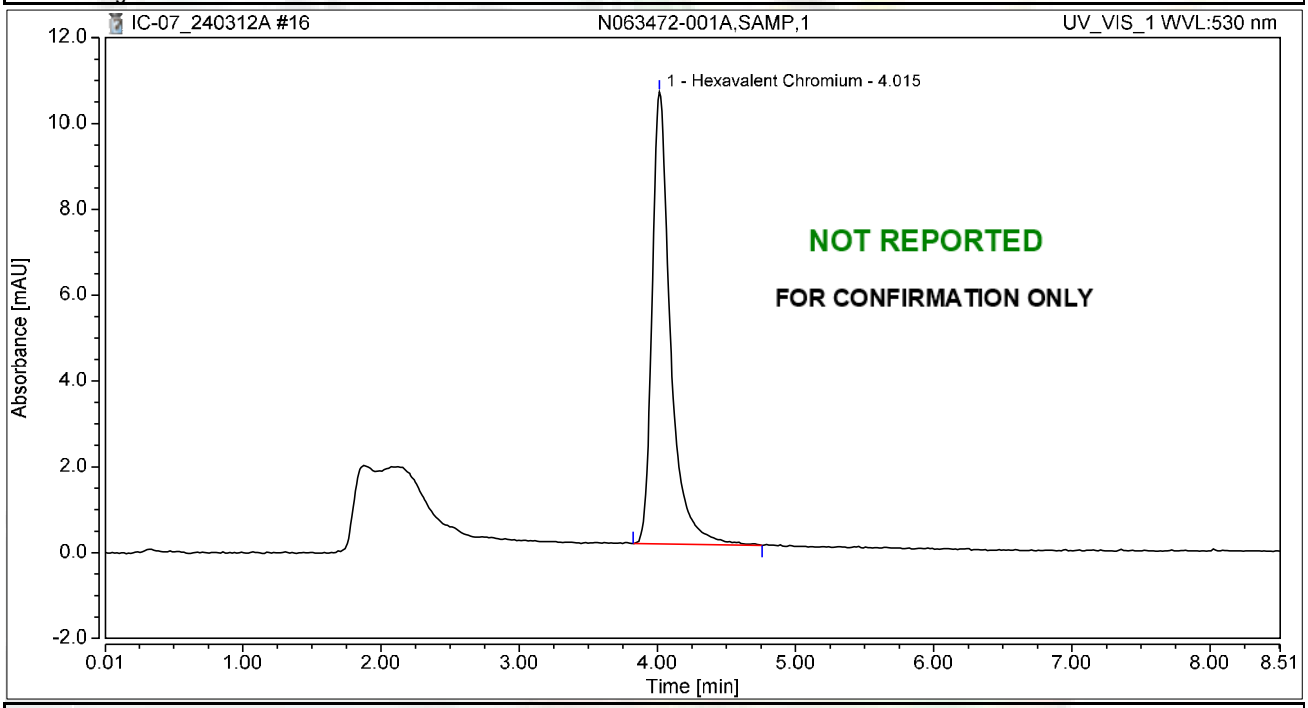
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063472-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 11:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

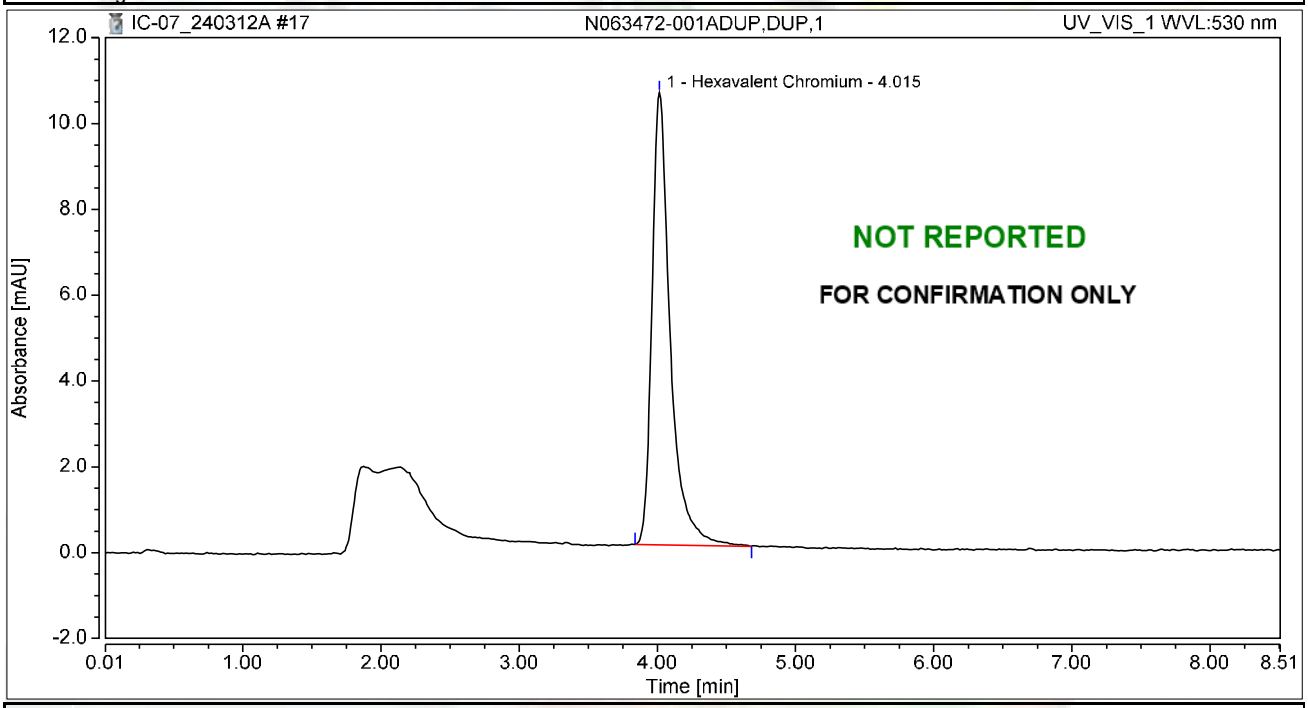
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.627	10.529	100.00	100.00	7.6437
Total:			**1.627**	**10.529**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063472-001ADUP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 11:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

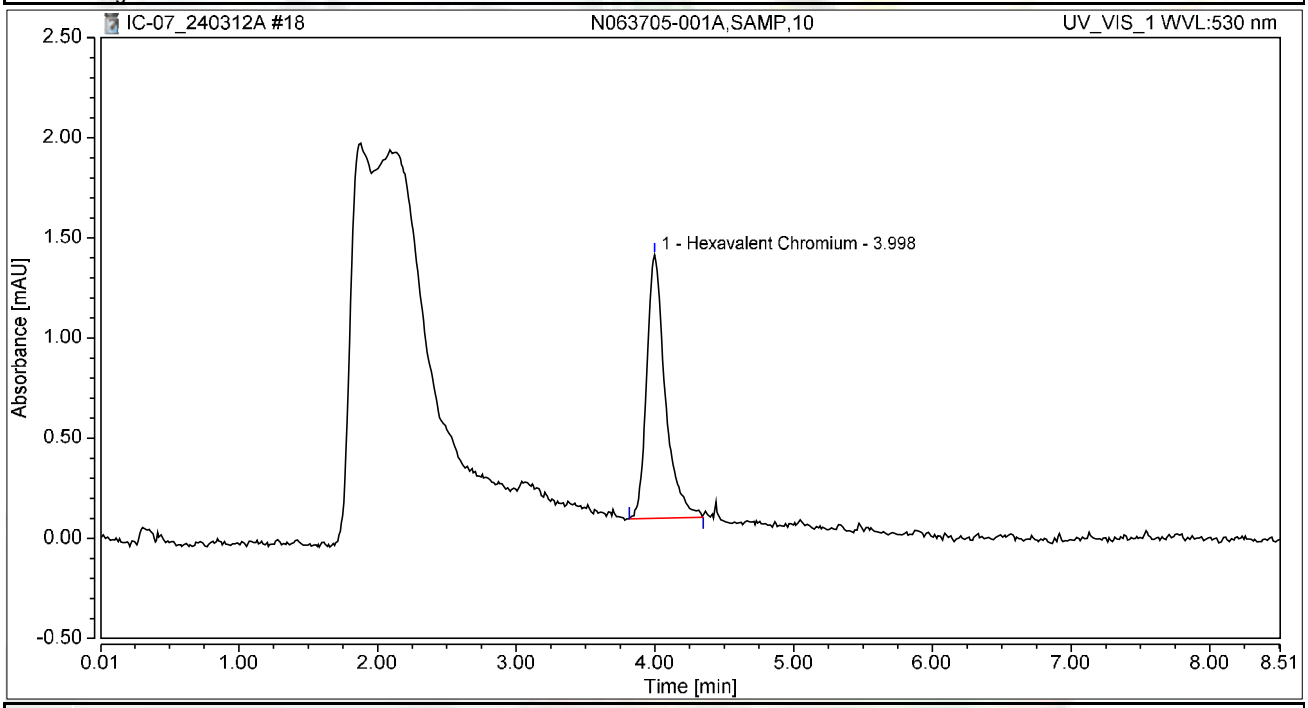
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.615	10.534	100.00	100.00	7.5860
Total:			**1.615**	**10.534**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-001A,SAMP,10**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 11:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

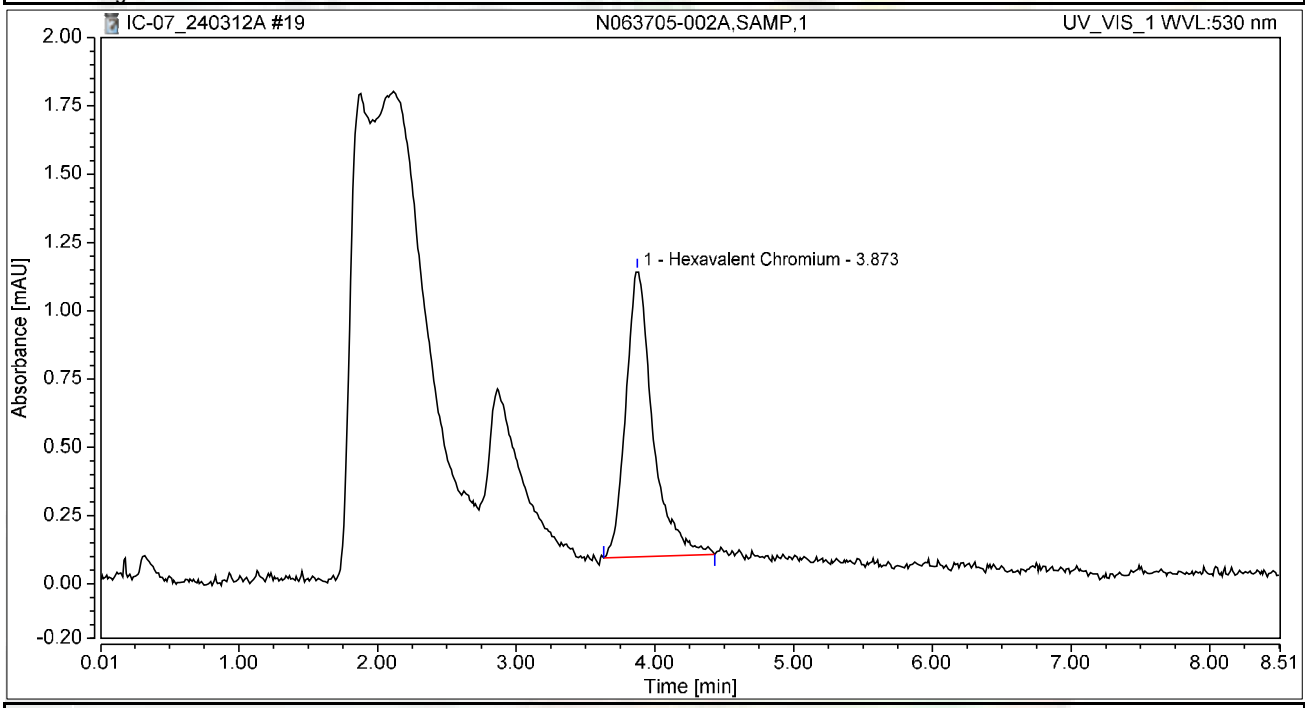
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.204	1.316	100.00	100.00	0.9565
Total:			**0.204**	**1.316**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 11:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

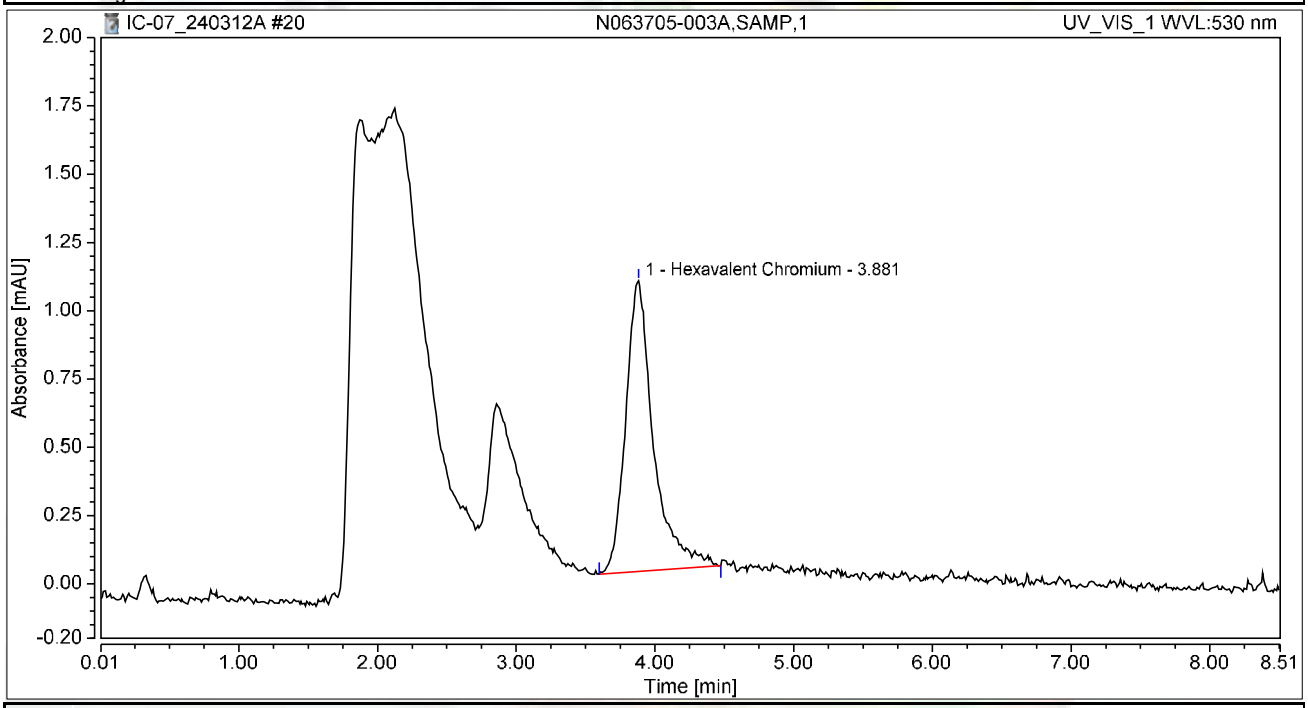
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.873	0.234	1.047	100.00	100.00	1.1006
Total:			**0.234**	**1.047**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 12:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

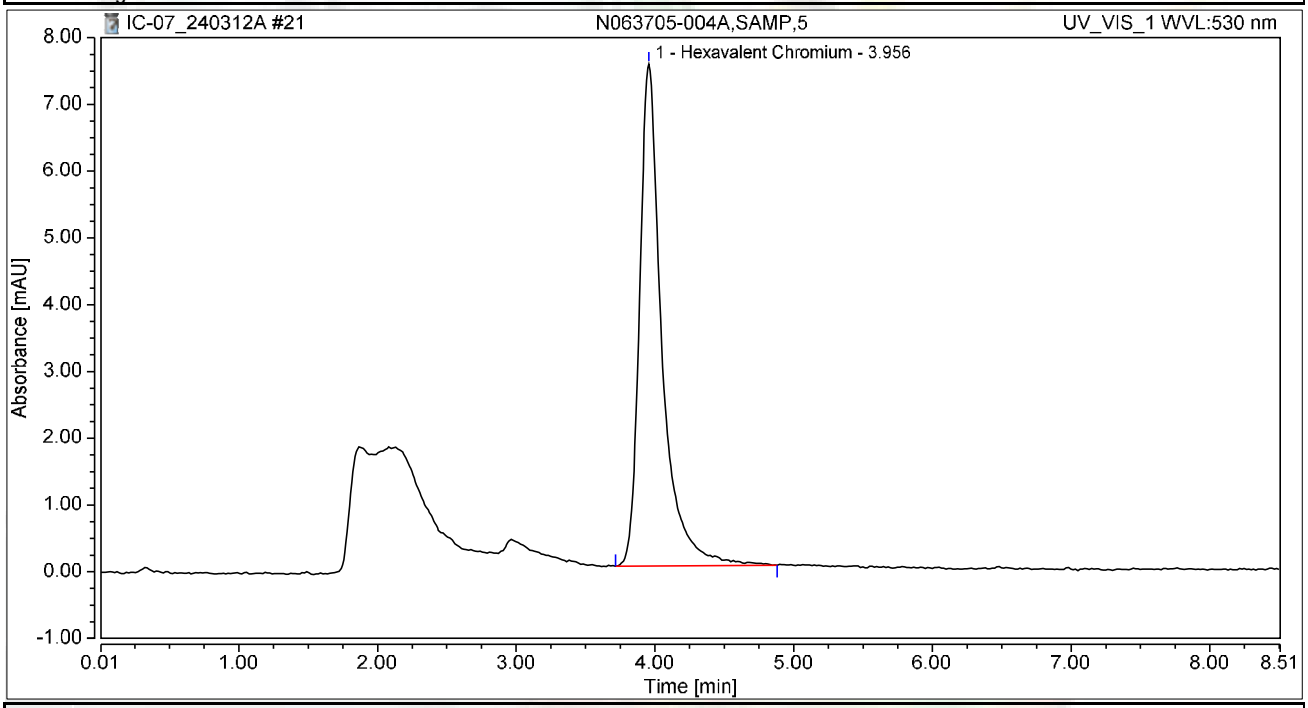
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.881	0.247	1.065	100.00	100.00	1.1597
Total:			**0.247**	**1.065**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-004A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 12:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

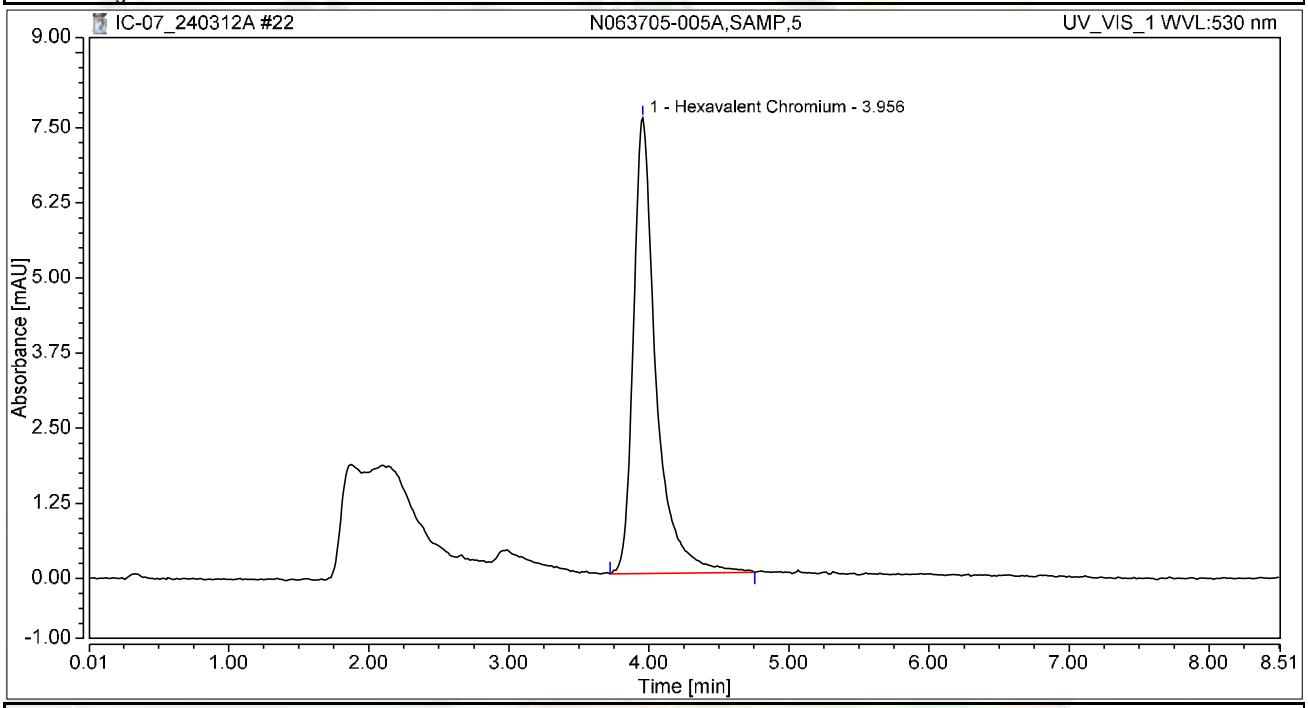
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	1.410	7.523	100.00	100.00	6.6233
Total:			**1.410**	**7.523**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 12:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

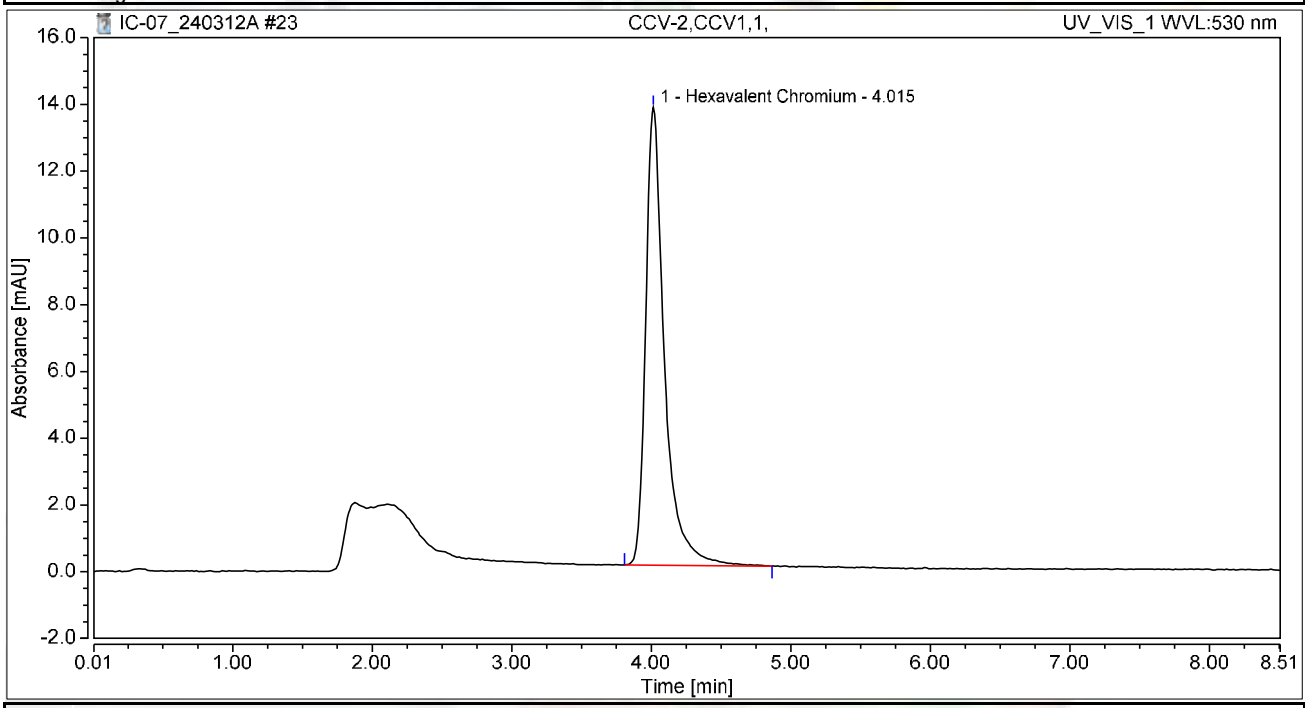
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	1.413	7.583	100.00	100.00	6.6402
Total:			**1.413**	**7.583**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 12:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

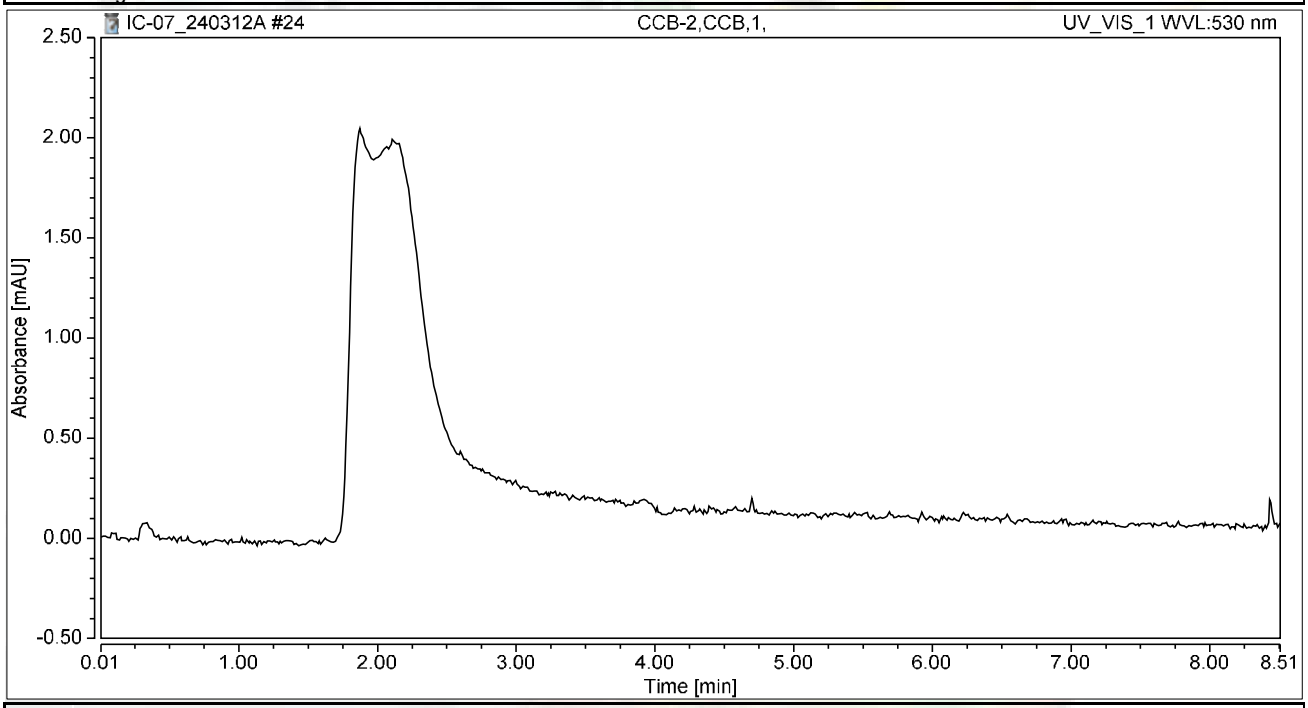
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	2.143	13.720	100.00	100.00	10.0687
Total:			**2.143**	**13.720**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 12:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

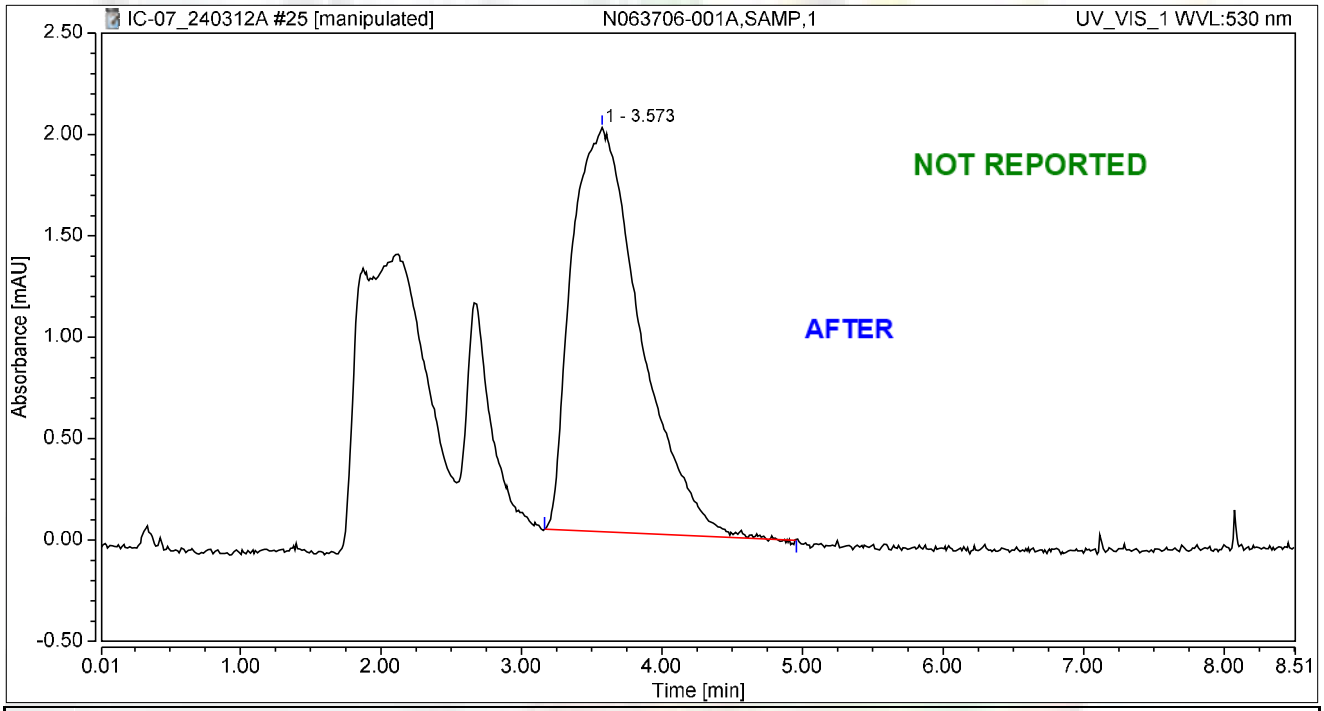
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063706-001A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 12:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

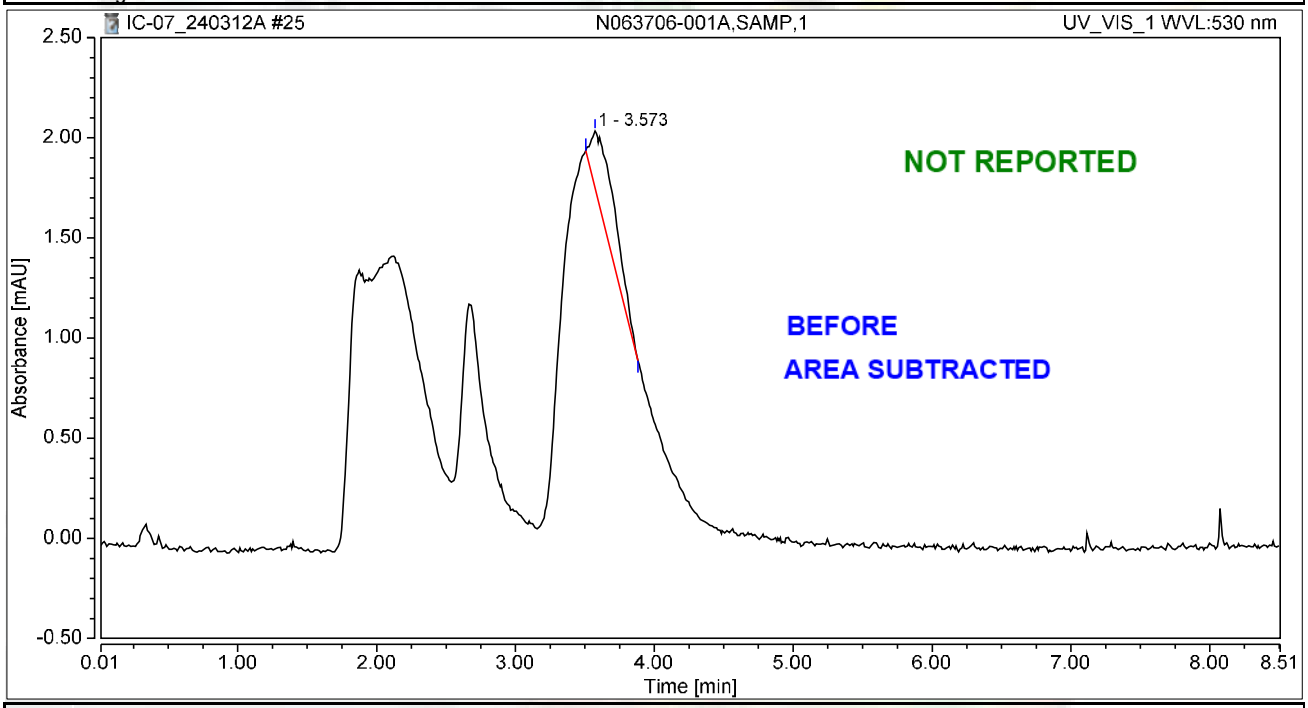
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.573	1.128	1.993	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**1.128**	**1.993**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063706-001A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 12:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

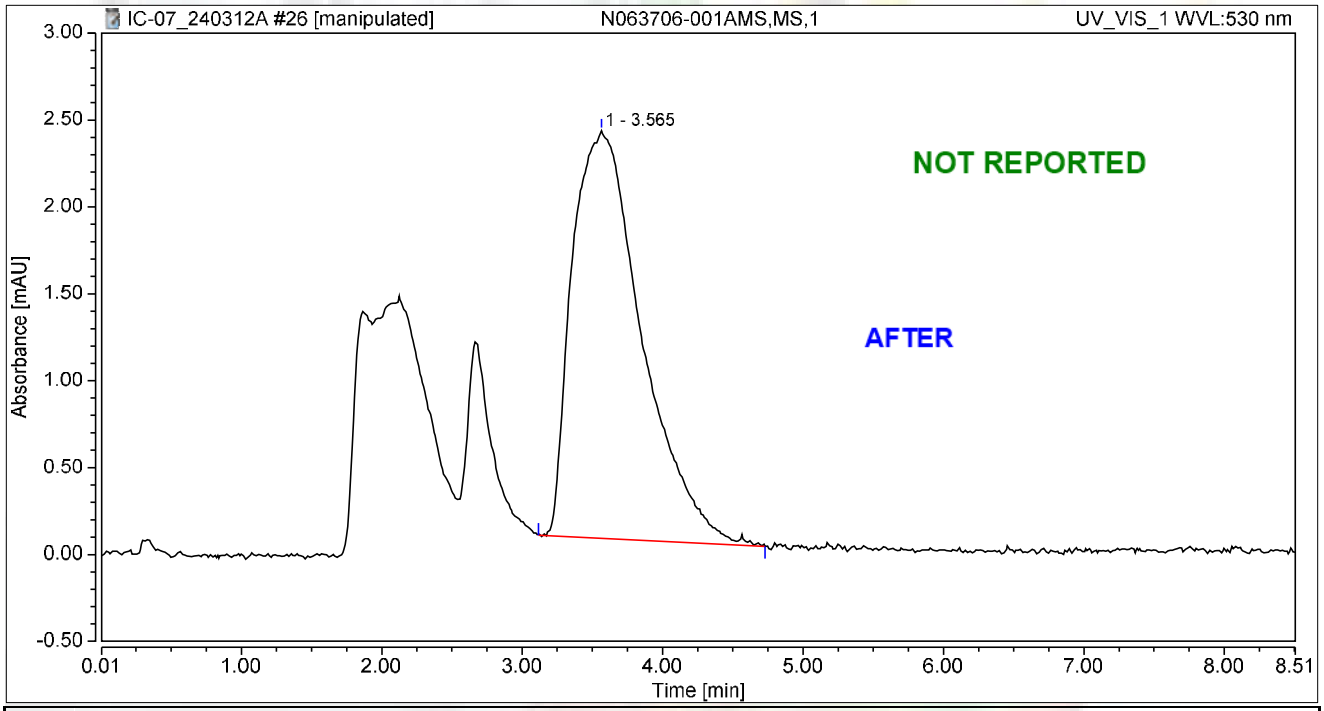
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.573	0.076	0.284	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.076**	**0.284**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063706-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 13:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

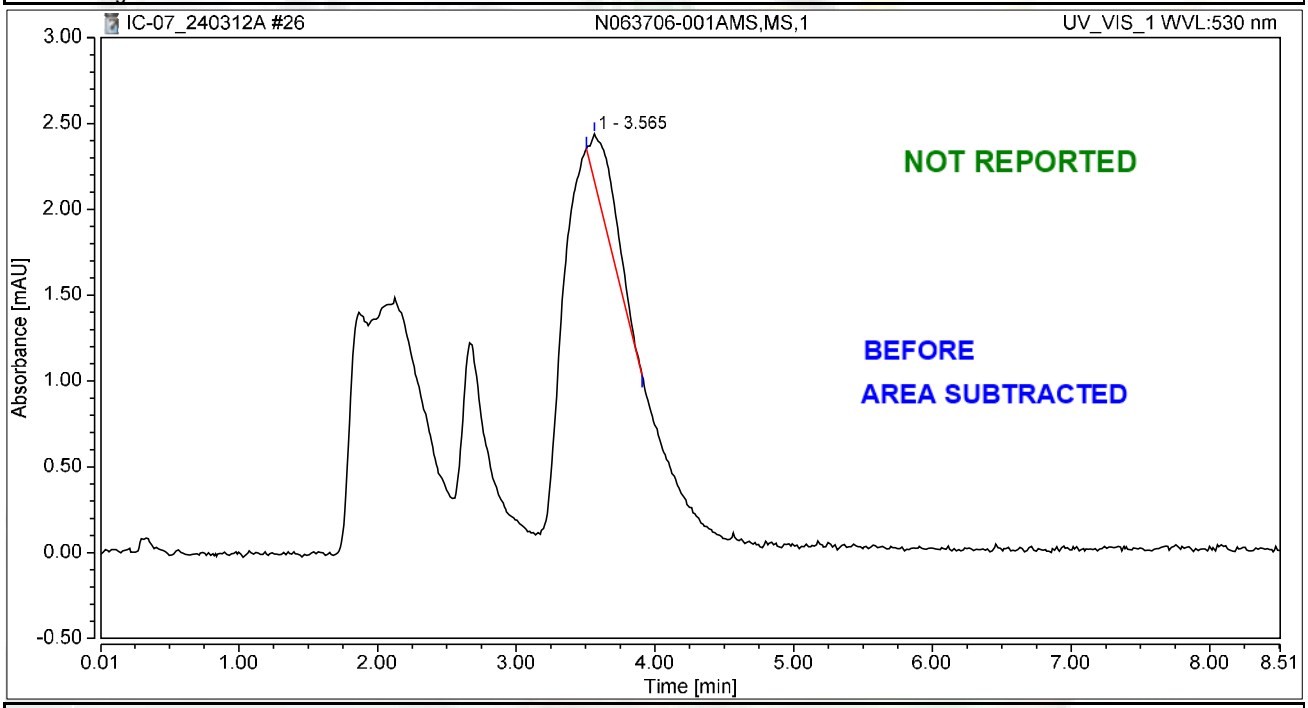
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.565	1.350	2.346	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**1.350**	**2.346**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063706-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 13:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

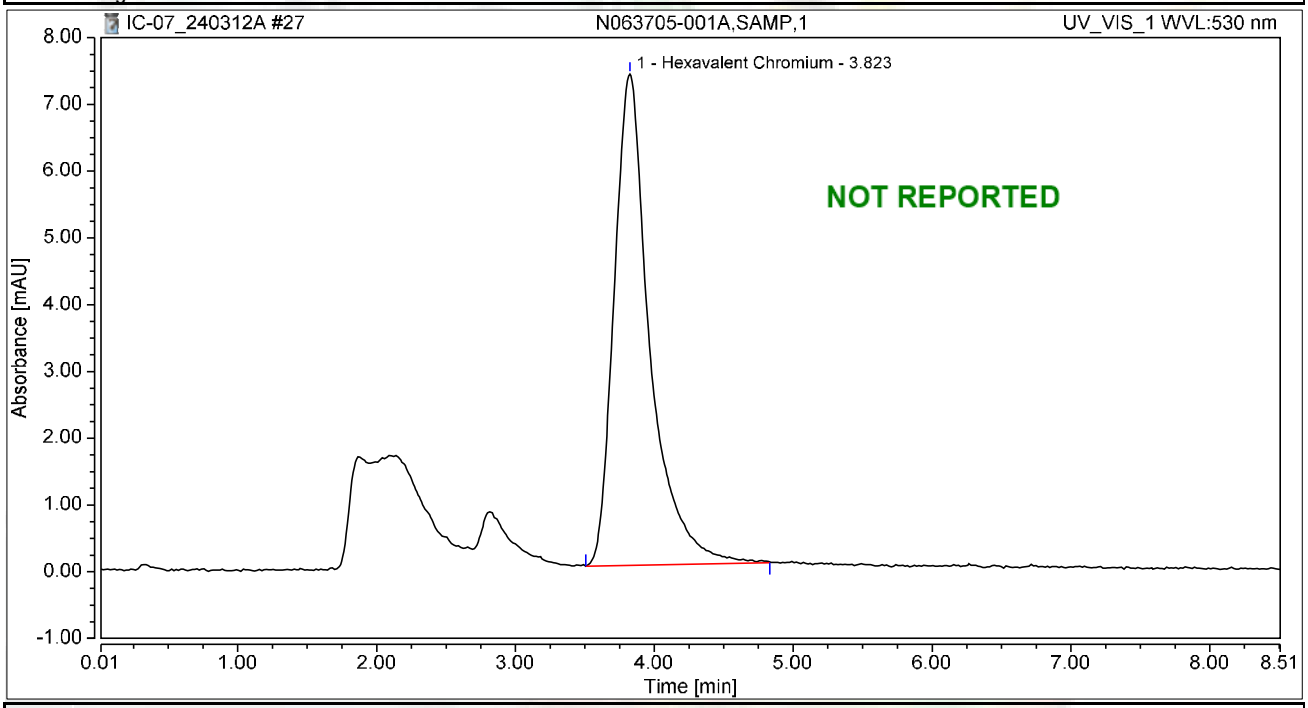
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1		3.565	0.085	0.277	100.00	100.00	n.a.
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.085**	**0.277**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-001A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 13:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

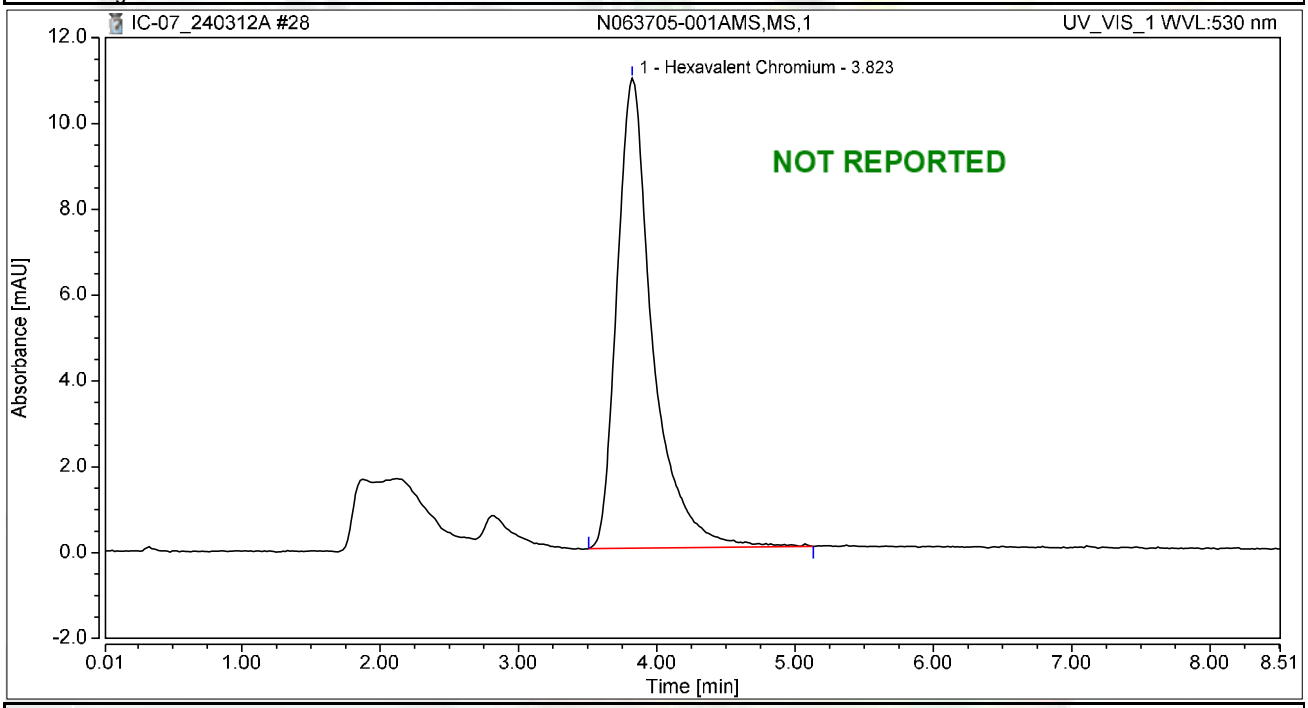
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.823	2.194	7.361	100.00	100.00	10.3069
Total:			**2.194**	**7.361**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 13:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

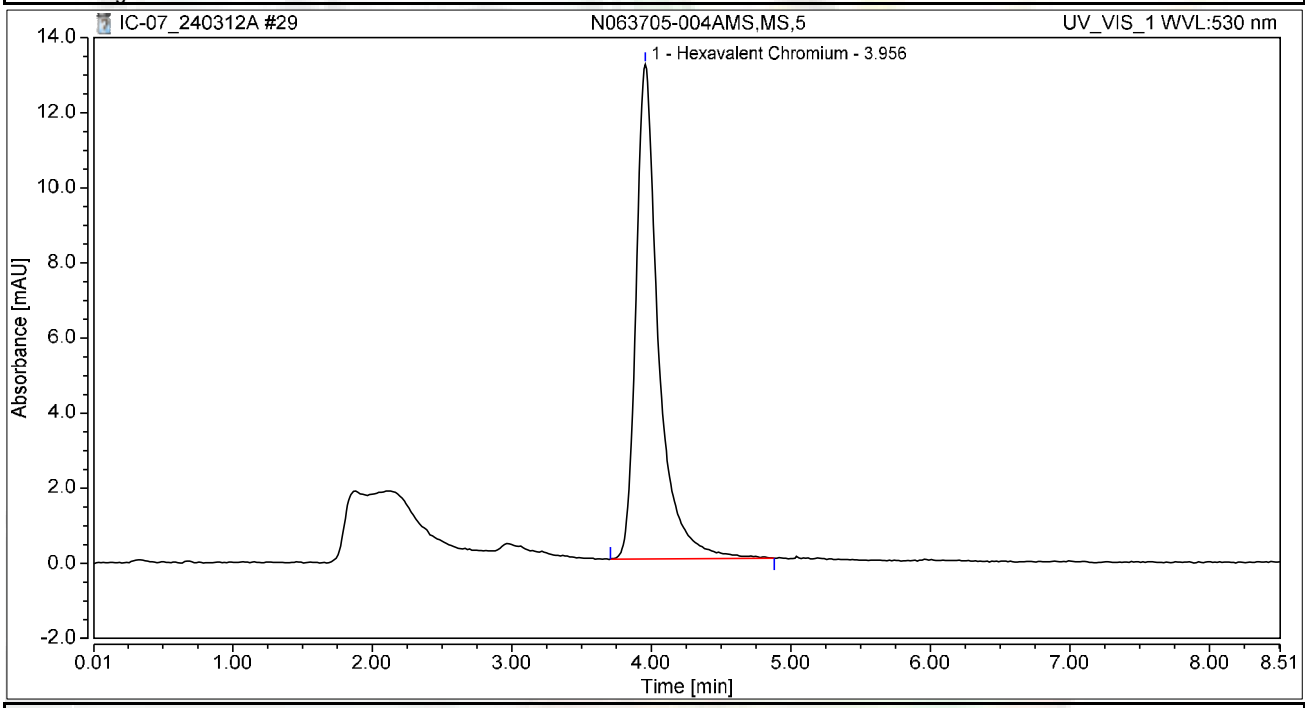
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.823	3.274	10.943	100.00	100.00	15.3815
Total:			**3.274**	**10.943**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-004AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 13:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

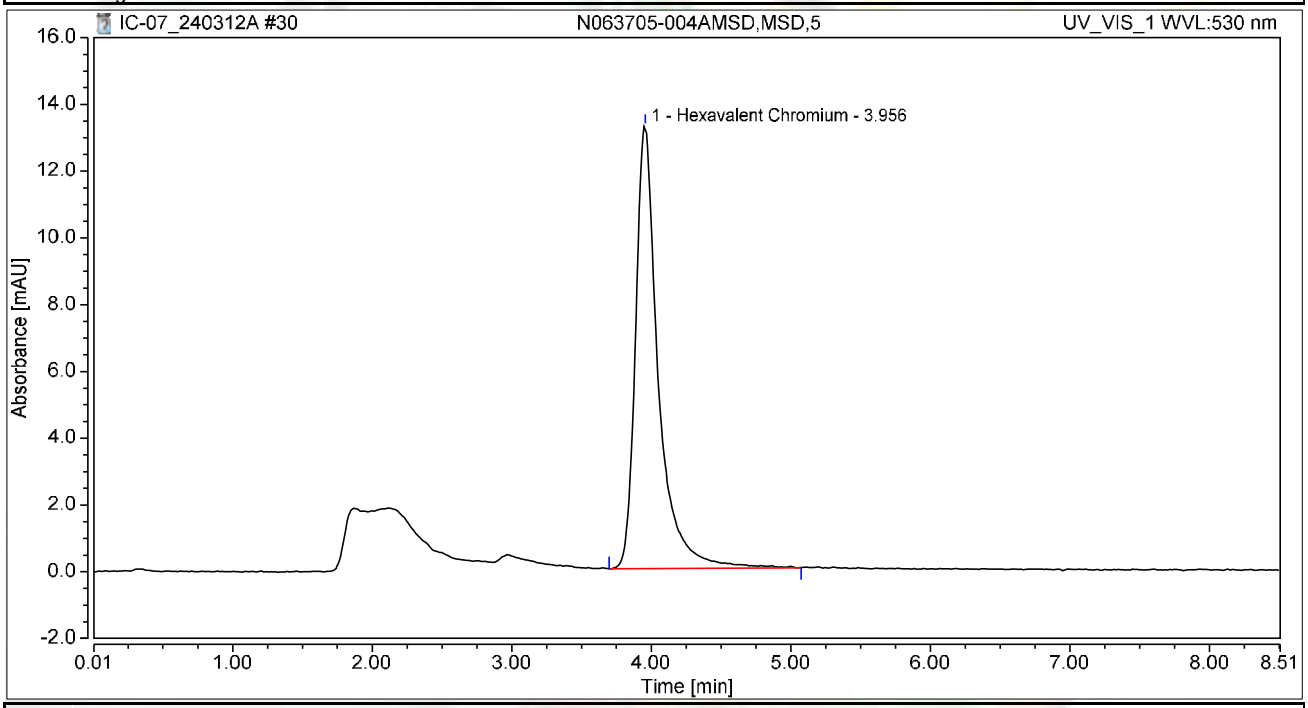
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	2.453	13.173	100.00	100.00	11.5265
Total:			**2.453**	**13.173**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-004AMSD,MSD,5**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 13:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

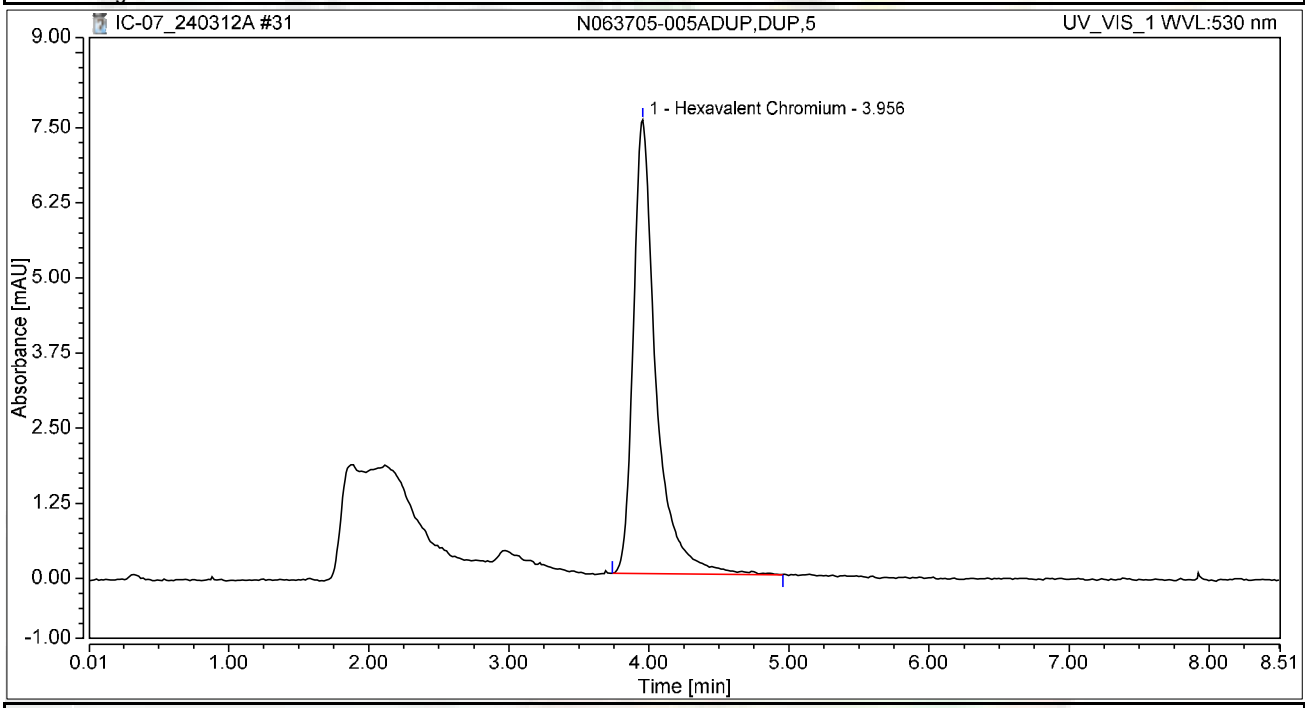
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	2.510	13.251	100.00	100.00	11.7932
Total:			**2.510**	**13.251**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-005ADUP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 13:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

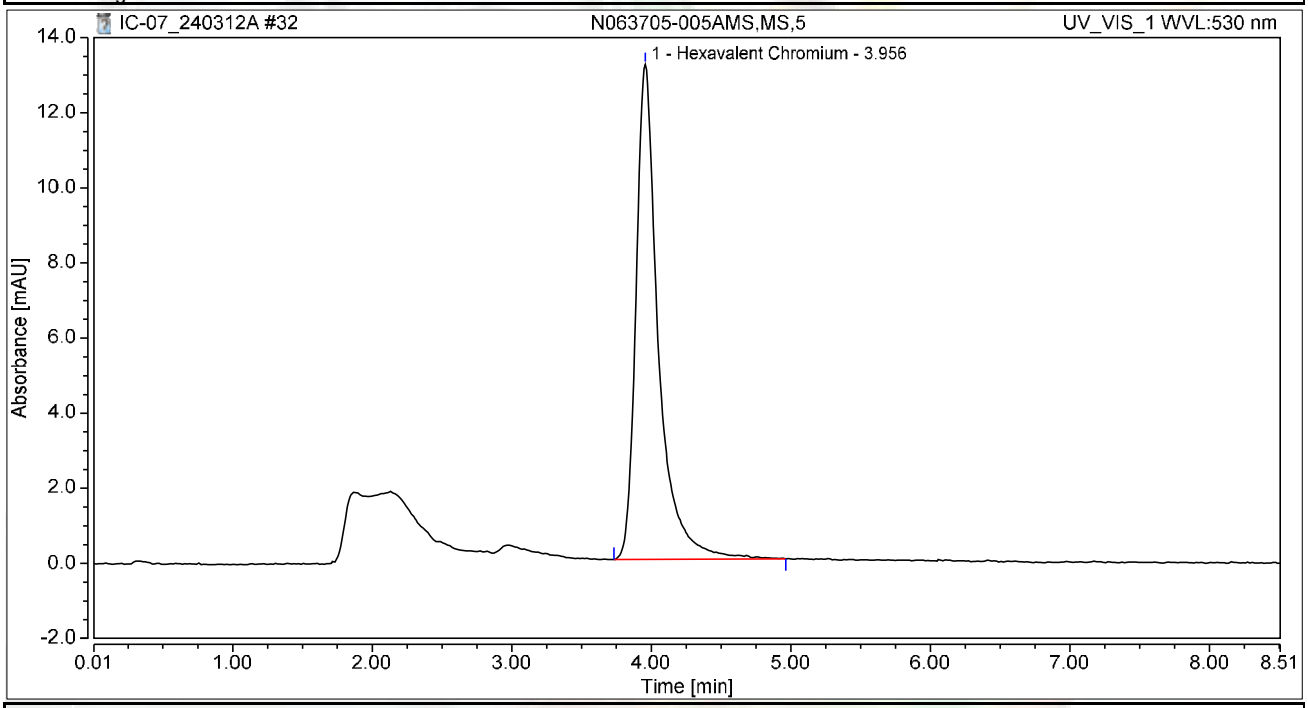
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	1.413	7.550	100.00	100.00	6.6395
Total:			**1.413**	**7.550**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-005AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 13:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

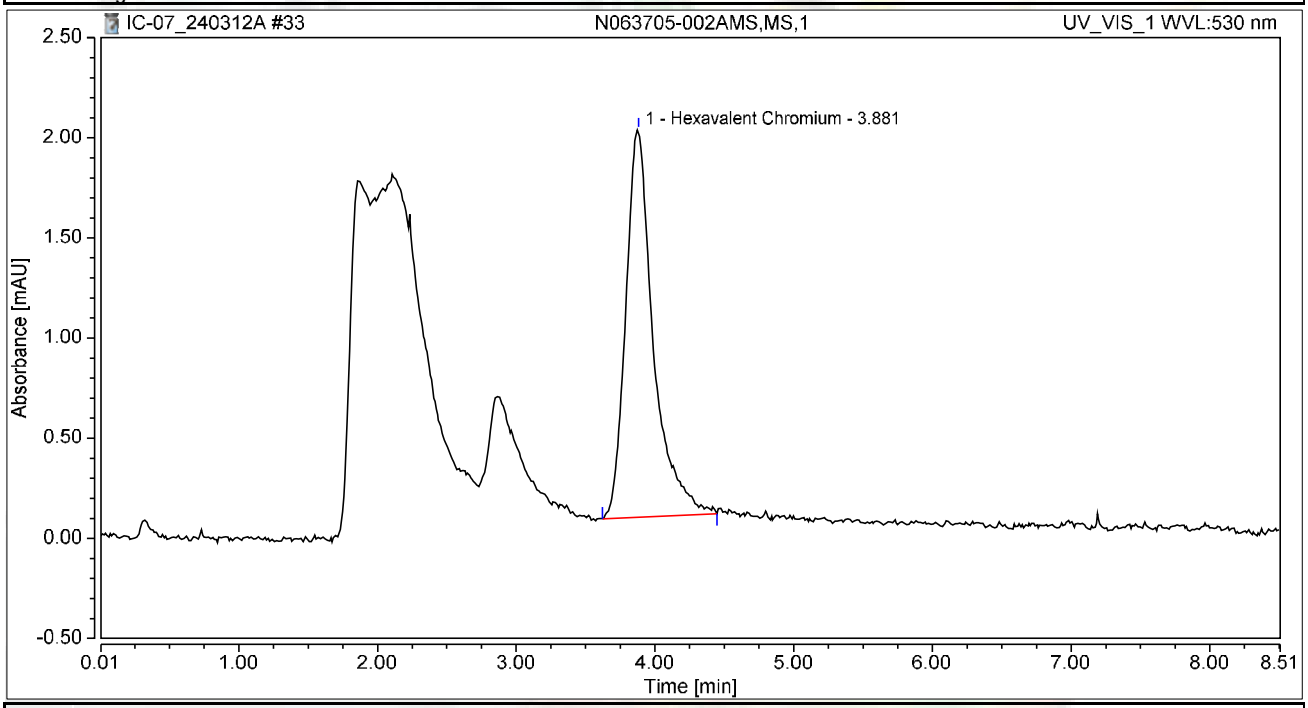
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	2.451	13.170	100.00	100.00	11.5145
Total:			**2.451**	**13.170**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 14:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

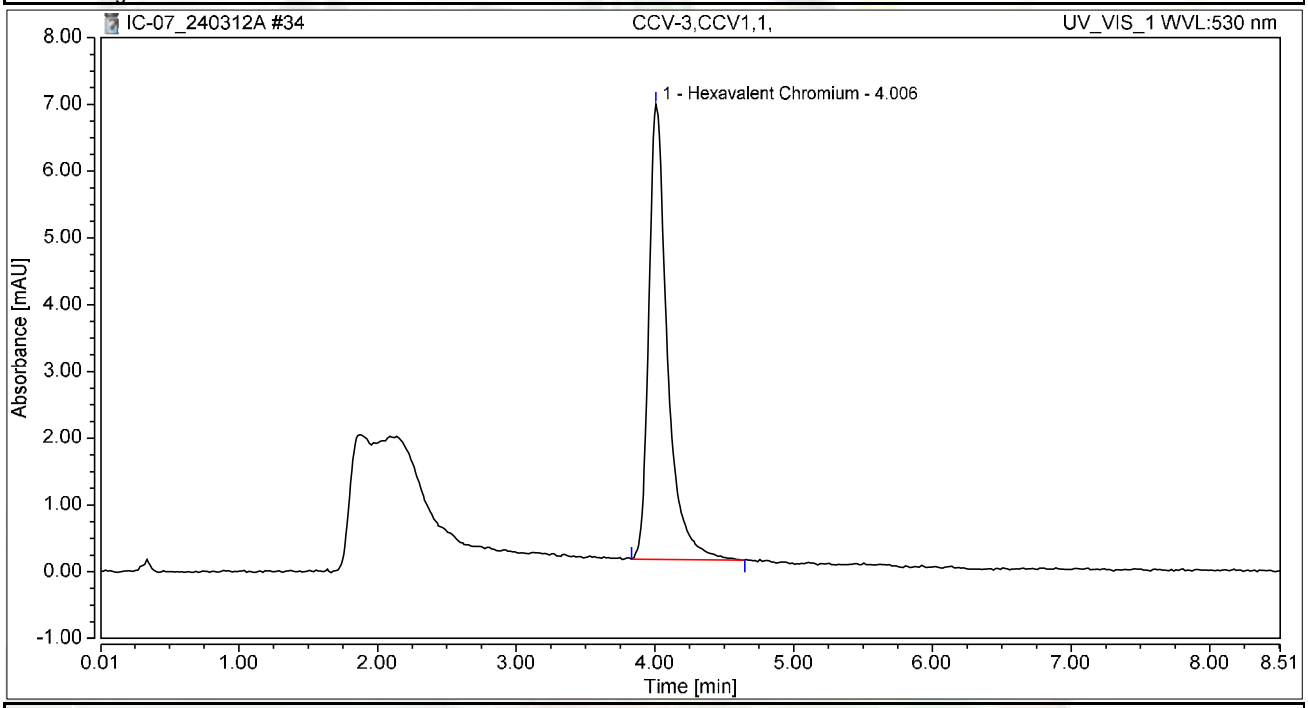
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.881	0.446	1.936	100.00	100.00	2.0939
Total:			**0.446**	**1.936**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 14:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

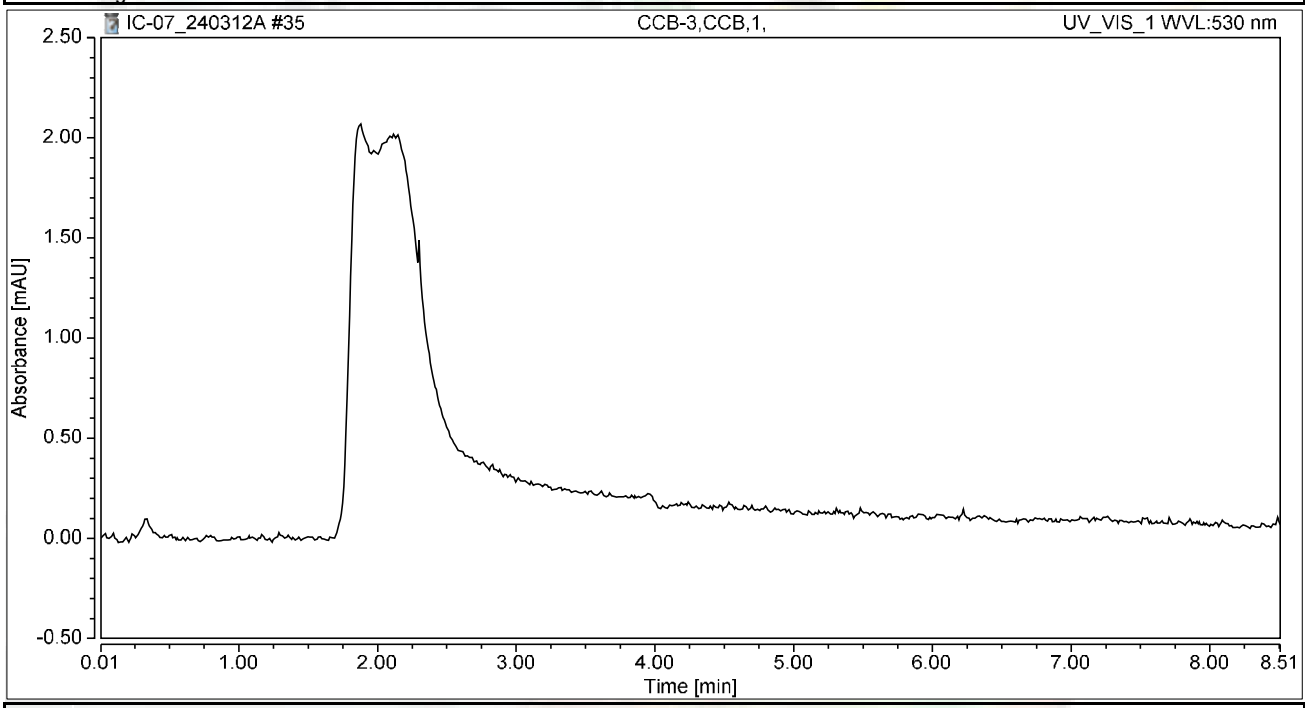
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.061	6.816	100.00	100.00	4.9847
Total:			**1.061**	**6.816**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 14:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

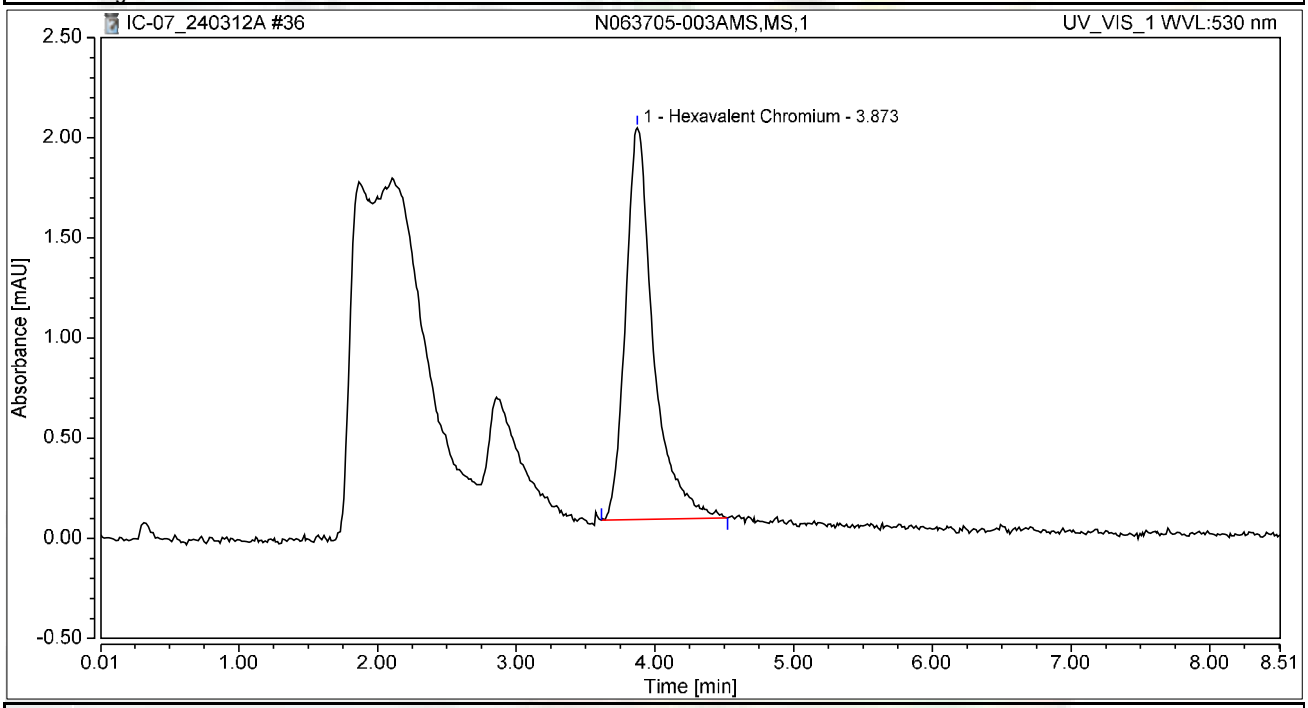
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 14:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

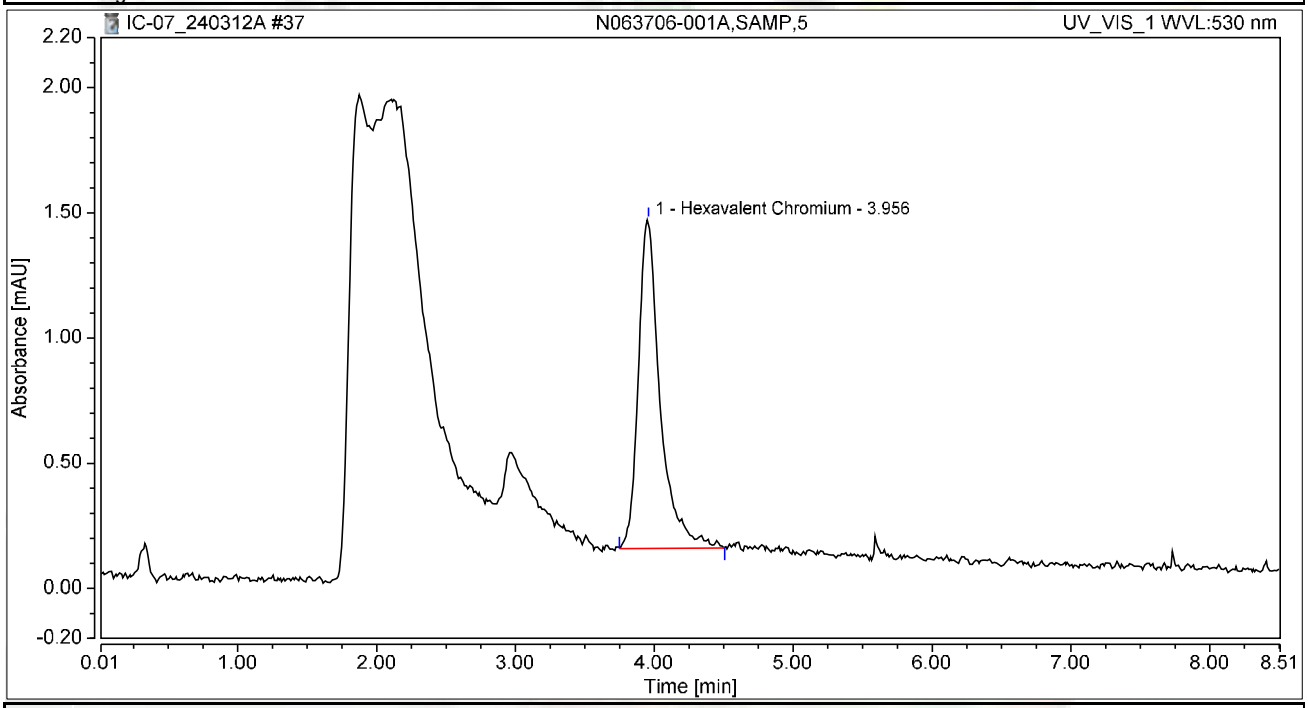
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.873	0.454	1.956	100.00	100.00	2.1346
Total:			**0.454**	**1.956**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063706-001A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 14:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

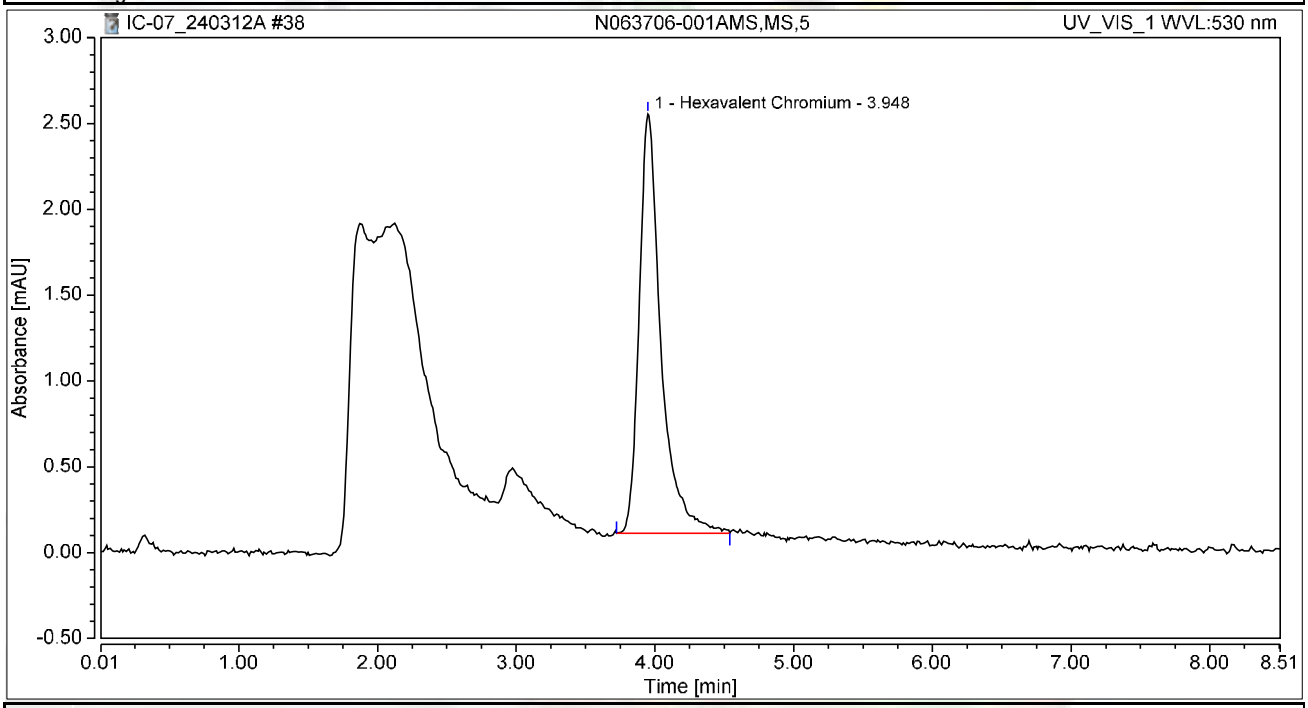
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.240	1.313	100.00	100.00	1.1257
Total:			**0.240**	**1.313**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063706-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 14:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

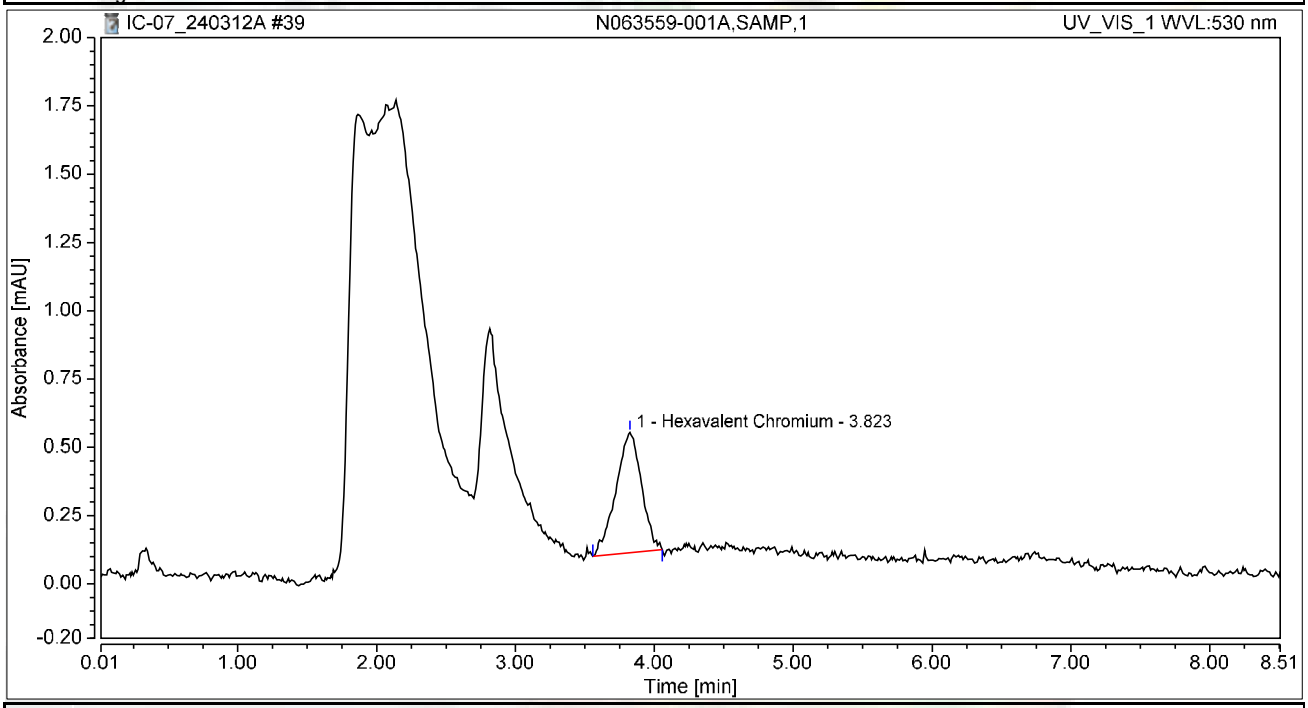
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.445	2.444	100.00	100.00	2.0894
Total:			**0.445**	**2.444**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-001A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 15:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

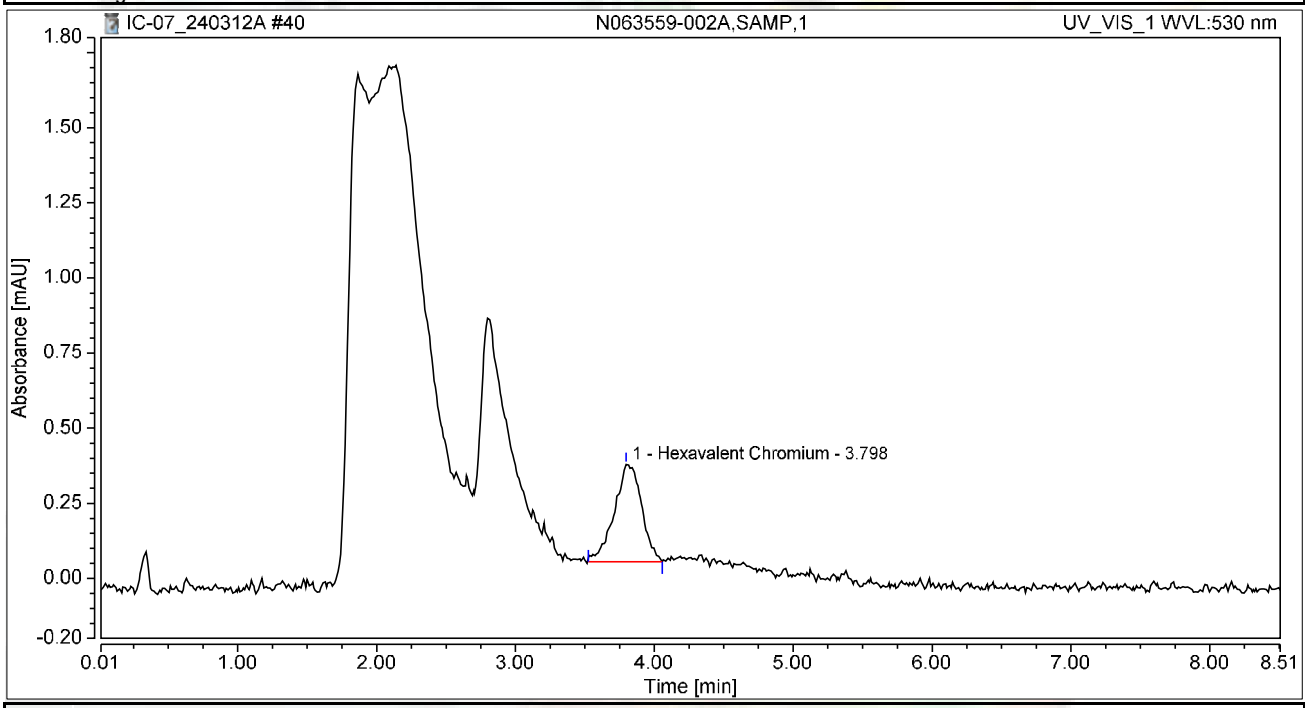
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.823	0.094	0.440	100.00	100.00	0.4413
Total:			**0.094**	**0.440**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-002A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 15:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

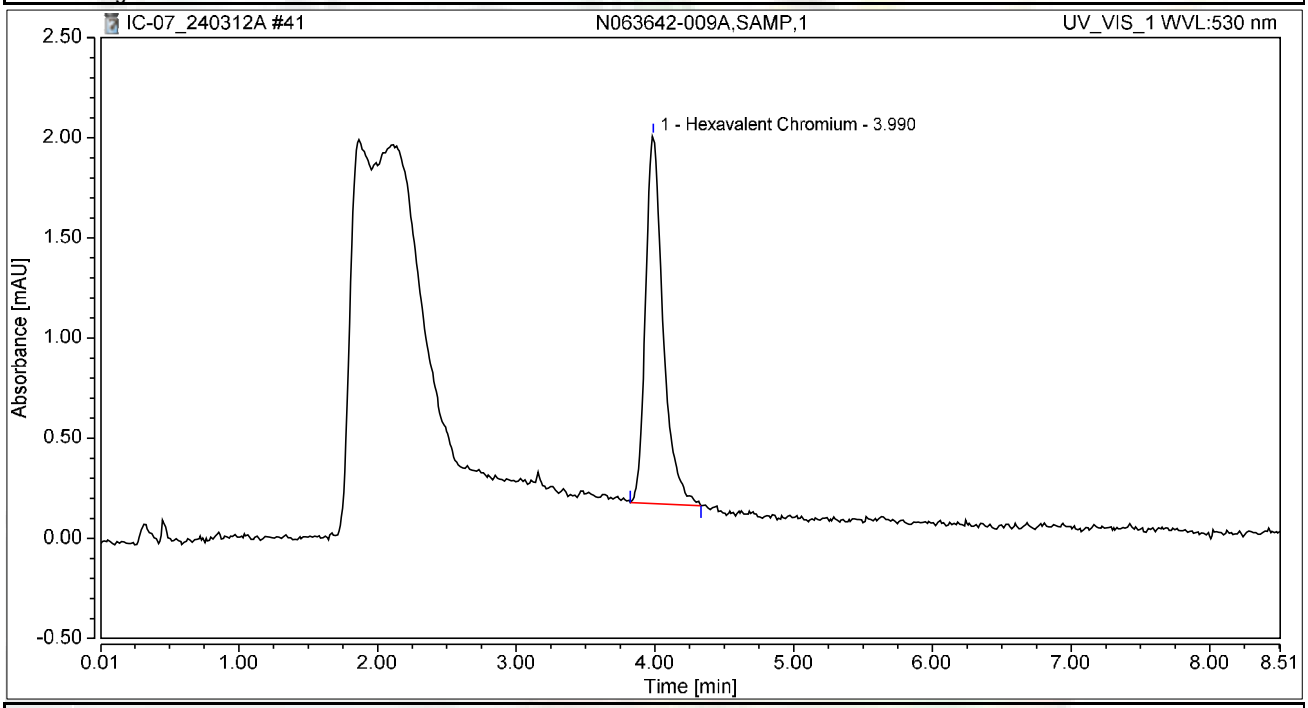
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.798	0.074	0.323	100.00	100.00	0.3475
Total:			**0.074**	**0.323**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 15:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

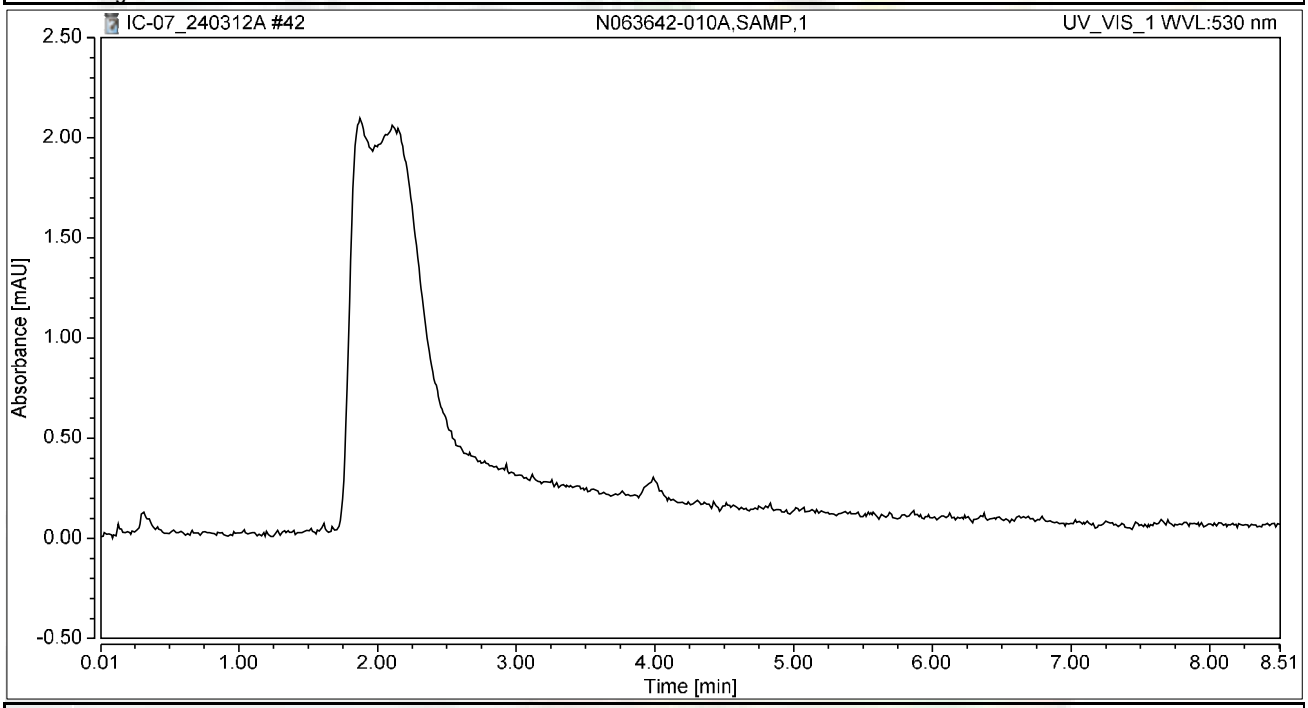
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.270	1.839	100.00	100.00	1.2695
Total:			**0.270**	**1.839**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-010A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 15:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

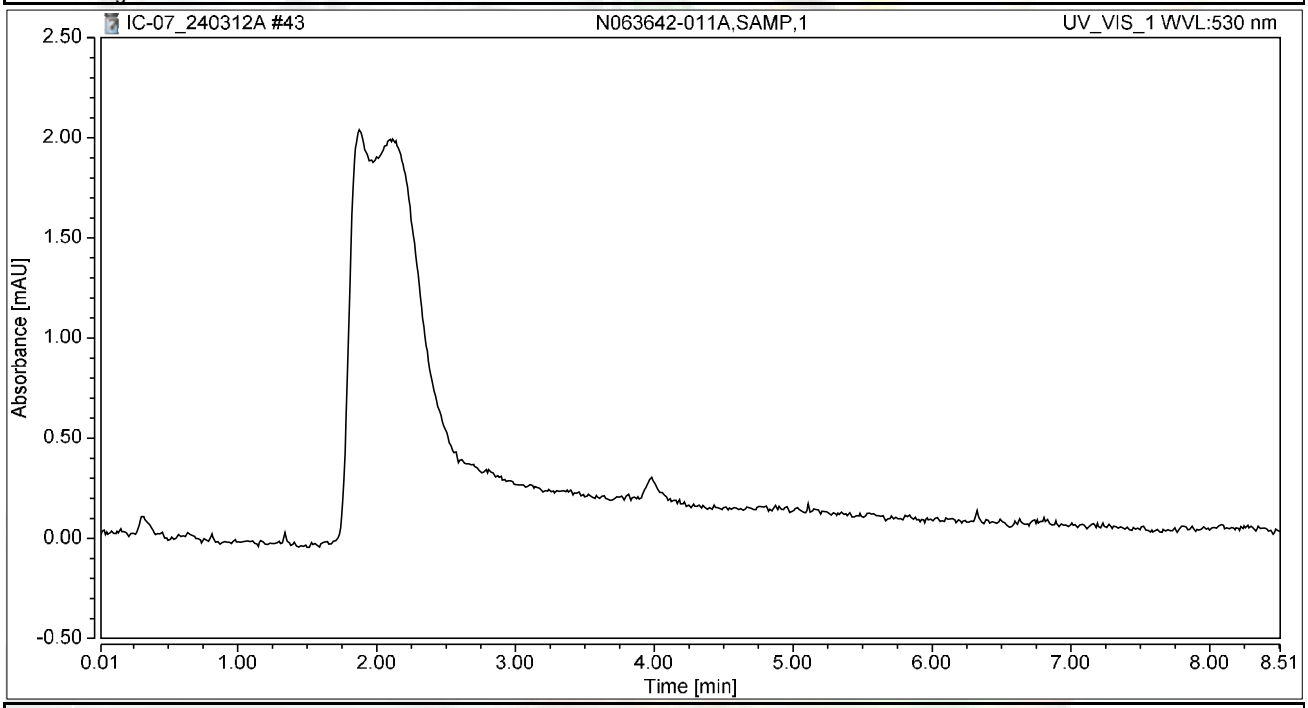
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-011A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 15:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

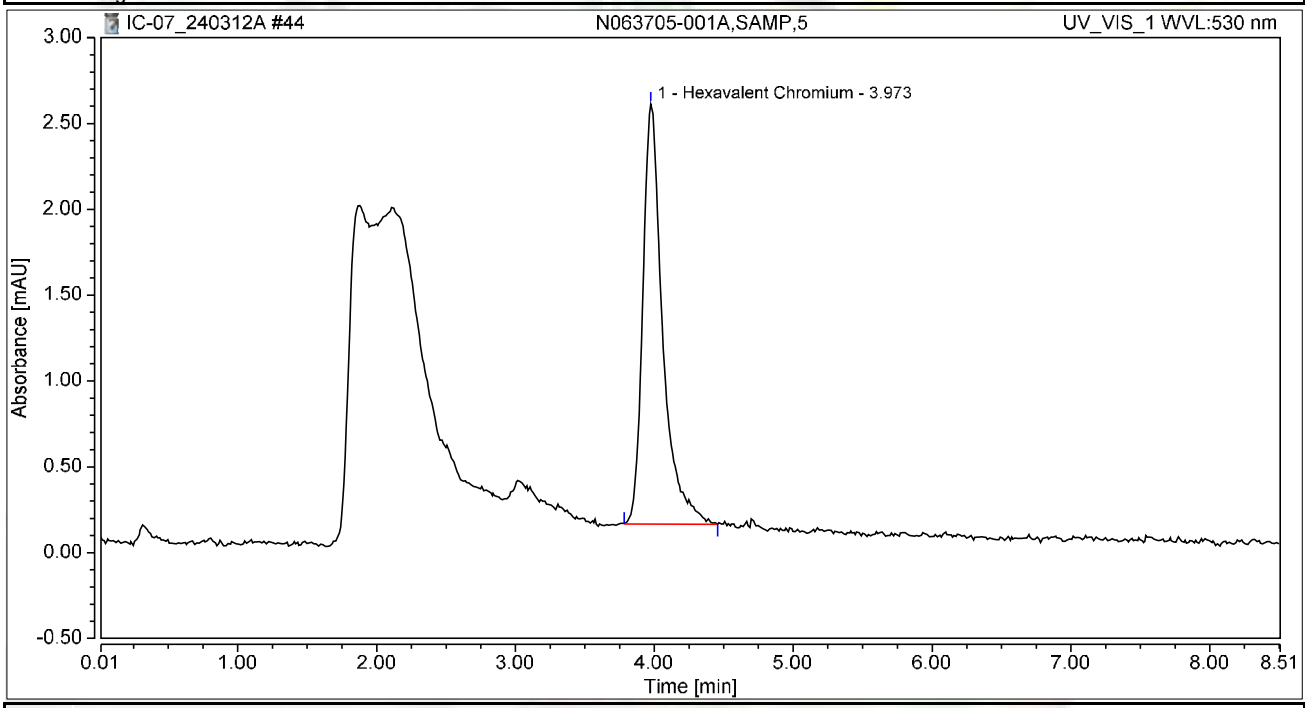
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-001A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 15:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

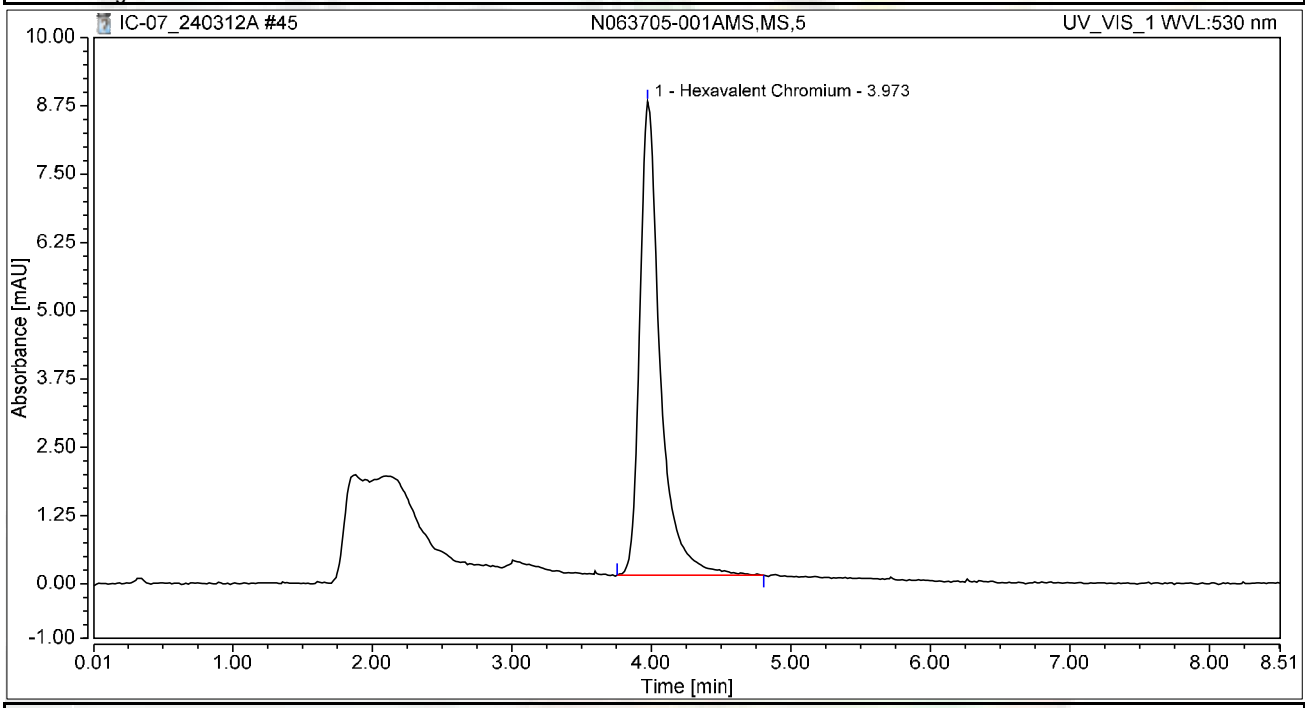
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.407	2.448	100.00	100.00	1.9130
Total:			**0.407**	**2.448**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063705-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 16:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

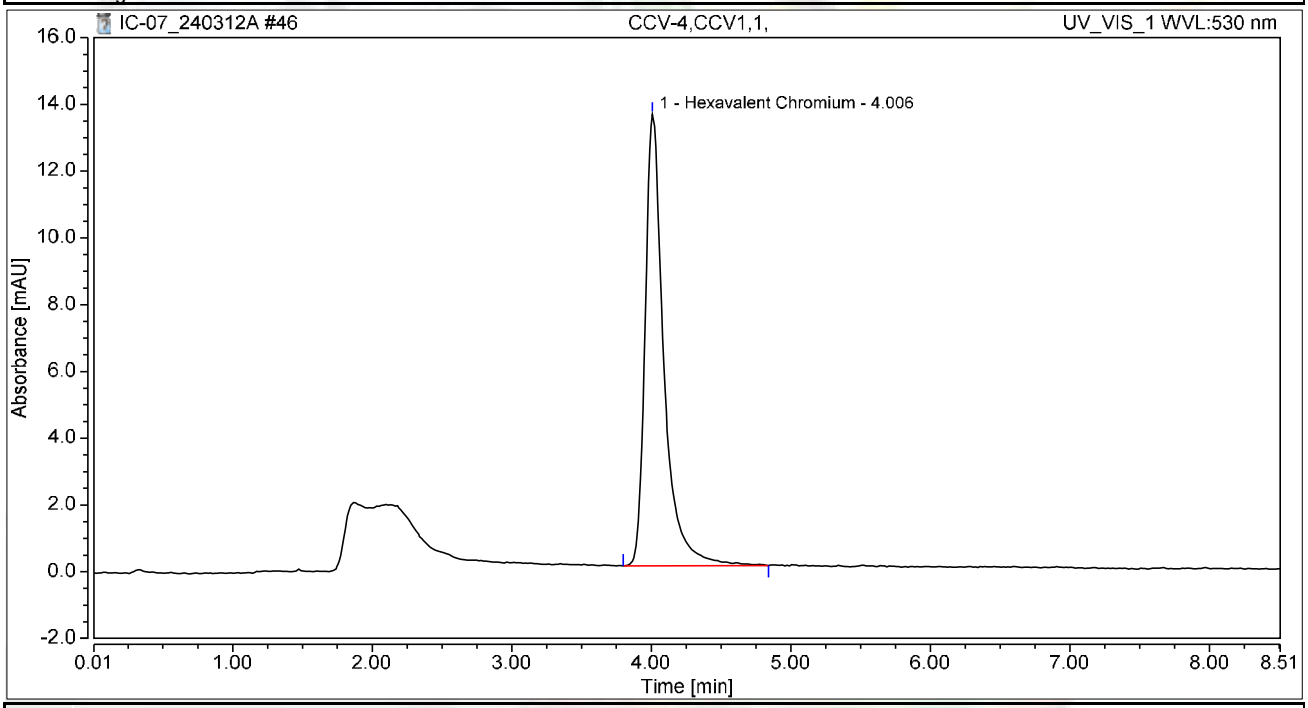
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	1.474	8.671	100.00	100.00	6.9244
Total:			**1.474**	**8.671**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 16:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

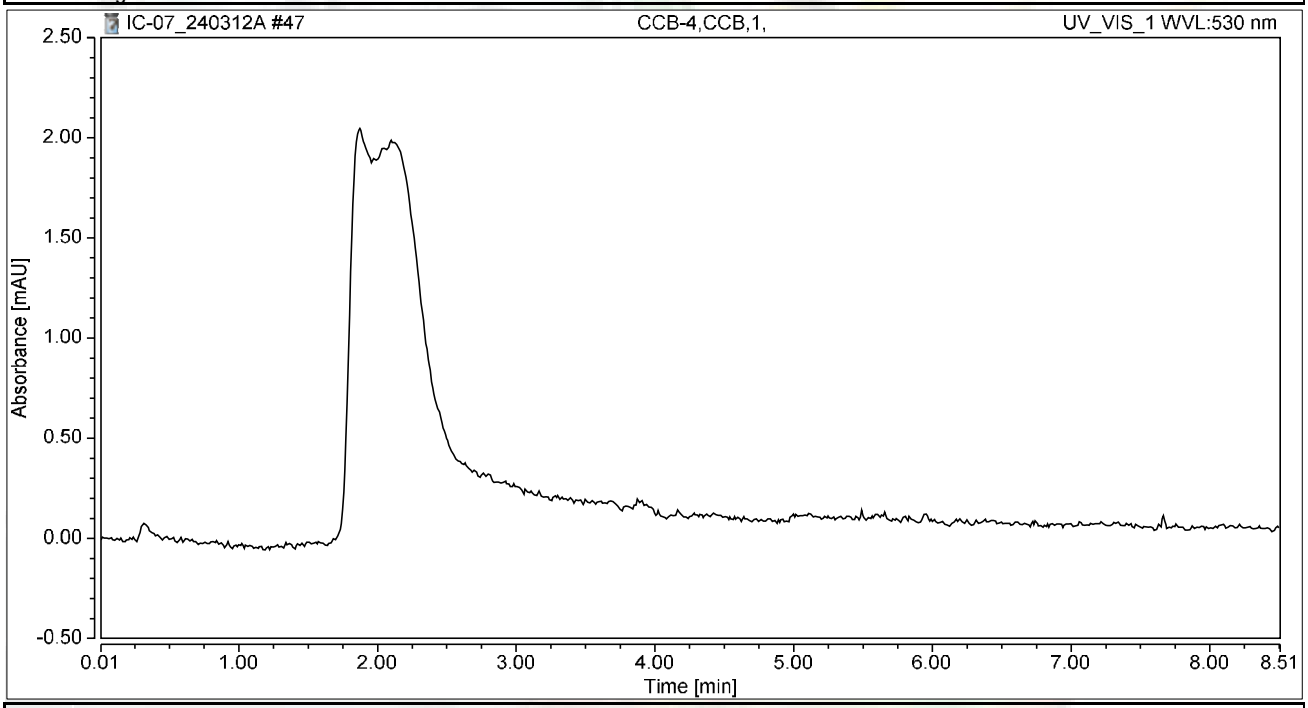
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	2.112	13.532	100.00	100.00	9.9232
Total:			**2.112**	**13.532**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 16:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

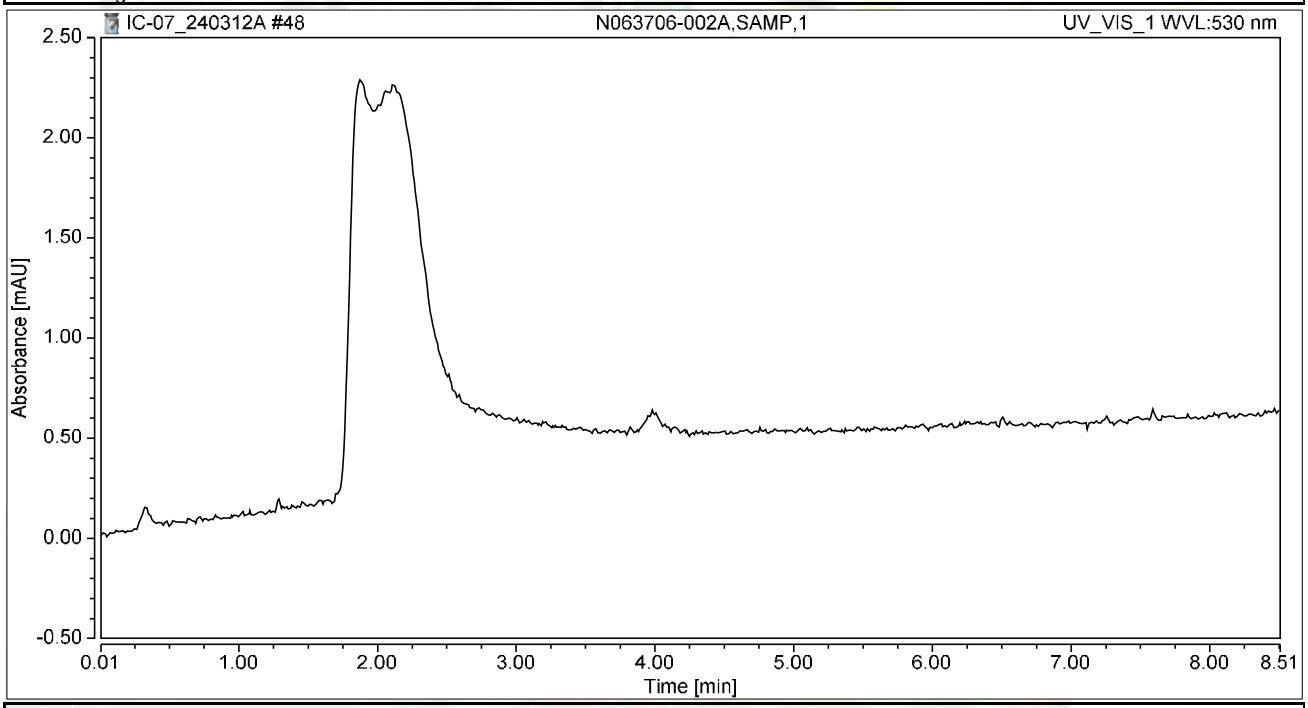
JRB 3/13/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063706-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 16:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

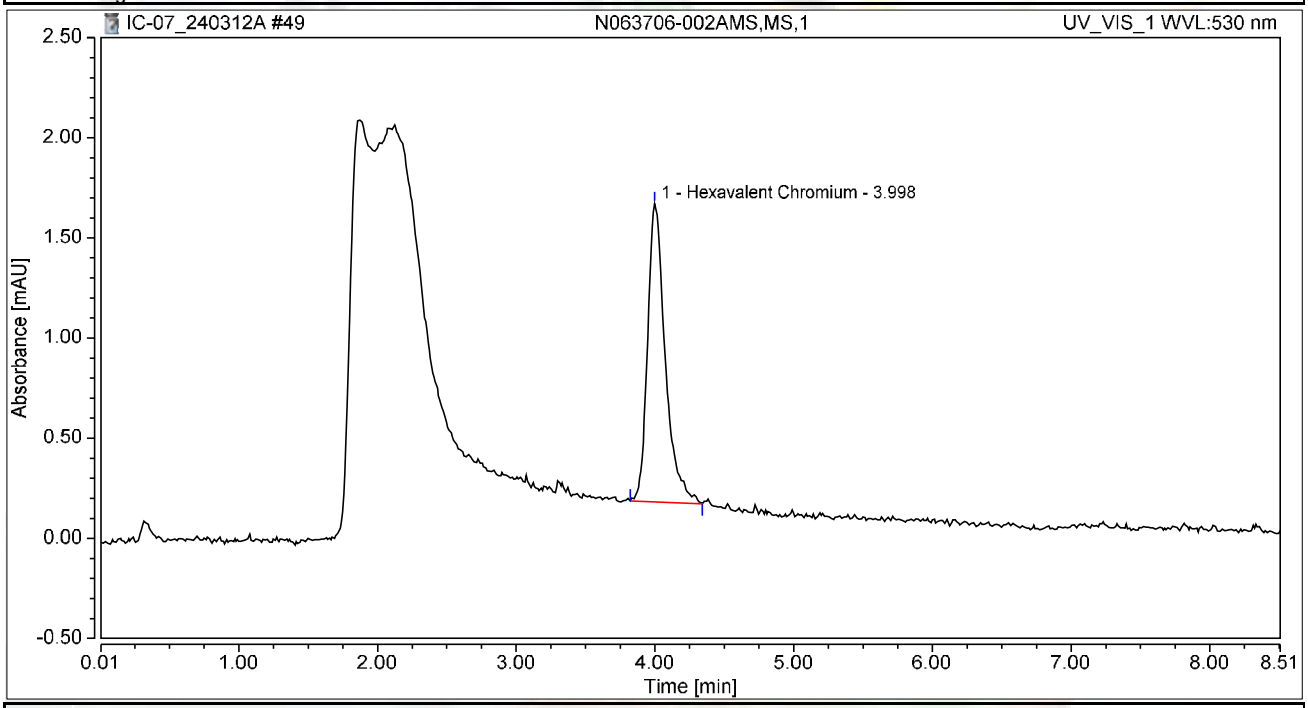
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063706-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 16:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

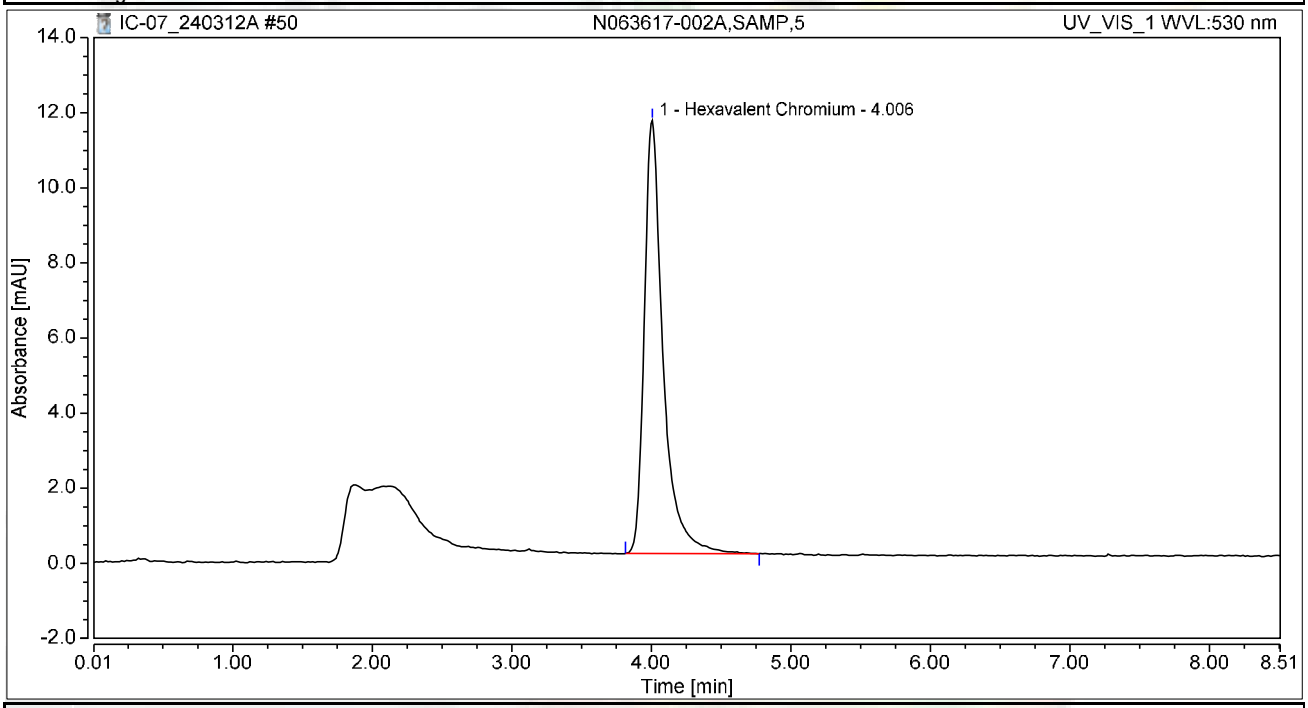
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.220	1.490	100.00	100.00	1.0347
Total:			**0.220**	**1.490**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 17:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

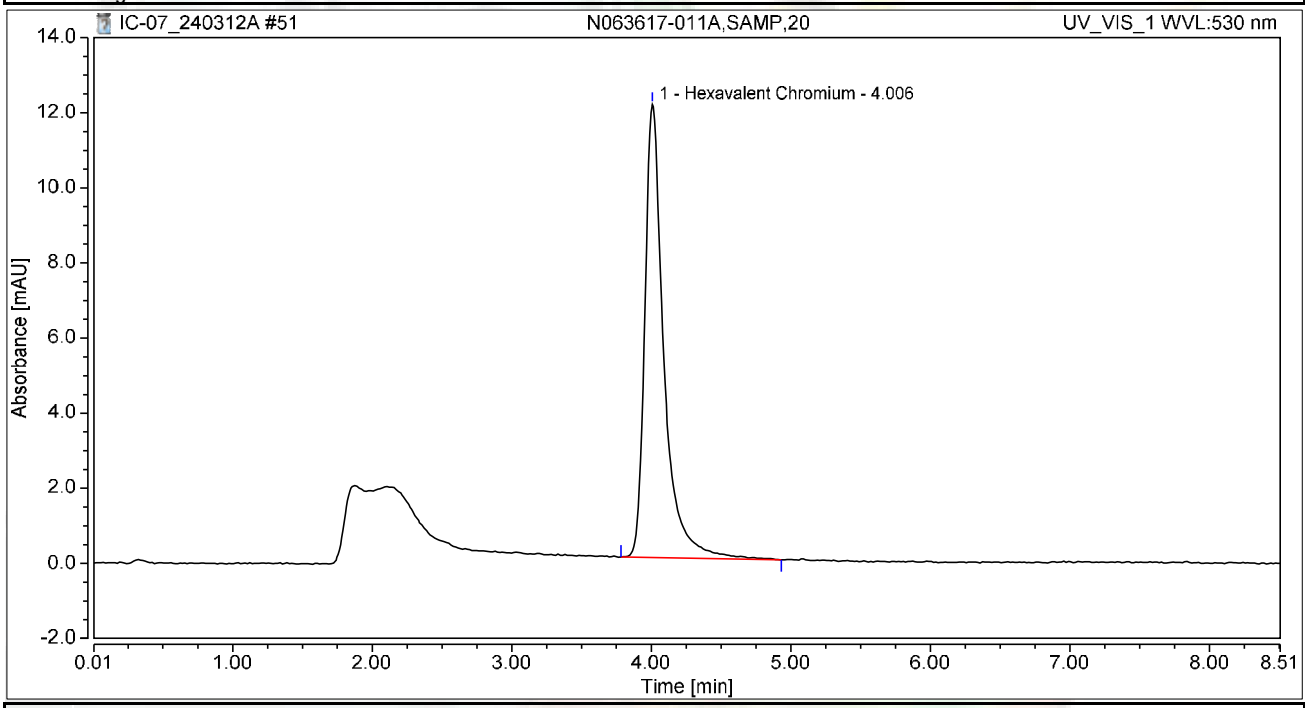
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.803	11.526	100.00	100.00	8.4714
Total:			**1.803**	**11.526**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-011A,SAMP,20**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 17:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

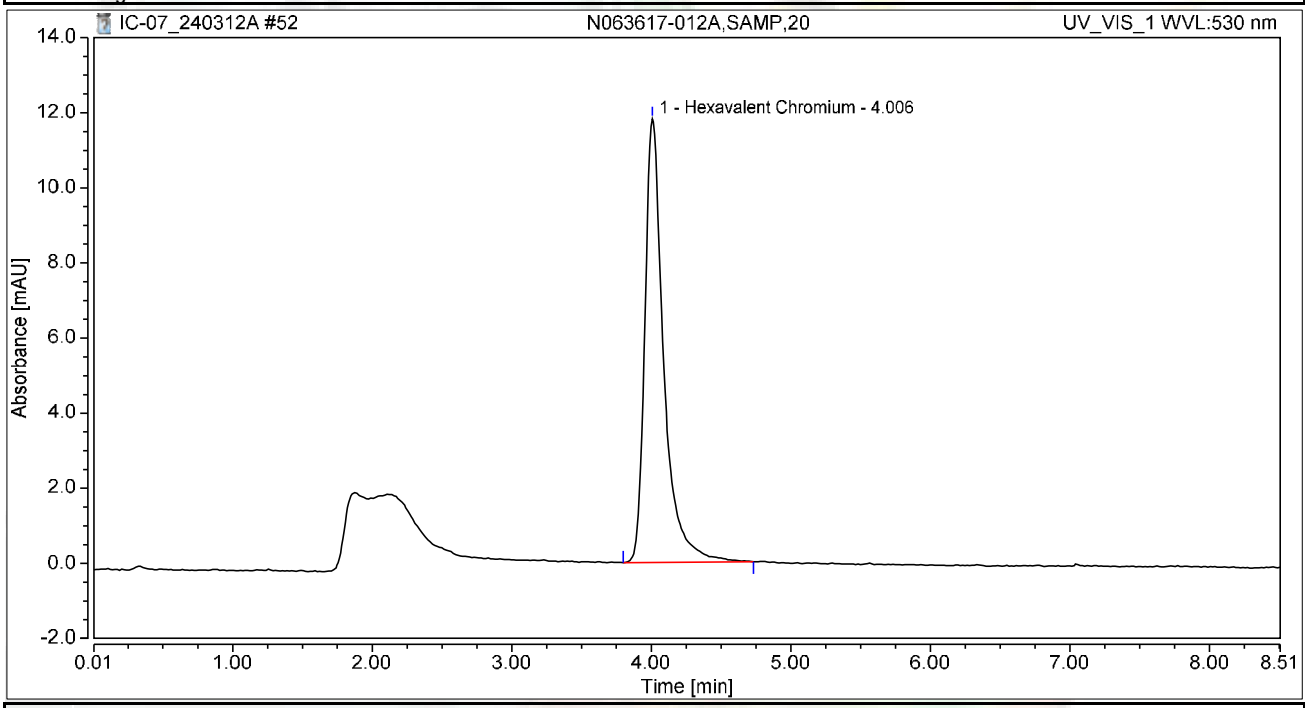
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.910	12.068	100.00	100.00	8.9719
Total:			**1.910**	**12.068**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-012A,SAMP,20**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 17:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

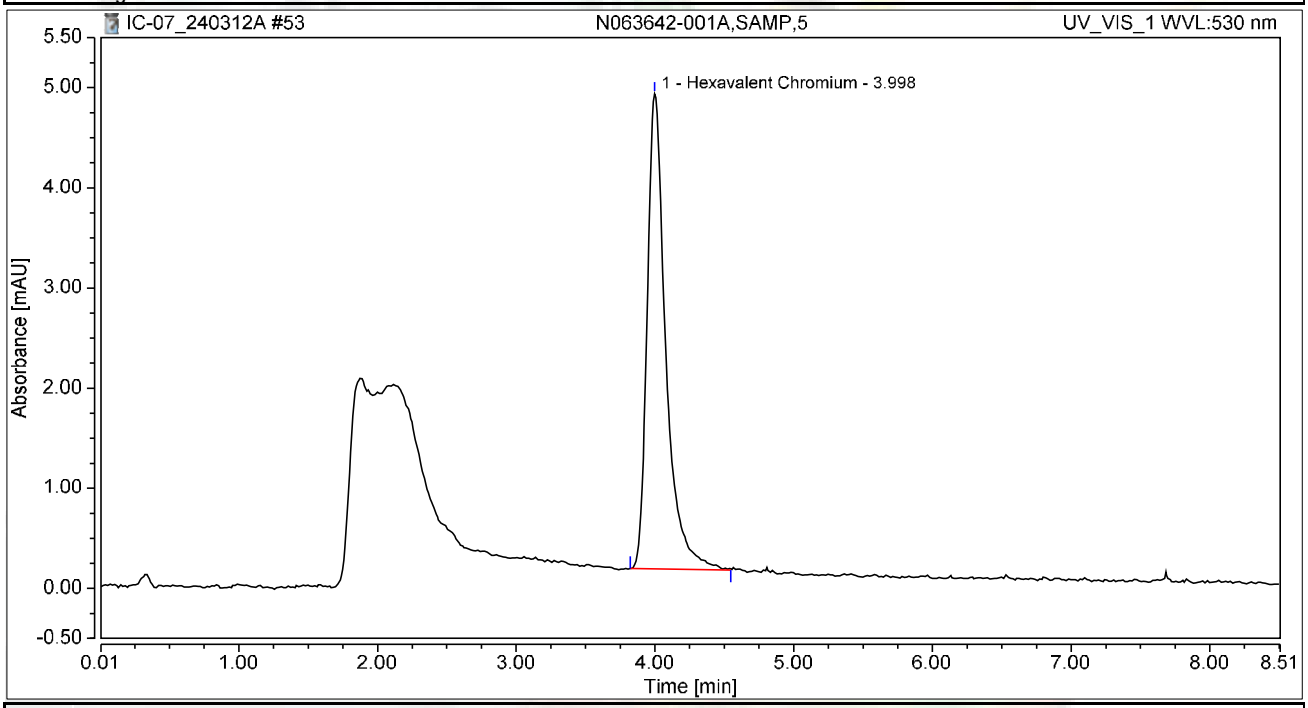
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.855	11.817	100.00	100.00	8.7145
Total:			**1.855**	**11.817**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 17:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

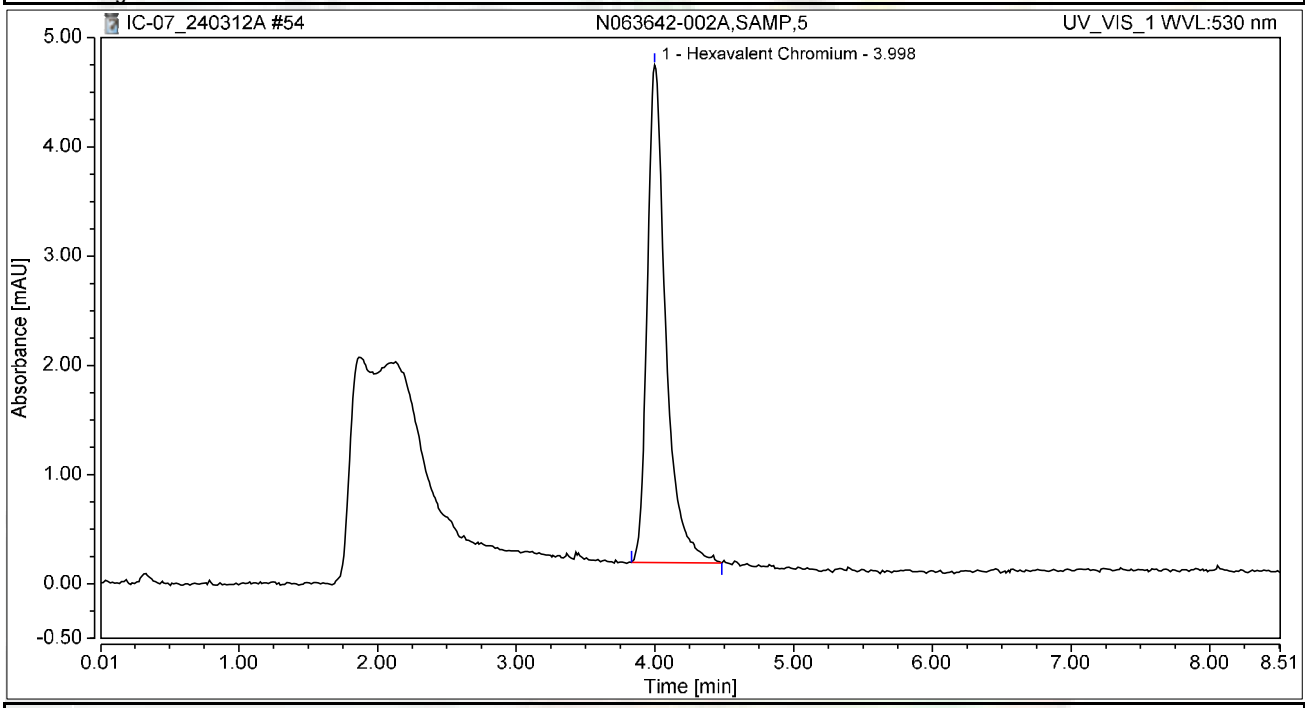
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.737	4.743	100.00	100.00	3.4606
Total:			**0.737**	**4.743**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 17:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

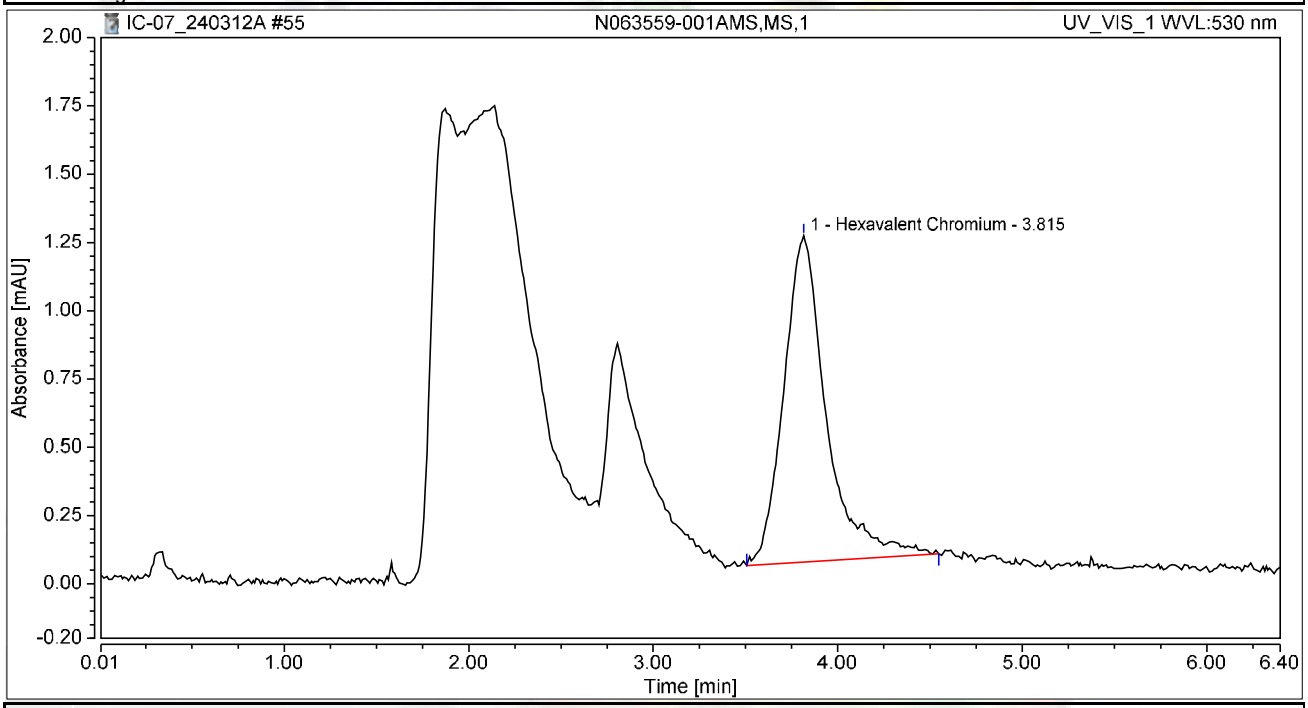
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.705	4.554	100.00	100.00	3.3146
Total:			**0.705**	**4.554**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-001AMS,MS,1**	*Run Time (min):*	**6.39**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 17:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	0.319	1.196	100.00	100.00	1.4982
Total:			**0.319**	**1.196**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-002AMS,MS,1**	*Run Time (min):*	**n.a.**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**n.a.**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 20:27**	*Sample Weight:*	**1.0000**

Chromatogram

Can't read channel UV_VIS_1 from injection #56 - N063559-002AMS,MS,1.
Channel is not available.

Integration Results

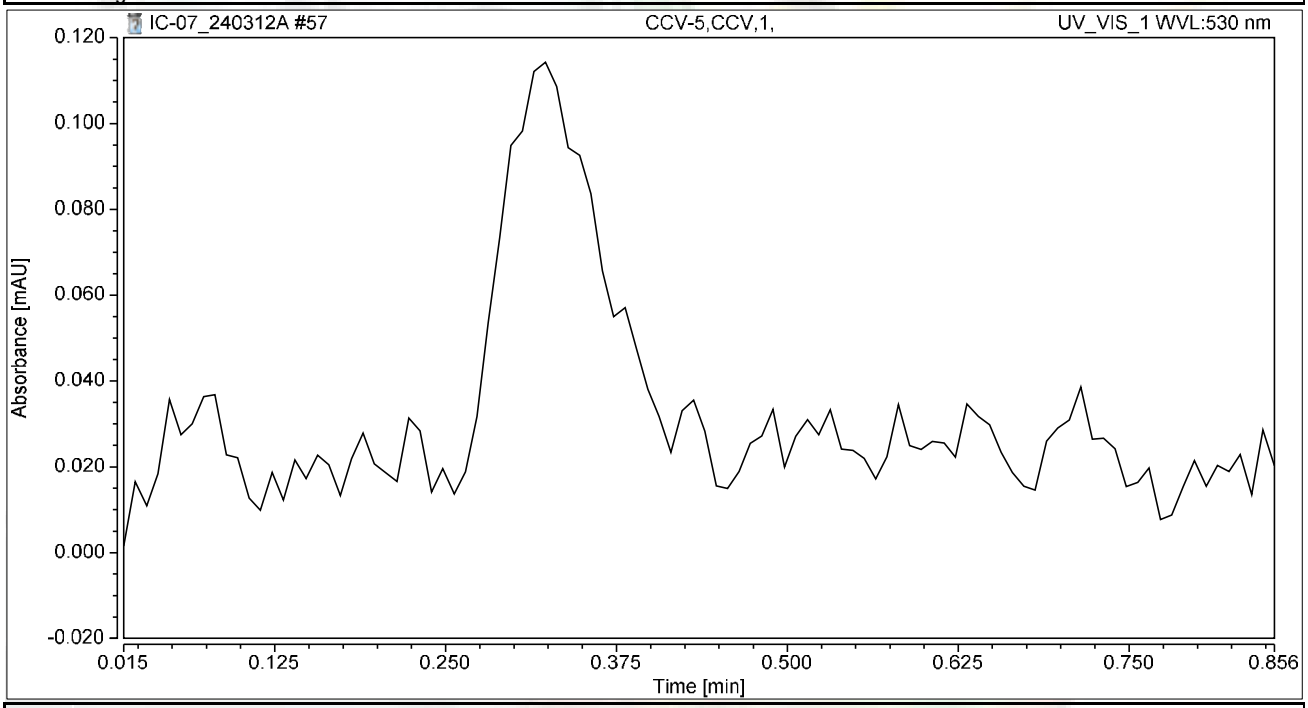
No.	Peak Name	Retention Time min	Area n.a.	Height n.a.	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**0.84**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 20:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

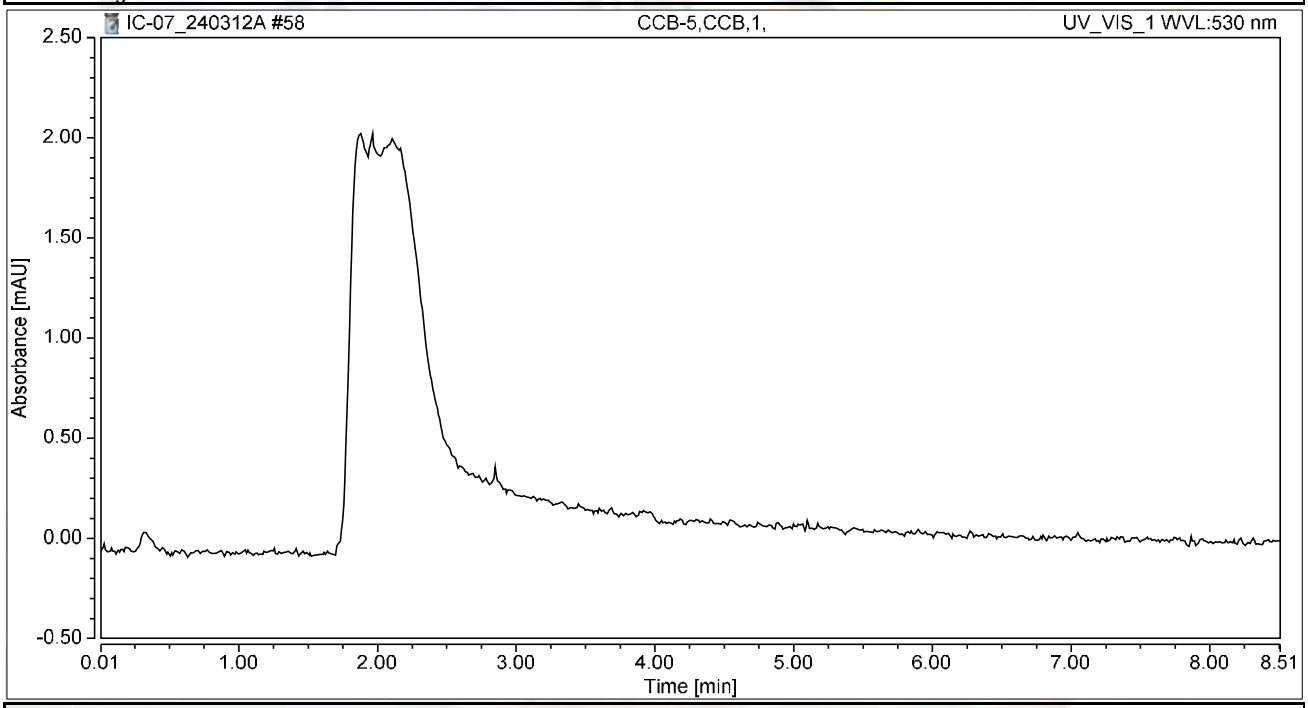
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 20:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

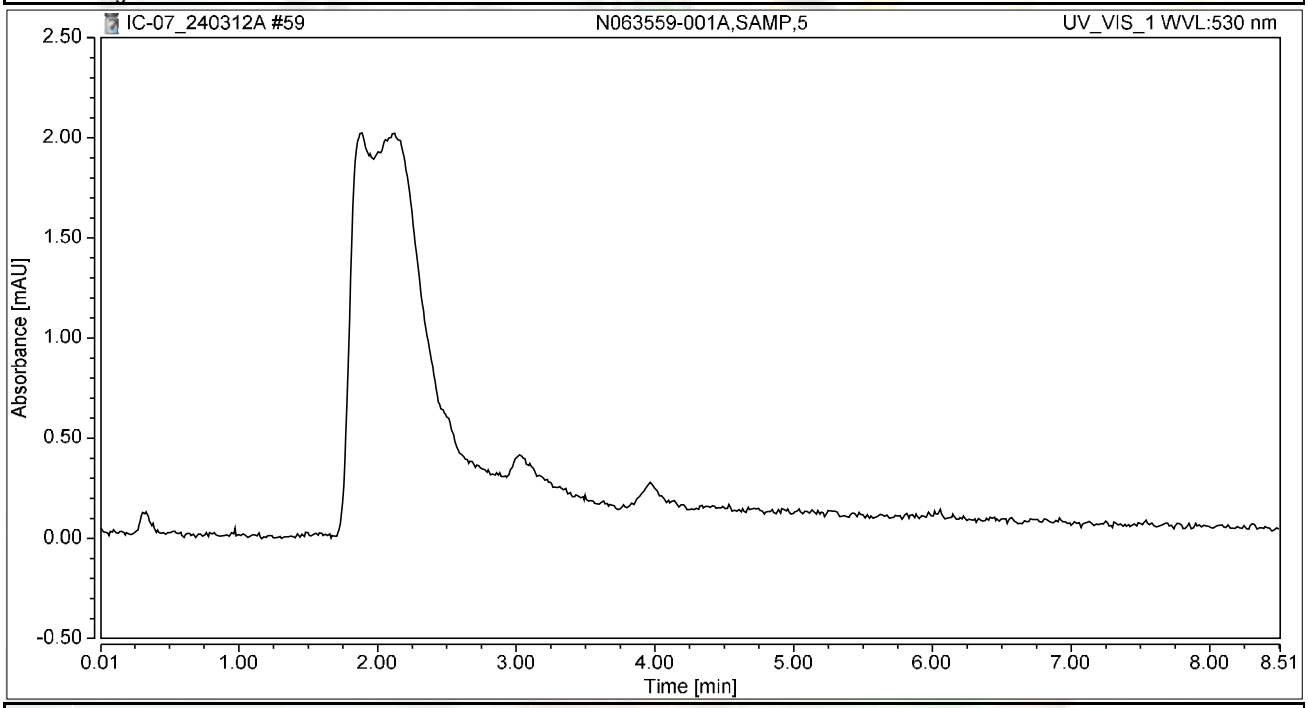
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 20:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

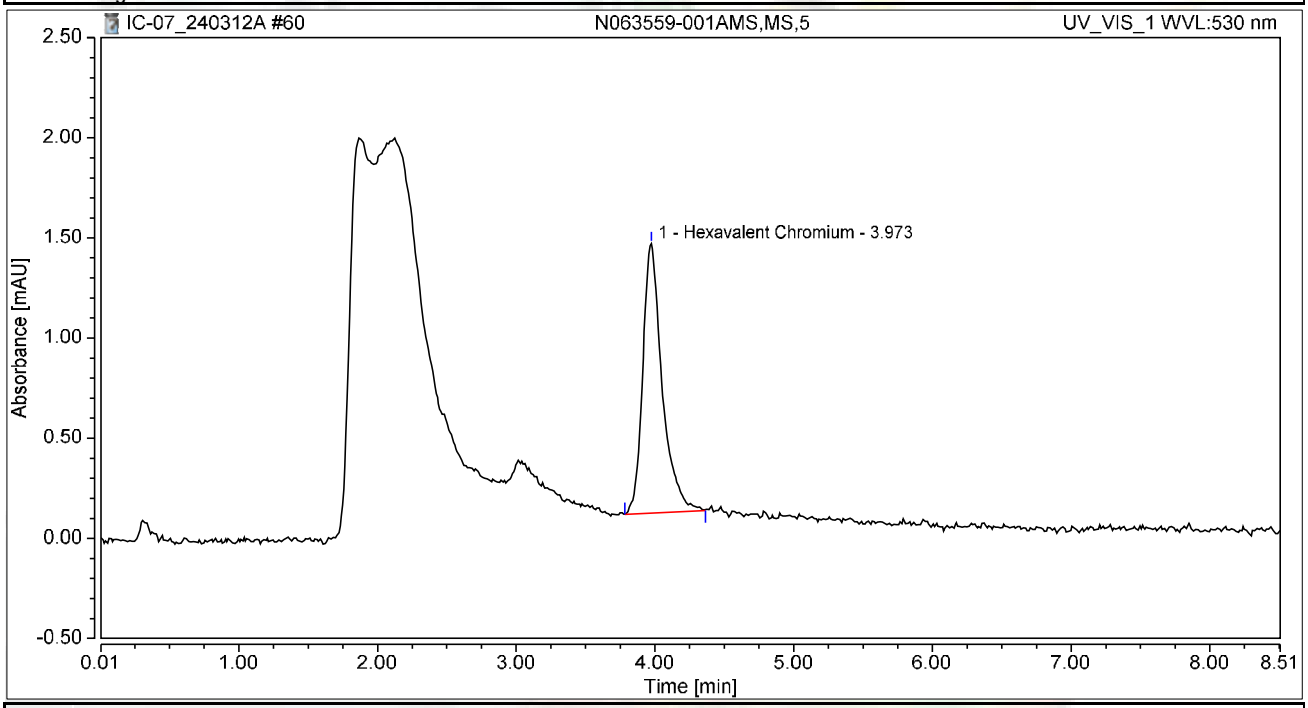
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 20:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

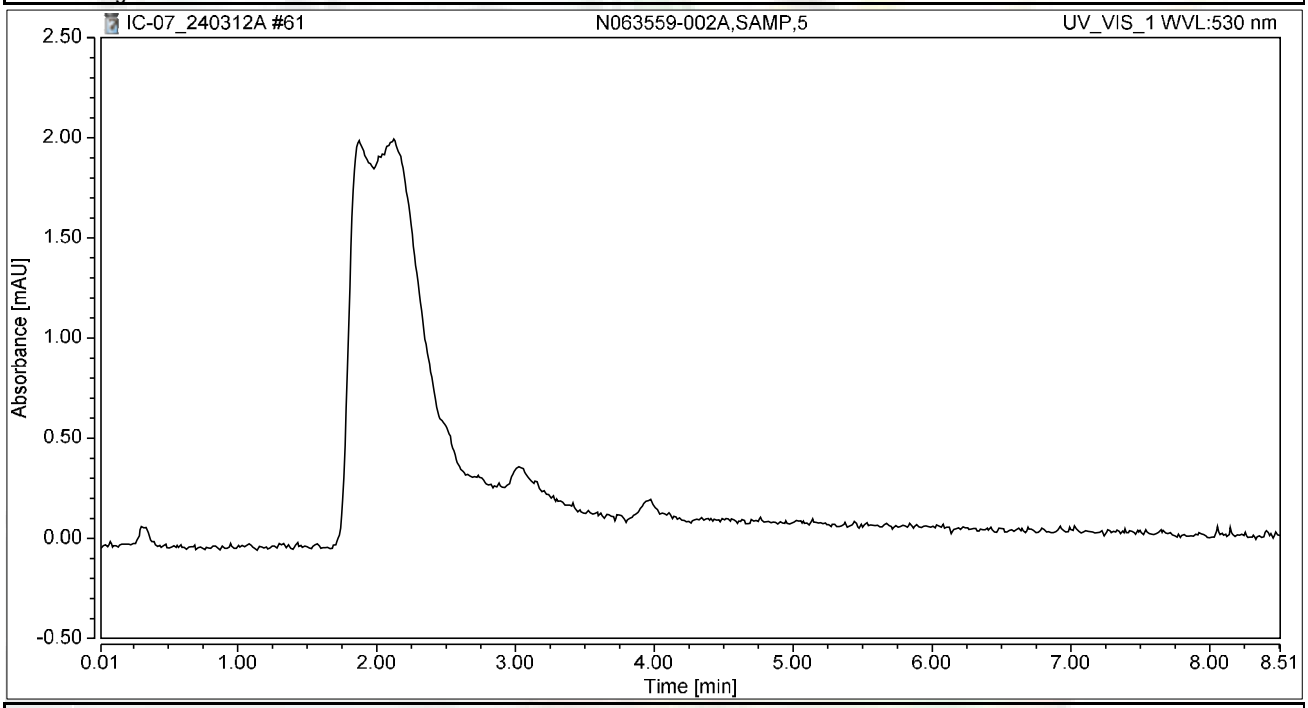
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.218	1.346	100.00	100.00	1.0239
Total:			**0.218**	**1.346**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-002A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 21:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

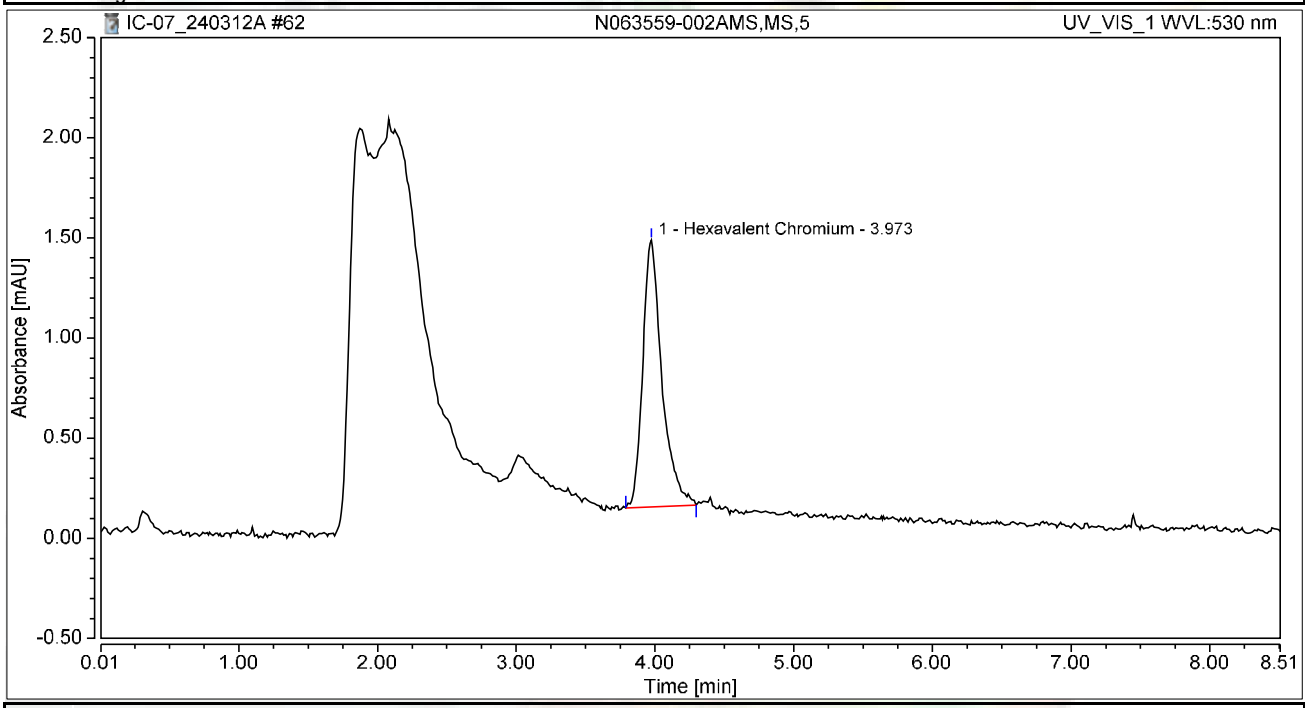
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 21:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

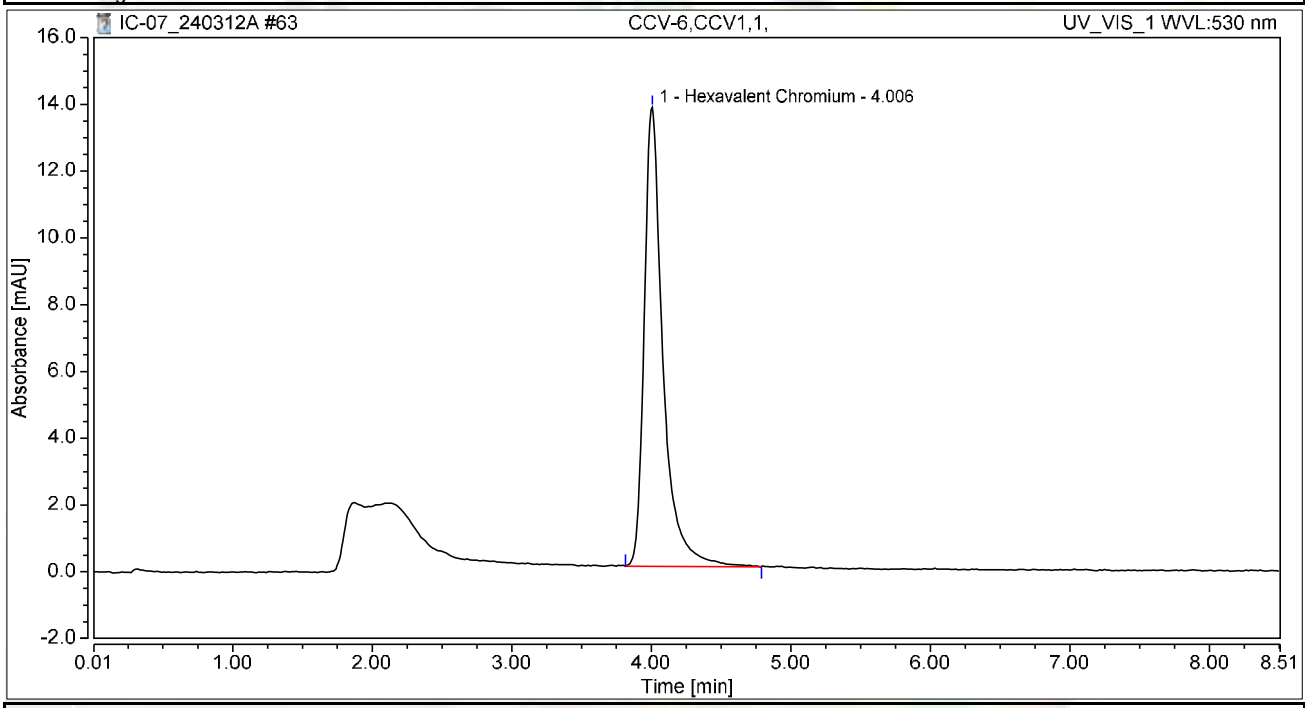
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.214	1.332	100.00	100.00	1.0035
Total:			**0.214**	**1.332**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 21:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

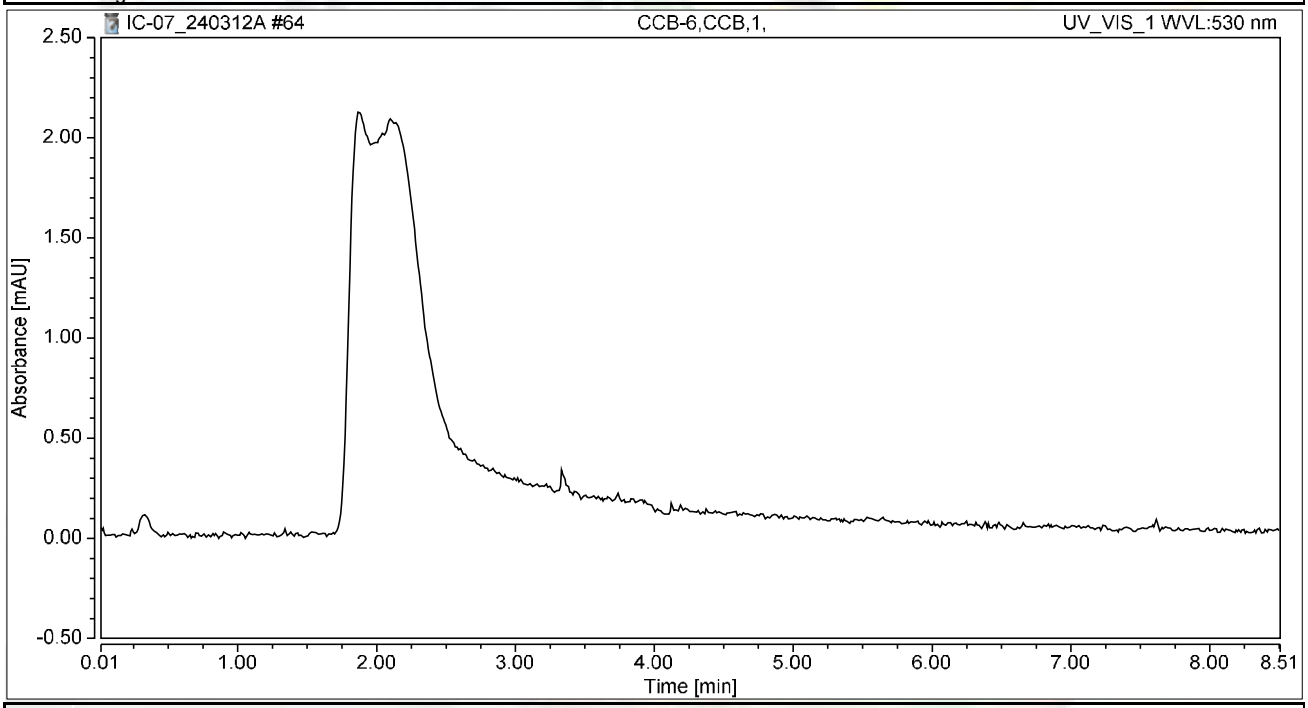
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	2.145	13.746	100.00	100.00	10.0767
Total:			**2.145**	**13.746**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 21:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

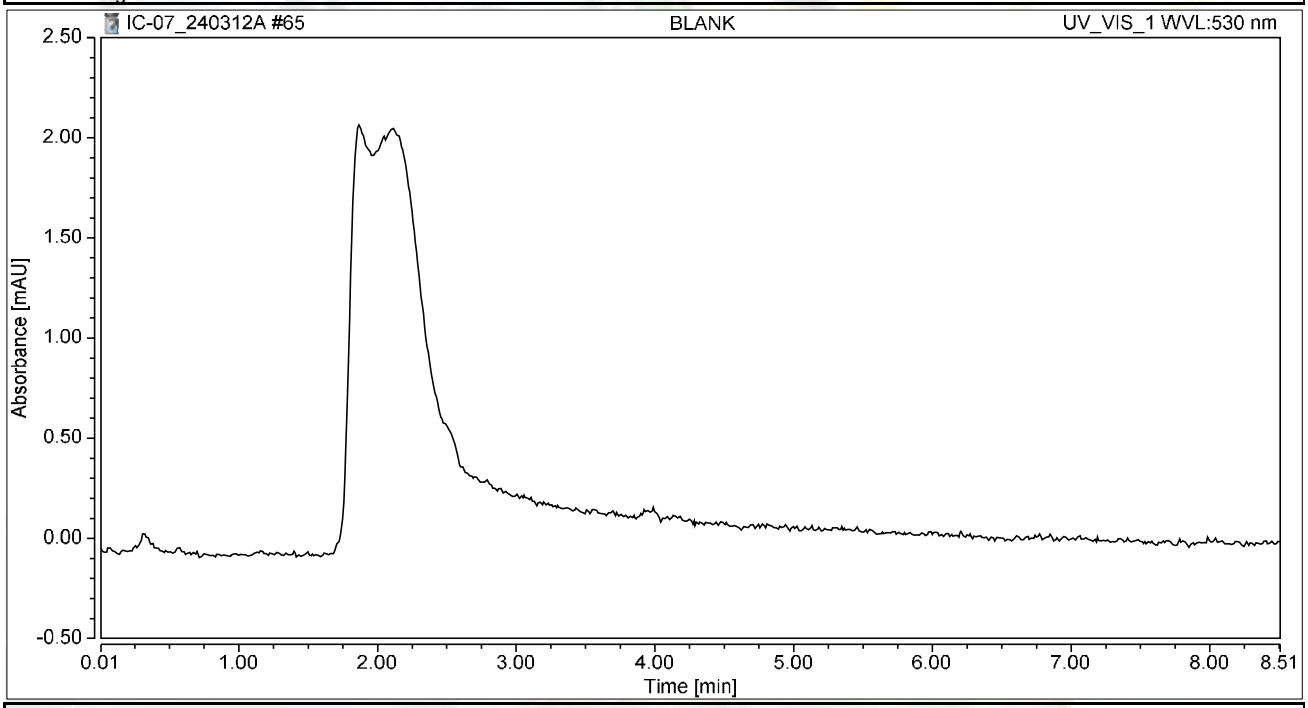
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**12/Mar/24 21:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240313A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/13/24 9:23 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/13/24 9:37 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/13/24 9:46 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/13/24 9:56 AM	Reported
13	MB-R183577	MBLK	1	Hexavalent Chromium	03/13/24 10:05 AM	Reported
14	LCS-R183577	LCS	1	Hexavalent Chromium	03/13/24 10:14 AM	Reported
15	N063562-001A	SAMP	1	Hexavalent Chromium	03/13/24 10:24 AM	Reported
16	N063618-001A	SAMP	1	Hexavalent Chromium	03/13/24 10:33 AM	Reported
17	N063562-001AMS	MS	1	Hexavalent Chromium	03/13/24 10:43 AM	Reported
18	N063618-001AMS	MS	1	Hexavalent Chromium	03/13/24 10:52 AM	Reported
19	N063736-001A	SAMP	1	Hexavalent Chromium	03/13/24 11:02 AM	Reported
20	N063736-002A	SAMP	5	Hexavalent Chromium	03/13/24 11:11 AM	Reported
21	N063736-003A	SAMP	10	Hexavalent Chromium	03/13/24 11:21 AM	Reported
22	N063736-004A	SAMP	20	Hexavalent Chromium	03/13/24 11:30 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/13/24 11:40 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/13/24 11:49 AM	Reported
25	N063562-001ADUP	DUP	1	Hexavalent Chromium	03/13/24 11:58 AM	Reported
26	N063736-001AMS	MS	1	Hexavalent Chromium	03/13/24 12:08 PM	Reported
27	N063736-002A	SAMP	1	Hexavalent Chromium	03/13/24 12:17 PM	Not Reported
28	N063736-002AMS	MS	1	Hexavalent Chromium	03/13/24 12:27 PM	Not Reported
29	N063736-004AMS	MS	20	Hexavalent Chromium	03/13/24 12:36 PM	Reported
30	N063736-004AMSD	MSD	20	Hexavalent Chromium	03/13/24 12:46 PM	Reported
31	N063736-003AMS	MS	10	Hexavalent Chromium	03/13/24 12:55 PM	Reported
32	N063736-005A	SAMP	1	Hexavalent Chromium	03/13/24 1:05 PM	Reported
33	N063736-005AMS	MS	1	Hexavalent Chromium	03/13/24 1:14 PM	Reported
34	CCV-3	CCV	1	Hexavalent Chromium	03/13/24 1:24 PM	Reported
35	CCB-3	CCB	1	Hexavalent Chromium	03/13/24 1:33 PM	Reported
36	N063736-002AMS	MS	5	Hexavalent Chromium	03/13/24 1:43 PM	Reported
37	N063736-001A	SAMP	5	Hexavalent Chromium	03/13/24 1:52 PM	Not Reported
38	N063736-001AMS	MS	5	Hexavalent Chromium	03/13/24 2:01 PM	Not Reported
39	N063642-003A	SAMP	1	Hexavalent Chromium	03/13/24 2:11 PM	Reported
40	N063559-002A	SAMP	1	Hexavalent Chromium	03/13/24 2:20 PM	Not Reported
41	N063559-001AMS	MS	1	Hexavalent Chromium	03/13/24 2:30 PM	Reported
42	N063559-002AMS	MS	1	Hexavalent Chromium	03/13/24 2:39 PM	Not Reported

INJECTION LOG: 240313A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063617-002A	SAMP	5	Hexavalent Chromium	03/13/24 2:49 PM	Reported
44	N063617-011A	SAMP	20	Hexavalent Chromium	03/13/24 2:58 PM	Reported
45	N063617-012A	SAMP	20	Hexavalent Chromium	03/13/24 3:26 PM	Reported
46	CCV-4	CCV1	1	Hexavalent Chromium	03/13/24 3:39 PM	Reported
47	CCB-4	CCB	1	Hexavalent Chromium	03/13/24 3:48 PM	Reported
48	N063706-002A	SAMP	1	Hexavalent Chromium	03/13/24 3:58 PM	Reported
49	N063706-002AMS	MS	1	Hexavalent Chromium	03/13/24 4:07 PM	Reported
50	N063642-001A	SAMP	5	Hexavalent Chromium	03/13/24 4:17 PM	Reported
51	N063642-002A	SAMP	5	Hexavalent Chromium	03/13/24 4:26 PM	Reported
52	N063559-001A	SAMP	5	Hexavalent Chromium	03/13/24 4:36 PM	Not Reported
53	N063559-001AMS	MS	5	Hexavalent Chromium	03/13/24 4:45 PM	Not Reported
54	N063559-002A	SAMP	5	Hexavalent Chromium	03/13/24 4:54 PM	Reported
55	N063559-002AMS	MS	5	Hexavalent Chromium	03/13/24 5:04 PM	Reported
56	N063559-001A	SAMP	1	Hexavalent Chromium	03/13/24 5:13 PM	Reported
57	CCV-5	CCV	1	Hexavalent Chromium	03/13/24 5:23 PM	Reported
58	CCB-5	CCB	1	Hexavalent Chromium	03/13/24 5:32 PM	Reported
59	N063735-001A	SAMP	1	Hexavalent Chromium	03/13/24 5:42 PM	Not Reported
60	N063735-001AMS	MS	1	Hexavalent Chromium	03/13/24 5:51 PM	Not Reported
61	N063735-003A	SAMP	1	Hexavalent Chromium	03/13/24 6:01 PM	Not Reported
62	N063735-003AMS	MS	1	Hexavalent Chromium	03/13/24 6:10 PM	Not Reported
63	N063735-008A	SAMP	1	Hexavalent Chromium	03/13/24 6:20 PM	Not Reported
64	N063735-008AMS	MS	1	Hexavalent Chromium	03/13/24 6:29 PM	Not Reported
65	N063735-014A	SAMP	1	Hexavalent Chromium	03/13/24 6:39 PM	Not Reported
66	N063735-014AMS	MS	1	Hexavalent Chromium	03/13/24 6:48 PM	Not Reported
67	MB-2	MBLK	1	Hexavalent Chromium	03/13/24 6:57 PM	Not Reported
68	LCS-2	LCS	1	Hexavalent Chromium	03/13/24 7:07 PM	Not Reported
69	CCV-6	CCV1	1	Hexavalent Chromium	03/13/24 7:16 PM	Not Reported
70	CCB-6	CCB	1	Hexavalent Chromium	03/13/24 7:26 PM	Not Reported
71	N063295-002A	SAMP	5	Hexavalent Chromium	03/13/24 7:35 PM	Not Reported
72	N063295-002AMS	MS	5	Hexavalent Chromium	03/13/24 7:45 PM	Not Reported
73	N063295-003A	SAMP	5	Hexavalent Chromium	03/13/24 7:54 PM	Not Reported
74	N063295-003AMS	MS	5	Hexavalent Chromium	03/13/24 8:04 PM	Not Reported
75	N063562-001A	SAMP	1	Hexavalent Chromium	03/13/24 8:13 PM	Not Reported
76	N063562-001AMS	MS	1	Hexavalent Chromium	03/13/24 8:23 PM	Not Reported
77	N063617-007A	SAMP	1	Hexavalent Chromium	03/13/24 8:32 PM	Not Reported
78	N063617-007AMS	MS	1	Hexavalent Chromium	03/13/24 8:42 PM	Not Reported
79	N063617-013A	SAMP	1	Hexavalent Chromium	03/13/24 8:51 PM	Not Reported
80	N063617-013AMS	MS	1	Hexavalent Chromium	03/13/24 9:00 PM	Not Reported
81	CCV-7	CCV	1	Hexavalent Chromium	03/13/24 9:10 PM	Not Reported
82	CCB-7	CCB	1	Hexavalent Chromium	03/13/24 9:19 PM	Not Reported
83	N063642-003A	SAMP	1	Hexavalent Chromium	03/13/24 9:29 PM	Not Reported
84	N063642-003AMS	MS	1	Hexavalent Chromium	03/13/24 9:38 PM	Not Reported

INJECTION LOG: 240313A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063642-004A	SAMP	1	Hexavalent Chromium	03/13/24 9:48 PM	Not Reported
86	N063642-004AMS	MS	1	Hexavalent Chromium	03/13/24 9:57 PM	Not Reported
87	N063642-007A	SAMP	1	Hexavalent Chromium	03/13/24 10:07 PM	Not Reported
88	N063642-007AMS	MS	1	Hexavalent Chromium	03/13/24 10:16 PM	Not Reported
89	CCV-8	CCV1	1	Hexavalent Chromium	03/13/24 10:26 PM	Not Reported
90	CCB-8	CCB	1	Hexavalent Chromium	03/13/24 10:35 PM	Not Reported
91	BLANK	BLANK	1	Hexavalent Chromium	03/13/24 10:44 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240313A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**13/Mar/24 23:15:14**
No. of Injections:	**94**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/13/2024 09:23	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/13/2024 09:37	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/13/2024 09:46	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/13/2024 09:56	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/13/2024 10:05	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/13/2024 10:14	Finished	LCS @5ppb, IWST-231228B
15	N063562-001A,SAMF	7	1000	Unknown		03/13/2024 10:24	Finished	SAMP,10 mL
16	N063618-001A,SAMF	8	1000	Unknown		03/13/2024 10:33	Finished	SAMP,10 mL
17	N063562-001AMS,MS	9	1000	Unknown		03/13/2024 10:43	Finished	MS (1ppb), IWST-231228B,10r
18	N063618-001AMS,MS	10	1000	Unknown		03/13/2024 10:52	Finished	MS (1ppb), IWST-231228B,10r
19	N063736-001A,SAMF	11	1000	Unknown		03/13/2024 11:02	Finished	SAMP,10 mL
20	N063736-002A,SAMF	12	1000	Unknown		03/13/2024 11:11	Finished	SAMP,2>10 mL
21	N063736-003A,SAMF	13	1000	Unknown		03/13/2024 11:21	Finished	SAMP,1>10 mL
22	N063736-004A,SAMF	14	1000	Unknown		03/13/2024 11:30	Finished	SAMP,0.5>10 mL
23	CCV-2,CCV1,1,	15	1000	Unknown		03/13/2024 11:40	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		03/13/2024 11:49	Finished	CCB R240129C
25	N063562-001ADUP,D	17	1000	Unknown		03/13/2024 11:58	Finished	DUP,10 mL
26	N063736-001AMS,MS	18	1000	Unknown		03/13/2024 12:08	Finished	MS (5ppb), IWST-231228B,10r
27	N063736-002A,SAMF	19	1000	Unknown		03/13/2024 12:17	Finished	SAMP,10 mL
28	N063736-002AMS,MS	20	1000	Unknown		03/13/2024 12:27	Finished	MS (1ppb), IWST-231228B,10r
29	N063736-004AMS,MS	21	1000	Unknown		03/13/2024 12:36	Finished	MS (5ppb), IWST-231228B,0.5
30	N063736-004AMSD,M	22	1000	Unknown		03/13/2024 12:46	Finished	MSD (5ppb), IWST-231228B,0.
31	N063736-003AMS,MS	23	1000	Unknown		03/13/2024 12:55	Finished	MS (5ppb), IWST-231228B,1>1
32	N063736-005A,SAMF	24	1000	Unknown		03/13/2024 13:05	Finished	SAMP,10 mL
33	N063736-005AMS,MS	25	1000	Unknown		03/13/2024 13:14	Finished	MS (1ppb), IWST-231228B,10r
34	CCV-3,CCV,1,	26	1000	Unknown		03/13/2024 13:24	Finished	CCV @10ppb, IWST-231228A
35	CCB-3,CCB,1,	27	1000	Unknown		03/13/2024 13:33	Finished	CCB R240129C
36	N063736-002AMS,MS	28	1000	Unknown		03/13/2024 13:43	Finished	MS (1ppb), IWST-231228B,2>1
37	N063736-001A,SAMF	29	1000	Unknown		03/13/2024 13:52	Finished	SAMP,2>10 mL
38	N063736-001AMS,MS	30	1000	Unknown		03/13/2024 14:01	Finished	MS (1ppb), IWST-231228B,2>1
39	N063642-003A,SAMF	31	1000	Unknown		03/13/2024 14:11	Finished	SAMP,10 mL
40	N063559-002A,SAMF	32	1000	Unknown		03/13/2024 14:20	Finished	SAMP,10 mL
41	N063559-001AMS,MS	33	1000	Unknown		03/13/2024 14:30	Finished	MS (1ppb), IWST-231228B,10r
42	N063559-002AMS,MS	34	1000	Unknown		03/13/2024 14:39	Finished	MS (1ppb), IWST-231228B,10r
43	N063617-002A,SAMF	35	1000	Unknown		03/13/2024 14:49	Finished	SAMP,2>10 mL
44	N063617-011A,SAMF	36	1000	Unknown		03/13/2024 14:58	Finished	SAMP,0.5>10 mL
45	N063617-012A,SAMF	1	1000	Unknown		03/13/2024 15:26	Finished	SAMP,0.5>10 mL
46	CCV-4,CCV1,1,	2	1000	Unknown		03/13/2024 15:39	Finished	CCV @10ppb, IWST-231228A
47	CCB-4,CCB,1,	3	1000	Unknown		03/13/2024 15:48	Finished	CCB R240129C
48	N063706-002A,SAMF	4	1000	Unknown		03/13/2024 15:58	Finished	SAMP,10 mL
49	N063706-002AMS,MS	5	1000	Unknown		03/13/2024 16:07	Finished	MS (1ppb), IWST-231228B,10r
50	N063642-001A,SAMF	6	1000	Unknown		03/13/2024 16:17	Finished	SAMP,2>10 mL
51	N063642-002A,SAMF	7	1000	Unknown		03/13/2024 16:26	Finished	SAMP,2>10 mL
52	N063559-001A,SAMF	8	1000	Unknown		03/13/2024 16:36	Finished	SAMP,2>10 mL
53	N063559-001AMS,MS	9	1000	Unknown		03/13/2024 16:45	Finished	MS (1ppb), IWST-231228B,2>1
54	N063559-002A,SAMF	10	1000	Unknown		03/13/2024 16:54	Finished	SAMP,2>10 mL
55	N063559-002AMS,MS	11	1000	Unknown		03/13/2024 17:04	Finished	MS (1ppb), IWST-231228B,2>1
56	N063559-001A,SAMF	12	1000	Unknown		03/13/2024 17:13	Finished	SAMP,10 mL
57	CCV-5,CCV,1,	13	1000	Unknown		03/13/2024 17:23	Finished	CCV @5ppb, IWST-231228A
58	CCB-5,CCB,1,	14	1000	Unknown		03/13/2024 17:32	Finished	CCB R240129C
59	N063735-001A,SAMF	15	1000	Unknown		03/13/2024 17:42	Finished	SAMP,10 mL
60	N063735-001AMS,MS	16	1000	Unknown		03/13/2024 17:51	Finished	MS (1ppb), IWST-231228B,10r

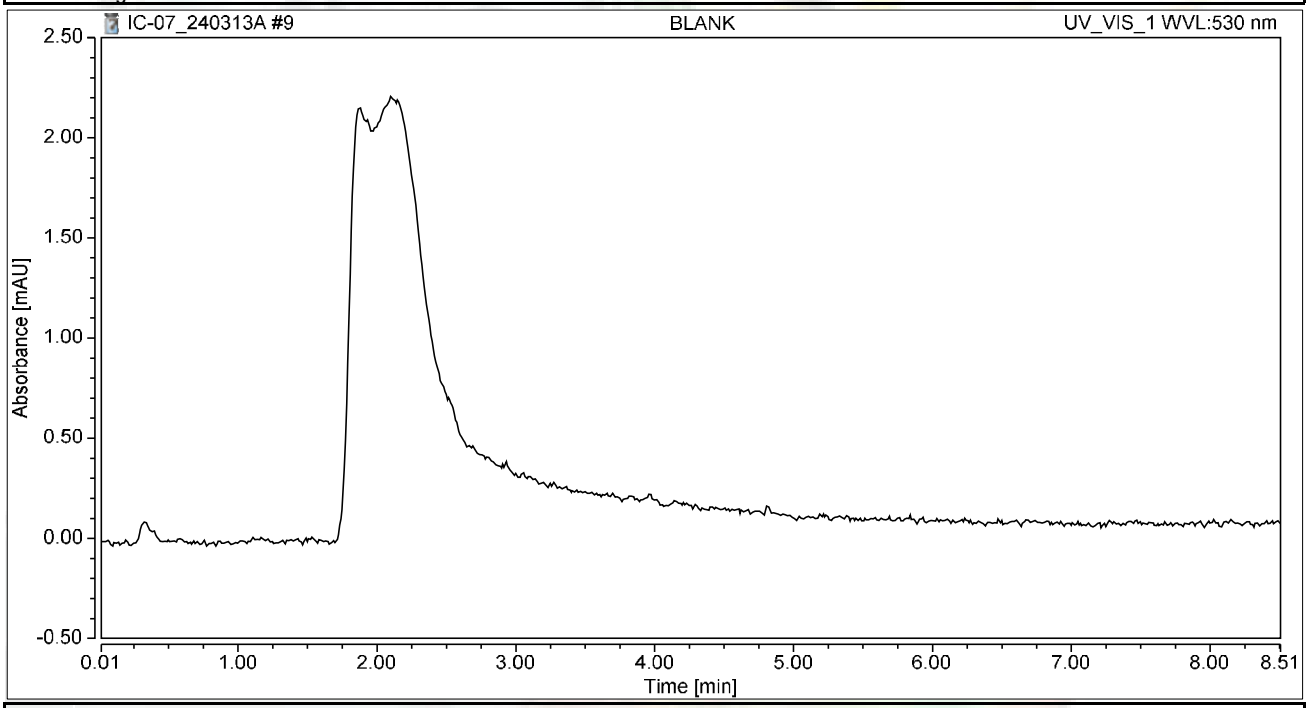
61	N063735-003A,SAMP	17	1000	Unknown		03/13/2024 18:01	Finished	SAMP,10 mL
62	N063735-003AMS,MS	18	1000	Unknown		03/13/2024 18:10	Finished	MS (1ppb), IWST-231228B,10r
63	N063735-008A,SAMP	19	1000	Unknown		03/13/2024 18:20	Finished	SAMP,10 mL
64	N063735-008AMS,MS	20	1000	Unknown		03/13/2024 18:29	Finished	MS (1ppb), IWST-231228B,10r
65	N063735-014A,SAMP	21	1000	Unknown		03/13/2024 18:39	Finished	SAMP,10 mL
66	N063735-014AMS,MS	22	1000	Unknown		03/13/2024 18:48	Finished	MS (1ppb), IWST-231228B,10r
67	MB-2,MBLK,1,	23	1000	Unknown		03/13/2024 18:57	Finished	MB R240129C
68	LCS-2,LCS,1,	24	1000	Unknown		03/13/2024 19:07	Finished	LCS @5ppb, IWST-231228B
69	CCV-6,CCV1,1,	25	1000	Unknown		03/13/2024 19:16	Finished	CCV @10ppb, IWST-231228A
70	CCB-6,CCB,1,	26	1000	Unknown		03/13/2024 19:26	Finished	CCB R240129C
71	N063295-002A,SAMP	27	1000	Unknown		03/13/2024 19:35	Finished	SAMP,2>10 mL
72	N063295-002AMS,MS	28	1000	Unknown		03/13/2024 19:45	Finished	MS (1ppb), IWST-231228B,2>1
73	N063295-003A,SAMP	29	1000	Unknown		03/13/2024 19:54	Finished	SAMP,2>10 mL
74	N063295-003AMS,MS	30	1000	Unknown		03/13/2024 20:04	Finished	MS (1ppb), IWST-231228B,2>1
75	N063562-001A,SAMP	31	1000	Unknown		03/13/2024 20:13	Finished	SAMP,10 mL
76	N063562-001AMS,MS	32	1000	Unknown		03/13/2024 20:23	Finished	MS (1ppb), IWST-231228B,10r
77	N063617-007A,SAMP	33	1000	Unknown		03/13/2024 20:32	Finished	SAMP,10 mL
78	N063617-007AMS,MS	34	1000	Unknown		03/13/2024 20:42	Finished	MS (1ppb), IWST-231228B,10r
79	N063617-013A,SAMP	35	1000	Unknown		03/13/2024 20:51	Finished	SAMP,10 mL
80	N063617-013AMS,MS	36	1000	Unknown		03/13/2024 21:00	Finished	MS (1ppb), IWST-231228B,10r
81	CCV-7,CCV,1,	37	1000	Unknown		03/13/2024 21:10	Finished	CCV @5ppb, IWST-231228A
82	CCB-7,CCB,1,	38	1000	Unknown		03/13/2024 21:19	Finished	CCB R240129C
83	N063642-003A,SAMP	39	1000	Unknown		03/13/2024 21:29	Finished	SAMP,10 mL
84	N063642-003AMS,MS	40	1000	Unknown		03/13/2024 21:38	Finished	MS (1ppb), IWST-231228B,10r
85	N063642-004A,SAMP	41	1000	Unknown		03/13/2024 21:48	Finished	SAMP,10 mL
86	N063642-004AMS,MS	42	1000	Unknown		03/13/2024 21:57	Finished	MS (1ppb), IWST-231228B,10r
87	N063642-007A,SAMP	43	1000	Unknown		03/13/2024 22:07	Finished	SAMP,10 mL
88	N063642-007AMS,MS	44	1000	Unknown		03/13/2024 22:16	Finished	MS (1ppb), IWST-231228B,10r
89	CCV-8,CCV1,1,	45	1000	Unknown		03/13/2024 22:26	Finished	CCV @10ppb, IWST-231228A
90	CCB-8,CCB,1,	46	1000	Unknown		03/13/2024 22:35	Finished	CCB R240129C
91	BLANK	47	1000	Unknown		03/13/2024 22:44	Finished	BLANK
92	SHUTDOWN	48	1000	Unknown		03/13/2024 22:54	Finished	
93	Eluent: R240311C	49	1000	Unknown		n.a.	Finished	
94	PCR: R240311D	50	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 09:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

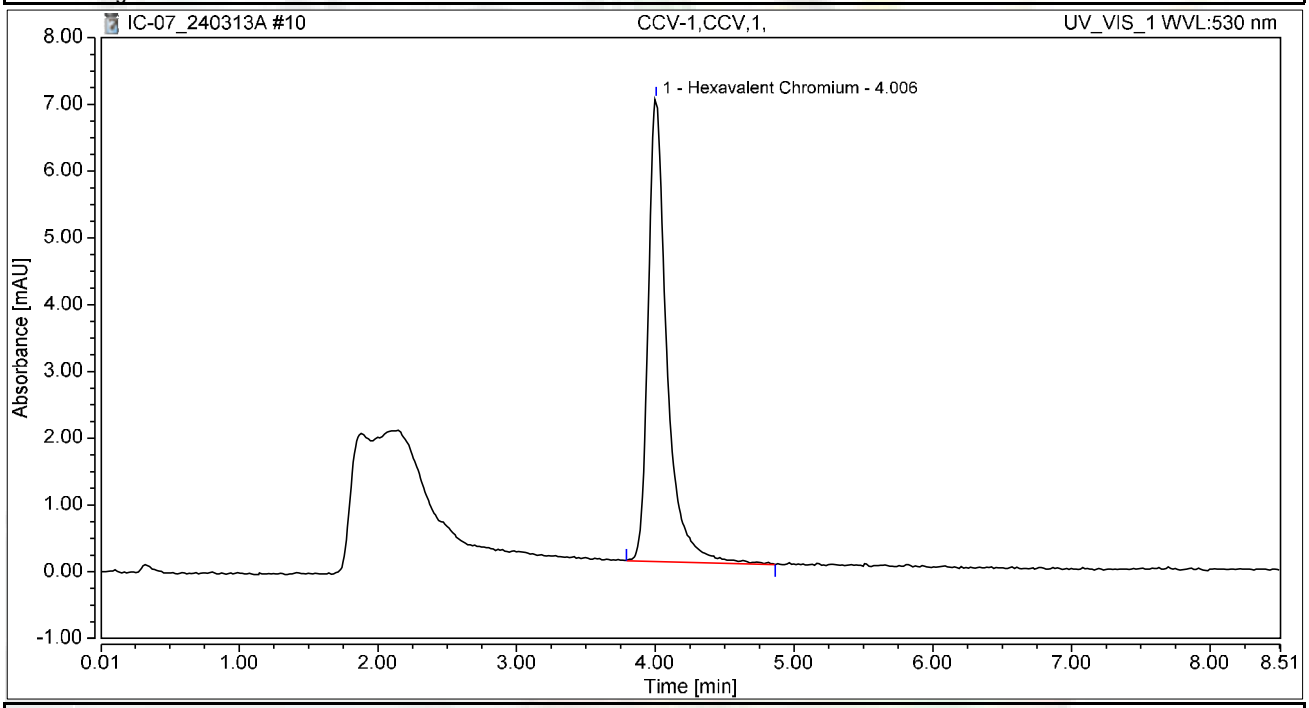
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 09:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.094	6.934	100.00	100.00	5.1419
Total:			**1.094**	**6.934**	**100.00**	**100.00**	

Reviewed by:

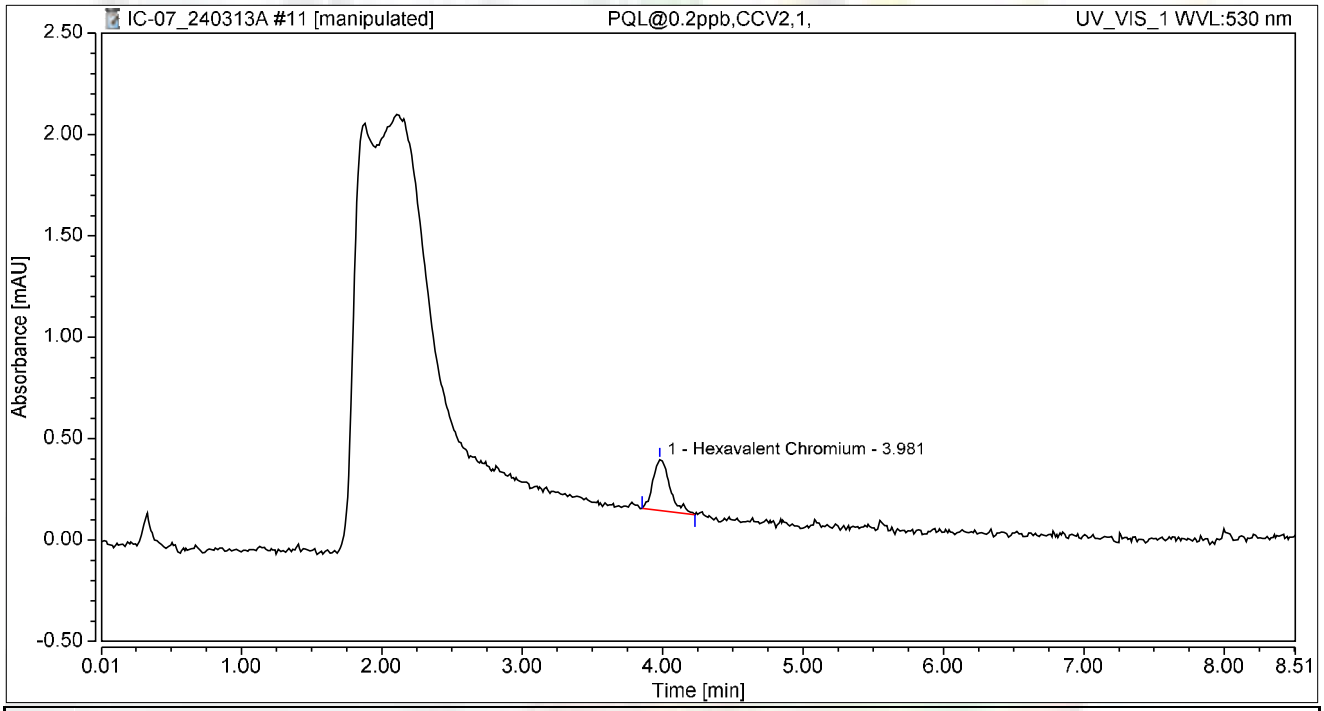
JRB 3/14/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 09:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

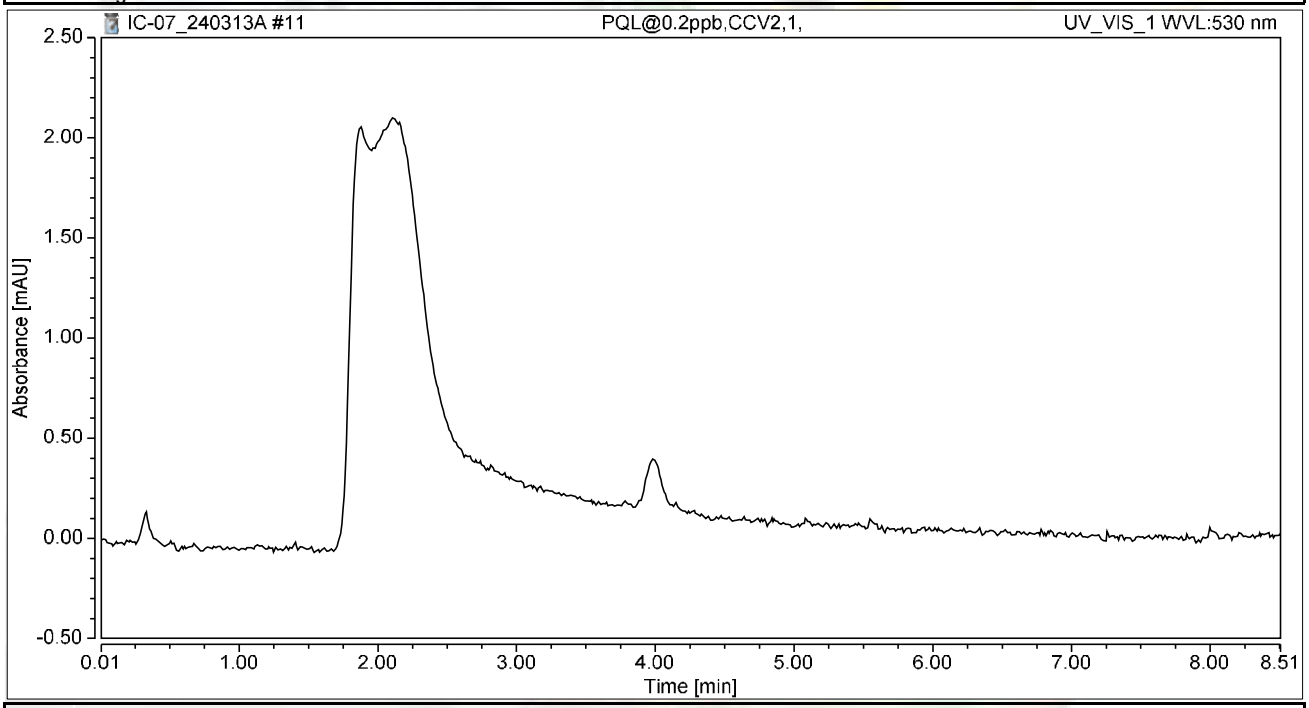
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.036	0.249	100.00	100.00	0.1673
Total:			**0.036**	**0.249**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 09:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

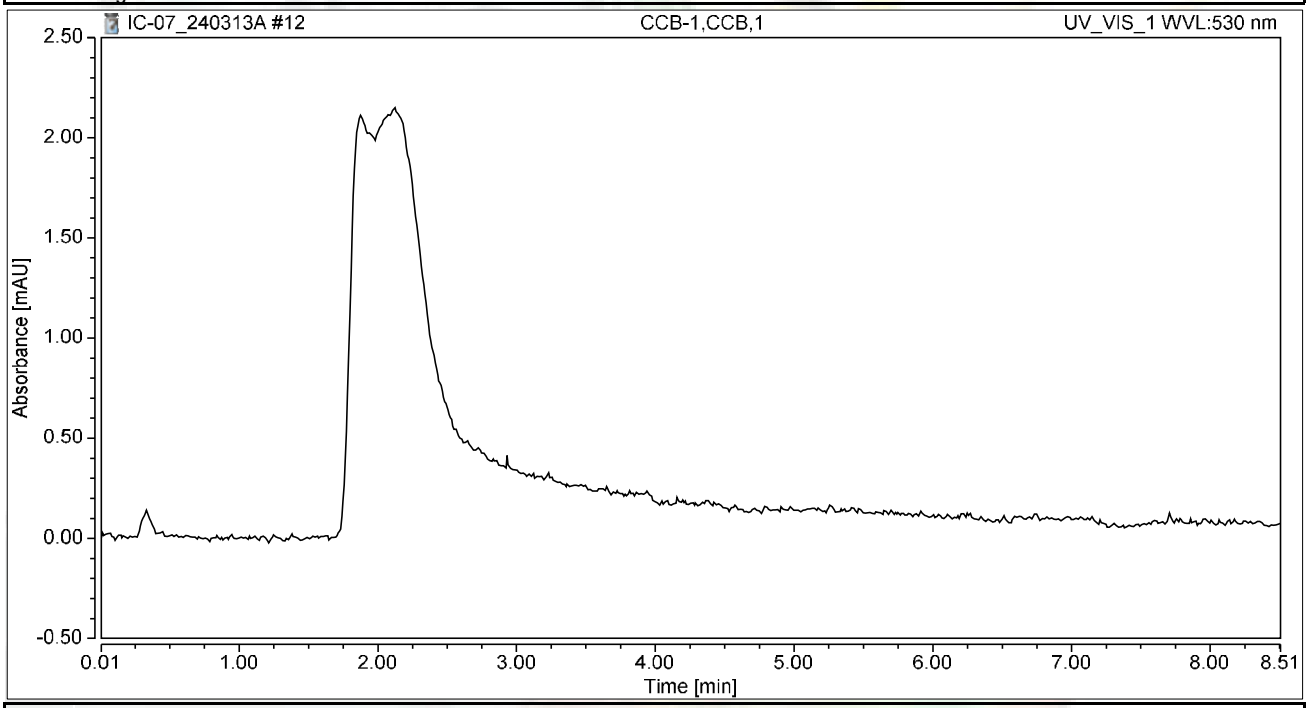
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 09:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

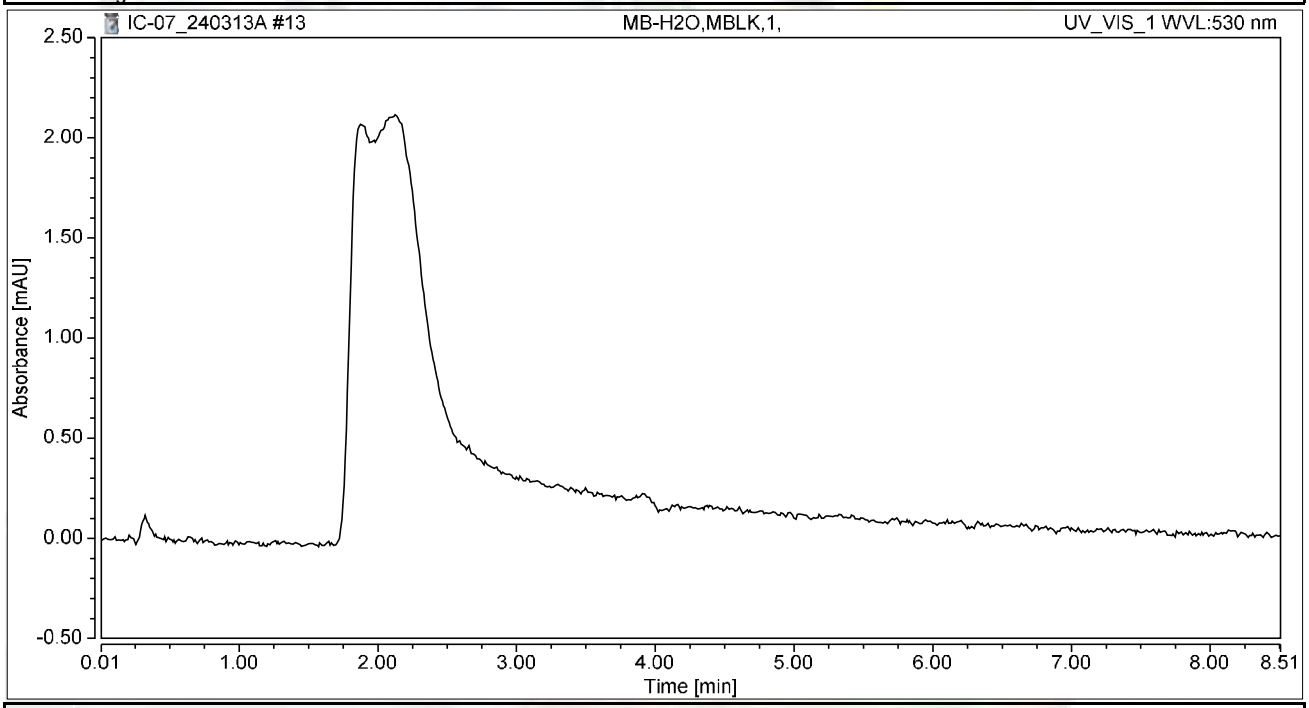
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 10:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

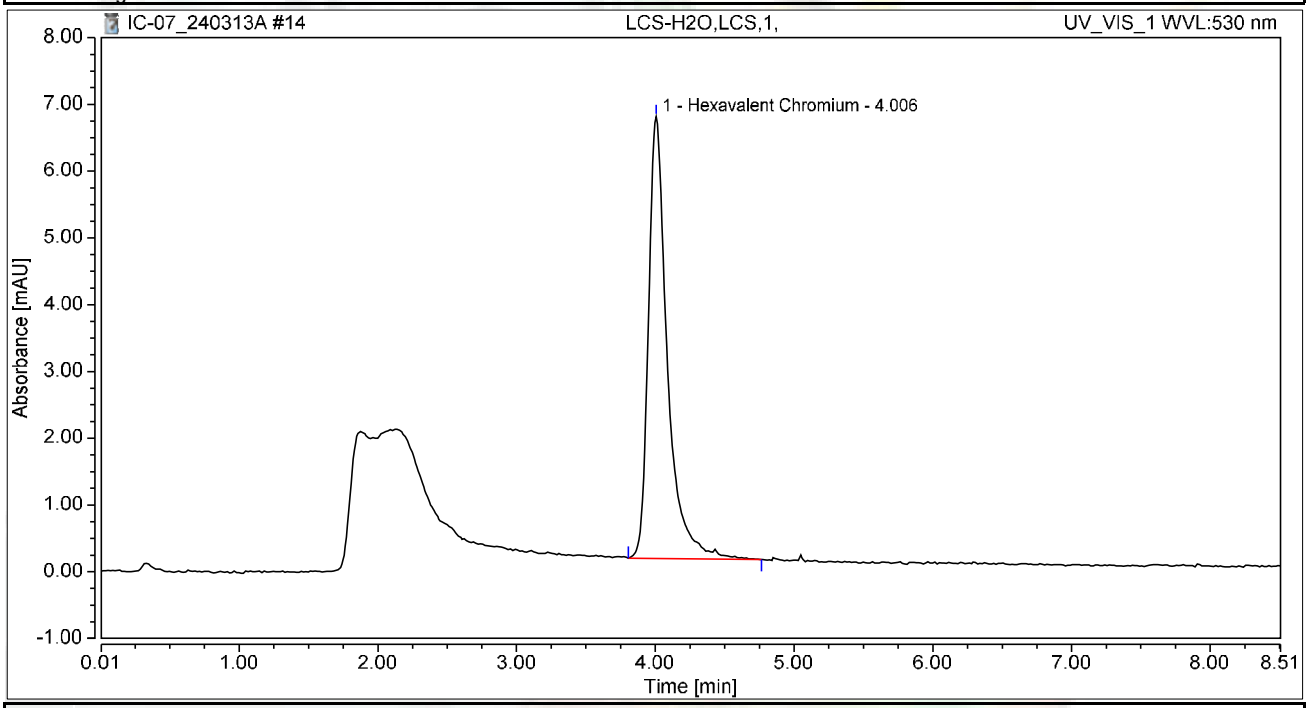
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 10:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

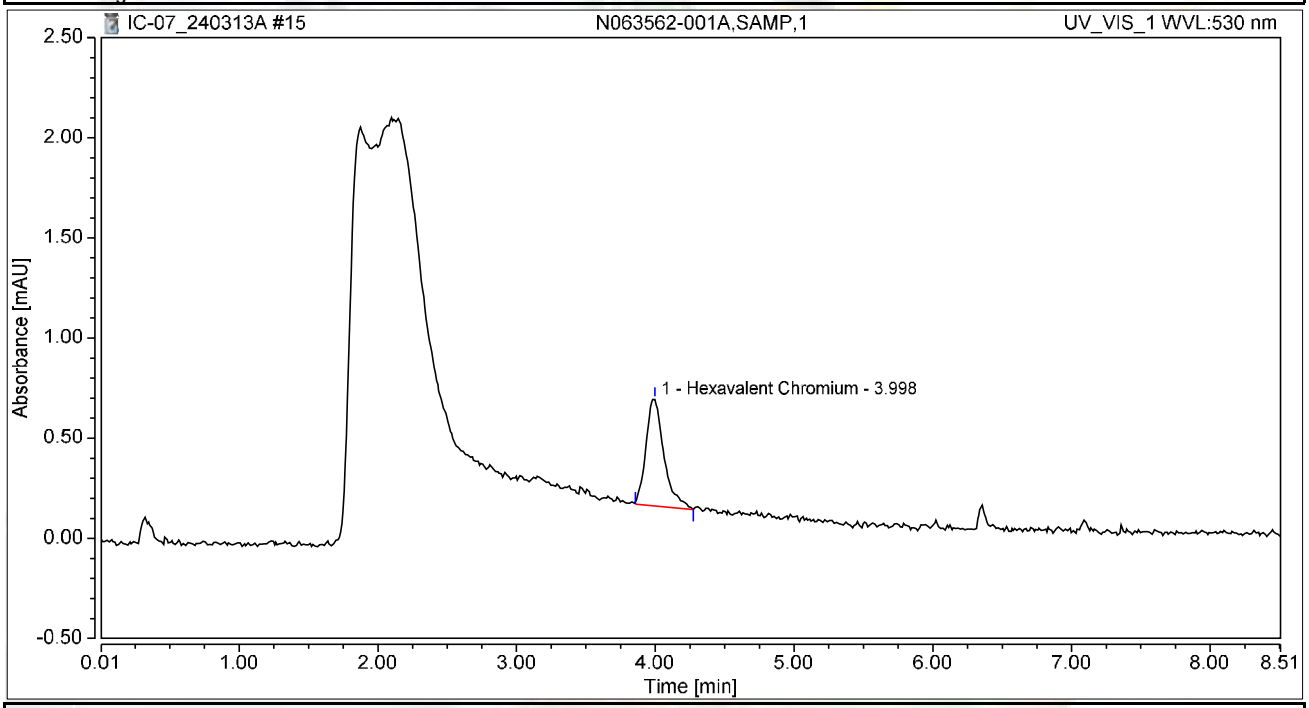
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.051	6.620	100.00	100.00	4.9361
Total:			**1.051**	**6.620**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063562-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 10:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

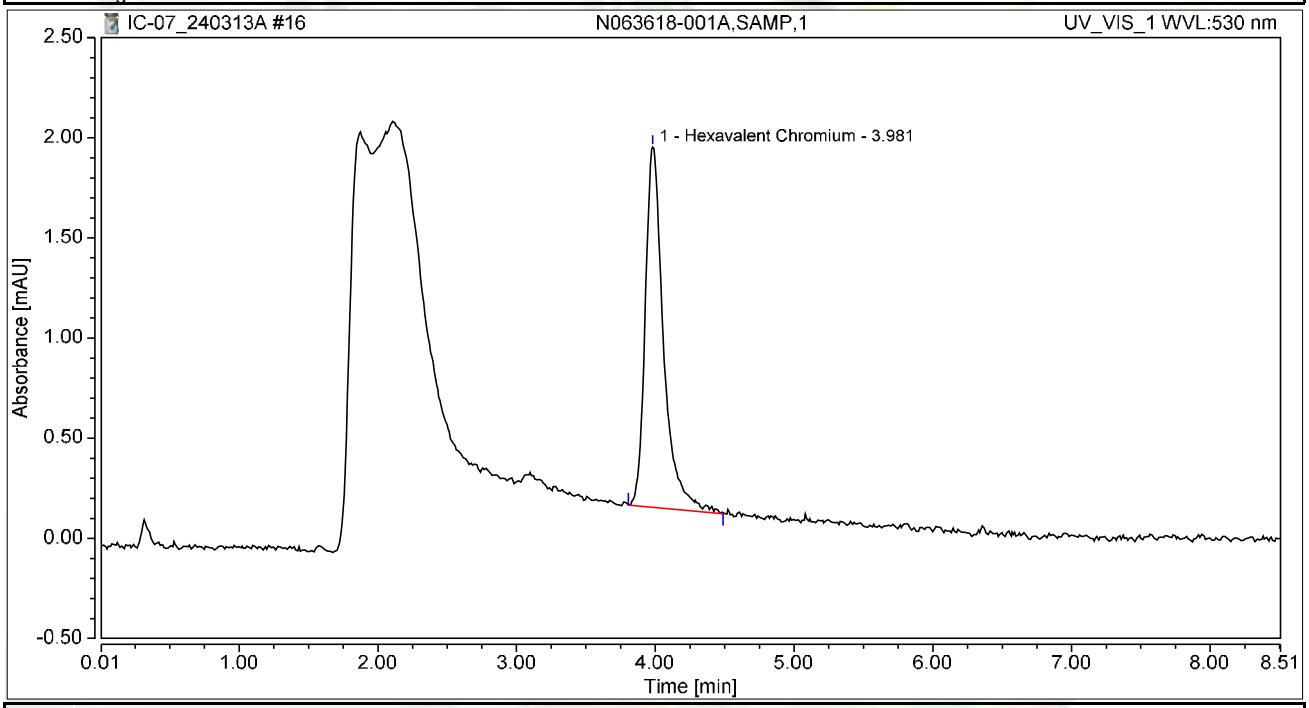
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.080	0.532	100.00	100.00	0.3777
Total:			**0.080**	**0.532**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063618-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 10:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

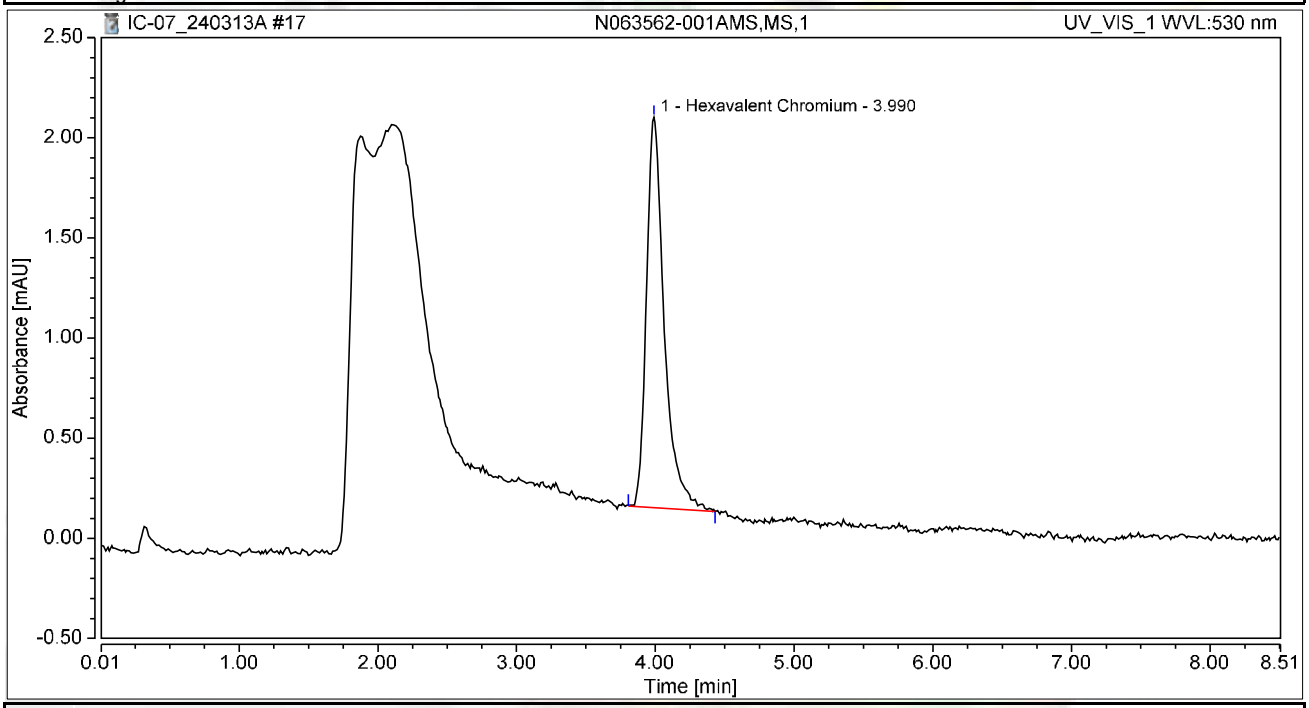
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.275	1.798	100.00	100.00	1.2921
Total:			**0.275**	**1.798**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063562-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 10:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

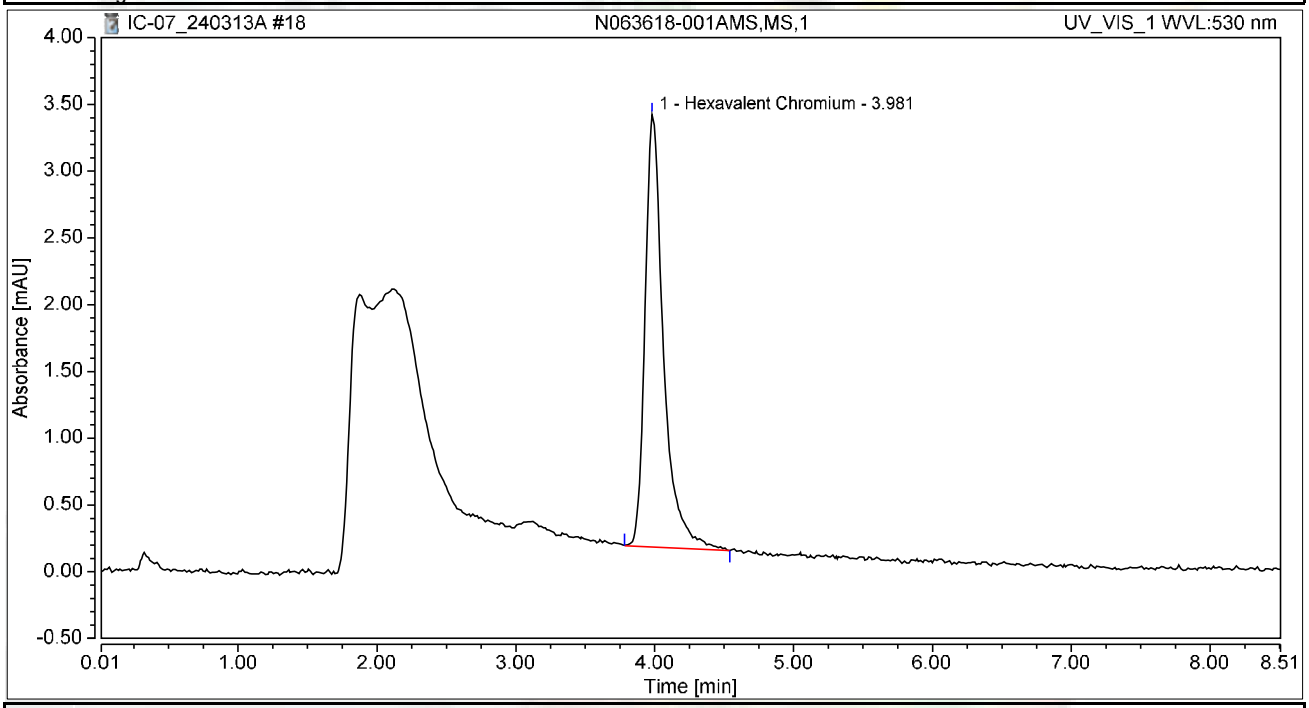
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.291	1.950	100.00	100.00	1.3683
Total:			**0.291**	**1.950**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063618-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 10:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

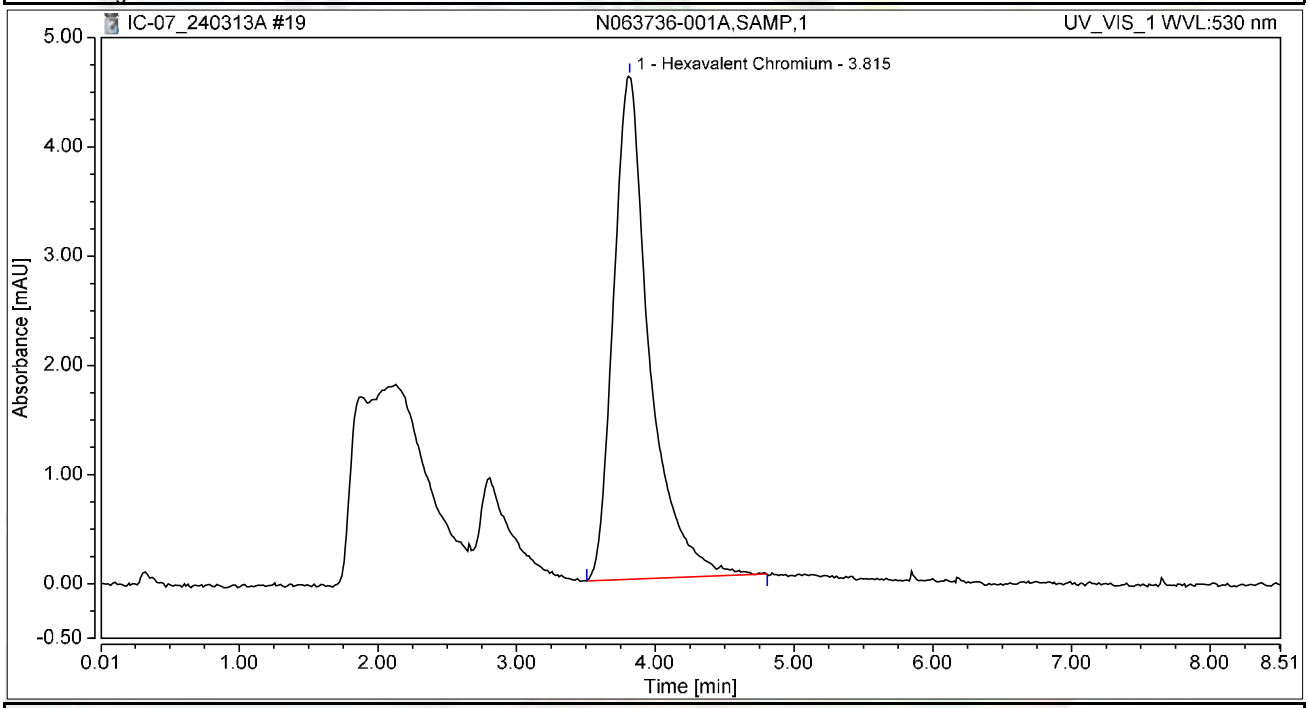
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.499	3.237	100.00	100.00	2.3447
Total:			**0.499**	**3.237**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 11:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

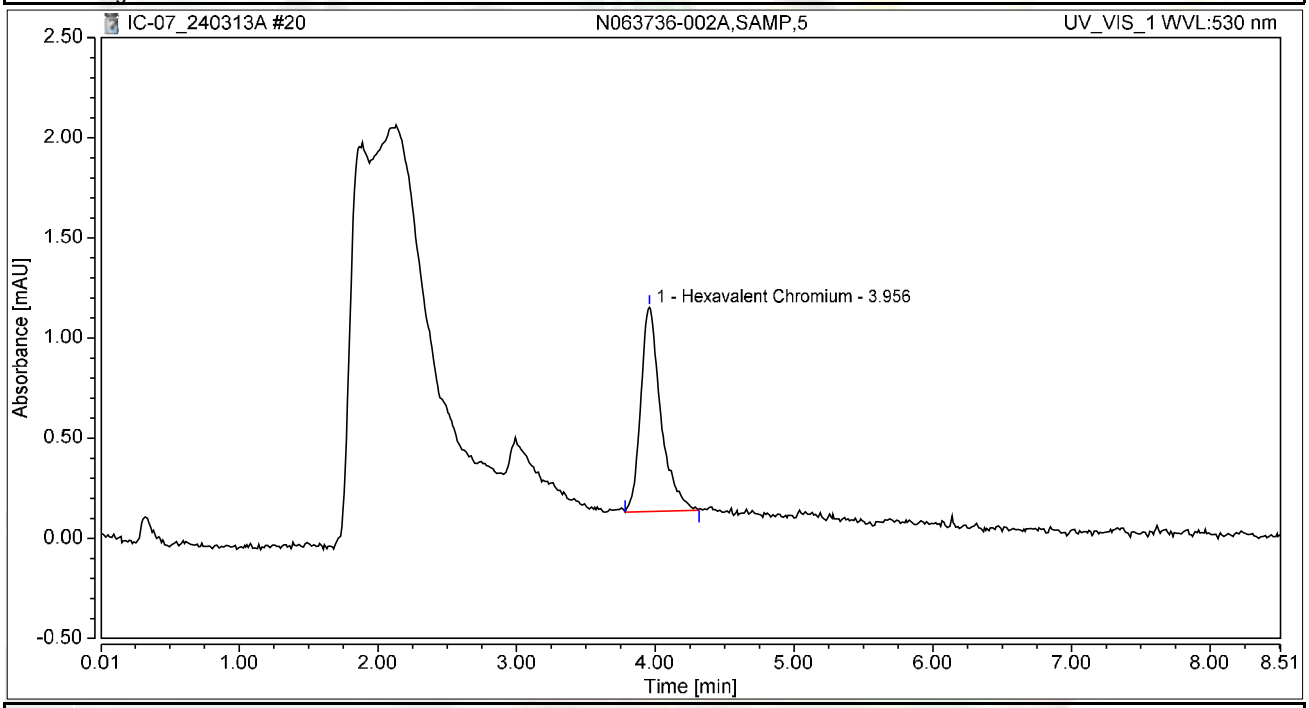
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	1.388	4.614	100.00	100.00	6.5216
Total:			**1.388**	**4.614**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 11:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

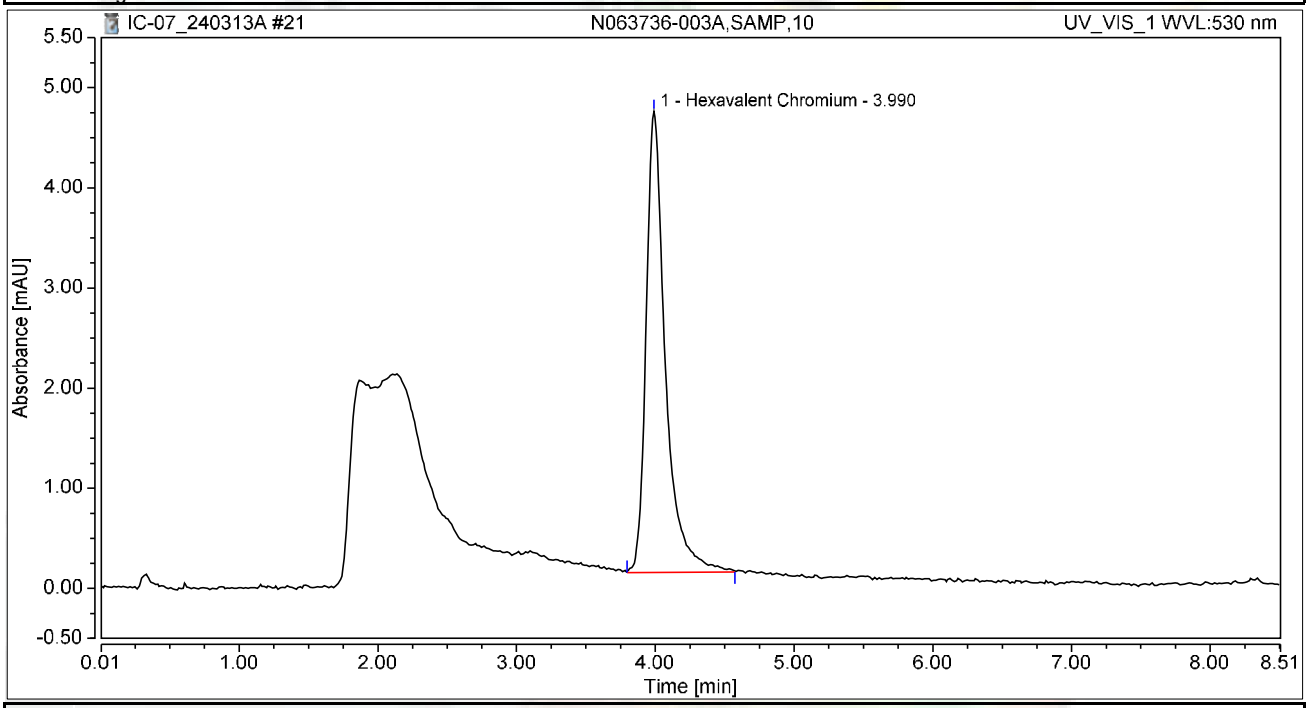
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.171	1.020	100.00	100.00	0.8045
Total:			**0.171**	**1.020**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-003A,SAMP,10**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 11:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

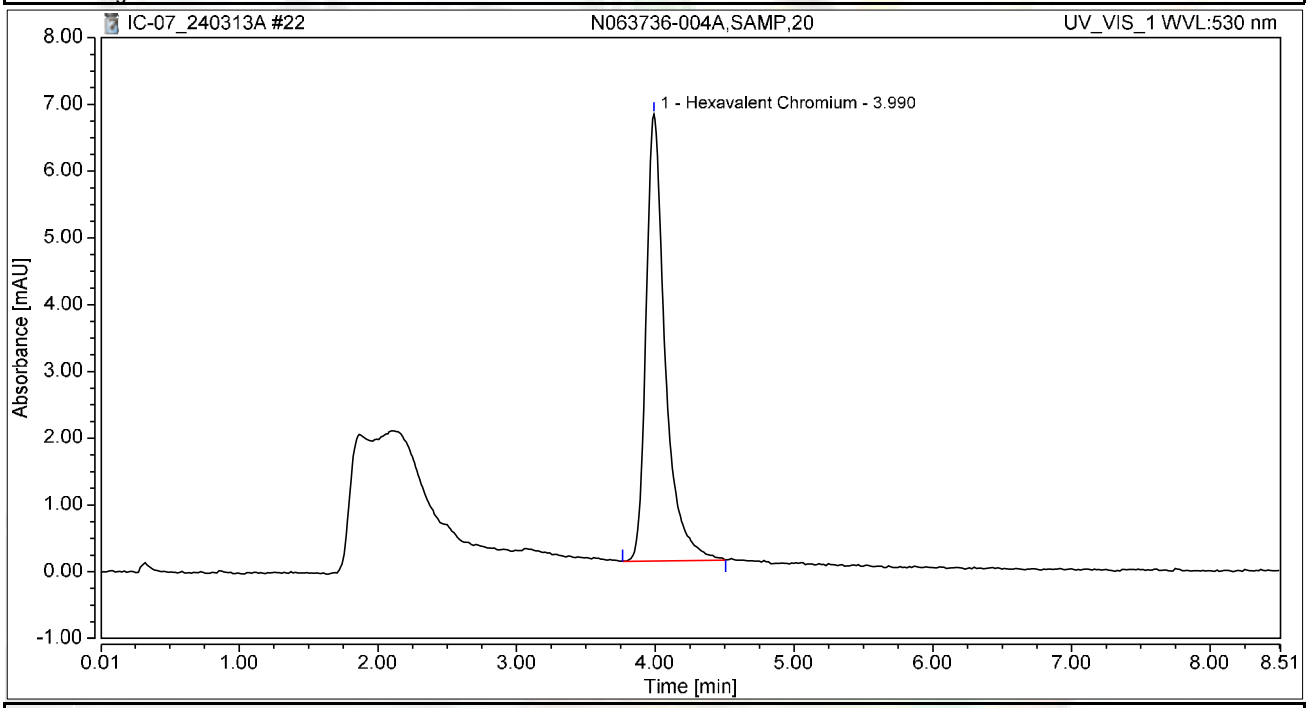
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.743	4.603	100.00	100.00	3.4904
Total:			**0.743**	**4.603**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-004A,SAMP,20**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 11:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

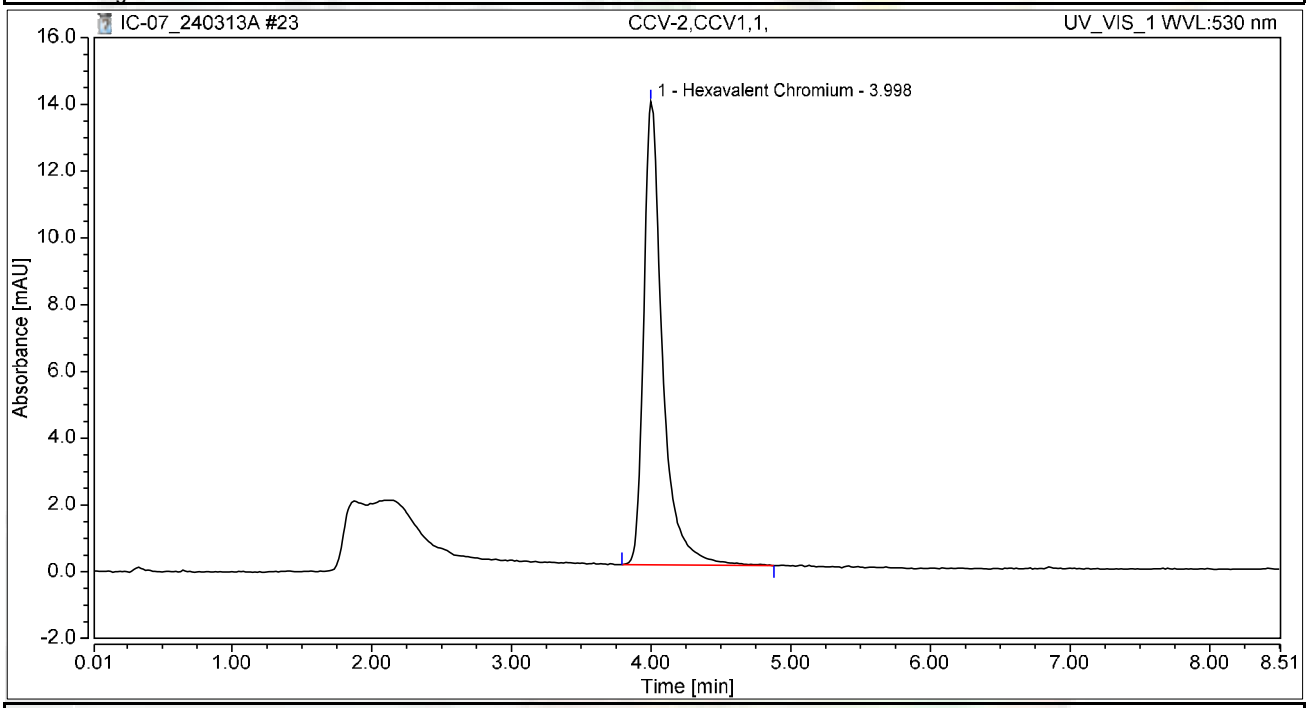
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	1.071	6.692	100.00	100.00	5.0317
Total:			**1.071**	**6.692**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 11:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

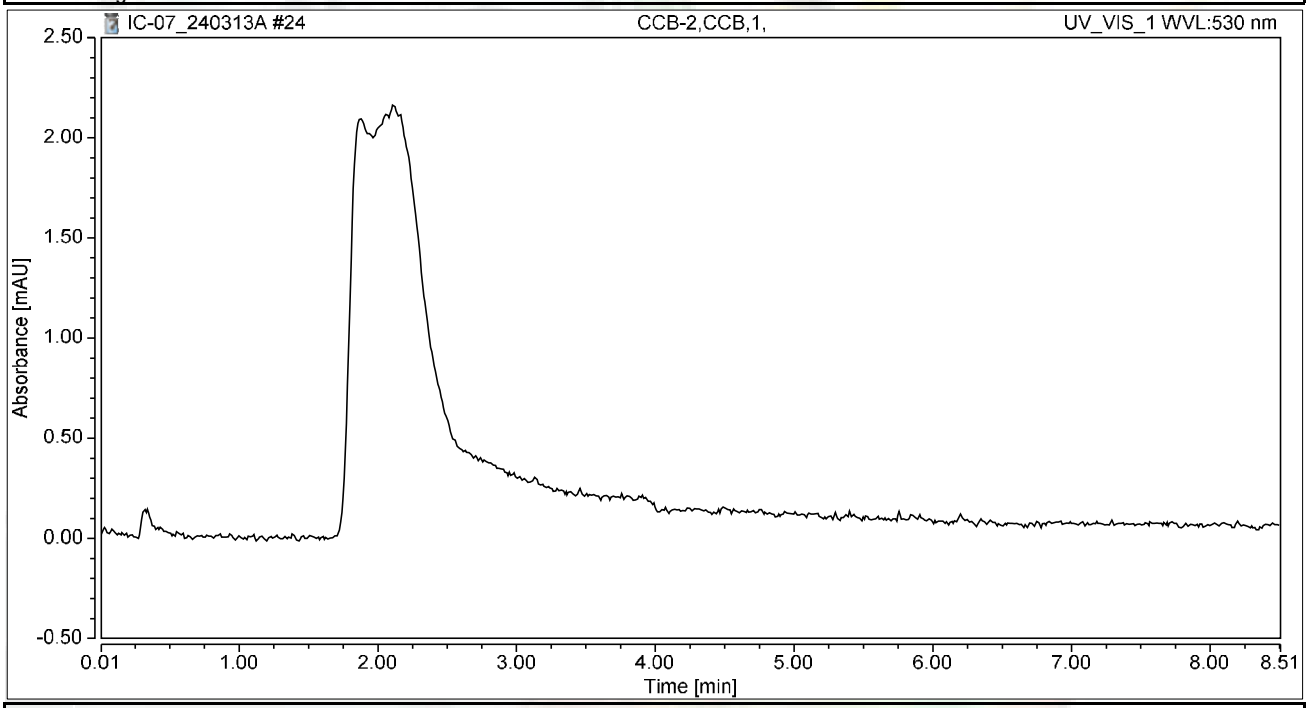
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	2.167	13.877	100.00	100.00	10.1829
Total:			**2.167**	**13.877**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 11:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

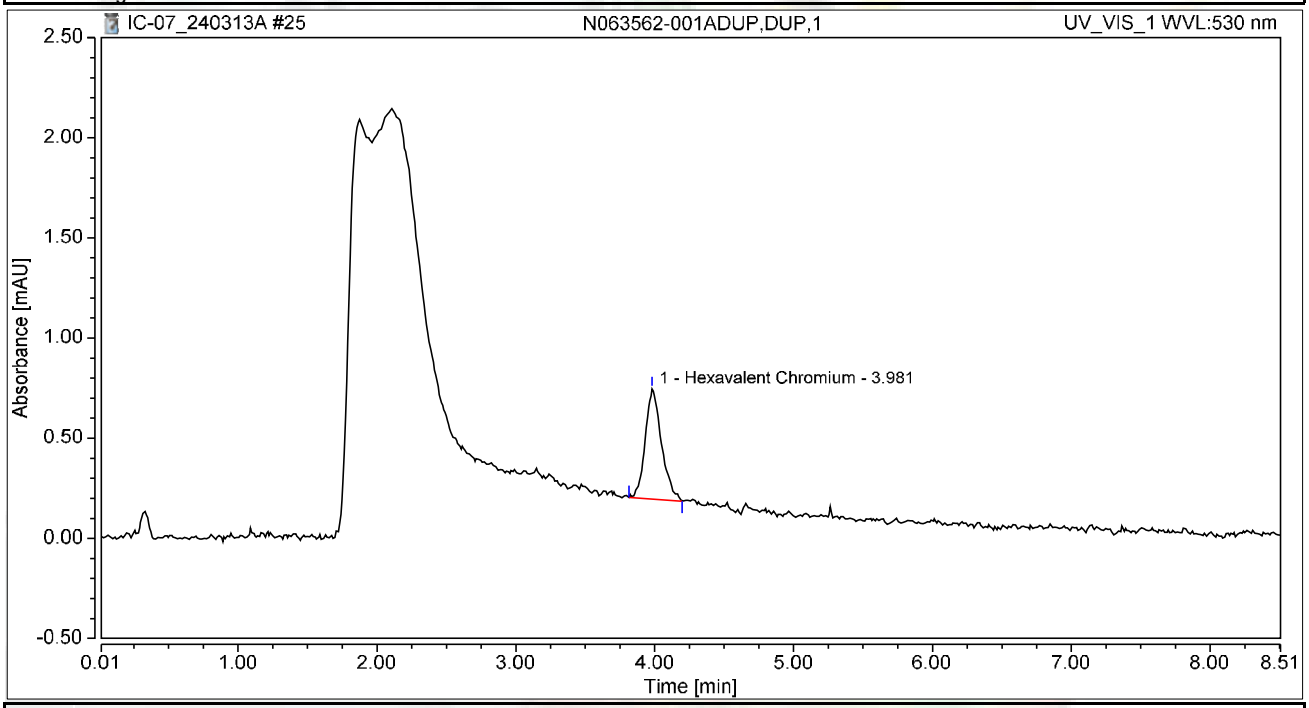
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063562-001ADUP,DUP,1**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 11:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

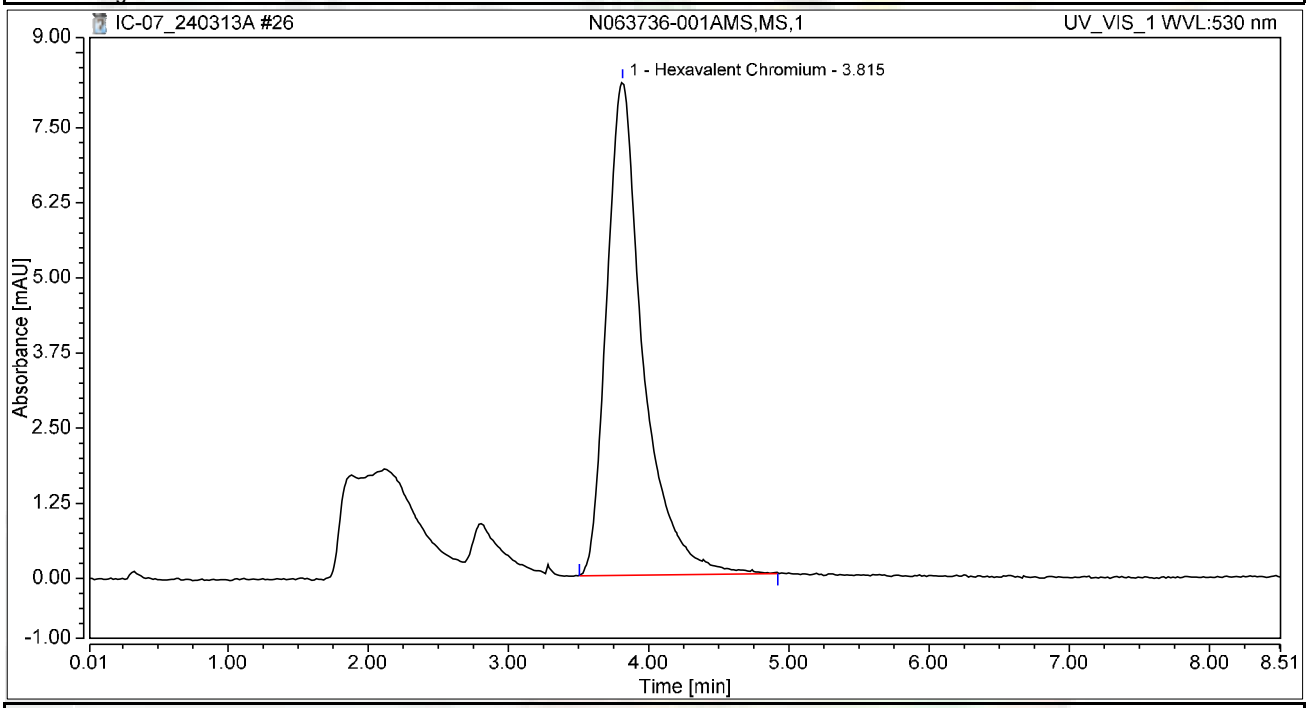
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.075	0.551	100.00	100.00	0.3519
Total:			**0.075**	**0.551**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 12:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

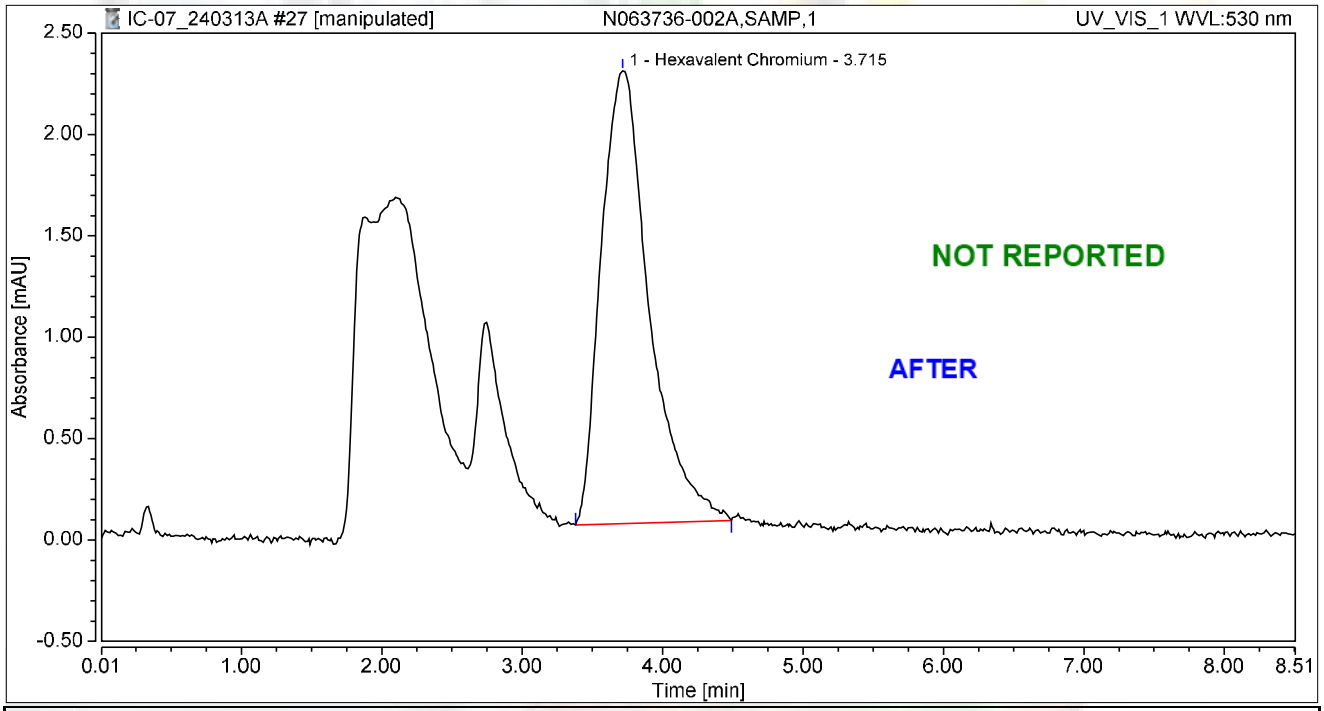
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	2.468	8.223	100.00	100.00	11.5941
Total:			**2.468**	**8.223**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 12:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

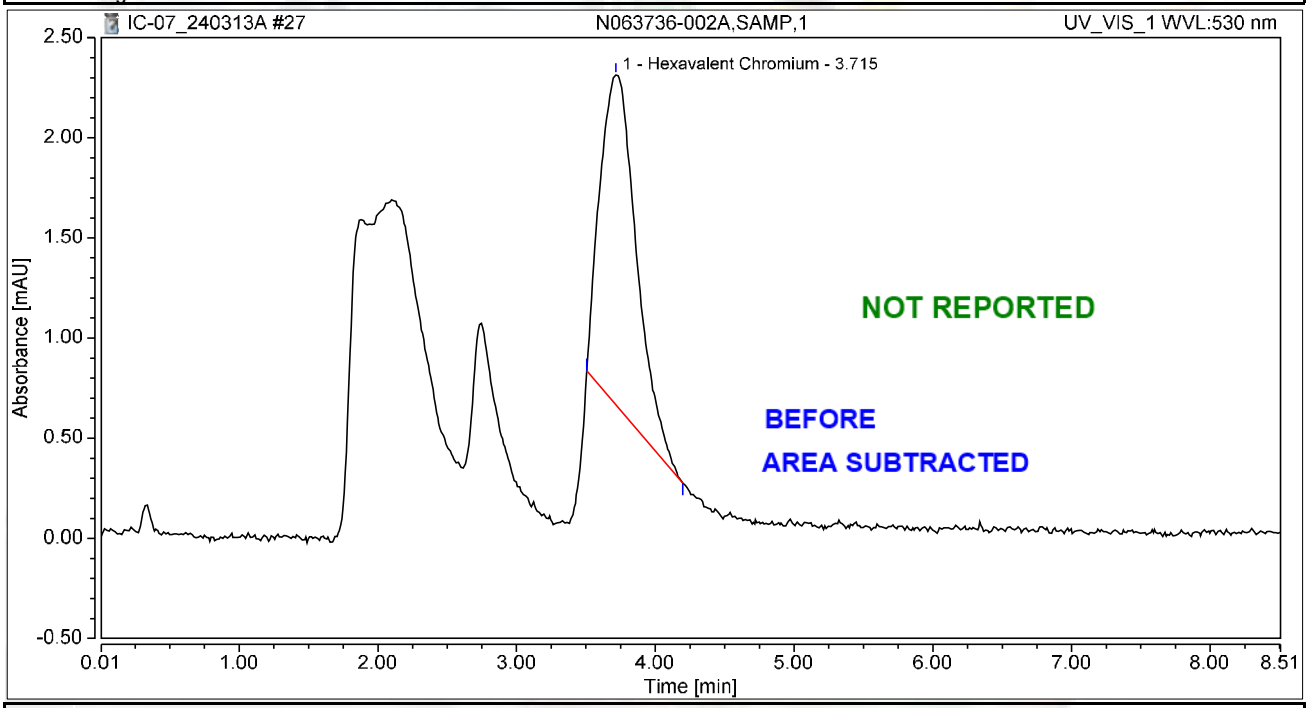
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.715	0.887	2.232	100.00	100.00	4.1654
Total:			**0.887**	**2.232**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 12:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

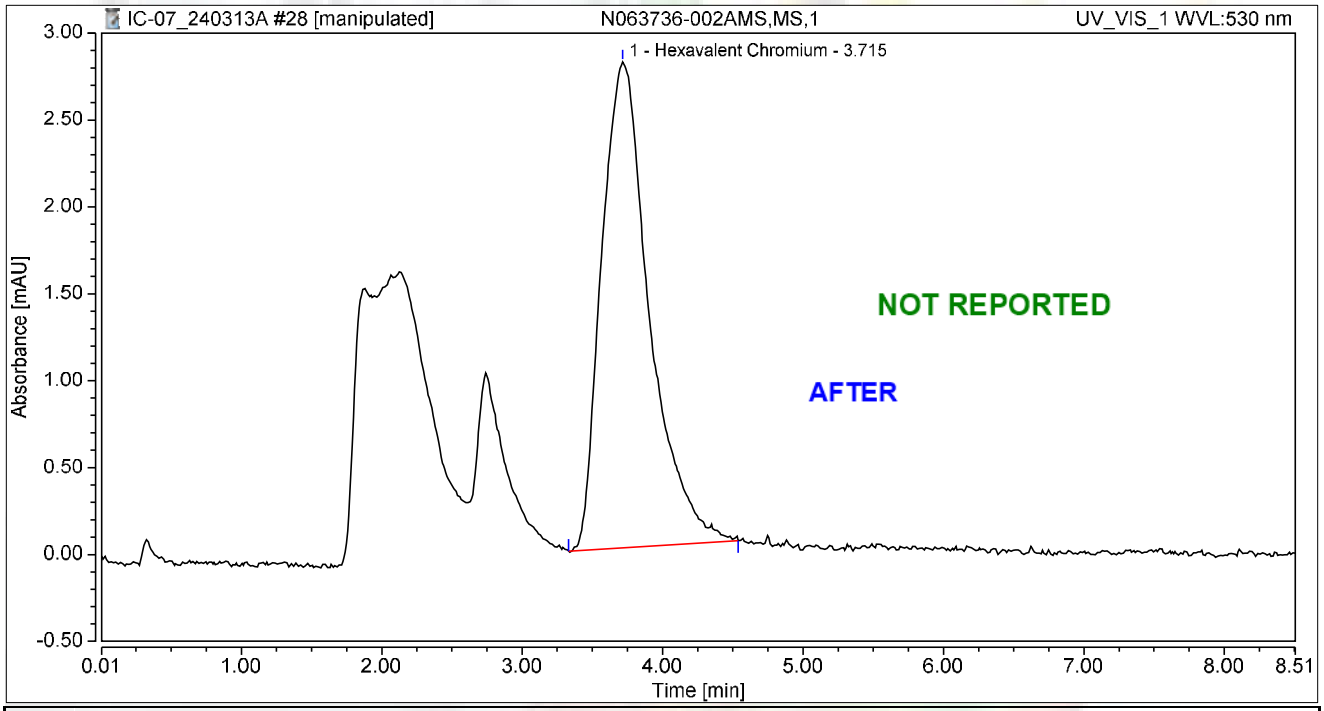
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.715	0.502	1.644	100.00	100.00	2.3565
Total:			**0.502**	**1.644**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 12:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

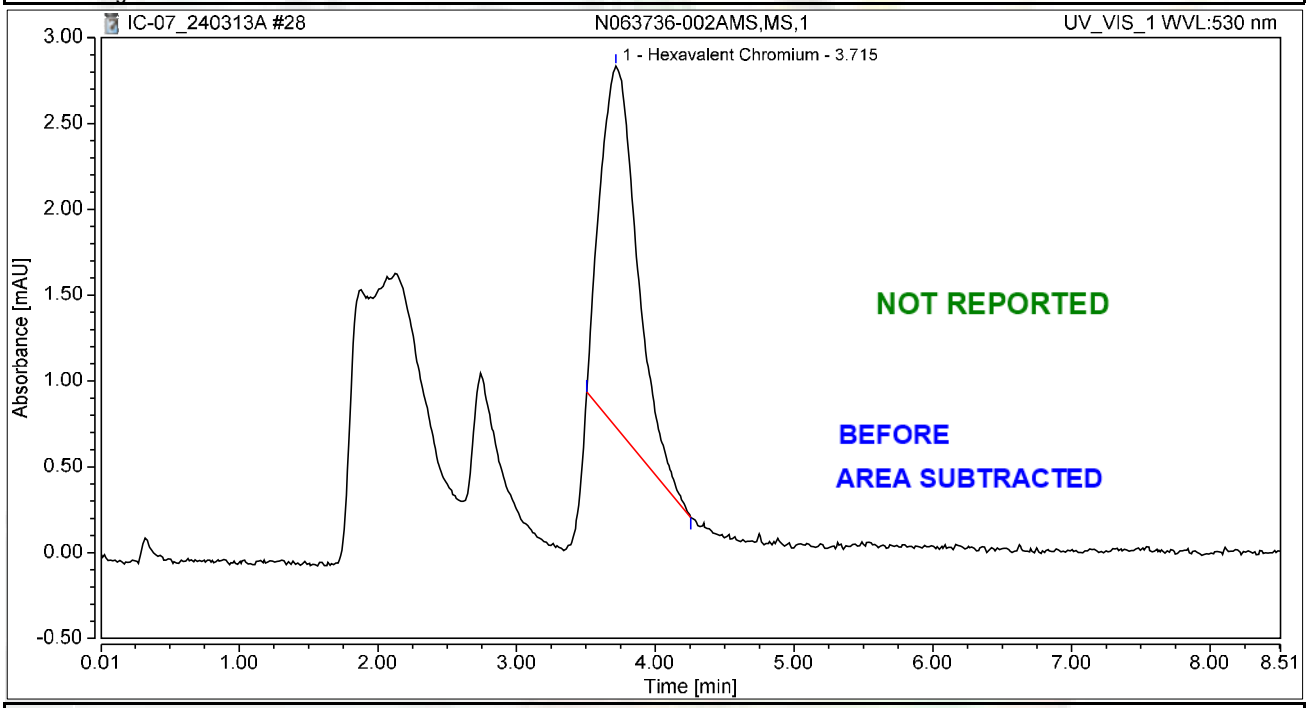
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.715	1.104	2.796	100.00	100.00	5.1875
Total:			**1.104**	**2.796**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 12:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

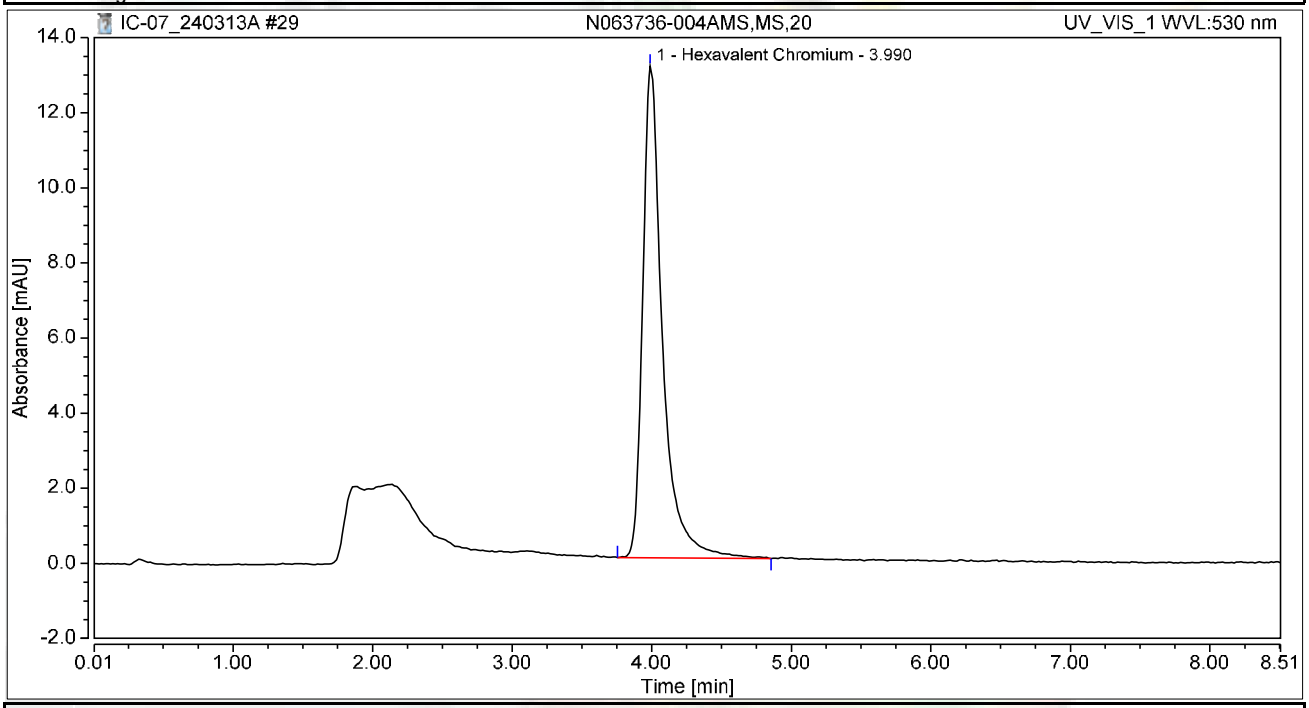
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.715	0.653	2.101	100.00	100.00	3.0692
Total:			**0.653**	**2.101**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-004AMS,MS,20**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 12:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

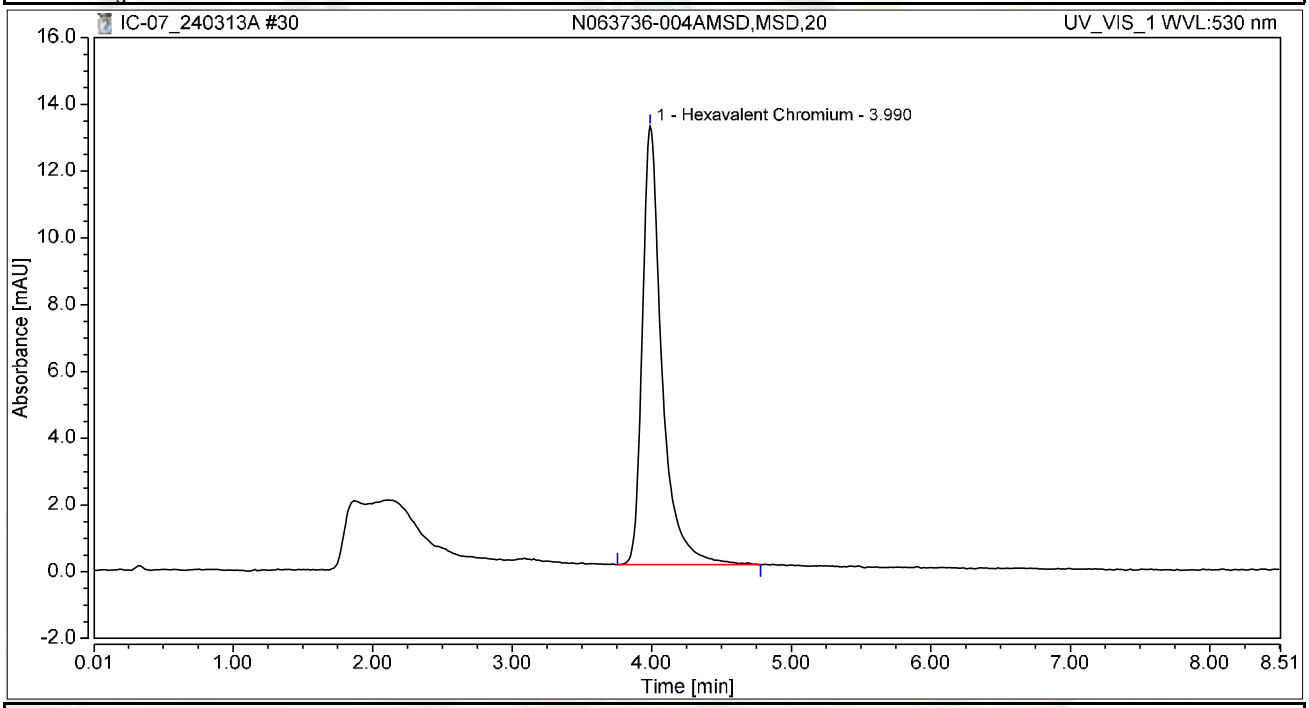
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	2.154	13.094	100.00	100.00	10.1202
Total:			**2.154**	**13.094**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-004AMSD,MSD,20**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 12:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

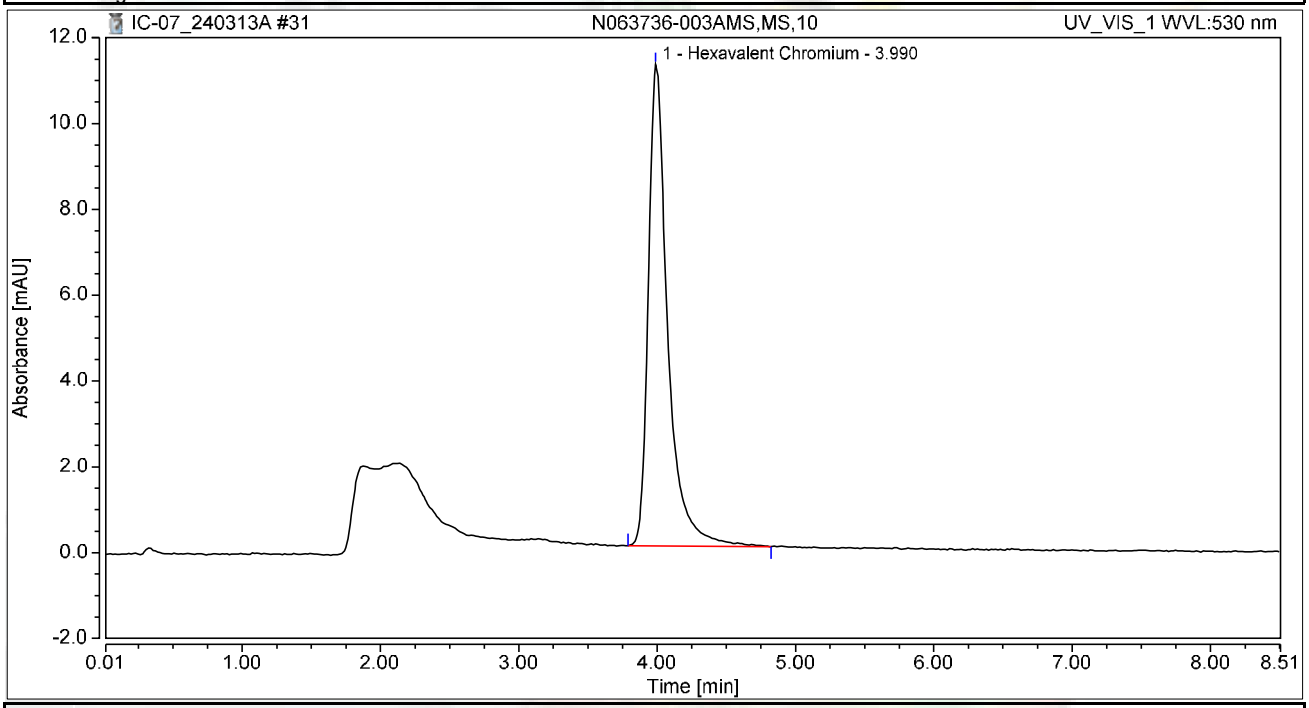
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	2.147	13.144	100.00	100.00	10.0858
Total:			**2.147**	**13.144**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-003AMS,MS,10**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 12:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

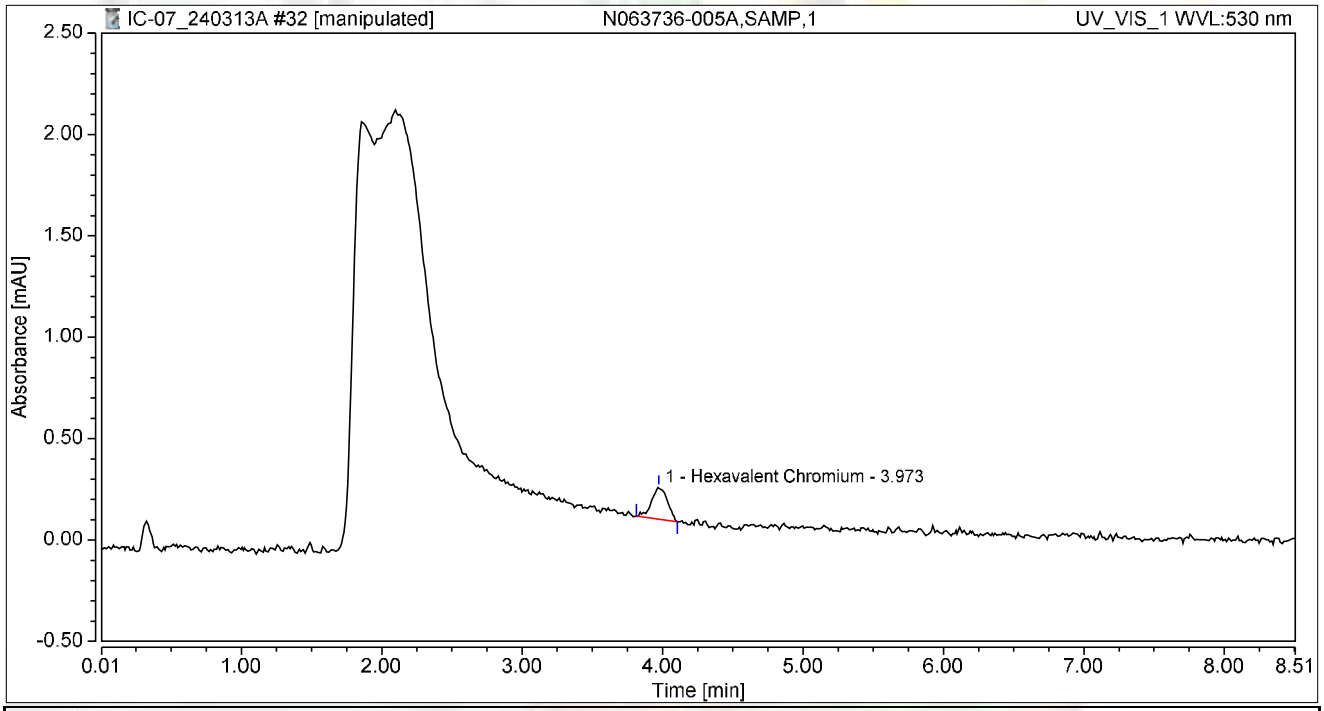
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	1.823	11.213	100.00	100.00	8.5658
Total:			**1.823**	**11.213**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 13:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

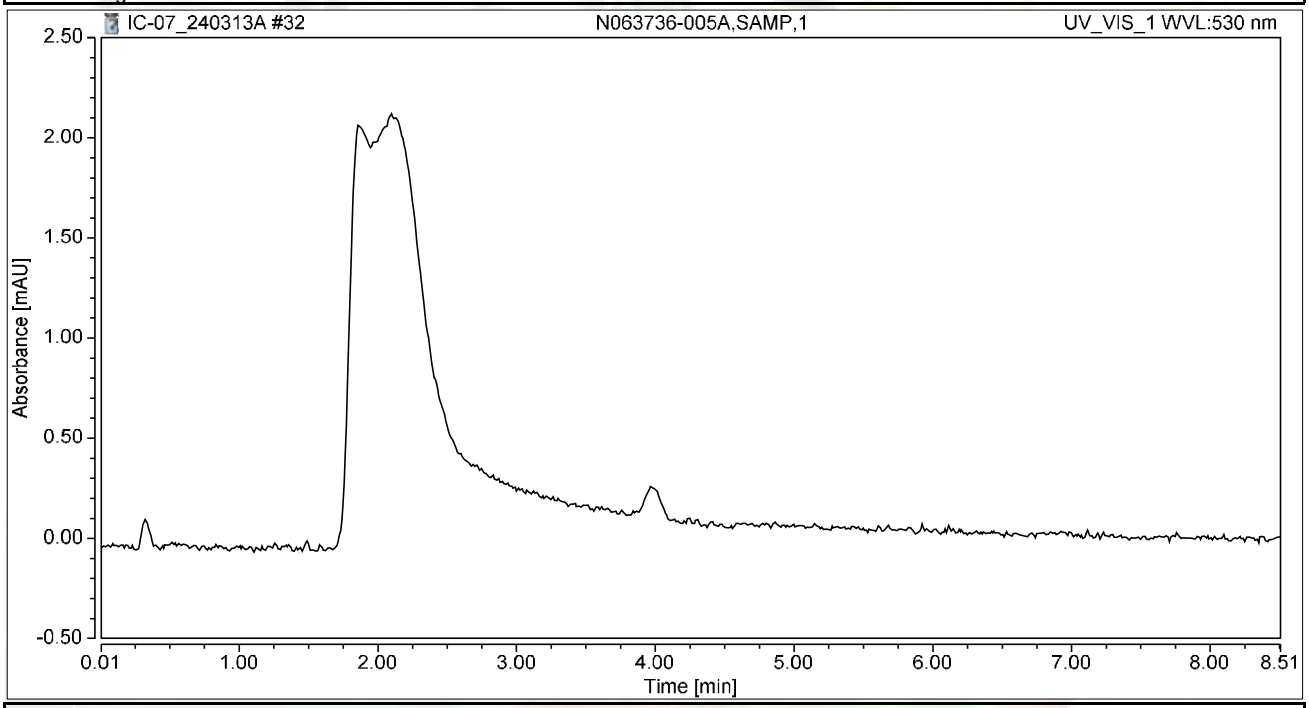
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.021	0.157	100.00	100.00	0.0975
Total:			**0.021**	**0.157**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 13:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

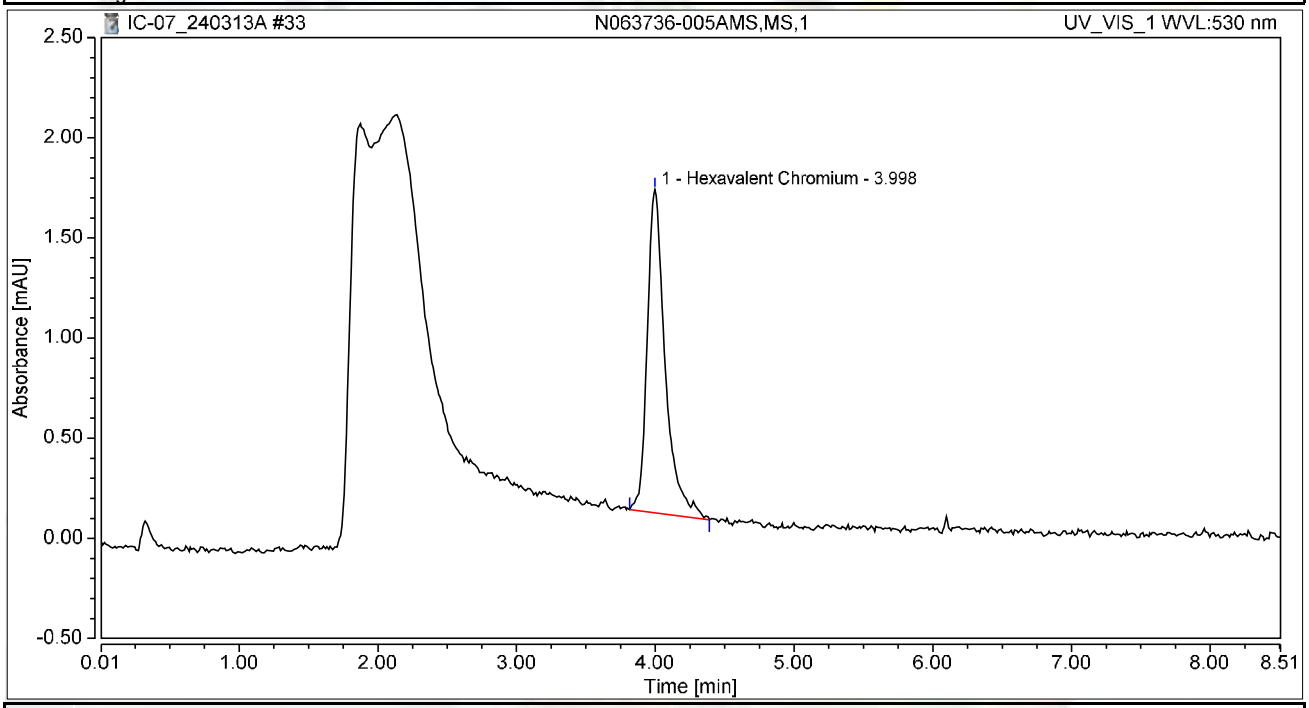
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 13:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

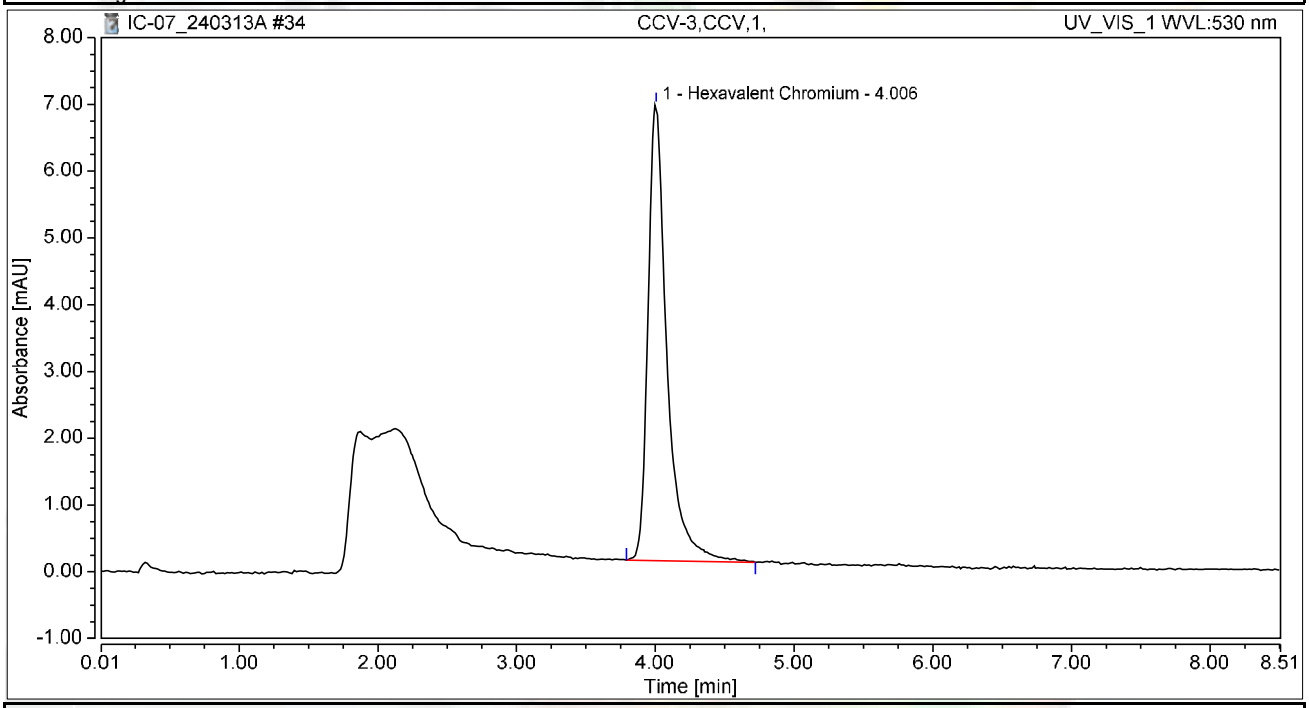
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.242	1.614	100.00	100.00	1.1381
Total:			**0.242**	**1.614**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 13:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

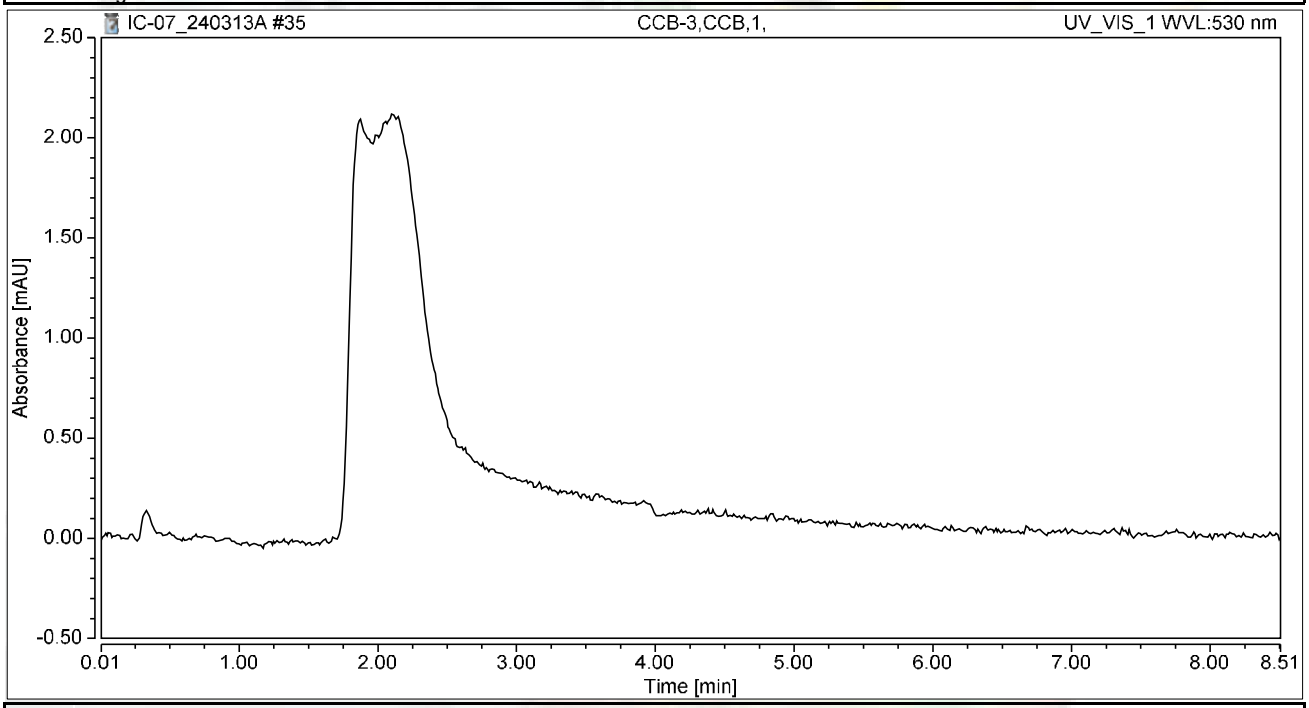
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.084	6.830	100.00	100.00	5.0947
Total:			**1.084**	**6.830**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 13:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

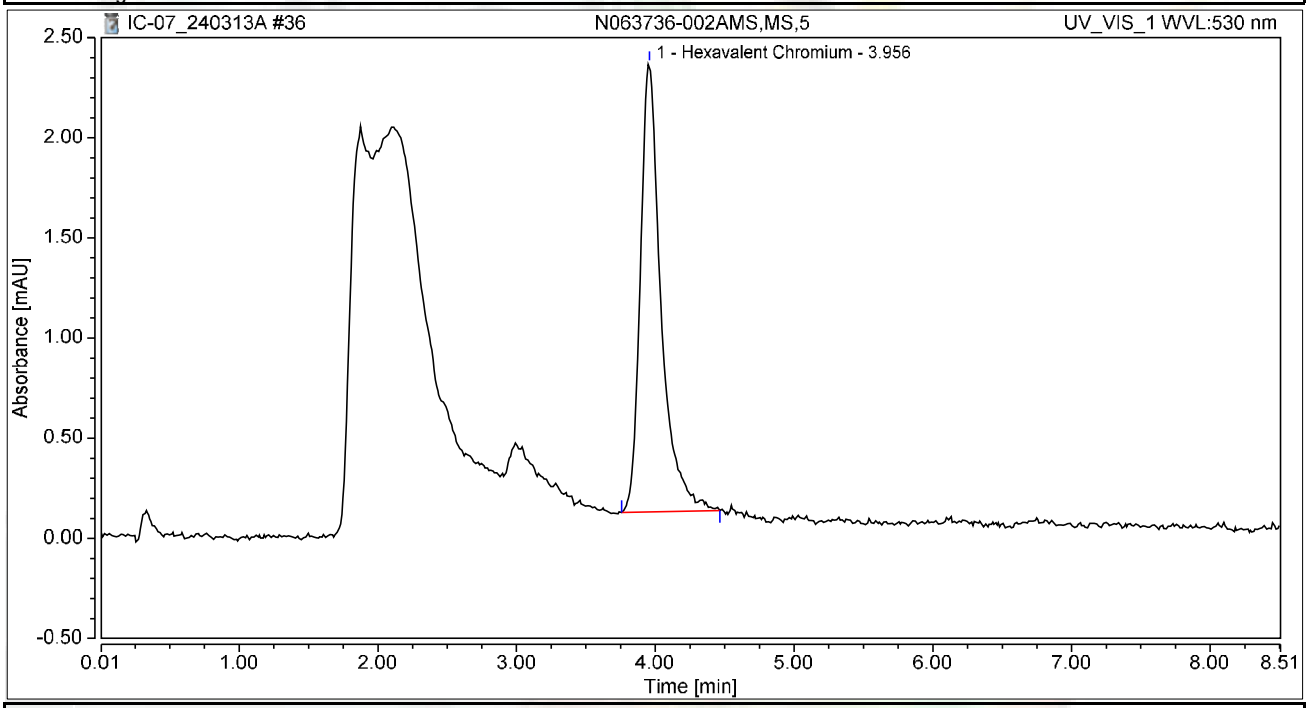
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 13:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

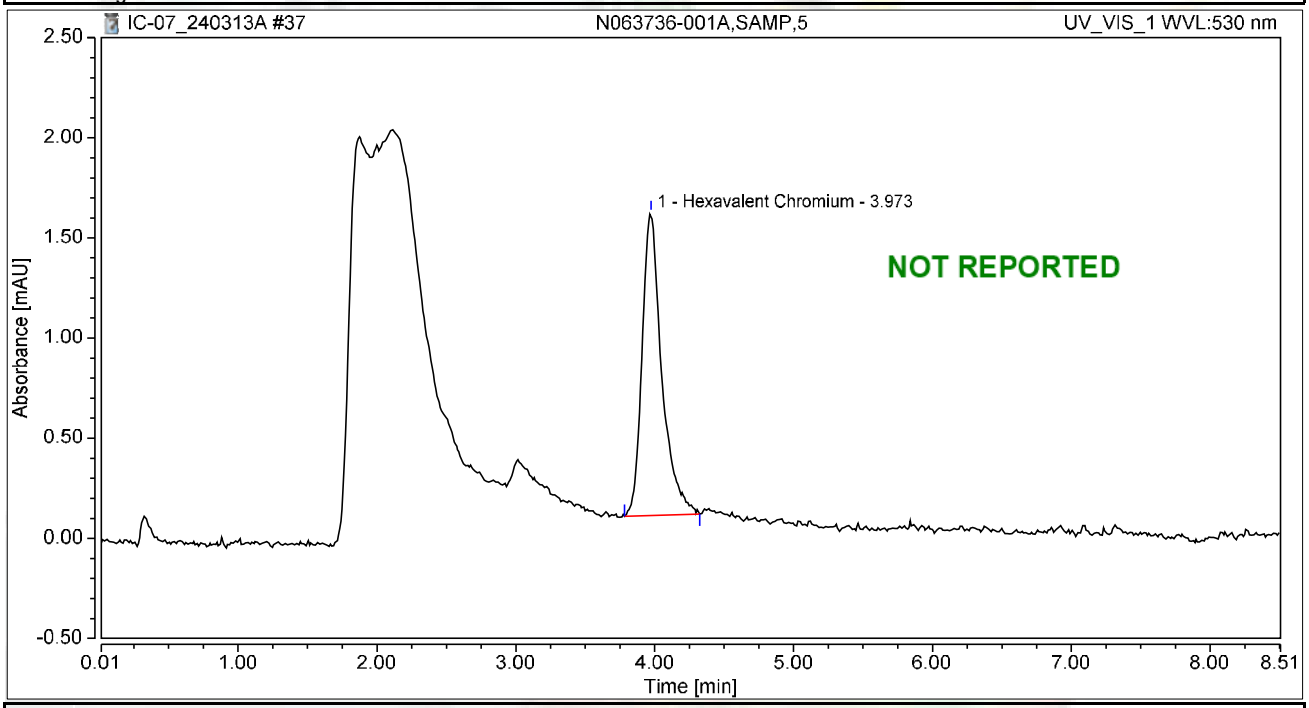
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.388	2.239	100.00	100.00	1.8231
Total:			**0.388**	**2.239**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-001A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 13:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

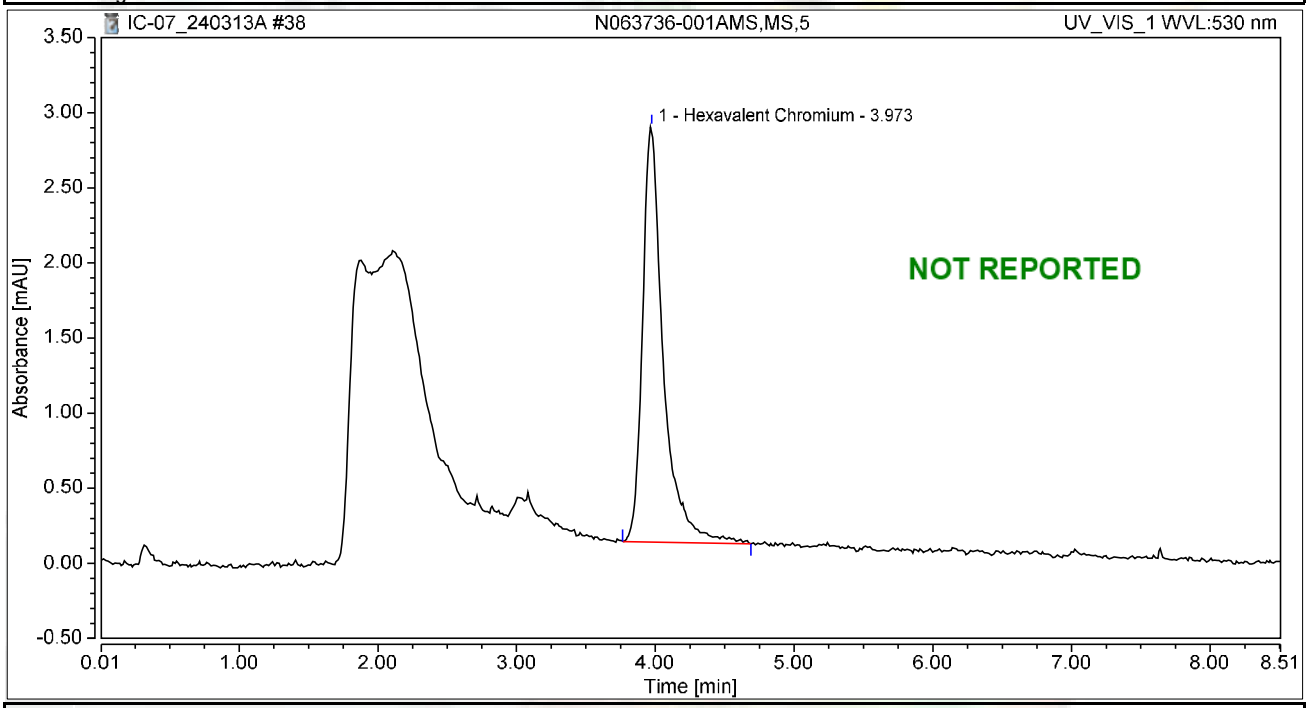
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.248	1.512	100.00	100.00	1.1662
Total:			**0.248**	**1.512**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 14:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

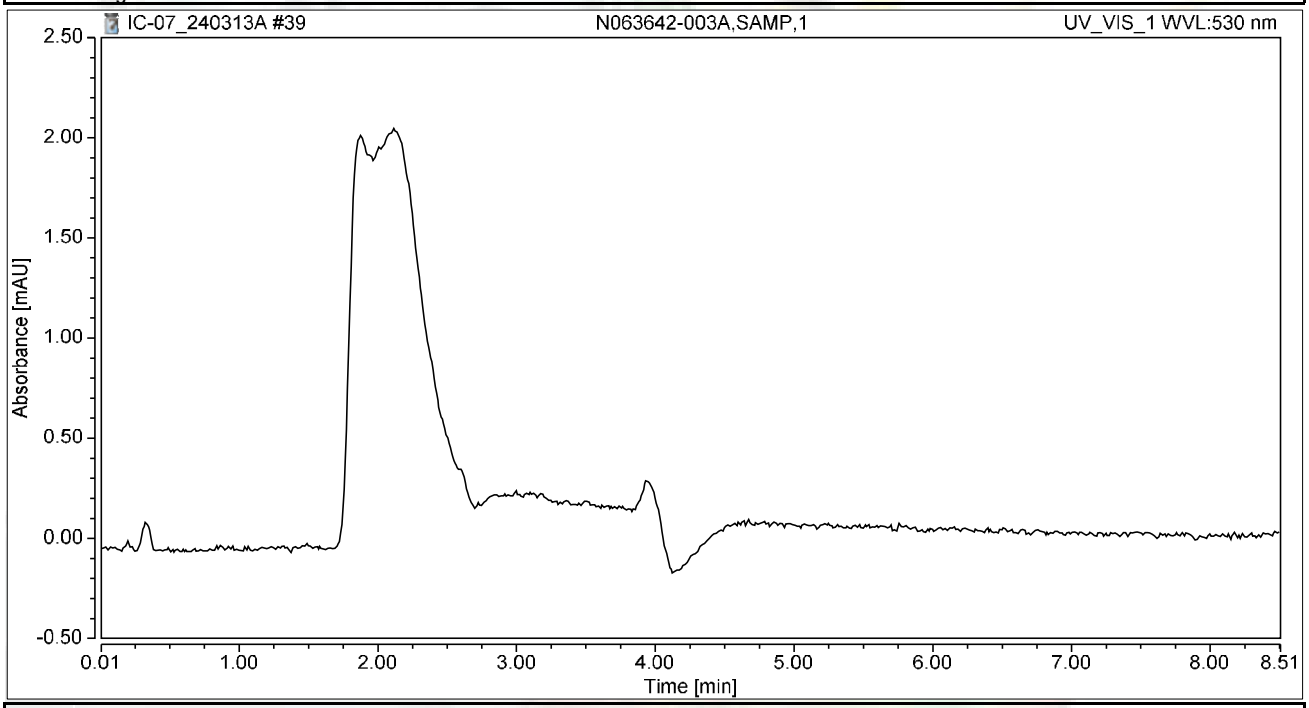
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.481	2.767	100.00	100.00	2.2579
Total:			**0.481**	**2.767**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 14:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

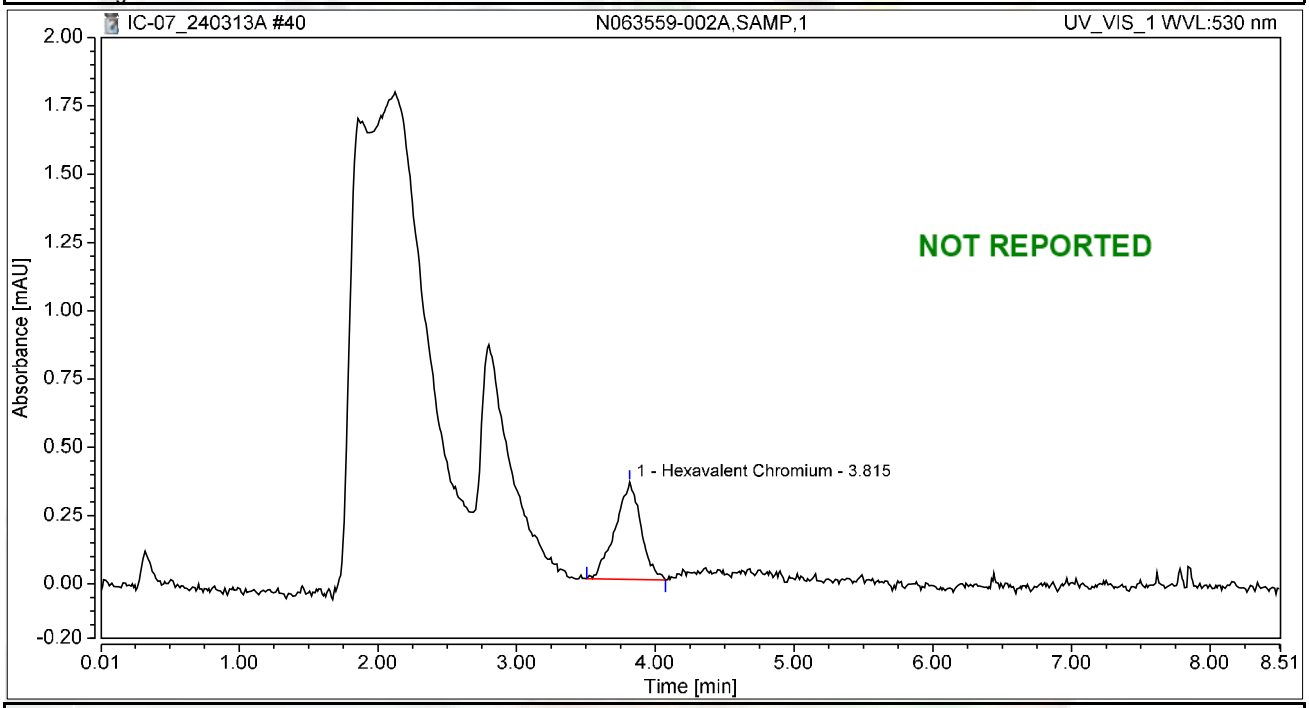
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 14:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

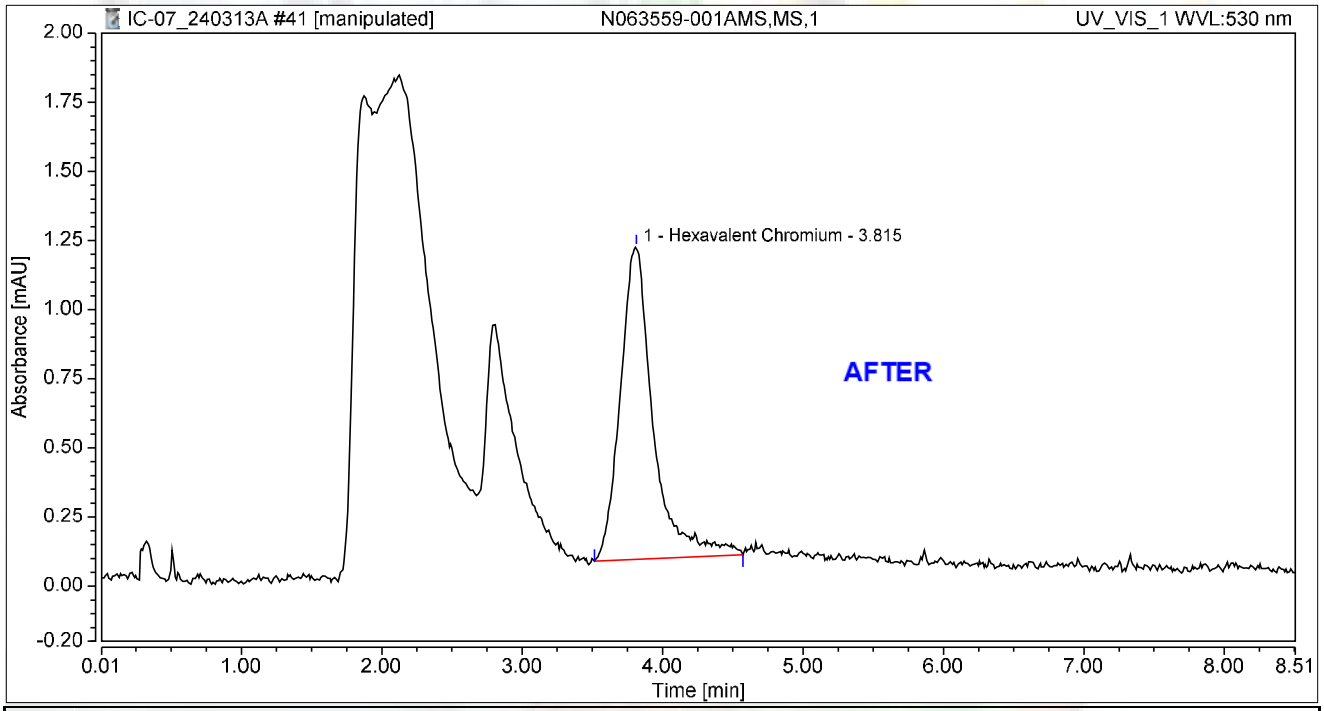
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	0.077	0.357	100.00	100.00	0.3594
Total:			**0.077**	**0.357**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 14:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	0.306	1.130	100.00	100.00	1.4386
Total:			**0.306**	**1.130**	**100.00**	**100.00**	

Reviewed by:

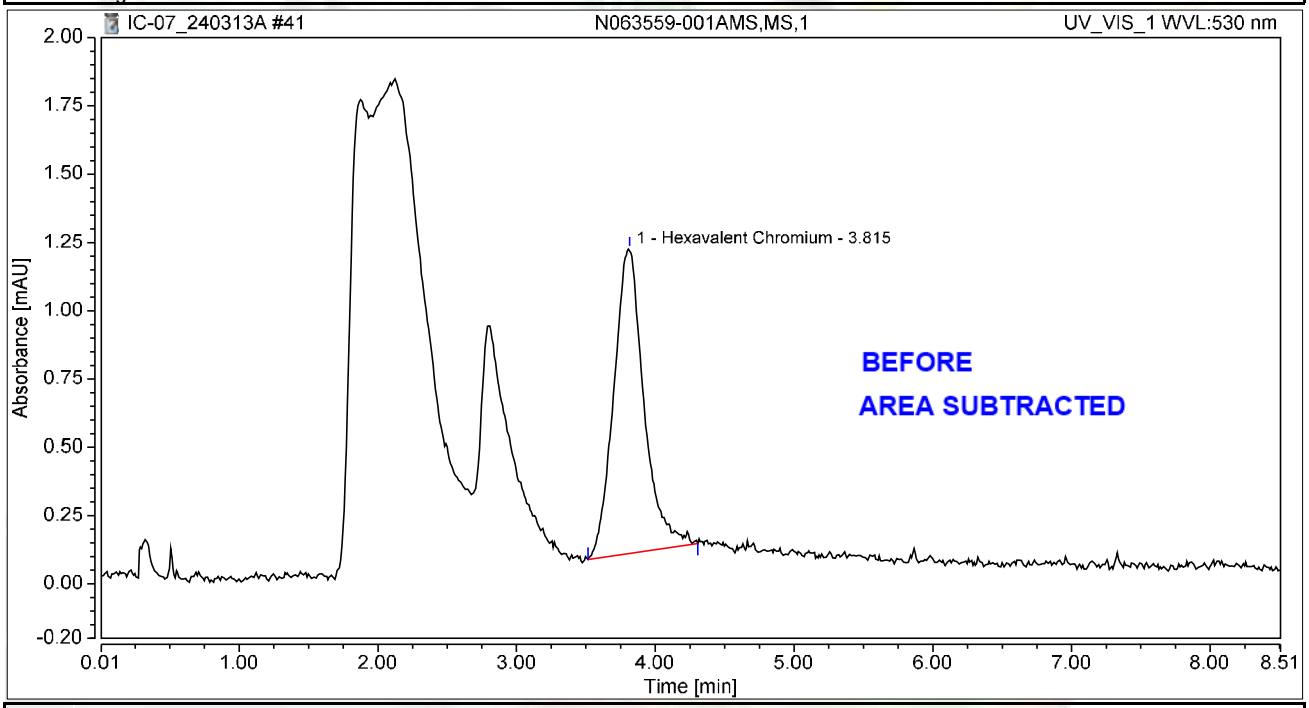
JRB 3/14/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063559-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 14:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

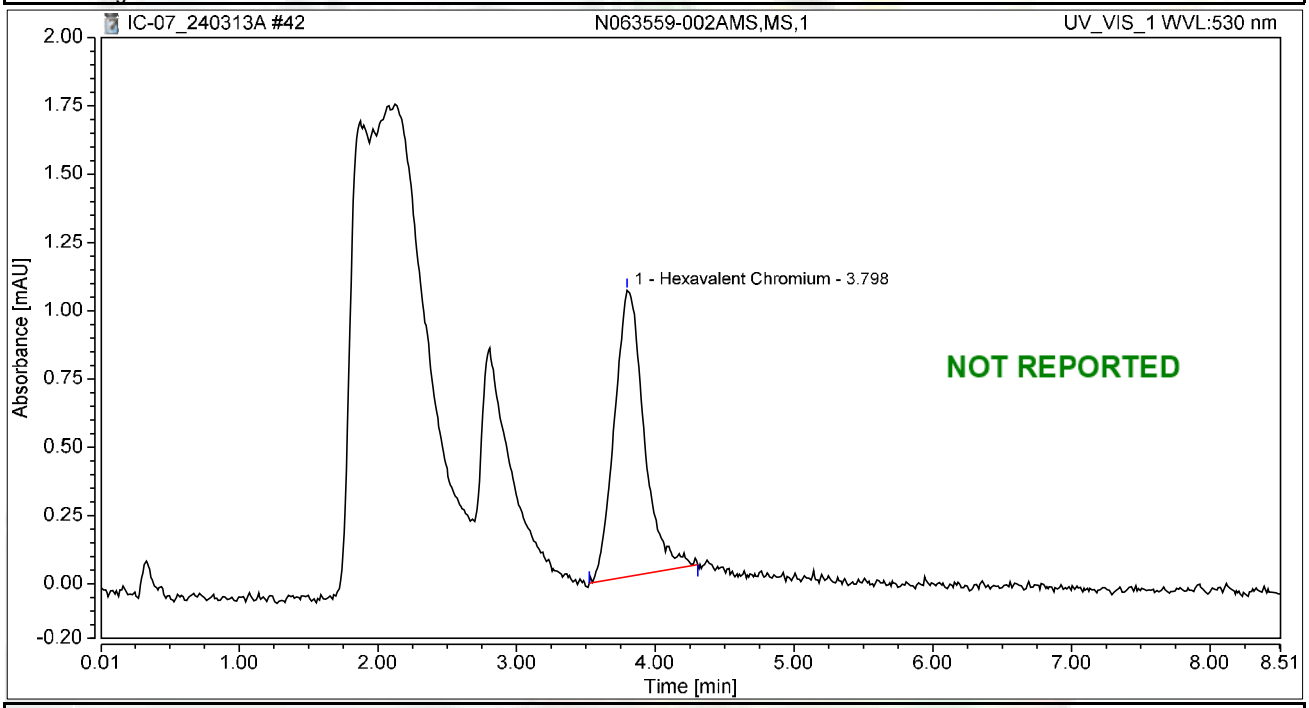
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	0.281	1.115	100.00	100.00	1.3216
Total:			**0.281**	**1.115**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 14:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

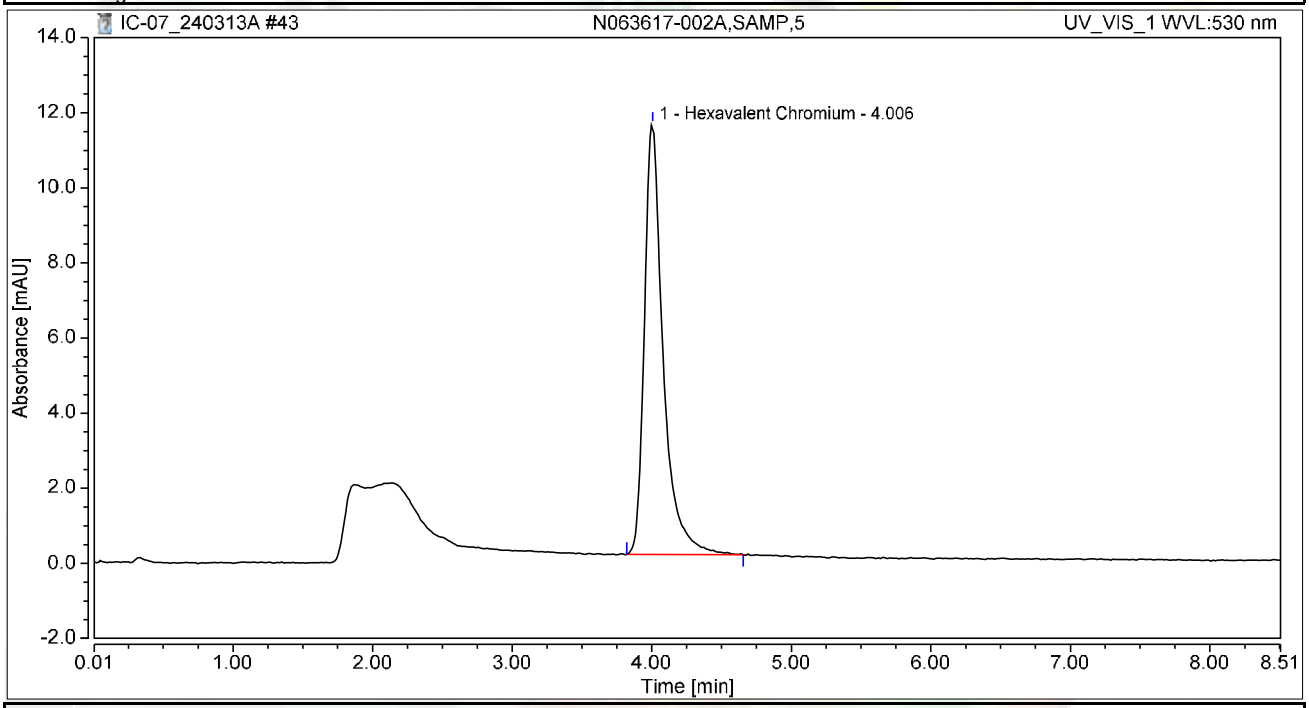
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.798	0.260	1.048	100.00	100.00	1.2225
Total:			**0.260**	**1.048**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 14:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

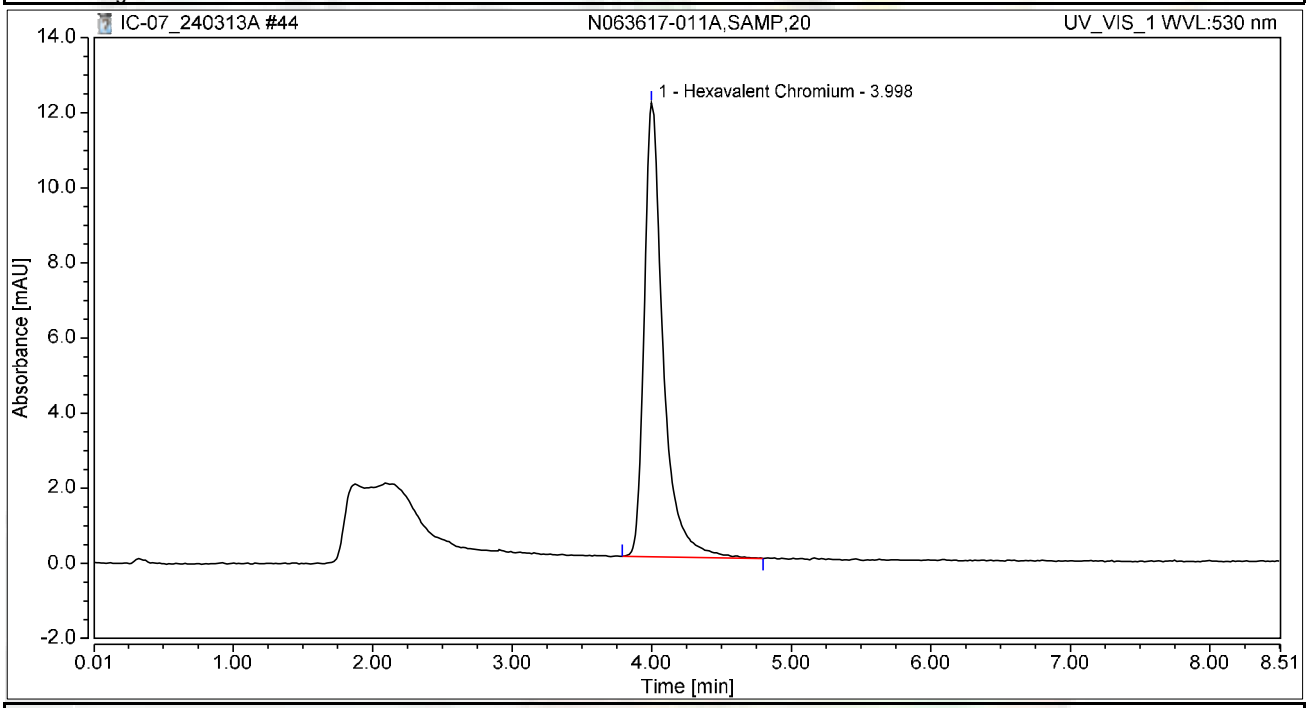
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.789	11.455	100.00	100.00	8.4033
Total:			**1.789**	**11.455**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-011A,SAMP,20**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 14:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

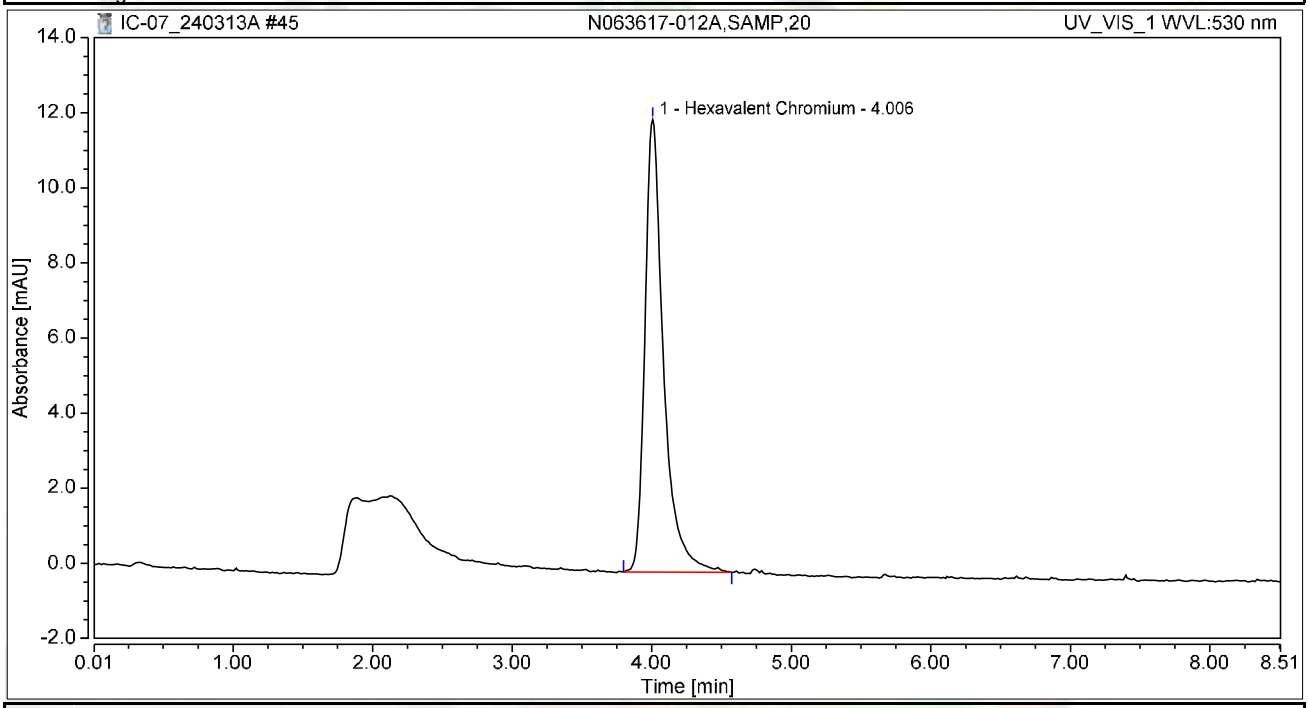
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	1.906	12.091	100.00	100.00	8.9538
Total:			**1.906**	**12.091**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-012A,SAMP,20**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 15:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

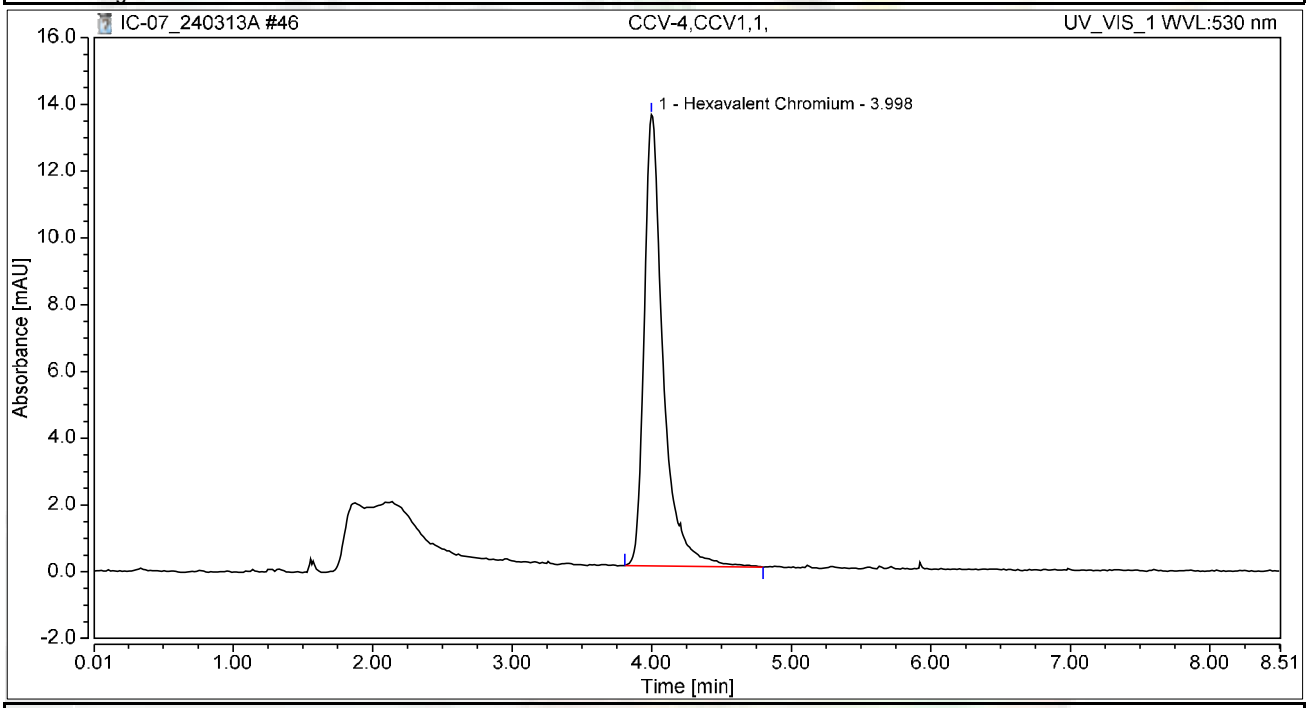
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.866	12.055	100.00	100.00	8.7688
Total:			**1.866**	**12.055**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 15:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

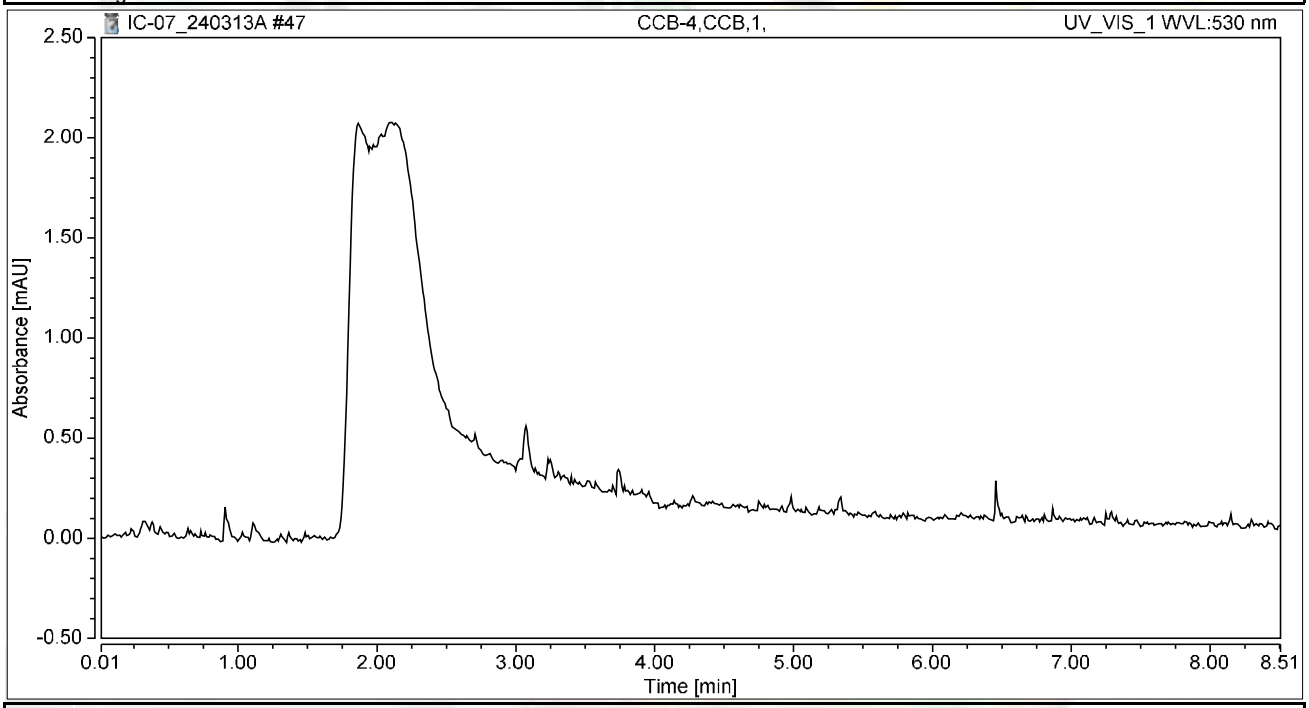
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	2.139	13.510	100.00	100.00	10.0495
Total:			**2.139**	**13.510**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 15:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

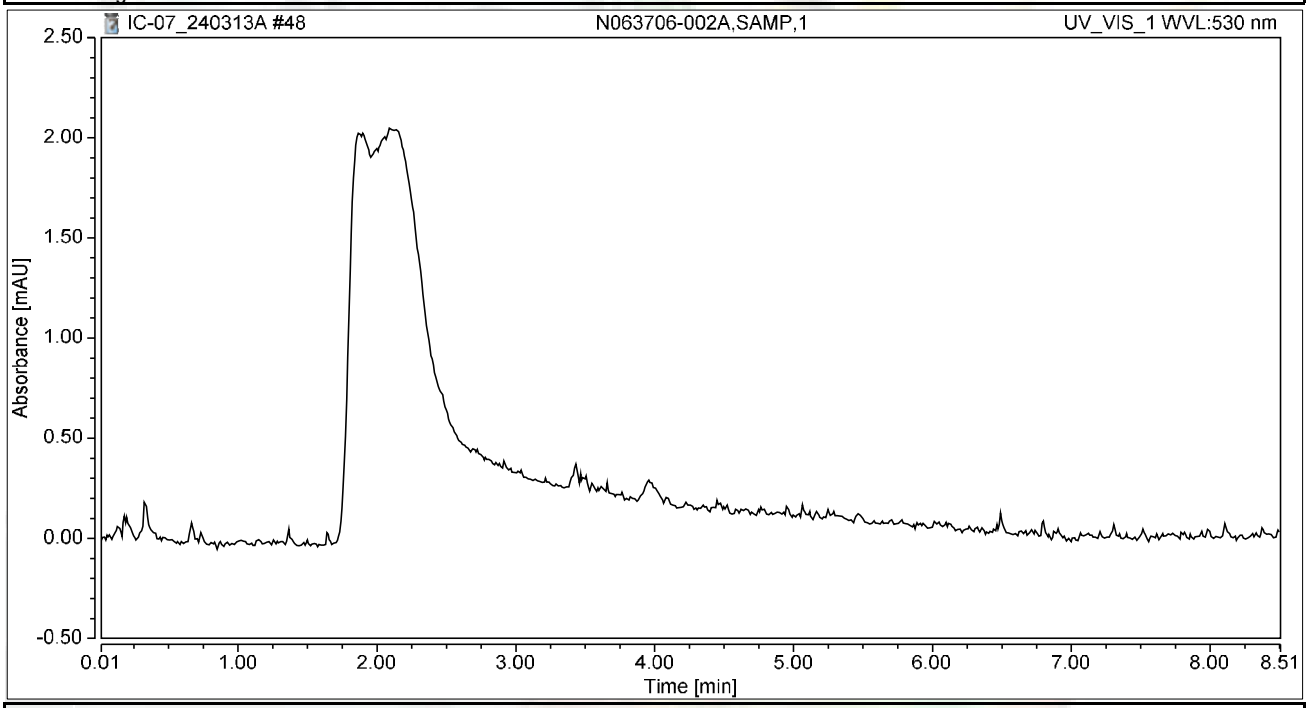
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063706-002A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 15:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

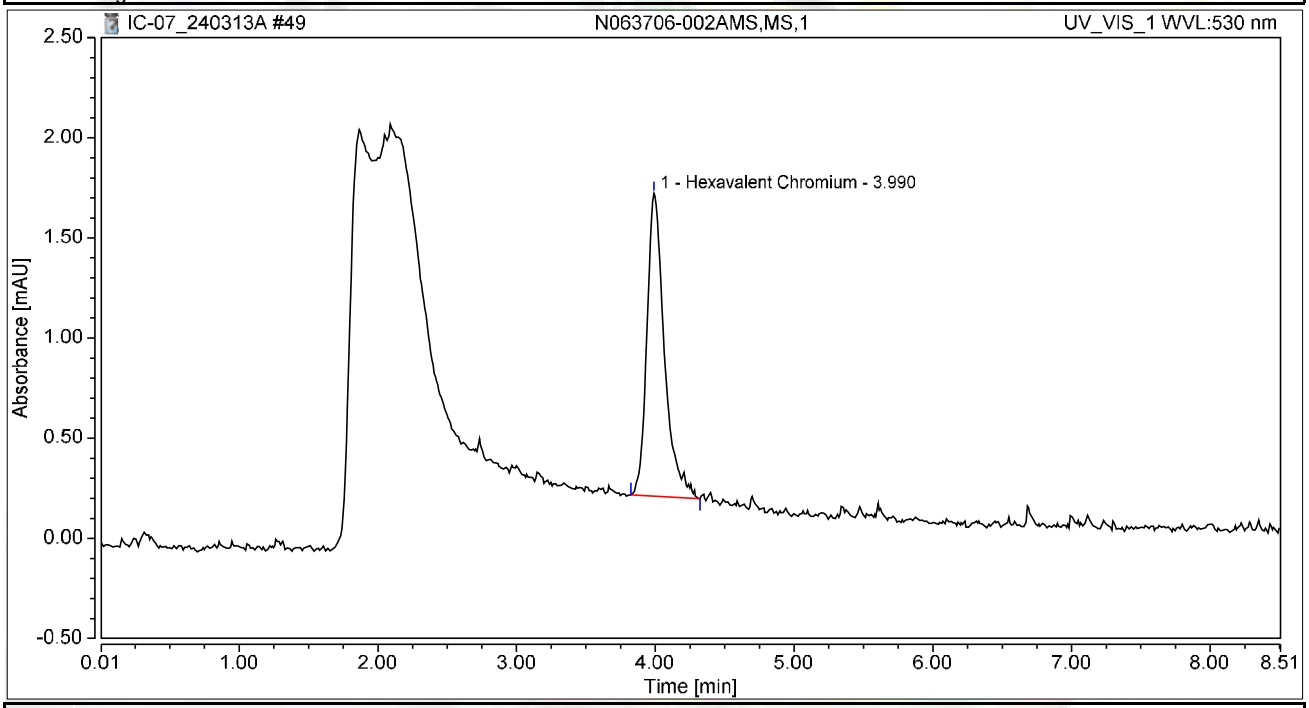
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063706-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 16:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

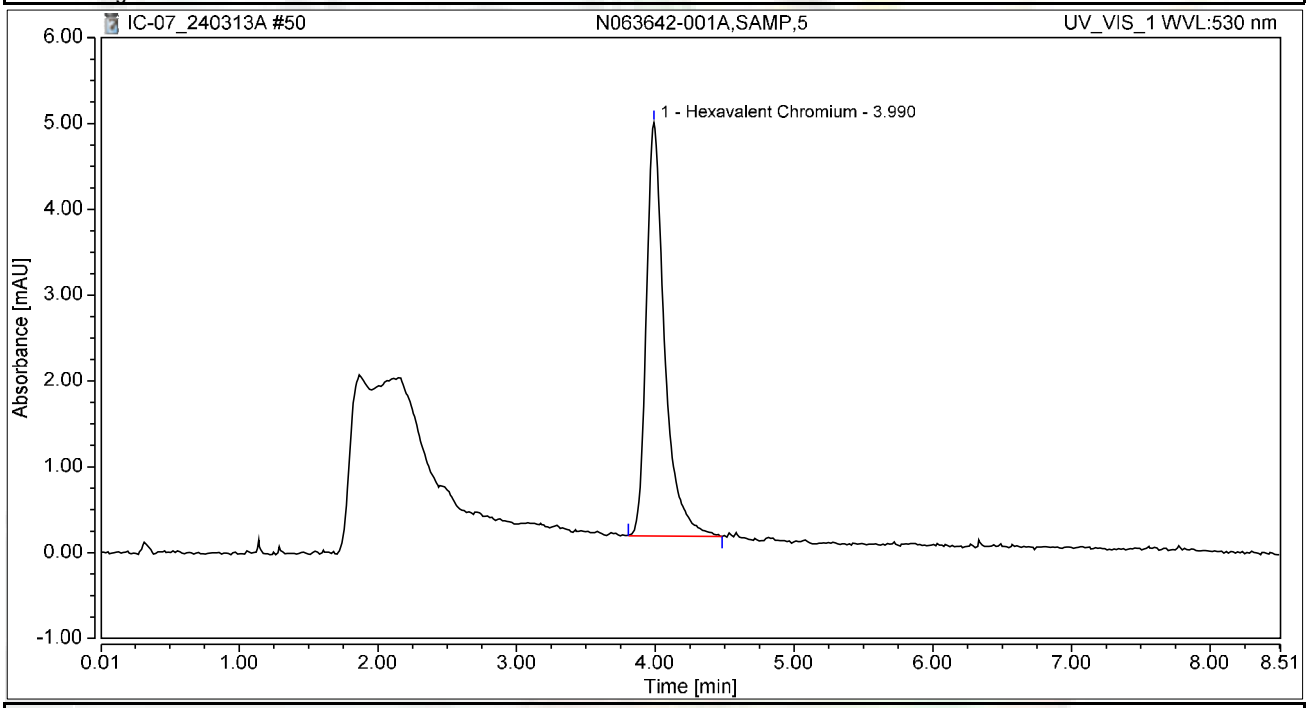
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.221	1.510	100.00	100.00	1.0380
Total:			**0.221**	**1.510**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 16:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

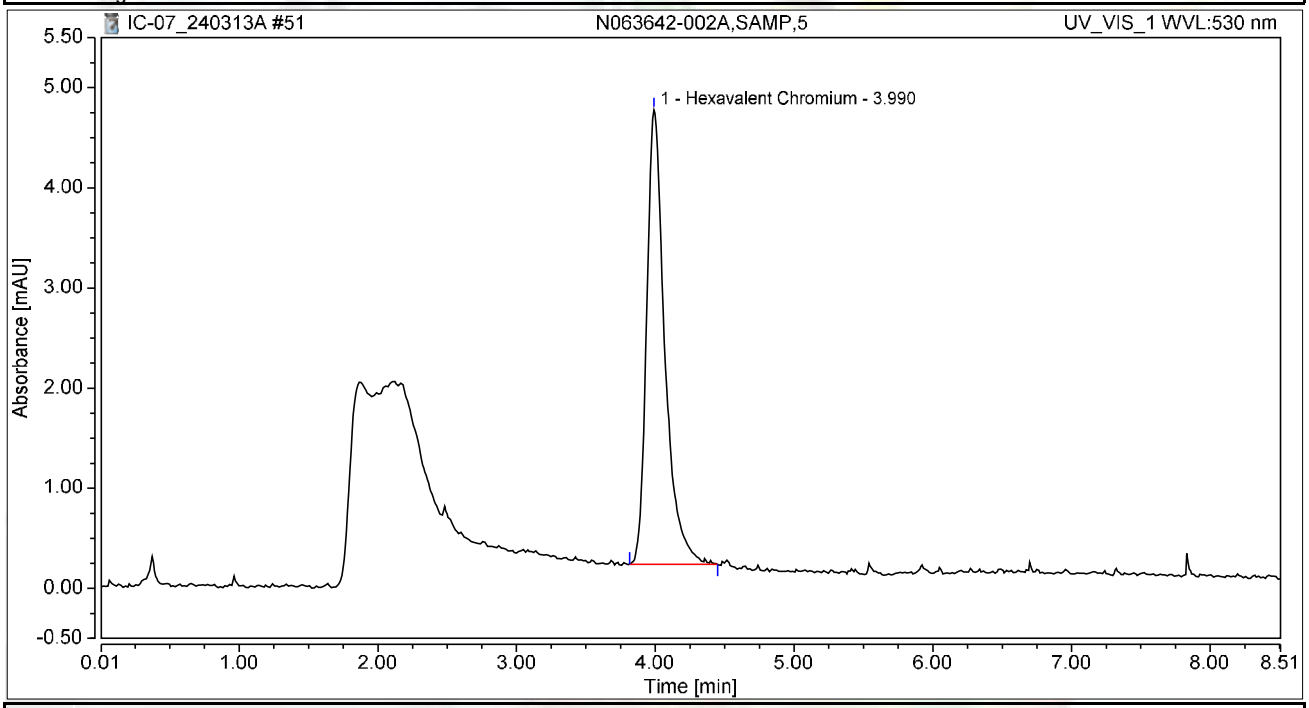
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.737	4.814	100.00	100.00	3.4638
Total:			**0.737**	**4.814**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 16:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

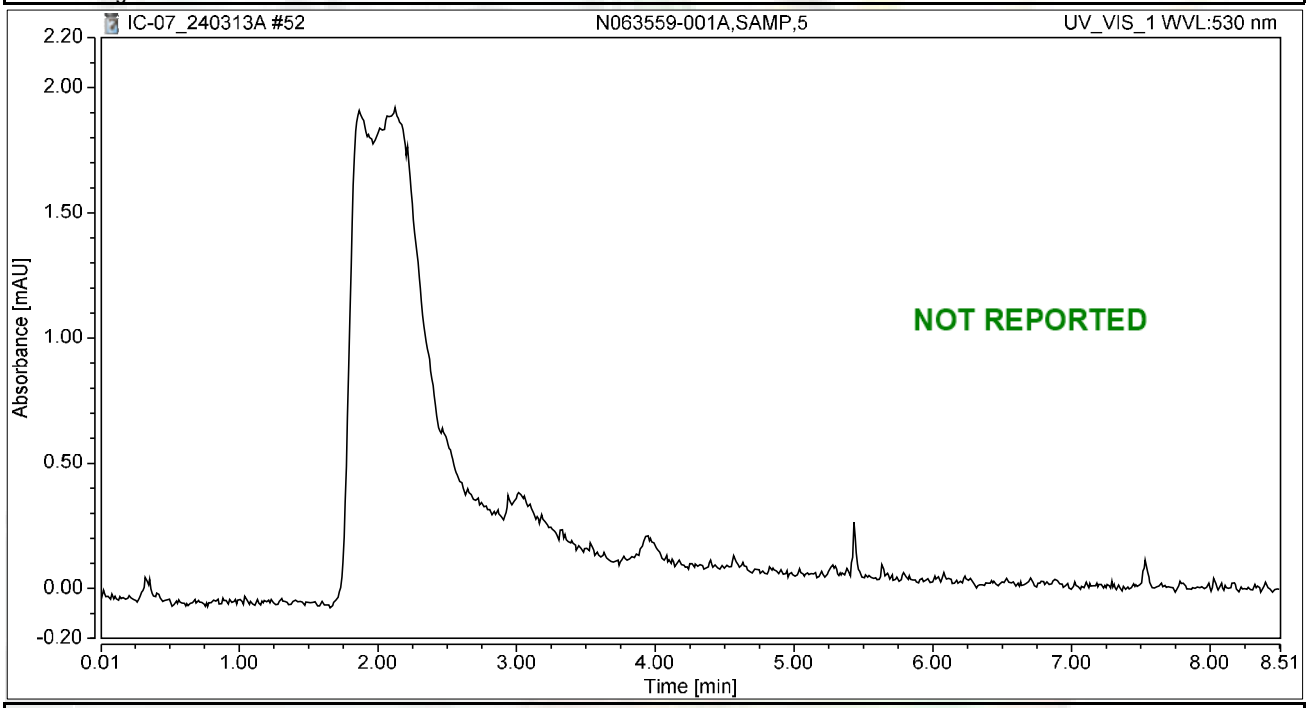
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.690	4.536	100.00	100.00	3.2414
Total:			**0.690**	**4.536**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 16:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

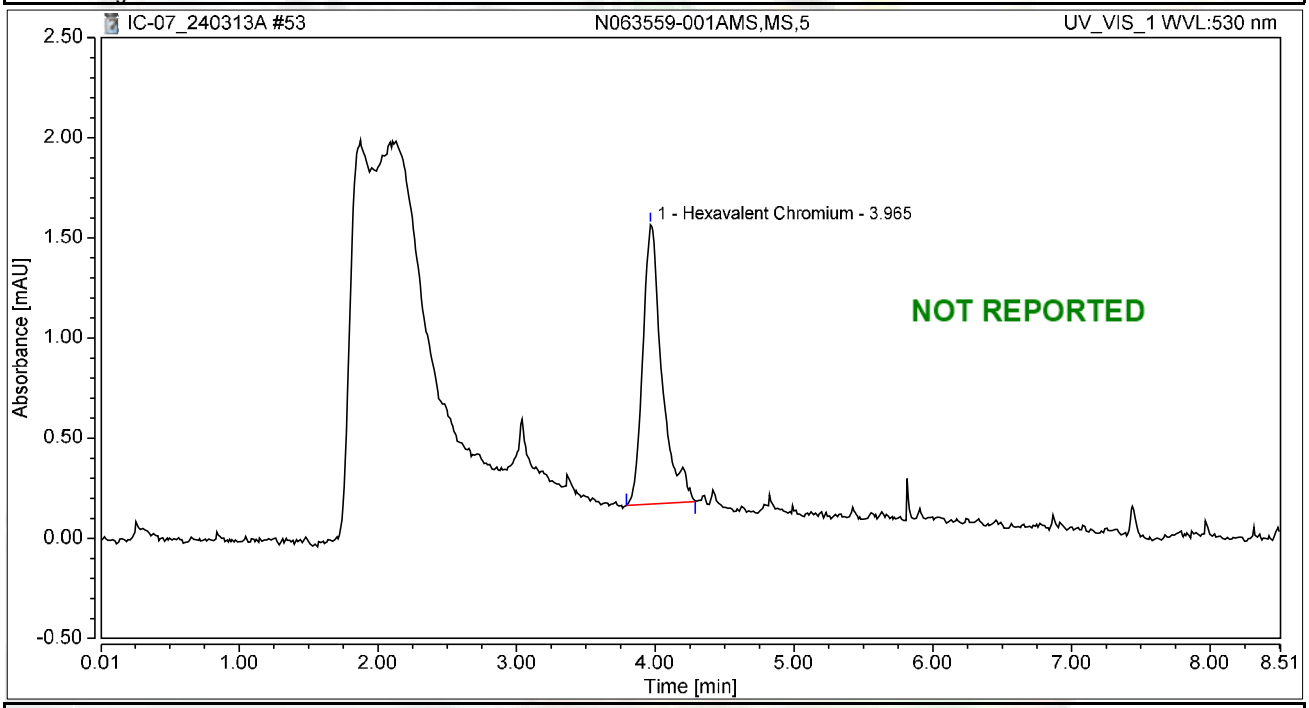
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 16:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

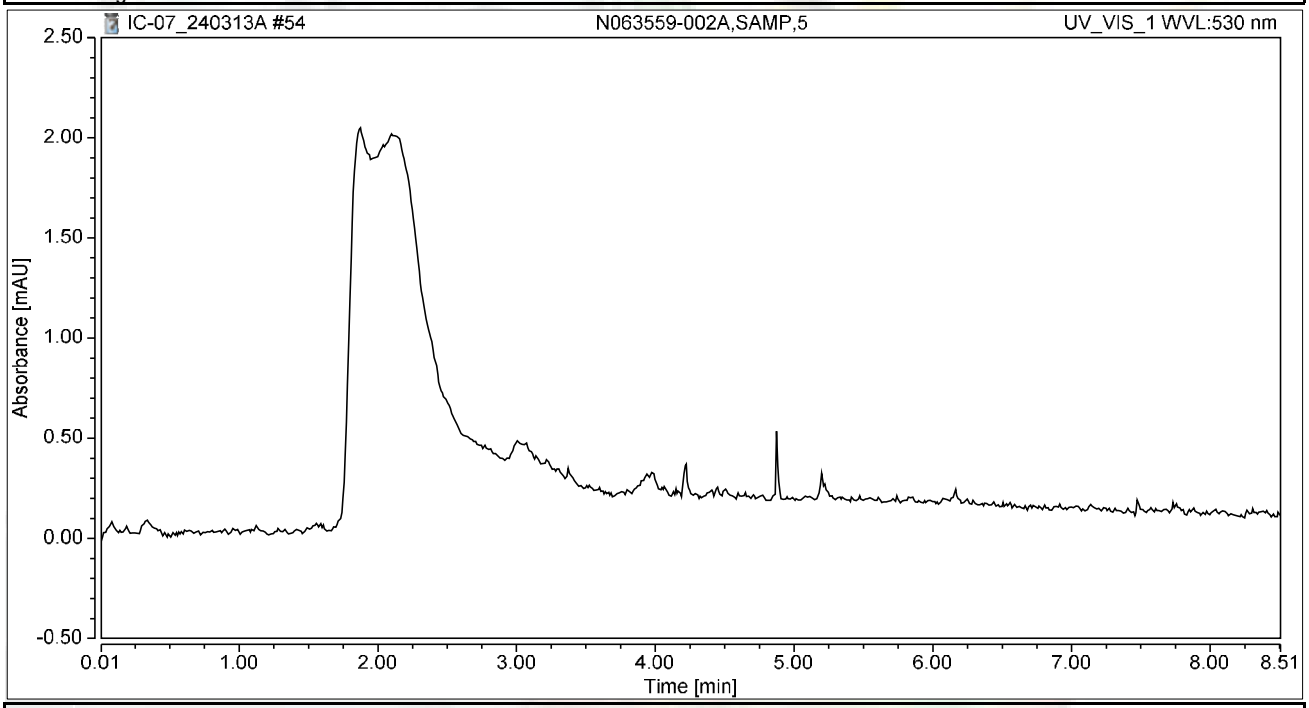
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.224	1.395	100.00	100.00	1.0533
Total:			**0.224**	**1.395**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 16:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

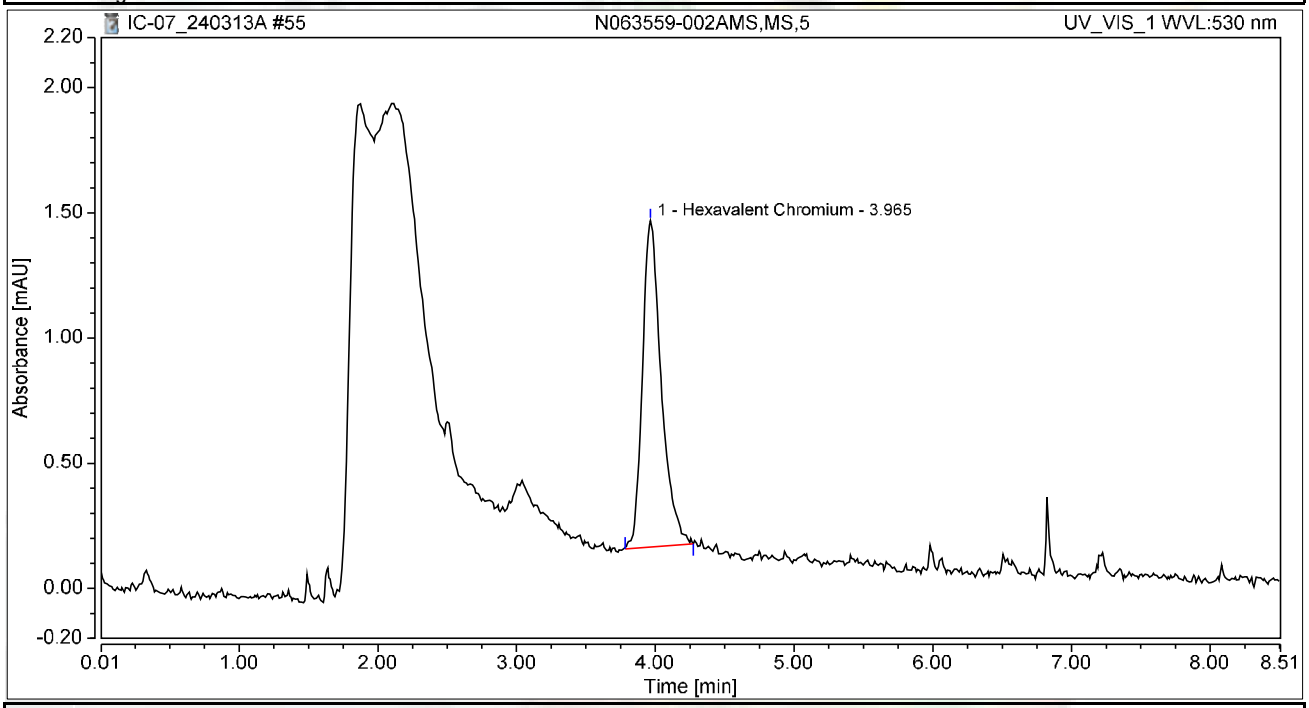
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 17:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

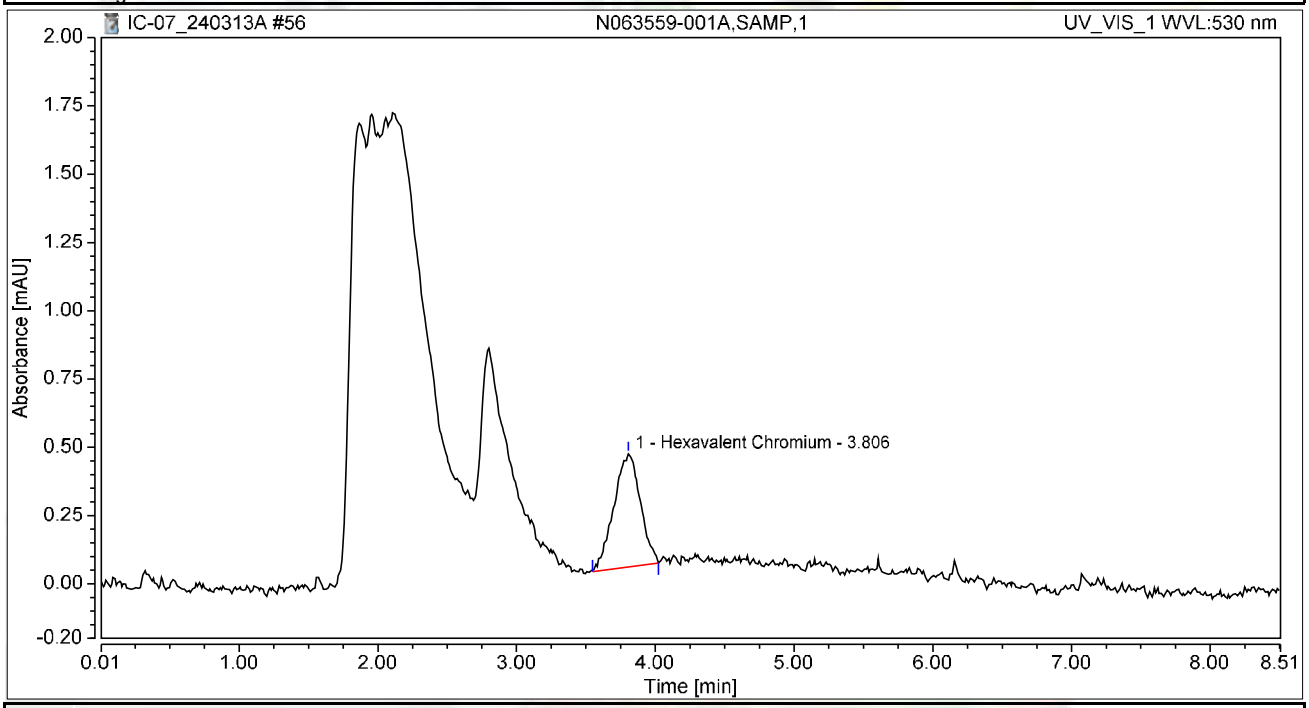
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.206	1.302	100.00	100.00	0.9660
Total:			**0.206**	**1.302**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 17:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

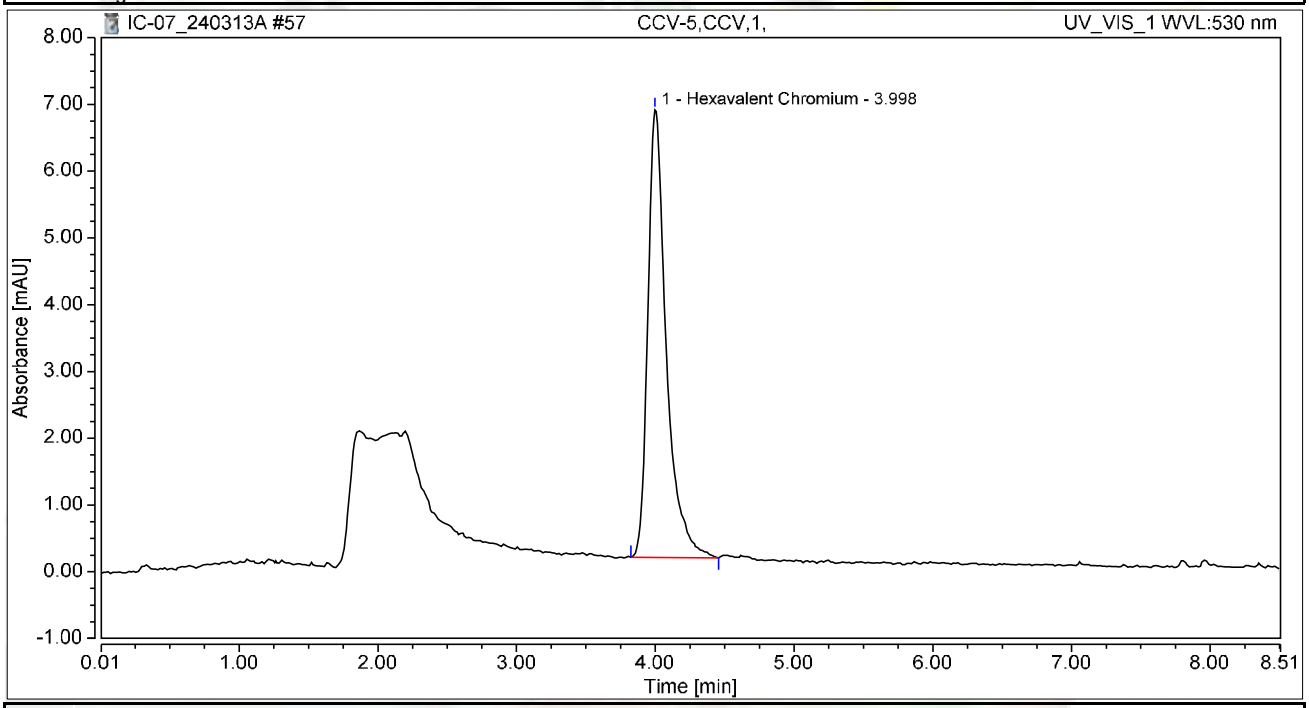
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.806	0.092	0.414	100.00	100.00	0.4311
Total:			**0.092**	**0.414**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 17:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

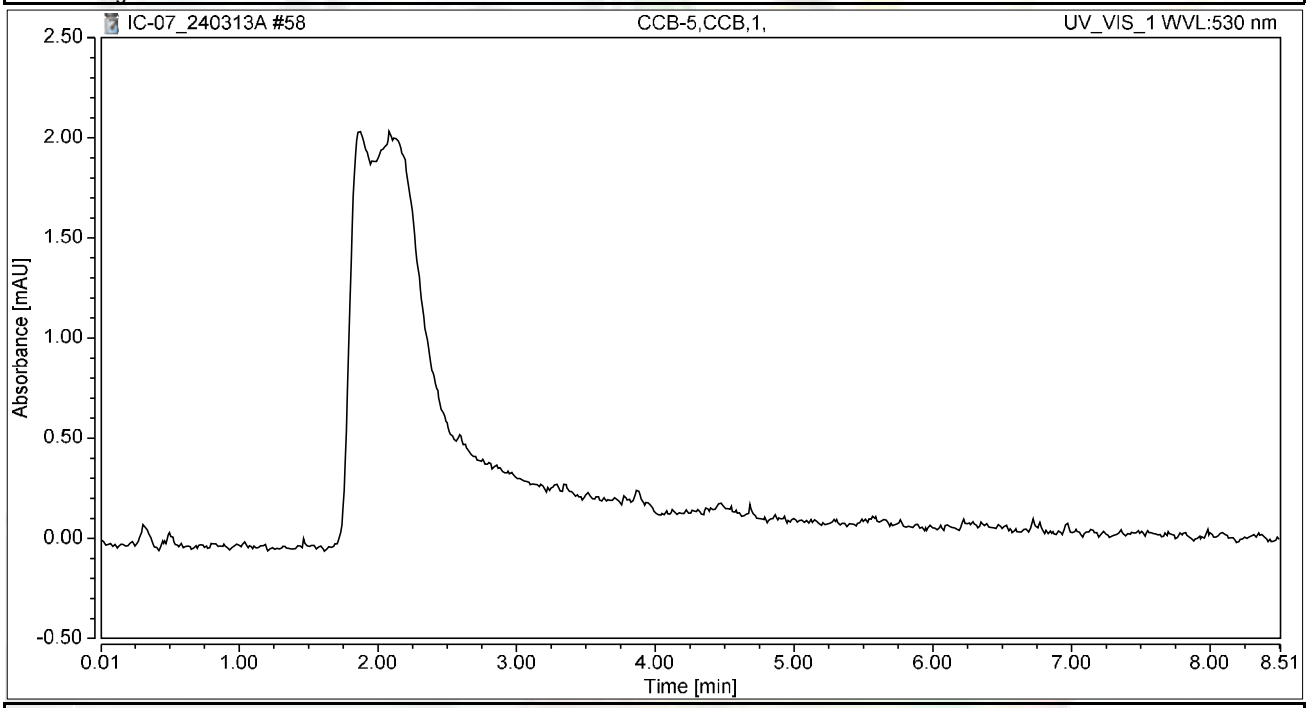
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	1.036	6.705	100.00	100.00	4.8696
Total:			**1.036**	**6.705**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 17:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

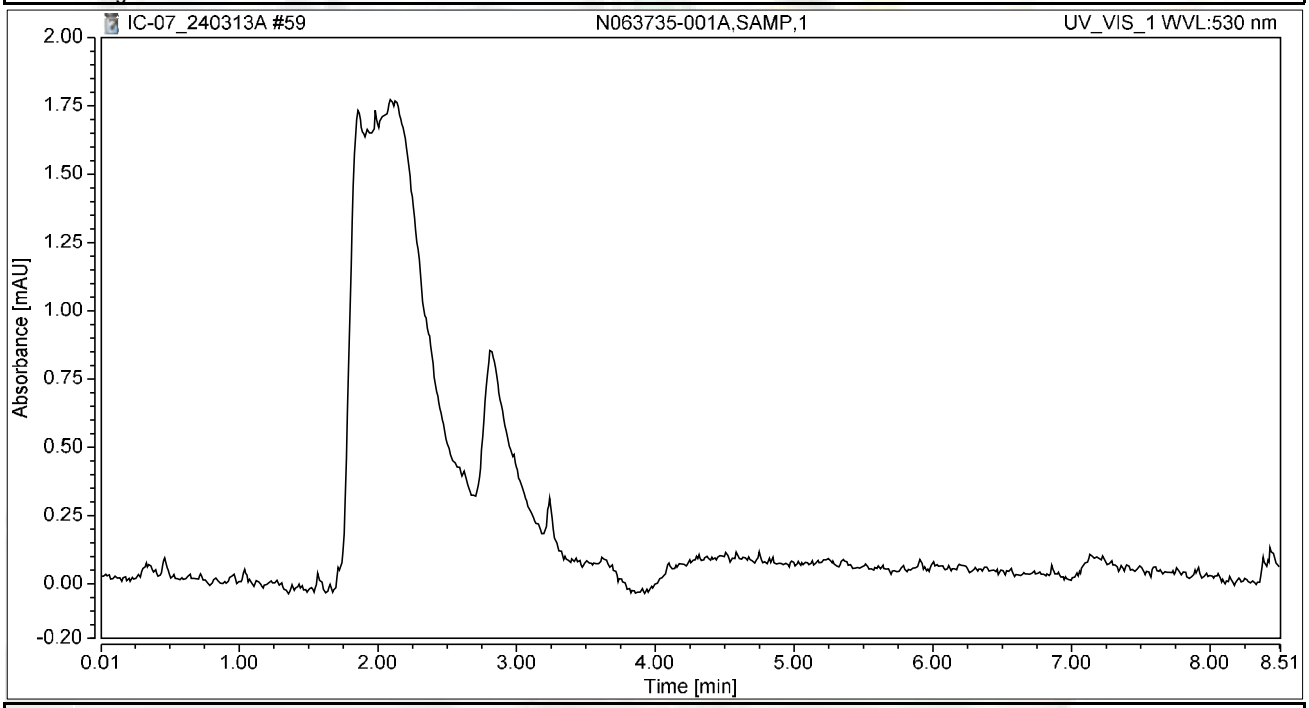
RB 3/14/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063735-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 17:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

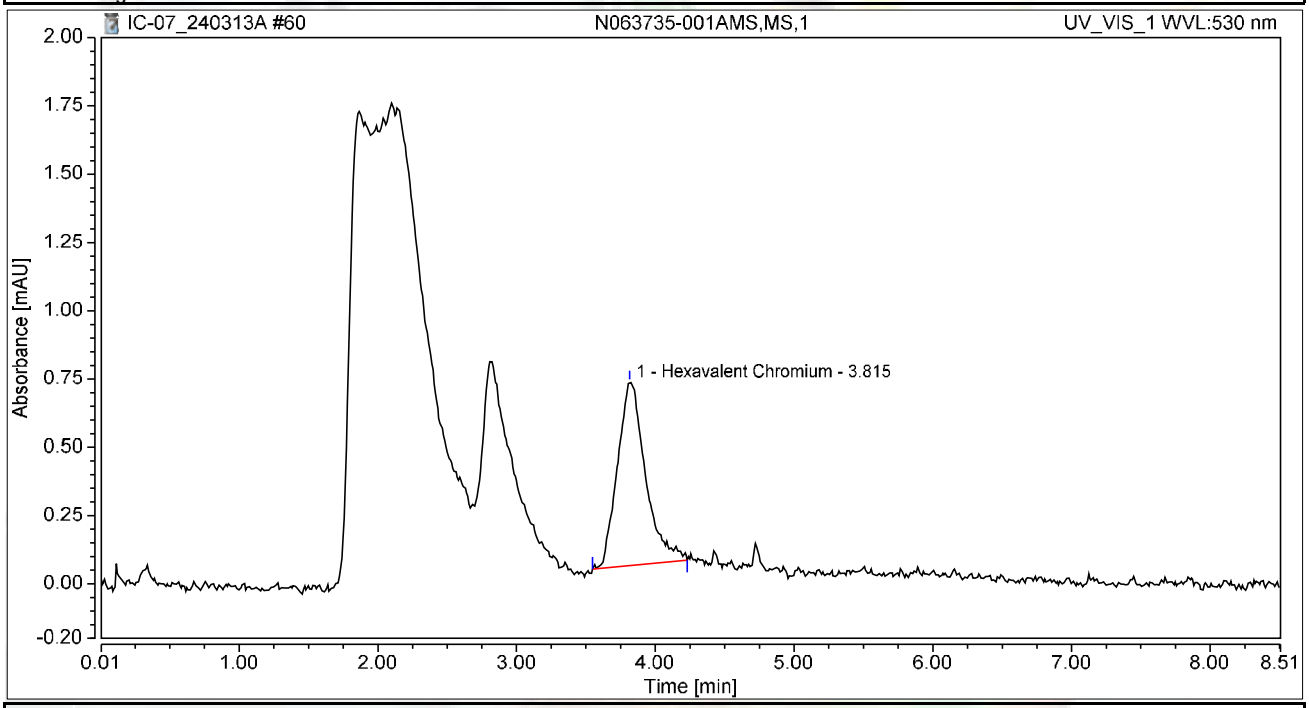
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 17:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

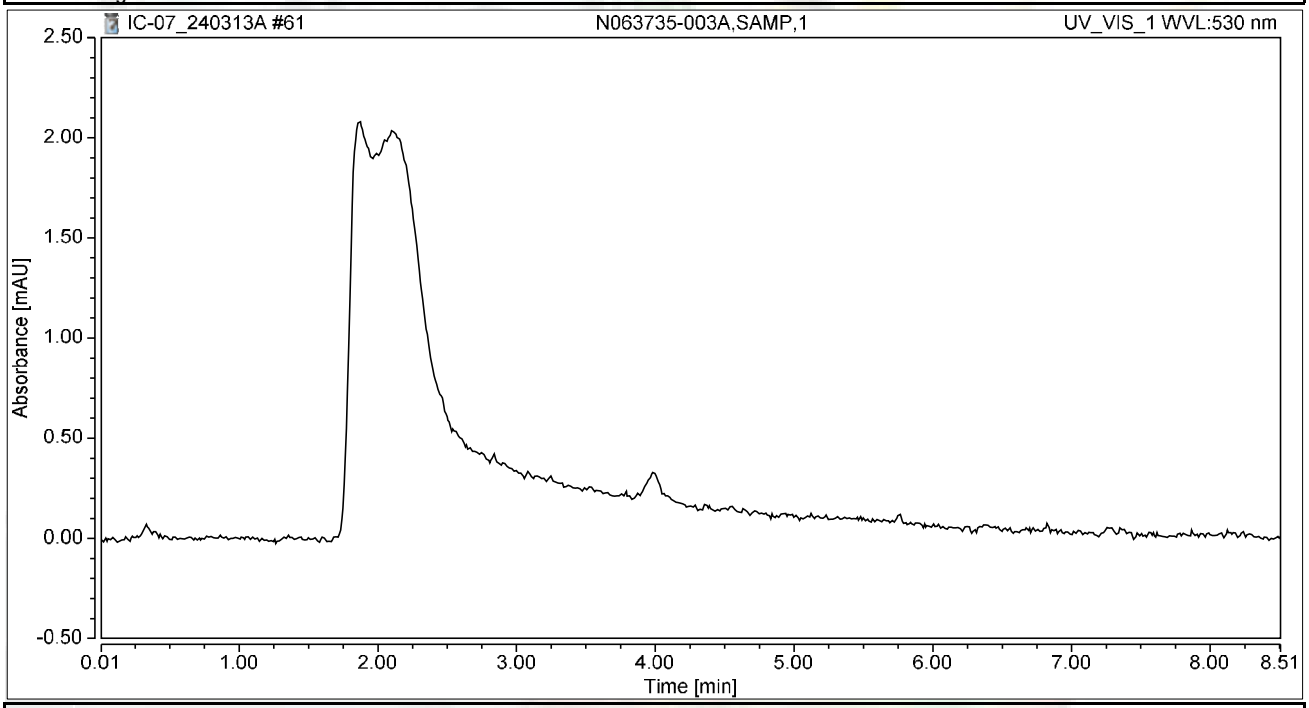
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	0.157	0.670	100.00	100.00	0.7396
Total:			**0.157**	**0.670**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 18:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

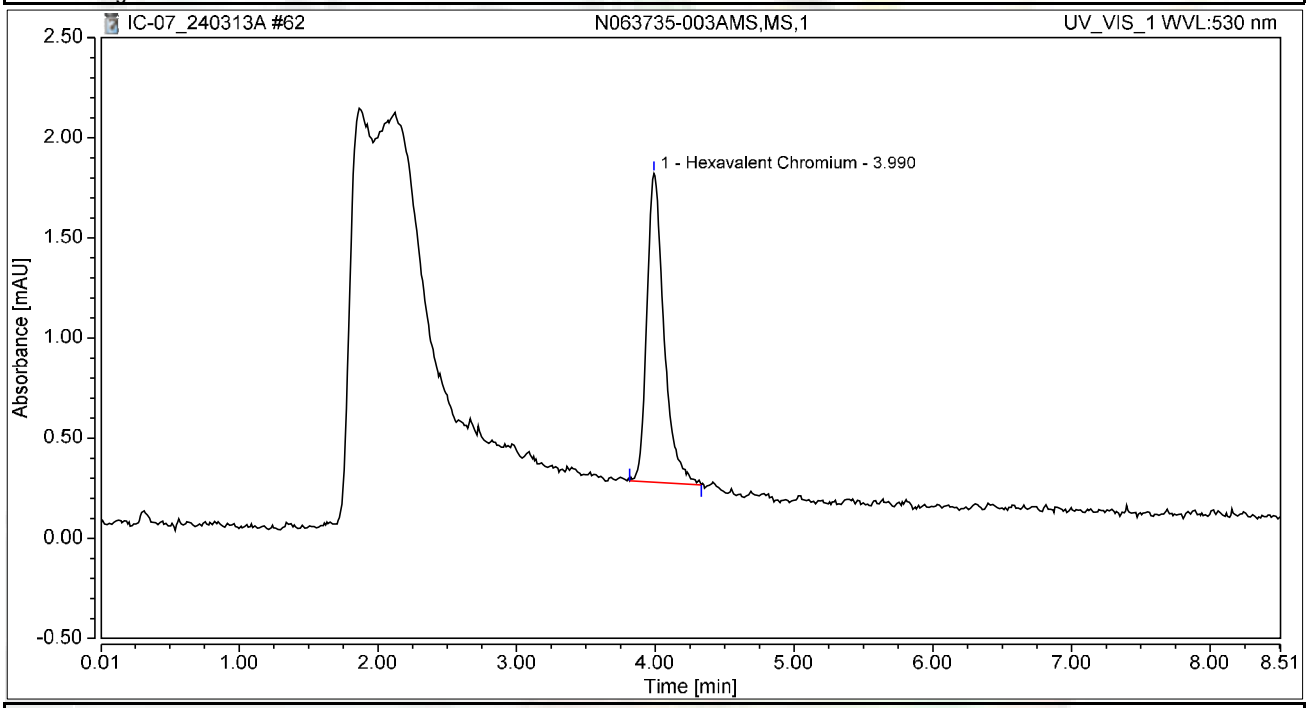
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 18:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

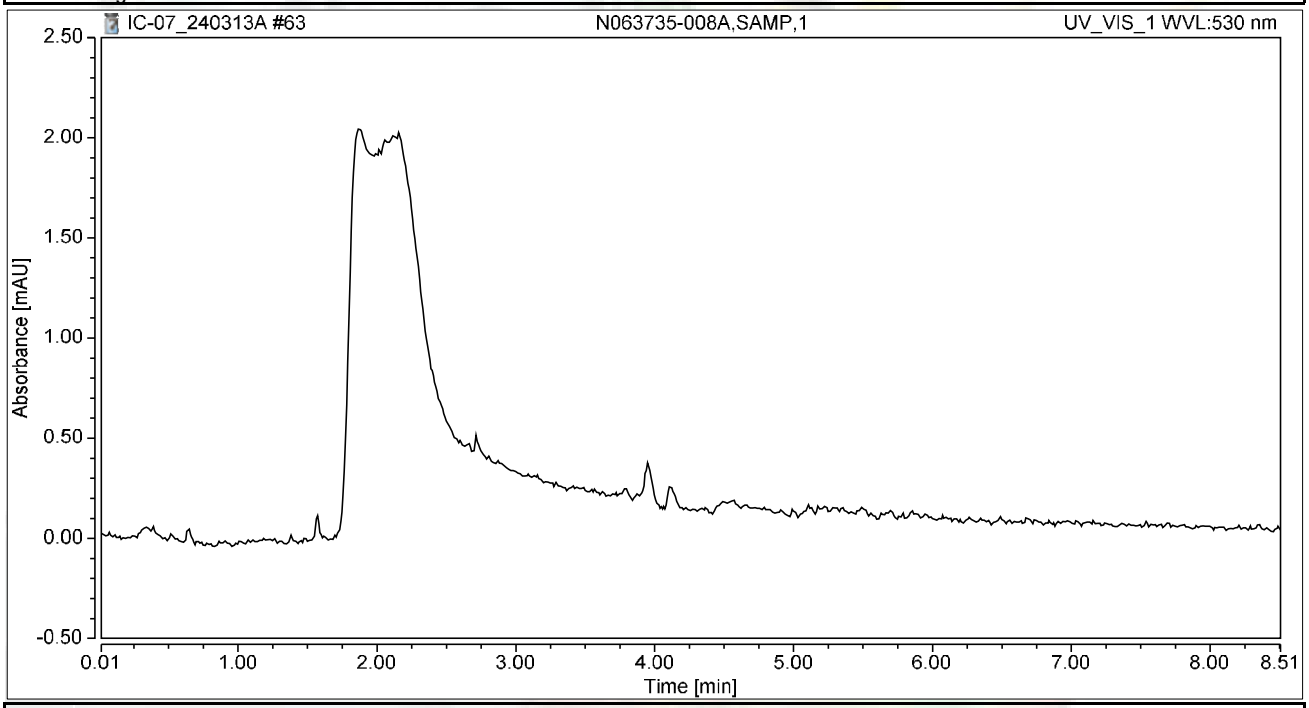
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.221	1.541	100.00	100.00	1.0390
Total:			**0.221**	**1.541**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-008A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 18:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

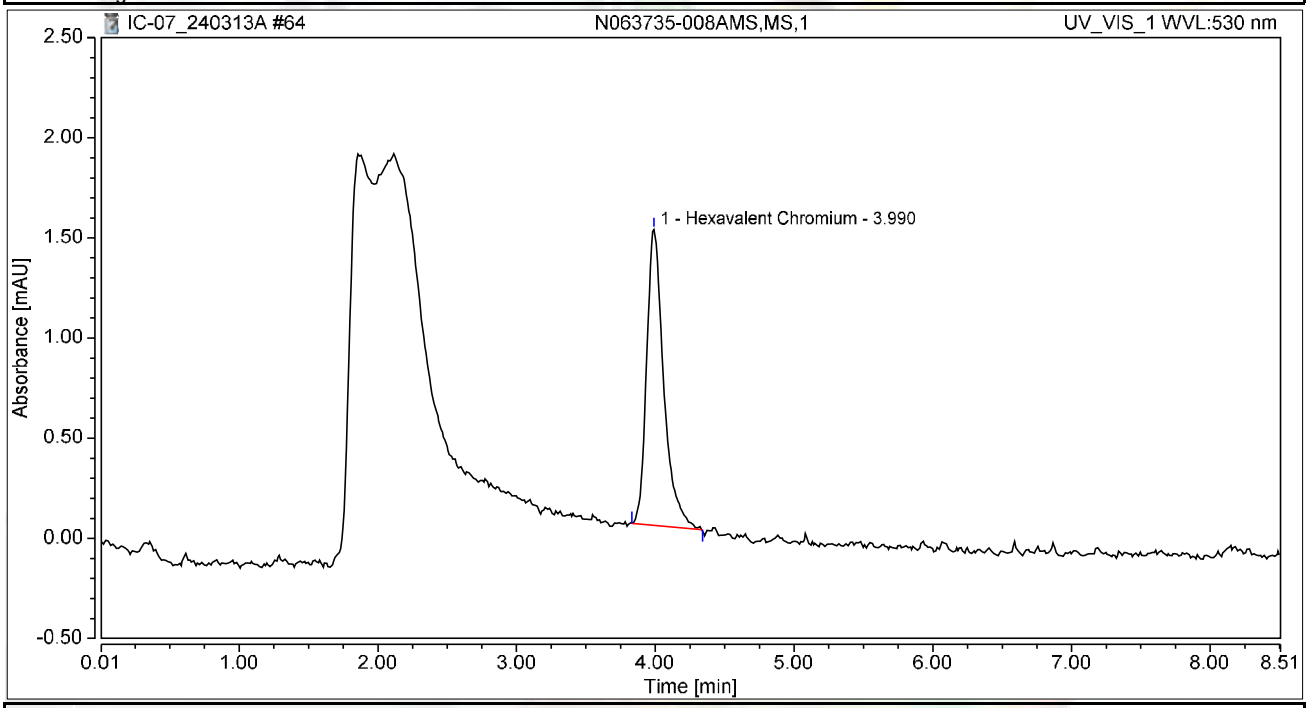
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 18:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

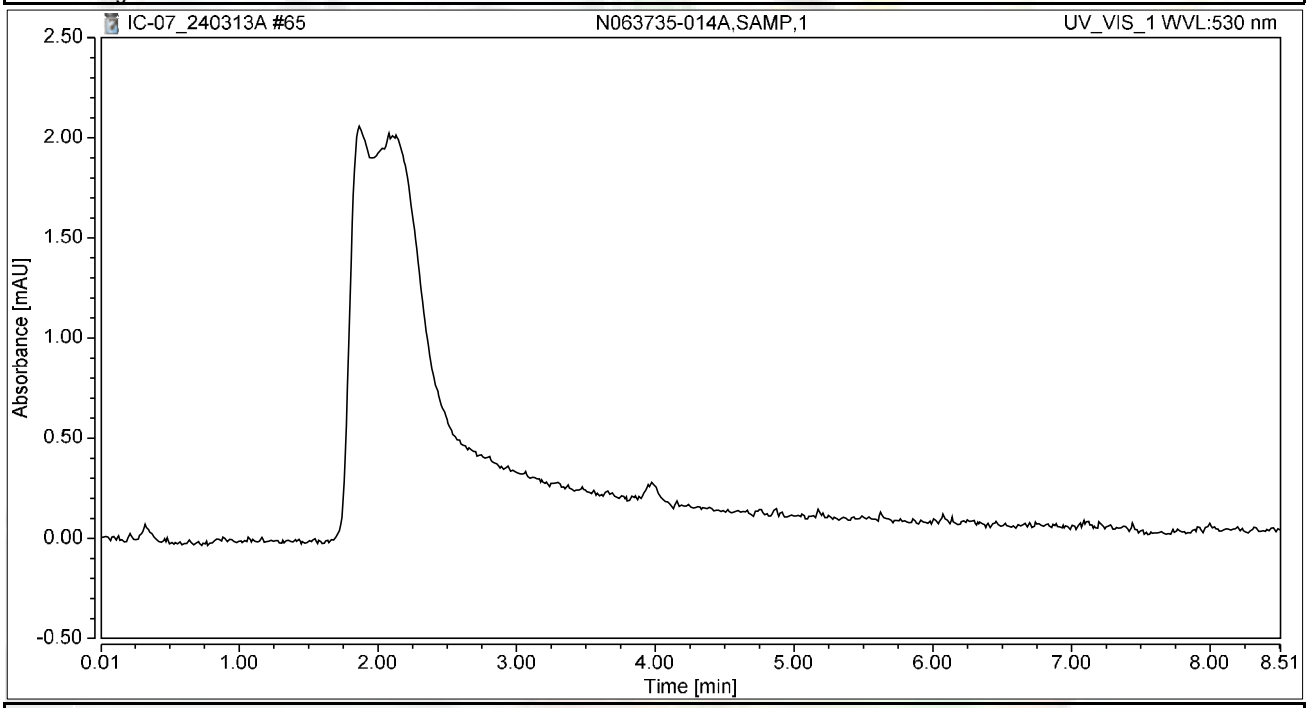
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.212	1.476	100.00	100.00	0.9957
Total:			**0.212**	**1.476**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-014A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 18:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

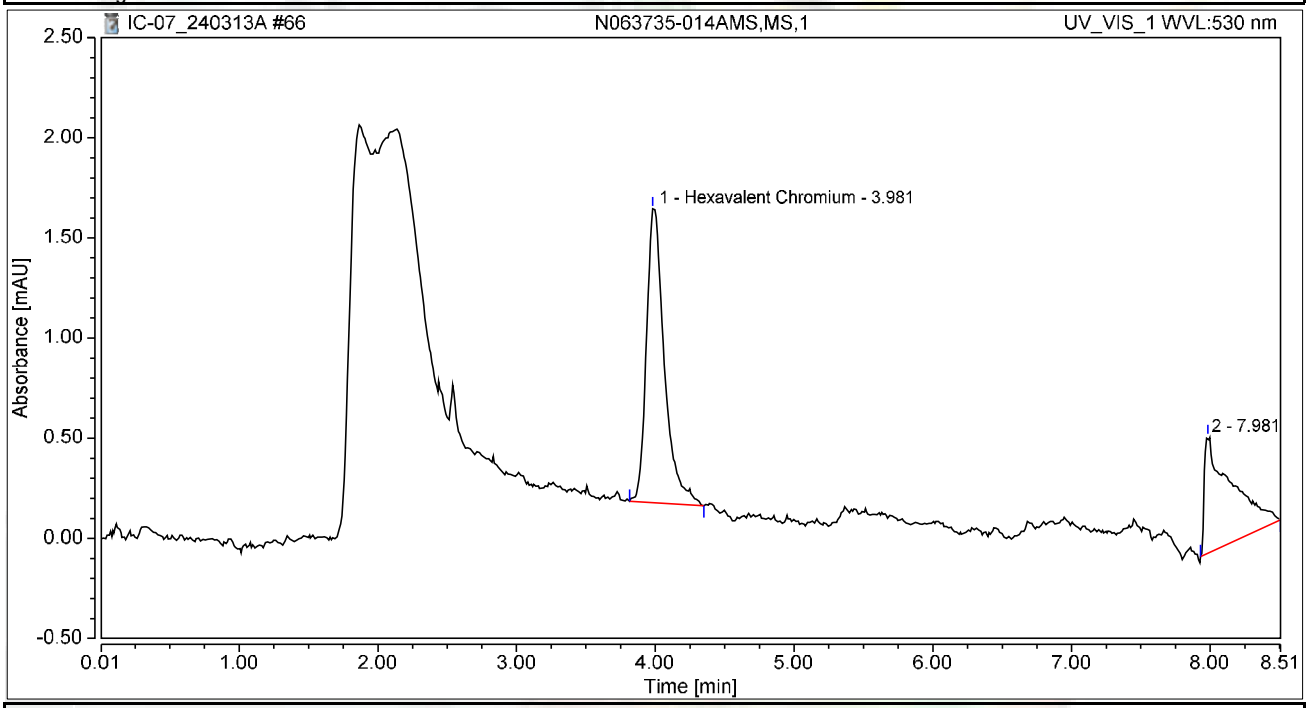
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-014AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 18:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

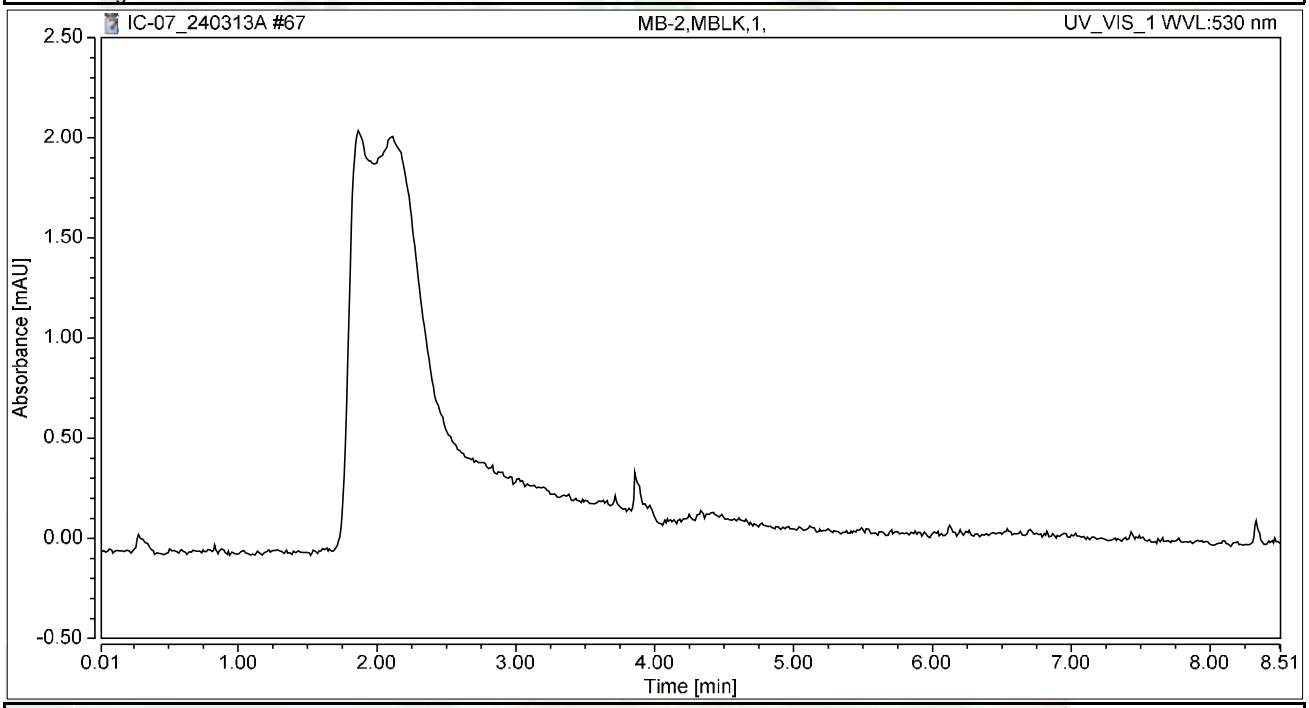
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.221	1.468	62.16	71.56	1.0379
2		7.981	0.134	0.584	37.84	28.44	n.a.
Total:			**0.355**	**2.052**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-2,MBLK,1,**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 18:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

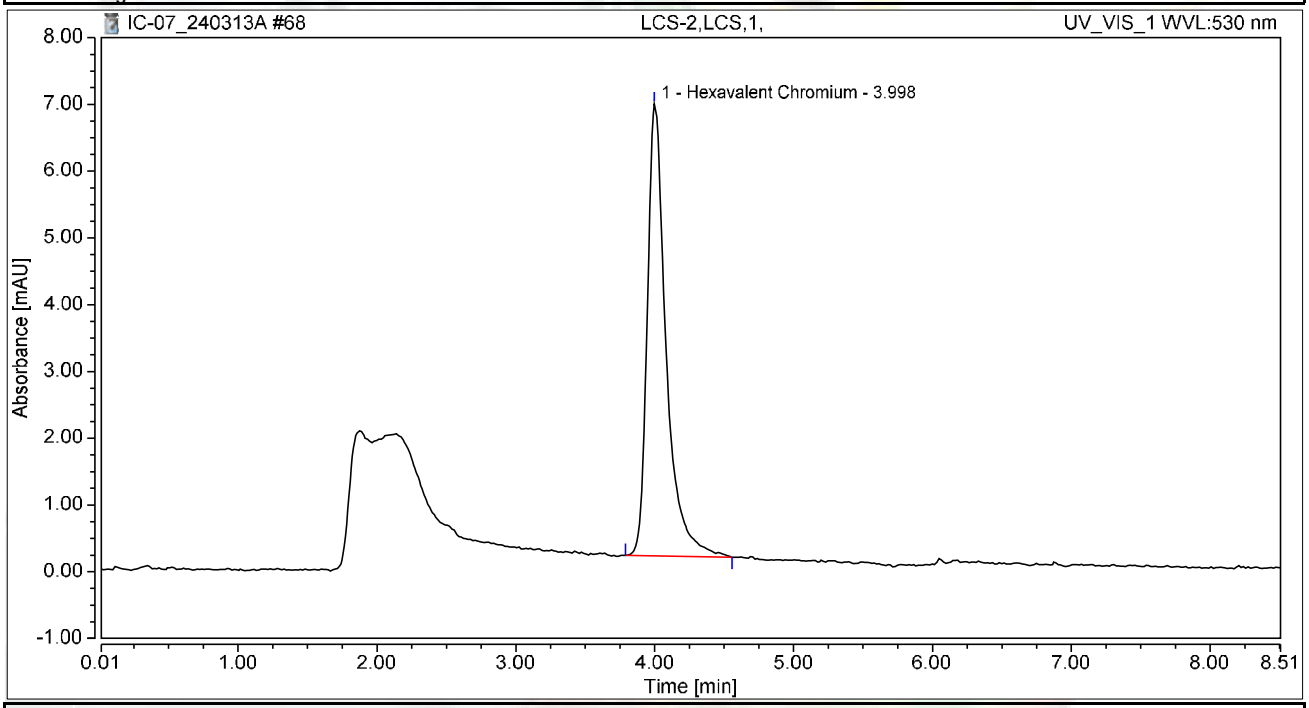
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-2,LCS,1,**	*Run Time (min):*	**8.49**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 19:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

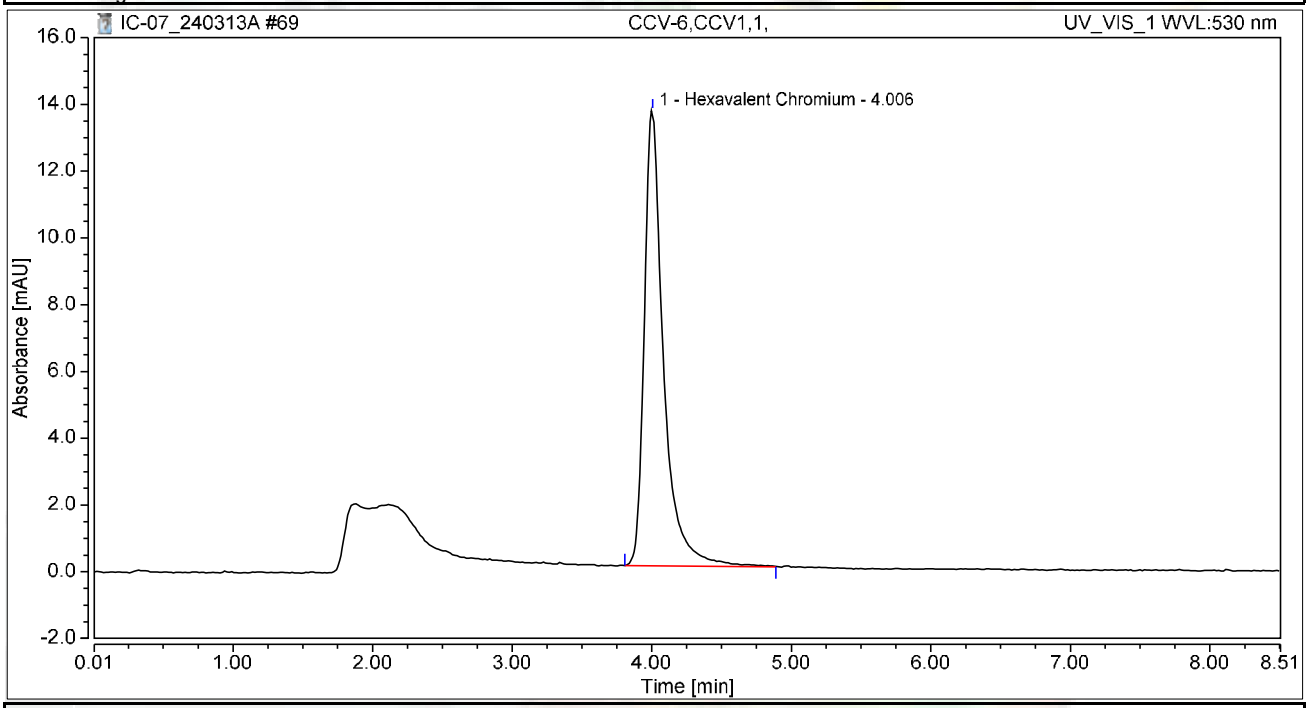
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	1.067	6.775	100.00	100.00	5.0143
Total:			**1.067**	**6.775**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 19:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

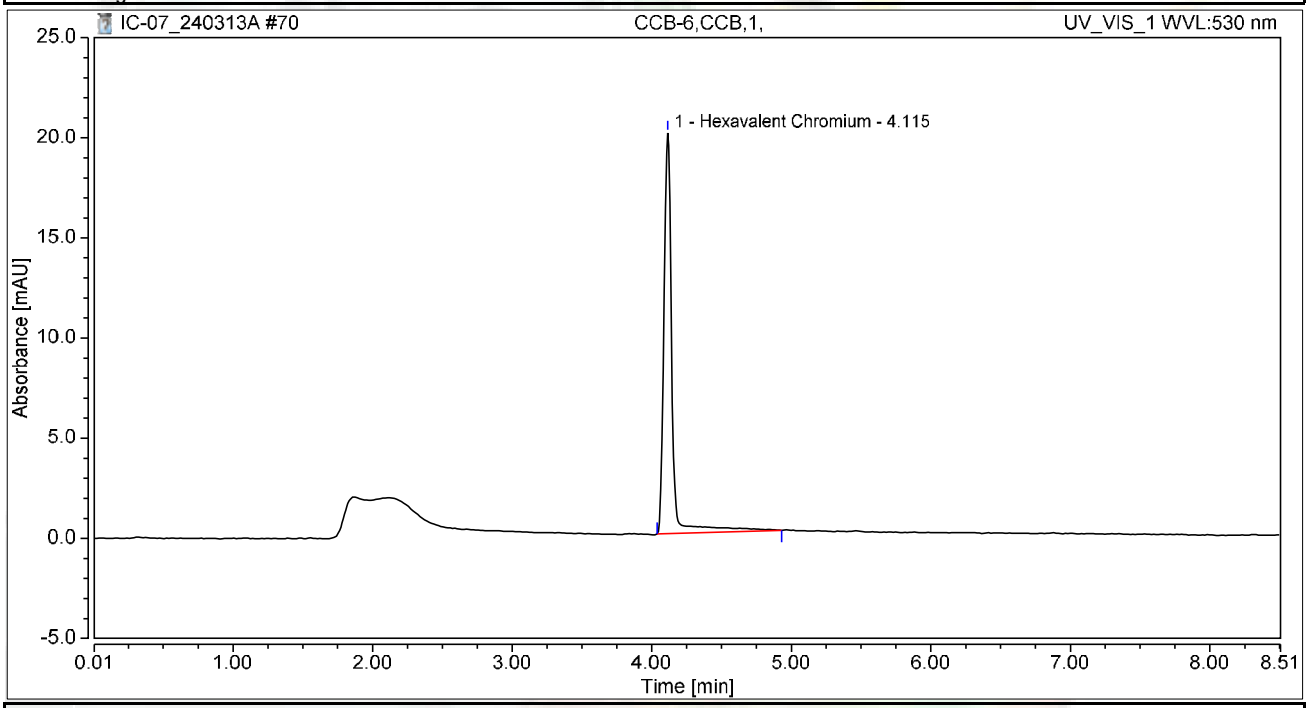
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	2.187	13.630	100.00	100.00	10.2763
Total:			**2.187**	**13.630**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 19:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

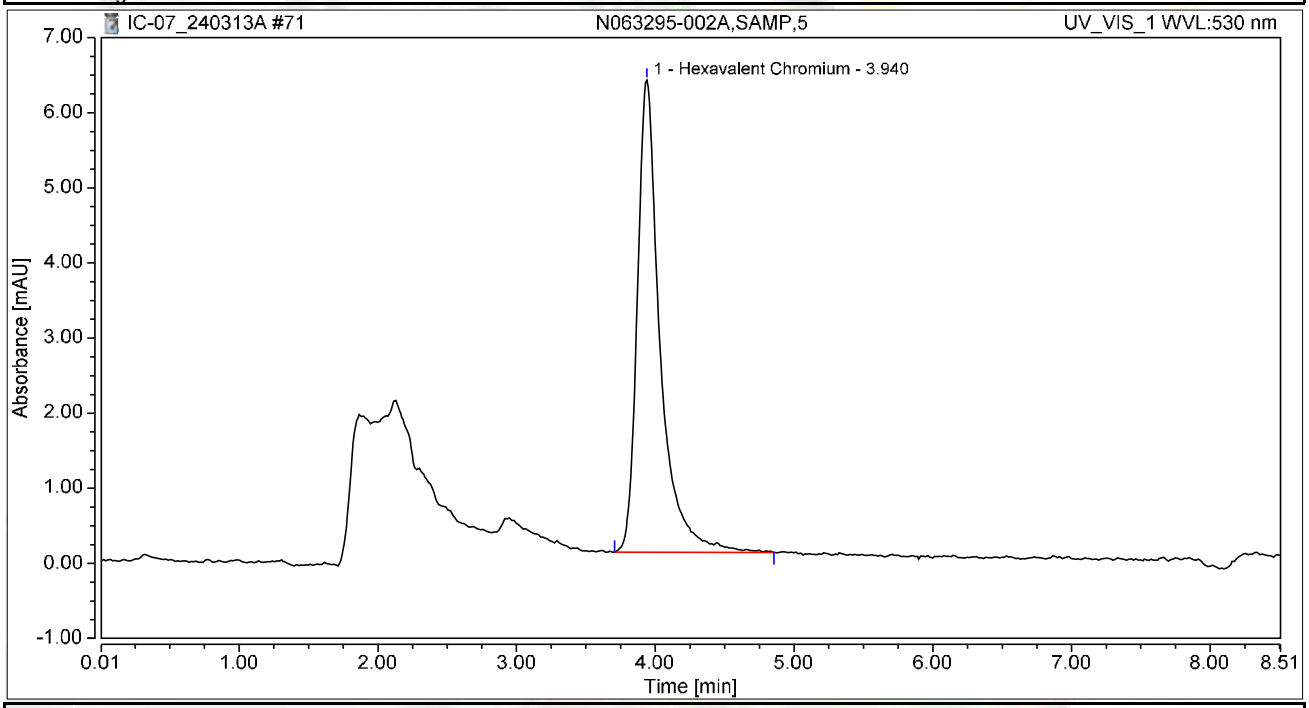
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.115	1.357	20.023	100.00	100.00	6.3757
Total:			**1.357**	**20.023**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 19:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

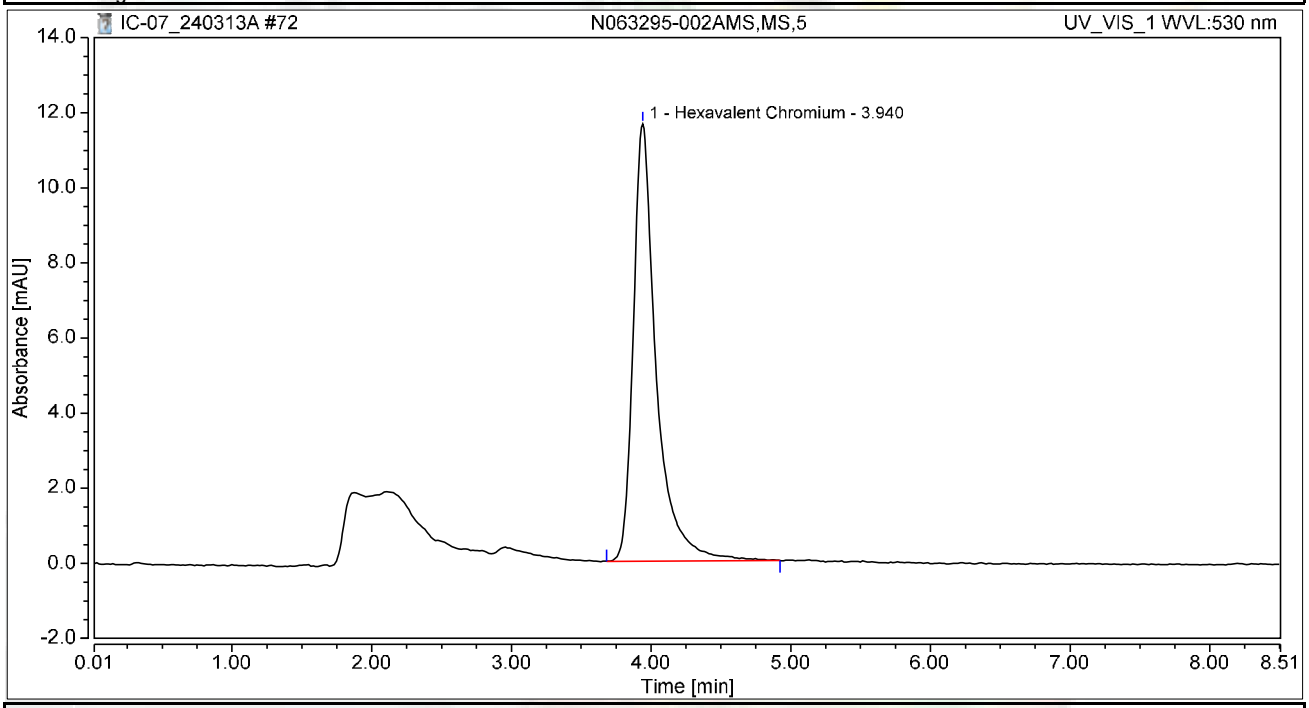
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	1.200	6.288	100.00	100.00	5.6395
Total:			**1.200**	**6.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 19:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

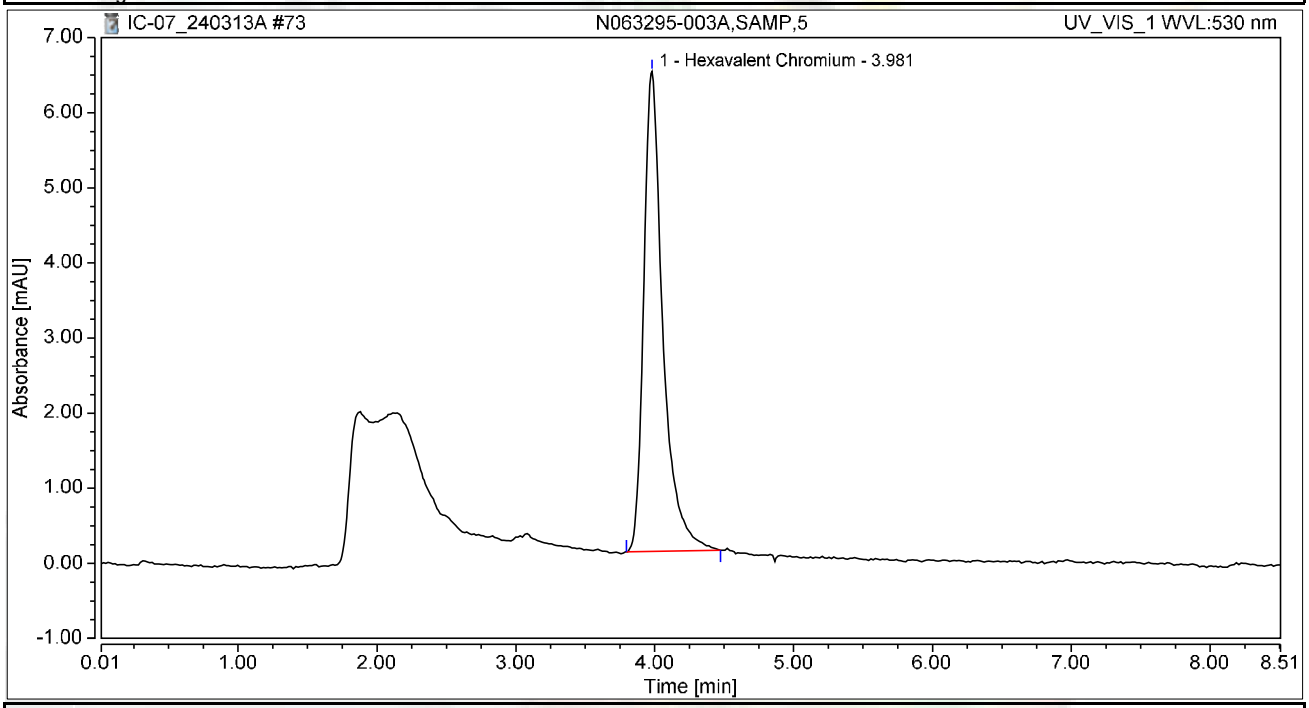
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	2.224	11.647	100.00	100.00	10.4504
Total:			**2.224**	**11.647**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 19:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

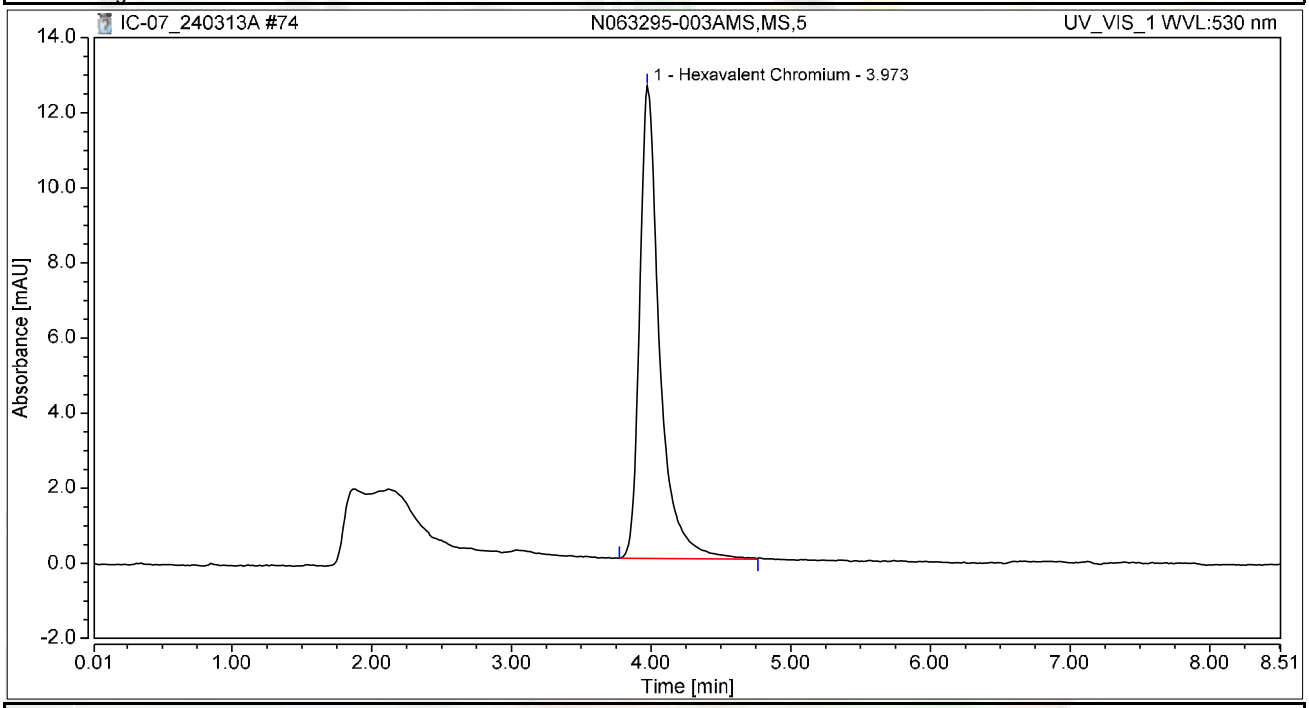
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.023	6.391	100.00	100.00	4.8042
Total:			**1.023**	**6.391**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 20:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

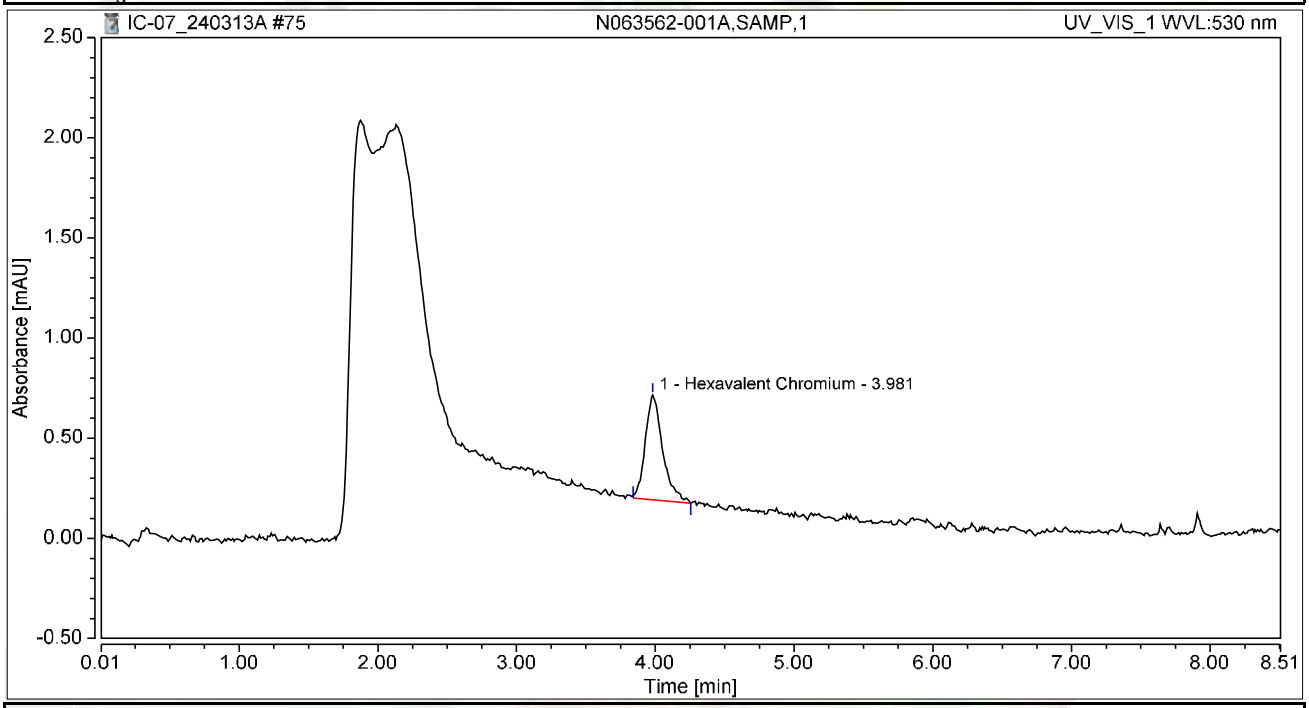
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	2.082	12.583	100.00	100.00	9.7801
Total:			**2.082**	**12.583**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063562-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 20:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

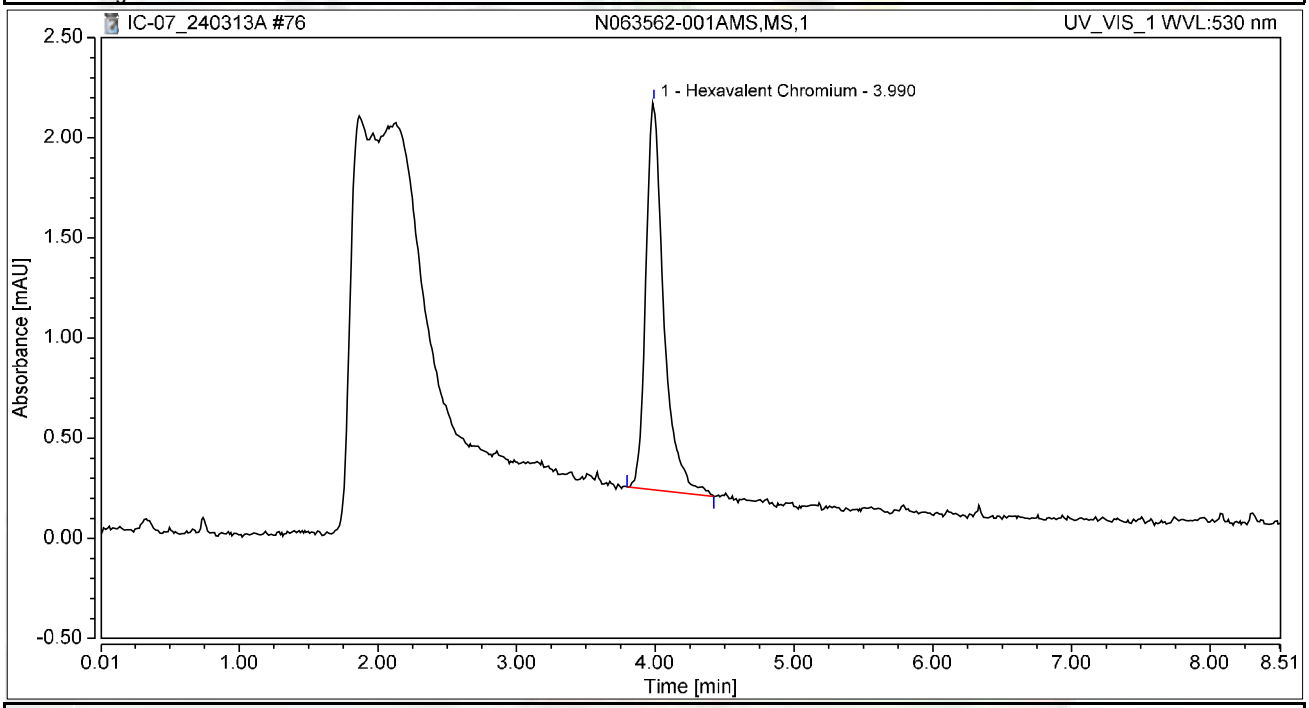
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.076	0.523	100.00	100.00	0.3578
Total:			**0.076**	**0.523**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063562-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 20:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

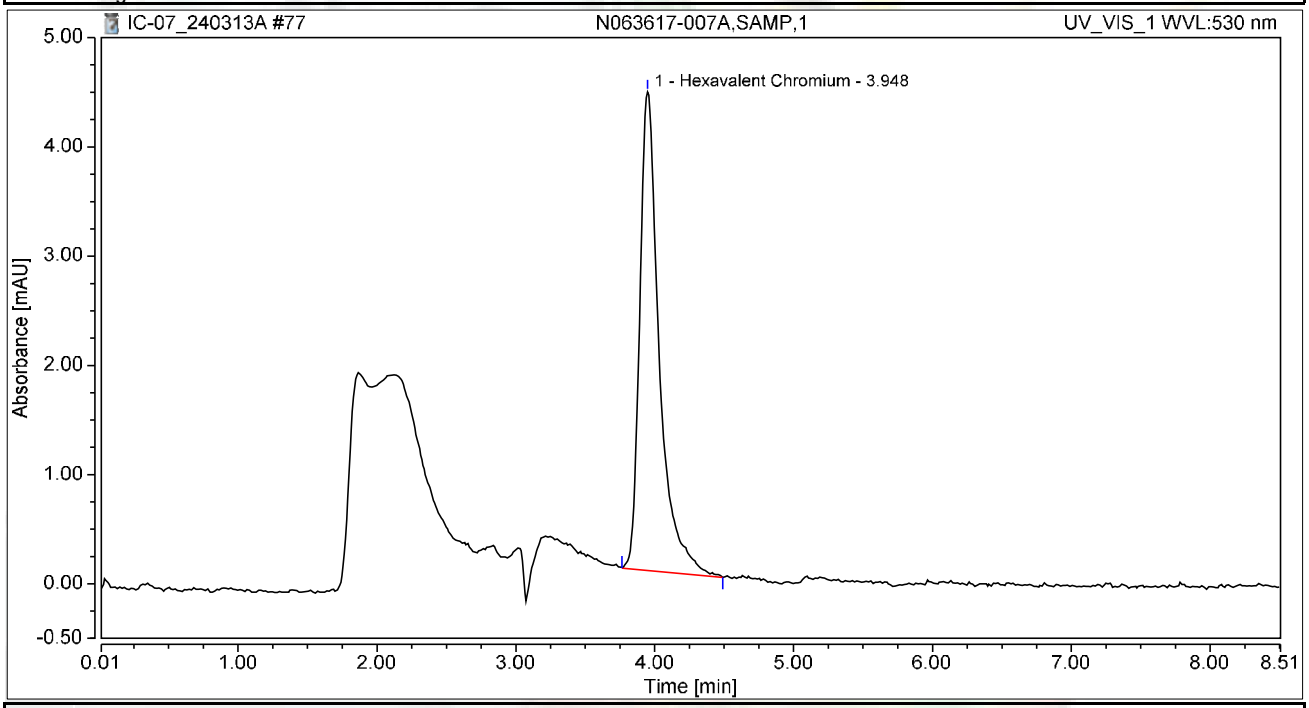
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.291	1.939	100.00	100.00	1.3694
Total:			**0.291**	**1.939**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-007A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 20:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

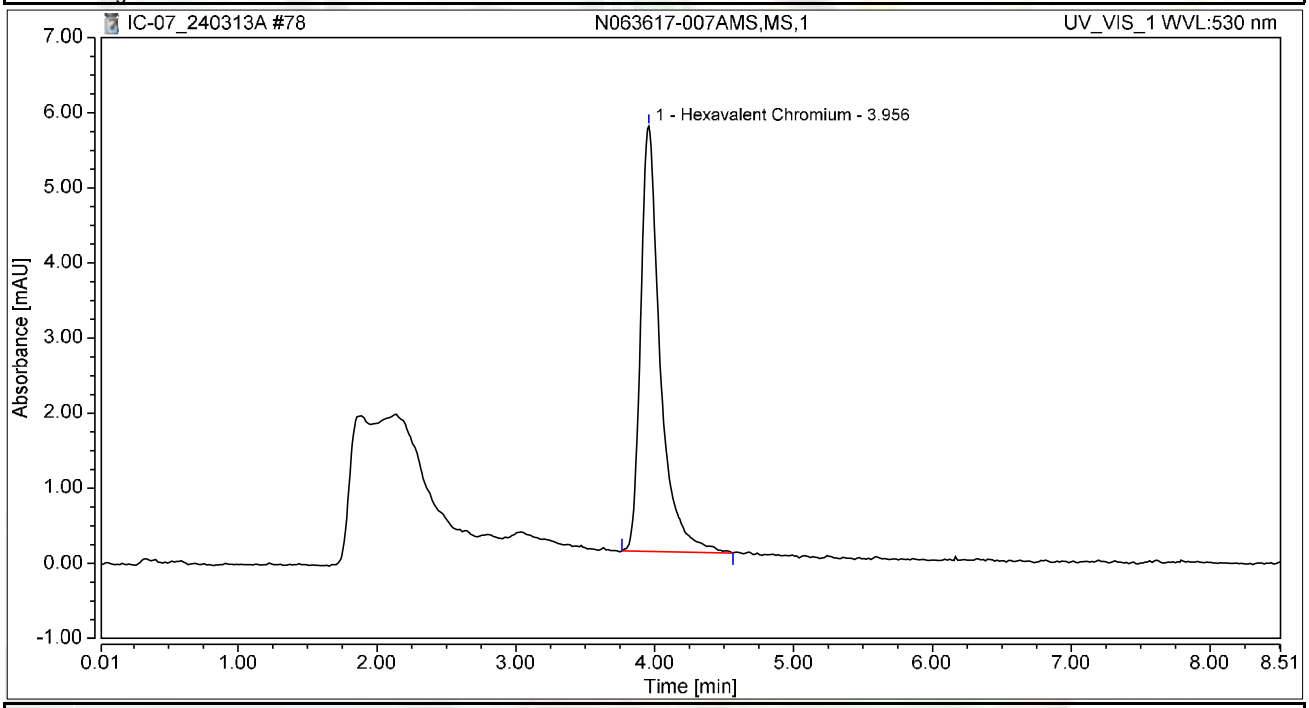
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.714	4.380	100.00	100.00	3.3557
Total:			**0.714**	**4.380**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-007AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 20:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

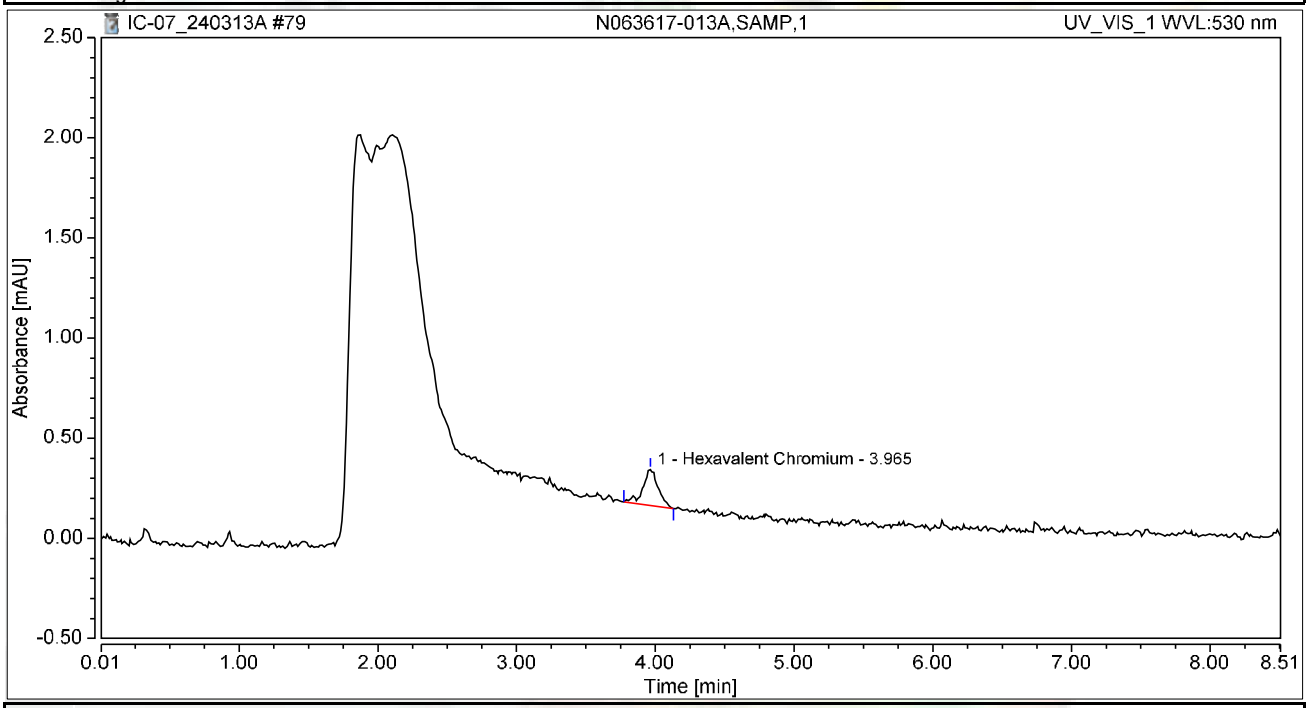
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.922	5.659	100.00	100.00	4.3331
Total:			**0.922**	**5.659**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-013A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 20:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

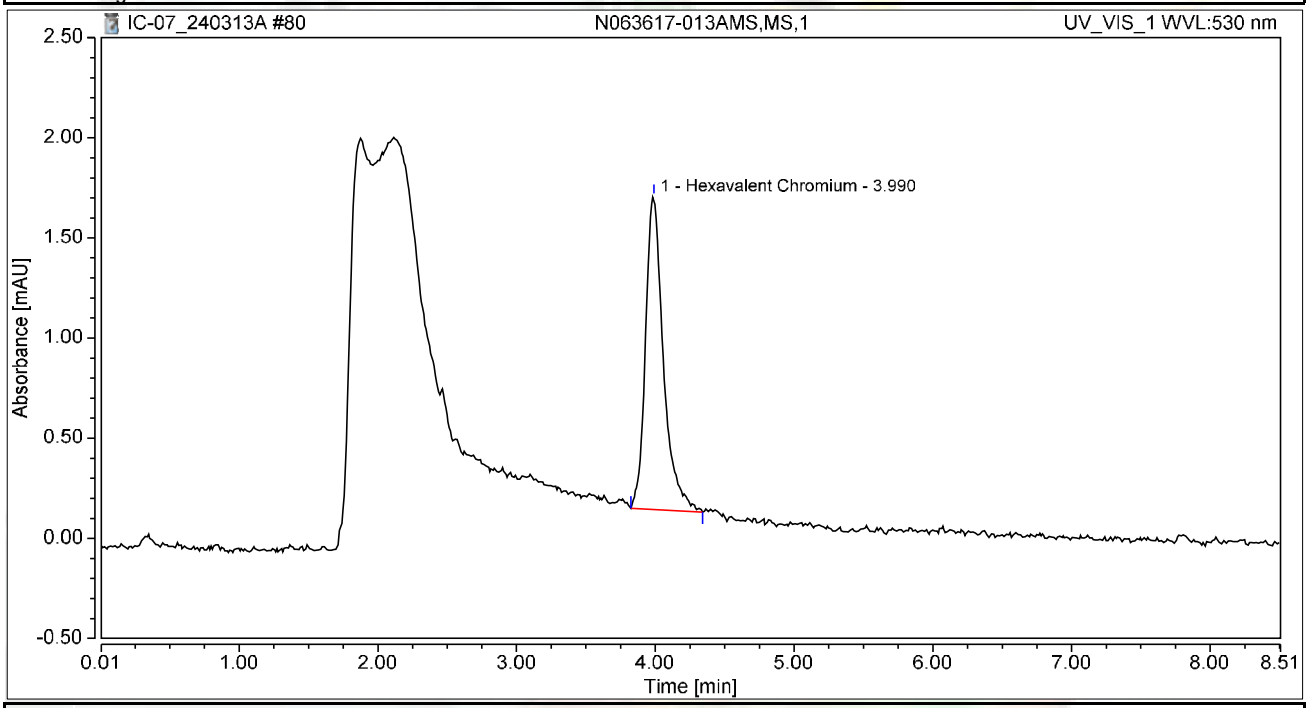
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.023	0.179	100.00	100.00	0.1081
Total:			**0.023**	**0.179**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-013AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 21:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

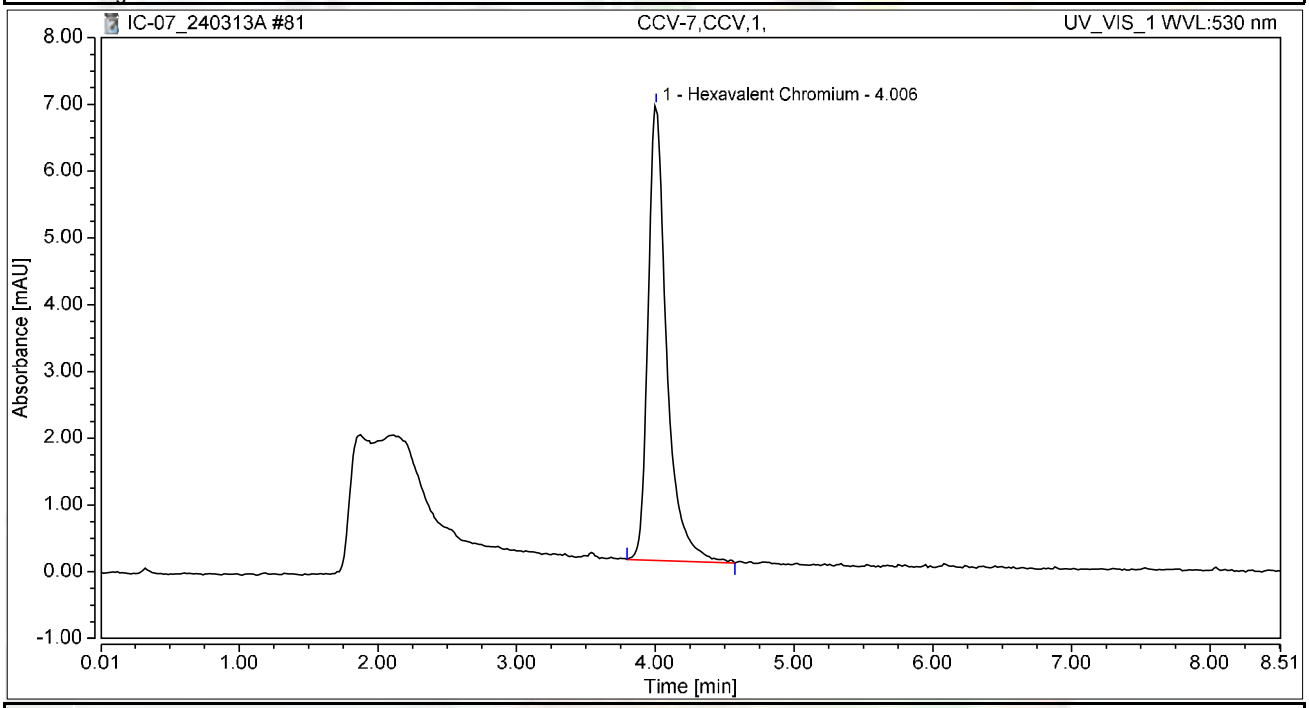
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.234	1.562	100.00	100.00	1.1009
Total:			**0.234**	**1.562**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 21:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

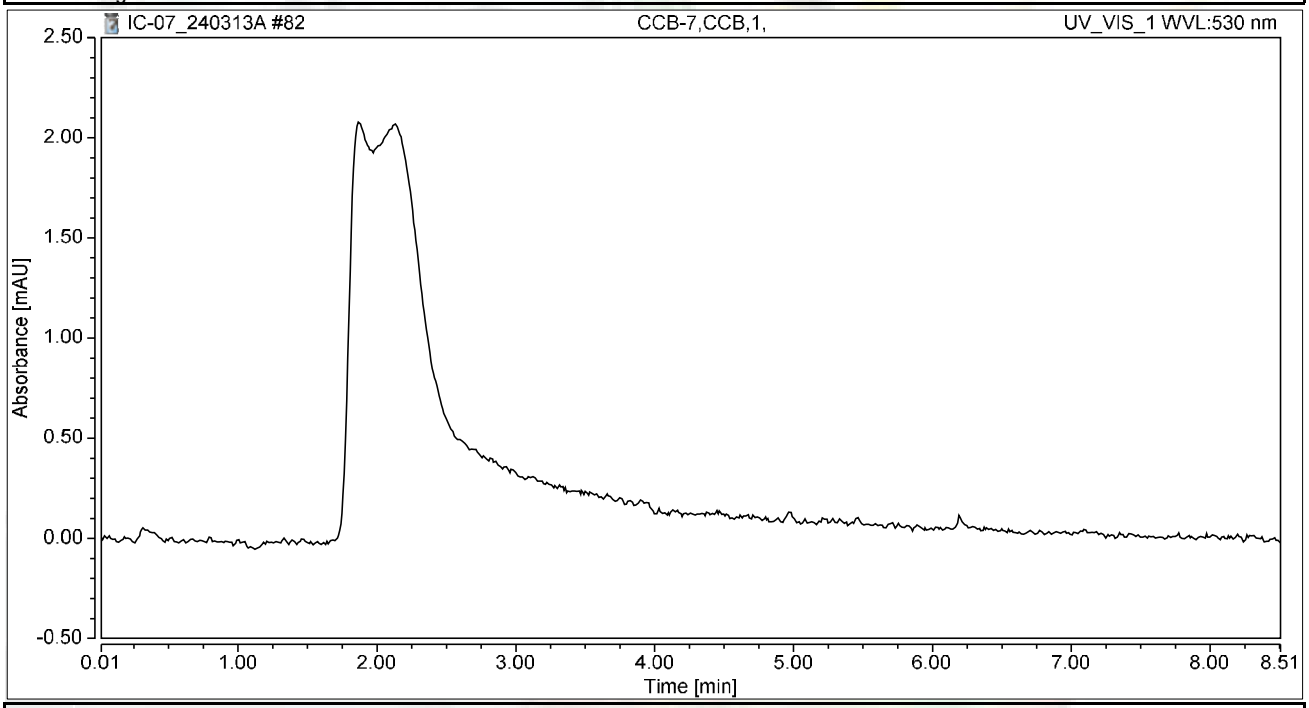
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.064	6.816	100.00	100.00	4.9999
Total:			**1.064**	**6.816**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 21:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

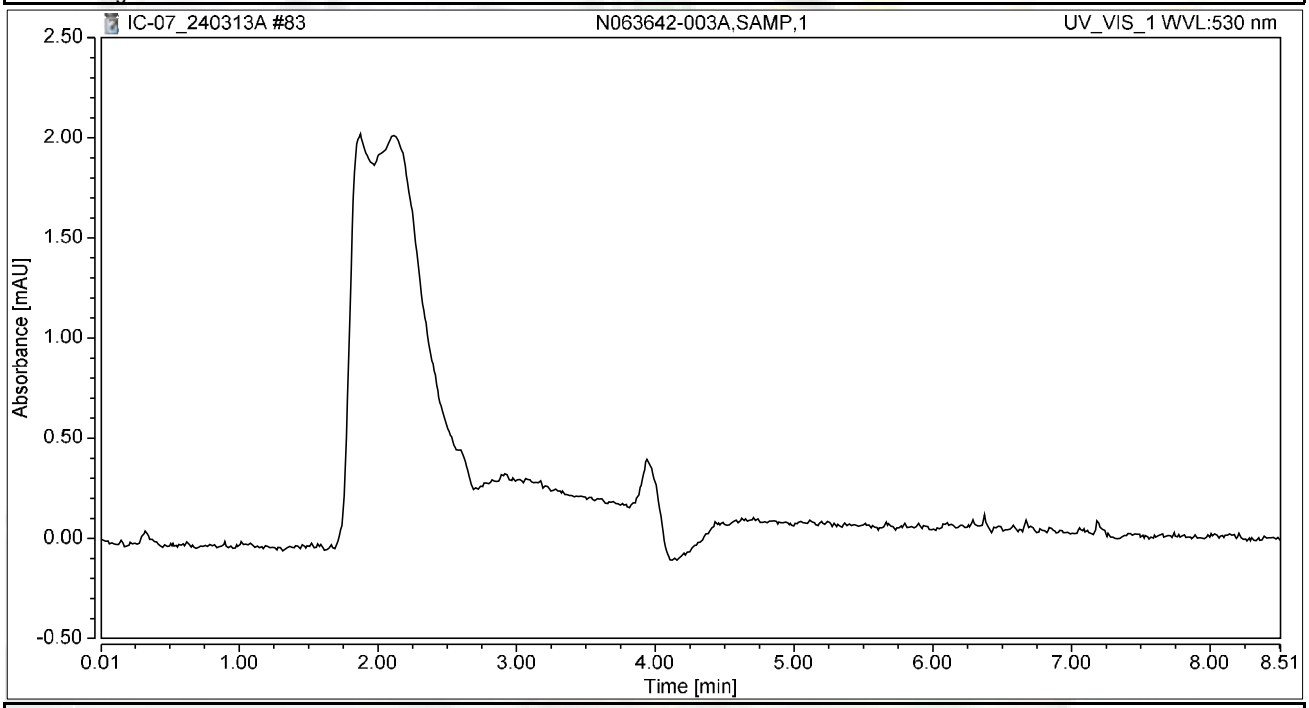
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 21:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

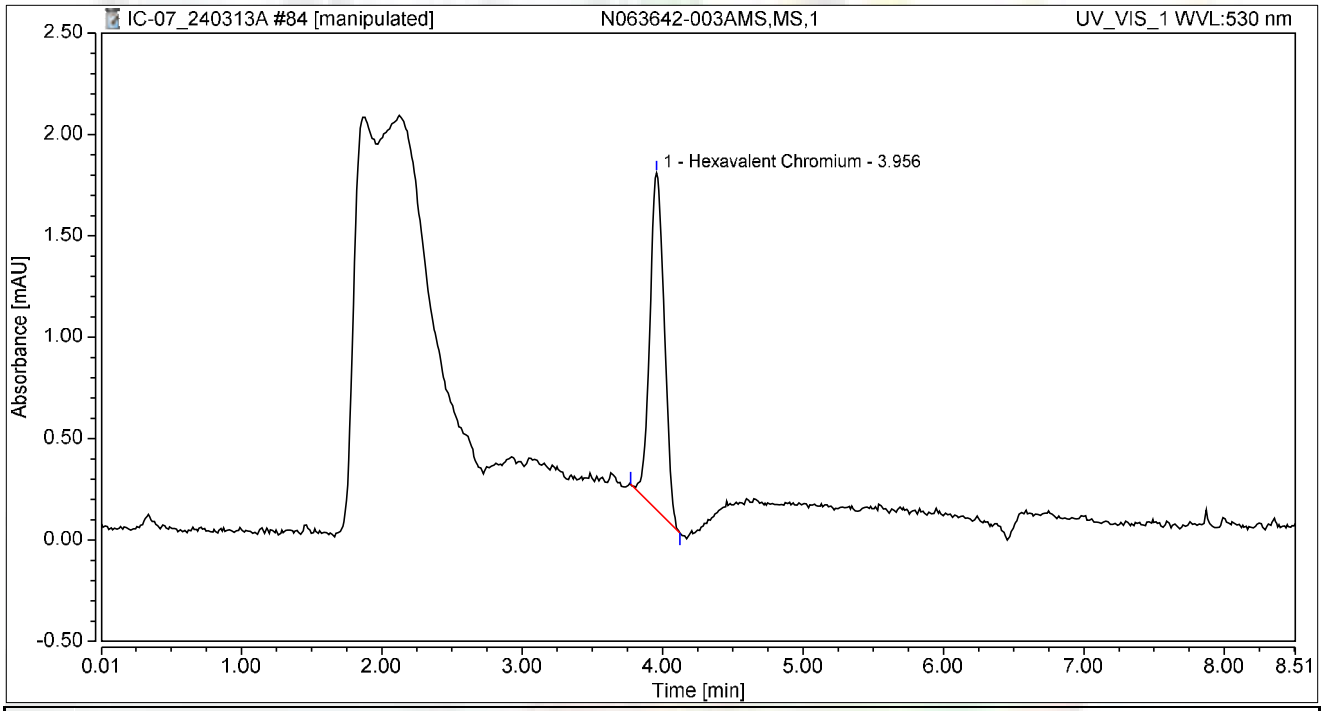
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 21:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

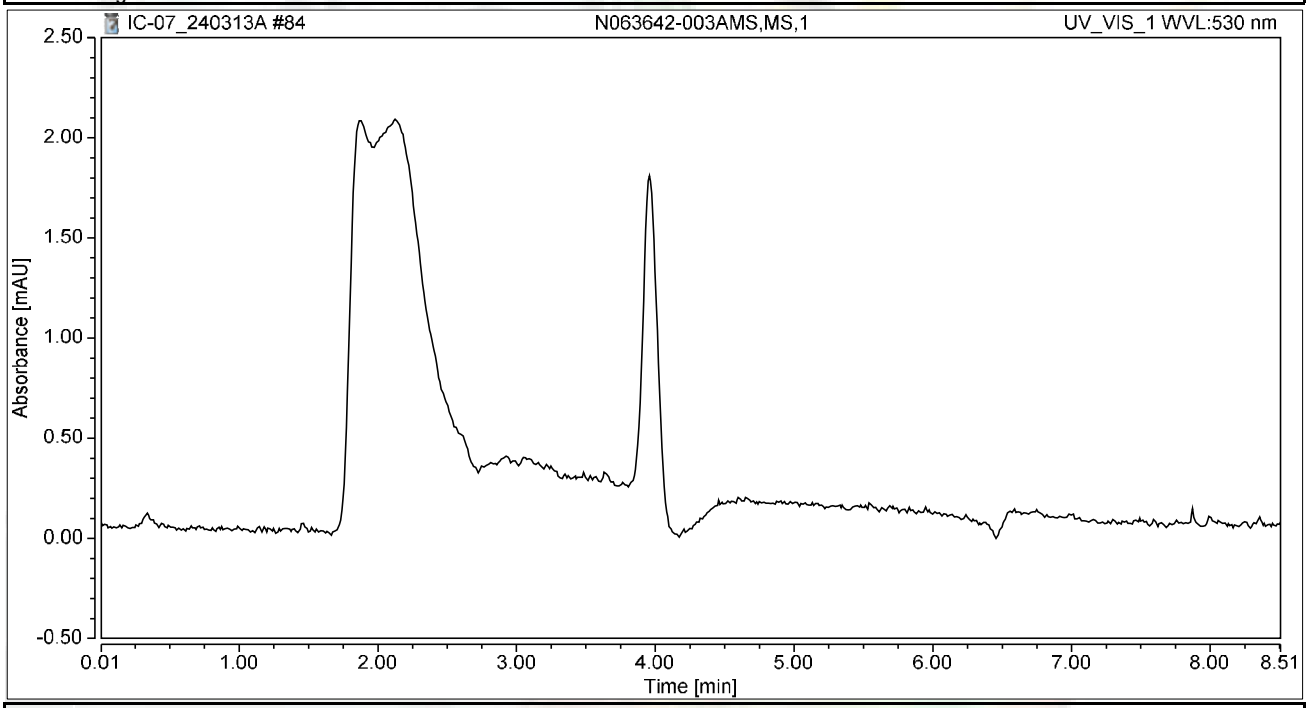
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.198	1.661	100.00	100.00	0.9288
Total:			**0.198**	**1.661**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 21:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

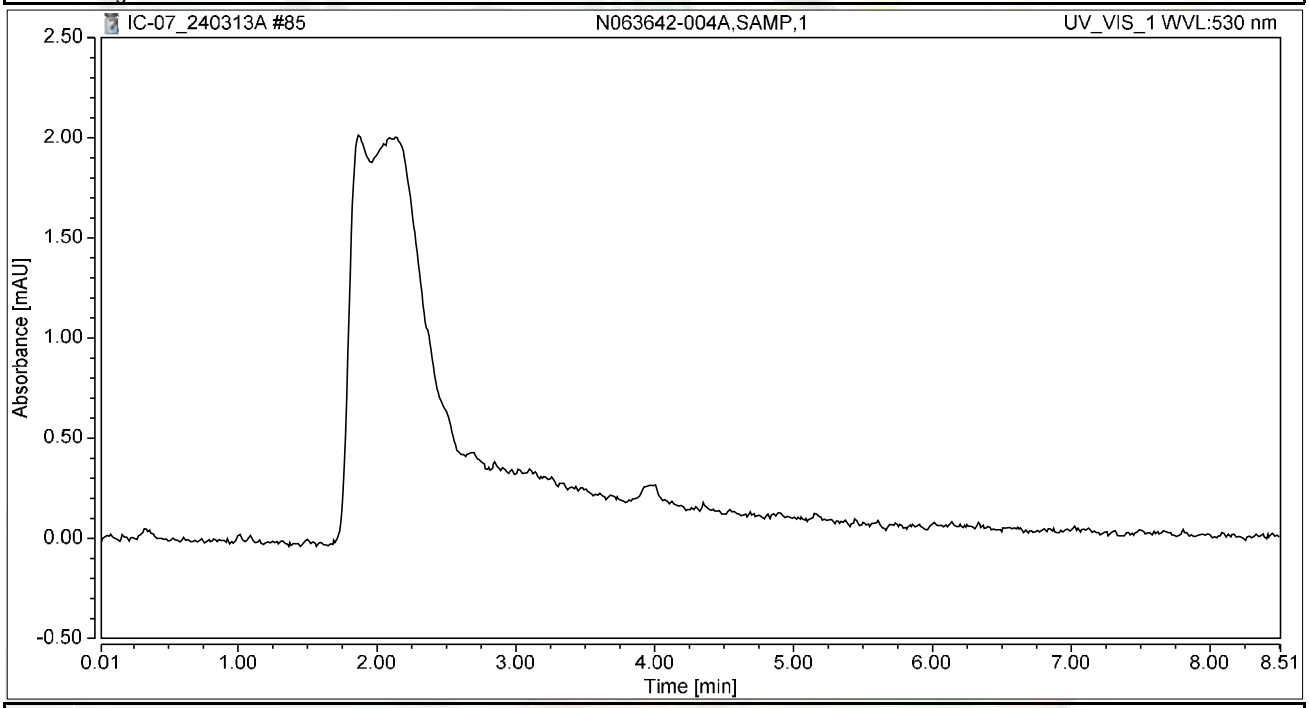
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-004A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 21:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

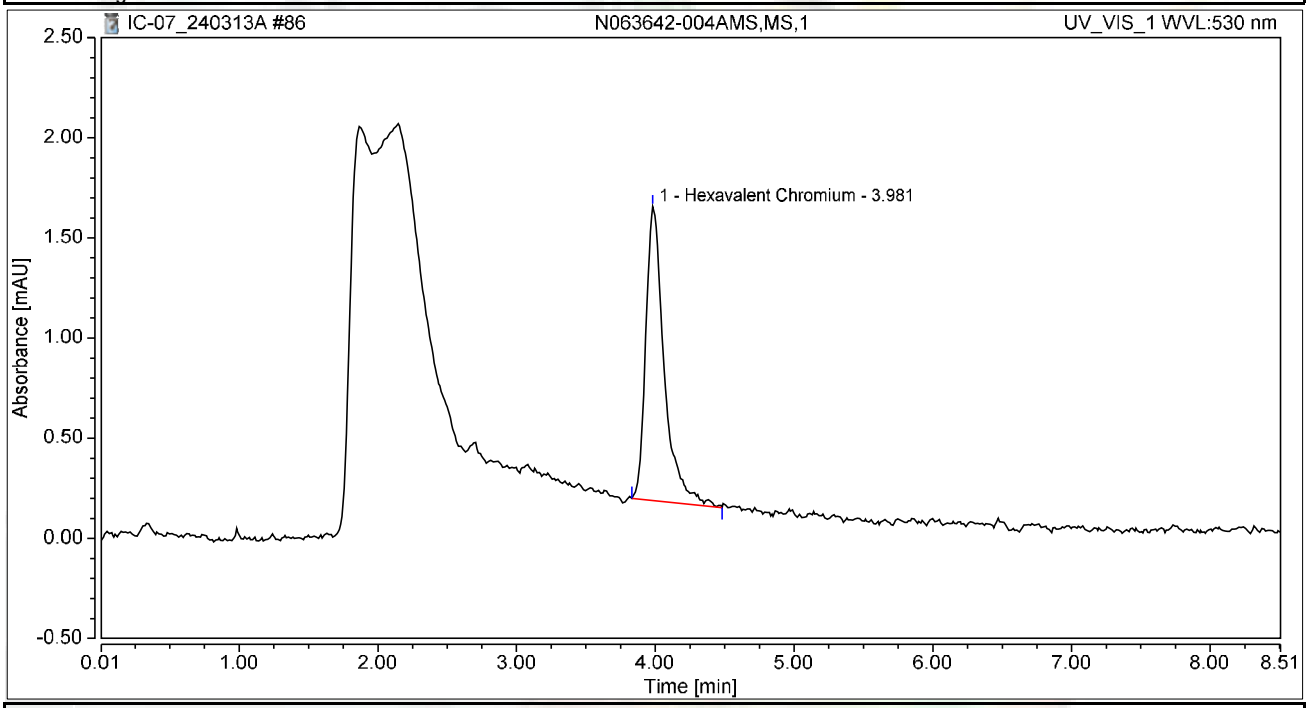
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 21:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

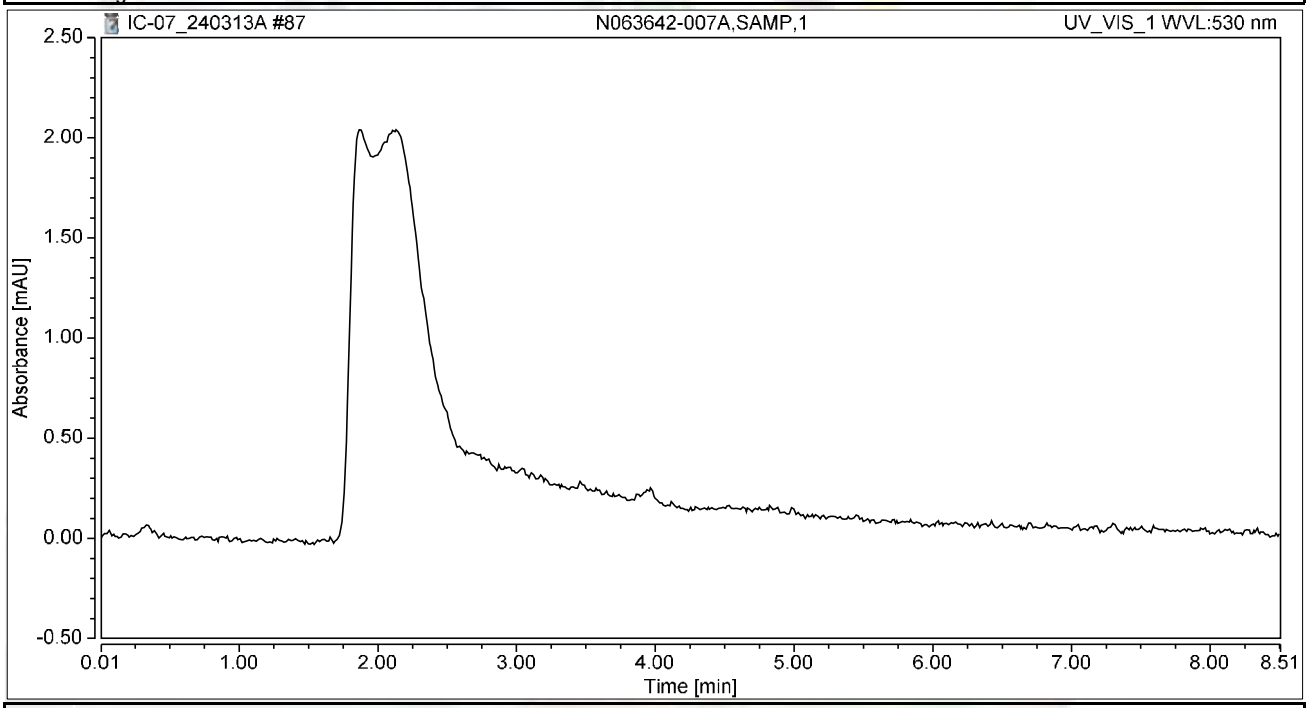
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.226	1.466	100.00	100.00	1.0624
Total:			**0.226**	**1.466**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-007A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 22:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

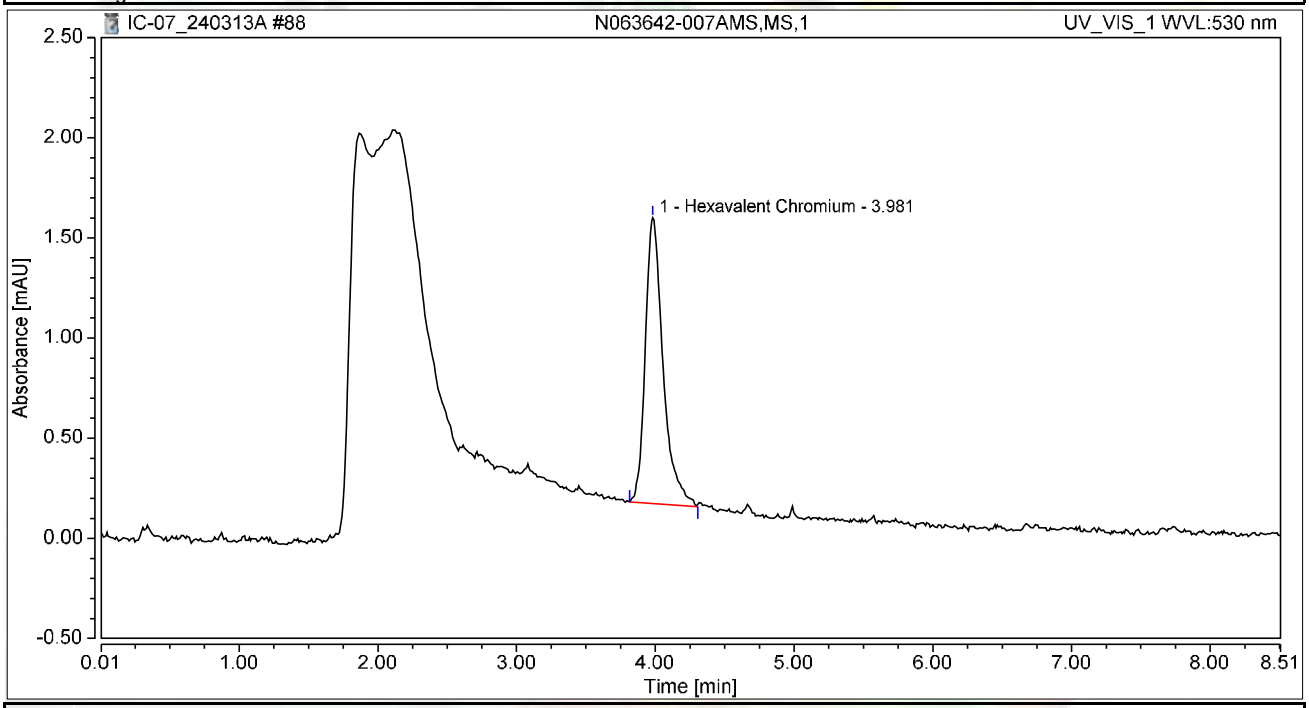
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**44**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 22:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

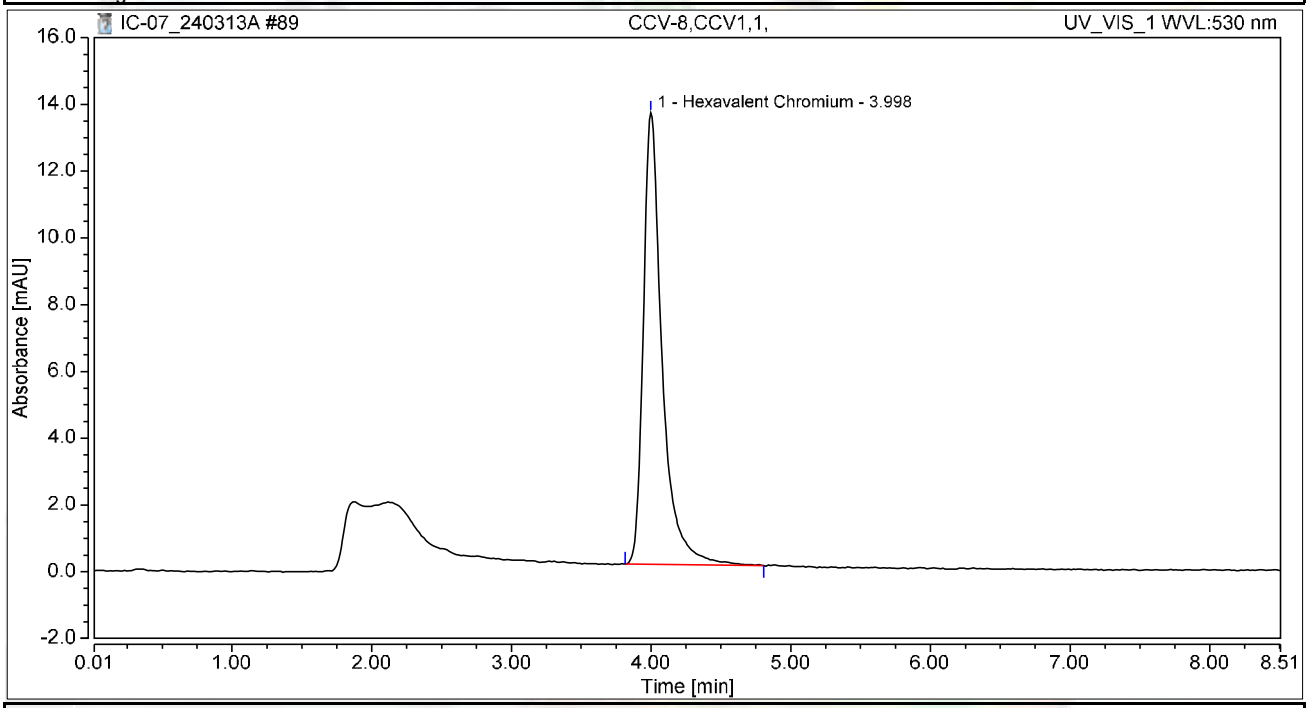
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.212	1.427	100.00	100.00	0.9971
Total:			**0.212**	**1.427**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-8,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**45**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 22:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

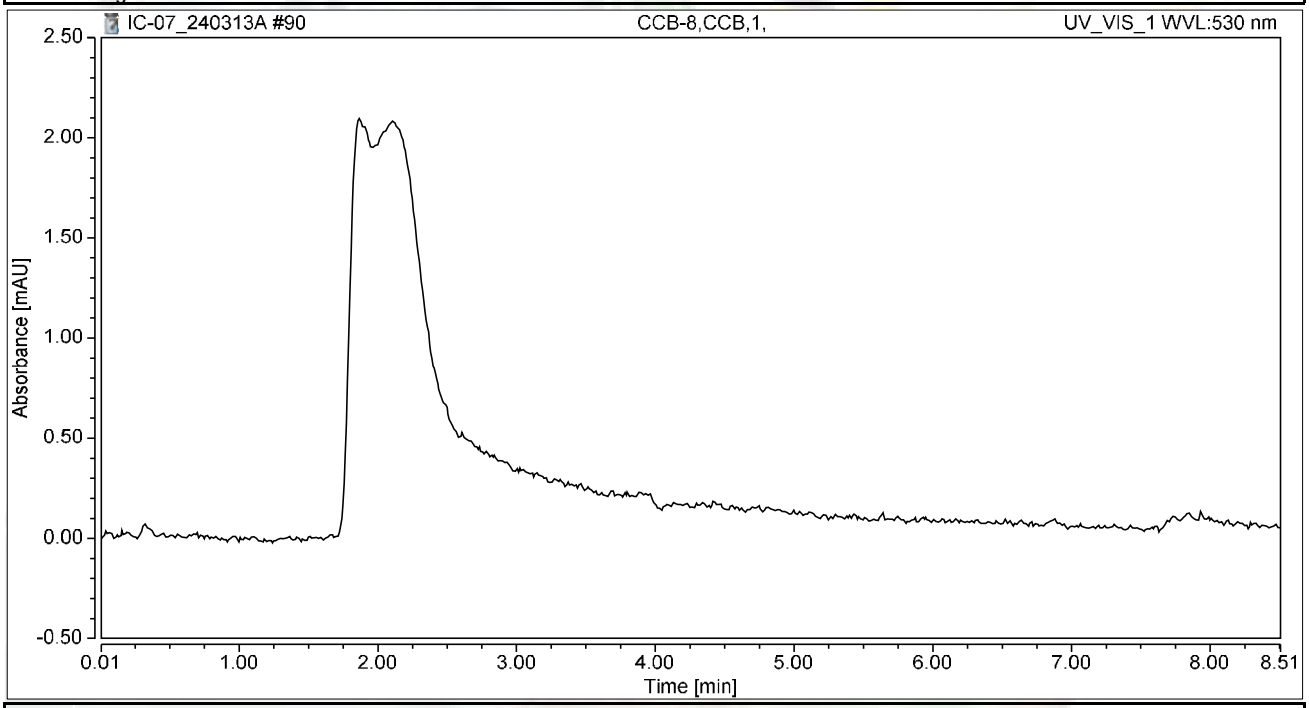
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	2.115	13.522	100.00	100.00	9.9394
Total:			**2.115**	**13.522**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-8,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**46**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 22:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

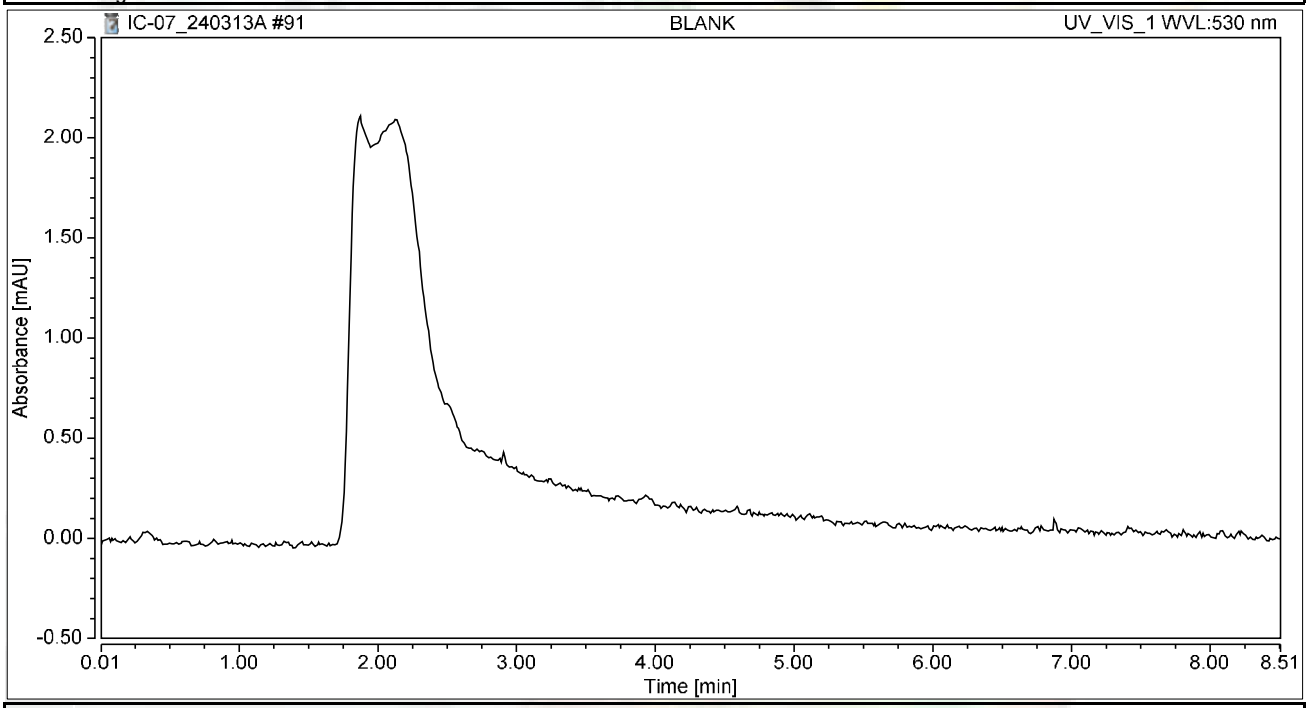
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**47**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 22:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

EPA 300.0

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R183502
ASSET #: N063705 / N063706

Instrument ID: IC-08
Analyst: RBA
Date Analyzed: 3/12/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)		X			X	
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

~~Detection of Sulfate in CCB1/MB was >1/2PQL. However, N063705/N063706 samples were >5X the CCB detection.~~

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 3/13/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: GROUNDWATER

FORMULA:

Calculate the Sulfate concentration, in mg/L, in the orignal sample as follows:

Sulfate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N063706-001B** concentration in mg/L is calculated as follows:

Sulfate, mg/L = 9.1739 * 100

= 917.39

Reporting result in two significant figures,

Sulfate, mg/L = 920

Reviewed by:

dMocha 3/26/2024

ANALYSIS RUN LOG

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240223	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240223	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240223	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240223	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240223	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240223	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240223	Finished
8	ICV,ICV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240223	Finished
9	ICB,ICB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240223	Finished
10	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240223	Finished
11	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240223	Finished
12	N063297-001B,SAMP,10	Unknown	7	1000.0	Anions Default	EPA 300_0_240223	Finished
13	N063297-001BDUP,DUP,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240223	Finished
14	N063297-001BMS,MS,10	Unknown	9	1000.0	Anions Default	EPA 300_0_240223	Finished
15	N063297-001BMSD,MSD,10	Unknown	10	1000.0	Anions Default	EPA 300_0_240223	Finished
16	N063252-001C,SAMP,2000	Unknown	11	1000.0	Anions Default	EPA 300_0_240223	Finished
17	N063252-001CMS,MS,2000	Unknown	12	1000.0	Anions Default	EPA 300_0_240223	Finished
18	N063248-005B,SAMP,1000	Unknown	13	1000.0	Anions Default	EPA 300_0_240223	Finished
19	N063248-006B,SAMP,2000	Unknown	14	1000.0	Anions Default	EPA 300_0_240223	Finished
20	CCV-1,CCV,1	Unknown	15	1000.0	Anions Default	EPA 300_0_240223	Finished
21	CCB-1,CCB,1	Unknown	16	1000.0	Anions Default	EPA 300_0_240223	Finished
22	N063248-007B,SAMP,2000	Unknown	17	1000.0	Anions Default	EPA 300_0_240223	Finished
23	N063248-008B,SAMP,2000	Unknown	18	1000.0	Anions Default	EPA 300_0_240223	Finished
24	N063248-010C,SAMP,100	Unknown	19	1000.0	Anions Default	EPA 300_0_240223	Finished
25	N063248-011C,SAMP,1000	Unknown	20	1000.0	Anions Default	EPA 300_0_240223	Finished
26	N063248-005B,SAMP,100	Unknown	21	1000.0	Anions Default	EPA 300_0_240223	Finished
27	N063248-006B,SAMP,100	Unknown	22	1000.0	Anions Default	EPA 300_0_240223	Finished
28	N063248-007B,SAMP,100	Unknown	23	1000.0	Anions Default	EPA 300_0_240223	Finished
29	N063248-008B,SAMP,100	Unknown	24	1000.0	Anions Default	EPA 300_0_240223	Finished
30	N063248-010C,SAMP,20	Unknown	25	1000.0	Anions Default	EPA 300_0_240223	Finished
31	N063248-011C,SAMP,100	Unknown	26	1000.0	Anions Default	EPA 300_0_240223	Finished
32	CCV-2,CCV,1	Unknown	27	1000.0	Anions Default	EPA 300_0_240223	Finished
33	CCB-2,CCB,1	Unknown	28	1000.0	Anions Default	EPA 300_0_240223	Finished
34	N063295-005B,SAMP,2000	Unknown	29	1000.0	Anions Default	EPA 300_0_240223	Finished
35	N063295-006B,SAMP,2000	Unknown	30	1000.0	Anions Default	EPA 300_0_240223	Finished
36	N063295-007B,SAMP,2000	Unknown	31	1000.0	Anions Default	EPA 300_0_240223	Finished
37	N063295-008B,SAMP,2000	Unknown	32	1000.0	Anions Default	EPA 300_0_240223	Finished
38	N063295-005B,SAMP,100	Unknown	33	1000.0	Anions Default	EPA 300_0_240223	Finished
39	N063295-006B,SAMP,100	Unknown	34	1000.0	Anions Default	EPA 300_0_240223	Finished
40	N063295-007B,SAMP,100	Unknown	35	1000.0	Anions Default	EPA 300_0_240223	Finished
41	N063295-008B,SAMP,100	Unknown	36	1000.0	Anions Default	EPA 300_0_240223	Finished

Processed by:

Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)

2/25/2024

IC8 RBA 2/25/2024 4:51:54 PM

reviewed by: 2/27/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:07:15 AM	BLANK
2	Std - 0	2/23/2024 9:22:33 AM	IBLANK
3	Std - 1	2/23/2024 9:53:29 AM	STD-LOW
4	Std - 2	2/23/2024 10:08:47 AM	STD
5	Std - 3	2/23/2024 10:24:06 AM	STD
6	Std - 4	2/23/2024 10:39:24 AM	STD
7	Std - 5	2/23/2024 10:54:42 AM	STD-HIGH
8	ICV,ICV,1	2/23/2024 11:10:00 AM	ICV, IWST-240216B
9	ICB,ICB,1	2/23/2024 11:25:18 AM	ICB
10	MB-H2O,MBLK,1	2/23/2024 11:40:36 AM	MB
11	LCS-H2O,LCS,1	2/23/2024 11:55:54 AM	LCS, IWST-240216B
12	N063297-001B,SAMP,10	2/23/2024 1:45:16 PM	SAMP,1>10mL,
13	N063297-001BDUP,DUP,10	2/23/2024 2:00:34 PM	DUP,1>10mL,
14	N063297-001BMS,MS,10	2/23/2024 2:15:52 PM	MS,1>10mL,
15	N063297-001BMSD,MSD,10	2/23/2024 2:31:10 PM	MSD,1>10mL,
16	N063252-001C,SAMP,2000	2/23/2024 2:46:27 PM	SAMP,0.005>10mL,
17	N063252-001CMS,MS,2000	2/23/2024 3:01:45 PM	MS,0.005>10mL,
18	N063248-005B,SAMP,1000	2/23/2024 4:06:07 PM	SAMP,0.01>10mL,
19	N063248-006B,SAMP,2000	2/23/2024 4:21:25 PM	SAMP,0.005>10mL,
20	CCV-1,CCV,1	2/23/2024 4:36:43 PM	CCV, IWST-240216A
21	CCB-1,CCB,1	2/23/2024 4:52:01 PM	CCB
22	N063248-007B,SAMP,2000	2/23/2024 5:07:19 PM	SAMP,0.005>10mL,
23	N063248-008B,SAMP,2000	2/23/2024 5:22:37 PM	SAMP,0.005>10mL,
24	N063248-010C,SAMP,100	2/23/2024 5:37:54 PM	SAMP,0.1>10mL,
25	N063248-011C,SAMP,1000	2/23/2024 5:53:13 PM	SAMP,0.01>10mL,
26	N063248-005B,SAMP,100	2/23/2024 6:08:32 PM	SAMP,0.1>10mL,
27	N063248-006B,SAMP,100	2/23/2024 6:23:50 PM	SAMP,0.1>10mL,
28	N063248-007B,SAMP,100	2/23/2024 6:39:07 PM	SAMP,0.1>10mL,
29	N063248-008B,SAMP,100	2/23/2024 6:54:26 PM	SAMP,0.1>10mL,
30	N063248-010C,SAMP,20	2/23/2024 7:09:45 PM	SAMP,0.5>10mL,
31	N063248-011C,SAMP,100	2/23/2024 7:25:03 PM	SAMP,0.1>10mL,
32	CCV-2,CCV,1	2/23/2024 7:40:21 PM	CCV, IWST-240216A
33	CCB-2,CCB,1	2/23/2024 7:55:39 PM	CCB
34	N063295-005B,SAMP,2000	2/23/2024 8:10:57 PM	SAMP,0.005>10mL,
35	N063295-006B,SAMP,2000	2/23/2024 8:26:16 PM	SAMP,0.005>10mL,
36	N063295-007B,SAMP,2000	2/23/2024 8:41:34 PM	SAMP,0.005>10mL,
37	N063295-008B,SAMP,2000	2/23/2024 8:56:52 PM	SAMP,0.005>10mL,
38	N063295-005B,SAMP,100	2/23/2024 9:12:11 PM	SAMP,0.1>10mL,
39	N063295-006B,SAMP,100	2/23/2024 9:27:28 PM	SAMP,0.1>10mL,
40	N063295-007B,SAMP,100	2/23/2024 9:42:47 PM	SAMP,0.1>10mL,
41	N063295-008B,SAMP,100	2/23/2024 9:58:05 PM	SAMP,0.1>10mL,

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	N063253-001C,SAMP,5000	Unknown	37	1000.0	Anions Default	EPA 300_0_240223	Finished
43	N063253-001C,SAMP,10000	Unknown	38	1000.0	Anions Default	EPA 300_0_240223	Finished
44	CCV-3,CCV,1	Unknown	39	1000.0	Anions Default	EPA 300_0_240223	Finished
45	CCB-3,CCB,1	Unknown	40	1000.0	Anions Default	EPA 300_0_240223	Finished
46	N063256-001C,SAMP,100	Unknown	41	1000.0	Anions Default	EPA 300_0_240223	Finished
47	N063254-001C,SAMP,10000	Unknown	42	1000.0	Anions Default	EPA 300_0_240223	Finished
48	N063255-001C,SAMP,10000	Unknown	43	1000.0	Anions Default	EPA 300_0_240223	Finished
49	N063257-001C,SAMP,10000	Unknown	44	1000.0	Anions Default	EPA 300_0_240223	Finished
50	N063258-001C,SAMP,10000	Unknown	45	1000.0	Anions Default	EPA 300_0_240223	Finished
51	CCV-4,CCV,1	Unknown	46	1000.0	Anions Default	EPA 300_0_240223	Finished
52	CCB-4,CCB,1	Unknown	47	1000.0	Anions Default	EPA 300_0_240223	Finished

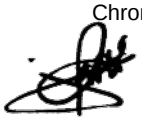
Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	N063253-001C,SAMP,5000	2/23/2024 10:13:23 PM	SAMP,0.002>10mL,
43	N063253-001C,SAMP,10000	2/23/2024 10:28:42 PM	SAMP,0.001>10mL,
44	CCV-3,CCV,1	2/23/2024 10:43:59 PM	CCV, IWST-240216A
45	CCB-3,CCB,1	2/23/2024 10:59:17 PM	CCB
46	N063256-001C,SAMP,100	2/23/2024 11:14:35 PM	SAMP,0.1>10mL,
47	N063254-001C,SAMP,10000	2/23/2024 11:29:53 PM	SAMP,0.001>10mL,
48	N063255-001C,SAMP,10000	2/23/2024 11:45:11 PM	SAMP,0.001>10mL,
49	N063257-001C,SAMP,10000	2/24/2024 12:00:28 AM	SAMP,0.001>10mL,
50	N063258-001C,SAMP,10000	2/24/2024 12:15:46 AM	SAMP,0.001>10mL,
51	CCV-4,CCV,1	2/24/2024 12:31:04 AM	CCV, IWST-240216A
52	CCB-4,CCB,1	2/24/2024 12:46:23 AM	CCB

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 34
Created: 3/11/2024 12:32:20 PM by IC-05
Last Update: 3/12/2024 9:57:30 AM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240223	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240223	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240223	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240223	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240223	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240223	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240223	Finished
8	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240223	Finished
9	CCV-1,CCV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240223	Finished
10	CCB-1,CCB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240223	Finished
11	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240223	Finished
12	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240223	Finished
13	N063705-001B,SAMP,10	Unknown	6	1000.0	Anions Default	EPA 300_0_240223	Finished
14	N063705-002B,SAMP,10	Unknown	7	1000.0	Anions Default	EPA 300_0_240223	Finished
15	N063705-003B,SAMP,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240223	Finished
16	N063705-004B,SAMP,10	Unknown	9	1000.0	Anions Default	EPA 300_0_240223	Finished
17	N063705-005B,SAMP,10	Unknown	10	1000.0	Anions Default	EPA 300_0_240223	Finished
18	N063706-001B,SAMP,10	Unknown	11	1000.0	Anions Default	EPA 300_0_240223	Finished
19	N063705-001BMS,MS,10	Unknown	12	1000.0	Anions Default	EPA 300_0_240223	Finished
20	N063705-001BMSD,MSD,10	Unknown	13	1000.0	Anions Default	EPA 300_0_240223	Finished
21	CCV-2,CCV,1	Unknown	14	1000.0	Anions Default	EPA 300_0_240223	Finished
22	CCB-2,CCB,1	Unknown	15	1000.0	Anions Default	EPA 300_0_240223	Finished
23	N063705-002BDUP,DUP,10	Unknown	16	1000.0	Anions Default	EPA 300_0_240223	Finished
24	N063705-001B,SAMP,100	Unknown	17	1000.0	Anions Default	EPA 300_0_240223	Finished
25	N063705-001BMS,MS,100	Unknown	18	1000.0	Anions Default	EPA 300_0_240223	Finished
26	N063705-001BMSD,MSD,100	Unknown	19	1000.0	Anions Default	EPA 300_0_240223	Finished
27	N063705-002B,SAMP,50	Unknown	20	1000.0	Anions Default	EPA 300_0_240223	Finished
28	N063705-002BDUP,DUP,50	Unknown	21	1000.0	Anions Default	EPA 300_0_240223	Finished
29	N063705-003B,SAMP,50	Unknown	22	1000.0	Anions Default	EPA 300_0_240223	Finished
30	N063705-004B,SAMP,100	Unknown	23	1000.0	Anions Default	EPA 300_0_240223	Finished
31	N063705-005B,SAMP,100	Unknown	24	1000.0	Anions Default	EPA 300_0_240223	Finished
32	N063706-001B,SAMP,100	Unknown	25	1000.0	Anions Default	EPA 300_0_240223	Finished
33	CCV-3,CCV,1	Unknown	26	1000.0	Anions Default	EPA 300_0_240223	Finished
34	CCB-3,CCB,1	Unknown	27	1000.0	Anions Default	EPA 300_0_240223	Finished

Processed by:
Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)



3/12/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 34
Created: 3/11/2024 12:32:20 PM by IC-05
Last Update: 3/12/2024 9:57:30 AM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:07:15 AM	BLANK
2	Std - 0	2/23/2024 9:22:33 AM	IBLANK
3	Std - 1	2/23/2024 9:53:29 AM	STD-LOW
4	Std - 2	2/23/2024 10:08:47 AM	STD
5	Std - 3	2/23/2024 10:24:06 AM	STD
6	Std - 4	2/23/2024 10:39:24 AM	STD
7	Std - 5	2/23/2024 10:54:42 AM	STD-HIGH
8	BLANK	3/12/2024 7:24:04 AM	BLANK
9	CCV-1,CCV,1	3/12/2024 7:39:21 AM	CCV, IWST-240308A
10	CCB-1,CCB,1	3/12/2024 7:54:39 AM	CCB
11	MB-H2O,MBLK,1	3/12/2024 8:09:57 AM	MB
12	LCS-H2O,LCS,1	3/12/2024 8:25:15 AM	LCS, IWST-240308B
13	N063705-001B,SAMP,10	3/12/2024 9:44:11 AM	SAMP,1>10mL,
14	N063705-002B,SAMP,10	3/12/2024 9:59:30 AM	SAMP,1>10mL,
15	N063705-003B,SAMP,10	3/12/2024 10:14:48 AM	SAMP,1>10mL,
16	N063705-004B,SAMP,10	3/12/2024 10:30:05 AM	SAMP,1>10mL,
17	N063705-005B,SAMP,10	3/12/2024 10:45:23 AM	SAMP,1>10mL,
18	N063706-001B,SAMP,10	3/12/2024 11:00:42 AM	SAMP,1>10mL,
19	N063705-001BMS,MS,10	3/12/2024 11:15:59 AM	MS,1>10mL,
20	N063705-001BMSD,MSD,10	3/12/2024 11:31:18 AM	MSD,1>10mL,
21	CCV-2,CCV,1	3/12/2024 11:46:36 AM	CCV, IWST-240308A
22	CCB-2,CCB,1	3/12/2024 12:01:54 PM	CCB
23	N063705-002BDUP,DUP,10	3/12/2024 12:17:12 PM	DUP,1>10mL,
24	N063705-001B,SAMP,100	3/12/2024 12:32:31 PM	SAMP,0.1>10mL,
25	N063705-001BMS,MS,100	3/12/2024 12:47:49 PM	MS,0.1>10mL,
26	N063705-001BMSD,MSD,100	3/12/2024 1:03:07 PM	MSD,0.1>10mL,
27	N063705-002B,SAMP,50	3/12/2024 1:18:26 PM	SAMP,0.2>10mL,
28	N063705-002BDUP,DUP,50	3/12/2024 1:33:44 PM	DUP,0.2>10mL,
29	N063705-003B,SAMP,50	3/12/2024 1:49:01 PM	SAMP,0.2>10mL,
30	N063705-004B,SAMP,100	3/12/2024 2:04:20 PM	SAMP,0.1>10mL,
31	N063705-005B,SAMP,100	3/12/2024 2:19:38 PM	SAMP,0.1>10mL,
32	N063706-001B,SAMP,100	3/12/2024 2:34:56 PM	SAMP,0.1>10mL,
33	CCV-3,CCV,1	3/12/2024 2:50:14 PM	CCV, IWST-240308A
34	CCB-3,CCB,1	3/12/2024 3:05:32 PM	CCB

INITIAL CALIBRATION DATA SUMMARY

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 2/23/2024

Initial Calibration:

Nitrate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0201	0.0879	0.1672	0.4214	0.8656	1.000
Measured, in mg/L	0.000000	0.062700	0.259300	0.489100	1.225800	2.513100	
Relative Error (%RE)		25.4%		-2.2%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712E

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 2/23/2024

Initial Calibration:

Sulfate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.5	2	4	10	20	R^2
Area,mAU*min	0.0000	0.0480	0.2008	0.4077	1.0415	2.1673	1.000
Measured, in mg/L	0.000000	0.632600	2.038000	3.940700	9.768100	20.120700	
Relative Error (%RE)		26.5%		-1.5%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712G

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **ICV**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5742336**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.049	0.50	4.000	0	101	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCV**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742338**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.907	0.50	4.000	0	97.7	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCV**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742342**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.832	0.50	4.000	0	95.8	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCV**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742353**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.825	0.50	4.000	0	95.6	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **ICV**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5742317**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.269	0.050	1.250	0	102	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCV**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742319**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.206	0.050	1.250	0	96.5	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCV**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742331**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.322	0.050	1.250	0	106	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCV**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742334**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.204	0.050	1.250	0	96.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **ICB**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5742337**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCB**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742339**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCB**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742343**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCB**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742354**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **ICB**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5742318**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCB**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742320**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCB**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742332**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183502**
Client ID: **CCB**	Batch ID: **R183502**	TestNo: **EPA 300.0**		Analysis Date: **3/12/2024**	SeqNo: **5742335**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 3/12/2024

Sample Name		Retention Time	Evaluation
ICV	Nitrate	6.540	
CCV-1	Nitrate	6.450	
CCV-2	Nitrate	6.440	
CCV-3	Nitrate	6.447	
	Average	6.446	
	Applied RT Window	6.246 - 6.646	
MB-R183502_NO3	Nitrate	N.A.	N.A.
LCS-R183502_NO3	Nitrate	6.443	PASS
N063706-001B	Nitrate	6.427	PASS
N063705-001BMS	Nitrate	6.450	PASS
N063705-001BMSD	Nitrate	6.454	PASS
N063705-002BDUP	Nitrate	6.453	PASS

Reviewed by:

dMocha 3/26/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 3/12/2024

Sample Name		Retention Time	Evaluation
ICV	Sulfate	9.933	
CCV-1	Sulfate	9.734	
CCV-2	Sulfate	9.717	
CCV-3	Sulfate	9.717	
	Average	9.723	
	Applied RT Window	9.523 - 9.923	
MB-R183502_SO4	Sulfate	9.890	PASS
LCS-R183502_SO4	Sulfate	9.737	PASS
N063705-001BMS	Sulfate	9.740	PASS
N063705-001BMSD	Sulfate	9.740	PASS
N063705-002BDUP	Sulfate	9.697	PASS
N063706-001B	Sulfate	9.693	PASS

Reviewed by:

dlRocha 3/26/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): 10/5/2022, 12/14/2022, 3/22/2023,7/10/2023; 10/3/2023 & 11/14/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: mg/L

Instrument Name: **IC-08 & IC-09**

Datafile IC-08 221005A #24 IC-08 221214A #30 IC-08 230322A #35 IC-08 230710A #13 IC-09 231003A #14 IC-08 231114A #24 IC-09 231114A #19

Analyte	#1	#2	#3	#4	#5	#6	#7	Spike Conc., mg/L	SD	$t_{(n-1)}$ value	MDLs	MDL	PQL
Fluoride	0.100	0.103	0.108	0.118	0.110	0.098	0.126	0.10	0.0101	3.143	**0.0318**	**0.0318**	0.10
Chloride	0.480	0.418	0.472	0.653	0.624	0.587	0.622	0.50	0.0922	3.143	**0.2898**	**0.2898**	0.50
Nitrite	0.068	0.061	0.060	0.071	0.063	0.061	0.070	0.05	0.0047	3.143	**0.0149**	**0.0149**	0.05
Bromide	0.526	0.502	0.509	0.522	0.536	0.527	0.520	0.50	0.0116	3.143	**0.0364**	**0.0364**	0.50
Nitrate	0.073	0.058	0.059	0.073	0.074	0.068	0.073	0.05	0.0068	3.143	**0.0215**	**0.0240**	0.05
Phosphate	0.112	0.096	0.114	0.120	0.130	0.093	0.124	0.10	0.0138	3.143	**0.0433**	**0.0433**	0.10
Sulfate	0.501	0.609	0.638	0.401	0.704	0.620	0.697	0.50	0.1092	3.143	**0.3432**	**0.3432**	0.50

METHOD DETECTION LIMIT (Blanks)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Analyte	MDLb	# of Records
Fluoride	0	63
Chloride	0.1456	80
Nitrite	0.0147	64
Bromide	0	18
Nitrate	0.0240	132
Phosphate	0.0237	34
Sulfate	0.2579	107

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

EPA 6010B
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107482
ASSET #: N063706

Instrument ID: ICP-02
Analyst: DBJ
Date Analyzed: 3/12/2024

Method:

[X] EPA 6010B / 200.7
[ ] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

%Rec of Fe in N063705-002C-MS/MSD failed, high bias. However, LCS passed criteria.

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 03122024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in ug/L , in the original sample as follows:

Iron , ug/L = A * DF * PF *CF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL
CF= Conversion Factor from mg/L to ug/L, 1000

For Sample **N063706-001C** , the concentration i ug/L is calculated as follows:

Iron , ug/L = 0.00102 * 1 * (25/25) * 1000

Iron , ug/L = 1.02

Reporting results in two significant figures,

Iron , ug/L = 1.0

Since PQL of Iron , in ug/L = 20

Iron , ug/L = ND

Reviewed by:

dMRocha 3/26/2024

% RSD SUMMARY

RSD SUMMARY: 240312B

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	Fe	0	51.38	15	<PQL
Standard1	ICAL	1	Fe	0.02	28.38	15	NR!
Standard2	ICAL	1	Fe	0.05	3.9	15	PASS
Standard3	ICAL	1	Fe	2	0.09	15	PASS
Standard4	ICAL	1	Fe	5	0.15	15	PASS
Standard5	ICAL	1	Fe	7.5	0.15	15	PASS
Standard6	ICAL	1	Fe	10	0.1	15	PASS
Standard7	ICAL	1	Fe	20	0.12	15	PASS
ICV	ICV	1	Fe	10.07	0.16	15	PASS
ICB	ICB	1	Fe	-0.01	20.9	15	<PQL
LLICV	CCV1	1	Fe	0.02	10.86	20	PASS
LLICV	CCV1	1	Fe	0.02	2.43	20	PASS
ICSA1	ICSA	1	Fe	191.46	0.07	15	PASS
ICSAB1	ICSAB	1	Fe	188.9	0.12	15	PASS
MB-107482	MBLK	1	Fe	-0.01	40.03	15	<PQL
LCS-107482	LCS	1	Fe	0.1	8.88	15	PASS
N063705-001C	SAMP	1	Fe	0.04	26.29	15	NR!
N063705-002C	SAMP	1	Fe	0.01	20.61	15	<PQL
N063705-002C	SAMP	5	Fe	0	31.85	15	<PQL
N063705-002C-PS	PS	1	Fe	0.1	1.66	15	PASS
N063705-002C-MS	MS	1	Fe	0.21	0.47	15	PASS
N063705-002C-MSD	MSD	1	Fe	0.2	0.81	15	PASS
N063705-003C	SAMP	1	Fe	0.01	35.58	15	<PQL
N063705-004C	SAMP	1	Fe	0.01	9.26	15	PASS
CCV1	CCV	1	Fe	10.01	0.03	15	PASS
CCB1	CCB	1	Fe	0	95.17	15	<PQL
N063705-005C	SAMP	1	Fe	0.03	6	15	PASS
N063706-001C	SAMP	1	Fe	0	60.85	15	<PQL
N063642-008E	SAMP	1	Fe	0.03	2.74	15	PASS
N063642-009E	SAMP	1	Fe	0.03	4.17	15	PASS
N063705-001C	SAMP	1	Fe	0.01	2.56	15	PASS
CCV2	CCV	1	Fe	9.98	0.15	15	PASS
CCB2	CCB	1	Fe	-0.01	1.61	15	PASS
CCV3	CCV	1	Fe	9.96	0.11	15	PASS
CCB3	CCB	1	Fe	-0.01	6.33	15	PASS
CCV4	CCV	1	Fe	10.01	0.19	15	PASS
CCB4	CCB	1	Fe	0.02	4.5	15	PASS
ICSA2	ICSA	1	Fe	191.86	0.01	15	PASS
ICSAB2	ICSAB	1	Fe	188.18	0.09	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240312B

Instrument ID: ICP-02

STANDARD CODE	
Standard1	MWST-240311M, 0.5<50mL
Standard2	MWST-240311N
Standard3	MWST-240311O, 5<50mL
Standard4	MWST-240311O,12.5<50mL
Standard5	MWST-240311O, 15<40mL
Standard6	MWST-240311O, 25<50mL
Standard7	MWST-243011O
ICV	MWST-240311AF
CCV	MWST-240311O, 25<50mL
ICSA/ICSAB	MWST-240311P / MWST-240311Q
Int. Std. (Y)	MWST-240311B
PS Spike	MWST-240311X/Y/Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	03/12/2024	03:34:44 PM
2	Standard1	ICAL	1	03/12/2024	03:38:50 PM
3	Standard2	ICAL	1	03/12/2024	03:42:56 PM
4	Standard3	ICAL	1	03/12/2024	03:47:01 PM
5	Standard4	ICAL	1	03/12/2024	03:51:07 PM
6	Standard5	ICAL	1	03/12/2024	03:55:14 PM
7	Standard6	ICAL	1	03/12/2024	03:59:22 PM
8	Standard7	ICAL	1	03/12/2024	04:03:30 PM
250	ICV	ICV	1	03/12/2024	04:08:47 PM
1	ICB	ICB	1	03/12/2024	04:12:57 PM
2	LLICV	CCV1	1	03/12/2024	04:17:02 PM
2	LLICV	CCV1	1	03/12/2024	04:29:15 PM
9	ICSA1	ICSA	1	03/12/2024	04:33:22 PM
10	ICSAB1	ICSAB	1	03/12/2024	04:39:06 PM
131	MB-107482	MBLK	1	03/12/2024	05:01:43 PM
132	LCS-107482	LCS	1	03/12/2024	05:05:52 PM
133	N063705-001C	SAMP	1	03/12/2024	05:09:59 PM
134	N063705-002C	SAMP	1	03/12/2024	05:16:08 PM
135	N063705-002C	SAMP	5	03/12/2024	05:22:17 PM
136	N063705-002C-PS	PS	1	03/12/2024	05:26:25 PM
137	N063705-002C-MS	MS	1	03/12/2024	05:32:34 PM
138	N063705-002C-MSD	MSD	1	03/12/2024	05:38:43 PM
139	N063705-003C	SAMP	1	03/12/2024	05:44:51 PM
140	N063705-004C	SAMP	1	03/12/2024	05:51:00 PM
7	CCV1	CCV	1	03/12/2024	05:57:07 PM
1	CCB1	CCB	1	03/12/2024	06:01:16 PM
141	N063705-005C	SAMP	1	03/12/2024	06:05:22 PM
142	N063706-001C	SAMP	1	03/12/2024	06:11:30 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
143	N063642-008E	SAMP	1	03/12/2024	06:17:38 PM
144	N063642-009E	SAMP	1	03/12/2024	06:23:47 PM
133	N063705-001C	SAMP	1	03/12/2024	06:28:47 PM
145	MB-107440	MBLK	1	03/12/2024	06:34:56 PM
146	LCS1-107440	LCS	1	03/12/2024	06:39:05 PM
147	N063659-001A	SAMP	1	03/12/2024	06:43:14 PM
148	N063659-001A	SAMP	5	03/12/2024	06:47:22 PM
149	N063659-001A-PS	PS	1	03/12/2024	06:51:32 PM
7	CCV2	CCV	1	03/12/2024	06:55:41 PM
1	CCB2	CCB	1	03/12/2024	06:59:52 PM
150	N063659-001A-MS	MS	1	03/12/2024	07:03:58 PM
151	N063659-001A-MSD	MSD	1	03/12/2024	07:08:07 PM
152	N063659-002A	SAMP	1	03/12/2024	07:12:16 PM
153	N063659-003A	SAMP	1	03/12/2024	07:16:25 PM
154	N063659-004A	SAMP	1	03/12/2024	07:20:34 PM
155	N063660-001A	SAMP	1	03/12/2024	07:24:43 PM
156	N063660-002A	SAMP	1	03/12/2024	07:28:52 PM
157	N063660-003A	SAMP	1	03/12/2024	07:33:01 PM
158	N063660-004A	SAMP	1	03/12/2024	07:37:09 PM
159	N063660-005A	SAMP	1	03/12/2024	07:41:19 PM
7	CCV3	CCV	1	03/12/2024	07:45:28 PM
1	CCB3	CCB	1	03/12/2024	07:49:37 PM
160	N063660-006A	SAMP	1	03/12/2024	07:53:44 PM
161	N063661-001A	SAMP	1	03/12/2024	07:57:53 PM
7	CCV4	CCV	1	03/12/2024	08:02:02 PM
1	CCB4	CCB	1	03/12/2024	08:06:12 PM
9	ICSA2	ICSA	1	03/12/2024	08:10:18 PM
10	ICSAB2	ICSAB	1	03/12/2024	08:16:03 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/12/2024 12:30:00 PM**
Prep End Date: **3/12/2024 4:30:00 PM**
Prep Batch **107482** Prep Code:**3010_W_DISS**

Reviewed/ Date: dMocha 4/1/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units
mL / mL

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107482	Aqueous		25	☐	25	1.000		
MB-107482	Aqueous		25	☐	25	1.000		
N063642-008E	Groundwater	<2	25	☐	25	1.000		
N063642-009E	Groundwater	<2	25	☐	25	1.000		
N063705-001C	Groundwater	<2	25	☐	25	1.000		
N063705-002C	Groundwater	<2	25	☐	25	1.000		
N063705-002C-MS	Groundwater	<2	25	☐	25	1.000		
N063705-002C-MSD	Groundwater	<2	25	☐	25	1.000		
N063705-003C	Groundwater	<2	25	☐	25	1.000		
N063705-004C	Groundwater	<2	25	☐	25	1.000		
N063705-005C	Groundwater	<2	25	☐	25	1.000		
N063706-001C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15448	HYDROCHLORIC ACID
16152	NITRIC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240311X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240311Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240311Z	ICP Solution C	LCS,MS,MSD	0.5

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240312B

Instrument ID: ICP-02

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Iron								
CalBlk	03/12/2024	03:34:44 PM	Fe	273.953	81	0.00	mg/L	
Standard1	03/12/2024	03:38:50 PM	Fe	273.953	160	0.0200	mg/L	
Standard2	03/12/2024	03:42:56 PM	Fe	273.953	340	0.050	mg/L	
Standard3	03/12/2024	03:47:01 PM	Fe	273.953	11116	2.000	mg/L	
Standard4	03/12/2024	03:51:07 PM	Fe	273.953	28007	5.000	mg/L	
Standard5	03/12/2024	03:55:14 PM	Fe	273.953	42413	7.500	mg/L	
Standard6	03/12/2024	03:59:22 PM	Fe	273.953	56708	10.000	mg/L	
Standard7	03/12/2024	04:03:30 PM	Fe	273.953	113298	20.000	mg/L	1.0000

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **ICV**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742355**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10074.401	20	10000	0	101	90	110				

Sample ID **LLICV**	SampType: **CCV1**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **ZZZZZZ**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742358**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	16.342	20	20.00	0	81.7	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **CCV**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742371**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10007.977	20	10000	0	100	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **CCV**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742383**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	9978.550	20	10000	0	99.8	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **CCV**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742395**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	9959.718	20	10000	0	99.6	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **CCV**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742399**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10007.006	20	10000	0	100	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID	ICB	SampType:	ICB	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	183506
Client ID:	ICB	Batch ID:	R183506	TestNo:	EPA 6010B			Analysis Date:	3/12/2024	SeqNo:	5742356

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-5.613799	20									

Sample ID	CCB1	SampType:	CCB	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	183506
Client ID:	CCB	Batch ID:	R183506	TestNo:	EPA 6010B			Analysis Date:	3/12/2024	SeqNo:	5742372

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-1.070269	20									

Sample ID	CCB2	SampType:	CCB	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	183506
Client ID:	CCB	Batch ID:	R183506	TestNo:	EPA 6010B			Analysis Date:	3/12/2024	SeqNo:	5742384

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-8.318882	20									

Sample ID	CCB3	SampType:	CCB	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	183506
Client ID:	CCB	Batch ID:	R183506	TestNo:	EPA 6010B			Analysis Date:	3/12/2024	SeqNo:	5742396

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	-10.542343	20									

Sample ID	CCB4	SampType:	CCB	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	183506
Client ID:	CCB	Batch ID:	R183506	TestNo:	EPA 6010B			Analysis Date:	3/12/2024	SeqNo:	5742400

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	20.812	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Detection of Fe was > PQL in CCB4 . However, samples were closed by CCV2/CCB2.

dMocha 3/26/2024

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSA1**	SampType: **ICSA**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **ICSA**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742359**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	525618.509	50	500000	0	105	80	120				
Calcium	574685.746	500	500000	0	115	80	120				
Iron	191463.430	20	200000	0	95.7	80	120				
Magnesium	536992.777	100	500000	0	107	80	120				

Sample ID **ICSAB1**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **ICSAB**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742360**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	514636.432	50	500000	0	103	80	120				
Calcium	564181.906	500	500000	0	113	80	120				
Iron	188901.094	20	200000	0	94.5	80	120				
Magnesium	527873.510	100	500000	0	106	80	120				

Sample ID **ICSA2**	SampType: **ICSA**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **ICSA**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742401**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	525620.240	50	500000	0	105	80	120				
Calcium	573396.075	500	500000	0	115	80	120				
Iron	191859.044	20	200000	0	95.9	80	120				
Magnesium	539303.040	100	500000	0	108	80	120				

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **ICSAB**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742402**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	513530.300	50	500000	0	103	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID: **ICSAB**	Batch ID: **R183506**	TestNo: **EPA 6010B**		Analysis Date: **3/12/2024**	SeqNo: **5742402**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	560857.001	500	500000	0	112	80	120				
Iron	188176.626	20	200000	0	94.1	80	120				
Magnesium	525937.007	100	500000	0	105	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240312B

Instrument ID: ICP-02

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	1	99.77	65-125	PASS
Standard2	ICAL	1	1.01	101.14	65-125	PASS
Standard3	ICAL	1	1.01	101.1	65-125	PASS
Standard4	ICAL	1	1.01	100.66	65-125	PASS
Standard5	ICAL	1	1	100.16	65-125	PASS
Standard6	ICAL	1	0.99	99.39	65-125	PASS
Standard7	ICAL	1	0.98	98.23	65-125	PASS
ICV	ICV	1	1.01	100.69	65-125	PASS
ICB	ICB	1	1	99.55	65-125	PASS
LLICV	CCV1	1	1	99.73	65-125	PASS
LLICV	CCV1	1	1.01	101.16	65-125	PASS
ICSA1	ICSA	1	0.87	87.19	65-125	PASS
ICSAB1	ICSAB	1	0.87	87.17	65-125	PASS
MB-107482	MBLK	1	1.01	101.1	65-125	PASS
LCS-107482	LCS	1	0.96	96.3	65-125	PASS
N063705-001C	SAMP	1	0.8	80.15	65-125	PASS
N063705-002C	SAMP	1	0.82	82.21	65-125	PASS
N063705-002C	SAMP	5	0.92	91.99	65-125	PASS
N063705-002C-PS	PS	1	0.79	79.09	65-125	PASS
N063705-002C-MS	MS	1	0.85	85.49	65-125	PASS
N063705-002C-MSD	MSD	1	0.82	81.79	65-125	PASS
N063705-003C	SAMP	1	0.83	82.94	65-125	PASS
N063705-004C	SAMP	1	0.74	74.29	65-125	PASS
CCV1	CCV	1	0.99	98.98	65-125	PASS
CCB1	CCB	1	1	100.16	65-125	PASS
N063705-005C	SAMP	1	0.74	74.47	65-125	PASS
N063706-001C	SAMP	1	0.75	75.25	65-125	PASS
N063642-008E	SAMP	1	0.93	92.86	65-125	PASS
N063642-009E	SAMP	1	0.9	90.38	65-125	PASS
N063705-001C	SAMP	1	0.8	80.26	65-125	PASS
CCV2	CCV	1	1	99.56	65-125	PASS
CCB2	CCB	1	1	100.14	65-125	PASS
CCV3	CCV	1	0.99	98.68	65-125	PASS
CCB3	CCB	1	1	100.03	65-125	PASS
CCV4	CCV	1	1	100.26	65-125	PASS
CCB4	CCB	1	1.02	101.89	65-125	PASS
ICSA2	ICSA	1	0.87	87.43	65-125	PASS
ICSAB2	ICSAB	1	0.87	86.64	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063706
Test Method: EPA 6010B
Analysis Date: 3/12/2024

Matrix: Groundwater
Batch No.: 107482

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima 7300DV

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Fe. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063705-002C DT 5x	Iron	Fe	µg/L	0	NA	13.68658	100.00%	10

Reviewed by:

dMocha 3/26/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID	**N063705-002C-PS**	SampType: **PS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183506**
Client ID:	**ZZZZZZ**	Batch ID: **107482**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/12/2024**	SeqNo: **5742366**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	103.733	20	100.0	13.69	90.0	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

EPA 6020
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107478
ASSET #: N063706

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 3/12/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: —

2nd Level Reviewer LG 4/5/2024 Date:

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Groundwater

FORMULA:

Calculate the Barium concentration, in ug/L in the original sample as follows:

Barium , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063706-001C** , the concentration in ug/L is calculated as follows:

Barium , ug/L = 47.862 * 1 *(25 / 25)

Barium , ug/L = 47.862

Reporting results in two significant figures,

Barium , ug/L = 48

Reviewed by:

JRB 4/5/2024

% RSD SUMMARY

PERCENT RSD SUMMARY: 240312A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	21.573	15	<PQL	0.03	11.301	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.47	6.798	15	PASS	0.41	2.274	15	PASS
Std3-5/50 ppb	ICAL	1	4.67	0.377	15	PASS	4.77	1.271	15	PASS
Std4-10/100 ppb	ICAL	1	9.74	2.679	15	PASS	9.72	1.63	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.63	0.654	15	PASS	19.76	1.057	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.56	0.32	15	PASS	39.04	0.96	15	PASS
Std7-100/1000 ppb	ICAL	1	99.1	0.412	15	PASS	99.67	1.517	15	PASS
Std8-200/2000 ppb	ICAL	1	200.6	0.926	15	PASS	200.4	0.774	15	PASS
ICV	ICV	1	10.28	1.305	15	PASS	104.87	0.289	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
LLICV1	CCV1	1	1.1	5.297	20	PASS	0.51	4.389	20	PASS
MLCCV	CCV	1	19.52	1.746	15	PASS	19.69	2.132	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.73	0.665	15	PASS	20.64	1.205	15	PASS
CCV1	CCV	1	19.69	0.918	15	PASS	19.31	1.176	15	PASS
CCB1	CCB	1	0	126.212	15	<PQL	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.39	1.219	15	PASS	19.53	0.445	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV3	CCV	1	19.5	0.202	15	PASS	19.61	0.778	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.84	1.706	15	PASS	20.69	1.831	15	PASS
MB-107478	MBLK	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
LCS-107478	LCS	1	10.03	0.694	15	PASS	101.22	0.919	15	PASS
N063705-001C	SAMP	1	20.27	1.439	15	PASS	6.73	3.985	15	PASS
N063705-001C	SAMP	5	4.51	3.732	15	PASS	1.38	1.304	15	PASS
N063705-001C-PS	PS	1	29.28	0.56	15	PASS	99.79	1.586	15	PASS
N063705-001C-MS	MS	1	30.14	0.851	15	PASS	101.14	1.225	15	PASS
N063705-001C-MSD	MSD	1	30.09	1.434	15	PASS	101.18	0.66	15	PASS
N063705-002C	SAMP	1	37.84	2.651	15	PASS	10.62	3.232	15	PASS
N063705-003C	SAMP	1	37.49	1.588	15	PASS	6.91	1.622	15	PASS
CCV4	CCV	1	20.2	1.099	15	PASS	19.48	0.137	15	PASS
CCB4	CCB	1	0	191.265	15	<PQL	<0.000	N/A	15	<PQL
N063705-004C	SAMP	1	29.44	2.18	15	PASS	5.76	0.238	15	PASS
N063705-005C	SAMP	1	29.67	0.599	15	PASS	5.81	2.069	15	PASS
N063706-001C	SAMP	1	47.86	2.155	15	PASS	346.29	1.574	15	PASS
N063706-001C	SAMP	10	5.2	1.141	15	PASS	39.1	0.987	15	PASS
CCV5	CCV	1	20.32	0.506	15	PASS	19.37	0.998	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	0	53.174	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240312A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
ICSAB3	ICSAB	1	21.39	0.541	15	PASS	20.3	1.627	15	PASS

PERCENT RSD SUMMARY: 240312A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.06	40.926	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.48	5.798	15	PASS
Std3-5/50 ppb	ICAL	1	4.93	4.884	15	PASS
Std4-10/100 ppb	ICAL	1	9.6	1.432	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.57	1.712	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.67	0.69	15	PASS
Std7-100/1000 ppb	ICAL	1	99.32	0.965	15	PASS
Std8-200/2000 ppb	ICAL	1	200.47	0.96	15	PASS
ICV	ICV	1	10.26	0.562	15	PASS
ICB	ICB	1	0	1843.484	15	<PQL
LLICV1	CCV1	1	0.1	27.847	20	<PQL
MLCCV	CCV	1	19.53	0.888	15	PASS
ICSA1	ICSA	1	0	1230.608	15	<PQL
ICSAB1	ICSAB	1	20.62	0.688	15	PASS
CCV1	CCV	1	19.45	2.003	15	PASS
CCB1	CCB	1	0.01	93.594	15	<PQL
CCV2	CCV	1	19.3	0.915	15	PASS
CCB2	CCB	1	0.01	92.742	15	<PQL
CCV3	CCV	1	19.44	2.042	15	PASS
CCB3	CCB	1	0.01	71.127	15	<PQL
ICSA2	ICSA	1	0.03	56.698	15	<PQL
ICSAB2	ICSAB	1	20.75	0.711	15	PASS
MB-107478	MBLK	1	0.01	74.983	15	<PQL
LCS-107478	LCS	1	9.95	3.401	15	PASS
N063705-001C	SAMP	1	<0.000	N/A	15	<PQL
N063705-001C	SAMP	5	<0.000	N/A	15	<PQL
N063705-001C-PS	PS	1	10.28	3.397	15	PASS
N063705-001C-MS	MS	1	10.4	4.094	15	PASS
N063705-001C-MSD	MSD	1	10.19	1.352	15	PASS
N063705-002C	SAMP	1	<0.000	N/A	15	<PQL
N063705-003C	SAMP	1	<0.000	N/A	15	<PQL
CCV4	CCV	1	19.52	0.25	15	PASS
CCB4	CCB	1	0.02	23.522	15	<PQL
N063705-004C	SAMP	1	<0.000	N/A	15	<PQL
N063705-005C	SAMP	1	<0.000	N/A	15	<PQL
N063706-001C	SAMP	1	<0.000	N/A	15	<PQL
N063706-001C	SAMP	10	<0.000	N/A	15	<PQL
CCV5	CCV	1	19.82	1.204	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240312A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
ICSAB3	ICSAB	1	20.59	2.53	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240312A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0312001.d	RINSE	ICAL	1	03/12/24 2:37 PM
A0312002.d	Cal Blk	IBLK	1	03/12/24 2:41 PM
A0312003.d	Std1-0.1/1 ppb	ICAL	1	03/12/24 2:46 PM
A0312004.d	Std2-0.5/5 ppb	ICAL	1	03/12/24 2:51 PM
A0312005.d	Std3-5/50 ppb	ICAL	1	03/12/24 2:56 PM
A0312006.d	Std4-10/100 ppb	ICAL	1	03/12/24 3:00 PM
A0312007.d	Std5-4.0/20/200 ppb	ICAL	1	03/12/24 3:05 PM
A0312008.d	Std6-8.0/40/400 ppb	ICAL	1	03/12/24 3:10 PM
A0312009.d	Std7-100/1000 ppb	ICAL	1	03/12/24 3:15 PM
A0312010.d	Std8-200/2000 ppb	ICAL	1	03/12/24 3:19 PM
A0312011.d	ICV	ICV	1	03/12/24 3:34 PM
A0312012.d	ICB	ICB	1	03/12/24 3:38 PM
A0312013.d	LLICV1	CCV1	1	03/12/24 3:43 PM
A0312014.d	MLCCV	CCV	1	03/12/24 3:48 PM
A0312015.d	ICSA1	ICSA	1	03/12/24 3:52 PM
A0312016.d	ICSAB1	ICSAB	1	03/12/24 3:57 PM
A0312017.d	MB-107466	MBLK	1	03/12/24 4:09 PM
A0312018.d	LCS-107466	LCS	1	03/12/24 4:14 PM
A0312019.d	N063687-001A	SAMP	1	03/12/24 4:19 PM
A0312020.d	N063687-001A	SAMP	5	03/12/24 4:23 PM
A0312021.d	N063687-001A-PS	PS	1	03/12/24 4:28 PM
A0312022.d	N063687-001A-MS	MS	1	03/12/24 4:32 PM
A0312023.d	N063687-001A-MSD	MSD	1	03/12/24 4:37 PM
A0312024.d	N063687-002A	SAMP	1	03/12/24 4:42 PM
A0312025.d	N063700-001A	SAMP	1	03/12/24 4:46 PM
A0312026.d	N063701-001A	SAMP	1	03/12/24 4:51 PM
A0312027.d	CCV1	CCV	1	03/12/24 4:56 PM
A0312028.d	CCB1	CCB	1	03/12/24 5:00 PM
A0312029.d	N063702-001A	SAMP	1	03/12/24 5:05 PM
A0312030.d	N063703-001A	SAMP	1	03/12/24 5:10 PM
A0312031.d	N063687-001A	SAMP	1	03/12/24 5:14 PM
A0312032.d	N063687-001A	SAMP	1	03/12/24 5:19 PM
A0312033.d	N063687-001A	SAMP	1	03/12/24 5:24 PM
A0312034.d	CCV2	CCV	1	03/12/24 5:28 PM
A0312035.d	CCB2	CCB	1	03/12/24 5:33 PM
A0312036.d	MB-107476	MBLK	1	03/12/24 5:37 PM
A0312037.d	LCS-107476	LCS	1	03/12/24 5:42 PM
A0312038.d	N063688-001A	SAMP	1	03/12/24 5:47 PM
A0312039.d	N063688-001A	SAMP	5	03/12/24 5:51 PM
A0312040.d	N063688-001A-PS	PS	1	03/12/24 5:56 PM
A0312041.d	N063688-001A-MS	MS	1	03/12/24 6:01 PM
A0312042.d	N063688-001A-MSD	MSD	1	03/12/24 6:05 PM

INJECTION LOG: 240312A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0312043.d	CCV3	CCV	1	03/12/24 6:10 PM
A0312044.d	CCB3	CCB	1	03/12/24 6:15 PM
A0312045.d	ICSA2	ICSA	1	03/12/24 6:19 PM
A0312046.d	ICSAB2	ICSAB	1	03/12/24 6:24 PM
A0312047.d	MB-107478	MBLK	1	03/12/24 6:29 PM
A0312048.d	LCS-107478	LCS	1	03/12/24 6:33 PM
A0312049.d	N063705-001C	SAMP	1	03/12/24 6:38 PM
A0312050.d	N063705-001C	SAMP	5	03/12/24 6:42 PM
A0312051.d	N063705-001C-PS	PS	1	03/12/24 6:47 PM
A0312052.d	N063705-001C-MS	MS	1	03/12/24 6:52 PM
A0312053.d	N063705-001C-MSD	MSD	1	03/12/24 6:56 PM
A0312054.d	N063705-002C	SAMP	1	03/12/24 7:01 PM
A0312055.d	N063705-003C	SAMP	1	03/12/24 7:06 PM
A0312056.d	RINSE	ICAL	1	03/12/24 7:10 PM
A0312057.d	CCV4	CCV	1	03/12/24 7:15 PM
A0312058.d	CCB4	CCB	1	03/12/24 7:20 PM
A0312059.d	N063705-004C	SAMP	1	03/12/24 7:24 PM
A0312060.d	N063705-005C	SAMP	1	03/12/24 7:29 PM
A0312061.d	N063706-001C	SAMP	1	03/12/24 7:34 PM
A0312062.d	N063706-001C	SAMP	10	03/12/24 7:43 PM
A0312063.d	CCV5	CCV	1	03/12/24 7:48 PM
A0312064.d	CCB5	CCB	1	03/12/24 7:52 PM
A0312065.d	ICSA3	ICSA	1	03/12/24 7:57 PM
A0312066.d	ICSAB3	ICSAB	1	03/12/24 8:02 PM
A0312067.d	RINSE	ICAL	1	03/12/24 8:06 PM
A0312068.d	RINSE	ICAL	1	03/12/24 8:11 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/12/2024 11:31:18 AM**
Prep End Date: **3/12/2024 3:30:00 PM**
Prep Batch **107478** Prep Code:**3010_W_MSDISS_TPK**

Reviewed/ Date: JRB for 4/5/2024
Initials/ Date: _____
Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-1-16**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107478	Aqueous		25	☐	25	1.000		
MB-107478	Aqueous		25	☐	25	1.000		
N063705-001C	Groundwater	<2	25	☐	25	1.000		
N063705-001C-MS	Groundwater	<2	25	☐	25	1.000		
N063705-001C-MSD	Groundwater	<2	25	☐	25	1.000		
N063705-002C	Groundwater	<2	25	☐	25	1.000		
N063705-003C	Groundwater	<2	25	☐	25	1.000		
N063705-004C	Groundwater	<2	25	☐	25	1.000		
N063705-005C	Groundwater	<2	25	☐	25	1.000		
N063706-001C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240311B.b
Acq. Date-Time	2024-03-12 13:48:49
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

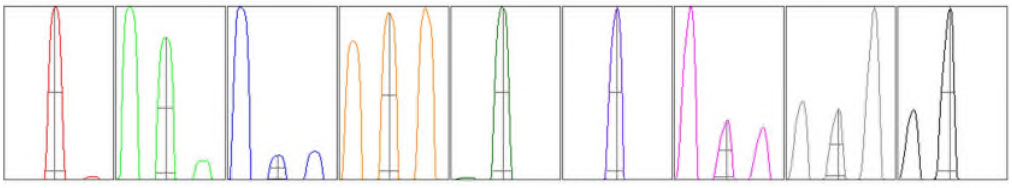
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	7480	74800.53	500.00		2.616	5.000
24	10.00	22346	223463.66	500.00		2.448	5.000
25	10.00	3014	30144.78	500.00		3.148	5.000
26	10.00	3496	34956.56	500.00		2.759	5.000
59	10.00	35897	358973.97	500.00		1.958	5.000
115	10.00	53931	539311.37	500.00		1.998	5.000
206	10.00	11019	110187.45	500.00		1.918	5.000
207	10.00	9137	91373.28	500.00		1.797	5.000
208	10.00	22678	226777.84	500.00		1.824	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.558 %
Doubly Charged	70 / 140 1.095 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	7502.73	8.90	8.90 - 9.10	
24	22331.58	23.90	23.90 - 24.10	
25	3014.51	24.90	24.90 - 25.10	
26	3620.45	25.90	25.90 - 26.10	
59	35835.13	58.95	58.90 - 59.10	
115	52662.28	115.00	114.90 - 115.10	
206	10634.45	205.95	205.90 - 206.10	
207	9513.91	206.95	206.90 - 207.10	
208	23658.59	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.38	0.528	0.900	
24	0.43	0.539	0.900	
25	0.42	0.526	0.900	
26	0.42	0.536	0.900	
59	0.40	0.536	0.900	
115	0.36	0.488	0.900	
206	0.37	0.539	0.900	
207	0.36	0.543	0.900	
208	0.36	0.558	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.4 mm	Torch V	1.1 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2521 V	Pulse HV	1595 V

[H2]

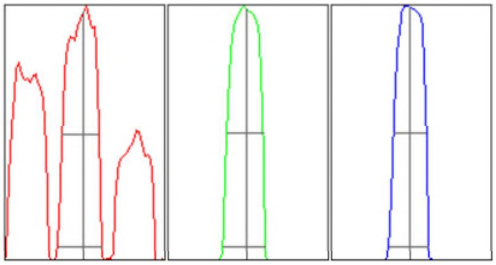
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		289	2894.65			7.603	
59		3457	34573.69			2.713	
115		49850	498503.75			2.301	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.511 %
Doubly Charged	70 / 140 0.327 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	306.04	26.00	25.90 - 26.10	
59	3610.31	59.00	58.90 - 59.10	
115	51031.09	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.70	0.832	0.900	
59	0.68	0.792	0.900	
115	0.62	0.757	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	0.9999	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.4 mm	Torch V	1.1 mm		

EM

Discriminator	4.5 mV	Analog HV	2521 V	Pulse HV	1595 V

[He]

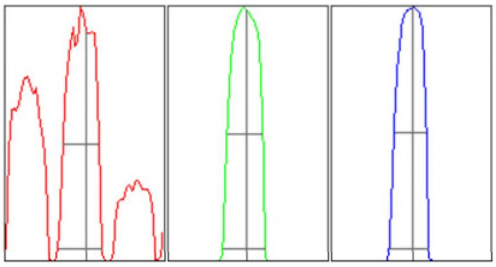
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		116	1159.04			10.300	
59		10115	101147.80			1.749	
115		10885	108853.04			2.046	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.210 %
Doubly Charged	70 / 140 1.038 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	120.76	26.05	25.90 - 26.10	
59	10227.46	59.00	58.90 - 59.10	
115	10984.10	115.05	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.68	0.827	0.900	
59	0.68	0.792	0.900	
115	0.62	0.741	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	0.9999	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.02		

Hardware Settings

Torch

Torch H	1.4 mm	Torch V	1.1 mm

EM

Discriminator	4.5 mV	Analog HV	2521 V	Pulse HV	1595 V

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240312A

Instrument ID: ICPMS-03

Analyte	Data File	A0312002.d	A0312003.d	A0312004.d	A0312005.d	A0312006.d	A0312007.d	A0312008.d	A0312009.d	A0312010.d	
	Acq. Date-Time	03/12/2024 02:41 PM	03/12/2024 02:46 PM	03/12/2024 02:51 PM	03/12/2024 02:56 PM	03/12/2024 03:00 PM	03/12/2024 03:05 PM	03/12/2024 03:10 PM	03/12/2024 03:15 PM	03/12/2024 03:19 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	66096.8		66122.4	65582.6	65801.2	65427.5	66876.6	66091.2	66231.7	
55 Mn [2]	CPS	175.5		1118.5	11070.7	22475.3	45231.3	91205.2	229825.9	462877.8	1.0000
72 Ge (ISTD) [2]	CPS	40727.2	40256.1	40237.1	40233.7	40026.7	40241.6	40525.7	40379.6	40419.8	
75 As [2]	CPS	13.3	45.5	280	2737.9	5286.3	10817.8	22074.5	55052.4	111207.8	1.0000
159 Tb (ISTD) [3]	CPS	2440785.4		2418930.5	2429558.9	2434133	2413182.7	2418850.8	2447523.6	2445038.7	
137 Ba [3]	CPS	73.3		2280.2	22059.2	46054.9	91967.3	185690.7	470500.7	951332.3	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **ICV** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742147**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.255	0.10	10.00	0	103	90	110				
Barium	10.283	1.0	10.00	0	103	90	110				
Manganese	104.872	0.50	100.0	0	105	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **ZZZZZZ** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742149**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.095	0.10	0.1000	0	95.2	80	120				
Barium	1.105	1.0	1.000	0	110	80	120				
Manganese	0.508	0.50	0.5000	0	102	80	120				

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **CCV** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742150**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.534	0.10	20.00	0	97.7	90	110				
Barium	19.521	1.0	20.00	0	97.6	90	110				
Manganese	19.686	0.50	20.00	0	98.4	90	110				

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **CCV** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742163**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.445	0.10	20.00	0	97.2	90	110				
Barium	19.691	1.0	20.00	0	98.5	90	110				
Manganese	19.311	0.50	20.00	0	96.6	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **CCV** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742170**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.296	0.10	20.00	0	96.5	90	110				
Barium	19.388	1.0	20.00	0	96.9	90	110				
Manganese	19.532	0.50	20.00	0	97.7	90	110				

Sample ID **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **CCV** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742179**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.443	0.10	20.00	0	97.2	90	110				
Barium	19.502	1.0	20.00	0	97.5	90	110				
Manganese	19.610	0.50	20.00	0	98.1	90	110				

Sample ID **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **CCV** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742192**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.516	0.10	20.00	0	97.6	90	110				
Barium	20.205	1.0	20.00	0	101	90	110				
Manganese	19.485	0.50	20.00	0	97.4	90	110				

Sample ID **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **CCV** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742198**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.819	0.10	20.00	0	99.1	90	110				
Barium	20.323	1.0	20.00	0	102	90	110				
Manganese	19.369	0.50	20.00	0	96.8	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB**	SampType: **ICB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183503**
Client ID: **ICB**	Batch ID: **R183503**	TestNo: **EPA 6020**		Analysis Date: **3/12/2024**	SeqNo: **5742148**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183503**
Client ID: **CCB**	Batch ID: **R183503**	TestNo: **EPA 6020**		Analysis Date: **3/12/2024**	SeqNo: **5742164**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183503**
Client ID: **CCB**	Batch ID: **R183503**	TestNo: **EPA 6020**		Analysis Date: **3/12/2024**	SeqNo: **5742171**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183503**
Client ID: **CCB**	Batch ID: **R183503**	TestNo: **EPA 6020**		Analysis Date: **3/12/2024**	SeqNo: **5742180**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183503**
Client ID: **CCB**	Batch ID: **R183503**	TestNo: **EPA 6020**		Analysis Date: **3/12/2024**	SeqNo: **5742193**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183503**
Client ID: **CCB**	Batch ID: **R183503**	TestNo: **EPA 6020**		Analysis Date: **3/12/2024**	SeqNo: **5742199**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **ICSA** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742151**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **ICSAB** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742152**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.624	0.10	20.00	0	103	80	120				
Barium	20.730	1.0	20.00	0	104	80	120				
Manganese	20.637	0.50	20.00	0	103	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **ICSA** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742181**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **ICSAB** Batch ID: **R183503** TestNo: **EPA 6020** Analysis Date: **3/12/2024** SeqNo: **5742182**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.749	0.10	20.00	0	104	80	120				
Barium	20.838	1.0	20.00	0	104	80	120				
Manganese	20.687	0.50	20.00	0	103	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA3**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183503**
Client ID: **ICSA**	Batch ID: **R183503**	TestNo: **EPA 6020**		Analysis Date: **3/12/2024**	SeqNo: **5742200**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183503**
Client ID: **ICSAB**	Batch ID: **R183503**	TestNo: **EPA 6020**		Analysis Date: **3/12/2024**	SeqNo: **5742201**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.594	0.10	20.00	0	103	80	120				
Barium	21.388	1.0	20.00	0	107	80	120				
Manganese	20.299	0.50	20.00	0	101	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240312A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	2440785.4	2440785.4	100	PASS	30-150	66096.8	66096.8	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	2460721.8	2440785.4	100.82	PASS	30-150	65820.1	66096.8	99.58	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	2418930.5	2440785.4	99.1	PASS	30-150	66122.4	66096.8	100.04	PASS	30-150
Std3-5/50 ppb	ICAL	1	2429558.9	2440785.4	99.54	PASS	30-150	65582.6	66096.8	99.22	PASS	30-150
Std4-10/100 ppb	ICAL	1	2434133	2440785.4	99.73	PASS	30-150	65801.2	66096.8	99.55	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	2413182.7	2440785.4	98.87	PASS	30-150	65427.5	66096.8	98.99	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	2418850.8	2440785.4	99.1	PASS	30-150	66876.6	66096.8	101.18	PASS	30-150
Std7-100/1000 ppb	ICAL	1	2447523.6	2440785.4	100.28	PASS	30-150	66091.2	66096.8	99.99	PASS	30-150
Std8-200/2000 ppb	ICAL	1	2445038.7	2440785.4	100.17	PASS	30-150	66231.7	66096.8	100.2	PASS	30-150
ICV	ICV	1	2459332.3	2440785.4	100.76	PASS	30-150	65556.9	66096.8	99.18	PASS	30-150
ICB	ICB	1	2418480.9	2440785.4	99.09	PASS	30-150	65092.9	66096.8	98.48	PASS	30-150
LLICV1	CCV1	1	2397352.4	2440785.4	98.22	PASS	30-150	64307.6	66096.8	97.29	PASS	30-150
MLCCV	CCV	1	2445039.1	2440785.4	100.17	PASS	30-150	64990.2	66096.8	98.33	PASS	30-150
ICSA1	ICSA	1	2403496.6	2440785.4	98.47	PASS	30-150	63901.5	66096.8	96.68	PASS	30-150
ICSAB1	ICSAB	1	2392764.2	2440785.4	98.03	PASS	30-150	64609.8	66096.8	97.75	PASS	30-150
CCV1	CCV	1	2470026	2440785.4	101.2	PASS	30-150	66347.9	66096.8	100.38	PASS	30-150
CCB1	CCB	1	2458752.7	2440785.4	100.74	PASS	30-150	65717.5	66096.8	99.43	PASS	30-150
CCV2	CCV	1	2493188.9	2440785.4	102.15	PASS	30-150	65588.2	66096.8	99.23	PASS	30-150
CCB2	CCB	1	2494484.9	2440785.4	102.2	PASS	30-150	64973.4	66096.8	98.3	PASS	30-150
CCV3	CCV	1	2528748.8	2440785.4	103.6	PASS	30-150	65565.9	66096.8	99.2	PASS	30-150
CCB3	CCB	1	2515953.7	2440785.4	103.08	PASS	30-150	66113.5	66096.8	100.03	PASS	30-150
ICSA2	ICSA	1	2470130.8	2440785.4	101.2	PASS	30-150	65623.8	66096.8	99.28	PASS	30-150
ICSAB2	ICSAB	1	2436151.8	2440785.4	99.81	PASS	30-150	64030.9	66096.8	96.87	PASS	30-150
MB-107478	MBLK	1	2252555.5	2440785.4	92.29	PASS	30-150	58536.5	66096.8	88.56	PASS	30-150
LCS-107478	LCS	1	2274313.7	2440785.4	93.18	PASS	30-150	59121.9	66096.8	89.45	PASS	30-150
N063705-001C	SAMP	1	1883379.1	2440785.4	77.16	PASS	30-150	56621.2	66096.8	85.66	PASS	30-150
N063705-001C	SAMP	5	2146253.5	2440785.4	87.93	PASS	30-150	62389.4	66096.8	94.39	PASS	30-150
N063705-001C-PS	PS	1	1934388.6	2440785.4	79.25	PASS	30-150	58927.9	66096.8	89.15	PASS	30-150
N063705-001C-MS	MS	1	1930835.5	2440785.4	79.11	PASS	30-150	57804	66096.8	87.45	PASS	30-150
N063705-001C-MSD	MSD	1	1919631.1	2440785.4	78.65	PASS	30-150	57855.4	66096.8	87.53	PASS	30-150
N063705-002C	SAMP	1	2000082	2440785.4	81.94	PASS	30-150	58637.9	66096.8	88.72	PASS	30-150
N063705-003C	SAMP	1	2008850.5	2440785.4	82.3	PASS	30-150	57775	66096.8	87.41	PASS	30-150
CCV4	CCV	1	2417234	2440785.4	99.04	PASS	30-150	68119.2	66096.8	103.06	PASS	30-150
CCB4	CCB	1	2343050.2	2440785.4	96	PASS	30-150	66137.1	66096.8	100.06	PASS	30-150
N063705-004C	SAMP	1	1670492.4	2440785.4	68.44	PASS	30-150	52114.3	66096.8	78.85	PASS	30-150
N063705-005C	SAMP	1	1652164.6	2440785.4	67.69	PASS	30-150	51927.1	66096.8	78.56	PASS	30-150
N063706-001C	SAMP	1	1680871.5	2440785.4	68.87	PASS	30-150	54217.7	66096.8	82.03	PASS	30-150
N063706-001C	SAMP	10	2121331	2440785.4	86.91	PASS	30-150	62852.2	66096.8	95.09	PASS	30-150
CCV5	CCV	1	2348194.5	2440785.4	96.21	PASS	30-150	69006.5	66096.8	104.4	PASS	30-150
CCB5	CCB	1	2345109.9	2440785.4	96.08	PASS	30-150	67422	66096.8	102	PASS	30-150
ICSA3	ICSA	1	2295585.3	2440785.4	94.05	PASS	30-150	67167.8	66096.8	101.62	PASS	30-150

INTERNAL STANDARD: 240312A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
ICSAB3	ICSAB	1	2254769	2440785.4	92.38	PASS	30-150	64697	66096.8	97.88	PASS	30-150

INTERNAL STANDARD: 240312A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	40727.2	40727.2	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	40256.1	40727.2	98.84	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	40237.1	40727.2	98.8	PASS	30-150
Std3-5/50 ppb	ICAL	1	40233.7	40727.2	98.79	PASS	30-150
Std4-10/100 ppb	ICAL	1	40026.7	40727.2	98.28	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	40241.6	40727.2	98.81	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	40525.7	40727.2	99.51	PASS	30-150
Std7-100/1000 ppb	ICAL	1	40379.6	40727.2	99.15	PASS	30-150
Std8-200/2000 ppb	ICAL	1	40419.8	40727.2	99.25	PASS	30-150
ICV	ICV	1	40093.4	40727.2	98.44	PASS	30-150
ICB	ICB	1	39730.3	40727.2	97.55	PASS	30-150
LLICV1	CCV1	1	39544.3	40727.2	97.1	PASS	30-150
MLCCV	CCV	1	39888.5	40727.2	97.94	PASS	30-150
ICSA1	ICSA	1	39465.2	40727.2	96.9	PASS	30-150
ICSAB1	ICSAB	1	39408.4	40727.2	96.76	PASS	30-150
CCV1	CCV	1	40760.6	40727.2	100.08	PASS	30-150
CCB1	CCB	1	40608	40727.2	99.71	PASS	30-150
CCV2	CCV	1	40068.9	40727.2	98.38	PASS	30-150
CCB2	CCB	1	40253.8	40727.2	98.84	PASS	30-150
CCV3	CCV	1	40602.4	40727.2	99.69	PASS	30-150
CCB3	CCB	1	41072.5	40727.2	100.85	PASS	30-150
ICSA2	ICSA	1	40329.6	40727.2	99.02	PASS	30-150
ICSAB2	ICSAB	1	38878.3	40727.2	95.46	PASS	30-150
MB-107478	MBLK	1	36524	40727.2	89.68	PASS	30-150
LCS-107478	LCS	1	36431.6	40727.2	89.45	PASS	30-150
N063705-001C	SAMP	1	33807.1	40727.2	83.01	PASS	30-150
N063705-001C	SAMP	5	37421.5	40727.2	91.88	PASS	30-150
N063705-001C-PS	PS	1	33980.8	40727.2	83.44	PASS	30-150
N063705-001C-MS	MS	1	33917.3	40727.2	83.28	PASS	30-150
N063705-001C-MSD	MSD	1	33598.9	40727.2	82.5	PASS	30-150
N063705-002C	SAMP	1	34204.6	40727.2	83.98	PASS	30-150
N063705-003C	SAMP	1	33414.1	40727.2	82.04	PASS	30-150
CCV4	CCV	1	41333.2	40727.2	101.49	PASS	30-150
CCB4	CCB	1	40189.3	40727.2	98.68	PASS	30-150
N063705-004C	SAMP	1	29968.5	40727.2	73.58	PASS	30-150
N063705-005C	SAMP	1	30060.9	40727.2	73.81	PASS	30-150
N063706-001C	SAMP	1	30810.1	40727.2	75.65	PASS	30-150
N063706-001C	SAMP	10	37920.5	40727.2	93.11	PASS	30-150
CCV5	CCV	1	41239.6	40727.2	101.26	PASS	30-150
CCB5	CCB	1	41505.9	40727.2	101.91	PASS	30-150
ICSA3	ICSA	1	40318.4	40727.2	99	PASS	30-150

INTERNAL STANDARD: 240312A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
ICSAB3	ICSAB	1	39464.1	40727.2	96.9	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.:	N063706
Test Method:	EPA 6020
Analysis Date:	3/12/2024
Matrix:	Groundwater
Batch No.:	107478
Instrument ID:	ICPMS-03
Instrument Description:	Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to As, Ba, Mn. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063705-001C DT 5x	Arsenic	As	µg/L	0	NA	0		10
N063705-001C DT 5x	Barium	Ba	µg/L	22.54131	NA	20.2749	11.18%	10
N063705-001C DT 5x	Manganese	Mn	µg/L	6.898722	NA	6.731893	2.48%	10

Reviewed by:

JRB 4/5/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063706
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **N063705-001C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183503**
Client ID: **ZZZZZZ** Batch ID: **107478** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/12/2024** SeqNo: **5742187**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.278	0.10	10.00	0	103	80	120				
Barium	29.282	1.0	10.00	20.27	90.1	80	120				
Manganese	99.794	0.50	100.0	6.732	93.1	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number : 504398
Report Level : II
Report Date : 03/28/2024

Analytical Report *prepared for:*

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Location: N063707

Authorized for release by:

Quynhgiao Le

Quynhgiao Le, Project Manager
714-7716900
quynhgiao.le@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Sonny Lorenzo
Asset Laboratories
11110 Artersia
Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 504398
Location: N063707
Date Received: 03/14/24

Sample ID	Lab ID	Collected	Matrix
N063707-001A / PT5D-0324	504398-001	03/11/24 14:29	Water
N063707-002A / PT6D-0324	504398-002	03/11/24 13:53	Water
N063707-003A / MW-931-Q124	504398-003	03/11/24 14:03	Water
N063707-004A / MW-44-115-0324	504398-004	03/11/24 12:41	Water
N063707-005A / MW-928-Q124	504398-005	03/11/24 12:51	Water
N063707-006A / MW-44-125-0324	504398-006	03/11/24 12:03	Water

ENTHALPY ANALYTICAL

Case Narrative

Asset Laboratories 11110 Artersia Blvd, Suite B Cerritos, CA 90703 Sonny Lorenzo	Lab Job Number: 504398 Location: N063707 Date Received: 03/14/24

- This data package contains sample and QC results for six water samples, requested for the above referenced project on 03/14/24. The samples were received cold and intact.
- Level II is also requested.

504398

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Enthalpy Analytical
931 W. Barkley Ave.
Orange, CA 92868

TEL: (714) 771-6900
FAX: (714) 538-1209
Acct #:

Field Sampler: Riggie Tep

12-Mar-24

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				SM5310B		
N063707-001A / PT5D-0324	Groundwater	3/11/2024 2:29:00 PM	8OZA	1		
N063707-002A / PT6D-0324	Groundwater	3/11/2024 1:53:00 PM	8OZA	1		
N063707-003A / MW-931-Q124	Groundwater	3/11/2024 2:03:00 PM	8OZA	1		
N063707-004A / MW-44-115-0324	Groundwater	3/11/2024 12:41:00 PM	8OZA	1		
N063707-005A / MW-928-Q124	Groundwater	3/11/2024 12:51:00 PM	8OZA	1		
N063707-006A / MW-44-125-0324	Groundwater	3/11/2024 12:03:00 PM	8OZA	1		

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N63707A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for TOC by SM5310B. EDD requirement Labspec7 edata.

GLS #: 561087909

		Date/Time			Date/Time
Relinquished by:	YRodriguez	3/12/2024 1630	**Received by:**		3/14/24 10:09
Relinquished by:			**Received by:**		

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Asset Labs Project: N063707

Date Received: 3/14/24 Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 4.0 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☑ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 2.2 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____ ☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: Ileana Sylvestrini Date: MAR 14 2024

GLS.

800-322-5555
www.gls-us.com

Ship From
ADVANCED TECHNOLOGY
LABORATORIES, INC.
MARLON CARTIN
3151 W. POST RD.
LAS VEGAS, NV 89118

Ship To
ENHALPY ANALYTICAL
SAMPLE RECEIVING
931 W. BARKLEY AVE
ORANGE, CA 92868

COD: $0.00
Weight: 0 lb(s)
Reference:

Delivery Instructions:

Signature Type: STANDARD

Tracking #: 561087909

PDS

ORANGE

2.2 | 4.0

S10219D

5364270

ORC CA927-RD0

Print Date: 3/12/2024 2:06 PM

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.
Step 2: Fold this page in half.
Step 3: Securely attach this label to your package and do not cover the barcode.

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all of the General Logistics Systems US, Inc. (GLS) service terms & conditions including, but not limited to; limits of liability, declared value conditions, and claim procedures which are available on our website at www.gls-us.com.

ENTHALPY ANALYTICAL

Analysis Results for 504398

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 504398
Location: N063707
Date Received: 03/14/24

Sample ID: N063707-001A / PT5D-0324 **Lab ID:** 504398-001 **Collected:** 03/11/24 14:29
Matrix: Water

504398-001 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	ND		mg/L	1.0	1	335596	03/18/24	03/18/24	EPL

Sample ID: N063707-002A / PT6D-0324 **Lab ID:** 504398-002 **Collected:** 03/11/24 13:53
Matrix: Water

504398-002 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.6**		mg/L	1.0	1	335596	03/18/24	03/18/24	EPL

Sample ID: N063707-003A / MW-931-Q124 **Lab ID:** 504398-003 **Collected:** 03/11/24 14:03
Matrix: Water

504398-003 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.7**		mg/L	1.0	1	335596	03/18/24	03/18/24	EPL

Sample ID: N063707-004A / MW-44-115-0324 **Lab ID:** 504398-004 **Collected:** 03/11/24 12:41
Matrix: Water

504398-004 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	ND		mg/L	1.0	1	335596	03/18/24	03/18/24	EPL

Sample ID: N063707-005A / MW-928-Q124 **Lab ID:** 504398-005 **Collected:** 03/11/24 12:51
Matrix: Water

504398-005 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	ND		mg/L	1.0	1	335596	03/18/24	03/18/24	EPL

Sample ID: N063707-006A / MW-44-125-0324 **Lab ID:** 504398-006 **Collected:** 03/11/24 12:03
Matrix: Water

504398-006 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	ND		mg/L	1.0	1	335596	03/18/24	03/18/24	EPL

ND Not Detected

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type: Blank	**Lab ID: QC1137172**	**Batch: 335596**
Matrix: Water	**Method: SM 5310B**	

QC1137172 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Total Organic Carbon	ND		mg/L	1.0	03/18/24	03/18/24

Type: Lab Control Sample	**Lab ID: QC1137173**	**Batch: 335596**
Matrix: Water	**Method: SM 5310B**	

QC1137173 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Total Organic Carbon	23.19	25.00	mg/L	93%		80-120

Type: Matrix Spike	**Lab ID: QC1137174**	**Batch: 335596**
Matrix (Source ID): Water (504367-004)	**Method: SM 5310B**	

QC1137174 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Total Organic Carbon	39.31	11.85	25.00	mg/L	110%		80-120	2

Type: Matrix Spike Duplicate	**Lab ID: QC1137175**	**Batch: 335596**
Matrix (Source ID): Water (504367-004)	**Method: SM 5310B**	

QC1137175 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Total Organic Carbon	38.99	11.85	25.00	mg/L	109%		80-120	1	20	2

ND Not Detected

ARCADIS

Project: PG&E Topock - PCM

Project No.: 30121866.1Q23GW

ASSET Laboratories Work Order:

N063735

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063735

Item	Page
Cover Page	1-6
Analytical Result/QC Summary Reports	7-71
Sample Receiving Items	72-78
List of Analysts	79
Raw Data	
EPA 218.6	80-319
EPA 300.0	320-353
EPA 6010B_Dissolved	354-384
EPA 6020_Dissolved	385-431

March 26, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063735

RE: PG&E Topock - PCM, 30121866.1Q23GW

Attention: Dan Bush

Enclosed are the results for sample(s) received on March 12, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30121866.1Q23GW
Lab Order: N063735

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 218.6:

Dilution was necessary for samples N063735-002A and -004A due to matrix interference. Samples were analyzed at lower dilution however matrix spike recovery was not met indicating possible matrix interference. Samples were reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Analytical Comments for EPA 300:

Dilution was necessary due to precipitation of sample upon addition of eluent.

Analytical Comments for EPA 6010B:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Iron in QC samples N063735-002C-MS and N063735-002C-MSD possibly due to matrix interference. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

ASSET Laboratories

Date: *26-Mar-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30121866.1Q23GW
Lab Order: N063735
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063735-001A	MW-36-090-0324	Groundwater	3/12/2024 11:17:00 AM	3/12/2024	3/26/2024
N063735-001B	MW-36-090-0324	Groundwater	3/12/2024 11:17:00 AM	3/12/2024	3/26/2024
N063735-001C	MW-36-090-0324	Groundwater	3/12/2024 11:17:00 AM	3/12/2024	3/26/2024
N063735-002A	MW-34-080-0324	Groundwater	3/12/2024 1:13:00 PM	3/12/2024	3/26/2024
N063735-002B	MW-34-080-0324	Groundwater	3/12/2024 1:13:00 PM	3/12/2024	3/26/2024
N063735-002C	MW-34-080-0324	Groundwater	3/12/2024 1:13:00 PM	3/12/2024	3/26/2024
N063735-003A	MW-34-080-EB-0324	Groundwater	3/12/2024 12:50:00 PM	3/12/2024	3/26/2024
N063735-004A	TW-02D-0324	Groundwater	3/12/2024 9:14:00 AM	3/12/2024	3/26/2024
N063735-004B	TW-02D-0324	Groundwater	3/12/2024 9:14:00 AM	3/12/2024	3/26/2024
N063735-004C	TW-02D-0324	Groundwater	3/12/2024 9:14:00 AM	3/12/2024	3/26/2024
N063735-005A	TW-02S-0324	Groundwater	3/12/2024 8:40:00 AM	3/12/2024	3/26/2024
N063735-005B	TW-02S-0324	Groundwater	3/12/2024 8:40:00 AM	3/12/2024	3/26/2024
N063735-005C	TW-02S-0324	Groundwater	3/12/2024 8:40:00 AM	3/12/2024	3/26/2024
N063735-006A	TW-03D-0324	Groundwater	3/12/2024 9:48:00 AM	3/12/2024	3/26/2024
N063735-006B	TW-03D-0324	Groundwater	3/12/2024 9:48:00 AM	3/12/2024	3/26/2024
N063735-006C	TW-03D-0324	Groundwater	3/12/2024 9:48:00 AM	3/12/2024	3/26/2024
N063735-007A	MW-39-040-0324	Groundwater	3/12/2024 9:41:00 AM	3/12/2024	3/26/2024
N063735-007B	MW-39-040-0324	Groundwater	3/12/2024 9:41:00 AM	3/12/2024	3/26/2024
N063735-007C	MW-39-040-0324	Groundwater	3/12/2024 9:41:00 AM	3/12/2024	3/26/2024
N063735-008A	MW-39-040-EB-0324	Groundwater	3/12/2024 9:18:00 AM	3/12/2024	3/26/2024
N063735-009A	MW-39-050-0324	Groundwater	3/12/2024 11:06:00 AM	3/12/2024	3/26/2024
N063735-009B	MW-39-050-0324	Groundwater	3/12/2024 11:06:00 AM	3/12/2024	3/26/2024
N063735-009C	MW-39-050-0324	Groundwater	3/12/2024 11:06:00 AM	3/12/2024	3/26/2024
N063735-010A	MW-39-060-0324	Groundwater	3/12/2024 11:33:00 AM	3/12/2024	3/26/2024
N063735-010B	MW-39-060-0324	Groundwater	3/12/2024 11:33:00 AM	3/12/2024	3/26/2024
N063735-010C	MW-39-060-0324	Groundwater	3/12/2024 11:33:00 AM	3/12/2024	3/26/2024
N063735-011A	MW-39-070-0324	Groundwater	3/12/2024 9:13:00 AM	3/12/2024	3/26/2024
N063735-011B	MW-39-070-0324	Groundwater	3/12/2024 9:13:00 AM	3/12/2024	3/26/2024
N063735-011C	MW-39-070-0324	Groundwater	3/12/2024 9:13:00 AM	3/12/2024	3/26/2024

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30121866.1Q23GW
Lab Order: N063735
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063735-012A	MW-30-050-0324	Groundwater	3/12/2024 12:38:00 PM	3/12/2024	3/26/2024
N063735-012B	MW-30-050-0324	Groundwater	3/12/2024 12:38:00 PM	3/12/2024	3/26/2024
N063735-012C	MW-30-050-0324	Groundwater	3/12/2024 12:38:00 PM	3/12/2024	3/26/2024
N063735-013A	MW-45-095a-0324	Groundwater	3/12/2024 1:56:00 PM	3/12/2024	3/26/2024
N063735-013B	MW-45-095a-0324	Groundwater	3/12/2024 1:56:00 PM	3/12/2024	3/26/2024
N063735-013C	MW-45-095a-0324	Groundwater	3/12/2024 1:56:00 PM	3/12/2024	3/26/2024
N063735-014A	EB-741-Q124	Groundwater	3/12/2024 2:10:00 PM	3/12/2024	3/26/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-090-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 11:17:00 AM
Lab ID:	N063735-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240314A**	QC Batch: **R183616**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	3/14/2024 03:34 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-34-080-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 1:13:00 PM
Lab ID:	N063735-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240314A**	QC Batch: **R183616**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	3/14/2024 05:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-34-080-EB-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 12:50:00 PM
Lab ID:	N063735-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240314A**	QC Batch: **R183616**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	3/14/2024 03:53 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	TW-02D-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 9:14:00 AM
Lab ID:	N063735-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240314A**	QC Batch: **R183616**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	3/14/2024 09:46 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	TW-02S-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 8:40:00 AM
Lab ID:	N063735-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240314A**	QC Batch: **R183616**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	6.8	0.039	0.20		µg/L	1	3/14/2024 05:49 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	TW-03D-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 9:48:00 AM
Lab ID:	N063735-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240314A**	QC Batch: **R183616**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	20	0.19	1.0		µg/L	5	3/14/2024 11:04 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-040-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 9:41:00 AM
Lab ID:	N063735-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240314A**	QC Batch: **R183616**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	3/14/2024 01:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-040-EB-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 9:18:00 AM
Lab ID:	N063735-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240314A**	QC Batch: **R183616**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	3/14/2024 04:34 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-050-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 11:06:00 AM
Lab ID:	N063735-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240314A**	QC Batch: **R183616**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	3/14/2024 01:26 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-060-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 11:33:00 AM
Lab ID:	N063735-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240314A**	QC Batch: **R183616**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	3/14/2024 01:44 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-070-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 9:13:00 AM
Lab ID:	N063735-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240314A**	QC Batch: **R183616**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	7.7	0.039	0.20		µg/L	1	3/14/2024 02:22 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-30-050-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 12:38:00 PM
Lab ID:	N063735-012	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240315A**	QC Batch: **R183690**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	3/15/2024 10:55 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-45-095a-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 1:56:00 PM
Lab ID:	N063735-013	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240314A**	QC Batch: **R183616**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	0.25	0.039	0.20		µg/L	1	3/14/2024 03:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-741-Q124
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 2:10:00 PM
Lab ID:	N063735-014	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240314A**	QC Batch: **R183616**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	3/14/2024 04:53 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R183616** SampType: **MBLK** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **PBW** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748068**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R183616** SampType: **LCS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **LCSW** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748069**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.895	0.20	5.000	0	97.9	90	110				

Sample ID: **N063735-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748071**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	44.813	1.0	25.00	19.83	99.9	90	110				

Sample ID: **N063735-006ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748072**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	19.721	1.0						19.83	0.549	20	

Sample ID: **N063735-006AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748073**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	44.911	1.0	25.00	19.83	100	90	110	44.81	0.218	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063735-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748077**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.093	0.20	1.000	0.1384	95.5	90	110				

Sample ID: **N063735-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748079**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.050	0.20	1.000	0	105	90	110				

Sample ID: **N063735-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748081**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.052	0.20	1.000	0	105	90	110				

Sample ID: **N063735-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748088**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.904	0.20	1.000	0	90.4	90	110				

Sample ID: **N063735-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748090**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.068	0.20	1.000	0.1166	95.2	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063735-008AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748094**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.065	0.20	1.000	0	106	90	110				

Sample ID: **N063735-014AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748096**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.060	0.20	1.000	0	106	90	110				

Sample ID: **N063735-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748098**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.676	1.0	5.000	0	93.5	90	110				

Sample ID: **N063735-005AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748100**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	12.016	0.20	5.000	6.842	103	90	110				

Sample ID: **N063734-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748104**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.609	1.0	5.000	0	92.2	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063734-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748106**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.654	1.0	5.000	0	93.1	90	110				

Sample ID: **N063771-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748110**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.704	1.0	5.000	0	94.1	90	110				

Sample ID: **N063771-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748112**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.293	1.0	5.000	0	106	90	110				

Sample ID: **N063771-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748114**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.749	1.0	5.000	0	95.0	90	110				

Sample ID: **N063735-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748118**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.669	1.0	5.000	0.8435	96.5	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063735-011AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748119**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	13.075	0.20	5.000	7.651	108	90	110				

Sample ID: **N063735-013AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5768702**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.255	0.20	1.000	0.2507	100	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R183690**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **PBW**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752660**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R183690**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **LCSW**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752661**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.983	0.20	5.000	0	99.7	90	110				

Sample ID: **N063735-012AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752663**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.049	0.20	1.000	0	105	90	110				

Sample ID: **N063771-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752665**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.168	1.0	5.000	4.893	106	90	110				

Sample ID: **N063771-014AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752669**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	42.641	1.0	25.00	17.52	100	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063771-015AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752671**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	42.351	1.0	25.00	17.61	99.0	90	110				

Sample ID: **N063771-018AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752673**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	37.590	1.0	25.00	12.24	101	90	110				

Sample ID: **N063771-014ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752674**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	17.260	1.0						17.52	1.49	20	

Sample ID: **N063771-014AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752675**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	41.939	1.0	25.00	17.52	97.7	90	110	42.64	1.66	20	

Sample ID: **N063771-008AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752681**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.055	0.20	1.000	0	105	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063771-019AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752683**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.054	0.20	1.000	0	105	90	110				

Sample ID: **N063771-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752687**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.635	1.0	5.000	0	92.7	90	110				

Sample ID: **N063812-006AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752689**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.076	0.20	1.000	0	108	90	110				

Sample ID: **N063812-008AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752691**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.037	0.20	1.000	0	104	90	110				

Sample ID: **N063812-017AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752693**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.010	0.20	1.000	0	101	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063771-010AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752695**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.753	1.0	5.000	0	95.1	90	110				

Sample ID: **N063771-012AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752699**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.556	1.0	5.000	0	91.1	90	110				

Sample ID: **N063771-006AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752703**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.615	1.0	5.000	0	92.3	90	110				

Sample ID: **N063771-007AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752705**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.865	1.0	5.000	0	97.3	90	110				

Sample ID: **N063771-009AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752707**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.670	1.0	5.000	0	93.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063771-013AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5768704**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.990	0.20	1.000	0	99.0	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-090-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 11:17:00 AM
Lab ID:	N063735-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240313A**	QC Batch: **R183573**			PrepDate:			Analyst: **RAB**
Sulfate	570	17	25		mg/L	50	3/13/2024 12:48 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240313A**	QC Batch: **R183563**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/13/2024 11:47 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-34-080-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 1:13:00 PM
Lab ID:	N063735-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240313A**	QC Batch: **R183573**			PrepDate:			Analyst: **RAB**
Sulfate	690	34	50		mg/L	100	3/13/2024 01:04 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240313A**	QC Batch: **R183563**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/13/2024 12:02 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	TW-02D-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 9:14:00 AM
Lab ID:	N063735-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240313A**	QC Batch: **R183573**			PrepDate:			Analyst: **RAB**
Sulfate	340	17	25		mg/L	50	3/13/2024 01:19 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240313A**	QC Batch: **R183563**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/13/2024 12:18 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	TW-02S-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 8:40:00 AM
Lab ID:	N063735-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240313A**	QC Batch: **R183573**			PrepDate:			Analyst: **RAB**
Sulfate	320	17	25		mg/L	50	3/13/2024 01:35 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240313A**	QC Batch: **R183563**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/13/2024 12:33 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	TW-03D-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 9:48:00 AM
Lab ID:	N063735-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240313A**	QC Batch: **R183573**			PrepDate:			Analyst: **RAB**
Sulfate	350	17	25		mg/L	50	3/13/2024 01:51 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240313A**	QC Batch: **R183563**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/13/2024 12:48 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-040-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 9:41:00 AM
Lab ID:	N063735-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240313A**	QC Batch: **R183573**			PrepDate:			Analyst: **RAB**
Sulfate	160	6.9	10		mg/L	20	3/13/2024 02:07 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240313A**	QC Batch: **R183563**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.12	0.25		mg/L	5	3/13/2024 01:03 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-050-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 11:06:00 AM
Lab ID:	N063735-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240313A**	QC Batch: **R183573**			PrepDate:			Analyst: **RAB**
Sulfate	200	6.9	10		mg/L	20	3/13/2024 02:23 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240313A**	QC Batch: **R183563**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.12	0.25		mg/L	5	3/13/2024 01:19 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-060-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 11:33:00 AM
Lab ID:	N063735-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240313A**	QC Batch: **R183573**			PrepDate:			Analyst: **RAB**
Sulfate	200	6.9	10		mg/L	20	3/13/2024 02:39 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240313A**	QC Batch: **R183563**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.12	0.25		mg/L	5	3/13/2024 01:34 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-070-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 9:13:00 AM
Lab ID:	N063735-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240313A**	QC Batch: **R183573**			PrepDate:			Analyst: **RAB**
Sulfate	450	17	25		mg/L	50	3/13/2024 03:43 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240313A**	QC Batch: **R183563**			PrepDate:			Analyst: **RAB**
Nitrate as N	4.4	0.24	0.50		mg/L	10	3/13/2024 02:05 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-30-050-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 12:38:00 PM
Lab ID:	N063735-012	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240313A**	QC Batch: **R183573**			PrepDate:			Analyst: **RAB**
Sulfate	230	6.9	10		mg/L	20	3/13/2024 03:27 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240313A**	QC Batch: **R183563**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.12	0.25		mg/L	5	3/13/2024 01:49 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-45-095a-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 1:56:00 PM
Lab ID:	N063735-013	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240313A**	QC Batch: **R183573**			PrepDate:			Analyst: **RAB**
Sulfate	650	17	25		mg/L	50	3/13/2024 03:59 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240313A**	QC Batch: **R183563**			PrepDate:			Analyst: **RAB**
Nitrate as N	3.4	0.24	0.50		mg/L	10	3/13/2024 02:51 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **MB-R183573_SO4**	SampType: **MBLK**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:		RunNo: **183573**
Client ID: **PBW**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**		SeqNo: **5745560**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	0.351	0.50									

Sample ID: **LCS-R183573_SO4**	SampType: **LCS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:		RunNo: **183573**
Client ID: **LCSW**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**		SeqNo: **5745561**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.991	0.50	4.000	0	99.8	90	110				

Sample ID: **N063736-001BMS**	SampType: **MS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:		RunNo: **183573**
Client ID: **ZZZZZZ**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**		SeqNo: **5745563**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	1017.500	50	400.0	629.6	97.0	80	120				

Sample ID: **N063736-001BMSD**	SampType: **MSD**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:		RunNo: **183573**
Client ID: **ZZZZZZ**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**		SeqNo: **5745564**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	1022.340	50	400.0	629.6	98.2	80	120	1018	0.475	20	

Sample ID: **N063736-003BDUP**	SampType: **DUP**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:		RunNo: **183573**
Client ID: **ZZZZZZ**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**		SeqNo: **5745566**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	617.990	50						621.8	0.613	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **N063736-003BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **183573**
Client ID: **ZZZZZZ** Batch ID: **R183573** TestNo: **EPA 300.0** Analysis Date: **3/13/2024** SeqNo: **5745567**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	1008.020	50	400.0	621.8	96.6	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **MB-R183563_NO3** SampType: **MBLK** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **183563**
Client ID: **PBW** Batch ID: **R183563** TestNo: **EPA 300.0** Analysis Date: **3/13/2024** SeqNo: **5743968**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **LCS-R183563_NO3** SampType: **LCS** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **183563**
Client ID: **LCSW** Batch ID: **R183563** TestNo: **EPA 300.0** Analysis Date: **3/13/2024** SeqNo: **5743969**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.201	0.050	1.250	0	96.1	90	110				

Sample ID: **N063736-001BMS** SampType: **MS** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **183563**
Client ID: **ZZZZZZ** Batch ID: **R183563** TestNo: **EPA 300.0** Analysis Date: **3/13/2024** SeqNo: **5743974**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	11.872	0.50	12.50	0	95.0	80	120				

Sample ID: **N063736-001BMSD** SampType: **MSD** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **183563**
Client ID: **ZZZZZZ** Batch ID: **R183563** TestNo: **EPA 300.0** Analysis Date: **3/13/2024** SeqNo: **5743975**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.090	0.50	12.50	0	96.7	80	120	11.87	1.82	20	

Sample ID: **N063736-004BDUP** SampType: **DUP** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **183563**
Client ID: **ZZZZZZ** Batch ID: **R183563** TestNo: **EPA 300.0** Analysis Date: **3/13/2024** SeqNo: **5743976**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.50						0	0	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **N063736-004BMS**	SampType: **MS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **ZZZZZZ**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743977**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.165	0.50	12.50	0	97.3	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-090-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 11:17:00 AM
Lab ID:	N063735-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240313B**	QC Batch: **107498**				PrepDate:	**3/13/2024**	Analyst: **DJ**
Iron	42	13	20		µg/L	1	3/13/2024 06:48 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-34-080-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 1:13:00 PM
Lab ID:	N063735-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240313B**	QC Batch: **107498**				PrepDate:	**3/13/2024**	Analyst: **DJ**
Iron	340	13	20		µg/L	1	3/13/2024 06:54 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	TW-02D-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 9:14:00 AM
Lab ID:	N063735-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240313B**	QC Batch: **107498**				PrepDate:	**3/13/2024**	Analyst: **DJ**
Iron	38	13	20		µg/L	1	3/13/2024 07:31 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	TW-02S-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 8:40:00 AM
Lab ID:	N063735-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240313B**	QC Batch: **107498**				PrepDate:	**3/13/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	3/13/2024 07:37 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California **Client Sample ID:** TW-03D-0324
Lab Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW **Collection Date:** 3/12/2024 9:48:00 AM
Lab ID: N063735-006 **Matrix:** GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240313B**	QC Batch: **107498**				PrepDate:	**3/13/2024**	Analyst: **DJ**
Iron	82	13	20		µg/L	1	3/13/2024 07:44 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-040-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 9:41:00 AM
Lab ID:	N063735-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240313B**	QC Batch: **107498**				PrepDate:	**3/13/2024**	Analyst: **DJ**
Iron	350	13	20		µg/L	1	3/13/2024 07:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Client Sample ID: MW-39-050-0324
Lab Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW
Collection Date: 3/12/2024 11:06:00 AM
Lab ID: N063735-009
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
EPA 3010A			**EPA 6010B**				
RunID: **NV00922-ICP2_240313B**	QC Batch: **107498**			PrepDate:	**3/13/2024**		Analyst: **DJ**
Iron	ND	13	20		µg/L	1	3/13/2024 07:54 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-060-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 11:33:00 AM
Lab ID:	N063735-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
EPA 3010A			**EPA 6010B**				
RunID: **NV00922-ICP2_240313B**	QC Batch: **107498**			PrepDate:	**3/13/2024**		Analyst: **DJ**
Iron	45	13	20		µg/L	1	3/13/2024 08:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California **Client Sample ID:** MW-39-070-0324
Lab Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW **Collection Date:** 3/12/2024 9:13:00 AM
Lab ID: N063735-011 **Matrix:** GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
EPA 3010A			**EPA 6010B**				
RunID: **NV00922-ICP2_240313B**	QC Batch: **107498**			PrepDate:	**3/13/2024**		Analyst: **DJ**
Iron	ND	13	20		µg/L	1	3/13/2024 08:04 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-30-050-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 12:38:00 PM
Lab ID:	N063735-012	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240313B**	QC Batch: **107498**				PrepDate:	**3/13/2024**	Analyst: **DJ**
Iron	140	13	20		µg/L	1	3/13/2024 08:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-45-095a-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 1:56:00 PM
Lab ID:	N063735-013	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240313B**	QC Batch: **107498**				PrepDate:	**3/13/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	3/13/2024 08:24 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-107498**	SampType: **MBLK**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/13/2024**	RunNo: **183568**
Client ID: **PBW**	Batch ID: **107498**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/13/2024**	SeqNo: **5744126**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS-107498**	SampType: **LCS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/13/2024**	RunNo: **183568**
Client ID: **LCSW**	Batch ID: **107498**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/13/2024**	SeqNo: **5744127**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	104.831	20	100.0	0	105	85	115				

Sample ID: **N063735-002C-MS**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/13/2024**	RunNo: **183568**
Client ID: **ZZZZZZ**	Batch ID: **107498**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/13/2024**	SeqNo: **5744136**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	500.772	20	100.0	343.3	158	75	125				S

Sample ID: **N063735-002C-MSD**	SampType: **MSD**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/13/2024**	RunNo: **183568**
Client ID: **ZZZZZZ**	Batch ID: **107498**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/13/2024**	SeqNo: **5744137**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	510.410	20	100.0	343.3	167	75	125	500.8	1.91	20	S

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N063735-002C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **183568**
Client ID: **ZZZZZZ** Batch ID: **107498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/13/2024** SeqNo: **5744133**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	447.549	20	100.0	343.3	104	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-090-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 11:17:00 AM
Lab ID:	N063735-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240313A**	QC Batch: **107497**			PrepDate:	**3/13/2024**		Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/13/2024 09:40 PM
Barium	65	0.083	1.0		µg/L	1	3/13/2024 09:40 PM
Manganese	130	0.26	5.0		µg/L	10	3/13/2024 11:32 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-34-080-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 1:13:00 PM
Lab ID:	N063735-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240313A**	QC Batch: **107497**				PrepDate:	**3/13/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/13/2024 10:13 PM
Barium	37	0.083	1.0		µg/L	1	3/13/2024 10:13 PM
Manganese	150	0.026	0.50		µg/L	1	3/13/2024 10:13 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *26-Mar-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	TW-02D-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 9:14:00 AM
Lab ID:	N063735-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240313A**	QC Batch: **107497**			PrepDate:	**3/13/2024**		Analyst: **DJ**
Arsenic	2.4	0.050	0.10		µg/L	1	3/13/2024 10:17 PM
Barium	16	0.083	1.0		µg/L	1	3/13/2024 10:17 PM
Manganese	74	0.026	0.50		µg/L	1	3/13/2024 10:17 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	TW-02S-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 8:40:00 AM
Lab ID:	N063735-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240313A**	QC Batch: **107497**			PrepDate:	**3/13/2024**		Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/13/2024 10:22 PM
Barium	160	0.083	1.0		µg/L	1	3/13/2024 10:22 PM
Manganese	ND	0.026	0.50		µg/L	1	3/13/2024 10:22 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	TW-03D-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 9:48:00 AM
Lab ID:	N063735-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240313A**	QC Batch: **107497**				PrepDate:	**3/13/2024**	Analyst: **DJ**
Arsenic	1.5	0.050	0.10		µg/L	1	3/13/2024 10:27 PM
Barium	39	0.083	1.0		µg/L	1	3/13/2024 10:27 PM
Manganese	32	0.026	0.50		µg/L	1	3/13/2024 10:27 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-040-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 9:41:00 AM
Lab ID:	N063735-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240313A**	QC Batch: **107497**				PrepDate:	**3/13/2024**	Analyst: **DJ**
Arsenic	12	0.050	0.10		µg/L	1	3/13/2024 10:31 PM
Barium	86	0.083	1.0		µg/L	1	3/13/2024 10:31 PM
Manganese	110	0.026	0.50		µg/L	1	3/13/2024 10:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-050-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 11:06:00 AM
Lab ID:	N063735-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240313A**	QC Batch: **107497**			PrepDate:	**3/13/2024**		Analyst: **DJ**
Arsenic	1.7	0.050	0.10		µg/L	1	3/13/2024 10:36 PM
Barium	54	0.083	1.0		µg/L	1	3/13/2024 10:36 PM
Manganese	250	0.26	5.0		µg/L	10	3/14/2024 12:04 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-060-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 11:33:00 AM
Lab ID:	N063735-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240313A**	QC Batch: **107497**				PrepDate:	**3/13/2024**	Analyst: **DJ**
Arsenic	1.9	0.050	0.10		µg/L	1	3/13/2024 10:55 PM
Barium	30	0.083	1.0		µg/L	1	3/13/2024 10:55 PM
Manganese	170	0.026	0.50		µg/L	1	3/13/2024 10:55 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-070-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 9:13:00 AM
Lab ID:	N063735-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240313A**	QC Batch: **107497**			PrepDate:		**3/13/2024**	Analyst: **DJ**
Arsenic	0.96	0.050	0.10		µg/L	1	3/13/2024 10:59 PM
Barium	47	0.083	1.0		µg/L	1	3/13/2024 10:59 PM
Manganese	14	0.026	0.50		µg/L	1	3/13/2024 10:59 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-30-050-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 12:38:00 PM
Lab ID:	N063735-012	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240313A**	QC Batch: **107497**			PrepDate:	**3/13/2024**		Analyst: **DJ**
Arsenic	1.9	0.050	0.10		µg/L	1	3/13/2024 11:04 PM
Barium	34	0.083	1.0		µg/L	1	3/13/2024 11:04 PM
Manganese	580	0.26	5.0		µg/L	10	3/14/2024 12:09 AM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-45-095a-0324
Lab Order:	N063735		
Project:	PG&E Topock - PCM, 30121866.1Q23GW	**Collection Date:**	3/12/2024 1:56:00 PM
Lab ID:	N063735-013	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240313A**	QC Batch: **107497**				PrepDate:	**3/13/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/13/2024 11:09 PM
Barium	28	0.083	1.0		µg/L	1	3/13/2024 11:09 PM
Manganese	28	0.026	0.50		µg/L	1	3/13/2024 11:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **MB-107497** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/13/2024** RunNo: **183572**
Client ID: **PBW** Batch ID: **107497** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/13/2024** SeqNo: **5745320**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **LCS-107497** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/13/2024** RunNo: **183572**
Client ID: **LCSW** Batch ID: **107497** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/13/2024** SeqNo: **5745321**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.372	0.10	10.00	0	104	85	115				
Barium	10.093	1.0	10.00	0	101	85	115				
Manganese	99.963	0.50	100.0	0	100	85	115				

Sample ID: **N063735-001C-MS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/13/2024** RunNo: **183572**
Client ID: **ZZZZZZ** Batch ID: **107497** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/13/2024** SeqNo: **5745333**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	9.342	0.10	10.00	0	93.4	75	125				
Barium	72.784	1.0	10.00	64.58	82.0	75	125				

Sample ID: **N063735-001C-MSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/13/2024** RunNo: **183572**
Client ID: **ZZZZZZ** Batch ID: **107497** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/13/2024** SeqNo: **5745334**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	9.287	0.10	10.00	0	92.9	75	125	9.342	0.583	20	
Barium	72.422	1.0	10.00	64.58	78.4	75	125	72.78	0.498	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063735-001C-MS**	SampType: **MS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **3/13/2024**	RunNo: **183572**
Client ID: **ZZZZZZ**	Batch ID: **107497**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **3/13/2024**	SeqNo: **5745356**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	224.035	5.0	100.0	132.7	91.3	75	125				

Sample ID: **N063735-001C-MSD**	SampType: **MSD**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **3/13/2024**	RunNo: **183572**
Client ID: **ZZZZZZ**	Batch ID: **107497**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **3/14/2024**	SeqNo: **5745357**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	233.110	5.0	100.0	132.7	100	75	125	224.0	3.97	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

SAMPLE RECEIVING ITEMS

ARCUS02 C: 3/27/2024 12:00 AM
FOLDER R: 3/12/2024
N063735-015A 1 of 1

ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Require		Sample Receipt Condition
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	Excel EDD	RTNE	Y N
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.moore@entrigen.com	Address:	Geotracker	RWQCB ✓	1. Chilled ✓
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com P.O.#	Labspec	CalTrans	2. Headspace
Submitted By: Riggie Tep		Phone: 949-727-1400, ext 200 Fax:	Others ✓	LEVEL III	3. Container Intact ✓
Title: Field Tech	Phone: 916-786-3302 Fax:		Specify: RWQCB	LEVEL IV	4. Seal Present ✓
Signature: Date: 03/12/24	Sampled By: Riggie Tep		Global ID:	Regulatory	5. IR number 13
I hereby authorize ASSET Labs to perform the tests indicated below.	*I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for*			Specify State:	6. Method of Cooling: ICE
Project Name: PG&E Topock - PCM	Signature: Date: 03/12/24				Sample Temp: 1.9°C / 2.4°C
Project Number: 30121866.1Q23GW					Courier: ASSET
					Tracking No.:

Matrix: Ground X | Sediment | Potable | Soil | NPDES | Other Solid | Surface

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly)	Nitrate, sulfate (EPA 300.0) (1 L poly)	Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Molybdenum, Selenium (500mL poly)	Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOA)	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 (125 mL poly)	Ammonia as Nitrogen (SM4500NH3); H2SO4 (1 L poly)	Nitrate, sulfate (EPA 300.0) (1 L poly)	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1		✓ MW-36-090-0324	3/12/2024	11:17		X	X	X							E	3	P	BNS	N063735-001
2		✓ MW-34-080-0324	3/12/2024	13:13		X	X	X							E	3	P	BNS	-002
3		✓ MW-34-080-EB-0324	3/12/2024	12:50		X									E	1	P	BNS	-003
4		✓ TW-02D-0324	3/12/2024	9:14		X	X	X							E	3	P	BNS	-004
5		✓ TW-02S-0324	3/12/2024	8:40		X	X	X							E	3	P	BNS	-005
6		✓ TW-03D-0324	3/12/2024	9:48		X	X	X							E	3	P	BNS	-006
7		✓ MW-39-040-0324	3/12/2024	9:41		X	X	X							E	3	P	BNS	-007
8		✓ MW-39-040-EB-0324	3/12/2024	9:18		X									E	1	P	BNS	-008
9		✓ MW-39-050-0324	3/12/2024	11:06		X	X	X							E	3	P	BNS	-009
10		✓ MW-39-060-0324	3/12/2024	11:33		X	X	X							E	3	P	BNS	-010
11		✓ MW-39-070-0324	3/12/2024	9:13		X	X	X							E	3	P	BNS	-011
12		✓ MW-30-050-0324	3/12/2024	12:38		X	X	X							E	3	P	BNS	-012
13		✓ MW-45-095a-0324	3/12/2024	13:56		X	X	X							E	3	P	BNS	-013
14	✓EB-741-0124	~~EB-739-Q124~~	3/12/2024	14:10		X									E	1	P	BNS	-014

Relinquished by (Signature and Printed Name): M. Riggie Tep 03/12/24 Date/Time: 1548 — Received by: Michael Alcantar 3/12/24 1548

Relinquished by (Signature and Printed Name): Michael Alcantar 3/12/24 Date/Time: 1944 — Received by: Michael Alcantar 3/12/24 1944

Relinquished by (Signature and Printed Name): Date/Time: — Received by: Date/Time:

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:				Container Type:		
H=HCL	N=HNO_3	S=H_2SO_4	C=4°C	T=Tube	V=VOA	P=Pint
Z=$Zn(AC)_2$	O=NaOH	T=$Na_2S_2O_3$		J=Jar	B=Tedlar	G=Glass
Others/Specify:	B (NH4)2SO4/NH4OH			M=Metal	M=Metal	C=Can

White=Laboratory Copy — Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	3/12/2024	Workorder:	N063735
Rep sample Temp (Deg C):	1.9/2.4	IR Gun ID:	3

Temp Blank: ☑ Yes ☐ No

Carrier name: ASSET

Last 4 digits of Tracking No.: NS Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By: CC Chara Cintron 3/13/2024

Reviewed By: for: MBC 3/13/2024

ASSET Laboratories

WORK ORDER Summary

13-Mar-24

WorkOrder: N063735

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30121866.1Q23GW **QC Level:** Level IV **Date Received:** 3/12/2024 7:44 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063735-001A	MW-36-090-0324	3/12/2024 11:17:00 AM	3/27/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063735-001B			3/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063735-001C			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063735-002A	MW-34-080-0324	3/12/2024 1:13:00 PM	3/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063735-002B			3/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063735-002C			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063735-003A	MW-34-080-EB-0324	3/12/2024 12:50:00 PM	3/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063735-004A	TW-02D-0324	3/12/2024 9:14:00 AM	3/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063735-004B			3/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063735-004C			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW

WORK ORDER Summary

13-Mar-24

WorkOrder: N063735

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30121866.1Q23GW **QC Level:** Level IV **Date Received:** 3/12/2024 7:44 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063735-005A	TW-02S-0324	3/12/2024 8:40:00 AM	3/27/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063735-005B			3/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063735-005C			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063735-006A	TW-03D-0324	3/12/2024 9:48:00 AM	3/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063735-006B			3/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063735-006C			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063735-007A	MW-39-040-0324	3/12/2024 9:41:00 AM	3/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063735-007B			3/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063735-007C			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063735-008A	MW-39-040-EB-0324	3/12/2024 9:18:00 AM	3/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW

WORK ORDER Summary

13-Mar-24

WorkOrder: N063735

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30121866.1Q23GW **QC Level:** Level IV **Date Received:** 3/12/2024 7:44 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063735-009A	MW-39-050-0324	3/12/2024 11:06:00 AM	3/27/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063735-009B			3/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063735-009C			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063735-010A	MW-39-060-0324	3/12/2024 11:33:00 AM	3/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063735-010B			3/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063735-010C			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063735-011A	MW-39-070-0324	3/12/2024 9:13:00 AM	3/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063735-011B			3/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063735-011C			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063735-012A	MW-30-050-0324	3/12/2024 12:38:00 PM	3/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

13-Mar-24

WorkOrder: N063735

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30121866.1Q23GW **QC Level:** Level IV **Date Received:** 3/12/2024 7:44 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063735-012B	MW-30-050-0324	3/12/2024 12:38:00 PM	3/27/2024	Groundwater	EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063735-012C			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063735-013A	MW-45-095a-0324	3/12/2024 1:56:00 PM	3/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063735-013B			3/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/27/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063735-013C			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/27/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/27/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063735-014A	EB-741-Q124	3/12/2024 2:10:00 PM	3/27/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063735-015A	FOLDER	3/27/2024	3/27/2024		Folder	Folder	☐	☐	☐	LAB
			3/27/2024		Folder	Level IV Report	☐	☐	☐	LAB
			3/27/2024		Folder	Folder	☐	☐	☐	LAB

List of Analysts

ASSET Laboratories Work Order: N063735

NAME	TEST METHOD
Ria Abes	EPA 218.6, EPA 300.0
Diane Jetajobe	EPA 6010B_Dissolved, EPA 6020_Dissolved

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R183616
ASSET #: N063735

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 3/14/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments: Dilution was necessary for samples N063735-002A and -004A due to matrix interference.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer: RBA Date: _____

2nd Level Reviewer: dMocha 3/22/2024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R183690
ASSET #: N063735

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 3/15/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer: RBA Date: _____

2nd Level Reviewer: dMocha 3/24/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063735-005A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 6.8423 * 1$$

$$Cr^{+6}, \mu g/L = 6.8423$$

Reporting results in two significant figures,

$$\mathbf{Cr^{+6}, \mu g/L = 6.8}$$

Reviewed by:

dMocha 4/2/2024

ANALYSIS RUN LOG

INJECTION LOG: 240305A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	03/05/24 4:07 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/05/24 4:16 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	03/05/24 4:26 PM	Reported
12	MB-R183315	MBLK	1	Hexavalent Chromium	03/05/24 4:35 PM	Reported
13	LCS-R183315	LCS	1	Hexavalent Chromium	03/05/24 4:45 PM	Reported
14	MB-107277	MBLK	1	Hexavalent Chromium	03/05/24 4:54 PM	Reported
15	N063472-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:04 PM	Reported
16	N063472-001ADUP	DUP	1	Hexavalent Chromium	03/05/24 5:13 PM	Reported
17	N063535-006A	SAMP	1	Hexavalent Chromium	03/05/24 5:23 PM	Reported
18	N063535-006AMS	MS	1	Hexavalent Chromium	03/05/24 5:32 PM	Reported
19	N063535-006AMSD	MSD	1	Hexavalent Chromium	03/05/24 5:42 PM	Reported
20	N063534-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:51 PM	Reported
21	N063534-001AMS	MS	1	Hexavalent Chromium	03/05/24 6:00 PM	Reported
22	CCV-1	CCV1	1	Hexavalent Chromium	03/05/24 6:10 PM	Reported
23	CCB-1	CCB	1	Hexavalent Chromium	03/05/24 6:20 PM	Reported
24	N063534-002A	SAMP	1	Hexavalent Chromium	03/05/24 6:30 PM	Reported
25	N063534-002AMS	MS	1	Hexavalent Chromium	03/05/24 6:38 PM	Reported
26	N063534-003A	SAMP	1	Hexavalent Chromium	03/05/24 6:48 PM	Reported
27	N063534-003AMS	MS	1	Hexavalent Chromium	03/05/24 6:57 PM	Reported
28	N063535-001A	SAMP	1	Hexavalent Chromium	03/05/24 7:07 PM	Reported
29	N063535-002A	SAMP	1	Hexavalent Chromium	03/05/24 7:16 PM	Reported
30	N063535-003A	SAMP	1	Hexavalent Chromium	03/05/24 7:26 PM	Reported
31	N063535-004A	SAMP	1	Hexavalent Chromium	03/05/24 7:35 PM	Reported
32	N063535-005A	SAMP	1	Hexavalent Chromium	03/05/24 7:48 PM	Reported
33	CCV-2	CCV	1	Hexavalent Chromium	03/05/24 7:57 PM	Reported
34	CCB-2	CCB	1	Hexavalent Chromium	03/05/24 8:07 PM	Reported
35	N063535-007A	SAMP	1	Hexavalent Chromium	03/05/24 8:16 PM	Reported
36	N063535-008A	SAMP	1	Hexavalent Chromium	03/05/24 8:25 PM	Reported
37	CCV-3	CCV1	1	Hexavalent Chromium	03/05/24 8:35 PM	Reported
38	CCB-3	CCB	1	Hexavalent Chromium	03/05/24 8:46 PM	Reported
39	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 8:55 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240305A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**07/Mar/24 08:03:58**
No. of Injections:	**42**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	8	1000	Unknown		03/05/2024 16:07	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	9	1000	Unknown		03/05/2024 16:16	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	10	1000	Unknown		03/05/2024 16:26	Finished	ICB R240129C
12	MB-H2O,MBLK,1,	11	1000	Unknown		03/05/2024 16:35	Finished	MB R240129C
13	LCS-H2O,LCS,1,	12	1000	Unknown		03/05/2024 16:45	Finished	LCS @5ppb, IWST-231228B
14	MB-107277,MBLK,1,	13	1000	Unknown		03/05/2024 16:54	Finished	MB TCLP
15	N063472-001A,SAMP	14	1000	Unknown		03/05/2024 17:04	Finished	SAMP,10 mL
16	N063472-001ADUP,D	15	1000	Unknown		03/05/2024 17:13	Finished	REP,10 mL
17	N063535-006A,SAMP	16	1000	Unknown		03/05/2024 17:23	Finished	SAMP,10 mL
18	N063535-006AMS,MS	17	1000	Unknown		03/05/2024 17:32	Finished	MS (5ppb), IWST-231228B,10r
19	N063535-006AMSD,M	18	1000	Unknown		03/05/2024 17:42	Finished	MSD (5ppb), IWST-231228B,1
20	N063534-001A,SAMP	19	1000	Unknown		03/05/2024 17:51	Finished	SAMP,10 mL
21	N063534-001AMS,MS	20	1000	Unknown		03/05/2024 18:00	Finished	MS (1ppb), IWST-231228B,10r
22	CCV-1,CCV1,1,	21	1000	Unknown		03/05/2024 18:10	Finished	CCV @10ppb, IWST-231228A
23	CCB-1,CCB,1,	22	1000	Unknown		03/05/2024 18:20	Finished	CCB R240129C
24	N063534-002A,SAMP	23	1000	Unknown		03/05/2024 18:30	Finished	SAMP,10 mL
25	N063534-002AMS,MS	24	1000	Unknown		03/05/2024 18:38	Finished	MS (1ppb), IWST-231228B,10r
26	N063534-003A,SAMP	25	1000	Unknown		03/05/2024 18:48	Finished	SAMP,10 mL
27	N063534-003AMS,MS	26	1000	Unknown		03/05/2024 18:57	Finished	MS (1ppb), IWST-231228B,10r
28	N063535-001A,SAMP	27	1000	Unknown		03/05/2024 19:07	Finished	SAMP,10 mL
29	N063535-002A,SAMP	28	1000	Unknown		03/05/2024 19:16	Finished	SAMP,10 mL
30	N063535-003A,SAMP	29	1000	Unknown		03/05/2024 19:26	Finished	SAMP,10 mL
31	N063535-004A,SAMP	30	1000	Unknown		03/05/2024 19:35	Finished	SAMP,10 mL
32	N063535-005A,SAMP	31	1000	Unknown		03/05/2024 19:48	Finished	SAMP,10 mL
33	CCV-2,CCV,1,	32	1000	Unknown		03/05/2024 19:57	Finished	CCV @5ppb, IWST-231228A
34	CCB-2,CCB,1,	33	1000	Unknown		03/05/2024 20:07	Finished	CCB R240129C
35	N063535-007A,SAMP	34	1000	Unknown		03/05/2024 20:16	Finished	SAMP,10 mL
36	N063535-008A,SAMP	35	1000	Unknown		03/05/2024 20:25	Finished	SAMP,10 mL
37	CCV-3,CCV1,1,	37	1000	Unknown		03/05/2024 20:35	Finished	CCV @10ppb, IWST-231228A
38	CCB-3,CCB,1,	38	1000	Unknown		03/05/2024 20:46	Finished	CCB R240129C
39	BLANK	39	1000	Unknown		03/05/2024 20:55	Finished	BLANK
40	SHUTDOWN	40	1000	Unknown		03/05/2024 21:05	Finished	
41	Eluent: R240305B	41	1000	Unknown		n.a.	Finished	
42	PCR: R240305C	42	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240314A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/14/24 9:24 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/14/24 9:38 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/14/24 9:48 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/14/24 9:57 AM	Reported
13	MB-R183616	MBLK	1	Hexavalent Chromium	03/14/24 10:06 AM	Reported
14	LCS-R183616	LCS	1	Hexavalent Chromium	03/14/24 10:16 AM	Reported
15	N063735-005A	SAMP	5	Hexavalent Chromium	03/14/24 10:51 AM	Not Reported
16	N063735-006A	SAMP	5	Hexavalent Chromium	03/14/24 11:04 AM	Reported
17	N063735-005ADUP	DUP	5	Hexavalent Chromium	03/14/24 11:13 AM	Not Reported
18	N063735-006AMS	MS	5	Hexavalent Chromium	03/14/24 11:23 AM	Reported
19	N063734-001A	SAMP	1	Hexavalent Chromium	03/14/24 11:32 AM	Not Reported
20	N063734-001AMS	MS	1	Hexavalent Chromium	03/14/24 11:41 AM	Not Reported
21	N063735-006ADUP	DUP	5	Hexavalent Chromium	03/14/24 11:51 AM	Reported
22	N063735-006AMSD	MSD	5	Hexavalent Chromium	03/14/24 12:00 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/14/24 12:10 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/14/24 12:19 PM	Reported
25	N063734-002A	SAMP	1	Hexavalent Chromium	03/14/24 12:29 PM	Not Reported
26	N063734-002AMS	MS	1	Hexavalent Chromium	03/14/24 12:38 PM	Not Reported
27	N063735-004A	SAMP	1	Hexavalent Chromium	03/14/24 12:48 PM	Not Reported
28	N063735-004AMS	MS	1	Hexavalent Chromium	03/14/24 12:57 PM	Not Reported
29	N063735-007A	SAMP	1	Hexavalent Chromium	03/14/24 1:07 PM	Reported
30	N063735-007AMS	MS	1	Hexavalent Chromium	03/14/24 1:16 PM	Reported
31	N063735-009A	SAMP	1	Hexavalent Chromium	03/14/24 1:26 PM	Reported
32	N063735-009AMS	MS	1	Hexavalent Chromium	03/14/24 1:35 PM	Reported
33	N063735-010A	SAMP	1	Hexavalent Chromium	03/14/24 1:44 PM	Reported
34	N063735-010AMS	MS	1	Hexavalent Chromium	03/14/24 1:54 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	03/14/24 2:03 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	03/14/24 2:13 PM	Reported
37	N063735-011A	SAMP	1	Hexavalent Chromium	03/14/24 2:22 PM	Reported
38	N063735-011AMS	MS	1	Hexavalent Chromium	03/14/24 2:32 PM	Not Reported
39	N063735-012A	SAMP	1	Hexavalent Chromium	03/14/24 2:41 PM	Not Reported
40	N063735-012AMS	MS	1	Hexavalent Chromium	03/14/24 2:51 PM	Not Reported
41	N063735-013A	SAMP	1	Hexavalent Chromium	03/14/24 3:00 PM	Not Reported
42	N063735-013AMS	MS	1	Hexavalent Chromium	03/14/24 3:24 PM	Not Reported

dMRocha 3/26/2024
for RBA

INJECTION LOG: 240314A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063735-001A	SAMP	1	Hexavalent Chromium	03/14/24 3:34 PM	Reported
44	N063735-001AMS	MS	1	Hexavalent Chromium	03/14/24 3:44 PM	Reported
45	N063735-003A	SAMP	1	Hexavalent Chromium	03/14/24 3:53 PM	Reported
46	N063735-003AMS	MS	1	Hexavalent Chromium	03/14/24 4:03 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	03/14/24 4:12 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	03/14/24 4:22 PM	Reported
49	N063735-008A	SAMP	1	Hexavalent Chromium	03/14/24 4:34 PM	Reported
50	N063735-008AMS	MS	1	Hexavalent Chromium	03/14/24 4:43 PM	Reported
51	N063735-014A	SAMP	1	Hexavalent Chromium	03/14/24 4:53 PM	Reported
52	N063735-014AMS	MS	1	Hexavalent Chromium	03/14/24 5:02 PM	Reported
53	N063735-002A	SAMP	1	Hexavalent Chromium	03/14/24 5:12 PM	Not Reported
54	N063735-002AMS	MS	1	Hexavalent Chromium	03/14/24 5:21 PM	Not Reported
55	N063735-002A	SAMP	5	Hexavalent Chromium	03/14/24 5:31 PM	Reported
56	N063735-002AMS	MS	5	Hexavalent Chromium	03/14/24 5:40 PM	Reported
57	N063735-005A	SAMP	1	Hexavalent Chromium	03/14/24 5:49 PM	Reported
58	N063735-005AMS	MS	1	Hexavalent Chromium	03/14/24 5:59 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	03/14/24 6:08 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	03/14/24 6:18 PM	Reported
61	N063735-005AMS	MS	5	Hexavalent Chromium	03/14/24 6:27 PM	Not Reported
62	N063248-008A	SAMP	5	Hexavalent Chromium	03/14/24 6:37 PM	Not Reported
63	N063248-008AMS	MS	5	Hexavalent Chromium	03/14/24 6:46 PM	Not Reported
64	N063734-001A	SAMP	5	Hexavalent Chromium	03/14/24 6:56 PM	Reported
65	N063734-001AMS	MS	5	Hexavalent Chromium	03/14/24 7:05 PM	Reported
66	N063734-002A	SAMP	5	Hexavalent Chromium	03/14/24 7:15 PM	Reported
67	N063734-002AMS	MS	5	Hexavalent Chromium	03/14/24 7:24 PM	Reported
68	N063771-003A	SAMP	1	Hexavalent Chromium	03/14/24 7:34 PM	Not Reported
69	N063771-003AMS	MS	1	Hexavalent Chromium	03/14/24 7:43 PM	Not Reported
70	N063771-004A	SAMP	1	Hexavalent Chromium	03/14/24 7:52 PM	Not Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	03/14/24 8:02 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	03/14/24 8:11 PM	Reported
73	N063771-004AMS	MS	1	Hexavalent Chromium	03/14/24 8:21 PM	Not Reported
74	N063771-005A	SAMP	1	Hexavalent Chromium	03/14/24 8:30 PM	Not Reported
75	N063771-005AMS	MS	1	Hexavalent Chromium	03/14/24 8:40 PM	Not Reported
76	N063771-003A	SAMP	5	Hexavalent Chromium	03/14/24 8:49 PM	Reported
77	N063771-003AMS	MS	5	Hexavalent Chromium	03/14/24 8:59 PM	Reported
78	N063771-004A	SAMP	5	Hexavalent Chromium	03/14/24 9:08 PM	Reported
79	N063771-004AMS	MS	5	Hexavalent Chromium	03/14/24 9:18 PM	Reported
80	N063771-005A	SAMP	5	Hexavalent Chromium	03/14/24 9:27 PM	Reported
81	N063771-005AMS	MS	5	Hexavalent Chromium	03/14/24 9:36 PM	Reported
82	N063735-004A	SAMP	5	Hexavalent Chromium	03/14/24 9:46 PM	Reported
83	CCV-7	CCV	1	Hexavalent Chromium	03/14/24 9:55 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	03/14/24 10:05 PM	Reported

INJECTION LOG: 240314A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063735-004AMS	MS	5	Hexavalent Chromium	03/14/24 10:14 PM	Reported
86	N063735-011AMS	MS	1	Hexavalent Chromium	03/14/24 10:24 PM	Reported
87	N063735-013A	SAMP	5	Hexavalent Chromium	03/14/24 10:33 PM	not Reported
88	N063735-013AMS	MS	5	Hexavalent Chromium	03/14/24 10:43 PM	not Reported
89	CCV-8	CCV1	1	Hexavalent Chromium	03/14/24 10:52 PM	Reported
90	CCB-8	CCB	1	Hexavalent Chromium	03/14/24 11:02 PM	Reported

dMocha 3/26/2024

for RBA

Injection Log Summary

Sequence Details

Name:	**IC-07_240314A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**14/Mar/24 23:32:19**
No. of Injections:	**93**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/14/2024 09:24	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/14/2024 09:38	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/14/2024 09:48	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/14/2024 09:57	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/14/2024 10:06	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/14/2024 10:16	Finished	LCS @5ppb, IWST-231228B
15	N063735-005A,SAMF	1	1000	Unknown		03/14/2024 10:51	Finished	SAMP,2>10 mL
16	N063735-006A,SAMF	2	1000	Unknown		03/14/2024 11:04	Finished	SAMP,2>10 mL
17	N063735-005ADUP,D	3	1000	Unknown		03/14/2024 11:13	Finished	DUP,2>10 mL
18	N063735-006AMS,MS	4	1000	Unknown		03/14/2024 11:23	Finished	MS (5ppb), IWST-231228B,2>1
19	N063734-001A,SAMF	5	1000	Unknown		03/14/2024 11:32	Finished	SAMP,10 mL
20	N063734-001AMS,MS	6	1000	Unknown		03/14/2024 11:41	Finished	MS (1ppb), IWST-231228B,10r
21	N063735-006ADUP,D	7	1000	Unknown		03/14/2024 11:51	Finished	DUP,2>10 mL
22	N063735-006AMSD,M	8	1000	Unknown		03/14/2024 12:00	Finished	MSD (5ppb), IWST-231228B,2
23	CCV-2,CCV1,1,	9	1000	Unknown		03/14/2024 12:10	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		03/14/2024 12:19	Finished	CCB R240129C
25	N063734-002A,SAMF	11	1000	Unknown		03/14/2024 12:29	Finished	SAMP,10 mL
26	N063734-002AMS,MS	12	1000	Unknown		03/14/2024 12:38	Finished	MS (1ppb), IWST-231228B,10r
27	N063735-004A,SAMF	13	1000	Unknown		03/14/2024 12:48	Finished	SAMP,10 mL
28	N063735-004AMS,MS	14	1000	Unknown		03/14/2024 12:57	Finished	MS (1ppb), IWST-231228B,10r
29	N063735-007A,SAMF	15	1000	Unknown		03/14/2024 13:07	Finished	SAMP,10 mL
30	N063735-007AMS,MS	16	1000	Unknown		03/14/2024 13:16	Finished	MS (1ppb), IWST-231228B,10r
31	N063735-009A,SAMF	17	1000	Unknown		03/14/2024 13:26	Finished	SAMP,10 mL
32	N063735-009AMS,MS	18	1000	Unknown		03/14/2024 13:35	Finished	MS (1ppb), IWST-231228B,10r
33	N063735-010A,SAMF	19	1000	Unknown		03/14/2024 13:44	Finished	SAMP,10 mL
34	N063735-010AMS,MS	20	1000	Unknown		03/14/2024 13:54	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	21	1000	Unknown		03/14/2024 14:03	Finished	CCV @10ppb, IWST-231228A
36	CCB-3,CCB,1,	22	1000	Unknown		03/14/2024 14:13	Finished	CCB R240129C
37	N063735-011A,SAMF	23	1000	Unknown		03/14/2024 14:22	Finished	SAMP,10 mL
38	N063735-011AMS,MS	24	1000	Unknown		03/14/2024 14:32	Finished	MS (1ppb), IWST-231228B,10r
39	N063735-012A,SAMF	25	1000	Unknown		03/14/2024 14:41	Finished	SAMP,10 mL
40	N063735-012AMS,MS	26	1000	Unknown		03/14/2024 14:51	Finished	MS (1ppb), IWST-231228B,10r
41	N063735-013A,SAMF	27	1000	Unknown		03/14/2024 15:00	Finished	SAMP,10 mL
42	N063735-013AMS,MS	1	1000	Unknown		03/14/2024 15:24	Finished	MS (1ppb), IWST-231228B,10r
43	N063735-001A,SAMF	2	1000	Unknown		03/14/2024 15:34	Finished	SAMP,10 mL
44	N063735-001AMS,MS	3	1000	Unknown		03/14/2024 15:44	Finished	MS (1ppb), IWST-231228B,10r
45	N063735-003A,SAMF	4	1000	Unknown		03/14/2024 15:53	Finished	SAMP,10 mL
46	N063735-003AMS,MS	5	1000	Unknown		03/14/2024 16:03	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	6	1000	Unknown		03/14/2024 16:12	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	7	1000	Unknown		03/14/2024 16:22	Finished	CCB R240129C
49	N063735-008A,SAMF	8	1000	Unknown		03/14/2024 16:34	Finished	SAMP,10 mL
50	N063735-008AMS,MS	9	1000	Unknown		03/14/2024 16:43	Finished	MS (1ppb), IWST-231228B,10r
51	N063735-014A,SAMF	10	1000	Unknown		03/14/2024 16:53	Finished	SAMP,10 mL
52	N063735-014AMS,MS	11	1000	Unknown		03/14/2024 17:02	Finished	MS (1ppb), IWST-231228B,10r
53	N063735-002A,SAMF	12	1000	Unknown		03/14/2024 17:12	Finished	SAMP,10 mL
54	N063735-002AMS,MS	13	1000	Unknown		03/14/2024 17:21	Finished	MS (1ppb), IWST-231228B,10r
55	N063735-002A,SAMF	14	1000	Unknown		03/14/2024 17:31	Finished	SAMP,2>10 mL
56	N063735-002AMS,MS	15	1000	Unknown		03/14/2024 17:40	Finished	MS (1ppb), IWST-231228B,2>1
57	N063735-005A,SAMF	16	1000	Unknown		03/14/2024 17:49	Finished	SAMP,10 mL
58	N063735-005AMS,MS	17	1000	Unknown		03/14/2024 17:59	Finished	MS (5ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	18	1000	Unknown		03/14/2024 18:08	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	19	1000	Unknown		03/14/2024 18:18	Finished	CCB R240129C

61	N063735-005AMS,MS	20	1000	Unknown		03/14/2024 18:27	Finished	MS (1ppb), IWST-231228B,2>1
62	N063248-008A,SAMP	21	1000	Unknown		03/14/2024 18:37	Finished	SAMP,2>10 mL
63	N063248-008AMS,MS	22	1000	Unknown		03/14/2024 18:46	Finished	MS (1ppb), IWST-231228B,2>1
64	N063734-001A,SAMP	23	1000	Unknown		03/14/2024 18:56	Finished	SAMP,2>10 mL
65	N063734-001AMS,MS	24	1000	Unknown		03/14/2024 19:05	Finished	MS (1ppb), IWST-231228B,2>1
66	N063734-002A,SAMP	25	1000	Unknown		03/14/2024 19:15	Finished	SAMP,2>10 mL
67	N063734-002AMS,MS	26	1000	Unknown		03/14/2024 19:24	Finished	MS (1ppb), IWST-231228B,2>1
68	N063771-003A,SAMP	27	1000	Unknown		03/14/2024 19:34	Finished	SAMP,10 mL
69	N063771-003AMS,MS	28	1000	Unknown		03/14/2024 19:43	Finished	MS (1ppb), IWST-231228B,10r
70	N063771-004A,SAMP	29	1000	Unknown		03/14/2024 19:52	Finished	SAMP,10 mL
71	CCV-6,CCV1,1,	30	1000	Unknown		03/14/2024 20:02	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	31	1000	Unknown		03/14/2024 20:11	Finished	CCB R240129C
73	N063771-004AMS,MS	32	1000	Unknown		03/14/2024 20:21	Finished	MS (1ppb), IWST-231228B,10r
74	N063771-005A,SAMP	33	1000	Unknown		03/14/2024 20:30	Finished	SAMP,10 mL
75	N063771-005AMS,MS	34	1000	Unknown		03/14/2024 20:40	Finished	MS (1ppb), IWST-231228B,10r
76	N063771-003A,SAMP	35	1000	Unknown		03/14/2024 20:49	Finished	SAMP,2>10 mL
77	N063771-003AMS,MS	36	1000	Unknown		03/14/2024 20:59	Finished	MS (1ppb), IWST-231228B,2>1
78	N063771-004A,SAMP	37	1000	Unknown		03/14/2024 21:08	Finished	SAMP,2>10 mL
79	N063771-004AMS,MS	38	1000	Unknown		03/14/2024 21:18	Finished	MS (1ppb), IWST-231228B,2>1
80	N063771-005A,SAMP	39	1000	Unknown		03/14/2024 21:27	Finished	SAMP,2>10 mL
81	N063771-005AMS,MS	40	1000	Unknown		03/14/2024 21:36	Finished	MS (1ppb), IWST-231228B,2>1
82	N063735-004A,SAMP	41	1000	Unknown		03/14/2024 21:46	Finished	SAMP,2>10 mL
83	CCV-7,CCV,1,	42	1000	Unknown		03/14/2024 21:55	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	43	1000	Unknown		03/14/2024 22:05	Finished	CCB R240129C
85	N0637735-004AMS,M	44	1000	Unknown		03/14/2024 22:14	Finished	MS (1ppb), IWST-231228B,2>1
86	N063735-011AMS,MS	45	1000	Unknown		03/14/2024 22:24	Finished	MS (5ppb), IWST-231228B,10r
87	N063735-013A,SAMP	46	1000	Unknown		03/14/2024 22:33	Finished	SAMP,2>10 mL
88	N063735-013AMS,MS	47	1000	Unknown		03/14/2024 22:43	Finished	MS (1ppb), IWST-231228B,2>1
89	CCV-8,CCV1,1,	48	1000	Unknown		03/14/2024 22:52	Finished	CCV @10ppb, IWST-231228A
90	CCB-8,CCB,1,	49	1000	Unknown		03/14/2024 23:02	Finished	CCB R240129C
91	SHUTDOWN	50	1000	Unknown		03/14/2024 23:11	Finished	
92	Eluent: R240313A	51	1000	Unknown		n.a.	Finished	
93	PCR: R240313B	CurrentVial	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240315A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/15/24 9:39 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/15/24 9:53 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/15/24 10:02 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/15/24 10:11 AM	Reported
13	MB-R183690	MBLK	1	Hexavalent Chromium	03/15/24 10:21 AM	Reported
14	LCS-R183690	LCS	1	Hexavalent Chromium	03/15/24 10:30 AM	Reported
15	N063735-012A	SAMP	1	Hexavalent Chromium	03/15/24 10:55 AM	Reported
16	N063735-012AMS	MS	1	Hexavalent Chromium	03/15/24 11:07 AM	Reported
17	N063771-001A	SAMP	1	Hexavalent Chromium	03/15/24 11:17 AM	Not Reported
18	N063771-001AMS	MS	1	Hexavalent Chromium	03/15/24 11:26 AM	Not Reported
19	N063771-001A	SAMP	5	Hexavalent Chromium	03/15/24 11:57 AM	Reported
20	N063771-001AMS	MS	5	Hexavalent Chromium	03/15/24 12:09 PM	Reported
21	N063771-002A	SAMP	1	Hexavalent Chromium	03/15/24 12:19 PM	Not Reported
22	N063771-002AMS	MS	1	Hexavalent Chromium	03/15/24 12:28 PM	Not Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/15/24 12:37 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/15/24 12:47 PM	Reported
25	N063771-014A	SAMP	5	Hexavalent Chromium	03/15/24 12:56 PM	Reported
26	N063771-014AMS	MS	5	Hexavalent Chromium	03/15/24 1:06 PM	Reported
27	N063771-015A	SAMP	5	Hexavalent Chromium	03/15/24 1:15 PM	Reported
28	N063771-015AMS	MS	5	Hexavalent Chromium	03/15/24 1:25 PM	Reported
29	N063771-018A	SAMP	5	Hexavalent Chromium	03/15/24 1:34 PM	Reported
30	N063771-018AMS	MS	5	Hexavalent Chromium	03/15/24 1:44 PM	Reported
31	N063771-010A	SAMP	1	Hexavalent Chromium	03/15/24 1:53 PM	Not Reported
32	N063771-010AMS	MS	1	Hexavalent Chromium	03/15/24 2:03 PM	Not Reported
33	N063771-014ADUP	DUP	5	Hexavalent Chromium	03/15/24 2:12 PM	Reported
34	N063771-014AMSD	MSD	5	Hexavalent Chromium	03/15/24 2:22 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	03/15/24 2:31 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	03/15/24 2:40 PM	Reported
37	N063771-012A	SAMP	1	Hexavalent Chromium	03/15/24 2:50 PM	Not Reported
38	N063771-012AMS	MS	1	Hexavalent Chromium	03/15/24 2:59 PM	Not Reported
39	N063771-013A	SAMP	1	Hexavalent Chromium	03/15/24 3:09 PM	~~Not~~ Reported
40	N063771-013AMS	MS	1	Hexavalent Chromium	03/15/24 3:18 PM	~~Not~~ Reported
41	N063771-006A	SAMP	1	Hexavalent Chromium	03/15/24 3:28 PM	Not Reported
42	N063771-006AMS	MS	1	Hexavalent Chromium	03/15/24 3:37 PM	Not Reported

dMocha 4/2/2024
for RBA

INJECTION LOG: 240315A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063771-007A	SAMP	1	Hexavalent Chromium	03/15/24 3:47 PM	Not Reported
44	N063771-007AMS	MS	1	Hexavalent Chromium	03/15/24 4:02 PM	Not Reported
45	N063771-009A	SAMP	1	Hexavalent Chromium	03/15/24 4:14 PM	Not Reported
46	N063771-009AMS	MS	1	Hexavalent Chromium	03/15/24 4:23 PM	Not Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	03/15/24 4:33 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	03/15/24 4:42 PM	Reported
49	N063771-008A	SAMP	1	Hexavalent Chromium	03/15/24 4:52 PM	Reported
50	N063771-008AMS	MS	1	Hexavalent Chromium	03/15/24 5:01 PM	Reported
51	N063771-016A	SAMP	1	Hexavalent Chromium	03/15/24 5:11 PM	Not Reported
52	N063771-016AMS	MS	1	Hexavalent Chromium	03/15/24 5:20 PM	Not Reported
53	N063771-017A	SAMP	1	Hexavalent Chromium	03/15/24 5:29 PM	Not Reported
54	N063771-017AMS	MS	1	Hexavalent Chromium	03/15/24 5:39 PM	Not Reported
55	N063771-019A	SAMP	1	Hexavalent Chromium	03/15/24 5:48 PM	Reported
56	N063771-019AMS	MS	1	Hexavalent Chromium	03/15/24 5:58 PM	Reported
57	N063771-011A	SAMP	1	Hexavalent Chromium	03/15/24 6:08 PM	Not Reported
58	N063771-011AMS	MS	1	Hexavalent Chromium	03/15/24 6:17 PM	Not Reported
59	CCV-5	CCV	1	Hexavalent Chromium	03/15/24 6:26 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	03/15/24 6:36 PM	Reported
61	N063771-002A	SAMP	5	Hexavalent Chromium	03/15/24 6:45 PM	Reported
62	N063771-002AMS	MS	5	Hexavalent Chromium	03/15/24 6:55 PM	Reported
63	N063812-006A	SAMP	1	Hexavalent Chromium	03/15/24 7:04 PM	Reported
64	N063812-006AMS	MS	1	Hexavalent Chromium	03/15/24 7:14 PM	Reported
65	N063812-008A	SAMP	1	Hexavalent Chromium	03/15/24 7:23 PM	Reported
66	N063812-008AMS	MS	1	Hexavalent Chromium	03/15/24 7:32 PM	Reported
67	N063812-017A	SAMP	1	Hexavalent Chromium	03/15/24 7:42 PM	Reported
68	N063812-017AMS	MS	1	Hexavalent Chromium	03/15/24 7:51 PM	Reported
69	N063771-010A	SAMP	5	Hexavalent Chromium	03/15/24 8:01 PM	Reported
70	N063771-010AMS	MS	5	Hexavalent Chromium	03/15/24 8:10 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	03/15/24 8:20 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	03/15/24 8:29 PM	Reported
73	N063771-012A	SAMP	5	Hexavalent Chromium	03/15/24 8:39 PM	Reported
74	N063771-012AMS	MS	5	Hexavalent Chromium	03/15/24 8:48 PM	Reported
75	N063771-013A	SAMP	5	Hexavalent Chromium	03/15/24 8:58 PM	Not Reported
76	N063771-013AMS	MS	5	Hexavalent Chromium	03/15/24 9:07 PM	Not Reported
77	N063771-006A	SAMP	5	Hexavalent Chromium	03/15/24 9:16 PM	Reported
78	N063771-006AMS	MS	5	Hexavalent Chromium	03/15/24 9:26 PM	Reported
79	N063771-007A	SAMP	5	Hexavalent Chromium	03/15/24 9:35 PM	Reported
80	N063771-007AMS	MS	5	Hexavalent Chromium	03/15/24 9:45 PM	Reported
81	N063771-009A	SAMP	5	Hexavalent Chromium	03/15/24 9:54 PM	Reported
82	N063771-009AMS	MS	5	Hexavalent Chromium	03/15/24 10:04 PM	Reported
83	CCV-7	CCV	1	Hexavalent Chromium	03/15/24 10:13 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	03/15/24 10:23 PM	Reported

dMRocha 4/2/2024
for RBA **94**

INJECTION LOG: 240315A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	BLANK	BLANK	1	Hexavalent Chromium	03/15/24 10:32 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240315A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**15/Mar/24 23:02:54**
No. of Injections:	**88**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/15/2024 09:39	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/15/2024 09:53	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/15/2024 10:02	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/15/2024 10:11	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/15/2024 10:21	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/15/2024 10:30	Finished	LCS @5ppb, IWST-231228B
15	N063735-012A,SAMP	1	1000	Unknown		03/15/2024 10:55	Finished	SAMP,10 mL
16	N063735-012AMS,MS	2	1000	Unknown		03/15/2024 11:07	Finished	MS (1ppb), IWST-231228B,10r
17	N063771-001A,SAMP	3	1000	Unknown		03/15/2024 11:17	Finished	SAMP,10 mL
18	N063771-001AMS,MS	4	1000	Unknown		03/15/2024 11:26	Finished	MS (5ppb), IWST-231228B,10r
19	N063771-001A,SAMP	1	1000	Unknown		03/15/2024 11:57	Finished	SAMP,2>10 mL
20	N063771-001AMS,MS	2	1000	Unknown		03/15/2024 12:09	Finished	MS (1ppb), IWST-231228B,2>
21	N063771-002A,SAMP	3	1000	Unknown		03/15/2024 12:19	Finished	SAMP,10 mL
22	N063771-002AMS,MS	4	1000	Unknown		03/15/2024 12:28	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	5	1000	Unknown		03/15/2024 12:37	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	6	1000	Unknown		03/15/2024 12:47	Finished	CCB R240129C
25	N063771-014A,SAMP	7	1000	Unknown		03/15/2024 12:56	Finished	SAMP,2>10 mL
26	N063771-014AMS,MS	8	1000	Unknown		03/15/2024 13:06	Finished	MS (1ppb), IWST-231228B,2>
27	N063771-015A,SAMP	9	1000	Unknown		03/15/2024 13:15	Finished	SAMP,2>10 mL
28	N063771-015AMS,MS	10	1000	Unknown		03/15/2024 13:25	Finished	MS (1ppb), IWST-231228B,2>
29	N063771-018A,SAMP	11	1000	Unknown		03/15/2024 13:34	Finished	SAMP,2>10 mL
30	N063771-018AMS,MS	12	1000	Unknown		03/15/2024 13:44	Finished	MS (1ppb), IWST-231228B,2>
31	N063771-010A,SAMP	13	1000	Unknown		03/15/2024 13:53	Finished	SAMP,10 mL
32	N063771-010AMS,MS	14	1000	Unknown		03/15/2024 14:03	Finished	MS (1ppb), IWST-231228B,10r
33	N063771-014ADUP,D	15	1000	Unknown		03/15/2024 14:12	Finished	DUP,2>10 mL
34	N063771-014AMSD,M	16	1000	Unknown		03/15/2024 14:22	Finished	MSD (5ppb), IWST-231228B,2
35	CCV-3,CCV,1,	17	1000	Unknown		03/15/2024 14:31	Finished	CCV @10ppb, IWST-231228A
36	CCB-3,CCB,1,	18	1000	Unknown		03/15/2024 14:40	Finished	CCB R240129C
37	N063771-012A,SAMP	19	1000	Unknown		03/15/2024 14:50	Finished	SAMP,10 mL
38	N063771-012AMS,MS	20	1000	Unknown		03/15/2024 14:59	Finished	MS (1ppb), IWST-231228B,10r
39	N063771-013A,SAMP	21	1000	Unknown		03/15/2024 15:09	Finished	SAMP,10 mL
40	N063771-013AMS,MS	22	1000	Unknown		03/15/2024 15:18	Finished	MS (1ppb), IWST-231228B,10r
41	N063771-006A,SAMP	23	1000	Unknown		03/15/2024 15:28	Finished	SAMP,10 mL
42	N063771-006AMS,MS	24	1000	Unknown		03/15/2024 15:37	Finished	MS (1ppb), IWST-231228B,10r
43	N063771-007A,SAMP	25	1000	Unknown		03/15/2024 15:47	Finished	SAMP,10 mL
44	N063771-007AMS,MS	1	1000	Unknown		03/15/2024 16:02	Finished	MS (1ppb), IWST-231228B,10r
45	N063771-009A,SAMP	2	1000	Unknown		03/15/2024 16:14	Finished	SAMP,10 mL
46	N063771-009AMS,MS	3	1000	Unknown		03/15/2024 16:23	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	4	1000	Unknown		03/15/2024 16:33	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	5	1000	Unknown		03/15/2024 16:42	Finished	CCB R240129C
49	N063771-008A,SAMP	6	1000	Unknown		03/15/2024 16:52	Finished	SAMP,10 mL
50	N063771-008AMS,MS	7	1000	Unknown		03/15/2024 17:01	Finished	MS (1ppb), IWST-231228B,10r
51	N063771-016A,SAMP	8	1000	Unknown		03/15/2024 17:11	Finished	SAMP,10 mL
52	N063771-016AMS,MS	9	1000	Unknown		03/15/2024 17:20	Finished	MS (1ppb), IWST-231228B,10r
53	N063771-017A,SAMP	10	1000	Unknown		03/15/2024 17:29	Finished	SAMP,10 mL
54	N063771-017AMS,MS	11	1000	Unknown		03/15/2024 17:39	Finished	MS (1ppb), IWST-231228B,10r
55	N063771-019A,SAMP	12	1000	Unknown		03/15/2024 17:48	Finished	SAMP,10 mL
56	N063771-019AMS,MS	13	1000	Unknown		03/15/2024 17:58	Finished	MS (1ppb), IWST-231228B,10r
57	N063771-011A,SAMP	14	1000	Unknown		03/15/2024 18:08	Finished	SAMP,10 mL
58	N063771-011AMS,MS	15	1000	Unknown		03/15/2024 18:17	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	16	1000	Unknown		03/15/2024 18:26	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	17	1000	Unknown		03/15/2024 18:36	Finished	CCB R240129C

61	N063771-002A,SAMP	18	1000	Unknown		03/15/2024 18:45	Finished	SAMP,2>10 mL
62	N063771-002AMS,MS	19	1000	Unknown		03/15/2024 18:55	Finished	MS (1ppb), IWST-231228B,2>
63	N063812-006A,SAMP	20	1000	Unknown		03/15/2024 19:04	Finished	SAMP,10 mL
64	N063812-006AMS,MS	21	1000	Unknown		03/15/2024 19:14	Finished	MS (1ppb), IWST-231228B,10
65	N063812-008A,SAMP	22	1000	Unknown		03/15/2024 19:23	Finished	SAMP,10 mL
66	N063812-008AMS,MS	23	1000	Unknown		03/15/2024 19:32	Finished	MS (1ppb), IWST-231228B,10
67	N063812-017A,SAMP	24	1000	Unknown		03/15/2024 19:42	Finished	SAMP,10 mL
68	N063812-017AMS,MS	25	1000	Unknown		03/15/2024 19:51	Finished	MS (1ppb), IWST-231228B,10
69	N063771-010A,SAMP	26	1000	Unknown		03/15/2024 20:01	Finished	SAMP,2>10 mL
70	N063771-010AMS,MS	27	1000	Unknown		03/15/2024 20:10	Finished	MS (1ppb), IWST-231228B,2>
71	CCV-6,CCV1,1,	28	1000	Unknown		03/15/2024 20:20	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	29	1000	Unknown		03/15/2024 20:29	Finished	CCB R240129C
73	N063771-012A,SAMP	30	1000	Unknown		03/15/2024 20:39	Finished	SAMP,2>10 mL
74	N063771-012AMS,MS	31	1000	Unknown		03/15/2024 20:48	Finished	MS (1ppb), IWST-231228B,2>
75	N063771-013A,SAMP	32	1000	Unknown		03/15/2024 20:58	Finished	SAMP,2>10 mL
76	N063771-013AMS,MS	33	1000	Unknown		03/15/2024 21:07	Finished	MS (1ppb), IWST-231228B,2>
77	N063771-006A,SAMP	34	1000	Unknown		03/15/2024 21:16	Finished	SAMP,2>10 mL
78	N063771-006AMS,MS	35	1000	Unknown		03/15/2024 21:26	Finished	MS (1ppb), IWST-231228B,2>
79	N063771-007A,SAMP	36	1000	Unknown		03/15/2024 21:35	Finished	SAMP,2>10 mL
80	N063771-007AMS,MS	37	1000	Unknown		03/15/2024 21:45	Finished	MS (1ppb), IWST-231228B,2>
81	N063771-009A,SAMP	38	1000	Unknown		03/15/2024 21:54	Finished	SAMP,2>10 mL
82	N063771-009AMS,MS	39	1000	Unknown		03/15/2024 22:04	Finished	MS (1ppb), IWST-231228B,2>
83	CCV-7,CCV,1,	40	1000	Unknown		03/15/2024 22:13	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	41	1000	Unknown		03/15/2024 22:23	Finished	CCB R240129C
85	BLANK	42	1000	Unknown		03/15/2024 22:32	Finished	BLANK
86	SHUTDOWN	43	1000	Unknown		03/15/2024 22:42	Finished	
87	Eluent: R240313A	44	1000	Unknown		n.a.	Finished	
88	PCR: R240313B	45	1000	Unknown		n.a.	Finished	

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 3/12/24
Time Prepared: 1055H
Prepared By: MA

Reagent ID:
Sulfuric Acid: 15735
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: NH4031E
NH4OH + NH4SO4 buffer: NH4012C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MB-107451	7.70	9.48	2L	~2L	+0.2mL NH4012C	JC
2)	N63472-1A	9.34	9.37	1		1mL	
3)	N63705-1A	9.40	—	~250mL	~250mL		
4)	2A	9.32	—				
5)	3A	9.34	—				
6)	4B	9.48	—				
7)	5A	9.46	—				
8)	N63706[illegible] 1A	9.31	—				
9)	2MS	9.66	—				
10)							
11)							
12)							
13)							
14)							
15)							

Sample Preparation

Date Prepared: 3/13/24
Time Prepared: 0956H
Prepared By: MT

Reagent ID:
Sulfuric Acid: 15405
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: NH4031BA
NH4OH + NH4SO4 buffer: NH4012C

6N NaOH. N23122C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	N63734-1A	9.33	—	~250mL	~250mL		
2)	1MS	9.35	—				
3)	N63735-1A	9.11	9.40			+4	
4)	2A	8.48	9.47			+7	
5)	3B	9.32	—				
6)	4A	9.39	—				
7)	5A	9.34	—				
8)	6A	9.36	—				
9)	7B	9.47	—				
10)	8A	9.74	—				
11)	9A	9.31	—				
12)	10A	9.31	—				
13)	11A	9.38	—				
14)	MD	9.46	—				
15)	13A	9.41	—				
	14B	9.70	—				

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 3/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0412	0.2259	1.0754	2.1395	3.1834	4.2546	1.0000
Measured, in ug/L	0.193700	1.061600	5.052800	10.052000	14.957000	19.990000	
Relative Error (%RE)	-3.2%		1.1%				

	Stock	Working
Standard Concentration:	1,000,000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ICV**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5748062**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.874	0.20	5.000	0	97.5	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5748063**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.20	0.2000	0	109	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCV**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748065**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.998	0.20	5.000	0	100	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748066**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.203	0.20	0.2000	0	102	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748074**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.186	0.20	10.00	0	102	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCV**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748082**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.002	0.20	5.000	0	100	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748091**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.318	0.20	10.00	0	103	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCV**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748101**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.953	0.20	5.000	0	99.0	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748107**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.384	0.20	10.00	0	104	95	105				

Sample ID: **CCV-7**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCV**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748116**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.065	0.20	5.000	0	101	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-8**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748122**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.270	0.20	10.00	0	103	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ICV**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5752654**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.874	0.20	5.000	0	97.5	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5752655**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.20	0.2000	0	109	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCV**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752657**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.058	0.20	5.000	0	101	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752658**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.196	0.20	0.2000	0	97.9	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752666**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.226	0.20	10.00	0	102	95	105				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCV**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752676**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.039	0.20	5.000	0	101	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752678**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.226	0.20	10.00	0	102	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCV**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752684**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.037	0.20	5.000	0	101	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752696**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.228	0.20	10.00	0	102	95	105				

Sample ID: **CCV-7**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCV**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752708**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.046	0.20	5.000	0	101	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ICB**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5748064**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCB**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748067**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCB**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748075**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCB**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748083**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCB**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748092**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCB**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748102**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCB**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748108**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-7**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCB**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748117**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-8**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCB**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748123**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ICB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5752656**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752659**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752667**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752677**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752679**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752685**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752697**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-7**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752709**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/14/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	4.006	
CCV-2	3.998	
CCV-3	3.998	
CCV-4	3.998	
CCV-5	3.998	
CCV-6	3.990	
CCV-7	3.990	
CCV-8	3.990	
Average	3.996	
Actual RT Window	3.916 - 4.076	
Applied RT Window	3.796 - 4.196	
MB-R183616	N.A.	N.A.
LCS-R183616	4.006	PASS
N063735-005A	3.981	PASS
N063735-006A	3.965	PASS
N063735-005ADUP	3.973	PASS
N063735-006AMS	3.965	PASS
N063734-001A	3.815	PASS
N063734-001AMS	3.798	PASS
N063735-006ADUP	3.965	PASS
N063735-006AMSD	3.965	PASS
N063734-002A	3.798	PASS
N063735-004A	3.798	PASS
N063735-007A	3.973	PASS
N063735-007AMS	3.981	PASS
N063735-009A	N.A.	N.A.
N063735-009AMS	3.981	PASS
N063735-010A	N.A.	N.A.
N063735-010AMS	3.973	PASS
N063735-011A	3.915	PASS
N063735-011AMS	3.906	PASS

Reviewed by:

dMocha 4/2/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/14/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	4.006	
CCV-2	3.998	
CCV-3	3.998	
CCV-4	3.998	
CCV-5	3.998	
CCV-6	3.990	
CCV-7	3.990	
CCV-8	3.990	
Average	3.996	
Actual RT Window	3.916 - 4.076	
Applied RT Window	3.796 - 4.196	
N063735-012A	N.A.	N.A.
N063735-012AMS	3.956	PASS
N063735-013A	3.806	PASS
N063735-013AMS	3.798	PASS
N063735-001A	N.A.	N.A.
N063735-001AMS	3.831	PASS
N063735-003A	3.973	PASS
N063735-003AMS	3.990	PASS
N063735-008A	N.A.	N.A.
N063735-008AMS	3.990	PASS
N063735-014A	N.A.	N.A.
N063735-014AMS	3.990	PASS
N063735-002A	N.A.	N.A.
N063735-002AMS	3.798	PASS
N063735-002A	N.A.	N.A.
N063735-002AMS	3.965	PASS
N063735-005A	3.831	PASS
N063735-005AMS	3.823	PASS
N063735-005AMS	3.965	PASS
N063248-008A	N.A.	N.A.

Reviewed by:

dMocha 4/2/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/14/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	4.006	
CCV-2	3.998	
CCV-3	3.998	
CCV-4	3.998	
CCV-5	3.998	
CCV-6	3.990	
CCV-7	3.990	
CCV-8	3.990	
Average	3.996	
Actual RT Window	3.916 - 4.076	
Applied RT Window	3.796 - 4.196	
N063248-008AMS	3.923	PASS
N063734-001A	N.A.	N.A.
N063734-001AMS	3.956	PASS
N063734-002A	N.A.	N.A.
N063734-002AMS	3.956	PASS
N063771-003A	N.A.	N.A.
N063771-004A	3.806	PASS
N063771-005A	N.A.	N.A.
N063771-003A	N.A.	N.A.
N063771-003AMS	3.956	PASS
N063771-004A	N.A.	N.A.
N063771-004AMS	3.948	PASS
N063771-005A	N.A.	N.A.
N063771-005AMS	3.940	PASS
N063735-004A	3.956	PASS
N063735-004AMS	3.956	PASS
N063735-011AMS	3.906	PASS
N063735-013A	N.A.	N.A.
N063735-013AMS	3.956	PASS

Reviewed by:

dMRocha 4/2/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/15/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	3.998	
CCV-2	3.990	
CCV-3	3.990	
CCV-4	3.990	
CCV-5	3.981	
CCV-6	3.981	
CCV-7	3.990	

Average	3.989
Actual RT Window	3.909 - 4.069
Applied RT Window	3.789 - 4.189

MB-R183690	N.A.	N.A.
LCS-R183690	3.990	PASS
N063735-012A	N.A.	N.A.
N063735-012AMS	3.965	PASS
N063771-001A	3.790	PASS
N063771-001AMS	3.790	PASS
N063771-001A	3.965	PASS
N063771-001AMS	3.956	PASS
N063771-002A	N.A.	N.A.
N063771-014A	3.965	PASS
N063771-014AMS	3.956	PASS
N063771-015A	3.956	PASS
N063771-015AMS	3.956	PASS
N063771-018A	3.948	PASS
N063771-018AMS	3.948	PASS
N063771-010A	N.A.	N.A.
N063771-014ADUP	3.956	PASS
N063771-014AMSD	3.956	PASS
N063771-012A	N.A.	N.A.
N063771-012AMS	3.798	PASS
N063771-013A	N.A.	N.A.

Reviewed by:

dMRocha 4/2/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/15/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	3.998	
CCV-2	3.990	
CCV-3	3.990	
CCV-4	3.990	
CCV-5	3.981	
CCV-6	3.981	
CCV-7	3.990	
Average	3.989	
Actual RT Window	3.909 - 4.069	
Applied RT Window	3.789 - 4.189	
N063771-013AMS	3.790	PASS
N063771-006A	N.A.	N.A.
N063771-007A	N.A.	N.A.
N063771-007AMS	3.790	PASS
N063771-009A	N.A.	N.A.
N063771-009AMS	3.815	PASS
N063771-008A	N.A.	N.A.
N063771-008AMS	3.973	PASS
N063771-017A	3.790	PASS
N063771-017AMS	3.790	PASS
N063771-019A	N.A.	N.A.
N063771-019AMS	3.973	PASS
N063771-011A	N.A.	N.A.
N063771-011AMS	3.790	PASS
N063771-002A	N.A.	N.A.
N063771-002AMS	3.948	PASS
N063812-006A	N.A.	N.A.
N063812-006AMS	3.973	PASS
N063812-008A	N.A.	N.A.
N063812-008AMS	3.973	PASS
N063812-017A	N.A.	N.A.

Reviewed by:

dMRocha 4/2/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/15/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	3.998	
CCV-2	3.990	
CCV-3	3.990	
CCV-4	3.990	
CCV-5	3.981	
CCV-6	3.981	
CCV-7	3.990	

Average	3.989
Actual RT Window	3.909 - 4.069
Applied RT Window	3.789 - 4.189

N063812-017AMS	3.973	PASS
N063771-010A	N.A.	N.A.
N063771-010AMS	3.940	PASS
N063771-012A	N.A.	N.A.
N063771-012AMS	3.948	PASS
N063771-013A	N.A.	N.A.
N063771-013AMS	3.948	PASS
N063771-006A	N.A.	N.A.
N063771-006AMS	3.948	PASS
N063771-007A	N.A.	N.A.
N063771-007AMS	3.948	PASS
N063771-009A	N.A.	N.A.
N063771-009AMS	3.948	PASS

Reviewed by:

dMRocha 4/2/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240305A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	03/05/24 4:07 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/05/24 4:16 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	03/05/24 4:26 PM	Reported
12	MB-R183315	MBLK	1	Hexavalent Chromium	03/05/24 4:35 PM	Reported
13	LCS-R183315	LCS	1	Hexavalent Chromium	03/05/24 4:45 PM	Reported
14	MB-107277	MBLK	1	Hexavalent Chromium	03/05/24 4:54 PM	Reported
15	N063472-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:04 PM	Reported
16	N063472-001ADUP	DUP	1	Hexavalent Chromium	03/05/24 5:13 PM	Reported
17	N063535-006A	SAMP	1	Hexavalent Chromium	03/05/24 5:23 PM	Reported
18	N063535-006AMS	MS	1	Hexavalent Chromium	03/05/24 5:32 PM	Reported
19	N063535-006AMSD	MSD	1	Hexavalent Chromium	03/05/24 5:42 PM	Reported
20	N063534-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:51 PM	Reported
21	N063534-001AMS	MS	1	Hexavalent Chromium	03/05/24 6:00 PM	Reported
22	CCV-1	CCV1	1	Hexavalent Chromium	03/05/24 6:10 PM	Reported
23	CCB-1	CCB	1	Hexavalent Chromium	03/05/24 6:20 PM	Reported
24	N063534-002A	SAMP	1	Hexavalent Chromium	03/05/24 6:30 PM	Reported
25	N063534-002AMS	MS	1	Hexavalent Chromium	03/05/24 6:38 PM	Reported
26	N063534-003A	SAMP	1	Hexavalent Chromium	03/05/24 6:48 PM	Reported
27	N063534-003AMS	MS	1	Hexavalent Chromium	03/05/24 6:57 PM	Reported
28	N063535-001A	SAMP	1	Hexavalent Chromium	03/05/24 7:07 PM	Reported
29	N063535-002A	SAMP	1	Hexavalent Chromium	03/05/24 7:16 PM	Reported
30	N063535-003A	SAMP	1	Hexavalent Chromium	03/05/24 7:26 PM	Reported
31	N063535-004A	SAMP	1	Hexavalent Chromium	03/05/24 7:35 PM	Reported
32	N063535-005A	SAMP	1	Hexavalent Chromium	03/05/24 7:48 PM	Reported
33	CCV-2	CCV	1	Hexavalent Chromium	03/05/24 7:57 PM	Reported
34	CCB-2	CCB	1	Hexavalent Chromium	03/05/24 8:07 PM	Reported
35	N063535-007A	SAMP	1	Hexavalent Chromium	03/05/24 8:16 PM	Reported
36	N063535-008A	SAMP	1	Hexavalent Chromium	03/05/24 8:25 PM	Reported
37	CCV-3	CCV1	1	Hexavalent Chromium	03/05/24 8:35 PM	Reported
38	CCB-3	CCB	1	Hexavalent Chromium	03/05/24 8:46 PM	Reported
39	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 8:55 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240305A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**07/Mar/24 08:03:58**
No. of Injections:	**42**	*Updated By:*	**ics 5000**

Injection Details

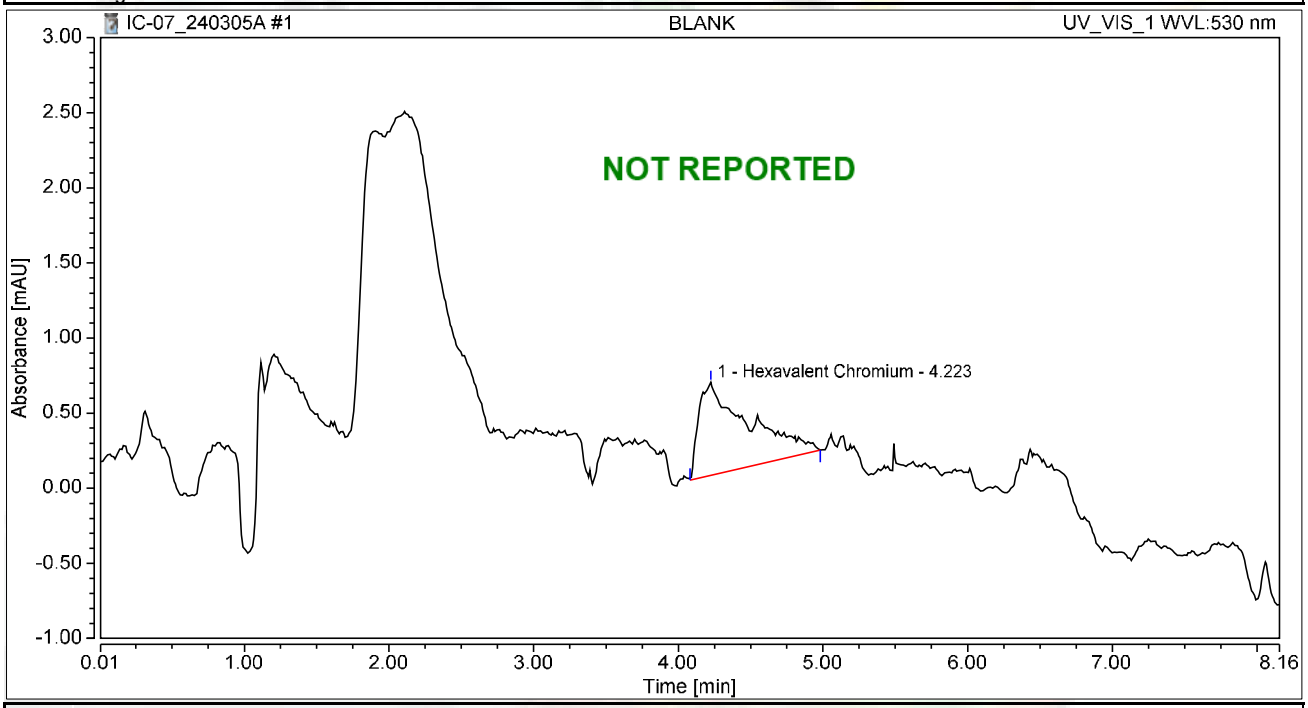
No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	8	1000	Unknown		03/05/2024 16:07	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	9	1000	Unknown		03/05/2024 16:16	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	10	1000	Unknown		03/05/2024 16:26	Finished	ICB R240129C
12	MB-H2O,MBLK,1,	11	1000	Unknown		03/05/2024 16:35	Finished	MB R240129C
13	LCS-H2O,LCS,1,	12	1000	Unknown		03/05/2024 16:45	Finished	LCS @5ppb, IWST-231228B
14	MB-107277,MBLK,1,	13	1000	Unknown		03/05/2024 16:54	Finished	MB TCLP
15	N063472-001A,SAMP	14	1000	Unknown		03/05/2024 17:04	Finished	SAMP,10 mL
16	N063472-001ADUP,D	15	1000	Unknown		03/05/2024 17:13	Finished	REP,10 mL
17	N063535-006A,SAMP	16	1000	Unknown		03/05/2024 17:23	Finished	SAMP,10 mL
18	N063535-006AMS,MS	17	1000	Unknown		03/05/2024 17:32	Finished	MS (5ppb), IWST-231228B,10r
19	N063535-006AMSD,M	18	1000	Unknown		03/05/2024 17:42	Finished	MSD (5ppb), IWST-231228B,1(
20	N063534-001A,SAMP	19	1000	Unknown		03/05/2024 17:51	Finished	SAMP,10 mL
21	N063534-001AMS,MS	20	1000	Unknown		03/05/2024 18:00	Finished	MS (1ppb), IWST-231228B,10r
22	CCV-1,CCV1,1,	21	1000	Unknown		03/05/2024 18:10	Finished	CCV @10ppb, IWST-231228A
23	CCB-1,CCB,1,	22	1000	Unknown		03/05/2024 18:20	Finished	CCB R240129C
24	N063534-002A,SAMP	23	1000	Unknown		03/05/2024 18:30	Finished	SAMP,10 mL
25	N063534-002AMS,MS	24	1000	Unknown		03/05/2024 18:38	Finished	MS (1ppb), IWST-231228B,10r
26	N063534-003A,SAMP	25	1000	Unknown		03/05/2024 18:48	Finished	SAMP,10 mL
27	N063534-003AMS,MS	26	1000	Unknown		03/05/2024 18:57	Finished	MS (1ppb), IWST-231228B,10r
28	N063535-001A,SAMP	27	1000	Unknown		03/05/2024 19:07	Finished	SAMP,10 mL
29	N063535-002A,SAMP	28	1000	Unknown		03/05/2024 19:16	Finished	SAMP,10 mL
30	N063535-003A,SAMP	29	1000	Unknown		03/05/2024 19:26	Finished	SAMP,10 mL
31	N063535-004A,SAMP	30	1000	Unknown		03/05/2024 19:35	Finished	SAMP,10 mL
32	N063535-005A,SAMP	31	1000	Unknown		03/05/2024 19:48	Finished	SAMP,10 mL
33	CCV-2,CCV,1,	32	1000	Unknown		03/05/2024 19:57	Finished	CCV @5ppb, IWST-231228A
34	CCB-2,CCB,1,	33	1000	Unknown		03/05/2024 20:07	Finished	CCB R240129C
35	N063535-007A,SAMP	34	1000	Unknown		03/05/2024 20:16	Finished	SAMP,10 mL
36	N063535-008A,SAMP	35	1000	Unknown		03/05/2024 20:25	Finished	SAMP,10 mL
37	CCV-3,CCV1,1,	37	1000	Unknown		03/05/2024 20:35	Finished	CCV @10ppb, IWST-231228A
38	CCB-3,CCB,1,	38	1000	Unknown		03/05/2024 20:46	Finished	CCB R240129C
39	BLANK	39	1000	Unknown		03/05/2024 20:55	Finished	BLANK
40	SHUTDOWN	40	1000	Unknown		03/05/2024 21:05	Finished	
41	Eluent: R240305B	41	1000	Unknown		n.a.	Finished	
42	PCR: R240305C	42	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.15**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 13:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

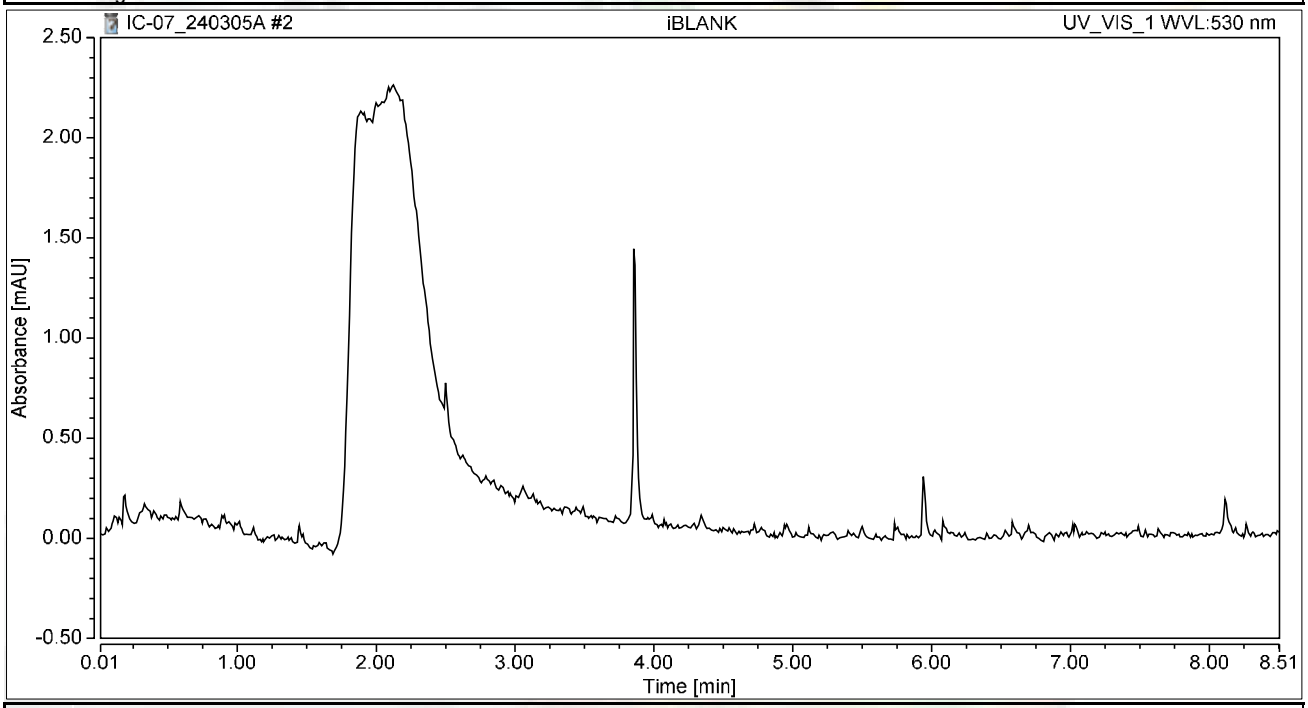
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.223	0.243	0.620	100.00	100.00	1.1440
Total:			**0.243**	**0.620**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 14:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

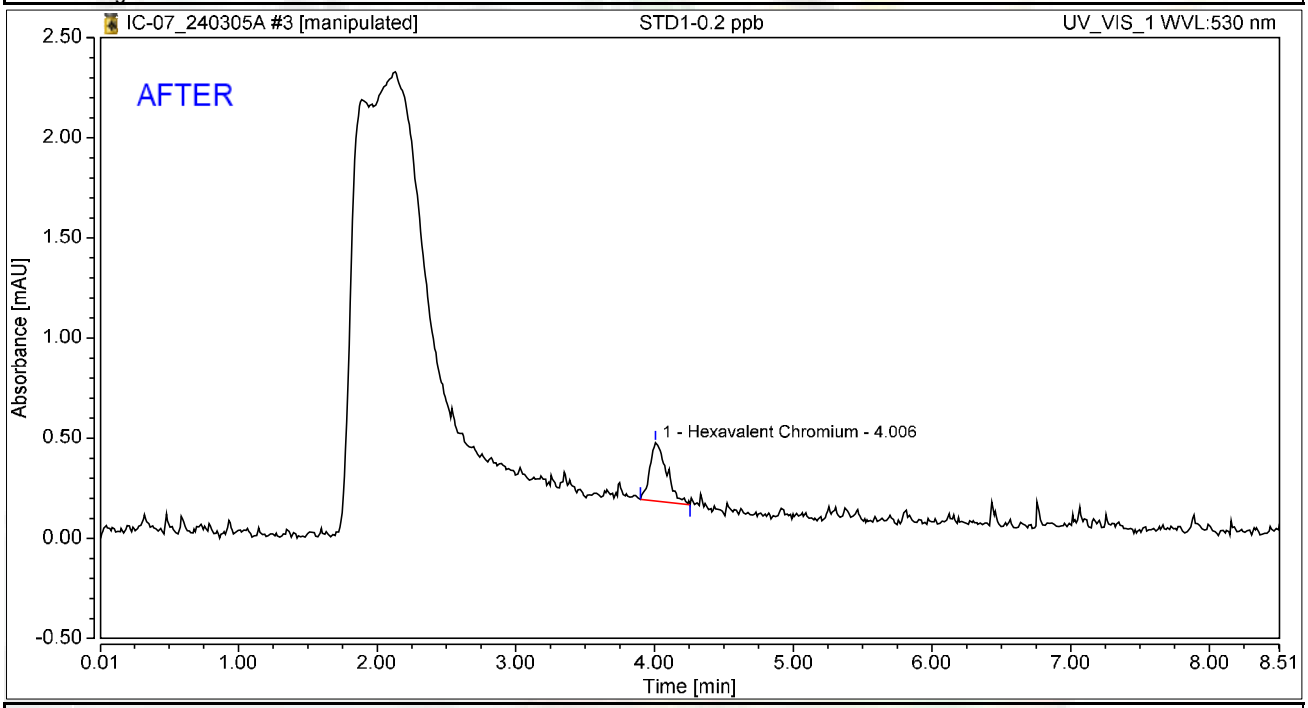
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.041	0.290	100.00	100.00	0.1937
Total:			**0.041**	**0.290**	**100.00**	**100.00**	

Reviewed by:

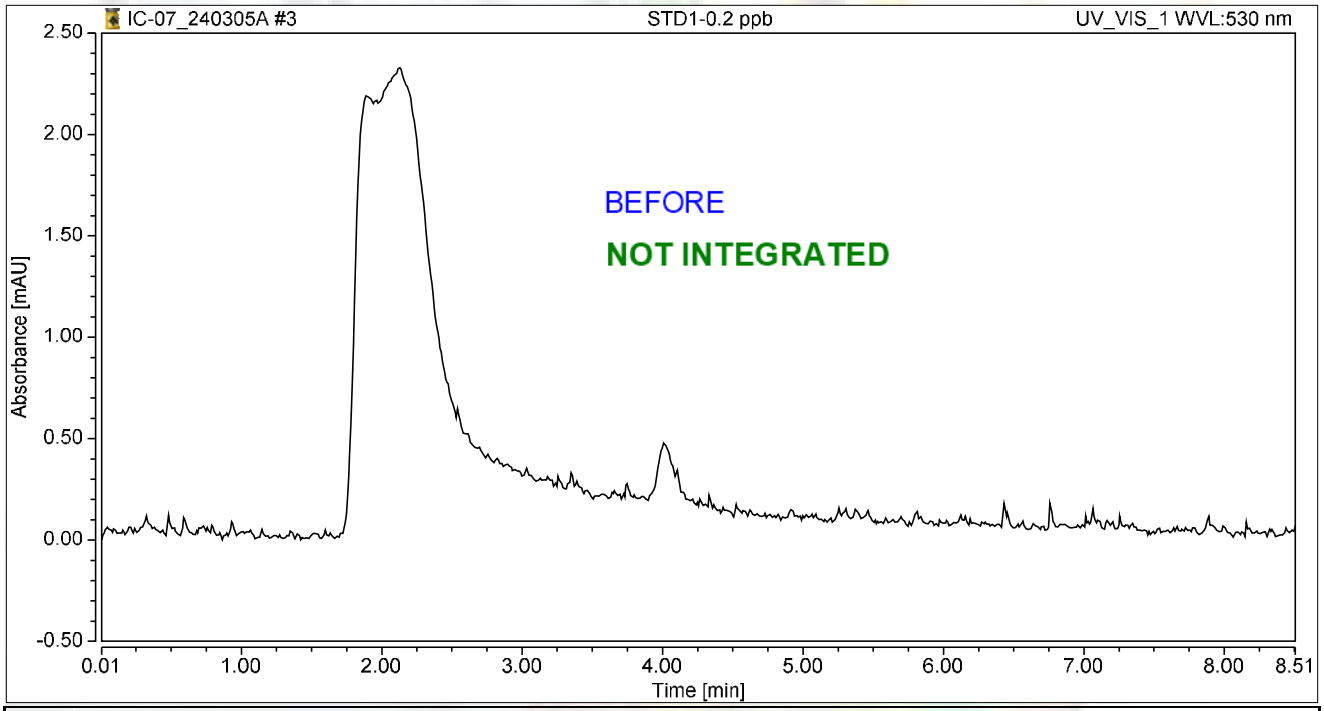
dMocha 3/11/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

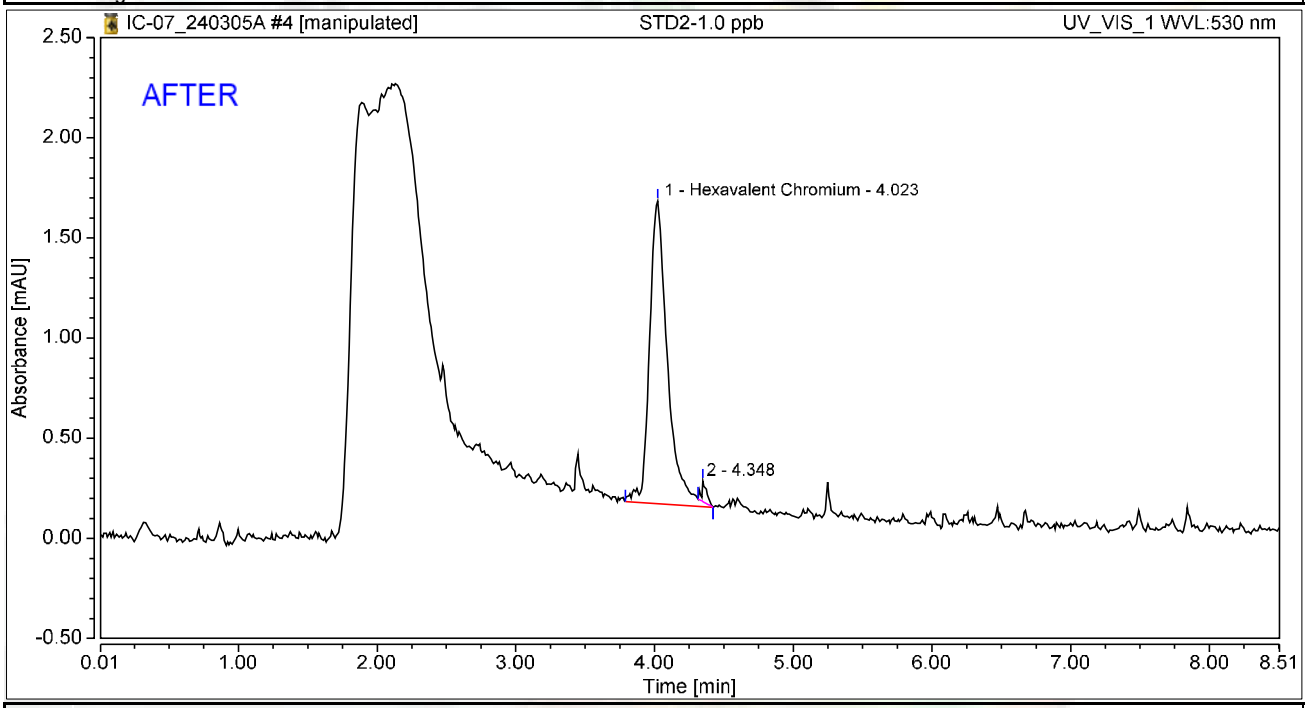
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.226	1.511	98.02	93.66	1.0616
2		4.348	0.005	0.102	1.98	6.34	n.a.
Total:			**0.231**	**1.614**	**100.00**	**100.00**	

Reviewed by:

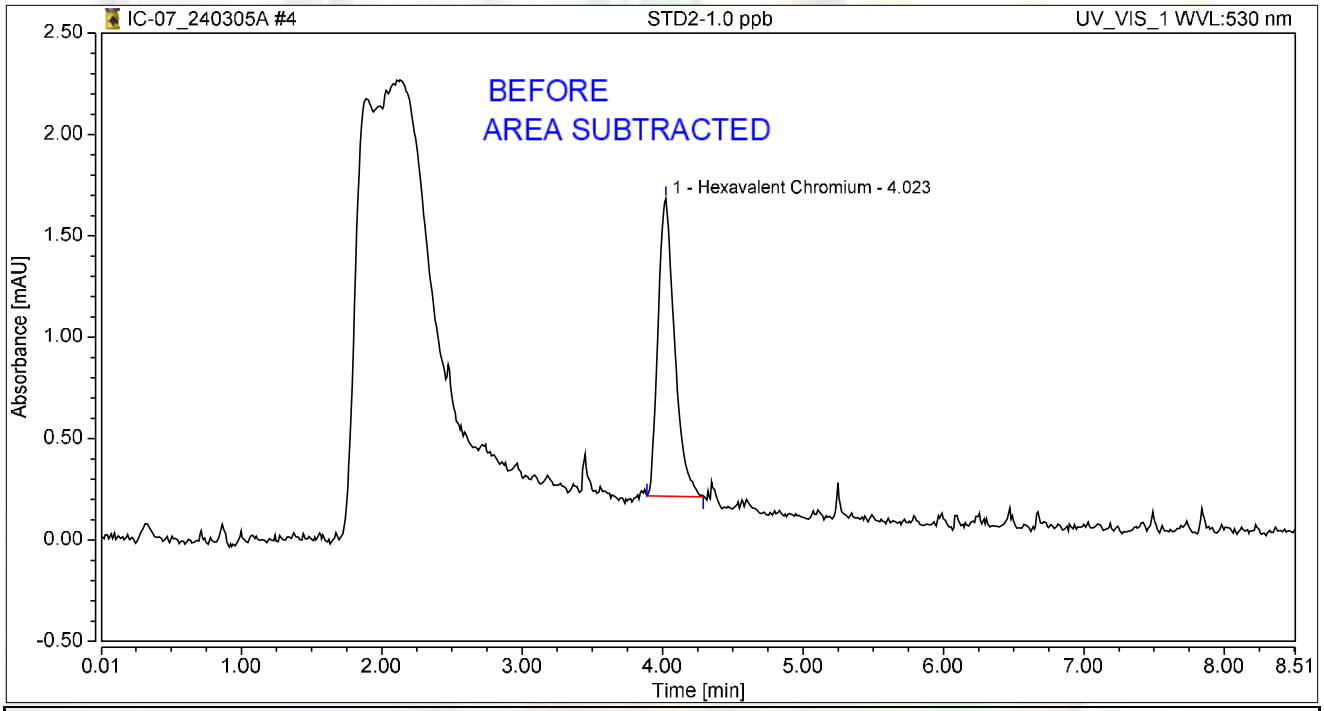
dlRocha 3/11/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

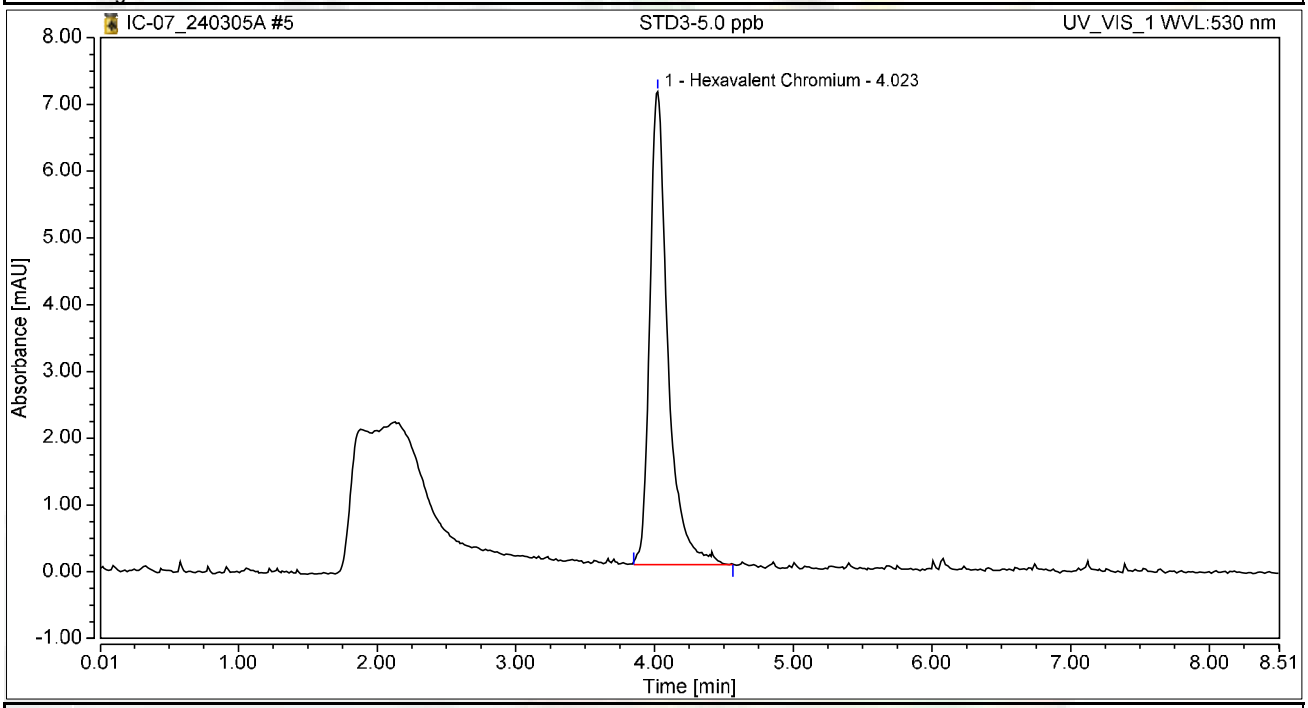
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.201	1.469	100.00	100.00	0.9426
Total:			**0.201**	**1.469**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

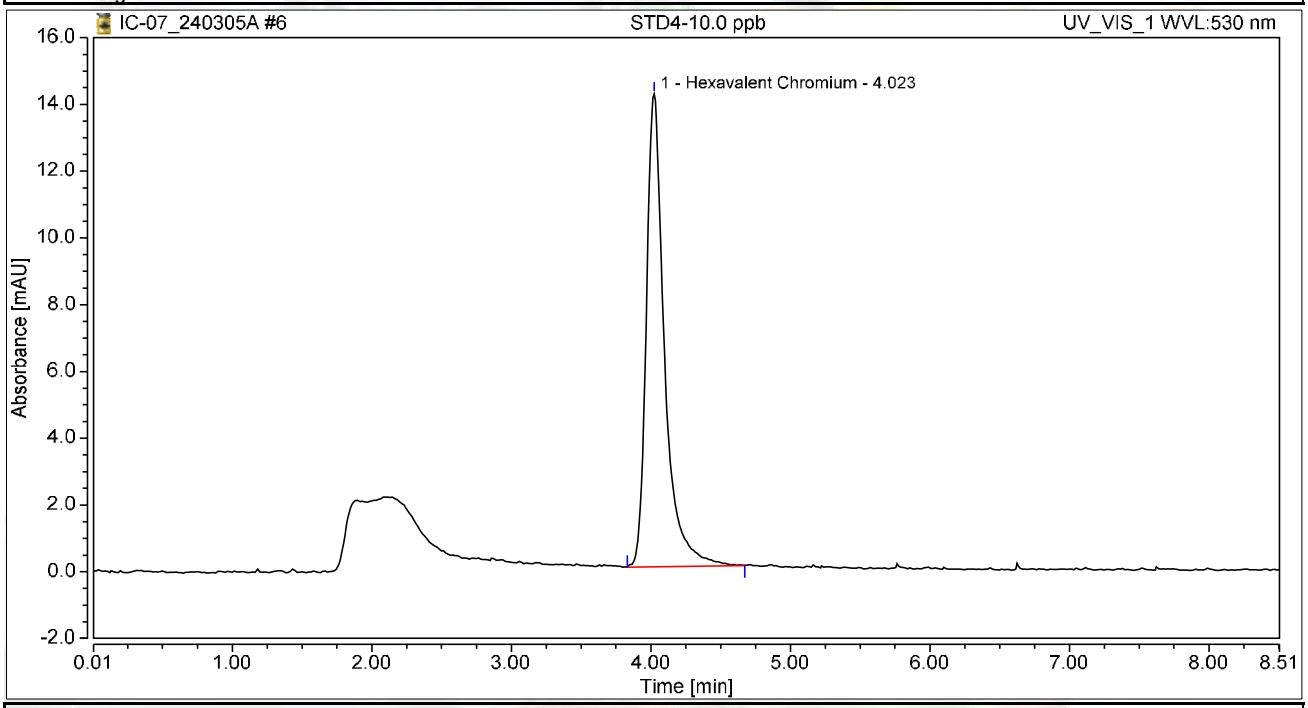
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	1.075	7.087	100.00	100.00	5.0528
Total:			**1.075**	**7.087**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

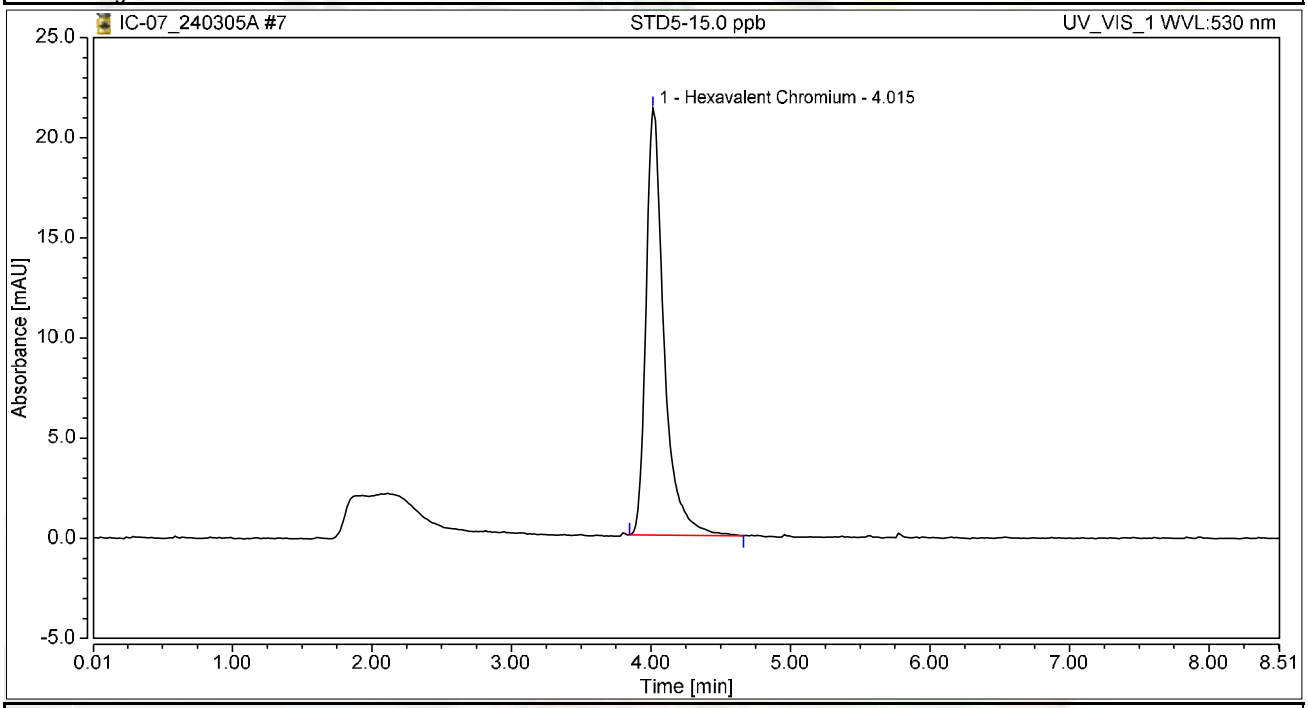
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	2.139	14.164	100.00	100.00	10.0520
Total:			**2.139**	**14.164**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

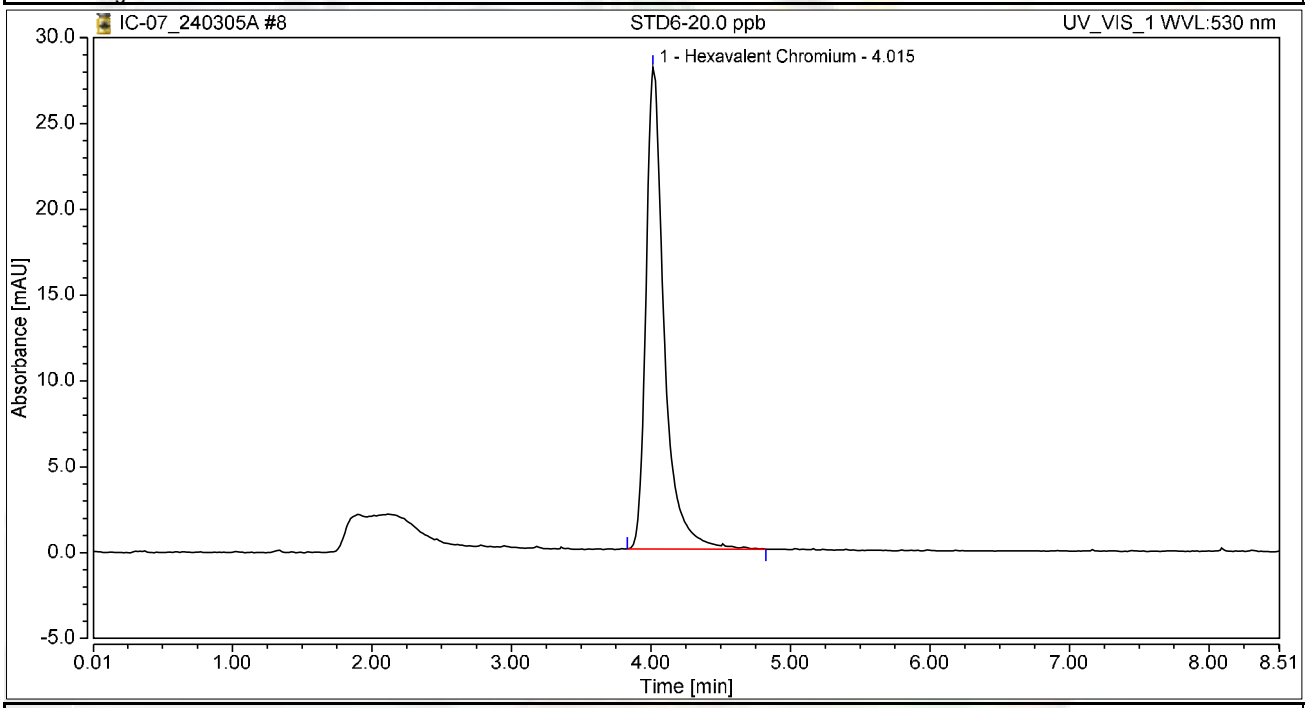
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	3.183	21.307	100.00	100.00	14.9570
Total:			**3.183**	**21.307**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:58**	*Sample Weight:*	**1.0000**

Chromatogram



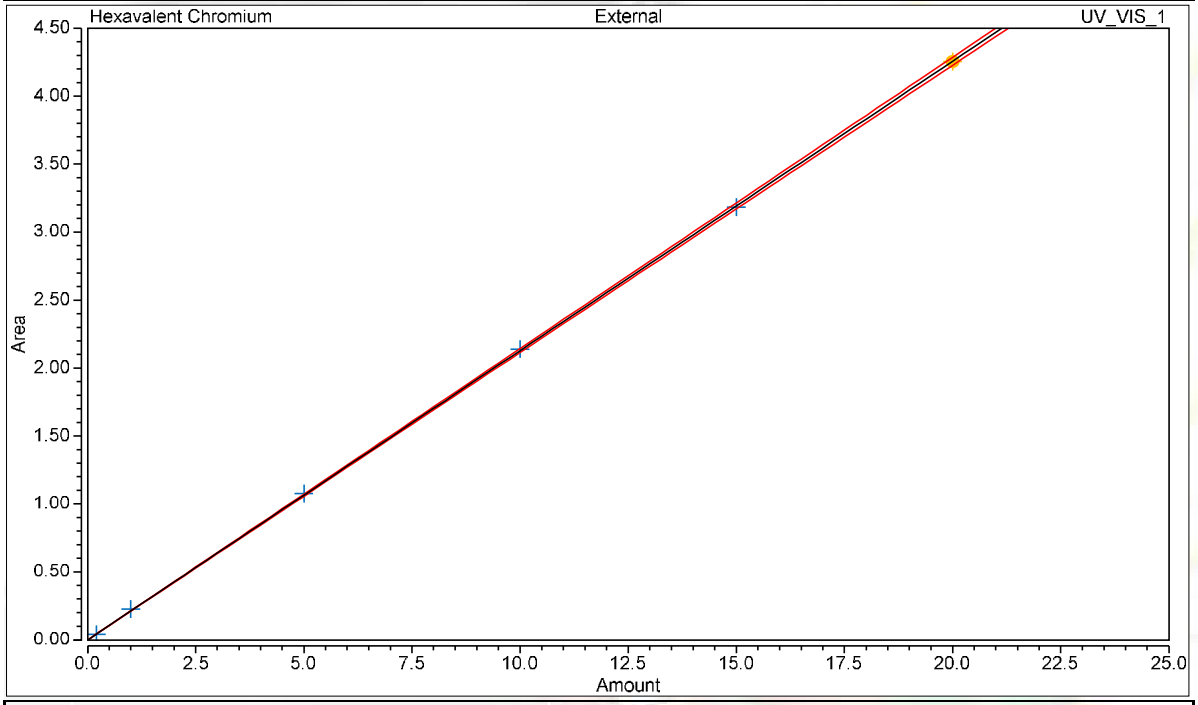
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	4.255	28.050	100.00	100.00	19.9900
Total:			**4.255**	**28.050**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2128
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99996

Calibration Plot Hexavalent Chromium



Calibration Results Hexavalent Chromium

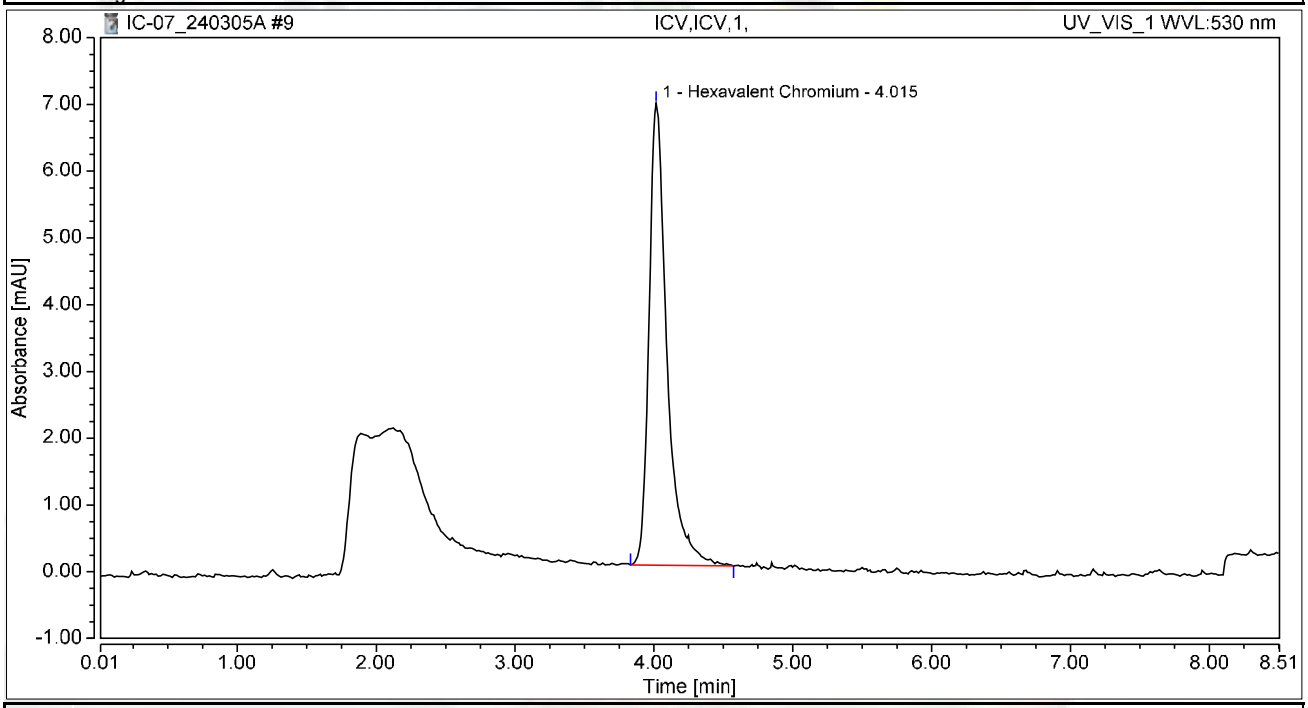
No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0412	0.041	0.290
4	STD2-1.0 ppb	02	1.0000	0.2259	0.226	1.511
5	STD3-5.0 ppb	03	5.0000	1.0754	1.075	7.087
6	STD4-10.0 ppb	04	10.0000	2.1395	2.139	14.164
7	STD5-15.0 ppb	05	15.0000	3.1834	3.183	21.307
8	STD6-20.0 ppb	06	20.0000	4.2546	4.255	28.050

Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

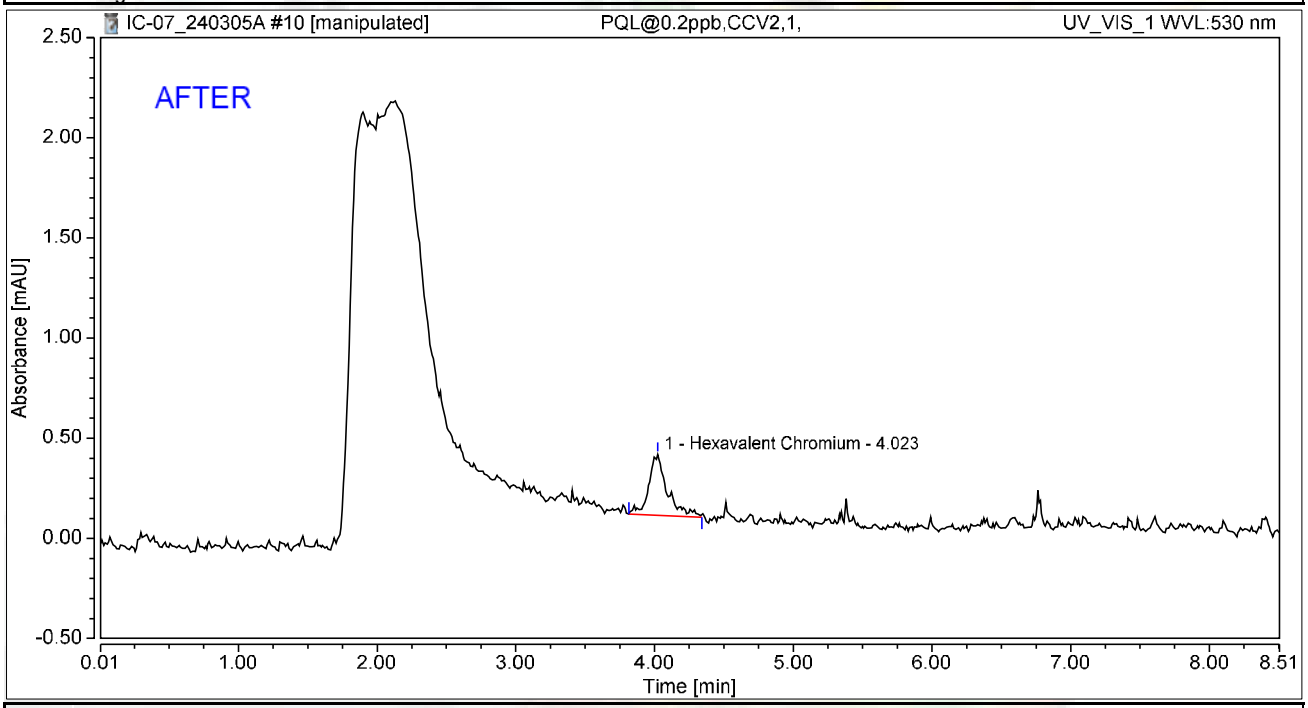
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.037	6.923	100.00	100.00	4.8744
Total:			**1.037**	**6.923**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.047	0.304	100.00	100.00	0.2189
Total:			**0.047**	**0.304**	**100.00**	**100.00**	

Reviewed by:

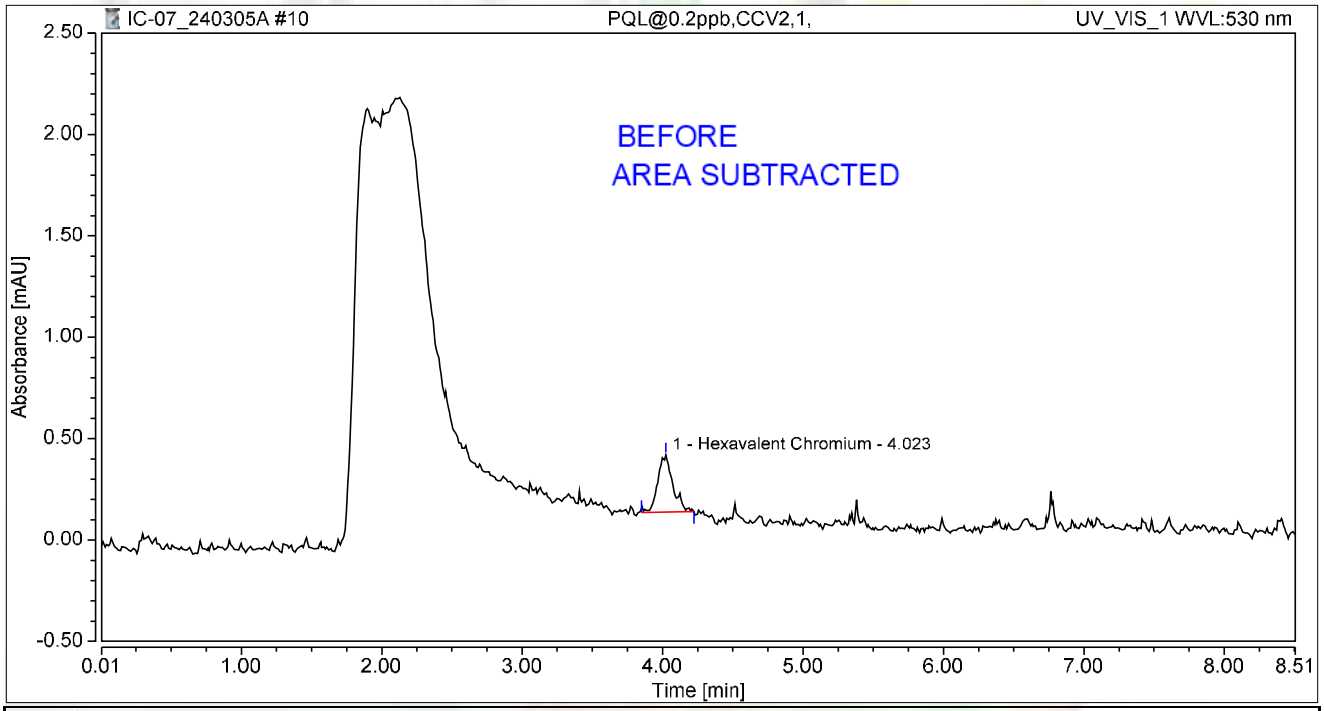
dMocha 3/11/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

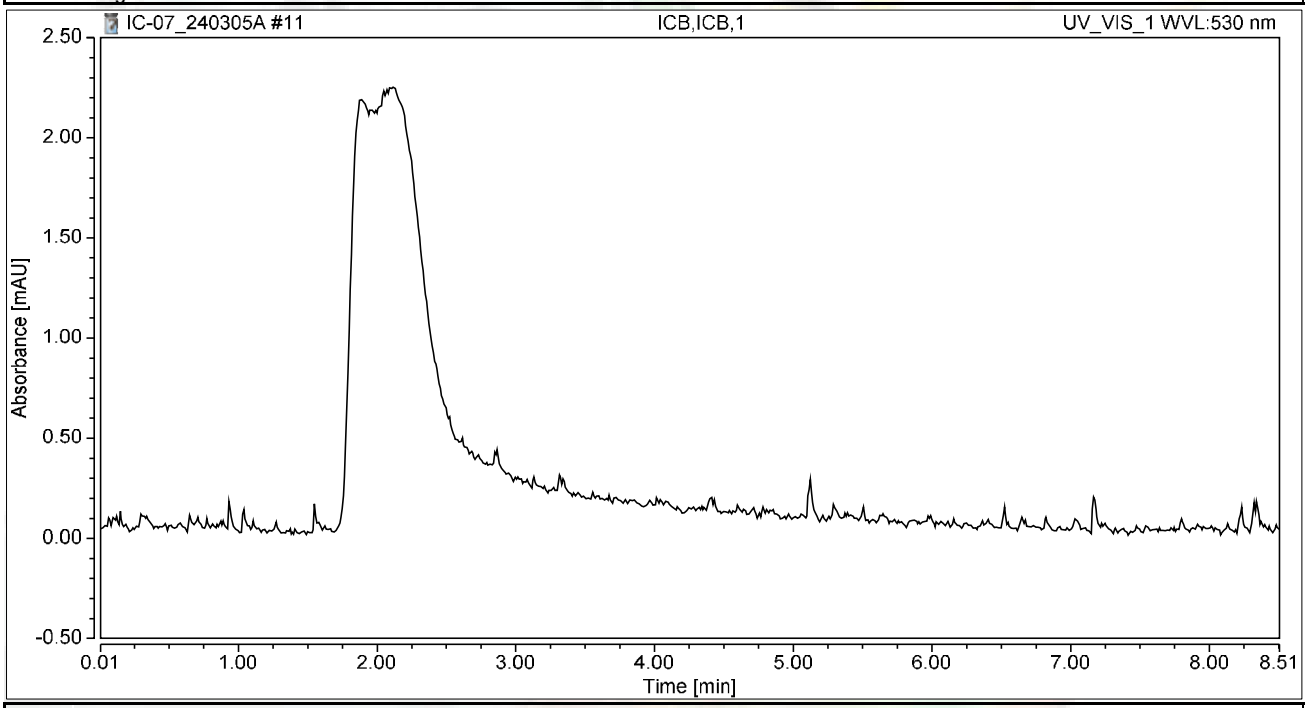
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.035	0.282	100.00	100.00	0.1646
Total:			**0.035**	**0.282**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240314A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/14/24 9:24 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/14/24 9:38 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/14/24 9:48 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/14/24 9:57 AM	Reported
13	MB-R183616	MBLK	1	Hexavalent Chromium	03/14/24 10:06 AM	Reported
14	LCS-R183616	LCS	1	Hexavalent Chromium	03/14/24 10:16 AM	Reported
15	N063735-005A	SAMP	5	Hexavalent Chromium	03/14/24 10:51 AM	Not Reported
16	N063735-006A	SAMP	5	Hexavalent Chromium	03/14/24 11:04 AM	Reported
17	N063735-005ADUP	DUP	5	Hexavalent Chromium	03/14/24 11:13 AM	Not Reported
18	N063735-006AMS	MS	5	Hexavalent Chromium	03/14/24 11:23 AM	Reported
19	N063734-001A	SAMP	1	Hexavalent Chromium	03/14/24 11:32 AM	Not Reported
20	N063734-001AMS	MS	1	Hexavalent Chromium	03/14/24 11:41 AM	Not Reported
21	N063735-006ADUP	DUP	5	Hexavalent Chromium	03/14/24 11:51 AM	Reported
22	N063735-006AMSD	MSD	5	Hexavalent Chromium	03/14/24 12:00 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/14/24 12:10 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/14/24 12:19 PM	Reported
25	N063734-002A	SAMP	1	Hexavalent Chromium	03/14/24 12:29 PM	Not Reported
26	N063734-002AMS	MS	1	Hexavalent Chromium	03/14/24 12:38 PM	Not Reported
27	N063735-004A	SAMP	1	Hexavalent Chromium	03/14/24 12:48 PM	Not Reported
28	N063735-004AMS	MS	1	Hexavalent Chromium	03/14/24 12:57 PM	Not Reported
29	N063735-007A	SAMP	1	Hexavalent Chromium	03/14/24 1:07 PM	Reported
30	N063735-007AMS	MS	1	Hexavalent Chromium	03/14/24 1:16 PM	Reported
31	N063735-009A	SAMP	1	Hexavalent Chromium	03/14/24 1:26 PM	Reported
32	N063735-009AMS	MS	1	Hexavalent Chromium	03/14/24 1:35 PM	Reported
33	N063735-010A	SAMP	1	Hexavalent Chromium	03/14/24 1:44 PM	Reported
34	N063735-010AMS	MS	1	Hexavalent Chromium	03/14/24 1:54 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	03/14/24 2:03 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	03/14/24 2:13 PM	Reported
37	N063735-011A	SAMP	1	Hexavalent Chromium	03/14/24 2:22 PM	Reported
38	N063735-011AMS	MS	1	Hexavalent Chromium	03/14/24 2:32 PM	Not Reported
39	N063735-012A	SAMP	1	Hexavalent Chromium	03/14/24 2:41 PM	Not Reported
40	N063735-012AMS	MS	1	Hexavalent Chromium	03/14/24 2:51 PM	Not Reported
41	N063735-013A	SAMP	1	Hexavalent Chromium	03/14/24 3:00 PM	Not Reported
42	N063735-013AMS	MS	1	Hexavalent Chromium	03/14/24 3:24 PM	Not Reported

dMRocha 3/26/2024
for RBA 142

INJECTION LOG: 240314A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063735-001A	SAMP	1	Hexavalent Chromium	03/14/24 3:34 PM	Reported
44	N063735-001AMS	MS	1	Hexavalent Chromium	03/14/24 3:44 PM	Reported
45	N063735-003A	SAMP	1	Hexavalent Chromium	03/14/24 3:53 PM	Reported
46	N063735-003AMS	MS	1	Hexavalent Chromium	03/14/24 4:03 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	03/14/24 4:12 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	03/14/24 4:22 PM	Reported
49	N063735-008A	SAMP	1	Hexavalent Chromium	03/14/24 4:34 PM	Reported
50	N063735-008AMS	MS	1	Hexavalent Chromium	03/14/24 4:43 PM	Reported
51	N063735-014A	SAMP	1	Hexavalent Chromium	03/14/24 4:53 PM	Reported
52	N063735-014AMS	MS	1	Hexavalent Chromium	03/14/24 5:02 PM	Reported
53	N063735-002A	SAMP	1	Hexavalent Chromium	03/14/24 5:12 PM	Not Reported
54	N063735-002AMS	MS	1	Hexavalent Chromium	03/14/24 5:21 PM	Not Reported
55	N063735-002A	SAMP	5	Hexavalent Chromium	03/14/24 5:31 PM	Reported
56	N063735-002AMS	MS	5	Hexavalent Chromium	03/14/24 5:40 PM	Reported
57	N063735-005A	SAMP	1	Hexavalent Chromium	03/14/24 5:49 PM	Reported
58	N063735-005AMS	MS	1	Hexavalent Chromium	03/14/24 5:59 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	03/14/24 6:08 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	03/14/24 6:18 PM	Reported
61	N063735-005AMS	MS	5	Hexavalent Chromium	03/14/24 6:27 PM	Not Reported
62	N063248-008A	SAMP	5	Hexavalent Chromium	03/14/24 6:37 PM	Not Reported
63	N063248-008AMS	MS	5	Hexavalent Chromium	03/14/24 6:46 PM	Not Reported
64	N063734-001A	SAMP	5	Hexavalent Chromium	03/14/24 6:56 PM	Reported
65	N063734-001AMS	MS	5	Hexavalent Chromium	03/14/24 7:05 PM	Reported
66	N063734-002A	SAMP	5	Hexavalent Chromium	03/14/24 7:15 PM	Reported
67	N063734-002AMS	MS	5	Hexavalent Chromium	03/14/24 7:24 PM	Reported
68	N063771-003A	SAMP	1	Hexavalent Chromium	03/14/24 7:34 PM	Not Reported
69	N063771-003AMS	MS	1	Hexavalent Chromium	03/14/24 7:43 PM	Not Reported
70	N063771-004A	SAMP	1	Hexavalent Chromium	03/14/24 7:52 PM	Not Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	03/14/24 8:02 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	03/14/24 8:11 PM	Reported
73	N063771-004AMS	MS	1	Hexavalent Chromium	03/14/24 8:21 PM	Not Reported
74	N063771-005A	SAMP	1	Hexavalent Chromium	03/14/24 8:30 PM	Not Reported
75	N063771-005AMS	MS	1	Hexavalent Chromium	03/14/24 8:40 PM	Not Reported
76	N063771-003A	SAMP	5	Hexavalent Chromium	03/14/24 8:49 PM	Reported
77	N063771-003AMS	MS	5	Hexavalent Chromium	03/14/24 8:59 PM	Reported
78	N063771-004A	SAMP	5	Hexavalent Chromium	03/14/24 9:08 PM	Reported
79	N063771-004AMS	MS	5	Hexavalent Chromium	03/14/24 9:18 PM	Reported
80	N063771-005A	SAMP	5	Hexavalent Chromium	03/14/24 9:27 PM	Reported
81	N063771-005AMS	MS	5	Hexavalent Chromium	03/14/24 9:36 PM	Reported
82	N063735-004A	SAMP	5	Hexavalent Chromium	03/14/24 9:46 PM	Reported
83	CCV-7	CCV	1	Hexavalent Chromium	03/14/24 9:55 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	03/14/24 10:05 PM	Reported

INJECTION LOG: 240314A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063735-004AMS	MS	5	Hexavalent Chromium	03/14/24 10:14 PM	Reported
86	N063735-011AMS	MS	1	Hexavalent Chromium	03/14/24 10:24 PM	Reported
87	N063735-013A	SAMP	5	Hexavalent Chromium	03/14/24 10:33 PM	not Reported
88	N063735-013AMS	MS	5	Hexavalent Chromium	03/14/24 10:43 PM	not Reported
89	CCV-8	CCV1	1	Hexavalent Chromium	03/14/24 10:52 PM	Reported
90	CCB-8	CCB	1	Hexavalent Chromium	03/14/24 11:02 PM	Reported

dMocha 3/26/2024

for RBA

Injection Log Summary

Sequence Details

Name:	**IC-07_240314A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**14/Mar/24 23:32:19**
No. of Injections:	**93**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/14/2024 09:24	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/14/2024 09:38	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/14/2024 09:48	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/14/2024 09:57	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/14/2024 10:06	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/14/2024 10:16	Finished	LCS @5ppb, IWST-231228B
15	N063735-005A,SAMF	1	1000	Unknown		03/14/2024 10:51	Finished	SAMP,2>10 mL
16	N063735-006A,SAMF	2	1000	Unknown		03/14/2024 11:04	Finished	SAMP,2>10 mL
17	N063735-005ADUP,D	3	1000	Unknown		03/14/2024 11:13	Finished	DUP,2>10 mL
18	N063735-006AMS,MS	4	1000	Unknown		03/14/2024 11:23	Finished	MS (5ppb), IWST-231228B,2>
19	N063734-001A,SAMF	5	1000	Unknown		03/14/2024 11:32	Finished	SAMP,10 mL
20	N063734-001AMS,MS	6	1000	Unknown		03/14/2024 11:41	Finished	MS (1ppb), IWST-231228B,10r
21	N063735-006ADUP,D	7	1000	Unknown		03/14/2024 11:51	Finished	DUP,2>10 mL
22	N063735-006AMSD,M	8	1000	Unknown		03/14/2024 12:00	Finished	MSD (5ppb), IWST-231228B,2
23	CCV-2,CCV1,1,	9	1000	Unknown		03/14/2024 12:10	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		03/14/2024 12:19	Finished	CCB R240129C
25	N063734-002A,SAMF	11	1000	Unknown		03/14/2024 12:29	Finished	SAMP,10 mL
26	N063734-002AMS,MS	12	1000	Unknown		03/14/2024 12:38	Finished	MS (1ppb), IWST-231228B,10r
27	N063735-004A,SAMF	13	1000	Unknown		03/14/2024 12:48	Finished	SAMP,10 mL
28	N063735-004AMS,MS	14	1000	Unknown		03/14/2024 12:57	Finished	MS (1ppb), IWST-231228B,10r
29	N063735-007A,SAMF	15	1000	Unknown		03/14/2024 13:07	Finished	SAMP,10 mL
30	N063735-007AMS,MS	16	1000	Unknown		03/14/2024 13:16	Finished	MS (1ppb), IWST-231228B,10r
31	N063735-009A,SAMF	17	1000	Unknown		03/14/2024 13:26	Finished	SAMP,10 mL
32	N063735-009AMS,MS	18	1000	Unknown		03/14/2024 13:35	Finished	MS (1ppb), IWST-231228B,10r
33	N063735-010A,SAMF	19	1000	Unknown		03/14/2024 13:44	Finished	SAMP,10 mL
34	N063735-010AMS,MS	20	1000	Unknown		03/14/2024 13:54	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	21	1000	Unknown		03/14/2024 14:03	Finished	CCV @10ppb, IWST-231228A
36	CCB-3,CCB,1,	22	1000	Unknown		03/14/2024 14:13	Finished	CCB R240129C
37	N063735-011A,SAMF	23	1000	Unknown		03/14/2024 14:22	Finished	SAMP,10 mL
38	N063735-011AMS,MS	24	1000	Unknown		03/14/2024 14:32	Finished	MS (1ppb), IWST-231228B,10r
39	N063735-012A,SAMF	25	1000	Unknown		03/14/2024 14:41	Finished	SAMP,10 mL
40	N063735-012AMS,MS	26	1000	Unknown		03/14/2024 14:51	Finished	MS (1ppb), IWST-231228B,10r
41	N063735-013A,SAMF	27	1000	Unknown		03/14/2024 15:00	Finished	SAMP,10 mL
42	N063735-013AMS,MS	1	1000	Unknown		03/14/2024 15:24	Finished	MS (1ppb), IWST-231228B,10r
43	N063735-001A,SAMF	2	1000	Unknown		03/14/2024 15:34	Finished	SAMP,10 mL
44	N063735-001AMS,MS	3	1000	Unknown		03/14/2024 15:44	Finished	MS (1ppb), IWST-231228B,10r
45	N063735-003A,SAMF	4	1000	Unknown		03/14/2024 15:53	Finished	SAMP,10 mL
46	N063735-003AMS,MS	5	1000	Unknown		03/14/2024 16:03	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	6	1000	Unknown		03/14/2024 16:12	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	7	1000	Unknown		03/14/2024 16:22	Finished	CCB R240129C
49	N063735-008A,SAMF	8	1000	Unknown		03/14/2024 16:34	Finished	SAMP,10 mL
50	N063735-008AMS,MS	9	1000	Unknown		03/14/2024 16:43	Finished	MS (1ppb), IWST-231228B,10r
51	N063735-014A,SAMF	10	1000	Unknown		03/14/2024 16:53	Finished	SAMP,10 mL
52	N063735-014AMS,MS	11	1000	Unknown		03/14/2024 17:02	Finished	MS (1ppb), IWST-231228B,10r
53	N063735-002A,SAMF	12	1000	Unknown		03/14/2024 17:12	Finished	SAMP,10 mL
54	N063735-002AMS,MS	13	1000	Unknown		03/14/2024 17:21	Finished	MS (1ppb), IWST-231228B,10r
55	N063735-002A,SAMF	14	1000	Unknown		03/14/2024 17:31	Finished	SAMP,2>10 mL
56	N063735-002AMS,MS	15	1000	Unknown		03/14/2024 17:40	Finished	MS (1ppb), IWST-231228B,2>
57	N063735-005A,SAMF	16	1000	Unknown		03/14/2024 17:49	Finished	SAMP,10 mL
58	N063735-005AMS,MS	17	1000	Unknown		03/14/2024 17:59	Finished	MS (5ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	18	1000	Unknown		03/14/2024 18:08	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	19	1000	Unknown		03/14/2024 18:18	Finished	CCB R240129C

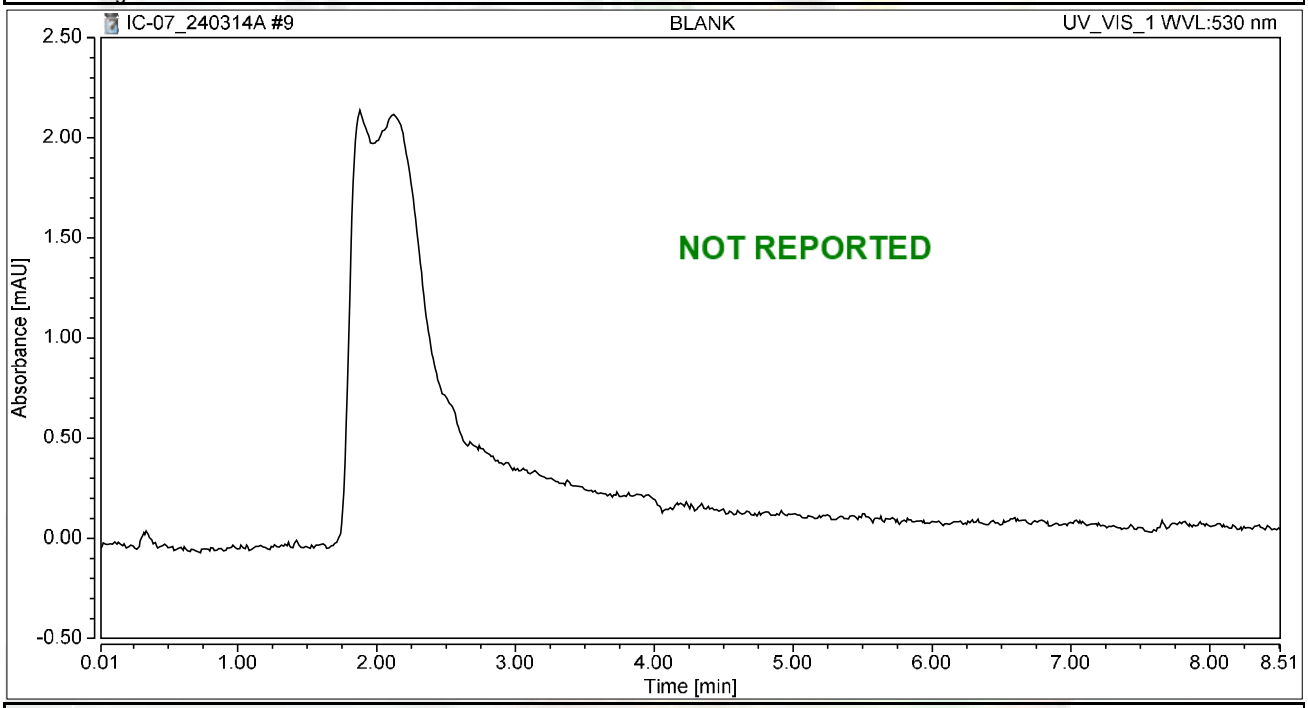
61	N063735-005AMS,MS	20	1000	Unknown		03/14/2024 18:27	Finished	MS (1ppb), IWST-231228B,2>1
62	N063248-008A,SAMP	21	1000	Unknown		03/14/2024 18:37	Finished	SAMP,2>10 mL
63	N063248-008AMS,MS	22	1000	Unknown		03/14/2024 18:46	Finished	MS (1ppb), IWST-231228B,2>1
64	N063734-001A,SAMP	23	1000	Unknown		03/14/2024 18:56	Finished	SAMP,2>10 mL
65	N063734-001AMS,MS	24	1000	Unknown		03/14/2024 19:05	Finished	MS (1ppb), IWST-231228B,2>1
66	N063734-002A,SAMP	25	1000	Unknown		03/14/2024 19:15	Finished	SAMP,2>10 mL
67	N063734-002AMS,MS	26	1000	Unknown		03/14/2024 19:24	Finished	MS (1ppb), IWST-231228B,2>1
68	N063771-003A,SAMP	27	1000	Unknown		03/14/2024 19:34	Finished	SAMP,10 mL
69	N063771-003AMS,MS	28	1000	Unknown		03/14/2024 19:43	Finished	MS (1ppb), IWST-231228B,10r
70	N063771-004A,SAMP	29	1000	Unknown		03/14/2024 19:52	Finished	SAMP,10 mL
71	CCV-6,CCV1,1,	30	1000	Unknown		03/14/2024 20:02	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	31	1000	Unknown		03/14/2024 20:11	Finished	CCB R240129C
73	N063771-004AMS,MS	32	1000	Unknown		03/14/2024 20:21	Finished	MS (1ppb), IWST-231228B,10r
74	N063771-005A,SAMP	33	1000	Unknown		03/14/2024 20:30	Finished	SAMP,10 mL
75	N063771-005AMS,MS	34	1000	Unknown		03/14/2024 20:40	Finished	MS (1ppb), IWST-231228B,10r
76	N063771-003A,SAMP	35	1000	Unknown		03/14/2024 20:49	Finished	SAMP,2>10 mL
77	N063771-003AMS,MS	36	1000	Unknown		03/14/2024 20:59	Finished	MS (1ppb), IWST-231228B,2>1
78	N063771-004A,SAMP	37	1000	Unknown		03/14/2024 21:08	Finished	SAMP,2>10 mL
79	N063771-004AMS,MS	38	1000	Unknown		03/14/2024 21:18	Finished	MS (1ppb), IWST-231228B,2>1
80	N063771-005A,SAMP	39	1000	Unknown		03/14/2024 21:27	Finished	SAMP,2>10 mL
81	N063771-005AMS,MS	40	1000	Unknown		03/14/2024 21:36	Finished	MS (1ppb), IWST-231228B,2>1
82	N063735-004A,SAMP	41	1000	Unknown		03/14/2024 21:46	Finished	SAMP,2>10 mL
83	CCV-7,CCV,1,	42	1000	Unknown		03/14/2024 21:55	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	43	1000	Unknown		03/14/2024 22:05	Finished	CCB R240129C
85	N0637735-004AMS,M	44	1000	Unknown		03/14/2024 22:14	Finished	MS (1ppb), IWST-231228B,2>1
86	N063735-011AMS,MS	45	1000	Unknown		03/14/2024 22:24	Finished	MS (5ppb), IWST-231228B,10r
87	N063735-013A,SAMP	46	1000	Unknown		03/14/2024 22:33	Finished	SAMP,2>10 mL
88	N063735-013AMS,MS	47	1000	Unknown		03/14/2024 22:43	Finished	MS (1ppb), IWST-231228B,2>1
89	CCV-8,CCV1,1,	48	1000	Unknown		03/14/2024 22:52	Finished	CCV @10ppb, IWST-231228A
90	CCB-8,CCB,1,	49	1000	Unknown		03/14/2024 23:02	Finished	CCB R240129C
91	SHUTDOWN	50	1000	Unknown		03/14/2024 23:11	Finished	
92	Eluent: R240313A	51	1000	Unknown		n.a.	Finished	
93	PCR: R240313B	CurrentVial	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 09:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

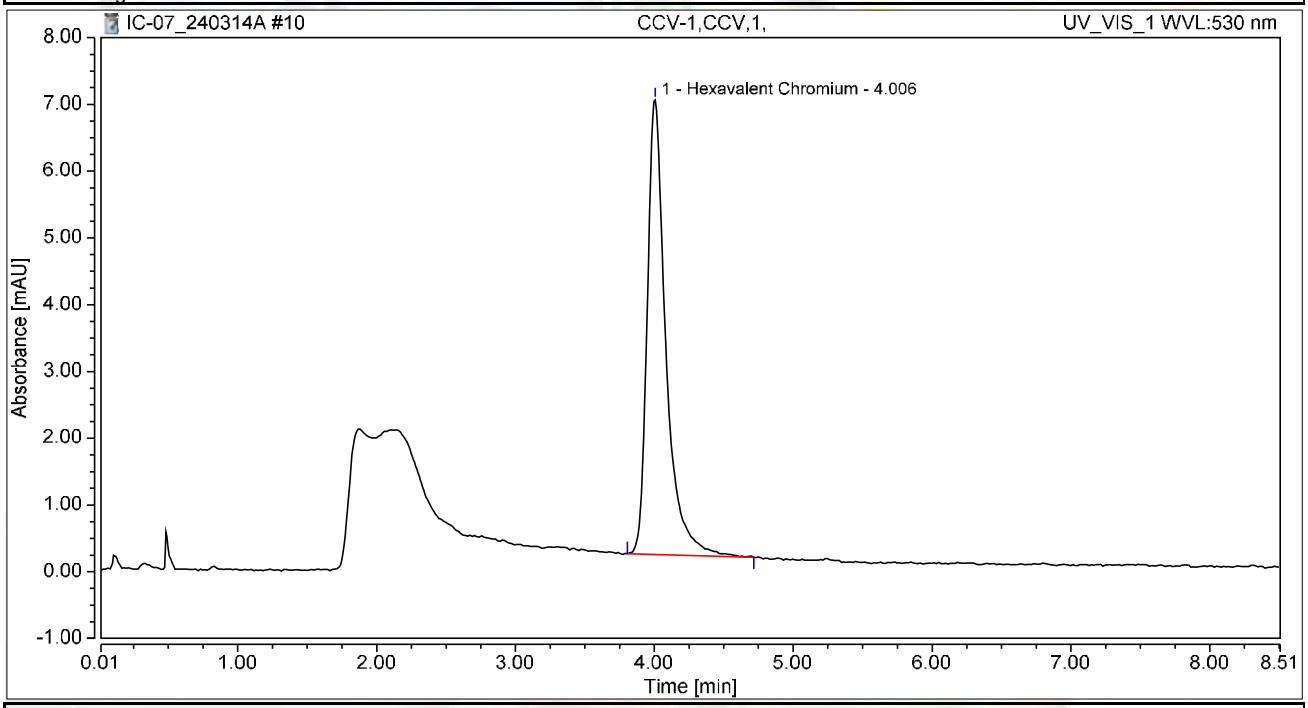
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 09:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.064	6.812	100.00	100.00	4.9981
Total:			**1.064**	**6.812**	**100.00**	**100.00**	

Reviewed by:

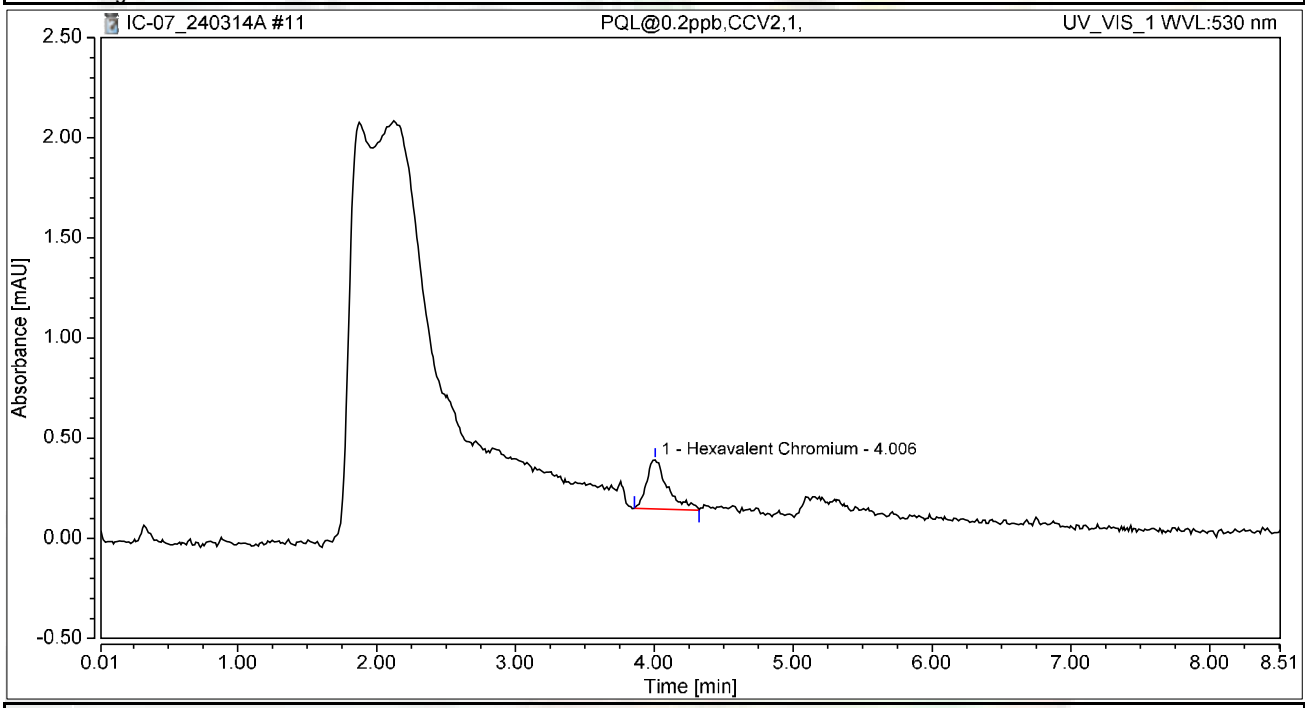
dMocha 3/22/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 09:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

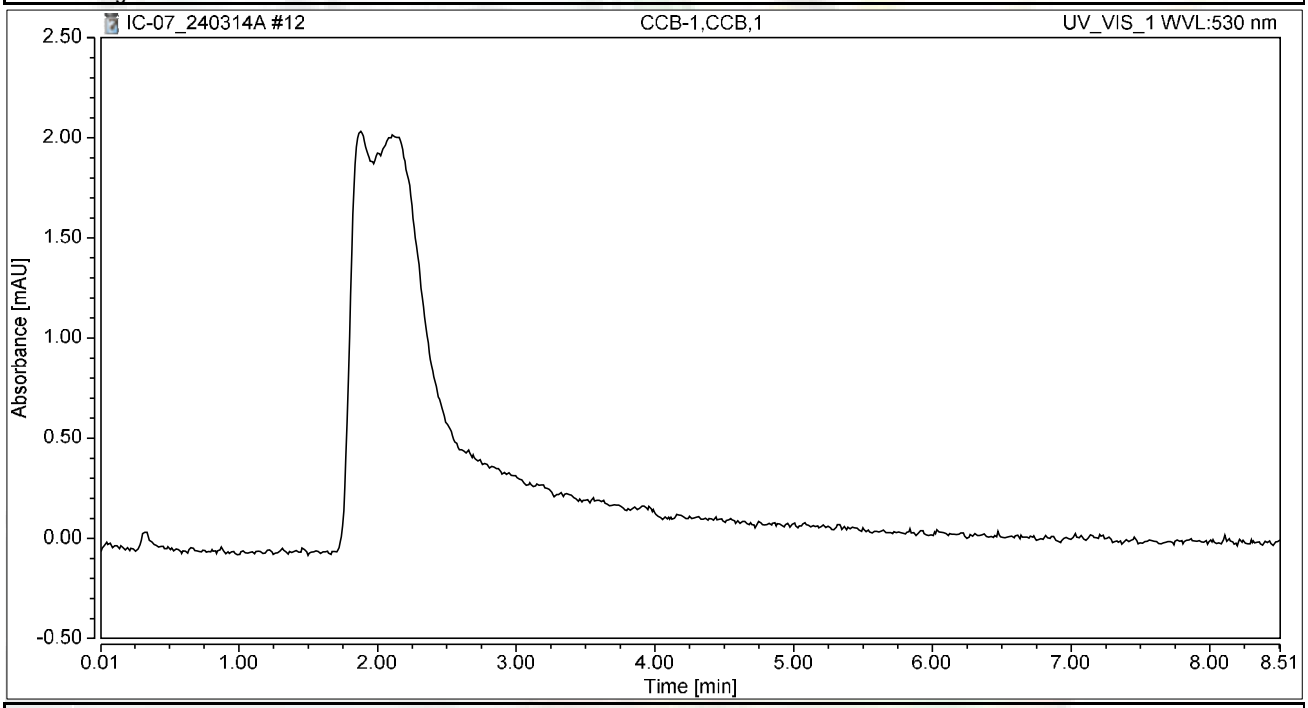
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.043	0.243	100.00	100.00	0.2031
Total:			**0.043**	**0.243**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 09:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

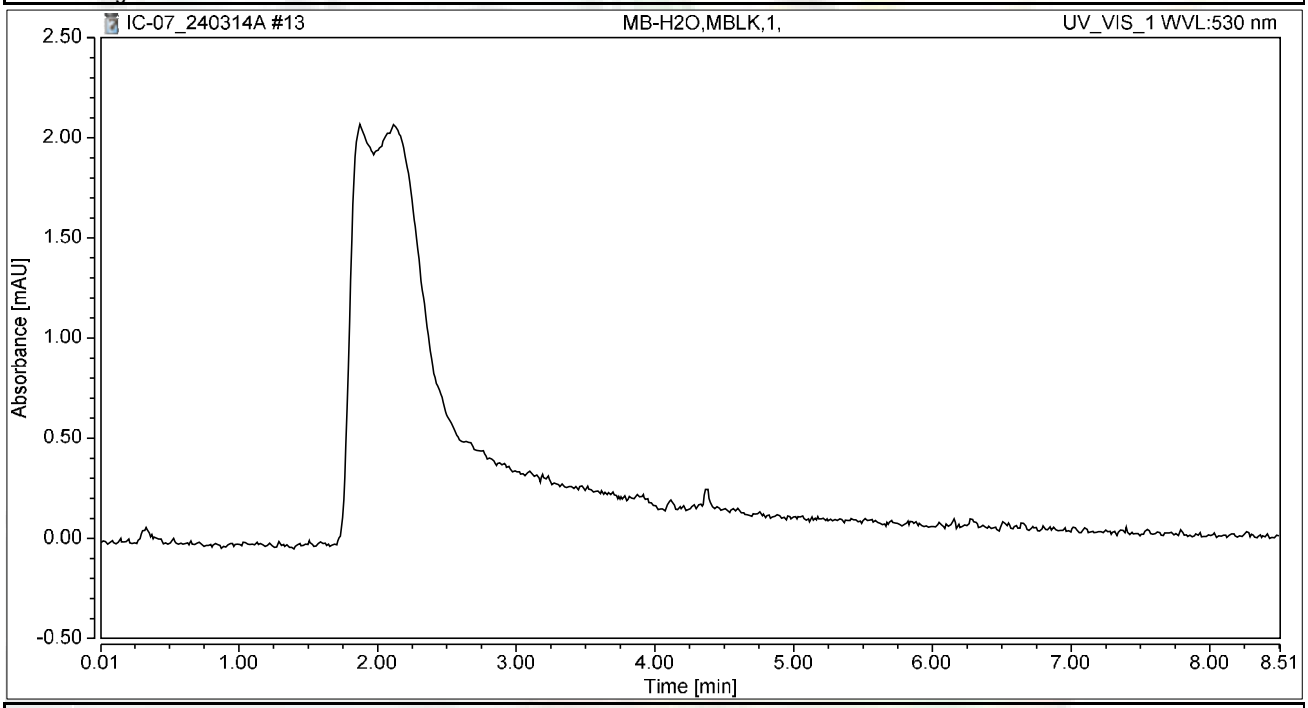
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 10:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

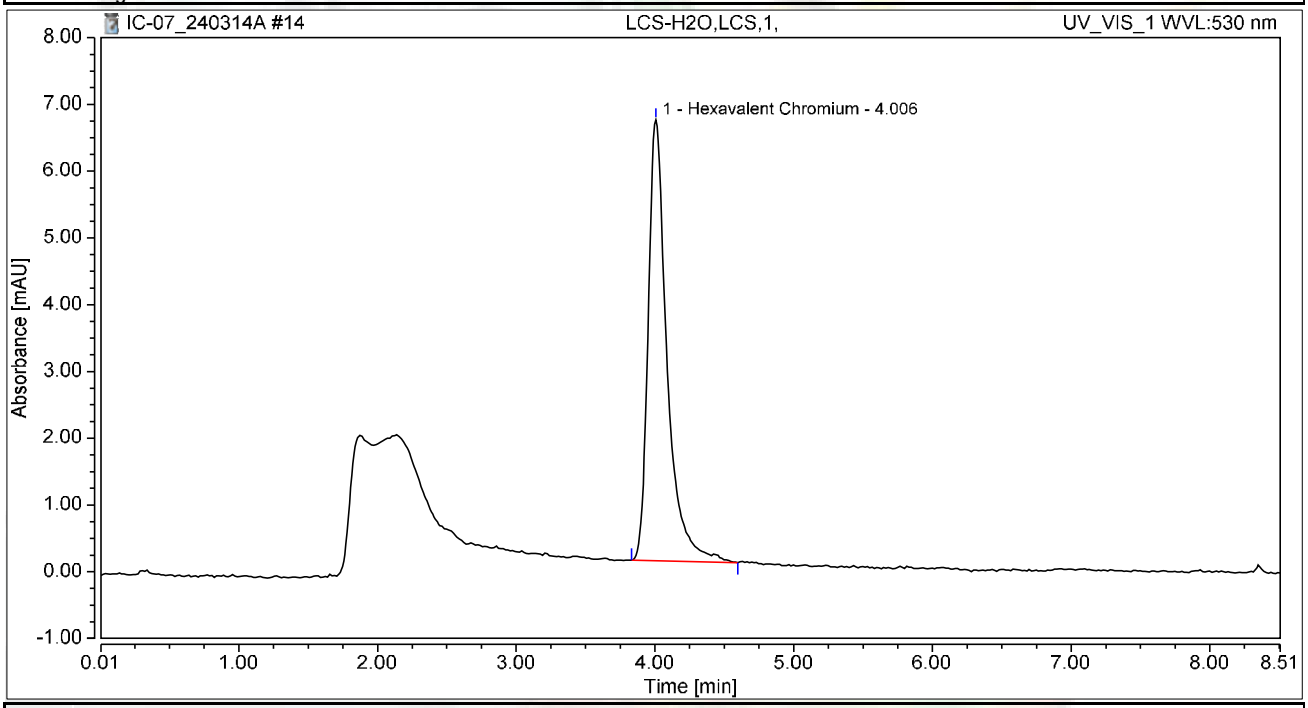
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 10:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

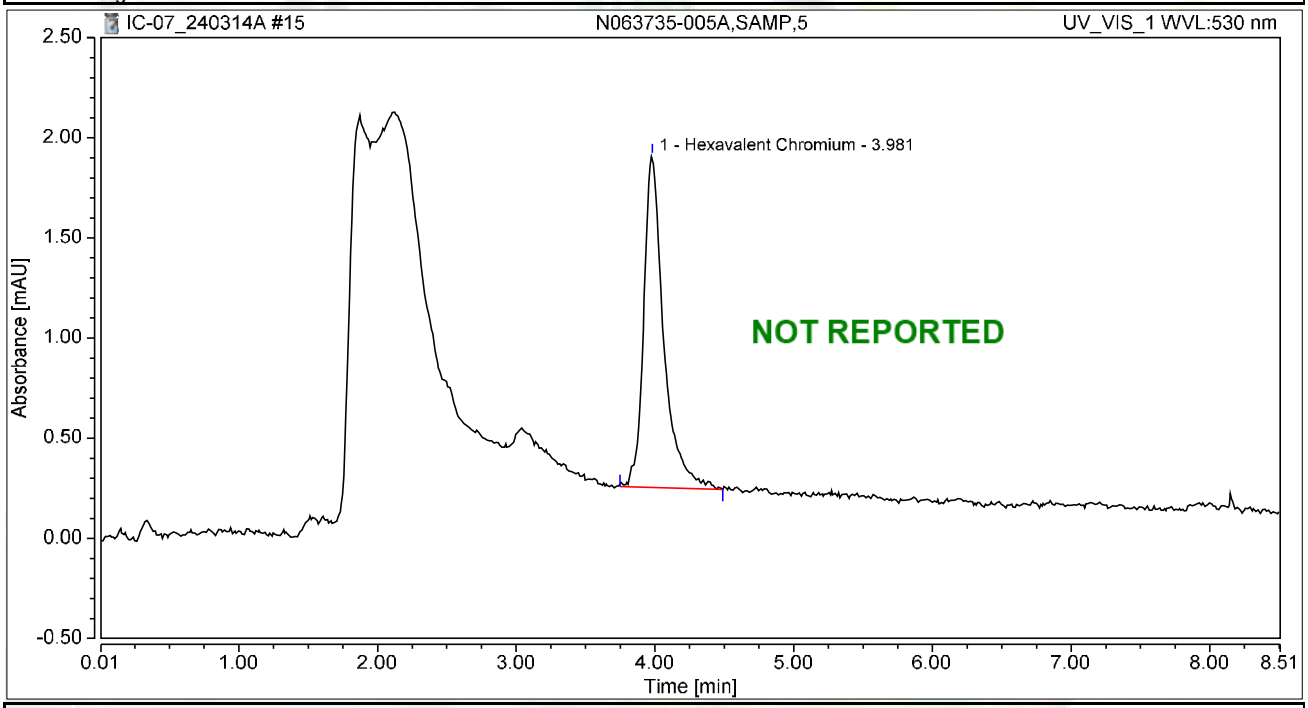
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.042	6.603	100.00	100.00	4.8945
Total:			**1.042**	**6.603**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 10:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

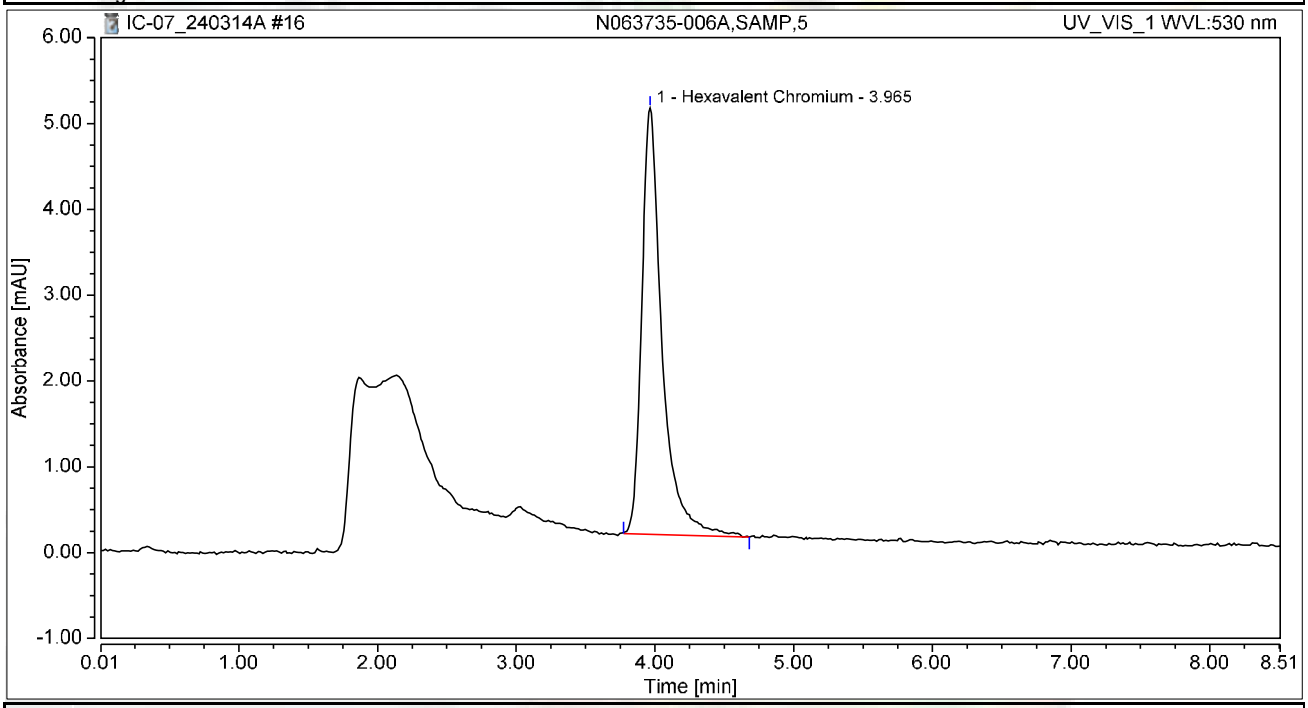
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.276	1.656	100.00	100.00	1.2947
Total:			**0.276**	**1.656**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-006A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 11:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

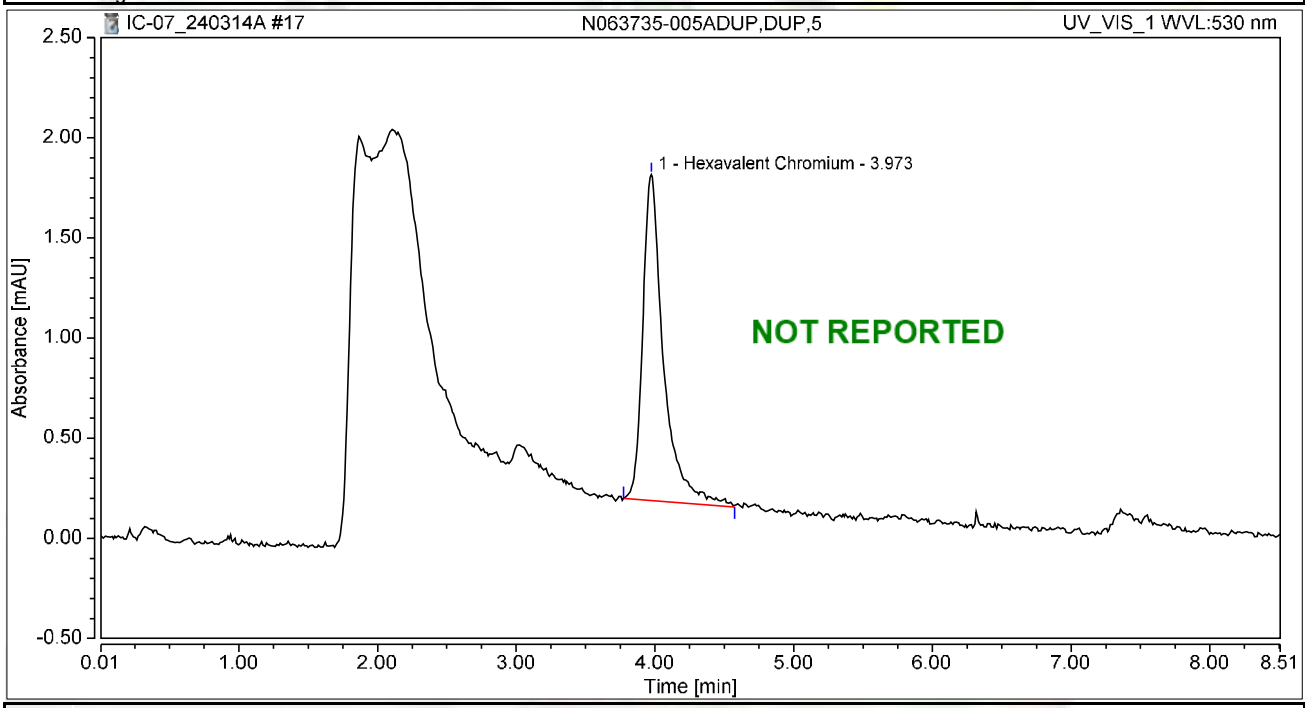
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.844	4.968	100.00	100.00	3.9659
Total:			**0.844**	**4.968**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-005ADUP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 11:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

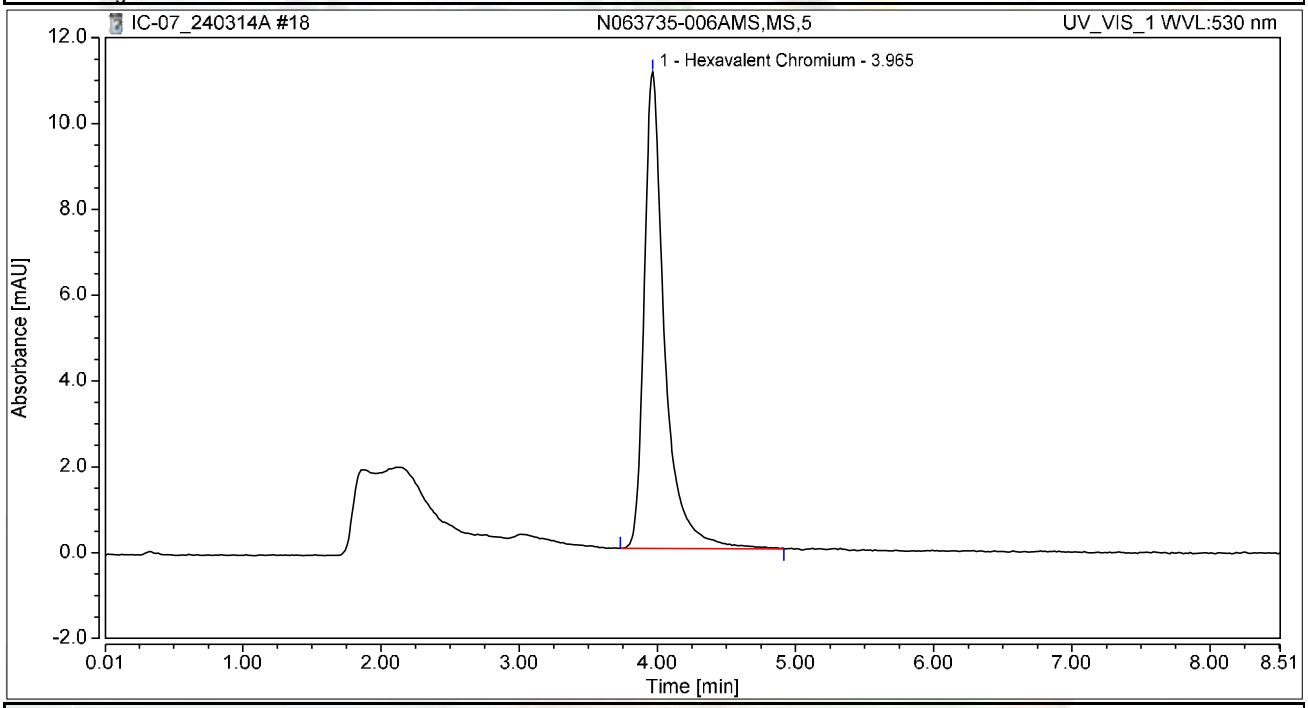
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.281	1.627	100.00	100.00	1.3226
Total:			**0.281**	**1.627**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-006AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 11:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

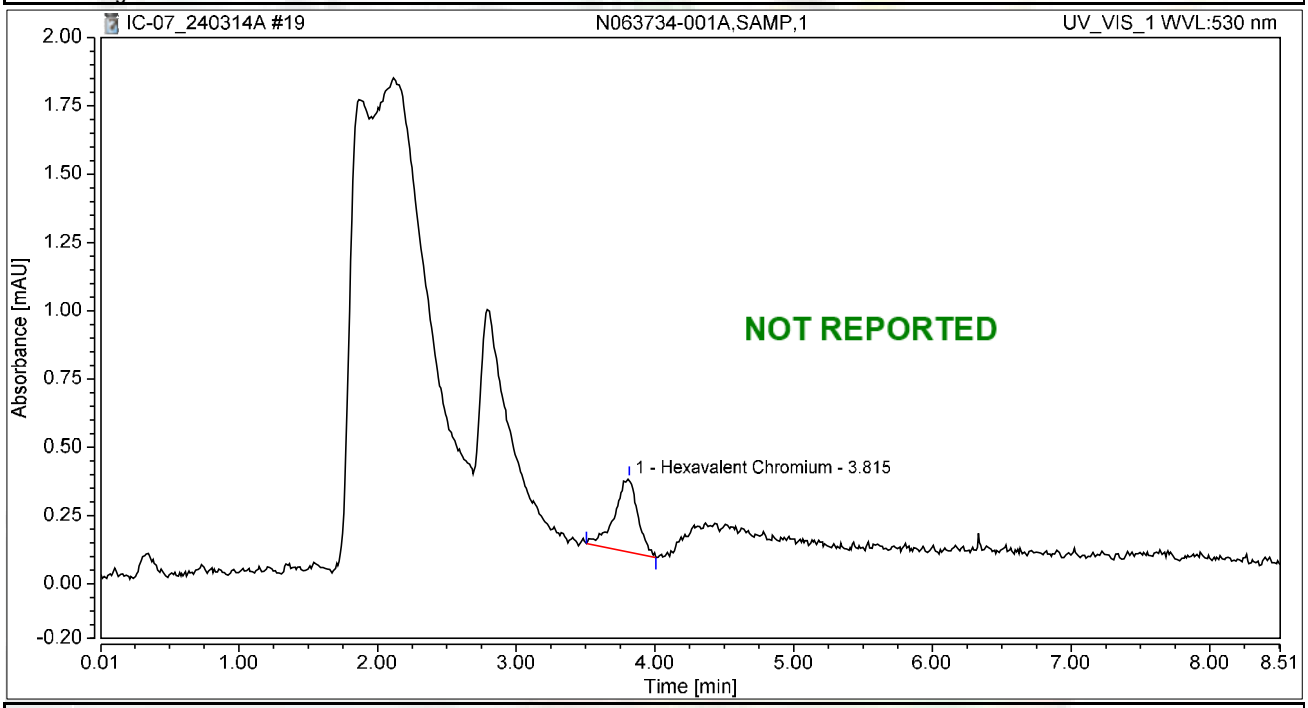
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	1.908	11.108	100.00	100.00	8.9625
Total:			**1.908**	**11.108**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063734-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 11:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

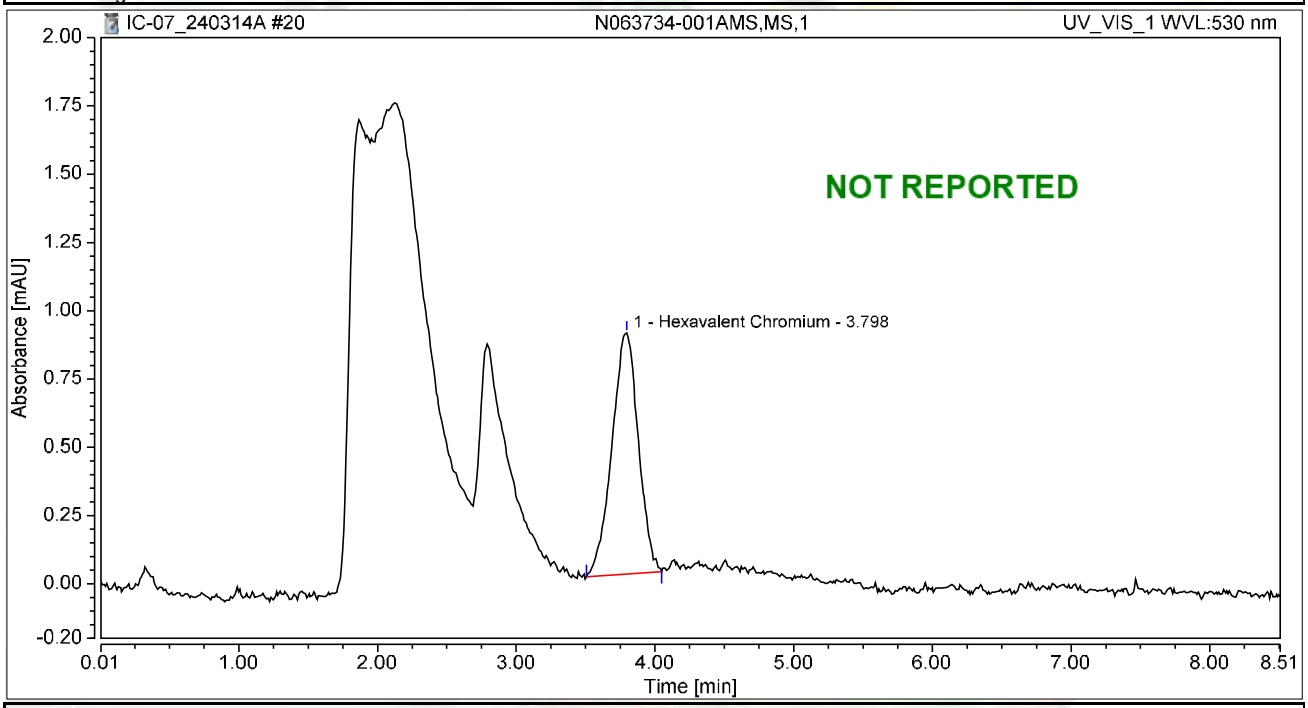
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	0.052	0.270	100.00	100.00	0.2450
Total:			**0.052**	**0.270**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063734-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 11:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

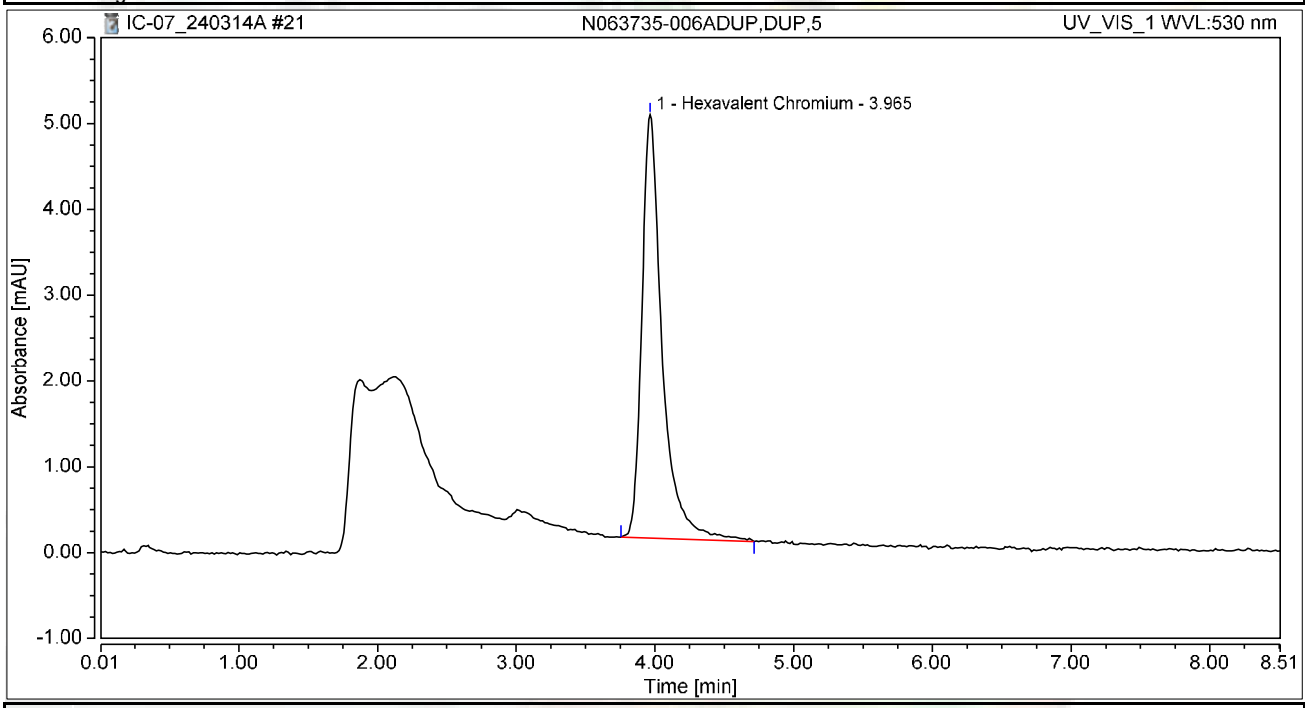
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.798	0.194	0.882	100.00	100.00	0.9119
Total:			**0.194**	**0.882**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-006ADUP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 11:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

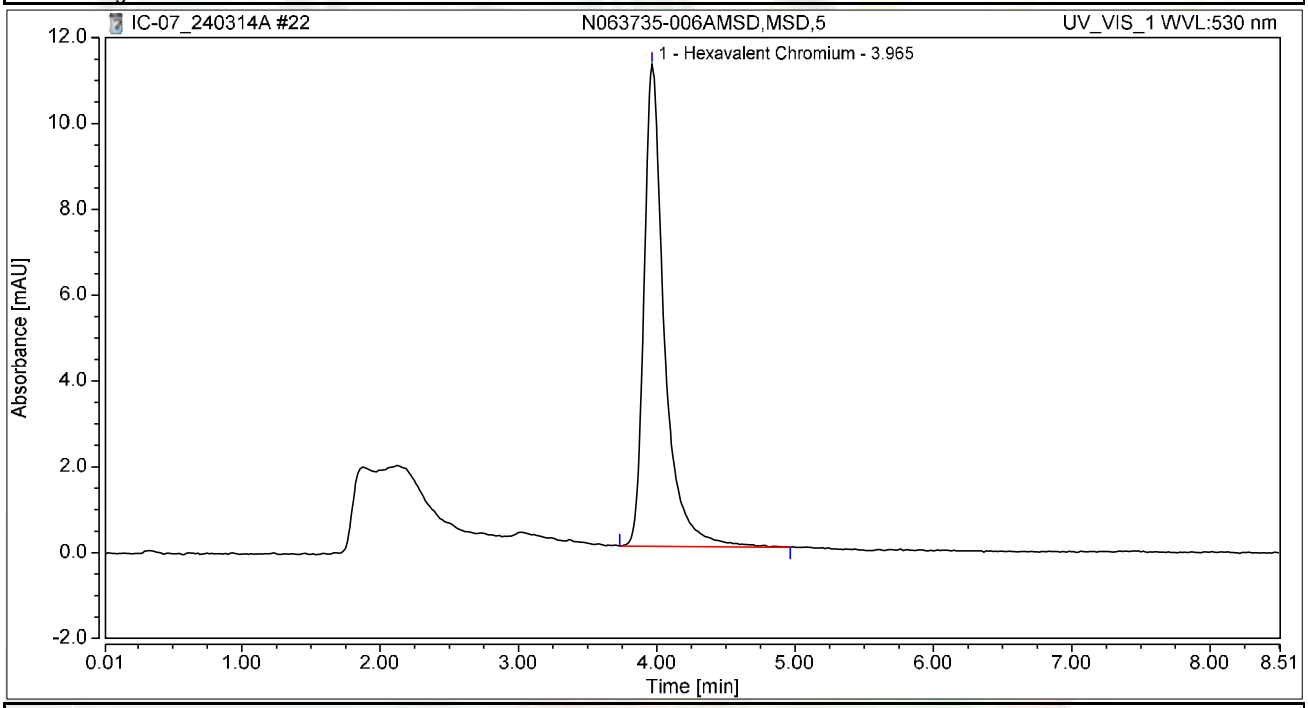
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.839	4.932	100.00	100.00	3.9442
Total:			**0.839**	**4.932**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-006AMSD,MSD,5**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 12:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

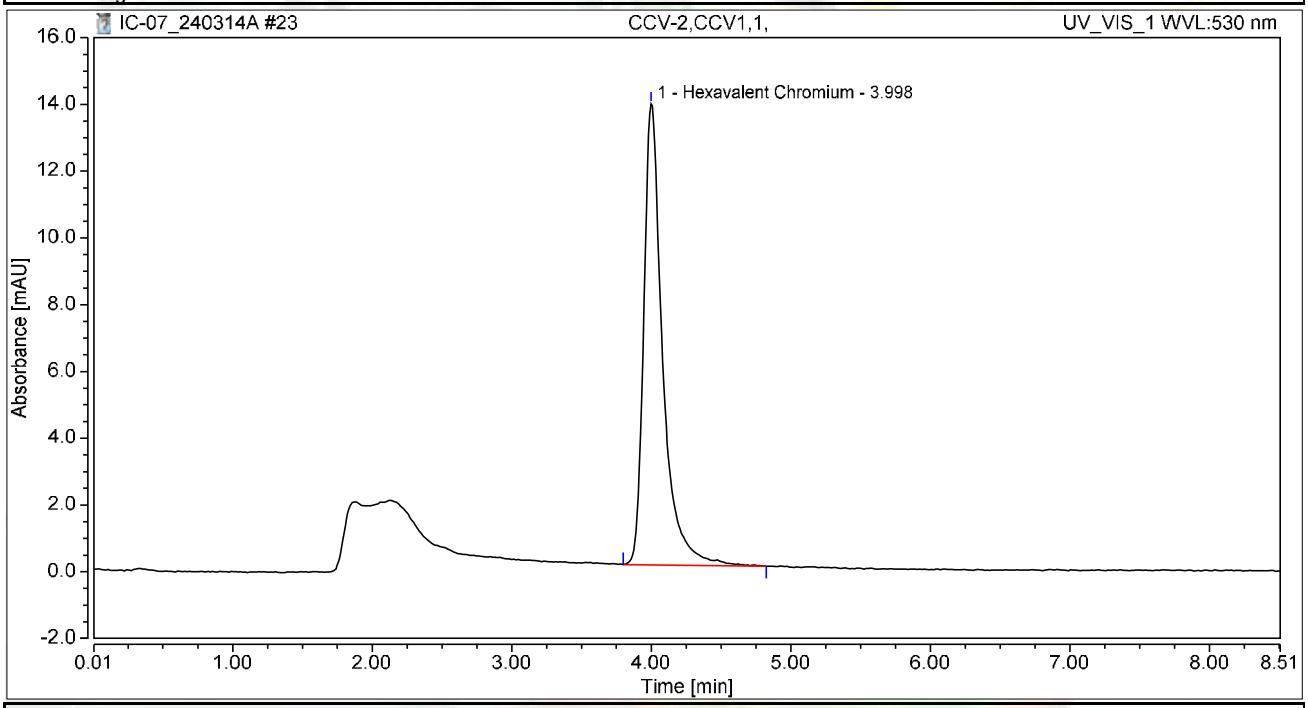
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	1.912	11.224	100.00	100.00	8.9821
Total:			**1.912**	**11.224**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 12:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

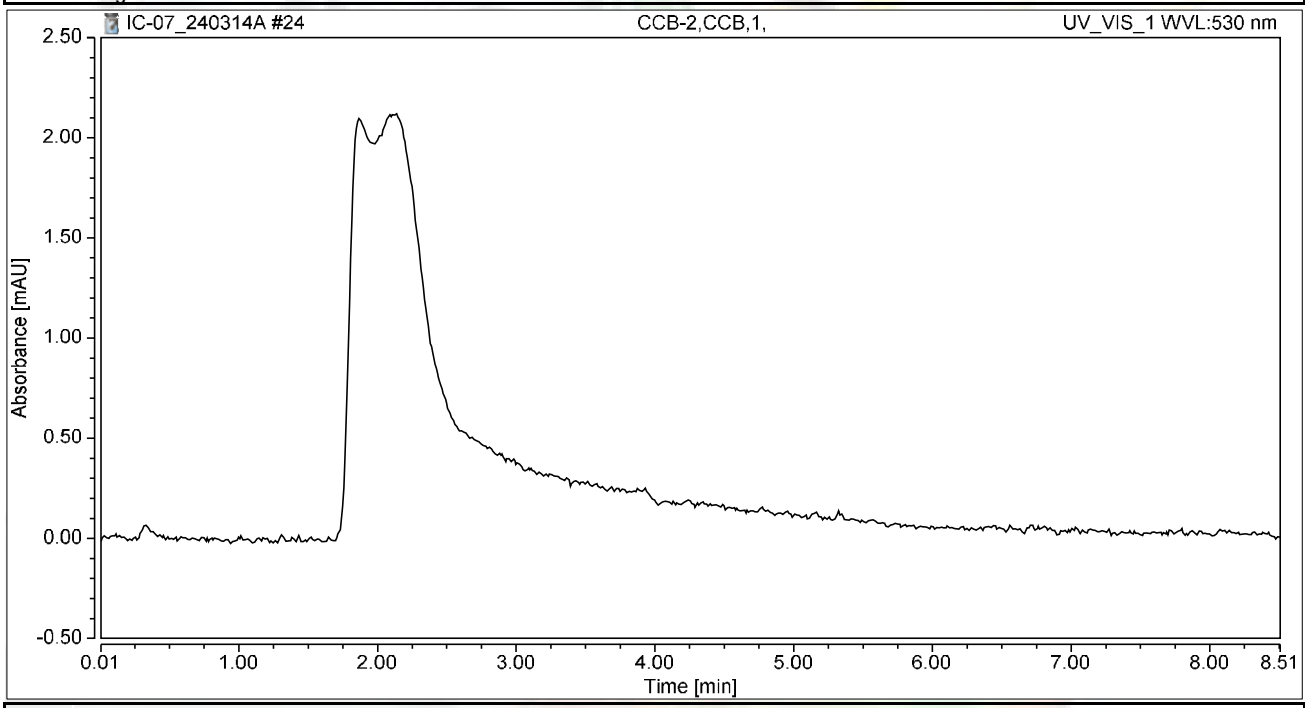
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	2.168	13.813	100.00	100.00	10.1856
Total:			**2.168**	**13.813**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

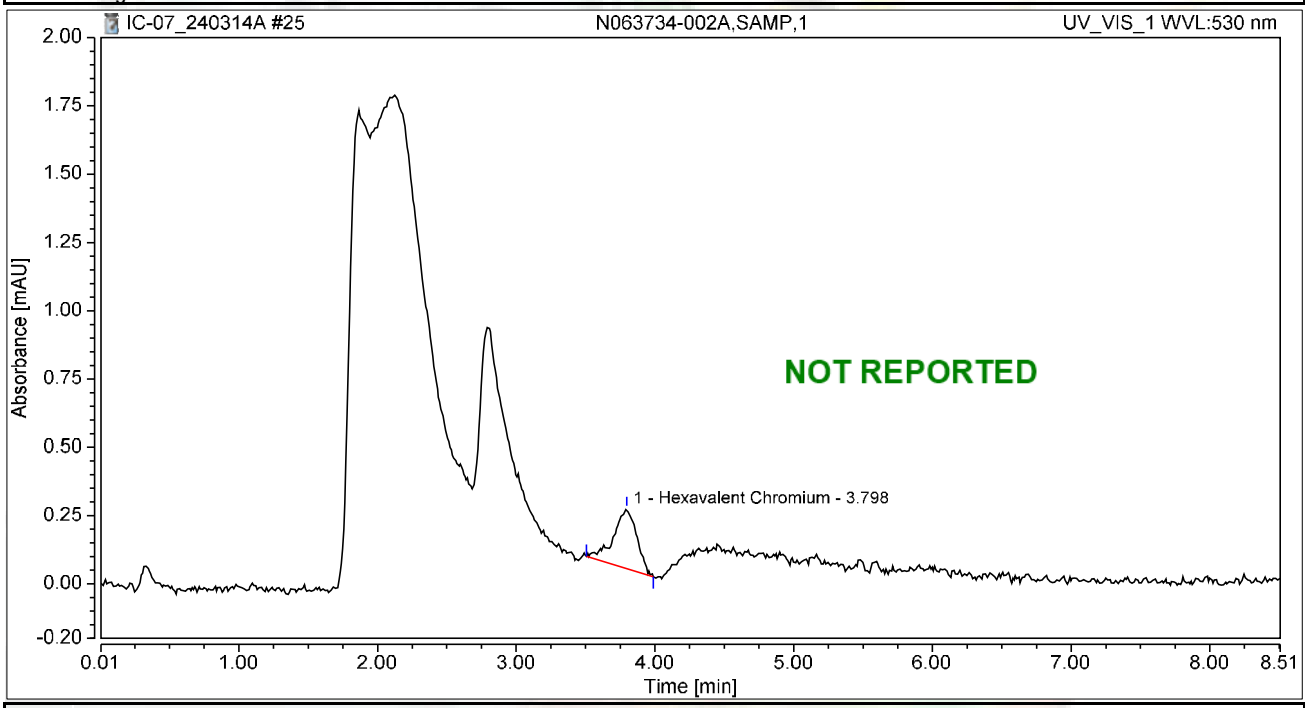
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063734-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 12:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

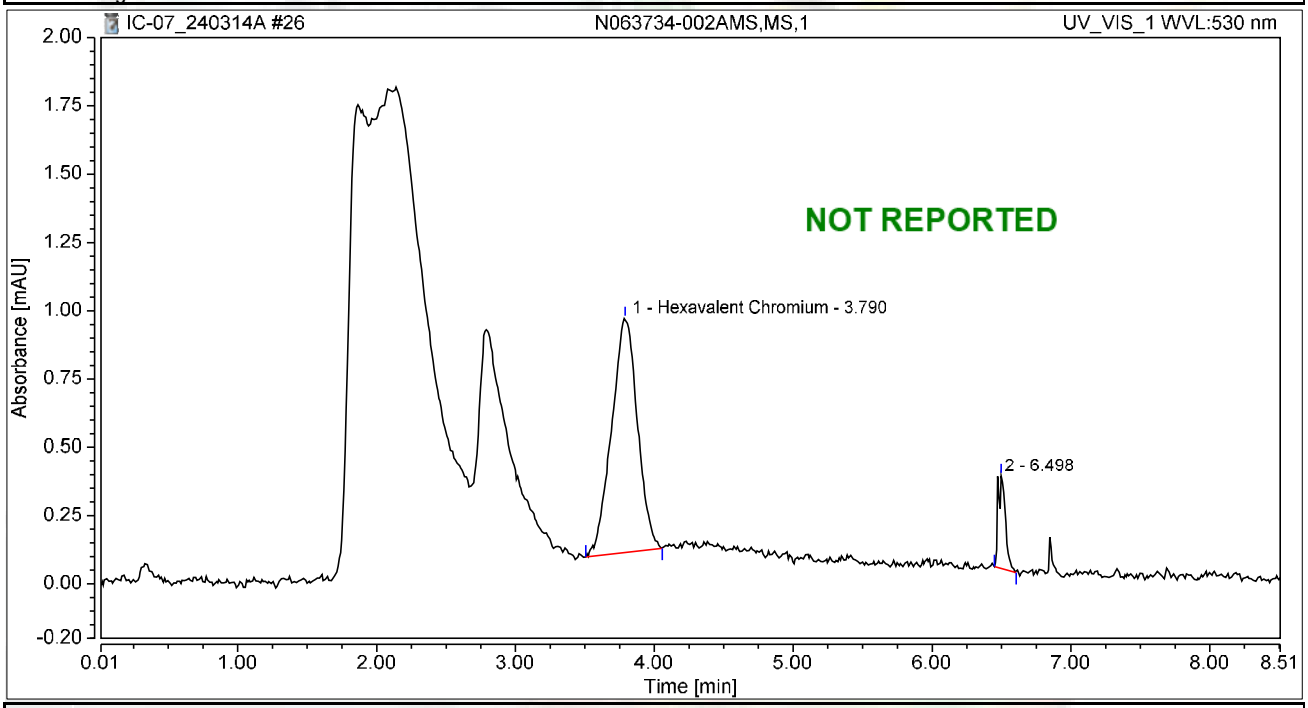
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.798	0.042	0.219	100.00	100.00	0.1977
Total:			**0.042**	**0.219**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063734-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

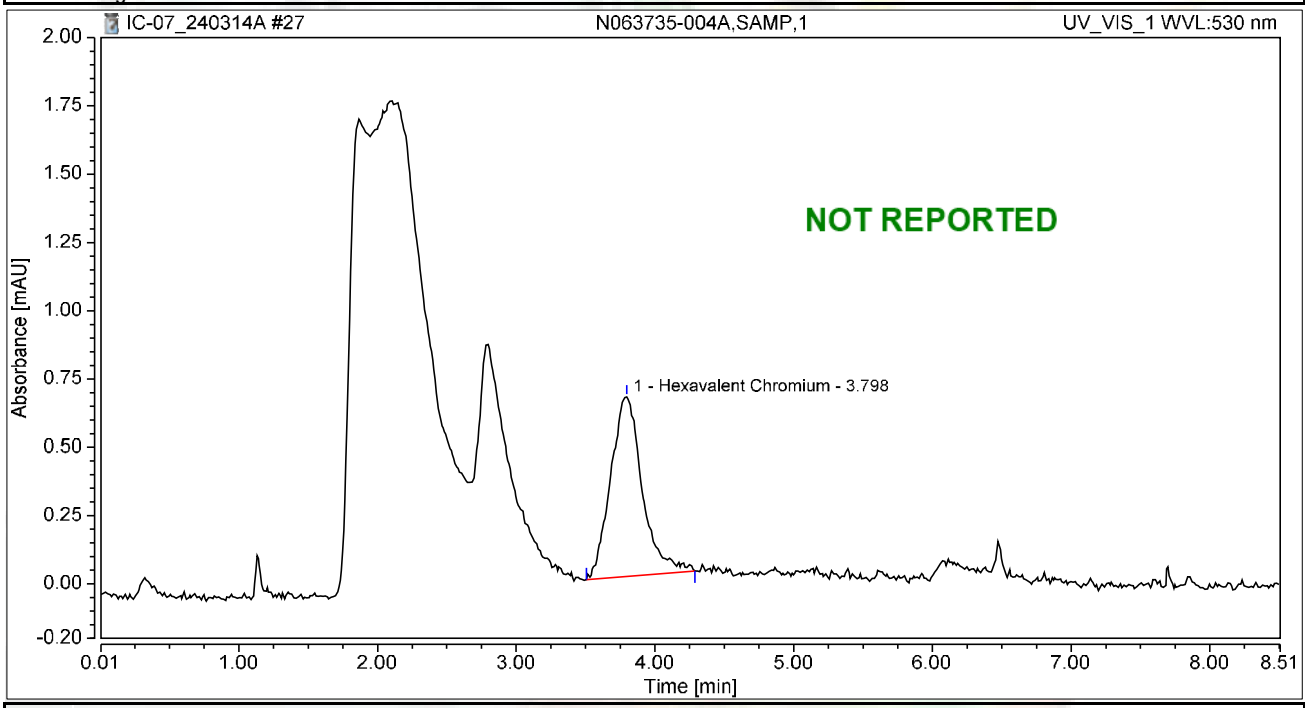
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.185	0.857	89.68	71.69	0.8705
2		6.498	0.021	0.338	10.32	28.31	n.a.
Total:			**0.207**	**1.195**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 12:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

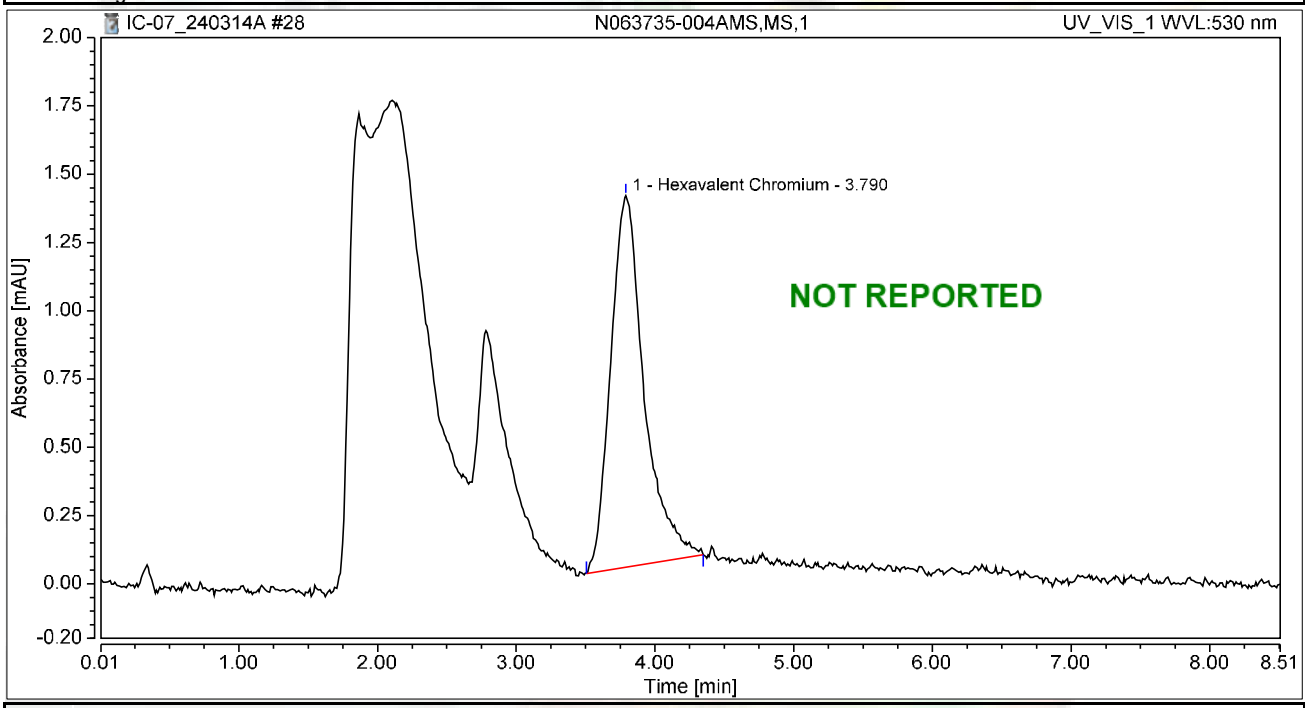
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.798	0.175	0.657	100.00	100.00	0.8217
Total:			**0.175**	**0.657**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

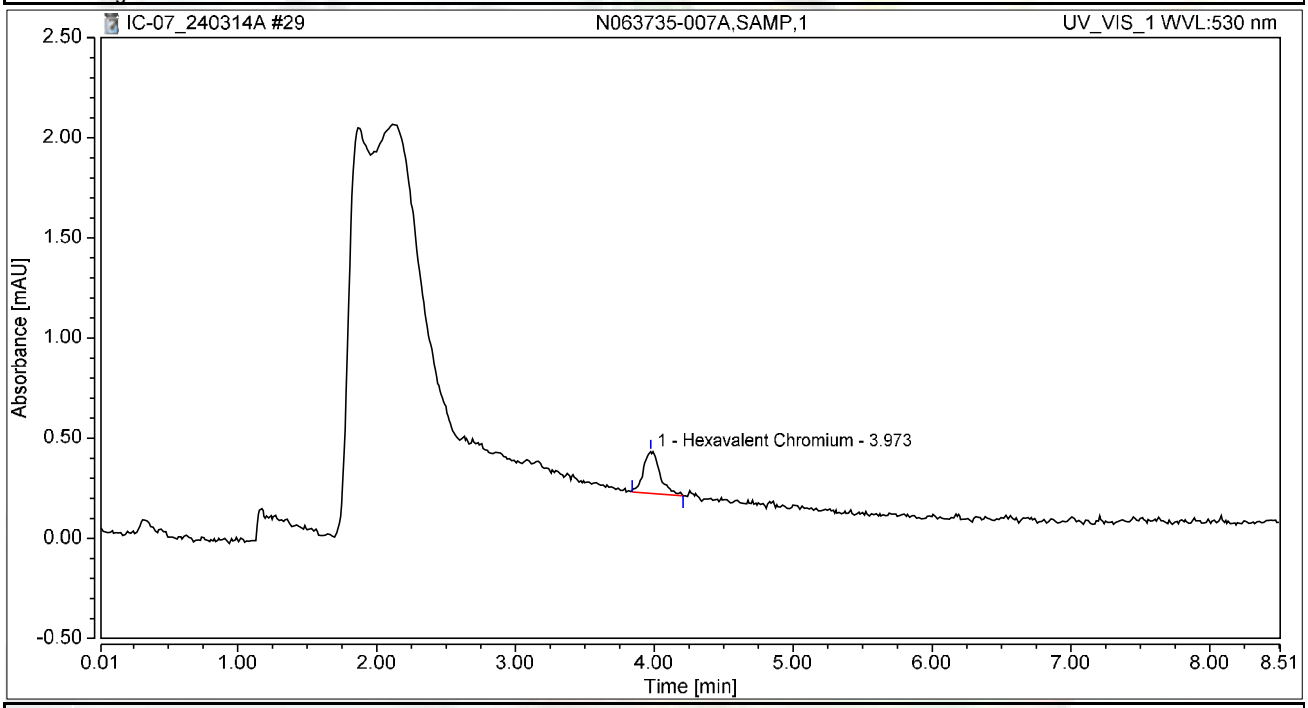
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.379	1.360	100.00	100.00	1.7819
Total:			**0.379**	**1.360**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-007A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 13:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

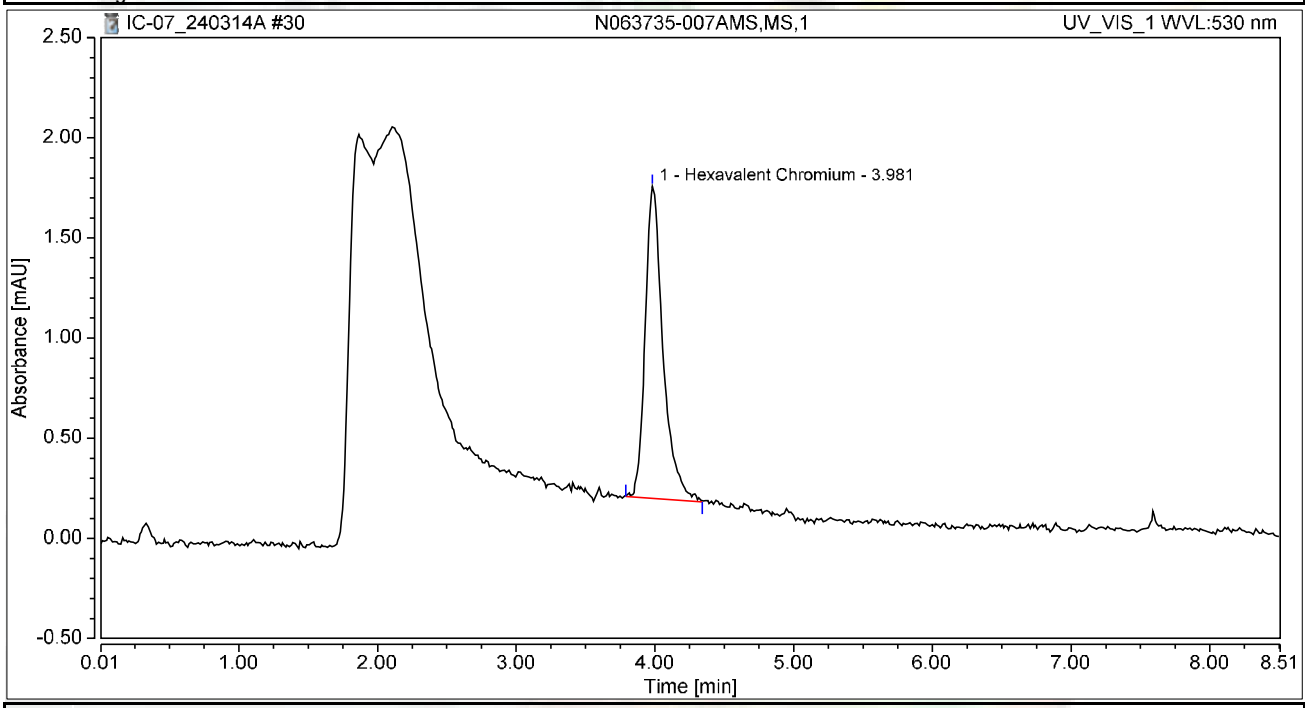
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.029	0.209	100.00	100.00	0.1384
Total:			**0.029**	**0.209**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 13:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

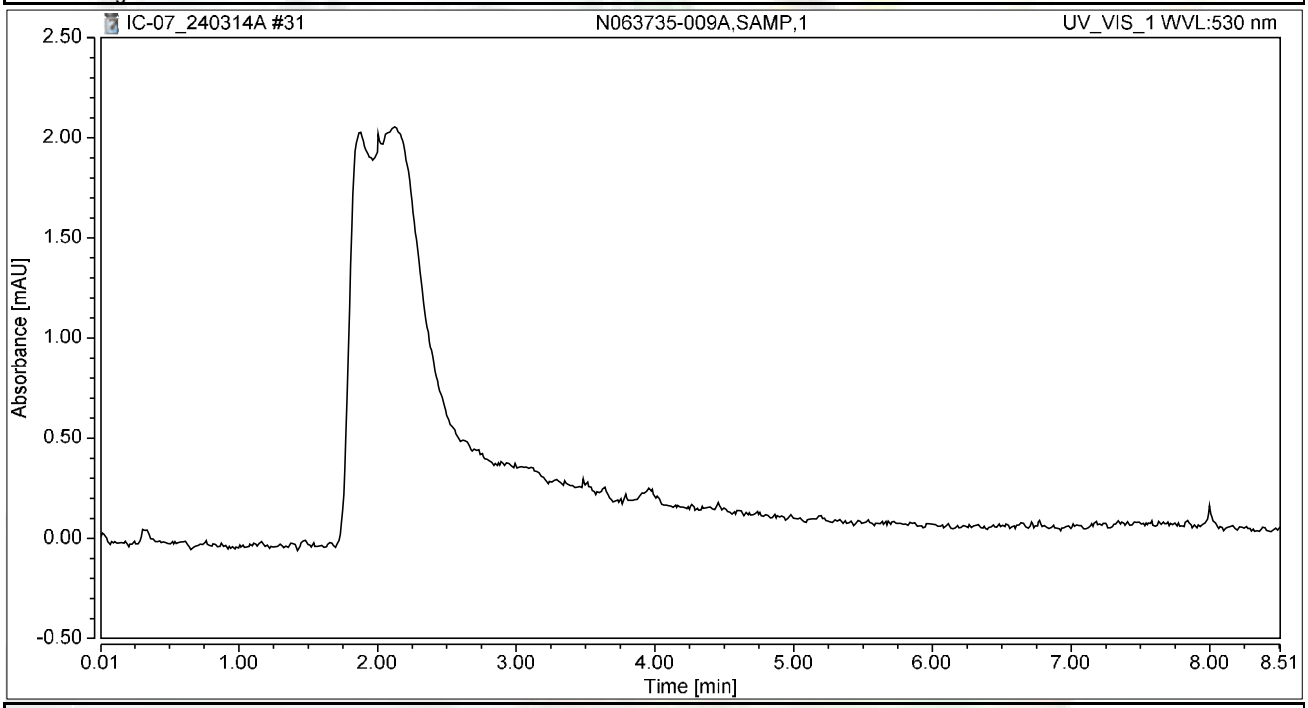
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.233	1.559	100.00	100.00	1.0934
Total:			**0.233**	**1.559**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 13:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

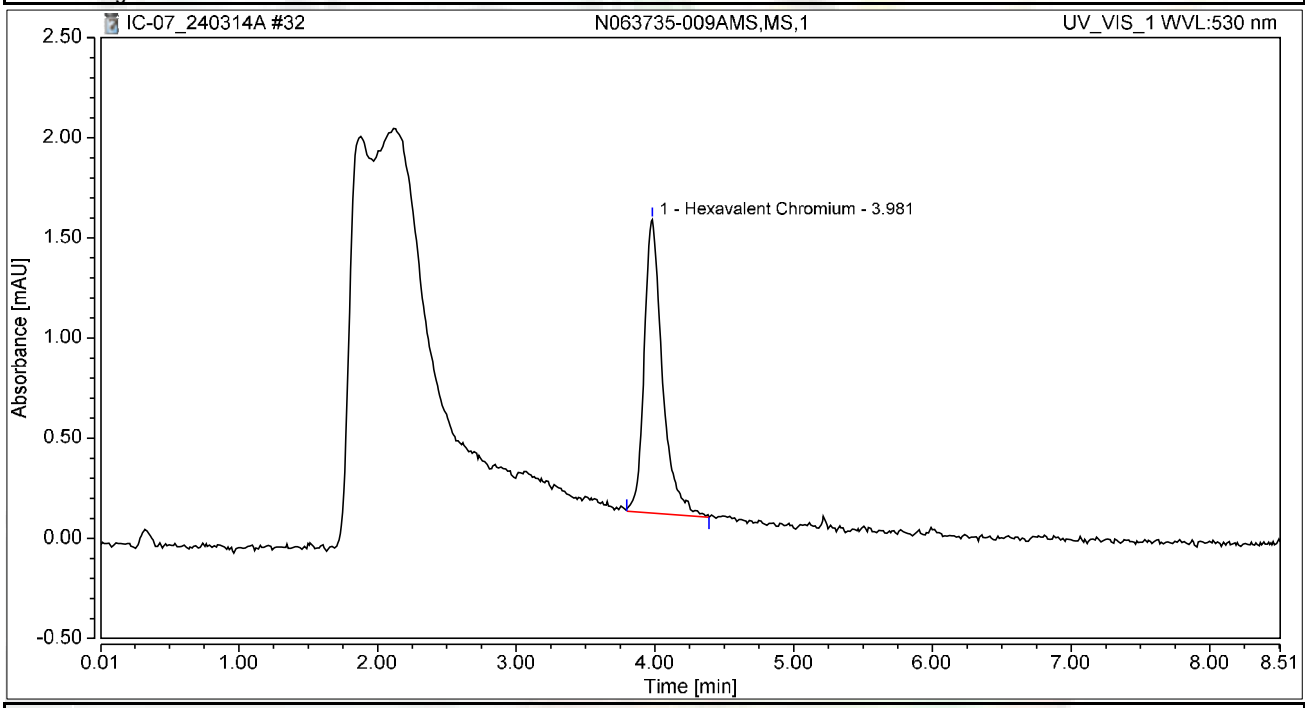
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 13:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

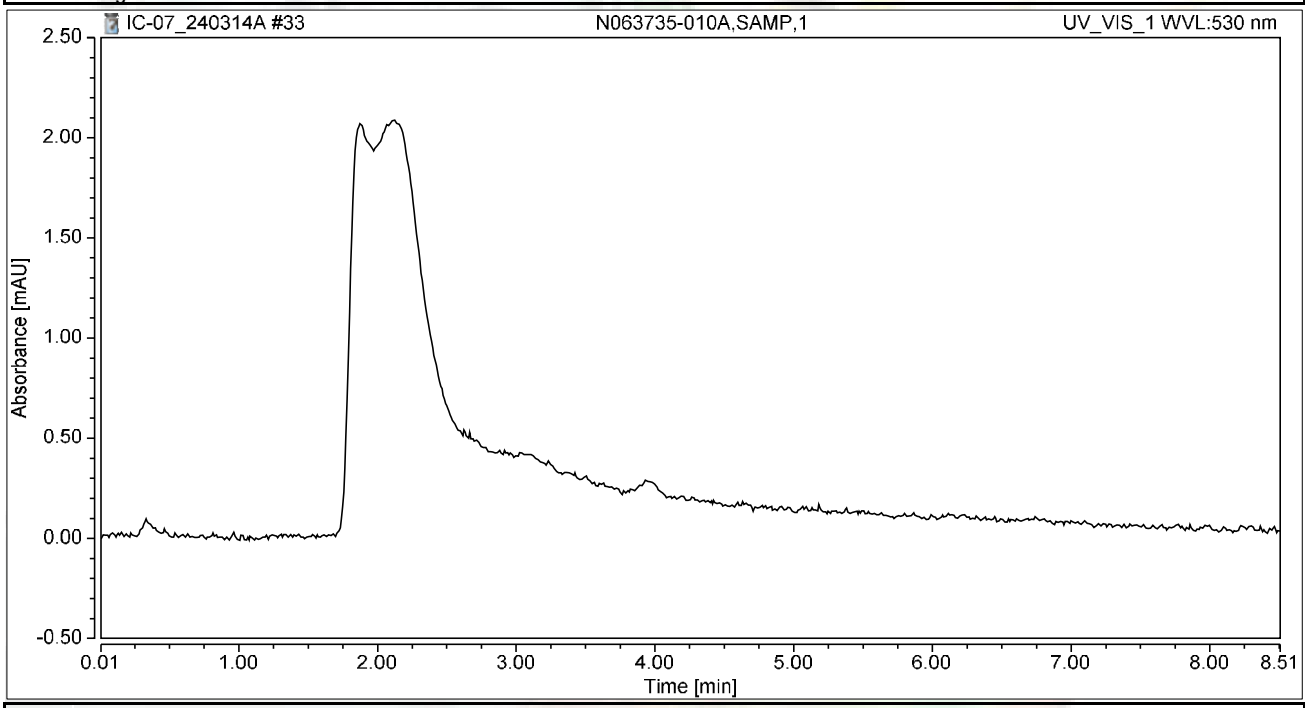
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.223	1.466	100.00	100.00	1.0501
Total:			**0.223**	**1.466**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-010A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 13:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

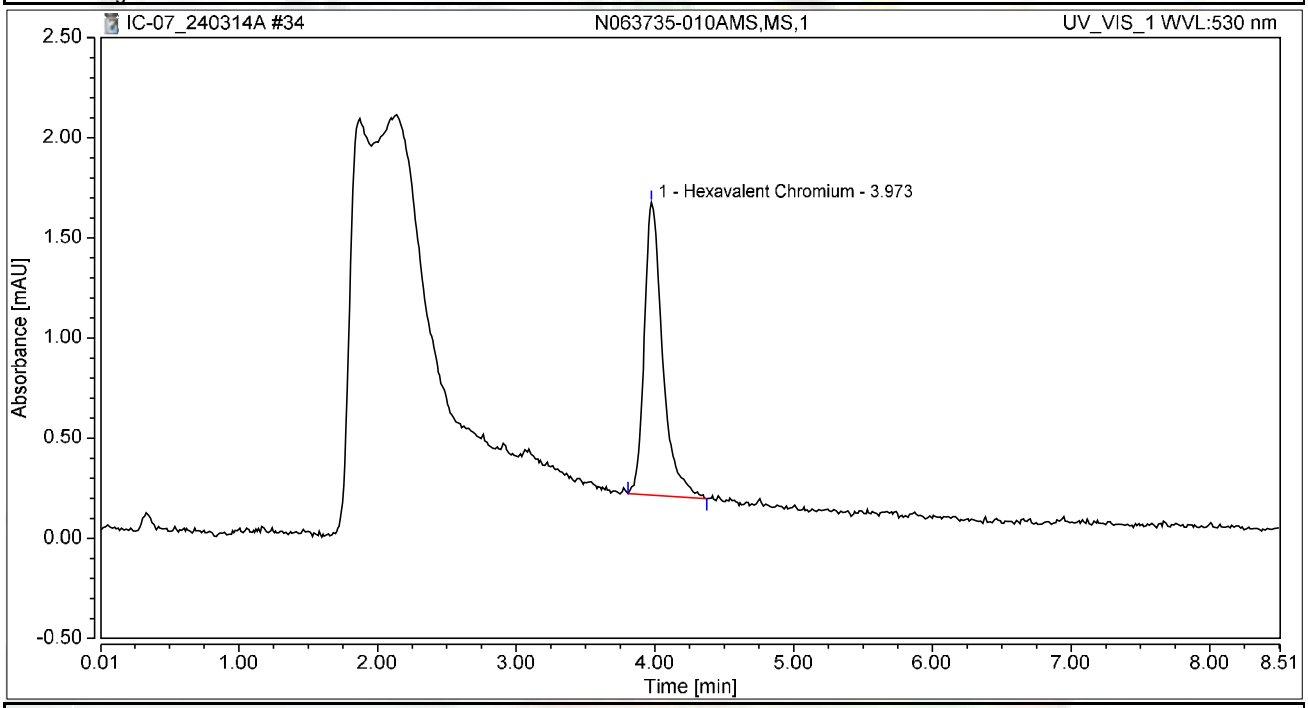
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-010AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 13:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

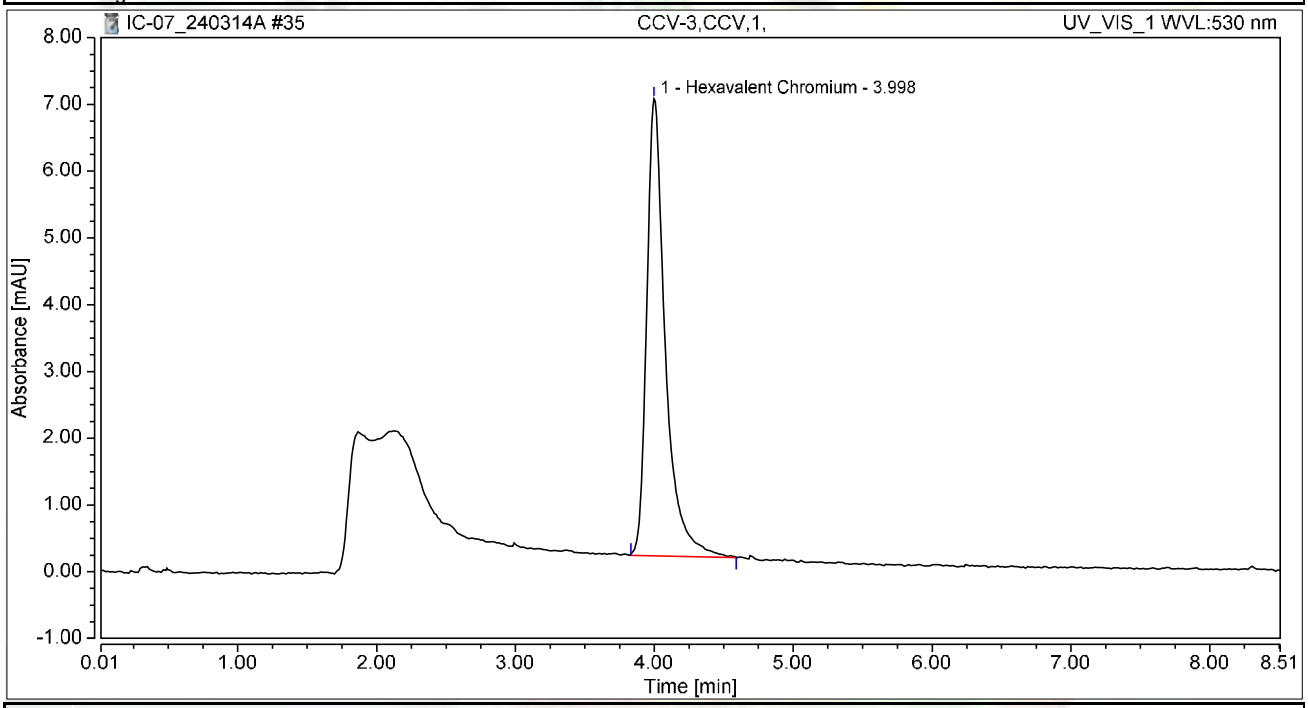
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.224	1.461	100.00	100.00	1.0518
Total:			**0.224**	**1.461**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 14:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

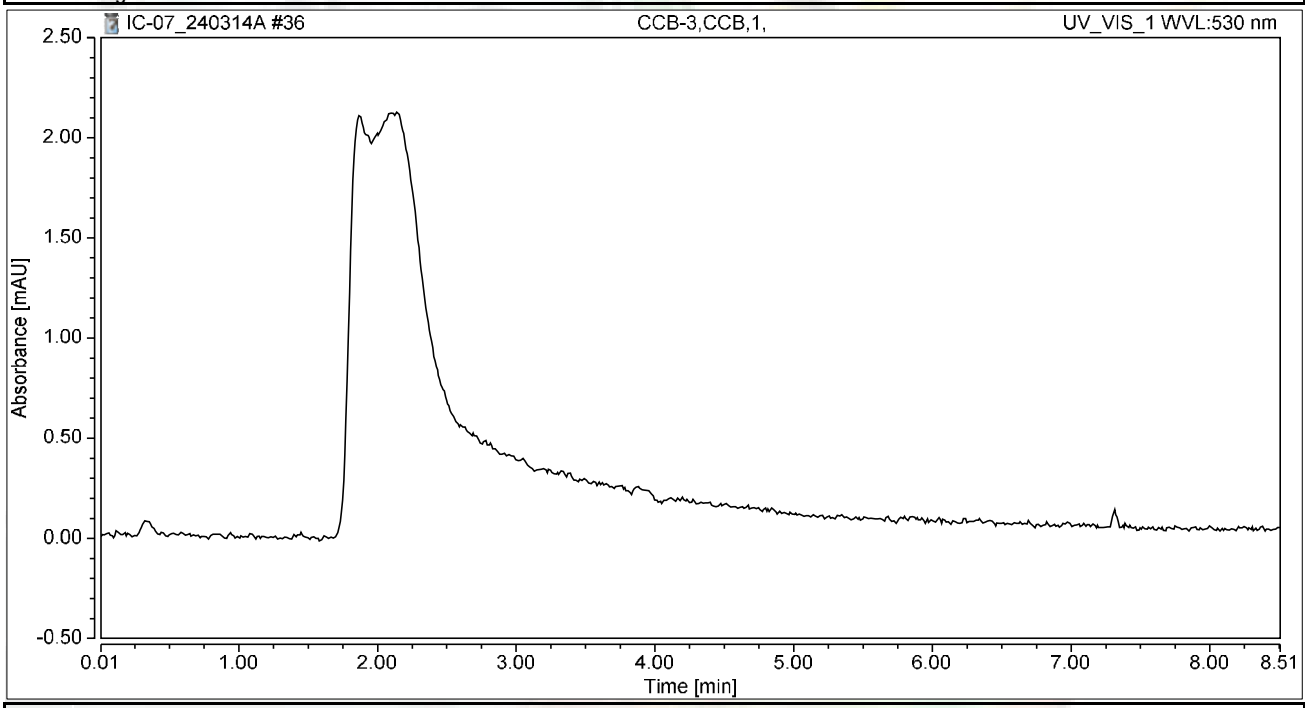
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	1.065	6.847	100.00	100.00	5.0015
Total:			**1.065**	**6.847**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 14:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

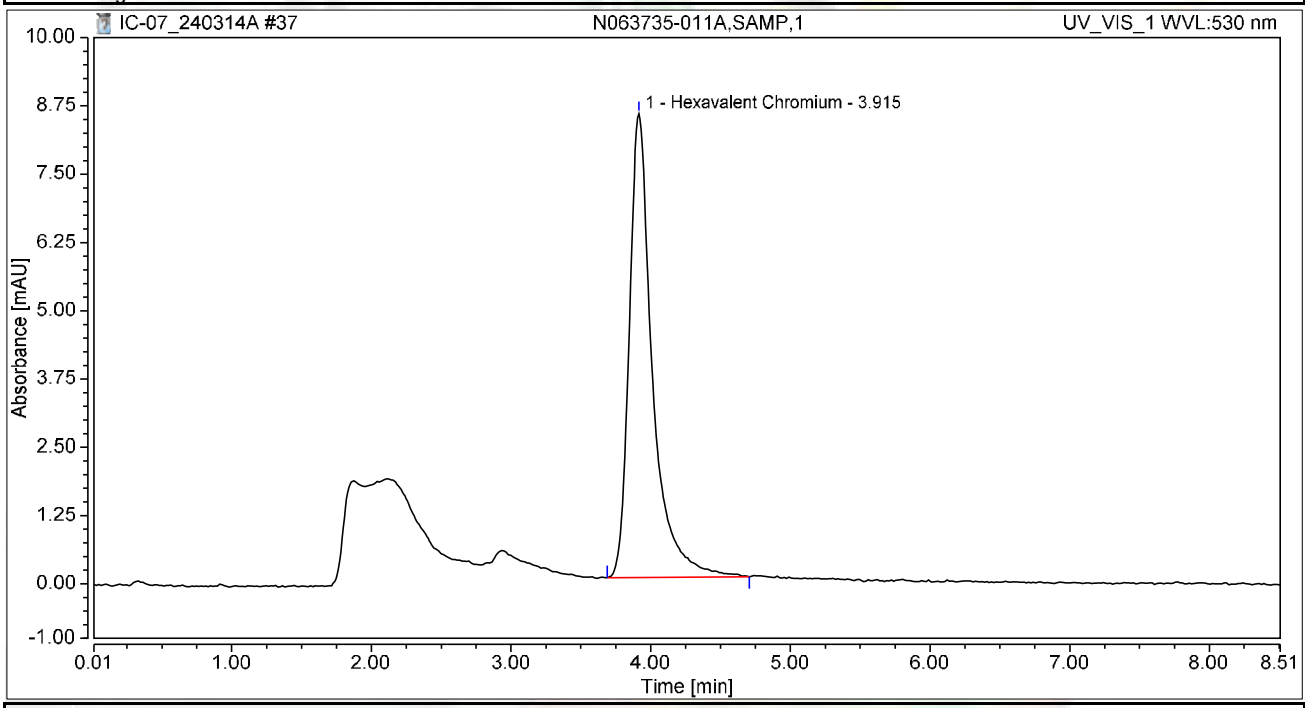
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-011A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 14:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

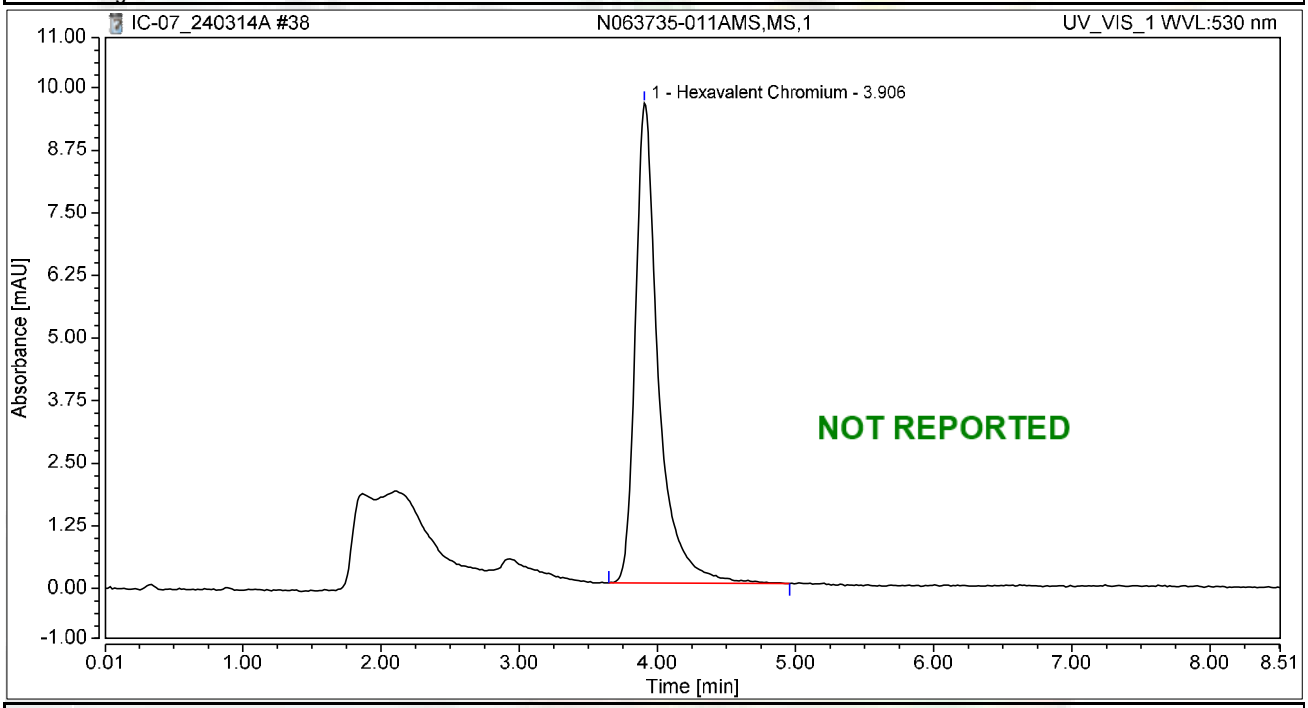
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.915	1.628	8.490	100.00	100.00	7.6510
Total:			**1.628**	**8.490**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 14:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

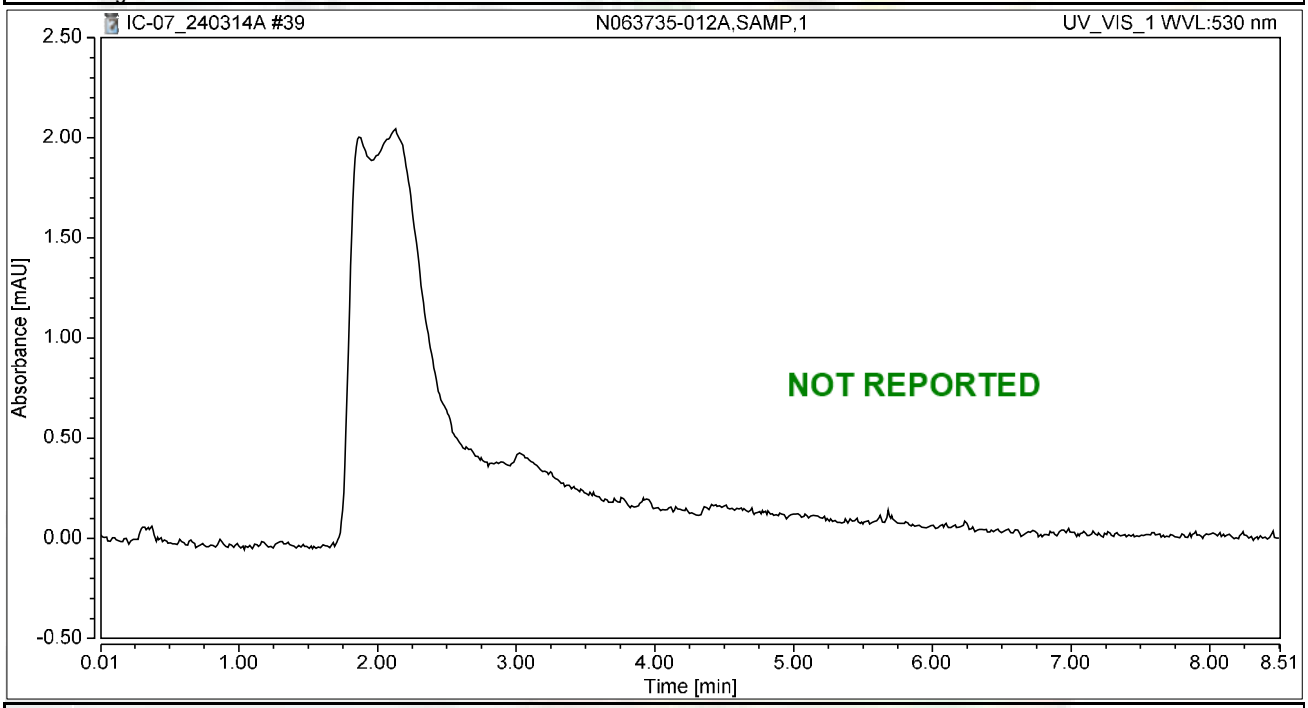
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.906	1.857	9.585	100.00	100.00	8.7265
Total:			**1.857**	**9.585**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-012A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 14:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

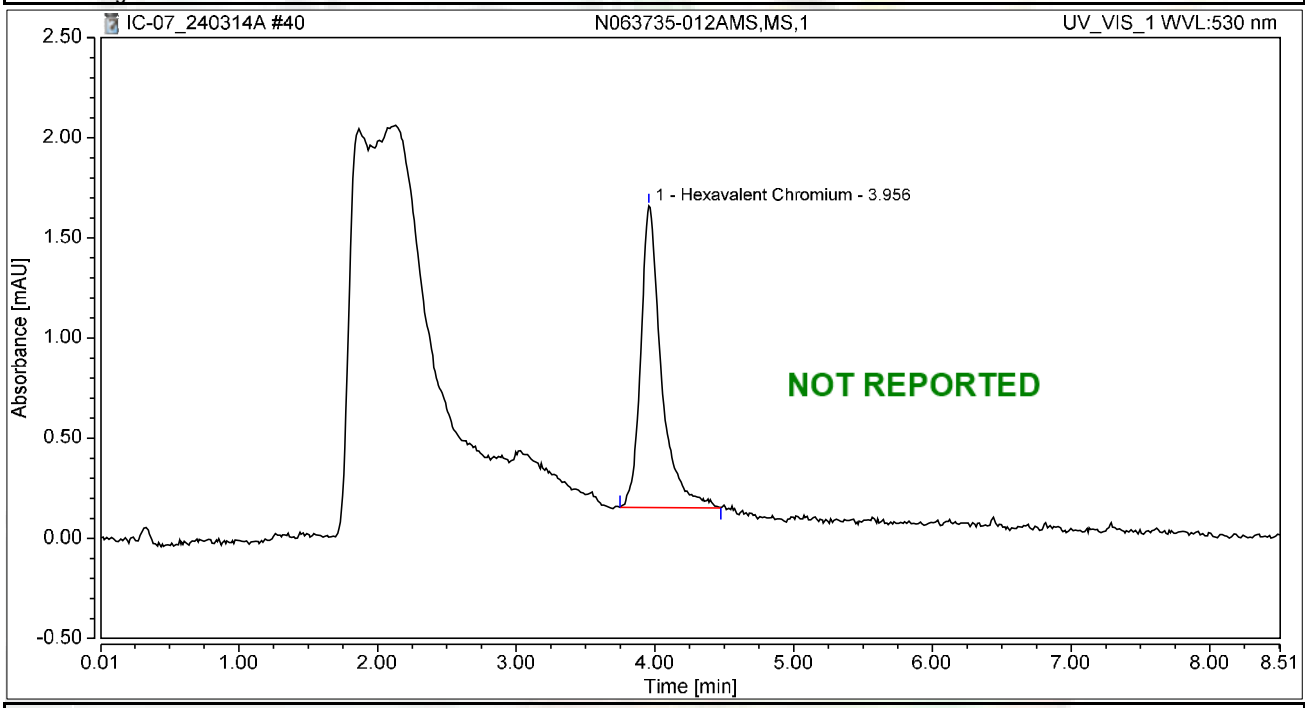
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-012AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 14:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

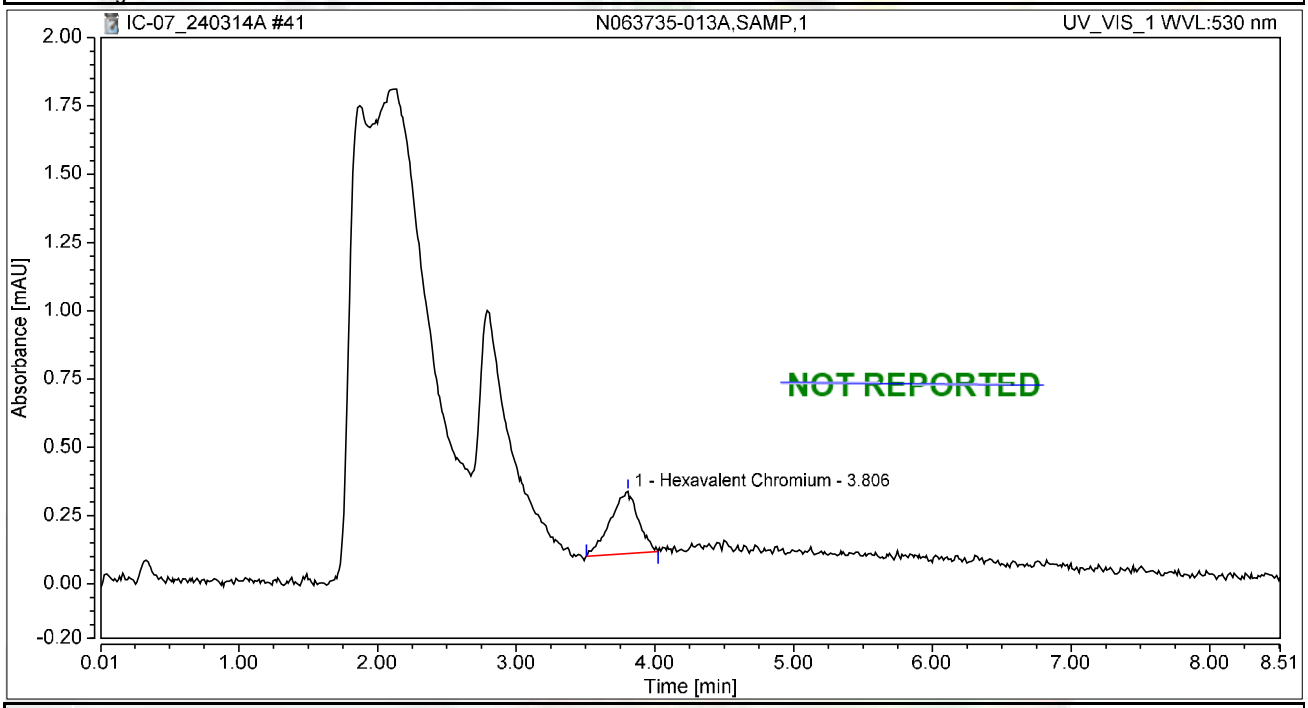
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.260	1.507	100.00	100.00	1.2203
Total:			**0.260**	**1.507**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-013A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 15:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

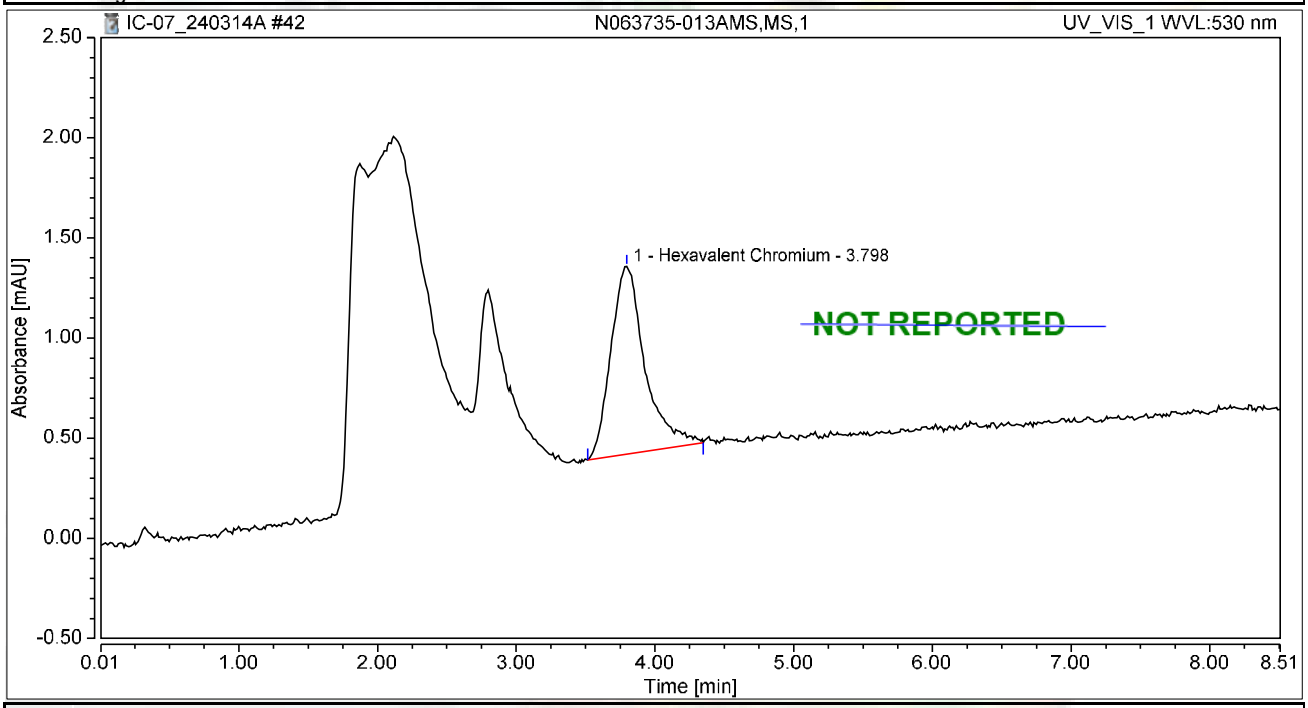
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.806	0.053	0.227	100.00	100.00	0.2507
Total:			**0.053**	**0.227**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-013AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 15:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

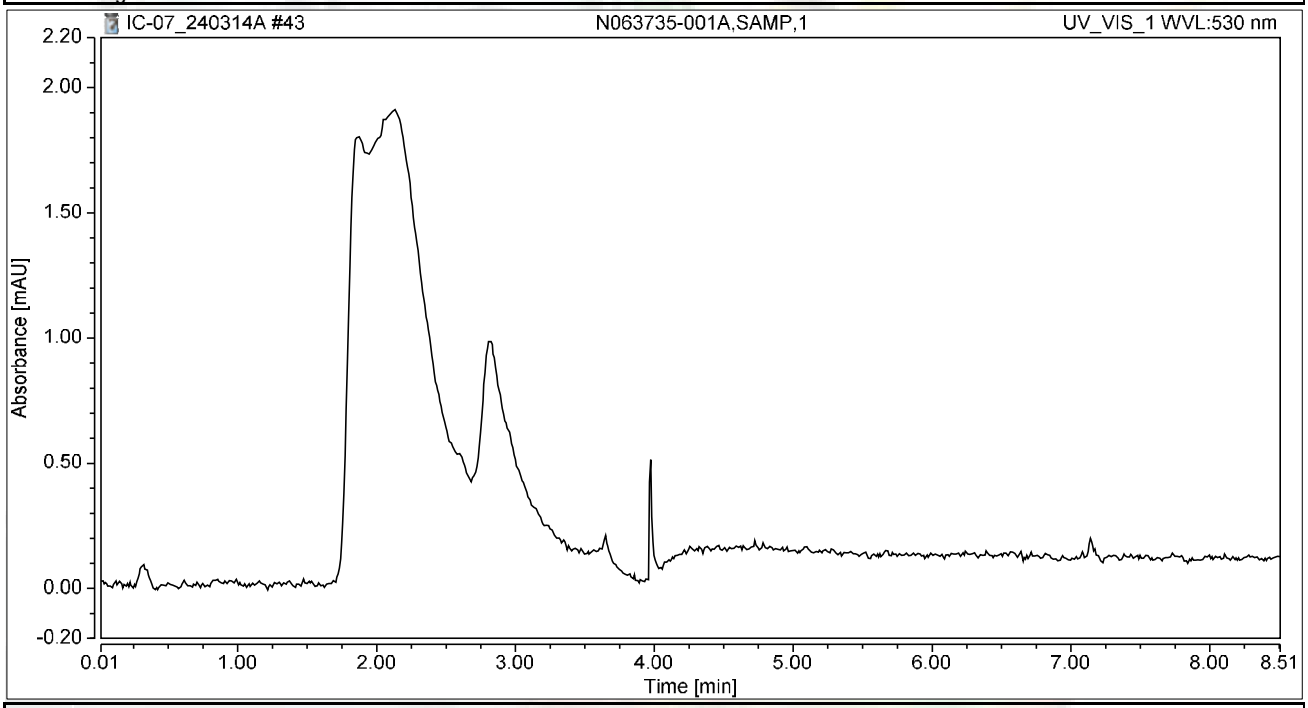
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.798	0.267	0.937	100.00	100.00	1.2551
Total:			**0.267**	**0.937**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-001A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 15:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

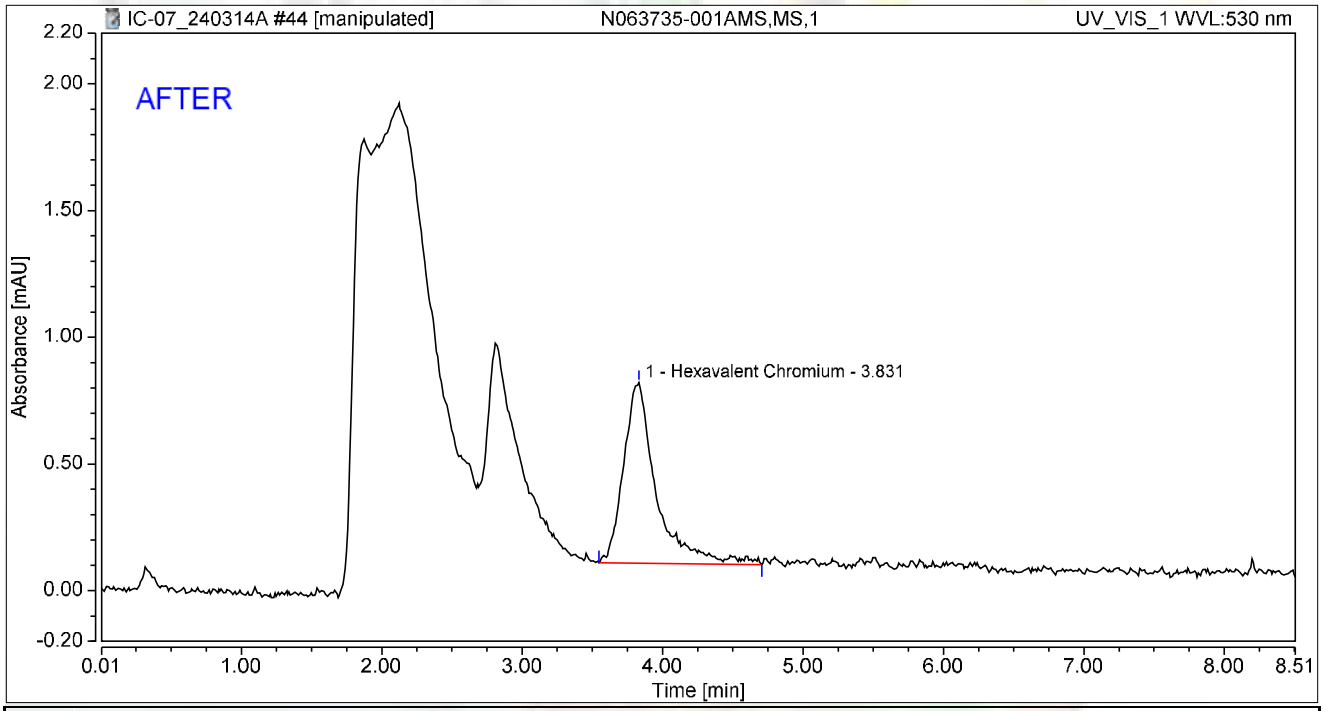
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 15:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.831	0.192	0.713	100.00	100.00	0.9040
Total:			**0.192**	**0.713**	**100.00**	**100.00**	

Reviewed by:

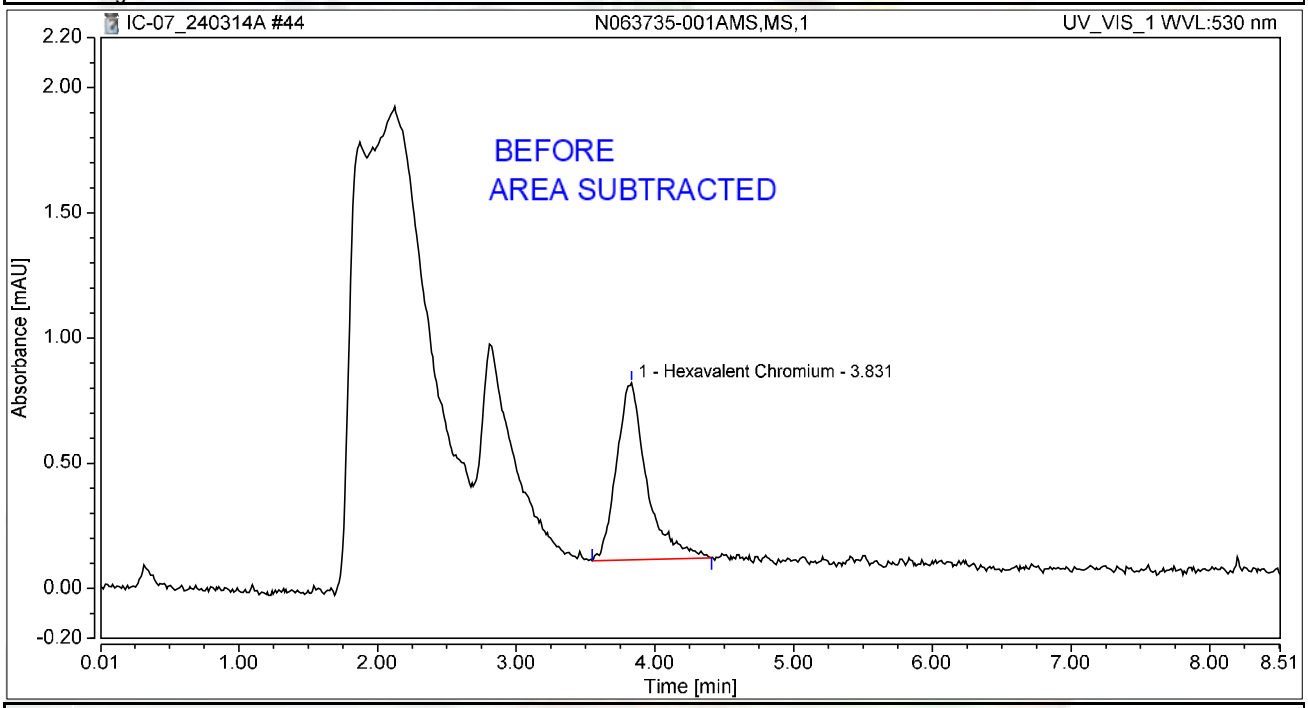
dMocha 3/22/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063735-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 15:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

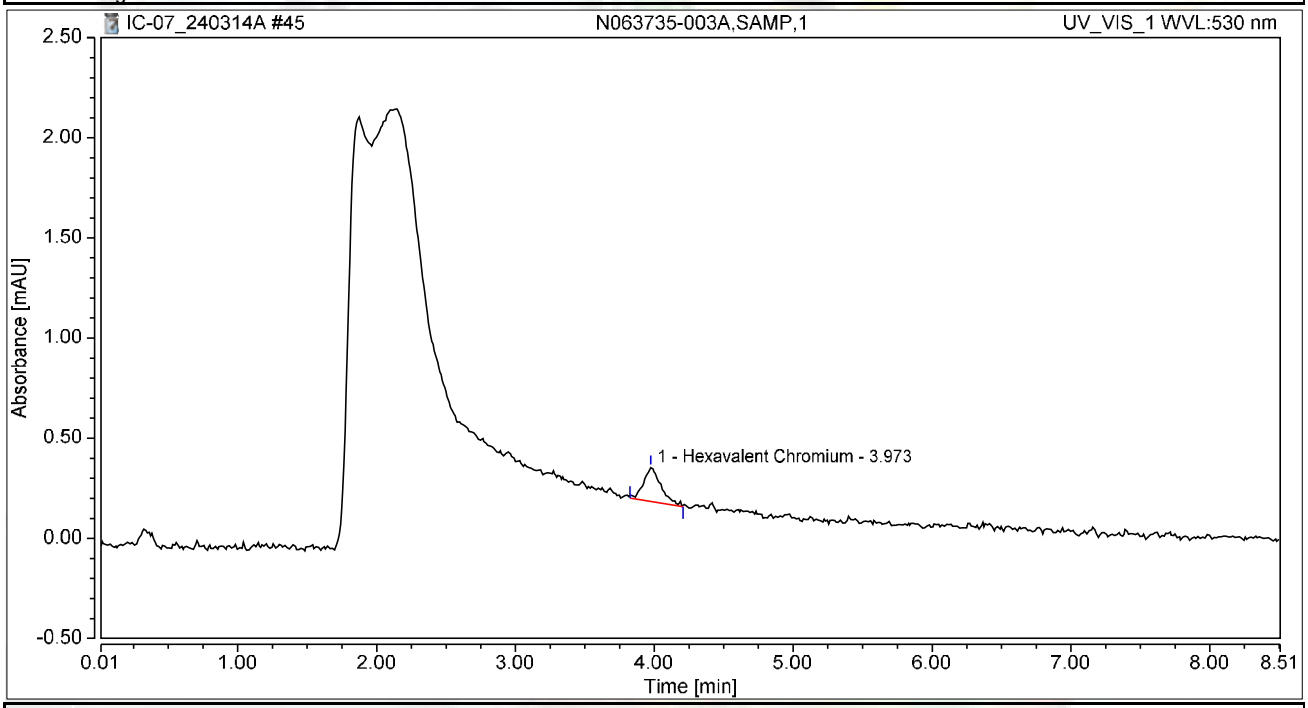
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.831	0.179	0.707	100.00	100.00	0.8395
Total:			**0.179**	**0.707**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-003A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 15:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

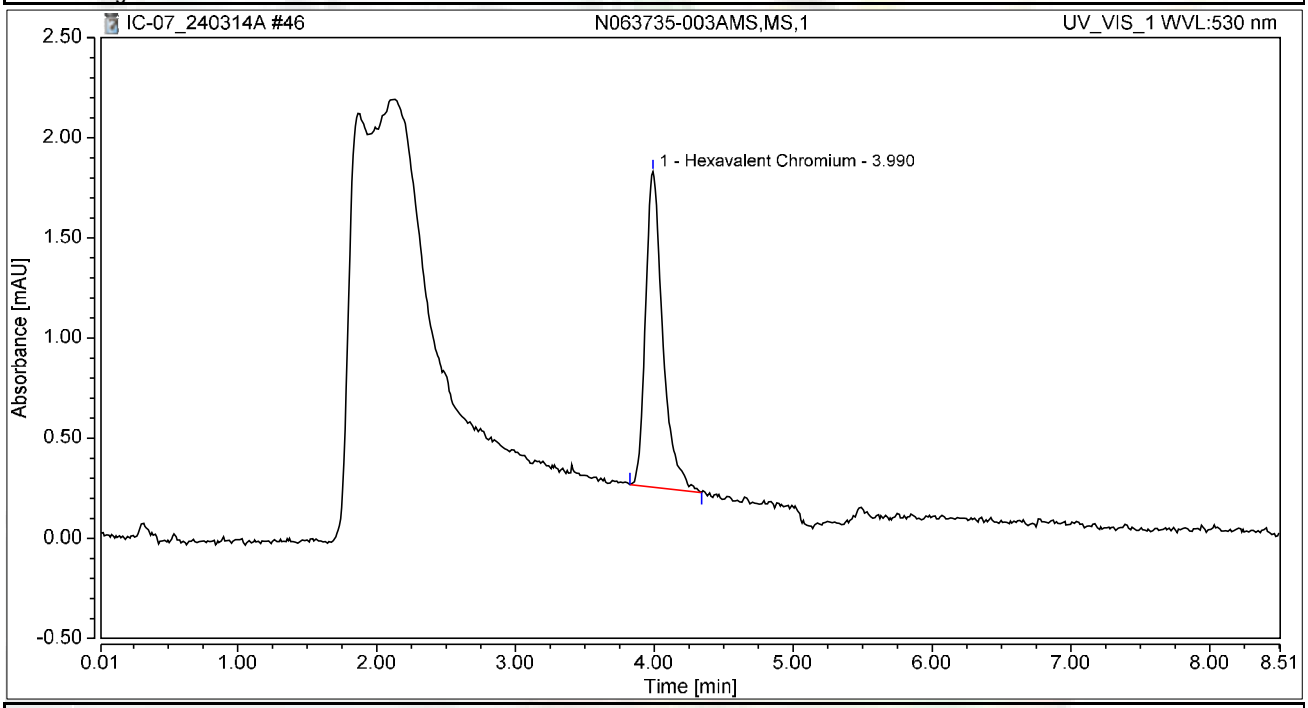
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.025	0.169	100.00	100.00	0.1166
Total:			**0.025**	**0.169**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-003AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 16:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

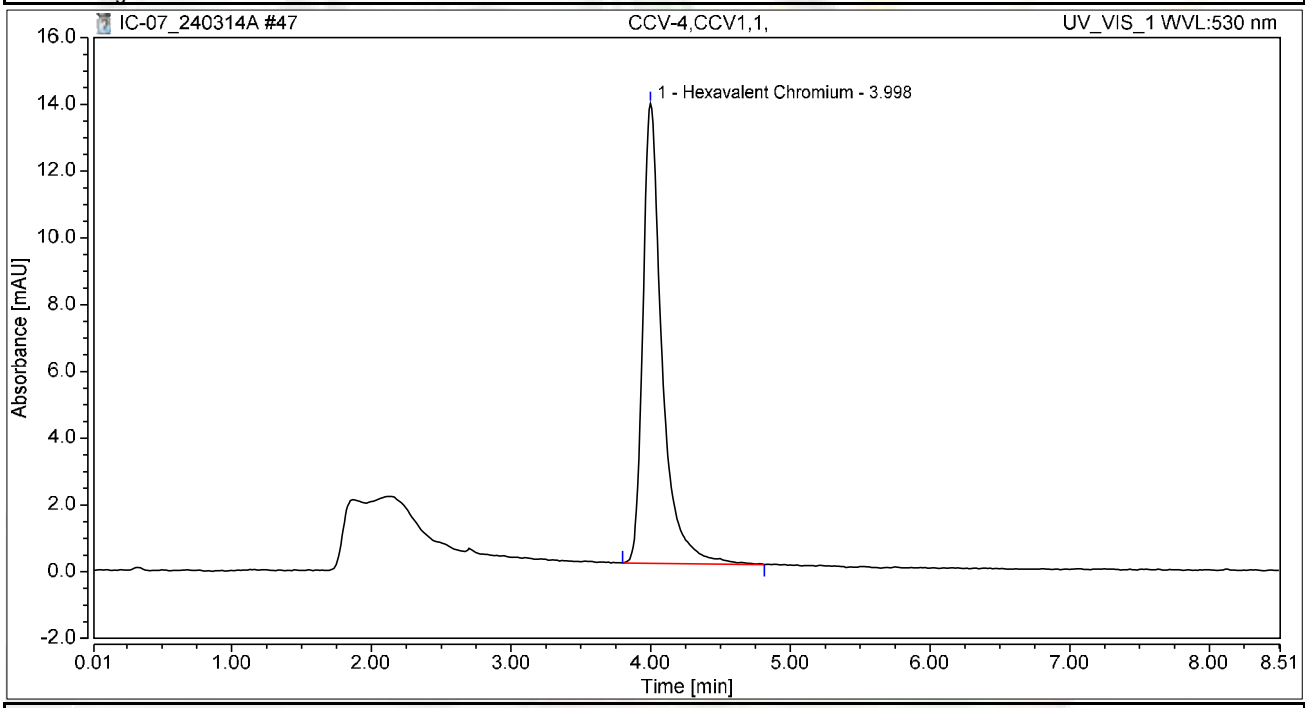
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.227	1.574	100.00	100.00	1.0682
Total:			**0.227**	**1.574**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 16:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

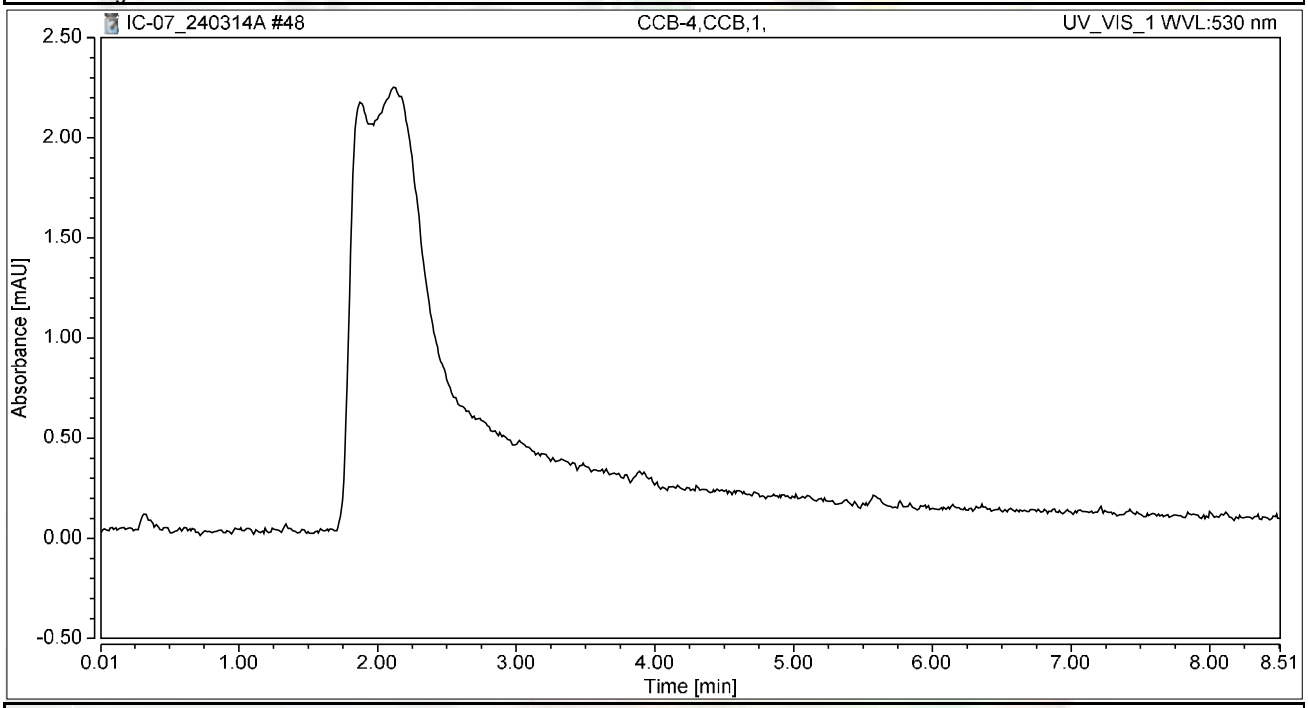
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	2.196	13.778	100.00	100.00	10.3179
Total:			**2.196**	**13.778**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 16:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

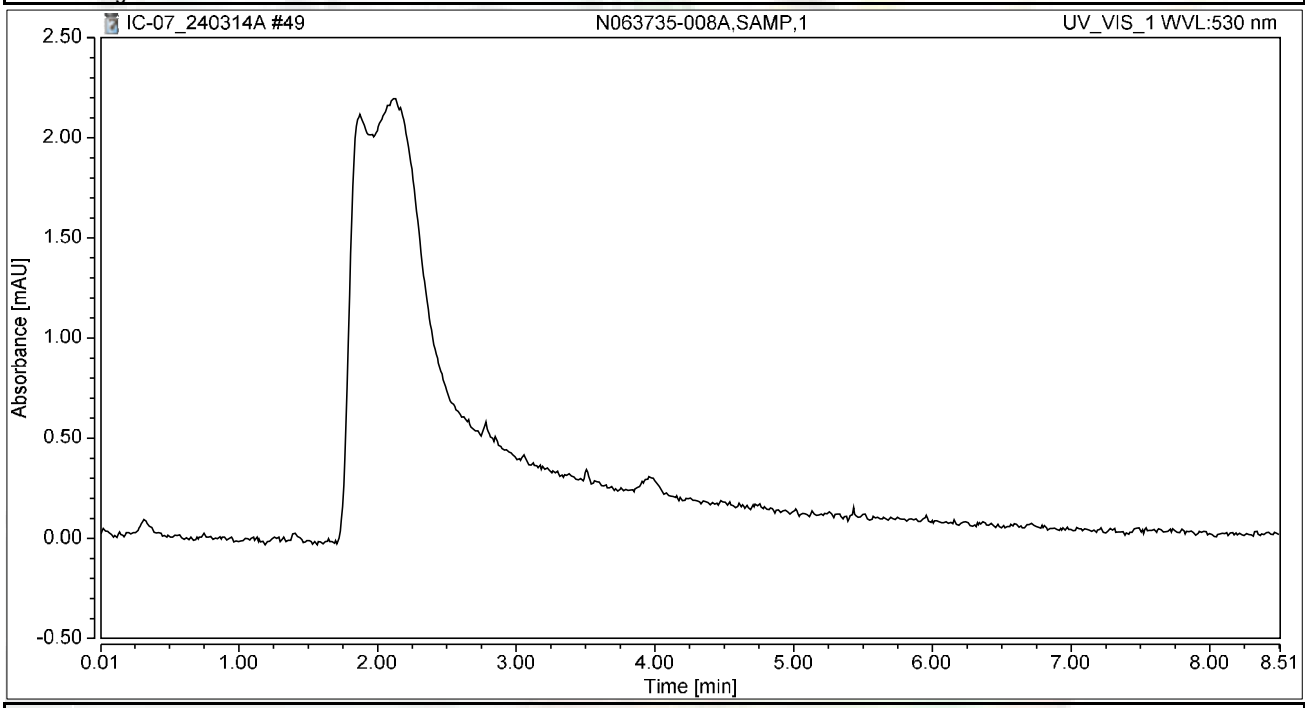
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 16:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

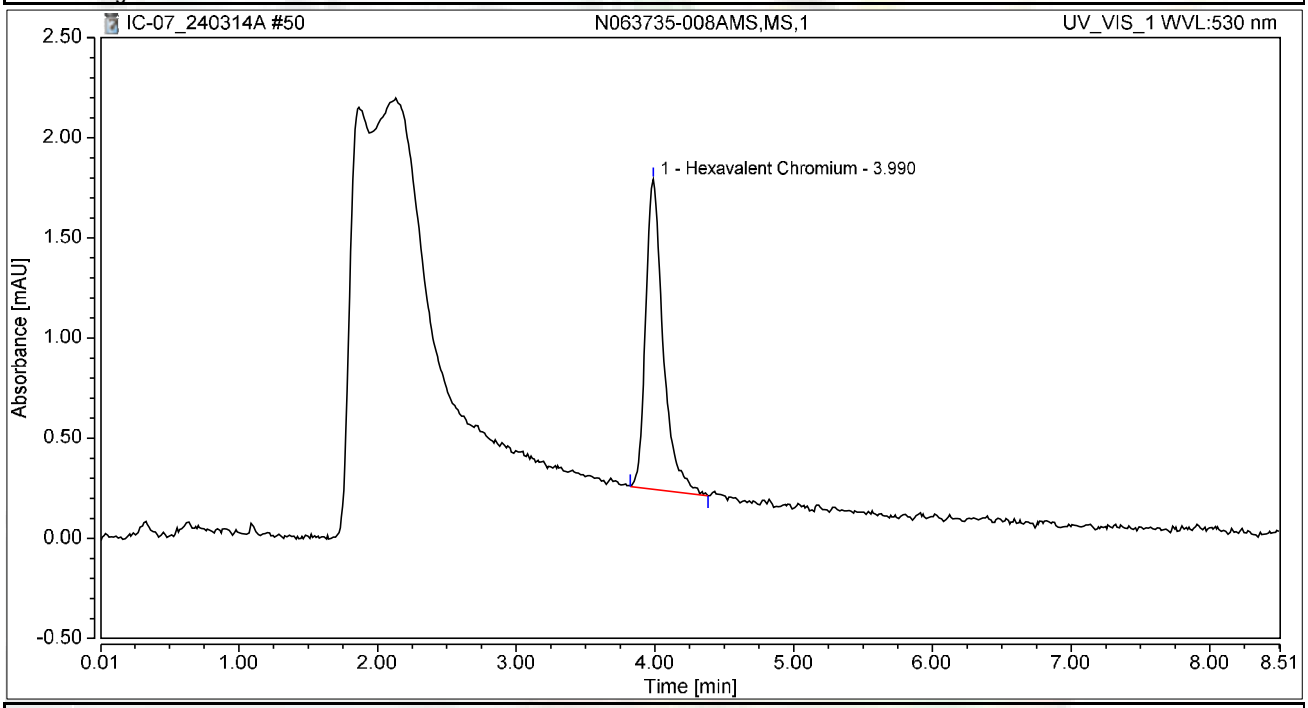
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 16:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

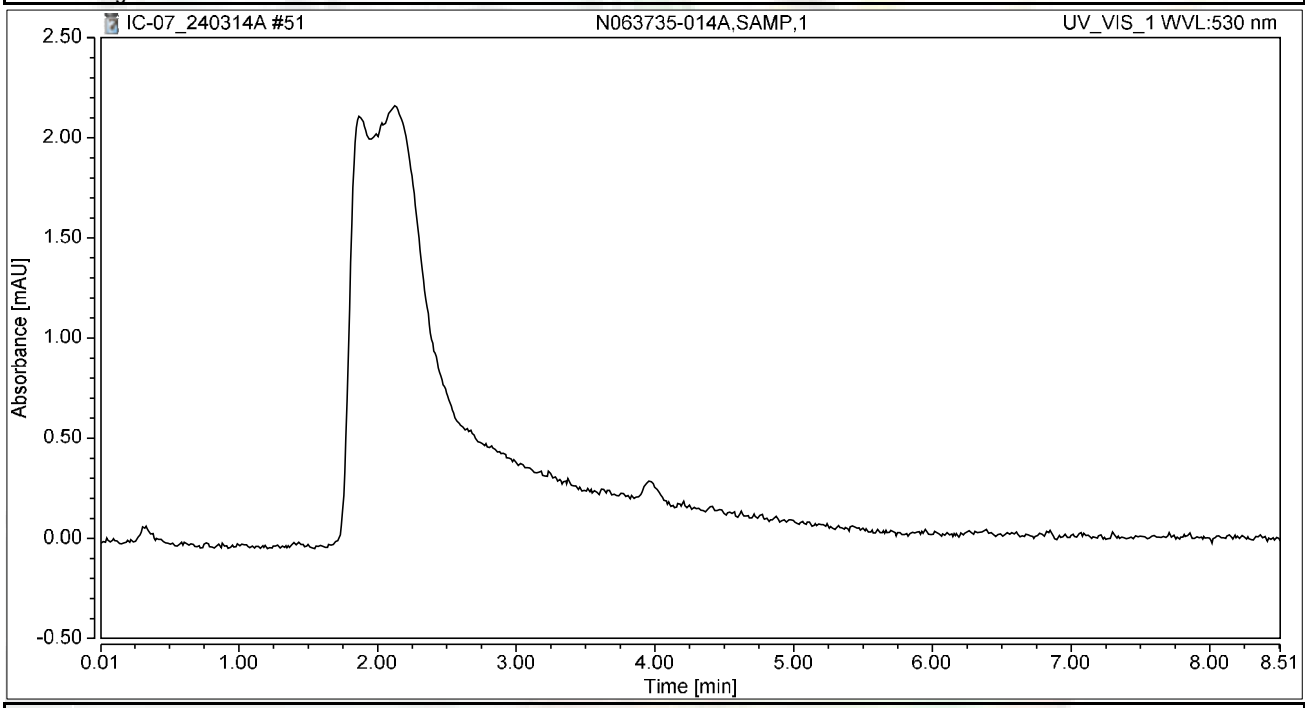
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.227	1.546	100.00	100.00	1.0645
Total:			**0.227**	**1.546**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-014A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 16:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

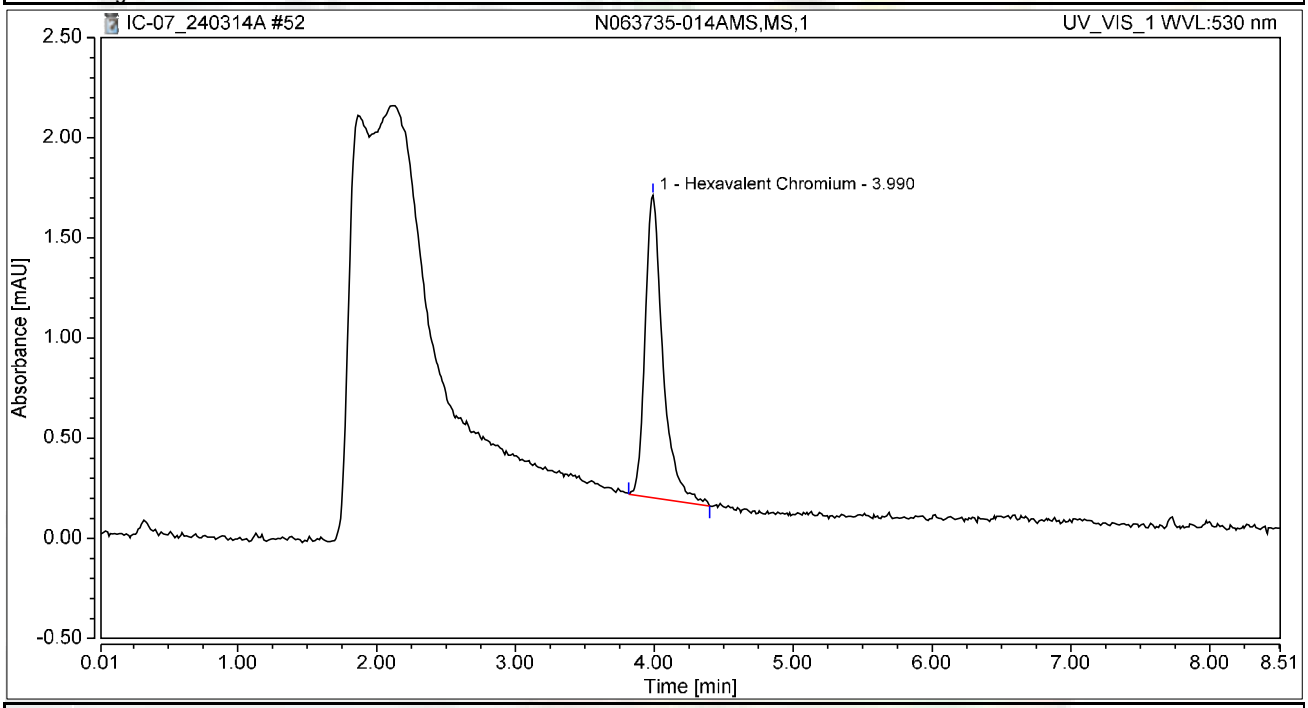
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-014AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 17:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

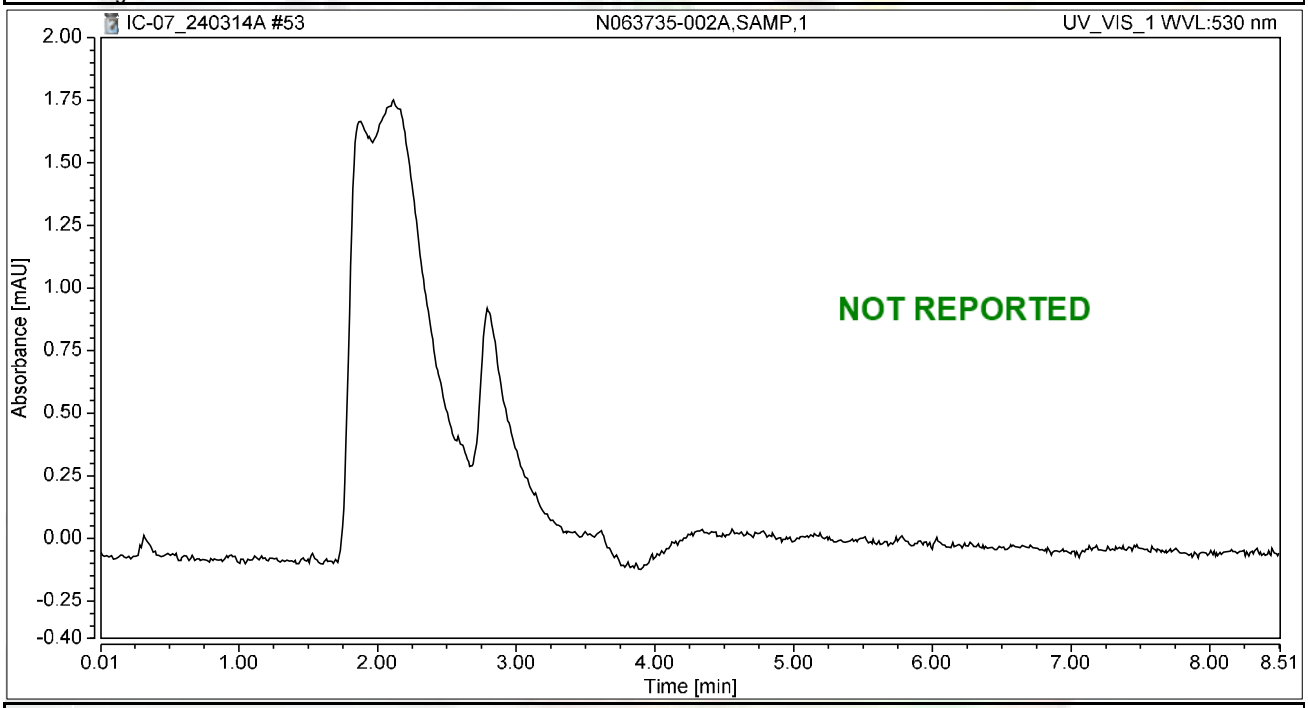
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.226	1.511	100.00	100.00	1.0596
Total:			**0.226**	**1.511**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 17:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

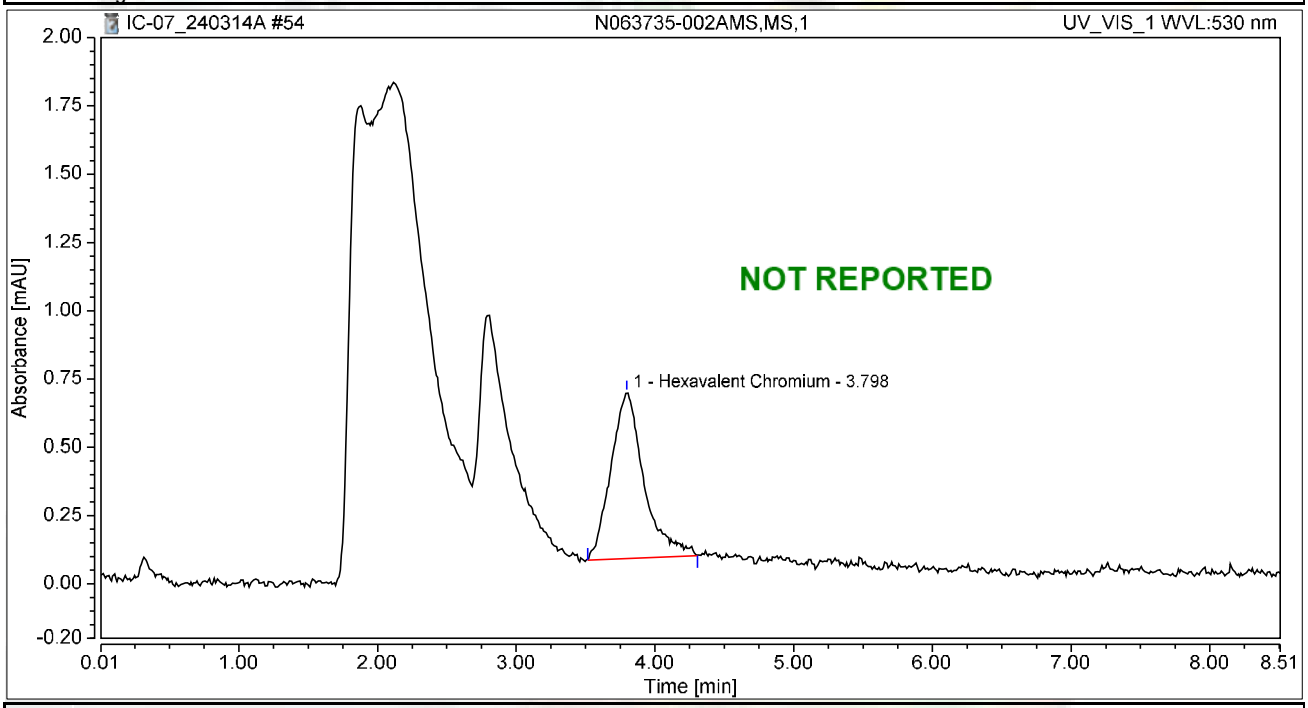
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 17:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

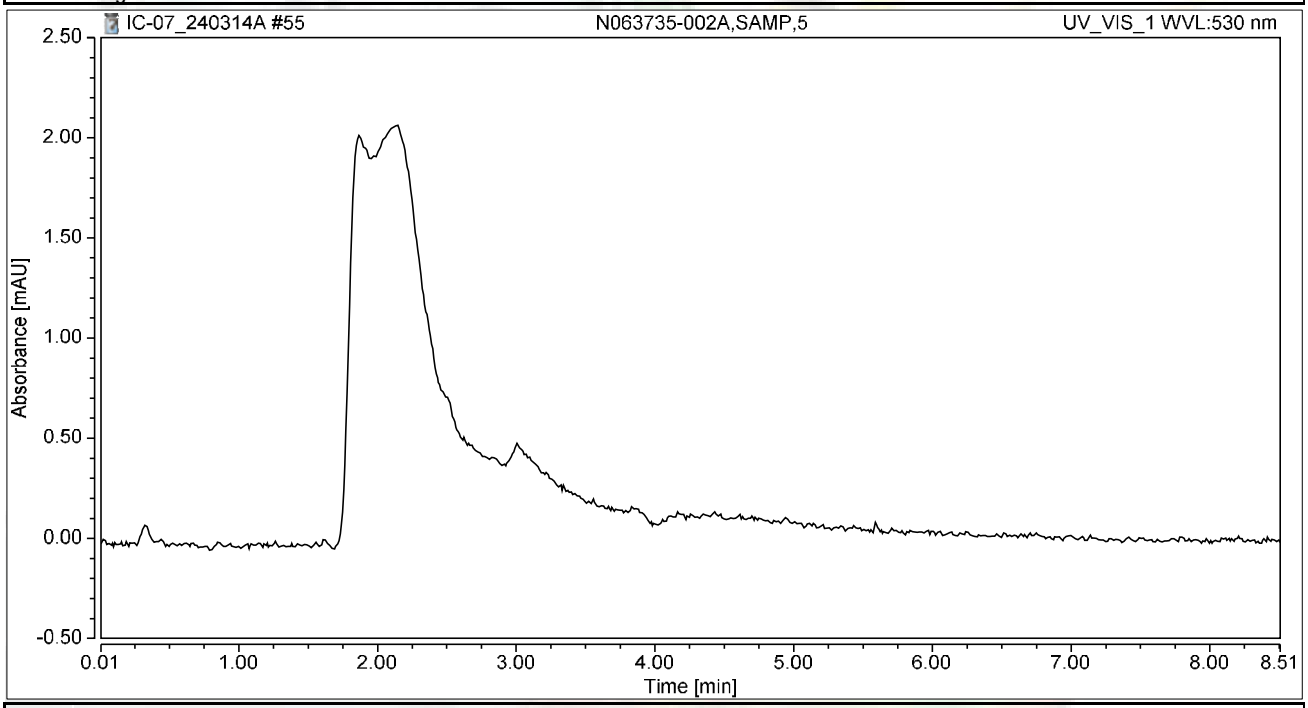
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.798	0.168	0.608	100.00	100.00	0.7872
Total:			**0.168**	**0.608**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 17:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

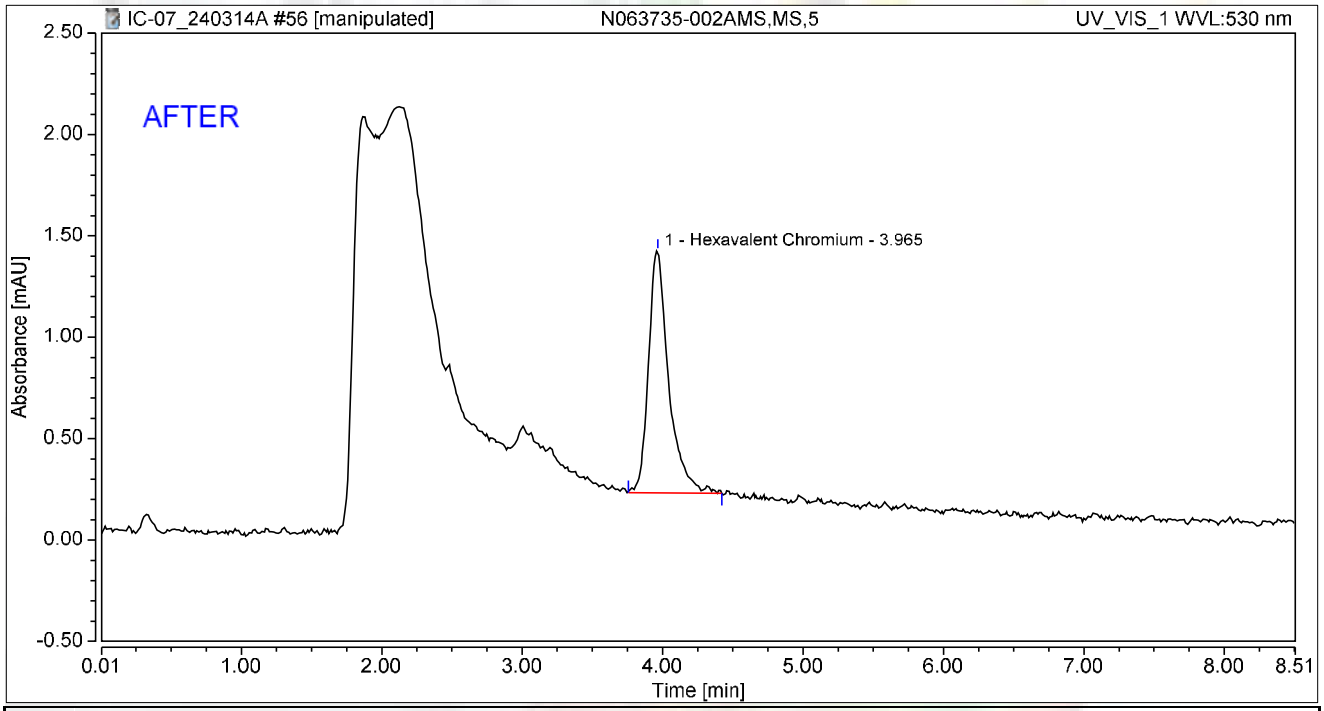
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 17:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.199	1.192	100.00	100.00	0.9351
Total:			**0.199**	**1.192**	**100.00**	**100.00**	

Reviewed by:

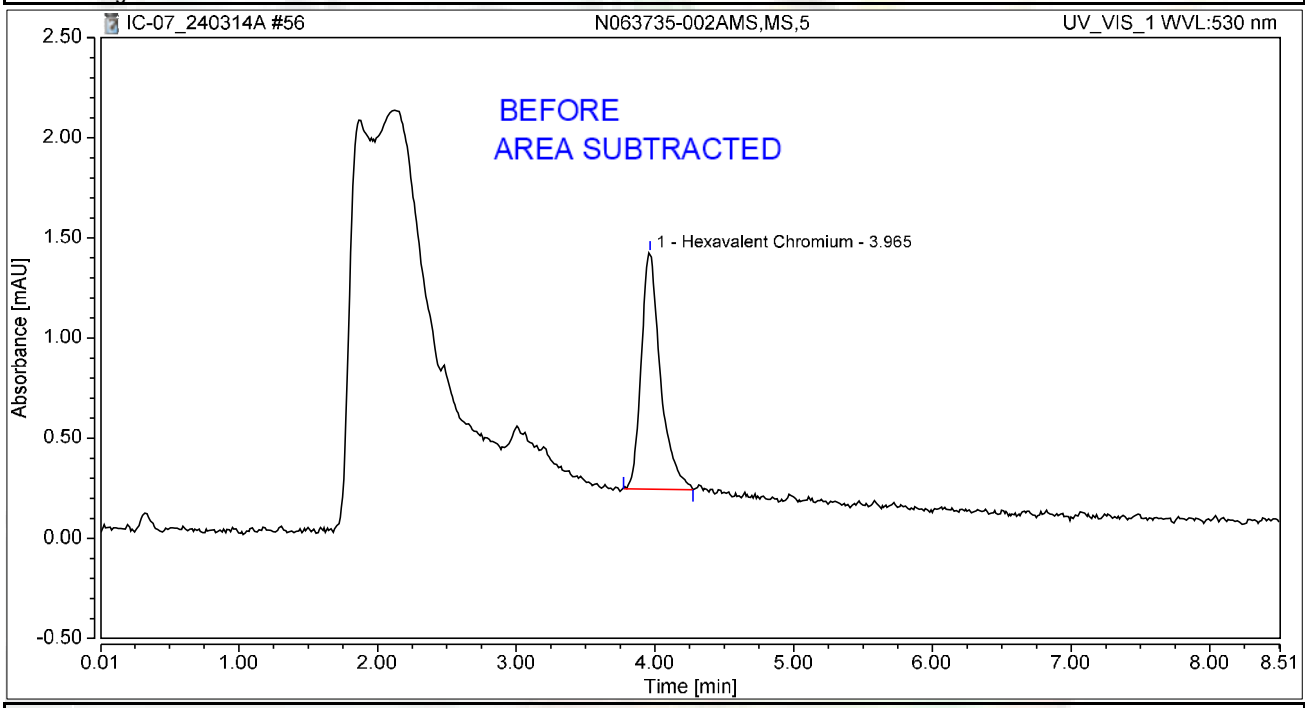
dMocha 3/22/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063735-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 17:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

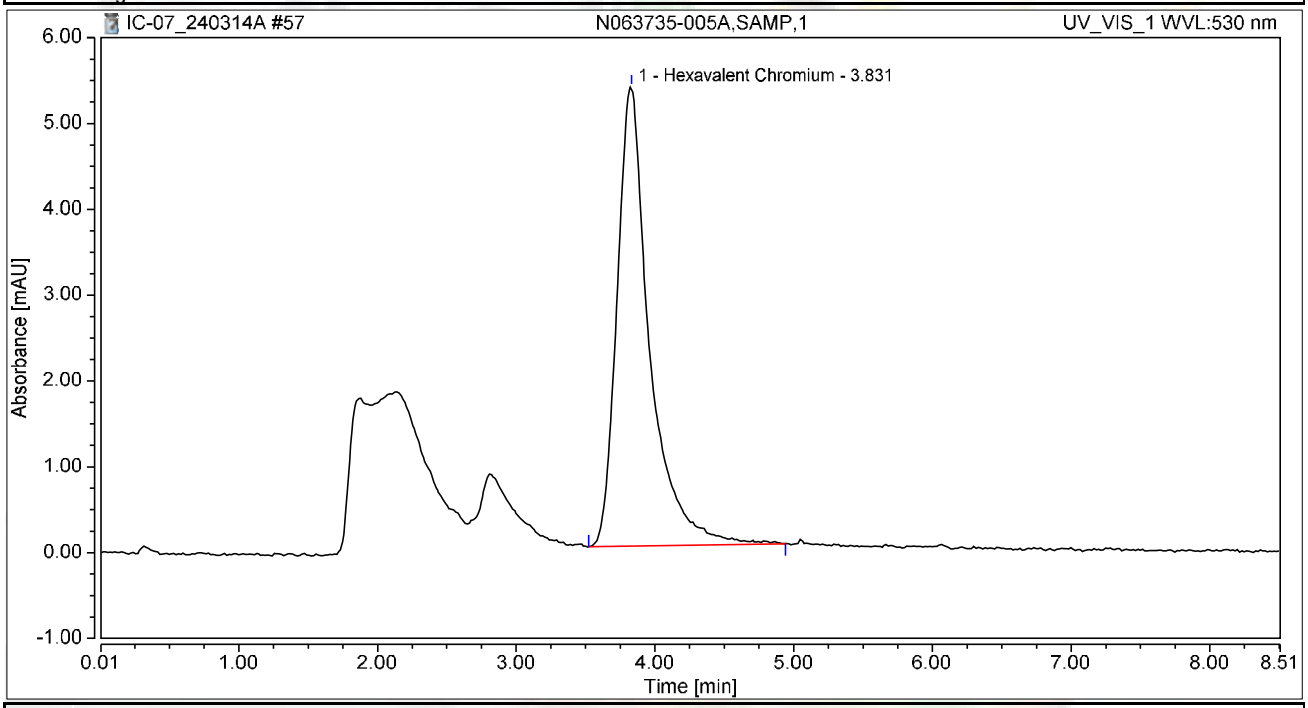
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.190	1.179	100.00	100.00	0.8917
Total:			**0.190**	**1.179**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 17:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

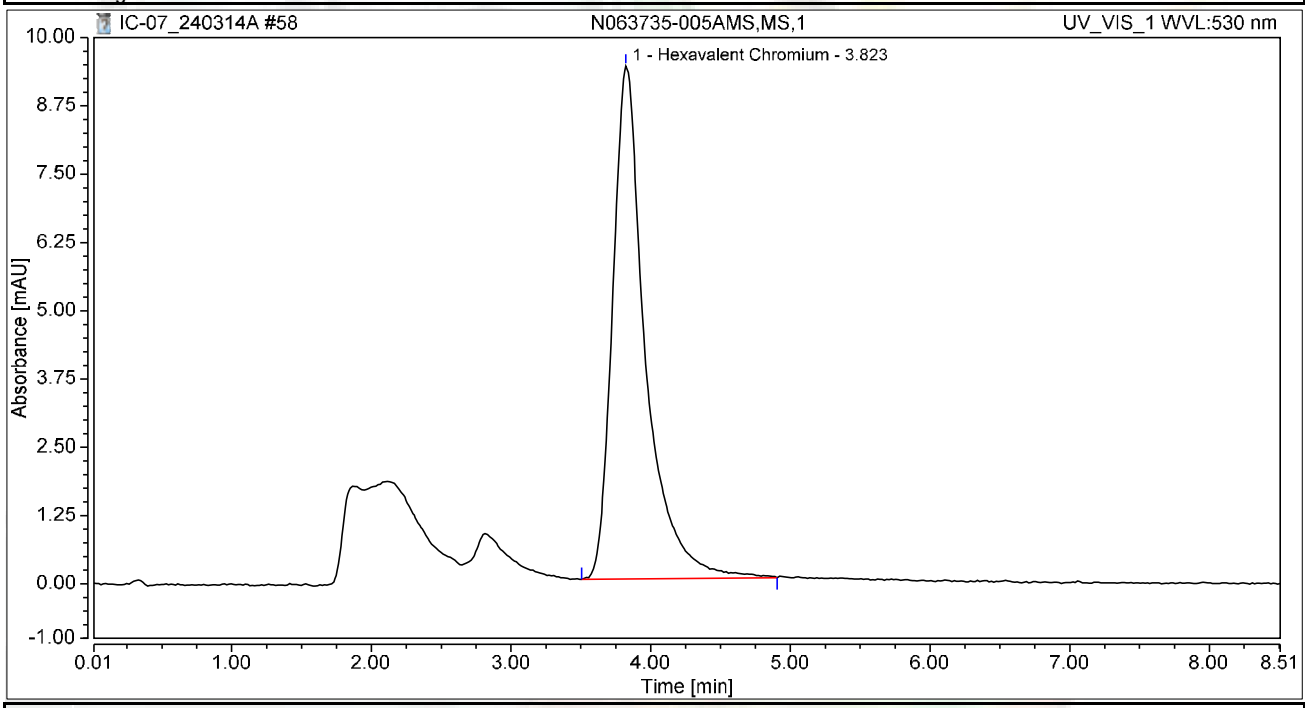
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.831	1.456	5.349	100.00	100.00	6.8423
Total:			**1.456**	**5.349**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-005AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 17:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

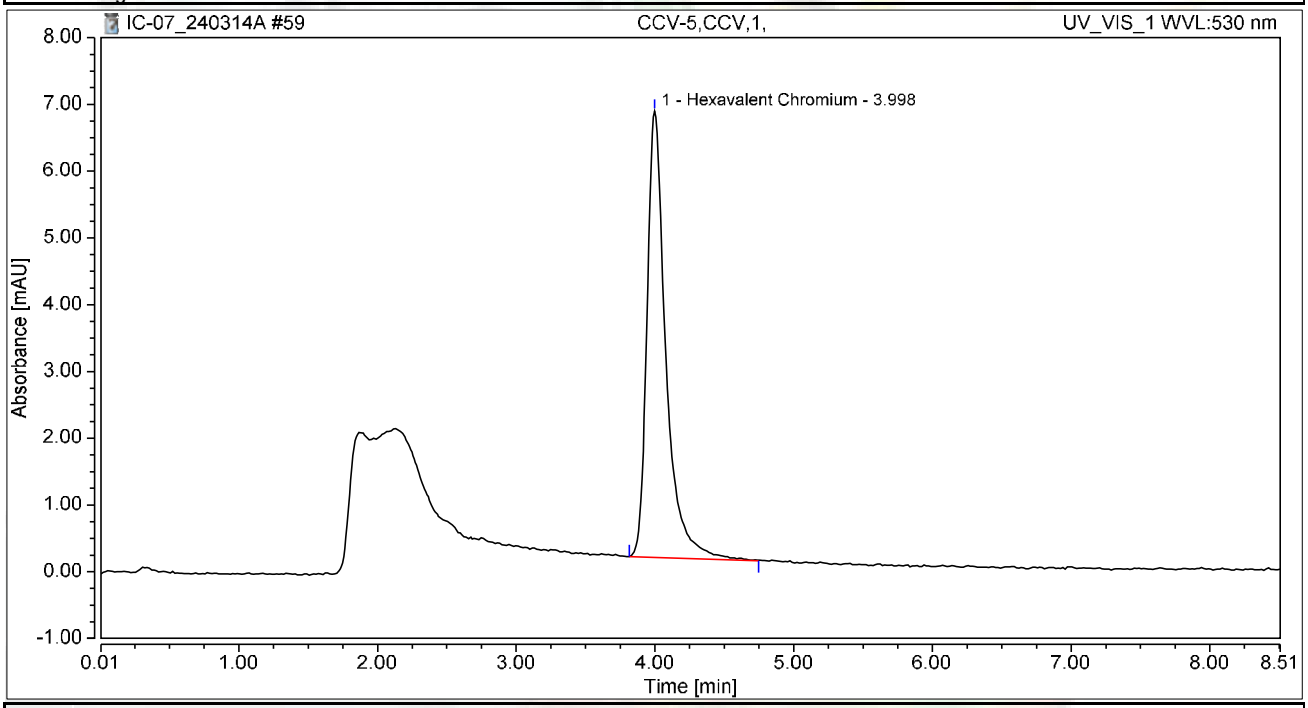
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.823	2.557	9.389	100.00	100.00	12.0155
Total:			**2.557**	**9.389**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 18:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

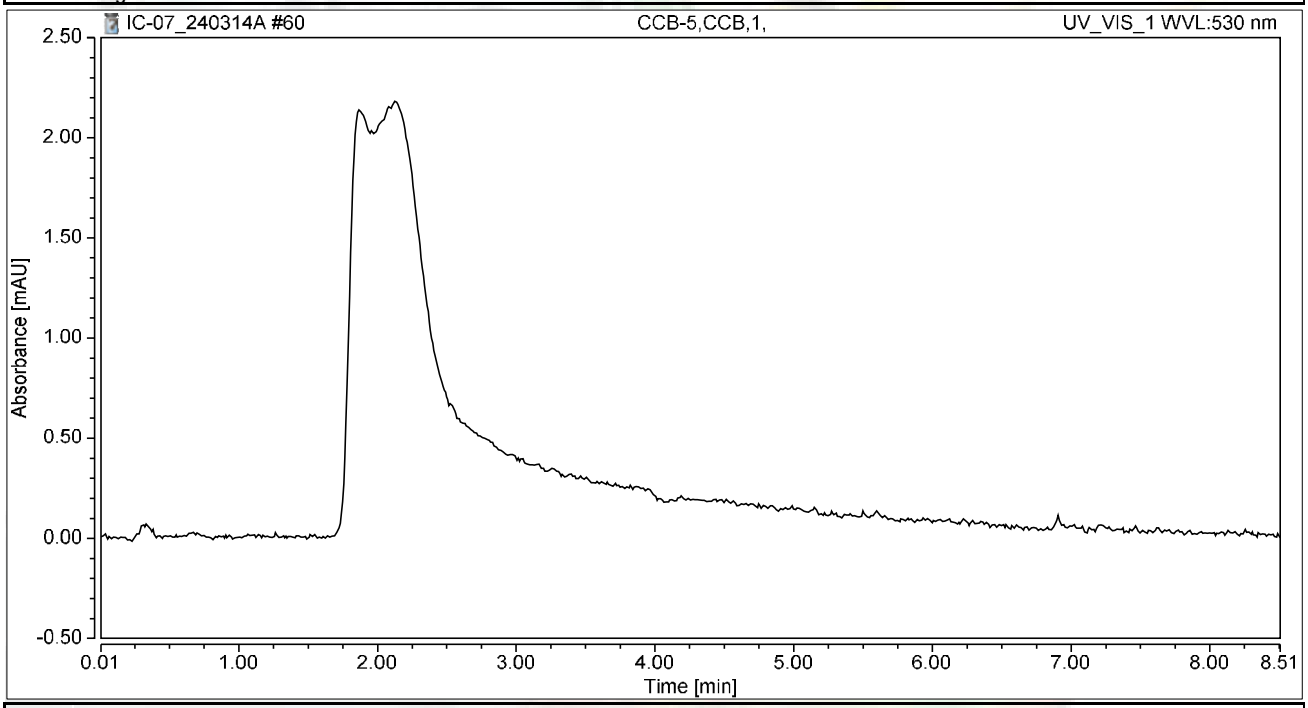
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	1.054	6.684	100.00	100.00	4.9525
Total:			**1.054**	**6.684**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 18:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

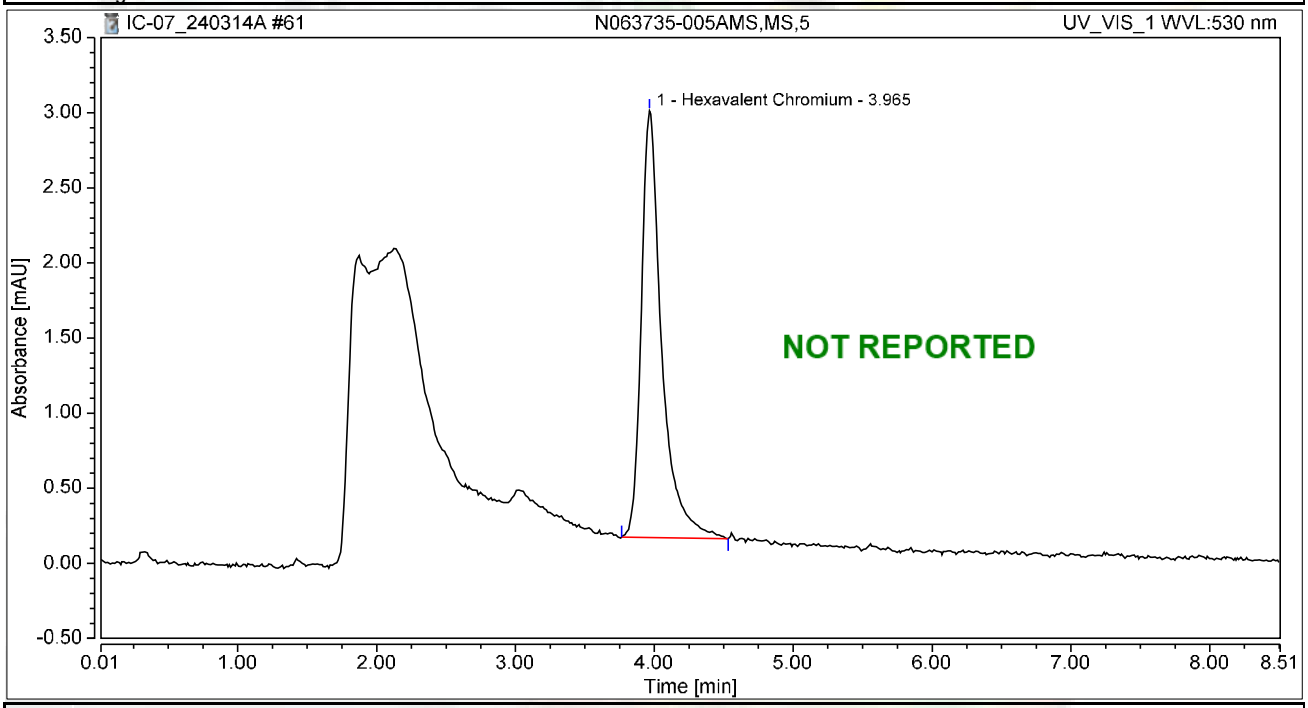
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-005AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 18:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

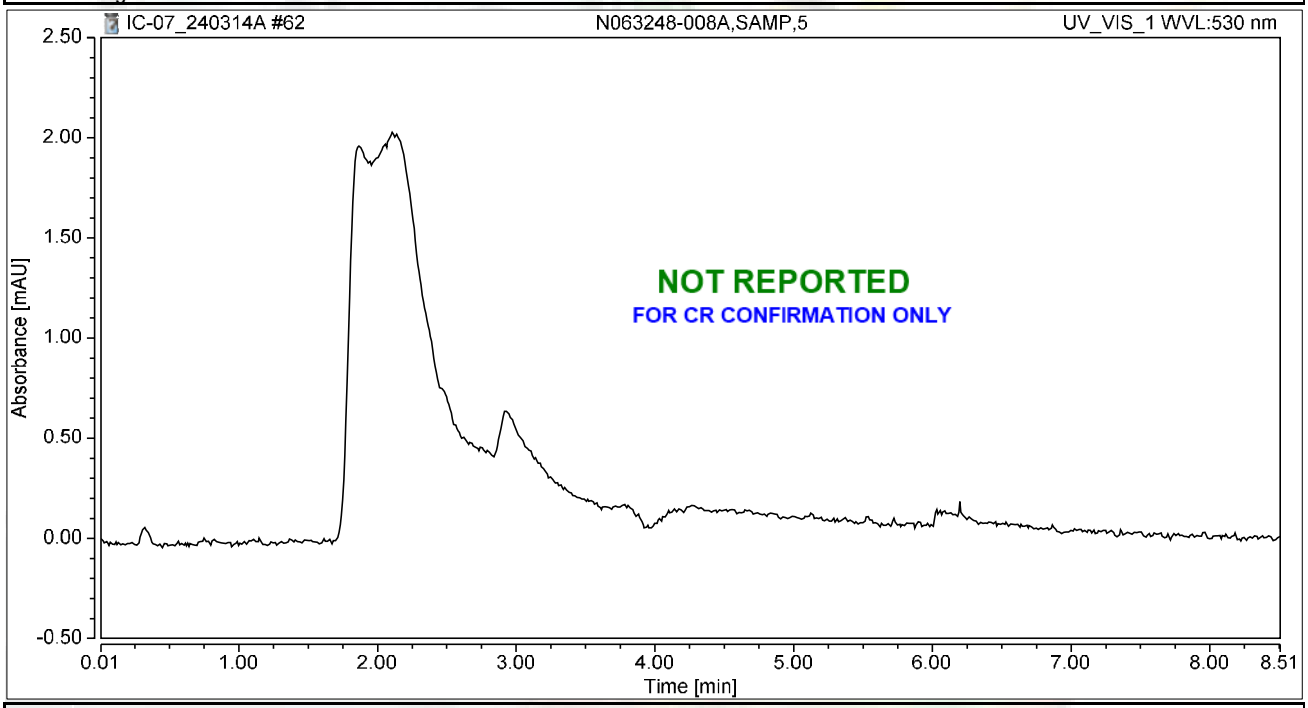
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.485	2.840	100.00	100.00	2.2790
Total:			**0.485**	**2.840**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-008A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 18:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

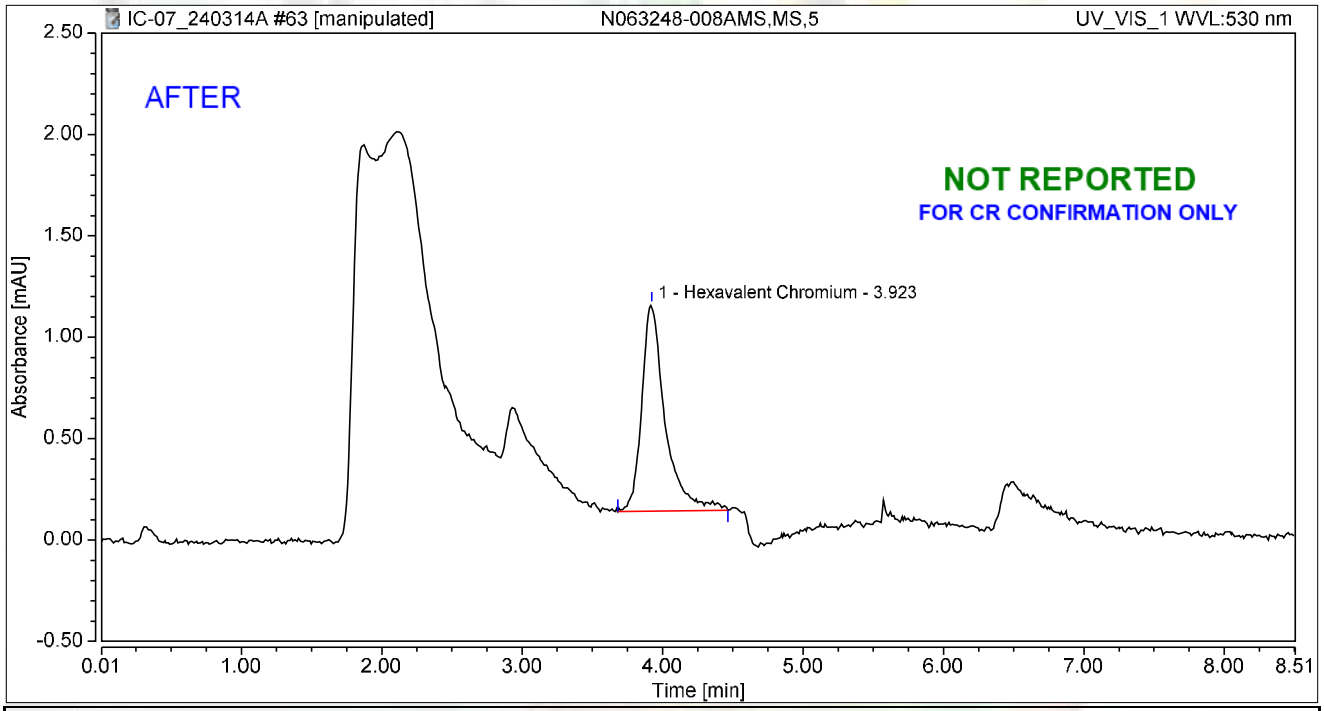
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-008AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 18:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

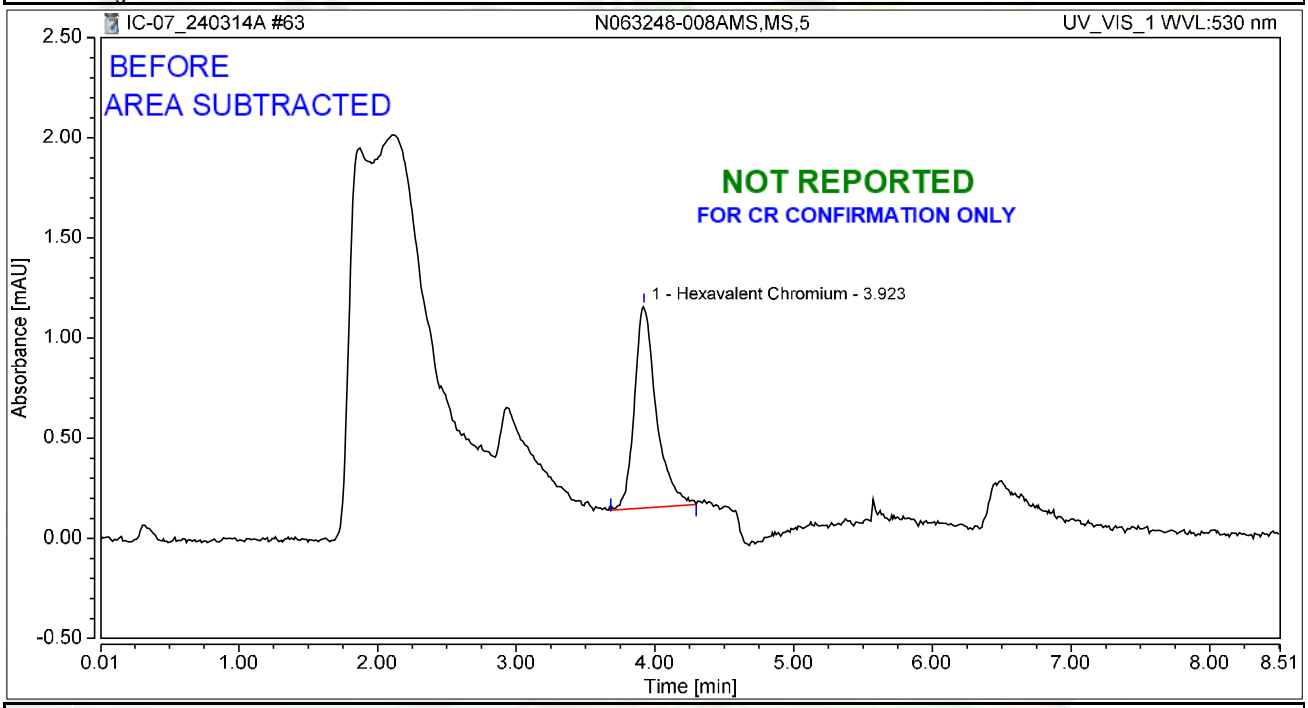
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.197	1.021	100.00	100.00	0.9242
Total:			**0.197**	**1.021**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-008AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 18:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

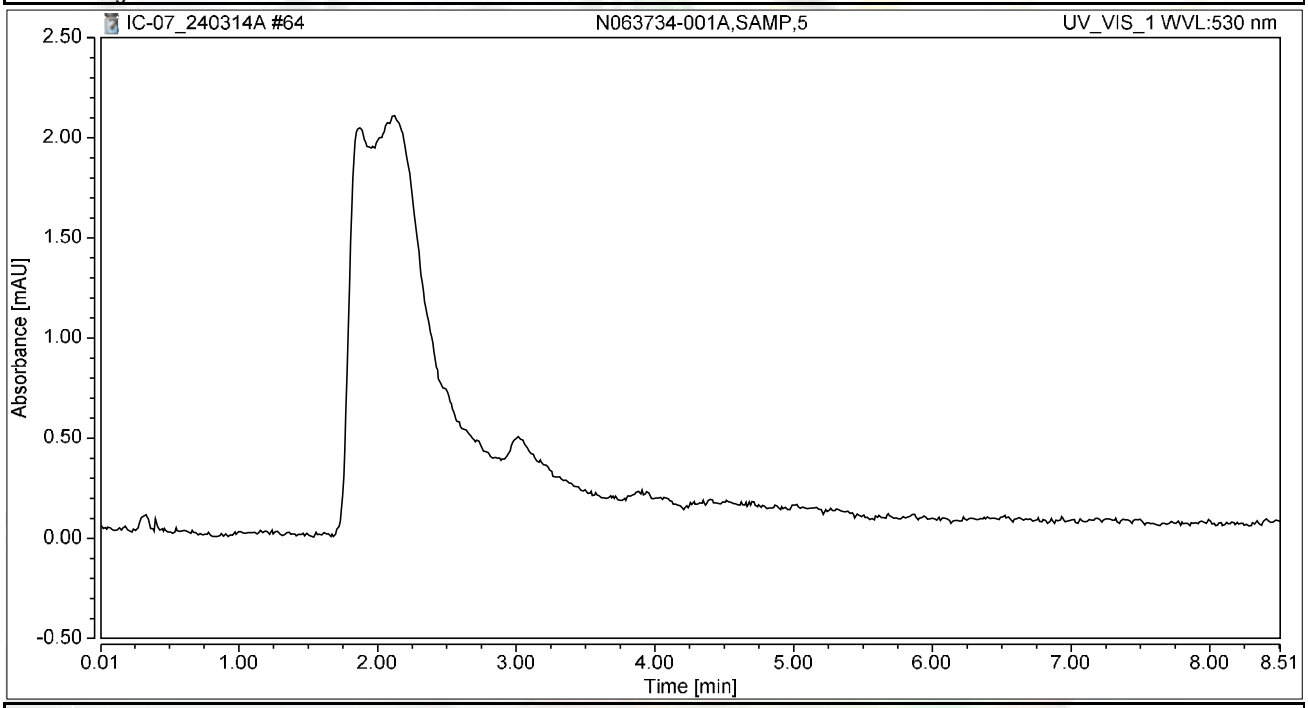
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.184	1.012	100.00	100.00	0.8652
Total:			**0.184**	**1.012**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063734-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 18:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

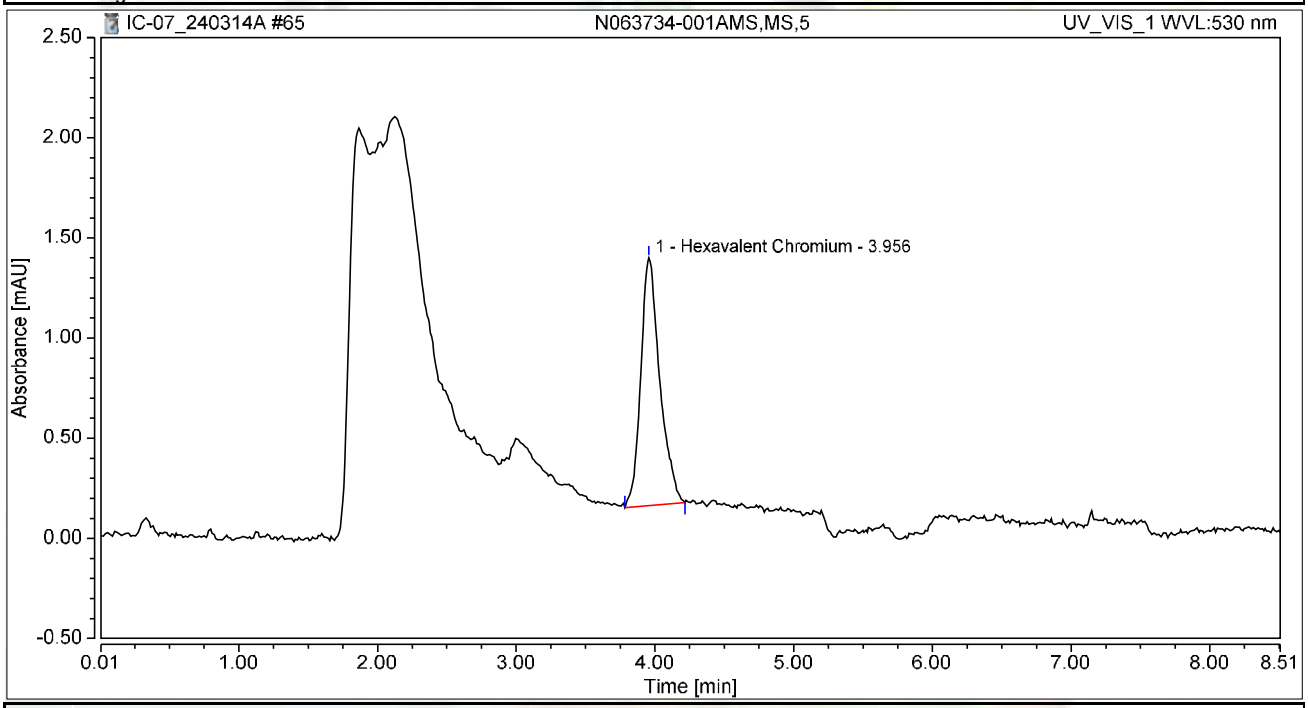
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063734-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 19:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

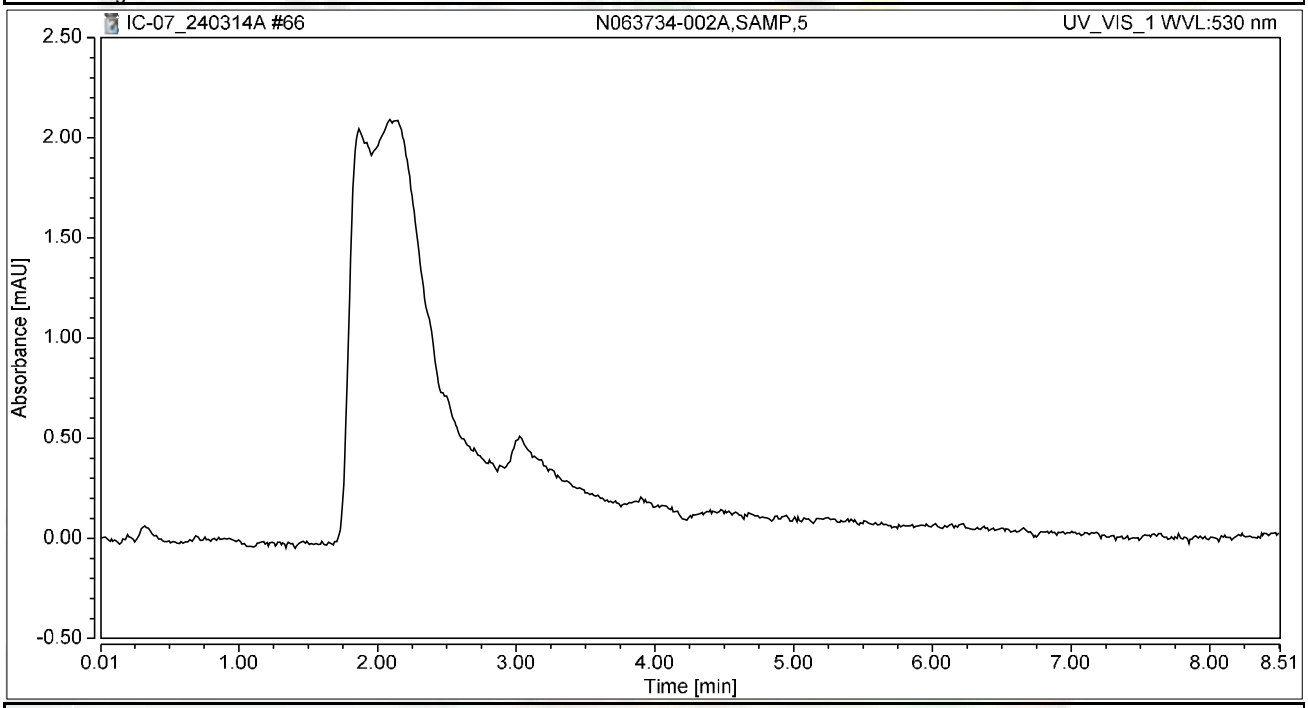
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.196	1.237	100.00	100.00	0.9218
Total:			**0.196**	**1.237**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063734-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 19:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

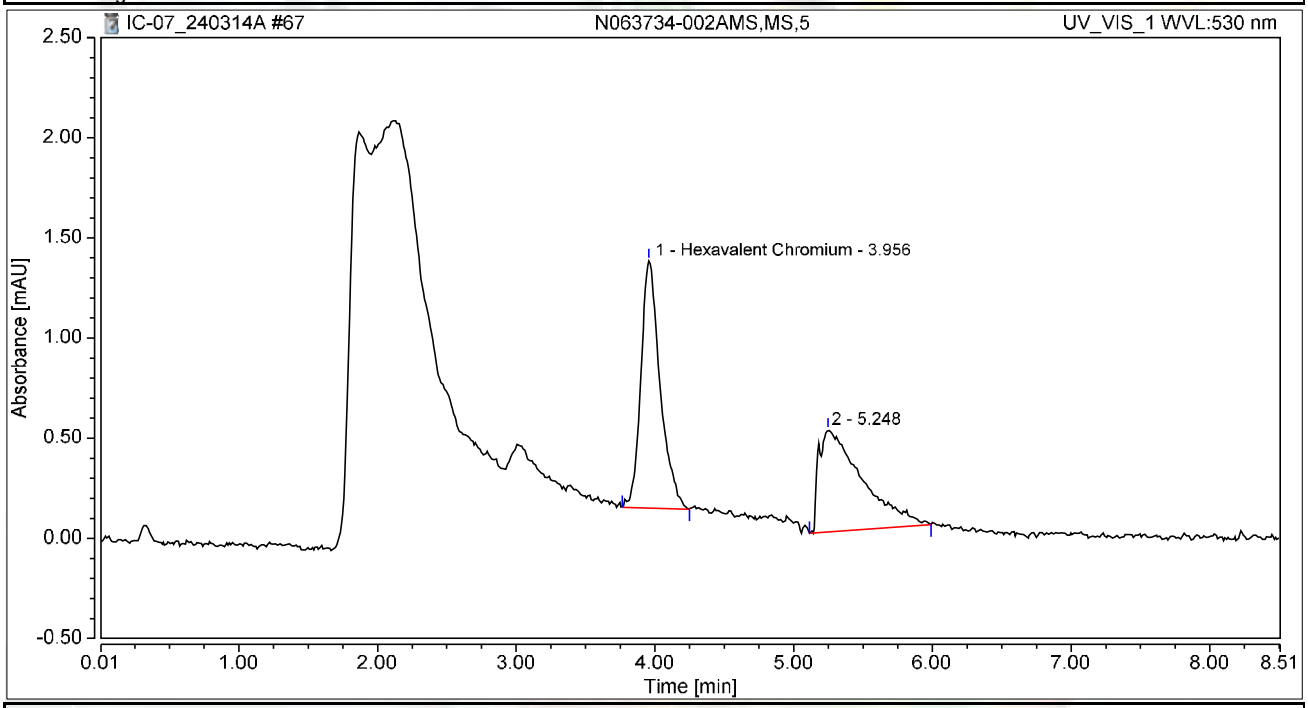
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063734-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 19:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

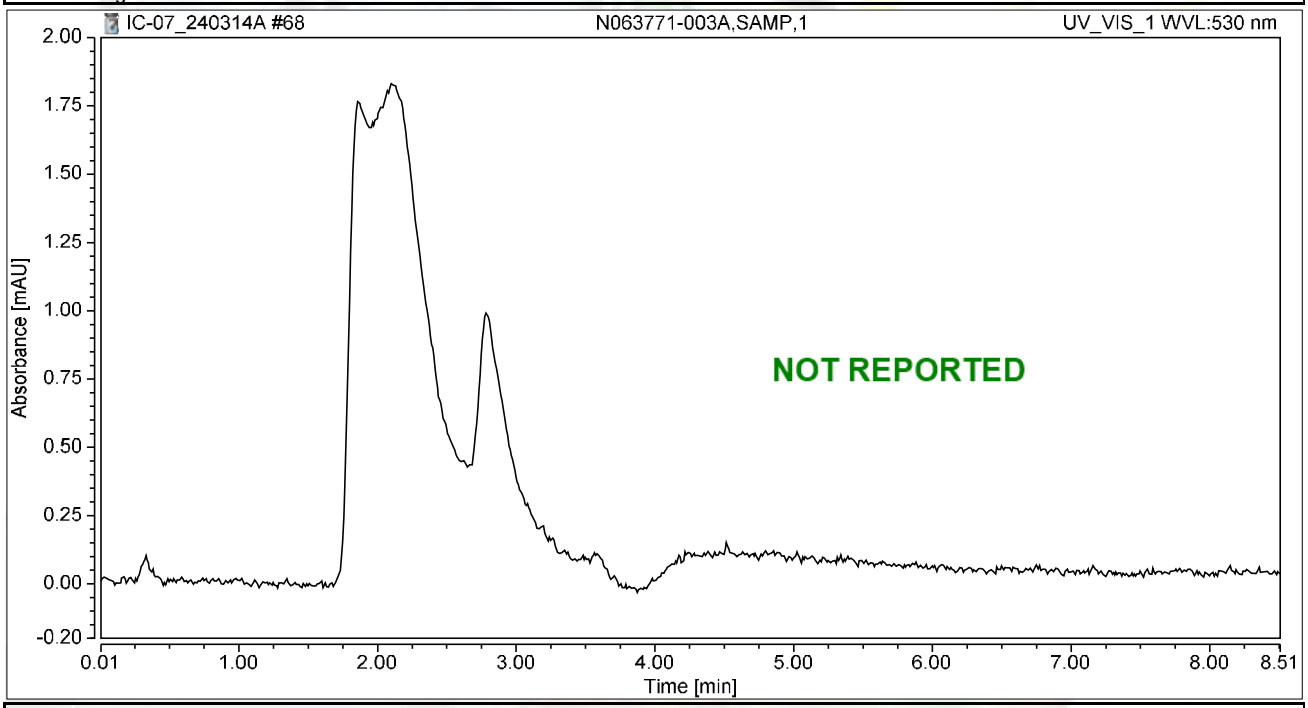
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.198	1.235	51.75	70.80	0.9308
2		5.248	0.185	0.509	48.25	29.20	n.a.
Total:			**0.383**	**1.744**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 19:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

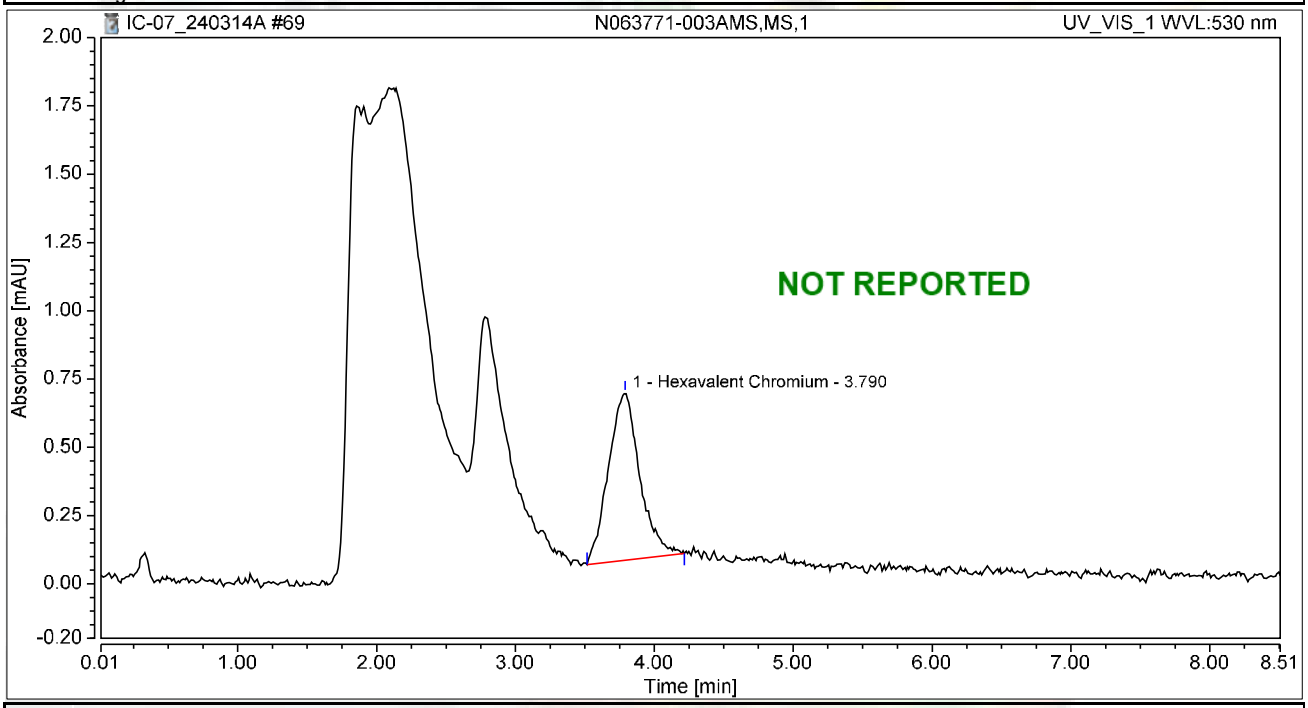
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-003AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 19:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

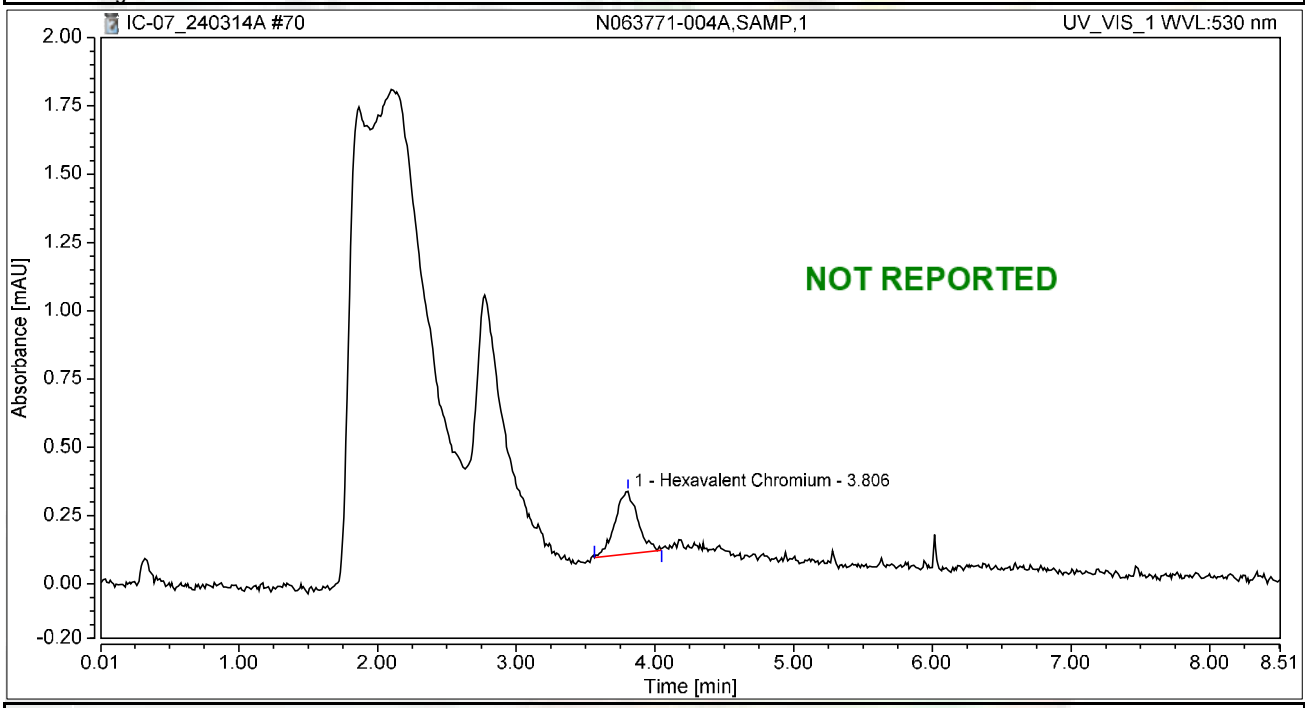
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.160	0.612	100.00	100.00	0.7511
Total:			**0.160**	**0.612**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 19:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

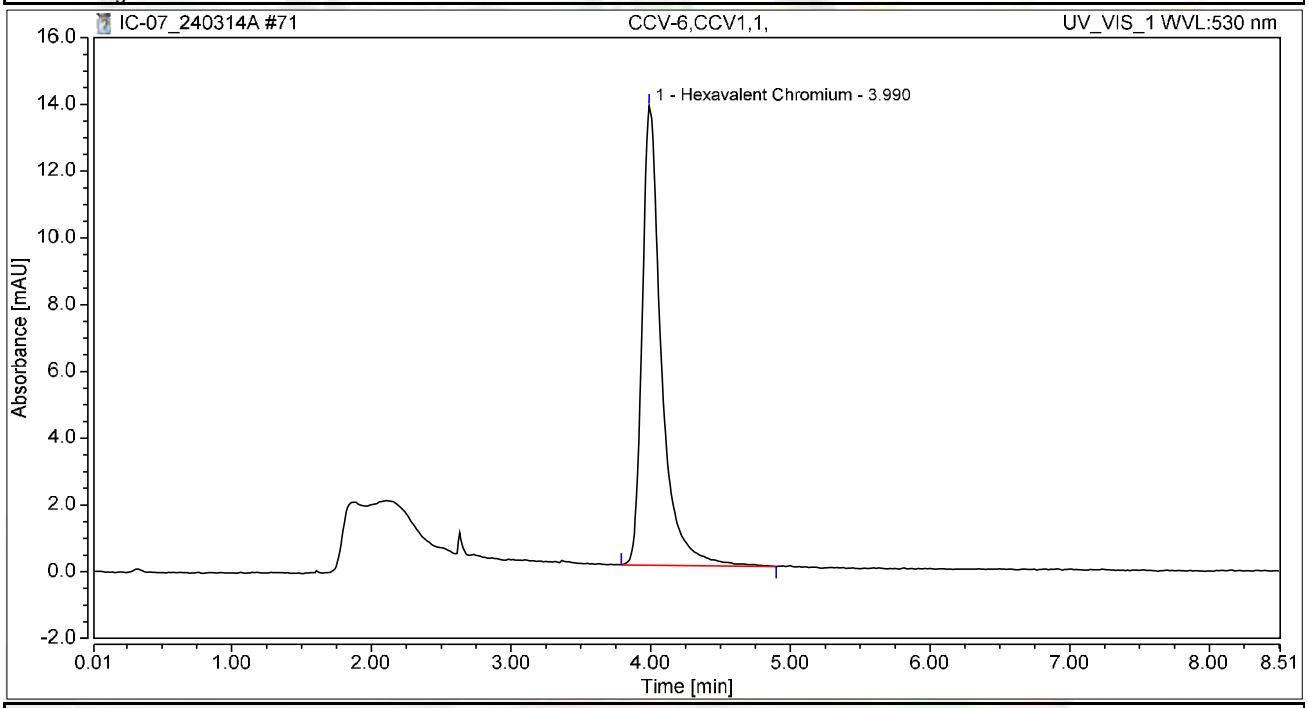
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.806	0.043	0.228	100.00	100.00	0.2041
Total:			**0.043**	**0.228**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 20:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

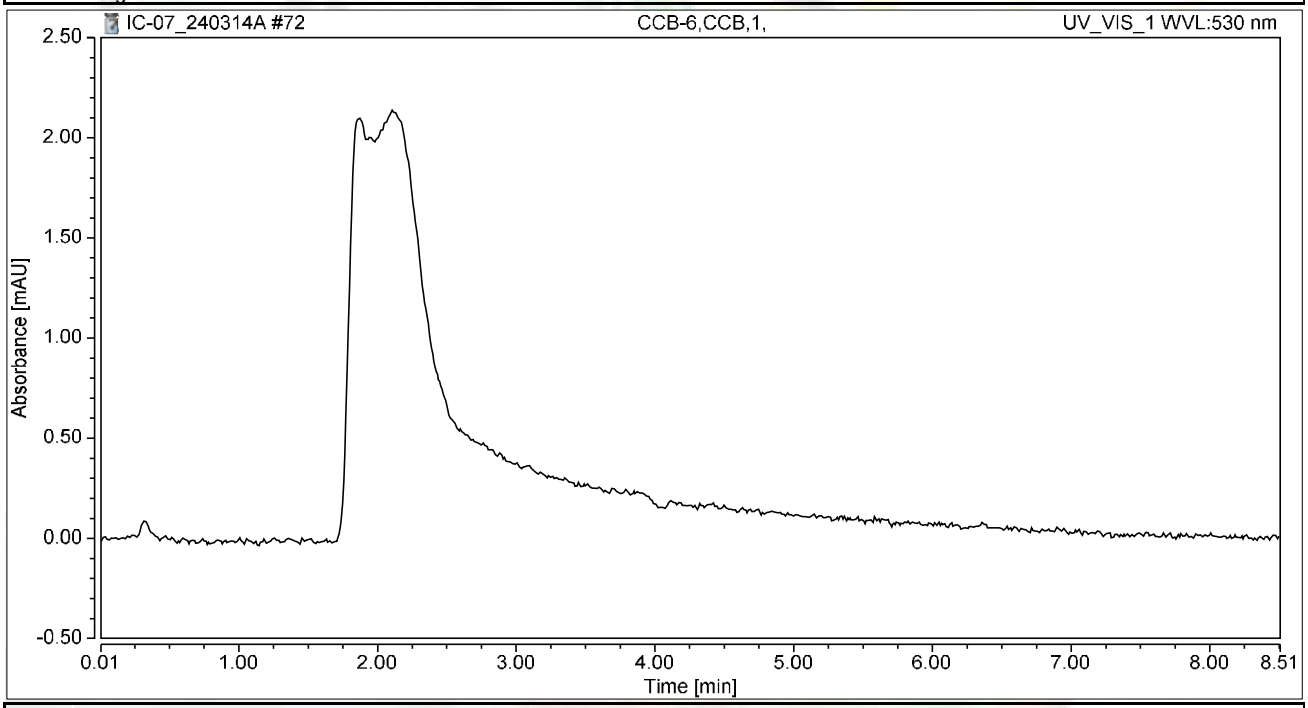
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	2.210	13.763	100.00	100.00	10.3837
Total:			**2.210**	**13.763**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 20:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

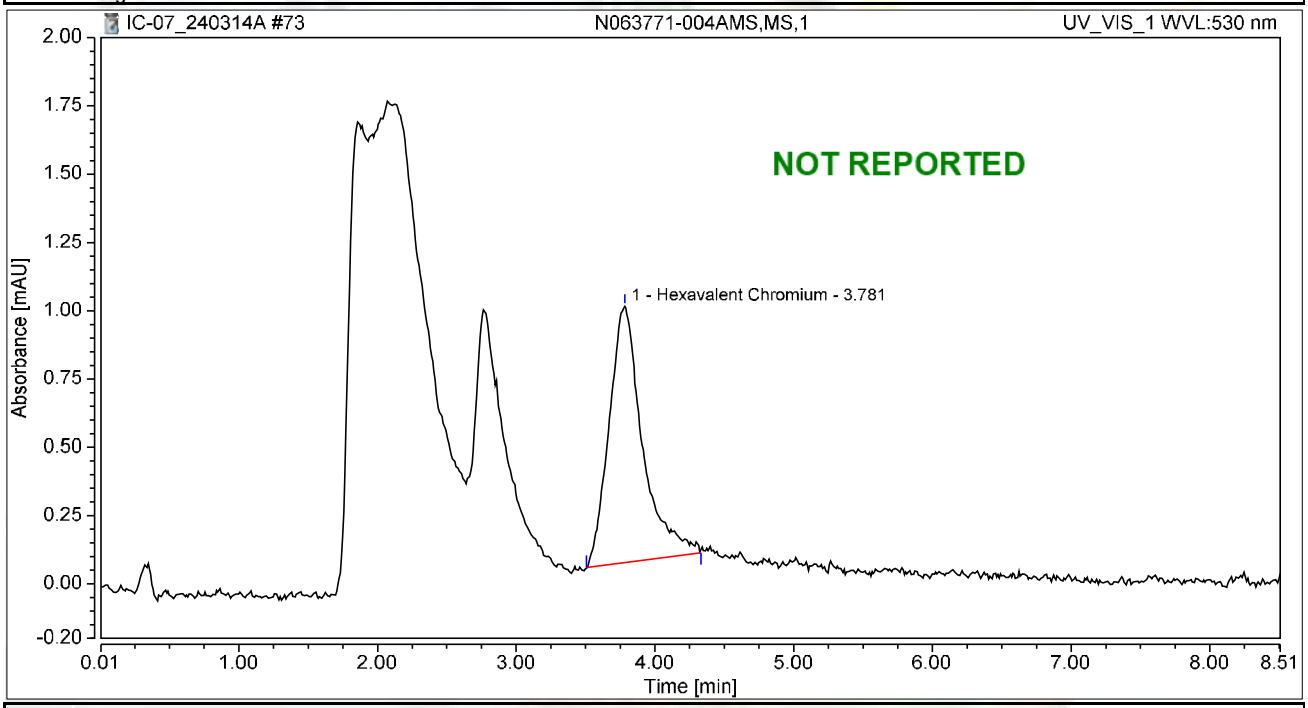
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 20:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

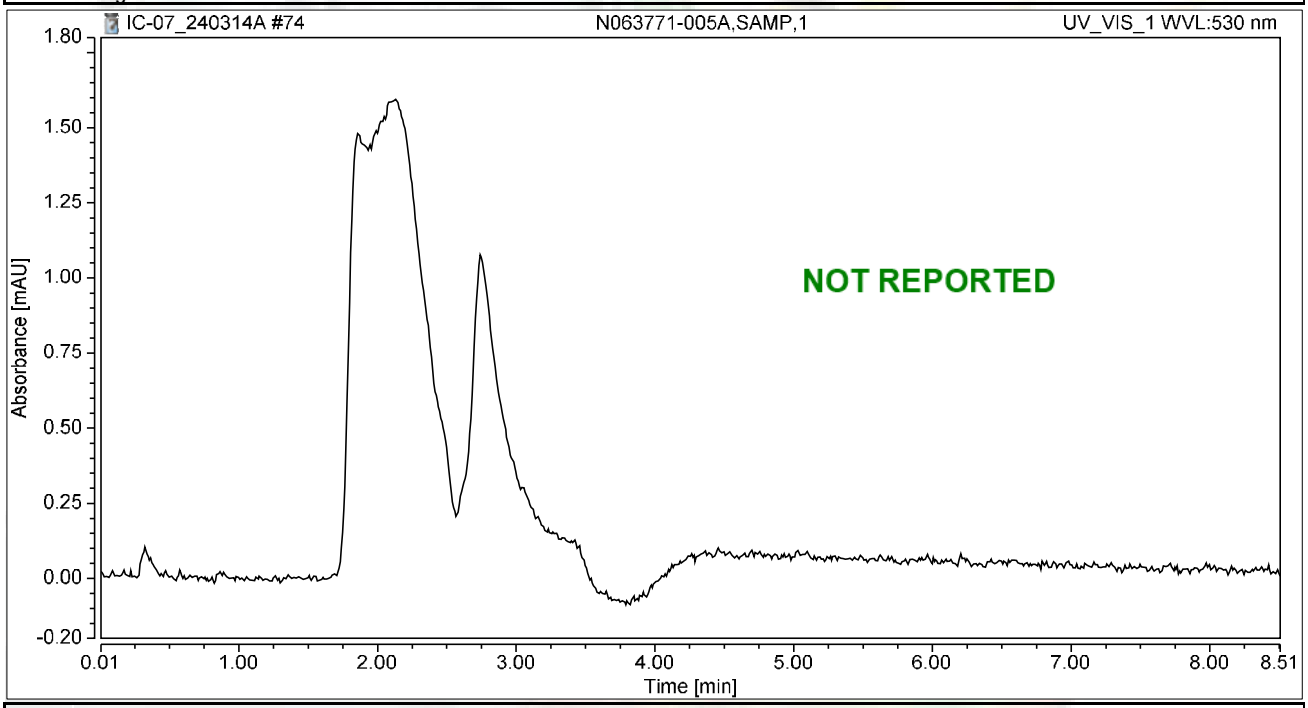
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.781	0.262	0.938	100.00	100.00	1.2302
Total:			**0.262**	**0.938**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 20:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

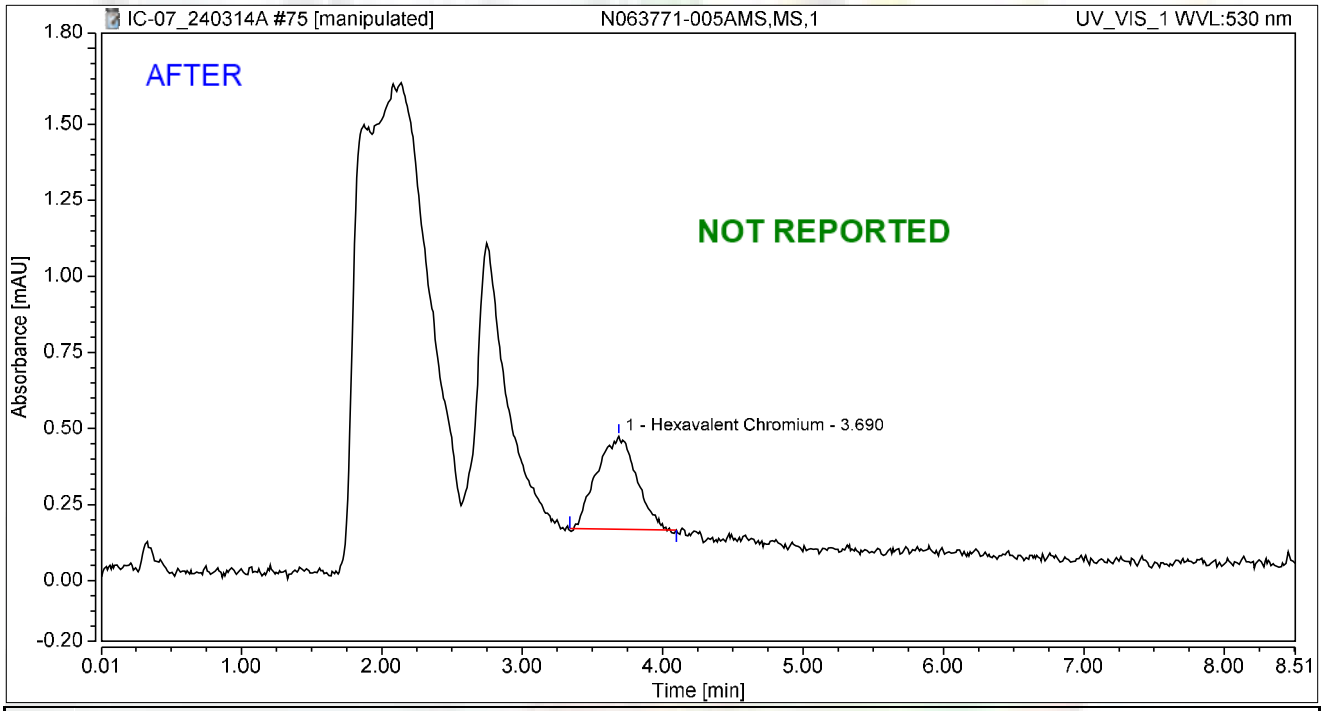
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 20:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.690	0.100	0.306	100.00	100.00	0.4690
Total:			**0.100**	**0.306**	**100.00**	**100.00**	

Reviewed by:

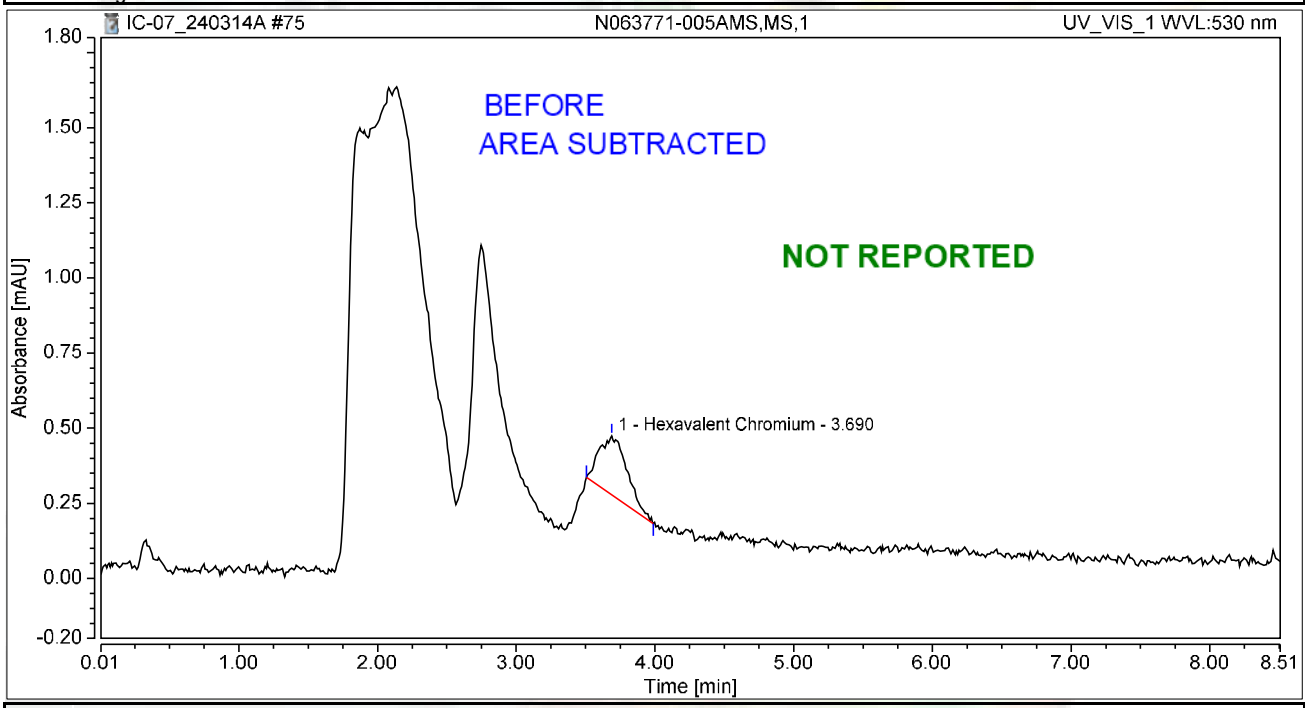
dMocha 3/22/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063771-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 20:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

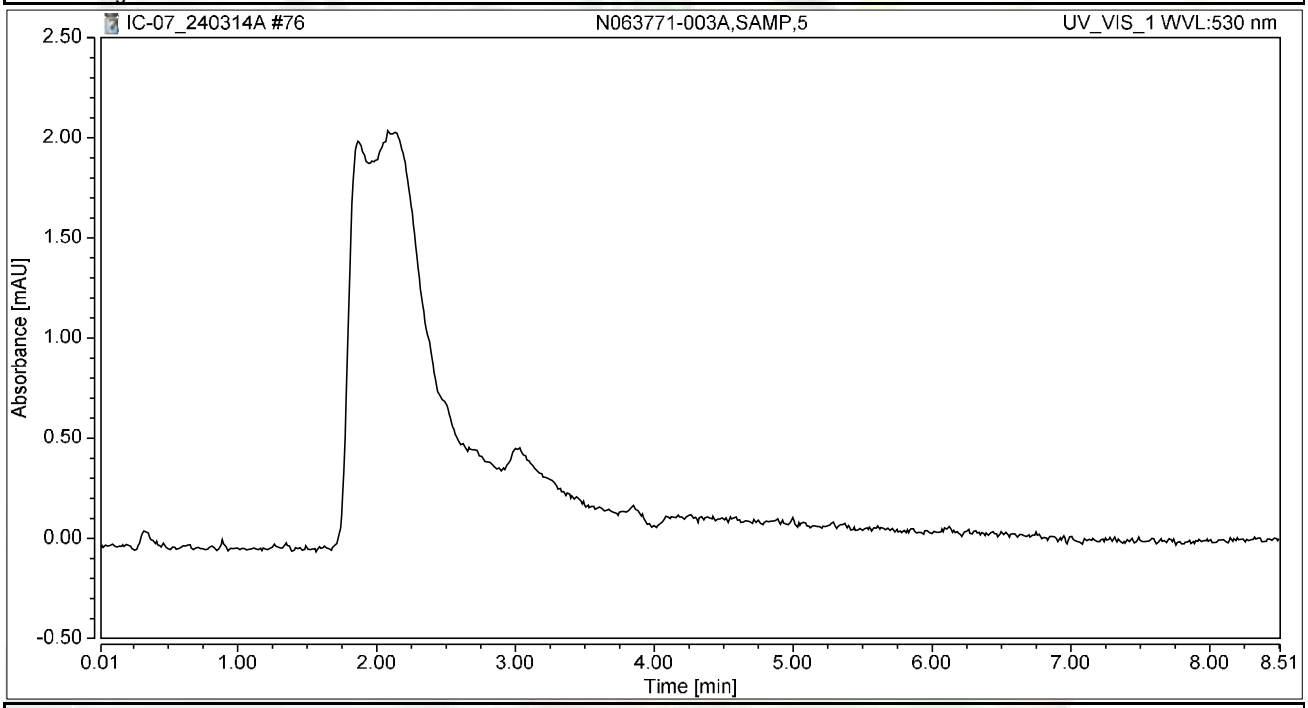
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.690	0.046	0.197	100.00	100.00	0.2171
Total:			**0.046**	**0.197**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-003A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 20:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

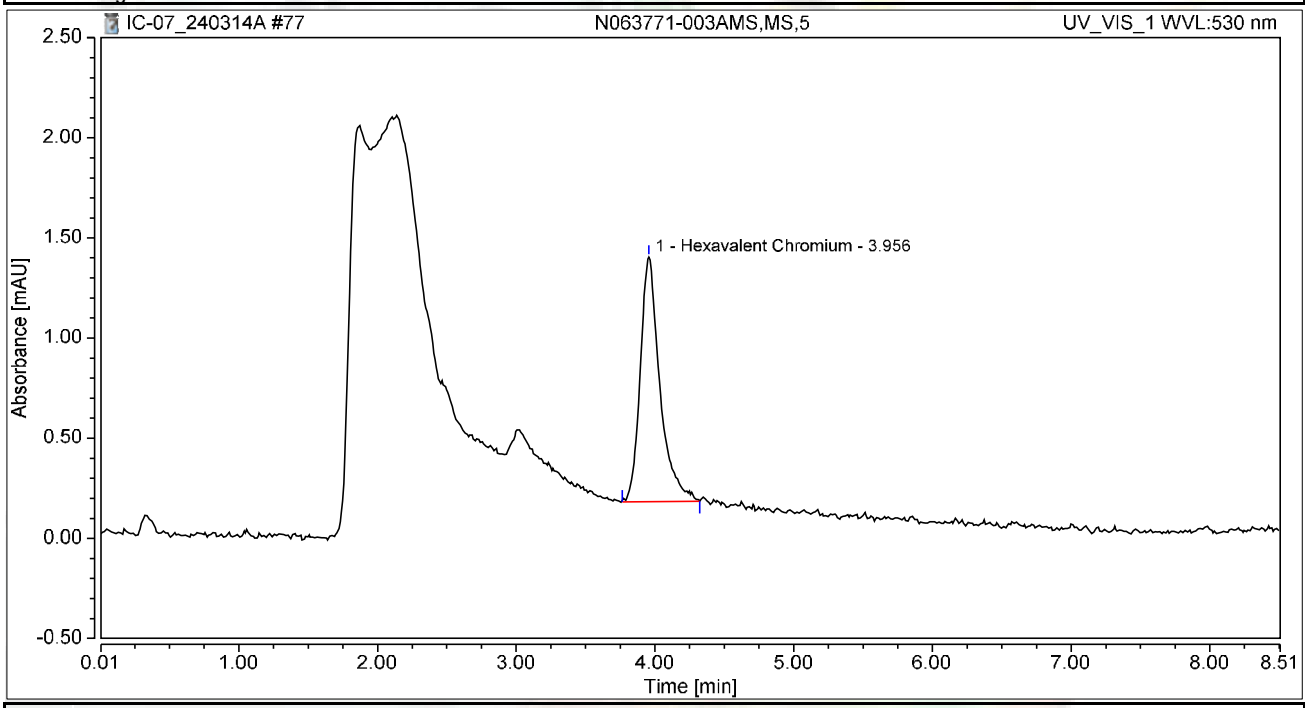
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 20:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

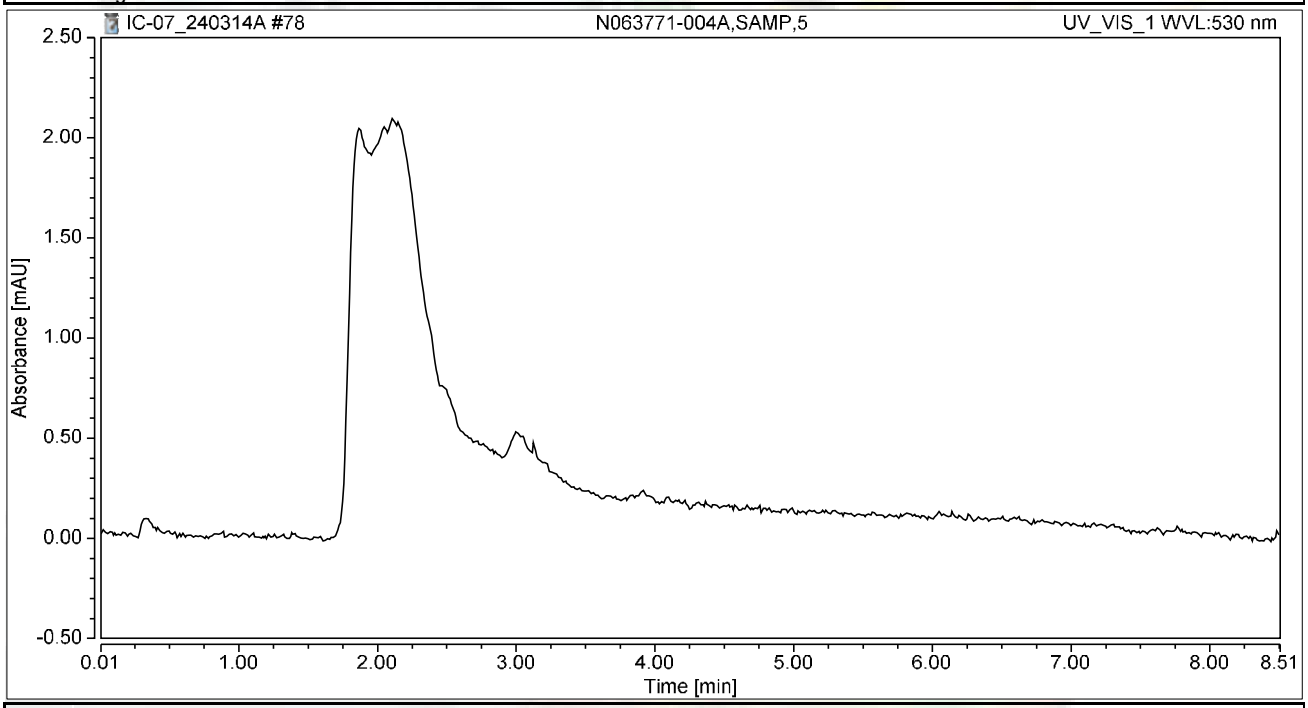
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.200	1.220	100.00	100.00	0.9407
Total:			**0.200**	**1.220**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-004A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 21:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

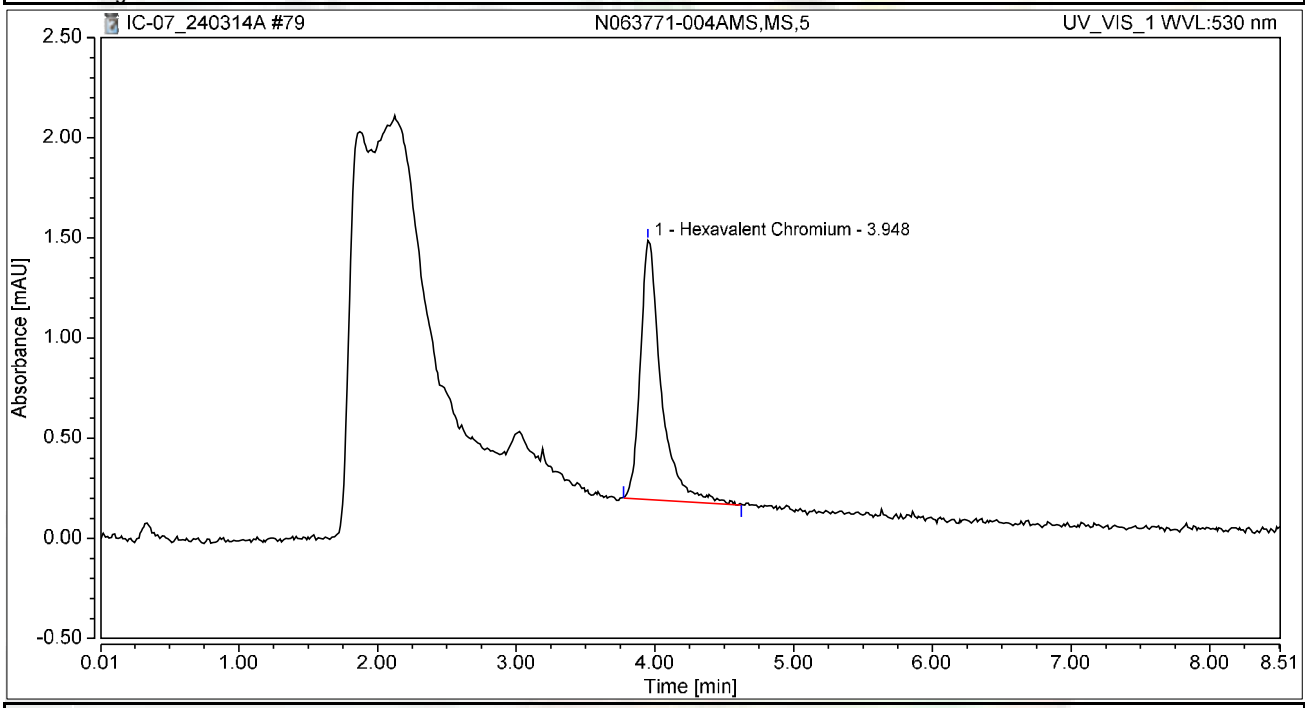
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-004AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 21:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

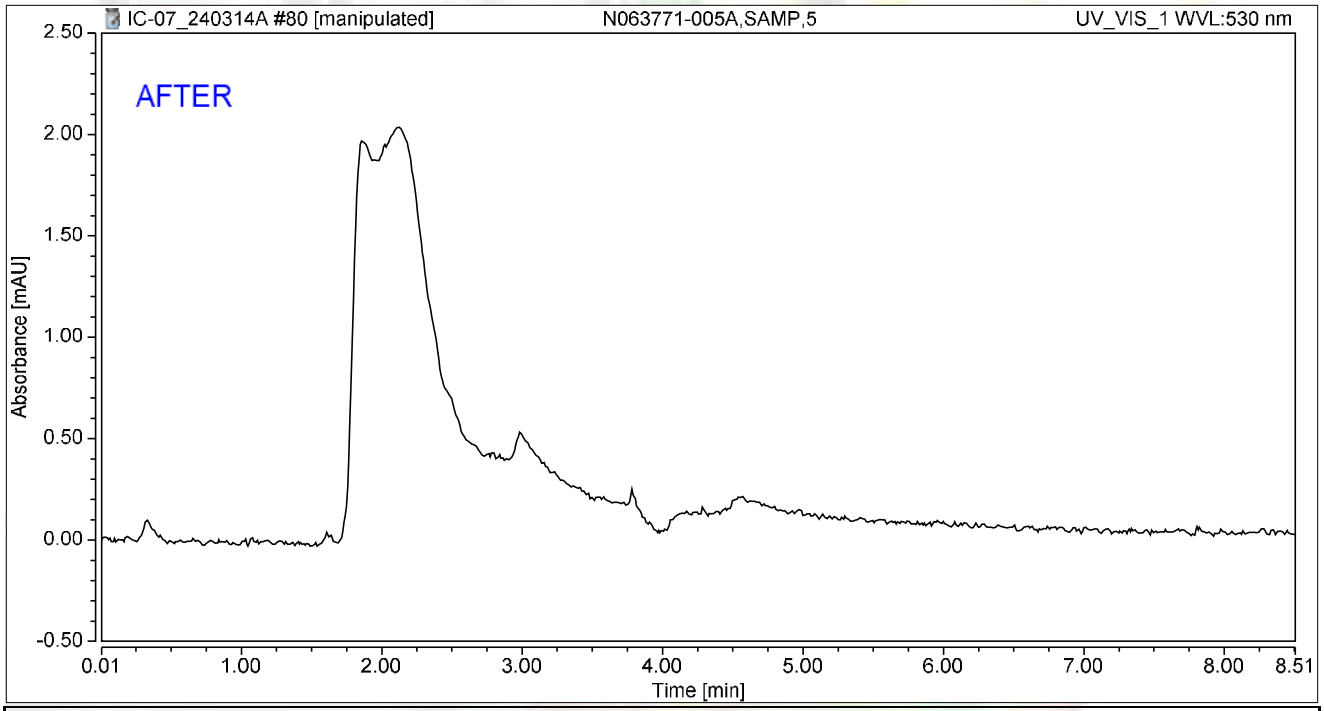
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.225	1.293	100.00	100.00	1.0585
Total:			**0.225**	**1.293**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 21:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Reviewed by:

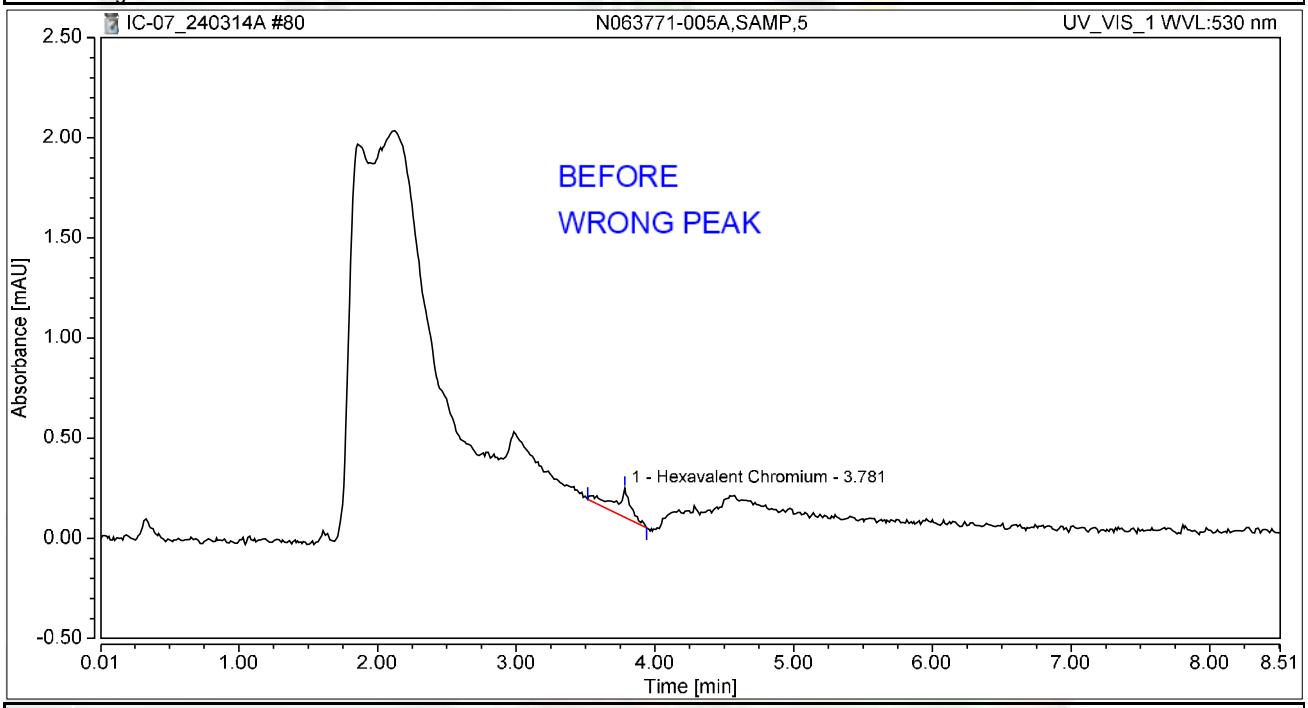
dMocha 3/22/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063771-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 21:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

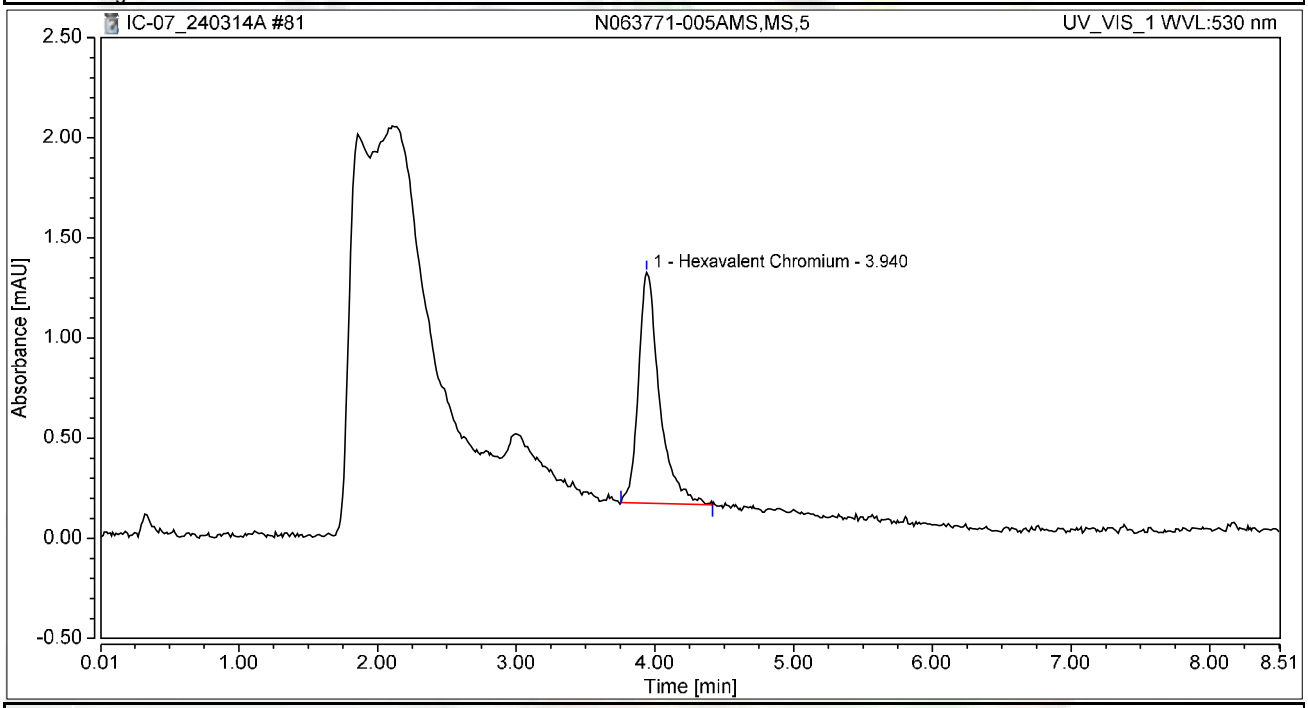
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.781	0.019	0.146	100.00	100.00	0.0905
Total:			**0.019**	**0.146**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-005AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 21:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

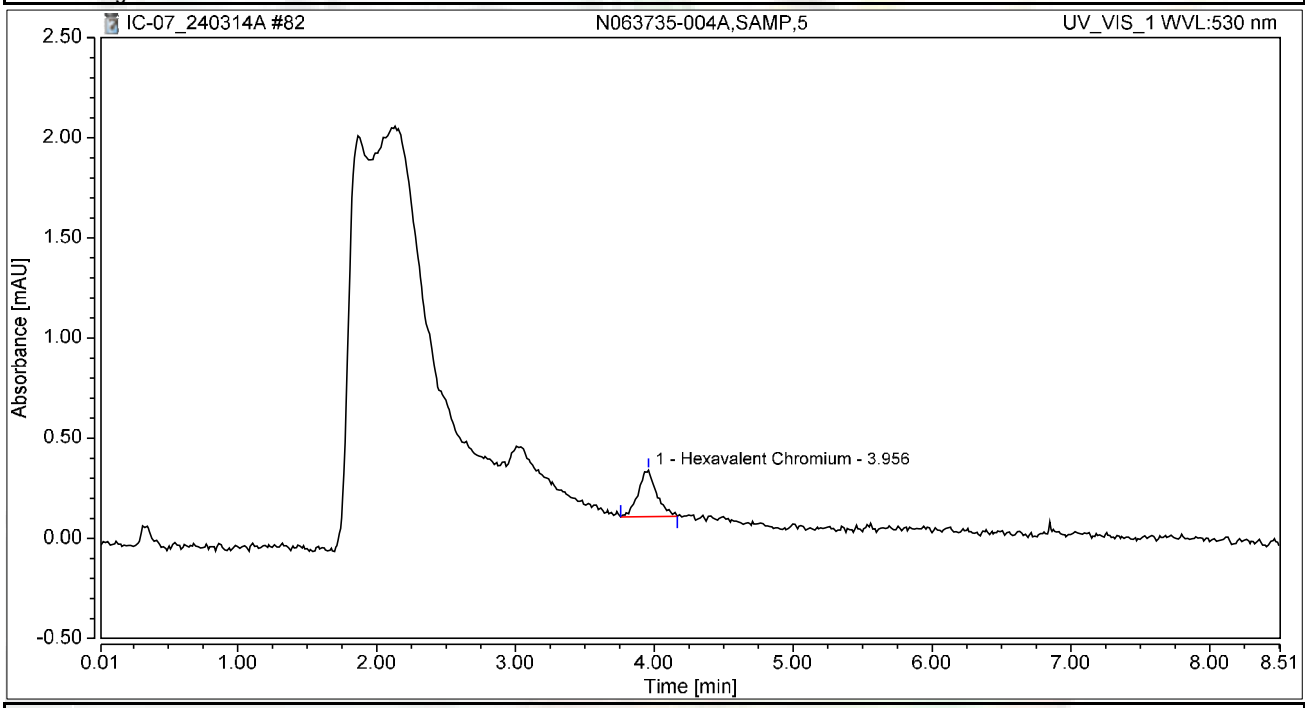
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.202	1.152	100.00	100.00	0.9497
Total:			**0.202**	**1.152**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-004A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 21:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

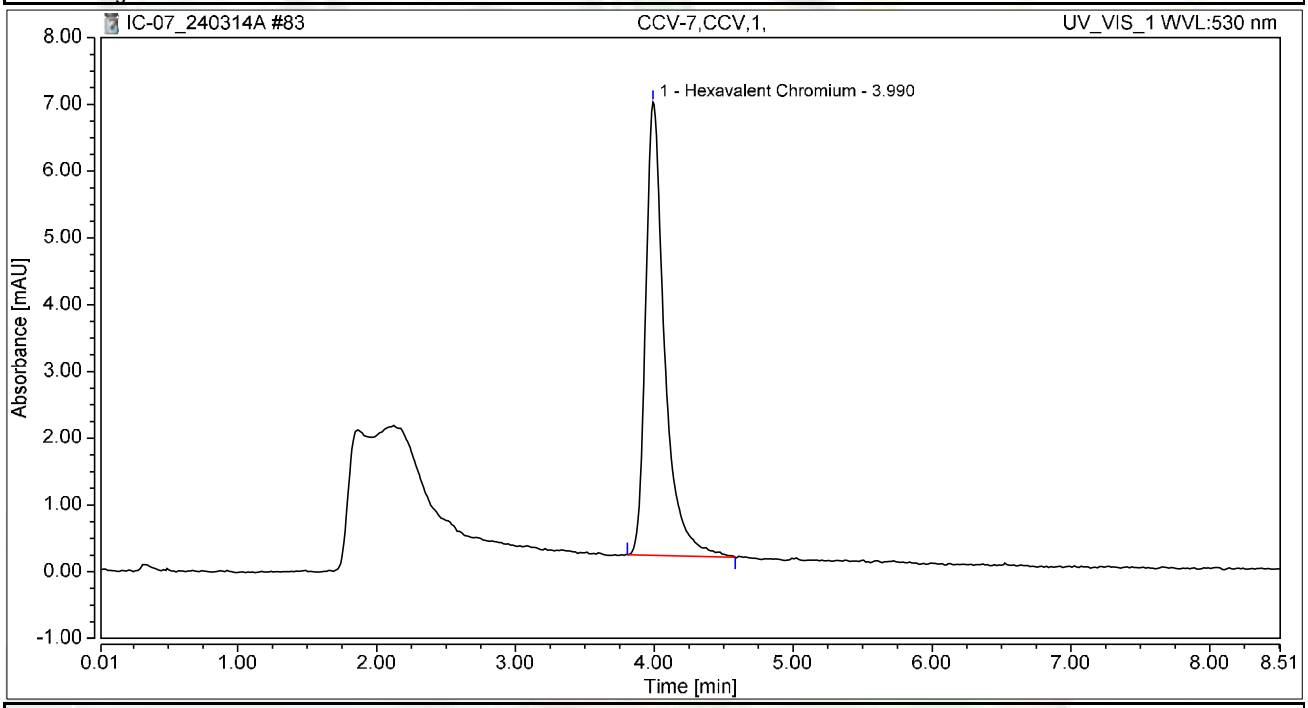
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.036	0.232	100.00	100.00	0.1687
Total:			**0.036**	**0.232**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 21:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

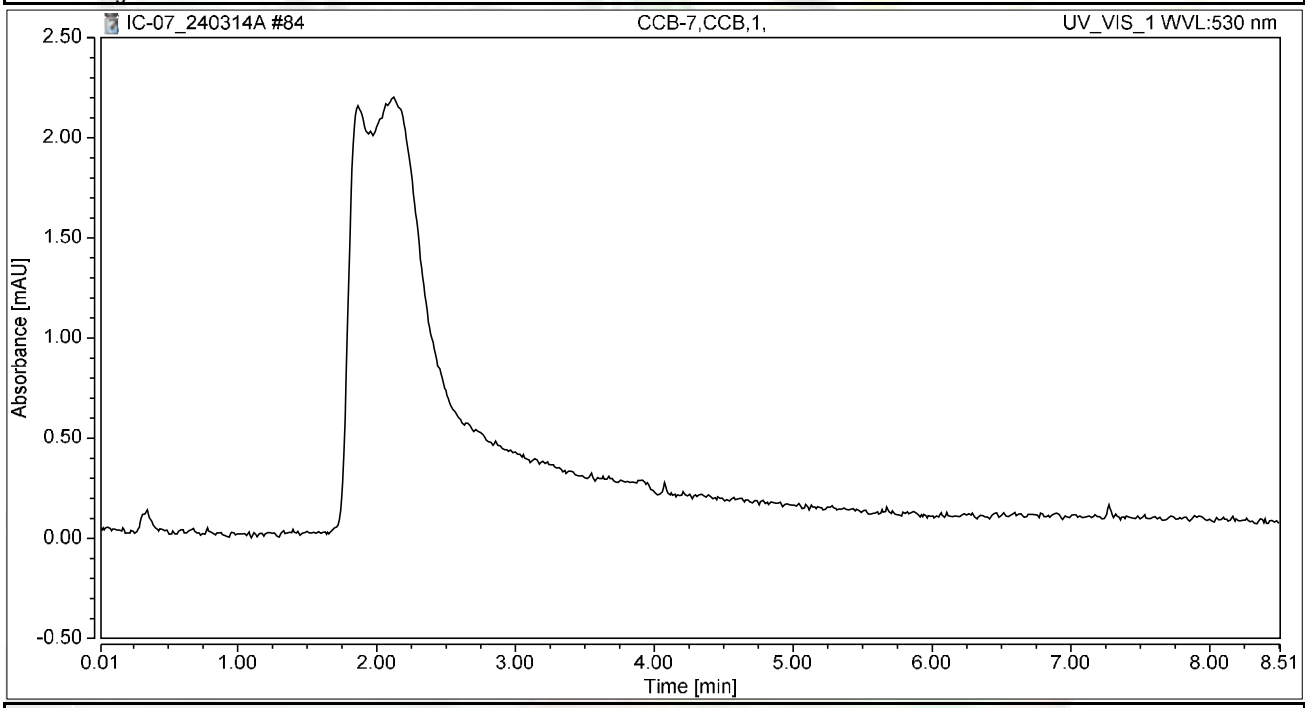
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	1.078	6.787	100.00	100.00	5.0653
Total:			**1.078**	**6.787**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 22:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

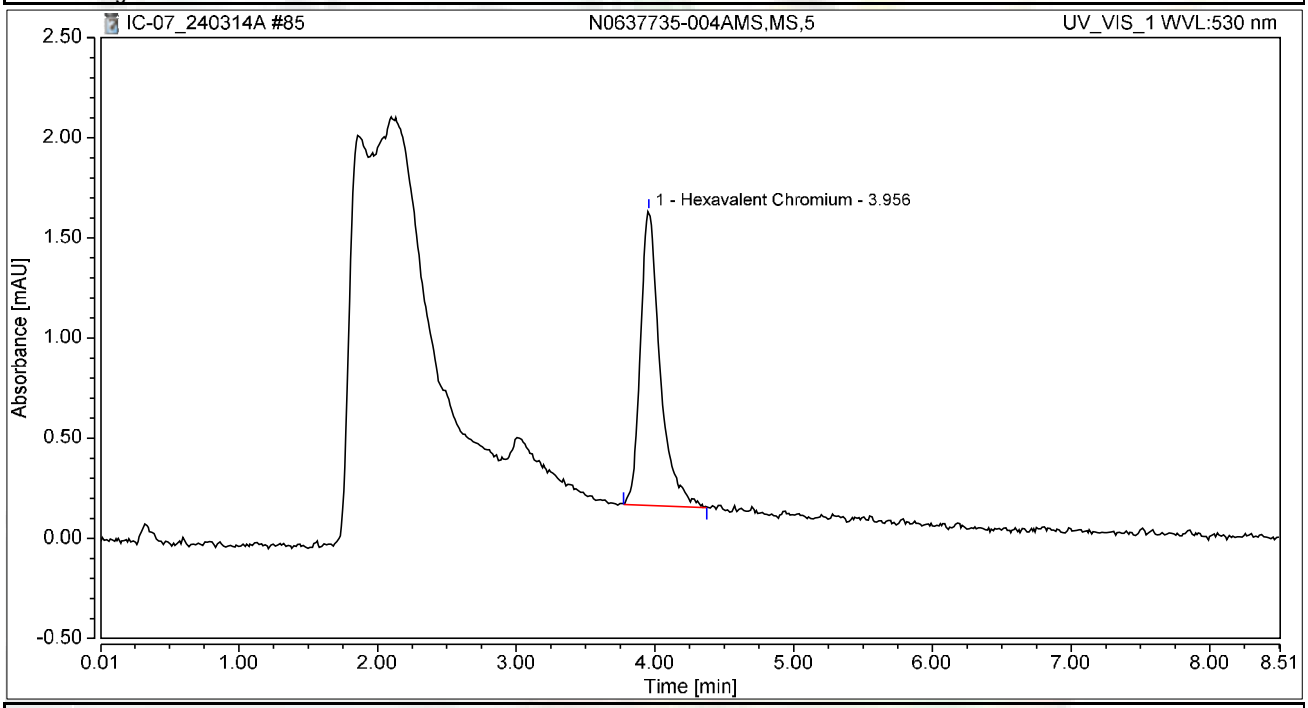
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N0637735-004AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**44**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 22:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

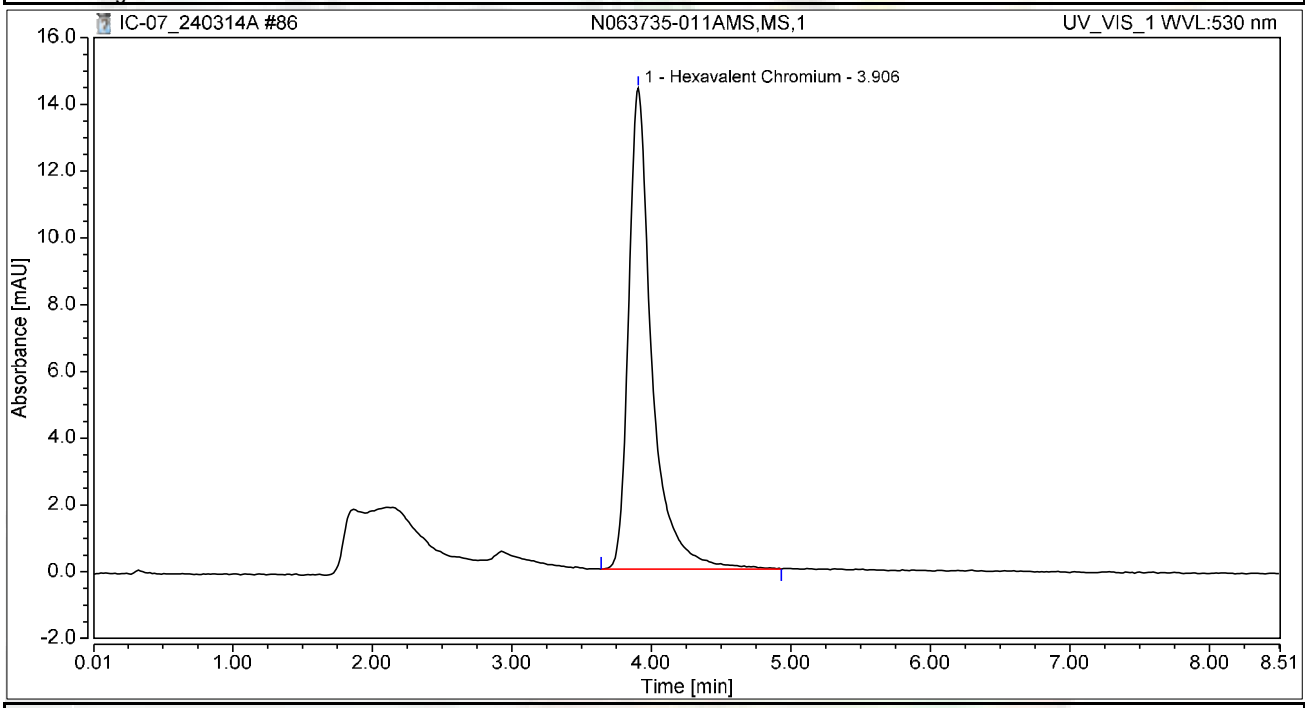
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.241	1.469	100.00	100.00	1.1337
Total:			**0.241**	**1.469**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**45**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 22:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

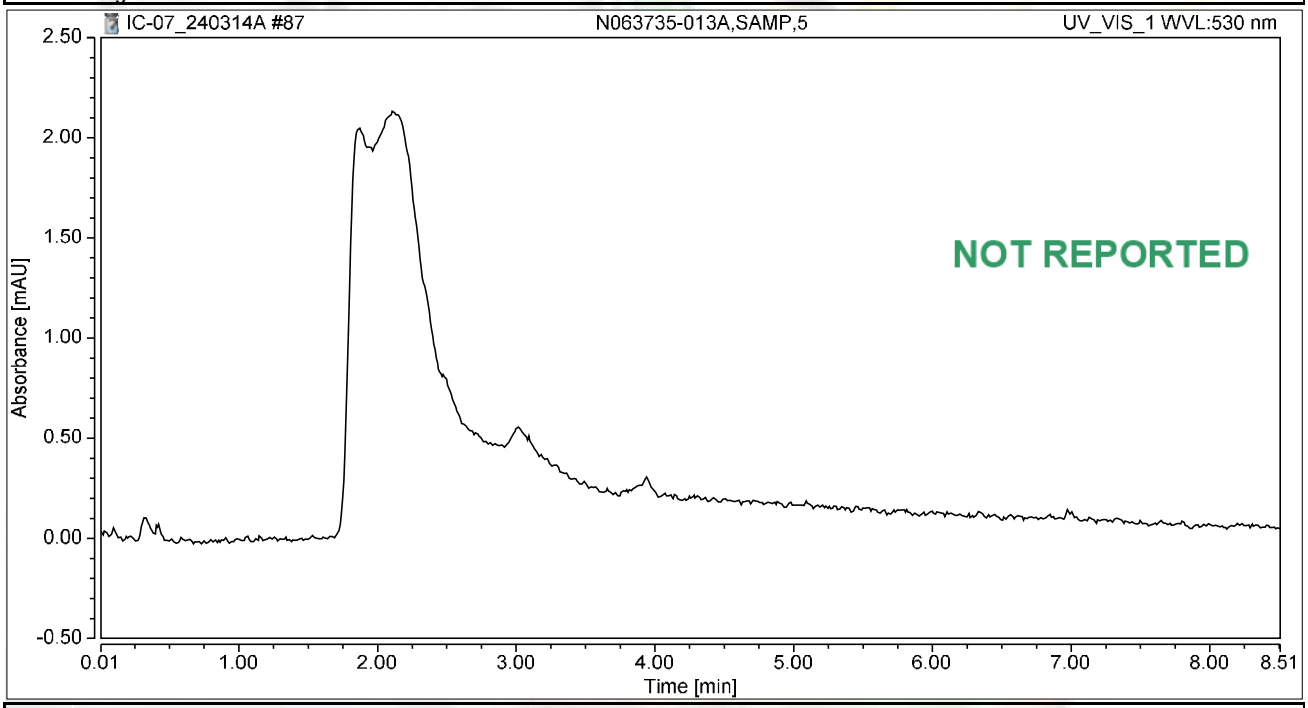
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.906	2.783	14.403	100.00	100.00	13.0754
Total:			**2.783**	**14.403**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-013A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**46**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 22:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

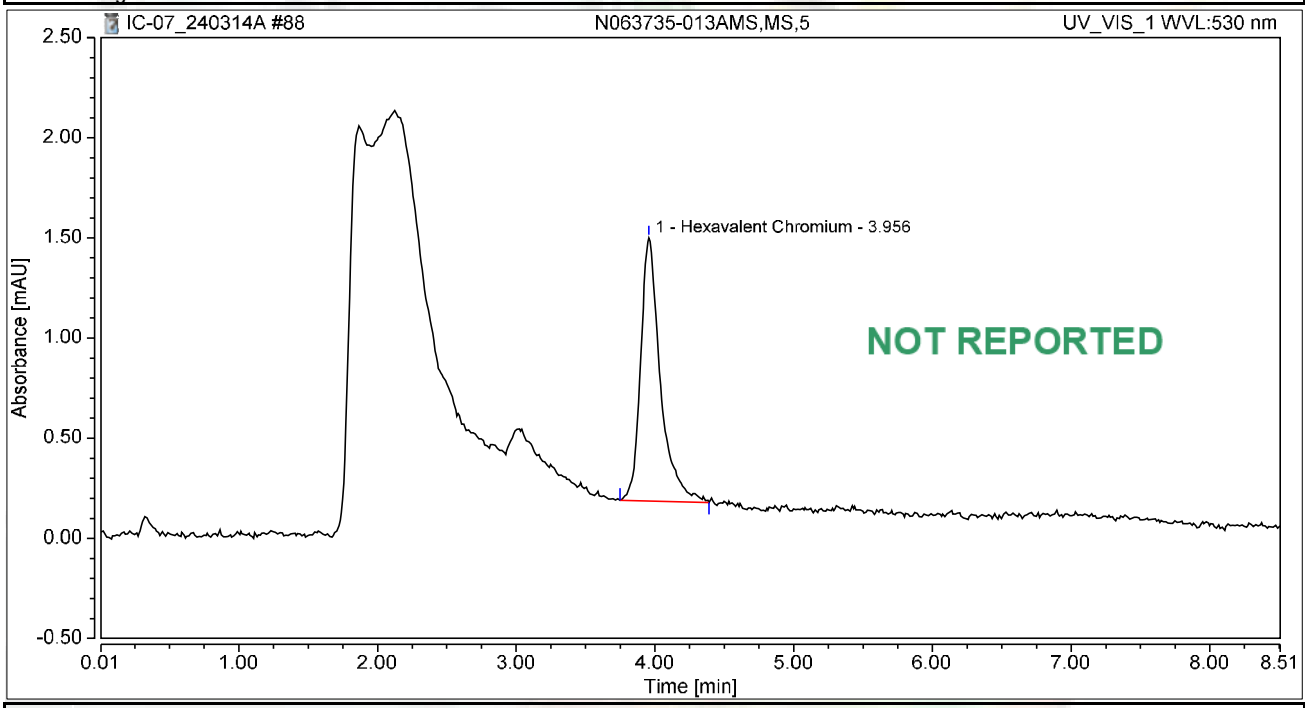
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-013AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**47**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 22:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

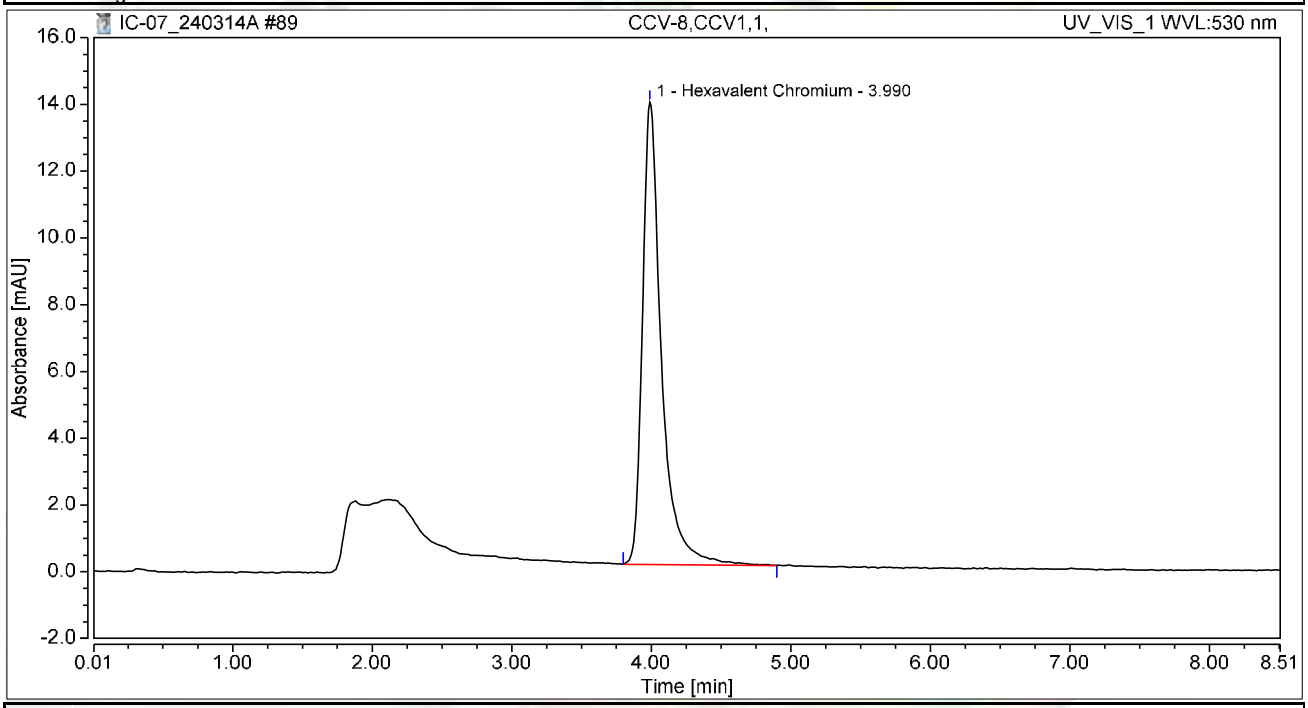
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.217	1.313	100.00	100.00	1.0173
Total:			**0.217**	**1.313**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-8,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**48**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 22:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

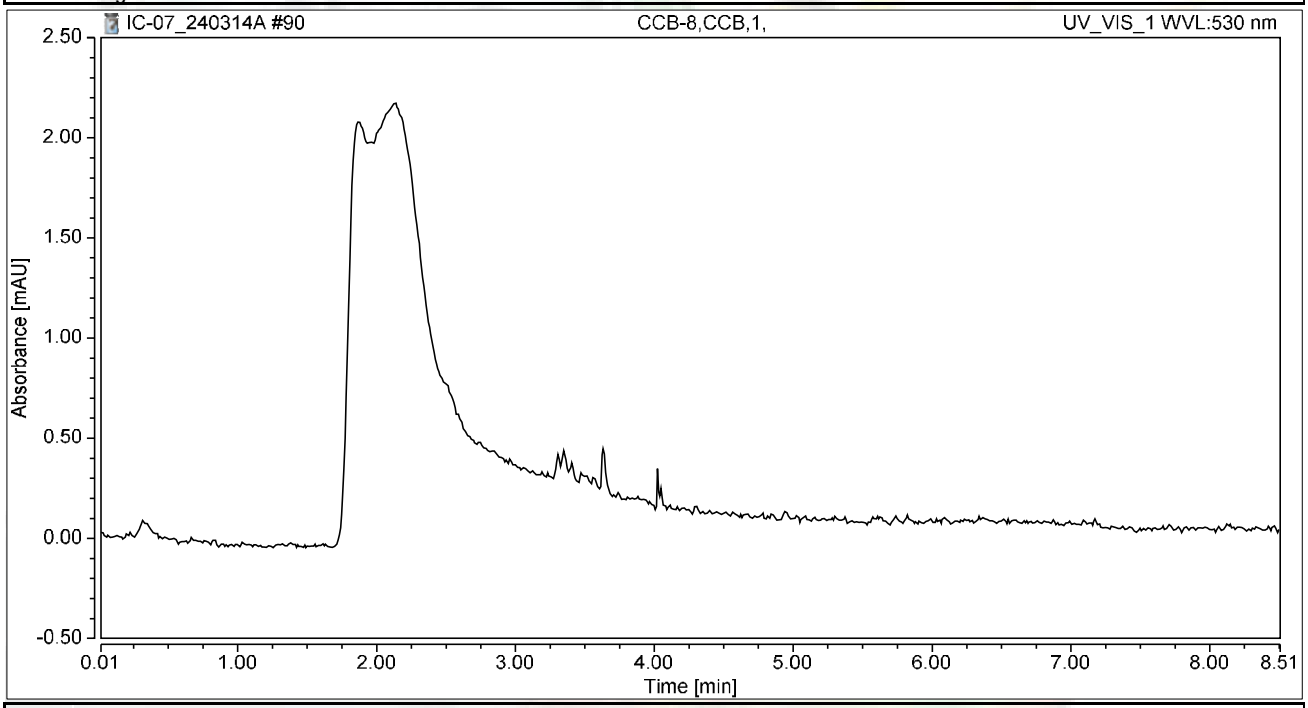
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	2.186	13.849	100.00	100.00	10.2699
Total:			**2.186**	**13.849**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-8,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**49**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 23:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240315A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/15/24 9:39 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/15/24 9:53 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/15/24 10:02 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/15/24 10:11 AM	Reported
13	MB-R183690	MBLK	1	Hexavalent Chromium	03/15/24 10:21 AM	Reported
14	LCS-R183690	LCS	1	Hexavalent Chromium	03/15/24 10:30 AM	Reported
15	N063735-012A	SAMP	1	Hexavalent Chromium	03/15/24 10:55 AM	Reported
16	N063735-012AMS	MS	1	Hexavalent Chromium	03/15/24 11:07 AM	Reported
17	N063771-001A	SAMP	1	Hexavalent Chromium	03/15/24 11:17 AM	Not Reported
18	N063771-001AMS	MS	1	Hexavalent Chromium	03/15/24 11:26 AM	Not Reported
19	N063771-001A	SAMP	5	Hexavalent Chromium	03/15/24 11:57 AM	Reported
20	N063771-001AMS	MS	5	Hexavalent Chromium	03/15/24 12:09 PM	Reported
21	N063771-002A	SAMP	1	Hexavalent Chromium	03/15/24 12:19 PM	Not Reported
22	N063771-002AMS	MS	1	Hexavalent Chromium	03/15/24 12:28 PM	Not Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/15/24 12:37 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/15/24 12:47 PM	Reported
25	N063771-014A	SAMP	5	Hexavalent Chromium	03/15/24 12:56 PM	Reported
26	N063771-014AMS	MS	5	Hexavalent Chromium	03/15/24 1:06 PM	Reported
27	N063771-015A	SAMP	5	Hexavalent Chromium	03/15/24 1:15 PM	Reported
28	N063771-015AMS	MS	5	Hexavalent Chromium	03/15/24 1:25 PM	Reported
29	N063771-018A	SAMP	5	Hexavalent Chromium	03/15/24 1:34 PM	Reported
30	N063771-018AMS	MS	5	Hexavalent Chromium	03/15/24 1:44 PM	Reported
31	N063771-010A	SAMP	1	Hexavalent Chromium	03/15/24 1:53 PM	Not Reported
32	N063771-010AMS	MS	1	Hexavalent Chromium	03/15/24 2:03 PM	Not Reported
33	N063771-014ADUP	DUP	5	Hexavalent Chromium	03/15/24 2:12 PM	Reported
34	N063771-014AMSD	MSD	5	Hexavalent Chromium	03/15/24 2:22 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	03/15/24 2:31 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	03/15/24 2:40 PM	Reported
37	N063771-012A	SAMP	1	Hexavalent Chromium	03/15/24 2:50 PM	Not Reported
38	N063771-012AMS	MS	1	Hexavalent Chromium	03/15/24 2:59 PM	Not Reported
39	N063771-013A	SAMP	1	Hexavalent Chromium	03/15/24 3:09 PM	Not Reported
40	N063771-013AMS	MS	1	Hexavalent Chromium	03/15/24 3:18 PM	Not Reported
41	N063771-006A	SAMP	1	Hexavalent Chromium	03/15/24 3:28 PM	Not Reported
42	N063771-006AMS	MS	1	Hexavalent Chromium	03/15/24 3:37 PM	Not Reported

INJECTION LOG: 240315A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063771-007A	SAMP	1	Hexavalent Chromium	03/15/24 3:47 PM	Not Reported
44	N063771-007AMS	MS	1	Hexavalent Chromium	03/15/24 4:02 PM	Not Reported
45	N063771-009A	SAMP	1	Hexavalent Chromium	03/15/24 4:14 PM	Not Reported
46	N063771-009AMS	MS	1	Hexavalent Chromium	03/15/24 4:23 PM	Not Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	03/15/24 4:33 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	03/15/24 4:42 PM	Reported
49	N063771-008A	SAMP	1	Hexavalent Chromium	03/15/24 4:52 PM	Reported
50	N063771-008AMS	MS	1	Hexavalent Chromium	03/15/24 5:01 PM	Reported
51	N063771-016A	SAMP	1	Hexavalent Chromium	03/15/24 5:11 PM	Not Reported
52	N063771-016AMS	MS	1	Hexavalent Chromium	03/15/24 5:20 PM	Not Reported
53	N063771-017A	SAMP	1	Hexavalent Chromium	03/15/24 5:29 PM	Not Reported
54	N063771-017AMS	MS	1	Hexavalent Chromium	03/15/24 5:39 PM	Not Reported
55	N063771-019A	SAMP	1	Hexavalent Chromium	03/15/24 5:48 PM	Reported
56	N063771-019AMS	MS	1	Hexavalent Chromium	03/15/24 5:58 PM	Reported
57	N063771-011A	SAMP	1	Hexavalent Chromium	03/15/24 6:08 PM	Not Reported
58	N063771-011AMS	MS	1	Hexavalent Chromium	03/15/24 6:17 PM	Not Reported
59	CCV-5	CCV	1	Hexavalent Chromium	03/15/24 6:26 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	03/15/24 6:36 PM	Reported
61	N063771-002A	SAMP	5	Hexavalent Chromium	03/15/24 6:45 PM	Reported
62	N063771-002AMS	MS	5	Hexavalent Chromium	03/15/24 6:55 PM	Reported
63	N063812-006A	SAMP	1	Hexavalent Chromium	03/15/24 7:04 PM	Reported
64	N063812-006AMS	MS	1	Hexavalent Chromium	03/15/24 7:14 PM	Reported
65	N063812-008A	SAMP	1	Hexavalent Chromium	03/15/24 7:23 PM	Reported
66	N063812-008AMS	MS	1	Hexavalent Chromium	03/15/24 7:32 PM	Reported
67	N063812-017A	SAMP	1	Hexavalent Chromium	03/15/24 7:42 PM	Reported
68	N063812-017AMS	MS	1	Hexavalent Chromium	03/15/24 7:51 PM	Reported
69	N063771-010A	SAMP	5	Hexavalent Chromium	03/15/24 8:01 PM	Reported
70	N063771-010AMS	MS	5	Hexavalent Chromium	03/15/24 8:10 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	03/15/24 8:20 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	03/15/24 8:29 PM	Reported
73	N063771-012A	SAMP	5	Hexavalent Chromium	03/15/24 8:39 PM	Reported
74	N063771-012AMS	MS	5	Hexavalent Chromium	03/15/24 8:48 PM	Reported
75	N063771-013A	SAMP	5	Hexavalent Chromium	03/15/24 8:58 PM	Not Reported
76	N063771-013AMS	MS	5	Hexavalent Chromium	03/15/24 9:07 PM	Not Reported
77	N063771-006A	SAMP	5	Hexavalent Chromium	03/15/24 9:16 PM	Reported
78	N063771-006AMS	MS	5	Hexavalent Chromium	03/15/24 9:26 PM	Reported
79	N063771-007A	SAMP	5	Hexavalent Chromium	03/15/24 9:35 PM	Reported
80	N063771-007AMS	MS	5	Hexavalent Chromium	03/15/24 9:45 PM	Reported
81	N063771-009A	SAMP	5	Hexavalent Chromium	03/15/24 9:54 PM	Reported
82	N063771-009AMS	MS	5	Hexavalent Chromium	03/15/24 10:04 PM	Reported
83	CCV-7	CCV	1	Hexavalent Chromium	03/15/24 10:13 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	03/15/24 10:23 PM	Reported

dMocha 4/2/2024
for RBA **236**

INJECTION LOG: 240315A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	BLANK	BLANK	1	Hexavalent Chromium	03/15/24 10:32 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240315A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**15/Mar/24 23:02:54**
No. of Injections:	**88**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/15/2024 09:39	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/15/2024 09:53	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/15/2024 10:02	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/15/2024 10:11	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/15/2024 10:21	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/15/2024 10:30	Finished	LCS @5ppb, IWST-231228B
15	N063735-012A,SAMP	1	1000	Unknown		03/15/2024 10:55	Finished	SAMP,10 mL
16	N063735-012AMS,MS	2	1000	Unknown		03/15/2024 11:07	Finished	MS (1ppb), IWST-231228B,10r
17	N063771-001A,SAMP	3	1000	Unknown		03/15/2024 11:17	Finished	SAMP,10 mL
18	N063771-001AMS,MS	4	1000	Unknown		03/15/2024 11:26	Finished	MS (5ppb), IWST-231228B,10r
19	N063771-001A,SAMP	1	1000	Unknown		03/15/2024 11:57	Finished	SAMP,2>10 mL
20	N063771-001AMS,MS	2	1000	Unknown		03/15/2024 12:09	Finished	MS (1ppb), IWST-231228B,2>1
21	N063771-002A,SAMP	3	1000	Unknown		03/15/2024 12:19	Finished	SAMP,10 mL
22	N063771-002AMS,MS	4	1000	Unknown		03/15/2024 12:28	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	5	1000	Unknown		03/15/2024 12:37	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	6	1000	Unknown		03/15/2024 12:47	Finished	CCB R240129C
25	N063771-014A,SAMP	7	1000	Unknown		03/15/2024 12:56	Finished	SAMP,2>10 mL
26	N063771-014AMS,MS	8	1000	Unknown		03/15/2024 13:06	Finished	MS (1ppb), IWST-231228B,2>1
27	N063771-015A,SAMP	9	1000	Unknown		03/15/2024 13:15	Finished	SAMP,2>10 mL
28	N063771-015AMS,MS	10	1000	Unknown		03/15/2024 13:25	Finished	MS (1ppb), IWST-231228B,2>1
29	N063771-018A,SAMP	11	1000	Unknown		03/15/2024 13:34	Finished	SAMP,2>10 mL
30	N063771-018AMS,MS	12	1000	Unknown		03/15/2024 13:44	Finished	MS (1ppb), IWST-231228B,2>1
31	N063771-010A,SAMP	13	1000	Unknown		03/15/2024 13:53	Finished	SAMP,10 mL
32	N063771-010AMS,MS	14	1000	Unknown		03/15/2024 14:03	Finished	MS (1ppb), IWST-231228B,10r
33	N063771-014ADUP,D	15	1000	Unknown		03/15/2024 14:12	Finished	DUP,2>10 mL
34	N063771-014AMSD,M	16	1000	Unknown		03/15/2024 14:22	Finished	MSD (5ppb), IWST-231228B,2
35	CCV-3,CCV,1,	17	1000	Unknown		03/15/2024 14:31	Finished	CCV @10ppb, IWST-231228A
36	CCB-3,CCB,1,	18	1000	Unknown		03/15/2024 14:40	Finished	CCB R240129C
37	N063771-012A,SAMP	19	1000	Unknown		03/15/2024 14:50	Finished	SAMP,10 mL
38	N063771-012AMS,MS	20	1000	Unknown		03/15/2024 14:59	Finished	MS (1ppb), IWST-231228B,10r
39	N063771-013A,SAMP	21	1000	Unknown		03/15/2024 15:09	Finished	SAMP,10 mL
40	N063771-013AMS,MS	22	1000	Unknown		03/15/2024 15:18	Finished	MS (1ppb), IWST-231228B,10r
41	N063771-006A,SAMP	23	1000	Unknown		03/15/2024 15:28	Finished	SAMP,10 mL
42	N063771-006AMS,MS	24	1000	Unknown		03/15/2024 15:37	Finished	MS (1ppb), IWST-231228B,10r
43	N063771-007A,SAMP	25	1000	Unknown		03/15/2024 15:47	Finished	SAMP,10 mL
44	N063771-007AMS,MS	1	1000	Unknown		03/15/2024 16:02	Finished	MS (1ppb), IWST-231228B,10r
45	N063771-009A,SAMP	2	1000	Unknown		03/15/2024 16:14	Finished	SAMP,10 mL
46	N063771-009AMS,MS	3	1000	Unknown		03/15/2024 16:23	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	4	1000	Unknown		03/15/2024 16:33	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	5	1000	Unknown		03/15/2024 16:42	Finished	CCB R240129C
49	N063771-008A,SAMP	6	1000	Unknown		03/15/2024 16:52	Finished	SAMP,10 mL
50	N063771-008AMS,MS	7	1000	Unknown		03/15/2024 17:01	Finished	MS (1ppb), IWST-231228B,10r
51	N063771-016A,SAMP	8	1000	Unknown		03/15/2024 17:11	Finished	SAMP,10 mL
52	N063771-016AMS,MS	9	1000	Unknown		03/15/2024 17:20	Finished	MS (1ppb), IWST-231228B,10r
53	N063771-017A,SAMP	10	1000	Unknown		03/15/2024 17:29	Finished	SAMP,10 mL
54	N063771-017AMS,MS	11	1000	Unknown		03/15/2024 17:39	Finished	MS (1ppb), IWST-231228B,10r
55	N063771-019A,SAMP	12	1000	Unknown		03/15/2024 17:48	Finished	SAMP,10 mL
56	N063771-019AMS,MS	13	1000	Unknown		03/15/2024 17:58	Finished	MS (1ppb), IWST-231228B,10r
57	N063771-011A,SAMP	14	1000	Unknown		03/15/2024 18:08	Finished	SAMP,10 mL
58	N063771-011AMS,MS	15	1000	Unknown		03/15/2024 18:17	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	16	1000	Unknown		03/15/2024 18:26	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	17	1000	Unknown		03/15/2024 18:36	Finished	CCB R240129C

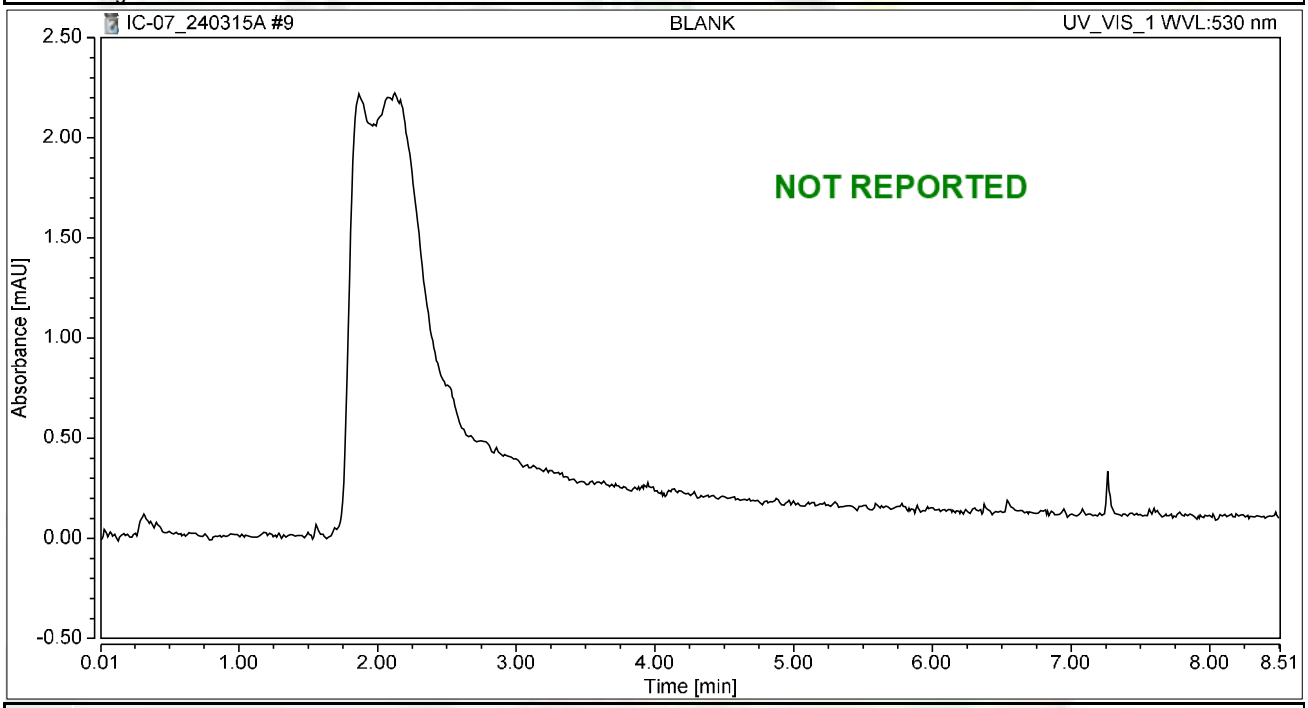
61	N063771-002A,SAMP	18	1000	Unknown		03/15/2024 18:45	Finished	SAMP,2>10 mL
62	N063771-002AMS,MS	19	1000	Unknown		03/15/2024 18:55	Finished	MS (1ppb), IWST-231228B,2>
63	N063812-006A,SAMP	20	1000	Unknown		03/15/2024 19:04	Finished	SAMP,10 mL
64	N063812-006AMS,MS	21	1000	Unknown		03/15/2024 19:14	Finished	MS (1ppb), IWST-231228B,10r
65	N063812-008A,SAMP	22	1000	Unknown		03/15/2024 19:23	Finished	SAMP,10 mL
66	N063812-008AMS,MS	23	1000	Unknown		03/15/2024 19:32	Finished	MS (1ppb), IWST-231228B,10r
67	N063812-017A,SAMP	24	1000	Unknown		03/15/2024 19:42	Finished	SAMP,10 mL
68	N063812-017AMS,MS	25	1000	Unknown		03/15/2024 19:51	Finished	MS (1ppb), IWST-231228B,10r
69	N063771-010A,SAMP	26	1000	Unknown		03/15/2024 20:01	Finished	SAMP,2>10 mL
70	N063771-010AMS,MS	27	1000	Unknown		03/15/2024 20:10	Finished	MS (1ppb), IWST-231228B,2>
71	CCV-6,CCV1,1,	28	1000	Unknown		03/15/2024 20:20	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	29	1000	Unknown		03/15/2024 20:29	Finished	CCB R240129C
73	N063771-012A,SAMP	30	1000	Unknown		03/15/2024 20:39	Finished	SAMP,2>10 mL
74	N063771-012AMS,MS	31	1000	Unknown		03/15/2024 20:48	Finished	MS (1ppb), IWST-231228B,2>
75	N063771-013A,SAMP	32	1000	Unknown		03/15/2024 20:58	Finished	SAMP,2>10 mL
76	N063771-013AMS,MS	33	1000	Unknown		03/15/2024 21:07	Finished	MS (1ppb), IWST-231228B,2>
77	N063771-006A,SAMP	34	1000	Unknown		03/15/2024 21:16	Finished	SAMP,2>10 mL
78	N063771-006AMS,MS	35	1000	Unknown		03/15/2024 21:26	Finished	MS (1ppb), IWST-231228B,2>
79	N063771-007A,SAMP	36	1000	Unknown		03/15/2024 21:35	Finished	SAMP,2>10 mL
80	N063771-007AMS,MS	37	1000	Unknown		03/15/2024 21:45	Finished	MS (1ppb), IWST-231228B,2>
81	N063771-009A,SAMP	38	1000	Unknown		03/15/2024 21:54	Finished	SAMP,2>10 mL
82	N063771-009AMS,MS	39	1000	Unknown		03/15/2024 22:04	Finished	MS (1ppb), IWST-231228B,2>
83	CCV-7,CCV,1,	40	1000	Unknown		03/15/2024 22:13	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	41	1000	Unknown		03/15/2024 22:23	Finished	CCB R240129C
85	BLANK	42	1000	Unknown		03/15/2024 22:32	Finished	BLANK
86	SHUTDOWN	43	1000	Unknown		03/15/2024 22:42	Finished	
87	Eluent: R240313A	44	1000	Unknown		n.a.	Finished	
88	PCR: R240313B	45	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 09:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

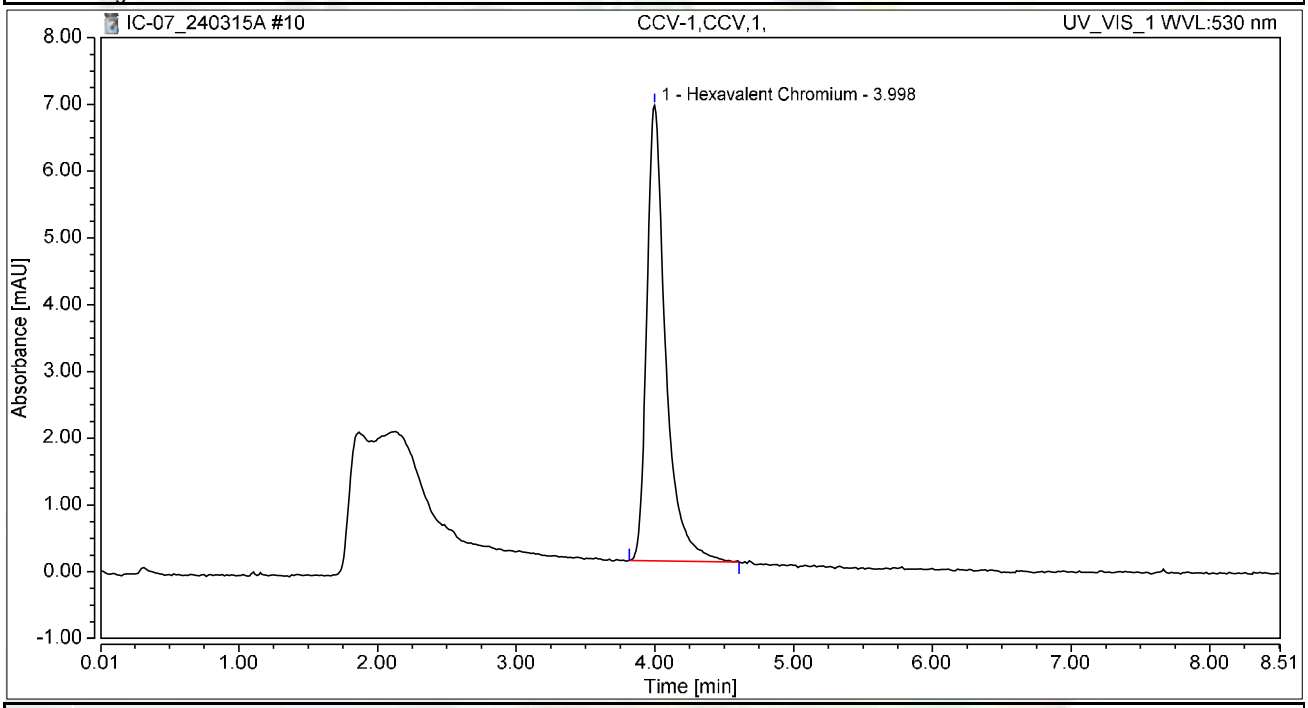
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 09:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	1.076	6.823	100.00	100.00	5.0578
Total:			**1.076**	**6.823**	**100.00**	**100.00**	

Reviewed by:

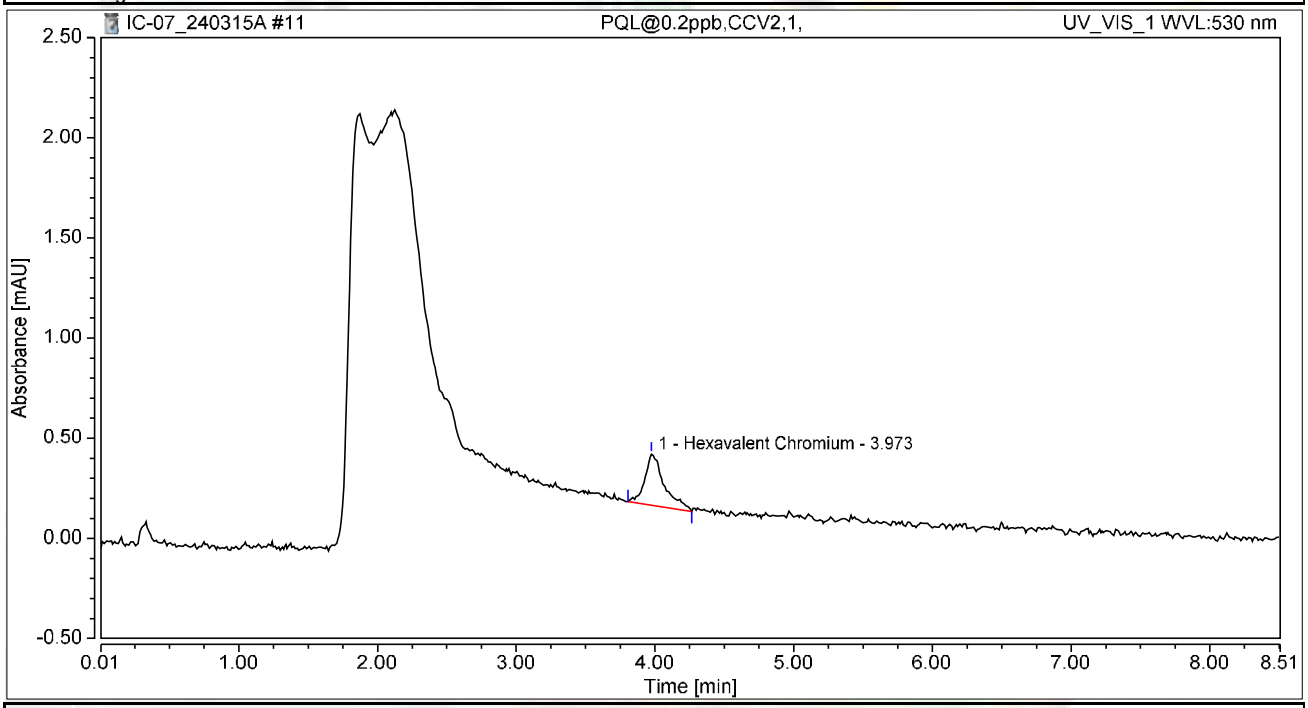
dMocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 10:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

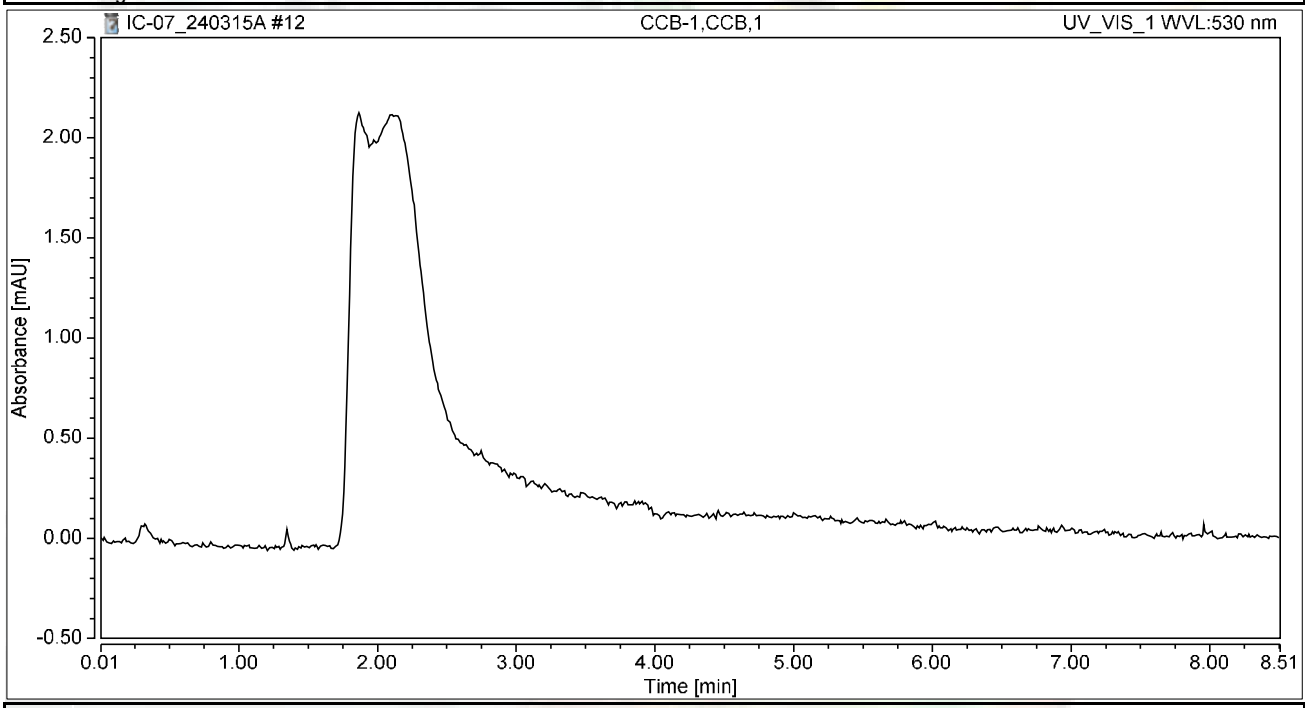
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.042	0.254	100.00	100.00	0.1957
Total:			**0.042**	**0.254**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 10:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

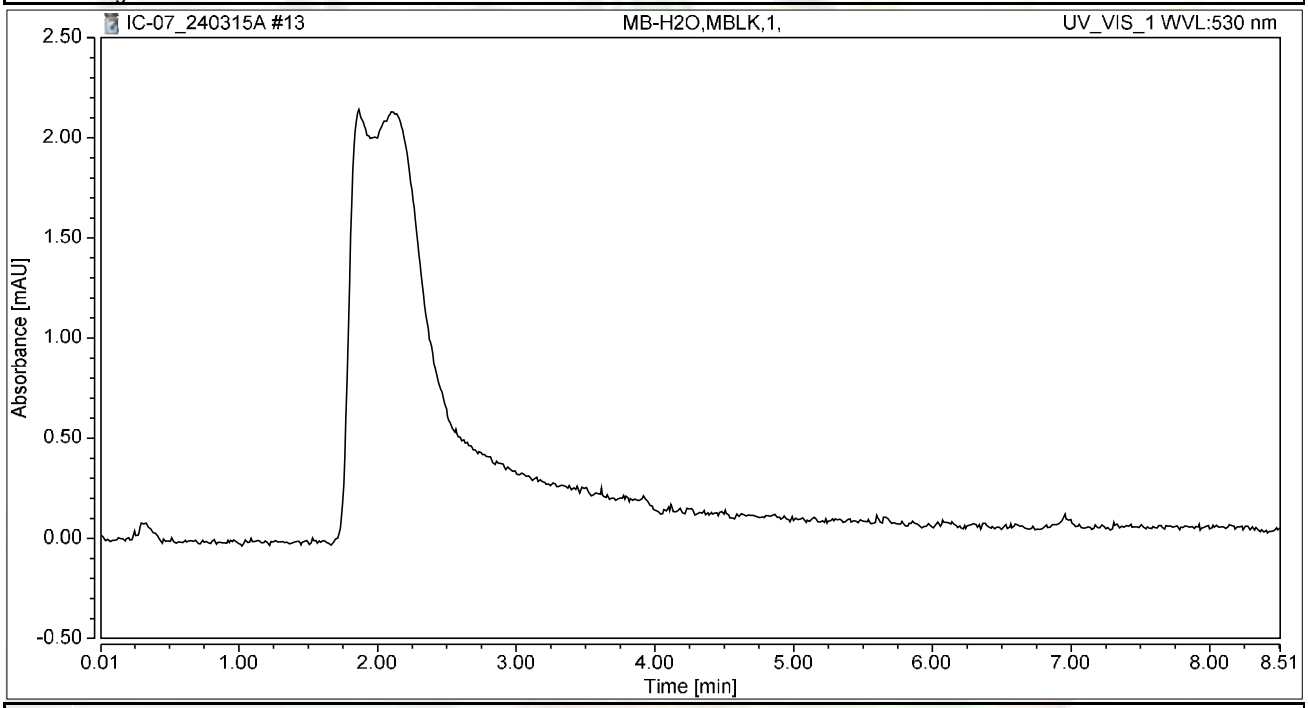
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 10:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

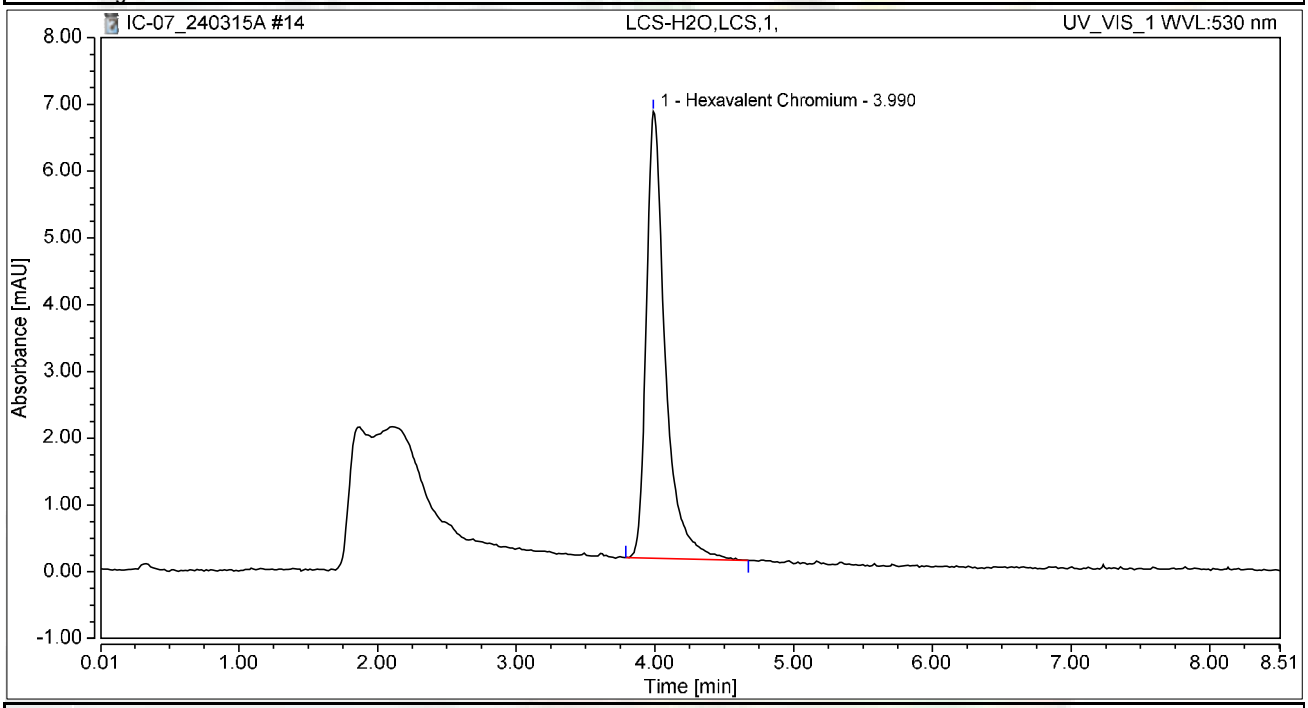
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 10:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

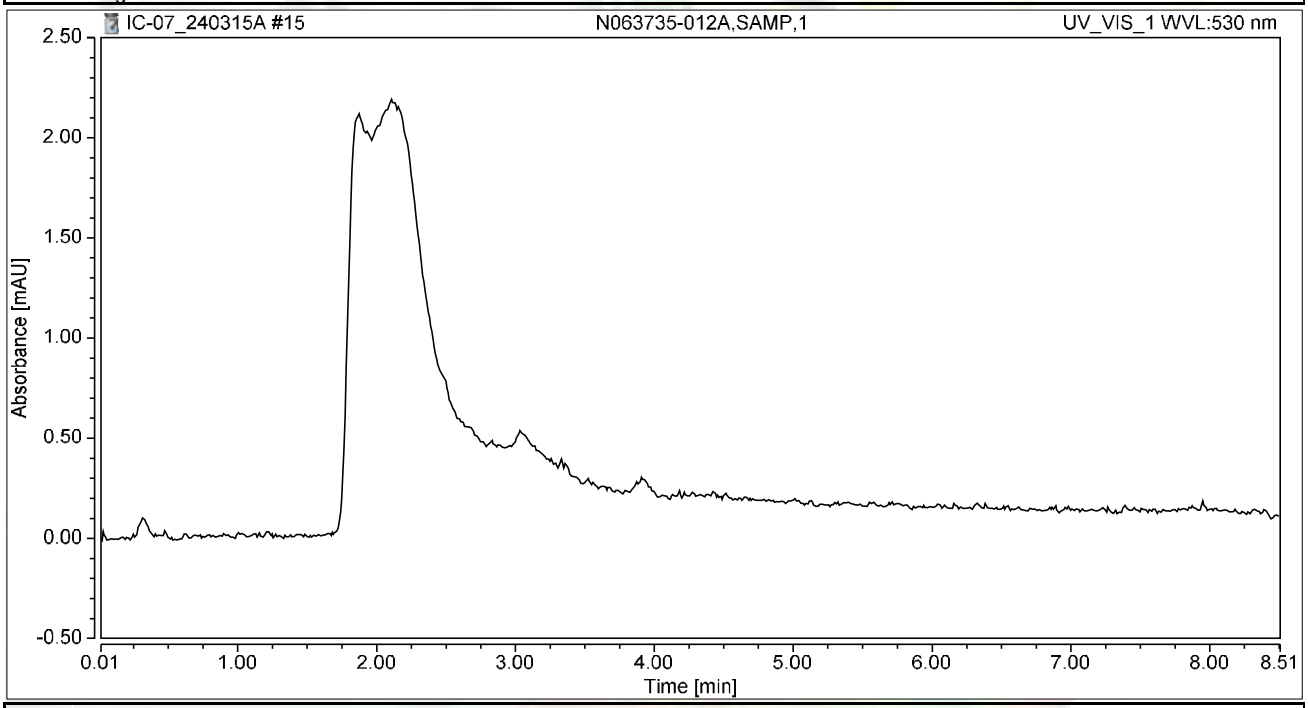
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	1.060	6.690	100.00	100.00	4.9825
Total:			**1.060**	**6.690**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-012A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 10:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

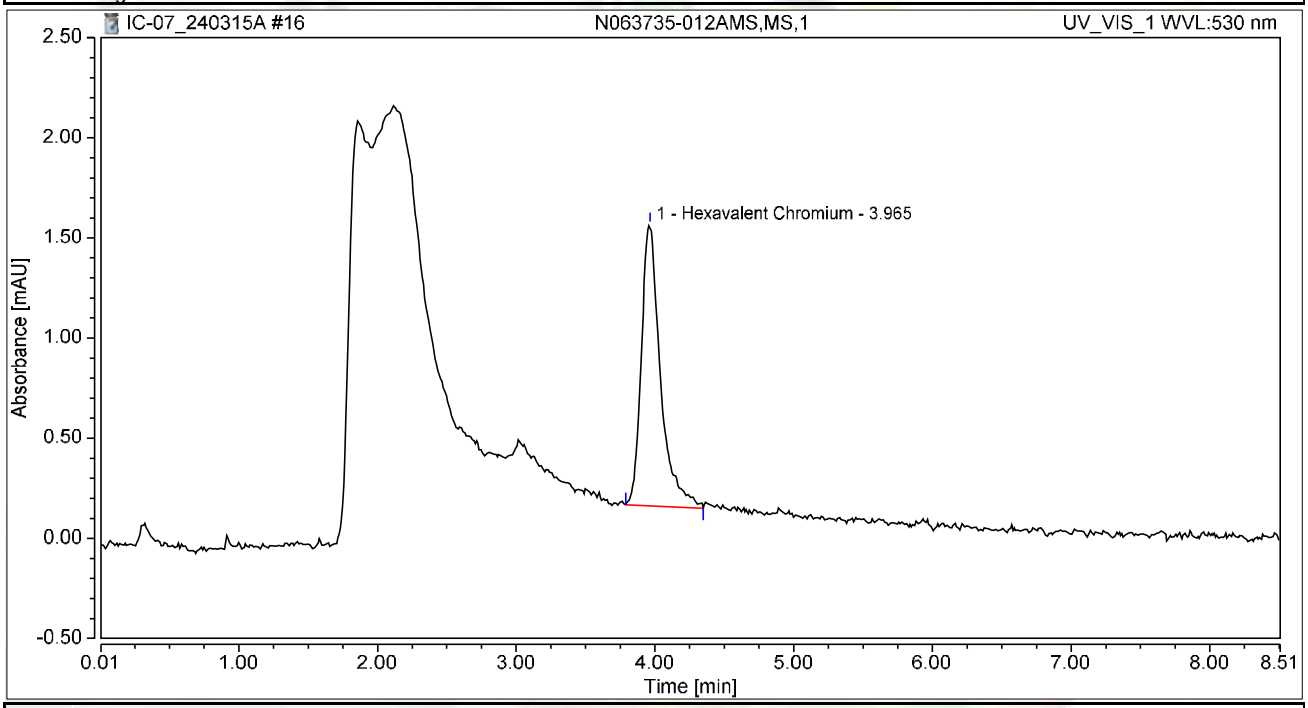
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-012AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 11:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

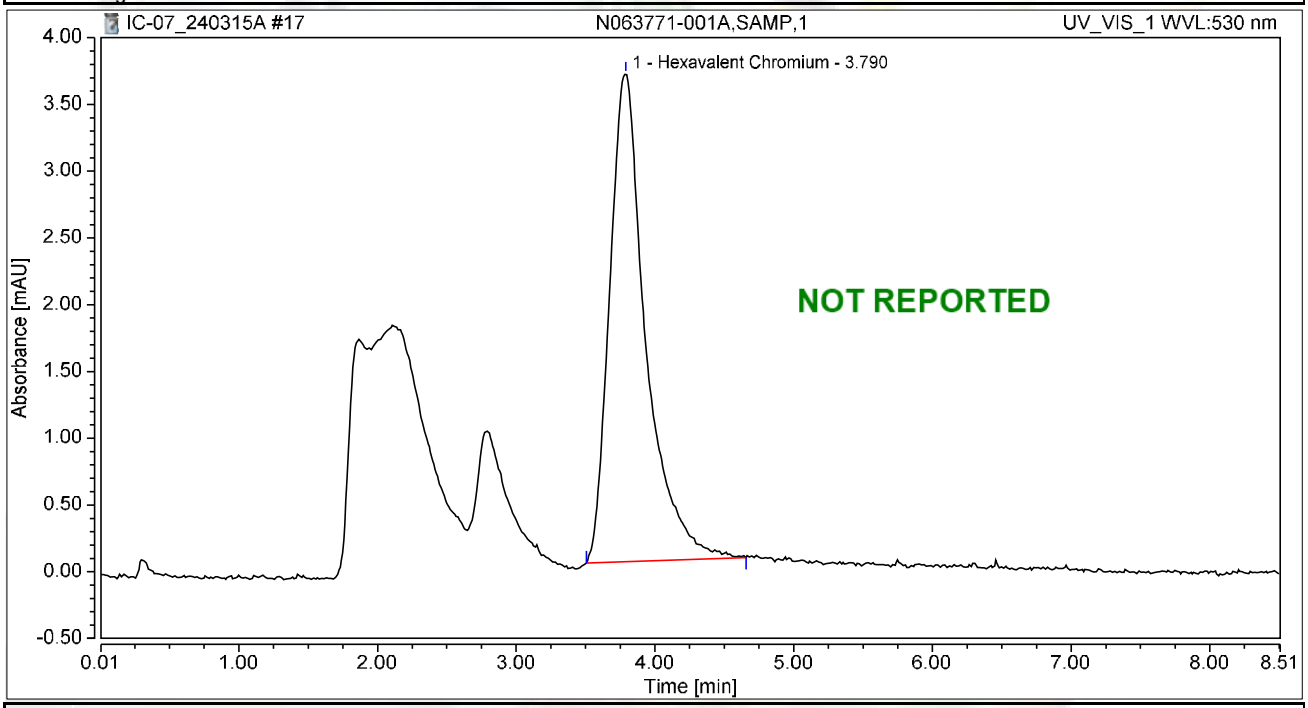
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.223	1.403	100.00	100.00	1.0487
Total:			**0.223**	**1.403**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 11:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

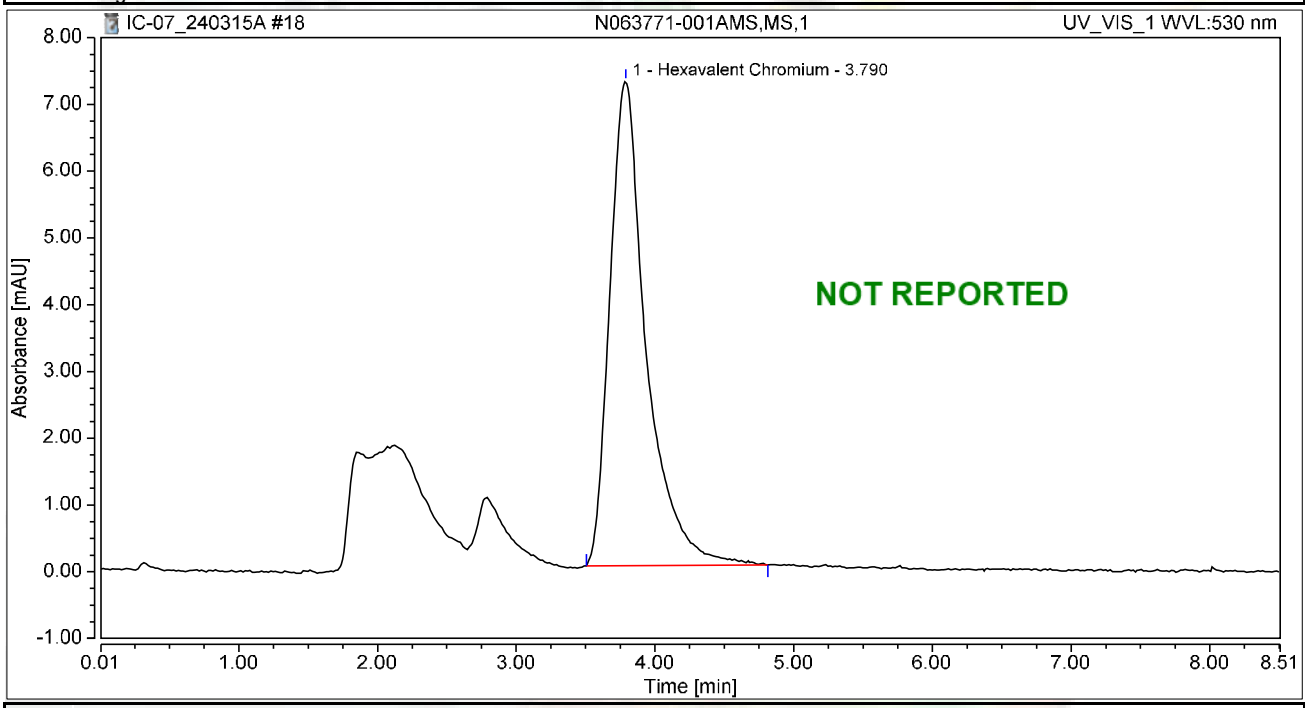
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	1.103	3.654	100.00	100.00	5.1829
Total:			**1.103**	**3.654**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 11:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

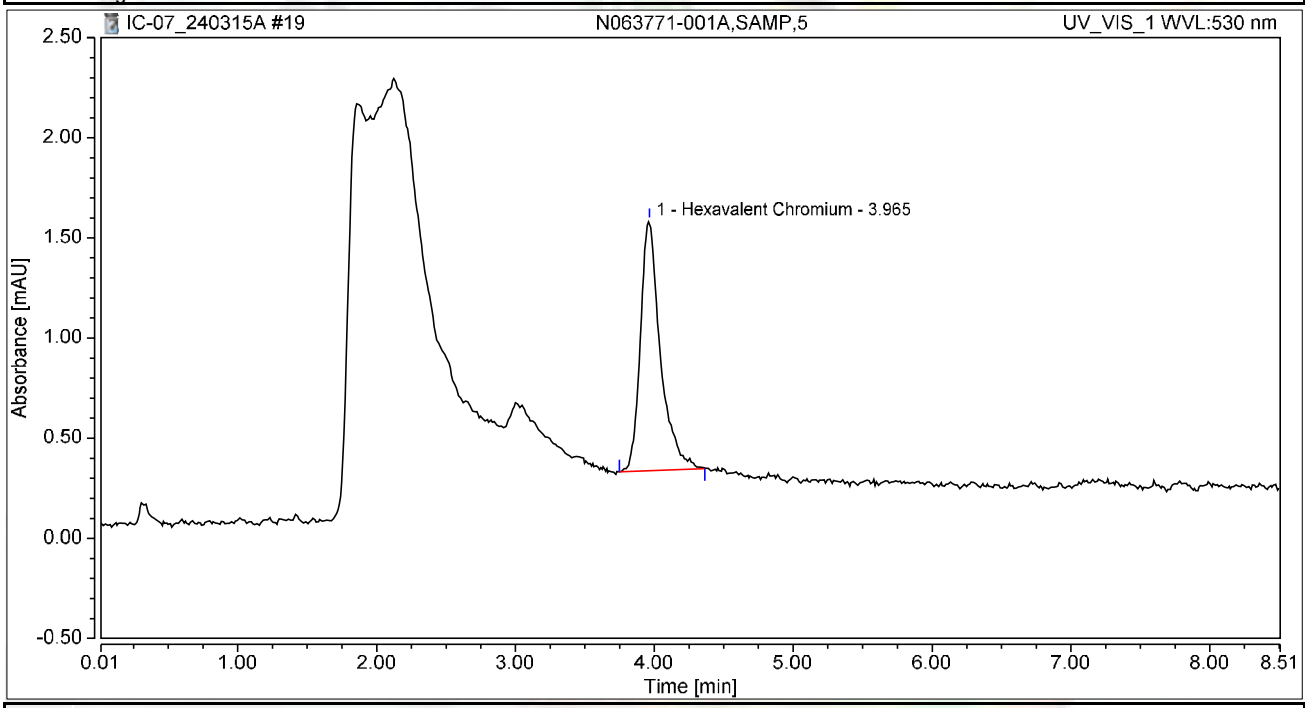
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	2.208	7.257	100.00	100.00	10.3724
Total:			**2.208**	**7.257**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-001A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 11:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

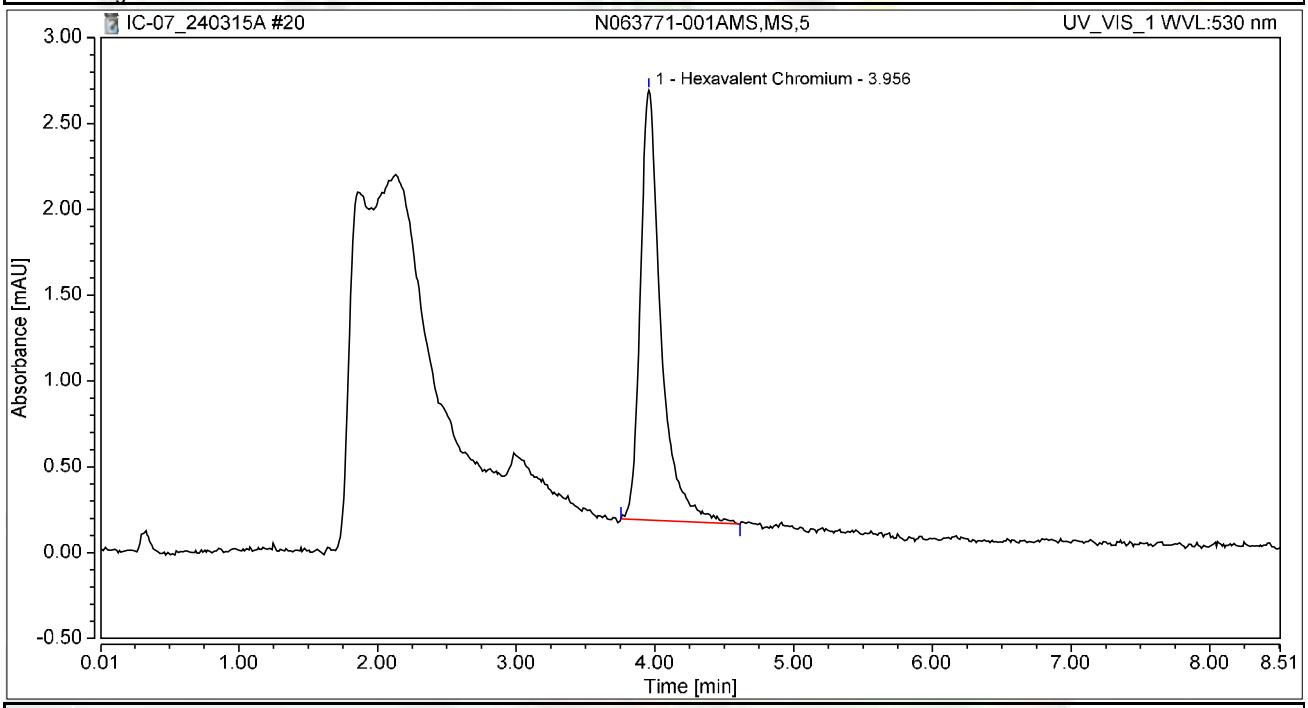
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.208	1.249	100.00	100.00	0.9786
Total:			**0.208**	**1.249**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

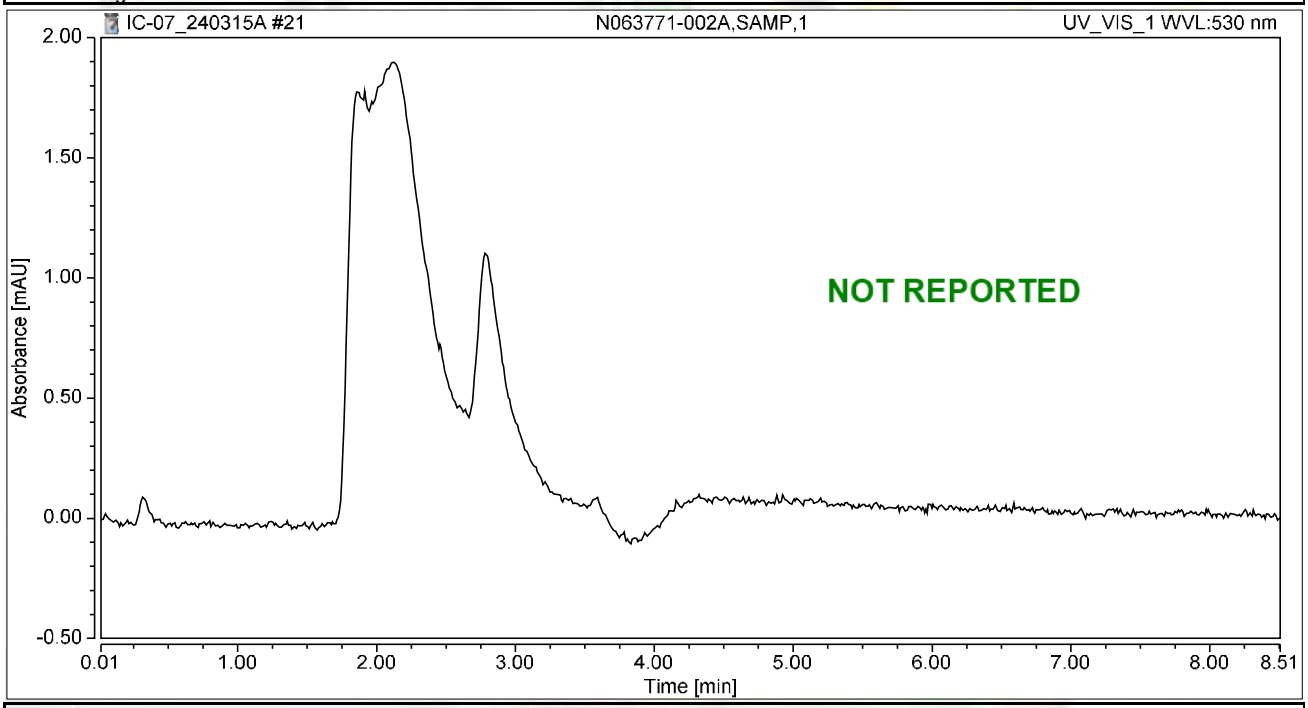
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.433	2.504	100.00	100.00	2.0336
Total:			**0.433**	**2.504**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-002A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

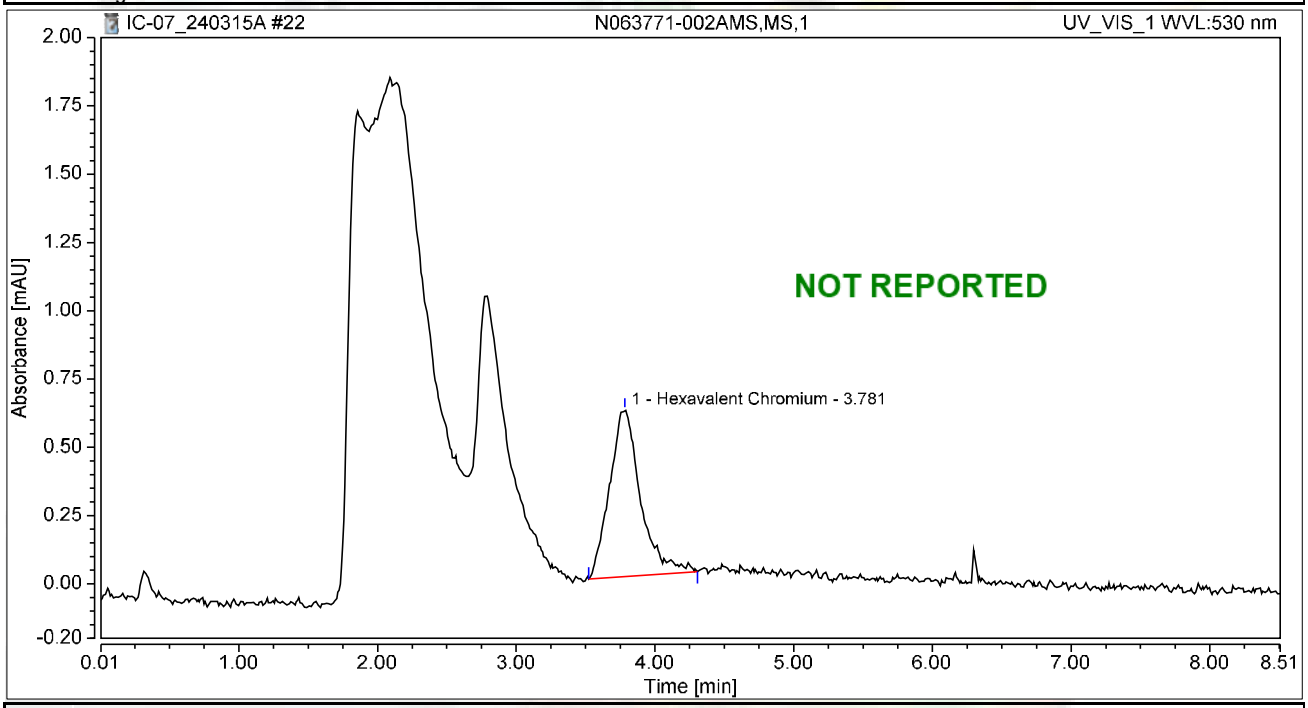
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

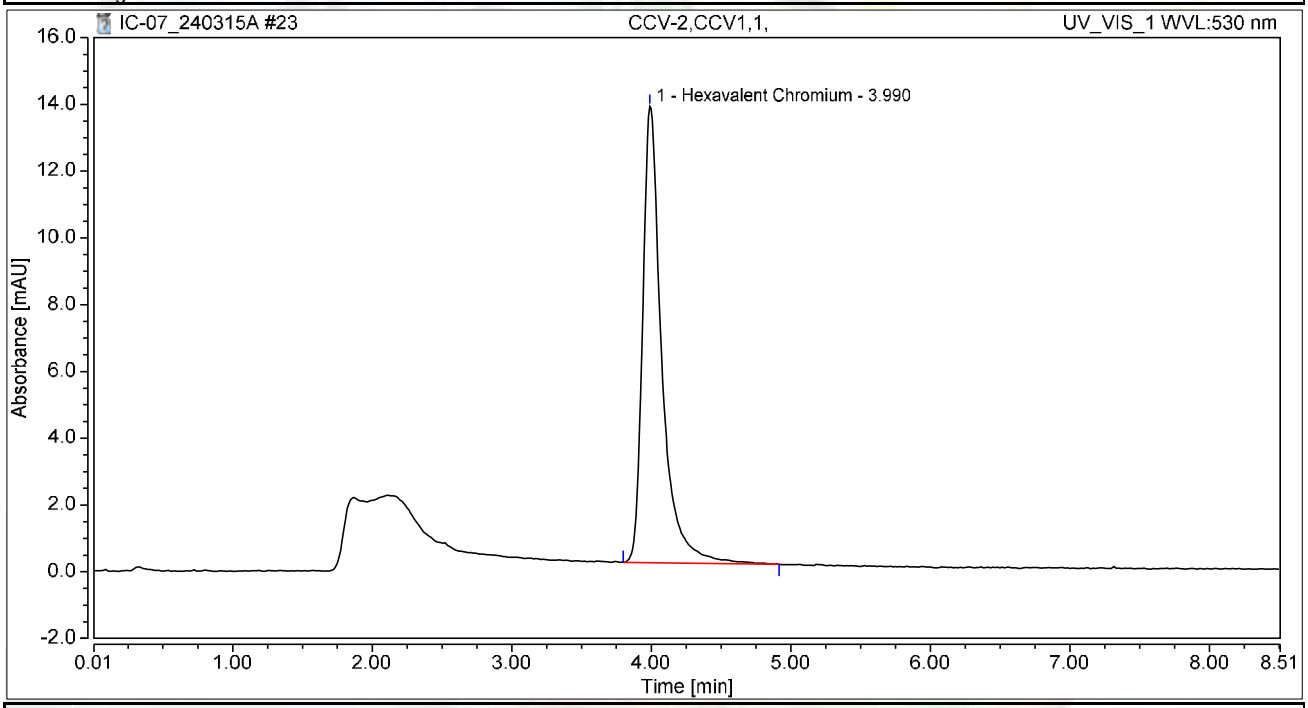
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.781	0.158	0.609	100.00	100.00	0.7441
Total:			**0.158**	**0.609**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 12:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

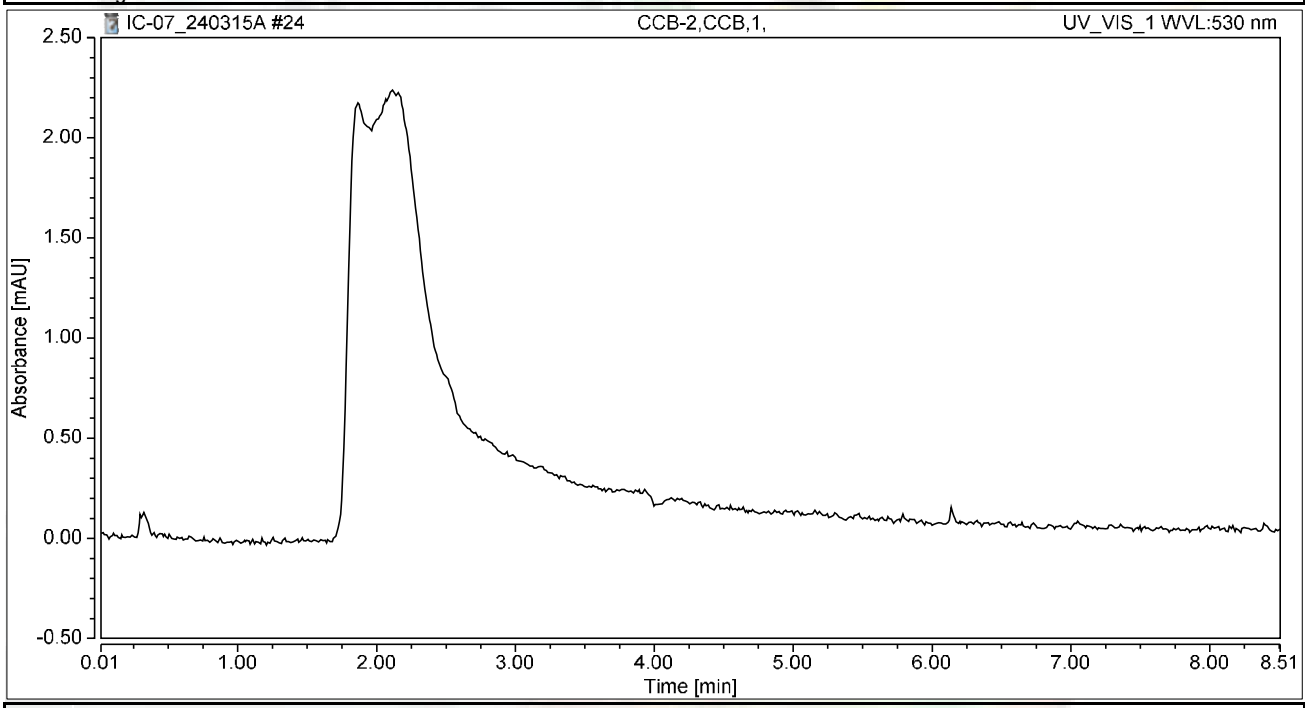
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	2.176	13.665	100.00	100.00	10.2260
Total:			**2.176**	**13.665**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

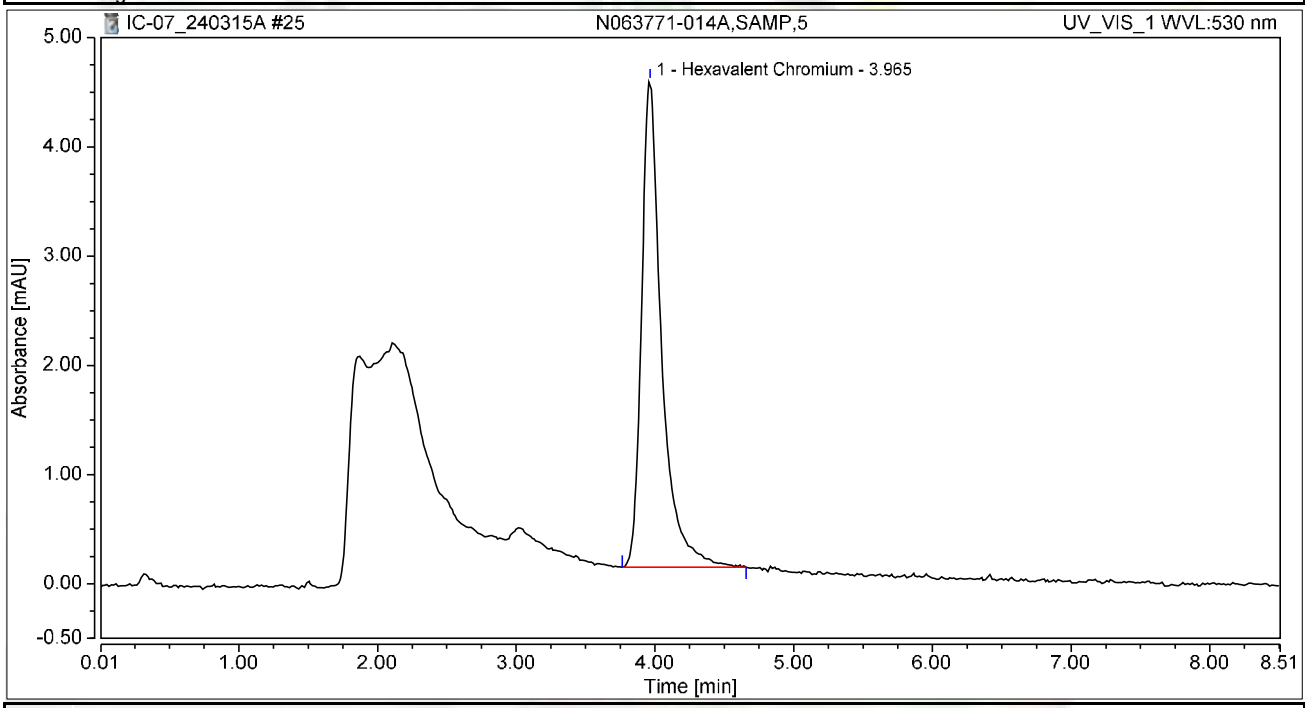
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-014A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 12:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

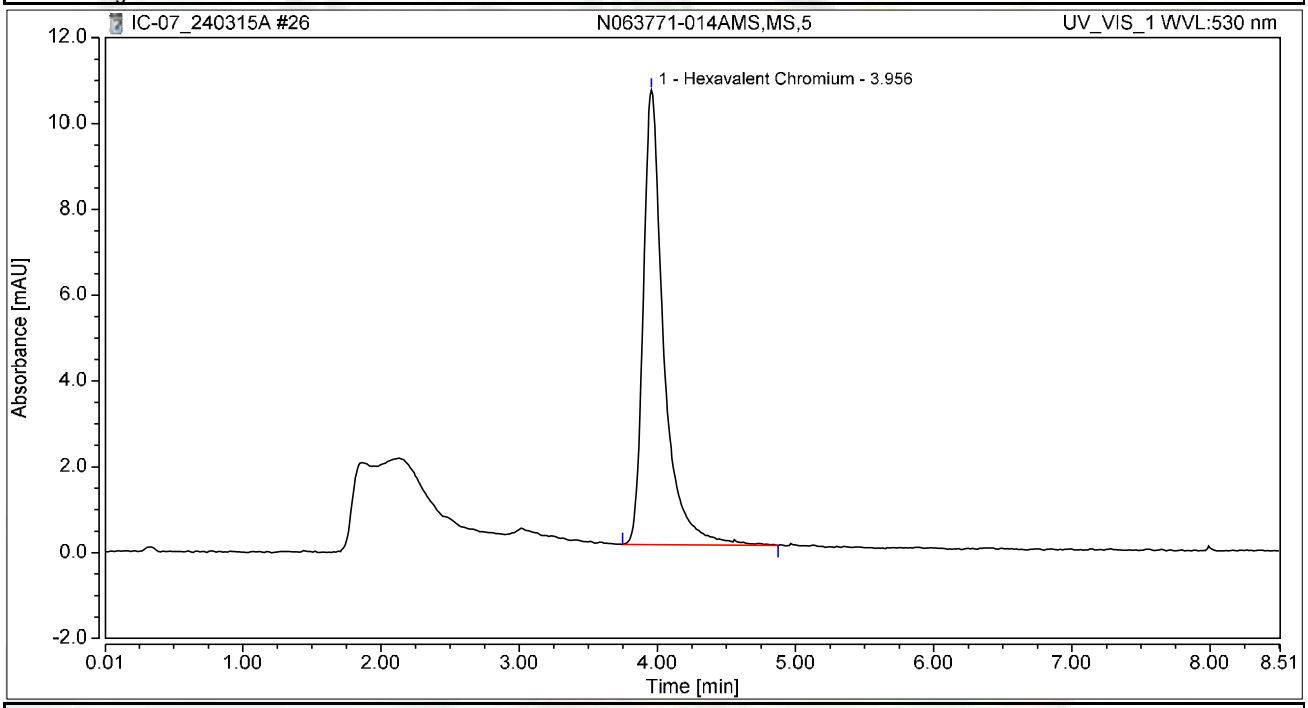
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.746	4.453	100.00	100.00	3.5039
Total:			**0.746**	**4.453**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-014AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 13:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

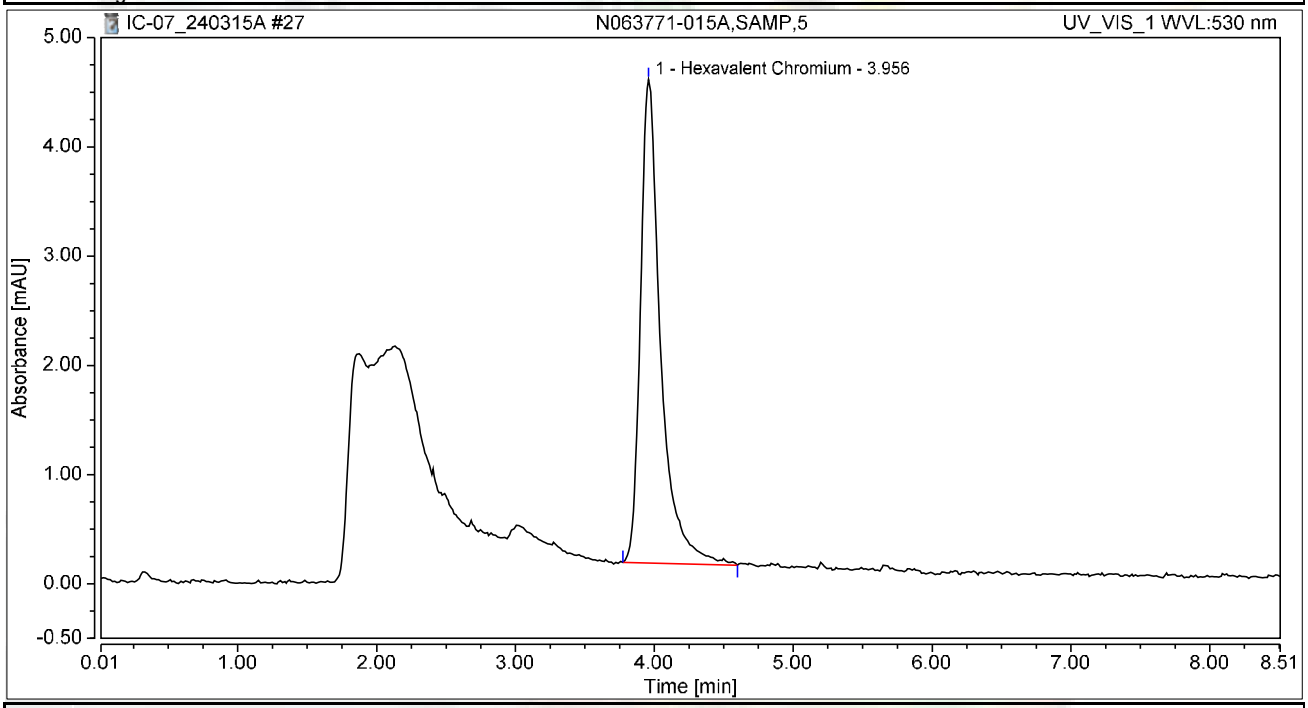
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	1.815	10.595	100.00	100.00	8.5282
Total:			**1.815**	**10.595**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-015A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 13:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

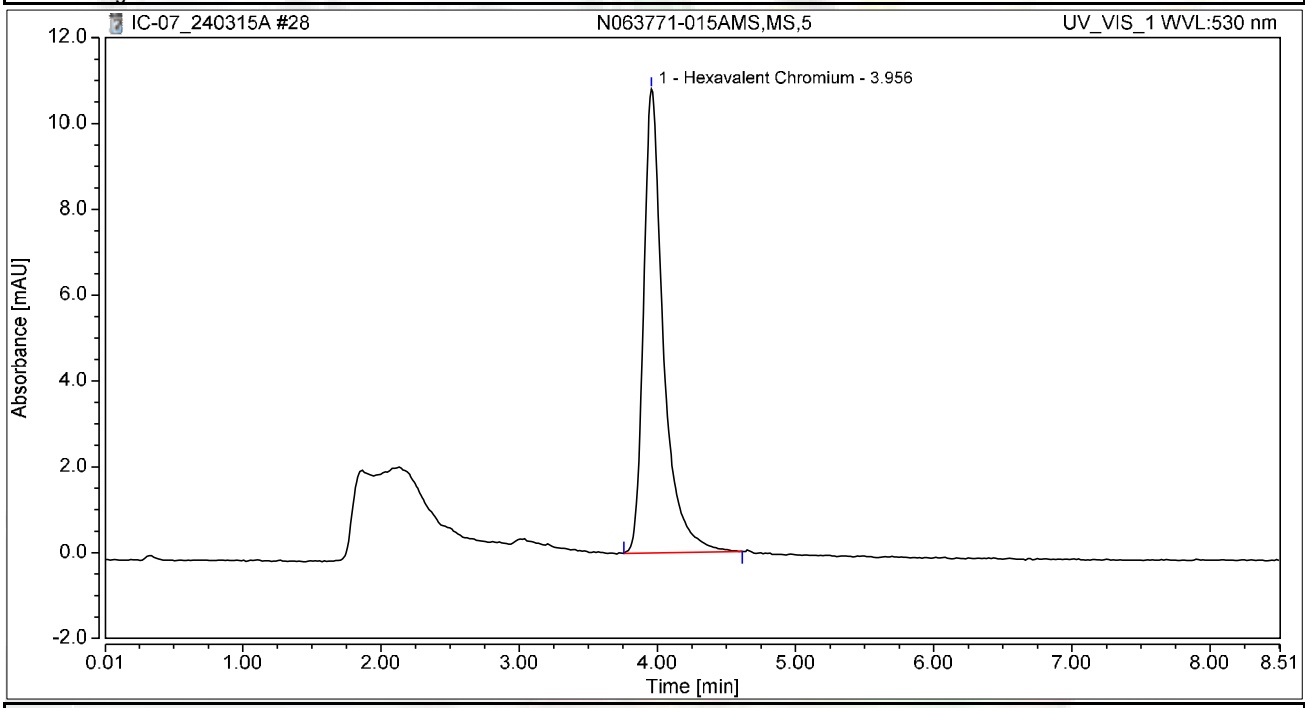
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.750	4.426	100.00	100.00	3.5216
Total:			**0.750**	**4.426**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-015AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 13:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

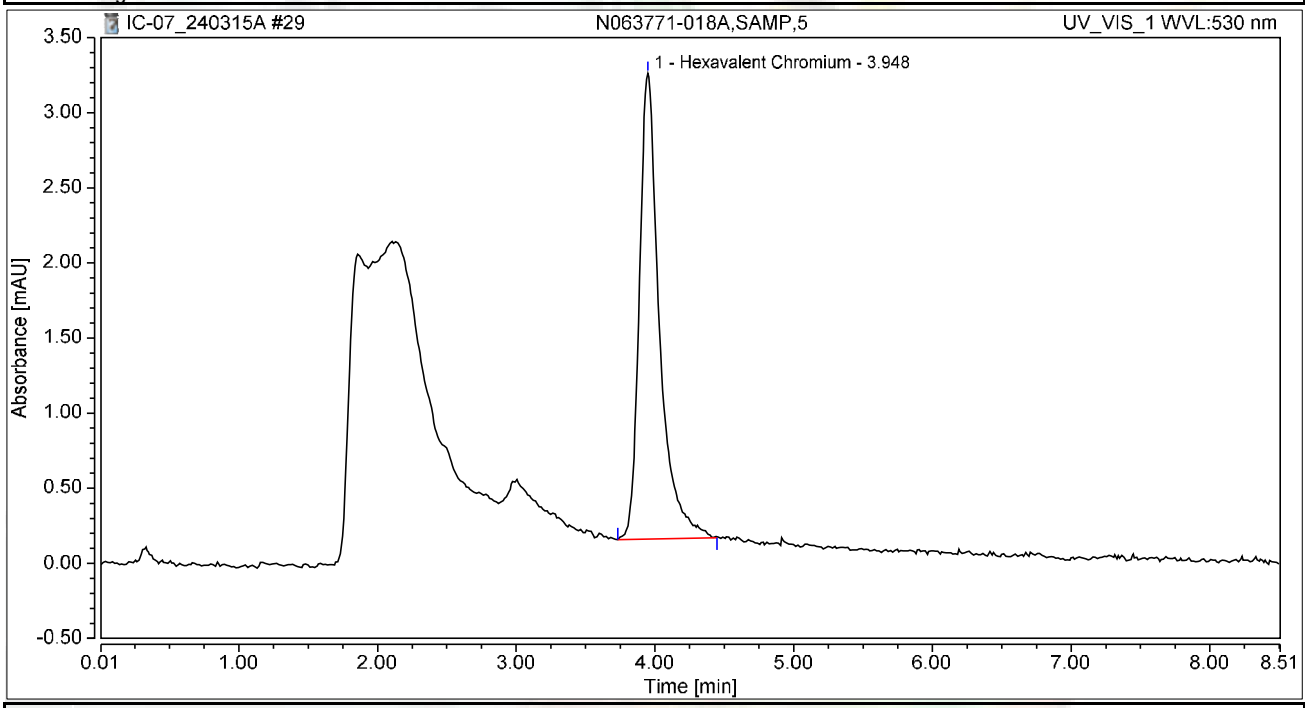
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	1.803	10.809	100.00	100.00	8.4702
Total:			**1.803**	**10.809**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-018A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 13:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

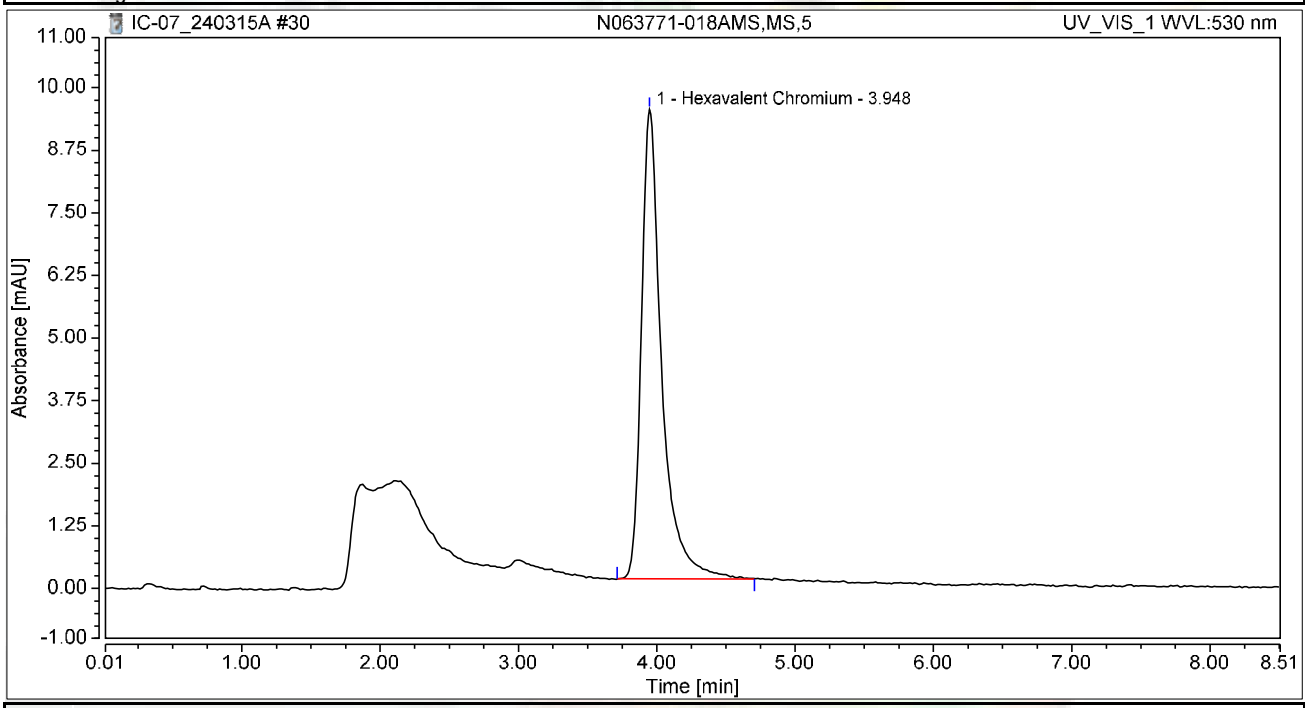
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.521	3.101	100.00	100.00	2.4475
Total:			**0.521**	**3.101**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-018AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 13:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

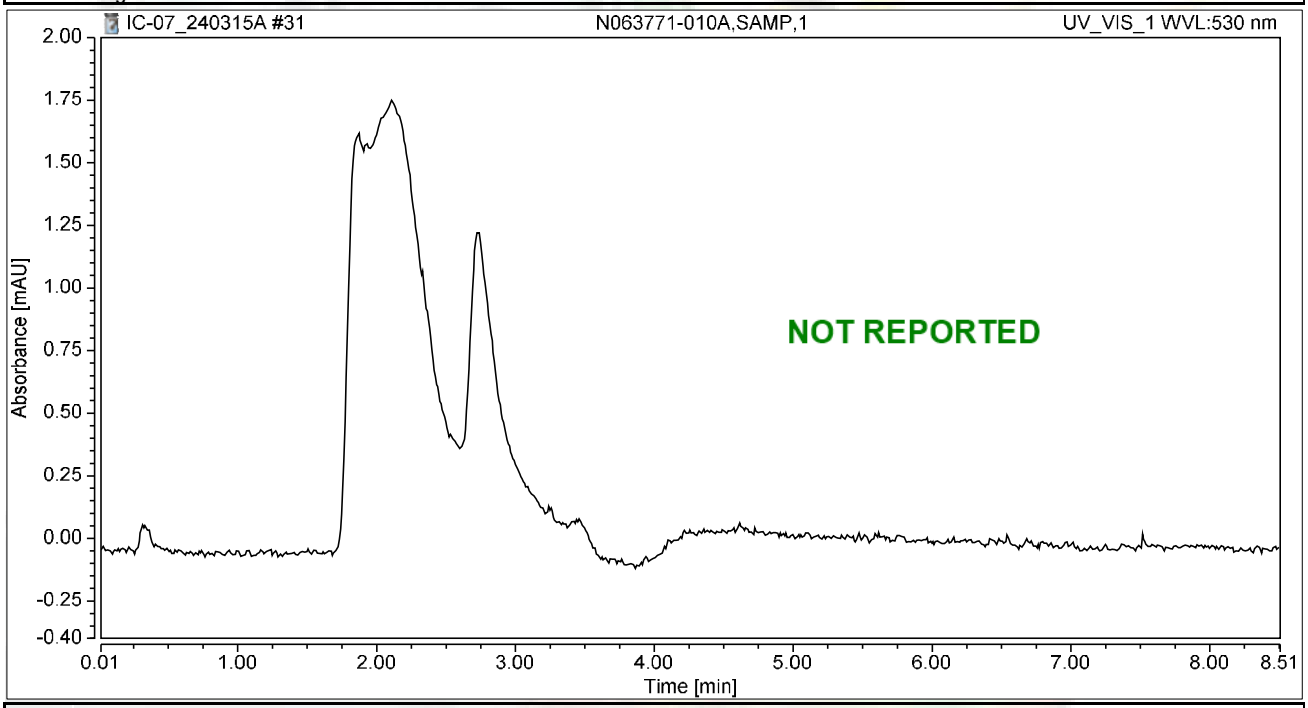
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	1.600	9.380	100.00	100.00	7.5179
Total:			**1.600**	**9.380**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-010A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 13:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

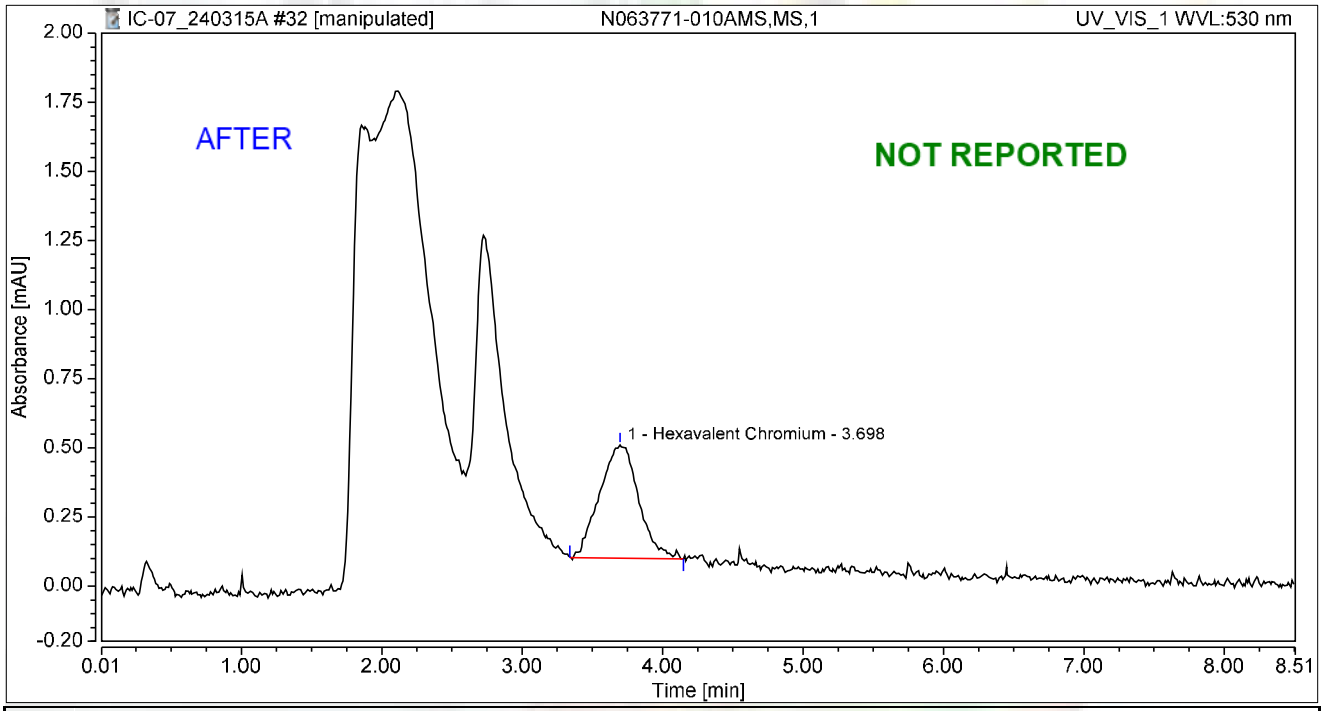
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-010AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.698	0.131	0.409	100.00	100.00	0.6175
Total:			**0.131**	**0.409**	**100.00**	**100.00**	

Reviewed by:

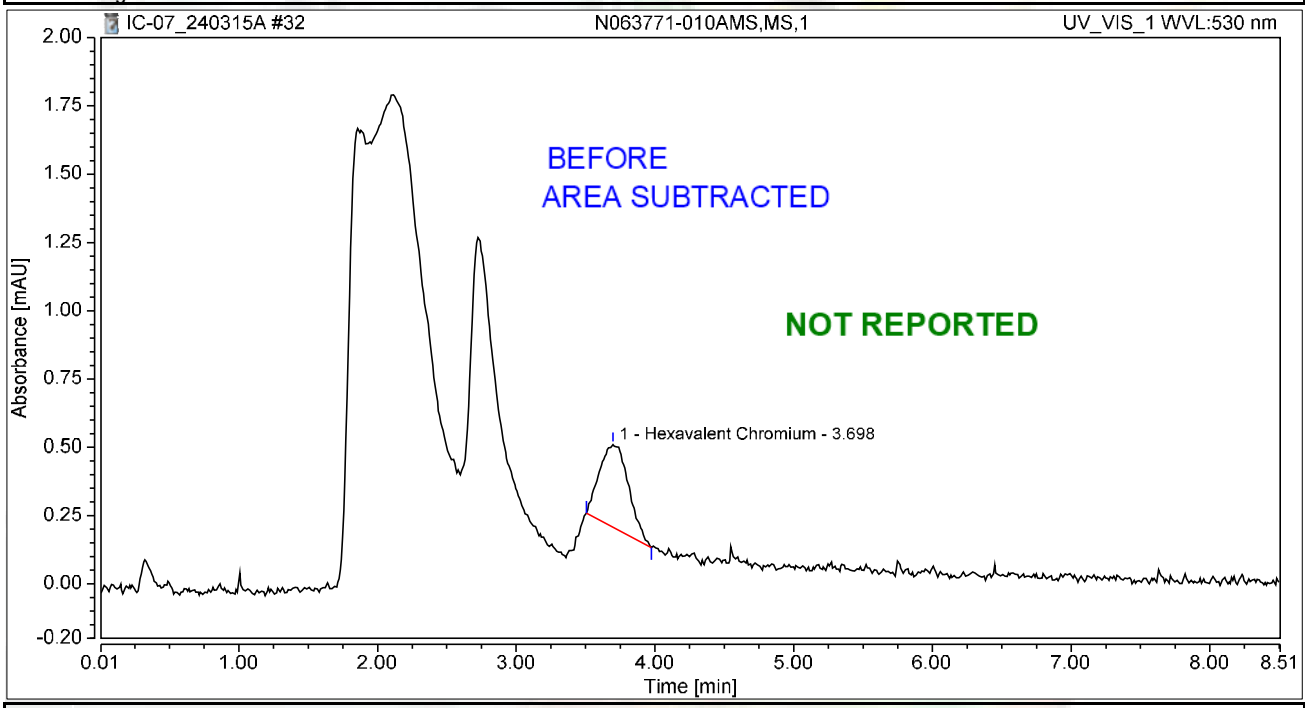
dlRocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063771-010AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

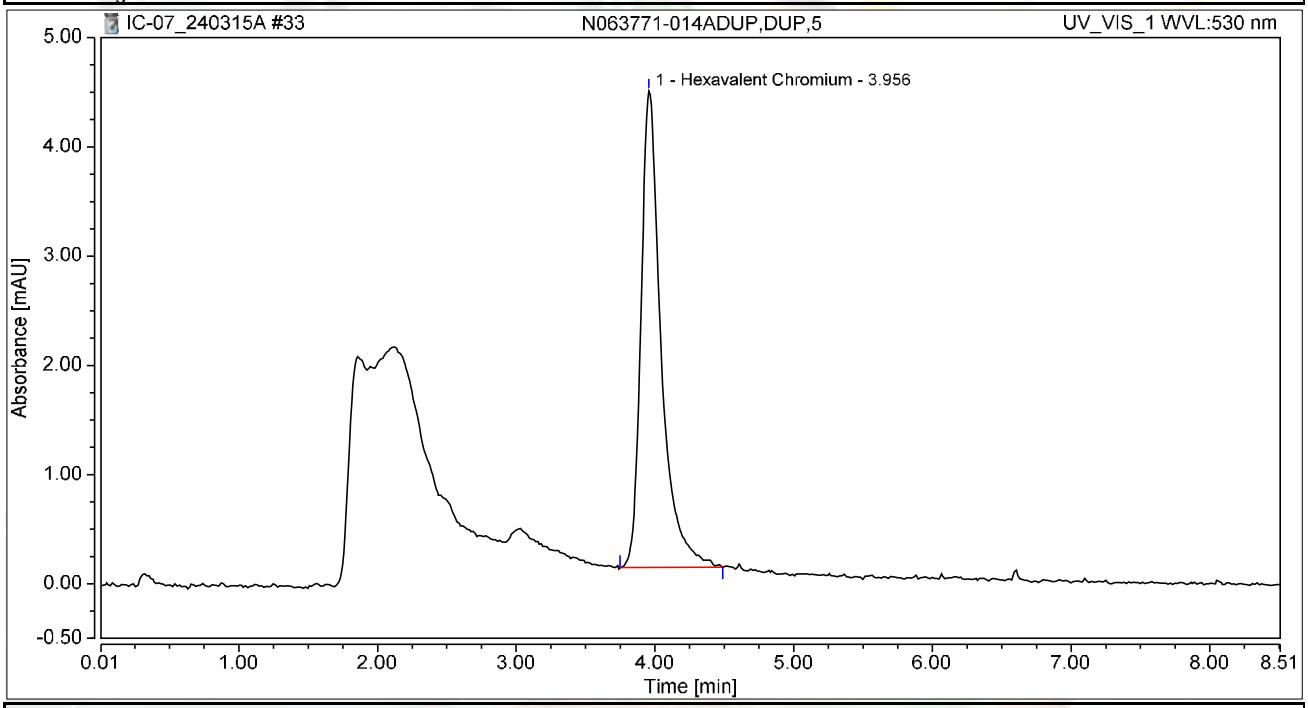
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.698	0.074	0.303	100.00	100.00	0.3471
Total:			**0.074**	**0.303**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-014ADUP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

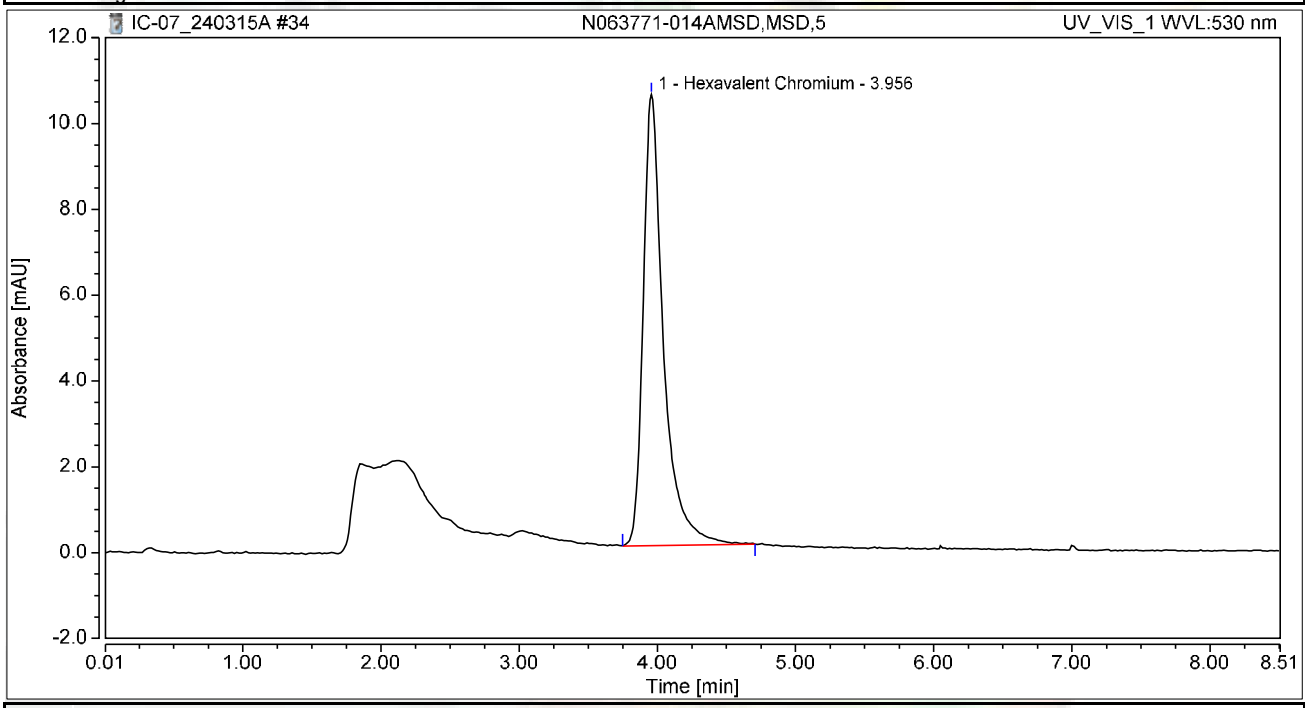
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.735	4.362	100.00	100.00	3.4520
Total:			**0.735**	**4.362**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-014AMSD,MSD,5**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

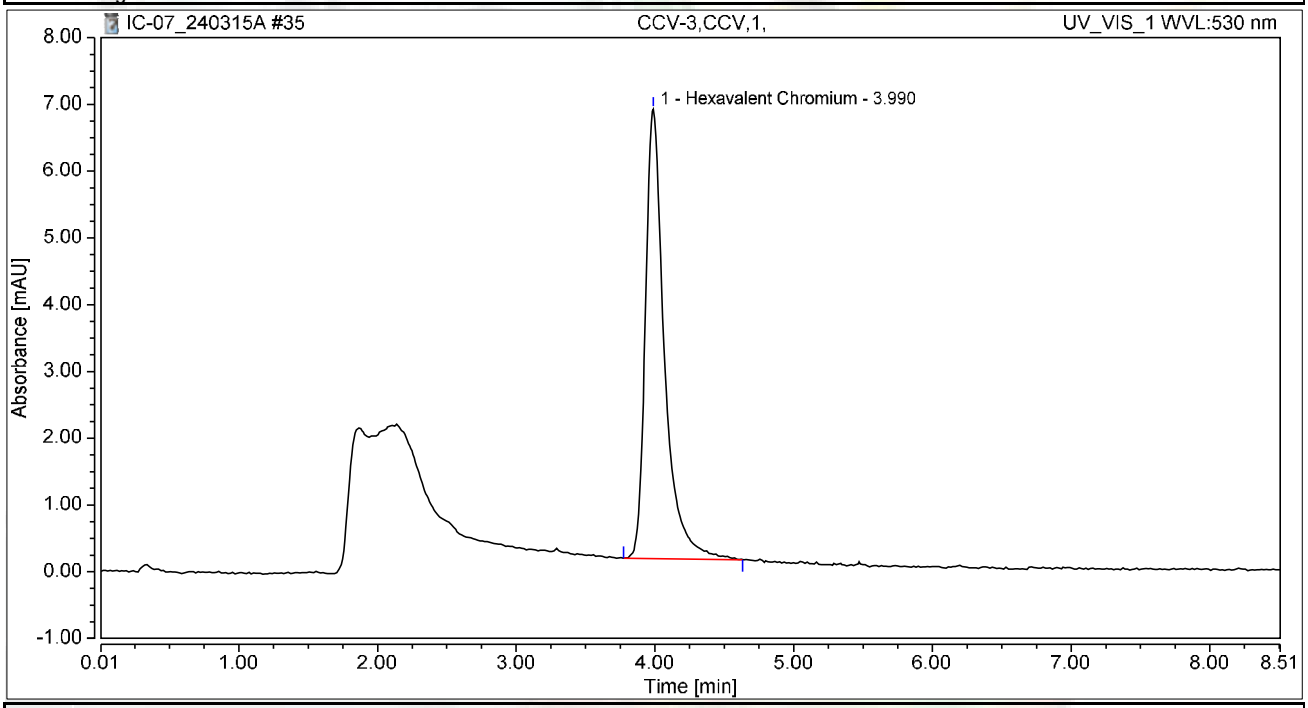
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	1.785	10.506	100.00	100.00	8.3877
Total:			**1.785**	**10.506**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

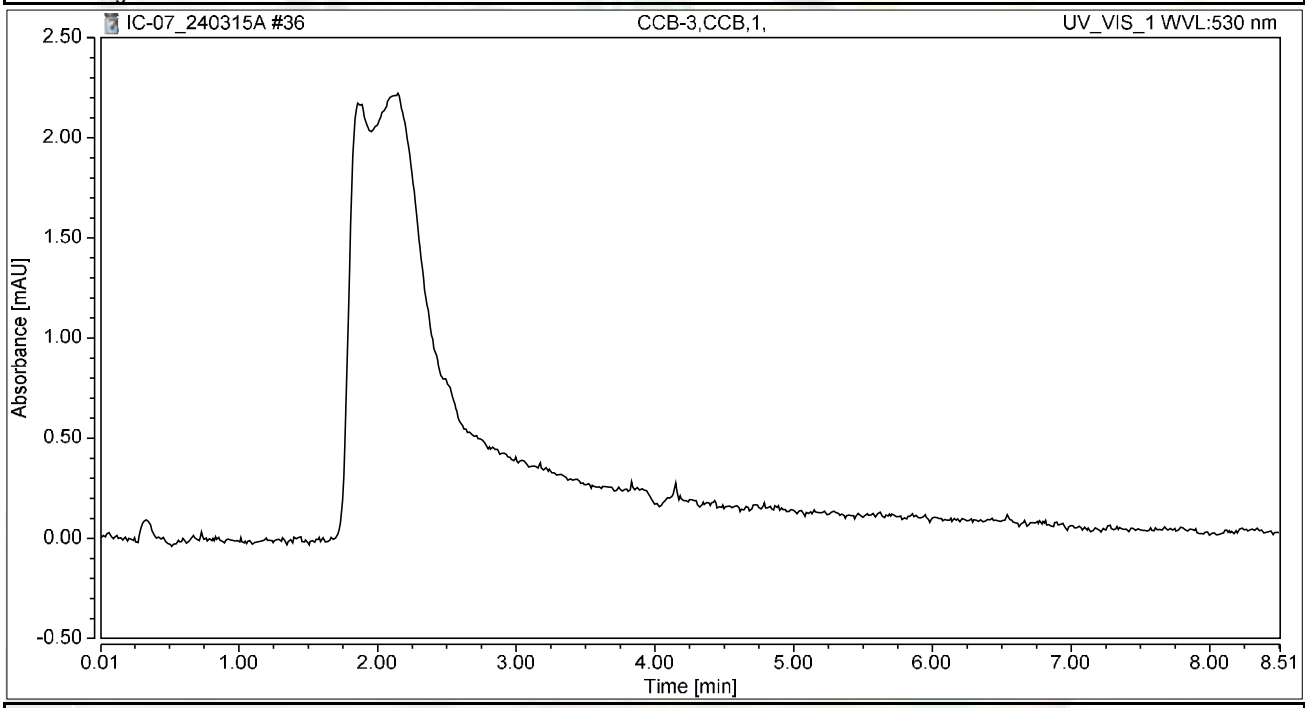
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	1.073	6.730	100.00	100.00	5.0391
Total:			**1.073**	**6.730**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

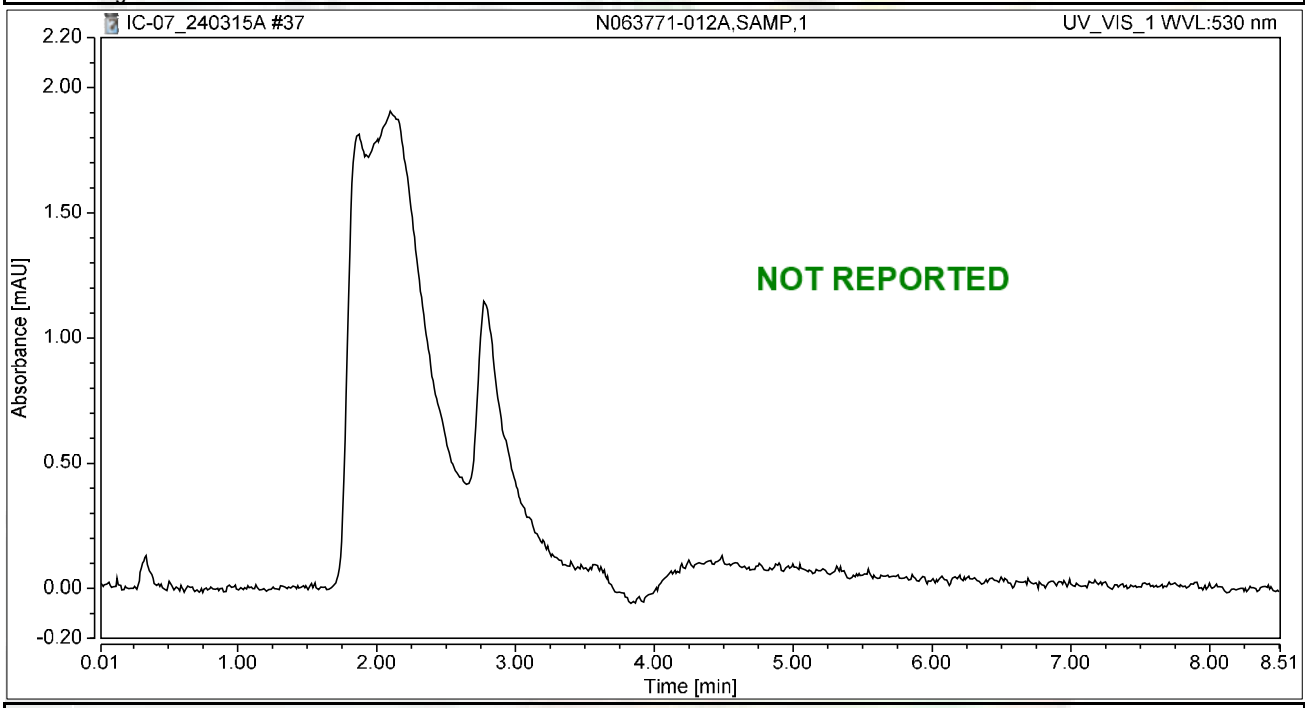
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-012A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

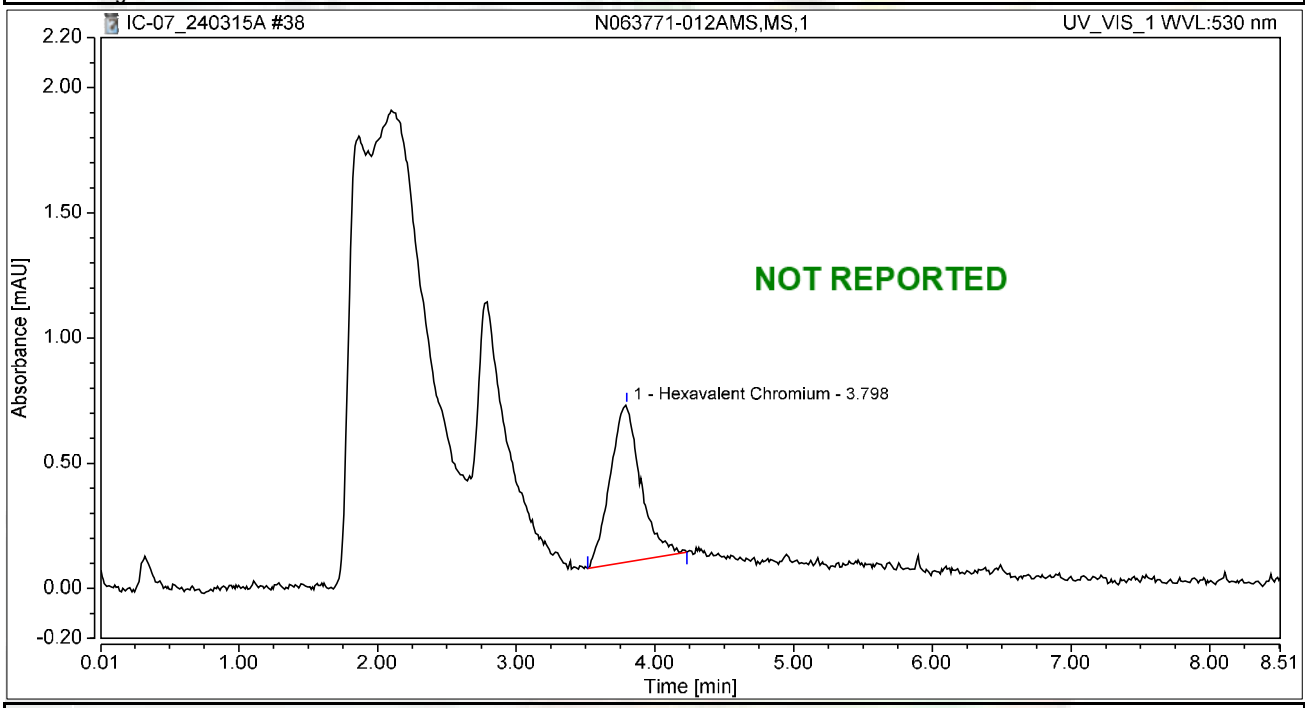
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-012AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

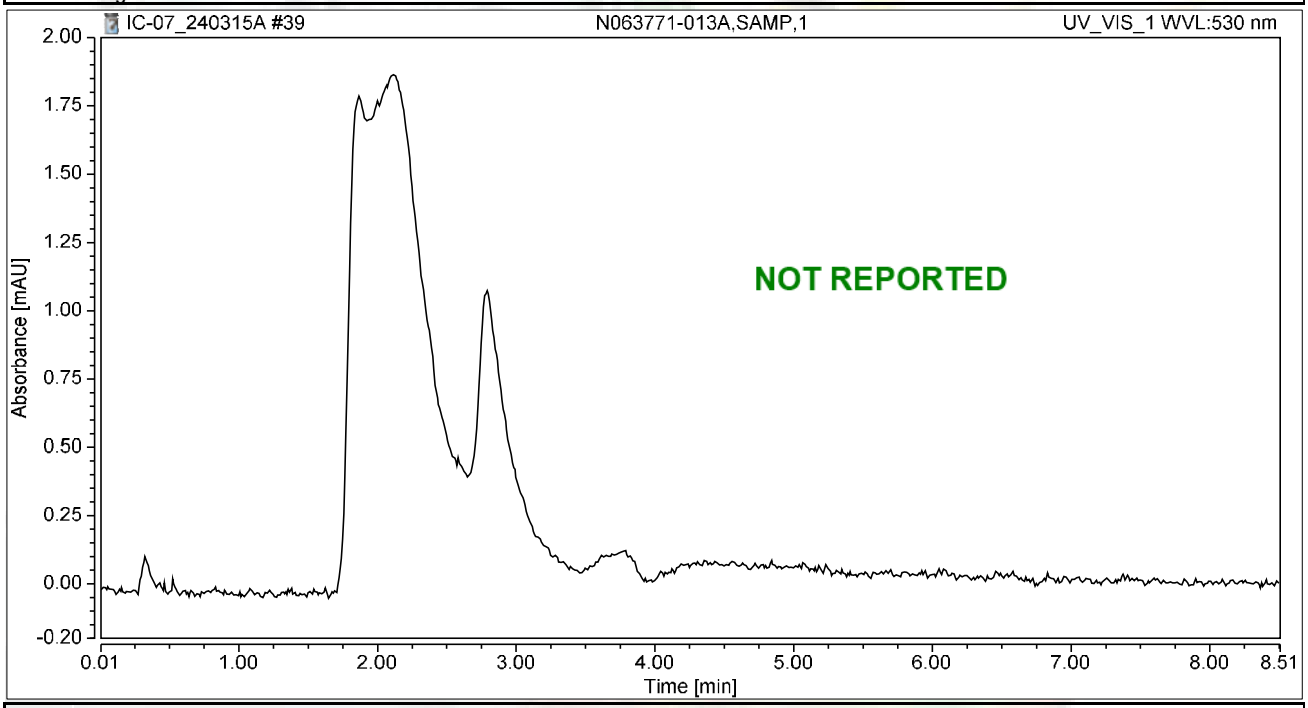
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.798	0.161	0.628	100.00	100.00	0.7548
Total:			**0.161**	**0.628**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-013A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 15:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

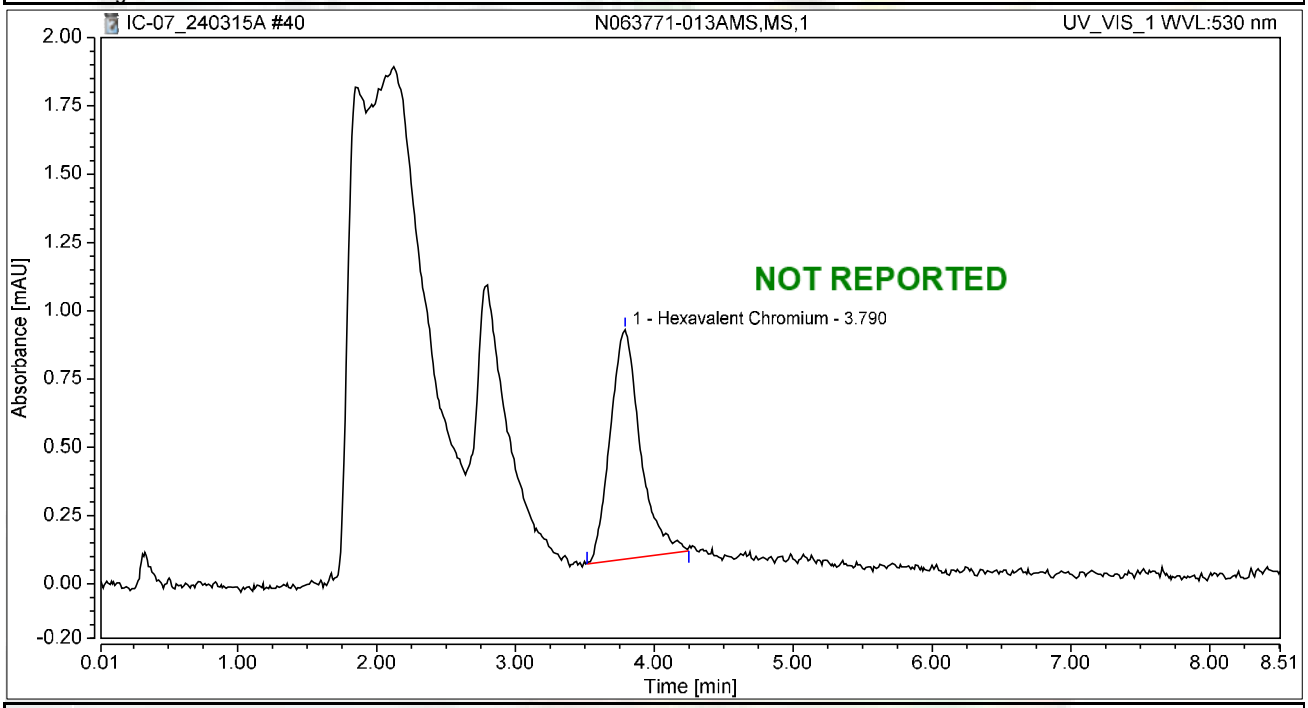
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-013AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 15:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

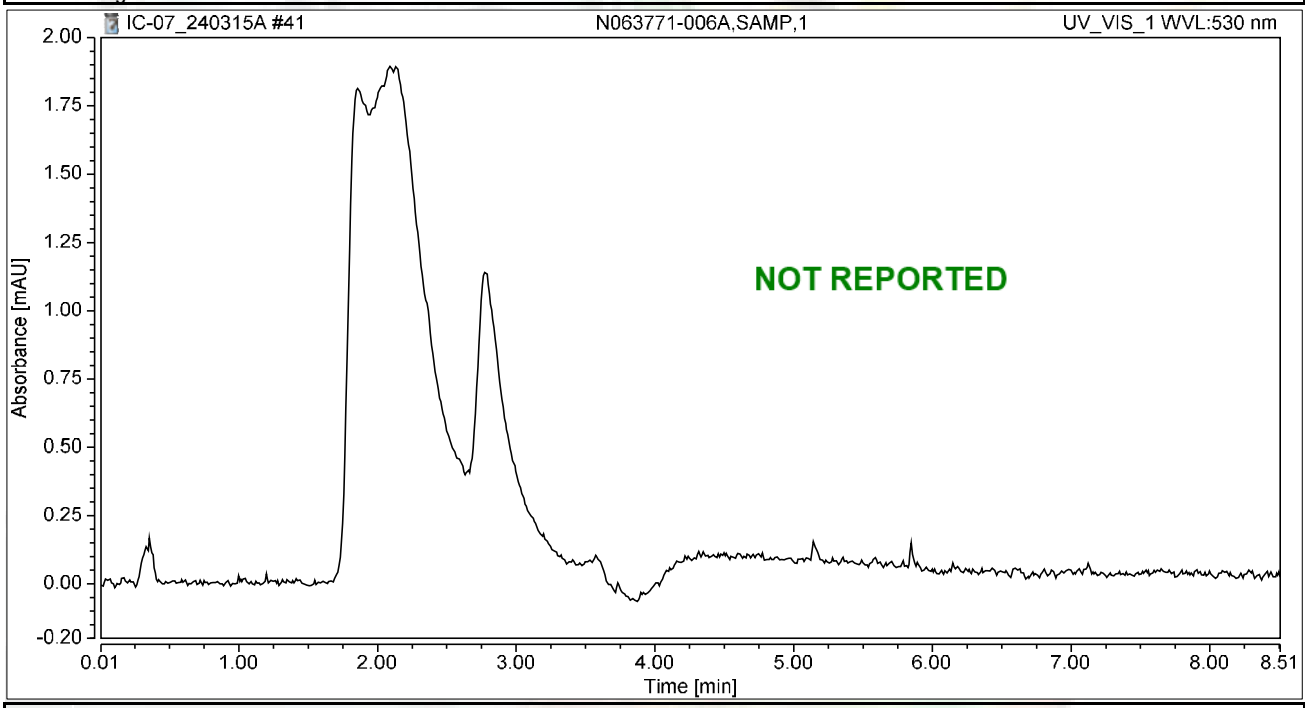
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.211	0.840	100.00	100.00	0.9896
Total:			**0.211**	**0.840**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 15:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

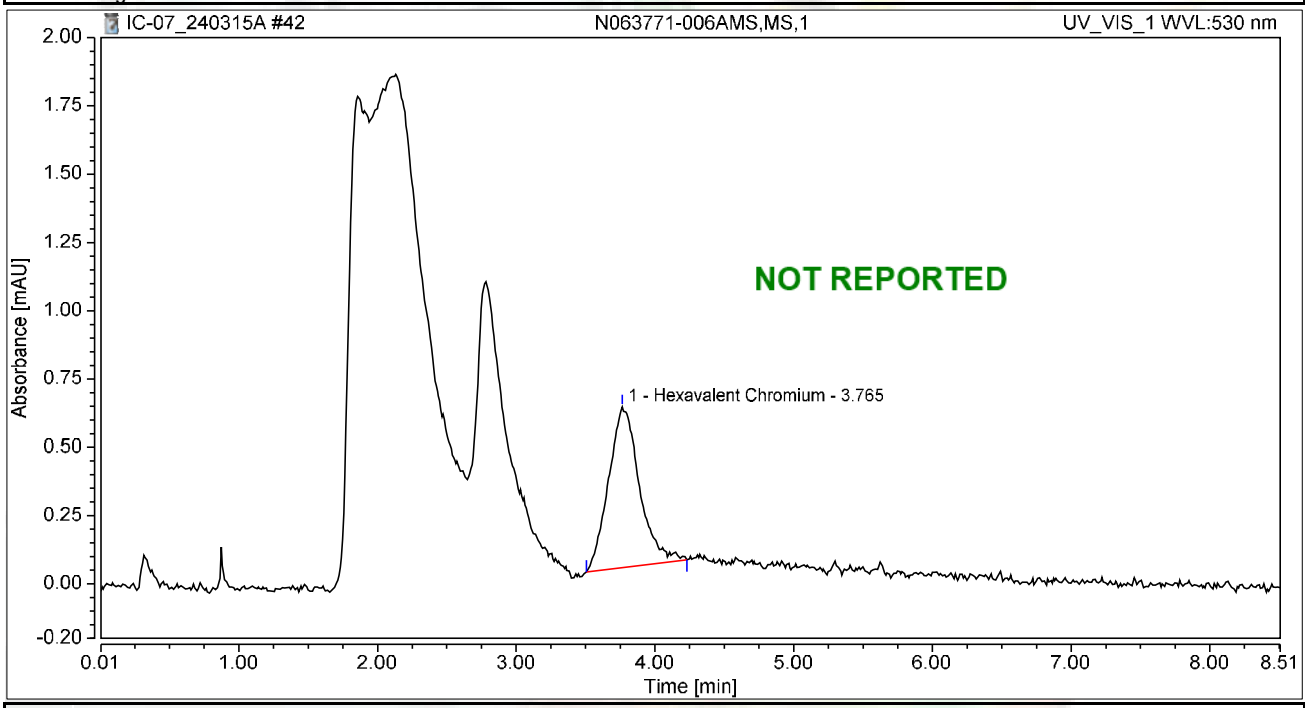
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 15:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

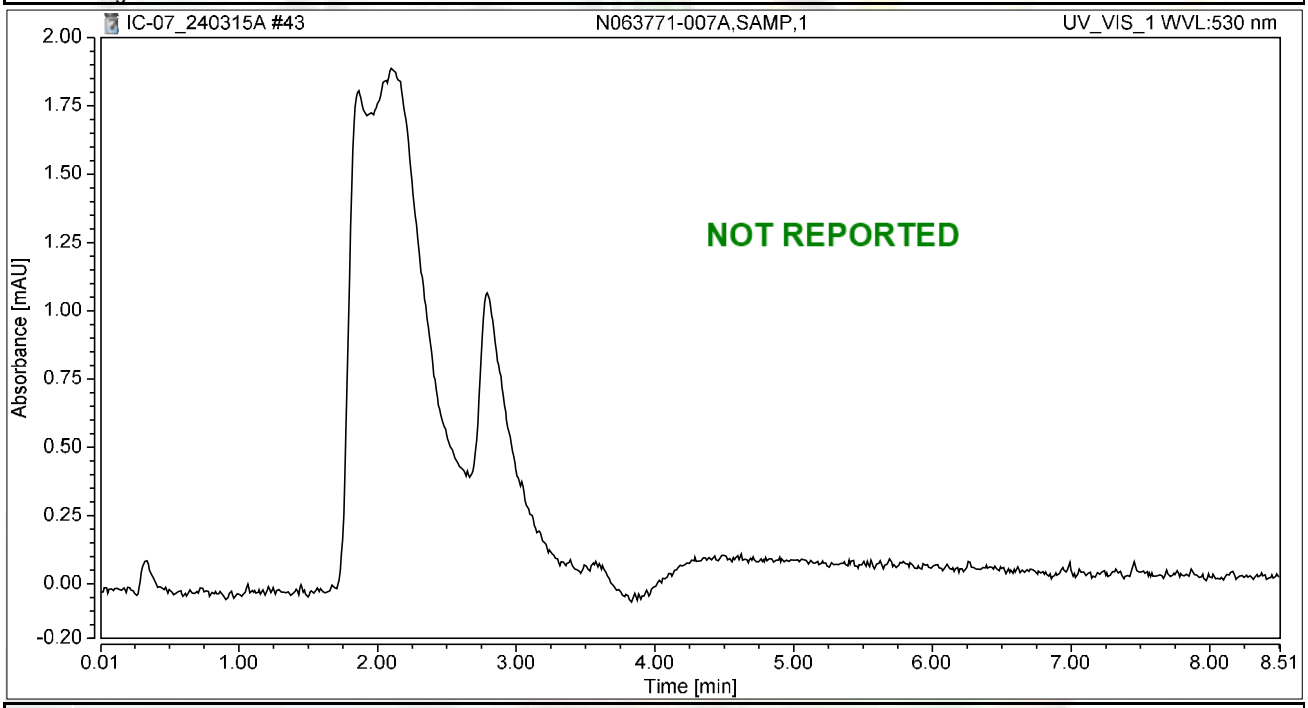
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.765	0.152	0.589	100.00	100.00	0.7126
Total:			**0.152**	**0.589**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-007A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 15:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

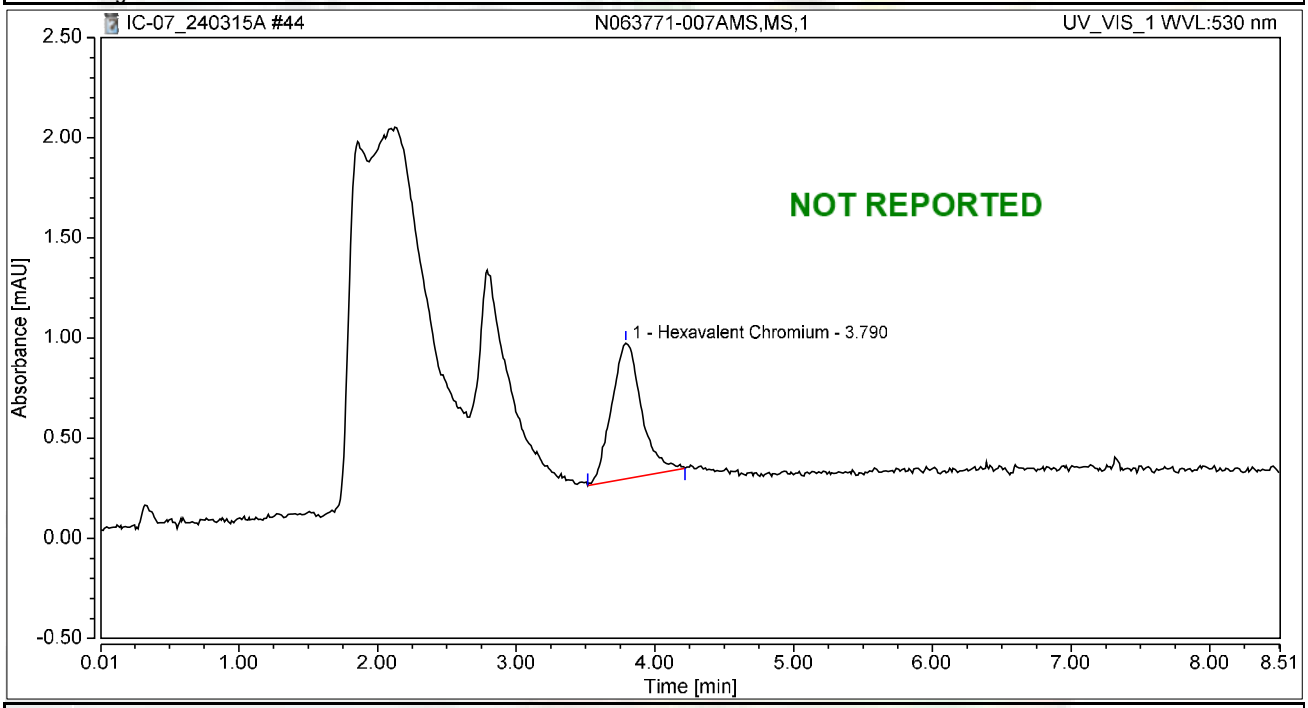
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 16:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

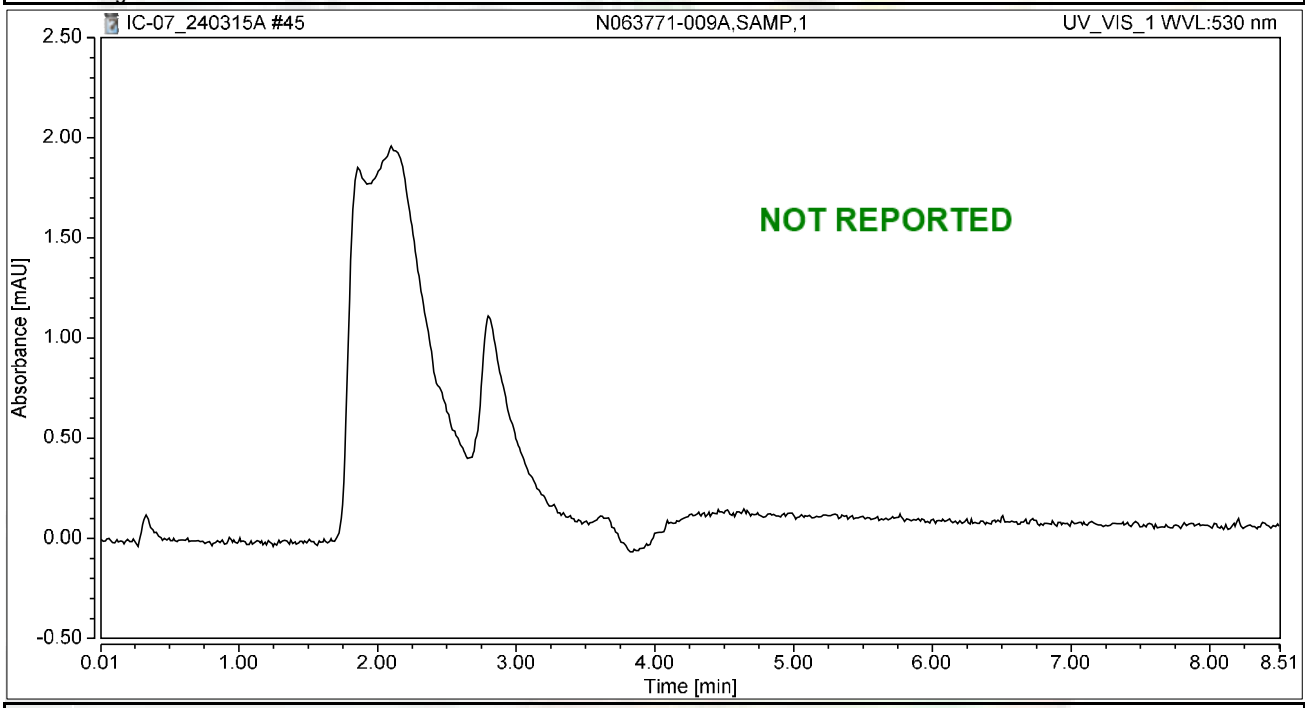
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.169	0.676	100.00	100.00	0.7931
Total:			**0.169**	**0.676**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 16:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

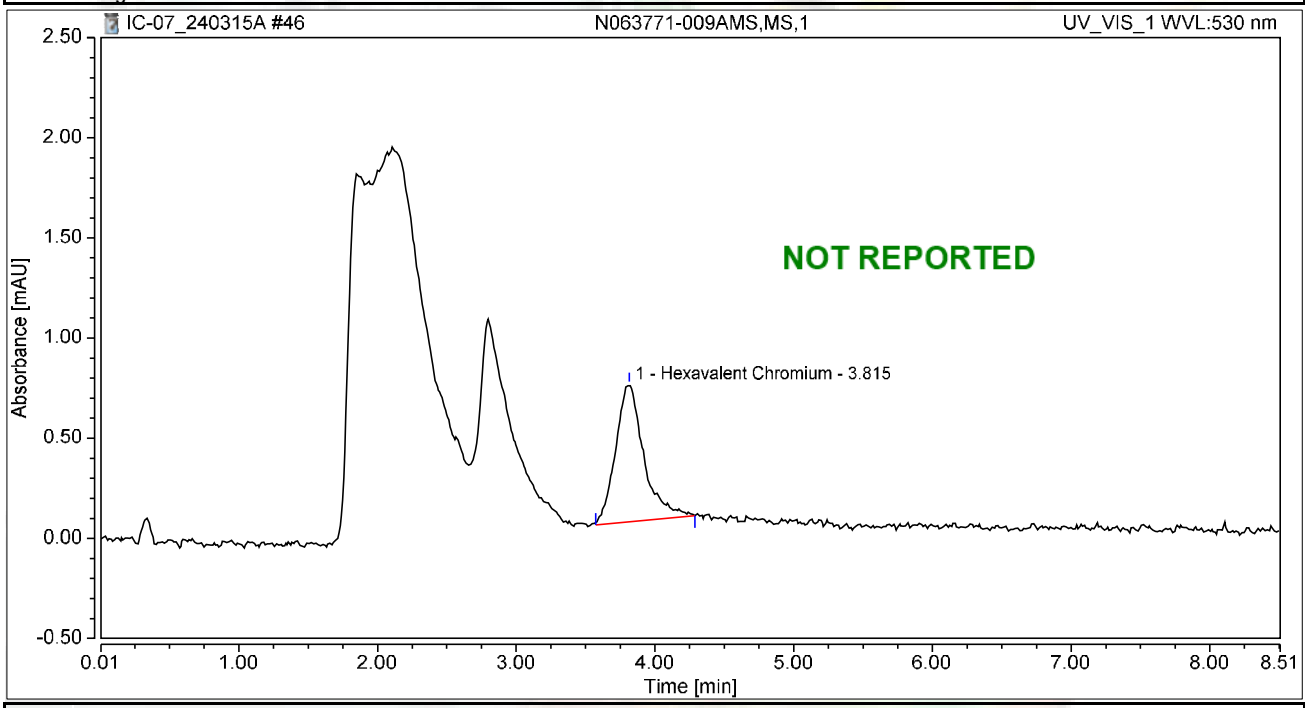
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 16:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

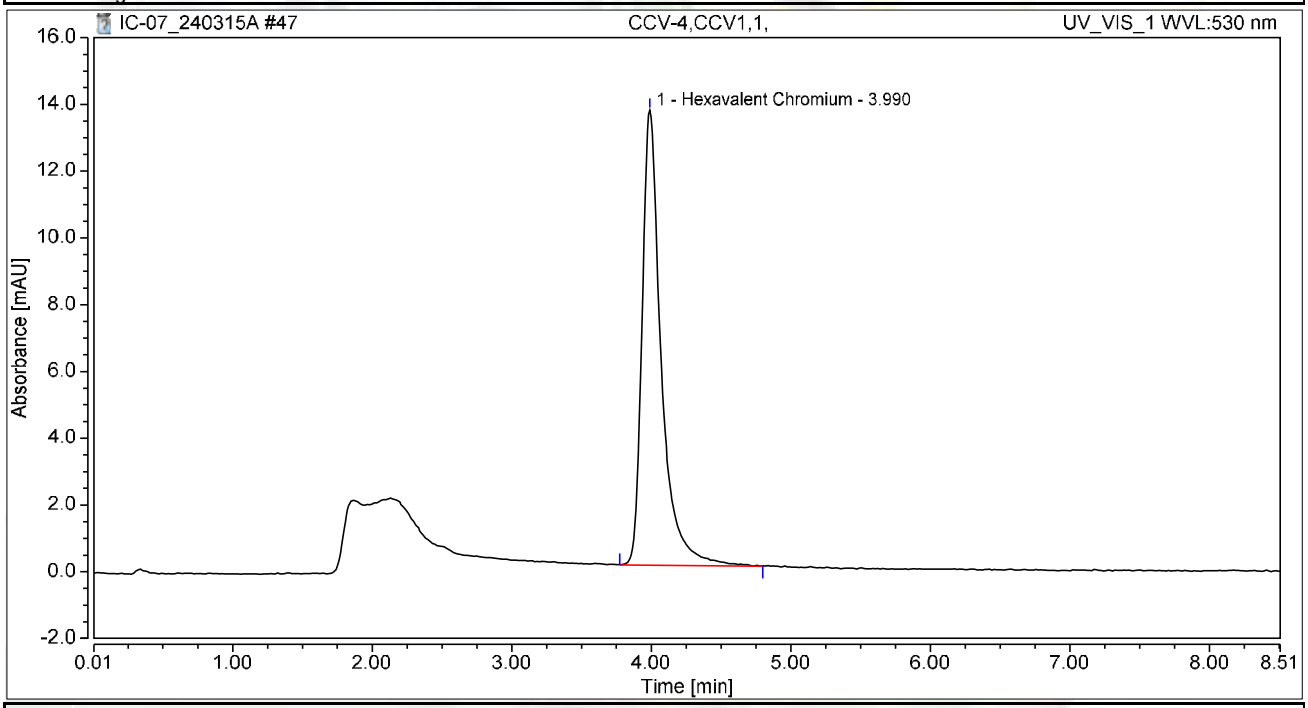
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	0.162	0.685	100.00	100.00	0.7605
Total:			**0.162**	**0.685**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 16:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

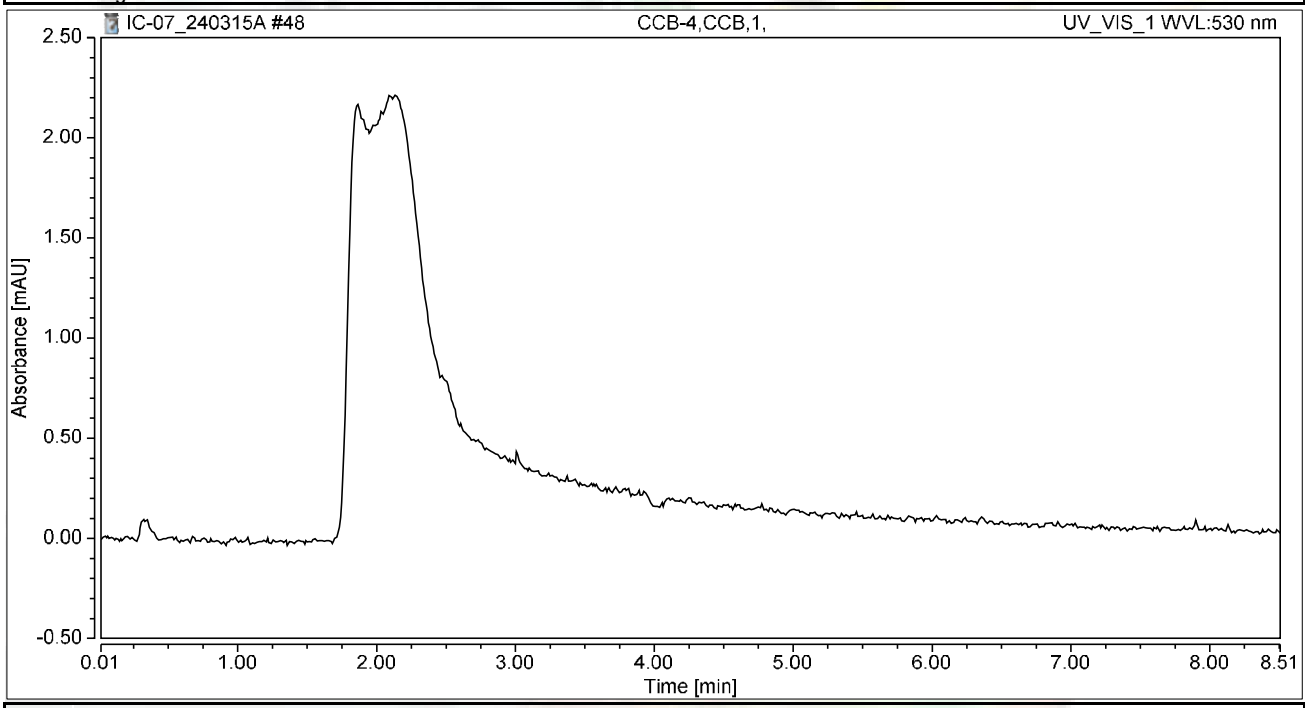
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	2.176	13.636	100.00	100.00	10.2256
Total:			**2.176**	**13.636**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 16:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

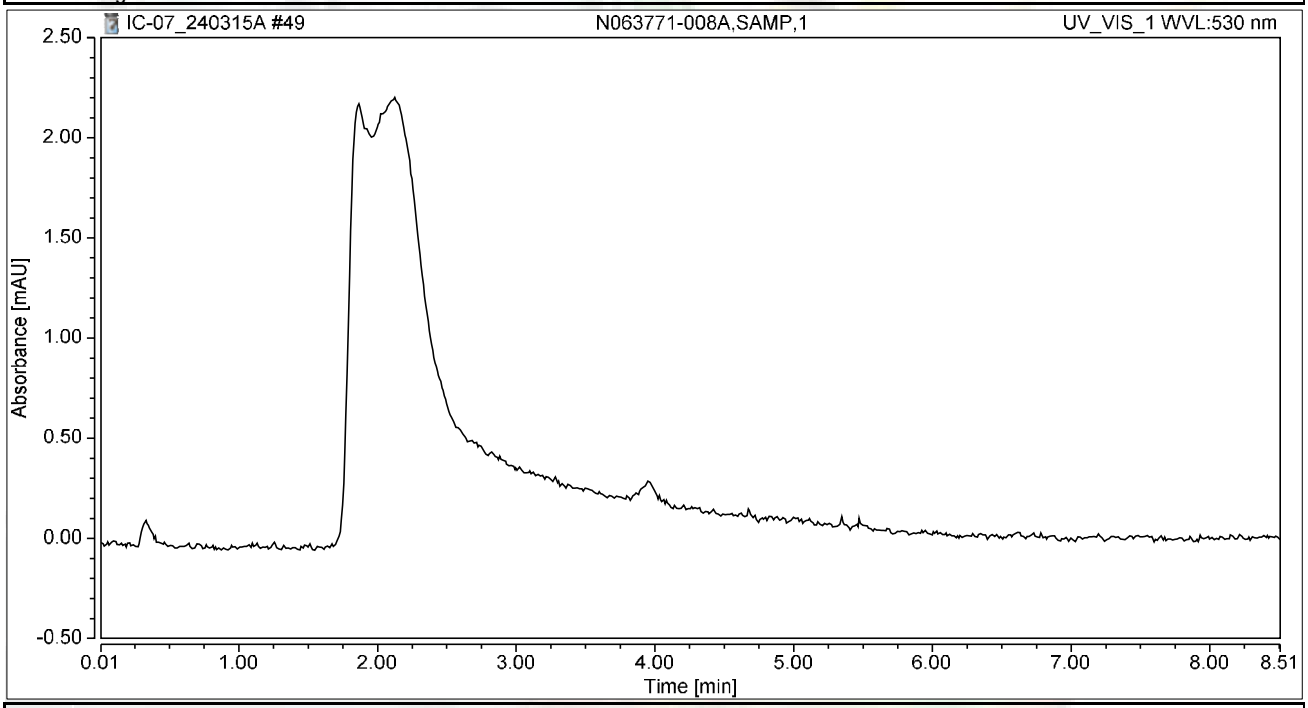
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 16:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

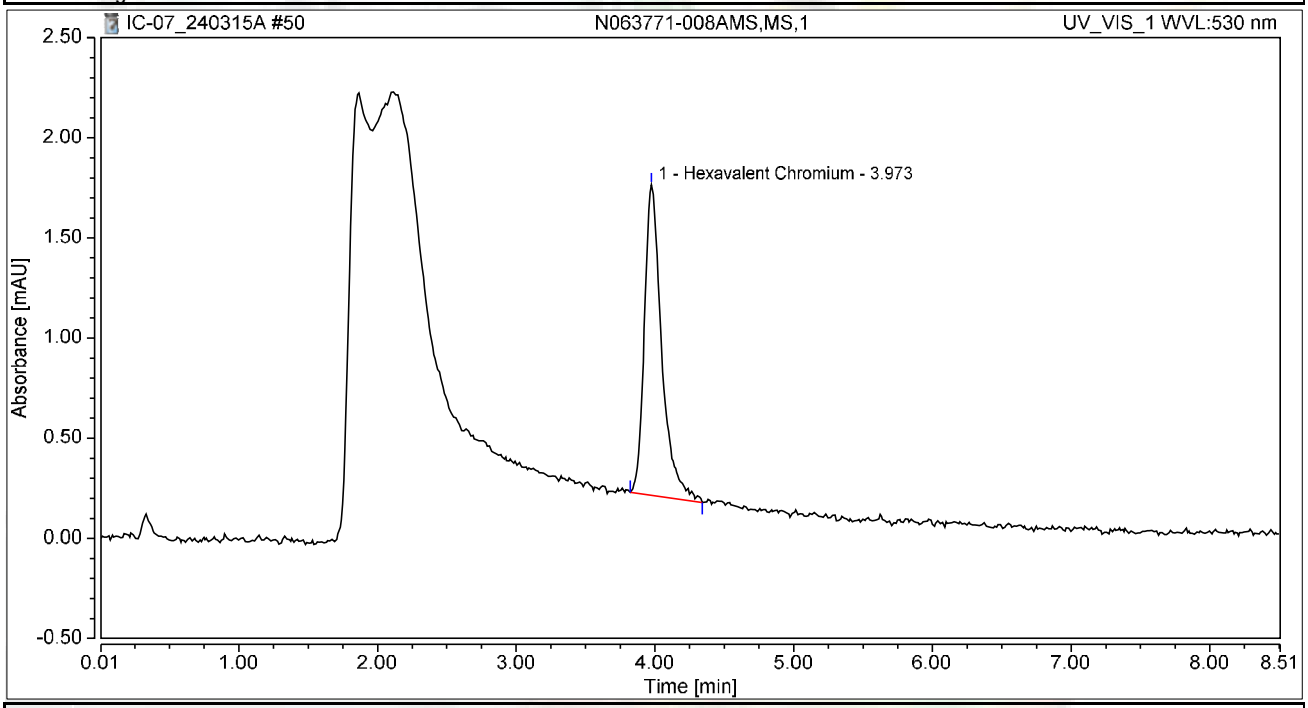
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 17:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

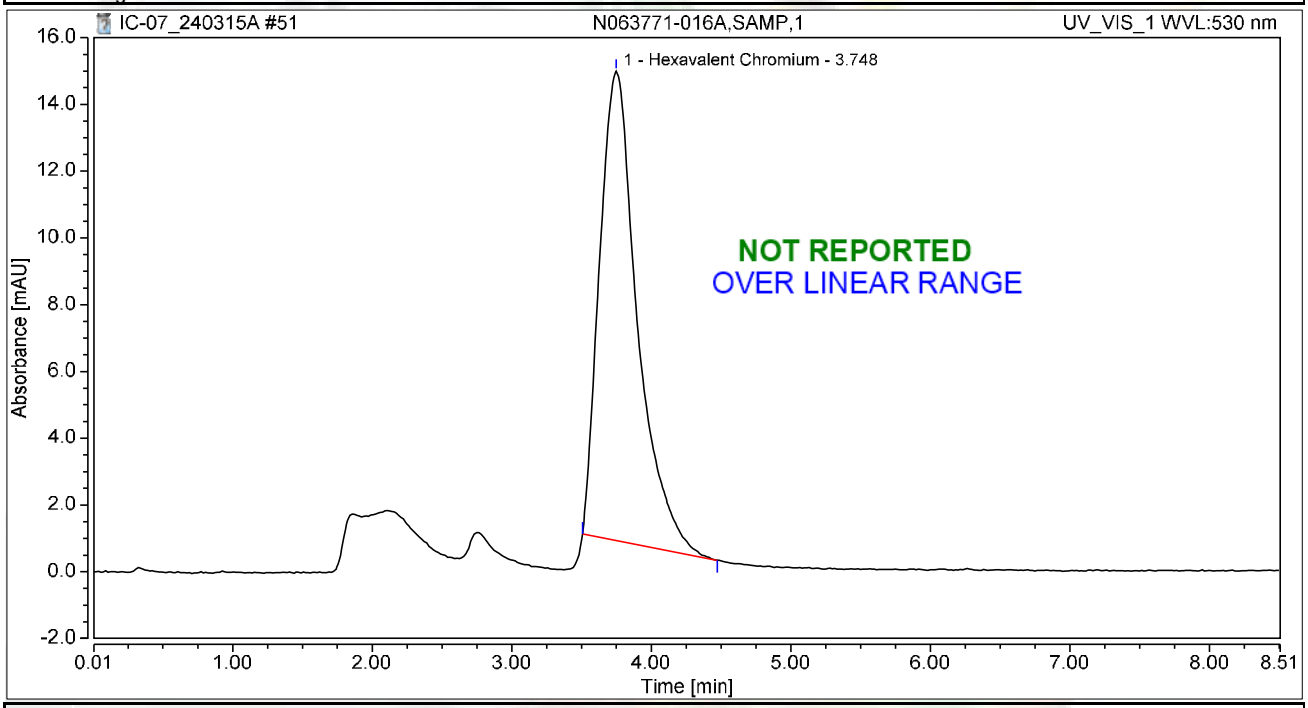
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.225	1.551	100.00	100.00	1.0549
Total:			**0.225**	**1.551**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-016A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 17:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

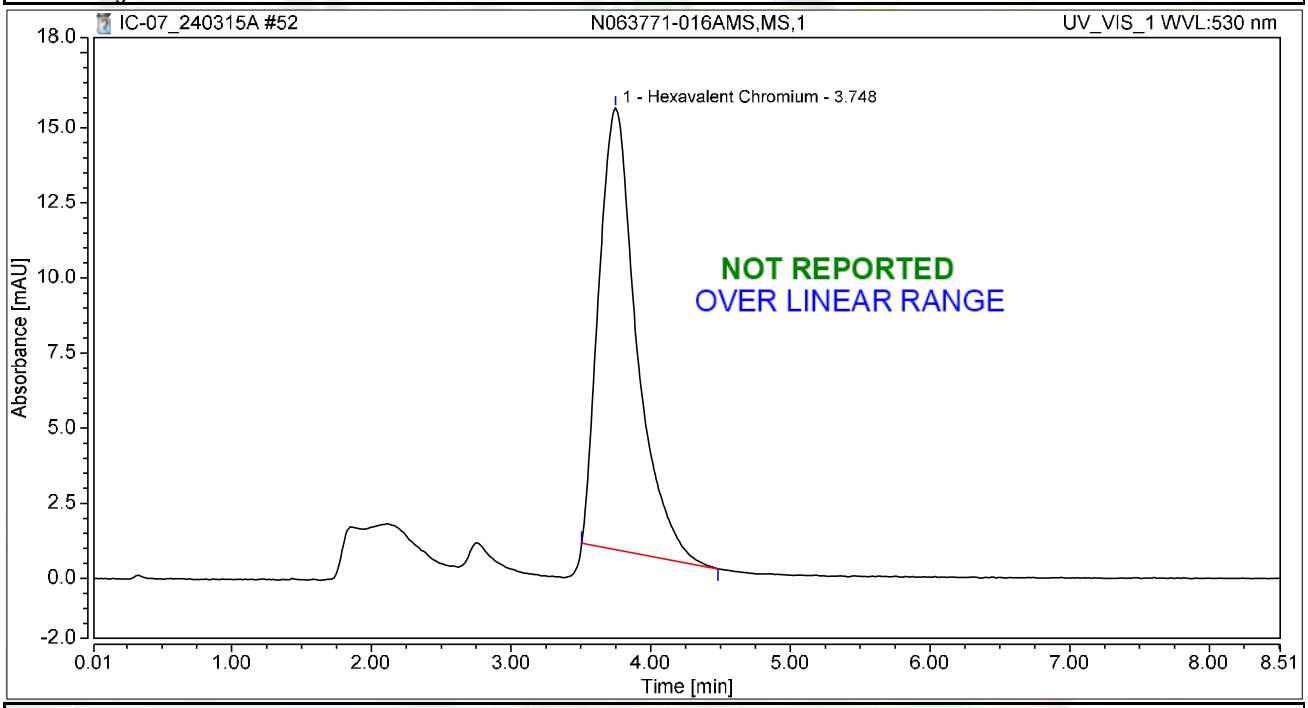
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.748	4.401	14.060	100.00	100.00	20.6778
Total:			**4.401**	**14.060**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-016AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 17:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

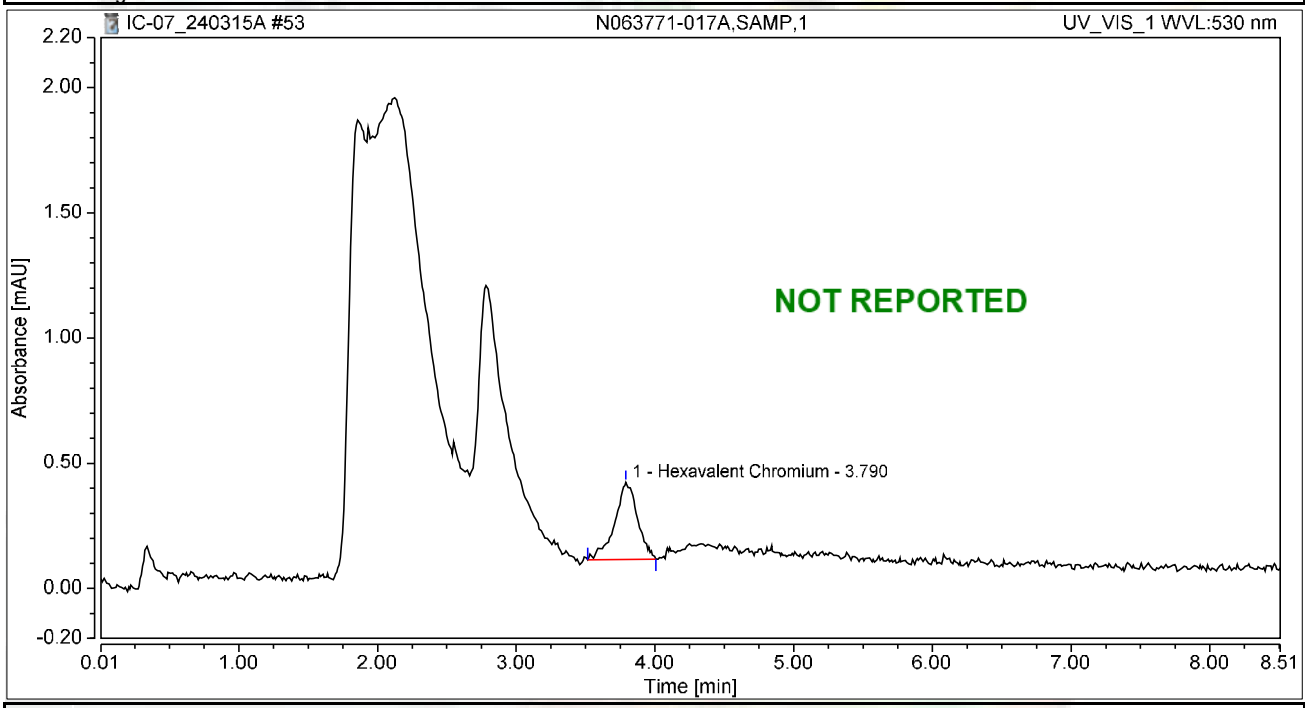
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.748	4.600	14.694	100.00	100.00	21.6128
Total:			**4.600**	**14.694**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-017A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 17:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

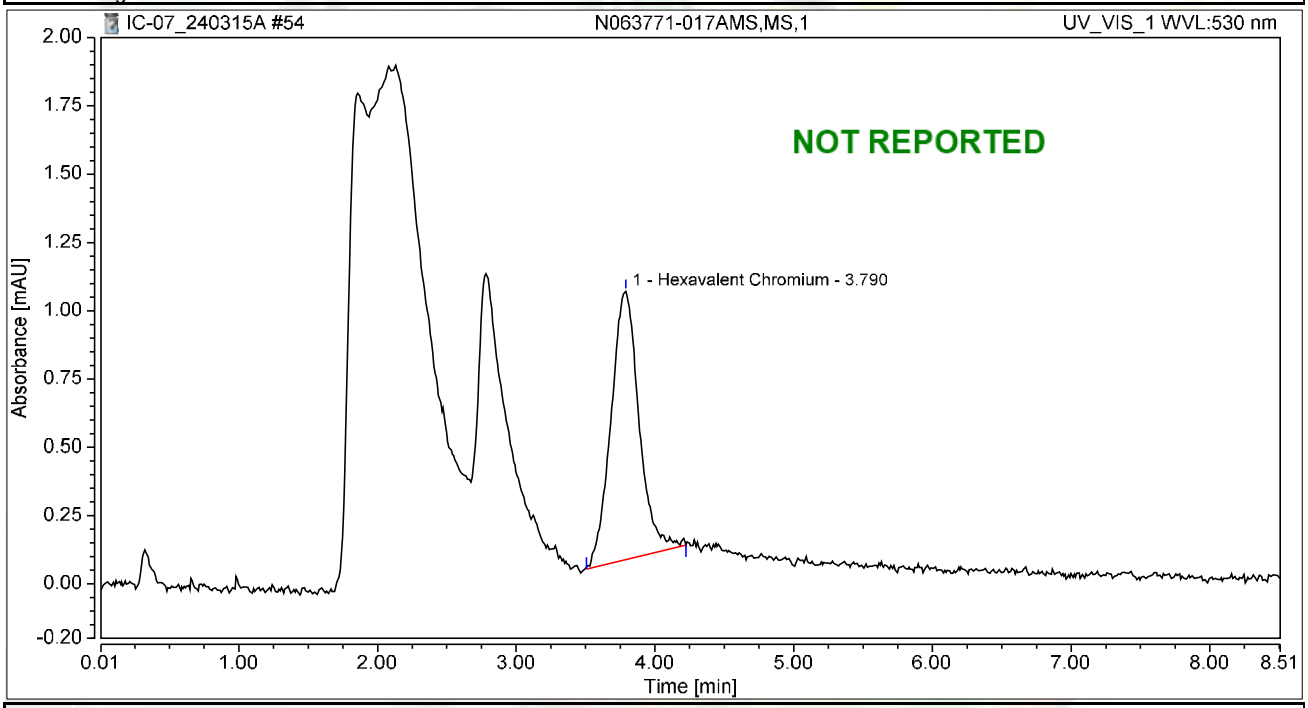
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.058	0.307	100.00	100.00	0.2746
Total:			**0.058**	**0.307**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-017AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 17:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

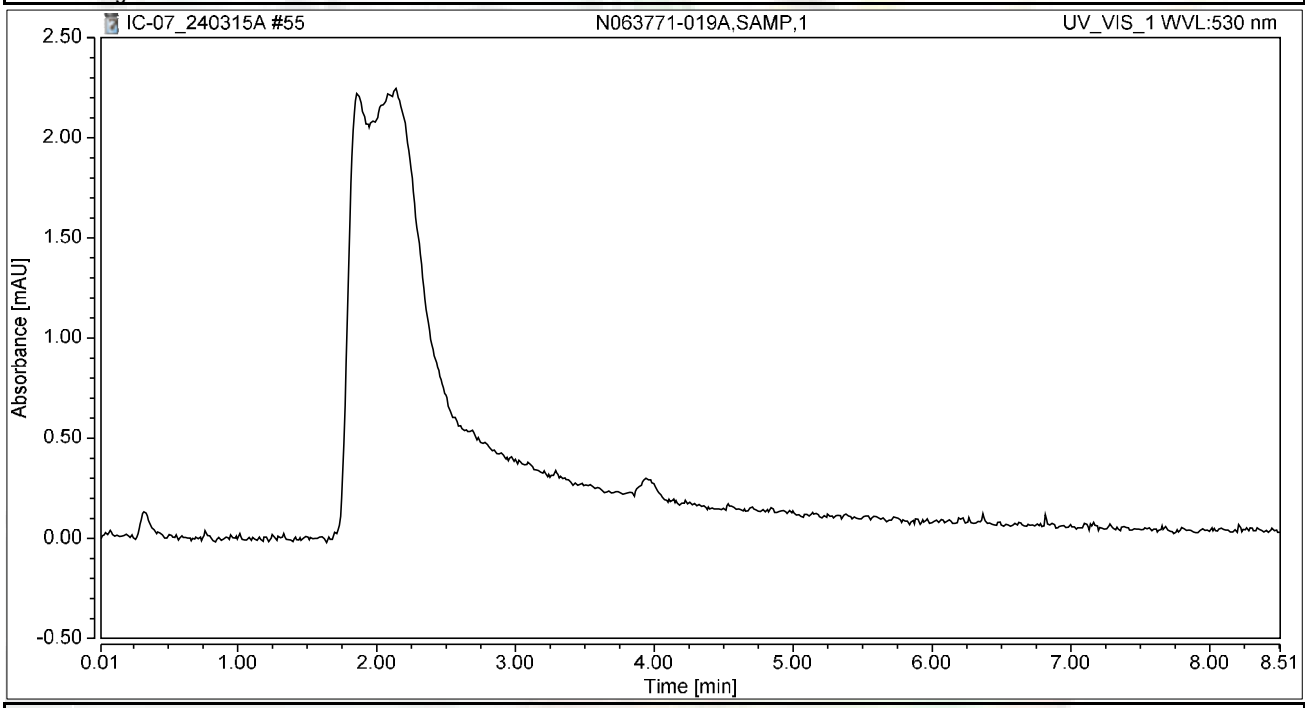
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.231	0.983	100.00	100.00	1.0840
Total:			**0.231**	**0.983**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-019A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 17:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

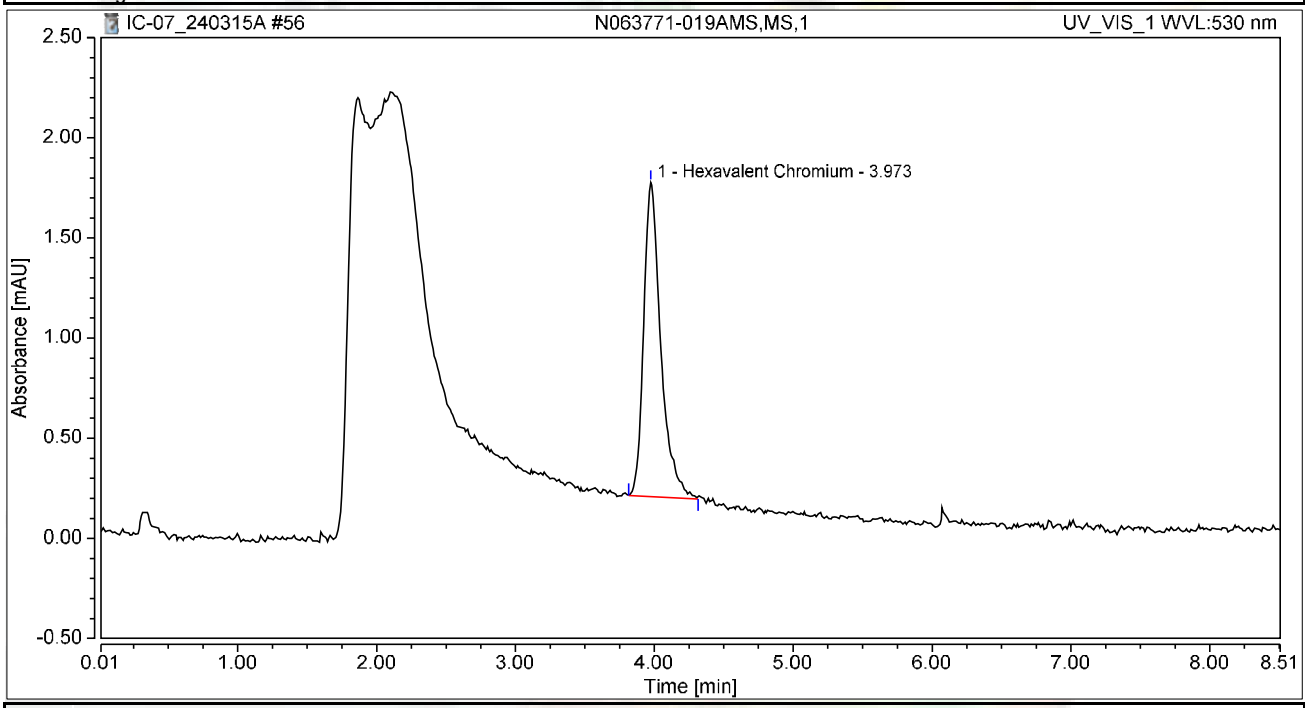
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-019AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 17:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

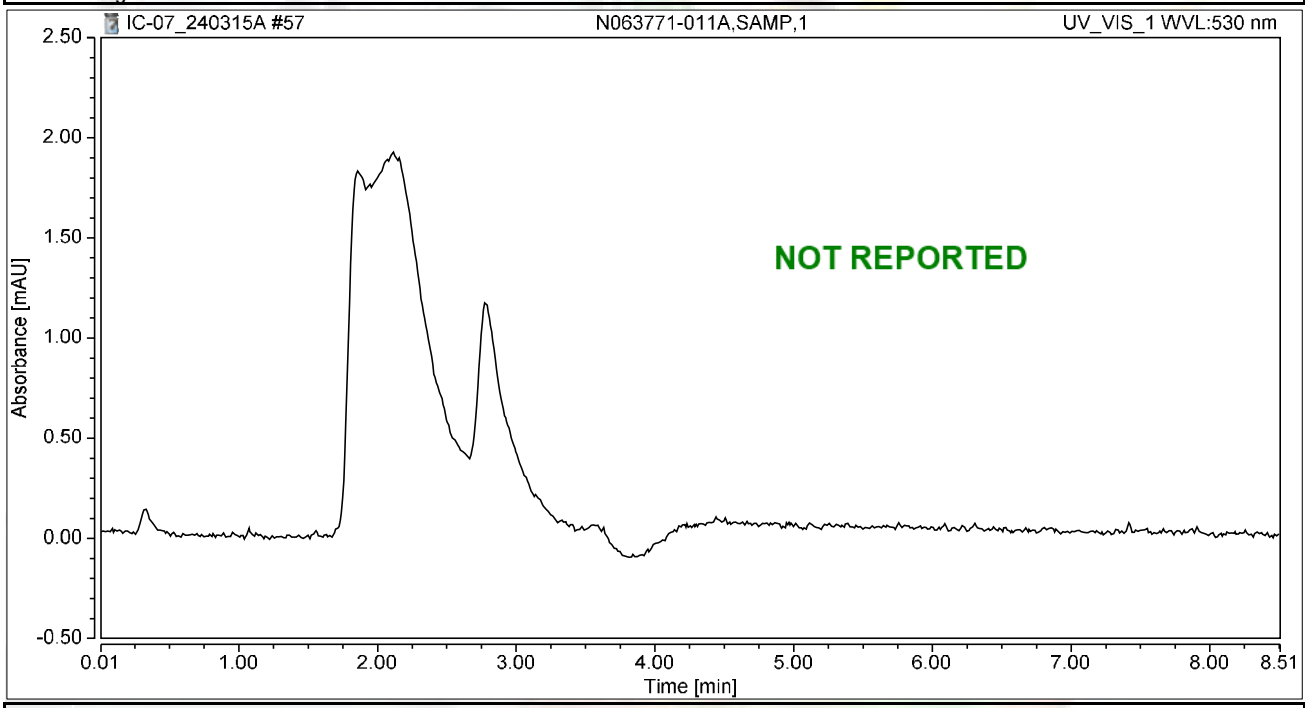
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.224	1.568	100.00	100.00	1.0544
Total:			**0.224**	**1.568**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-011A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 18:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

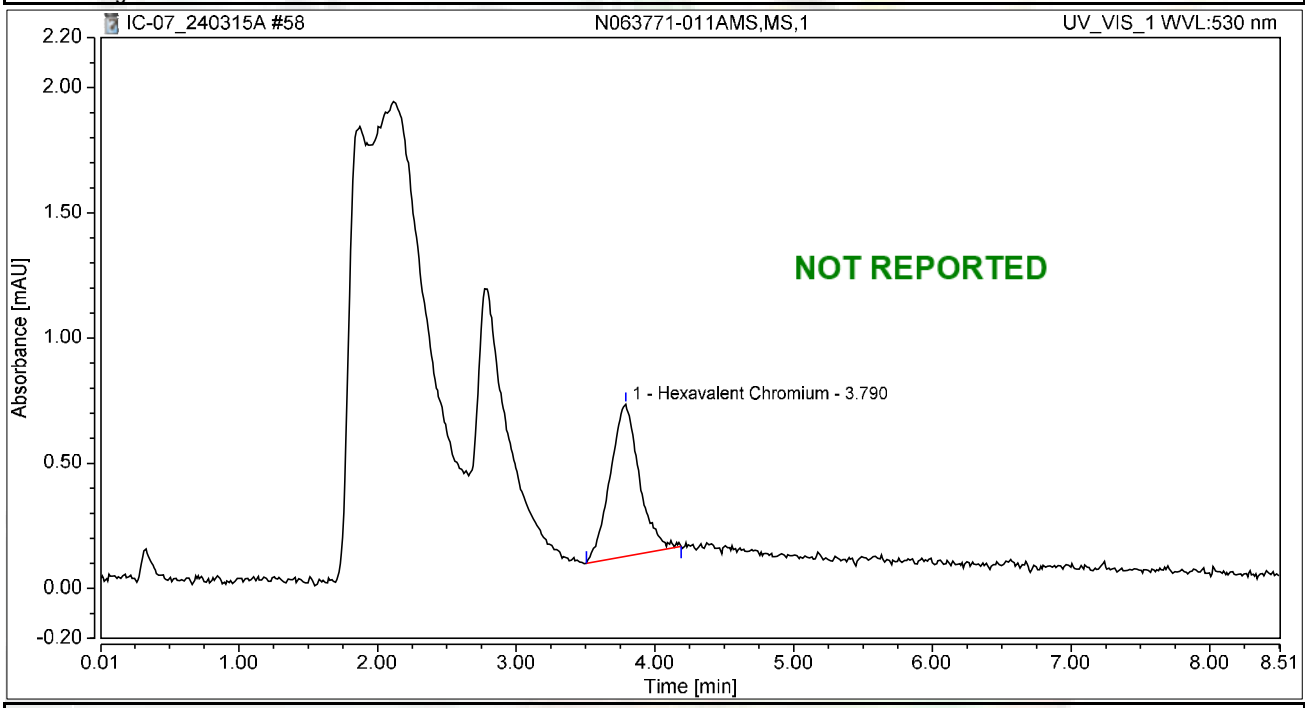
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 18:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

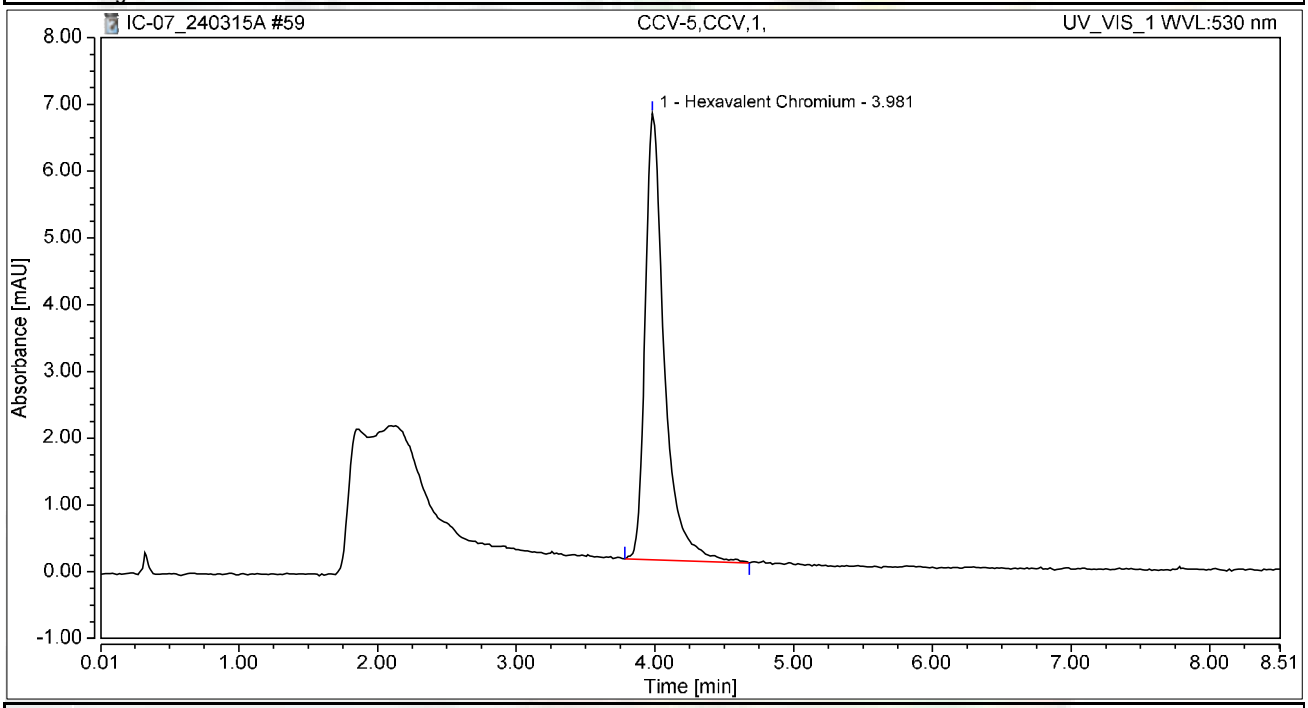
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.148	0.607	100.00	100.00	0.6959
Total:			**0.148**	**0.607**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 18:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

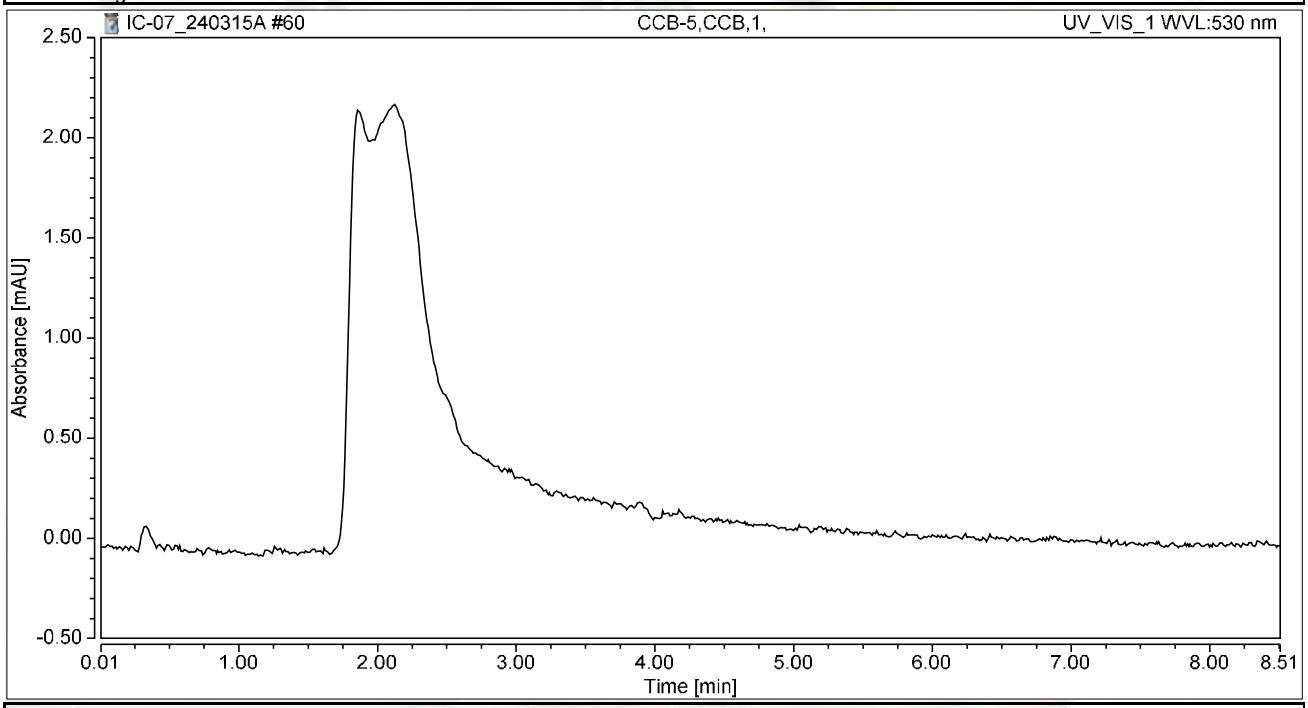
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.072	6.686	100.00	100.00	5.0371
Total:			**1.072**	**6.686**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 18:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

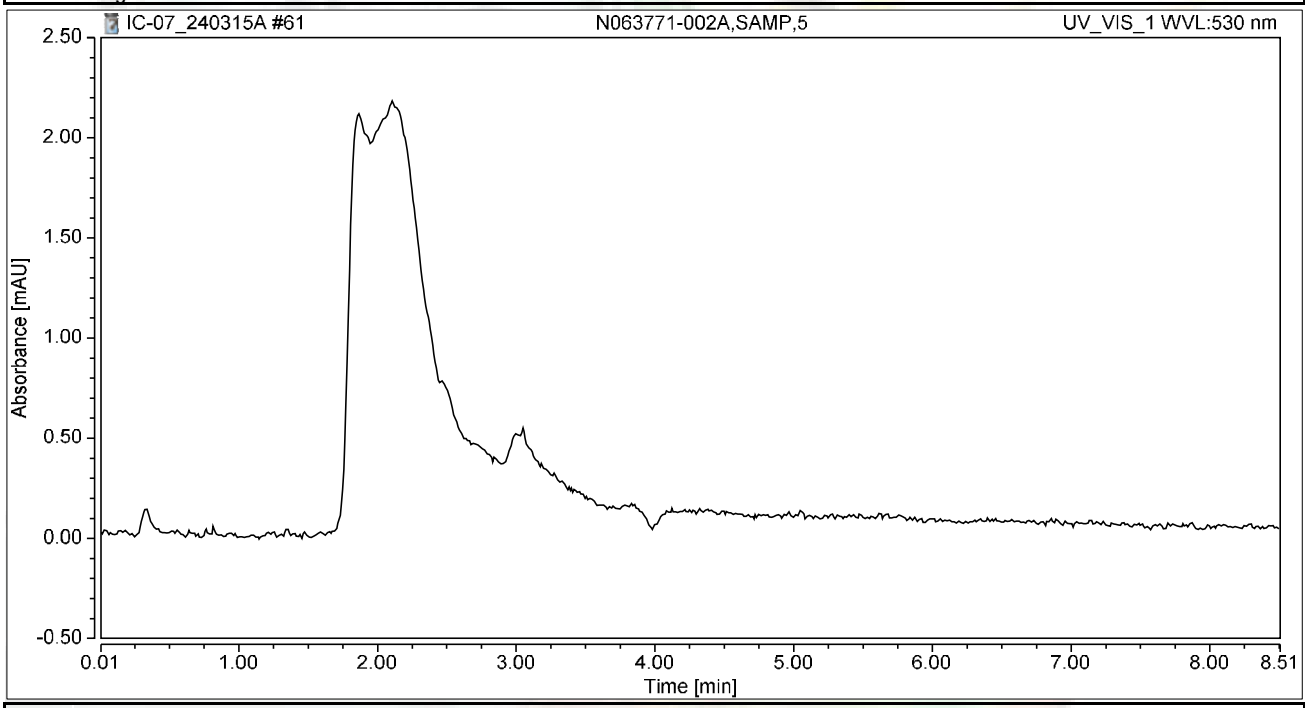
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 18:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

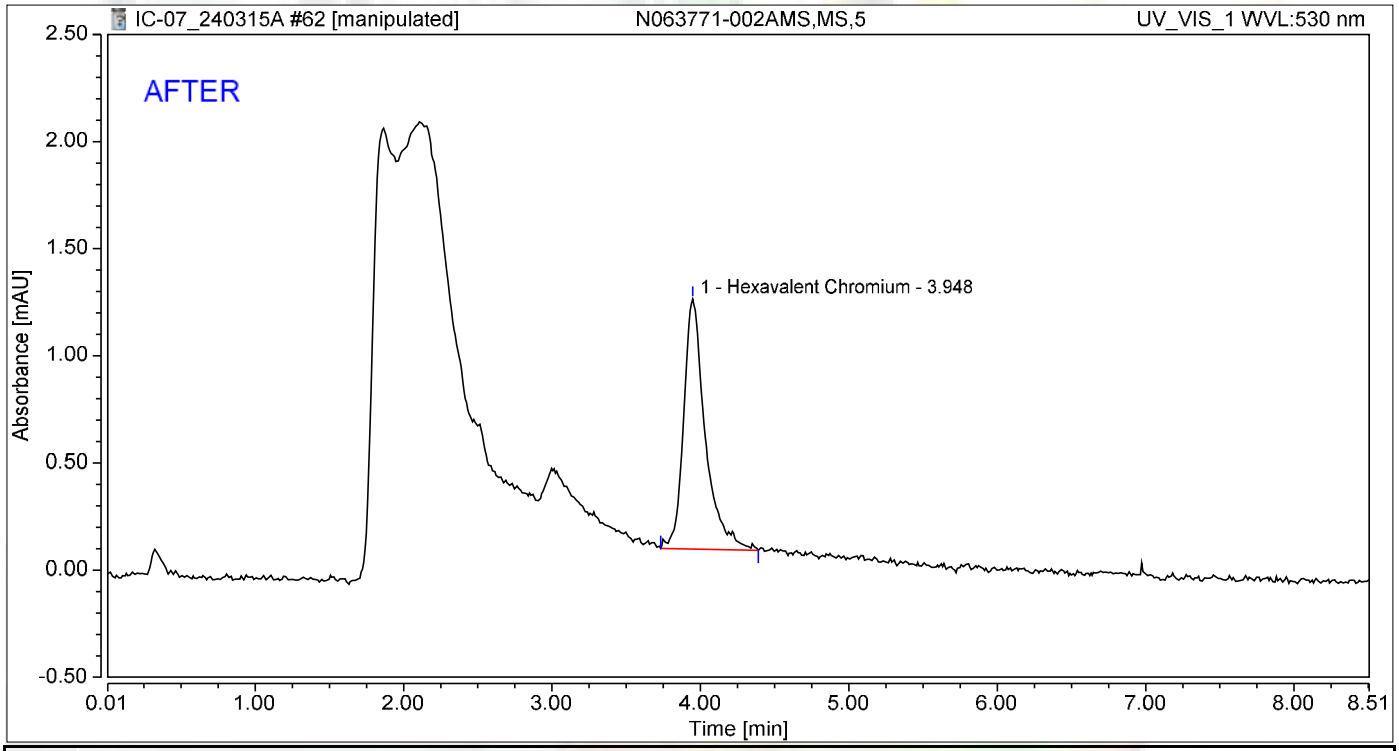
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 18:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.197	1.167	100.00	100.00	0.9270
Total:			**0.197**	**1.167**	**100.00**	**100.00**	

Reviewed by:

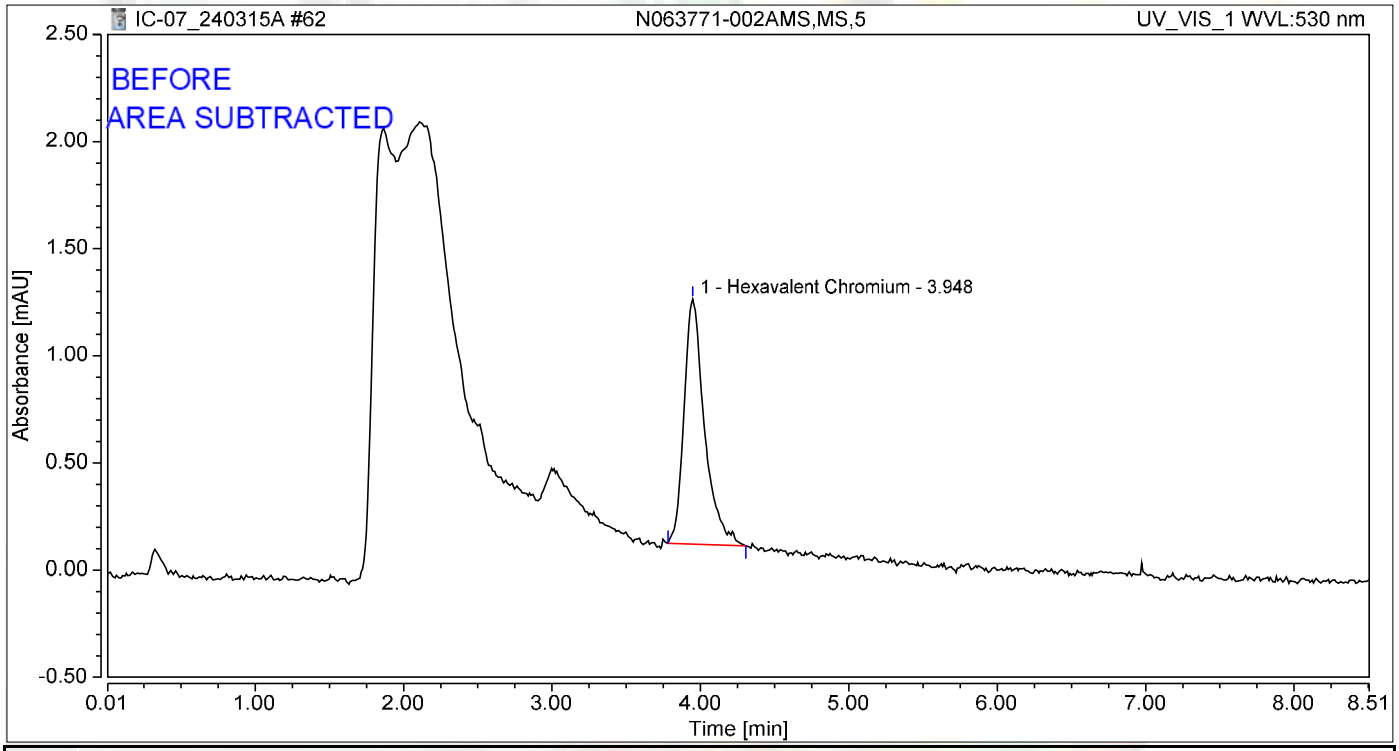
dMocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063771-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 18:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

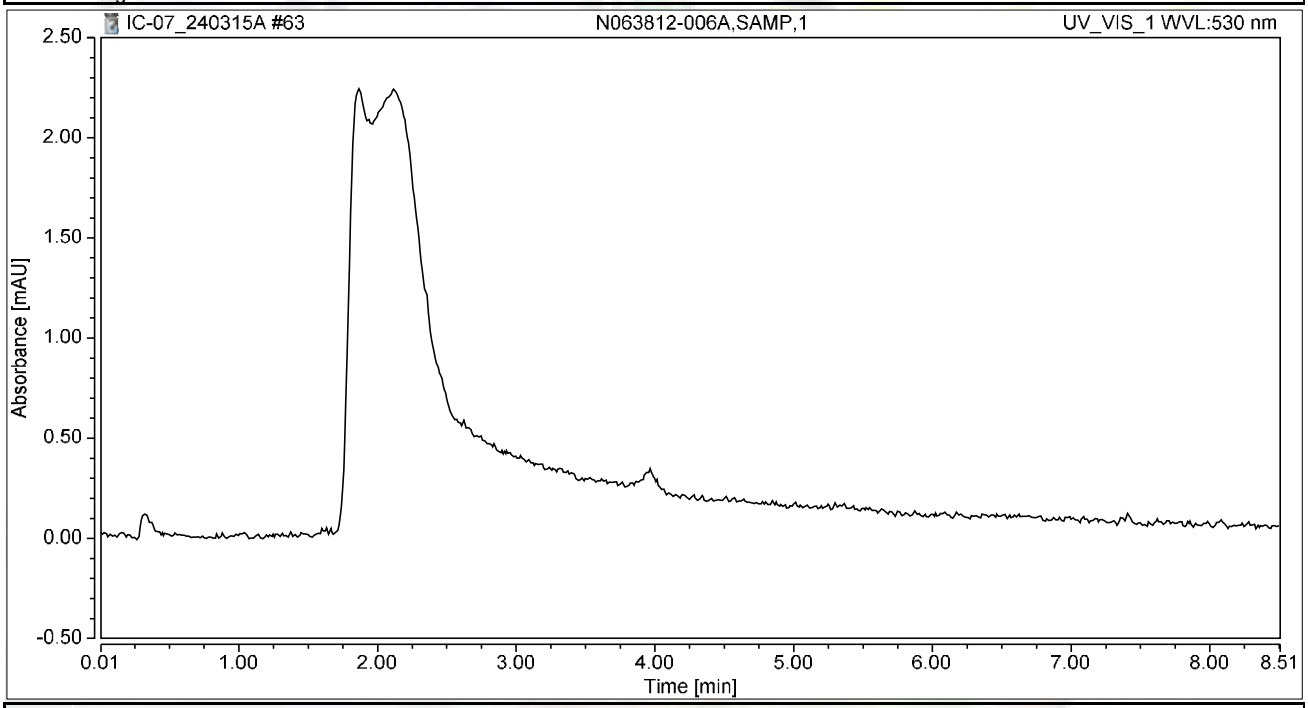
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.183	1.144	100.00	100.00	0.8594
Total:			**0.183**	**1.144**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 19:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

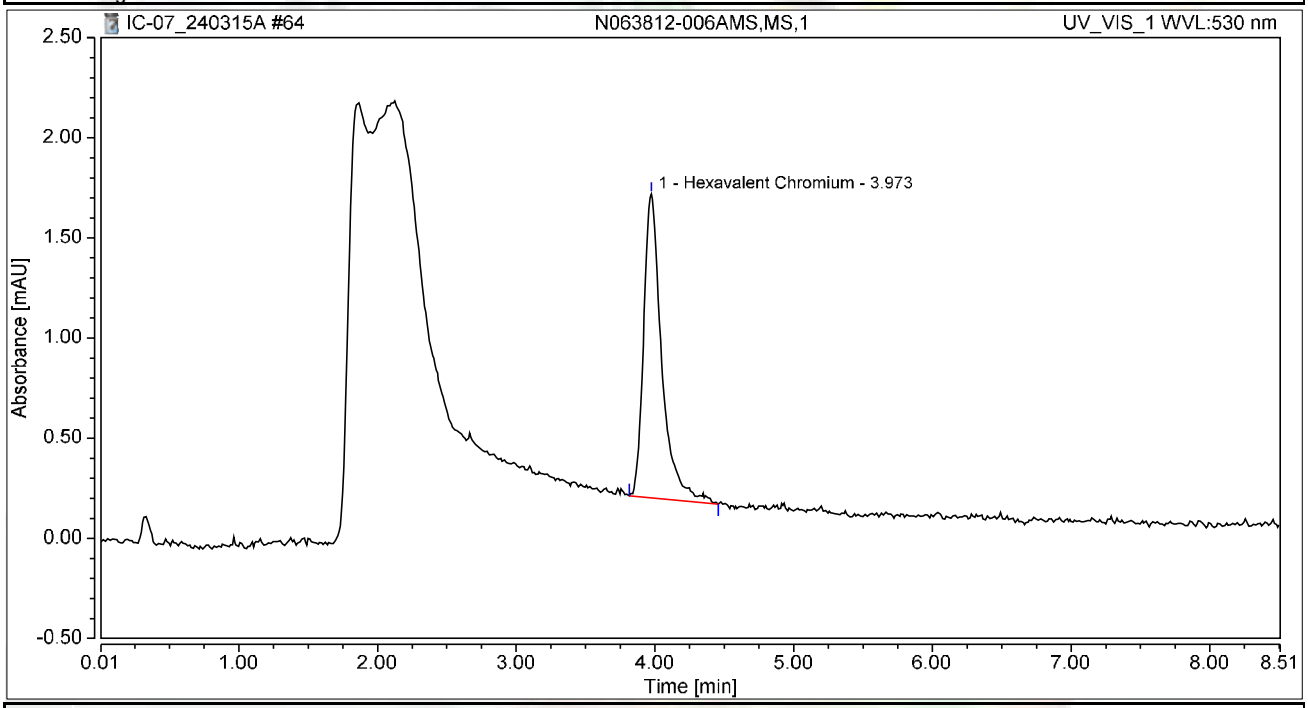
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 19:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

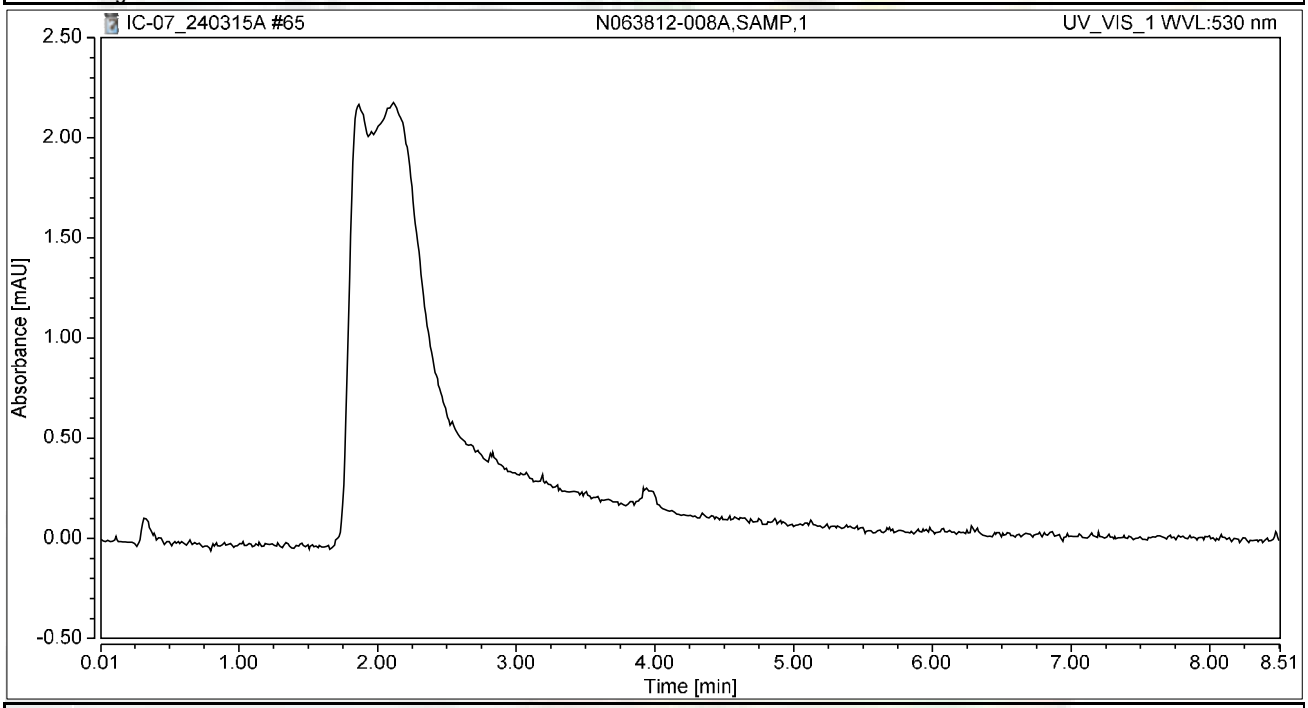
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.229	1.516	100.00	100.00	1.0759
Total:			**0.229**	**1.516**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 19:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

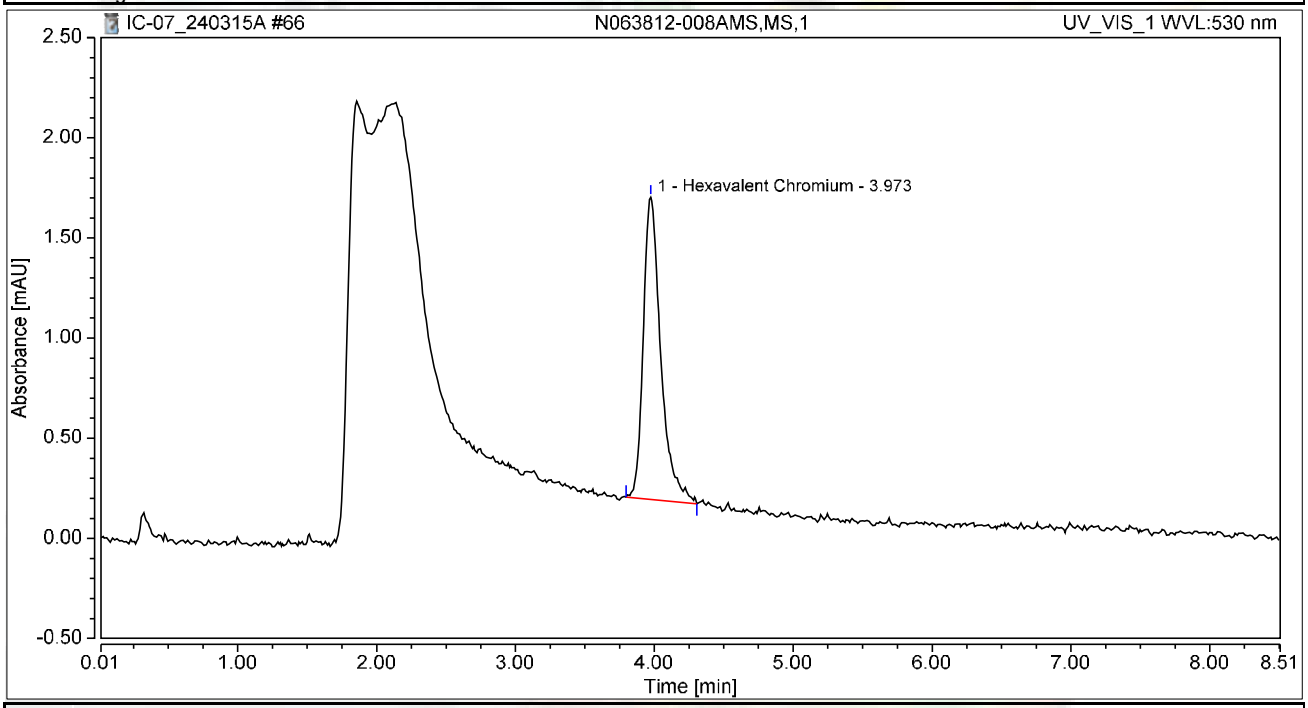
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-008AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 19:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

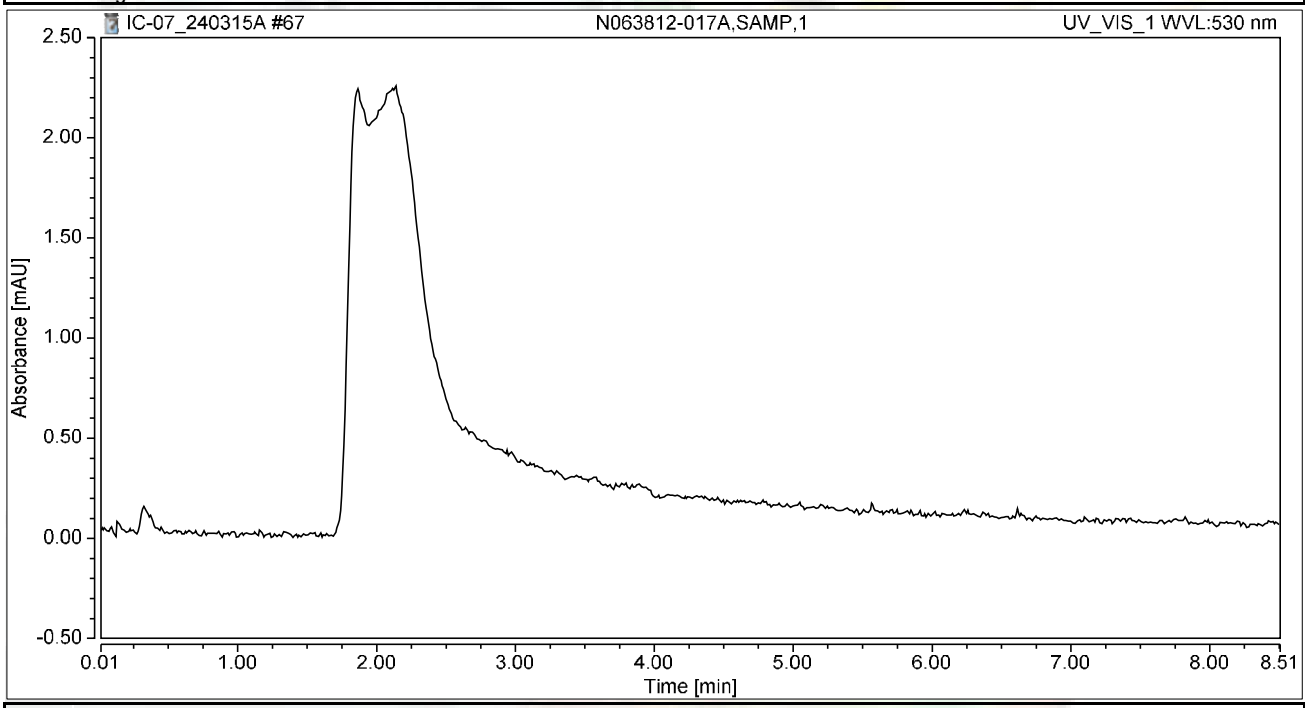
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.221	1.510	100.00	100.00	1.0366
Total:			**0.221**	**1.510**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-017A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 19:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

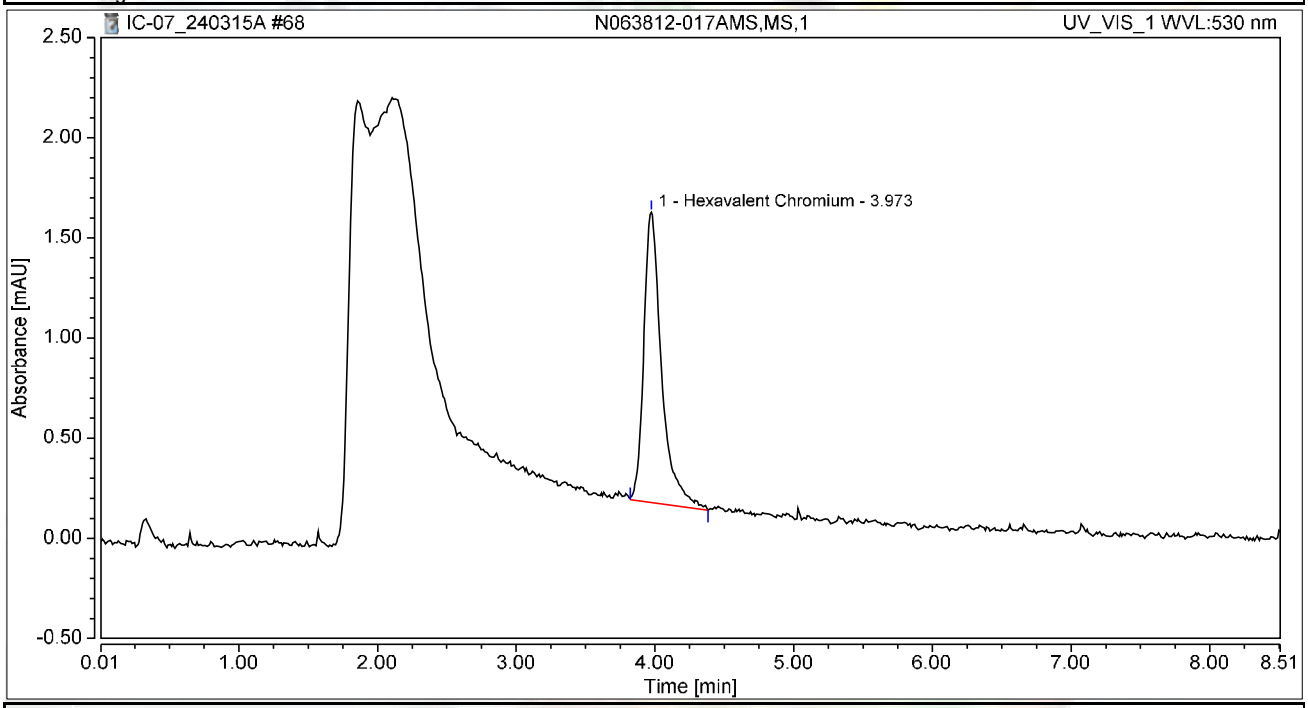
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-017AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 19:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

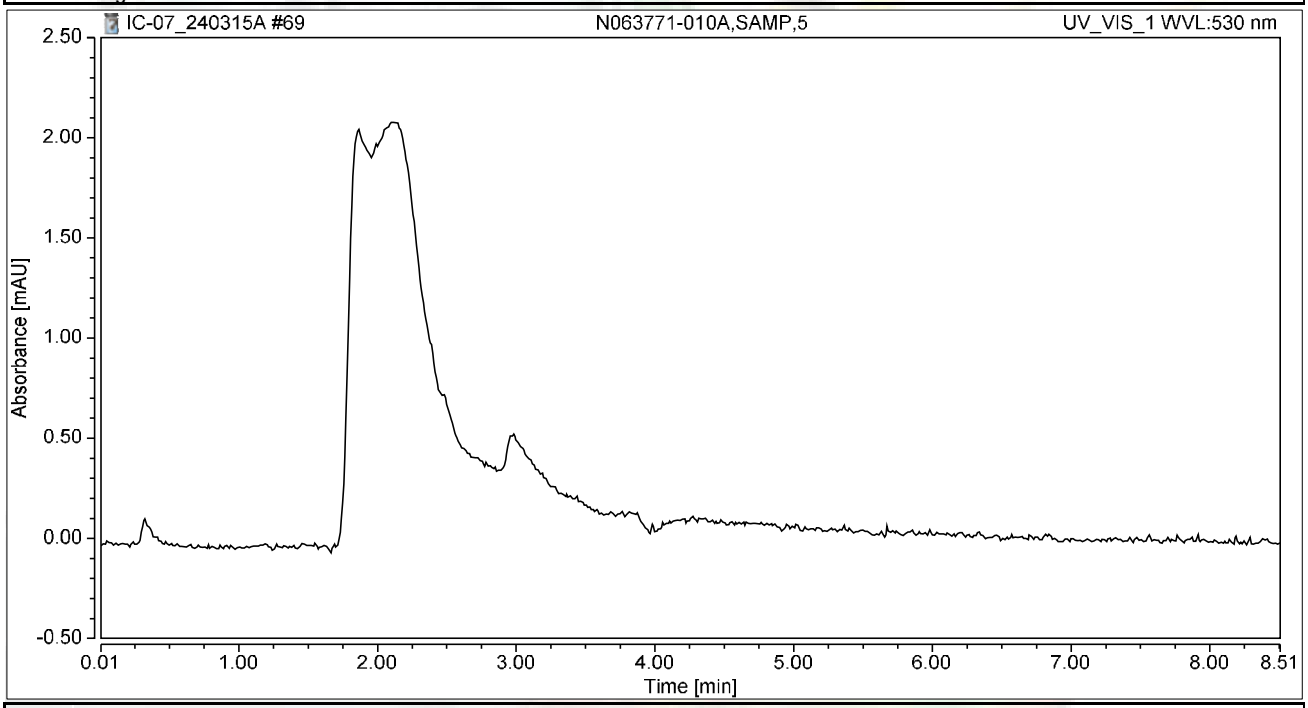
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.215	1.449	100.00	100.00	1.0098
Total:			**0.215**	**1.449**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-010A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

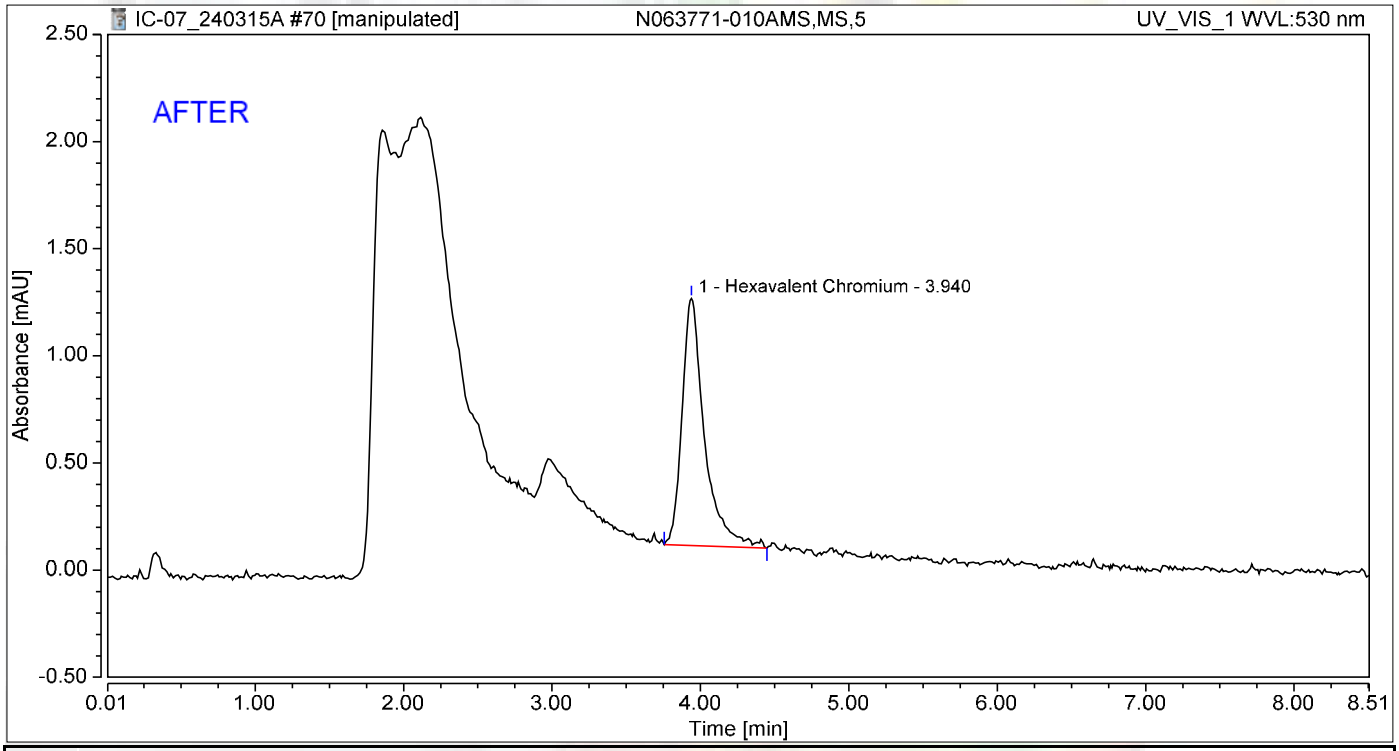
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-010AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.202	1.153	100.00	100.00	0.9506
Total:			**0.202**	**1.153**	**100.00**	**100.00**	

Reviewed by:

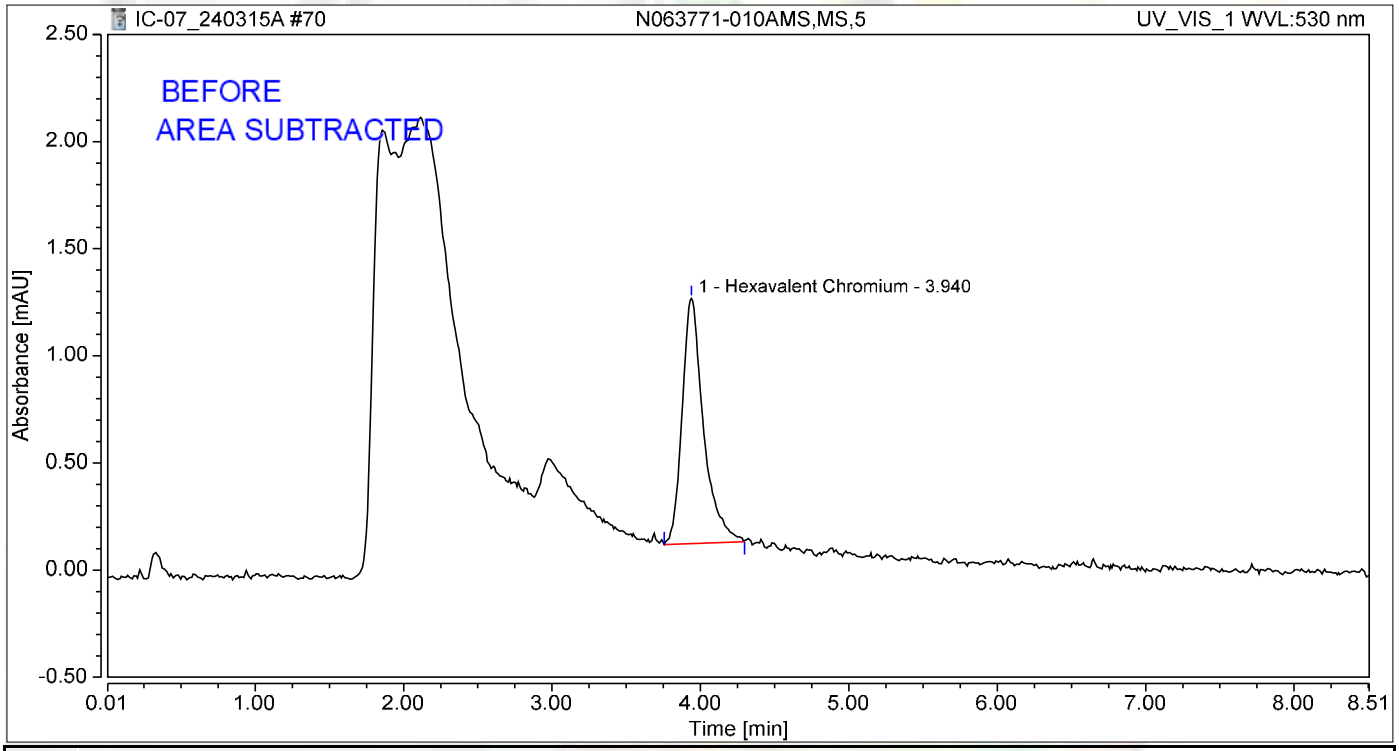
dMocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063771-010AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

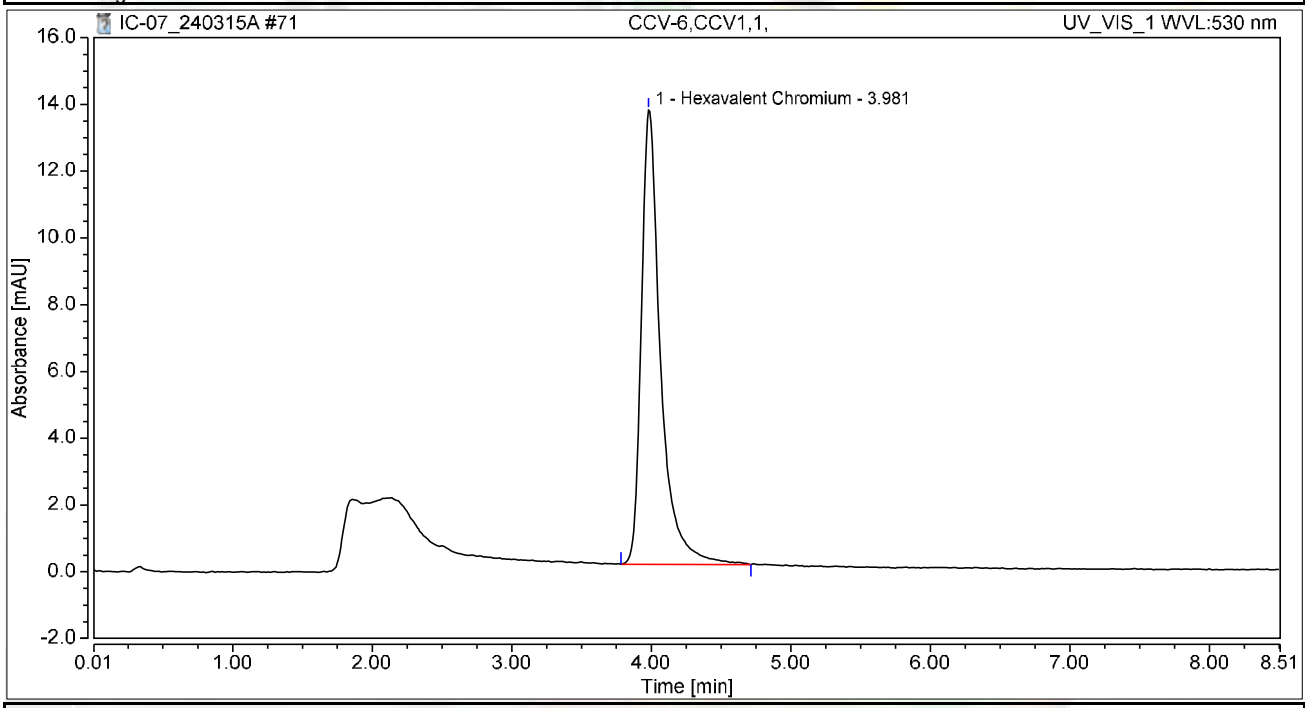
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.191	1.144	100.00	100.00	0.8977
Total:			**0.191**	**1.144**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

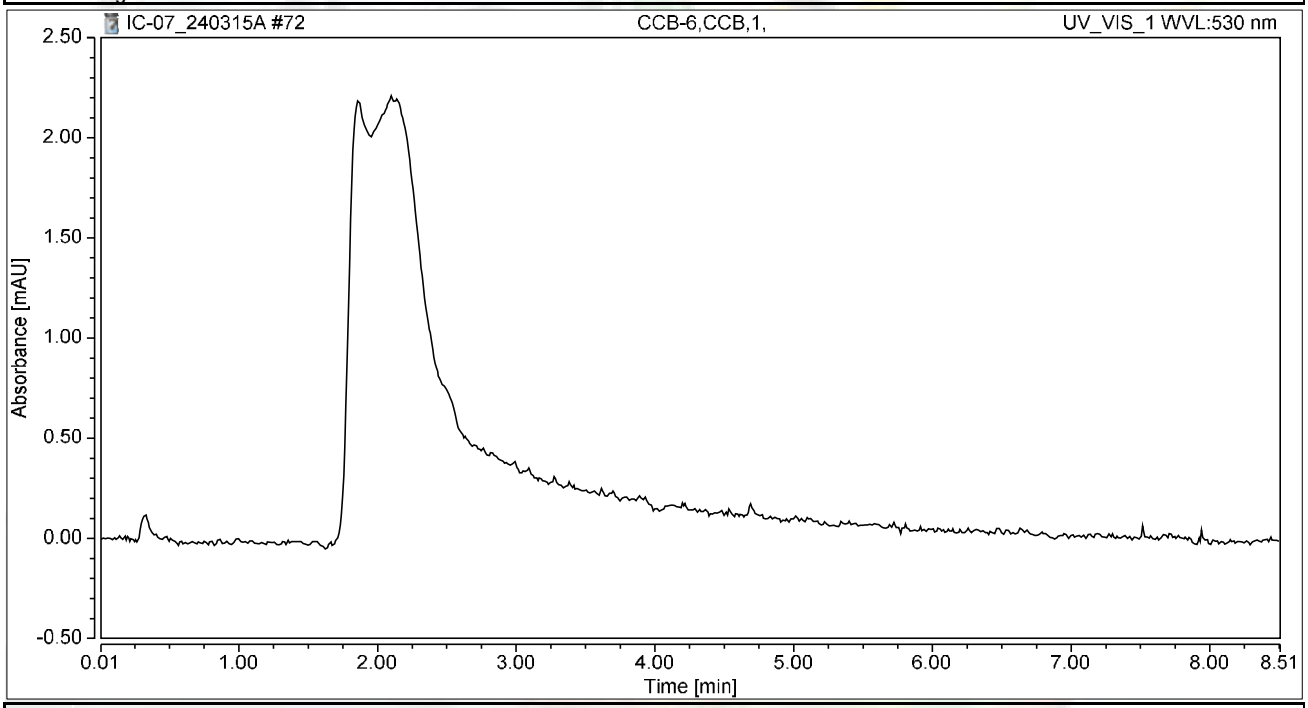
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	2.177	13.608	100.00	100.00	10.2280
Total:			**2.177**	**13.608**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

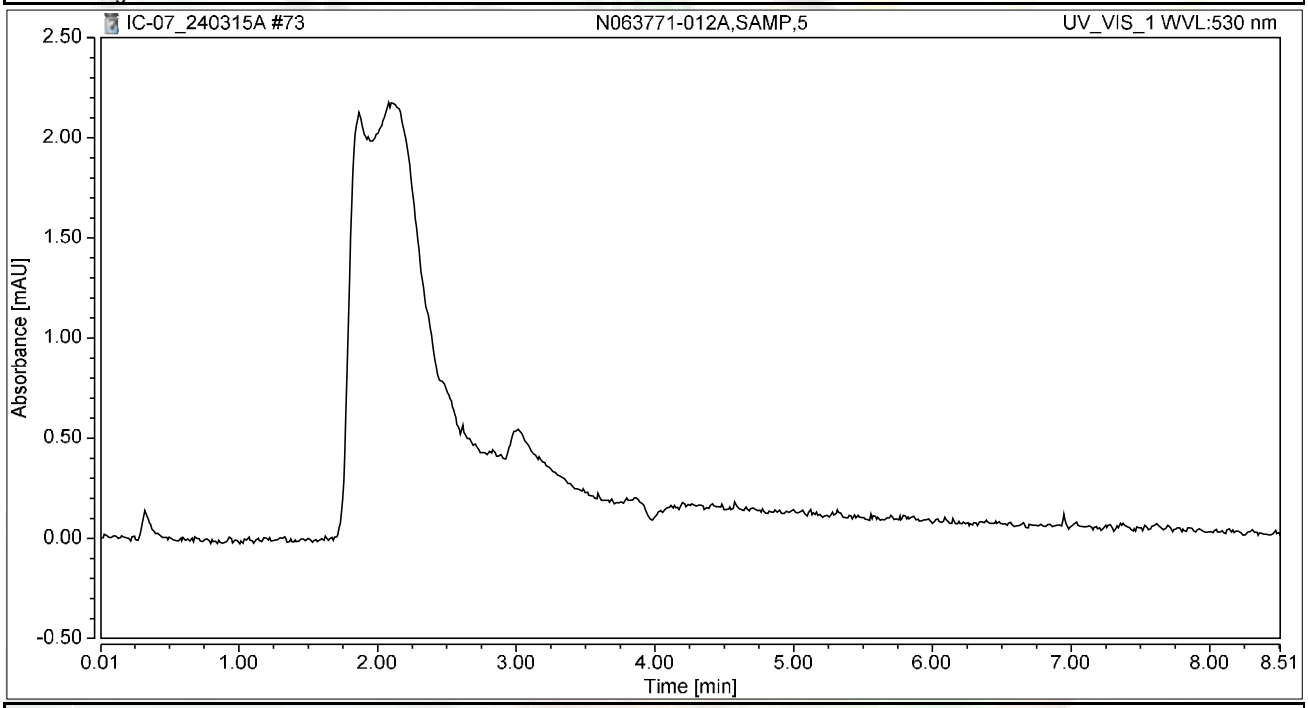
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-012A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

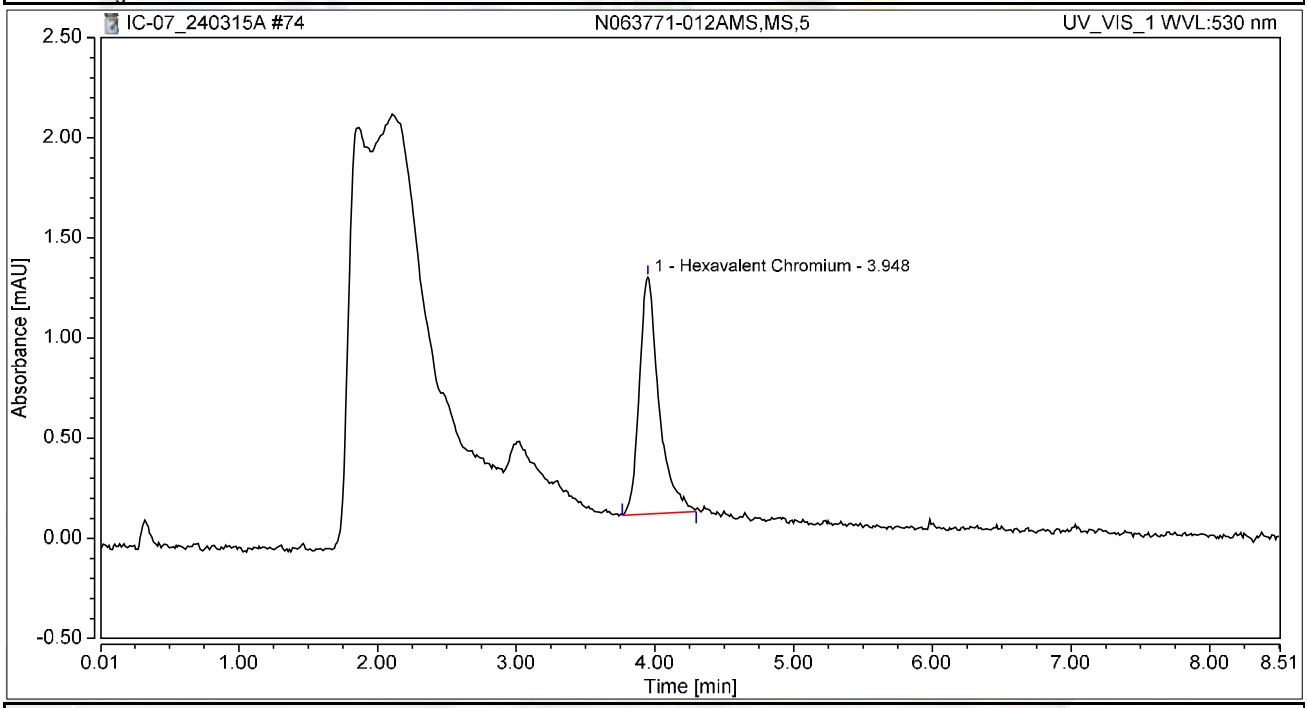
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-012AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

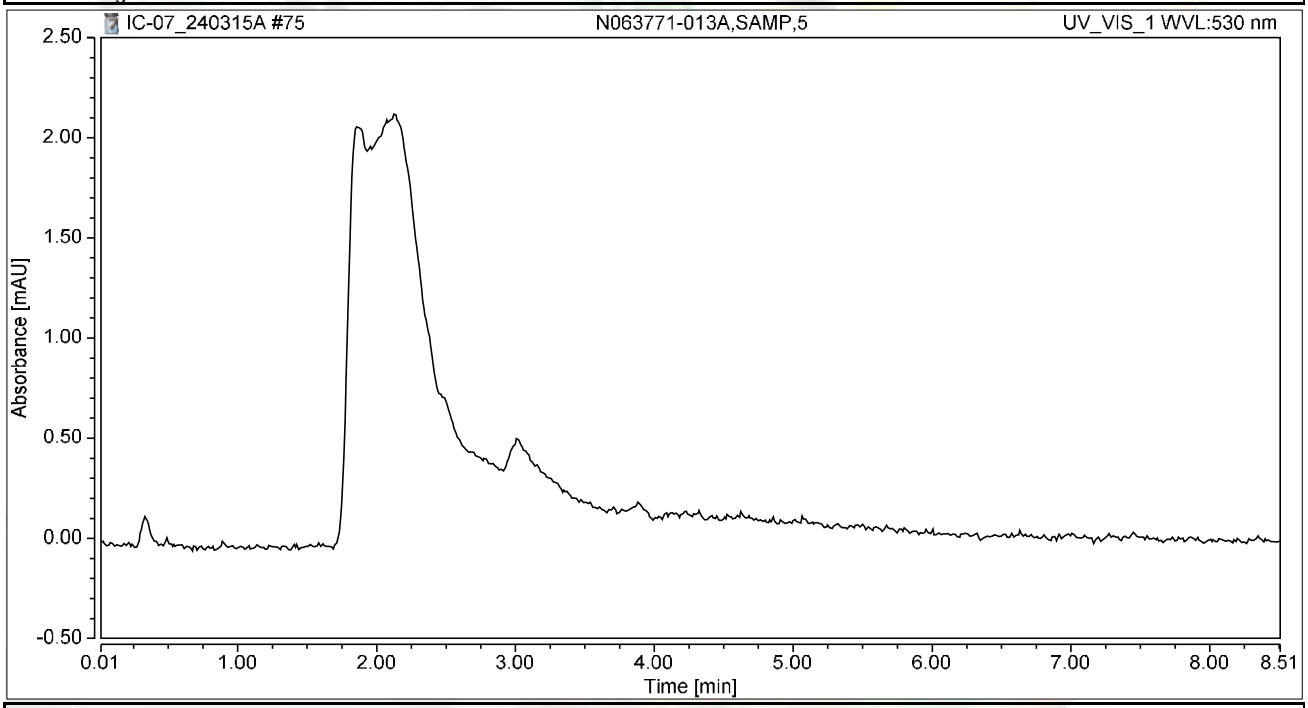
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.194	1.182	100.00	100.00	0.9112
Total:			**0.194**	**1.182**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-013A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

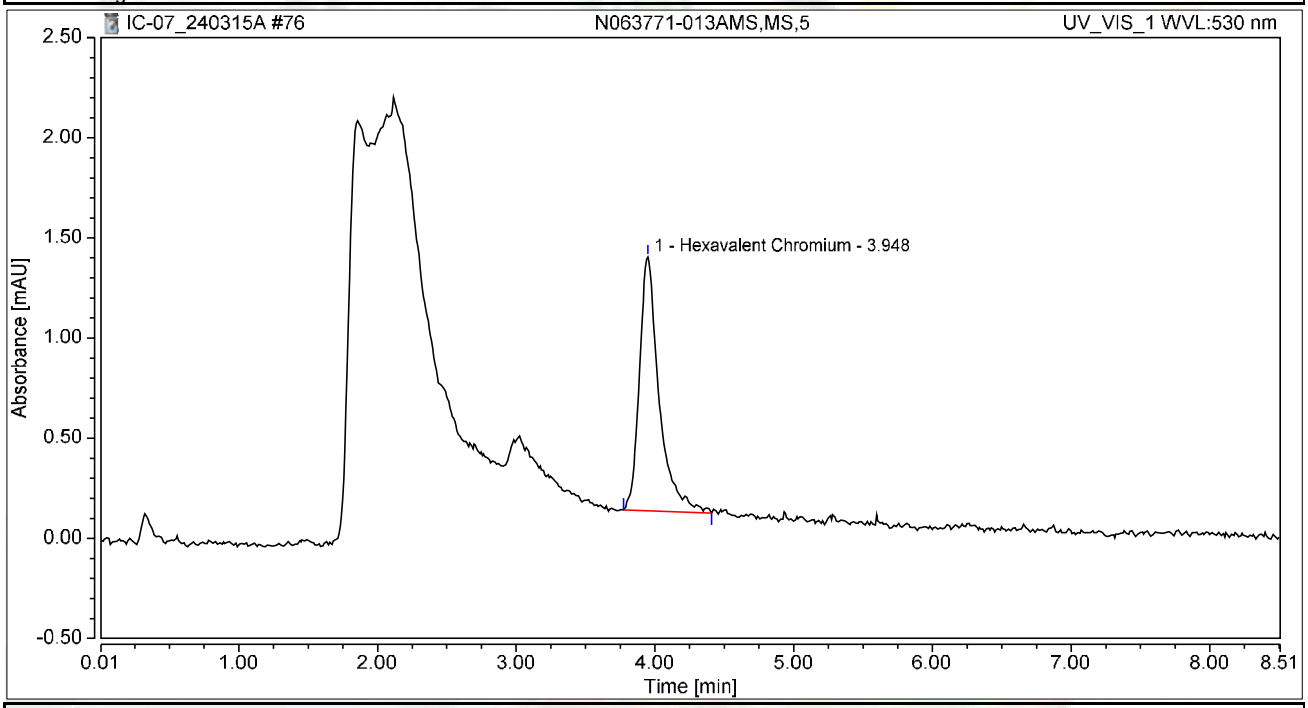
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-013AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 21:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

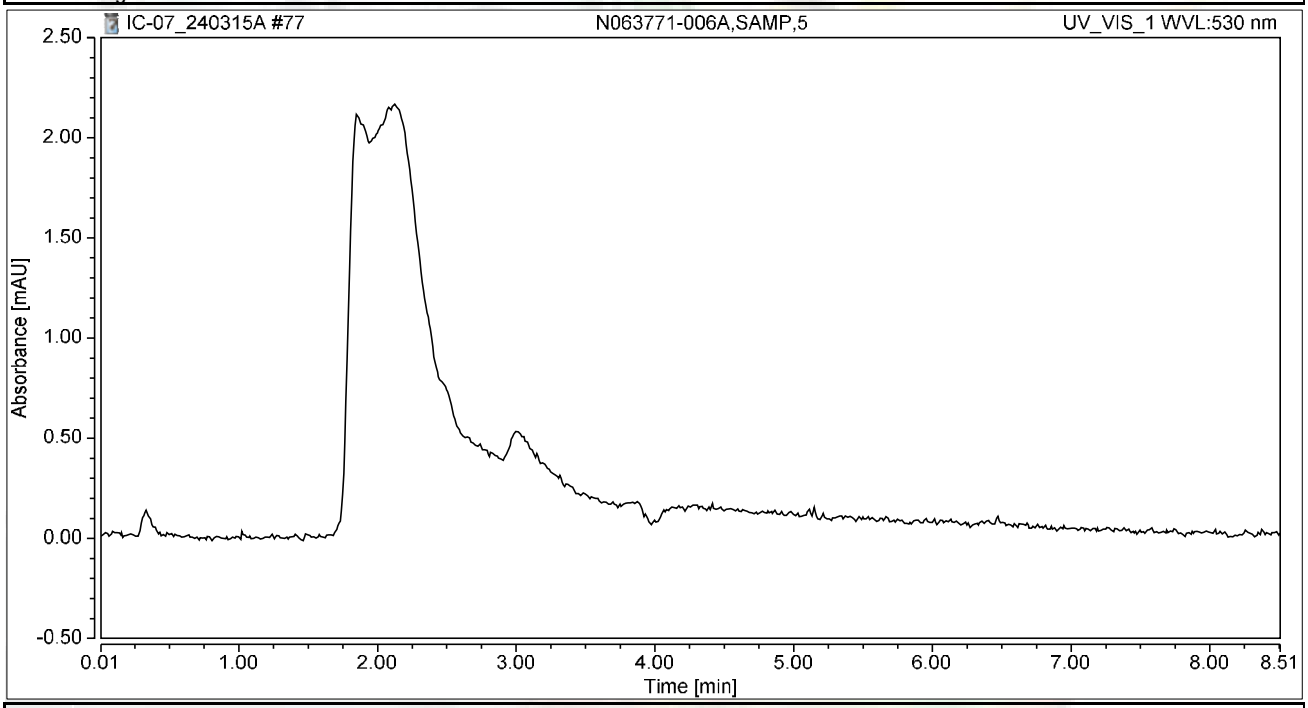
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.208	1.268	100.00	100.00	0.9776
Total:			**0.208**	**1.268**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-006A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 21:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

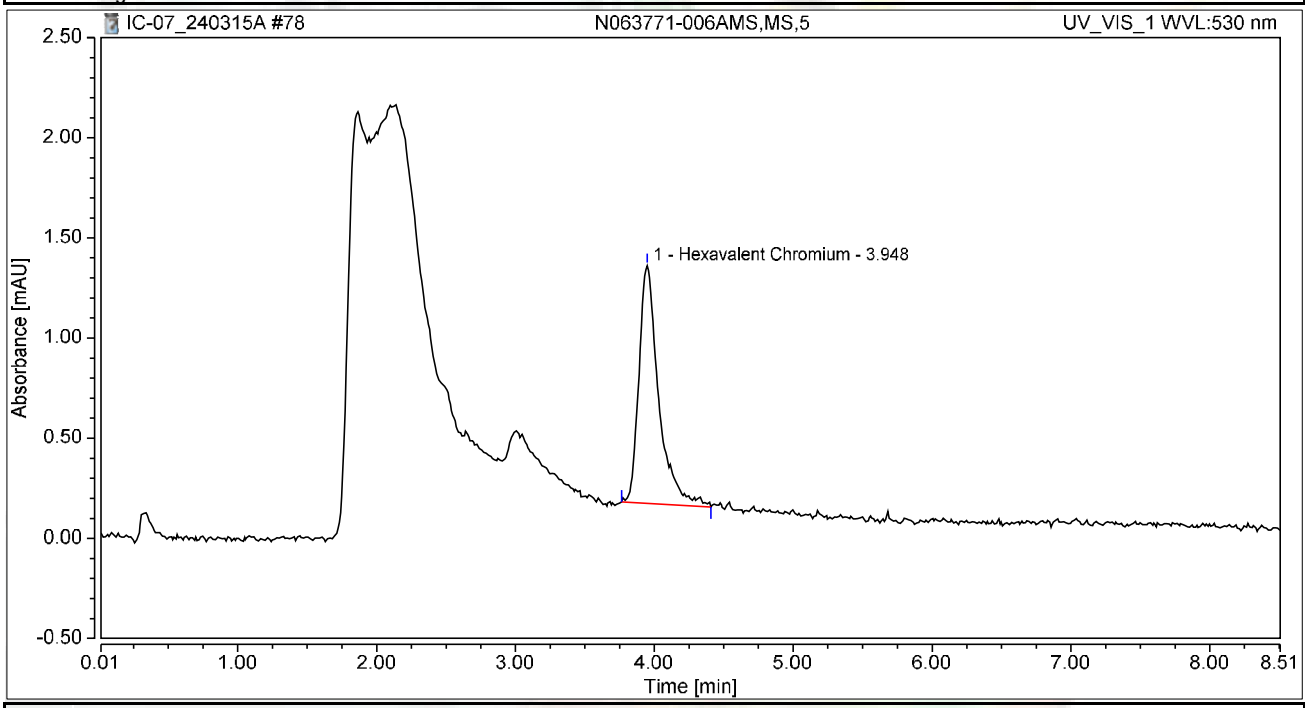
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-006AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 21:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

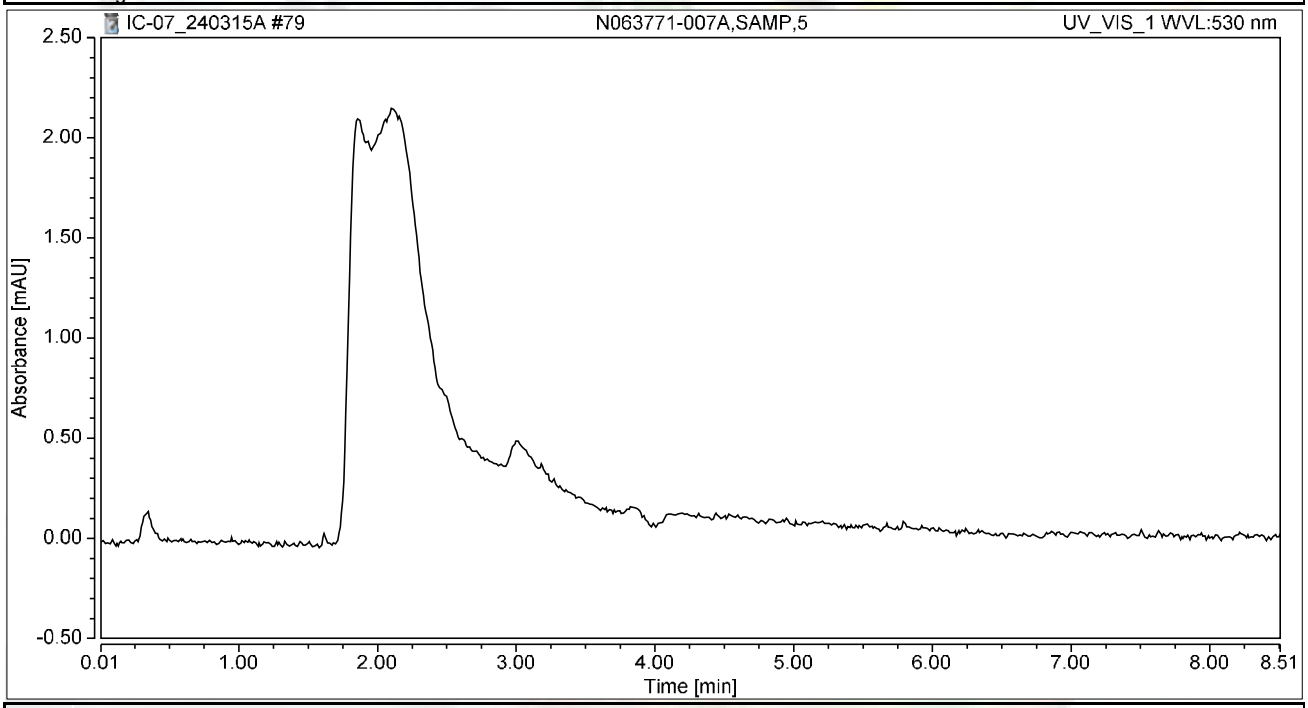
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.196	1.188	100.00	100.00	0.9229
Total:			**0.196**	**1.188**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-007A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 21:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

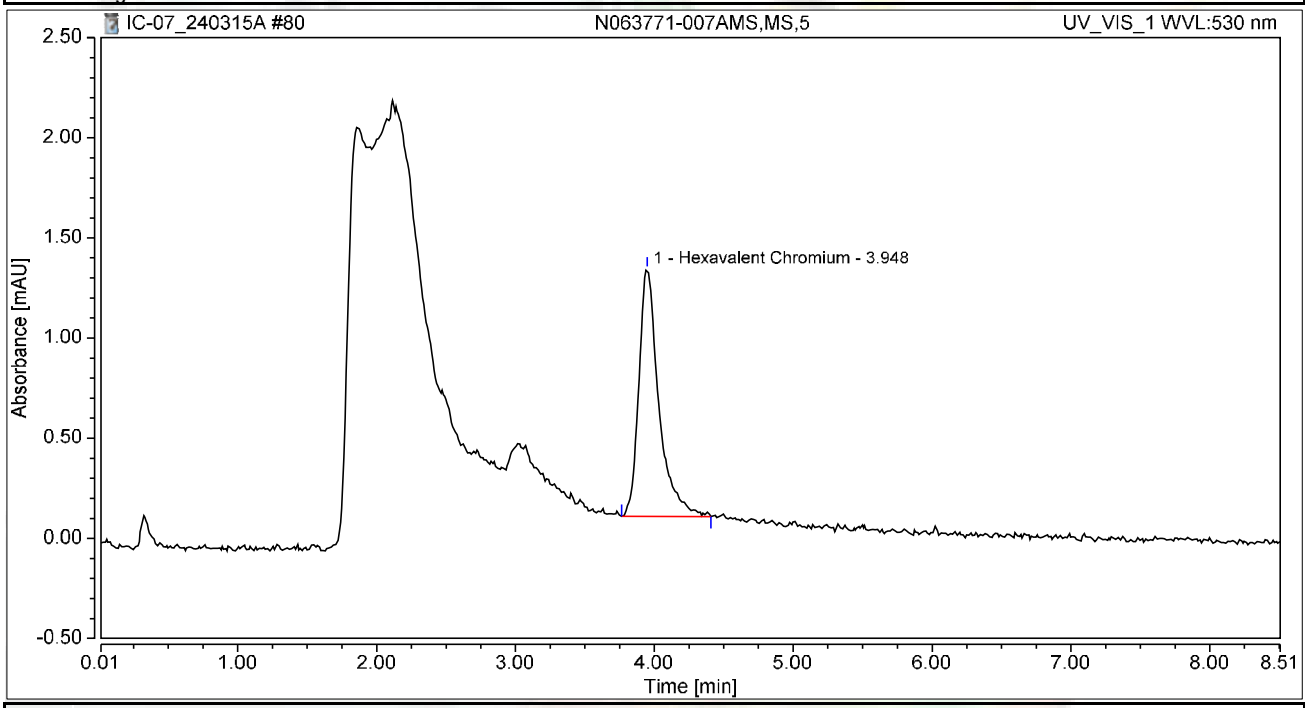
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-007AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 21:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

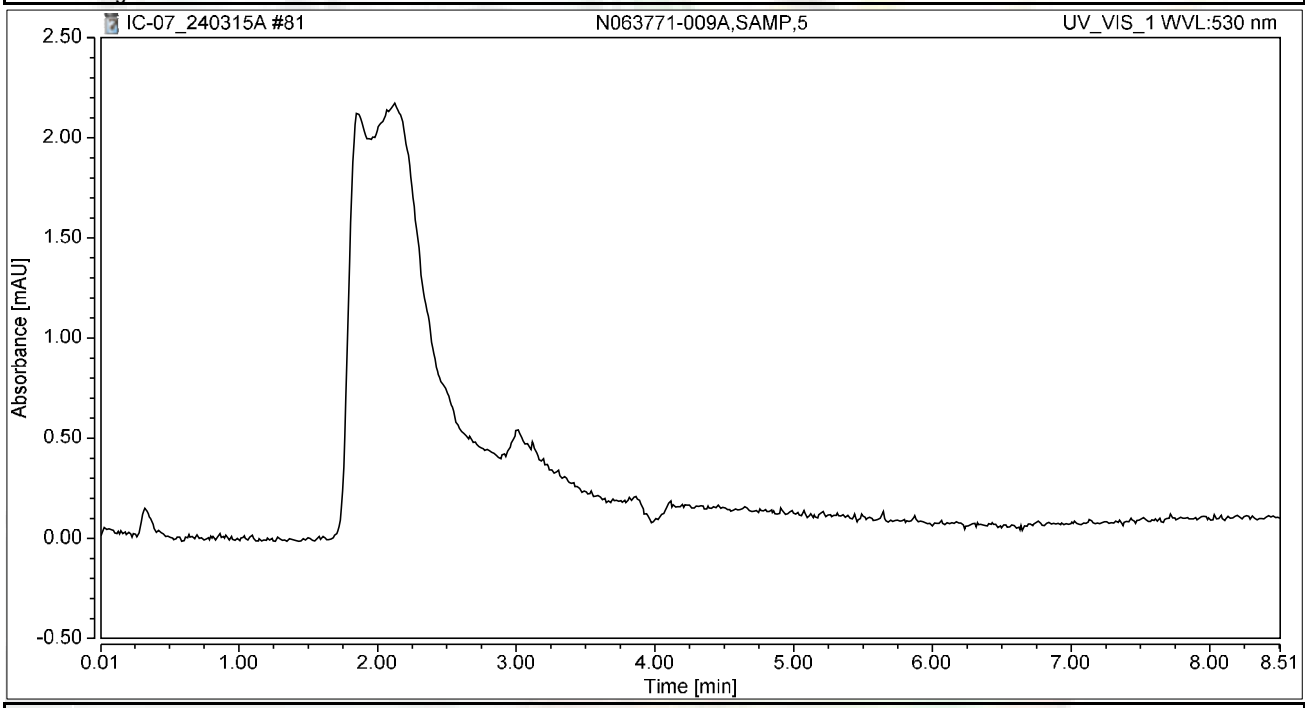
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.207	1.235	100.00	100.00	0.9730
Total:			**0.207**	**1.235**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-009A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 21:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

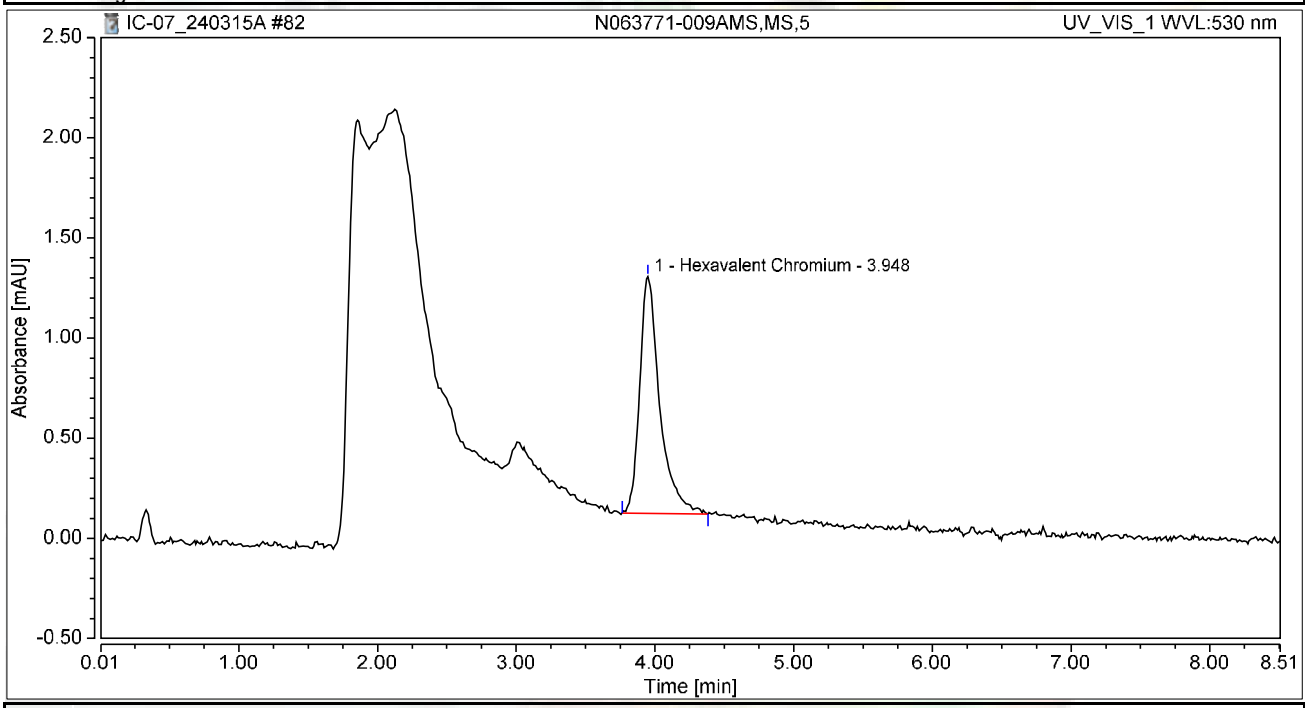
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-009AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 22:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

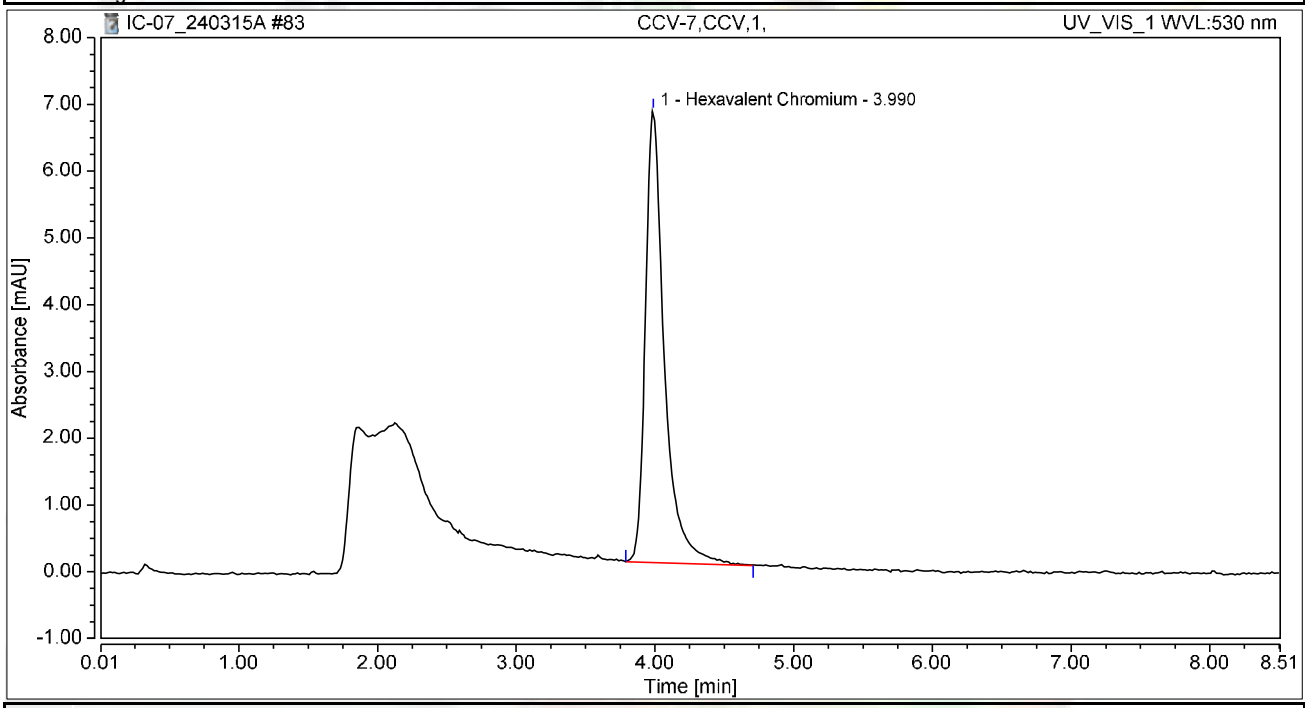
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.199	1.183	100.00	100.00	0.9340
Total:			**0.199**	**1.183**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 22:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

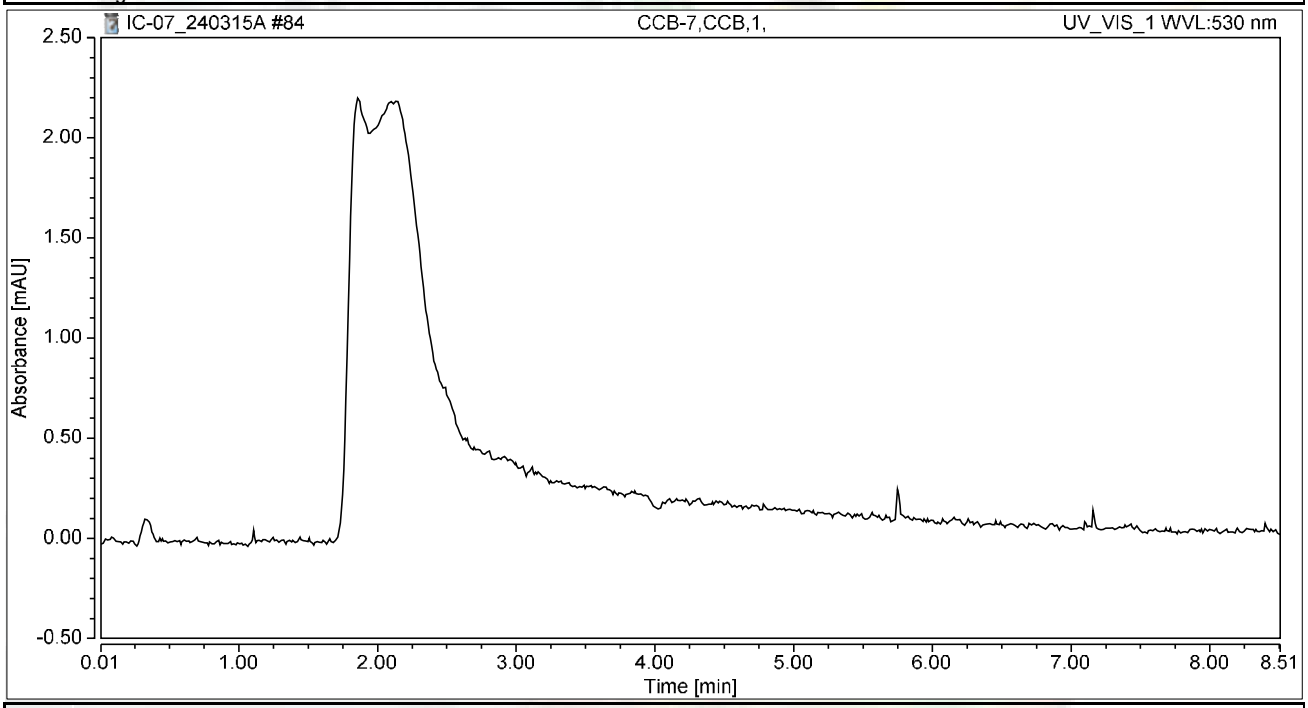
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	1.074	6.771	100.00	100.00	5.0464
Total:			**1.074**	**6.771**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 22:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

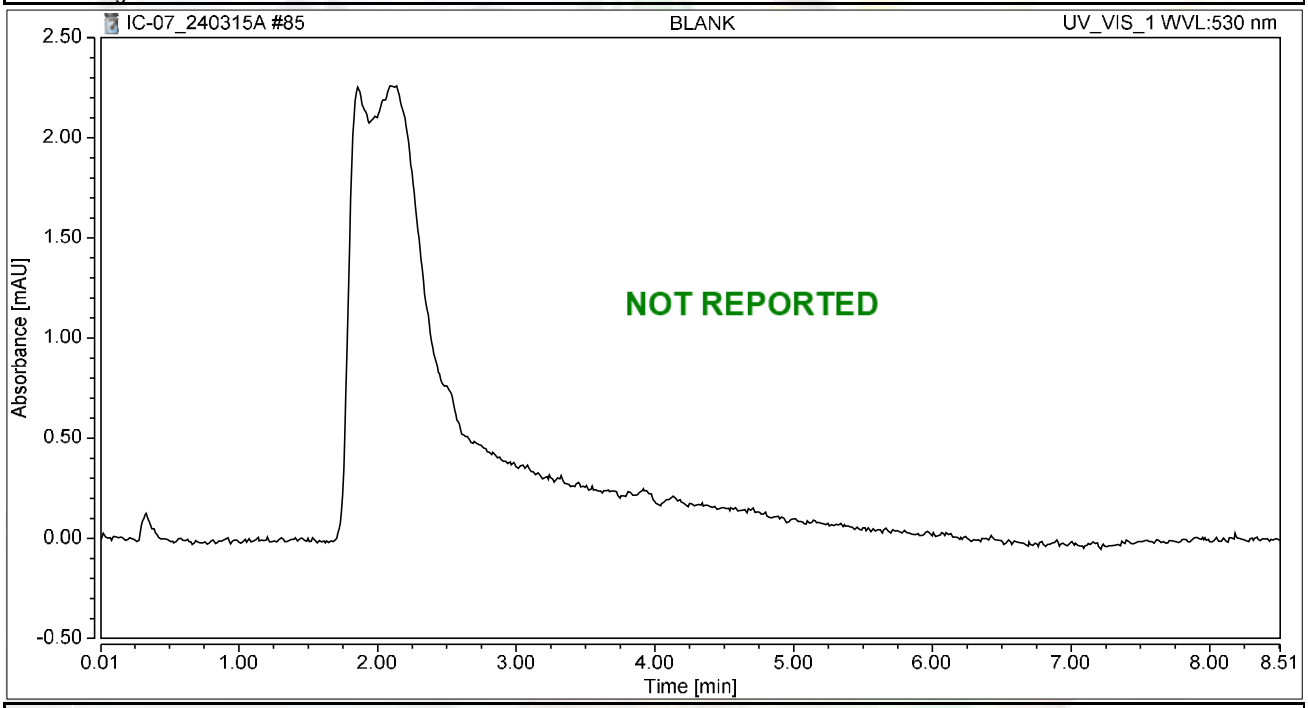
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 22:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

EPA 300.0

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R183563
ASSET #: N063735 / N063736

Instrument ID: IC-08
Analyst: RBA
Date Analyzed: 3/13/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 3/14/2024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R183573
ASSET #: N063735 / N063736

Instrument ID: IC-09
Analyst: RBA
Date Analyzed: 3/13/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.		X			X	
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

Detection of Sulfate in CCB1/4/MB was >1/2PQL. However, N063735/N063736 samples were >5X the CCB detection.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 3/14/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: GROUNDWATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the orignal sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N063735-011B** concentration in mg/L is calculated as follows:

Nitrate, mg/L = 0.4382 * 10

= 4.382

Reporting result in two significant figures,

Nitrate, mg/L = 4.4

Reviewed by:

dMocha 4/12/2024

ANALYSIS RUN LOG

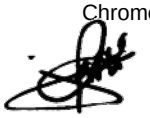
Sequence: IC-08_240223A
Operator: IC-05
Printed: 2/25/2024 4:50:56 PM

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240223	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240223	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240223	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240223	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240223	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240223	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240223	Finished
8	ICV,ICV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240223	Finished
9	ICB,ICB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240223	Finished
10	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240223	Finished
11	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240223	Finished
12	N063297-001B,SAMP,10	Unknown	7	1000.0	Anions Default	EPA 300_0_240223	Finished
13	N063297-001BDUP,DUP,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240223	Finished
14	N063297-001BMS,MS,10	Unknown	9	1000.0	Anions Default	EPA 300_0_240223	Finished
15	N063297-001BMSD,MSD,10	Unknown	10	1000.0	Anions Default	EPA 300_0_240223	Finished
16	N063252-001C,SAMP,2000	Unknown	11	1000.0	Anions Default	EPA 300_0_240223	Finished
17	N063252-001CMS,MS,2000	Unknown	12	1000.0	Anions Default	EPA 300_0_240223	Finished
18	N063248-005B,SAMP,1000	Unknown	13	1000.0	Anions Default	EPA 300_0_240223	Finished
19	N063248-006B,SAMP,2000	Unknown	14	1000.0	Anions Default	EPA 300_0_240223	Finished
20	CCV-1,CCV,1	Unknown	15	1000.0	Anions Default	EPA 300_0_240223	Finished
21	CCB-1,CCB,1	Unknown	16	1000.0	Anions Default	EPA 300_0_240223	Finished
22	N063248-007B,SAMP,2000	Unknown	17	1000.0	Anions Default	EPA 300_0_240223	Finished
23	N063248-008B,SAMP,2000	Unknown	18	1000.0	Anions Default	EPA 300_0_240223	Finished
24	N063248-010C,SAMP,100	Unknown	19	1000.0	Anions Default	EPA 300_0_240223	Finished
25	N063248-011C,SAMP,1000	Unknown	20	1000.0	Anions Default	EPA 300_0_240223	Finished
26	N063248-005B,SAMP,100	Unknown	21	1000.0	Anions Default	EPA 300_0_240223	Finished
27	N063248-006B,SAMP,100	Unknown	22	1000.0	Anions Default	EPA 300_0_240223	Finished
28	N063248-007B,SAMP,100	Unknown	23	1000.0	Anions Default	EPA 300_0_240223	Finished
29	N063248-008B,SAMP,100	Unknown	24	1000.0	Anions Default	EPA 300_0_240223	Finished
30	N063248-010C,SAMP,20	Unknown	25	1000.0	Anions Default	EPA 300_0_240223	Finished
31	N063248-011C,SAMP,100	Unknown	26	1000.0	Anions Default	EPA 300_0_240223	Finished
32	CCV-2,CCV,1	Unknown	27	1000.0	Anions Default	EPA 300_0_240223	Finished
33	CCB-2,CCB,1	Unknown	28	1000.0	Anions Default	EPA 300_0_240223	Finished
34	N063295-005B,SAMP,2000	Unknown	29	1000.0	Anions Default	EPA 300_0_240223	Finished
35	N063295-006B,SAMP,2000	Unknown	30	1000.0	Anions Default	EPA 300_0_240223	Finished
36	N063295-007B,SAMP,2000	Unknown	31	1000.0	Anions Default	EPA 300_0_240223	Finished
37	N063295-008B,SAMP,2000	Unknown	32	1000.0	Anions Default	EPA 300_0_240223	Finished
38	N063295-005B,SAMP,100	Unknown	33	1000.0	Anions Default	EPA 300_0_240223	Finished
39	N063295-006B,SAMP,100	Unknown	34	1000.0	Anions Default	EPA 300_0_240223	Finished
40	N063295-007B,SAMP,100	Unknown	35	1000.0	Anions Default	EPA 300_0_240223	Finished
41	N063295-008B,SAMP,100	Unknown	36	1000.0	Anions Default	EPA 300_0_240223	Finished

Processed by:

Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)



2/25/2024

IC8 RBA 2/25/2024 4:51:54 PM

reviewed by: 2/27/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:07:15 AM	BLANK
2	Std - 0	2/23/2024 9:22:33 AM	IBLANK
3	Std - 1	2/23/2024 9:53:29 AM	STD-LOW
4	Std - 2	2/23/2024 10:08:47 AM	STD
5	Std - 3	2/23/2024 10:24:06 AM	STD
6	Std - 4	2/23/2024 10:39:24 AM	STD
7	Std - 5	2/23/2024 10:54:42 AM	STD-HIGH
8	ICV,ICV,1	2/23/2024 11:10:00 AM	ICV, IWST-240216B
9	ICB,ICB,1	2/23/2024 11:25:18 AM	ICB
10	MB-H2O,MBLK,1	2/23/2024 11:40:36 AM	MB
11	LCS-H2O,LCS,1	2/23/2024 11:55:54 AM	LCS, IWST-240216B
12	N063297-001B,SAMP,10	2/23/2024 1:45:16 PM	SAMP,1>10mL,
13	N063297-001BDUP,DUP,10	2/23/2024 2:00:34 PM	DUP,1>10mL,
14	N063297-001BMS,MS,10	2/23/2024 2:15:52 PM	MS,1>10mL,
15	N063297-001BMSD,MSD,10	2/23/2024 2:31:10 PM	MSD,1>10mL,
16	N063252-001C,SAMP,2000	2/23/2024 2:46:27 PM	SAMP,0.005>10mL,
17	N063252-001CMS,MS,2000	2/23/2024 3:01:45 PM	MS,0.005>10mL,
18	N063248-005B,SAMP,1000	2/23/2024 4:06:07 PM	SAMP,0.01>10mL,
19	N063248-006B,SAMP,2000	2/23/2024 4:21:25 PM	SAMP,0.005>10mL,
20	CCV-1,CCV,1	2/23/2024 4:36:43 PM	CCV, IWST-240216A
21	CCB-1,CCB,1	2/23/2024 4:52:01 PM	CCB
22	N063248-007B,SAMP,2000	2/23/2024 5:07:19 PM	SAMP,0.005>10mL,
23	N063248-008B,SAMP,2000	2/23/2024 5:22:37 PM	SAMP,0.005>10mL,
24	N063248-010C,SAMP,100	2/23/2024 5:37:54 PM	SAMP,0.1>10mL,
25	N063248-011C,SAMP,1000	2/23/2024 5:53:13 PM	SAMP,0.01>10mL,
26	N063248-005B,SAMP,100	2/23/2024 6:08:32 PM	SAMP,0.1>10mL,
27	N063248-006B,SAMP,100	2/23/2024 6:23:50 PM	SAMP,0.1>10mL,
28	N063248-007B,SAMP,100	2/23/2024 6:39:07 PM	SAMP,0.1>10mL,
29	N063248-008B,SAMP,100	2/23/2024 6:54:26 PM	SAMP,0.1>10mL,
30	N063248-010C,SAMP,20	2/23/2024 7:09:45 PM	SAMP,0.5>10mL,
31	N063248-011C,SAMP,100	2/23/2024 7:25:03 PM	SAMP,0.1>10mL,
32	CCV-2,CCV,1	2/23/2024 7:40:21 PM	CCV, IWST-240216A
33	CCB-2,CCB,1	2/23/2024 7:55:39 PM	CCB
34	N063295-005B,SAMP,2000	2/23/2024 8:10:57 PM	SAMP,0.005>10mL,
35	N063295-006B,SAMP,2000	2/23/2024 8:26:16 PM	SAMP,0.005>10mL,
36	N063295-007B,SAMP,2000	2/23/2024 8:41:34 PM	SAMP,0.005>10mL,
37	N063295-008B,SAMP,2000	2/23/2024 8:56:52 PM	SAMP,0.005>10mL,
38	N063295-005B,SAMP,100	2/23/2024 9:12:11 PM	SAMP,0.1>10mL,
39	N063295-006B,SAMP,100	2/23/2024 9:27:28 PM	SAMP,0.1>10mL,
40	N063295-007B,SAMP,100	2/23/2024 9:42:47 PM	SAMP,0.1>10mL,
41	N063295-008B,SAMP,100	2/23/2024 9:58:05 PM	SAMP,0.1>10mL,

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	N063253-001C,SAMP,5000	Unknown	37	1000.0	Anions Default	EPA 300_0_240223	Finished
43	N063253-001C,SAMP,10000	Unknown	38	1000.0	Anions Default	EPA 300_0_240223	Finished
44	CCV-3,CCV,1	Unknown	39	1000.0	Anions Default	EPA 300_0_240223	Finished
45	CCB-3,CCB,1	Unknown	40	1000.0	Anions Default	EPA 300_0_240223	Finished
46	N063256-001C,SAMP,100	Unknown	41	1000.0	Anions Default	EPA 300_0_240223	Finished
47	N063254-001C,SAMP,10000	Unknown	42	1000.0	Anions Default	EPA 300_0_240223	Finished
48	N063255-001C,SAMP,10000	Unknown	43	1000.0	Anions Default	EPA 300_0_240223	Finished
49	N063257-001C,SAMP,10000	Unknown	44	1000.0	Anions Default	EPA 300_0_240223	Finished
50	N063258-001C,SAMP,10000	Unknown	45	1000.0	Anions Default	EPA 300_0_240223	Finished
51	CCV-4,CCV,1	Unknown	46	1000.0	Anions Default	EPA 300_0_240223	Finished
52	CCB-4,CCB,1	Unknown	47	1000.0	Anions Default	EPA 300_0_240223	Finished

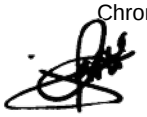
Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	N063253-001C,SAMP,5000	2/23/2024 10:13:23 PM	SAMP,0.002>10mL,
43	N063253-001C,SAMP,10000	2/23/2024 10:28:42 PM	SAMP,0.001>10mL,
44	CCV-3,CCV,1	2/23/2024 10:43:59 PM	CCV, IWST-240216A
45	CCB-3,CCB,1	2/23/2024 10:59:17 PM	CCB
46	N063256-001C,SAMP,100	2/23/2024 11:14:35 PM	SAMP,0.1>10mL,
47	N063254-001C,SAMP,10000	2/23/2024 11:29:53 PM	SAMP,0.001>10mL,
48	N063255-001C,SAMP,10000	2/23/2024 11:45:11 PM	SAMP,0.001>10mL,
49	N063257-001C,SAMP,10000	2/24/2024 12:00:28 AM	SAMP,0.001>10mL,
50	N063258-001C,SAMP,10000	2/24/2024 12:15:46 AM	SAMP,0.001>10mL,
51	CCV-4,CCV,1	2/24/2024 12:31:04 AM	CCV, IWST-240216A
52	CCB-4,CCB,1	2/24/2024 12:46:23 AM	CCB

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 37
Created: 3/12/2024 9:59:20 AM by IC-05
Last Update: 3/13/2024 12:07:25 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240223	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240223	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240223	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240223	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240223	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240223	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240223	Finished
8	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240223	Finished
9	CCV-1,CCV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240223	Finished
10	CCB-1,CCB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240223	Finished
11	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240223	Finished
12	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240223	Finished
13	N063736-001B,SAMP,10	Unknown	6	1000.0	Anions Default	EPA 300_0_240223	Finished
14	N063736-002B,SAMP,10	Unknown	7	1000.0	Anions Default	EPA 300_0_240223	Finished
15	N063736-003B,SAMP,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240223	Finished
16	N063736-004B,SAMP,10	Unknown	9	1000.0	Anions Default	EPA 300_0_240223	Finished
17	N063736-001BMS,MS,10	Unknown	10	1000.0	Anions Default	EPA 300_0_240223	Finished
18	N063736-001BMSD,MSD,10	Unknown	11	1000.0	Anions Default	EPA 300_0_240223	Finished
19	N063736-004BDUP,DUP,10	Unknown	12	1000.0	Anions Default	EPA 300_0_240223	Finished
20	N063736-004BMS,MS,10	Unknown	13	1000.0	Anions Default	EPA 300_0_240223	Finished
21	CCV-2,CCV,1	Unknown	14	1000.0	Anions Default	EPA 300_0_240223	Finished
22	CCB-2,CCB,1	Unknown	15	1000.0	Anions Default	EPA 300_0_240223	Finished
23	N063735-001B,SAMP,10	Unknown	16	1000.0	Anions Default	EPA 300_0_240223	Finished
24	N063735-002B,SAMP,10	Unknown	17	1000.0	Anions Default	EPA 300_0_240223	Finished
25	N063735-004B,SAMP,10	Unknown	18	1000.0	Anions Default	EPA 300_0_240223	Finished
26	N063735-005B,SAMP,10	Unknown	19	1000.0	Anions Default	EPA 300_0_240223	Finished
27	N063735-006B,SAMP,10	Unknown	20	1000.0	Anions Default	EPA 300_0_240223	Finished
28	N063735-007B,SAMP,5	Unknown	21	1000.0	Anions Default	EPA 300_0_240223	Finished
29	N063735-009B,SAMP,5	Unknown	22	1000.0	Anions Default	EPA 300_0_240223	Finished
30	N063735-010B,SAMP,5	Unknown	23	1000.0	Anions Default	EPA 300_0_240223	Finished
31	N063735-012B,SAMP,5	Unknown	24	1000.0	Anions Default	EPA 300_0_240223	Finished
32	N063735-011B,SAMP,10	Unknown	25	1000.0	Anions Default	EPA 300_0_240223	Finished
33	CCV-3,CCV,1	Unknown	26	1000.0	Anions Default	EPA 300_0_240223	Finished
34	CCB-3,CCB,1	Unknown	27	1000.0	Anions Default	EPA 300_0_240223	Finished
35	N063735-013B,SAMP,10	Unknown	28	1000.0	Anions Default	EPA 300_0_240223	Finished
36	CCV-4,CCV,1	Unknown	29	1000.0	Anions Default	EPA 300_0_240223	Finished
37	CCB-4,CCB,1	Unknown	30	1000.0	Anions Default	EPA 300_0_240223	Finished

Processed by:
Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)
reviewed by: 3/17/2024



3/13/2024

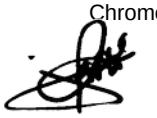
Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 37
Created: 3/12/2024 9:59:20 AM by IC-05
Last Update: 3/13/2024 12:07:25 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:07:15 AM	BLANK
2	Std - 0	2/23/2024 9:22:33 AM	IBLANK
3	Std - 1	2/23/2024 9:53:29 AM	STD-LOW
4	Std - 2	2/23/2024 10:08:47 AM	STD
5	Std - 3	2/23/2024 10:24:06 AM	STD
6	Std - 4	2/23/2024 10:39:24 AM	STD
7	Std - 5	2/23/2024 10:54:42 AM	STD-HIGH
8	BLANK	3/13/2024 7:24:45 AM	BLANK
9	CCV-1,CCV,1	3/13/2024 7:40:03 AM	CCV, IWST-240308A
10	CCB-1,CCB,1	3/13/2024 7:55:21 AM	CCB
11	MB-H2O,MBLK,1	3/13/2024 8:10:40 AM	MB
12	LCS-H2O,LCS,1	3/13/2024 8:25:58 AM	LCS, IWST-240308B
13	N063736-001B,SAMP,10	3/13/2024 8:54:51 AM	SAMP,1>10mL,
14	N063736-002B,SAMP,10	3/13/2024 9:10:08 AM	SAMP,1>10mL,
15	N063736-003B,SAMP,10	3/13/2024 9:25:26 AM	SAMP,1>10mL,
16	N063736-004B,SAMP,10	3/13/2024 9:40:44 AM	SAMP,1>10mL,
17	N063736-001BMS,MS,10	3/13/2024 9:56:03 AM	MS,1>10mL,
18	N063736-001BMSD,MSD,10	3/13/2024 10:11:21 AM	MSD,1>10mL,
19	N063736-004BDUP,DUP,10	3/13/2024 10:26:38 AM	DUP,1>10mL,
20	N063736-004BMS,MS,10	3/13/2024 10:41:56 AM	MS,1>10mL,
21	CCV-2,CCV,1	3/13/2024 10:57:15 AM	CCV, IWST-240308A
22	CCB-2,CCB,1	3/13/2024 11:12:33 AM	CCB
23	N063735-001B,SAMP,10	3/13/2024 11:47:27 AM	SAMP,1>10mL,
24	N063735-002B,SAMP,10	3/13/2024 12:02:44 PM	SAMP,1>10mL,
25	N063735-004B,SAMP,10	3/13/2024 12:18:02 PM	SAMP,1>10mL,
26	N063735-005B,SAMP,10	3/13/2024 12:33:20 PM	SAMP,1>10mL,
27	N063735-006B,SAMP,10	3/13/2024 12:48:38 PM	SAMP,1>10mL,
28	N063735-007B,SAMP,5	3/13/2024 1:03:56 PM	SAMP,2>10mL,
29	N063735-009B,SAMP,5	3/13/2024 1:19:14 PM	SAMP,2>10mL,
30	N063735-010B,SAMP,5	3/13/2024 1:34:32 PM	SAMP,2>10mL,
31	N063735-012B,SAMP,5	3/13/2024 1:49:50 PM	SAMP,2>10mL,
32	N063735-011B,SAMP,10	3/13/2024 2:05:09 PM	SAMP,1>10mL,
33	CCV-3,CCV,1	3/13/2024 2:20:27 PM	CCV, IWST-240308A
34	CCB-3,CCB,1	3/13/2024 2:35:45 PM	CCB
35	N063735-013B,SAMP,10	3/13/2024 2:51:03 PM	SAMP,1>10mL,
36	CCV-4,CCV,1	3/13/2024 3:06:21 PM	CCV, IWST-240308A
37	CCB-4,CCB,1	3/13/2024 3:21:39 PM	CCB

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/23/2024 9:04:47 AM by IC-05
Last Update: 2/25/2024 7:08:17 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
2	Std - 0	Standard	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
3	Std - 1	Standard	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
4	Std - 2	Standard	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
5	Std - 3	Standard	3	1000.0	Anions_Default	EPA 300_0_240223A	Finished
6	Std - 4	Standard	4	1000.0	Anions_Default	EPA 300_0_240223A	Finished
7	Std - 5	Standard	5	1000.0	Anions_Default	EPA 300_0_240223A	Finished
8	ICV,ICV,1	Unknown	6	1000.0	Anions_Default	EPA 300_0_240223A	Finished
9	ICB,ICB,1	Unknown	7	1000.0	Anions_Default	EPA 300_0_240223A	Finished
10	MB-H2O,MBLK,1	Unknown	8	1000.0	Anions_Default	EPA 300_0_240223A	Finished
11	LCS-H2O,LCS,1	Unknown	9	1000.0	Anions_Default	EPA 300_0_240223A	Finished
12	N063297-001B,SAMP,5	Unknown	11	1000.0	Anions_Default	EPA 300_0_240223A	Finished
13	N063297-002C,SAMP,20	Unknown	12	1000.0	Anions_Default	EPA 300_0_240223A	Finished
14	N063297-003C,SAMP,10	Unknown	13	1000.0	Anions_Default	EPA 300_0_240223A	Finished
15	N063295-008B,SAMP,10	Unknown	14	1000.0	Anions_Default	EPA 300_0_240223A	Finished
16	N063295-008BMS,MS,10	Unknown	15	1000.0	Anions_Default	EPA 300_0_240223A	Finished
17	N063295-008BMSD,MSD,10	Unknown	16	1000.0	Anions_Default	EPA 300_0_240223A	Finished
18	N063295-005B,SAMP,10	Unknown	17	1000.0	Anions_Default	EPA 300_0_240223A	Finished
19	N063295-006B,SAMP,10	Unknown	18	1000.0	Anions_Default	EPA 300_0_240223A	Finished
20	CCV-1,CCV,1	Unknown	19	1000.0	Anions_Default	EPA 300_0_240223A	Finished
21	CCB-1,CCB,1	Unknown	20	1000.0	Anions_Default	EPA 300_0_240223A	Finished
22	N063295-007B,SAMP,10	Unknown	21	1000.0	Anions_Default	EPA 300_0_240223A	Finished
23	N063295-008BDUP,DUP,10	Unknown	22	1000.0	Anions_Default	EPA 300_0_240223A	Finished
24	N063297-001BMS,MS,5	Unknown	23	1000.0	Anions_Default	EPA 300_0_240223A	Finished
25	N063297-001BMSD,MSD,5	Unknown	24	1000.0	Anions_Default	EPA 300_0_240223A	Finished
26	N063297-001BDUP,DUP,5	Unknown	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
27	N063297-001B,SAMP,10	Unknown	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
28	N063303-001C,SAMP,10	Unknown	3	1000.0	Anions_Default	EPA 300_0_240223A	Finished
29	N063303-002C,SAMP,10	Unknown	4	1000.0	Anions_Default	EPA 300_0_240223A	Finished
30	N063303-006C,SAMP,10	Unknown	5	1000.0	Anions_Default	EPA 300_0_240223A	Finished
31	N063303-008C,SAMP,10	Unknown	6	1000.0	Anions_Default	EPA 300_0_240223A	Finished
32	CCV-2,CCV,1	Unknown	7	1000.0	Anions_Default	EPA 300_0_240223A	Finished
33	CCB-2,CCB,1	Unknown	8	1000.0	Anions_Default	EPA 300_0_240223A	Finished
34	N063297-003BMS,MS,10	Unknown	9	1000.0	Anions_Default	EPA 300_0_240223A	Finished
35	N063256-001C,SAMP,20	Unknown	10	1000.0	Anions_Default	EPA 300_0_240223A	Finished
36	BLANK	Unknown	11	1000.0	Anions_Default	EPA 300_0_240223A	Finished
37	N063259-001C,SAMP,50	Unknown	12	1000.0	Anions_Default	EPA 300_0_240223A	Finished
38	BLANK	Unknown	13	1000.0	Anions_Default	EPA 300_0_240223A	Finished
39	N063260-001C,SAMP,100	Unknown	14	1000.0	Anions_Default	EPA 300_0_240223A	Finished
40	BLANK	Unknown	15	1000.0	Anions_Default	EPA 300_0_240223A	Finished
41	N063261-001C,SAMP,100	Unknown	16	1000.0	Anions_Default	EPA 300_0_240223A	Finished

Processed by:
Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)



2/25/2024

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/23/2024 9:04:47 AM by IC-05
Last Update: 2/25/2024 7:08:17 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:06:35 AM	BLANK
2	Std - 0	2/23/2024 9:21:54 AM	IBLANK
3	Std - 1	2/23/2024 9:54:20 AM	STD-LOW
4	Std - 2	2/23/2024 10:09:39 AM	STD
5	Std - 3	2/23/2024 10:25:35 AM	STD
6	Std - 4	2/23/2024 10:41:31 AM	STD
7	Std - 5	2/23/2024 10:57:27 AM	STD-HIGH 240216B
8	ICV,ICV,1	2/23/2024 11:13:23 AM	ICV, IWST-~~240131B~~
9	ICB,ICB,1	2/23/2024 11:29:18 AM	ICB
10	MB-H2O,MBLK,1	2/23/2024 11:45:14 AM	MB 240216B
11	LCS-H2O,LCS,1	2/23/2024 12:01:09 PM	LCS IWST-~~240131B~~
12	N063297-001B,SAMP,5	2/23/2024 12:17:04 PM	SAMP,2>10mL,
13	N063297-002C,SAMP,20	2/23/2024 12:33:00 PM	SAMP,0.5>10mL,
14	N063297-003C,SAMP,10	2/23/2024 12:48:55 PM	SAMP,1>10mL,
15	N063295-008B,SAMP,10	2/23/2024 1:04:51 PM	SAMP,1>10mL,
16	N063295-008BMS,MS,10	2/23/2024 1:20:46 PM	MS,1>10mL,
17	N063295-008BMSD,MSD,10	2/23/2024 1:36:43 PM	MSD,1>10mL,
18	N063295-005B,SAMP,10	2/23/2024 1:52:37 PM	SAMP,1>10mL,
19	N063295-006B,SAMP,10	2/23/2024 2:08:33 PM	SAMP,1>10mL,240216A
20	CCV-1,CCV,1	2/23/2024 2:24:29 PM	CCV, IWST-~~240131A~~
21	CCB-1,CCB,1	2/23/2024 2:40:25 PM	CCB
22	N063295-007B,SAMP,10	2/23/2024 2:56:21 PM	SAMP,1>10mL,
23	N063295-008BDUP,DUP,10	2/23/2024 3:12:16 PM	DUP,1>10mL,
24	N063297-001BMS,MS,5	2/23/2024 3:28:11 PM	MS,2>10mL,
25	N063297-001BMSD,MSD,5	2/23/2024 3:44:07 PM	MSD,2>10mL,
26	N063297-001BDUP,DUP,5	2/23/2024 4:05:45 PM	DUP,2>10mL,
27	N063297-001B,SAMP,10	2/23/2024 4:21:04 PM	SAMP,1>10mL,
28	N063303-001C,SAMP,10	2/23/2024 4:37:00 PM	SAMP,1>10mL,
29	N063303-002C,SAMP,10	2/23/2024 4:52:55 PM	SAMP,1>10mL,
30	N063303-006C,SAMP,10	2/23/2024 5:08:51 PM	SAMP,1>10mL,
31	N063303-008C,SAMP,10	2/23/2024 5:24:46 PM	SAMP,1>10mL,240216A
32	CCV-2,CCV,1	2/23/2024 5:40:42 PM	CCV, IWST-~~240131A~~
33	CCB-2,CCB,1	2/23/2024 5:56:38 PM	CCB
34	N063297-003BMS,MS,10	2/23/2024 6:12:34 PM	MS,1>10mL,
35	N063256-001C,SAMP,20	2/23/2024 6:28:29 PM	SAMP,0.5>10mL,
36	BLANK	2/23/2024 6:44:25 PM	BLANK
37	N063259-001C,SAMP,50	2/23/2024 7:00:22 PM	SAMP,0.2>10mL,
38	BLANK	2/23/2024 7:16:17 PM	BLANK
39	N063260-001C,SAMP,100	2/23/2024 7:32:13 PM	SAMP,0.1>10mL,
40	BLANK	2/23/2024 7:48:10 PM	BLANK
41	N063261-001C,SAMP,100	2/23/2024 8:04:05 PM	SAMP,0.1>10mL,

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/23/2024 9:04:47 AM by IC-05
Last Update: 2/25/2024 7:08:17 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	BLANK	Unknown	17	1000.0	Anions_Default	EPA 300_0_240223A	Finished
43	CCV-3,CCV,1	Unknown	18	1000.0	Anions_Default	EPA 300_0_240223A	Finished
44	CCB-3,CCB,1	Unknown	19	1000.0	Anions_Default	EPA 300_0_240223A	Finished

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/23/2024 9:04:47 AM by IC-05
Last Update: 2/25/2024 7:08:17 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	BLANK	2/23/2024 8:20:01 PM	BLANK 240216A
43	CCV-3,CCV,1	2/23/2024 8:35:57 PM	CCV, IWST-~~240131A~~
44	CCB-3,CCB,1	2/23/2024 8:51:53 PM	CCB

dMocha 3/10/2024
for RBA

Sequence: IC-09_240313A
Operator: IC-05
Printed: 3/13/2024 10:48:09 PM

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 42
Created: 3/13/2024 8:15:28 AM by IC-05
Last Update: 3/13/2024 12:55:50 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
2	Std - 0	Standard	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
3	Std - 1	Standard	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
4	Std - 2	Standard	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
5	Std - 3	Standard	3	1000.0	Anions_Default	EPA 300_0_240223A	Finished
6	Std - 4	Standard	4	1000.0	Anions_Default	EPA 300_0_240223A	Finished
7	Std - 5	Standard	5	1000.0	Anions_Default	EPA 300_0_240223A	Finished
8	BLANK	Unknown	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
9	CCV-1,CCV,1	Unknown	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
10	CCB-1,CCB,1	Unknown	3	1000.0	Anions_Default	EPA 300_0_240223A	Finished
11	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions_Default	EPA 300_0_240223A	Finished
12	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions_Default	EPA 300_0_240223A	Finished
13	N063712-001A,SAMP,20	Unknown	7	1000.0	Anions_Default	EPA 300_0_240223A	Finished
14	N063736-001B,SAMP,100	Unknown	8	1000.0	Anions_Default	EPA 300_0_240223A	Finished
15	N063736-001BMS,MS,100	Unknown	9	1000.0	Anions_Default	EPA 300_0_240223A	Finished
16	N063736-001BMSD,MSD,100	Unknown	10	1000.0	Anions_Default	EPA 300_0_240223A	Finished
17	N063736-003B,SAMP,100	Unknown	11	1000.0	Anions_Default	EPA 300_0_240223A	Finished
18	N063736-003BDUP,DUP,100	Unknown	12	1000.0	Anions_Default	EPA 300_0_240223A	Finished
19	N063736-003BMS,MS,100	Unknown	13	1000.0	Anions_Default	EPA 300_0_240223A	Finished
20	N063736-002B,SAMP,100	Unknown	14	1000.0	Anions_Default	EPA 300_0_240223A	Finished
21	CCV-2,CCV,1	Unknown	15	1000.0	Anions_Default	EPA 300_0_240223A	Finished
22	CCB-2,CCB,1	Unknown	16	1000.0	Anions_Default	EPA 300_0_240223A	Finished
23	N063736-004B,SAMP,100	Unknown	17	1000.0	Anions_Default	EPA 300_0_240223A	Finished
24	N063712-001A,SAMP,1	Unknown	18	1000.0	Anions_Default	EPA 300_0_240223A	Finished
25	N063735-001B,SAMP,50	Unknown	19	1000.0	Anions_Default	EPA 300_0_240223A	Finished
26	N063735-002B,SAMP,100	Unknown	20	1000.0	Anions_Default	EPA 300_0_240223A	Finished
27	N063735-004B,SAMP,50	Unknown	21	1000.0	Anions_Default	EPA 300_0_240223A	Finished
28	N063735-005B,SAMP,50	Unknown	22	1000.0	Anions_Default	EPA 300_0_240223A	Finished
29	N063735-006B,SAMP,50	Unknown	23	1000.0	Anions_Default	EPA 300_0_240223A	Finished
30	N063735-007B,SAMP,20	Unknown	24	1000.0	Anions_Default	EPA 300_0_240223A	Finished
31	N063735-009B,SAMP,20	Unknown	25	1000.0	Anions_Default	EPA 300_0_240223A	Finished
32	N063735-010B,SAMP,20	Unknown	26	1000.0	Anions_Default	EPA 300_0_240223A	Finished
33	CCV-3,CCV,1	Unknown	27	1000.0	Anions_Default	EPA 300_0_240223A	Finished
34	CCB-3,CCB,1	Unknown	28	1000.0	Anions_Default	EPA 300_0_240223A	Finished
35	N063735-012B,SAMP,20	Unknown	29	1000.0	Anions_Default	EPA 300_0_240223A	Finished
36	N063735-011B,SAMP,50	Unknown	30	1000.0	Anions_Default	EPA 300_0_240223A	Finished
37	N063735-013B,SAMP,50	Unknown	31	1000.0	Anions_Default	EPA 300_0_240223A	Finished
38	N063712-001ADUP,DUP,1	Unknown	32	1000.0	Anions_Default	EPA 300_0_240223A	Finished
39	N063712-001AMS,MS,1	Unknown	33	1000.0	Anions_Default	EPA 300_0_240223A	Finished
40	N063712-001AMSD,MSD,1	Unknown	34	1000.0	Anions_Default	EPA 300_0_240223A	Finished
41	CCV-4,CCV,1	Unknown	35	1000.0	Anions_Default	EPA 300_0_240223A	Finished

Processed by:

reviewed by: 3/18/2024

3/14/2024

IC9 RBA 3/13/2024 10:48:30 PM

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 42
Created: 3/13/2024 8:15:28 AM by IC-05
Last Update: 3/13/2024 12:55:50 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:06:35 AM	BLANK
2	Std - 0	2/23/2024 9:21:54 AM	IBLANK
3	Std - 1	2/23/2024 9:54:20 AM	STD-LOW
4	Std - 2	2/23/2024 10:09:39 AM	STD
5	Std - 3	2/23/2024 10:25:35 AM	STD
6	Std - 4	2/23/2024 10:41:31 AM	STD
7	Std - 5	2/23/2024 10:57:27 AM	STD-HIGH
8	BLANK	3/13/2024 8:17:58 AM	BLANK
9	CCV-1,CCV,1	3/13/2024 8:33:17 AM	CCV, IWST-240308A
10	CCB-1,CCB,1	3/13/2024 8:49:13 AM	CCB
11	MB-H2O,MBLK,1	3/13/2024 9:05:08 AM	MB
12	LCS-H2O,LCS,1	3/13/2024 9:21:04 AM	LCS, IWST-240308B
13	N063712-001A,SAMP,20	3/13/2024 9:36:59 AM	SAMP,0.5>10mL,
14	N063736-001B,SAMP,100	3/13/2024 9:52:55 AM	SAMP,0.1>10mL,
15	N063736-001BMS,MS,100	3/13/2024 10:08:50 AM	MS,0.1>10mL,
16	N063736-001BMSD,MSD,100	3/13/2024 10:24:45 AM	MSD,0.1>10mL,
17	N063736-003B,SAMP,100	3/13/2024 10:40:41 AM	SAMP,0.1>10mL,
18	N063736-003BDUP,DUP,100	3/13/2024 10:56:37 AM	DUP,0.1>10mL,
19	N063736-003BMS,MS,100	3/13/2024 11:12:32 AM	MS,0.1>10mL,
20	N063736-002B,SAMP,100	3/13/2024 11:28:28 AM	SAMP,0.1>10mL,
21	CCV-2,CCV,1	3/13/2024 11:44:24 AM	CCV, IWST-240308A
22	CCB-2,CCB,1	3/13/2024 12:00:20 PM	CCB
23	N063736-004B,SAMP,100	3/13/2024 12:16:15 PM	SAMP,0.1>10mL,
24	N063712-001A,SAMP,1	3/13/2024 12:32:11 PM	SAMP,10mL,
25	N063735-001B,SAMP,50	3/13/2024 12:48:06 PM	SAMP,0.2>10mL,
26	N063735-002B,SAMP,100	3/13/2024 1:04:02 PM	SAMP,0.1>10mL,
27	N063735-004B,SAMP,50	3/13/2024 1:19:56 PM	SAMP,0.2>10mL,
28	N063735-005B,SAMP,50	3/13/2024 1:35:53 PM	SAMP,0.2>10mL,
29	N063735-006B,SAMP,50	3/13/2024 1:51:49 PM	SAMP,0.2>10mL,
30	N063735-007B,SAMP,20	3/13/2024 2:07:45 PM	SAMP,0.5>10mL,
31	N063735-009B,SAMP,20	3/13/2024 2:23:40 PM	SAMP,0.5>10mL,
32	N063735-010B,SAMP,20	3/13/2024 2:39:36 PM	SAMP,0.5>10mL,
33	CCV-3,CCV,1	3/13/2024 2:55:33 PM	CCV, IWST-240308A
34	CCB-3,CCB,1	3/13/2024 3:11:28 PM	CCB
35	N063735-012B,SAMP,20	3/13/2024 3:27:24 PM	SAMP,0.5>10mL,
36	N063735-011B,SAMP,50	3/13/2024 3:43:19 PM	SAMP,0.2>10mL,
37	N063735-013B,SAMP,50	3/13/2024 3:59:15 PM	SAMP,0.2>10mL,
38	N063712-001ADUP,DUP,1	3/13/2024 4:15:11 PM	DUP,10mL,
39	N063712-001AMS,MS,1	3/13/2024 4:31:07 PM	MS,10mL,
40	N063712-001AMSD,MSD,1	3/13/2024 4:47:02 PM	MSD,10mL,
41	CCV-4,CCV,1	3/13/2024 5:02:57 PM	CCV, IWST-240308A

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 42
Created: 3/13/2024 8:15:28 AM by IC-05
Last Update: 3/13/2024 12:55:50 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	CCB-4,CCB,1	Unknown	36	1000.0	Anions_Default	EPA 300_0_240223A	Finished

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 42
Created: 3/13/2024 8:15:28 AM by IC-05
Last Update: 3/13/2024 12:55:50 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	CCB-4,CCB,1	3/13/2024 5:18:53 PM	CCB

INITIAL CALIBRATION DATA SUMMARY

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 2/23/2024

Initial Calibration:

Nitrate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0201	0.0879	0.1672	0.4214	0.8656	1.000
Measured, in mg/L	0.000000	0.062700	0.259300	0.489100	1.225800	2.513100	
Relative Error (%RE)		25.4%		-2.2%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712E

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-09
Date Calibrated: 2/23/2024

Initial Calibration:

Sulfate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.5	2	4	10	20	R^2
Area,mAU*min	0.0000	0.0569	0.2273	0.4613	1.1803	2.4884	0.999
Measured, in mg/L	0.000000	0.682100	2.047200	3.922700	9.683700	20.164400	
Relative Error (%RE)		36.4%		-1.9%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712G

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183573**
Client ID: **ICV**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5745556**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.951	0.50	4.000	0	98.8	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183573**
Client ID: **CCV**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5745558**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.926	0.50	4.000	0	98.2	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183573**
Client ID: **CCV**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5745569**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.884	0.50	4.000	0	97.1	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183573**
Client ID: **CCV**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5745580**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.875	0.50	4.000	0	96.9	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183573**
Client ID: **CCV**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5745585**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.913	0.50	4.000	0	97.8	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **ICV**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5743964**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.269	0.050	1.250	0	102	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **CCV**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743966**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.222	0.050	1.250	0	97.7	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **CCV**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743978**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.202	0.050	1.250	0	96.2	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **CCV**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743990**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.190	0.050	1.250	0	95.2	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **CCV**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743993**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.179	0.050	1.250	0	94.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183573**
Client ID: **ICB**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5745557**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183573**
Client ID: **CCB**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5745559**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183573**
Client ID: **CCB**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5745570**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183573**
Client ID: **CCB**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5745581**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183573**
Client ID: **CCB**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5745586**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	0.364	0.50									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

Detection of SO4 was >1/2PQL in CCB4. However, samples were >5x the CCB detection.

dlRocha 4/12/2024

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **ICB**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5743965**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **CCB**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743967**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **CCB**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743979**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **CCB**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743991**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **CCB**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743994**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 3/13/2024

Sample Name		Retention Time	Evaluation
ICV	Nitrate	6.540	
CCV-1	Nitrate	6.414	
CCV-2	Nitrate	6.407	
CCV-3	Nitrate	6.383	
CCV-4	Nitrate	6.400	

Average 6.401
Applied RT Window 6.201 - 6.601

MB-R183563_NO3	Nitrate	N.A.	N.A.
LCS-R183563_NO3	Nitrate	6.410	PASS
N063736-001BMS	Nitrate	6.404	PASS
N063736-001BMSD	Nitrate	6.424	PASS
N063736-004BDUP	Nitrate	6.390	PASS
N063736-004BMS	Nitrate	6.427	PASS
N063735-001B	Nitrate	N.A.	N.A.
N063735-002B	Nitrate	N.A.	N.A.
N063735-004B	Nitrate	N.A.	N.A.
N063735-005B	Nitrate	6.390	PASS
N063735-006B	Nitrate	6.404	PASS
N063735-007B	Nitrate	N.A.	N.A.
N063735-009B	Nitrate	N.A.	N.A.
N063735-010B	Nitrate	6.427	PASS
N063735-012B	Nitrate	N.A.	N.A.
N063735-011B	Nitrate	6.414	PASS
N063735-013B	Nitrate	6.417	PASS

Reviewed by:

dMocha 4/12/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-09

Analytical Sequence

Date Analyzed: 3/13/2024

Sample Name		Retention Time	Evaluation
ICV	Sulfate	10.777	
CCV-1	Sulfate	10.637	
CCV-2	Sulfate	10.614	
CCV-3	Sulfate	10.611	
CCV-4	Sulfate	10.624	
	Average	10.622	
	Applied RT Window	10.422 - 10.822	
MB-R183573_SO4	Sulfate	10.654	PASS
LCS-R183573_SO4	Sulfate	10.667	PASS
N063736-001BMS	Sulfate	10.637	PASS
N063736-001BMSD	Sulfate	10.634	PASS
N063736-003BDUP	Sulfate	10.614	PASS
N063736-003BMS	Sulfate	10.627	PASS
N063735-001B	Sulfate	10.624	PASS
N063735-002B	Sulfate	10.614	PASS
N063735-004B	Sulfate	10.617	PASS
N063735-005B	Sulfate	10.611	PASS
N063735-006B	Sulfate	10.614	PASS
N063735-007B	Sulfate	10.614	PASS
N063735-009B	Sulfate	10.617	PASS
N063735-010B	Sulfate	10.621	PASS
N063735-012B	Sulfate	10.621	PASS
N063735-011B	Sulfate	10.614	PASS
N063735-013B	Sulfate	10.634	PASS

Reviewed by:

dMocha 4/12/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): 10/5/2022, 12/14/2022, 3/22/2023,7/10/2023; 10/3/2023 & 11/14/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: mg/L

Instrument Name: **IC-08 & IC-09**

Datafile IC-08 221005A #24 IC-08 221214A #30 IC-08 230322A #35 IC-08 230710A #13 IC-09 231003A #14 IC-08 231114A #24 IC-09 231114A #19

Analyte	#1	#2	#3	#4	#5	#6	#7	Spike Conc., mg/L	SD	$t_{(n-1)}$ value	MDLs	MDL	PQL
Fluoride	0.100	0.103	0.108	0.118	0.110	0.098	0.126	0.10	0.0101	3.143	**0.0318**	**0.0318**	0.10
Chloride	0.480	0.418	0.472	0.653	0.624	0.587	0.622	0.50	0.0922	3.143	**0.2898**	**0.2898**	0.50
Nitrite	0.068	0.061	0.060	0.071	0.063	0.061	0.070	0.05	0.0047	3.143	**0.0149**	**0.0149**	0.05
Bromide	0.526	0.502	0.509	0.522	0.536	0.527	0.520	0.50	0.0116	3.143	**0.0364**	**0.0364**	0.50
Nitrate	0.073	0.058	0.059	0.073	0.074	0.068	0.073	0.05	0.0068	3.143	**0.0215**	**0.0240**	0.05
Phosphate	0.112	0.096	0.114	0.120	0.130	0.093	0.124	0.10	0.0138	3.143	**0.0433**	**0.0433**	0.10
Sulfate	0.501	0.609	0.638	0.401	0.704	0.620	0.697	0.50	0.1092	3.143	**0.3432**	**0.3432**	0.50

METHOD DETECTION LIMIT (Blanks)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Analyte	MDLb	# of Records
Fluoride	0	63
Chloride	0.1456	80
Nitrite	0.0147	64
Bromide	0	18
Nitrate	0.0240	132
Phosphate	0.0237	34
Sulfate	0.2579	107

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

EPA 6010B
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107498
ASSET #: N063735

Instrument ID: ICP-02
Analyst: DBJ
Date Analyzed: 3/13/2024

Method:

[X] EPA 6010B / 200.7
[ ] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

%Rec of Fe in N063735-002C-MS/MSD failed, high bias. However, LCS passed criteria.

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 03142024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in ug/L , in the original sample as follows:

Iron , ug/L = A * DF * PF *CF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL
CF= Conversion Factor from mg/L to ug/L, 1000

For Sample **N063735-001C** , the concentration i ug/L is calculated as follows:

Iron , ug/L = 0.04245 * 1 * (25/25) * 1000

Iron , ug/L = 42.45

Reporting results in two significant figures,

Iron , ug/L = 42

Reviewed by:

dlRocha 4/2/2024

% RSD SUMMARY

RSD SUMMARY: 240313B

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	Fe	0	4.41	15	PASS
Standard1	ICAL	1	Fe	0.02	5.93	15	PASS
Standard2	ICAL	1	Fe	0.05	0.93	15	PASS
Standard3	ICAL	1	Fe	2	0.07	15	PASS
Standard4	ICAL	1	Fe	5	0.13	15	PASS
Standard5	ICAL	1	Fe	7.5	0.15	15	PASS
Standard6	ICAL	1	Fe	10	0.02	15	PASS
Standard7	ICAL	1	Fe	20	0.05	15	PASS
ICV	ICV	1	Fe	10.11	0.09	15	PASS
ICB	ICB	1	Fe	0	98.61	15	<PQL
LLICV	CCV1	1	Fe	0.02	0.65	20	PASS
ICSA1	ICSA	1	Fe	184.84	0.07	15	PASS
ICSAB1	ICSAB	1	Fe	182.52	0.07	15	PASS
RINSE	RINSE	1	Fe	0.02	40.34	15	<PQL
RINSE	RINSE	1	Fe	0.01	49.96	15	<PQL
MB-107498	MBLK	1	Fe	0	87.21	15	<PQL
LCS-107498	LCS	1	Fe	0.1	8.89	15	PASS
N063734-001B	SAMP	1	Fe	0.38	1.75	15	PASS
N063734-002B	SAMP	1	Fe	0.36	2.57	15	PASS
N063735-001C	SAMP	1	Fe	0.04	2.85	15	PASS
N063735-002C	SAMP	1	Fe	0.34	0.36	15	PASS
N063735-002C	SAMP	5	Fe	0.06	2.75	15	PASS
N063735-002C-PS	PS	1	Fe	0.45	0.29	15	PASS
CCV1	CCV	1	Fe	10.16	0.06	15	PASS
CCB1	CCB	1	Fe	0	3.74	15	PASS
N063735-002C-MS	MS	1	Fe	0.5	0.28	15	PASS
N063735-002C-MSD	MSD	1	Fe	0.51	1.22	15	PASS
N063735-004C	SAMP	1	Fe	0.04	1.61	15	PASS
N063735-005C	SAMP	1	Fe	0.01	12.15	15	PASS
N063735-006C	SAMP	1	Fe	0.08	0.92	15	PASS
N063735-007C	SAMP	1	Fe	0.35	0.97	15	PASS
N063735-009C	SAMP	1	Fe	0.01	9.89	15	PASS
N063735-010C	SAMP	1	Fe	0.05	3.17	15	PASS
N063735-011C	SAMP	1	Fe	0	34.64	15	<PQL
N063735-012C	SAMP	1	Fe	0.14	1.88	15	PASS
CCV2	CCV	1	Fe	10.07	0.06	15	PASS
CCB2	CCB	1	Fe	0	6.32	15	PASS
N063735-013C	SAMP	1	Fe	0.01	14.01	15	PASS
N063736-001C	SAMP	1	Fe	0.29	0.37	15	PASS
N063736-002C	SAMP	1	Fe	0.09	1.11	15	PASS
N063736-003C	SAMP	1	Fe	0.03	8.69	15	PASS
N063736-004C	SAMP	1	Fe	0.01	8.67	15	PASS

RSD SUMMARY: 240313B

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CCV3	CCV	1	Fe	10.12	0.07	15	PASS
CCB3	CCB	1	Fe	0	28.25	15	<PQL
ICSA2	ICSA	1	Fe	183.93	0.11	15	PASS
ICSAB2	ICSAB	1	Fe	181.68	0.09	15	PASS
RINSE	RINSE	1	Fe	-0.01	16.95	15	<PQL
STD1	SAMP	1	Fe	2.05	0.23	15	PASS
STD2	SAMP	1	Fe	0.04	2.92	15	PASS
RINSE	RINSE	1	Fe	0	4.88	15	PASS
CCV4	CCV	1	Fe	10.19	0.15	15	PASS
CCB4	CCB	1	Fe	0.01	31.42	15	<PQL
ICSA3	ICSA	1	Fe	185.17	0.11	15	PASS
ICSAB3	ICSAB	1	Fe	182.74	0.04	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240313B

Instrument ID: ICP-02

STANDARD CODE	
Standard1	MWST-240311M, 0.5<50mL
Standard2	MWST-240311N
Standard3	MWST-240311O, 5<50mL
Standard4	MWST-240311O,12.5<50mL
Standard5	MWST-240311O, 15<40mL
Standard6	MWST-240311O, 25<50mL
Standard7	MWST-243011O
ICV	MWST-240311AF
CCV	MWST-240311O, 25<50mL
ICSA/ICSAB	MWST-240311P / MWST-240311Q
Int. Std. (Y)	MWST-240311B
PS Spike	MWST-240311X/Y/Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	03/13/2024	05:06:08 PM
2	Standard1	ICAL	1	03/13/2024	05:10:17 PM
3	Standard2	ICAL	1	03/13/2024	05:14:23 PM
4	Standard3	ICAL	1	03/13/2024	05:18:30 PM
5	Standard4	ICAL	1	03/13/2024	05:22:38 PM
6	Standard5	ICAL	1	03/13/2024	05:26:46 PM
7	Standard6	ICAL	1	03/13/2024	05:30:54 PM
8	Standard7	ICAL	1	03/13/2024	05:35:03 PM
250	ICV	ICV	1	03/13/2024	05:38:16 PM
1	ICB	ICB	1	03/13/2024	05:42:28 PM
2	LLICV	CCV1	1	03/13/2024	05:49:34 PM
9	ICSA1	ICSA	1	03/13/2024	05:53:40 PM
10	ICSAB1	ICSAB	1	03/13/2024	05:59:23 PM
239	RINSE	RINSE	1	03/13/2024	06:11:21 PM
240	RINSE	RINSE	1	03/13/2024	06:20:16 PM
11	MB-107498	MBLK	1	03/13/2024	06:28:21 PM
12	LCS-107498	LCS	1	03/13/2024	06:32:27 PM
13	N063734-001B	SAMP	1	03/13/2024	06:36:33 PM
14	N063734-002B	SAMP	1	03/13/2024	06:42:40 PM
15	N063735-001C	SAMP	1	03/13/2024	06:48:47 PM
16	N063735-002C	SAMP	1	03/13/2024	06:54:53 PM
17	N063735-002C	SAMP	5	03/13/2024	07:01:00 PM
18	N063735-002C-PS	PS	1	03/13/2024	07:05:07 PM
7	CCV1	CCV	1	03/13/2024	07:11:15 PM
1	CCB1	CCB	1	03/13/2024	07:15:24 PM
19	N063735-002C-MS	MS	1	03/13/2024	07:19:30 PM
20	N063735-002C-MSD	MSD	1	03/13/2024	07:25:38 PM
21	N063735-004C	SAMP	1	03/13/2024	07:31:46 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
22	N063735-005C	SAMP	1	03/13/2024	07:37:55 PM
23	N063735-006C	SAMP	1	03/13/2024	07:44:03 PM
24	N063735-007C	SAMP	1	03/13/2024	07:50:08 PM
25	N063735-009C	SAMP	1	03/13/2024	07:54:14 PM
26	N063735-010C	SAMP	1	03/13/2024	08:00:19 PM
27	N063735-011C	SAMP	1	03/13/2024	08:04:25 PM
28	N063735-012C	SAMP	1	03/13/2024	08:10:32 PM
7	CCV2	CCV	1	03/13/2024	08:16:39 PM
1	CCB2	CCB	1	03/13/2024	08:20:47 PM
29	N063735-013C	SAMP	1	03/13/2024	08:24:53 PM
30	N063736-001C	SAMP	1	03/13/2024	08:31:01 PM
31	N063736-002C	SAMP	1	03/13/2024	08:37:08 PM
32	N063736-003C	SAMP	1	03/13/2024	08:43:15 PM
33	N063736-004C	SAMP	1	03/13/2024	08:49:22 PM
7	CCV3	CCV	1	03/13/2024	08:55:31 PM
1	CCB3	CCB	1	03/13/2024	08:59:39 PM
9	ICSA2	ICSA	1	03/13/2024	09:03:46 PM
10	ICSAB2	ICSAB	1	03/13/2024	09:09:28 PM
67	RINSE	RINSE	1	03/13/2024	09:27:18 PM
68	STD1	SAMP	1	03/13/2024	09:31:27 PM
69	STD2	SAMP	1	03/13/2024	09:35:35 PM
67	RINSE	RINSE	1	03/13/2024	09:39:43 PM
7	CCV4	CCV	1	03/13/2024	09:43:51 PM
1	CCB4	CCB	1	03/13/2024	09:48:00 PM
9	ICSA3	ICSA	1	03/13/2024	09:52:06 PM
10	ICSAB3	ICSAB	1	03/13/2024	09:57:49 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/13/2024 9:47:20 AM**
Prep End Date: **3/13/2024 2:00:00 PM**
Prep Batch **107498** Prep Code:**3010_W_DISS**

Reviewed/ Date: dlRocha 4/2/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-1-17**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107498	Aqueous		25	☐	25	1.000		
MB-107498	Aqueous		25	☐	25	1.000		
N063734-001B	Water	<2	25	☐	25	1.000		
N063734-002B	Water	<2	25	☐	25	1.000		
N063735-001C	Groundwater	<2	25	☐	25	1.000		
N063735-002C	Groundwater	<2	25	☐	25	1.000		
N063735-002C-MS	Groundwater	<2	25	☐	25	1.000		
N063735-002C-MSD	Groundwater	<2	25	☐	25	1.000		
N063735-004C	Groundwater	<2	25	☐	25	1.000		
N063735-005C	Groundwater	<2	25	☐	25	1.000		
N063735-006C	Groundwater	<2	25	☐	25	1.000		
N063735-007C	Groundwater	<2	25	☐	25	1.000		
N063735-009C	Groundwater	<2	25	☐	25	1.000		
N063735-010C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15448	HYDROCHLORIC ACID
16152	NITRIC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240311X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240311Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240311Z	ICP Solution C	LCS,MS,MSD	0.5

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/13/2024 9:47:20 AM**
Prep End Date: **3/13/2024 2:00:00 PM**
Prep Batch **107498** Prep Code:**3010_W_DISS**

Reviewed/ Date: dMocha 4/2/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-1-17**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063735-011C	Groundwater	<2	25	☐	25	1.000		
N063735-012C	Groundwater	<2	25	☐	25	1.000		
N063735-013C	Groundwater	<2	25	☐	25	1.000		
N063736-001C	Groundwater	<2	25	☐	25	1.000		
N063736-002C	Groundwater	<2	25	☐	25	1.000		
N063736-003C	Groundwater	<2	25	☐	25	1.000		
N063736-004C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15448	HYDROCHLORIC ACID
16152	NITRIC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240311X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240311Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240311Z	ICP Solution C	LCS,MS,MSD	0.5

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240313B

Instrument ID: ICP-02

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Iron								
CalBlk	03/13/2024	05:06:08 PM	Fe	273.953	106	0.00	mg/L	
Standard1	03/13/2024	05:10:17 PM	Fe	273.953	41	0.0200	mg/L	
Standard2	03/13/2024	05:14:23 PM	Fe	273.953	212	0.050	mg/L	
Standard3	03/13/2024	05:18:30 PM	Fe	273.953	10205	2.000	mg/L	
Standard4	03/13/2024	05:22:38 PM	Fe	273.953	26502	5.000	mg/L	
Standard5	03/13/2024	05:26:46 PM	Fe	273.953	39112	7.500	mg/L	
Standard6	03/13/2024	05:30:54 PM	Fe	273.953	52879	10.000	mg/L	
Standard7	03/13/2024	05:35:03 PM	Fe	273.953	104167	20.000	mg/L	1.0000

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID	**ICV**	SampType:	**ICV**	TestCode:	**6010_WDPG**	Units:	**µg/L**	Prep Date:		RunNo:	**183568**
Client ID:	**ICV**	Batch ID:	**R183568**	TestNo:	**EPA 6010B**			Analysis Date:	**3/13/2024**	SeqNo:	**5744121**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10106.571	20	10000	0	101	90	110				

Sample ID	**LLICV**	SampType:	**CCV1**	TestCode:	**6010_WDPG**	Units:	**µg/L**	Prep Date:		RunNo:	**183568**
Client ID:	**ZZZZZZ**	Batch ID:	**R183568**	TestNo:	**EPA 6010B**			Analysis Date:	**3/13/2024**	SeqNo:	**5744123**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	23.616	20	20.00	0	118	80	120				

Sample ID	**CCV1**	SampType:	**CCV**	TestCode:	**6010_WDPG**	Units:	**µg/L**	Prep Date:		RunNo:	**183568**
Client ID:	**CCV**	Batch ID:	**R183568**	TestNo:	**EPA 6010B**			Analysis Date:	**3/13/2024**	SeqNo:	**5744134**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10159.823	20	10000	0	102	90	110				

Sample ID	**CCV2**	SampType:	**CCV**	TestCode:	**6010_WDPG**	Units:	**µg/L**	Prep Date:		RunNo:	**183568**
Client ID:	**CCV**	Batch ID:	**R183568**	TestNo:	**EPA 6010B**			Analysis Date:	**3/13/2024**	SeqNo:	**5744146**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10071.733	20	10000	0	101	90	110				

Sample ID	**CCV3**	SampType:	**CCV**	TestCode:	**6010_WDPG**	Units:	**µg/L**	Prep Date:		RunNo:	**183568**
Client ID:	**CCV**	Batch ID:	**R183568**	TestNo:	**EPA 6010B**			Analysis Date:	**3/13/2024**	SeqNo:	**5744153**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10117.627	20	10000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID	SampType	TestCode	Units	Prep Date	RunNo
ICB	**ICB**	**6010_WDPG**	**µg/L**		**183568**
Client ID: **ICB**	Batch ID: **R183568**	TestNo: **EPA 6010B**		Analysis Date: **3/13/2024**	SeqNo: **5744122**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.223	20									

Sample ID	SampType	TestCode	Units	Prep Date	RunNo
CCB1	**CCB**	**6010_WDPG**	**µg/L**		**183568**
Client ID: **CCB**	Batch ID: **R183568**	TestNo: **EPA 6010B**		Analysis Date: **3/13/2024**	SeqNo: **5744135**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	3.416	20									

Sample ID	SampType	TestCode	Units	Prep Date	RunNo
CCB2	**CCB**	**6010_WDPG**	**µg/L**		**183568**
Client ID: **CCB**	Batch ID: **R183568**	TestNo: **EPA 6010B**		Analysis Date: **3/13/2024**	SeqNo: **5744147**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.644	20									

Sample ID	SampType	TestCode	Units	Prep Date	RunNo
CCB3	**CCB**	**6010_WDPG**	**µg/L**		**183568**
Client ID: **CCB**	Batch ID: **R183568**	TestNo: **EPA 6010B**		Analysis Date: **3/13/2024**	SeqNo: **5744154**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	3.515	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSA1**	SampType: **ICSA**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183568**
Client ID: **ICSA**	Batch ID: **R183568**	TestNo: **EPA 6010B**		Analysis Date: **3/13/2024**	SeqNo: **5744124**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	515679.216	50	500000	0	103	80	120				
Calcium	571146.357	500	500000	0	114	80	120				
Iron	184840.409	20	200000	0	92.4	80	120				
Magnesium	519532.735	100	500000	0	104	80	120				

Sample ID **ICSAB1**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183568**
Client ID: **ICSAB**	Batch ID: **R183568**	TestNo: **EPA 6010B**		Analysis Date: **3/13/2024**	SeqNo: **5744125**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	507653.340	50	500000	0	102	80	120				
Calcium	561963.426	500	500000	0	112	80	120				
Iron	182518.828	20	200000	0	91.3	80	120				
Magnesium	512050.298	100	500000	0	102	80	120				

Sample ID **ICSA2**	SampType: **ICSA**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183568**
Client ID: **ICSA**	Batch ID: **R183568**	TestNo: **EPA 6010B**		Analysis Date: **3/13/2024**	SeqNo: **5744155**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	515637.501	50	500000	0	103	80	120				
Calcium	574623.803	500	500000	0	115	80	120				
Iron	183932.208	20	200000	0	92.0	80	120				
Magnesium	518303.894	100	500000	0	104	80	120				

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183568**
Client ID: **ICSAB**	Batch ID: **R183568**	TestNo: **EPA 6010B**		Analysis Date: **3/13/2024**	SeqNo: **5744156**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	507988.521	50	500000	0	102	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183568**
Client ID: **ICSAB**	Batch ID: **R183568**	TestNo: **EPA 6010B**		Analysis Date: **3/13/2024**	SeqNo: **5744156**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	563080.541	500	500000	0	113	80	120				
Iron	181681.280	20	200000	0	90.8	80	120				
Magnesium	510413.620	100	500000	0	102	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240313B

Instrument ID: ICP-02

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	1.01	100.73	65-125	PASS
Standard2	ICAL	1	1.01	101.19	65-125	PASS
Standard3	ICAL	1	1.01	101.02	65-125	PASS
Standard4	ICAL	1	0.99	98.78	65-125	PASS
Standard5	ICAL	1	0.99	99.18	65-125	PASS
Standard6	ICAL	1	0.97	97.36	65-125	PASS
Standard7	ICAL	1	0.96	95.96	65-125	PASS
ICV	ICV	1	0.98	97.53	65-125	PASS
ICB	ICB	1	1	99.95	65-125	PASS
LLICV	CCV1	1	1	100.39	65-125	PASS
ICSA1	ICSA	1	0.82	81.51	65-125	PASS
ICSAB1	ICSAB	1	0.8	80.38	65-125	PASS
RINSE	RINSE	1	1.04	104.16	65-125	PASS
RINSE	RINSE	1	1	99.53	65-125	PASS
MB-107498	MBLK	1	0.97	97.34	65-125	PASS
LCS-107498	LCS	1	0.96	96.16	65-125	PASS
N063734-001B	SAMP	1	0.76	76.13	65-125	PASS
N063734-002B	SAMP	1	0.74	74.18	65-125	PASS
N063735-001C	SAMP	1	0.76	75.97	65-125	PASS
N063735-002C	SAMP	1	0.74	74.23	65-125	PASS
N063735-002C	SAMP	5	0.86	86.01	65-125	PASS
N063735-002C-PS	PS	1	0.73	73.3	65-125	PASS
CCV1	CCV	1	0.98	97.53	65-125	PASS
CCB1	CCB	1	1	99.94	65-125	PASS
N063735-002C-MS	MS	1	0.76	76.42	65-125	PASS
N063735-002C-MSD	MSD	1	0.75	74.86	65-125	PASS
N063735-004C	SAMP	1	0.75	74.7	65-125	PASS
N063735-005C	SAMP	1	0.77	77.38	65-125	PASS
N063735-006C	SAMP	1	0.73	73.31	65-125	PASS
N063735-007C	SAMP	1	0.88	88.45	65-125	PASS
N063735-009C	SAMP	1	0.89	89.43	65-125	PASS
N063735-010C	SAMP	1	0.88	88.46	65-125	PASS
N063735-011C	SAMP	1	0.8	80.19	65-125	PASS
N063735-012C	SAMP	1	0.86	85.95	65-125	PASS
CCV2	CCV	1	0.96	96.06	65-125	PASS
CCB2	CCB	1	0.99	99.05	65-125	PASS
N063735-013C	SAMP	1	0.74	74.24	65-125	PASS
N063736-001C	SAMP	1	0.75	74.75	65-125	PASS
N063736-002C	SAMP	1	0.72	71.83	65-125	PASS
N063736-003C	SAMP	1	0.77	77.11	65-125	PASS

INTERNAL STANDARD: 240313B

Instrument ID: ICP-02

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
N063736-004C	SAMP	1	0.71	70.92	65-125	PASS
CCV3	CCV	1	0.97	96.73	65-125	PASS
CCB3	CCB	1	1	99.92	65-125	PASS
ICSA2	ICSA	1	0.82	81.72	65-125	PASS
ICSAB2	ICSAB	1	0.81	81.31	65-125	PASS
RINSE	RINSE	1	1.08	107.88	65-125	PASS
STD1	SAMP	1	0.99	99.34	65-125	PASS
STD2	SAMP	1	1.03	102.88	65-125	PASS
RINSE	RINSE	1	1.08	108.21	65-125	PASS
CCV4	CCV	1	1	100.16	65-125	PASS
CCB4	CCB	1	1.04	103.57	65-125	PASS
ICSA3	ICSA	1	0.84	84.35	65-125	PASS
ICSAB3	ICSAB	1	0.84	83.7	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063735
Test Method: EPA 6010B
Analysis Date: 3/13/2024

Matrix: Groundwater
Batch No.: 107498

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima 7300DV

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Fe. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063735-002C DT 5x	Iron	Fe	µg/L	305.6335	NA	343.2672	10.96%	10

Reviewed by:

dMocha 4/2/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID	**N063735-002C-PS**	SampType: **PS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183568**
Client ID:	**ZZZZZZ**	Batch ID: **107498**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/13/2024**	SeqNo: **5744133**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	447.549	20	100.0	343.3	104	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

EPA 6020
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107497
ASSET #: N063735

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 3/13/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: —

2nd Level Reviewer KDG 3/14/2024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Groundwater

FORMULA:

Calculate the Barium concentration, in ug/L in the original sample as follows:

Barium , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063735-001C** , the concentration in ug/L is calculated as follows:

Barium , ug/L = 64.583 * 1 *(25 / 25)

Barium , ug/L = 64.583

Reporting results in two significant figures,

Barium , ug/L = 65

Reviewed by:

JRB 4/14/2024

% RSD SUMMARY

PERCENT RSD SUMMARY: 240313A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.11	8.444	15	PASS	0.1	9.383	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.5	6.177	15	PASS	0.49	6.621	15	PASS
Std3-5/50 ppb	ICAL	1	4.96	2.609	15	PASS	4.93	1.913	15	PASS
Std4-10/100 ppb	ICAL	1	9.98	1.803	15	PASS	9.86	1.332	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.99	1.148	15	PASS	19.67	1.794	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	40.23	0.628	15	PASS	39.98	0.781	15	PASS
Std7-100/1000 ppb	ICAL	1	100.27	0.315	15	PASS	99.67	0.284	15	PASS
Std8-200/2000 ppb	ICAL	1	199.82	0.858	15	PASS	200.21	1.987	15	PASS
ICV	ICV	1	10.22	1.043	15	PASS	100.81	0.583	15	PASS
ICB	ICB	1	0	537.792	15	<PQL	<0.000	N/A	15	<PQL
LLICV1	LLICV	1	1.06	7.092	20	PASS	0.53	8.302	20	PASS
MLCCV	CCV	1	19.76	2.083	15	PASS	19.84	1.419	15	PASS
ICSA1	ICSA	1	0.01	43.751	15	<PQL	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.53	0.377	15	PASS	20.16	0.427	15	PASS
CCV1	CCV	1	19.92	0.696	15	PASS	19.85	0.924	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV2	CCV	1	20.01	0.799	15	PASS	19.76	1.377	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	0.01	47.316	15	<PQL	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.63	1.813	15	PASS	20.27	0.931	15	PASS
CCV3	CCV	1	19.82	1.102	15	PASS	19.62	0.702	15	PASS
CCB3	CCB	1	0	297.591	15	<PQL	<0.000	N/A	15	<PQL
CCV4	CCV	1	19.96	0.899	15	PASS	19.66	0.837	15	PASS
CCB4	CCB	1	0	167.203	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	0	299.781	15	<PQL	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.3	0.829	15	PASS	20.08	0.359	15	PASS
MB-107497	MBLK	1	0	136.618	15	<PQL	<0.000	N/A	15	<PQL
LCS-107497	LCS	1	10.09	1.468	15	PASS	99.96	1.099	15	PASS
N063736-001C	SAMP	1	55.83	2.132	15	PASS	372.67	0.95	15	PASS
N063736-002C	SAMP	1	15.51	0.835	15	PASS	35.54	0.418	15	PASS
N063736-003C	SAMP	1	37.53	0.583	15	PASS	5.86	2.128	15	PASS
N063736-004C	SAMP	1	34.62	1.111	15	PASS	6.9	2.384	15	PASS
N063734-001B	SAMP	1	50.35	1.181	15	PASS	459.13	2.028	15	PASS
N063734-002B	SAMP	1	49.02	0.861	15	PASS	449.71	0.764	15	PASS
N063735-001C	SAMP	1	64.58	2.134	15	PASS	118.91	0.488	15	PASS
N063735-001C	SAMP	5	13.9	0.584	15	PASS	26.46	2.439	15	PASS
CCV5	CCV	1	20.7	1.35	15	PASS	18.77	0.389	15	PASS
CCB5	CCB	1	0	123.815	15	<PQL	<0.000	N/A	15	<PQL
N063735-001C-PS	PS	1	73.67	1.184	15	PASS	206.84	0.296	15	PASS
N063735-001C-MS	MS	1	72.78	0.453	15	PASS	203.05	0.872	15	PASS

PERCENT RSD SUMMARY: 240313A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063735-001C-MSD	MSD	1	72.42	2.331	15	PASS	204.75	0.87	15	PASS
N063735-002C	SAMP	1	37.25	1.331	15	PASS	152.08	0.771	15	PASS
N063735-004C	SAMP	1	15.96	2.072	15	PASS	73.7	1.808	15	PASS
N063735-005C	SAMP	1	161.27	1.834	15	PASS	<0.000	N/A	15	<PQL
N063735-006C	SAMP	1	38.6	1.952	15	PASS	32.31	2.668	15	PASS
N063735-007C	SAMP	1	86.46	0.609	15	PASS	114.22	1.456	15	PASS
N063735-009C	SAMP	1	54.06	2.355	15	PASS	234.47	0.724	15	PASS
CCV6	CCV	1	20.31	1.03	15	PASS	19.04	2.338	15	PASS
CCB6	CCB	1	0	64.351	15	<PQL	<0.000	N/A	15	<PQL
N063735-010C	SAMP	1	29.97	1.041	15	PASS	165.56	1.995	15	PASS
N063735-011C	SAMP	1	46.68	1.724	15	PASS	14.47	1.045	15	PASS
N063735-012C	SAMP	1	34.04	1.508	15	PASS	536.52	1.111	15	PASS
N063735-013C	SAMP	1	28	0.93	15	PASS	28.35	2.171	15	PASS
N063736-003C	SAMP	1	38.22	0.641	15	PASS	5.88	3.286	15	PASS
N063736-001C	SAMP	10	6.02	1.367	15	PASS	39.52	2.084	15	PASS
N063734-001B	SAMP	10	5.07	2.684	15	PASS	49.19	0.894	15	PASS
N063734-002B	SAMP	10	5.07	1.814	15	PASS	50.19	1.363	15	PASS
N063735-001C	SAMP	10	6.89	2.748	15	PASS	13.27	2.981	15	PASS
N063735-001C	SAMP	50	1.52	2.842	15	PASS	2.69	1.951	15	PASS
CCV7	CCV	1	20.81	1.052	15	PASS	19.26	0.712	15	PASS
CCB7	CCB	1	0	460.848	15	<PQL	<0.000	N/A	15	<PQL
N063735-001C-PS	PS	10	16.14	2.31	15	PASS	100.32	0.572	15	PASS
N063735-001C-MS	MS	10	7.57	1.315	15	PASS	22.4	2.347	15	PASS
N063735-001C-MSD	MSD	10	7.9	4.694	15	PASS	23.31	0.45	15	PASS
N063735-009C	SAMP	10	5.51	3.019	15	PASS	25.06	1.802	15	PASS
N063735-012C	SAMP	10	3.47	2.07	15	PASS	57.51	0.949	15	PASS
N063736-003C	SAMP	1	37.45	0.735	15	PASS	5.79	1.045	15	PASS
N063736-003C	SAMP	1	37.13	1.726	15	PASS	5.93	3.599	15	PASS
N063736-003C	SAMP	1	37.37	1.311	15	PASS	5.78	2.473	15	PASS
N063736-003C	SAMP	1	37.18	1.212	15	PASS	5.78	3.767	15	PASS
CCV8	CCV	1	20.27	0.331	15	PASS	19.33	2.503	15	PASS
CCB8	CCB	1	0	442.622	15	<PQL	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	0	28.932	15	<PQL	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.58	0.176	15	PASS	19.87	0.26	15	PASS
N063295-001A	SAMP	1	51.39	0.98	15	PASS	149.81	1.752	15	PASS

PERCENT RSD SUMMARY: 240313A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.11	24.001	15	FAIL
Std2-0.5/5 ppb	ICAL	1	0.51	12.096	15	PASS
Std3-5/50 ppb	ICAL	1	4.93	4.232	15	PASS
Std4-10/100 ppb	ICAL	1	9.85	3.081	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.94	1.413	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.57	0.724	15	PASS
Std7-100/1000 ppb	ICAL	1	99.52	1.59	15	PASS
Std8-200/2000 ppb	ICAL	1	200.34	0.286	15	PASS
ICV	ICV	1	10.46	2.161	15	PASS
ICB	ICB	1	0	108.003	15	<PQL
LLICV1	LLICV	1	0.11	7.512	20	PASS
MLCCV	CCV	1	19.91	0.745	15	PASS
ICSA1	ICSA	1	0.01	65.181	15	<PQL
ICSAB1	ICSAB	1	20.78	1.576	15	PASS
CCV1	CCV	1	20.02	1.44	15	PASS
CCB1	CCB	1	0	227.591	15	<PQL
CCV2	CCV	1	20.13	2.987	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.13	2.807	15	PASS
CCV3	CCV	1	20.03	2.563	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL
CCV4	CCV	1	20.21	2.55	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.14	1.27	15	PASS
MB-107497	MBLK	1	0.01	175.84	15	<PQL
LCS-107497	LCS	1	10.37	3.161	15	PASS
N063736-001C	SAMP	1	<0.000	N/A	15	<PQL
N063736-002C	SAMP	1	<0.000	N/A	15	<PQL
N063736-003C	SAMP	1	0.28	39.555	15	NR!
N063736-004C	SAMP	1	<0.000	N/A	15	<PQL
N063734-001B	SAMP	1	<0.000	N/A	15	<PQL
N063734-002B	SAMP	1	<0.000	N/A	15	<PQL
N063735-001C	SAMP	1	<0.000	N/A	15	<PQL
N063735-001C	SAMP	5	<0.000	N/A	15	<PQL
CCV5	CCV	1	19.32	0.896	15	PASS
CCB5	CCB	1	0	686.573	15	<PQL
N063735-001C-PS	PS	1	9.41	2.095	15	PASS
N063735-001C-MS	MS	1	9.34	3.915	15	PASS

PERCENT RSD SUMMARY: 240313A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
N063735-001C-MSD	MSD	1	9.29	3.808	15	PASS
N063735-002C	SAMP	1	<0.000	N/A	15	<PQL
N063735-004C	SAMP	1	2.37	2.437	15	PASS
N063735-005C	SAMP	1	<0.000	N/A	15	<PQL
N063735-006C	SAMP	1	1.47	8.31	15	PASS
N063735-007C	SAMP	1	11.73	1.723	15	PASS
N063735-009C	SAMP	1	1.71	7.319	15	PASS
CCV6	CCV	1	19.3	1.245	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL
N063735-010C	SAMP	1	1.93	4.895	15	PASS
N063735-011C	SAMP	1	0.96	8.338	15	PASS
N063735-012C	SAMP	1	1.9	2.597	15	PASS
N063735-013C	SAMP	1	<0.000	N/A	15	<PQL
N063736-003C	SAMP	1	0.18	77.054	15	NR!
N063736-001C	SAMP	10	<0.000	N/A	15	<PQL
N063734-001B	SAMP	10	<0.000	N/A	15	<PQL
N063734-002B	SAMP	10	<0.000	N/A	15	<PQL
N063735-001C	SAMP	10	<0.000	N/A	15	<PQL
N063735-001C	SAMP	50	0.02	116.872	15	<PQL
CCV7	CCV	1	19.21	2.175	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL
N063735-001C-PS	PS	10	9.61	3.445	15	PASS
N063735-001C-MS	MS	10	1.04	7.835	15	PASS
N063735-001C-MSD	MSD	10	1.02	5.07	15	PASS
N063735-009C	SAMP	10	0.15	25.56	15	NR!
N063735-012C	SAMP	10	0.16	25.779	15	NR!
N063736-003C	SAMP	1	0.33	21.296	15	NR!
N063736-003C	SAMP	1	0.23	25.672	15	NR!
N063736-003C	SAMP	1	0.23	58.538	15	NR!
N063736-003C	SAMP	1	0.16	29.568	15	NR!
CCV8	CCV	1	19.21	2.803	15	PASS
CCB8	CCB	1	0.01	113.606	15	<PQL
ICSA4	ICSA	1	0	144.3	15	<PQL
ICSAB4	ICSAB	1	19.79	1.699	15	PASS
N063295-001A	SAMP	1	<0.000	N/A	15	<PQL

ANALYSIS RUN LOG

INJECTION LOG: 240313A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0313001.d	RINSE	ICAL	1	03/13/24 4:50 PM
A0313002.d	Cal Blk	IBLK	1	03/13/24 4:55 PM
A0313003.d	Std1-0.1/1 ppb	ICAL	1	03/13/24 5:00 PM
A0313004.d	Std2-0.5/5 ppb	ICAL	1	03/13/24 5:04 PM
A0313005.d	Std3-5/50 ppb	ICAL	1	03/13/24 5:09 PM
A0313006.d	Std4-10/100 ppb	ICAL	1	03/13/24 5:14 PM
A0313007.d	Std5-4.0/20/200 ppb	ICAL	1	03/13/24 5:19 PM
A0313008.d	Std6-8.0/40/400 ppb	ICAL	1	03/13/24 5:23 PM
A0313009.d	Std7-100/1000 ppb	ICAL	1	03/13/24 5:28 PM
A0313010.d	Std8-200/2000 ppb	ICAL	1	03/13/24 5:33 PM
A0313011.d	ICV	ICV	1	03/13/24 5:43 PM
A0313012.d	ICB	ICB	1	03/13/24 5:47 PM
A0313013.d	LLICV1	LLICV	1	03/13/24 5:52 PM
A0313014.d	MLCCV	CCV	1	03/13/24 5:57 PM
A0313015.d	ICSA1	ICSA	1	03/13/24 6:01 PM
A0313016.d	ICSAB1	ICSAB	1	03/13/24 6:06 PM
A0313017.d	N062388-003A	SAMP	1	03/13/24 6:11 PM
A0313018.d	N062388-004A	SAMP	1	03/13/24 6:15 PM
A0313019.d	N062915-002A	SAMP	1	03/13/24 6:20 PM
A0313020.d	CCV1	CCV	1	03/13/24 6:25 PM
A0313021.d	CCB1	CCB	1	03/13/24 6:29 PM
A0313022.d	MB-107499	MBLK	1	03/13/24 6:34 PM
A0313023.d	LCS-107499	LCS	1	03/13/24 6:39 PM
A0313024.d	N063706-001C	SAMP	1	03/13/24 6:43 PM
A0313025.d	N063706-001C	SAMP	5	03/13/24 6:48 PM
A0313026.d	N063706-001C-PS	PS	1	03/13/24 6:53 PM
A0313027.d	N063706-001C-MS	MS	1	03/13/24 6:57 PM
A0313028.d	N063706-001C-MSD	MSD	1	03/13/24 7:02 PM
A0313029.d	N062388-003A	SAMP	1	03/13/24 7:07 PM
A0313030.d	N062388-004A	SAMP	1	03/13/24 7:11 PM
A0313031.d	N062915-002A	SAMP	1	03/13/24 7:16 PM
A0313032.d	CCV2	CCV	1	03/13/24 7:21 PM
A0313033.d	CCB2	CCB	1	03/13/24 7:25 PM
A0313034.d	ICSA2	ICSA	1	03/13/24 7:30 PM
A0313035.d	ICSAB2	ICSAB	1	03/13/24 7:35 PM
A0313036.d	N063562-001A	SAMP	1	03/13/24 7:39 PM
A0313037.d	N063562-001B	SAMP	1	03/13/24 7:44 PM
A0313038.d	N063617-007A	SAMP	1	03/13/24 7:49 PM
A0313039.d	N063617-007B	SAMP	1	03/13/24 7:53 PM
A0313040.d	N063617-013A	SAMP	1	03/13/24 7:58 PM
A0313041.d	N063617-013B	SAMP	1	03/13/24 8:03 PM
A0313042.d	N063642-003A	SAMP	1	03/13/24 8:07 PM

INJECTION LOG: 240313A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0313043.d	N063642-003B	SAMP	1	03/13/24 8:12 PM
A0313044.d	N063642-004A	SAMP	1	03/13/24 8:17 PM
A0313045.d	N063642-004B	SAMP	1	03/13/24 8:21 PM
A0313046.d	CCV3	CCV	1	03/13/24 8:26 PM
A0313047.d	CCB3	CCB	1	03/13/24 8:31 PM
A0313048.d	N063642-007A	SAMP	1	03/13/24 8:35 PM
A0313049.d	N063642-007B	SAMP	1	03/13/24 8:40 PM
A0313050.d	CCV4	CCV	1	03/13/24 8:45 PM
A0313051.d	CCB4	CCB	1	03/13/24 8:49 PM
A0313052.d	ICSA3	ICSA	1	03/13/24 8:54 PM
A0313053.d	ICSAB3	ICSAB	1	03/13/24 8:59 PM
A0313054.d	MB-107497	MBLK	1	03/13/24 9:03 PM
A0313055.d	LCS-107497	LCS	1	03/13/24 9:08 PM
A0313056.d	N063736-001C	SAMP	1	03/13/24 9:12 PM
A0313057.d	N063736-002C	SAMP	1	03/13/24 9:17 PM
A0313058.d	N063736-003C	SAMP	1	03/13/24 9:22 PM
A0313059.d	N063736-004C	SAMP	1	03/13/24 9:26 PM
A0313060.d	N063734-001B	SAMP	1	03/13/24 9:31 PM
A0313061.d	N063734-002B	SAMP	1	03/13/24 9:36 PM
A0313062.d	N063735-001C	SAMP	1	03/13/24 9:40 PM
A0313063.d	N063735-001C	SAMP	5	03/13/24 9:45 PM
A0313064.d	CCV5	CCV	1	03/13/24 9:50 PM
A0313065.d	CCB5	CCB	1	03/13/24 9:54 PM
A0313066.d	N063735-001C-PS	PS	1	03/13/24 9:59 PM
A0313067.d	N063735-001C-MS	MS	1	03/13/24 10:04 PM
A0313068.d	N063735-001C-MSD	MSD	1	03/13/24 10:08 PM
A0313069.d	N063735-002C	SAMP	1	03/13/24 10:13 PM
A0313070.d	N063735-004C	SAMP	1	03/13/24 10:17 PM
A0313071.d	N063735-005C	SAMP	1	03/13/24 10:22 PM
A0313072.d	N063735-006C	SAMP	1	03/13/24 10:27 PM
A0313073.d	N063735-007C	SAMP	1	03/13/24 10:31 PM
A0313074.d	N063735-009C	SAMP	1	03/13/24 10:36 PM
A0313075.d	RINSE	ICAL	1	03/13/24 10:41 PM
A0313076.d	CCV6	CCV	1	03/13/24 10:45 PM
A0313077.d	CCB6	CCB	1	03/13/24 10:50 PM
A0313078.d	N063735-010C	SAMP	1	03/13/24 10:55 PM
A0313079.d	N063735-011C	SAMP	1	03/13/24 10:59 PM
A0313080.d	N063735-012C	SAMP	1	03/13/24 11:04 PM
A0313081.d	N063735-013C	SAMP	1	03/13/24 11:09 PM
A0313082.d	N063736-003C	SAMP	1	03/13/24 11:13 PM
A0313083.d	N063736-001C	SAMP	10	03/13/24 11:18 PM
A0313084.d	N063734-001B	SAMP	10	03/13/24 11:23 PM

INJECTION LOG: 240313A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0313085.d	N063734-002B	SAMP	10	03/13/24 11:27 PM
A0313086.d	N063735-001C	SAMP	10	03/13/24 11:32 PM
A0313087.d	N063735-001C	SAMP	50	03/13/24 11:37 PM
A0313088.d	CCV7	CCV	1	03/13/24 11:41 PM
A0313089.d	CCB7	CCB	1	03/13/24 11:46 PM
A0313090.d	N063735-001C-PS	PS	10	03/13/24 11:50 PM
A0313091.d	N063735-001C-MS	MS	10	03/13/24 11:55 PM
A0313092.d	N063735-001C-MSD	MSD	10	03/14/24 12:00 AM
A0313093.d	N063735-009C	SAMP	10	03/14/24 12:04 AM
A0313094.d	N063735-012C	SAMP	10	03/14/24 12:09 AM
A0313095.d	N063736-003C	SAMP	1	03/14/24 12:14 AM
A0313096.d	N063736-003C	SAMP	1	03/14/24 12:18 AM
A0313097.d	N063736-003C	SAMP	1	03/14/24 12:23 AM
A0313098.d	N063736-003C	SAMP	1	03/14/24 12:27 AM
A0313099.d	RINSE	ICAL	1	03/14/24 12:32 AM
A0313100.d	CCV8	CCV	1	03/14/24 12:37 AM
A0313101.d	CCB8	CCB	1	03/14/24 12:42 AM
A0313102.d	ICSA4	ICSA	1	03/14/24 12:46 AM
A0313103.d	ICSAB4	ICSAB	1	03/14/24 12:51 AM
A0313104.d	N063295-001A	SAMP	1	03/14/24 12:55 AM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/13/2024 9:43:35 AM**
Prep End Date: **3/13/2024 2:00:00 PM**
Prep Batch **107497** Prep Code: **3010_W_MSDISS_TPK**

Reviewed/ Date: JRB 4/14/2024
Initials/ Date: for
Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-1-17**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107497	Aqueous		25	☐	25	1.000		
MB-107497	Aqueous		25	☐	25	1.000		
N063734-001B	Water	<2	25	☐	25	1.000		
N063734-002B	Water	<2	25	☐	25	1.000		
N063735-001C	Groundwater	<2	25	☐	25	1.000		
N063735-001C-MS	Groundwater	<2	25	☐	25	1.000		
N063735-001C-MSD	Groundwater	<2	25	☐	25	1.000		
N063735-002C	Groundwater	<2	25	☐	25	1.000		
N063735-004C	Groundwater	<2	25	☐	25	1.000		
N063735-005C	Groundwater	<2	25	☐	25	1.000		
N063735-006C	Groundwater	<2	25	☐	25	1.000		
N063735-007C	Groundwater	<2	25	☐	25	1.000		
N063735-009C	Groundwater	<2	25	☐	25	1.000		
N063735-010C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/13/2024 9:43:35 AM**
Prep End Date: **3/13/2024 2:00:00 PM**
Prep Batch **107497** Prep Code:**3010_W_MSDISS_TPK**

Reviewed/ Date: JRB 4/14/2024
Initials/ Date: for
Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-1-17**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063735-011C	Groundwater	<2	25	☐	25	1.000		
N063735-012C	Groundwater	<2	25	☐	25	1.000		
N063735-013C	Groundwater	<2	25	☐	25	1.000		
N063736-001C	Groundwater	<2	25	☐	25	1.000		
N063736-002C	Groundwater	<2	25	☐	25	1.000		
N063736-003C	Groundwater	<2	25	☐	25	1.000		
N063736-004C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240312A.b
Acq. Date-Time	2024-03-13 16:43:18
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

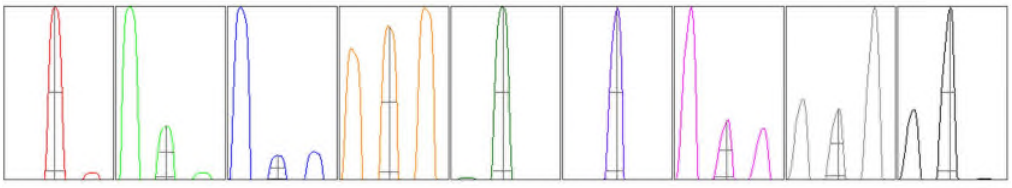
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	8102	81021.40	500.00		2.098	5.000
24	10.00	23361	233612.73	500.00		2.676	5.000
25	10.00	3115	31147.97	500.00		2.720	5.000
26	10.00	3621	36205.36	500.00		2.888	5.000
59	10.00	40138	401382.40	500.00		2.109	5.000
115	10.00	55001	550007.28	500.00		2.095	5.000
206	10.00	10748	107476.29	500.00		2.315	5.000
207	10.00	8946	89459.98	500.00		2.026	5.000
208	10.00	22062	220624.46	500.00		2.085	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.491 %
Doubly Charged	70 / 140 0.837 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	8283.03	8.90	8.90 - 9.10	
24	23723.97	23.90	23.90 - 24.10	
25	3188.56	24.90	24.90 - 25.10	
26	3758.77	25.90	25.90 - 26.10	
59	39679.28	58.95	58.90 - 59.10	
115	54124.71	115.00	114.90 - 115.10	
206	10175.84	205.95	205.90 - 206.10	
207	9066.91	206.95	206.90 - 207.10	
208	22429.02	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.38	0.527	0.900	
24	0.43	0.538	0.900	
25	0.42	0.526	0.900	
26	0.42	0.535	0.900	
59	0.40	0.535	0.900	
115	0.36	0.486	0.900	
206	0.36	0.537	0.900	
207	0.36	0.539	0.900	
208	0.36	0.536	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2521 V	Pulse HV	1597 V

[H2]

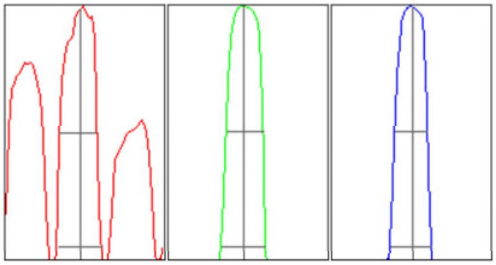
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		310	3100.08			6.570	
59		5388	53884.91			2.427	
115		54760	547604.47			2.083	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.445 %
Doubly Charged	70 / 140 0.305 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	339.55	25.95	25.90 - 26.10	
59	5568.76	58.95	58.90 - 59.10	
115	56209.54	115.05	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.71	0.835	0.900	
59	0.70	0.830	0.900	
115	0.62	0.780	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0004	QP Bias	-15.0 V
Mass Offset	124	Axis Offset	-0.01		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm		

EM

Discriminator	4.5 mV	Analog HV	2521 V	Pulse HV	1597 V

[He]

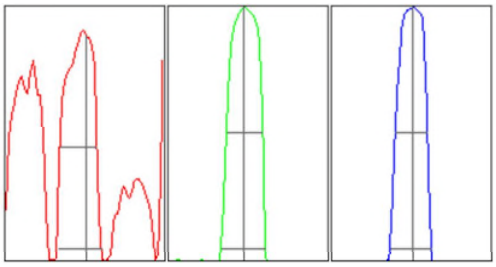
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		125	1246.05			9.282	
59		10961	109612.38			2.060	
115		11454	114535.77			1.776	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.198 %
Doubly Charged	70 / 140 1.201 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	131.76	26.05	25.90 - 26.10	
59	11135.75	58.95	58.90 - 59.10	
115	11575.77	115.05	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.70	0.832	0.900	
59	0.69	0.829	0.900	
115	0.61	0.779	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0004	QP Bias	-13.0 V
Mass Offset	124	Axis Offset	-0.01		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

EM

Discriminator	4.5 mV	Analog HV	2521 V	Pulse HV	1597 V

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240313A

Instrument ID: ICPMS-03

Analyte	Data File	A0313002.d	A0313003.d	A0313004.d	A0313005.d	A0313006.d	A0313007.d	A0313008.d	A0313009.d	A0313010.d	
	Acq. Date-Time	03/13/2024 04:55 PM	03/13/2024 05:00 PM	03/13/2024 05:04 PM	03/13/2024 05:09 PM	03/13/2024 05:14 PM	03/13/2024 05:19 PM	03/13/2024 05:23 PM	03/13/2024 05:28 PM	03/13/2024 05:33 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	67943.1		66536.2	66994.7	67124.2	66657.8	66543	67396.4	67496.9	
55 Mn [2]	CPS	124.4		1320.7	12220.3	24352	48120.7	97528.6	246066.6	494733.3	1.0000
72 Ge (ISTD) [2]	CPS	39103.3	38409.4	38495.1	38735.8	39159	38983	39210.2	39827.3	39857.3	
75 As [2]	CPS	13.3	76.6	305.5	2854.6	5756.4	11582.7	23108	58998.3	118885	1.0000
159 Tb (ISTD) [3]	CPS	2274673.4		2283830.6	2276622.3	2284847.5	2291285.8	2283090.2	2328048.9	2341330.1	
137 Ba [3]	CPS	26.7		2256.9	22015.8	44480.6	89306.1	179027.4	454966.5	911919.7	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ICV** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745277**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.463	0.10	10.00	0	105	90	110				
Barium	10.216	1.0	10.00	0	102	90	110				
Manganese	100.806	0.50	100.0	0	101	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ZZZZZZ** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745279**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.115	0.10	0.1000	0	115	80	120				
Barium	1.060	1.0	1.000	0	106	80	120				
Manganese	0.526	0.50	0.5000	0	105	80	120				

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCV** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745280**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.908	0.10	20.00	0	99.5	90	110				
Barium	19.764	1.0	20.00	0	98.8	90	110				
Manganese	19.842	0.50	20.00	0	99.2	90	110				

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCV** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745286**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.020	0.10	20.00	0	100	90	110				
Barium	19.921	1.0	20.00	0	99.6	90	110				
Manganese	19.852	0.50	20.00	0	99.3	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCV** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745298**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.133	0.10	20.00	0	101	90	110				
Barium	20.014	1.0	20.00	0	100	90	110				
Manganese	19.763	0.50	20.00	0	98.8	90	110				

Sample ID **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCV** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745312**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.033	0.10	20.00	0	100	90	110				
Barium	19.822	1.0	20.00	0	99.1	90	110				
Manganese	19.619	0.50	20.00	0	98.1	90	110				

Sample ID **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCV** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745316**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.213	0.10	20.00	0	101	90	110				
Barium	19.964	1.0	20.00	0	99.8	90	110				
Manganese	19.659	0.50	20.00	0	98.3	90	110				

Sample ID **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCV** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745330**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.317	0.10	20.00	0	96.6	90	110				
Barium	20.702	1.0	20.00	0	104	90	110				
Manganese	18.767	0.50	20.00	0	93.8	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV6** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCV** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745341**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.300	0.10	20.00	0	96.5	90	110				
Barium	20.314	1.0	20.00	0	102	90	110				
Manganese	19.038	0.50	20.00	0	95.2	90	110				

Sample ID **CCV7** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCV** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745353**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.214	0.10	20.00	0	96.1	90	110				
Barium	20.814	1.0	20.00	0	104	90	110				
Manganese	19.262	0.50	20.00	0	96.3	90	110				

Sample ID **CCV8** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCV** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/14/2024** SeqNo: **5745364**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.209	0.10	20.00	0	96.0	90	110				
Barium	20.270	1.0	20.00	0	101	90	110				
Manganese	19.328	0.50	20.00	0	96.6	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB**	SampType: **ICB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183572**
Client ID: **ICB**	Batch ID: **R183572**	TestNo: **EPA 6020**		Analysis Date: **3/13/2024**	SeqNo: **5745278**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183572**
Client ID: **CCB**	Batch ID: **R183572**	TestNo: **EPA 6020**		Analysis Date: **3/13/2024**	SeqNo: **5745287**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183572**
Client ID: **CCB**	Batch ID: **R183572**	TestNo: **EPA 6020**		Analysis Date: **3/13/2024**	SeqNo: **5745299**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183572**
Client ID: **CCB**	Batch ID: **R183572**	TestNo: **EPA 6020**		Analysis Date: **3/13/2024**	SeqNo: **5745313**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB4** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCB** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745317**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB5** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCB** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745331**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB6** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCB** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745342**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB7** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCB** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745354**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB8** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCB** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/14/2024** SeqNo: **5745365**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ICSA** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745281**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ICSAB** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745282**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.778	0.10	20.00	0	104	80	120				
Barium	20.529	1.0	20.00	0	103	80	120				
Manganese	20.158	0.50	20.00	0	101	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ICSA** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745300**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ICSAB** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745301**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.131	0.10	20.00	0	101	80	120				
Barium	20.635	1.0	20.00	0	103	80	120				
Manganese	20.266	0.50	20.00	0	101	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA3** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ICSA** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745318**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB3** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ICSAB** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745319**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.137	0.10	20.00	0	101	80	120				
Barium	20.298	1.0	20.00	0	101	80	120				
Manganese	20.076	0.50	20.00	0	100	80	120				

Sample ID **ICSA4** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ICSA** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/14/2024** SeqNo: **5745366**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB4** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ICSAB** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/14/2024** SeqNo: **5745367**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.794	0.10	20.00	0	99.0	80	120				
Barium	20.580	1.0	20.00	0	103	80	120				
Manganese	19.871	0.50	20.00	0	99.4	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240313A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	2274673.4	2274673.4	100	PASS	30-150	67943.1	67943.1	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	2294496.2	2274673.4	100.87	PASS	30-150	66455.8	67943.1	97.81	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	2283830.6	2274673.4	100.4	PASS	30-150	66536.2	67943.1	97.93	PASS	30-150
Std3-5/50 ppb	ICAL	1	2276622.3	2274673.4	100.09	PASS	30-150	66994.7	67943.1	98.6	PASS	30-150
Std4-10/100 ppb	ICAL	1	2284847.5	2274673.4	100.45	PASS	30-150	67124.2	67943.1	98.79	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	2291285.8	2274673.4	100.73	PASS	30-150	66657.8	67943.1	98.11	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	2283090.2	2274673.4	100.37	PASS	30-150	66543	67943.1	97.94	PASS	30-150
Std7-100/1000 ppb	ICAL	1	2328048.9	2274673.4	102.35	PASS	30-150	67396.4	67943.1	99.2	PASS	30-150
Std8-200/2000 ppb	ICAL	1	2341330.1	2274673.4	102.93	PASS	30-150	67496.9	67943.1	99.34	PASS	30-150
ICV	ICV	1	2326384.4	2274673.4	102.27	PASS	30-150	67197.7	67943.1	98.9	PASS	30-150
ICB	ICB	1	2340678	2274673.4	102.9	PASS	30-150	66608.8	67943.1	98.04	PASS	30-150
LLICV1	LLICV	1	2330508.5	2274673.4	102.45	PASS	30-150	66864.1	67943.1	98.41	PASS	30-150
MLCCV	CCV	1	2350512.9	2274673.4	103.33	PASS	30-150	67660.6	67943.1	99.58	PASS	30-150
ICSA1	ICSA	1	2329812.1	2274673.4	102.42	PASS	30-150	66615.4	67943.1	98.05	PASS	30-150
ICSAB1	ICSAB	1	2352340.5	2274673.4	103.41	PASS	30-150	67682	67943.1	99.62	PASS	30-150
CCV1	CCV	1	2352757.2	2274673.4	103.43	PASS	30-150	68426	67943.1	100.71	PASS	30-150
CCB1	CCB	1	2335364.2	2274673.4	102.67	PASS	30-150	67543.6	67943.1	99.41	PASS	30-150
CCV2	CCV	1	2314771.8	2274673.4	101.76	PASS	30-150	68335.7	67943.1	100.58	PASS	30-150
CCB2	CCB	1	2329526.7	2274673.4	102.41	PASS	30-150	67436.5	67943.1	99.25	PASS	30-150
ICSA2	ICSA	1	2312599.8	2274673.4	101.67	PASS	30-150	67839.2	67943.1	99.85	PASS	30-150
ICSAB2	ICSAB	1	2349793.6	2274673.4	103.3	PASS	30-150	67850.4	67943.1	99.86	PASS	30-150
CCV3	CCV	1	2495073.6	2274673.4	109.69	PASS	30-150	67002.5	67943.1	98.62	PASS	30-150
CCB3	CCB	1	2425710.3	2274673.4	106.64	PASS	30-150	65038.2	67943.1	95.72	PASS	30-150
CCV4	CCV	1	2421710.2	2274673.4	106.46	PASS	30-150	64332	67943.1	94.69	PASS	30-150
CCB4	CCB	1	2405523.5	2274673.4	105.75	PASS	30-150	64946.8	67943.1	95.59	PASS	30-150
ICSA3	ICSA	1	2424983.8	2274673.4	106.61	PASS	30-150	64638.9	67943.1	95.14	PASS	30-150
ICSAB3	ICSAB	1	2441190.5	2274673.4	107.32	PASS	30-150	65056	67943.1	95.75	PASS	30-150
MB-107497	MBLK	1	2412484.9	2274673.4	106.06	PASS	30-150	64512.9	67943.1	94.95	PASS	30-150
LCS-107497	LCS	1	2413301.6	2274673.4	106.09	PASS	30-150	64219.5	67943.1	94.52	PASS	30-150
N063736-001C	SAMP	1	1789785	2274673.4	78.68	PASS	30-150	65205.5	67943.1	95.97	PASS	30-150
N063736-002C	SAMP	1	1783046.7	2274673.4	78.39	PASS	30-150	64221.9	67943.1	94.52	PASS	30-150
N063736-003C	SAMP	1	1966894.7	2274673.4	86.47	PASS	30-150	64434.8	67943.1	94.84	PASS	30-150
N063736-004C	SAMP	1	1702840	2274673.4	74.86	PASS	30-150	61492.7	67943.1	90.51	PASS	30-150
N063734-001B	SAMP	1	1744897.7	2274673.4	76.71	PASS	30-150	62961.7	67943.1	92.67	PASS	30-150
N063734-002B	SAMP	1	1594460.3	2274673.4	70.1	PASS	30-150	60955.3	67943.1	89.72	PASS	30-150
N063735-001C	SAMP	1	1609159.9	2274673.4	70.74	PASS	30-150	61653.4	67943.1	90.74	PASS	30-150
N063735-001C	SAMP	5	1833918.7	2274673.4	80.62	PASS	30-150	67121	67943.1	98.79	PASS	30-150
CCV5	CCV	1	1999884	2274673.4	87.92	PASS	30-150	73275.6	67943.1	107.85	PASS	30-150
CCB5	CCB	1	2053390.2	2274673.4	90.27	PASS	30-150	70745.8	67943.1	104.13	PASS	30-150
N063735-001C-PS	PS	1	1627832.3	2274673.4	71.56	PASS	30-150	61400.1	67943.1	90.37	PASS	30-150
N063735-001C-MS	MS	1	1643917.9	2274673.4	72.27	PASS	30-150	61164.7	67943.1	90.02	PASS	30-150

INTERNAL STANDARD: 240313A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
N063735-001C-MSD	MSD	1	1603388.3	2274673.4	70.49	PASS	30-150	60293.9	67943.1	88.74	PASS	30-150
N063735-002C	SAMP	1	1511518.1	2274673.4	66.45	PASS	30-150	58982.7	67943.1	86.81	PASS	30-150
N063735-004C	SAMP	1	1488601.9	2274673.4	65.44	PASS	30-150	59720.8	67943.1	87.9	PASS	30-150
N063735-005C	SAMP	1	1573640.1	2274673.4	69.18	PASS	30-150	60485.8	67943.1	89.02	PASS	30-150
N063735-006C	SAMP	1	1529631.7	2274673.4	67.25	PASS	30-150	60272.9	67943.1	88.71	PASS	30-150
N063735-007C	SAMP	1	1835426.4	2274673.4	80.69	PASS	30-150	66883.5	67943.1	98.44	PASS	30-150
N063735-009C	SAMP	1	1792296.8	2274673.4	78.79	PASS	30-150	64267.6	67943.1	94.59	PASS	30-150
CCV6	CCV	1	1980432	2274673.4	87.06	PASS	30-150	69098	67943.1	101.7	PASS	30-150
CCB6	CCB	1	2027345.9	2274673.4	89.13	PASS	30-150	68429.7	67943.1	100.72	PASS	30-150
N063735-010C	SAMP	1	2033282.1	2274673.4	89.39	PASS	30-150	64024.6	67943.1	94.23	PASS	30-150
N063735-011C	SAMP	1	1830818	2274673.4	80.49	PASS	30-150	60904	67943.1	89.64	PASS	30-150
N063735-012C	SAMP	1	1979653.7	2274673.4	87.03	PASS	30-150	61666.8	67943.1	90.76	PASS	30-150
N063735-013C	SAMP	1	1587708.3	2274673.4	69.8	PASS	30-150	56656.8	67943.1	83.39	PASS	30-150
N063736-003C	SAMP	1	1623344.2	2274673.4	71.37	PASS	30-150	57068.3	67943.1	83.99	PASS	30-150
N063736-001C	SAMP	10	1846609.2	2274673.4	81.18	PASS	30-150	62978.3	67943.1	92.69	PASS	30-150
N063734-001B	SAMP	10	1906524	2274673.4	83.82	PASS	30-150	63075.3	67943.1	92.84	PASS	30-150
N063734-002B	SAMP	10	1892035.1	2274673.4	83.18	PASS	30-150	62436.3	67943.1	91.89	PASS	30-150
N063735-001C	SAMP	10	1872168.9	2274673.4	82.3	PASS	30-150	62202.1	67943.1	91.55	PASS	30-150
N063735-001C	SAMP	50	1949930.2	2274673.4	85.72	PASS	30-150	63640.8	67943.1	93.67	PASS	30-150
CCV7	CCV	1	1986766	2274673.4	87.34	PASS	30-150	64559.7	67943.1	95.02	PASS	30-150
CCB7	CCB	1	2015949.5	2274673.4	88.63	PASS	30-150	63820.4	67943.1	93.93	PASS	30-150
N063735-001C-PS	PS	10	2007112.4	2274673.4	88.24	PASS	30-150	60816.9	67943.1	89.51	PASS	30-150
N063735-001C-MS	MS	10	2014754.6	2274673.4	88.57	PASS	30-150	61715.8	67943.1	90.83	PASS	30-150
N063735-001C-MSD	MSD	10	2017005.3	2274673.4	88.67	PASS	30-150	61064.5	67943.1	89.88	PASS	30-150
N063735-009C	SAMP	10	2098881.5	2274673.4	92.27	PASS	30-150	61710.3	67943.1	90.83	PASS	30-150
N063735-012C	SAMP	10	2114511.7	2274673.4	92.96	PASS	30-150	61232.9	67943.1	90.12	PASS	30-150
N063736-003C	SAMP	1	1697286.1	2274673.4	74.62	PASS	30-150	54621.2	67943.1	80.39	PASS	30-150
N063736-003C	SAMP	1	1674886.1	2274673.4	73.63	PASS	30-150	54310.3	67943.1	79.93	PASS	30-150
N063736-003C	SAMP	1	1687596.2	2274673.4	74.19	PASS	30-150	55239.9	67943.1	81.3	PASS	30-150
N063736-003C	SAMP	1	1699873.7	2274673.4	74.73	PASS	30-150	56505.3	67943.1	83.17	PASS	30-150
CCV8	CCV	1	2027559.4	2274673.4	89.14	PASS	30-150	62262.2	67943.1	91.64	PASS	30-150
CCB8	CCB	1	2072229	2274673.4	91.1	PASS	30-150	61995.6	67943.1	91.25	PASS	30-150
ICSA4	ICSA	1	2094428.8	2274673.4	92.08	PASS	30-150	60937.4	67943.1	89.69	PASS	30-150
ICSAB4	ICSAB	1	2115596	2274673.4	93.01	PASS	30-150	60829.1	67943.1	89.53	PASS	30-150
N063295-001A	SAMP	1	1689375.9	2274673.4	74.27	PASS	30-150	53476.5	67943.1	78.71	PASS	30-150

INTERNAL STANDARD: 240313A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	39103.3	39103.3	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	38409.4	39103.3	98.23	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	38495.1	39103.3	98.44	PASS	30-150
Std3-5/50 ppb	ICAL	1	38735.8	39103.3	99.06	PASS	30-150
Std4-10/100 ppb	ICAL	1	39159	39103.3	100.14	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	38983	39103.3	99.69	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	39210.2	39103.3	100.27	PASS	30-150
Std7-100/1000 ppb	ICAL	1	39827.3	39103.3	101.85	PASS	30-150
Std8-200/2000 ppb	ICAL	1	39857.3	39103.3	101.93	PASS	30-150
ICV	ICV	1	39057.6	39103.3	99.88	PASS	30-150
ICB	ICB	1	39132.2	39103.3	100.07	PASS	30-150
LLICV1	LLICV	1	39019.7	39103.3	99.79	PASS	30-150
MLCCV	CCV	1	39598.8	39103.3	101.27	PASS	30-150
ICSA1	ICSA	1	39372.8	39103.3	100.69	PASS	30-150
ICSAB1	ICSAB	1	39291.6	39103.3	100.48	PASS	30-150
CCV1	CCV	1	39586.6	39103.3	101.24	PASS	30-150
CCB1	CCB	1	39649	39103.3	101.4	PASS	30-150
CCV2	CCV	1	39380.6	39103.3	100.71	PASS	30-150
CCB2	CCB	1	39974.3	39103.3	102.23	PASS	30-150
ICSA2	ICSA	1	39830.5	39103.3	101.86	PASS	30-150
ICSAB2	ICSAB	1	39663.5	39103.3	101.43	PASS	30-150
CCV3	CCV	1	40420.9	39103.3	103.37	PASS	30-150
CCB3	CCB	1	39161.2	39103.3	100.15	PASS	30-150
CCV4	CCV	1	38613.2	39103.3	98.75	PASS	30-150
CCB4	CCB	1	39427.4	39103.3	100.83	PASS	30-150
ICSA3	ICSA	1	39401.8	39103.3	100.76	PASS	30-150
ICSAB3	ICSAB	1	39420.7	39103.3	100.81	PASS	30-150
MB-107497	MBLK	1	39283.7	39103.3	100.46	PASS	30-150
LCS-107497	LCS	1	39046.5	39103.3	99.85	PASS	30-150
N063736-001C	SAMP	1	35982.9	39103.3	92.02	PASS	30-150
N063736-002C	SAMP	1	36409.3	39103.3	93.11	PASS	30-150
N063736-003C	SAMP	1	37069.7	39103.3	94.8	PASS	30-150
N063736-004C	SAMP	1	34000.8	39103.3	86.95	PASS	30-150
N063734-001B	SAMP	1	35370.4	39103.3	90.45	PASS	30-150
N063734-002B	SAMP	1	34116.6	39103.3	87.25	PASS	30-150
N063735-001C	SAMP	1	34539.8	39103.3	88.33	PASS	30-150
N063735-001C	SAMP	5	39088.8	39103.3	99.96	PASS	30-150
CCV5	CCV	1	42136.3	39103.3	107.76	PASS	30-150
CCB5	CCB	1	41743.1	39103.3	106.75	PASS	30-150
N063735-001C-PS	PS	1	34500.8	39103.3	88.23	PASS	30-150
N063735-001C-MS	MS	1	34772.5	39103.3	88.92	PASS	30-150

INTERNAL STANDARD: 240313A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
N063735-001C-MSD	MSD	1	34438.5	39103.3	88.07	PASS	30-150
N063735-002C	SAMP	1	33326.2	39103.3	85.23	PASS	30-150
N063735-004C	SAMP	1	33705.8	39103.3	86.2	PASS	30-150
N063735-005C	SAMP	1	34622.2	39103.3	88.54	PASS	30-150
N063735-006C	SAMP	1	33816.1	39103.3	86.48	PASS	30-150
N063735-007C	SAMP	1	40010	39103.3	102.32	PASS	30-150
N063735-009C	SAMP	1	37769.1	39103.3	96.59	PASS	30-150
CCV6	CCV	1	40722.8	39103.3	104.14	PASS	30-150
CCB6	CCB	1	41119.3	39103.3	105.16	PASS	30-150
N063735-010C	SAMP	1	39004.2	39103.3	99.75	PASS	30-150
N063735-011C	SAMP	1	35710.1	39103.3	91.32	PASS	30-150
N063735-012C	SAMP	1	36784.6	39103.3	94.07	PASS	30-150
N063735-013C	SAMP	1	32853	39103.3	84.02	PASS	30-150
N063736-003C	SAMP	1	33066.8	39103.3	84.56	PASS	30-150
N063736-001C	SAMP	10	37269.1	39103.3	95.31	PASS	30-150
N063734-001B	SAMP	10	37482.9	39103.3	95.86	PASS	30-150
N063734-002B	SAMP	10	37626.6	39103.3	96.22	PASS	30-150
N063735-001C	SAMP	10	37689	39103.3	96.38	PASS	30-150
N063735-001C	SAMP	50	38916.2	39103.3	99.52	PASS	30-150
CCV7	CCV	1	39978.8	39103.3	102.24	PASS	30-150
CCB7	CCB	1	38975.2	39103.3	99.67	PASS	30-150
N063735-001C-PS	PS	10	36689.9	39103.3	93.83	PASS	30-150
N063735-001C-MS	MS	10	37966.2	39103.3	97.09	PASS	30-150
N063735-001C-MSD	MSD	10	37878.2	39103.3	96.87	PASS	30-150
N063735-009C	SAMP	10	38611.1	39103.3	98.74	PASS	30-150
N063735-012C	SAMP	10	38095.3	39103.3	97.42	PASS	30-150
N063736-003C	SAMP	1	32532.3	39103.3	83.2	PASS	30-150
N063736-003C	SAMP	1	32493.3	39103.3	83.1	PASS	30-150
N063736-003C	SAMP	1	32879.6	39103.3	84.08	PASS	30-150
N063736-003C	SAMP	1	33113.5	39103.3	84.68	PASS	30-150
CCV8	CCV	1	38603.2	39103.3	98.72	PASS	30-150
CCB8	CCB	1	37873.8	39103.3	96.86	PASS	30-150
ICSA4	ICSA	1	37921.6	39103.3	96.98	PASS	30-150
ICSAB4	ICSAB	1	38118.7	39103.3	97.48	PASS	30-150
N063295-001A	SAMP	1	32454.4	39103.3	83	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.: N063735
Test Method: EPA 6020
Analysis Date: 3/13/2024

Matrix: Groundwater
Batch No.: 107497

Instrument ID: ICPMS-03
Instrument Description: Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to As. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063735-001C DT 5x	Arsenic	As	µg/L	0	NA	0		10
N063735-001C DT 5x	Barium	Ba	µg/L	69.51141	PASS	64.58299	7.63%	10
N063735-001C DT 50x	Manganese	Mn	µg/L	134.7154	PASS	132.7161	1.51%	10

Reviewed by:

JRB 4/14/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063735
Project: PG&E Topock - PCM, 30121866.1Q23GW

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **N063735-001C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ZZZZZZ** Batch ID: **107497** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/13/2024** SeqNo: **5745332**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	9.414	0.10	10.00	0	94.1	80	120				
Barium	73.670	1.0	10.00	64.58	90.9	80	120				

Sample ID **N063735-001C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ZZZZZZ** Batch ID: **107497** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/13/2024** SeqNo: **5745355**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	1003.150	5.0	1000	132.7	87.0	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

ARCADIS

Project: PG&E Topock - PCM

Project No.: 30211191

ASSET Laboratories Work Order:

N063736

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063736

Item	Page
Cover Page	1-5
Analytical Result/QC Summary Reports	6-33
Sample Receiving Items	34-38
List of Analysts	39
Raw Data	
EPA 218.6	40-181
EPA 300.0	182-215
EPA 6010B_Dissolved	216-246
EPA 6020_Dissolved	247-295

March 14, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063736

RE: PG&E Topock - PCM, 30211191

Attention: Dan Bush

Enclosed are the results for sample(s) received on March 12, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063736

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 218.6:

Dilution was necessary for sample N063736-002 due to matrix interference. Sample was analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Sample was reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Analytical Comments for EPA 300:

Dilution was necessary due to precipitation of sample upon addition of eluent.

Analytical Comments for EPA 6010B:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Iron in QC samples N063735-002C-MS and N063735-002C-MSD possibly due to matrix interference. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

ASSET Laboratories

Date: *14-Mar-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063736
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063736-001A	MW-36-100-0324	Groundwater	3/12/2024 10:54:00 AM	3/12/2024	3/14/2024
N063736-001B	MW-36-100-0324	Groundwater	3/12/2024 10:54:00 AM	3/12/2024	3/14/2024
N063736-001C	MW-36-100-0324	Groundwater	3/12/2024 10:54:00 AM	3/12/2024	3/14/2024
N063736-002A	MW-34-100-0324	Groundwater	3/12/2024 12:45:00 PM	3/12/2024	3/14/2024
N063736-002B	MW-34-100-0324	Groundwater	3/12/2024 12:45:00 PM	3/12/2024	3/14/2024
N063736-002C	MW-34-100-0324	Groundwater	3/12/2024 12:45:00 PM	3/12/2024	3/14/2024
N063736-003A	MW-39-080-0324	Groundwater	3/12/2024 10:15:00 AM	3/12/2024	3/14/2024
N063736-003B	MW-39-080-0324	Groundwater	3/12/2024 10:15:00 AM	3/12/2024	3/14/2024
N063736-003C	MW-39-080-0324	Groundwater	3/12/2024 10:15:00 AM	3/12/2024	3/14/2024
N063736-004A	MW-39-100-0324	Groundwater	3/12/2024 11:56:00 AM	3/12/2024	3/14/2024
N063736-004B	MW-39-100-0324	Groundwater	3/12/2024 11:56:00 AM	3/12/2024	3/14/2024
N063736-004C	MW-39-100-0324	Groundwater	3/12/2024 11:56:00 AM	3/12/2024	3/14/2024
N063736-005A	EB-740-Q124	Groundwater	3/12/2024 1:20:00 PM	3/12/2024	3/14/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-100-0324
Lab Order:	N063736		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/12/2024 10:54:00 AM
Lab ID:	N063736-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240313A**	QC Batch: **R183577**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	6.5	0.039	0.20		µg/L	1	3/13/2024 11:02 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-34-100-0324
Lab Order:	N063736		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/12/2024 12:45:00 PM
Lab ID:	N063736-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240313A**	QC Batch: **R183577**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	4.0	0.19	1.0		µg/L	5	3/13/2024 11:11 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-080-0324
Lab Order:	N063736		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/12/2024 10:15:00 AM
Lab ID:	N063736-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240313A**	QC Batch: **R183577**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	35	0.39	2.0		µg/L	10	3/13/2024 11:21 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-100-0324
Lab Order:	N063736		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/12/2024 11:56:00 AM
Lab ID:	N063736-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240313A**	QC Batch: **R183577**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	100	0.77	4.0		µg/L	20	3/13/2024 11:30 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-740-Q124
Lab Order:	N063736		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/12/2024 1:20:00 PM
Lab ID:	N063736-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240313A**	QC Batch: **R183577**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	3/13/2024 01:05 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R183577**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183577**			
Client ID: **PBW**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**			SeqNo: **5745756**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R183577**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183577**			
Client ID: **LCSW**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**			SeqNo: **5745757**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.936	0.20	5.000	0	98.7	90	110				

Sample ID: **N063562-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183577**			
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**			SeqNo: **5745760**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.368	0.20	1.000	0.3777	99.1	90	110				

Sample ID: **N063618-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183577**			
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**			SeqNo: **5745761**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.345	0.20	1.000	1.292	105	90	110				

Sample ID: **N063562-001ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183577**			
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**			SeqNo: **5745768**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.352	0.20						0.3777	7.07	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063736-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745769**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	11.594	0.20	5.000	6.522	101	90	110				

Sample ID: **N063736-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745770**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	202.404	4.0	100.0	100.6	102	90	110				

Sample ID: **N063736-004AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745771**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	201.716	4.0	100.0	100.6	101	90	110	202.4	0.340	20	

Sample ID: **N063736-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745772**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	85.658	2.0	50.00	34.90	102	90	110				

Sample ID: **N063736-005AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745774**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.138	0.20	1.000	0.09750	104	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063736-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745777**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.116	1.0	5.000	4.022	102	90	110				

Sample ID: **N063559-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745779**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.439	0.20	1.000	0.4311	101	90	110				

Sample ID: **N063706-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745786**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.038	0.20	1.000	0	104	90	110				

Sample ID: **N063559-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745790**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.830	1.0	5.000	0	96.6	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-100-0324
Lab Order:	N063736		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/12/2024 10:54:00 AM
Lab ID:	N063736-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240313A**	QC Batch: **R183573**			PrepDate:			Analyst: **RAB**
Sulfate	630	34	50		mg/L	100	3/13/2024 09:52 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240313A**	QC Batch: **R183563**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/13/2024 08:54 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-34-100-0324
Lab Order:	N063736		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/12/2024 12:45:00 PM
Lab ID:	N063736-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240313A**	QC Batch: **R183573**			PrepDate:			Analyst: **RAB**
Sulfate	980	34	50		mg/L	100	3/13/2024 11:28 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240313A**	QC Batch: **R183563**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/13/2024 09:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-080-0324
Lab Order:	N063736		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/12/2024 10:15:00 AM
Lab ID:	N063736-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240313A**	QC Batch: **R183573**			PrepDate:			Analyst: **RAB**
Sulfate	620	34	50		mg/L	100	3/13/2024 10:40 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240313A**	QC Batch: **R183563**			PrepDate:			Analyst: **RAB**
Nitrate as N	8.2	0.24	0.50		mg/L	10	3/13/2024 09:25 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-100-0324
Lab Order:	N063736		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/12/2024 11:56:00 AM
Lab ID:	N063736-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240313A**	QC Batch: **R183573**			PrepDate:			Analyst: **RAB**
Sulfate	950	34	50		mg/L	100	3/13/2024 12:16 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240313A**	QC Batch: **R183563**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/13/2024 09:40 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **MB-R183573_SO4**	SampType: **MBLK**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **183573**			
Client ID: **PBW**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**			SeqNo: **5745560**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	0.351	0.50									

Sample ID: **LCS-R183573_SO4**	SampType: **LCS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **183573**			
Client ID: **LCSW**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**			SeqNo: **5745561**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.991	0.50	4.000	0	99.8	90	110				

Sample ID: **N063736-001BMS**	SampType: **MS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **183573**			
Client ID: **ZZZZZZ**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**			SeqNo: **5745563**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	1017.500	50	400.0	629.6	97.0	80	120				

Sample ID: **N063736-001BMSD**	SampType: **MSD**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **183573**			
Client ID: **ZZZZZZ**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**			SeqNo: **5745564**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	1022.340	50	400.0	629.6	98.2	80	120	1018	0.475	20	

Sample ID: **N063736-003BDUP**	SampType: **DUP**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **183573**			
Client ID: **ZZZZZZ**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**			SeqNo: **5745566**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	617.990	50						621.8	0.613	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **N063736-003BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **183573**
Client ID: **ZZZZZZ** Batch ID: **R183573** TestNo: **EPA 300.0** Analysis Date: **3/13/2024** SeqNo: **5745567**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	1008.020	50	400.0	621.8	96.6	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **MB-R183563_NO3**	SampType: **MBLK**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **PBW**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743968**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **LCS-R183563_NO3**	SampType: **LCS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **LCSW**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743969**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.201	0.050	1.250	0	96.1	90	110				

Sample ID: **N063736-001BMS**	SampType: **MS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **ZZZZZZ**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743974**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	11.872	0.50	12.50	0	95.0	80	120				

Sample ID: **N063736-001BMSD**	SampType: **MSD**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **ZZZZZZ**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743975**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.090	0.50	12.50	0	96.7	80	120	11.87	1.82	20	

Sample ID: **N063736-004BDUP**	SampType: **DUP**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **ZZZZZZ**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743976**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.50						0	0	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **N063736-004BMS** SampType: **MS** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **183563**
Client ID: **ZZZZZZ** Batch ID: **R183563** TestNo: **EPA 300.0** Analysis Date: **3/13/2024** SeqNo: **5743977**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.165	0.50	12.50	0	97.3	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-100-0324
Lab Order:	N063736		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/12/2024 10:54:00 AM
Lab ID:	N063736-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240313B**	QC Batch: **107498**				PrepDate:	**3/13/2024**	Analyst: **DJ**
Iron	290	13	20		µg/L	1	3/13/2024 08:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-34-100-0324
Lab Order:	N063736		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/12/2024 12:45:00 PM
Lab ID:	N063736-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240313B**	QC Batch: **107498**				PrepDate:	**3/13/2024**	Analyst: **DJ**
Iron	88	13	20		µg/L	1	3/13/2024 08:37 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-080-0324
Lab Order:	N063736		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/12/2024 10:15:00 AM
Lab ID:	N063736-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240313B**	QC Batch: **107498**				PrepDate:	**3/13/2024**	Analyst: **DJ**
Iron	27	13	20		µg/L	1	3/13/2024 08:43 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-100-0324
Lab Order:	N063736		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/12/2024 11:56:00 AM
Lab ID:	N063736-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240313B**	QC Batch: **107498**				PrepDate:	**3/13/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	3/13/2024 08:49 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-107498**	SampType: **MBLK**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/13/2024**	RunNo: **183568**
Client ID: **PBW**	Batch ID: **107498**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/13/2024**	SeqNo: **5744126**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS-107498**	SampType: **LCS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/13/2024**	RunNo: **183568**
Client ID: **LCSW**	Batch ID: **107498**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/13/2024**	SeqNo: **5744127**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	104.831	20	100.0	0	105	85	115				

Sample ID: **N063735-002C-MS**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/13/2024**	RunNo: **183568**
Client ID: **ZZZZZZ**	Batch ID: **107498**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/13/2024**	SeqNo: **5744136**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	500.772	20	100.0	343.3	158	75	125				S

Sample ID: **N063735-002C-MSD**	SampType: **MSD**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/13/2024**	RunNo: **183568**
Client ID: **ZZZZZZ**	Batch ID: **107498**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/13/2024**	SeqNo: **5744137**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	510.410	20	100.0	343.3	167	75	125	500.8	1.91	20	S

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N063735-002C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **183568**
Client ID: **ZZZZZZ** Batch ID: **107498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/13/2024** SeqNo: **5744133**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	447.549	20	100.0	343.3	104	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-36-100-0324
Lab Order:	N063736		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/12/2024 10:54:00 AM
Lab ID:	N063736-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240313A**	QC Batch: **107497**			PrepDate:	**3/13/2024**	Analyst: **DJ**	
Arsenic	ND	0.050	0.10		µg/L	1	3/13/2024 09:12 PM
Barium	56	0.083	1.0		µg/L	1	3/13/2024 09:12 PM
Manganese	400	0.26	5.0		µg/L	10	3/13/2024 11:18 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-34-100-0324
Lab Order:	N063736		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/12/2024 12:45:00 PM
Lab ID:	N063736-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240313A**	QC Batch: **107497**				PrepDate:	**3/13/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/13/2024 09:17 PM
Barium	16	0.083	1.0		µg/L	1	3/13/2024 09:17 PM
Manganese	36	0.026	0.50		µg/L	1	3/13/2024 09:17 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-080-0324
Lab Order:	N063736		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/12/2024 10:15:00 AM
Lab ID:	N063736-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240313A**	QC Batch: **107497**			PrepDate:		**3/13/2024**	Analyst: **DJ**
Arsenic	0.33	0.050	0.10		µg/L	1	3/14/2024 12:14 AM
Barium	38	0.083	1.0		µg/L	1	3/13/2024 09:22 PM
Manganese	5.9	0.026	0.50		µg/L	1	3/13/2024 09:22 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-39-100-0324
Lab Order:	N063736		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/12/2024 11:56:00 AM
Lab ID:	N063736-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240313A**	QC Batch: **107497**			PrepDate:		**3/13/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/13/2024 09:26 PM
Barium	35	0.083	1.0		µg/L	1	3/13/2024 09:26 PM
Manganese	6.9	0.026	0.50		µg/L	1	3/13/2024 09:26 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **MB-107497** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/13/2024** RunNo: **183572**
Client ID: **PBW** Batch ID: **107497** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/13/2024** SeqNo: **5745320**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **LCS-107497** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/13/2024** RunNo: **183572**
Client ID: **LCSW** Batch ID: **107497** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/13/2024** SeqNo: **5745321**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.372	0.10	10.00	0	104	85	115				
Barium	10.093	1.0	10.00	0	101	85	115				
Manganese	99.963	0.50	100.0	0	100	85	115				

Sample ID: **N063735-001C-MS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/13/2024** RunNo: **183572**
Client ID: **ZZZZZZ** Batch ID: **107497** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/13/2024** SeqNo: **5745333**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	9.342	0.10	10.00	0	93.4	75	125				
Barium	72.784	1.0	10.00	64.58	82.0	75	125				

Sample ID: **N063735-001C-MSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/13/2024** RunNo: **183572**
Client ID: **ZZZZZZ** Batch ID: **107497** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/13/2024** SeqNo: **5745334**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	9.287	0.10	10.00	0	92.9	75	125	9.342	0.583	20	
Barium	72.422	1.0	10.00	64.58	78.4	75	125	72.78	0.498	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063735-001C-MS**	SampType: **MS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **3/13/2024**	RunNo: **183572**
Client ID: **ZZZZZZ**	Batch ID: **107497**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **3/13/2024**	SeqNo: **5745356**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	224.035	5.0	100.0	132.7	91.3	75	125				

Sample ID: **N063735-001C-MSD**	SampType: **MSD**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **3/13/2024**	RunNo: **183572**
Client ID: **ZZZZZZ**	Batch ID: **107497**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **3/14/2024**	SeqNo: **5745357**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	233.110	5.0	100.0	132.7	100	75	125	224.0	3.97	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SAMPLE RECEIVING ITEMS

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

ARCUS02 C: 3/13/2024 12:00 AM
FOLDER R: 3/12/2024
N063736-006A 1 of 1

Page 1 of 1

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.moore@critigen.com	Address:	
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com	P.O.#
Submitted By: Ryssie Top		Phone: 949-727-1400, ext 200	Fax:
Title: Field Tech	Phone: 916-786-3302 Fax:		
Signature: Date: 03/12/24	Sampled By: Ryssie Top		

I hereby authorize ASSET Labs to perform the tests indicated below.

I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for

Project Name: PG&E Topock - PCM
Project Number: 30211191

Signature: Date: 03/12/24

Matrix: Ground X | Sediment | Potable | Soil | NPDES | Other Solid | Surface

Excel EDD		RTNE	
Geotracker		RWQCB	✓
Labspec		CalTrans	
Others	✓	LEVEL III	
Specify: RWQCB		LEVEL IV	
Global ID:		Regulatory	
		Specify State:	

	Y	N
1. Chilled	✓	
2. Headspace		
3. Container Intact	✓	
4. Seal Present		
5. IR number	3	
6. Method of Cooling: ICE		
Sample Temp: 1.9°C / 2.4°C		

Courier: ASSET
Tracking No.:

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly)	Nitrate, sulfate (EPA 300.0) (1 L poly)	Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Selenium, Molybdenum (500mL poly)	Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOA)	Ammonia as Nitrogen (SM4500NH3D); H2SO4 (1 L poly)	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 (125 mL poly)	Nitrate (EPA 300.0) (1 L poly)	(1 L poly)	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063736-001	✓ MW-36-100-0324	3/12/2024	10:54		X	X	X								B	3	P	BNS	
2	-002	✓ MW-34-100-0324	3/12/2024	12:45		X	X	X								B	3	P	BNS	
3	-003	✓ MW-39-080-0324	3/12/2024	10:15		X	X	X								B	3	P	BNS	
4	-004	✓ MW-39-100-0324	3/12/2024	11:56		X	X	X								B	3	P	BNS	
5	-005	✓ EB-740-Q124	3/12/2024	13:20		X										B	1	P	BNS	
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				

Relinquished by (Signature and Printed Name): M. Ryssie Top Date/Time: 03/12/24 1548
Relinquished by (Signature and Printed Name): Michael Acanfora Date/Time: 3/12/24 1548
Relinquished by (Signature and Printed Name): Michael Acanfora Date/Time: 3/12/24 1944
Relinquished by (Signature and Printed Name): Michael Acanfora Date/Time: 3/12/24 1944
Relinquished by (Signature and Printed Name): Date/Time:
Relinquished by (Signature and Printed Name): Date/Time:

Turn Around Time (TAT)

	A	< 24 Hrs or Same Day TAT
X	B	= Next Workday
	C	= 2 Workdays
	D	= 3 Workdays
	E	= Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:				Container Type:		
H=HCL	N=HNO_3	S=H_2SO_4	C=4°C	T=Tube	V=VOA	P=Pint
Z=$Zn(AC)_2$	O=NaOH	T=$Na_2S_2O_3$		J=Jar	B=Tedlar	G=Glass
Others/Specify:	B (NH4)2SO4/NH4OH			M=Metal	M=Metal	C=Can

White=Laboratory Copy
Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	3/12/2024	Workorder:	N063736
Rep sample Temp (Deg C):	1.9/2.4	IR Gun ID:	3

Temp Blank: ☑ Yes ☐ No

Carrier name: ASSET

Last 4 digits of Tracking No.: NA Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By: CC Chara Cintron
3/13/2024

Reviewed By: for: MBC 03/13/2024

ASSET Laboratories

WORK ORDER Summary

13-Mar-24

WorkOrder: N063736

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 3/12/2024 7:44 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063736-001A	MW-36-100-0324	3/12/2024 10:54:00 AM	3/13/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063736-001B			3/13/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/13/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063736-001C			3/13/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/13/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/13/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/13/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063736-002A	MW-34-100-0324	3/12/2024 12:45:00 PM	3/13/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063736-002B			3/13/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/13/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063736-002C			3/13/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/13/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/13/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/13/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063736-003A	MW-39-080-0324	3/12/2024 10:15:00 AM	3/13/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063736-003B			3/13/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/13/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063736-003C			3/13/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/13/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/13/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/13/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063736-004A	MW-39-100-0324	3/12/2024 11:56:00 AM	3/13/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW

ASSET Laboratories

WORK ORDER Summary

13-Mar-24

WorkOrder: N063736

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 3/12/2024 7:44 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063736-004B	MW-39-100-0324	3/12/2024 11:56:00 AM	3/13/2024	Groundwater	EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/13/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063736-004C			3/13/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/13/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/13/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/13/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063736-005A	EB-740-Q124	3/12/2024 1:20:00 PM	3/13/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063736-006A	FOLDER	3/13/2024	3/13/2024		Folder	Folder	☐	☐	☐	LAB
			3/13/2024		Folder	Level IV Report	☐	☐	☐	LAB
			3/13/2024		Folder	Folder	☐	☐	☐	LAB

List of Analysts

ASSET Laboratories Work Order: N063736

NAME	TEST METHOD
Ria Abes	EPA 218.6, EPA 300.0
Diane Jetajobe	EPA 6010B_Dissolved, EPA 6020_Dissolved

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R183577
ASSET #: N063736

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 3/13/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

RB 03142024

2nd Level Reviewer _____ Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063736-001A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 6.5216 * 1$$

$$Cr^{+6}, \mu g/L = 6.5216$$

Reporting results in two significant figures,

$$\mathbf{Cr^{+6}, \mu g/L = 6.5}$$

Reviewed by:

dMocha 3/26/2024

ANALYSIS RUN LOG

INJECTION LOG: 240305A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	03/05/24 4:07 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/05/24 4:16 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	03/05/24 4:26 PM	Reported
12	MB-R183315	MBLK	1	Hexavalent Chromium	03/05/24 4:35 PM	Reported
13	LCS-R183315	LCS	1	Hexavalent Chromium	03/05/24 4:45 PM	Reported
14	MB-107277	MBLK	1	Hexavalent Chromium	03/05/24 4:54 PM	Reported
15	N063472-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:04 PM	Reported
16	N063472-001ADUP	DUP	1	Hexavalent Chromium	03/05/24 5:13 PM	Reported
17	N063535-006A	SAMP	1	Hexavalent Chromium	03/05/24 5:23 PM	Reported
18	N063535-006AMS	MS	1	Hexavalent Chromium	03/05/24 5:32 PM	Reported
19	N063535-006AMSD	MSD	1	Hexavalent Chromium	03/05/24 5:42 PM	Reported
20	N063534-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:51 PM	Reported
21	N063534-001AMS	MS	1	Hexavalent Chromium	03/05/24 6:00 PM	Reported
22	CCV-1	CCV1	1	Hexavalent Chromium	03/05/24 6:10 PM	Reported
23	CCB-1	CCB	1	Hexavalent Chromium	03/05/24 6:20 PM	Reported
24	N063534-002A	SAMP	1	Hexavalent Chromium	03/05/24 6:30 PM	Reported
25	N063534-002AMS	MS	1	Hexavalent Chromium	03/05/24 6:38 PM	Reported
26	N063534-003A	SAMP	1	Hexavalent Chromium	03/05/24 6:48 PM	Reported
27	N063534-003AMS	MS	1	Hexavalent Chromium	03/05/24 6:57 PM	Reported
28	N063535-001A	SAMP	1	Hexavalent Chromium	03/05/24 7:07 PM	Reported
29	N063535-002A	SAMP	1	Hexavalent Chromium	03/05/24 7:16 PM	Reported
30	N063535-003A	SAMP	1	Hexavalent Chromium	03/05/24 7:26 PM	Reported
31	N063535-004A	SAMP	1	Hexavalent Chromium	03/05/24 7:35 PM	Reported
32	N063535-005A	SAMP	1	Hexavalent Chromium	03/05/24 7:48 PM	Reported
33	CCV-2	CCV	1	Hexavalent Chromium	03/05/24 7:57 PM	Reported
34	CCB-2	CCB	1	Hexavalent Chromium	03/05/24 8:07 PM	Reported
35	N063535-007A	SAMP	1	Hexavalent Chromium	03/05/24 8:16 PM	Reported
36	N063535-008A	SAMP	1	Hexavalent Chromium	03/05/24 8:25 PM	Reported
37	CCV-3	CCV1	1	Hexavalent Chromium	03/05/24 8:35 PM	Reported
38	CCB-3	CCB	1	Hexavalent Chromium	03/05/24 8:46 PM	Reported
39	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 8:55 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240305A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**07/Mar/24 08:03:58**
No. of Injections:	**42**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	8	1000	Unknown		03/05/2024 16:07	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	9	1000	Unknown		03/05/2024 16:16	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	10	1000	Unknown		03/05/2024 16:26	Finished	ICB R240129C
12	MB-H2O,MBLK,1,	11	1000	Unknown		03/05/2024 16:35	Finished	MB R240129C
13	LCS-H2O,LCS,1,	12	1000	Unknown		03/05/2024 16:45	Finished	LCS @5ppb, IWST-231228B
14	MB-107277,MBLK,1,	13	1000	Unknown		03/05/2024 16:54	Finished	MB TCLP
15	N063472-001A,SAMP	14	1000	Unknown		03/05/2024 17:04	Finished	SAMP,10 mL
16	N063472-001ADUP,D	15	1000	Unknown		03/05/2024 17:13	Finished	REP,10 mL
17	N063535-006A,SAMP	16	1000	Unknown		03/05/2024 17:23	Finished	SAMP,10 mL
18	N063535-006AMS,MS	17	1000	Unknown		03/05/2024 17:32	Finished	MS (5ppb), IWST-231228B,10r
19	N063535-006AMSD,M	18	1000	Unknown		03/05/2024 17:42	Finished	MSD (5ppb), IWST-231228B,1
20	N063534-001A,SAMP	19	1000	Unknown		03/05/2024 17:51	Finished	SAMP,10 mL
21	N063534-001AMS,MS	20	1000	Unknown		03/05/2024 18:00	Finished	MS (1ppb), IWST-231228B,10r
22	CCV-1,CCV1,1,	21	1000	Unknown		03/05/2024 18:10	Finished	CCV @10ppb, IWST-231228A
23	CCB-1,CCB,1,	22	1000	Unknown		03/05/2024 18:20	Finished	CCB R240129C
24	N063534-002A,SAMP	23	1000	Unknown		03/05/2024 18:30	Finished	SAMP,10 mL
25	N063534-002AMS,MS	24	1000	Unknown		03/05/2024 18:38	Finished	MS (1ppb), IWST-231228B,10r
26	N063534-003A,SAMP	25	1000	Unknown		03/05/2024 18:48	Finished	SAMP,10 mL
27	N063534-003AMS,MS	26	1000	Unknown		03/05/2024 18:57	Finished	MS (1ppb), IWST-231228B,10r
28	N063535-001A,SAMP	27	1000	Unknown		03/05/2024 19:07	Finished	SAMP,10 mL
29	N063535-002A,SAMP	28	1000	Unknown		03/05/2024 19:16	Finished	SAMP,10 mL
30	N063535-003A,SAMP	29	1000	Unknown		03/05/2024 19:26	Finished	SAMP,10 mL
31	N063535-004A,SAMP	30	1000	Unknown		03/05/2024 19:35	Finished	SAMP,10 mL
32	N063535-005A,SAMP	31	1000	Unknown		03/05/2024 19:48	Finished	SAMP,10 mL
33	CCV-2,CCV,1,	32	1000	Unknown		03/05/2024 19:57	Finished	CCV @5ppb, IWST-231228A
34	CCB-2,CCB,1,	33	1000	Unknown		03/05/2024 20:07	Finished	CCB R240129C
35	N063535-007A,SAMP	34	1000	Unknown		03/05/2024 20:16	Finished	SAMP,10 mL
36	N063535-008A,SAMP	35	1000	Unknown		03/05/2024 20:25	Finished	SAMP,10 mL
37	CCV-3,CCV1,1,	37	1000	Unknown		03/05/2024 20:35	Finished	CCV @10ppb, IWST-231228A
38	CCB-3,CCB,1,	38	1000	Unknown		03/05/2024 20:46	Finished	CCB R240129C
39	BLANK	39	1000	Unknown		03/05/2024 20:55	Finished	BLANK
40	SHUTDOWN	40	1000	Unknown		03/05/2024 21:05	Finished	
41	Eluent: R240305B	41	1000	Unknown		n.a.	Finished	
42	PCR: R240305C	42	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240313A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/13/24 9:23 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/13/24 9:37 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/13/24 9:46 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/13/24 9:56 AM	Reported
13	MB-R183577	MBLK	1	Hexavalent Chromium	03/13/24 10:05 AM	Reported
14	LCS-R183577	LCS	1	Hexavalent Chromium	03/13/24 10:14 AM	Reported
15	N063562-001A	SAMP	1	Hexavalent Chromium	03/13/24 10:24 AM	Reported
16	N063618-001A	SAMP	1	Hexavalent Chromium	03/13/24 10:33 AM	Reported
17	N063562-001AMS	MS	1	Hexavalent Chromium	03/13/24 10:43 AM	Reported
18	N063618-001AMS	MS	1	Hexavalent Chromium	03/13/24 10:52 AM	Reported
19	N063736-001A	SAMP	1	Hexavalent Chromium	03/13/24 11:02 AM	Reported
20	N063736-002A	SAMP	5	Hexavalent Chromium	03/13/24 11:11 AM	Reported
21	N063736-003A	SAMP	10	Hexavalent Chromium	03/13/24 11:21 AM	Reported
22	N063736-004A	SAMP	20	Hexavalent Chromium	03/13/24 11:30 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/13/24 11:40 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/13/24 11:49 AM	Reported
25	N063562-001ADUP	DUP	1	Hexavalent Chromium	03/13/24 11:58 AM	Reported
26	N063736-001AMS	MS	1	Hexavalent Chromium	03/13/24 12:08 PM	Reported
27	N063736-002A	SAMP	1	Hexavalent Chromium	03/13/24 12:17 PM	Not Reported
28	N063736-002AMS	MS	1	Hexavalent Chromium	03/13/24 12:27 PM	Not Reported
29	N063736-004AMS	MS	20	Hexavalent Chromium	03/13/24 12:36 PM	Reported
30	N063736-004AMSD	MSD	20	Hexavalent Chromium	03/13/24 12:46 PM	Reported
31	N063736-003AMS	MS	10	Hexavalent Chromium	03/13/24 12:55 PM	Reported
32	N063736-005A	SAMP	1	Hexavalent Chromium	03/13/24 1:05 PM	Reported
33	N063736-005AMS	MS	1	Hexavalent Chromium	03/13/24 1:14 PM	Reported
34	CCV-3	CCV	1	Hexavalent Chromium	03/13/24 1:24 PM	Reported
35	CCB-3	CCB	1	Hexavalent Chromium	03/13/24 1:33 PM	Reported
36	N063736-002AMS	MS	5	Hexavalent Chromium	03/13/24 1:43 PM	Reported
37	N063736-001A	SAMP	5	Hexavalent Chromium	03/13/24 1:52 PM	Not Reported
38	N063736-001AMS	MS	5	Hexavalent Chromium	03/13/24 2:01 PM	Not Reported
39	N063642-003A	SAMP	1	Hexavalent Chromium	03/13/24 2:11 PM	Reported
40	N063559-002A	SAMP	1	Hexavalent Chromium	03/13/24 2:20 PM	Not Reported
41	N063559-001AMS	MS	1	Hexavalent Chromium	03/13/24 2:30 PM	Reported
42	N063559-002AMS	MS	1	Hexavalent Chromium	03/13/24 2:39 PM	Not Reported

INJECTION LOG: 240313A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063617-002A	SAMP	5	Hexavalent Chromium	03/13/24 2:49 PM	Reported
44	N063617-011A	SAMP	20	Hexavalent Chromium	03/13/24 2:58 PM	Reported
45	N063617-012A	SAMP	20	Hexavalent Chromium	03/13/24 3:26 PM	Reported
46	CCV-4	CCV1	1	Hexavalent Chromium	03/13/24 3:39 PM	Reported
47	CCB-4	CCB	1	Hexavalent Chromium	03/13/24 3:48 PM	Reported
48	N063706-002A	SAMP	1	Hexavalent Chromium	03/13/24 3:58 PM	Reported
49	N063706-002AMS	MS	1	Hexavalent Chromium	03/13/24 4:07 PM	Reported
50	N063642-001A	SAMP	5	Hexavalent Chromium	03/13/24 4:17 PM	Reported
51	N063642-002A	SAMP	5	Hexavalent Chromium	03/13/24 4:26 PM	Reported
52	N063559-001A	SAMP	5	Hexavalent Chromium	03/13/24 4:36 PM	Not Reported
53	N063559-001AMS	MS	5	Hexavalent Chromium	03/13/24 4:45 PM	Not Reported
54	N063559-002A	SAMP	5	Hexavalent Chromium	03/13/24 4:54 PM	Reported
55	N063559-002AMS	MS	5	Hexavalent Chromium	03/13/24 5:04 PM	Reported
56	N063559-001A	SAMP	1	Hexavalent Chromium	03/13/24 5:13 PM	Reported
57	CCV-5	CCV	1	Hexavalent Chromium	03/13/24 5:23 PM	Reported
58	CCB-5	CCB	1	Hexavalent Chromium	03/13/24 5:32 PM	Reported
59	N063735-001A	SAMP	1	Hexavalent Chromium	03/13/24 5:42 PM	Not Reported
60	N063735-001AMS	MS	1	Hexavalent Chromium	03/13/24 5:51 PM	Not Reported
61	N063735-003A	SAMP	1	Hexavalent Chromium	03/13/24 6:01 PM	Not Reported
62	N063735-003AMS	MS	1	Hexavalent Chromium	03/13/24 6:10 PM	Not Reported
63	N063735-008A	SAMP	1	Hexavalent Chromium	03/13/24 6:20 PM	Not Reported
64	N063735-008AMS	MS	1	Hexavalent Chromium	03/13/24 6:29 PM	Not Reported
65	N063735-014A	SAMP	1	Hexavalent Chromium	03/13/24 6:39 PM	Not Reported
66	N063735-014AMS	MS	1	Hexavalent Chromium	03/13/24 6:48 PM	Not Reported
67	MB-2	MBLK	1	Hexavalent Chromium	03/13/24 6:57 PM	Not Reported
68	LCS-2	LCS	1	Hexavalent Chromium	03/13/24 7:07 PM	Not Reported
69	CCV-6	CCV1	1	Hexavalent Chromium	03/13/24 7:16 PM	Not Reported
70	CCB-6	CCB	1	Hexavalent Chromium	03/13/24 7:26 PM	Not Reported
71	N063295-002A	SAMP	5	Hexavalent Chromium	03/13/24 7:35 PM	Not Reported
72	N063295-002AMS	MS	5	Hexavalent Chromium	03/13/24 7:45 PM	Not Reported
73	N063295-003A	SAMP	5	Hexavalent Chromium	03/13/24 7:54 PM	Not Reported
74	N063295-003AMS	MS	5	Hexavalent Chromium	03/13/24 8:04 PM	Not Reported
75	N063562-001A	SAMP	1	Hexavalent Chromium	03/13/24 8:13 PM	Not Reported
76	N063562-001AMS	MS	1	Hexavalent Chromium	03/13/24 8:23 PM	Not Reported
77	N063617-007A	SAMP	1	Hexavalent Chromium	03/13/24 8:32 PM	Not Reported
78	N063617-007AMS	MS	1	Hexavalent Chromium	03/13/24 8:42 PM	Not Reported
79	N063617-013A	SAMP	1	Hexavalent Chromium	03/13/24 8:51 PM	Not Reported
80	N063617-013AMS	MS	1	Hexavalent Chromium	03/13/24 9:00 PM	Not Reported
81	CCV-7	CCV	1	Hexavalent Chromium	03/13/24 9:10 PM	Not Reported
82	CCB-7	CCB	1	Hexavalent Chromium	03/13/24 9:19 PM	Not Reported
83	N063642-003A	SAMP	1	Hexavalent Chromium	03/13/24 9:29 PM	Not Reported
84	N063642-003AMS	MS	1	Hexavalent Chromium	03/13/24 9:38 PM	Not Reported

INJECTION LOG: 240313A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063642-004A	SAMP	1	Hexavalent Chromium	03/13/24 9:48 PM	Not Reported
86	N063642-004AMS	MS	1	Hexavalent Chromium	03/13/24 9:57 PM	Not Reported
87	N063642-007A	SAMP	1	Hexavalent Chromium	03/13/24 10:07 PM	Not Reported
88	N063642-007AMS	MS	1	Hexavalent Chromium	03/13/24 10:16 PM	Not Reported
89	CCV-8	CCV1	1	Hexavalent Chromium	03/13/24 10:26 PM	Not Reported
90	CCB-8	CCB	1	Hexavalent Chromium	03/13/24 10:35 PM	Not Reported
91	BLANK	BLANK	1	Hexavalent Chromium	03/13/24 10:44 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240313A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**13/Mar/24 23:15:14**
No. of Injections:	**94**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/13/2024 09:23	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/13/2024 09:37	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/13/2024 09:46	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/13/2024 09:56	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/13/2024 10:05	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/13/2024 10:14	Finished	LCS @5ppb, IWST-231228B
15	N063562-001A,SAMF	7	1000	Unknown		03/13/2024 10:24	Finished	SAMP,10 mL
16	N063618-001A,SAMF	8	1000	Unknown		03/13/2024 10:33	Finished	SAMP,10 mL
17	N063562-001AMS,MS	9	1000	Unknown		03/13/2024 10:43	Finished	MS (1ppb), IWST-231228B,10r
18	N063618-001AMS,MS	10	1000	Unknown		03/13/2024 10:52	Finished	MS (1ppb), IWST-231228B,10r
19	N063736-001A,SAMF	11	1000	Unknown		03/13/2024 11:02	Finished	SAMP,10 mL
20	N063736-002A,SAMF	12	1000	Unknown		03/13/2024 11:11	Finished	SAMP,2>10 mL
21	N063736-003A,SAMF	13	1000	Unknown		03/13/2024 11:21	Finished	SAMP,1>10 mL
22	N063736-004A,SAMF	14	1000	Unknown		03/13/2024 11:30	Finished	SAMP,0.5>10 mL
23	CCV-2,CCV1,1,	15	1000	Unknown		03/13/2024 11:40	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		03/13/2024 11:49	Finished	CCB R240129C
25	N063562-001ADUP,D	17	1000	Unknown		03/13/2024 11:58	Finished	DUP,10 mL
26	N063736-001AMS,MS	18	1000	Unknown		03/13/2024 12:08	Finished	MS (5ppb), IWST-231228B,10r
27	N063736-002A,SAMF	19	1000	Unknown		03/13/2024 12:17	Finished	SAMP,10 mL
28	N063736-002AMS,MS	20	1000	Unknown		03/13/2024 12:27	Finished	MS (1ppb), IWST-231228B,10r
29	N063736-004AMS,MS	21	1000	Unknown		03/13/2024 12:36	Finished	MS (5ppb), IWST-231228B,0.5
30	N063736-004AMSD,M	22	1000	Unknown		03/13/2024 12:46	Finished	MSD (5ppb), IWST-231228B,0.
31	N063736-003AMS,MS	23	1000	Unknown		03/13/2024 12:55	Finished	MS (5ppb), IWST-231228B,1>1
32	N063736-005A,SAMF	24	1000	Unknown		03/13/2024 13:05	Finished	SAMP,10 mL
33	N063736-005AMS,MS	25	1000	Unknown		03/13/2024 13:14	Finished	MS (1ppb), IWST-231228B,10r
34	CCV-3,CCV,1,	26	1000	Unknown		03/13/2024 13:24	Finished	CCV @10ppb, IWST-231228A
35	CCB-3,CCB,1,	27	1000	Unknown		03/13/2024 13:33	Finished	CCB R240129C
36	N063736-002AMS,MS	28	1000	Unknown		03/13/2024 13:43	Finished	MS (1ppb), IWST-231228B,2>1
37	N063736-001A,SAMF	29	1000	Unknown		03/13/2024 13:52	Finished	SAMP,2>10 mL
38	N063736-001AMS,MS	30	1000	Unknown		03/13/2024 14:01	Finished	MS (1ppb), IWST-231228B,2>1
39	N063642-003A,SAMF	31	1000	Unknown		03/13/2024 14:11	Finished	SAMP,10 mL
40	N063559-002A,SAMF	32	1000	Unknown		03/13/2024 14:20	Finished	SAMP,10 mL
41	N063559-001AMS,MS	33	1000	Unknown		03/13/2024 14:30	Finished	MS (1ppb), IWST-231228B,10r
42	N063559-002AMS,MS	34	1000	Unknown		03/13/2024 14:39	Finished	MS (1ppb), IWST-231228B,10r
43	N063617-002A,SAMF	35	1000	Unknown		03/13/2024 14:49	Finished	SAMP,2>10 mL
44	N063617-011A,SAMF	36	1000	Unknown		03/13/2024 14:58	Finished	SAMP,0.5>10 mL
45	N063617-012A,SAMF	1	1000	Unknown		03/13/2024 15:26	Finished	SAMP,0.5>10 mL
46	CCV-4,CCV1,1,	2	1000	Unknown		03/13/2024 15:39	Finished	CCV @10ppb, IWST-231228A
47	CCB-4,CCB,1,	3	1000	Unknown		03/13/2024 15:48	Finished	CCB R240129C
48	N063706-002A,SAMF	4	1000	Unknown		03/13/2024 15:58	Finished	SAMP,10 mL
49	N063706-002AMS,MS	5	1000	Unknown		03/13/2024 16:07	Finished	MS (1ppb), IWST-231228B,10r
50	N063642-001A,SAMF	6	1000	Unknown		03/13/2024 16:17	Finished	SAMP,2>10 mL
51	N063642-002A,SAMF	7	1000	Unknown		03/13/2024 16:26	Finished	SAMP,2>10 mL
52	N063559-001A,SAMF	8	1000	Unknown		03/13/2024 16:36	Finished	SAMP,2>10 mL
53	N063559-001AMS,MS	9	1000	Unknown		03/13/2024 16:45	Finished	MS (1ppb), IWST-231228B,2>1
54	N063559-002A,SAMF	10	1000	Unknown		03/13/2024 16:54	Finished	SAMP,2>10 mL
55	N063559-002AMS,MS	11	1000	Unknown		03/13/2024 17:04	Finished	MS (1ppb), IWST-231228B,2>1
56	N063559-001A,SAMF	12	1000	Unknown		03/13/2024 17:13	Finished	SAMP,10 mL
57	CCV-5,CCV,1,	13	1000	Unknown		03/13/2024 17:23	Finished	CCV @5ppb, IWST-231228A
58	CCB-5,CCB,1,	14	1000	Unknown		03/13/2024 17:32	Finished	CCB R240129C
59	N063735-001A,SAMF	15	1000	Unknown		03/13/2024 17:42	Finished	SAMP,10 mL
60	N063735-001AMS,MS	16	1000	Unknown		03/13/2024 17:51	Finished	MS (1ppb), IWST-231228B,10r

61	N063735-003A,SAMP	17	1000	Unknown		03/13/2024 18:01	Finished	SAMP,10 mL
62	N063735-003AMS,MS	18	1000	Unknown		03/13/2024 18:10	Finished	MS (1ppb), IWST-231228B,10r
63	N063735-008A,SAMP	19	1000	Unknown		03/13/2024 18:20	Finished	SAMP,10 mL
64	N063735-008AMS,MS	20	1000	Unknown		03/13/2024 18:29	Finished	MS (1ppb), IWST-231228B,10r
65	N063735-014A,SAMP	21	1000	Unknown		03/13/2024 18:39	Finished	SAMP,10 mL
66	N063735-014AMS,MS	22	1000	Unknown		03/13/2024 18:48	Finished	MS (1ppb), IWST-231228B,10r
67	MB-2,MBLK,1,	23	1000	Unknown		03/13/2024 18:57	Finished	MB R240129C
68	LCS-2,LCS,1,	24	1000	Unknown		03/13/2024 19:07	Finished	LCS @5ppb, IWST-231228B
69	CCV-6,CCV1,1,	25	1000	Unknown		03/13/2024 19:16	Finished	CCV @10ppb, IWST-231228A
70	CCB-6,CCB,1,	26	1000	Unknown		03/13/2024 19:26	Finished	CCB R240129C
71	N063295-002A,SAMP	27	1000	Unknown		03/13/2024 19:35	Finished	SAMP,2>10 mL
72	N063295-002AMS,MS	28	1000	Unknown		03/13/2024 19:45	Finished	MS (1ppb), IWST-231228B,2>1
73	N063295-003A,SAMP	29	1000	Unknown		03/13/2024 19:54	Finished	SAMP,2>10 mL
74	N063295-003AMS,MS	30	1000	Unknown		03/13/2024 20:04	Finished	MS (1ppb), IWST-231228B,2>1
75	N063562-001A,SAMP	31	1000	Unknown		03/13/2024 20:13	Finished	SAMP,10 mL
76	N063562-001AMS,MS	32	1000	Unknown		03/13/2024 20:23	Finished	MS (1ppb), IWST-231228B,10r
77	N063617-007A,SAMP	33	1000	Unknown		03/13/2024 20:32	Finished	SAMP,10 mL
78	N063617-007AMS,MS	34	1000	Unknown		03/13/2024 20:42	Finished	MS (1ppb), IWST-231228B,10r
79	N063617-013A,SAMP	35	1000	Unknown		03/13/2024 20:51	Finished	SAMP,10 mL
80	N063617-013AMS,MS	36	1000	Unknown		03/13/2024 21:00	Finished	MS (1ppb), IWST-231228B,10r
81	CCV-7,CCV,1,	37	1000	Unknown		03/13/2024 21:10	Finished	CCV @5ppb, IWST-231228A
82	CCB-7,CCB,1,	38	1000	Unknown		03/13/2024 21:19	Finished	CCB R240129C
83	N063642-003A,SAMP	39	1000	Unknown		03/13/2024 21:29	Finished	SAMP,10 mL
84	N063642-003AMS,MS	40	1000	Unknown		03/13/2024 21:38	Finished	MS (1ppb), IWST-231228B,10r
85	N063642-004A,SAMP	41	1000	Unknown		03/13/2024 21:48	Finished	SAMP,10 mL
86	N063642-004AMS,MS	42	1000	Unknown		03/13/2024 21:57	Finished	MS (1ppb), IWST-231228B,10r
87	N063642-007A,SAMP	43	1000	Unknown		03/13/2024 22:07	Finished	SAMP,10 mL
88	N063642-007AMS,MS	44	1000	Unknown		03/13/2024 22:16	Finished	MS (1ppb), IWST-231228B,10r
89	CCV-8,CCV1,1,	45	1000	Unknown		03/13/2024 22:26	Finished	CCV @10ppb, IWST-231228A
90	CCB-8,CCB,1,	46	1000	Unknown		03/13/2024 22:35	Finished	CCB R240129C
91	BLANK	47	1000	Unknown		03/13/2024 22:44	Finished	BLANK
92	SHUTDOWN	48	1000	Unknown		03/13/2024 22:54	Finished	
93	Eluent: R240311C	49	1000	Unknown		n.a.	Finished	
94	PCR: R240311D	50	1000	Unknown		n.a.	Finished	

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 2/12/24
Time Prepared: 0956 H
Prepared By: NA

Reagent ID:
Sulfuric Acid: 15405
Diphenylcarbazide: 15109
NH4OH + NH4SO4 eluent: N240213A
NH4OH + NH4SO4 buffer: N240126C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	1006776-10	9.44	-	~150ml	~200ml		
2)	2A	9.46	-				
3)	3A	9.47	-				
4)	4A	9.54	-				
5)	5A	9.69	-				
6)							
7)							
8)							
9)							
10)							
11)							
12)							
13)							
14)							
15)							

Sample Preparation

Date Prepared: _____
Time Prepared: _____
Prepared By: _____

Reagent ID:
Sulfuric Acid: _____
Diphenylcarbazide: _____
NH4OH + NH4SO4 eluent: _____
NH4OH + NH4SO4 buffer: _____

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)							
2)							
3)							
4)							
5)							
6)							
7)							
8)							
9)							
10)							
11)							
12)							
13)							
14)							
15)							

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 3/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0412	0.2259	1.0754	2.1395	3.1834	4.2546	1.0000
Measured, in ug/L	0.193700	1.061600	5.052800	10.052000	14.957000	19.990000	
Relative Error (%RE)	-3.2%		1.1%				

	Stock	Working
Standard Concentration:	1,000,000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ICV**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5745750**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.874	0.20	5.000	0	97.5	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5745751**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.20	0.2000	0	109	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **CCV**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745753**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.142	0.20	5.000	0	103	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745754**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.167	0.20	0.2000	0	83.6	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745766**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.183	0.20	10.00	0	102	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **CCV**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745775**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.095	0.20	5.000	0	102	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ZZZZZZ**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745783**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.050	0.20	10.00	0	100	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **CCV**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745792**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.870	0.20	5.000	0	97.4	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **ICB**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5745752**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **CCB**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745755**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **CCB**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745767**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **CCB**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745776**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183577**
Client ID: **CCB**	Batch ID: **R183577**	TestNo: **EPA 218.6**		Analysis Date: **3/13/2024**	SeqNo: **5745784**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5** SampType: **CCB** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183577**
Client ID: **CCB** Batch ID: **R183577** TestNo: **EPA 218.6** Analysis Date: **3/13/2024** SeqNo: **5745793**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/13/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	4.006	
CCV-2	3.998	
CCV-3	4.006	
CCV-4	3.998	
CCV-5	3.998	
Average	4.001	
Actual RT Window	3.921 - 4.081	
Applied RT Window	3.801 - 4.201	
MB-R183577	N.A.	N.A.
LCS-R183577	4.006	PASS
N063562-001A	3.998	PASS
N063618-001A	3.981	PASS
N063562-001AMS	3.990	PASS
N063618-001AMS	3.981	PASS
N063736-001A	3.815	PASS
N063736-002A	3.956	PASS
N063736-003A	3.990	PASS
N063736-004A	3.990	PASS
N063562-001ADUP	3.981	PASS
N063736-001AMS	3.815	PASS
N063736-004AMS	3.990	PASS
N063736-004AMSD	3.990	PASS
N063736-003AMS	3.990	PASS
N063736-005A	3.973	PASS
N063736-005AMS	3.998	PASS
N063736-002AMS	3.956	PASS
N063736-001A	3.973	PASS
N063736-001AMS	3.973	PASS
N063642-003A	N.A.	N.A.
N063559-002A	3.815	PASS
N063559-001AMS	3.815	PASS

Reviewed by:

dMocha 3/26/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/13/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	4.006	
CCV-2	3.998	
CCV-3	4.006	
CCV-4	3.998	
CCV-5	3.998	
Average	4.001	
Actual RT Window	3.921 - 4.081	
Applied RT Window	3.801 - 4.201	
N063617-002A	4.006	PASS
N063617-011A	3.998	PASS
N063617-012A	4.006	PASS
N063706-002A	N.A.	N.A.
N063706-002AMS	3.990	PASS
N063642-001A	3.990	PASS
N063642-002A	3.990	PASS
N063559-001A	N.A.	N.A.
N063559-001AMS	3.965	PASS
N063559-002A	N.A.	N.A.
N063559-002AMS	3.965	PASS
N063559-001A	3.806	PASS
N063735-001A	N.A.	N.A.
N063735-001AMS	3.815	PASS
N063735-003A	N.A.	N.A.
N063735-003AMS	3.990	PASS
N063735-008A	N.A.	N.A.
N063735-008AMS	3.990	PASS
N063735-014A	N.A.	N.A.
N063735-014AMS	3.981	PASS
MB-2	N.A.	N.A.
LCS-2	3.998	PASS
N063295-002A	3.940	PASS

Reviewed by:

dlRocha 3/26/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/13/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	4.006	
CCV-2	3.998	
CCV-3	4.006	
CCV-4	3.998	
CCV-5	3.998	
Average	4.001	
Actual RT Window	3.921 - 4.081	
Applied RT Window	3.801 - 4.201	
N063295-002AMS	3.940	PASS
N063295-003A	3.981	PASS
N063295-003AMS	3.973	PASS
N063562-001A	3.981	PASS
N063562-001AMS	3.990	PASS
N063617-007A	3.948	PASS
N063617-007AMS	3.956	PASS
N063617-013A	3.965	PASS
N063617-013AMS	3.990	PASS
N063642-003A	N.A.	N.A.
N063642-003AMS	3.956	PASS
N063642-004A	N.A.	N.A.
N063642-004AMS	3.981	PASS
N063642-007A	N.A.	N.A.
N063642-007AMS	3.981	PASS

Reviewed by:

dMRocha 3/26/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240305A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	03/05/24 4:07 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/05/24 4:16 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	03/05/24 4:26 PM	Reported
12	MB-R183315	MBLK	1	Hexavalent Chromium	03/05/24 4:35 PM	Reported
13	LCS-R183315	LCS	1	Hexavalent Chromium	03/05/24 4:45 PM	Reported
14	MB-107277	MBLK	1	Hexavalent Chromium	03/05/24 4:54 PM	Reported
15	N063472-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:04 PM	Reported
16	N063472-001ADUP	DUP	1	Hexavalent Chromium	03/05/24 5:13 PM	Reported
17	N063535-006A	SAMP	1	Hexavalent Chromium	03/05/24 5:23 PM	Reported
18	N063535-006AMS	MS	1	Hexavalent Chromium	03/05/24 5:32 PM	Reported
19	N063535-006AMSD	MSD	1	Hexavalent Chromium	03/05/24 5:42 PM	Reported
20	N063534-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:51 PM	Reported
21	N063534-001AMS	MS	1	Hexavalent Chromium	03/05/24 6:00 PM	Reported
22	CCV-1	CCV1	1	Hexavalent Chromium	03/05/24 6:10 PM	Reported
23	CCB-1	CCB	1	Hexavalent Chromium	03/05/24 6:20 PM	Reported
24	N063534-002A	SAMP	1	Hexavalent Chromium	03/05/24 6:30 PM	Reported
25	N063534-002AMS	MS	1	Hexavalent Chromium	03/05/24 6:38 PM	Reported
26	N063534-003A	SAMP	1	Hexavalent Chromium	03/05/24 6:48 PM	Reported
27	N063534-003AMS	MS	1	Hexavalent Chromium	03/05/24 6:57 PM	Reported
28	N063535-001A	SAMP	1	Hexavalent Chromium	03/05/24 7:07 PM	Reported
29	N063535-002A	SAMP	1	Hexavalent Chromium	03/05/24 7:16 PM	Reported
30	N063535-003A	SAMP	1	Hexavalent Chromium	03/05/24 7:26 PM	Reported
31	N063535-004A	SAMP	1	Hexavalent Chromium	03/05/24 7:35 PM	Reported
32	N063535-005A	SAMP	1	Hexavalent Chromium	03/05/24 7:48 PM	Reported
33	CCV-2	CCV	1	Hexavalent Chromium	03/05/24 7:57 PM	Reported
34	CCB-2	CCB	1	Hexavalent Chromium	03/05/24 8:07 PM	Reported
35	N063535-007A	SAMP	1	Hexavalent Chromium	03/05/24 8:16 PM	Reported
36	N063535-008A	SAMP	1	Hexavalent Chromium	03/05/24 8:25 PM	Reported
37	CCV-3	CCV1	1	Hexavalent Chromium	03/05/24 8:35 PM	Reported
38	CCB-3	CCB	1	Hexavalent Chromium	03/05/24 8:46 PM	Reported
39	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 8:55 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240305A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**07/Mar/24 08:03:58**
No. of Injections:	**42**	*Updated By:*	**ics 5000**

Injection Details

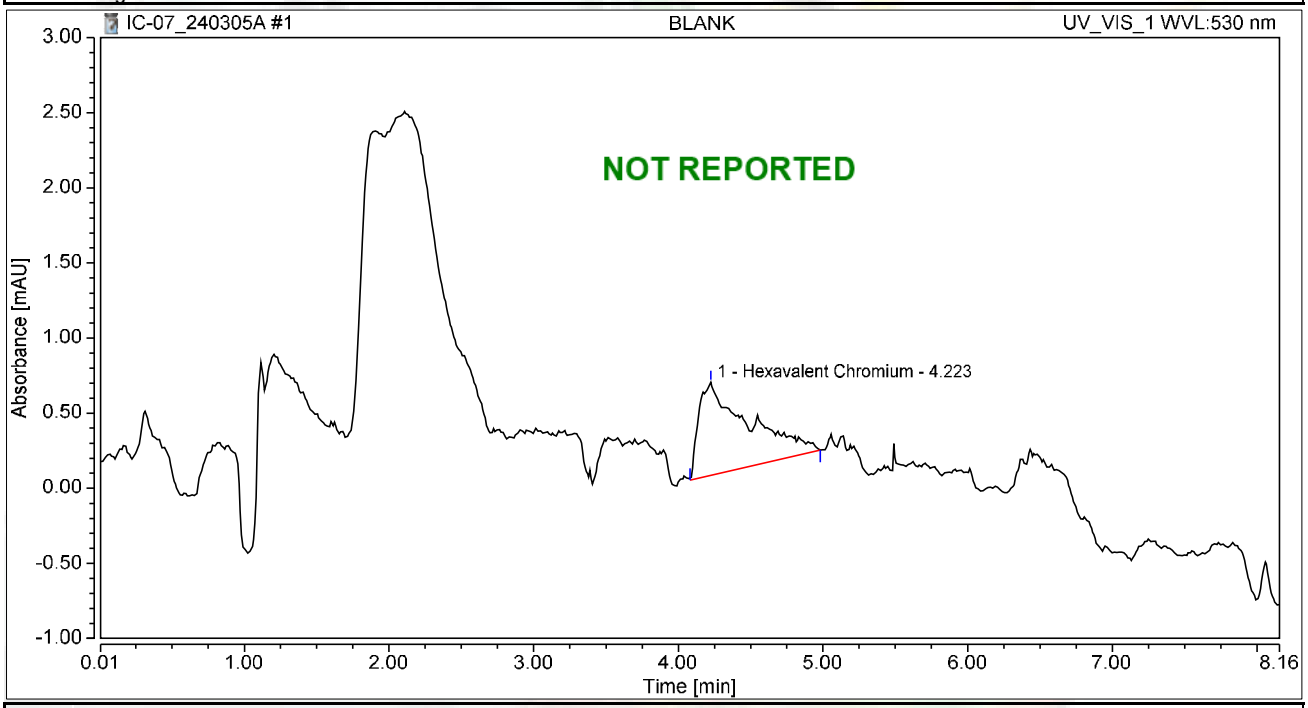
No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	8	1000	Unknown		03/05/2024 16:07	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	9	1000	Unknown		03/05/2024 16:16	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	10	1000	Unknown		03/05/2024 16:26	Finished	ICB R240129C
12	MB-H2O,MBLK,1,	11	1000	Unknown		03/05/2024 16:35	Finished	MB R240129C
13	LCS-H2O,LCS,1,	12	1000	Unknown		03/05/2024 16:45	Finished	LCS @5ppb, IWST-231228B
14	MB-107277,MBLK,1,	13	1000	Unknown		03/05/2024 16:54	Finished	MB TCLP
15	N063472-001A,SAMP	14	1000	Unknown		03/05/2024 17:04	Finished	SAMP,10 mL
16	N063472-001ADUP,D	15	1000	Unknown		03/05/2024 17:13	Finished	REP,10 mL
17	N063535-006A,SAMP	16	1000	Unknown		03/05/2024 17:23	Finished	SAMP,10 mL
18	N063535-006AMS,MS	17	1000	Unknown		03/05/2024 17:32	Finished	MS (5ppb), IWST-231228B,10r
19	N063535-006AMSD,M	18	1000	Unknown		03/05/2024 17:42	Finished	MSD (5ppb), IWST-231228B,1(
20	N063534-001A,SAMP	19	1000	Unknown		03/05/2024 17:51	Finished	SAMP,10 mL
21	N063534-001AMS,MS	20	1000	Unknown		03/05/2024 18:00	Finished	MS (1ppb), IWST-231228B,10r
22	CCV-1,CCV1,1,	21	1000	Unknown		03/05/2024 18:10	Finished	CCV @10ppb, IWST-231228A
23	CCB-1,CCB,1,	22	1000	Unknown		03/05/2024 18:20	Finished	CCB R240129C
24	N063534-002A,SAMP	23	1000	Unknown		03/05/2024 18:30	Finished	SAMP,10 mL
25	N063534-002AMS,MS	24	1000	Unknown		03/05/2024 18:38	Finished	MS (1ppb), IWST-231228B,10r
26	N063534-003A,SAMP	25	1000	Unknown		03/05/2024 18:48	Finished	SAMP,10 mL
27	N063534-003AMS,MS	26	1000	Unknown		03/05/2024 18:57	Finished	MS (1ppb), IWST-231228B,10r
28	N063535-001A,SAMP	27	1000	Unknown		03/05/2024 19:07	Finished	SAMP,10 mL
29	N063535-002A,SAMP	28	1000	Unknown		03/05/2024 19:16	Finished	SAMP,10 mL
30	N063535-003A,SAMP	29	1000	Unknown		03/05/2024 19:26	Finished	SAMP,10 mL
31	N063535-004A,SAMP	30	1000	Unknown		03/05/2024 19:35	Finished	SAMP,10 mL
32	N063535-005A,SAMP	31	1000	Unknown		03/05/2024 19:48	Finished	SAMP,10 mL
33	CCV-2,CCV,1,	32	1000	Unknown		03/05/2024 19:57	Finished	CCV @5ppb, IWST-231228A
34	CCB-2,CCB,1,	33	1000	Unknown		03/05/2024 20:07	Finished	CCB R240129C
35	N063535-007A,SAMP	34	1000	Unknown		03/05/2024 20:16	Finished	SAMP,10 mL
36	N063535-008A,SAMP	35	1000	Unknown		03/05/2024 20:25	Finished	SAMP,10 mL
37	CCV-3,CCV1,1,	37	1000	Unknown		03/05/2024 20:35	Finished	CCV @10ppb, IWST-231228A
38	CCB-3,CCB,1,	38	1000	Unknown		03/05/2024 20:46	Finished	CCB R240129C
39	BLANK	39	1000	Unknown		03/05/2024 20:55	Finished	BLANK
40	SHUTDOWN	40	1000	Unknown		03/05/2024 21:05	Finished	
41	Eluent: R240305B	41	1000	Unknown		n.a.	Finished	
42	PCR: R240305C	42	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.15**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 13:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

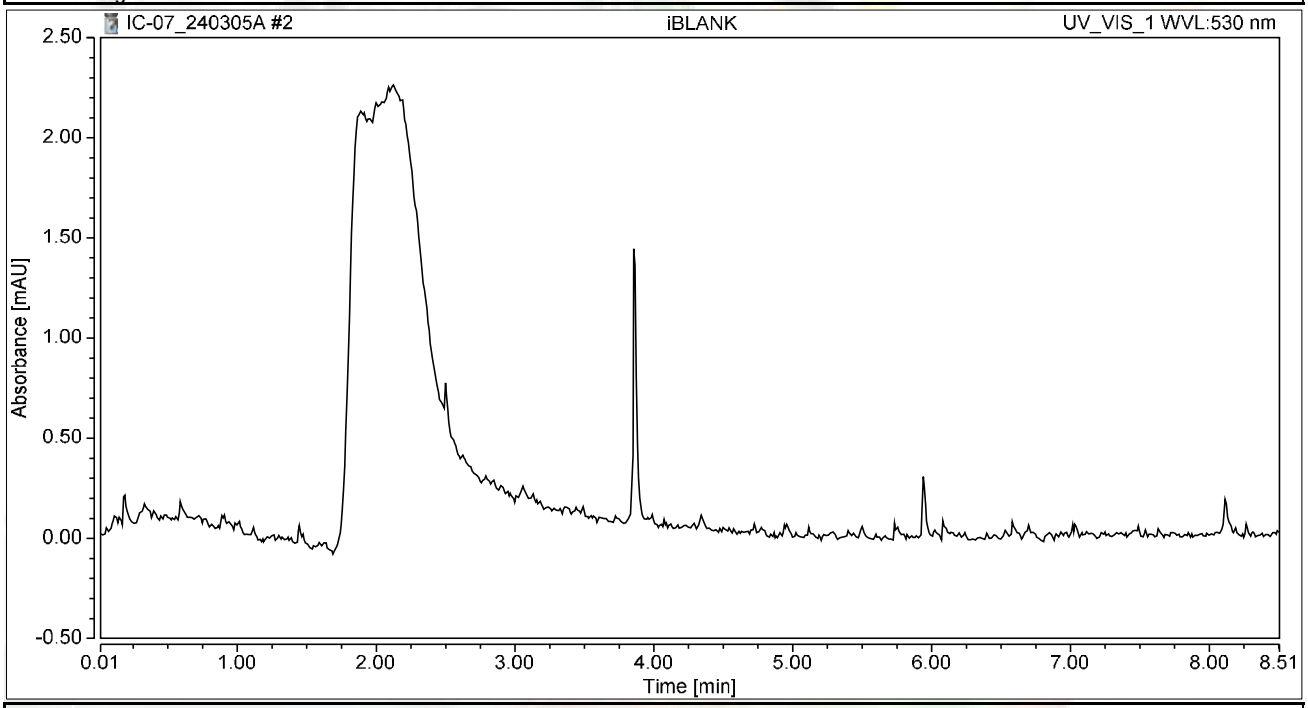
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.223	0.243	0.620	100.00	100.00	1.1440
Total:			**0.243**	**0.620**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 14:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

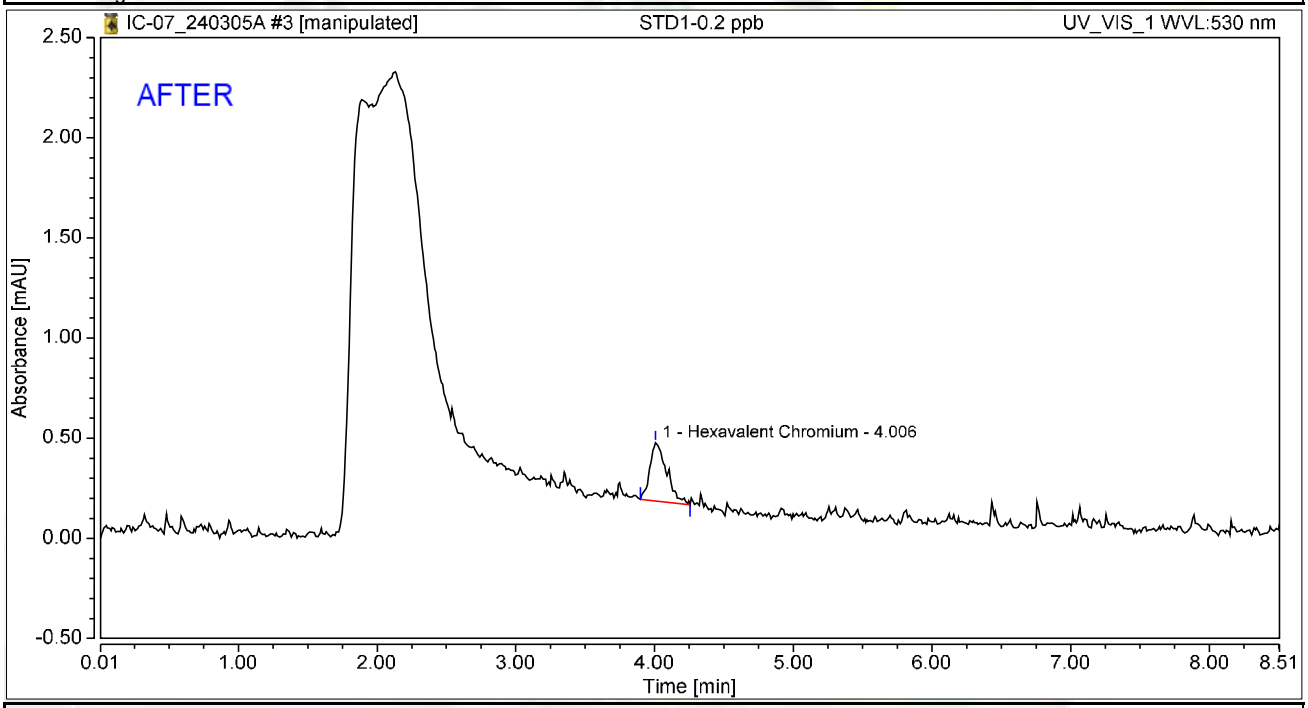
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.041	0.290	100.00	100.00	0.1937
Total:			**0.041**	**0.290**	**100.00**	**100.00**	

Reviewed by:

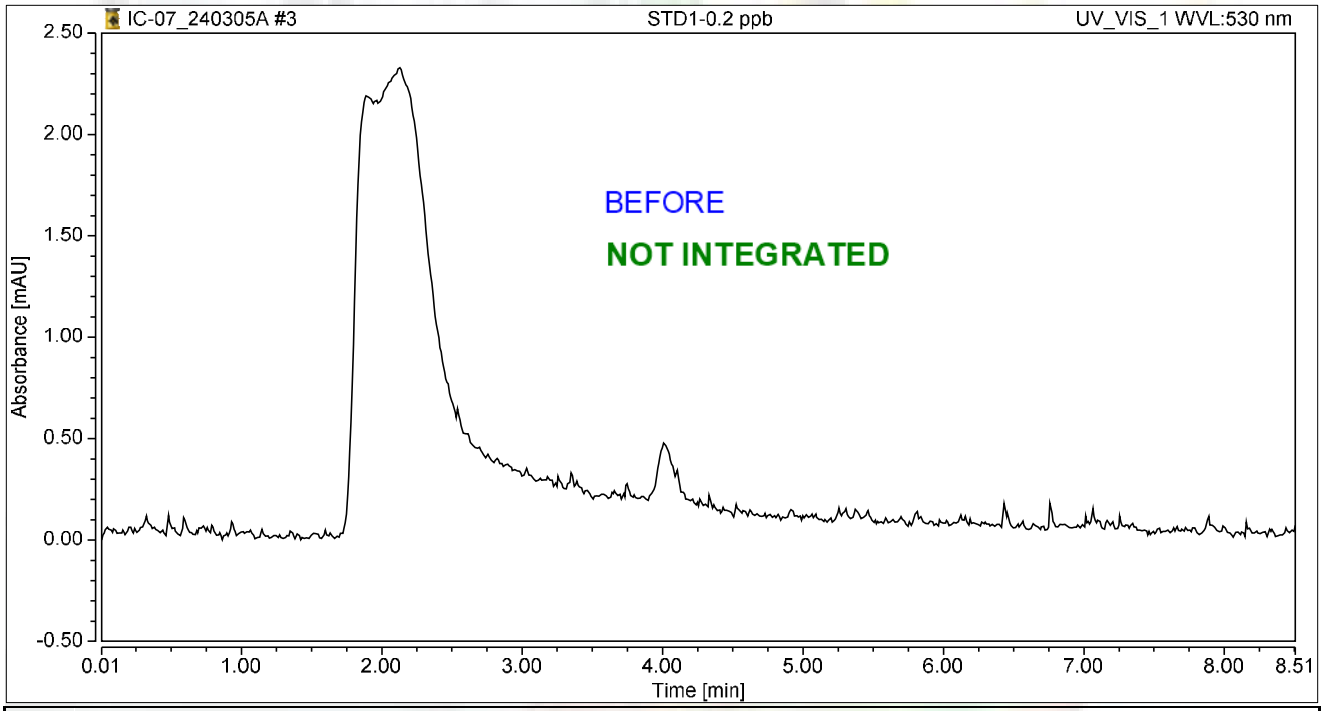
dMocha 3/11/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

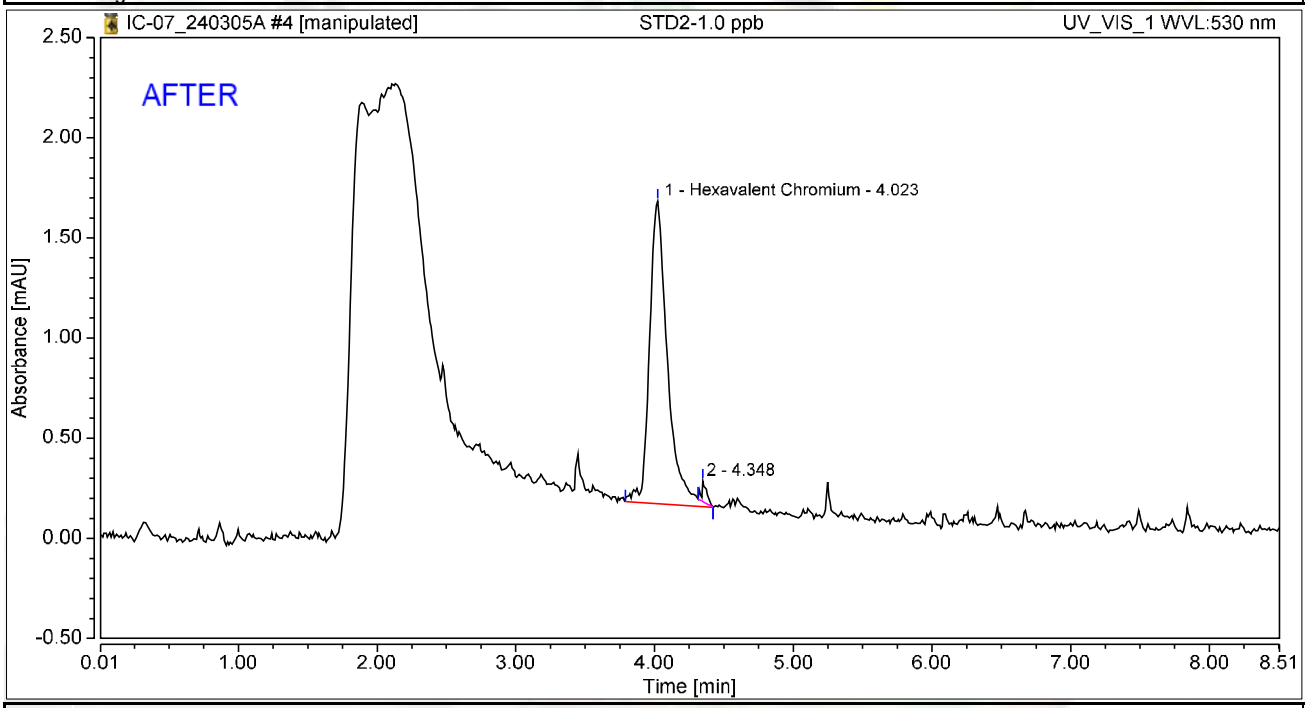
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.226	1.511	98.02	93.66	1.0616
2		4.348	0.005	0.102	1.98	6.34	n.a.
Total:			**0.231**	**1.614**	**100.00**	**100.00**	

Reviewed by:

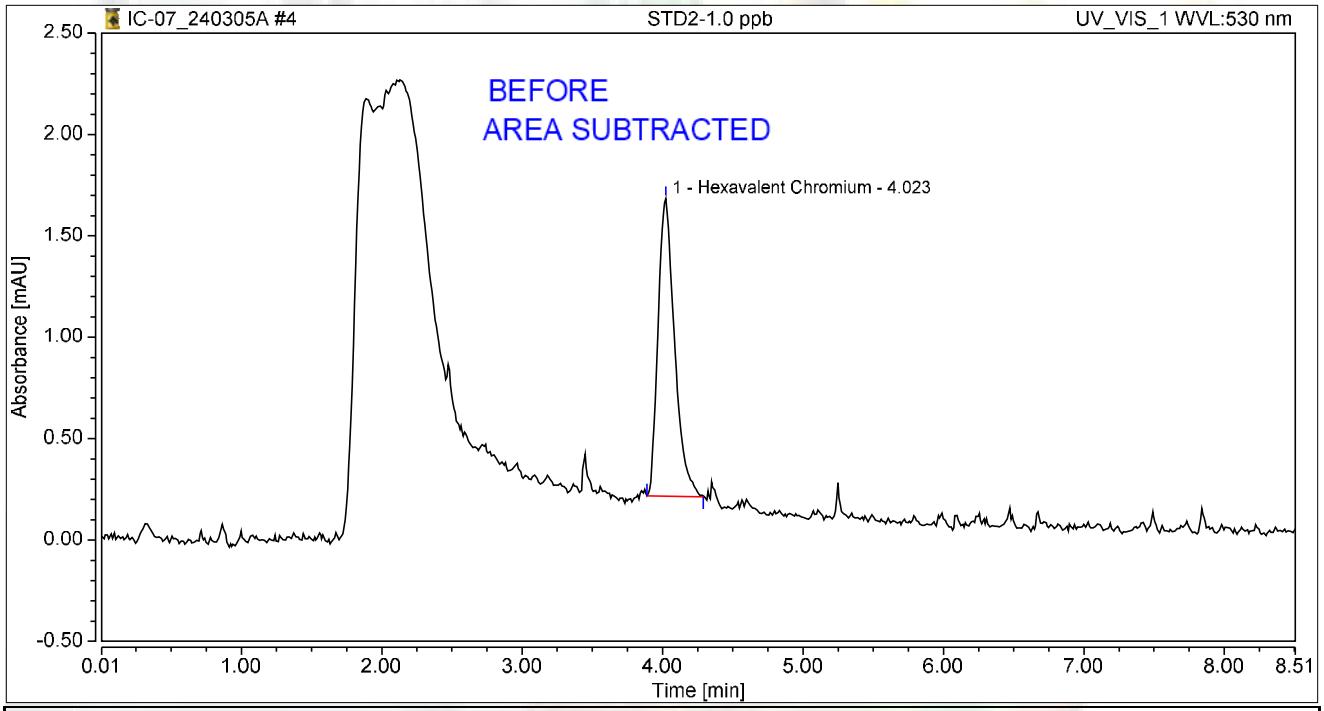
dlRocha 3/11/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

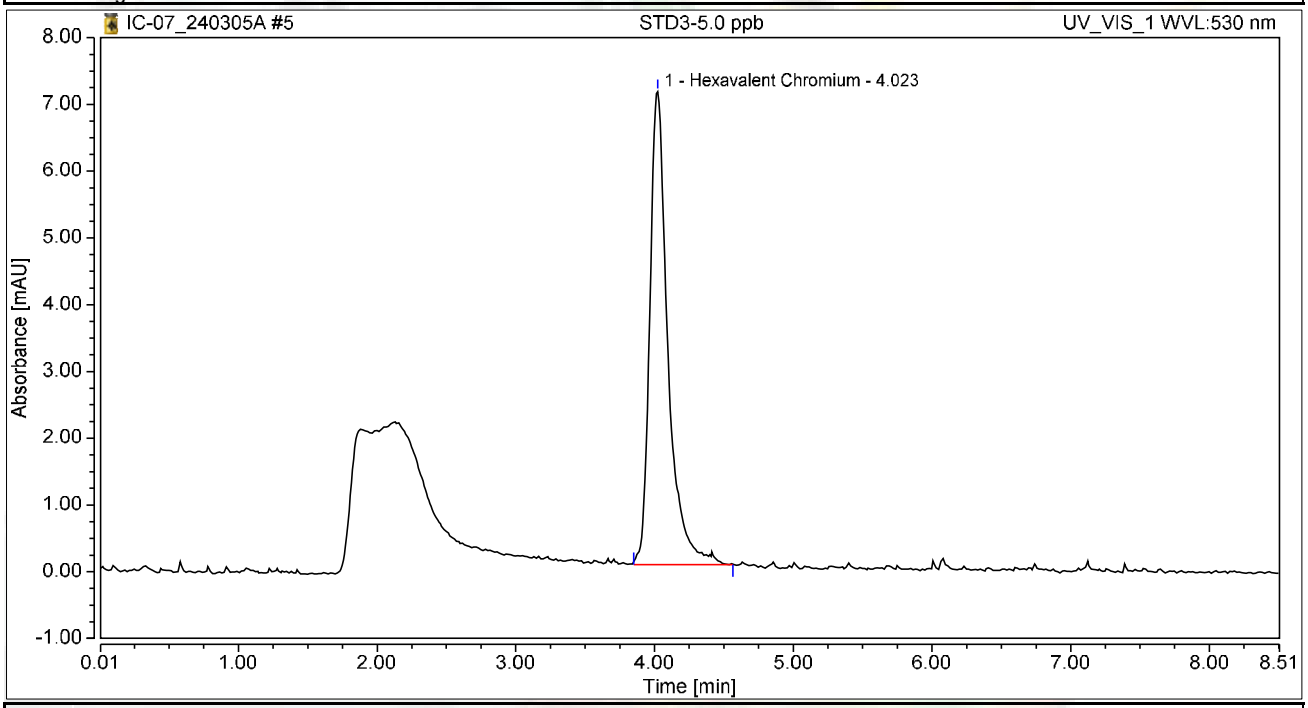
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.201	1.469	100.00	100.00	0.9426
Total:			**0.201**	**1.469**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

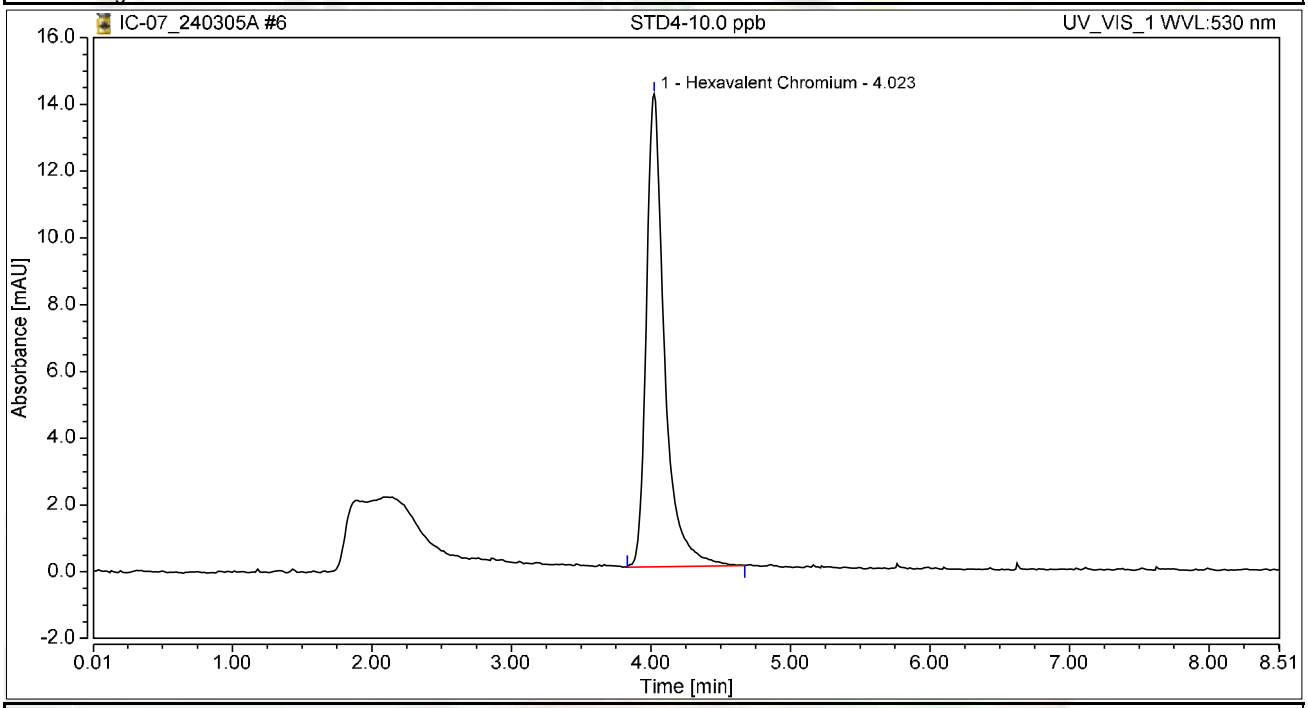
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	1.075	7.087	100.00	100.00	5.0528
Total:			**1.075**	**7.087**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

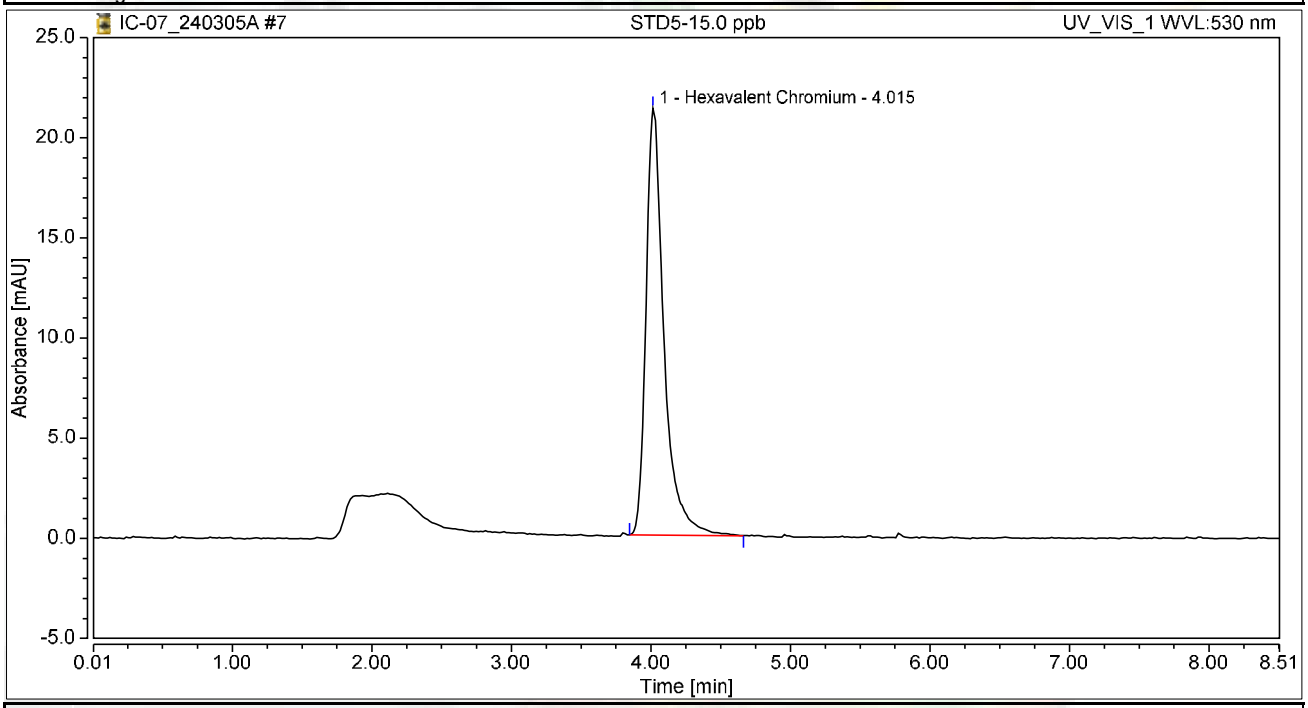
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	2.139	14.164	100.00	100.00	10.0520
Total:			**2.139**	**14.164**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

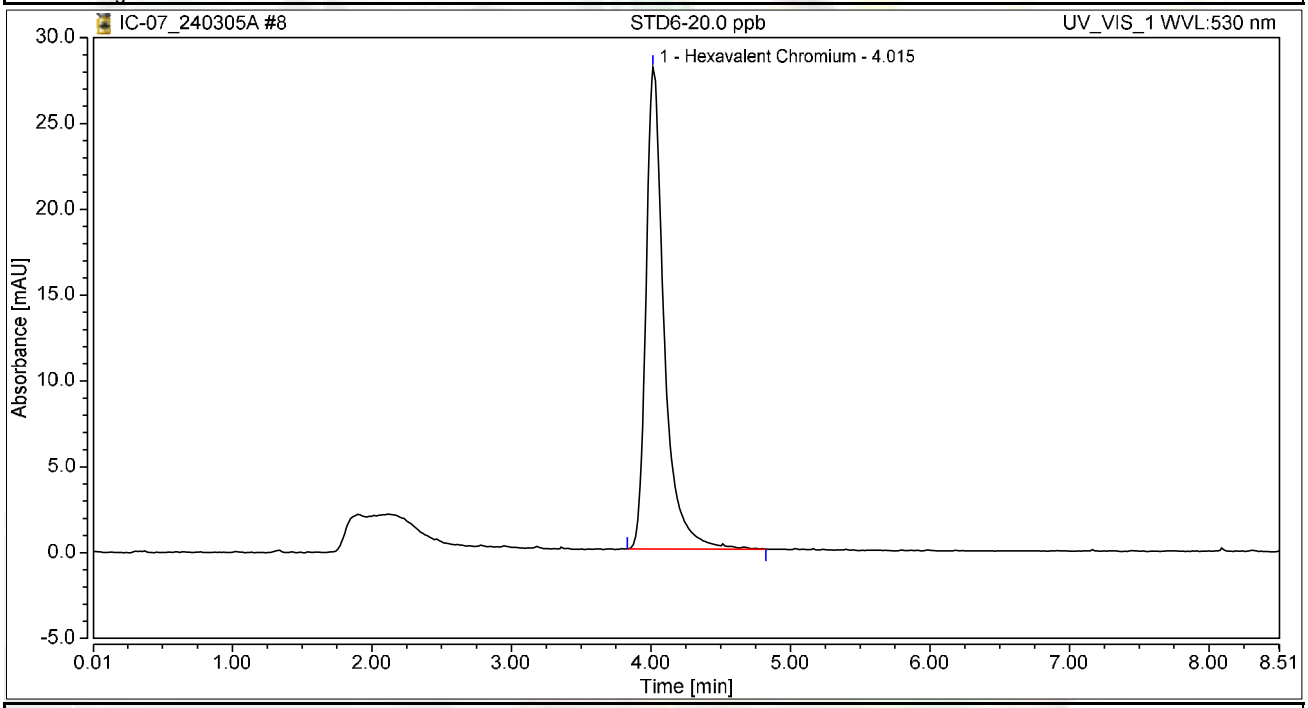
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	3.183	21.307	100.00	100.00	14.9570
Total:			**3.183**	**21.307**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:58**	*Sample Weight:*	**1.0000**

Chromatogram



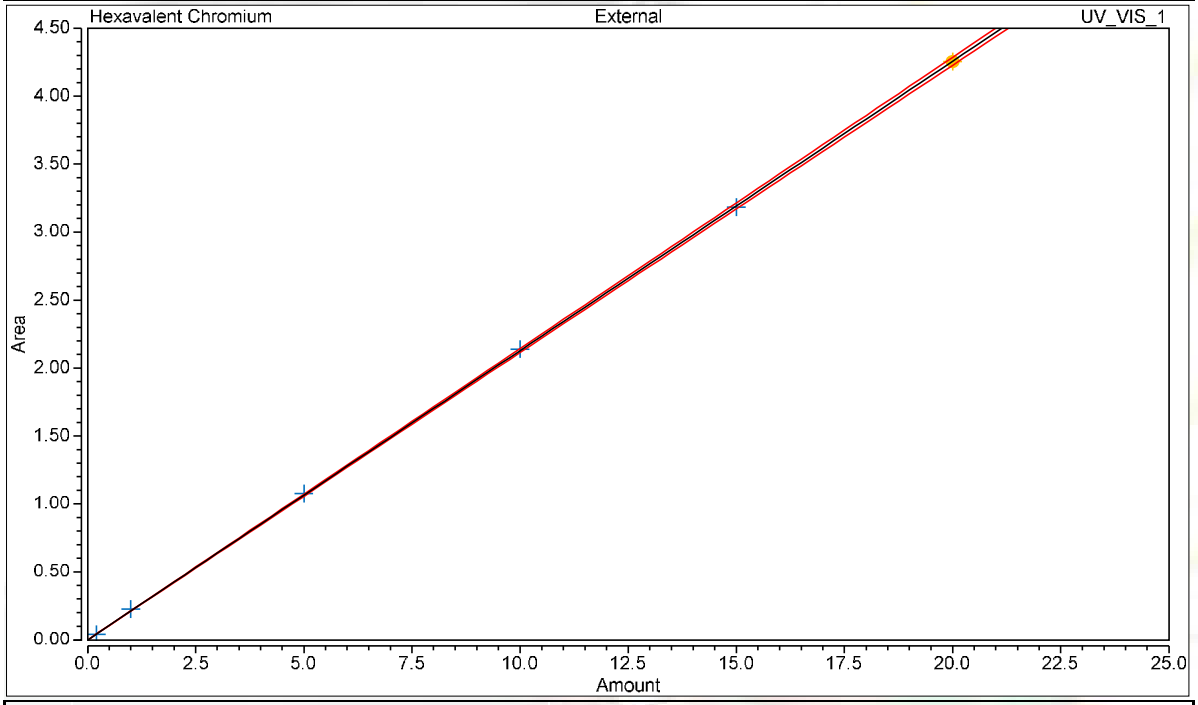
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	4.255	28.050	100.00	100.00	19.9900
Total:			**4.255**	**28.050**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2128
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99996

Calibration Plot Hexavalent Chromium



Calibration Results Hexavalent Chromium

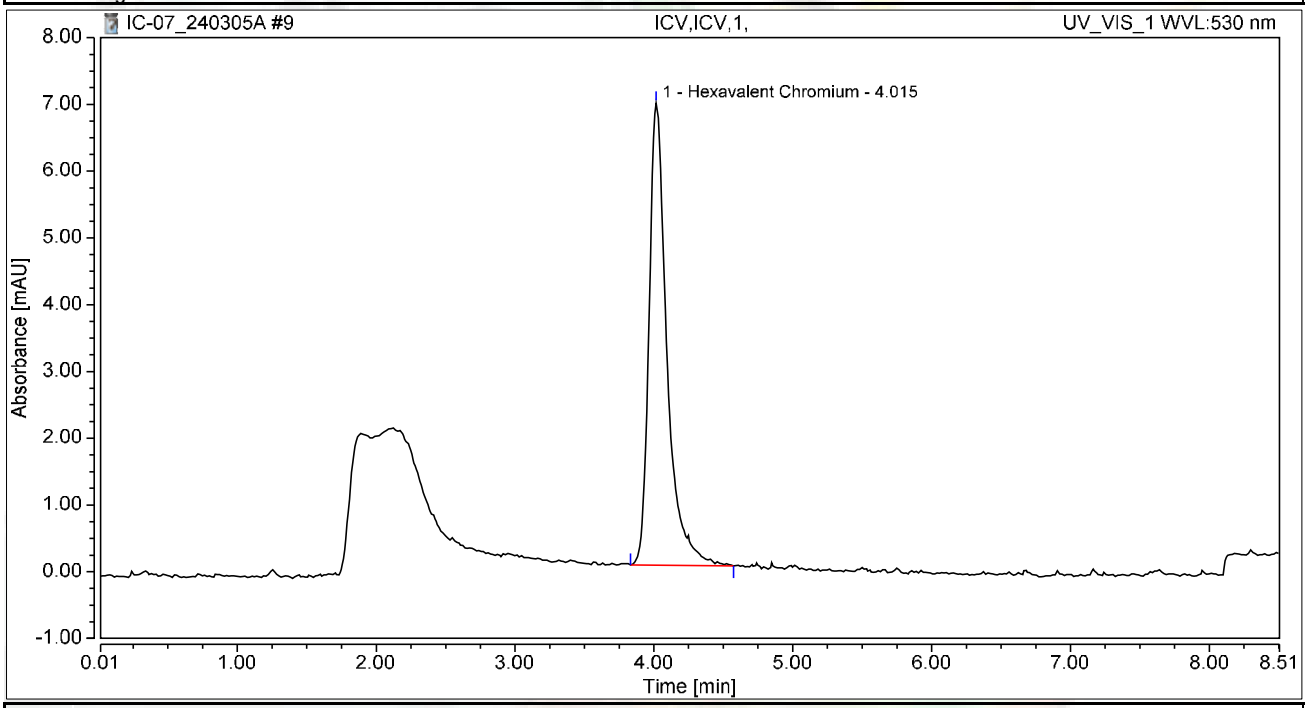
No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0412	0.041	0.290
4	STD2-1.0 ppb	02	1.0000	0.2259	0.226	1.511
5	STD3-5.0 ppb	03	5.0000	1.0754	1.075	7.087
6	STD4-10.0 ppb	04	10.0000	2.1395	2.139	14.164
7	STD5-15.0 ppb	05	15.0000	3.1834	3.183	21.307
8	STD6-20.0 ppb	06	20.0000	4.2546	4.255	28.050

Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

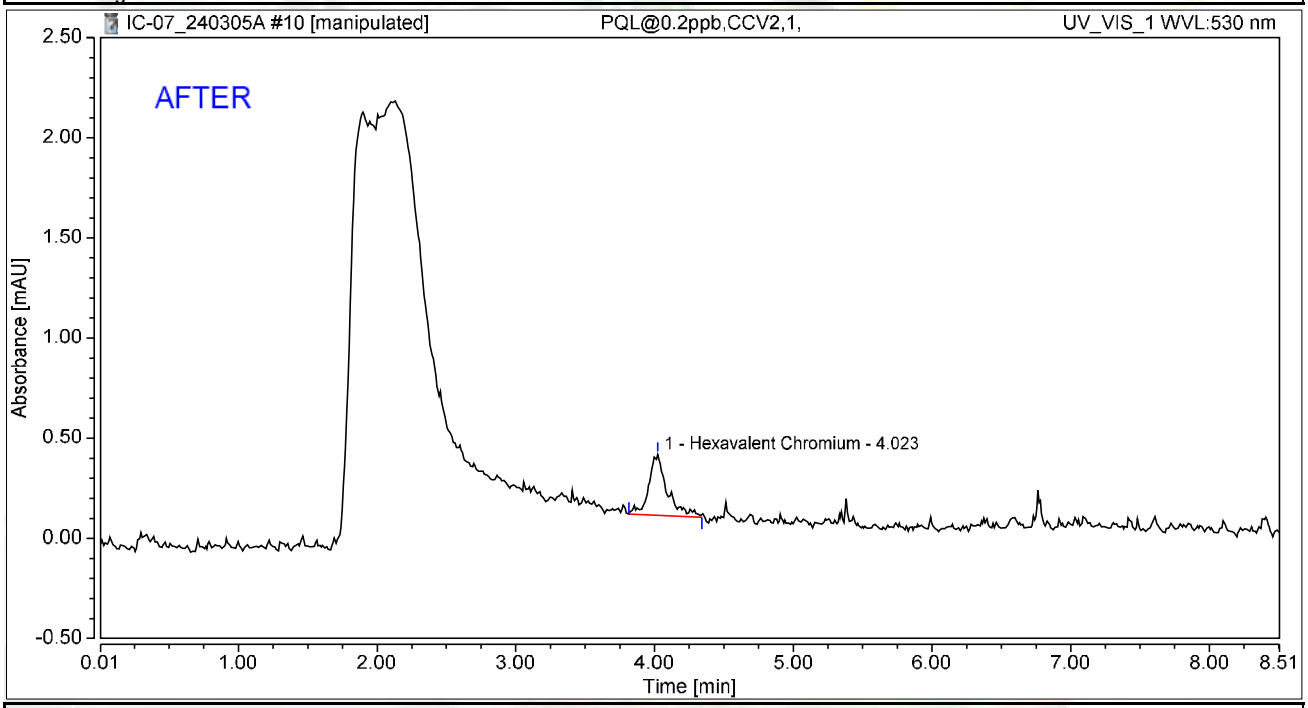
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.037	6.923	100.00	100.00	4.8744
Total:			**1.037**	**6.923**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.047	0.304	100.00	100.00	0.2189
Total:			**0.047**	**0.304**	**100.00**	**100.00**	

Reviewed by:

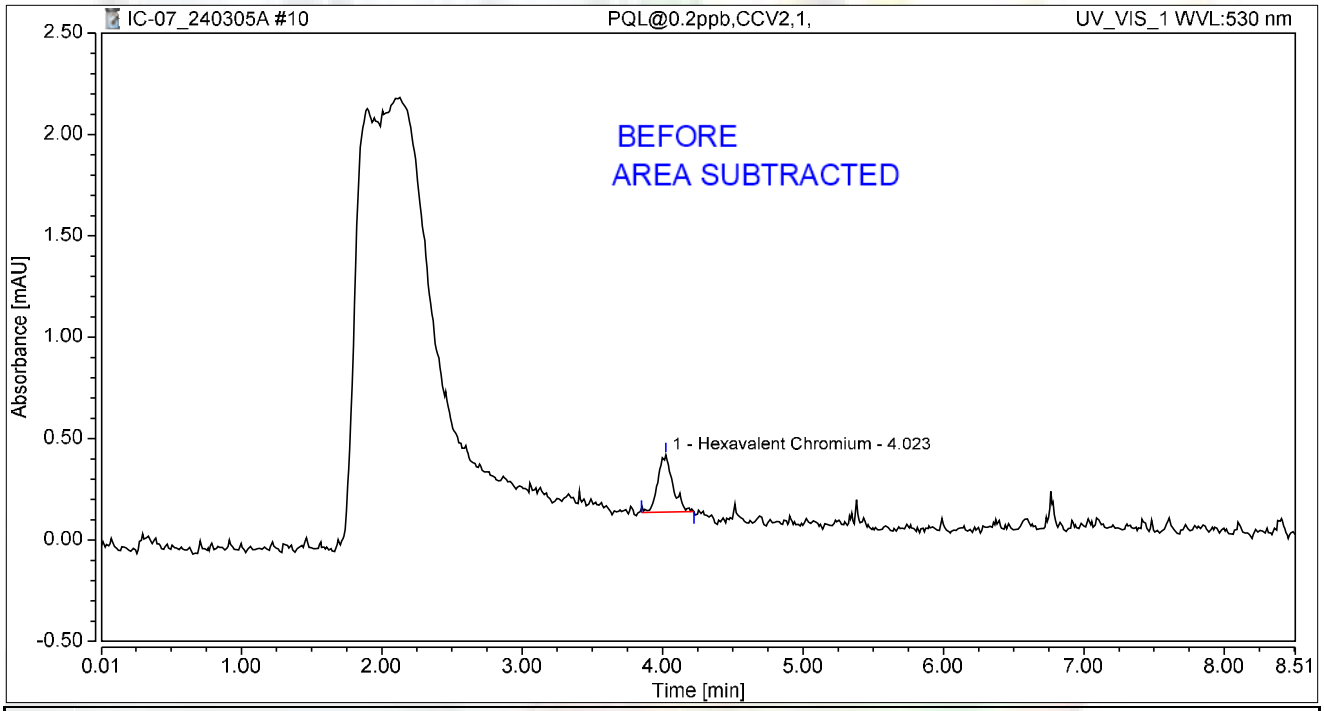
dMocha 3/11/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

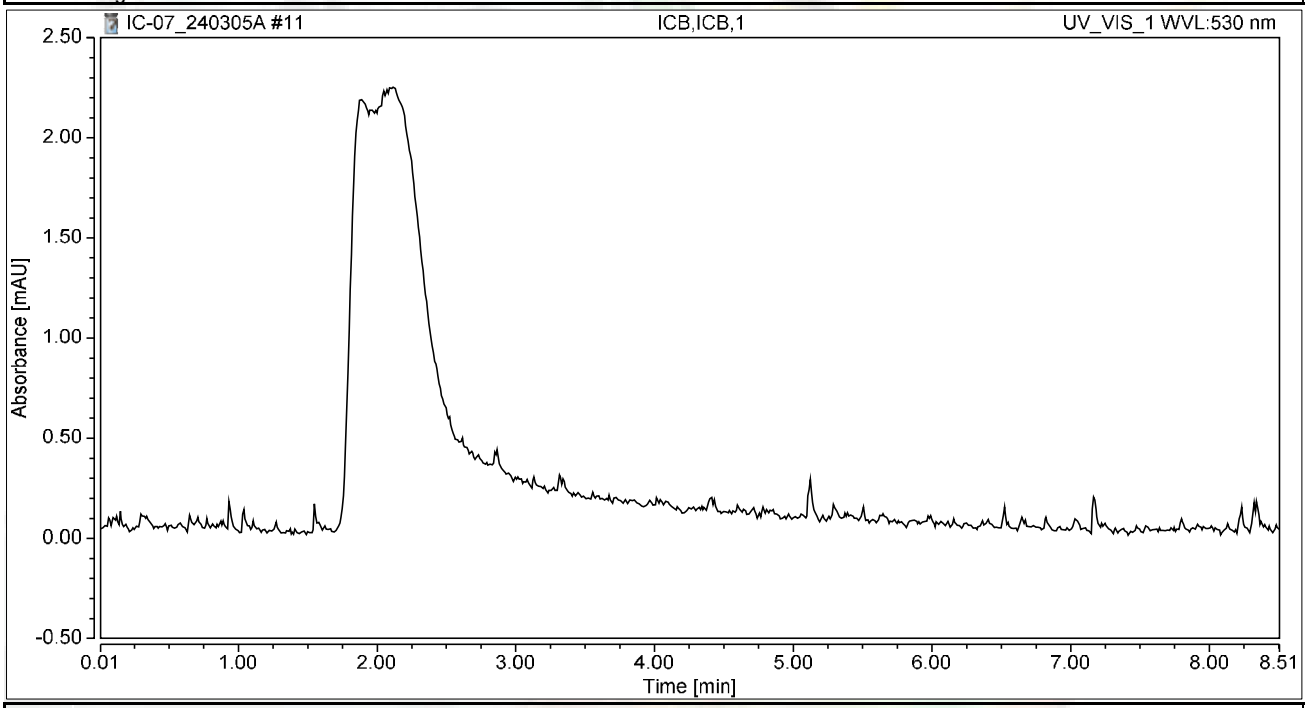
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.035	0.282	100.00	100.00	0.1646
Total:			**0.035**	**0.282**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240313A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/13/24 9:23 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/13/24 9:37 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/13/24 9:46 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/13/24 9:56 AM	Reported
13	MB-R183577	MBLK	1	Hexavalent Chromium	03/13/24 10:05 AM	Reported
14	LCS-R183577	LCS	1	Hexavalent Chromium	03/13/24 10:14 AM	Reported
15	N063562-001A	SAMP	1	Hexavalent Chromium	03/13/24 10:24 AM	Reported
16	N063618-001A	SAMP	1	Hexavalent Chromium	03/13/24 10:33 AM	Reported
17	N063562-001AMS	MS	1	Hexavalent Chromium	03/13/24 10:43 AM	Reported
18	N063618-001AMS	MS	1	Hexavalent Chromium	03/13/24 10:52 AM	Reported
19	N063736-001A	SAMP	1	Hexavalent Chromium	03/13/24 11:02 AM	Reported
20	N063736-002A	SAMP	5	Hexavalent Chromium	03/13/24 11:11 AM	Reported
21	N063736-003A	SAMP	10	Hexavalent Chromium	03/13/24 11:21 AM	Reported
22	N063736-004A	SAMP	20	Hexavalent Chromium	03/13/24 11:30 AM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/13/24 11:40 AM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/13/24 11:49 AM	Reported
25	N063562-001ADUP	DUP	1	Hexavalent Chromium	03/13/24 11:58 AM	Reported
26	N063736-001AMS	MS	1	Hexavalent Chromium	03/13/24 12:08 PM	Reported
27	N063736-002A	SAMP	1	Hexavalent Chromium	03/13/24 12:17 PM	Not Reported
28	N063736-002AMS	MS	1	Hexavalent Chromium	03/13/24 12:27 PM	Not Reported
29	N063736-004AMS	MS	20	Hexavalent Chromium	03/13/24 12:36 PM	Reported
30	N063736-004AMSD	MSD	20	Hexavalent Chromium	03/13/24 12:46 PM	Reported
31	N063736-003AMS	MS	10	Hexavalent Chromium	03/13/24 12:55 PM	Reported
32	N063736-005A	SAMP	1	Hexavalent Chromium	03/13/24 1:05 PM	Reported
33	N063736-005AMS	MS	1	Hexavalent Chromium	03/13/24 1:14 PM	Reported
34	CCV-3	CCV	1	Hexavalent Chromium	03/13/24 1:24 PM	Reported
35	CCB-3	CCB	1	Hexavalent Chromium	03/13/24 1:33 PM	Reported
36	N063736-002AMS	MS	5	Hexavalent Chromium	03/13/24 1:43 PM	Reported
37	N063736-001A	SAMP	5	Hexavalent Chromium	03/13/24 1:52 PM	Not Reported
38	N063736-001AMS	MS	5	Hexavalent Chromium	03/13/24 2:01 PM	Not Reported
39	N063642-003A	SAMP	1	Hexavalent Chromium	03/13/24 2:11 PM	Reported
40	N063559-002A	SAMP	1	Hexavalent Chromium	03/13/24 2:20 PM	Not Reported
41	N063559-001AMS	MS	1	Hexavalent Chromium	03/13/24 2:30 PM	Reported
42	N063559-002AMS	MS	1	Hexavalent Chromium	03/13/24 2:39 PM	Not Reported

INJECTION LOG: 240313A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063617-002A	SAMP	5	Hexavalent Chromium	03/13/24 2:49 PM	Reported
44	N063617-011A	SAMP	20	Hexavalent Chromium	03/13/24 2:58 PM	Reported
45	N063617-012A	SAMP	20	Hexavalent Chromium	03/13/24 3:26 PM	Reported
46	CCV-4	CCV1	1	Hexavalent Chromium	03/13/24 3:39 PM	Reported
47	CCB-4	CCB	1	Hexavalent Chromium	03/13/24 3:48 PM	Reported
48	N063706-002A	SAMP	1	Hexavalent Chromium	03/13/24 3:58 PM	Reported
49	N063706-002AMS	MS	1	Hexavalent Chromium	03/13/24 4:07 PM	Reported
50	N063642-001A	SAMP	5	Hexavalent Chromium	03/13/24 4:17 PM	Reported
51	N063642-002A	SAMP	5	Hexavalent Chromium	03/13/24 4:26 PM	Reported
52	N063559-001A	SAMP	5	Hexavalent Chromium	03/13/24 4:36 PM	Not Reported
53	N063559-001AMS	MS	5	Hexavalent Chromium	03/13/24 4:45 PM	Not Reported
54	N063559-002A	SAMP	5	Hexavalent Chromium	03/13/24 4:54 PM	Reported
55	N063559-002AMS	MS	5	Hexavalent Chromium	03/13/24 5:04 PM	Reported
56	N063559-001A	SAMP	1	Hexavalent Chromium	03/13/24 5:13 PM	Reported
57	CCV-5	CCV	1	Hexavalent Chromium	03/13/24 5:23 PM	Reported
58	CCB-5	CCB	1	Hexavalent Chromium	03/13/24 5:32 PM	Reported
59	N063735-001A	SAMP	1	Hexavalent Chromium	03/13/24 5:42 PM	Not Reported
60	N063735-001AMS	MS	1	Hexavalent Chromium	03/13/24 5:51 PM	Not Reported
61	N063735-003A	SAMP	1	Hexavalent Chromium	03/13/24 6:01 PM	Not Reported
62	N063735-003AMS	MS	1	Hexavalent Chromium	03/13/24 6:10 PM	Not Reported
63	N063735-008A	SAMP	1	Hexavalent Chromium	03/13/24 6:20 PM	Not Reported
64	N063735-008AMS	MS	1	Hexavalent Chromium	03/13/24 6:29 PM	Not Reported
65	N063735-014A	SAMP	1	Hexavalent Chromium	03/13/24 6:39 PM	Not Reported
66	N063735-014AMS	MS	1	Hexavalent Chromium	03/13/24 6:48 PM	Not Reported
67	MB-2	MBLK	1	Hexavalent Chromium	03/13/24 6:57 PM	Not Reported
68	LCS-2	LCS	1	Hexavalent Chromium	03/13/24 7:07 PM	Not Reported
69	CCV-6	CCV1	1	Hexavalent Chromium	03/13/24 7:16 PM	Not Reported
70	CCB-6	CCB	1	Hexavalent Chromium	03/13/24 7:26 PM	Not Reported
71	N063295-002A	SAMP	5	Hexavalent Chromium	03/13/24 7:35 PM	Not Reported
72	N063295-002AMS	MS	5	Hexavalent Chromium	03/13/24 7:45 PM	Not Reported
73	N063295-003A	SAMP	5	Hexavalent Chromium	03/13/24 7:54 PM	Not Reported
74	N063295-003AMS	MS	5	Hexavalent Chromium	03/13/24 8:04 PM	Not Reported
75	N063562-001A	SAMP	1	Hexavalent Chromium	03/13/24 8:13 PM	Not Reported
76	N063562-001AMS	MS	1	Hexavalent Chromium	03/13/24 8:23 PM	Not Reported
77	N063617-007A	SAMP	1	Hexavalent Chromium	03/13/24 8:32 PM	Not Reported
78	N063617-007AMS	MS	1	Hexavalent Chromium	03/13/24 8:42 PM	Not Reported
79	N063617-013A	SAMP	1	Hexavalent Chromium	03/13/24 8:51 PM	Not Reported
80	N063617-013AMS	MS	1	Hexavalent Chromium	03/13/24 9:00 PM	Not Reported
81	CCV-7	CCV	1	Hexavalent Chromium	03/13/24 9:10 PM	Not Reported
82	CCB-7	CCB	1	Hexavalent Chromium	03/13/24 9:19 PM	Not Reported
83	N063642-003A	SAMP	1	Hexavalent Chromium	03/13/24 9:29 PM	Not Reported
84	N063642-003AMS	MS	1	Hexavalent Chromium	03/13/24 9:38 PM	Not Reported

INJECTION LOG: 240313A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063642-004A	SAMP	1	Hexavalent Chromium	03/13/24 9:48 PM	Not Reported
86	N063642-004AMS	MS	1	Hexavalent Chromium	03/13/24 9:57 PM	Not Reported
87	N063642-007A	SAMP	1	Hexavalent Chromium	03/13/24 10:07 PM	Not Reported
88	N063642-007AMS	MS	1	Hexavalent Chromium	03/13/24 10:16 PM	Not Reported
89	CCV-8	CCV1	1	Hexavalent Chromium	03/13/24 10:26 PM	Not Reported
90	CCB-8	CCB	1	Hexavalent Chromium	03/13/24 10:35 PM	Not Reported
91	BLANK	BLANK	1	Hexavalent Chromium	03/13/24 10:44 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240313A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**13/Mar/24 23:15:14**
No. of Injections:	**94**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/13/2024 09:23	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/13/2024 09:37	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/13/2024 09:46	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/13/2024 09:56	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/13/2024 10:05	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/13/2024 10:14	Finished	LCS @5ppb, IWST-231228B
15	N063562-001A,SAMF	7	1000	Unknown		03/13/2024 10:24	Finished	SAMP,10 mL
16	N063618-001A,SAMF	8	1000	Unknown		03/13/2024 10:33	Finished	SAMP,10 mL
17	N063562-001AMS,MS	9	1000	Unknown		03/13/2024 10:43	Finished	MS (1ppb), IWST-231228B,10r
18	N063618-001AMS,MS	10	1000	Unknown		03/13/2024 10:52	Finished	MS (1ppb), IWST-231228B,10r
19	N063736-001A,SAMF	11	1000	Unknown		03/13/2024 11:02	Finished	SAMP,10 mL
20	N063736-002A,SAMF	12	1000	Unknown		03/13/2024 11:11	Finished	SAMP,2>10 mL
21	N063736-003A,SAMF	13	1000	Unknown		03/13/2024 11:21	Finished	SAMP,1>10 mL
22	N063736-004A,SAMF	14	1000	Unknown		03/13/2024 11:30	Finished	SAMP,0.5>10 mL
23	CCV-2,CCV1,1,	15	1000	Unknown		03/13/2024 11:40	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		03/13/2024 11:49	Finished	CCB R240129C
25	N063562-001ADUP,D	17	1000	Unknown		03/13/2024 11:58	Finished	DUP,10 mL
26	N063736-001AMS,MS	18	1000	Unknown		03/13/2024 12:08	Finished	MS (5ppb), IWST-231228B,10r
27	N063736-002A,SAMF	19	1000	Unknown		03/13/2024 12:17	Finished	SAMP,10 mL
28	N063736-002AMS,MS	20	1000	Unknown		03/13/2024 12:27	Finished	MS (1ppb), IWST-231228B,10r
29	N063736-004AMS,MS	21	1000	Unknown		03/13/2024 12:36	Finished	MS (5ppb), IWST-231228B,0.5
30	N063736-004AMSD,M	22	1000	Unknown		03/13/2024 12:46	Finished	MSD (5ppb), IWST-231228B,0.
31	N063736-003AMS,MS	23	1000	Unknown		03/13/2024 12:55	Finished	MS (5ppb), IWST-231228B,1>1
32	N063736-005A,SAMF	24	1000	Unknown		03/13/2024 13:05	Finished	SAMP,10 mL
33	N063736-005AMS,MS	25	1000	Unknown		03/13/2024 13:14	Finished	MS (1ppb), IWST-231228B,10r
34	CCV-3,CCV,1,	26	1000	Unknown		03/13/2024 13:24	Finished	CCV @10ppb, IWST-231228A
35	CCB-3,CCB,1,	27	1000	Unknown		03/13/2024 13:33	Finished	CCB R240129C
36	N063736-002AMS,MS	28	1000	Unknown		03/13/2024 13:43	Finished	MS (1ppb), IWST-231228B,2>1
37	N063736-001A,SAMF	29	1000	Unknown		03/13/2024 13:52	Finished	SAMP,2>10 mL
38	N063736-001AMS,MS	30	1000	Unknown		03/13/2024 14:01	Finished	MS (1ppb), IWST-231228B,2>1
39	N063642-003A,SAMF	31	1000	Unknown		03/13/2024 14:11	Finished	SAMP,10 mL
40	N063559-002A,SAMF	32	1000	Unknown		03/13/2024 14:20	Finished	SAMP,10 mL
41	N063559-001AMS,MS	33	1000	Unknown		03/13/2024 14:30	Finished	MS (1ppb), IWST-231228B,10r
42	N063559-002AMS,MS	34	1000	Unknown		03/13/2024 14:39	Finished	MS (1ppb), IWST-231228B,10r
43	N063617-002A,SAMF	35	1000	Unknown		03/13/2024 14:49	Finished	SAMP,2>10 mL
44	N063617-011A,SAMF	36	1000	Unknown		03/13/2024 14:58	Finished	SAMP,0.5>10 mL
45	N063617-012A,SAMF	1	1000	Unknown		03/13/2024 15:26	Finished	SAMP,0.5>10 mL
46	CCV-4,CCV1,1,	2	1000	Unknown		03/13/2024 15:39	Finished	CCV @10ppb, IWST-231228A
47	CCB-4,CCB,1,	3	1000	Unknown		03/13/2024 15:48	Finished	CCB R240129C
48	N063706-002A,SAMF	4	1000	Unknown		03/13/2024 15:58	Finished	SAMP,10 mL
49	N063706-002AMS,MS	5	1000	Unknown		03/13/2024 16:07	Finished	MS (1ppb), IWST-231228B,10r
50	N063642-001A,SAMF	6	1000	Unknown		03/13/2024 16:17	Finished	SAMP,2>10 mL
51	N063642-002A,SAMF	7	1000	Unknown		03/13/2024 16:26	Finished	SAMP,2>10 mL
52	N063559-001A,SAMF	8	1000	Unknown		03/13/2024 16:36	Finished	SAMP,2>10 mL
53	N063559-001AMS,MS	9	1000	Unknown		03/13/2024 16:45	Finished	MS (1ppb), IWST-231228B,2>1
54	N063559-002A,SAMF	10	1000	Unknown		03/13/2024 16:54	Finished	SAMP,2>10 mL
55	N063559-002AMS,MS	11	1000	Unknown		03/13/2024 17:04	Finished	MS (1ppb), IWST-231228B,2>1
56	N063559-001A,SAMF	12	1000	Unknown		03/13/2024 17:13	Finished	SAMP,10 mL
57	CCV-5,CCV,1,	13	1000	Unknown		03/13/2024 17:23	Finished	CCV @5ppb, IWST-231228A
58	CCB-5,CCB,1,	14	1000	Unknown		03/13/2024 17:32	Finished	CCB R240129C
59	N063735-001A,SAMF	15	1000	Unknown		03/13/2024 17:42	Finished	SAMP,10 mL
60	N063735-001AMS,MS	16	1000	Unknown		03/13/2024 17:51	Finished	MS (1ppb), IWST-231228B,10r

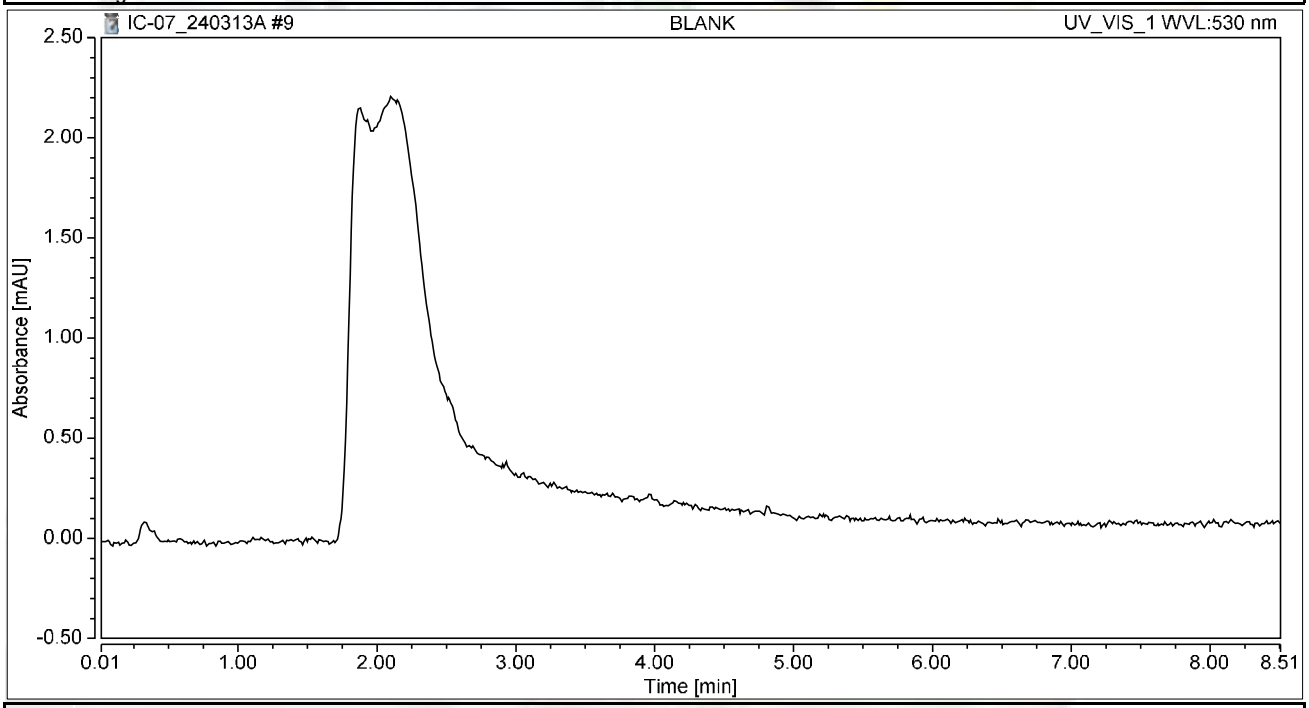
61	N063735-003A,SAMP	17	1000	Unknown		03/13/2024 18:01	Finished	SAMP,10 mL
62	N063735-003AMS,MS	18	1000	Unknown		03/13/2024 18:10	Finished	MS (1ppb), IWST-231228B,10r
63	N063735-008A,SAMP	19	1000	Unknown		03/13/2024 18:20	Finished	SAMP,10 mL
64	N063735-008AMS,MS	20	1000	Unknown		03/13/2024 18:29	Finished	MS (1ppb), IWST-231228B,10r
65	N063735-014A,SAMP	21	1000	Unknown		03/13/2024 18:39	Finished	SAMP,10 mL
66	N063735-014AMS,MS	22	1000	Unknown		03/13/2024 18:48	Finished	MS (1ppb), IWST-231228B,10r
67	MB-2,MBLK,1,	23	1000	Unknown		03/13/2024 18:57	Finished	MB R240129C
68	LCS-2,LCS,1,	24	1000	Unknown		03/13/2024 19:07	Finished	LCS @5ppb, IWST-231228B
69	CCV-6,CCV1,1,	25	1000	Unknown		03/13/2024 19:16	Finished	CCV @10ppb, IWST-231228A
70	CCB-6,CCB,1,	26	1000	Unknown		03/13/2024 19:26	Finished	CCB R240129C
71	N063295-002A,SAMP	27	1000	Unknown		03/13/2024 19:35	Finished	SAMP,2>10 mL
72	N063295-002AMS,MS	28	1000	Unknown		03/13/2024 19:45	Finished	MS (1ppb), IWST-231228B,2>1
73	N063295-003A,SAMP	29	1000	Unknown		03/13/2024 19:54	Finished	SAMP,2>10 mL
74	N063295-003AMS,MS	30	1000	Unknown		03/13/2024 20:04	Finished	MS (1ppb), IWST-231228B,2>1
75	N063562-001A,SAMP	31	1000	Unknown		03/13/2024 20:13	Finished	SAMP,10 mL
76	N063562-001AMS,MS	32	1000	Unknown		03/13/2024 20:23	Finished	MS (1ppb), IWST-231228B,10r
77	N063617-007A,SAMP	33	1000	Unknown		03/13/2024 20:32	Finished	SAMP,10 mL
78	N063617-007AMS,MS	34	1000	Unknown		03/13/2024 20:42	Finished	MS (1ppb), IWST-231228B,10r
79	N063617-013A,SAMP	35	1000	Unknown		03/13/2024 20:51	Finished	SAMP,10 mL
80	N063617-013AMS,MS	36	1000	Unknown		03/13/2024 21:00	Finished	MS (1ppb), IWST-231228B,10r
81	CCV-7,CCV,1,	37	1000	Unknown		03/13/2024 21:10	Finished	CCV @5ppb, IWST-231228A
82	CCB-7,CCB,1,	38	1000	Unknown		03/13/2024 21:19	Finished	CCB R240129C
83	N063642-003A,SAMP	39	1000	Unknown		03/13/2024 21:29	Finished	SAMP,10 mL
84	N063642-003AMS,MS	40	1000	Unknown		03/13/2024 21:38	Finished	MS (1ppb), IWST-231228B,10r
85	N063642-004A,SAMP	41	1000	Unknown		03/13/2024 21:48	Finished	SAMP,10 mL
86	N063642-004AMS,MS	42	1000	Unknown		03/13/2024 21:57	Finished	MS (1ppb), IWST-231228B,10r
87	N063642-007A,SAMP	43	1000	Unknown		03/13/2024 22:07	Finished	SAMP,10 mL
88	N063642-007AMS,MS	44	1000	Unknown		03/13/2024 22:16	Finished	MS (1ppb), IWST-231228B,10r
89	CCV-8,CCV1,1,	45	1000	Unknown		03/13/2024 22:26	Finished	CCV @10ppb, IWST-231228A
90	CCB-8,CCB,1,	46	1000	Unknown		03/13/2024 22:35	Finished	CCB R240129C
91	BLANK	47	1000	Unknown		03/13/2024 22:44	Finished	BLANK
92	SHUTDOWN	48	1000	Unknown		03/13/2024 22:54	Finished	
93	Eluent: R240311C	49	1000	Unknown		n.a.	Finished	
94	PCR: R240311D	50	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 09:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

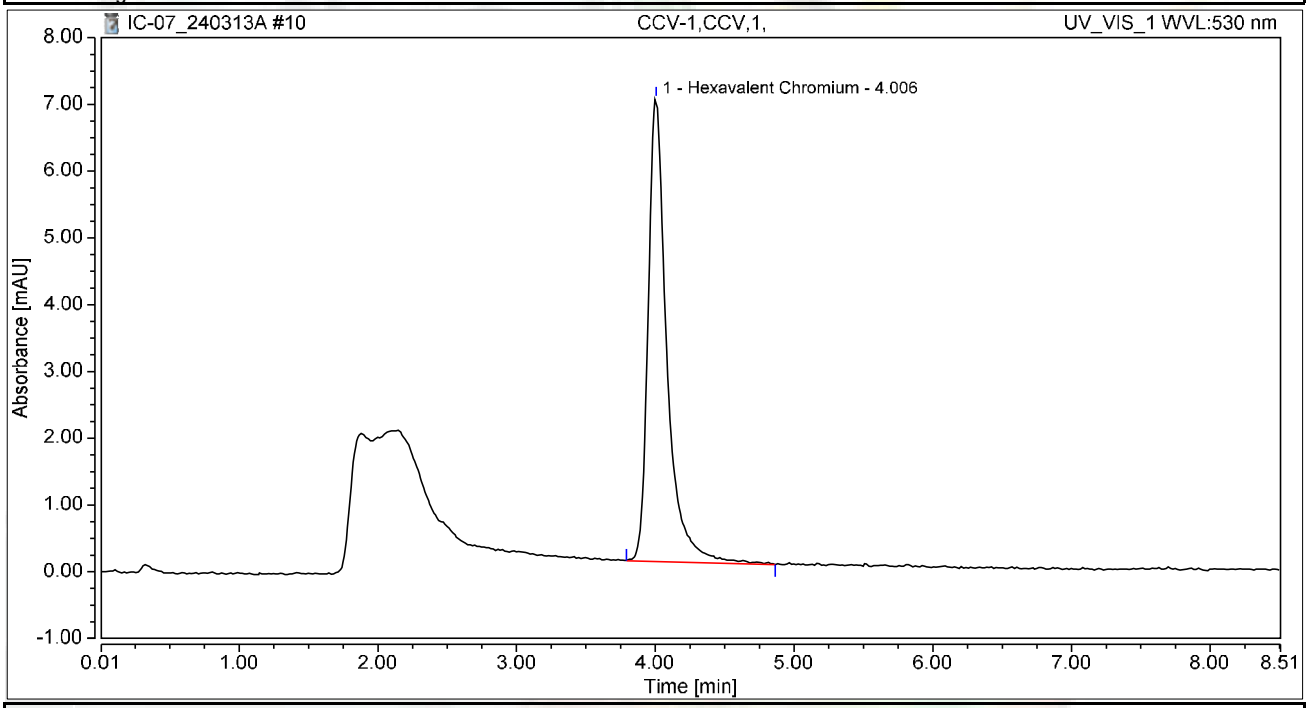
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 09:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.094	6.934	100.00	100.00	5.1419
Total:			**1.094**	**6.934**	**100.00**	**100.00**	

Reviewed by:

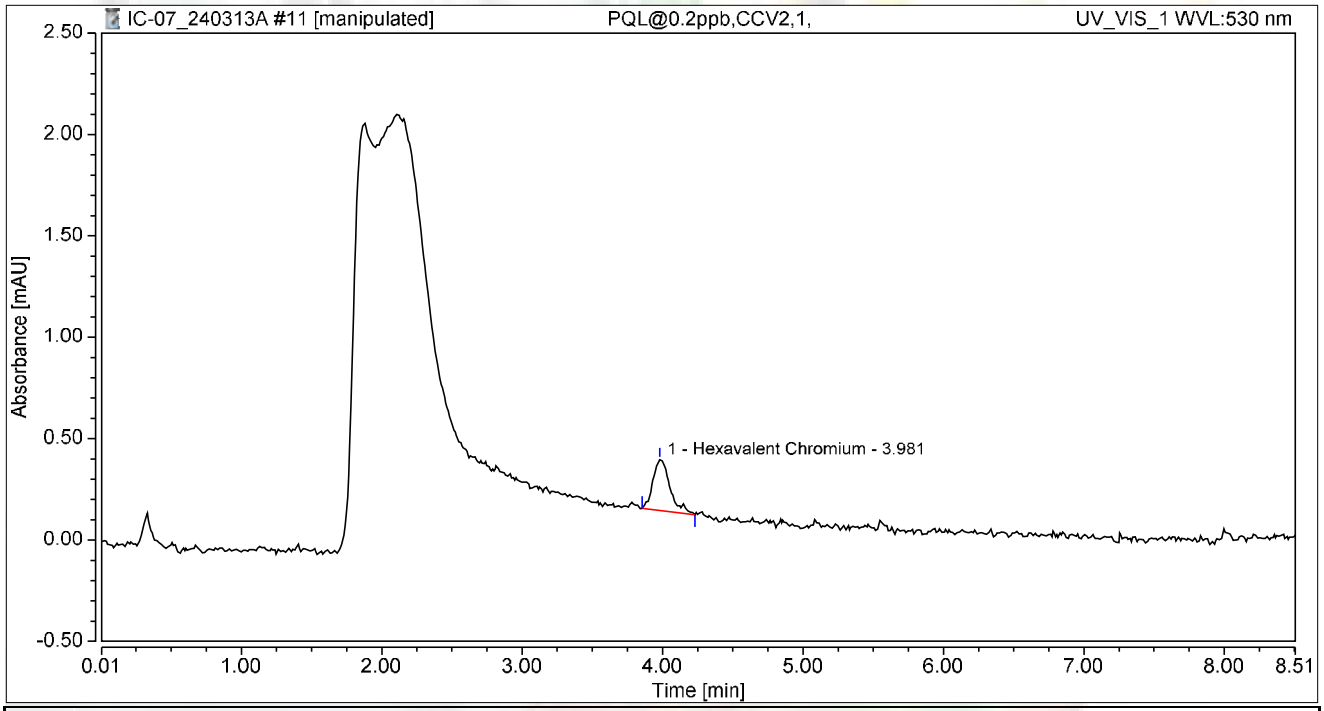
JRB 3/14/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 09:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

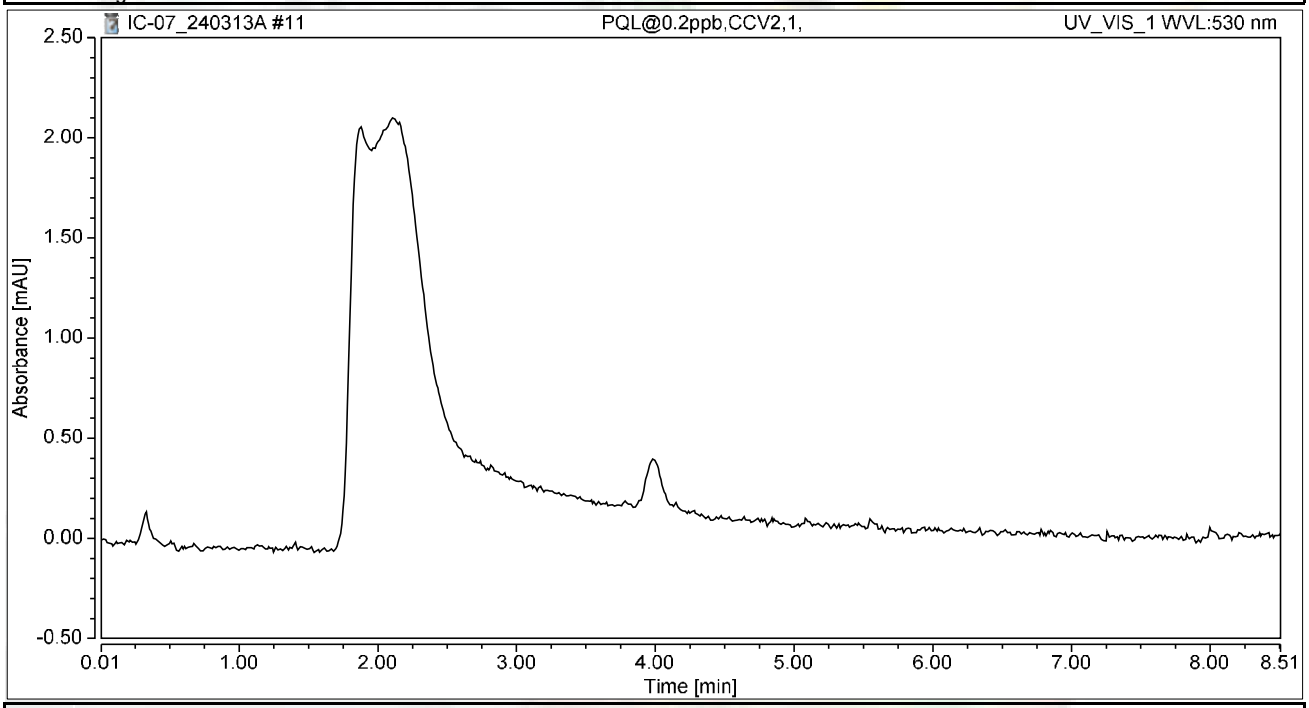
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.036	0.249	100.00	100.00	0.1673
Total:			**0.036**	**0.249**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 09:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

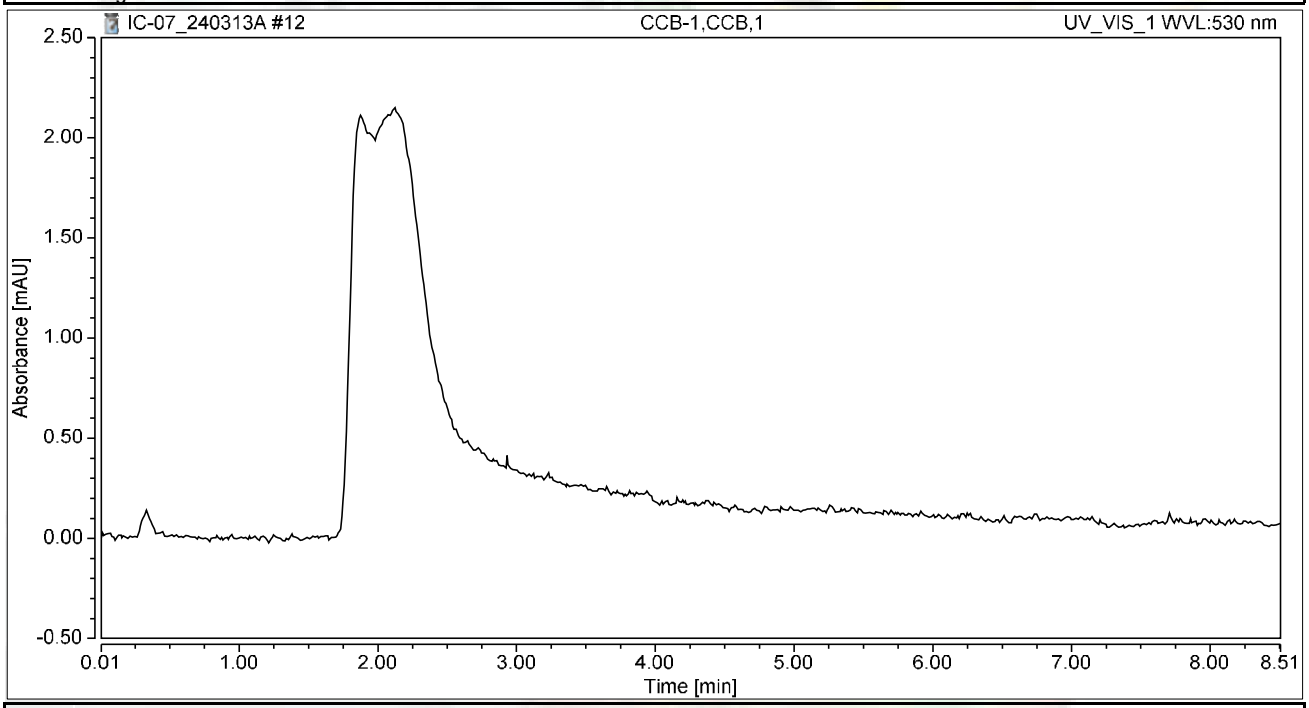
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 09:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

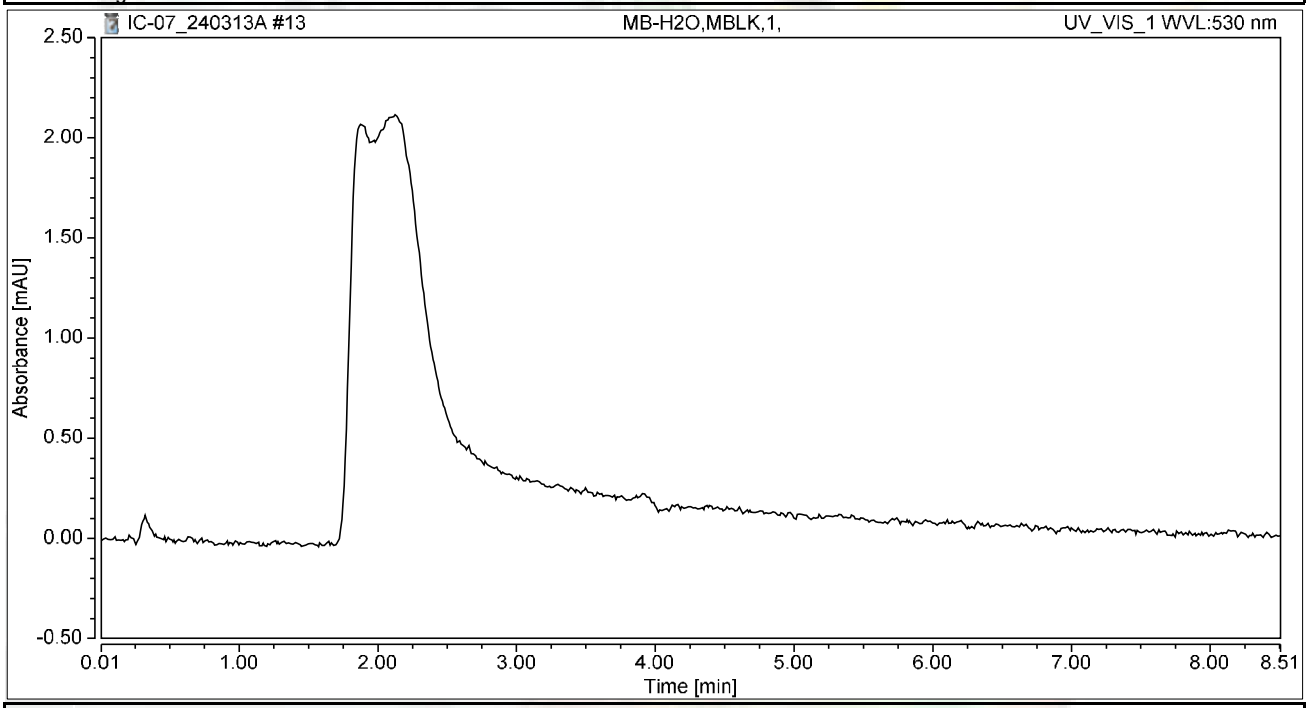
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 10:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

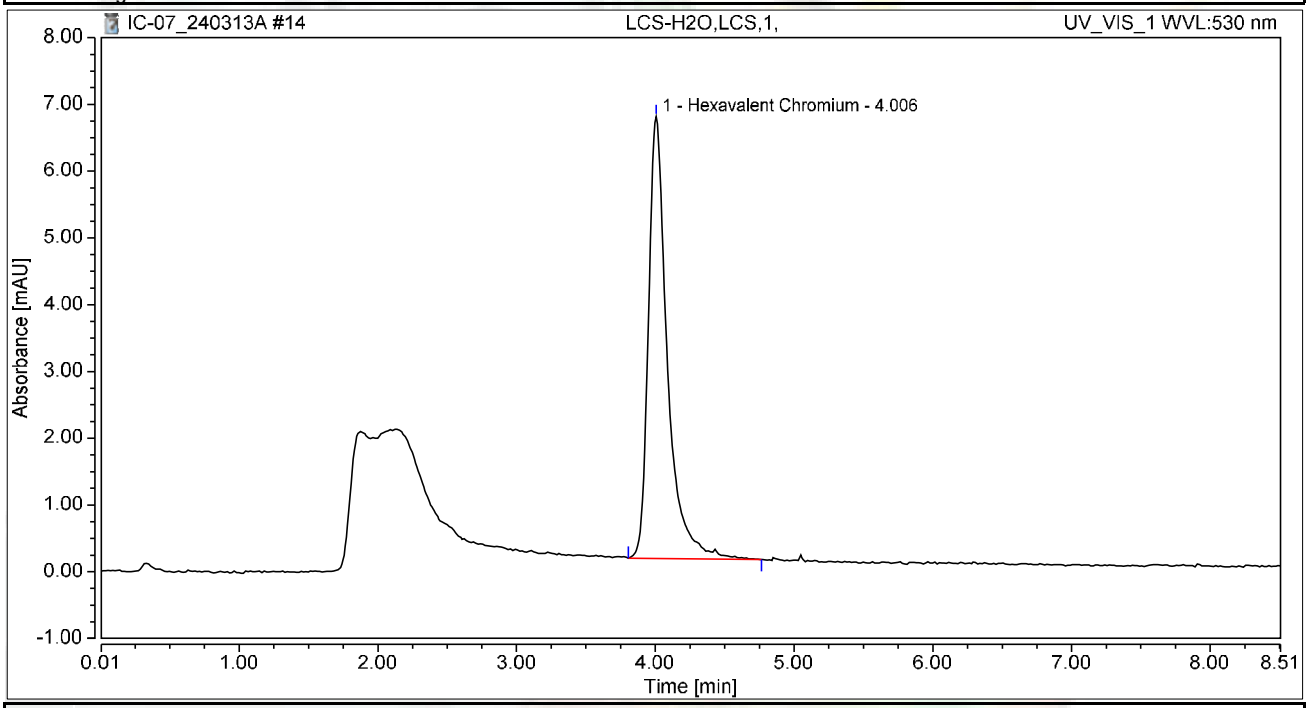
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 10:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

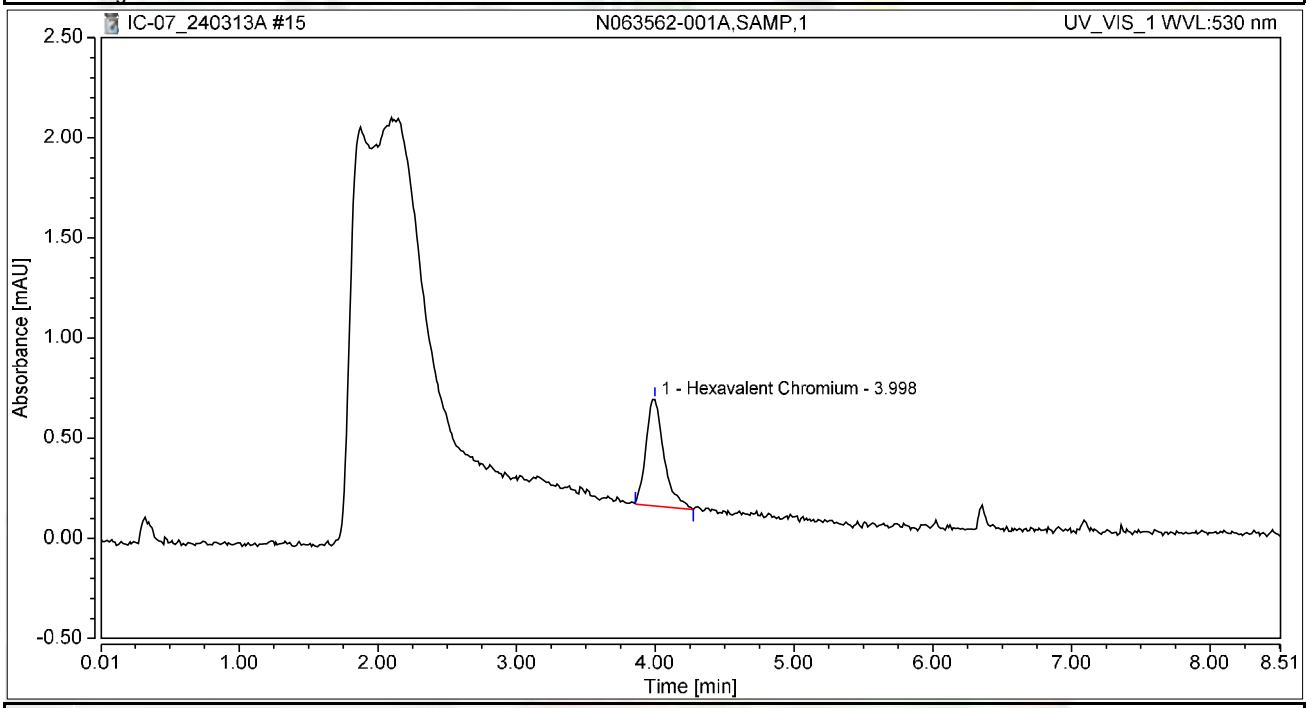
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.051	6.620	100.00	100.00	4.9361
Total:			**1.051**	**6.620**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063562-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 10:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

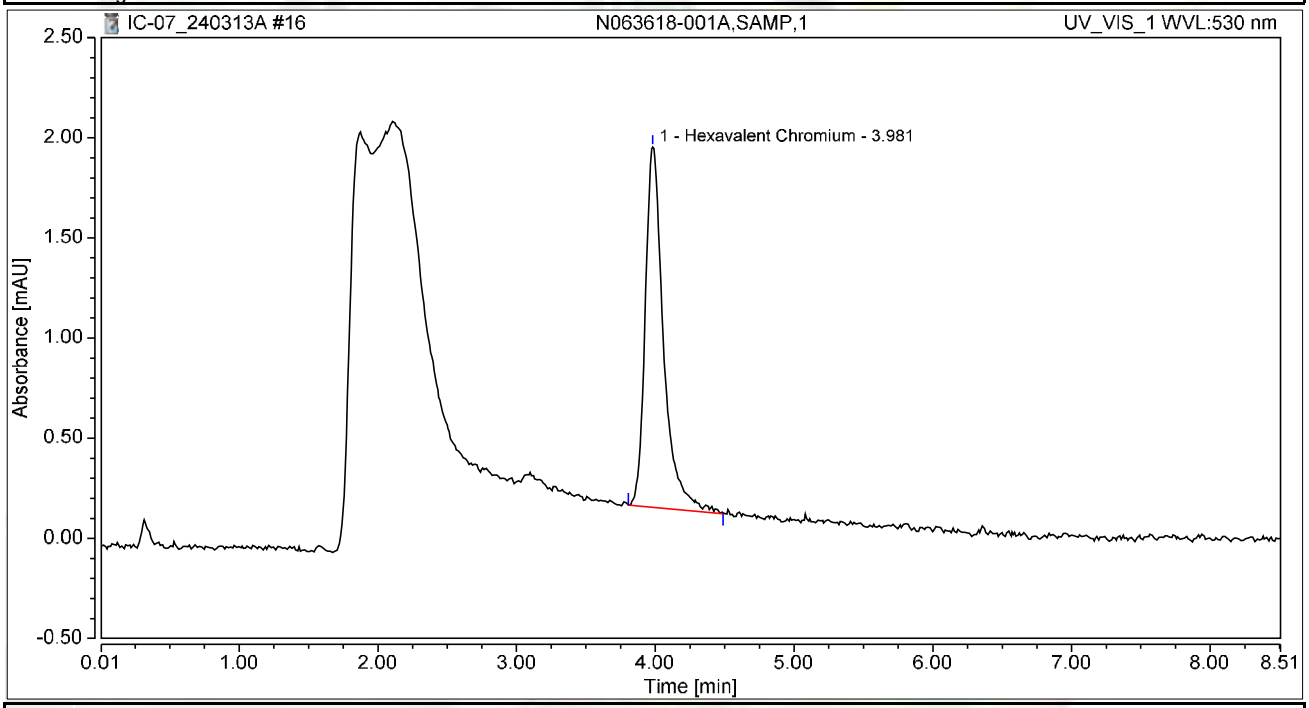
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.080	0.532	100.00	100.00	0.3777
Total:			**0.080**	**0.532**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063618-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 10:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

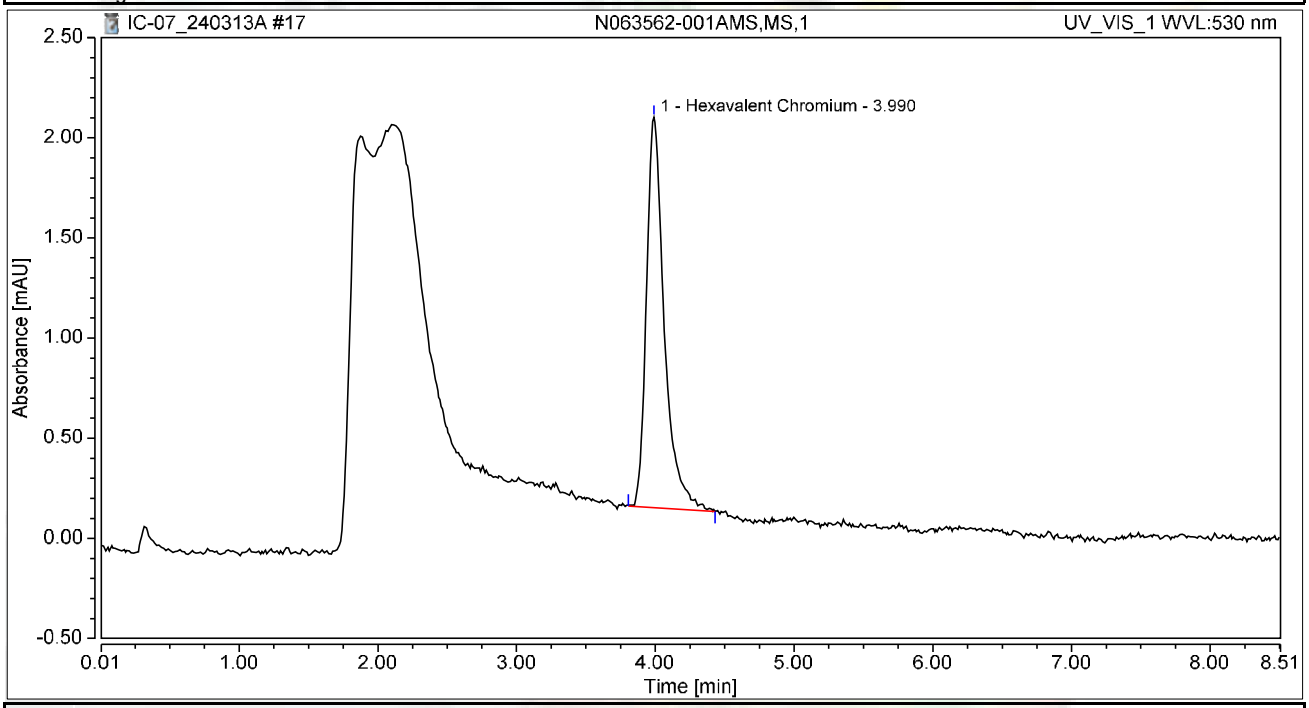
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.275	1.798	100.00	100.00	1.2921
Total:			**0.275**	**1.798**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063562-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 10:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

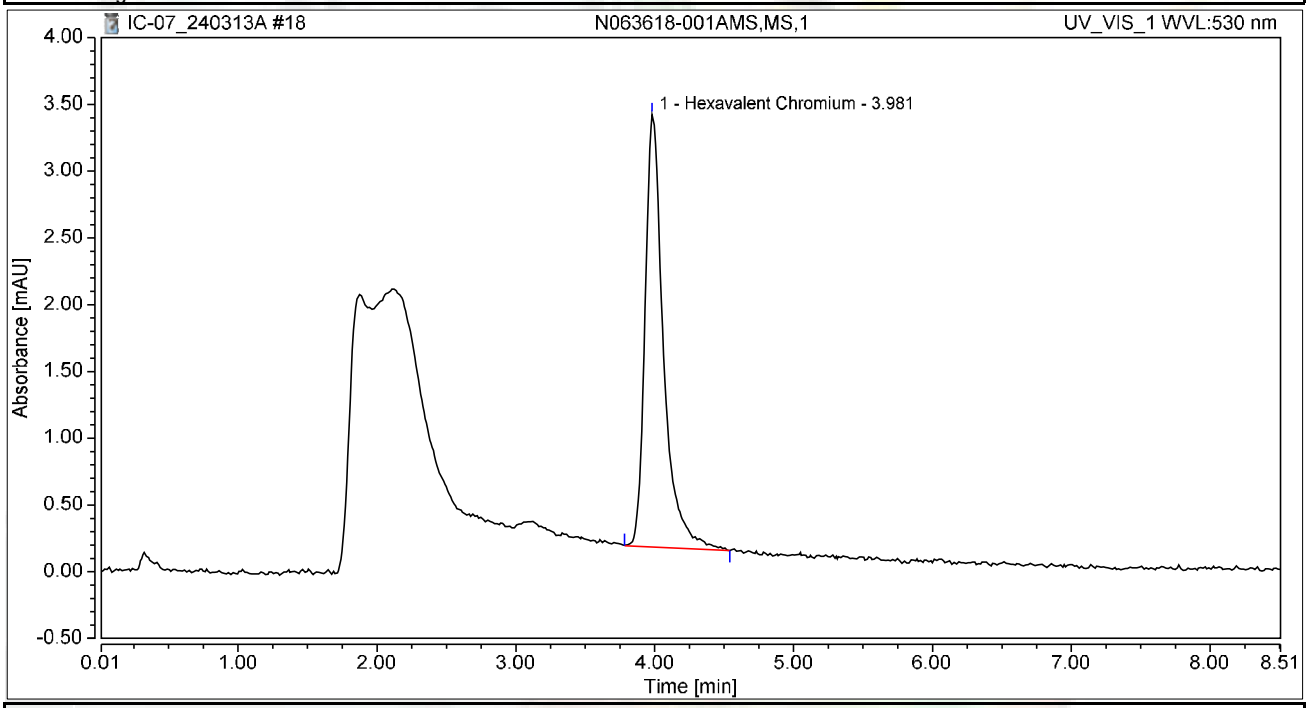
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.291	1.950	100.00	100.00	1.3683
Total:			**0.291**	**1.950**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063618-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 10:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

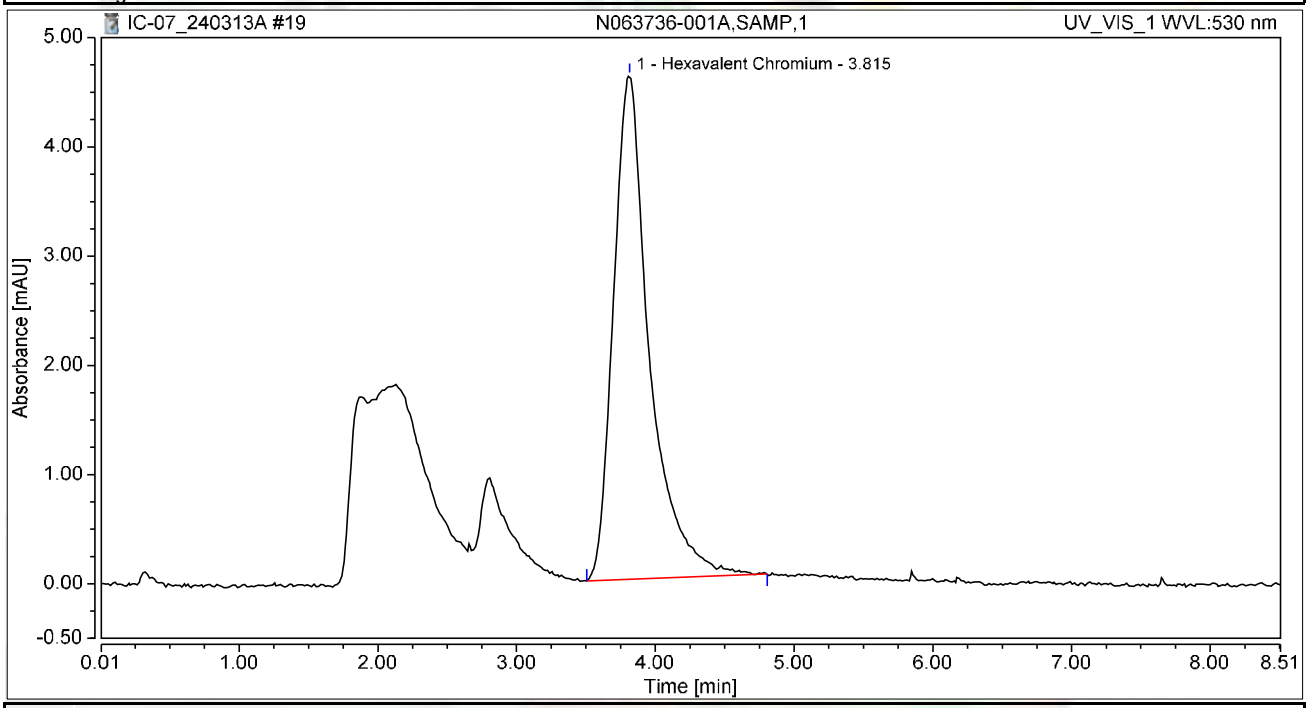
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.499	3.237	100.00	100.00	2.3447
Total:			**0.499**	**3.237**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 11:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

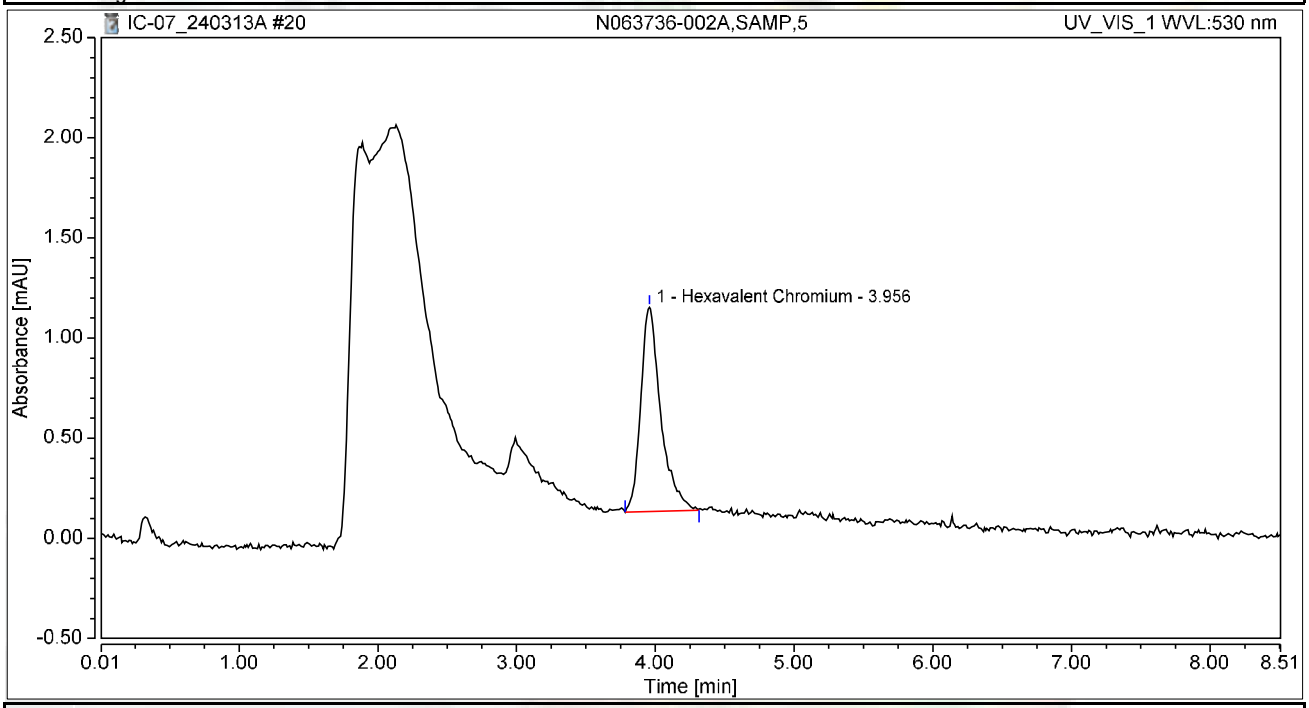
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	1.388	4.614	100.00	100.00	6.5216
Total:			**1.388**	**4.614**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 11:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

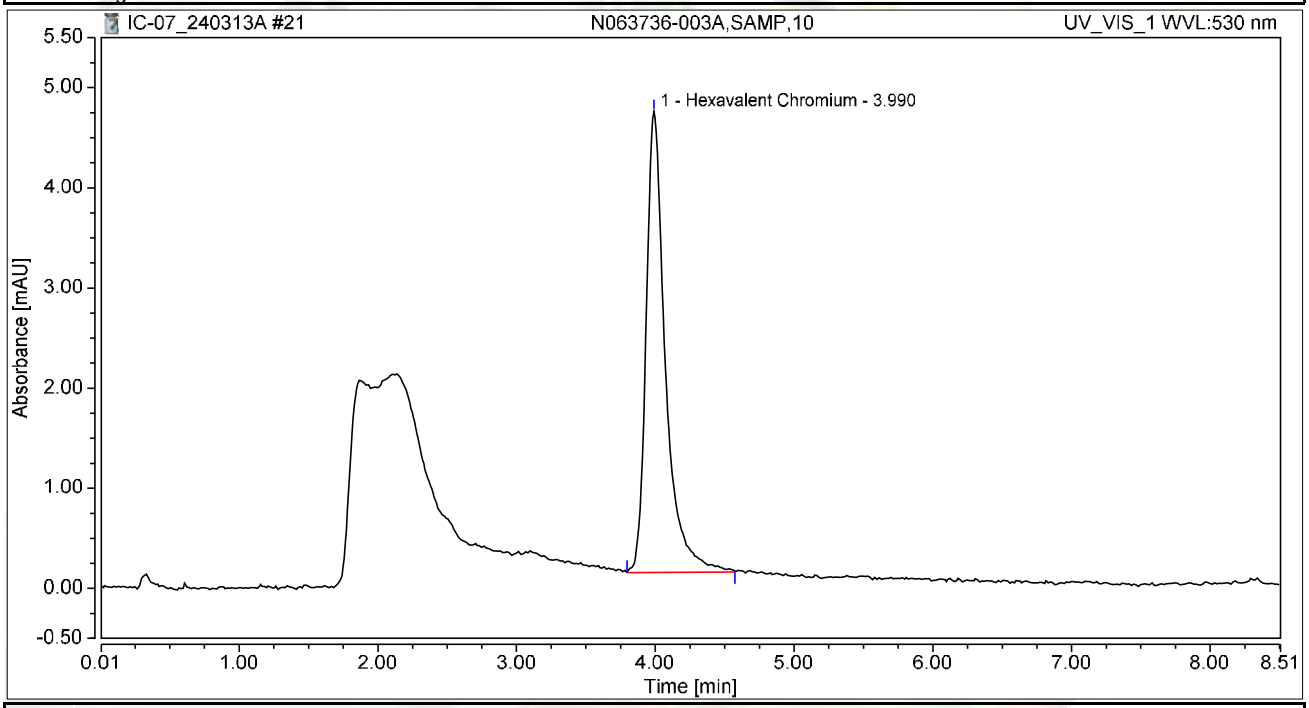
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.171	1.020	100.00	100.00	0.8045
Total:			**0.171**	**1.020**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-003A,SAMP,10**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 11:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

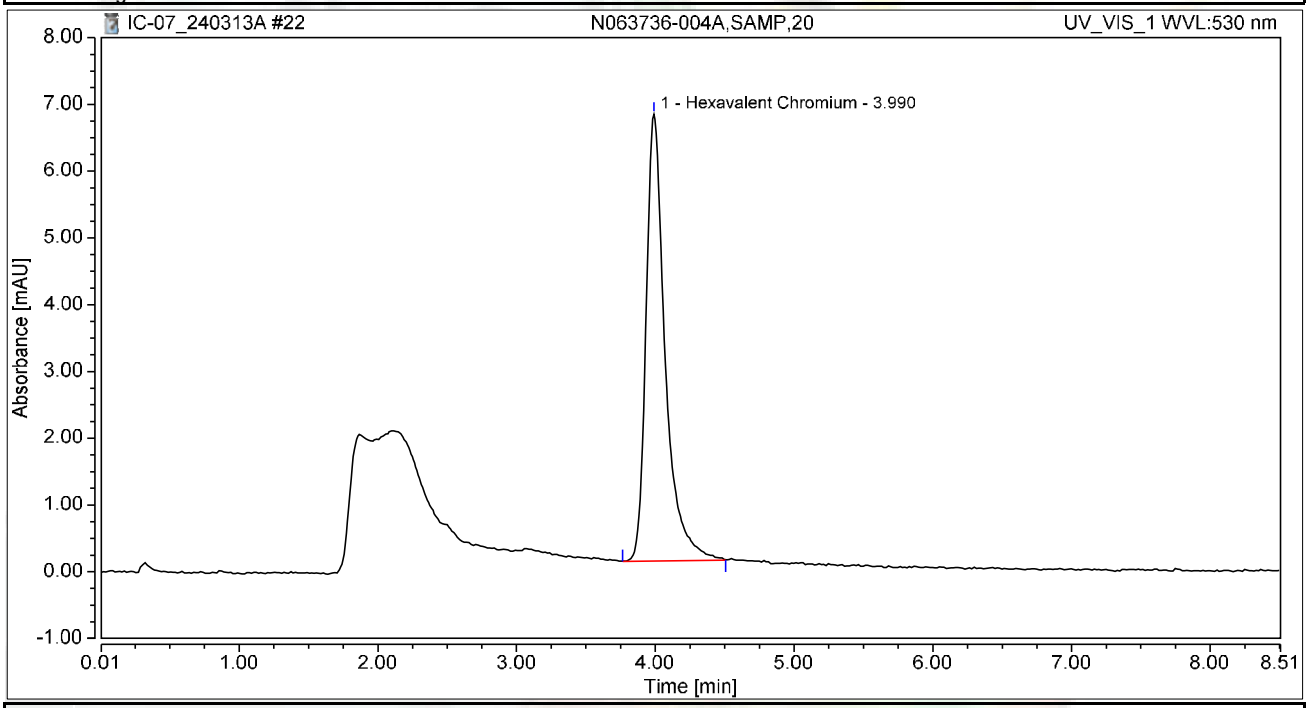
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.743	4.603	100.00	100.00	3.4904
Total:			**0.743**	**4.603**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-004A,SAMP,20**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 11:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

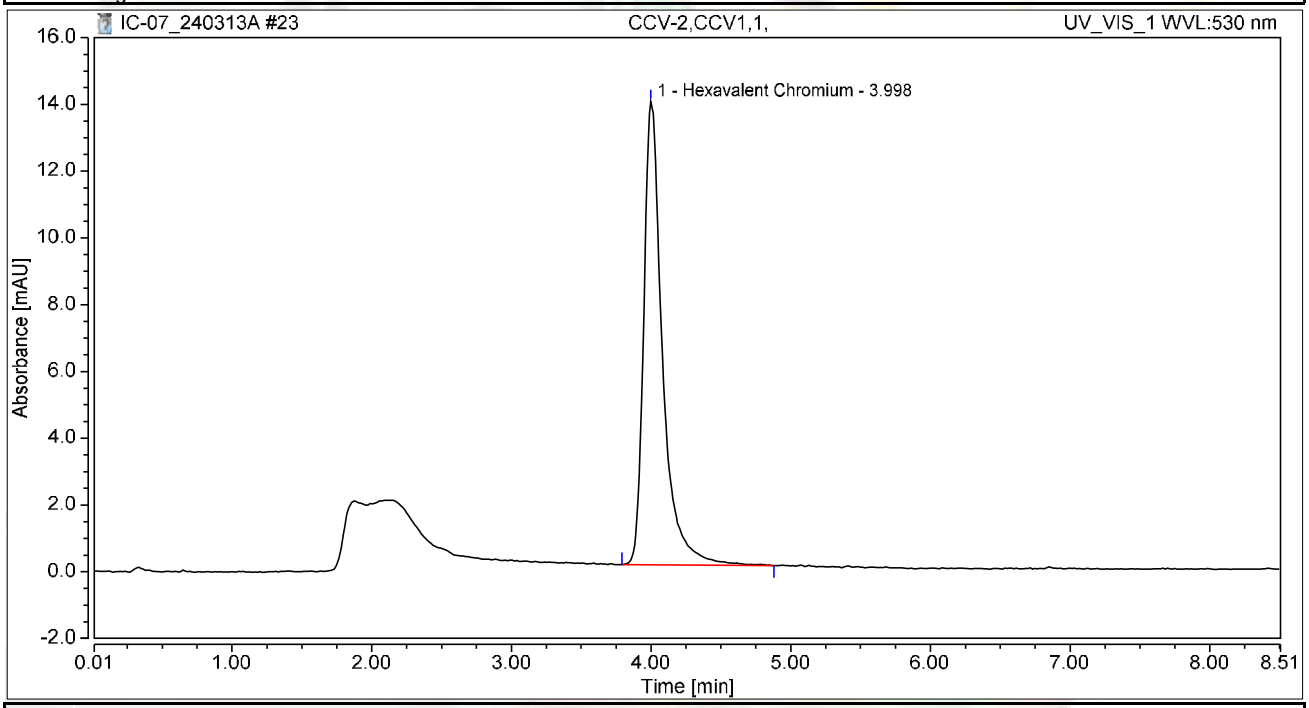
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	1.071	6.692	100.00	100.00	5.0317
Total:			**1.071**	**6.692**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 11:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

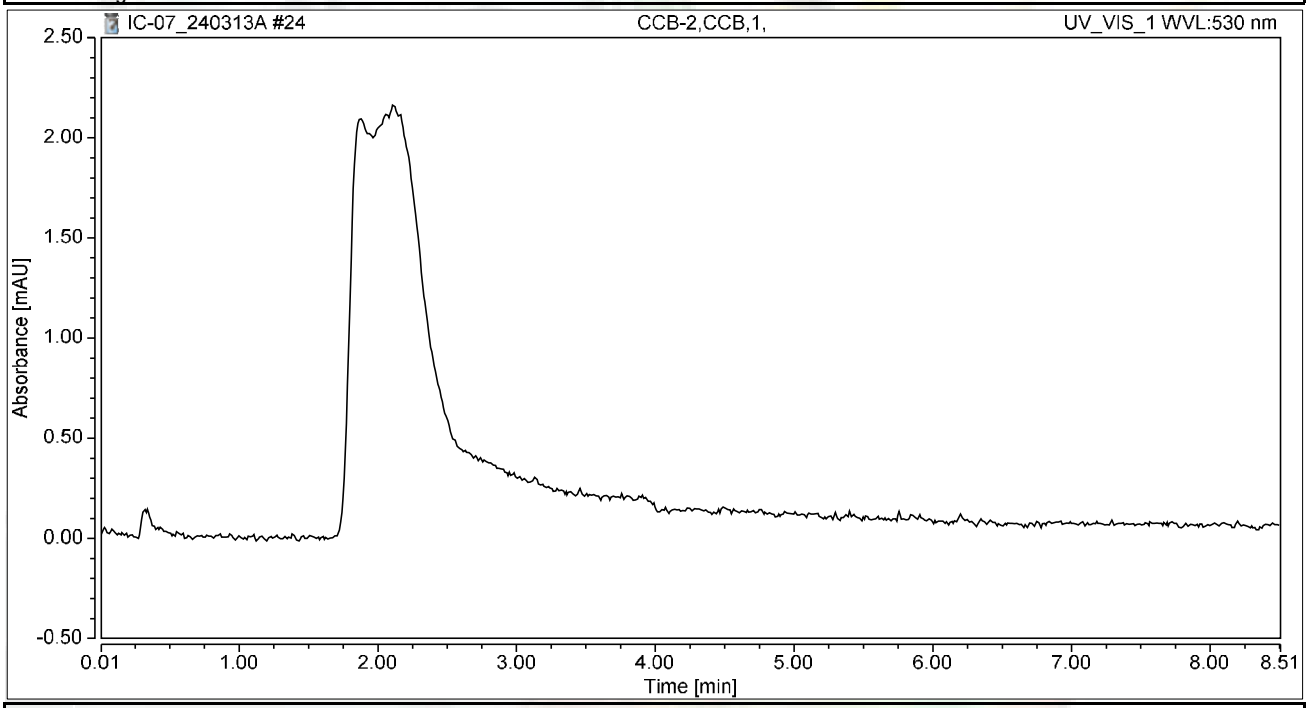
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	2.167	13.877	100.00	100.00	10.1829
Total:			**2.167**	**13.877**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 11:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

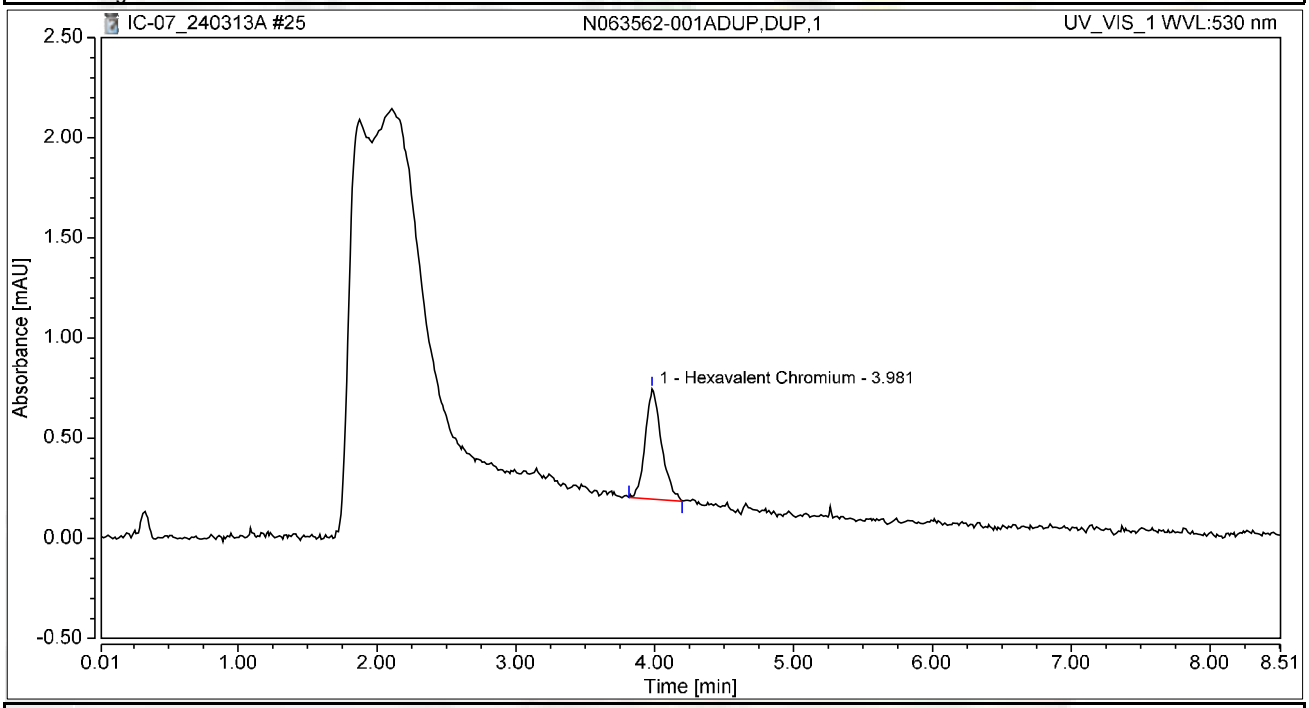
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063562-001ADUP,DUP,1**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 11:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

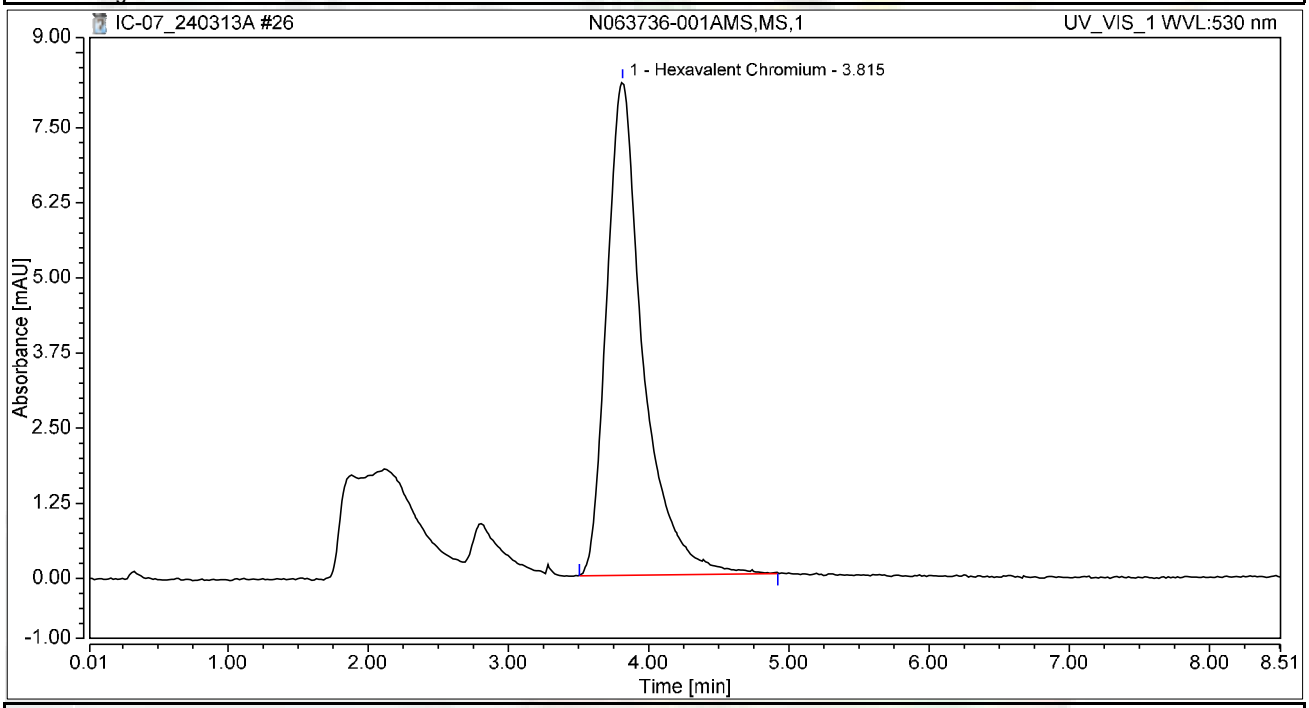
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.075	0.551	100.00	100.00	0.3519
Total:			**0.075**	**0.551**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 12:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

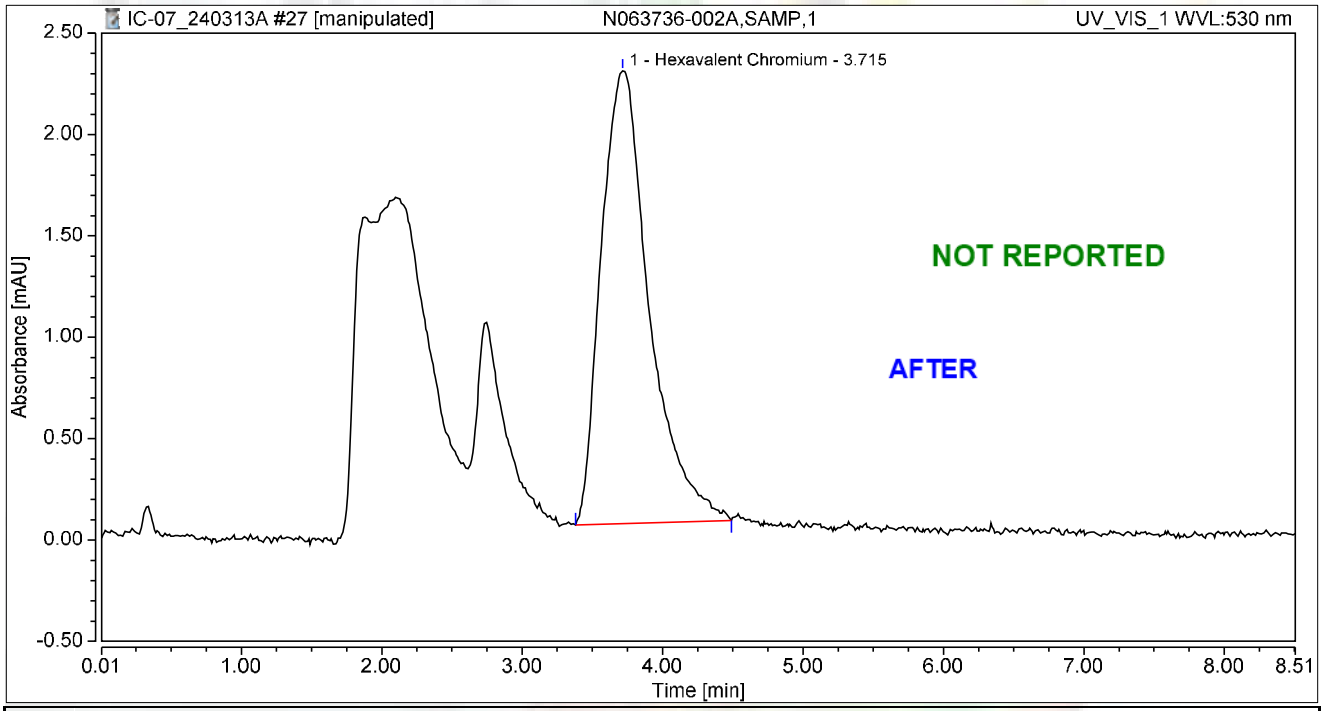
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	2.468	8.223	100.00	100.00	11.5941
Total:			**2.468**	**8.223**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 12:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

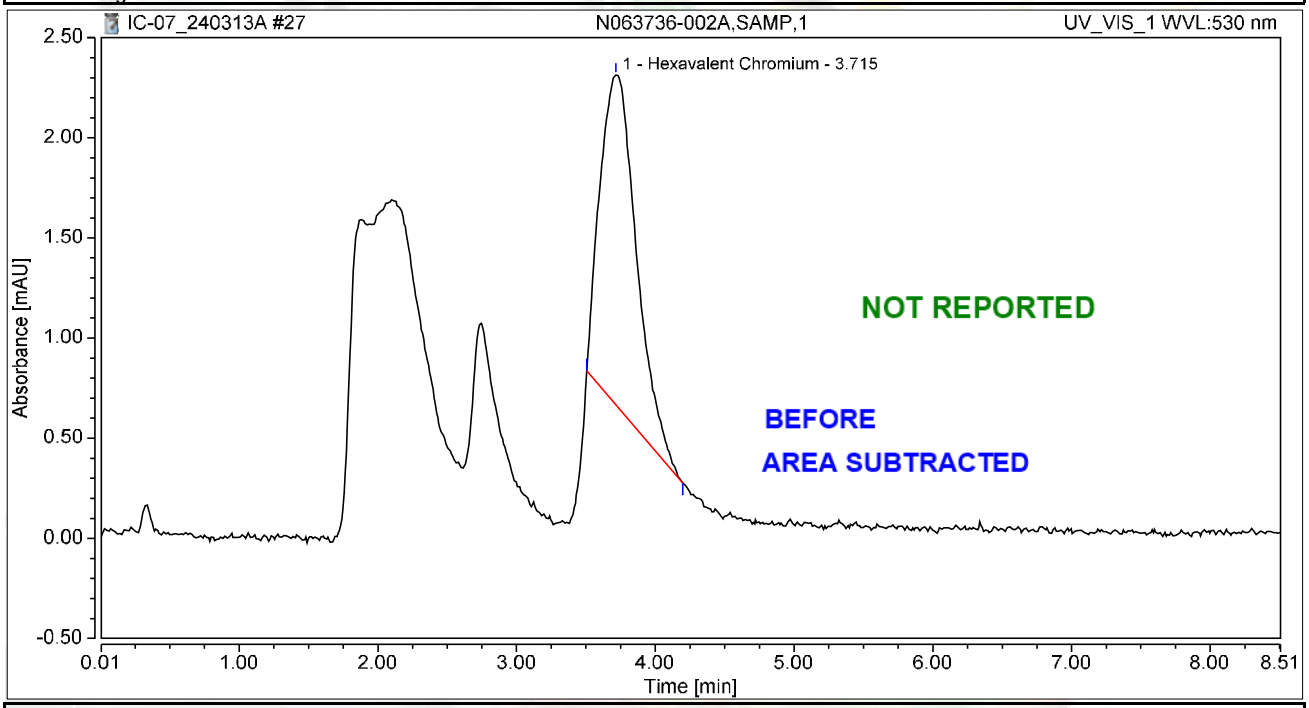
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.715	0.887	2.232	100.00	100.00	4.1654
Total:			**0.887**	**2.232**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 12:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

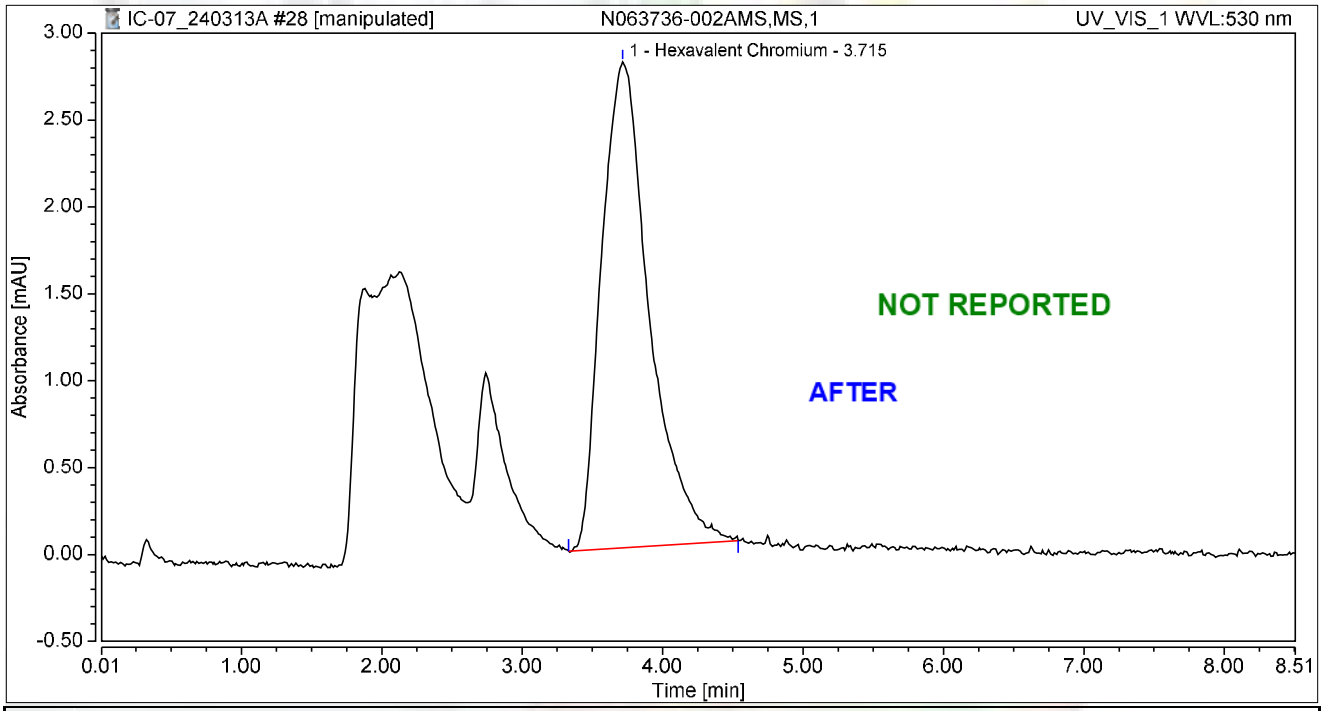
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.715	0.502	1.644	100.00	100.00	2.3565
Total:			**0.502**	**1.644**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 12:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

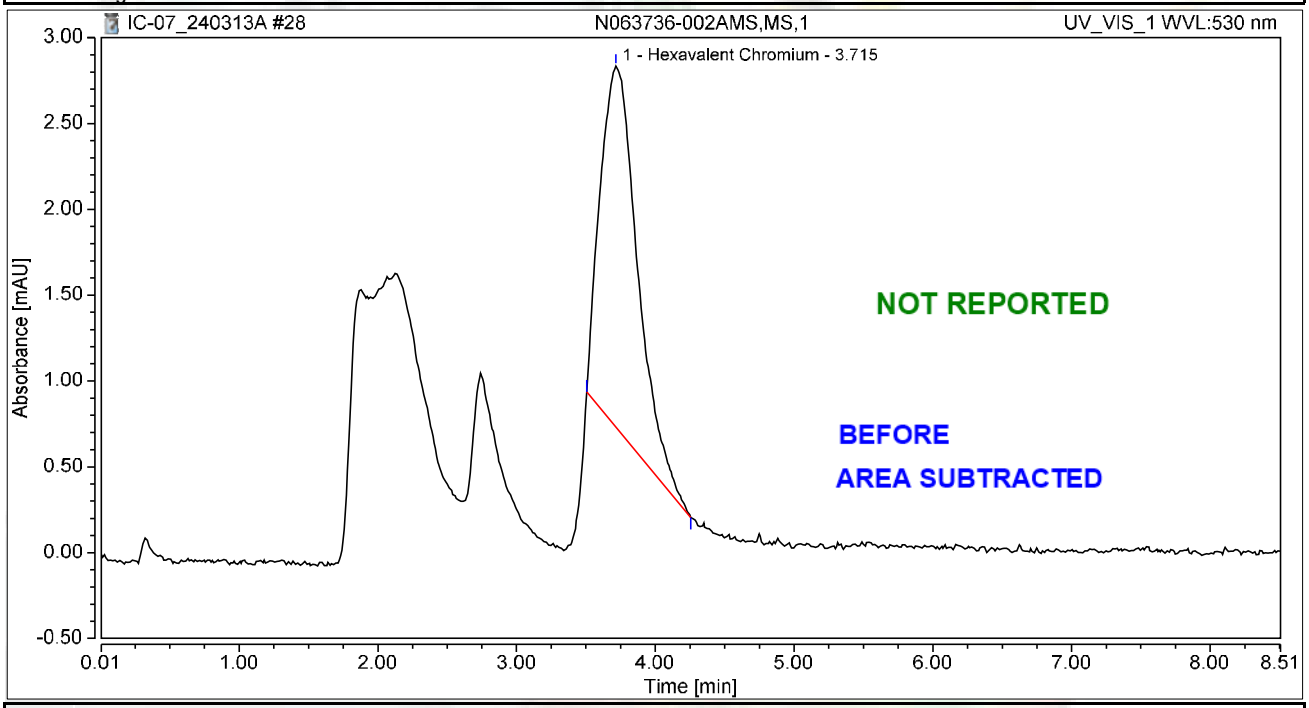
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.715	1.104	2.796	100.00	100.00	5.1875
Total:			**1.104**	**2.796**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 12:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

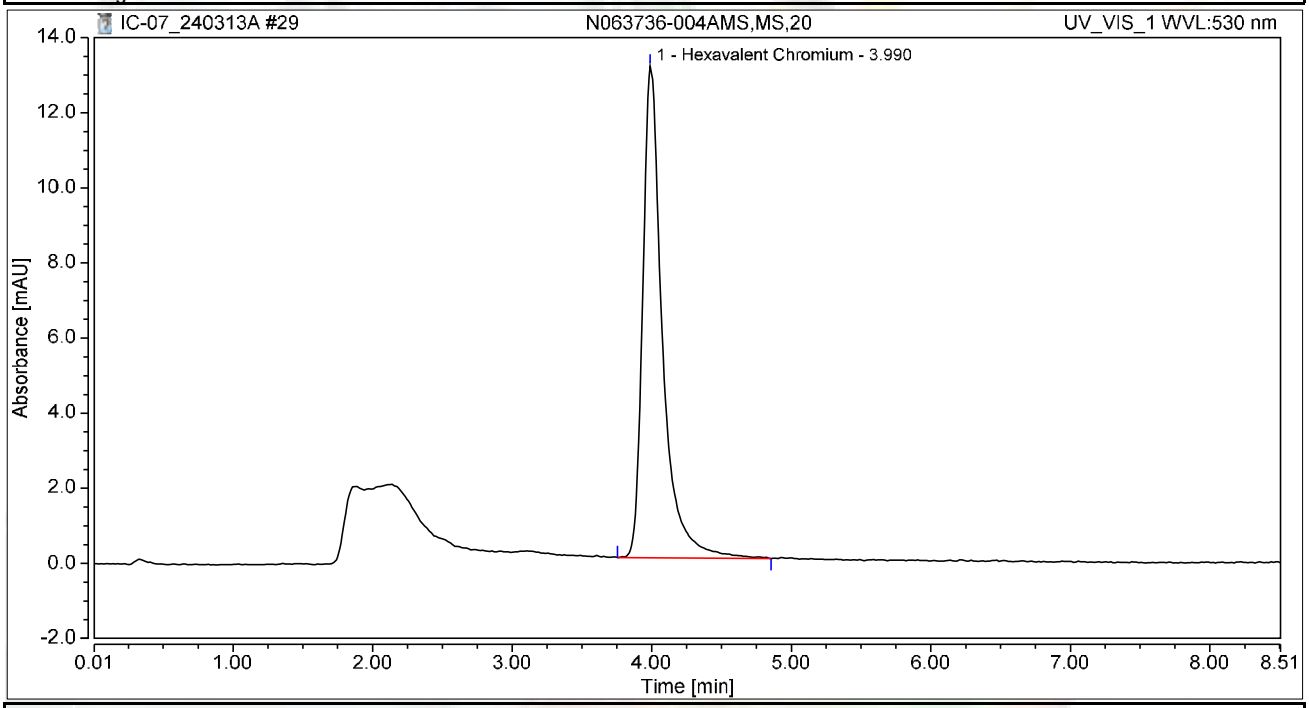
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.715	0.653	2.101	100.00	100.00	3.0692
Total:			**0.653**	**2.101**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-004AMS,MS,20**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 12:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

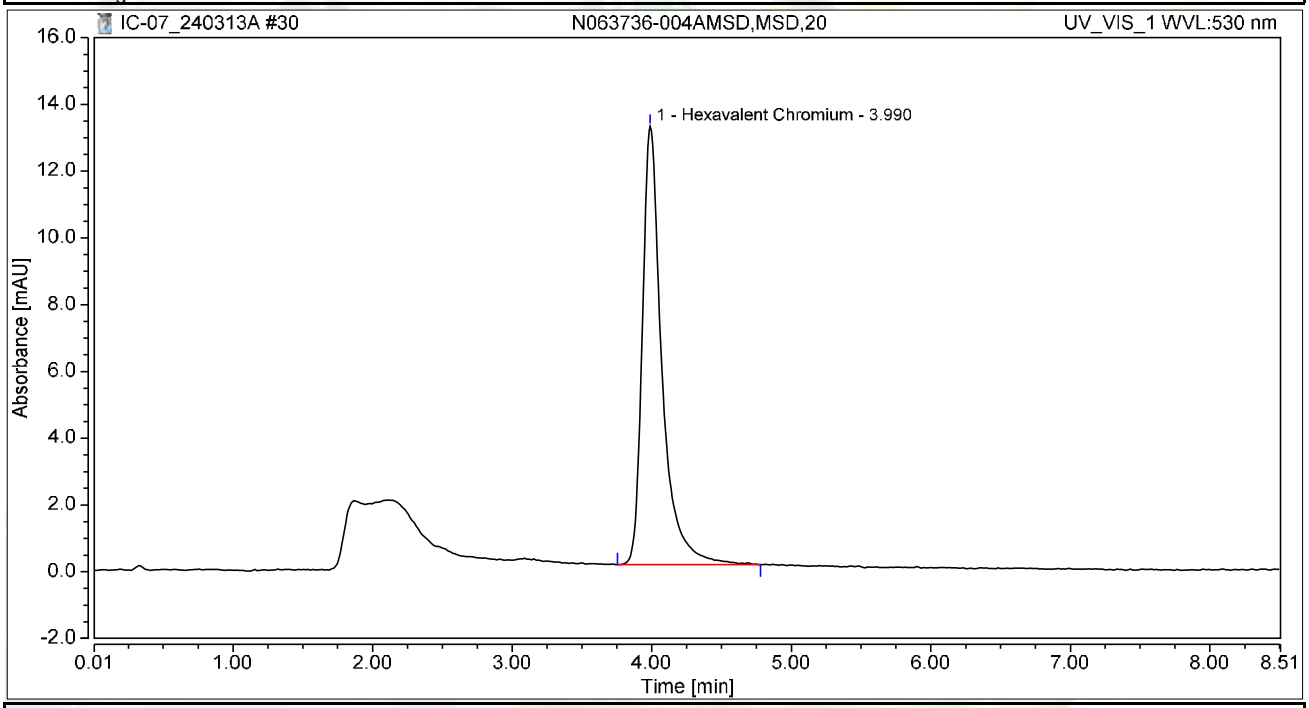
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	2.154	13.094	100.00	100.00	10.1202
Total:			**2.154**	**13.094**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-004AMSD,MSD,20**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 12:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

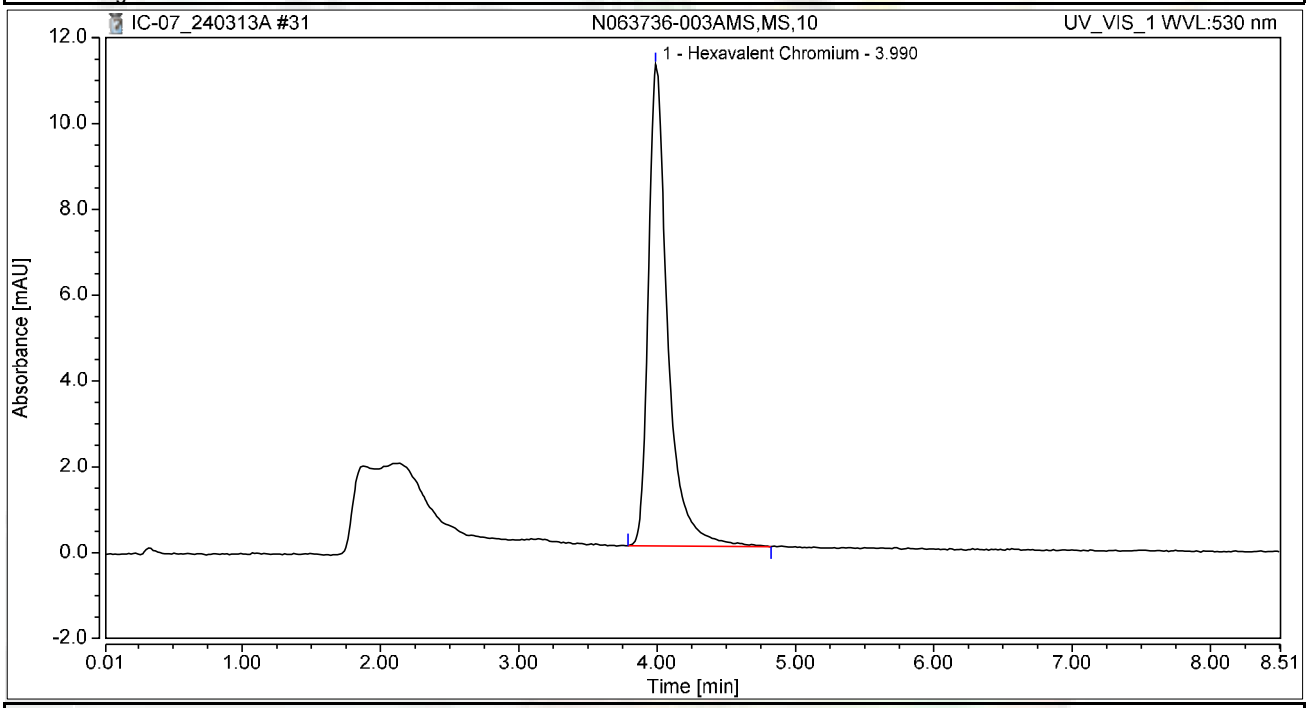
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	2.147	13.144	100.00	100.00	10.0858
Total:			**2.147**	**13.144**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-003AMS,MS,10**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 12:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

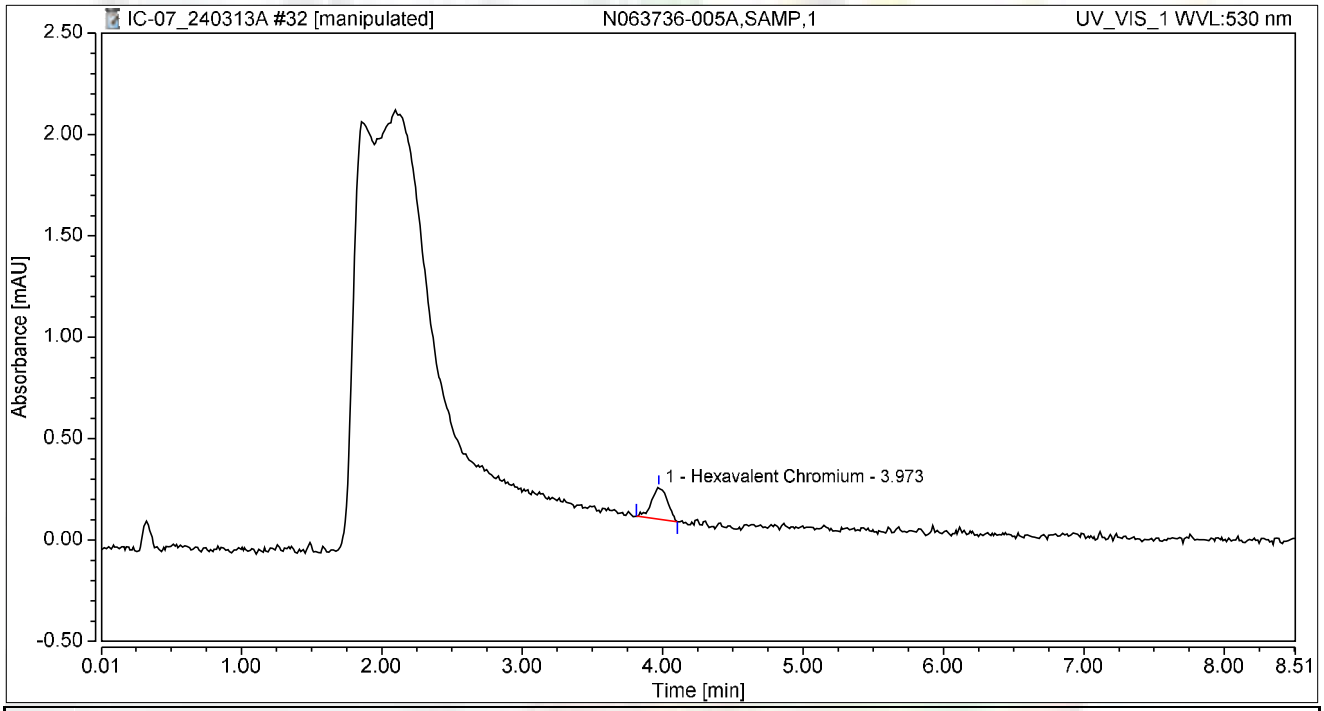
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	1.823	11.213	100.00	100.00	8.5658
Total:			**1.823**	**11.213**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 13:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

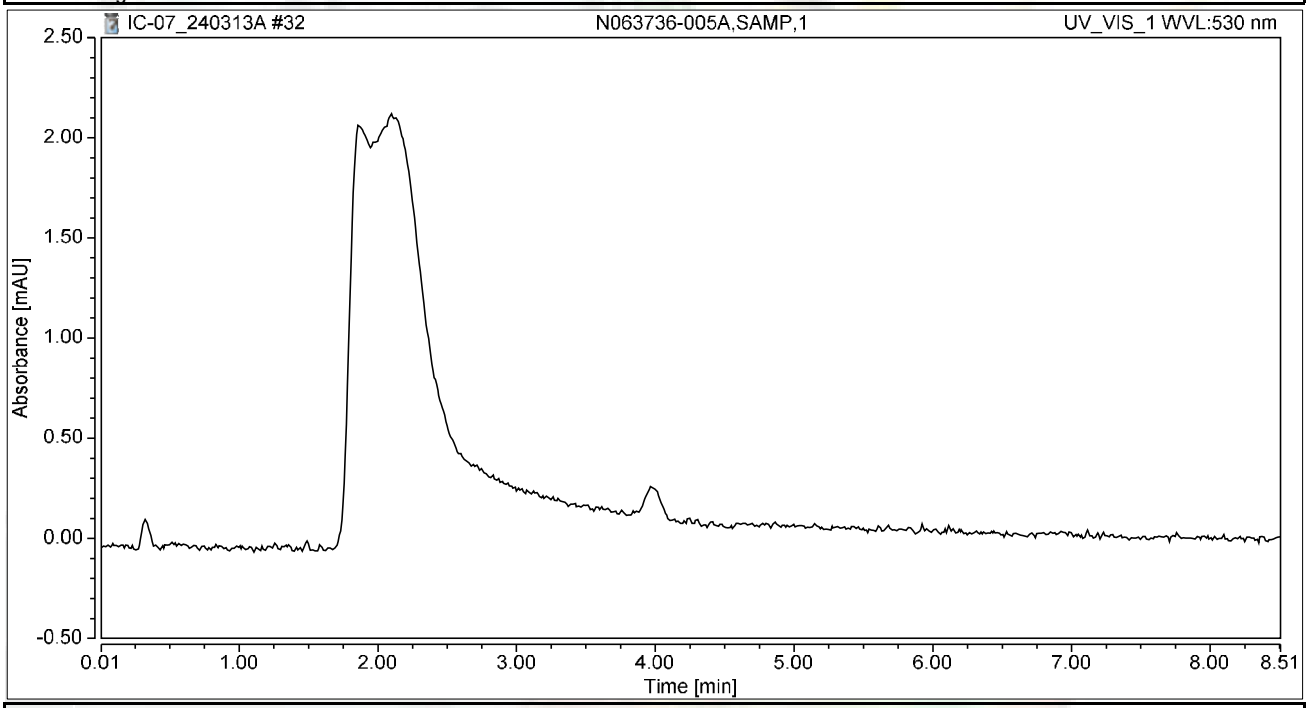
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.021	0.157	100.00	100.00	0.0975
Total:			**0.021**	**0.157**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 13:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

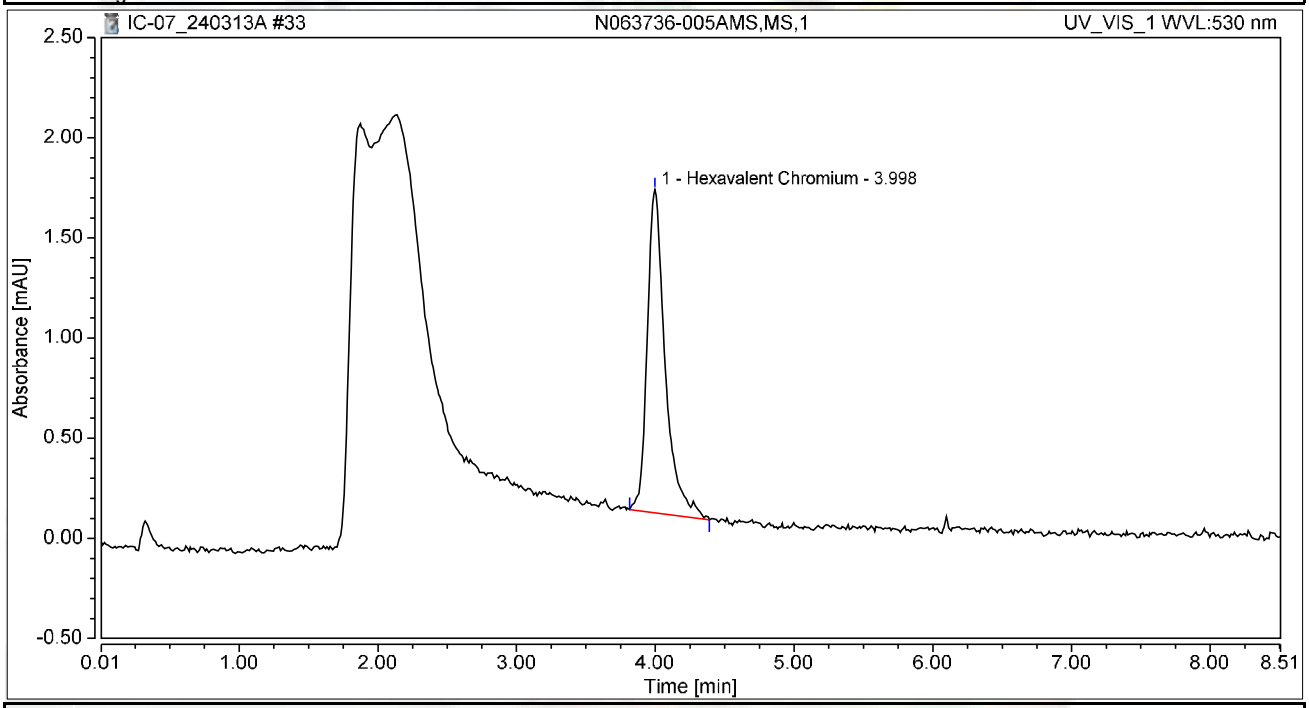
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 13:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

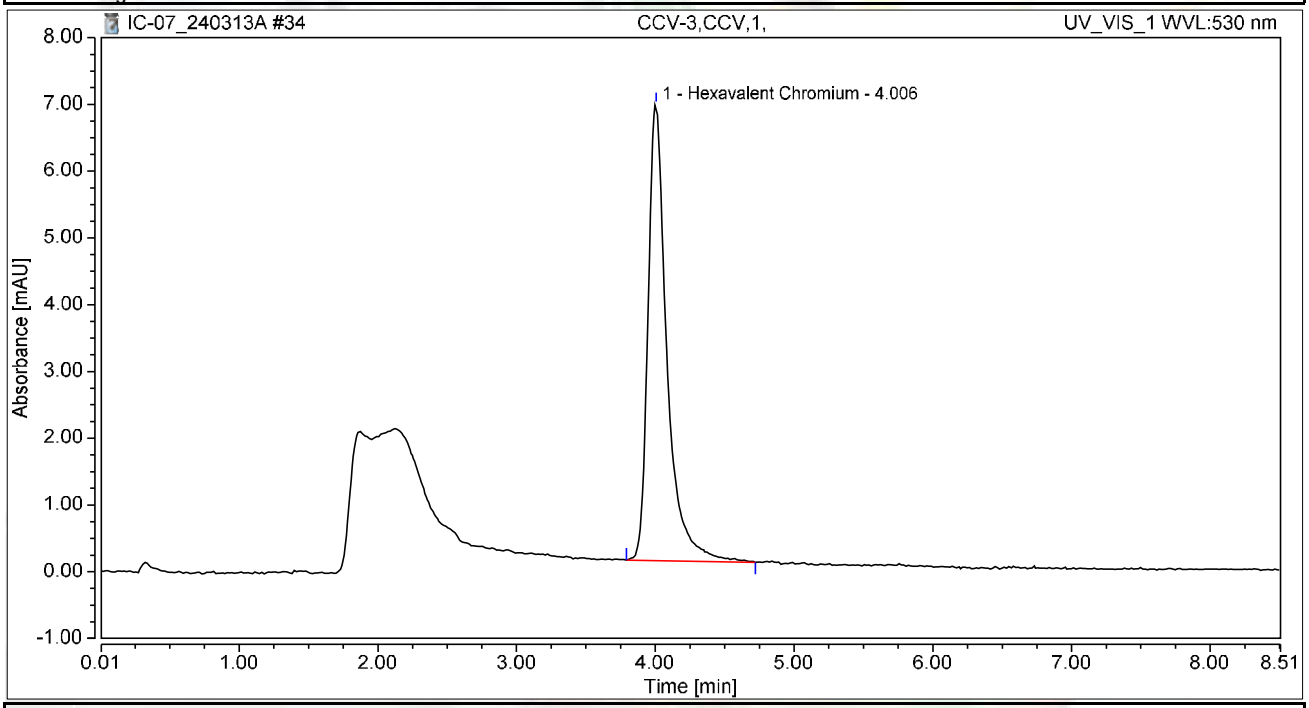
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	0.242	1.614	100.00	100.00	1.1381
Total:			**0.242**	**1.614**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 13:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

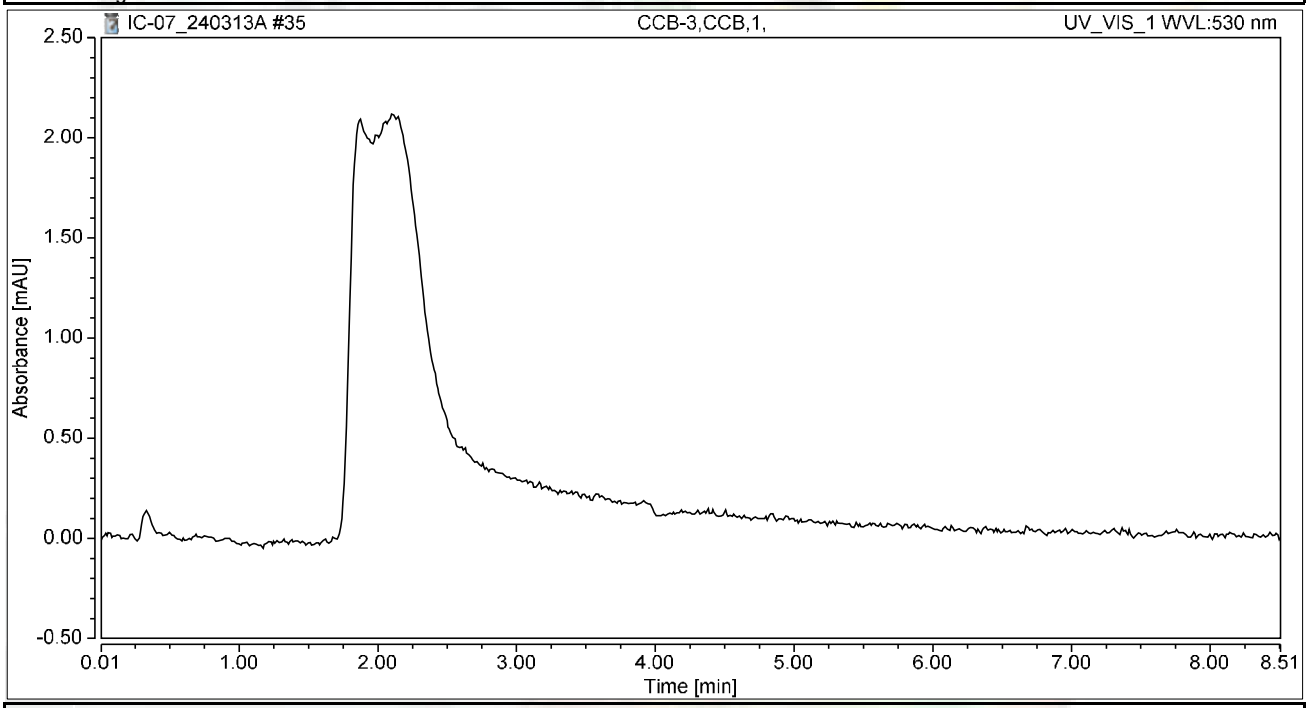
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.084	6.830	100.00	100.00	5.0947
Total:			**1.084**	**6.830**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 13:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

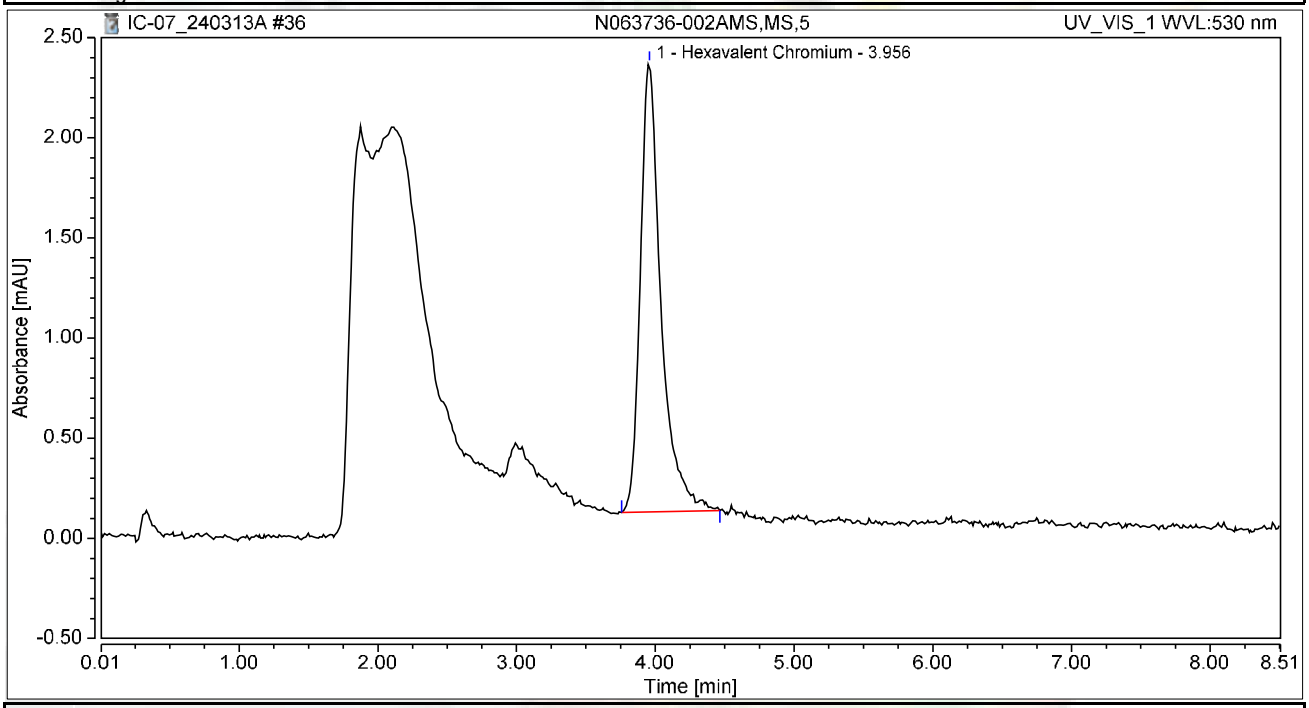
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 13:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

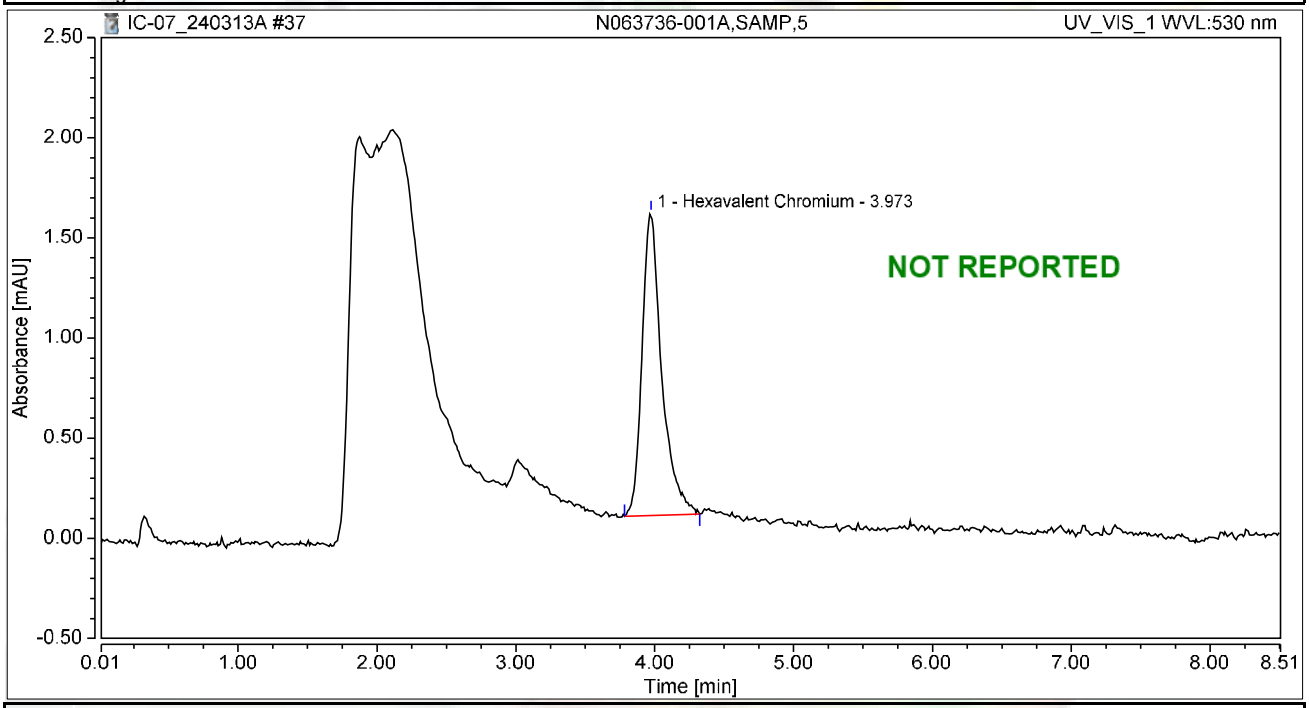
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.388	2.239	100.00	100.00	1.8231
Total:			**0.388**	**2.239**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-001A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 13:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

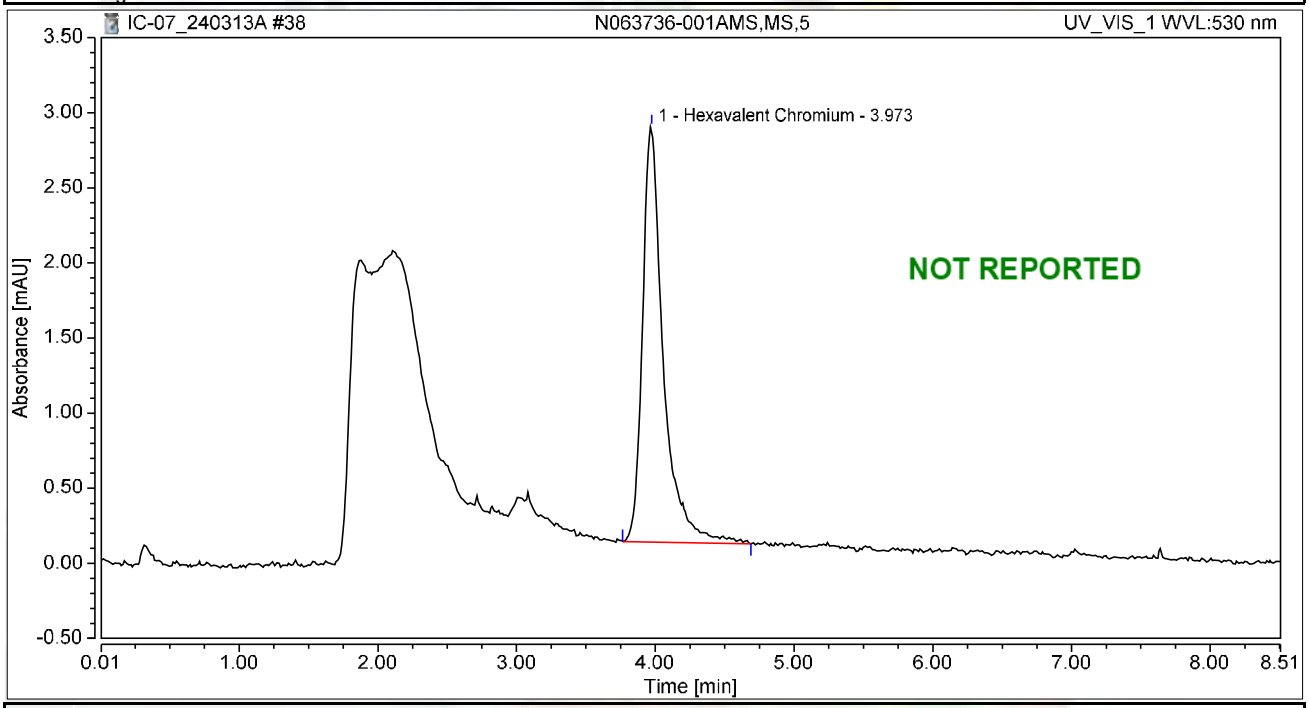
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.248	1.512	100.00	100.00	1.1662
Total:			**0.248**	**1.512**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063736-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 14:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

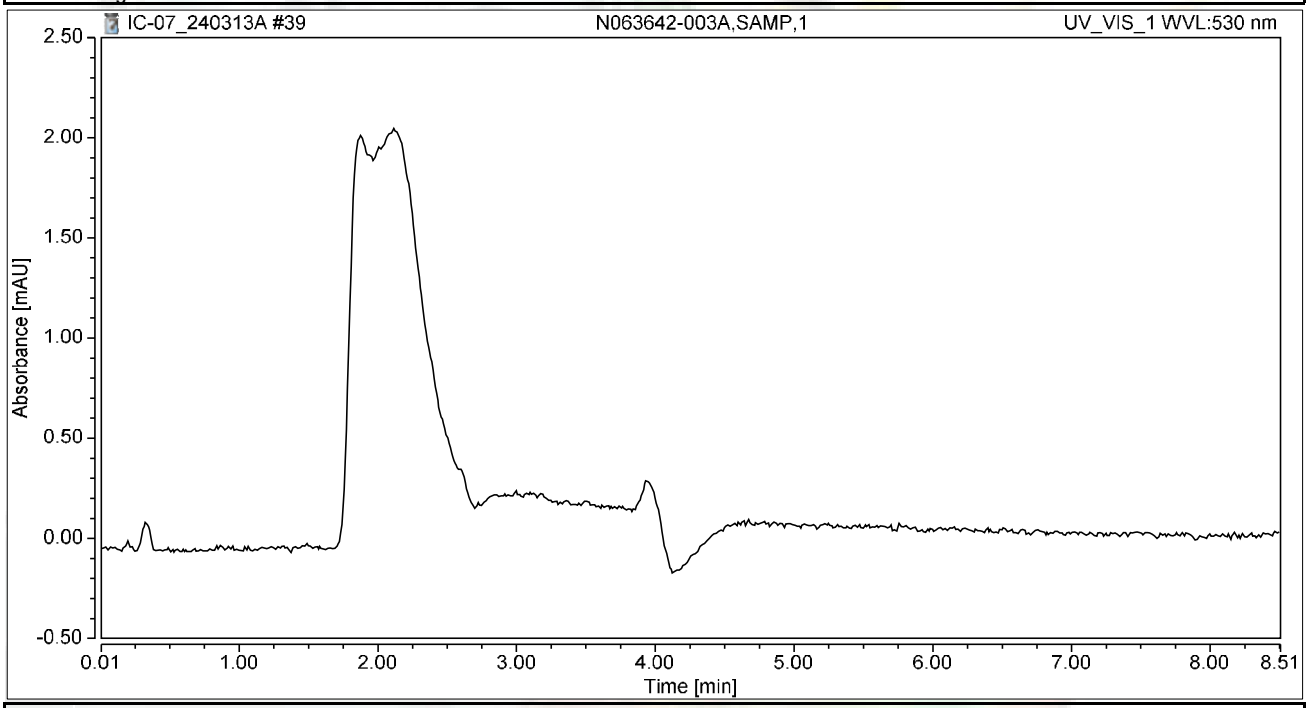
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.481	2.767	100.00	100.00	2.2579
Total:			**0.481**	**2.767**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 14:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

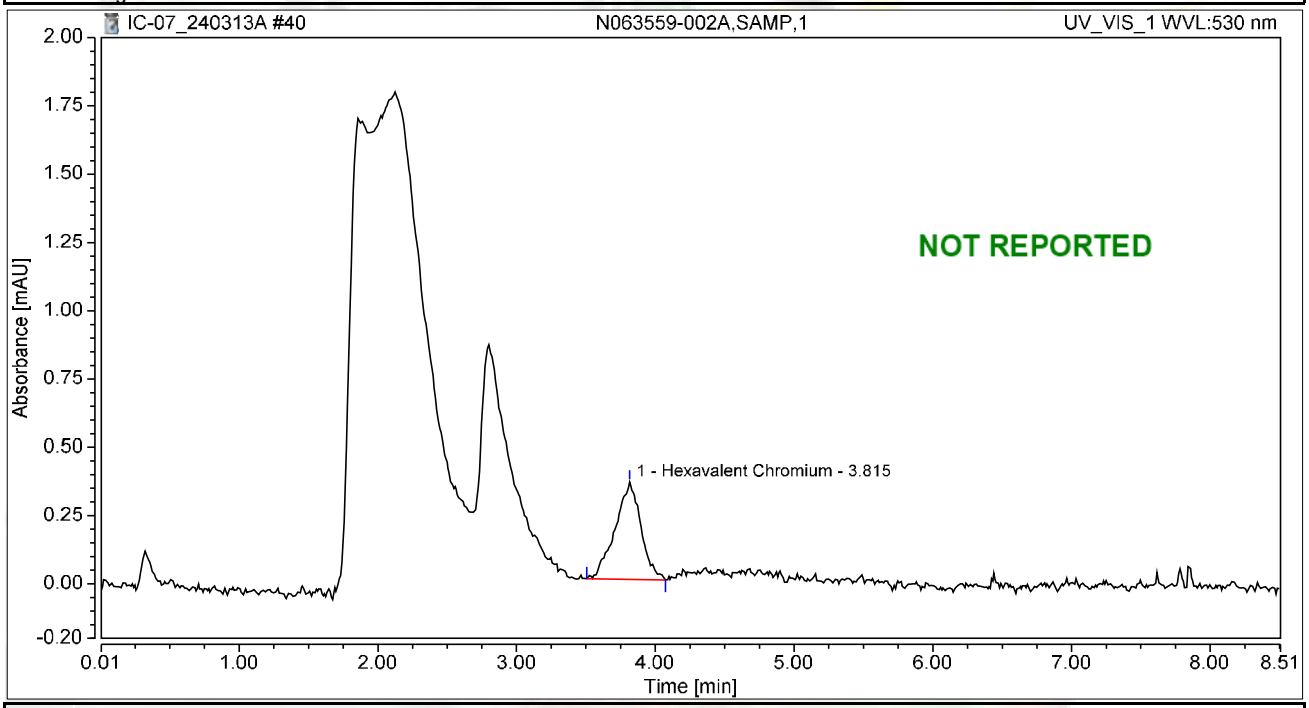
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 14:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

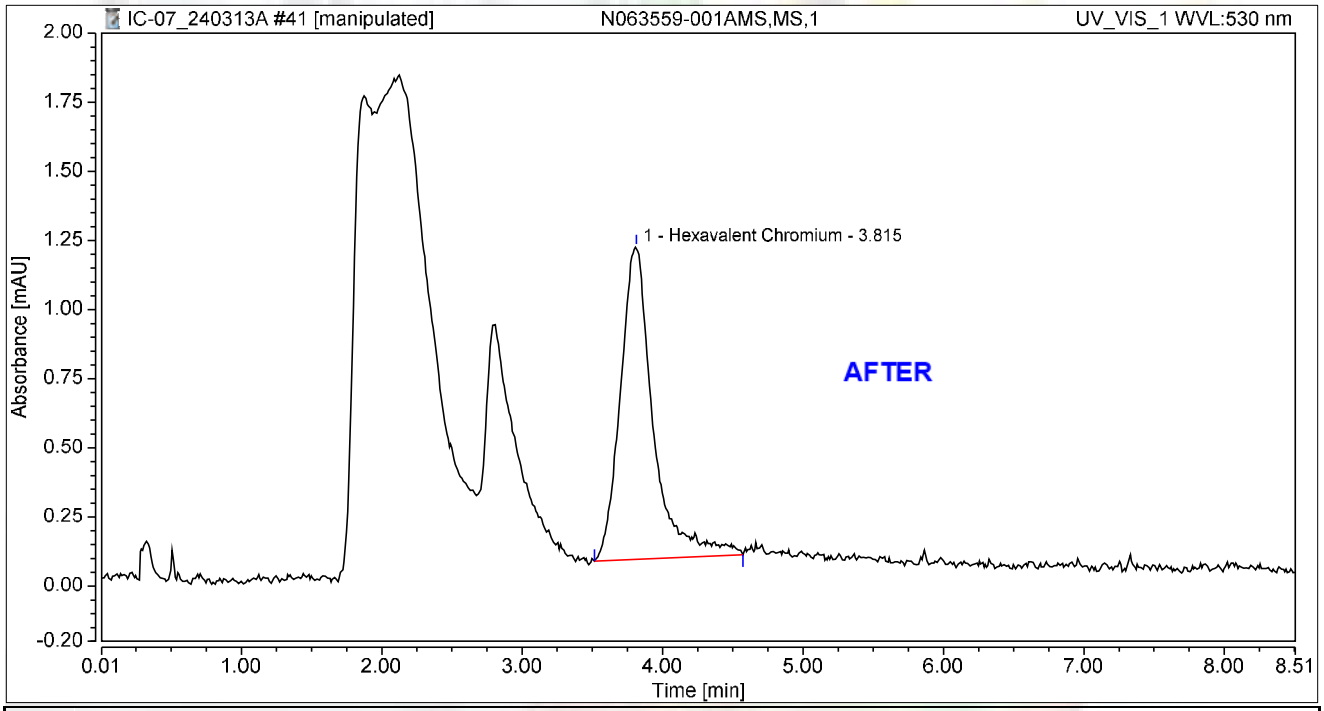
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	0.077	0.357	100.00	100.00	0.3594
Total:			**0.077**	**0.357**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 14:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	0.306	1.130	100.00	100.00	1.4386
Total:			**0.306**	**1.130**	**100.00**	**100.00**	

Reviewed by:

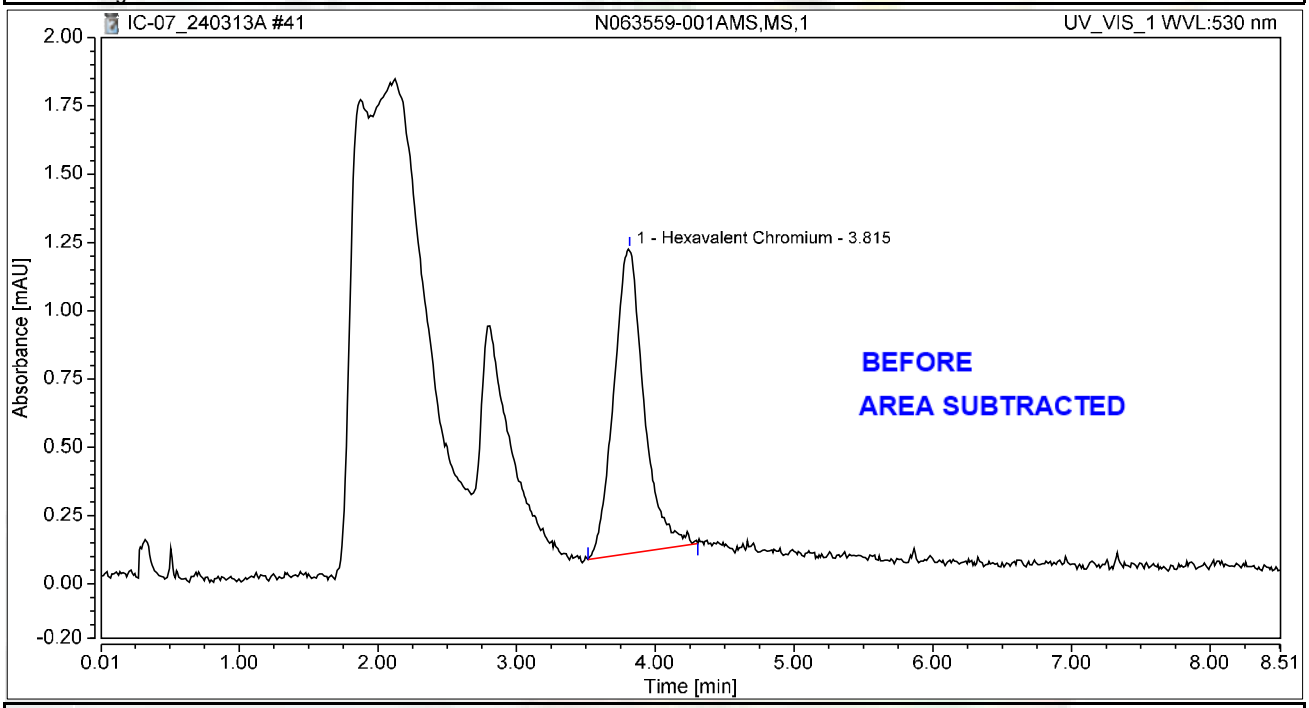
JRB 3/14/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063559-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 14:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

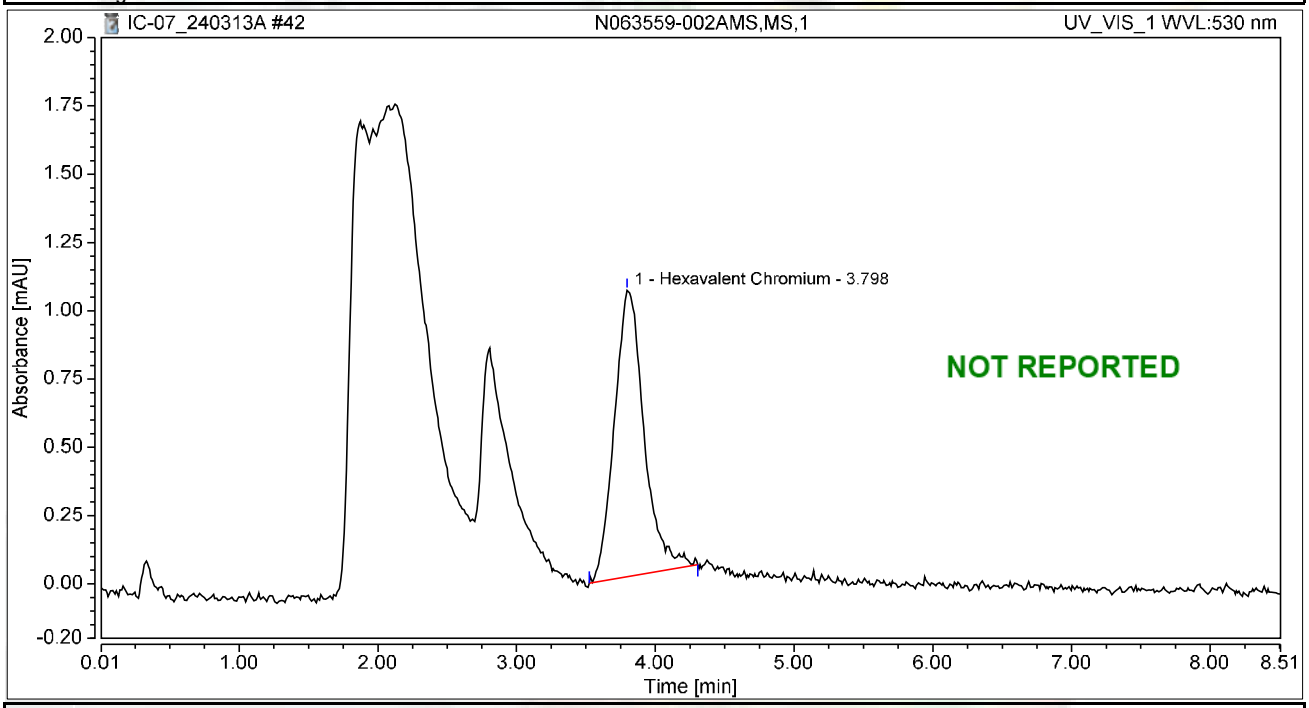
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	0.281	1.115	100.00	100.00	1.3216
Total:			**0.281**	**1.115**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 14:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

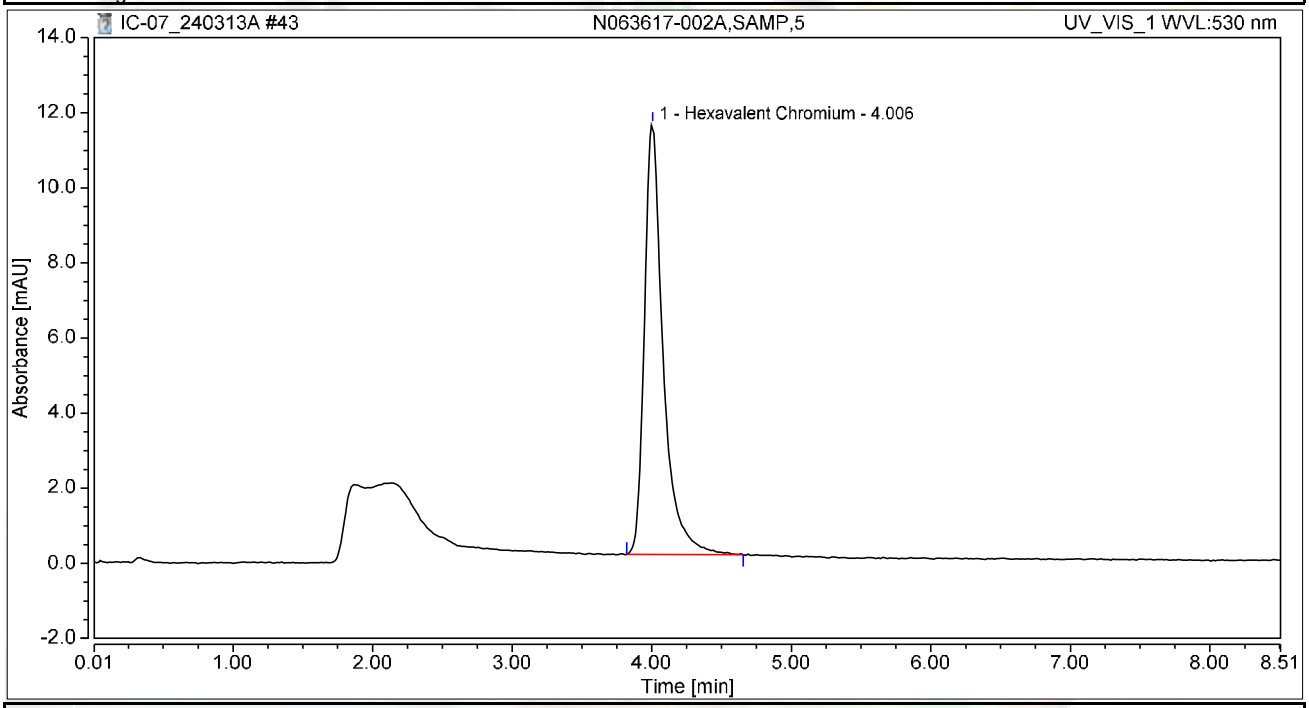
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.798	0.260	1.048	100.00	100.00	1.2225
Total:			**0.260**	**1.048**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 14:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

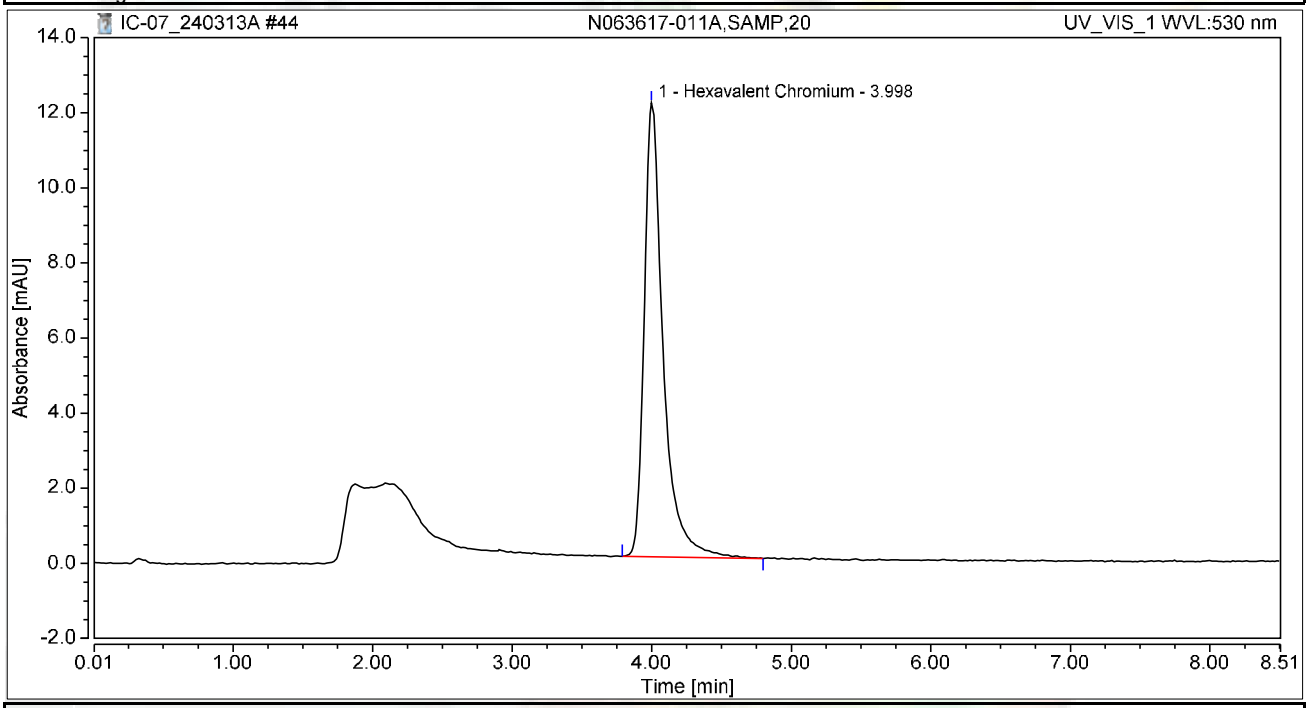
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.789	11.455	100.00	100.00	8.4033
Total:			**1.789**	**11.455**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-011A,SAMP,20**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 14:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

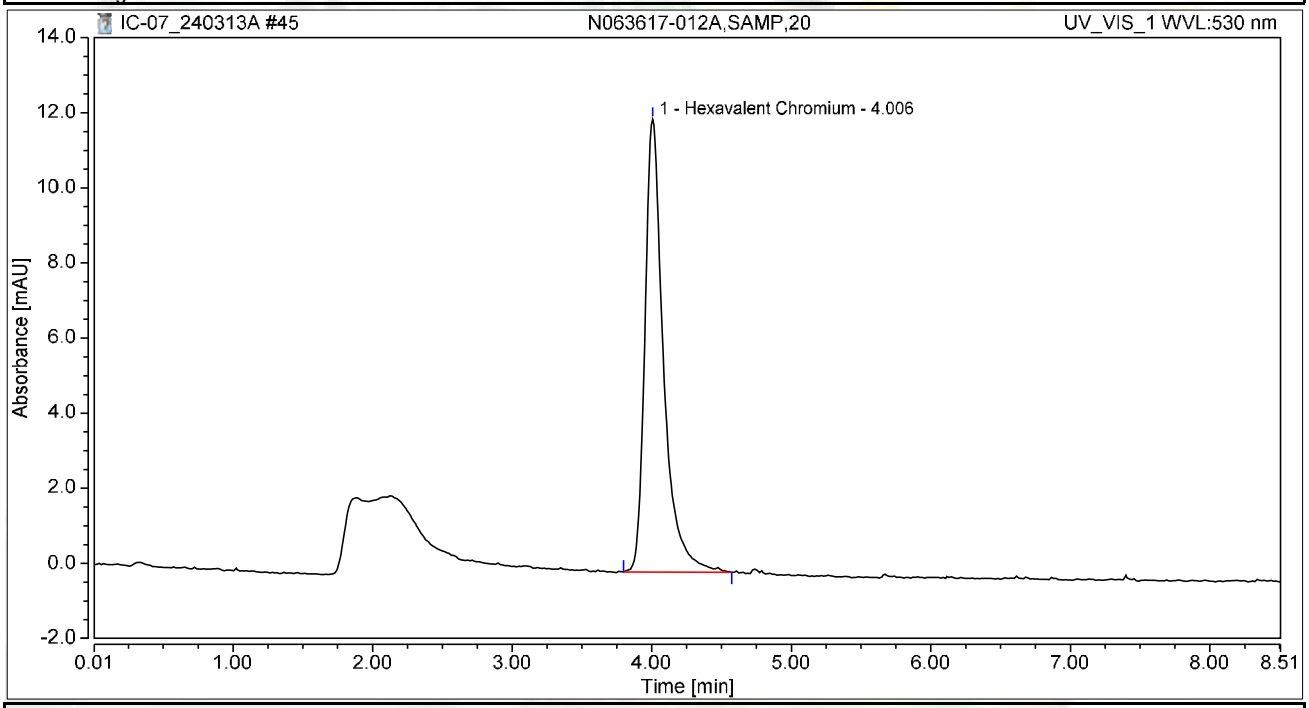
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	1.906	12.091	100.00	100.00	8.9538
Total:			**1.906**	**12.091**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-012A,SAMP,20**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 15:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

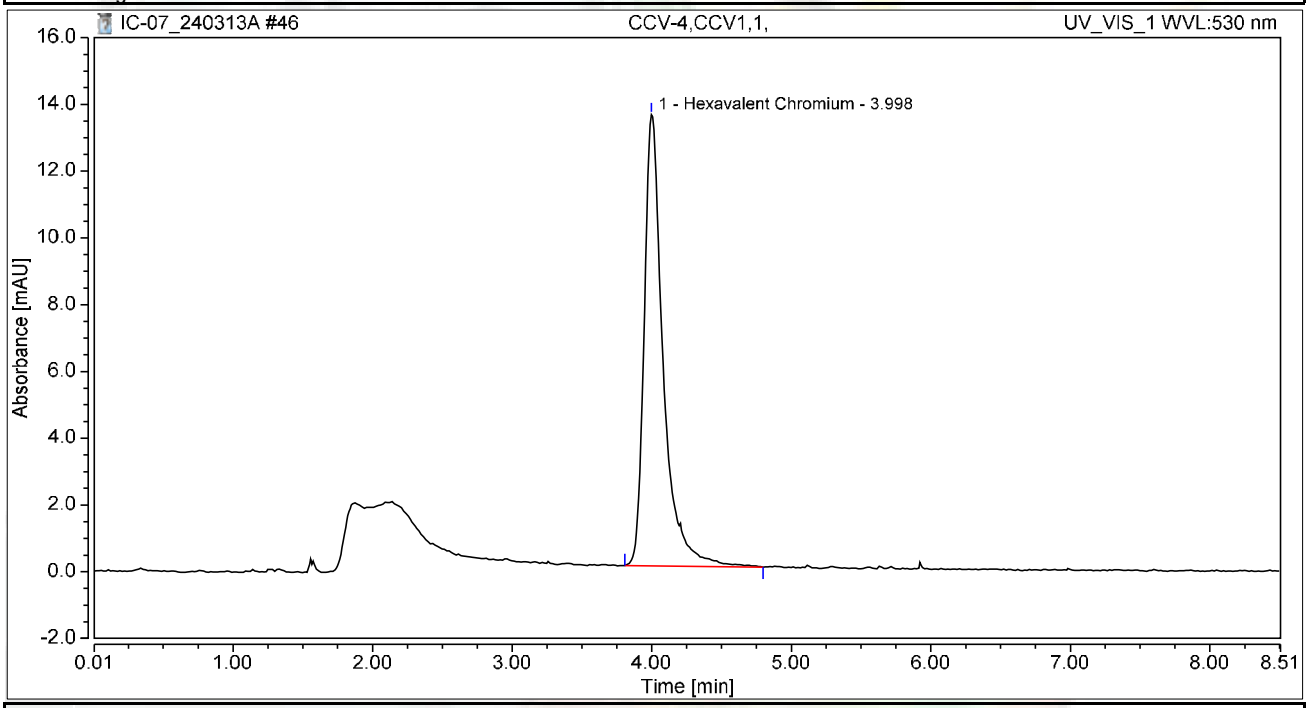
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.866	12.055	100.00	100.00	8.7688
Total:			**1.866**	**12.055**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 15:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

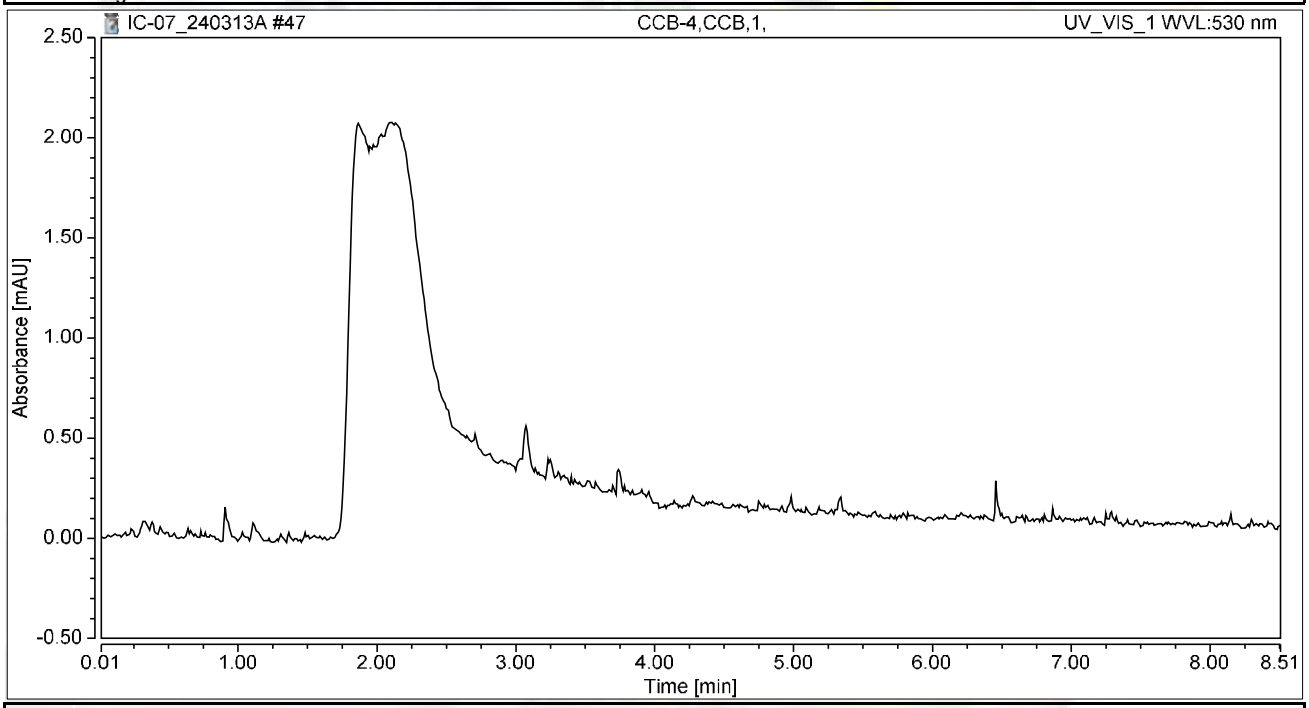
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	2.139	13.510	100.00	100.00	10.0495
Total:			**2.139**	**13.510**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 15:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

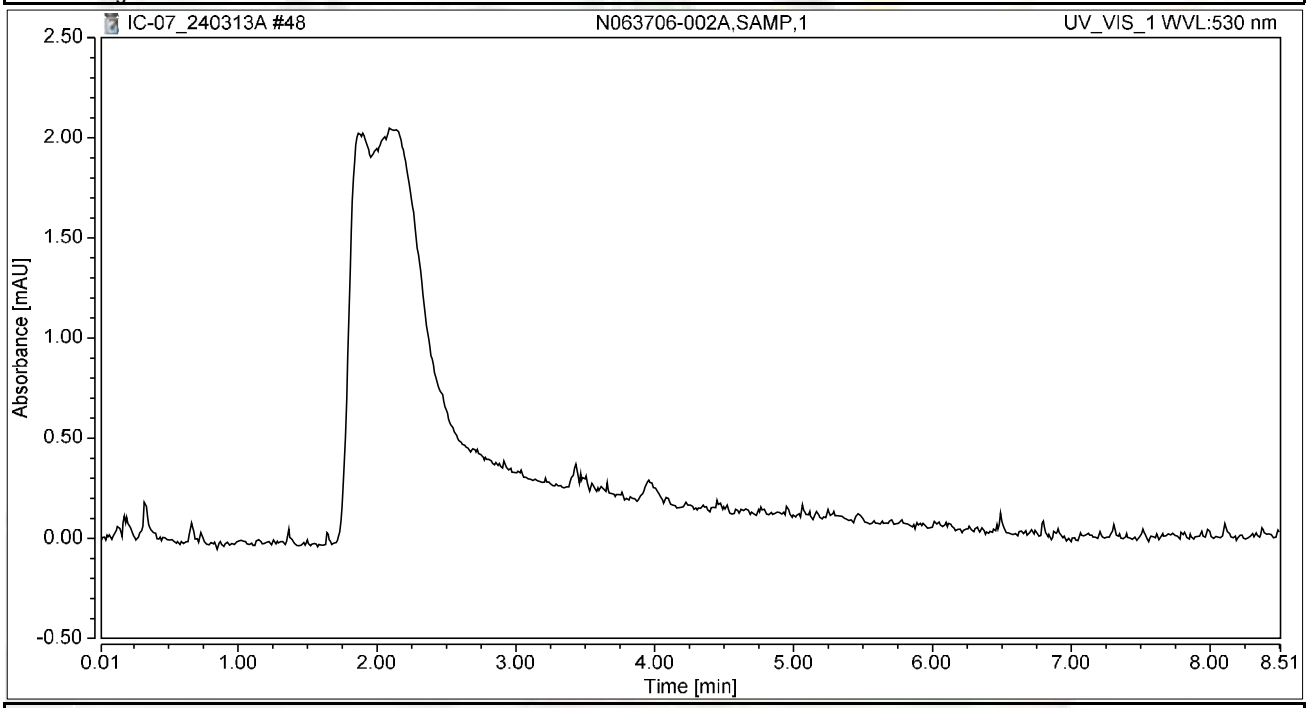
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063706-002A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 15:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

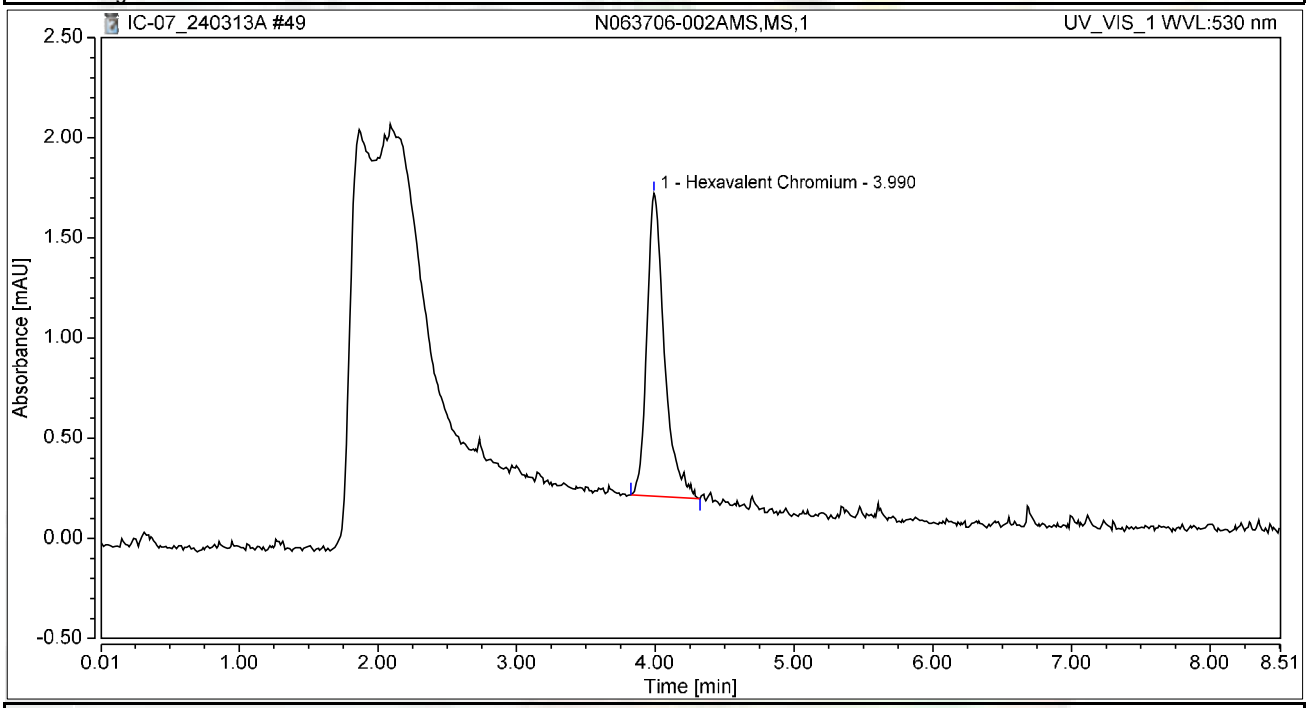
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063706-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 16:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

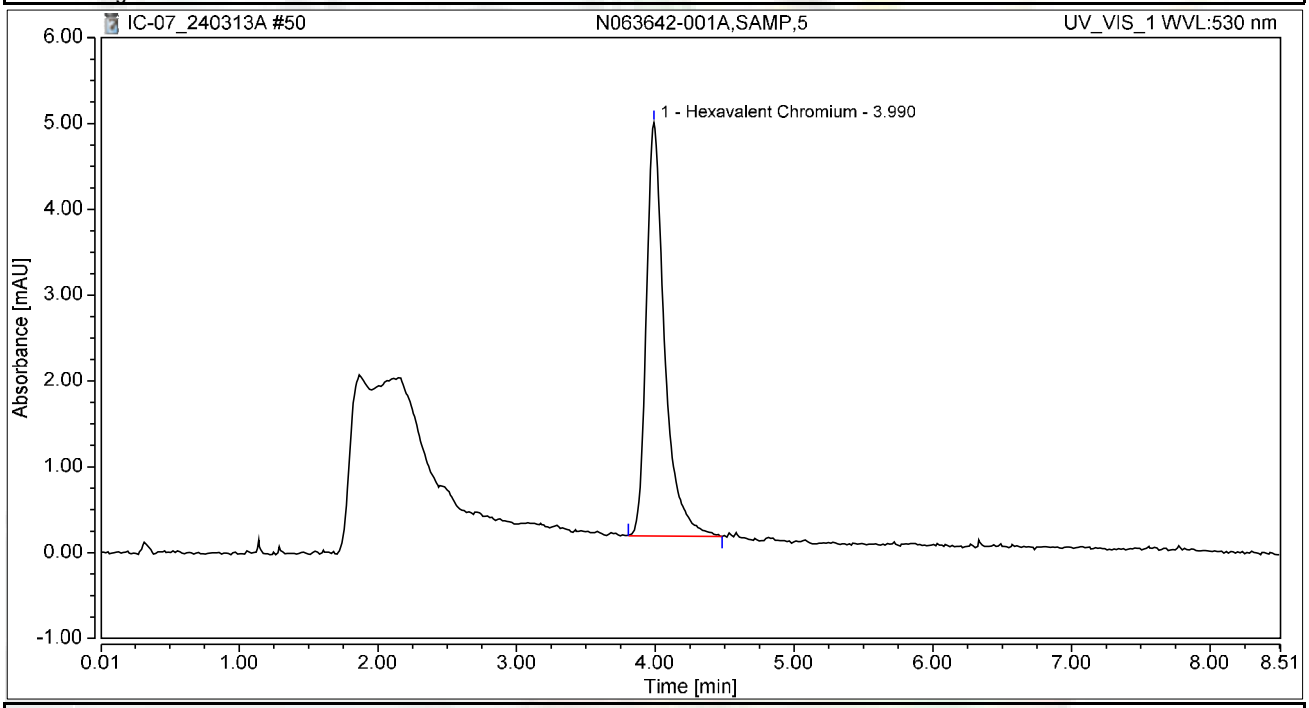
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.221	1.510	100.00	100.00	1.0380
Total:			**0.221**	**1.510**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 16:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

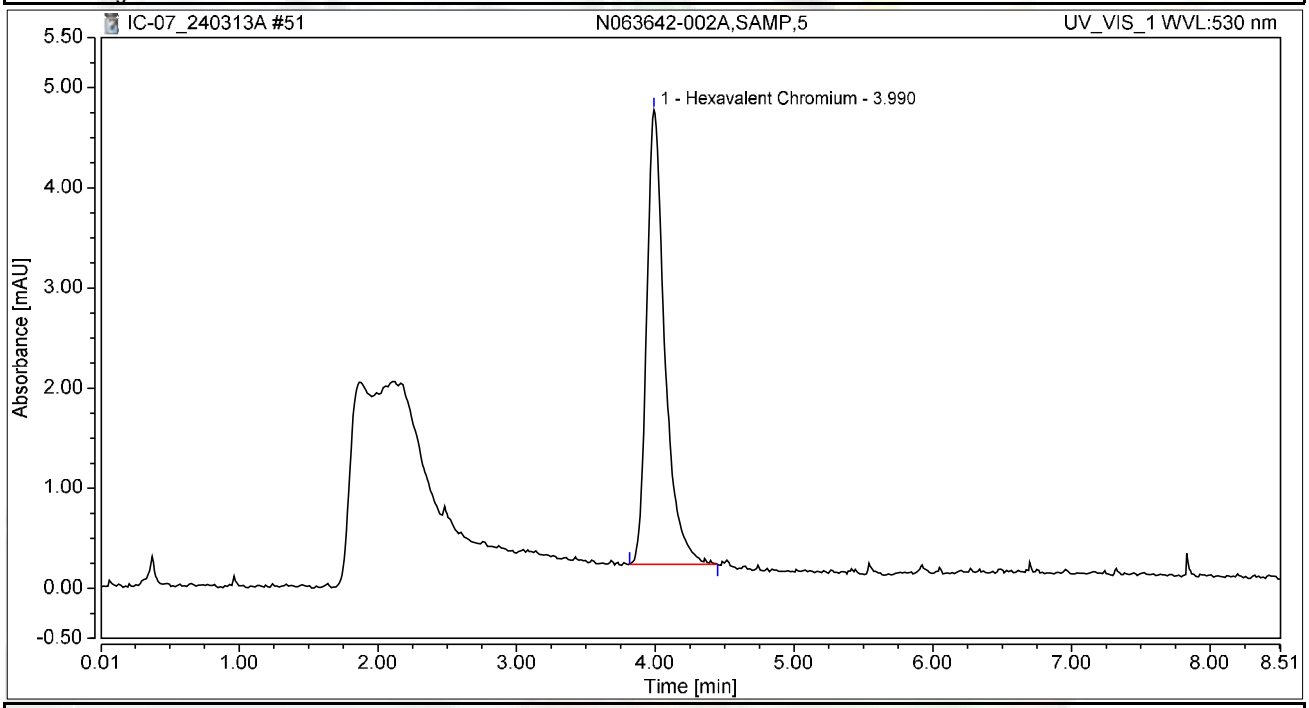
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.737	4.814	100.00	100.00	3.4638
Total:			**0.737**	**4.814**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 16:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

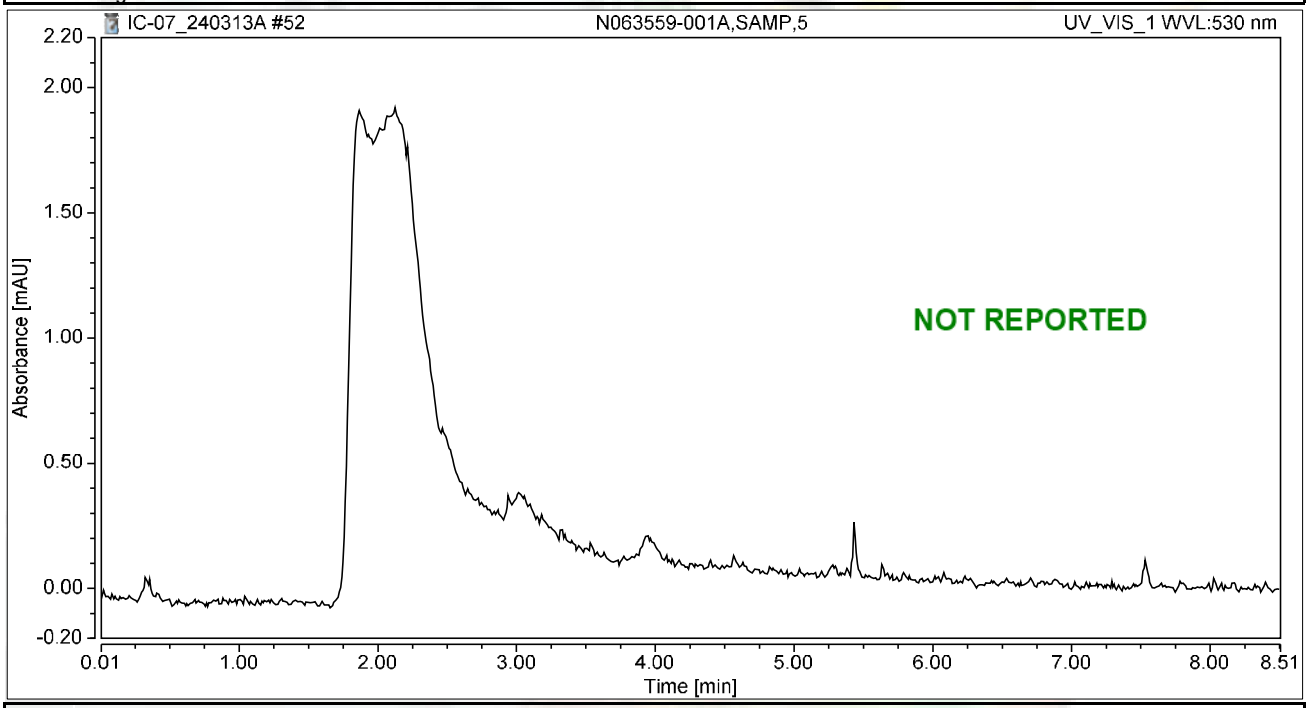
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.690	4.536	100.00	100.00	3.2414
Total:			**0.690**	**4.536**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 16:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

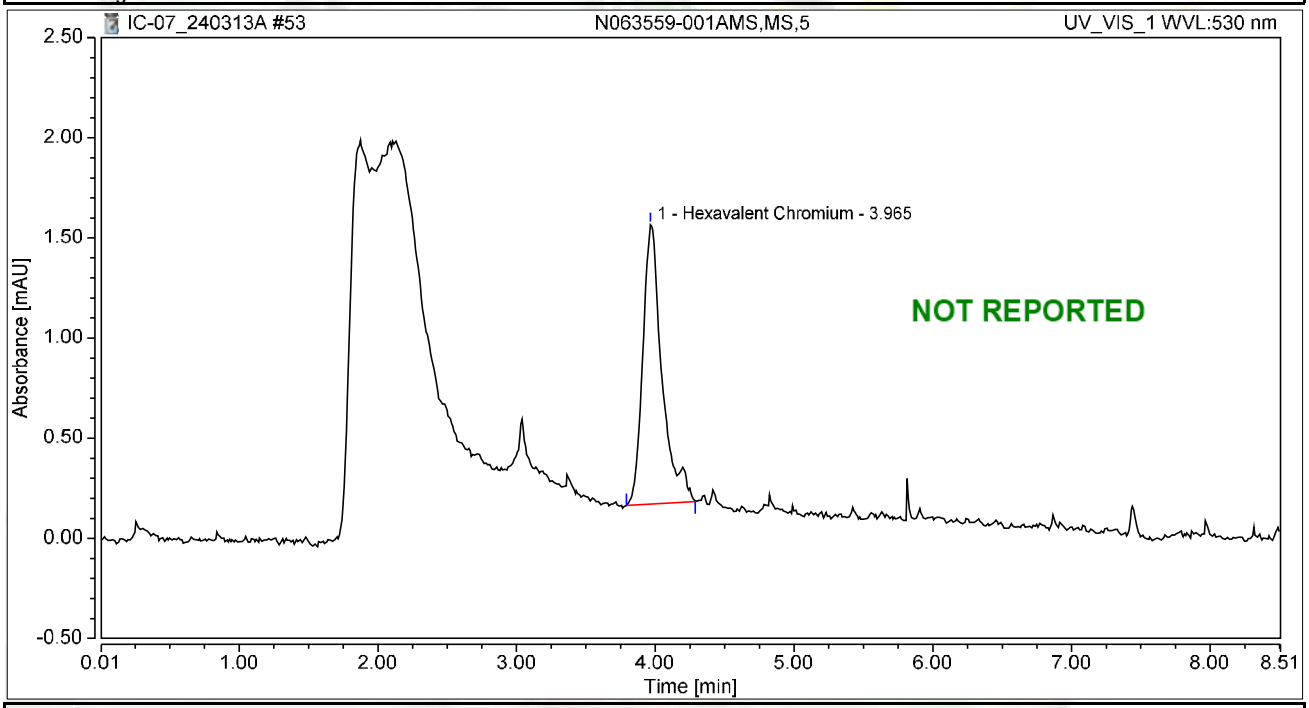
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 16:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

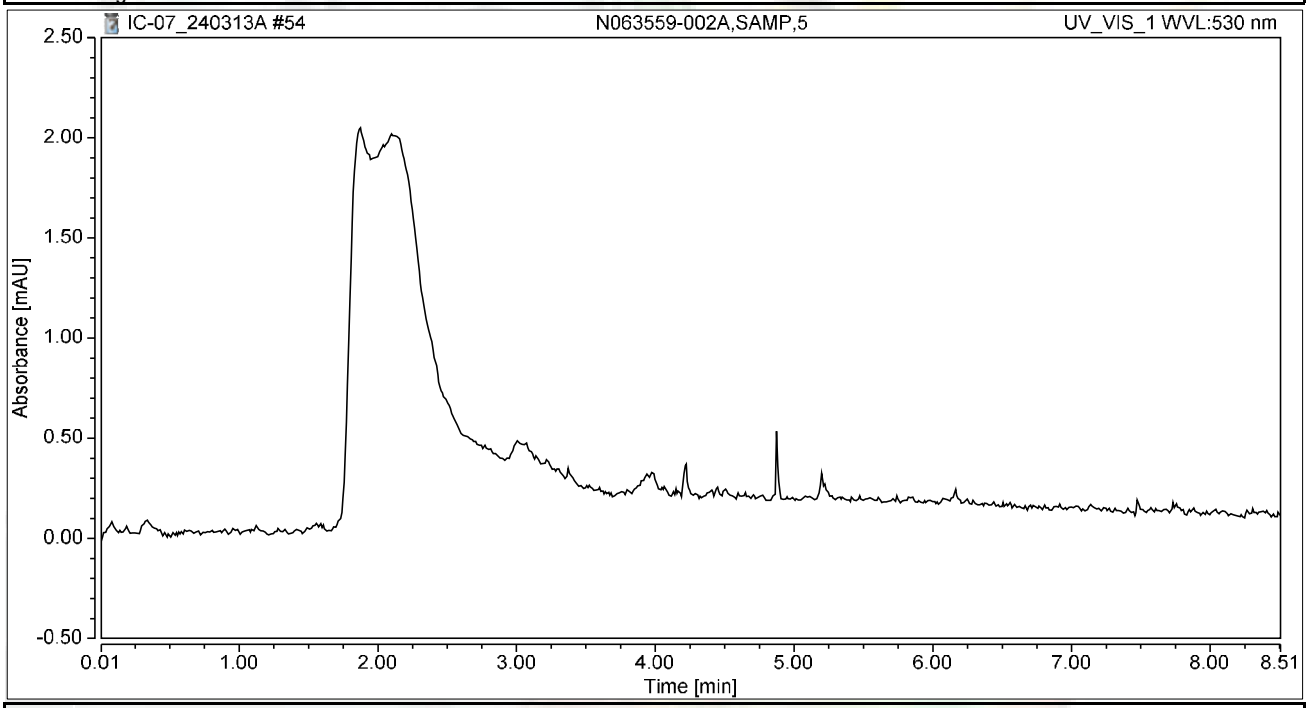
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.224	1.395	100.00	100.00	1.0533
Total:			**0.224**	**1.395**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 16:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

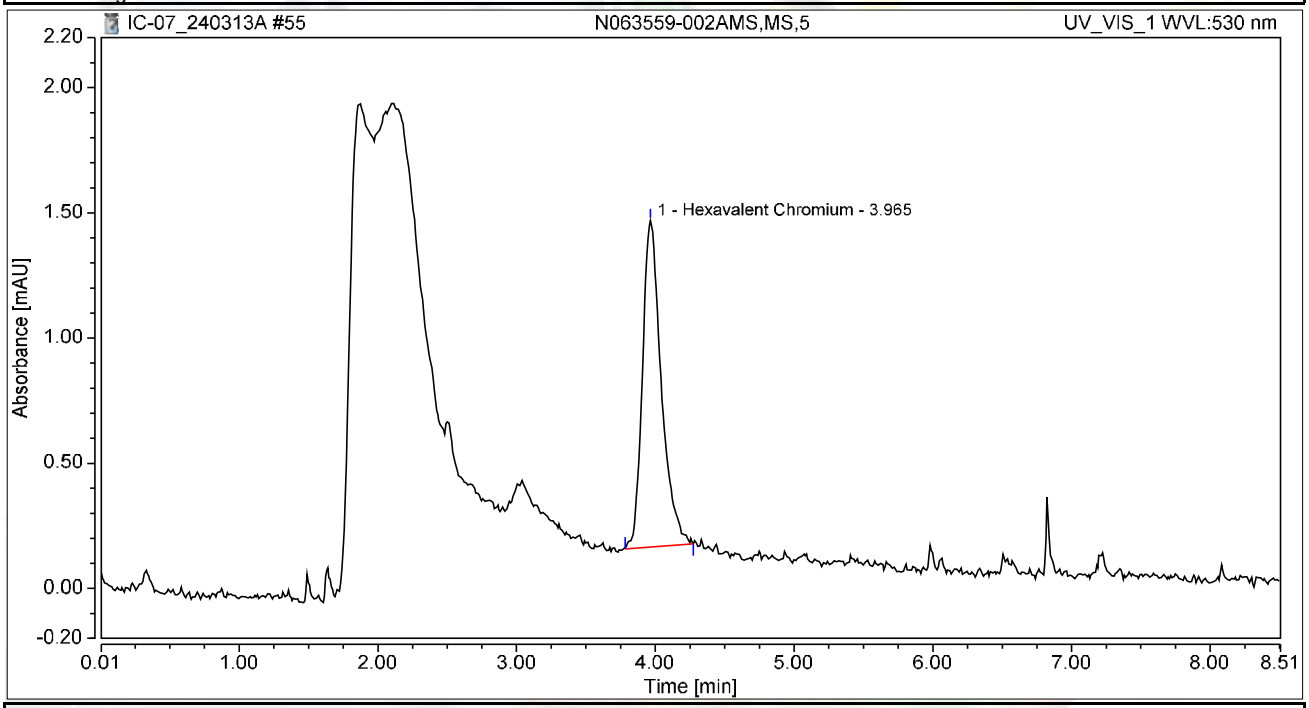
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 17:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

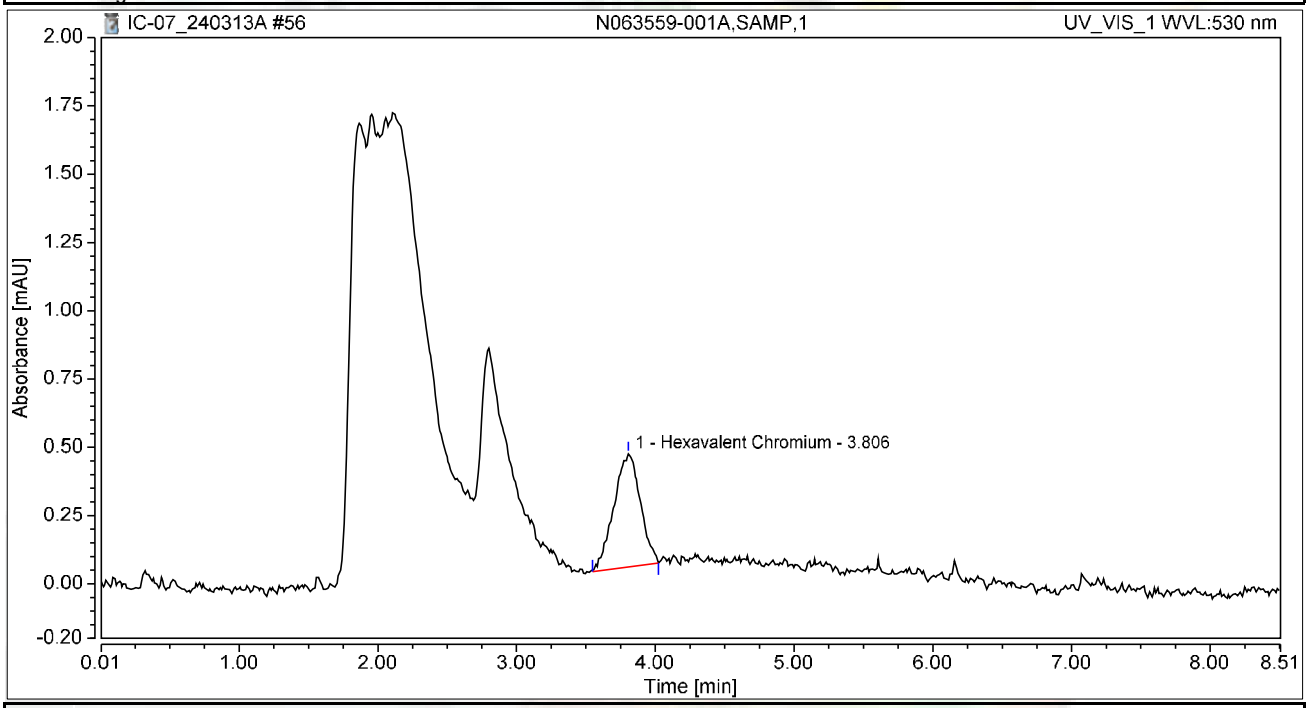
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.206	1.302	100.00	100.00	0.9660
Total:			**0.206**	**1.302**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063559-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 17:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

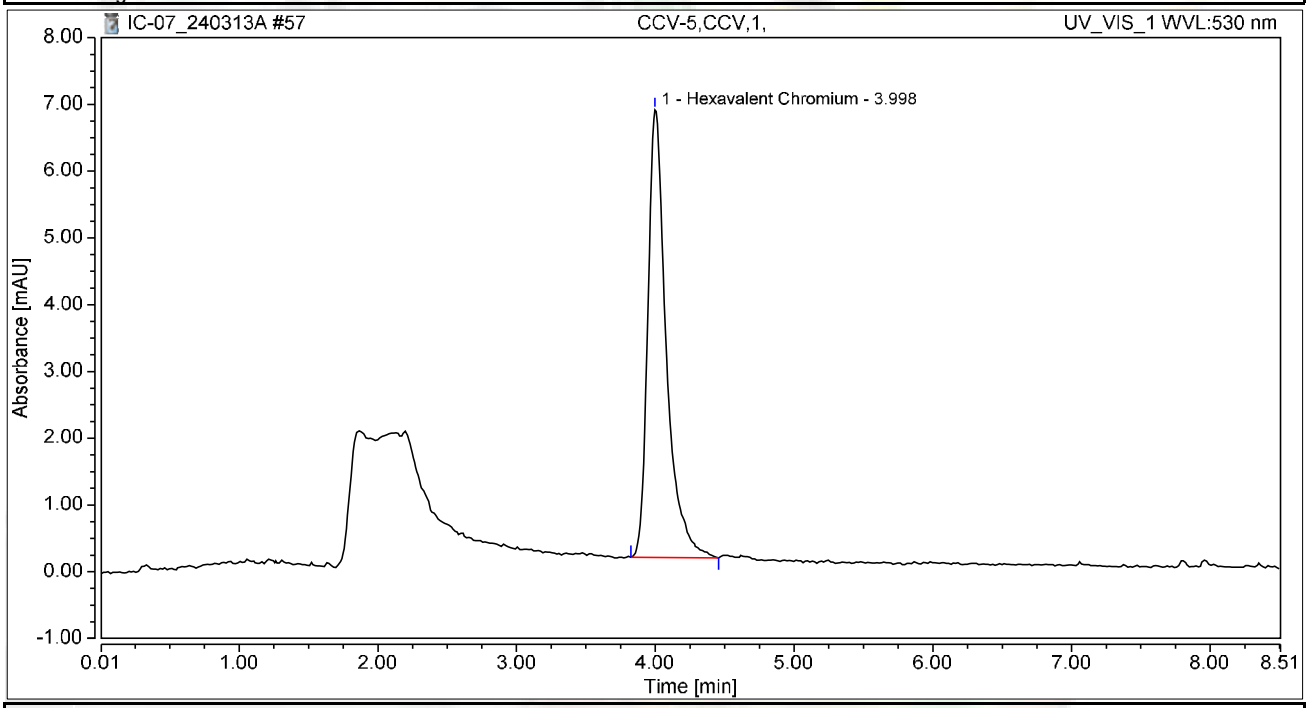
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.806	0.092	0.414	100.00	100.00	0.4311
Total:			**0.092**	**0.414**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 17:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

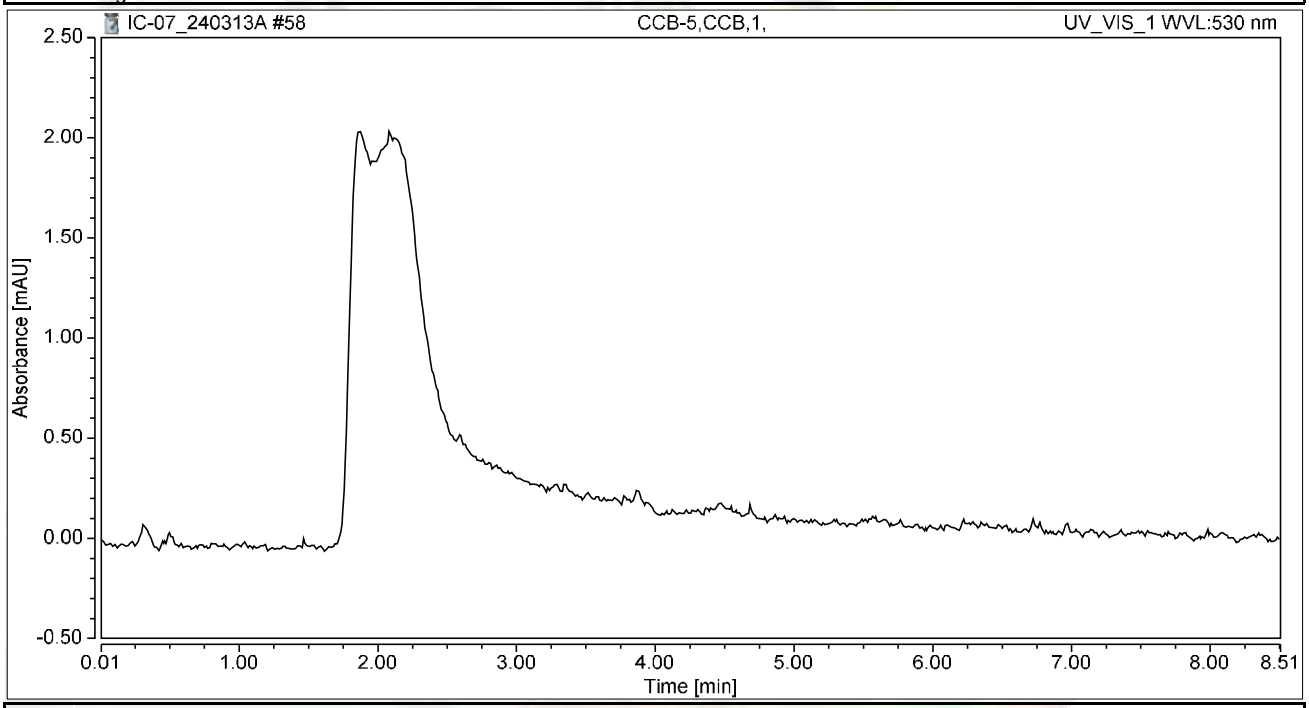
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	1.036	6.705	100.00	100.00	4.8696
Total:			**1.036**	**6.705**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 17:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

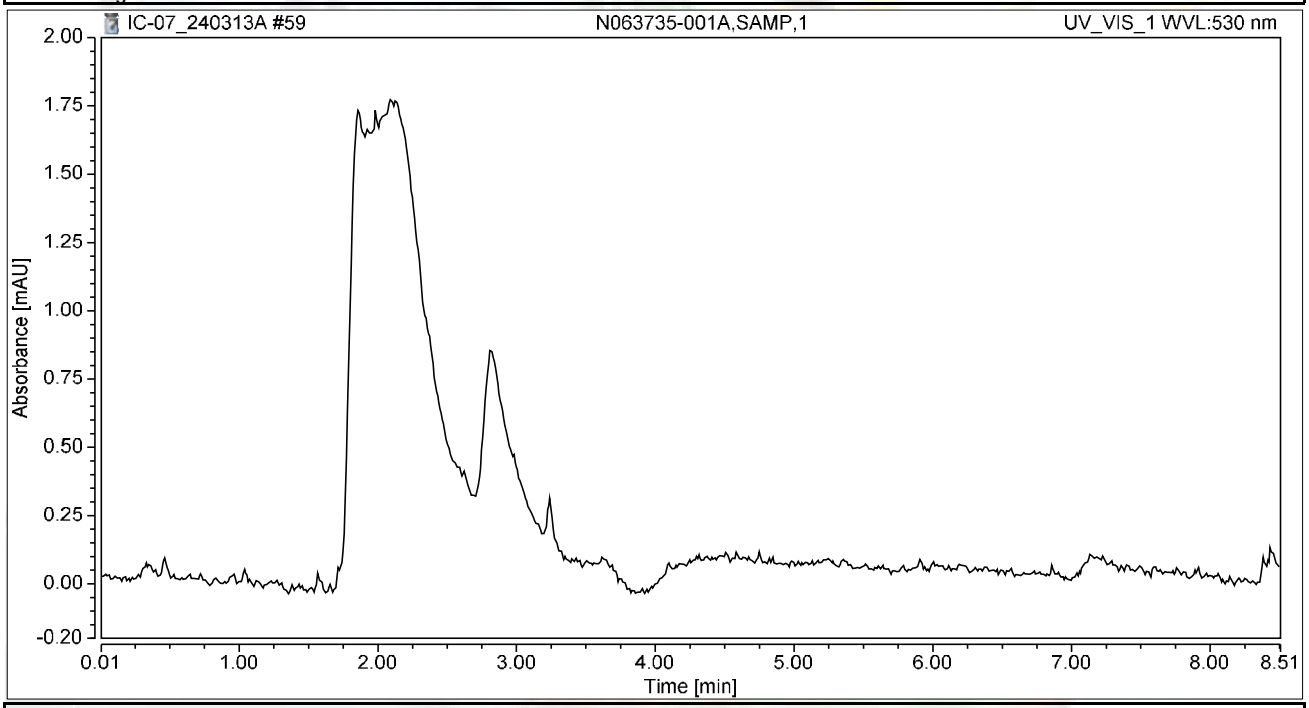
RB 3/14/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063735-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 17:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

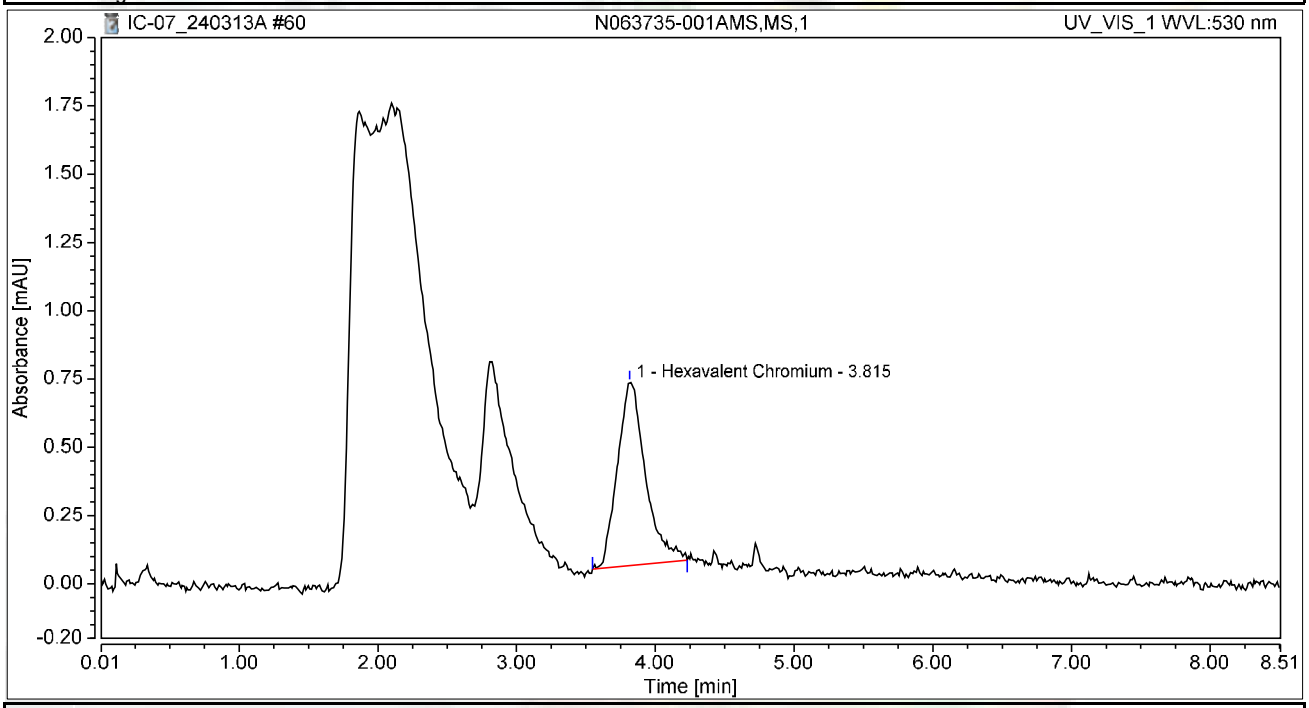
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 17:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

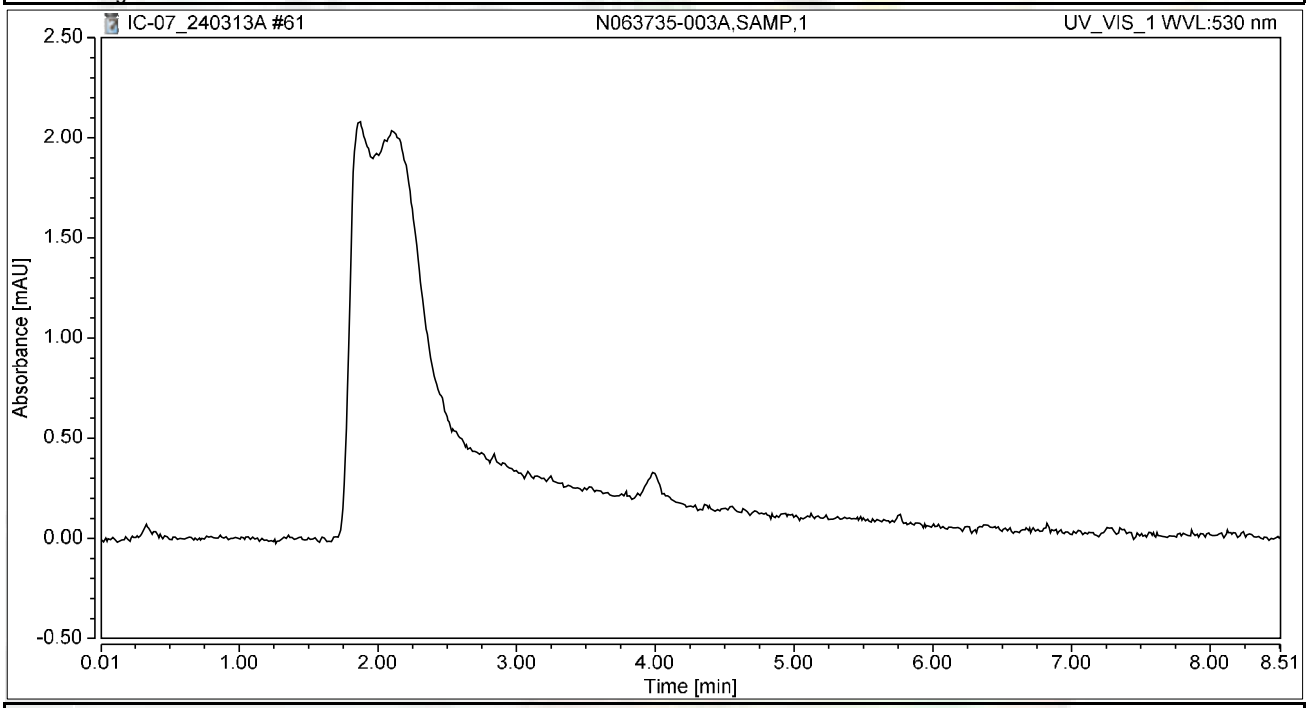
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	0.157	0.670	100.00	100.00	0.7396
Total:			**0.157**	**0.670**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 18:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

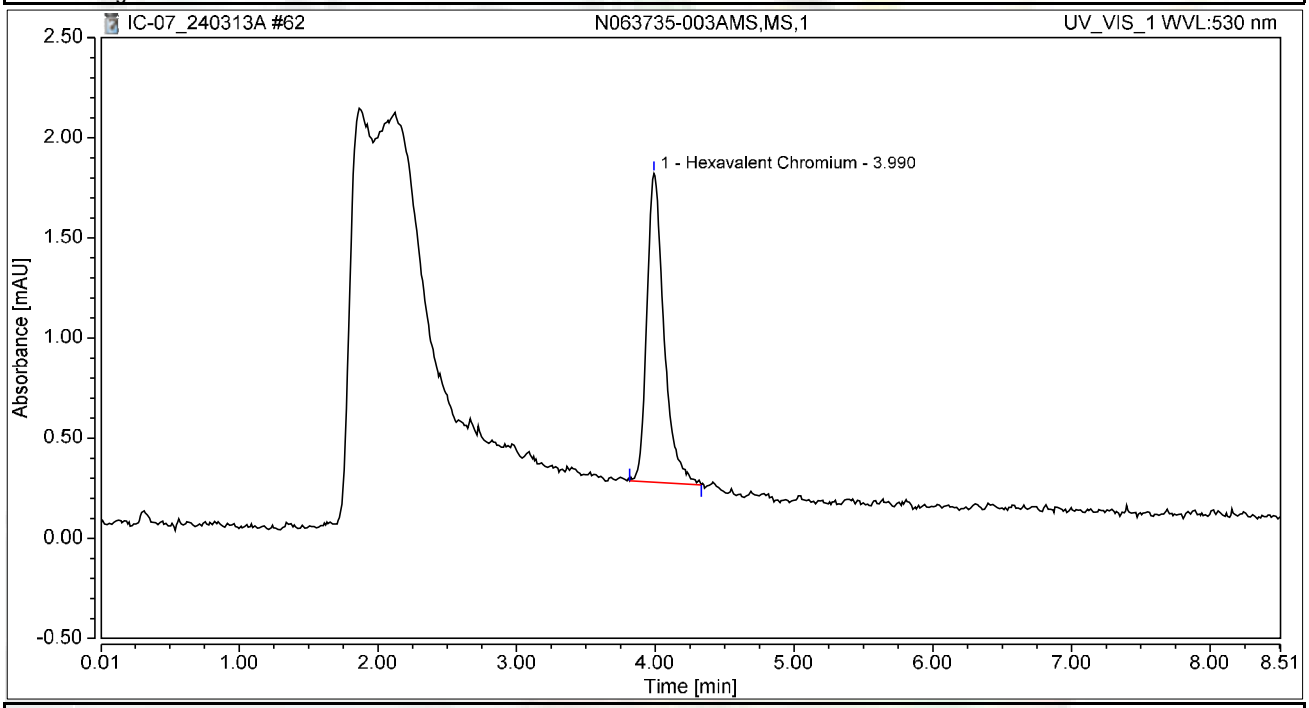
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 18:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

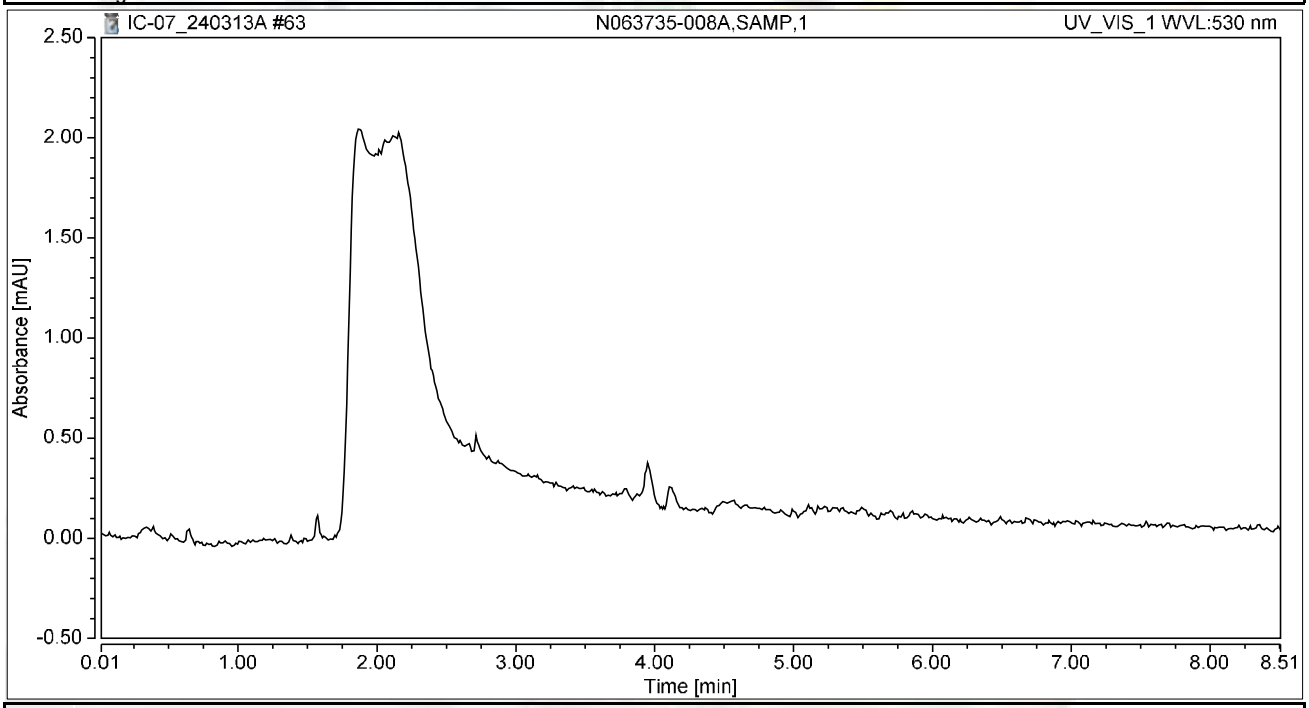
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.221	1.541	100.00	100.00	1.0390
Total:			**0.221**	**1.541**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-008A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 18:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

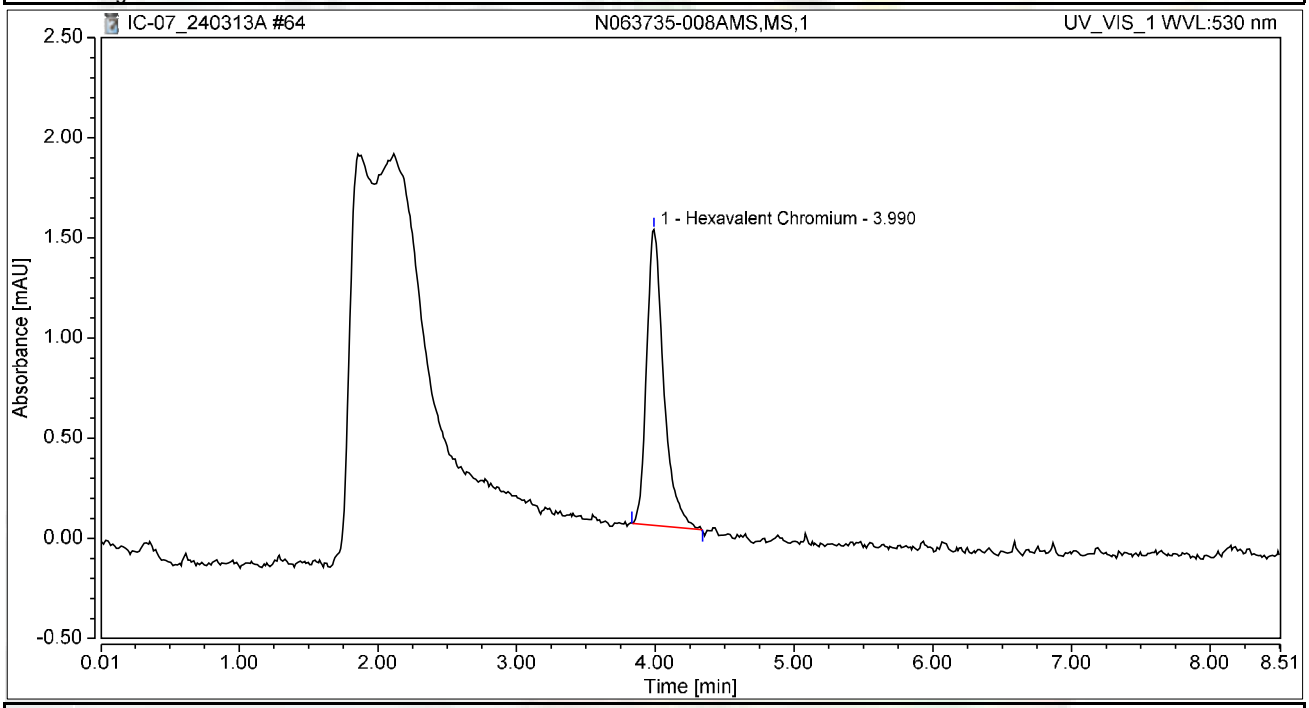
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 18:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

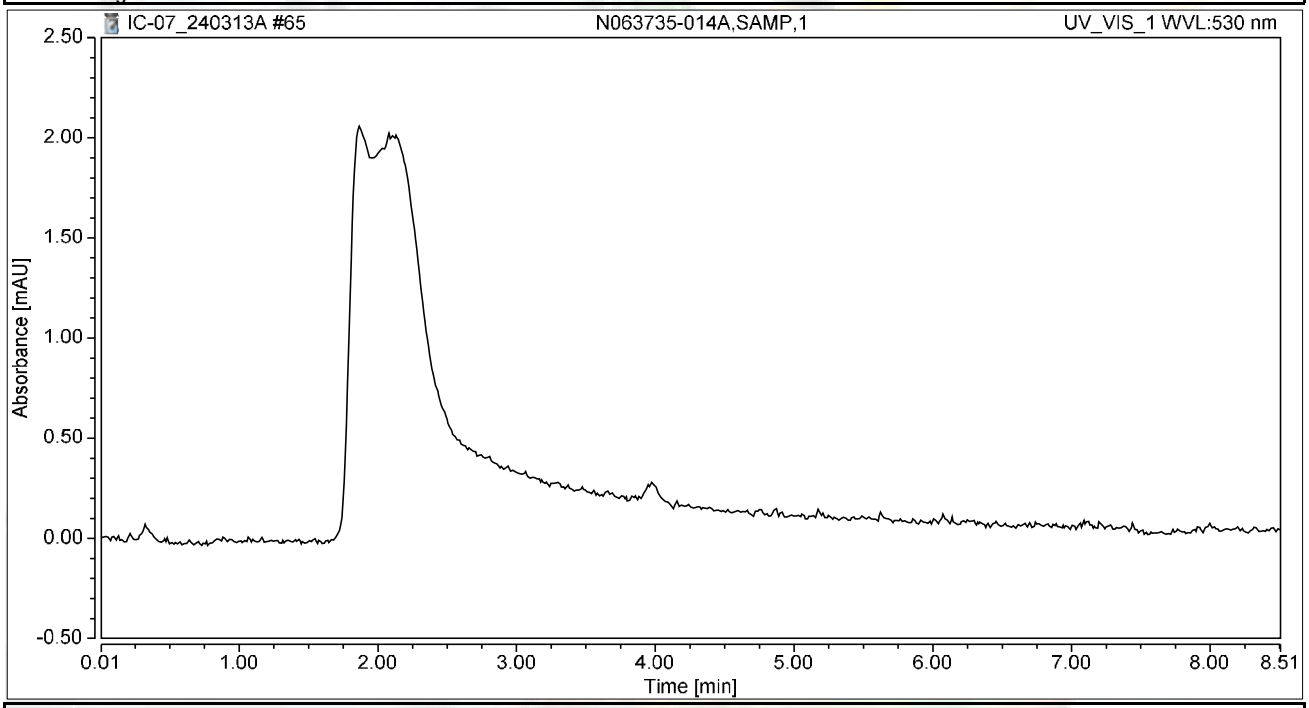
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.212	1.476	100.00	100.00	0.9957
Total:			**0.212**	**1.476**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-014A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 18:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

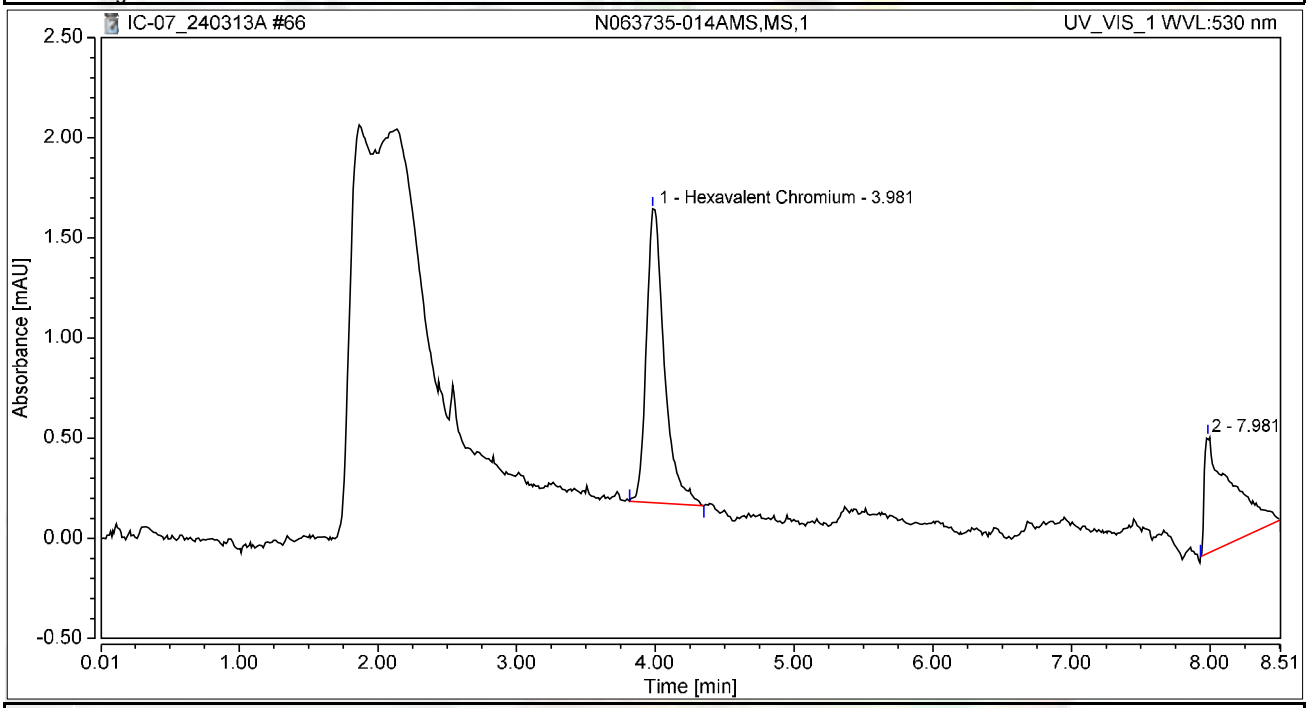
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-014AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 18:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

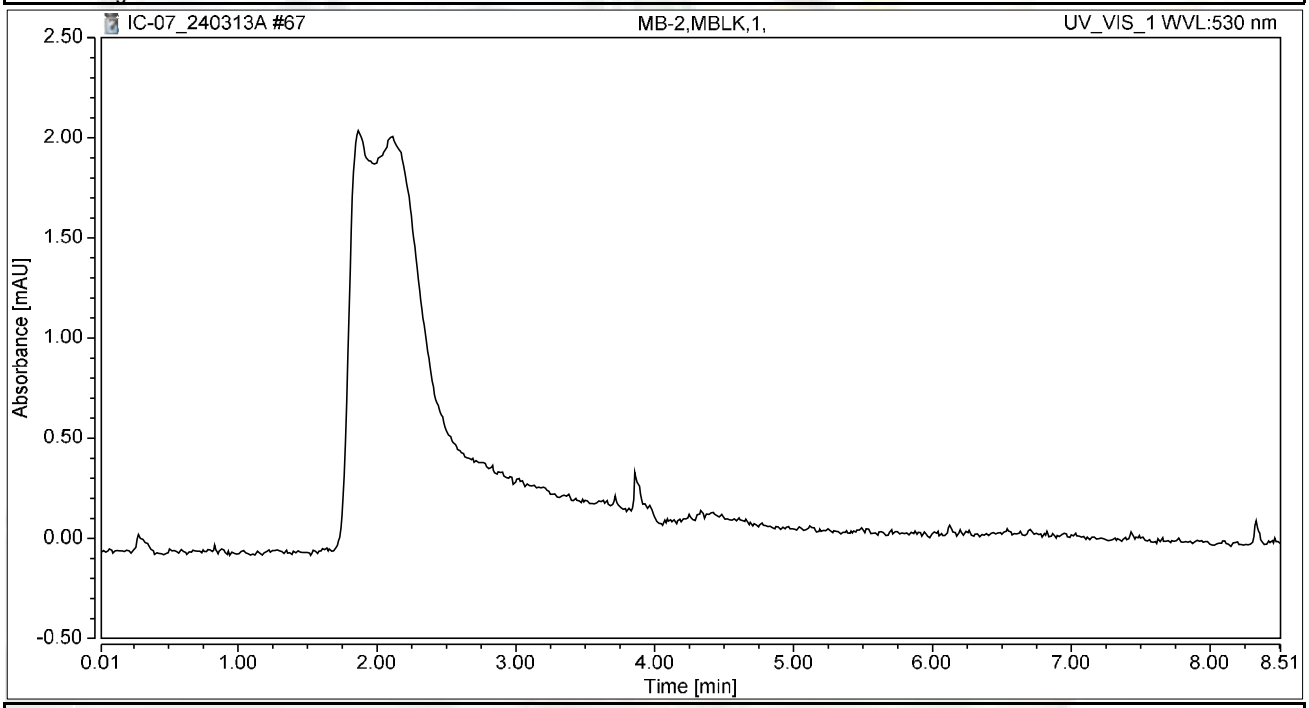
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.221	1.468	62.16	71.56	1.0379
2		7.981	0.134	0.584	37.84	28.44	n.a.
Total:			**0.355**	**2.052**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-2,MBLK,1,**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 18:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

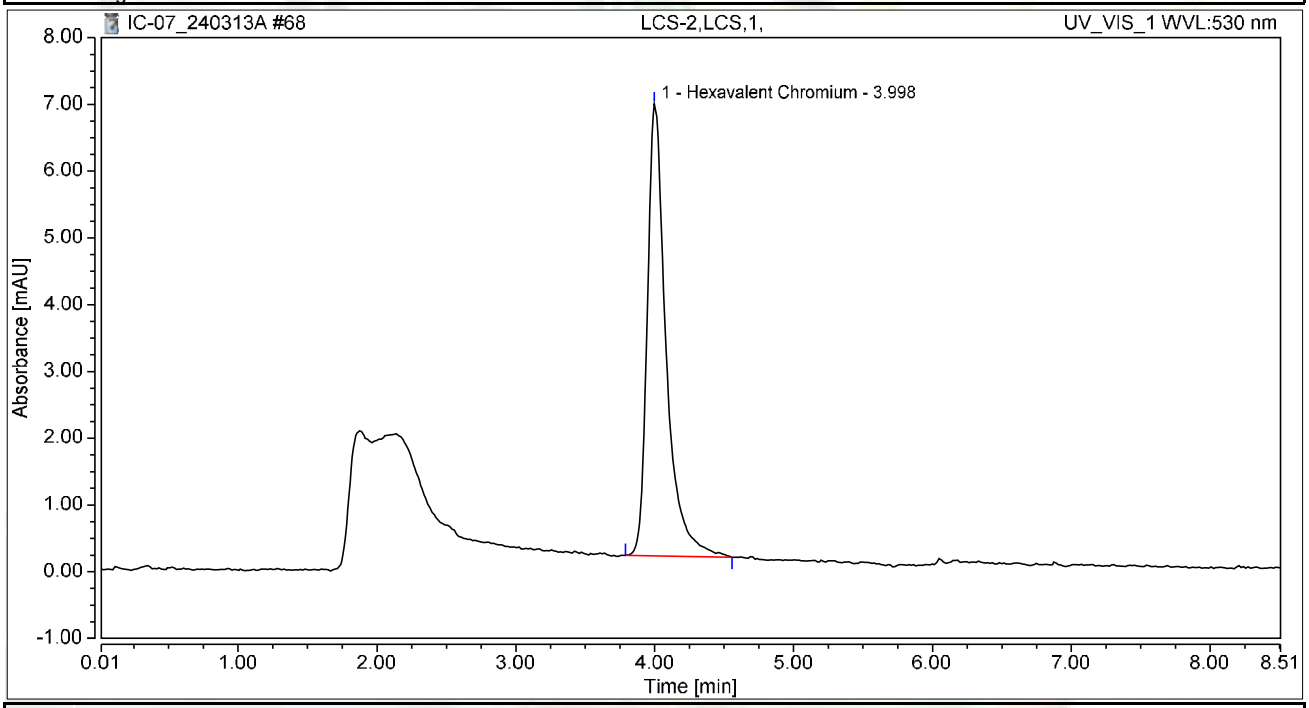
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-2,LCS,1,**	*Run Time (min):*	**8.49**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 19:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

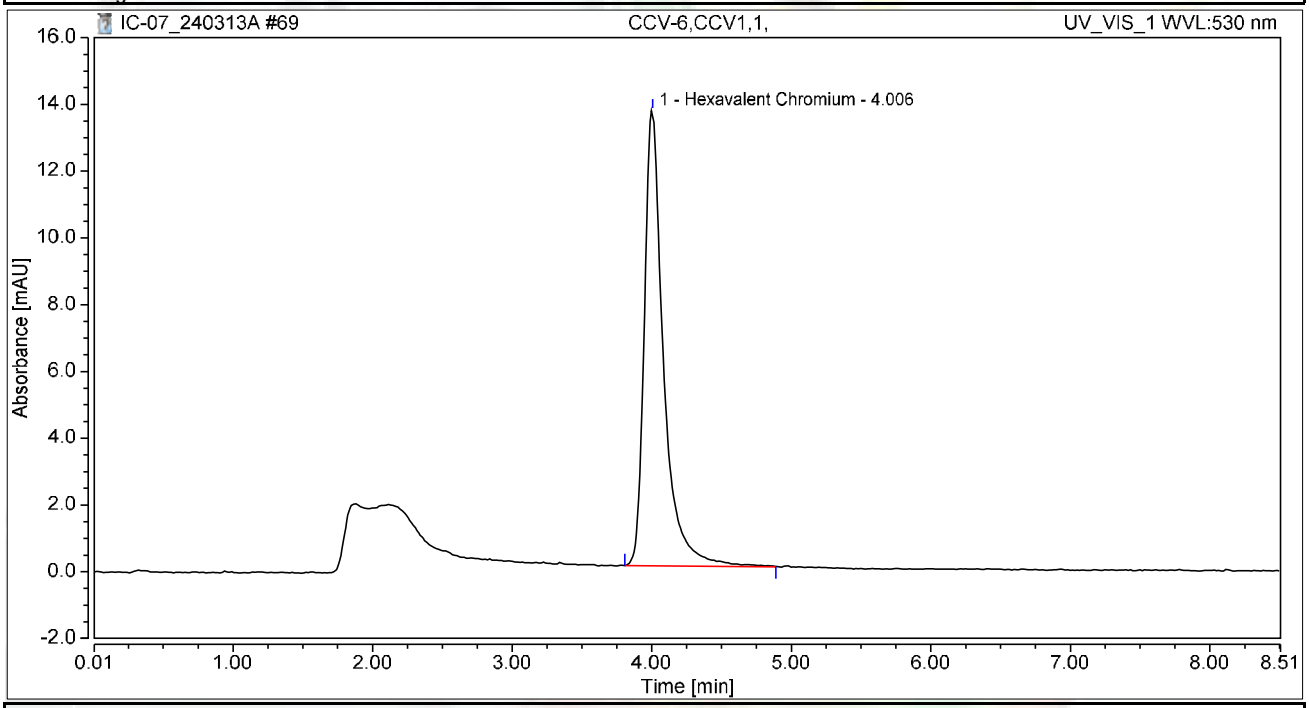
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	1.067	6.775	100.00	100.00	5.0143
Total:			**1.067**	**6.775**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 19:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

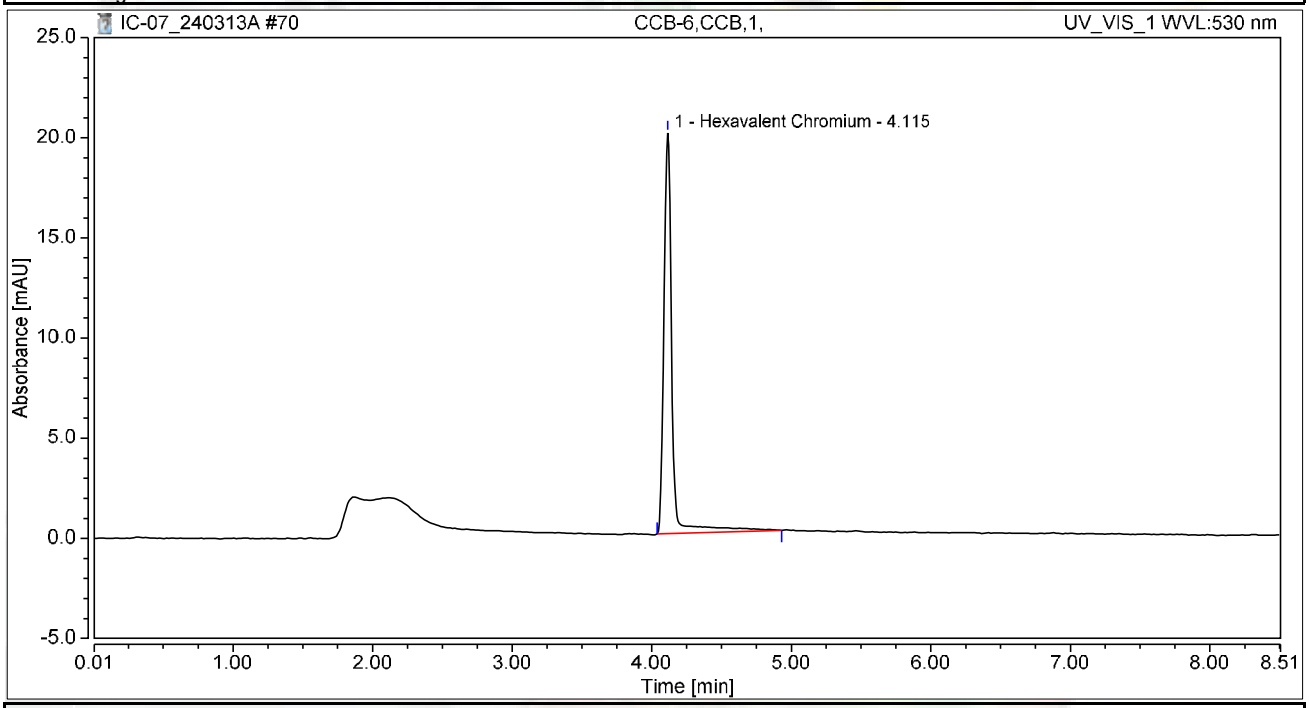
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	2.187	13.630	100.00	100.00	10.2763
Total:			**2.187**	**13.630**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 19:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

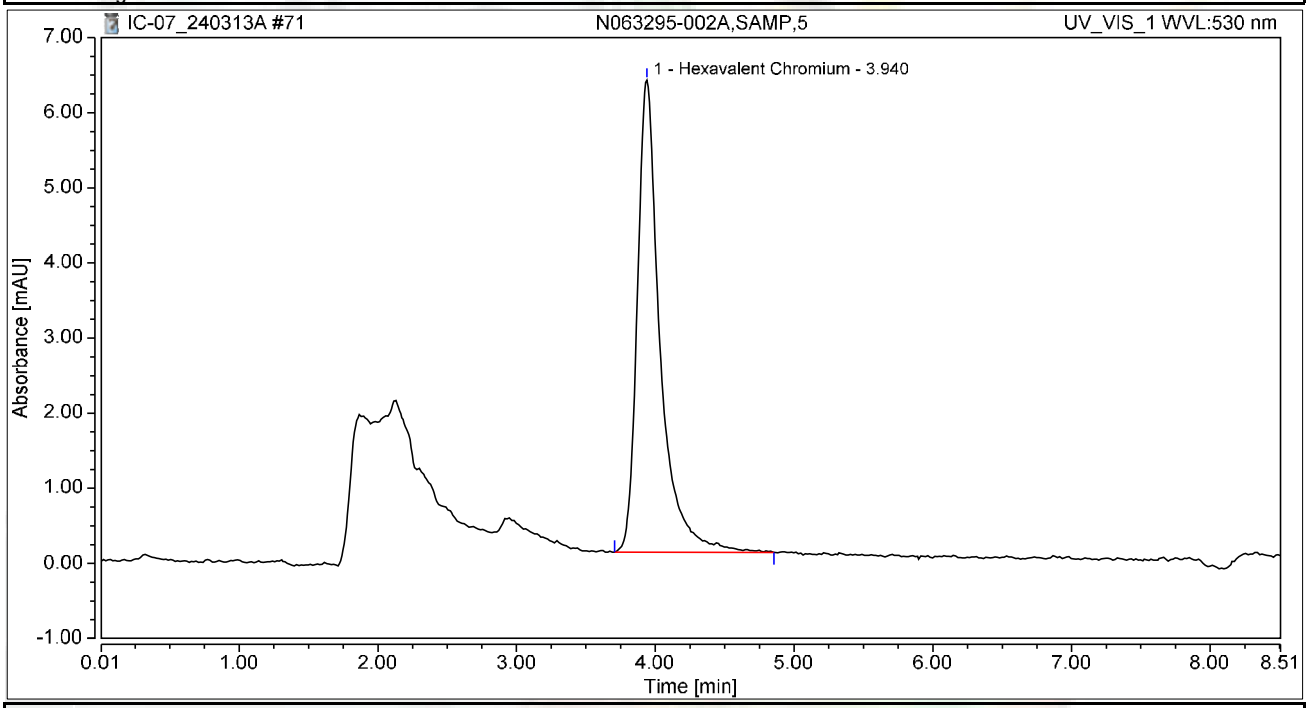
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.115	1.357	20.023	100.00	100.00	6.3757
Total:			**1.357**	**20.023**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 19:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

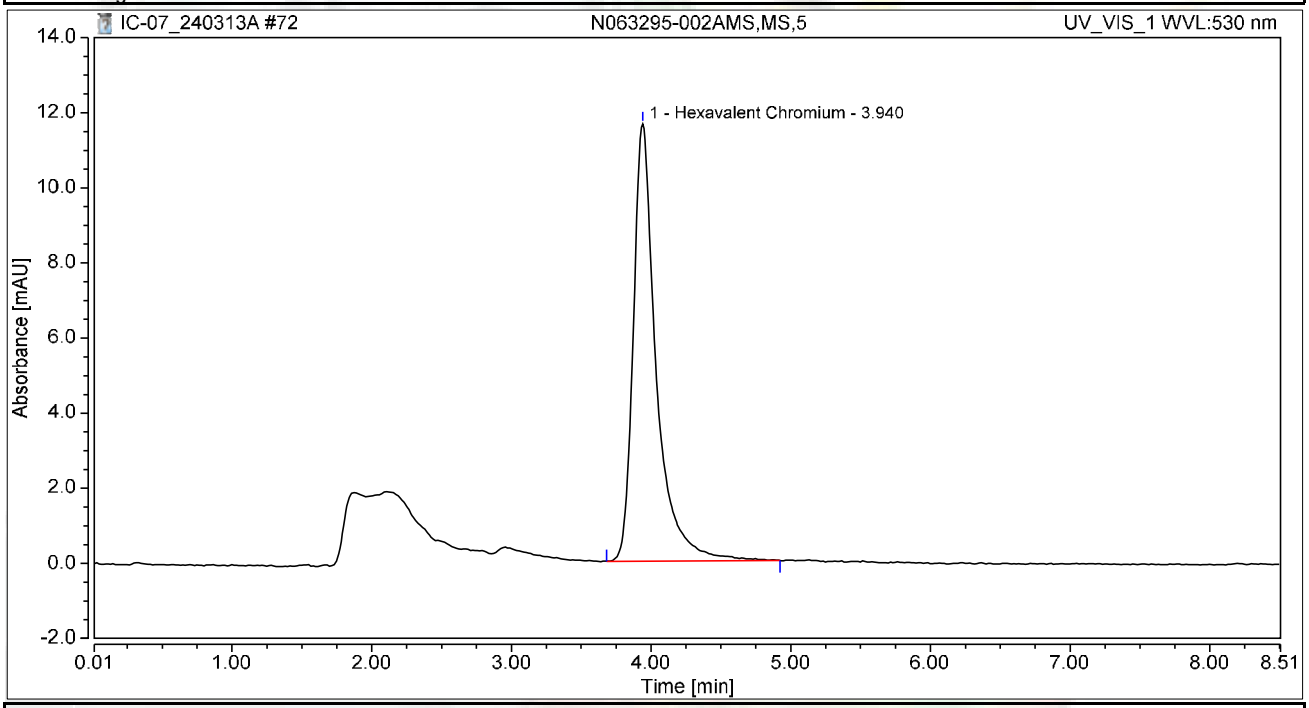
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	1.200	6.288	100.00	100.00	5.6395
Total:			**1.200**	**6.288**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-002AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 19:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

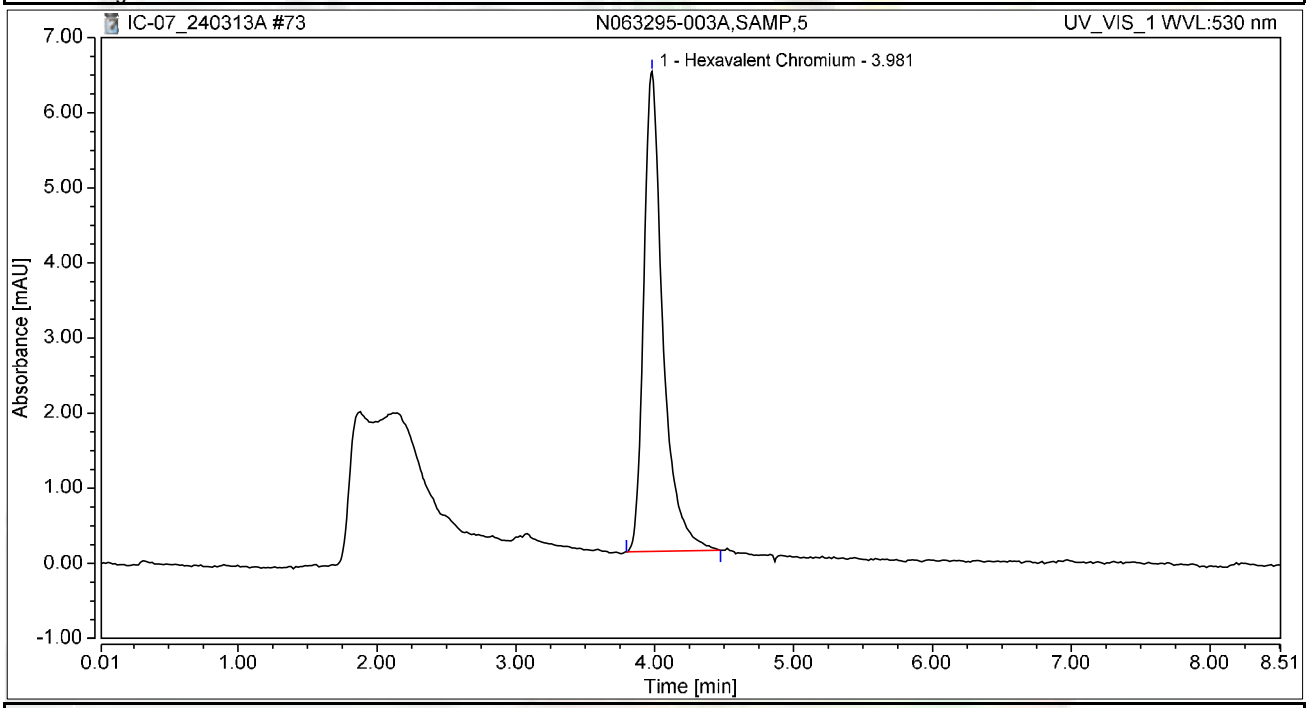
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	2.224	11.647	100.00	100.00	10.4504
Total:			**2.224**	**11.647**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 19:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

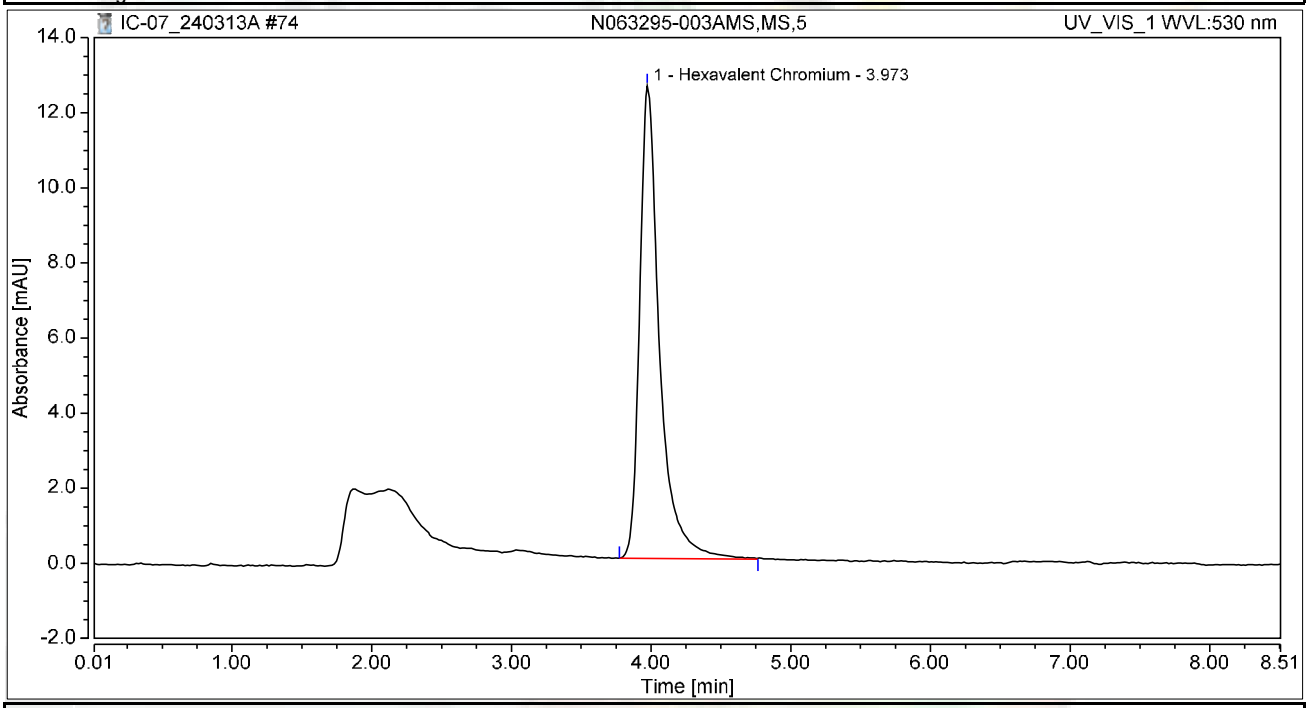
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.023	6.391	100.00	100.00	4.8042
Total:			**1.023**	**6.391**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063295-003AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 20:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

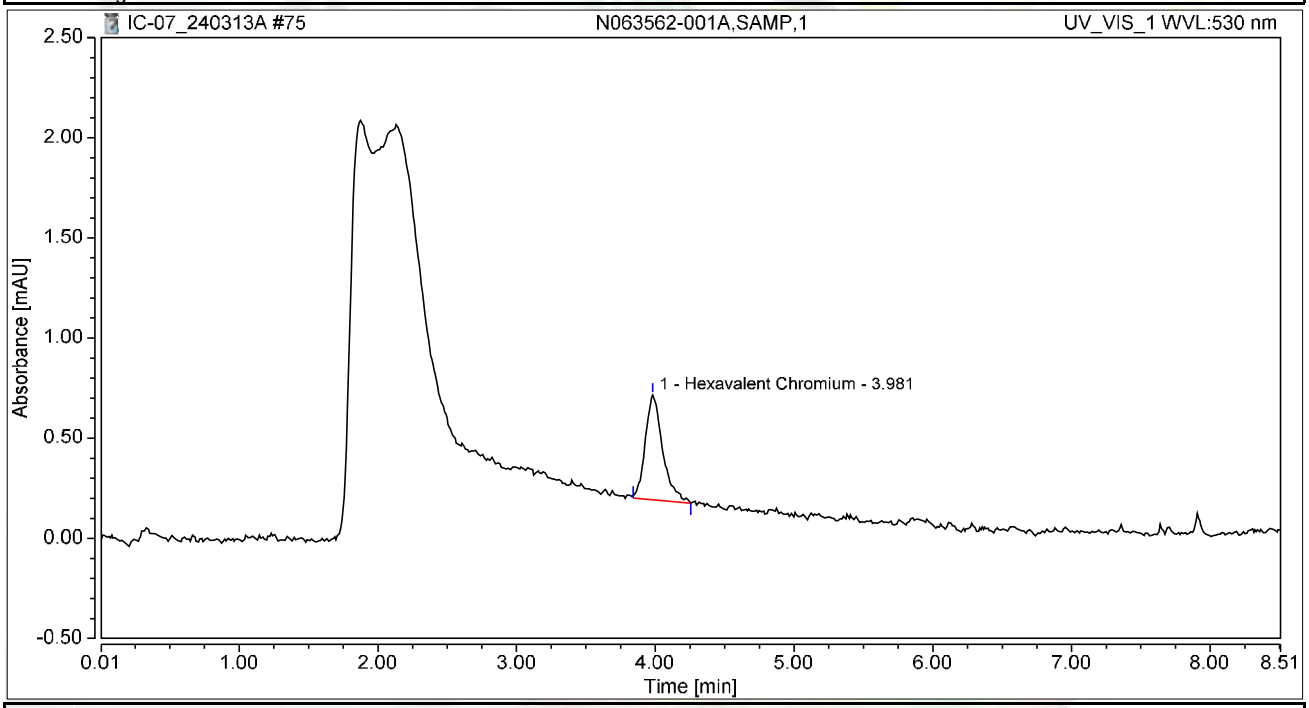
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	2.082	12.583	100.00	100.00	9.7801
Total:			**2.082**	**12.583**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063562-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 20:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

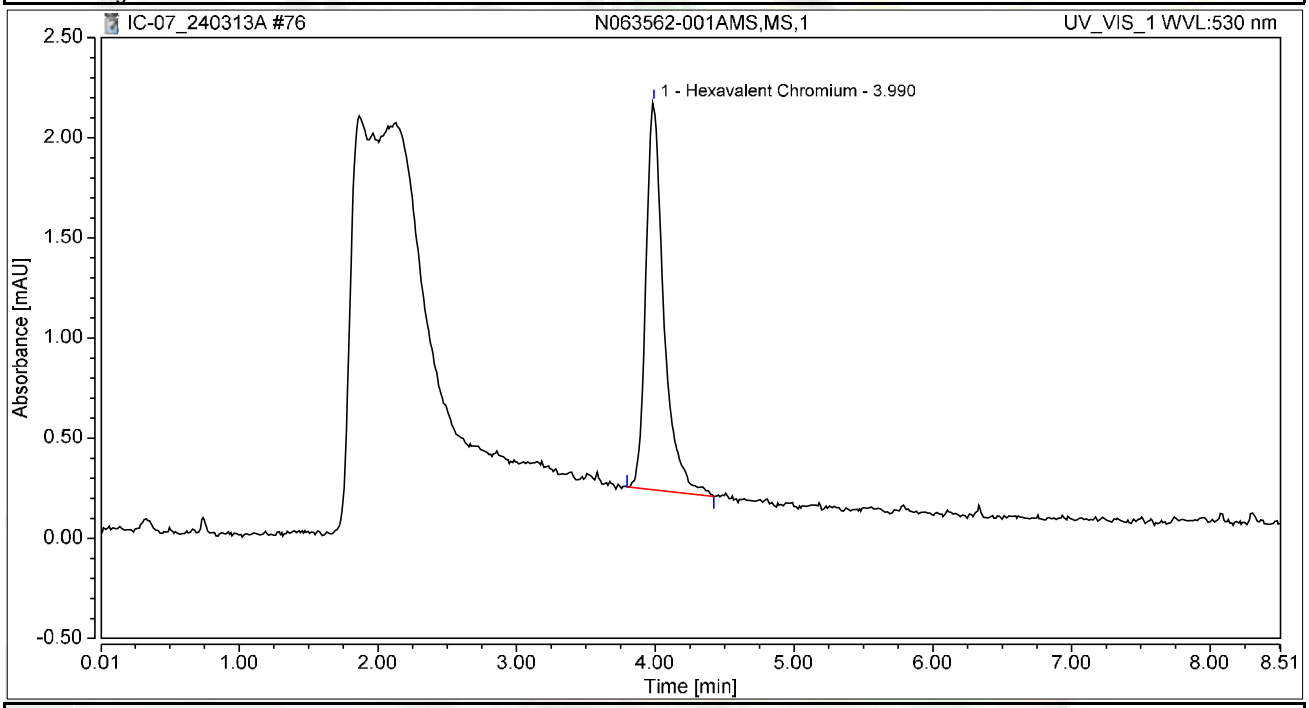
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.076	0.523	100.00	100.00	0.3578
Total:			**0.076**	**0.523**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063562-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 20:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

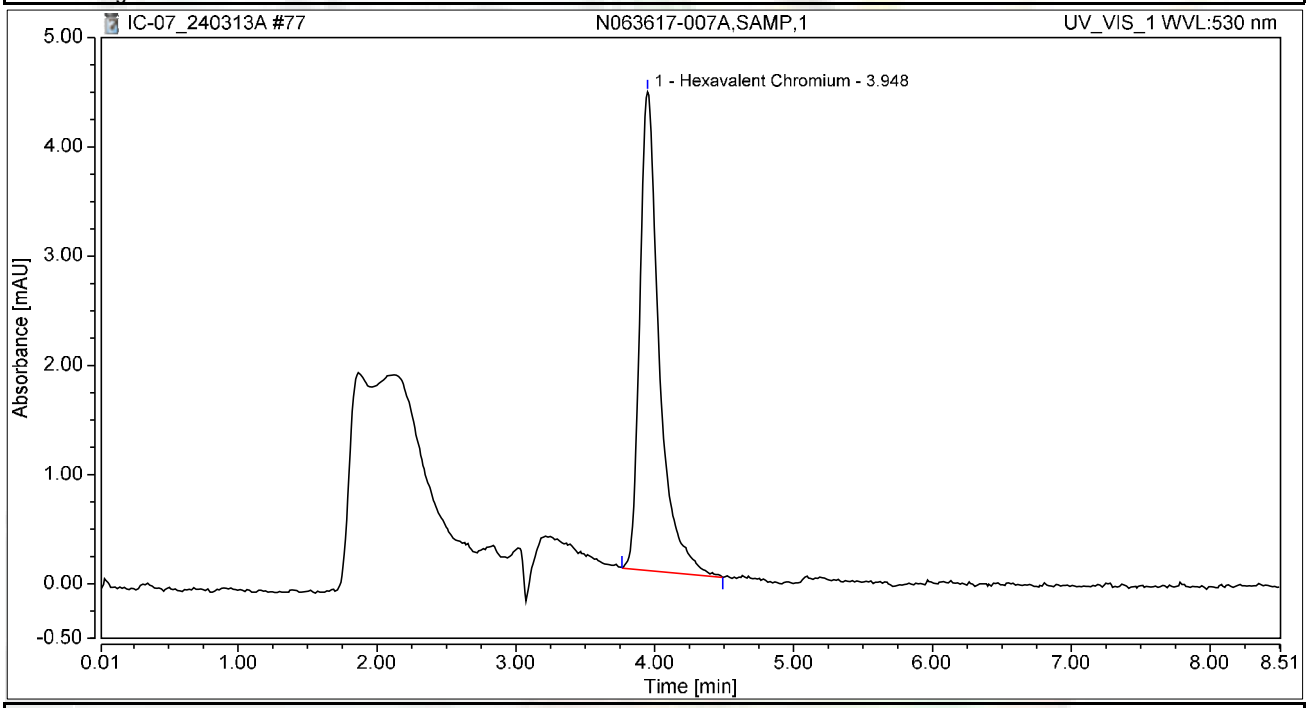
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.291	1.939	100.00	100.00	1.3694
Total:			**0.291**	**1.939**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-007A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 20:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

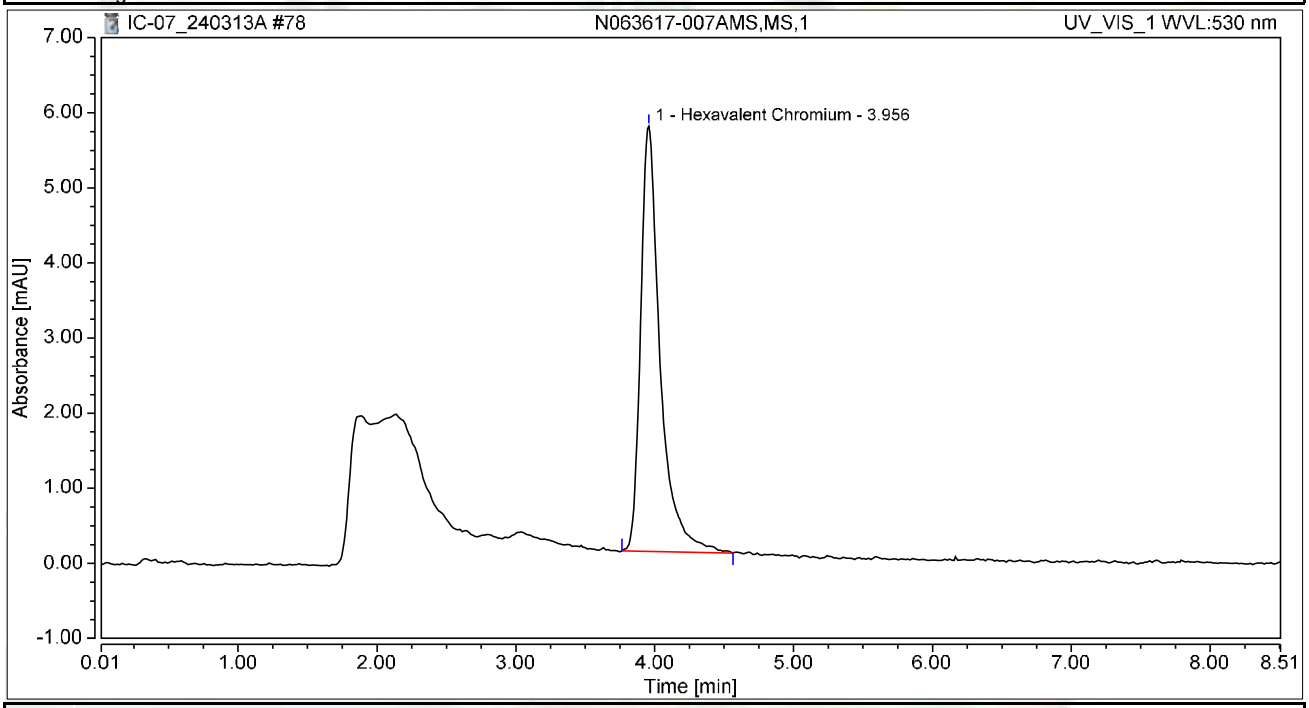
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.714	4.380	100.00	100.00	3.3557
Total:			**0.714**	**4.380**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-007AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 20:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

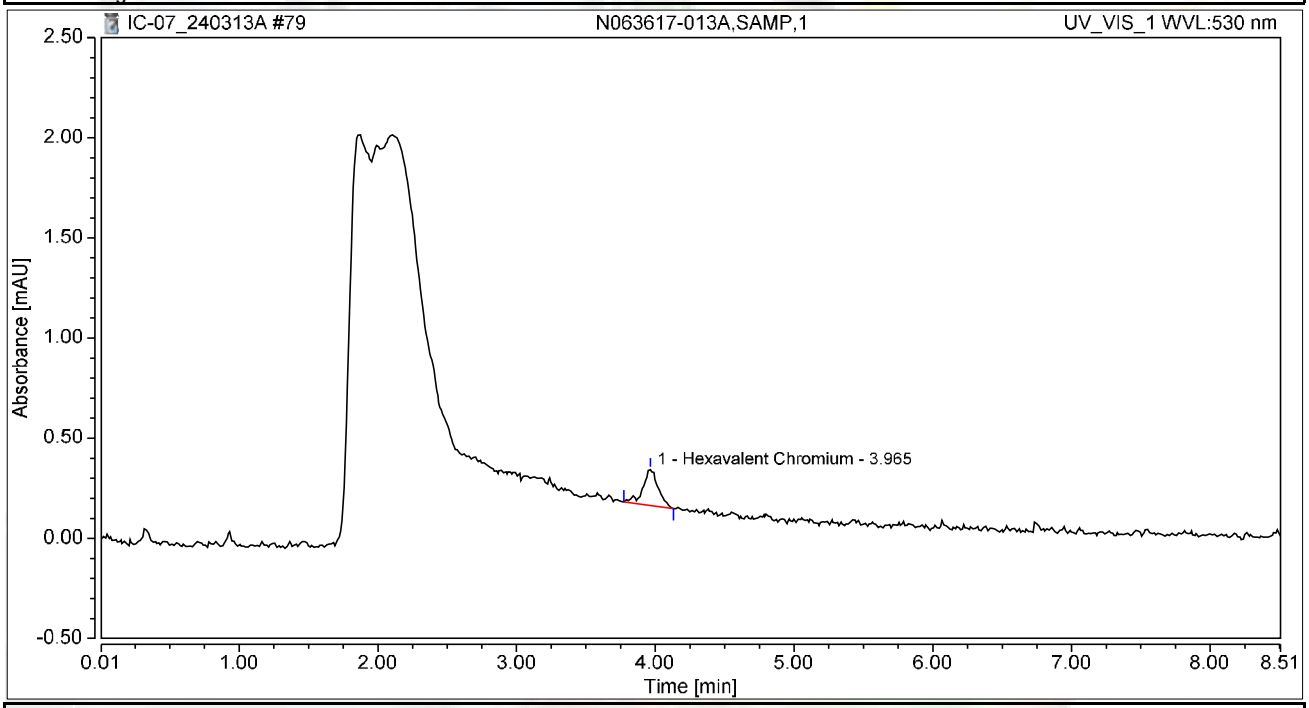
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.922	5.659	100.00	100.00	4.3331
Total:			**0.922**	**5.659**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-013A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 20:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

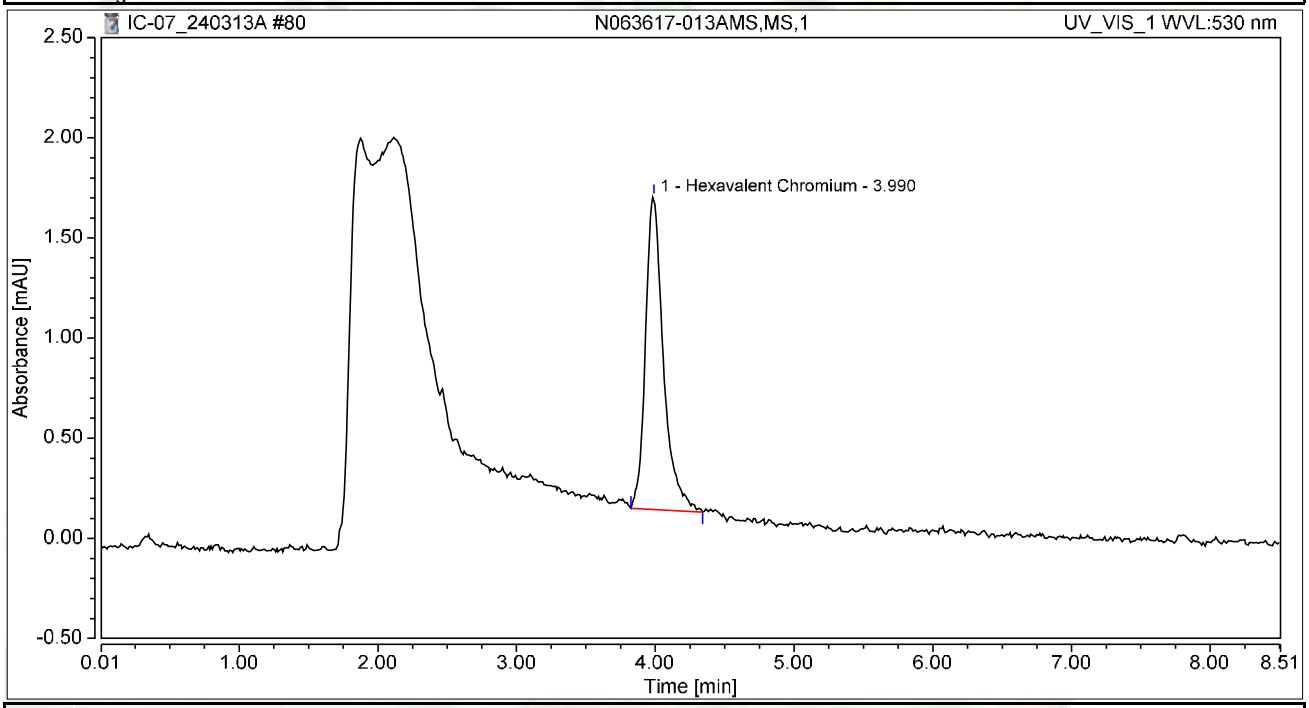
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.023	0.179	100.00	100.00	0.1081
Total:			**0.023**	**0.179**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-013AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 21:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

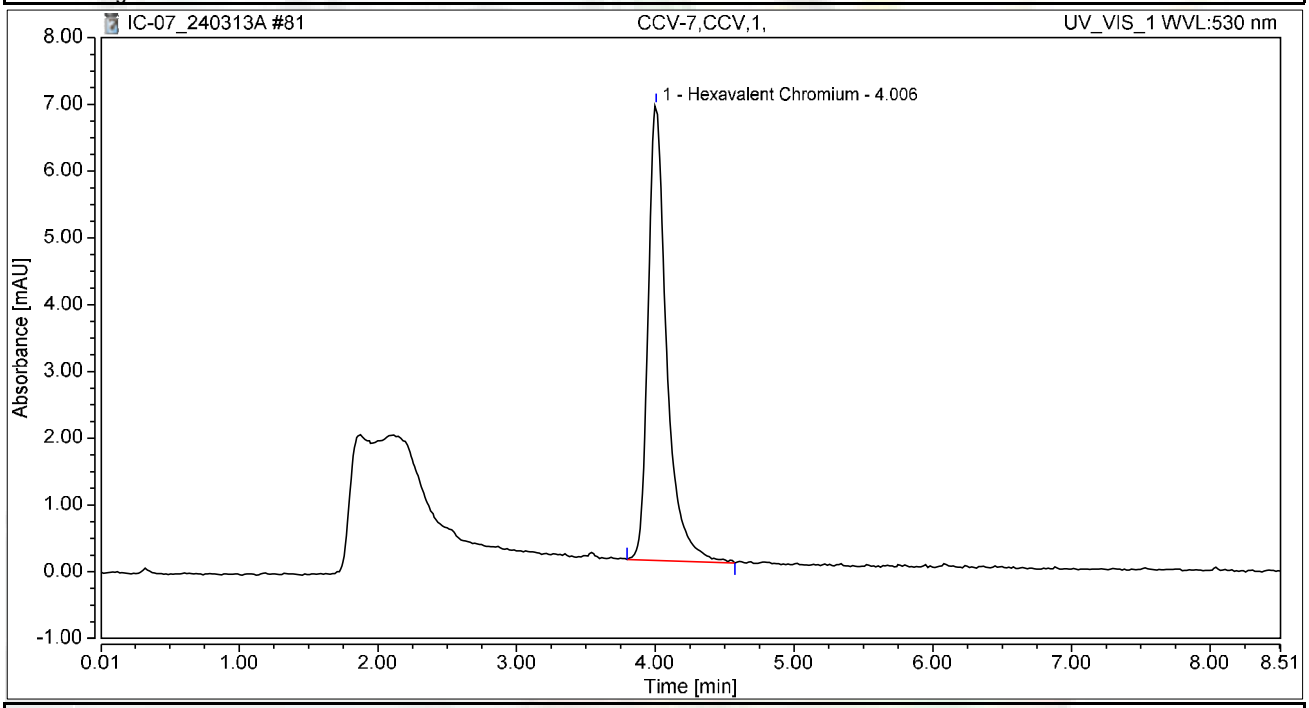
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.234	1.562	100.00	100.00	1.1009
Total:			**0.234**	**1.562**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 21:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

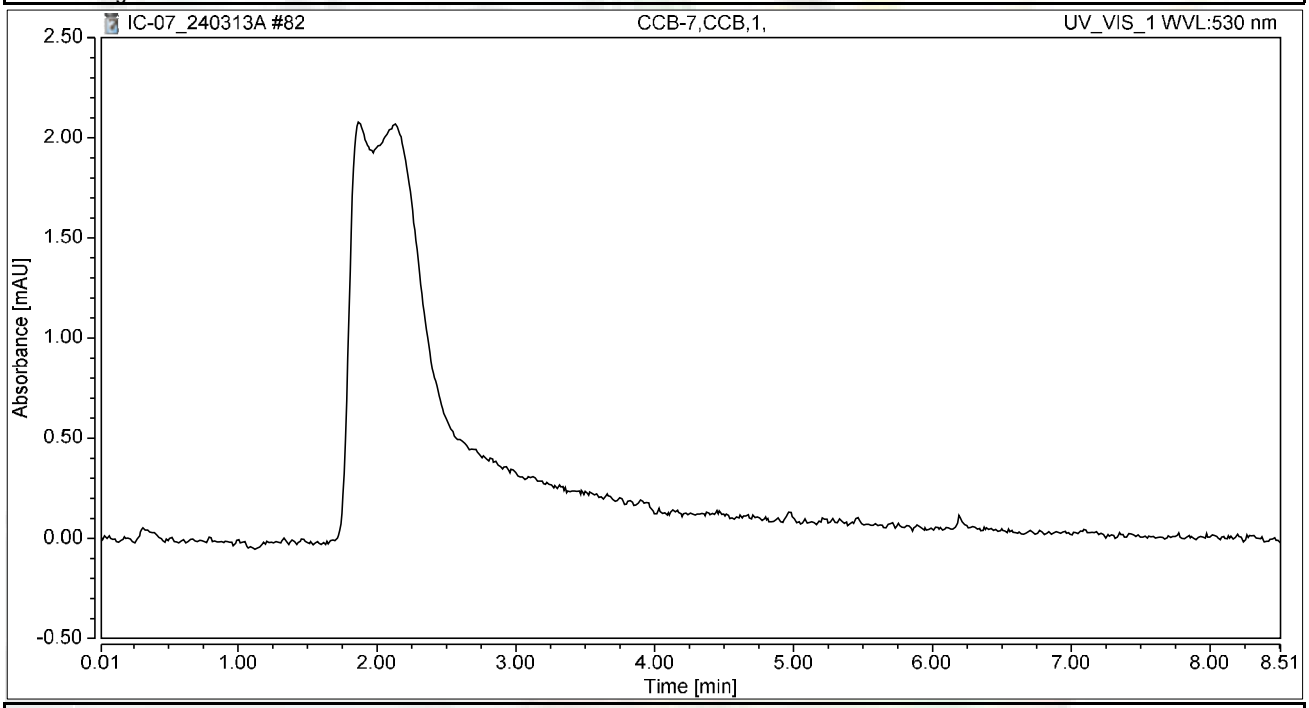
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.064	6.816	100.00	100.00	4.9999
Total:			**1.064**	**6.816**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 21:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

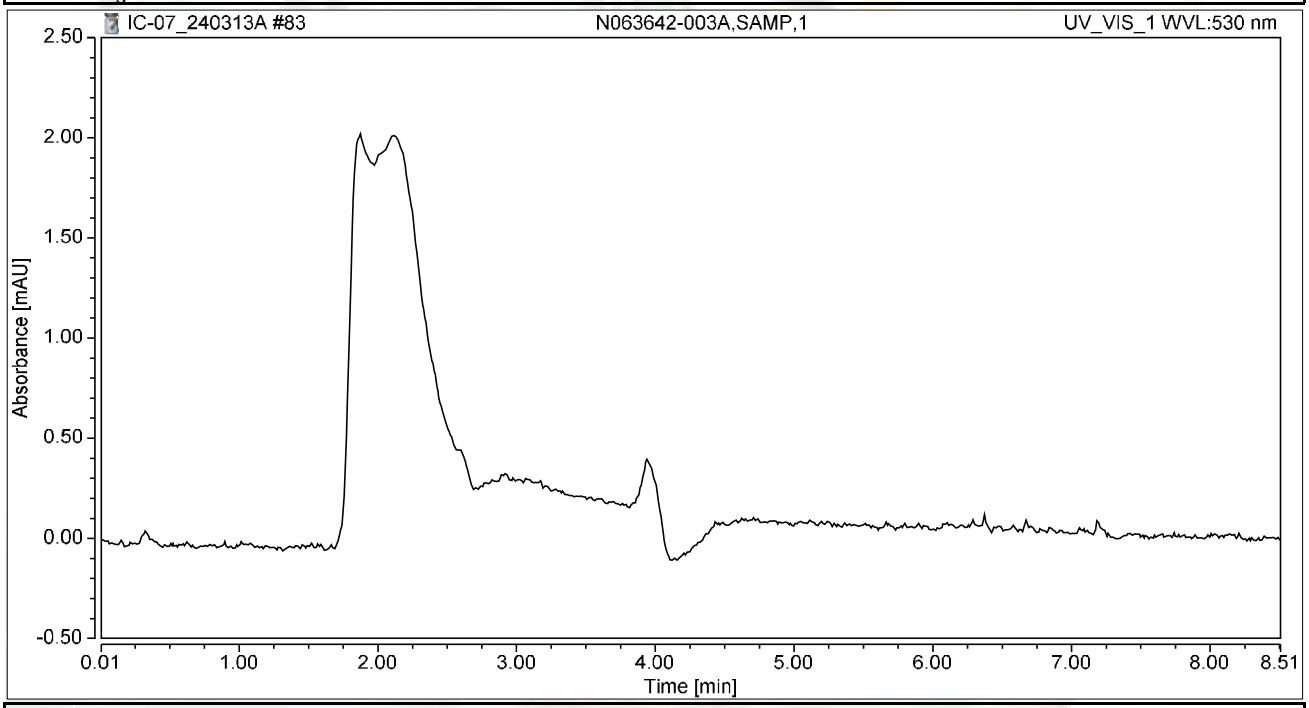
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 21:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

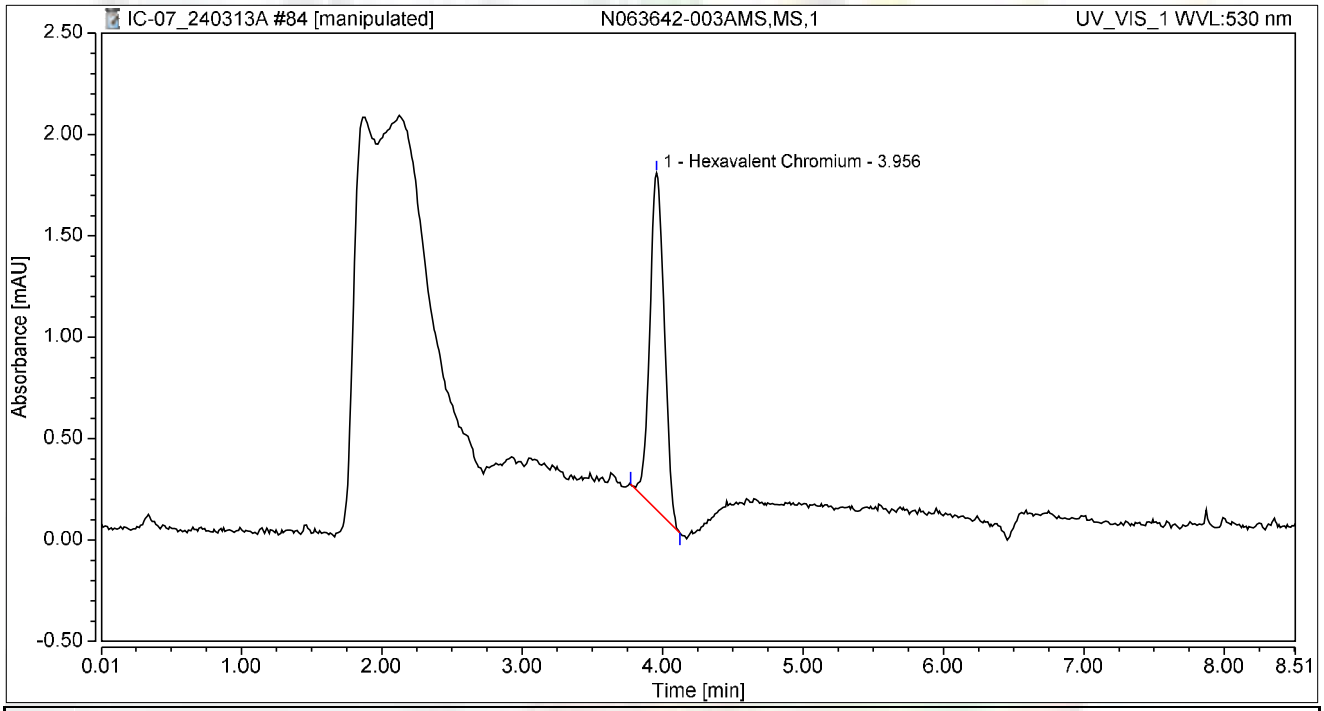
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 21:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

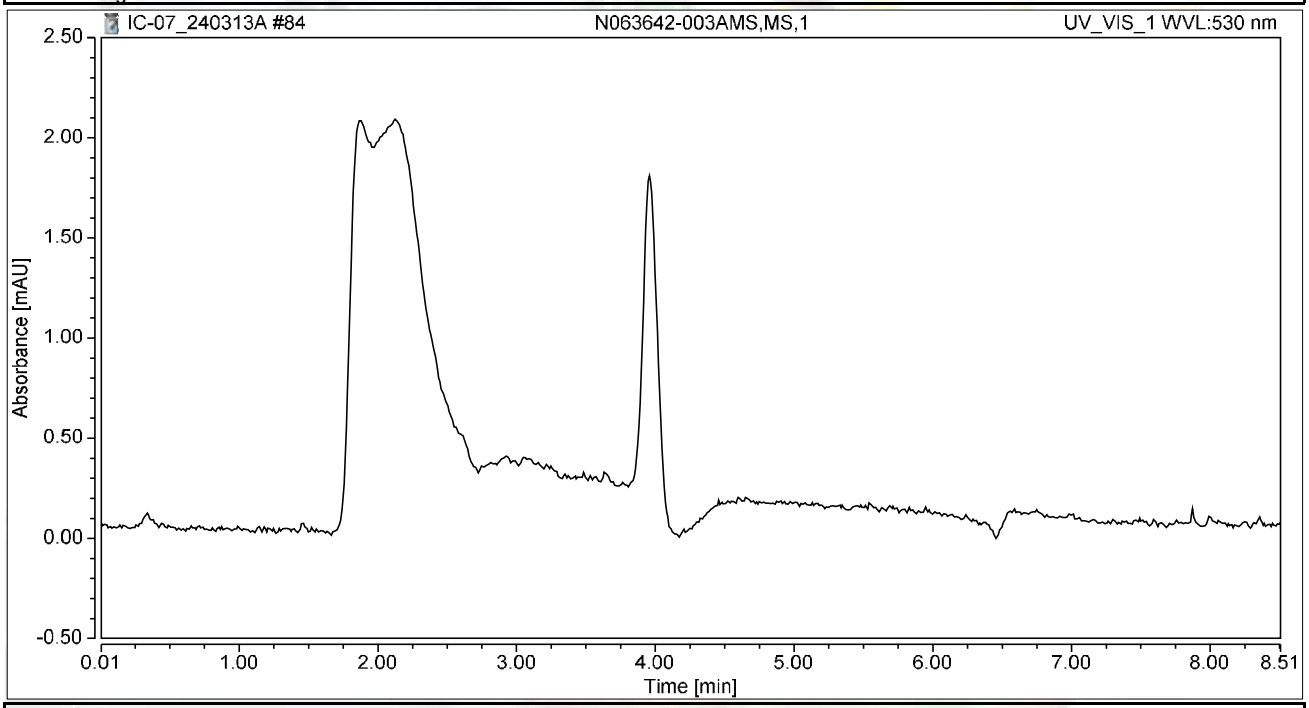
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.198	1.661	100.00	100.00	0.9288
Total:			**0.198**	**1.661**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-003AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 21:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

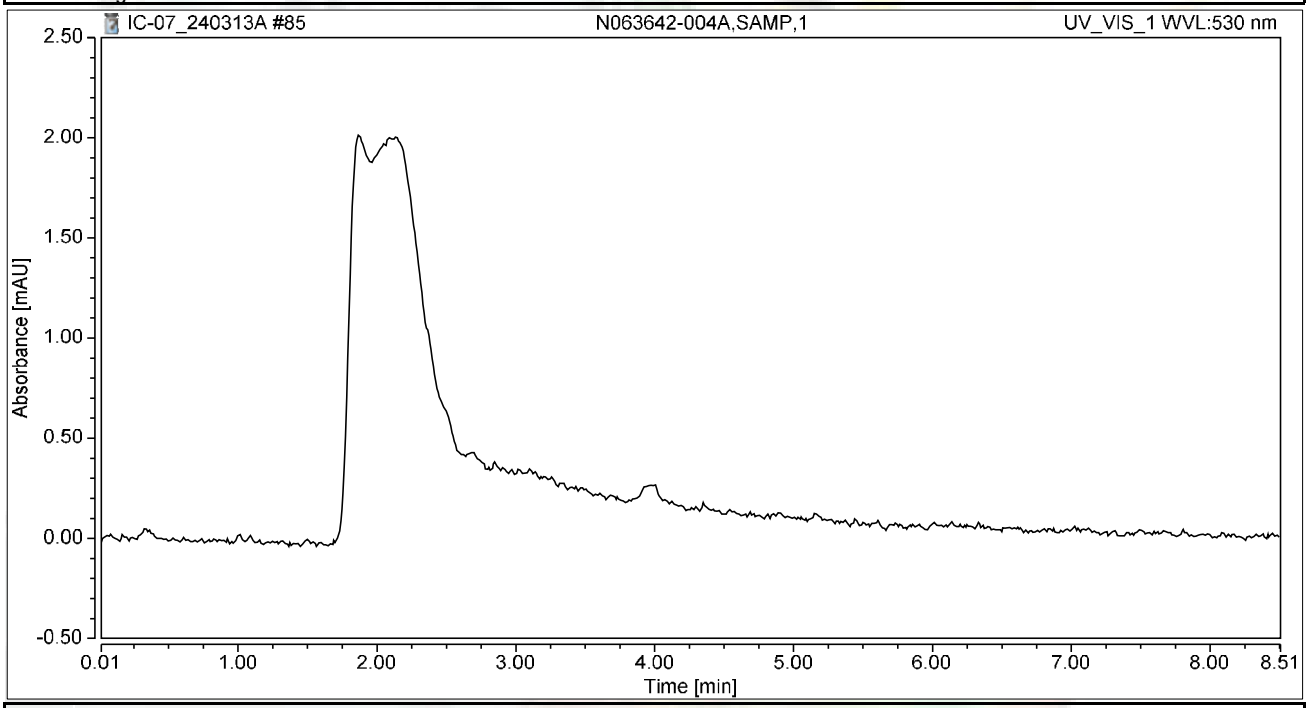
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-004A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 21:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

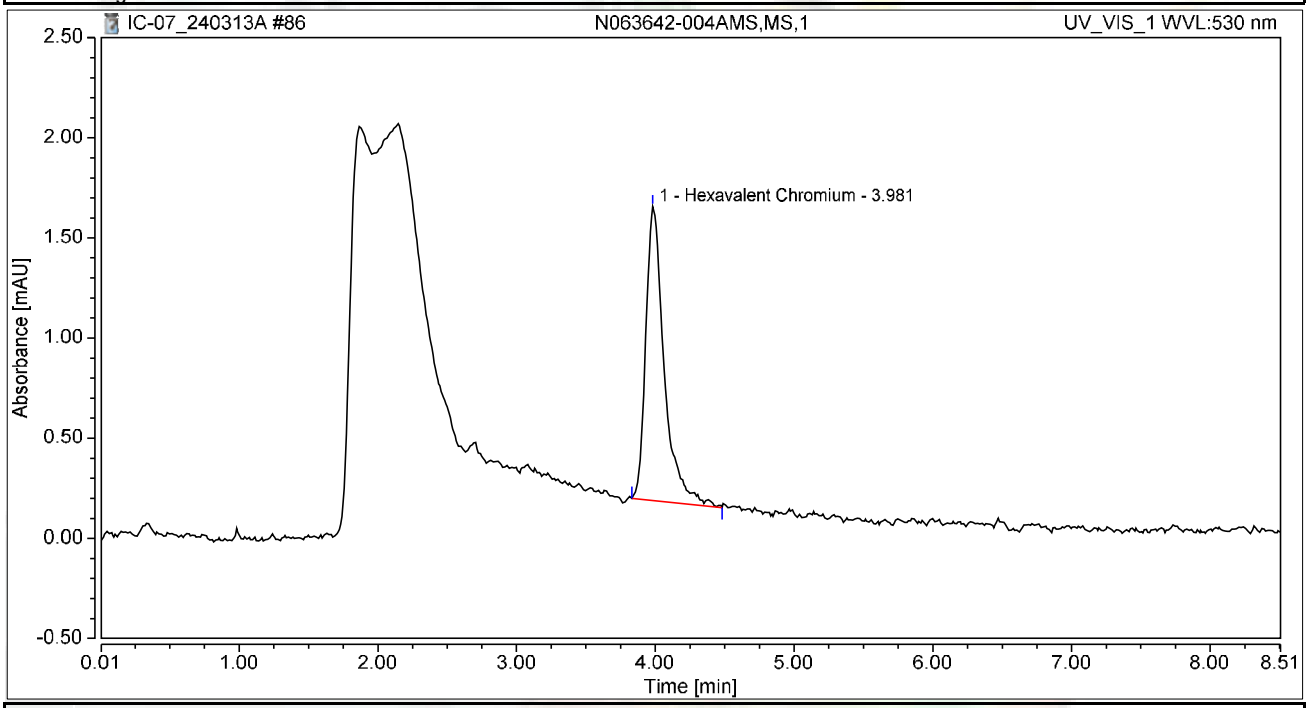
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 21:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

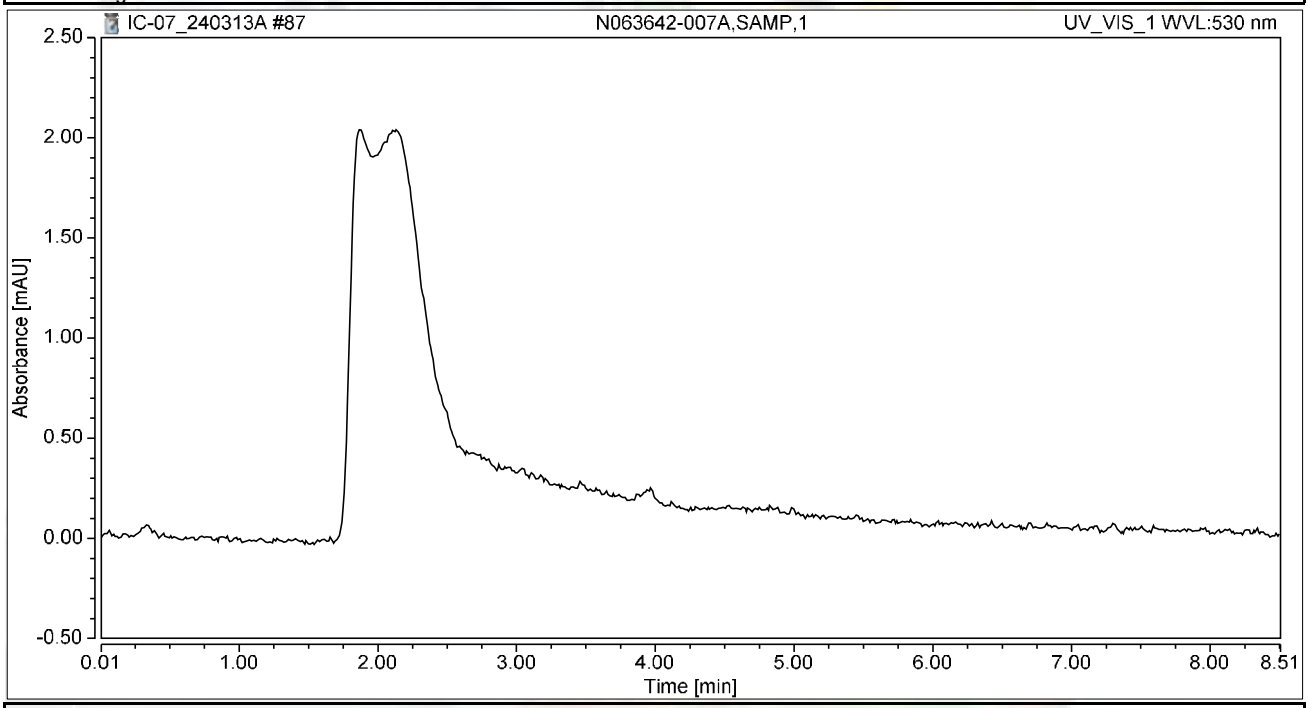
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.226	1.466	100.00	100.00	1.0624
Total:			**0.226**	**1.466**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-007A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 22:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

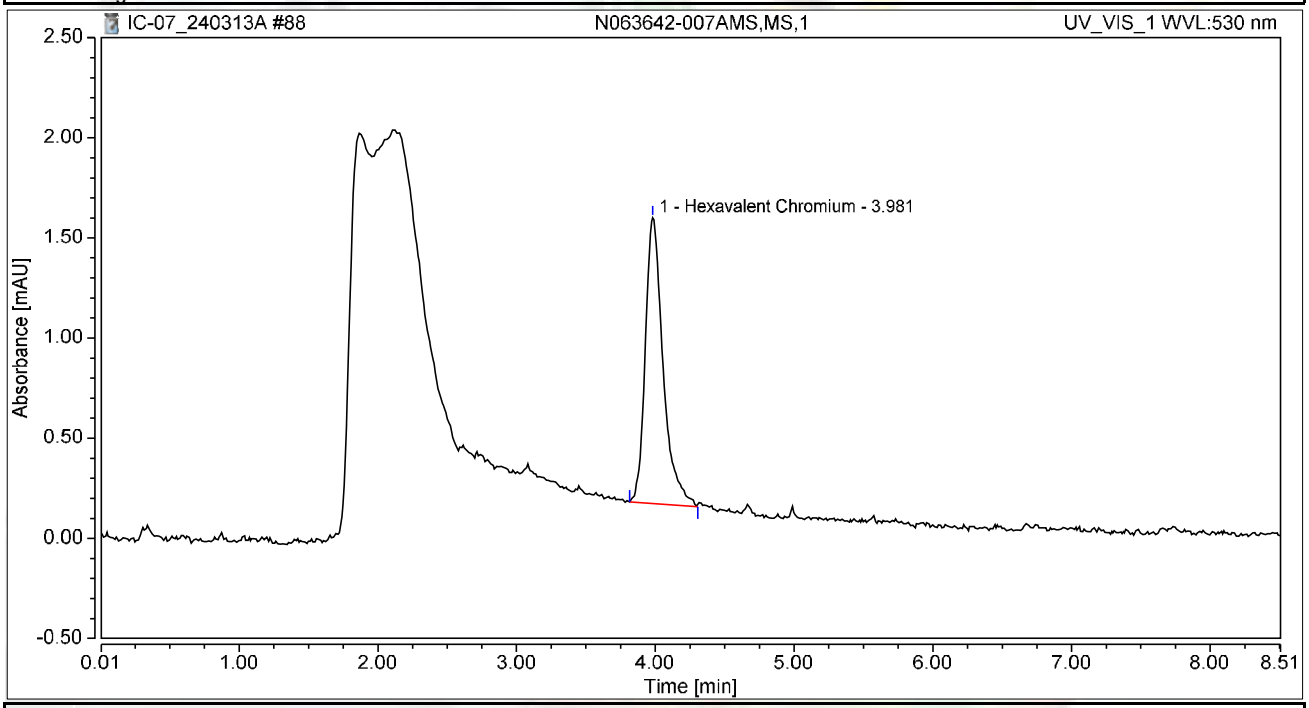
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063642-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**44**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 22:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

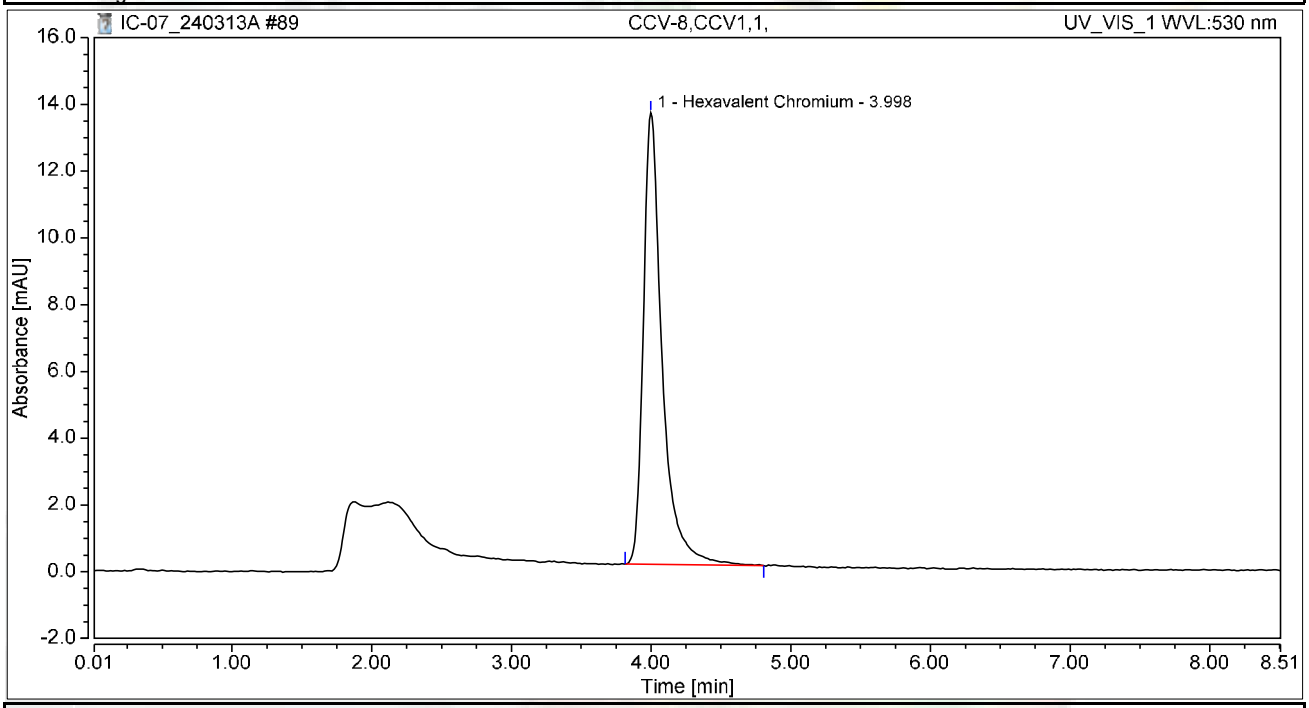
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.212	1.427	100.00	100.00	0.9971
Total:			**0.212**	**1.427**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-8,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**45**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 22:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

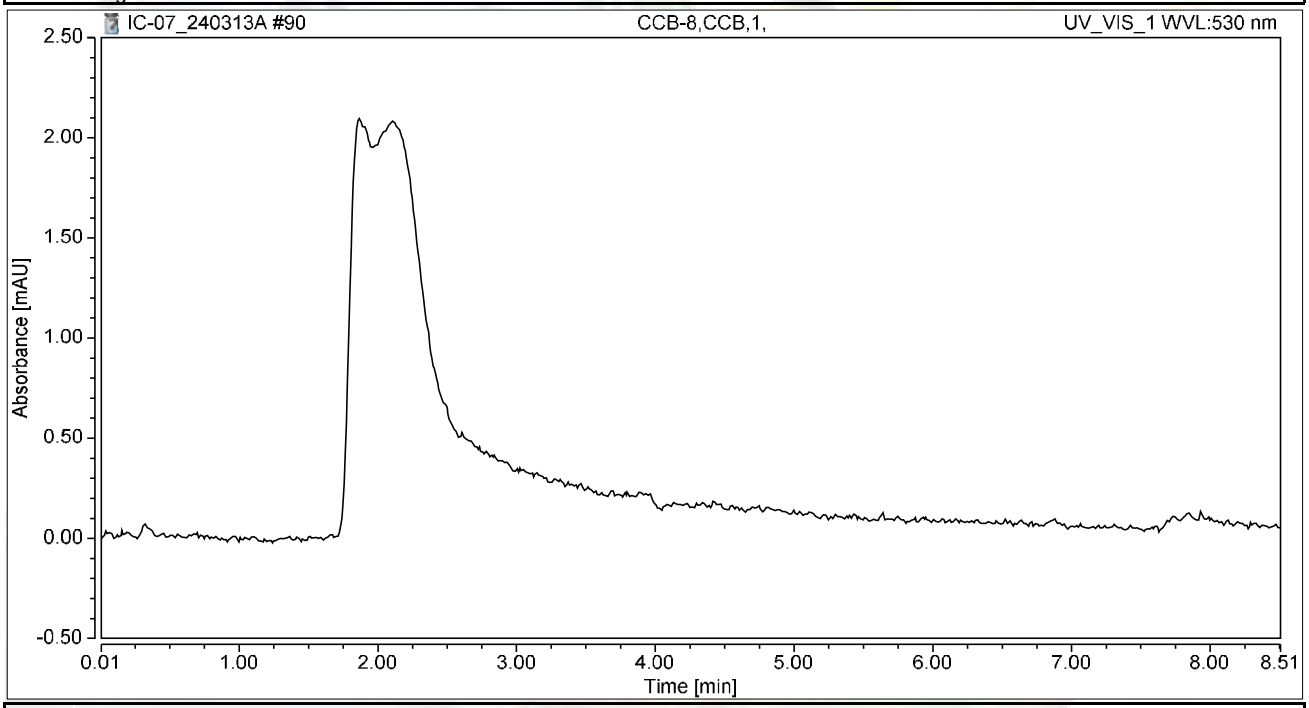
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	2.115	13.522	100.00	100.00	9.9394
Total:			**2.115**	**13.522**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-8,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**46**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 22:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

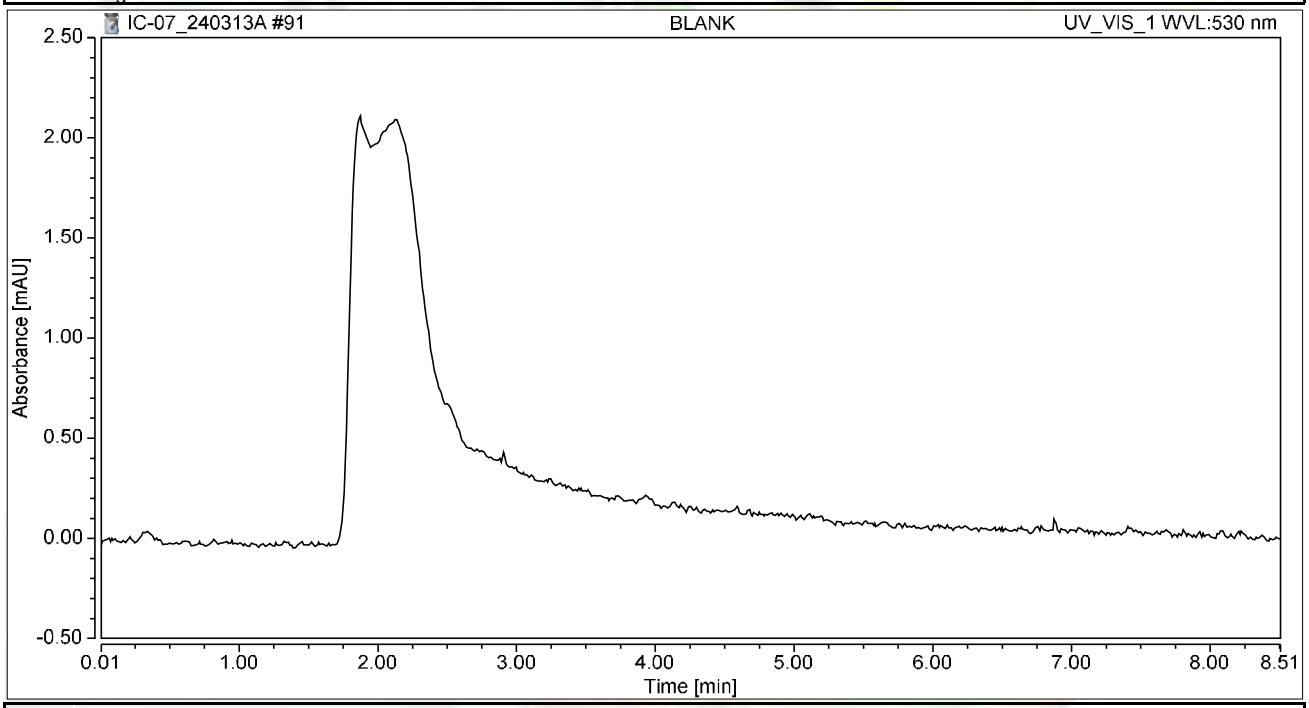
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**47**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**13/Mar/24 22:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

EPA 300.0

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R183563
ASSET #: N063735 / N063736

Instrument ID: IC-08
Analyst: RBA
Date Analyzed: 3/13/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 3/14/2024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R183573
ASSET #: N063735 / N063736

Instrument ID: IC-09
Analyst: RBA
Date Analyzed: 3/13/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.		X			X	
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

Detection of Sulfate in CCB1/4/MB was >1/2PQL. However, N063735/N063736 samples were >5X the CCB detection.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 3/14/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: GROUNDWATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the orignal sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N063736-003B** concentration in mg/L is calculated as follows:

Nitrate, mg/L = 0.823 * 10

= 8.23

Reporting result in two significant figures,

Nitrate, mg/L = 8.2

Reviewed by:

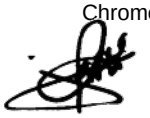
dMocha 3/26/2024

ANALYSIS RUN LOG

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240223	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240223	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240223	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240223	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240223	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240223	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240223	Finished
8	ICV,ICV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240223	Finished
9	ICB,ICB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240223	Finished
10	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240223	Finished
11	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240223	Finished
12	N063297-001B,SAMP,10	Unknown	7	1000.0	Anions Default	EPA 300_0_240223	Finished
13	N063297-001BDUP,DUP,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240223	Finished
14	N063297-001BMS,MS,10	Unknown	9	1000.0	Anions Default	EPA 300_0_240223	Finished
15	N063297-001BMSD,MSD,10	Unknown	10	1000.0	Anions Default	EPA 300_0_240223	Finished
16	N063252-001C,SAMP,2000	Unknown	11	1000.0	Anions Default	EPA 300_0_240223	Finished
17	N063252-001CMS,MS,2000	Unknown	12	1000.0	Anions Default	EPA 300_0_240223	Finished
18	N063248-005B,SAMP,1000	Unknown	13	1000.0	Anions Default	EPA 300_0_240223	Finished
19	N063248-006B,SAMP,2000	Unknown	14	1000.0	Anions Default	EPA 300_0_240223	Finished
20	CCV-1,CCV,1	Unknown	15	1000.0	Anions Default	EPA 300_0_240223	Finished
21	CCB-1,CCB,1	Unknown	16	1000.0	Anions Default	EPA 300_0_240223	Finished
22	N063248-007B,SAMP,2000	Unknown	17	1000.0	Anions Default	EPA 300_0_240223	Finished
23	N063248-008B,SAMP,2000	Unknown	18	1000.0	Anions Default	EPA 300_0_240223	Finished
24	N063248-010C,SAMP,100	Unknown	19	1000.0	Anions Default	EPA 300_0_240223	Finished
25	N063248-011C,SAMP,1000	Unknown	20	1000.0	Anions Default	EPA 300_0_240223	Finished
26	N063248-005B,SAMP,100	Unknown	21	1000.0	Anions Default	EPA 300_0_240223	Finished
27	N063248-006B,SAMP,100	Unknown	22	1000.0	Anions Default	EPA 300_0_240223	Finished
28	N063248-007B,SAMP,100	Unknown	23	1000.0	Anions Default	EPA 300_0_240223	Finished
29	N063248-008B,SAMP,100	Unknown	24	1000.0	Anions Default	EPA 300_0_240223	Finished
30	N063248-010C,SAMP,20	Unknown	25	1000.0	Anions Default	EPA 300_0_240223	Finished
31	N063248-011C,SAMP,100	Unknown	26	1000.0	Anions Default	EPA 300_0_240223	Finished
32	CCV-2,CCV,1	Unknown	27	1000.0	Anions Default	EPA 300_0_240223	Finished
33	CCB-2,CCB,1	Unknown	28	1000.0	Anions Default	EPA 300_0_240223	Finished
34	N063295-005B,SAMP,2000	Unknown	29	1000.0	Anions Default	EPA 300_0_240223	Finished
35	N063295-006B,SAMP,2000	Unknown	30	1000.0	Anions Default	EPA 300_0_240223	Finished
36	N063295-007B,SAMP,2000	Unknown	31	1000.0	Anions Default	EPA 300_0_240223	Finished
37	N063295-008B,SAMP,2000	Unknown	32	1000.0	Anions Default	EPA 300_0_240223	Finished
38	N063295-005B,SAMP,100	Unknown	33	1000.0	Anions Default	EPA 300_0_240223	Finished
39	N063295-006B,SAMP,100	Unknown	34	1000.0	Anions Default	EPA 300_0_240223	Finished
40	N063295-007B,SAMP,100	Unknown	35	1000.0	Anions Default	EPA 300_0_240223	Finished
41	N063295-008B,SAMP,100	Unknown	36	1000.0	Anions Default	EPA 300_0_240223	Finished

Processed by:
Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)



2/25/2024

IC8 RBA 2/25/2024 4:51:54 PM

reviewed by: 2/27/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:07:15 AM	BLANK
2	Std - 0	2/23/2024 9:22:33 AM	IBLANK
3	Std - 1	2/23/2024 9:53:29 AM	STD-LOW
4	Std - 2	2/23/2024 10:08:47 AM	STD
5	Std - 3	2/23/2024 10:24:06 AM	STD
6	Std - 4	2/23/2024 10:39:24 AM	STD
7	Std - 5	2/23/2024 10:54:42 AM	STD-HIGH
8	ICV,ICV,1	2/23/2024 11:10:00 AM	ICV, IWST-240216B
9	ICB,ICB,1	2/23/2024 11:25:18 AM	ICB
10	MB-H2O,MBLK,1	2/23/2024 11:40:36 AM	MB
11	LCS-H2O,LCS,1	2/23/2024 11:55:54 AM	LCS, IWST-240216B
12	N063297-001B,SAMP,10	2/23/2024 1:45:16 PM	SAMP,1>10mL,
13	N063297-001BDUP,DUP,10	2/23/2024 2:00:34 PM	DUP,1>10mL,
14	N063297-001BMS,MS,10	2/23/2024 2:15:52 PM	MS,1>10mL,
15	N063297-001BMSD,MSD,10	2/23/2024 2:31:10 PM	MSD,1>10mL,
16	N063252-001C,SAMP,2000	2/23/2024 2:46:27 PM	SAMP,0.005>10mL,
17	N063252-001CMS,MS,2000	2/23/2024 3:01:45 PM	MS,0.005>10mL,
18	N063248-005B,SAMP,1000	2/23/2024 4:06:07 PM	SAMP,0.01>10mL,
19	N063248-006B,SAMP,2000	2/23/2024 4:21:25 PM	SAMP,0.005>10mL,
20	CCV-1,CCV,1	2/23/2024 4:36:43 PM	CCV, IWST-240216A
21	CCB-1,CCB,1	2/23/2024 4:52:01 PM	CCB
22	N063248-007B,SAMP,2000	2/23/2024 5:07:19 PM	SAMP,0.005>10mL,
23	N063248-008B,SAMP,2000	2/23/2024 5:22:37 PM	SAMP,0.005>10mL,
24	N063248-010C,SAMP,100	2/23/2024 5:37:54 PM	SAMP,0.1>10mL,
25	N063248-011C,SAMP,1000	2/23/2024 5:53:13 PM	SAMP,0.01>10mL,
26	N063248-005B,SAMP,100	2/23/2024 6:08:32 PM	SAMP,0.1>10mL,
27	N063248-006B,SAMP,100	2/23/2024 6:23:50 PM	SAMP,0.1>10mL,
28	N063248-007B,SAMP,100	2/23/2024 6:39:07 PM	SAMP,0.1>10mL,
29	N063248-008B,SAMP,100	2/23/2024 6:54:26 PM	SAMP,0.1>10mL,
30	N063248-010C,SAMP,20	2/23/2024 7:09:45 PM	SAMP,0.5>10mL,
31	N063248-011C,SAMP,100	2/23/2024 7:25:03 PM	SAMP,0.1>10mL,
32	CCV-2,CCV,1	2/23/2024 7:40:21 PM	CCV, IWST-240216A
33	CCB-2,CCB,1	2/23/2024 7:55:39 PM	CCB
34	N063295-005B,SAMP,2000	2/23/2024 8:10:57 PM	SAMP,0.005>10mL,
35	N063295-006B,SAMP,2000	2/23/2024 8:26:16 PM	SAMP,0.005>10mL,
36	N063295-007B,SAMP,2000	2/23/2024 8:41:34 PM	SAMP,0.005>10mL,
37	N063295-008B,SAMP,2000	2/23/2024 8:56:52 PM	SAMP,0.005>10mL,
38	N063295-005B,SAMP,100	2/23/2024 9:12:11 PM	SAMP,0.1>10mL,
39	N063295-006B,SAMP,100	2/23/2024 9:27:28 PM	SAMP,0.1>10mL,
40	N063295-007B,SAMP,100	2/23/2024 9:42:47 PM	SAMP,0.1>10mL,
41	N063295-008B,SAMP,100	2/23/2024 9:58:05 PM	SAMP,0.1>10mL,

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	N063253-001C,SAMP,5000	Unknown	37	1000.0	Anions Default	EPA 300_0_240223	Finished
43	N063253-001C,SAMP,10000	Unknown	38	1000.0	Anions Default	EPA 300_0_240223	Finished
44	CCV-3,CCV,1	Unknown	39	1000.0	Anions Default	EPA 300_0_240223	Finished
45	CCB-3,CCB,1	Unknown	40	1000.0	Anions Default	EPA 300_0_240223	Finished
46	N063256-001C,SAMP,100	Unknown	41	1000.0	Anions Default	EPA 300_0_240223	Finished
47	N063254-001C,SAMP,10000	Unknown	42	1000.0	Anions Default	EPA 300_0_240223	Finished
48	N063255-001C,SAMP,10000	Unknown	43	1000.0	Anions Default	EPA 300_0_240223	Finished
49	N063257-001C,SAMP,10000	Unknown	44	1000.0	Anions Default	EPA 300_0_240223	Finished
50	N063258-001C,SAMP,10000	Unknown	45	1000.0	Anions Default	EPA 300_0_240223	Finished
51	CCV-4,CCV,1	Unknown	46	1000.0	Anions Default	EPA 300_0_240223	Finished
52	CCB-4,CCB,1	Unknown	47	1000.0	Anions Default	EPA 300_0_240223	Finished

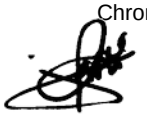
Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	N063253-001C,SAMP,5000	2/23/2024 10:13:23 PM	SAMP,0.002>10mL,
43	N063253-001C,SAMP,10000	2/23/2024 10:28:42 PM	SAMP,0.001>10mL,
44	CCV-3,CCV,1	2/23/2024 10:43:59 PM	CCV, IWST-240216A
45	CCB-3,CCB,1	2/23/2024 10:59:17 PM	CCB
46	N063256-001C,SAMP,100	2/23/2024 11:14:35 PM	SAMP,0.1>10mL,
47	N063254-001C,SAMP,10000	2/23/2024 11:29:53 PM	SAMP,0.001>10mL,
48	N063255-001C,SAMP,10000	2/23/2024 11:45:11 PM	SAMP,0.001>10mL,
49	N063257-001C,SAMP,10000	2/24/2024 12:00:28 AM	SAMP,0.001>10mL,
50	N063258-001C,SAMP,10000	2/24/2024 12:15:46 AM	SAMP,0.001>10mL,
51	CCV-4,CCV,1	2/24/2024 12:31:04 AM	CCV, IWST-240216A
52	CCB-4,CCB,1	2/24/2024 12:46:23 AM	CCB

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 37
Created: 3/12/2024 9:59:20 AM by IC-05
Last Update: 3/13/2024 12:07:25 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240223	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240223	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240223	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240223	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240223	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240223	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240223	Finished
8	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240223	Finished
9	CCV-1,CCV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240223	Finished
10	CCB-1,CCB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240223	Finished
11	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240223	Finished
12	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240223	Finished
13	N063736-001B,SAMP,10	Unknown	6	1000.0	Anions Default	EPA 300_0_240223	Finished
14	N063736-002B,SAMP,10	Unknown	7	1000.0	Anions Default	EPA 300_0_240223	Finished
15	N063736-003B,SAMP,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240223	Finished
16	N063736-004B,SAMP,10	Unknown	9	1000.0	Anions Default	EPA 300_0_240223	Finished
17	N063736-001BMS,MS,10	Unknown	10	1000.0	Anions Default	EPA 300_0_240223	Finished
18	N063736-001BMSD,MSD,10	Unknown	11	1000.0	Anions Default	EPA 300_0_240223	Finished
19	N063736-004BDUP,DUP,10	Unknown	12	1000.0	Anions Default	EPA 300_0_240223	Finished
20	N063736-004BMS,MS,10	Unknown	13	1000.0	Anions Default	EPA 300_0_240223	Finished
21	CCV-2,CCV,1	Unknown	14	1000.0	Anions Default	EPA 300_0_240223	Finished
22	CCB-2,CCB,1	Unknown	15	1000.0	Anions Default	EPA 300_0_240223	Finished
23	N063735-001B,SAMP,10	Unknown	16	1000.0	Anions Default	EPA 300_0_240223	Finished
24	N063735-002B,SAMP,10	Unknown	17	1000.0	Anions Default	EPA 300_0_240223	Finished
25	N063735-004B,SAMP,10	Unknown	18	1000.0	Anions Default	EPA 300_0_240223	Finished
26	N063735-005B,SAMP,10	Unknown	19	1000.0	Anions Default	EPA 300_0_240223	Finished
27	N063735-006B,SAMP,10	Unknown	20	1000.0	Anions Default	EPA 300_0_240223	Finished
28	N063735-007B,SAMP,5	Unknown	21	1000.0	Anions Default	EPA 300_0_240223	Finished
29	N063735-009B,SAMP,5	Unknown	22	1000.0	Anions Default	EPA 300_0_240223	Finished
30	N063735-010B,SAMP,5	Unknown	23	1000.0	Anions Default	EPA 300_0_240223	Finished
31	N063735-012B,SAMP,5	Unknown	24	1000.0	Anions Default	EPA 300_0_240223	Finished
32	N063735-011B,SAMP,10	Unknown	25	1000.0	Anions Default	EPA 300_0_240223	Finished
33	CCV-3,CCV,1	Unknown	26	1000.0	Anions Default	EPA 300_0_240223	Finished
34	CCB-3,CCB,1	Unknown	27	1000.0	Anions Default	EPA 300_0_240223	Finished
35	N063735-013B,SAMP,10	Unknown	28	1000.0	Anions Default	EPA 300_0_240223	Finished
36	CCV-4,CCV,1	Unknown	29	1000.0	Anions Default	EPA 300_0_240223	Finished
37	CCB-4,CCB,1	Unknown	30	1000.0	Anions Default	EPA 300_0_240223	Finished

Processed by:
Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)
reviewed by: 3/17/2024



3/13/2024

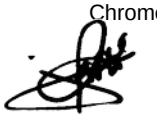
Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 37
Created: 3/12/2024 9:59:20 AM by IC-05
Last Update: 3/13/2024 12:07:25 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:07:15 AM	BLANK
2	Std - 0	2/23/2024 9:22:33 AM	IBLANK
3	Std - 1	2/23/2024 9:53:29 AM	STD-LOW
4	Std - 2	2/23/2024 10:08:47 AM	STD
5	Std - 3	2/23/2024 10:24:06 AM	STD
6	Std - 4	2/23/2024 10:39:24 AM	STD
7	Std - 5	2/23/2024 10:54:42 AM	STD-HIGH
8	BLANK	3/13/2024 7:24:45 AM	BLANK
9	CCV-1,CCV,1	3/13/2024 7:40:03 AM	CCV, IWST-240308A
10	CCB-1,CCB,1	3/13/2024 7:55:21 AM	CCB
11	MB-H2O,MBLK,1	3/13/2024 8:10:40 AM	MB
12	LCS-H2O,LCS,1	3/13/2024 8:25:58 AM	LCS, IWST-240308B
13	N063736-001B,SAMP,10	3/13/2024 8:54:51 AM	SAMP,1>10mL,
14	N063736-002B,SAMP,10	3/13/2024 9:10:08 AM	SAMP,1>10mL,
15	N063736-003B,SAMP,10	3/13/2024 9:25:26 AM	SAMP,1>10mL,
16	N063736-004B,SAMP,10	3/13/2024 9:40:44 AM	SAMP,1>10mL,
17	N063736-001BMS,MS,10	3/13/2024 9:56:03 AM	MS,1>10mL,
18	N063736-001BMSD,MSD,10	3/13/2024 10:11:21 AM	MSD,1>10mL,
19	N063736-004BDUP,DUP,10	3/13/2024 10:26:38 AM	DUP,1>10mL,
20	N063736-004BMS,MS,10	3/13/2024 10:41:56 AM	MS,1>10mL,
21	CCV-2,CCV,1	3/13/2024 10:57:15 AM	CCV, IWST-240308A
22	CCB-2,CCB,1	3/13/2024 11:12:33 AM	CCB
23	N063735-001B,SAMP,10	3/13/2024 11:47:27 AM	SAMP,1>10mL,
24	N063735-002B,SAMP,10	3/13/2024 12:02:44 PM	SAMP,1>10mL,
25	N063735-004B,SAMP,10	3/13/2024 12:18:02 PM	SAMP,1>10mL,
26	N063735-005B,SAMP,10	3/13/2024 12:33:20 PM	SAMP,1>10mL,
27	N063735-006B,SAMP,10	3/13/2024 12:48:38 PM	SAMP,1>10mL,
28	N063735-007B,SAMP,5	3/13/2024 1:03:56 PM	SAMP,2>10mL,
29	N063735-009B,SAMP,5	3/13/2024 1:19:14 PM	SAMP,2>10mL,
30	N063735-010B,SAMP,5	3/13/2024 1:34:32 PM	SAMP,2>10mL,
31	N063735-012B,SAMP,5	3/13/2024 1:49:50 PM	SAMP,2>10mL,
32	N063735-011B,SAMP,10	3/13/2024 2:05:09 PM	SAMP,1>10mL,
33	CCV-3,CCV,1	3/13/2024 2:20:27 PM	CCV, IWST-240308A
34	CCB-3,CCB,1	3/13/2024 2:35:45 PM	CCB
35	N063735-013B,SAMP,10	3/13/2024 2:51:03 PM	SAMP,1>10mL,
36	CCV-4,CCV,1	3/13/2024 3:06:21 PM	CCV, IWST-240308A
37	CCB-4,CCB,1	3/13/2024 3:21:39 PM	CCB

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/23/2024 9:04:47 AM by IC-05
Last Update: 2/25/2024 7:08:17 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
2	Std - 0	Standard	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
3	Std - 1	Standard	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
4	Std - 2	Standard	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
5	Std - 3	Standard	3	1000.0	Anions_Default	EPA 300_0_240223A	Finished
6	Std - 4	Standard	4	1000.0	Anions_Default	EPA 300_0_240223A	Finished
7	Std - 5	Standard	5	1000.0	Anions_Default	EPA 300_0_240223A	Finished
8	ICV,ICV,1	Unknown	6	1000.0	Anions_Default	EPA 300_0_240223A	Finished
9	ICB,ICB,1	Unknown	7	1000.0	Anions_Default	EPA 300_0_240223A	Finished
10	MB-H2O,MBLK,1	Unknown	8	1000.0	Anions_Default	EPA 300_0_240223A	Finished
11	LCS-H2O,LCS,1	Unknown	9	1000.0	Anions_Default	EPA 300_0_240223A	Finished
12	N063297-001B,SAMP,5	Unknown	11	1000.0	Anions_Default	EPA 300_0_240223A	Finished
13	N063297-002C,SAMP,20	Unknown	12	1000.0	Anions_Default	EPA 300_0_240223A	Finished
14	N063297-003C,SAMP,10	Unknown	13	1000.0	Anions_Default	EPA 300_0_240223A	Finished
15	N063295-008B,SAMP,10	Unknown	14	1000.0	Anions_Default	EPA 300_0_240223A	Finished
16	N063295-008BMS,MS,10	Unknown	15	1000.0	Anions_Default	EPA 300_0_240223A	Finished
17	N063295-008BMSD,MSD,10	Unknown	16	1000.0	Anions_Default	EPA 300_0_240223A	Finished
18	N063295-005B,SAMP,10	Unknown	17	1000.0	Anions_Default	EPA 300_0_240223A	Finished
19	N063295-006B,SAMP,10	Unknown	18	1000.0	Anions_Default	EPA 300_0_240223A	Finished
20	CCV-1,CCV,1	Unknown	19	1000.0	Anions_Default	EPA 300_0_240223A	Finished
21	CCB-1,CCB,1	Unknown	20	1000.0	Anions_Default	EPA 300_0_240223A	Finished
22	N063295-007B,SAMP,10	Unknown	21	1000.0	Anions_Default	EPA 300_0_240223A	Finished
23	N063295-008BDUP,DUP,10	Unknown	22	1000.0	Anions_Default	EPA 300_0_240223A	Finished
24	N063297-001BMS,MS,5	Unknown	23	1000.0	Anions_Default	EPA 300_0_240223A	Finished
25	N063297-001BMSD,MSD,5	Unknown	24	1000.0	Anions_Default	EPA 300_0_240223A	Finished
26	N063297-001BDUP,DUP,5	Unknown	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
27	N063297-001B,SAMP,10	Unknown	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
28	N063303-001C,SAMP,10	Unknown	3	1000.0	Anions_Default	EPA 300_0_240223A	Finished
29	N063303-002C,SAMP,10	Unknown	4	1000.0	Anions_Default	EPA 300_0_240223A	Finished
30	N063303-006C,SAMP,10	Unknown	5	1000.0	Anions_Default	EPA 300_0_240223A	Finished
31	N063303-008C,SAMP,10	Unknown	6	1000.0	Anions_Default	EPA 300_0_240223A	Finished
32	CCV-2,CCV,1	Unknown	7	1000.0	Anions_Default	EPA 300_0_240223A	Finished
33	CCB-2,CCB,1	Unknown	8	1000.0	Anions_Default	EPA 300_0_240223A	Finished
34	N063297-003BMS,MS,10	Unknown	9	1000.0	Anions_Default	EPA 300_0_240223A	Finished
35	N063256-001C,SAMP,20	Unknown	10	1000.0	Anions_Default	EPA 300_0_240223A	Finished
36	BLANK	Unknown	11	1000.0	Anions_Default	EPA 300_0_240223A	Finished
37	N063259-001C,SAMP,50	Unknown	12	1000.0	Anions_Default	EPA 300_0_240223A	Finished
38	BLANK	Unknown	13	1000.0	Anions_Default	EPA 300_0_240223A	Finished
39	N063260-001C,SAMP,100	Unknown	14	1000.0	Anions_Default	EPA 300_0_240223A	Finished
40	BLANK	Unknown	15	1000.0	Anions_Default	EPA 300_0_240223A	Finished
41	N063261-001C,SAMP,100	Unknown	16	1000.0	Anions_Default	EPA 300_0_240223A	Finished

Processed by:
Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)



2/25/2024

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/23/2024 9:04:47 AM by IC-05
Last Update: 2/25/2024 7:08:17 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:06:35 AM	BLANK
2	Std - 0	2/23/2024 9:21:54 AM	IBLANK
3	Std - 1	2/23/2024 9:54:20 AM	STD-LOW
4	Std - 2	2/23/2024 10:09:39 AM	STD
5	Std - 3	2/23/2024 10:25:35 AM	STD
6	Std - 4	2/23/2024 10:41:31 AM	STD
7	Std - 5	2/23/2024 10:57:27 AM	STD-HIGH 240216B
8	ICV,ICV,1	2/23/2024 11:13:23 AM	ICV, IWST-~~240131B~~
9	ICB,ICB,1	2/23/2024 11:29:18 AM	ICB
10	MB-H2O,MBLK,1	2/23/2024 11:45:14 AM	MB 240216B
11	LCS-H2O,LCS,1	2/23/2024 12:01:09 PM	LCS IWST-~~240131B~~
12	N063297-001B,SAMP,5	2/23/2024 12:17:04 PM	SAMP,2>10mL,
13	N063297-002C,SAMP,20	2/23/2024 12:33:00 PM	SAMP,0.5>10mL,
14	N063297-003C,SAMP,10	2/23/2024 12:48:55 PM	SAMP,1>10mL,
15	N063295-008B,SAMP,10	2/23/2024 1:04:51 PM	SAMP,1>10mL,
16	N063295-008BMS,MS,10	2/23/2024 1:20:46 PM	MS,1>10mL,
17	N063295-008BMSD,MSD,10	2/23/2024 1:36:43 PM	MSD,1>10mL,
18	N063295-005B,SAMP,10	2/23/2024 1:52:37 PM	SAMP,1>10mL,
19	N063295-006B,SAMP,10	2/23/2024 2:08:33 PM	SAMP,1>10mL,240216A
20	CCV-1,CCV,1	2/23/2024 2:24:29 PM	CCV, IWST-~~240131A~~
21	CCB-1,CCB,1	2/23/2024 2:40:25 PM	CCB
22	N063295-007B,SAMP,10	2/23/2024 2:56:21 PM	SAMP,1>10mL,
23	N063295-008BDUP,DUP,10	2/23/2024 3:12:16 PM	DUP,1>10mL,
24	N063297-001BMS,MS,5	2/23/2024 3:28:11 PM	MS,2>10mL,
25	N063297-001BMSD,MSD,5	2/23/2024 3:44:07 PM	MSD,2>10mL,
26	N063297-001BDUP,DUP,5	2/23/2024 4:05:45 PM	DUP,2>10mL,
27	N063297-001B,SAMP,10	2/23/2024 4:21:04 PM	SAMP,1>10mL,
28	N063303-001C,SAMP,10	2/23/2024 4:37:00 PM	SAMP,1>10mL,
29	N063303-002C,SAMP,10	2/23/2024 4:52:55 PM	SAMP,1>10mL,
30	N063303-006C,SAMP,10	2/23/2024 5:08:51 PM	SAMP,1>10mL,
31	N063303-008C,SAMP,10	2/23/2024 5:24:46 PM	SAMP,1>10mL,240216A
32	CCV-2,CCV,1	2/23/2024 5:40:42 PM	CCV, IWST-~~240131A~~
33	CCB-2,CCB,1	2/23/2024 5:56:38 PM	CCB
34	N063297-003BMS,MS,10	2/23/2024 6:12:34 PM	MS,1>10mL,
35	N063256-001C,SAMP,20	2/23/2024 6:28:29 PM	SAMP,0.5>10mL,
36	BLANK	2/23/2024 6:44:25 PM	BLANK
37	N063259-001C,SAMP,50	2/23/2024 7:00:22 PM	SAMP,0.2>10mL,
38	BLANK	2/23/2024 7:16:17 PM	BLANK
39	N063260-001C,SAMP,100	2/23/2024 7:32:13 PM	SAMP,0.1>10mL,
40	BLANK	2/23/2024 7:48:10 PM	BLANK
41	N063261-001C,SAMP,100	2/23/2024 8:04:05 PM	SAMP,0.1>10mL,

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/23/2024 9:04:47 AM by IC-05
Last Update: 2/25/2024 7:08:17 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	BLANK	Unknown	17	1000.0	Anions_Default	EPA 300_0_240223A	Finished
43	CCV-3,CCV,1	Unknown	18	1000.0	Anions_Default	EPA 300_0_240223A	Finished
44	CCB-3,CCB,1	Unknown	19	1000.0	Anions_Default	EPA 300_0_240223A	Finished

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/23/2024 9:04:47 AM by IC-05
Last Update: 2/25/2024 7:08:17 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	BLANK	2/23/2024 8:20:01 PM	BLANK 240216A
43	CCV-3,CCV,1	2/23/2024 8:35:57 PM	CCV, IWST-~~240131A~~
44	CCB-3,CCB,1	2/23/2024 8:51:53 PM	CCB

dMocha 3/10/2024
for RBA

Sequence: IC-09_240313A
Operator: IC-05
Printed: 3/13/2024 10:48:09 PM

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 42
Created: 3/13/2024 8:15:28 AM by IC-05
Last Update: 3/13/2024 12:55:50 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
2	Std - 0	Standard	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
3	Std - 1	Standard	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
4	Std - 2	Standard	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
5	Std - 3	Standard	3	1000.0	Anions_Default	EPA 300_0_240223A	Finished
6	Std - 4	Standard	4	1000.0	Anions_Default	EPA 300_0_240223A	Finished
7	Std - 5	Standard	5	1000.0	Anions_Default	EPA 300_0_240223A	Finished
8	BLANK	Unknown	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
9	CCV-1,CCV,1	Unknown	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
10	CCB-1,CCB,1	Unknown	3	1000.0	Anions_Default	EPA 300_0_240223A	Finished
11	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions_Default	EPA 300_0_240223A	Finished
12	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions_Default	EPA 300_0_240223A	Finished
13	N063712-001A,SAMP,20	Unknown	7	1000.0	Anions_Default	EPA 300_0_240223A	Finished
14	N063736-001B,SAMP,100	Unknown	8	1000.0	Anions_Default	EPA 300_0_240223A	Finished
15	N063736-001BMS,MS,100	Unknown	9	1000.0	Anions_Default	EPA 300_0_240223A	Finished
16	N063736-001BMSD,MSD,100	Unknown	10	1000.0	Anions_Default	EPA 300_0_240223A	Finished
17	N063736-003B,SAMP,100	Unknown	11	1000.0	Anions_Default	EPA 300_0_240223A	Finished
18	N063736-003BDUP,DUP,100	Unknown	12	1000.0	Anions_Default	EPA 300_0_240223A	Finished
19	N063736-003BMS,MS,100	Unknown	13	1000.0	Anions_Default	EPA 300_0_240223A	Finished
20	N063736-002B,SAMP,100	Unknown	14	1000.0	Anions_Default	EPA 300_0_240223A	Finished
21	CCV-2,CCV,1	Unknown	15	1000.0	Anions_Default	EPA 300_0_240223A	Finished
22	CCB-2,CCB,1	Unknown	16	1000.0	Anions_Default	EPA 300_0_240223A	Finished
23	N063736-004B,SAMP,100	Unknown	17	1000.0	Anions_Default	EPA 300_0_240223A	Finished
24	N063712-001A,SAMP,1	Unknown	18	1000.0	Anions_Default	EPA 300_0_240223A	Finished
25	N063735-001B,SAMP,50	Unknown	19	1000.0	Anions_Default	EPA 300_0_240223A	Finished
26	N063735-002B,SAMP,100	Unknown	20	1000.0	Anions_Default	EPA 300_0_240223A	Finished
27	N063735-004B,SAMP,50	Unknown	21	1000.0	Anions_Default	EPA 300_0_240223A	Finished
28	N063735-005B,SAMP,50	Unknown	22	1000.0	Anions_Default	EPA 300_0_240223A	Finished
29	N063735-006B,SAMP,50	Unknown	23	1000.0	Anions_Default	EPA 300_0_240223A	Finished
30	N063735-007B,SAMP,20	Unknown	24	1000.0	Anions_Default	EPA 300_0_240223A	Finished
31	N063735-009B,SAMP,20	Unknown	25	1000.0	Anions_Default	EPA 300_0_240223A	Finished
32	N063735-010B,SAMP,20	Unknown	26	1000.0	Anions_Default	EPA 300_0_240223A	Finished
33	CCV-3,CCV,1	Unknown	27	1000.0	Anions_Default	EPA 300_0_240223A	Finished
34	CCB-3,CCB,1	Unknown	28	1000.0	Anions_Default	EPA 300_0_240223A	Finished
35	N063735-012B,SAMP,20	Unknown	29	1000.0	Anions_Default	EPA 300_0_240223A	Finished
36	N063735-011B,SAMP,50	Unknown	30	1000.0	Anions_Default	EPA 300_0_240223A	Finished
37	N063735-013B,SAMP,50	Unknown	31	1000.0	Anions_Default	EPA 300_0_240223A	Finished
38	N063712-001ADUP,DUP,1	Unknown	32	1000.0	Anions_Default	EPA 300_0_240223A	Finished
39	N063712-001AMS,MS,1	Unknown	33	1000.0	Anions_Default	EPA 300_0_240223A	Finished
40	N063712-001AMSD,MSD,1	Unknown	34	1000.0	Anions_Default	EPA 300_0_240223A	Finished
41	CCV-4,CCV,1	Unknown	35	1000.0	Anions_Default	EPA 300_0_240223A	Finished

Processed by:

reviewed by: 3/18/2024

3/14/2024

IC9 RBA 3/13/2024 10:48:30 PM

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 42
Created: 3/13/2024 8:15:28 AM by IC-05
Last Update: 3/13/2024 12:55:50 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:06:35 AM	BLANK
2	Std - 0	2/23/2024 9:21:54 AM	IBLANK
3	Std - 1	2/23/2024 9:54:20 AM	STD-LOW
4	Std - 2	2/23/2024 10:09:39 AM	STD
5	Std - 3	2/23/2024 10:25:35 AM	STD
6	Std - 4	2/23/2024 10:41:31 AM	STD
7	Std - 5	2/23/2024 10:57:27 AM	STD-HIGH
8	BLANK	3/13/2024 8:17:58 AM	BLANK
9	CCV-1,CCV,1	3/13/2024 8:33:17 AM	CCV, IWST-240308A
10	CCB-1,CCB,1	3/13/2024 8:49:13 AM	CCB
11	MB-H2O,MBLK,1	3/13/2024 9:05:08 AM	MB
12	LCS-H2O,LCS,1	3/13/2024 9:21:04 AM	LCS, IWST-240308B
13	N063712-001A,SAMP,20	3/13/2024 9:36:59 AM	SAMP,0.5>10mL,
14	N063736-001B,SAMP,100	3/13/2024 9:52:55 AM	SAMP,0.1>10mL,
15	N063736-001BMS,MS,100	3/13/2024 10:08:50 AM	MS,0.1>10mL,
16	N063736-001BMSD,MSD,100	3/13/2024 10:24:45 AM	MSD,0.1>10mL,
17	N063736-003B,SAMP,100	3/13/2024 10:40:41 AM	SAMP,0.1>10mL,
18	N063736-003BDUP,DUP,100	3/13/2024 10:56:37 AM	DUP,0.1>10mL,
19	N063736-003BMS,MS,100	3/13/2024 11:12:32 AM	MS,0.1>10mL,
20	N063736-002B,SAMP,100	3/13/2024 11:28:28 AM	SAMP,0.1>10mL,
21	CCV-2,CCV,1	3/13/2024 11:44:24 AM	CCV, IWST-240308A
22	CCB-2,CCB,1	3/13/2024 12:00:20 PM	CCB
23	N063736-004B,SAMP,100	3/13/2024 12:16:15 PM	SAMP,0.1>10mL,
24	N063712-001A,SAMP,1	3/13/2024 12:32:11 PM	SAMP,10mL,
25	N063735-001B,SAMP,50	3/13/2024 12:48:06 PM	SAMP,0.2>10mL,
26	N063735-002B,SAMP,100	3/13/2024 1:04:02 PM	SAMP,0.1>10mL,
27	N063735-004B,SAMP,50	3/13/2024 1:19:56 PM	SAMP,0.2>10mL,
28	N063735-005B,SAMP,50	3/13/2024 1:35:53 PM	SAMP,0.2>10mL,
29	N063735-006B,SAMP,50	3/13/2024 1:51:49 PM	SAMP,0.2>10mL,
30	N063735-007B,SAMP,20	3/13/2024 2:07:45 PM	SAMP,0.5>10mL,
31	N063735-009B,SAMP,20	3/13/2024 2:23:40 PM	SAMP,0.5>10mL,
32	N063735-010B,SAMP,20	3/13/2024 2:39:36 PM	SAMP,0.5>10mL,
33	CCV-3,CCV,1	3/13/2024 2:55:33 PM	CCV, IWST-240308A
34	CCB-3,CCB,1	3/13/2024 3:11:28 PM	CCB
35	N063735-012B,SAMP,20	3/13/2024 3:27:24 PM	SAMP,0.5>10mL,
36	N063735-011B,SAMP,50	3/13/2024 3:43:19 PM	SAMP,0.2>10mL,
37	N063735-013B,SAMP,50	3/13/2024 3:59:15 PM	SAMP,0.2>10mL,
38	N063712-001ADUP,DUP,1	3/13/2024 4:15:11 PM	DUP,10mL,
39	N063712-001AMS,MS,1	3/13/2024 4:31:07 PM	MS,10mL,
40	N063712-001AMSD,MSD,1	3/13/2024 4:47:02 PM	MSD,10mL,
41	CCV-4,CCV,1	3/13/2024 5:02:57 PM	CCV, IWST-240308A

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 42
Created: 3/13/2024 8:15:28 AM by IC-05
Last Update: 3/13/2024 12:55:50 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	CCB-4,CCB,1	Unknown	36	1000.0	Anions_Default	EPA 300_0_240223A	Finished

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 42
Created: 3/13/2024 8:15:28 AM by IC-05
Last Update: 3/13/2024 12:55:50 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	CCB-4,CCB,1	3/13/2024 5:18:53 PM	CCB

INITIAL CALIBRATION DATA SUMMARY

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 2/23/2024

Initial Calibration:

Nitrate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0201	0.0879	0.1672	0.4214	0.8656	1.000
Measured, in mg/L	0.000000	0.062700	0.259300	0.489100	1.225800	2.513100	
Relative Error (%RE)		25.4%		-2.2%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712E

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-09
Date Calibrated: 2/23/2024

Initial Calibration:

Sulfate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.5	2	4	10	20	R^2
Area,mAU*min	0.0000	0.0569	0.2273	0.4613	1.1803	2.4884	0.999
Measured, in mg/L	0.000000	0.682100	2.047200	3.922700	9.683700	20.164400	
Relative Error (%RE)		36.4%		-1.9%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712G

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183573**
Client ID: **ICV**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5745556**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.951	0.50	4.000	0	98.8	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183573**
Client ID: **CCV**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5745558**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.926	0.50	4.000	0	98.2	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183573**
Client ID: **CCV**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5745569**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.884	0.50	4.000	0	97.1	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183573**
Client ID: **CCV**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5745580**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.875	0.50	4.000	0	96.9	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183573**
Client ID: **CCV**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5745585**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.913	0.50	4.000	0	97.8	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **ICV**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5743964**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.269	0.050	1.250	0	102	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **CCV**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743966**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.222	0.050	1.250	0	97.7	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **CCV**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743978**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.202	0.050	1.250	0	96.2	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **CCV**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743990**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.190	0.050	1.250	0	95.2	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **CCV**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743993**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.179	0.050	1.250	0	94.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183573**
Client ID: **ICB**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5745557**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183573**
Client ID: **CCB**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5745559**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183573**
Client ID: **CCB**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5745570**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183573**
Client ID: **CCB**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5745581**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183573**
Client ID: **CCB**	Batch ID: **R183573**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5745586**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	0.364	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

Detect of SO4 in CCB-4 is >1/2RL. However, So4 in samples are >5X the calibrtion blank detection.

3/19/2024

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **ICB**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5743965**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **CCB**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743967**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **CCB**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743979**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **CCB**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743991**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183563**
Client ID: **CCB**	Batch ID: **R183563**	TestNo: **EPA 300.0**		Analysis Date: **3/13/2024**	SeqNo: **5743994**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 3/13/2024

Sample Name		Retention Time	Evaluation
ICV	Nitrate	6.540	
CCV-1	Nitrate	6.414	
CCV-2	Nitrate	6.407	
CCV-3	Nitrate	6.383	
CCV-4	Nitrate	6.400	

Average 6.401
Applied RT Window 6.201 - 6.601

MB-R183563_NO3	Nitrate	N.A.	N.A.
LCS-R183563_NO3	Nitrate	6.410	PASS
N063736-001B	Nitrate	N.A.	N.A.
N063736-002B	Nitrate	N.A.	N.A.
N063736-003B	Nitrate	6.413	PASS
N063736-004B	Nitrate	6.397	PASS
N063736-001BMS	Nitrate	6.404	PASS
N063736-001BMSD	Nitrate	6.424	PASS
N063736-004BDUP	Nitrate	6.390	PASS
N063736-004BMS	Nitrate	6.427	PASS

Reviewed by:

dMocha 3/26/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-09

Analytical Sequence

Date Analyzed: 3/13/2024

Sample Name		Retention Time	Evaluation
ICV	Sulfate	10.777	
CCV-1	Sulfate	10.637	
CCV-2	Sulfate	10.614	
CCV-3	Sulfate	10.611	
CCV-4	Sulfate	10.624	
	Average	10.622	
	Applied RT Window	10.422 - 10.822	
MB-R183573_SO4	Sulfate	10.654	PASS
LCS-R183573_SO4	Sulfate	10.667	PASS
N063736-001B	Sulfate	10.637	PASS
N063736-001BMS	Sulfate	10.637	PASS
N063736-001BMSD	Sulfate	10.634	PASS
N063736-003B	Sulfate	10.631	PASS
N063736-003BDUP	Sulfate	10.614	PASS
N063736-003BMS	Sulfate	10.627	PASS
N063736-002B	Sulfate	10.617	PASS
N063736-004B	Sulfate	10.621	PASS

Reviewed by:

dMRocha 3/26/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): 10/5/2022, 12/14/2022, 3/22/2023,7/10/2023; 10/3/2023 & 11/14/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: mg/L

Instrument Name: **IC-08 & IC-09**

Datafile IC-08 221005A #24 IC-08 221214A #30 IC-08 230322A #35 IC-08 230710A #13 IC-09 231003A #14 IC-08 231114A #24 IC-09 231114A #19

Analyte	#1	#2	#3	#4	#5	#6	#7	Spike Conc., mg/L	SD	$t_{(n-1)}$ value	MDLs	MDL	PQL
Fluoride	0.100	0.103	0.108	0.118	0.110	0.098	0.126	0.10	0.0101	3.143	**0.0318**	**0.0318**	0.10
Chloride	0.480	0.418	0.472	0.653	0.624	0.587	0.622	0.50	0.0922	3.143	**0.2898**	**0.2898**	0.50
Nitrite	0.068	0.061	0.060	0.071	0.063	0.061	0.070	0.05	0.0047	3.143	**0.0149**	**0.0149**	0.05
Bromide	0.526	0.502	0.509	0.522	0.536	0.527	0.520	0.50	0.0116	3.143	**0.0364**	**0.0364**	0.50
Nitrate	0.073	0.058	0.059	0.073	0.074	0.068	0.073	0.05	0.0068	3.143	**0.0215**	**0.0240**	0.05
Phosphate	0.112	0.096	0.114	0.120	0.130	0.093	0.124	0.10	0.0138	3.143	**0.0433**	**0.0433**	0.10
Sulfate	0.501	0.609	0.638	0.401	0.704	0.620	0.697	0.50	0.1092	3.143	**0.3432**	**0.3432**	0.50

METHOD DETECTION LIMIT (Blanks)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Analyte	MDLb	# of Records
Fluoride	0	63
Chloride	0.1456	80
Nitrite	0.0147	64
Bromide	0	18
Nitrate	0.0240	132
Phosphate	0.0237	34
Sulfate	0.2579	107

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

EPA 6010B
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107498
ASSET #: N063736

Instrument ID: ICP-02
Analyst: DBJ
Date Analyzed: 3/13/2024

Method:

[X] EPA 6010B / 200.7
[ ] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

%Rec of Fe in N063735-002C-MS/MSD failed, high bias. However, LCS passed criteria.

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 03142024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in ug/L , in the original sample as follows:

Iron , ug/L = A * DF * PF *CF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL
CF= Conversion Factor from mg/L to ug/L, 1000

For Sample **N063736-001C** , the concentration i ug/L is calculated as follows:

Iron , ug/L = 0.29451 * 1 * (25/25) * 1000

Iron , ug/L = 294.51

Reporting results in two significant figures,

Iron , ug/L = 290

Reviewed by:

dMocha 3/26/2024

% RSD SUMMARY

RSD SUMMARY: 240313B

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	Fe	0	4.41	15	PASS
Standard1	ICAL	1	Fe	0.02	5.93	15	PASS
Standard2	ICAL	1	Fe	0.05	0.93	15	PASS
Standard3	ICAL	1	Fe	2	0.07	15	PASS
Standard4	ICAL	1	Fe	5	0.13	15	PASS
Standard5	ICAL	1	Fe	7.5	0.15	15	PASS
Standard6	ICAL	1	Fe	10	0.02	15	PASS
Standard7	ICAL	1	Fe	20	0.05	15	PASS
ICV	ICV	1	Fe	10.11	0.09	15	PASS
ICB	ICB	1	Fe	0	98.61	15	<PQL
LLICV	CCV1	1	Fe	0.02	0.65	20	PASS
ICSA1	ICSA	1	Fe	184.84	0.07	15	PASS
ICSAB1	ICSAB	1	Fe	182.52	0.07	15	PASS
RINSE	RINSE	1	Fe	0.02	40.34	15	<PQL
RINSE	RINSE	1	Fe	0.01	49.96	15	<PQL
MB-107498	MBLK	1	Fe	0	87.21	15	<PQL
LCS-107498	LCS	1	Fe	0.1	8.89	15	PASS
N063734-001B	SAMP	1	Fe	0.38	1.75	15	PASS
N063734-002B	SAMP	1	Fe	0.36	2.57	15	PASS
N063735-001C	SAMP	1	Fe	0.04	2.85	15	PASS
N063735-002C	SAMP	1	Fe	0.34	0.36	15	PASS
N063735-002C	SAMP	5	Fe	0.06	2.75	15	PASS
N063735-002C-PS	PS	1	Fe	0.45	0.29	15	PASS
CCV1	CCV	1	Fe	10.16	0.06	15	PASS
CCB1	CCB	1	Fe	0	3.74	15	PASS
N063735-002C-MS	MS	1	Fe	0.5	0.28	15	PASS
N063735-002C-MSD	MSD	1	Fe	0.51	1.22	15	PASS
N063735-004C	SAMP	1	Fe	0.04	1.61	15	PASS
N063735-005C	SAMP	1	Fe	0.01	12.15	15	PASS
N063735-006C	SAMP	1	Fe	0.08	0.92	15	PASS
N063735-007C	SAMP	1	Fe	0.35	0.97	15	PASS
N063735-009C	SAMP	1	Fe	0.01	9.89	15	PASS
N063735-010C	SAMP	1	Fe	0.05	3.17	15	PASS
N063735-011C	SAMP	1	Fe	0	34.64	15	<PQL
N063735-012C	SAMP	1	Fe	0.14	1.88	15	PASS
CCV2	CCV	1	Fe	10.07	0.06	15	PASS
CCB2	CCB	1	Fe	0	6.32	15	PASS
N063735-013C	SAMP	1	Fe	0.01	14.01	15	PASS
N063736-001C	SAMP	1	Fe	0.29	0.37	15	PASS
N063736-002C	SAMP	1	Fe	0.09	1.11	15	PASS
N063736-003C	SAMP	1	Fe	0.03	8.69	15	PASS
N063736-004C	SAMP	1	Fe	0.01	8.67	15	PASS

RSD SUMMARY: 240313B

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CCV3	CCV	1	Fe	10.12	0.07	15	PASS
CCB3	CCB	1	Fe	0	28.25	15	<PQL
ICSA2	ICSA	1	Fe	183.93	0.11	15	PASS
ICSAB2	ICSAB	1	Fe	181.68	0.09	15	PASS
RINSE	RINSE	1	Fe	-0.01	16.95	15	<PQL
STD1	SAMP	1	Fe	2.05	0.23	15	PASS
STD2	SAMP	1	Fe	0.04	2.92	15	PASS
RINSE	RINSE	1	Fe	0	4.88	15	PASS
CCV4	CCV	1	Fe	10.19	0.15	15	PASS
CCB4	CCB	1	Fe	0.01	31.42	15	<PQL
ICSA3	ICSA	1	Fe	185.17	0.11	15	PASS
ICSAB3	ICSAB	1	Fe	182.74	0.04	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240313B

Instrument ID: ICP-02

STANDARD CODE	
Standard1	MWST-240311M, 0.5<50mL
Standard2	MWST-240311N
Standard3	MWST-240311O, 5<50mL
Standard4	MWST-240311O,12.5<50mL
Standard5	MWST-240311O, 15<40mL
Standard6	MWST-240311O, 25<50mL
Standard7	MWST-243011O
ICV	MWST-240311AF
CCV	MWST-240311O, 25<50mL
ICSA/ICSAB	MWST-240311P / MWST-240311Q
Int. Std. (Y)	MWST-240311B
PS Spike	MWST-240311X/Y/Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	03/13/2024	05:06:08 PM
2	Standard1	ICAL	1	03/13/2024	05:10:17 PM
3	Standard2	ICAL	1	03/13/2024	05:14:23 PM
4	Standard3	ICAL	1	03/13/2024	05:18:30 PM
5	Standard4	ICAL	1	03/13/2024	05:22:38 PM
6	Standard5	ICAL	1	03/13/2024	05:26:46 PM
7	Standard6	ICAL	1	03/13/2024	05:30:54 PM
8	Standard7	ICAL	1	03/13/2024	05:35:03 PM
250	ICV	ICV	1	03/13/2024	05:38:16 PM
1	ICB	ICB	1	03/13/2024	05:42:28 PM
2	LLICV	CCV1	1	03/13/2024	05:49:34 PM
9	ICSA1	ICSA	1	03/13/2024	05:53:40 PM
10	ICSAB1	ICSAB	1	03/13/2024	05:59:23 PM
239	RINSE	RINSE	1	03/13/2024	06:11:21 PM
240	RINSE	RINSE	1	03/13/2024	06:20:16 PM
11	MB-107498	MBLK	1	03/13/2024	06:28:21 PM
12	LCS-107498	LCS	1	03/13/2024	06:32:27 PM
13	N063734-001B	SAMP	1	03/13/2024	06:36:33 PM
14	N063734-002B	SAMP	1	03/13/2024	06:42:40 PM
15	N063735-001C	SAMP	1	03/13/2024	06:48:47 PM
16	N063735-002C	SAMP	1	03/13/2024	06:54:53 PM
17	N063735-002C	SAMP	5	03/13/2024	07:01:00 PM
18	N063735-002C-PS	PS	1	03/13/2024	07:05:07 PM
7	CCV1	CCV	1	03/13/2024	07:11:15 PM
1	CCB1	CCB	1	03/13/2024	07:15:24 PM
19	N063735-002C-MS	MS	1	03/13/2024	07:19:30 PM
20	N063735-002C-MSD	MSD	1	03/13/2024	07:25:38 PM
21	N063735-004C	SAMP	1	03/13/2024	07:31:46 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
22	N063735-005C	SAMP	1	03/13/2024	07:37:55 PM
23	N063735-006C	SAMP	1	03/13/2024	07:44:03 PM
24	N063735-007C	SAMP	1	03/13/2024	07:50:08 PM
25	N063735-009C	SAMP	1	03/13/2024	07:54:14 PM
26	N063735-010C	SAMP	1	03/13/2024	08:00:19 PM
27	N063735-011C	SAMP	1	03/13/2024	08:04:25 PM
28	N063735-012C	SAMP	1	03/13/2024	08:10:32 PM
7	CCV2	CCV	1	03/13/2024	08:16:39 PM
1	CCB2	CCB	1	03/13/2024	08:20:47 PM
29	N063735-013C	SAMP	1	03/13/2024	08:24:53 PM
30	N063736-001C	SAMP	1	03/13/2024	08:31:01 PM
31	N063736-002C	SAMP	1	03/13/2024	08:37:08 PM
32	N063736-003C	SAMP	1	03/13/2024	08:43:15 PM
33	N063736-004C	SAMP	1	03/13/2024	08:49:22 PM
7	CCV3	CCV	1	03/13/2024	08:55:31 PM
1	CCB3	CCB	1	03/13/2024	08:59:39 PM
9	ICSA2	ICSA	1	03/13/2024	09:03:46 PM
10	ICSAB2	ICSAB	1	03/13/2024	09:09:28 PM
67	RINSE	RINSE	1	03/13/2024	09:27:18 PM
68	STD1	SAMP	1	03/13/2024	09:31:27 PM
69	STD2	SAMP	1	03/13/2024	09:35:35 PM
67	RINSE	RINSE	1	03/13/2024	09:39:43 PM
7	CCV4	CCV	1	03/13/2024	09:43:51 PM
1	CCB4	CCB	1	03/13/2024	09:48:00 PM
9	ICSA3	ICSA	1	03/13/2024	09:52:06 PM
10	ICSAB3	ICSAB	1	03/13/2024	09:57:49 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/13/2024 9:47:20 AM**
Prep End Date: **3/13/2024 2:00:00 PM**
Prep Batch **107498** Prep Code:**3010_W_DISS**

Reviewed/ Date: dMocha 3/26/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-1-17**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107498	Aqueous		25	☐	25	1.000		
MB-107498	Aqueous		25	☐	25	1.000		
N063734-001B	Water	<2	25	☐	25	1.000		
N063734-002B	Water	<2	25	☐	25	1.000		
N063735-001C	Groundwater	<2	25	☐	25	1.000		
N063735-002C	Groundwater	<2	25	☐	25	1.000		
N063735-002C-MS	Groundwater	<2	25	☐	25	1.000		
N063735-002C-MSD	Groundwater	<2	25	☐	25	1.000		
N063735-004C	Groundwater	<2	25	☐	25	1.000		
N063735-005C	Groundwater	<2	25	☐	25	1.000		
N063735-006C	Groundwater	<2	25	☐	25	1.000		
N063735-007C	Groundwater	<2	25	☐	25	1.000		
N063735-009C	Groundwater	<2	25	☐	25	1.000		
N063735-010C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15448	HYDROCHLORIC ACID
16152	NITRIC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240311X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240311Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240311Z	ICP Solution C	LCS,MS,MSD	0.5

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/13/2024 9:47:20 AM**
Prep End Date: **3/13/2024 2:00:00 PM**
Prep Batch **107498** Prep Code:**3010_W_DISS**

Reviewed/ Date: dMocha 3/26/2024
Initials/ Date: for
Technician: **Jocelyn Rivera**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-1-17**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063735-011C	Groundwater	<2	25	☐	25	1.000		
N063735-012C	Groundwater	<2	25	☐	25	1.000		
N063735-013C	Groundwater	<2	25	☐	25	1.000		
N063736-001C	Groundwater	<2	25	☐	25	1.000		
N063736-002C	Groundwater	<2	25	☐	25	1.000		
N063736-003C	Groundwater	<2	25	☐	25	1.000		
N063736-004C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15448	HYDROCHLORIC ACID
16152	NITRIC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240311X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240311Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240311Z	ICP Solution C	LCS,MS,MSD	0.5

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240313B

Instrument ID: ICP-02

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Iron								
CalBlk	03/13/2024	05:06:08 PM	Fe	273.953	106	0.00	mg/L	
Standard1	03/13/2024	05:10:17 PM	Fe	273.953	41	0.0200	mg/L	
Standard2	03/13/2024	05:14:23 PM	Fe	273.953	212	0.050	mg/L	
Standard3	03/13/2024	05:18:30 PM	Fe	273.953	10205	2.000	mg/L	
Standard4	03/13/2024	05:22:38 PM	Fe	273.953	26502	5.000	mg/L	
Standard5	03/13/2024	05:26:46 PM	Fe	273.953	39112	7.500	mg/L	
Standard6	03/13/2024	05:30:54 PM	Fe	273.953	52879	10.000	mg/L	
Standard7	03/13/2024	05:35:03 PM	Fe	273.953	104167	20.000	mg/L	1.0000

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183568**
Client ID: **ICV**	Batch ID: **R183568**	TestNo: **EPA 6010B**		Analysis Date: **3/13/2024**	SeqNo: **5744121**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10106.571	20	10000	0	101	90	110				

Sample ID **LLICV**	SampType: **CCV1**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183568**
Client ID: **ZZZZZZ**	Batch ID: **R183568**	TestNo: **EPA 6010B**		Analysis Date: **3/13/2024**	SeqNo: **5744123**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	23.616	20	20.00	0	118	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183568**
Client ID: **CCV**	Batch ID: **R183568**	TestNo: **EPA 6010B**		Analysis Date: **3/13/2024**	SeqNo: **5744134**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10159.823	20	10000	0	102	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183568**
Client ID: **CCV**	Batch ID: **R183568**	TestNo: **EPA 6010B**		Analysis Date: **3/13/2024**	SeqNo: **5744146**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10071.733	20	10000	0	101	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183568**
Client ID: **CCV**	Batch ID: **R183568**	TestNo: **EPA 6010B**		Analysis Date: **3/13/2024**	SeqNo: **5744153**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10117.627	20	10000	0	101	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183568**
Client ID: **ICB**	Batch ID: **R183568**	TestNo: **EPA 6010B**		Analysis Date: **3/13/2024**	SeqNo: **5744122**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.223	20									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183568**
Client ID: **CCB**	Batch ID: **R183568**	TestNo: **EPA 6010B**		Analysis Date: **3/13/2024**	SeqNo: **5744135**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	3.416	20									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183568**
Client ID: **CCB**	Batch ID: **R183568**	TestNo: **EPA 6010B**		Analysis Date: **3/13/2024**	SeqNo: **5744147**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.644	20									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183568**
Client ID: **CCB**	Batch ID: **R183568**	TestNo: **EPA 6010B**		Analysis Date: **3/13/2024**	SeqNo: **5744154**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	3.515	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **183568**
Client ID: **ICSA** Batch ID: **R183568** TestNo: **EPA 6010B** Analysis Date: **3/13/2024** SeqNo: **5744124**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	515679.216	50	500000	0	103	80	120				
Calcium	571146.357	500	500000	0	114	80	120				
Iron	184840.409	20	200000	0	92.4	80	120				
Magnesium	519532.735	100	500000	0	104	80	120				

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **183568**
Client ID: **ICSAB** Batch ID: **R183568** TestNo: **EPA 6010B** Analysis Date: **3/13/2024** SeqNo: **5744125**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	507653.340	50	500000	0	102	80	120				
Calcium	561963.426	500	500000	0	112	80	120				
Iron	182518.828	20	200000	0	91.3	80	120				
Magnesium	512050.298	100	500000	0	102	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **183568**
Client ID: **ICSA** Batch ID: **R183568** TestNo: **EPA 6010B** Analysis Date: **3/13/2024** SeqNo: **5744155**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	515637.501	50	500000	0	103	80	120				
Calcium	574623.803	500	500000	0	115	80	120				
Iron	183932.208	20	200000	0	92.0	80	120				
Magnesium	518303.894	100	500000	0	104	80	120				

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **183568**
Client ID: **ICSAB** Batch ID: **R183568** TestNo: **EPA 6010B** Analysis Date: **3/13/2024** SeqNo: **5744156**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	507988.521	50	500000	0	102	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183568**
Client ID: **ICSAB**	Batch ID: **R183568**	TestNo: **EPA 6010B**		Analysis Date: **3/13/2024**	SeqNo: **5744156**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	563080.541	500	500000	0	113	80	120				
Iron	181681.280	20	200000	0	90.8	80	120				
Magnesium	510413.620	100	500000	0	102	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240313B

Instrument ID: ICP-02

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	1.01	100.73	65-125	PASS
Standard2	ICAL	1	1.01	101.19	65-125	PASS
Standard3	ICAL	1	1.01	101.02	65-125	PASS
Standard4	ICAL	1	0.99	98.78	65-125	PASS
Standard5	ICAL	1	0.99	99.18	65-125	PASS
Standard6	ICAL	1	0.97	97.36	65-125	PASS
Standard7	ICAL	1	0.96	95.96	65-125	PASS
ICV	ICV	1	0.98	97.53	65-125	PASS
ICB	ICB	1	1	99.95	65-125	PASS
LLICV	CCV1	1	1	100.39	65-125	PASS
ICSA1	ICSA	1	0.82	81.51	65-125	PASS
ICSAB1	ICSAB	1	0.8	80.38	65-125	PASS
RINSE	RINSE	1	1.04	104.16	65-125	PASS
RINSE	RINSE	1	1	99.53	65-125	PASS
MB-107498	MBLK	1	0.97	97.34	65-125	PASS
LCS-107498	LCS	1	0.96	96.16	65-125	PASS
N063734-001B	SAMP	1	0.76	76.13	65-125	PASS
N063734-002B	SAMP	1	0.74	74.18	65-125	PASS
N063735-001C	SAMP	1	0.76	75.97	65-125	PASS
N063735-002C	SAMP	1	0.74	74.23	65-125	PASS
N063735-002C	SAMP	5	0.86	86.01	65-125	PASS
N063735-002C-PS	PS	1	0.73	73.3	65-125	PASS
CCV1	CCV	1	0.98	97.53	65-125	PASS
CCB1	CCB	1	1	99.94	65-125	PASS
N063735-002C-MS	MS	1	0.76	76.42	65-125	PASS
N063735-002C-MSD	MSD	1	0.75	74.86	65-125	PASS
N063735-004C	SAMP	1	0.75	74.7	65-125	PASS
N063735-005C	SAMP	1	0.77	77.38	65-125	PASS
N063735-006C	SAMP	1	0.73	73.31	65-125	PASS
N063735-007C	SAMP	1	0.88	88.45	65-125	PASS
N063735-009C	SAMP	1	0.89	89.43	65-125	PASS
N063735-010C	SAMP	1	0.88	88.46	65-125	PASS
N063735-011C	SAMP	1	0.8	80.19	65-125	PASS
N063735-012C	SAMP	1	0.86	85.95	65-125	PASS
CCV2	CCV	1	0.96	96.06	65-125	PASS
CCB2	CCB	1	0.99	99.05	65-125	PASS
N063735-013C	SAMP	1	0.74	74.24	65-125	PASS
N063736-001C	SAMP	1	0.75	74.75	65-125	PASS
N063736-002C	SAMP	1	0.72	71.83	65-125	PASS
N063736-003C	SAMP	1	0.77	77.11	65-125	PASS

INTERNAL STANDARD: 240313B

Instrument ID: ICP-02

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
N063736-004C	SAMP	1	0.71	70.92	65-125	PASS
CCV3	CCV	1	0.97	96.73	65-125	PASS
CCB3	CCB	1	1	99.92	65-125	PASS
ICSA2	ICSA	1	0.82	81.72	65-125	PASS
ICSAB2	ICSAB	1	0.81	81.31	65-125	PASS
RINSE	RINSE	1	1.08	107.88	65-125	PASS
STD1	SAMP	1	0.99	99.34	65-125	PASS
STD2	SAMP	1	1.03	102.88	65-125	PASS
RINSE	RINSE	1	1.08	108.21	65-125	PASS
CCV4	CCV	1	1	100.16	65-125	PASS
CCB4	CCB	1	1.04	103.57	65-125	PASS
ICSA3	ICSA	1	0.84	84.35	65-125	PASS
ICSAB3	ICSAB	1	0.84	83.7	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063736
Test Method: EPA 6010B
Analysis Date: 3/13/2024

Matrix: Groundwater
Batch No.: 107498

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima 7300DV

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Fe. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063735-002C DT 5x	Iron	Fe	µg/L	305.6335	NA	343.2672	10.96%	10

Reviewed by:

dMocha 3/26/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID	**N063735-002C-PS**	SampType:	**PS**	TestCode:	**6010_WDPG**	Units:	**µg/L**	Prep Date:		RunNo:	**183568**
Client ID:	**ZZZZZZ**	Batch ID:	**107498**	TestNo:	**EPA 6010B**	**EPA 3010A**		Analysis Date:	**3/13/2024**	SeqNo:	**5744133**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	447.549	20	100.0	343.3	104	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

EPA 6020
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107497
ASSET #: N063736

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 3/13/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented	X			X		
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

% RSD of As in N063736-003C failed, several times. Please see CAR # 7349

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: —

2nd Level Reviewer KDG 3/14/2024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Groundwater

FORMULA:

Calculate the Barium concentration, in ug/L in the original sample as follows:

Barium , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063736-001C** , the concentration in ug/L is calculated as follows:

Barium , ug/L = 55.8345 * 1 *(25 / 25)

Barium , ug/L = 55.8345

Reporting results in two significant figures,

Barium , ug/L = 56

Reviewed by:

JRB 4/5/2024

% RSD SUMMARY

PERCENT RSD SUMMARY: 240313A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.11	8.444	15	PASS	0.1	9.383	15	PASS
Std2-0.5/5 ppb	ICAL	1	0.5	6.177	15	PASS	0.49	6.621	15	PASS
Std3-5/50 ppb	ICAL	1	4.96	2.609	15	PASS	4.93	1.913	15	PASS
Std4-10/100 ppb	ICAL	1	9.98	1.803	15	PASS	9.86	1.332	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.99	1.148	15	PASS	19.67	1.794	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	40.23	0.628	15	PASS	39.98	0.781	15	PASS
Std7-100/1000 ppb	ICAL	1	100.27	0.315	15	PASS	99.67	0.284	15	PASS
Std8-200/2000 ppb	ICAL	1	199.82	0.858	15	PASS	200.21	1.987	15	PASS
ICV	ICV	1	10.22	1.043	15	PASS	100.81	0.583	15	PASS
ICB	ICB	1	0	537.792	15	<PQL	<0.000	N/A	15	<PQL
LLICV1	LLICV	1	1.06	7.092	20	PASS	0.53	8.302	20	PASS
MLCCV	CCV	1	19.76	2.083	15	PASS	19.84	1.419	15	PASS
ICSA1	ICSA	1	0.01	43.751	15	<PQL	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.53	0.377	15	PASS	20.16	0.427	15	PASS
CCV1	CCV	1	19.92	0.696	15	PASS	19.85	0.924	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV2	CCV	1	20.01	0.799	15	PASS	19.76	1.377	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	0.01	47.316	15	<PQL	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.63	1.813	15	PASS	20.27	0.931	15	PASS
CCV3	CCV	1	19.82	1.102	15	PASS	19.62	0.702	15	PASS
CCB3	CCB	1	0	297.591	15	<PQL	<0.000	N/A	15	<PQL
CCV4	CCV	1	19.96	0.899	15	PASS	19.66	0.837	15	PASS
CCB4	CCB	1	0	167.203	15	<PQL	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	0	299.781	15	<PQL	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.3	0.829	15	PASS	20.08	0.359	15	PASS
MB-107497	MBLK	1	0	136.618	15	<PQL	<0.000	N/A	15	<PQL
LCS-107497	LCS	1	10.09	1.468	15	PASS	99.96	1.099	15	PASS
N063736-001C	SAMP	1	55.83	2.132	15	PASS	372.67	0.95	15	PASS
N063736-002C	SAMP	1	15.51	0.835	15	PASS	35.54	0.418	15	PASS
N063736-003C	SAMP	1	37.53	0.583	15	PASS	5.86	2.128	15	PASS
N063736-004C	SAMP	1	34.62	1.111	15	PASS	6.9	2.384	15	PASS
N063734-001B	SAMP	1	50.35	1.181	15	PASS	459.13	2.028	15	PASS
N063734-002B	SAMP	1	49.02	0.861	15	PASS	449.71	0.764	15	PASS
N063735-001C	SAMP	1	64.58	2.134	15	PASS	118.91	0.488	15	PASS
N063735-001C	SAMP	5	13.9	0.584	15	PASS	26.46	2.439	15	PASS
CCV5	CCV	1	20.7	1.35	15	PASS	18.77	0.389	15	PASS
CCB5	CCB	1	0	123.815	15	<PQL	<0.000	N/A	15	<PQL
N063735-001C-PS	PS	1	73.67	1.184	15	PASS	206.84	0.296	15	PASS
N063735-001C-MS	MS	1	72.78	0.453	15	PASS	203.05	0.872	15	PASS

PERCENT RSD SUMMARY: 240313A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063735-001C-MSD	MSD	1	72.42	2.331	15	PASS	204.75	0.87	15	PASS
N063735-002C	SAMP	1	37.25	1.331	15	PASS	152.08	0.771	15	PASS
N063735-004C	SAMP	1	15.96	2.072	15	PASS	73.7	1.808	15	PASS
N063735-005C	SAMP	1	161.27	1.834	15	PASS	<0.000	N/A	15	<PQL
N063735-006C	SAMP	1	38.6	1.952	15	PASS	32.31	2.668	15	PASS
N063735-007C	SAMP	1	86.46	0.609	15	PASS	114.22	1.456	15	PASS
N063735-009C	SAMP	1	54.06	2.355	15	PASS	234.47	0.724	15	PASS
CCV6	CCV	1	20.31	1.03	15	PASS	19.04	2.338	15	PASS
CCB6	CCB	1	0	64.351	15	<PQL	<0.000	N/A	15	<PQL
N063735-010C	SAMP	1	29.97	1.041	15	PASS	165.56	1.995	15	PASS
N063735-011C	SAMP	1	46.68	1.724	15	PASS	14.47	1.045	15	PASS
N063735-012C	SAMP	1	34.04	1.508	15	PASS	536.52	1.111	15	PASS
N063735-013C	SAMP	1	28	0.93	15	PASS	28.35	2.171	15	PASS
N063736-003C	SAMP	1	38.22	0.641	15	PASS	5.88	3.286	15	PASS
N063736-001C	SAMP	10	6.02	1.367	15	PASS	39.52	2.084	15	PASS
N063734-001B	SAMP	10	5.07	2.684	15	PASS	49.19	0.894	15	PASS
N063734-002B	SAMP	10	5.07	1.814	15	PASS	50.19	1.363	15	PASS
N063735-001C	SAMP	10	6.89	2.748	15	PASS	13.27	2.981	15	PASS
N063735-001C	SAMP	50	1.52	2.842	15	PASS	2.69	1.951	15	PASS
CCV7	CCV	1	20.81	1.052	15	PASS	19.26	0.712	15	PASS
CCB7	CCB	1	0	460.848	15	<PQL	<0.000	N/A	15	<PQL
N063735-001C-PS	PS	10	16.14	2.31	15	PASS	100.32	0.572	15	PASS
N063735-001C-MS	MS	10	7.57	1.315	15	PASS	22.4	2.347	15	PASS
N063735-001C-MSD	MSD	10	7.9	4.694	15	PASS	23.31	0.45	15	PASS
N063735-009C	SAMP	10	5.51	3.019	15	PASS	25.06	1.802	15	PASS
N063735-012C	SAMP	10	3.47	2.07	15	PASS	57.51	0.949	15	PASS
N063736-003C	SAMP	1	37.45	0.735	15	PASS	5.79	1.045	15	PASS
N063736-003C	SAMP	1	37.13	1.726	15	PASS	5.93	3.599	15	PASS
N063736-003C	SAMP	1	37.37	1.311	15	PASS	5.78	2.473	15	PASS
N063736-003C	SAMP	1	37.18	1.212	15	PASS	5.78	3.767	15	PASS
CCV8	CCV	1	20.27	0.331	15	PASS	19.33	2.503	15	PASS
CCB8	CCB	1	0	442.622	15	<PQL	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	0	28.932	15	<PQL	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.58	0.176	15	PASS	19.87	0.26	15	PASS
N063295-001A	SAMP	1	51.39	0.98	15	PASS	149.81	1.752	15	PASS

PERCENT RSD SUMMARY: 240313A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.11	24.001	15	FAIL
Std2-0.5/5 ppb	ICAL	1	0.51	12.096	15	PASS
Std3-5/50 ppb	ICAL	1	4.93	4.232	15	PASS
Std4-10/100 ppb	ICAL	1	9.85	3.081	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.94	1.413	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.57	0.724	15	PASS
Std7-100/1000 ppb	ICAL	1	99.52	1.59	15	PASS
Std8-200/2000 ppb	ICAL	1	200.34	0.286	15	PASS
ICV	ICV	1	10.46	2.161	15	PASS
ICB	ICB	1	0	108.003	15	<PQL
LLICV1	LLICV	1	0.11	7.512	20	PASS
MLCCV	CCV	1	19.91	0.745	15	PASS
ICSA1	ICSA	1	0.01	65.181	15	<PQL
ICSAB1	ICSAB	1	20.78	1.576	15	PASS
CCV1	CCV	1	20.02	1.44	15	PASS
CCB1	CCB	1	0	227.591	15	<PQL
CCV2	CCV	1	20.13	2.987	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.13	2.807	15	PASS
CCV3	CCV	1	20.03	2.563	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL
CCV4	CCV	1	20.21	2.55	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.14	1.27	15	PASS
MB-107497	MBLK	1	0.01	175.84	15	<PQL
LCS-107497	LCS	1	10.37	3.161	15	PASS
N063736-001C	SAMP	1	<0.000	N/A	15	<PQL
N063736-002C	SAMP	1	<0.000	N/A	15	<PQL
N063736-003C	SAMP	1	0.28	39.555	15	NR!
N063736-004C	SAMP	1	<0.000	N/A	15	<PQL
N063734-001B	SAMP	1	<0.000	N/A	15	<PQL
N063734-002B	SAMP	1	<0.000	N/A	15	<PQL
N063735-001C	SAMP	1	<0.000	N/A	15	<PQL
N063735-001C	SAMP	5	<0.000	N/A	15	<PQL
CCV5	CCV	1	19.32	0.896	15	PASS
CCB5	CCB	1	0	686.573	15	<PQL
N063735-001C-PS	PS	1	9.41	2.095	15	PASS
N063735-001C-MS	MS	1	9.34	3.915	15	PASS

PERCENT RSD SUMMARY: 240313A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
N063735-001C-MSD	MSD	1	9.29	3.808	15	PASS
N063735-002C	SAMP	1	<0.000	N/A	15	<PQL
N063735-004C	SAMP	1	2.37	2.437	15	PASS
N063735-005C	SAMP	1	<0.000	N/A	15	<PQL
N063735-006C	SAMP	1	1.47	8.31	15	PASS
N063735-007C	SAMP	1	11.73	1.723	15	PASS
N063735-009C	SAMP	1	1.71	7.319	15	PASS
CCV6	CCV	1	19.3	1.245	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL
N063735-010C	SAMP	1	1.93	4.895	15	PASS
N063735-011C	SAMP	1	0.96	8.338	15	PASS
N063735-012C	SAMP	1	1.9	2.597	15	PASS
N063735-013C	SAMP	1	<0.000	N/A	15	<PQL
N063736-003C	SAMP	1	0.18	77.054	15	NR!
N063736-001C	SAMP	10	<0.000	N/A	15	<PQL
N063734-001B	SAMP	10	<0.000	N/A	15	<PQL
N063734-002B	SAMP	10	<0.000	N/A	15	<PQL
N063735-001C	SAMP	10	<0.000	N/A	15	<PQL
N063735-001C	SAMP	50	0.02	116.872	15	<PQL
CCV7	CCV	1	19.21	2.175	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL
N063735-001C-PS	PS	10	9.61	3.445	15	PASS
N063735-001C-MS	MS	10	1.04	7.835	15	PASS
N063735-001C-MSD	MSD	10	1.02	5.07	15	PASS
N063735-009C	SAMP	10	0.15	25.56	15	NR!
N063735-012C	SAMP	10	0.16	25.779	15	NR!
N063736-003C	SAMP	1	0.33	21.296	15	NR!
N063736-003C	SAMP	1	0.23	25.672	15	NR!
N063736-003C	SAMP	1	0.23	58.538	15	NR!
N063736-003C	SAMP	1	0.16	29.568	15	NR!
CCV8	CCV	1	19.21	2.803	15	PASS
CCB8	CCB	1	0.01	113.606	15	<PQL
ICSA4	ICSA	1	0	144.3	15	<PQL
ICSAB4	ICSAB	1	19.79	1.699	15	PASS
N063295-001A	SAMP	1	<0.000	N/A	15	<PQL

ANALYSIS RUN LOG

INJECTION LOG: 240313A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0313001.d	RINSE	ICAL	1	03/13/24 4:50 PM
A0313002.d	Cal Blk	IBLK	1	03/13/24 4:55 PM
A0313003.d	Std1-0.1/1 ppb	ICAL	1	03/13/24 5:00 PM
A0313004.d	Std2-0.5/5 ppb	ICAL	1	03/13/24 5:04 PM
A0313005.d	Std3-5/50 ppb	ICAL	1	03/13/24 5:09 PM
A0313006.d	Std4-10/100 ppb	ICAL	1	03/13/24 5:14 PM
A0313007.d	Std5-4.0/20/200 ppb	ICAL	1	03/13/24 5:19 PM
A0313008.d	Std6-8.0/40/400 ppb	ICAL	1	03/13/24 5:23 PM
A0313009.d	Std7-100/1000 ppb	ICAL	1	03/13/24 5:28 PM
A0313010.d	Std8-200/2000 ppb	ICAL	1	03/13/24 5:33 PM
A0313011.d	ICV	ICV	1	03/13/24 5:43 PM
A0313012.d	ICB	ICB	1	03/13/24 5:47 PM
A0313013.d	LLICV1	LLICV	1	03/13/24 5:52 PM
A0313014.d	MLCCV	CCV	1	03/13/24 5:57 PM
A0313015.d	ICSA1	ICSA	1	03/13/24 6:01 PM
A0313016.d	ICSAB1	ICSAB	1	03/13/24 6:06 PM
A0313017.d	N062388-003A	SAMP	1	03/13/24 6:11 PM
A0313018.d	N062388-004A	SAMP	1	03/13/24 6:15 PM
A0313019.d	N062915-002A	SAMP	1	03/13/24 6:20 PM
A0313020.d	CCV1	CCV	1	03/13/24 6:25 PM
A0313021.d	CCB1	CCB	1	03/13/24 6:29 PM
A0313022.d	MB-107499	MBLK	1	03/13/24 6:34 PM
A0313023.d	LCS-107499	LCS	1	03/13/24 6:39 PM
A0313024.d	N063706-001C	SAMP	1	03/13/24 6:43 PM
A0313025.d	N063706-001C	SAMP	5	03/13/24 6:48 PM
A0313026.d	N063706-001C-PS	PS	1	03/13/24 6:53 PM
A0313027.d	N063706-001C-MS	MS	1	03/13/24 6:57 PM
A0313028.d	N063706-001C-MSD	MSD	1	03/13/24 7:02 PM
A0313029.d	N062388-003A	SAMP	1	03/13/24 7:07 PM
A0313030.d	N062388-004A	SAMP	1	03/13/24 7:11 PM
A0313031.d	N062915-002A	SAMP	1	03/13/24 7:16 PM
A0313032.d	CCV2	CCV	1	03/13/24 7:21 PM
A0313033.d	CCB2	CCB	1	03/13/24 7:25 PM
A0313034.d	ICSA2	ICSA	1	03/13/24 7:30 PM
A0313035.d	ICSAB2	ICSAB	1	03/13/24 7:35 PM
A0313036.d	N063562-001A	SAMP	1	03/13/24 7:39 PM
A0313037.d	N063562-001B	SAMP	1	03/13/24 7:44 PM
A0313038.d	N063617-007A	SAMP	1	03/13/24 7:49 PM
A0313039.d	N063617-007B	SAMP	1	03/13/24 7:53 PM
A0313040.d	N063617-013A	SAMP	1	03/13/24 7:58 PM
A0313041.d	N063617-013B	SAMP	1	03/13/24 8:03 PM
A0313042.d	N063642-003A	SAMP	1	03/13/24 8:07 PM

INJECTION LOG: 240313A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0313043.d	N063642-003B	SAMP	1	03/13/24 8:12 PM
A0313044.d	N063642-004A	SAMP	1	03/13/24 8:17 PM
A0313045.d	N063642-004B	SAMP	1	03/13/24 8:21 PM
A0313046.d	CCV3	CCV	1	03/13/24 8:26 PM
A0313047.d	CCB3	CCB	1	03/13/24 8:31 PM
A0313048.d	N063642-007A	SAMP	1	03/13/24 8:35 PM
A0313049.d	N063642-007B	SAMP	1	03/13/24 8:40 PM
A0313050.d	CCV4	CCV	1	03/13/24 8:45 PM
A0313051.d	CCB4	CCB	1	03/13/24 8:49 PM
A0313052.d	ICSA3	ICSA	1	03/13/24 8:54 PM
A0313053.d	ICSAB3	ICSAB	1	03/13/24 8:59 PM
A0313054.d	MB-107497	MBLK	1	03/13/24 9:03 PM
A0313055.d	LCS-107497	LCS	1	03/13/24 9:08 PM
A0313056.d	N063736-001C	SAMP	1	03/13/24 9:12 PM
A0313057.d	N063736-002C	SAMP	1	03/13/24 9:17 PM
A0313058.d	N063736-003C	SAMP	1	03/13/24 9:22 PM
A0313059.d	N063736-004C	SAMP	1	03/13/24 9:26 PM
A0313060.d	N063734-001B	SAMP	1	03/13/24 9:31 PM
A0313061.d	N063734-002B	SAMP	1	03/13/24 9:36 PM
A0313062.d	N063735-001C	SAMP	1	03/13/24 9:40 PM
A0313063.d	N063735-001C	SAMP	5	03/13/24 9:45 PM
A0313064.d	CCV5	CCV	1	03/13/24 9:50 PM
A0313065.d	CCB5	CCB	1	03/13/24 9:54 PM
A0313066.d	N063735-001C-PS	PS	1	03/13/24 9:59 PM
A0313067.d	N063735-001C-MS	MS	1	03/13/24 10:04 PM
A0313068.d	N063735-001C-MSD	MSD	1	03/13/24 10:08 PM
A0313069.d	N063735-002C	SAMP	1	03/13/24 10:13 PM
A0313070.d	N063735-004C	SAMP	1	03/13/24 10:17 PM
A0313071.d	N063735-005C	SAMP	1	03/13/24 10:22 PM
A0313072.d	N063735-006C	SAMP	1	03/13/24 10:27 PM
A0313073.d	N063735-007C	SAMP	1	03/13/24 10:31 PM
A0313074.d	N063735-009C	SAMP	1	03/13/24 10:36 PM
A0313075.d	RINSE	ICAL	1	03/13/24 10:41 PM
A0313076.d	CCV6	CCV	1	03/13/24 10:45 PM
A0313077.d	CCB6	CCB	1	03/13/24 10:50 PM
A0313078.d	N063735-010C	SAMP	1	03/13/24 10:55 PM
A0313079.d	N063735-011C	SAMP	1	03/13/24 10:59 PM
A0313080.d	N063735-012C	SAMP	1	03/13/24 11:04 PM
A0313081.d	N063735-013C	SAMP	1	03/13/24 11:09 PM
A0313082.d	N063736-003C	SAMP	1	03/13/24 11:13 PM
A0313083.d	N063736-001C	SAMP	10	03/13/24 11:18 PM
A0313084.d	N063734-001B	SAMP	10	03/13/24 11:23 PM

INJECTION LOG: 240313A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0313085.d	N063734-002B	SAMP	10	03/13/24 11:27 PM
A0313086.d	N063735-001C	SAMP	10	03/13/24 11:32 PM
A0313087.d	N063735-001C	SAMP	50	03/13/24 11:37 PM
A0313088.d	CCV7	CCV	1	03/13/24 11:41 PM
A0313089.d	CCB7	CCB	1	03/13/24 11:46 PM
A0313090.d	N063735-001C-PS	PS	10	03/13/24 11:50 PM
A0313091.d	N063735-001C-MS	MS	10	03/13/24 11:55 PM
A0313092.d	N063735-001C-MSD	MSD	10	03/14/24 12:00 AM
A0313093.d	N063735-009C	SAMP	10	03/14/24 12:04 AM
A0313094.d	N063735-012C	SAMP	10	03/14/24 12:09 AM
A0313095.d	N063736-003C	SAMP	1	03/14/24 12:14 AM
A0313096.d	N063736-003C	SAMP	1	03/14/24 12:18 AM
A0313097.d	N063736-003C	SAMP	1	03/14/24 12:23 AM
A0313098.d	N063736-003C	SAMP	1	03/14/24 12:27 AM
A0313099.d	RINSE	ICAL	1	03/14/24 12:32 AM
A0313100.d	CCV8	CCV	1	03/14/24 12:37 AM
A0313101.d	CCB8	CCB	1	03/14/24 12:42 AM
A0313102.d	ICSA4	ICSA	1	03/14/24 12:46 AM
A0313103.d	ICSAB4	ICSAB	1	03/14/24 12:51 AM
A0313104.d	N063295-001A	SAMP	1	03/14/24 12:55 AM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/13/2024 9:43:35 AM**
Prep End Date: **3/13/2024 2:00:00 PM**

Reviewed/ Date: JRB 4/5/2024
Initials/ Date: for

Prep Batch **107497** Prep Code:**3010_W_MSDISS_TPK** Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-1-17**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107497	Aqueous		25	☐	25	1.000		
MB-107497	Aqueous		25	☐	25	1.000		
N063734-001B	Water	<2	25	☐	25	1.000		
N063734-002B	Water	<2	25	☐	25	1.000		
N063735-001C	Groundwater	<2	25	☐	25	1.000		
N063735-001C-MS	Groundwater	<2	25	☐	25	1.000		
N063735-001C-MSD	Groundwater	<2	25	☐	25	1.000		
N063735-002C	Groundwater	<2	25	☐	25	1.000		
N063735-004C	Groundwater	<2	25	☐	25	1.000		
N063735-005C	Groundwater	<2	25	☐	25	1.000		
N063735-006C	Groundwater	<2	25	☐	25	1.000		
N063735-007C	Groundwater	<2	25	☐	25	1.000		
N063735-009C	Groundwater	<2	25	☐	25	1.000		
N063735-010C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/13/2024 9:43:35 AM**
Prep End Date: **3/13/2024 2:00:00 PM**

Reviewed/ Date: JRB 4/5/2024
Initials/ Date: for

Prep Batch **107497** Prep Code:**3010_W_MSDISS_TPK** Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-1-17**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063735-011C	Groundwater	<2	25	☐	25	1.000		
N063735-012C	Groundwater	<2	25	☐	25	1.000		
N063735-013C	Groundwater	<2	25	☐	25	1.000		
N063736-001C	Groundwater	<2	25	☐	25	1.000		
N063736-002C	Groundwater	<2	25	☐	25	1.000		
N063736-003C	Groundwater	<2	25	☐	25	1.000		
N063736-004C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240312A.b
Acq. Date-Time	2024-03-13 16:43:18
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

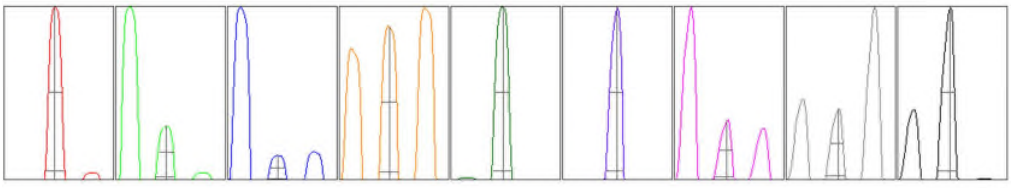
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	8102	81021.40	500.00		2.098	5.000
24	10.00	23361	233612.73	500.00		2.676	5.000
25	10.00	3115	31147.97	500.00		2.720	5.000
26	10.00	3621	36205.36	500.00		2.888	5.000
59	10.00	40138	401382.40	500.00		2.109	5.000
115	10.00	55001	550007.28	500.00		2.095	5.000
206	10.00	10748	107476.29	500.00		2.315	5.000
207	10.00	8946	89459.98	500.00		2.026	5.000
208	10.00	22062	220624.46	500.00		2.085	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.491 %
Doubly Charged	70 / 140 0.837 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	8283.03	8.90	8.90 - 9.10	
24	23723.97	23.90	23.90 - 24.10	
25	3188.56	24.90	24.90 - 25.10	
26	3758.77	25.90	25.90 - 26.10	
59	39679.28	58.95	58.90 - 59.10	
115	54124.71	115.00	114.90 - 115.10	
206	10175.84	205.95	205.90 - 206.10	
207	9066.91	206.95	206.90 - 207.10	
208	22429.02	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.38	0.527	0.900	
24	0.43	0.538	0.900	
25	0.42	0.526	0.900	
26	0.42	0.535	0.900	
59	0.40	0.535	0.900	
115	0.36	0.486	0.900	
206	0.36	0.537	0.900	
207	0.36	0.539	0.900	
208	0.36	0.536	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2521 V	Pulse HV	1597 V

[H2]

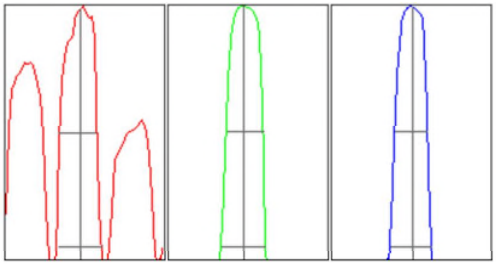
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		310	3100.08			6.570	
59		5388	53884.91			2.427	
115		54760	547604.47			2.083	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.445 %
Doubly Charged	70 / 140 0.305 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	339.55	25.95	25.90 - 26.10	
59	5568.76	58.95	58.90 - 59.10	
115	56209.54	115.05	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.71	0.835	0.900	
59	0.70	0.830	0.900	
115	0.62	0.780	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0004	QP Bias	-15.0 V
Mass Offset	124	Axis Offset	-0.01		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm		

EM

Discriminator	4.5 mV	Analog HV	2521 V	Pulse HV	1597 V

[He]

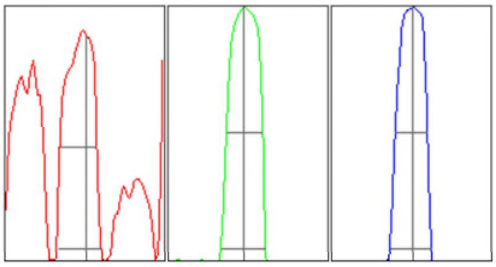
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		125	1246.05			9.282	
59		10961	109612.38			2.060	
115		11454	114535.77			1.776	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.198 %
Doubly Charged	70 / 140 1.201 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	131.76	26.05	25.90 - 26.10	
59	11135.75	58.95	58.90 - 59.10	
115	11575.77	115.05	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.70	0.832	0.900	
59	0.69	0.829	0.900	
115	0.61	0.779	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0004	QP Bias	-13.0 V
Mass Offset	124	Axis Offset	-0.01		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

EM

Discriminator	4.5 mV	Analog HV	2521 V	Pulse HV	1597 V

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240313A

Instrument ID: ICPMS-03

Analyte	Data File	A0313002.d	A0313003.d	A0313004.d	A0313005.d	A0313006.d	A0313007.d	A0313008.d	A0313009.d	A0313010.d	
	Acq. Date-Time	03/13/2024 04:55 PM	03/13/2024 05:00 PM	03/13/2024 05:04 PM	03/13/2024 05:09 PM	03/13/2024 05:14 PM	03/13/2024 05:19 PM	03/13/2024 05:23 PM	03/13/2024 05:28 PM	03/13/2024 05:33 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	67943.1		66536.2	66994.7	67124.2	66657.8	66543	67396.4	67496.9	
55 Mn [2]	CPS	124.4		1320.7	12220.3	24352	48120.7	97528.6	246066.6	494733.3	1.0000
72 Ge (ISTD) [2]	CPS	39103.3	38409.4	38495.1	38735.8	39159	38983	39210.2	39827.3	39857.3	
75 As [2]	CPS	13.3	76.6	305.5	2854.6	5756.4	11582.7	23108	58998.3	118885	1.0000
159 Tb (ISTD) [3]	CPS	2274673.4		2283830.6	2276622.3	2284847.5	2291285.8	2283090.2	2328048.9	2341330.1	
137 Ba [3]	CPS	26.7		2256.9	22015.8	44480.6	89306.1	179027.4	454966.5	911919.7	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ICV** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745277**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.463	0.10	10.00	0	105	90	110				
Barium	10.216	1.0	10.00	0	102	90	110				
Manganese	100.806	0.50	100.0	0	101	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ZZZZZZ** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745279**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.115	0.10	0.1000	0	115	80	120				
Barium	1.060	1.0	1.000	0	106	80	120				
Manganese	0.526	0.50	0.5000	0	105	80	120				

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCV** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745280**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.908	0.10	20.00	0	99.5	90	110				
Barium	19.764	1.0	20.00	0	98.8	90	110				
Manganese	19.842	0.50	20.00	0	99.2	90	110				

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCV** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745286**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.020	0.10	20.00	0	100	90	110				
Barium	19.921	1.0	20.00	0	99.6	90	110				
Manganese	19.852	0.50	20.00	0	99.3	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCV** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745298**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.133	0.10	20.00	0	101	90	110				
Barium	20.014	1.0	20.00	0	100	90	110				
Manganese	19.763	0.50	20.00	0	98.8	90	110				

Sample ID **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCV** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745312**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.033	0.10	20.00	0	100	90	110				
Barium	19.822	1.0	20.00	0	99.1	90	110				
Manganese	19.619	0.50	20.00	0	98.1	90	110				

Sample ID **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCV** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745316**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.213	0.10	20.00	0	101	90	110				
Barium	19.964	1.0	20.00	0	99.8	90	110				
Manganese	19.659	0.50	20.00	0	98.3	90	110				

Sample ID **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCV** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745330**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.317	0.10	20.00	0	96.6	90	110				
Barium	20.702	1.0	20.00	0	104	90	110				
Manganese	18.767	0.50	20.00	0	93.8	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV6** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCV** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745341**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.300	0.10	20.00	0	96.5	90	110				
Barium	20.314	1.0	20.00	0	102	90	110				
Manganese	19.038	0.50	20.00	0	95.2	90	110				

Sample ID **CCV7** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCV** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745353**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.214	0.10	20.00	0	96.1	90	110				
Barium	20.814	1.0	20.00	0	104	90	110				
Manganese	19.262	0.50	20.00	0	96.3	90	110				

Sample ID **CCV8** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCV** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/14/2024** SeqNo: **5745364**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.209	0.10	20.00	0	96.0	90	110				
Barium	20.270	1.0	20.00	0	101	90	110				
Manganese	19.328	0.50	20.00	0	96.6	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB** SampType: **ICB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ICB** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745278**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB1** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCB** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745287**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB2** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCB** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745299**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB3** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **CCB** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745313**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183572**
Client ID: **CCB**	Batch ID: **R183572**	TestNo: **EPA 6020**		Analysis Date: **3/13/2024**	SeqNo: **5745317**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183572**
Client ID: **CCB**	Batch ID: **R183572**	TestNo: **EPA 6020**		Analysis Date: **3/13/2024**	SeqNo: **5745331**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183572**
Client ID: **CCB**	Batch ID: **R183572**	TestNo: **EPA 6020**		Analysis Date: **3/13/2024**	SeqNo: **5745342**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB7**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183572**
Client ID: **CCB**	Batch ID: **R183572**	TestNo: **EPA 6020**		Analysis Date: **3/13/2024**	SeqNo: **5745354**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB8**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183572**
Client ID: **CCB**	Batch ID: **R183572**	TestNo: **EPA 6020**		Analysis Date: **3/14/2024**	SeqNo: **5745365**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ICSA** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745281**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ICSAB** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745282**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.778	0.10	20.00	0	104	80	120				
Barium	20.529	1.0	20.00	0	103	80	120				
Manganese	20.158	0.50	20.00	0	101	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ICSA** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745300**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ICSAB** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745301**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.131	0.10	20.00	0	101	80	120				
Barium	20.635	1.0	20.00	0	103	80	120				
Manganese	20.266	0.50	20.00	0	101	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA3** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ICSA** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745318**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB3** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ICSAB** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/13/2024** SeqNo: **5745319**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.137	0.10	20.00	0	101	80	120				
Barium	20.298	1.0	20.00	0	101	80	120				
Manganese	20.076	0.50	20.00	0	100	80	120				

Sample ID **ICSA4** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ICSA** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/14/2024** SeqNo: **5745366**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB4** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183572**
Client ID: **ICSAB** Batch ID: **R183572** TestNo: **EPA 6020** Analysis Date: **3/14/2024** SeqNo: **5745367**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.794	0.10	20.00	0	99.0	80	120				
Barium	20.580	1.0	20.00	0	103	80	120				
Manganese	19.871	0.50	20.00	0	99.4	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240313A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	2274673.4	2274673.4	100	PASS	30-150	67943.1	67943.1	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	2294496.2	2274673.4	100.87	PASS	30-150	66455.8	67943.1	97.81	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	2283830.6	2274673.4	100.4	PASS	30-150	66536.2	67943.1	97.93	PASS	30-150
Std3-5/50 ppb	ICAL	1	2276622.3	2274673.4	100.09	PASS	30-150	66994.7	67943.1	98.6	PASS	30-150
Std4-10/100 ppb	ICAL	1	2284847.5	2274673.4	100.45	PASS	30-150	67124.2	67943.1	98.79	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	2291285.8	2274673.4	100.73	PASS	30-150	66657.8	67943.1	98.11	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	2283090.2	2274673.4	100.37	PASS	30-150	66543	67943.1	97.94	PASS	30-150
Std7-100/1000 ppb	ICAL	1	2328048.9	2274673.4	102.35	PASS	30-150	67396.4	67943.1	99.2	PASS	30-150
Std8-200/2000 ppb	ICAL	1	2341330.1	2274673.4	102.93	PASS	30-150	67496.9	67943.1	99.34	PASS	30-150
ICV	ICV	1	2326384.4	2274673.4	102.27	PASS	30-150	67197.7	67943.1	98.9	PASS	30-150
ICB	ICB	1	2340678	2274673.4	102.9	PASS	30-150	66608.8	67943.1	98.04	PASS	30-150
LLICV1	LLICV	1	2330508.5	2274673.4	102.45	PASS	30-150	66864.1	67943.1	98.41	PASS	30-150
MLCCV	CCV	1	2350512.9	2274673.4	103.33	PASS	30-150	67660.6	67943.1	99.58	PASS	30-150
ICSA1	ICSA	1	2329812.1	2274673.4	102.42	PASS	30-150	66615.4	67943.1	98.05	PASS	30-150
ICSAB1	ICSAB	1	2352340.5	2274673.4	103.41	PASS	30-150	67682	67943.1	99.62	PASS	30-150
CCV1	CCV	1	2352757.2	2274673.4	103.43	PASS	30-150	68426	67943.1	100.71	PASS	30-150
CCB1	CCB	1	2335364.2	2274673.4	102.67	PASS	30-150	67543.6	67943.1	99.41	PASS	30-150
CCV2	CCV	1	2314771.8	2274673.4	101.76	PASS	30-150	68335.7	67943.1	100.58	PASS	30-150
CCB2	CCB	1	2329526.7	2274673.4	102.41	PASS	30-150	67436.5	67943.1	99.25	PASS	30-150
ICSA2	ICSA	1	2312599.8	2274673.4	101.67	PASS	30-150	67839.2	67943.1	99.85	PASS	30-150
ICSAB2	ICSAB	1	2349793.6	2274673.4	103.3	PASS	30-150	67850.4	67943.1	99.86	PASS	30-150
CCV3	CCV	1	2495073.6	2274673.4	109.69	PASS	30-150	67002.5	67943.1	98.62	PASS	30-150
CCB3	CCB	1	2425710.3	2274673.4	106.64	PASS	30-150	65038.2	67943.1	95.72	PASS	30-150
CCV4	CCV	1	2421710.2	2274673.4	106.46	PASS	30-150	64332	67943.1	94.69	PASS	30-150
CCB4	CCB	1	2405523.5	2274673.4	105.75	PASS	30-150	64946.8	67943.1	95.59	PASS	30-150
ICSA3	ICSA	1	2424983.8	2274673.4	106.61	PASS	30-150	64638.9	67943.1	95.14	PASS	30-150
ICSAB3	ICSAB	1	2441190.5	2274673.4	107.32	PASS	30-150	65056	67943.1	95.75	PASS	30-150
MB-107497	MBLK	1	2412484.9	2274673.4	106.06	PASS	30-150	64512.9	67943.1	94.95	PASS	30-150
LCS-107497	LCS	1	2413301.6	2274673.4	106.09	PASS	30-150	64219.5	67943.1	94.52	PASS	30-150
N063736-001C	SAMP	1	1789785	2274673.4	78.68	PASS	30-150	65205.5	67943.1	95.97	PASS	30-150
N063736-002C	SAMP	1	1783046.7	2274673.4	78.39	PASS	30-150	64221.9	67943.1	94.52	PASS	30-150
N063736-003C	SAMP	1	1966894.7	2274673.4	86.47	PASS	30-150	64434.8	67943.1	94.84	PASS	30-150
N063736-004C	SAMP	1	1702840	2274673.4	74.86	PASS	30-150	61492.7	67943.1	90.51	PASS	30-150
N063734-001B	SAMP	1	1744897.7	2274673.4	76.71	PASS	30-150	62961.7	67943.1	92.67	PASS	30-150
N063734-002B	SAMP	1	1594460.3	2274673.4	70.1	PASS	30-150	60955.3	67943.1	89.72	PASS	30-150
N063735-001C	SAMP	1	1609159.9	2274673.4	70.74	PASS	30-150	61653.4	67943.1	90.74	PASS	30-150
N063735-001C	SAMP	5	1833918.7	2274673.4	80.62	PASS	30-150	67121	67943.1	98.79	PASS	30-150
CCV5	CCV	1	1999884	2274673.4	87.92	PASS	30-150	73275.6	67943.1	107.85	PASS	30-150
CCB5	CCB	1	2053390.2	2274673.4	90.27	PASS	30-150	70745.8	67943.1	104.13	PASS	30-150
N063735-001C-PS	PS	1	1627832.3	2274673.4	71.56	PASS	30-150	61400.1	67943.1	90.37	PASS	30-150
N063735-001C-MS	MS	1	1643917.9	2274673.4	72.27	PASS	30-150	61164.7	67943.1	90.02	PASS	30-150

INTERNAL STANDARD: 240313A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
N063735-001C-MSD	MSD	1	1603388.3	2274673.4	70.49	PASS	30-150	60293.9	67943.1	88.74	PASS	30-150
N063735-002C	SAMP	1	1511518.1	2274673.4	66.45	PASS	30-150	58982.7	67943.1	86.81	PASS	30-150
N063735-004C	SAMP	1	1488601.9	2274673.4	65.44	PASS	30-150	59720.8	67943.1	87.9	PASS	30-150
N063735-005C	SAMP	1	1573640.1	2274673.4	69.18	PASS	30-150	60485.8	67943.1	89.02	PASS	30-150
N063735-006C	SAMP	1	1529631.7	2274673.4	67.25	PASS	30-150	60272.9	67943.1	88.71	PASS	30-150
N063735-007C	SAMP	1	1835426.4	2274673.4	80.69	PASS	30-150	66883.5	67943.1	98.44	PASS	30-150
N063735-009C	SAMP	1	1792296.8	2274673.4	78.79	PASS	30-150	64267.6	67943.1	94.59	PASS	30-150
CCV6	CCV	1	1980432	2274673.4	87.06	PASS	30-150	69098	67943.1	101.7	PASS	30-150
CCB6	CCB	1	2027345.9	2274673.4	89.13	PASS	30-150	68429.7	67943.1	100.72	PASS	30-150
N063735-010C	SAMP	1	2033282.1	2274673.4	89.39	PASS	30-150	64024.6	67943.1	94.23	PASS	30-150
N063735-011C	SAMP	1	1830818	2274673.4	80.49	PASS	30-150	60904	67943.1	89.64	PASS	30-150
N063735-012C	SAMP	1	1979653.7	2274673.4	87.03	PASS	30-150	61666.8	67943.1	90.76	PASS	30-150
N063735-013C	SAMP	1	1587708.3	2274673.4	69.8	PASS	30-150	56656.8	67943.1	83.39	PASS	30-150
N063736-003C	SAMP	1	1623344.2	2274673.4	71.37	PASS	30-150	57068.3	67943.1	83.99	PASS	30-150
N063736-001C	SAMP	10	1846609.2	2274673.4	81.18	PASS	30-150	62978.3	67943.1	92.69	PASS	30-150
N063734-001B	SAMP	10	1906524	2274673.4	83.82	PASS	30-150	63075.3	67943.1	92.84	PASS	30-150
N063734-002B	SAMP	10	1892035.1	2274673.4	83.18	PASS	30-150	62436.3	67943.1	91.89	PASS	30-150
N063735-001C	SAMP	10	1872168.9	2274673.4	82.3	PASS	30-150	62202.1	67943.1	91.55	PASS	30-150
N063735-001C	SAMP	50	1949930.2	2274673.4	85.72	PASS	30-150	63640.8	67943.1	93.67	PASS	30-150
CCV7	CCV	1	1986766	2274673.4	87.34	PASS	30-150	64559.7	67943.1	95.02	PASS	30-150
CCB7	CCB	1	2015949.5	2274673.4	88.63	PASS	30-150	63820.4	67943.1	93.93	PASS	30-150
N063735-001C-PS	PS	10	2007112.4	2274673.4	88.24	PASS	30-150	60816.9	67943.1	89.51	PASS	30-150
N063735-001C-MS	MS	10	2014754.6	2274673.4	88.57	PASS	30-150	61715.8	67943.1	90.83	PASS	30-150
N063735-001C-MSD	MSD	10	2017005.3	2274673.4	88.67	PASS	30-150	61064.5	67943.1	89.88	PASS	30-150
N063735-009C	SAMP	10	2098881.5	2274673.4	92.27	PASS	30-150	61710.3	67943.1	90.83	PASS	30-150
N063735-012C	SAMP	10	2114511.7	2274673.4	92.96	PASS	30-150	61232.9	67943.1	90.12	PASS	30-150
N063736-003C	SAMP	1	1697286.1	2274673.4	74.62	PASS	30-150	54621.2	67943.1	80.39	PASS	30-150
N063736-003C	SAMP	1	1674886.1	2274673.4	73.63	PASS	30-150	54310.3	67943.1	79.93	PASS	30-150
N063736-003C	SAMP	1	1687596.2	2274673.4	74.19	PASS	30-150	55239.9	67943.1	81.3	PASS	30-150
N063736-003C	SAMP	1	1699873.7	2274673.4	74.73	PASS	30-150	56505.3	67943.1	83.17	PASS	30-150
CCV8	CCV	1	2027559.4	2274673.4	89.14	PASS	30-150	62262.2	67943.1	91.64	PASS	30-150
CCB8	CCB	1	2072229	2274673.4	91.1	PASS	30-150	61995.6	67943.1	91.25	PASS	30-150
ICSA4	ICSA	1	2094428.8	2274673.4	92.08	PASS	30-150	60937.4	67943.1	89.69	PASS	30-150
ICSAB4	ICSAB	1	2115596	2274673.4	93.01	PASS	30-150	60829.1	67943.1	89.53	PASS	30-150
N063295-001A	SAMP	1	1689375.9	2274673.4	74.27	PASS	30-150	53476.5	67943.1	78.71	PASS	30-150

INTERNAL STANDARD: 240313A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	39103.3	39103.3	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	38409.4	39103.3	98.23	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	38495.1	39103.3	98.44	PASS	30-150
Std3-5/50 ppb	ICAL	1	38735.8	39103.3	99.06	PASS	30-150
Std4-10/100 ppb	ICAL	1	39159	39103.3	100.14	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	38983	39103.3	99.69	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	39210.2	39103.3	100.27	PASS	30-150
Std7-100/1000 ppb	ICAL	1	39827.3	39103.3	101.85	PASS	30-150
Std8-200/2000 ppb	ICAL	1	39857.3	39103.3	101.93	PASS	30-150
ICV	ICV	1	39057.6	39103.3	99.88	PASS	30-150
ICB	ICB	1	39132.2	39103.3	100.07	PASS	30-150
LLICV1	LLICV	1	39019.7	39103.3	99.79	PASS	30-150
MLCCV	CCV	1	39598.8	39103.3	101.27	PASS	30-150
ICSA1	ICSA	1	39372.8	39103.3	100.69	PASS	30-150
ICSAB1	ICSAB	1	39291.6	39103.3	100.48	PASS	30-150
CCV1	CCV	1	39586.6	39103.3	101.24	PASS	30-150
CCB1	CCB	1	39649	39103.3	101.4	PASS	30-150
CCV2	CCV	1	39380.6	39103.3	100.71	PASS	30-150
CCB2	CCB	1	39974.3	39103.3	102.23	PASS	30-150
ICSA2	ICSA	1	39830.5	39103.3	101.86	PASS	30-150
ICSAB2	ICSAB	1	39663.5	39103.3	101.43	PASS	30-150
CCV3	CCV	1	40420.9	39103.3	103.37	PASS	30-150
CCB3	CCB	1	39161.2	39103.3	100.15	PASS	30-150
CCV4	CCV	1	38613.2	39103.3	98.75	PASS	30-150
CCB4	CCB	1	39427.4	39103.3	100.83	PASS	30-150
ICSA3	ICSA	1	39401.8	39103.3	100.76	PASS	30-150
ICSAB3	ICSAB	1	39420.7	39103.3	100.81	PASS	30-150
MB-107497	MBLK	1	39283.7	39103.3	100.46	PASS	30-150
LCS-107497	LCS	1	39046.5	39103.3	99.85	PASS	30-150
N063736-001C	SAMP	1	35982.9	39103.3	92.02	PASS	30-150
N063736-002C	SAMP	1	36409.3	39103.3	93.11	PASS	30-150
N063736-003C	SAMP	1	37069.7	39103.3	94.8	PASS	30-150
N063736-004C	SAMP	1	34000.8	39103.3	86.95	PASS	30-150
N063734-001B	SAMP	1	35370.4	39103.3	90.45	PASS	30-150
N063734-002B	SAMP	1	34116.6	39103.3	87.25	PASS	30-150
N063735-001C	SAMP	1	34539.8	39103.3	88.33	PASS	30-150
N063735-001C	SAMP	5	39088.8	39103.3	99.96	PASS	30-150
CCV5	CCV	1	42136.3	39103.3	107.76	PASS	30-150
CCB5	CCB	1	41743.1	39103.3	106.75	PASS	30-150
N063735-001C-PS	PS	1	34500.8	39103.3	88.23	PASS	30-150
N063735-001C-MS	MS	1	34772.5	39103.3	88.92	PASS	30-150

INTERNAL STANDARD: 240313A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
N063735-001C-MSD	MSD	1	34438.5	39103.3	88.07	PASS	30-150
N063735-002C	SAMP	1	33326.2	39103.3	85.23	PASS	30-150
N063735-004C	SAMP	1	33705.8	39103.3	86.2	PASS	30-150
N063735-005C	SAMP	1	34622.2	39103.3	88.54	PASS	30-150
N063735-006C	SAMP	1	33816.1	39103.3	86.48	PASS	30-150
N063735-007C	SAMP	1	40010	39103.3	102.32	PASS	30-150
N063735-009C	SAMP	1	37769.1	39103.3	96.59	PASS	30-150
CCV6	CCV	1	40722.8	39103.3	104.14	PASS	30-150
CCB6	CCB	1	41119.3	39103.3	105.16	PASS	30-150
N063735-010C	SAMP	1	39004.2	39103.3	99.75	PASS	30-150
N063735-011C	SAMP	1	35710.1	39103.3	91.32	PASS	30-150
N063735-012C	SAMP	1	36784.6	39103.3	94.07	PASS	30-150
N063735-013C	SAMP	1	32853	39103.3	84.02	PASS	30-150
N063736-003C	SAMP	1	33066.8	39103.3	84.56	PASS	30-150
N063736-001C	SAMP	10	37269.1	39103.3	95.31	PASS	30-150
N063734-001B	SAMP	10	37482.9	39103.3	95.86	PASS	30-150
N063734-002B	SAMP	10	37626.6	39103.3	96.22	PASS	30-150
N063735-001C	SAMP	10	37689	39103.3	96.38	PASS	30-150
N063735-001C	SAMP	50	38916.2	39103.3	99.52	PASS	30-150
CCV7	CCV	1	39978.8	39103.3	102.24	PASS	30-150
CCB7	CCB	1	38975.2	39103.3	99.67	PASS	30-150
N063735-001C-PS	PS	10	36689.9	39103.3	93.83	PASS	30-150
N063735-001C-MS	MS	10	37966.2	39103.3	97.09	PASS	30-150
N063735-001C-MSD	MSD	10	37878.2	39103.3	96.87	PASS	30-150
N063735-009C	SAMP	10	38611.1	39103.3	98.74	PASS	30-150
N063735-012C	SAMP	10	38095.3	39103.3	97.42	PASS	30-150
N063736-003C	SAMP	1	32532.3	39103.3	83.2	PASS	30-150
N063736-003C	SAMP	1	32493.3	39103.3	83.1	PASS	30-150
N063736-003C	SAMP	1	32879.6	39103.3	84.08	PASS	30-150
N063736-003C	SAMP	1	33113.5	39103.3	84.68	PASS	30-150
CCV8	CCV	1	38603.2	39103.3	98.72	PASS	30-150
CCB8	CCB	1	37873.8	39103.3	96.86	PASS	30-150
ICSA4	ICSA	1	37921.6	39103.3	96.98	PASS	30-150
ICSAB4	ICSAB	1	38118.7	39103.3	97.48	PASS	30-150
N063295-001A	SAMP	1	32454.4	39103.3	83	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.:	N063736
Test Method:	EPA 6020
Analysis Date:	3/13/2024
Matrix:	Groundwater
Batch No.:	107497
Instrument ID:	ICPMS-03
Instrument Description:	Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to As. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063735-001C DT 5x	Arsenic	As	µg/L	0	NA	0		10
N063735-001C DT 5x	Barium	Ba	µg/L	69.51141	PASS	64.58299	7.63%	10
N063735-001C DT 50x	Manganese	Mn	µg/L	134.7154	PASS	132.7161	1.51%	10

Reviewed by:

JRB 4/5/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063736
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	N063735-001C-PS	SampType:	PS	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	183572
Client ID:	ZZZZZZ	Batch ID:	107497	TestNo:	EPA 6020	EPA 3010A		Analysis Date:	3/13/2024	SeqNo:	5745332

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	9.414	0.10	10.00	0	94.1	80	120				
Barium	73.670	1.0	10.00	64.58	90.9	80	120				

Sample ID	N063735-001C-PS	SampType:	PS	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	183572
Client ID:	ZZZZZZ	Batch ID:	107497	TestNo:	EPA 6020	EPA 3010A		Analysis Date:	3/13/2024	SeqNo:	5745355

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	1003.150	5.0	1000	132.7	87.0	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CORRECTIVE ACTION DOCUMENTATION

ASSET Laboratories

Corrective Action Report (CAR)

Date Initiated: 14-Mar-24
Initiated By: Diane Jetajobe
Corrective Action Report ID: 7439
Department: ME-3(ICPMS)

Corrective Action Description

CAR Summary: N063736-003C was re-analyzed several times with failed RSD for As

Description of Nonconformance: N063736-003C was re analyze several times due to RSD not meeting the 15% criteria for As. RSD on all run failed acceptance criteria

Description of Corrective Action: As was reported at 0.328 ug/L with the lowest RSD of 21.30%. The results are comparabale on all runs

Performed By: Diane Jetajobe
Completion Date: 14-Mar-24

Client Notification

Client Notification Required: No
Notified By:

Comment:

Quality Assurance Review

Corrective Action: Deficiency

Further Action required by QA:

Approval and Closure

CAR Closed By: _____ Close Date:

QA Reviewed By: _____ QA Date: 14-Mar-24

Katrina Diaz

Last Updated BY KatrinaD Updated: 14-Mar-2024 5:27 PM Reported: 14-Mar-2024 4:27 PM

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number : 504473
Report Level : II
Report Date : 04/01/2024

Analytical Report *prepared for:*

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Location: N063738

Authorized for release by:

Quynhgiao Le

Quynhgiao Le, Project Manager
714-7716900
quynhgiao.le@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Sonny Lorenzo
Asset Laboratories
11110 Artersia
Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 504473
Location: N063738
Date Received: 03/15/24

Sample ID	Lab ID	Collected	Matrix
N063738-001A / MW-30-050-324	504473-001	03/12/24 12:38	Water
N063738-002A / MW-45-095A-324	504473-002	03/12/24 13:56	Water
N063738-003A / MW-36-090-324	504473-003	03/12/24 11:17	Water
N063738-004A / MW-34-080-324	504473-004	03/12/24 13:13	Water
N063738-005A / TW-02D-0324	504473-005	03/12/24 09:14	Water
N063738-006A / TW-02S-0324	504473-006	03/12/24 08:40	Water
N063738-007A / TW-03D-0324	504473-007	03/12/24 09:48	Water
N063738-008A / MW-39-040-0324	504473-008	03/12/24 09:41	Water
N063738-009A / MW-39-050-0324	504473-009	03/12/24 11:06	Water
N063738-010A / MW-39-060-0324	504473-010	03/12/24 11:33	Water
N063738-011A / MW-39-070-0324	504473-011	03/12/24 09:13	Water
N063738-012A / MW-39-080-0324	504473-012	03/12/24 10:15	Water
N063738-013A / MW-39-100-0324	504473-013	03/12/24 11:56	Water
N063738-014A / MW-36-100-0324	504473-014	03/12/24 10:54	Water
N063738-015A / MW-34-100-0324	504473-015	03/12/24 12:45	Water

ENTHALPY ANALYTICAL

Case Narrative

Asset Laboratories 11110 Artersia Blvd, Suite B Cerritos, CA 90703 Sonny Lorenzo	Lab Job Number: 504473 Location: N063738 Date Received: 03/15/24

- This data package contains sample and QC results for fifteen water samples, requested for the above referenced project on 03/15/24. The samples were received cold and intact.
- Level II was also requested.

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Enthalpy Analytical
931 W. Barkley Ave.
Orange, CA 92868

TEL: (714) 771-6900
FAX: (714) 538-1209
Acct #:

Field Sampler: Riggie Tep

13-Mar-24

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				SM5310B		
N063738-001A / MW-30-050-0324	Ground Water	3/12/2024 12:38:00 PM	8OZA	1		
N063738-002A / MW-45-095a-0324	Ground Water	3/12/2024 1:56:00 PM	8OZA	1		
N063738-003A / MW-36-090-0324	Ground Water	3/12/2024 11:17:00 AM	8OZA	1		
N063738-004A / MW-34-080-0324	Ground Water	3/12/2024 1:13:00 PM	8OZA	1		
N063738-005A / TW-02D-0324	Ground Water	3/12/2024 9:14:00 AM	8OZA	1		
N063738-006A / TW-02S-0324	Ground Water	3/12/2024 8:40:00 AM	8OZA	1		
N063738-007A / TW-03D-0324	Ground Water	3/12/2024 9:48:00 AM	8OZA	1		
N063738-008A / MW-39-040-0324	Ground Water	3/12/2024 9:41:00 AM	8OZA	1		
N063738-009A / MW-39-050-0324	Ground Water	3/12/2024 11:06:00 AM	8OZA	1		
N063738-010A / MW-39-060-0324	Ground Water	3/12/2024 11:33:00 AM	8OZA	1		
N063738-011A / MW-39-070-0324	Ground Water	3/12/2024 9:13:00 AM	8OZA	1		
N063738-012A / MW-39-080-0324	Ground Water	3/12/2024 10:15:00 AM	8OZA	1		
N063738-013A / MW-39-100-0324	Ground Water	3/12/2024 11:56:00 AM	8OZA	1		
N063738-014A / MW-36-100-0324	Ground Water	3/12/2024 10:54:00 AM	8OZA	1		
N063738-015A / MW-34-100-0324	Ground Water	3/12/2024 12:45:00 PM	8OZA	1		

3/20/24

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N63738A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze by TOC by SM5310B. EDD requirement Labspec7 edata.

GLS #: 561093991

		Date/Time		Date/Time
Relinquished by:	YRodriguez	3/13/2024 1600	**Received by:**	
Relinquished by:			**Received by:**	

504473

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Enthalpy Analytical
931 W. Barkley Ave.
Orange, CA 92868

TEL: (714) 771-6900
FAX: (714) 538-1209
Acct #:

Field Sampler: Riggie Tep

13-Mar-24

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				SM5310B		
N063738-001A / MW-30-050-0324	Ground Water	3/12/2024 12:38:00 PM	8OZA	1		
N063738-002A / MW-45-095a-0324	Ground Water	3/12/2024 1:56:00 PM	8OZA	1		
N063738-003A / MW--36-090-0324	Ground Water	3/12/2024 11:17:00 AM	8OZA	1		
N063738-004A / MW-34-080-0324	Ground Water	3/12/2024 1:13:00 PM	8OZA	1		
N063738-005A / TW-02D-0324	Ground Water	3/12/2024 9:14:00 AM	8OZA	1		
N063738-006A / TW-02S-0324	Ground Water	3/12/2024 8:40:00 AM	8OZA	1		
N063738-007A / TW-03D-0324	Ground Water	3/12/2024 9:48:00 AM	8OZA	1		
N063738-008A / MW-39-040-0324	Ground Water	3/12/2024 9:41:00 AM	8OZA	1		
N063738-009A / MW-39-050-0324	Ground Water	3/12/2024 11:06:00 AM	8OZA	1		
N063738-010A / MW-39-060-0324	Ground Water	3/12/2024 11:33:00 AM	8OZA	1		
N063738-011A / MW-39-070-0324	Ground Water	3/12/2024 9:13:00 AM	8OZA	1		
N063738-012A / MW-39-080-0324	Ground Water	3/12/2024 10:15:00 AM	8OZA	1		
N063738-013A / MW-39-100-0324	Ground Water	3/12/2024 11:56:00 AM	8OZA	1		
N063738-014A / MW-36-100-0324	Ground Water	3/12/2024 10:54:00 AM	8OZA	1		
N063738-015A / MW-34-100-0324	Ground Water	3/12/2024 12:45:00 PM	8OZA	1		

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N63738A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze by TOC by SM5310B. EDD requirement Labspec7 edata.

GLS #: 561093991

		Date/Time			Date/Time
Relinquished by:	YRodriguez	3/13/2024 1600	**Received by:**	[signature]	3/15/24 10:21
Relinquished by:			**Received by:**		

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Asset Labs Project: N063738

Date Received: 3/15/24 Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 2.7 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☑ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 0-3 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Asset labs label for Sample 001 and 002 did not match the IDs of the original clients.

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____

☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: _____ Date: 3/15/24

GLS.

800-322-5555
www.gls-us.com

Ship From
ADVANCED TECHNOLOGY
LABORATORIES, INC.
MARLON CARTIN
3151 W. POST RD.
LAS VEGAS, NV 89118

Tracking #: 561093991

PDS

Ship To
ENHALPY ANALYTICAL
SAMPLE RECEIVING
931 W. BARKLEY AVE
ORANGE, CA 92868

ORANGE

S10219D

COD: $0.00
Weight: 0 lb(s)
Reference:

Delivery Instructions:

5435552

Signature Type: STANDARD

ORC CA927-RD0

Print Date: 3/13/2024 12:13 PM

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.
Step 2: Fold this page in half.
Step 3: Securely attach this label to your package and do not cover the barcode.

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all of the General Logistics Systems US, Inc. (GLS) service terms & conditions including, but not limited to; limits of liability, declared value conditions, and claim procedures which are available on our website at www.gls-us.com.

0.7

ENTHALPY ANALYTICAL

Analysis Results for 504473

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 504473
Location: N063738
Date Received: 03/15/24

Sample ID: N063738-001A / MW-30-050-324 **Lab ID:** 504473-001 **Matrix:** Water **Collected:** 03/12/24 12:38

504473-001 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.9**		mg/L	1.0	1	335608	03/19/24	03/19/24	EPL

Sample ID: N063738-002A / MW-45-095A-324 **Lab ID:** 504473-002 **Matrix:** Water **Collected:** 03/12/24 13:56

504473-002 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.3**		mg/L	1.0	1	335608	03/19/24	03/19/24	EPL

Sample ID: N063738-003A / MW-36-090-324 **Lab ID:** 504473-003 **Matrix:** Water **Collected:** 03/12/24 11:17

504473-003 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.8**		mg/L	1.0	1	335608	03/20/24	03/20/24	EPL

Sample ID: N063738-004A / MW-34-080-324 **Lab ID:** 504473-004 **Matrix:** Water **Collected:** 03/12/24 13:13

504473-004 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.1**		mg/L	1.0	1	335608	03/20/24	03/20/24	EPL

Sample ID: N063738-005A / TW-02D-0324 **Lab ID:** 504473-005 **Matrix:** Water **Collected:** 03/12/24 09:14

504473-005 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.6**		mg/L	1.0	1	335608	03/20/24	03/20/24	EPL

Sample ID: N063738-006A / TW-02S-0324 **Lab ID:** 504473-006 **Matrix:** Water **Collected:** 03/12/24 08:40

504473-006 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.8**		mg/L	1.0	1	335608	03/20/24	03/20/24	EPL

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 504473

Sample ID: N063738-007A / TW-03D-0324 **Lab ID:** 504473-007 **Collected:** 03/12/24 09:48 **Matrix:** Water

504473-007 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.2**		mg/L	1.0	1	335608	03/20/24	03/20/24	EPL

Sample ID: N063738-008A / MW-39-040-0324 **Lab ID:** 504473-008 **Collected:** 03/12/24 09:41 **Matrix:** Water

504473-008 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**7.3**		mg/L	1.0	1	335608	03/20/24	03/20/24	EPL

Sample ID: N063738-009A / MW-39-050-0324 **Lab ID:** 504473-009 **Collected:** 03/12/24 11:06 **Matrix:** Water

504473-009 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.5**		mg/L	1.0	1	335608	03/20/24	03/20/24	EPL

Sample ID: N063738-010A / MW-39-060-0324 **Lab ID:** 504473-010 **Collected:** 03/12/24 11:33 **Matrix:** Water

504473-010 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.1**		mg/L	1.0	1	335608	03/20/24	03/20/24	EPL

Sample ID: N063738-011A / MW-39-070-0324 **Lab ID:** 504473-011 **Collected:** 03/12/24 09:13 **Matrix:** Water

504473-011 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.6**		mg/L	1.0	1	335608	03/20/24	03/20/24	EPL

Sample ID: N063738-012A / MW-39-080-0324 **Lab ID:** 504473-012 **Collected:** 03/12/24 10:15 **Matrix:** Water

504473-012 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**3.3**		mg/L	1.0	1	335608	03/20/24	03/20/24	EPL

Sample ID: N063738-013A / MW-39-100-0324 **Lab ID:** 504473-013 **Collected:** 03/12/24 11:56 **Matrix:** Water

504473-013 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**3.2**		mg/L	1.0	1	335608	03/20/24	03/20/24	EPL

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 504473

Sample ID:	Lab ID:	Collected:
N063738-014A / MW-36-100-0324	504473-014	03/12/24 10:54
	Matrix: Water	

504473-014 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.2**		mg/L	1.0	1	335608	03/20/24	03/20/24	EPL

Sample ID:	Lab ID:	Collected:
N063738-015A / MW-34-100-0324	504473-015	03/12/24 12:45
	Matrix: Water	

504473-015 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.7**		mg/L	1.0	1	335608	03/20/24	03/20/24	EPL

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type: Blank	**Lab ID: QC1137205**	**Batch: 335608**
Matrix: Water	**Method: SM 5310B**	

QC1137205 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Total Organic Carbon	ND		mg/L	1.0	03/19/24	03/19/24

Type: Lab Control Sample	**Lab ID: QC1137206**	**Batch: 335608**
Matrix: Water	**Method: SM 5310B**	

QC1137206 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Total Organic Carbon	22.42	25.00	mg/L	90%		80-120

Type: Matrix Spike	**Lab ID: QC1137207**	**Batch: 335608**
Matrix (Source ID): Water (504473-001)	**Method: SM 5310B**	

QC1137207 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Total Organic Carbon	29.53	2.936	25.00	mg/L	106%		80-120	1

Type: Matrix Spike Duplicate	**Lab ID: QC1137208**	**Batch: 335608**
Matrix (Source ID): Water (504473-001)	**Method: SM 5310B**	

QC1137208 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Total Organic Carbon	28.48	2.936	25.00	mg/L	102%		80-120	4	20	1

ND Not Detected

ARCADIS

Project: PG&E Topock - PCM

Project No.: 30211191

ASSET Laboratories Work Order:

N063771

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063771

Item	Page
Cover Page	1-6
Analytical Result/QC Summary Reports	7-99
Sample Receiving Items	100-111
List of Analysts	112
Raw Data	
EPA 218.6	113-448
EPA 300.0	449-484
EPA 6010B_Dissolved	485-518
EPA 6020_Dissolved	519-583

April 01, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063771

RE: PG&E Topock - PCM, 30211191

Attention: Dan Bush

Enclosed are the results for sample(s) received on March 13, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063771

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 218.6:

Dilution was necessary for samples N063771-002A, 003A, -004A, -005A, -006A, -007A, -009A, -010A, -011A, -012A and -017A due to matrix interference. Samples were analyzed at lower dilution however matrix spike recovery was not met indicating possible matrix interference. Samples were reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Analytical Comments for EPA 300:

Dilution was necessary due to precipitation for sample upon addition of eluent.

Analytical Comments for EPA 6010B:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Iron in QC samples N063771-001C-MS and N063771-001C-MSD possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

ASSET Laboratories

Date: *01-Apr-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063771
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063771-001A	MW-76-039-0324	Groundwater	3/13/2024 12:37:00 PM	3/13/2024	4/1/2024
N063771-001B	MW-76-039-0324	Groundwater	3/13/2024 12:37:00 PM	3/13/2024	4/1/2024
N063771-001C	MW-76-039-0324	Groundwater	3/13/2024 12:37:00 PM	3/13/2024	4/1/2024
N063771-002A	MW-76-156-0324	Groundwater	3/13/2024 1:09:00 PM	3/13/2024	4/1/2024
N063771-002B	MW-76-156-0324	Groundwater	3/13/2024 1:09:00 PM	3/13/2024	4/1/2024
N063771-002C	MW-76-156-0324	Groundwater	3/13/2024 1:09:00 PM	3/13/2024	4/1/2024
N063771-003A	MW-76-181-0324	Groundwater	3/13/2024 1:44:00 PM	3/13/2024	4/1/2024
N063771-003B	MW-76-181-0324	Groundwater	3/13/2024 1:44:00 PM	3/13/2024	4/1/2024
N063771-003C	MW-76-181-0324	Groundwater	3/13/2024 1:44:00 PM	3/13/2024	4/1/2024
N063771-004A	MW-76-218-0324	Groundwater	3/13/2024 2:22:00 PM	3/13/2024	4/1/2024
N063771-004B	MW-76-218-0324	Groundwater	3/13/2024 2:22:00 PM	3/13/2024	4/1/2024
N063771-004C	MW-76-218-0324	Groundwater	3/13/2024 2:22:00 PM	3/13/2024	4/1/2024
N063771-005A	MW-82-046-0324	Groundwater	3/13/2024 9:53:00 AM	3/13/2024	4/1/2024
N063771-005B	MW-82-046-0324	Groundwater	3/13/2024 9:53:00 AM	3/13/2024	4/1/2024
N063771-005C	MW-82-046-0324	Groundwater	3/13/2024 9:53:00 AM	3/13/2024	4/1/2024
N063771-006A	MW-82-168-0324	Groundwater	3/13/2024 10:35:00 AM	3/13/2024	4/1/2024
N063771-006B	MW-82-168-0324	Groundwater	3/13/2024 10:35:00 AM	3/13/2024	4/1/2024
N063771-006C	MW-82-168-0324	Groundwater	3/13/2024 10:35:00 AM	3/13/2024	4/1/2024
N063771-007A	MW-82-198-0324	Groundwater	3/13/2024 11:16:00 AM	3/13/2024	4/1/2024
N063771-007B	MW-82-198-0324	Groundwater	3/13/2024 11:16:00 AM	3/13/2024	4/1/2024
N063771-007C	MW-82-198-0324	Groundwater	3/13/2024 11:16:00 AM	3/13/2024	4/1/2024
N063771-008A	EB-742-Q124	Groundwater	3/13/2024 2:30:00 PM	3/13/2024	4/1/2024
N063771-009A	MW-77-046-0324	Groundwater	3/13/2024 1:28:00 PM	3/13/2024	4/1/2024
N063771-009B	MW-77-046-0324	Groundwater	3/13/2024 1:28:00 PM	3/13/2024	4/1/2024
N063771-009C	MW-77-046-0324	Groundwater	3/13/2024 1:28:00 PM	3/13/2024	4/1/2024
N063771-010A	MW-77-102-0324	Groundwater	3/13/2024 12:03:00 PM	3/13/2024	4/1/2024
N063771-010B	MW-77-102-0324	Groundwater	3/13/2024 12:03:00 PM	3/13/2024	4/1/2024
N063771-010C	MW-77-102-0324	Groundwater	3/13/2024 12:03:00 PM	3/13/2024	4/1/2024
N063771-011A	MW-77-158-0324	Groundwater	3/13/2024 1:01:00 PM	3/13/2024	4/1/2024

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063771
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063771-011B	MW-77-158-0324	Groundwater	3/13/2024 1:01:00 PM	3/13/2024	4/1/2024
N063771-011C	MW-77-158-0324	Groundwater	3/13/2024 1:01:00 PM	3/13/2024	4/1/2024
N063771-012A	MW-929-Q124	Groundwater	3/13/2024 1:11:00 PM	3/13/2024	4/1/2024
N063771-012B	MW-929-Q124	Groundwater	3/13/2024 1:11:00 PM	3/13/2024	4/1/2024
N063771-012C	MW-929-Q124	Groundwater	3/13/2024 1:11:00 PM	3/13/2024	4/1/2024
N063771-013A	MW-77-187-0324	Groundwater	3/13/2024 2:25:00 PM	3/13/2024	4/1/2024
N063771-013B	MW-77-187-0324	Groundwater	3/13/2024 2:25:00 PM	3/13/2024	4/1/2024
N063771-013C	MW-77-187-0324	Groundwater	3/13/2024 2:25:00 PM	3/13/2024	4/1/2024
N063771-014A	MW-81-043-0324	Groundwater	3/13/2024 10:23:00 AM	3/13/2024	4/1/2024
N063771-014B	MW-81-043-0324	Groundwater	3/13/2024 10:23:00 AM	3/13/2024	4/1/2024
N063771-014C	MW-81-043-0324	Groundwater	3/13/2024 10:23:00 AM	3/13/2024	4/1/2024
N063771-015A	MW-930-Q124	Groundwater	3/13/2024 10:33:00 AM	3/13/2024	4/1/2024
N063771-015B	MW-930-Q124	Groundwater	3/13/2024 10:33:00 AM	3/13/2024	4/1/2024
N063771-015C	MW-930-Q124	Groundwater	3/13/2024 10:33:00 AM	3/13/2024	4/1/2024
N063771-016A	MW-81-098-0324	Groundwater	3/13/2024 11:01:00 AM	3/13/2024	4/1/2024
N063771-016B	MW-81-098-0324	Groundwater	3/13/2024 11:01:00 AM	3/13/2024	4/1/2024
N063771-016C	MW-81-098-0324	Groundwater	3/13/2024 11:01:00 AM	3/13/2024	4/1/2024
N063771-017A	MW-31-060-0324	Groundwater	3/13/2024 3:50:00 PM	3/13/2024	4/1/2024
N063771-017B	MW-31-060-0324	Groundwater	3/13/2024 3:50:00 PM	3/13/2024	4/1/2024
N063771-017C	MW-31-060-0324	Groundwater	3/13/2024 3:50:00 PM	3/13/2024	4/1/2024
N063771-018A	MW-31-135-0324	Groundwater	3/13/2024 4:26:00 PM	3/13/2024	4/1/2024
N063771-018B	MW-31-135-0324	Groundwater	3/13/2024 4:26:00 PM	3/13/2024	4/1/2024
N063771-018C	MW-31-135-0324	Groundwater	3/13/2024 4:26:00 PM	3/13/2024	4/1/2024
N063771-019A	EB-743-Q124	Groundwater	3/13/2024 4:35:00 PM	3/13/2024	4/1/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-76-039-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 12:37:00 PM
Lab ID:	N063771-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240315A**	QC Batch: **R183690**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	4.9	0.19	1.0		µg/L	5	3/15/2024 11:57 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-76-156-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 1:09:00 PM
Lab ID:	N063771-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240315A**	QC Batch: **R183690**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	3/15/2024 06:45 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-76-181-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 1:44:00 PM
Lab ID:	N063771-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240314A**	QC Batch: **R183616**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	3/14/2024 08:49 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-76-218-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 2:22:00 PM
Lab ID:	N063771-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240314A**	QC Batch: **R183616**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	3/14/2024 09:08 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-82-046-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 9:53:00 AM
Lab ID:	N063771-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240314A**	QC Batch: **R183616**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	3/14/2024 09:27 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-82-168-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 10:35:00 AM
Lab ID:	N063771-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240315A**	QC Batch: **R183690**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	3/15/2024 09:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-82-198-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 11:16:00 AM
Lab ID:	N063771-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240315A**	QC Batch: **R183690**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	3/15/2024 09:35 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-742-Q124
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 2:30:00 PM
Lab ID:	N063771-008	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240315A**	QC Batch: **R183690**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	3/15/2024 04:52 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-77-046-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 1:28:00 PM
Lab ID:	N063771-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240315A**	QC Batch: **R183690**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	3/15/2024 09:54 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-77-102-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 12:03:00 PM
Lab ID:	N063771-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240315A**	QC Batch: **R183690**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	3/15/2024 08:01 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-77-158-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 1:01:00 PM
Lab ID:	N063771-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240318A**	QC Batch: **R183736**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	3/18/2024 06:51 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-929-Q124
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 1:11:00 PM
Lab ID:	N063771-012	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240315A**	QC Batch: **R183690**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	3/15/2024 08:39 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-77-187-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 2:25:00 PM
Lab ID:	N063771-013	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240315A**	QC Batch: **R183690**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	3/15/2024 03:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-81-043-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 10:23:00 AM
Lab ID:	N063771-014	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240315A**	QC Batch: **R183690**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	18	0.19	1.0		µg/L	5	3/15/2024 12:56 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-930-Q124
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 10:33:00 AM
Lab ID:	N063771-015	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240315A**	QC Batch: **R183690**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	18	0.19	1.0		µg/L	5	3/15/2024 01:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-81-098-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 11:01:00 AM
Lab ID:	N063771-016	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240318A**	QC Batch: **R183736**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	22	0.19	1.0		µg/L	5	3/18/2024 06:29 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-31-060-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 3:50:00 PM
Lab ID:	N063771-017	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240318A**	QC Batch: **R183736**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.19	1.0		µg/L	5	3/18/2024 09:22 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-31-135-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 4:26:00 PM
Lab ID:	N063771-018	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240315A**	QC Batch: **R183690**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	12	0.19	1.0		µg/L	5	3/15/2024 01:34 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-743-Q124
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 4:35:00 PM
Lab ID:	N063771-019	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240315A**	QC Batch: **R183690**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	ND	0.039	0.20		µg/L	1	3/15/2024 05:48 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R183616**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183616**			
Client ID: **PBW**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**			SeqNo: **5748068**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R183616**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183616**			
Client ID: **LCSW**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**			SeqNo: **5748069**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.895	0.20	5.000	0	97.9	90	110				

Sample ID: **N063735-006AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183616**			
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**			SeqNo: **5748071**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	44.813	1.0	25.00	19.83	99.9	90	110				

Sample ID: **N063735-006ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183616**			
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**			SeqNo: **5748072**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	19.721	1.0						19.83	0.549	20	

Sample ID: **N063735-006AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183616**			
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**			SeqNo: **5748073**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	44.911	1.0	25.00	19.83	100	90	110	44.81	0.218	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063735-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748077**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.093	0.20	1.000	0.1384	95.5	90	110				

Sample ID: **N063735-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748079**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.050	0.20	1.000	0	105	90	110				

Sample ID: **N063735-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748081**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.052	0.20	1.000	0	105	90	110				

Sample ID: **N063735-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748088**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.904	0.20	1.000	0	90.4	90	110				

Sample ID: **N063735-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748090**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.068	0.20	1.000	0.1166	95.2	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063735-008AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748094**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.065	0.20	1.000	0	106	90	110				

Sample ID: **N063735-014AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748096**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.060	0.20	1.000	0	106	90	110				

Sample ID: **N063735-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748098**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.676	1.0	5.000	0	93.5	90	110				

Sample ID: **N063735-005AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748100**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	12.016	0.20	5.000	6.842	103	90	110				

Sample ID: **N063734-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748104**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.609	1.0	5.000	0	92.2	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063734-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748106**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.654	1.0	5.000	0	93.1	90	110				

Sample ID: **N063771-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748110**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.704	1.0	5.000	0	94.1	90	110				

Sample ID: **N063771-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748112**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.293	1.0	5.000	0	106	90	110				

Sample ID: **N063771-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748114**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.749	1.0	5.000	0	95.0	90	110				

Sample ID: **N063735-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183616**
Client ID: **ZZZZZZ** Batch ID: **R183616** TestNo: **EPA 218.6** Analysis Date: **3/14/2024** SeqNo: **5748118**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.669	1.0	5.000	0.8435	96.5	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063735-011AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748119**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	13.075	0.20	5.000	7.651	108	90	110				

Sample ID: **N063735-013AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5768702**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.255	0.20	1.000	0.2507	100	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R183690**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **PBW**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752660**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R183690**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **LCSW**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752661**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.983	0.20	5.000	0	99.7	90	110				

Sample ID: **N063735-012AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752663**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.049	0.20	1.000	0	105	90	110				

Sample ID: **N063771-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752665**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.168	1.0	5.000	4.893	106	90	110				

Sample ID: **N063771-014AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752669**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	42.641	1.0	25.00	17.52	100	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063771-015AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752671**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	42.351	1.0	25.00	17.61	99.0	90	110				

Sample ID: **N063771-018AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752673**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	37.590	1.0	25.00	12.24	101	90	110				

Sample ID: **N063771-014ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752674**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	17.260	1.0						17.52	1.49	20	

Sample ID: **N063771-014AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752675**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	41.939	1.0	25.00	17.52	97.7	90	110	42.64	1.66	20	

Sample ID: **N063771-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752681**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.055	0.20	1.000	0	105	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063771-019AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752683**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.054	0.20	1.000	0	105	90	110				

Sample ID: **N063771-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752687**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.635	1.0	5.000	0	92.7	90	110				

Sample ID: **N063812-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752689**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.076	0.20	1.000	0	108	90	110				

Sample ID: **N063812-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752691**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.037	0.20	1.000	0	104	90	110				

Sample ID: **N063812-017AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752693**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.010	0.20	1.000	0	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063771-010AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752695**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.753	1.0	5.000	0	95.1	90	110				

Sample ID: **N063771-012AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752699**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.556	1.0	5.000	0	91.1	90	110				

Sample ID: **N063771-006AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752703**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.615	1.0	5.000	0	92.3	90	110				

Sample ID: **N063771-007AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752705**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.865	1.0	5.000	0	97.3	90	110				

Sample ID: **N063771-009AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752707**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.670	1.0	5.000	0	93.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063771-013AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5768704**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.990	0.20	1.000	0	99.0	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R183736**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **PBW**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756156**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R183736**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **LCSW**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756157**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.657	0.20	5.000	0	93.1	90	110				

Sample ID: **N063812-011AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756159**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	47.954	1.0	25.00	23.26	98.8	90	110				

Sample ID: **N063812-009AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756161**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.327	0.20	1.000	0.2967	103	90	110				

Sample ID: **N063812-015AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756166**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.845	0.20	1.000	0.8727	97.3	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063812-011ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183736**			
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**			SeqNo: **5756167**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	1.0						23.26	0	20	

Sample ID: **N063812-011AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183736**			
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**			SeqNo: **5756168**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	48.720	1.0	25.00	23.26	102	90	110	47.95	1.58	20	

Sample ID: **N063812-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183736**			
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**			SeqNo: **5756172**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	749.610	20	500.0	275.2	94.9	90	110				

Sample ID: **N063812-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183736**			
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**			SeqNo: **5756174**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4612.000	100	2500	2165	97.9	90	110				

Sample ID: **N063812-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183736**			
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**			SeqNo: **5756176**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4643.600	100	2500	2174	98.8	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063812-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756178**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4429.400	100	2500	1973	98.3	90	110				

Sample ID: **N063812-007AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756180**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.197	0.20	1.000	1.123	107	90	110				

Sample ID: **N063771-016AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756184**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	47.238	1.0	25.00	22.04	101	90	110				

Sample ID: **N063771-011AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756186**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.518	1.0	5.000	0	90.4	90	110				

Sample ID: **N063812-016AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756188**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.697	1.0	5.000	0	93.9	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063812-016AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183736**			
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**			SeqNo: **5756189**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.013	1.0	5.000	0	100	90	110	4.697	6.50	20	

Sample ID: **N063771-016ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183736**			
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**			SeqNo: **5756190**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	22.853	1.0						22.04	3.63	20	

Sample ID: **N063812-005AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183736**			
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**			SeqNo: **5756194**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.562	1.0	5.000	0	91.2	90	110				

Sample ID: **N063812-010AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183736**			
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**			SeqNo: **5756196**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1104.240	20	500.0	591.9	102	90	110				

Sample ID: **N063771-017AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183736**			
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**			SeqNo: **5756198**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.048	1.0	5.000	0	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063812-014AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183736**
Client ID: **ZZZZZZ** Batch ID: **R183736** TestNo: **EPA 218.6** Analysis Date: **3/18/2024** SeqNo: **5756201**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.047	0.20	1.000	1.012	104	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-76-039-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 12:37:00 PM
Lab ID:	N063771-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240314A**	QC Batch: **R183613**			PrepDate:			Analyst: **RAB**
Sulfate	400	17	25		mg/L	50	3/14/2024 09:55 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240314A**	QC Batch: **R183609**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/14/2024 09:23 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-76-156-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 1:09:00 PM
Lab ID:	N063771-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240314A**	QC Batch: **R183613**			PrepDate:			Analyst: **RAB**
Sulfate	370	17	25		mg/L	50	3/14/2024 10:11 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240314A**	QC Batch: **R183609**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/14/2024 09:38 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-76-181-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 1:44:00 PM
Lab ID:	N063771-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240314A**	QC Batch: **R183613**			PrepDate:			Analyst: **RAB**
Sulfate	410	17	25		mg/L	50	3/14/2024 10:27 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240314A**	QC Batch: **R183609**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/14/2024 09:53 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-76-218-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 2:22:00 PM
Lab ID:	N063771-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240314A**	QC Batch: **R183613**			PrepDate:			Analyst: **RAB**
Sulfate	430	17	25		mg/L	50	3/14/2024 10:42 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240314A**	QC Batch: **R183609**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/14/2024 10:09 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-82-046-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 9:53:00 AM
Lab ID:	N063771-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240314A**	QC Batch: **R183613**			PrepDate:			Analyst: **RAB**
Sulfate	1800	69	100		mg/L	200	3/14/2024 09:39 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240314A**	QC Batch: **R183609**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/14/2024 10:24 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-82-168-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 10:35:00 AM
Lab ID:	N063771-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240314A**	QC Batch: **R183613**			PrepDate:			Analyst: **RAB**
Sulfate	380	17	25		mg/L	50	3/14/2024 10:58 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240314A**	QC Batch: **R183609**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/14/2024 10:39 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-82-198-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 11:16:00 AM
Lab ID:	N063771-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240314A**	QC Batch: **R183613**			PrepDate:			Analyst: **RAB**
Sulfate	330	17	25		mg/L	50	3/14/2024 11:14 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240314A**	QC Batch: **R183609**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/14/2024 10:55 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-77-046-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 1:28:00 PM
Lab ID:	N063771-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240314A**	QC Batch: **R183613**			PrepDate:			Analyst: **RAB**
Sulfate	330	17	25		mg/L	50	3/14/2024 11:30 AM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240314A**	QC Batch: **R183609**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/14/2024 11:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-77-102-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 12:03:00 PM
Lab ID:	N063771-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240314A**	QC Batch: **R183613**			PrepDate:			Analyst: **RAB**
Sulfate	600	17	25		mg/L	50	3/14/2024 01:22 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240314A**	QC Batch: **R183609**			PrepDate:			Analyst: **RAB**
Nitrate as N	0.53	0.24	0.50		mg/L	10	3/14/2024 12:11 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-77-158-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 1:01:00 PM
Lab ID:	N063771-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240314A**	QC Batch: **R183613**			PrepDate:			Analyst: **RAB**
Sulfate	340	17	25		mg/L	50	3/14/2024 01:38 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240314A**	QC Batch: **R183609**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/14/2024 12:26 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-929-Q124
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 1:11:00 PM
Lab ID:	N063771-012	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240314A**	QC Batch: **R183613**			PrepDate:			Analyst: **RAB**
Sulfate	340	17	25		mg/L	50	3/14/2024 01:54 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240314A**	QC Batch: **R183609**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/14/2024 12:42 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-77-187-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 2:25:00 PM
Lab ID:	N063771-013	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240314A**	QC Batch: **R183613**			PrepDate:			Analyst: **RAB**
Sulfate	340	17	25		mg/L	50	3/14/2024 02:10 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240314A**	QC Batch: **R183609**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/14/2024 01:59 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT: ARCADIS U.S., Inc. - California
Client Sample ID: MW-81-043-0324
Lab Order: N063771
Project: PG&E Topock - PCM, 30211191
Collection Date: 3/13/2024 10:23:00 AM
Lab ID: N063771-014
Matrix: GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240314A** QC Batch: **R183613**				PrepDate:			Analyst: **RAB**
Sulfate	350	17	25		mg/L	50	3/14/2024 02:25 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240314A** QC Batch: **R183609**				PrepDate:			Analyst: **RAB**
Nitrate as N	0.72	0.24	0.50		mg/L	10	3/14/2024 02:14 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-930-Q124
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 10:33:00 AM
Lab ID:	N063771-015	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240314A**	QC Batch: **R183613**			PrepDate:			Analyst: **RAB**
Sulfate	360	17	25		mg/L	50	3/14/2024 02:41 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240314A**	QC Batch: **R183609**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/14/2024 02:30 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-81-098-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 11:01:00 AM
Lab ID:	N063771-016	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240314A**	QC Batch: **R183613**			PrepDate:			Analyst: **RAB**
Sulfate	490	17	25		mg/L	50	3/14/2024 03:29 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240314A**	QC Batch: **R183609**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/14/2024 02:45 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-31-060-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 3:50:00 PM
Lab ID:	N063771-017	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240314A**	QC Batch: **R183613**			PrepDate:			Analyst: **RAB**
Sulfate	340	17	25		mg/L	50	3/14/2024 04:01 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240314A**	QC Batch: **R183609**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/14/2024 11:56 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-31-135-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 4:26:00 PM
Lab ID:	N063771-018	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC9_240314A**	QC Batch: **R183613**			PrepDate:			Analyst: **RAB**
Sulfate	410	17	25		mg/L	50	3/14/2024 03:45 PM
ANIONS BY ION CHROMATOGRAPHY							
			EPA 300.0				
RunID: **NV00922-IC8_240314A**	QC Batch: **R183609**			PrepDate:			Analyst: **RAB**
Nitrate as N	ND	0.24	0.50		mg/L	10	3/14/2024 03:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **MB-R183613_SO4**	SampType: **MBLK**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **183613**			
Client ID: **PBW**	Batch ID: **R183613**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**			SeqNo: **5747893**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **LCS-R183613_SO4**	SampType: **LCS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **183613**			
Client ID: **LCSW**	Batch ID: **R183613**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**			SeqNo: **5747894**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.013	0.50	4.000	0	100	90	110				

Sample ID: **N063771-001BMS**	SampType: **MS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **183613**			
Client ID: **ZZZZZZ**	Batch ID: **R183613**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**			SeqNo: **5747905**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	587.060	25	200.0	397.2	94.9	80	120				

Sample ID: **N063771-001BMSD**	SampType: **MSD**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **183613**			
Client ID: **ZZZZZZ**	Batch ID: **R183613**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**			SeqNo: **5747906**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	586.935	25	200.0	397.2	94.9	80	120	587.1	0.0213	20	

Sample ID: **N063771-003BDUP**	SampType: **DUP**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:			RunNo: **183613**			
Client ID: **ZZZZZZ**	Batch ID: **R183613**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**			SeqNo: **5747907**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	403.855	25						414.3	2.56	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **N063771-003BMS**	SampType: **MS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:						RunNo: **183613**		
Client ID: **ZZZZZZ**	Batch ID: **R183613**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**						SeqNo: **5747908**		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Sulfate	610.155	25	200.0	414.3	97.9	80	120					

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **MB-R183609_NO3**	SampType: **MBLK**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183609**
Client ID: **PBW**	Batch ID: **R183609**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**	SeqNo: **5747744**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **LCS-R183609_NO3**	SampType: **LCS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183609**
Client ID: **LCSW**	Batch ID: **R183609**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**	SeqNo: **5747745**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.181	0.050	1.250	0	94.4	90	110				

Sample ID: **N063771-002BMS**	SampType: **MS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183609**
Client ID: **ZZZZZZ**	Batch ID: **R183609**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**	SeqNo: **5747767**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	11.525	0.50	12.50	0	92.2	80	120				

Sample ID: **N063771-002BMSD**	SampType: **MSD**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183609**
Client ID: **ZZZZZZ**	Batch ID: **R183609**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**	SeqNo: **5747768**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.149	0.50	12.50	0	97.2	80	120	11.52	5.27	20	

Sample ID: **N063771-004BDUP**	SampType: **DUP**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183609**
Client ID: **ZZZZZZ**	Batch ID: **R183609**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**	SeqNo: **5747769**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.50						0	0	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **N063771-004BMS** SampType: **MS** TestCode: **300WLLNO3** Units: **mg/L** Prep Date: RunNo: **183609**
Client ID: **ZZZZZZ** Batch ID: **R183609** TestNo: **EPA 300.0** Analysis Date: **3/14/2024** SeqNo: **5747770**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	11.744	0.50	12.50	0	94.0	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-76-039-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 12:37:00 PM
Lab ID:	N063771-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240315A**	QC Batch: **107534**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Iron	84	13	20		µg/L	1	3/15/2024 03:03 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-76-156-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 1:09:00 PM
Lab ID:	N063771-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240315A**	QC Batch: **107534**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Iron	29	13	20		µg/L	1	3/15/2024 03:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-76-181-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 1:44:00 PM
Lab ID:	N063771-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240315A**	QC Batch: **107534**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Iron	93	13	20		µg/L	1	3/15/2024 04:09 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-76-218-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 2:22:00 PM
Lab ID:	N063771-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240315A**	QC Batch: **107534**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Iron	28	13	20		µg/L	1	3/15/2024 04:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-82-046-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 9:53:00 AM
Lab ID:	N063771-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240315A**	QC Batch: **107534**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Iron	330	13	20		µg/L	1	3/15/2024 04:19 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-82-168-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 10:35:00 AM
Lab ID:	N063771-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240315A**	QC Batch: **107534**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Iron	62	13	20		µg/L	1	3/15/2024 04:25 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-82-198-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 11:16:00 AM
Lab ID:	N063771-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240315A**	QC Batch: **107534**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Iron	24	13	20		µg/L	1	3/15/2024 04:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-77-046-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 1:28:00 PM
Lab ID:	N063771-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240315A**	QC Batch: **107534**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Iron	43	13	20		µg/L	1	3/15/2024 04:35 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-77-102-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 12:03:00 PM
Lab ID:	N063771-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240315A**	QC Batch: **107534**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Iron	22	13	20		µg/L	1	3/15/2024 04:41 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-77-158-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 1:01:00 PM
Lab ID:	N063771-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240315A**	QC Batch: **107534**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Iron	47	13	20		µg/L	1	3/15/2024 04:48 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-929-Q124
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 1:11:00 PM
Lab ID:	N063771-012	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240315A**	QC Batch: **107534**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Iron	44	13	20		µg/L	1	3/15/2024 04:54 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-77-187-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 2:25:00 PM
Lab ID:	N063771-013	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_240315A**	QC Batch: **107534**			PrepDate:	**3/14/2024**		Analyst: **DJ**
Iron	ND	13	20		µg/L	1	3/15/2024 05:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-81-043-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 10:23:00 AM
Lab ID:	N063771-014	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240315A**	QC Batch: **107534**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	3/15/2024 05:12 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-930-Q124
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 10:33:00 AM
Lab ID:	N063771-015	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240315A**	QC Batch: **107534**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	3/15/2024 05:18 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-81-098-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 11:01:00 AM
Lab ID:	N063771-016	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP2_240315A**	QC Batch: **107534**			PrepDate:	**3/14/2024**		Analyst: **DJ**
Iron	ND	13	20		µg/L	1	3/15/2024 05:24 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-31-060-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 3:50:00 PM
Lab ID:	N063771-017	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240315A**	QC Batch: **107534**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Iron	37	13	20		µg/L	1	3/15/2024 05:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-31-135-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 4:26:00 PM
Lab ID:	N063771-018	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A				**EPA 6010B**		
RunID: **NV00922-ICP2_240315A**	QC Batch: **107534**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Iron	ND	13	20		µg/L	1	3/15/2024 05:37 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-107534**	SampType: **MBLK**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/14/2024**	RunNo: **183634**
Client ID: **PBW**	Batch ID: **107534**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/15/2024**	SeqNo: **5748709**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS-107534**	SampType: **LCS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/14/2024**	RunNo: **183634**
Client ID: **LCSW**	Batch ID: **107534**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/15/2024**	SeqNo: **5748710**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	99.125	20	100.0	0	99.1	85	115				

Sample ID: **N063771-001C-MS**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/14/2024**	RunNo: **183634**
Client ID: **ZZZZZZ**	Batch ID: **107534**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/15/2024**	SeqNo: **5748714**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	235.572	20	100.0	84.21	151	75	125				S

Sample ID: **N063771-001C-MSD**	SampType: **MSD**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/14/2024**	RunNo: **183634**
Client ID: **ZZZZZZ**	Batch ID: **107534**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/15/2024**	SeqNo: **5748715**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	232.251	20	100.0	84.21	148	75	125	235.6	1.42	20	S

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N063771-001C-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **183634**
Client ID: **ZZZZZZ** Batch ID: **107534** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/15/2024** SeqNo: **5748713**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	140.829	20	100.0	84.21	56.6	80	120				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-76-039-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 12:37:00 PM
Lab ID:	N063771-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240315D**	QC Batch: **107535**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/15/2024 07:26 PM
Barium	110	0.083	1.0		µg/L	1	3/15/2024 07:26 PM
Manganese	21	0.026	0.50		µg/L	1	3/15/2024 07:26 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-76-156-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 1:09:00 PM
Lab ID:	N063771-002	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240315D**	QC Batch: **107535**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/15/2024 07:31 PM
Barium	36	0.083	1.0		µg/L	1	3/15/2024 07:31 PM
Manganese	68	0.026	0.50		µg/L	1	3/15/2024 07:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-76-181-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 1:44:00 PM
Lab ID:	N063771-003	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240315D**	QC Batch: **107535**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/15/2024 07:54 PM
Barium	33	0.083	1.0		µg/L	1	3/15/2024 07:54 PM
Manganese	44	0.026	0.50		µg/L	1	3/15/2024 07:54 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-76-218-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 2:22:00 PM
Lab ID:	N063771-004	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240315D**	QC Batch: **107535**			PrepDate:	**3/14/2024**		Analyst: **DJ**
Arsenic	4.2	0.050	0.10		µg/L	1	3/15/2024 08:12 PM
Barium	40	0.083	1.0		µg/L	1	3/15/2024 08:12 PM
Manganese	82	0.026	0.50		µg/L	1	3/15/2024 08:12 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-82-046-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 9:53:00 AM
Lab ID:	N063771-005	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240315D**	QC Batch: **107535**			PrepDate:	**3/14/2024**	Analyst: **DJ**	
Arsenic	10	0.050	0.10		µg/L	1	3/15/2024 08:17 PM
Barium	61	0.083	1.0		µg/L	1	3/15/2024 08:17 PM
Manganese	380	0.26	5.0		µg/L	10	3/19/2024 12:52 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-82-168-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 10:35:00 AM
Lab ID:	N063771-006	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240315D**	QC Batch: **107535**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/15/2024 08:22 PM
Barium	30	0.083	1.0		µg/L	1	3/15/2024 08:22 PM
Manganese	49	0.026	0.50		µg/L	1	3/15/2024 08:22 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-82-198-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 11:16:00 AM
Lab ID:	N063771-007	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240315D**	QC Batch: **107535**			PrepDate:	**3/14/2024**		Analyst: **DJ**
Arsenic	1.3	0.050	0.10		µg/L	1	3/15/2024 08:26 PM
Barium	37	0.083	1.0		µg/L	1	3/15/2024 08:26 PM
Manganese	23	0.026	0.50		µg/L	1	3/15/2024 08:26 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-77-046-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 1:28:00 PM
Lab ID:	N063771-009	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240315D**	QC Batch: **107535**			PrepDate:	**3/14/2024**		Analyst: **DJ**
Arsenic	0.42	0.050	0.10		µg/L	1	3/15/2024 08:31 PM
Barium	100	0.083	1.0		µg/L	1	3/15/2024 08:31 PM
Manganese	830	0.26	5.0		µg/L	10	3/15/2024 09:41 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-77-102-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 12:03:00 PM
Lab ID:	N063771-010	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240315D**	QC Batch: **107535**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/15/2024 08:36 PM
Barium	67	0.083	1.0		µg/L	1	3/15/2024 08:36 PM
Manganese	72	0.026	0.50		µg/L	1	3/15/2024 08:36 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-77-158-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 1:01:00 PM
Lab ID:	N063771-011	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240315D**	QC Batch: **107535**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/15/2024 08:40 PM
Barium	39	0.083	1.0		µg/L	1	3/15/2024 08:40 PM
Manganese	37	0.026	0.50		µg/L	1	3/15/2024 08:40 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-929-Q124
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 1:11:00 PM
Lab ID:	N063771-012	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240315D**	QC Batch: **107535**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/15/2024 08:45 PM
Barium	39	0.083	1.0		µg/L	1	3/15/2024 08:45 PM
Manganese	36	0.026	0.50		µg/L	1	3/15/2024 08:45 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
	DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-77-187-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 2:25:00 PM
Lab ID:	N063771-013	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240315D**	QC Batch: **107535**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Arsenic	3.2	0.050	0.10		µg/L	1	3/15/2024 08:50 PM
Barium	25	0.083	1.0		µg/L	1	3/15/2024 08:50 PM
Manganese	43	0.026	0.50		µg/L	1	3/15/2024 08:50 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-81-043-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 10:23:00 AM
Lab ID:	N063771-014	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240315D**	QC Batch: **107535**			PrepDate:	**3/14/2024**		Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/15/2024 09:08 PM
Barium	130	0.083	1.0		µg/L	1	3/15/2024 09:08 PM
Manganese	ND	0.026	0.50		µg/L	1	3/15/2024 09:08 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-930-Q124
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 10:33:00 AM
Lab ID:	N063771-015	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240315D**	QC Batch: **107535**			PrepDate:	**3/14/2024**		Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/15/2024 09:13 PM
Barium	130	0.083	1.0		µg/L	1	3/15/2024 09:13 PM
Manganese	ND	0.026	0.50		µg/L	1	3/15/2024 09:13 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-81-098-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 11:01:00 AM
Lab ID:	N063771-016	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240315D**	QC Batch: **107535**			PrepDate:	**3/14/2024**		Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/15/2024 09:17 PM
Barium	50	0.083	1.0		µg/L	1	3/15/2024 09:17 PM
Manganese	58	0.026	0.50		µg/L	1	3/15/2024 09:17 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-31-060-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 3:50:00 PM
Lab ID:	N063771-017	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A		**EPA 6020**				
RunID: **NV00922-ICP8_240315D**	QC Batch: **107535**			PrepDate:	**3/14/2024**	Analyst: **DJ**	
Arsenic	ND	0.050	0.10		µg/L	1	3/15/2024 09:22 PM
Barium	390	0.83	10		µg/L	10	3/15/2024 09:45 PM
Manganese	1200	0.26	5.0		µg/L	10	3/15/2024 09:45 PM

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range	
	H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit	
	S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified	
	DO	Surrogate Diluted Out			

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-31-135-0324
Lab Order:	N063771		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/13/2024 4:26:00 PM
Lab ID:	N063771-018	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
	EPA 3010A				**EPA 6020**		
RunID: **NV00922-ICP8_240315D**	QC Batch: **107535**				PrepDate:	**3/14/2024**	Analyst: **DJ**
Arsenic	ND	0.050	0.10		µg/L	1	3/15/2024 09:27 PM
Barium	33	0.083	1.0		µg/L	1	3/15/2024 09:27 PM
Manganese	15	0.026	0.50		µg/L	1	3/15/2024 09:27 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **MB-107535** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/14/2024** RunNo: **183672**
Client ID: **PBW** Batch ID: **107535** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/15/2024** SeqNo: **5751458**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **LCS-107535** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/14/2024** RunNo: **183672**
Client ID: **LCSW** Batch ID: **107535** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/15/2024** SeqNo: **5751459**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.334	0.10	10.00	0	103	85	115				
Manganese	106.432	0.50	100.0	0	106	85	115				

Sample ID: **N063771-002C-MS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/14/2024** RunNo: **183672**
Client ID: **ZZZZZZ** Batch ID: **107535** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/15/2024** SeqNo: **5751464**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	8.907	0.10	10.00	0	89.1	75	125				
Barium	47.183	1.0	10.00	36.30	109	75	125				
Manganese	161.770	0.50	100.0	67.66	94.1	75	125				

Sample ID: **N063771-002C-MSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/14/2024** RunNo: **183672**
Client ID: **ZZZZZZ** Batch ID: **107535** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/15/2024** SeqNo: **5751465**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	8.950	0.10	10.00	0	89.5	75	125	8.907	0.479	20	
Barium	47.489	1.0	10.00	36.30	112	75	125	47.18	0.648	20	
Manganese	162.487	0.50	100.0	67.66	94.8	75	125	161.8	0.442	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **LCS-107535** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/14/2024** RunNo: **183672**
Client ID: **LCSW** Batch ID: **107535** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/15/2024** SeqNo: **5751485**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	10.304	1.0	10.00	0	103	85	115				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SAMPLE RECEIVING ITEMS

ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

ARCUS02 C: 3/28/2024 12:00 AM
FOLDER R: 3/13/2024
N063771-020A 1 of 1

Page 1 of 1

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD R…
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	Excel EDD
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.moore@critigen.com	Address:	Geotracker
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com P.O.#	Labspec
Submitted By: Reggie Top		Phone: 949-727-1400, ext 200 Fax:	Others ✓
Title: Field Tech	Phone: 916-786-3302 Fax:		Specify: RWQCB
Signature: Date: 03/13/24	Sampled By: Reggie Top		Global ID:
Project Name: PG&E Topock - PCM	Signature: Date: 03/13/24		
Project Number: 30211191			

I hereby authorize ASSET Labs to perform the tests indicated below.

I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for

EDD R…			
Excel EDD		RTNE	
Geotracker		RWQCB	✓
Labspec		CalTrans	
Others	✓	LEVEL III	
Specify: RWQCB		LEVEL IV	
Global ID:		Regulatory	
		Specify State:	

	Y	N
1. Chilled	✓	
2. Headspace		✓
3. Container Intact	✓	
4. Seal Present		✓
5. IR number	3	
6. Method of Cooling:	IC	

Sample Temp: 9.3°C / 3.7°C

Courier: ASSET
Tracking No.: N/A

Matrix: Ground X | Sediment; Potable | Soil; NPDES | Other Solid; Surface

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly)	Nitrate, sulfate (EPA 300.0) (1 L poly)	Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Selenium, Molybdenum (500mL poly)	Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOA)	Ammonia as Nitrogen (SM4500NH3D); H2SO4 (1 L poly)	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 (125 mL poly)	Nitrate (EPA 300.0) (1 L poly)	(1 L poly)				Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063771-001	✓ MW-76-039-0324	3/13/2024	12:37		X	X	X											E	3	P	BNS	
2	-002	✓ MW-76-156-0324	3/13/2024	13:09		X	X	X											E	3	P	BNS	
3	-003	✓ MW-76-181-0324	3/13/2024	13:44		X	X	X											E	3	P	BNS	
4	-004	✓ MW-76-218-0324	3/13/2024	14:22		X	X	X											E	3	P	BNS	
5	-005	✓ MW-82-046-0324	3/13/2024	9:50		X	X	X											E	3	P	BNS	
6	-006	✓ MW-82-168-0324	3/13/2024	10:35		X	X	X											E	3	P	BNS	
7	-007	✓ MW-82-198-0324	3/13/2024	11:16		X	X	X											E	3	P	BNS	
8	-008	✓ EB-742-Q124	3/13/2024	14:30		X													E	1	P	BNS	
9	-009	✓ MW-77-046-0324	3/13/2024	13:28		X	X	X											E	3	P	BNS	
10	-010	✓ MW-77-102-0324	3/13/2024	12:03		X	X	X											E	3	P	BNS	
11	-011	✓ MW-77-158-0324	3/13/2024	13:01		X	X	X											E	3	P	BNS	
12	-012	✓ MW-929-Q124	3/13/2024	13:11		X	X	X											E	3	P	BNS	
13	-013	✓ MW-77-187-0324	3/13/2024	14:25		X	X	X											E	3	P	BNS	
14	-014	✓ MW-81-043-0324	3/13/2024	10:23		X	X	X											E	3	P	BNS	

Relinquished by (Signature and Printed Name): Reggie Top 03/13/24	Date/Time: 1756	Relinquished by (Signature and Printed Name):	Date/Time: 3/13/24 1750
Relinquished by (Signature and Printed Name): 3/13/24	Date/Time: 1932	Relinquished by (Signature and Printed Name): FEDEX 3/13/24	Date/Time: 1932
Relinquished by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:

Turn Around Time (TAT)

	A	< 24 Hrs or Same Day TAT
	B	= Next Workday
	C	= 2 Workdays
	D	= 3 Workdays
X	E	= Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks per bill/site sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. Per subcontract analysis, TAT and Surcharges will vary.

Preservatives:				Container Type:		
H=HCL	N=HNO_3	S=H_2SO_4	C=4°C	T=Tube	V=VOA	P=Pint
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$		J=Jar	B=Tedlar	G=Glass
Others/Specify:	B (NH4)2SO4/NH4OH			M=Metal	M=Metal	C=Can

White=Laboratory Copy
Yellow=Customer's Copy

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.moore@critigen.com	Address:	
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com	P.O.#
Submitted By: Reggie Tod	Phone: 916-786-3302 Fax:	Phone: 949-727-1400, ext 200	Fax:
Title: Field Tech			
Signature: Date: 03/13/24	Sampled By: Reggie Tod		
I hereby authorize ASSET Labs to perform the tests indicated below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally misleading the sample location, date or time of collection is considered fraud and may be grounds for		
Project Name: PG&E Topock - PCM	Signature: RB Date: 03/13/24		
Project Number: 30211191			

EDD Requirement		QA/QC	
Excel EDD		RTNE	
Geotracker		RWQCB	✓
Labspec		CalTrans	
Others	✓	LEVEL III	
Specify: RWQCB		LEVEL IV	
Global ID:		Regulatory	
		Specify State:	

Sample Receipt Condition

	Y	N
1. Chilled	✓	
2. Headspace		✓
3. Container Intact	✓	
4. Seal Present		✓
5. IR number	3	
6. Method of Cooling:	Ice	

Sample Temp: 3.7°C / 2.5°C

Courier: ASSET
Tracking No.: N/A

Matrix: Ground X | Sediment | Potable | Soil | NPDES | Other Solid | Surface

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly)	Nitrate, sulfate (EPA 300.0) (1 L poly)	Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Molybdenum, Selenium (500mL poly)	Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOA)	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 (125 mL poly)	Ammonia as Nitrogen (SM4500NH3); H2SO4 (1 L poly)	Nitrate, sulfate (EPA 300.0) (1 L poly)	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063771-015	✓ MW-930-Q124	3/13/2024	10:33		X	X	X							E	3	P	BNS	
2	-016	✓ MW-81-098-0324	3/13/2024	11:01		X	X	X							E	3	P	BNS	
3	-017	✓ MW-31-060-0324	3/13/2024	15:50		X	X	X							E	3	P	BNS	
4	-018	✓ MW-31-135-0324	3/13/2024	16:26		X	X	X							E	3	P	BNS	
5	-019	✓ EB-743-Q124	3/13/2024	16:35		X									E	1	P	BNS	
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			

Relinquished by (Signature and Printed Name): Reggie Tod Date/Time: 03/13/24 1756
Relinquished by (Signature and Printed Name): [signature] Date/Time: 3/13/24 1756
Relinquished by (Signature and Printed Name): [signature] 3/13/24 1932 Date/Time:
Relinquished by (Signature and Printed Name): FEDEX NIVEM Date/Time: 3/13/24 1932
Relinquished by (Signature and Printed Name): Date/Time:
Relinquished by (Signature and Printed Name): Date/Time:

Turn Around Time (TAT)

	A	< 24 Hrs or Same Day TAT
	B	= Next Workday
	C	= 2 Workdays
	D	= 3 Workdays
X	E	= Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days. surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35% 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are not 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:				Container Type:		
H=HCL	N=HNO_3	S=H_2SO_4	C=4°C	T=Tube	V=VOA	P=Pint
Z=$Zn(AC)_2$	O=NaOH	T=$Na_2S_2O_3$		J=Jar	B=Tedlar	G=Glass
Others/Specify:	B	(NH4)2SO4/NH4OH		M=Metal	M=Metal	C=Can

White=Laboratory Copy
Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	3/13/2024	Workorder:	N063771
Rep sample Temp (Deg C):	2.5/3.7	IR Gun ID:	3
Temp Blank:	☑ Yes ☐ No		
Carrier name:	ASSET		
Last 4 digits of Tracking No.:	NA	Packing Material Used:	None
Cooling process:	☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None		

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☐	No ☑	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☑	No ☐	NA ☐
Was Client notified?	Yes ☑	No ☐	NA ☐

Comments: See Correspondence.

For:

Checklist Completed By: FR YRodriguez

3/15/2024

for: MBC 03/18/2024

Reviewed By:

Subject: RE: PG&E Topock - PCM, 30211191 (ASSET Labs No. N063771 and N063772)
From: "Madsen, Laura" <Laura.Madsen@arcadis.com>
Date: 3/15/2024, 6:54 AM
To: Yoandra Rodriguez <yoandra@assetlaboratories.com>
CC: "jimuel.penafiel@assetlaboratoriesph.com" <jimuel.penafiel@assetlaboratoriesph.com>, "maryann.balilu@assetlaboratoriesph.com" <maryann.balilu@assetlaboratoriesph.com>

Hi Yoandra,

The correct time is 9:53

Thanks,

Laura

Laura Madsen PG

Project Geologist

Arcadis U.S., Inc.
M +1 303 653 5749

From: Yoandra Rodriguez <yoandra@assetlaboratories.com>
Sent: Thursday, March 14, 2024 8:21 PM
To: Madsen, Laura <Laura.Madsen@arcadis.com>
Cc: jimuel.penafiel@assetlaboratoriesph.com; maryann.balilu@assetlaboratoriesph.com
Subject: PG&E Topock - PCM, 30211191 (ASSET Labs No. N063771 and N063772)

Hi Laura,

Please confirm collection time for sample 5 on the attached COCs:

- COC: 0950

- Labels: 0953

--
Thanks,

Yoandra Rodriguez

Project Manager

Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 | F: 702.307.2691
California: 11110 Artesia Blvd., Ste. B, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436

ASSET LABORATORIES - Serving Clients with Passion and Professionalism

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ASSET Laboratories

WORK ORDER Summary

15-Mar-24

WorkOrder: N063771

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 3/13/2024 7:32 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063771-001A	MW-76-039-0324	3/13/2024 12:37:00 PM	3/28/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063771-001B			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063771-001C			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/28/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063771-002A	MW-76-156-0324	3/13/2024 1:09:00 PM	3/28/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063771-002B			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063771-002C			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/28/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063771-003A	MW-76-181-0324	3/13/2024 1:44:00 PM	3/28/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063771-003B			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063771-003C			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/28/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063771-004A	MW-76-218-0324	3/13/2024 2:22:00 PM	3/28/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW

WORK ORDER Summary

15-Mar-24

WorkOrder: N063771

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 3/13/2024 7:32 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063771-004B	MW-76-218-0324	3/13/2024 2:22:00 PM	3/28/2024	Groundwater	EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063771-004C			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/28/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063771-005A	MW-82-046-0324	3/13/2024 9:53:00 AM	3/28/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063771-005B			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063771-005C			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/28/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063771-006A	MW-82-168-0324	3/13/2024 10:35:00 AM	3/28/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063771-006B			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063771-006C			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/28/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063771-007A	MW-82-198-0324	3/13/2024 11:16:00 AM	3/28/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063771-007B			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW

WORK ORDER Summary

15-Mar-24

WorkOrder: N063771

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 3/13/2024 7:32 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063771-007B	MW-82-198-0324	3/13/2024 11:16:00 AM	3/28/2024	Groundwater	EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063771-007C			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/28/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063771-008A	EB-742-Q124	3/13/2024 2:30:00 PM	3/28/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063771-009A	MW-77-046-0324	3/13/2024 1:28:00 PM	3/28/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063771-009B			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063771-009C			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/28/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063771-010A	MW-77-102-0324	3/13/2024 12:03:00 PM	3/28/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063771-010B			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063771-010C			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/28/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063771-011A	MW-77-158-0324	3/13/2024 1:01:00 PM	3/28/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063771-011B			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW

WORK ORDER Summary

15-Mar-24

WorkOrder: N063771

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 3/13/2024 7:32 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063771-011B	MW-77-158-0324	3/13/2024 1:01:00 PM	3/28/2024	Groundwater	EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063771-011C			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/28/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063771-012A	MW-929-Q124	3/13/2024 1:11:00 PM	3/28/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063771-012B			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063771-012C			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/28/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063771-013A	MW-77-187-0324	3/13/2024 2:25:00 PM	3/28/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063771-013B			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063771-013C			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/28/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063771-014A	MW-81-043-0324	3/13/2024 10:23:00 AM	3/28/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063771-014B			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW

WORK ORDER Summary

15-Mar-24

WorkOrder: N063771

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 3/13/2024 7:32 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063771-014C	MW-81-043-0324	3/13/2024 10:23:00 AM	3/28/2024	Groundwater	EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/28/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063771-015A	MW-930-Q124	3/13/2024 10:33:00 AM	3/28/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063771-015B			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063771-015C			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/28/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063771-016A	MW-81-098-0324	3/13/2024 11:01:00 AM	3/28/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063771-016B			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063771-016C			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/28/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063771-017A	MW-31-060-0324	3/13/2024 3:50:00 PM	3/28/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063771-017B			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063771-017C			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW

WORK ORDER Summary

15-Mar-24

WorkOrder: N063771

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 3/13/2024 7:32 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063771-017C	MW-31-060-0324	3/13/2024 3:50:00 PM	3/28/2024	Groundwater	EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/28/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063771-018A	MW-31-135-0324	3/13/2024 4:26:00 PM	3/28/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063771-018B			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/28/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063771-018C			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/28/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/28/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063771-019A	EB-743-Q124	3/13/2024 4:35:00 PM	3/28/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063771-020A	FOLDER	3/28/2024	3/28/2024		Folder	Folder	☐	☐	☐	LAB
			3/28/2024		Folder	Level IV Report	☐	☐	☐	LAB
			3/28/2024		Folder	Folder	☐	☐	☐	LAB

List of Analysts

ASSET Laboratories Work Order: N063771

NAME	TEST METHOD
Ria Abes	EPA 218.6, EPA 300.0
Diane Jetajobe	EPA 6010B_Dissolved, EPA 6020_Dissolved

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R183616
ASSET #: N063771

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 3/14/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments: Dilution was necessary for some samples due to matrix interference.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer dMocha 3/22/2024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R183690
ASSET #: N063771

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 3/15/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments: Dilution was necessary for some samples due to matrix interference.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer: RBA Date: _____

2nd Level Reviewer: dRocha 3/24/2024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R183736
ASSET #: N063771

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 3/18/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments: Dilution was necessary for some samples due to matrix interference.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer: RBA Date: _____

2nd Level Reviewer: dMocha 3/24/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063771-001A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 0.9786 * 5$$

$$Cr^{+6}, \mu g/L = 4.8930$$

Reporting results in two significant figures,

$$\mathbf{Cr^{+6}, \mu g/L = 4.9}$$

Reviewed by:

dMocha 4/16/2024

ANALYSIS RUN LOG

INJECTION LOG: 240305A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	03/05/24 4:07 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/05/24 4:16 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	03/05/24 4:26 PM	Reported
12	MB-R183315	MBLK	1	Hexavalent Chromium	03/05/24 4:35 PM	Reported
13	LCS-R183315	LCS	1	Hexavalent Chromium	03/05/24 4:45 PM	Reported
14	MB-107277	MBLK	1	Hexavalent Chromium	03/05/24 4:54 PM	Reported
15	N063472-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:04 PM	Reported
16	N063472-001ADUP	DUP	1	Hexavalent Chromium	03/05/24 5:13 PM	Reported
17	N063535-006A	SAMP	1	Hexavalent Chromium	03/05/24 5:23 PM	Reported
18	N063535-006AMS	MS	1	Hexavalent Chromium	03/05/24 5:32 PM	Reported
19	N063535-006AMSD	MSD	1	Hexavalent Chromium	03/05/24 5:42 PM	Reported
20	N063534-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:51 PM	Reported
21	N063534-001AMS	MS	1	Hexavalent Chromium	03/05/24 6:00 PM	Reported
22	CCV-1	CCV1	1	Hexavalent Chromium	03/05/24 6:10 PM	Reported
23	CCB-1	CCB	1	Hexavalent Chromium	03/05/24 6:20 PM	Reported
24	N063534-002A	SAMP	1	Hexavalent Chromium	03/05/24 6:30 PM	Reported
25	N063534-002AMS	MS	1	Hexavalent Chromium	03/05/24 6:38 PM	Reported
26	N063534-003A	SAMP	1	Hexavalent Chromium	03/05/24 6:48 PM	Reported
27	N063534-003AMS	MS	1	Hexavalent Chromium	03/05/24 6:57 PM	Reported
28	N063535-001A	SAMP	1	Hexavalent Chromium	03/05/24 7:07 PM	Reported
29	N063535-002A	SAMP	1	Hexavalent Chromium	03/05/24 7:16 PM	Reported
30	N063535-003A	SAMP	1	Hexavalent Chromium	03/05/24 7:26 PM	Reported
31	N063535-004A	SAMP	1	Hexavalent Chromium	03/05/24 7:35 PM	Reported
32	N063535-005A	SAMP	1	Hexavalent Chromium	03/05/24 7:48 PM	Reported
33	CCV-2	CCV	1	Hexavalent Chromium	03/05/24 7:57 PM	Reported
34	CCB-2	CCB	1	Hexavalent Chromium	03/05/24 8:07 PM	Reported
35	N063535-007A	SAMP	1	Hexavalent Chromium	03/05/24 8:16 PM	Reported
36	N063535-008A	SAMP	1	Hexavalent Chromium	03/05/24 8:25 PM	Reported
37	CCV-3	CCV1	1	Hexavalent Chromium	03/05/24 8:35 PM	Reported
38	CCB-3	CCB	1	Hexavalent Chromium	03/05/24 8:46 PM	Reported
39	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 8:55 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240305A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**07/Mar/24 08:03:58**
No. of Injections:	**42**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	8	1000	Unknown		03/05/2024 16:07	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	9	1000	Unknown		03/05/2024 16:16	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	10	1000	Unknown		03/05/2024 16:26	Finished	ICB R240129C
12	MB-H2O,MBLK,1,	11	1000	Unknown		03/05/2024 16:35	Finished	MB R240129C
13	LCS-H2O,LCS,1,	12	1000	Unknown		03/05/2024 16:45	Finished	LCS @5ppb, IWST-231228B
14	MB-107277,MBLK,1,	13	1000	Unknown		03/05/2024 16:54	Finished	MB TCLP
15	N063472-001A,SAMP	14	1000	Unknown		03/05/2024 17:04	Finished	SAMP,10 mL
16	N063472-001ADUP,D	15	1000	Unknown		03/05/2024 17:13	Finished	REP,10 mL
17	N063535-006A,SAMP	16	1000	Unknown		03/05/2024 17:23	Finished	SAMP,10 mL
18	N063535-006AMS,MS	17	1000	Unknown		03/05/2024 17:32	Finished	MS (5ppb), IWST-231228B,10r
19	N063535-006AMSD,M	18	1000	Unknown		03/05/2024 17:42	Finished	MSD (5ppb), IWST-231228B,1
20	N063534-001A,SAMP	19	1000	Unknown		03/05/2024 17:51	Finished	SAMP,10 mL
21	N063534-001AMS,MS	20	1000	Unknown		03/05/2024 18:00	Finished	MS (1ppb), IWST-231228B,10r
22	CCV-1,CCV1,1,	21	1000	Unknown		03/05/2024 18:10	Finished	CCV @10ppb, IWST-231228A
23	CCB-1,CCB,1,	22	1000	Unknown		03/05/2024 18:20	Finished	CCB R240129C
24	N063534-002A,SAMP	23	1000	Unknown		03/05/2024 18:30	Finished	SAMP,10 mL
25	N063534-002AMS,MS	24	1000	Unknown		03/05/2024 18:38	Finished	MS (1ppb), IWST-231228B,10r
26	N063534-003A,SAMP	25	1000	Unknown		03/05/2024 18:48	Finished	SAMP,10 mL
27	N063534-003AMS,MS	26	1000	Unknown		03/05/2024 18:57	Finished	MS (1ppb), IWST-231228B,10r
28	N063535-001A,SAMP	27	1000	Unknown		03/05/2024 19:07	Finished	SAMP,10 mL
29	N063535-002A,SAMP	28	1000	Unknown		03/05/2024 19:16	Finished	SAMP,10 mL
30	N063535-003A,SAMP	29	1000	Unknown		03/05/2024 19:26	Finished	SAMP,10 mL
31	N063535-004A,SAMP	30	1000	Unknown		03/05/2024 19:35	Finished	SAMP,10 mL
32	N063535-005A,SAMP	31	1000	Unknown		03/05/2024 19:48	Finished	SAMP,10 mL
33	CCV-2,CCV,1,	32	1000	Unknown		03/05/2024 19:57	Finished	CCV @5ppb, IWST-231228A
34	CCB-2,CCB,1,	33	1000	Unknown		03/05/2024 20:07	Finished	CCB R240129C
35	N063535-007A,SAMP	34	1000	Unknown		03/05/2024 20:16	Finished	SAMP,10 mL
36	N063535-008A,SAMP	35	1000	Unknown		03/05/2024 20:25	Finished	SAMP,10 mL
37	CCV-3,CCV1,1,	37	1000	Unknown		03/05/2024 20:35	Finished	CCV @10ppb, IWST-231228A
38	CCB-3,CCB,1,	38	1000	Unknown		03/05/2024 20:46	Finished	CCB R240129C
39	BLANK	39	1000	Unknown		03/05/2024 20:55	Finished	BLANK
40	SHUTDOWN	40	1000	Unknown		03/05/2024 21:05	Finished	
41	Eluent: R240305B	41	1000	Unknown		n.a.	Finished	
42	PCR: R240305C	42	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240314A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/14/24 9:24 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/14/24 9:38 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/14/24 9:48 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/14/24 9:57 AM	Reported
13	MB-R183616	MBLK	1	Hexavalent Chromium	03/14/24 10:06 AM	Reported
14	LCS-R183616	LCS	1	Hexavalent Chromium	03/14/24 10:16 AM	Reported
15	N063735-005A	SAMP	5	Hexavalent Chromium	03/14/24 10:51 AM	Not Reported
16	N063735-006A	SAMP	5	Hexavalent Chromium	03/14/24 11:04 AM	Reported
17	N063735-005ADUP	DUP	5	Hexavalent Chromium	03/14/24 11:13 AM	Not Reported
18	N063735-006AMS	MS	5	Hexavalent Chromium	03/14/24 11:23 AM	Reported
19	N063734-001A	SAMP	1	Hexavalent Chromium	03/14/24 11:32 AM	Not Reported
20	N063734-001AMS	MS	1	Hexavalent Chromium	03/14/24 11:41 AM	Not Reported
21	N063735-006ADUP	DUP	5	Hexavalent Chromium	03/14/24 11:51 AM	Reported
22	N063735-006AMSD	MSD	5	Hexavalent Chromium	03/14/24 12:00 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/14/24 12:10 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/14/24 12:19 PM	Reported
25	N063734-002A	SAMP	1	Hexavalent Chromium	03/14/24 12:29 PM	Not Reported
26	N063734-002AMS	MS	1	Hexavalent Chromium	03/14/24 12:38 PM	Not Reported
27	N063735-004A	SAMP	1	Hexavalent Chromium	03/14/24 12:48 PM	Not Reported
28	N063735-004AMS	MS	1	Hexavalent Chromium	03/14/24 12:57 PM	Not Reported
29	N063735-007A	SAMP	1	Hexavalent Chromium	03/14/24 1:07 PM	Reported
30	N063735-007AMS	MS	1	Hexavalent Chromium	03/14/24 1:16 PM	Reported
31	N063735-009A	SAMP	1	Hexavalent Chromium	03/14/24 1:26 PM	Reported
32	N063735-009AMS	MS	1	Hexavalent Chromium	03/14/24 1:35 PM	Reported
33	N063735-010A	SAMP	1	Hexavalent Chromium	03/14/24 1:44 PM	Reported
34	N063735-010AMS	MS	1	Hexavalent Chromium	03/14/24 1:54 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	03/14/24 2:03 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	03/14/24 2:13 PM	Reported
37	N063735-011A	SAMP	1	Hexavalent Chromium	03/14/24 2:22 PM	Reported
38	N063735-011AMS	MS	1	Hexavalent Chromium	03/14/24 2:32 PM	Not Reported
39	N063735-012A	SAMP	1	Hexavalent Chromium	03/14/24 2:41 PM	Not Reported
40	N063735-012AMS	MS	1	Hexavalent Chromium	03/14/24 2:51 PM	Not Reported
41	N063735-013A	SAMP	1	Hexavalent Chromium	03/14/24 3:00 PM	~~Not~~ Reported
42	N063735-013AMS	MS	1	Hexavalent Chromium	03/14/24 3:24 PM	~~Not~~ Reported

INJECTION LOG: 240314A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063735-001A	SAMP	1	Hexavalent Chromium	03/14/24 3:34 PM	Reported
44	N063735-001AMS	MS	1	Hexavalent Chromium	03/14/24 3:44 PM	Reported
45	N063735-003A	SAMP	1	Hexavalent Chromium	03/14/24 3:53 PM	Reported
46	N063735-003AMS	MS	1	Hexavalent Chromium	03/14/24 4:03 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	03/14/24 4:12 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	03/14/24 4:22 PM	Reported
49	N063735-008A	SAMP	1	Hexavalent Chromium	03/14/24 4:34 PM	Reported
50	N063735-008AMS	MS	1	Hexavalent Chromium	03/14/24 4:43 PM	Reported
51	N063735-014A	SAMP	1	Hexavalent Chromium	03/14/24 4:53 PM	Reported
52	N063735-014AMS	MS	1	Hexavalent Chromium	03/14/24 5:02 PM	Reported
53	N063735-002A	SAMP	1	Hexavalent Chromium	03/14/24 5:12 PM	Not Reported
54	N063735-002AMS	MS	1	Hexavalent Chromium	03/14/24 5:21 PM	Not Reported
55	N063735-002A	SAMP	5	Hexavalent Chromium	03/14/24 5:31 PM	Reported
56	N063735-002AMS	MS	5	Hexavalent Chromium	03/14/24 5:40 PM	Reported
57	N063735-005A	SAMP	1	Hexavalent Chromium	03/14/24 5:49 PM	Reported
58	N063735-005AMS	MS	1	Hexavalent Chromium	03/14/24 5:59 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	03/14/24 6:08 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	03/14/24 6:18 PM	Reported
61	N063735-005AMS	MS	5	Hexavalent Chromium	03/14/24 6:27 PM	Not Reported
62	N063248-008A	SAMP	5	Hexavalent Chromium	03/14/24 6:37 PM	Not Reported
63	N063248-008AMS	MS	5	Hexavalent Chromium	03/14/24 6:46 PM	Not Reported
64	N063734-001A	SAMP	5	Hexavalent Chromium	03/14/24 6:56 PM	Reported
65	N063734-001AMS	MS	5	Hexavalent Chromium	03/14/24 7:05 PM	Reported
66	N063734-002A	SAMP	5	Hexavalent Chromium	03/14/24 7:15 PM	Reported
67	N063734-002AMS	MS	5	Hexavalent Chromium	03/14/24 7:24 PM	Reported
68	N063771-003A	SAMP	1	Hexavalent Chromium	03/14/24 7:34 PM	Not Reported
69	N063771-003AMS	MS	1	Hexavalent Chromium	03/14/24 7:43 PM	Not Reported
70	N063771-004A	SAMP	1	Hexavalent Chromium	03/14/24 7:52 PM	Not Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	03/14/24 8:02 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	03/14/24 8:11 PM	Reported
73	N063771-004AMS	MS	1	Hexavalent Chromium	03/14/24 8:21 PM	Not Reported
74	N063771-005A	SAMP	1	Hexavalent Chromium	03/14/24 8:30 PM	Not Reported
75	N063771-005AMS	MS	1	Hexavalent Chromium	03/14/24 8:40 PM	Not Reported
76	N063771-003A	SAMP	5	Hexavalent Chromium	03/14/24 8:49 PM	Reported
77	N063771-003AMS	MS	5	Hexavalent Chromium	03/14/24 8:59 PM	Reported
78	N063771-004A	SAMP	5	Hexavalent Chromium	03/14/24 9:08 PM	Reported
79	N063771-004AMS	MS	5	Hexavalent Chromium	03/14/24 9:18 PM	Reported
80	N063771-005A	SAMP	5	Hexavalent Chromium	03/14/24 9:27 PM	Reported
81	N063771-005AMS	MS	5	Hexavalent Chromium	03/14/24 9:36 PM	Reported
82	N063735-004A	SAMP	5	Hexavalent Chromium	03/14/24 9:46 PM	Reported
83	CCV-7	CCV	1	Hexavalent Chromium	03/14/24 9:55 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	03/14/24 10:05 PM	Reported

INJECTION LOG: 240314A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063735-004AMS	MS	5	Hexavalent Chromium	03/14/24 10:14 PM	Reported
86	N063735-011AMS	MS	1	Hexavalent Chromium	03/14/24 10:24 PM	Reported
87	N063735-013A	SAMP	5	Hexavalent Chromium	03/14/24 10:33 PM	Not Reported
88	N063735-013AMS	MS	5	Hexavalent Chromium	03/14/24 10:43 PM	Not Reported
89	CCV-8	CCV1	1	Hexavalent Chromium	03/14/24 10:52 PM	Reported
90	CCB-8	CCB	1	Hexavalent Chromium	03/14/24 11:02 PM	Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240314A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**14/Mar/24 23:32:19**
No. of Injections:	**93**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/14/2024 09:24	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/14/2024 09:38	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/14/2024 09:48	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/14/2024 09:57	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/14/2024 10:06	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/14/2024 10:16	Finished	LCS @5ppb, IWST-231228B
15	N063735-005A,SAMF	1	1000	Unknown		03/14/2024 10:51	Finished	SAMP,2>10 mL
16	N063735-006A,SAMF	2	1000	Unknown		03/14/2024 11:04	Finished	SAMP,2>10 mL
17	N063735-005ADUP,D	3	1000	Unknown		03/14/2024 11:13	Finished	DUP,2>10 mL
18	N063735-006AMS,MS	4	1000	Unknown		03/14/2024 11:23	Finished	MS (5ppb), IWST-231228B,2>1
19	N063734-001A,SAMF	5	1000	Unknown		03/14/2024 11:32	Finished	SAMP,10 mL
20	N063734-001AMS,MS	6	1000	Unknown		03/14/2024 11:41	Finished	MS (1ppb), IWST-231228B,10r
21	N063735-006ADUP,D	7	1000	Unknown		03/14/2024 11:51	Finished	DUP,2>10 mL
22	N063735-006AMSD,M	8	1000	Unknown		03/14/2024 12:00	Finished	MSD (5ppb), IWST-231228B,2
23	CCV-2,CCV1,1,	9	1000	Unknown		03/14/2024 12:10	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		03/14/2024 12:19	Finished	CCB R240129C
25	N063734-002A,SAMF	11	1000	Unknown		03/14/2024 12:29	Finished	SAMP,10 mL
26	N063734-002AMS,MS	12	1000	Unknown		03/14/2024 12:38	Finished	MS (1ppb), IWST-231228B,10r
27	N063735-004A,SAMF	13	1000	Unknown		03/14/2024 12:48	Finished	SAMP,10 mL
28	N063735-004AMS,MS	14	1000	Unknown		03/14/2024 12:57	Finished	MS (1ppb), IWST-231228B,10r
29	N063735-007A,SAMF	15	1000	Unknown		03/14/2024 13:07	Finished	SAMP,10 mL
30	N063735-007AMS,MS	16	1000	Unknown		03/14/2024 13:16	Finished	MS (1ppb), IWST-231228B,10r
31	N063735-009A,SAMF	17	1000	Unknown		03/14/2024 13:26	Finished	SAMP,10 mL
32	N063735-009AMS,MS	18	1000	Unknown		03/14/2024 13:35	Finished	MS (1ppb), IWST-231228B,10r
33	N063735-010A,SAMF	19	1000	Unknown		03/14/2024 13:44	Finished	SAMP,10 mL
34	N063735-010AMS,MS	20	1000	Unknown		03/14/2024 13:54	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	21	1000	Unknown		03/14/2024 14:03	Finished	CCV @10ppb, IWST-231228A
36	CCB-3,CCB,1,	22	1000	Unknown		03/14/2024 14:13	Finished	CCB R240129C
37	N063735-011A,SAMF	23	1000	Unknown		03/14/2024 14:22	Finished	SAMP,10 mL
38	N063735-011AMS,MS	24	1000	Unknown		03/14/2024 14:32	Finished	MS (1ppb), IWST-231228B,10r
39	N063735-012A,SAMF	25	1000	Unknown		03/14/2024 14:41	Finished	SAMP,10 mL
40	N063735-012AMS,MS	26	1000	Unknown		03/14/2024 14:51	Finished	MS (1ppb), IWST-231228B,10r
41	N063735-013A,SAMF	27	1000	Unknown		03/14/2024 15:00	Finished	SAMP,10 mL
42	N063735-013AMS,MS	1	1000	Unknown		03/14/2024 15:24	Finished	MS (1ppb), IWST-231228B,10r
43	N063735-001A,SAMF	2	1000	Unknown		03/14/2024 15:34	Finished	SAMP,10 mL
44	N063735-001AMS,MS	3	1000	Unknown		03/14/2024 15:44	Finished	MS (1ppb), IWST-231228B,10r
45	N063735-003A,SAMF	4	1000	Unknown		03/14/2024 15:53	Finished	SAMP,10 mL
46	N063735-003AMS,MS	5	1000	Unknown		03/14/2024 16:03	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	6	1000	Unknown		03/14/2024 16:12	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	7	1000	Unknown		03/14/2024 16:22	Finished	CCB R240129C
49	N063735-008A,SAMF	8	1000	Unknown		03/14/2024 16:34	Finished	SAMP,10 mL
50	N063735-008AMS,MS	9	1000	Unknown		03/14/2024 16:43	Finished	MS (1ppb), IWST-231228B,10r
51	N063735-014A,SAMF	10	1000	Unknown		03/14/2024 16:53	Finished	SAMP,10 mL
52	N063735-014AMS,MS	11	1000	Unknown		03/14/2024 17:02	Finished	MS (1ppb), IWST-231228B,10r
53	N063735-002A,SAMF	12	1000	Unknown		03/14/2024 17:12	Finished	SAMP,10 mL
54	N063735-002AMS,MS	13	1000	Unknown		03/14/2024 17:21	Finished	MS (1ppb), IWST-231228B,10r
55	N063735-002A,SAMF	14	1000	Unknown		03/14/2024 17:31	Finished	SAMP,2>10 mL
56	N063735-002AMS,MS	15	1000	Unknown		03/14/2024 17:40	Finished	MS (1ppb), IWST-231228B,2>1
57	N063735-005A,SAMF	16	1000	Unknown		03/14/2024 17:49	Finished	SAMP,10 mL
58	N063735-005AMS,MS	17	1000	Unknown		03/14/2024 17:59	Finished	MS (5ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	18	1000	Unknown		03/14/2024 18:08	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	19	1000	Unknown		03/14/2024 18:18	Finished	CCB R240129C

61	N063735-005AMS,MS	20	1000	Unknown		03/14/2024 18:27	Finished	MS (1ppb), IWST-231228B,2>1
62	N063248-008A,SAMP	21	1000	Unknown		03/14/2024 18:37	Finished	SAMP,2>10 mL
63	N063248-008AMS,MS	22	1000	Unknown		03/14/2024 18:46	Finished	MS (1ppb), IWST-231228B,2>1
64	N063734-001A,SAMP	23	1000	Unknown		03/14/2024 18:56	Finished	SAMP,2>10 mL
65	N063734-001AMS,MS	24	1000	Unknown		03/14/2024 19:05	Finished	MS (1ppb), IWST-231228B,2>1
66	N063734-002A,SAMP	25	1000	Unknown		03/14/2024 19:15	Finished	SAMP,2>10 mL
67	N063734-002AMS,MS	26	1000	Unknown		03/14/2024 19:24	Finished	MS (1ppb), IWST-231228B,2>1
68	N063771-003A,SAMP	27	1000	Unknown		03/14/2024 19:34	Finished	SAMP,10 mL
69	N063771-003AMS,MS	28	1000	Unknown		03/14/2024 19:43	Finished	MS (1ppb), IWST-231228B,10r
70	N063771-004A,SAMP	29	1000	Unknown		03/14/2024 19:52	Finished	SAMP,10 mL
71	CCV-6,CCV1,1,	30	1000	Unknown		03/14/2024 20:02	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	31	1000	Unknown		03/14/2024 20:11	Finished	CCB R240129C
73	N063771-004AMS,MS	32	1000	Unknown		03/14/2024 20:21	Finished	MS (1ppb), IWST-231228B,10r
74	N063771-005A,SAMP	33	1000	Unknown		03/14/2024 20:30	Finished	SAMP,10 mL
75	N063771-005AMS,MS	34	1000	Unknown		03/14/2024 20:40	Finished	MS (1ppb), IWST-231228B,10r
76	N063771-003A,SAMP	35	1000	Unknown		03/14/2024 20:49	Finished	SAMP,2>10 mL
77	N063771-003AMS,MS	36	1000	Unknown		03/14/2024 20:59	Finished	MS (1ppb), IWST-231228B,2>1
78	N063771-004A,SAMP	37	1000	Unknown		03/14/2024 21:08	Finished	SAMP,2>10 mL
79	N063771-004AMS,MS	38	1000	Unknown		03/14/2024 21:18	Finished	MS (1ppb), IWST-231228B,2>1
80	N063771-005A,SAMP	39	1000	Unknown		03/14/2024 21:27	Finished	SAMP,2>10 mL
81	N063771-005AMS,MS	40	1000	Unknown		03/14/2024 21:36	Finished	MS (1ppb), IWST-231228B,2>1
82	N063735-004A,SAMP	41	1000	Unknown		03/14/2024 21:46	Finished	SAMP,2>10 mL
83	CCV-7,CCV,1,	42	1000	Unknown		03/14/2024 21:55	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	43	1000	Unknown		03/14/2024 22:05	Finished	CCB R240129C
85	N0637735-004AMS,M	44	1000	Unknown		03/14/2024 22:14	Finished	MS (1ppb), IWST-231228B,2>1
86	N063735-011AMS,MS	45	1000	Unknown		03/14/2024 22:24	Finished	MS (5ppb), IWST-231228B,10r
87	N063735-013A,SAMP	46	1000	Unknown		03/14/2024 22:33	Finished	SAMP,2>10 mL
88	N063735-013AMS,MS	47	1000	Unknown		03/14/2024 22:43	Finished	MS (1ppb), IWST-231228B,2>1
89	CCV-8,CCV1,1,	48	1000	Unknown		03/14/2024 22:52	Finished	CCV @10ppb, IWST-231228A
90	CCB-8,CCB,1,	49	1000	Unknown		03/14/2024 23:02	Finished	CCB R240129C
91	SHUTDOWN	50	1000	Unknown		03/14/2024 23:11	Finished	
92	Eluent: R240313A	51	1000	Unknown		n.a.	Finished	
93	PCR: R240313B	CurrentVial	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240315A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/15/24 9:39 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/15/24 9:53 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/15/24 10:02 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/15/24 10:11 AM	Reported
13	MB-R183690	MBLK	1	Hexavalent Chromium	03/15/24 10:21 AM	Reported
14	LCS-R183690	LCS	1	Hexavalent Chromium	03/15/24 10:30 AM	Reported
15	N063735-012A	SAMP	1	Hexavalent Chromium	03/15/24 10:55 AM	Reported
16	N063735-012AMS	MS	1	Hexavalent Chromium	03/15/24 11:07 AM	Reported
17	N063771-001A	SAMP	1	Hexavalent Chromium	03/15/24 11:17 AM	Not Reported
18	N063771-001AMS	MS	1	Hexavalent Chromium	03/15/24 11:26 AM	Not Reported
19	N063771-001A	SAMP	5	Hexavalent Chromium	03/15/24 11:57 AM	Reported
20	N063771-001AMS	MS	5	Hexavalent Chromium	03/15/24 12:09 PM	Reported
21	N063771-002A	SAMP	1	Hexavalent Chromium	03/15/24 12:19 PM	Not Reported
22	N063771-002AMS	MS	1	Hexavalent Chromium	03/15/24 12:28 PM	Not Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/15/24 12:37 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/15/24 12:47 PM	Reported
25	N063771-014A	SAMP	5	Hexavalent Chromium	03/15/24 12:56 PM	Reported
26	N063771-014AMS	MS	5	Hexavalent Chromium	03/15/24 1:06 PM	Reported
27	N063771-015A	SAMP	5	Hexavalent Chromium	03/15/24 1:15 PM	Reported
28	N063771-015AMS	MS	5	Hexavalent Chromium	03/15/24 1:25 PM	Reported
29	N063771-018A	SAMP	5	Hexavalent Chromium	03/15/24 1:34 PM	Reported
30	N063771-018AMS	MS	5	Hexavalent Chromium	03/15/24 1:44 PM	Reported
31	N063771-010A	SAMP	1	Hexavalent Chromium	03/15/24 1:53 PM	Not Reported
32	N063771-010AMS	MS	1	Hexavalent Chromium	03/15/24 2:03 PM	Not Reported
33	N063771-014ADUP	DUP	5	Hexavalent Chromium	03/15/24 2:12 PM	Reported
34	N063771-014AMSD	MSD	5	Hexavalent Chromium	03/15/24 2:22 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	03/15/24 2:31 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	03/15/24 2:40 PM	Reported
37	N063771-012A	SAMP	1	Hexavalent Chromium	03/15/24 2:50 PM	Not Reported
38	N063771-012AMS	MS	1	Hexavalent Chromium	03/15/24 2:59 PM	Not Reported
39	N063771-013A	SAMP	1	Hexavalent Chromium	03/15/24 3:09 PM	~~Not~~ Reported
40	N063771-013AMS	MS	1	Hexavalent Chromium	03/15/24 3:18 PM	Not Reported
41	N063771-006A	SAMP	1	Hexavalent Chromium	03/15/24 3:28 PM	Not Reported
42	N063771-006AMS	MS	1	Hexavalent Chromium	03/15/24 3:37 PM	Not Reported

INJECTION LOG: 240315A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063771-007A	SAMP	1	Hexavalent Chromium	03/15/24 3:47 PM	Not Reported
44	N063771-007AMS	MS	1	Hexavalent Chromium	03/15/24 4:02 PM	Not Reported
45	N063771-009A	SAMP	1	Hexavalent Chromium	03/15/24 4:14 PM	Not Reported
46	N063771-009AMS	MS	1	Hexavalent Chromium	03/15/24 4:23 PM	Not Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	03/15/24 4:33 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	03/15/24 4:42 PM	Reported
49	N063771-008A	SAMP	1	Hexavalent Chromium	03/15/24 4:52 PM	Reported
50	N063771-008AMS	MS	1	Hexavalent Chromium	03/15/24 5:01 PM	Reported
51	N063771-016A	SAMP	1	Hexavalent Chromium	03/15/24 5:11 PM	Not Reported
52	N063771-016AMS	MS	1	Hexavalent Chromium	03/15/24 5:20 PM	Not Reported
53	N063771-017A	SAMP	1	Hexavalent Chromium	03/15/24 5:29 PM	Not Reported
54	N063771-017AMS	MS	1	Hexavalent Chromium	03/15/24 5:39 PM	Not Reported
55	N063771-019A	SAMP	1	Hexavalent Chromium	03/15/24 5:48 PM	Reported
56	N063771-019AMS	MS	1	Hexavalent Chromium	03/15/24 5:58 PM	Reported
57	N063771-011A	SAMP	1	Hexavalent Chromium	03/15/24 6:08 PM	Not Reported
58	N063771-011AMS	MS	1	Hexavalent Chromium	03/15/24 6:17 PM	Not Reported
59	CCV-5	CCV	1	Hexavalent Chromium	03/15/24 6:26 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	03/15/24 6:36 PM	Reported
61	N063771-002A	SAMP	5	Hexavalent Chromium	03/15/24 6:45 PM	Reported
62	N063771-002AMS	MS	5	Hexavalent Chromium	03/15/24 6:55 PM	Reported
63	N063812-006A	SAMP	1	Hexavalent Chromium	03/15/24 7:04 PM	Reported
64	N063812-006AMS	MS	1	Hexavalent Chromium	03/15/24 7:14 PM	Reported
65	N063812-008A	SAMP	1	Hexavalent Chromium	03/15/24 7:23 PM	Reported
66	N063812-008AMS	MS	1	Hexavalent Chromium	03/15/24 7:32 PM	Reported
67	N063812-017A	SAMP	1	Hexavalent Chromium	03/15/24 7:42 PM	Reported
68	N063812-017AMS	MS	1	Hexavalent Chromium	03/15/24 7:51 PM	Reported
69	N063771-010A	SAMP	5	Hexavalent Chromium	03/15/24 8:01 PM	Reported
70	N063771-010AMS	MS	5	Hexavalent Chromium	03/15/24 8:10 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	03/15/24 8:20 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	03/15/24 8:29 PM	Reported
73	N063771-012A	SAMP	5	Hexavalent Chromium	03/15/24 8:39 PM	Reported
74	N063771-012AMS	MS	5	Hexavalent Chromium	03/15/24 8:48 PM	Reported
75	N063771-013A	SAMP	5	Hexavalent Chromium	03/15/24 8:58 PM	Not Reported
76	N063771-013AMS	MS	5	Hexavalent Chromium	03/15/24 9:07 PM	Not Reported
77	N063771-006A	SAMP	5	Hexavalent Chromium	03/15/24 9:16 PM	Reported
78	N063771-006AMS	MS	5	Hexavalent Chromium	03/15/24 9:26 PM	Reported
79	N063771-007A	SAMP	5	Hexavalent Chromium	03/15/24 9:35 PM	Reported
80	N063771-007AMS	MS	5	Hexavalent Chromium	03/15/24 9:45 PM	Reported
81	N063771-009A	SAMP	5	Hexavalent Chromium	03/15/24 9:54 PM	Reported
82	N063771-009AMS	MS	5	Hexavalent Chromium	03/15/24 10:04 PM	Reported
83	CCV-7	CCV	1	Hexavalent Chromium	03/15/24 10:13 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	03/15/24 10:23 PM	Reported

INJECTION LOG: 240315A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	BLANK	BLANK	1	Hexavalent Chromium	03/15/24 10:32 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240315A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**15/Mar/24 23:02:54**
No. of Injections:	**88**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/15/2024 09:39	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/15/2024 09:53	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/15/2024 10:02	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/15/2024 10:11	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/15/2024 10:21	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/15/2024 10:30	Finished	LCS @5ppb, IWST-231228B
15	N063735-012A,SAMP	1	1000	Unknown		03/15/2024 10:55	Finished	SAMP,10 mL
16	N063735-012AMS,MS	2	1000	Unknown		03/15/2024 11:07	Finished	MS (1ppb), IWST-231228B,10r
17	N063771-001A,SAMP	3	1000	Unknown		03/15/2024 11:17	Finished	SAMP,10 mL
18	N063771-001AMS,MS	4	1000	Unknown		03/15/2024 11:26	Finished	MS (5ppb), IWST-231228B,10r
19	N063771-001A,SAMP	1	1000	Unknown		03/15/2024 11:57	Finished	SAMP,2>10 mL
20	N063771-001AMS,MS	2	1000	Unknown		03/15/2024 12:09	Finished	MS (1ppb), IWST-231228B,2>
21	N063771-002A,SAMP	3	1000	Unknown		03/15/2024 12:19	Finished	SAMP,10 mL
22	N063771-002AMS,MS	4	1000	Unknown		03/15/2024 12:28	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	5	1000	Unknown		03/15/2024 12:37	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	6	1000	Unknown		03/15/2024 12:47	Finished	CCB R240129C
25	N063771-014A,SAMP	7	1000	Unknown		03/15/2024 12:56	Finished	SAMP,2>10 mL
26	N063771-014AMS,MS	8	1000	Unknown		03/15/2024 13:06	Finished	MS (1ppb), IWST-231228B,2>
27	N063771-015A,SAMP	9	1000	Unknown		03/15/2024 13:15	Finished	SAMP,2>10 mL
28	N063771-015AMS,MS	10	1000	Unknown		03/15/2024 13:25	Finished	MS (1ppb), IWST-231228B,2>
29	N063771-018A,SAMP	11	1000	Unknown		03/15/2024 13:34	Finished	SAMP,2>10 mL
30	N063771-018AMS,MS	12	1000	Unknown		03/15/2024 13:44	Finished	MS (1ppb), IWST-231228B,2>
31	N063771-010A,SAMP	13	1000	Unknown		03/15/2024 13:53	Finished	SAMP,10 mL
32	N063771-010AMS,MS	14	1000	Unknown		03/15/2024 14:03	Finished	MS (1ppb), IWST-231228B,10r
33	N063771-014ADUP,D	15	1000	Unknown		03/15/2024 14:12	Finished	DUP,2>10 mL
34	N063771-014AMSD,M	16	1000	Unknown		03/15/2024 14:22	Finished	MSD (5ppb), IWST-231228B,2
35	CCV-3,CCV,1,	17	1000	Unknown		03/15/2024 14:31	Finished	CCV @10ppb, IWST-231228A
36	CCB-3,CCB,1,	18	1000	Unknown		03/15/2024 14:40	Finished	CCB R240129C
37	N063771-012A,SAMP	19	1000	Unknown		03/15/2024 14:50	Finished	SAMP,10 mL
38	N063771-012AMS,MS	20	1000	Unknown		03/15/2024 14:59	Finished	MS (1ppb), IWST-231228B,10r
39	N063771-013A,SAMP	21	1000	Unknown		03/15/2024 15:09	Finished	SAMP,10 mL
40	N063771-013AMS,MS	22	1000	Unknown		03/15/2024 15:18	Finished	MS (1ppb), IWST-231228B,10r
41	N063771-006A,SAMP	23	1000	Unknown		03/15/2024 15:28	Finished	SAMP,10 mL
42	N063771-006AMS,MS	24	1000	Unknown		03/15/2024 15:37	Finished	MS (1ppb), IWST-231228B,10r
43	N063771-007A,SAMP	25	1000	Unknown		03/15/2024 15:47	Finished	SAMP,10 mL
44	N063771-007AMS,MS	1	1000	Unknown		03/15/2024 16:02	Finished	MS (1ppb), IWST-231228B,10r
45	N063771-009A,SAMP	2	1000	Unknown		03/15/2024 16:14	Finished	SAMP,10 mL
46	N063771-009AMS,MS	3	1000	Unknown		03/15/2024 16:23	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	4	1000	Unknown		03/15/2024 16:33	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	5	1000	Unknown		03/15/2024 16:42	Finished	CCB R240129C
49	N063771-008A,SAMP	6	1000	Unknown		03/15/2024 16:52	Finished	SAMP,10 mL
50	N063771-008AMS,MS	7	1000	Unknown		03/15/2024 17:01	Finished	MS (1ppb), IWST-231228B,10r
51	N063771-016A,SAMP	8	1000	Unknown		03/15/2024 17:11	Finished	SAMP,10 mL
52	N063771-016AMS,MS	9	1000	Unknown		03/15/2024 17:20	Finished	MS (1ppb), IWST-231228B,10r
53	N063771-017A,SAMP	10	1000	Unknown		03/15/2024 17:29	Finished	SAMP,10 mL
54	N063771-017AMS,MS	11	1000	Unknown		03/15/2024 17:39	Finished	MS (1ppb), IWST-231228B,10r
55	N063771-019A,SAMP	12	1000	Unknown		03/15/2024 17:48	Finished	SAMP,10 mL
56	N063771-019AMS,MS	13	1000	Unknown		03/15/2024 17:58	Finished	MS (1ppb), IWST-231228B,10r
57	N063771-011A,SAMP	14	1000	Unknown		03/15/2024 18:08	Finished	SAMP,10 mL
58	N063771-011AMS,MS	15	1000	Unknown		03/15/2024 18:17	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	16	1000	Unknown		03/15/2024 18:26	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	17	1000	Unknown		03/15/2024 18:36	Finished	CCB R240129C

61	N063771-002A,SAMP	18	1000	Unknown		03/15/2024 18:45	Finished	SAMP,2>10 mL
62	N063771-002AMS,MS	19	1000	Unknown		03/15/2024 18:55	Finished	MS (1ppb), IWST-231228B,2>
63	N063812-006A,SAMP	20	1000	Unknown		03/15/2024 19:04	Finished	SAMP,10 mL
64	N063812-006AMS,MS	21	1000	Unknown		03/15/2024 19:14	Finished	MS (1ppb), IWST-231228B,10
65	N063812-008A,SAMP	22	1000	Unknown		03/15/2024 19:23	Finished	SAMP,10 mL
66	N063812-008AMS,MS	23	1000	Unknown		03/15/2024 19:32	Finished	MS (1ppb), IWST-231228B,10
67	N063812-017A,SAMP	24	1000	Unknown		03/15/2024 19:42	Finished	SAMP,10 mL
68	N063812-017AMS,MS	25	1000	Unknown		03/15/2024 19:51	Finished	MS (1ppb), IWST-231228B,10
69	N063771-010A,SAMP	26	1000	Unknown		03/15/2024 20:01	Finished	SAMP,2>10 mL
70	N063771-010AMS,MS	27	1000	Unknown		03/15/2024 20:10	Finished	MS (1ppb), IWST-231228B,2>
71	CCV-6,CCV1,1,	28	1000	Unknown		03/15/2024 20:20	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	29	1000	Unknown		03/15/2024 20:29	Finished	CCB R240129C
73	N063771-012A,SAMP	30	1000	Unknown		03/15/2024 20:39	Finished	SAMP,2>10 mL
74	N063771-012AMS,MS	31	1000	Unknown		03/15/2024 20:48	Finished	MS (1ppb), IWST-231228B,2>
75	N063771-013A,SAMP	32	1000	Unknown		03/15/2024 20:58	Finished	SAMP,2>10 mL
76	N063771-013AMS,MS	33	1000	Unknown		03/15/2024 21:07	Finished	MS (1ppb), IWST-231228B,2>
77	N063771-006A,SAMP	34	1000	Unknown		03/15/2024 21:16	Finished	SAMP,2>10 mL
78	N063771-006AMS,MS	35	1000	Unknown		03/15/2024 21:26	Finished	MS (1ppb), IWST-231228B,2>
79	N063771-007A,SAMP	36	1000	Unknown		03/15/2024 21:35	Finished	SAMP,2>10 mL
80	N063771-007AMS,MS	37	1000	Unknown		03/15/2024 21:45	Finished	MS (1ppb), IWST-231228B,2>
81	N063771-009A,SAMP	38	1000	Unknown		03/15/2024 21:54	Finished	SAMP,2>10 mL
82	N063771-009AMS,MS	39	1000	Unknown		03/15/2024 22:04	Finished	MS (1ppb), IWST-231228B,2>
83	CCV-7,CCV,1,	40	1000	Unknown		03/15/2024 22:13	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	41	1000	Unknown		03/15/2024 22:23	Finished	CCB R240129C
85	BLANK	42	1000	Unknown		03/15/2024 22:32	Finished	BLANK
86	SHUTDOWN	43	1000	Unknown		03/15/2024 22:42	Finished	
87	Eluent: R240313A	44	1000	Unknown		n.a.	Finished	
88	PCR: R240313B	45	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240318A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/18/24 11:42 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/18/24 11:57 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/18/24 12:06 PM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/18/24 12:15 PM	Reported
13	MB-R183736	MBLK	1	Hexavalent Chromium	03/18/24 12:25 PM	Reported
14	LCS-R183736	LCS	1	Hexavalent Chromium	03/18/24 12:34 PM	Reported
15	N063812-011A	SAMP	5	Hexavalent Chromium	03/18/24 12:44 PM	Reported
16	N063812-011AMS	MS	5	Hexavalent Chromium	03/18/24 12:53 PM	Reported
17	N063812-016A	SAMP	1	Hexavalent Chromium	03/18/24 1:03 PM	Not Reported
18	N063812-016AMS	MS	1	Hexavalent Chromium	03/18/24 1:12 PM	Not Reported
19	N063812-005A	SAMP	1	Hexavalent Chromium	03/18/24 1:22 PM	Not Reported
20	N063812-005AMS	MS	1	Hexavalent Chromium	03/18/24 1:31 PM	Not Reported
21	N063812-009A	SAMP	1	Hexavalent Chromium	03/18/24 1:41 PM	Reported
22	N063812-009AMS	MS	1	Hexavalent Chromium	03/18/24 1:50 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/18/24 1:59 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/18/24 2:09 PM	Reported
25	N063812-014A	SAMP	1	Hexavalent Chromium	03/18/24 2:18 PM	Reported
26	N063812-015A	SAMP	1	Hexavalent Chromium	03/18/24 2:28 PM	Reported
27	N063812-014AMS	MS	1	Hexavalent Chromium	03/18/24 2:37 PM	Not Reported
28	N063812-015AMS	MS	1	Hexavalent Chromium	03/18/24 2:47 PM	Reported
29	N063812-011ADUP	DUP	5	Hexavalent Chromium	03/18/24 2:59 PM	Reported
30	N063812-011AMSD	MSD	5	Hexavalent Chromium	03/18/24 3:10 PM	Reported
31	N063812-012A	SAMP	50	Hexavalent Chromium	03/18/24 3:20 PM	Not Reported
32	N063812-012AMS	MS	50	Hexavalent Chromium	03/18/24 3:29 PM	Not Reported
33	N063812-013A	SAMP	5	Hexavalent Chromium	03/18/24 3:39 PM	Not Reported
34	N063812-013AMS	MS	5	Hexavalent Chromium	03/18/24 3:48 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	03/18/24 3:57 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	03/18/24 4:07 PM	Reported
37	N063812-001A	SAMP	100	Hexavalent Chromium	03/18/24 4:16 PM	Reported
38	N063812-001AMS	MS	100	Hexavalent Chromium	03/18/24 4:26 PM	Reported
39	N063812-002A	SAMP	500	Hexavalent Chromium	03/18/24 4:35 PM	Reported
40	N063812-002AMS	MS	500	Hexavalent Chromium	03/18/24 4:45 PM	Reported
41	N063812-003A	SAMP	500	Hexavalent Chromium	03/18/24 4:54 PM	Reported
42	N063812-003AMS	MS	500	Hexavalent Chromium	03/18/24 5:04 PM	Reported

INJECTION LOG: 240318A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063812-004A	SAMP	500	Hexavalent Chromium	03/18/24 5:13 PM	Reported
44	N063812-004AMS	MS	500	Hexavalent Chromium	03/18/24 5:23 PM	Reported
45	N063812-007A	SAMP	1	Hexavalent Chromium	03/18/24 5:32 PM	Reported
46	N063812-007AMS	MS	1	Hexavalent Chromium	03/18/24 5:42 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	03/18/24 5:51 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	03/18/24 6:00 PM	Reported
49	N063812-007A	SAMP	5	Hexavalent Chromium	03/18/24 6:10 PM	Not Reported
50	N063812-007AMS	MS	5	Hexavalent Chromium	03/18/24 6:19 PM	Not Reported
51	N063771-016A	SAMP	5	Hexavalent Chromium	03/18/24 6:29 PM	Reported
52	N063771-016AMS	MS	5	Hexavalent Chromium	03/18/24 6:41 PM	Reported
53	N063771-011A	SAMP	5	Hexavalent Chromium	03/18/24 6:51 PM	Reported
54	N063771-011AMS	MS	5	Hexavalent Chromium	03/18/24 7:01 PM	Reported
55	N063812-016A	SAMP	5	Hexavalent Chromium	03/18/24 7:10 PM	Reported
56	N063812-016AMS	MS	5	Hexavalent Chromium	03/18/24 7:19 PM	Reported
57	N063812-016AMSD	MSD	5	Hexavalent Chromium	03/18/24 7:29 PM	Reported
58	N063771-016ADUP	DUP	5	Hexavalent Chromium	03/18/24 7:38 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	03/18/24 7:48 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	03/18/24 7:57 PM	Reported
61	N063812-005A	SAMP	5	Hexavalent Chromium	03/18/24 8:07 PM	Reported
62	N063812-005AMS	MS	5	Hexavalent Chromium	03/18/24 8:16 PM	Reported
63	N063812-009A	SAMP	5	Hexavalent Chromium	03/18/24 8:25 PM	Not Reported
64	N063812-009AMS	MS	5	Hexavalent Chromium	03/18/24 8:35 PM	Not Reported
65	N063812-010A	SAMP	100	Hexavalent Chromium	03/18/24 8:44 PM	Reported
66	N063812-010AMS	MS	100	Hexavalent Chromium	03/18/24 8:54 PM	Reported
67	N063812-014A	SAMP	5	Hexavalent Chromium	03/18/24 9:03 PM	Not Reported
68	N063812-014AMS	MS	5	Hexavalent Chromium	03/18/24 9:13 PM	Not Reported
69	N063771-017A	SAMP	5	Hexavalent Chromium	03/18/24 9:22 PM	Reported
70	N063771-017AMS	MS	5	Hexavalent Chromium	03/18/24 9:32 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	03/18/24 9:41 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	03/18/24 9:51 PM	Reported
73	N063812-014AMS	MS	1	Hexavalent Chromium	03/18/24 10:00 PM	Reported
74	N063812-011ADUP	DUP	5	Hexavalent Chromium	03/18/24 10:10 PM	Not Reported
75	CCV-7	CCV	1	Hexavalent Chromium	03/18/24 10:19 PM	Reported
76	CCB-7	CCB	1	Hexavalent Chromium	03/18/24 10:28 PM	Reported
77	BLANK	BLANK	1	Hexavalent Chromium	03/18/24 10:38 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240318A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**18/Mar/24 23:08:39**
No. of Injections:	**80**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/18/2024 11:42	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/18/2024 11:57	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/18/2024 12:06	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/18/2024 12:15	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/18/2024 12:25	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/18/2024 12:34	Finished	LCS @5ppb, IWST-231228B
15	N063812-011A,SAMP	7	1000	Unknown		03/18/2024 12:44	Finished	SAMP,2>10 mL
16	N063812-011AMS,MS	8	1000	Unknown		03/18/2024 12:53	Finished	MS (5ppb), IWST-231228B,2>1
17	N063812-016A,SAMP	9	1000	Unknown		03/18/2024 13:03	Finished	SAMP,10 mL
18	N063812-016AMS,MS	10	1000	Unknown		03/18/2024 13:12	Finished	MS (1ppb), IWST-231228B,10r
19	N063812-005A,SAMP	11	1000	Unknown		03/18/2024 13:22	Finished	SAMP,10 mL
20	N063812-005AMS,MS	12	1000	Unknown		03/18/2024 13:31	Finished	MS (1ppb), IWST-231228B,10r
21	N063812-009A,SAMP	13	1000	Unknown		03/18/2024 13:41	Finished	SAMP,10 mL
22	N063812-009AMS,MS	14	1000	Unknown		03/18/2024 13:50	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	15	1000	Unknown		03/18/2024 13:59	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		03/18/2024 14:09	Finished	CCB R240129C
25	N063812-014A,SAMP	17	1000	Unknown		03/18/2024 14:18	Finished	SAMP,10 mL
26	N063812-015A,SAMP	18	1000	Unknown		03/18/2024 14:28	Finished	SAMP,10 mL
27	N063812-014AMS,MS	19	1000	Unknown		03/18/2024 14:37	Finished	MS (5ppb), IWST-231228B,10r
28	N063812-015AMS,MS	20	1000	Unknown		03/18/2024 14:47	Finished	MS (1ppb), IWST-231228B,10r
29	N063812-011ADUP,D	1	1000	Unknown		03/18/2024 14:59	Finished	DUP,2>10 mL
30	N063812-011AMSD,M	2	1000	Unknown		03/18/2024 15:10	Finished	MS (5ppb), IWST-231228B,2>1
31	N063812-012A,SAMP	3	1000	Unknown		03/18/2024 15:20	Finished	SAMP,0.2>10 mL
32	N063812-012AMS,MS	4	1000	Unknown		03/18/2024 15:29	Finished	MS (5ppb), IWST-231228B,0.2
33	N063812-013A,SAMP	5	1000	Unknown		03/18/2024 15:39	Finished	SAMP,2>10 mL
34	N063812-013AMS,MS	6	1000	Unknown		03/18/2024 15:48	Finished	MS (5ppb), IWST-231228B,2>1
35	CCV-3,CCV,1,	7	1000	Unknown		03/18/2024 15:57	Finished	CCV @10ppb, IWST-231228A
36	CCB-3,CCB,1,	8	1000	Unknown		03/18/2024 16:07	Finished	CCB R240129C
37	N063812-001A,SAMP	9	1000	Unknown		03/18/2024 16:16	Finished	SAMP,0.1>10 mL
38	N063812-001AMS,MS	10	1000	Unknown		03/18/2024 16:26	Finished	MS (5ppb), IWST-231228B,0.1
39	N063812-002A,SAMP	11	1000	Unknown		03/18/2024 16:35	Finished	SAMP,0.02>10 mL
40	N063812-002AMS,MS	12	1000	Unknown		03/18/2024 16:45	Finished	MS (5ppb), IWST-231228B,0.0
41	N063812-003A,SAMP	13	1000	Unknown		03/18/2024 16:54	Finished	SAMP,0.02>10 mL
42	N063812-003AMS,MS	14	1000	Unknown		03/18/2024 17:04	Finished	MS (5ppb), IWST-231228B,0.0
43	N063812-004A,SAMP	15	1000	Unknown		03/18/2024 17:13	Finished	SAMP,0.02>10 mL
44	N063812-004AMS,MS	16	1000	Unknown		03/18/2024 17:23	Finished	MS (5ppb), IWST-231228B,0.0
45	N063812-007A,SAMP	17	1000	Unknown		03/18/2024 17:32	Finished	SAMP,10 mL
46	N063812-007AMS,MS	18	1000	Unknown		03/18/2024 17:42	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	19	1000	Unknown		03/18/2024 17:51	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	20	1000	Unknown		03/18/2024 18:00	Finished	CCB R240129C
49	N063812-007A,SAMP	21	1000	Unknown		03/18/2024 18:10	Finished	SAMP,2>10 mL
50	N063812-007AMS,MS	22	1000	Unknown		03/18/2024 18:19	Finished	MS (1ppb), IWST-231228B,2>1
51	N063771-016A,SAMP	23	1000	Unknown		03/18/2024 18:29	Finished	SAMP,2>10 mL
52	N063771-016AMS,MS	24	1000	Unknown		03/18/2024 18:41	Finished	MS (5ppb), IWST-231228B,2>1
53	N063771-011A,SAMP	25	1000	Unknown		03/18/2024 18:51	Finished	SAMP,2>10 mL
54	N063771-011AMS,MS	26	1000	Unknown		03/18/2024 19:01	Finished	MS (1ppb), IWST-231228B,2>1
55	N063812-016A,SAMP	27	1000	Unknown		03/18/2024 19:10	Finished	SAMP,2>10 mL
56	N063812-016AMS,MS	28	1000	Unknown		03/18/2024 19:19	Finished	MS (1ppb), IWST-231228B,2>1
57	N063812-016AMSD,M	29	1000	Unknown		03/18/2024 19:29	Finished	MSD (1ppb), IWST-231228B,2>
58	N063771-016ADUP,D	30	1000	Unknown		03/18/2024 19:38	Finished	DUP,2>10 mL
59	CCV-5,CCV,1,	31	1000	Unknown		03/18/2024 19:48	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	32	1000	Unknown		03/18/2024 19:57	Finished	CCB R240129C

61	N063812-005A,SAMP	33	1000	Unknown		03/18/2024 20:07	Finished	SAMP,2>10 mL
62	N063812-005AMS,MS	34	1000	Unknown		03/18/2024 20:16	Finished	MS (1ppb), IWST-231228B,2>
63	N063812-009A,SAMP	35	1000	Unknown		03/18/2024 20:25	Finished	SAMP,2>10 mL
64	N063812-009AMS,MS	36	1000	Unknown		03/18/2024 20:35	Finished	MS (1ppb), IWST-231228B,2>
65	N063812-010A,SAMP	37	1000	Unknown		03/18/2024 20:44	Finished	SAMP,0.1>10 mL
66	N063812-010AMS,MS	38	1000	Unknown		03/18/2024 20:54	Finished	MS (5ppb), IWST-231228B,0.1
67	N063812-014A,SAMP	39	1000	Unknown		03/18/2024 21:03	Finished	SAMP,2>10 mL
68	N063812-014AMS,MS	40	1000	Unknown		03/18/2024 21:13	Finished	MS (1ppb), IWST-231228B,2>
69	N063771-017A,SAMP	41	1000	Unknown		03/18/2024 21:22	Finished	SAMP,2>10 mL
70	N063771-017AMS,MS	42	1000	Unknown		03/18/2024 21:32	Finished	MS (1ppb), IWST-231228B,2>
71	CCV-6,CCV1,1,	43	1000	Unknown		03/18/2024 21:41	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	44	1000	Unknown		03/18/2024 21:51	Finished	CCB R240129C
73	N063812-014AMS,MS	45	1000	Unknown		03/18/2024 22:00	Finished	MS (1ppb), IWST-231228B,10
74	N063812-011ADUP,D	46	1000	Unknown		03/18/2024 22:10	Finished	DUP,2>10 mL
75	CCV-7,CCV,1,	47	1000	Unknown		03/18/2024 22:19	Finished	CCV @5ppb, IWST-231228A
76	CCB-7,CCB,1,	48	1000	Unknown		03/18/2024 22:28	Finished	CCB R240129C
77	BLANK	49	1000	Unknown		03/18/2024 22:38	Finished	BLANK
78	SHUTDOWN	50	1000	Unknown		03/18/2024 22:47	Finished	
79	Eluent: R240318A	51	1000	Unknown		n.a.	Finished	
80	PCR: R240318B	CurrentVial	1000	Unknown		n.a.	Finished	

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 3/14/24
Time Prepared: 0956H
Prepared By: NA

Reagent ID:
Sulfuric Acid: 15405
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: R240313A
NH4OH + NH4SO4 buffer: R240124C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	406776-1A	9.48	-	~250mL	~250mL		
2)	2A	9.46	-				
3)	3A	9.37	-				
4)	4A	9.34	-				
5)	5A	9.69	-				
6)							
7)							
8)							
9)							
10)							
11)							
12)							
13)							
14)							
15)							

Sample Preparation

Date Prepared: 3/14/24
Time Prepared: 0928H
Prepared By: m

Reagent ID:
Sulfuric Acid: 15405
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: R240313A
NH4OH + NH4SO4 buffer: R240124C

for NaOH: R231224C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	406771-1A	9.38	-	~250mL	~250mL		
2)	2A	9.30	-				
3)	3A	8.84	9.59			+6	
4)	4A	8.70	9.54			+6	
5)	5A	8.64	9.62			+7	
6)	6A	9.44	-				
7)	7A	9.46	-				
8)	8A	9.34	-				
9)	9A	9.40	-				
10)	10A	9.35	-				
11)	11A	9.32	-				
12)	12A	9.36	-				
13)	13A	9.47	-				
14)	14A	9.39	-				
15)	15A	9.41	-				
	16A	9.77	-				

Logbook No. 24

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 7/14/24
Time Prepared: 1624H
Prepared By: NA

Reagent ID:
Sulfuric Acid: 15405
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: N240717A | N240717A
NH4OH + NH4SO4 buffer: N240719C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW377 17A	9.32	-	~500ml	~200 ml		
2)	18A	9.34	-				
3)	19A	9.68	-				
4)							
5)							
6)							
7)							
8)							
9)							
10)							
11)							
12)							
13)							
14)							
15)							

Sample Preparation

Date Prepared: 7/15/24
Time Prepared: 0934H
Prepared By: NA

Reagent ID:
Sulfuric Acid: 15405
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: N240717A | N240 3158
NH4OH + NH4SO4 buffer: N240719C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW382 - 1A	9.52	-	~500ml	~200ml		
2)	2A	9.37	-				
3)	3A	9.36	-				
4)	4A	9.49	-				
5)	5A	9.44	-				
6)	6A	9.69	-				
7)	7A	9.70	-				
8)	8A	9.69	-				
9)	9A	9.47	-				
10)	10A	9.48	-				
11)	11A	9.37	-				
12)	12A	9.34	-				
13)	13A	9.36	-				
14)	14A	9.48	-				
15)	15A	9.45	-				
	16A	9.42	-				
	17A	9.67	-				

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 3/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0412	0.2259	1.0754	2.1395	3.1834	4.2546	1.0000
Measured, in ug/L	0.193700	1.061600	5.052800	10.052000	14.957000	19.990000	
Relative Error (%RE)	-3.2%		1.1%				

	Stock	Working
Standard Concentration:	1,000,000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ICV**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5748062**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.874	0.20	5.000	0	97.5	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5748063**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.20	0.2000	0	109	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCV**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748065**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.998	0.20	5.000	0	100	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748066**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.203	0.20	0.2000	0	102	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748074**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.186	0.20	10.00	0	102	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCV**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748082**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.002	0.20	5.000	0	100	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748091**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.318	0.20	10.00	0	103	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCV**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748101**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.953	0.20	5.000	0	99.0	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748107**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.384	0.20	10.00	0	104	95	105				

Sample ID: **CCV-7**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCV**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748116**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.065	0.20	5.000	0	101	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-8**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ZZZZZZ**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748122**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.270	0.20	10.00	0	103	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ICV**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5752654**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.874	0.20	5.000	0	97.5	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5752655**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.20	0.2000	0	109	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCV**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752657**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.058	0.20	5.000	0	101	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752658**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.196	0.20	0.2000	0	97.9	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752666**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.226	0.20	10.00	0	102	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCV**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752676**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.039	0.20	5.000	0	101	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752678**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.226	0.20	10.00	0	102	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCV**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752684**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.037	0.20	5.000	0	101	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752696**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.228	0.20	10.00	0	102	95	105				

Sample ID: **CCV-7**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCV**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752708**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.046	0.20	5.000	0	101	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ICV**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5756150**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.874	0.20	5.000	0	97.5	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5756151**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.20	0.2000	0	109	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCV**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756153**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.973	0.20	5.000	0	99.5	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756154**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.200	0.20	0.2000	0	99.8	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756162**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.995	0.20	10.00	0	99.9	95	105				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCV**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756169**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.997	0.20	5.000	0	99.9	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756181**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.028	0.20	10.00	0	100	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCV**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756191**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.120	0.20	5.000	0	102	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756199**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.446	0.20	10.00	0	104	95	105				

Sample ID: **CCV-7**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCV**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756202**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.081	0.20	5.000	0	102	95	105				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **ICB**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5748064**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCB**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748067**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCB**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748075**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCB**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748083**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCB**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748092**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCB**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748102**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCB**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748108**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-7**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCB**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748117**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-8**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183616**
Client ID: **CCB**	Batch ID: **R183616**	TestNo: **EPA 218.6**		Analysis Date: **3/14/2024**	SeqNo: **5748123**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ICB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5752656**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752659**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752667**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752677**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752679**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752685**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752697**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-7**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752709**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ICB**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5756152**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCB**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756155**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCB**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756163**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCB**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756170**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCB**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756182**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCB**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756192**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCB**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756200**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-7**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCB**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756203**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/14/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	4.006	
CCV-2	3.998	
CCV-3	3.998	
CCV-4	3.998	
CCV-5	3.998	
CCV-6	3.990	
CCV-7	3.990	
CCV-8	3.990	
Average	3.996	
Actual RT Window	3.916 - 4.076	
Applied RT Window	3.796 - 4.196	
MB-R183616	N.A.	N.A.
LCS-R183616	4.006	PASS
N063735-005A	3.981	PASS
N063735-006A	3.965	PASS
N063735-005ADUP	3.973	PASS
N063735-006AMS	3.965	PASS
N063734-001A	3.815	PASS
N063734-001AMS	3.798	PASS
N063735-006ADUP	3.965	PASS
N063735-006AMSD	3.965	PASS
N063734-002A	3.798	PASS
N063735-004A	3.798	PASS
N063735-007A	3.973	PASS
N063735-007AMS	3.981	PASS
N063735-009A	N.A.	N.A.
N063735-009AMS	3.981	PASS
N063735-010A	N.A.	N.A.
N063735-010AMS	3.973	PASS
N063735-011A	3.915	PASS
N063735-011AMS	3.906	PASS

Reviewed by:

dRocha 4/16/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/14/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	4.006	
CCV-2	3.998	
CCV-3	3.998	
CCV-4	3.998	
CCV-5	3.998	
CCV-6	3.990	
CCV-7	3.990	
CCV-8	3.990	
Average	3.996	
Actual RT Window	3.916 - 4.076	
Applied RT Window	3.796 - 4.196	
N063735-012A	N.A.	N.A.
N063735-012AMS	3.956	PASS
N063735-013A	3.806	PASS
N063735-013AMS	3.798	PASS
N063735-001A	N.A.	N.A.
N063735-001AMS	3.831	PASS
N063735-003A	3.973	PASS
N063735-003AMS	3.990	PASS
N063735-008A	N.A.	N.A.
N063735-008AMS	3.990	PASS
N063735-014A	N.A.	N.A.
N063735-014AMS	3.990	PASS
N063735-002A	N.A.	N.A.
N063735-002AMS	3.798	PASS
N063735-002A	N.A.	N.A.
N063735-002AMS	3.965	PASS
N063735-005A	3.831	PASS
N063735-005AMS	3.823	PASS
N063735-005AMS	3.965	PASS
N063248-008A	N.A.	N.A.

Reviewed by:

dMocha 4/16/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/14/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	4.006	
CCV-2	3.998	
CCV-3	3.998	
CCV-4	3.998	
CCV-5	3.998	
CCV-6	3.990	
CCV-7	3.990	
CCV-8	3.990	
Average	3.996	
Actual RT Window	3.916 - 4.076	
Applied RT Window	3.796 - 4.196	
N063248-008AMS	3.923	PASS
N063734-001A	N.A.	N.A.
N063734-001AMS	3.956	PASS
N063734-002A	N.A.	N.A.
N063734-002AMS	3.956	PASS
N063771-003A	N.A.	N.A.
N063771-004A	3.806	PASS
N063771-005A	N.A.	N.A.
N063771-003A	N.A.	N.A.
N063771-003AMS	3.956	PASS
N063771-004A	N.A.	N.A.
N063771-004AMS	3.948	PASS
N063771-005A	N.A.	N.A.
N063771-005AMS	3.940	PASS
N063735-004A	3.956	PASS
N063735-004AMS	3.956	PASS
N063735-011AMS	3.906	PASS
N063735-013A	N.A.	N.A.
N063735-013AMS	3.956	PASS

Reviewed by:

dMocha 4/16/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/15/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	3.998	
CCV-2	3.990	
CCV-3	3.990	
CCV-4	3.990	
CCV-5	3.981	
CCV-6	3.981	
CCV-7	3.990	

Average	3.989
Actual RT Window	3.909 - 4.069
Applied RT Window	3.789 - 4.189

MB-R183690	N.A.	N.A.
LCS-R183690	3.990	PASS
N063735-012A	N.A.	N.A.
N063735-012AMS	3.965	PASS
N063771-001A	3.790	PASS
N063771-001AMS	3.790	PASS
N063771-001A	3.965	PASS
N063771-001AMS	3.956	PASS
N063771-002A	N.A.	N.A.
N063771-014A	3.965	PASS
N063771-014AMS	3.956	PASS
N063771-015A	3.956	PASS
N063771-015AMS	3.956	PASS
N063771-018A	3.948	PASS
N063771-018AMS	3.948	PASS
N063771-010A	N.A.	N.A.
N063771-014ADUP	3.956	PASS
N063771-014AMSD	3.956	PASS
N063771-012A	N.A.	N.A.
N063771-012AMS	3.798	PASS
N063771-013A	N.A.	N.A.

Reviewed by:

dMRocha 4/16/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/15/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	3.998	
CCV-2	3.990	
CCV-3	3.990	
CCV-4	3.990	
CCV-5	3.981	
CCV-6	3.981	
CCV-7	3.990	
Average	3.989	
Actual RT Window	3.909 - 4.069	
Applied RT Window	3.789 - 4.189	
N063771-013AMS	3.790	PASS
N063771-006A	N.A.	N.A.
N063771-007A	N.A.	N.A.
N063771-007AMS	3.790	PASS
N063771-009A	N.A.	N.A.
N063771-009AMS	3.815	PASS
N063771-008A	N.A.	N.A.
N063771-008AMS	3.973	PASS
N063771-017A	3.790	PASS
N063771-017AMS	3.790	PASS
N063771-019A	N.A.	N.A.
N063771-019AMS	3.973	PASS
N063771-011A	N.A.	N.A.
N063771-011AMS	3.790	PASS
N063771-002A	N.A.	N.A.
N063771-002AMS	3.948	PASS
N063812-006A	N.A.	N.A.
N063812-006AMS	3.973	PASS
N063812-008A	N.A.	N.A.
N063812-008AMS	3.973	PASS
N063812-017A	N.A.	N.A.

Reviewed by:

dMocha 4/16/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/15/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	3.998	
CCV-2	3.990	
CCV-3	3.990	
CCV-4	3.990	
CCV-5	3.981	
CCV-6	3.981	
CCV-7	3.990	
Average	3.989	
Actual RT Window	3.909 - 4.069	
Applied RT Window	3.789 - 4.189	
N063812-017AMS	3.973	PASS
N063771-010A	N.A.	N.A.
N063771-010AMS	3.940	PASS
N063771-012A	N.A.	N.A.
N063771-012AMS	3.948	PASS
N063771-013A	N.A.	N.A.
N063771-013AMS	3.948	PASS
N063771-006A	N.A.	N.A.
N063771-006AMS	3.948	PASS
N063771-007A	N.A.	N.A.
N063771-007AMS	3.948	PASS
N063771-009A	N.A.	N.A.
N063771-009AMS	3.948	PASS

Reviewed by:

dMocha 4/16/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/18/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	3.981	
CCV-2	3.981	
CCV-3	3.973	
CCV-4	3.973	
CCV-5	3.981	
CCV-6	3.981	
CCV-7	3.981	

Average	3.979
Actual RT Window	3.899 - 4.059
Applied RT Window	3.779 - 4.179

MB-R183736	N.A.	N.A.
LCS-R183736	3.973	PASS
N063812-011A	3.940	PASS
N063812-011AMS	3.940	PASS
N063812-016A	N.A.	N.A.
N063812-016AMS	3.798	PASS
N063812-005A	N.A.	N.A.
N063812-009A	3.781	PASS
N063812-009AMS	3.790	PASS
N063812-014A	3.781	PASS
N063812-015A	3.956	PASS
N063812-014AMS	3.781	PASS
N063812-015AMS	3.956	PASS
N063812-011ADUP	N.A.	N.A.
N063812-011AMSD	3.948	PASS
N063812-012A	3.973	PASS
N063812-012AMS	3.973	PASS
N063812-013A	3.940	PASS
N063812-013AMS	3.948	PASS
N063812-001A	3.981	PASS
N063812-001AMS	3.973	PASS

Reviewed by:

dMocha 4/16/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/18/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	3.981	
CCV-2	3.981	
CCV-3	3.973	
CCV-4	3.973	
CCV-5	3.981	
CCV-6	3.981	
CCV-7	3.981	
Average	3.979	
Actual RT Window	3.899 - 4.059	
Applied RT Window	3.779 - 4.179	
N063812-002A	3.981	PASS
N063812-002AMS	3.973	PASS
N063812-003A	3.973	PASS
N063812-003AMS	3.981	PASS
N063812-004A	3.973	PASS
N063812-004AMS	3.973	PASS
N063812-007A	3.848	PASS
N063812-007AMS	3.856	PASS
N063812-007A	3.923	PASS
N063812-007AMS	3.956	PASS
N063771-016A	3.940	PASS
N063771-016AMS	3.940	PASS
N063771-011A	N.A.	N.A.
N063771-011AMS	3.940	PASS
N063812-016A	N.A.	N.A.
N063812-016AMS	3.940	PASS
N063812-016AMSD	3.940	PASS
N063771-016ADUP	3.940	PASS
N063812-005A	N.A.	N.A.
N063812-005AMS	3.940	PASS
N063812-009A	N.A.	N.A.

Reviewed by:

dMocha 4/16/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/18/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	3.981	
CCV-2	3.981	
CCV-3	3.973	
CCV-4	3.973	
CCV-5	3.981	
CCV-6	3.981	
CCV-7	3.981	
Average	3.979	
Actual RT Window	3.899 - 4.059	
Applied RT Window	3.779 - 4.179	
N063812-009AMS	3.948	PASS
N063812-010A	3.981	PASS
N063812-010AMS	3.981	PASS
N063812-014A	3.940	PASS
N063812-014AMS	3.940	PASS
N063771-017A	N.A.	N.A.
N063771-017AMS	3.940	PASS
N063812-014AMS	3.790	PASS
N063812-011ADUP	3.948	PASS

Reviewed by:

dlRocha 4/16/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240305A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	03/05/24 4:07 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/05/24 4:16 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	03/05/24 4:26 PM	Reported
12	MB-R183315	MBLK	1	Hexavalent Chromium	03/05/24 4:35 PM	Reported
13	LCS-R183315	LCS	1	Hexavalent Chromium	03/05/24 4:45 PM	Reported
14	MB-107277	MBLK	1	Hexavalent Chromium	03/05/24 4:54 PM	Reported
15	N063472-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:04 PM	Reported
16	N063472-001ADUP	DUP	1	Hexavalent Chromium	03/05/24 5:13 PM	Reported
17	N063535-006A	SAMP	1	Hexavalent Chromium	03/05/24 5:23 PM	Reported
18	N063535-006AMS	MS	1	Hexavalent Chromium	03/05/24 5:32 PM	Reported
19	N063535-006AMSD	MSD	1	Hexavalent Chromium	03/05/24 5:42 PM	Reported
20	N063534-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:51 PM	Reported
21	N063534-001AMS	MS	1	Hexavalent Chromium	03/05/24 6:00 PM	Reported
22	CCV-1	CCV1	1	Hexavalent Chromium	03/05/24 6:10 PM	Reported
23	CCB-1	CCB	1	Hexavalent Chromium	03/05/24 6:20 PM	Reported
24	N063534-002A	SAMP	1	Hexavalent Chromium	03/05/24 6:30 PM	Reported
25	N063534-002AMS	MS	1	Hexavalent Chromium	03/05/24 6:38 PM	Reported
26	N063534-003A	SAMP	1	Hexavalent Chromium	03/05/24 6:48 PM	Reported
27	N063534-003AMS	MS	1	Hexavalent Chromium	03/05/24 6:57 PM	Reported
28	N063535-001A	SAMP	1	Hexavalent Chromium	03/05/24 7:07 PM	Reported
29	N063535-002A	SAMP	1	Hexavalent Chromium	03/05/24 7:16 PM	Reported
30	N063535-003A	SAMP	1	Hexavalent Chromium	03/05/24 7:26 PM	Reported
31	N063535-004A	SAMP	1	Hexavalent Chromium	03/05/24 7:35 PM	Reported
32	N063535-005A	SAMP	1	Hexavalent Chromium	03/05/24 7:48 PM	Reported
33	CCV-2	CCV	1	Hexavalent Chromium	03/05/24 7:57 PM	Reported
34	CCB-2	CCB	1	Hexavalent Chromium	03/05/24 8:07 PM	Reported
35	N063535-007A	SAMP	1	Hexavalent Chromium	03/05/24 8:16 PM	Reported
36	N063535-008A	SAMP	1	Hexavalent Chromium	03/05/24 8:25 PM	Reported
37	CCV-3	CCV1	1	Hexavalent Chromium	03/05/24 8:35 PM	Reported
38	CCB-3	CCB	1	Hexavalent Chromium	03/05/24 8:46 PM	Reported
39	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 8:55 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240305A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**07/Mar/24 08:03:58**
No. of Injections:	**42**	*Updated By:*	**ics 5000**

Injection Details

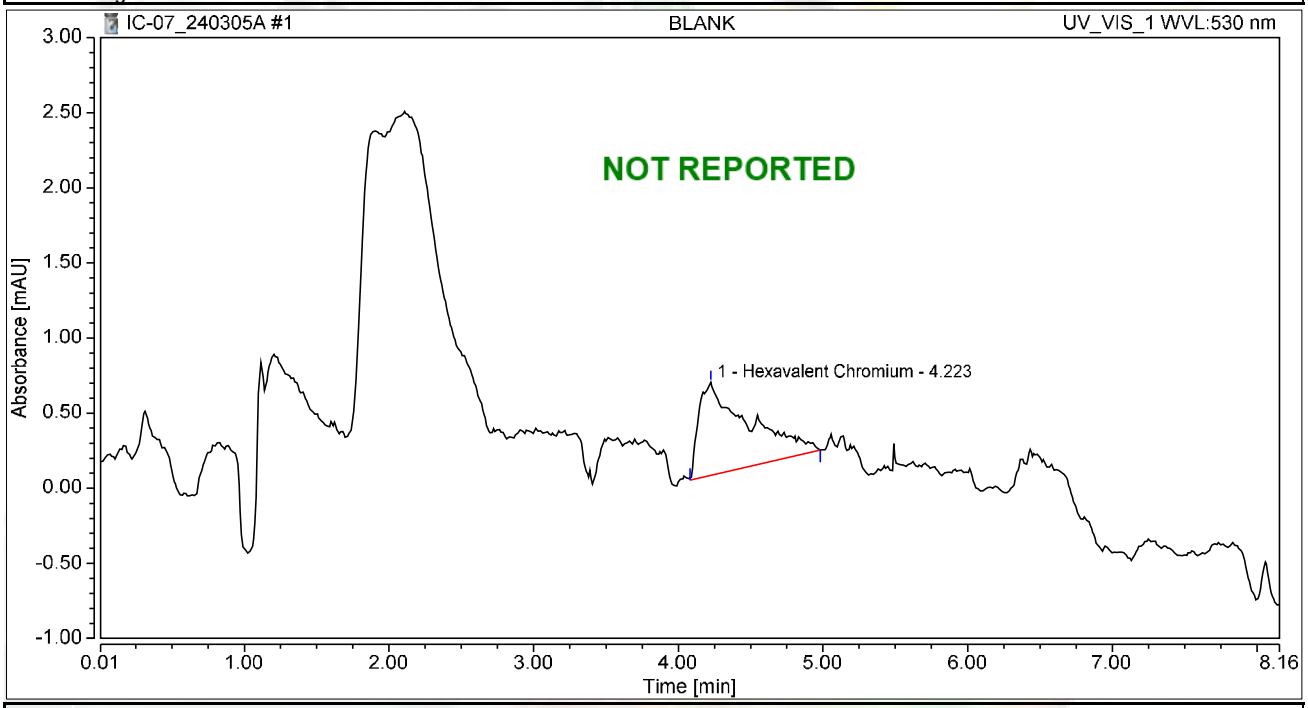
No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	8	1000	Unknown		03/05/2024 16:07	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	9	1000	Unknown		03/05/2024 16:16	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	10	1000	Unknown		03/05/2024 16:26	Finished	ICB R240129C
12	MB-H2O,MBLK,1,	11	1000	Unknown		03/05/2024 16:35	Finished	MB R240129C
13	LCS-H2O,LCS,1,	12	1000	Unknown		03/05/2024 16:45	Finished	LCS @5ppb, IWST-231228B
14	MB-107277,MBLK,1,	13	1000	Unknown		03/05/2024 16:54	Finished	MB TCLP
15	N063472-001A,SAMP	14	1000	Unknown		03/05/2024 17:04	Finished	SAMP,10 mL
16	N063472-001ADUP,D	15	1000	Unknown		03/05/2024 17:13	Finished	REP,10 mL
17	N063535-006A,SAMP	16	1000	Unknown		03/05/2024 17:23	Finished	SAMP,10 mL
18	N063535-006AMS,MS	17	1000	Unknown		03/05/2024 17:32	Finished	MS (5ppb), IWST-231228B,10r
19	N063535-006AMSD,M	18	1000	Unknown		03/05/2024 17:42	Finished	MSD (5ppb), IWST-231228B,1(
20	N063534-001A,SAMP	19	1000	Unknown		03/05/2024 17:51	Finished	SAMP,10 mL
21	N063534-001AMS,MS	20	1000	Unknown		03/05/2024 18:00	Finished	MS (1ppb), IWST-231228B,10r
22	CCV-1,CCV1,1,	21	1000	Unknown		03/05/2024 18:10	Finished	CCV @10ppb, IWST-231228A
23	CCB-1,CCB,1,	22	1000	Unknown		03/05/2024 18:20	Finished	CCB R240129C
24	N063534-002A,SAMP	23	1000	Unknown		03/05/2024 18:30	Finished	SAMP,10 mL
25	N063534-002AMS,MS	24	1000	Unknown		03/05/2024 18:38	Finished	MS (1ppb), IWST-231228B,10r
26	N063534-003A,SAMP	25	1000	Unknown		03/05/2024 18:48	Finished	SAMP,10 mL
27	N063534-003AMS,MS	26	1000	Unknown		03/05/2024 18:57	Finished	MS (1ppb), IWST-231228B,10r
28	N063535-001A,SAMP	27	1000	Unknown		03/05/2024 19:07	Finished	SAMP,10 mL
29	N063535-002A,SAMP	28	1000	Unknown		03/05/2024 19:16	Finished	SAMP,10 mL
30	N063535-003A,SAMP	29	1000	Unknown		03/05/2024 19:26	Finished	SAMP,10 mL
31	N063535-004A,SAMP	30	1000	Unknown		03/05/2024 19:35	Finished	SAMP,10 mL
32	N063535-005A,SAMP	31	1000	Unknown		03/05/2024 19:48	Finished	SAMP,10 mL
33	CCV-2,CCV,1,	32	1000	Unknown		03/05/2024 19:57	Finished	CCV @5ppb, IWST-231228A
34	CCB-2,CCB,1,	33	1000	Unknown		03/05/2024 20:07	Finished	CCB R240129C
35	N063535-007A,SAMP	34	1000	Unknown		03/05/2024 20:16	Finished	SAMP,10 mL
36	N063535-008A,SAMP	35	1000	Unknown		03/05/2024 20:25	Finished	SAMP,10 mL
37	CCV-3,CCV1,1,	37	1000	Unknown		03/05/2024 20:35	Finished	CCV @10ppb, IWST-231228A
38	CCB-3,CCB,1,	38	1000	Unknown		03/05/2024 20:46	Finished	CCB R240129C
39	BLANK	39	1000	Unknown		03/05/2024 20:55	Finished	BLANK
40	SHUTDOWN	40	1000	Unknown		03/05/2024 21:05	Finished	
41	Eluent: R240305B	41	1000	Unknown		n.a.	Finished	
42	PCR: R240305C	42	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.15**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 13:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

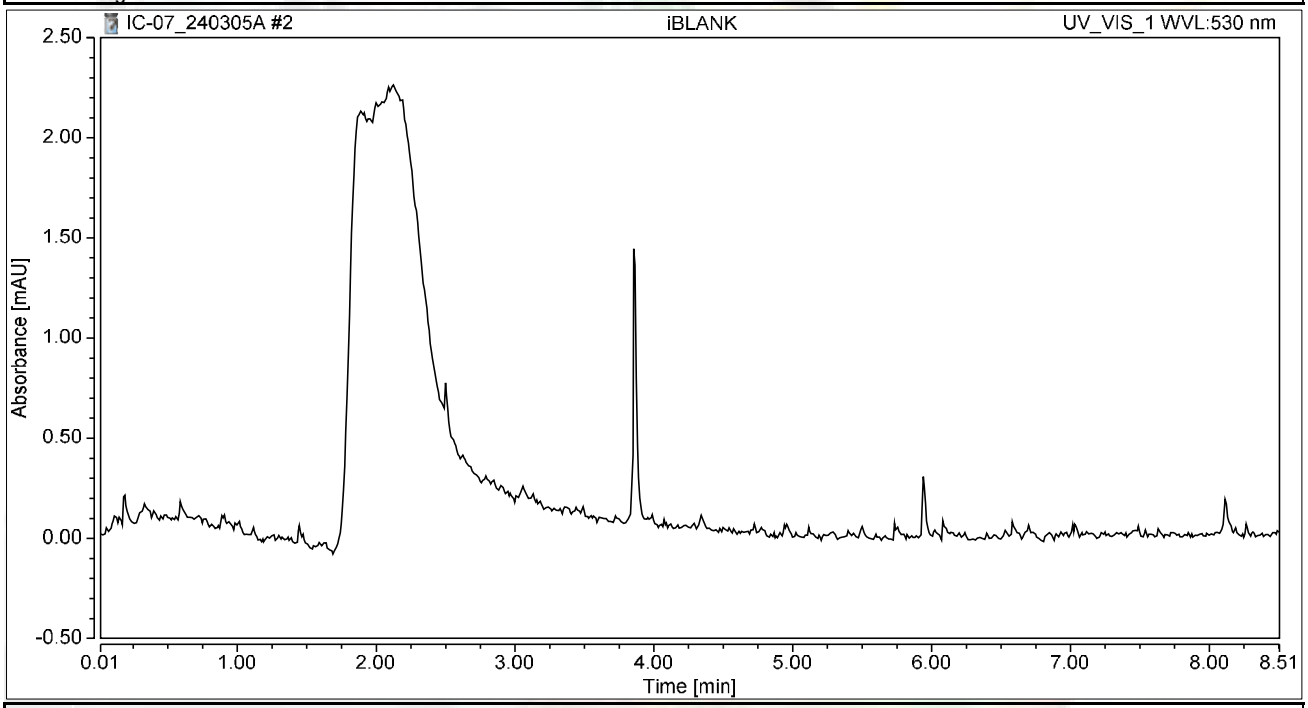
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.223	0.243	0.620	100.00	100.00	1.1440
Total:			**0.243**	**0.620**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 14:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

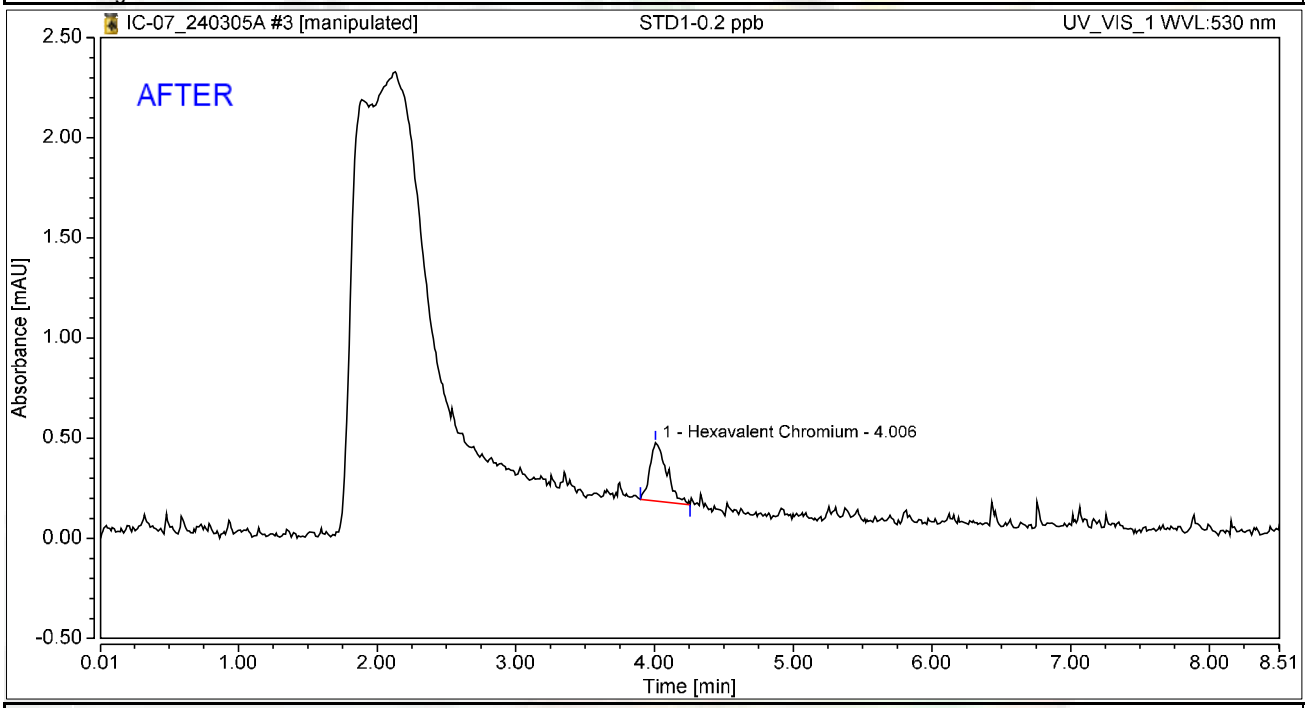
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.041	0.290	100.00	100.00	0.1937
Total:			**0.041**	**0.290**	**100.00**	**100.00**	

Reviewed by:

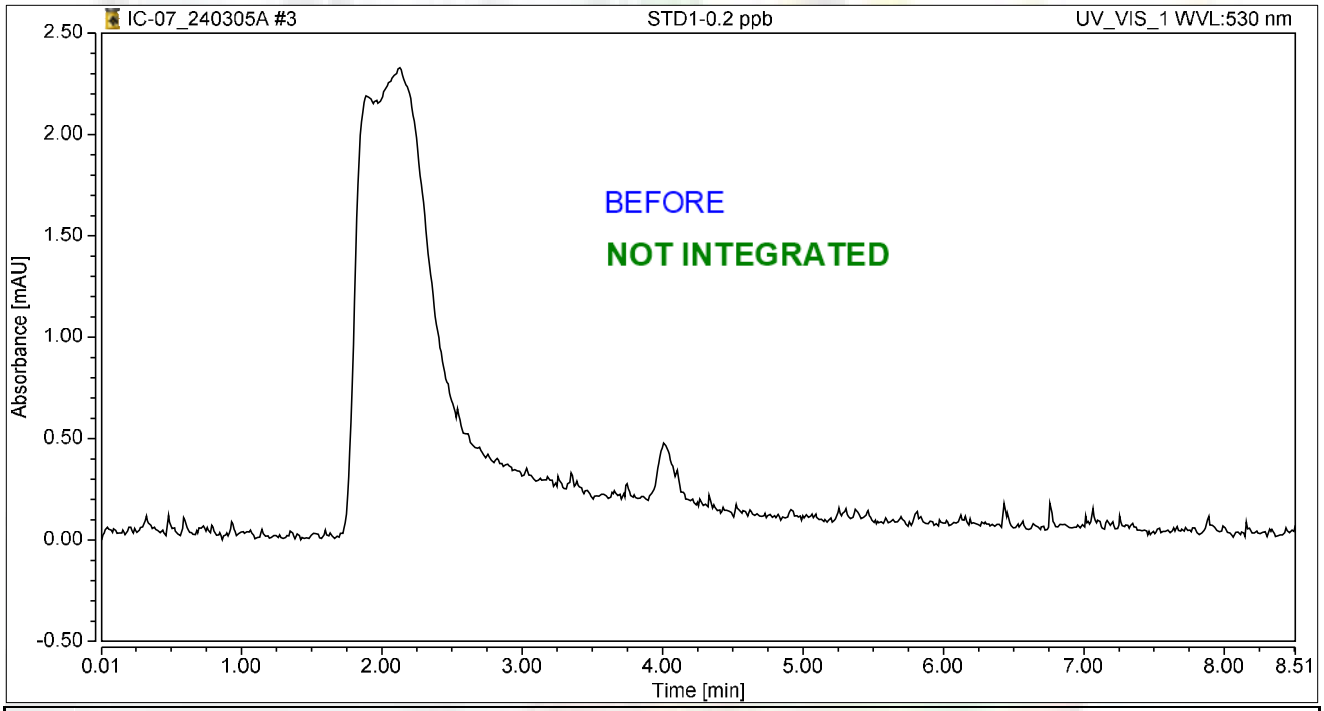
dMocha 3/11/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

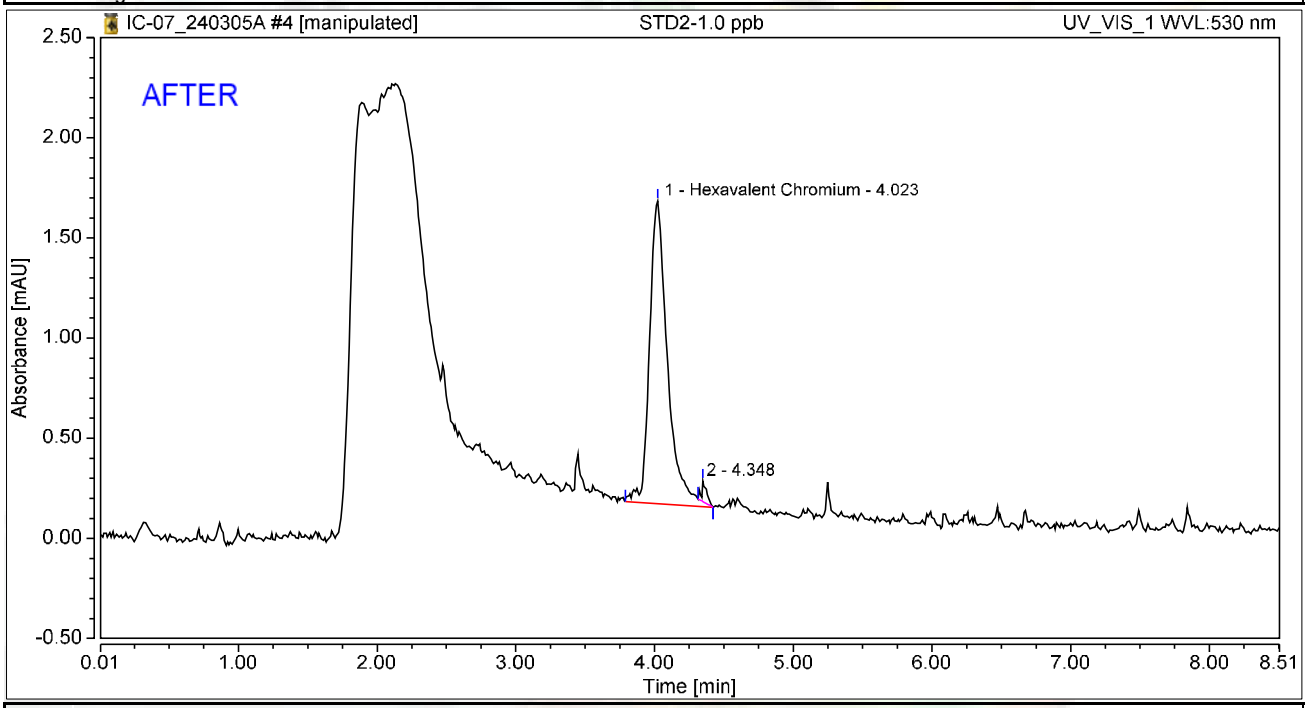
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.226	1.511	98.02	93.66	1.0616
2		4.348	0.005	0.102	1.98	6.34	n.a.
Total:			**0.231**	**1.614**	**100.00**	**100.00**	

Reviewed by:

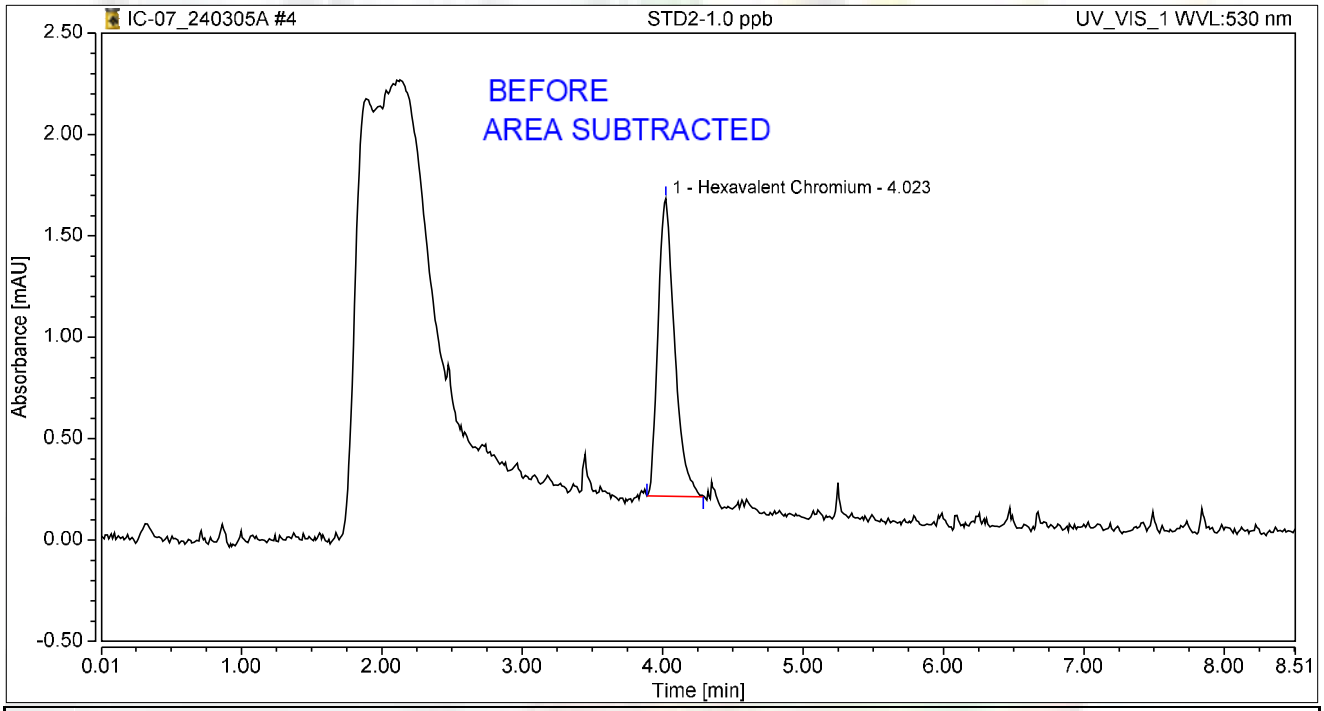
dlRocha 3/11/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

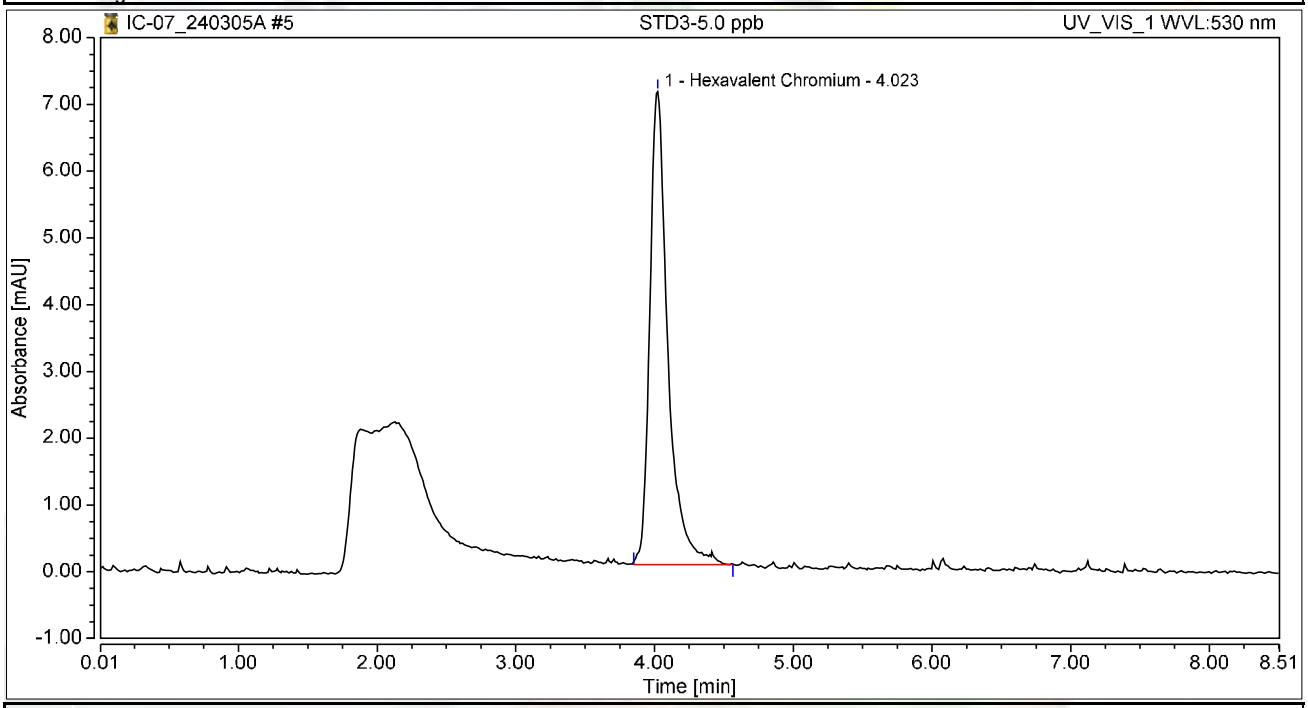
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.201	1.469	100.00	100.00	0.9426
Total:			**0.201**	**1.469**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

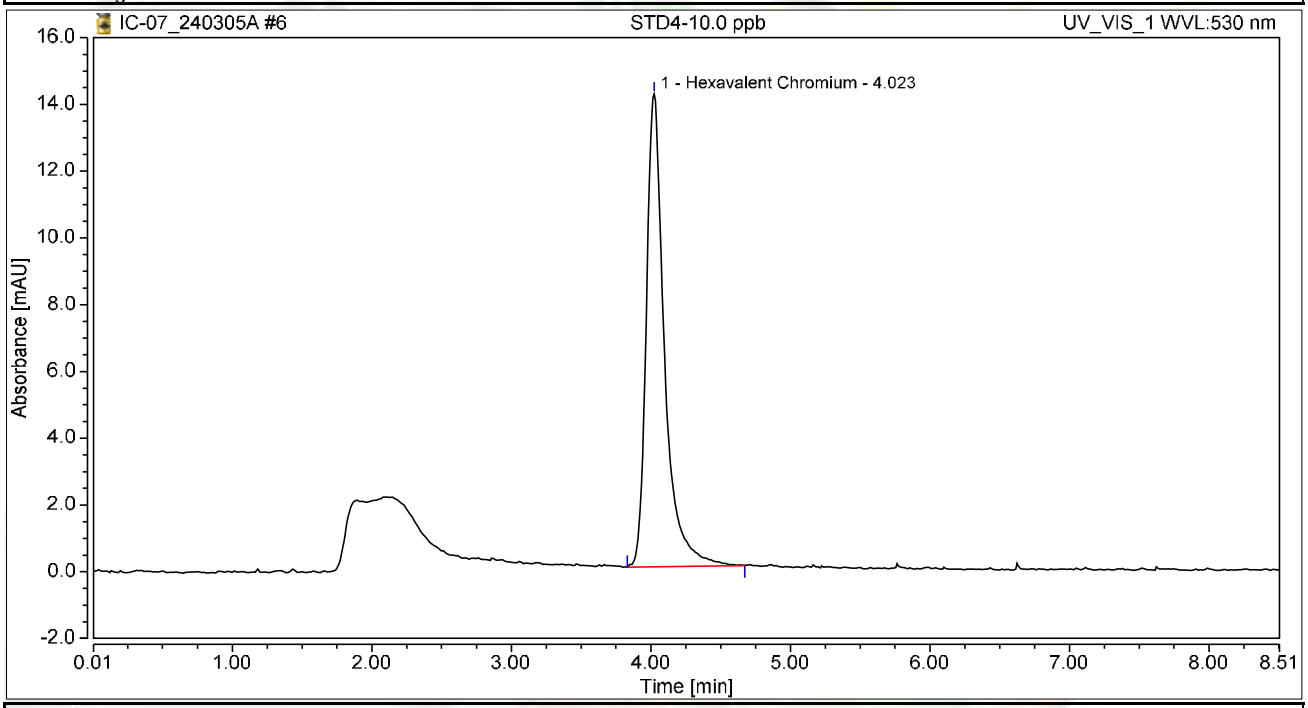
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	1.075	7.087	100.00	100.00	5.0528
Total:			**1.075**	**7.087**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

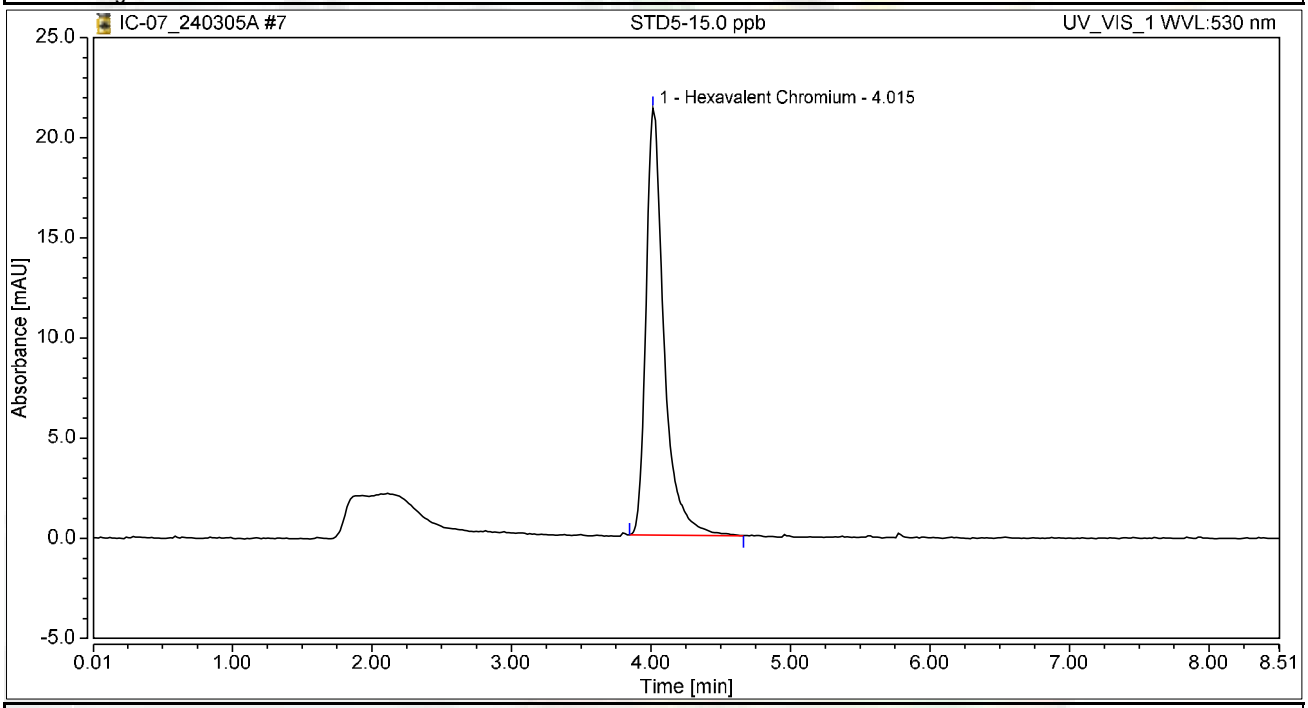
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	2.139	14.164	100.00	100.00	10.0520
Total:			**2.139**	**14.164**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

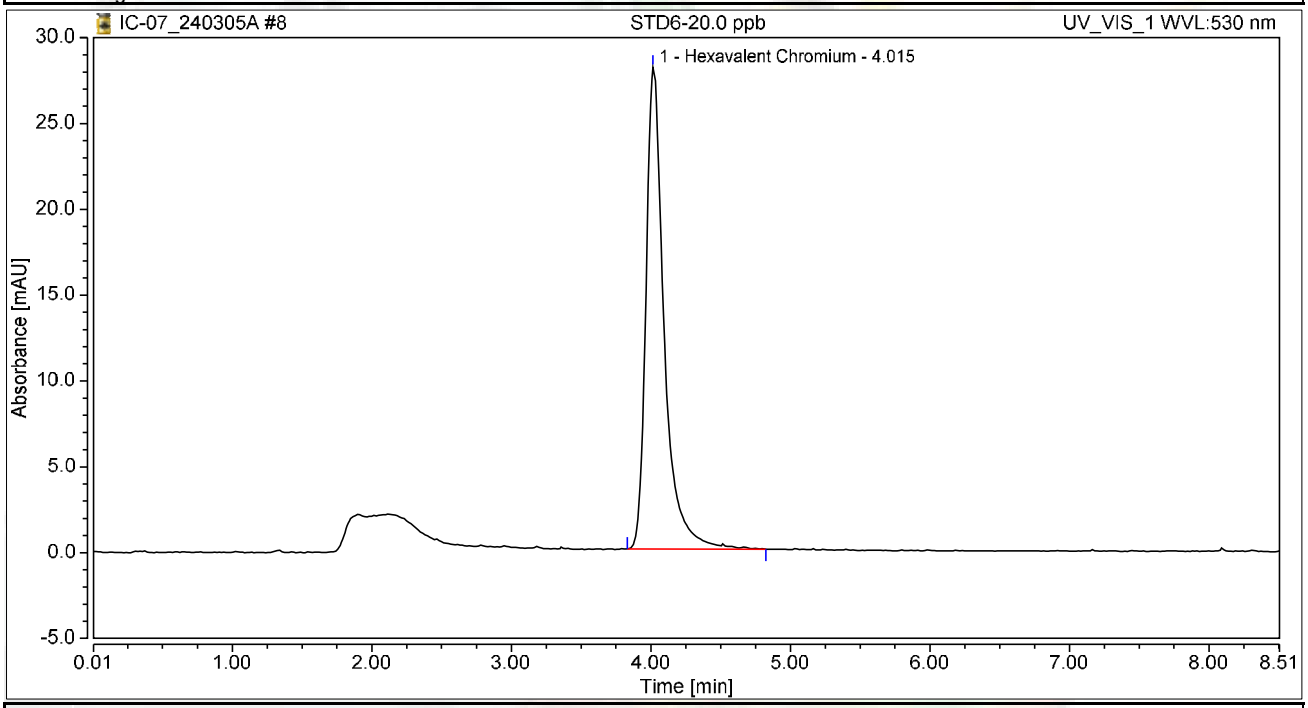
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	3.183	21.307	100.00	100.00	14.9570
Total:			**3.183**	**21.307**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:58**	*Sample Weight:*	**1.0000**

Chromatogram



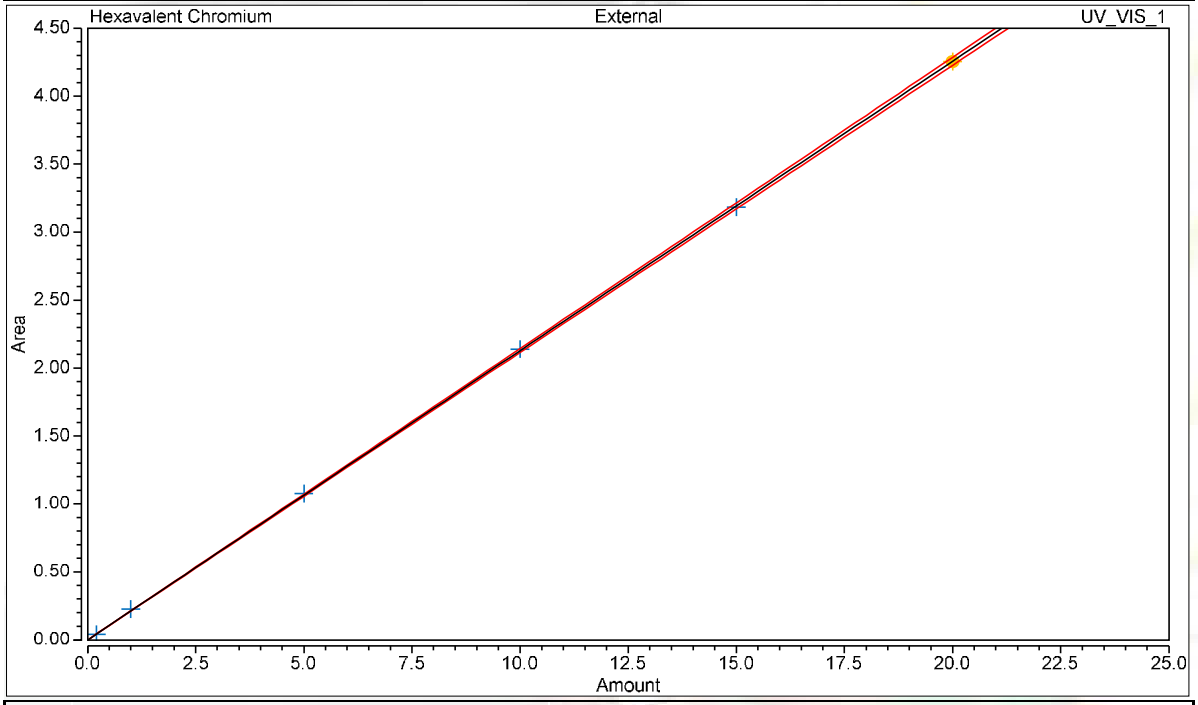
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	4.255	28.050	100.00	100.00	19.9900
Total:			**4.255**	**28.050**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2128
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99996

Calibration Plot Hexavalent Chromium



Calibration Results Hexavalent Chromium

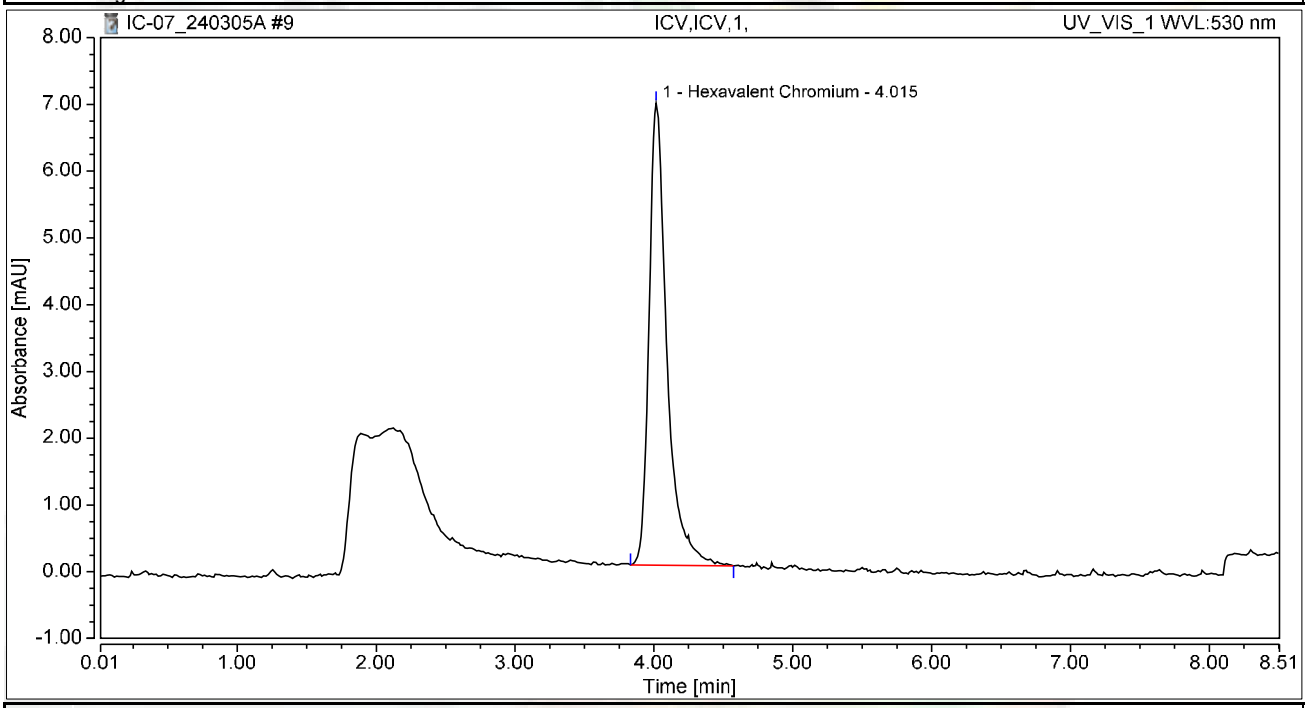
No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0412	0.041	0.290
4	STD2-1.0 ppb	02	1.0000	0.2259	0.226	1.511
5	STD3-5.0 ppb	03	5.0000	1.0754	1.075	7.087
6	STD4-10.0 ppb	04	10.0000	2.1395	2.139	14.164
7	STD5-15.0 ppb	05	15.0000	3.1834	3.183	21.307
8	STD6-20.0 ppb	06	20.0000	4.2546	4.255	28.050

Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

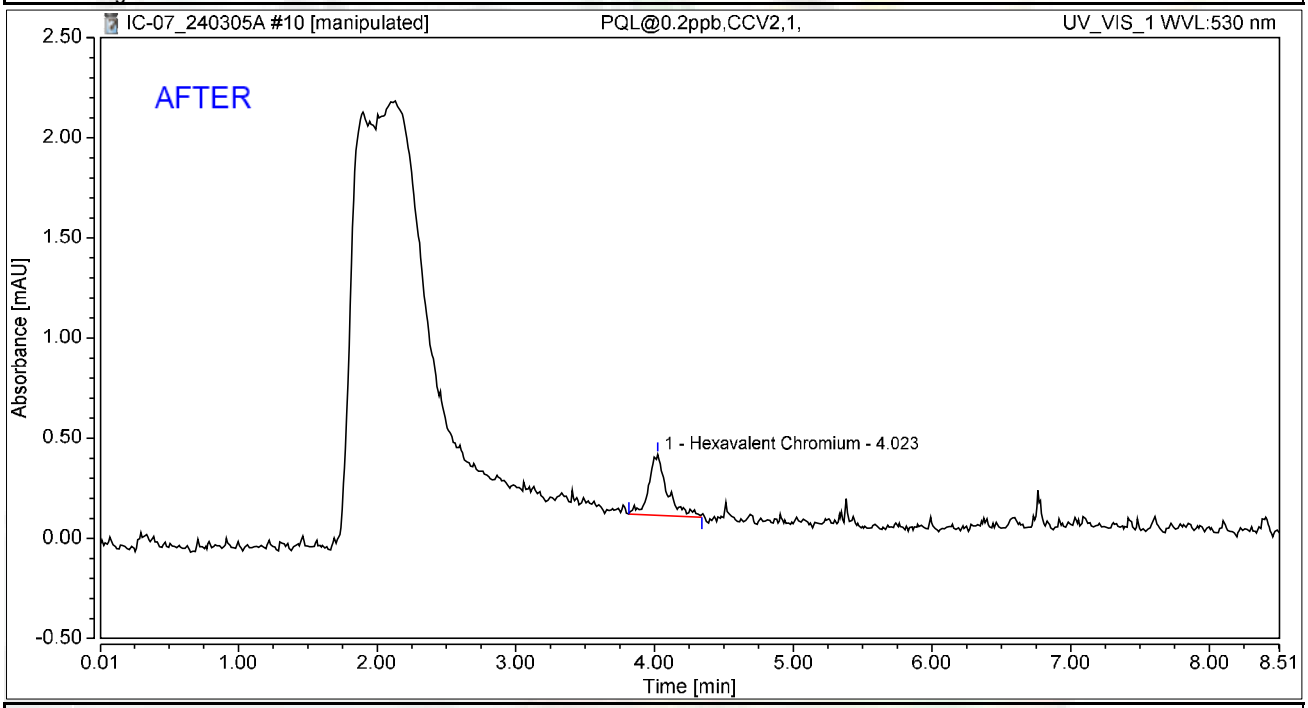
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.037	6.923	100.00	100.00	4.8744
Total:			**1.037**	**6.923**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.047	0.304	100.00	100.00	0.2189
Total:			**0.047**	**0.304**	**100.00**	**100.00**	

Reviewed by:

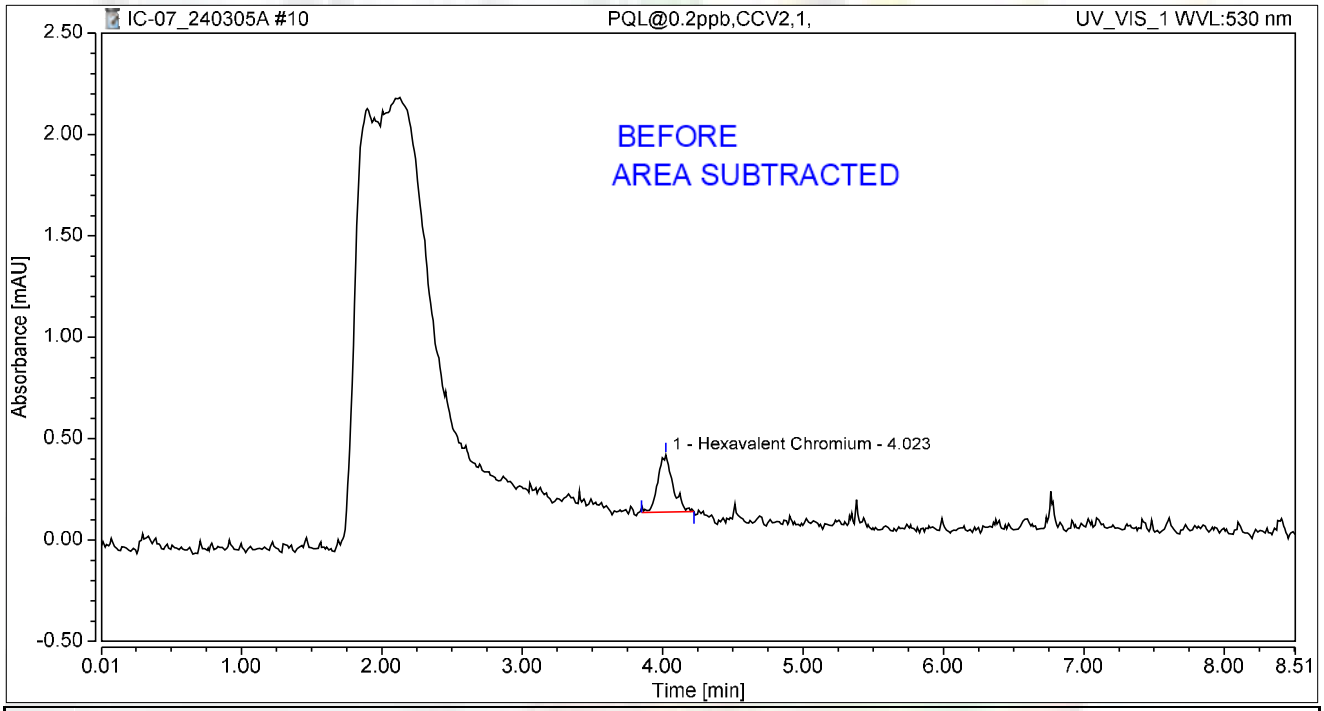
dMocha 3/11/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

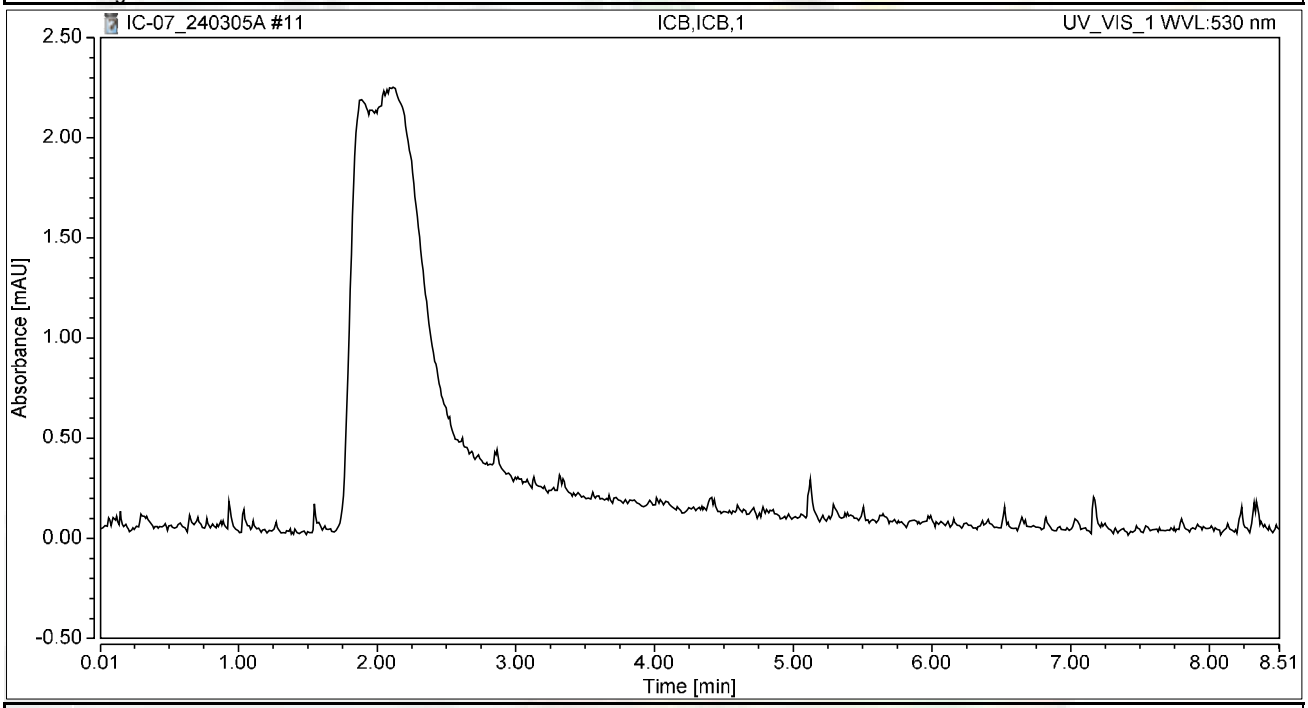
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.035	0.282	100.00	100.00	0.1646
Total:			**0.035**	**0.282**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240314A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/14/24 9:24 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/14/24 9:38 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/14/24 9:48 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/14/24 9:57 AM	Reported
13	MB-R183616	MBLK	1	Hexavalent Chromium	03/14/24 10:06 AM	Reported
14	LCS-R183616	LCS	1	Hexavalent Chromium	03/14/24 10:16 AM	Reported
15	N063735-005A	SAMP	5	Hexavalent Chromium	03/14/24 10:51 AM	Not Reported
16	N063735-006A	SAMP	5	Hexavalent Chromium	03/14/24 11:04 AM	Reported
17	N063735-005ADUP	DUP	5	Hexavalent Chromium	03/14/24 11:13 AM	Not Reported
18	N063735-006AMS	MS	5	Hexavalent Chromium	03/14/24 11:23 AM	Reported
19	N063734-001A	SAMP	1	Hexavalent Chromium	03/14/24 11:32 AM	Not Reported
20	N063734-001AMS	MS	1	Hexavalent Chromium	03/14/24 11:41 AM	Not Reported
21	N063735-006ADUP	DUP	5	Hexavalent Chromium	03/14/24 11:51 AM	Reported
22	N063735-006AMSD	MSD	5	Hexavalent Chromium	03/14/24 12:00 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/14/24 12:10 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/14/24 12:19 PM	Reported
25	N063734-002A	SAMP	1	Hexavalent Chromium	03/14/24 12:29 PM	Not Reported
26	N063734-002AMS	MS	1	Hexavalent Chromium	03/14/24 12:38 PM	Not Reported
27	N063735-004A	SAMP	1	Hexavalent Chromium	03/14/24 12:48 PM	Not Reported
28	N063735-004AMS	MS	1	Hexavalent Chromium	03/14/24 12:57 PM	Not Reported
29	N063735-007A	SAMP	1	Hexavalent Chromium	03/14/24 1:07 PM	Reported
30	N063735-007AMS	MS	1	Hexavalent Chromium	03/14/24 1:16 PM	Reported
31	N063735-009A	SAMP	1	Hexavalent Chromium	03/14/24 1:26 PM	Reported
32	N063735-009AMS	MS	1	Hexavalent Chromium	03/14/24 1:35 PM	Reported
33	N063735-010A	SAMP	1	Hexavalent Chromium	03/14/24 1:44 PM	Reported
34	N063735-010AMS	MS	1	Hexavalent Chromium	03/14/24 1:54 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	03/14/24 2:03 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	03/14/24 2:13 PM	Reported
37	N063735-011A	SAMP	1	Hexavalent Chromium	03/14/24 2:22 PM	Reported
38	N063735-011AMS	MS	1	Hexavalent Chromium	03/14/24 2:32 PM	Not Reported
39	N063735-012A	SAMP	1	Hexavalent Chromium	03/14/24 2:41 PM	Not Reported
40	N063735-012AMS	MS	1	Hexavalent Chromium	03/14/24 2:51 PM	Not Reported
41	N063735-013A	SAMP	1	Hexavalent Chromium	03/14/24 3:00 PM	Not Reported
42	N063735-013AMS	MS	1	Hexavalent Chromium	03/14/24 3:24 PM	Not Reported

dMRocha 3/26/2024
for RBA 188

INJECTION LOG: 240314A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063735-001A	SAMP	1	Hexavalent Chromium	03/14/24 3:34 PM	Reported
44	N063735-001AMS	MS	1	Hexavalent Chromium	03/14/24 3:44 PM	Reported
45	N063735-003A	SAMP	1	Hexavalent Chromium	03/14/24 3:53 PM	Reported
46	N063735-003AMS	MS	1	Hexavalent Chromium	03/14/24 4:03 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	03/14/24 4:12 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	03/14/24 4:22 PM	Reported
49	N063735-008A	SAMP	1	Hexavalent Chromium	03/14/24 4:34 PM	Reported
50	N063735-008AMS	MS	1	Hexavalent Chromium	03/14/24 4:43 PM	Reported
51	N063735-014A	SAMP	1	Hexavalent Chromium	03/14/24 4:53 PM	Reported
52	N063735-014AMS	MS	1	Hexavalent Chromium	03/14/24 5:02 PM	Reported
53	N063735-002A	SAMP	1	Hexavalent Chromium	03/14/24 5:12 PM	Not Reported
54	N063735-002AMS	MS	1	Hexavalent Chromium	03/14/24 5:21 PM	Not Reported
55	N063735-002A	SAMP	5	Hexavalent Chromium	03/14/24 5:31 PM	Reported
56	N063735-002AMS	MS	5	Hexavalent Chromium	03/14/24 5:40 PM	Reported
57	N063735-005A	SAMP	1	Hexavalent Chromium	03/14/24 5:49 PM	Reported
58	N063735-005AMS	MS	1	Hexavalent Chromium	03/14/24 5:59 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	03/14/24 6:08 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	03/14/24 6:18 PM	Reported
61	N063735-005AMS	MS	5	Hexavalent Chromium	03/14/24 6:27 PM	Not Reported
62	N063248-008A	SAMP	5	Hexavalent Chromium	03/14/24 6:37 PM	Not Reported
63	N063248-008AMS	MS	5	Hexavalent Chromium	03/14/24 6:46 PM	Not Reported
64	N063734-001A	SAMP	5	Hexavalent Chromium	03/14/24 6:56 PM	Reported
65	N063734-001AMS	MS	5	Hexavalent Chromium	03/14/24 7:05 PM	Reported
66	N063734-002A	SAMP	5	Hexavalent Chromium	03/14/24 7:15 PM	Reported
67	N063734-002AMS	MS	5	Hexavalent Chromium	03/14/24 7:24 PM	Reported
68	N063771-003A	SAMP	1	Hexavalent Chromium	03/14/24 7:34 PM	Not Reported
69	N063771-003AMS	MS	1	Hexavalent Chromium	03/14/24 7:43 PM	Not Reported
70	N063771-004A	SAMP	1	Hexavalent Chromium	03/14/24 7:52 PM	Not Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	03/14/24 8:02 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	03/14/24 8:11 PM	Reported
73	N063771-004AMS	MS	1	Hexavalent Chromium	03/14/24 8:21 PM	Not Reported
74	N063771-005A	SAMP	1	Hexavalent Chromium	03/14/24 8:30 PM	Not Reported
75	N063771-005AMS	MS	1	Hexavalent Chromium	03/14/24 8:40 PM	Not Reported
76	N063771-003A	SAMP	5	Hexavalent Chromium	03/14/24 8:49 PM	Reported
77	N063771-003AMS	MS	5	Hexavalent Chromium	03/14/24 8:59 PM	Reported
78	N063771-004A	SAMP	5	Hexavalent Chromium	03/14/24 9:08 PM	Reported
79	N063771-004AMS	MS	5	Hexavalent Chromium	03/14/24 9:18 PM	Reported
80	N063771-005A	SAMP	5	Hexavalent Chromium	03/14/24 9:27 PM	Reported
81	N063771-005AMS	MS	5	Hexavalent Chromium	03/14/24 9:36 PM	Reported
82	N063735-004A	SAMP	5	Hexavalent Chromium	03/14/24 9:46 PM	Reported
83	CCV-7	CCV	1	Hexavalent Chromium	03/14/24 9:55 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	03/14/24 10:05 PM	Reported

INJECTION LOG: 240314A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	N063735-004AMS	MS	5	Hexavalent Chromium	03/14/24 10:14 PM	Reported
86	N063735-011AMS	MS	1	Hexavalent Chromium	03/14/24 10:24 PM	Reported
87	N063735-013A	SAMP	5	Hexavalent Chromium	03/14/24 10:33 PM	not Reported
88	N063735-013AMS	MS	5	Hexavalent Chromium	03/14/24 10:43 PM	not Reported
89	CCV-8	CCV1	1	Hexavalent Chromium	03/14/24 10:52 PM	Reported
90	CCB-8	CCB	1	Hexavalent Chromium	03/14/24 11:02 PM	Reported

dMocha 3/26/2024

for RBA

Injection Log Summary

Sequence Details

Name:	**IC-07_240314A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**14/Mar/24 23:32:19**
No. of Injections:	**93**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/14/2024 09:24	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/14/2024 09:38	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/14/2024 09:48	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/14/2024 09:57	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/14/2024 10:06	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/14/2024 10:16	Finished	LCS @5ppb, IWST-231228B
15	N063735-005A,SAMF	1	1000	Unknown		03/14/2024 10:51	Finished	SAMP,2>10 mL
16	N063735-006A,SAMF	2	1000	Unknown		03/14/2024 11:04	Finished	SAMP,2>10 mL
17	N063735-005ADUP,D	3	1000	Unknown		03/14/2024 11:13	Finished	DUP,2>10 mL
18	N063735-006AMS,MS	4	1000	Unknown		03/14/2024 11:23	Finished	MS (5ppb), IWST-231228B,2>
19	N063734-001A,SAMF	5	1000	Unknown		03/14/2024 11:32	Finished	SAMP,10 mL
20	N063734-001AMS,MS	6	1000	Unknown		03/14/2024 11:41	Finished	MS (1ppb), IWST-231228B,10r
21	N063735-006ADUP,D	7	1000	Unknown		03/14/2024 11:51	Finished	DUP,2>10 mL
22	N063735-006AMSD,M	8	1000	Unknown		03/14/2024 12:00	Finished	MSD (5ppb), IWST-231228B,2
23	CCV-2,CCV1,1,	9	1000	Unknown		03/14/2024 12:10	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		03/14/2024 12:19	Finished	CCB R240129C
25	N063734-002A,SAMF	11	1000	Unknown		03/14/2024 12:29	Finished	SAMP,10 mL
26	N063734-002AMS,MS	12	1000	Unknown		03/14/2024 12:38	Finished	MS (1ppb), IWST-231228B,10r
27	N063735-004A,SAMF	13	1000	Unknown		03/14/2024 12:48	Finished	SAMP,10 mL
28	N063735-004AMS,MS	14	1000	Unknown		03/14/2024 12:57	Finished	MS (1ppb), IWST-231228B,10r
29	N063735-007A,SAMF	15	1000	Unknown		03/14/2024 13:07	Finished	SAMP,10 mL
30	N063735-007AMS,MS	16	1000	Unknown		03/14/2024 13:16	Finished	MS (1ppb), IWST-231228B,10r
31	N063735-009A,SAMF	17	1000	Unknown		03/14/2024 13:26	Finished	SAMP,10 mL
32	N063735-009AMS,MS	18	1000	Unknown		03/14/2024 13:35	Finished	MS (1ppb), IWST-231228B,10r
33	N063735-010A,SAMF	19	1000	Unknown		03/14/2024 13:44	Finished	SAMP,10 mL
34	N063735-010AMS,MS	20	1000	Unknown		03/14/2024 13:54	Finished	MS (1ppb), IWST-231228B,10r
35	CCV-3,CCV,1,	21	1000	Unknown		03/14/2024 14:03	Finished	CCV @10ppb, IWST-231228A
36	CCB-3,CCB,1,	22	1000	Unknown		03/14/2024 14:13	Finished	CCB R240129C
37	N063735-011A,SAMF	23	1000	Unknown		03/14/2024 14:22	Finished	SAMP,10 mL
38	N063735-011AMS,MS	24	1000	Unknown		03/14/2024 14:32	Finished	MS (1ppb), IWST-231228B,10r
39	N063735-012A,SAMF	25	1000	Unknown		03/14/2024 14:41	Finished	SAMP,10 mL
40	N063735-012AMS,MS	26	1000	Unknown		03/14/2024 14:51	Finished	MS (1ppb), IWST-231228B,10r
41	N063735-013A,SAMF	27	1000	Unknown		03/14/2024 15:00	Finished	SAMP,10 mL
42	N063735-013AMS,MS	1	1000	Unknown		03/14/2024 15:24	Finished	MS (1ppb), IWST-231228B,10r
43	N063735-001A,SAMF	2	1000	Unknown		03/14/2024 15:34	Finished	SAMP,10 mL
44	N063735-001AMS,MS	3	1000	Unknown		03/14/2024 15:44	Finished	MS (1ppb), IWST-231228B,10r
45	N063735-003A,SAMF	4	1000	Unknown		03/14/2024 15:53	Finished	SAMP,10 mL
46	N063735-003AMS,MS	5	1000	Unknown		03/14/2024 16:03	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	6	1000	Unknown		03/14/2024 16:12	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	7	1000	Unknown		03/14/2024 16:22	Finished	CCB R240129C
49	N063735-008A,SAMF	8	1000	Unknown		03/14/2024 16:34	Finished	SAMP,10 mL
50	N063735-008AMS,MS	9	1000	Unknown		03/14/2024 16:43	Finished	MS (1ppb), IWST-231228B,10r
51	N063735-014A,SAMF	10	1000	Unknown		03/14/2024 16:53	Finished	SAMP,10 mL
52	N063735-014AMS,MS	11	1000	Unknown		03/14/2024 17:02	Finished	MS (1ppb), IWST-231228B,10r
53	N063735-002A,SAMF	12	1000	Unknown		03/14/2024 17:12	Finished	SAMP,10 mL
54	N063735-002AMS,MS	13	1000	Unknown		03/14/2024 17:21	Finished	MS (1ppb), IWST-231228B,10r
55	N063735-002A,SAMF	14	1000	Unknown		03/14/2024 17:31	Finished	SAMP,2>10 mL
56	N063735-002AMS,MS	15	1000	Unknown		03/14/2024 17:40	Finished	MS (1ppb), IWST-231228B,2>
57	N063735-005A,SAMF	16	1000	Unknown		03/14/2024 17:49	Finished	SAMP,10 mL
58	N063735-005AMS,MS	17	1000	Unknown		03/14/2024 17:59	Finished	MS (5ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	18	1000	Unknown		03/14/2024 18:08	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	19	1000	Unknown		03/14/2024 18:18	Finished	CCB R240129C

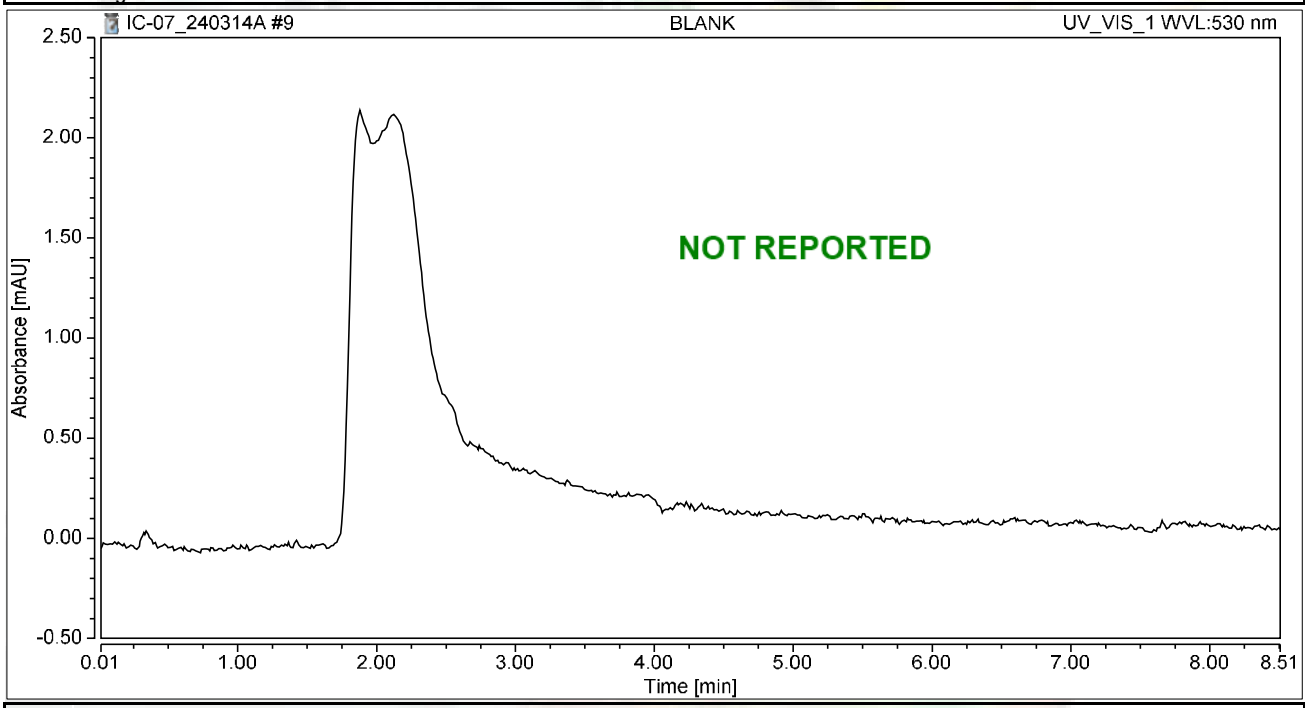
61	N063735-005AMS,MS	20	1000	Unknown		03/14/2024 18:27	Finished	MS (1ppb), IWST-231228B,2>1
62	N063248-008A,SAMP	21	1000	Unknown		03/14/2024 18:37	Finished	SAMP,2>10 mL
63	N063248-008AMS,MS	22	1000	Unknown		03/14/2024 18:46	Finished	MS (1ppb), IWST-231228B,2>1
64	N063734-001A,SAMP	23	1000	Unknown		03/14/2024 18:56	Finished	SAMP,2>10 mL
65	N063734-001AMS,MS	24	1000	Unknown		03/14/2024 19:05	Finished	MS (1ppb), IWST-231228B,2>1
66	N063734-002A,SAMP	25	1000	Unknown		03/14/2024 19:15	Finished	SAMP,2>10 mL
67	N063734-002AMS,MS	26	1000	Unknown		03/14/2024 19:24	Finished	MS (1ppb), IWST-231228B,2>1
68	N063771-003A,SAMP	27	1000	Unknown		03/14/2024 19:34	Finished	SAMP,10 mL
69	N063771-003AMS,MS	28	1000	Unknown		03/14/2024 19:43	Finished	MS (1ppb), IWST-231228B,10r
70	N063771-004A,SAMP	29	1000	Unknown		03/14/2024 19:52	Finished	SAMP,10 mL
71	CCV-6,CCV1,1,	30	1000	Unknown		03/14/2024 20:02	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	31	1000	Unknown		03/14/2024 20:11	Finished	CCB R240129C
73	N063771-004AMS,MS	32	1000	Unknown		03/14/2024 20:21	Finished	MS (1ppb), IWST-231228B,10r
74	N063771-005A,SAMP	33	1000	Unknown		03/14/2024 20:30	Finished	SAMP,10 mL
75	N063771-005AMS,MS	34	1000	Unknown		03/14/2024 20:40	Finished	MS (1ppb), IWST-231228B,10r
76	N063771-003A,SAMP	35	1000	Unknown		03/14/2024 20:49	Finished	SAMP,2>10 mL
77	N063771-003AMS,MS	36	1000	Unknown		03/14/2024 20:59	Finished	MS (1ppb), IWST-231228B,2>1
78	N063771-004A,SAMP	37	1000	Unknown		03/14/2024 21:08	Finished	SAMP,2>10 mL
79	N063771-004AMS,MS	38	1000	Unknown		03/14/2024 21:18	Finished	MS (1ppb), IWST-231228B,2>1
80	N063771-005A,SAMP	39	1000	Unknown		03/14/2024 21:27	Finished	SAMP,2>10 mL
81	N063771-005AMS,MS	40	1000	Unknown		03/14/2024 21:36	Finished	MS (1ppb), IWST-231228B,2>1
82	N063735-004A,SAMP	41	1000	Unknown		03/14/2024 21:46	Finished	SAMP,2>10 mL
83	CCV-7,CCV,1,	42	1000	Unknown		03/14/2024 21:55	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	43	1000	Unknown		03/14/2024 22:05	Finished	CCB R240129C
85	N0637735-004AMS,M	44	1000	Unknown		03/14/2024 22:14	Finished	MS (1ppb), IWST-231228B,2>1
86	N063735-011AMS,MS	45	1000	Unknown		03/14/2024 22:24	Finished	MS (5ppb), IWST-231228B,10r
87	N063735-013A,SAMP	46	1000	Unknown		03/14/2024 22:33	Finished	SAMP,2>10 mL
88	N063735-013AMS,MS	47	1000	Unknown		03/14/2024 22:43	Finished	MS (1ppb), IWST-231228B,2>1
89	CCV-8,CCV1,1,	48	1000	Unknown		03/14/2024 22:52	Finished	CCV @10ppb, IWST-231228A
90	CCB-8,CCB,1,	49	1000	Unknown		03/14/2024 23:02	Finished	CCB R240129C
91	SHUTDOWN	50	1000	Unknown		03/14/2024 23:11	Finished	
92	Eluent: R240313A	51	1000	Unknown		n.a.	Finished	
93	PCR: R240313B	CurrentVial	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 09:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

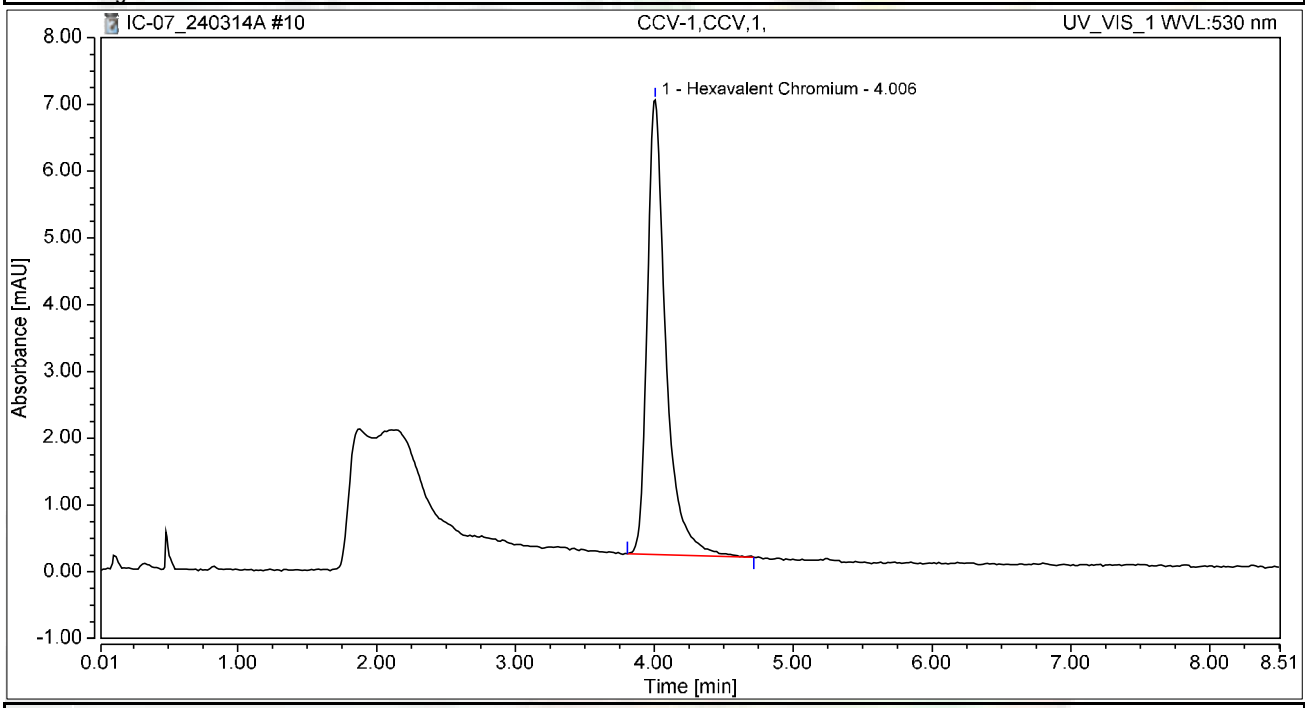
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 09:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.064	6.812	100.00	100.00	4.9981
Total:			**1.064**	**6.812**	**100.00**	**100.00**	

Reviewed by:

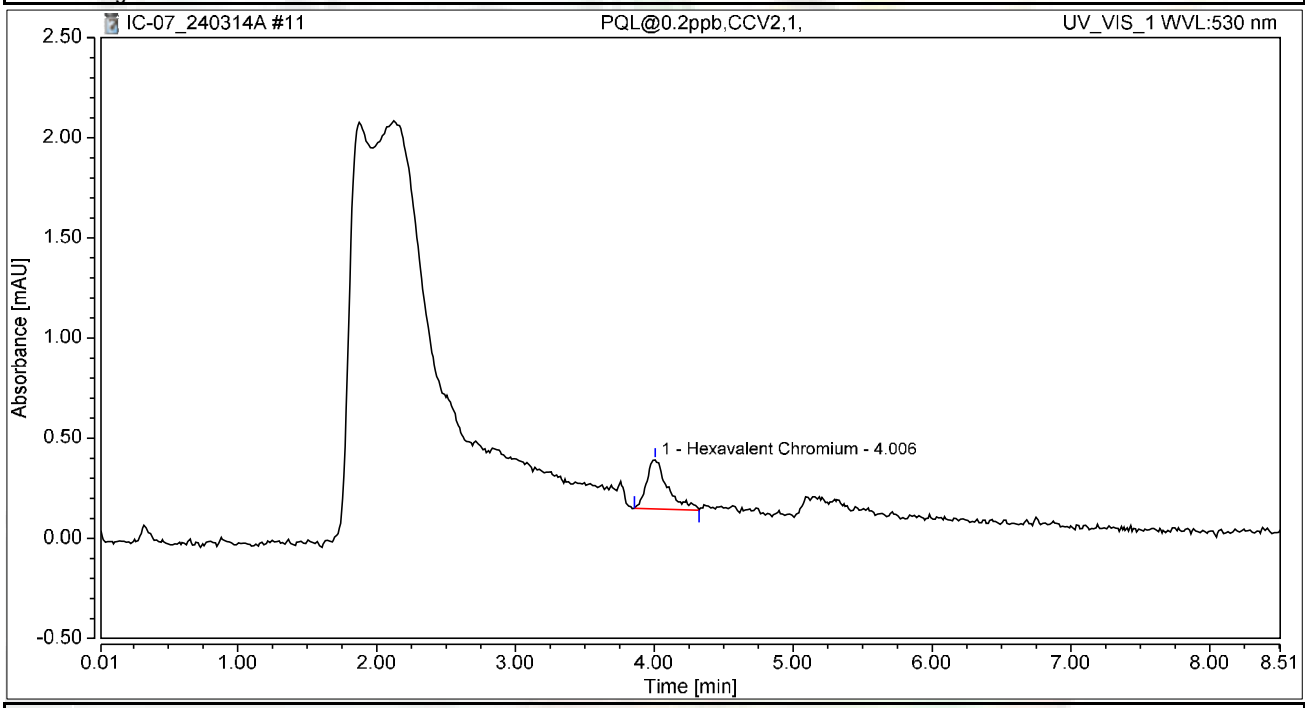
dMocha 3/22/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 09:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

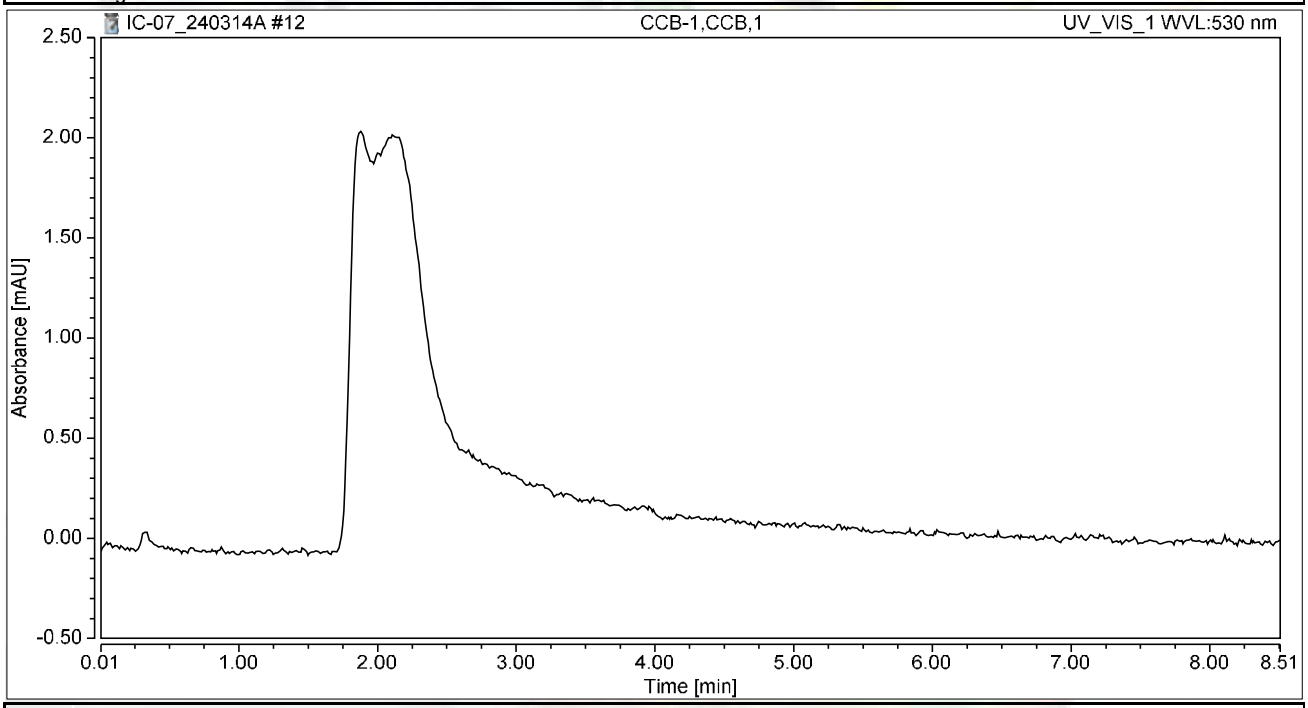
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.043	0.243	100.00	100.00	0.2031
Total:			**0.043**	**0.243**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 09:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

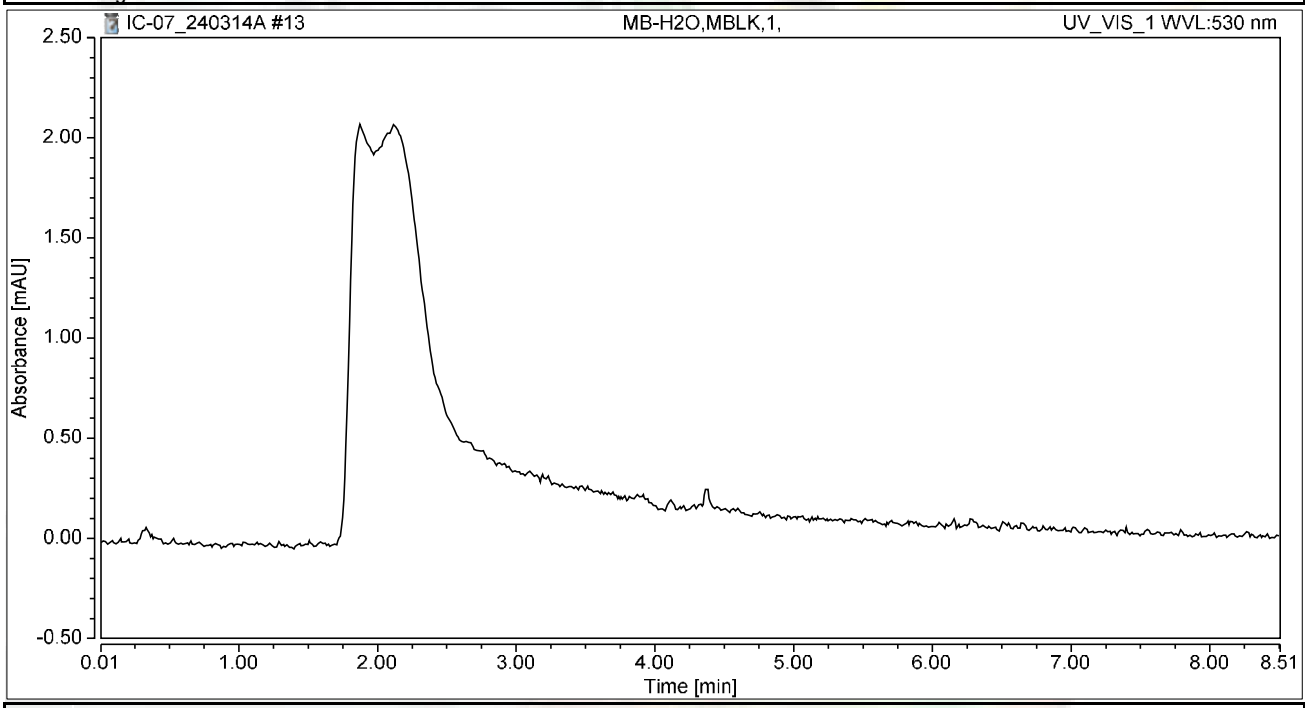
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 10:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

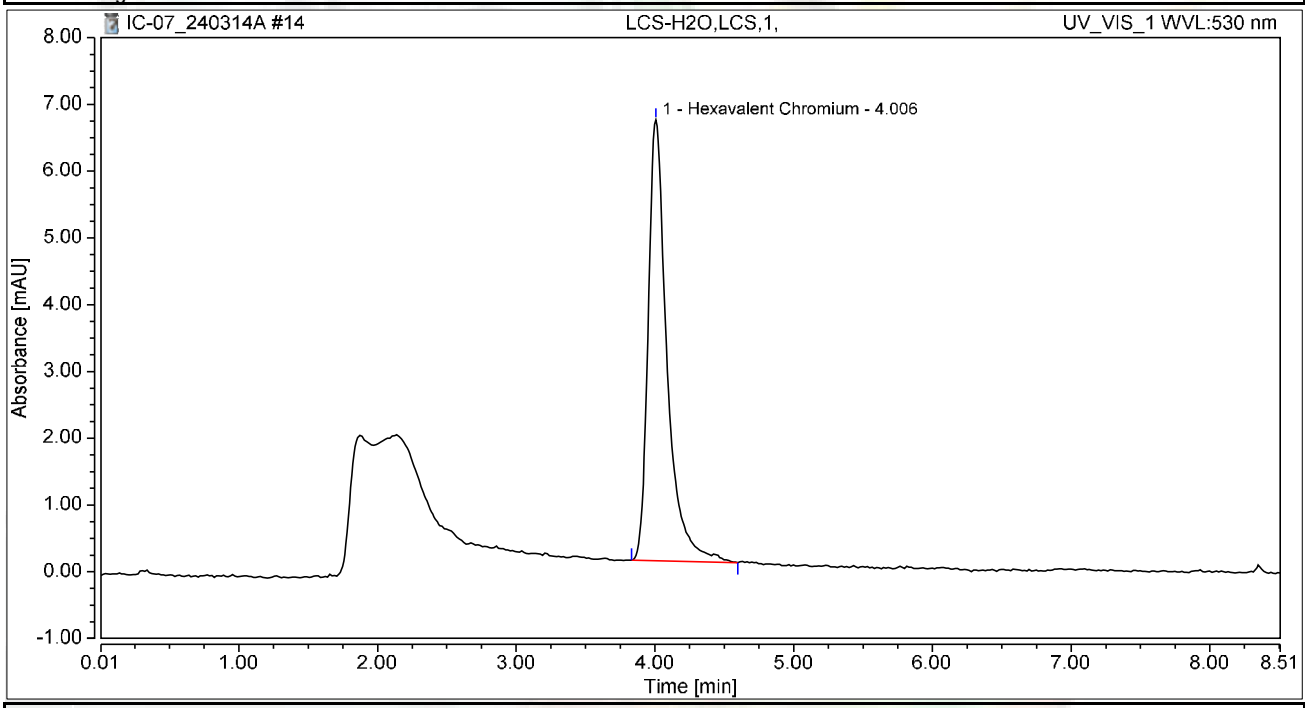
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 10:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

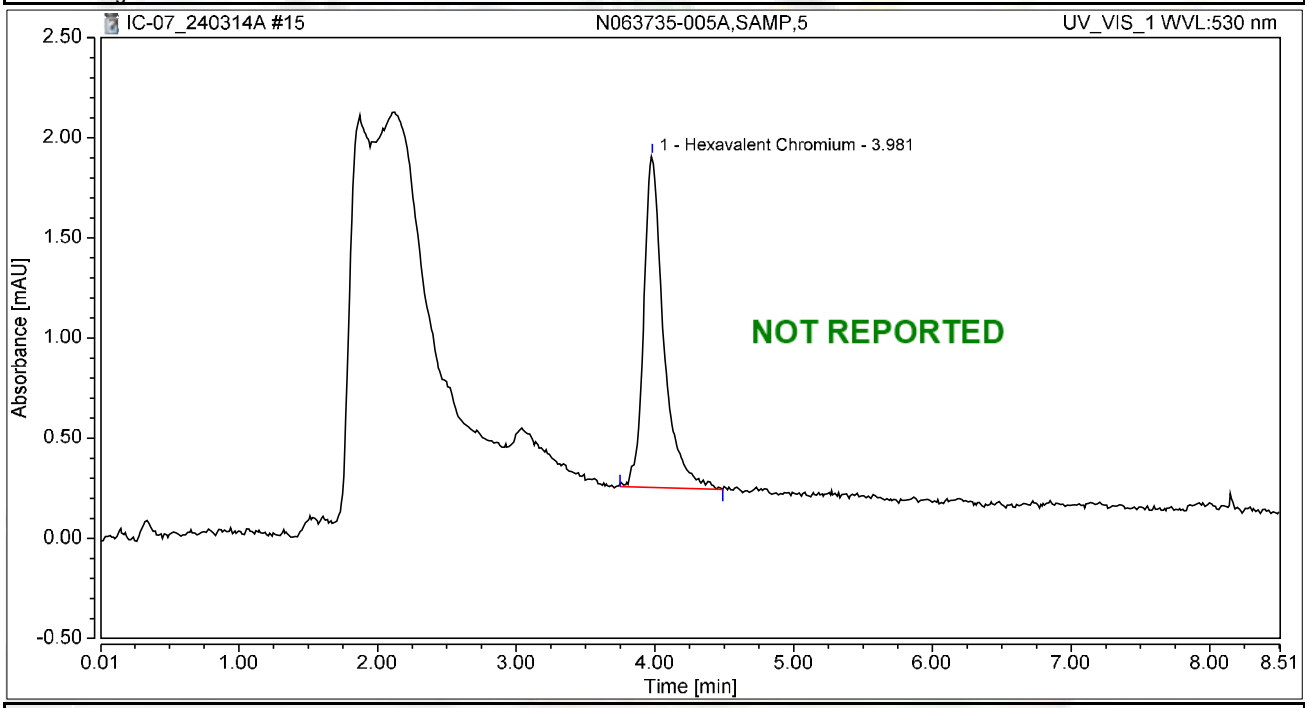
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	1.042	6.603	100.00	100.00	4.8945
Total:			**1.042**	**6.603**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 10:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

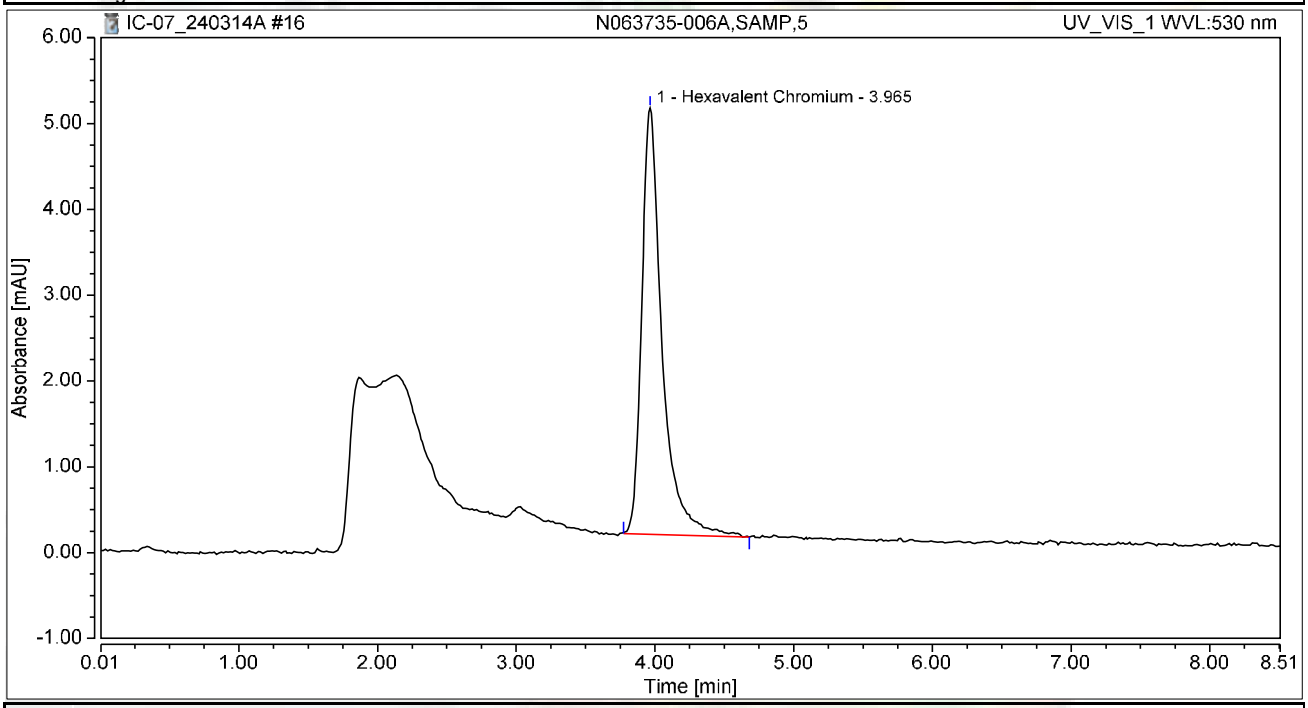
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.276	1.656	100.00	100.00	1.2947
Total:			**0.276**	**1.656**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-006A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 11:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

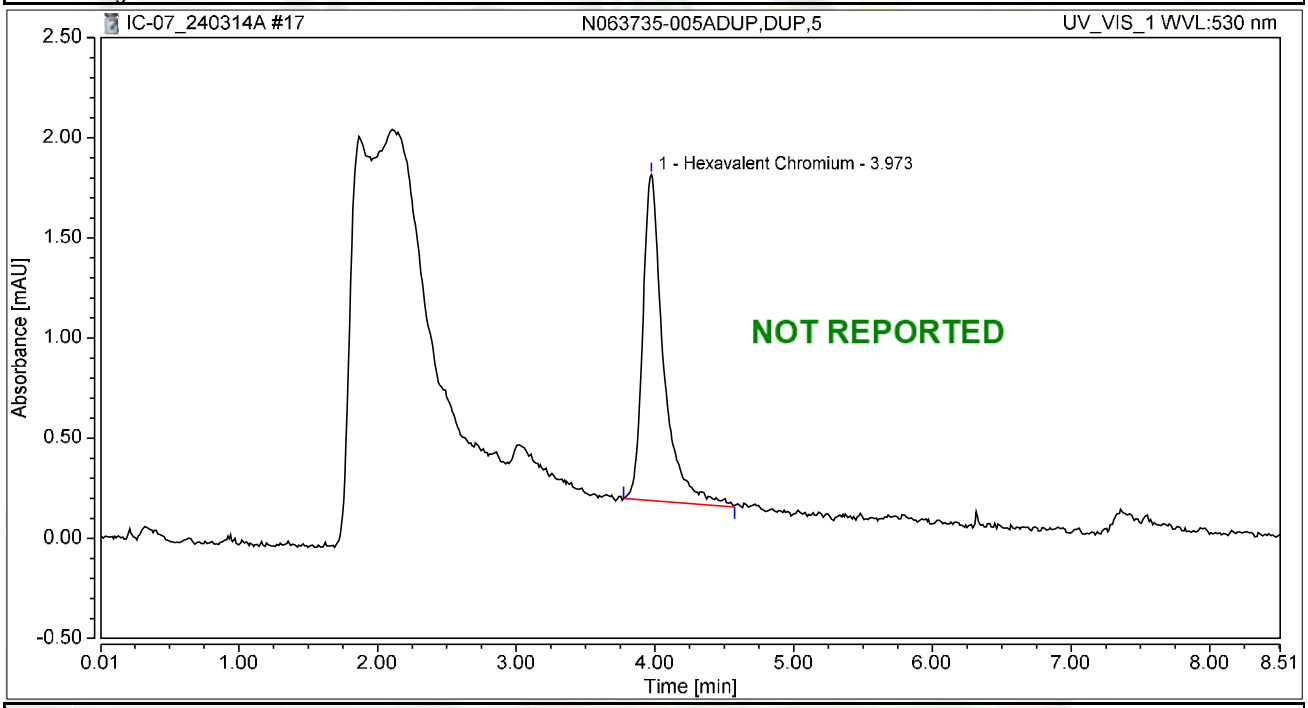
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.844	4.968	100.00	100.00	3.9659
Total:			**0.844**	**4.968**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-005ADUP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 11:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

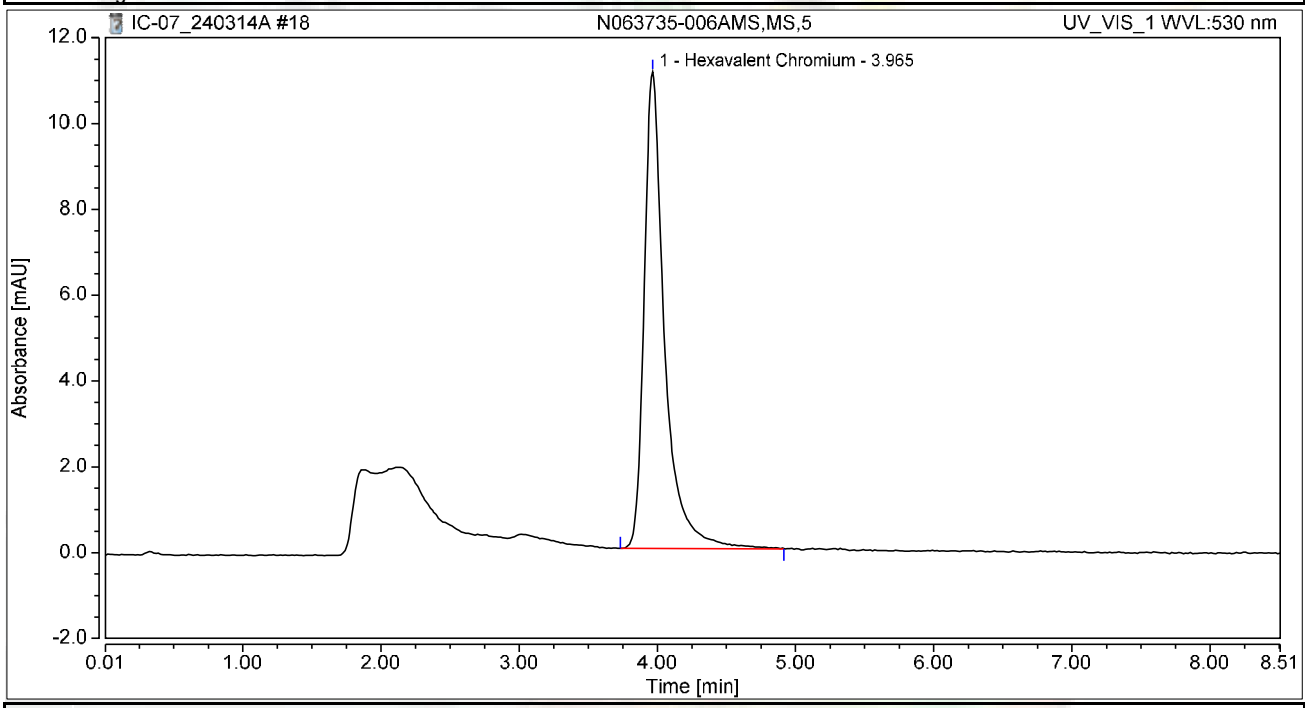
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.281	1.627	100.00	100.00	1.3226
Total:			**0.281**	**1.627**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-006AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 11:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

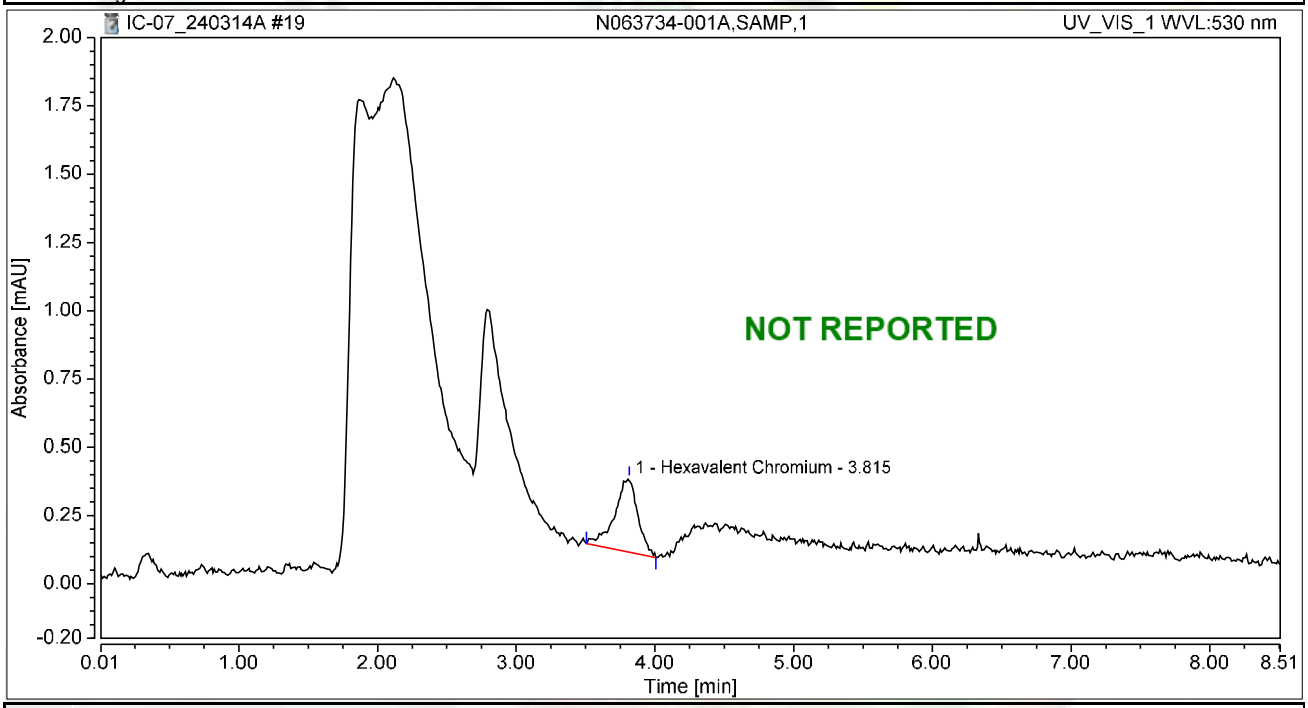
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	1.908	11.108	100.00	100.00	8.9625
Total:			**1.908**	**11.108**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063734-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 11:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

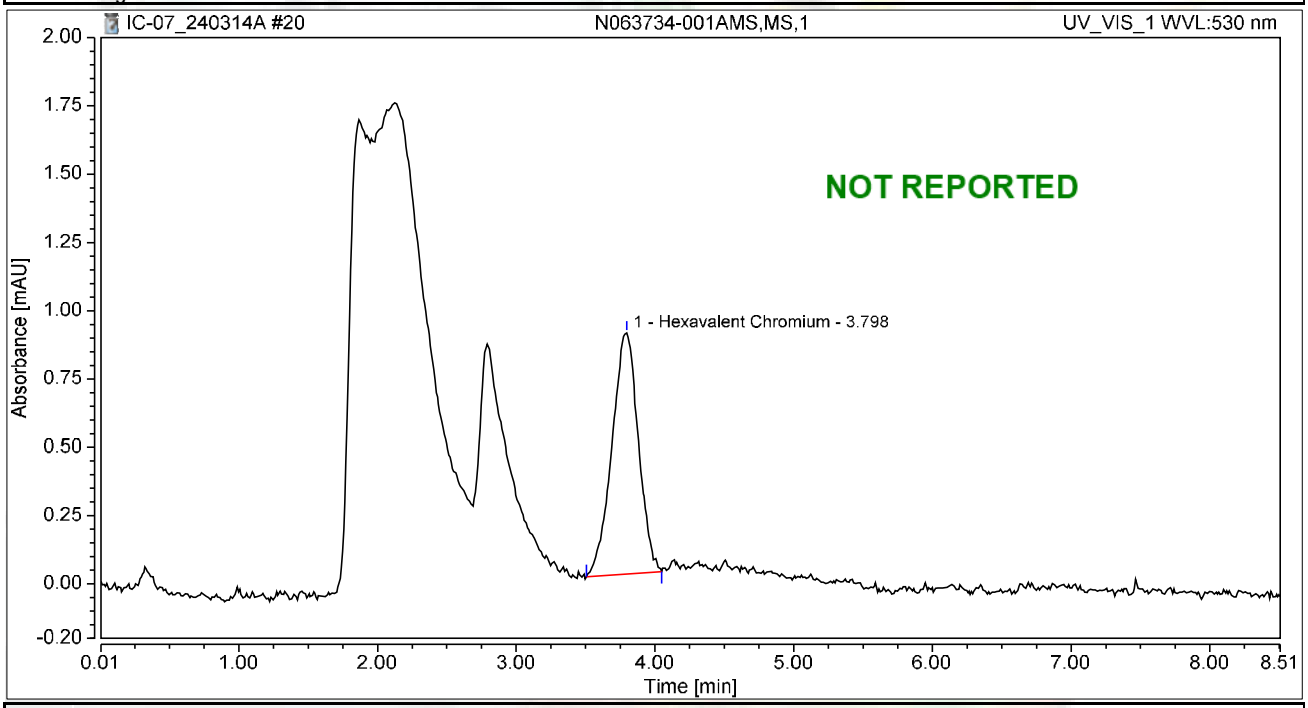
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	0.052	0.270	100.00	100.00	0.2450
Total:			**0.052**	**0.270**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063734-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 11:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

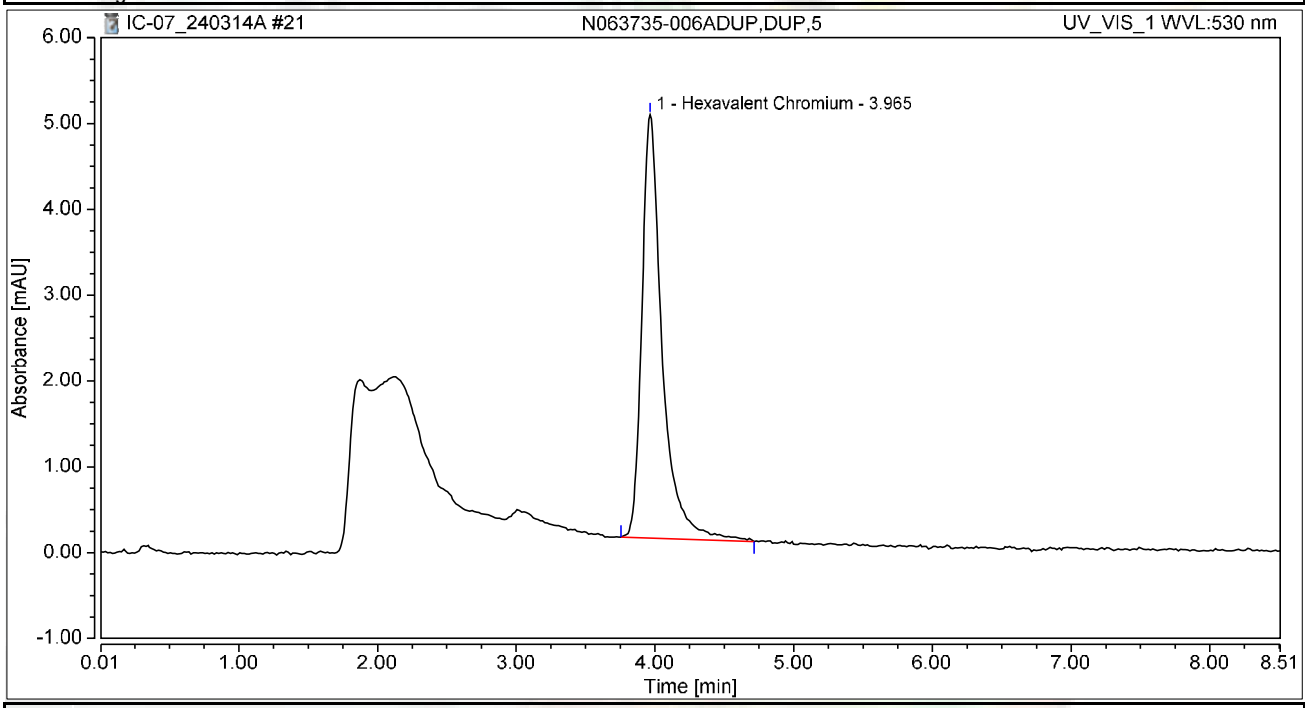
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.798	0.194	0.882	100.00	100.00	0.9119
Total:			**0.194**	**0.882**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-006ADUP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 11:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

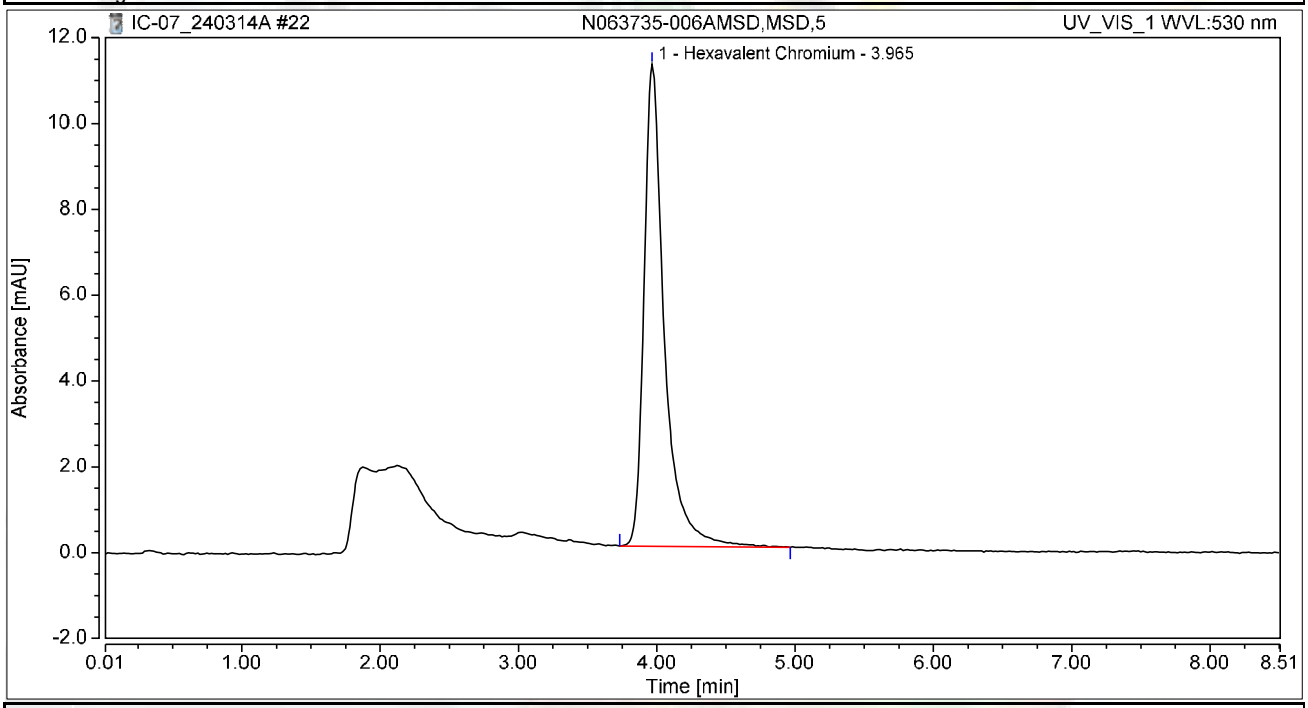
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.839	4.932	100.00	100.00	3.9442
Total:			**0.839**	**4.932**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-006AMSD,MSD,5**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 12:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

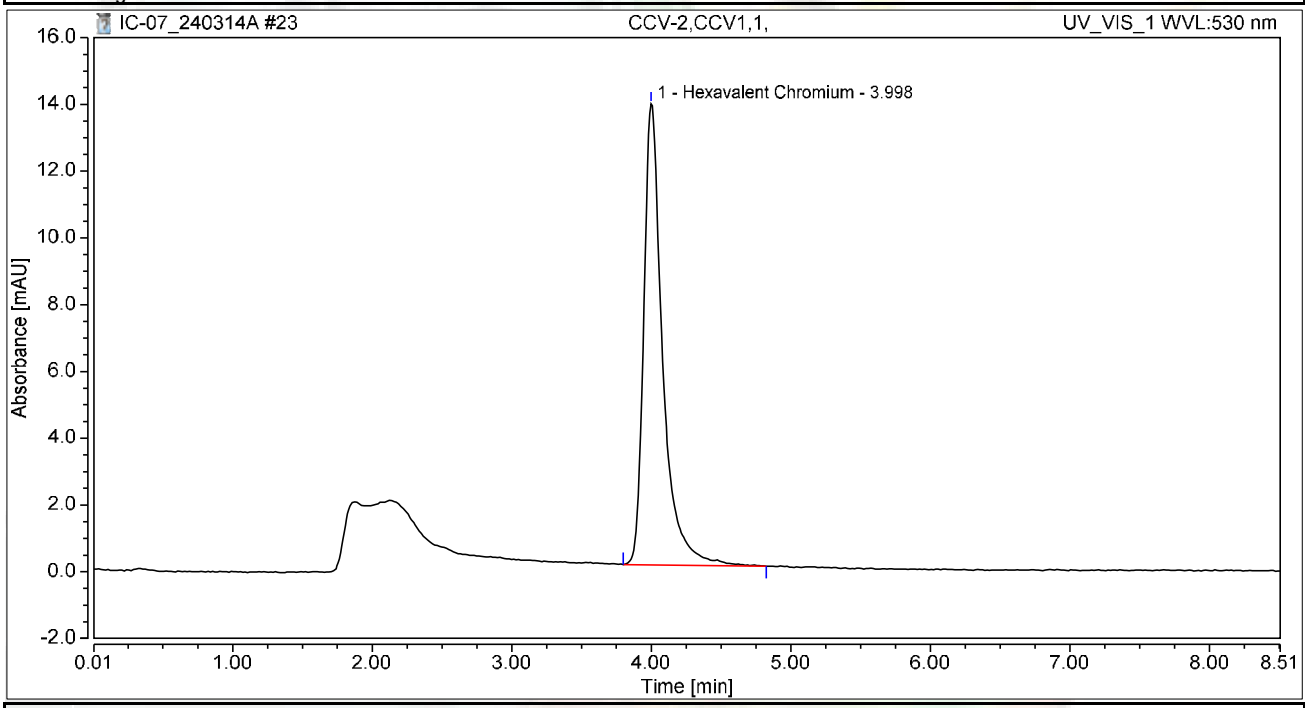
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	1.912	11.224	100.00	100.00	8.9821
Total:			**1.912**	**11.224**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 12:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

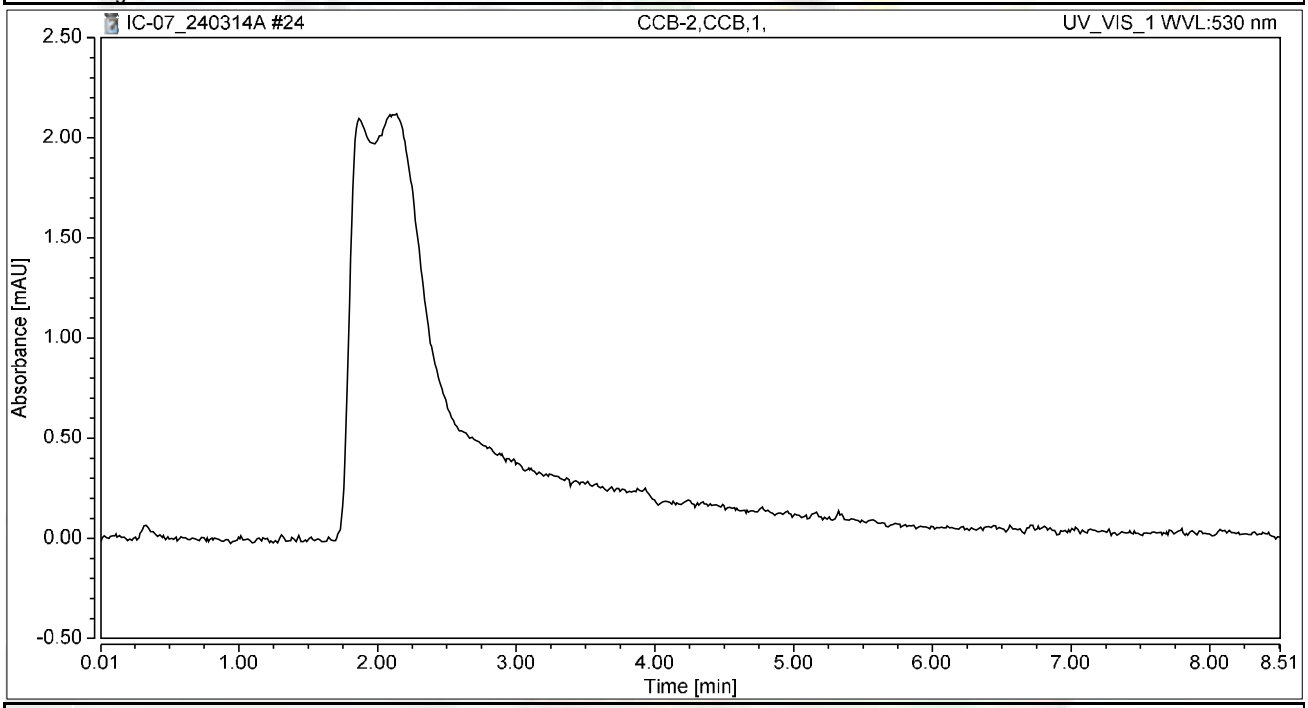
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	2.168	13.813	100.00	100.00	10.1856
Total:			**2.168**	**13.813**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

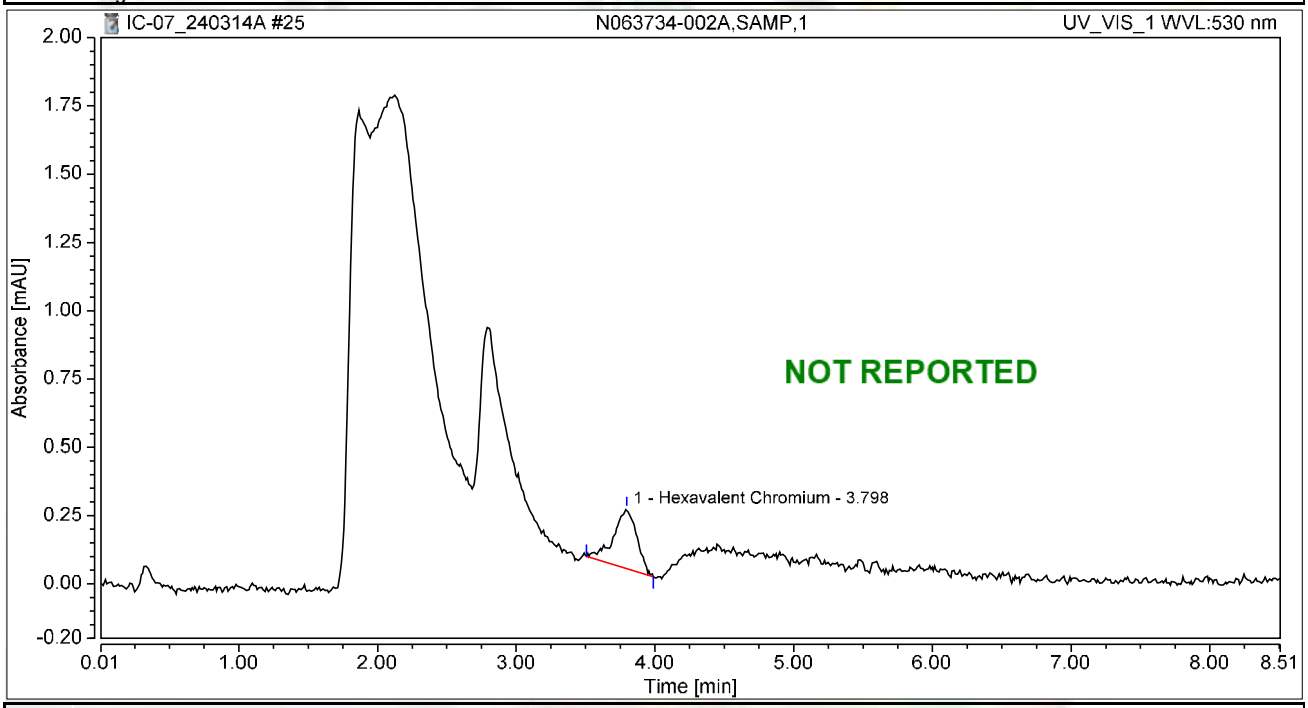
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063734-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 12:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

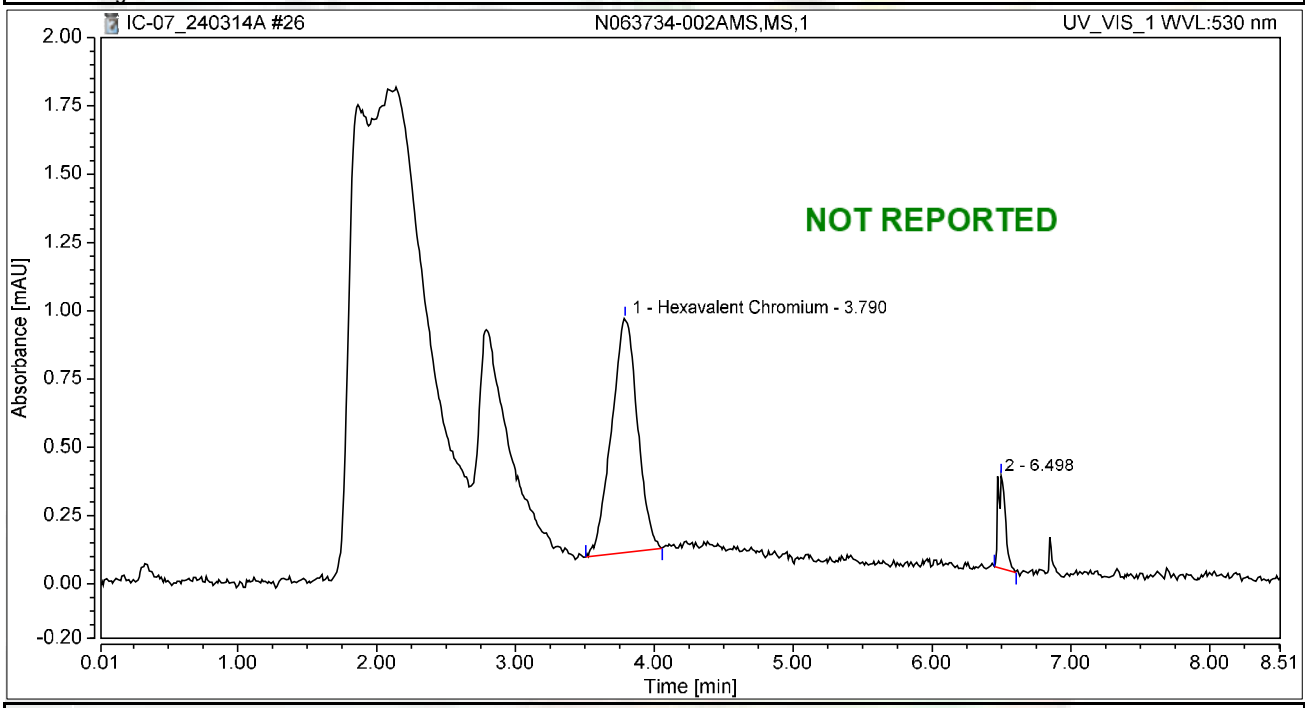
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.798	0.042	0.219	100.00	100.00	0.1977
Total:			**0.042**	**0.219**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063734-002AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

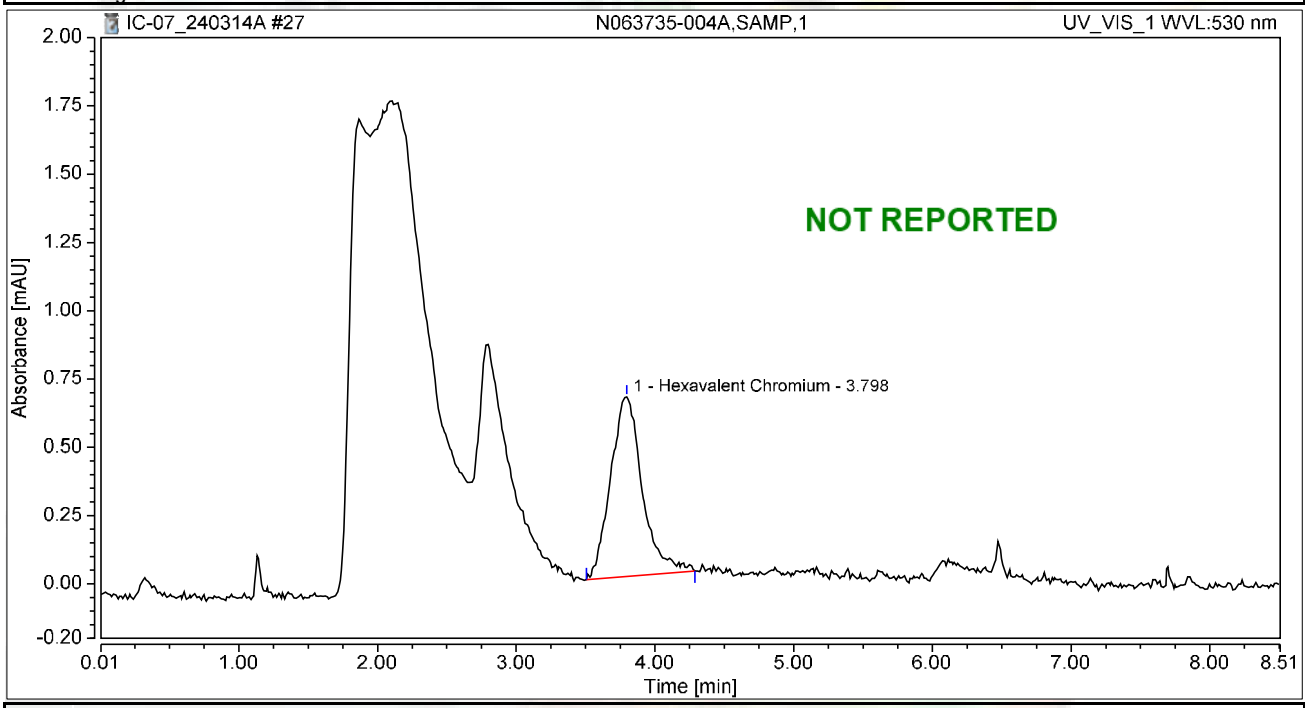
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.185	0.857	89.68	71.69	0.8705
2		6.498	0.021	0.338	10.32	28.31	n.a.
Total:			**0.207**	**1.195**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 12:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

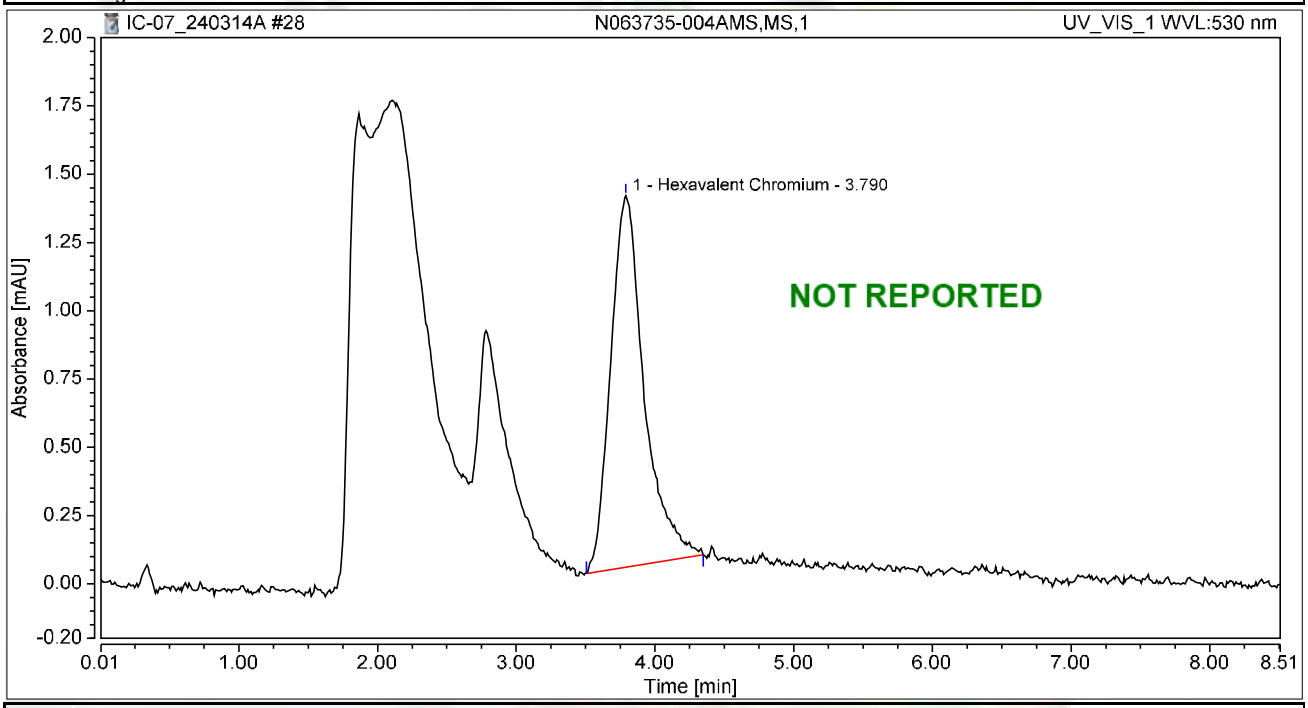
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.798	0.175	0.657	100.00	100.00	0.8217
Total:			**0.175**	**0.657**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

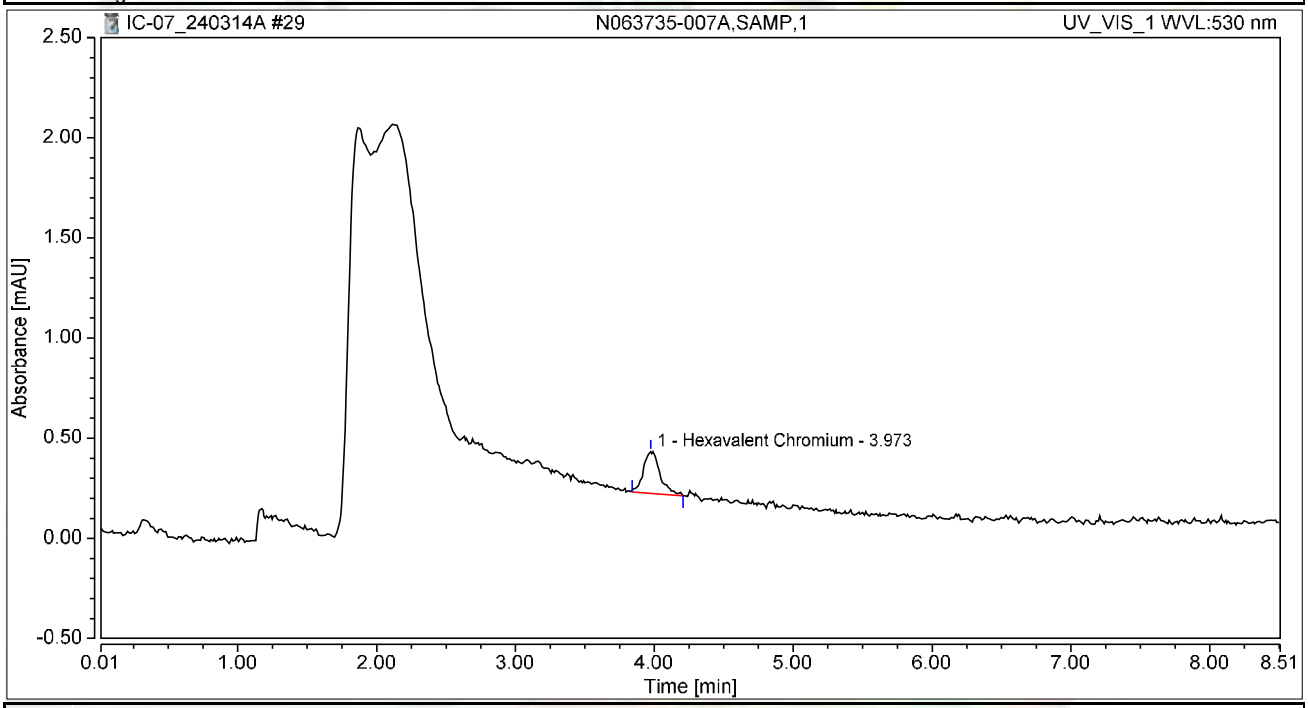
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.379	1.360	100.00	100.00	1.7819
Total:			**0.379**	**1.360**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-007A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 13:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

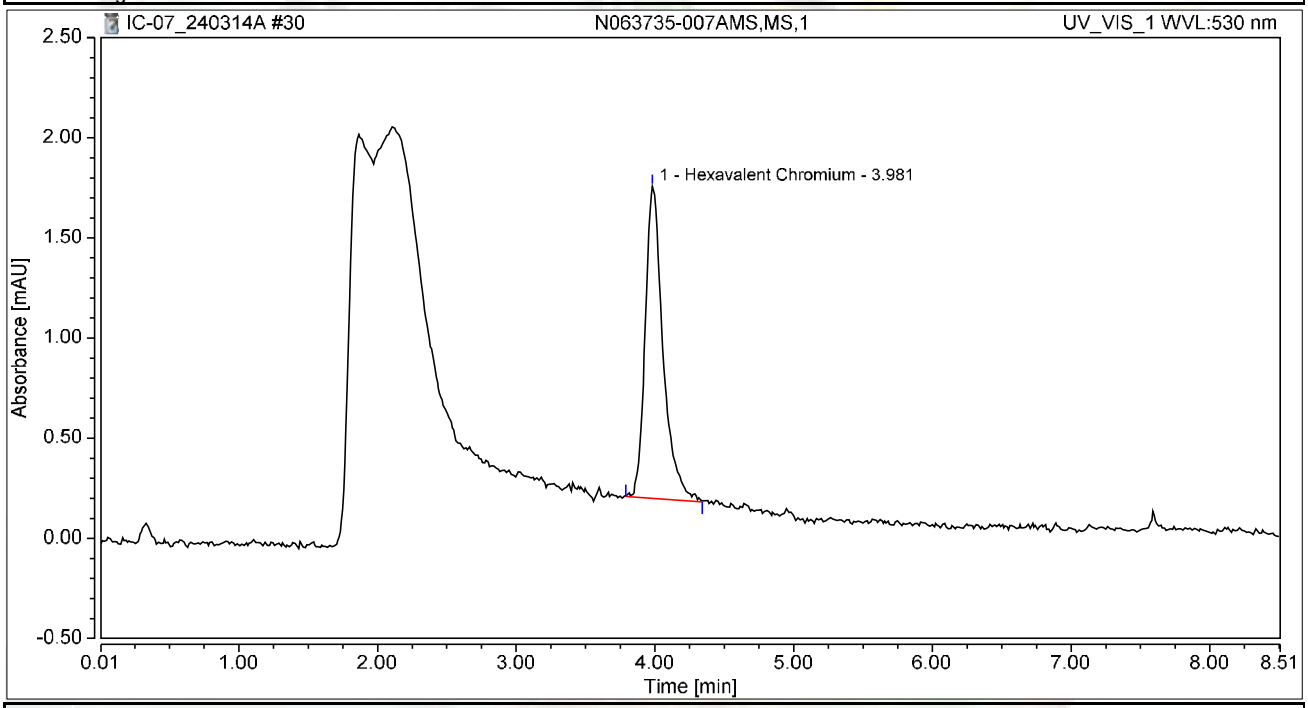
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.029	0.209	100.00	100.00	0.1384
Total:			**0.029**	**0.209**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 13:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

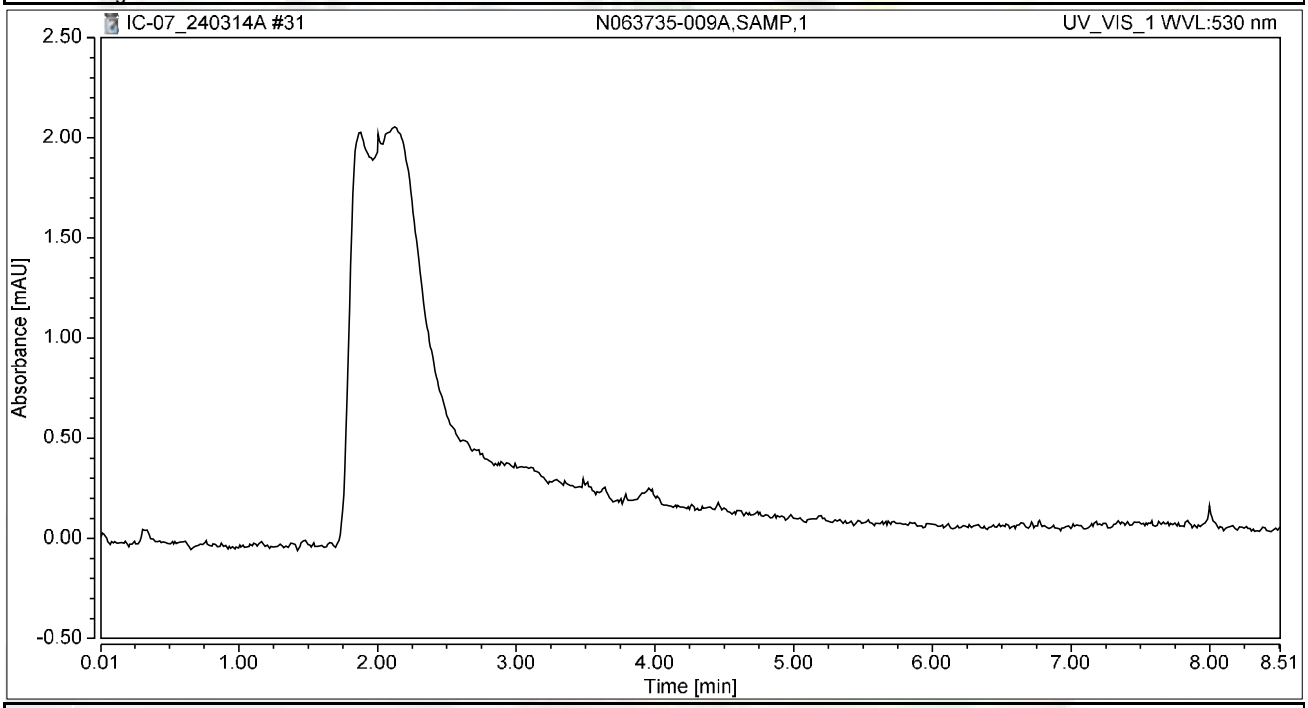
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.233	1.559	100.00	100.00	1.0934
Total:			**0.233**	**1.559**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 13:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

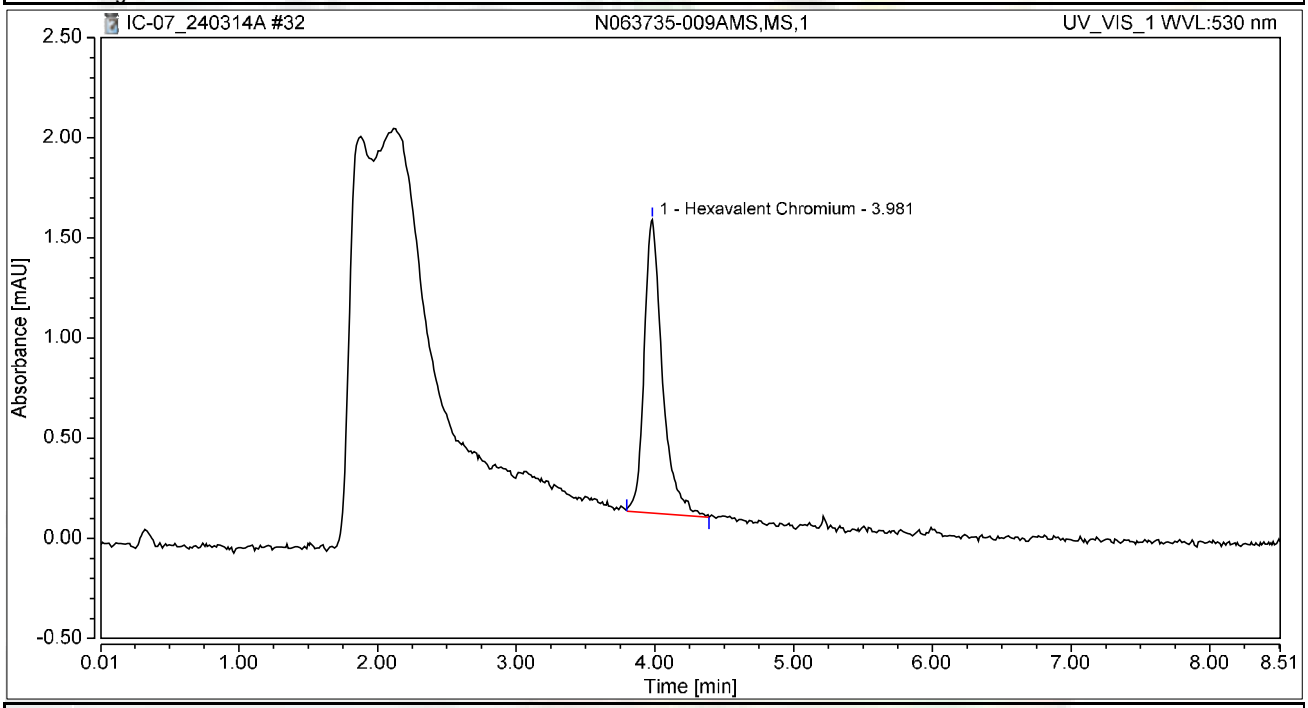
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 13:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

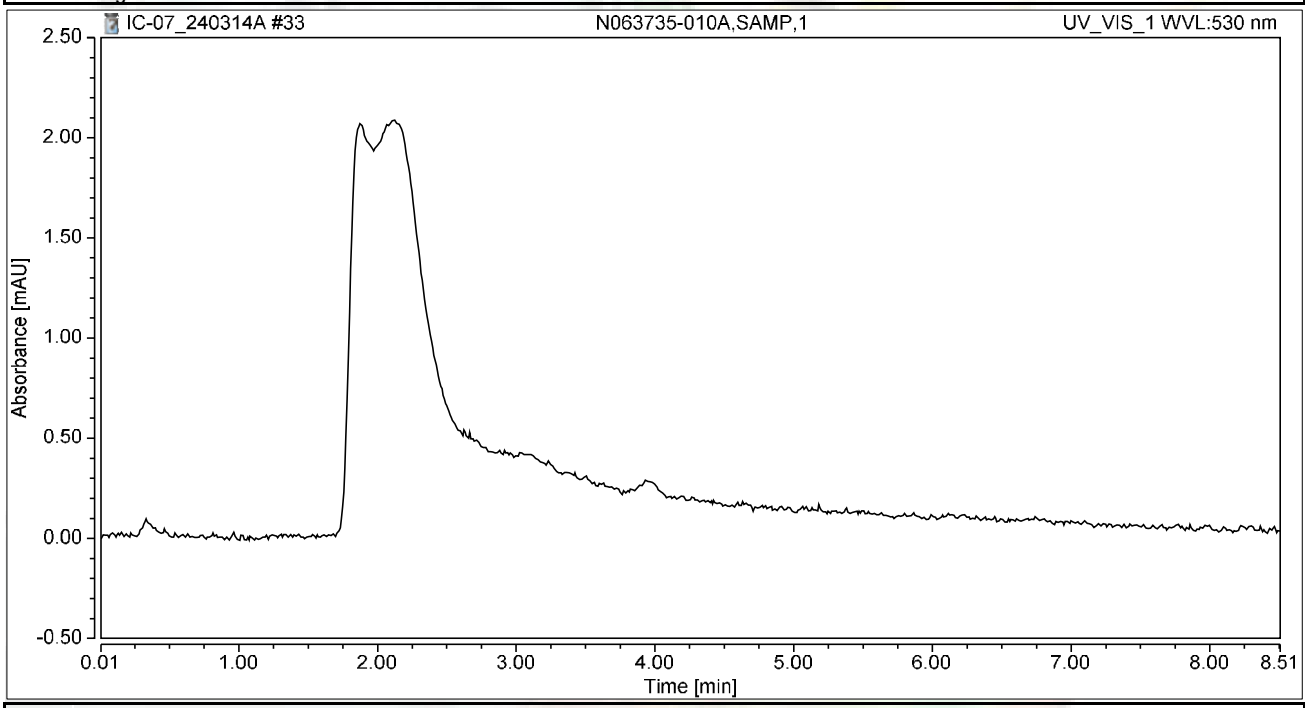
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.223	1.466	100.00	100.00	1.0501
Total:			**0.223**	**1.466**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-010A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 13:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

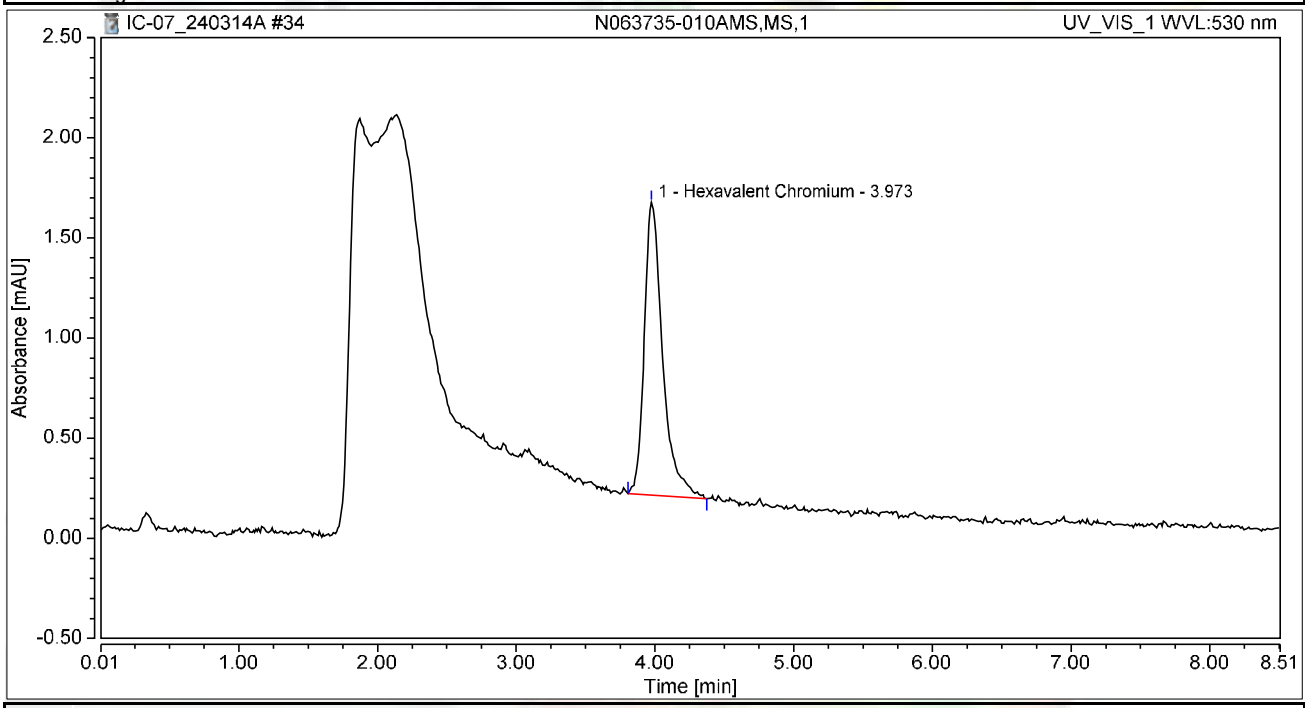
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-010AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 13:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

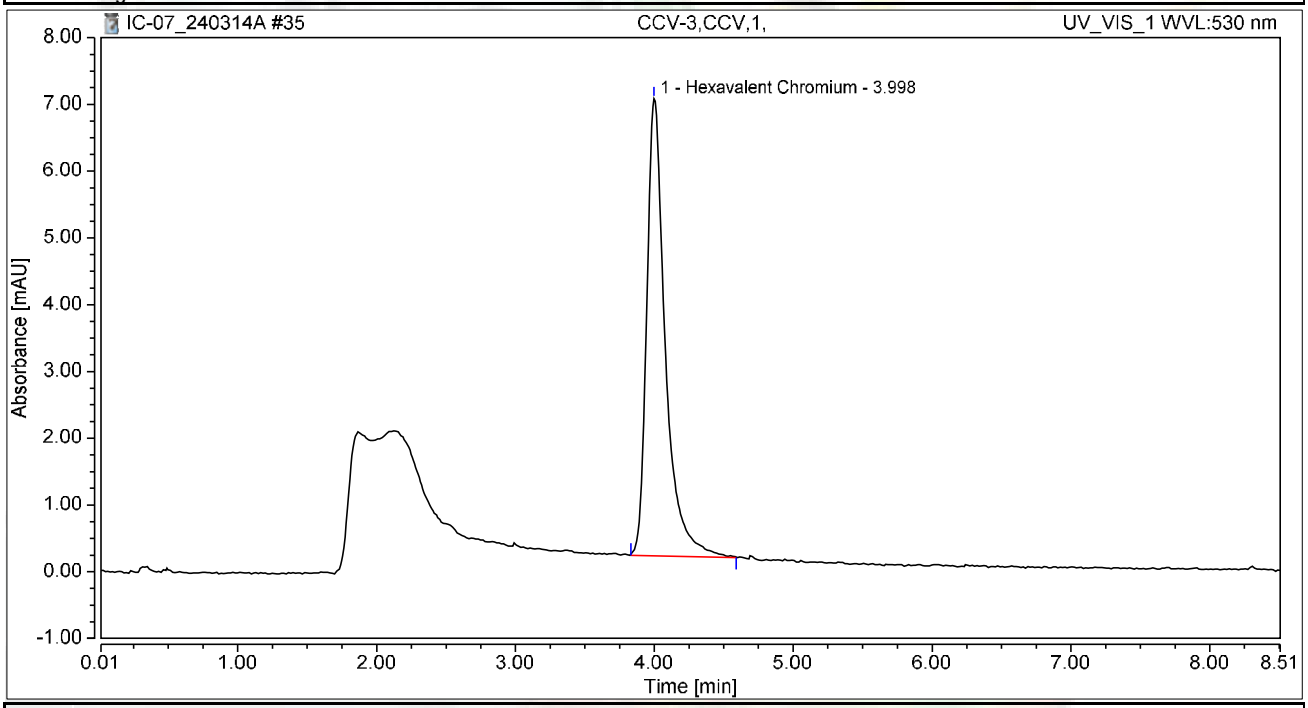
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.224	1.461	100.00	100.00	1.0518
Total:			**0.224**	**1.461**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 14:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

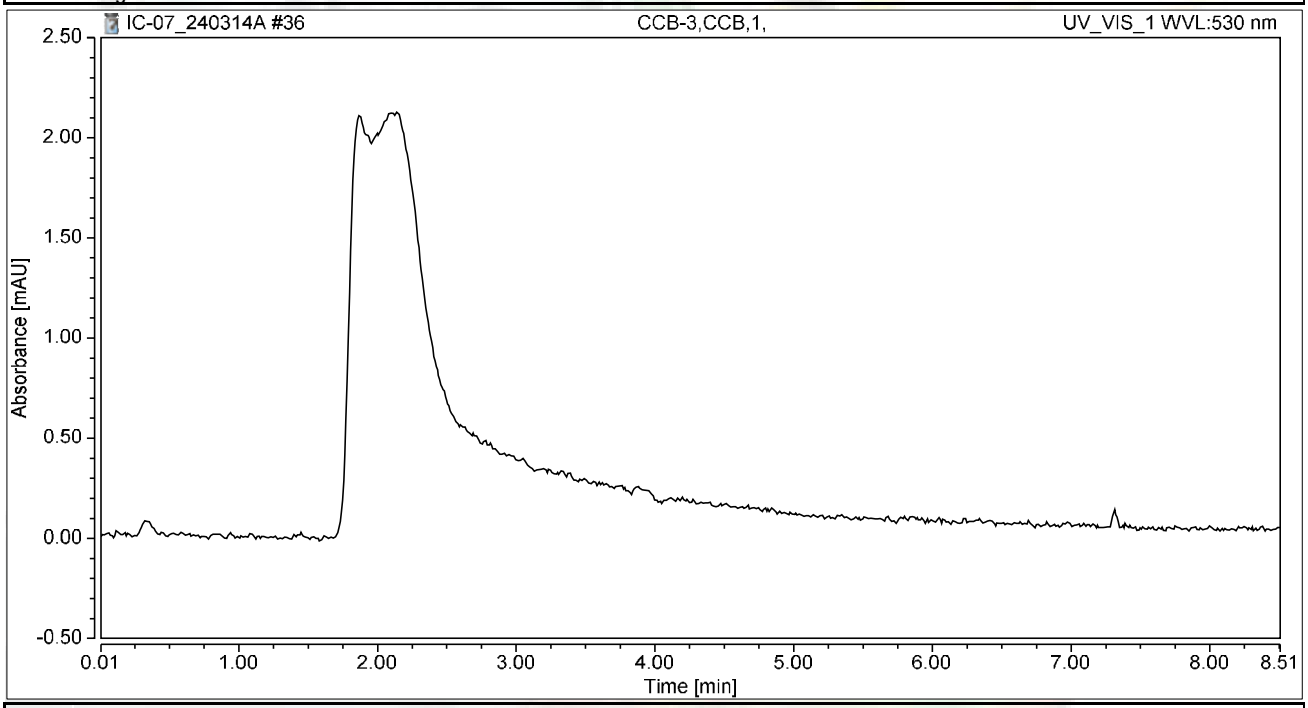
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	1.065	6.847	100.00	100.00	5.0015
Total:			**1.065**	**6.847**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 14:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

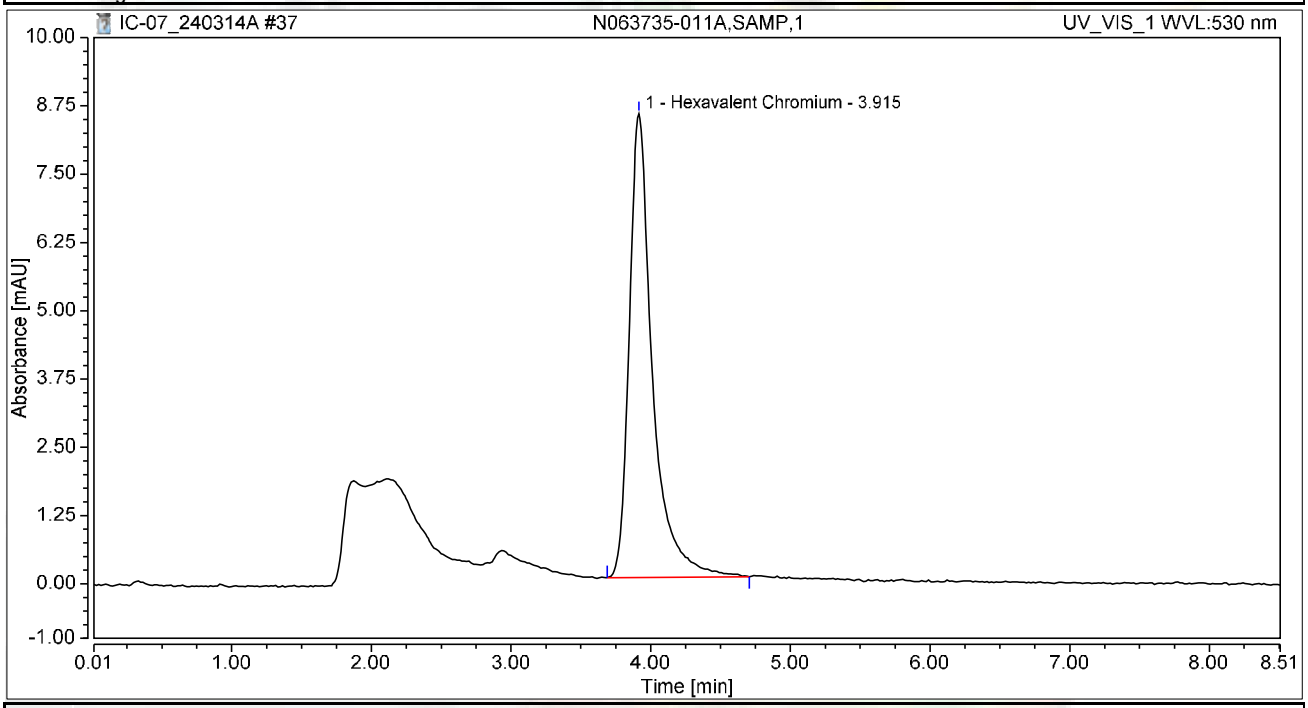
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-011A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 14:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

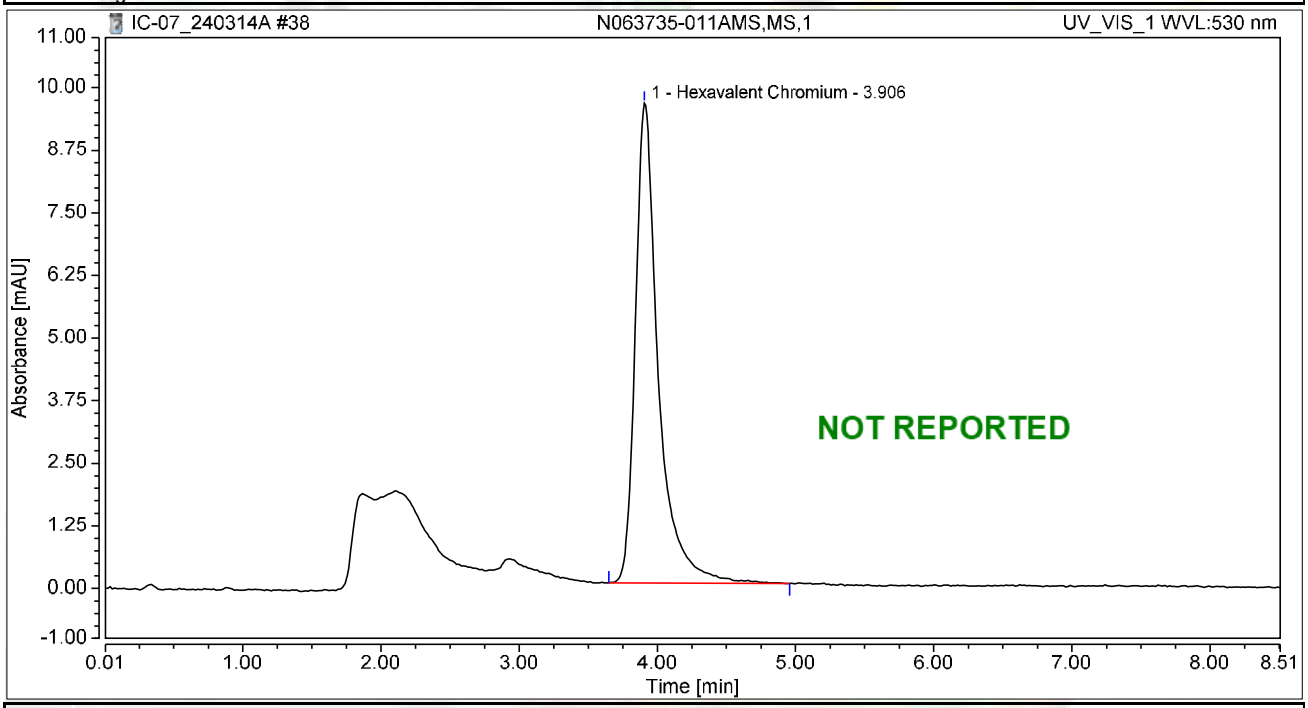
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.915	1.628	8.490	100.00	100.00	7.6510
Total:			**1.628**	**8.490**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 14:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

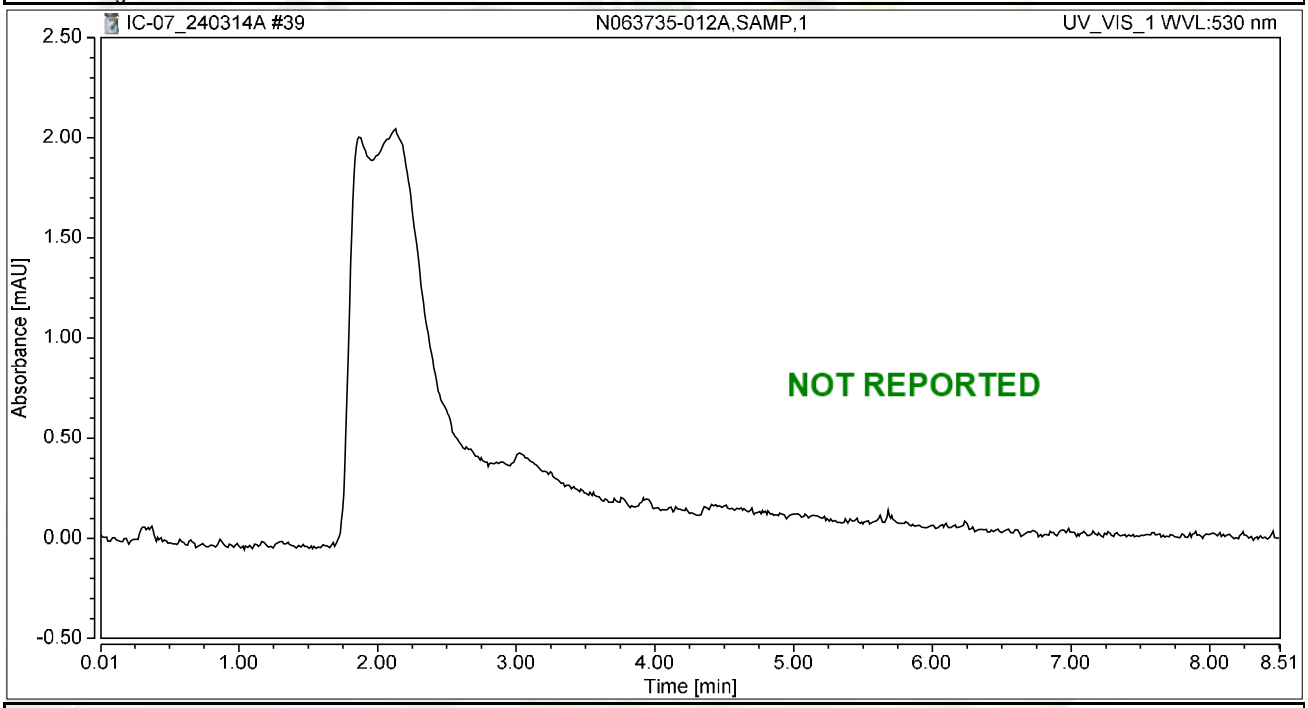
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.906	1.857	9.585	100.00	100.00	8.7265
Total:			**1.857**	**9.585**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-012A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 14:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

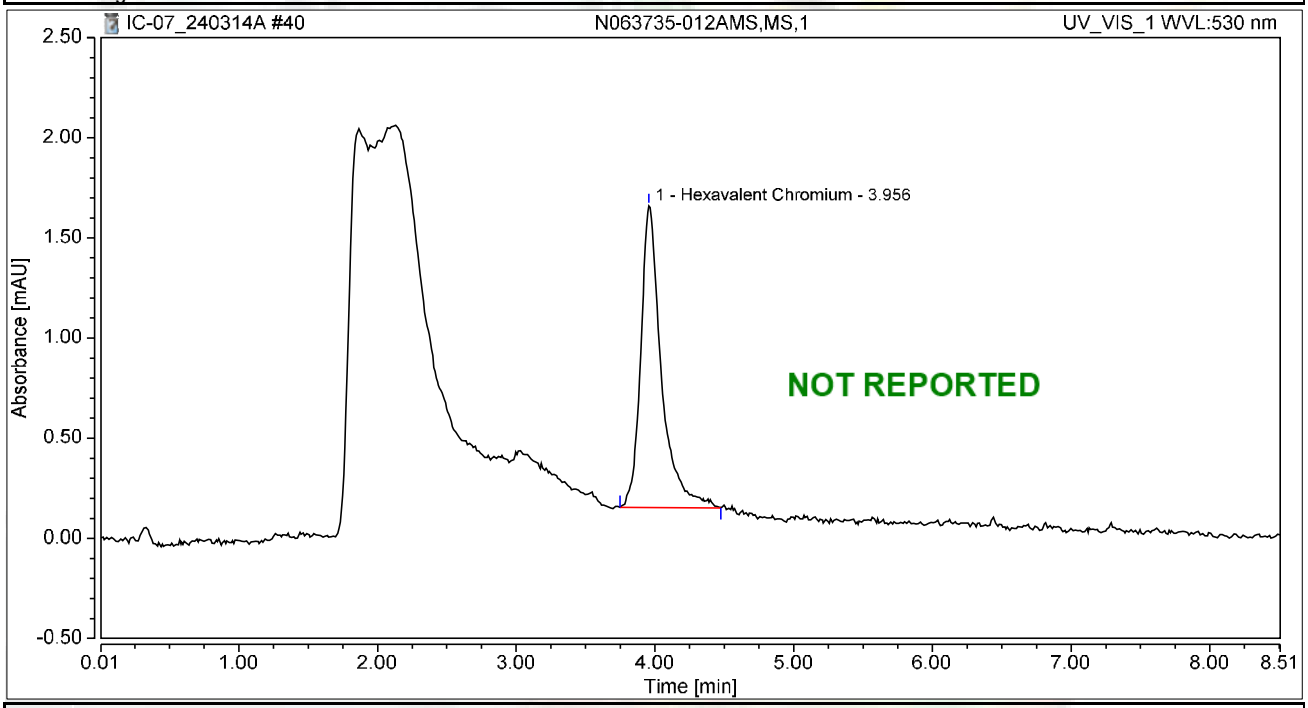
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-012AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 14:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

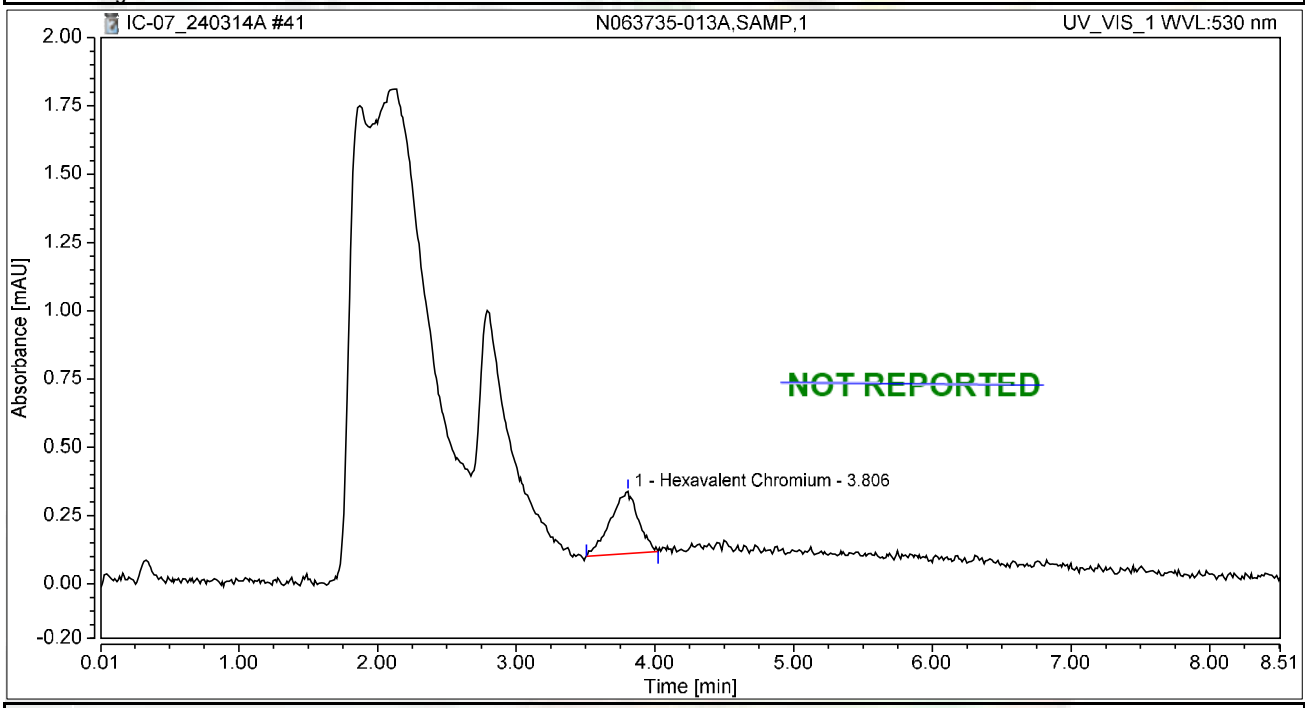
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.260	1.507	100.00	100.00	1.2203
Total:			**0.260**	**1.507**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-013A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 15:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

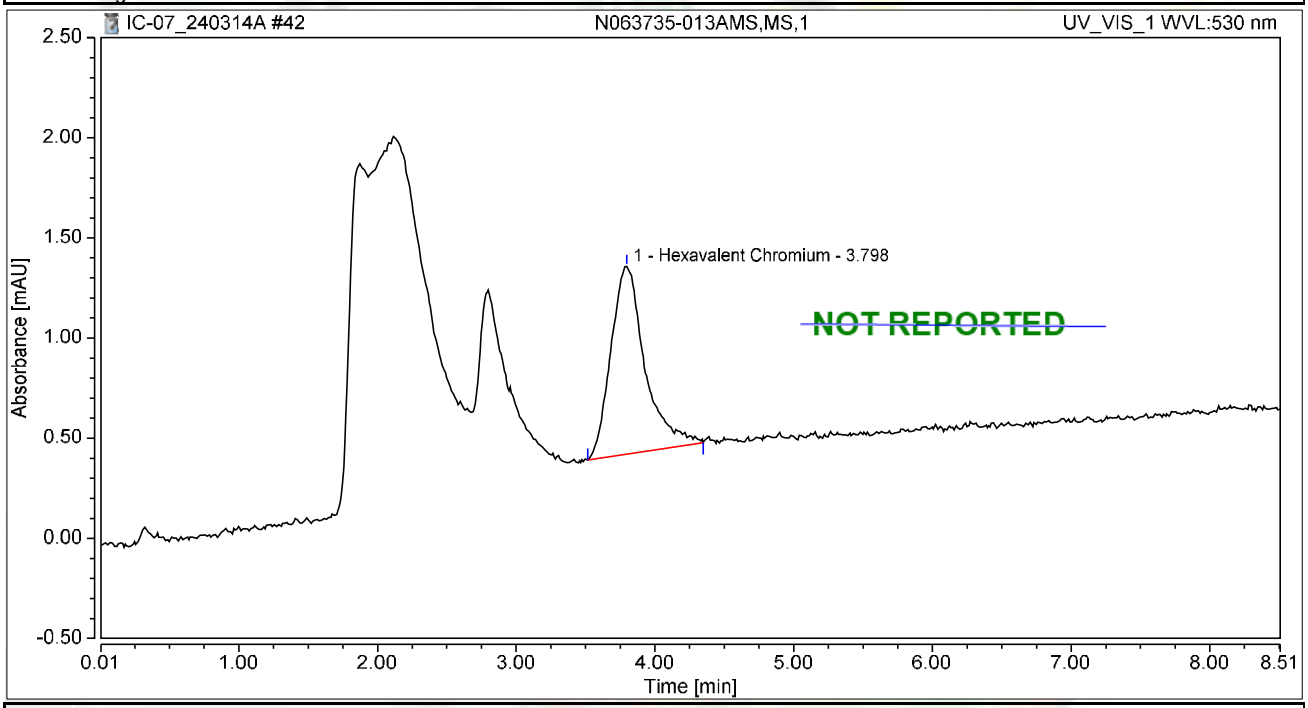
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.806	0.053	0.227	100.00	100.00	0.2507
Total:			**0.053**	**0.227**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-013AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 15:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

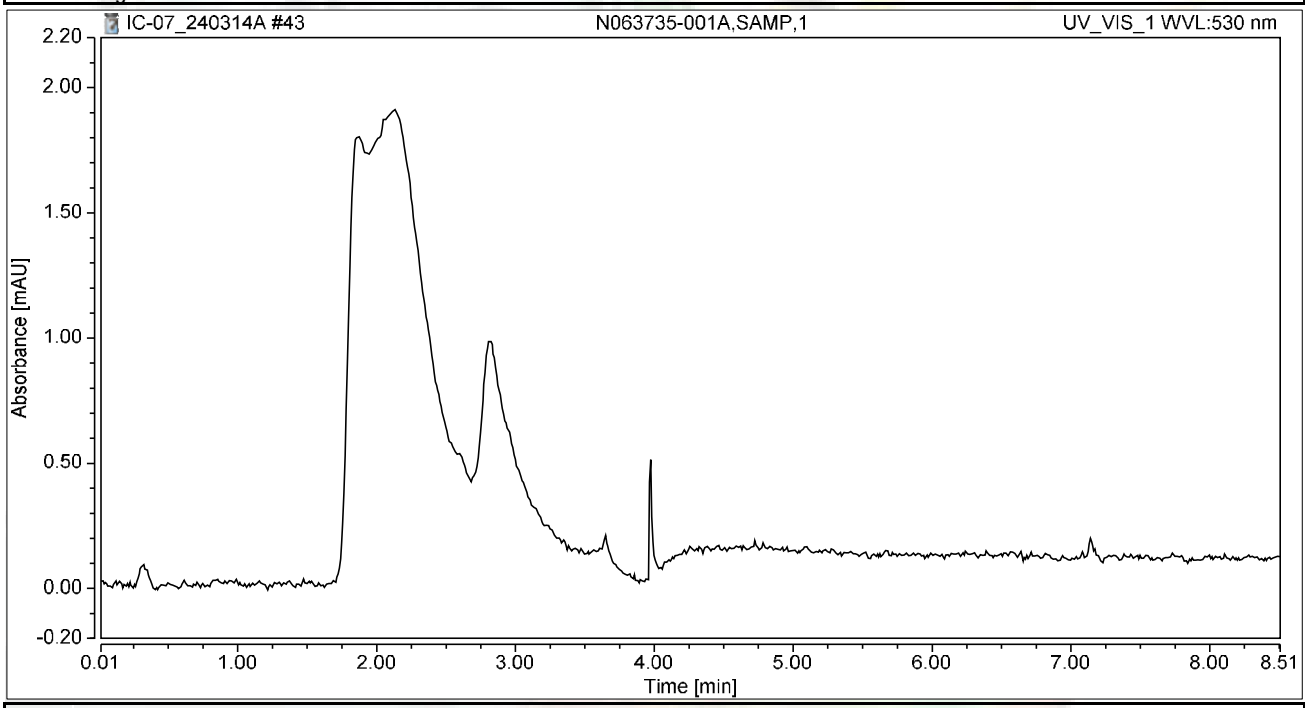
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.798	0.267	0.937	100.00	100.00	1.2551
Total:			**0.267**	**0.937**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-001A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 15:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

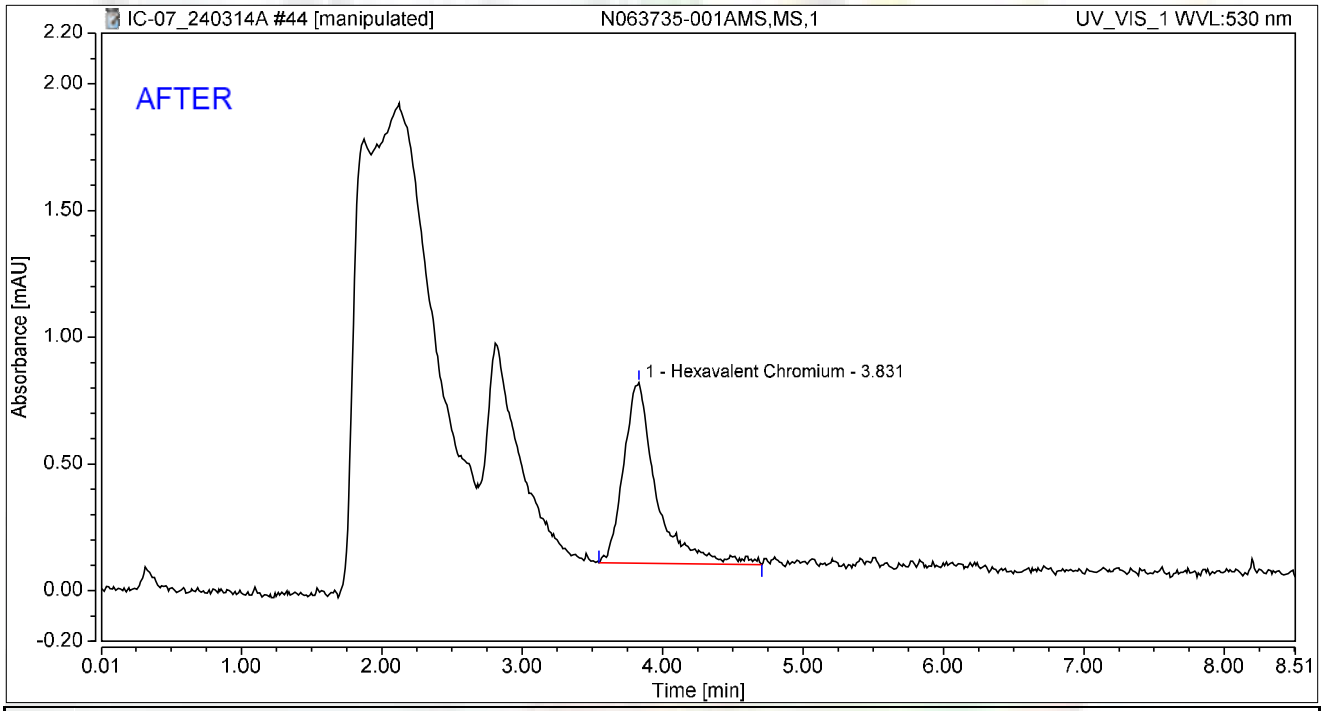
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 15:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.831	0.192	0.713	100.00	100.00	0.9040
Total:			**0.192**	**0.713**	**100.00**	**100.00**	

Reviewed by:

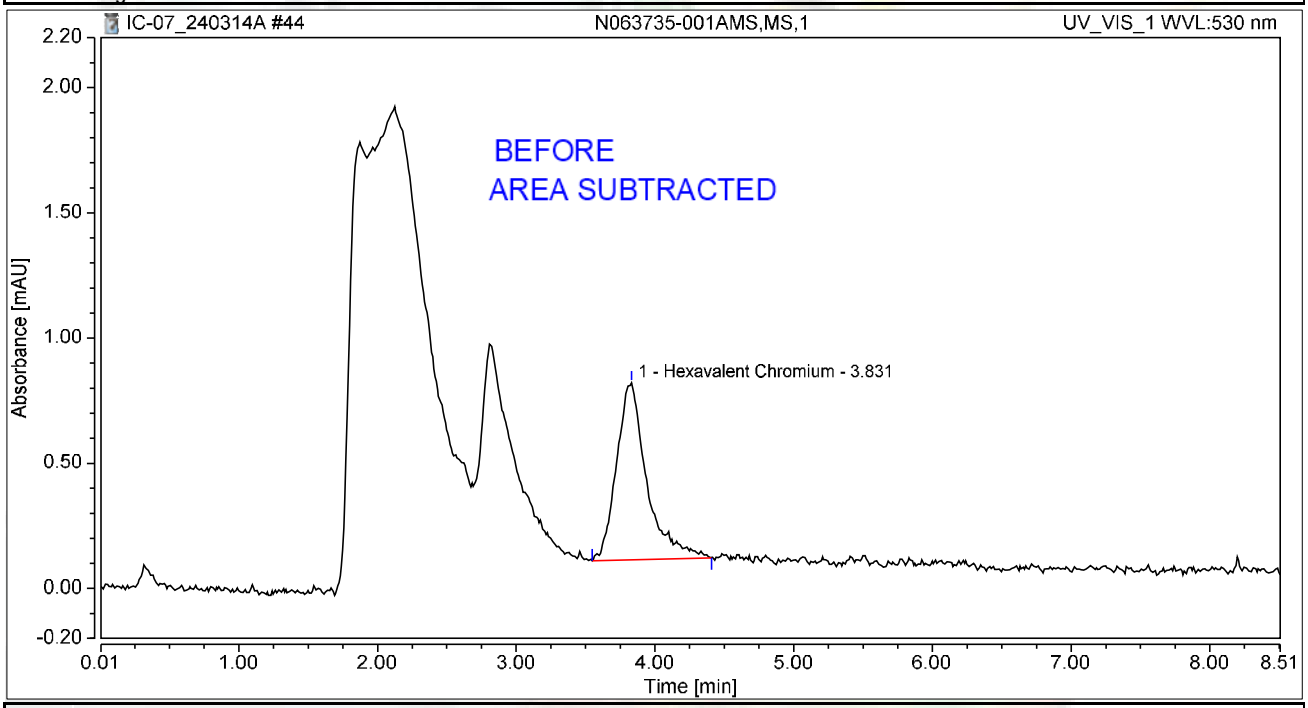
dMocha 3/22/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063735-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 15:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

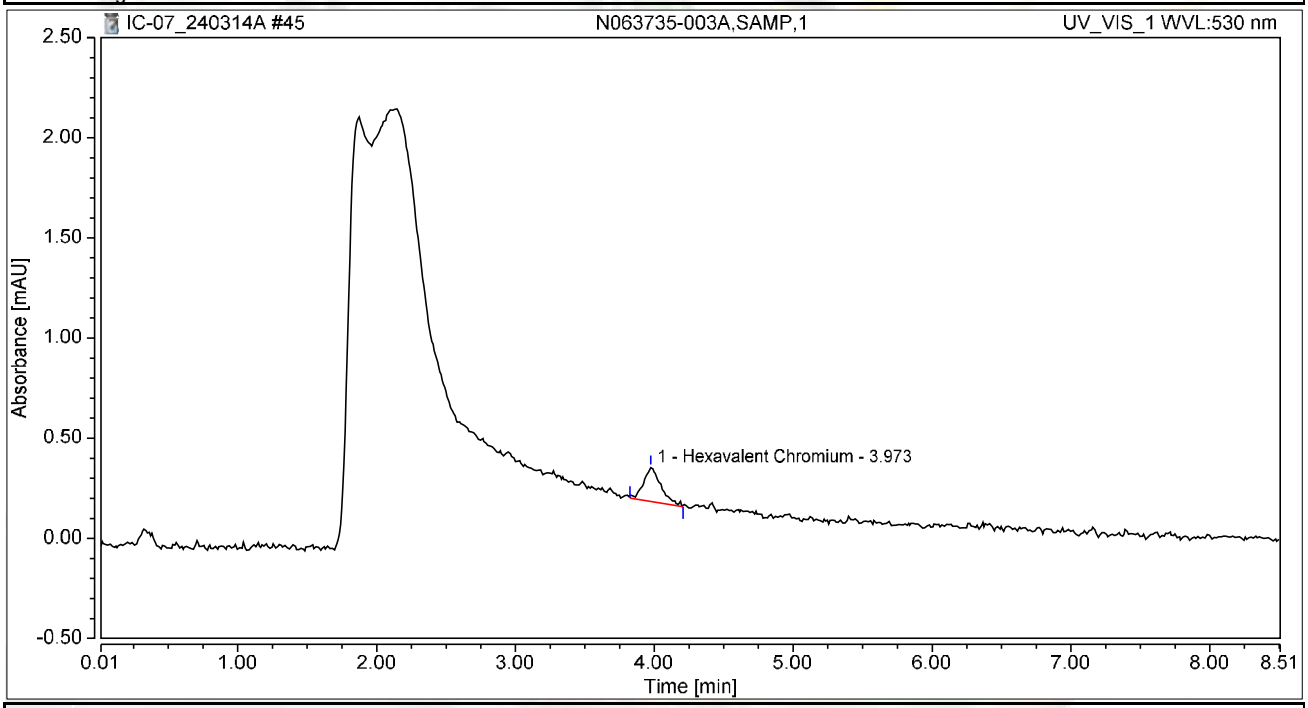
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.831	0.179	0.707	100.00	100.00	0.8395
Total:			**0.179**	**0.707**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-003A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 15:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

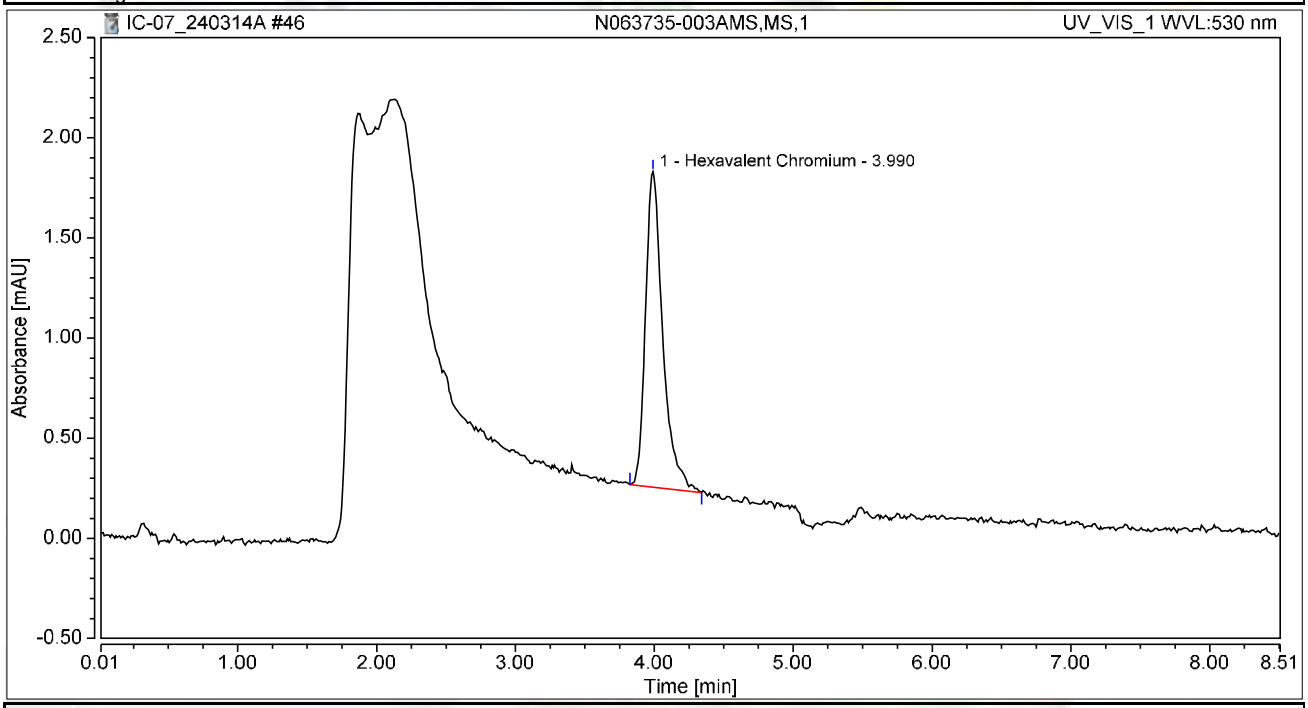
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.025	0.169	100.00	100.00	0.1166
Total:			**0.025**	**0.169**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-003AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 16:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

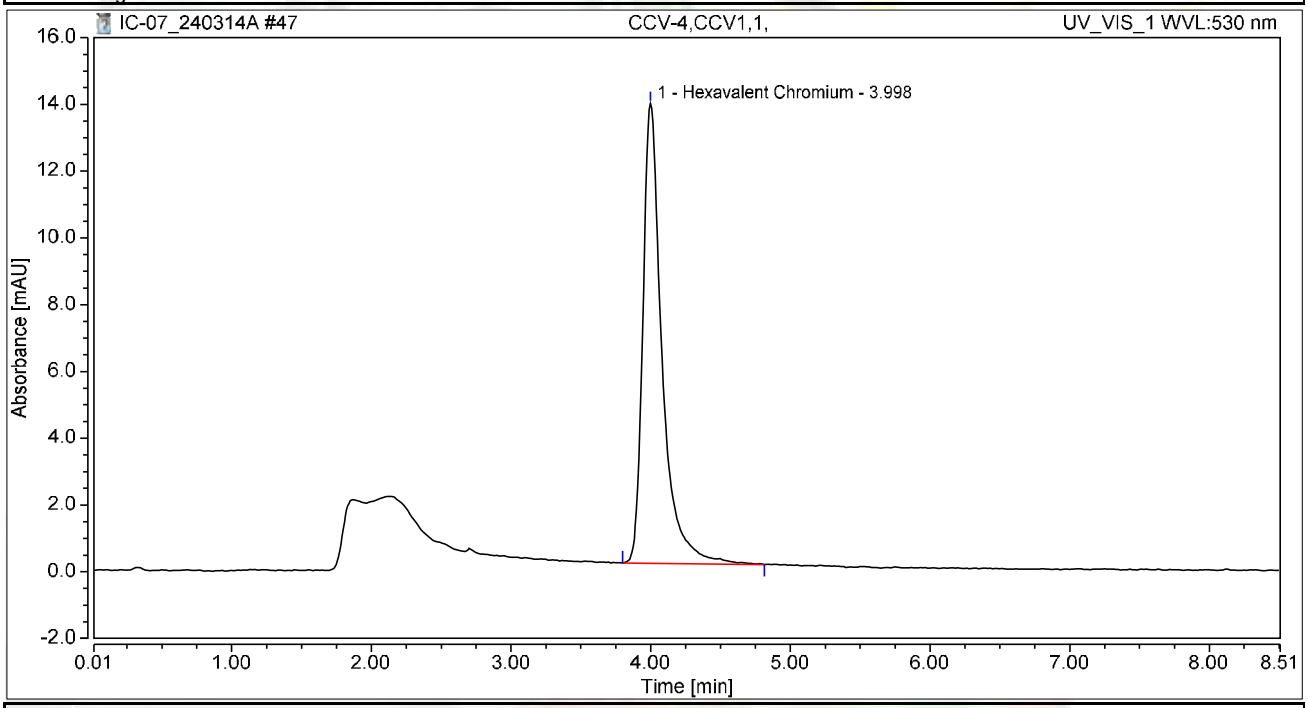
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.227	1.574	100.00	100.00	1.0682
Total:			**0.227**	**1.574**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 16:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

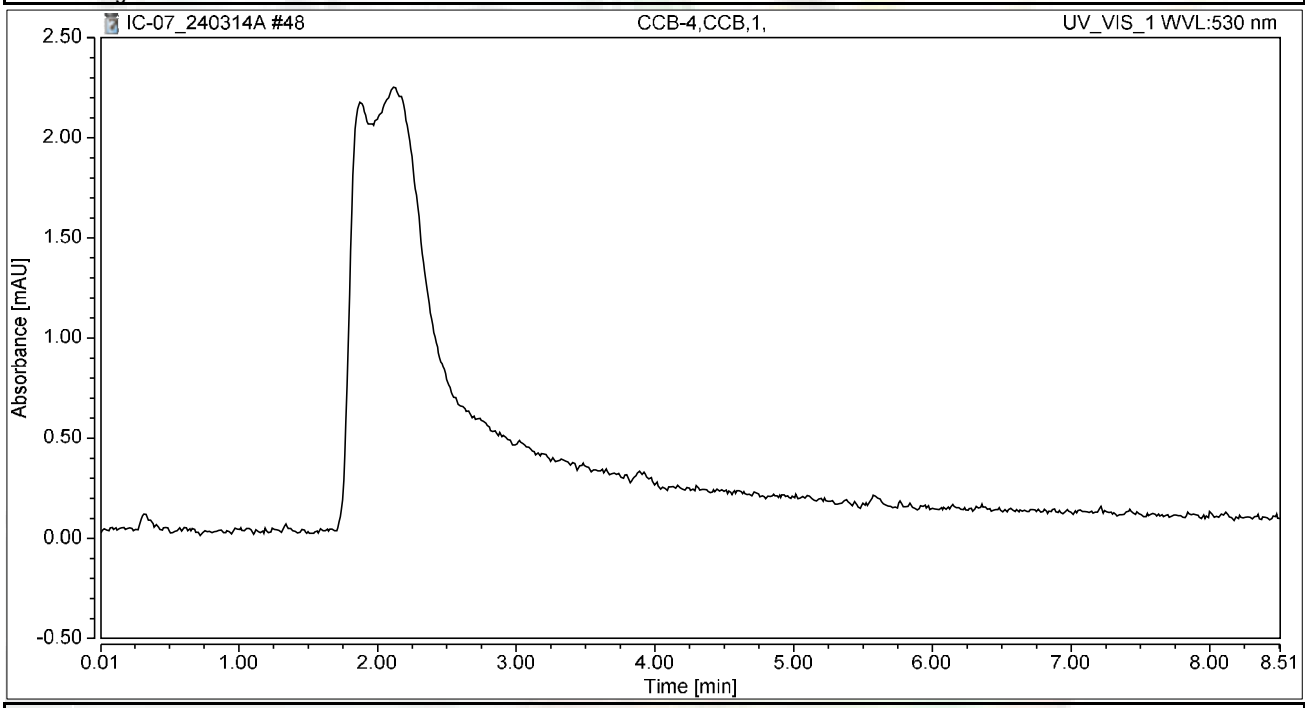
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	2.196	13.778	100.00	100.00	10.3179
Total:			**2.196**	**13.778**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 16:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

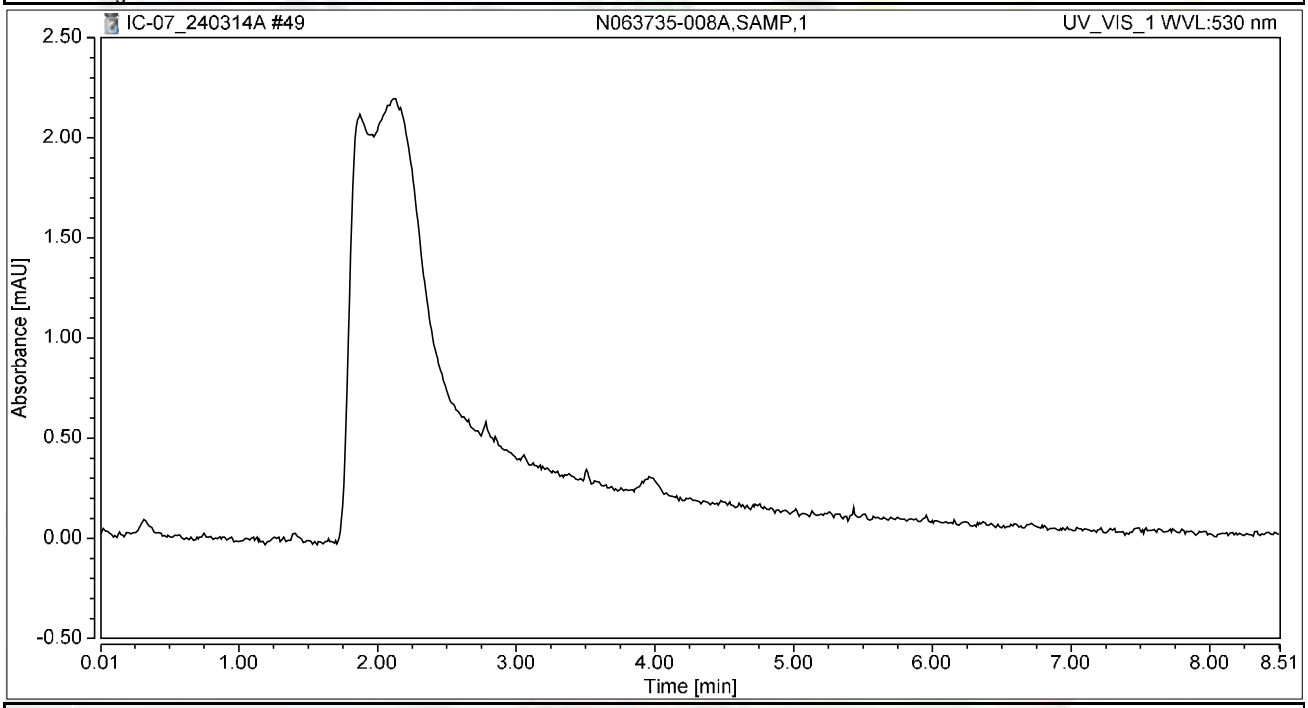
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 16:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

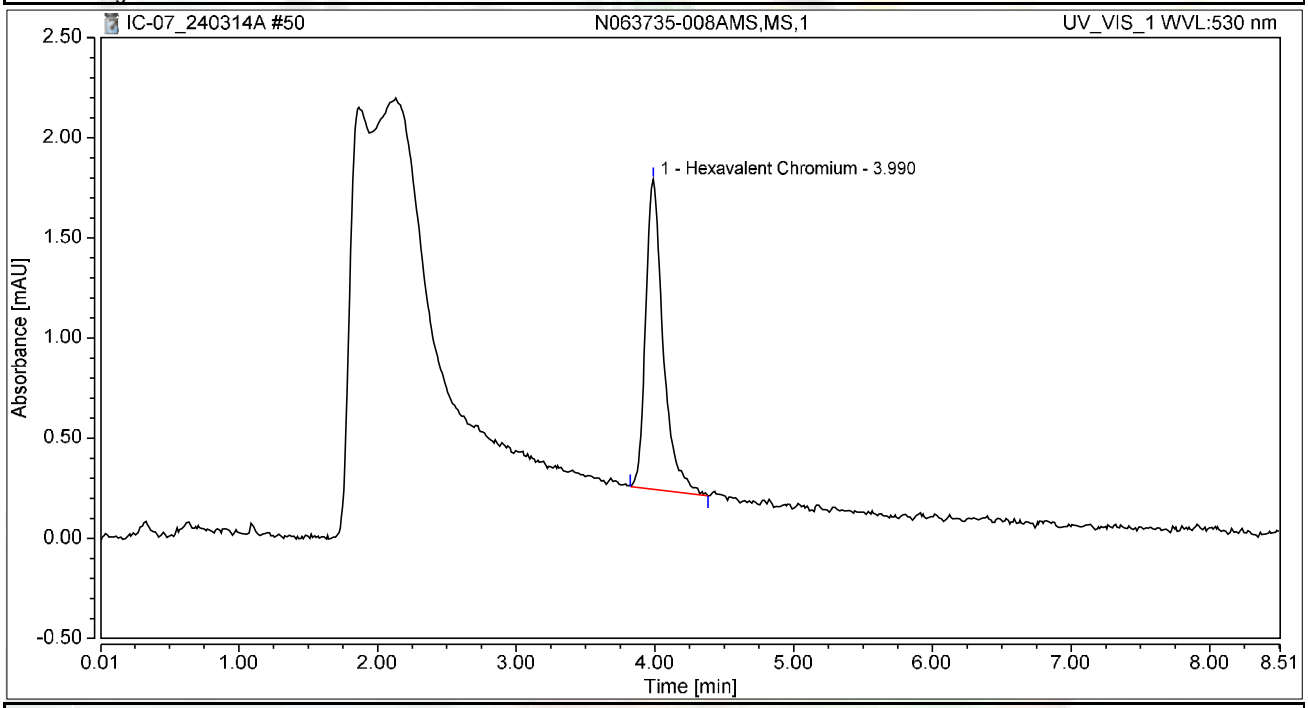
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 16:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

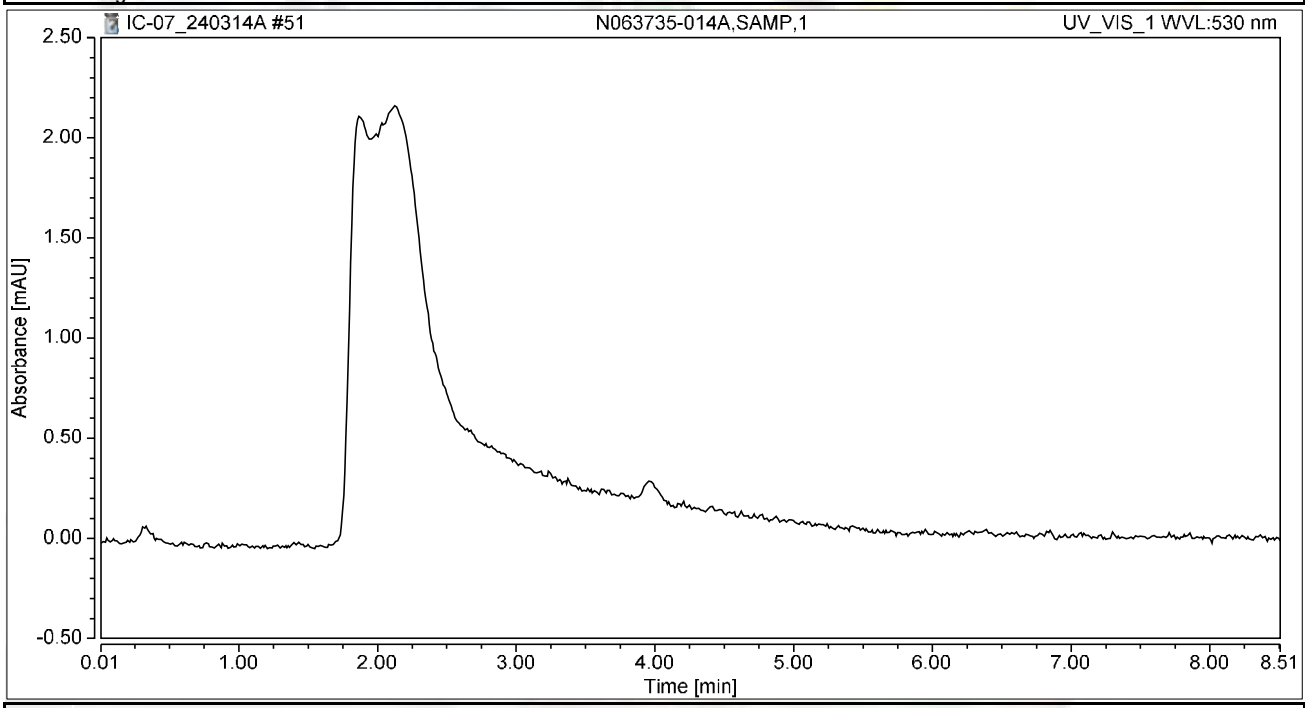
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.227	1.546	100.00	100.00	1.0645
Total:			**0.227**	**1.546**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-014A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 16:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

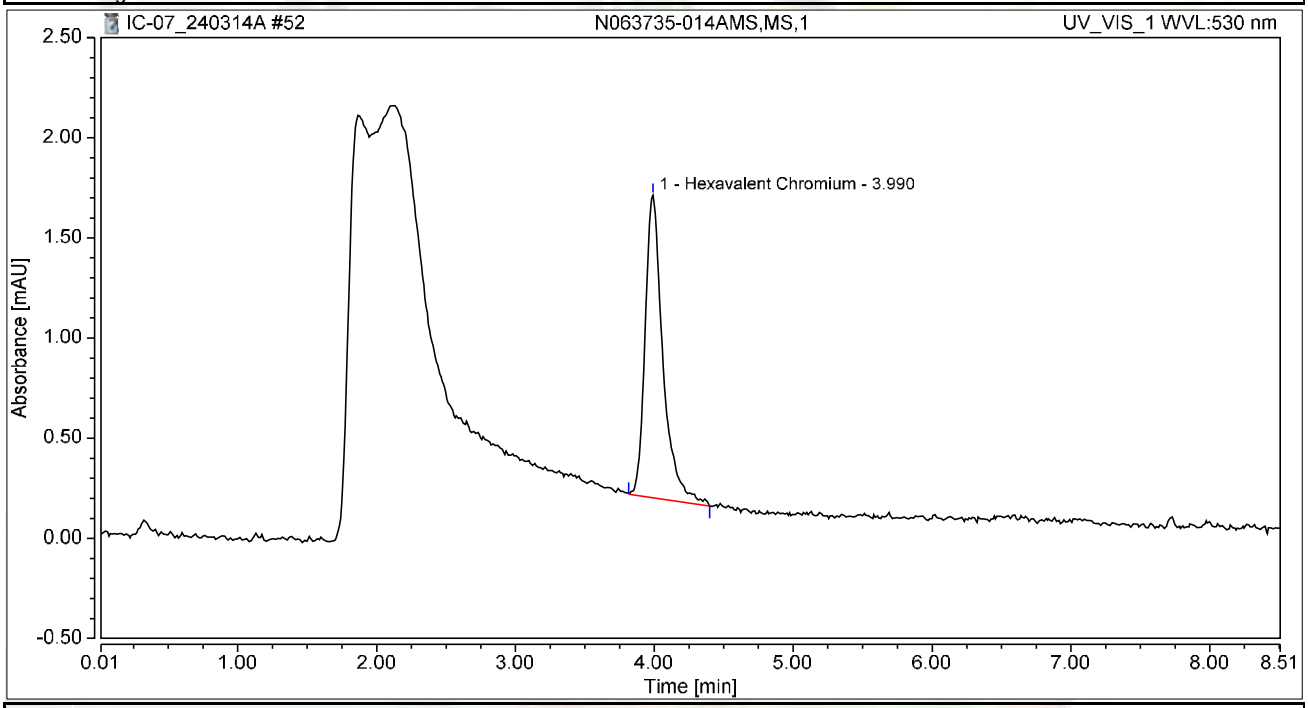
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-014AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 17:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

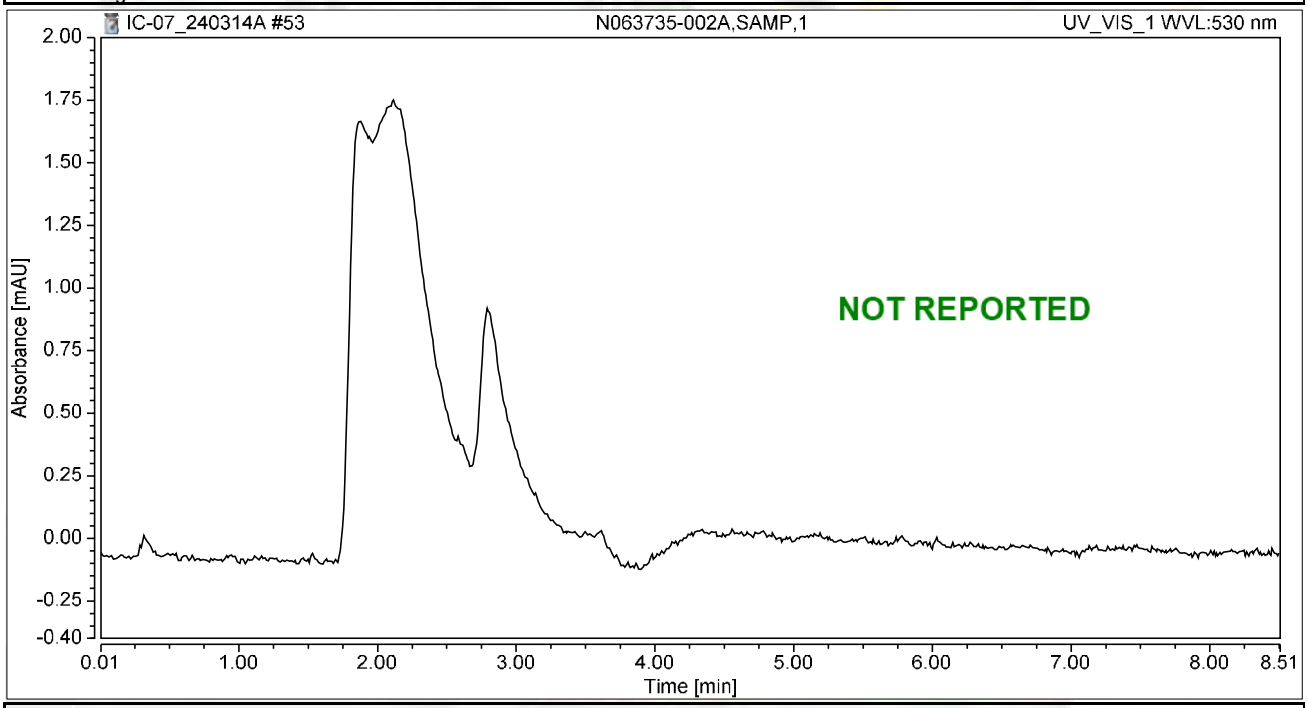
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	0.226	1.511	100.00	100.00	1.0596
Total:			**0.226**	**1.511**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-002A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 17:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

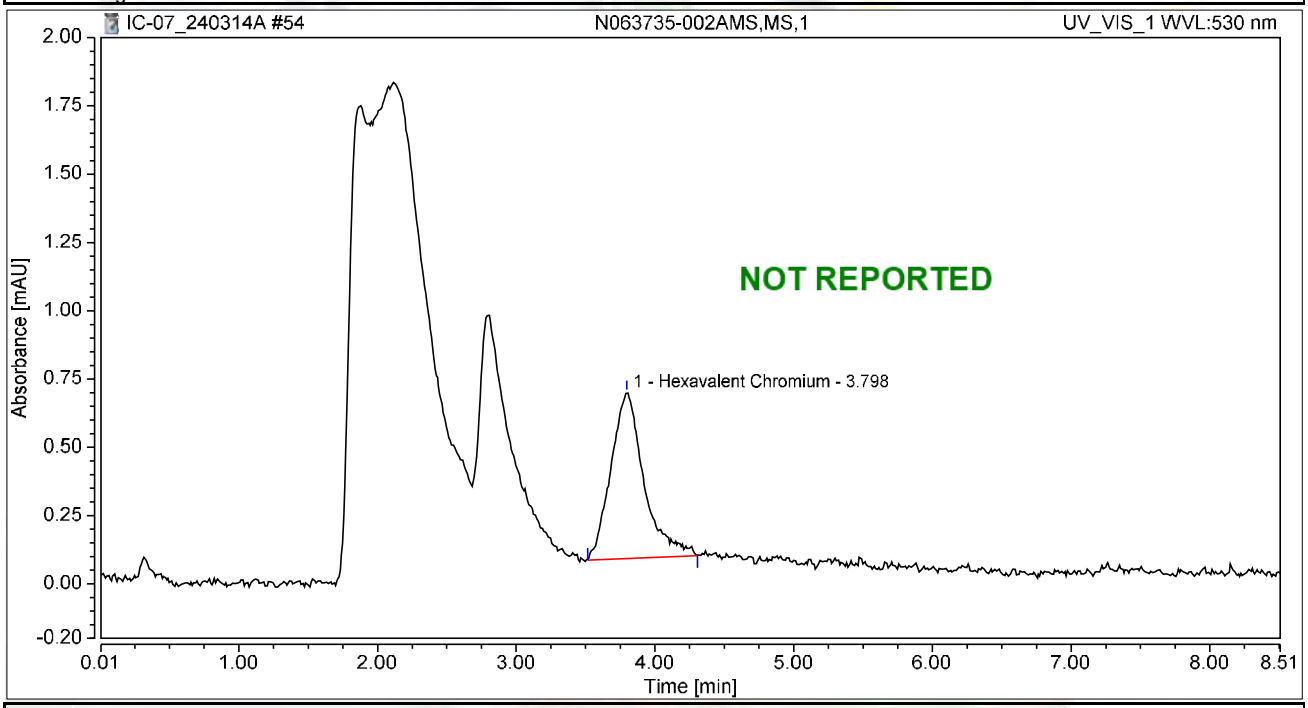
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 17:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

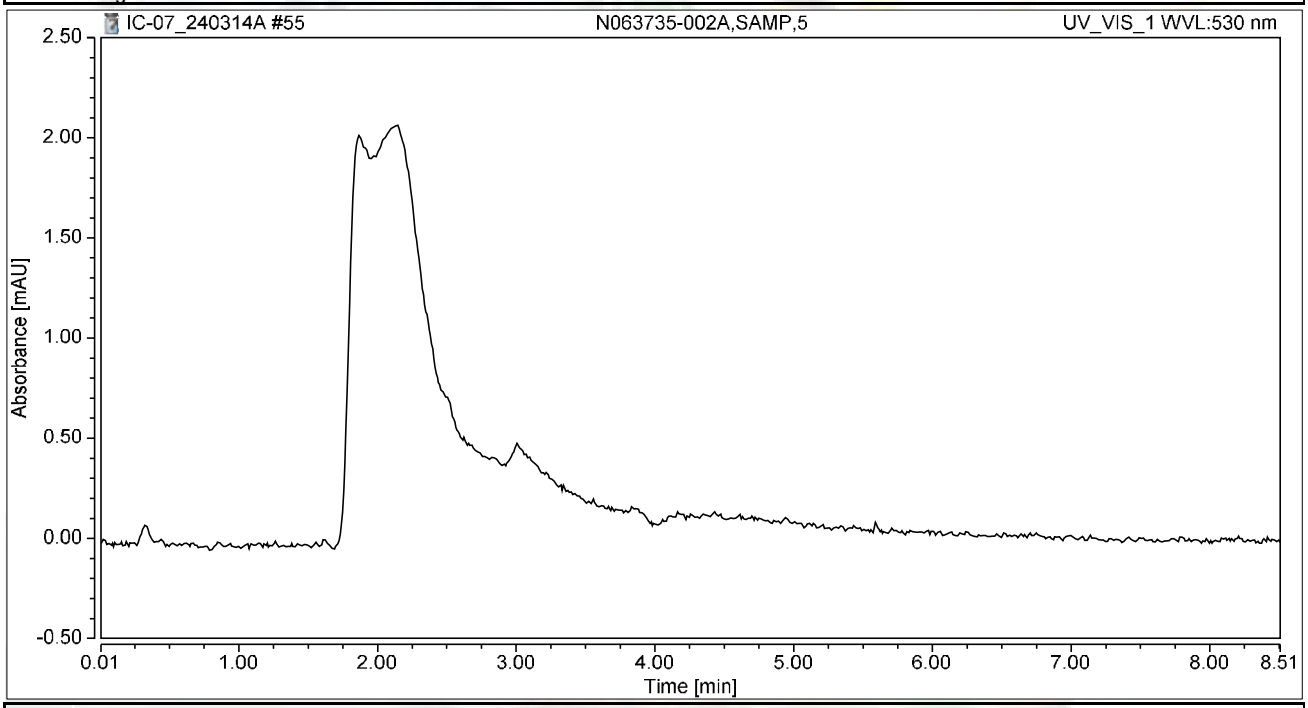
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.798	0.168	0.608	100.00	100.00	0.7872
Total:			**0.168**	**0.608**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 17:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

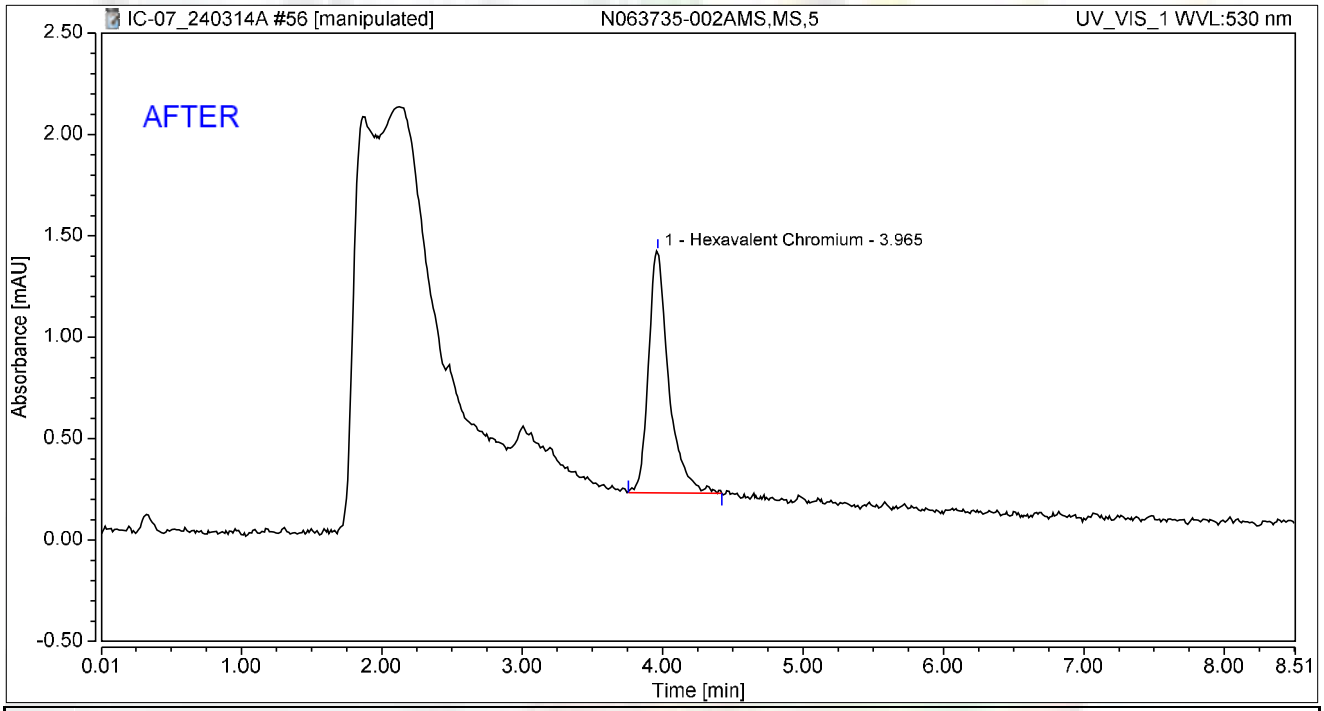
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 17:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.199	1.192	100.00	100.00	0.9351
Total:			**0.199**	**1.192**	**100.00**	**100.00**	

Reviewed by:

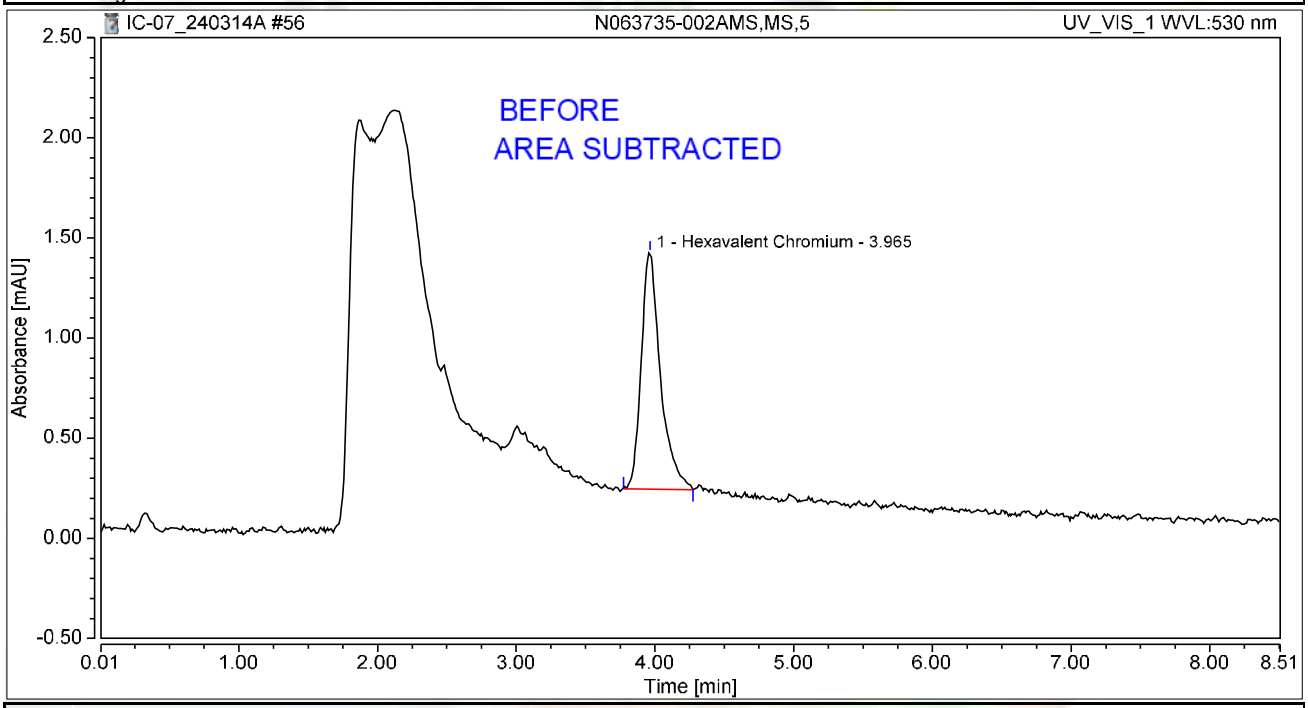
dMocha 3/22/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063735-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 17:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

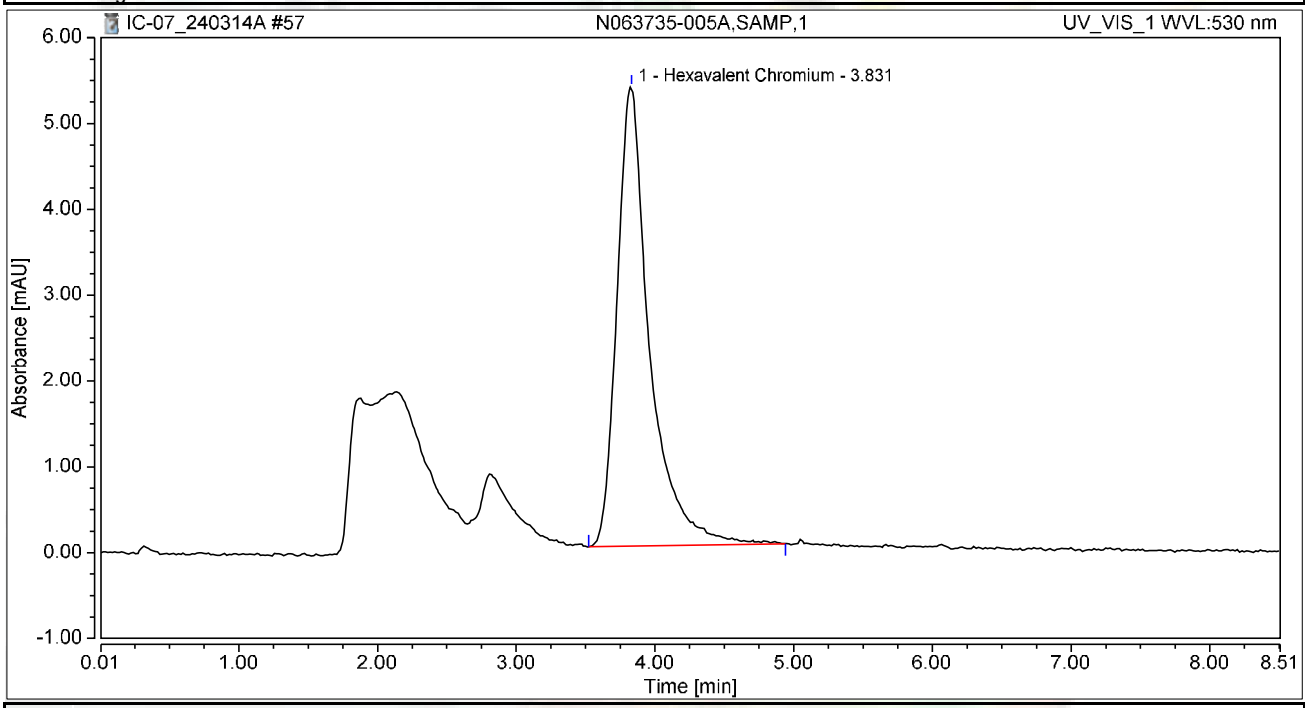
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.190	1.179	100.00	100.00	0.8917
Total:			**0.190**	**1.179**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 17:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

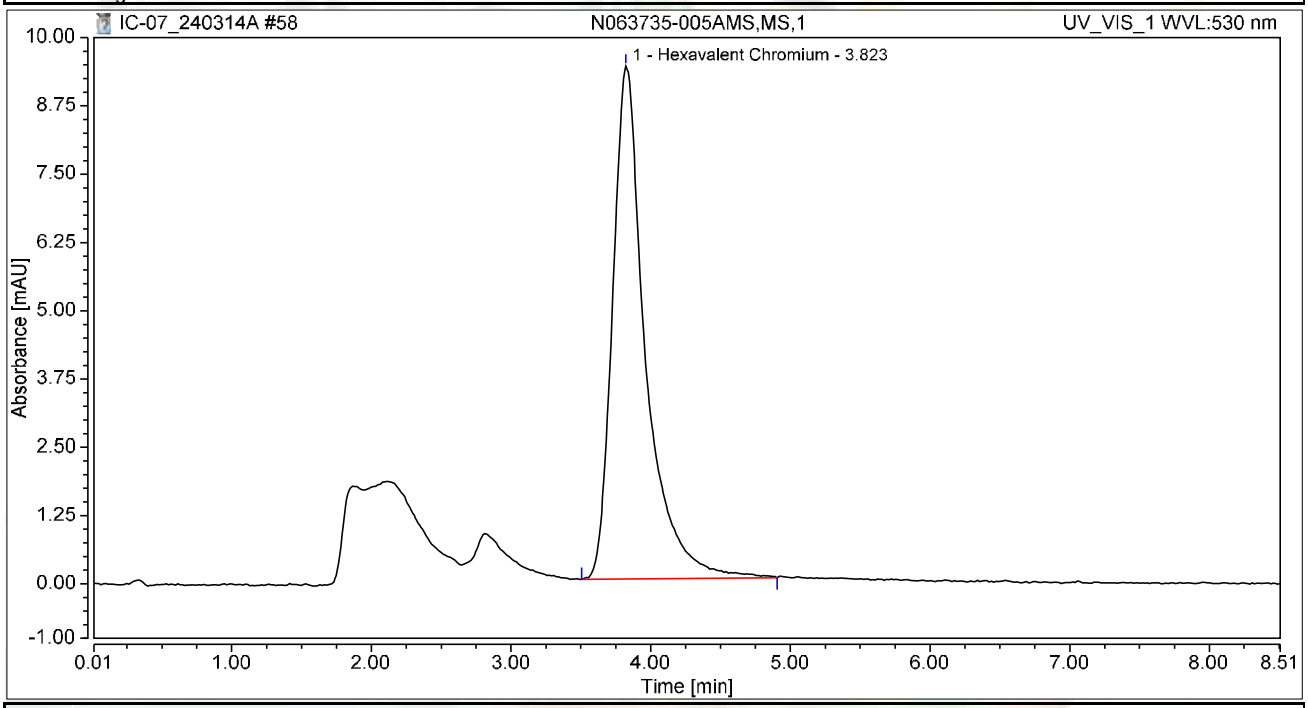
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.831	1.456	5.349	100.00	100.00	6.8423
Total:			**1.456**	**5.349**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-005AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 17:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

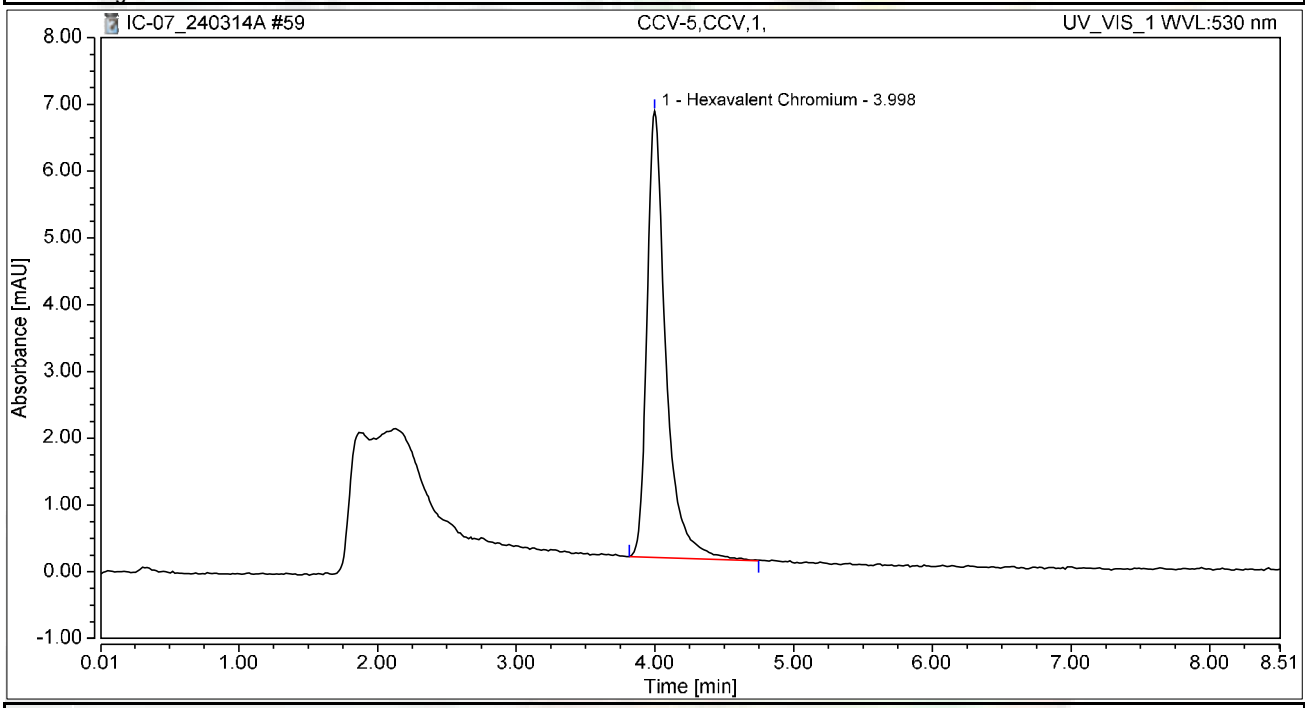
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.823	2.557	9.389	100.00	100.00	12.0155
Total:			**2.557**	**9.389**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 18:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

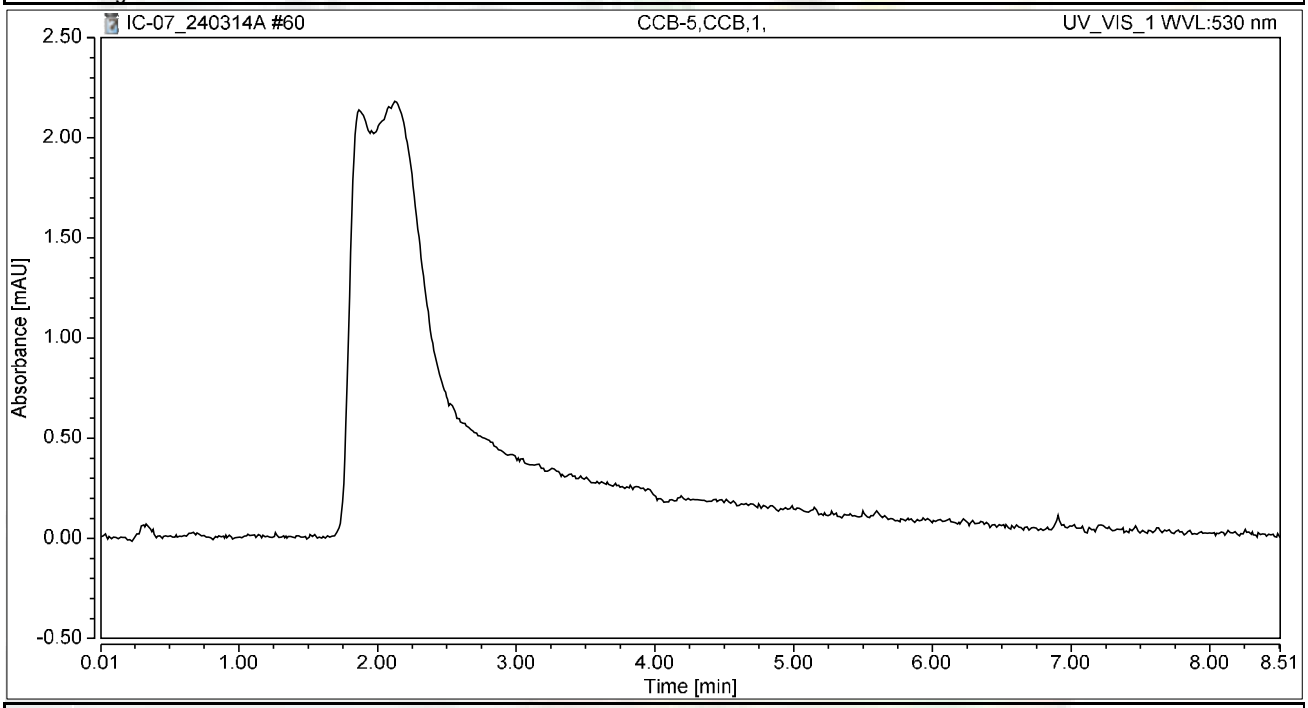
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	1.054	6.684	100.00	100.00	4.9525
Total:			**1.054**	**6.684**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 18:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

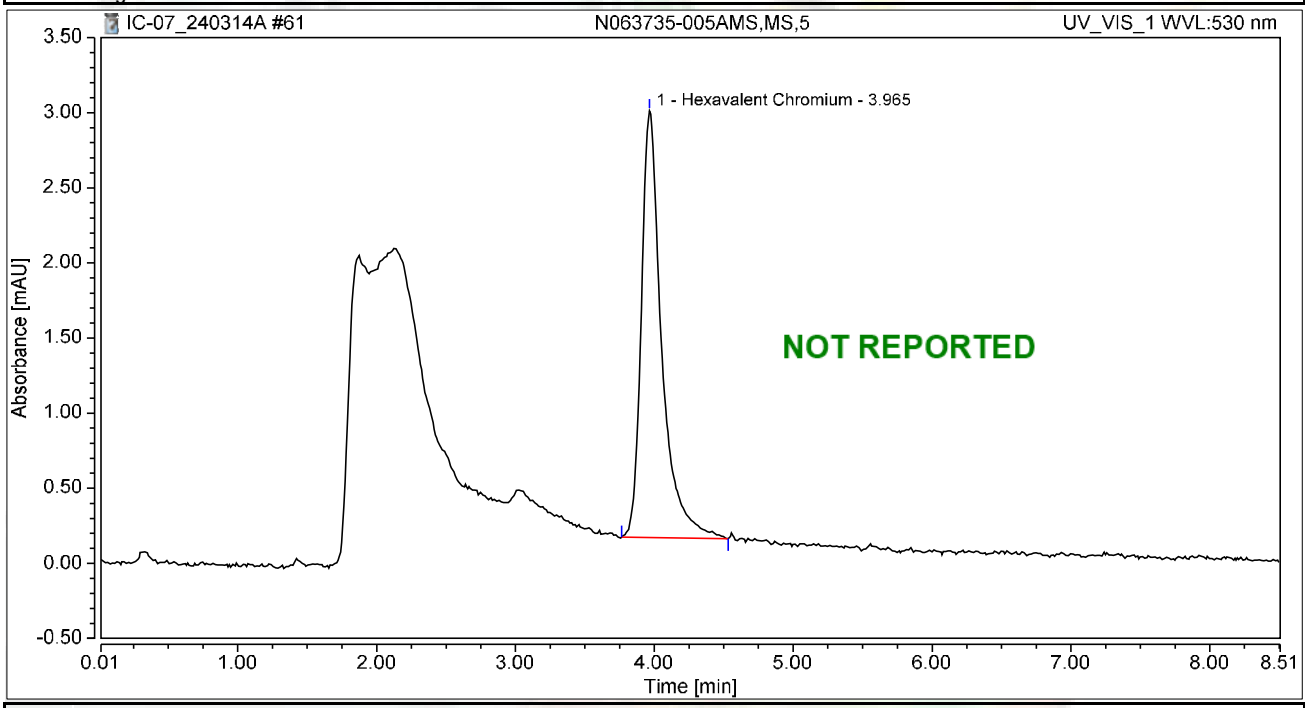
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-005AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 18:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

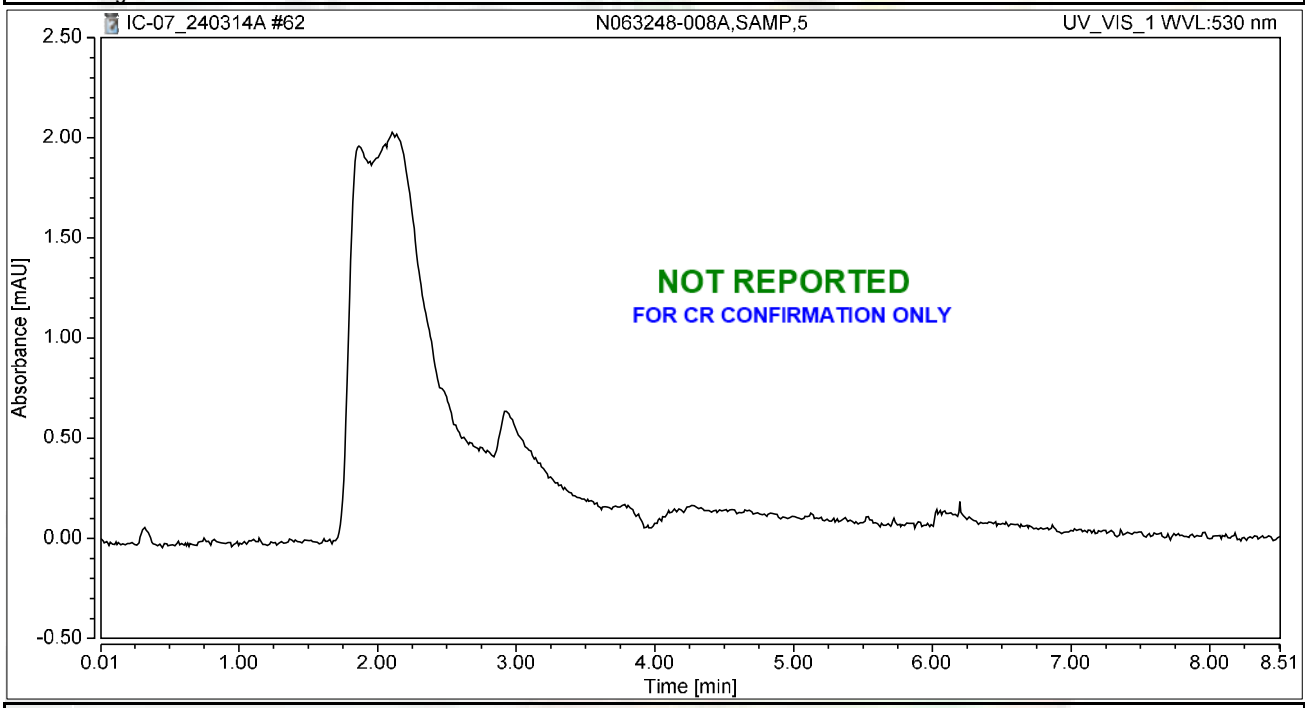
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.485	2.840	100.00	100.00	2.2790
Total:			**0.485**	**2.840**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-008A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 18:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

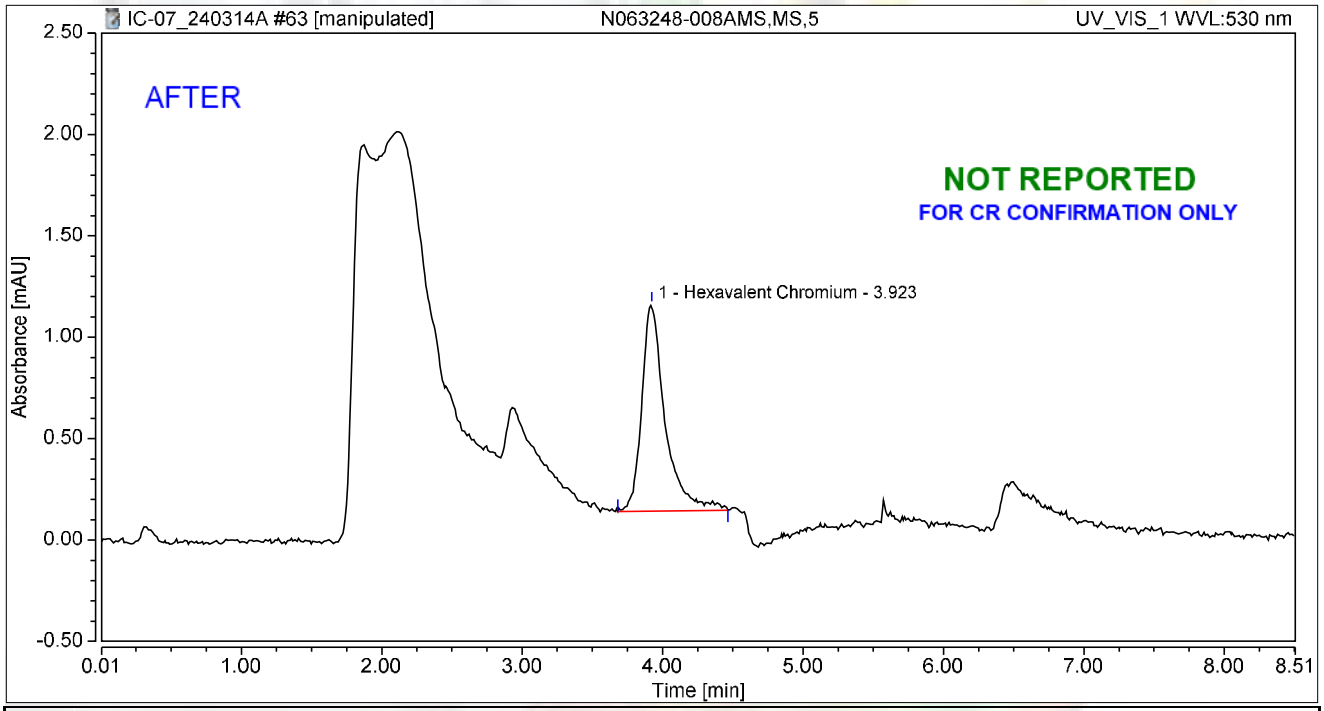
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-008AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 18:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

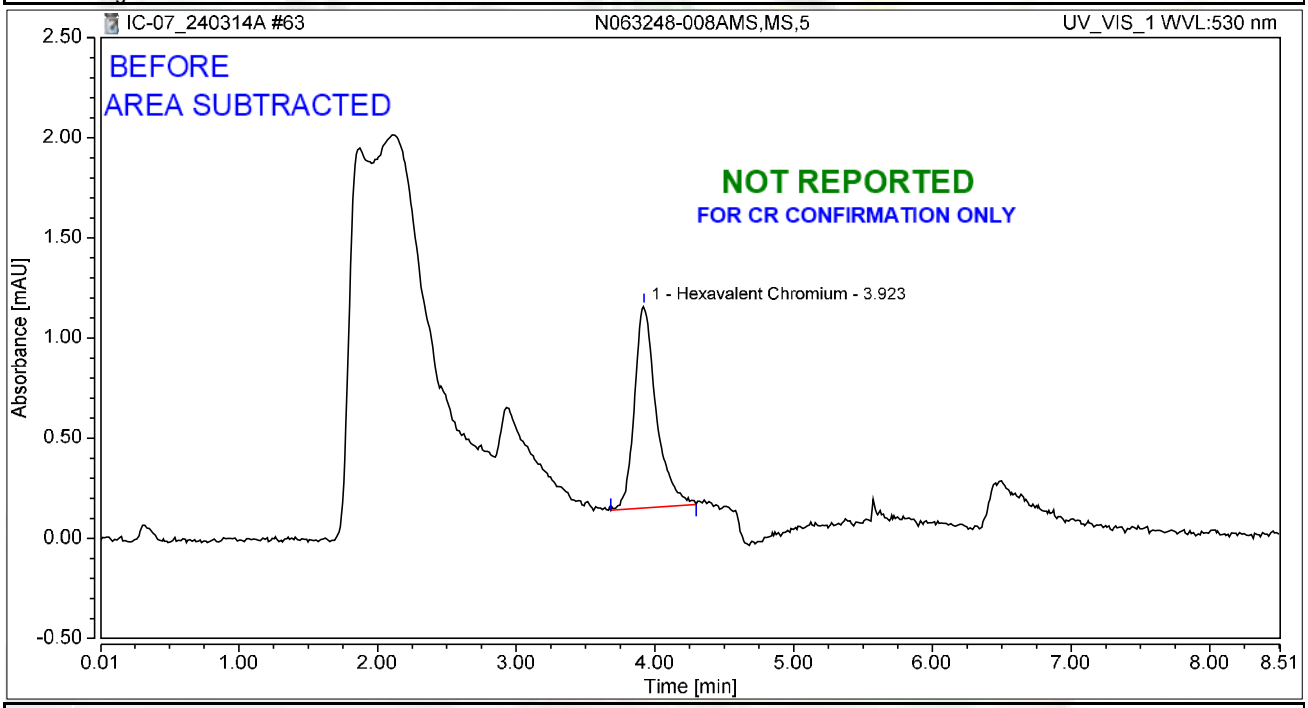
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.197	1.021	100.00	100.00	0.9242
Total:			**0.197**	**1.021**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063248-008AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 18:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

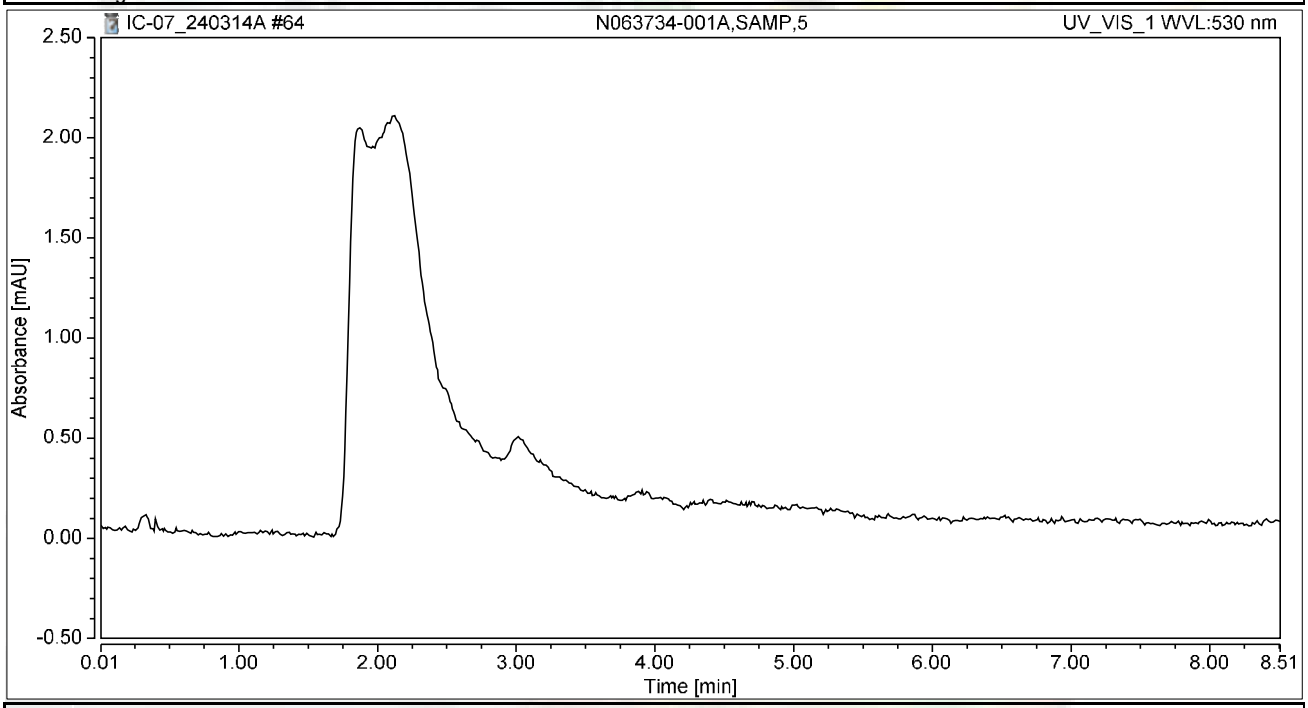
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.184	1.012	100.00	100.00	0.8652
Total:			**0.184**	**1.012**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063734-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 18:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

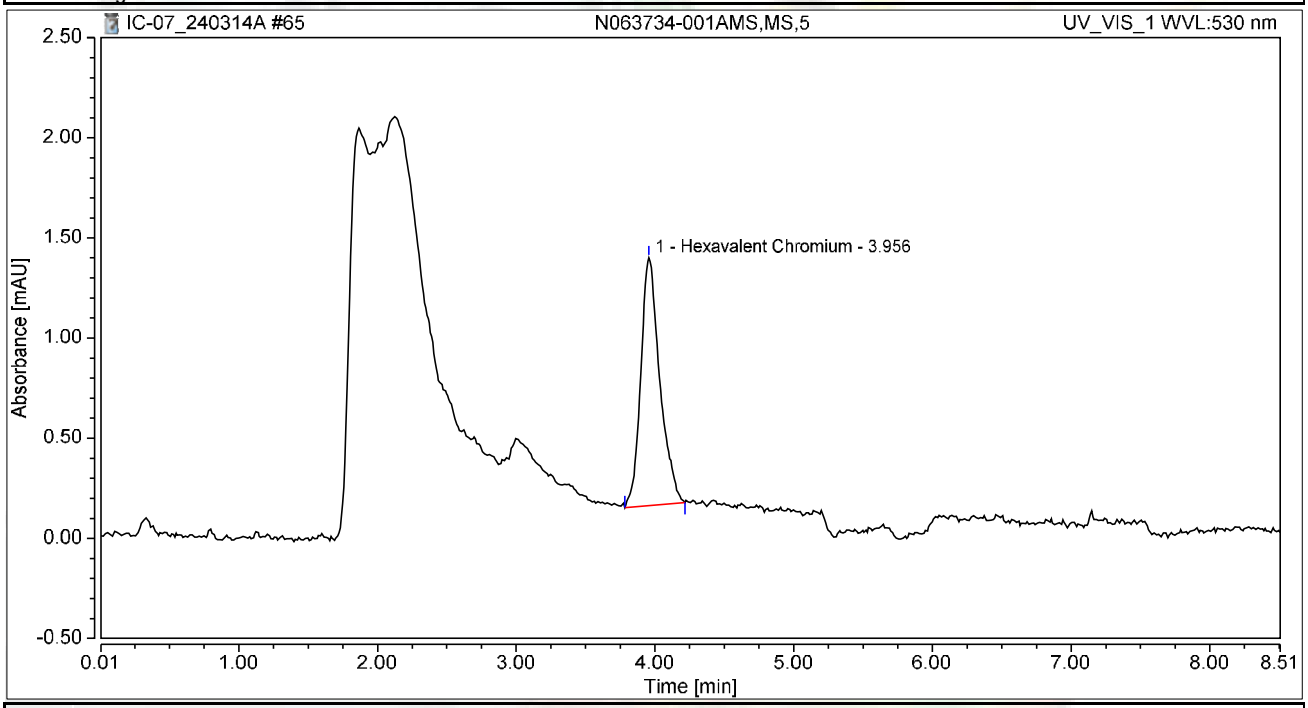
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063734-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 19:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

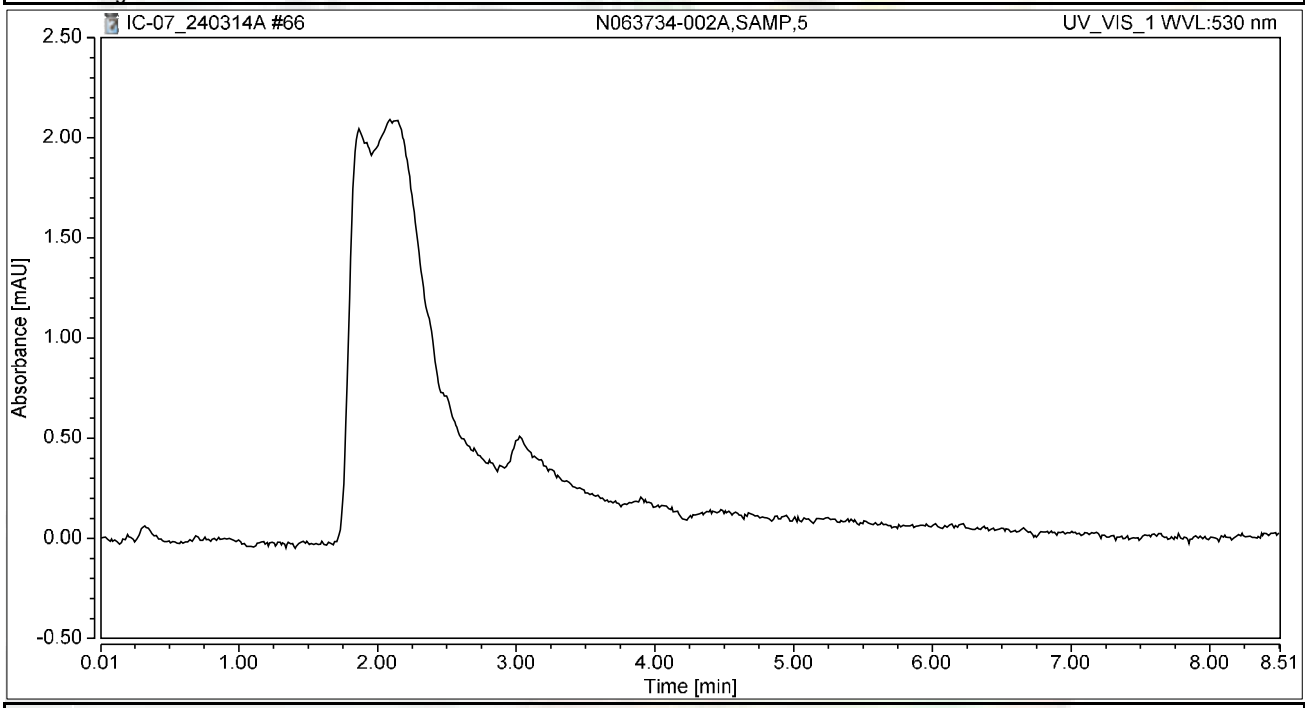
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.196	1.237	100.00	100.00	0.9218
Total:			**0.196**	**1.237**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063734-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 19:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

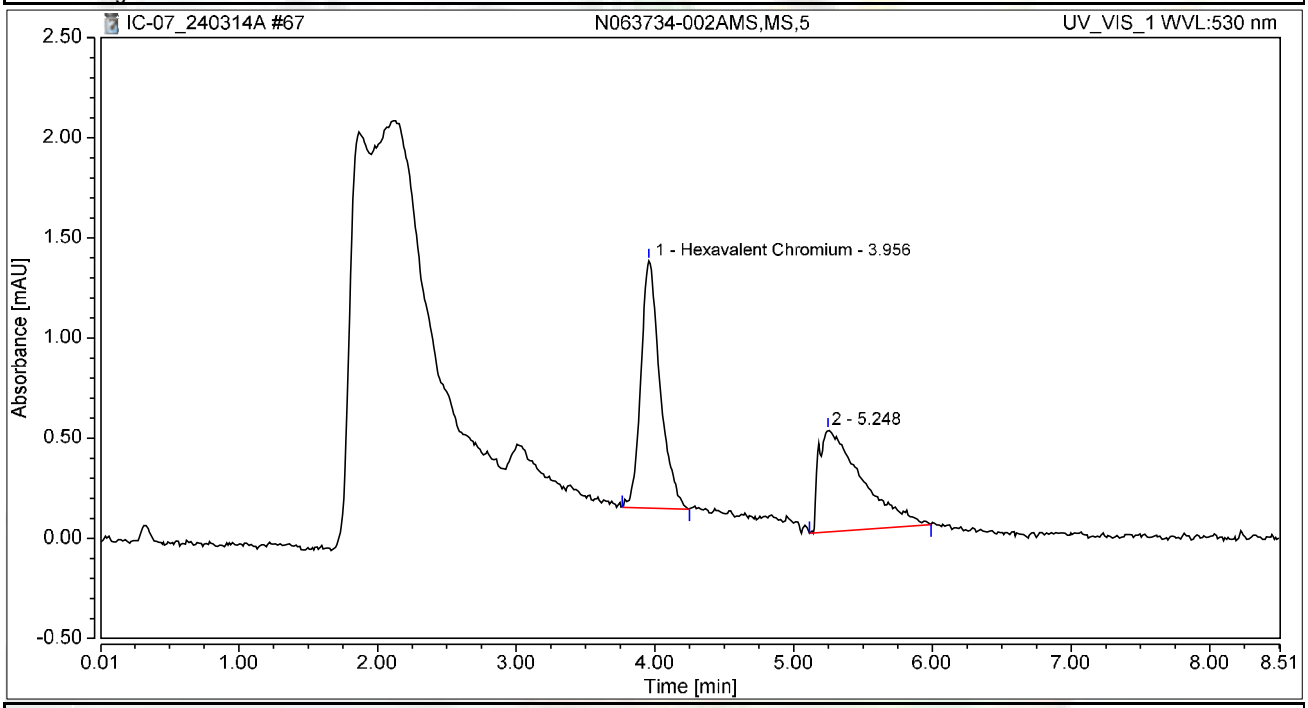
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063734-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 19:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

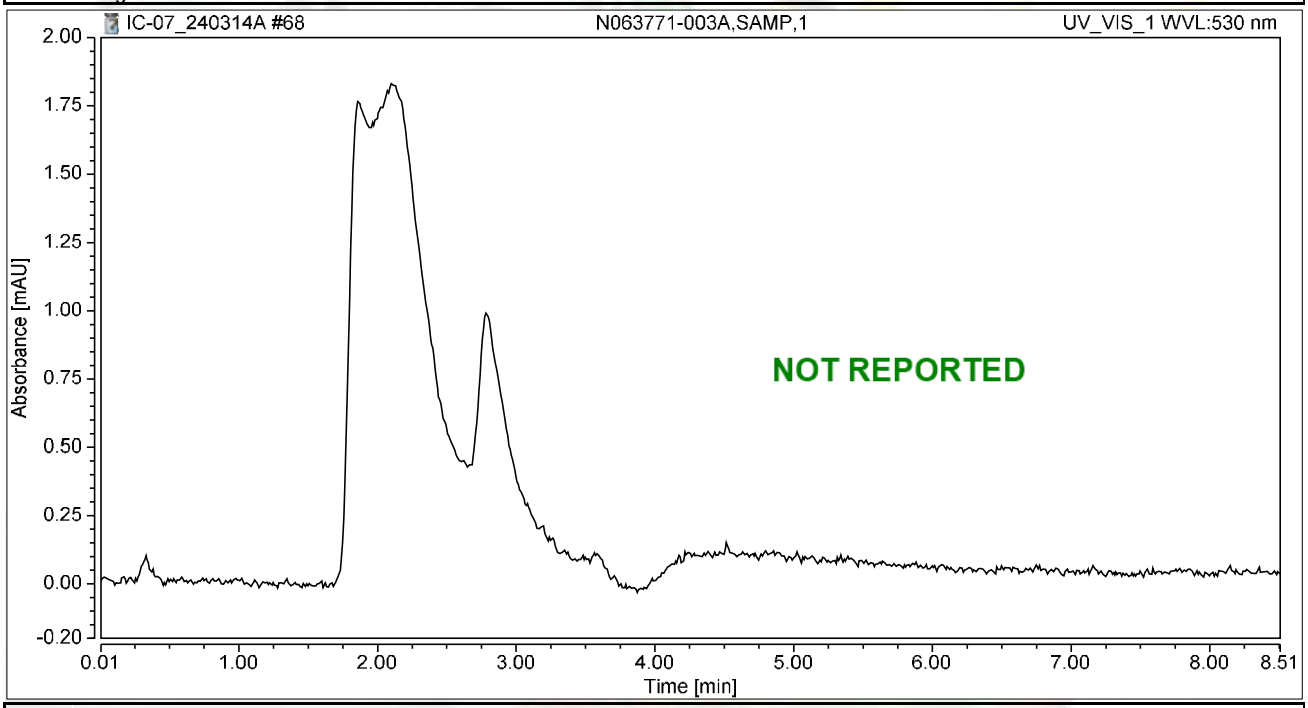
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.198	1.235	51.75	70.80	0.9308
2		5.248	0.185	0.509	48.25	29.20	n.a.
Total:			**0.383**	**1.744**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-003A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 19:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

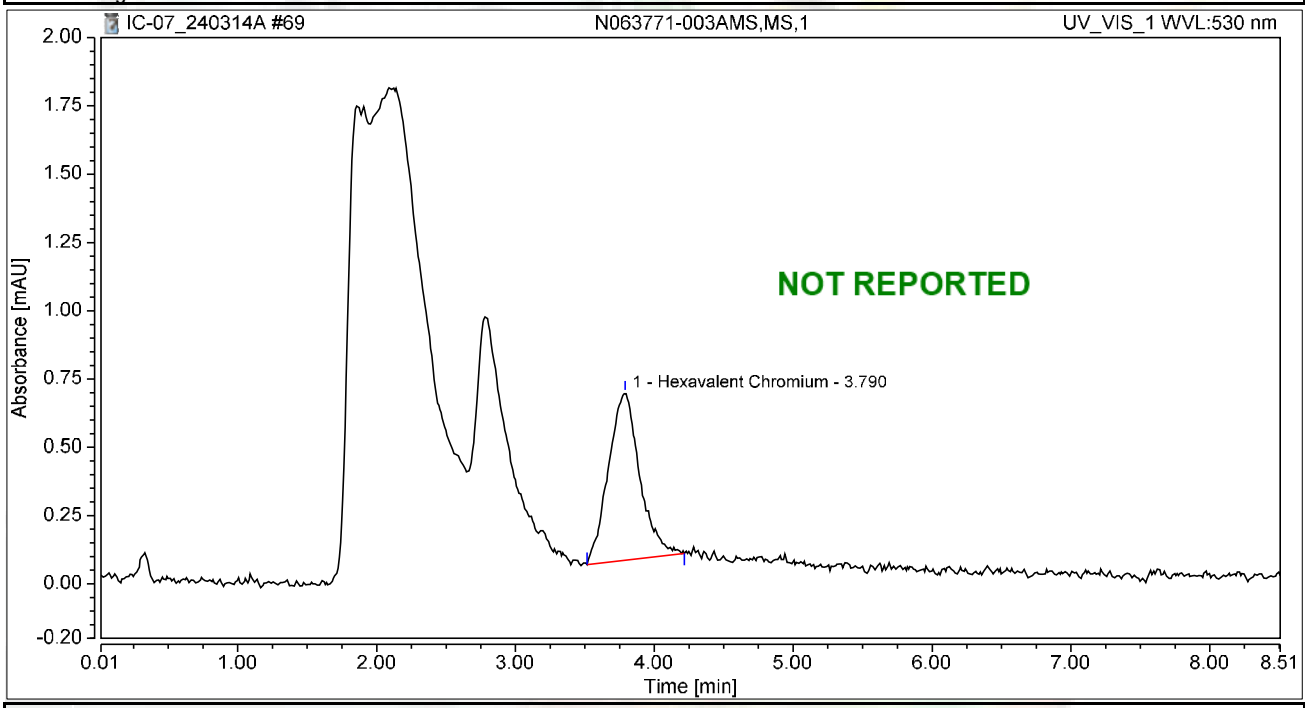
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-003AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 19:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

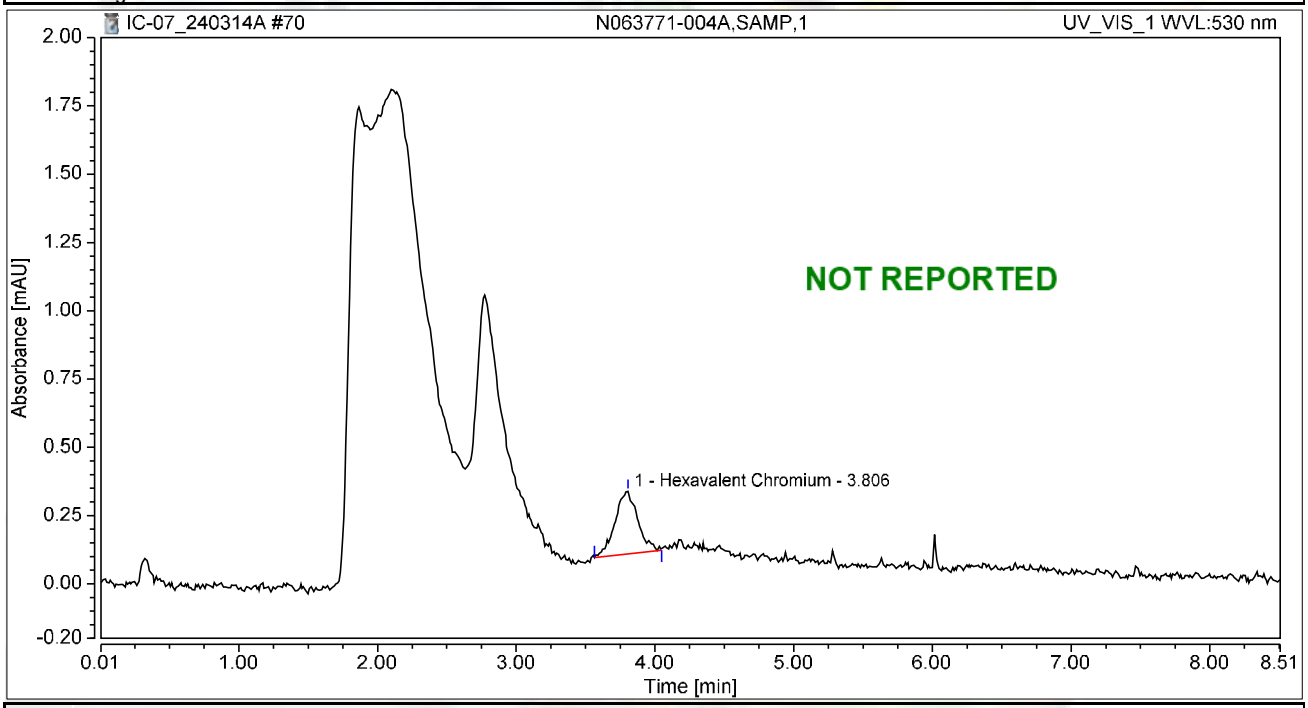
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.160	0.612	100.00	100.00	0.7511
Total:			**0.160**	**0.612**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-004A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 19:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

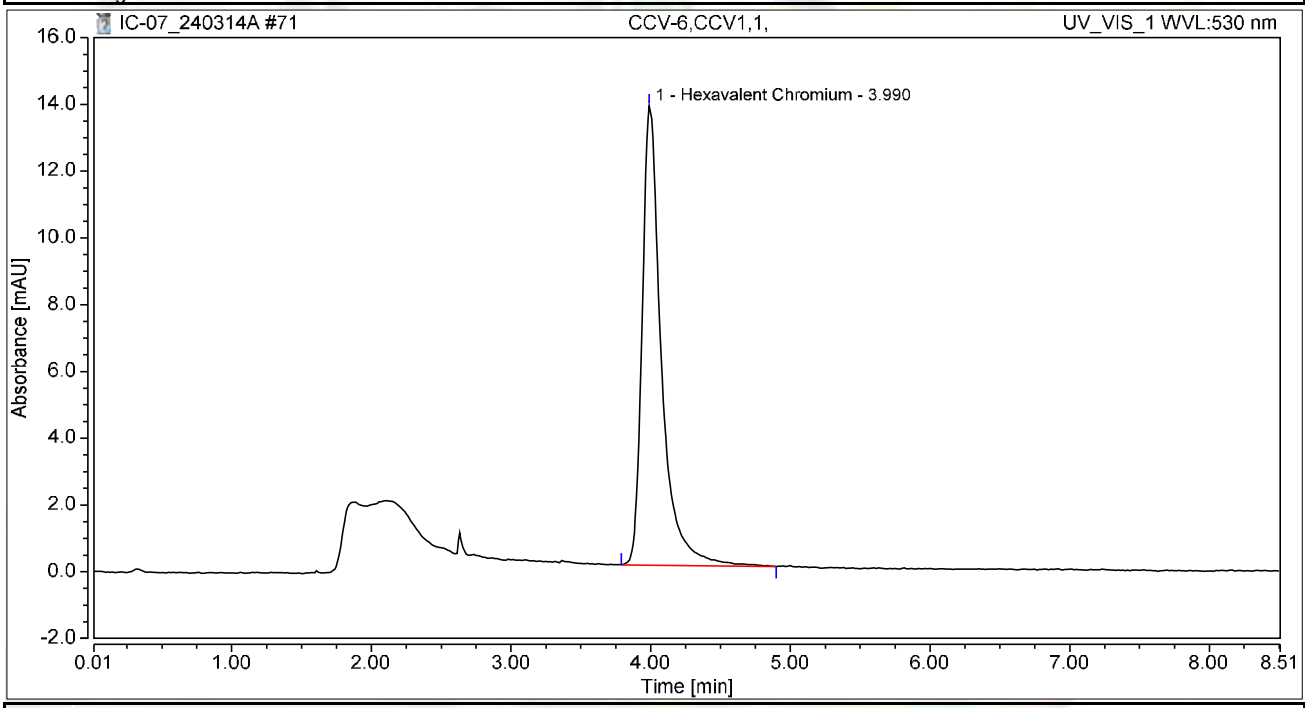
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.806	0.043	0.228	100.00	100.00	0.2041
Total:			**0.043**	**0.228**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 20:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

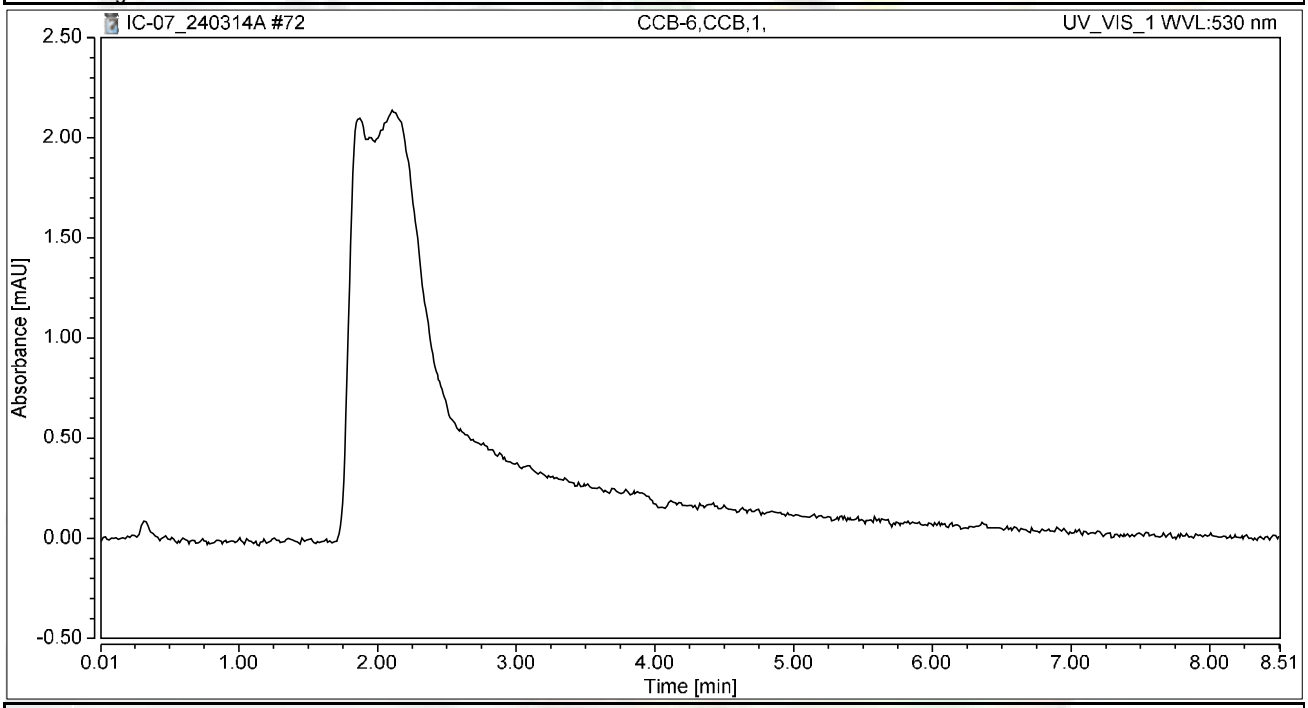
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	2.210	13.763	100.00	100.00	10.3837
Total:			**2.210**	**13.763**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 20:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

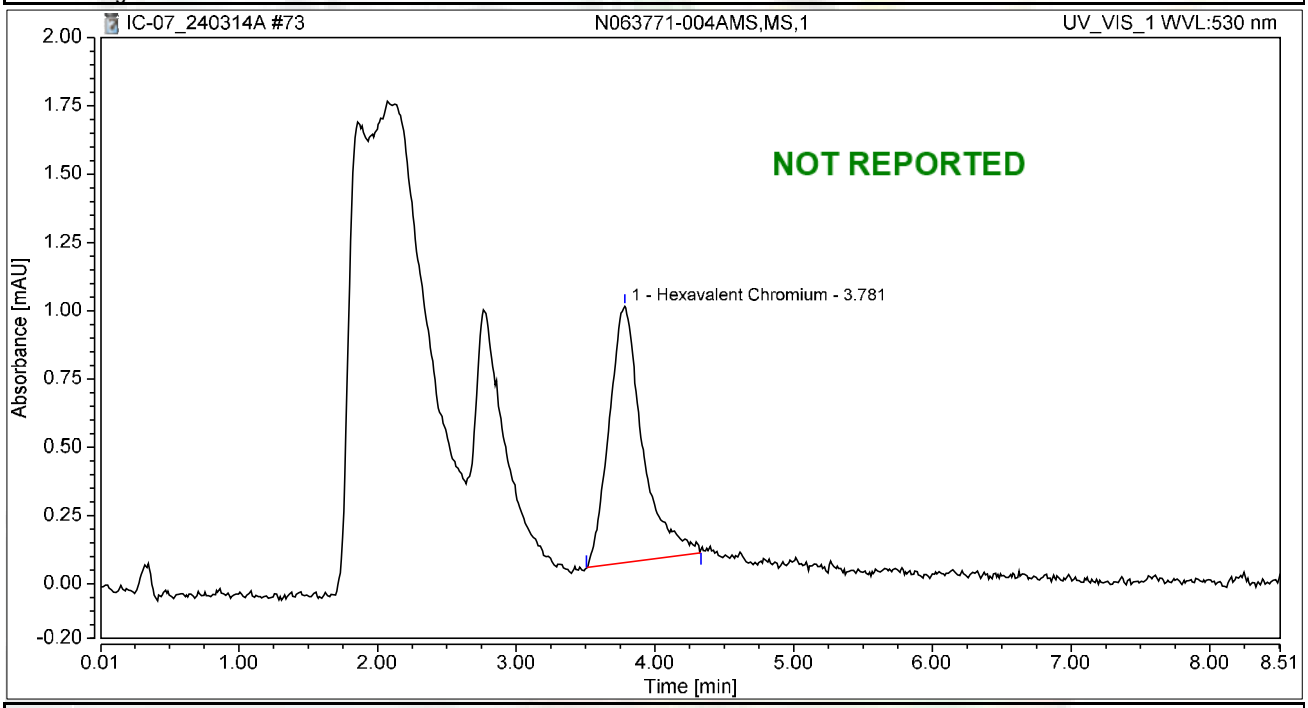
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-004AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 20:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

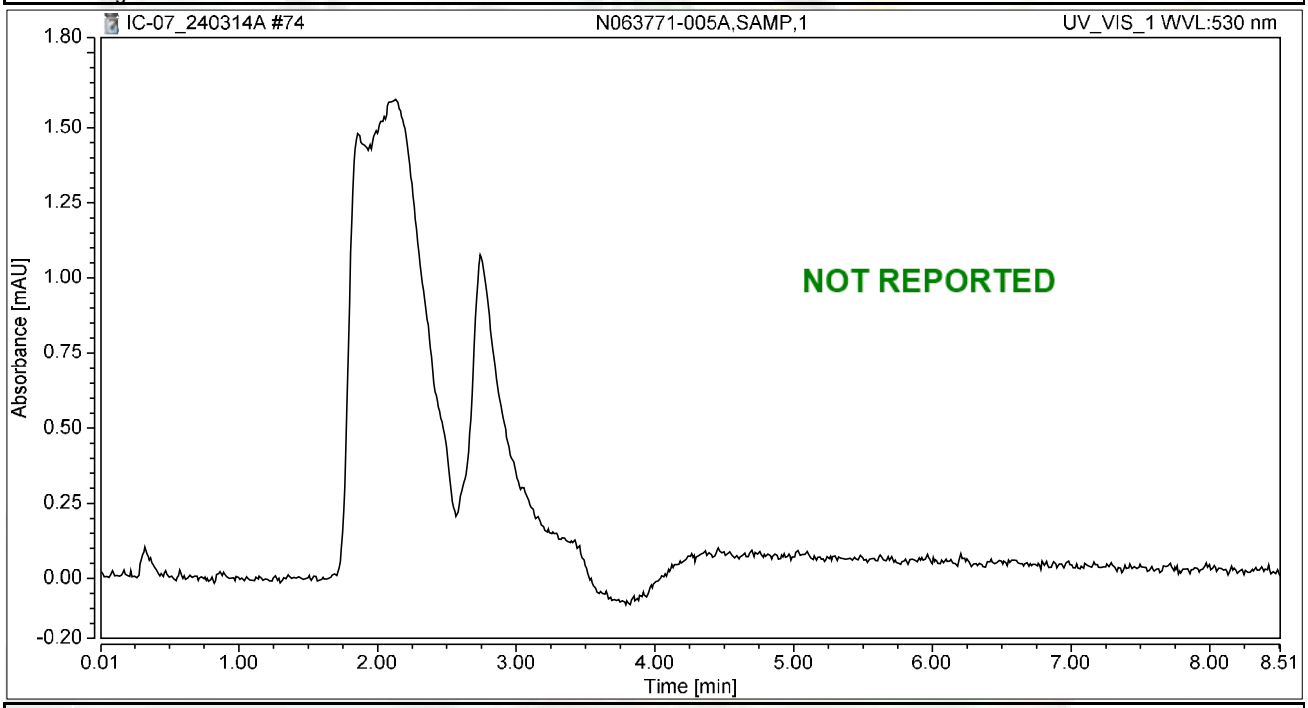
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.781	0.262	0.938	100.00	100.00	1.2302
Total:			**0.262**	**0.938**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-005A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 20:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

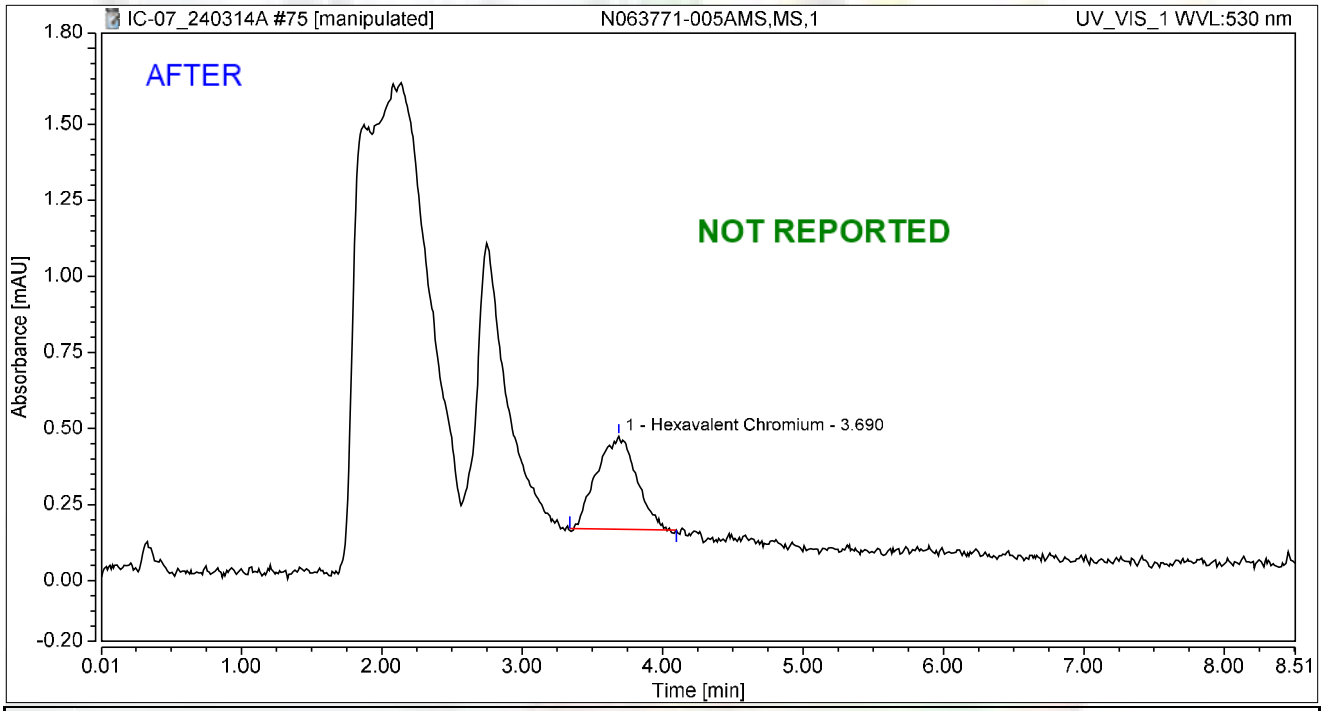
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 20:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.690	0.100	0.306	100.00	100.00	0.4690
Total:			**0.100**	**0.306**	**100.00**	**100.00**	

Reviewed by:

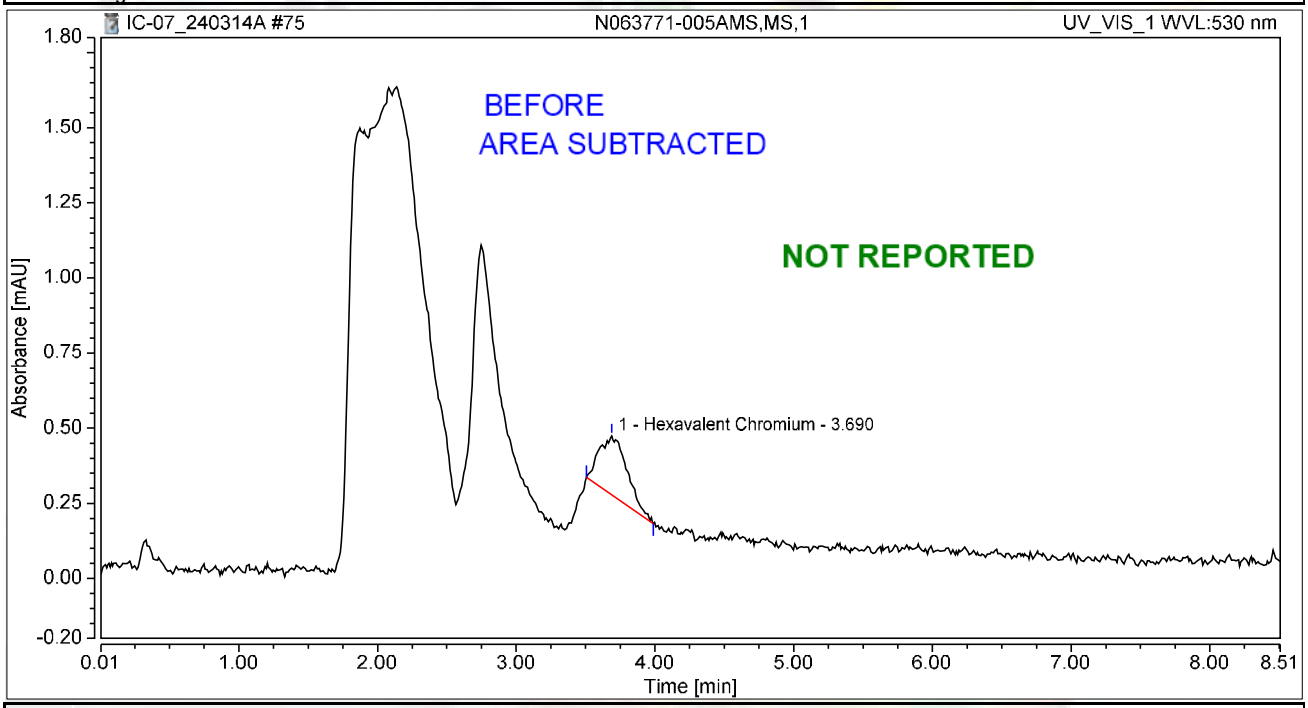
dMocha 3/22/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063771-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 20:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

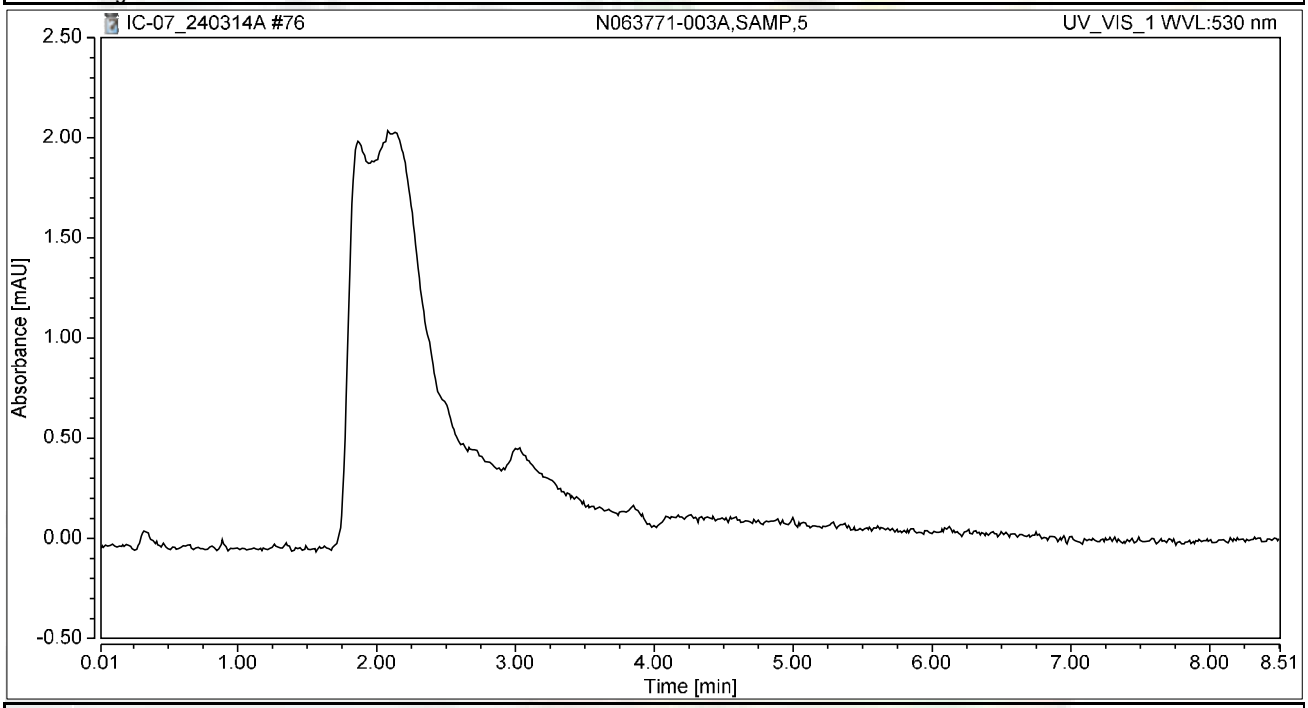
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.690	0.046	0.197	100.00	100.00	0.2171
Total:			**0.046**	**0.197**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-003A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 20:49**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

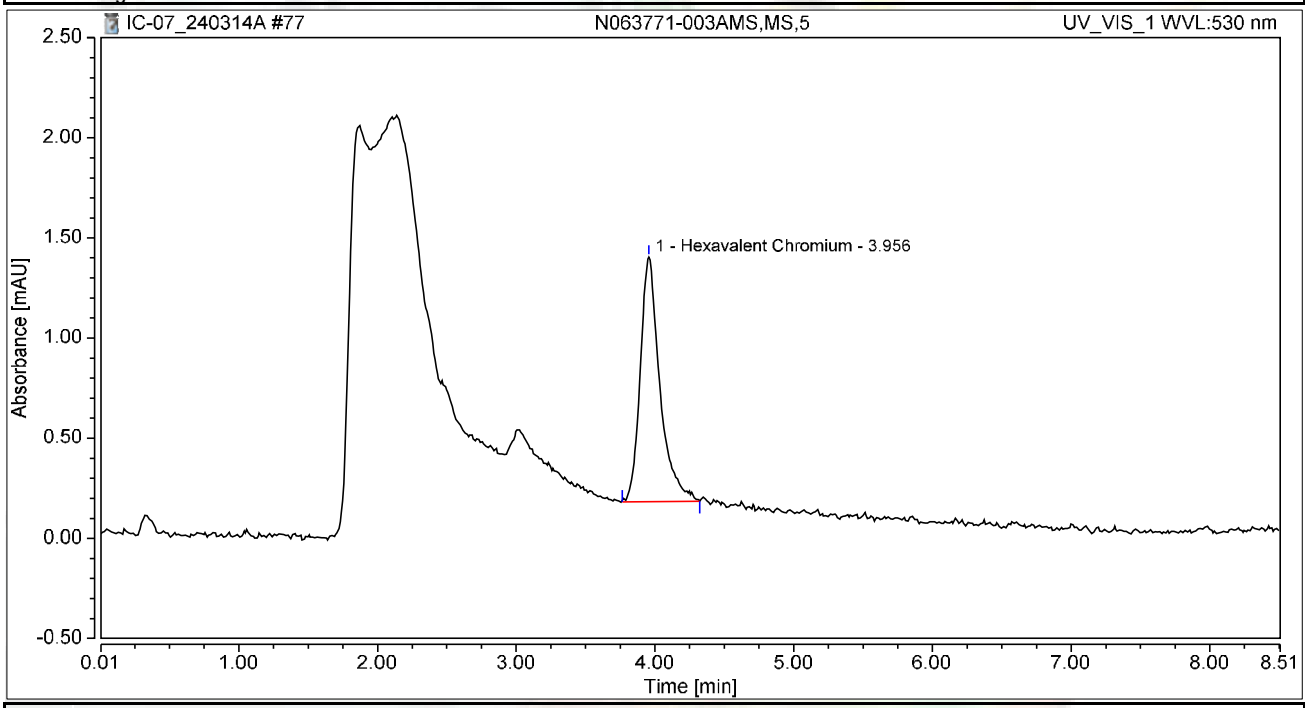
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-003AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 20:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

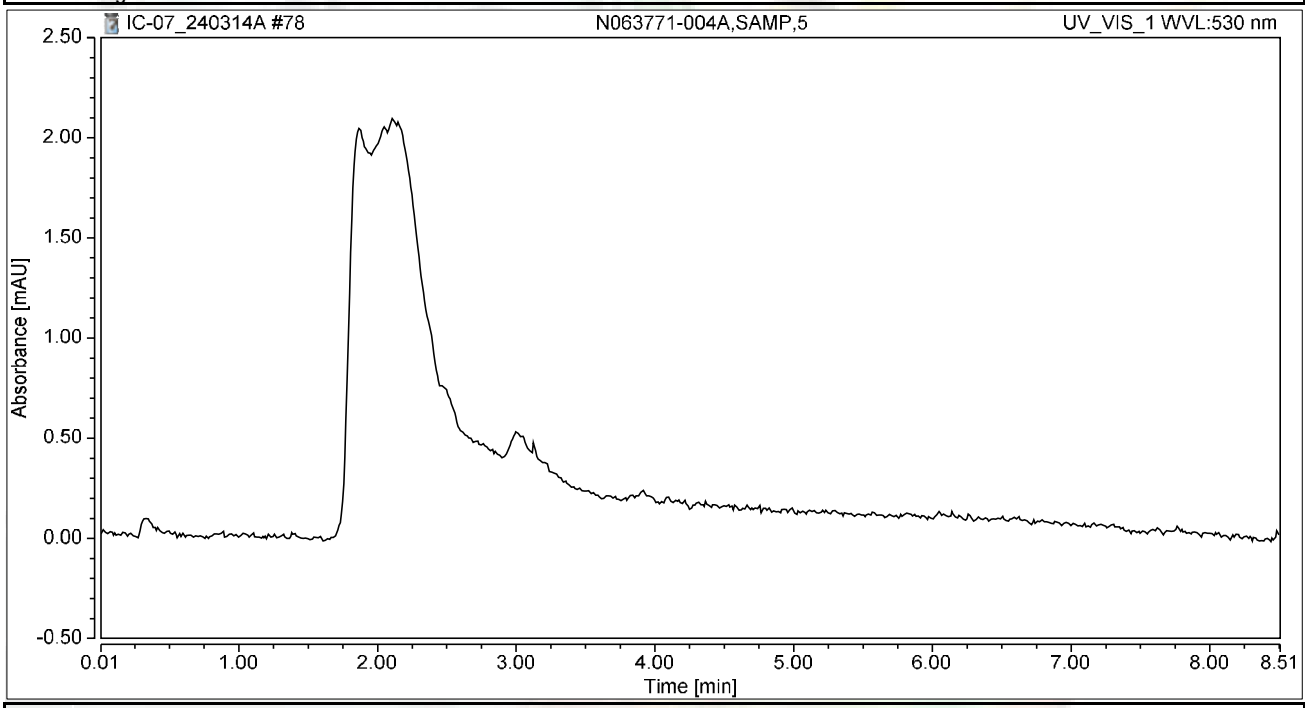
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.200	1.220	100.00	100.00	0.9407
Total:			**0.200**	**1.220**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-004A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 21:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

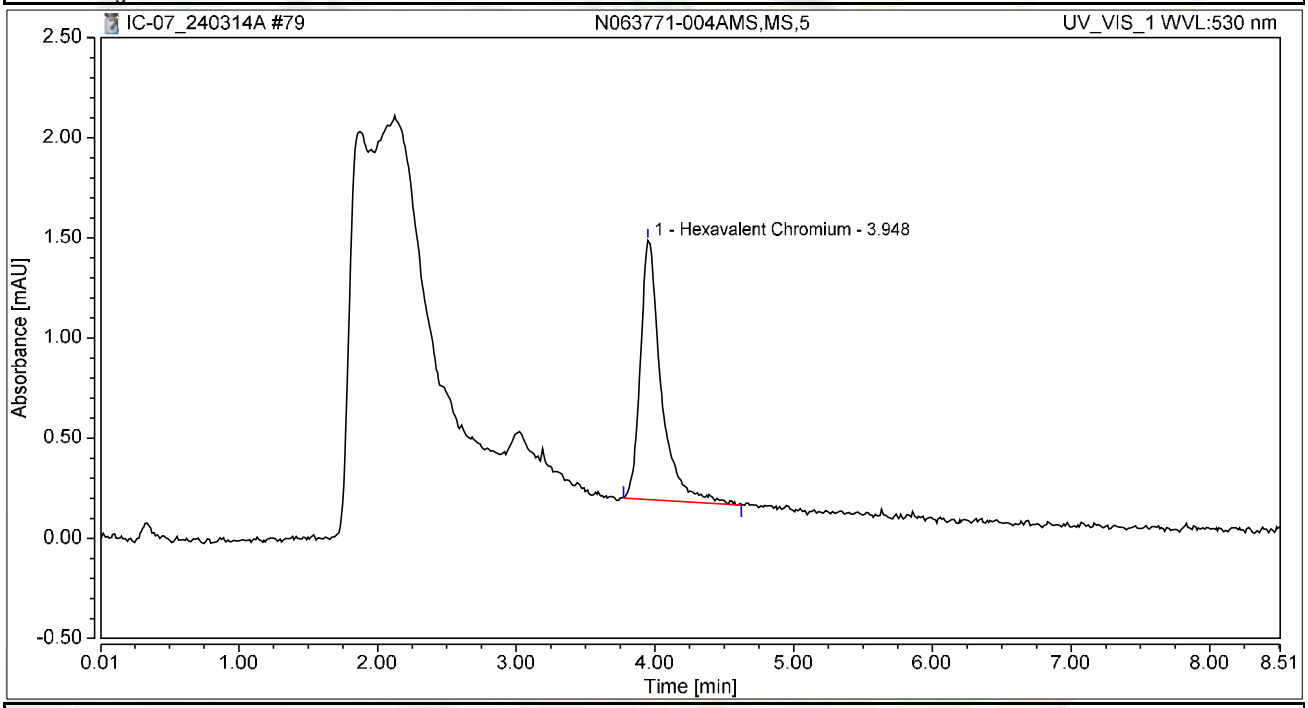
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-004AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 21:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

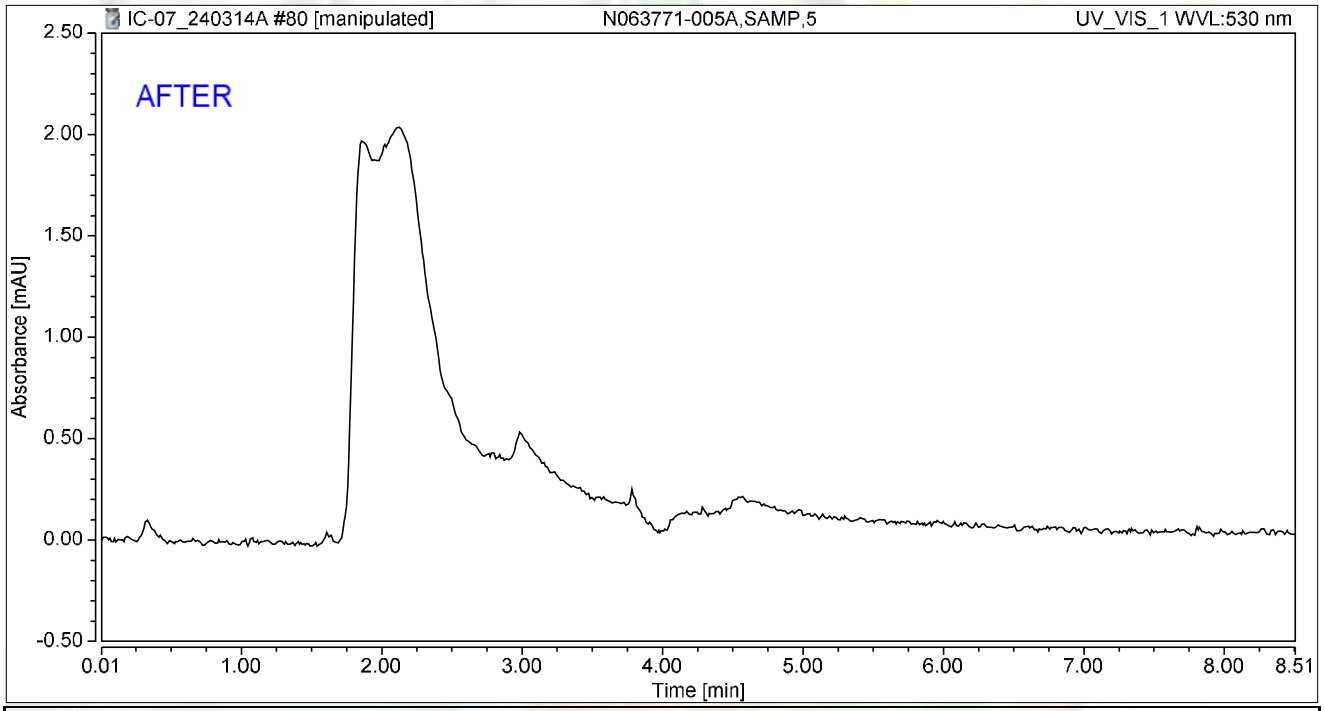
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.225	1.293	100.00	100.00	1.0585
Total:			**0.225**	**1.293**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 21:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Reviewed by:

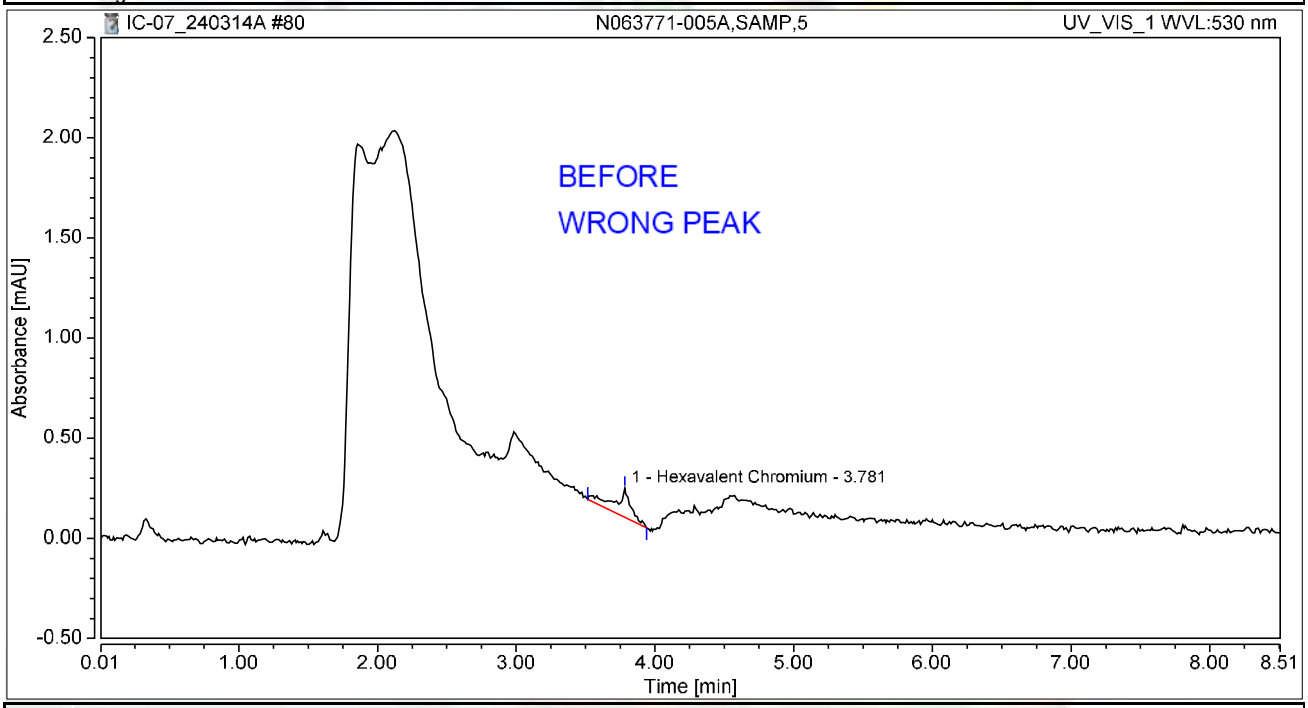
dMocha 3/22/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063771-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 21:27**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

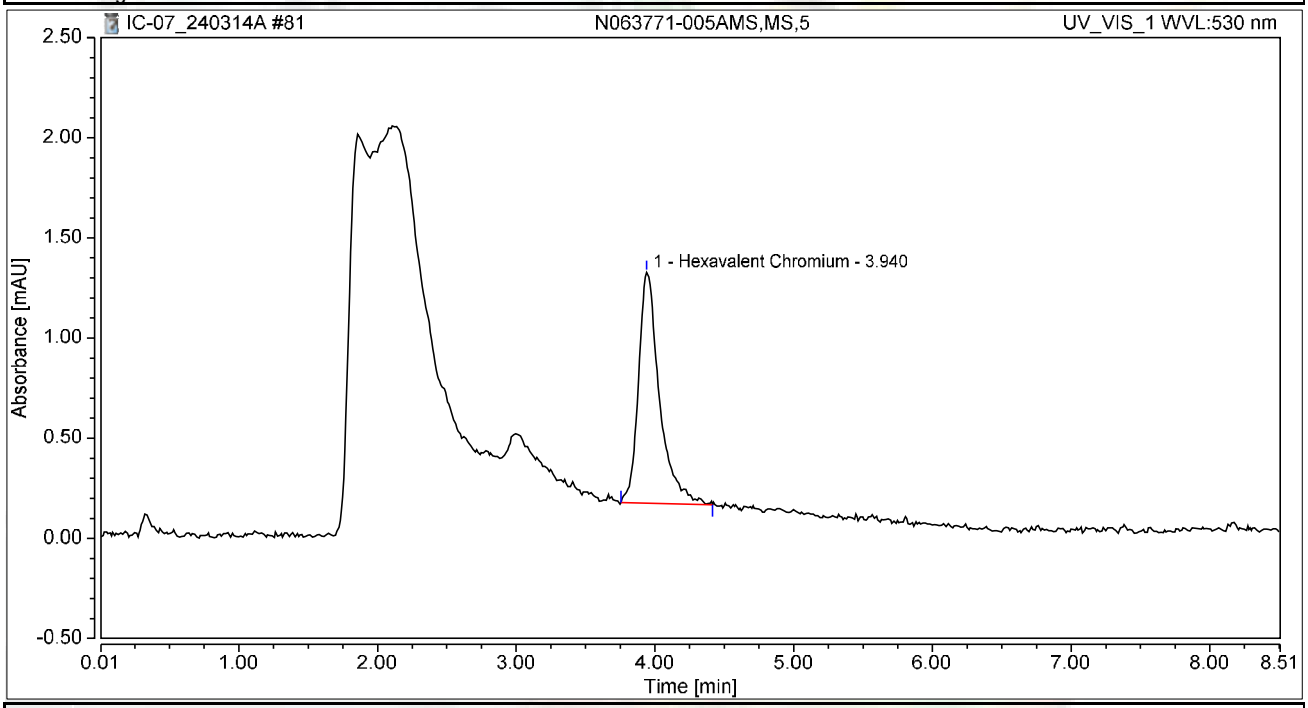
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.781	0.019	0.146	100.00	100.00	0.0905
Total:			**0.019**	**0.146**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-005AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 21:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

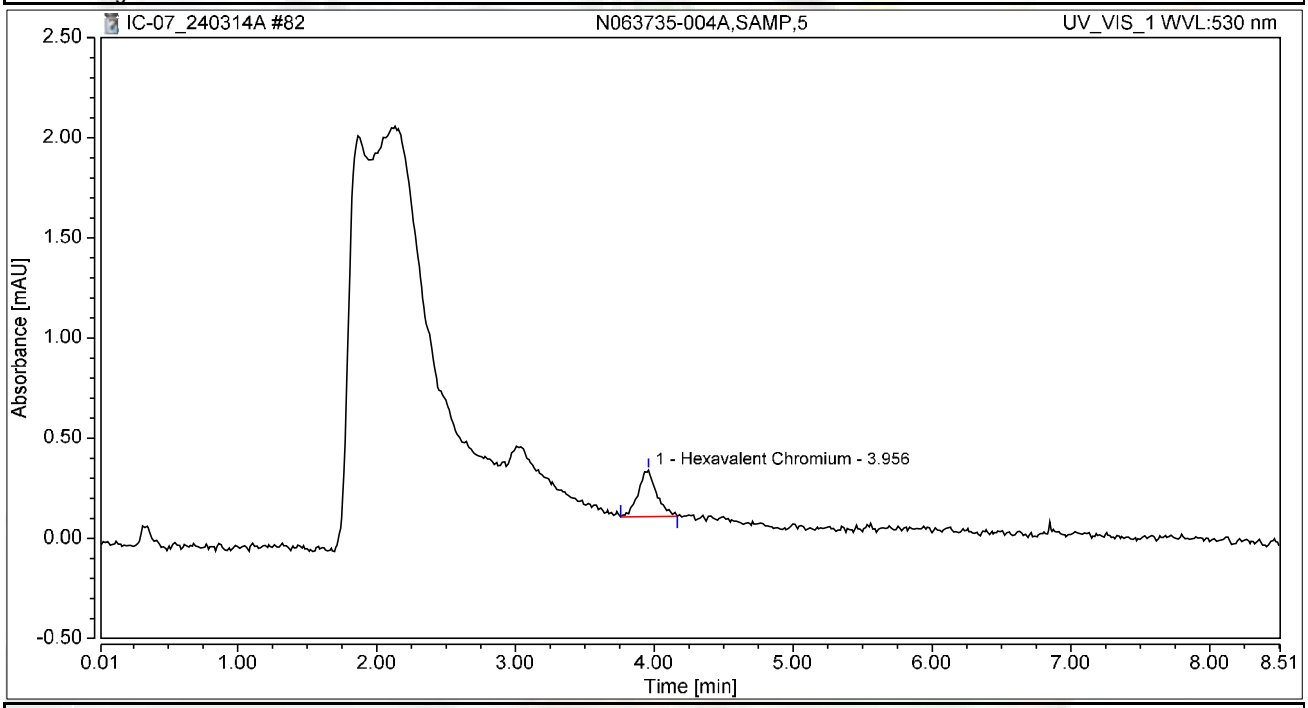
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.202	1.152	100.00	100.00	0.9497
Total:			**0.202**	**1.152**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-004A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 21:46**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

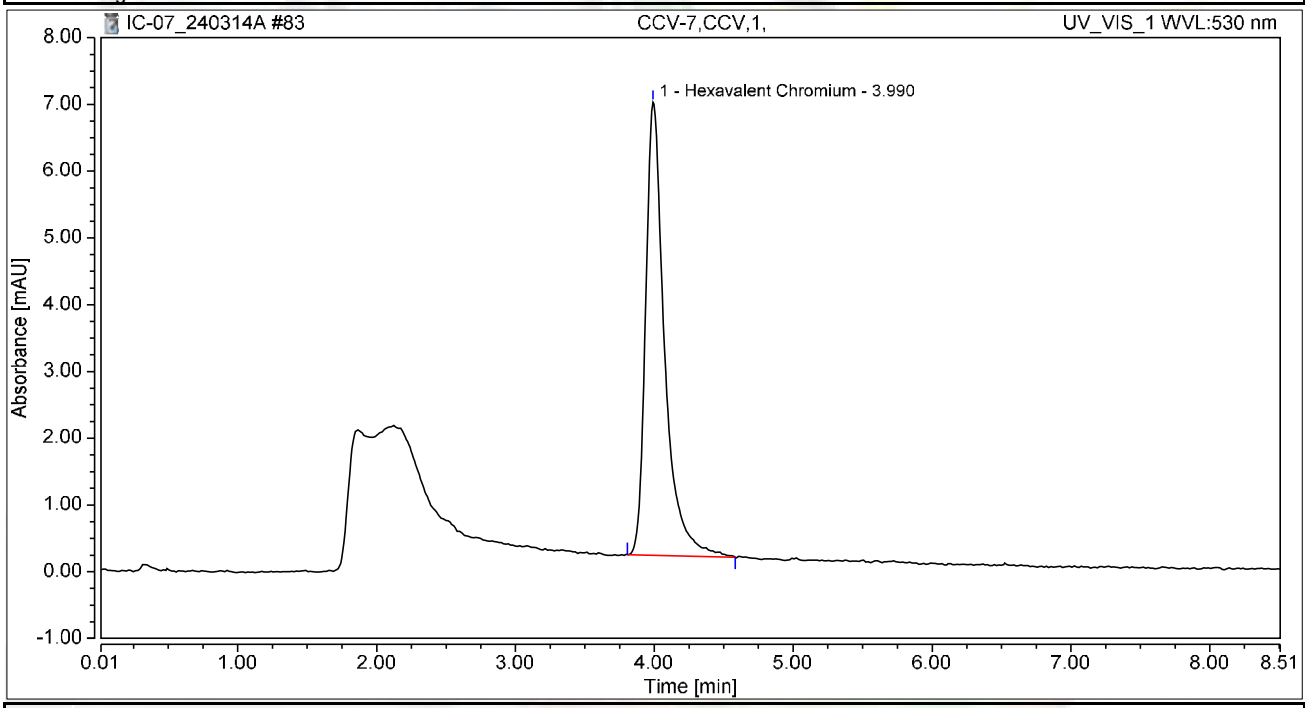
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.036	0.232	100.00	100.00	0.1687
Total:			**0.036**	**0.232**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 21:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

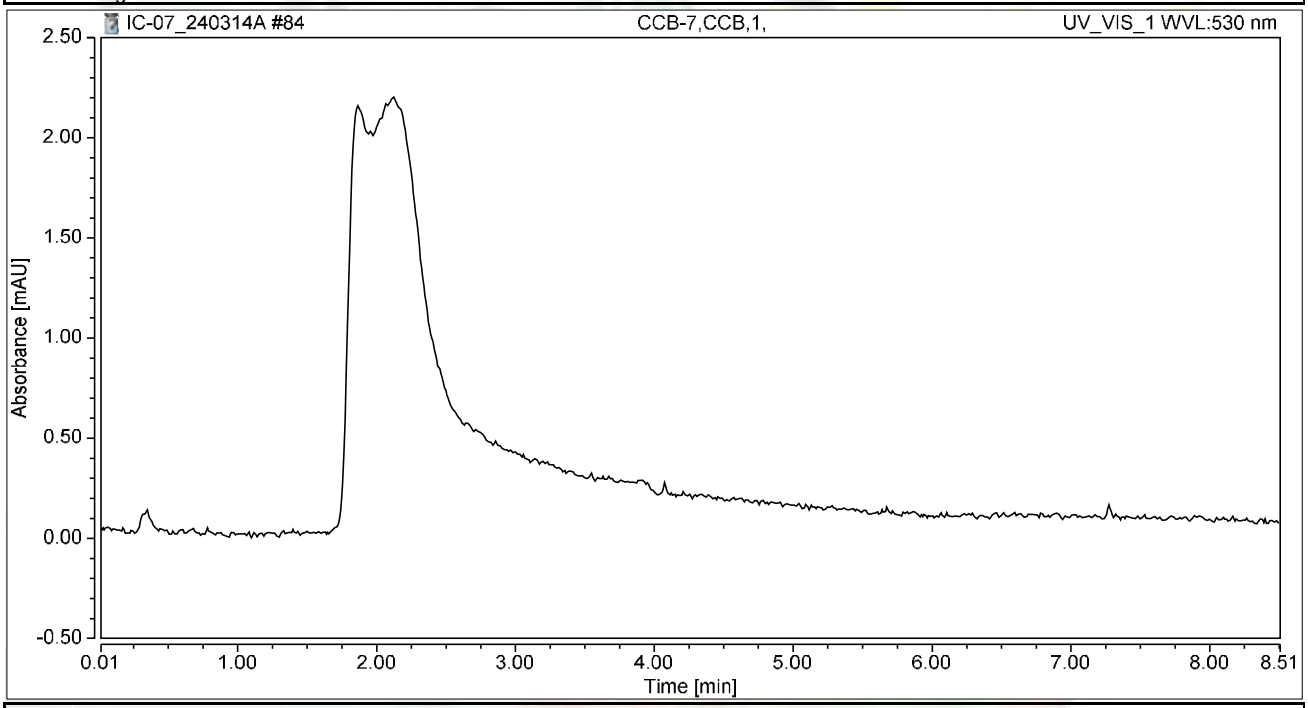
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	1.078	6.787	100.00	100.00	5.0653
Total:			**1.078**	**6.787**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 22:05**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

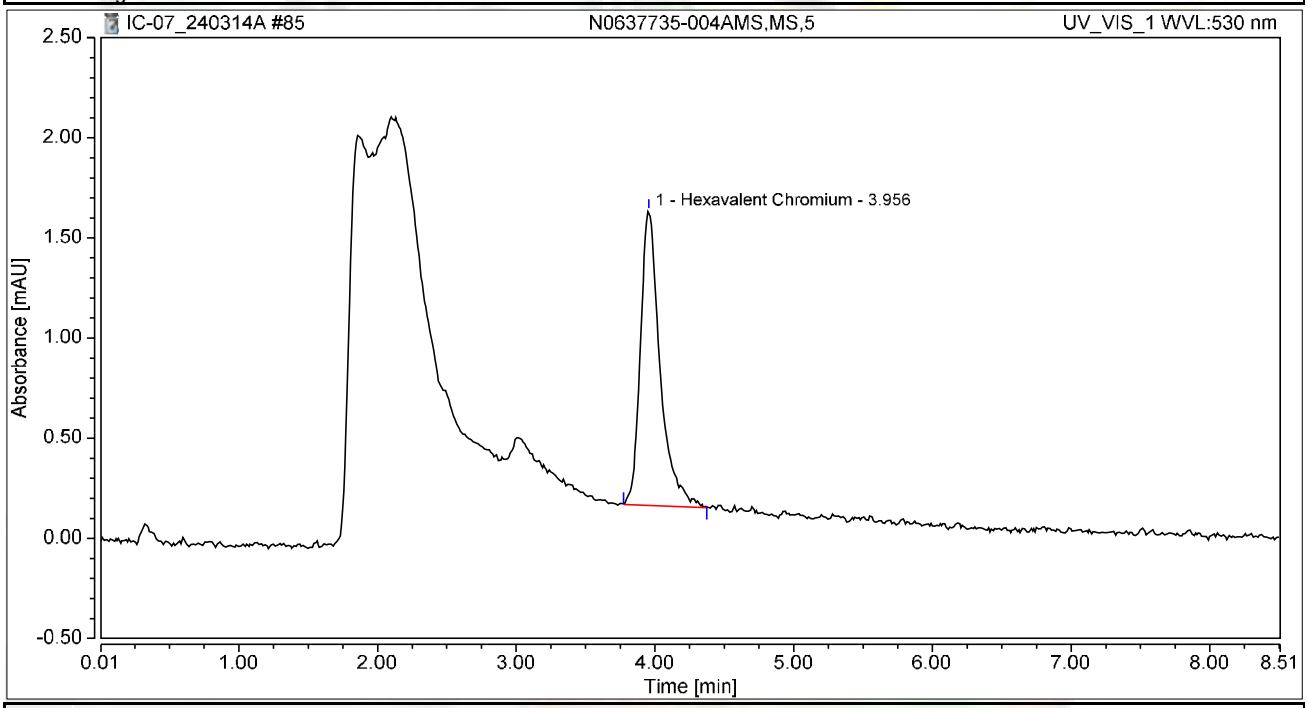
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N0637735-004AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**44**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 22:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

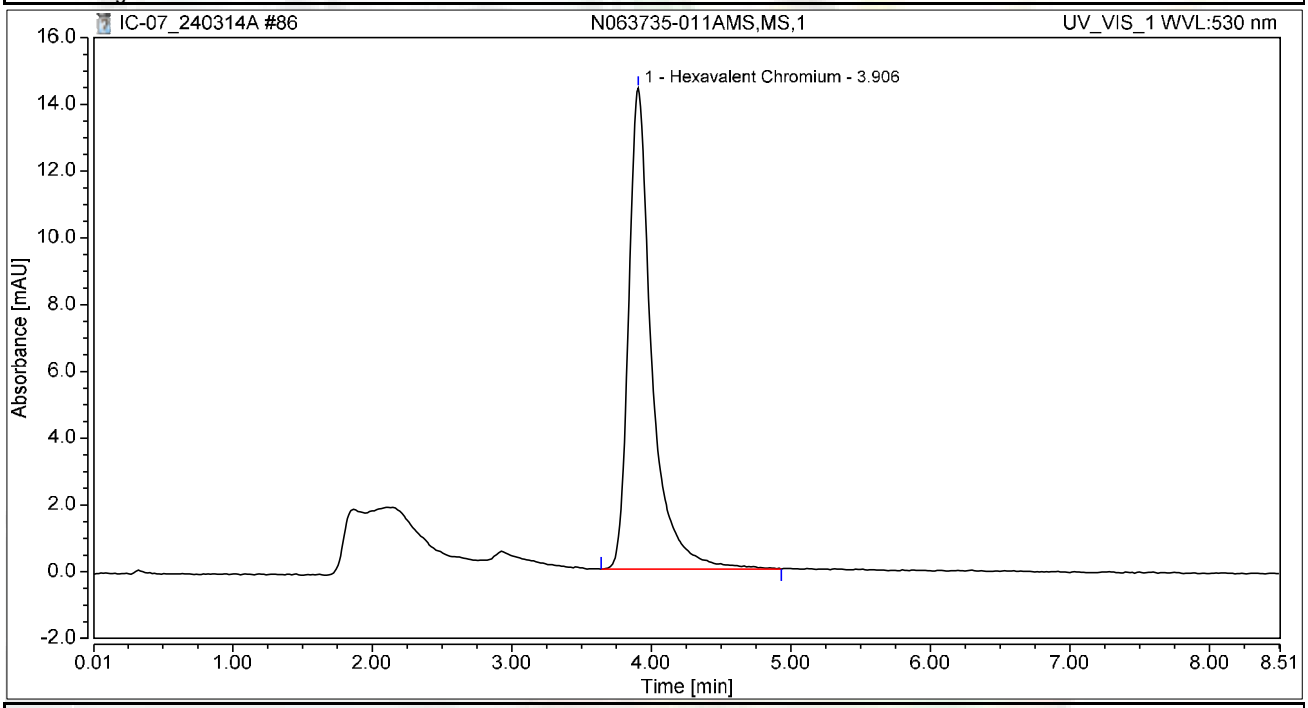
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.241	1.469	100.00	100.00	1.1337
Total:			**0.241**	**1.469**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**45**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 22:24**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

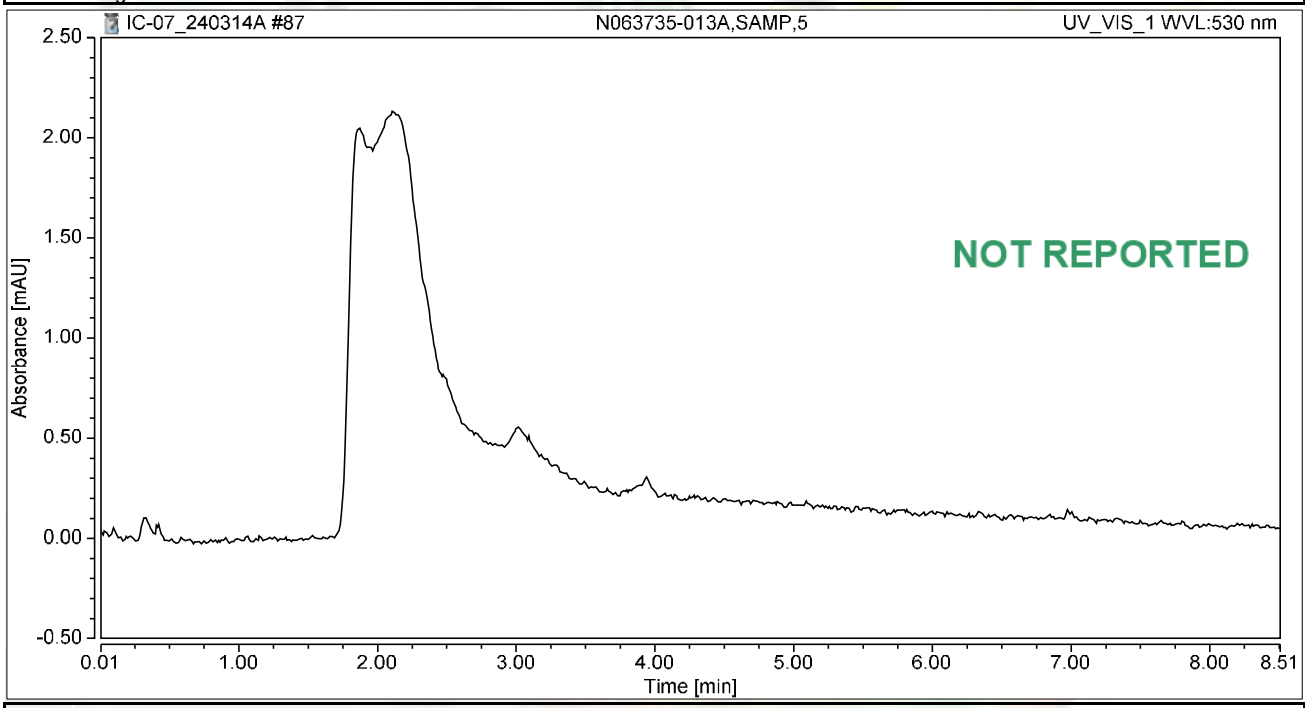
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.906	2.783	14.403	100.00	100.00	13.0754
Total:			**2.783**	**14.403**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-013A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**46**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 22:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

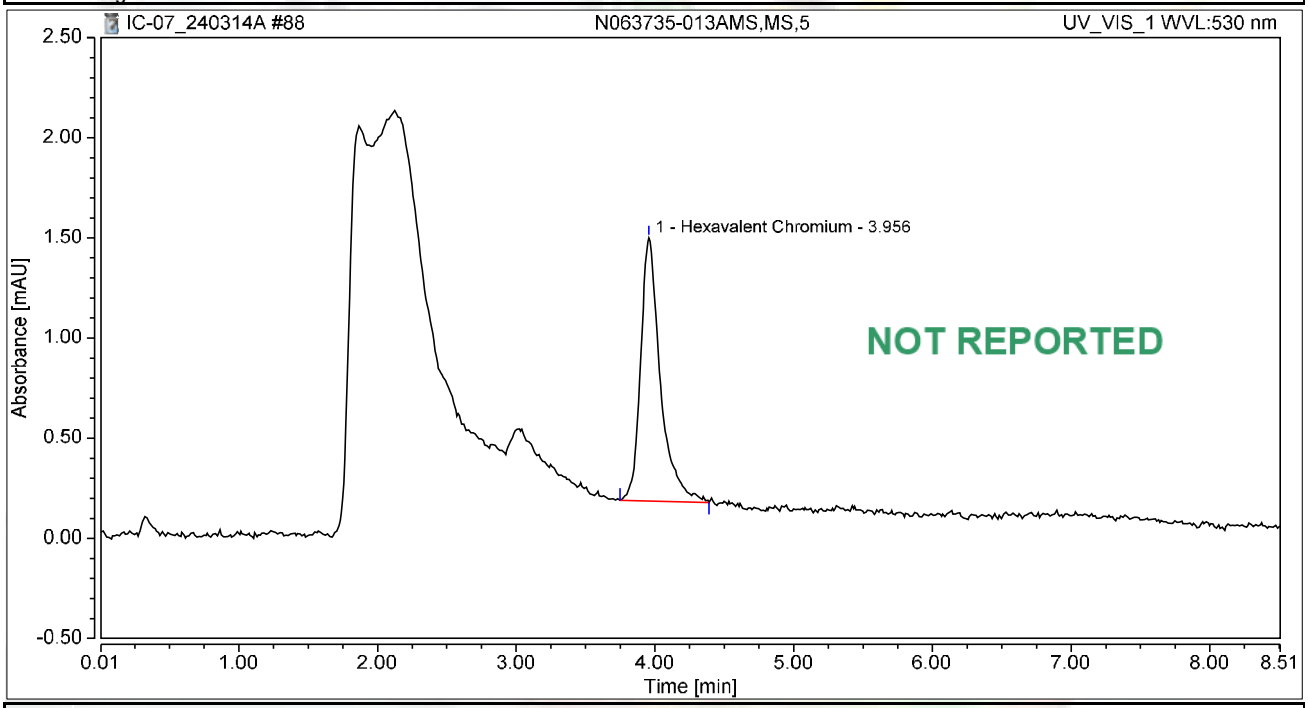
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-013AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**47**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 22:43**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

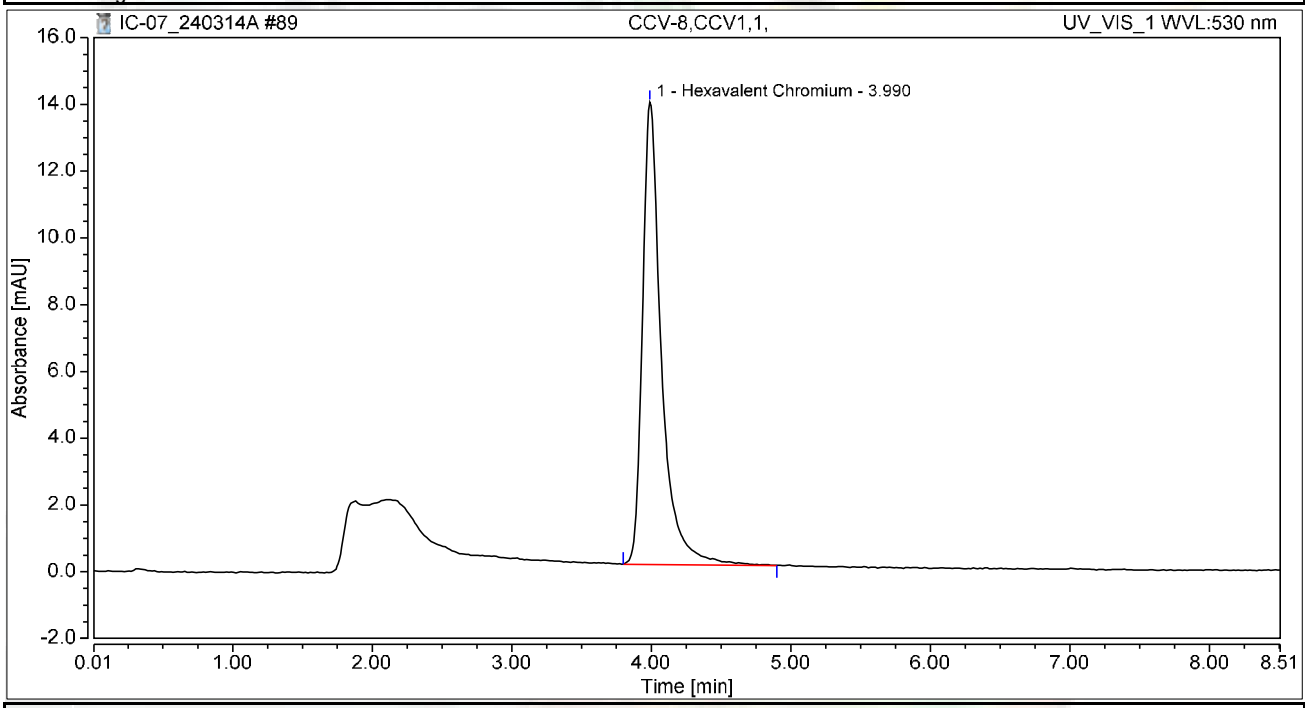
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.217	1.313	100.00	100.00	1.0173
Total:			**0.217**	**1.313**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-8,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**48**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 22:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

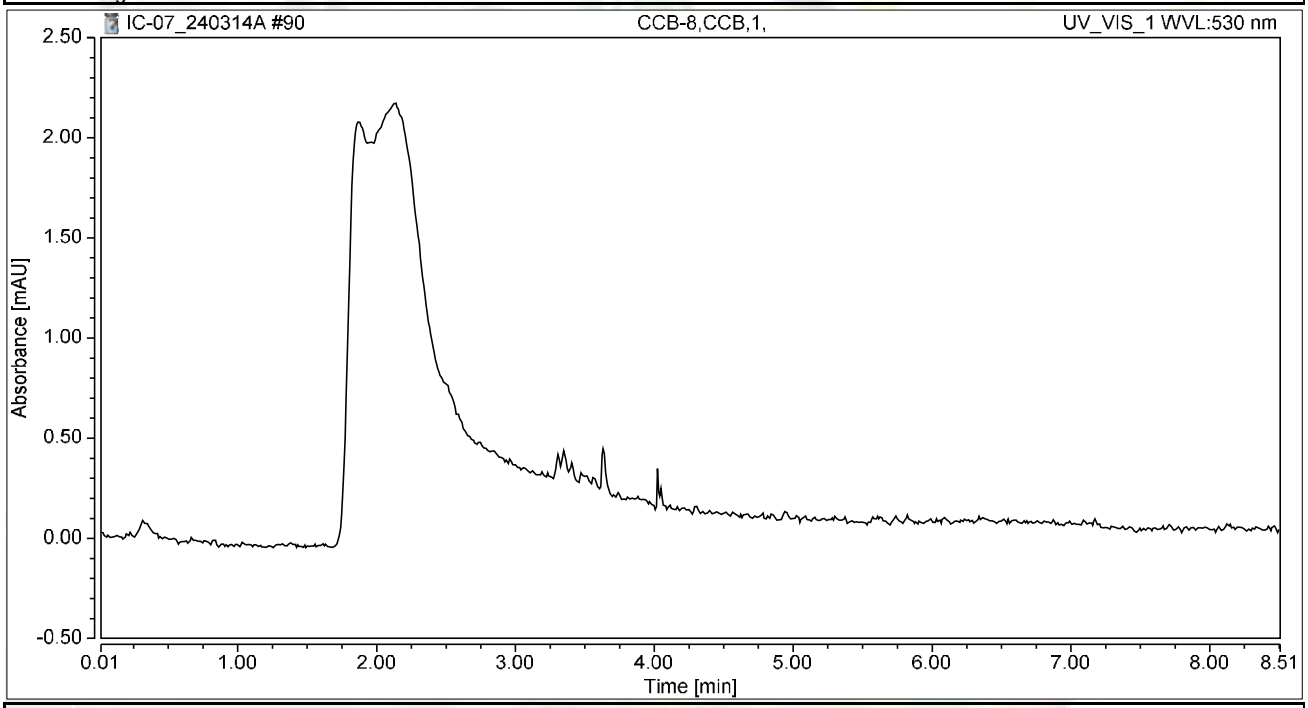
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	2.186	13.849	100.00	100.00	10.2699
Total:			**2.186**	**13.849**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-8,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**49**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**14/Mar/24 23:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240315A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/15/24 9:39 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/15/24 9:53 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/15/24 10:02 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/15/24 10:11 AM	Reported
13	MB-R183690	MBLK	1	Hexavalent Chromium	03/15/24 10:21 AM	Reported
14	LCS-R183690	LCS	1	Hexavalent Chromium	03/15/24 10:30 AM	Reported
15	N063735-012A	SAMP	1	Hexavalent Chromium	03/15/24 10:55 AM	Reported
16	N063735-012AMS	MS	1	Hexavalent Chromium	03/15/24 11:07 AM	Reported
17	N063771-001A	SAMP	1	Hexavalent Chromium	03/15/24 11:17 AM	Not Reported
18	N063771-001AMS	MS	1	Hexavalent Chromium	03/15/24 11:26 AM	Not Reported
19	N063771-001A	SAMP	5	Hexavalent Chromium	03/15/24 11:57 AM	Reported
20	N063771-001AMS	MS	5	Hexavalent Chromium	03/15/24 12:09 PM	Reported
21	N063771-002A	SAMP	1	Hexavalent Chromium	03/15/24 12:19 PM	Not Reported
22	N063771-002AMS	MS	1	Hexavalent Chromium	03/15/24 12:28 PM	Not Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/15/24 12:37 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/15/24 12:47 PM	Reported
25	N063771-014A	SAMP	5	Hexavalent Chromium	03/15/24 12:56 PM	Reported
26	N063771-014AMS	MS	5	Hexavalent Chromium	03/15/24 1:06 PM	Reported
27	N063771-015A	SAMP	5	Hexavalent Chromium	03/15/24 1:15 PM	Reported
28	N063771-015AMS	MS	5	Hexavalent Chromium	03/15/24 1:25 PM	Reported
29	N063771-018A	SAMP	5	Hexavalent Chromium	03/15/24 1:34 PM	Reported
30	N063771-018AMS	MS	5	Hexavalent Chromium	03/15/24 1:44 PM	Reported
31	N063771-010A	SAMP	1	Hexavalent Chromium	03/15/24 1:53 PM	Not Reported
32	N063771-010AMS	MS	1	Hexavalent Chromium	03/15/24 2:03 PM	Not Reported
33	N063771-014ADUP	DUP	5	Hexavalent Chromium	03/15/24 2:12 PM	Reported
34	N063771-014AMSD	MSD	5	Hexavalent Chromium	03/15/24 2:22 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	03/15/24 2:31 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	03/15/24 2:40 PM	Reported
37	N063771-012A	SAMP	1	Hexavalent Chromium	03/15/24 2:50 PM	Not Reported
38	N063771-012AMS	MS	1	Hexavalent Chromium	03/15/24 2:59 PM	Not Reported
39	N063771-013A	SAMP	1	Hexavalent Chromium	03/15/24 3:09 PM	Not Reported
40	N063771-013AMS	MS	1	Hexavalent Chromium	03/15/24 3:18 PM	Not Reported
41	N063771-006A	SAMP	1	Hexavalent Chromium	03/15/24 3:28 PM	Not Reported
42	N063771-006AMS	MS	1	Hexavalent Chromium	03/15/24 3:37 PM	Not Reported

dMRocha 3/26/2024
for RBA

INJECTION LOG: 240315A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063771-007A	SAMP	1	Hexavalent Chromium	03/15/24 3:47 PM	Not Reported
44	N063771-007AMS	MS	1	Hexavalent Chromium	03/15/24 4:02 PM	Not Reported
45	N063771-009A	SAMP	1	Hexavalent Chromium	03/15/24 4:14 PM	Not Reported
46	N063771-009AMS	MS	1	Hexavalent Chromium	03/15/24 4:23 PM	Not Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	03/15/24 4:33 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	03/15/24 4:42 PM	Reported
49	N063771-008A	SAMP	1	Hexavalent Chromium	03/15/24 4:52 PM	Reported
50	N063771-008AMS	MS	1	Hexavalent Chromium	03/15/24 5:01 PM	Reported
51	N063771-016A	SAMP	1	Hexavalent Chromium	03/15/24 5:11 PM	Not Reported
52	N063771-016AMS	MS	1	Hexavalent Chromium	03/15/24 5:20 PM	Not Reported
53	N063771-017A	SAMP	1	Hexavalent Chromium	03/15/24 5:29 PM	Not Reported
54	N063771-017AMS	MS	1	Hexavalent Chromium	03/15/24 5:39 PM	Not Reported
55	N063771-019A	SAMP	1	Hexavalent Chromium	03/15/24 5:48 PM	Reported
56	N063771-019AMS	MS	1	Hexavalent Chromium	03/15/24 5:58 PM	Reported
57	N063771-011A	SAMP	1	Hexavalent Chromium	03/15/24 6:08 PM	Not Reported
58	N063771-011AMS	MS	1	Hexavalent Chromium	03/15/24 6:17 PM	Not Reported
59	CCV-5	CCV	1	Hexavalent Chromium	03/15/24 6:26 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	03/15/24 6:36 PM	Reported
61	N063771-002A	SAMP	5	Hexavalent Chromium	03/15/24 6:45 PM	Reported
62	N063771-002AMS	MS	5	Hexavalent Chromium	03/15/24 6:55 PM	Reported
63	N063812-006A	SAMP	1	Hexavalent Chromium	03/15/24 7:04 PM	Reported
64	N063812-006AMS	MS	1	Hexavalent Chromium	03/15/24 7:14 PM	Reported
65	N063812-008A	SAMP	1	Hexavalent Chromium	03/15/24 7:23 PM	Reported
66	N063812-008AMS	MS	1	Hexavalent Chromium	03/15/24 7:32 PM	Reported
67	N063812-017A	SAMP	1	Hexavalent Chromium	03/15/24 7:42 PM	Reported
68	N063812-017AMS	MS	1	Hexavalent Chromium	03/15/24 7:51 PM	Reported
69	N063771-010A	SAMP	5	Hexavalent Chromium	03/15/24 8:01 PM	Reported
70	N063771-010AMS	MS	5	Hexavalent Chromium	03/15/24 8:10 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	03/15/24 8:20 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	03/15/24 8:29 PM	Reported
73	N063771-012A	SAMP	5	Hexavalent Chromium	03/15/24 8:39 PM	Reported
74	N063771-012AMS	MS	5	Hexavalent Chromium	03/15/24 8:48 PM	Reported
75	N063771-013A	SAMP	5	Hexavalent Chromium	03/15/24 8:58 PM	not Reported
76	N063771-013AMS	MS	5	Hexavalent Chromium	03/15/24 9:07 PM	not Reported
77	N063771-006A	SAMP	5	Hexavalent Chromium	03/15/24 9:16 PM	Reported
78	N063771-006AMS	MS	5	Hexavalent Chromium	03/15/24 9:26 PM	Reported
79	N063771-007A	SAMP	5	Hexavalent Chromium	03/15/24 9:35 PM	Reported
80	N063771-007AMS	MS	5	Hexavalent Chromium	03/15/24 9:45 PM	Reported
81	N063771-009A	SAMP	5	Hexavalent Chromium	03/15/24 9:54 PM	Reported
82	N063771-009AMS	MS	5	Hexavalent Chromium	03/15/24 10:04 PM	Reported
83	CCV-7	CCV	1	Hexavalent Chromium	03/15/24 10:13 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	03/15/24 10:23 PM	Reported

dMocha 3/26/2024

for RBA

INJECTION LOG: 240315A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	BLANK	BLANK	1	Hexavalent Chromium	03/15/24 10:32 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240315A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**15/Mar/24 23:02:54**
No. of Injections:	**88**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/15/2024 09:39	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/15/2024 09:53	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/15/2024 10:02	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/15/2024 10:11	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/15/2024 10:21	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/15/2024 10:30	Finished	LCS @5ppb, IWST-231228B
15	N063735-012A,SAMF	1	1000	Unknown		03/15/2024 10:55	Finished	SAMP,10 mL
16	N063735-012AMS,MS	2	1000	Unknown		03/15/2024 11:07	Finished	MS (1ppb), IWST-231228B,10r
17	N063771-001A,SAMF	3	1000	Unknown		03/15/2024 11:17	Finished	SAMP,10 mL
18	N063771-001AMS,MS	4	1000	Unknown		03/15/2024 11:26	Finished	MS (5ppb), IWST-231228B,10r
19	N063771-001A,SAMF	1	1000	Unknown		03/15/2024 11:57	Finished	SAMP,2>10 mL
20	N063771-001AMS,MS	2	1000	Unknown		03/15/2024 12:09	Finished	MS (1ppb), IWST-231228B,2>1
21	N063771-002A,SAMF	3	1000	Unknown		03/15/2024 12:19	Finished	SAMP,10 mL
22	N063771-002AMS,MS	4	1000	Unknown		03/15/2024 12:28	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	5	1000	Unknown		03/15/2024 12:37	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	6	1000	Unknown		03/15/2024 12:47	Finished	CCB R240129C
25	N063771-014A,SAMF	7	1000	Unknown		03/15/2024 12:56	Finished	SAMP,2>10 mL
26	N063771-014AMS,MS	8	1000	Unknown		03/15/2024 13:06	Finished	MS (1ppb), IWST-231228B,2>1
27	N063771-015A,SAMF	9	1000	Unknown		03/15/2024 13:15	Finished	SAMP,2>10 mL
28	N063771-015AMS,MS	10	1000	Unknown		03/15/2024 13:25	Finished	MS (1ppb), IWST-231228B,2>1
29	N063771-018A,SAMF	11	1000	Unknown		03/15/2024 13:34	Finished	SAMP,2>10 mL
30	N063771-018AMS,MS	12	1000	Unknown		03/15/2024 13:44	Finished	MS (1ppb), IWST-231228B,2>1
31	N063771-010A,SAMF	13	1000	Unknown		03/15/2024 13:53	Finished	SAMP,10 mL
32	N063771-010AMS,MS	14	1000	Unknown		03/15/2024 14:03	Finished	MS (1ppb), IWST-231228B,10r
33	N063771-014ADUP,D	15	1000	Unknown		03/15/2024 14:12	Finished	DUP,2>10 mL
34	N063771-014AMSD,M	16	1000	Unknown		03/15/2024 14:22	Finished	MSD (5ppb), IWST-231228B,2
35	CCV-3,CCV,1,	17	1000	Unknown		03/15/2024 14:31	Finished	CCV @10ppb, IWST-231228A
36	CCB-3,CCB,1,	18	1000	Unknown		03/15/2024 14:40	Finished	CCB R240129C
37	N063771-012A,SAMF	19	1000	Unknown		03/15/2024 14:50	Finished	SAMP,10 mL
38	N063771-012AMS,MS	20	1000	Unknown		03/15/2024 14:59	Finished	MS (1ppb), IWST-231228B,10r
39	N063771-013A,SAMF	21	1000	Unknown		03/15/2024 15:09	Finished	SAMP,10 mL
40	N063771-013AMS,MS	22	1000	Unknown		03/15/2024 15:18	Finished	MS (1ppb), IWST-231228B,10r
41	N063771-006A,SAMF	23	1000	Unknown		03/15/2024 15:28	Finished	SAMP,10 mL
42	N063771-006AMS,MS	24	1000	Unknown		03/15/2024 15:37	Finished	MS (1ppb), IWST-231228B,10r
43	N063771-007A,SAMF	25	1000	Unknown		03/15/2024 15:47	Finished	SAMP,10 mL
44	N063771-007AMS,MS	1	1000	Unknown		03/15/2024 16:02	Finished	MS (1ppb), IWST-231228B,10r
45	N063771-009A,SAMF	2	1000	Unknown		03/15/2024 16:14	Finished	SAMP,10 mL
46	N063771-009AMS,MS	3	1000	Unknown		03/15/2024 16:23	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	4	1000	Unknown		03/15/2024 16:33	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	5	1000	Unknown		03/15/2024 16:42	Finished	CCB R240129C
49	N063771-008A,SAMF	6	1000	Unknown		03/15/2024 16:52	Finished	SAMP,10 mL
50	N063771-008AMS,MS	7	1000	Unknown		03/15/2024 17:01	Finished	MS (1ppb), IWST-231228B,10r
51	N063771-016A,SAMF	8	1000	Unknown		03/15/2024 17:11	Finished	SAMP,10 mL
52	N063771-016AMS,MS	9	1000	Unknown		03/15/2024 17:20	Finished	MS (1ppb), IWST-231228B,10r
53	N063771-017A,SAMF	10	1000	Unknown		03/15/2024 17:29	Finished	SAMP,10 mL
54	N063771-017AMS,MS	11	1000	Unknown		03/15/2024 17:39	Finished	MS (1ppb), IWST-231228B,10r
55	N063771-019A,SAMF	12	1000	Unknown		03/15/2024 17:48	Finished	SAMP,10 mL
56	N063771-019AMS,MS	13	1000	Unknown		03/15/2024 17:58	Finished	MS (1ppb), IWST-231228B,10r
57	N063771-011A,SAMF	14	1000	Unknown		03/15/2024 18:08	Finished	SAMP,10 mL
58	N063771-011AMS,MS	15	1000	Unknown		03/15/2024 18:17	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	16	1000	Unknown		03/15/2024 18:26	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	17	1000	Unknown		03/15/2024 18:36	Finished	CCB R240129C

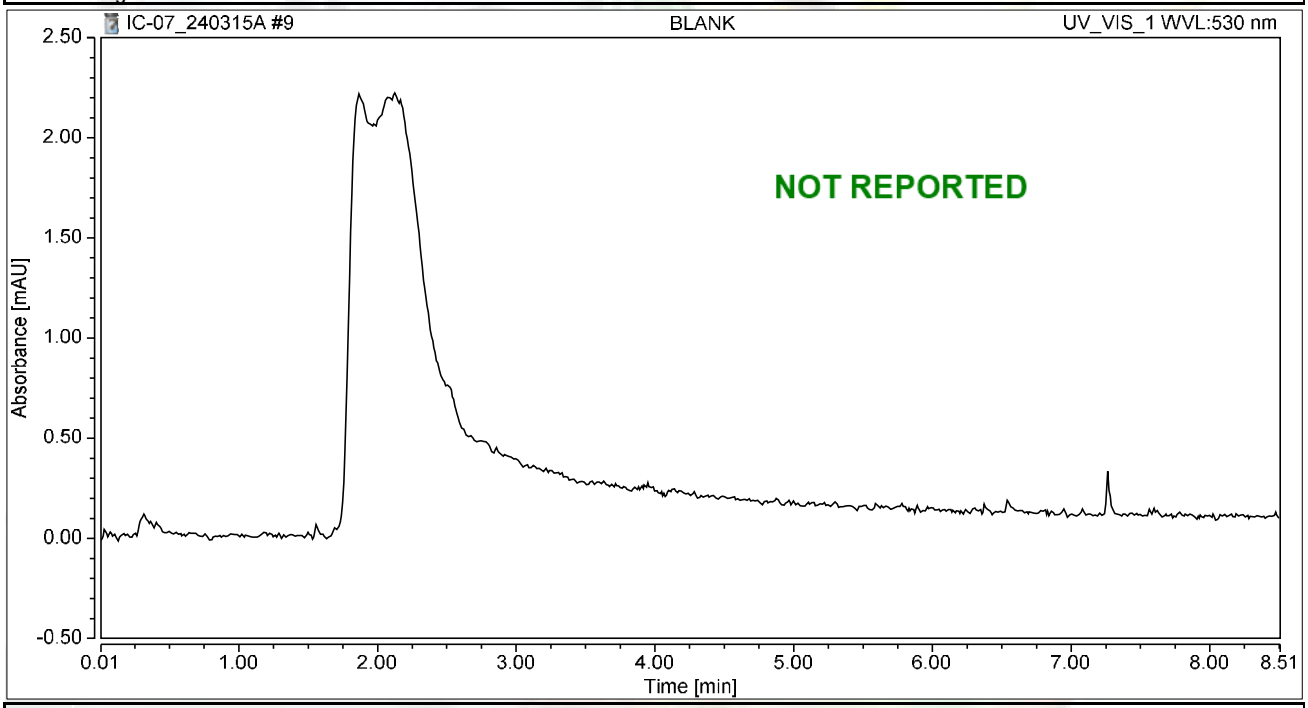
61	N063771-002A,SAMP	18	1000	Unknown		03/15/2024 18:45	Finished	SAMP,2>10 mL
62	N063771-002AMS,MS	19	1000	Unknown		03/15/2024 18:55	Finished	MS (1ppb), IWST-231228B,2>
63	N063812-006A,SAMP	20	1000	Unknown		03/15/2024 19:04	Finished	SAMP,10 mL
64	N063812-006AMS,MS	21	1000	Unknown		03/15/2024 19:14	Finished	MS (1ppb), IWST-231228B,10r
65	N063812-008A,SAMP	22	1000	Unknown		03/15/2024 19:23	Finished	SAMP,10 mL
66	N063812-008AMS,MS	23	1000	Unknown		03/15/2024 19:32	Finished	MS (1ppb), IWST-231228B,10r
67	N063812-017A,SAMP	24	1000	Unknown		03/15/2024 19:42	Finished	SAMP,10 mL
68	N063812-017AMS,MS	25	1000	Unknown		03/15/2024 19:51	Finished	MS (1ppb), IWST-231228B,10r
69	N063771-010A,SAMP	26	1000	Unknown		03/15/2024 20:01	Finished	SAMP,2>10 mL
70	N063771-010AMS,MS	27	1000	Unknown		03/15/2024 20:10	Finished	MS (1ppb), IWST-231228B,2>
71	CCV-6,CCV1,1,	28	1000	Unknown		03/15/2024 20:20	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	29	1000	Unknown		03/15/2024 20:29	Finished	CCB R240129C
73	N063771-012A,SAMP	30	1000	Unknown		03/15/2024 20:39	Finished	SAMP,2>10 mL
74	N063771-012AMS,MS	31	1000	Unknown		03/15/2024 20:48	Finished	MS (1ppb), IWST-231228B,2>
75	N063771-013A,SAMP	32	1000	Unknown		03/15/2024 20:58	Finished	SAMP,2>10 mL
76	N063771-013AMS,MS	33	1000	Unknown		03/15/2024 21:07	Finished	MS (1ppb), IWST-231228B,2>
77	N063771-006A,SAMP	34	1000	Unknown		03/15/2024 21:16	Finished	SAMP,2>10 mL
78	N063771-006AMS,MS	35	1000	Unknown		03/15/2024 21:26	Finished	MS (1ppb), IWST-231228B,2>
79	N063771-007A,SAMP	36	1000	Unknown		03/15/2024 21:35	Finished	SAMP,2>10 mL
80	N063771-007AMS,MS	37	1000	Unknown		03/15/2024 21:45	Finished	MS (1ppb), IWST-231228B,2>
81	N063771-009A,SAMP	38	1000	Unknown		03/15/2024 21:54	Finished	SAMP,2>10 mL
82	N063771-009AMS,MS	39	1000	Unknown		03/15/2024 22:04	Finished	MS (1ppb), IWST-231228B,2>
83	CCV-7,CCV,1,	40	1000	Unknown		03/15/2024 22:13	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	41	1000	Unknown		03/15/2024 22:23	Finished	CCB R240129C
85	BLANK	42	1000	Unknown		03/15/2024 22:32	Finished	BLANK
86	SHUTDOWN	43	1000	Unknown		03/15/2024 22:42	Finished	
87	Eluent: R240313A	44	1000	Unknown		n.a.	Finished	
88	PCR: R240313B	45	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 09:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

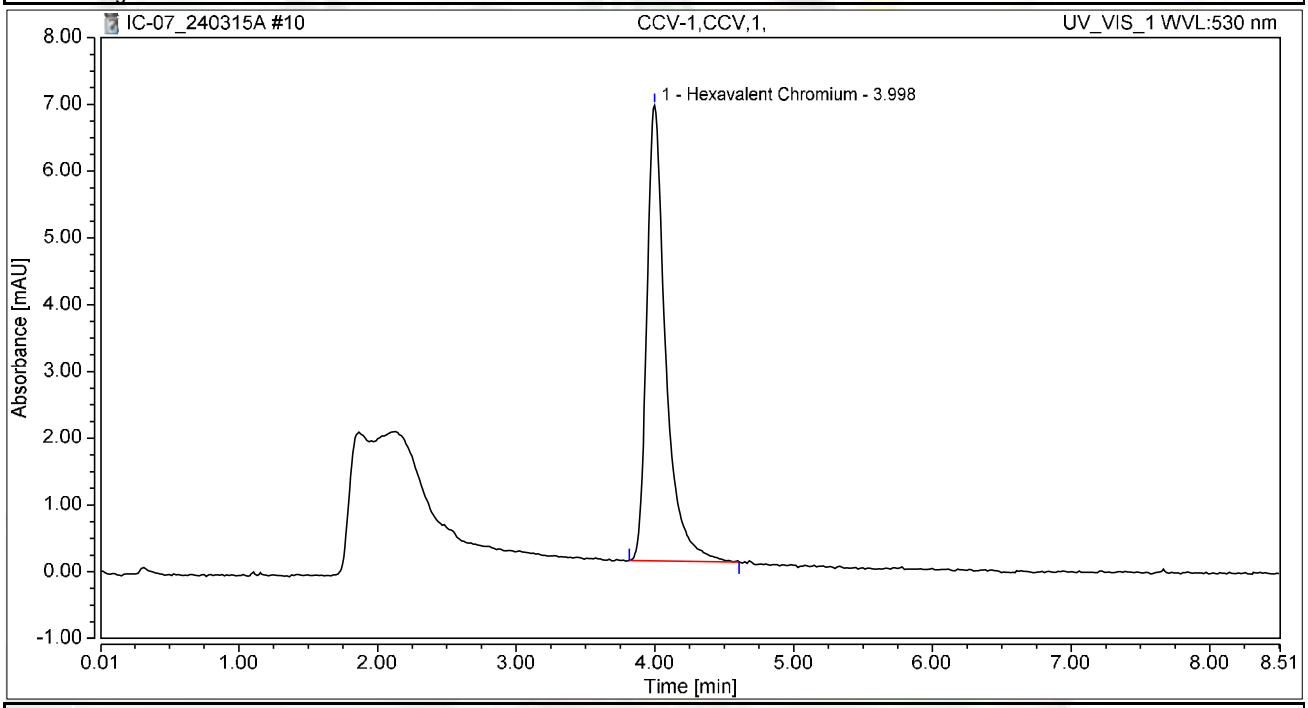
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 09:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	1.076	6.823	100.00	100.00	5.0578
Total:			**1.076**	**6.823**	**100.00**	**100.00**	

Reviewed by:

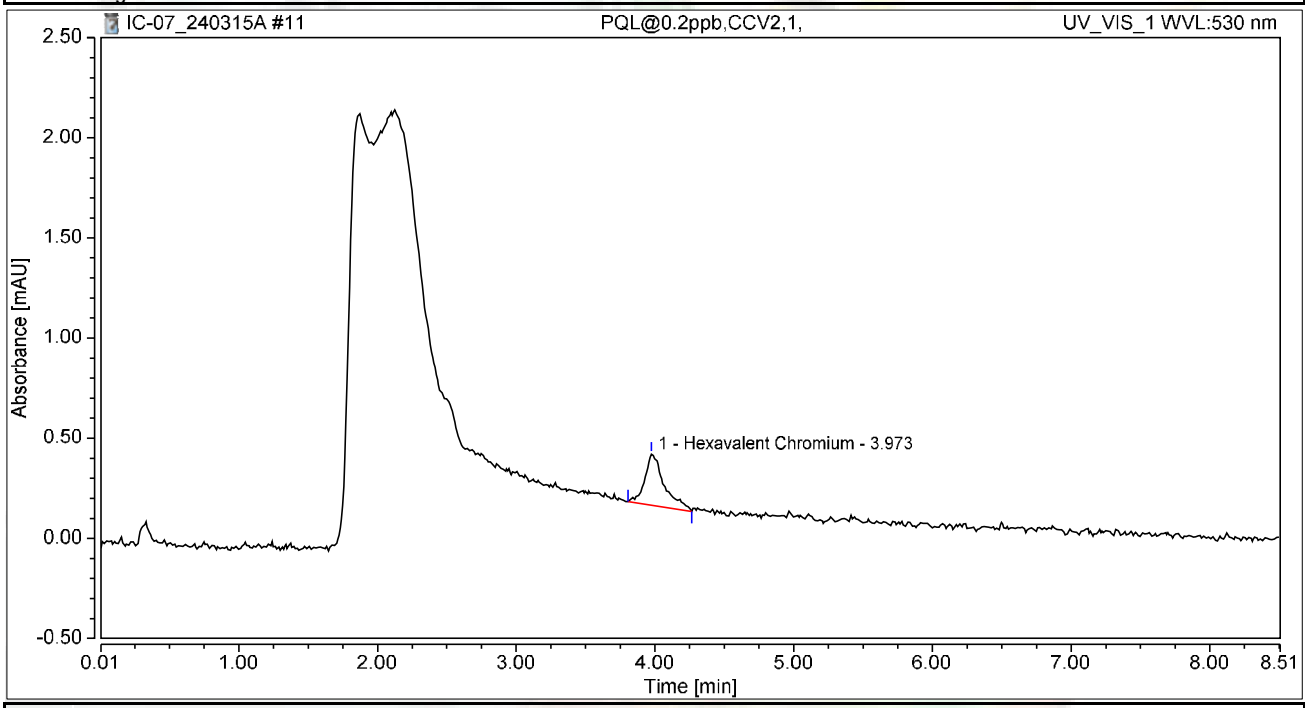
dMocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 10:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

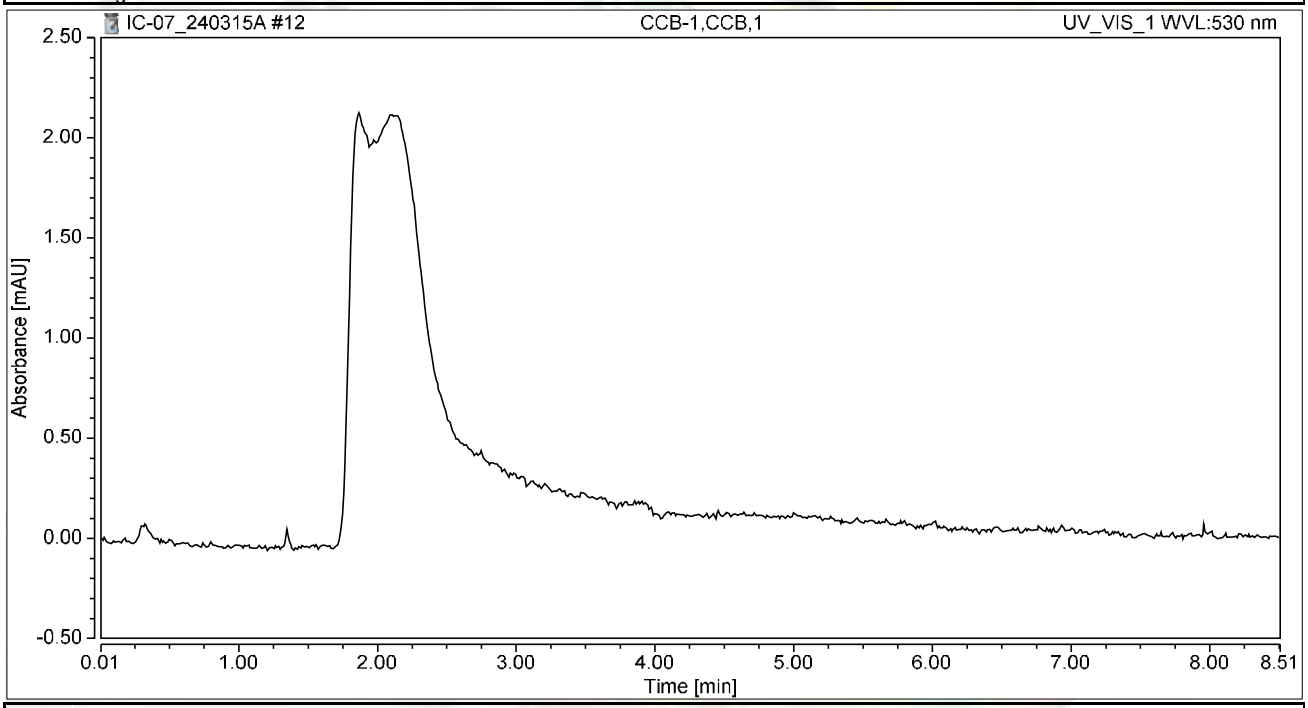
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.042	0.254	100.00	100.00	0.1957
Total:			**0.042**	**0.254**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 10:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

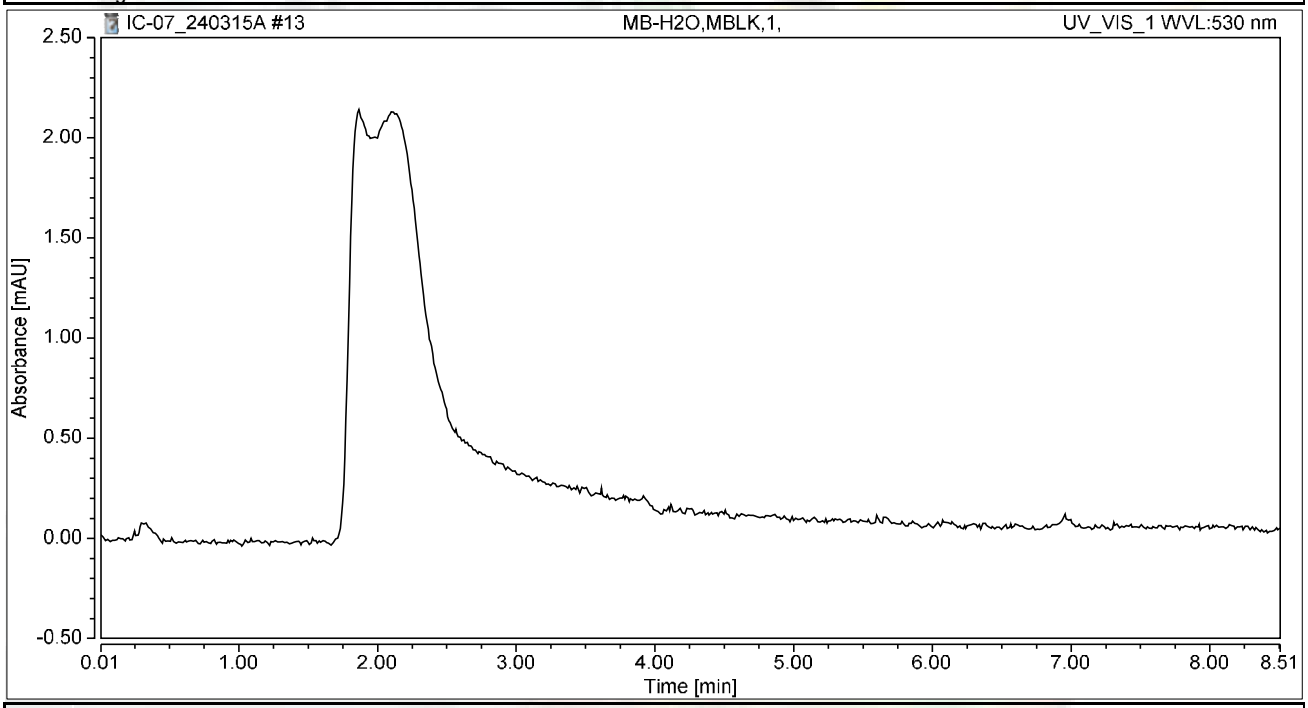
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 10:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

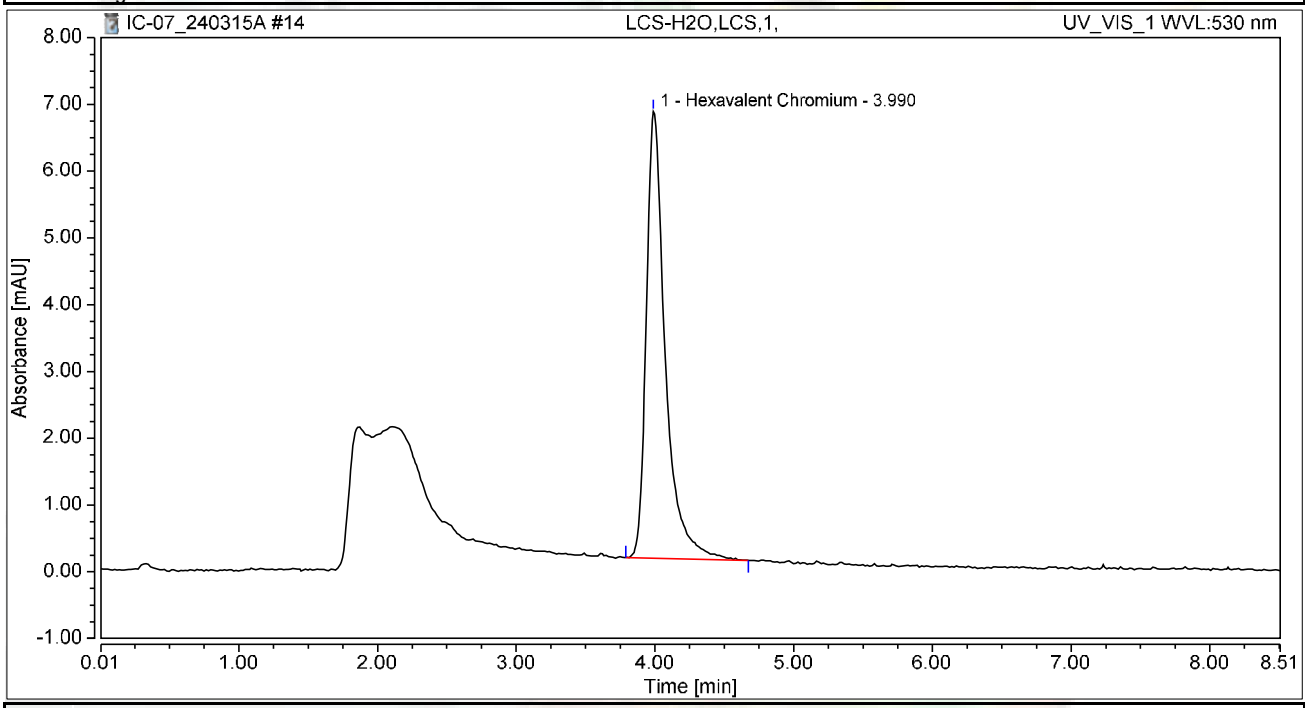
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 10:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

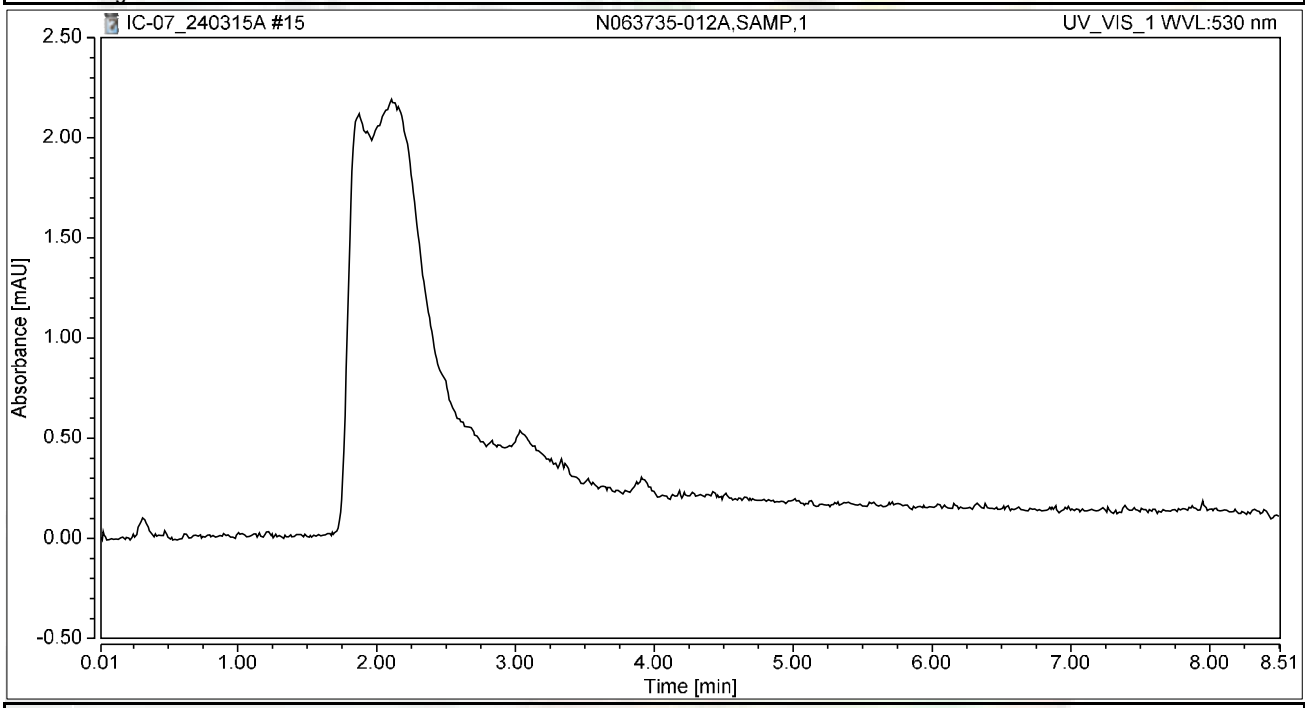
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	1.060	6.690	100.00	100.00	4.9825
Total:			**1.060**	**6.690**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-012A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 10:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

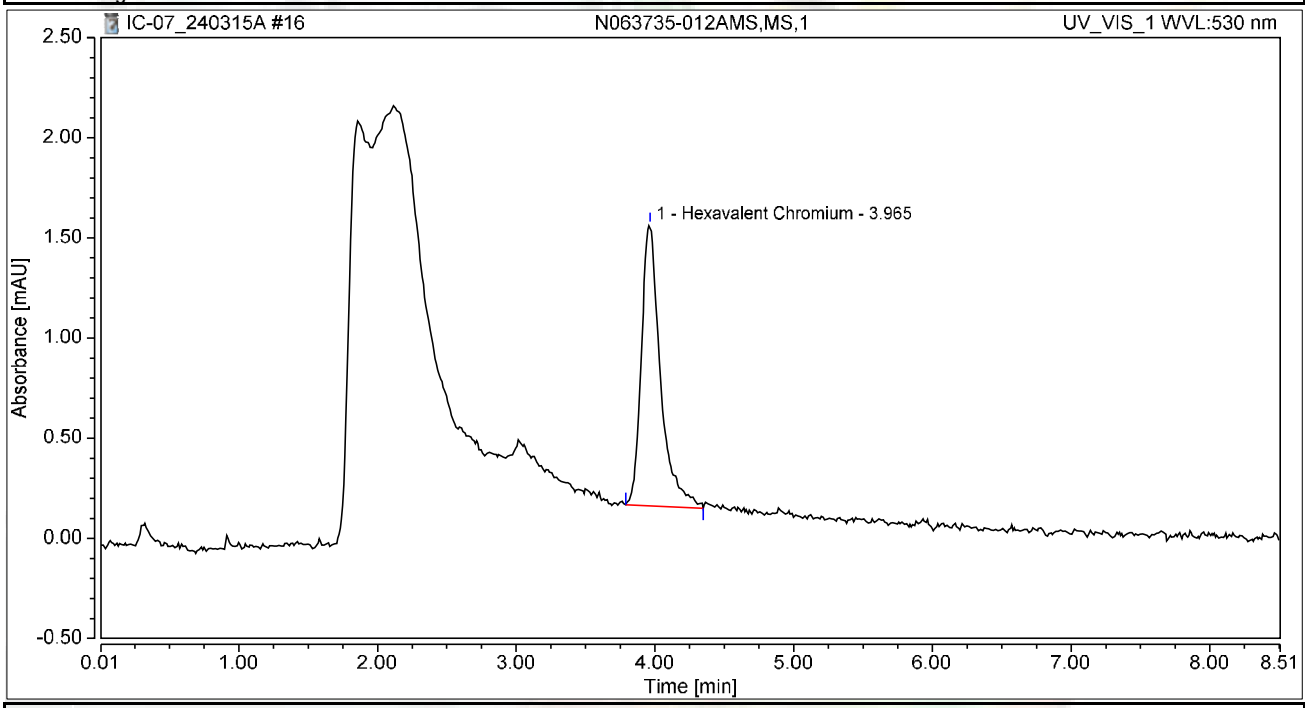
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-012AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 11:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

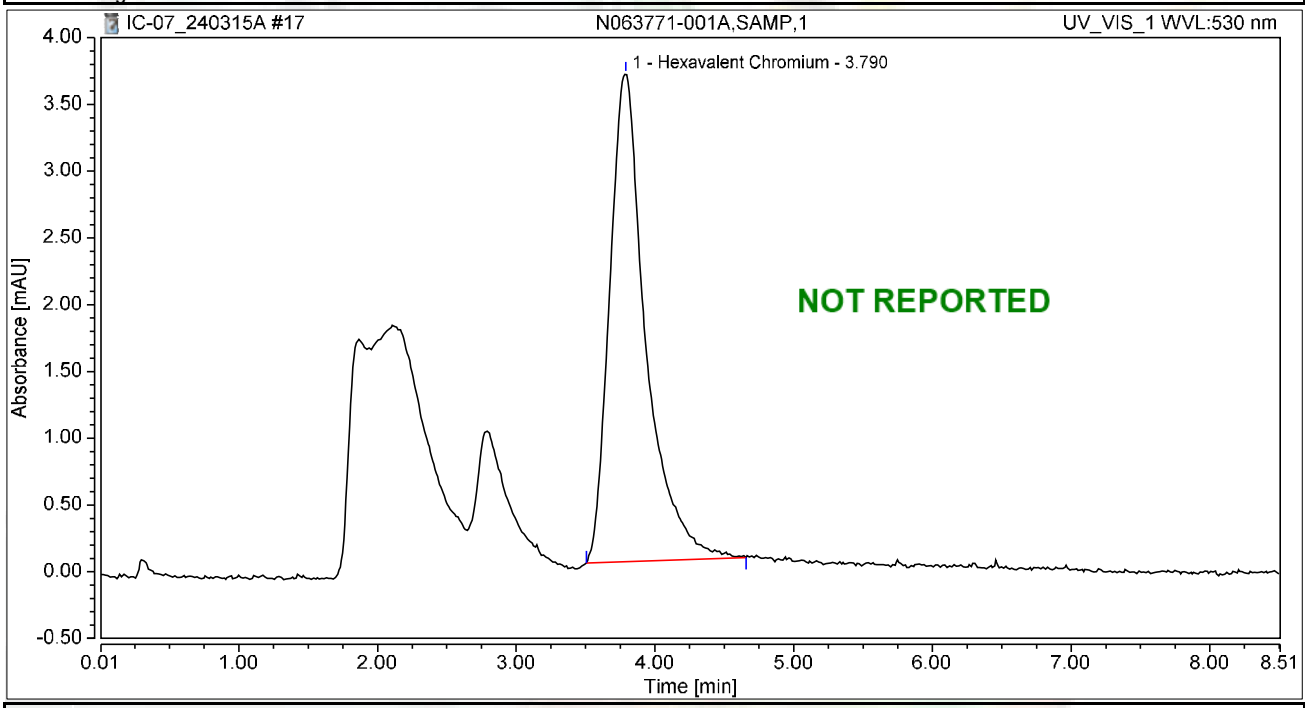
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.223	1.403	100.00	100.00	1.0487
Total:			**0.223**	**1.403**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 11:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

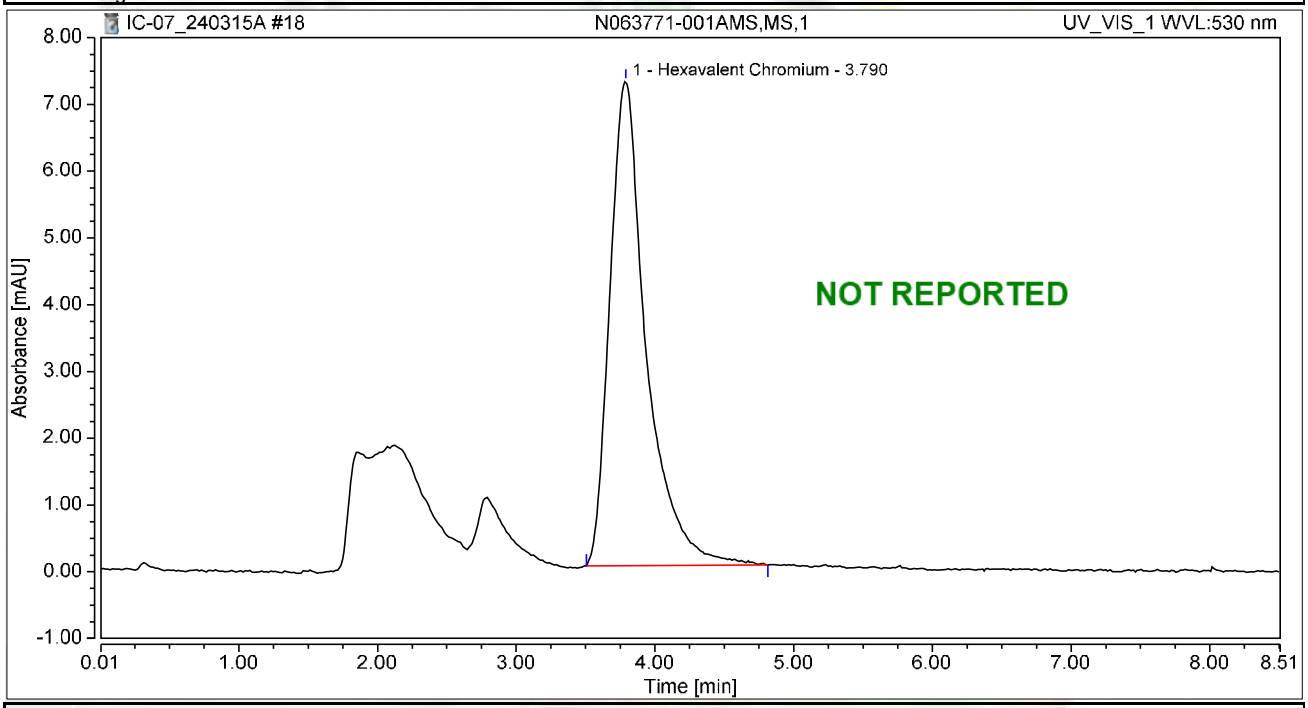
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	1.103	3.654	100.00	100.00	5.1829
Total:			**1.103**	**3.654**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 11:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

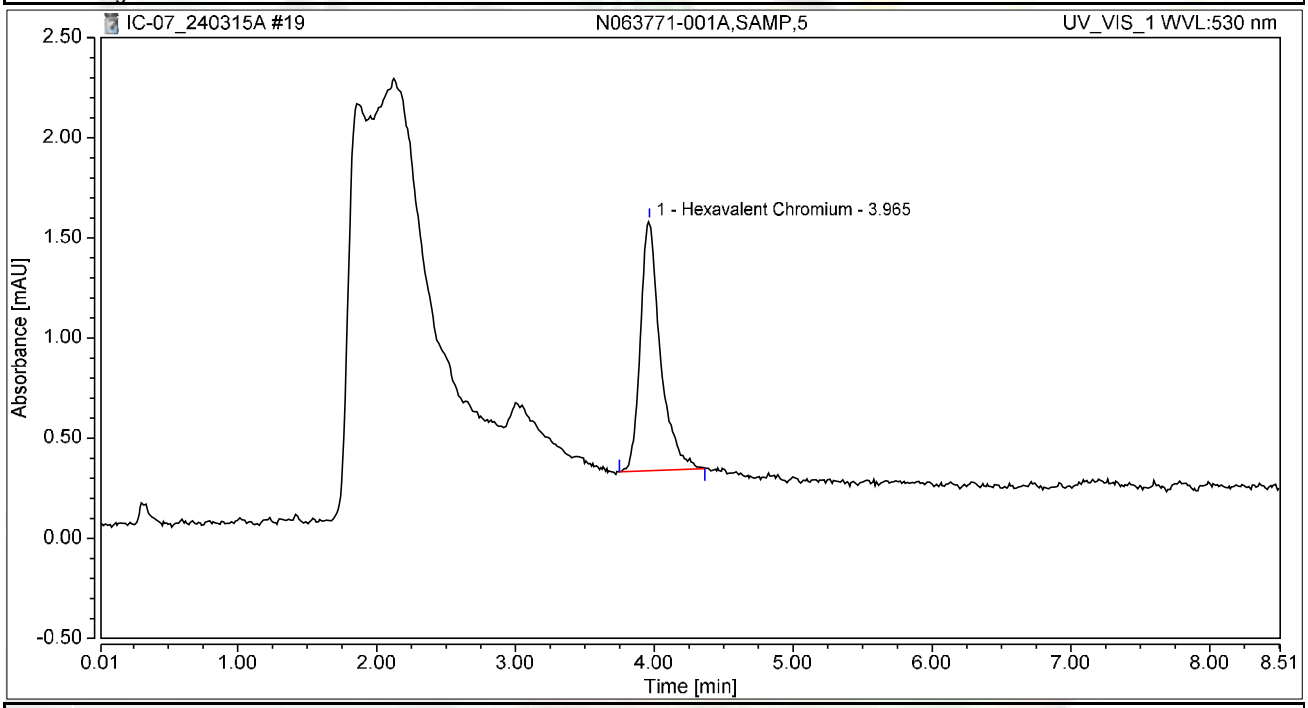
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	2.208	7.257	100.00	100.00	10.3724
Total:			**2.208**	**7.257**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-001A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 11:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

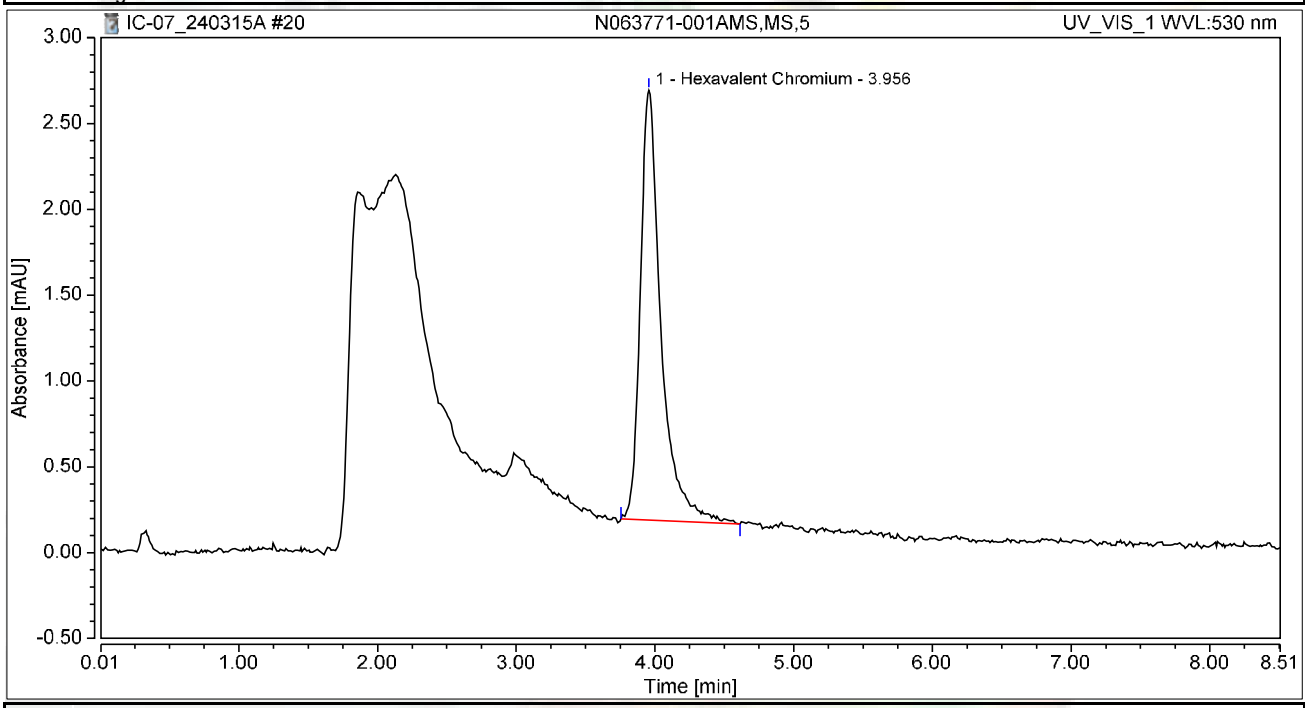
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.208	1.249	100.00	100.00	0.9786
Total:			**0.208**	**1.249**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

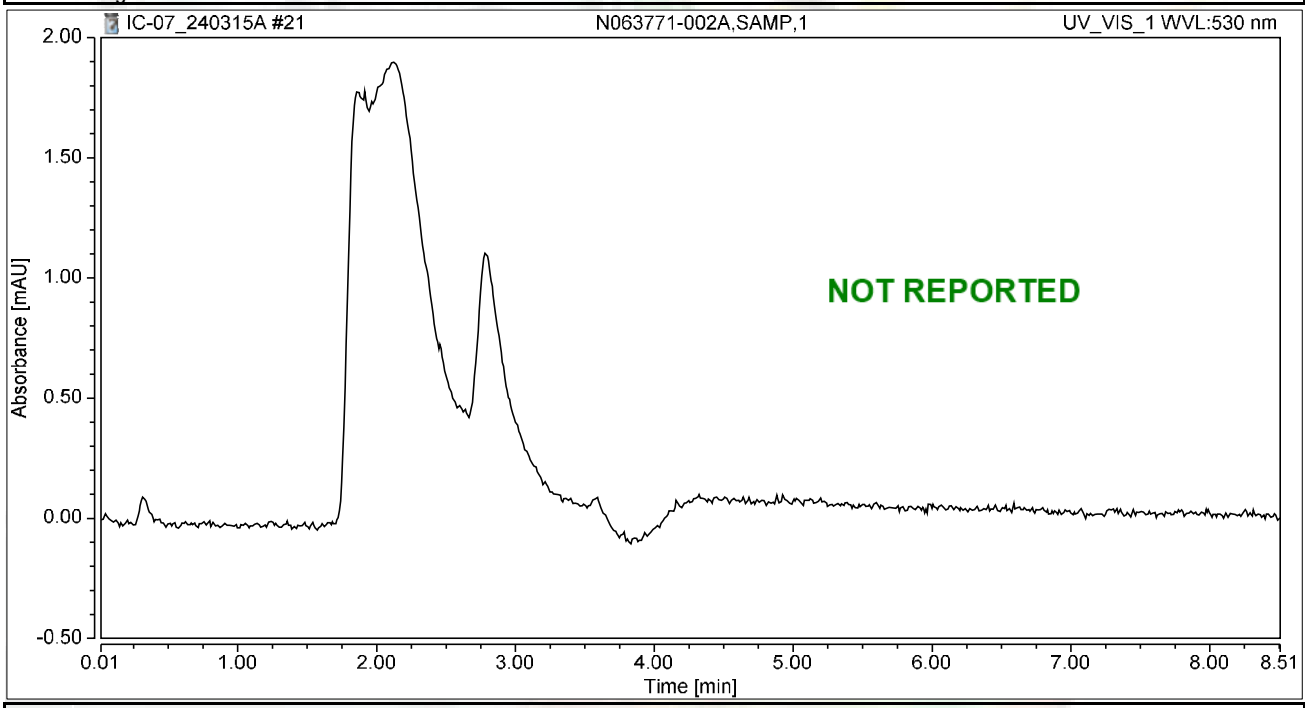
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.433	2.504	100.00	100.00	2.0336
Total:			**0.433**	**2.504**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-002A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

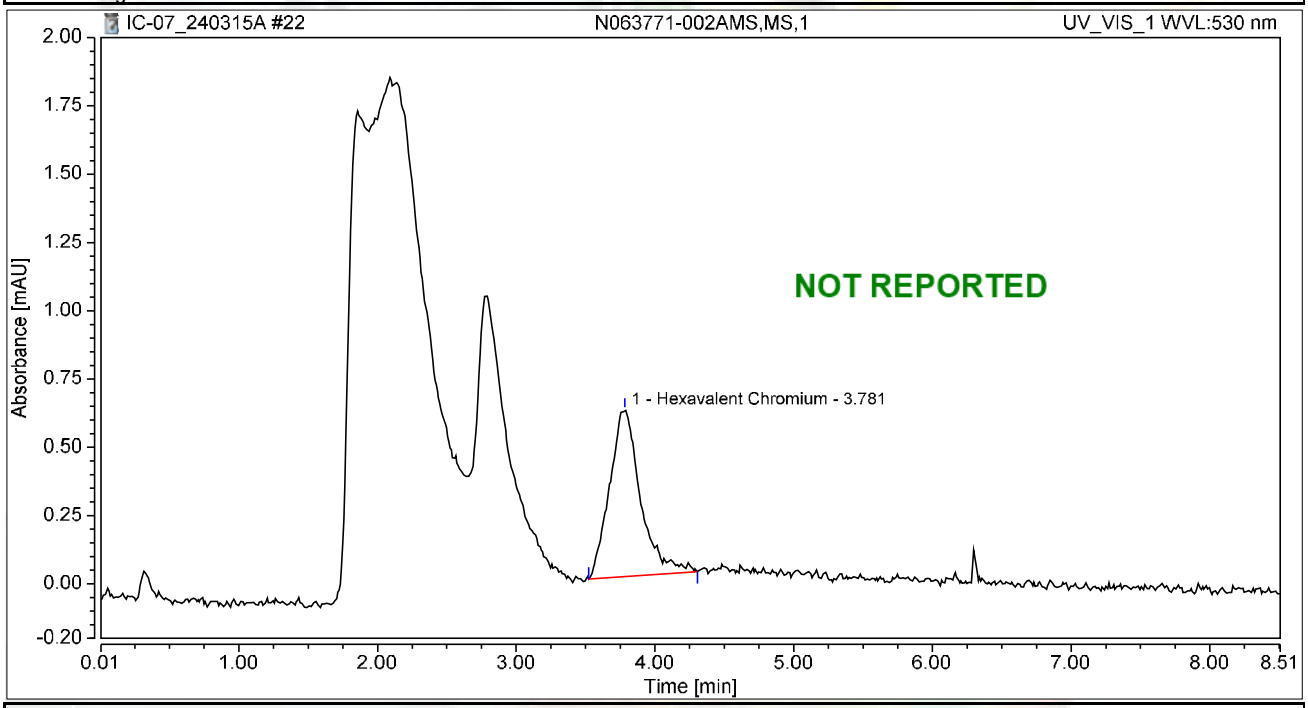
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

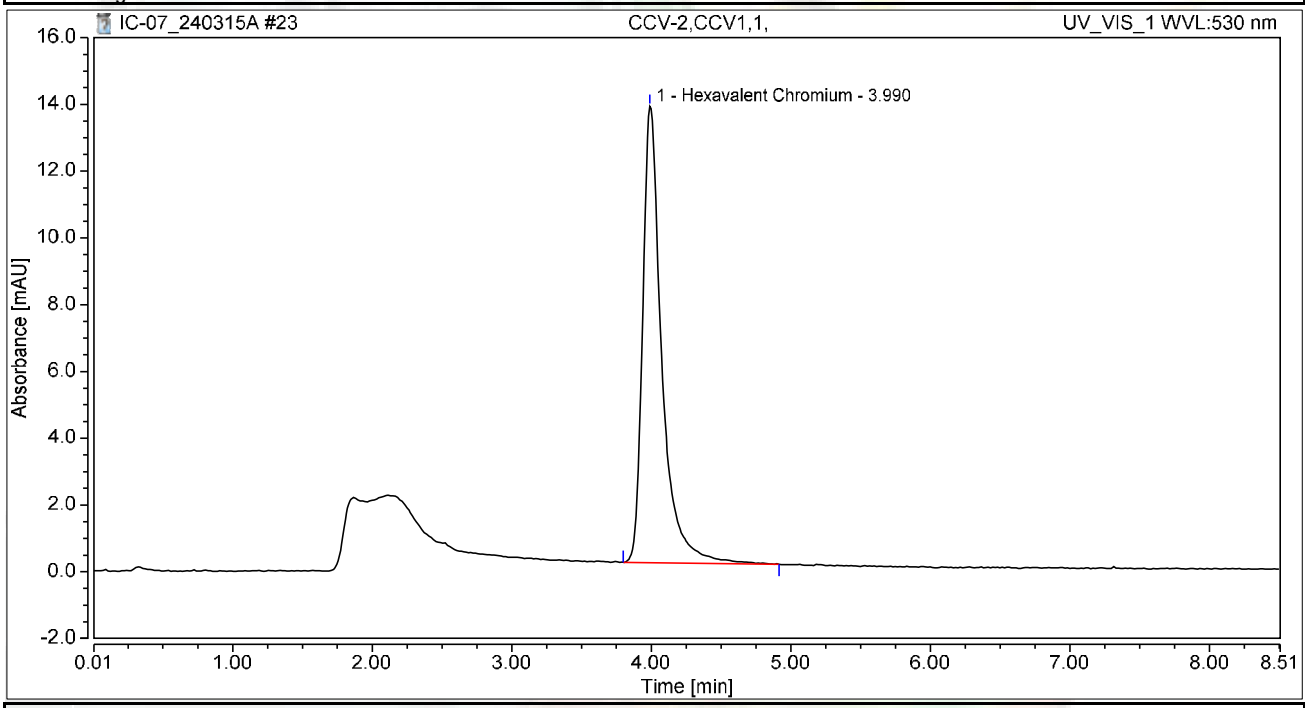
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.781	0.158	0.609	100.00	100.00	0.7441
Total:			**0.158**	**0.609**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 12:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

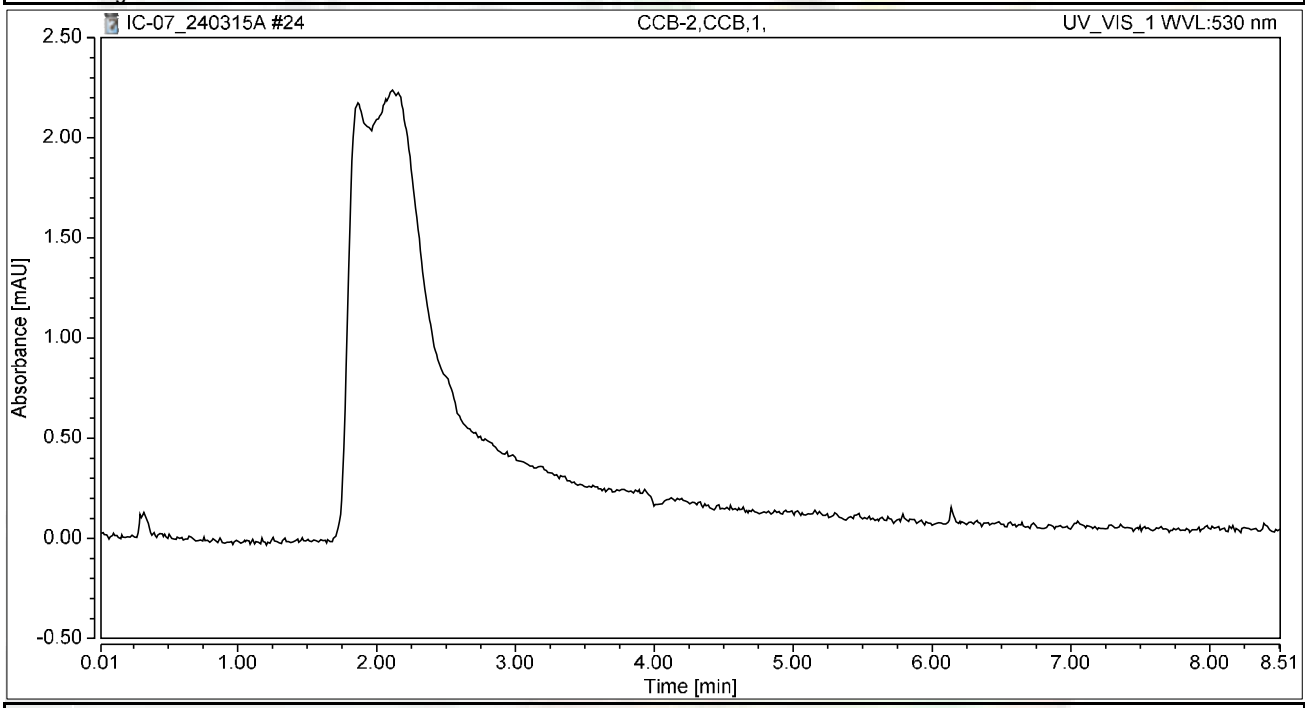
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	2.176	13.665	100.00	100.00	10.2260
Total:			**2.176**	**13.665**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

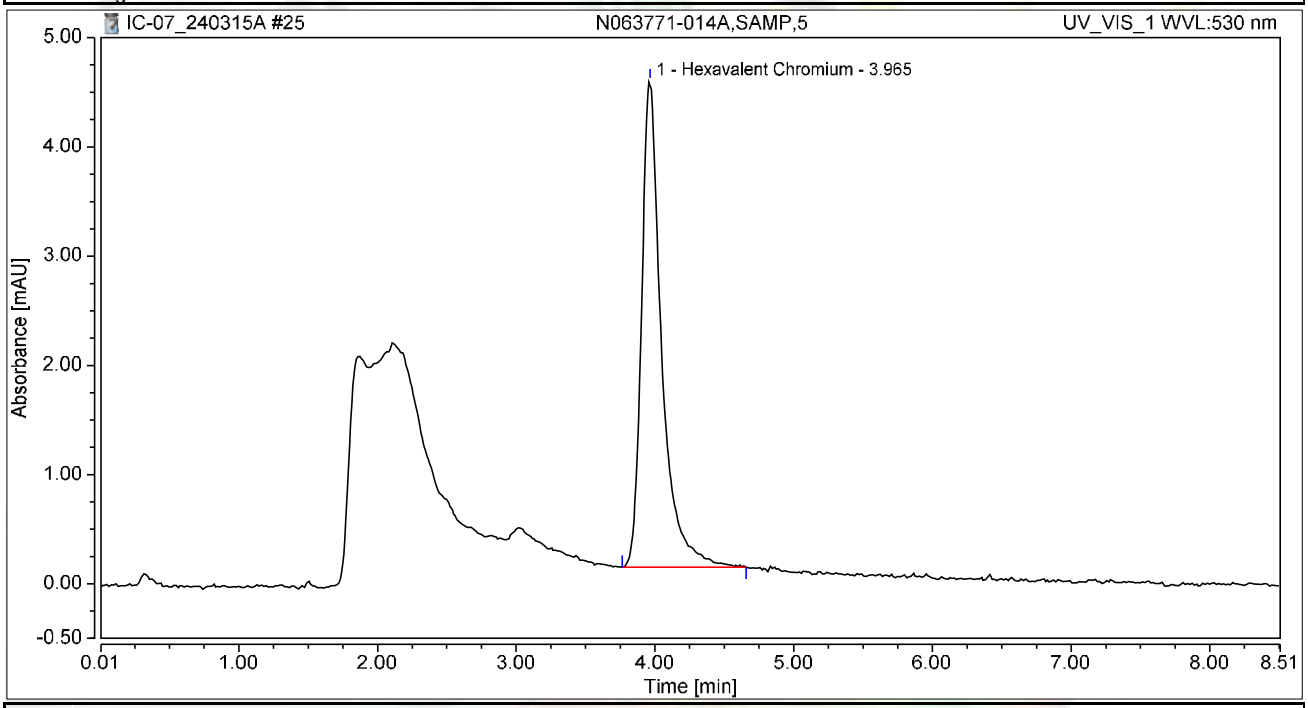
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-014A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 12:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

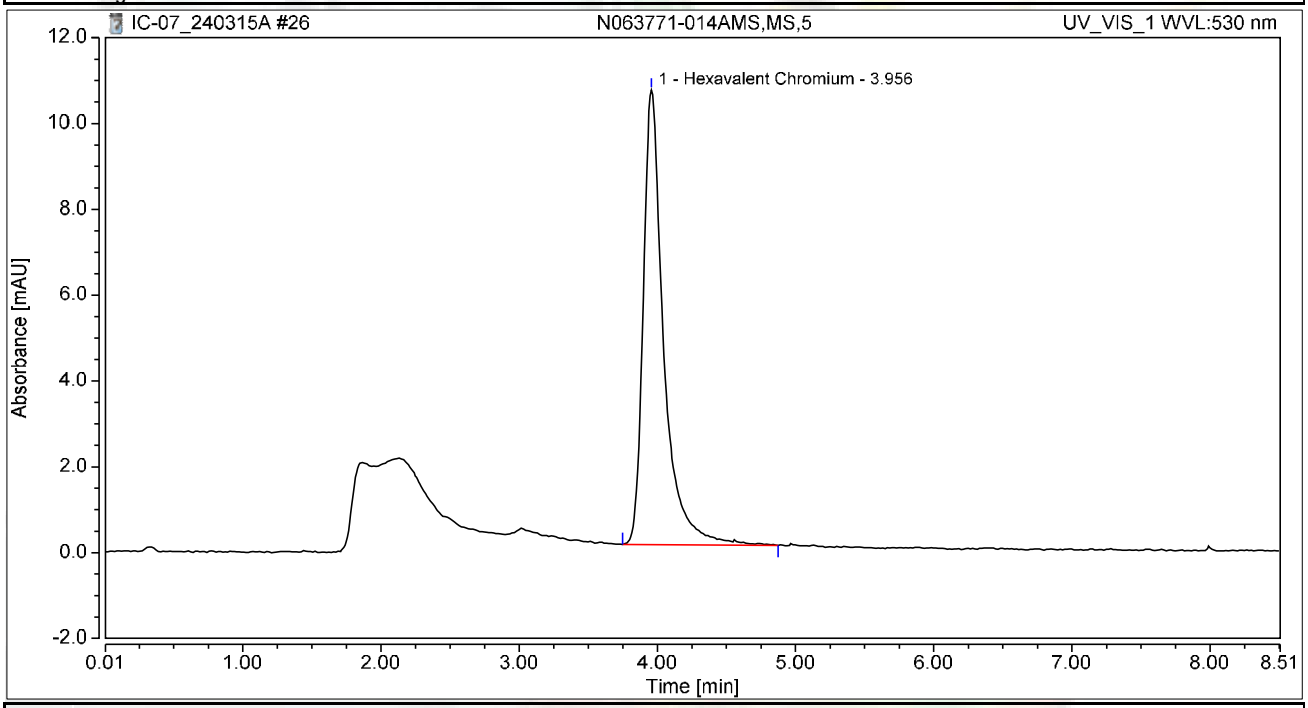
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.746	4.453	100.00	100.00	3.5039
Total:			**0.746**	**4.453**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-014AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 13:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

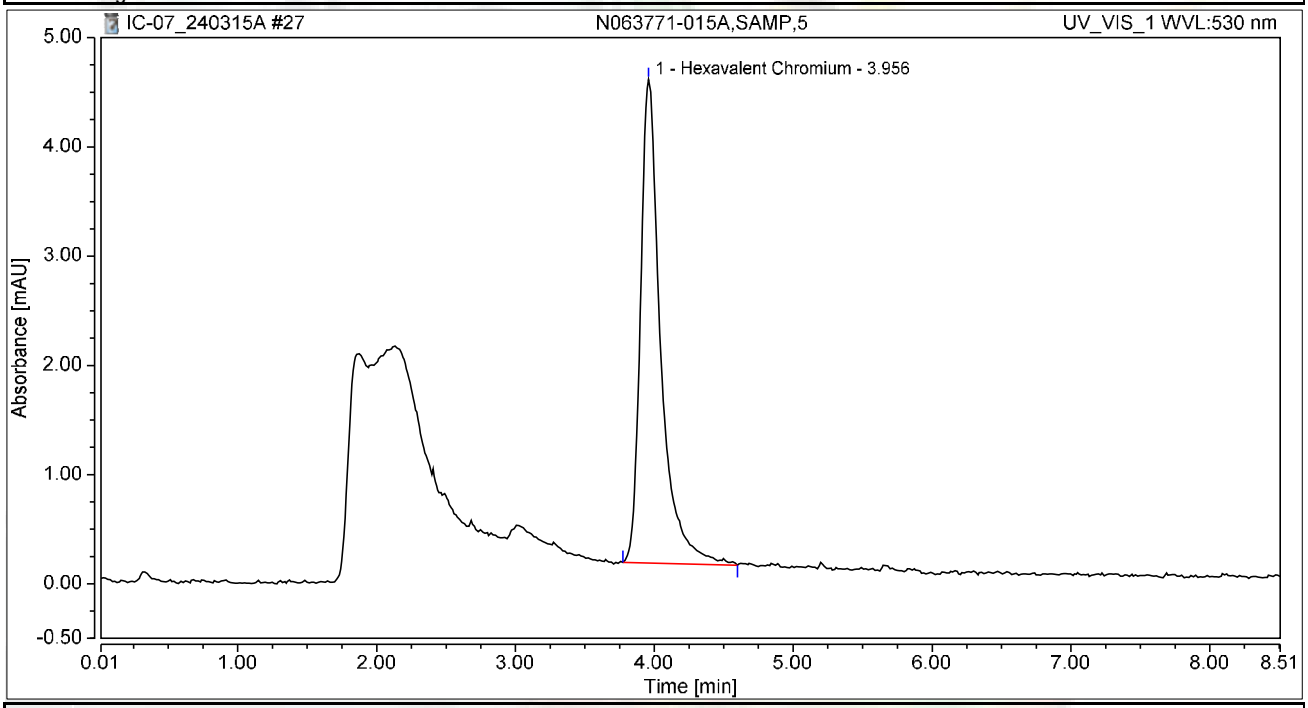
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	1.815	10.595	100.00	100.00	8.5282
Total:			**1.815**	**10.595**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-015A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 13:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

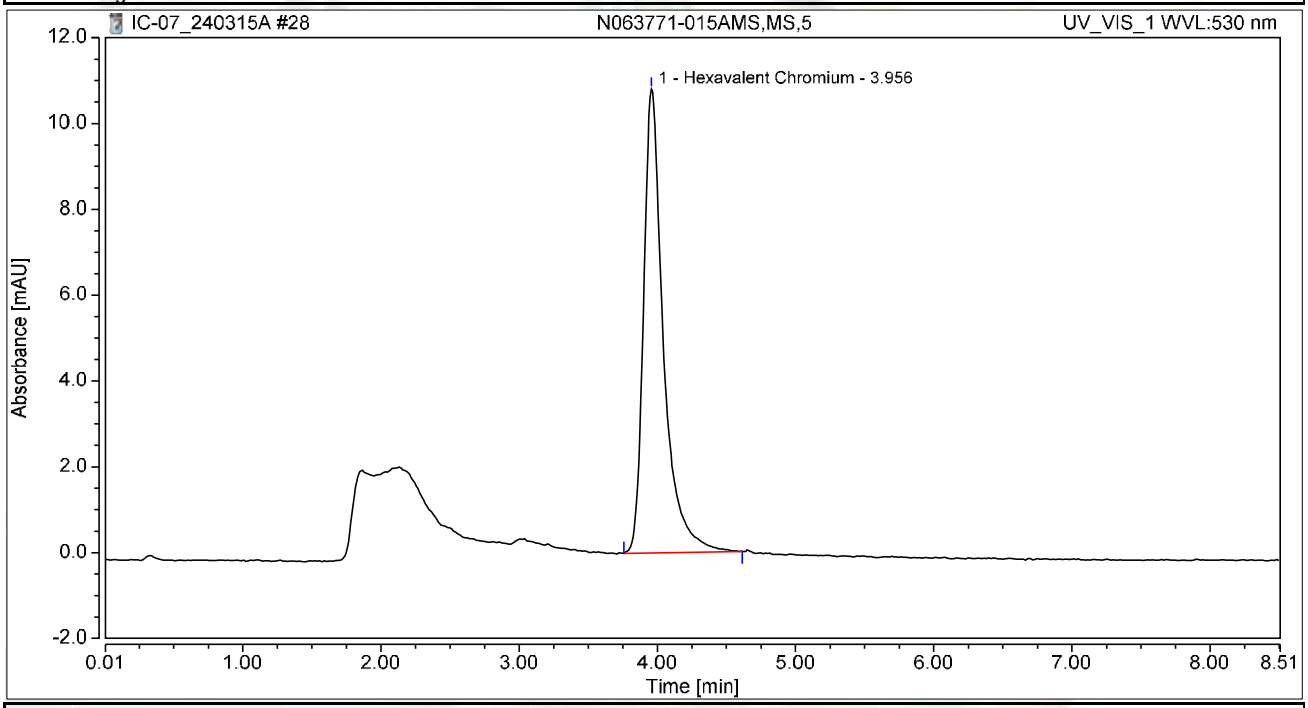
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.750	4.426	100.00	100.00	3.5216
Total:			**0.750**	**4.426**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-015AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 13:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

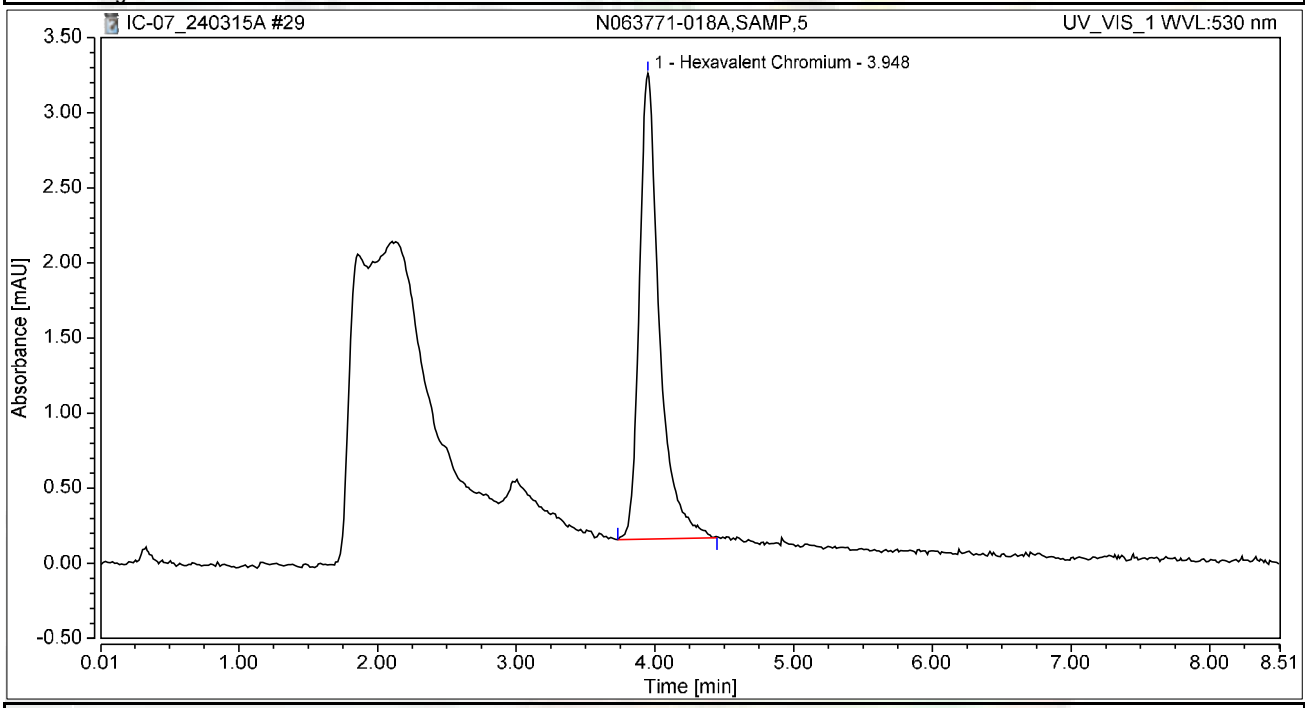
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	1.803	10.809	100.00	100.00	8.4702
Total:			**1.803**	**10.809**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-018A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 13:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

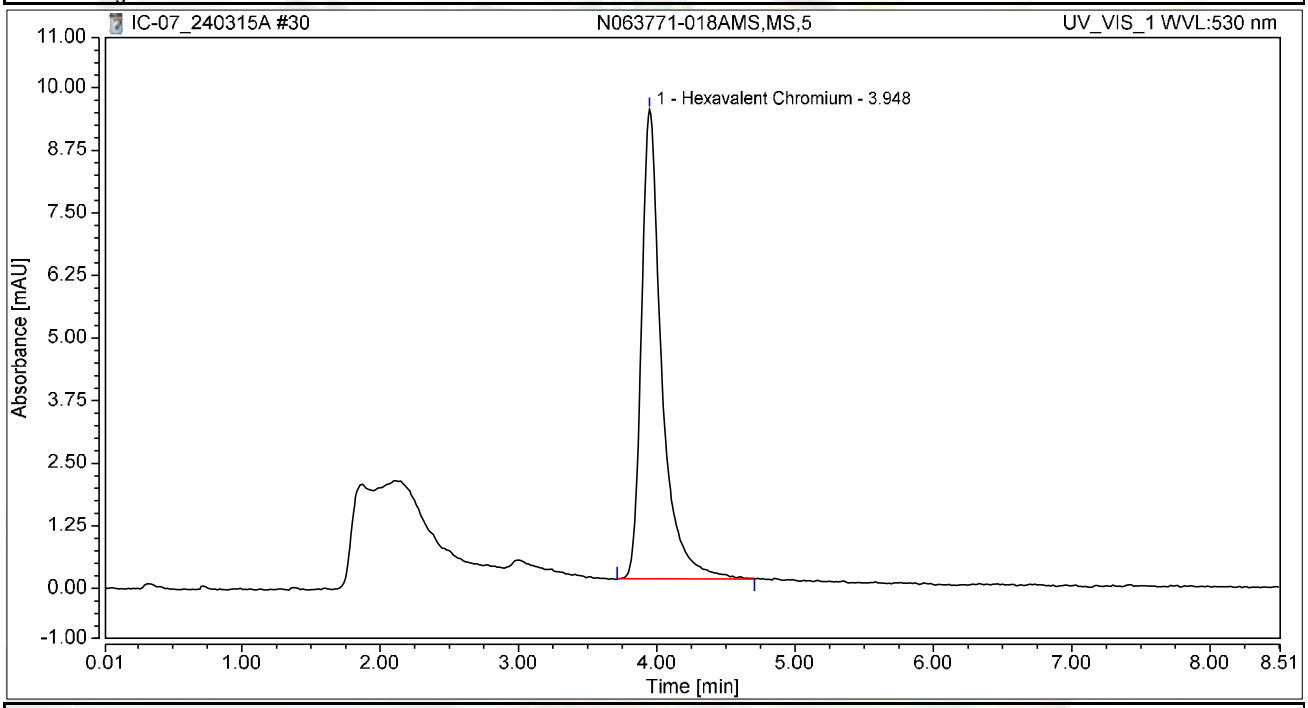
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.521	3.101	100.00	100.00	2.4475
Total:			**0.521**	**3.101**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-018AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 13:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

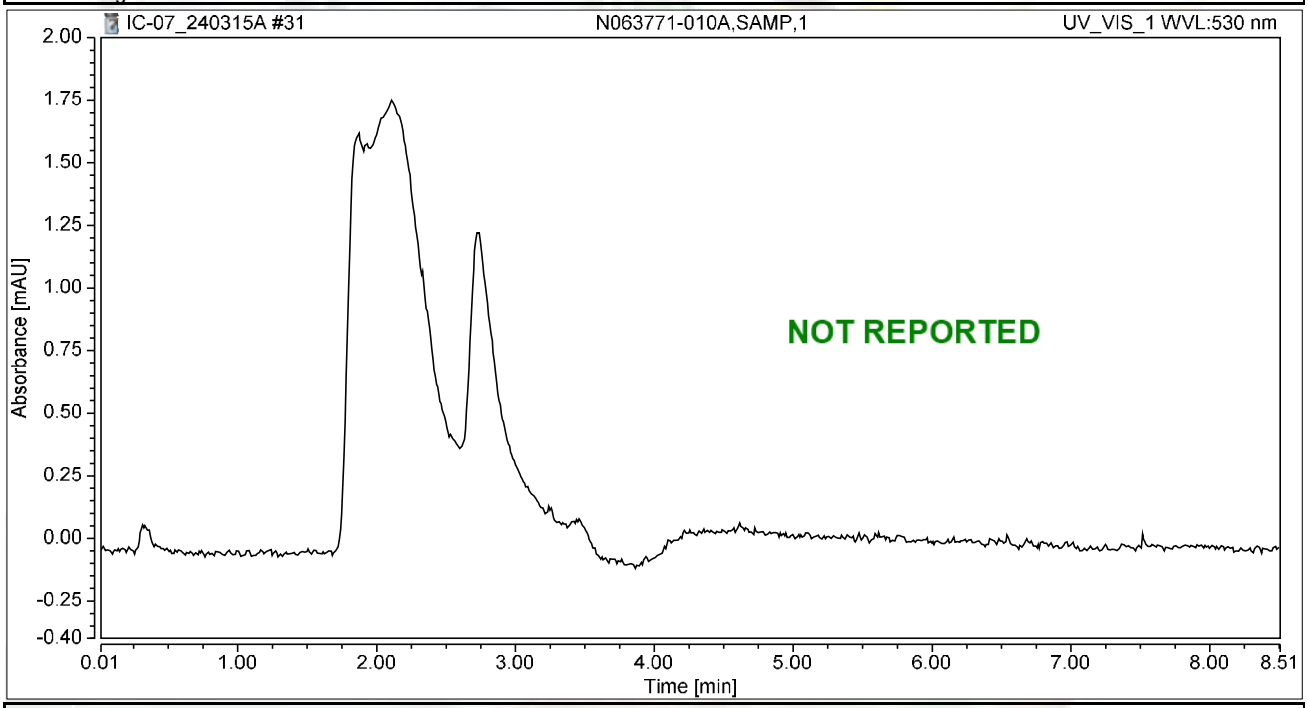
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	1.600	9.380	100.00	100.00	7.5179
Total:			**1.600**	**9.380**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-010A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 13:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

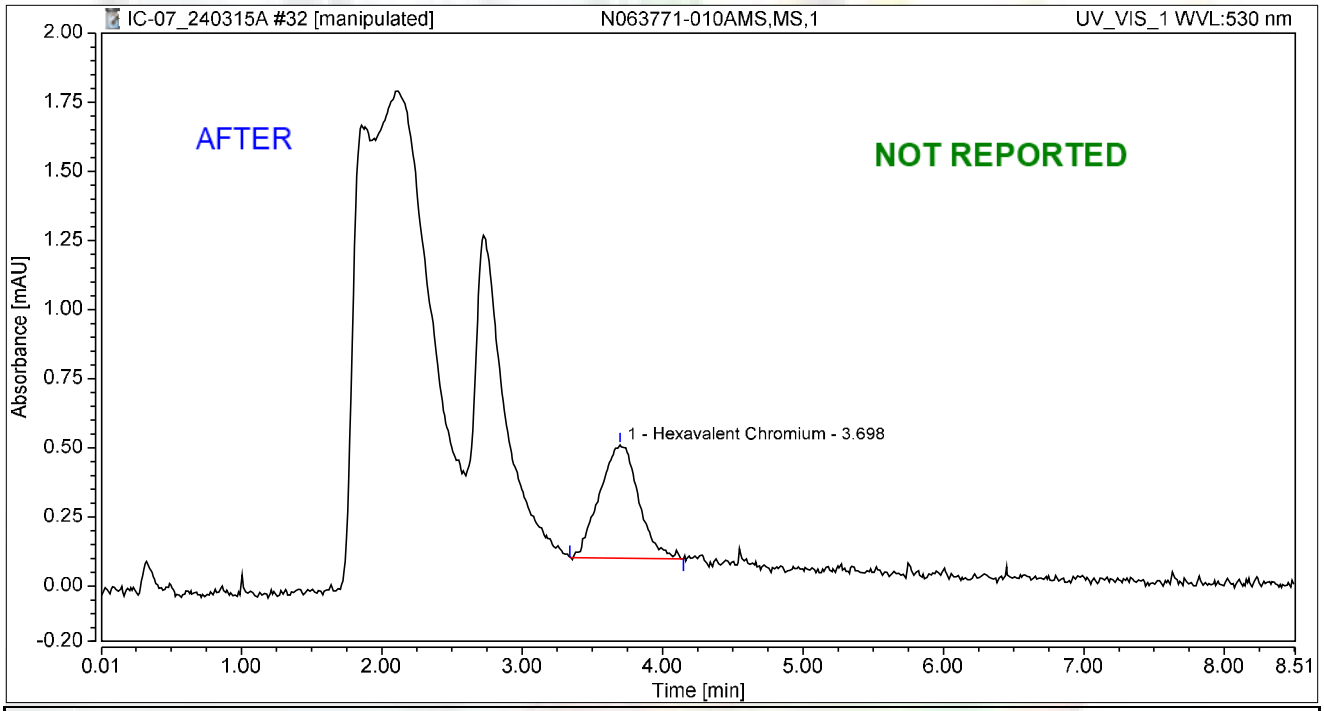
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-010AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.698	0.131	0.409	100.00	100.00	0.6175
Total:			**0.131**	**0.409**	**100.00**	**100.00**	

Reviewed by:

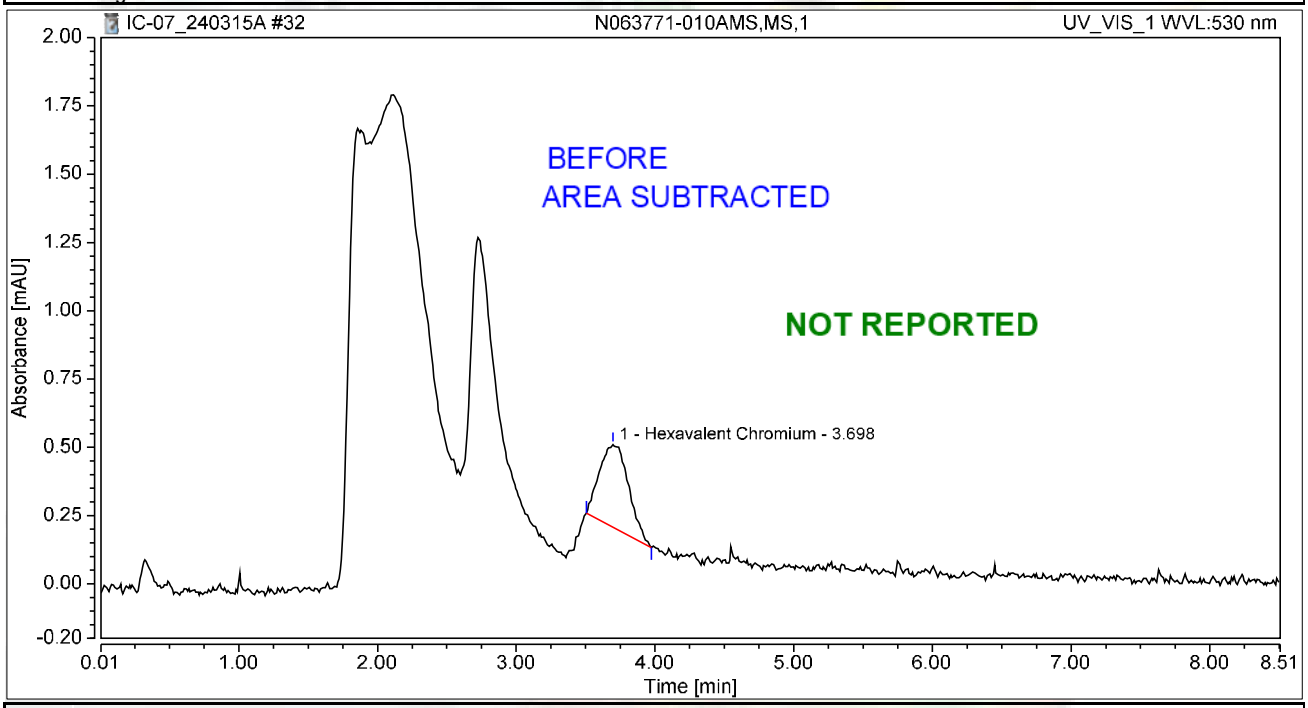
dlRocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063771-010AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

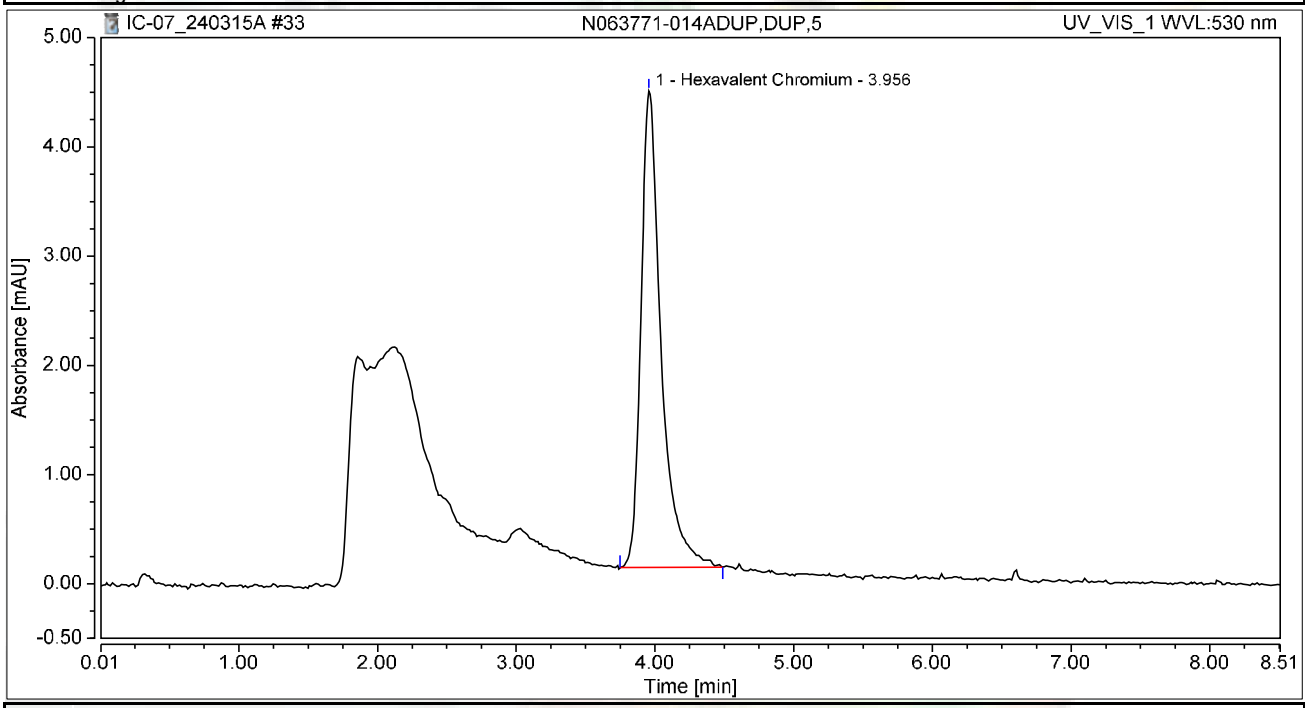
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.698	0.074	0.303	100.00	100.00	0.3471
Total:			**0.074**	**0.303**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-014ADUP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

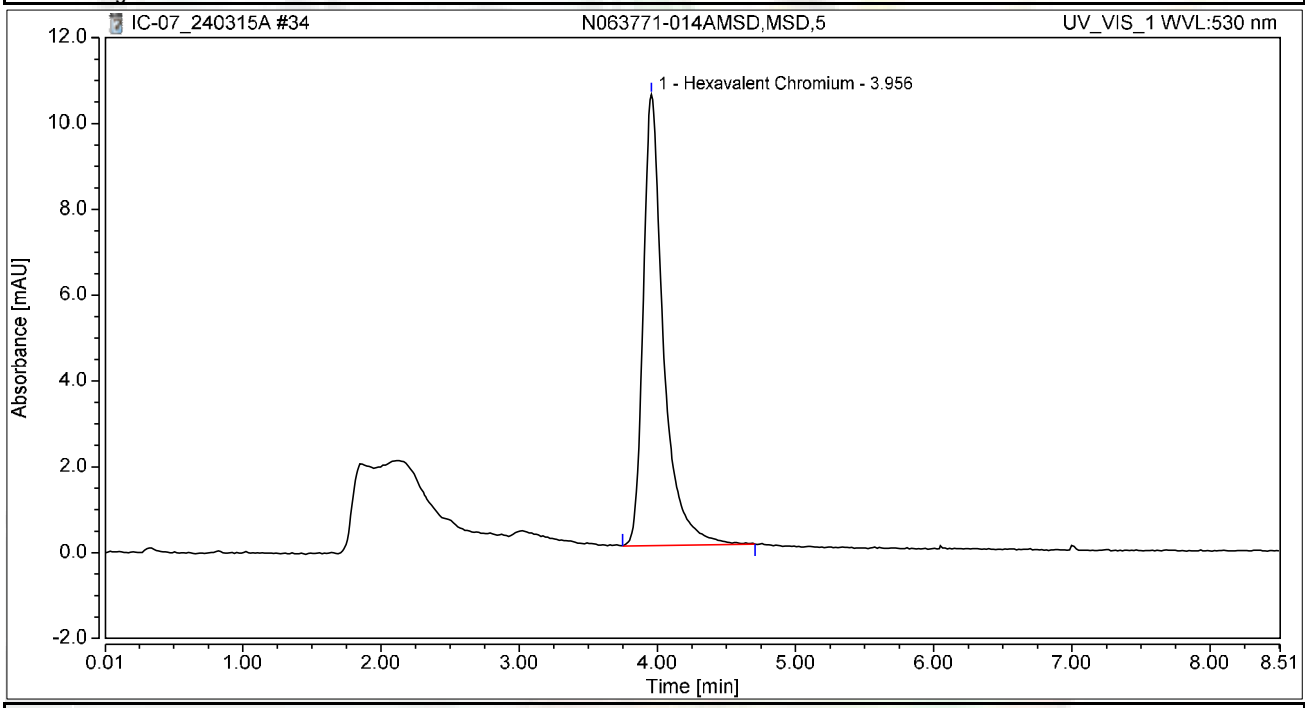
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.735	4.362	100.00	100.00	3.4520
Total:			**0.735**	**4.362**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-014AMSD,MSD,5**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

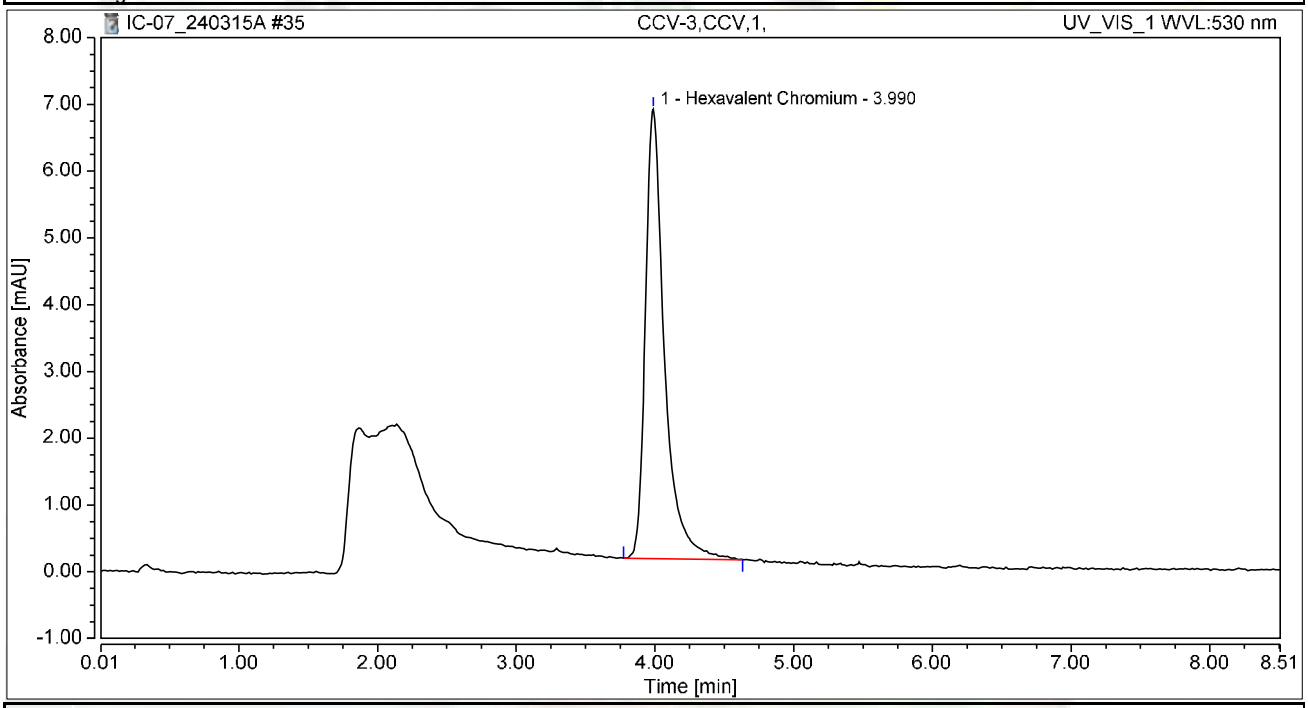
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	1.785	10.506	100.00	100.00	8.3877
Total:			**1.785**	**10.506**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

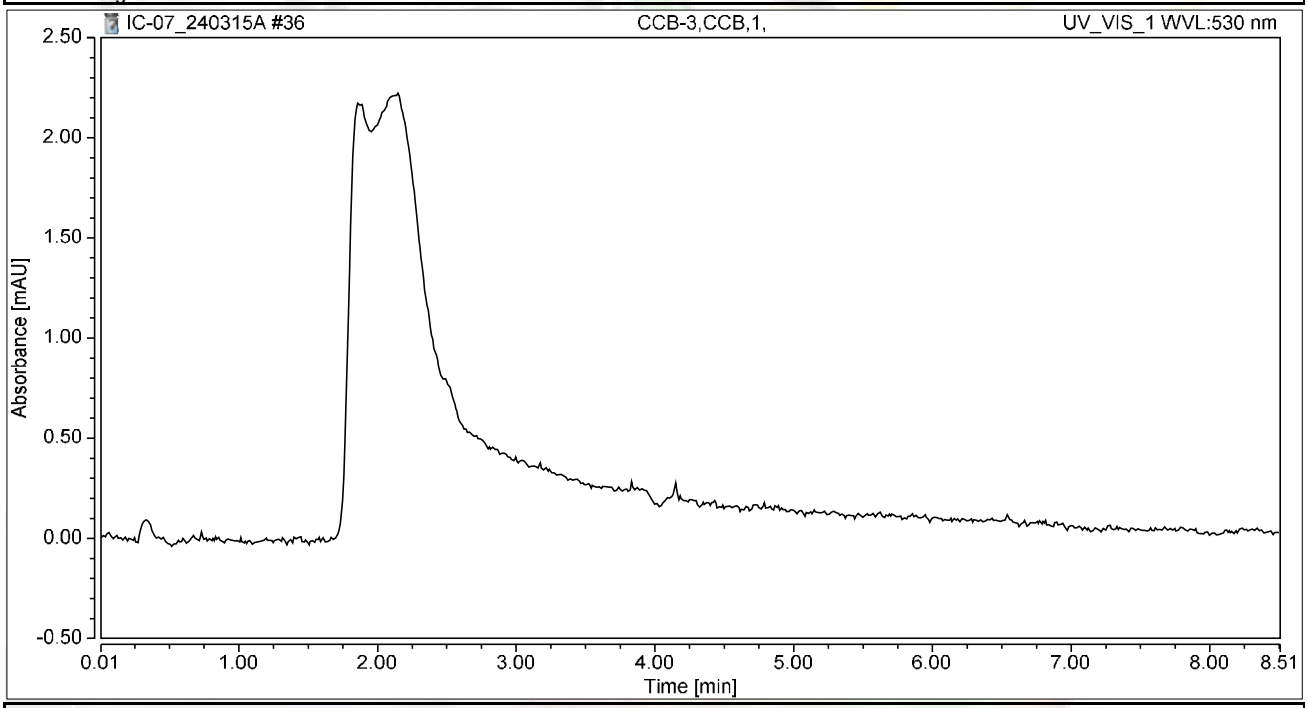
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	1.073	6.730	100.00	100.00	5.0391
Total:			**1.073**	**6.730**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

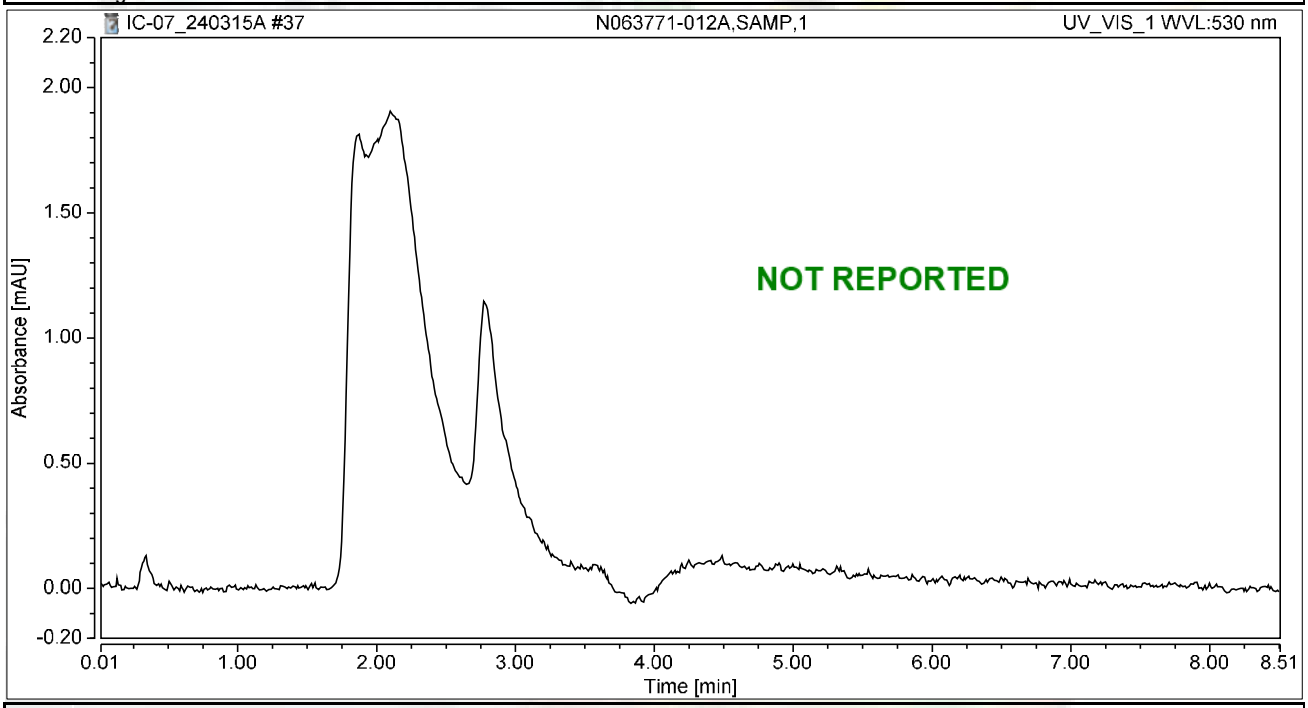
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-012A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

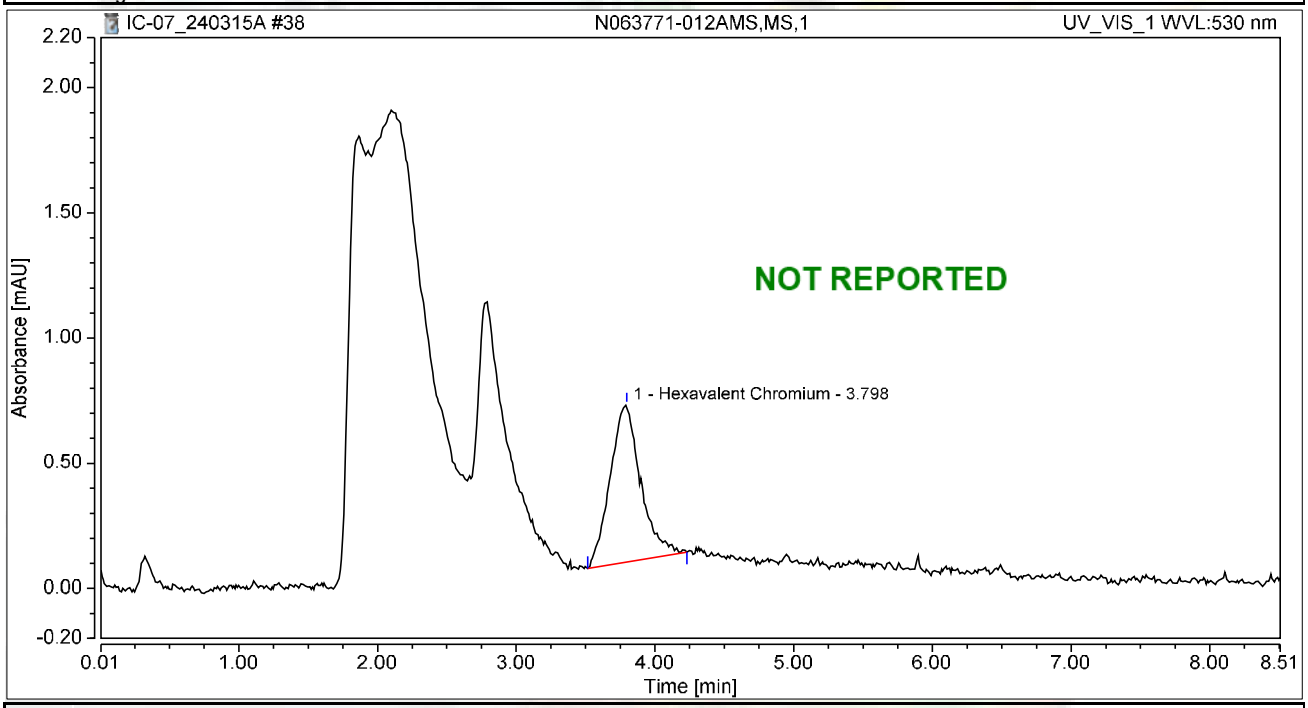
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-012AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

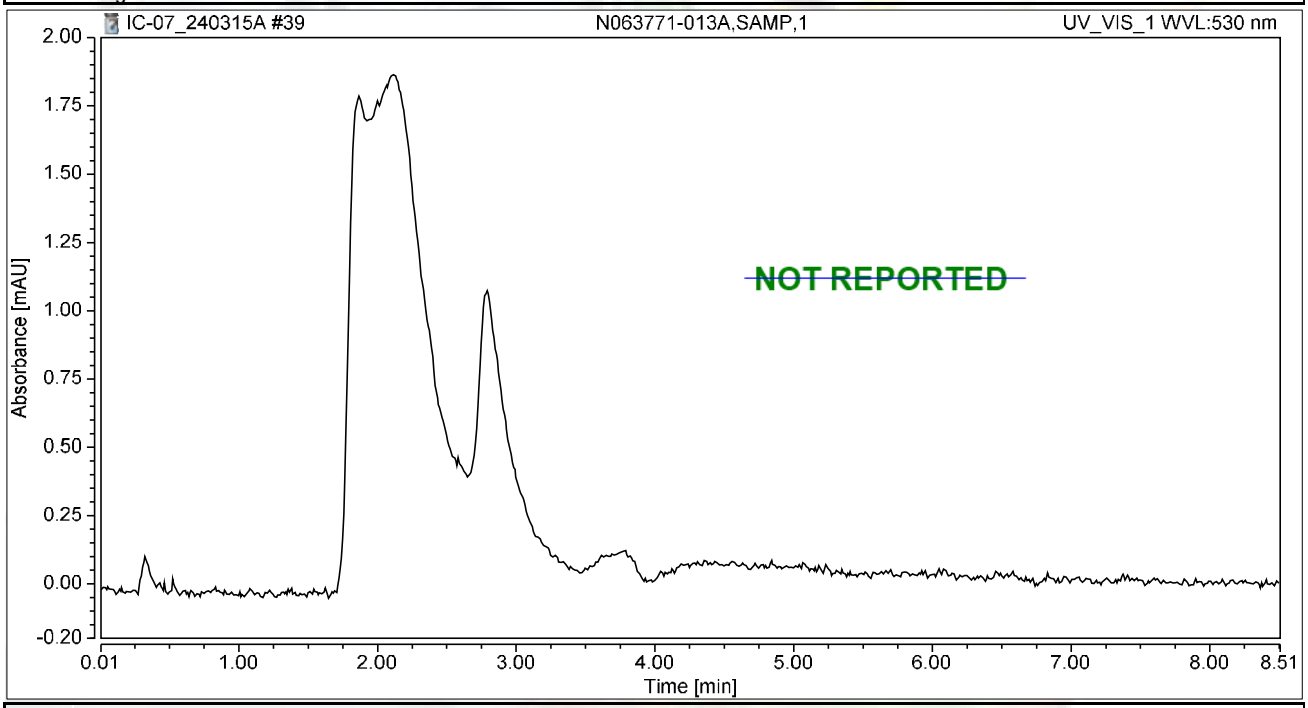
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.798	0.161	0.628	100.00	100.00	0.7548
Total:			**0.161**	**0.628**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-013A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 15:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

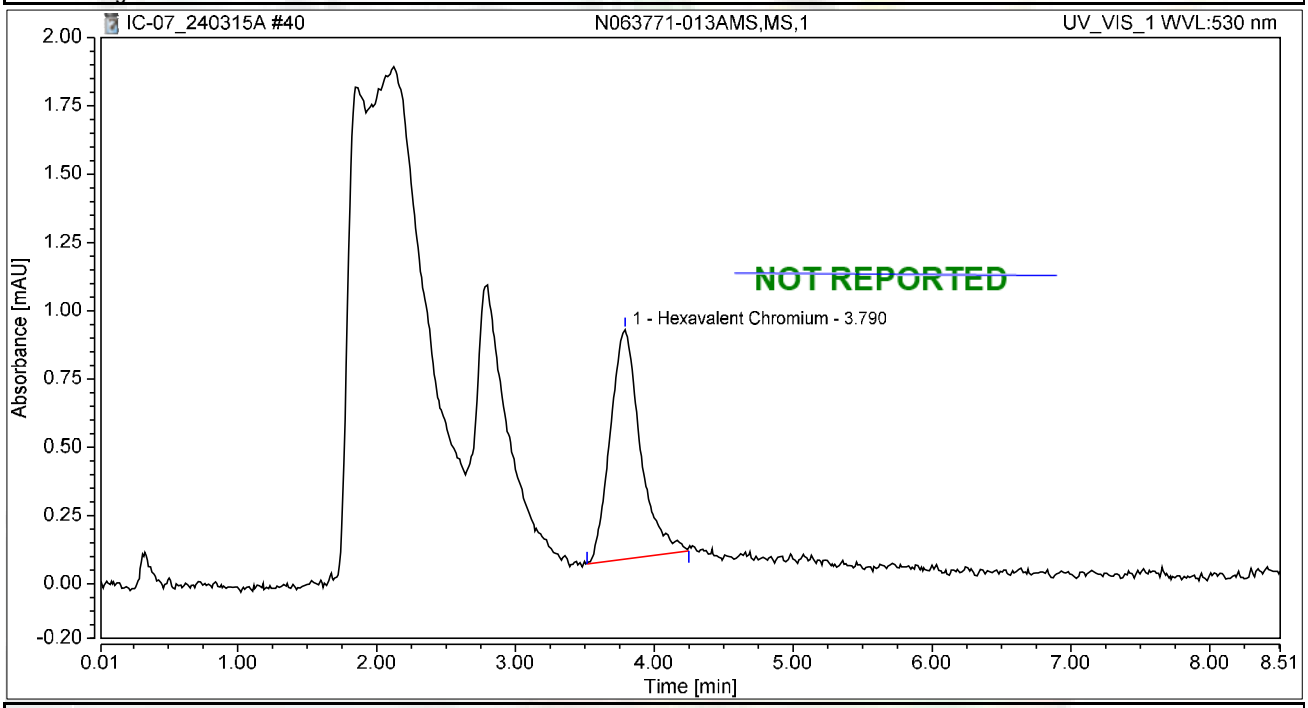
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-013AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 15:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

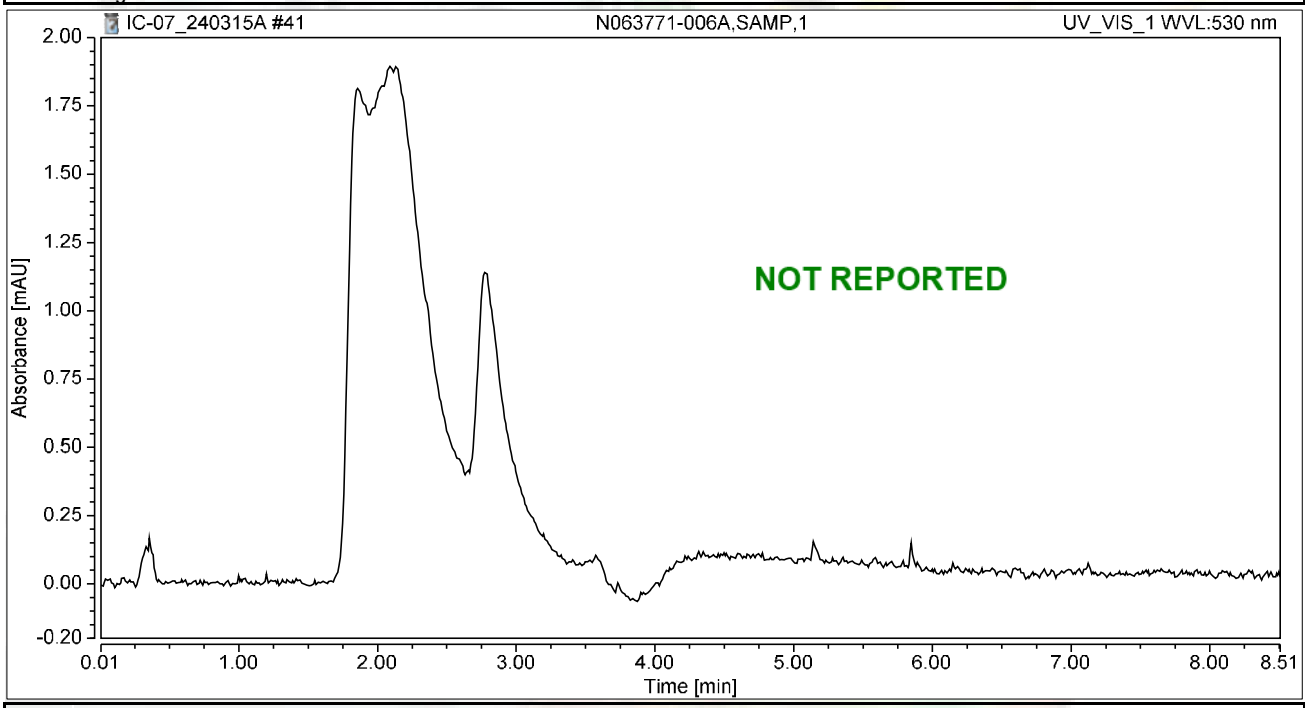
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.211	0.840	100.00	100.00	0.9896
Total:			**0.211**	**0.840**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 15:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

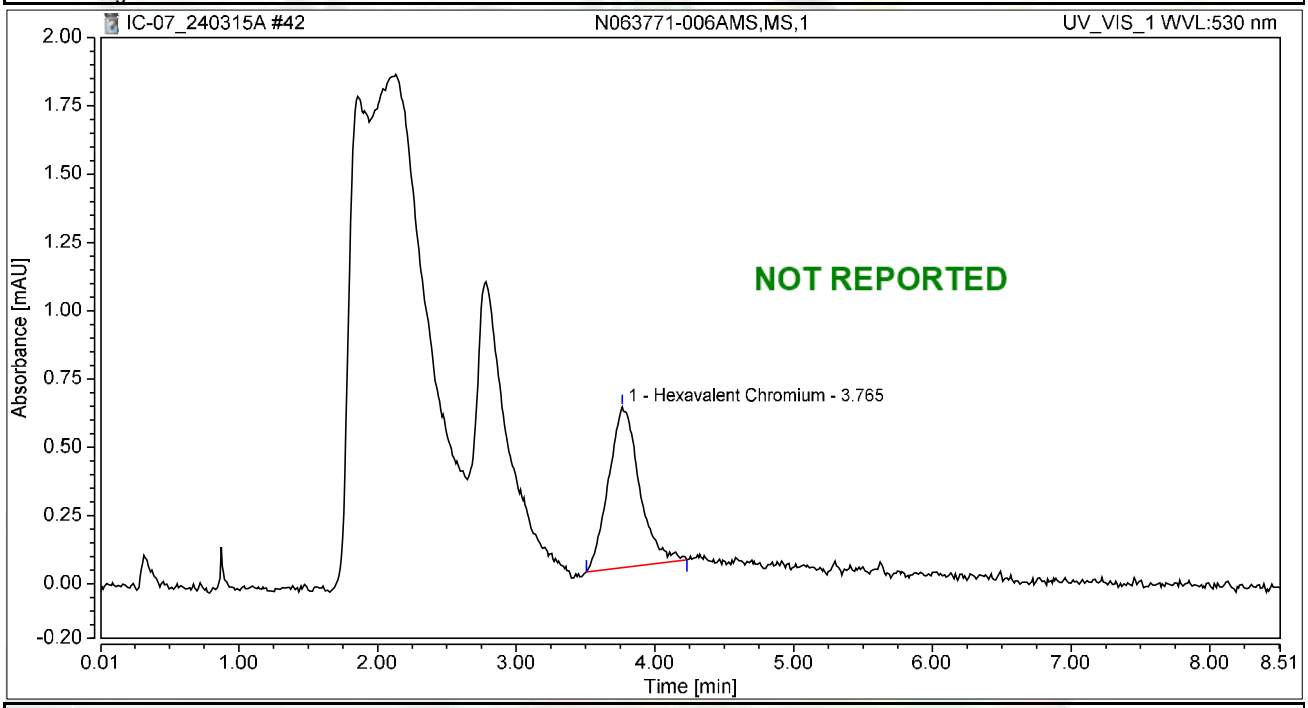
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 15:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

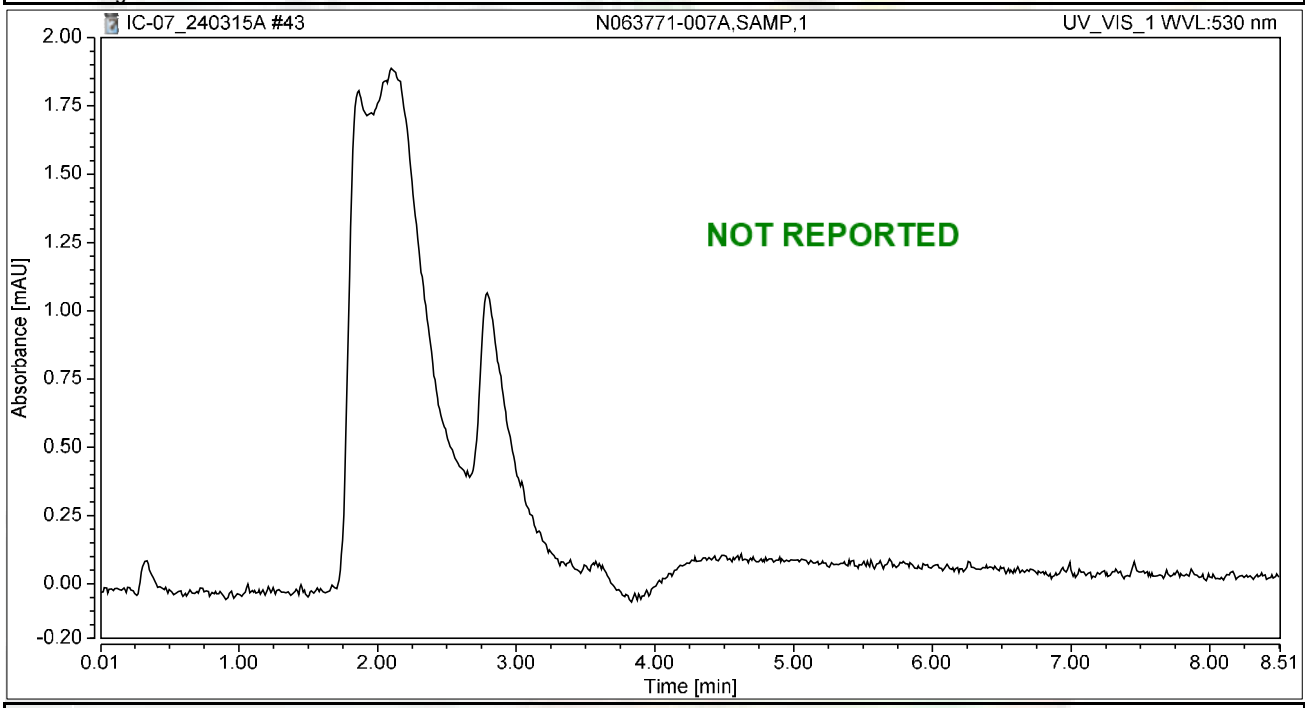
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.765	0.152	0.589	100.00	100.00	0.7126
Total:			**0.152**	**0.589**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-007A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 15:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

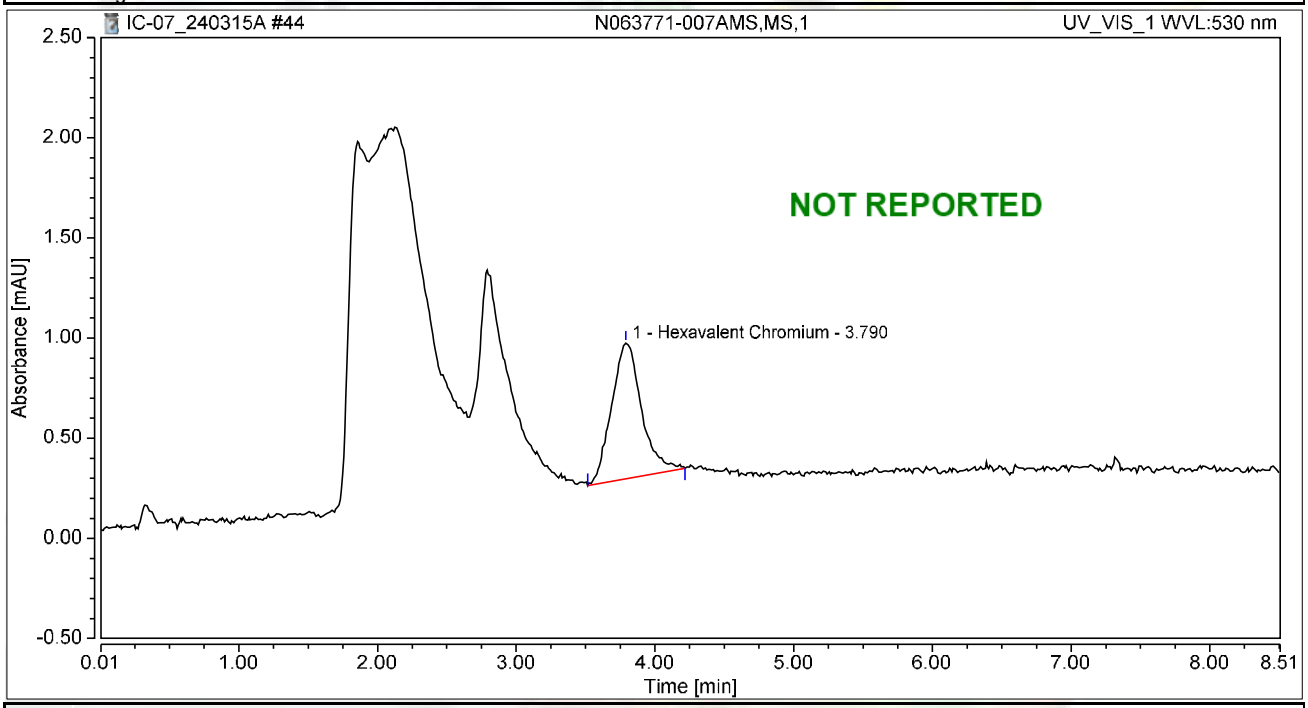
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 16:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

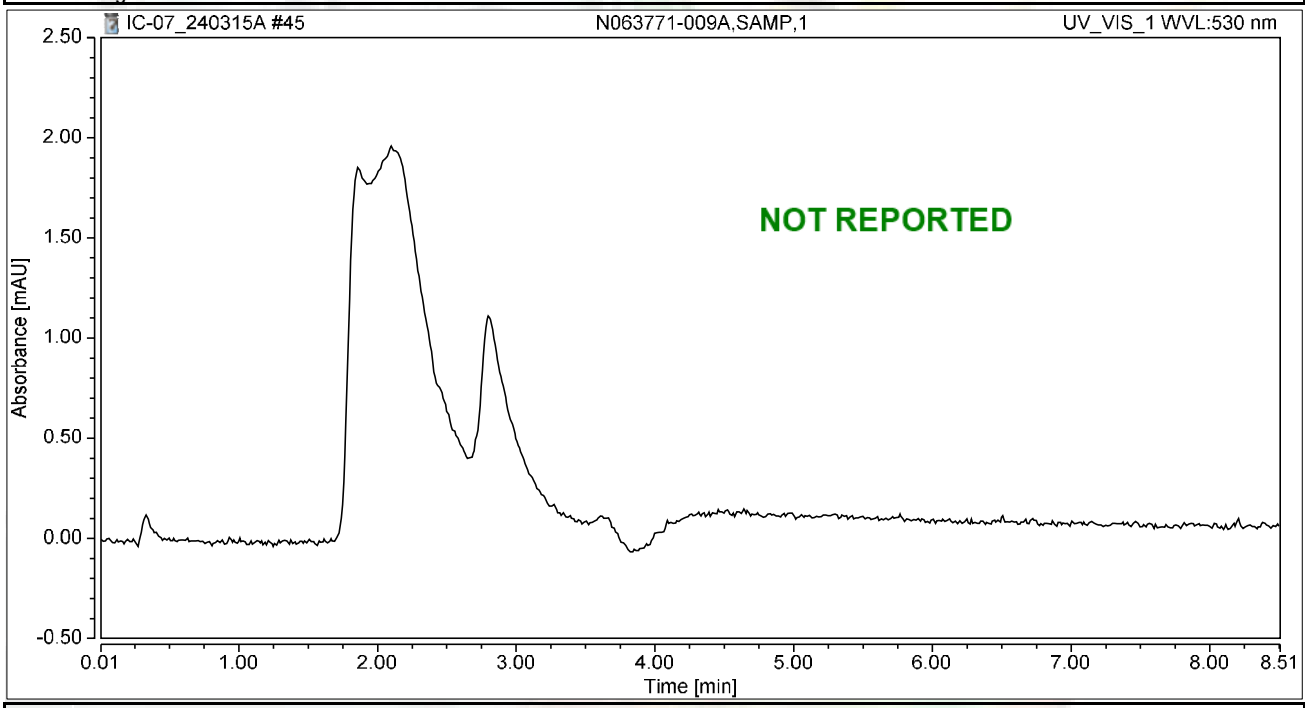
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.169	0.676	100.00	100.00	0.7931
Total:			**0.169**	**0.676**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 16:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

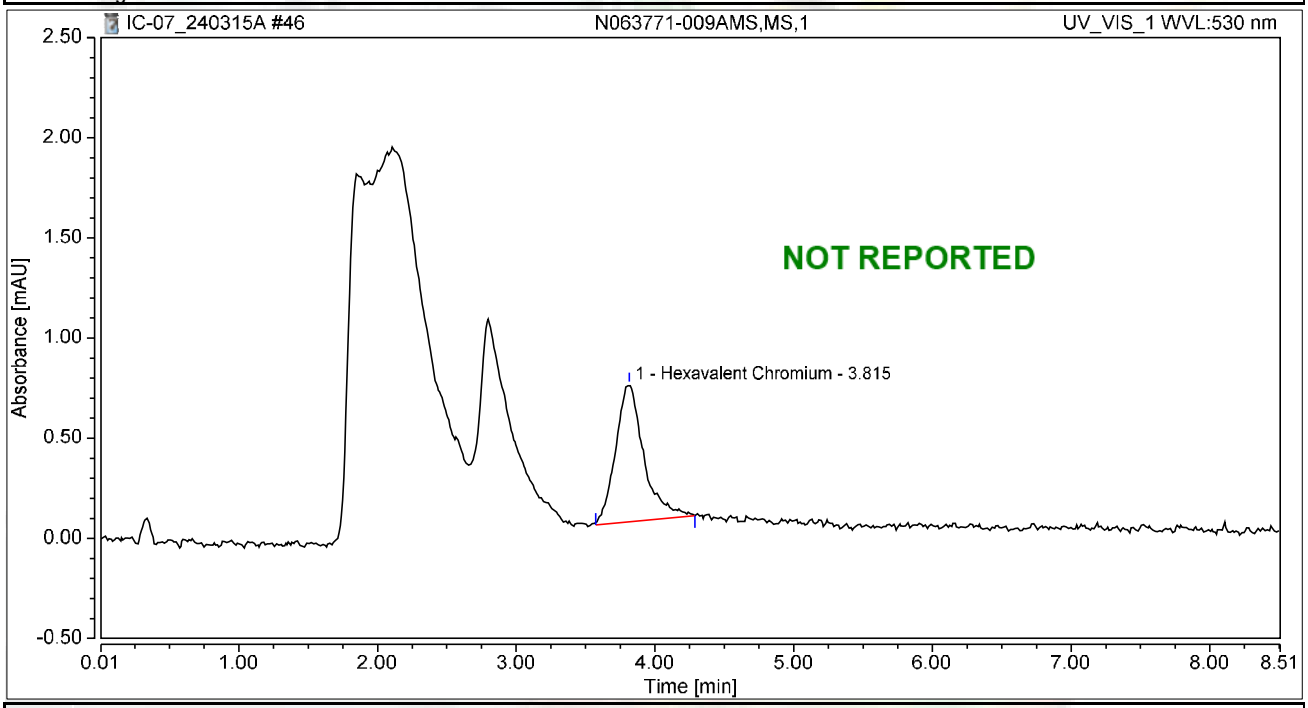
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 16:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

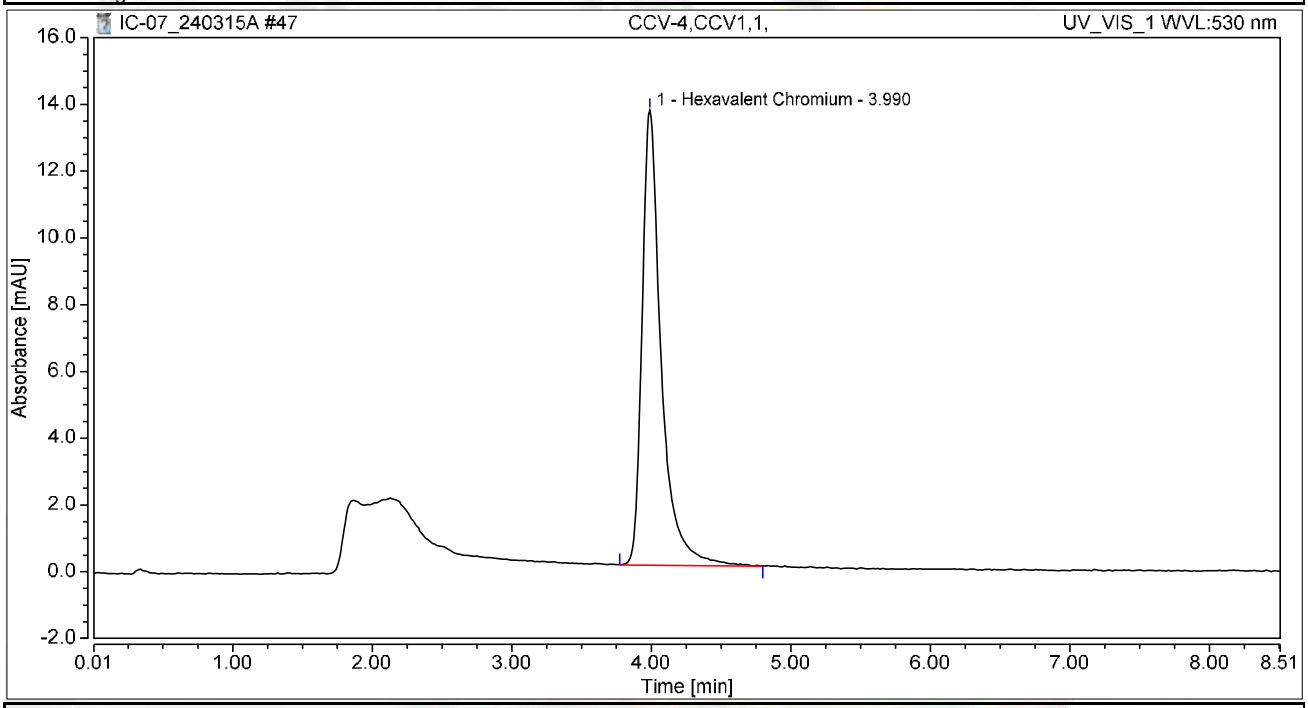
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	0.162	0.685	100.00	100.00	0.7605
Total:			**0.162**	**0.685**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 16:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

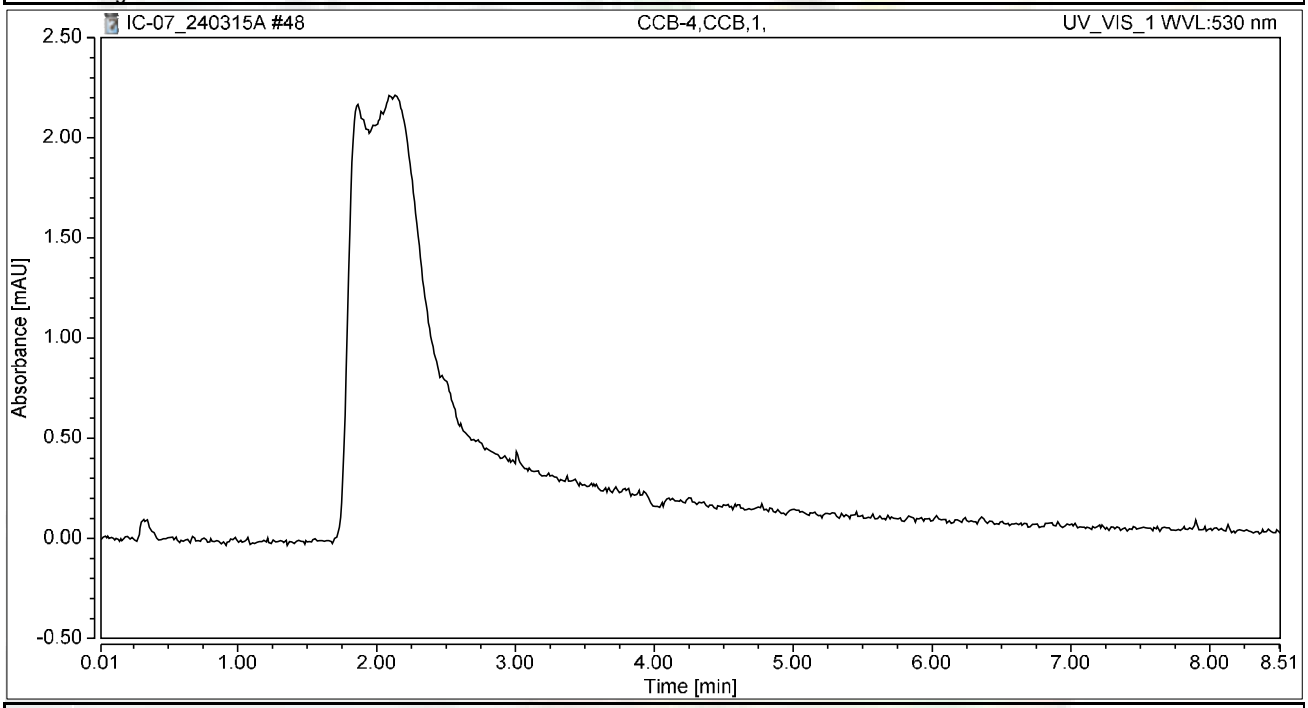
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	2.176	13.636	100.00	100.00	10.2256
Total:			**2.176**	**13.636**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 16:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

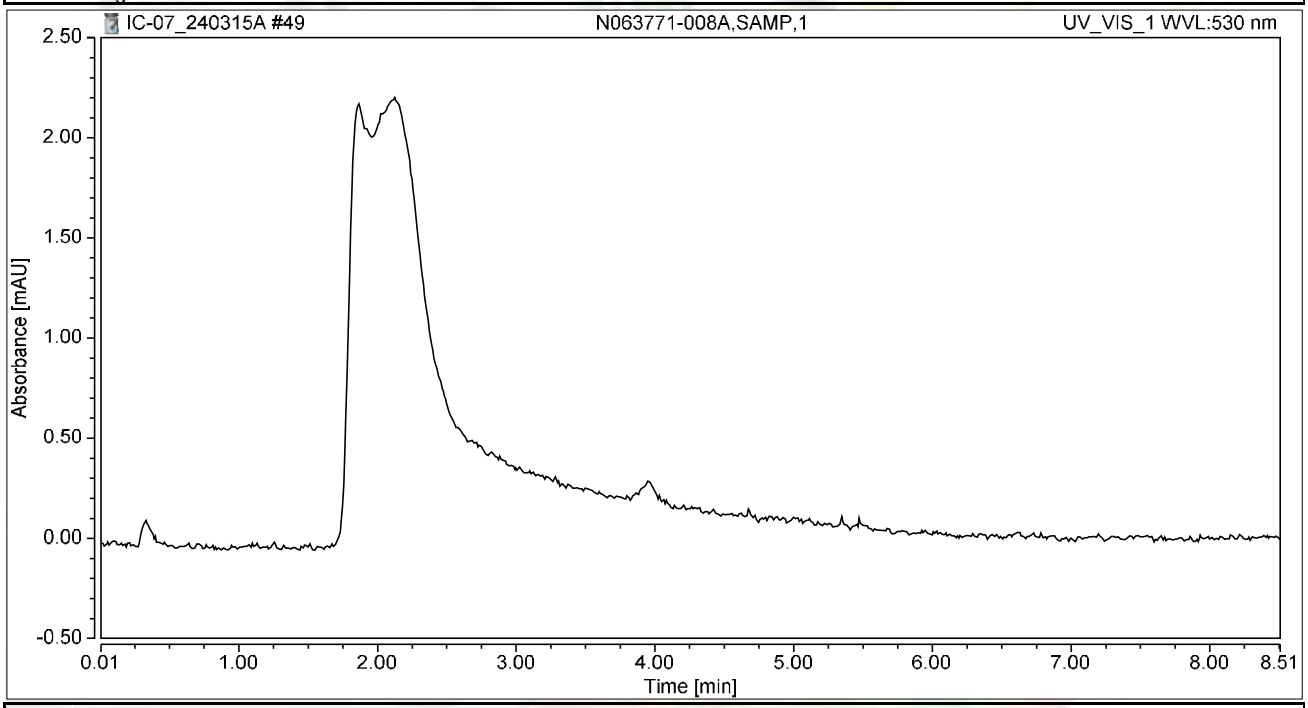
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 16:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

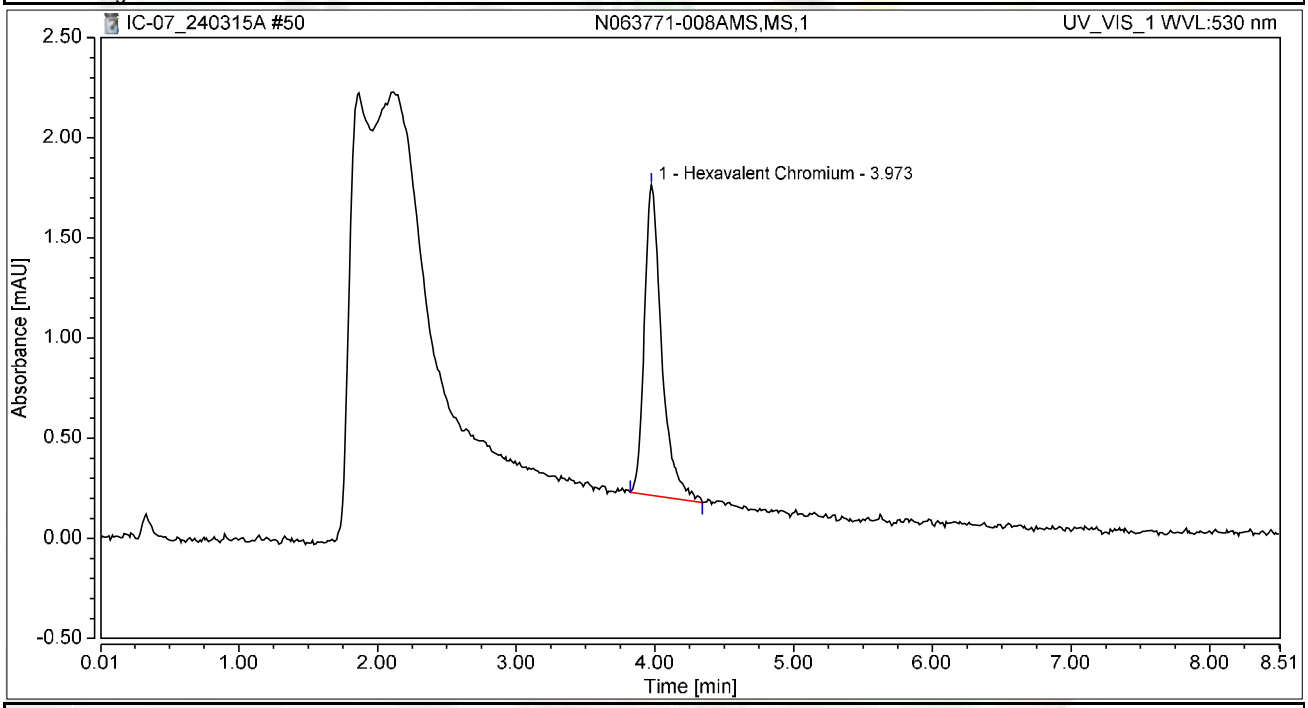
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 17:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

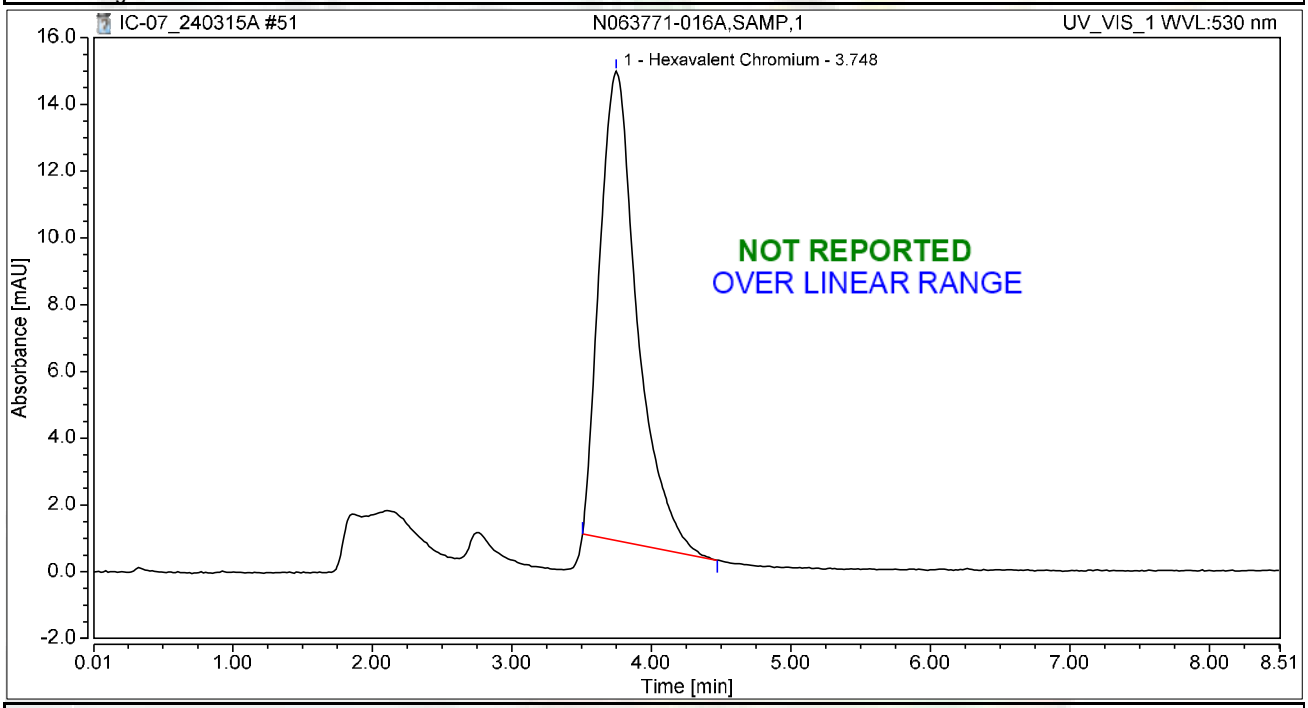
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.225	1.551	100.00	100.00	1.0549
Total:			**0.225**	**1.551**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-016A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 17:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

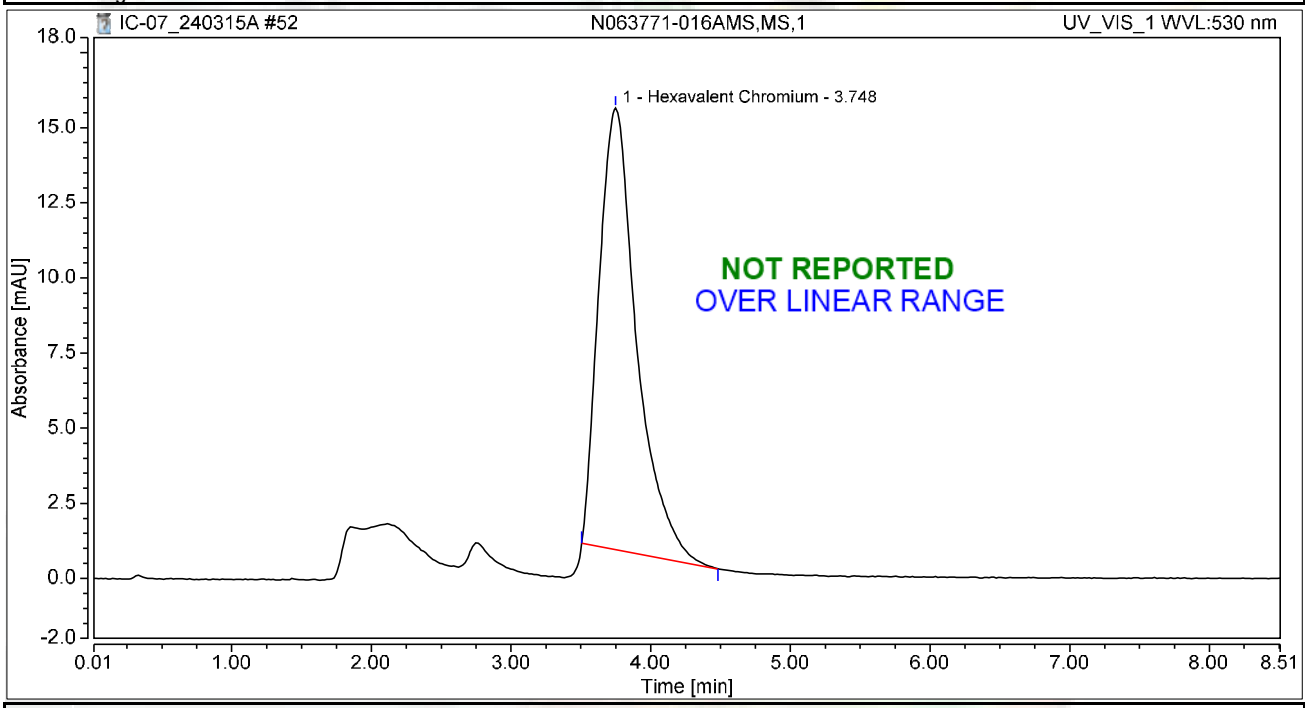
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.748	4.401	14.060	100.00	100.00	20.6778
Total:			**4.401**	**14.060**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-016AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 17:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

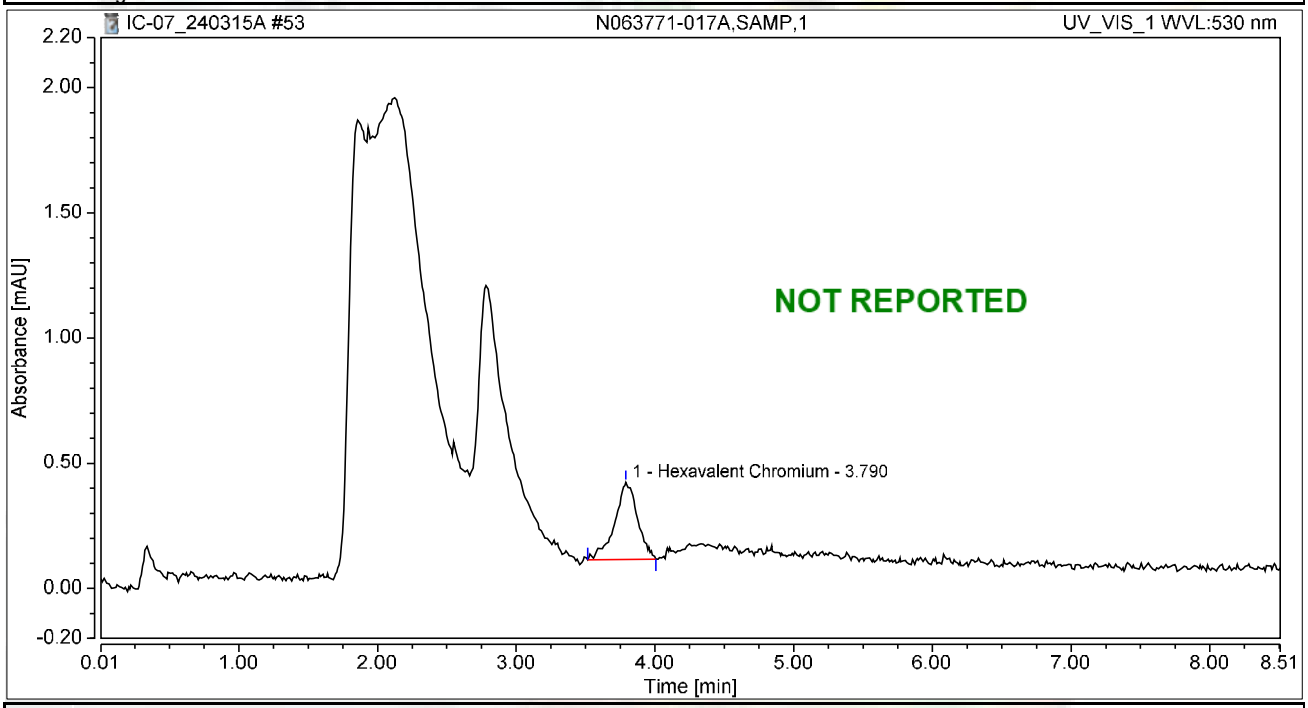
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.748	4.600	14.694	100.00	100.00	21.6128
Total:			**4.600**	**14.694**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-017A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 17:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

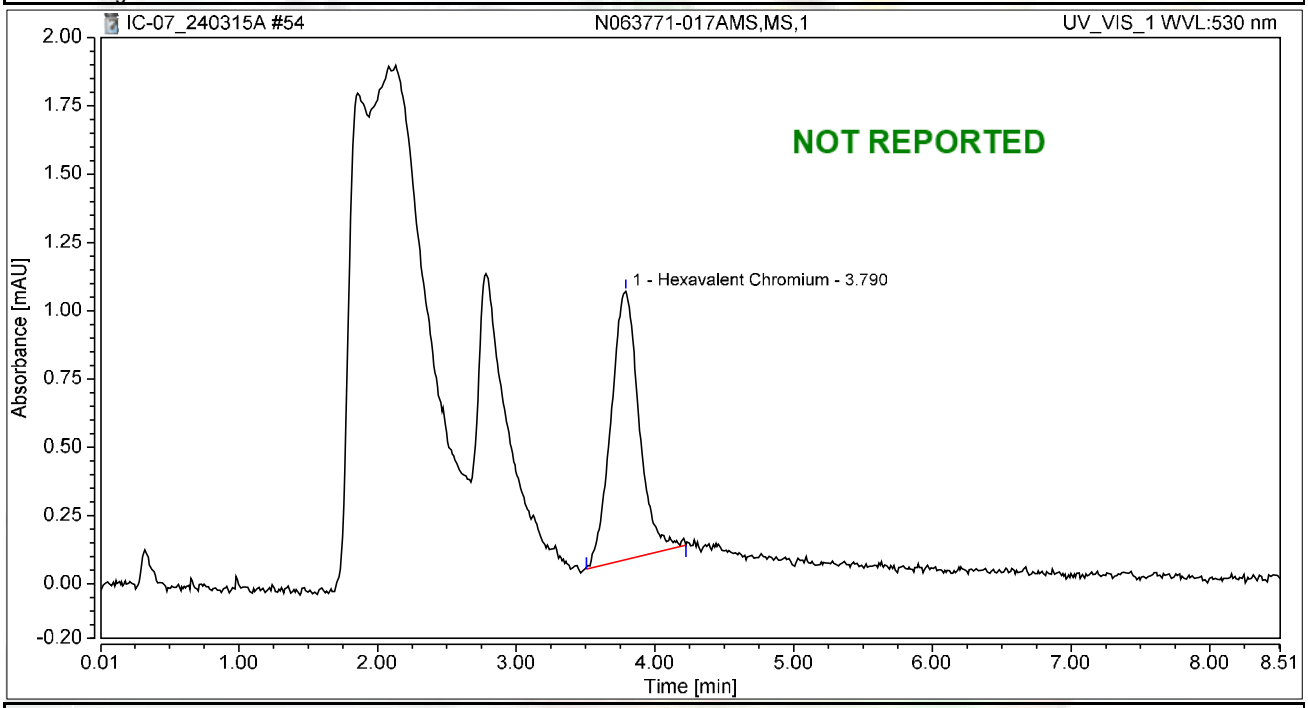
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.058	0.307	100.00	100.00	0.2746
Total:			**0.058**	**0.307**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-017AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 17:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

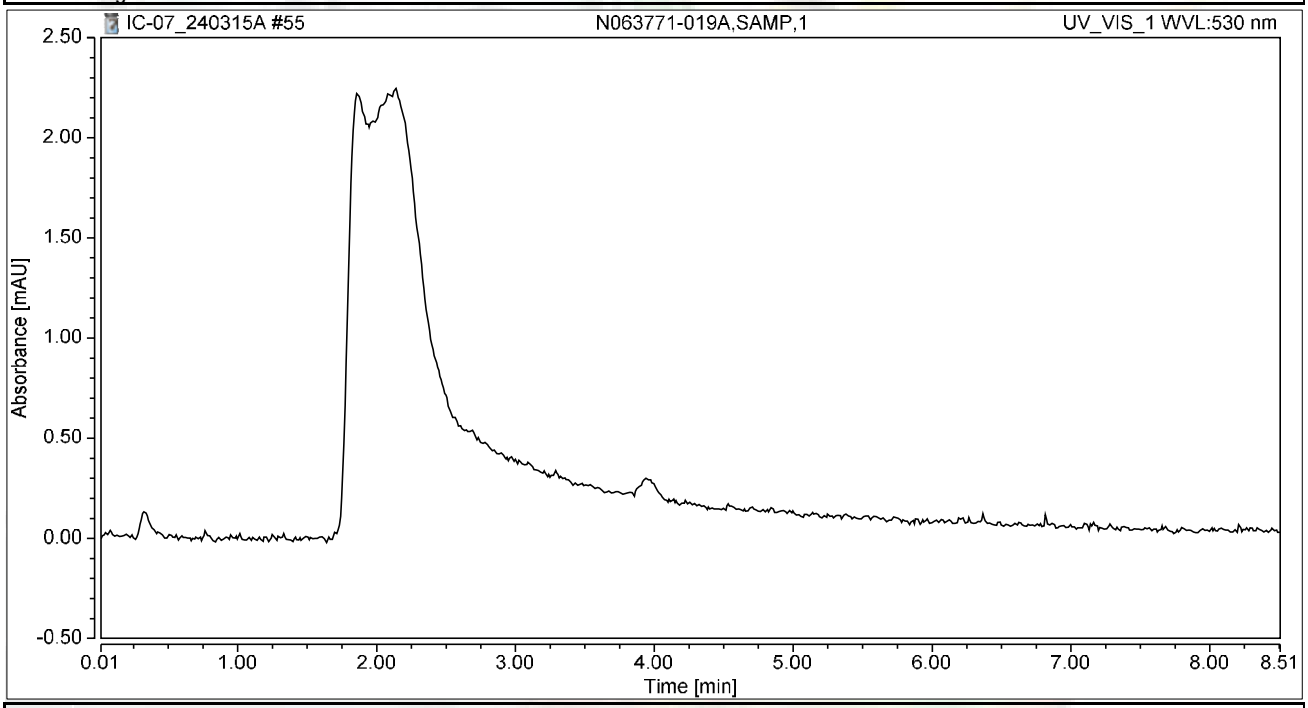
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.231	0.983	100.00	100.00	1.0840
Total:			**0.231**	**0.983**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-019A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 17:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

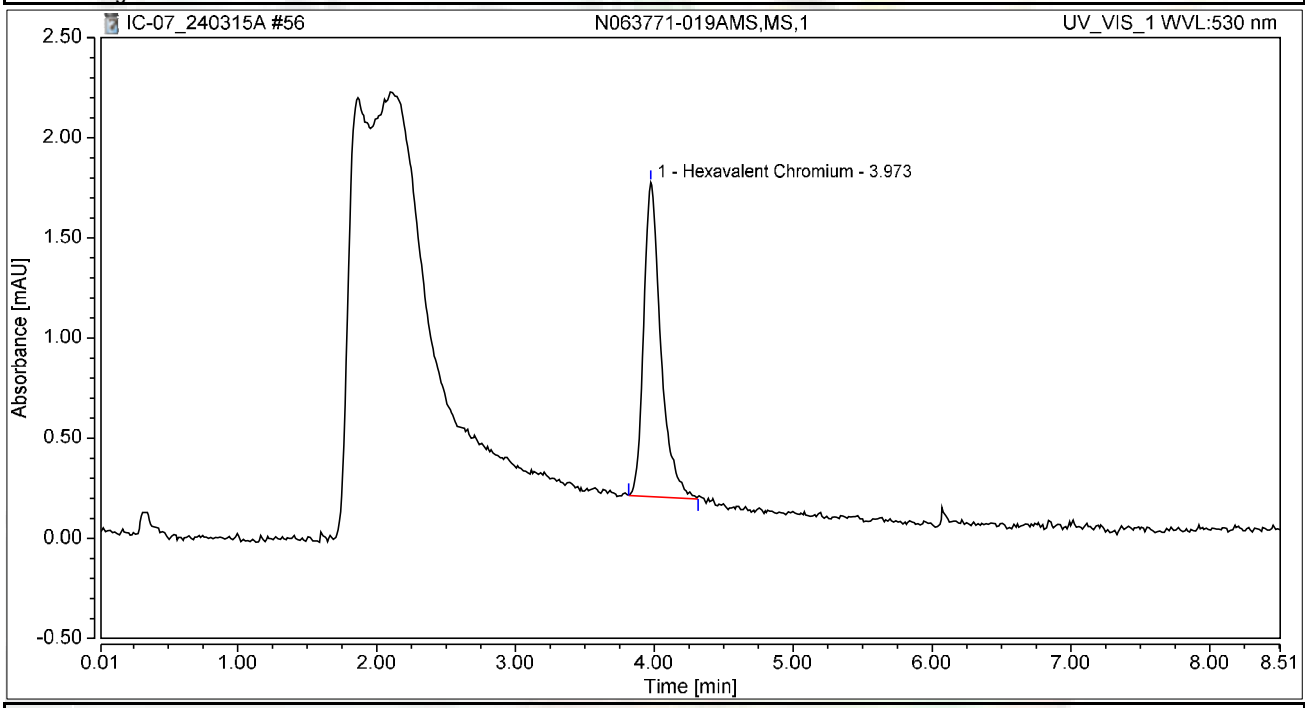
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-019AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 17:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

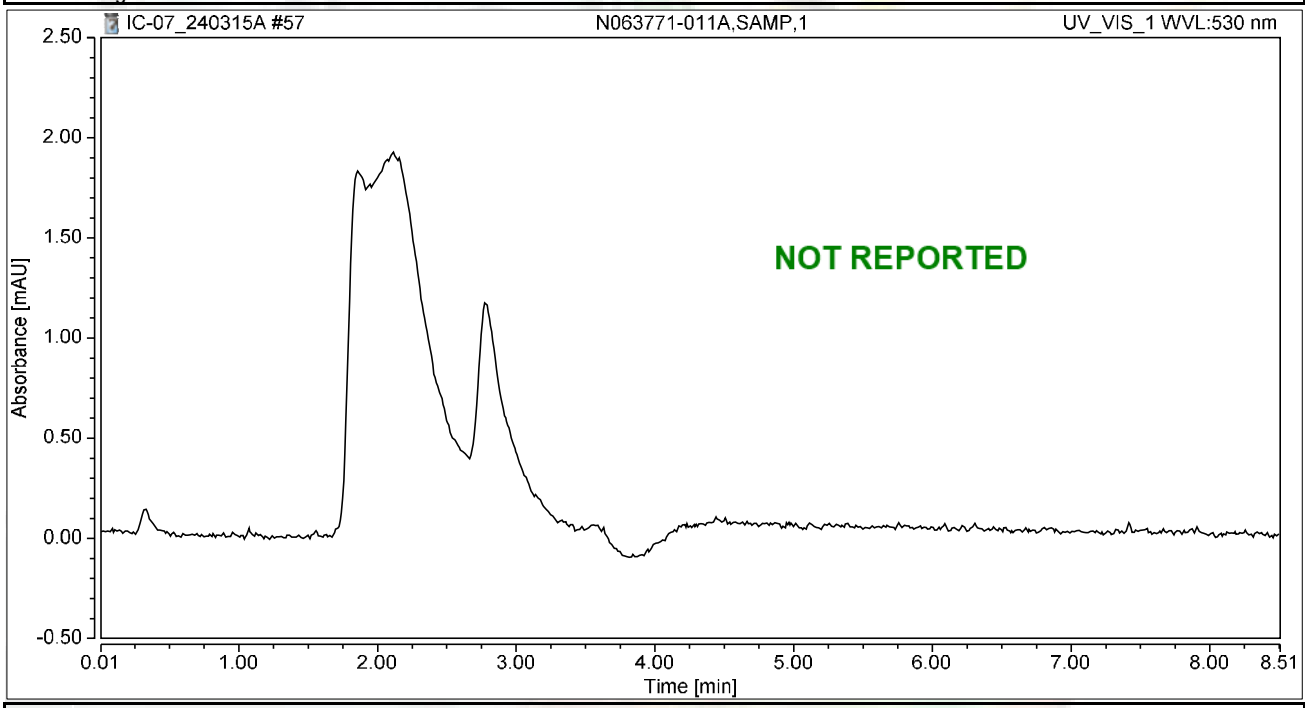
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.224	1.568	100.00	100.00	1.0544
Total:			**0.224**	**1.568**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-011A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 18:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

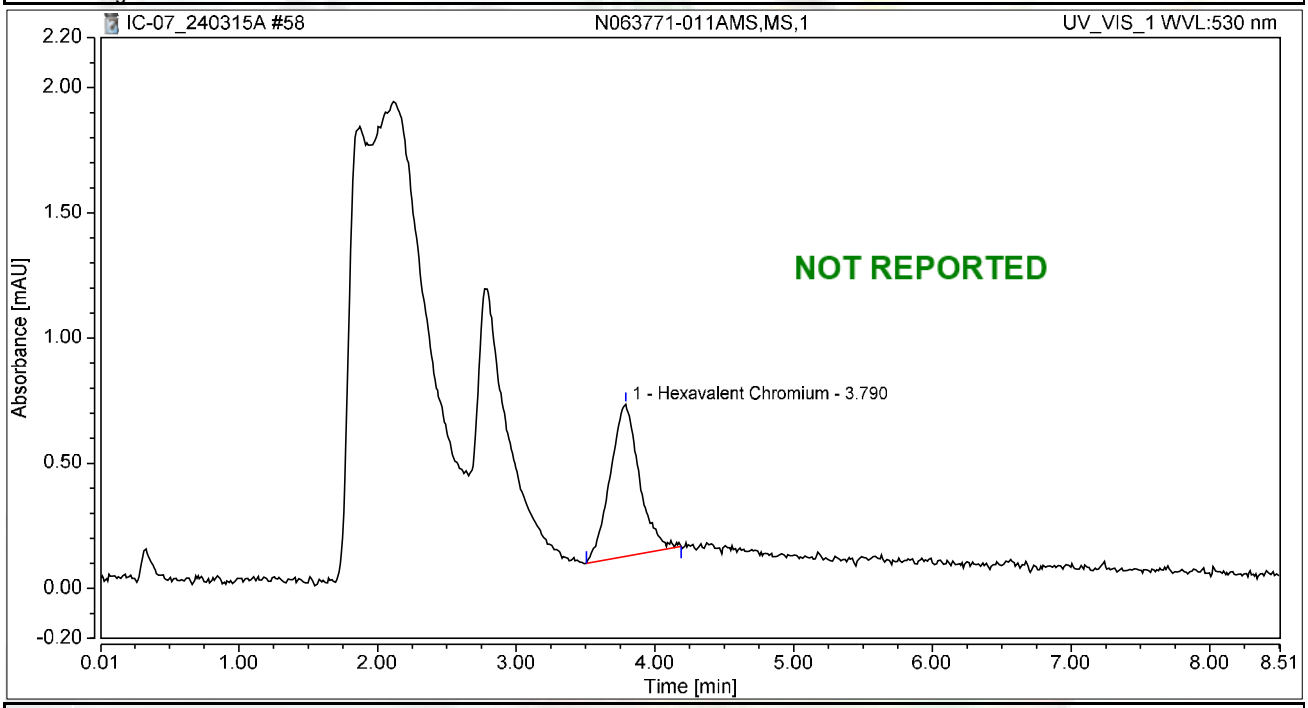
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 18:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

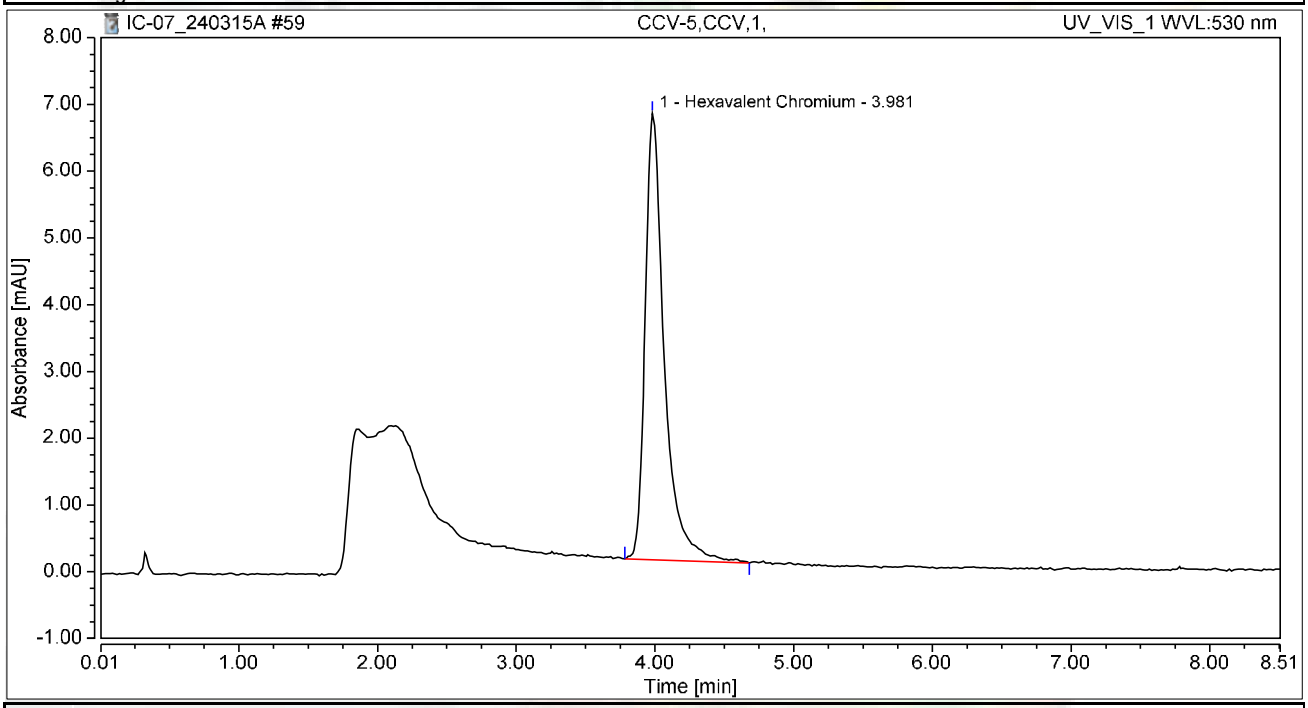
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.148	0.607	100.00	100.00	0.6959
Total:			**0.148**	**0.607**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 18:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

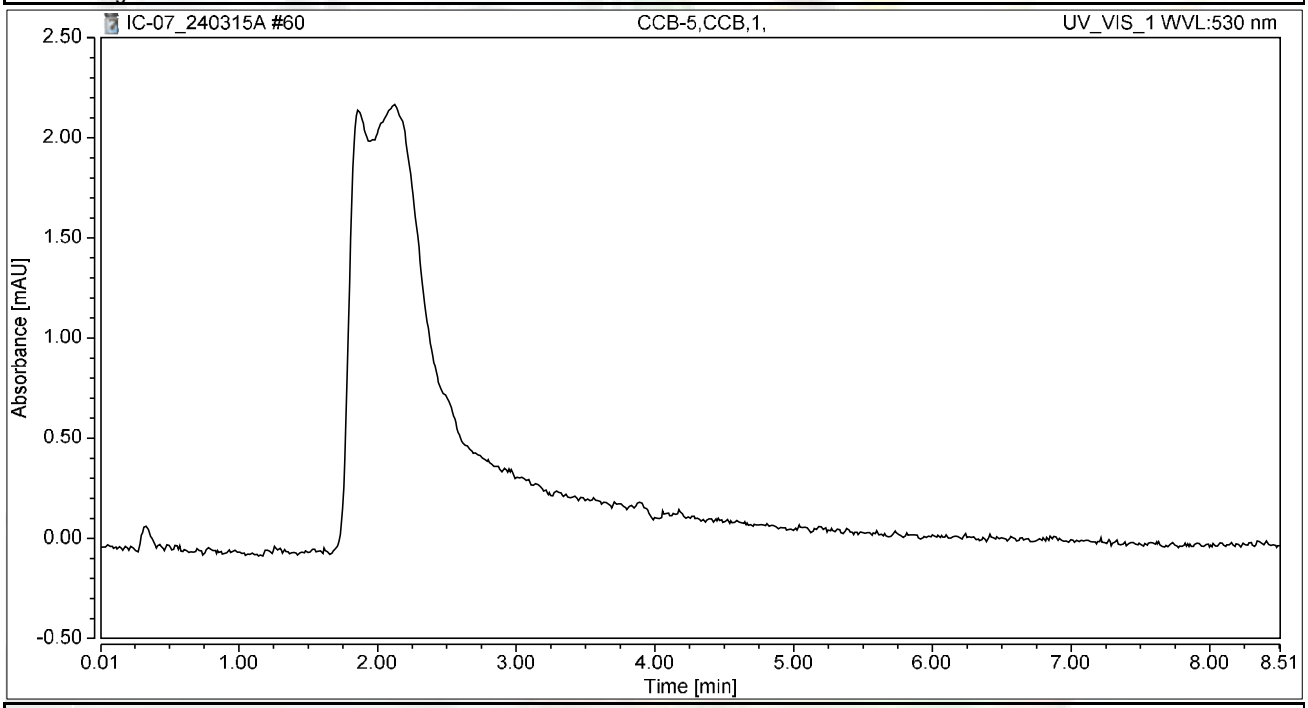
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.072	6.686	100.00	100.00	5.0371
Total:			**1.072**	**6.686**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 18:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

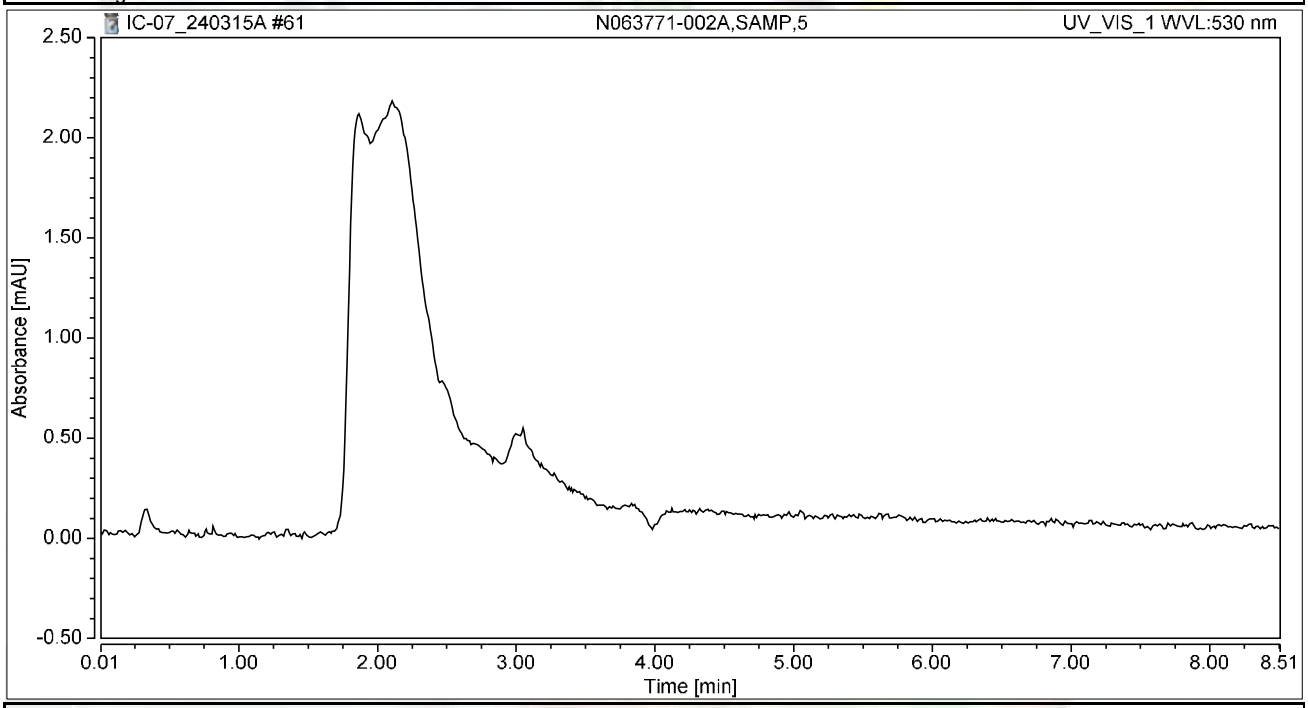
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 18:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

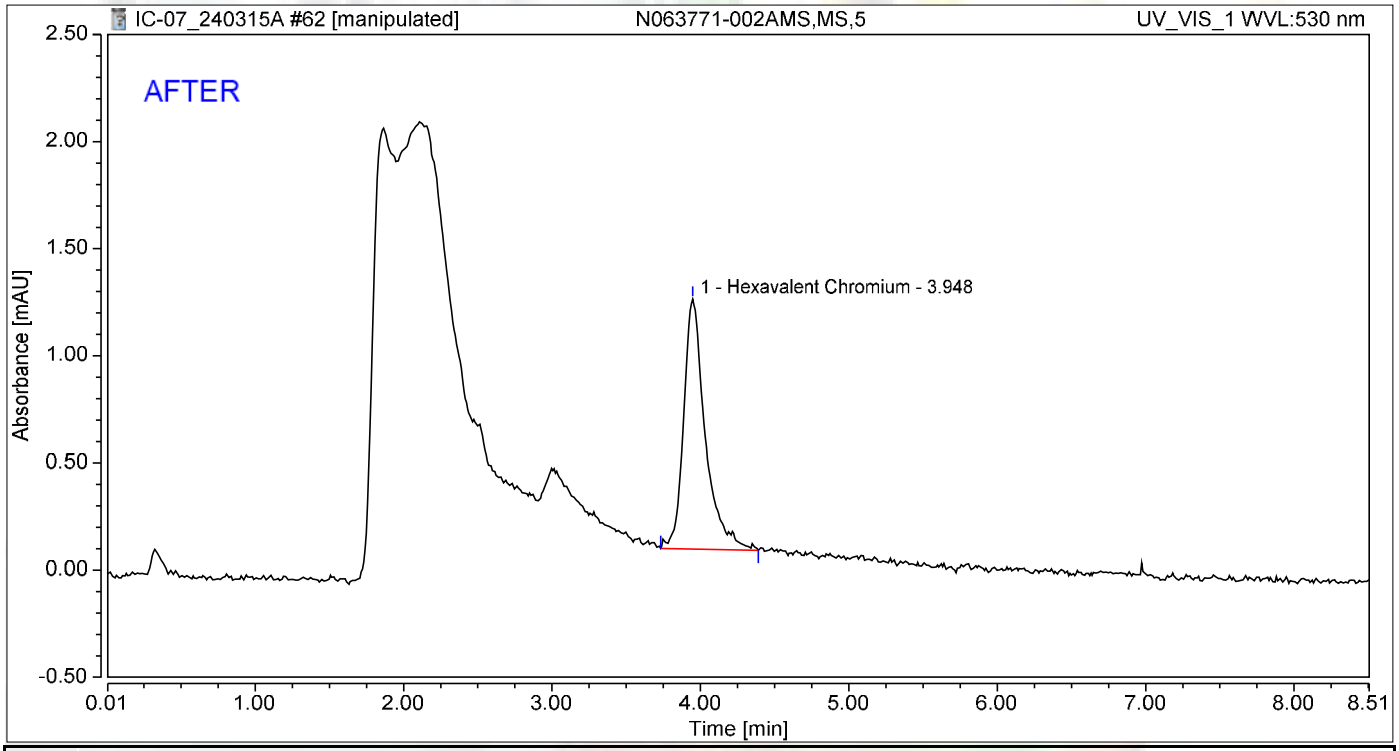
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 18:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.197	1.167	100.00	100.00	0.9270
Total:			**0.197**	**1.167**	**100.00**	**100.00**	

Reviewed by:

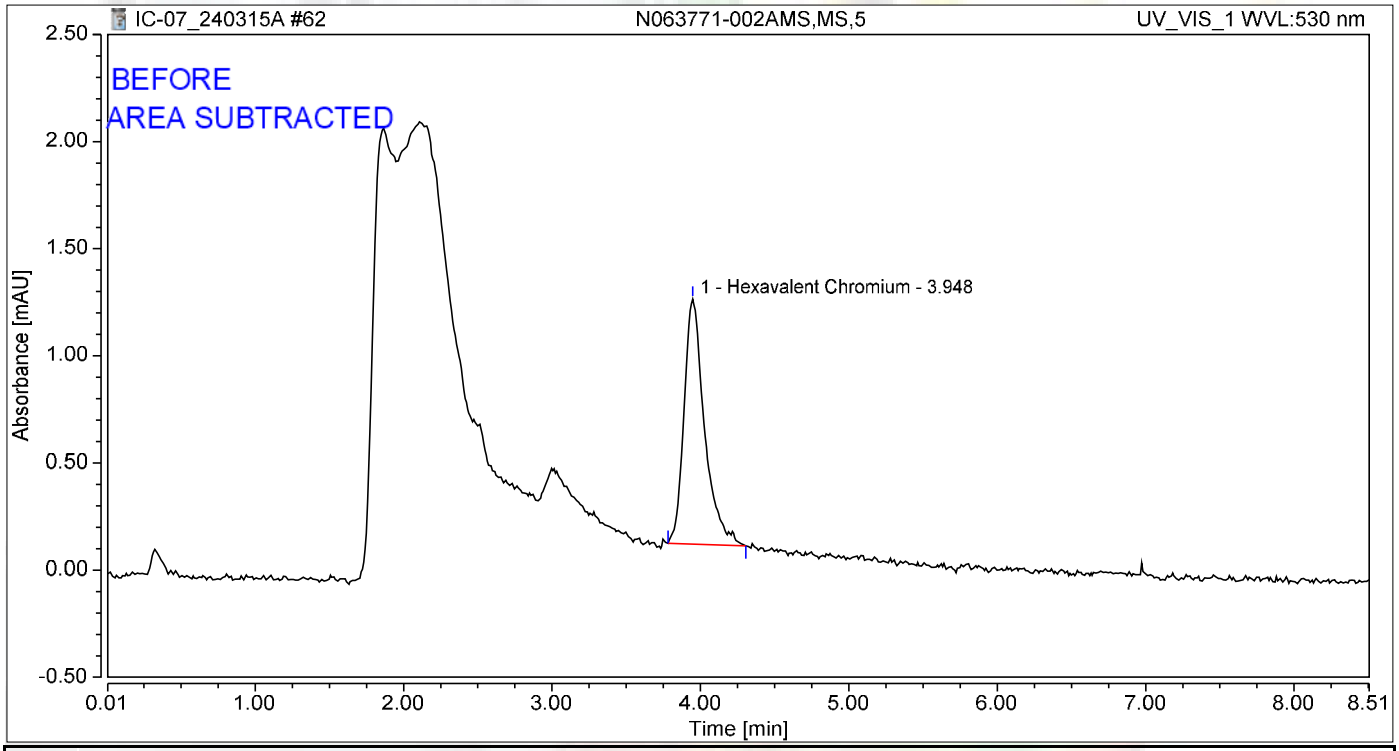
dMocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063771-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 18:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

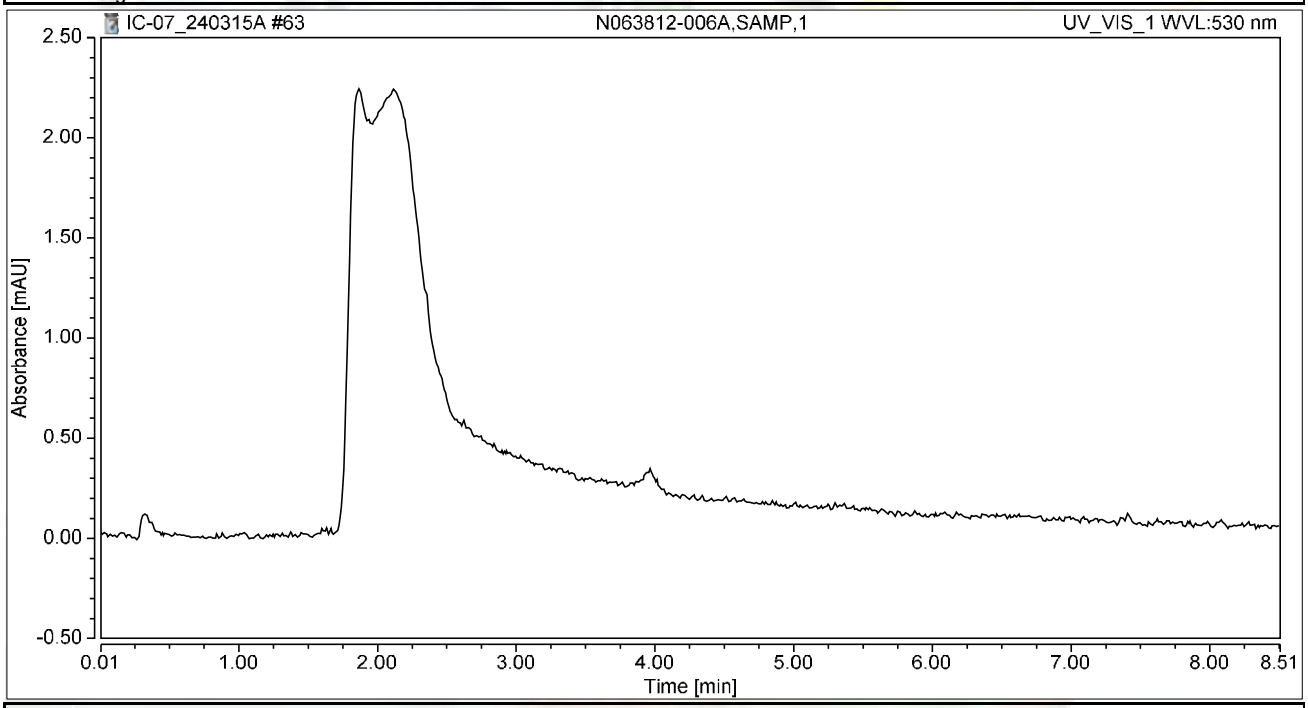
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.183	1.144	100.00	100.00	0.8594
Total:			**0.183**	**1.144**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 19:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

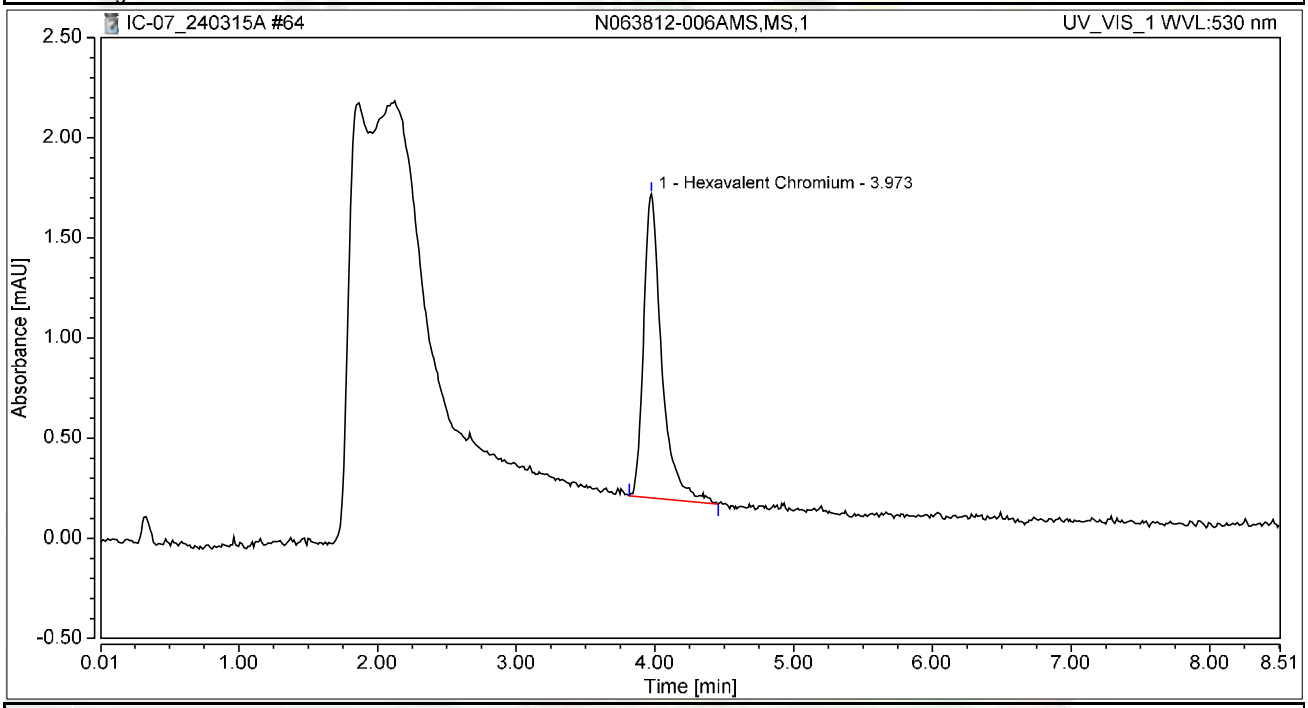
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 19:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

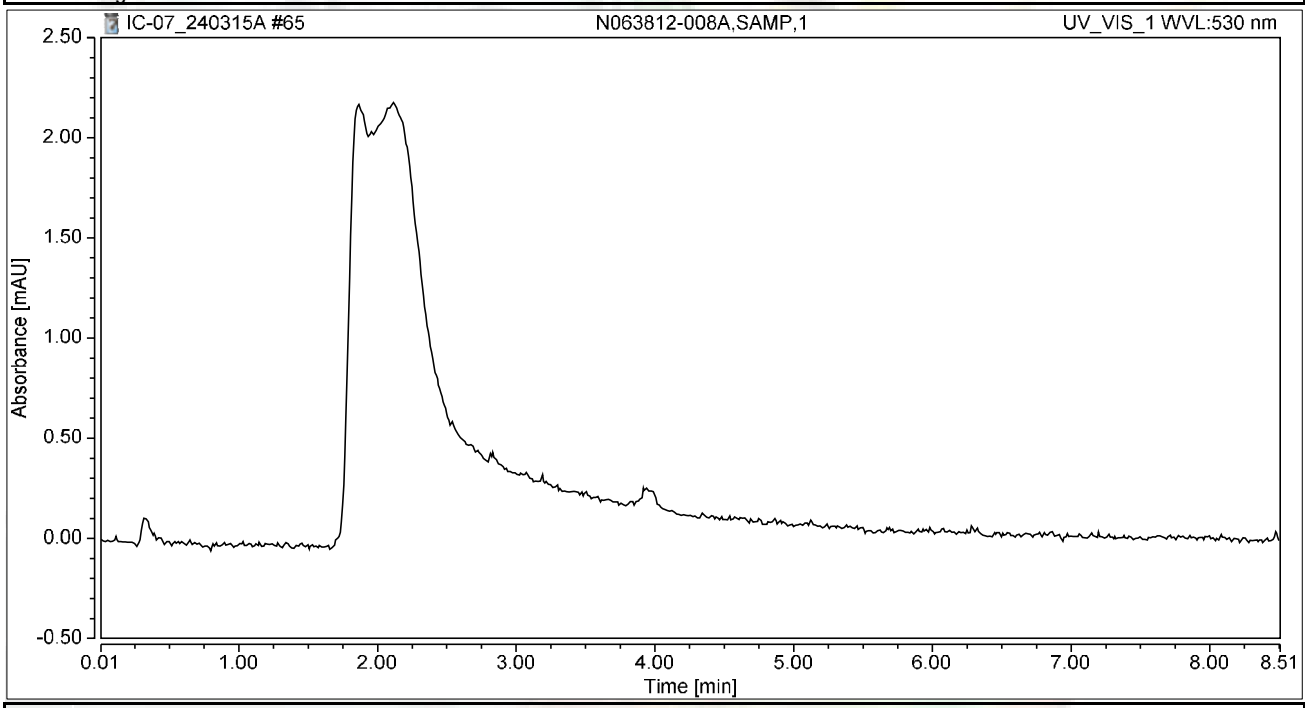
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.229	1.516	100.00	100.00	1.0759
Total:			**0.229**	**1.516**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 19:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

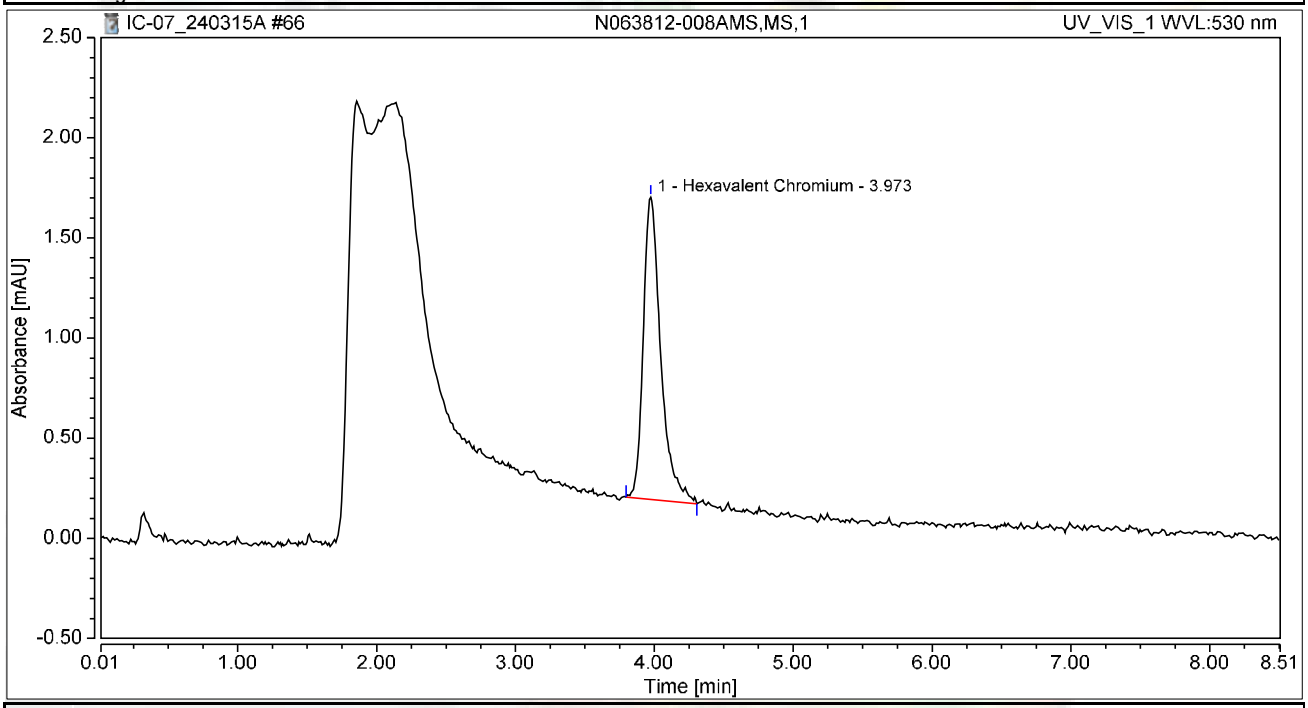
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-008AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 19:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

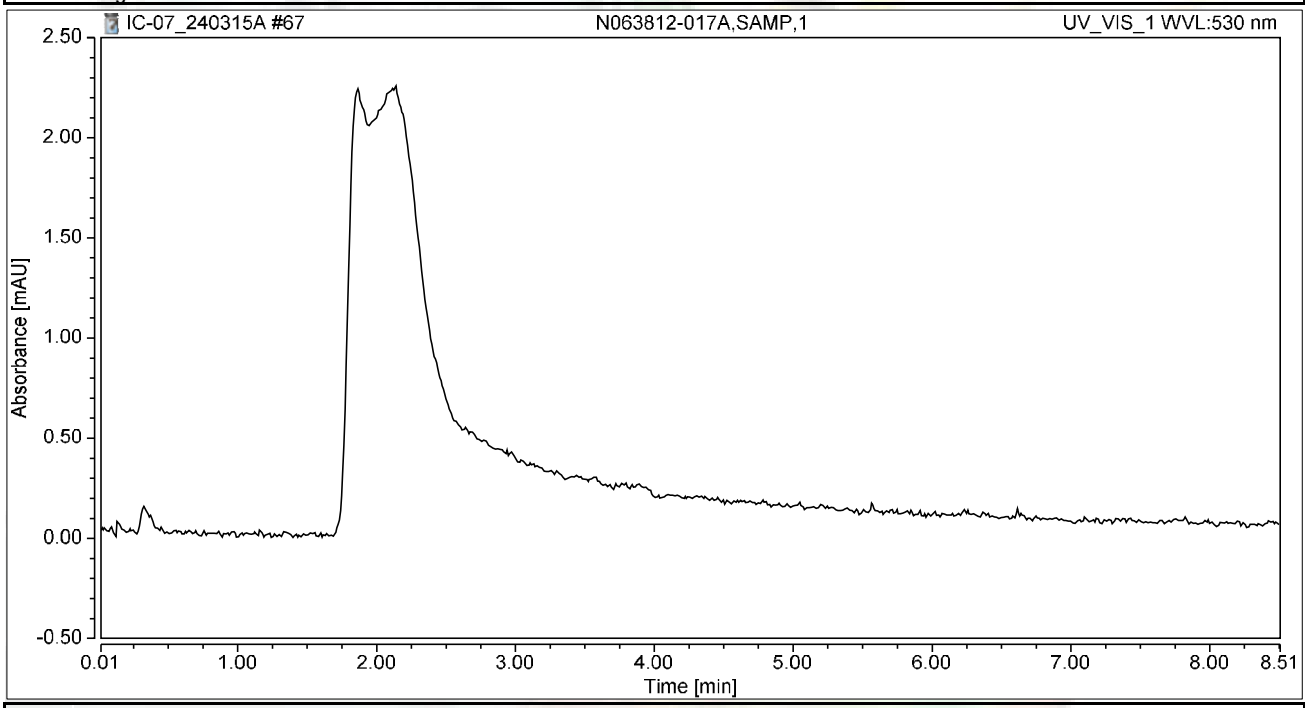
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.221	1.510	100.00	100.00	1.0366
Total:			**0.221**	**1.510**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-017A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 19:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

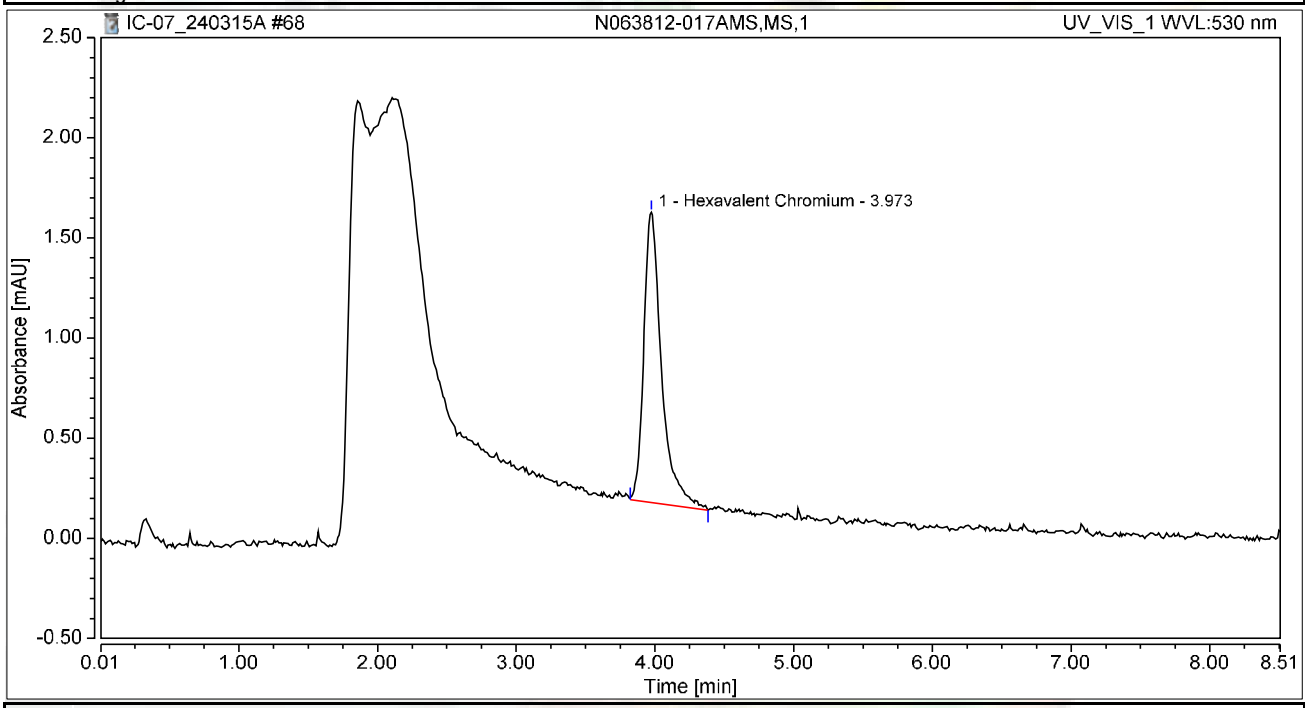
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-017AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 19:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

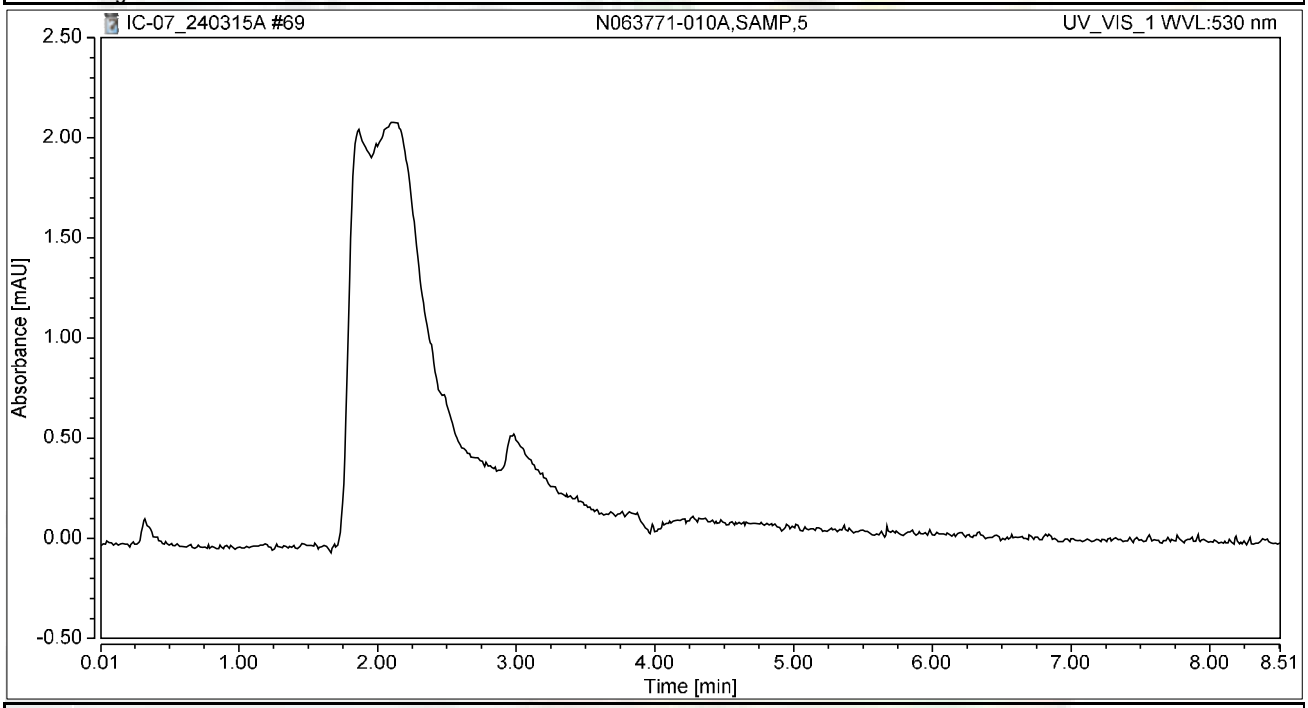
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.215	1.449	100.00	100.00	1.0098
Total:			**0.215**	**1.449**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-010A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

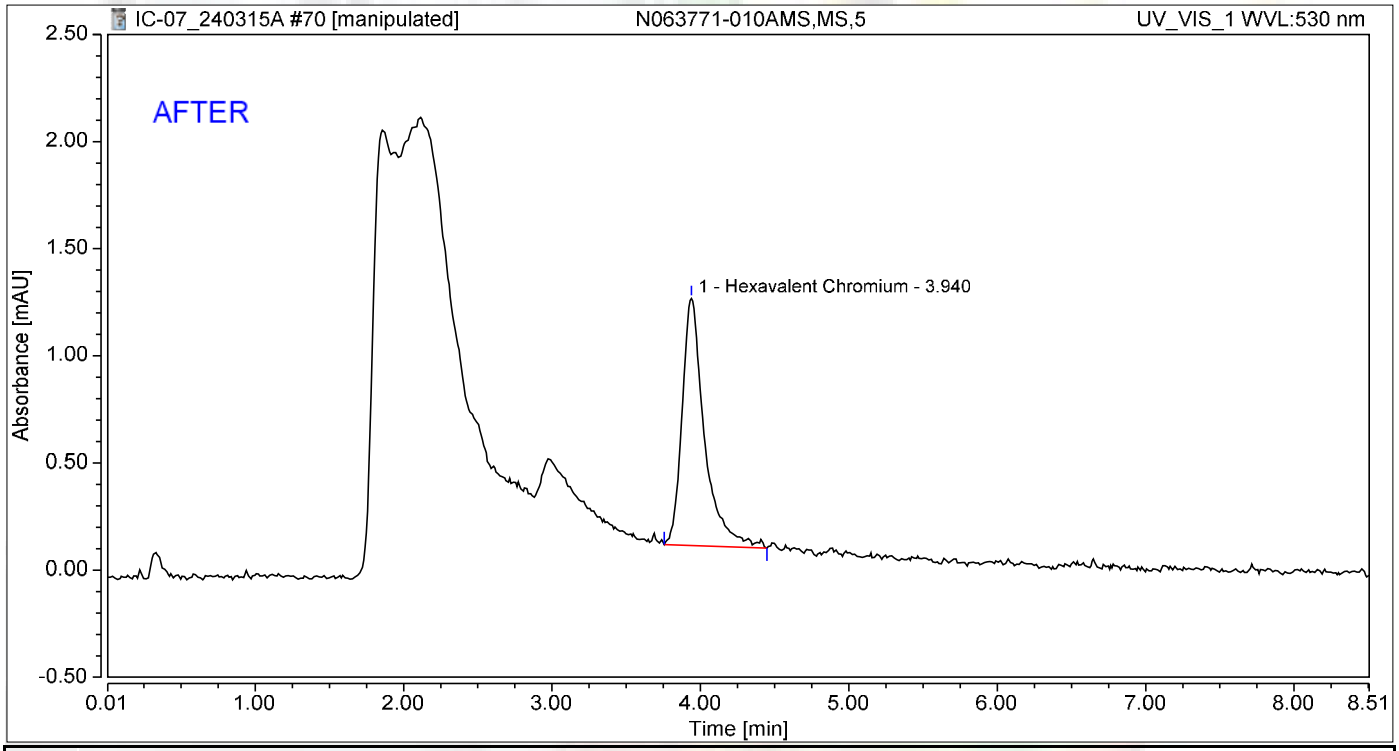
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-010AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.202	1.153	100.00	100.00	0.9506
Total:			**0.202**	**1.153**	**100.00**	**100.00**	

Reviewed by:

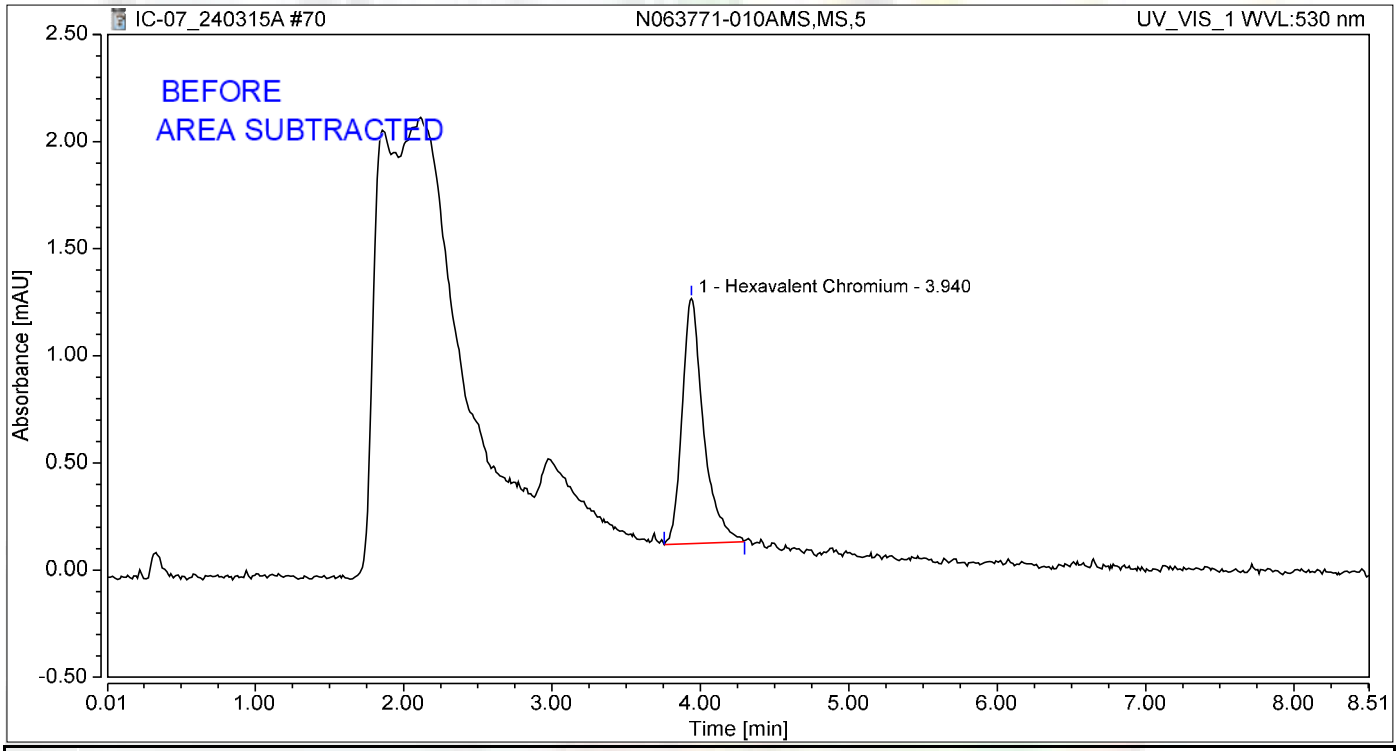
dMocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063771-010AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

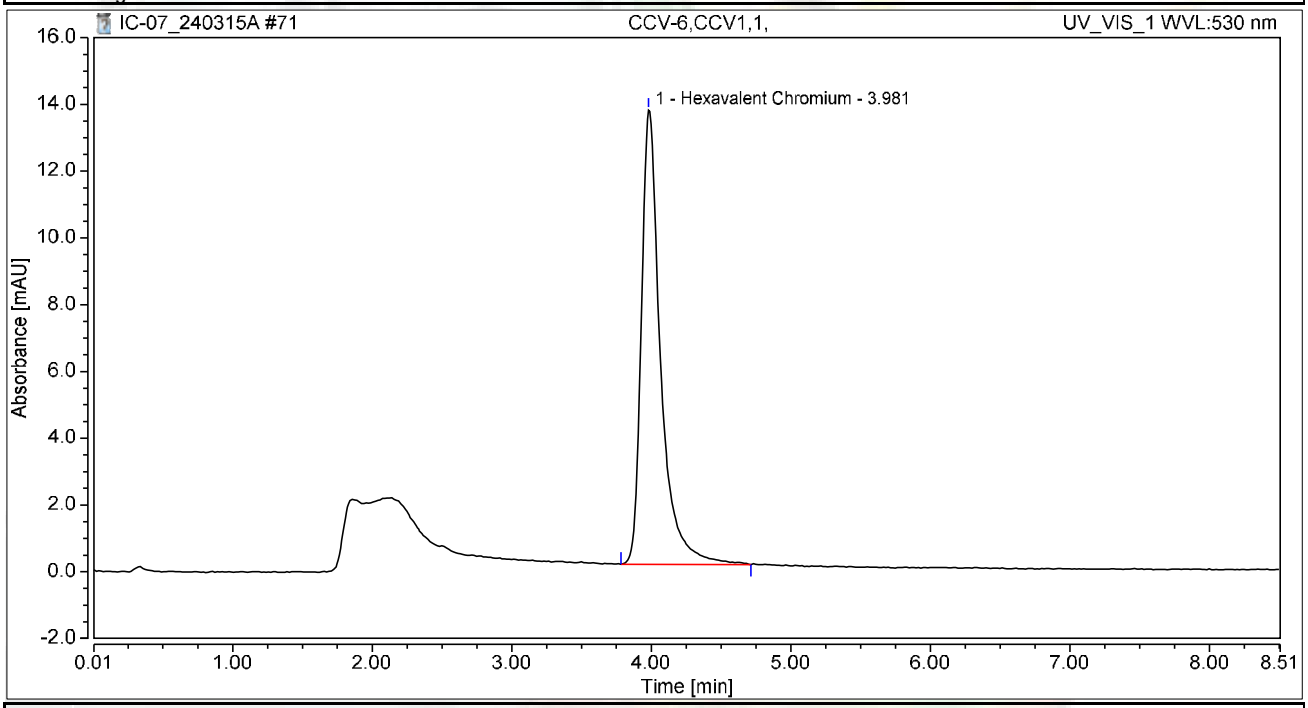
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.191	1.144	100.00	100.00	0.8977
Total:			**0.191**	**1.144**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

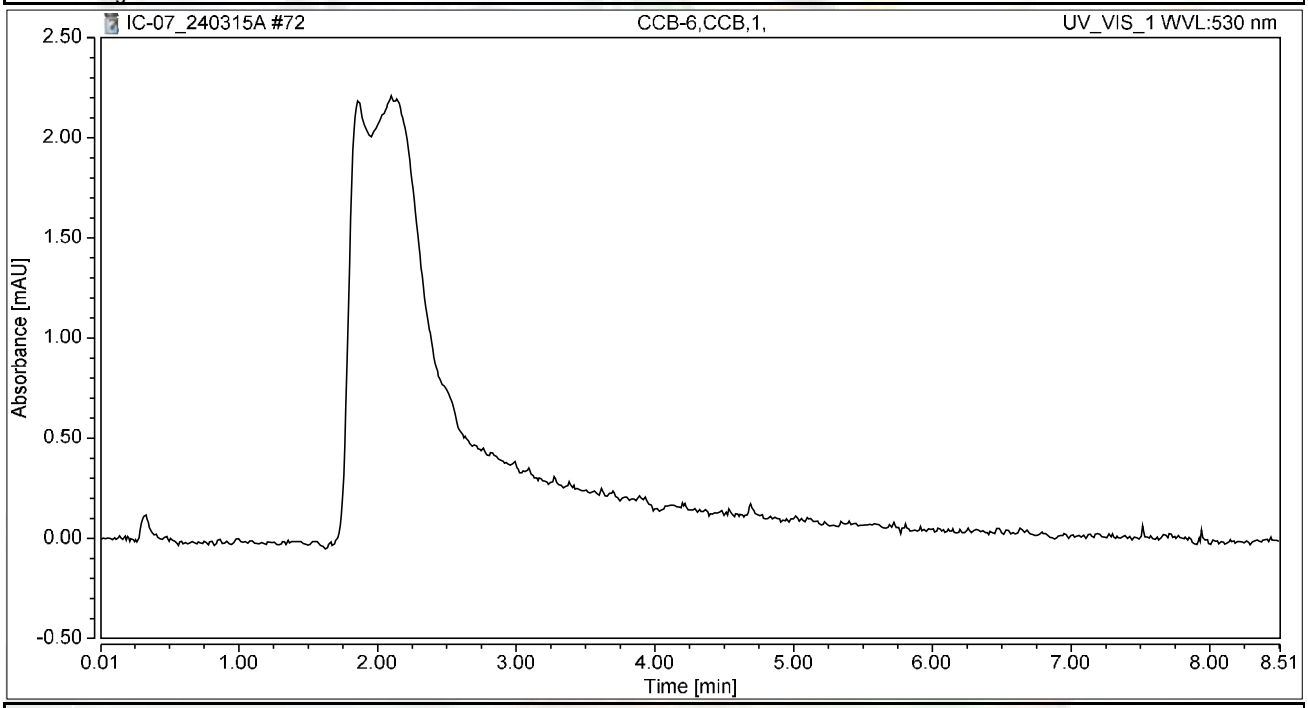
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	2.177	13.608	100.00	100.00	10.2280
Total:			**2.177**	**13.608**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

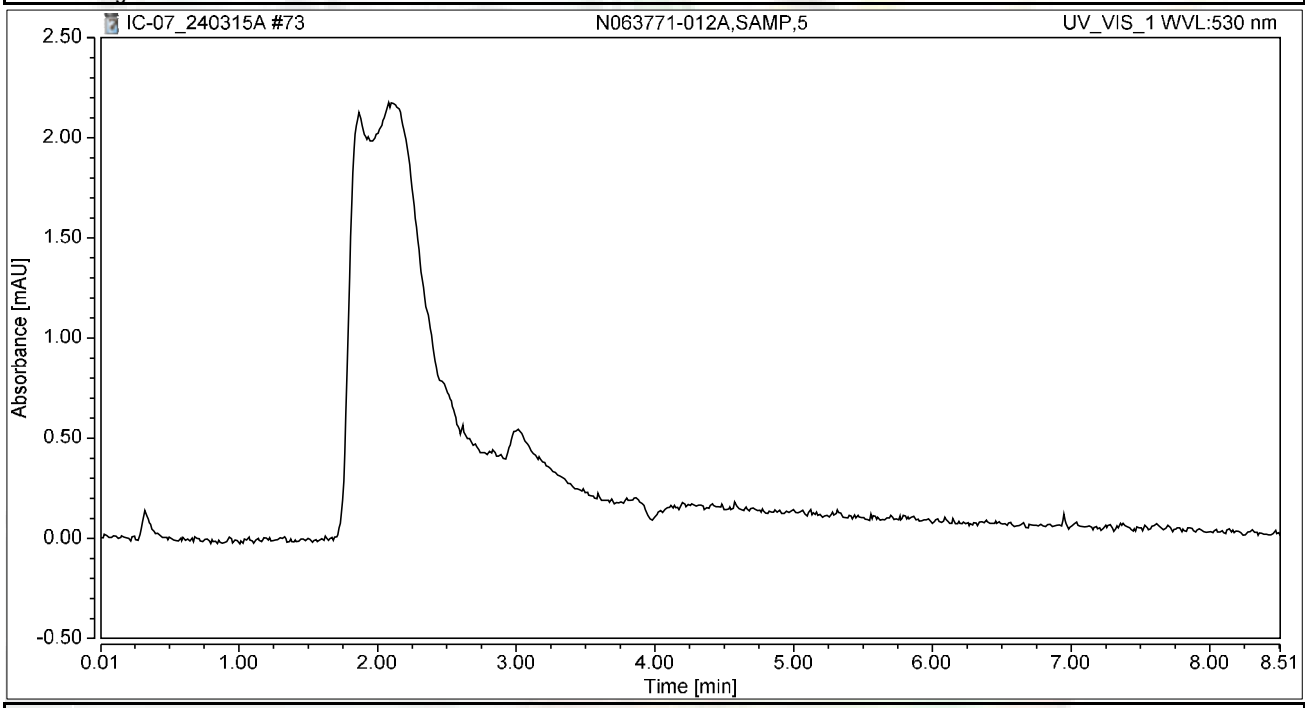
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-012A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

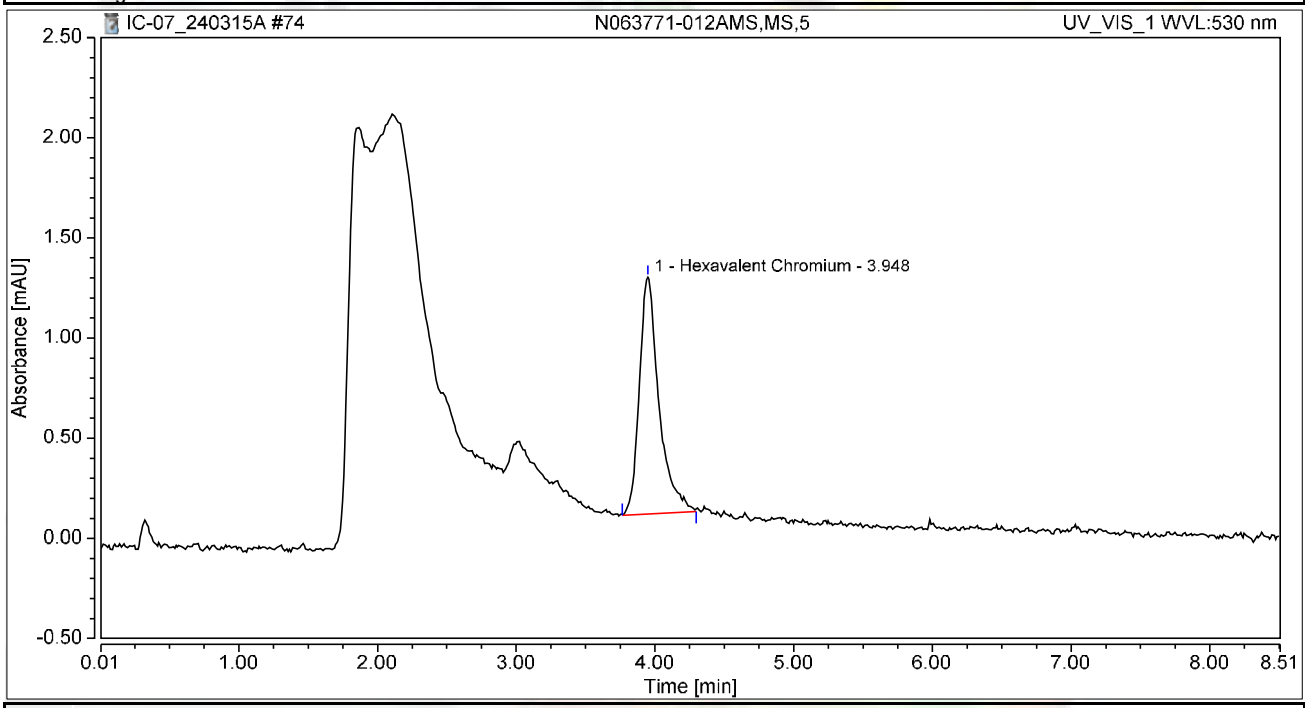
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-012AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

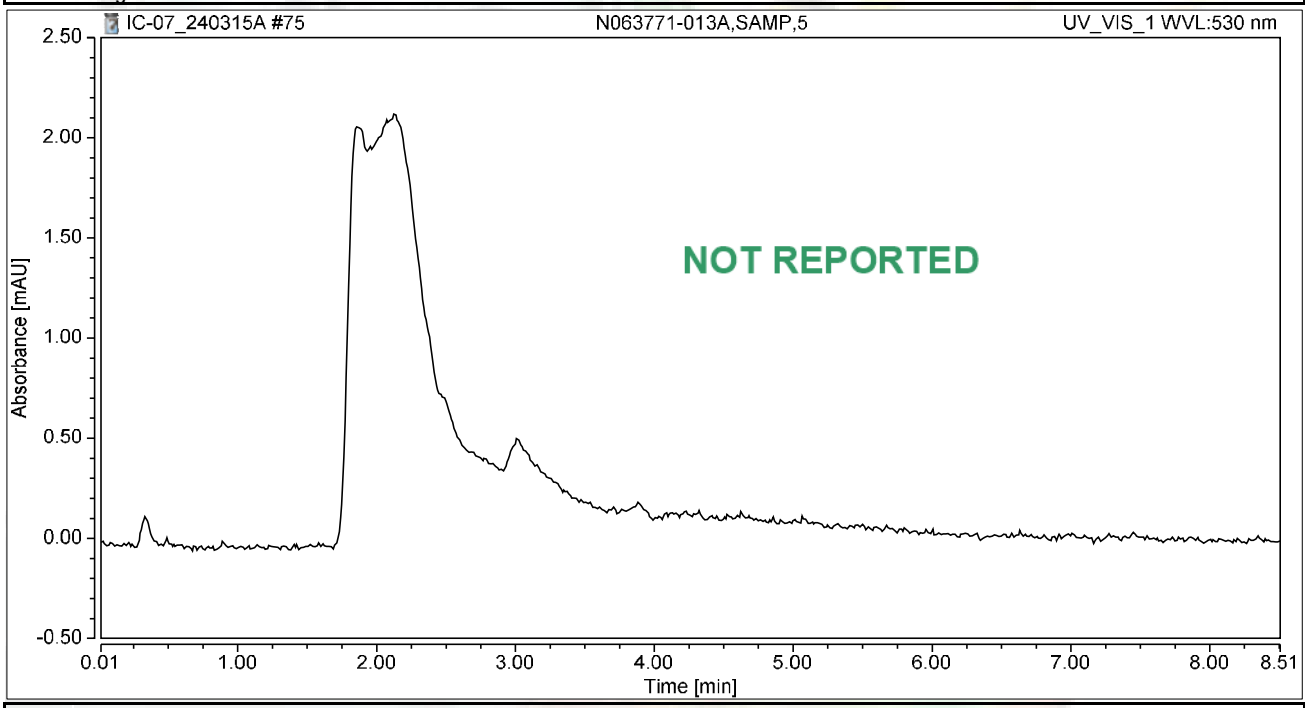
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.194	1.182	100.00	100.00	0.9112
Total:			**0.194**	**1.182**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-013A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

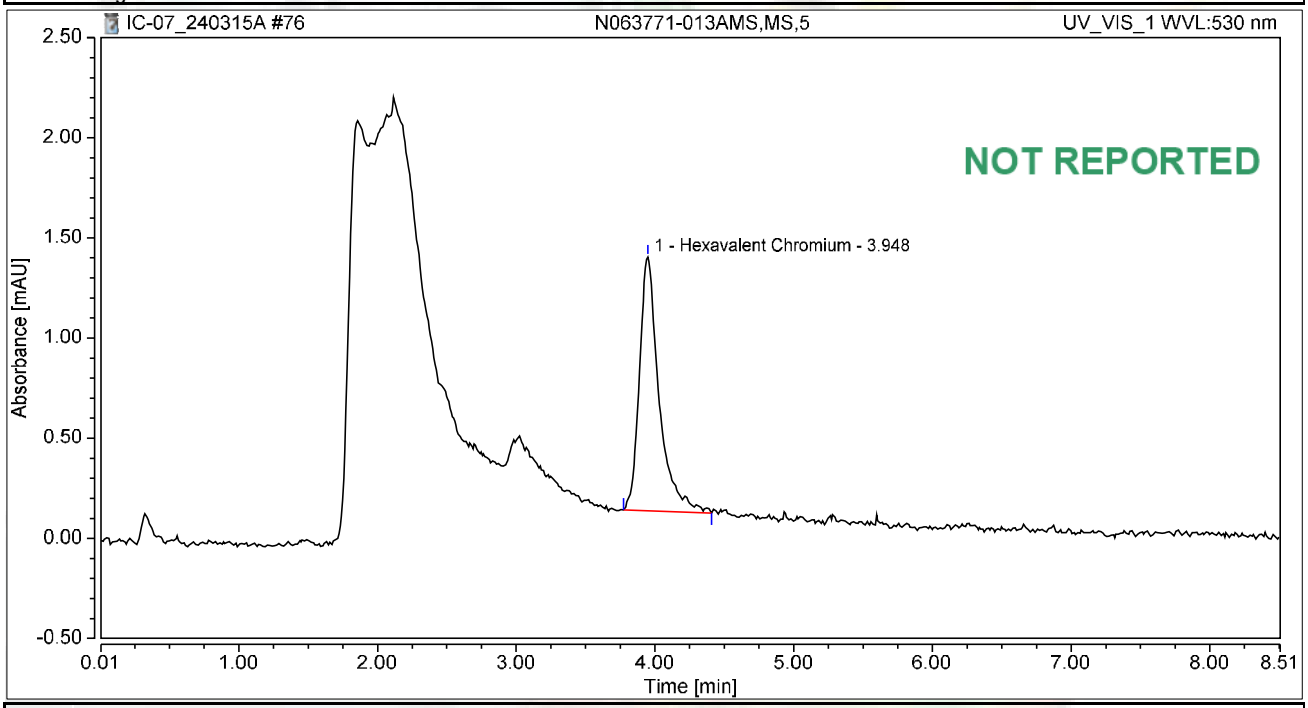
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-013AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 21:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

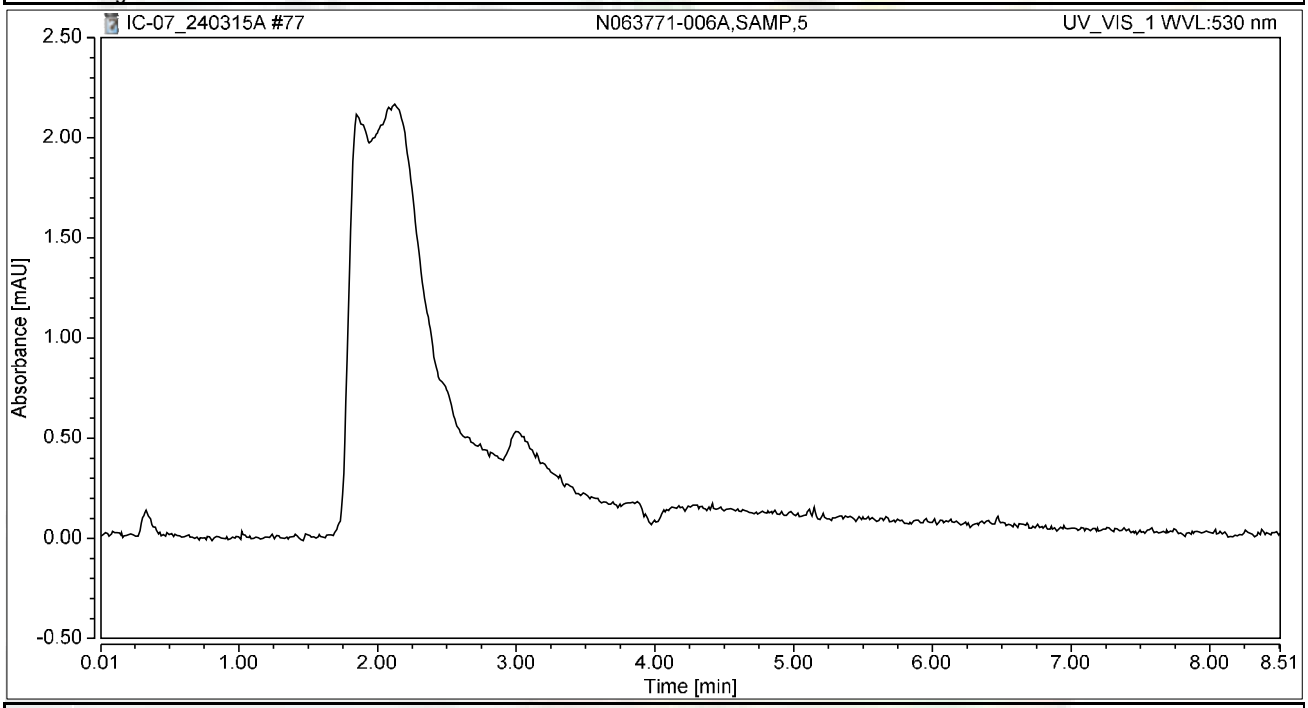
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.208	1.268	100.00	100.00	0.9776
Total:			**0.208**	**1.268**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-006A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 21:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

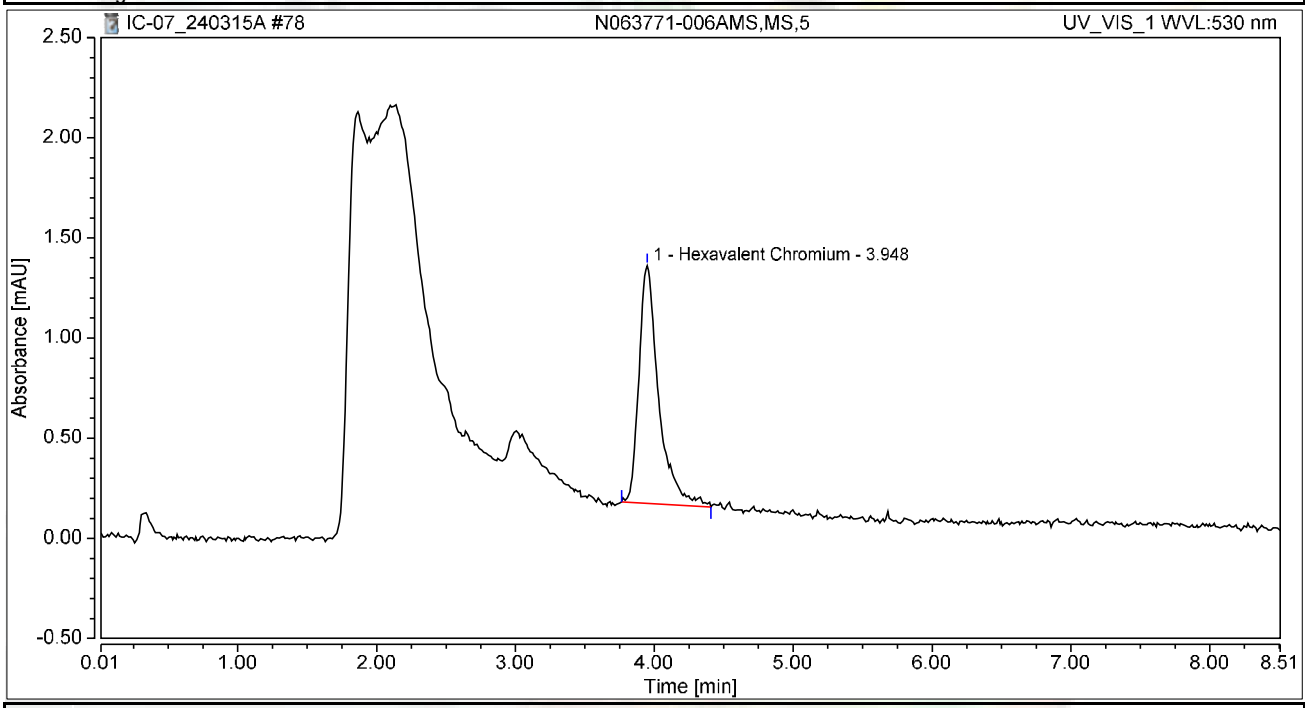
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-006AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 21:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

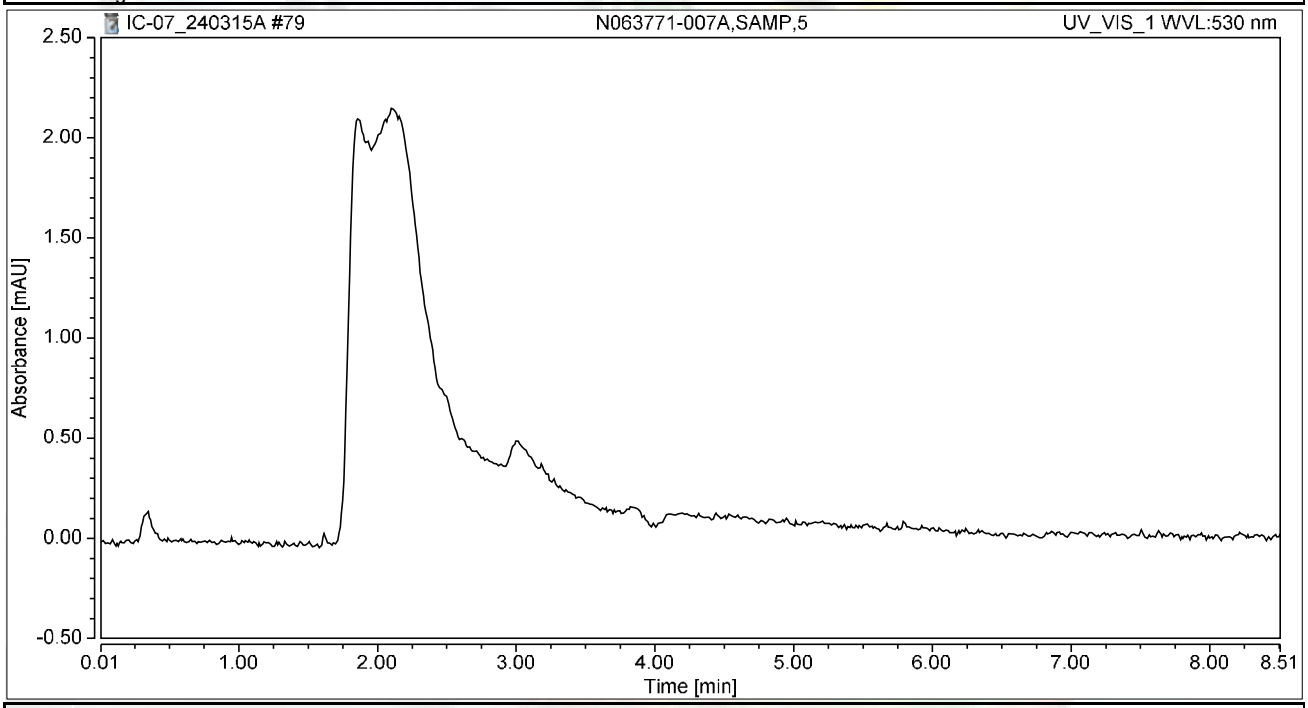
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.196	1.188	100.00	100.00	0.9229
Total:			**0.196**	**1.188**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-007A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 21:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

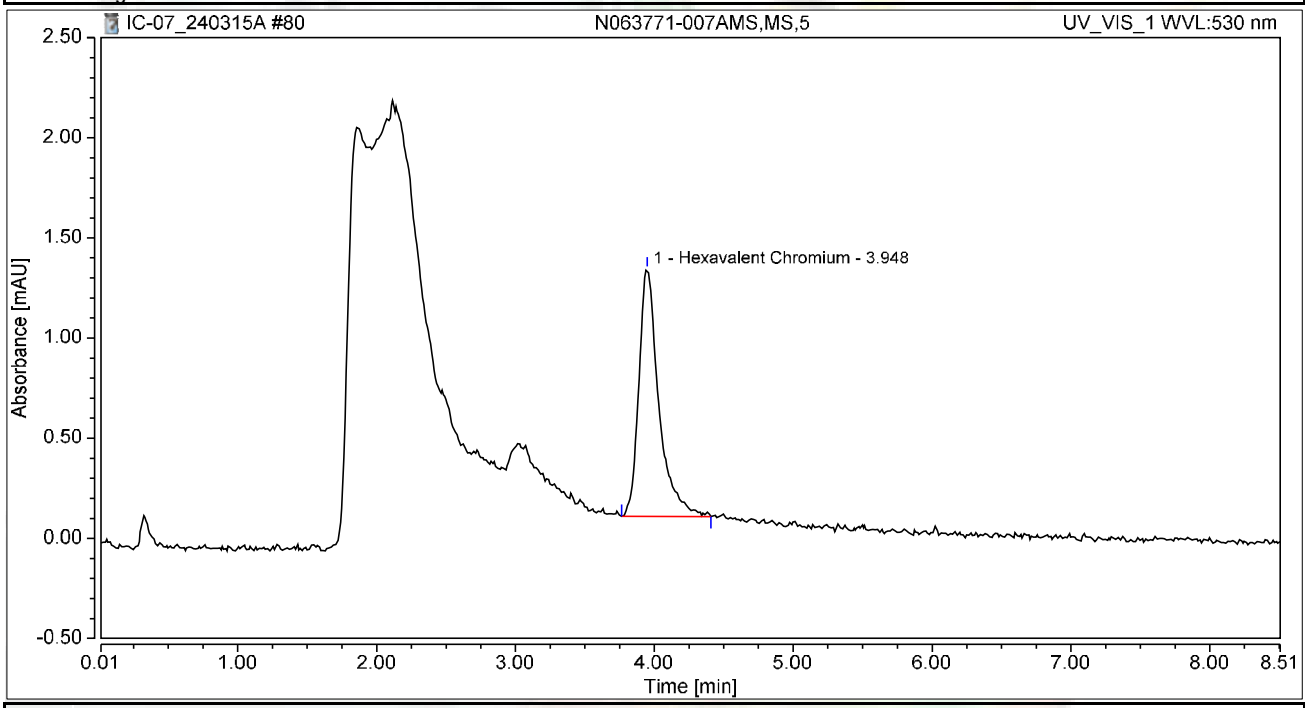
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-007AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 21:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

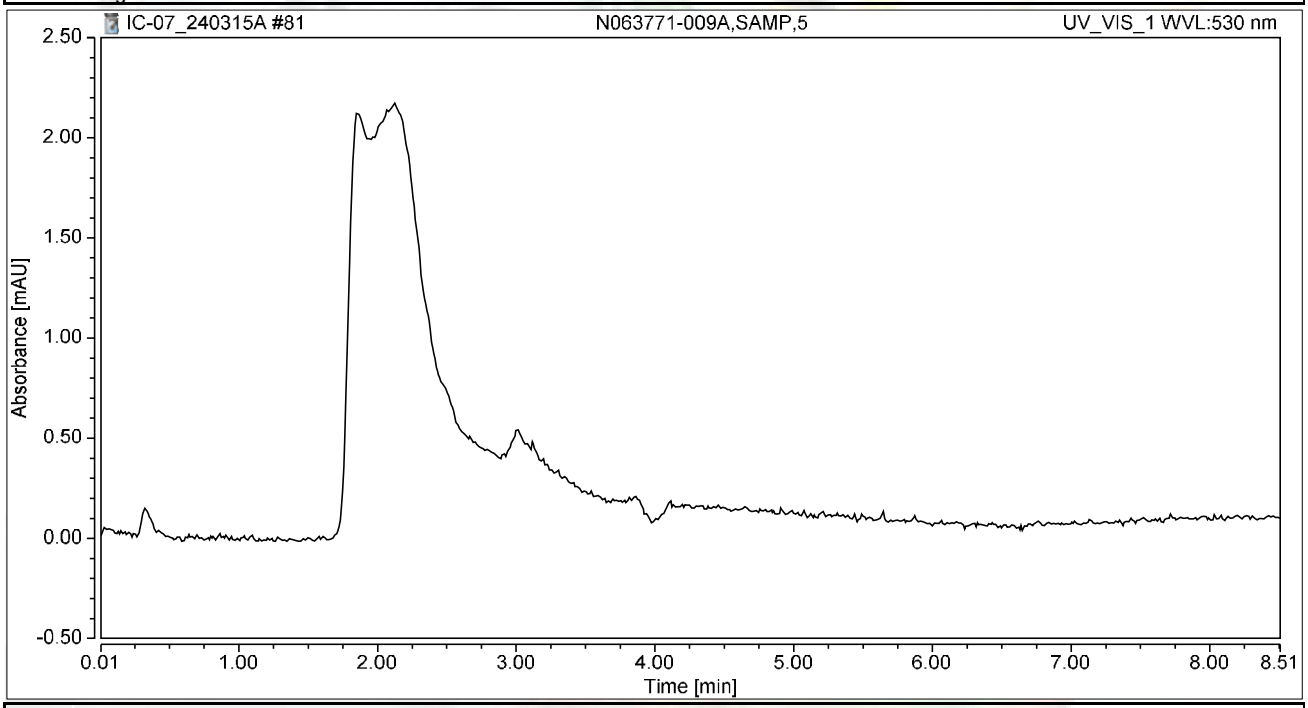
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.207	1.235	100.00	100.00	0.9730
Total:			**0.207**	**1.235**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-009A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 21:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

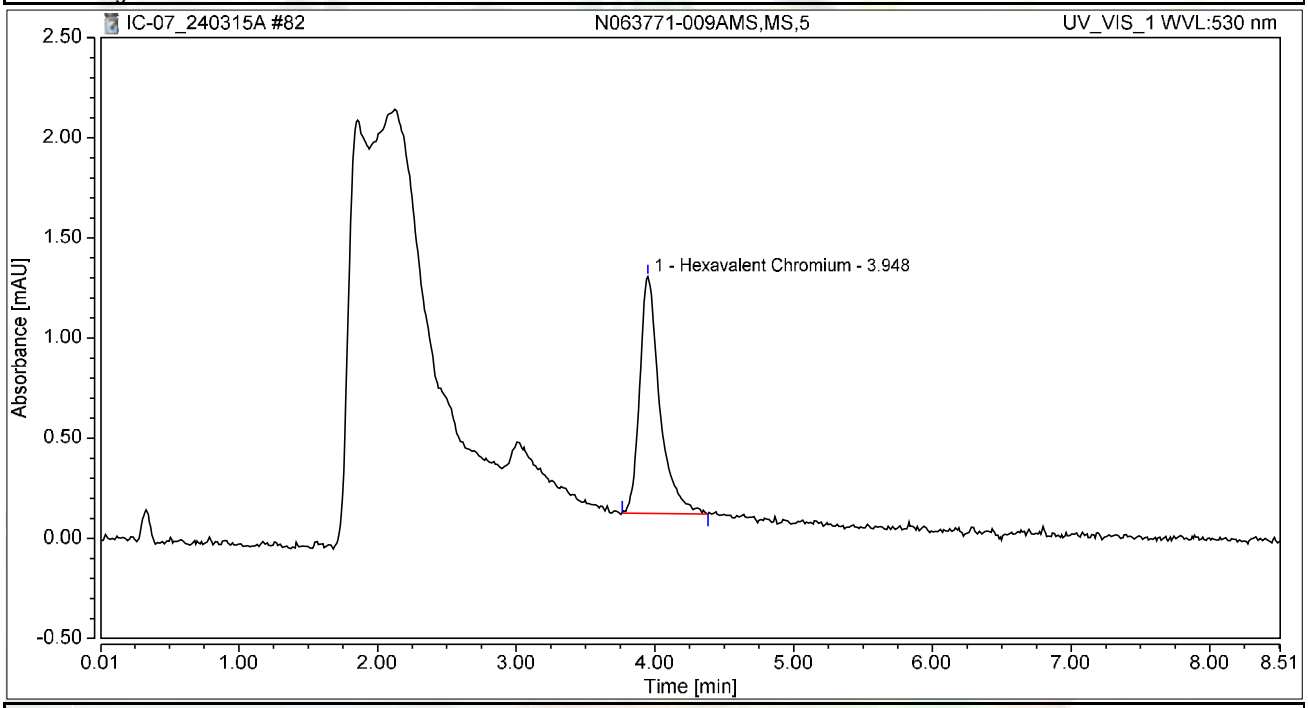
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-009AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 22:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

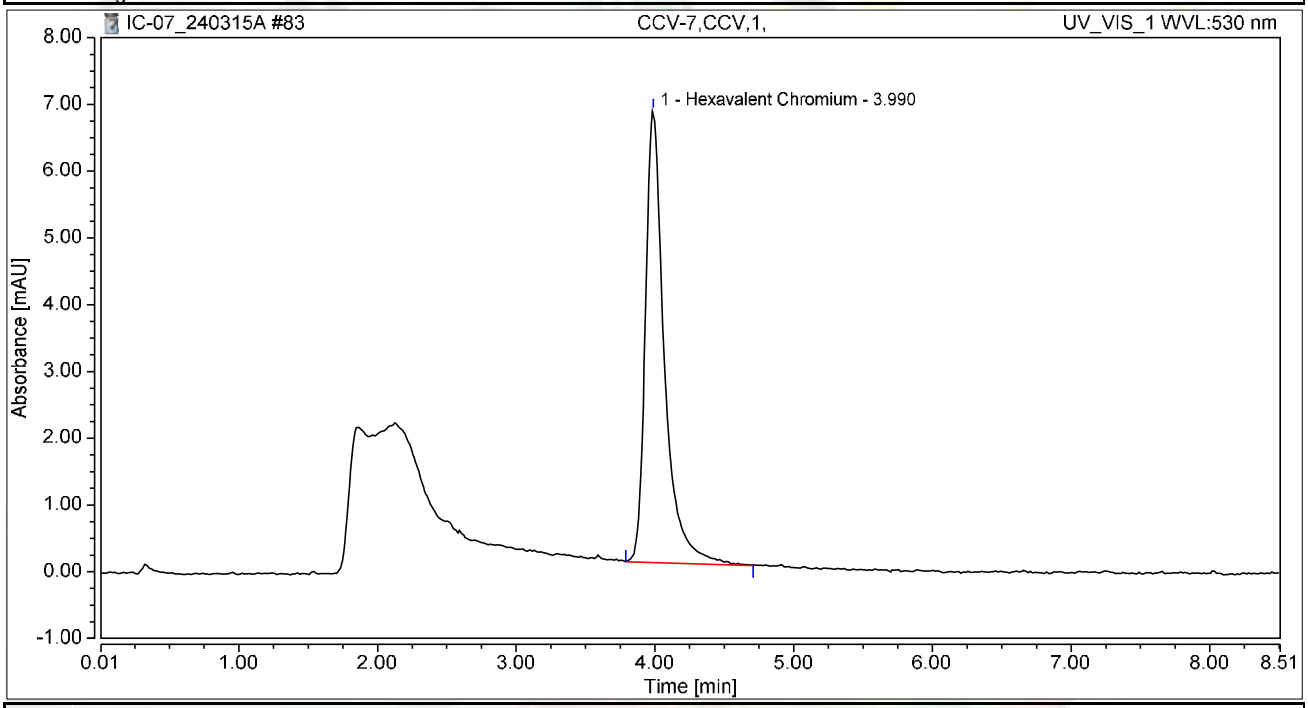
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.199	1.183	100.00	100.00	0.9340
Total:			**0.199**	**1.183**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 22:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

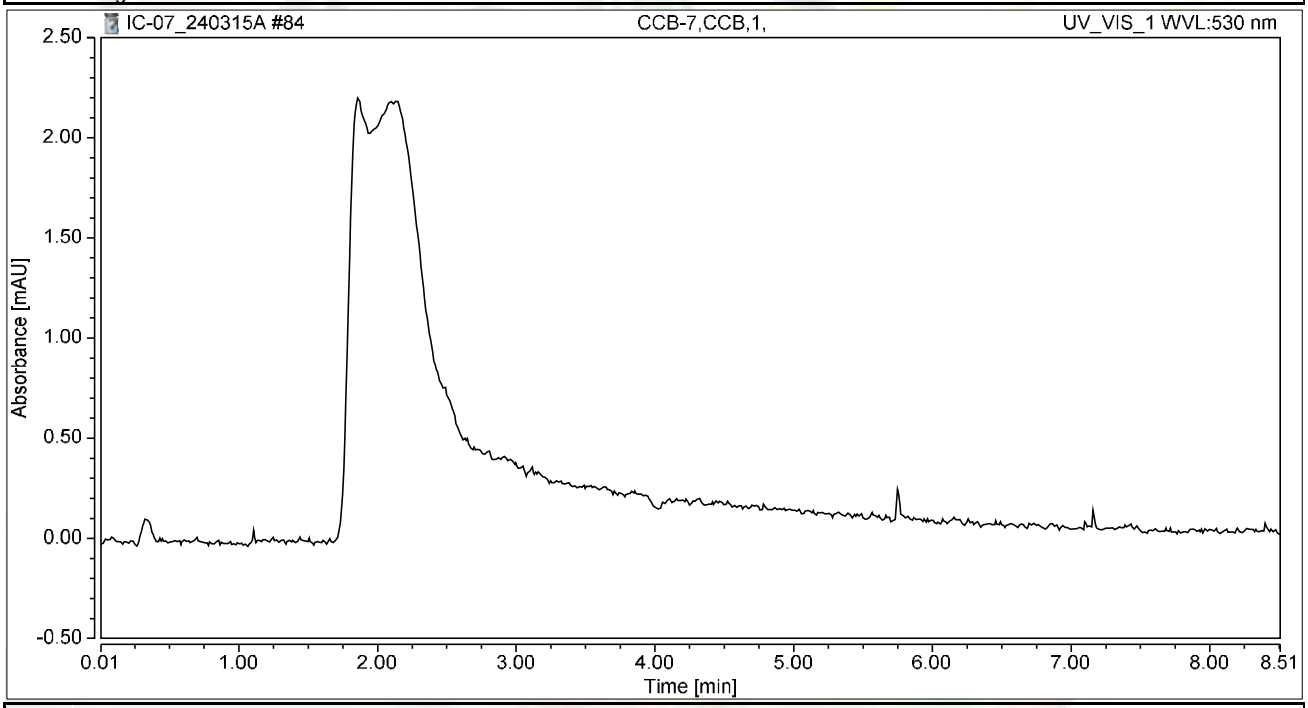
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	1.074	6.771	100.00	100.00	5.0464
Total:			**1.074**	**6.771**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 22:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

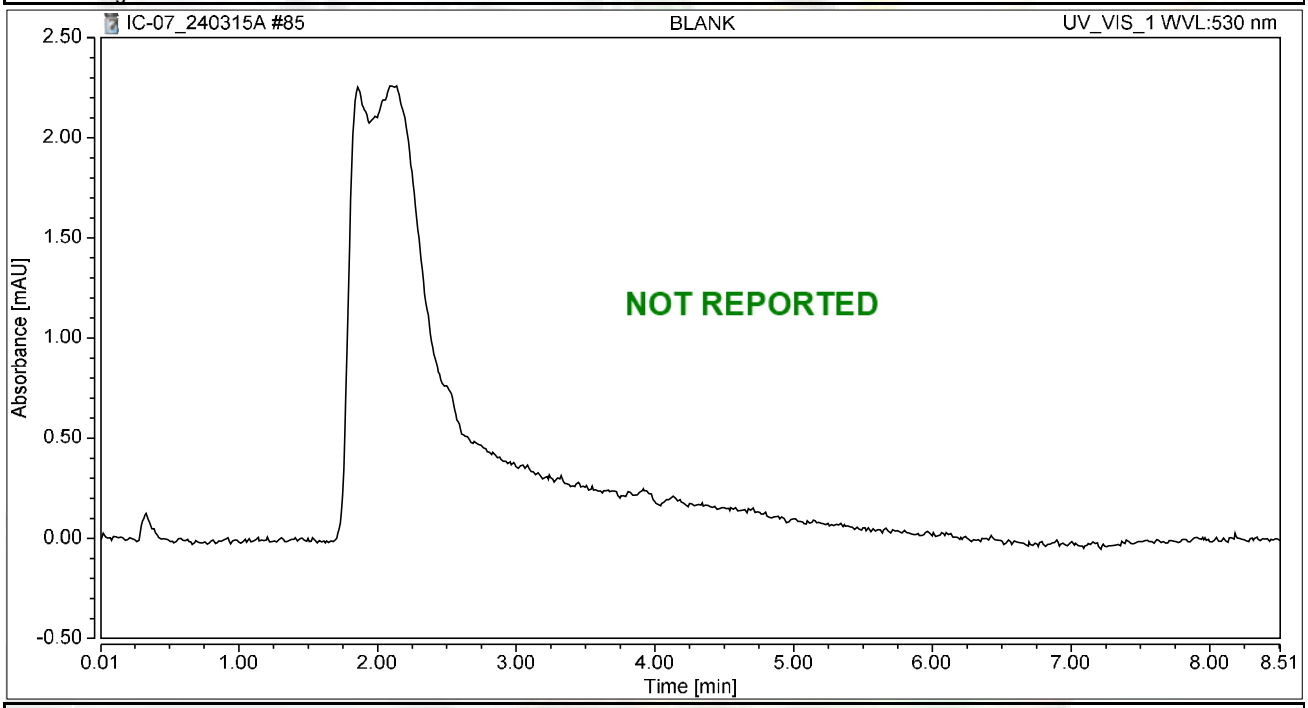
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 22:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240318A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/18/24 11:42 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/18/24 11:57 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/18/24 12:06 PM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/18/24 12:15 PM	Reported
13	MB-R183736	MBLK	1	Hexavalent Chromium	03/18/24 12:25 PM	Reported
14	LCS-R183736	LCS	1	Hexavalent Chromium	03/18/24 12:34 PM	Reported
15	N063812-011A	SAMP	5	Hexavalent Chromium	03/18/24 12:44 PM	Reported
16	N063812-011AMS	MS	5	Hexavalent Chromium	03/18/24 12:53 PM	Reported
17	N063812-016A	SAMP	1	Hexavalent Chromium	03/18/24 1:03 PM	Not Reported
18	N063812-016AMS	MS	1	Hexavalent Chromium	03/18/24 1:12 PM	Not Reported
19	N063812-005A	SAMP	1	Hexavalent Chromium	03/18/24 1:22 PM	Not Reported
20	N063812-005AMS	MS	1	Hexavalent Chromium	03/18/24 1:31 PM	Not Reported
21	N063812-009A	SAMP	1	Hexavalent Chromium	03/18/24 1:41 PM	Reported
22	N063812-009AMS	MS	1	Hexavalent Chromium	03/18/24 1:50 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/18/24 1:59 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/18/24 2:09 PM	Reported
25	N063812-014A	SAMP	1	Hexavalent Chromium	03/18/24 2:18 PM	Reported
26	N063812-015A	SAMP	1	Hexavalent Chromium	03/18/24 2:28 PM	Reported
27	N063812-014AMS	MS	1	Hexavalent Chromium	03/18/24 2:37 PM	Not Reported
28	N063812-015AMS	MS	1	Hexavalent Chromium	03/18/24 2:47 PM	Reported
29	N063812-011ADUP	DUP	5	Hexavalent Chromium	03/18/24 2:59 PM	Reported
30	N063812-011AMSD	MSD	5	Hexavalent Chromium	03/18/24 3:10 PM	Reported
31	N063812-012A	SAMP	50	Hexavalent Chromium	03/18/24 3:20 PM	Not Reported
32	N063812-012AMS	MS	50	Hexavalent Chromium	03/18/24 3:29 PM	Not Reported
33	N063812-013A	SAMP	5	Hexavalent Chromium	03/18/24 3:39 PM	Not Reported
34	N063812-013AMS	MS	5	Hexavalent Chromium	03/18/24 3:48 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	03/18/24 3:57 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	03/18/24 4:07 PM	Reported
37	N063812-001A	SAMP	100	Hexavalent Chromium	03/18/24 4:16 PM	Reported
38	N063812-001AMS	MS	100	Hexavalent Chromium	03/18/24 4:26 PM	Reported
39	N063812-002A	SAMP	500	Hexavalent Chromium	03/18/24 4:35 PM	Reported
40	N063812-002AMS	MS	500	Hexavalent Chromium	03/18/24 4:45 PM	Reported
41	N063812-003A	SAMP	500	Hexavalent Chromium	03/18/24 4:54 PM	Reported
42	N063812-003AMS	MS	500	Hexavalent Chromium	03/18/24 5:04 PM	Reported

INJECTION LOG: 240318A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063812-004A	SAMP	500	Hexavalent Chromium	03/18/24 5:13 PM	Reported
44	N063812-004AMS	MS	500	Hexavalent Chromium	03/18/24 5:23 PM	Reported
45	N063812-007A	SAMP	1	Hexavalent Chromium	03/18/24 5:32 PM	Reported
46	N063812-007AMS	MS	1	Hexavalent Chromium	03/18/24 5:42 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	03/18/24 5:51 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	03/18/24 6:00 PM	Reported
49	N063812-007A	SAMP	5	Hexavalent Chromium	03/18/24 6:10 PM	Not Reported
50	N063812-007AMS	MS	5	Hexavalent Chromium	03/18/24 6:19 PM	Not Reported
51	N063771-016A	SAMP	5	Hexavalent Chromium	03/18/24 6:29 PM	Reported
52	N063771-016AMS	MS	5	Hexavalent Chromium	03/18/24 6:41 PM	Reported
53	N063771-011A	SAMP	5	Hexavalent Chromium	03/18/24 6:51 PM	Reported
54	N063771-011AMS	MS	5	Hexavalent Chromium	03/18/24 7:01 PM	Reported
55	N063812-016A	SAMP	5	Hexavalent Chromium	03/18/24 7:10 PM	Reported
56	N063812-016AMS	MS	5	Hexavalent Chromium	03/18/24 7:19 PM	Reported
57	N063812-016AMSD	MSD	5	Hexavalent Chromium	03/18/24 7:29 PM	Reported
58	N063771-016ADUP	DUP	5	Hexavalent Chromium	03/18/24 7:38 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	03/18/24 7:48 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	03/18/24 7:57 PM	Reported
61	N063812-005A	SAMP	5	Hexavalent Chromium	03/18/24 8:07 PM	Reported
62	N063812-005AMS	MS	5	Hexavalent Chromium	03/18/24 8:16 PM	Reported
63	N063812-009A	SAMP	5	Hexavalent Chromium	03/18/24 8:25 PM	Not Reported
64	N063812-009AMS	MS	5	Hexavalent Chromium	03/18/24 8:35 PM	Not Reported
65	N063812-010A	SAMP	100	Hexavalent Chromium	03/18/24 8:44 PM	Reported
66	N063812-010AMS	MS	100	Hexavalent Chromium	03/18/24 8:54 PM	Reported
67	N063812-014A	SAMP	5	Hexavalent Chromium	03/18/24 9:03 PM	Not Reported
68	N063812-014AMS	MS	5	Hexavalent Chromium	03/18/24 9:13 PM	Not Reported
69	N063771-017A	SAMP	5	Hexavalent Chromium	03/18/24 9:22 PM	Reported
70	N063771-017AMS	MS	5	Hexavalent Chromium	03/18/24 9:32 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	03/18/24 9:41 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	03/18/24 9:51 PM	Reported
73	N063812-014AMS	MS	1	Hexavalent Chromium	03/18/24 10:00 PM	Reported
74	N063812-011ADUP	DUP	5	Hexavalent Chromium	03/18/24 10:10 PM	Not Reported
75	CCV-7	CCV	1	Hexavalent Chromium	03/18/24 10:19 PM	Reported
76	CCB-7	CCB	1	Hexavalent Chromium	03/18/24 10:28 PM	Reported
77	BLANK	BLANK	1	Hexavalent Chromium	03/18/24 10:38 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240318A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**18/Mar/24 23:08:39**
No. of Injections:	**80**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/18/2024 11:42	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/18/2024 11:57	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/18/2024 12:06	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/18/2024 12:15	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/18/2024 12:25	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/18/2024 12:34	Finished	LCS @5ppb, IWST-231228B
15	N063812-011A,SAMP	7	1000	Unknown		03/18/2024 12:44	Finished	SAMP,2>10 mL
16	N063812-011AMS,MS	8	1000	Unknown		03/18/2024 12:53	Finished	MS (5ppb), IWST-231228B,2>1
17	N063812-016A,SAMP	9	1000	Unknown		03/18/2024 13:03	Finished	SAMP,10 mL
18	N063812-016AMS,MS	10	1000	Unknown		03/18/2024 13:12	Finished	MS (1ppb), IWST-231228B,10r
19	N063812-005A,SAMP	11	1000	Unknown		03/18/2024 13:22	Finished	SAMP,10 mL
20	N063812-005AMS,MS	12	1000	Unknown		03/18/2024 13:31	Finished	MS (1ppb), IWST-231228B,10r
21	N063812-009A,SAMP	13	1000	Unknown		03/18/2024 13:41	Finished	SAMP,10 mL
22	N063812-009AMS,MS	14	1000	Unknown		03/18/2024 13:50	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	15	1000	Unknown		03/18/2024 13:59	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		03/18/2024 14:09	Finished	CCB R240129C
25	N063812-014A,SAMP	17	1000	Unknown		03/18/2024 14:18	Finished	SAMP,10 mL
26	N063812-015A,SAMP	18	1000	Unknown		03/18/2024 14:28	Finished	SAMP,10 mL
27	N063812-014AMS,MS	19	1000	Unknown		03/18/2024 14:37	Finished	MS (5ppb), IWST-231228B,10r
28	N063812-015AMS,MS	20	1000	Unknown		03/18/2024 14:47	Finished	MS (1ppb), IWST-231228B,10r
29	N063812-011ADUP,D	1	1000	Unknown		03/18/2024 14:59	Finished	DUP,2>10 mL
30	N063812-011AMSD,M	2	1000	Unknown		03/18/2024 15:10	Finished	MS (5ppb), IWST-231228B,2>1
31	N063812-012A,SAMP	3	1000	Unknown		03/18/2024 15:20	Finished	SAMP,0.2>10 mL
32	N063812-012AMS,MS	4	1000	Unknown		03/18/2024 15:29	Finished	MS (5ppb), IWST-231228B,0.2
33	N063812-013A,SAMP	5	1000	Unknown		03/18/2024 15:39	Finished	SAMP,2>10 mL
34	N063812-013AMS,MS	6	1000	Unknown		03/18/2024 15:48	Finished	MS (5ppb), IWST-231228B,2>1
35	CCV-3,CCV,1,	7	1000	Unknown		03/18/2024 15:57	Finished	CCV @10ppb, IWST-231228A
36	CCB-3,CCB,1,	8	1000	Unknown		03/18/2024 16:07	Finished	CCB R240129C
37	N063812-001A,SAMP	9	1000	Unknown		03/18/2024 16:16	Finished	SAMP,0.1>10 mL
38	N063812-001AMS,MS	10	1000	Unknown		03/18/2024 16:26	Finished	MS (5ppb), IWST-231228B,0.1
39	N063812-002A,SAMP	11	1000	Unknown		03/18/2024 16:35	Finished	SAMP,0.02>10 mL
40	N063812-002AMS,MS	12	1000	Unknown		03/18/2024 16:45	Finished	MS (5ppb), IWST-231228B,0.0
41	N063812-003A,SAMP	13	1000	Unknown		03/18/2024 16:54	Finished	SAMP,0.02>10 mL
42	N063812-003AMS,MS	14	1000	Unknown		03/18/2024 17:04	Finished	MS (5ppb), IWST-231228B,0.0
43	N063812-004A,SAMP	15	1000	Unknown		03/18/2024 17:13	Finished	SAMP,0.02>10 mL
44	N063812-004AMS,MS	16	1000	Unknown		03/18/2024 17:23	Finished	MS (5ppb), IWST-231228B,0.0
45	N063812-007A,SAMP	17	1000	Unknown		03/18/2024 17:32	Finished	SAMP,10 mL
46	N063812-007AMS,MS	18	1000	Unknown		03/18/2024 17:42	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	19	1000	Unknown		03/18/2024 17:51	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	20	1000	Unknown		03/18/2024 18:00	Finished	CCB R240129C
49	N063812-007A,SAMP	21	1000	Unknown		03/18/2024 18:10	Finished	SAMP,2>10 mL
50	N063812-007AMS,MS	22	1000	Unknown		03/18/2024 18:19	Finished	MS (1ppb), IWST-231228B,2>1
51	N063771-016A,SAMP	23	1000	Unknown		03/18/2024 18:29	Finished	SAMP,2>10 mL
52	N063771-016AMS,MS	24	1000	Unknown		03/18/2024 18:41	Finished	MS (5ppb), IWST-231228B,2>1
53	N063771-011A,SAMP	25	1000	Unknown		03/18/2024 18:51	Finished	SAMP,2>10 mL
54	N063771-011AMS,MS	26	1000	Unknown		03/18/2024 19:01	Finished	MS (1ppb), IWST-231228B,2>1
55	N063812-016A,SAMP	27	1000	Unknown		03/18/2024 19:10	Finished	SAMP,2>10 mL
56	N063812-016AMS,MS	28	1000	Unknown		03/18/2024 19:19	Finished	MS (1ppb), IWST-231228B,2>1
57	N063812-016AMSD,M	29	1000	Unknown		03/18/2024 19:29	Finished	MSD (1ppb), IWST-231228B,2>
58	N063771-016ADUP,D	30	1000	Unknown		03/18/2024 19:38	Finished	DUP,2>10 mL
59	CCV-5,CCV,1,	31	1000	Unknown		03/18/2024 19:48	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	32	1000	Unknown		03/18/2024 19:57	Finished	CCB R240129C

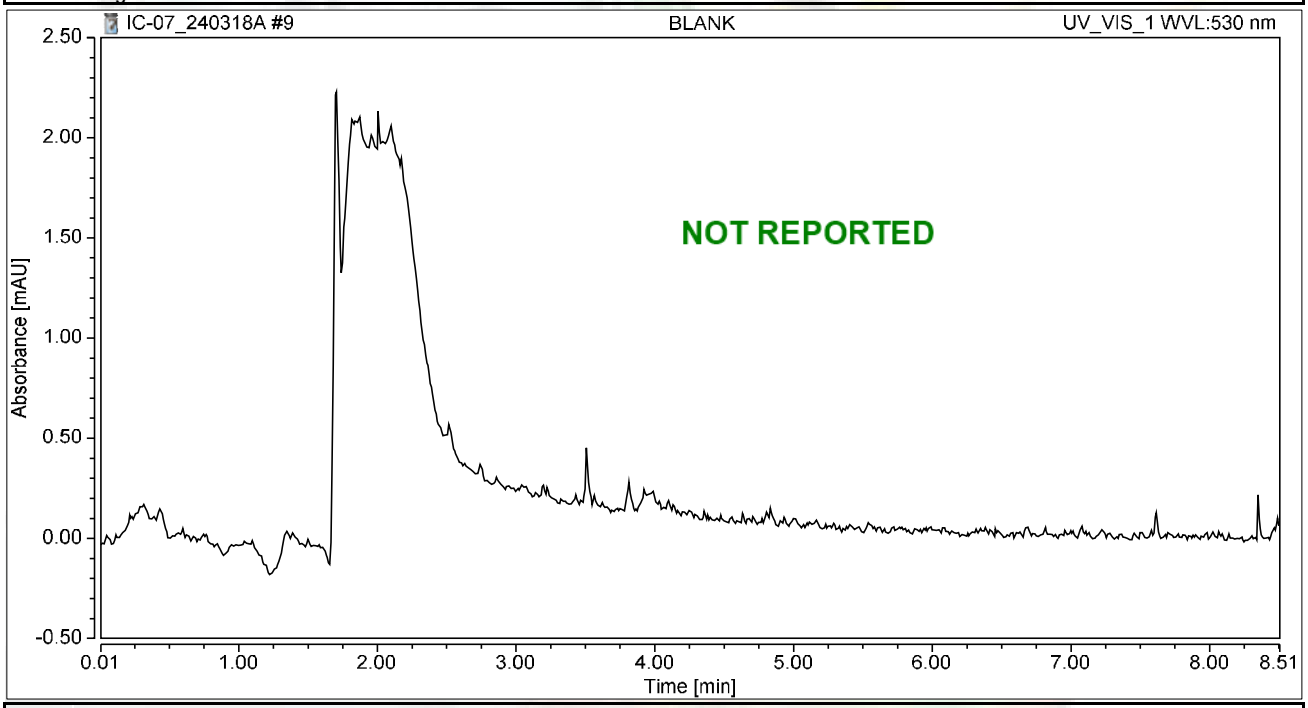
61	N063812-005A,SAMP	33	1000	Unknown		03/18/2024 20:07	Finished	SAMP,2>10 mL
62	N063812-005AMS,MS	34	1000	Unknown		03/18/2024 20:16	Finished	MS (1ppb), IWST-231228B,2>
63	N063812-009A,SAMP	35	1000	Unknown		03/18/2024 20:25	Finished	SAMP,2>10 mL
64	N063812-009AMS,MS	36	1000	Unknown		03/18/2024 20:35	Finished	MS (1ppb), IWST-231228B,2>
65	N063812-010A,SAMP	37	1000	Unknown		03/18/2024 20:44	Finished	SAMP,0.1>10 mL
66	N063812-010AMS,MS	38	1000	Unknown		03/18/2024 20:54	Finished	MS (5ppb), IWST-231228B,0.1
67	N063812-014A,SAMP	39	1000	Unknown		03/18/2024 21:03	Finished	SAMP,2>10 mL
68	N063812-014AMS,MS	40	1000	Unknown		03/18/2024 21:13	Finished	MS (1ppb), IWST-231228B,2>
69	N063771-017A,SAMP	41	1000	Unknown		03/18/2024 21:22	Finished	SAMP,2>10 mL
70	N063771-017AMS,MS	42	1000	Unknown		03/18/2024 21:32	Finished	MS (1ppb), IWST-231228B,2>
71	CCV-6,CCV1,1,	43	1000	Unknown		03/18/2024 21:41	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	44	1000	Unknown		03/18/2024 21:51	Finished	CCB R240129C
73	N063812-014AMS,MS	45	1000	Unknown		03/18/2024 22:00	Finished	MS (1ppb), IWST-231228B,10r
74	N063812-011ADUP,D	46	1000	Unknown		03/18/2024 22:10	Finished	DUP,2>10 mL
75	CCV-7,CCV,1,	47	1000	Unknown		03/18/2024 22:19	Finished	CCV @5ppb, IWST-231228A
76	CCB-7,CCB,1,	48	1000	Unknown		03/18/2024 22:28	Finished	CCB R240129C
77	BLANK	49	1000	Unknown		03/18/2024 22:38	Finished	BLANK
78	SHUTDOWN	50	1000	Unknown		03/18/2024 22:47	Finished	
79	Eluent: R240318A	51	1000	Unknown		n.a.	Finished	
80	PCR: R240318B	CurrentVial	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 11:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

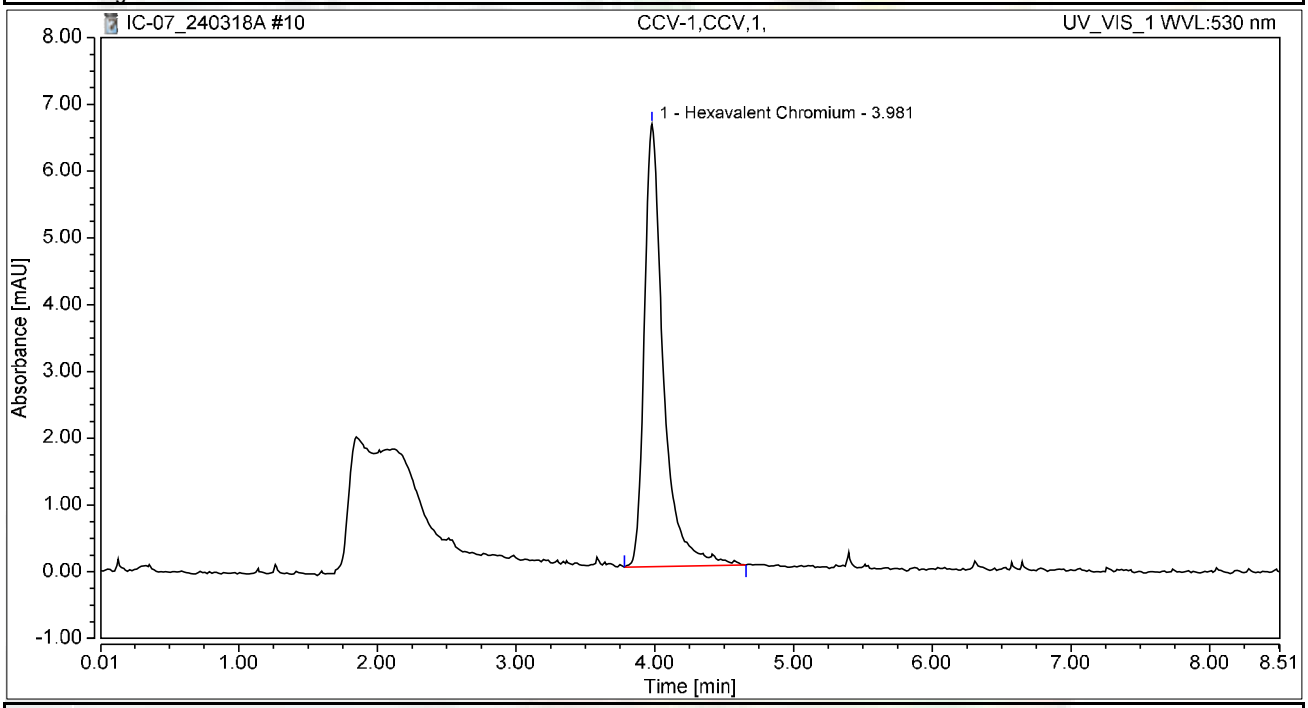
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 11:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.058	6.633	100.00	100.00	4.9728
Total:			**1.058**	**6.633**	**100.00**	**100.00**	

Reviewed by:

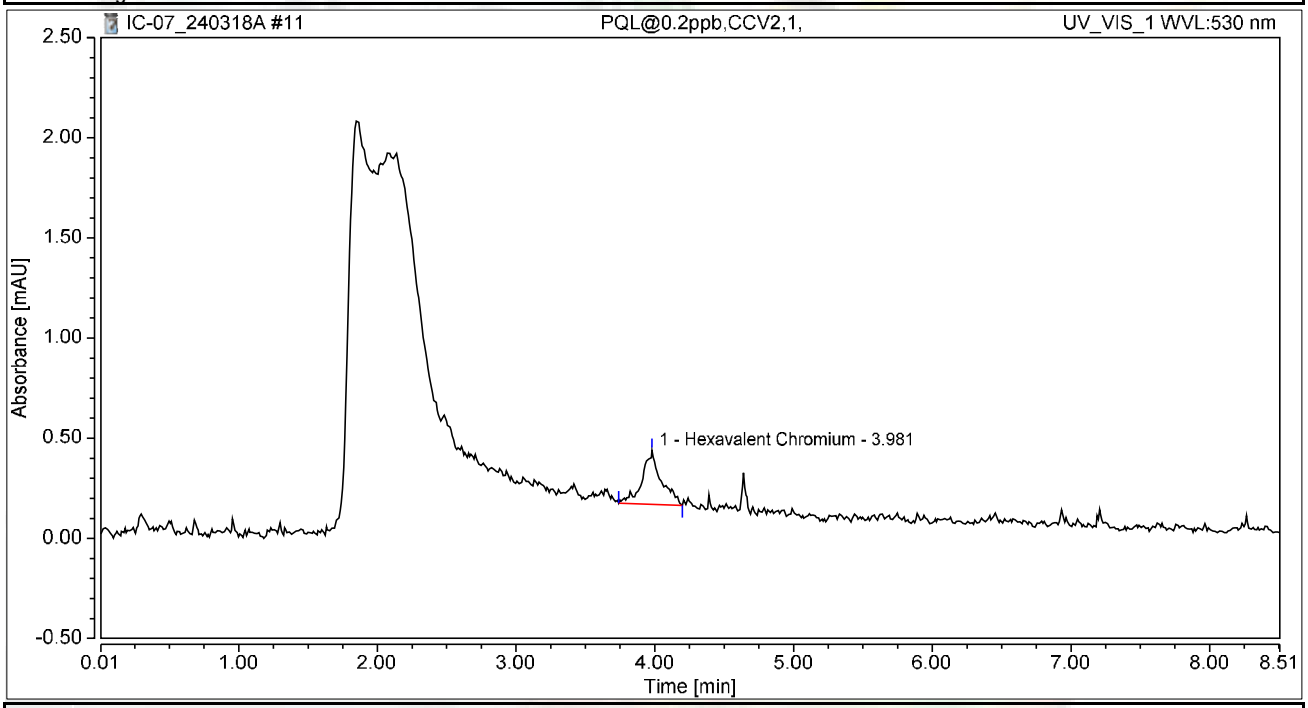
dMocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 12:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

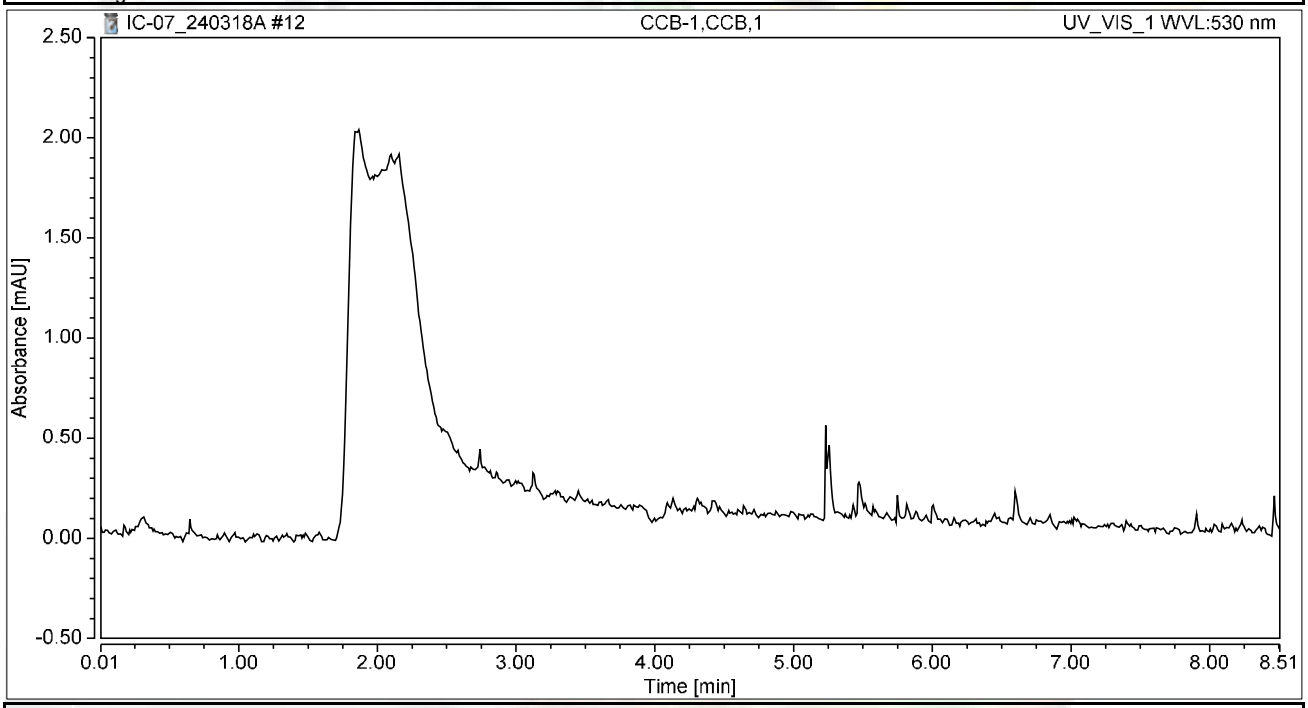
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.042	0.269	100.00	100.00	0.1995
Total:			**0.042**	**0.269**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 12:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

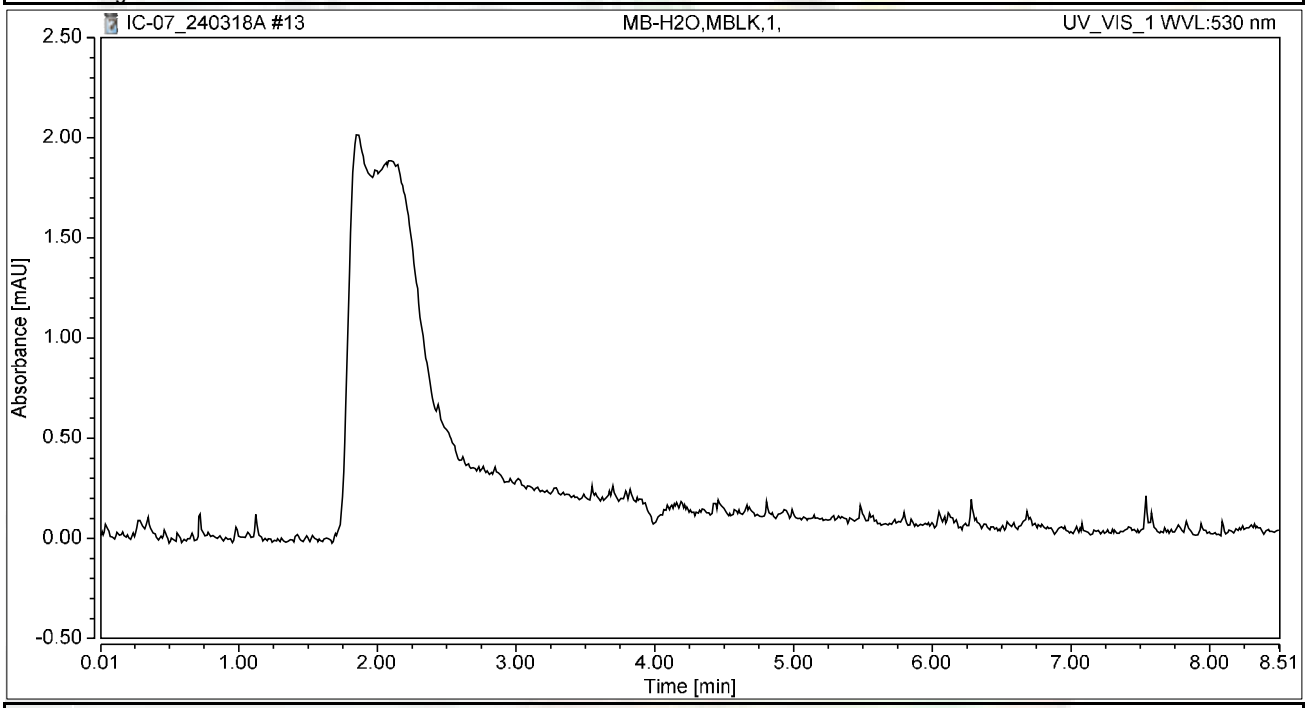
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 12:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

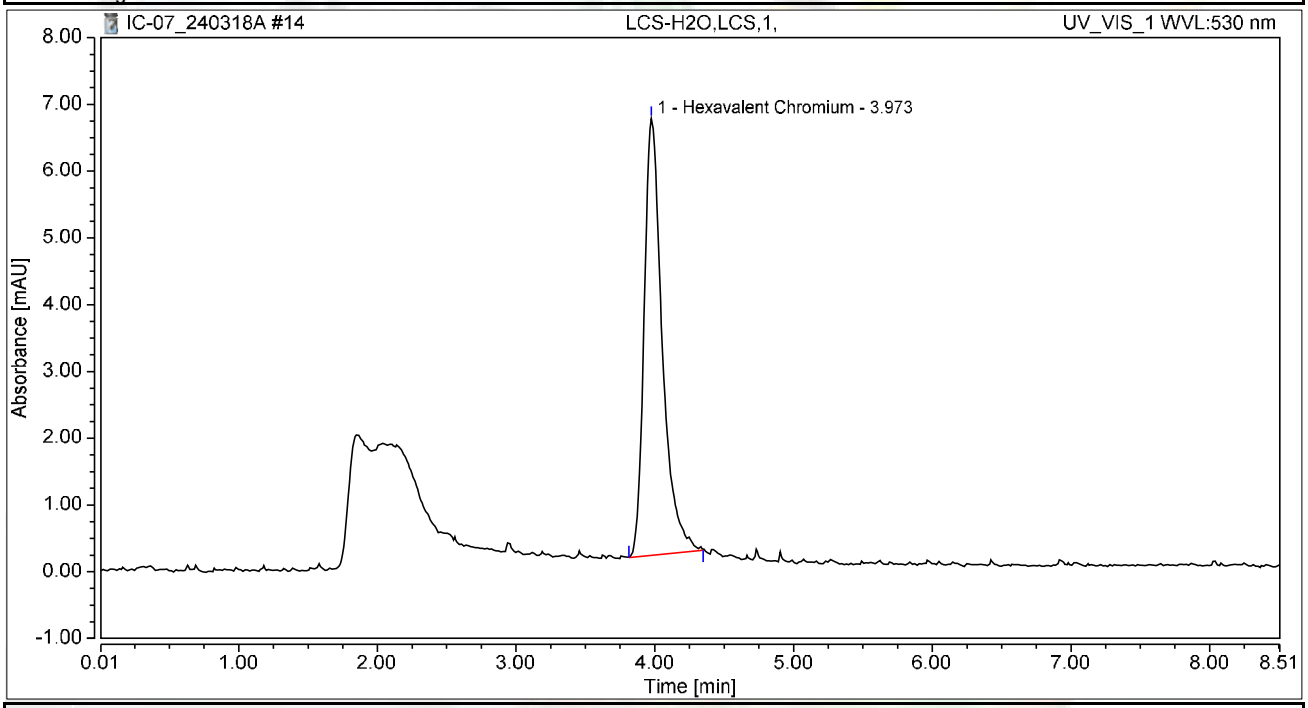
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 12:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

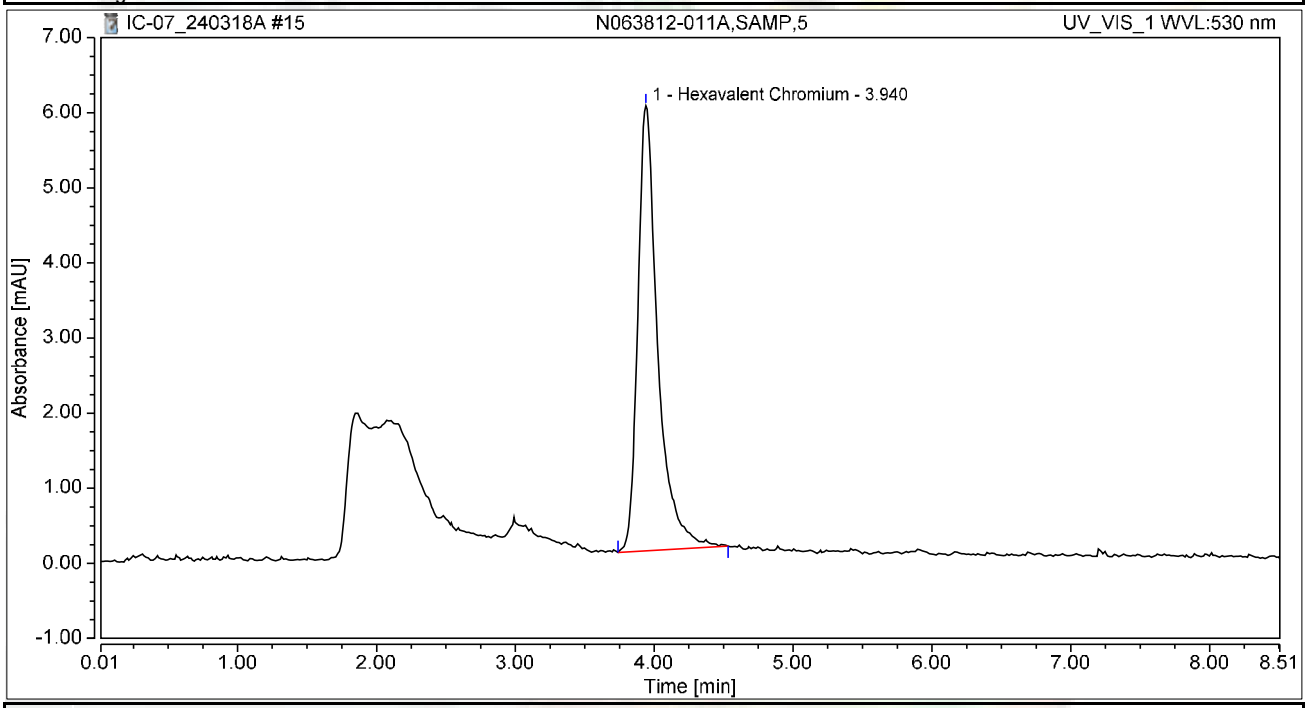
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.991	6.545	100.00	100.00	4.6569
Total:			**0.991**	**6.545**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-011A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 12:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

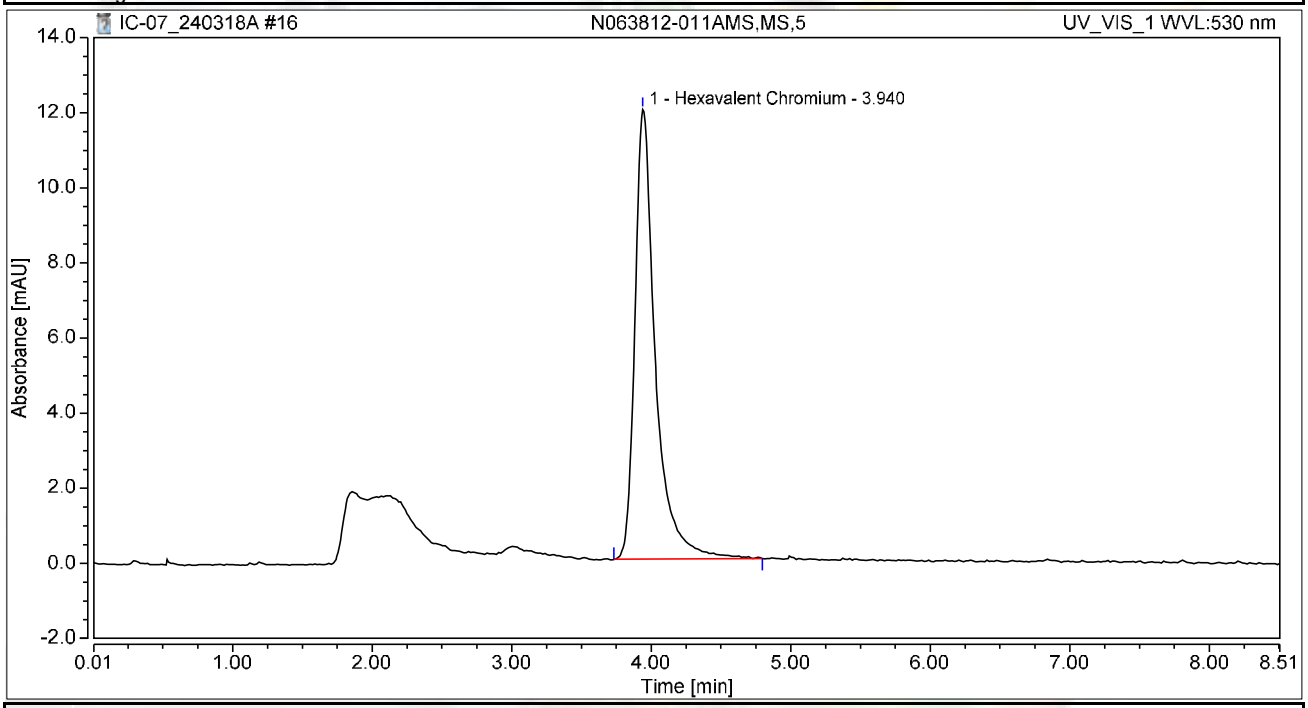
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.990	5.925	100.00	100.00	4.6523
Total:			**0.990**	**5.925**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-011AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 12:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

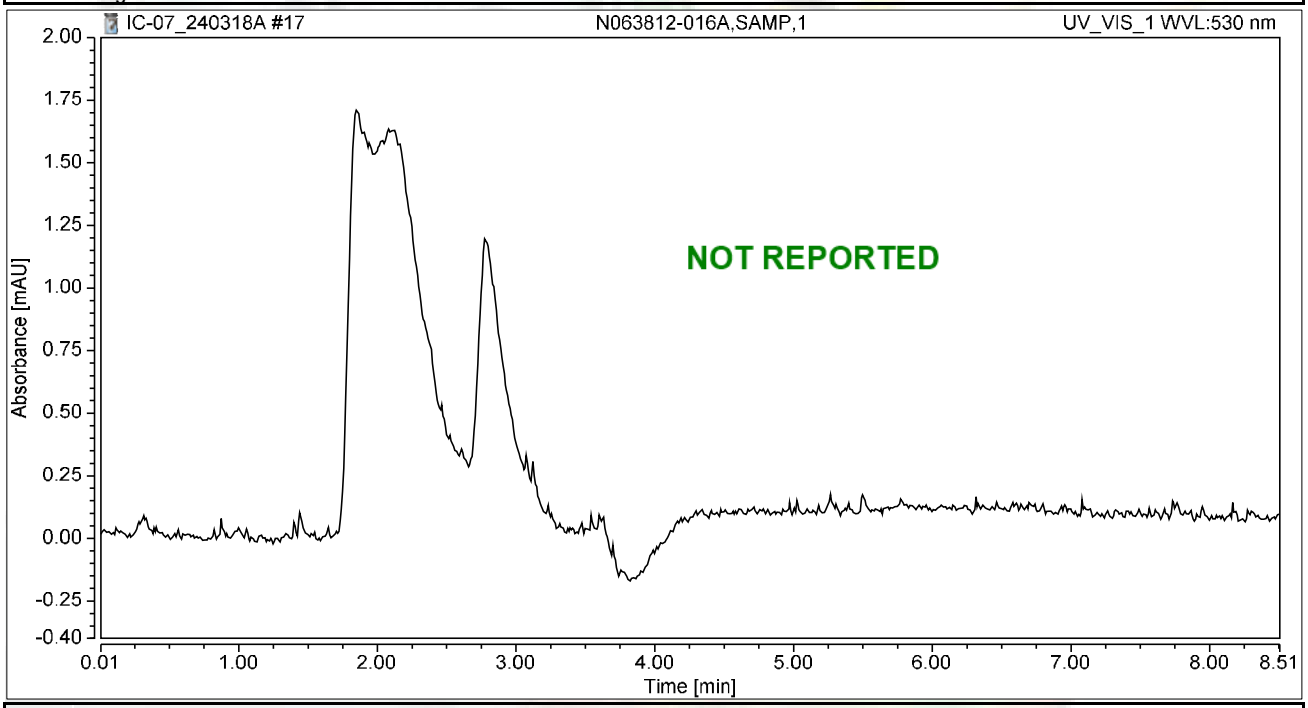
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	2.041	11.975	100.00	100.00	9.5908
Total:			**2.041**	**11.975**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-016A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 13:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

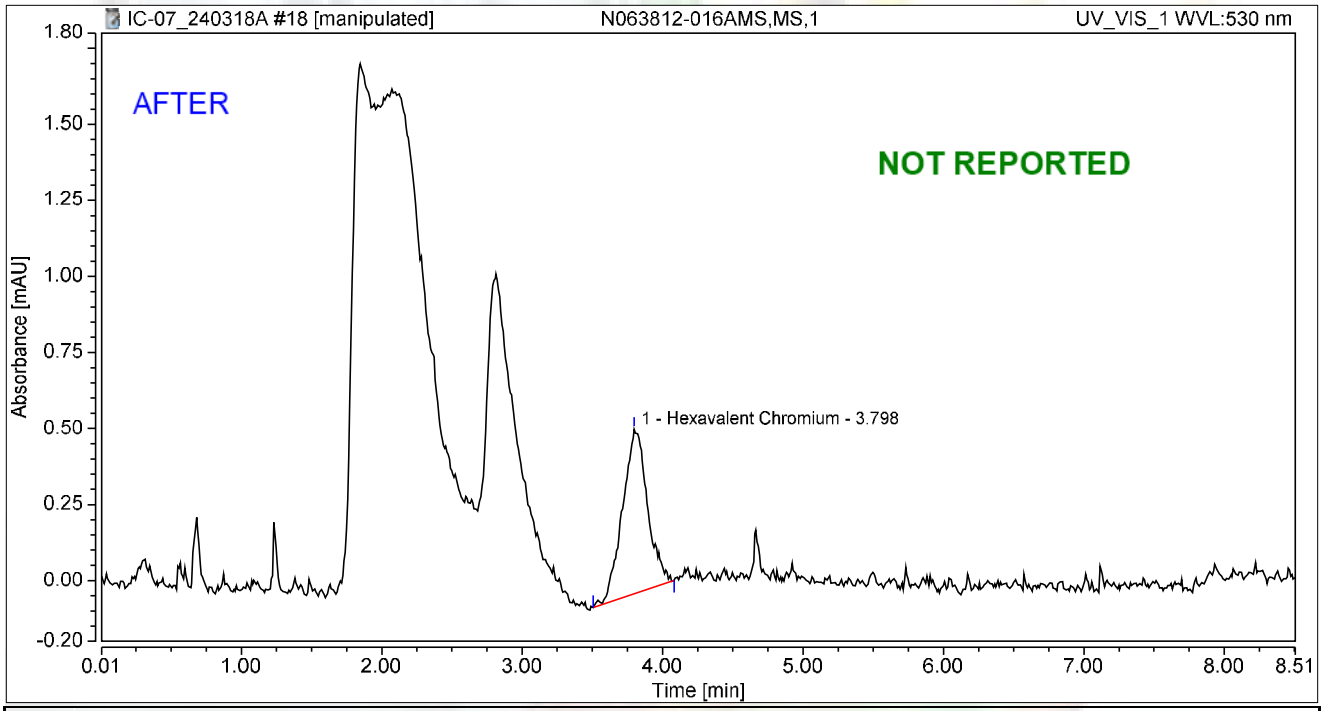
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-016AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 13:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.798	0.111	0.541	100.00	100.00	0.5214
Total:			**0.111**	**0.541**	**100.00**	**100.00**	

Reviewed by:

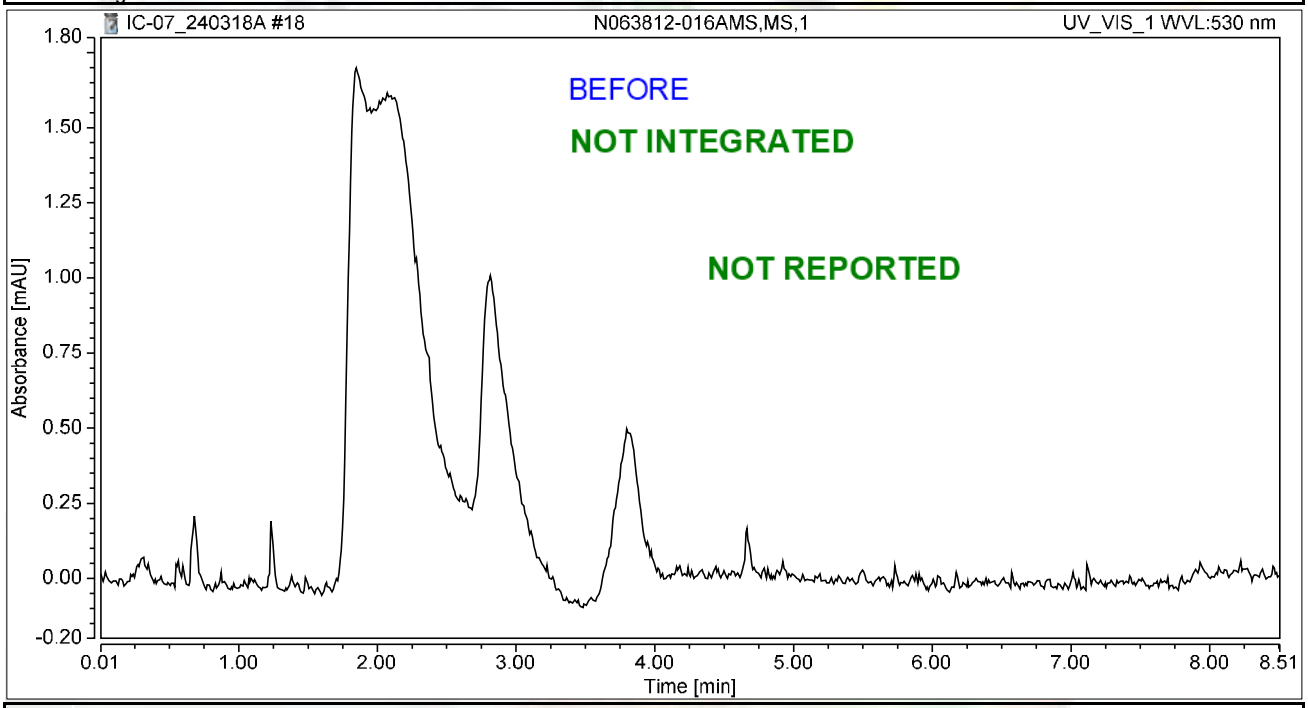
dMocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063812-016AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 13:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

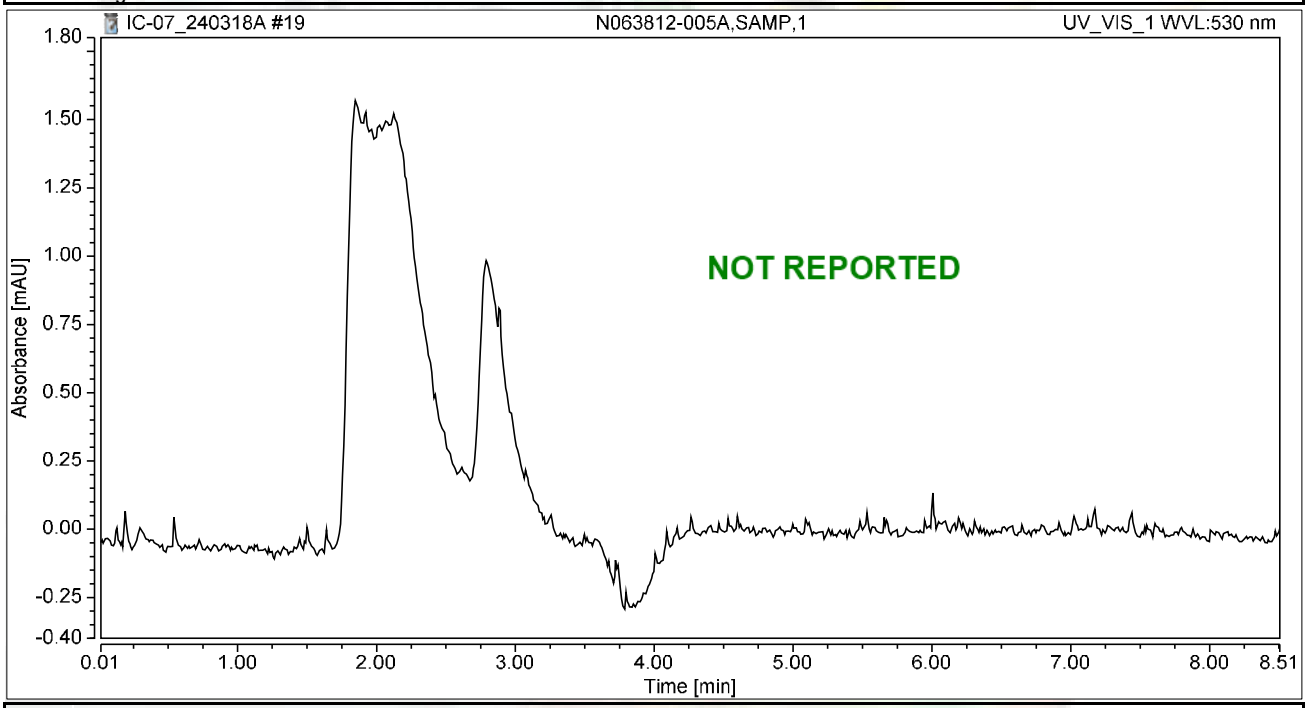
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-005A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 13:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

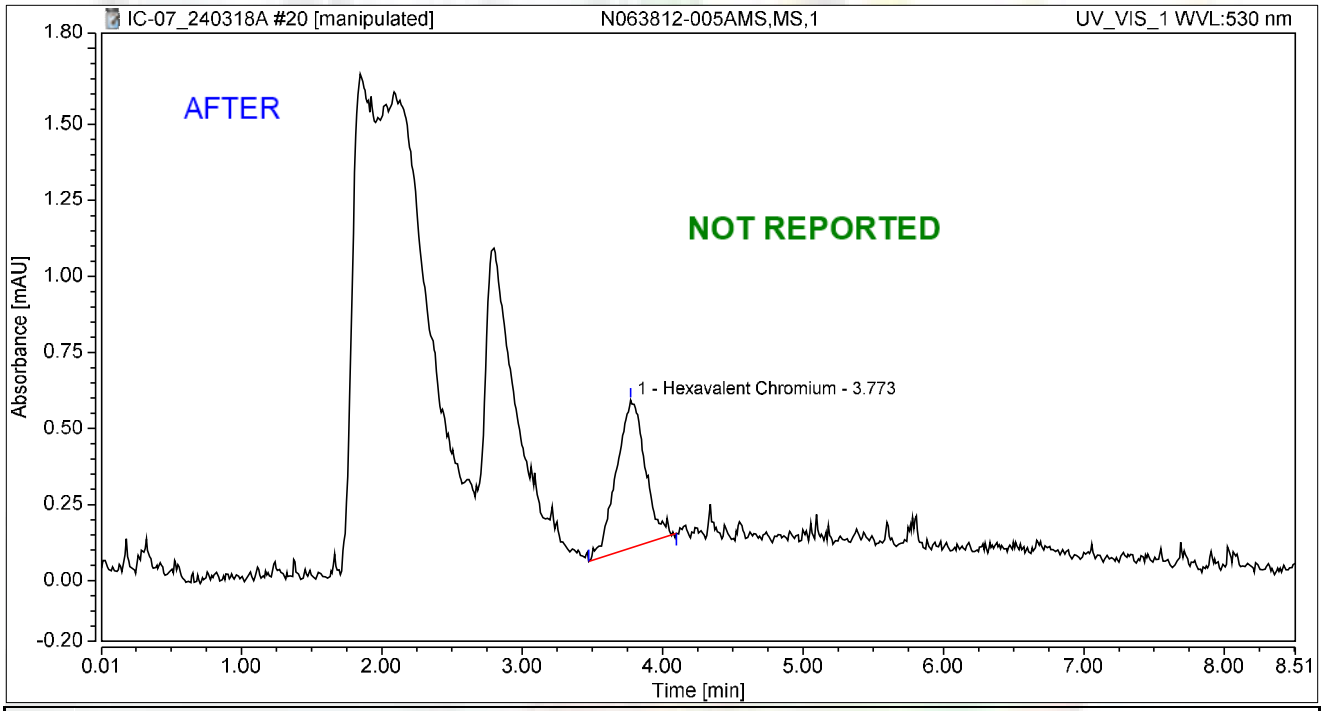
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 13:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.773	0.115	0.486	100.00	100.00	0.5415
Total:			**0.115**	**0.486**	**100.00**	**100.00**	

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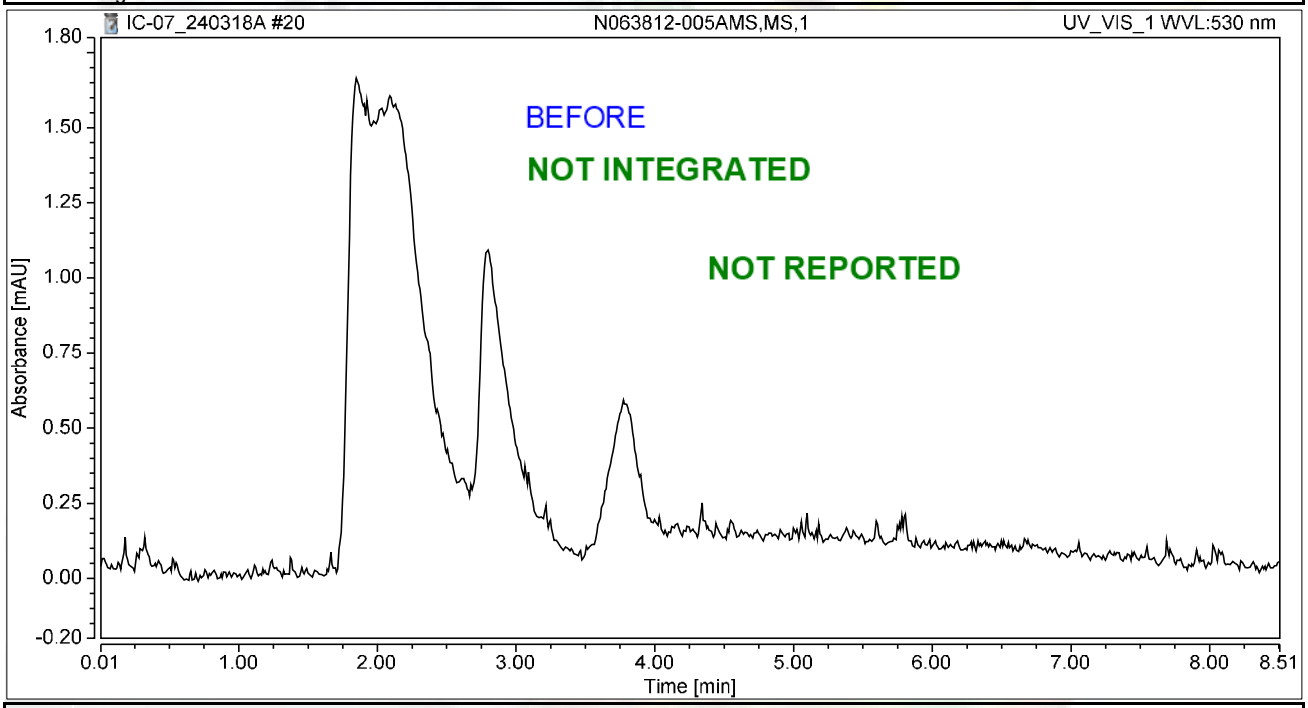
Chromatogram and Results

Injection Details

Injection Name:	**N063812-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 13:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

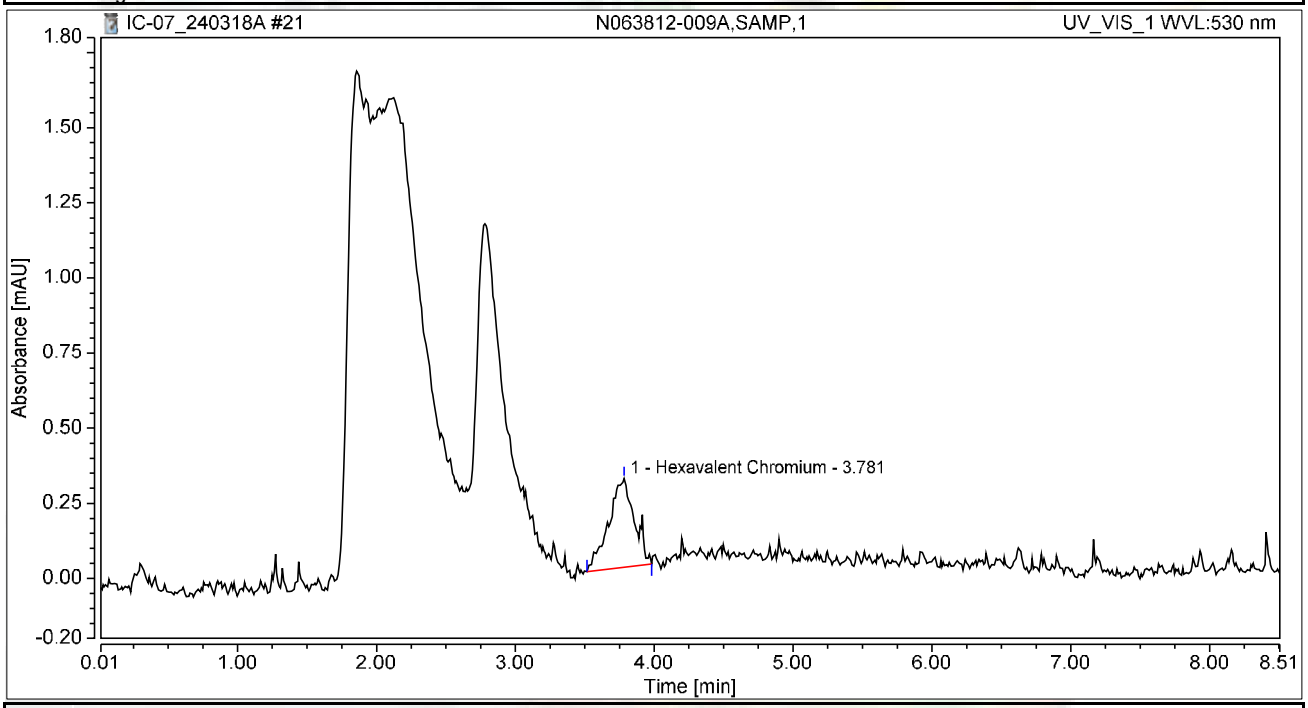
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-009A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 13:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

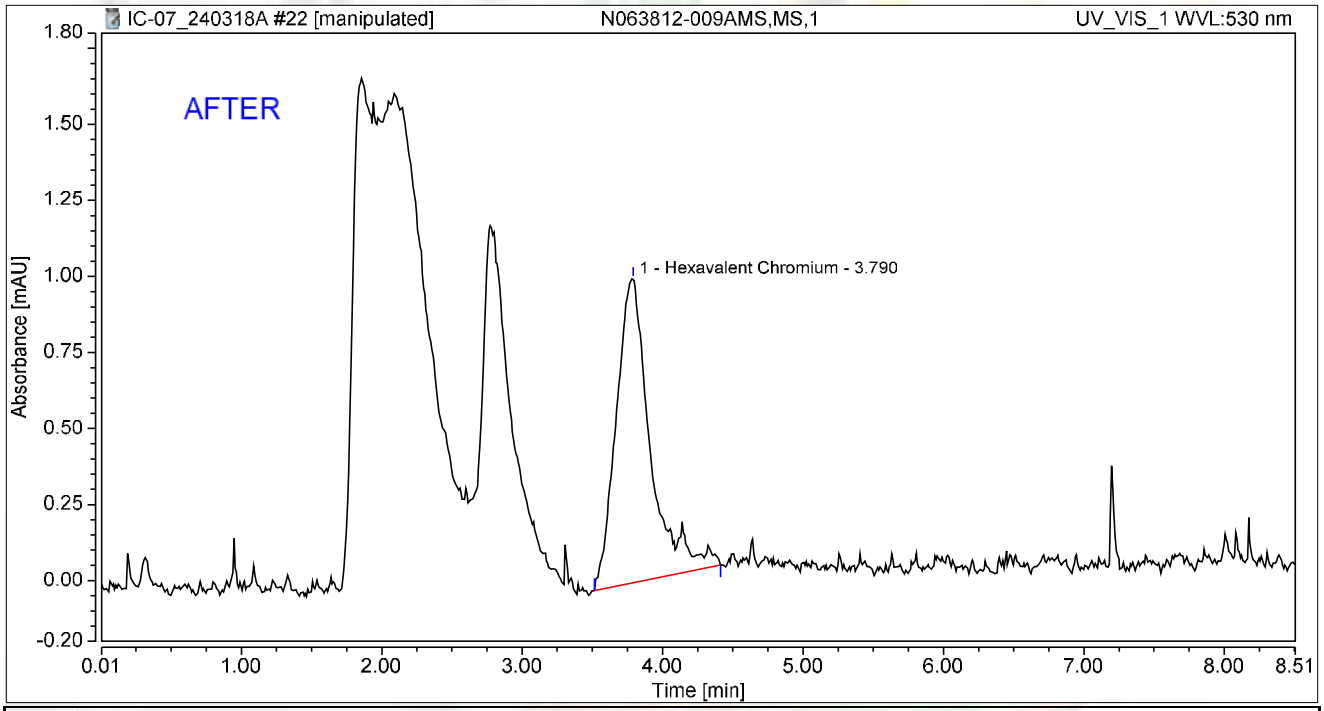
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.781	0.063	0.295	100.00	100.00	0.2967
Total:			**0.063**	**0.295**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 13:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.282	0.999	100.00	100.00	1.3271
Total:			**0.282**	**0.999**	**100.00**	**100.00**	

Reviewed by:

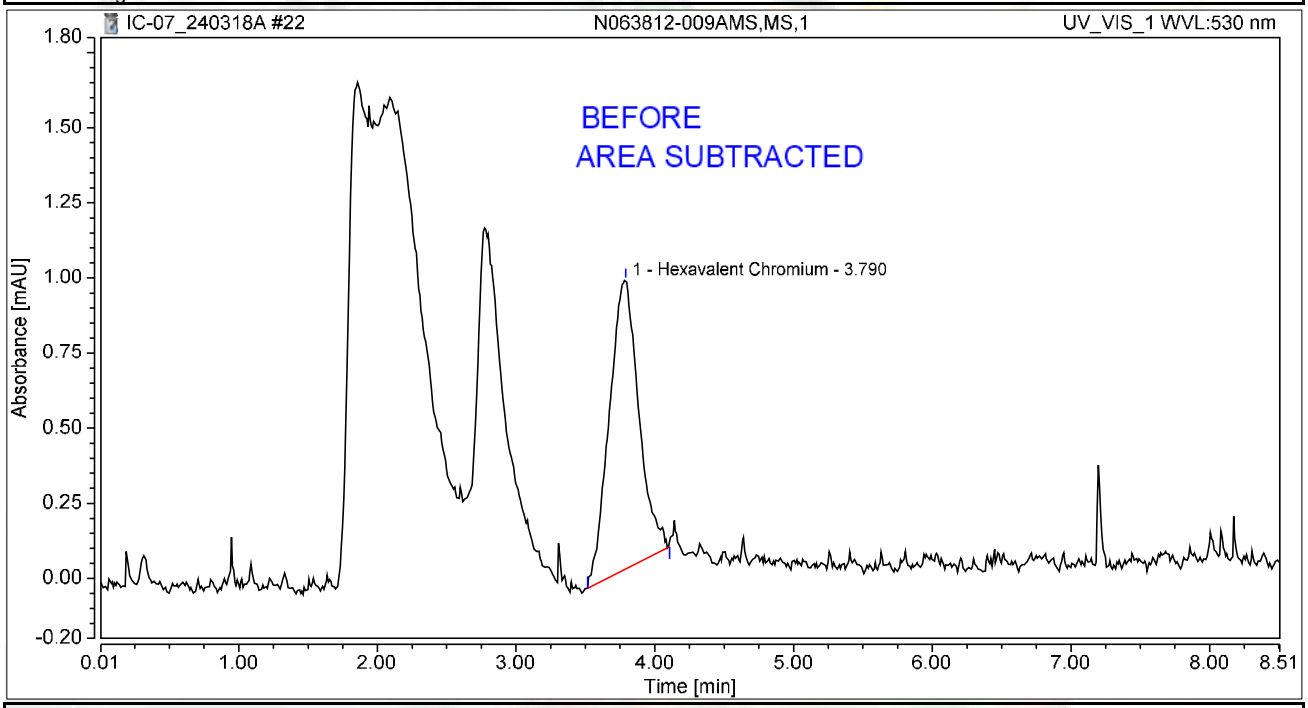
dlRocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063812-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 13:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

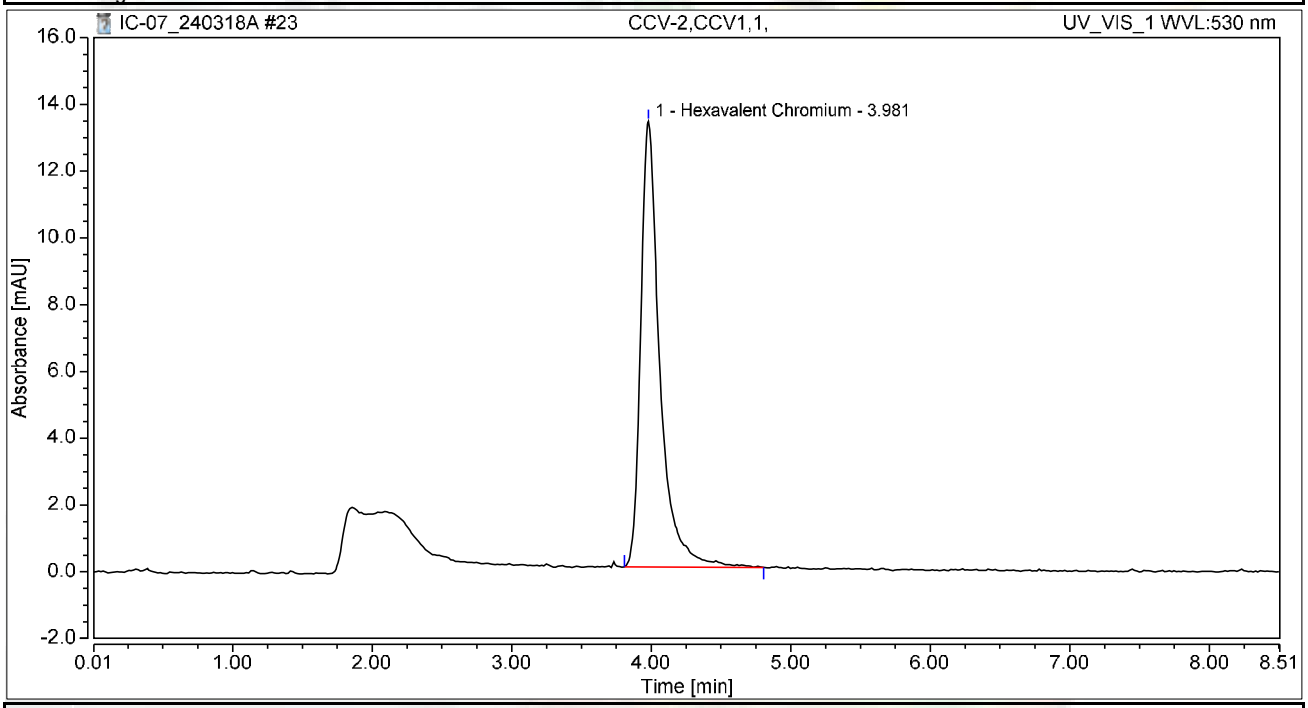
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.239	0.961	100.00	100.00	1.1218
Total:			**0.239**	**0.961**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 13:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

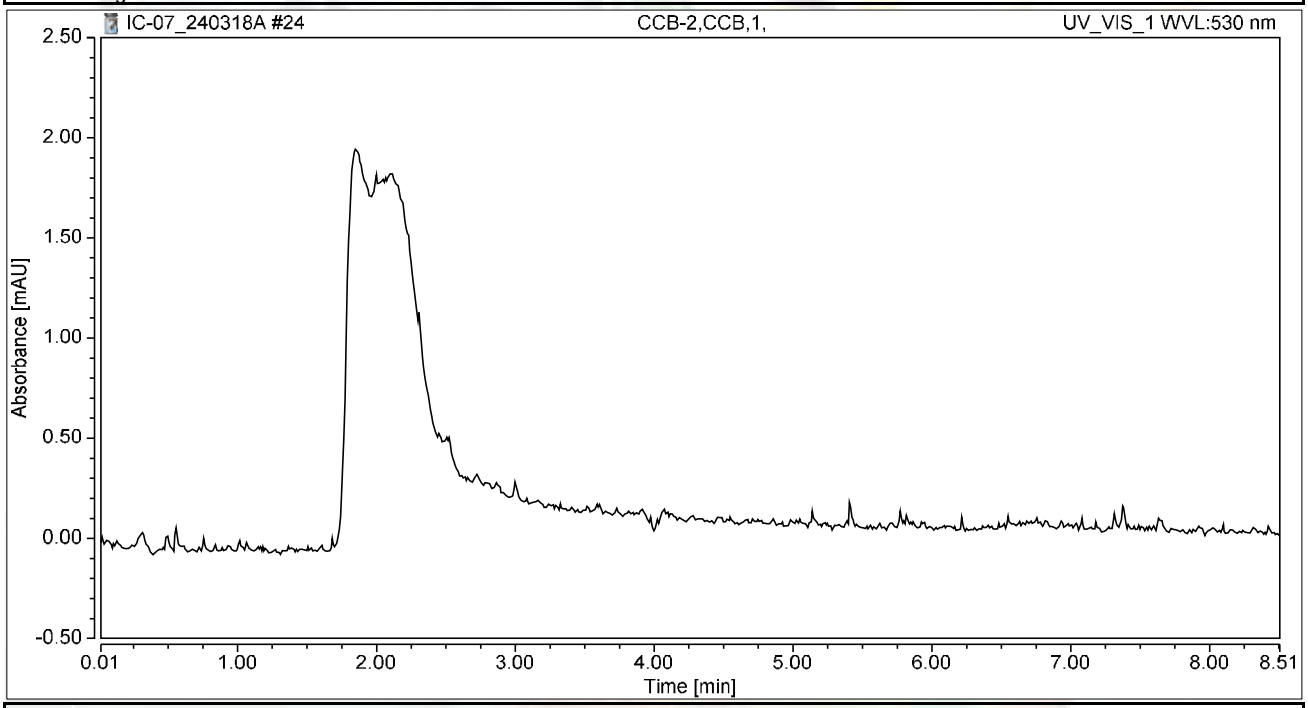
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	2.127	13.347	100.00	100.00	9.9946
Total:			**2.127**	**13.347**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 14:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

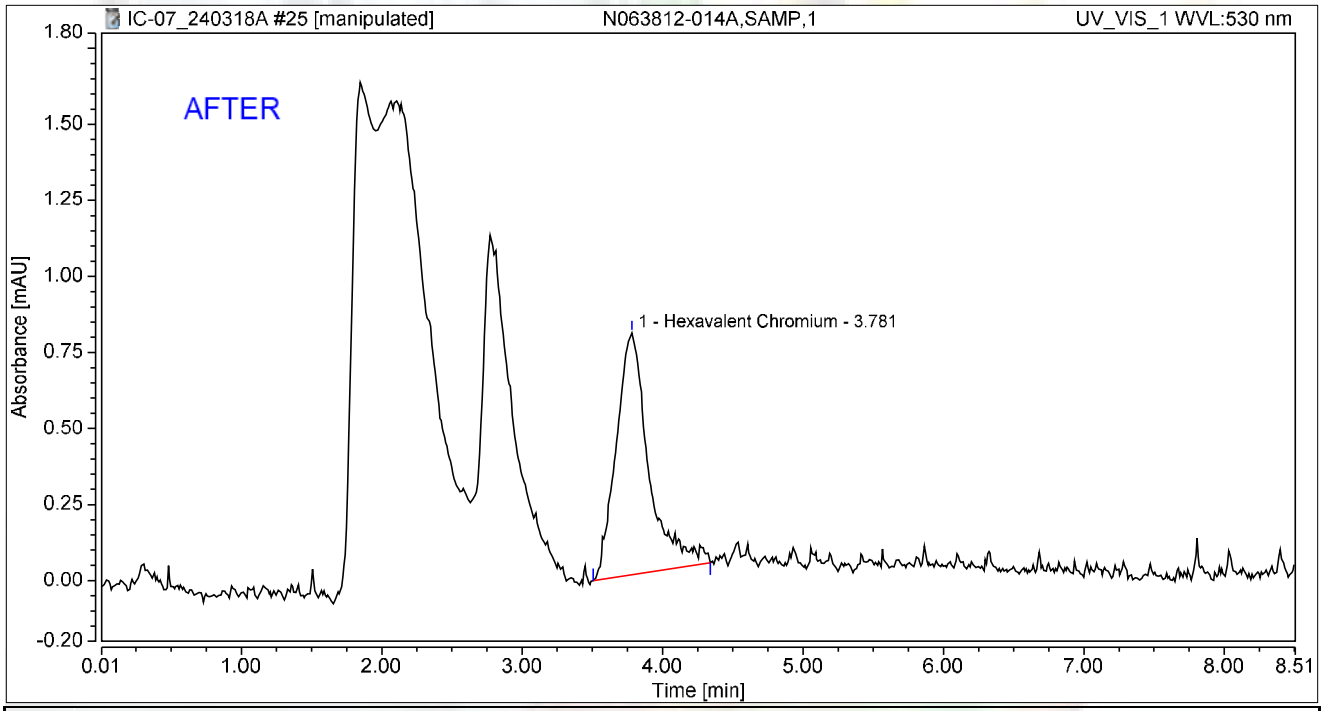
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-014A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 14:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.781	0.215	0.796	100.00	100.00	1.0116
Total:			**0.215**	**0.796**	**100.00**	**100.00**	

Reviewed by:

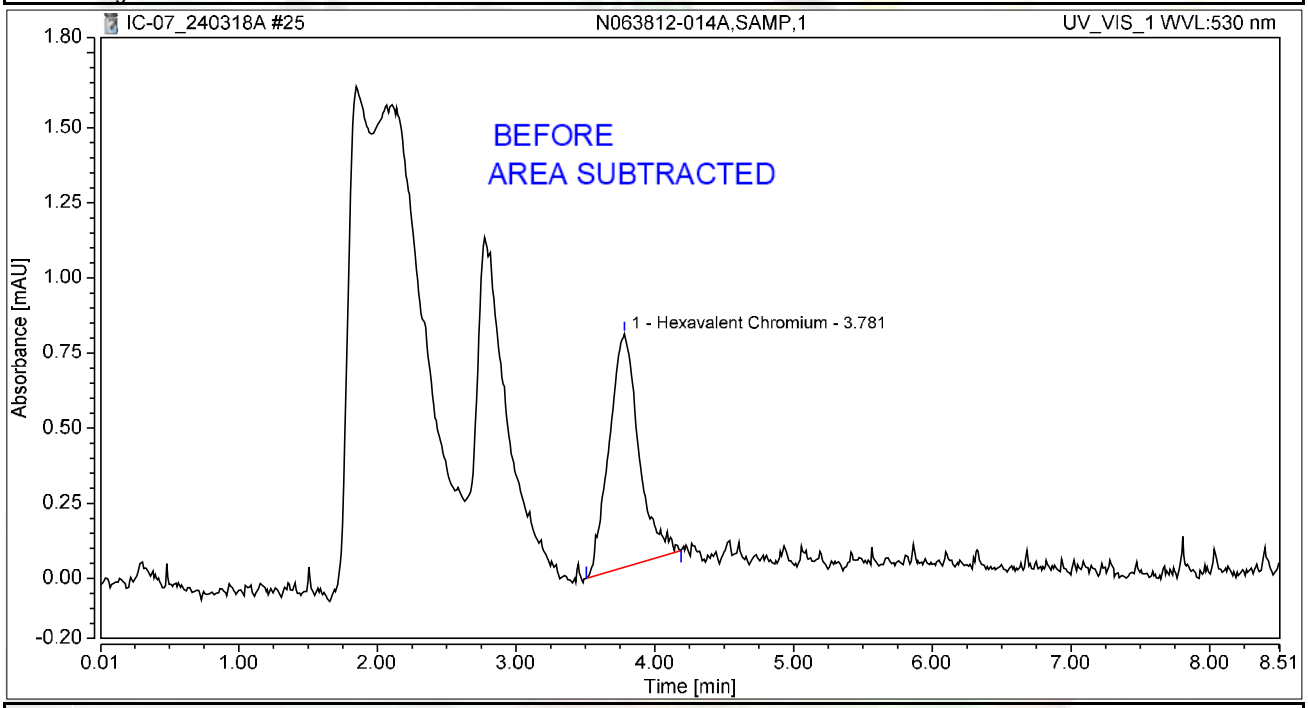
dMRocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063812-014A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 14:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

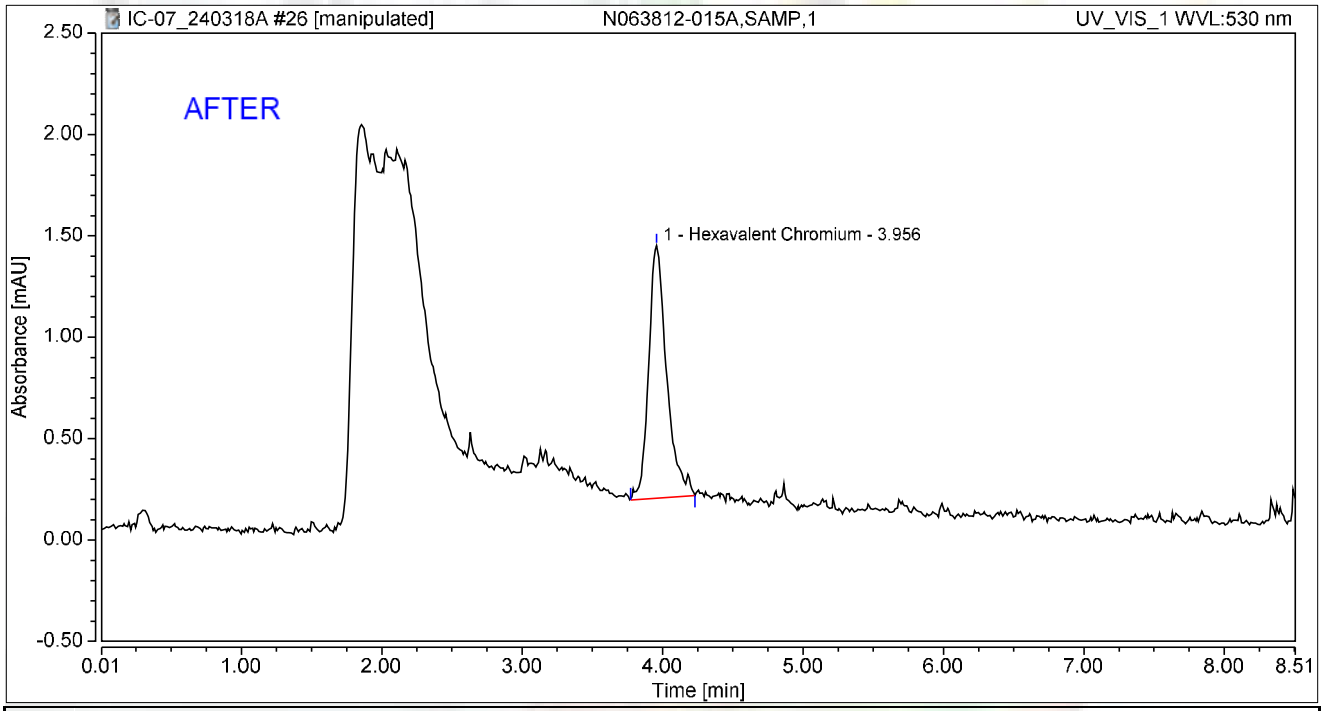
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.781	0.193	0.778	100.00	100.00	0.9083
Total:			**0.193**	**0.778**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-015A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 14:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.186	1.246	100.00	100.00	0.8727
Total:			**0.186**	**1.246**	**100.00**	**100.00**	

Reviewed by:

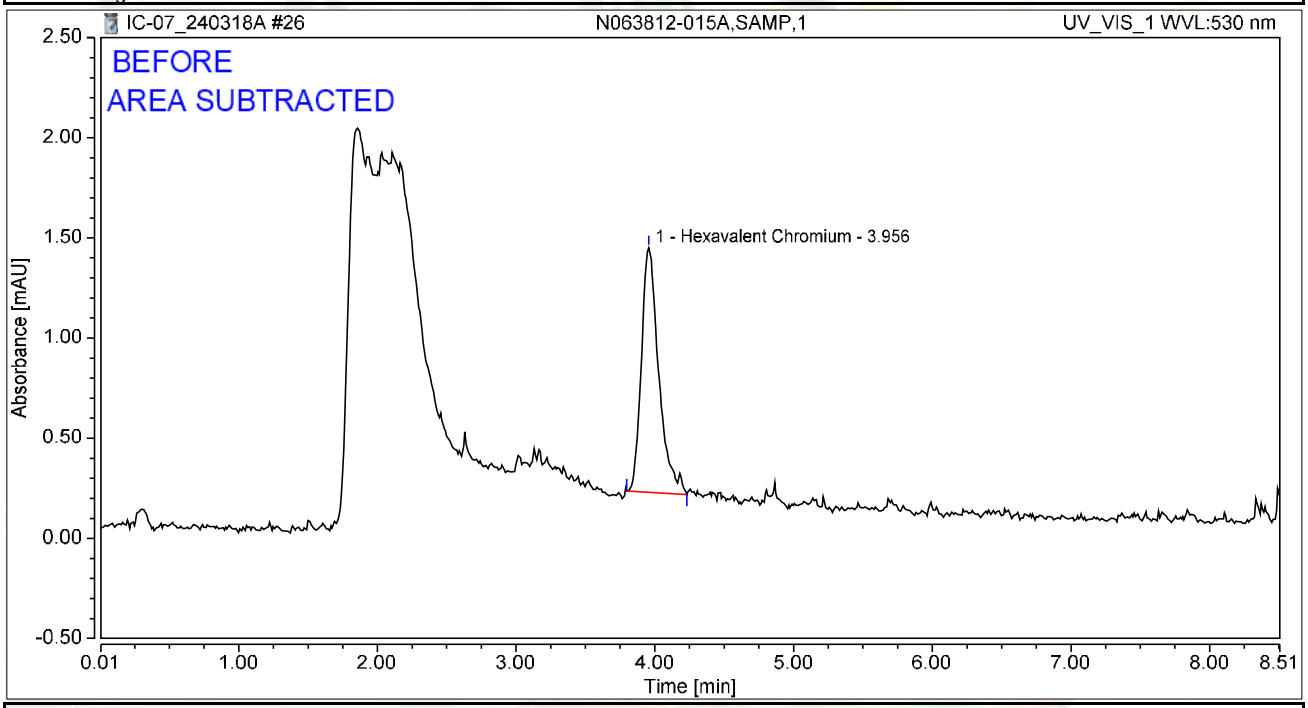
dMocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063812-015A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 14:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

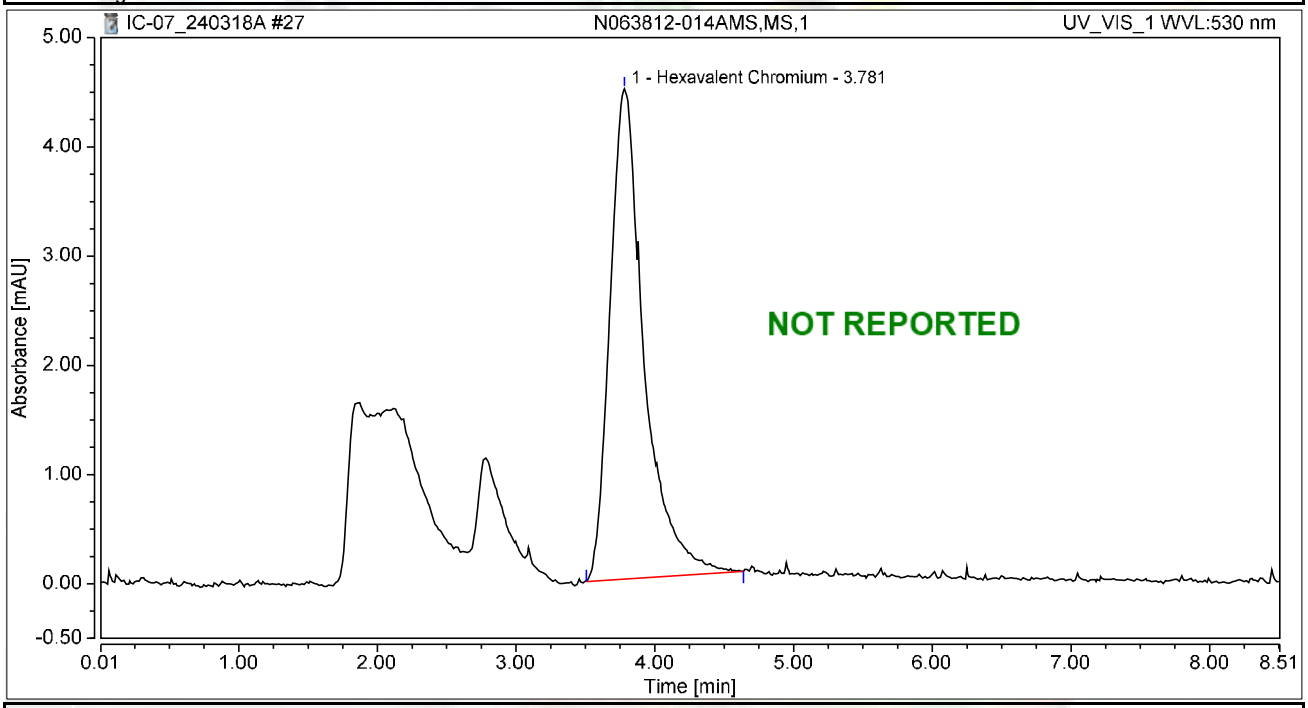
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.176	1.221	100.00	100.00	0.8286
Total:			**0.176**	**1.221**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-014AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 14:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

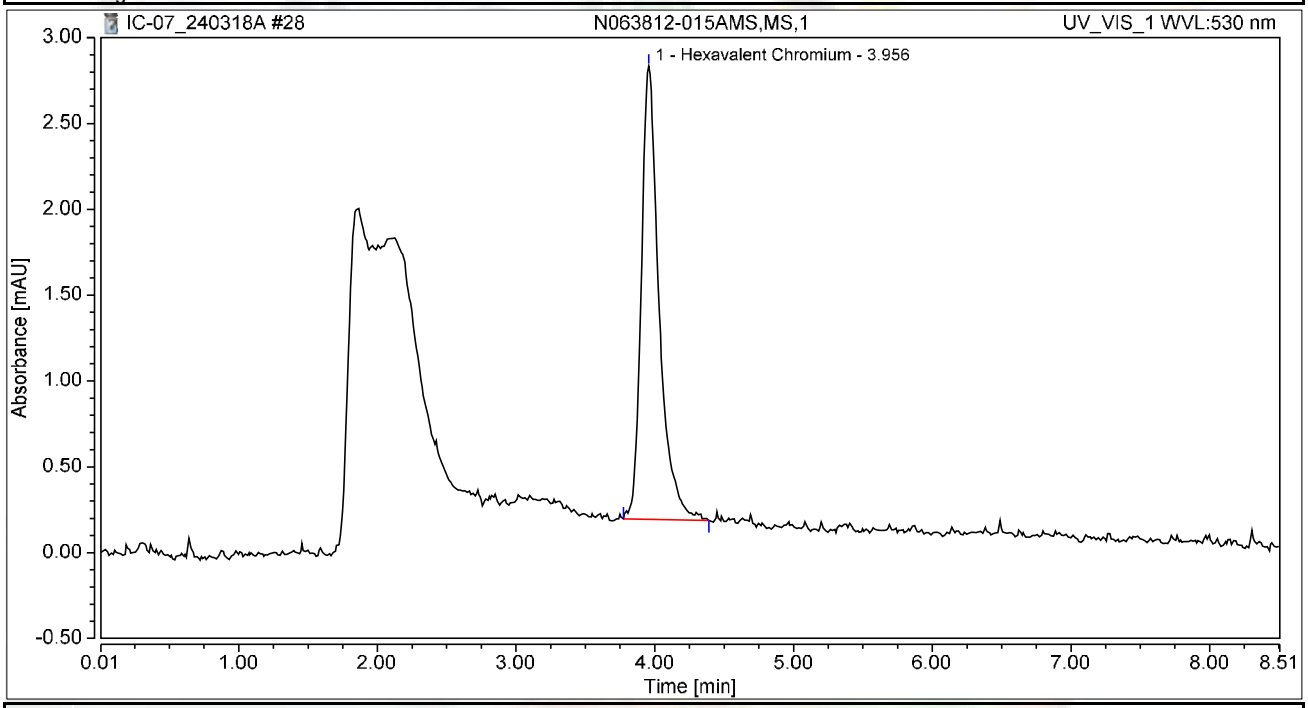
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.781	1.281	4.488	100.00	100.00	6.0185
Total:			**1.281**	**4.488**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-015AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 14:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

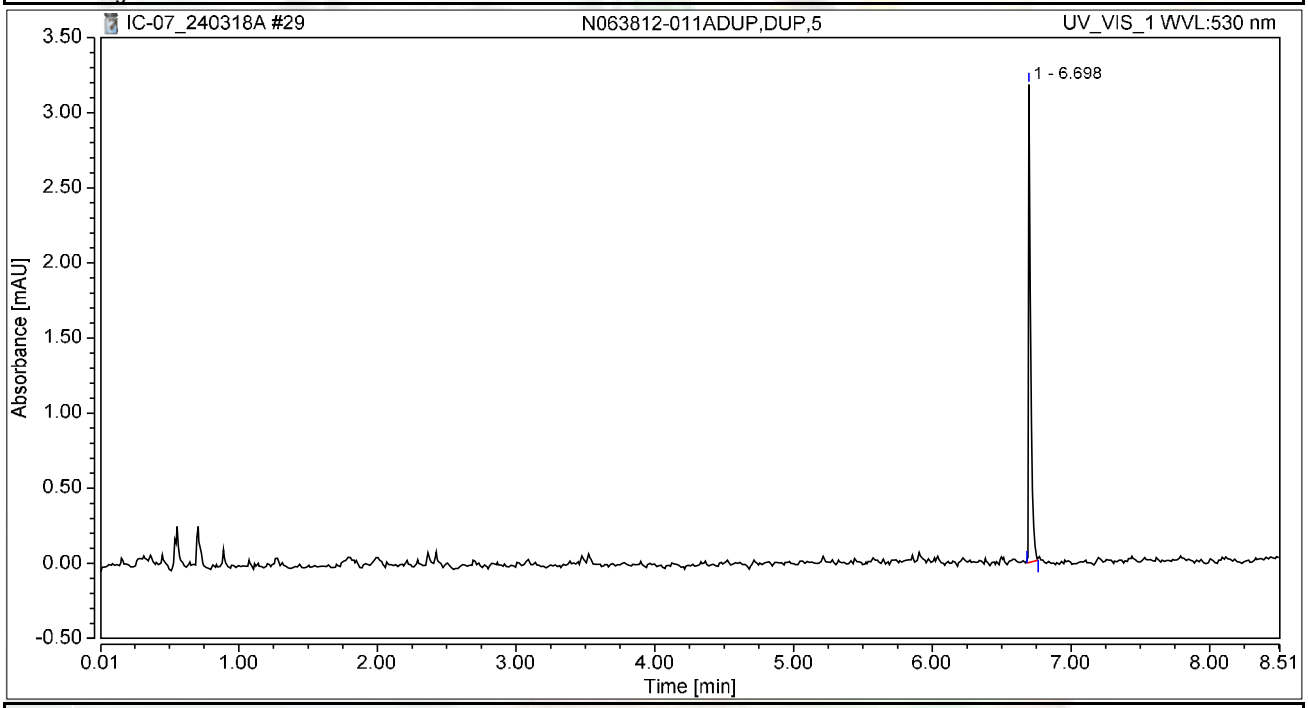
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.393	2.642	100.00	100.00	1.8454
Total:			**0.393**	**2.642**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-011ADUP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 14:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

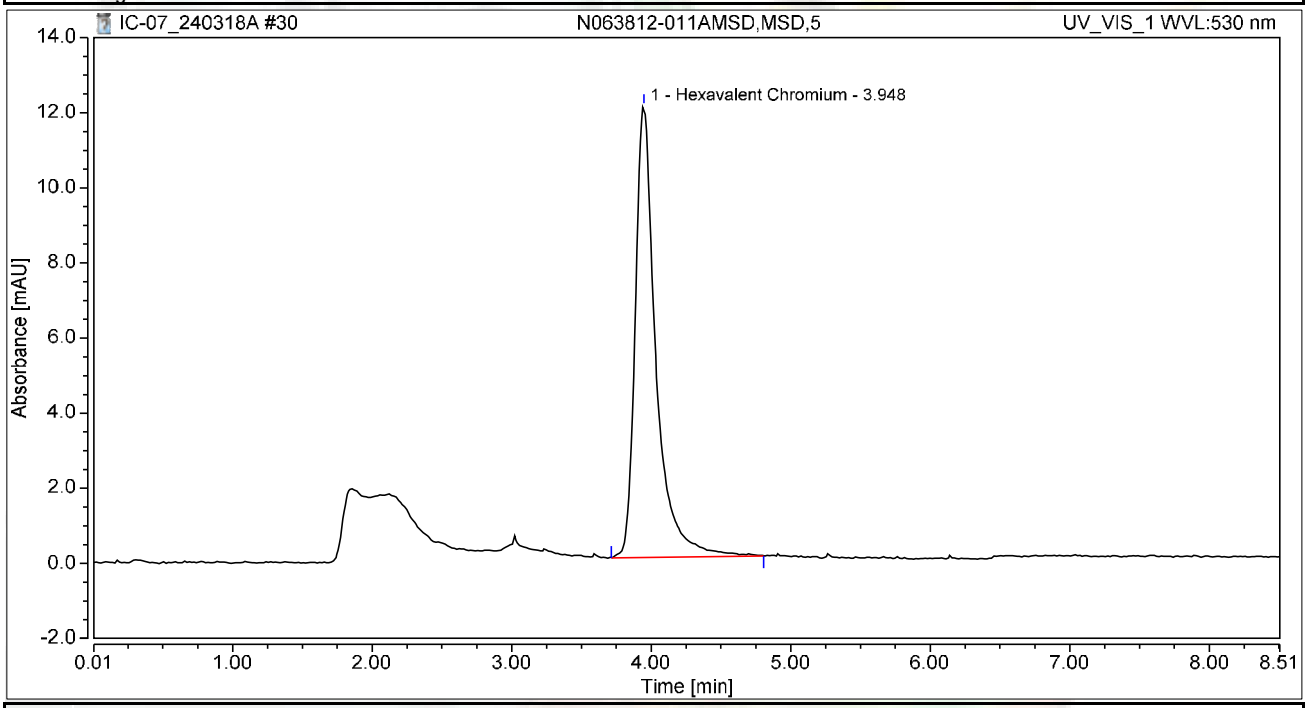
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		6.698	0.057	3.182	100.00	100.00	n.a.
Total:			**0.057**	**3.182**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-011AMSD,MSD,5**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 15:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

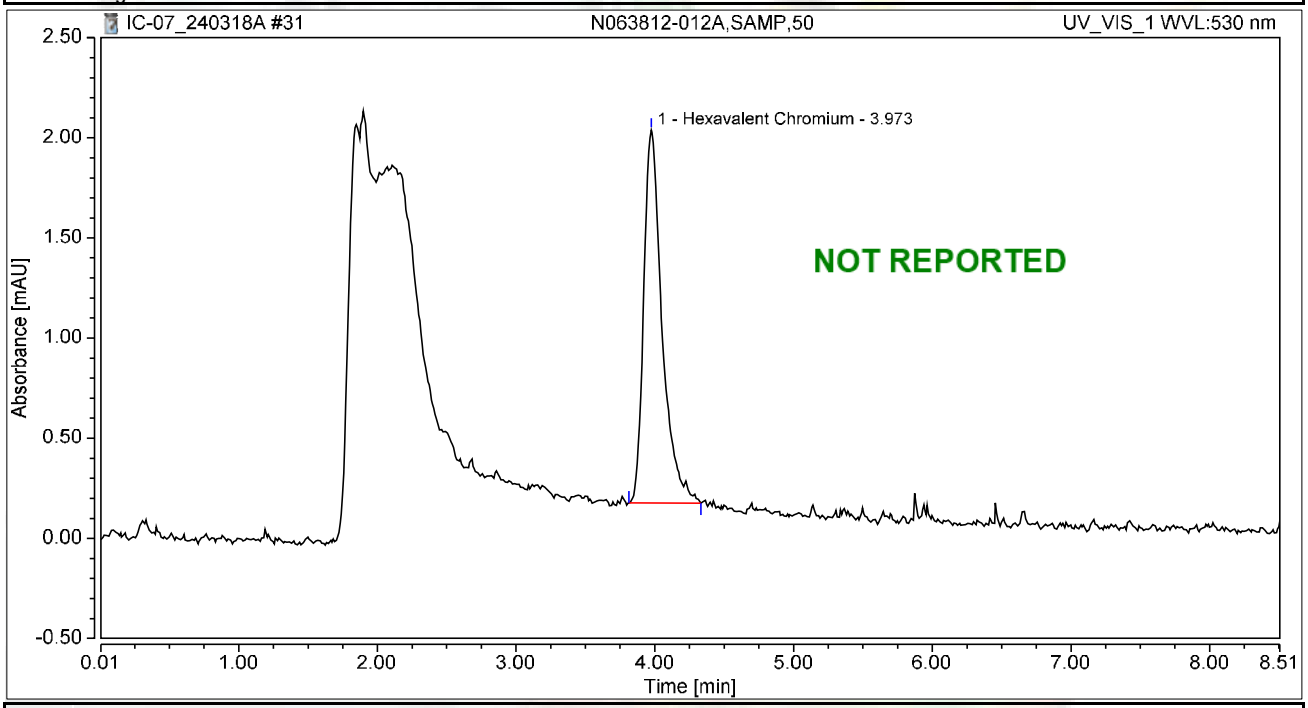
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	2.074	12.014	100.00	100.00	9.7440
Total:			**2.074**	**12.014**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-012A,SAMP,50**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 15:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

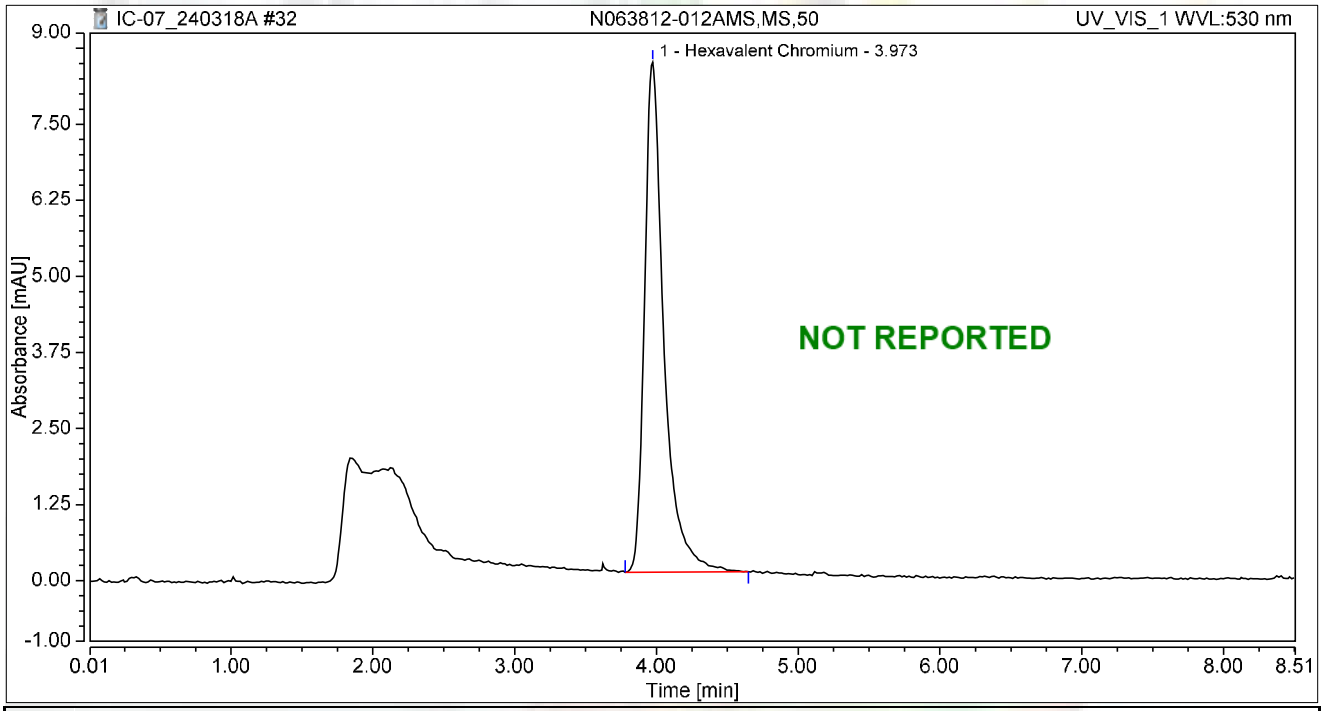
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.285	1.861	100.00	100.00	1.3395
Total:			**0.285**	**1.861**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-012AMS,MS,50**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 15:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

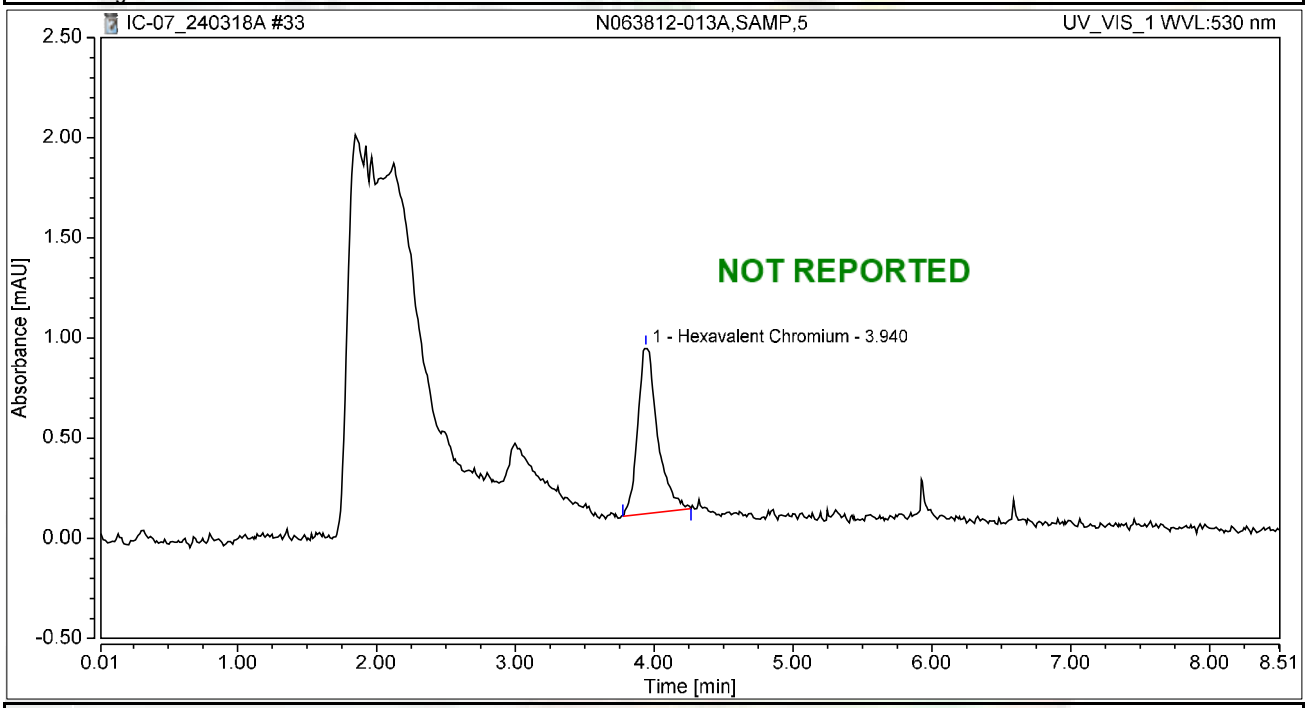
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	1.328	8.381	100.00	100.00	6.2384
Total:			**1.328**	**8.381**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-013A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 15:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

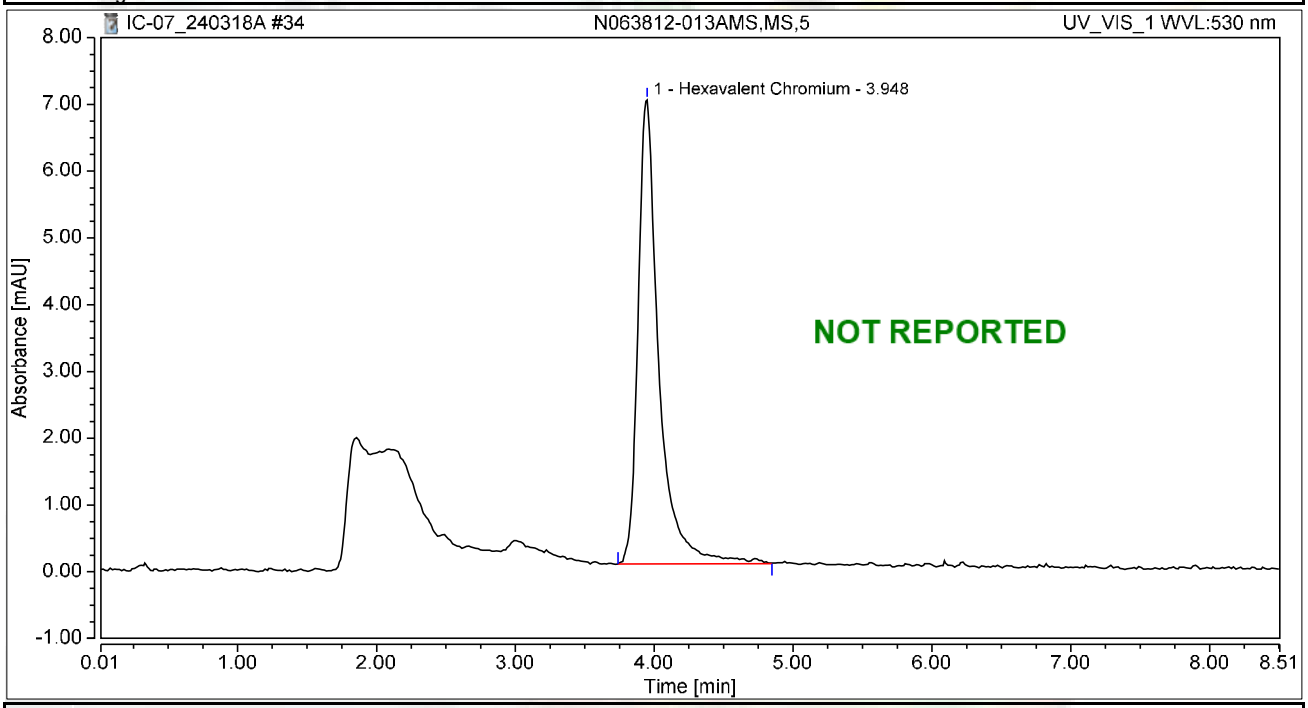
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.137	0.829	100.00	100.00	0.6438
Total:			**0.137**	**0.829**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-013AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 15:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

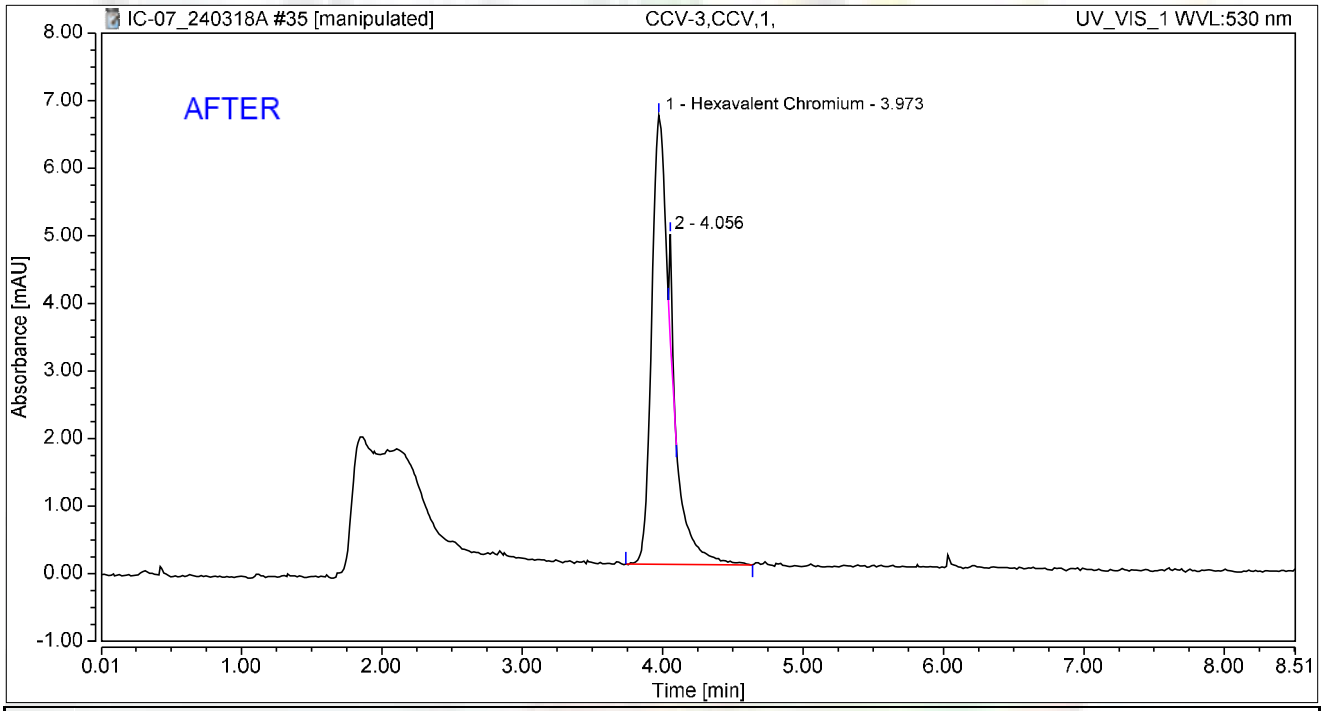
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	1.209	6.950	100.00	100.00	5.6823
Total:			**1.209**	**6.950**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 15:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	1.064	6.644	97.33	80.74	4.9972
2		4.056	0.029	1.585	2.67	19.26	n.a.
Total:			**1.093**	**8.229**	**100.00**	**100.00**	

Reviewed by:

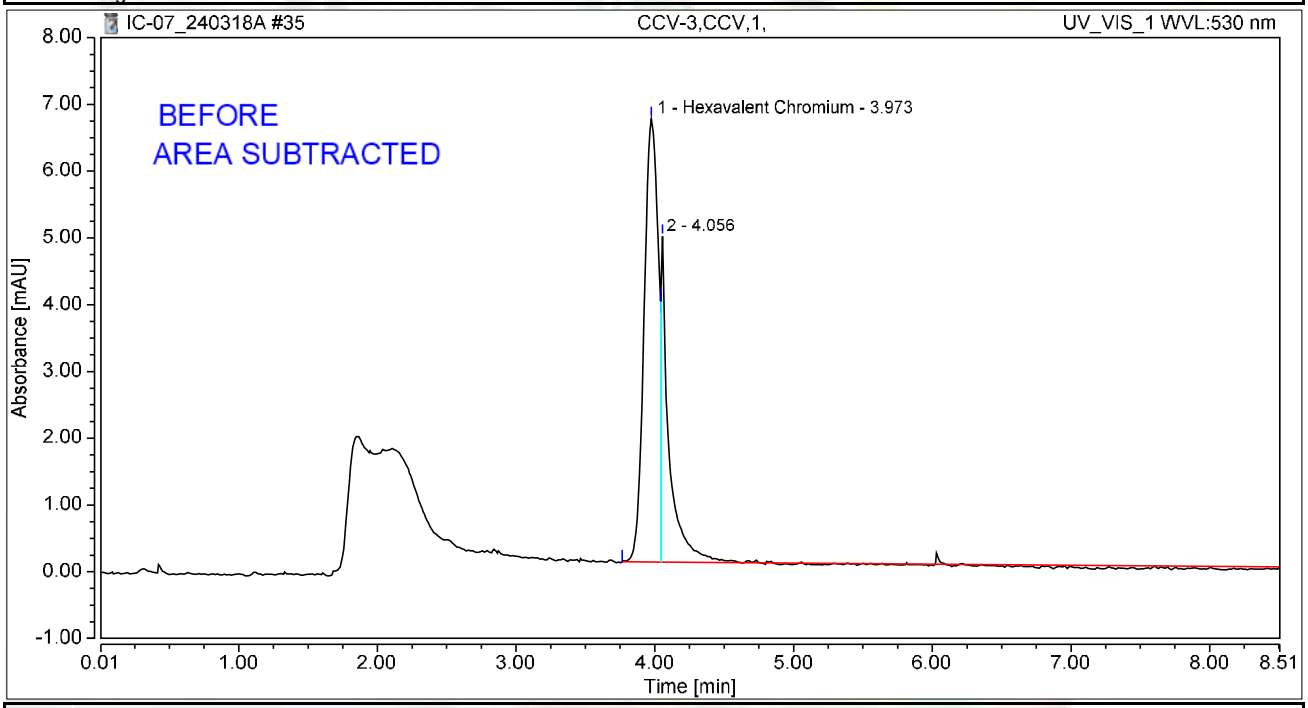
dMocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 15:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

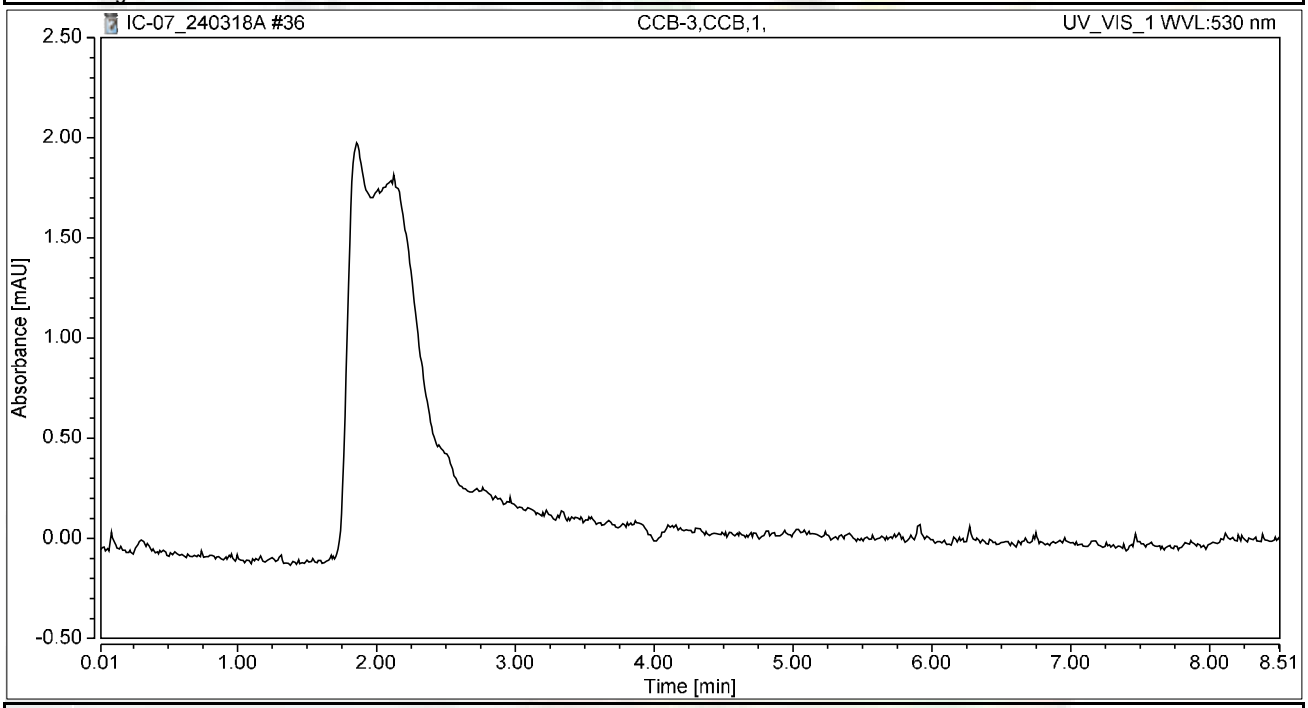
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.790	6.641	77.70	57.65	3.7114
2		4.056	0.227	4.879	22.30	42.35	n.a.
Total:			**1.017**	**11.520**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 16:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

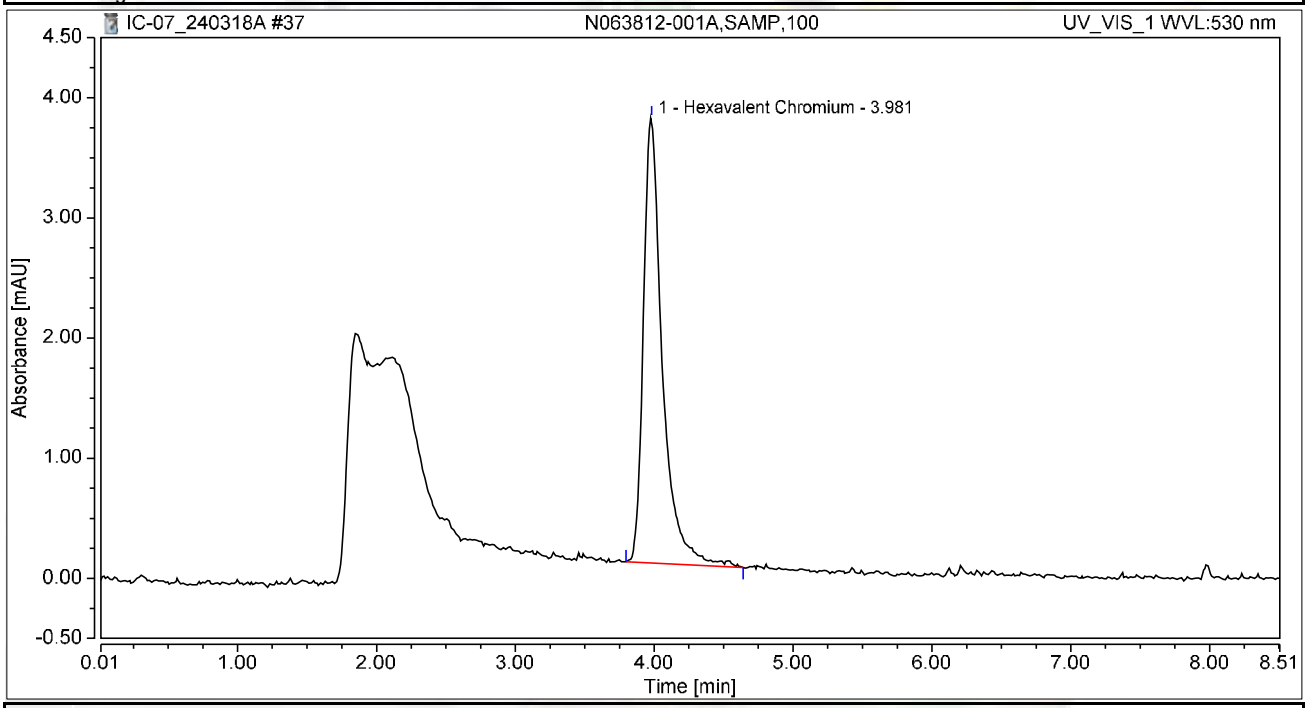
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-001A,SAMP,100**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 16:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

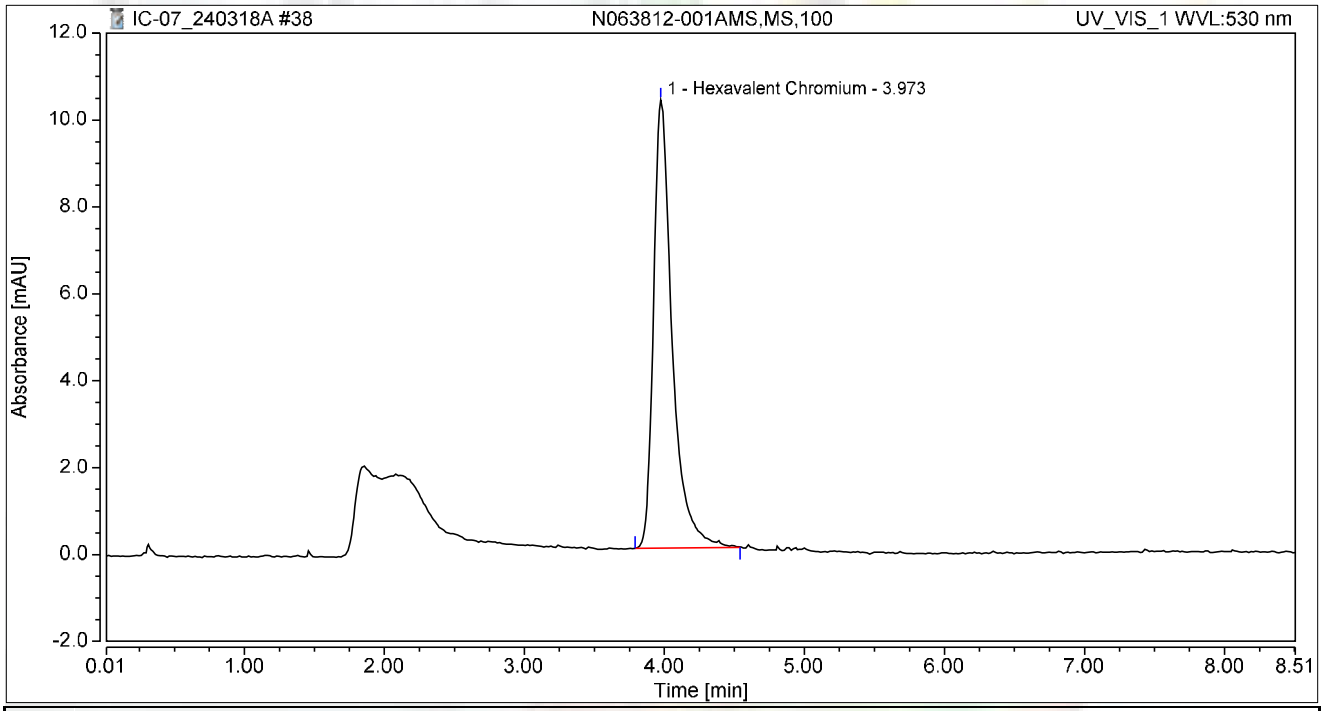
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.586	3.701	100.00	100.00	2.7518
Total:			**0.586**	**3.701**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-001AMS,MS,100**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 16:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

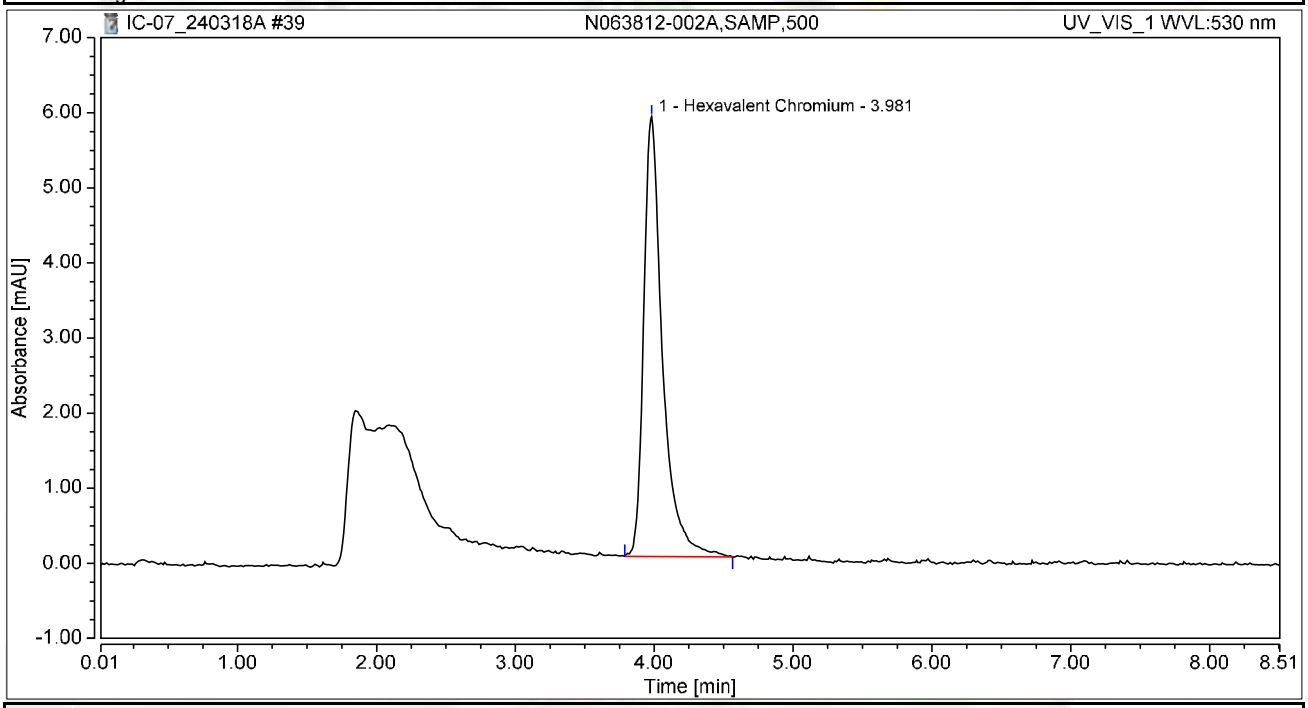
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	1.595	10.316	100.00	100.00	7.4961
Total:			**1.595**	**10.316**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-002A,SAMP,500**	*Run Time (min):*	**8.49**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 16:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

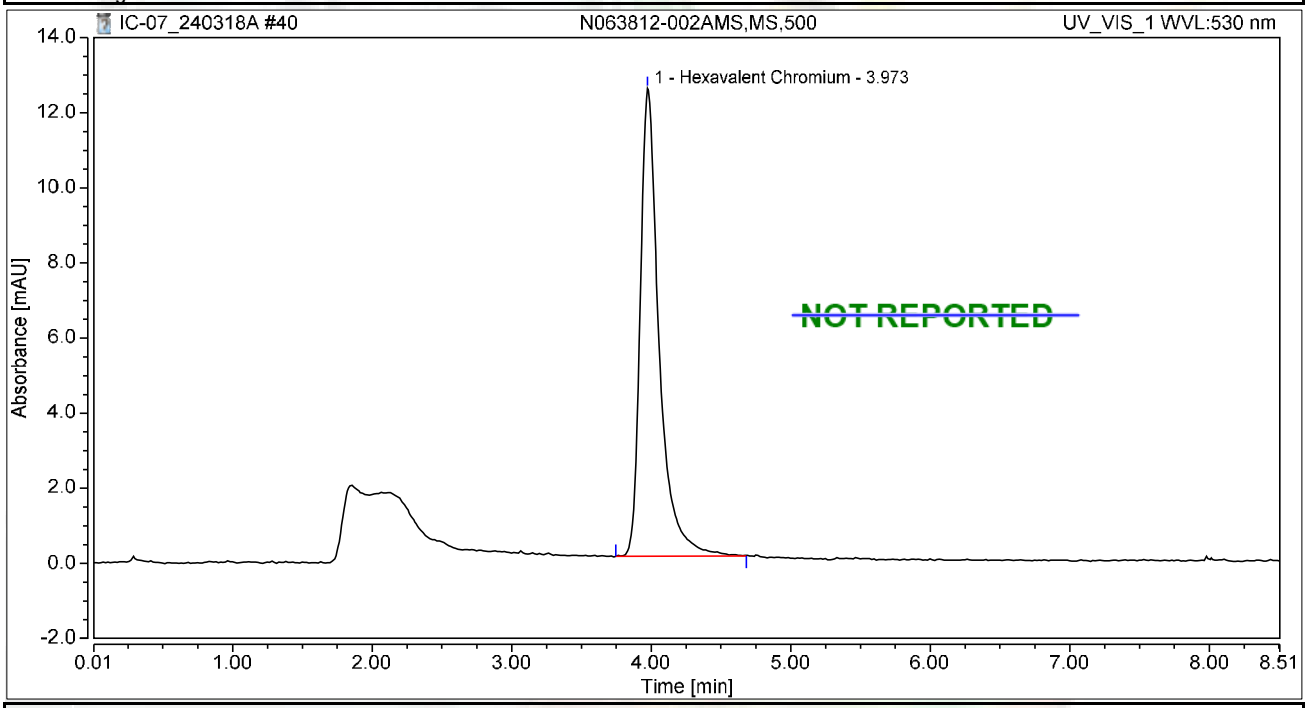
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.922	5.855	100.00	100.00	4.3307
Total:			**0.922**	**5.855**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-002AMS,MS,500**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 16:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

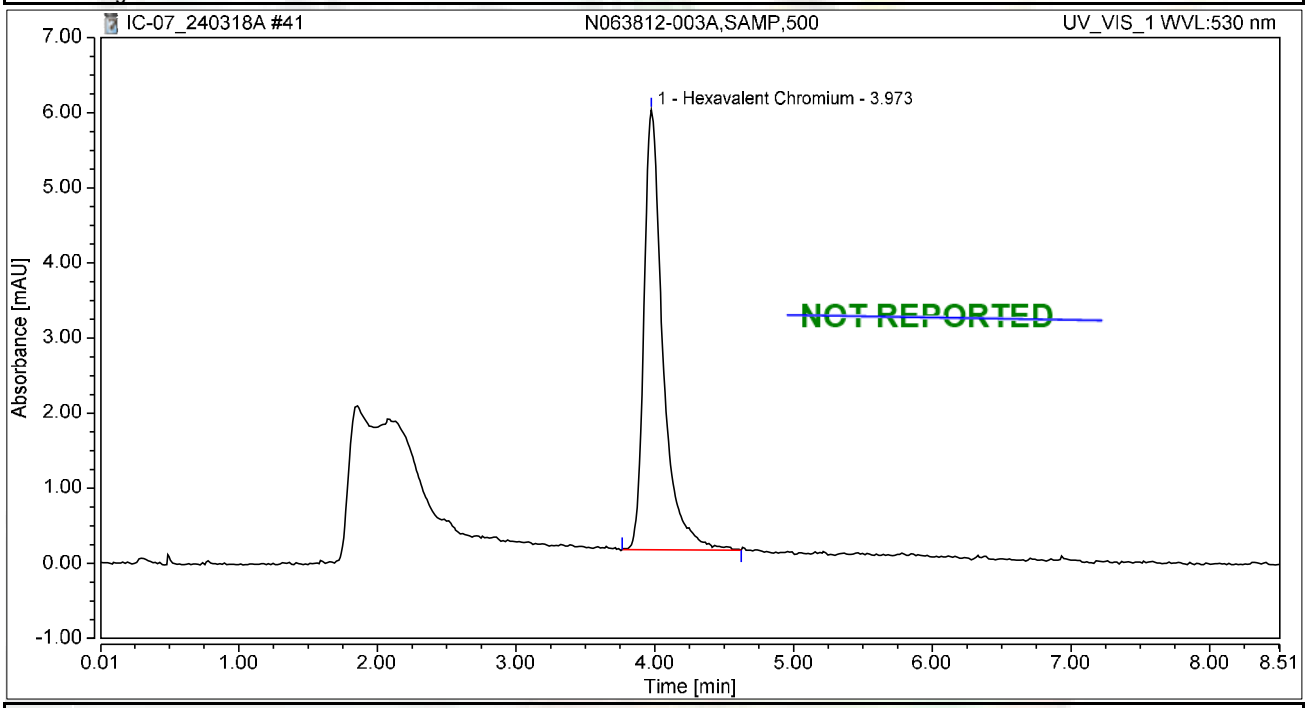
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	1.963	12.456	100.00	100.00	9.2240
Total:			**1.963**	**12.456**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-003A,SAMP,500**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 16:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

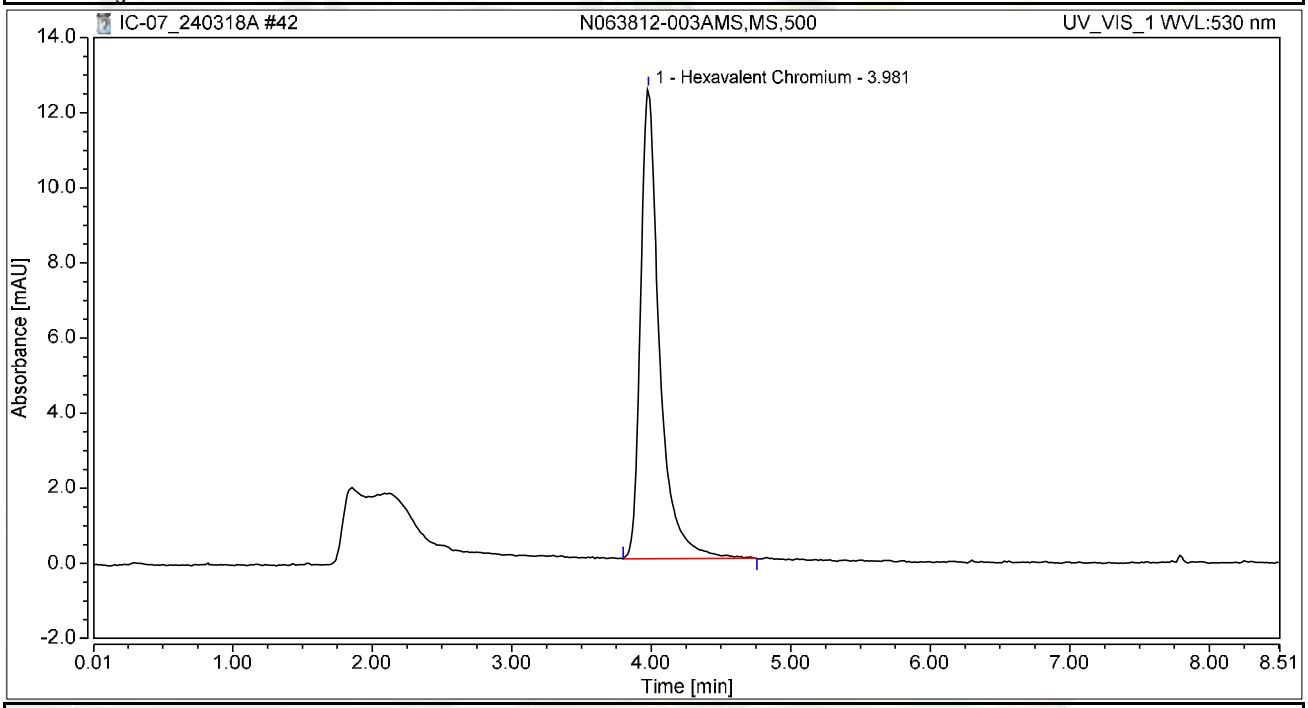
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.926	5.855	100.00	100.00	4.3488
Total:			**0.926**	**5.855**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-003AMS,MS,500**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 17:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

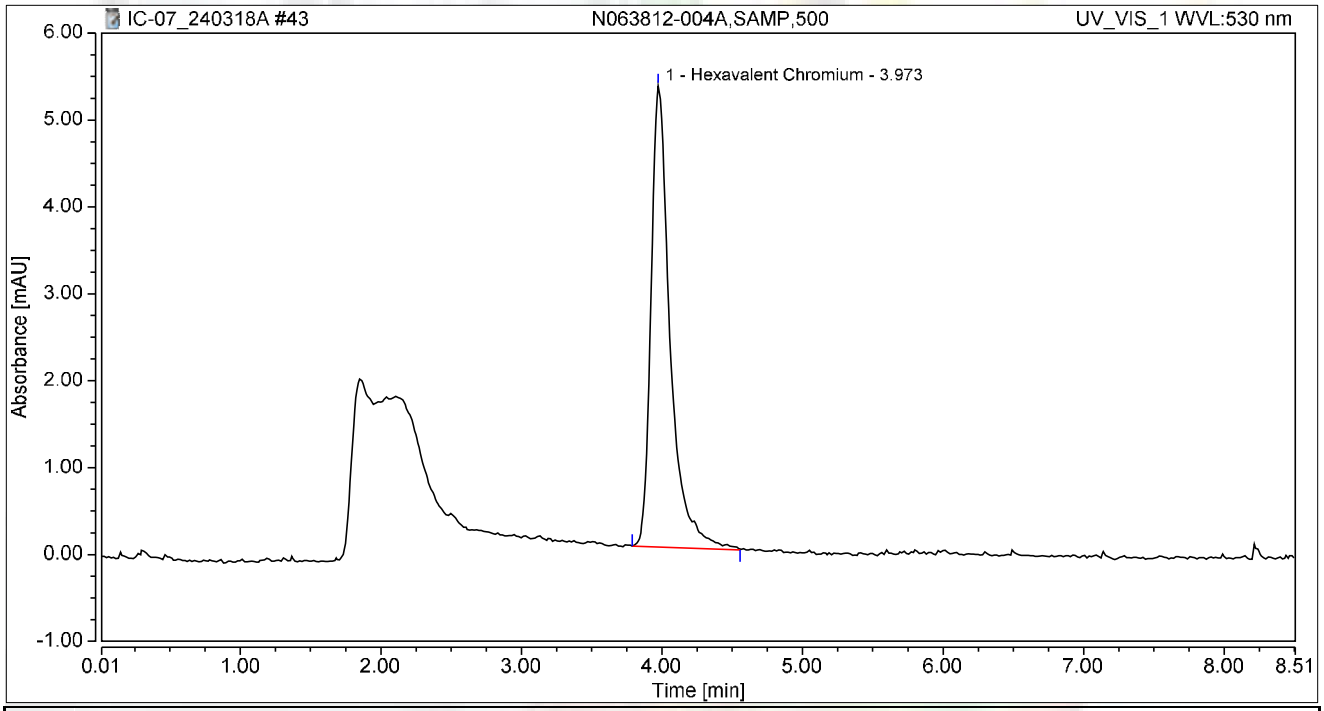
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.977	12.520	100.00	100.00	9.2872
Total:			**1.977**	**12.520**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-004A,SAMP,500**	*Run Time (min):*	**8.49**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 17:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

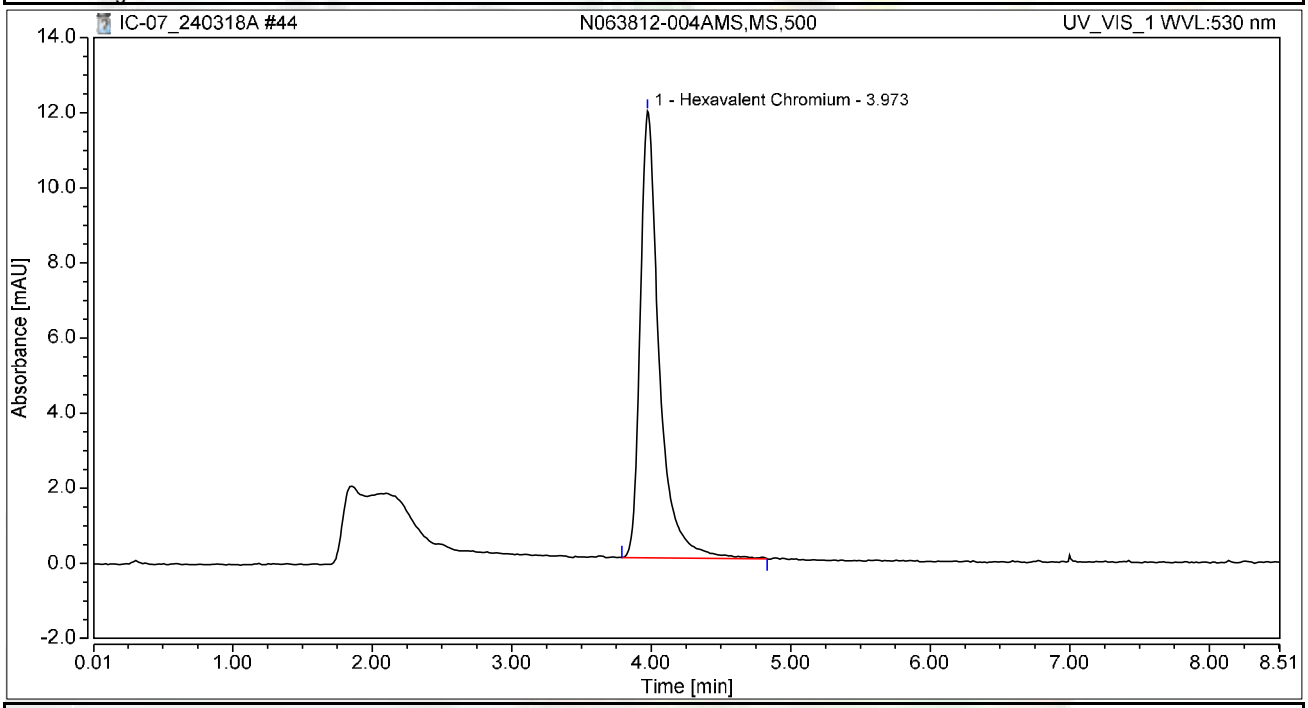
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.840	5.308	100.00	100.00	3.9462
Total:			**0.840**	**5.308**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-004AMS,MS,500**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 17:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

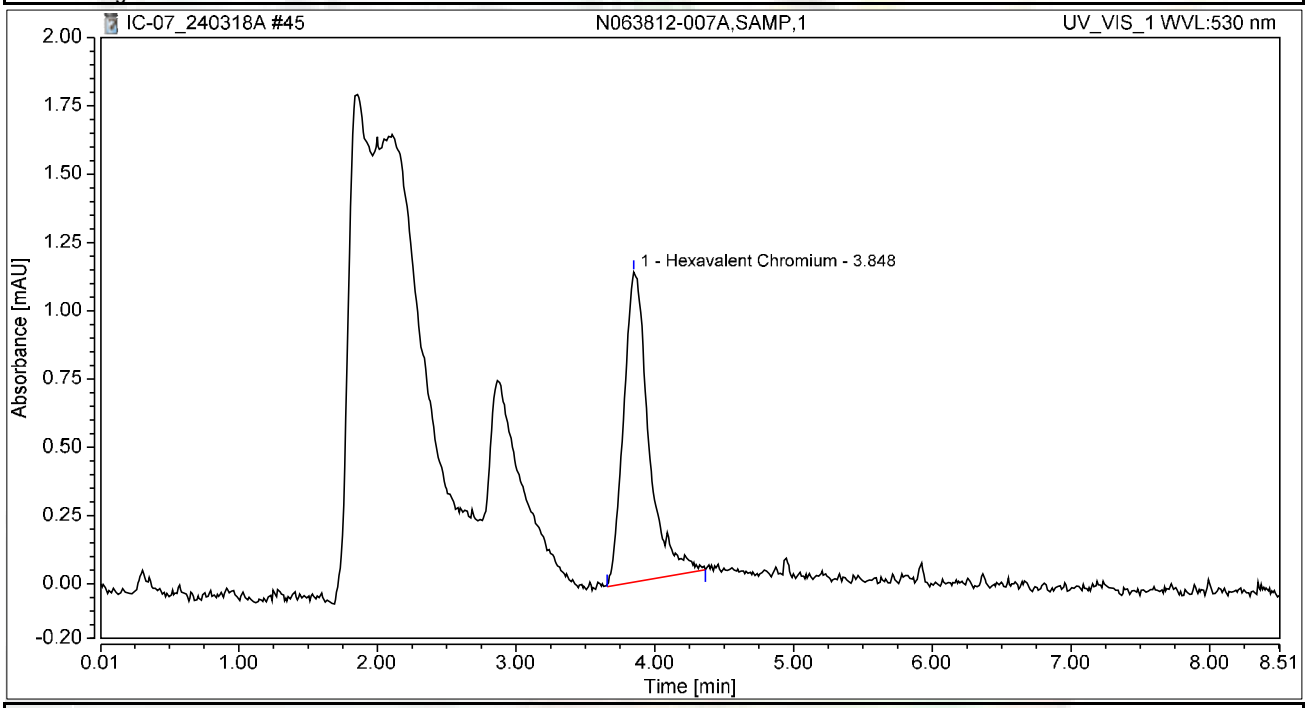
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	1.885	11.897	100.00	100.00	8.8588
Total:			**1.885**	**11.897**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-007A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 17:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

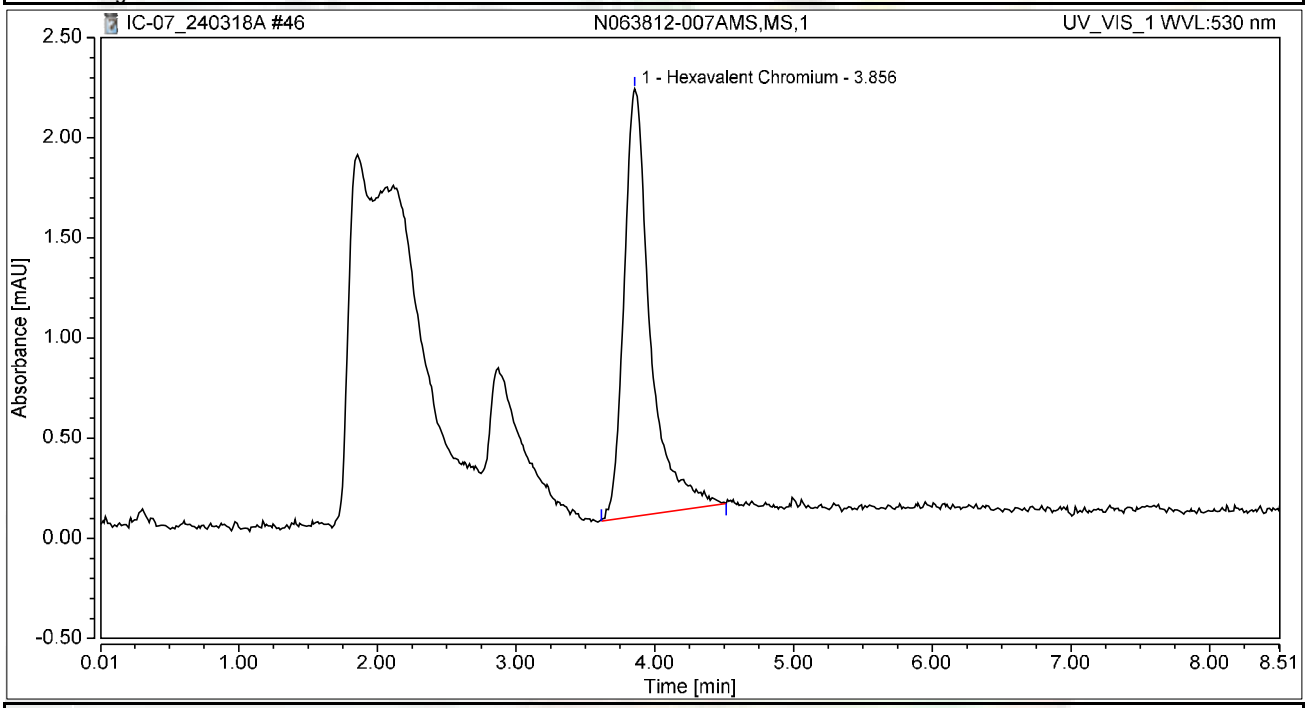
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.848	0.239	1.135	100.00	100.00	1.1232
Total:			**0.239**	**1.135**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 17:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

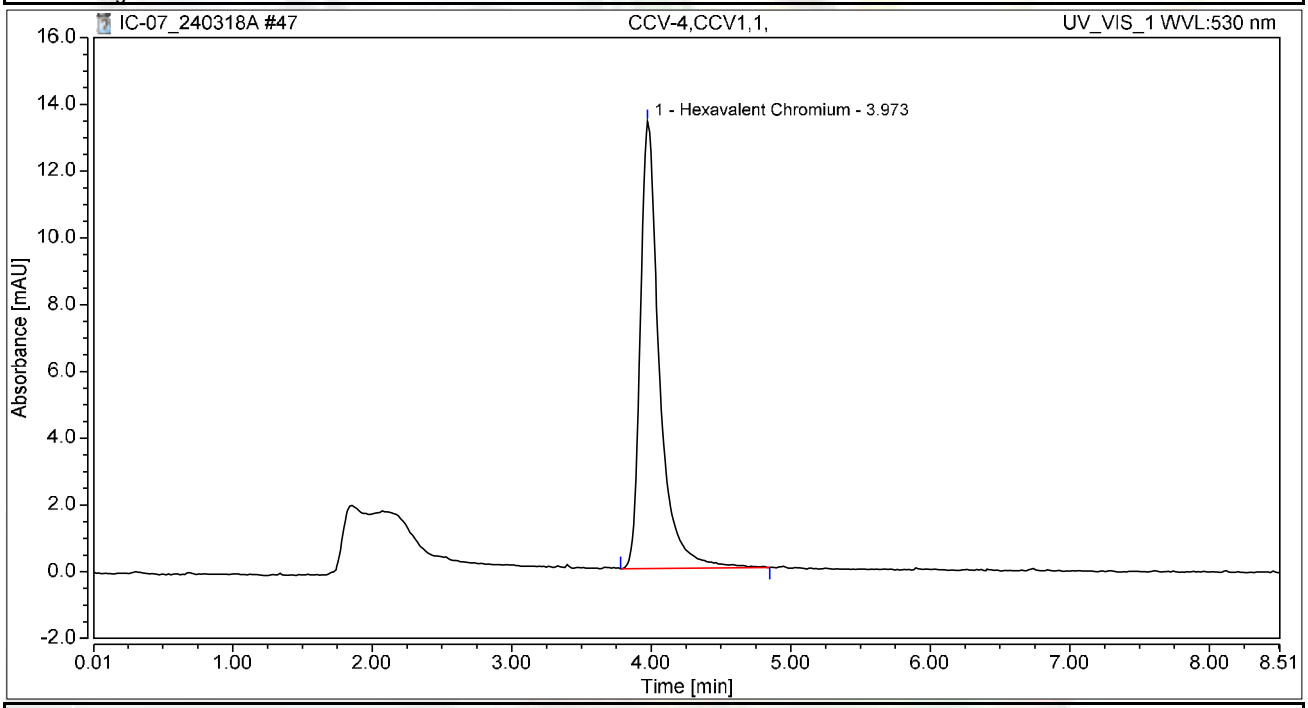
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.468	2.136	100.00	100.00	2.1970
Total:			**0.468**	**2.136**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 17:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

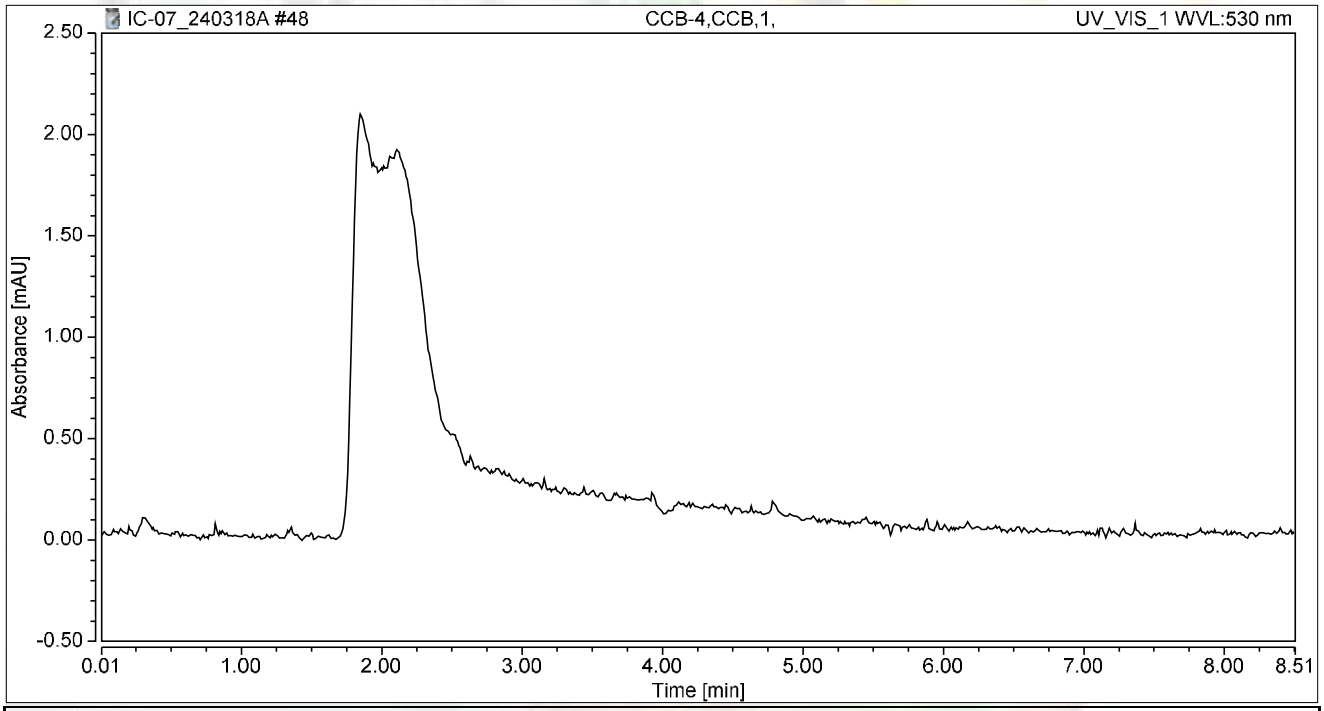
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	2.134	13.392	100.00	100.00	10.0277
Total:			**2.134**	**13.392**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 18:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

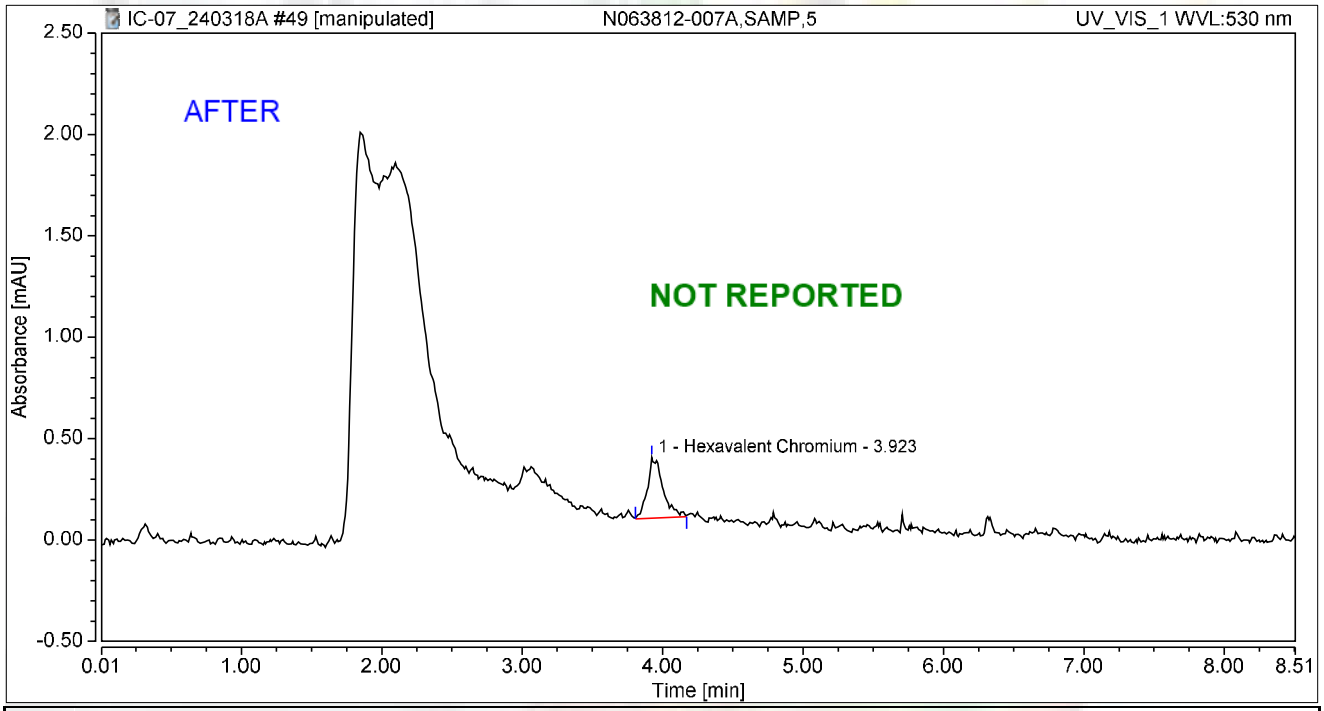
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-007A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 18:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.039	0.299	100.00	100.00	0.1832
Total:			**0.039**	**0.299**	**100.00**	**100.00**	

Reviewed by:

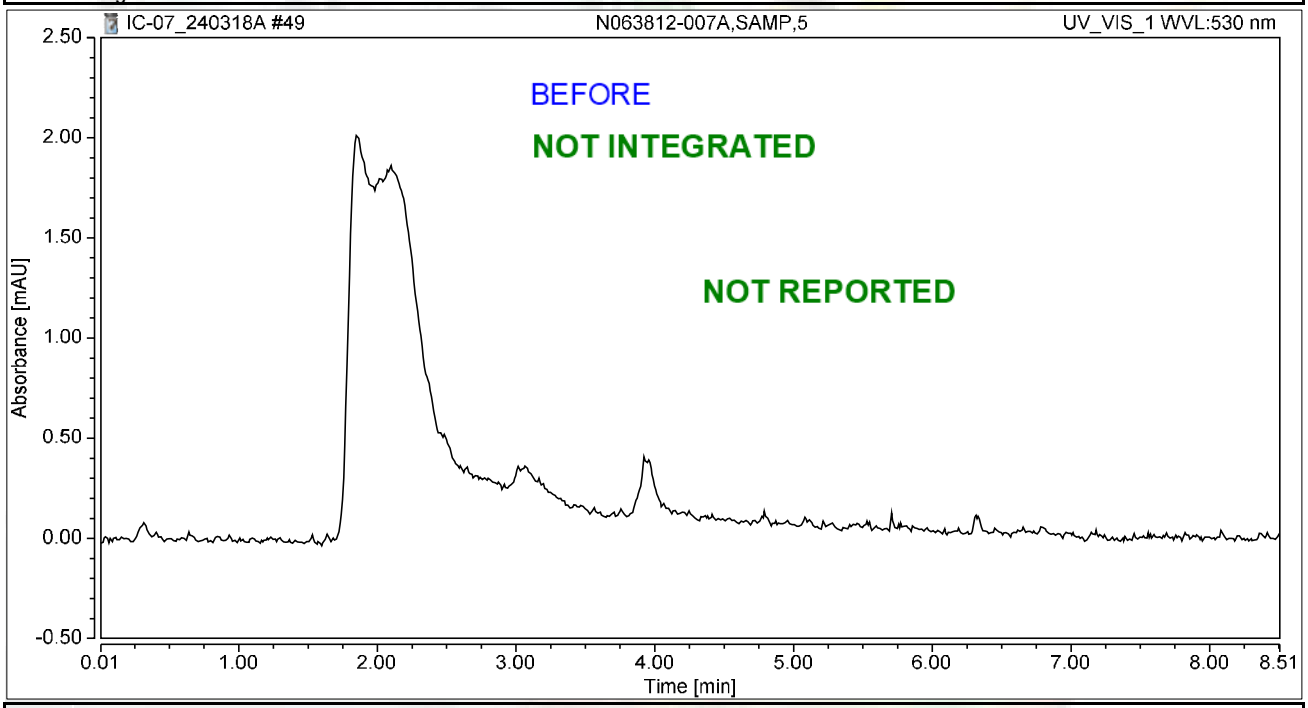
dMocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063812-007A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 18:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

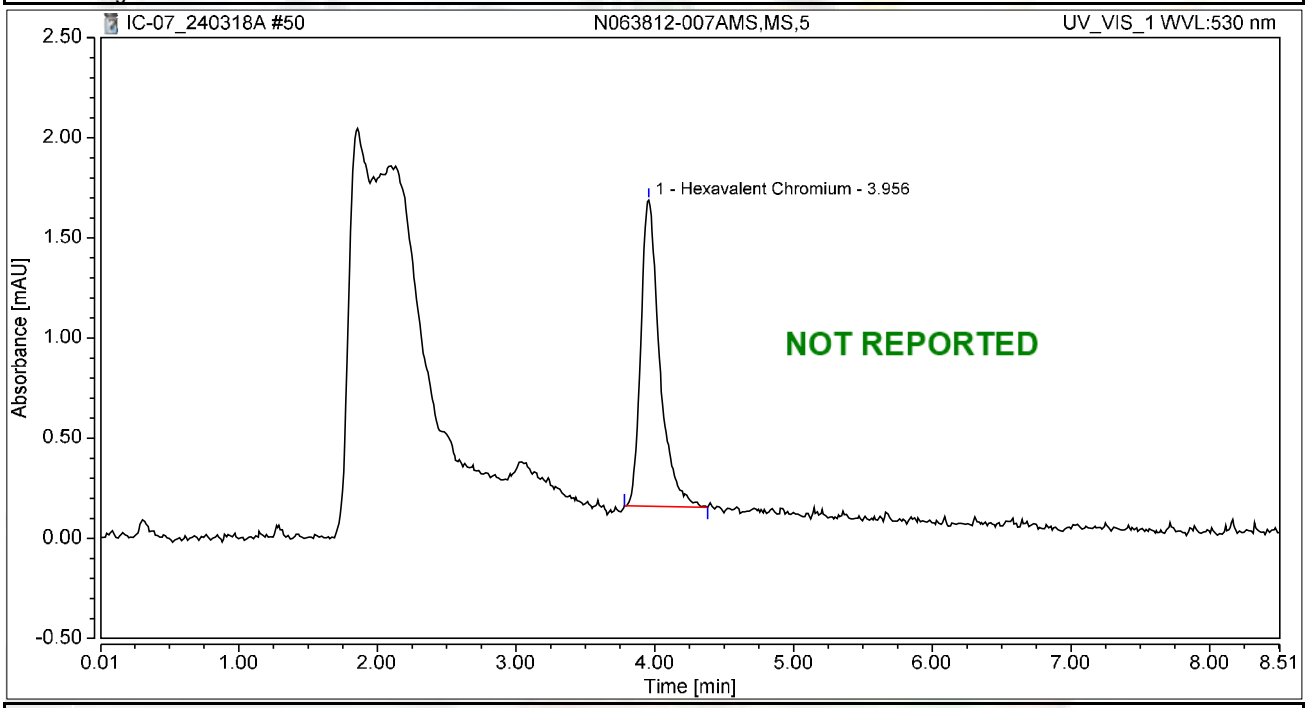
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-007AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 18:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

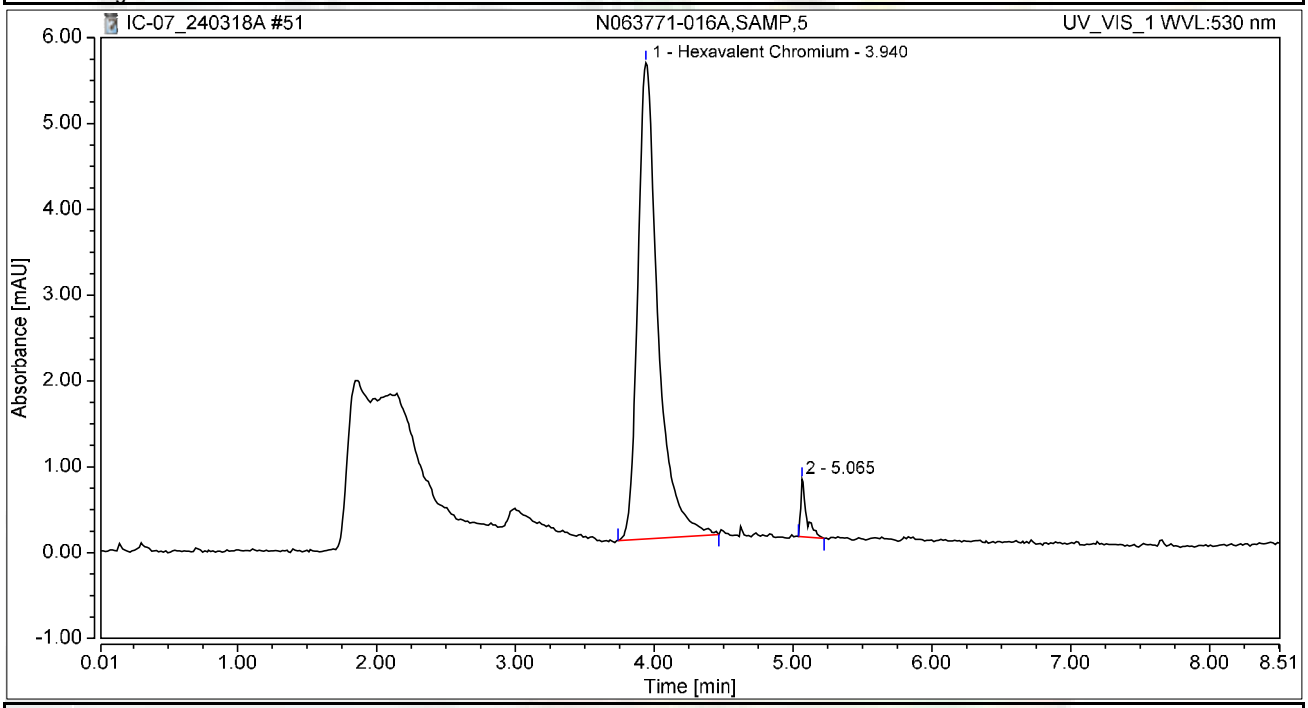
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.241	1.530	100.00	100.00	1.1339
Total:			**0.241**	**1.530**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-016A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 18:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

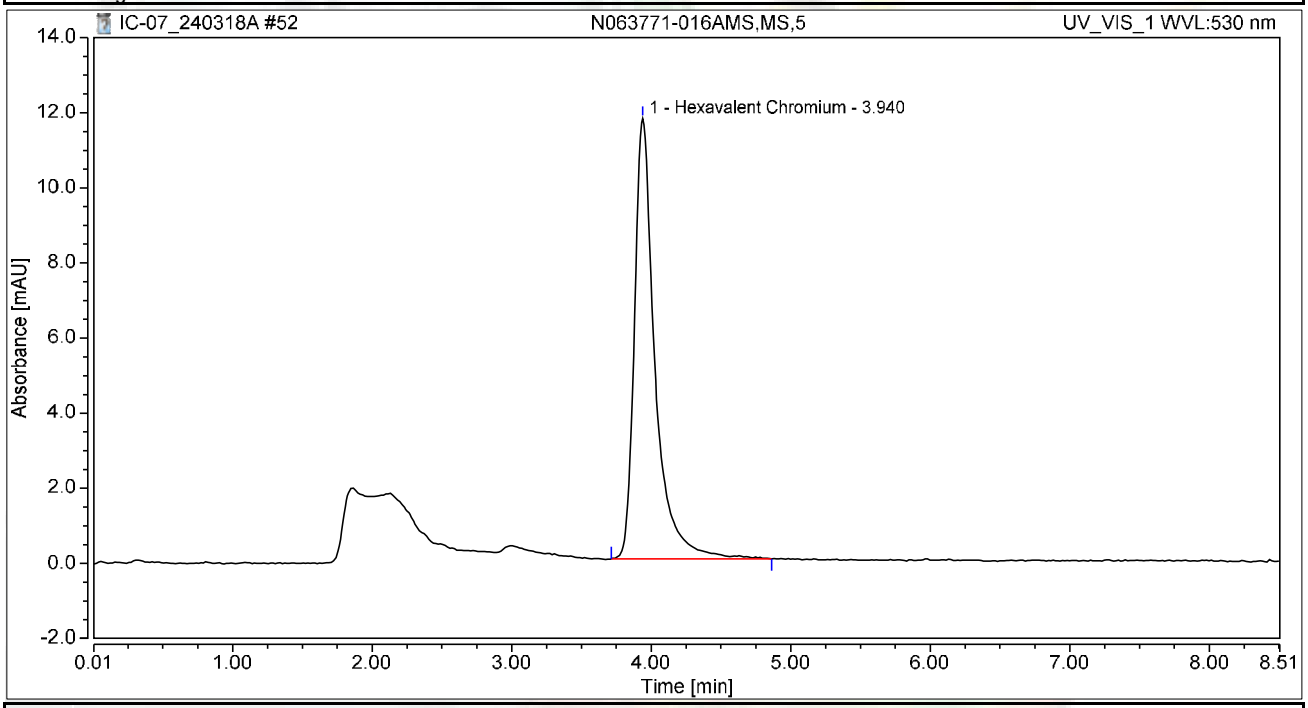
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.938	5.546	96.58	89.24	4.4074
2		5.065	0.033	0.669	3.42	10.76	n.a.
Total:			**0.971**	**6.214**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-016AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 18:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

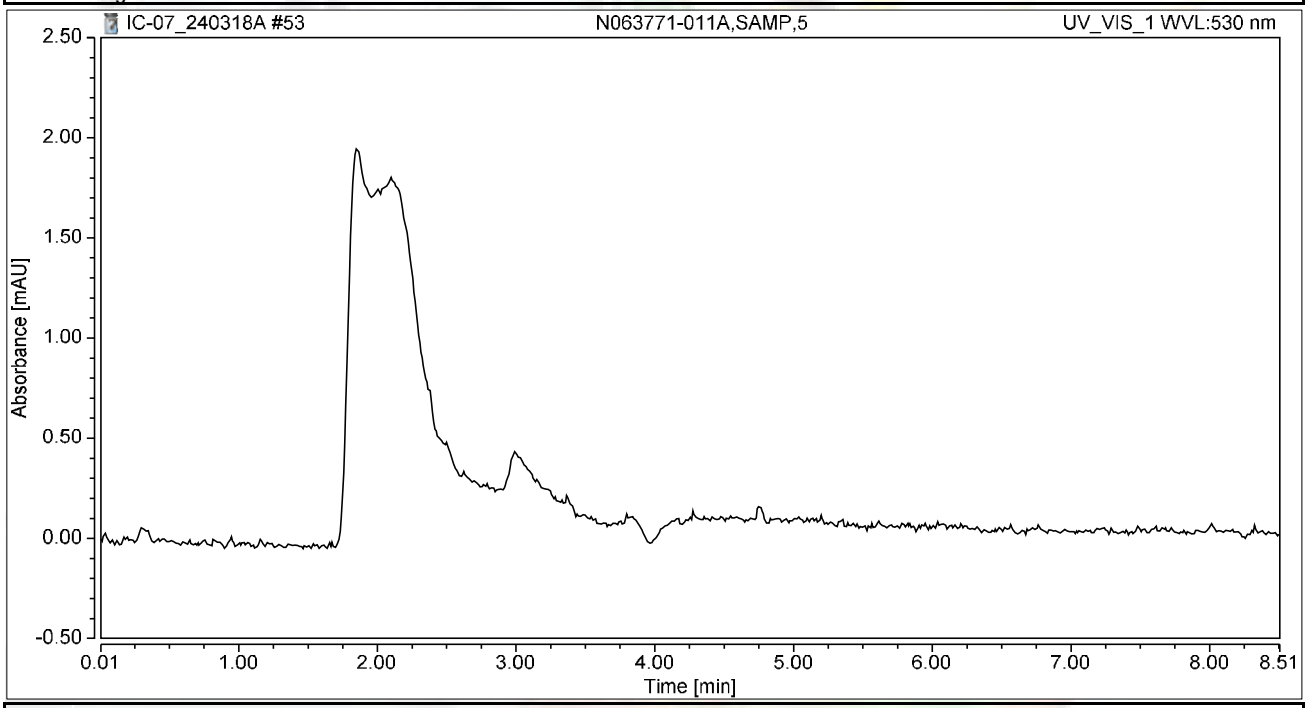
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	2.011	11.727	100.00	100.00	9.4476
Total:			**2.011**	**11.727**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-011A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 18:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

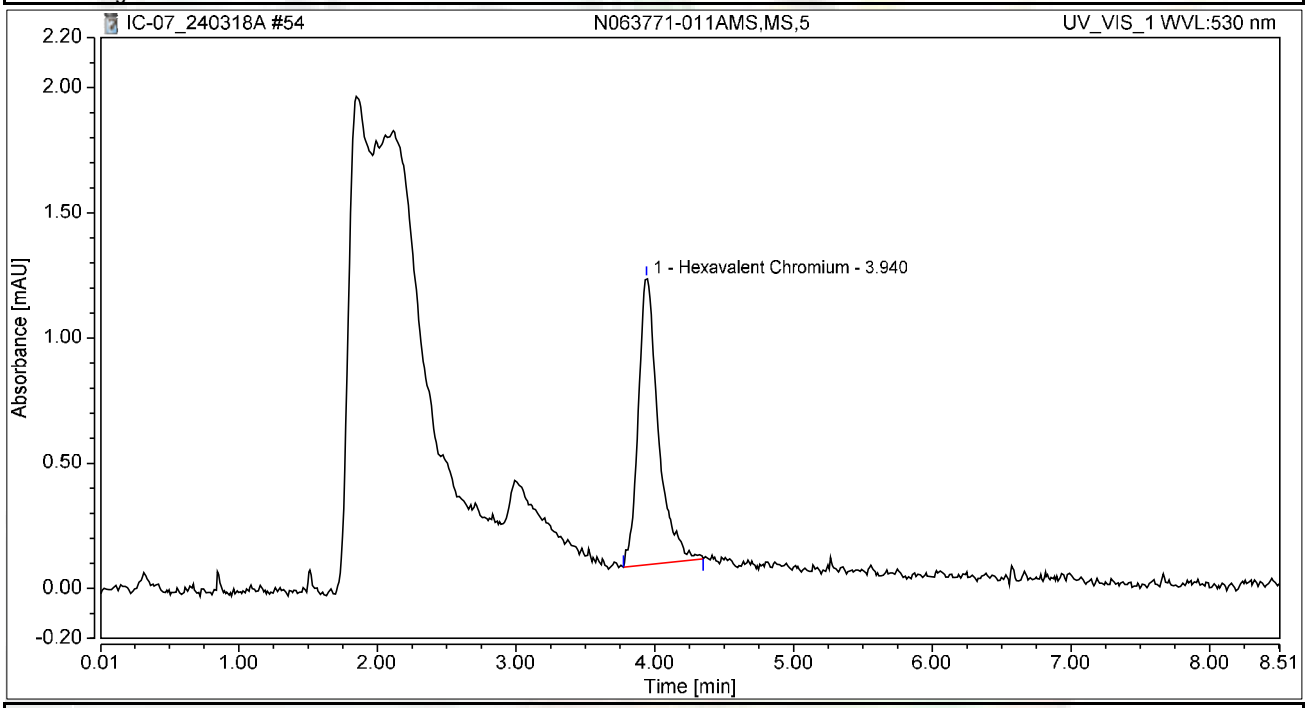
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-011AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 19:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

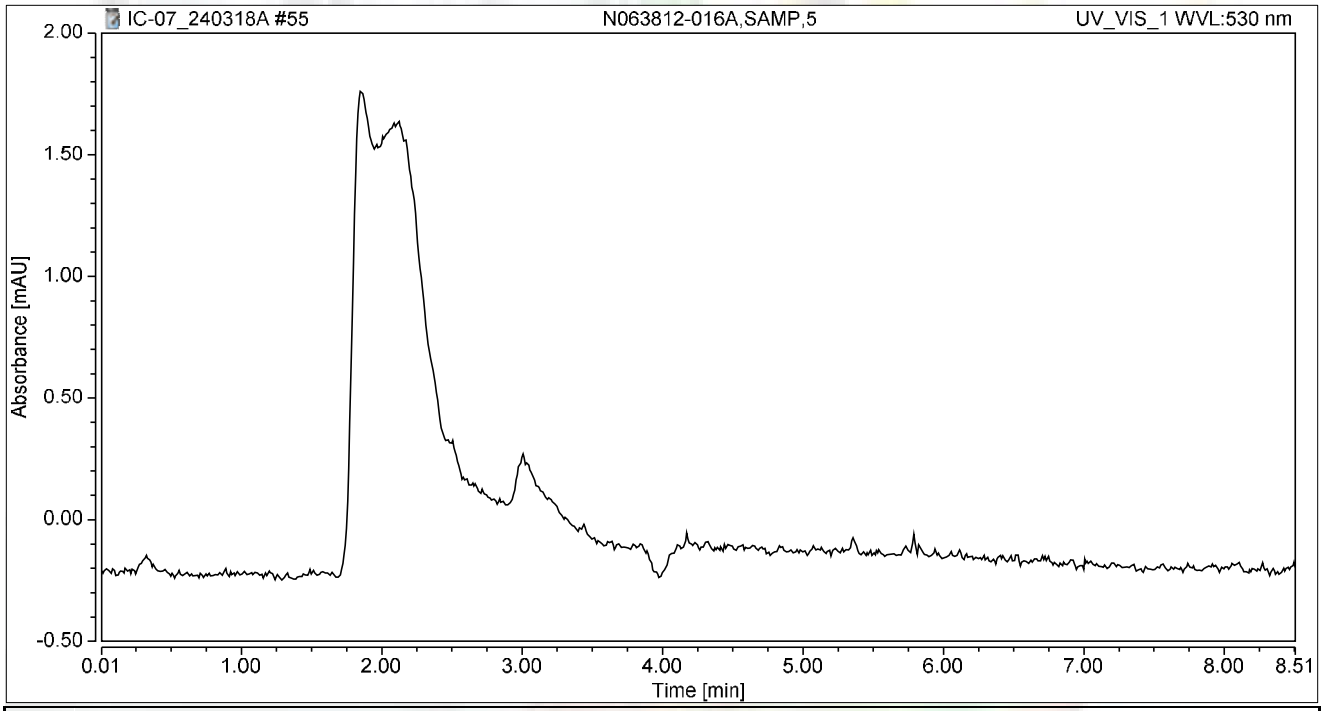
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.192	1.143	100.00	100.00	0.9036
Total:			**0.192**	**1.143**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-016A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 19:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

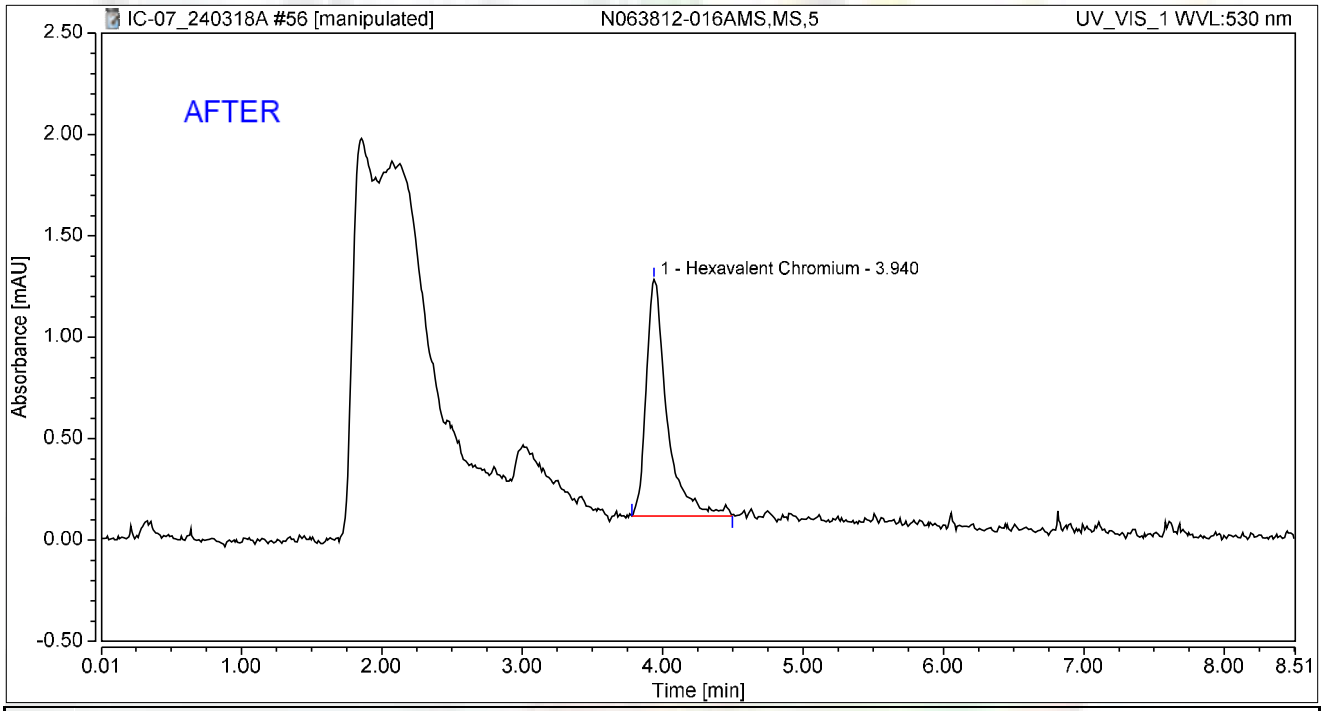
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-016AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 19:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.200	1.166	100.00	100.00	0.9394
Total:			**0.200**	**1.166**	**100.00**	**100.00**	

Reviewed by:

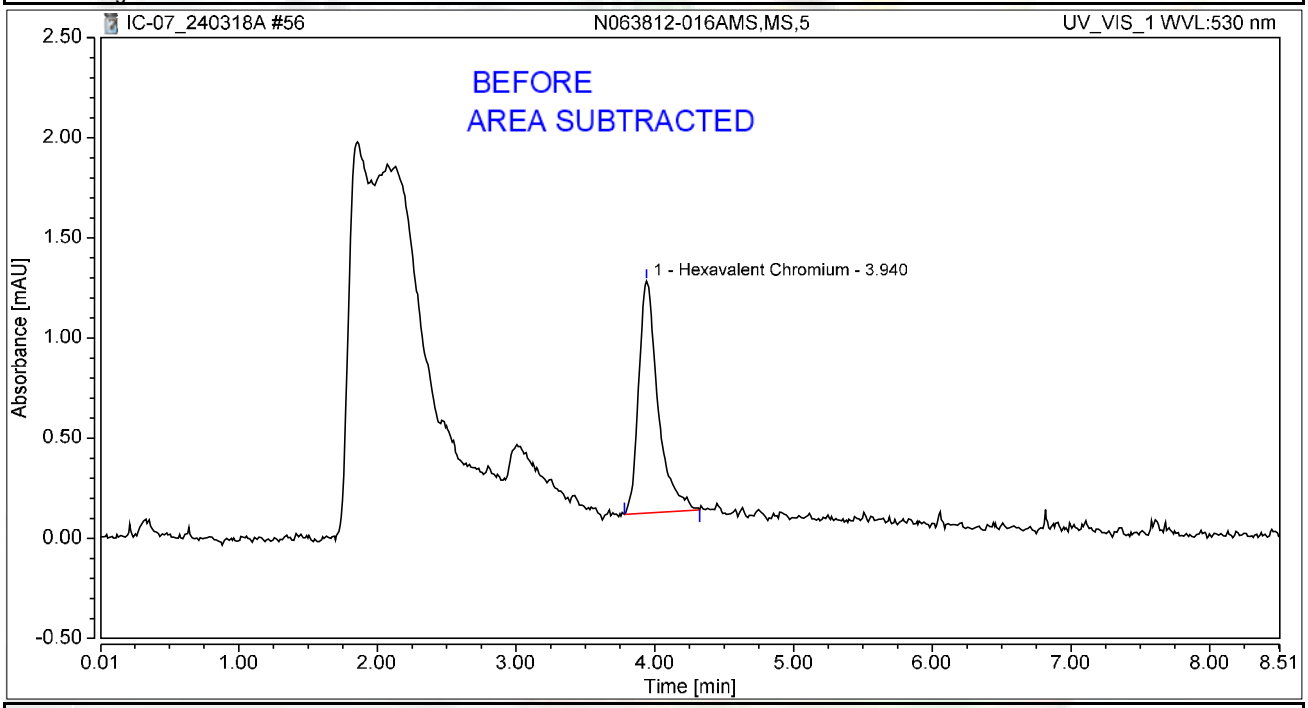
dMocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063812-016AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 19:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

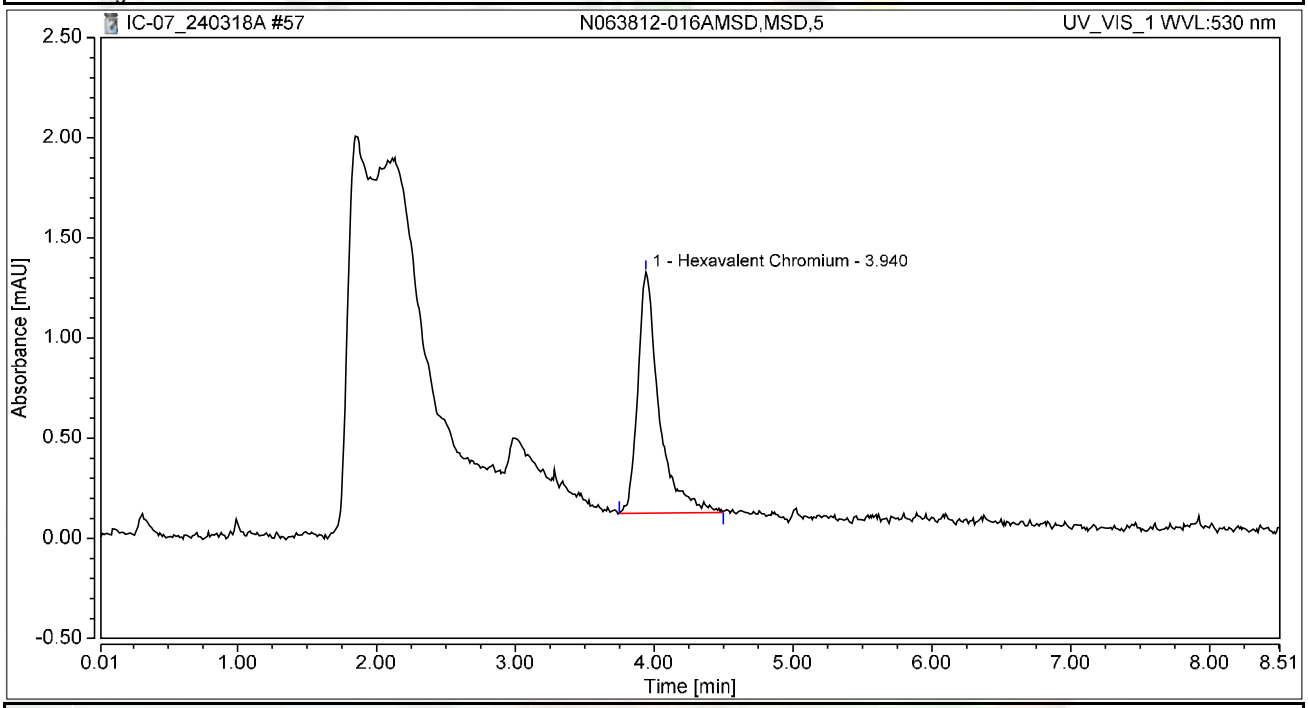
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.188	1.159	100.00	100.00	0.8848
Total:			**0.188**	**1.159**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-016AMSD,MSD,5**	*Run Time (min):*	**8.49**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 19:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

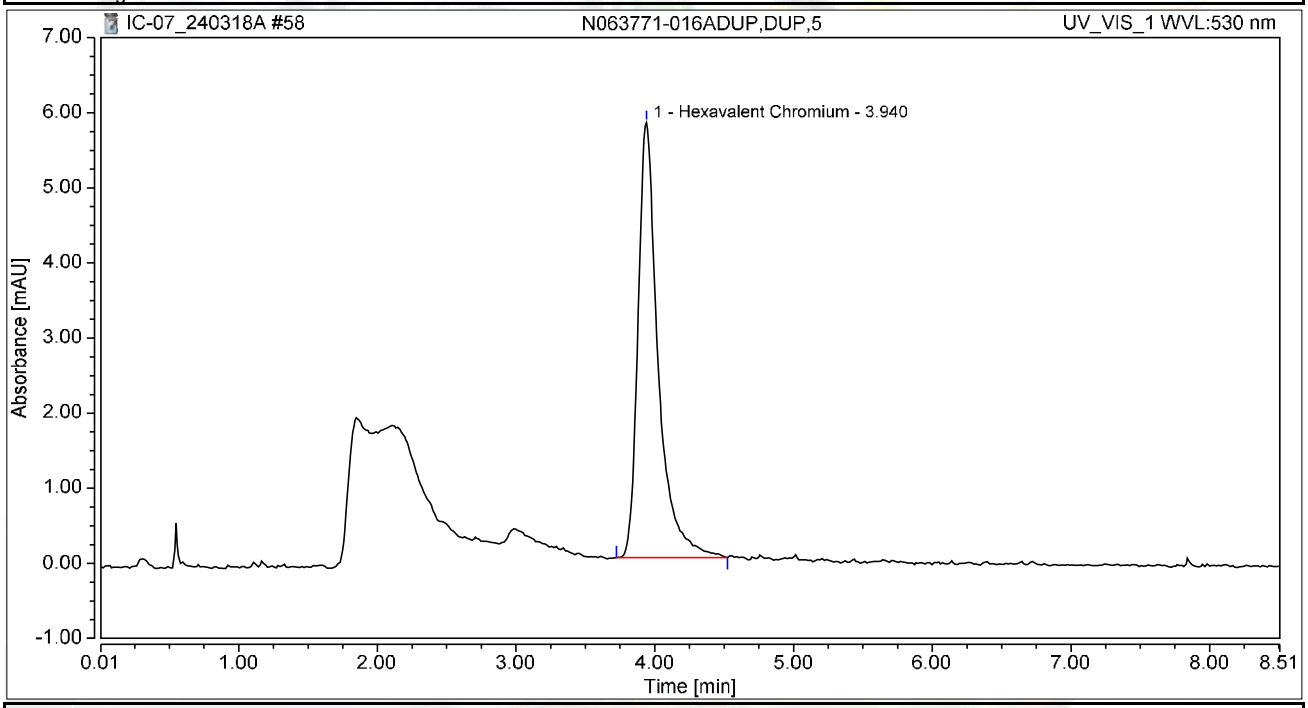
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.213	1.203	100.00	100.00	1.0025
Total:			**0.213**	**1.203**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-016ADUP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 19:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

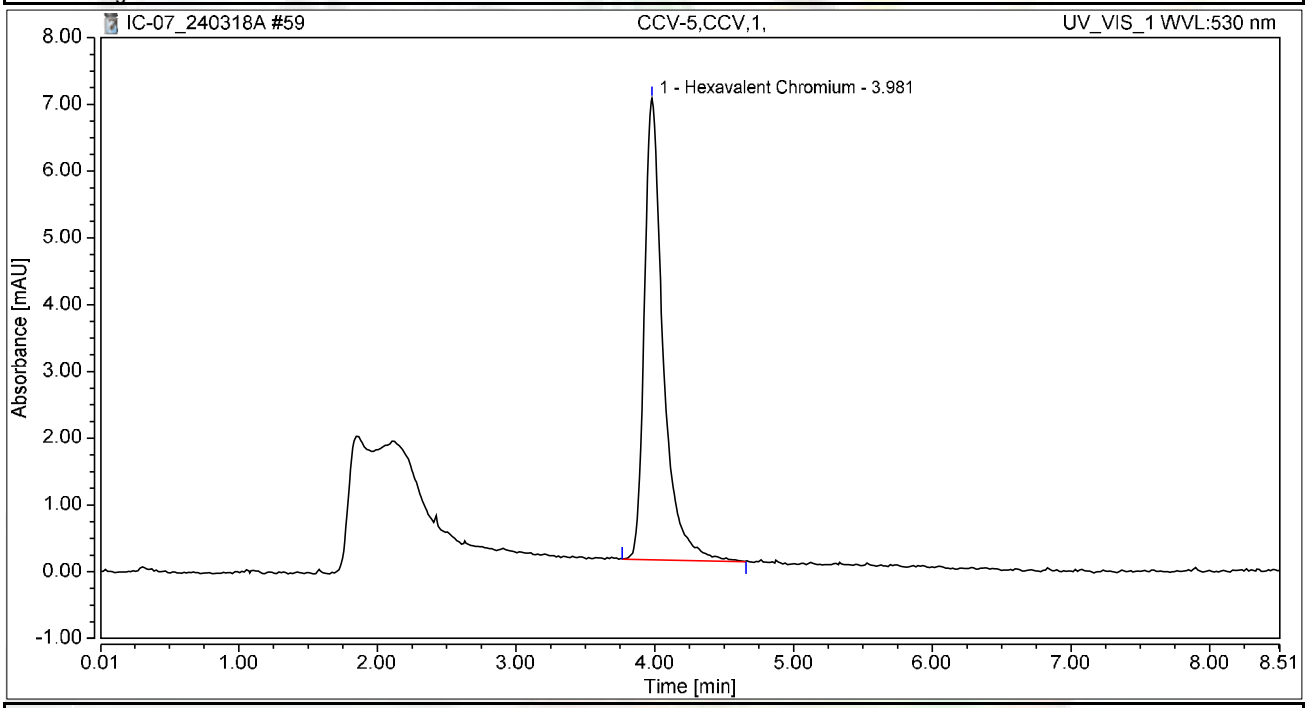
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.973	5.791	100.00	100.00	4.5705
Total:			**0.973**	**5.791**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 19:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

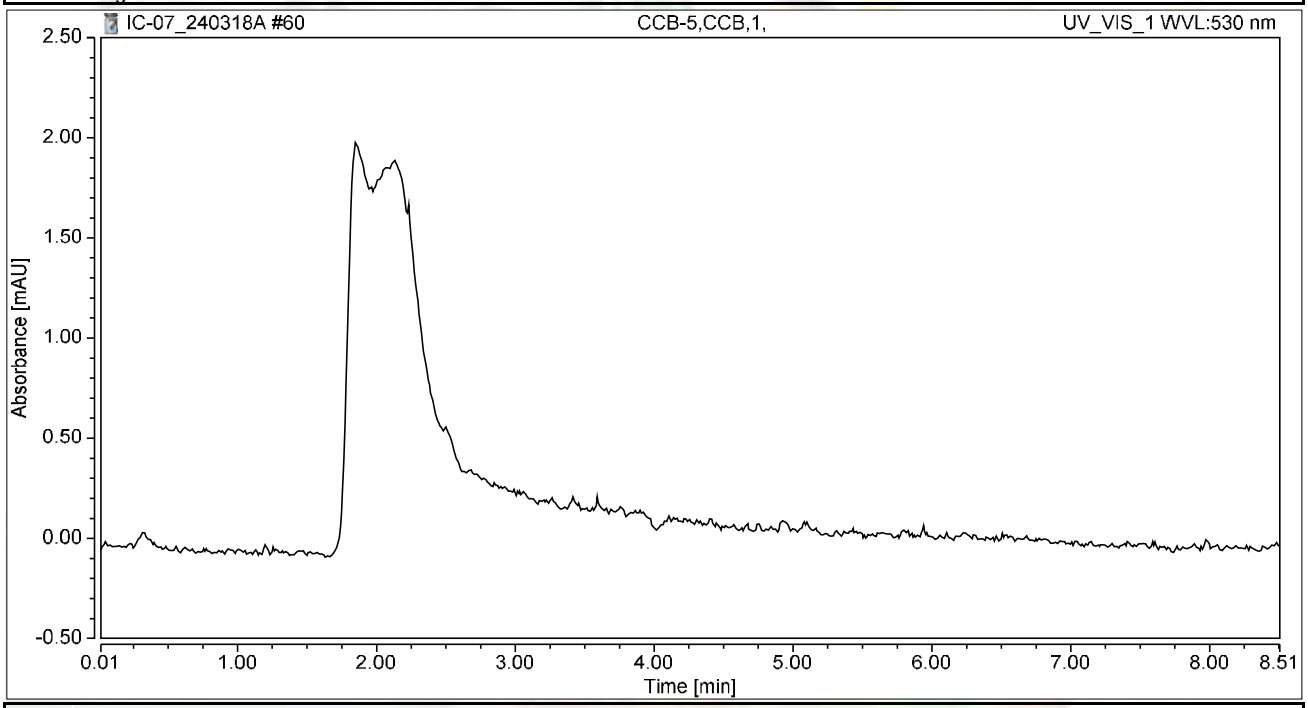
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.090	6.911	100.00	100.00	5.1195
Total:			**1.090**	**6.911**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 19:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

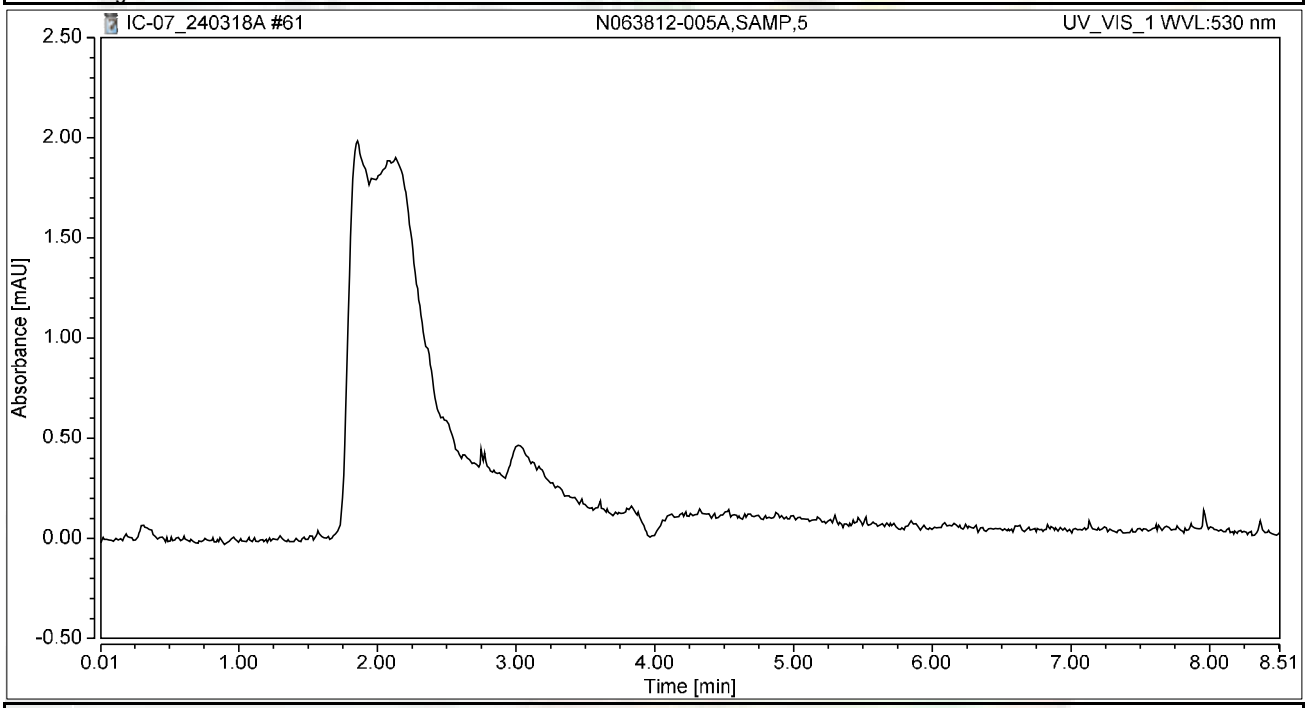
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 20:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

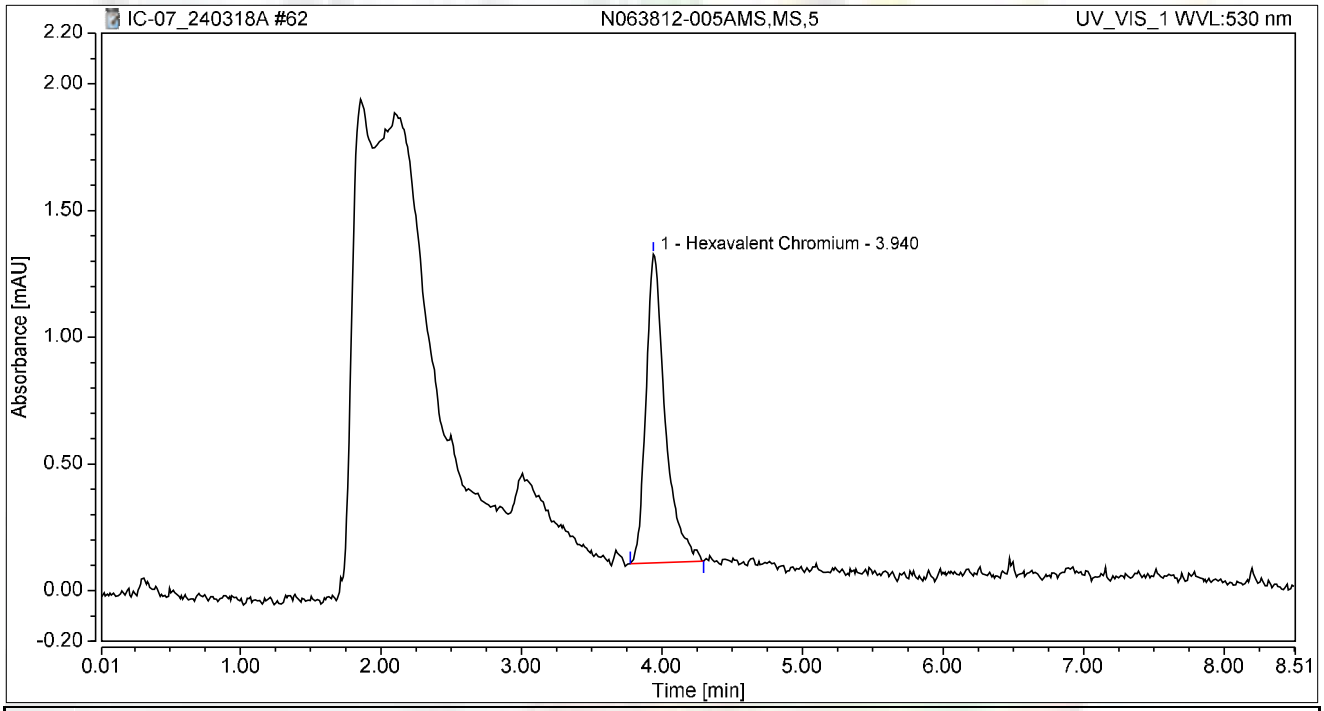
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-005AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 20:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

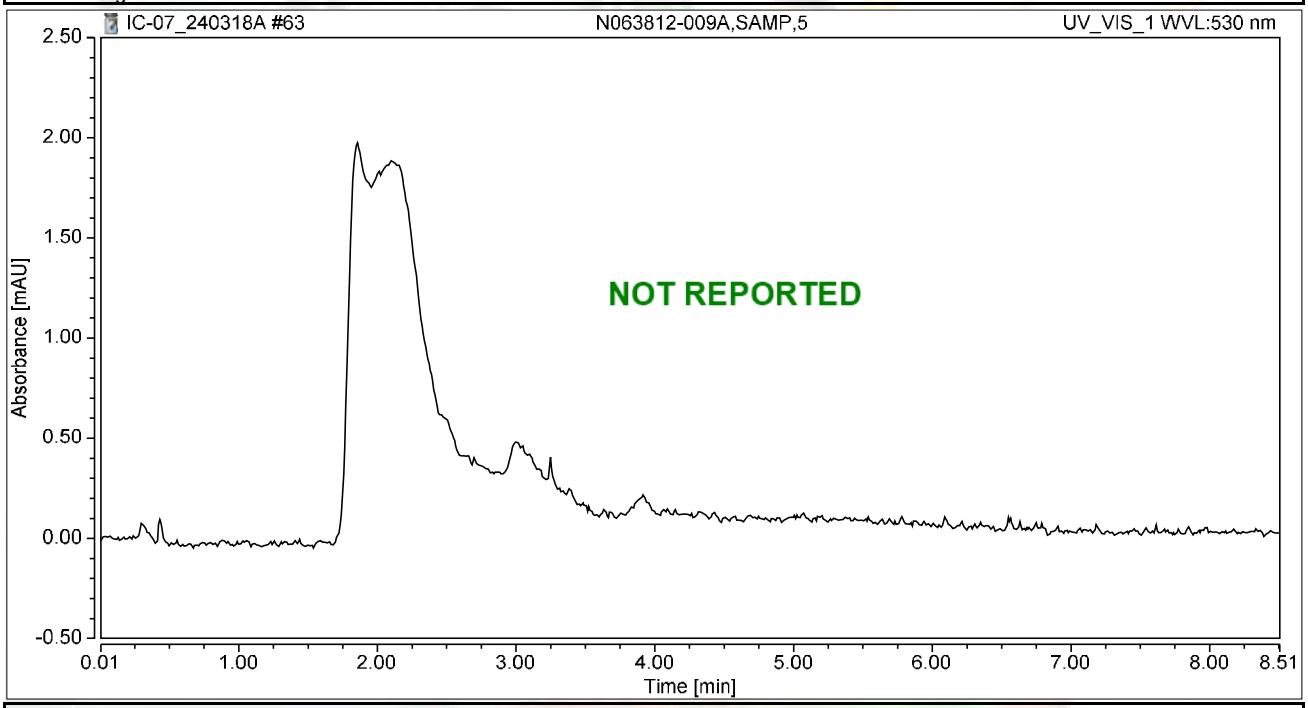
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.194	1.218	100.00	100.00	0.9123
Total:			**0.194**	**1.218**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-009A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 20:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

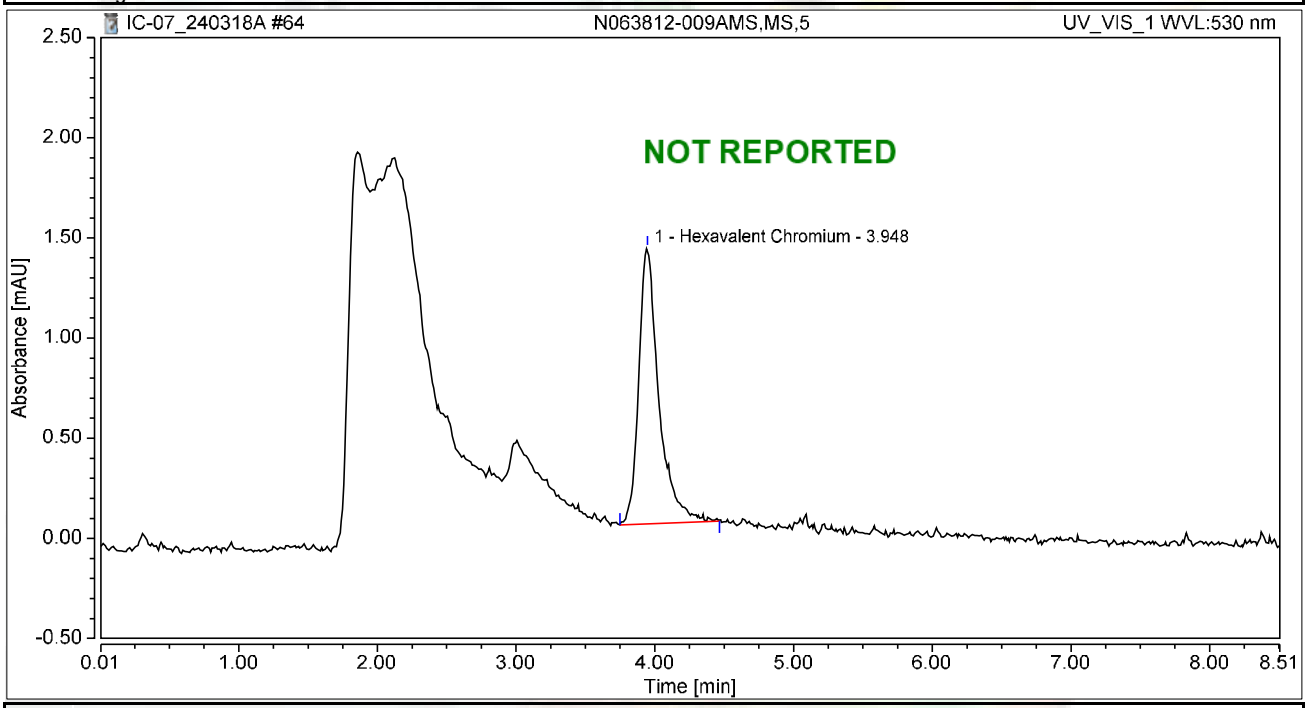
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-009AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 20:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

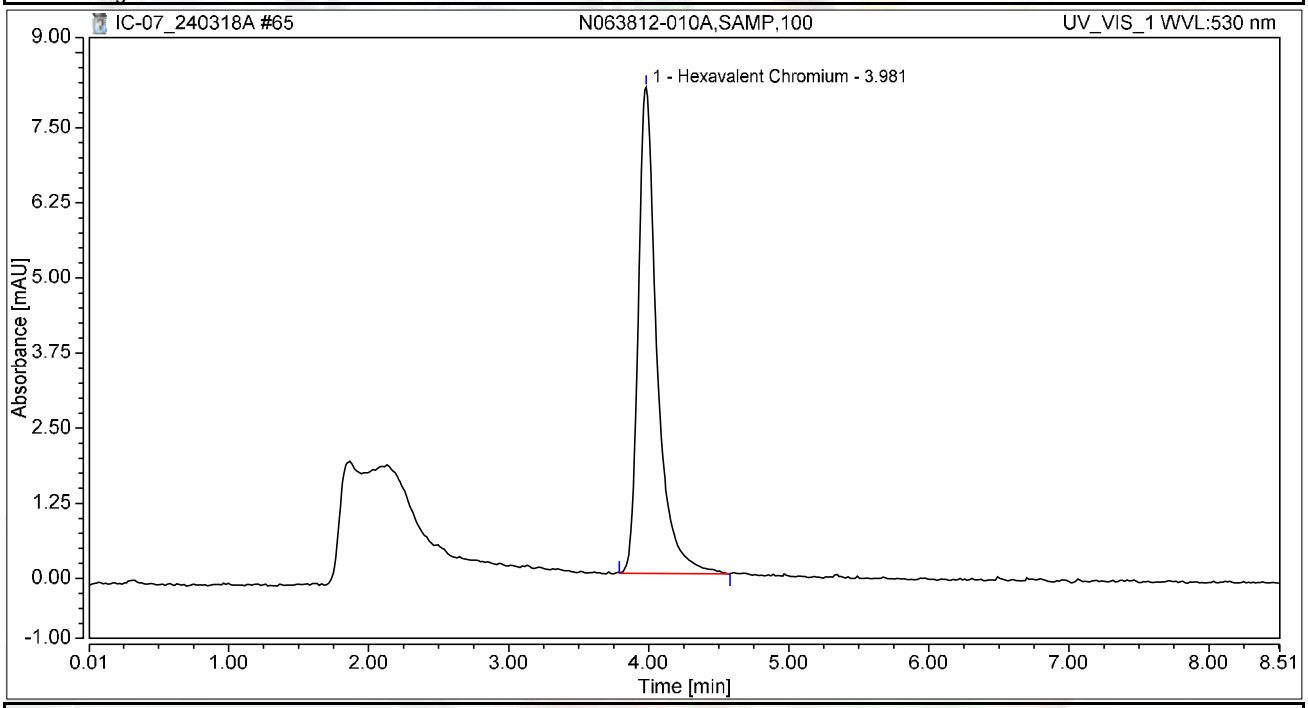
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.232	1.378	100.00	100.00	1.0893
Total:			**0.232**	**1.378**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-010A,SAMP,100**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 20:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

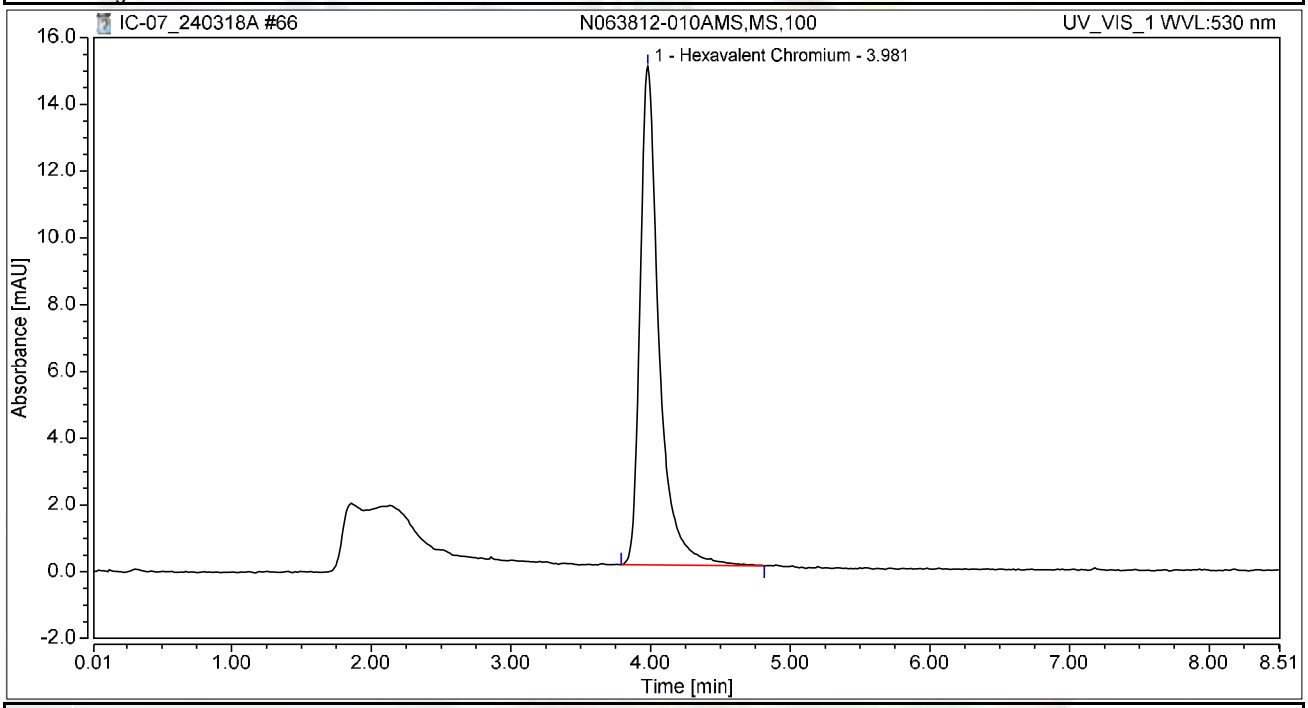
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.260	8.091	100.00	100.00	5.9187
Total:			**1.260**	**8.091**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-010AMS,MS,100**	*Run Time (min):*	**8.49**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 20:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

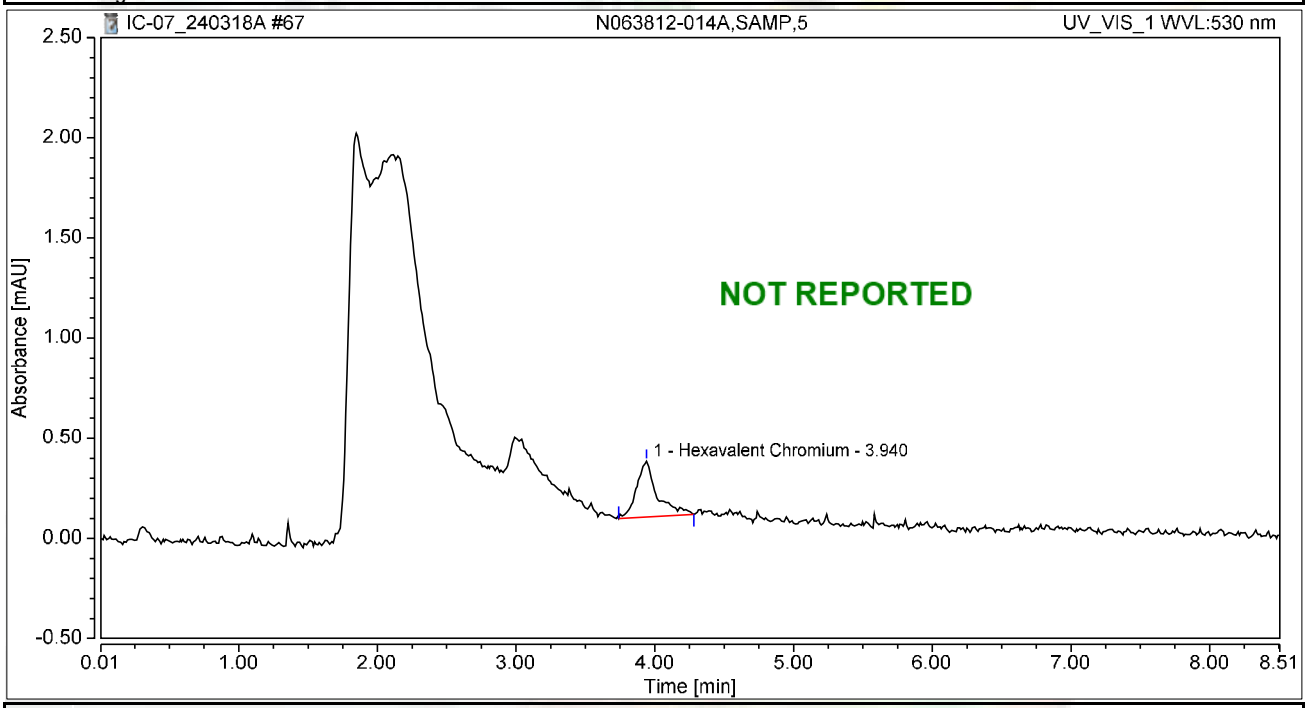
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	2.350	14.929	100.00	100.00	11.0424
Total:			**2.350**	**14.929**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-014A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 21:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

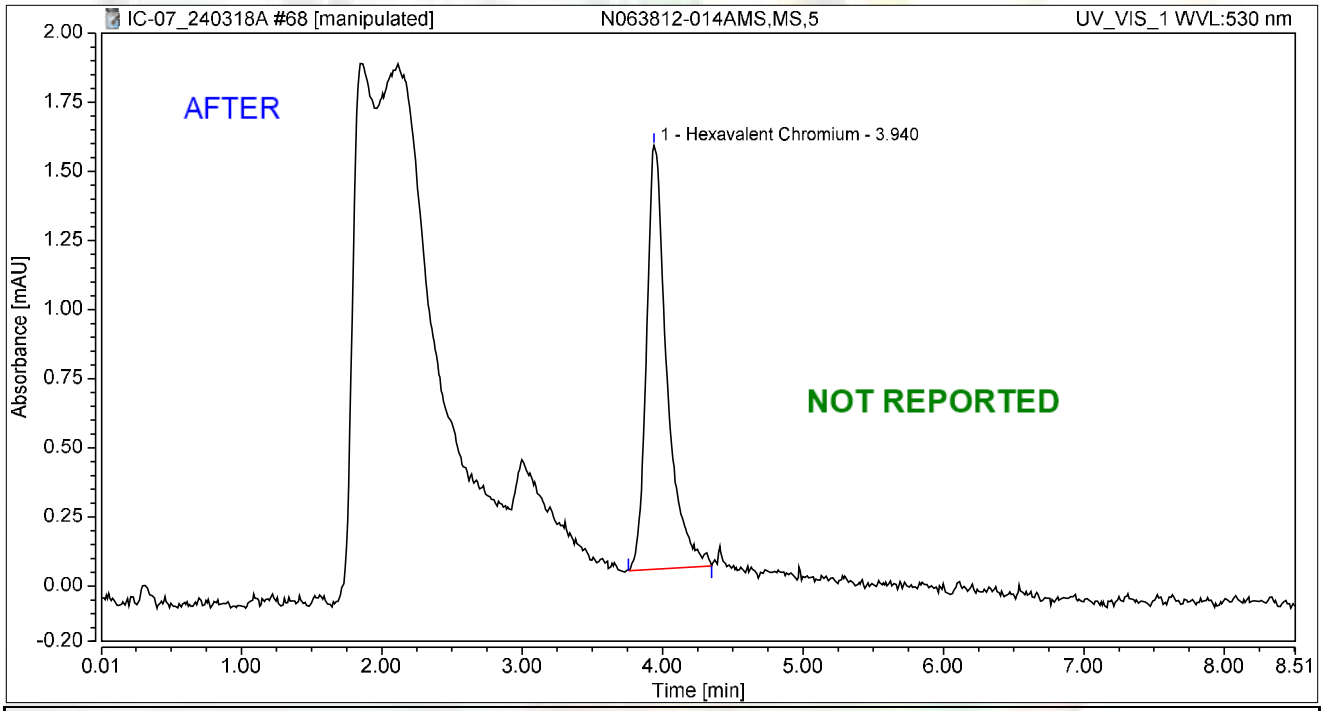
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.048	0.278	100.00	100.00	0.2257
Total:			**0.048**	**0.278**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-014AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 21:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.259	1.533	100.00	100.00	1.2162
Total:			**0.259**	**1.533**	**100.00**	**100.00**	

Reviewed by:

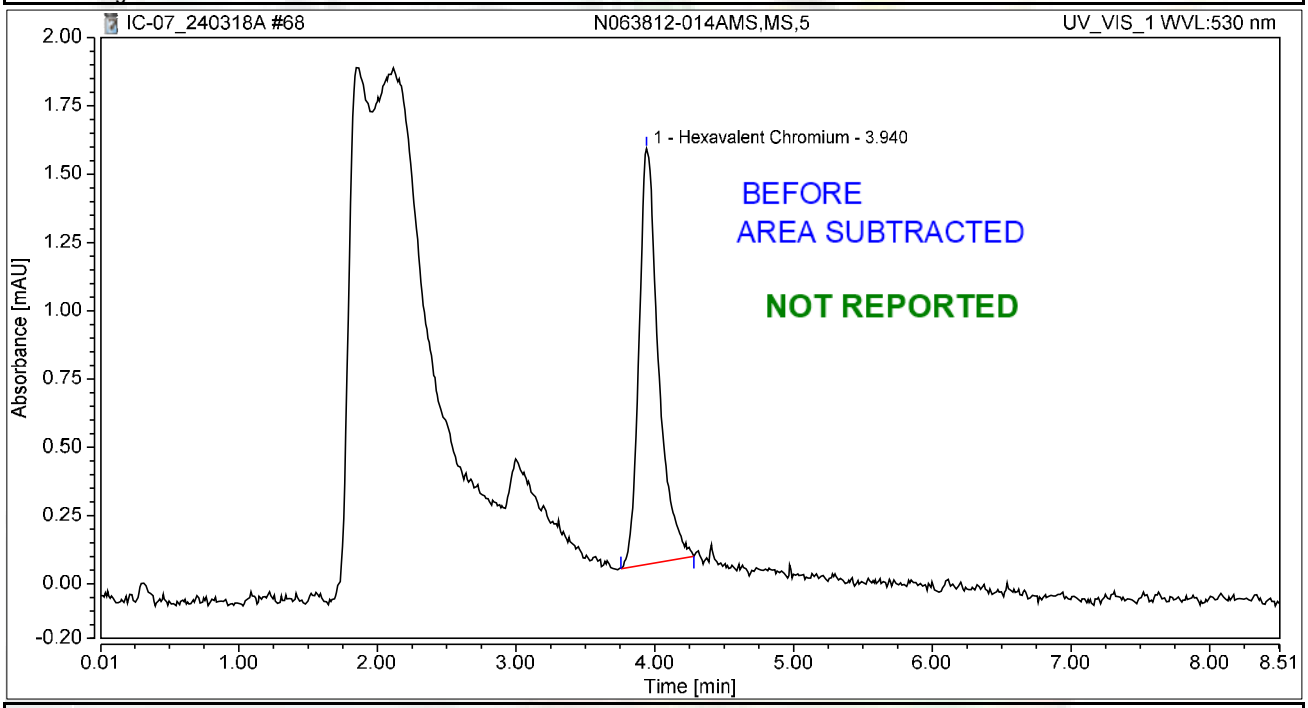
dRocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063812-014AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 21:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

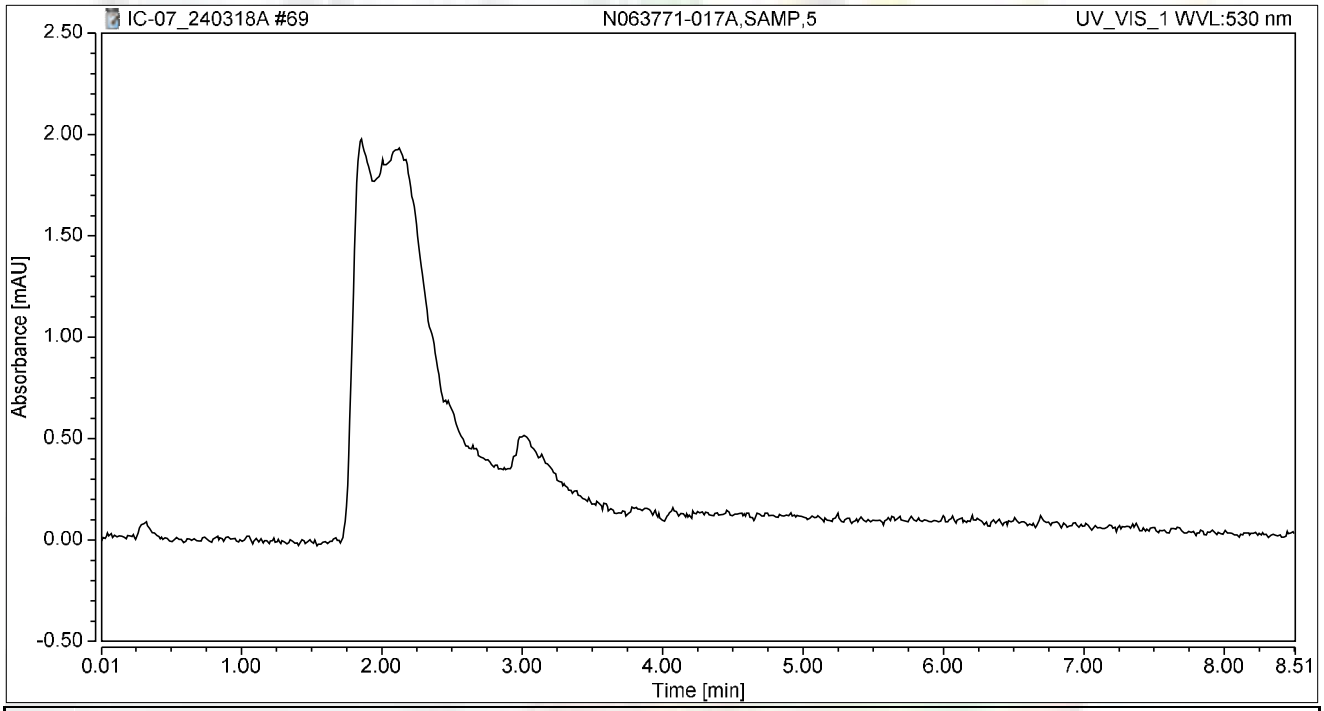
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.249	1.523	100.00	100.00	1.1685
Total:			**0.249**	**1.523**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-017A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 21:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

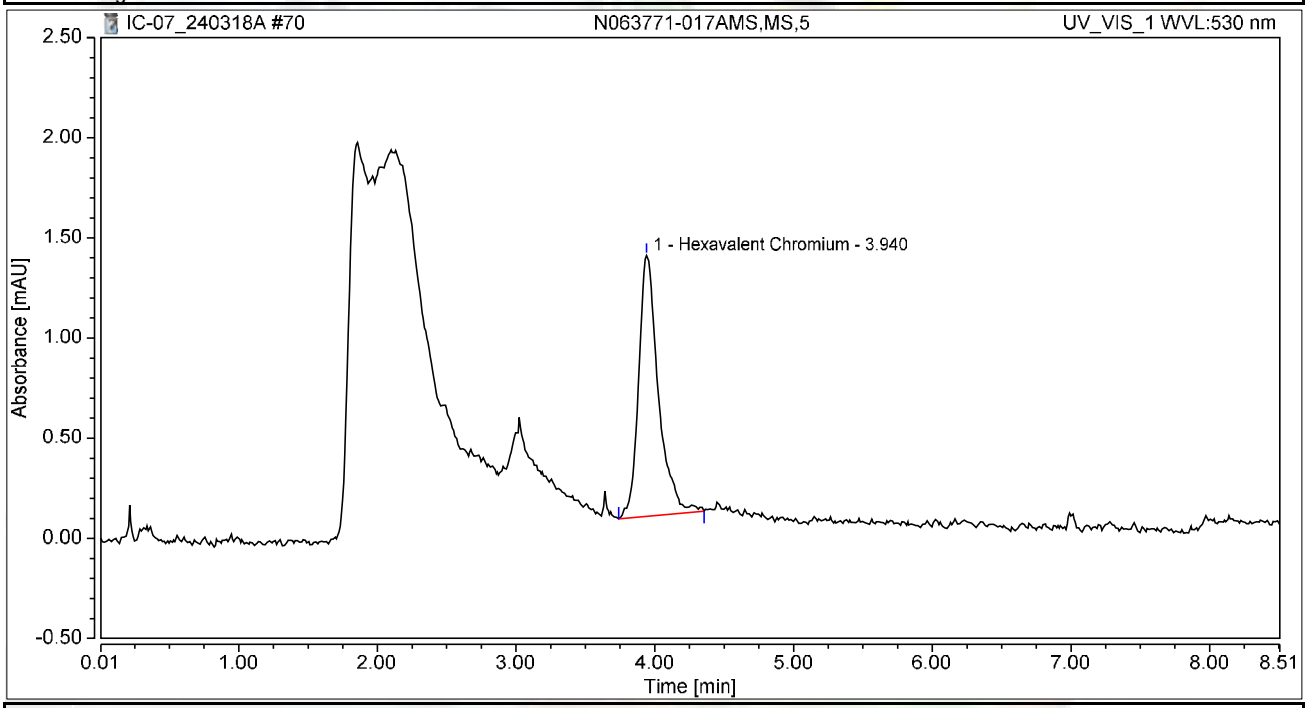
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-017AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 21:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

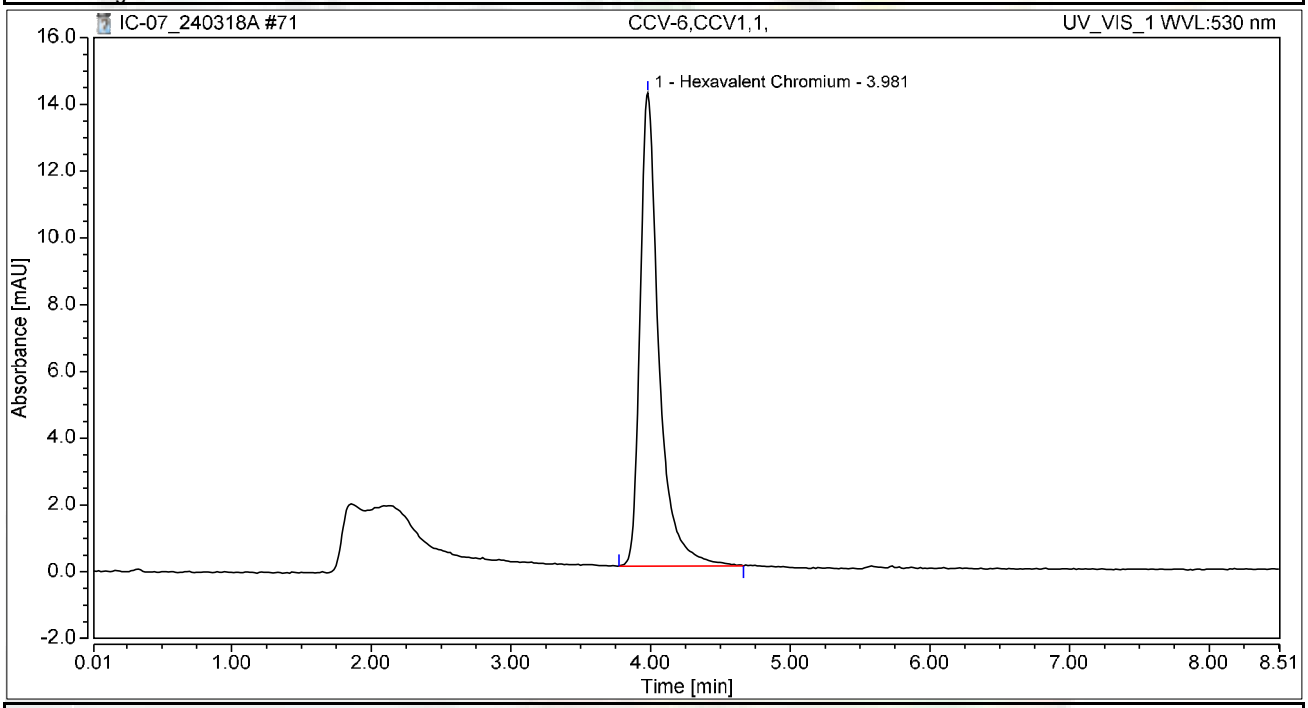
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.215	1.303	100.00	100.00	1.0095
Total:			**0.215**	**1.303**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 21:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

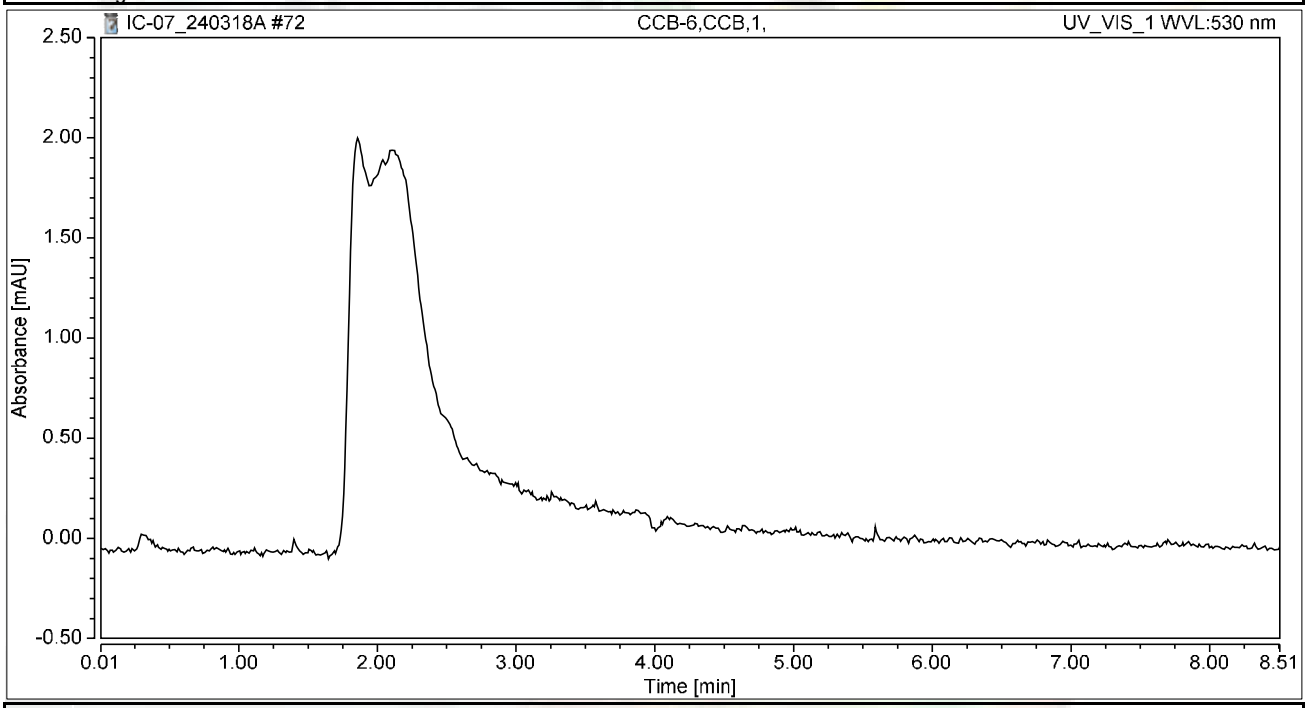
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	2.223	14.175	100.00	100.00	10.4461
Total:			**2.223**	**14.175**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**44**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 21:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

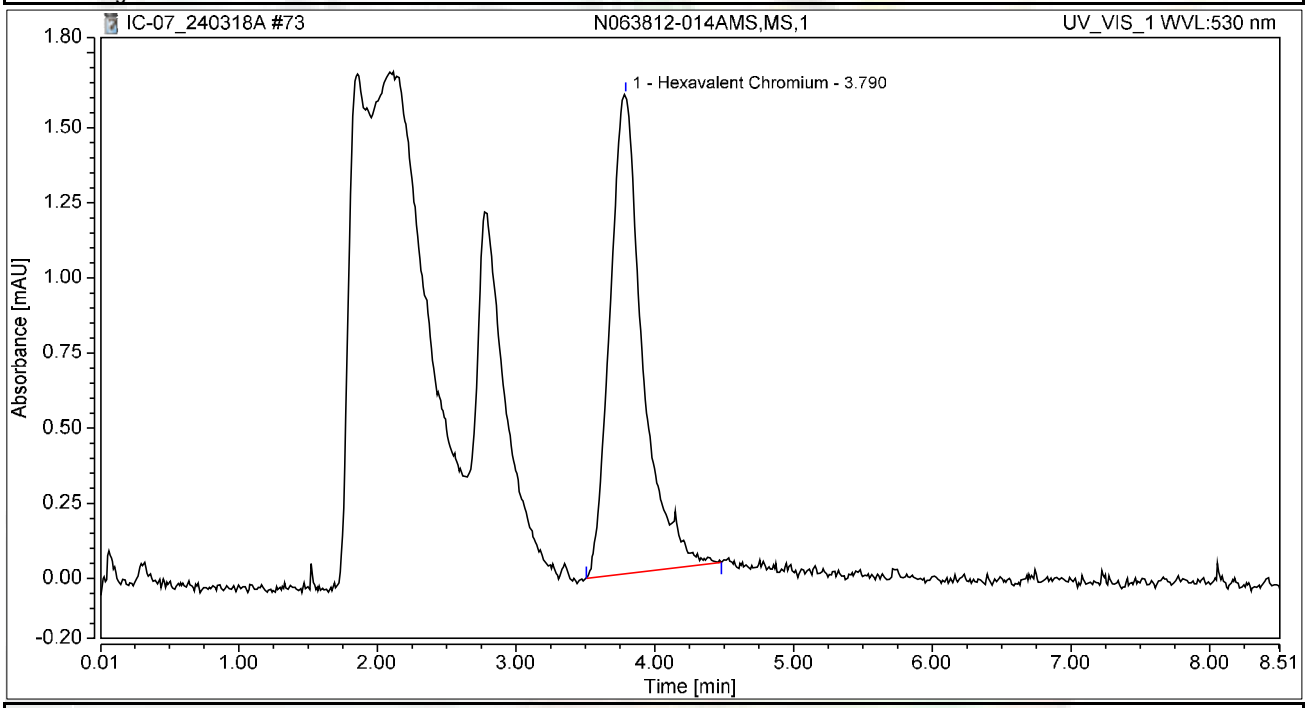
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-014AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**45**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 22:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

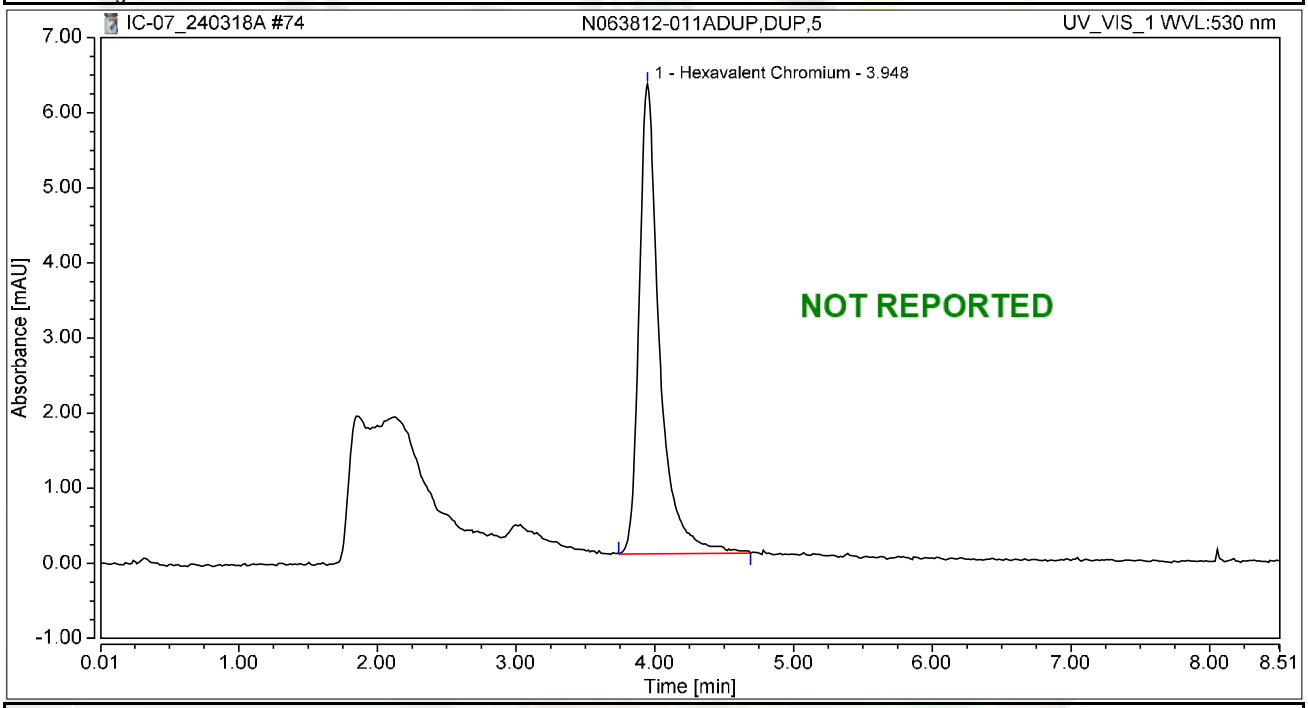
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.436	1.597	100.00	100.00	2.0474
Total:			**0.436**	**1.597**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-011ADUP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**46**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 22:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

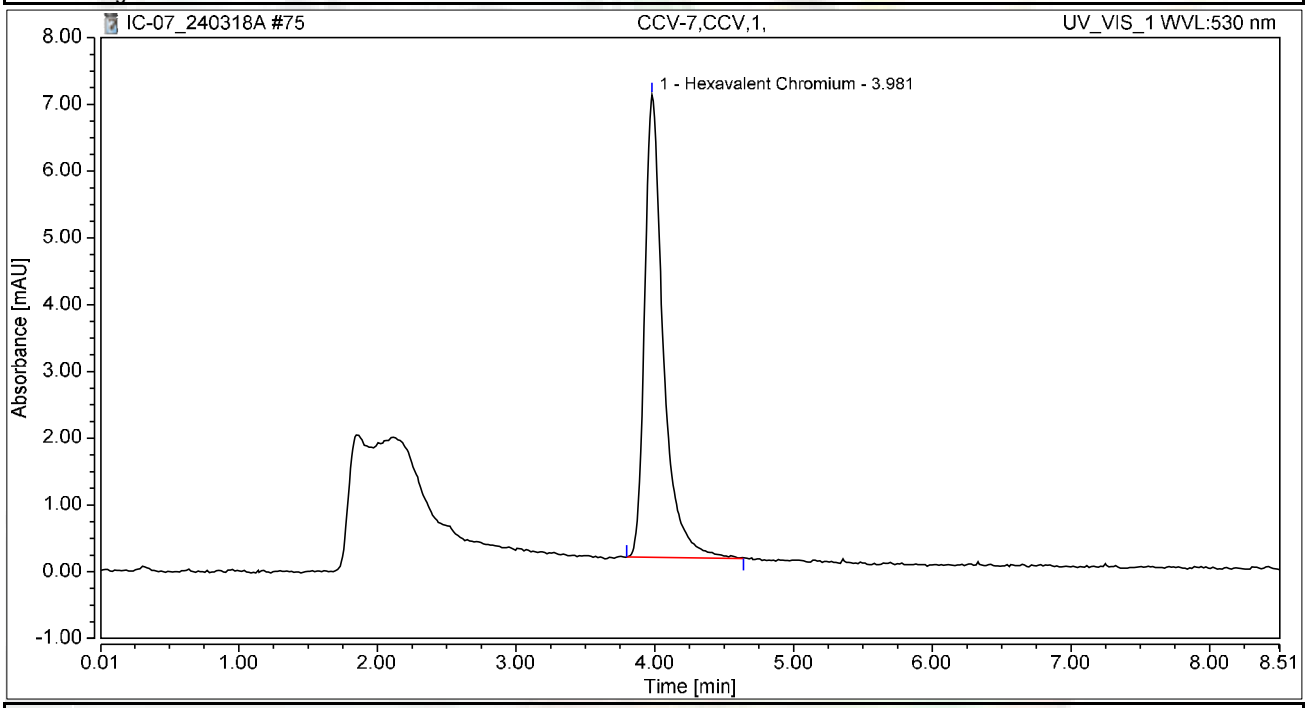
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	1.067	6.256	100.00	100.00	5.0146
Total:			**1.067**	**6.256**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**47**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 22:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

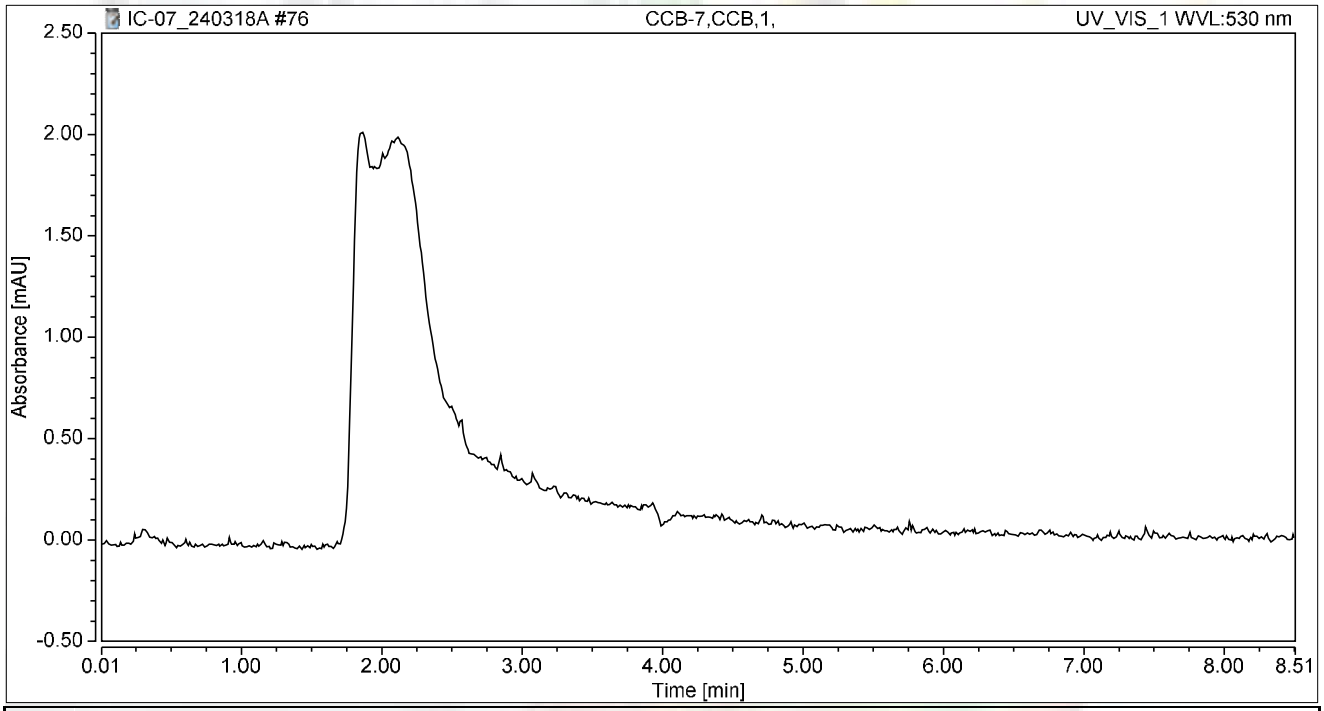
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.081	6.928	100.00	100.00	5.0809
Total:			**1.081**	**6.928**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**48**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 22:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

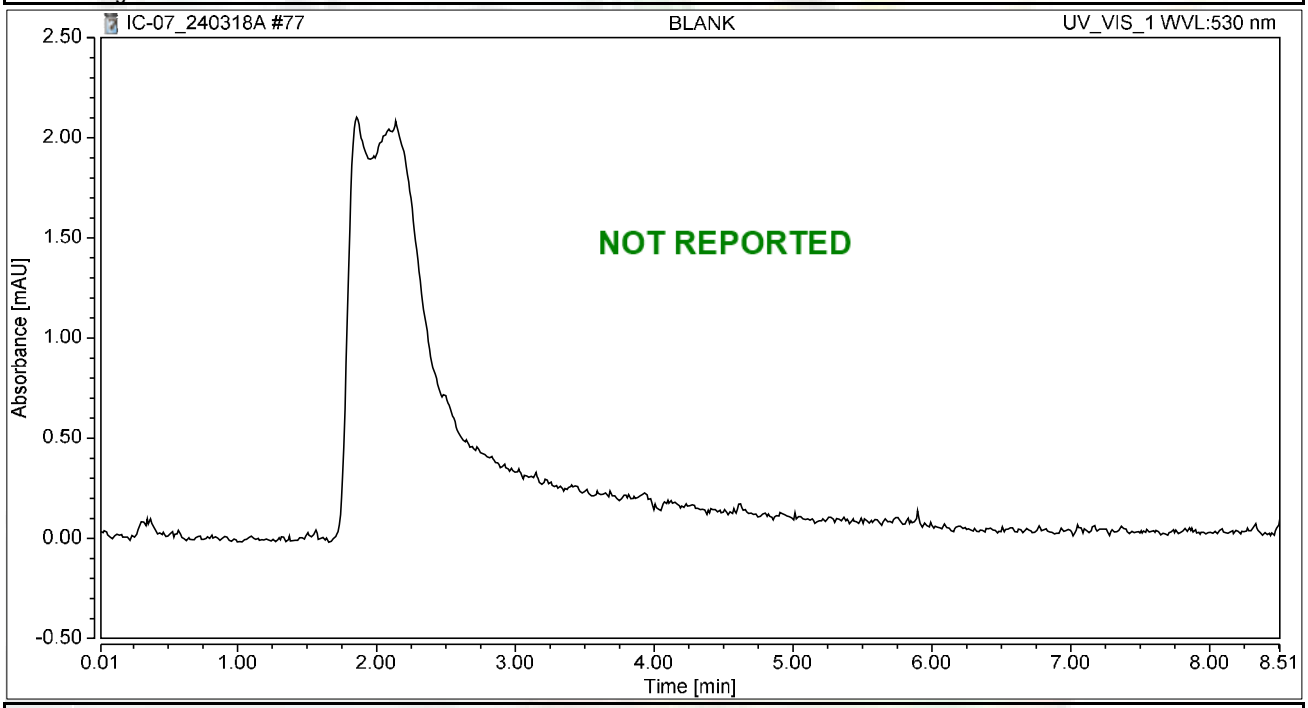
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.49**
Vial Number:	**49**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 22:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

EPA 300.0

IC ARCUS
REV 2.0
011416

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R183609
ASSET #: N063771

Instrument ID: IC-08
Analyst: RBA
Date Analyzed: 3/14/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 3/19/2024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R183613
ASSET #: N063771

Instrument ID: IC-09
Analyst: RBA
Date Analyzed: 3/14/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.		X		X	~~X~~	
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

Detection of Sulfate in CCB1/MB was >1/2PQL. However, N063771 samples were >5X the CCB detection.

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 3/21/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: GROUNDWATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the orignal sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N063771-010B** concentration in mg/L is calculated as follows:

Nitrate, mg/L = 0.0526 * 10

= 0.526

Reporting result in two significant figures,

Nitrate, mg/L = 0.53

Reviewed by:

dMocha 4/16/2024

ANALYSIS RUN LOG

Sequence: IC-08_240223A
Operator: IC-05
Printed: 2/25/2024 4:50:56 PM

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240223	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240223	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240223	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240223	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240223	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240223	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240223	Finished
8	ICV,ICV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240223	Finished
9	ICB,ICB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240223	Finished
10	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240223	Finished
11	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240223	Finished
12	N063297-001B,SAMP,10	Unknown	7	1000.0	Anions Default	EPA 300_0_240223	Finished
13	N063297-001BDUP,DUP,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240223	Finished
14	N063297-001BMS,MS,10	Unknown	9	1000.0	Anions Default	EPA 300_0_240223	Finished
15	N063297-001BMSD,MSD,10	Unknown	10	1000.0	Anions Default	EPA 300_0_240223	Finished
16	N063252-001C,SAMP,2000	Unknown	11	1000.0	Anions Default	EPA 300_0_240223	Finished
17	N063252-001CMS,MS,2000	Unknown	12	1000.0	Anions Default	EPA 300_0_240223	Finished
18	N063248-005B,SAMP,1000	Unknown	13	1000.0	Anions Default	EPA 300_0_240223	Finished
19	N063248-006B,SAMP,2000	Unknown	14	1000.0	Anions Default	EPA 300_0_240223	Finished
20	CCV-1,CCV,1	Unknown	15	1000.0	Anions Default	EPA 300_0_240223	Finished
21	CCB-1,CCB,1	Unknown	16	1000.0	Anions Default	EPA 300_0_240223	Finished
22	N063248-007B,SAMP,2000	Unknown	17	1000.0	Anions Default	EPA 300_0_240223	Finished
23	N063248-008B,SAMP,2000	Unknown	18	1000.0	Anions Default	EPA 300_0_240223	Finished
24	N063248-010C,SAMP,100	Unknown	19	1000.0	Anions Default	EPA 300_0_240223	Finished
25	N063248-011C,SAMP,1000	Unknown	20	1000.0	Anions Default	EPA 300_0_240223	Finished
26	N063248-005B,SAMP,100	Unknown	21	1000.0	Anions Default	EPA 300_0_240223	Finished
27	N063248-006B,SAMP,100	Unknown	22	1000.0	Anions Default	EPA 300_0_240223	Finished
28	N063248-007B,SAMP,100	Unknown	23	1000.0	Anions Default	EPA 300_0_240223	Finished
29	N063248-008B,SAMP,100	Unknown	24	1000.0	Anions Default	EPA 300_0_240223	Finished
30	N063248-010C,SAMP,20	Unknown	25	1000.0	Anions Default	EPA 300_0_240223	Finished
31	N063248-011C,SAMP,100	Unknown	26	1000.0	Anions Default	EPA 300_0_240223	Finished
32	CCV-2,CCV,1	Unknown	27	1000.0	Anions Default	EPA 300_0_240223	Finished
33	CCB-2,CCB,1	Unknown	28	1000.0	Anions Default	EPA 300_0_240223	Finished
34	N063295-005B,SAMP,2000	Unknown	29	1000.0	Anions Default	EPA 300_0_240223	Finished
35	N063295-006B,SAMP,2000	Unknown	30	1000.0	Anions Default	EPA 300_0_240223	Finished
36	N063295-007B,SAMP,2000	Unknown	31	1000.0	Anions Default	EPA 300_0_240223	Finished
37	N063295-008B,SAMP,2000	Unknown	32	1000.0	Anions Default	EPA 300_0_240223	Finished
38	N063295-005B,SAMP,100	Unknown	33	1000.0	Anions Default	EPA 300_0_240223	Finished
39	N063295-006B,SAMP,100	Unknown	34	1000.0	Anions Default	EPA 300_0_240223	Finished
40	N063295-007B,SAMP,100	Unknown	35	1000.0	Anions Default	EPA 300_0_240223	Finished
41	N063295-008B,SAMP,100	Unknown	36	1000.0	Anions Default	EPA 300_0_240223	Finished

Processed by:

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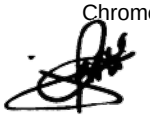


2/25/2024

IC8 RBA 2/25/2024 4:51:54 PM

reviewed by: 2/27/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:07:15 AM	BLANK
2	Std - 0	2/23/2024 9:22:33 AM	IBLANK
3	Std - 1	2/23/2024 9:53:29 AM	STD-LOW
4	Std - 2	2/23/2024 10:08:47 AM	STD
5	Std - 3	2/23/2024 10:24:06 AM	STD
6	Std - 4	2/23/2024 10:39:24 AM	STD
7	Std - 5	2/23/2024 10:54:42 AM	STD-HIGH
8	ICV,ICV,1	2/23/2024 11:10:00 AM	ICV, IWST-240216B
9	ICB,ICB,1	2/23/2024 11:25:18 AM	ICB
10	MB-H2O,MBLK,1	2/23/2024 11:40:36 AM	MB
11	LCS-H2O,LCS,1	2/23/2024 11:55:54 AM	LCS, IWST-240216B
12	N063297-001B,SAMP,10	2/23/2024 1:45:16 PM	SAMP,1>10mL,
13	N063297-001BDUP,DUP,10	2/23/2024 2:00:34 PM	DUP,1>10mL,
14	N063297-001BMS,MS,10	2/23/2024 2:15:52 PM	MS,1>10mL,
15	N063297-001BMSD,MSD,10	2/23/2024 2:31:10 PM	MSD,1>10mL,
16	N063252-001C,SAMP,2000	2/23/2024 2:46:27 PM	SAMP,0.005>10mL,
17	N063252-001CMS,MS,2000	2/23/2024 3:01:45 PM	MS,0.005>10mL,
18	N063248-005B,SAMP,1000	2/23/2024 4:06:07 PM	SAMP,0.01>10mL,
19	N063248-006B,SAMP,2000	2/23/2024 4:21:25 PM	SAMP,0.005>10mL,
20	CCV-1,CCV,1	2/23/2024 4:36:43 PM	CCV, IWST-240216A
21	CCB-1,CCB,1	2/23/2024 4:52:01 PM	CCB
22	N063248-007B,SAMP,2000	2/23/2024 5:07:19 PM	SAMP,0.005>10mL,
23	N063248-008B,SAMP,2000	2/23/2024 5:22:37 PM	SAMP,0.005>10mL,
24	N063248-010C,SAMP,100	2/23/2024 5:37:54 PM	SAMP,0.1>10mL,
25	N063248-011C,SAMP,1000	2/23/2024 5:53:13 PM	SAMP,0.01>10mL,
26	N063248-005B,SAMP,100	2/23/2024 6:08:32 PM	SAMP,0.1>10mL,
27	N063248-006B,SAMP,100	2/23/2024 6:23:50 PM	SAMP,0.1>10mL,
28	N063248-007B,SAMP,100	2/23/2024 6:39:07 PM	SAMP,0.1>10mL,
29	N063248-008B,SAMP,100	2/23/2024 6:54:26 PM	SAMP,0.1>10mL,
30	N063248-010C,SAMP,20	2/23/2024 7:09:45 PM	SAMP,0.5>10mL,
31	N063248-011C,SAMP,100	2/23/2024 7:25:03 PM	SAMP,0.1>10mL,
32	CCV-2,CCV,1	2/23/2024 7:40:21 PM	CCV, IWST-240216A
33	CCB-2,CCB,1	2/23/2024 7:55:39 PM	CCB
34	N063295-005B,SAMP,2000	2/23/2024 8:10:57 PM	SAMP,0.005>10mL,
35	N063295-006B,SAMP,2000	2/23/2024 8:26:16 PM	SAMP,0.005>10mL,
36	N063295-007B,SAMP,2000	2/23/2024 8:41:34 PM	SAMP,0.005>10mL,
37	N063295-008B,SAMP,2000	2/23/2024 8:56:52 PM	SAMP,0.005>10mL,
38	N063295-005B,SAMP,100	2/23/2024 9:12:11 PM	SAMP,0.1>10mL,
39	N063295-006B,SAMP,100	2/23/2024 9:27:28 PM	SAMP,0.1>10mL,
40	N063295-007B,SAMP,100	2/23/2024 9:42:47 PM	SAMP,0.1>10mL,
41	N063295-008B,SAMP,100	2/23/2024 9:58:05 PM	SAMP,0.1>10mL,

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	N063253-001C,SAMP,5000	Unknown	37	1000.0	Anions Default	EPA 300_0_240223	Finished
43	N063253-001C,SAMP,10000	Unknown	38	1000.0	Anions Default	EPA 300_0_240223	Finished
44	CCV-3,CCV,1	Unknown	39	1000.0	Anions Default	EPA 300_0_240223	Finished
45	CCB-3,CCB,1	Unknown	40	1000.0	Anions Default	EPA 300_0_240223	Finished
46	N063256-001C,SAMP,100	Unknown	41	1000.0	Anions Default	EPA 300_0_240223	Finished
47	N063254-001C,SAMP,10000	Unknown	42	1000.0	Anions Default	EPA 300_0_240223	Finished
48	N063255-001C,SAMP,10000	Unknown	43	1000.0	Anions Default	EPA 300_0_240223	Finished
49	N063257-001C,SAMP,10000	Unknown	44	1000.0	Anions Default	EPA 300_0_240223	Finished
50	N063258-001C,SAMP,10000	Unknown	45	1000.0	Anions Default	EPA 300_0_240223	Finished
51	CCV-4,CCV,1	Unknown	46	1000.0	Anions Default	EPA 300_0_240223	Finished
52	CCB-4,CCB,1	Unknown	47	1000.0	Anions Default	EPA 300_0_240223	Finished

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	N063253-001C,SAMP,5000	2/23/2024 10:13:23 PM	SAMP,0.002>10mL,
43	N063253-001C,SAMP,10000	2/23/2024 10:28:42 PM	SAMP,0.001>10mL,
44	CCV-3,CCV,1	2/23/2024 10:43:59 PM	CCV, IWST-240216A
45	CCB-3,CCB,1	2/23/2024 10:59:17 PM	CCB
46	N063256-001C,SAMP,100	2/23/2024 11:14:35 PM	SAMP,0.1>10mL,
47	N063254-001C,SAMP,10000	2/23/2024 11:29:53 PM	SAMP,0.001>10mL,
48	N063255-001C,SAMP,10000	2/23/2024 11:45:11 PM	SAMP,0.001>10mL,
49	N063257-001C,SAMP,10000	2/24/2024 12:00:28 AM	SAMP,0.001>10mL,
50	N063258-001C,SAMP,10000	2/24/2024 12:15:46 AM	SAMP,0.001>10mL,
51	CCV-4,CCV,1	2/24/2024 12:31:04 AM	CCV, IWST-240216A
52	CCB-4,CCB,1	2/24/2024 12:46:23 AM	CCB

Sequence: IC-08_240314A
Operator: IC-05
Printed: 3/14/2024 10:23:11 PM

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 44
Created: 3/13/2024 12:13:21 PM by IC-05
Last Update: 3/14/2024 10:21:56 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240223	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240223	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240223	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240223	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240223	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240223	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240223	Finished
8	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240223	Finished
9	CCV-1,CCV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240223	Finished
10	CCB-1,CCB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240223	Finished
11	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240223	Finished
12	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240223	Finished
13	N063771-001B,SAMP,10	Unknown	6	1000.0	Anions Default	EPA 300_0_240223	Finished
14	N063771-002B,SAMP,10	Unknown	7	1000.0	Anions Default	EPA 300_0_240223	Finished
15	N063771-003B,SAMP,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240223	Finished
16	N063771-004B,SAMP,10	Unknown	9	1000.0	Anions Default	EPA 300_0_240223	Finished
17	N063771-005B,SAMP,10	Unknown	10	1000.0	Anions Default	EPA 300_0_240223	Finished
18	N063771-006B,SAMP,10	Unknown	11	1000.0	Anions Default	EPA 300_0_240223	Finished
19	N063771-007B,SAMP,10	Unknown	12	1000.0	Anions Default	EPA 300_0_240223	Finished
20	N063771-009B,SAMP,10	Unknown	13	1000.0	Anions Default	EPA 300_0_240223	Finished
21	CCV-2,CCV,1	Unknown	14	1000.0	Anions Default	EPA 300_0_240223	Finished
22	CCB-2,CCB,1	Unknown	15	1000.0	Anions Default	EPA 300_0_240223	Finished
23	N063771-017B,SAMP,10	Unknown	16	1000.0	Anions Default	EPA 300_0_240223	Finished
24	N063771-010B,SAMP,10	Unknown	17	1000.0	Anions Default	EPA 300_0_240223	Finished
25	N063771-011B,SAMP,10	Unknown	18	1000.0	Anions Default	EPA 300_0_240223	Finished
26	N063771-012B,SAMP,10	Unknown	19	1000.0	Anions Default	EPA 300_0_240223	Finished
27	N063784-001G,SAMP,5	Unknown	20	1000.0	Anions Default	EPA 300_0_240223	Finished
28	N063785-006B,SAMP,10	Unknown	20	1000.0	Anions Default	EPA 300_0_240223	Finished
29	N063771-013B,SAMP,10	Unknown	20	1000.0	Anions Default	EPA 300_0_240223	Finished
30	N063771-014B,SAMP,10	Unknown	21	1000.0	Anions Default	EPA 300_0_240223	Finished
31	N063771-015B,SAMP,10	Unknown	22	1000.0	Anions Default	EPA 300_0_240223	Finished
32	N063771-016B,SAMP,10	Unknown	23	1000.0	Anions Default	EPA 300_0_240223	Finished
33	CCV-3,CCV,1	Unknown	26	1000.0	Anions Default	EPA 300_0_240223	Finished
34	CCB-3,CCB,1	Unknown	27	1000.0	Anions Default	EPA 300_0_240223	Finished
35	N063771-018B,SAMP,10	Unknown	24	1000.0	Anions Default	EPA 300_0_240223	Finished
36	N063771-002BMS,MS,10	Unknown	25	1000.0	Anions Default	EPA 300_0_240223	Finished
37	N063771-002BMSD,MSD,10	Unknown	28	1000.0	Anions Default	EPA 300_0_240223	Finished
38	N063771-004BDUP,DUP,10	Unknown	29	1000.0	Anions Default	EPA 300_0_240223	Finished
39	N063771-004BMS,MS,10	Unknown	30	1000.0	Anions Default	EPA 300_0_240223	Finished
40	N063784-001GDUP,DUP,5	Unknown	31	1000.0	Anions Default	EPA 300_0_240223	Finished
41	N063784-001GMS,MS,5	Unknown	31	1000.0	Anions Default	EPA 300_0_240223	Finished

Processed by:

Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)

reviewed by: 3/17/2024

3/14/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 44
Created: 3/13/2024 12:13:21 PM by IC-05
Last Update: 3/14/2024 10:21:56 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:07:15 AM	BLANK
2	Std - 0	2/23/2024 9:22:33 AM	IBLANK
3	Std - 1	2/23/2024 9:53:29 AM	STD-LOW
4	Std - 2	2/23/2024 10:08:47 AM	STD
5	Std - 3	2/23/2024 10:24:06 AM	STD
6	Std - 4	2/23/2024 10:39:24 AM	STD
7	Std - 5	2/23/2024 10:54:42 AM	STD-HIGH
8	BLANK	3/14/2024 6:36:43 AM	BLANK
9	CCV-1,CCV,1	3/14/2024 6:52:01 AM	CCV, IWST-240308A
10	CCB-1,CCB,1	3/14/2024 7:07:19 AM	CCB
11	MB-H2O,MBLK,1	3/14/2024 7:22:38 AM	MB
12	LCS-H2O,LCS,1	3/14/2024 7:37:56 AM	LCS, IWST-240308B
13	N063771-001B,SAMP,10	3/14/2024 9:23:14 AM	SAMP,1>10mL,
14	N063771-002B,SAMP,10	3/14/2024 9:38:32 AM	SAMP,1>10mL,
15	N063771-003B,SAMP,10	3/14/2024 9:53:51 AM	SAMP,1>10mL,
16	N063771-004B,SAMP,10	3/14/2024 10:09:09 AM	SAMP,1>10mL,
17	N063771-005B,SAMP,10	3/14/2024 10:24:27 AM	SAMP,1>10mL,
18	N063771-006B,SAMP,10	3/14/2024 10:39:44 AM	SAMP,1>10mL,
19	N063771-007B,SAMP,10	3/14/2024 10:55:02 AM	SAMP,1>10mL,
20	N063771-009B,SAMP,10	3/14/2024 11:10:20 AM	SAMP,1>10mL,
21	CCV-2,CCV,1	3/14/2024 11:25:39 AM	CCV, IWST-240308A
22	CCB-2,CCB,1	3/14/2024 11:40:57 AM	CCB
23	N063771-017B,SAMP,10	3/14/2024 11:56:15 AM	SAMP,1>10mL,
24	N063771-010B,SAMP,10	3/14/2024 12:11:33 PM	SAMP,1>10mL,
25	N063771-011B,SAMP,10	3/14/2024 12:26:51 PM	SAMP,1>10mL,
26	N063771-012B,SAMP,10	3/14/2024 12:42:10 PM	SAMP,1>10mL,
27	N063784-001G,SAMP,5	3/14/2024 1:28:57 PM	SAMP,2>10mL,
28	N063785-006B,SAMP,10	3/14/2024 1:44:16 PM	SAMP,1>10mL,
29	N063771-013B,SAMP,10	3/14/2024 1:59:34 PM	SAMP,1>10mL,
30	N063771-014B,SAMP,10	3/14/2024 2:14:52 PM	SAMP,1>10mL,
31	N063771-015B,SAMP,10	3/14/2024 2:30:10 PM	SAMP,1>10mL,
32	N063771-016B,SAMP,10	3/14/2024 2:45:27 PM	SAMP,1>10mL,
33	CCV-3,CCV,1	3/14/2024 3:00:45 PM	CCV, IWST-240308A
34	CCB-3,CCB,1	3/14/2024 3:16:04 PM	CCB
35	N063771-018B,SAMP,10	3/14/2024 3:31:22 PM	SAMP,1>10mL,
36	N063771-002BMS,MS,10	3/14/2024 3:46:40 PM	MS,1>10mL,
37	N063771-002BMSD,MSD,10	3/14/2024 4:01:58 PM	MSD,1>10mL,
38	N063771-004BDUP,DUP,10	3/14/2024 4:17:16 PM	DUP,1>10mL,
39	N063771-004BMS,MS,10	3/14/2024 4:32:35 PM	MS,1>10mL,
40	N063784-001GDUP,DUP,5	3/14/2024 4:47:52 PM	DUP,2>10mL,
41	N063784-001GMS,MS,5	3/14/2024 5:03:10 PM	MS,2>10mL,

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 44
Created: 3/13/2024 12:13:21 PM by IC-05
Last Update: 3/14/2024 10:21:56 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	N063784-001GMSD,MSD,5	Unknown	32	1000.0	Anions Default	EPA 300_0_240223	Finished
43	CCV-4,CCV,1	Unknown	31	1000.0	Anions Default	EPA 300_0_240223	Finished
44	CCB-4,CCB,1	Unknown	32	1000.0	Anions Default	EPA 300_0_240223	Finished

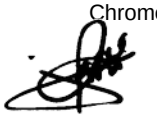
Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 44
Created: 3/13/2024 12:13:21 PM by IC-05
Last Update: 3/14/2024 10:21:56 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	N063784-001GMSD,MSD,5	3/14/2024 5:18:28 PM	MSD,2>10mL,
43	CCV-4,CCV,1	3/14/2024 5:33:46 PM	CCV, IWST-240308A
44	CCB-4,CCB,1	3/14/2024 5:49:04 PM	CCB

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/23/2024 9:04:47 AM by IC-05
Last Update: 2/25/2024 7:08:17 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
2	Std - 0	Standard	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
3	Std - 1	Standard	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
4	Std - 2	Standard	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
5	Std - 3	Standard	3	1000.0	Anions_Default	EPA 300_0_240223A	Finished
6	Std - 4	Standard	4	1000.0	Anions_Default	EPA 300_0_240223A	Finished
7	Std - 5	Standard	5	1000.0	Anions_Default	EPA 300_0_240223A	Finished
8	ICV,ICV,1	Unknown	6	1000.0	Anions_Default	EPA 300_0_240223A	Finished
9	ICB,ICB,1	Unknown	7	1000.0	Anions_Default	EPA 300_0_240223A	Finished
10	MB-H2O,MBLK,1	Unknown	8	1000.0	Anions_Default	EPA 300_0_240223A	Finished
11	LCS-H2O,LCS,1	Unknown	9	1000.0	Anions_Default	EPA 300_0_240223A	Finished
12	N063297-001B,SAMP,5	Unknown	11	1000.0	Anions_Default	EPA 300_0_240223A	Finished
13	N063297-002C,SAMP,20	Unknown	12	1000.0	Anions_Default	EPA 300_0_240223A	Finished
14	N063297-003C,SAMP,10	Unknown	13	1000.0	Anions_Default	EPA 300_0_240223A	Finished
15	N063295-008B,SAMP,10	Unknown	14	1000.0	Anions_Default	EPA 300_0_240223A	Finished
16	N063295-008BMS,MS,10	Unknown	15	1000.0	Anions_Default	EPA 300_0_240223A	Finished
17	N063295-008BMSD,MSD,10	Unknown	16	1000.0	Anions_Default	EPA 300_0_240223A	Finished
18	N063295-005B,SAMP,10	Unknown	17	1000.0	Anions_Default	EPA 300_0_240223A	Finished
19	N063295-006B,SAMP,10	Unknown	18	1000.0	Anions_Default	EPA 300_0_240223A	Finished
20	CCV-1,CCV,1	Unknown	19	1000.0	Anions_Default	EPA 300_0_240223A	Finished
21	CCB-1,CCB,1	Unknown	20	1000.0	Anions_Default	EPA 300_0_240223A	Finished
22	N063295-007B,SAMP,10	Unknown	21	1000.0	Anions_Default	EPA 300_0_240223A	Finished
23	N063295-008BDUP,DUP,10	Unknown	22	1000.0	Anions_Default	EPA 300_0_240223A	Finished
24	N063297-001BMS,MS,5	Unknown	23	1000.0	Anions_Default	EPA 300_0_240223A	Finished
25	N063297-001BMSD,MSD,5	Unknown	24	1000.0	Anions_Default	EPA 300_0_240223A	Finished
26	N063297-001BDUP,DUP,5	Unknown	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
27	N063297-001B,SAMP,10	Unknown	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
28	N063303-001C,SAMP,10	Unknown	3	1000.0	Anions_Default	EPA 300_0_240223A	Finished
29	N063303-002C,SAMP,10	Unknown	4	1000.0	Anions_Default	EPA 300_0_240223A	Finished
30	N063303-006C,SAMP,10	Unknown	5	1000.0	Anions_Default	EPA 300_0_240223A	Finished
31	N063303-008C,SAMP,10	Unknown	6	1000.0	Anions_Default	EPA 300_0_240223A	Finished
32	CCV-2,CCV,1	Unknown	7	1000.0	Anions_Default	EPA 300_0_240223A	Finished
33	CCB-2,CCB,1	Unknown	8	1000.0	Anions_Default	EPA 300_0_240223A	Finished
34	N063297-003BMS,MS,10	Unknown	9	1000.0	Anions_Default	EPA 300_0_240223A	Finished
35	N063256-001C,SAMP,20	Unknown	10	1000.0	Anions_Default	EPA 300_0_240223A	Finished
36	BLANK	Unknown	11	1000.0	Anions_Default	EPA 300_0_240223A	Finished
37	N063259-001C,SAMP,50	Unknown	12	1000.0	Anions_Default	EPA 300_0_240223A	Finished
38	BLANK	Unknown	13	1000.0	Anions_Default	EPA 300_0_240223A	Finished
39	N063260-001C,SAMP,100	Unknown	14	1000.0	Anions_Default	EPA 300_0_240223A	Finished
40	BLANK	Unknown	15	1000.0	Anions_Default	EPA 300_0_240223A	Finished
41	N063261-001C,SAMP,100	Unknown	16	1000.0	Anions_Default	EPA 300_0_240223A	Finished

Processed by:
Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)



2/25/2024

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/23/2024 9:04:47 AM by IC-05
Last Update: 2/25/2024 7:08:17 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:06:35 AM	BLANK
2	Std - 0	2/23/2024 9:21:54 AM	IBLANK
3	Std - 1	2/23/2024 9:54:20 AM	STD-LOW
4	Std - 2	2/23/2024 10:09:39 AM	STD
5	Std - 3	2/23/2024 10:25:35 AM	STD
6	Std - 4	2/23/2024 10:41:31 AM	STD
7	Std - 5	2/23/2024 10:57:27 AM	STD-HIGH 240216B
8	ICV,ICV,1	2/23/2024 11:13:23 AM	ICV, IWST-~~240131B~~
9	ICB,ICB,1	2/23/2024 11:29:18 AM	ICB
10	MB-H2O,MBLK,1	2/23/2024 11:45:14 AM	MB 240216B
11	LCS-H2O,LCS,1	2/23/2024 12:01:09 PM	LCS IWST-~~240131B~~
12	N063297-001B,SAMP,5	2/23/2024 12:17:04 PM	SAMP,2>10mL,
13	N063297-002C,SAMP,20	2/23/2024 12:33:00 PM	SAMP,0.5>10mL,
14	N063297-003C,SAMP,10	2/23/2024 12:48:55 PM	SAMP,1>10mL,
15	N063295-008B,SAMP,10	2/23/2024 1:04:51 PM	SAMP,1>10mL,
16	N063295-008BMS,MS,10	2/23/2024 1:20:46 PM	MS,1>10mL,
17	N063295-008BMSD,MSD,10	2/23/2024 1:36:43 PM	MSD,1>10mL,
18	N063295-005B,SAMP,10	2/23/2024 1:52:37 PM	SAMP,1>10mL,
19	N063295-006B,SAMP,10	2/23/2024 2:08:33 PM	SAMP,1>10mL,240216A
20	CCV-1,CCV,1	2/23/2024 2:24:29 PM	CCV, IWST-~~240131A~~
21	CCB-1,CCB,1	2/23/2024 2:40:25 PM	CCB
22	N063295-007B,SAMP,10	2/23/2024 2:56:21 PM	SAMP,1>10mL,
23	N063295-008BDUP,DUP,10	2/23/2024 3:12:16 PM	DUP,1>10mL,
24	N063297-001BMS,MS,5	2/23/2024 3:28:11 PM	MS,2>10mL,
25	N063297-001BMSD,MSD,5	2/23/2024 3:44:07 PM	MSD,2>10mL,
26	N063297-001BDUP,DUP,5	2/23/2024 4:05:45 PM	DUP,2>10mL,
27	N063297-001B,SAMP,10	2/23/2024 4:21:04 PM	SAMP,1>10mL,
28	N063303-001C,SAMP,10	2/23/2024 4:37:00 PM	SAMP,1>10mL,
29	N063303-002C,SAMP,10	2/23/2024 4:52:55 PM	SAMP,1>10mL,
30	N063303-006C,SAMP,10	2/23/2024 5:08:51 PM	SAMP,1>10mL,
31	N063303-008C,SAMP,10	2/23/2024 5:24:46 PM	SAMP,1>10mL,240216A
32	CCV-2,CCV,1	2/23/2024 5:40:42 PM	CCV, IWST-~~240131A~~
33	CCB-2,CCB,1	2/23/2024 5:56:38 PM	CCB
34	N063297-003BMS,MS,10	2/23/2024 6:12:34 PM	MS,1>10mL,
35	N063256-001C,SAMP,20	2/23/2024 6:28:29 PM	SAMP,0.5>10mL,
36	BLANK	2/23/2024 6:44:25 PM	BLANK
37	N063259-001C,SAMP,50	2/23/2024 7:00:22 PM	SAMP,0.2>10mL,
38	BLANK	2/23/2024 7:16:17 PM	BLANK
39	N063260-001C,SAMP,100	2/23/2024 7:32:13 PM	SAMP,0.1>10mL,
40	BLANK	2/23/2024 7:48:10 PM	BLANK
41	N063261-001C,SAMP,100	2/23/2024 8:04:05 PM	SAMP,0.1>10mL,

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/23/2024 9:04:47 AM by IC-05
Last Update: 2/25/2024 7:08:17 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	BLANK	Unknown	17	1000.0	Anions_Default	EPA 300_0_240223A	Finished
43	CCV-3,CCV,1	Unknown	18	1000.0	Anions_Default	EPA 300_0_240223A	Finished
44	CCB-3,CCB,1	Unknown	19	1000.0	Anions_Default	EPA 300_0_240223A	Finished

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 2/23/2024 9:04:47 AM by IC-05
Last Update: 2/25/2024 7:08:17 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	BLANK	2/23/2024 8:20:01 PM	BLANK 240216A
43	CCV-3,CCV,1	2/23/2024 8:35:57 PM	CCV, IWST-~~240131A~~
44	CCB-3,CCB,1	2/23/2024 8:51:53 PM	CCB

dMocha 3/10/2024
for RBA

Sequence: IC-09_240314A
Operator: IC-05
Printed: 3/15/2024 12:23:42 AM

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 3/13/2024 12:12:16 PM by IC-05
Last Update: 3/14/2024 1:35:49 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
2	Std - 0	Standard	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
3	Std - 1	Standard	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
4	Std - 2	Standard	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
5	Std - 3	Standard	3	1000.0	Anions_Default	EPA 300_0_240223A	Finished
6	Std - 4	Standard	4	1000.0	Anions_Default	EPA 300_0_240223A	Finished
7	Std - 5	Standard	5	1000.0	Anions_Default	EPA 300_0_240223A	Finished
8	BLANK	Unknown	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
9	CCV-1,CCV,1	Unknown	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
10	CCB-1,CCB,1	Unknown	3	1000.0	Anions_Default	EPA 300_0_240223A	Finished
11	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions_Default	EPA 300_0_240223A	Finished
12	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions_Default	EPA 300_0_240223A	Finished
13	N063771-005B,SAMP,200	Unknown	1	1000.0	Anions_Default	EPA 300_0_240223A	Finished
14	N063771-001B,SAMP,50	Unknown	2	1000.0	Anions_Default	EPA 300_0_240223A	Finished
15	N063771-002B,SAMP,50	Unknown	3	1000.0	Anions_Default	EPA 300_0_240223A	Finished
16	N063771-003B,SAMP,50	Unknown	4	1000.0	Anions_Default	EPA 300_0_240223A	Finished
17	N063771-004B,SAMP,50	Unknown	5	1000.0	Anions_Default	EPA 300_0_240223A	Finished
18	N063771-006B,SAMP,50	Unknown	6	1000.0	Anions_Default	EPA 300_0_240223A	Finished
19	N063771-007B,SAMP,50	Unknown	7	1000.0	Anions_Default	EPA 300_0_240223A	Finished
20	N063771-009B,SAMP,50	Unknown	8	1000.0	Anions_Default	EPA 300_0_240223A	Finished
21	CCV-2,CCV,1	Unknown	9	1000.0	Anions_Default	EPA 300_0_240223A	Finished
22	CCB-2,CCB,1	Unknown	10	1000.0	Anions_Default	EPA 300_0_240223A	Finished
23	N063771-001BMS,MS,50	Unknown	11	1000.0	Anions_Default	EPA 300_0_240223A	Finished
24	N063771-001BMSD,MSD,50	Unknown	12	1000.0	Anions_Default	EPA 300_0_240223A	Finished
25	N063771-003BDUP,DUP,50	Unknown	13	1000.0	Anions_Default	EPA 300_0_240223A	Finished
26	N063771-003BMS,MS,50	Unknown	14	1000.0	Anions_Default	EPA 300_0_240223A	Finished
27	N063771-010B,SAMP,50	Unknown	15	1000.0	Anions_Default	EPA 300_0_240223A	Finished
28	N063771-011B,SAMP,50	Unknown	16	1000.0	Anions_Default	EPA 300_0_240223A	Finished
29	N063771-012B,SAMP,50	Unknown	17	1000.0	Anions_Default	EPA 300_0_240223A	Finished
30	N063771-013B,SAMP,50	Unknown	18	1000.0	Anions_Default	EPA 300_0_240223A	Finished
31	N063771-014B,SAMP,50	Unknown	19	1000.0	Anions_Default	EPA 300_0_240223A	Finished
32	N063771-015B,SAMP,50	Unknown	20	1000.0	Anions_Default	EPA 300_0_240223A	Finished
33	CCV-3,CCV,1	Unknown	21	1000.0	Anions_Default	EPA 300_0_240223A	Finished
34	CCB-3,CCB,1	Unknown	22	1000.0	Anions_Default	EPA 300_0_240223A	Finished
35	N063771-016B,SAMP,50	Unknown	23	1000.0	Anions_Default	EPA 300_0_240223A	Finished
36	N063771-018B,SAMP,50	Unknown	24	1000.0	Anions_Default	EPA 300_0_240223A	Finished
37	N063771-017B,SAMP,50	Unknown	25	1000.0	Anions_Default	EPA 300_0_240223A	Finished
38	N063785-006B,SAMP,500	Unknown	26	1000.0	Anions_Default	EPA 300_0_240223A	Finished
39	N063785-006B,SAMP,2000	Unknown	27	1000.0	Anions_Default	EPA 300_0_240223A	Finished
40	N063785-006BDUP,DUP,2000	Unknown	28	1000.0	Anions_Default	EPA 300_0_240223A	Finished
41	N063785-006BMS,MS,2000	Unknown	29	1000.0	Anions_Default	EPA 300_0_240223A	Finished

Processed by:

Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)

3/15/2024

IC9 RBA 3/15/2024 12:24:05 AM

reviewed by: 3/15/2024

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 3/13/2024 12:12:16 PM by IC-05
Last Update: 3/14/2024 1:35:49 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:06:35 AM	BLANK
2	Std - 0	2/23/2024 9:21:54 AM	IBLANK
3	Std - 1	2/23/2024 9:54:20 AM	STD-LOW
4	Std - 2	2/23/2024 10:09:39 AM	STD
5	Std - 3	2/23/2024 10:25:35 AM	STD
6	Std - 4	2/23/2024 10:41:31 AM	STD
7	Std - 5	2/23/2024 10:57:27 AM	STD-HIGH
8	BLANK	3/14/2024 8:14:04 AM	BLANK
9	CCV-1,CCV,1	3/14/2024 8:29:30 AM	CCV, IWST-240308A
10	CCB-1,CCB,1	3/14/2024 8:45:26 AM	CCB
11	MB-H2O,MBLK,1	3/14/2024 9:01:21 AM	MB
12	LCS-H2O,LCS,1	3/14/2024 9:17:17 AM	LCS, IWST-240308B
13	N063771-005B,SAMP,200	3/14/2024 9:39:53 AM	SAMP,0.05>10mL,
14	N063771-001B,SAMP,50	3/14/2024 9:55:12 AM	SAMP,0.2>10mL,
15	N063771-002B,SAMP,50	3/14/2024 10:11:08 AM	SAMP,0.2>10mL,
16	N063771-003B,SAMP,50	3/14/2024 10:27:03 AM	SAMP,0.2>10mL,
17	N063771-004B,SAMP,50	3/14/2024 10:42:59 AM	SAMP,0.2>10mL,
18	N063771-006B,SAMP,50	3/14/2024 10:58:55 AM	SAMP,0.2>10mL,
19	N063771-007B,SAMP,50	3/14/2024 11:14:50 AM	SAMP,0.2>10mL,
20	N063771-009B,SAMP,50	3/14/2024 11:30:46 AM	SAMP,0.2>10mL,
21	CCV-2,CCV,1	3/14/2024 11:46:42 AM	CCV, IWST-240308A
22	CCB-2,CCB,1	3/14/2024 12:02:37 PM	CCB
23	N063771-001BMS,MS,50	3/14/2024 12:18:33 PM	MS,0.2>10mL,
24	N063771-001BMSD,MSD,50	3/14/2024 12:34:28 PM	MSD,0.2>10mL,
25	N063771-003BDUP,DUP,50	3/14/2024 12:50:24 PM	DUP,0.2>10mL,
26	N063771-003BMS,MS,50	3/14/2024 1:06:20 PM	MS,0.2>10mL,
27	N063771-010B,SAMP,50	3/14/2024 1:22:16 PM	SAMP,0.2>10mL,
28	N063771-011B,SAMP,50	3/14/2024 1:38:11 PM	SAMP,0.2>10mL,
29	N063771-012B,SAMP,50	3/14/2024 1:54:07 PM	SAMP,0.2>10mL,
30	N063771-013B,SAMP,50	3/14/2024 2:10:03 PM	SAMP,0.2>10mL,
31	N063771-014B,SAMP,50	3/14/2024 2:25:59 PM	SAMP,0.2>10mL,
32	N063771-015B,SAMP,50	3/14/2024 2:41:54 PM	SAMP,0.2>10mL,
33	CCV-3,CCV,1	3/14/2024 2:57:50 PM	CCV, IWST-240308A
34	CCB-3,CCB,1	3/14/2024 3:13:46 PM	CCB
35	N063771-016B,SAMP,50	3/14/2024 3:29:41 PM	SAMP,0.2>10mL,
36	N063771-018B,SAMP,50	3/14/2024 3:45:38 PM	SAMP,0.2>10mL,
37	N063771-017B,SAMP,50	3/14/2024 4:01:33 PM	SAMP,0.2>10mL,
38	N063785-006B,SAMP,500	3/14/2024 4:17:29 PM	SAMP,0.02>10mL,
39	N063785-006B,SAMP,2000	3/14/2024 4:33:25 PM	SAMP,0.005>10mL,
40	N063785-006BDUP,DUP,2000	3/14/2024 4:49:21 PM	DUP,0.005>10mL,
41	N063785-006BMS,MS,2000	3/14/2024 5:05:16 PM	MS,0.005>10mL,

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 3/13/2024 12:12:16 PM by IC-05
Last Update: 3/14/2024 1:35:49 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	N063785-006BMSD,MSD,2000	Unknown	30	1000.0	Anions_Default	EPA 300_0_240223A	Finished
43	CCV-4,CCV,1	Unknown	31	1000.0	Anions_Default	EPA 300_0_240223A	Finished
44	CCB-4,CCB,1	Unknown	32	1000.0	Anions_Default	EPA 300_0_240223A	Finished

Title:
Datasource: D1NZHKQ1_local
Location: ICS-2000_PERC\2_Data\2023_Perc_Anion2
Timebase: ICS-2000_PERC
#Samples: 44
Created: 3/13/2024 12:12:16 PM by IC-05
Last Update: 3/14/2024 1:35:49 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	N063785-006BMSD,MSD,2000	3/14/2024 5:21:12 PM	MSD,0.005>10mL,
43	CCV-4,CCV,1	3/14/2024 5:37:07 PM	CCV, IWST-240308A
44	CCB-4,CCB,1	3/14/2024 5:53:03 PM	CCB

INITIAL CALIBRATION DATA SUMMARY

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 2/23/2024

Initial Calibration:

Nitrate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0201	0.0879	0.1672	0.4214	0.8656	1.000
Measured, in mg/L	0.000000	0.062700	0.259300	0.489100	1.225800	2.513100	
Relative Error (%RE)		25.4%		-2.2%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712E

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-09
Date Calibrated: 2/23/2024

Initial Calibration:

Sulfate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.5	2	4	10	20	R^2
Area,mAU*min	0.0000	0.0569	0.2273	0.4613	1.1803	2.4884	0.999
Measured, in mg/L	0.000000	0.682100	2.047200	3.922700	9.683700	20.164400	
Relative Error (%RE)		36.4%		-1.9%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712G

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183613**
Client ID: **ICV**	Batch ID: **R183613**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5747889**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.951	0.50	4.000	0	98.8	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183613**
Client ID: **CCV**	Batch ID: **R183613**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**	SeqNo: **5747891**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.919	0.50	4.000	0	98.0	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183613**
Client ID: **CCV**	Batch ID: **R183613**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**	SeqNo: **5747903**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.882	0.50	4.000	0	97.0	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183613**
Client ID: **CCV**	Batch ID: **R183613**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**	SeqNo: **5747915**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.905	0.50	4.000	0	97.6	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183613**
Client ID: **CCV**	Batch ID: **R183613**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**	SeqNo: **5747920**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.927	0.50	4.000	0	98.2	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICV** SampType: **ICV** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **183609**
Client ID: **ICV** Batch ID: **R183609** TestNo: **EPA 300.0** Analysis Date: **2/23/2024** SeqNo: **5747740**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.269	0.050	1.250	0	102	90	110				

Sample ID: **CCV-1** SampType: **CCV** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **183609**
Client ID: **CCV** Batch ID: **R183609** TestNo: **EPA 300.0** Analysis Date: **3/14/2024** SeqNo: **5747742**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.200	0.050	1.250	0	96.0	90	110				

Sample ID: **CCV-2** SampType: **CCV** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **183609**
Client ID: **CCV** Batch ID: **R183609** TestNo: **EPA 300.0** Analysis Date: **3/14/2024** SeqNo: **5747754**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.200	0.050	1.250	0	96.0	90	110				

Sample ID: **CCV-3** SampType: **CCV** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **183609**
Client ID: **CCV** Batch ID: **R183609** TestNo: **EPA 300.0** Analysis Date: **3/14/2024** SeqNo: **5747764**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.208	0.050	1.250	0	96.6	90	110				

Sample ID: **CCV-4** SampType: **CCV** TestCode: **300WLLNO3P** Units: **mg/L** Prep Date: RunNo: **183609**
Client ID: **CCV** Batch ID: **R183609** TestNo: **EPA 300.0** Analysis Date: **3/14/2024** SeqNo: **5747771**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.197	0.050	1.250	0	95.7	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183613**
Client ID: **ICB**	Batch ID: **R183613**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5747890**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183613**
Client ID: **CCB**	Batch ID: **R183613**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**	SeqNo: **5747892**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183613**
Client ID: **CCB**	Batch ID: **R183613**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**	SeqNo: **5747904**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183613**
Client ID: **CCB**	Batch ID: **R183613**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**	SeqNo: **5747916**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183613**
Client ID: **CCB**	Batch ID: **R183613**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**	SeqNo: **5747921**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183609**
Client ID: **ICB**	Batch ID: **R183609**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5747741**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183609**
Client ID: **CCB**	Batch ID: **R183609**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**	SeqNo: **5747743**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183609**
Client ID: **CCB**	Batch ID: **R183609**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**	SeqNo: **5747755**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183609**
Client ID: **CCB**	Batch ID: **R183609**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**	SeqNo: **5747765**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183609**
Client ID: **CCB**	Batch ID: **R183609**	TestNo: **EPA 300.0**		Analysis Date: **3/14/2024**	SeqNo: **5747772**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 3/14/2024

Sample Name		Retention Time	Evaluation
ICV	Nitrate	6.540	
CCV-1	Nitrate	6.410	
CCV-2	Nitrate	6.390	
CCV-3	Nitrate	6.404	
CCV-4	Nitrate	6.400	

Average 6.401
Applied RT Window 6.201 - 6.601

MB-R183609_NO3	Nitrate	N.A.	N.A.
LCS-R183609_NO3	Nitrate	6.407	PASS
N063771-001B	Nitrate	N.A.	N.A.
N063771-002B	Nitrate	N.A.	N.A.
N063771-003B	Nitrate	N.A.	N.A.
N063771-004B	Nitrate	N.A.	N.A.
N063771-005B	Nitrate	N.A.	N.A.
N063771-006B	Nitrate	N.A.	N.A.
N063771-007B	Nitrate	N.A.	N.A.
N063771-009B	Nitrate	N.A.	N.A.
N063771-017B	Nitrate	N.A.	N.A.
N063771-010B	Nitrate	6.403	PASS
N063771-011B	Nitrate	6.394	PASS
N063771-012B	Nitrate	N.A.	N.A.
N063771-013B	Nitrate	6.414	PASS
N063771-014B	Nitrate	6.410	PASS
N063771-015B	Nitrate	6.393	PASS
N063771-016B	Nitrate	6.393	PASS
N063771-018B	Nitrate	6.413	PASS
N063771-002BMS	Nitrate	6.404	PASS
N063771-002BMSD	Nitrate	6.407	PASS
N063771-004BDUP	Nitrate	N.A.	N.A.
N063771-004BMS	Nitrate	6.404	PASS

Reviewed by:

dlRocha 4/16/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-09

Analytical Sequence

Date Analyzed: 3/14/2024

Sample Name		Retention Time	Evaluation
ICV	Sulfate	10.777	
CCV-1	Sulfate	10.651	
CCV-2	Sulfate	10.621	
CCV-3	Sulfate	10.654	
CCV-4	Sulfate	10.637	
	Average	10.641	
	Applied RT Window	10.441 - 10.841	
MB-R183613_SO4	Sulfate	10.677	PASS
LCS-R183613_SO4	Sulfate	10.664	PASS
N063771-005B	Sulfate	10.631	PASS
N063771-001B	Sulfate	10.637	PASS
N063771-002B	Sulfate	10.631	PASS
N063771-003B	Sulfate	10.627	PASS
N063771-004B	Sulfate	10.627	PASS
N063771-006B	Sulfate	10.627	PASS
N063771-007B	Sulfate	10.624	PASS
N063771-009B	Sulfate	10.624	PASS
N063771-001BMS	Sulfate	10.637	PASS
N063771-001BMSD	Sulfate	10.644	PASS
N063771-003BDUP	Sulfate	10.634	PASS
N063771-003BMS	Sulfate	10.637	PASS
N063771-010B	Sulfate	10.634	PASS
N063771-011B	Sulfate	10.661	PASS
N063771-012B	Sulfate	10.661	PASS
N063771-013B	Sulfate	10.654	PASS
N063771-014B	Sulfate	10.664	PASS
N063771-015B	Sulfate	10.661	PASS
N063771-016B	Sulfate	10.651	PASS
N063771-018B	Sulfate	10.634	PASS
N063771-017B	Sulfate	10.647	PASS

Reviewed by:

dMocha 4/16/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): 10/5/2022, 12/14/2022, 3/22/2023,7/10/2023; 10/3/2023 & 11/14/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: mg/L

Instrument Name: **IC-08 & IC-09**

Datafile IC-08 221005A #24 IC-08 221214A #30 IC-08 230322A #35 IC-08 230710A #13 IC-09 231003A #14 IC-08 231114A #24 IC-09 231114A #19

Analyte	#1	#2	#3	#4	#5	#6	#7	Spike Conc., mg/L	SD	$t_{(n-1)}$ value	MDLs	MDL	PQL
Fluoride	0.100	0.103	0.108	0.118	0.110	0.098	0.126	0.10	0.0101	3.143	**0.0318**	**0.0318**	0.10
Chloride	0.480	0.418	0.472	0.653	0.624	0.587	0.622	0.50	0.0922	3.143	**0.2898**	**0.2898**	0.50
Nitrite	0.068	0.061	0.060	0.071	0.063	0.061	0.070	0.05	0.0047	3.143	**0.0149**	**0.0149**	0.05
Bromide	0.526	0.502	0.509	0.522	0.536	0.527	0.520	0.50	0.0116	3.143	**0.0364**	**0.0364**	0.50
Nitrate	0.073	0.058	0.059	0.073	0.074	0.068	0.073	0.05	0.0068	3.143	**0.0215**	**0.0240**	0.05
Phosphate	0.112	0.096	0.114	0.120	0.130	0.093	0.124	0.10	0.0138	3.143	**0.0433**	**0.0433**	0.10
Sulfate	0.501	0.609	0.638	0.401	0.704	0.620	0.697	0.50	0.1092	3.143	**0.3432**	**0.3432**	0.50

METHOD DETECTION LIMIT (Blanks)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Analyte	MDLb	# of Records
Fluoride	0	63
Chloride	0.1456	80
Nitrite	0.0147	64
Bromide	0	18
Nitrate	0.0240	132
Phosphate	0.0237	34
Sulfate	0.2579	107

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

EPA 6010B
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107534
ASSET #: N063771

Instrument ID: ICP-02
Analyst: DBJ
Date Analyzed: 3/15/2024

Method:

[X] EPA 6010B / 200.7
[ ] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

% Rec of Fe in N063771-001C-PS/MS/ MSD failed. However, LCS passed criteria

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 03302024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in ug/L , in the original sample as follows:

Iron , ug/L = A * DF * PF *CF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL
CF= Conversion Factor from mg/L to ug/L, 1000

For Sample **N063771-001C** , the concentration i ug/L is calculated as follows:

Iron , ug/L = 0.08421 * 1 * (25/25) * 1000

Iron , ug/L = 84.21

Reporting results in two significant figures,

Iron , ug/L = 84

Reviewed by:

dMocha 4/12/2024

% RSD SUMMARY

RSD SUMMARY: 240315A

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	Fe	0	66.4	15	<PQL
Standard1	ICAL	1	Fe	0.02	28.15	15	NR!
Standard2	ICAL	1	Fe	0.05	3.69	15	PASS
Standard3	ICAL	1	Fe	2	0.25	15	PASS
Standard4	ICAL	1	Fe	5	0.13	15	PASS
Standard5	ICAL	1	Fe	7.5	0.23	15	PASS
Standard6	ICAL	1	Fe	10	0.09	15	PASS
Standard7	ICAL	1	Fe	20	0.23	15	PASS
ICV	ICV	1	Fe	10.66	0.12	15	PASS
ICB	ICB	1	Fe	0	55.86	15	<PQL
LLICV	CCV1	1	Fe	0.02	1.28	20	PASS
ICSA1	ICSA	1	Fe	188.12	0.08	15	PASS
ICSAB1	ICSAB	1	Fe	185.89	0.16	15	PASS
RINSE	RINSE	1	Fe	0.03	14.24	15	PASS
MB-107534	MBLK	1	Fe	0.02	63.38	15	NR!
MB-107534	MBLK	1	Fe	0.01	62.52	15	<PQL
LCS-107534	LCS	1	Fe	0.1	5.96	15	PASS
N063771-001C	SAMP	1	Fe	0.08	1.15	15	PASS
N063771-001C	SAMP	5	Fe	0.01	24.25	15	<PQL
N063771-001C-PS	PS	1	Fe	0.14	0.84	15	PASS
N063771-001C-MS	MS	1	Fe	0.24	0.43	15	PASS
N063771-001C-MSD	MSD	1	Fe	0.23	1.5	15	PASS
N063771-002C	SAMP	1	Fe	0.03	4.8	15	PASS
CCV1	CCV	1	Fe	10.46	0.2	15	PASS
CCB1	CCB	1	Fe	0	36.19	15	<PQL
N063771-003C	SAMP	1	Fe	0.09	0.58	15	PASS
N063771-004C	SAMP	1	Fe	0.03	3.77	15	PASS
N063771-005C	SAMP	1	Fe	0.33	0.51	15	PASS
N063771-006C	SAMP	1	Fe	0.06	1.18	15	PASS
N063771-007C	SAMP	1	Fe	0.02	9.92	15	PASS
N063771-009C	SAMP	1	Fe	0.04	2.93	15	PASS
N063771-010C	SAMP	1	Fe	0.02	5.4	15	PASS
N063771-011C	SAMP	1	Fe	0.05	3.19	15	PASS
N063771-012C	SAMP	1	Fe	0.04	3.75	15	PASS
N063771-013C	SAMP	1	Fe	0.02	0.86	15	PASS
CCV2	CCV	1	Fe	10.36	0.11	15	PASS
CCB2	CCB	1	Fe	0.01	19.42	15	<PQL
N063771-014C	SAMP	1	Fe	0.01	10.83	15	PASS
N063771-015C	SAMP	1	Fe	0.01	5.23	15	PASS
N063771-016C	SAMP	1	Fe	0.02	1.18	15	PASS
N063771-017C	SAMP	1	Fe	0.04	4.81	15	PASS
N063771-018C	SAMP	1	Fe	0.02	5.51	15	PASS

RSD SUMMARY: 240315A

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CCV3	CCV	1	Fe	10.38	0.13	15	PASS
CCB3	CCB	1	Fe	0	33.06	15	<PQL
ICSA2	ICSA	1	Fe	186.76	0.09	15	PASS
ICSAB2	ICSAB	1	Fe	184.18	0.13	15	PASS
RINSE	RINSE	1	Fe	0.05	10.37	15	PASS
RINSE	RINSE	1	Fe	0.03	27.28	15	NR!

ANALYSIS RUN LOG

INJECTION LOG: 240315A

Instrument ID: ICP-02

STANDARD CODE	
Standard1	MWST-240311M, 0.5<50mL
Standard2	MWST-240311N
Standard3	MWST-240311O, 5<50mL
Standard4	MWST-240311O,12.5<50mL
Standard5	MWST-240311O, 15<40mL
Standard6	MWST-240311O, 25<50mL
Standard7	MWST-243011O
ICV	MWST-240311AF
CCV	MWST-240311O, 25<50mL
ICSA/ICSAB	MWST-240311P / MWST-240311Q
Int. Std. (Y)	MWST-240311B
PS Spike	MWST-240311X/Y/Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	03/15/2024	01:31:20 PM
2	Standard1	ICAL	1	03/15/2024	01:35:26 PM
3	Standard2	ICAL	1	03/15/2024	01:39:31 PM
4	Standard3	ICAL	1	03/15/2024	01:43:35 PM
5	Standard4	ICAL	1	03/15/2024	01:48:11 PM
6	Standard5	ICAL	1	03/15/2024	01:52:48 PM
7	Standard6	ICAL	1	03/15/2024	01:56:58 PM
8	Standard7	ICAL	1	03/15/2024	02:01:05 PM
250	ICV	ICV	1	03/15/2024	02:09:05 PM
1	ICB	ICB	1	03/15/2024	02:13:17 PM
2	LLICV	CCV1	1	03/15/2024	02:17:21 PM
9	ICSA1	ICSA	1	03/15/2024	02:21:27 PM
10	ICSAB1	ICSAB	1	03/15/2024	02:27:09 PM
239	RINSE	RINSE	1	03/15/2024	02:39:43 PM
11	MB-107534	MBLK	1	03/15/2024	02:43:48 PM
11	MB-107534	MBLK	1	03/15/2024	02:55:01 PM
12	LCS-107534	LCS	1	03/15/2024	02:59:05 PM
13	N063771-001C	SAMP	1	03/15/2024	03:03:10 PM
14	N063771-001C	SAMP	5	03/15/2024	03:09:15 PM
15	N063771-001C-PS	PS	1	03/15/2024	03:13:21 PM
16	N063771-001C-MS	MS	1	03/15/2024	03:19:27 PM
17	N063771-001C-MSD	MSD	1	03/15/2024	03:25:33 PM
18	N063771-002C	SAMP	1	03/15/2024	03:31:39 PM
7	CCV1	CCV	1	03/15/2024	03:37:45 PM
1	CCB1	CCB	1	03/15/2024	04:04:57 PM
19	N063771-003C	SAMP	1	03/15/2024	04:09:05 PM
20	N063771-004C	SAMP	1	03/15/2024	04:15:14 PM
21	N063771-005C	SAMP	1	03/15/2024	04:19:22 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
22	N063771-006C	SAMP	1	03/15/2024	04:25:31 PM
23	N063771-007C	SAMP	1	03/15/2024	04:31:41 PM
24	N063771-009C	SAMP	1	03/15/2024	04:35:47 PM
25	N063771-010C	SAMP	1	03/15/2024	04:41:53 PM
26	N063771-011C	SAMP	1	03/15/2024	04:48:00 PM
27	N063771-012C	SAMP	1	03/15/2024	04:54:07 PM
28	N063771-013C	SAMP	1	03/15/2024	05:00:14 PM
7	CCV2	CCV	1	03/15/2024	05:04:21 PM
1	CCB2	CCB	1	03/15/2024	05:08:32 PM
29	N063771-014C	SAMP	1	03/15/2024	05:12:39 PM
30	N063771-015C	SAMP	1	03/15/2024	05:18:48 PM
31	N063771-016C	SAMP	1	03/15/2024	05:24:55 PM
32	N063771-017C	SAMP	1	03/15/2024	05:31:02 PM
33	N063771-018C	SAMP	1	03/15/2024	05:37:13 PM
7	CCV3	CCV	1	03/15/2024	05:40:16 PM
1	CCB3	CCB	1	03/15/2024	05:44:27 PM
9	ICSA2	ICSA	1	03/15/2024	05:48:34 PM
10	ICSAB2	ICSAB	1	03/15/2024	05:54:19 PM
239	RINSE	RINSE	1	03/15/2024	06:05:48 PM
239	RINSE	RINSE	1	03/15/2024	06:09:57 PM
35	MB-107567	MBLK	1	03/15/2024	06:16:23 PM
36	LCS-107567	LCS	1	03/15/2024	06:20:28 PM
37	N063812-001C	SAMP	1	03/15/2024	06:24:34 PM
38	N063812-002C	SAMP	1	03/15/2024	06:28:41 PM
39	N063812-003C	SAMP	1	03/15/2024	06:34:47 PM
40	N063812-004C	SAMP	1	03/15/2024	06:40:54 PM
41	N063812-005C	SAMP	1	03/15/2024	06:46:59 PM
42	N063812-007C	SAMP	1	03/15/2024	06:53:07 PM
7	CCV4	CCV	1	03/15/2024	06:59:15 PM
1	CCB4	CCB	1	03/15/2024	07:03:24 PM
43	N063812-009C	SAMP	1	03/15/2024	07:07:31 PM
44	N063812-010C	SAMP	1	03/15/2024	07:13:38 PM
45	N063812-011C	SAMP	1	03/15/2024	07:19:47 PM
46	N063812-011C	SAMP	5	03/15/2024	07:25:56 PM
47	N063812-011C-PS	PS	1	03/15/2024	07:30:05 PM
48	N063812-011CMS	MS	1	03/15/2024	07:36:12 PM
49	N063812-011CMSD	MSD	1	03/15/2024	07:42:18 PM
50	N063812-012C	SAMP	1	03/15/2024	07:48:24 PM
51	N063812-013C	SAMP	1	03/15/2024	07:54:31 PM
52	N063812-014C	SAMP	1	03/15/2024	08:00:38 PM
7	CCV5	CCV	1	03/15/2024	08:06:45 PM
1	CCB5	CCB	1	03/15/2024	08:10:56 PM
53	N063812-015C	SAMP	1	03/15/2024	08:15:03 PM
54	N063812-016C	SAMP	1	03/15/2024	08:37:52 PM
55	N063812-016C	SAMP	5	03/15/2024	08:43:59 PM
56	N063812-016C-PS	PS	1	03/15/2024	08:48:07 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
57	N063812-016CMS	MS	1	03/15/2024	08:53:46 PM
58	N063812-016CMSD	MSD	1	03/15/2024	08:59:24 PM
7	CCV6	CCV	1	03/15/2024	09:05:03 PM
1	CCB6	CCB	1	03/15/2024	09:09:14 PM
9	ICSA3	ICSA	1	03/15/2024	09:13:21 PM
10	ICSAB3	ICSAB	1	03/15/2024	09:19:06 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/14/2024 11:06:45 AM**
Prep End Date: **3/14/2024 3:00:00 PM**
Prep Batch **107534** Prep Code:**3010_W_DISS**

Reviewed/ Date: dMocha 4/12/2024
Initials/ Date: _____
Technician: **Diane Jetajobe**

Prep Factor Units
mL / mL

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107534	Aqueous		25	☐	25	1.000		
MB-107534	Aqueous		25	☐	25	1.000		
N063771-001C	Groundwater	<2	25	☐	25	1.000		
N063771-001C-MS	Groundwater	<2	25	☐	25	1.000		
N063771-001C-MSD	Groundwater	<2	25	☐	25	1.000		
N063771-002C	Groundwater	<2	25	☐	25	1.000		
N063771-003C	Groundwater	<2	25	☐	25	1.000		
N063771-004C	Groundwater	<2	25	☐	25	1.000		
N063771-005C	Groundwater	<2	25	☐	25	1.000		
N063771-006C	Groundwater	<2	25	☐	25	1.000		
N063771-007C	Groundwater	<2	25	☐	25	1.000		
N063771-009C	Groundwater	<2	25	☐	25	1.000		
N063771-010C	Groundwater	<2	25	☐	25	1.000		
N063771-011C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15448	HYDROCHLORIC ACID
16152	NITRIC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240311X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240311Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240311Z	ICP Solution C	LCS,MS,MSD	0.5

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/14/2024 11:06:45 AM**
Prep End Date: **3/14/2024 3:00:00 PM**

Reviewed/ Date: dRocha 4/12/2024

Initials/ Date: _____

Prep Batch **107534** Prep Code:**3010_W_DISS**

Technician: **Diane Jetajobe**

Prep Factor Units
mL / mL

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063771-012C	Groundwater	<2	25	☐	25	1.000		
N063771-013C	Groundwater	<2	25	☐	25	1.000		
N063771-014C	Groundwater	<2	25	☐	25	1.000		
N063771-015C	Groundwater	<2	25	☐	25	1.000		
N063771-016C	Groundwater	<2	25	☐	25	1.000		
N063771-017C	Groundwater	<2	25	☐	25	1.000		
N063771-018C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15448	HYDROCHLORIC ACID
16152	NITRIC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240311X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240311Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240311Z	ICP Solution C	LCS,MS,MSD	0.5

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240315A

Instrument ID: ICP-02

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Iron								
CalBlk	03/15/2024	01:31:20 PM	Fe	273.953	9	0.00	mg/L	
Standard1	03/15/2024	01:35:26 PM	Fe	273.953	148	0.0200	mg/L	
Standard2	03/15/2024	01:39:31 PM	Fe	273.953	312	0.050	mg/L	
Standard3	03/15/2024	01:43:35 PM	Fe	273.953	10350	2.000	mg/L	
Standard4	03/15/2024	01:48:11 PM	Fe	273.953	26960	5.000	mg/L	
Standard5	03/15/2024	01:52:48 PM	Fe	273.953	39390	7.500	mg/L	
Standard6	03/15/2024	01:56:58 PM	Fe	273.953	56047	10.000	mg/L	
Standard7	03/15/2024	02:01:05 PM	Fe	273.953	103609	20.000	mg/L	0.9995

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **ICV**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748703**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10665.368	20	10000	0	107	90	110				

Sample ID **LLICV**	SampType: **CCV1**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **ZZZZZZ**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748705**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	22.020	20	20.00	0	110	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCV**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748717**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10458.578	20	10000	0	105	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCV**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748729**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10355.487	20	10000	0	104	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCV**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748736**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10380.071	20	10000	0	104	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCV**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748837**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10403.680	20	10000	0	104	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCV**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748849**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10380.792	20	10000	0	104	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCV**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748857**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10300.854	20	10000	0	103	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **ICB**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748704**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.383	20									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCB**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748718**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	3.599	20									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCB**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748730**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	5.294	20									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCB**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748737**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	3.308	20									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCB**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748838**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.269	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID	**CCB5**	SampType:	**CCB**	TestCode:	**6010_WDPG**	Units:	**µg/L**	Prep Date:		RunNo:	**183634**
Client ID:	**CCB**	Batch ID:	**R183634**	TestNo:	**EPA 6010B**			Analysis Date:	**3/15/2024**	SeqNo:	**5748850**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.927	20									

Sample ID	**CCB6**	SampType:	**CCB**	TestCode:	**6010_WDPG**	Units:	**µg/L**	Prep Date:		RunNo:	**183634**
Client ID:	**CCB**	Batch ID:	**R183634**	TestNo:	**EPA 6010B**			Analysis Date:	**3/15/2024**	SeqNo:	**5748858**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.014	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSA1**	SampType: **ICSA**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **ICSA**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748706**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	534133.715	50	500000	0	107	80	120				
Calcium	593135.884	500	500000	0	119	80	120				
Iron	188123.131	20	200000	0	94.1	80	120				
Magnesium	536157.389	100	500000	0	107	80	120				

Sample ID **ICSAB1**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **ICSAB**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748707**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	526060.234	50	500000	0	105	80	120				
Calcium	581000.447	500	500000	0	116	80	120				
Iron	185889.884	20	200000	0	92.9	80	120				
Magnesium	529473.754	100	500000	0	106	80	120				

Sample ID **ICSA2**	SampType: **ICSA**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **ICSA**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748738**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	533139.499	50	500000	0	107	80	120				
Calcium	585895.120	500	500000	0	117	80	120				
Iron	186758.689	20	200000	0	93.4	80	120				
Magnesium	523505.370	100	500000	0	105	80	120				

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **ICSAB**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748739**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	524477.338	50	500000	0	105	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **183634**
Client ID: **ICSAB** Batch ID: **R183634** TestNo: **EPA 6010B** Analysis Date: **3/15/2024** SeqNo: **5748739**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	573192.711	500	500000	0	115	80	120				
Iron	184177.050	20	200000	0	92.1	80	120				
Magnesium	515505.629	100	500000	0	103	80	120				

Sample ID **ICSA3** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **183634**
Client ID: **ICSA** Batch ID: **R183634** TestNo: **EPA 6010B** Analysis Date: **3/15/2024** SeqNo: **5748859**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	530235.859	50	500000	0	106	80	120				
Calcium	582918.724	500	500000	0	117	80	120				
Iron	184779.921	20	200000	0	92.4	80	120				
Magnesium	518079.204	100	500000	0	104	80	120				

Sample ID **ICSAB3** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **183634**
Client ID: **ICSAB** Batch ID: **R183634** TestNo: **EPA 6010B** Analysis Date: **3/15/2024** SeqNo: **5748860**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	521712.344	50	500000	0	104	80	120				
Calcium	567315.675	500	500000	0	113	80	120				
Iron	182190.006	20	200000	0	91.1	80	120				
Magnesium	509205.400	100	500000	0	102	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

INTERNAL STANDARD: 240315A

Instrument ID: ICP-02

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	0.98	97.62	65-125	PASS
Standard2	ICAL	1	1	100.07	65-125	PASS
Standard3	ICAL	1	1.06	105.9	65-125	PASS
Standard4	ICAL	1	1.06	105.49	65-125	PASS
Standard5	ICAL	1	1.06	105.92	65-125	PASS
Standard6	ICAL	1	1.04	104.22	65-125	PASS
Standard7	ICAL	1	1.02	102.45	65-125	PASS
ICV	ICV	1	1.05	104.89	65-125	PASS
ICB	ICB	1	1.03	103.27	65-125	PASS
LLICV	CCV1	1	1	100.42	65-125	PASS
ICSA1	ICSA	1	0.91	90.51	65-125	PASS
ICSAB1	ICSAB	1	0.9	89.53	65-125	PASS
RINSE	RINSE	1	1.11	110.82	65-125	PASS
MB-107534	MBLK	1	1.01	100.76	65-125	PASS
MB-107534	MBLK	1	1.01	100.9	65-125	PASS
LCS-107534	LCS	1	1.04	103.94	65-125	PASS
N063771-001C	SAMP	1	0.83	82.72	65-125	PASS
N063771-001C	SAMP	5	0.92	92.27	65-125	PASS
N063771-001C-PS	PS	1	0.8	79.76	65-125	PASS
N063771-001C-MS	MS	1	0.83	82.66	65-125	PASS
N063771-001C-MSD	MSD	1	0.82	82.07	65-125	PASS
N063771-002C	SAMP	1	0.82	81.84	65-125	PASS
CCV1	CCV	1	1.05	104.52	65-125	PASS
CCB1	CCB	1	1.04	103.72	65-125	PASS
N063771-003C	SAMP	1	0.82	82.17	65-125	PASS
N063771-004C	SAMP	1	0.81	80.95	65-125	PASS
N063771-005C	SAMP	1	0.75	75.29	65-125	PASS
N063771-006C	SAMP	1	0.81	81.25	65-125	PASS
N063771-007C	SAMP	1	0.83	83.13	65-125	PASS
N063771-009C	SAMP	1	0.83	82.65	65-125	PASS
N063771-010C	SAMP	1	0.79	79.47	65-125	PASS
N063771-011C	SAMP	1	0.81	81.19	65-125	PASS
N063771-012C	SAMP	1	0.8	80.1	65-125	PASS
N063771-013C	SAMP	1	0.84	84.5	65-125	PASS
CCV2	CCV	1	1.06	105.54	65-125	PASS
CCB2	CCB	1	1.07	106.85	65-125	PASS
N063771-014C	SAMP	1	0.84	83.94	65-125	PASS
N063771-015C	SAMP	1	0.84	83.8	65-125	PASS
N063771-016C	SAMP	1	0.81	81.34	65-125	PASS
N063771-017C	SAMP	1	0.84	83.93	65-125	PASS

INTERNAL STANDARD: 240315A

Instrument ID: ICP-02

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
N063771-018C	SAMP	1	0.81	80.85	65-125	PASS
CCV3	CCV	1	1.06	105.78	65-125	PASS
CCB3	CCB	1	1.07	107.4	65-125	PASS
ICSA2	ICSA	1	0.93	92.76	65-125	PASS
ICSAB2	ICSAB	1	0.92	91.77	65-125	PASS
RINSE	RINSE	1	1.13	113.21	65-125	PASS
RINSE	RINSE	1	1.11	111.2	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063771
Test Method: EPA 6010B
Analysis Date: 3/15/2024

Matrix: Groundwater
Batch No.: 107534

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima 7300DV

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Fe. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063771-001C DT 5x	Iron	Fe	µg/L	63.7253	NA	84.21244	24.33%	10

Reviewed by:

dMocha 4/12/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **N063771-001C-PS**	SampType: **PS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:				RunNo: **183634**			
Client ID: **ZZZZZZ**	Batch ID: **107534**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/15/2024**				SeqNo: **5748713**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	140.829	20	100.0	84.21	56.6	80	120				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

EPA 6020
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107535
ASSET #: N063771

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 3/15/2024

Method:

[ ] EPA 6010B / 200.7
[X] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.		X			X	
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

Mn is OLR in N063771-005C. For dilution

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: -

2nd Level Reviewer KDG 3/29/2024 Date:

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107535
ASSET #: N063771

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 3/19/2024

Method:

[ ] EPA 6010B / 200.7
[X] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.			X			X
24. LCS compounds within control limits.			X			X
25. MS/MSD, RPD's are within control limits			X			X
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

Mn dilution for N063771-005C

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: –

2nd Level Reviewer KDG 3/29/2024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Groundwater

FORMULA:

Calculate the Barium concentration, in ug/L in the original sample as follows:

Barium , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063771-001C** , the concentration in ug/L is calculated as follows:

Barium , ug/L = 113.726 * 1 *(25 / 25)

Barium , ug/L = 113.726

Reporting results in two significant figures,

Barium , ug/L = 110

Reviewed by:

JRB 4/18/2024

% RSD SUMMARY

PERCENT RSD SUMMARY: 240315A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	5.81	15	PASS	0.11	23.956	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.51	10.383	15	PASS	0.51	6.279	15	PASS
Std3-5/50 ppb	ICAL	1	5.02	2.357	15	PASS	5.03	1.932	15	PASS
Std4-10/100 ppb	ICAL	1	9.89	0.522	15	PASS	10.13	2.123	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.56	1.187	15	PASS	19.63	1.475	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	40.02	2.886	15	PASS	39.77	1.44	15	PASS
Std7-100/1000 ppb	ICAL	1	99.61	0.976	15	PASS	99.54	1.82	15	PASS
Std8-200/2000 ppb	ICAL	1	200.24	0.899	15	PASS	200.3	0.993	15	PASS
ICV	ICV	1	10.13	1.829	15	PASS	102.02	0.787	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	0.01	76.032	15	<PQL
LLICV1	CCV1	1	0.98	7.658	20	PASS	0.57	5.536	20	PASS
LLICV1	CCV1	1	0.97	9.11	20	PASS	0.6	6.523	20	PASS
MLCCV	CCV	1	19.73	1.3	15	PASS	19.87	0.943	15	PASS
ICSA1	ICSA	1	0	294.624	15	<PQL	0.01	129.102	15	<PQL
ICSAB1	ICSAB	1	19.94	0.69	15	PASS	20.36	2.349	15	PASS
CCV1	CCV	1	19.34	0.8	15	PASS	19.57	0.906	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL	0.01	27.928	15	<PQL
CCV2	CCV	1	19.83	0.707	15	PASS	19.64	0.971	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	0.01	78.324	15	<PQL
ICSA2	ICSA	1	0	804.295	15	<PQL	0	205.018	15	<PQL
ICSAB2	ICSAB	1	20.12	0.717	15	PASS	20.25	2.581	15	PASS
MB-107535	MBLK	1	0.01	51.473	15	<PQL	<0.000	N/A	15	<PQL
LCS-107535	LCS	1	18.89	1.007	15	PASS	106.43	0.909	15	PASS
N063771-001C	SAMP	1	113.73	1.23	15	PASS	21.3	0.66	15	PASS
N063771-002C	SAMP	1	36.3	1.131	15	PASS	67.66	1.398	15	PASS
N063771-002C	SAMP	5	7.42	4.326	15	PASS	13.89	0.244	15	PASS
N063771-002C-PS	PS	1	46.02	1.06	15	PASS	160.25	0.755	15	PASS
N063771-002C-MS	MS	1	47.18	0.069	15	PASS	161.77	1.269	15	PASS
N063771-002C-MSD	MSD	1	47.49	1.26	15	PASS	162.49	1.152	15	PASS
N063771-003C	SAMP	1	33.47	1.067	15	PASS	44.2	0.687	15	PASS
CCV3	CCV	1	19.94	2.387	15	PASS	19.53	1.392	15	PASS
CCB3	CCB	1	0	89.946	15	<PQL	<0.000	N/A	15	<PQL
N063771-004C	SAMP	1	40.13	0.796	15	PASS	81.77	0.982	15	PASS
N063771-005C	SAMP	1	61.25	1.597	15	PASS	291.38	1.833	15	PASS
N063771-006C	SAMP	1	30.36	1.056	15	PASS	49.43	0.519	15	PASS
N063771-007C	SAMP	1	36.99	1.721	15	PASS	23.41	1.319	15	PASS
N063771-009C	SAMP	1	102.63	1.249	15	PASS	697.56	0.898	15	PASS
N063771-010C	SAMP	1	67.26	0.755	15	PASS	71.77	1.374	15	PASS
N063771-011C	SAMP	1	39.21	0.882	15	PASS	36.6	2.488	15	PASS
N063771-012C	SAMP	1	39.4	1.27	15	PASS	35.92	1.292	15	PASS

PERCENT RSD SUMMARY: 240315A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063771-013C	SAMP	1	25.15	1.814	15	PASS	43.33	1.167	15	PASS
CCV4	CCV	1	20.18	2.441	15	PASS	19.41	0.647	15	PASS
CCB4	CCB	1	0	365.879	15	<PQL	0	166.632	15	<PQL
N063771-014C	SAMP	1	128.21	1.637	15	PASS	<0.000	N/A	15	<PQL
N063771-015C	SAMP	1	131.96	0.65	15	PASS	<0.000	N/A	15	<PQL
N063771-016C	SAMP	1	49.69	1.12	15	PASS	58.13	0.564	15	PASS
N063771-017C	SAMP	1	359.42	1.733	15	PASS	1090.55	1.446	15	PASS
N063771-018C	SAMP	1	33.39	1.694	15	PASS	15.02	1.414	15	PASS
LCS-107535	LCS	1	10.3	0.644	15	PASS	99.08	1.185	15	PASS
N063771-005C	SAMP	10	7.92	2.206	15	PASS	38.71	1.676	15	PASS
N063771-009C	SAMP	10	12.61	0.87	15	PASS	82.79	2.008	15	PASS
N063771-017C	SAMP	10	39.39	0.685	15	PASS	122.76	1.115	15	PASS
CCV5	CCV	1	19.84	1.388	15	PASS	19.84	0.573	15	PASS
CCB5	CCB	1	0	203.947	15	<PQL	0	102.271	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	0.01	62.067	15	<PQL
ICSAB3	ICSAB	1	20.53	0.759	15	PASS	20.42	1.689	15	PASS
CCV6	CCV	1	20.07	0.375	15	PASS	19.68	1.171	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL	0	730.447	15	<PQL
CCV7	CCV	1	20.03	0.809	15	PASS	19.66	1.077	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	0	101.114	15	<PQL
ICSA4	ICSA	1	0	429.339	15	<PQL	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.46	2.426	15	PASS	20.34	0.968	15	PASS
CCV8	CCV	1	20.21	0.333	15	PASS	19.5	0.94	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
CCV9	CCV	1	19.9	1.575	15	PASS	19.82	2.112	15	PASS
CCB9	CCB	1	0	721.427	15	<PQL	0	512.337	15	<PQL
CCV10	CCV	1	20.16	1.366	15	PASS	19.64	1.298	15	PASS
CCB10	CCB	1	<0.000	N/A	15	<PQL	0.01	93.936	15	<PQL
ICSA5	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB5	ICSAB	1	20.8	0.73	15	PASS	20.45	1.809	15	PASS

PERCENT RSD SUMMARY: 240315A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.1	38.603	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.57	8.018	15	PASS
Std3-5/50 ppb	ICAL	1	4.9	3.284	15	PASS
Std4-10/100 ppb	ICAL	1	10.14	2.524	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	20.04	2.094	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	40.54	2.639	15	PASS
Std7-100/1000 ppb	ICAL	1	99.73	0.443	15	PASS
Std8-200/2000 ppb	ICAL	1	200.02	0.223	15	PASS
ICV	ICV	1	10.45	3.552	15	PASS
ICB	ICB	1	0	3043.851	15	<PQL
LLICV1	CCV1	1	0.15	27.867	20	<PQL
LLICV1	CCV1	1	0.11	22.283	20	<PQL
MLCCV	CCV	1	20.31	0.602	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.54	1.461	15	PASS
CCV1	CCV	1	20.17	2.544	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.77	1.485	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	0.01	220.784	15	<PQL
ICSAB2	ICSAB	1	20.59	2.779	15	PASS
MB-107535	MBLK	1	<0.000	N/A	15	<PQL
LCS-107535	LCS	1	10.33	1.337	15	PASS
N063771-001C	SAMP	1	<0.000	N/A	15	<PQL
N063771-002C	SAMP	1	<0.000	N/A	15	<PQL
N063771-002C	SAMP	5	<0.000	N/A	15	<PQL
N063771-002C-PS	PS	1	8.88	1.68	15	PASS
N063771-002C-MS	MS	1	8.91	0.903	15	PASS
N063771-002C-MSD	MSD	1	8.95	3.06	15	PASS
N063771-003C	SAMP	1	<0.000	N/A	15	<PQL
CCV3	CCV	1	19.17	1.224	15	PASS
CCB3	CCB	1	0.01	203.625	15	<PQL
N063771-004C	SAMP	1	4.21	1.161	15	PASS
N063771-005C	SAMP	1	9.95	2.735	15	PASS
N063771-006C	SAMP	1	<0.000	N/A	15	<PQL
N063771-007C	SAMP	1	1.35	3.751	15	PASS
N063771-009C	SAMP	1	0.42	13.729	15	PASS
N063771-010C	SAMP	1	<0.000	N/A	15	<PQL
N063771-011C	SAMP	1	<0.000	N/A	15	<PQL
N063771-012C	SAMP	1	<0.000	N/A	15	<PQL

PERCENT RSD SUMMARY: 240315A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
N063771-013C	SAMP	1	3.23	9.323	15	PASS
CCV4	CCV	1	18.62	2.333	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL
N063771-014C	SAMP	1	<0.000	N/A	15	<PQL
N063771-015C	SAMP	1	<0.000	N/A	15	<PQL
N063771-016C	SAMP	1	<0.000	N/A	15	<PQL
N063771-017C	SAMP	1	<0.000	N/A	15	<PQL
N063771-018C	SAMP	1	<0.000	N/A	15	<PQL
LCS-107535	LCS	1	9.86	2.868	15	PASS
N063771-005C	SAMP	10	1.29	7.774	15	PASS
N063771-009C	SAMP	10	0.03	70.059	15	<PQL
N063771-017C	SAMP	10	<0.000	N/A	15	<PQL
CCV5	CCV	1	19.49	1.242	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	0	1351.891	15	<PQL
ICSAB3	ICSAB	1	20.21	2.12	15	PASS
CCV6	CCV	1	19.88	0.623	15	PASS
CCB6	CCB	1	0.01	28.105	15	<PQL
CCV7	CCV	1	19.52	2.087	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	0.01	120.201	15	<PQL
ICSAB4	ICSAB	1	20.55	1.865	15	PASS
CCV8	CCV	1	19.9	1.618	15	PASS
CCB8	CCB	1	0	1113.009	15	<PQL
CCV9	CCV	1	19.44	2.325	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL
CCV10	CCV	1	19.43	1.845	15	PASS
CCB10	CCB	1	0	225.171	15	<PQL
ICSA5	ICSA	1	0	635.96	15	<PQL
ICSAB5	ICSAB	1	19.85	3.534	15	PASS

PERCENT RSD SUMMARY: 240319A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.1	18.171	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.51	15.274	15	FAIL
Std3-5/50 ppb	ICAL	1	4.95	3.673	15	PASS
Std4-10/100 ppb	ICAL	1	10.05	0.858	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.97	0.685	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.55	1.353	15	PASS
Std7-100/1000 ppb	ICAL	1	98.88	0.108	15	PASS
Std8-200/2000 ppb	ICAL	1	200.65	0.716	15	PASS
ICV	ICV	1	101.64	1.301	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL
LLICV1	LLICV	1	0.55	9.082	20	PASS
MLCCV	CCV	1	19.75	2.439	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.15	1.352	15	PASS
N063771-005C	SAMP	10	37.86	0.502	15	PASS
CCV1	CCV	1	19.78	1.267	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.65	1.148	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.04	2.382	15	PASS
CCV3	CCV	1	19.74	1.579	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL
CCV4	CCV	1	19.95	1.287	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL
CCV5	CCV	1	19.53	1.199	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL
CCV6	CCV	1	19.64	1.04	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL
CCV7	CCV	1	19.8	1.464	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.18	1.217	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240315A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0315001.d	RINSE	ICAL	1	03/15/24 4:01 PM
A0315002.d	RINSE	ICAL	1	03/15/24 4:06 PM
A0315003.d	Cal Blk	IBLK	1	03/15/24 4:10 PM
A0315004.d	Std1-0.1/1 ppb	ICAL	1	03/15/24 4:15 PM
A0315005.d	Std2-0.5/5 ppb	ICAL	1	03/15/24 4:20 PM
A0315006.d	Std3-5/50 ppb	ICAL	1	03/15/24 4:25 PM
A0315007.d	Std4-10/100 ppb	ICAL	1	03/15/24 4:29 PM
A0315008.d	Std5-4.0/20/200 ppb	ICAL	1	03/15/24 4:34 PM
A0315009.d	Std6-8.0/40/400 ppb	ICAL	1	03/15/24 4:39 PM
A0315010.d	Std7-100/1000 ppb	ICAL	1	03/15/24 4:44 PM
A0315011.d	Std8-200/2000 ppb	ICAL	1	03/15/24 4:48 PM
A0315012.d	ICV	ICV	1	03/15/24 4:54 PM
A0315013.d	ICB	ICB	1	03/15/24 4:59 PM
A0315014.d	LLICV1	CCV1	1	03/15/24 5:04 PM
A0315015.d	LLICV1	CCV1	1	03/15/24 5:11 PM
A0315016.d	MLCCV	CCV	1	03/15/24 5:16 PM
A0315017.d	ICSA1	ICSA	1	03/15/24 5:20 PM
A0315018.d	ICSAB1	ICSAB	1	03/15/24 5:25 PM
A0315019.d	MB-107536	MBLK	1	03/15/24 5:30 PM
A0315020.d	LCS-107536	LCS	1	03/15/24 5:35 PM
A0315021.d	N063746-001A	SAMP	1	03/15/24 5:39 PM
A0315022.d	N063747-001A	SAMP	1	03/15/24 5:44 PM
A0315023.d	N063747-001A	SAMP	5	03/15/24 5:48 PM
A0315024.d	N063747-001A-PS	PS	1	03/15/24 5:53 PM
A0315025.d	N063747-001A-MS	MS	1	03/15/24 5:58 PM
A0315026.d	N063747-001A-MSD	MSD	1	03/15/24 6:02 PM
A0315027.d	N063748-001A	SAMP	1	03/15/24 6:07 PM
A0315028.d	CCV1	CCV	1	03/15/24 6:12 PM
A0315029.d	CCB1	CCB	1	03/15/24 6:16 PM
A0315030.d	MB-107537	MBLK	1	03/15/24 6:21 PM
A0315031.d	LCS-107537	LCS	1	03/15/24 6:25 PM
A0315032.d	N063711-001C	SAMP	1	03/15/24 6:30 PM
A0315033.d	N063711-001C	SAMP	5	03/15/24 6:35 PM
A0315034.d	N063711-001C-PS	PS	1	03/15/24 6:39 PM
A0315035.d	N063711-001C-MS	MS	1	03/15/24 6:44 PM
A0315036.d	N063711-001C-MSD	MSD	1	03/15/24 6:49 PM
A0315037.d	RINSE	ICAL	1	03/15/24 6:53 PM
A0315038.d	CCV2	CCV	1	03/15/24 6:58 PM
A0315039.d	CCB2	CCB	1	03/15/24 7:03 PM
A0315040.d	ICSA2	ICSA	1	03/15/24 7:07 PM
A0315041.d	ICSAB2	ICSAB	1	03/15/24 7:12 PM
A0315042.d	MB-107535	MBLK	1	03/15/24 7:17 PM

INJECTION LOG: 240315A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0315043.d	LCS-107535	LCS	1	03/15/24 7:21 PM
A0315044.d	N063771-001C	SAMP	1	03/15/24 7:26 PM
A0315045.d	N063771-002C	SAMP	1	03/15/24 7:31 PM
A0315046.d	N063771-002C	SAMP	5	03/15/24 7:35 PM
A0315047.d	N063771-002C-PS	PS	1	03/15/24 7:40 PM
A0315048.d	N063771-002C-MS	MS	1	03/15/24 7:45 PM
A0315049.d	N063771-002C-MSD	MSD	1	03/15/24 7:49 PM
A0315050.d	N063771-003C	SAMP	1	03/15/24 7:54 PM
A0315051.d	RINSE	ICAL	1	03/15/24 7:58 PM
A0315052.d	CCV3	CCV	1	03/15/24 8:03 PM
A0315053.d	CCB3	CCB	1	03/15/24 8:08 PM
A0315054.d	N063771-004C	SAMP	1	03/15/24 8:12 PM
A0315055.d	N063771-005C	SAMP	1	03/15/24 8:17 PM
A0315056.d	N063771-006C	SAMP	1	03/15/24 8:22 PM
A0315057.d	N063771-007C	SAMP	1	03/15/24 8:26 PM
A0315058.d	N063771-009C	SAMP	1	03/15/24 8:31 PM
A0315059.d	N063771-010C	SAMP	1	03/15/24 8:36 PM
A0315060.d	N063771-011C	SAMP	1	03/15/24 8:40 PM
A0315061.d	N063771-012C	SAMP	1	03/15/24 8:45 PM
A0315062.d	N063771-013C	SAMP	1	03/15/24 8:50 PM
A0315063.d	RINSE	ICAL	1	03/15/24 8:54 PM
A0315064.d	CCV4	CCV	1	03/15/24 8:59 PM
A0315065.d	CCB4	CCB	1	03/15/24 9:03 PM
A0315066.d	N063771-014C	SAMP	1	03/15/24 9:08 PM
A0315067.d	N063771-015C	SAMP	1	03/15/24 9:13 PM
A0315068.d	N063771-016C	SAMP	1	03/15/24 9:17 PM
A0315069.d	N063771-017C	SAMP	1	03/15/24 9:22 PM
A0315070.d	N063771-018C	SAMP	1	03/15/24 9:27 PM
A0315071.d	LCS-107535	LCS	1	03/15/24 9:31 PM
A0315072.d	N063771-005C	SAMP	10	03/15/24 9:36 PM
A0315073.d	N063771-009C	SAMP	10	03/15/24 9:41 PM
A0315074.d	N063771-017C	SAMP	10	03/15/24 9:45 PM
A0315075.d	RINSE	ICAL	1	03/15/24 9:50 PM
A0315076.d	CCV5	CCV	1	03/15/24 9:55 PM
A0315077.d	CCB5	CCB	1	03/15/24 9:59 PM
A0315078.d	ICSA3	ICSA	1	03/15/24 10:04 PM
A0315079.d	ICSAB3	ICSAB	1	03/15/24 10:08 PM
A0315080.d	MB-107565	MBLK	1	03/15/24 10:13 PM
A0315081.d	LCS-107565	LCS	1	03/15/24 10:18 PM
A0315082.d	N063734-001C	SAMP	1	03/15/24 10:23 PM
A0315083.d	N063734-001C	SAMP	5	03/15/24 10:27 PM
A0315084.d	N063734-001C	SAMP	10	03/15/24 10:32 PM

INJECTION LOG: 240315A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0315085.d	N063734-001C	SAMP	50	03/15/24 10:37 PM
A0315086.d	N063734-001C-PS	PS	1	03/15/24 10:41 PM
A0315087.d	N063734-001C-PS	PS	10	03/15/24 10:46 PM
A0315088.d	N063734-001C-MS	MS	1	03/15/24 10:51 PM
A0315089.d	N063734-001C-MS	MS	10	03/15/24 10:55 PM
A0315090.d	CCV6	CCV	1	03/15/24 11:00 PM
A0315091.d	CCB6	CCB	1	03/15/24 11:04 PM
A0315092.d	N063734-001C-MSD	MSD	1	03/15/24 11:09 PM
A0315093.d	N063734-001C-MSD	MSD	10	03/15/24 11:14 PM
A0315094.d	N063734-002C	SAMP	1	03/15/24 11:18 PM
A0315095.d	N063734-002C	SAMP	10	03/15/24 11:23 PM
A0315096.d	CCV7	CCV	1	03/15/24 11:28 PM
A0315097.d	CCB7	CCB	1	03/15/24 11:32 PM
A0315098.d	ICSA4	ICSA	1	03/15/24 11:37 PM
A0315099.d	ICSAB4	ICSAB	1	03/15/24 11:42 PM
A0315100.d	MB-107566	MBLK	1	03/15/24 11:46 PM
A0315101.d	LCS-107566	LCS	1	03/15/24 11:51 PM
A0315102.d	N063812-001C	SAMP	1	03/15/24 11:56 PM
A0315103.d	N063812-002C	SAMP	1	03/16/24 12:00 AM
A0315104.d	N063812-003C	SAMP	1	03/16/24 12:05 AM
A0315105.d	N063812-004C	SAMP	1	03/16/24 12:10 AM
A0315106.d	N063812-005C	SAMP	1	03/16/24 12:14 AM
A0315107.d	N063812-007C	SAMP	1	03/16/24 12:19 AM
A0315108.d	N063812-009C	SAMP	1	03/16/24 12:24 AM
A0315109.d	RINSE	ICAL	1	03/16/24 12:28 AM
A0315110.d	CCV8	CCV	1	03/16/24 12:33 AM
A0315111.d	CCB8	CCB	1	03/16/24 12:38 AM
A0315112.d	N063812-010C	SAMP	1	03/16/24 12:42 AM
A0315113.d	N063812-011C	SAMP	1	03/16/24 12:47 AM
A0315114.d	N063812-011C	SAMP	5	03/16/24 12:52 AM
A0315115.d	N063812-011C-PS	PS	1	03/16/24 12:56 AM
A0315116.d	N063812-011CMS	MS	1	03/16/24 1:01 AM
A0315117.d	N063812-011CMSD	MSD	1	03/16/24 1:06 AM
A0315118.d	N063812-012C	SAMP	1	03/16/24 1:10 AM
A0315119.d	N063812-013C	SAMP	1	03/16/24 1:15 AM
A0315120.d	N063812-014C	SAMP	1	03/16/24 1:20 AM
A0315121.d	RINSE	ICAL	1	03/16/24 1:24 AM
A0315122.d	CCV9	CCV	1	03/16/24 1:29 AM
A0315123.d	CCB9	CCB	1	03/16/24 1:34 AM
A0315124.d	N063812-015C	SAMP	1	03/16/24 1:38 AM
A0315125.d	N063812-016C	SAMP	1	03/16/24 1:43 AM
A0315126.d	N063812-016C	SAMP	5	03/16/24 1:48 AM

INJECTION LOG: 240315A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0315127.d	N063812-016C-PS	PS	1	03/16/24 1:52 AM
A0315128.d	N063812-016CMS	MS	1	03/16/24 1:57 AM
A0315129.d	N063812-016CMSD	MSD	1	03/16/24 2:01 AM
A0315130.d	RINSE	ICAL	1	03/16/24 2:06 AM
A0315131.d	CCV10	CCV	1	03/16/24 2:11 AM
A0315132.d	CCB10	CCB	1	03/16/24 2:16 AM
A0315133.d	ICSA5	ICSA	1	03/16/24 2:20 AM
A0315134.d	ICSAB5	ICSAB	1	03/16/24 2:25 AM
A0315135.d	RINSE	ICAL	1	03/16/24 2:29 AM
A0315136.d	RINSE	ICAL	1	03/16/24 2:34 AM
A0315137.d	RINSE	ICAL	1	03/16/24 2:39 AM
A0315138.d	RINSE	ICAL	1	03/16/24 2:43 AM

INJECTION LOG: 240319A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0319001.d	RINSE	ICAL	1	03/19/24 11:10 AM
A0319002.d	RINSE	ICAL	1	03/19/24 11:15 AM
A0319003.d	Cal Blk	IBLK	1	03/19/24 11:19 AM
A0319004.d	Std1-0.1/1 ppb	ICAL	1	03/19/24 11:24 AM
A0319005.d	Std2-0.5/5 ppb	ICAL	1	03/19/24 11:29 AM
A0319006.d	Std3-5/50 ppb	ICAL	1	03/19/24 11:34 AM
A0319007.d	Std4-10/100 ppb	ICAL	1	03/19/24 11:38 AM
A0319008.d	Std5-4.0/20/200 ppb	ICAL	1	03/19/24 11:43 AM
A0319009.d	Std6-8.0/40/400 ppb	ICAL	1	03/19/24 11:48 AM
A0319010.d	Std7-100/1000 ppb	ICAL	1	03/19/24 11:53 AM
A0319011.d	Std8-200/2000 ppb	ICAL	1	03/19/24 11:57 AM
A0319012.d	ICV	ICV	1	03/19/24 12:15 PM
A0319013.d	ICB	ICB	1	03/19/24 12:20 PM
A0319014.d	LLICV1	LLICV	1	03/19/24 12:25 PM
A0319015.d	MLCCV	CCV	1	03/19/24 12:29 PM
A0319016.d	ICSA1	ICSA	1	03/19/24 12:34 PM
A0319017.d	ICSAB1	ICSAB	1	03/19/24 12:38 PM
A0319018.d	N063771-005C	SAMP	10	03/19/24 12:52 PM
A0319019.d	N063812-002C	SAMP	1	03/19/24 12:57 PM
A0319020.d	N063812-005C	SAMP	10	03/19/24 1:01 PM
A0319021.d	N063812-009C	SAMP	10	03/19/24 1:06 PM
A0319022.d	N063812-014C	SAMP	1	03/19/24 1:11 PM
A0319023.d	N063812-014C	SAMP	10	03/19/24 1:15 PM
A0319024.d	N063812-015C	SAMP	10	03/19/24 1:20 PM
A0319025.d	N063812-016C	SAMP	100	03/19/24 1:25 PM
A0319026.d	N063812-016C	SAMP	500	03/19/24 1:29 PM
A0319027.d	CCV1	CCV	1	03/19/24 1:34 PM
A0319028.d	CCB1	CCB	1	03/19/24 1:39 PM
A0319029.d	N063812-016C	SAMP	100	03/19/24 1:43 PM
A0319030.d	N063812-016C	SAMP	500	03/19/24 1:48 PM
A0319031.d	N063812-016C-PS	PS	100	03/19/24 1:52 PM
A0319032.d	N063812-016CMS	MS	100	03/19/24 1:57 PM
A0319033.d	N063812-016C	SAMP	100	03/19/24 2:02 PM
A0319034.d	N063812-016C	SAMP	500	03/19/24 2:07 PM
A0319035.d	N063812-016C-PS	PS	100	03/19/24 2:11 PM
A0319036.d	N063812-016CMS	MS	100	03/19/24 2:16 PM
A0319037.d	N063812-016CMSD	MSD	100	03/19/24 2:20 PM
A0319038.d	N063812-002C	SAMP	1	03/19/24 2:25 PM
A0319039.d	CCV2	CCV	1	03/19/24 2:30 PM
A0319040.d	CCB2	CCB	1	03/19/24 2:35 PM
A0319041.d	ICSA2	ICSA	1	03/19/24 2:39 PM
A0319042.d	ICSAB2	ICSAB	1	03/19/24 2:44 PM

INJECTION LOG: 240319A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0319043.d	MB-107624	MBLK	1	03/19/24 2:49 PM
A0319044.d	LCS-107624	LCS	1	03/19/24 2:53 PM
A0319045.d	N063863-001A	SAMP	1	03/19/24 2:58 PM
A0319046.d	N063864-001A	SAMP	1	03/19/24 3:03 PM
A0319047.d	LCS-107624	LCS	1	03/19/24 3:17 PM
A0319048.d	N063863-001A	SAMP	1	03/19/24 3:21 PM
A0319049.d	N063864-001A	SAMP	1	03/19/24 3:26 PM
A0319050.d	N063864-001A	SAMP	5	03/19/24 3:30 PM
A0319051.d	N063864-001A-PS	PS	1	03/19/24 3:35 PM
A0319052.d	N063864-001A-MS	MS	1	03/19/24 3:40 PM
A0319053.d	CCV3	CCV	1	03/19/24 3:44 PM
A0319054.d	CCB3	CCB	1	03/19/24 3:49 PM
A0319055.d	N063864-001A-MSD	MSD	1	03/19/24 3:54 PM
A0319056.d	N063865-001A	SAMP	1	03/19/24 3:58 PM
A0319057.d	N063865-001A-MS	MS	1	03/19/24 4:03 PM
A0319058.d	N063865-002A	SAMP	1	03/19/24 4:08 PM
A0319059.d	N063865-003A	SAMP	1	03/19/24 4:12 PM
A0319060.d	N063865-004A	SAMP	1	03/19/24 4:17 PM
A0319061.d	N063865-005A	SAMP	1	03/19/24 4:21 PM
A0319062.d	N063865-006A	SAMP	1	03/19/24 4:26 PM
A0319063.d	N063865-007A	SAMP	1	03/19/24 4:31 PM
A0319064.d	N063865-008A	SAMP	1	03/19/24 4:35 PM
A0319065.d	CCV4	CCV	1	03/19/24 4:40 PM
A0319066.d	CCB4	CCB	1	03/19/24 4:45 PM
A0319067.d	N063865-009A	SAMP	1	03/19/24 4:49 PM
A0319068.d	N063865-010A	SAMP	1	03/19/24 4:54 PM
A0319069.d	N063865-011A	SAMP	1	03/19/24 5:02 PM
A0319070.d	N063865-012A	SAMP	1	03/19/24 5:06 PM
A0319071.d	N063865-013A	SAMP	1	03/19/24 5:11 PM
A0319072.d	N063865-014A	SAMP	1	03/19/24 5:15 PM
A0319073.d	N063863-001A	SAMP	1	03/19/24 5:20 PM
A0319074.d	N063864-001A	SAMP	1	03/19/24 5:25 PM
A0319075.d	N063864-001A	SAMP	5	03/19/24 5:29 PM
A0319076.d	CCV5	CCV	1	03/19/24 5:34 PM
A0319077.d	CCB5	CCB	1	03/19/24 5:39 PM
A0319078.d	N063864-001A-PS	PS	1	03/19/24 5:43 PM
A0319079.d	N063864-001A-MS	MS	1	03/19/24 5:48 PM
A0319080.d	N063864-001A-MSD	MSD	1	03/19/24 5:53 PM
A0319081.d	N063865-001A	SAMP	1	03/19/24 5:57 PM
A0319082.d	N063865-001A-MS	MS	1	03/19/24 6:02 PM
A0319083.d	N063865-002A	SAMP	1	03/19/24 6:06 PM
A0319084.d	N063865-003A	SAMP	1	03/19/24 6:11 PM

INJECTION LOG: 240319A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0319085.d	N063865-004A	SAMP	1	03/19/24 6:16 PM
A0319086.d	N063865-005A	SAMP	1	03/19/24 6:20 PM
A0319087.d	N063865-006A	SAMP	1	03/19/24 6:25 PM
A0319088.d	CCV6	CCV	1	03/19/24 6:30 PM
A0319089.d	CCB6	CCB	1	03/19/24 6:34 PM
A0319090.d	N063865-007A	SAMP	1	03/19/24 6:39 PM
A0319091.d	N063865-008A	SAMP	1	03/19/24 6:44 PM
A0319092.d	N063865-009A	SAMP	1	03/19/24 6:48 PM
A0319093.d	N063863-001A	SAMP	1	03/19/24 6:53 PM
A0319094.d	N063863-001A	SAMP	1	03/19/24 6:58 PM
A0319095.d	N063863-001A	SAMP	1	03/19/24 7:02 PM
A0319096.d	CCV7	CCV	1	03/19/24 7:07 PM
A0319097.d	CCB7	CCB	1	03/19/24 7:11 PM
A0319098.d	ICSA3	ICSA	1	03/19/24 7:16 PM
A0319099.d	ICSAB3	ICSAB	1	03/19/24 7:21 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/14/2024 11:07:06 AM**
Prep End Date: **3/14/2024 3:00:00 PM**

Reviewed/ Date: JRB 4/18/2024

Initials/ Date: for

Prep Batch **107535** Prep Code:**3010_W_MSDISS_TPK** Technician: **Diane Jetajobe**

Prep Factor Units
mL / mL

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107535	Aqueous		25	☐	25	1.000		
MB-107535	Aqueous		25	☐	25	1.000		
N063771-001C	Groundwater	<2	25	☐	25	1.000		
N063771-002C	Groundwater	<2	25	☐	25	1.000		
N063771-002C-MS	Groundwater	<2	25	☐	25	1.000		
N063771-002C-MSD	Groundwater	<2	25	☐	25	1.000		
N063771-003C	Groundwater	<2	25	☐	25	1.000		
N063771-004C	Groundwater	<2	25	☐	25	1.000		
N063771-005C	Groundwater	<2	25	☐	25	1.000		
N063771-006C	Groundwater	<2	25	☐	25	1.000		
N063771-007C	Groundwater	<2	25	☐	25	1.000		
N063771-009C	Groundwater	<2	25	☐	25	1.000		
N063771-010C	Groundwater	<2	25	☐	25	1.000		
N063771-011C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/14/2024 11:07:06 AM**
Prep End Date: **3/14/2024 3:00:00 PM**

Reviewed/ Date: JRB 4/18/2024
Initials/ Date: for

Prep Batch **107535** Prep Code:**3010_W_MSDISS_TPK** Technician: **Diane Jetajobe**

Prep Factor Units
mL / mL

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063771-012C	Groundwater	<2	25	☐	25	1.000		
N063771-013C	Groundwater	<2	25	☐	25	1.000		
N063771-014C	Groundwater	<2	25	☐	25	1.000		
N063771-015C	Groundwater	<2	25	☐	25	1.000		
N063771-016C	Groundwater	<2	25	☐	25	1.000		
N063771-017C	Groundwater	<2	25	☐	25	1.000		
N063771-018C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240313A.b
Acq. Date-Time	2024-03-15 14:17:48
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

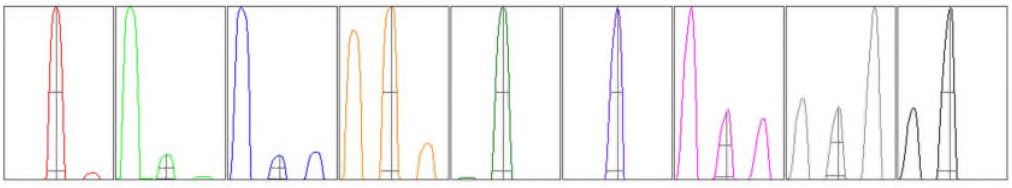
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	5363	53627.17	500.00		2.631	5.000
24	10.00	16622	166223.08	500.00		3.488	5.000
25	10.00	2221	22214.65	500.00		4.168	5.000
26	10.00	2634	26343.32	500.00		3.715	5.000
59	10.00	29754	297539.64	500.00		2.925	5.000
115	10.00	41927	419271.16	500.00		2.281	5.000
206	10.00	8374	83744.30	500.00		2.588	5.000
207	10.00	6955	69547.10	500.00		2.532	5.000
208	10.00	17139	171391.73	500.00		2.458	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.516 %
Doubly Charged	70 / 140 0.693 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	5237.12	8.95	8.90 - 9.10	
24	16478.98	23.90	23.90 - 24.10	
25	2217.52	24.95	24.90 - 25.10	
26	2560.01	25.95	25.90 - 26.10	
59	28723.01	58.95	58.90 - 59.10	
115	40469.42	115.05	114.90 - 115.10	
206	7838.92	205.95	205.90 - 206.10	
207	7095.68	206.95	206.90 - 207.10	
208	17104.73	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.488	0.900	
24	0.41	0.497	0.900	
25	0.40	0.495	0.900	
26	0.40	0.494	0.900	
59	0.38	0.531	0.900	
115	0.34	0.481	0.900	
206	0.35	0.511	0.900	
207	0.34	0.534	0.900	
208	0.35	0.533	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.2 mm	Torch V	1.3 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2525 V	Pulse HV	1600 V

[H2]

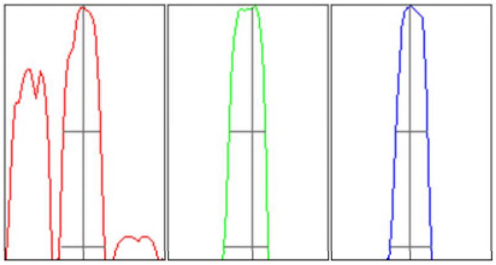
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		231	2314.56			6.735	
59		2938	29382.92			2.660	
115		41852	418518.13			2.431	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.478 %
Doubly Charged	70 / 140 0.266 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	256.28	26.00	25.90 - 26.10	
59	3067.67	59.10	58.90 - 59.10	
115	43467.83	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.70	0.836	0.900	
59	0.69	0.825	0.900	
115	0.60	0.774	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	0.9999	QP Bias	-15.0 V
Mass Offset	124	Axis Offset	0.05		

Hardware Settings

Torch

Torch H	1.2 mm	Torch V	1.3 mm		

EM

Discriminator	4.5 mV	Analog HV	2525 V	Pulse HV	1600 V

[He]

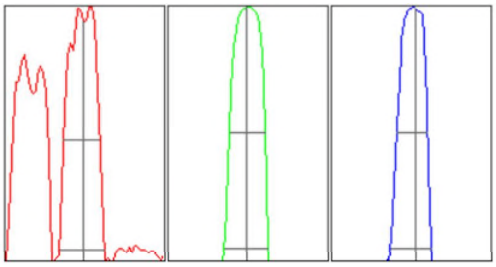
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		93	931.63			8.299	
59		8883	88828.45			2.271	
115		8420	84196.19			2.434	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.196 %
Doubly Charged	70 / 140 1.045 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	94.26	26.00	25.90 - 26.10	
59	8989.32	59.00	58.90 - 59.10	
115	8536.07	115.10	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.69	0.836	0.900	
59	0.68	0.823	0.900	
115	0.59	0.771	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	0.9999	QP Bias	-13.0 V
Mass Offset	124	Axis Offset	0.05		

Hardware Settings

Torch

Torch H	1.2 mm	Torch V	1.3 mm

EM

Discriminator	4.5 mV	Analog HV	2525 V	Pulse HV	1600 V

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240315A1.b
Acq. Date-Time	2024-03-19 11:06:23
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

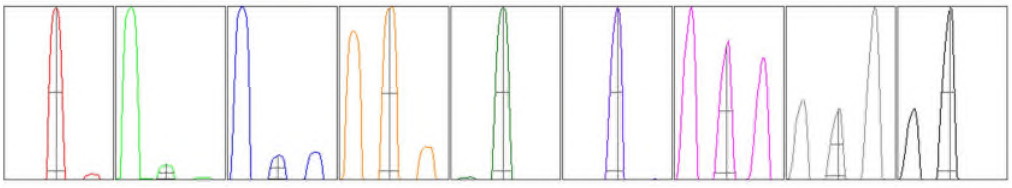
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	4900	48995.32	500.00		3.728	5.000
24	10.00	14644	146437.58	500.00		3.114	5.000
25	10.00	1944	19444.67	500.00		3.922	5.000
26	10.00	2267	22670.86	500.00		4.011	5.000
59	10.00	27647	276472.37	500.00		2.348	5.000
115	10.00	6731	67314.16	500.00		3.094	5.000
206	10.00	9748	97479.34	500.00		2.390	5.000
207	10.00	8109	81085.84	500.00		2.480	5.000
208	10.00	20112	201123.70	500.00		1.959	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.580 %
Doubly Charged	70 / 140 0.609 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	4879.50	8.95	8.90 - 9.10	
24	14817.78	23.90	23.90 - 24.10	
25	1991.23	24.90	24.90 - 25.10	
26	2298.37	25.90	25.90 - 26.10	
59	27679.58	58.95	58.90 - 59.10	
115	6620.50	115.05	114.90 - 115.10	
206	9098.87	205.95	205.90 - 206.10	
207	8142.31	206.95	206.90 - 207.10	
208	20282.76	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.487	0.900	
24	0.42	0.516	0.900	
25	0.41	0.496	0.900	
26	0.41	0.529	0.900	
59	0.39	0.532	0.900	
115	0.35	0.483	0.900	
206	0.36	0.570	0.900	
207	0.35	0.538	0.900	
208	0.35	0.534	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.4 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2526 V	Pulse HV	1598 V

[H2]

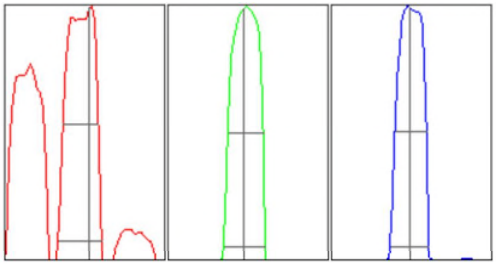
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		212	2120.73			7.347	
59		2526	25259.37			3.247	
115		6997	69969.93			2.756	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.545 %
Doubly Charged	70 / 140 0.214 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	226.52	26.10	25.90 - 26.10	
59	2662.99	58.95	58.90 - 59.10	
115	7446.12	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.67	0.816	0.900	
59	0.67	0.785	0.900	
115	0.60	0.732	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0000	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.01		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.4 mm		

EM

Discriminator	4.5 mV	Analog HV	2526 V	Pulse HV	1598 V

[He]

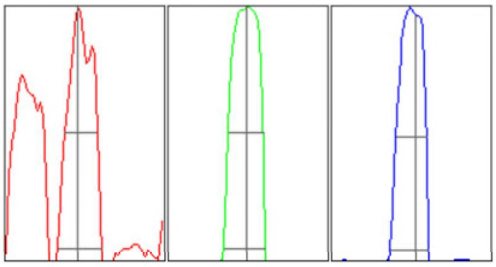
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		87	865.82			11.628	
59		8023	80225.50			2.118	
115		1386	13861.82			2.952	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.224 %
Doubly Charged	70 / 140 0.967 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	102.01	25.90	25.90 - 26.10	
59	8044.71	59.00	58.90 - 59.10	
115	1437.69	115.10	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.63	0.825	0.900	
59	0.66	0.784	0.900	
115	0.59	0.729	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0000	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.01		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.4 mm

EM

Discriminator	4.5 mV	Analog HV	2526 V	Pulse HV	1598 V

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240315A

Instrument ID: ICPMS-03

Analyte	Data File	A0315003.d	A0315004.d	A0315005.d	A0315006.d	A0315007.d	A0315008.d	A0315009.d	A0315010.d	A0315011.d	
	Acq. Date-Time	03/15/2024 04:10 PM	03/15/2024 04:15 PM	03/15/2024 04:20 PM	03/15/2024 04:25 PM	03/15/2024 04:29 PM	03/15/2024 04:34 PM	03/15/2024 04:39 PM	03/15/2024 04:44 PM	03/15/2024 04:48 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	56928.8		57426.2	57220.9	57371.5	57222.2	57465.1	57486.3	57788.3	
55 Mn [2]	CPS	52.1		1105.2	10328.4	20795.9	40146.7	81638.7	204281.5	413307.3	1.0000
72 Ge (ISTD) [2]	CPS	35687.7	35623.1	35872.6	35840.3	35342.6	35731.1	35911.6	36177.7	36408.2	
75 As [2]	CPS	13.3	64.4	307.7	2544.6	5178.5	10334.2	20987.5	52010.4	104963.8	1.0000
159 Tb (ISTD) [3]	CPS	2050498.8		2070855.9	2050557.5	2060610.9	2075363.8	2054330	2084760.9	2094903.5	
137 Ba [3]	CPS	53.3		2183.5	20827.5	41177.9	81985.1	165933.6	419086.5	846495.6	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION SUMMARY: 240319A

Instrument ID: ICPMS-03

Analyte	Data File	A0319003.d	A0319005.d	A0319006.d	A0319007.d	A0319008.d	A0319009.d	A0319010.d	A0319011.d	
	Acq. Date-Time	03/19/2024 11:19 AM	03/19/2024 11:29 AM	03/19/2024 11:34 AM	03/19/2024 11:38 AM	03/19/2024 11:43 AM	03/19/2024 11:48 AM	03/19/2024 11:53 AM	03/19/2024 11:57 AM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	47952	47690.2	47870.6	47402.6	46500	47217.6	47027.1	47268.8	
55 Mn [2]	CPS	70.9	937.4	8587	17179.5	33430.8	67178.5	167155.1	340871.6	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ICV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751429**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.446	0.10	10.00	0	104	90	110				
Barium	10.129	1.0	10.00	0	101	90	110				
Manganese	102.021	0.50	100.0	0	102	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ZZZZZZ** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751431**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.981	1.0	1.000	0	98.1	80	120				
Manganese	0.567	0.50	0.5000	0	113	80	120				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ZZZZZZ** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751432**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.110	0.10	0.1000	0	110	80	120				

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751433**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.307	0.10	20.00	0	102	90	110				
Barium	19.735	1.0	20.00	0	98.7	90	110				
Manganese	19.874	0.50	20.00	0	99.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751445**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.173	0.10	20.00	0	101	90	110				
Barium	19.335	1.0	20.00	0	96.7	90	110				
Manganese	19.566	0.50	20.00	0	97.8	90	110				

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751454**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.769	0.10	20.00	0	98.8	90	110				
Barium	19.833	1.0	20.00	0	99.2	90	110				
Manganese	19.644	0.50	20.00	0	98.2	90	110				

Sample ID **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751467**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.167	0.10	20.00	0	95.8	90	110				
Barium	19.935	1.0	20.00	0	99.7	90	110				
Manganese	19.529	0.50	20.00	0	97.6	90	110				

Sample ID **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751478**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	18.621	0.10	20.00	0	93.1	90	110				
Barium	20.176	1.0	20.00	0	101	90	110				
Manganese	19.406	0.50	20.00	0	97.0	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751489**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.490	0.10	20.00	0	97.5	90	110				
Barium	19.840	1.0	20.00	0	99.2	90	110				
Manganese	19.839	0.50	20.00	0	99.2	90	110				

Sample ID **CCV6** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751503**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.883	0.10	20.00	0	99.4	90	110				
Barium	20.065	1.0	20.00	0	100	90	110				
Manganese	19.677	0.50	20.00	0	98.4	90	110				

Sample ID **CCV7** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751509**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.515	0.10	20.00	0	97.6	90	110				
Barium	20.027	1.0	20.00	0	100	90	110				
Manganese	19.658	0.50	20.00	0	98.3	90	110				

Sample ID **CCV8** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/16/2024** SeqNo: **5751522**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.897	0.10	20.00	0	99.5	90	110				
Barium	20.208	1.0	20.00	0	101	90	110				
Manganese	19.501	0.50	20.00	0	97.5	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV9** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/16/2024** SeqNo: **5751533**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.440	0.10	20.00	0	97.2	90	110				
Barium	19.895	1.0	20.00	0	99.5	90	110				
Manganese	19.821	0.50	20.00	0	99.1	90	110				

Sample ID **CCV10** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/16/2024** SeqNo: **5751541**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.426	0.10	20.00	0	97.1	90	110				
Barium	20.163	1.0	20.00	0	101	90	110				
Manganese	19.635	0.50	20.00	0	98.2	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV**	SampType: **ICV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **ICV**	Batch ID: **R183805**	TestNo: **EPA 6020**		Analysis Date: **3/19/2024**	SeqNo: **5759280**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	101.641	0.50	100.0	0	102	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **ZZZZZZ**	Batch ID: **R183805**	TestNo: **EPA 6020**		Analysis Date: **3/19/2024**	SeqNo: **5759282**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	0.546	0.50	0.5000	0	109	80	120				

Sample ID **MLCCV**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **CCV**	Batch ID: **R183805**	TestNo: **EPA 6020**		Analysis Date: **3/19/2024**	SeqNo: **5759283**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.752	0.50	20.00	0	98.8	90	110				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **CCV**	Batch ID: **R183805**	TestNo: **EPA 6020**		Analysis Date: **3/19/2024**	SeqNo: **5759295**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.783	0.50	20.00	0	98.9	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **CCV**	Batch ID: **R183805**	TestNo: **EPA 6020**		Analysis Date: **3/19/2024**	SeqNo: **5759307**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.650	0.50	20.00	0	98.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB** SampType: **ICB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ICB** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751430**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB1** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCB** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751446**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB2** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCB** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751455**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB3** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCB** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751468**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183672**
Client ID: **CCB**	Batch ID: **R183672**	TestNo: **EPA 6020**		Analysis Date: **3/15/2024**	SeqNo: **5751479**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183672**
Client ID: **CCB**	Batch ID: **R183672**	TestNo: **EPA 6020**		Analysis Date: **3/15/2024**	SeqNo: **5751490**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183672**
Client ID: **CCB**	Batch ID: **R183672**	TestNo: **EPA 6020**		Analysis Date: **3/15/2024**	SeqNo: **5751504**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB7**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183672**
Client ID: **CCB**	Batch ID: **R183672**	TestNo: **EPA 6020**		Analysis Date: **3/15/2024**	SeqNo: **5751510**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB8**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183672**
Client ID: **CCB**	Batch ID: **R183672**	TestNo: **EPA 6020**		Analysis Date: **3/16/2024**	SeqNo: **5751523**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB9**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183672**
Client ID: **CCB**	Batch ID: **R183672**	TestNo: **EPA 6020**		Analysis Date: **3/16/2024**	SeqNo: **5751534**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB10**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183672**
Client ID: **CCB**	Batch ID: **R183672**	TestNo: **EPA 6020**		Analysis Date: **3/16/2024**	SeqNo: **5751542**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB**	SampType: **ICB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **ICB**	Batch ID: **R183805**	TestNo: **EPA 6020**		Analysis Date: **3/19/2024**	SeqNo: **5759281**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **CCB**	Batch ID: **R183805**	TestNo: **EPA 6020**		Analysis Date: **3/19/2024**	SeqNo: **5759296**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **CCB**	Batch ID: **R183805**	TestNo: **EPA 6020**		Analysis Date: **3/19/2024**	SeqNo: **5759308**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ICSA** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751434**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ICSAB** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751435**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.538	0.10	20.00	0	103	80	120				
Barium	19.940	1.0	20.00	0	99.7	80	120				
Manganese	20.365	0.50	20.00	0	102	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ICSA** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751456**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ICSAB** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751457**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.592	0.10	20.00	0	103	80	120				
Barium	20.123	1.0	20.00	0	101	80	120				
Manganese	20.246	0.50	20.00	0	101	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA3** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ICSA** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751491**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB3** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ICSAB** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751492**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.210	0.10	20.00	0	101	80	120				
Barium	20.527	1.0	20.00	0	103	80	120				
Manganese	20.424	0.50	20.00	0	102	80	120				

Sample ID **ICSA4** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ICSA** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751511**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB4** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ICSAB** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751512**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.550	0.10	20.00	0	103	80	120				
Barium	20.458	1.0	20.00	0	102	80	120				
Manganese	20.342	0.50	20.00	0	102	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA5**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183672**
Client ID: **ICSA**	Batch ID: **R183672**	TestNo: **EPA 6020**		Analysis Date: **3/16/2024**	SeqNo: **5751543**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB5**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183672**
Client ID: **ICSAB**	Batch ID: **R183672**	TestNo: **EPA 6020**		Analysis Date: **3/16/2024**	SeqNo: **5751544**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.849	0.10	20.00	0	99.2	80	120				
Barium	20.801	1.0	20.00	0	104	80	120				
Manganese	20.446	0.50	20.00	0	102	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	ICSA1	SampType:	ICSA	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	183805
Client ID:	ICSA	Batch ID:	R183805	TestNo:	EPA 6020			Analysis Date:	3/19/2024	SeqNo:	5759284

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID	ICSAB1	SampType:	ICSAB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	183805
Client ID:	ICSAB	Batch ID:	R183805	TestNo:	EPA 6020			Analysis Date:	3/19/2024	SeqNo:	5759285

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	20.145	0.50	20.00	0	101	80	120				

Sample ID	ICSA2	SampType:	ICSA	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	183805
Client ID:	ICSA	Batch ID:	R183805	TestNo:	EPA 6020			Analysis Date:	3/19/2024	SeqNo:	5759309

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID	ICSAB2	SampType:	ICSAB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	183805
Client ID:	ICSAB	Batch ID:	R183805	TestNo:	EPA 6020			Analysis Date:	3/19/2024	SeqNo:	5759310

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	20.037	0.50	20.00	0	100	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240315A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	2050498.8	2050498.8	100	PASS	30-150	56928.8	56928.8	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	2058760.6	2050498.8	100.4	PASS	30-150	56976.9	56928.8	100.08	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	2070855.9	2050498.8	100.99	PASS	30-150	57426.2	56928.8	100.87	PASS	30-150
Std3-5/50 ppb	ICAL	1	2050557.5	2050498.8	100	PASS	30-150	57220.9	56928.8	100.51	PASS	30-150
Std4-10/100 ppb	ICAL	1	2060610.9	2050498.8	100.49	PASS	30-150	57371.5	56928.8	100.78	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	2075363.8	2050498.8	101.21	PASS	30-150	57222.2	56928.8	100.52	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	2054330	2050498.8	100.19	PASS	30-150	57465.1	56928.8	100.94	PASS	30-150
Std7-100/1000 ppb	ICAL	1	2084760.9	2050498.8	101.67	PASS	30-150	57486.3	56928.8	100.98	PASS	30-150
Std8-200/2000 ppb	ICAL	1	2094903.5	2050498.8	102.17	PASS	30-150	57788.3	56928.8	101.51	PASS	30-150
ICV	ICV	1	2063638.4	2050498.8	100.64	PASS	30-150	55980.1	56928.8	98.33	PASS	30-150
ICB	ICB	1	2061905.9	2050498.8	100.56	PASS	30-150	55843	56928.8	98.09	PASS	30-150
LLICV1	CCV1	1	2108637.6	2050498.8	102.84	PASS	30-150	56575.5	56928.8	99.38	PASS	30-150
LLICV1	CCV1	1	2119324.6	2050498.8	103.36	PASS	30-150	57313.4	56928.8	100.68	PASS	30-150
MLCCV	CCV	1	2087634.7	2050498.8	101.81	PASS	30-150	56656.8	56928.8	99.52	PASS	30-150
ICSA1	ICSA	1	2059683.1	2050498.8	100.45	PASS	30-150	56014.6	56928.8	98.39	PASS	30-150
ICSAB1	ICSAB	1	2078707	2050498.8	101.38	PASS	30-150	57378.1	56928.8	100.79	PASS	30-150
CCV1	CCV	1	2099511.5	2050498.8	102.39	PASS	30-150	57339	56928.8	100.72	PASS	30-150
CCB1	CCB	1	2044076.8	2050498.8	99.69	PASS	30-150	56951.1	56928.8	100.04	PASS	30-150
CCV2	CCV	1	2055126.4	2050498.8	100.23	PASS	30-150	56724.9	56928.8	99.64	PASS	30-150
CCB2	CCB	1	2060931.6	2050498.8	100.51	PASS	30-150	55727	56928.8	97.89	PASS	30-150
ICSA2	ICSA	1	2062157.9	2050498.8	100.57	PASS	30-150	55478.5	56928.8	97.45	PASS	30-150
ICSAB2	ICSAB	1	2064770	2050498.8	100.7	PASS	30-150	55873.1	56928.8	98.15	PASS	30-150
MB-107535	MBLK	1	2016108.9	2050498.8	98.32	PASS	30-150	54231.1	56928.8	95.26	PASS	30-150
LCS-107535	LCS	1	2051726.9	2050498.8	100.06	PASS	30-150	54436.1	56928.8	95.62	PASS	30-150
N063771-001C	SAMP	1	1536507.8	2050498.8	74.93	PASS	30-150	52531.1	56928.8	92.28	PASS	30-150
N063771-002C	SAMP	1	1475874.3	2050498.8	71.98	PASS	30-150	52058.6	56928.8	91.45	PASS	30-150
N063771-002C	SAMP	5	1782964.5	2050498.8	86.95	PASS	30-150	55956.6	56928.8	98.29	PASS	30-150
N063771-002C-PS	PS	1	1479965.5	2050498.8	72.18	PASS	30-150	51750	56928.8	90.9	PASS	30-150
N063771-002C-MS	MS	1	1469224.8	2050498.8	71.65	PASS	30-150	52036.3	56928.8	91.41	PASS	30-150
N063771-002C-MSD	MSD	1	1449115.2	2050498.8	70.67	PASS	30-150	51946.2	56928.8	91.25	PASS	30-150
N063771-003C	SAMP	1	1433386.2	2050498.8	69.9	PASS	30-150	51197.1	56928.8	89.93	PASS	30-150
CCV3	CCV	1	1915973	2050498.8	93.44	PASS	30-150	61081.3	56928.8	107.29	PASS	30-150
CCB3	CCB	1	1884117	2050498.8	91.89	PASS	30-150	58818.8	56928.8	103.32	PASS	30-150
N063771-004C	SAMP	1	1418024.8	2050498.8	69.16	PASS	30-150	50995.4	56928.8	89.58	PASS	30-150
N063771-005C	SAMP	1	1360083.4	2050498.8	66.33	PASS	30-150	50341.2	56928.8	88.43	PASS	30-150
N063771-006C	SAMP	1	1430815	2050498.8	69.78	PASS	30-150	51621.7	56928.8	90.68	PASS	30-150
N063771-007C	SAMP	1	1434527	2050498.8	69.96	PASS	30-150	52114.4	56928.8	91.54	PASS	30-150
N063771-009C	SAMP	1	1471400.4	2050498.8	71.76	PASS	30-150	51564.8	56928.8	90.58	PASS	30-150
N063771-010C	SAMP	1	1387530.1	2050498.8	67.67	PASS	30-150	50061.4	56928.8	87.94	PASS	30-150
N063771-011C	SAMP	1	1441321.5	2050498.8	70.29	PASS	30-150	51774.5	56928.8	90.95	PASS	30-150
N063771-012C	SAMP	1	1455688.6	2050498.8	70.99	PASS	30-150	51978.4	56928.8	91.3	PASS	30-150

INTERNAL STANDARD: 240315A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
N063771-013C	SAMP	1	1431569.6	2050498.8	69.82	PASS	30-150	52765.4	56928.8	92.69	PASS	30-150
CCV4	CCV	1	1761399	2050498.8	85.9	PASS	30-150	61448.1	56928.8	107.94	PASS	30-150
CCB4	CCB	1	1782654.8	2050498.8	86.94	PASS	30-150	60170.2	56928.8	105.69	PASS	30-150
N063771-014C	SAMP	1	1476088.9	2050498.8	71.99	PASS	30-150	50218.6	56928.8	88.21	PASS	30-150
N063771-015C	SAMP	1	1485381.8	2050498.8	72.44	PASS	30-150	50083.6	56928.8	87.98	PASS	30-150
N063771-016C	SAMP	1	1426641.3	2050498.8	69.58	PASS	30-150	50193	56928.8	88.17	PASS	30-150
N063771-017C	SAMP	1	1505184	2050498.8	73.41	PASS	30-150	51722	56928.8	90.85	PASS	30-150
N063771-018C	SAMP	1	1396240.9	2050498.8	68.09	PASS	30-150	49983.5	56928.8	87.8	PASS	30-150
LCS-107535	LCS	1	1783545.4	2050498.8	86.98	PASS	30-150	60254.9	56928.8	105.84	PASS	30-150
N063771-005C	SAMP	10	1691259.6	2050498.8	82.48	PASS	30-150	56288.9	56928.8	98.88	PASS	30-150
N063771-009C	SAMP	10	1764668.4	2050498.8	86.06	PASS	30-150	56471.9	56928.8	99.2	PASS	30-150
N063771-017C	SAMP	10	1767319.2	2050498.8	86.19	PASS	30-150	56658	56928.8	99.52	PASS	30-150
CCV5	CCV	1	1892130	2050498.8	92.28	PASS	30-150	58698.3	56928.8	103.11	PASS	30-150
CCB5	CCB	1	1885215.4	2050498.8	91.94	PASS	30-150	57895.7	56928.8	101.7	PASS	30-150
ICSA3	ICSA	1	1914658	2050498.8	93.38	PASS	30-150	57874.4	56928.8	101.66	PASS	30-150
ICSAB3	ICSAB	1	1957078.2	2050498.8	95.44	PASS	30-150	57238.8	56928.8	100.54	PASS	30-150
CCV6	CCV	1	1914310.5	2050498.8	93.36	PASS	30-150	58465.4	56928.8	102.7	PASS	30-150
CCB6	CCB	1	1893218	2050498.8	92.33	PASS	30-150	56873.1	56928.8	99.9	PASS	30-150
CCV7	CCV	1	1917389.3	2050498.8	93.51	PASS	30-150	58086.1	56928.8	102.03	PASS	30-150
CCB7	CCB	1	1909283.6	2050498.8	93.11	PASS	30-150	56715.9	56928.8	99.63	PASS	30-150
ICSA4	ICSA	1	1921866	2050498.8	93.73	PASS	30-150	56730.4	56928.8	99.65	PASS	30-150
ICSAB4	ICSAB	1	1970449.7	2050498.8	96.1	PASS	30-150	55855.3	56928.8	98.11	PASS	30-150
CCV8	CCV	1	1893273	2050498.8	92.33	PASS	30-150	58197.6	56928.8	102.23	PASS	30-150
CCB8	CCB	1	1880956.7	2050498.8	91.73	PASS	30-150	55966.6	56928.8	98.31	PASS	30-150
CCV9	CCV	1	1886737	2050498.8	92.01	PASS	30-150	57579	56928.8	101.14	PASS	30-150
CCB9	CCB	1	1862688.8	2050498.8	90.84	PASS	30-150	56216.5	56928.8	98.75	PASS	30-150
CCV10	CCV	1	1873579.7	2050498.8	91.37	PASS	30-150	57179.7	56928.8	100.44	PASS	30-150
CCB10	CCB	1	1864218	2050498.8	90.92	PASS	30-150	55237.6	56928.8	97.03	PASS	30-150
ICSA5	ICSA	1	1863005.9	2050498.8	90.86	PASS	30-150	54720.4	56928.8	96.12	PASS	30-150
ICSAB5	ICSAB	1	1899729.1	2050498.8	92.65	PASS	30-150	54520.8	56928.8	95.77	PASS	30-150

INTERNAL STANDARD: 240315A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	35687.7	35687.7	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	35623.1	35687.7	99.82	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	35872.6	35687.7	100.52	PASS	30-150
Std3-5/50 ppb	ICAL	1	35840.3	35687.7	100.43	PASS	30-150
Std4-10/100 ppb	ICAL	1	35342.6	35687.7	99.03	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	35731.1	35687.7	100.12	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	35911.6	35687.7	100.63	PASS	30-150
Std7-100/1000 ppb	ICAL	1	36177.7	35687.7	101.37	PASS	30-150
Std8-200/2000 ppb	ICAL	1	36408.2	35687.7	102.02	PASS	30-150
ICV	ICV	1	35328	35687.7	98.99	PASS	30-150
ICB	ICB	1	35256.8	35687.7	98.79	PASS	30-150
LLICV1	CCV1	1	35113.2	35687.7	98.39	PASS	30-150
LLICV1	CCV1	1	35655.4	35687.7	99.91	PASS	30-150
MLCCV	CCV	1	35184.4	35687.7	98.59	PASS	30-150
ICSA1	ICSA	1	34976.2	35687.7	98.01	PASS	30-150
ICSAB1	ICSAB	1	35501.8	35687.7	99.48	PASS	30-150
CCV1	CCV	1	35690	35687.7	100.01	PASS	30-150
CCB1	CCB	1	35480.6	35687.7	99.42	PASS	30-150
CCV2	CCV	1	35011.8	35687.7	98.11	PASS	30-150
CCB2	CCB	1	35235.6	35687.7	98.73	PASS	30-150
ICSA2	ICSA	1	34690	35687.7	97.2	PASS	30-150
ICSAB2	ICSAB	1	35206.7	35687.7	98.65	PASS	30-150
MB-107535	MBLK	1	34153.4	35687.7	95.7	PASS	30-150
LCS-107535	LCS	1	33824.9	35687.7	94.78	PASS	30-150
N063771-001C	SAMP	1	30396	35687.7	85.17	PASS	30-150
N063771-002C	SAMP	1	30647.5	35687.7	85.88	PASS	30-150
N063771-002C	SAMP	5	33545.4	35687.7	94	PASS	30-150
N063771-002C-PS	PS	1	30293.6	35687.7	84.89	PASS	30-150
N063771-002C-MS	MS	1	30423.8	35687.7	85.25	PASS	30-150
N063771-002C-MSD	MSD	1	30598.6	35687.7	85.74	PASS	30-150
N063771-003C	SAMP	1	30312.5	35687.7	84.94	PASS	30-150
CCV3	CCV	1	37645.4	35687.7	105.49	PASS	30-150
CCB3	CCB	1	36433.8	35687.7	102.09	PASS	30-150
N063771-004C	SAMP	1	30151.1	35687.7	84.49	PASS	30-150
N063771-005C	SAMP	1	28766.4	35687.7	80.61	PASS	30-150
N063771-006C	SAMP	1	30787.8	35687.7	86.27	PASS	30-150
N063771-007C	SAMP	1	30876.9	35687.7	86.52	PASS	30-150
N063771-009C	SAMP	1	30709.9	35687.7	86.05	PASS	30-150
N063771-010C	SAMP	1	29397.5	35687.7	82.37	PASS	30-150
N063771-011C	SAMP	1	30535.1	35687.7	85.56	PASS	30-150
N063771-012C	SAMP	1	30964.8	35687.7	86.77	PASS	30-150

INTERNAL STANDARD: 240315A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
N063771-013C	SAMP	1	31047.2	35687.7	87	PASS	30-150
CCV4	CCV	1	37603.2	35687.7	105.37	PASS	30-150
CCB4	CCB	1	36394.9	35687.7	101.98	PASS	30-150
N063771-014C	SAMP	1	29920.7	35687.7	83.84	PASS	30-150
N063771-015C	SAMP	1	29890.6	35687.7	83.76	PASS	30-150
N063771-016C	SAMP	1	29745.9	35687.7	83.35	PASS	30-150
N063771-017C	SAMP	1	31569.3	35687.7	88.46	PASS	30-150
N063771-018C	SAMP	1	29895.1	35687.7	83.77	PASS	30-150
LCS-107535	LCS	1	37075.4	35687.7	103.89	PASS	30-150
N063771-005C	SAMP	10	34694.6	35687.7	97.22	PASS	30-150
N063771-009C	SAMP	10	34677.8	35687.7	97.17	PASS	30-150
N063771-017C	SAMP	10	35220.1	35687.7	98.69	PASS	30-150
CCV5	CCV	1	36760.1	35687.7	103.01	PASS	30-150
CCB5	CCB	1	36413.8	35687.7	102.04	PASS	30-150
ICSA3	ICSA	1	36044.1	35687.7	101	PASS	30-150
ICSAB3	ICSAB	1	36186.6	35687.7	101.4	PASS	30-150
CCV6	CCV	1	36057.5	35687.7	101.04	PASS	30-150
CCB6	CCB	1	35770.2	35687.7	100.23	PASS	30-150
CCV7	CCV	1	36352.5	35687.7	101.86	PASS	30-150
CCB7	CCB	1	35299.1	35687.7	98.91	PASS	30-150
ICSA4	ICSA	1	35155.5	35687.7	98.51	PASS	30-150
ICSAB4	ICSAB	1	35060.8	35687.7	98.24	PASS	30-150
CCV8	CCV	1	35940.5	35687.7	100.71	PASS	30-150
CCB8	CCB	1	35105.5	35687.7	98.37	PASS	30-150
CCV9	CCV	1	36057.5	35687.7	101.04	PASS	30-150
CCB9	CCB	1	35193.3	35687.7	98.61	PASS	30-150
CCV10	CCV	1	35461.7	35687.7	99.37	PASS	30-150
CCB10	CCB	1	35060.8	35687.7	98.24	PASS	30-150
ICSA5	ICSA	1	34946.1	35687.7	97.92	PASS	30-150
ICSAB5	ICSAB	1	34892.7	35687.7	97.77	PASS	30-150

INTERNAL STANDARD: 240319A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	47952	47952	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	48668.4	47952	101.49	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	47690.2	47952	99.45	PASS	30-150
Std3-5/50 ppb	ICAL	1	47870.6	47952	99.83	PASS	30-150
Std4-10/100 ppb	ICAL	1	47402.6	47952	98.85	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	46500	47952	96.97	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	47217.6	47952	98.47	PASS	30-150
Std7-100/1000 ppb	ICAL	1	47027.1	47952	98.07	PASS	30-150
Std8-200/2000 ppb	ICAL	1	47268.8	47952	98.58	PASS	30-150
ICV	ICV	1	46504.5	47952	96.98	PASS	30-150
ICB	ICB	1	45758.1	47952	95.42	PASS	30-150
LLICV1	LLICV	1	46378.6	47952	96.72	PASS	30-150
MLCCV	CCV	1	46552.5	47952	97.08	PASS	30-150
ICSA1	ICSA	1	45358.1	47952	94.59	PASS	30-150
ICSAB1	ICSAB	1	46997	47952	98.01	PASS	30-150
N063771-005C	SAMP	10	44904.7	47952	93.65	PASS	30-150
CCV1	CCV	1	48815.5	47952	101.8	PASS	30-150
CCB1	CCB	1	48319.7	47952	100.77	PASS	30-150
CCV2	CCV	1	49305.8	47952	102.82	PASS	30-150
CCB2	CCB	1	48975	47952	102.13	PASS	30-150
ICSA2	ICSA	1	47953.1	47952	100	PASS	30-150
ICSAB2	ICSAB	1	48824.4	47952	101.82	PASS	30-150
CCV3	CCV	1	48749.9	47952	101.66	PASS	30-150
CCB3	CCB	1	49698	47952	103.64	PASS	30-150
CCV4	CCV	1	51203.8	47952	106.78	PASS	30-150
CCB4	CCB	1	50810.3	47952	105.96	PASS	30-150
CCV5	CCV	1	50935.2	47952	106.22	PASS	30-150
CCB5	CCB	1	50682.2	47952	105.69	PASS	30-150
CCV6	CCV	1	51016.5	47952	106.39	PASS	30-150
CCB6	CCB	1	50898.3	47952	106.14	PASS	30-150
CCV7	CCV	1	52203.5	47952	108.87	PASS	30-150
CCB7	CCB	1	51678.5	47952	107.77	PASS	30-150
ICSA3	ICSA	1	51326.4	47952	107.04	PASS	30-150
ICSAB3	ICSAB	1	51911.5	47952	108.26	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.: N063771
Test Method: EPA 6020
Analysis Date: 3/15/2024

Matrix: Groundwater
Batch No.: 107535

Instrument ID: ICPMS-03
Instrument Description: Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to As. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063771-002C DT 5x	Arsenic	As	µg/L	0	NA	0		10
N063771-002C DT 5x	Barium	Ba	µg/L	37.0822	PASS	36.30436	2.14%	10
N063771-002C DT 5x	Manganese	Mn	µg/L	69.45779	PASS	67.6584	2.66%	10

Reviewed by:

JRB 4/18/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063771
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **N063771-002C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ZZZZZZ** Batch ID: **107535** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/15/2024** SeqNo: **5751463**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	8.881	0.10	10.00	0	88.8	80	120				
Barium	46.022	1.0	10.00	36.30	97.2	80	120				
Manganese	160.255	0.50	100.0	67.66	92.6	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number : 504472
Report Level : II
Report Date : 04/01/2024

Analytical Report *prepared for:*

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Location: N063772

Authorized for release by:

Quynhgiao Le, Project Manager
714-7716900
quynhgiao.le@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Sonny Lorenzo
Asset Laboratories
11110 Artersia
Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 504472
Location: N063772
Date Received: 03/15/24

Sample ID	Lab ID	Collected	Matrix
N063772-001A / MW-76-039-0324	504472-001	03/13/24 12:37	Water
N063772-002A / MW-76-156-0324	504472-002	03/13/24 13:09	Water
N063772-003A / MW-76-181-0324	504472-003	03/13/24 13:44	Water
N063772-004A / MW-76-218-0324	504472-004	03/13/24 14:22	Water
N063772-005A / MW-82-046-0324	504472-005	03/13/24 09:53	Water
N063772-006A / MW-82-168-0324	504472-006	03/13/24 10:35	Water
N063772-007A / MW-82-198-0324	504472-007	03/13/24 11:16	Water
N063772-008A / MW-77-046-0324	504472-008	03/13/24 13:28	Water
N063772-009A / MW-77-102-0324	504472-009	03/13/24 12:03	Water
N063772-010A / MW-77-158-0324	504472-010	03/13/24 13:01	Water
N063772-011A / MW-929-Q124	504472-011	03/13/24 13:11	Water
N063772-012A / MW-77-187-0324	504472-012	03/13/24 14:25	Water
N063772-013A / MW-81-043-0324	504472-013	03/13/24 10:23	Water
N063772-014A / MW-930-Q124	504472-014	03/13/24 10:33	Water
N063772-015A / MW-81-098-0324	504472-015	03/13/24 11:01	Water
N063772-016A / MW-31-060-0324	504472-016	03/13/24 15:50	Water
N063772-017A / MW-31-135-0324	504472-017	03/13/24 16:26	Water

Case Narrative

Asset Laboratories 11110 Artersia Blvd, Suite B Cerritos, CA 90703 Sonny Lorenzo	Lab Job Number: 504472 Location: N063772 Date Received: 03/15/24

- This data package contains sample and QC results for seventeen water samples, requested for the above referenced project on 03/15/24. The samples were received cold and intact.
- Level II was also requested.

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Enthalpy Analytical
931 W. Barkley Ave.
Orange, CA 92868

TEL: (714) 771-6900
FAX: (714) 538-1209
Acct #:

Field Sampler: Riggie Tep

14-Mar-24

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests: SM5310B		
N063772-001A / MW-76-039-0324	Groundwater	3/13/2024 12:37:00 PM	8OZA	1		
N063772-002A / MW-76-156-0324	Groundwater	3/13/2024 1:09:00 PM	8OZA	1		
N063772-003A / MW-76-181-0324	Groundwater	3/13/2024 1:44:00 PM	8OZA	1		
N063772-004A / MW-76-218-0324	Groundwater	3/13/2024 2:22:00 PM	8OZA	1		
N063772-005A / MW-82-046-0324	Groundwater	3/13/2024 ~~9:50:00~~ 9:53:00 AM	8OZA	1	YRodriguez 3/15/2024	
N063772-006A / MW-82-168-0324	Groundwater	3/13/2024 10:35:00 AM	8OZA	1		
N063772-007A / MW-82-198-0324	Groundwater	3/13/2024 11:16:00 AM	8OZA	1		
N063772-008A / MW-77-046-0324	Groundwater	3/13/2024 1:28:00 PM	8OZA	1		
N063772-009A / MW-77-102-0324	Groundwater	3/13/2024 12:03:00 PM	8OZA	1		
N063772-010A / MW-77-158-0324	Groundwater	3/13/2024 1:01:00 PM	8OZA	1		
N063772-011A / MW-929-Q124	Groundwater	3/13/2024 1:11:00 PM	8OZA	1		
N063772-012A / MW-77-187-0324	Groundwater	3/13/2024 2:25:00 PM	8OZA	1		
N063772-013A / MW-81-043-0324	Groundwater	3/13/2024 10:23:00 AM	8OZA	1		
N063772-014A / MW-930-Q124	Groundwater	3/13/2024 10:33:00 AM	8OZA	1		
N063772-015A / MW-81-098-0324	Groundwater	3/13/2024 11:01:00 AM	8OZA	1		
N063772-016A / MW-31-060-0324	Groundwater	3/13/2024 3:50:00 PM	8OZA	1		
N063772-017A / MW-31-135-0324	Groundwater	3/13/2024 4:26:00 PM	8OZA	1		

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N63772A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for TOC by SM5310B. EDD requirement Labspec7 edata.

GLS#: 561105485

		Date/Time		Date/Time
Relinquished by:	YRodriguez	3/14/2024 16:30	**Received by:**	
Relinquished by:			**Received by:**	

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Enthalpy Analytical
931 W. Barkley Ave.
Orange, CA 92868

TEL: (714) 771-6900
FAX: (714) 538-1209
Acct #:

Field Sampler: Riggie Tep

14-Mar-24

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests: SM5310B		
N063772-001A / MW-76-039-0324	Groundwater	3/13/2024 12:37:00 PM	8OZA	1		
N063772-002A / MW-76-156-0324	Groundwater	3/13/2024 1:09:00 PM	8OZA	1		
N063772-003A / MW-76-181-0324	Groundwater	3/13/2024 1:44:00 PM	8OZA	1		
N063772-004A / MW-76-218-0324	Groundwater	3/13/2024 2:22:00 PM	8OZA	1		
N063772-005A / MW-82-046-0324	Groundwater	3/13/2024 ~~9:50:00~~ 9:53:00 AM	8OZA	1	YRodriguez 3/15/2024	
N063772-006A / MW-82-168-0324	Groundwater	3/13/2024 10:35:00 AM	8OZA	1		
N063772-007A / MW-82-198-0324	Groundwater	3/13/2024 11:16:00 AM	8OZA	1		
N063772-008A / MW-77-046-0324	Groundwater	3/13/2024 1:28:00 PM	8OZA	1		
N063772-009A / MW-77-102-0324	Groundwater	3/13/2024 12:03:00 PM	8OZA	1		
N063772-010A / MW-77-158-0324	Groundwater	3/13/2024 1:01:00 PM	8OZA	1		
N063772-011A / MW-929-Q124	Groundwater	3/13/2024 1:11:00 PM	8OZA	1		
N063772-012A / MW-77-187-0324	Groundwater	3/13/2024 2:25:00 PM	8OZA	1		
N063772-013A / MW-81-043-0324	Groundwater	3/13/2024 10:23:00 AM	8OZA	1		
N063772-014A / MW-930-Q124	Groundwater	3/13/2024 10:33:00 AM	8OZA	1		
N063772-015A / MW-81-098-0324	Groundwater	3/13/2024 11:01:00 AM	8OZA	1		
N063772-016A / MW-31-060-0324	Groundwater	3/13/2024 3:50:00 PM	8OZA	1		
N063772-017A / MW-31-135-0324	Groundwater	3/13/2024 4:26:00 PM	8OZA	1		

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

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Please analyze for TOC by SM5310B. EDD requirement Labspec7 edata.

GLS#: 561105485

		Date/Time		Date/Time
Relinquished by:	YRodriguez	3/14/2024 16:30	**Received by:**	
Relinquished by:			**Received by:**	

504472

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

QC Level: Level IV

Subcontractor:

Enthalpy Analytical
931 W. Barkley Ave.
Orange, CA 92868

TEL: (714) 771-6900
FAX: (714) 538-1209
Acct #:

Field Sampler: Riggie Tep

14-Mar-24

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				SM5310B		
N063772-001A / MW-76-039-0324	Groundwater	3/13/2024 12:37:00 PM	8OZA	1		
N063772-002A / MW-76-156-0324	Groundwater	3/13/2024 1:09:00 PM	8OZA	1		
N063772-003A / MW-76-181-0324	Groundwater	3/13/2024 1:44:00 PM	8OZA	1		
N063772-004A / MW-76-218-0324	Groundwater	3/13/2024 2:22:00 PM	8OZA	1		
N063772-005A / MW-82-046-0324	Groundwater	3/13/2024 9:50:00 AM	8OZA	1		
N063772-006A / MW-82-168-0324	Groundwater	3/13/2024 10:35:00 AM	8OZA	1		
N063772-007A / MW-82-198-0324	Groundwater	3/13/2024 11:16:00 AM	8OZA	1		
N063772-008A / MW-77-046-0324	Groundwater	3/13/2024 1:28:00 PM	8OZA	1		
N063772-009A / MW-77-102-0324	Groundwater	3/13/2024 12:03:00 PM	8OZA	1		
N063772-010A / MW-77-158-0324	Groundwater	3/13/2024 1:01:00 PM	8OZA	1		
N063772-011A / MW-929-Q124	Groundwater	3/13/2024 1:11:00 PM	8OZA	1		
N063772-012A / MW-77-187-0324	Groundwater	3/13/2024 2:25:00 PM	8OZA	1		
N063772-013A / MW-81-043-0324	Groundwater	3/13/2024 10:23:00 AM	8OZA	1		
N063772-014A / MW-930-Q124	Groundwater	3/13/2024 10:33:00 AM	8OZA	1		
N063772-015A / MW-81-098-0324	Groundwater	3/13/2024 11:01:00 AM	8OZA	1		
N063772-016A / MW-31-060-0324	Groundwater	3/13/2024 3:50:00 PM	8OZA	1		
N063772-017A / MW-31-135-0324	Groundwater	3/13/2024 4:26:00 PM	8OZA	1		

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

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Please analyze for TOC by SM5310B. EDD requirement Labspec7 edata.

GLS#: 561105485

		Date/Time			Date/Time
Relinquished by:	YRodriguez	3/14/2024 16:30	**Received by:**		3/15/24 10:21
Relinquished by:			**Received by:**		

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Asset Labs

Date Received: 3/15/24

Project: N063772

Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2)

Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 2.7 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☑ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 0.3 #2: _____ #3: _____ #4: _____

Section 4

	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____ ☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: _____ Date: 3/15/24

GLS.

800-322-5555
www.gls-us.com

Ship From
ADVANCED TECHNOLOGY
LABORATORIES, INC.
MARLON CARTIN
3151 W. POST RD.
LAS VEGAS, NV 89118

Tracking #: 561105485

PDS

Ship To
ENHALPY ANALYTICAL
SAMPLE RECEIVING
806 N. BATAVIA
ORANGE, CA 92868

ORANGE

S10219D

COD: $0.00
Weight: 0 lb(s)
Reference:

Delivery Instructions:

5520906

Signature Type: STANDARD

ORC CA927-RD0

Print Date: 3/14/2024 3:34 PM

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.
Step 2: Fold this page in half.
Step 3: Securely attach this label to your package and do not cover the barcode.

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all of the General Logistics Systems US, Inc. (GLS) service terms & conditions including, but not limited to; limits of liability, declared value conditions, and claim procedures which are available on our website at www.gls-us.com.

27

ENTHALPY ANALYTICAL

Analysis Results for 504472

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 504472
Location: N063772
Date Received: 03/15/24

Sample ID: N063772-001A / MW-76-039-0324 **Lab ID:** 504472-001 **Matrix:** Water **Collected:** 03/13/24 12:37

504472-001 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.6**		mg/L	1.0	1	335697	03/19/24	03/19/24	EPL

Sample ID: N063772-002A / MW-76-156-0324 **Lab ID:** 504472-002 **Matrix:** Water **Collected:** 03/13/24 13:09

504472-002 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.6**		mg/L	1.0	1	335697	03/19/24	03/19/24	EPL

Sample ID: N063772-003A / MW-76-181-0324 **Lab ID:** 504472-003 **Matrix:** Water **Collected:** 03/13/24 13:44

504472-003 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.5**		mg/L	1.0	1	335697	03/19/24	03/19/24	EPL

Sample ID: N063772-004A / MW-76-218-0324 **Lab ID:** 504472-004 **Matrix:** Water **Collected:** 03/13/24 14:22

504472-004 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.4**		mg/L	1.0	1	335697	03/19/24	03/19/24	EPL

Sample ID: N063772-005A / MW-82-046-0324 **Lab ID:** 504472-005 **Matrix:** Water **Collected:** 03/13/24 09:53

504472-005 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**31**		mg/L	2.0	2	335697	03/19/24	03/19/24	EPL

Sample ID: N063772-006A / MW-82-168-0324 **Lab ID:** 504472-006 **Matrix:** Water **Collected:** 03/13/24 10:35

504472-006 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.0**		mg/L	1.0	1	335697	03/19/24	03/19/24	EPL

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 504472

Sample ID: N063772-007A / MW-82-198-0324 **Lab ID:** 504472-007 **Collected:** 03/13/24 11:16 **Matrix:** Water

504472-007 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	ND		mg/L	1.0	1	335697	03/19/24	03/19/24	EPL

Sample ID: N063772-008A / MW-77-046-0324 **Lab ID:** 504472-008 **Collected:** 03/13/24 13:28 **Matrix:** Water

504472-008 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.7**		mg/L	1.0	1	335697	03/19/24	03/19/24	EPL

Sample ID: N063772-009A / MW-77-102-0324 **Lab ID:** 504472-009 **Collected:** 03/13/24 12:03 **Matrix:** Water

504472-009 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.1**		mg/L	1.0	1	335697	03/19/24	03/19/24	EPL

Sample ID: N063772-010A / MW-77-158-0324 **Lab ID:** 504472-010 **Collected:** 03/13/24 13:01 **Matrix:** Water

504472-010 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.4**		mg/L	1.0	1	335697	03/19/24	03/19/24	EPL

Sample ID: N063772-011A / MW-929-Q124 **Lab ID:** 504472-011 **Collected:** 03/13/24 13:11 **Matrix:** Water

504472-011 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	ND		mg/L	1.0	1	335697	03/19/24	03/19/24	EPL

Sample ID: N063772-012A / MW-77-187-0324 **Lab ID:** 504472-012 **Collected:** 03/13/24 14:25 **Matrix:** Water

504472-012 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.1**		mg/L	1.0	1	335697	03/19/24	03/19/24	EPL

Sample ID: N063772-013A / MW-81-043-0324 **Lab ID:** 504472-013 **Collected:** 03/13/24 10:23 **Matrix:** Water

504472-013 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.4**		mg/L	1.0	1	335697	03/19/24	03/19/24	EPL

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 504472

Sample ID:	Lab ID: 504472-014	Collected: 03/13/24 10:33
N063772-014A / MW-930-Q124	Matrix: Water	

504472-014 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.1**		mg/L	1.0	1	335697	03/19/24	03/19/24	EPL

Sample ID:	Lab ID: 504472-015	Collected: 03/13/24 11:01
N063772-015A / MW-81-098-0324	Matrix: Water	

504472-015 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	ND		mg/L	1.0	1	335697	03/19/24	03/19/24	EPL

Sample ID:	Lab ID: 504472-016	Collected: 03/13/24 15:50
N063772-016A / MW-31-060-0324	Matrix: Water	

504472-016 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.0**		mg/L	1.0	1	335697	03/19/24	03/19/24	EPL

Sample ID:	Lab ID: 504472-017	Collected: 03/13/24 16:26
N063772-017A / MW-31-135-0324	Matrix: Water	

504472-017 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	ND		mg/L	1.0	1	335697	03/19/24	03/19/24	EPL

ND Not Detected

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type: Blank	**Lab ID: QC1137508**	**Batch: 335697**
Matrix: Water	**Method: SM 5310B**	

QC1137508 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Total Organic Carbon	ND		mg/L	1.0	03/19/24	03/19/24

Type: Lab Control Sample	**Lab ID: QC1137509**	**Batch: 335697**
Matrix: Water	**Method: SM 5310B**	

QC1137509 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Total Organic Carbon	23.44	25.00	mg/L	94%		80-120

Type: Matrix Spike	**Lab ID: QC1137510**	**Batch: 335697**
Matrix (Source ID): Water (504472-001)	**Method: SM 5310B**	

QC1137510 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Total Organic Carbon	27.92	1.610	25.00	mg/L	105%		80-120	1

Type: Matrix Spike Duplicate	**Lab ID: QC1137511**	**Batch: 335697**
Matrix (Source ID): Water (504472-001)	**Method: SM 5310B**	

QC1137511 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Total Organic Carbon	27.34	1.610	25.00	mg/L	103%		80-120	2	20	1

ND Not Detected

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number : 504628
Report Level : II
Report Date : 04/03/2024

Analytical Report *prepared for:*

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Location: N063811

Authorized for release by:

Quynhgiao Le

Quynhgiao Le, Project Manager
714-7716900
quynhgiao.le@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Sonny Lorenzo
Asset Laboratories
11110 Artersia
Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 504628
Location: N063811
Date Received: 03/19/24

Sample ID	Lab ID	Collected	Matrix
N063811-001A / MW-20-070-0324	504628-001	03/14/24 10:21	Water
N063811-002A / MW-20-100-0324	504628-002	03/14/24 11:32	Water
N063811-003A / MW-927-Q124	504628-003	03/14/24 11:42	Water
N063811-004A / MW-20-130-0324	504628-004	03/14/24 10:59	Water
N063811-005A / MW-21-0324	504628-005	03/14/24 09:51	Water
N063811-006A / MW-71-035-0324	504628-006	03/14/24 09:06	Water
N063811-007A / MW-78-070-0324	504628-007	03/14/24 11:36	Water
N063811-008A / MW-78-142-0324	504628-008	03/14/24 12:06	Water
N063811-009A / MW-79-058-0324	504628-009	03/14/24 08:32	Water
N063811-010A / MW-79-102-0324	504628-010	03/14/24 09:03	Water
N063811-011A / MW-80-057-0324	504628-011	03/14/24 12:49	Water
N063811-012A / MW-80-082-0324	504628-012	03/14/24 12:29	Water
N063811-013A / MW-51-0324	504628-013	03/14/24 10:43	Water
N063811-014A / MW-26-0324	504628-014	03/14/24 09:57	Water

Case Narrative

Asset Laboratories 11110 Artersia Blvd, Suite B Cerritos, CA 90703 Sonny Lorenzo	Lab Job Number: 504628 Location: N063811 Date Received: 03/19/24

- This data package contains sample and QC results for fourteen water samples, requested for the above referenced project on 03/19/24. The samples were received cold and intact.
- Level II is also requested.

ASSET Laboratories
3151-3153 W Post Rd., Las Vegas, NV 89118
www.atl-labs.com
TEL: 7023072659 *FAX: 7023072691*

CHAIN-OF-CUSTODY RECORD

504628

QC Level: Level IV

Subcontractor:
Enthalpy Analytical
931 W. Barkley Ave.
Orange, CA 92868

TEL: (714) 771-6900
FAX: (714) 538-1209
Acct #:

Field Sampler: Riggie Tep

18-Mar-24

Sample ID	Matrix	Date Collected	Bottle Type	Requested Tests		
				SM5310B		
N063811-001A / MW-20-070-0324	Groundwater	3/14/2024 10:21:00 AM	8OZA	1		
N063811-002A / MW-20-100-0324	Groundwater	3/14/2024 11:32:00 AM	8OZA	1		
N063811-003A / MW-927-Q124	Groundwater	3/14/2024 11:42:00 AM	8OZA	1		
N063811-004A / MW-20-130-0324	Groundwater	3/14/2024 10:59:00 AM	8OZA	1		
N063811-005A / MW-21-0324	Groundwater	3/14/2024 9:51:00 AM	8OZA	1		
N063811-006A / MW-71-035-0324	Groundwater	3/14/2024 9:06:00 AM	8OZA	1		
N063811-007A / MW-78-070-0324	Groundwater	3/14/2024 11:36:00 AM	8OZA	1		
N063811-008A / MW-78-142-0324	Groundwater	3/14/2024 12:06:00 PM	8OZA	1		
N063811-009A / MW-79-058-0324	Groundwater	3/14/2024 8:32:00 AM	8OZA	1	(MS/MSD)	
N063811-010A / MW-79-102-0324	Groundwater	3/14/2024 9:03:00 AM	8OZA	1		
N063811-011A / MW-80-057-0324	Groundwater	3/14/2024 12:49:00 PM	8OZA	1		
N063811-012A / MW-80-082-0324	Groundwater	3/14/2024 12:29:00 PM	8OZA	1		
N063811-013A / MW-51-0324	Groundwater	3/14/2024 10:43:00 AM	8OZA	1		
N063811-014A / MW-26-0324	Groundwater	3/14/2024 9:57:00 AM	8OZA	1	(MS/MSD)	

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N63811A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for TOC by SM5310B. EDD requirement Labspec7 edata.

GLS #: 561115804

		Date/Time			Date/Time
Relinquished by:	YRodriguez	3/18/2024 1600	**Received by:**		3/19/24 11:50
Relinquished by:			**Received by:**		

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Asset Laboratories Project: _____

Date Received: 3/19/24 Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 4.1 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☑ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 2.7 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____

☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: _____ Date: 3/19/24

GLS.

800-322-5555
www.gls-us.com

Ship From
ADVANCED TECHNOLOGY
LABORATORIES, INC.
MARLON CARTIN
3151 W. POST RD.
LAS VEGAS, NV 89118

Ship To
ENHALPY ANALYTICAL
SAMPLE RECEIVING
931 W. BARKLEY AVE
ORANGE, CA 92868

COD: $0.00
Weight: 0 lb(s)
Reference:

Delivery Instructions:

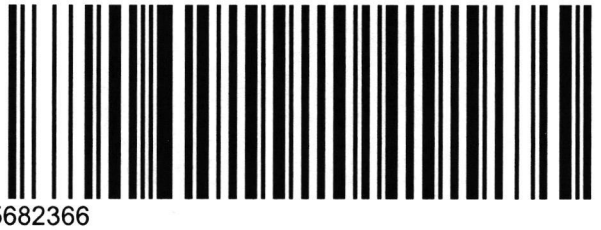
Signature Type: STANDARD

Tracking #: 561115804

PDS

ORANGE

S10219D



5682366

ORC CA927-RD0

Print Date: 3/18/2024 11:10 AM

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.
Step 1: Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer.
Step 2: Fold this page in half.
Step 3: Securely attach this label to your package and do not cover the barcode.

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all of the General Logistics Systems US, Inc. (GLS) service terms & conditions including, but not limited to; limits of liability, declared value conditions, and claim procedures which are available on our website at www.gls-us.com.

4.1/2.7°C

ENTHALPY ANALYTICAL

Analysis Results for 504628

Sonny Lorenzo
Asset Laboratories
11110 Artersia Blvd,
Suite B
Cerritos, CA 90703

Lab Job #: 504628
Location: N063811
Date Received: 03/19/24

Sample ID: N063811-001A / MW-20-070-0324 **Lab ID:** 504628-001 **Matrix:** Water **Collected:** 03/14/24 10:21

504628-001 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.0**		mg/L	1.0	1	335731	03/20/24	03/20/24	EPL

Sample ID: N063811-002A / MW-20-100-0324 **Lab ID:** 504628-002 **Matrix:** Water **Collected:** 03/14/24 11:32

504628-002 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.7**		mg/L	1.0	1	335731	03/20/24	03/20/24	EPL

Sample ID: N063811-003A / MW-927-Q124 **Lab ID:** 504628-003 **Matrix:** Water **Collected:** 03/14/24 11:42

504628-003 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.9**		mg/L	1.0	1	335731	03/20/24	03/20/24	EPL

Sample ID: N063811-004A / MW-20-130-0324 **Lab ID:** 504628-004 **Matrix:** Water **Collected:** 03/14/24 10:59

504628-004 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.1**		mg/L	1.0	1	335731	03/20/24	03/20/24	EPL

Sample ID: N063811-005A / MW-21-0324 **Lab ID:** 504628-005 **Matrix:** Water **Collected:** 03/14/24 09:51

504628-005 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**16**		mg/L	1.0	1	335731	03/20/24	03/20/24	EPL

Sample ID: N063811-006A / MW-71-035-0324 **Lab ID:** 504628-006 **Matrix:** Water **Collected:** 03/14/24 09:06

504628-006 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.3**		mg/L	1.0	1	335731	03/20/24	03/20/24	EPL

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 504628

Sample ID: N063811-007A / MW-78-070-0324 **Lab ID:** 504628-007 **Matrix:** Water **Collected:** 03/14/24 11:36

504628-007 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.3**		mg/L	1.0	1	335733	03/21/24	03/21/24	EPL

Sample ID: N063811-008A / MW-78-142-0324 **Lab ID:** 504628-008 **Matrix:** Water **Collected:** 03/14/24 12:06

504628-008 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	ND		mg/L	2.0	2	335733	03/21/24	03/21/24	EPL

Sample ID: N063811-009A / MW-79-058-0324 **Lab ID:** 504628-009 **Matrix:** Water **Collected:** 03/14/24 08:32

504628-009 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.2**		mg/L	1.0	1	335731	03/20/24	03/20/24	EPL

Sample ID: N063811-010A / MW-79-102-0324 **Lab ID:** 504628-010 **Matrix:** Water **Collected:** 03/14/24 09:03

504628-010 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**9.8**		mg/L	2.0	2	335733	03/21/24	03/21/24	EPL

Sample ID: N063811-011A / MW-80-057-0324 **Lab ID:** 504628-011 **Matrix:** Water **Collected:** 03/14/24 12:49

504628-011 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**1.3**		mg/L	1.0	1	335733	03/21/24	03/21/24	EPL

Sample ID: N063811-012A / MW-80-082-0324 **Lab ID:** 504628-012 **Matrix:** Water **Collected:** 03/14/24 12:29

504628-012 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	ND		mg/L	1.0	1	335733	03/21/24	03/21/24	EPL

Sample ID: N063811-013A / MW-51-0324 **Lab ID:** 504628-013 **Matrix:** Water **Collected:** 03/14/24 10:43

504628-013 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**11**		mg/L	1.0	1	335733	03/21/24	03/21/24	EPL

Results for any subcontracted analyses are not included in this section.

Analysis Results for 504628

Sample ID:	Lab ID: 504628-014	Collected: 03/14/24 09:57
N063811-014A / MW-26-0324	Matrix: Water	

504628-014 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: SM 5310B									
Total Organic Carbon	**2.8**		mg/L	1.0	1	335733	03/20/24	03/20/24	EPL

ND Not Detected

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Batch QC

Type: Blank **Lab ID: QC1137611** **Batch: 335731**
Matrix: Water **Method: SM 5310B**

QC1137611 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Total Organic Carbon	ND		mg/L	1.0	03/20/24	03/20/24

Type: Lab Control Sample **Lab ID: QC1137612** **Batch: 335731**
Matrix: Water **Method: SM 5310B**

QC1137612 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Total Organic Carbon	22.28	25.00	mg/L	89%		80-120

Type: Matrix Spike **Lab ID: QC1137613** **Batch: 335731**
Matrix (Source ID): Water (504628-009) **Method: SM 5310B**

QC1137613 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Total Organic Carbon	26.95	1.206	25.00	mg/L	103%		80-120	1

Type: Matrix Spike Duplicate **Lab ID: QC1137614** **Batch: 335731**
Matrix (Source ID): Water (504628-009) **Method: SM 5310B**

QC1137614 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Total Organic Carbon	27.84	1.206	25.00	mg/L	107%		80-120	3	20	1

Type: Blank **Lab ID: QC1137616** **Batch: 335733**
Matrix: Water **Method: SM 5310B**

QC1137616 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Total Organic Carbon	ND		mg/L	1.0	03/20/24	03/20/24

Type: Lab Control Sample **Lab ID: QC1137617** **Batch: 335733**
Matrix: Water **Method: SM 5310B**

QC1137617 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Total Organic Carbon	21.99	25.00	mg/L	88%		80-120

Type: Matrix Spike **Lab ID: QC1137618** **Batch: 335733**
Matrix (Source ID): Water (504628-014) **Method: SM 5310B**

QC1137618 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Total Organic Carbon	28.13	2.761	25.00	mg/L	101%		80-120	1

ENTHALPY ANALYTICAL

Batch QC

Type:	**Matrix Spike Duplicate**	**Lab ID:**	**QC1137619**	**Batch:**	**335733**
Matrix (Source ID):	**Water (504628-014)**	**Method:**	**SM 5310B**		

QC1137619 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Total Organic Carbon	26.67	2.761	25.00	mg/L	96%		80-120	5	20	1

ND Not Detected

ARCADIS

Project: PG&E Topock - PCM

Project No.: 30211191

ASSET Laboratories Work Order:

N063812

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063812

Item	Page
Cover Page	1-7
Analytical Result/QC Summary Reports	8-89
Sample Receiving Items	90-98
List of Analysts	99
Raw Data	
EPA 218.6	100-354
EPA 300.0	355-385
EPA 6010B_Dissolved	386-420
EPA 6020_Dissolved	421-489

April 01, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063812

RE: PG&E Topock - PCM, 30211191

Attention: Dan Bush

Enclosed are the results for sample(s) received on March 14, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 218.6:

Dilution was necessary for samples N063812-005A and N063812-016A due to matrix interference. Sample was analyzed at lower dilution however matrix spike recovery was not met indicating possible matrix interference. Samples were reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Analytical Comments for EPA 6010B:

Matrix Spike (MS) is outside recovery criteria for Iron in QC sample N063812-016CMS possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Iron in QC samples N063812-011CMS and N063812-011CMSD possibly due to matrix interference. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Barium in QC samples N063812-011CMS and N063812-011CMSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Manganese in

QC samples N063812-016CMS and N063812-016CMSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

ASSET Laboratories

Date: *01-Apr-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063812
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063812-001A	MW-20-070-0324	Groundwater	3/14/2024 10:21:00 AM	3/14/2024	4/1/2024
N063812-001B	MW-20-070-0324	Groundwater	3/14/2024 10:21:00 AM	3/14/2024	4/1/2024
N063812-001C	MW-20-070-0324	Groundwater	3/14/2024 10:21:00 AM	3/14/2024	4/1/2024
N063812-002A	MW-20-100-0324	Groundwater	3/14/2024 11:32:00 AM	3/14/2024	4/1/2024
N063812-002B	MW-20-100-0324	Groundwater	3/14/2024 11:32:00 AM	3/14/2024	4/1/2024
N063812-002C	MW-20-100-0324	Groundwater	3/14/2024 11:32:00 AM	3/14/2024	4/1/2024
N063812-003A	MW-927-Q124	Groundwater	3/14/2024 11:42:00 AM	3/14/2024	4/1/2024
N063812-003B	MW-927-Q124	Groundwater	3/14/2024 11:42:00 AM	3/14/2024	4/1/2024
N063812-003C	MW-927-Q124	Groundwater	3/14/2024 11:42:00 AM	3/14/2024	4/1/2024
N063812-004A	MW-20-130-0324	Groundwater	3/14/2024 10:59:00 AM	3/14/2024	4/1/2024
N063812-004B	MW-20-130-0324	Groundwater	3/14/2024 10:59:00 AM	3/14/2024	4/1/2024
N063812-004C	MW-20-130-0324	Groundwater	3/14/2024 10:59:00 AM	3/14/2024	4/1/2024
N063812-005A	MW-21-0324	Groundwater	3/14/2024 9:51:00 AM	3/14/2024	4/1/2024
N063812-005B	MW-21-0324	Groundwater	3/14/2024 9:51:00 AM	3/14/2024	4/1/2024
N063812-005C	MW-21-0324	Groundwater	3/14/2024 9:51:00 AM	3/14/2024	4/1/2024
N063812-006A	MW-21-EB-0324	Groundwater	3/14/2024 9:20:00 AM	3/14/2024	4/1/2024
N063812-007A	MW-71-035-0324	Groundwater	3/14/2024 9:06:00 AM	3/14/2024	4/1/2024
N063812-007B	MW-71-035-0324	Groundwater	3/14/2024 9:06:00 AM	3/14/2024	4/1/2024
N063812-007C	MW-71-035-0324	Groundwater	3/14/2024 9:06:00 AM	3/14/2024	4/1/2024
N063812-008A	EB-744-Q124	Groundwater	3/14/2024 12:40:00 PM	3/14/2024	4/1/2024
N063812-009A	MW-78-070-0324	Groundwater	3/14/2024 11:36:00 AM	3/14/2024	4/1/2024
N063812-009B	MW-78-070-0324	Groundwater	3/14/2024 11:36:00 AM	3/14/2024	4/1/2024
N063812-009C	MW-78-070-0324	Groundwater	3/14/2024 11:36:00 AM	3/14/2024	4/1/2024
N063812-010A	MW-78-142-0324	Groundwater	3/14/2024 12:06:00 PM	3/14/2024	4/1/2024
N063812-010B	MW-78-142-0324	Groundwater	3/14/2024 12:06:00 PM	3/14/2024	4/1/2024
N063812-010C	MW-78-142-0324	Groundwater	3/14/2024 12:06:00 PM	3/14/2024	4/1/2024
N063812-011A	MW-79-058-0324	Groundwater	3/14/2024 8:32:00 AM	3/14/2024	4/1/2024
N063812-011B	MW-79-058-0324	Groundwater	3/14/2024 8:32:00 AM	3/14/2024	4/1/2024
N063812-011C	MW-79-058-0324	Groundwater	3/14/2024 8:32:00 AM	3/14/2024	4/1/2024

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063812
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063812-012A	MW-79-102-0324	Groundwater	3/14/2024 9:03:00 AM	3/14/2024	4/1/2024
N063812-012B	MW-79-102-0324	Groundwater	3/14/2024 9:03:00 AM	3/14/2024	4/1/2024
N063812-012C	MW-79-102-0324	Groundwater	3/14/2024 9:03:00 AM	3/14/2024	4/1/2024
N063812-013A	MW-80-057-0324	Groundwater	3/14/2024 12:49:00 PM	3/14/2024	4/1/2024
N063812-013B	MW-80-057-0324	Groundwater	3/14/2024 12:49:00 PM	3/14/2024	4/1/2024
N063812-013C	MW-80-057-0324	Groundwater	3/14/2024 12:49:00 PM	3/14/2024	4/1/2024
N063812-014A	MW-80-082-0324	Groundwater	3/14/2024 12:29:00 PM	3/14/2024	4/1/2024
N063812-014B	MW-80-082-0324	Groundwater	3/14/2024 12:29:00 PM	3/14/2024	4/1/2024
N063812-014C	MW-80-082-0324	Groundwater	3/14/2024 12:29:00 PM	3/14/2024	4/1/2024
N063812-015A	MW-51-0324	Groundwater	3/14/2024 10:43:00 AM	3/14/2024	4/1/2024
N063812-015B	MW-51-0324	Groundwater	3/14/2024 10:43:00 AM	3/14/2024	4/1/2024
N063812-015C	MW-51-0324	Groundwater	3/14/2024 10:43:00 AM	3/14/2024	4/1/2024
N063812-016A	MW-26-0324	Groundwater	3/14/2024 9:57:00 AM	3/14/2024	4/1/2024
N063812-016B	MW-26-0324	Groundwater	3/14/2024 9:57:00 AM	3/14/2024	4/1/2024
N063812-016C	MW-26-0324	Groundwater	3/14/2024 9:57:00 AM	3/14/2024	4/1/2024
N063812-017A	EB-745-Q124	Groundwater	3/14/2024 1:05:00 PM	3/14/2024	4/1/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-070-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 10:21:00 AM
Lab ID:	N063812-001	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC						
		EPA 218.6				
RunID: NV00922-IC7_240318A	QC Batch: R183736			PrepDate:		Analyst: **RAB**
Hexavalent Chromium	280	20		µg/L	100	3/18/2024 04:16 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-100-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 11:32:00 AM
Lab ID:	N063812-002	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC						
			EPA 218.6			
RunID: NV00922-IC7_240318A	QC Batch: R183736			PrepDate:		Analyst: **RAB**
Hexavalent Chromium	2200	100		µg/L	500	3/18/2024 04:35 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-927-Q124
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 11:42:00 AM
Lab ID:	N063812-003	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC						
			EPA 218.6			
RunID: NV00922-IC7_240318A	QC Batch: R183736			PrepDate:		Analyst: **RAB**
Hexavalent Chromium	2200	100		µg/L	500	3/18/2024 04:54 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-130-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 10:59:00 AM
Lab ID:	N063812-004	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC						
			EPA 218.6			
RunID: NV00922-IC7_240318A	QC Batch: R183736			PrepDate:		Analyst: **RAB**
Hexavalent Chromium	2000	100		µg/L	500	3/18/2024 05:13 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-21-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 9:51:00 AM
Lab ID:	N063812-005	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC						
		EPA 218.6				
RunID: NV00922-IC7_240318A	QC Batch: R183736			PrepDate:		Analyst: **RAB**
Hexavalent Chromium	ND	1.0		µg/L	5	3/18/2024 08:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-21-EB-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 9:20:00 AM
Lab ID:	N063812-006	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC						
		EPA 218.6				
RunID: NV00922-IC7_240315A	QC Batch: R183690			PrepDate:		Analyst: **RAB**
Hexavalent Chromium	ND	0.20		µg/L	1	3/15/2024 07:04 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-71-035-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 9:06:00 AM
Lab ID:	N063812-007	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC						
		EPA 218.6				
RunID: NV00922-IC7_240318A	QC Batch: R183736			PrepDate:		Analyst: **RAB**
Hexavalent Chromium	1.1	0.20		µg/L	1	3/18/2024 05:32 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-744-Q124
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 12:40:00 PM
Lab ID:	N063812-008	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC						
		EPA 218.6				
RunID: NV00922-IC7_240315A	QC Batch: R183690			PrepDate:		Analyst: **RAB**
Hexavalent Chromium	ND	0.20		µg/L	1	3/15/2024 07:23 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-78-070-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 11:36:00 AM
Lab ID:	N063812-009	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC						
		EPA 218.6				
RunID: NV00922-IC7_240318A	QC Batch: R183736			PrepDate:		Analyst: **RAB**
Hexavalent Chromium	0.30	0.20		µg/L	1	3/18/2024 01:41 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-78-142-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 12:06:00 PM
Lab ID:	N063812-010	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC						
		EPA 218.6				
RunID: NV00922-IC7_240318A	QC Batch: R183736			PrepDate:		Analyst: **RAB**
Hexavalent Chromium	590	20		µg/L	100	3/18/2024 08:44 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-79-058-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 8:32:00 AM
Lab ID:	N063812-011	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC						
			EPA 218.6			
RunID: NV00922-IC7_240318A	QC Batch: R183736			PrepDate:		Analyst: **RAB**
Hexavalent Chromium	23	1.0		µg/L	5	3/18/2024 12:44 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-79-102-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 9:03:00 AM
Lab ID:	N063812-012	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC						
			EPA 218.6			
RunID: NV00922-IC7_240319A	QC Batch: R183788			PrepDate:		Analyst: **RAB**
Hexavalent Chromium	70	2.0		µg/L	10	3/19/2024 11:15 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-80-057-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 12:49:00 PM
Lab ID:	N063812-013	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC						
		EPA 218.6				
RunID: NV00922-IC7_240319A	QC Batch: R183788			PrepDate:		Analyst: **RAB**
Hexavalent Chromium	3.4	0.20		µg/L	1	3/19/2024 11:53 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-80-082-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 12:29:00 PM
Lab ID:	N063812-014	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC						
		EPA 218.6				
RunID: NV00922-IC7_240318A	QC Batch: R183736			PrepDate:		Analyst: **RAB**
Hexavalent Chromium	1.0	0.20		µg/L	1	3/18/2024 02:18 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-51-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 10:43:00 AM
Lab ID:	N063812-015	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC						
		EPA 218.6				
RunID: NV00922-IC7_240318A	QC Batch: R183736			PrepDate:		Analyst: **RAB**
Hexavalent Chromium	0.87	0.20		µg/L	1	3/18/2024 02:28 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-26-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 9:57:00 AM
Lab ID:	N063812-016	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC						
		EPA 218.6				
RunID: NV00922-IC7_240318A	QC Batch: R183736			PrepDate:		Analyst: **RAB**
Hexavalent Chromium	ND	1.0		µg/L	5	3/18/2024 07:10 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	EB-745-Q124
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 1:05:00 PM
Lab ID:	N063812-017	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC						
		EPA 218.6				
RunID: NV00922-IC7_240315A	QC Batch: R183690			PrepDate:		Analyst: **RAB**
Hexavalent Chromium	ND	0.20		µg/L	1	3/15/2024 07:42 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R183690**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **PBW**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752660**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R183690**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **LCSW**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752661**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.983	0.20	5.000	0	99.7	90	110				

Sample ID: **N063735-012AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752663**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.049	0.20	1.000	0	105	90	110				

Sample ID: **N063771-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752665**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.168	1.0	5.000	4.893	106	90	110				

Sample ID: **N063771-014AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752669**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	42.641	1.0	25.00	17.52	100	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063771-015AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752671**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	42.351	1.0	25.00	17.61	99.0	90	110				

Sample ID: **N063771-018AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752673**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	37.590	1.0	25.00	12.24	101	90	110				

Sample ID: **N063771-014ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752674**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	17.260	1.0						17.52	1.49	20	

Sample ID: **N063771-014AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752675**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	41.939	1.0	25.00	17.52	97.7	90	110	42.64	1.66	20	

Sample ID: **N063771-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752681**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.055	0.20	1.000	0	105	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063771-019AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752683**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.054	0.20	1.000	0	105	90	110				

Sample ID: **N063771-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752687**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.635	1.0	5.000	0	92.7	90	110				

Sample ID: **N063812-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752689**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.076	0.20	1.000	0	108	90	110				

Sample ID: **N063812-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752691**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.037	0.20	1.000	0	104	90	110				

Sample ID: **N063812-017AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752693**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.010	0.20	1.000	0	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063771-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752695**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.753	1.0	5.000	0	95.1	90	110				

Sample ID: **N063771-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752699**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.556	1.0	5.000	0	91.1	90	110				

Sample ID: **N063771-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752703**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.615	1.0	5.000	0	92.3	90	110				

Sample ID: **N063771-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752705**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.865	1.0	5.000	0	97.3	90	110				

Sample ID: **N063771-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5752707**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.670	1.0	5.000	0	93.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063771-013AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183690**
Client ID: **ZZZZZZ** Batch ID: **R183690** TestNo: **EPA 218.6** Analysis Date: **3/15/2024** SeqNo: **5768704**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.990	0.20	1.000	0	99.0	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R183736**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **PBW**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756156**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R183736**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **LCSW**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756157**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.657	0.20	5.000	0	93.1	90	110				

Sample ID: **N063812-011AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756159**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	47.954	1.0	25.00	23.26	98.8	90	110				

Sample ID: **N063812-009AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756161**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.327	0.20	1.000	0.2967	103	90	110				

Sample ID: **N063812-015AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756166**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.845	0.20	1.000	0.8727	97.3	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063812-011ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183736**			
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**			SeqNo: **5756167**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	1.0						23.26	0	20	

Sample ID: **N063812-011AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183736**			
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**			SeqNo: **5756168**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	48.720	1.0	25.00	23.26	102	90	110	47.95	1.58	20	

Sample ID: **N063812-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183736**			
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**			SeqNo: **5756172**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	749.610	20	500.0	275.2	94.9	90	110				

Sample ID: **N063812-002AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183736**			
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**			SeqNo: **5756174**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4612.000	100	2500	2165	97.9	90	110				

Sample ID: **N063812-003AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:			RunNo: **183736**			
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**			SeqNo: **5756176**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4643.600	100	2500	2174	98.8	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063812-004AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756178**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4429.400	100	2500	1973	98.3	90	110				

Sample ID: **N063812-007AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756180**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	2.197	0.20	1.000	1.123	107	90	110				

Sample ID: **N063771-016AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756184**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	47.238	1.0	25.00	22.04	101	90	110				

Sample ID: **N063771-011AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756186**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.518	1.0	5.000	0	90.4	90	110				

Sample ID: **N063812-016AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756188**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.697	1.0	5.000	0	93.9	90	110				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063812-016AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183736**
Client ID: **ZZZZZZ** Batch ID: **R183736** TestNo: **EPA 218.6** Analysis Date: **3/18/2024** SeqNo: **5756189**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.013	1.0	5.000	0	100	90	110	4.697	6.50	20	

Sample ID: **N063771-016ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183736**
Client ID: **ZZZZZZ** Batch ID: **R183736** TestNo: **EPA 218.6** Analysis Date: **3/18/2024** SeqNo: **5756190**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	22.853	1.0						22.04	3.63	20	

Sample ID: **N063812-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183736**
Client ID: **ZZZZZZ** Batch ID: **R183736** TestNo: **EPA 218.6** Analysis Date: **3/18/2024** SeqNo: **5756194**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.562	1.0	5.000	0	91.2	90	110				

Sample ID: **N063812-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183736**
Client ID: **ZZZZZZ** Batch ID: **R183736** TestNo: **EPA 218.6** Analysis Date: **3/18/2024** SeqNo: **5756196**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1104.240	20	500.0	591.9	102	90	110				

Sample ID: **N063771-017AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183736**
Client ID: **ZZZZZZ** Batch ID: **R183736** TestNo: **EPA 218.6** Analysis Date: **3/18/2024** SeqNo: **5756198**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.048	1.0	5.000	0	101	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063812-014AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**		Prep Date:						RunNo: **183736**	
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**			Analysis Date: **3/18/2024**						SeqNo: **5756201**	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Hexavalent Chromium	2.047	0.20	1.000	1.012	104	90	110					

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R183788**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183788**
Client ID: **PBW**	Batch ID: **R183788**	TestNo: **EPA 218.6**		Analysis Date: **3/19/2024**	SeqNo: **5757838**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R183788**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183788**
Client ID: **LCSW**	Batch ID: **R183788**	TestNo: **EPA 218.6**		Analysis Date: **3/19/2024**	SeqNo: **5757839**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.033	0.20	5.000	0	101	90	110				

Sample ID: **N063812-012ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183788**
Client ID: **ZZZZZZ**	Batch ID: **R183788**	TestNo: **EPA 218.6**		Analysis Date: **3/19/2024**	SeqNo: **5757841**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	71.080	2.0						70.50	0.824	20	

Sample ID: **N063812-012AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183788**
Client ID: **ZZZZZZ**	Batch ID: **R183788**	TestNo: **EPA 218.6**		Analysis Date: **3/19/2024**	SeqNo: **5757842**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	122.596	2.0	50.00	70.50	104	90	110				

Sample ID: **N063812-012AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183788**
Client ID: **ZZZZZZ**	Batch ID: **R183788**	TestNo: **EPA 218.6**		Analysis Date: **3/19/2024**	SeqNo: **5757843**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	122.270	2.0	50.00	70.50	104	90	110	122.6	0.266	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **N063812-013AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **183788**
Client ID: **ZZZZZZ** Batch ID: **R183788** TestNo: **EPA 218.6** Analysis Date: **3/19/2024** SeqNo: **5757845**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.403	0.20	1.000	3.357	105	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-070-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 10:21:00 AM
Lab ID:	N063812-001	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Sulfate	270	25		mg/L	50	3/15/2024 05:08 PM
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Nitrate as N	9.6	0.50		mg/L	10	3/15/2024 10:15 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-100-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 11:32:00 AM
Lab ID:	N063812-002	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Sulfate	420	25		mg/L	50	3/15/2024 05:23 PM
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Nitrate as N	6.9	0.50		mg/L	10	3/15/2024 10:30 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-927-Q124
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 11:42:00 AM
Lab ID:	N063812-003	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A QC Batch: R183637				PrepDate:		Analyst: **RAB**
Sulfate	410	25		mg/L	50	3/15/2024 06:09 PM
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A QC Batch: R183637				PrepDate:		Analyst: **RAB**
Nitrate as N	6.9	0.50		mg/L	10	3/15/2024 10:45 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-130-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 10:59:00 AM
Lab ID:	N063812-004	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Sulfate	720	50		mg/L	100	3/15/2024 06:24 PM
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Nitrate as N	4.2	0.50		mg/L	10	3/15/2024 11:00 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-21-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 9:51:00 AM
Lab ID:	N063812-005	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Sulfate	950	50		mg/L	100	3/15/2024 06:39 PM
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Nitrate as N	ND	0.50		mg/L	10	3/15/2024 11:16 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-71-035-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 9:06:00 AM
Lab ID:	N063812-007	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Sulfate	590	50		mg/L	100	3/15/2024 06:55 PM
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Nitrate as N	2.7	0.50		mg/L	10	3/15/2024 12:02 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-78-070-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 11:36:00 AM
Lab ID:	N063812-009	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Sulfate	280	25		mg/L	50	3/15/2024 07:10 PM
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Nitrate as N	ND	0.50		mg/L	10	3/15/2024 12:17 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-78-142-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 12:06:00 PM
Lab ID:	N063812-010	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Sulfate	430	25		mg/L	50	3/15/2024 07:25 PM
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Nitrate as N	0.64	0.50		mg/L	10	3/15/2024 12:32 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-79-058-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 8:32:00 AM
Lab ID:	N063812-011	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Sulfate	350	25		mg/L	50	3/15/2024 03:36 PM
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Nitrate as N	ND	0.50		mg/L	10	3/15/2024 09:23 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-79-102-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 9:03:00 AM
Lab ID:	N063812-012	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Sulfate	320	25		mg/L	50	3/15/2024 07:41 PM
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Nitrate as N	ND	0.50		mg/L	10	3/15/2024 03:21 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-80-057-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 12:49:00 PM
Lab ID:	N063812-013	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Sulfate	340	25		mg/L	50	3/15/2024 07:56 PM
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Nitrate as N	ND	0.50		mg/L	10	3/15/2024 01:03 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-80-082-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 12:29:00 PM
Lab ID:	N063812-014	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Sulfate	260	25		mg/L	50	3/15/2024 08:11 PM
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Nitrate as N	ND	0.50		mg/L	10	3/15/2024 01:18 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-51-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 10:43:00 AM
Lab ID:	N063812-015	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Sulfate	46	5.0		mg/L	10	3/15/2024 09:59 AM
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Nitrate as N	ND	0.50		mg/L	10	3/15/2024 09:59 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-26-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 9:57:00 AM
Lab ID:	N063812-016	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Sulfate	210	25		mg/L	50	3/15/2024 04:22 PM
ANIONS BY ION CHROMATOGRAPHY				**EPA 300.0**		
RunID: NV00922-IC8_240315A	QC Batch: R183637			PrepDate:		Analyst: **RAB**
Nitrate as N	ND	0.50		mg/L	10	3/15/2024 09:38 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **LCS-R183637_SO4**	SampType: **LCS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **LCSW**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749163**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.844	0.50	4.000	0	96.1	90	110				

Sample ID: **MB-R183637_SO4**	SampType: **MBLK**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **PBW**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749164**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **N063812-011BMS**	SampType: **MS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **ZZZZZZ**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749171**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	540.960	25	200.0	349.7	95.7	80	120				

Sample ID: **N063812-011BMSD**	SampType: **MSD**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **ZZZZZZ**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749172**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	541.785	25	200.0	349.7	96.1	80	120	541.0	0.152	20	

Sample ID: **N063812-016BMS**	SampType: **MS**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **ZZZZZZ**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749174**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	396.135	25	200.0	206.2	95.0	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **N063812-016BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **183637**
Client ID: **ZZZZZZ** Batch ID: **R183637** TestNo: **EPA 300.0** Analysis Date: **3/15/2024** SeqNo: **5749175**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	399.195	25	200.0	206.2	96.5	80	120	396.1	0.769	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **LCS-R183637_NO3**	SampType: **LCS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **LCSW**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749088**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.221	0.050	1.250	0	97.7	90	110				

Sample ID: **MB-R183637_NO3**	SampType: **MBLK**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **PBW**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749089**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **N063812-011BMS**	SampType: **MS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **ZZZZZZ**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749106**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.136	0.50	12.50	0	97.1	80	120				

Sample ID: **N063812-011BMSD**	SampType: **MSD**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **ZZZZZZ**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749107**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.140	0.50	12.50	0	97.1	80	120	12.14	0.0330	20	

Sample ID: **N063812-016BMS**	SampType: **MS**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **ZZZZZZ**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749108**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.377	0.50	12.50	0	99.0	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **N063812-016BMSD**	SampType: **MSD**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **ZZZZZZ**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749109**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	12.288	0.50	12.50	0	98.3	80	120	12.38	0.722	20	

Sample ID: **N063812-015BDUP**	SampType: **DUP**	TestCode: **300WLLNO3**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **ZZZZZZ**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749112**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.50						0	0	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-070-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 10:21:00 AM
Lab ID:	N063812-001	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						
	EPA 3010A			**EPA 6010B**		
RunID: NV00922-ICP2_240315A	QC Batch: 107567			PrepDate:	3/15/2024	Analyst: **DJ**
Iron	46	20		µg/L	1	3/15/2024 06:24 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-100-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 11:32:00 AM
Lab ID:	N063812-002	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						
	EPA 3010A			**EPA 6010B**		
RunID: NV00922-ICP2_240315A	QC Batch: 107567			PrepDate:	3/15/2024	Analyst: **DJ**
Iron	22	20		µg/L	1	3/15/2024 06:28 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-927-Q124
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 11:42:00 AM
Lab ID:	N063812-003	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						
EPA 3010A			**EPA 6010B**			
RunID: NV00922-ICP2_240315A	QC Batch: 107567			PrepDate:	3/15/2024	Analyst: **DJ**
Iron	ND	20		µg/L	1	3/15/2024 06:34 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-130-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 10:59:00 AM
Lab ID:	N063812-004	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						
	EPA 3010A			**EPA 6010B**		
RunID: NV00922-ICP2_240315A	QC Batch: 107567			PrepDate:	3/15/2024	Analyst: **DJ**
Iron	ND	20		µg/L	1	3/15/2024 06:40 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-21-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 9:51:00 AM
Lab ID:	N063812-005	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						
EPA 3010A				**EPA 6010B**		
RunID: NV00922-ICP2_240315A	QC Batch: 107567			PrepDate:	3/15/2024	Analyst: **DJ**
Iron	44	20		µg/L	1	3/15/2024 06:46 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-71-035-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 9:06:00 AM
Lab ID:	N063812-007	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						
	EPA 3010A			**EPA 6010B**		
RunID: NV00922-ICP2_240315A	QC Batch: 107567			PrepDate:	3/15/2024	Analyst: **DJ**
Iron	61	20		µg/L	1	3/15/2024 06:53 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-78-070-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 11:36:00 AM
Lab ID:	N063812-009	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						
EPA 3010A				**EPA 6010B**		
RunID: NV00922-ICP2_240315A	QC Batch: 107567			PrepDate:	3/15/2024	Analyst: **DJ**
Iron	470	20		µg/L	1	3/15/2024 07:07 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-78-142-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 12:06:00 PM
Lab ID:	N063812-010	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						
	EPA 3010A			**EPA 6010B**		
RunID: NV00922-ICP2_240315A	QC Batch: 107567			PrepDate:	3/15/2024	Analyst: **DJ**
Iron	ND	20		µg/L	1	3/15/2024 07:13 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-79-058-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 8:32:00 AM
Lab ID:	N063812-011	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						
	EPA 3010A			**EPA 6010B**		
RunID: NV00922-ICP2_240315A	QC Batch: 107567			PrepDate:	3/15/2024	Analyst: **DJ**
Iron	70	20		µg/L	1	3/15/2024 07:19 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-79-102-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 9:03:00 AM
Lab ID:	N063812-012	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						
	EPA 3010A			**EPA 6010B**		
RunID: NV00922-ICP2_240315A	QC Batch: 107567			PrepDate:	3/15/2024	Analyst: **DJ**
Iron	49	20		µg/L	1	3/15/2024 07:48 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-80-057-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 12:49:00 PM
Lab ID:	N063812-013	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						
EPA 3010A				**EPA 6010B**		
RunID: NV00922-ICP2_240315A	QC Batch: 107567			PrepDate:	3/15/2024	Analyst: **DJ**
Iron	120	20		µg/L	1	3/15/2024 07:54 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-80-082-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 12:29:00 PM
Lab ID:	N063812-014	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						
EPA 3010A			**EPA 6010B**			
RunID: NV00922-ICP2_240315A	QC Batch: 107567			PrepDate:	3/15/2024	Analyst: **DJ**
Iron	44	20		µg/L	1	3/15/2024 08:00 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-51-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 10:43:00 AM
Lab ID:	N063812-015	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						
	EPA 3010A			**EPA 6010B**		
RunID: NV00922-ICP2_240315A	QC Batch: 107567			PrepDate:	3/15/2024	Analyst: **DJ**
Iron	220	20		µg/L	1	3/15/2024 08:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-26-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 9:57:00 AM
Lab ID:	N063812-016	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP						
EPA 3010A				**EPA 6010B**		
RunID: NV00922-ICP2_240315A	QC Batch: 107567			PrepDate:	3/15/2024	Analyst: **DJ**
Iron	640	20		µg/L	1	3/15/2024 08:37 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-107567**	SampType: **MBLK**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/15/2024**	RunNo: **183634**
Client ID: **PBW**	Batch ID: **107567**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/15/2024**	SeqNo: **5748740**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS-107567**	SampType: **LCS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/15/2024**	RunNo: **183634**
Client ID: **LCSW**	Batch ID: **107567**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/15/2024**	SeqNo: **5748741**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	100.771	20	100.0	0	101	85	115				

Sample ID: **N063812-011CMS**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/15/2024**	RunNo: **183634**
Client ID: **ZZZZZZ**	Batch ID: **107567**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/15/2024**	SeqNo: **5748844**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	264.476	20	100.0	70.28	194	75	125				S

Sample ID: **N063812-011CMSD**	SampType: **MSD**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/15/2024**	RunNo: **183634**
Client ID: **ZZZZZZ**	Batch ID: **107567**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/15/2024**	SeqNo: **5748845**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	268.458	20	100.0	70.28	198	75	125	264.5	1.49	20	S

Sample ID: **N063812-016CMS**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **3/15/2024**	RunNo: **183634**
Client ID: **ZZZZZZ**	Batch ID: **107567**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/15/2024**	SeqNo: **5748855**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	798.422	20	100.0	639.9	159	75	125				S

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N063812-016CMSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: **3/15/2024** RunNo: **183634**
Client ID: **ZZZZZZ** Batch ID: **107567** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **3/15/2024** SeqNo: **5748856**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	757.455	20	100.0	639.9	118	75	125	798.4	5.27	20	

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N063812-011C-PS**	SampType: **PS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **ZZZZZZ**	Batch ID: **107567**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/15/2024**	SeqNo: **5748843**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	164.757	20	100.0	70.28	94.5	80	120				

Sample ID: **N063812-016C-PS**	SampType: **PS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **ZZZZZZ**	Batch ID: **107567**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/15/2024**	SeqNo: **5748854**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	712.018	20	100.0	639.9	72.1	80	120				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

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ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-070-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 10:21:00 AM
Lab ID:	N063812-001	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS						
	EPA 3010A			**EPA 6020**		
RunID: NV00922-ICP8_240315D	QC Batch: 107566			PrepDate:	3/15/2024	Analyst: **DJ**
Arsenic	1.5	0.10		µg/L	1	3/15/2024 11:56 PM
Barium	25	1.0		µg/L	1	3/15/2024 11:56 PM
Manganese	1.0	0.50		µg/L	1	3/15/2024 11:56 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-100-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 11:32:00 AM
Lab ID:	N063812-002	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS						
	EPA 3010A			**EPA 6020**		
RunID: NV00922-ICP8_240319B	QC Batch: 107566			PrepDate:	3/15/2024	Analyst: **DJ**
Arsenic	0.82	0.10		µg/L	1	3/19/2024 02:25 PM
Barium	28	1.0		µg/L	1	3/16/2024 12:00 AM
Manganese	ND	0.50		µg/L	1	3/16/2024 12:00 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

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ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-927-Q124
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 11:42:00 AM
Lab ID:	N063812-003	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS						
	EPA 3010A			**EPA 6020**		
RunID: NV00922-ICP8_240315D	QC Batch: 107566			PrepDate:	3/15/2024	Analyst: **DJ**
Arsenic	0.97	0.10		µg/L	1	3/16/2024 12:05 AM
Barium	29	1.0		µg/L	1	3/16/2024 12:05 AM
Manganese	ND	0.50		µg/L	1	3/16/2024 12:05 AM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-20-130-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 10:59:00 AM
Lab ID:	N063812-004	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS						
	EPA 3010A			**EPA 6020**		
RunID: NV00922-ICP8_240315D	QC Batch: 107566			PrepDate:	3/15/2024	Analyst: **DJ**
Arsenic	ND	0.10		µg/L	1	3/16/2024 12:10 AM
Barium	26	1.0		µg/L	1	3/16/2024 12:10 AM
Manganese	1.0	0.50		µg/L	1	3/16/2024 12:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-21-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 9:51:00 AM
Lab ID:	N063812-005	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS						
	EPA 3010A			**EPA 6020**		
RunID: NV00922-ICP8_240315D	QC Batch: 107566			PrepDate:	3/15/2024	Analyst: **DJ**
Arsenic	3.7	0.10		µg/L	1	3/16/2024 12:14 AM
Barium	65	1.0		µg/L	1	3/16/2024 12:14 AM
Manganese	220	5.0		µg/L	10	3/19/2024 01:01 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out
E	Value above quantitation range
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-71-035-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 9:06:00 AM
Lab ID:	N063812-007	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS						
	EPA 3010A			**EPA 6020**		
RunID: NV00922-ICP8_240315D	QC Batch: 107566			PrepDate:	3/15/2024	Analyst: **DJ**
Arsenic	ND	0.10		µg/L	1	3/16/2024 12:19 AM
Barium	44	1.0		µg/L	1	3/16/2024 12:19 AM
Manganese	29	0.50		µg/L	1	3/16/2024 12:19 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-78-070-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 11:36:00 AM
Lab ID:	N063812-009	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS						
	EPA 3010A			**EPA 6020**		
RunID: NV00922-ICP8_240315D	QC Batch: 107566			PrepDate:	3/15/2024	Analyst: **DJ**
Arsenic	ND	0.10		µg/L	1	3/16/2024 12:24 AM
Barium	130	1.0		µg/L	1	3/16/2024 12:24 AM
Manganese	730	5.0		µg/L	10	3/19/2024 01:06 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-78-142-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 12:06:00 PM
Lab ID:	N063812-010	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS						
	EPA 3010A			**EPA 6020**		
RunID: NV00922-ICP8_240315D	QC Batch: 107566			PrepDate:	3/15/2024	Analyst: **DJ**
Arsenic	0.83	0.10		µg/L	1	3/16/2024 12:42 AM
Barium	30	1.0		µg/L	1	3/16/2024 12:42 AM
Manganese	3.5	0.50		µg/L	1	3/16/2024 12:42 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-79-058-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 8:32:00 AM
Lab ID:	N063812-011	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS						
	EPA 3010A			**EPA 6020**		
RunID: NV00922-ICP8_240315D	QC Batch: 107566			PrepDate:	3/15/2024	Analyst: **DJ**
Arsenic	ND	0.10		µg/L	1	3/16/2024 12:47 AM
Barium	120	1.0		µg/L	1	3/16/2024 12:47 AM
Manganese	20	0.50		µg/L	1	3/16/2024 12:47 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-79-102-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 9:03:00 AM
Lab ID:	N063812-012	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS						
	EPA 3010A			**EPA 6020**		
RunID: NV00922-ICP8_240315D	QC Batch: 107566			PrepDate:	3/15/2024	Analyst: **DJ**
Arsenic	ND	0.10		µg/L	1	3/16/2024 01:10 AM
Barium	60	1.0		µg/L	1	3/16/2024 01:10 AM
Manganese	61	0.50		µg/L	1	3/16/2024 01:10 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-80-057-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 12:49:00 PM
Lab ID:	N063812-013	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS						
	EPA 3010A			**EPA 6020**		
RunID: NV00922-ICP8_240315D	QC Batch: 107566			PrepDate:	3/15/2024	Analyst: **DJ**
Arsenic	ND	0.10		µg/L	1	3/16/2024 01:15 AM
Barium	92	1.0		µg/L	1	3/16/2024 01:15 AM
Manganese	28	0.50		µg/L	1	3/16/2024 01:15 AM

Qualifiers:			
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-80-082-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 12:29:00 PM
Lab ID:	N063812-014	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS						
	EPA 3010A			**EPA 6020**		
RunID: NV00922-ICP8_240319B	QC Batch: 107566			PrepDate:	3/15/2024	Analyst: **DJ**
Arsenic	0.64	0.10		µg/L	1	3/19/2024 01:11 PM
Barium	58	1.0		µg/L	1	3/16/2024 01:20 AM
Manganese	750	5.0		µg/L	10	3/19/2024 01:15 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-51-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 10:43:00 AM
Lab ID:	N063812-015	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS						
	EPA 3010A			**EPA 6020**		
RunID: NV00922-ICP8_240315D	QC Batch: 107566			PrepDate:	3/15/2024	Analyst: **DJ**
Arsenic	2.2	0.10		µg/L	1	3/16/2024 01:38 AM
Barium	77	1.0		µg/L	1	3/16/2024 01:38 AM
Manganese	360	5.0		µg/L	10	3/19/2024 01:20 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

ASSET Laboratories

ANALYTICAL RESULTS

Print Date: *01-Apr-24*

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	MW-26-0324
Lab Order:	N063812		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/14/2024 9:57:00 AM
Lab ID:	N063812-016	**Matrix:**	GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS						
	EPA 3010A			**EPA 6020**		
RunID: NV00922-ICP8_240315D	QC Batch: 107566			PrepDate:	3/15/2024	Analyst: **DJ**
Arsenic	2.0	0.10		µg/L	1	3/16/2024 01:43 AM
Barium	120	1.0		µg/L	1	3/16/2024 01:43 AM
Manganese	1800	50		µg/L	100	3/19/2024 02:02 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **MB-107566** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/15/2024** RunNo: **183672**
Client ID: **PBW** Batch ID: **107566** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/15/2024** SeqNo: **5751513**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID: **LCS-107566** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/15/2024** RunNo: **183672**
Client ID: **LCSW** Batch ID: **107566** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/15/2024** SeqNo: **5751514**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.362	0.10	10.00	0	104	85	115				
Barium	10.091	1.0	10.00	0	101	85	115				
Manganese	99.214	0.50	100.0	0	99.2	85	115				

Sample ID: **N063812-011C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ZZZZZZ** Batch ID: **107566** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/16/2024** SeqNo: **5751527**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	8.549	0.10	10.00	0	85.5	80	120				
Barium	134.363	1.0	10.00	120.7	136	80	120				S
Manganese	114.283	0.50	100.0	19.55	94.7	80	120				

Sample ID: **N063812-011CMS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/15/2024** RunNo: **183672**
Client ID: **ZZZZZZ** Batch ID: **107566** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/16/2024** SeqNo: **5751528**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	8.311	0.10	10.00	0	83.1	75	125				
Barium	137.072	1.0	10.00	120.7	164	75	125				S
Manganese	113.196	0.50	100.0	19.55	93.7	75	125				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063812-011CMSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/15/2024** RunNo: **183672**
Client ID: **ZZZZZZ** Batch ID: **107566** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/16/2024** SeqNo: **5751529**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	8.405	0.10	10.00	0	84.1	75	125	8.311	1.13	20	
Barium	138.660	1.0	10.00	120.7	179	75	125	137.1	1.15	20	S
Manganese	112.228	0.50	100.0	19.55	92.7	75	125	113.2	0.859	20	

Sample ID: **N063812-016C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ZZZZZZ** Batch ID: **107566** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/16/2024** SeqNo: **5751538**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.788	0.10	10.00	2.006	97.8	80	120				
Barium	135.908	1.0	10.00	124.5	114	80	120				

Sample ID: **N063812-016CMS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/15/2024** RunNo: **183672**
Client ID: **ZZZZZZ** Batch ID: **107566** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/16/2024** SeqNo: **5751539**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.877	0.10	10.00	2.006	98.7	75	125				
Barium	133.818	1.0	10.00	124.5	92.9	75	125				

Sample ID: **N063812-016CMSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **3/15/2024** RunNo: **183672**
Client ID: **ZZZZZZ** Batch ID: **107566** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/16/2024** SeqNo: **5751540**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.799	0.10	10.00	2.006	97.9	75	125	11.88	0.657	20	
Barium	134.302	1.0	10.00	124.5	97.7	75	125	133.8	0.361	20	

Sample ID: **N063812-016C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183805**
Client ID: **ZZZZZZ** Batch ID: **107566** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/19/2024** SeqNo: **5759303**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063812-016C-PS**	SampType: **PS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **ZZZZZZ**	Batch ID: **107566**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **3/19/2024**	SeqNo: **5759303**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	11779.193	50	10000	1788	99.9	80	120				

Sample ID: **N063812-016CMS**	SampType: **MS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **3/15/2024**	RunNo: **183805**
Client ID: **ZZZZZZ**	Batch ID: **107566**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **3/19/2024**	SeqNo: **5759304**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	1838.877	50	100.0	1788	50.7	75	125				S

Sample ID: **N063812-016CMSD**	SampType: **MSD**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **3/15/2024**	RunNo: **183805**
Client ID: **ZZZZZZ**	Batch ID: **107566**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **3/19/2024**	SeqNo: **5759305**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	1855.761	50	100.0	1788	67.6	75	125	1839	0.914	20	S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063812-011C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ZZZZZZ** Batch ID: **107566** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/16/2024** SeqNo: **5751527**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	8.549	0.10	10.00	0	85.5	80	120				
Barium	134.363	1.0	10.00	120.7	136	80	120				S
Manganese	114.283	0.50	100.0	19.55	94.7	80	120				

Sample ID: **N063812-016C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ZZZZZZ** Batch ID: **107566** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/16/2024** SeqNo: **5751538**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.788	0.10	10.00	2.006	97.8	80	120				
Barium	135.908	1.0	10.00	124.5	114	80	120				

Sample ID: **N063812-016C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183805**
Client ID: **ZZZZZZ** Batch ID: **107566** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/19/2024** SeqNo: **5759303**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	11779.193	50	10000	1788	99.9	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

SAMPLE RECEIVING ITEMS

ARCUS02 FOLDER
C: 3/29/2024 12:00 AM
R: 3/14/2024
N063812-018A
1 of 1

ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

Page 1 of 1

Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement / QA/QC
101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	Excel EDD / RTNE
Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.moore@critigen.com	Address:	Geotracker / RWQCB ✓
Fax: -3302	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com	P.O.# / Labspec / CalTrans
ed By: Riggie Tep Field Tech	Phone: 916-786-3302	Phone: 949-727-1400, ext 200	Fax: / Others ✓ / LEVEL III
	Fax:		Specify: RWQCB / LEVEL IV
			Global ID: / Regulatory / Specify State:

Sample Receipt Condition

	Y	N
1. Chilled	✓	
2. Headspace		
3. Container Intact	✓	
4. Seal Present		✓
5. IR number	3	
6. Method of Cooling:	ICE	
Sample Temp:	1.4°C	1.8°C

Courier: Asset
Tracking No.:

re: Date: 03/14/24	Sampled By: Riggie Tep	Matrix: Ground X / Sediment / Potable / Soil / NPDES / Other Solid / Surface
uthorize ASSET Labs to perform the tests below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for	
Name: PG&E Topock - PCM	Signature:	Date: 03/14/24
Number: 30211191		

Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly)	Nitrate, sulfate (EPA 300.0) (1 L poly)	Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese (600mL poly)	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Selenium, Molybdenum (500mL poly)	Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOA)	Ammonia as Nitrogen (SM4500NH3D); H2SO4 (1 L poly)	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 (125 mL poly)	Nitrate (EPA 300.0) (1 L poly)	(1 L poly)	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
N063812-001	MW-20-070-0324	3/14/2024	10:21		X	X	X								E	3	P	BNS	
-002	MW-20-100-0324	3/14/2024	11:32		X	X	X								E	3	P	BNS	
-003	MW-927-Q124	3/14/2024	11:42		X	X	X								E	3	P	BNS	
-004	MW-20-130-0324	3/14/2024	10:59		X	X	X								E	3	P	BNS	
-005	MW-21-0324	3/14/2024	9:51		X	X	X								E	3	P	BNS	
-006	MW-21-EB-0324	3/14/2024	9:20		X										E	1	P	BNS	
-007	MW-71-035-0324	3/14/2024	9:06		X	X	X								E	3	P	BNS	
-008	EB-744-Q124	3/14/2024	12:40		X										E	1	P	BNS	
-009	MW-78-070-0324	3/14/2024	11:36		X	X	X								E	3	P	BNS	
-010	MW-78-142-0324	3/14/2024	12:06		X	X	X								E	3	P	BNS	
-011	MW-79-058-0324	3/14/2024	8:32		X	X	X								E	3	P	BNS	MSMSD
-012	MW-79-102-0324	3/14/2024	9:03		X	X	X								E	3	P	BNS	
-013	MW-80-057-0324	3/14/2024	12:49		X	X	X								E	3	P	BNS	
-014	MW-80-082-0324	3/14/2024	12:29		X	X	X								E	3	P	BNS	

d by (Signature and Printed Name): Riggie Tep 03/14/24 1750	Date/Time:	Relinquished by (Signature and Printed Name): Michael Alcantara 3/14/24 1750	Date/Time:
d by (Signature and Printed Name): Michael Alcantara 3/14/24 2142	Date/Time:	Relinquished by (Signature and Printed Name): Michael Alcantara 3/14/24 2142	Date/Time:
d by (Signature and Printed Name):	Date/Time:	Relinquished by (Signature and Printed Name):	Date/Time:

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
' is 5-7 business days. surcharges will apply for rush analysis
4 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
) formats will be no additional 3% of the total project price.
harge for Level III Data Packages. 15% for Level IV Data Packages. Surcharge applied on total project

5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:				Container Type:		
H=HCL	N=HNO_3	S=H_2SO_4	C=4°C	T=Tube	V=VOA	P=Pint
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$		J=Jar	B=Tedlar	G=Glass
Others/Specify:	B (NH4)2SO4/NH4OH			M=Metal	M=Metal	C=Can

White=Laboratory Copy
Yellow=Customer's Copy

ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CHAIN OF CUSTODY RECORD

Page 1 of 1

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

nt: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	
ress: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	
ress: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.moore@erdigen.com	Address:	
ne: 78(302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com	P.O.#
nitted By: Riggie Tap	Phone: 916-786-3302 Fax:	Phone: 949-727-1400, ext 200	Fax:
Field Tech			

EDD Requirement		QA/QC		Sample Receipt Condition	Y	N
Excel EDD		RTNE		1. Chilled	✓	
Geotracker		RWQCB	✓	2. Headspace		✓
Labspec		CalTrans		3. Container Intact	✓	
Others	✓	LEVEL III		4. Seal Present		✓
Specify: RWQCB		LEVEL IV		5. IR number	3	
Global ID:		Regulatory		6. Method of Cooling: ICE		
		Specify State:		Sample Temp: 1.6°C / 1.8°C		

ature: Date: 03/14/24

y authorize ASSET Labs to perform the tests ed below

ct Name: PG&E Topock - PCM

ct Number: 30211191

Sampled By: Riggie Tap

I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for

Signature: Date: 03/14/24

Matrix: Ground | X | Sediment; Potable | | Soil; NPDES | | Other Solid; Surface | |

Courier: ASSET

Tracking No.:

Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	250 mL poly: Cr(VI), FF (E218.6) (NH4)2, SO4, NH4, OH	1 L poly: Nitrate, sulfate (EPA 300.0)	500mL poly: Dissolved metals (SW6020) FF; HNO3 Arsenic, Iron, Barium, Manganese	500mL poly: Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium,	500mL poly: Dissolved metals (SW6020) FF; HNO3 Molybdenum, Selenium	3x40 mL VOA: Total Organic Carbon (SM5310C); H2SO4	125 mL poly: Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4	1 L poly: Ammonia as Nitrogen (SM4500NH3); H2SO4	1 L poly: Nitrate, sulfate (EPA 300.0)	Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
N063812-015	MW-51-0324	3/14/2024	~~10:49~~ 1043	(5)	X	X	X							E	3	P	BNS	
-016	MW-26-0324	3/14/2024	9:57		X	X	X							E	3	P	BNS	MSMSD
-017	EB-745-Q124	3/14/2024	13:05		X									E	1	P	BNS	

Relinquished by (Signature and Printed Name): Riggie Tap — Date/Time: 03/14/24 1750

Relinquished by (Signature and Printed Name): Michael Alcantara — Date/Time: 3/14/24 1750

Relinquished by (Signature and Printed Name): Michael Alcantara — Date/Time: 3/14/24 2142

Relinquished by (Signature and Printed Name): Michael Alcantara — Date/Time: 3/14/24 2142

Relinquished by (Signature and Printed Name): — Date/Time:

Turn Around Time (TAT)

A	< 24 Hrs or Same Day TAT
B	= Next Workday
C	= 2 Workdays
D	= 3 Workdays
X E	= Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

s will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
AT is 5-7 business days. surcharges will apply for rush analysis
24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
DD formats will be an additional 3% of the total project price.
Surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project

5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

Preservatives:

H=HCL	N=HNO_3	S=H_2SO_4	C=4°C
Z=Zn(AC)$_2$	O=NaOH	T=$Na_2S_2O_3$	
Others/Specify:	B (NH4)2SO4/NH4OH		

Container Type:

T=Tube	V=VOA	P=Pint
J=Jar	B=Tedlar	G=Glass
M=Metal	M=Metal	C=Can

Whitest laboratory Copy

Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	3/14/2024	Workorder:	N063812
Rep sample Temp (Deg C):	1.6/1.8	IR Gun ID:	3
Temp Blank:	☑ Yes ☐ No		
Carrier name:	ASSET		
Last 4 digits of Tracking No.:	NA	Packing Material Used:	None
Cooling process:	☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None		

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By: CC For: YRodriguez 3/15/2024

Reviewed By: MBC for: [illegible] 03/19/2024

ASSET Laboratories

WORK ORDER Summary

15-Mar-24

WorkOrder: N063812

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 3/14/2024 9:42 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063812-001A	MW-20-070-0324	3/14/2024 10:21:00 AM	3/29/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063812-001B			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063812-001C			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063812-002A	MW-20-100-0324	3/14/2024 11:32:00 AM	3/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063812-002B			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063812-002C			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063812-003A	MW-927-Q124	3/14/2024 11:42:00 AM	3/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063812-003B			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063812-003C			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063812-004A	MW-20-130-0324	3/14/2024 10:59:00 AM	3/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW

WORK ORDER Summary

15-Mar-24

WorkOrder: N063812

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 3/14/2024 9:42 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063812-004B	MW-20-130-0324	3/14/2024 10:59:00 AM	3/29/2024	Groundwater	EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063812-004C			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063812-005A	MW-21-0324	3/14/2024 9:51:00 AM	3/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063812-005B			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063812-005C			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063812-006A	MW-21-EB-0324	3/14/2024 9:20:00 AM	3/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063812-007A	MW-71-035-0324	3/14/2024 9:06:00 AM	3/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063812-007B			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063812-007C			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063812-008A	EB-744-Q124	3/14/2024 12:40:00 PM	3/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW

WORK ORDER Summary

15-Mar-24

WorkOrder: N063812

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 3/14/2024 9:42 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063812-009A	MW-78-070-0324	3/14/2024 11:36:00 AM	3/29/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063812-009B			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063812-009C			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063812-010A	MW-78-142-0324	3/14/2024 12:06:00 PM	3/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063812-010B			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063812-010C			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063812-011A	MW-79-058-0324	3/14/2024 8:32:00 AM	3/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☑	☐	WW
N063812-011B			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☑	☐	WW
			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☑	☐	WW
N063812-011C			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☑	☐	WW
			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☑	☐	WW
			3/29/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☑	☐	WW
			3/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☑	☐	WW
N063812-012A	MW-79-102-0324	3/14/2024 9:03:00 AM	3/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW

WORK ORDER Summary

15-Mar-24

WorkOrder: N063812

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 3/14/2024 9:42 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063812-012B	MW-79-102-0324	3/14/2024 9:03:00 AM	3/29/2024	Groundwater	EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063812-012C			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063812-013A	MW-80-057-0324	3/14/2024 12:49:00 PM	3/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063812-013B			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063812-013C			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063812-014A	MW-80-082-0324	3/14/2024 12:29:00 PM	3/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063812-014B			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063812-014C			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063812-015A	MW-51-0324	3/14/2024 10:43:00 AM	3/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063812-015B			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW

WORK ORDER Summary

15-Mar-24

WorkOrder: N063812

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 3/14/2024 9:42 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063812-015B	MW-51-0324	3/14/2024 10:43:00 AM	3/29/2024	Groundwater	EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☐	☐	WW
N063812-015C			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			3/29/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			3/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063812-016A	MW-26-0324	3/14/2024 9:57:00 AM	3/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☑	☐	WW
N063812-016B			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☑	☐	WW
			3/29/2024		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	☐	☑	☐	WW
N063812-016C			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☑	☐	WW
			3/29/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☑	☐	WW
			3/29/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☑	☐	WW
			3/29/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☑	☐	WW
N063812-017A	EB-745-Q124	3/14/2024 1:05:00 PM	3/29/2024		EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063812-018A	FOLDER	3/29/2024	3/29/2024		Folder	Folder	☐	☐	☐	LAB
			3/29/2024		Folder	Level IV Report	☐	☐	☐	LAB
			3/29/2024		Folder	Folder	☐	☐	☐	LAB

List of Analysts

ASSET Laboratories Work Order: N063812

NAME	TEST METHOD
Ria Abes	EPA 218.6, EPA 300.0
Diane Jetajobe	EPA 6010B_Dissolved, EPA 6020_Dissolved

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R183690
ASSET #: N063812

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 3/15/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer dMocha 3/24/2024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R183736
ASSET #: N063812

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 3/18/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments: Dilution was necessary for samples N063812-005A and N063812-016A due to matrix interference

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer dMRocha 3/24/2024 Date: _____

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

QC Batch Number: R183788
ASSET #: N063812

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 3/19/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer dRocha 3/25/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in μg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063812-001A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 2.7518 * 100$$

$$Cr^{+6}, \mu g/L = 275.1800$$

Reporting results in two significant figures,

Cr^{+6} ,µg/L = 280.0

Reviewed by:

dlRocha 4/17/2024

ANALYSIS RUN LOG

INJECTION LOG: 240305A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	03/05/24 4:07 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/05/24 4:16 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	03/05/24 4:26 PM	Reported
12	MB-R183315	MBLK	1	Hexavalent Chromium	03/05/24 4:35 PM	Reported
13	LCS-R183315	LCS	1	Hexavalent Chromium	03/05/24 4:45 PM	Reported
14	MB-107277	MBLK	1	Hexavalent Chromium	03/05/24 4:54 PM	Reported
15	N063472-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:04 PM	Reported
16	N063472-001ADUP	DUP	1	Hexavalent Chromium	03/05/24 5:13 PM	Reported
17	N063535-006A	SAMP	1	Hexavalent Chromium	03/05/24 5:23 PM	Reported
18	N063535-006AMS	MS	1	Hexavalent Chromium	03/05/24 5:32 PM	Reported
19	N063535-006AMSD	MSD	1	Hexavalent Chromium	03/05/24 5:42 PM	Reported
20	N063534-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:51 PM	Reported
21	N063534-001AMS	MS	1	Hexavalent Chromium	03/05/24 6:00 PM	Reported
22	CCV-1	CCV1	1	Hexavalent Chromium	03/05/24 6:10 PM	Reported
23	CCB-1	CCB	1	Hexavalent Chromium	03/05/24 6:20 PM	Reported
24	N063534-002A	SAMP	1	Hexavalent Chromium	03/05/24 6:30 PM	Reported
25	N063534-002AMS	MS	1	Hexavalent Chromium	03/05/24 6:38 PM	Reported
26	N063534-003A	SAMP	1	Hexavalent Chromium	03/05/24 6:48 PM	Reported
27	N063534-003AMS	MS	1	Hexavalent Chromium	03/05/24 6:57 PM	Reported
28	N063535-001A	SAMP	1	Hexavalent Chromium	03/05/24 7:07 PM	Reported
29	N063535-002A	SAMP	1	Hexavalent Chromium	03/05/24 7:16 PM	Reported
30	N063535-003A	SAMP	1	Hexavalent Chromium	03/05/24 7:26 PM	Reported
31	N063535-004A	SAMP	1	Hexavalent Chromium	03/05/24 7:35 PM	Reported
32	N063535-005A	SAMP	1	Hexavalent Chromium	03/05/24 7:48 PM	Reported
33	CCV-2	CCV	1	Hexavalent Chromium	03/05/24 7:57 PM	Reported
34	CCB-2	CCB	1	Hexavalent Chromium	03/05/24 8:07 PM	Reported
35	N063535-007A	SAMP	1	Hexavalent Chromium	03/05/24 8:16 PM	Reported
36	N063535-008A	SAMP	1	Hexavalent Chromium	03/05/24 8:25 PM	Reported
37	CCV-3	CCV1	1	Hexavalent Chromium	03/05/24 8:35 PM	Reported
38	CCB-3	CCB	1	Hexavalent Chromium	03/05/24 8:46 PM	Reported
39	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 8:55 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240305A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**07/Mar/24 08:03:58**
No. of Injections:	**42**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	8	1000	Unknown		03/05/2024 16:07	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	9	1000	Unknown		03/05/2024 16:16	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	10	1000	Unknown		03/05/2024 16:26	Finished	ICB R240129C
12	MB-H2O,MBLK,1,	11	1000	Unknown		03/05/2024 16:35	Finished	MB R240129C
13	LCS-H2O,LCS,1,	12	1000	Unknown		03/05/2024 16:45	Finished	LCS @5ppb, IWST-231228B
14	MB-107277,MBLK,1,	13	1000	Unknown		03/05/2024 16:54	Finished	MB TCLP
15	N063472-001A,SAMP	14	1000	Unknown		03/05/2024 17:04	Finished	SAMP,10 mL
16	N063472-001ADUP,D	15	1000	Unknown		03/05/2024 17:13	Finished	REP,10 mL
17	N063535-006A,SAMP	16	1000	Unknown		03/05/2024 17:23	Finished	SAMP,10 mL
18	N063535-006AMS,MS	17	1000	Unknown		03/05/2024 17:32	Finished	MS (5ppb), IWST-231228B,10r
19	N063535-006AMSD,M	18	1000	Unknown		03/05/2024 17:42	Finished	MSD (5ppb), IWST-231228B,1
20	N063534-001A,SAMP	19	1000	Unknown		03/05/2024 17:51	Finished	SAMP,10 mL
21	N063534-001AMS,MS	20	1000	Unknown		03/05/2024 18:00	Finished	MS (1ppb), IWST-231228B,10r
22	CCV-1,CCV1,1,	21	1000	Unknown		03/05/2024 18:10	Finished	CCV @10ppb, IWST-231228A
23	CCB-1,CCB,1,	22	1000	Unknown		03/05/2024 18:20	Finished	CCB R240129C
24	N063534-002A,SAMP	23	1000	Unknown		03/05/2024 18:30	Finished	SAMP,10 mL
25	N063534-002AMS,MS	24	1000	Unknown		03/05/2024 18:38	Finished	MS (1ppb), IWST-231228B,10r
26	N063534-003A,SAMP	25	1000	Unknown		03/05/2024 18:48	Finished	SAMP,10 mL
27	N063534-003AMS,MS	26	1000	Unknown		03/05/2024 18:57	Finished	MS (1ppb), IWST-231228B,10r
28	N063535-001A,SAMP	27	1000	Unknown		03/05/2024 19:07	Finished	SAMP,10 mL
29	N063535-002A,SAMP	28	1000	Unknown		03/05/2024 19:16	Finished	SAMP,10 mL
30	N063535-003A,SAMP	29	1000	Unknown		03/05/2024 19:26	Finished	SAMP,10 mL
31	N063535-004A,SAMP	30	1000	Unknown		03/05/2024 19:35	Finished	SAMP,10 mL
32	N063535-005A,SAMP	31	1000	Unknown		03/05/2024 19:48	Finished	SAMP,10 mL
33	CCV-2,CCV,1,	32	1000	Unknown		03/05/2024 19:57	Finished	CCV @5ppb, IWST-231228A
34	CCB-2,CCB,1,	33	1000	Unknown		03/05/2024 20:07	Finished	CCB R240129C
35	N063535-007A,SAMP	34	1000	Unknown		03/05/2024 20:16	Finished	SAMP,10 mL
36	N063535-008A,SAMP	35	1000	Unknown		03/05/2024 20:25	Finished	SAMP,10 mL
37	CCV-3,CCV1,1,	37	1000	Unknown		03/05/2024 20:35	Finished	CCV @10ppb, IWST-231228A
38	CCB-3,CCB,1,	38	1000	Unknown		03/05/2024 20:46	Finished	CCB R240129C
39	BLANK	39	1000	Unknown		03/05/2024 20:55	Finished	BLANK
40	SHUTDOWN	40	1000	Unknown		03/05/2024 21:05	Finished	
41	Eluent: R240305B	41	1000	Unknown		n.a.	Finished	
42	PCR: R240305C	42	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240315A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/15/24 9:39 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/15/24 9:53 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/15/24 10:02 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/15/24 10:11 AM	Reported
13	MB-R183690	MBLK	1	Hexavalent Chromium	03/15/24 10:21 AM	Reported
14	LCS-R183690	LCS	1	Hexavalent Chromium	03/15/24 10:30 AM	Reported
15	N063735-012A	SAMP	1	Hexavalent Chromium	03/15/24 10:55 AM	Reported
16	N063735-012AMS	MS	1	Hexavalent Chromium	03/15/24 11:07 AM	Reported
17	N063771-001A	SAMP	1	Hexavalent Chromium	03/15/24 11:17 AM	Not Reported
18	N063771-001AMS	MS	1	Hexavalent Chromium	03/15/24 11:26 AM	Not Reported
19	N063771-001A	SAMP	5	Hexavalent Chromium	03/15/24 11:57 AM	Reported
20	N063771-001AMS	MS	5	Hexavalent Chromium	03/15/24 12:09 PM	Reported
21	N063771-002A	SAMP	1	Hexavalent Chromium	03/15/24 12:19 PM	Not Reported
22	N063771-002AMS	MS	1	Hexavalent Chromium	03/15/24 12:28 PM	Not Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/15/24 12:37 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/15/24 12:47 PM	Reported
25	N063771-014A	SAMP	5	Hexavalent Chromium	03/15/24 12:56 PM	Reported
26	N063771-014AMS	MS	5	Hexavalent Chromium	03/15/24 1:06 PM	Reported
27	N063771-015A	SAMP	5	Hexavalent Chromium	03/15/24 1:15 PM	Reported
28	N063771-015AMS	MS	5	Hexavalent Chromium	03/15/24 1:25 PM	Reported
29	N063771-018A	SAMP	5	Hexavalent Chromium	03/15/24 1:34 PM	Reported
30	N063771-018AMS	MS	5	Hexavalent Chromium	03/15/24 1:44 PM	Reported
31	N063771-010A	SAMP	1	Hexavalent Chromium	03/15/24 1:53 PM	Not Reported
32	N063771-010AMS	MS	1	Hexavalent Chromium	03/15/24 2:03 PM	Not Reported
33	N063771-014ADUP	DUP	5	Hexavalent Chromium	03/15/24 2:12 PM	Reported
34	N063771-014AMSD	MSD	5	Hexavalent Chromium	03/15/24 2:22 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	03/15/24 2:31 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	03/15/24 2:40 PM	Reported
37	N063771-012A	SAMP	1	Hexavalent Chromium	03/15/24 2:50 PM	Not Reported
38	N063771-012AMS	MS	1	Hexavalent Chromium	03/15/24 2:59 PM	Not Reported
39	N063771-013A	SAMP	1	Hexavalent Chromium	03/15/24 3:09 PM	Not Reported
40	N063771-013AMS	MS	1	Hexavalent Chromium	03/15/24 3:18 PM	Not Reported
41	N063771-006A	SAMP	1	Hexavalent Chromium	03/15/24 3:28 PM	Not Reported
42	N063771-006AMS	MS	1	Hexavalent Chromium	03/15/24 3:37 PM	Not Reported

INJECTION LOG: 240315A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063771-007A	SAMP	1	Hexavalent Chromium	03/15/24 3:47 PM	Not Reported
44	N063771-007AMS	MS	1	Hexavalent Chromium	03/15/24 4:02 PM	Not Reported
45	N063771-009A	SAMP	1	Hexavalent Chromium	03/15/24 4:14 PM	Not Reported
46	N063771-009AMS	MS	1	Hexavalent Chromium	03/15/24 4:23 PM	Not Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	03/15/24 4:33 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	03/15/24 4:42 PM	Reported
49	N063771-008A	SAMP	1	Hexavalent Chromium	03/15/24 4:52 PM	Reported
50	N063771-008AMS	MS	1	Hexavalent Chromium	03/15/24 5:01 PM	Reported
51	N063771-016A	SAMP	1	Hexavalent Chromium	03/15/24 5:11 PM	Not Reported
52	N063771-016AMS	MS	1	Hexavalent Chromium	03/15/24 5:20 PM	Not Reported
53	N063771-017A	SAMP	1	Hexavalent Chromium	03/15/24 5:29 PM	Not Reported
54	N063771-017AMS	MS	1	Hexavalent Chromium	03/15/24 5:39 PM	Not Reported
55	N063771-019A	SAMP	1	Hexavalent Chromium	03/15/24 5:48 PM	Reported
56	N063771-019AMS	MS	1	Hexavalent Chromium	03/15/24 5:58 PM	Reported
57	N063771-011A	SAMP	1	Hexavalent Chromium	03/15/24 6:08 PM	Not Reported
58	N063771-011AMS	MS	1	Hexavalent Chromium	03/15/24 6:17 PM	Not Reported
59	CCV-5	CCV	1	Hexavalent Chromium	03/15/24 6:26 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	03/15/24 6:36 PM	Reported
61	N063771-002A	SAMP	5	Hexavalent Chromium	03/15/24 6:45 PM	Reported
62	N063771-002AMS	MS	5	Hexavalent Chromium	03/15/24 6:55 PM	Reported
63	N063812-006A	SAMP	1	Hexavalent Chromium	03/15/24 7:04 PM	Reported
64	N063812-006AMS	MS	1	Hexavalent Chromium	03/15/24 7:14 PM	Reported
65	N063812-008A	SAMP	1	Hexavalent Chromium	03/15/24 7:23 PM	Reported
66	N063812-008AMS	MS	1	Hexavalent Chromium	03/15/24 7:32 PM	Reported
67	N063812-017A	SAMP	1	Hexavalent Chromium	03/15/24 7:42 PM	Reported
68	N063812-017AMS	MS	1	Hexavalent Chromium	03/15/24 7:51 PM	Reported
69	N063771-010A	SAMP	5	Hexavalent Chromium	03/15/24 8:01 PM	Reported
70	N063771-010AMS	MS	5	Hexavalent Chromium	03/15/24 8:10 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	03/15/24 8:20 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	03/15/24 8:29 PM	Reported
73	N063771-012A	SAMP	5	Hexavalent Chromium	03/15/24 8:39 PM	Reported
74	N063771-012AMS	MS	5	Hexavalent Chromium	03/15/24 8:48 PM	Reported
75	N063771-013A	SAMP	5	Hexavalent Chromium	03/15/24 8:58 PM	Reported
76	N063771-013AMS	MS	5	Hexavalent Chromium	03/15/24 9:07 PM	Reported
77	N063771-006A	SAMP	5	Hexavalent Chromium	03/15/24 9:16 PM	Reported
78	N063771-006AMS	MS	5	Hexavalent Chromium	03/15/24 9:26 PM	Reported
79	N063771-007A	SAMP	5	Hexavalent Chromium	03/15/24 9:35 PM	Reported
80	N063771-007AMS	MS	5	Hexavalent Chromium	03/15/24 9:45 PM	Reported
81	N063771-009A	SAMP	5	Hexavalent Chromium	03/15/24 9:54 PM	Reported
82	N063771-009AMS	MS	5	Hexavalent Chromium	03/15/24 10:04 PM	Reported
83	CCV-7	CCV	1	Hexavalent Chromium	03/15/24 10:13 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	03/15/24 10:23 PM	Reported

INJECTION LOG: 240315A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	BLANK	BLANK	1	Hexavalent Chromium	03/15/24 10:32 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240315A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**15/Mar/24 23:02:54**
No. of Injections:	**88**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/15/2024 09:39	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/15/2024 09:53	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/15/2024 10:02	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/15/2024 10:11	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/15/2024 10:21	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/15/2024 10:30	Finished	LCS @5ppb, IWST-231228B
15	N063735-012A,SAMF	1	1000	Unknown		03/15/2024 10:55	Finished	SAMP,10 mL
16	N063735-012AMS,MS	2	1000	Unknown		03/15/2024 11:07	Finished	MS (1ppb), IWST-231228B,10r
17	N063771-001A,SAMF	3	1000	Unknown		03/15/2024 11:17	Finished	SAMP,10 mL
18	N063771-001AMS,MS	4	1000	Unknown		03/15/2024 11:26	Finished	MS (5ppb), IWST-231228B,10r
19	N063771-001A,SAMF	1	1000	Unknown		03/15/2024 11:57	Finished	SAMP,2>10 mL
20	N063771-001AMS,MS	2	1000	Unknown		03/15/2024 12:09	Finished	MS (1ppb), IWST-231228B,2>1
21	N063771-002A,SAMF	3	1000	Unknown		03/15/2024 12:19	Finished	SAMP,10 mL
22	N063771-002AMS,MS	4	1000	Unknown		03/15/2024 12:28	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	5	1000	Unknown		03/15/2024 12:37	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	6	1000	Unknown		03/15/2024 12:47	Finished	CCB R240129C
25	N063771-014A,SAMF	7	1000	Unknown		03/15/2024 12:56	Finished	SAMP,2>10 mL
26	N063771-014AMS,MS	8	1000	Unknown		03/15/2024 13:06	Finished	MS (1ppb), IWST-231228B,2>1
27	N063771-015A,SAMF	9	1000	Unknown		03/15/2024 13:15	Finished	SAMP,2>10 mL
28	N063771-015AMS,MS	10	1000	Unknown		03/15/2024 13:25	Finished	MS (1ppb), IWST-231228B,2>1
29	N063771-018A,SAMF	11	1000	Unknown		03/15/2024 13:34	Finished	SAMP,2>10 mL
30	N063771-018AMS,MS	12	1000	Unknown		03/15/2024 13:44	Finished	MS (1ppb), IWST-231228B,2>1
31	N063771-010A,SAMF	13	1000	Unknown		03/15/2024 13:53	Finished	SAMP,10 mL
32	N063771-010AMS,MS	14	1000	Unknown		03/15/2024 14:03	Finished	MS (1ppb), IWST-231228B,10r
33	N063771-014ADUP,D	15	1000	Unknown		03/15/2024 14:12	Finished	DUP,2>10 mL
34	N063771-014AMSD,M	16	1000	Unknown		03/15/2024 14:22	Finished	MSD (5ppb), IWST-231228B,2>
35	CCV-3,CCV,1,	17	1000	Unknown		03/15/2024 14:31	Finished	CCV @10ppb, IWST-231228A
36	CCB-3,CCB,1,	18	1000	Unknown		03/15/2024 14:40	Finished	CCB R240129C
37	N063771-012A,SAMF	19	1000	Unknown		03/15/2024 14:50	Finished	SAMP,10 mL
38	N063771-012AMS,MS	20	1000	Unknown		03/15/2024 14:59	Finished	MS (1ppb), IWST-231228B,10r
39	N063771-013A,SAMF	21	1000	Unknown		03/15/2024 15:09	Finished	SAMP,10 mL
40	N063771-013AMS,MS	22	1000	Unknown		03/15/2024 15:18	Finished	MS (1ppb), IWST-231228B,10r
41	N063771-006A,SAMF	23	1000	Unknown		03/15/2024 15:28	Finished	SAMP,10 mL
42	N063771-006AMS,MS	24	1000	Unknown		03/15/2024 15:37	Finished	MS (1ppb), IWST-231228B,10r
43	N063771-007A,SAMF	25	1000	Unknown		03/15/2024 15:47	Finished	SAMP,10 mL
44	N063771-007AMS,MS	1	1000	Unknown		03/15/2024 16:02	Finished	MS (1ppb), IWST-231228B,10r
45	N063771-009A,SAMF	2	1000	Unknown		03/15/2024 16:14	Finished	SAMP,10 mL
46	N063771-009AMS,MS	3	1000	Unknown		03/15/2024 16:23	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	4	1000	Unknown		03/15/2024 16:33	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	5	1000	Unknown		03/15/2024 16:42	Finished	CCB R240129C
49	N063771-008A,SAMF	6	1000	Unknown		03/15/2024 16:52	Finished	SAMP,10 mL
50	N063771-008AMS,MS	7	1000	Unknown		03/15/2024 17:01	Finished	MS (1ppb), IWST-231228B,10r
51	N063771-016A,SAMF	8	1000	Unknown		03/15/2024 17:11	Finished	SAMP,10 mL
52	N063771-016AMS,MS	9	1000	Unknown		03/15/2024 17:20	Finished	MS (1ppb), IWST-231228B,10r
53	N063771-017A,SAMF	10	1000	Unknown		03/15/2024 17:29	Finished	SAMP,10 mL
54	N063771-017AMS,MS	11	1000	Unknown		03/15/2024 17:39	Finished	MS (1ppb), IWST-231228B,10r
55	N063771-019A,SAMF	12	1000	Unknown		03/15/2024 17:48	Finished	SAMP,10 mL
56	N063771-019AMS,MS	13	1000	Unknown		03/15/2024 17:58	Finished	MS (1ppb), IWST-231228B,10r
57	N063771-011A,SAMF	14	1000	Unknown		03/15/2024 18:08	Finished	SAMP,10 mL
58	N063771-011AMS,MS	15	1000	Unknown		03/15/2024 18:17	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	16	1000	Unknown		03/15/2024 18:26	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	17	1000	Unknown		03/15/2024 18:36	Finished	CCB R240129C

61	N063771-002A,SAMP	18	1000	Unknown		03/15/2024 18:45	Finished	SAMP,2>10 mL
62	N063771-002AMS,MS	19	1000	Unknown		03/15/2024 18:55	Finished	MS (1ppb), IWST-231228B,2>
63	N063812-006A,SAMP	20	1000	Unknown		03/15/2024 19:04	Finished	SAMP,10 mL
64	N063812-006AMS,MS	21	1000	Unknown		03/15/2024 19:14	Finished	MS (1ppb), IWST-231228B,10
65	N063812-008A,SAMP	22	1000	Unknown		03/15/2024 19:23	Finished	SAMP,10 mL
66	N063812-008AMS,MS	23	1000	Unknown		03/15/2024 19:32	Finished	MS (1ppb), IWST-231228B,10
67	N063812-017A,SAMP	24	1000	Unknown		03/15/2024 19:42	Finished	SAMP,10 mL
68	N063812-017AMS,MS	25	1000	Unknown		03/15/2024 19:51	Finished	MS (1ppb), IWST-231228B,10
69	N063771-010A,SAMP	26	1000	Unknown		03/15/2024 20:01	Finished	SAMP,2>10 mL
70	N063771-010AMS,MS	27	1000	Unknown		03/15/2024 20:10	Finished	MS (1ppb), IWST-231228B,2>
71	CCV-6,CCV1,1,	28	1000	Unknown		03/15/2024 20:20	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	29	1000	Unknown		03/15/2024 20:29	Finished	CCB R240129C
73	N063771-012A,SAMP	30	1000	Unknown		03/15/2024 20:39	Finished	SAMP,2>10 mL
74	N063771-012AMS,MS	31	1000	Unknown		03/15/2024 20:48	Finished	MS (1ppb), IWST-231228B,2>
75	N063771-013A,SAMP	32	1000	Unknown		03/15/2024 20:58	Finished	SAMP,2>10 mL
76	N063771-013AMS,MS	33	1000	Unknown		03/15/2024 21:07	Finished	MS (1ppb), IWST-231228B,2>
77	N063771-006A,SAMP	34	1000	Unknown		03/15/2024 21:16	Finished	SAMP,2>10 mL
78	N063771-006AMS,MS	35	1000	Unknown		03/15/2024 21:26	Finished	MS (1ppb), IWST-231228B,2>
79	N063771-007A,SAMP	36	1000	Unknown		03/15/2024 21:35	Finished	SAMP,2>10 mL
80	N063771-007AMS,MS	37	1000	Unknown		03/15/2024 21:45	Finished	MS (1ppb), IWST-231228B,2>
81	N063771-009A,SAMP	38	1000	Unknown		03/15/2024 21:54	Finished	SAMP,2>10 mL
82	N063771-009AMS,MS	39	1000	Unknown		03/15/2024 22:04	Finished	MS (1ppb), IWST-231228B,2>
83	CCV-7,CCV,1,	40	1000	Unknown		03/15/2024 22:13	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	41	1000	Unknown		03/15/2024 22:23	Finished	CCB R240129C
85	BLANK	42	1000	Unknown		03/15/2024 22:32	Finished	BLANK
86	SHUTDOWN	43	1000	Unknown		03/15/2024 22:42	Finished	
87	Eluent: R240313A	44	1000	Unknown		n.a.	Finished	
88	PCR: R240313B	45	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240318A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/18/24 11:42 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/18/24 11:57 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/18/24 12:06 PM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/18/24 12:15 PM	Reported
13	MB-R183736	MBLK	1	Hexavalent Chromium	03/18/24 12:25 PM	Reported
14	LCS-R183736	LCS	1	Hexavalent Chromium	03/18/24 12:34 PM	Reported
15	N063812-011A	SAMP	5	Hexavalent Chromium	03/18/24 12:44 PM	Reported
16	N063812-011AMS	MS	5	Hexavalent Chromium	03/18/24 12:53 PM	Reported
17	N063812-016A	SAMP	1	Hexavalent Chromium	03/18/24 1:03 PM	Not Reported
18	N063812-016AMS	MS	1	Hexavalent Chromium	03/18/24 1:12 PM	Not Reported
19	N063812-005A	SAMP	1	Hexavalent Chromium	03/18/24 1:22 PM	Not Reported
20	N063812-005AMS	MS	1	Hexavalent Chromium	03/18/24 1:31 PM	Not Reported
21	N063812-009A	SAMP	1	Hexavalent Chromium	03/18/24 1:41 PM	Reported
22	N063812-009AMS	MS	1	Hexavalent Chromium	03/18/24 1:50 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/18/24 1:59 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/18/24 2:09 PM	Reported
25	N063812-014A	SAMP	1	Hexavalent Chromium	03/18/24 2:18 PM	Reported
26	N063812-015A	SAMP	1	Hexavalent Chromium	03/18/24 2:28 PM	Reported
27	N063812-014AMS	MS	1	Hexavalent Chromium	03/18/24 2:37 PM	Not Reported
28	N063812-015AMS	MS	1	Hexavalent Chromium	03/18/24 2:47 PM	Reported
29	N063812-011ADUP	DUP	5	Hexavalent Chromium	03/18/24 2:59 PM	Reported
30	N063812-011AMSD	MSD	5	Hexavalent Chromium	03/18/24 3:10 PM	Reported
31	N063812-012A	SAMP	50	Hexavalent Chromium	03/18/24 3:20 PM	Not Reported
32	N063812-012AMS	MS	50	Hexavalent Chromium	03/18/24 3:29 PM	Not Reported
33	N063812-013A	SAMP	5	Hexavalent Chromium	03/18/24 3:39 PM	Not Reported
34	N063812-013AMS	MS	5	Hexavalent Chromium	03/18/24 3:48 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	03/18/24 3:57 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	03/18/24 4:07 PM	Reported
37	N063812-001A	SAMP	100	Hexavalent Chromium	03/18/24 4:16 PM	Reported
38	N063812-001AMS	MS	100	Hexavalent Chromium	03/18/24 4:26 PM	Reported
39	N063812-002A	SAMP	500	Hexavalent Chromium	03/18/24 4:35 PM	Reported
40	N063812-002AMS	MS	500	Hexavalent Chromium	03/18/24 4:45 PM	Reported
41	N063812-003A	SAMP	500	Hexavalent Chromium	03/18/24 4:54 PM	Reported
42	N063812-003AMS	MS	500	Hexavalent Chromium	03/18/24 5:04 PM	Reported

INJECTION LOG: 240318A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063812-004A	SAMP	500	Hexavalent Chromium	03/18/24 5:13 PM	Reported
44	N063812-004AMS	MS	500	Hexavalent Chromium	03/18/24 5:23 PM	Reported
45	N063812-007A	SAMP	1	Hexavalent Chromium	03/18/24 5:32 PM	Reported
46	N063812-007AMS	MS	1	Hexavalent Chromium	03/18/24 5:42 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	03/18/24 5:51 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	03/18/24 6:00 PM	Reported
49	N063812-007A	SAMP	5	Hexavalent Chromium	03/18/24 6:10 PM	Not Reported
50	N063812-007AMS	MS	5	Hexavalent Chromium	03/18/24 6:19 PM	Not Reported
51	N063771-016A	SAMP	5	Hexavalent Chromium	03/18/24 6:29 PM	Reported
52	N063771-016AMS	MS	5	Hexavalent Chromium	03/18/24 6:41 PM	Reported
53	N063771-011A	SAMP	5	Hexavalent Chromium	03/18/24 6:51 PM	Reported
54	N063771-011AMS	MS	5	Hexavalent Chromium	03/18/24 7:01 PM	Reported
55	N063812-016A	SAMP	5	Hexavalent Chromium	03/18/24 7:10 PM	Reported
56	N063812-016AMS	MS	5	Hexavalent Chromium	03/18/24 7:19 PM	Reported
57	N063812-016AMSD	MSD	5	Hexavalent Chromium	03/18/24 7:29 PM	Reported
58	N063771-016ADUP	DUP	5	Hexavalent Chromium	03/18/24 7:38 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	03/18/24 7:48 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	03/18/24 7:57 PM	Reported
61	N063812-005A	SAMP	5	Hexavalent Chromium	03/18/24 8:07 PM	Reported
62	N063812-005AMS	MS	5	Hexavalent Chromium	03/18/24 8:16 PM	Reported
63	N063812-009A	SAMP	5	Hexavalent Chromium	03/18/24 8:25 PM	Not Reported
64	N063812-009AMS	MS	5	Hexavalent Chromium	03/18/24 8:35 PM	Not Reported
65	N063812-010A	SAMP	100	Hexavalent Chromium	03/18/24 8:44 PM	Reported
66	N063812-010AMS	MS	100	Hexavalent Chromium	03/18/24 8:54 PM	Reported
67	N063812-014A	SAMP	5	Hexavalent Chromium	03/18/24 9:03 PM	Not Reported
68	N063812-014AMS	MS	5	Hexavalent Chromium	03/18/24 9:13 PM	Not Reported
69	N063771-017A	SAMP	5	Hexavalent Chromium	03/18/24 9:22 PM	Reported
70	N063771-017AMS	MS	5	Hexavalent Chromium	03/18/24 9:32 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	03/18/24 9:41 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	03/18/24 9:51 PM	Reported
73	N063812-014AMS	MS	1	Hexavalent Chromium	03/18/24 10:00 PM	Reported
74	N063812-011ADUP	DUP	5	Hexavalent Chromium	03/18/24 10:10 PM	Not Reported
75	CCV-7	CCV	1	Hexavalent Chromium	03/18/24 10:19 PM	Reported
76	CCB-7	CCB	1	Hexavalent Chromium	03/18/24 10:28 PM	Reported
77	BLANK	BLANK	1	Hexavalent Chromium	03/18/24 10:38 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240318A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**18/Mar/24 23:08:39**
No. of Injections:	**80**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/18/2024 11:42	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/18/2024 11:57	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/18/2024 12:06	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/18/2024 12:15	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/18/2024 12:25	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/18/2024 12:34	Finished	LCS @5ppb, IWST-231228B
15	N063812-011A,SAMP	7	1000	Unknown		03/18/2024 12:44	Finished	SAMP,2>10 mL
16	N063812-011AMS,MS	8	1000	Unknown		03/18/2024 12:53	Finished	MS (5ppb), IWST-231228B,2>
17	N063812-016A,SAMP	9	1000	Unknown		03/18/2024 13:03	Finished	SAMP,10 mL
18	N063812-016AMS,MS	10	1000	Unknown		03/18/2024 13:12	Finished	MS (1ppb), IWST-231228B,10
19	N063812-005A,SAMP	11	1000	Unknown		03/18/2024 13:22	Finished	SAMP,10 mL
20	N063812-005AMS,MS	12	1000	Unknown		03/18/2024 13:31	Finished	MS (1ppb), IWST-231228B,10
21	N063812-009A,SAMP	13	1000	Unknown		03/18/2024 13:41	Finished	SAMP,10 mL
22	N063812-009AMS,MS	14	1000	Unknown		03/18/2024 13:50	Finished	MS (1ppb), IWST-231228B,10
23	CCV-2,CCV1,1,	15	1000	Unknown		03/18/2024 13:59	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		03/18/2024 14:09	Finished	CCB R240129C
25	N063812-014A,SAMP	17	1000	Unknown		03/18/2024 14:18	Finished	SAMP,10 mL
26	N063812-015A,SAMP	18	1000	Unknown		03/18/2024 14:28	Finished	SAMP,10 mL
27	N063812-014AMS,MS	19	1000	Unknown		03/18/2024 14:37	Finished	MS (5ppb), IWST-231228B,10
28	N063812-015AMS,MS	20	1000	Unknown		03/18/2024 14:47	Finished	MS (1ppb), IWST-231228B,10
29	N063812-011ADUP,D	1	1000	Unknown		03/18/2024 14:59	Finished	DUP,2>10 mL
30	N063812-011AMSD,M	2	1000	Unknown		03/18/2024 15:10	Finished	MS (5ppb), IWST-231228B,2>
31	N063812-012A,SAMP	3	1000	Unknown		03/18/2024 15:20	Finished	SAMP,0.2>10 mL
32	N063812-012AMS,MS	4	1000	Unknown		03/18/2024 15:29	Finished	MS (5ppb), IWST-231228B,0.2
33	N063812-013A,SAMP	5	1000	Unknown		03/18/2024 15:39	Finished	SAMP,2>10 mL
34	N063812-013AMS,MS	6	1000	Unknown		03/18/2024 15:48	Finished	MS (5ppb), IWST-231228B,2>
35	CCV-3,CCV,1,	7	1000	Unknown		03/18/2024 15:57	Finished	CCV @10ppb, IWST-231228A
36	CCB-3,CCB,1,	8	1000	Unknown		03/18/2024 16:07	Finished	CCB R240129C
37	N063812-001A,SAMP	9	1000	Unknown		03/18/2024 16:16	Finished	SAMP,0.1>10 mL
38	N063812-001AMS,MS	10	1000	Unknown		03/18/2024 16:26	Finished	MS (5ppb), IWST-231228B,0.1
39	N063812-002A,SAMP	11	1000	Unknown		03/18/2024 16:35	Finished	SAMP,0.02>10 mL
40	N063812-002AMS,MS	12	1000	Unknown		03/18/2024 16:45	Finished	MS (5ppb), IWST-231228B,0.0
41	N063812-003A,SAMP	13	1000	Unknown		03/18/2024 16:54	Finished	SAMP,0.02>10 mL
42	N063812-003AMS,MS	14	1000	Unknown		03/18/2024 17:04	Finished	MS (5ppb), IWST-231228B,0.0
43	N063812-004A,SAMP	15	1000	Unknown		03/18/2024 17:13	Finished	SAMP,0.02>10 mL
44	N063812-004AMS,MS	16	1000	Unknown		03/18/2024 17:23	Finished	MS (5ppb), IWST-231228B,0.0
45	N063812-007A,SAMP	17	1000	Unknown		03/18/2024 17:32	Finished	SAMP,10 mL
46	N063812-007AMS,MS	18	1000	Unknown		03/18/2024 17:42	Finished	MS (1ppb), IWST-231228B,10
47	CCV-4,CCV1,1,	19	1000	Unknown		03/18/2024 17:51	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	20	1000	Unknown		03/18/2024 18:00	Finished	CCB R240129C
49	N063812-007A,SAMP	21	1000	Unknown		03/18/2024 18:10	Finished	SAMP,2>10 mL
50	N063812-007AMS,MS	22	1000	Unknown		03/18/2024 18:19	Finished	MS (1ppb), IWST-231228B,2>
51	N063771-016A,SAMP	23	1000	Unknown		03/18/2024 18:29	Finished	SAMP,2>10 mL
52	N063771-016AMS,MS	24	1000	Unknown		03/18/2024 18:41	Finished	MS (5ppb), IWST-231228B,2>
53	N063771-011A,SAMP	25	1000	Unknown		03/18/2024 18:51	Finished	SAMP,2>10 mL
54	N063771-011AMS,MS	26	1000	Unknown		03/18/2024 19:01	Finished	MS (1ppb), IWST-231228B,2>
55	N063812-016A,SAMP	27	1000	Unknown		03/18/2024 19:10	Finished	SAMP,2>10 mL
56	N063812-016AMS,MS	28	1000	Unknown		03/18/2024 19:19	Finished	MS (1ppb), IWST-231228B,2>
57	N063812-016AMSD,M	29	1000	Unknown		03/18/2024 19:29	Finished	MSD (1ppb), IWST-231228B,2
58	N063771-016ADUP,D	30	1000	Unknown		03/18/2024 19:38	Finished	DUP,2>10 mL
59	CCV-5,CCV,1,	31	1000	Unknown		03/18/2024 19:48	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	32	1000	Unknown		03/18/2024 19:57	Finished	CCB R240129C

61	N063812-005A,SAMP	33	1000	Unknown		03/18/2024 20:07	Finished	SAMP,2>10 mL
62	N063812-005AMS,MS	34	1000	Unknown		03/18/2024 20:16	Finished	MS (1ppb), IWST-231228B,2>
63	N063812-009A,SAMP	35	1000	Unknown		03/18/2024 20:25	Finished	SAMP,2>10 mL
64	N063812-009AMS,MS	36	1000	Unknown		03/18/2024 20:35	Finished	MS (1ppb), IWST-231228B,2>
65	N063812-010A,SAMP	37	1000	Unknown		03/18/2024 20:44	Finished	SAMP,0.1>10 mL
66	N063812-010AMS,MS	38	1000	Unknown		03/18/2024 20:54	Finished	MS (5ppb), IWST-231228B,0.1
67	N063812-014A,SAMP	39	1000	Unknown		03/18/2024 21:03	Finished	SAMP,2>10 mL
68	N063812-014AMS,MS	40	1000	Unknown		03/18/2024 21:13	Finished	MS (1ppb), IWST-231228B,2>
69	N063771-017A,SAMP	41	1000	Unknown		03/18/2024 21:22	Finished	SAMP,2>10 mL
70	N063771-017AMS,MS	42	1000	Unknown		03/18/2024 21:32	Finished	MS (1ppb), IWST-231228B,2>
71	CCV-6,CCV1,1,	43	1000	Unknown		03/18/2024 21:41	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	44	1000	Unknown		03/18/2024 21:51	Finished	CCB R240129C
73	N063812-014AMS,MS	45	1000	Unknown		03/18/2024 22:00	Finished	MS (1ppb), IWST-231228B,10
74	N063812-011ADUP,D	46	1000	Unknown		03/18/2024 22:10	Finished	DUP,2>10 mL
75	CCV-7,CCV,1,	47	1000	Unknown		03/18/2024 22:19	Finished	CCV @5ppb, IWST-231228A
76	CCB-7,CCB,1,	48	1000	Unknown		03/18/2024 22:28	Finished	CCB R240129C
77	BLANK	49	1000	Unknown		03/18/2024 22:38	Finished	BLANK
78	SHUTDOWN	50	1000	Unknown		03/18/2024 22:47	Finished	
79	Eluent: R240318A	51	1000	Unknown		n.a.	Finished	
80	PCR: R240318B	CurrentVial	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240319A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/19/24 10:15 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/19/24 10:28 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/19/24 10:38 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/19/24 10:47 AM	Reported
13	MB-R183788	MBLK	1	Hexavalent Chromium	03/19/24 10:56 AM	Reported
14	LCS-R183788	LCS	1	Hexavalent Chromium	03/19/24 11:06 AM	Reported
15	N063812-012A	SAMP	10	Hexavalent Chromium	03/19/24 11:15 AM	Reported
16	N063812-012ADUP	DUP	10	Hexavalent Chromium	03/19/24 11:25 AM	Reported
17	N063812-012AMS	MS	10	Hexavalent Chromium	03/19/24 11:34 AM	Reported
18	N063812-012AMSD	MSD	10	Hexavalent Chromium	03/19/24 11:44 AM	Reported
19	N063812-013A	SAMP	1	Hexavalent Chromium	03/19/24 11:53 AM	Reported
20	N063812-013AMS	MS	1	Hexavalent Chromium	03/19/24 12:03 PM	Reported
21	N063812-013A	SAMP	5	Hexavalent Chromium	03/19/24 12:12 PM	Not Reported
22	N063812-013AMS	MS	5	Hexavalent Chromium	03/19/24 12:22 PM	Not Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/19/24 12:31 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/19/24 12:41 PM	Reported
25	BLANK	BLANK	1	Hexavalent Chromium	03/19/24 12:50 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240319A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**19/Mar/24 13:20:47**
No. of Injections:	**28**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/19/2024 10:15	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/19/2024 10:28	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/19/2024 10:38	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/19/2024 10:47	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/19/2024 10:56	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/19/2024 11:06	Finished	LCS @5ppb, IWST-231228B
15	N063812-012A,SAMP	7	1000	Unknown		03/19/2024 11:15	Finished	SAMP,1>10 mL
16	N063812-012ADUP,D	8	1000	Unknown		03/19/2024 11:25	Finished	DUP,1>10 mL
17	N063812-012AMS,MS	9	1000	Unknown		03/19/2024 11:34	Finished	MS (5ppb), IWST-231228B,1>
18	N063812-012AMSD,M	10	1000	Unknown		03/19/2024 11:44	Finished	MSD (5ppb), IWST-231228B,1
19	N063812-013A,SAMP	11	1000	Unknown		03/19/2024 11:53	Finished	SAMP,10 mL
20	N063812-013AMS,MS	12	1000	Unknown		03/19/2024 12:03	Finished	MS (1ppb), IWST-231228B,10r
21	N063812-013A,SAMP	13	1000	Unknown		03/19/2024 12:12	Finished	SAMP,2>10 mL
22	N063812-013AMS,MS	14	1000	Unknown		03/19/2024 12:22	Finished	MS (1ppb), IWST-231228B,2>
23	CCV-2,CCV1,1,	15	1000	Unknown		03/19/2024 12:31	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		03/19/2024 12:41	Finished	CCB R240129C
25	BLANK	17	1000	Unknown		03/19/2024 12:50	Finished	BLANK
26	SHUTDOWN	18	1000	Unknown		03/19/2024 12:59	Finished	
27	Eluent: R240318A	19	1000	Unknown		n.a.	Finished	
28	PCR: R240318B	20	1000	Unknown		n.a.	Finished	

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 7/14/24
Time Prepared: 1627H
Prepared By: NA

Reagent ID:
Sulfuric Acid: 15405
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: N240717A | N240717A
NH4OH + NH4SO4 buffer: N240129C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW377 17A	9.32	-	~250mL	~250 mL		
2)	18A	9.39	-				
3)	19A	9.68	-				
4)							
5)							
6)							
7)							
8)							
9)							
10)							
11)							
12)							
13)							
14)							
15)							

Sample Preparation

Date Prepared: 7/15/24
Time Prepared: 0934H
Prepared By: NA

Reagent ID:
Sulfuric Acid: 15405
Diphenylcarbazide: 15709
NH4OH + NH4SO4 eluent: N240717A | N240 3158
NH4OH + NH4SO4 buffer: N240129C

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MW382 - 1A	9.52	-	~250mL	~250mL		
2)	2A	9.37	-				
3)	3A	9.36	-				
4)	4A	9.49	-				
5)	5A	9.44	-				
6)	6A	9.69	-				
7)	7A	9.70	-				
8)	8A	9.69	-				
9)	9A	9.47	-				
10)	10A	9.48	-				
11)	11A	9.37	-				
12)	12A	9.34	-				
13)	13A	9.36	-				
14)	14A	9.48	-				
15)	15A	9.45	-				
	16A	9.42	-				
	17A	9.67	-				

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 3/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0412	0.2259	1.0754	2.1395	3.1834	4.2546	1.0000
Measured, in ug/L	0.193700	1.061600	5.052800	10.052000	14.957000	19.990000	
Relative Error (%RE)	-3.2%		1.1%				

	Stock	Working
Standard Concentration:	1,000,000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ICV**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5752654**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.874	0.20	5.000	0	97.5	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5752655**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.20	0.2000	0	109	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCV**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752657**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.058	0.20	5.000	0	101	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752658**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.196	0.20	0.2000	0	97.9	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752666**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.226	0.20	10.00	0	102	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCV**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752676**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.039	0.20	5.000	0	101	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752678**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.226	0.20	10.00	0	102	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCV**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752684**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.037	0.20	5.000	0	101	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ZZZZZZ**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752696**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.228	0.20	10.00	0	102	95	105				

Sample ID: **CCV-7**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCV**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752708**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.046	0.20	5.000	0	101	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ICV**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5756150**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.874	0.20	5.000	0	97.5	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5756151**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.20	0.2000	0	109	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCV**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756153**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.973	0.20	5.000	0	99.5	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756154**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.200	0.20	0.2000	0	99.8	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756162**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.995	0.20	10.00	0	99.9	95	105				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCV**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756169**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.997	0.20	5.000	0	99.9	95	105				

Sample ID: **CCV-4**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756181**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.028	0.20	10.00	0	100	95	105				

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCV**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756191**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.120	0.20	5.000	0	102	95	105				

Sample ID: **CCV-6**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ZZZZZZ**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756199**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.446	0.20	10.00	0	104	95	105				

Sample ID: **CCV-7**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCV**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756202**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.081	0.20	5.000	0	102	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183788**
Client ID: **ICV**	Batch ID: **R183788**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5757832**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.874	0.20	5.000	0	97.5	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183788**
Client ID: **ZZZZZZ**	Batch ID: **R183788**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5757833**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.20	0.2000	0	109	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183788**
Client ID: **CCV**	Batch ID: **R183788**	TestNo: **EPA 218.6**		Analysis Date: **3/19/2024**	SeqNo: **5757835**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.142	0.20	5.000	0	103	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183788**
Client ID: **ZZZZZZ**	Batch ID: **R183788**	TestNo: **EPA 218.6**		Analysis Date: **3/19/2024**	SeqNo: **5757836**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.178	0.20	0.2000	0	89.1	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183788**
Client ID: **ZZZZZZ**	Batch ID: **R183788**	TestNo: **EPA 218.6**		Analysis Date: **3/19/2024**	SeqNo: **5757846**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.071	0.20	10.00	0	101	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **ICB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5752656**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752659**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752667**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752677**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752679**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752685**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752697**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-7**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183690**
Client ID: **CCB**	Batch ID: **R183690**	TestNo: **EPA 218.6**		Analysis Date: **3/15/2024**	SeqNo: **5752709**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **ICB**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5756152**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCB**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756155**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCB**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756163**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCB**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756170**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCB**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756182**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCB**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756192**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCB**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756200**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-7**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183736**
Client ID: **CCB**	Batch ID: **R183736**	TestNo: **EPA 218.6**		Analysis Date: **3/18/2024**	SeqNo: **5756203**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183788**
Client ID: **ICB**	Batch ID: **R183788**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5757834**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183788**
Client ID: **CCB**	Batch ID: **R183788**	TestNo: **EPA 218.6**		Analysis Date: **3/19/2024**	SeqNo: **5757837**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **183788**
Client ID: **CCB**	Batch ID: **R183788**	TestNo: **EPA 218.6**		Analysis Date: **3/19/2024**	SeqNo: **5757847**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/15/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	3.998	
CCV-2	3.990	
CCV-3	3.990	
CCV-4	3.990	
CCV-5	3.981	
CCV-6	3.981	
CCV-7	3.990	

Average	3.989
Actual RT Window	3.909 - 4.069
Applied RT Window	3.789 - 4.189

MB-R183690	N.A.	N.A.
LCS-R183690	3.990	PASS
N063735-012A	N.A.	N.A.
N063735-012AMS	3.965	PASS
N063771-001A	3.790	PASS
N063771-001AMS	3.790	PASS
N063771-001A	3.965	PASS
N063771-001AMS	3.956	PASS
N063771-002A	N.A.	N.A.
N063771-014A	3.965	PASS
N063771-014AMS	3.956	PASS
N063771-015A	3.956	PASS
N063771-015AMS	3.956	PASS
N063771-018A	3.948	PASS
N063771-018AMS	3.948	PASS
N063771-010A	N.A.	N.A.
N063771-014ADUP	3.956	PASS
N063771-014AMSD	3.956	PASS
N063771-012A	N.A.	N.A.
N063771-012AMS	3.798	PASS
N063771-013A	N.A.	N.A.

Reviewed by:

dMocha 4/17/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/15/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	3.998	
CCV-2	3.990	
CCV-3	3.990	
CCV-4	3.990	
CCV-5	3.981	
CCV-6	3.981	
CCV-7	3.990	
Average	3.989	
Actual RT Window	3.909 - 4.069	
Applied RT Window	3.789 - 4.189	
N063771-013AMS	3.790	PASS
N063771-006A	N.A.	N.A.
N063771-007A	N.A.	N.A.
N063771-007AMS	3.790	PASS
N063771-009A	N.A.	N.A.
N063771-009AMS	3.815	PASS
N063771-008A	N.A.	N.A.
N063771-008AMS	3.973	PASS
N063771-017A	3.790	PASS
N063771-017AMS	3.790	PASS
N063771-019A	N.A.	N.A.
N063771-019AMS	3.973	PASS
N063771-011A	N.A.	N.A.
N063771-011AMS	3.790	PASS
N063771-002A	N.A.	N.A.
N063771-002AMS	3.948	PASS
N063812-006A	N.A.	N.A.
N063812-006AMS	3.973	PASS
N063812-008A	N.A.	N.A.
N063812-008AMS	3.973	PASS
N063812-017A	N.A.	N.A.

Reviewed by:

dlRocha 4/17/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/15/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	3.998	
CCV-2	3.990	
CCV-3	3.990	
CCV-4	3.990	
CCV-5	3.981	
CCV-6	3.981	
CCV-7	3.990	
Average	3.989	
Actual RT Window	3.909 - 4.069	
Applied RT Window	3.789 - 4.189	
N063812-017AMS	3.973	PASS
N063771-010A	N.A.	N.A.
N063771-010AMS	3.940	PASS
N063771-012A	N.A.	N.A.
N063771-012AMS	3.948	PASS
N063771-013A	N.A.	N.A.
N063771-013AMS	3.948	PASS
N063771-006A	N.A.	N.A.
N063771-006AMS	3.948	PASS
N063771-007A	N.A.	N.A.
N063771-007AMS	3.948	PASS
N063771-009A	N.A.	N.A.
N063771-009AMS	3.948	PASS

Reviewed by:

dMocha 4/17/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/18/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	3.981	
CCV-2	3.981	
CCV-3	3.973	
CCV-4	3.973	
CCV-5	3.981	
CCV-6	3.981	
CCV-7	3.981	

Average	3.979
Actual RT Window	3.899 - 4.059
Applied RT Window	3.779 - 4.179

MB-R183736	N.A.	N.A.
LCS-R183736	3.973	PASS
N063812-011A	3.940	PASS
N063812-011AMS	3.940	PASS
N063812-016A	N.A.	N.A.
N063812-016AMS	3.798	PASS
N063812-005A	N.A.	N.A.
N063812-009A	3.781	PASS
N063812-009AMS	3.790	PASS
N063812-014A	3.781	PASS
N063812-015A	3.956	PASS
N063812-014AMS	3.781	PASS
N063812-015AMS	3.956	PASS
N063812-011ADUP	N.A.	N.A.
N063812-011AMSD	3.948	PASS
N063812-012A	3.973	PASS
N063812-012AMS	3.973	PASS
N063812-013A	3.940	PASS
N063812-013AMS	3.948	PASS
N063812-001A	3.981	PASS
N063812-001AMS	3.973	PASS

Reviewed by:

dMRocha 4/17/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/18/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	3.981	
CCV-2	3.981	
CCV-3	3.973	
CCV-4	3.973	
CCV-5	3.981	
CCV-6	3.981	
CCV-7	3.981	
Average	3.979	
Actual RT Window	3.899 - 4.059	
Applied RT Window	3.779 - 4.179	
N063812-002A	3.981	PASS
N063812-002AMS	3.973	PASS
N063812-003A	3.973	PASS
N063812-003AMS	3.981	PASS
N063812-004A	3.973	PASS
N063812-004AMS	3.973	PASS
N063812-007A	3.848	PASS
N063812-007AMS	3.856	PASS
N063812-007A	3.923	PASS
N063812-007AMS	3.956	PASS
N063771-016A	3.940	PASS
N063771-016AMS	3.940	PASS
N063771-011A	N.A.	N.A.
N063771-011AMS	3.940	PASS
N063812-016A	N.A.	N.A.
N063812-016AMS	3.940	PASS
N063812-016AMSD	3.940	PASS
N063771-016ADUP	3.940	PASS
N063812-005A	N.A.	N.A.
N063812-005AMS	3.940	PASS
N063812-009A	N.A.	N.A.

Reviewed by:

dMocha 4/17/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/18/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	3.981	
CCV-2	3.981	
CCV-3	3.973	
CCV-4	3.973	
CCV-5	3.981	
CCV-6	3.981	
CCV-7	3.981	
Average	3.979	
Actual RT Window	3.899 - 4.059	
Applied RT Window	3.779 - 4.179	
N063812-009AMS	3.948	PASS
N063812-010A	3.981	PASS
N063812-010AMS	3.981	PASS
N063812-014A	3.940	PASS
N063812-014AMS	3.940	PASS
N063771-017A	N.A.	N.A.
N063771-017AMS	3.940	PASS
N063812-014AMS	3.790	PASS
N063812-011ADUP	3.948	PASS

Reviewed by:

dMocha 4/17/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/19/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	3.981	
CCV-2	3.973	

Average	3.977	
Actual RT Window	3.897 -	4.057
Applied RT Window	3.777 -	4.177

MB-R183788	N.A.	N.A.
LCS-R183788	3.973	PASS
N063812-012A	3.965	PASS
N063812-012ADUP	3.965	PASS
N063812-012AMS	3.965	PASS
N063812-012AMSD	3.956	PASS
N063812-013A	3.790	PASS
N063812-013AMS	3.781	PASS
N063812-013A	3.940	PASS
N063812-013AMS	3.940	PASS

Reviewed by:

dMRocha 4/17/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240305A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	03/05/24 4:07 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/05/24 4:16 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	03/05/24 4:26 PM	Reported
12	MB-R183315	MBLK	1	Hexavalent Chromium	03/05/24 4:35 PM	Reported
13	LCS-R183315	LCS	1	Hexavalent Chromium	03/05/24 4:45 PM	Reported
14	MB-107277	MBLK	1	Hexavalent Chromium	03/05/24 4:54 PM	Reported
15	N063472-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:04 PM	Reported
16	N063472-001ADUP	DUP	1	Hexavalent Chromium	03/05/24 5:13 PM	Reported
17	N063535-006A	SAMP	1	Hexavalent Chromium	03/05/24 5:23 PM	Reported
18	N063535-006AMS	MS	1	Hexavalent Chromium	03/05/24 5:32 PM	Reported
19	N063535-006AMSD	MSD	1	Hexavalent Chromium	03/05/24 5:42 PM	Reported
20	N063534-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:51 PM	Reported
21	N063534-001AMS	MS	1	Hexavalent Chromium	03/05/24 6:00 PM	Reported
22	CCV-1	CCV1	1	Hexavalent Chromium	03/05/24 6:10 PM	Reported
23	CCB-1	CCB	1	Hexavalent Chromium	03/05/24 6:20 PM	Reported
24	N063534-002A	SAMP	1	Hexavalent Chromium	03/05/24 6:30 PM	Reported
25	N063534-002AMS	MS	1	Hexavalent Chromium	03/05/24 6:38 PM	Reported
26	N063534-003A	SAMP	1	Hexavalent Chromium	03/05/24 6:48 PM	Reported
27	N063534-003AMS	MS	1	Hexavalent Chromium	03/05/24 6:57 PM	Reported
28	N063535-001A	SAMP	1	Hexavalent Chromium	03/05/24 7:07 PM	Reported
29	N063535-002A	SAMP	1	Hexavalent Chromium	03/05/24 7:16 PM	Reported
30	N063535-003A	SAMP	1	Hexavalent Chromium	03/05/24 7:26 PM	Reported
31	N063535-004A	SAMP	1	Hexavalent Chromium	03/05/24 7:35 PM	Reported
32	N063535-005A	SAMP	1	Hexavalent Chromium	03/05/24 7:48 PM	Reported
33	CCV-2	CCV	1	Hexavalent Chromium	03/05/24 7:57 PM	Reported
34	CCB-2	CCB	1	Hexavalent Chromium	03/05/24 8:07 PM	Reported
35	N063535-007A	SAMP	1	Hexavalent Chromium	03/05/24 8:16 PM	Reported
36	N063535-008A	SAMP	1	Hexavalent Chromium	03/05/24 8:25 PM	Reported
37	CCV-3	CCV1	1	Hexavalent Chromium	03/05/24 8:35 PM	Reported
38	CCB-3	CCB	1	Hexavalent Chromium	03/05/24 8:46 PM	Reported
39	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 8:55 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240305A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**07/Mar/24 08:03:58**
No. of Injections:	**42**	*Updated By:*	**ics 5000**

Injection Details

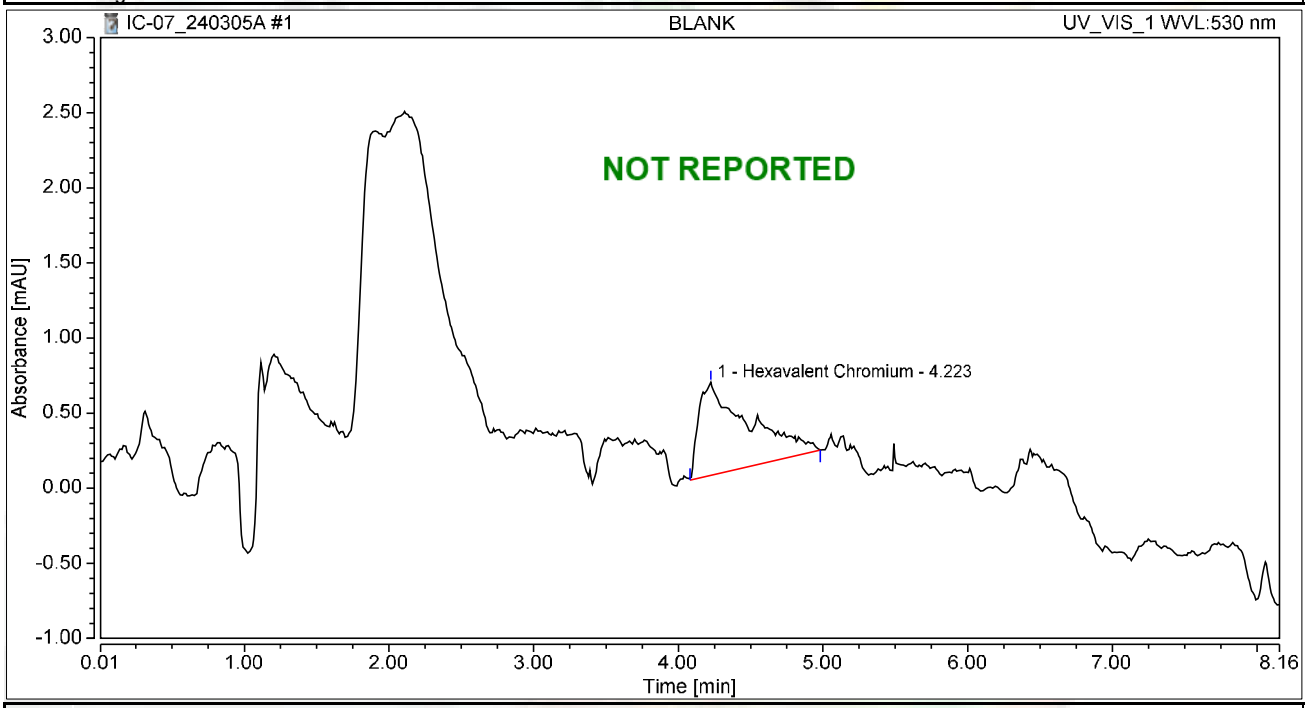
No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	8	1000	Unknown		03/05/2024 16:07	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	9	1000	Unknown		03/05/2024 16:16	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	10	1000	Unknown		03/05/2024 16:26	Finished	ICB R240129C
12	MB-H2O,MBLK,1,	11	1000	Unknown		03/05/2024 16:35	Finished	MB R240129C
13	LCS-H2O,LCS,1,	12	1000	Unknown		03/05/2024 16:45	Finished	LCS @5ppb, IWST-231228B
14	MB-107277,MBLK,1,	13	1000	Unknown		03/05/2024 16:54	Finished	MB TCLP
15	N063472-001A,SAMP	14	1000	Unknown		03/05/2024 17:04	Finished	SAMP,10 mL
16	N063472-001ADUP,D	15	1000	Unknown		03/05/2024 17:13	Finished	REP,10 mL
17	N063535-006A,SAMP	16	1000	Unknown		03/05/2024 17:23	Finished	SAMP,10 mL
18	N063535-006AMS,MS	17	1000	Unknown		03/05/2024 17:32	Finished	MS (5ppb), IWST-231228B,10r
19	N063535-006AMSD,M	18	1000	Unknown		03/05/2024 17:42	Finished	MSD (5ppb), IWST-231228B,1(
20	N063534-001A,SAMP	19	1000	Unknown		03/05/2024 17:51	Finished	SAMP,10 mL
21	N063534-001AMS,MS	20	1000	Unknown		03/05/2024 18:00	Finished	MS (1ppb), IWST-231228B,10r
22	CCV-1,CCV1,1,	21	1000	Unknown		03/05/2024 18:10	Finished	CCV @10ppb, IWST-231228A
23	CCB-1,CCB,1,	22	1000	Unknown		03/05/2024 18:20	Finished	CCB R240129C
24	N063534-002A,SAMP	23	1000	Unknown		03/05/2024 18:30	Finished	SAMP,10 mL
25	N063534-002AMS,MS	24	1000	Unknown		03/05/2024 18:38	Finished	MS (1ppb), IWST-231228B,10r
26	N063534-003A,SAMP	25	1000	Unknown		03/05/2024 18:48	Finished	SAMP,10 mL
27	N063534-003AMS,MS	26	1000	Unknown		03/05/2024 18:57	Finished	MS (1ppb), IWST-231228B,10r
28	N063535-001A,SAMP	27	1000	Unknown		03/05/2024 19:07	Finished	SAMP,10 mL
29	N063535-002A,SAMP	28	1000	Unknown		03/05/2024 19:16	Finished	SAMP,10 mL
30	N063535-003A,SAMP	29	1000	Unknown		03/05/2024 19:26	Finished	SAMP,10 mL
31	N063535-004A,SAMP	30	1000	Unknown		03/05/2024 19:35	Finished	SAMP,10 mL
32	N063535-005A,SAMP	31	1000	Unknown		03/05/2024 19:48	Finished	SAMP,10 mL
33	CCV-2,CCV,1,	32	1000	Unknown		03/05/2024 19:57	Finished	CCV @5ppb, IWST-231228A
34	CCB-2,CCB,1,	33	1000	Unknown		03/05/2024 20:07	Finished	CCB R240129C
35	N063535-007A,SAMP	34	1000	Unknown		03/05/2024 20:16	Finished	SAMP,10 mL
36	N063535-008A,SAMP	35	1000	Unknown		03/05/2024 20:25	Finished	SAMP,10 mL
37	CCV-3,CCV1,1,	37	1000	Unknown		03/05/2024 20:35	Finished	CCV @10ppb, IWST-231228A
38	CCB-3,CCB,1,	38	1000	Unknown		03/05/2024 20:46	Finished	CCB R240129C
39	BLANK	39	1000	Unknown		03/05/2024 20:55	Finished	BLANK
40	SHUTDOWN	40	1000	Unknown		03/05/2024 21:05	Finished	
41	Eluent: R240305B	41	1000	Unknown		n.a.	Finished	
42	PCR: R240305C	42	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.15**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 13:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

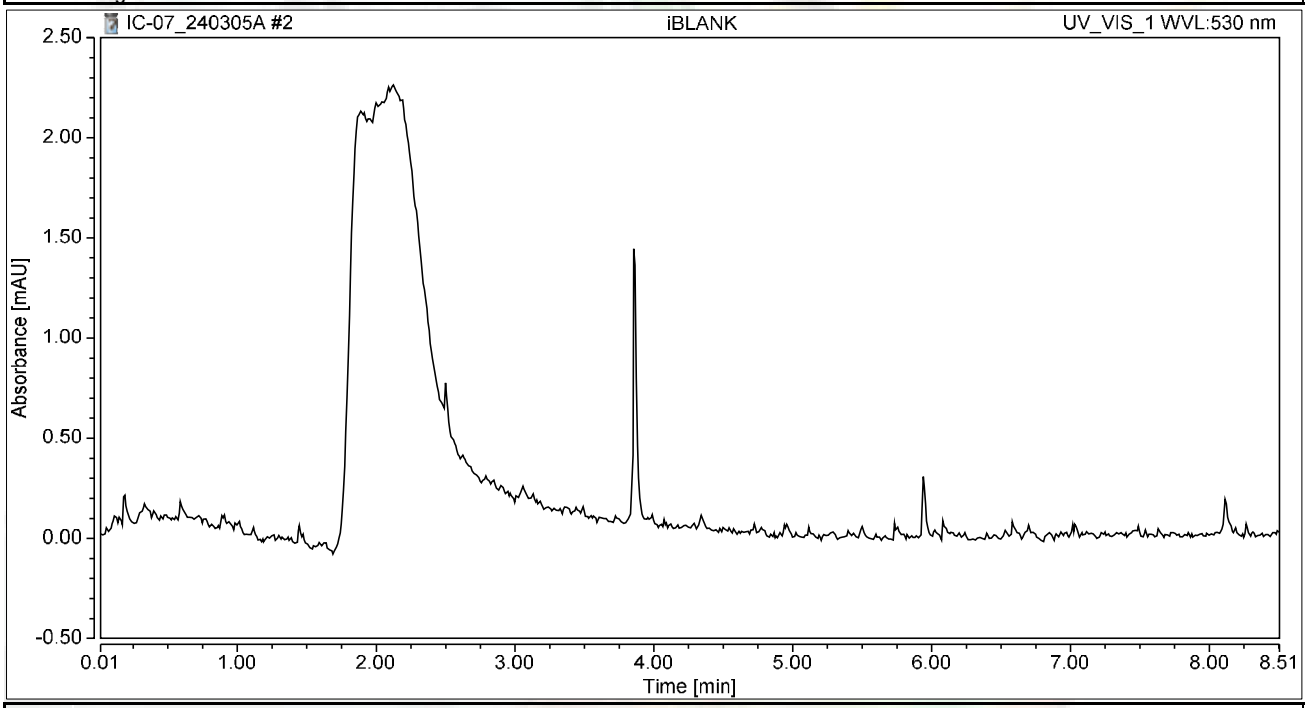
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.223	0.243	0.620	100.00	100.00	1.1440
Total:			**0.243**	**0.620**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 14:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

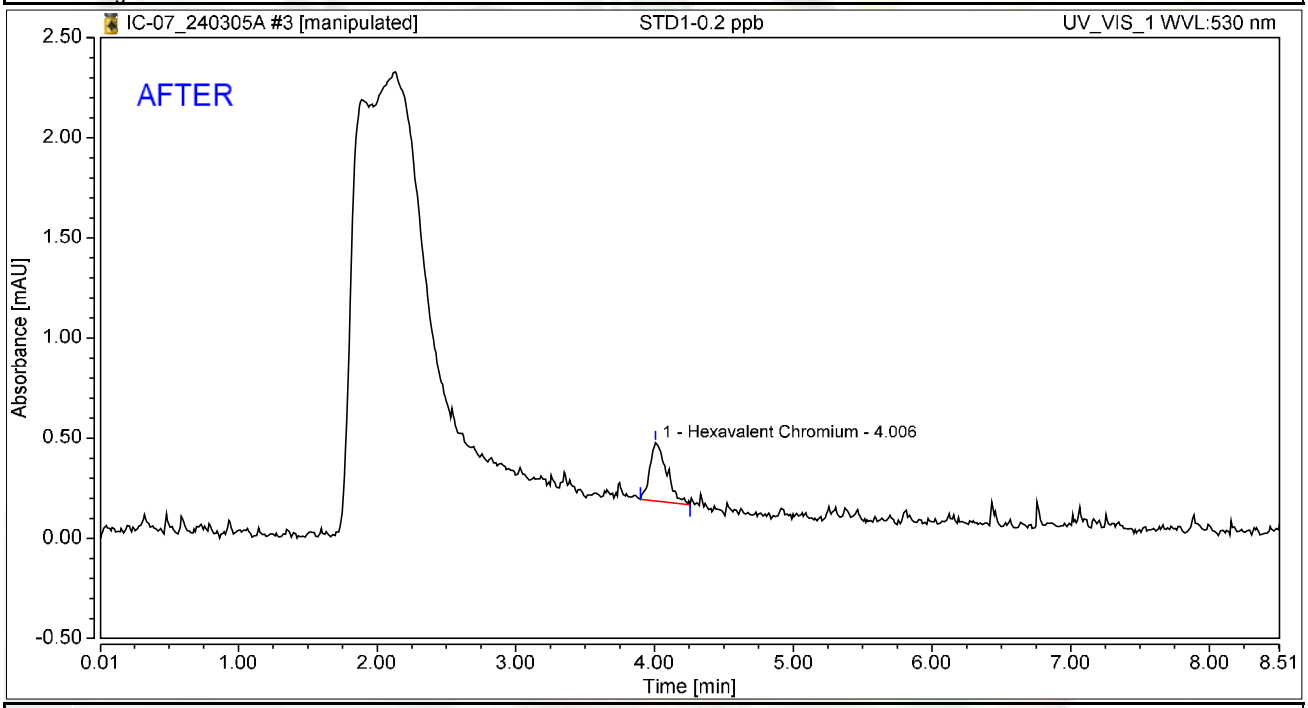
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.041	0.290	100.00	100.00	0.1937
Total:			**0.041**	**0.290**	**100.00**	**100.00**	

Reviewed by:

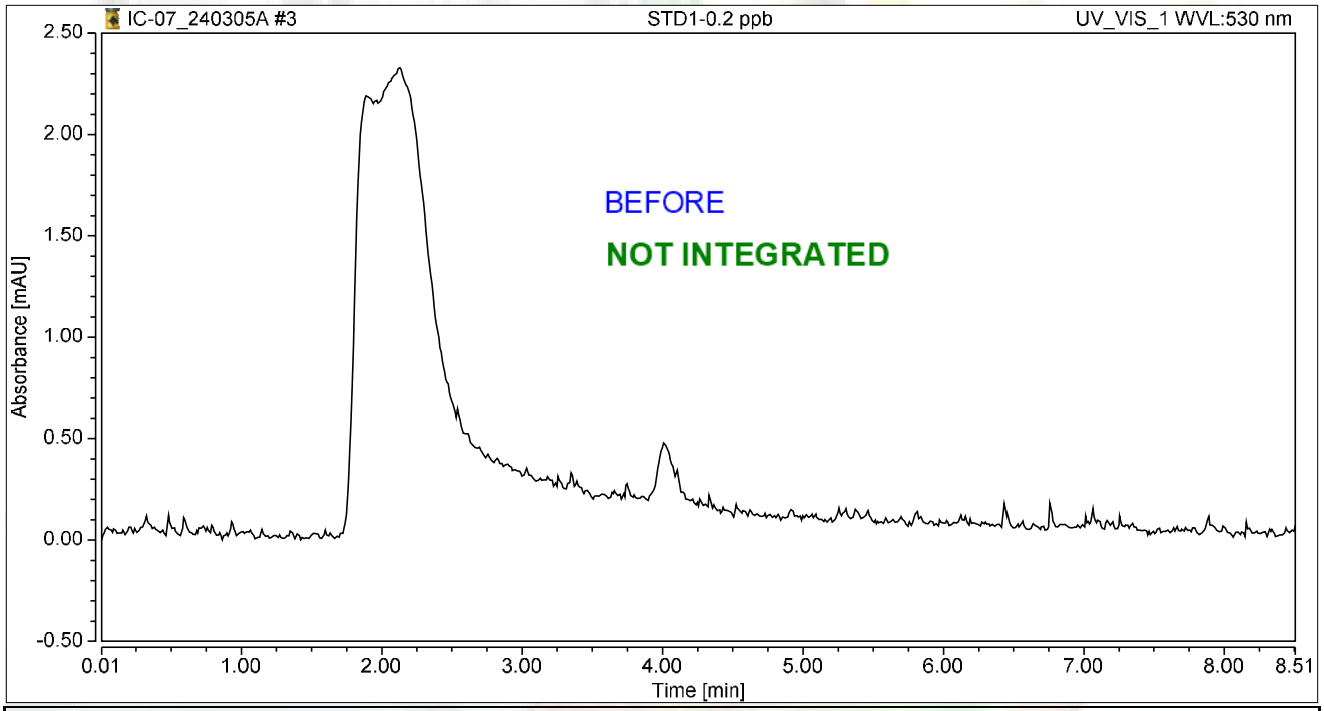
dMocha 3/11/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

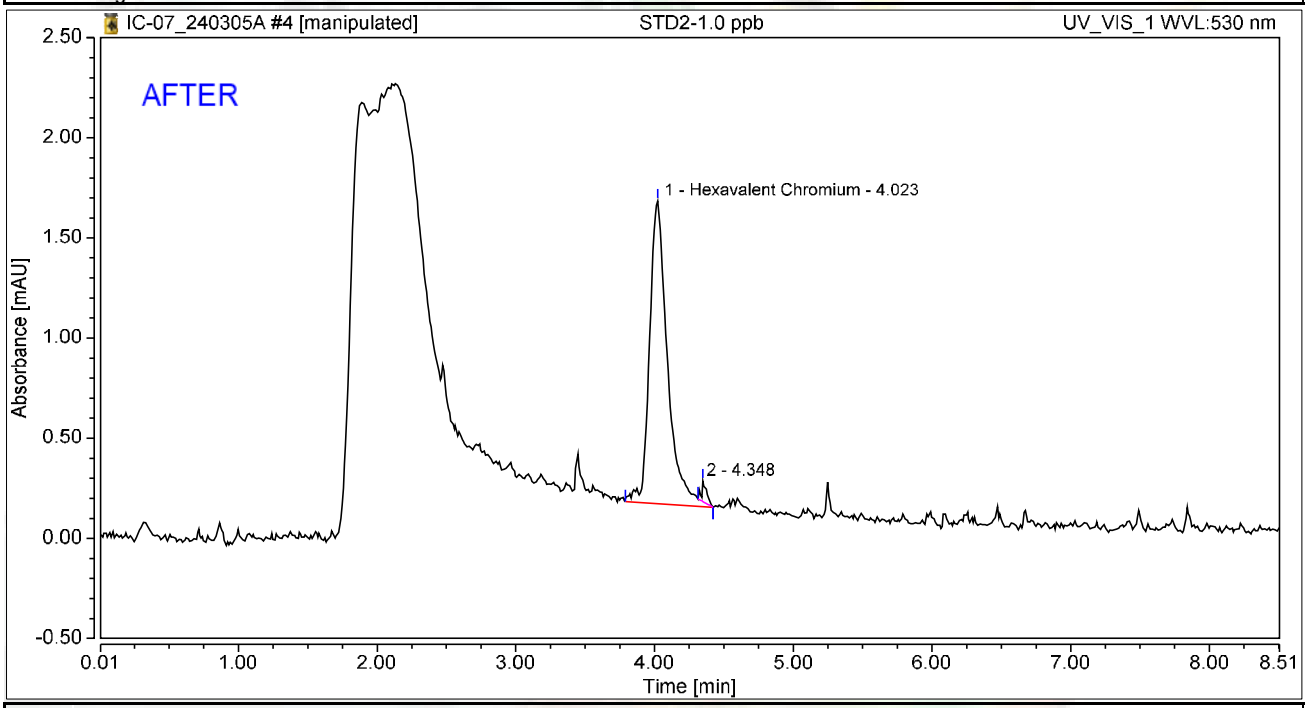
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.226	1.511	98.02	93.66	1.0616
2		4.348	0.005	0.102	1.98	6.34	n.a.
Total:			**0.231**	**1.614**	**100.00**	**100.00**	

Reviewed by:

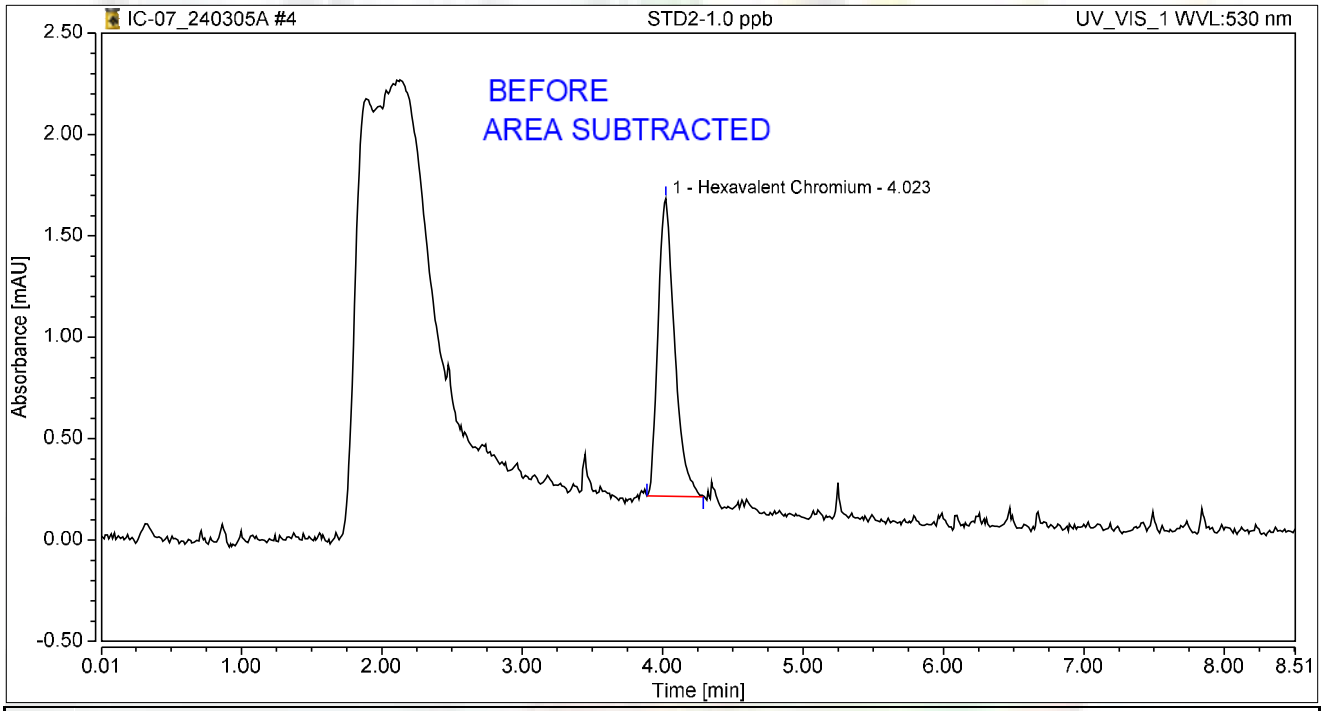
dlRocha 3/11/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

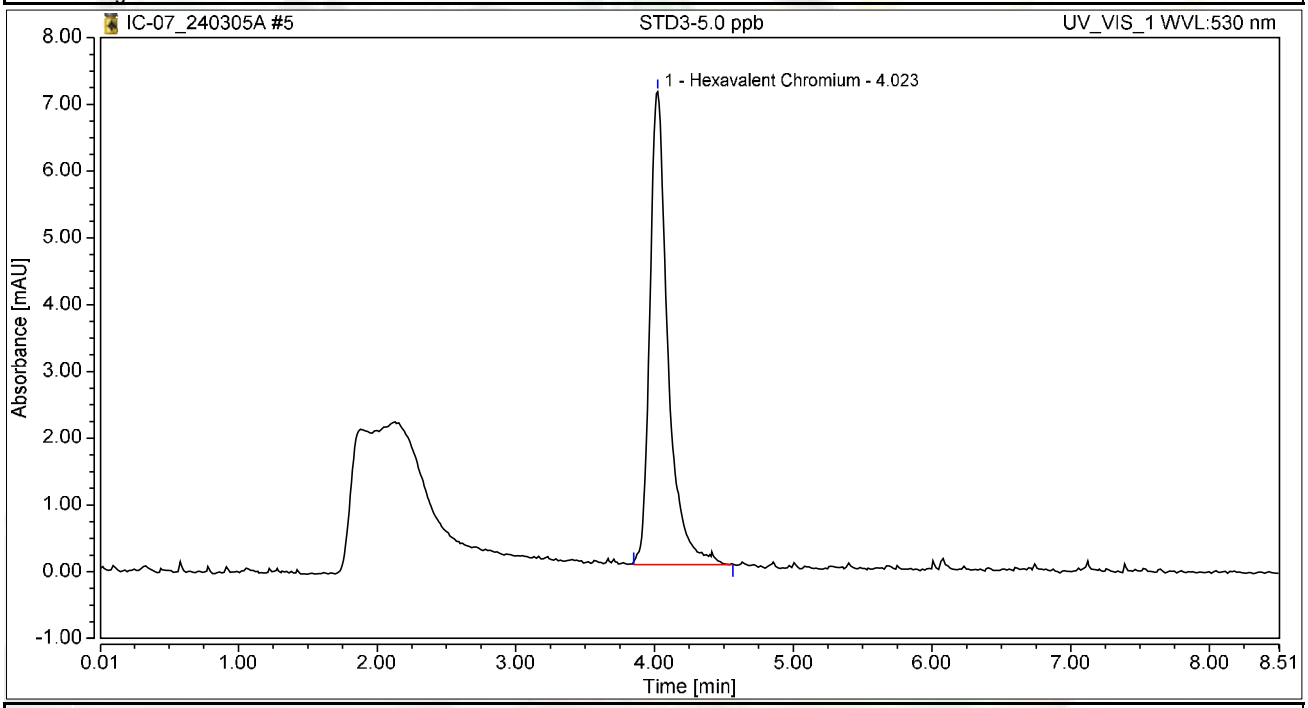
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.201	1.469	100.00	100.00	0.9426
Total:			**0.201**	**1.469**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

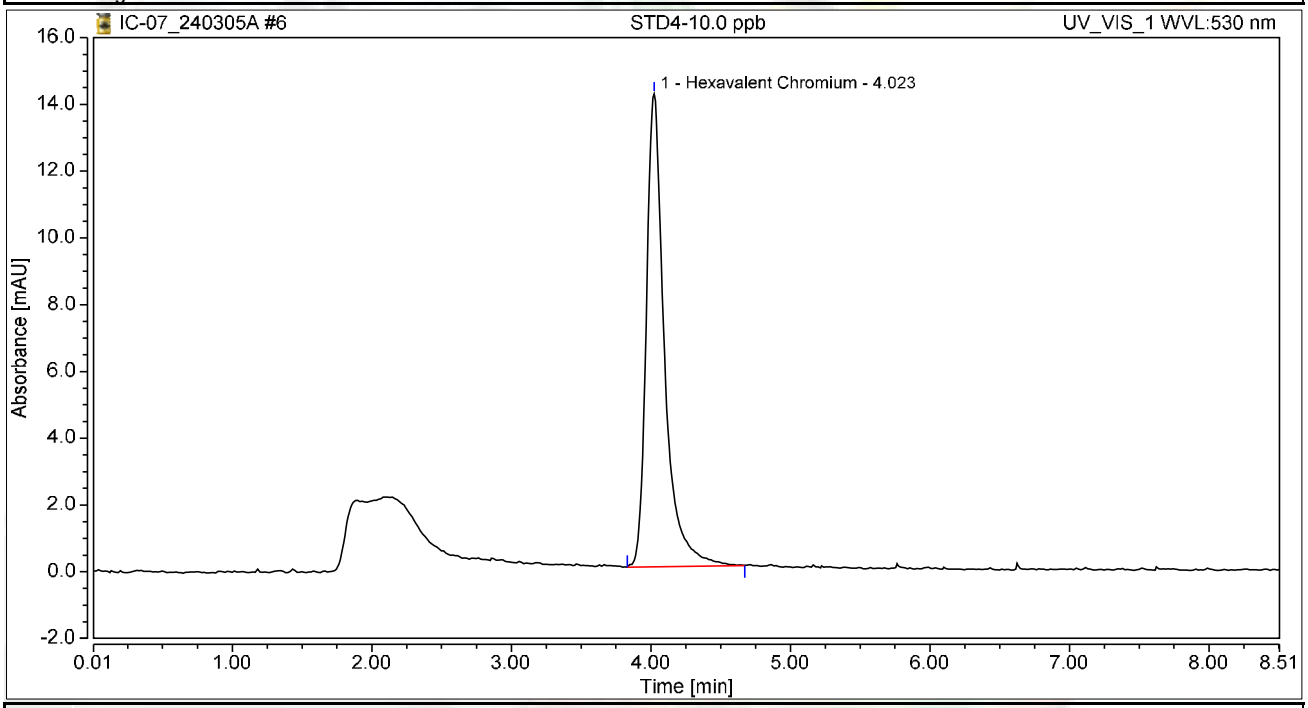
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	1.075	7.087	100.00	100.00	5.0528
Total:			**1.075**	**7.087**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

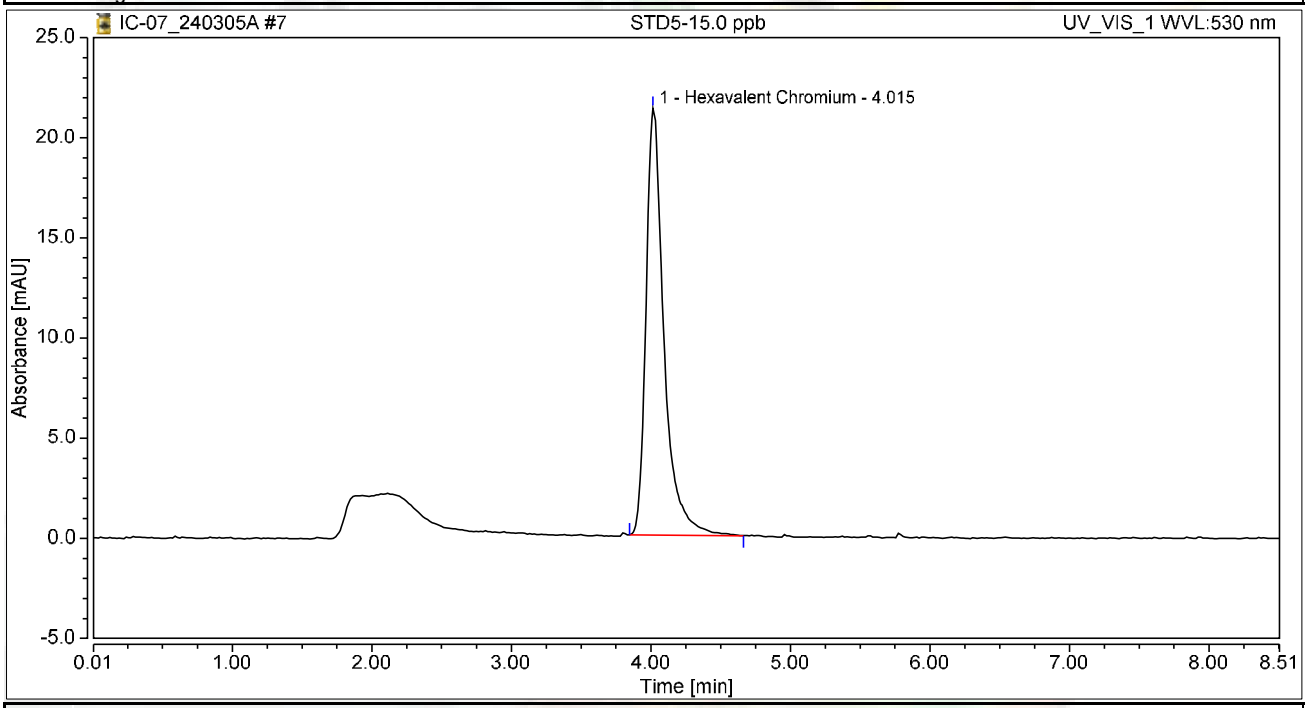
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	2.139	14.164	100.00	100.00	10.0520
Total:			**2.139**	**14.164**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

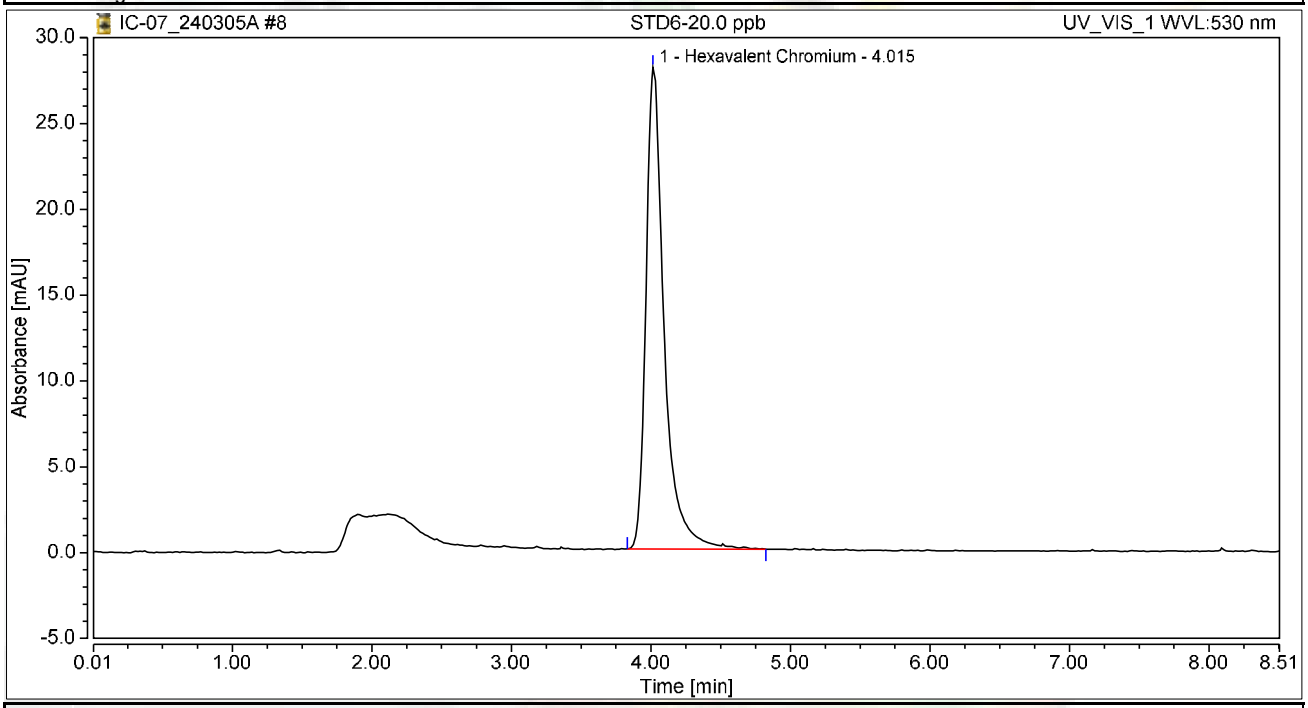
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	3.183	21.307	100.00	100.00	14.9570
Total:			**3.183**	**21.307**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:58**	*Sample Weight:*	**1.0000**

Chromatogram



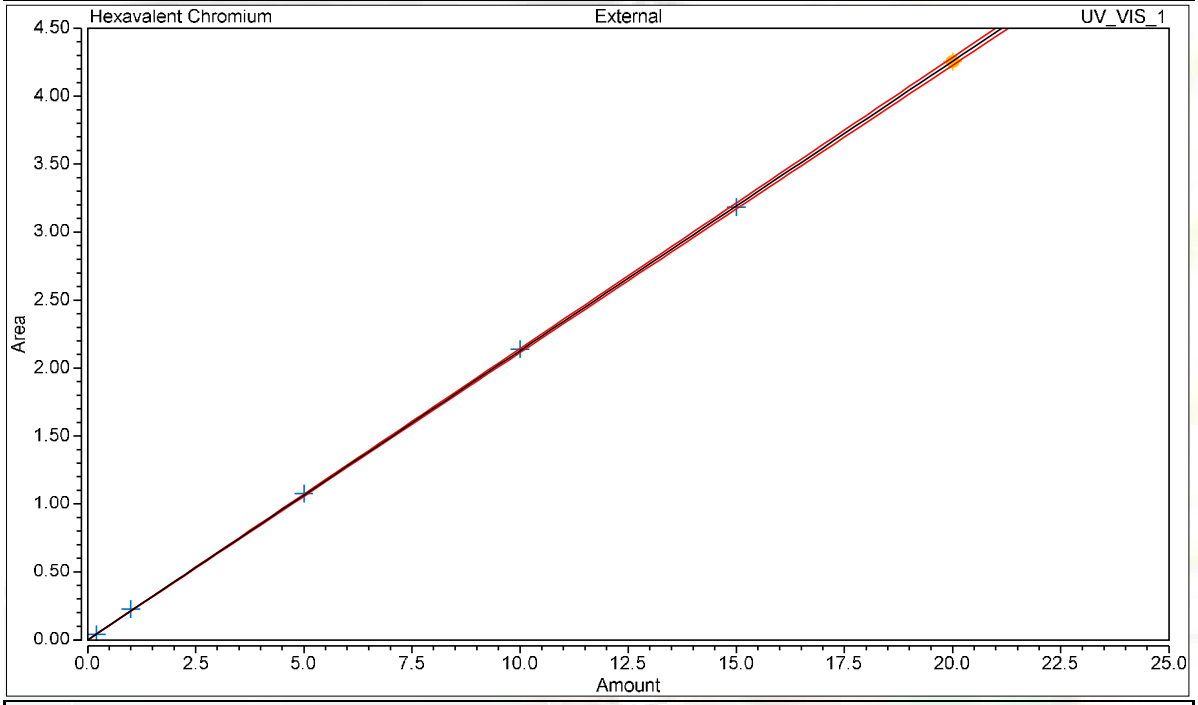
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	4.255	28.050	100.00	100.00	19.9900
Total:			**4.255**	**28.050**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2128
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99996

Calibration Plot Hexavalent Chromium



Calibration Results Hexavalent Chromium

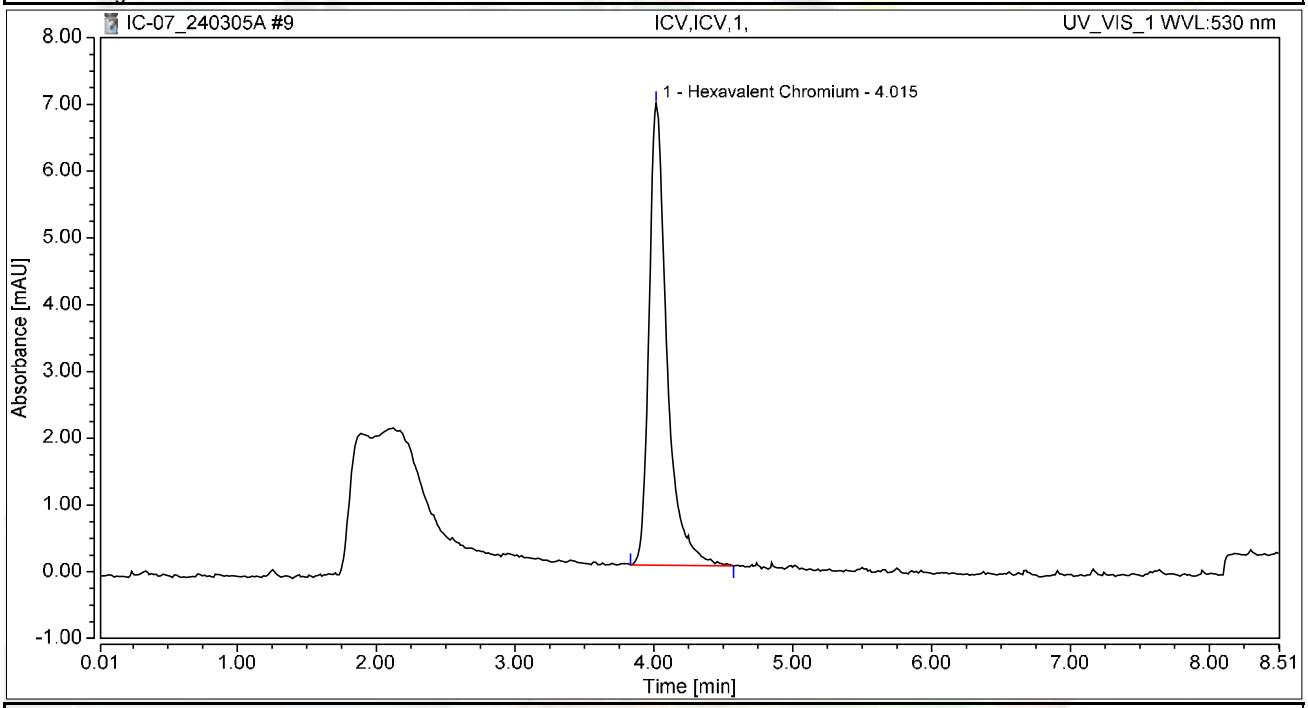
No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0412	0.041	0.290
4	STD2-1.0 ppb	02	1.0000	0.2259	0.226	1.511
5	STD3-5.0 ppb	03	5.0000	1.0754	1.075	7.087
6	STD4-10.0 ppb	04	10.0000	2.1395	2.139	14.164
7	STD5-15.0 ppb	05	15.0000	3.1834	3.183	21.307
8	STD6-20.0 ppb	06	20.0000	4.2546	4.255	28.050

Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

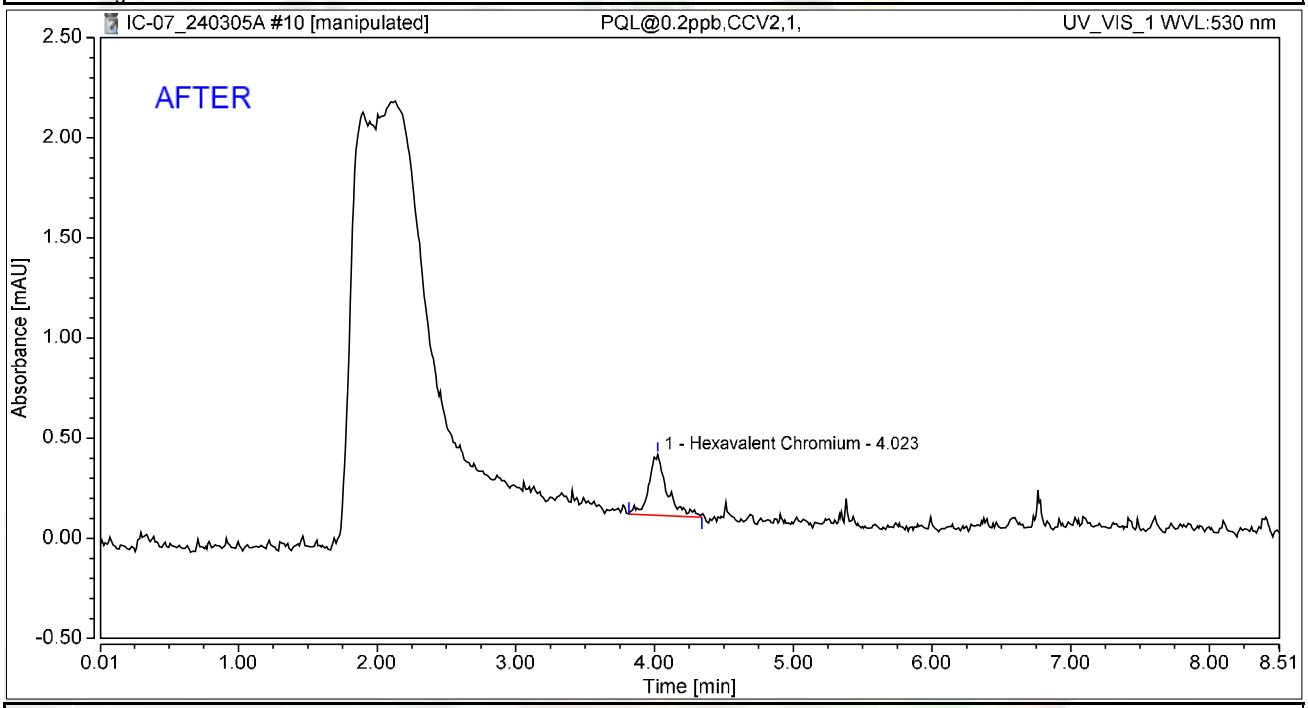
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.037	6.923	100.00	100.00	4.8744
Total:			**1.037**	**6.923**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.047	0.304	100.00	100.00	0.2189
Total:			**0.047**	**0.304**	**100.00**	**100.00**	

Reviewed by:

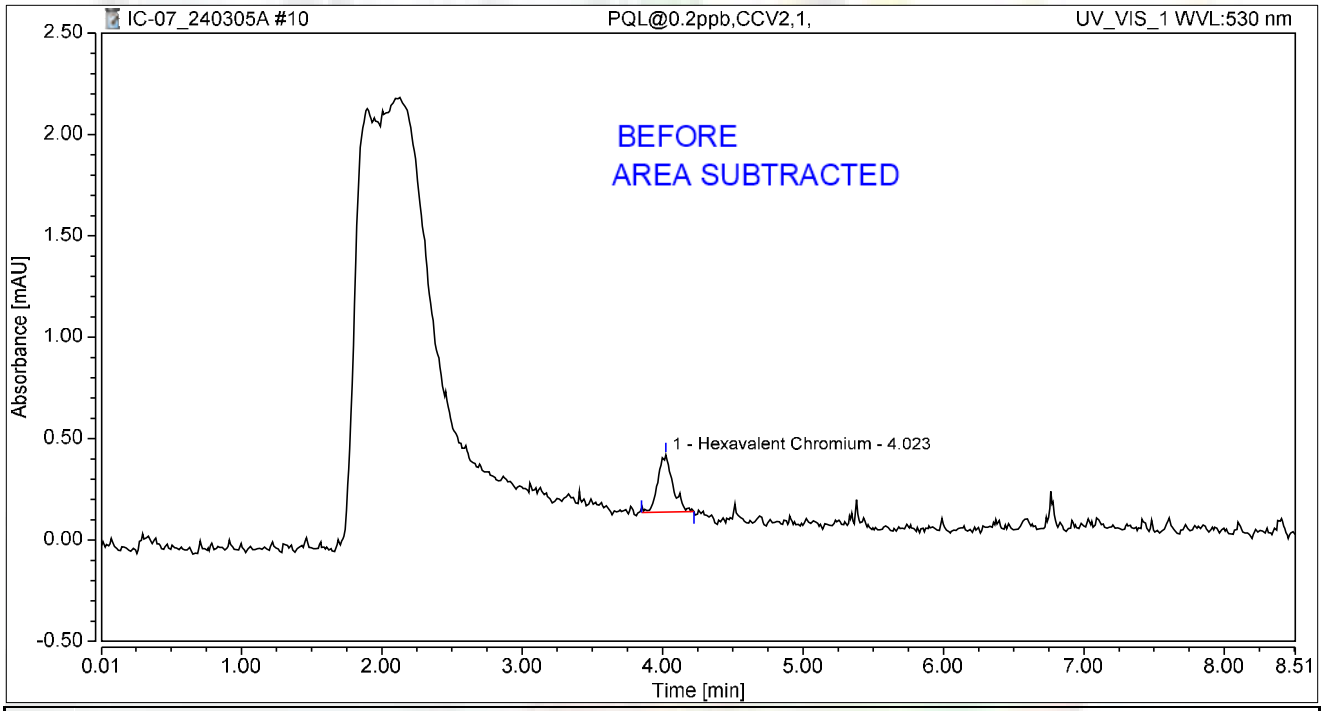
dMocha 3/11/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

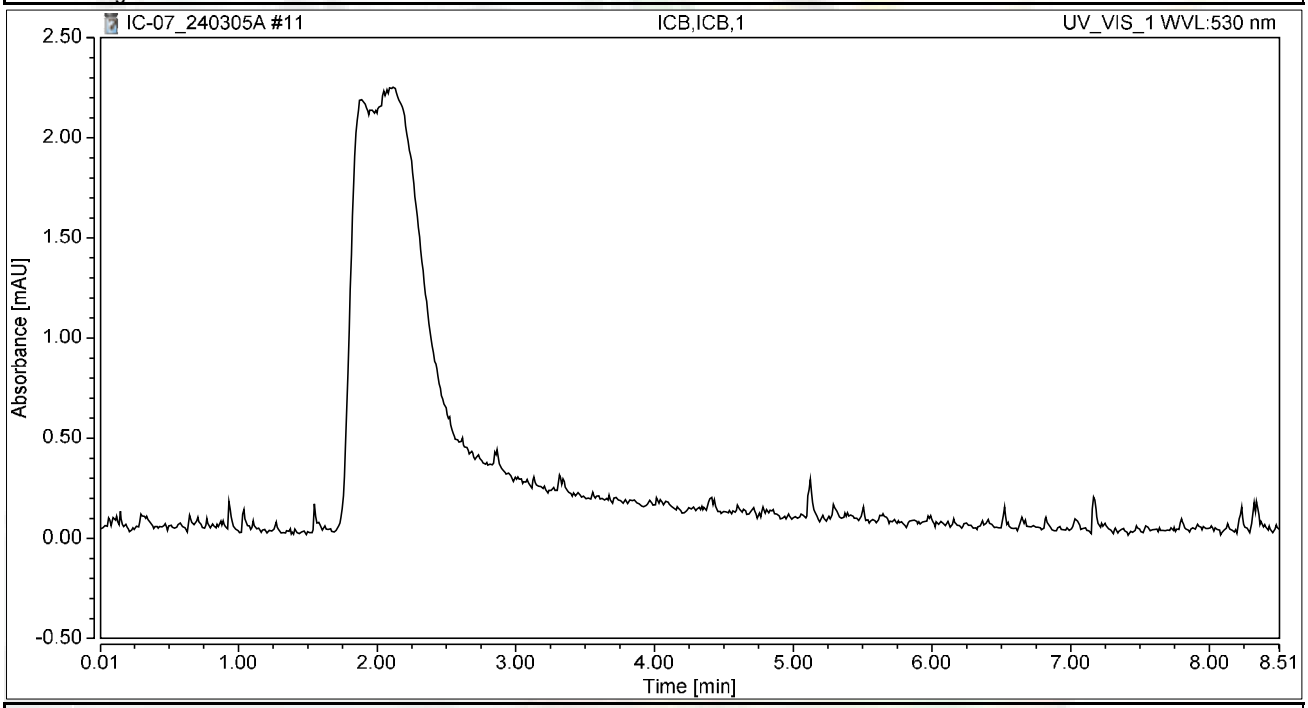
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.035	0.282	100.00	100.00	0.1646
Total:			**0.035**	**0.282**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240315A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/15/24 9:39 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/15/24 9:53 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/15/24 10:02 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/15/24 10:11 AM	Reported
13	MB-R183690	MBLK	1	Hexavalent Chromium	03/15/24 10:21 AM	Reported
14	LCS-R183690	LCS	1	Hexavalent Chromium	03/15/24 10:30 AM	Reported
15	N063735-012A	SAMP	1	Hexavalent Chromium	03/15/24 10:55 AM	Reported
16	N063735-012AMS	MS	1	Hexavalent Chromium	03/15/24 11:07 AM	Reported
17	N063771-001A	SAMP	1	Hexavalent Chromium	03/15/24 11:17 AM	Not Reported
18	N063771-001AMS	MS	1	Hexavalent Chromium	03/15/24 11:26 AM	Not Reported
19	N063771-001A	SAMP	5	Hexavalent Chromium	03/15/24 11:57 AM	Reported
20	N063771-001AMS	MS	5	Hexavalent Chromium	03/15/24 12:09 PM	Reported
21	N063771-002A	SAMP	1	Hexavalent Chromium	03/15/24 12:19 PM	Not Reported
22	N063771-002AMS	MS	1	Hexavalent Chromium	03/15/24 12:28 PM	Not Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/15/24 12:37 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/15/24 12:47 PM	Reported
25	N063771-014A	SAMP	5	Hexavalent Chromium	03/15/24 12:56 PM	Reported
26	N063771-014AMS	MS	5	Hexavalent Chromium	03/15/24 1:06 PM	Reported
27	N063771-015A	SAMP	5	Hexavalent Chromium	03/15/24 1:15 PM	Reported
28	N063771-015AMS	MS	5	Hexavalent Chromium	03/15/24 1:25 PM	Reported
29	N063771-018A	SAMP	5	Hexavalent Chromium	03/15/24 1:34 PM	Reported
30	N063771-018AMS	MS	5	Hexavalent Chromium	03/15/24 1:44 PM	Reported
31	N063771-010A	SAMP	1	Hexavalent Chromium	03/15/24 1:53 PM	Not Reported
32	N063771-010AMS	MS	1	Hexavalent Chromium	03/15/24 2:03 PM	Not Reported
33	N063771-014ADUP	DUP	5	Hexavalent Chromium	03/15/24 2:12 PM	Reported
34	N063771-014AMSD	MSD	5	Hexavalent Chromium	03/15/24 2:22 PM	Reported
35	CCV-3	CCV	1	Hexavalent Chromium	03/15/24 2:31 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	03/15/24 2:40 PM	Reported
37	N063771-012A	SAMP	1	Hexavalent Chromium	03/15/24 2:50 PM	Not Reported
38	N063771-012AMS	MS	1	Hexavalent Chromium	03/15/24 2:59 PM	Not Reported
39	N063771-013A	SAMP	1	Hexavalent Chromium	03/15/24 3:09 PM	Not Reported
40	N063771-013AMS	MS	1	Hexavalent Chromium	03/15/24 3:18 PM	Not Reported
41	N063771-006A	SAMP	1	Hexavalent Chromium	03/15/24 3:28 PM	Not Reported
42	N063771-006AMS	MS	1	Hexavalent Chromium	03/15/24 3:37 PM	Not Reported

INJECTION LOG: 240315A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063771-007A	SAMP	1	Hexavalent Chromium	03/15/24 3:47 PM	Not Reported
44	N063771-007AMS	MS	1	Hexavalent Chromium	03/15/24 4:02 PM	Not Reported
45	N063771-009A	SAMP	1	Hexavalent Chromium	03/15/24 4:14 PM	Not Reported
46	N063771-009AMS	MS	1	Hexavalent Chromium	03/15/24 4:23 PM	Not Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	03/15/24 4:33 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	03/15/24 4:42 PM	Reported
49	N063771-008A	SAMP	1	Hexavalent Chromium	03/15/24 4:52 PM	Reported
50	N063771-008AMS	MS	1	Hexavalent Chromium	03/15/24 5:01 PM	Reported
51	N063771-016A	SAMP	1	Hexavalent Chromium	03/15/24 5:11 PM	Not Reported
52	N063771-016AMS	MS	1	Hexavalent Chromium	03/15/24 5:20 PM	Not Reported
53	N063771-017A	SAMP	1	Hexavalent Chromium	03/15/24 5:29 PM	Not Reported
54	N063771-017AMS	MS	1	Hexavalent Chromium	03/15/24 5:39 PM	Not Reported
55	N063771-019A	SAMP	1	Hexavalent Chromium	03/15/24 5:48 PM	Reported
56	N063771-019AMS	MS	1	Hexavalent Chromium	03/15/24 5:58 PM	Reported
57	N063771-011A	SAMP	1	Hexavalent Chromium	03/15/24 6:08 PM	Not Reported
58	N063771-011AMS	MS	1	Hexavalent Chromium	03/15/24 6:17 PM	Not Reported
59	CCV-5	CCV	1	Hexavalent Chromium	03/15/24 6:26 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	03/15/24 6:36 PM	Reported
61	N063771-002A	SAMP	5	Hexavalent Chromium	03/15/24 6:45 PM	Reported
62	N063771-002AMS	MS	5	Hexavalent Chromium	03/15/24 6:55 PM	Reported
63	N063812-006A	SAMP	1	Hexavalent Chromium	03/15/24 7:04 PM	Reported
64	N063812-006AMS	MS	1	Hexavalent Chromium	03/15/24 7:14 PM	Reported
65	N063812-008A	SAMP	1	Hexavalent Chromium	03/15/24 7:23 PM	Reported
66	N063812-008AMS	MS	1	Hexavalent Chromium	03/15/24 7:32 PM	Reported
67	N063812-017A	SAMP	1	Hexavalent Chromium	03/15/24 7:42 PM	Reported
68	N063812-017AMS	MS	1	Hexavalent Chromium	03/15/24 7:51 PM	Reported
69	N063771-010A	SAMP	5	Hexavalent Chromium	03/15/24 8:01 PM	Reported
70	N063771-010AMS	MS	5	Hexavalent Chromium	03/15/24 8:10 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	03/15/24 8:20 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	03/15/24 8:29 PM	Reported
73	N063771-012A	SAMP	5	Hexavalent Chromium	03/15/24 8:39 PM	Reported
74	N063771-012AMS	MS	5	Hexavalent Chromium	03/15/24 8:48 PM	Reported
75	N063771-013A	SAMP	5	Hexavalent Chromium	03/15/24 8:58 PM	Reported
76	N063771-013AMS	MS	5	Hexavalent Chromium	03/15/24 9:07 PM	Reported
77	N063771-006A	SAMP	5	Hexavalent Chromium	03/15/24 9:16 PM	Reported
78	N063771-006AMS	MS	5	Hexavalent Chromium	03/15/24 9:26 PM	Reported
79	N063771-007A	SAMP	5	Hexavalent Chromium	03/15/24 9:35 PM	Reported
80	N063771-007AMS	MS	5	Hexavalent Chromium	03/15/24 9:45 PM	Reported
81	N063771-009A	SAMP	5	Hexavalent Chromium	03/15/24 9:54 PM	Reported
82	N063771-009AMS	MS	5	Hexavalent Chromium	03/15/24 10:04 PM	Reported
83	CCV-7	CCV	1	Hexavalent Chromium	03/15/24 10:13 PM	Reported
84	CCB-7	CCB	1	Hexavalent Chromium	03/15/24 10:23 PM	Reported

INJECTION LOG: 240315A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
85	BLANK	BLANK	1	Hexavalent Chromium	03/15/24 10:32 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240315A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**15/Mar/24 23:02:54**
No. of Injections:	**88**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/15/2024 09:39	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/15/2024 09:53	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/15/2024 10:02	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/15/2024 10:11	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/15/2024 10:21	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/15/2024 10:30	Finished	LCS @5ppb, IWST-231228B
15	N063735-012A,SAMP	1	1000	Unknown		03/15/2024 10:55	Finished	SAMP,10 mL
16	N063735-012AMS,MS	2	1000	Unknown		03/15/2024 11:07	Finished	MS (1ppb), IWST-231228B,10r
17	N063771-001A,SAMP	3	1000	Unknown		03/15/2024 11:17	Finished	SAMP,10 mL
18	N063771-001AMS,MS	4	1000	Unknown		03/15/2024 11:26	Finished	MS (5ppb), IWST-231228B,10r
19	N063771-001A,SAMP	1	1000	Unknown		03/15/2024 11:57	Finished	SAMP,2>10 mL
20	N063771-001AMS,MS	2	1000	Unknown		03/15/2024 12:09	Finished	MS (1ppb), IWST-231228B,2>1
21	N063771-002A,SAMP	3	1000	Unknown		03/15/2024 12:19	Finished	SAMP,10 mL
22	N063771-002AMS,MS	4	1000	Unknown		03/15/2024 12:28	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	5	1000	Unknown		03/15/2024 12:37	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	6	1000	Unknown		03/15/2024 12:47	Finished	CCB R240129C
25	N063771-014A,SAMP	7	1000	Unknown		03/15/2024 12:56	Finished	SAMP,2>10 mL
26	N063771-014AMS,MS	8	1000	Unknown		03/15/2024 13:06	Finished	MS (1ppb), IWST-231228B,2>1
27	N063771-015A,SAMP	9	1000	Unknown		03/15/2024 13:15	Finished	SAMP,2>10 mL
28	N063771-015AMS,MS	10	1000	Unknown		03/15/2024 13:25	Finished	MS (1ppb), IWST-231228B,2>1
29	N063771-018A,SAMP	11	1000	Unknown		03/15/2024 13:34	Finished	SAMP,2>10 mL
30	N063771-018AMS,MS	12	1000	Unknown		03/15/2024 13:44	Finished	MS (1ppb), IWST-231228B,2>1
31	N063771-010A,SAMP	13	1000	Unknown		03/15/2024 13:53	Finished	SAMP,10 mL
32	N063771-010AMS,MS	14	1000	Unknown		03/15/2024 14:03	Finished	MS (1ppb), IWST-231228B,10r
33	N063771-014ADUP,D	15	1000	Unknown		03/15/2024 14:12	Finished	DUP,2>10 mL
34	N063771-014AMSD,M	16	1000	Unknown		03/15/2024 14:22	Finished	MSD (5ppb), IWST-231228B,2
35	CCV-3,CCV,1,	17	1000	Unknown		03/15/2024 14:31	Finished	CCV @10ppb, IWST-231228A
36	CCB-3,CCB,1,	18	1000	Unknown		03/15/2024 14:40	Finished	CCB R240129C
37	N063771-012A,SAMP	19	1000	Unknown		03/15/2024 14:50	Finished	SAMP,10 mL
38	N063771-012AMS,MS	20	1000	Unknown		03/15/2024 14:59	Finished	MS (1ppb), IWST-231228B,10r
39	N063771-013A,SAMP	21	1000	Unknown		03/15/2024 15:09	Finished	SAMP,10 mL
40	N063771-013AMS,MS	22	1000	Unknown		03/15/2024 15:18	Finished	MS (1ppb), IWST-231228B,10r
41	N063771-006A,SAMP	23	1000	Unknown		03/15/2024 15:28	Finished	SAMP,10 mL
42	N063771-006AMS,MS	24	1000	Unknown		03/15/2024 15:37	Finished	MS (1ppb), IWST-231228B,10r
43	N063771-007A,SAMP	25	1000	Unknown		03/15/2024 15:47	Finished	SAMP,10 mL
44	N063771-007AMS,MS	1	1000	Unknown		03/15/2024 16:02	Finished	MS (1ppb), IWST-231228B,10r
45	N063771-009A,SAMP	2	1000	Unknown		03/15/2024 16:14	Finished	SAMP,10 mL
46	N063771-009AMS,MS	3	1000	Unknown		03/15/2024 16:23	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	4	1000	Unknown		03/15/2024 16:33	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	5	1000	Unknown		03/15/2024 16:42	Finished	CCB R240129C
49	N063771-008A,SAMP	6	1000	Unknown		03/15/2024 16:52	Finished	SAMP,10 mL
50	N063771-008AMS,MS	7	1000	Unknown		03/15/2024 17:01	Finished	MS (1ppb), IWST-231228B,10r
51	N063771-016A,SAMP	8	1000	Unknown		03/15/2024 17:11	Finished	SAMP,10 mL
52	N063771-016AMS,MS	9	1000	Unknown		03/15/2024 17:20	Finished	MS (1ppb), IWST-231228B,10r
53	N063771-017A,SAMP	10	1000	Unknown		03/15/2024 17:29	Finished	SAMP,10 mL
54	N063771-017AMS,MS	11	1000	Unknown		03/15/2024 17:39	Finished	MS (1ppb), IWST-231228B,10r
55	N063771-019A,SAMP	12	1000	Unknown		03/15/2024 17:48	Finished	SAMP,10 mL
56	N063771-019AMS,MS	13	1000	Unknown		03/15/2024 17:58	Finished	MS (1ppb), IWST-231228B,10r
57	N063771-011A,SAMP	14	1000	Unknown		03/15/2024 18:08	Finished	SAMP,10 mL
58	N063771-011AMS,MS	15	1000	Unknown		03/15/2024 18:17	Finished	MS (1ppb), IWST-231228B,10r
59	CCV-5,CCV,1,	16	1000	Unknown		03/15/2024 18:26	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	17	1000	Unknown		03/15/2024 18:36	Finished	CCB R240129C

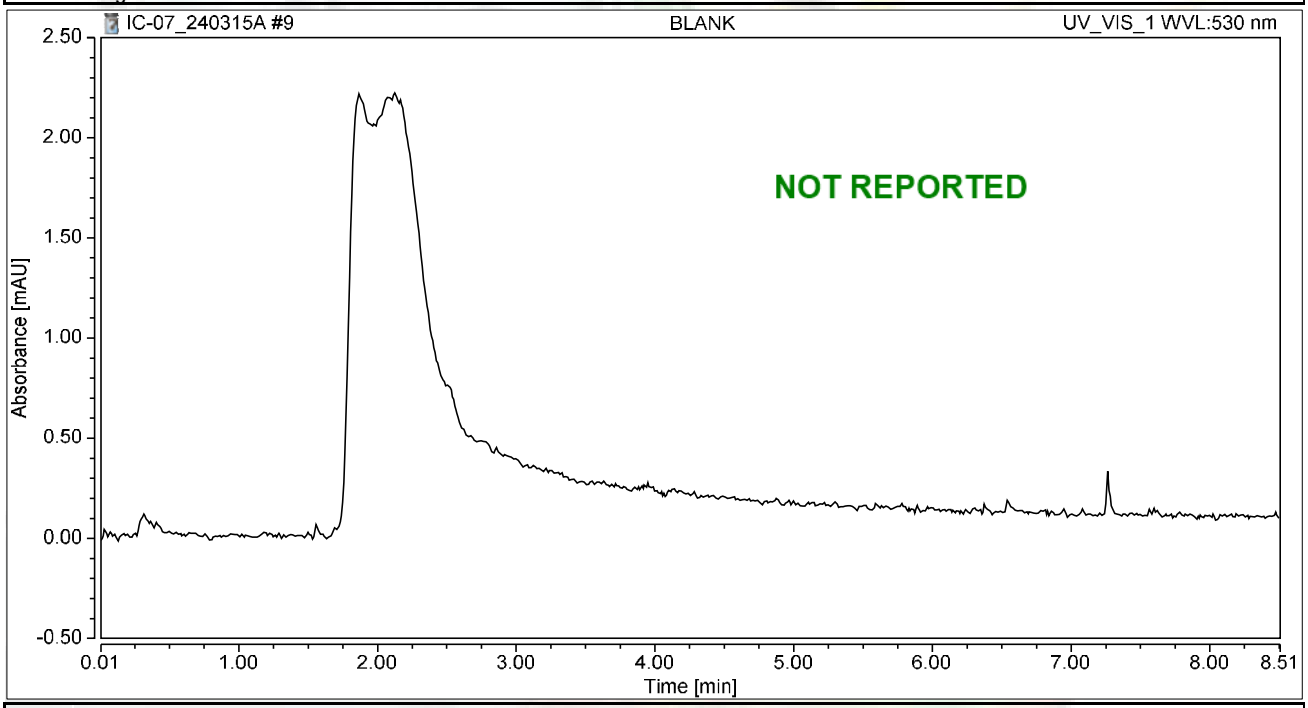
61	N063771-002A,SAMP	18	1000	Unknown		03/15/2024 18:45	Finished	SAMP,2>10 mL
62	N063771-002AMS,MS	19	1000	Unknown		03/15/2024 18:55	Finished	MS (1ppb), IWST-231228B,2>
63	N063812-006A,SAMP	20	1000	Unknown		03/15/2024 19:04	Finished	SAMP,10 mL
64	N063812-006AMS,MS	21	1000	Unknown		03/15/2024 19:14	Finished	MS (1ppb), IWST-231228B,10r
65	N063812-008A,SAMP	22	1000	Unknown		03/15/2024 19:23	Finished	SAMP,10 mL
66	N063812-008AMS,MS	23	1000	Unknown		03/15/2024 19:32	Finished	MS (1ppb), IWST-231228B,10r
67	N063812-017A,SAMP	24	1000	Unknown		03/15/2024 19:42	Finished	SAMP,10 mL
68	N063812-017AMS,MS	25	1000	Unknown		03/15/2024 19:51	Finished	MS (1ppb), IWST-231228B,10r
69	N063771-010A,SAMP	26	1000	Unknown		03/15/2024 20:01	Finished	SAMP,2>10 mL
70	N063771-010AMS,MS	27	1000	Unknown		03/15/2024 20:10	Finished	MS (1ppb), IWST-231228B,2>
71	CCV-6,CCV1,1,	28	1000	Unknown		03/15/2024 20:20	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	29	1000	Unknown		03/15/2024 20:29	Finished	CCB R240129C
73	N063771-012A,SAMP	30	1000	Unknown		03/15/2024 20:39	Finished	SAMP,2>10 mL
74	N063771-012AMS,MS	31	1000	Unknown		03/15/2024 20:48	Finished	MS (1ppb), IWST-231228B,2>
75	N063771-013A,SAMP	32	1000	Unknown		03/15/2024 20:58	Finished	SAMP,2>10 mL
76	N063771-013AMS,MS	33	1000	Unknown		03/15/2024 21:07	Finished	MS (1ppb), IWST-231228B,2>
77	N063771-006A,SAMP	34	1000	Unknown		03/15/2024 21:16	Finished	SAMP,2>10 mL
78	N063771-006AMS,MS	35	1000	Unknown		03/15/2024 21:26	Finished	MS (1ppb), IWST-231228B,2>
79	N063771-007A,SAMP	36	1000	Unknown		03/15/2024 21:35	Finished	SAMP,2>10 mL
80	N063771-007AMS,MS	37	1000	Unknown		03/15/2024 21:45	Finished	MS (1ppb), IWST-231228B,2>
81	N063771-009A,SAMP	38	1000	Unknown		03/15/2024 21:54	Finished	SAMP,2>10 mL
82	N063771-009AMS,MS	39	1000	Unknown		03/15/2024 22:04	Finished	MS (1ppb), IWST-231228B,2>
83	CCV-7,CCV,1,	40	1000	Unknown		03/15/2024 22:13	Finished	CCV @5ppb, IWST-231228A
84	CCB-7,CCB,1,	41	1000	Unknown		03/15/2024 22:23	Finished	CCB R240129C
85	BLANK	42	1000	Unknown		03/15/2024 22:32	Finished	BLANK
86	SHUTDOWN	43	1000	Unknown		03/15/2024 22:42	Finished	
87	Eluent: R240313A	44	1000	Unknown		n.a.	Finished	
88	PCR: R240313B	45	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 09:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

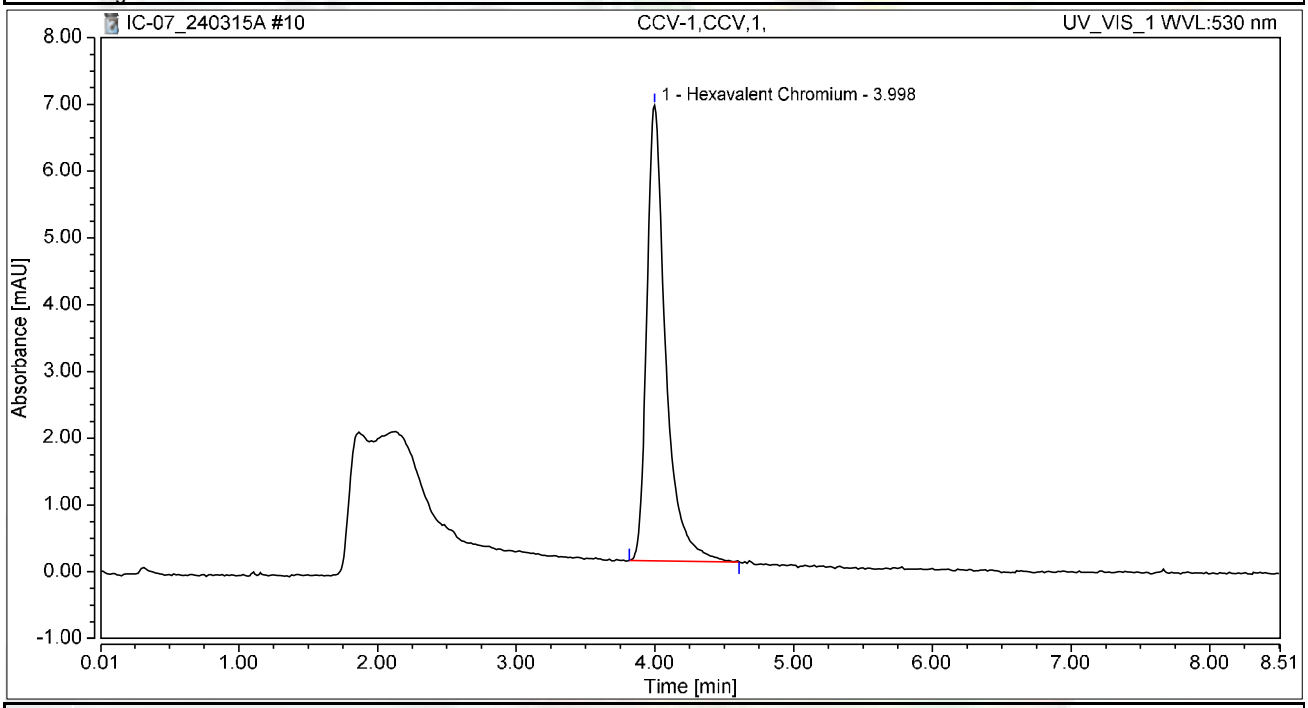
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 09:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.998	1.076	6.823	100.00	100.00	5.0578
Total:			**1.076**	**6.823**	**100.00**	**100.00**	

Reviewed by:

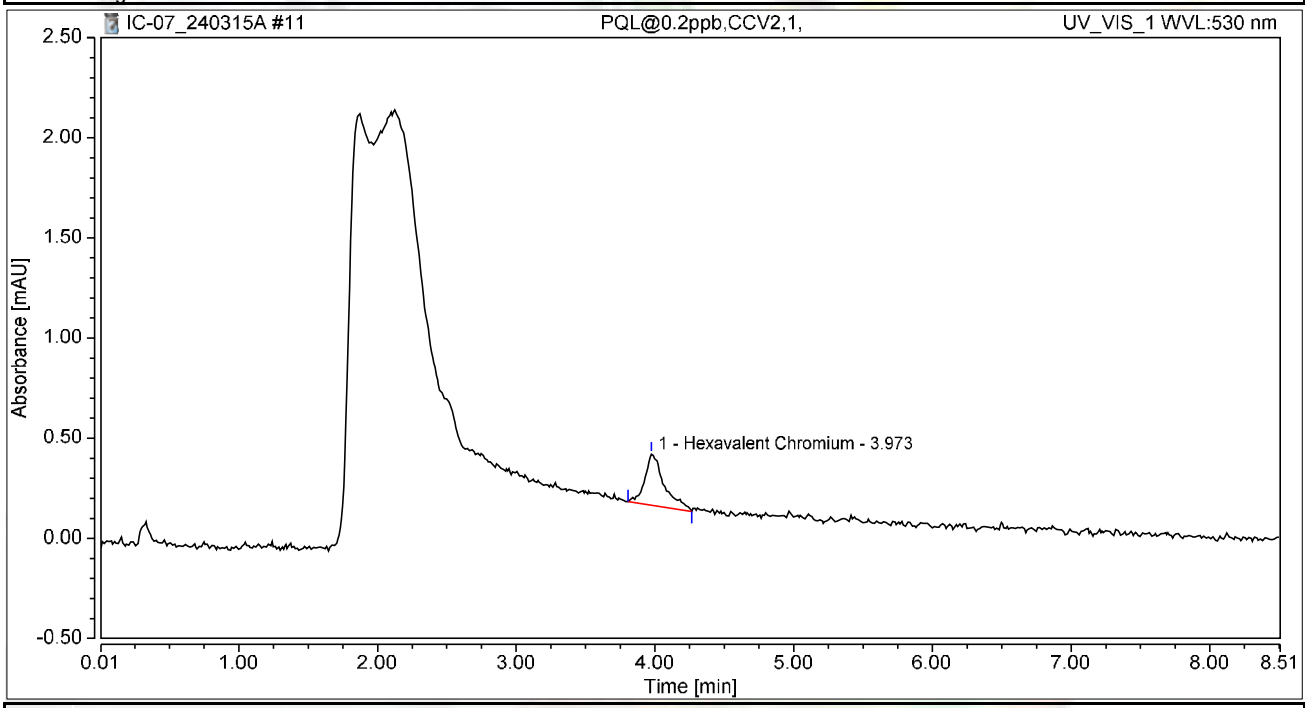
dMocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 10:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

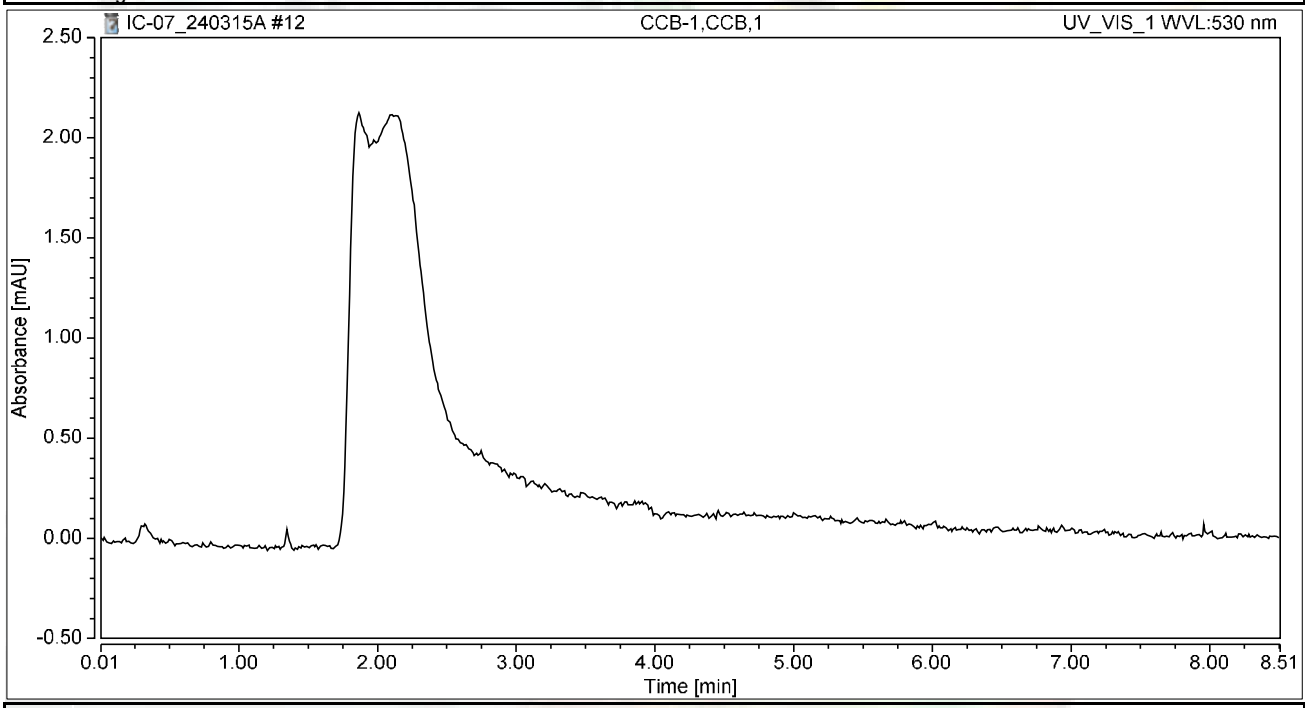
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.042	0.254	100.00	100.00	0.1957
Total:			**0.042**	**0.254**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 10:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

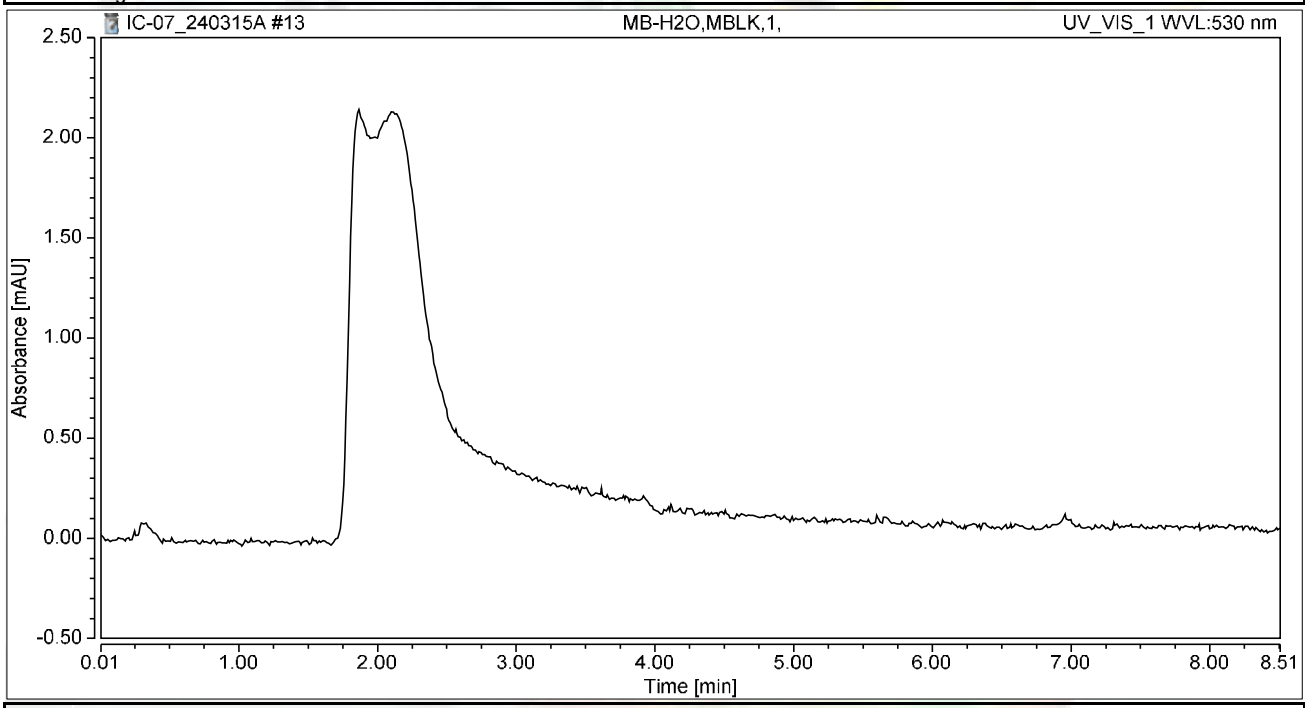
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 10:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

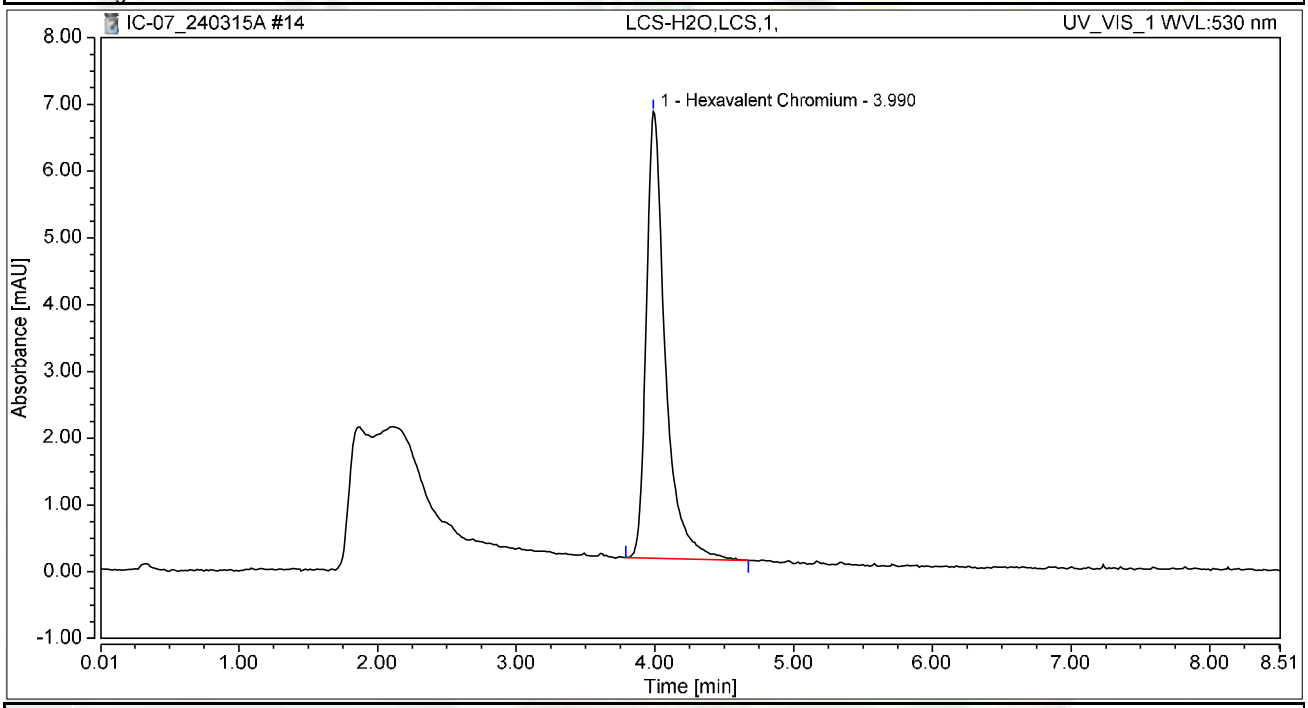
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 10:30**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

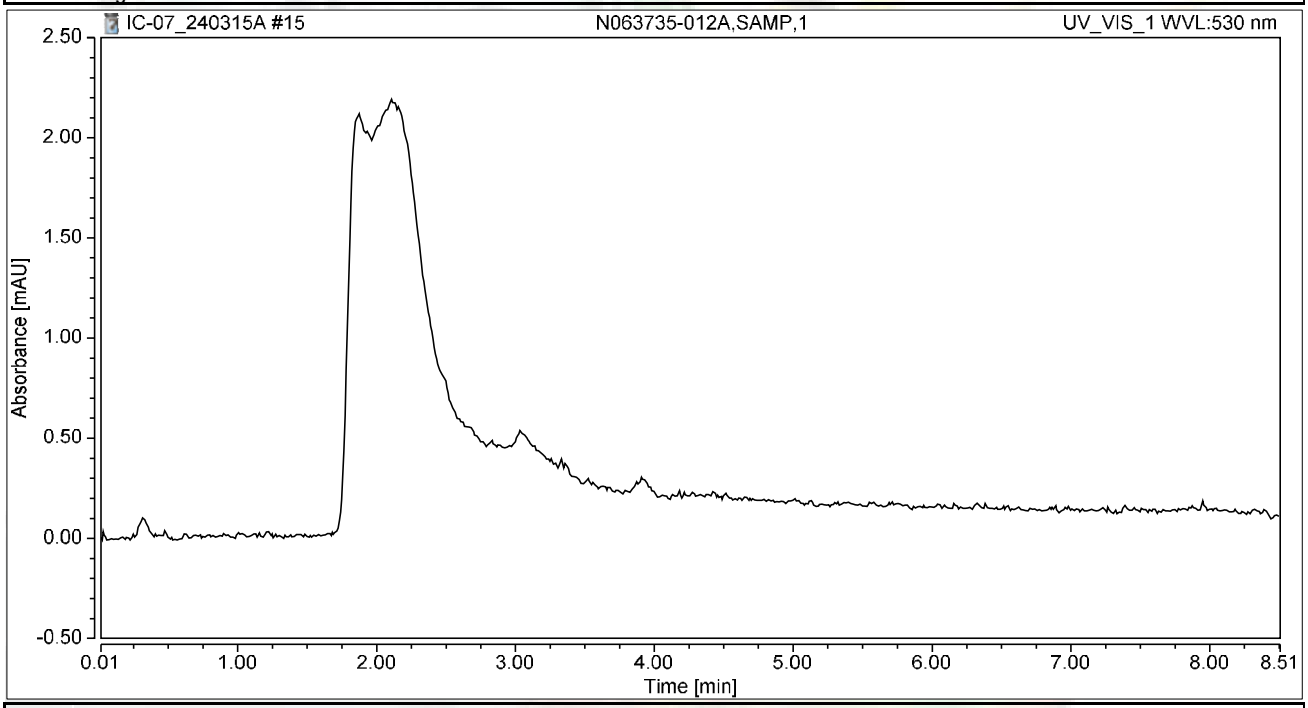
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	1.060	6.690	100.00	100.00	4.9825
Total:			**1.060**	**6.690**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-012A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 10:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

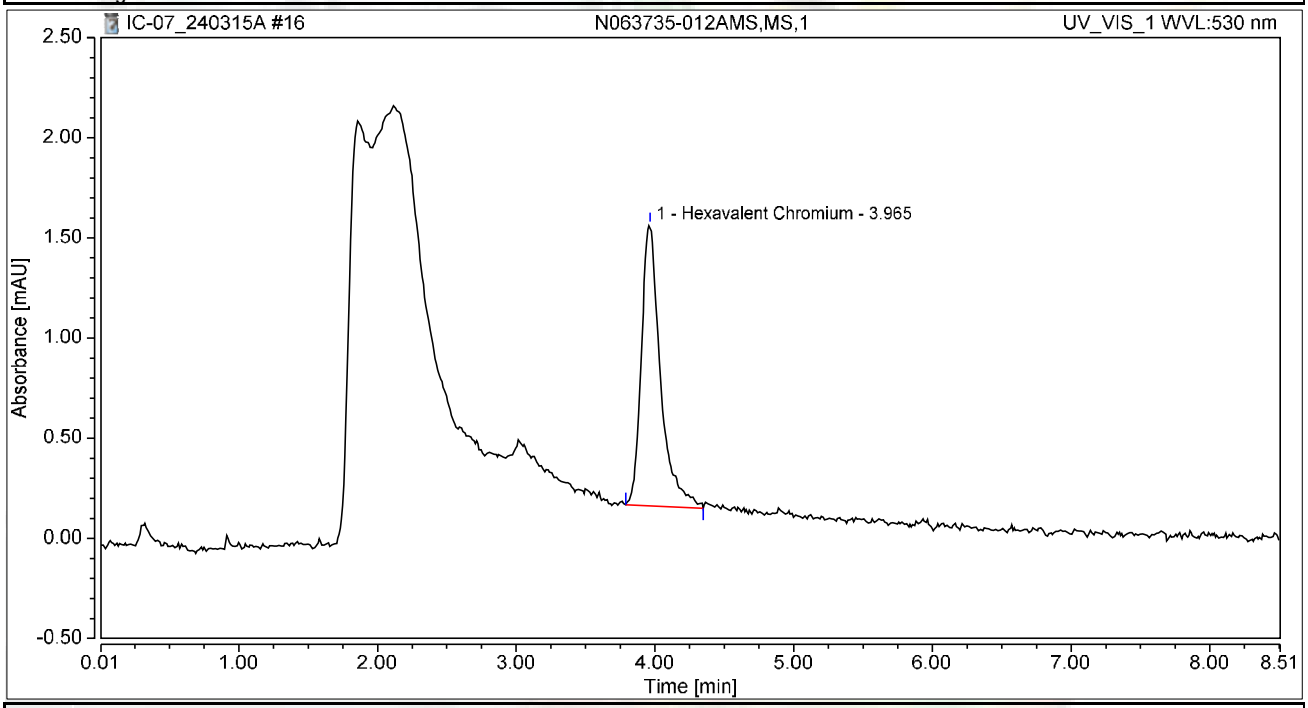
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063735-012AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 11:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

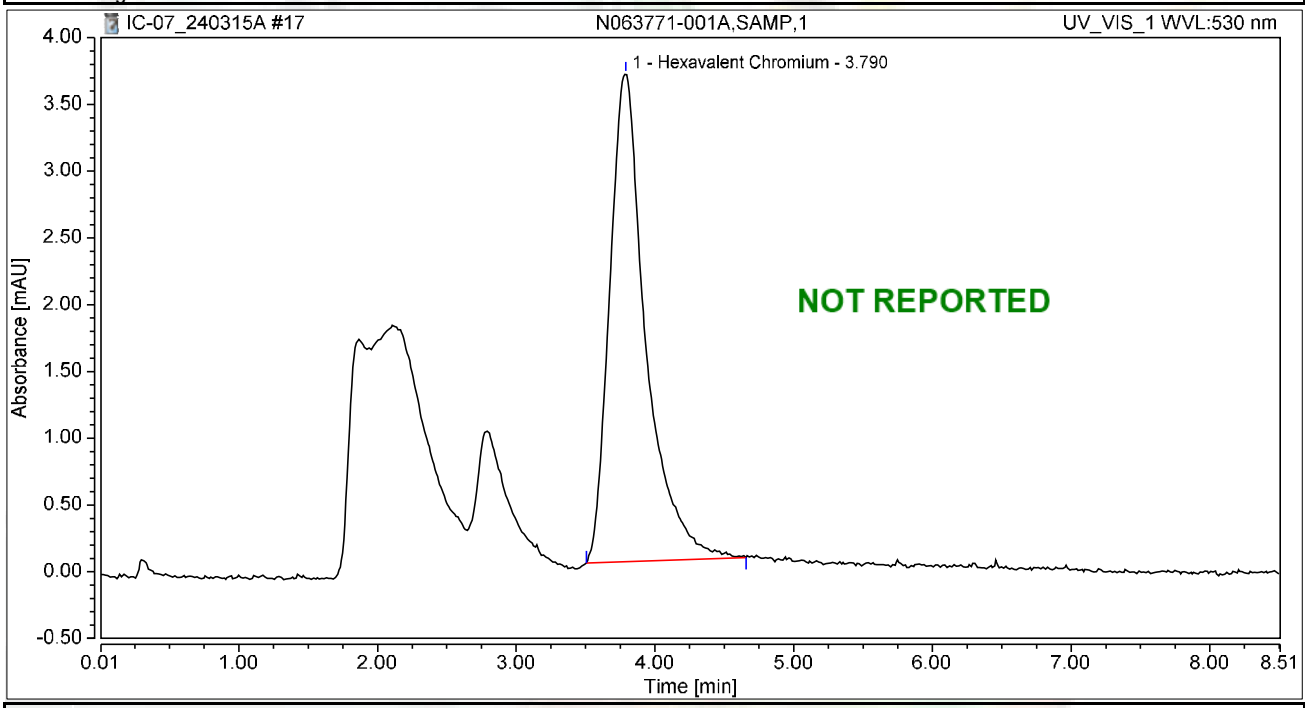
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.223	1.403	100.00	100.00	1.0487
Total:			**0.223**	**1.403**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 11:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

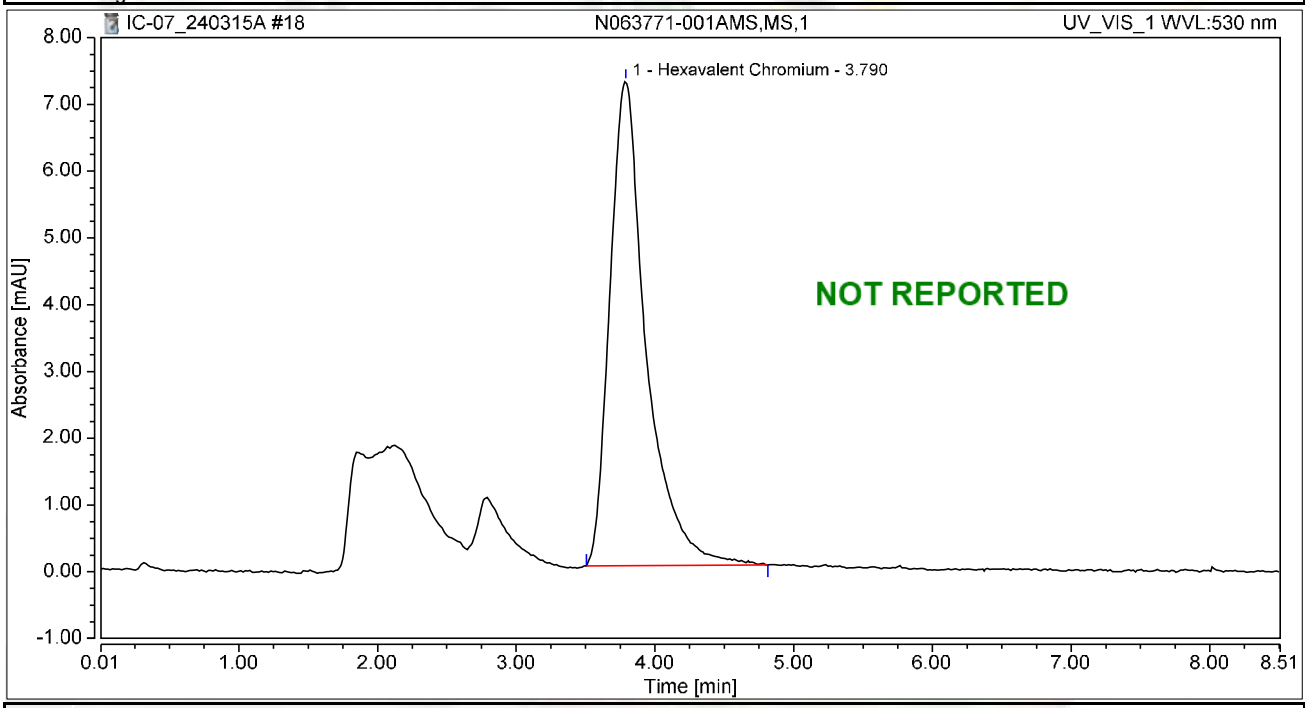
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	1.103	3.654	100.00	100.00	5.1829
Total:			**1.103**	**3.654**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-001AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 11:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

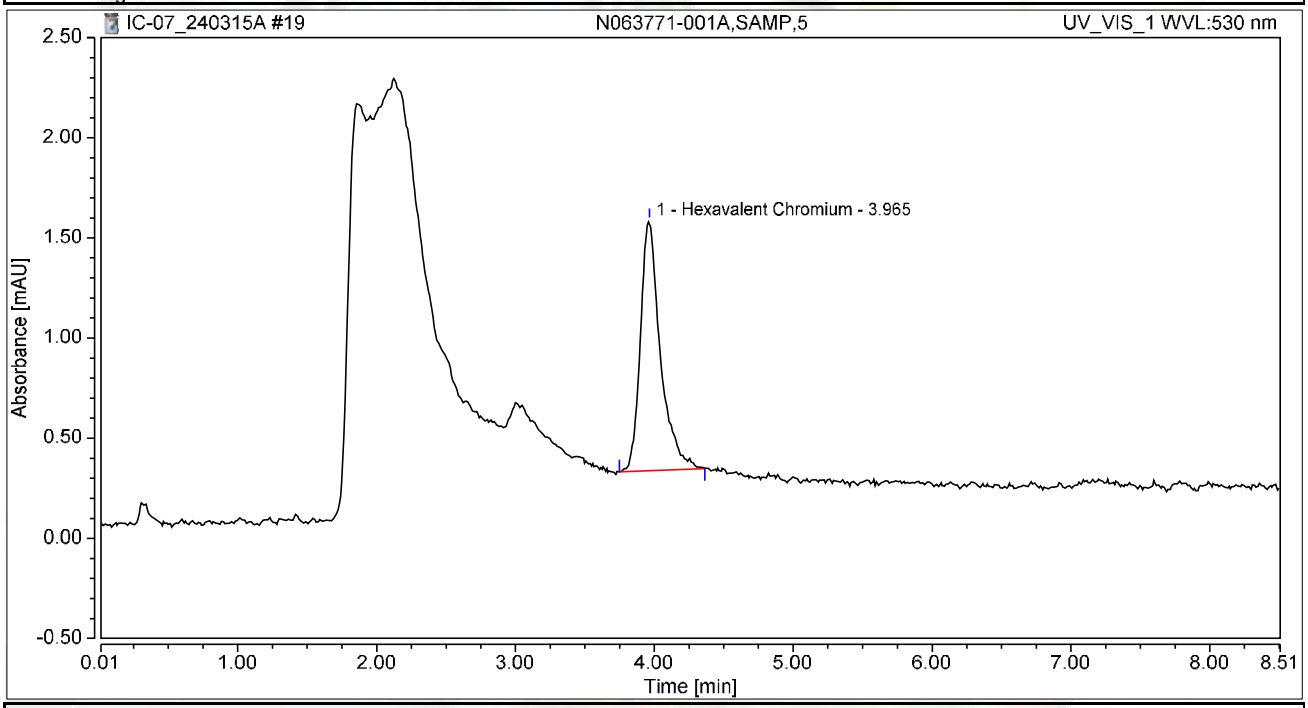
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	2.208	7.257	100.00	100.00	10.3724
Total:			**2.208**	**7.257**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-001A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 11:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

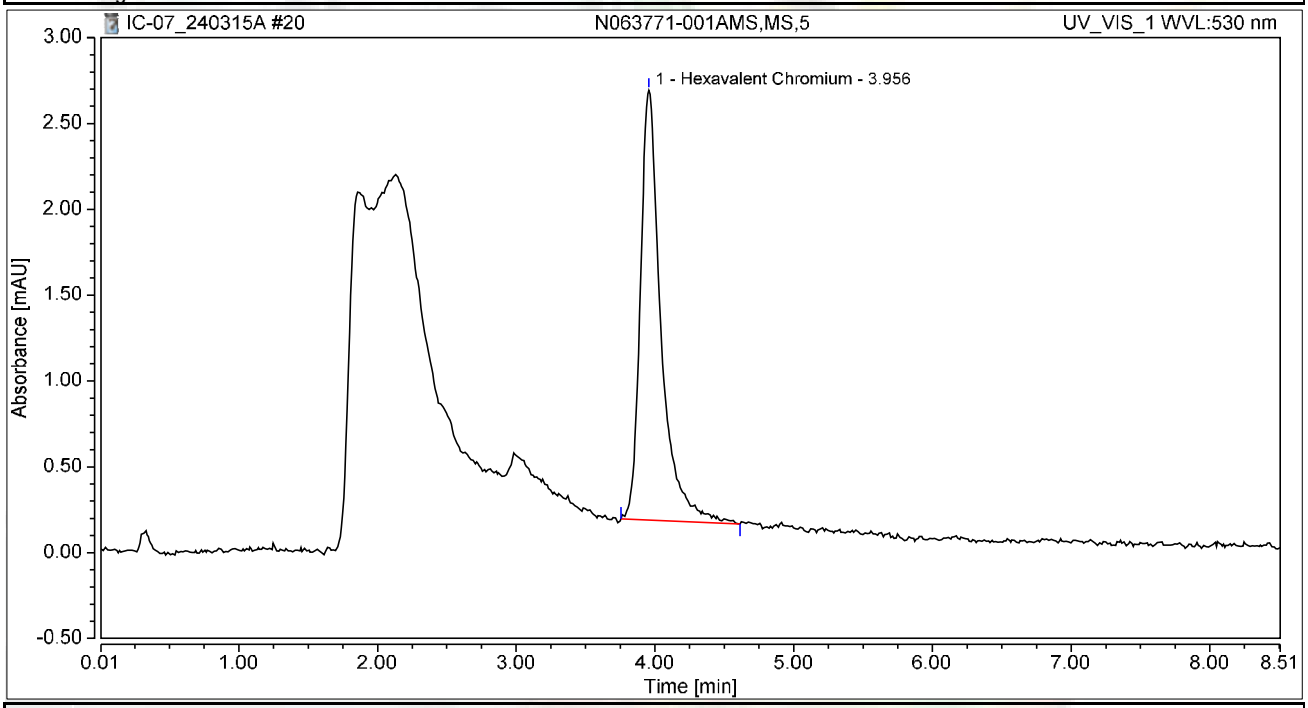
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.208	1.249	100.00	100.00	0.9786
Total:			**0.208**	**1.249**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

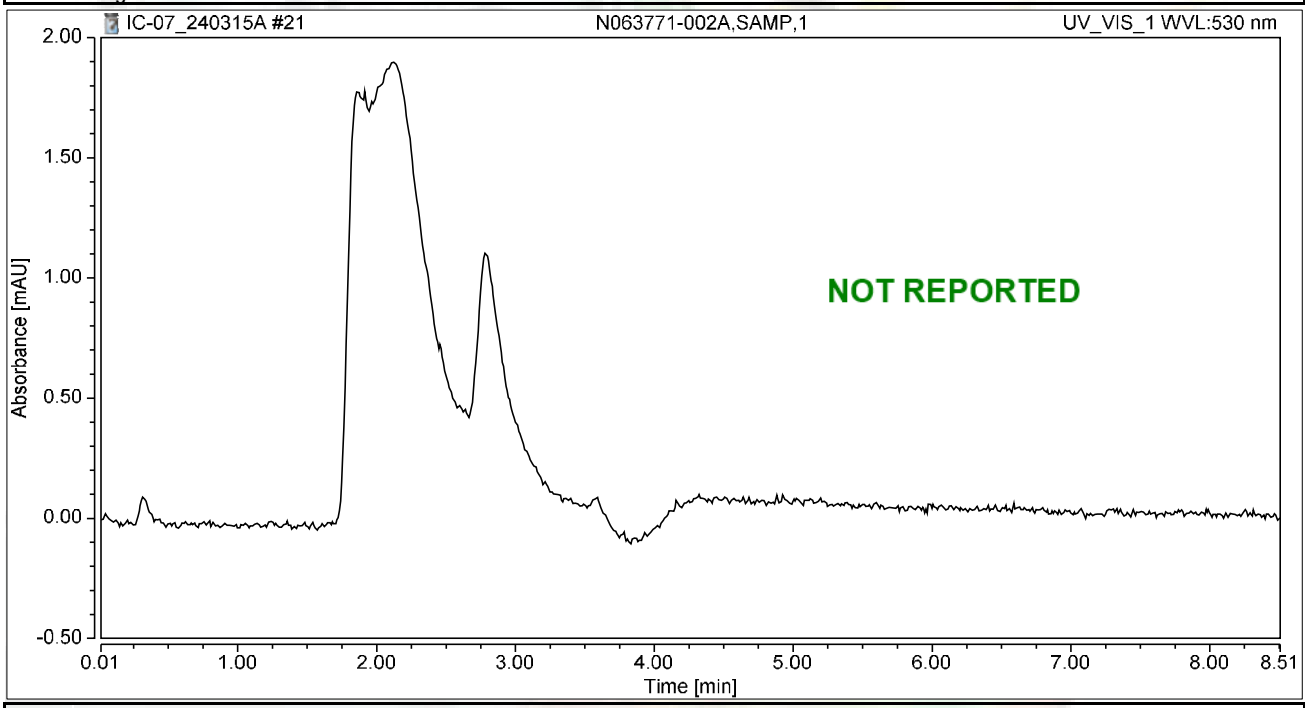
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.433	2.504	100.00	100.00	2.0336
Total:			**0.433**	**2.504**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-002A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

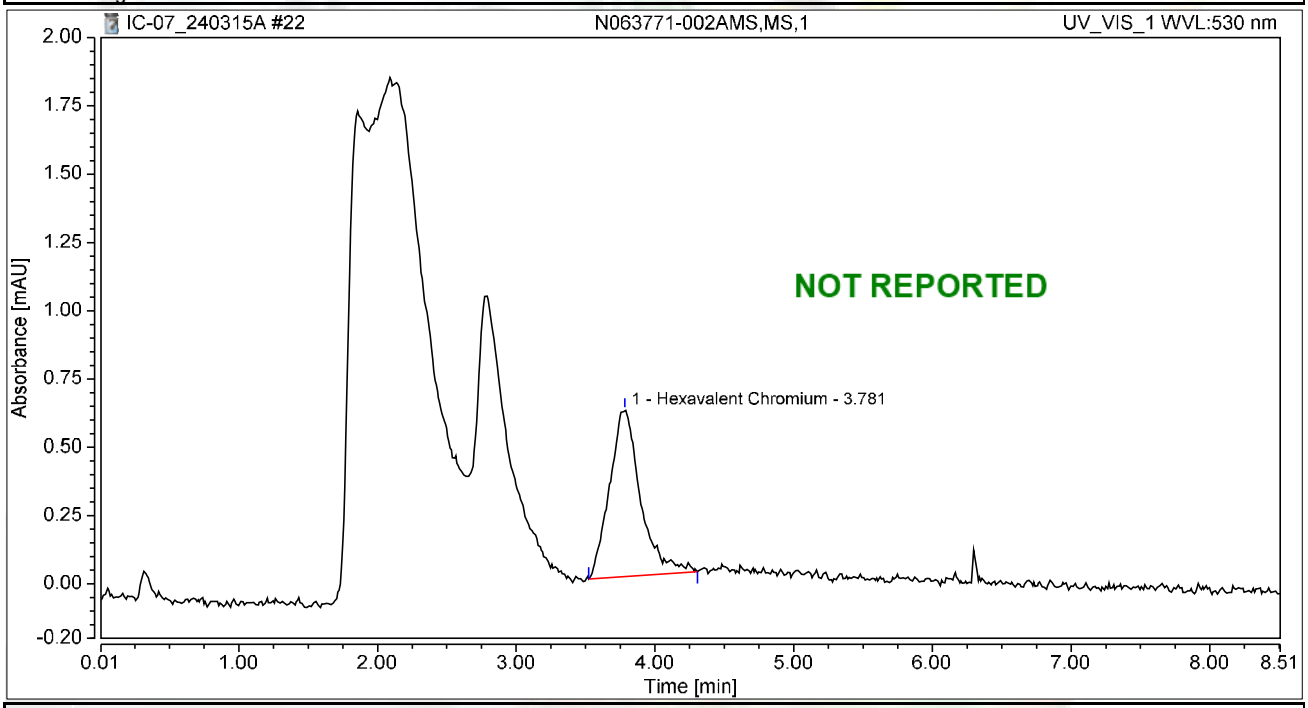
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-002AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

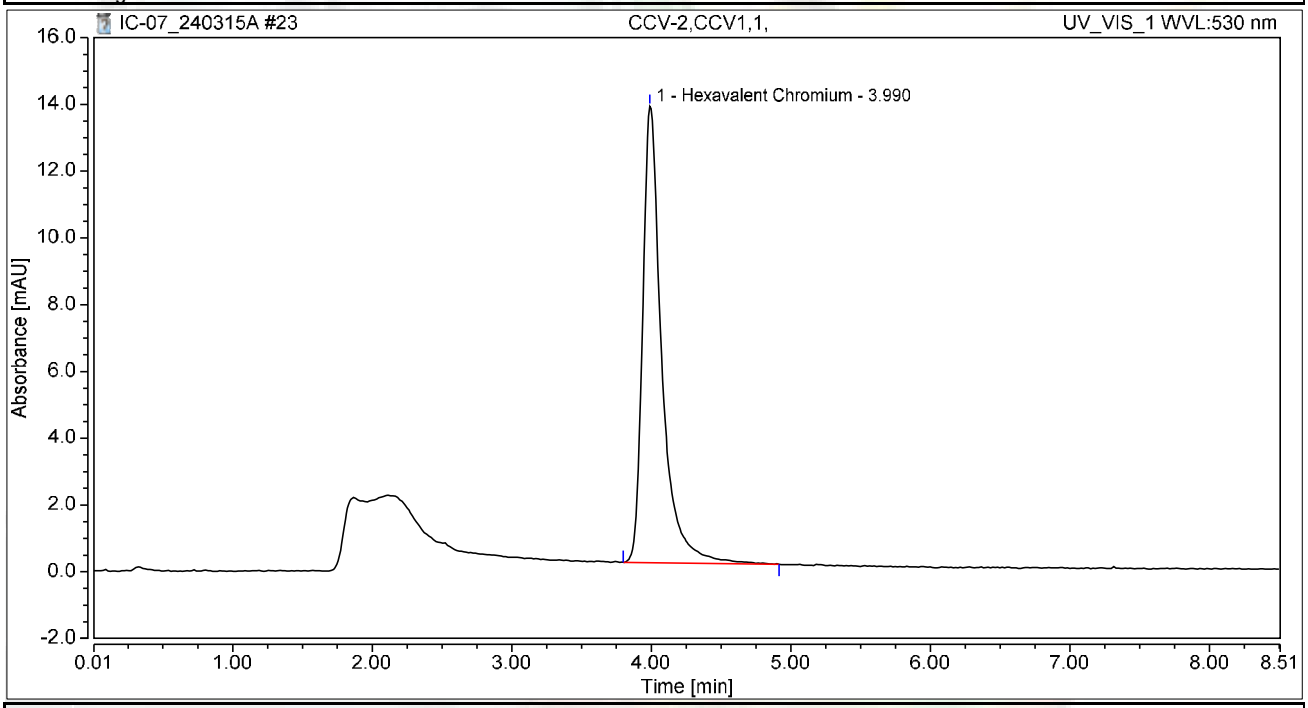
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.781	0.158	0.609	100.00	100.00	0.7441
Total:			**0.158**	**0.609**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 12:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

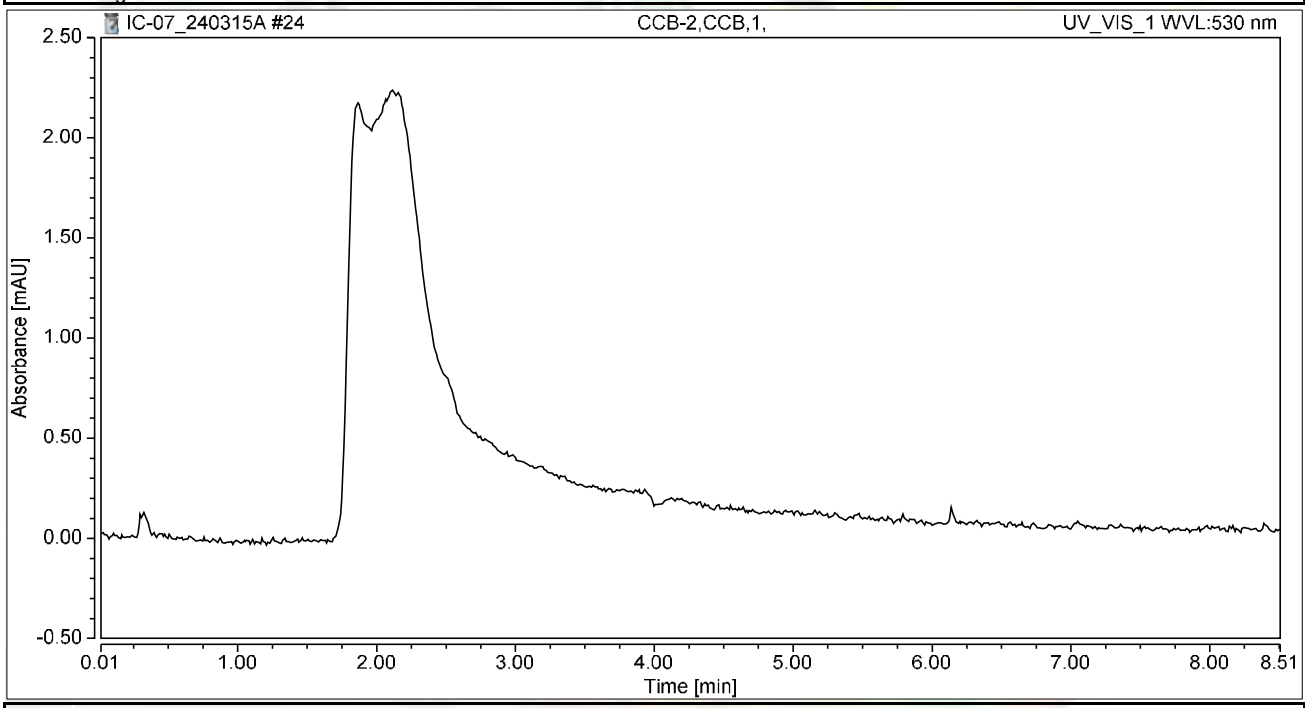
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	2.176	13.665	100.00	100.00	10.2260
Total:			**2.176**	**13.665**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

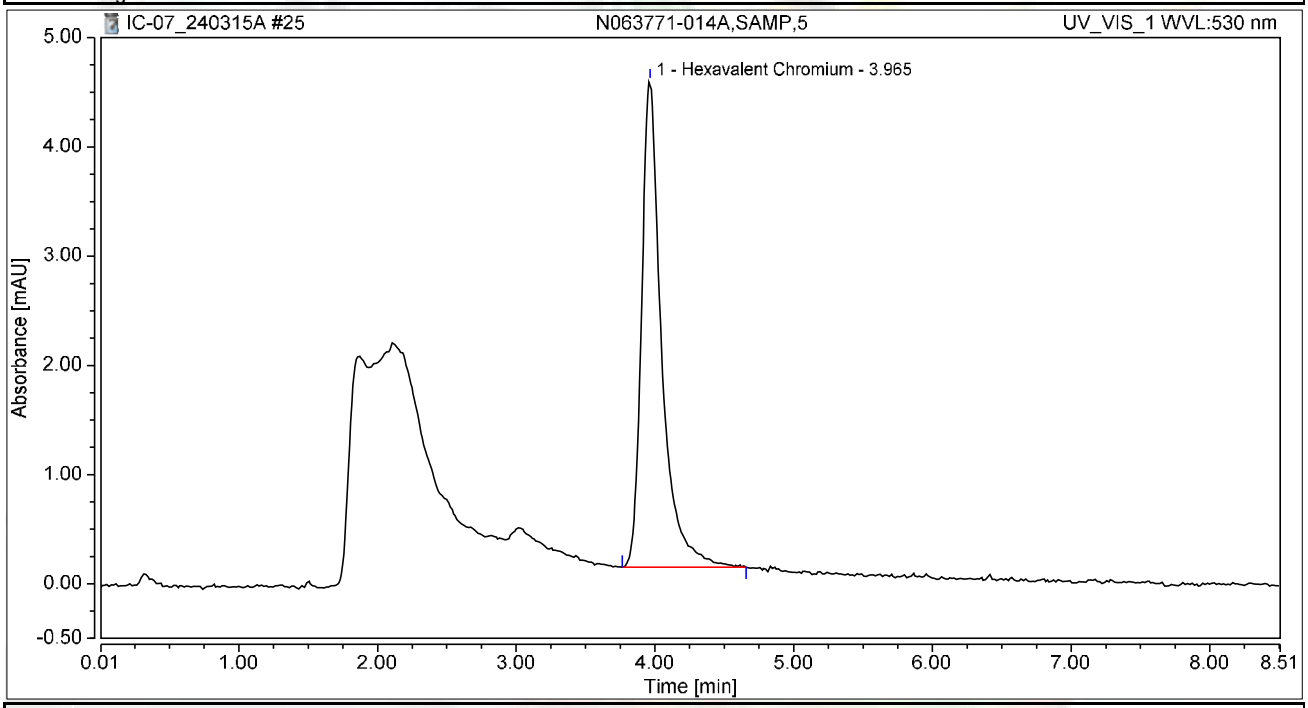
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-014A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 12:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

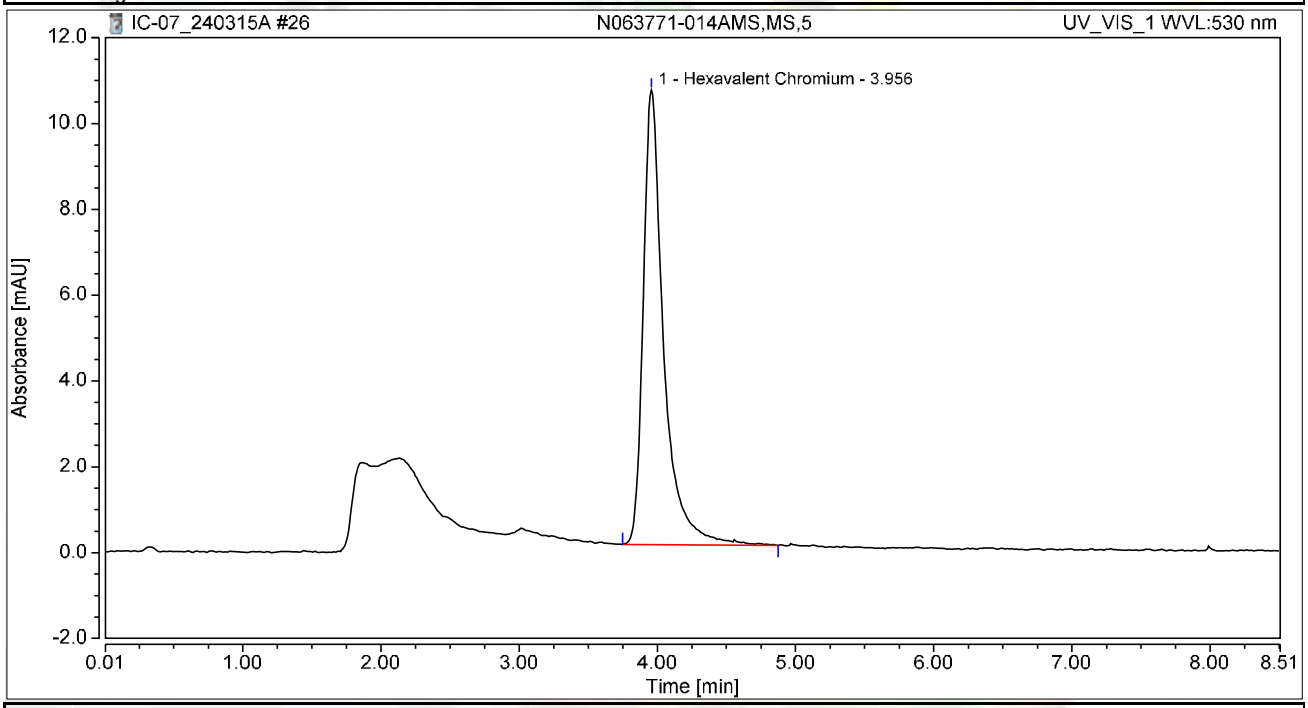
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.746	4.453	100.00	100.00	3.5039
Total:			**0.746**	**4.453**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-014AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 13:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

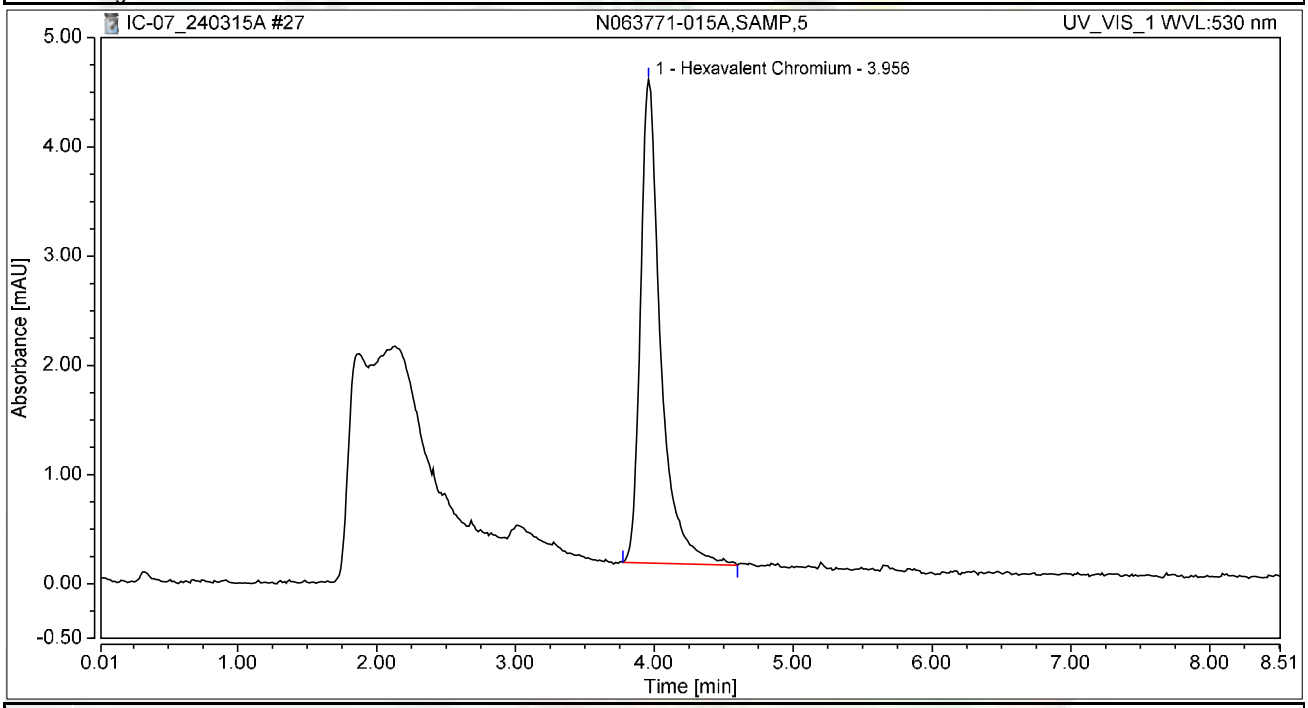
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	1.815	10.595	100.00	100.00	8.5282
Total:			**1.815**	**10.595**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-015A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 13:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

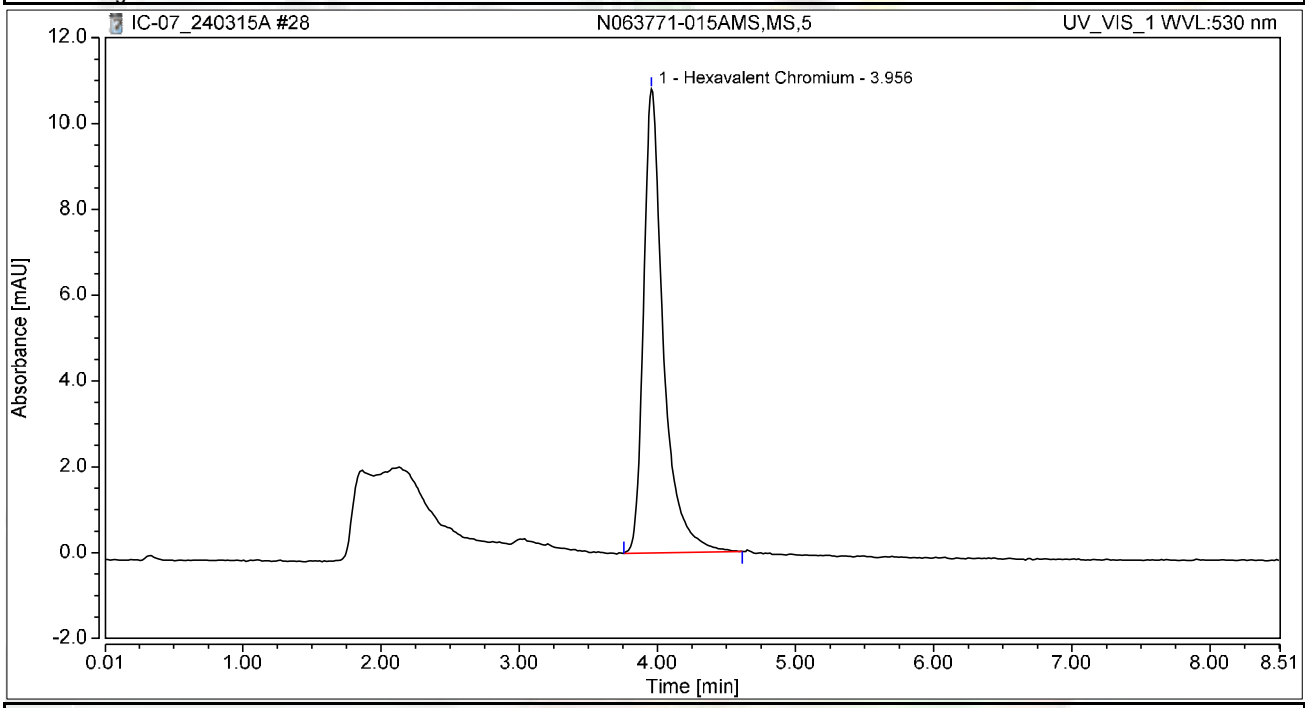
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.750	4.426	100.00	100.00	3.5216
Total:			**0.750**	**4.426**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-015AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 13:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

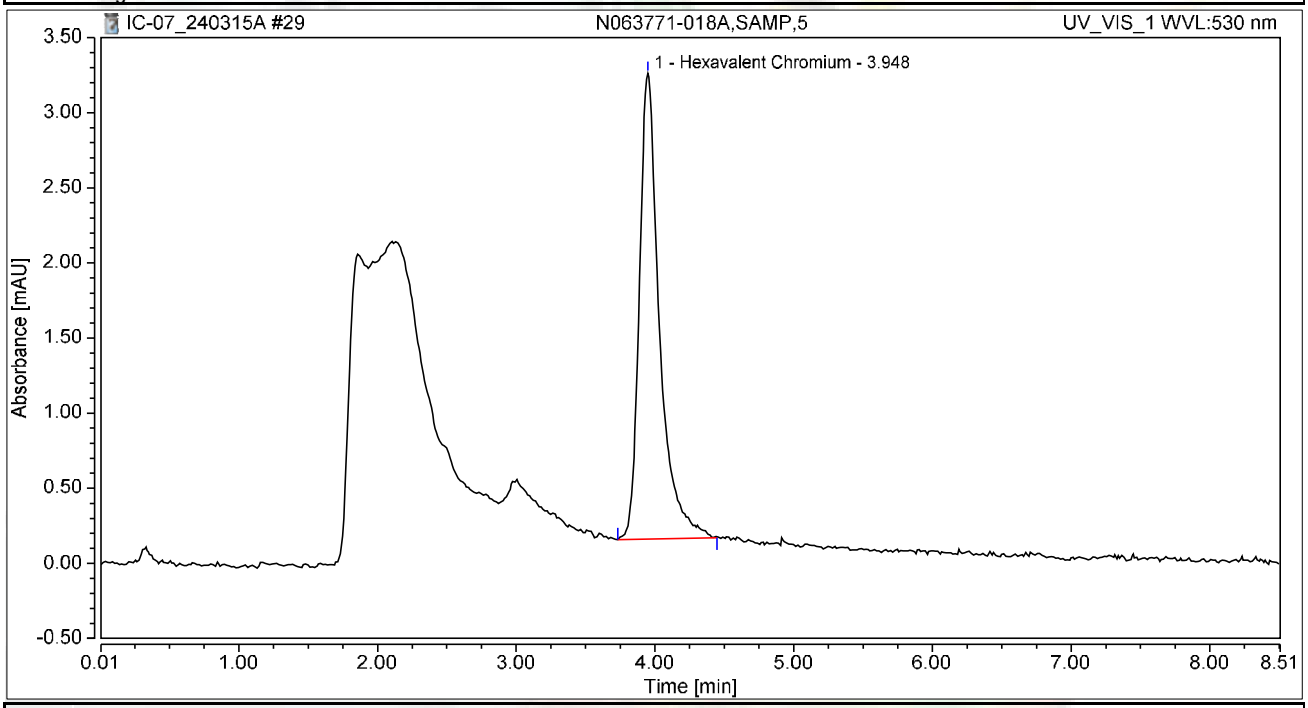
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	1.803	10.809	100.00	100.00	8.4702
Total:			**1.803**	**10.809**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-018A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 13:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

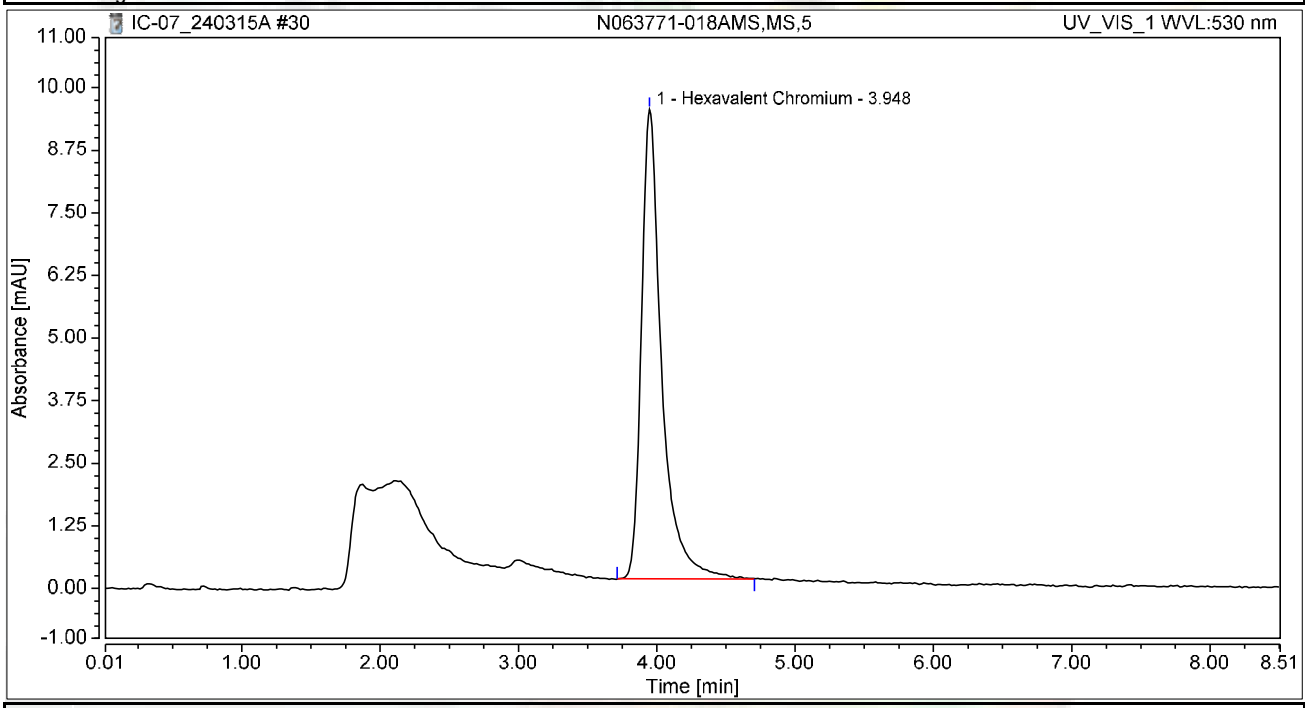
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.521	3.101	100.00	100.00	2.4475
Total:			**0.521**	**3.101**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-018AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 13:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

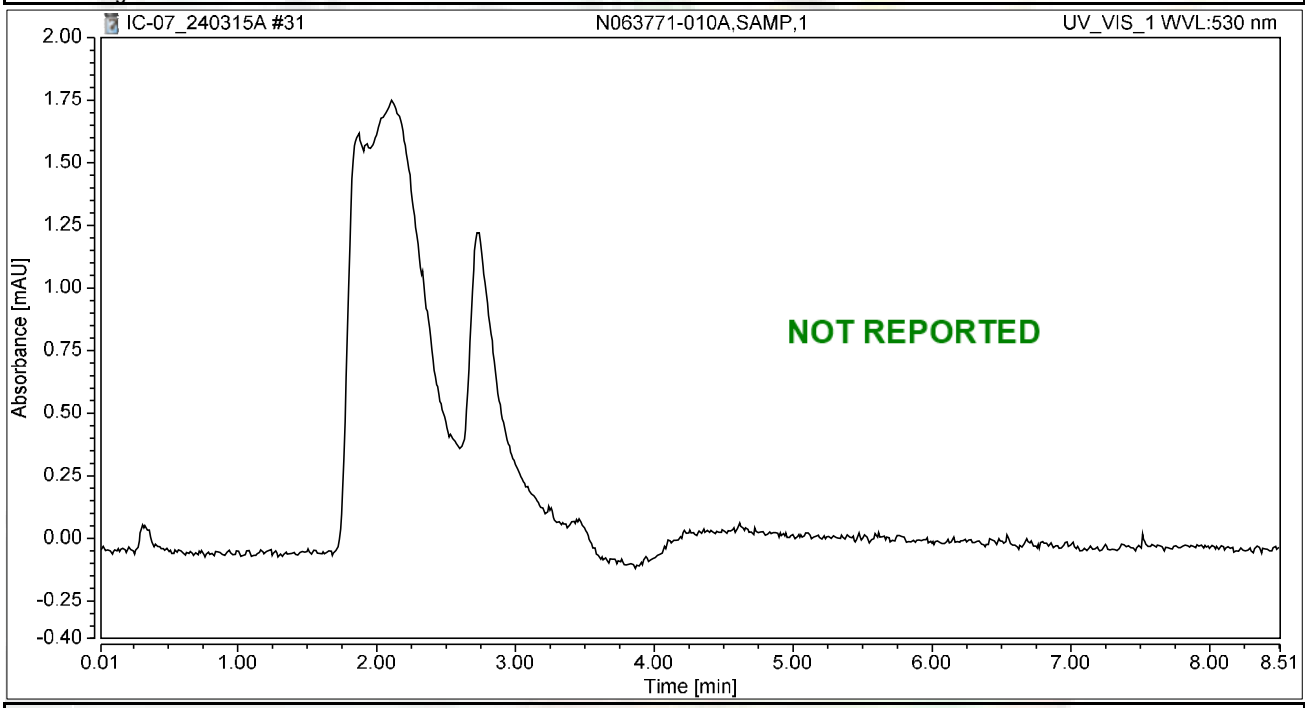
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	1.600	9.380	100.00	100.00	7.5179
Total:			**1.600**	**9.380**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-010A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 13:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

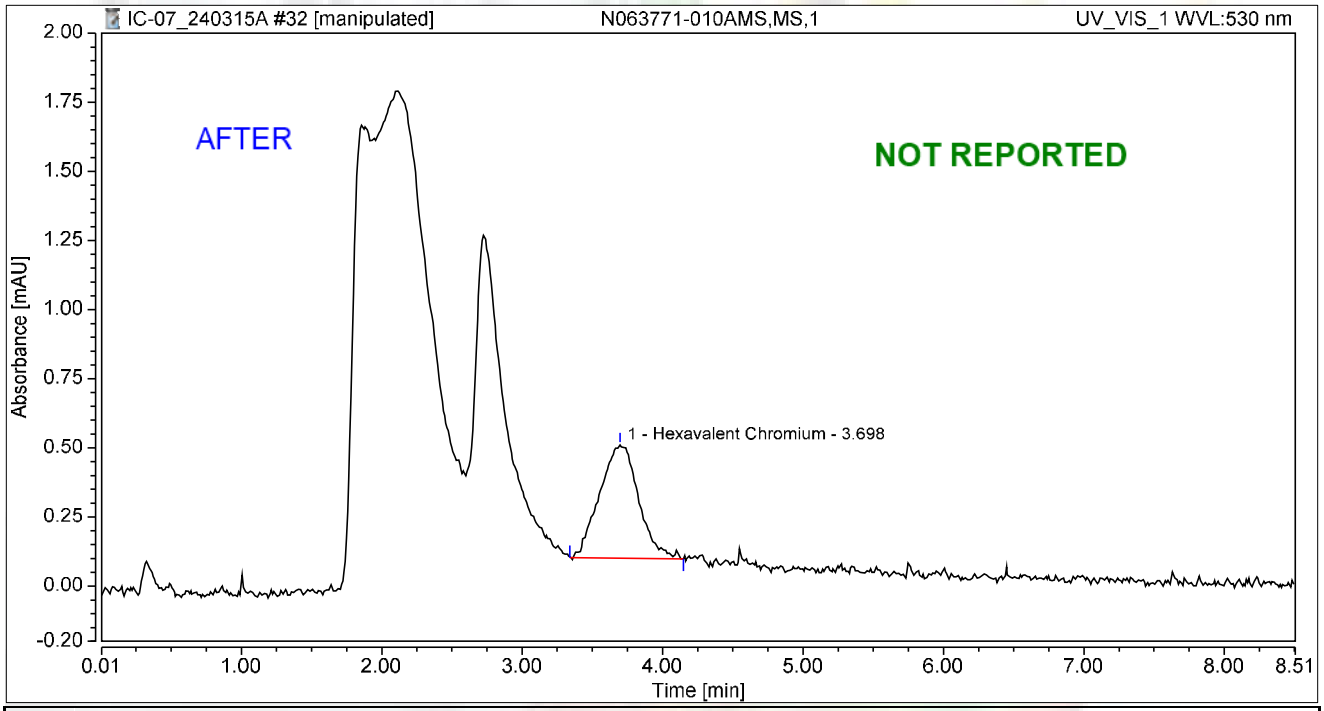
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-010AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.698	0.131	0.409	100.00	100.00	0.6175
Total:			**0.131**	**0.409**	**100.00**	**100.00**	

Reviewed by:

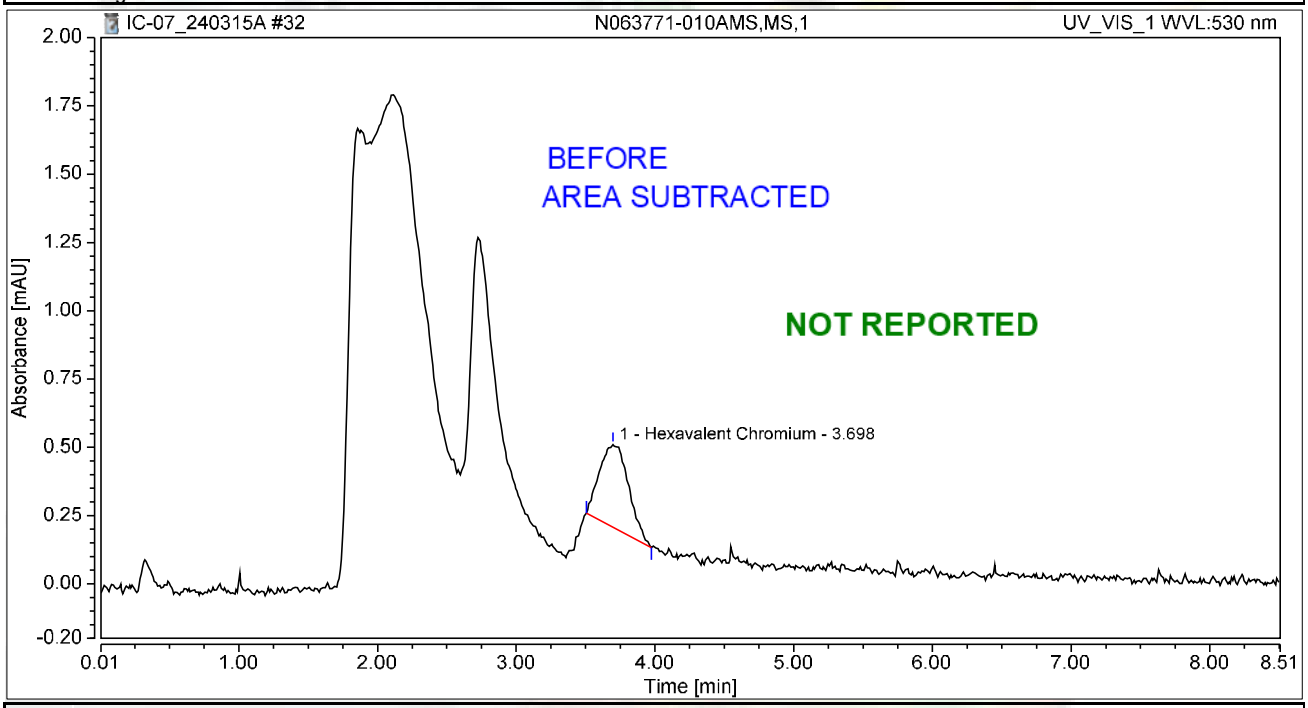
dlRocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063771-010AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

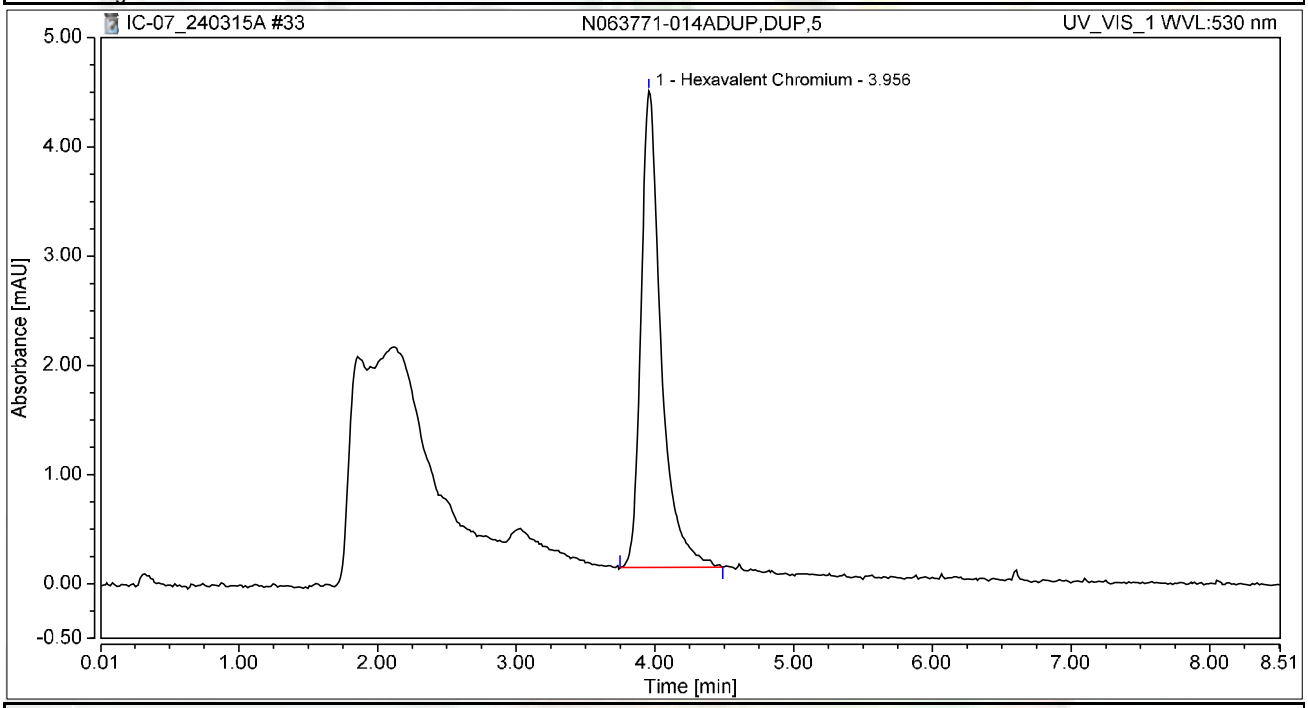
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.698	0.074	0.303	100.00	100.00	0.3471
Total:			**0.074**	**0.303**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-014ADUP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

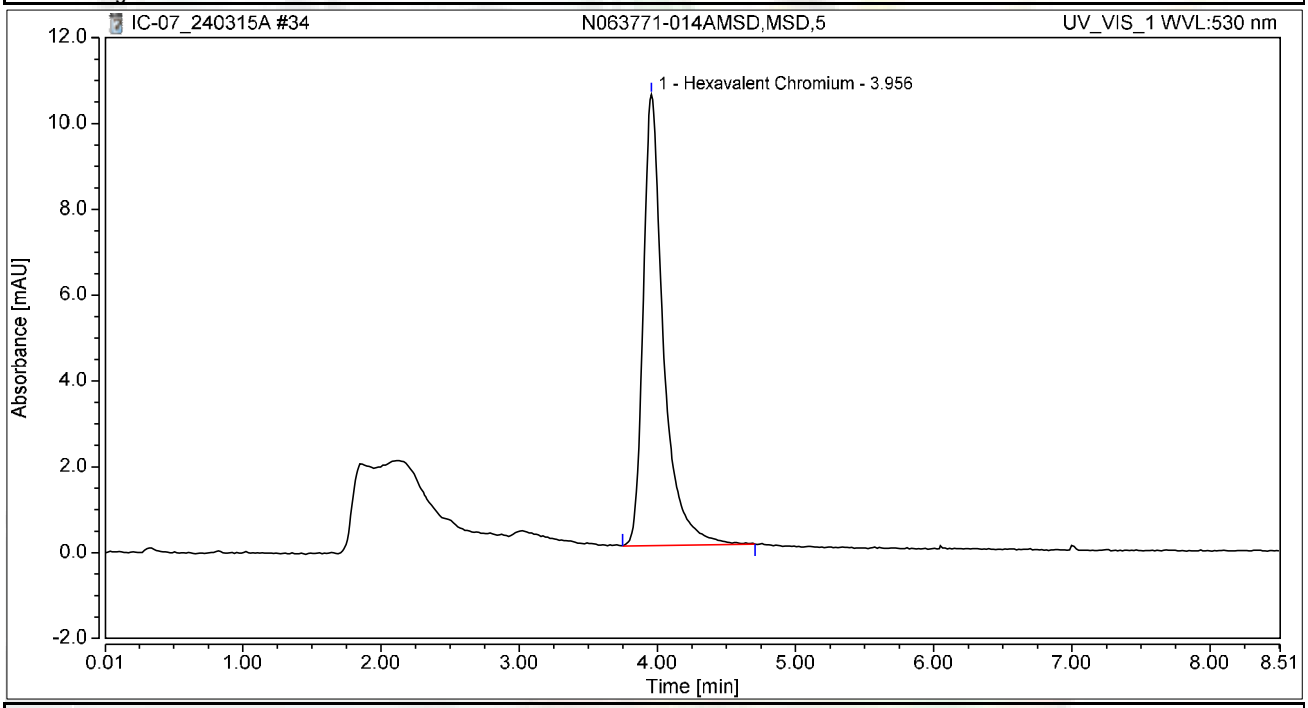
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.735	4.362	100.00	100.00	3.4520
Total:			**0.735**	**4.362**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-014AMSD,MSD,5**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

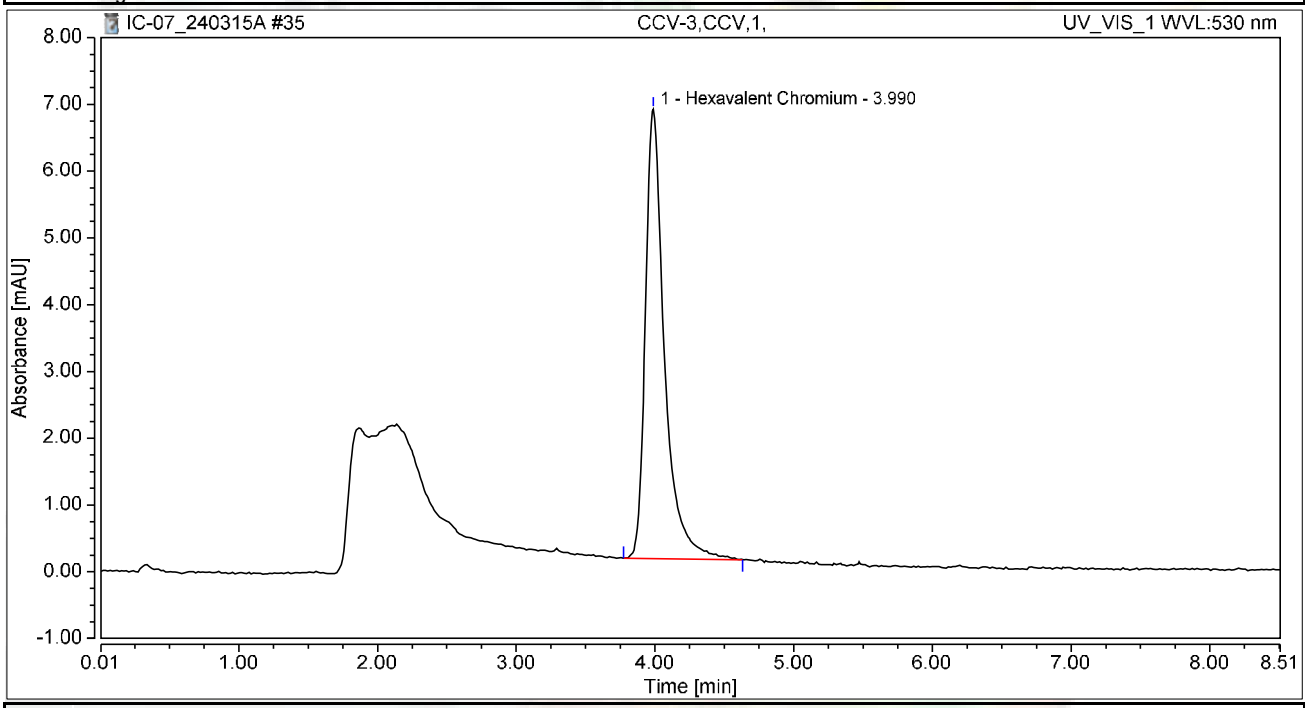
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	1.785	10.506	100.00	100.00	8.3877
Total:			**1.785**	**10.506**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

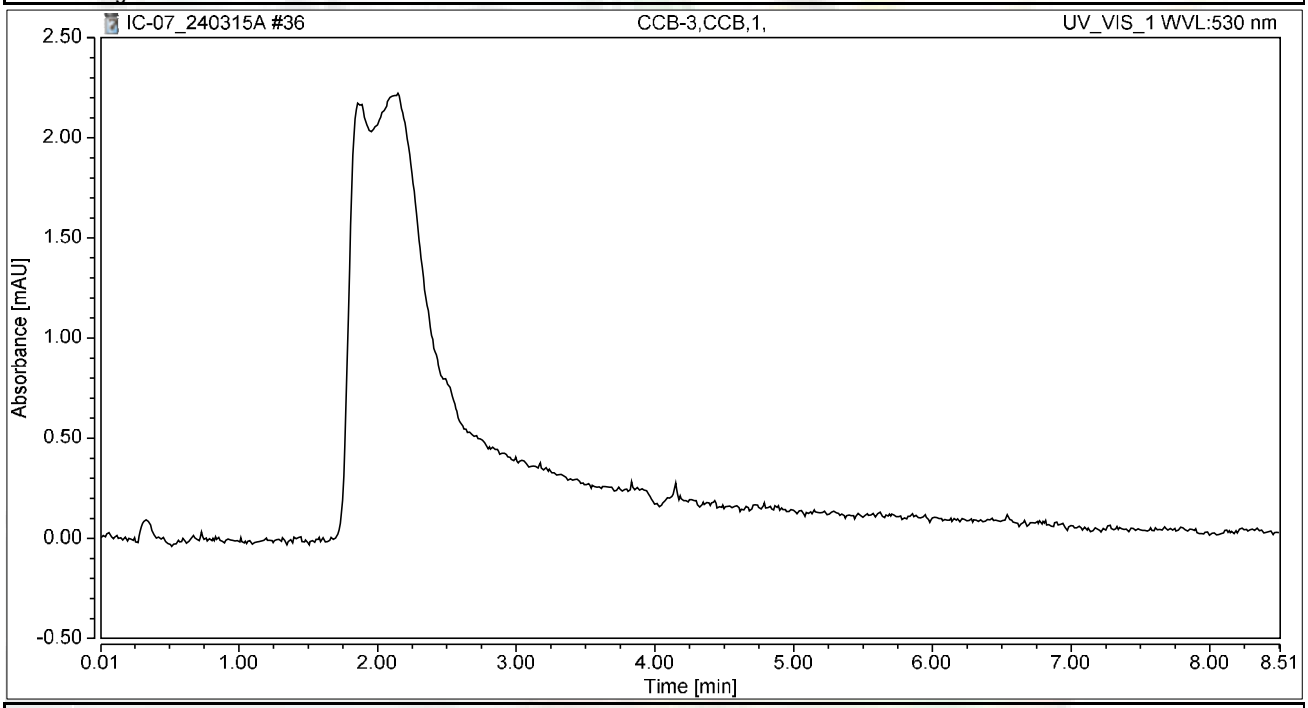
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	1.073	6.730	100.00	100.00	5.0391
Total:			**1.073**	**6.730**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:40**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

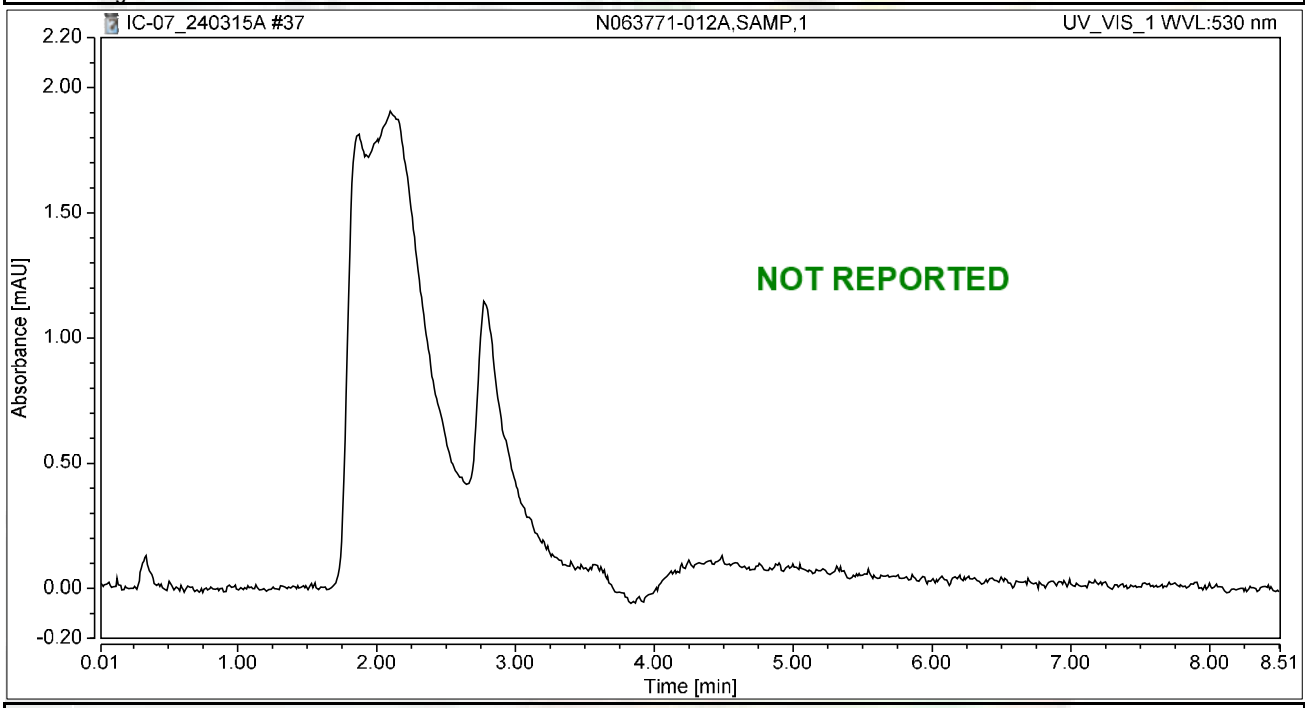
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-012A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

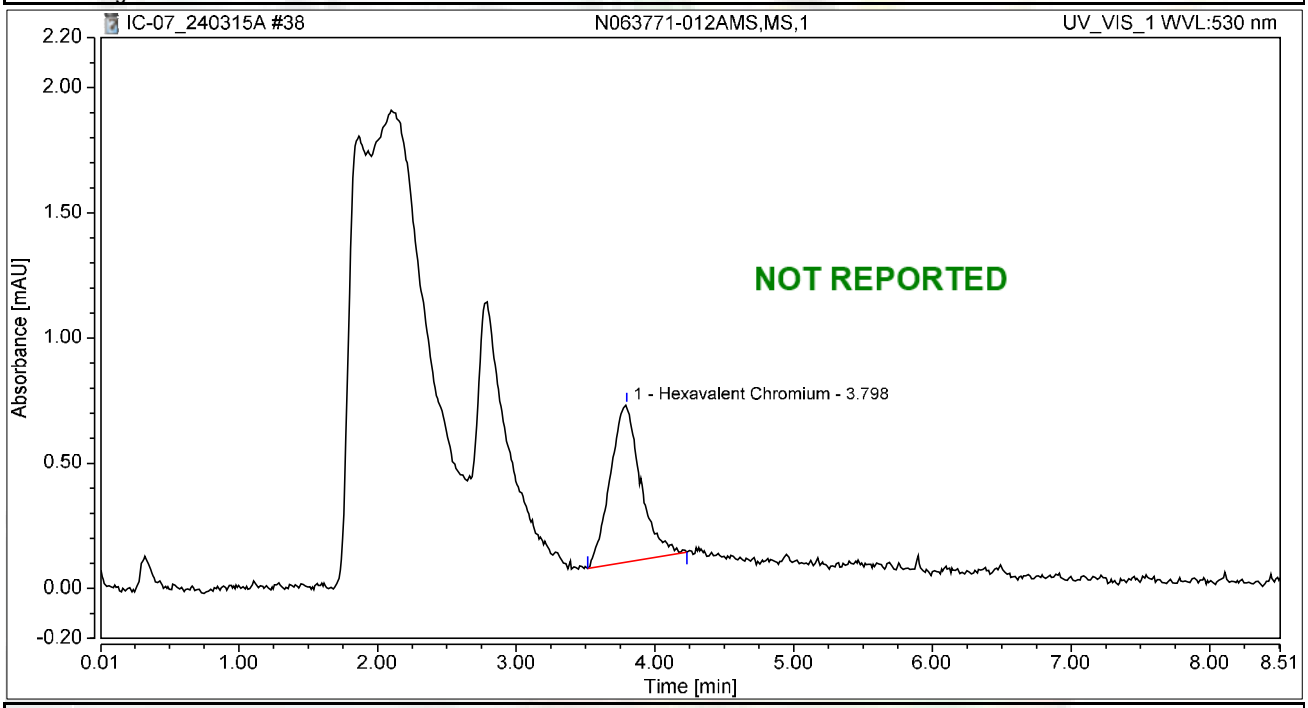
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-012AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 14:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

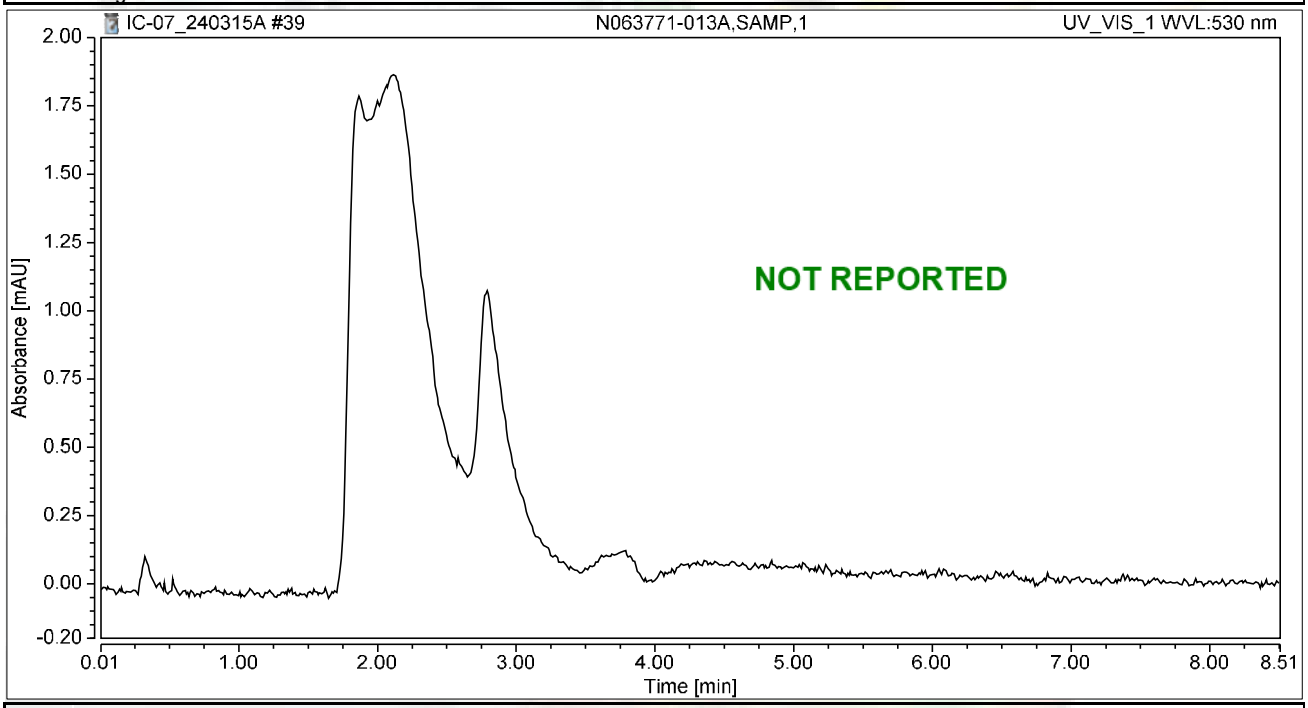
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.798	0.161	0.628	100.00	100.00	0.7548
Total:			**0.161**	**0.628**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-013A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 15:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

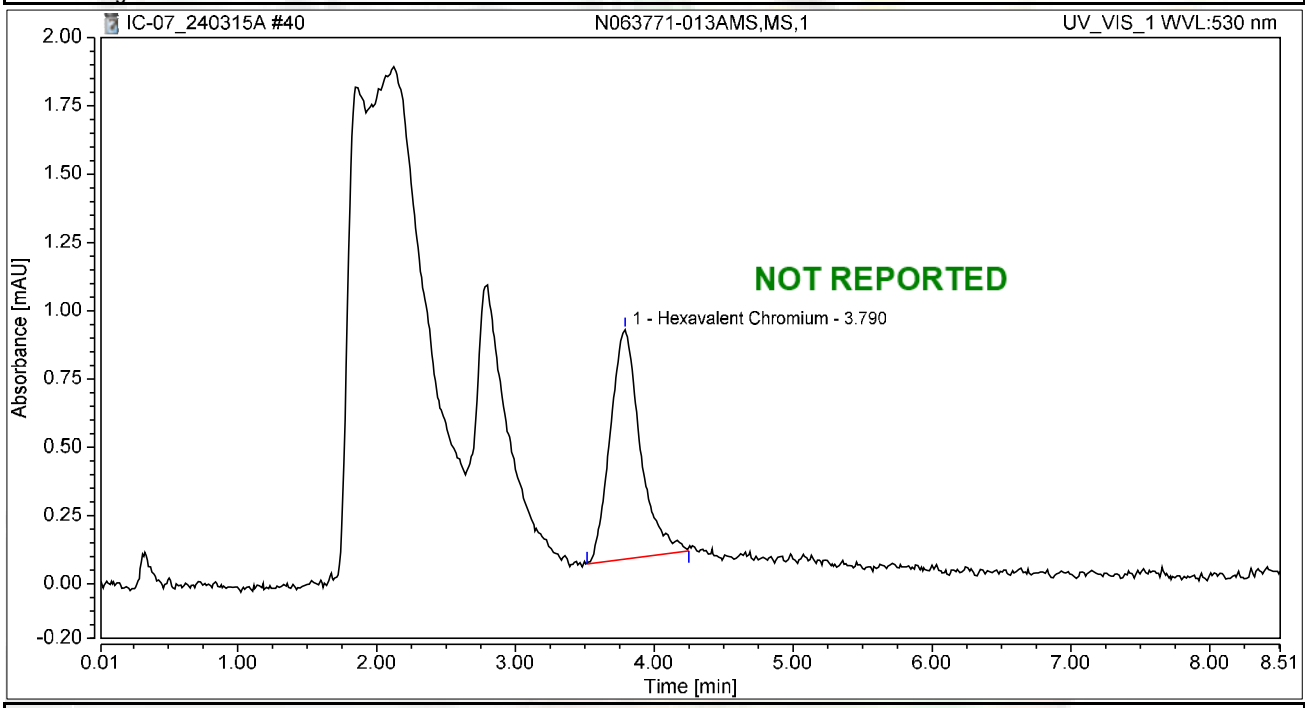
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-013AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 15:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

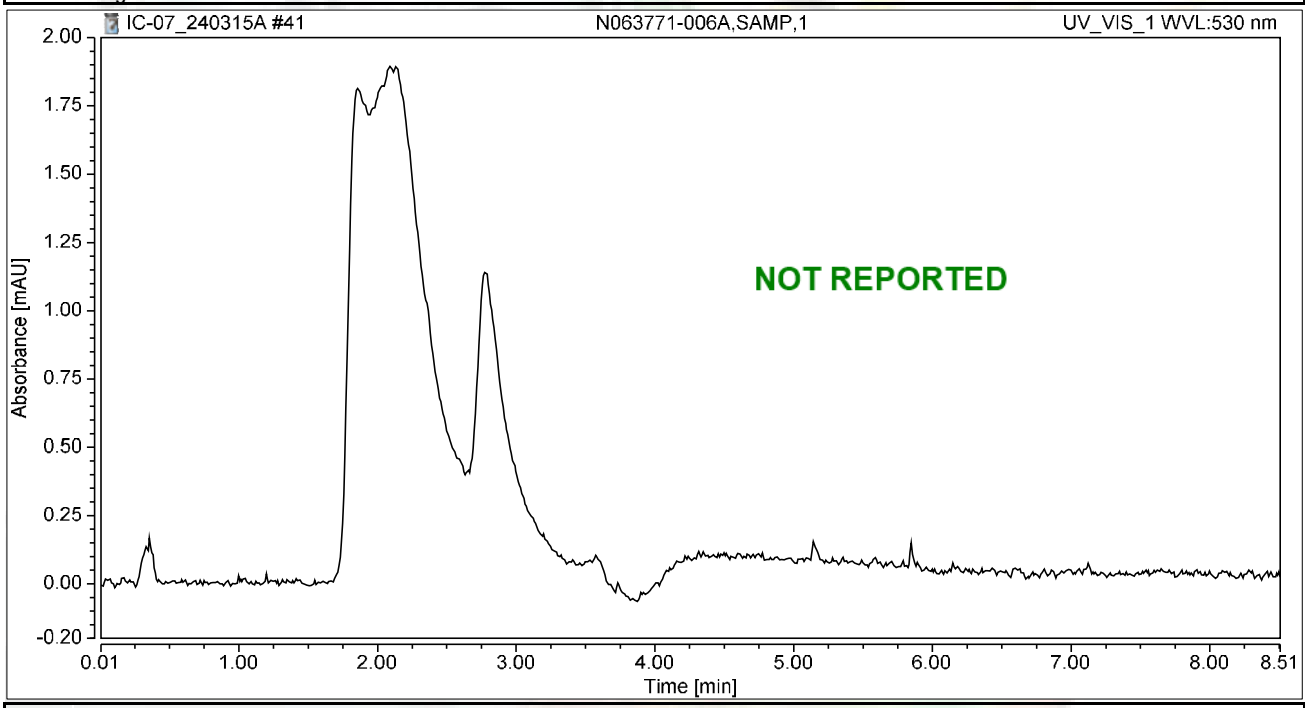
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.211	0.840	100.00	100.00	0.9896
Total:			**0.211**	**0.840**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 15:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

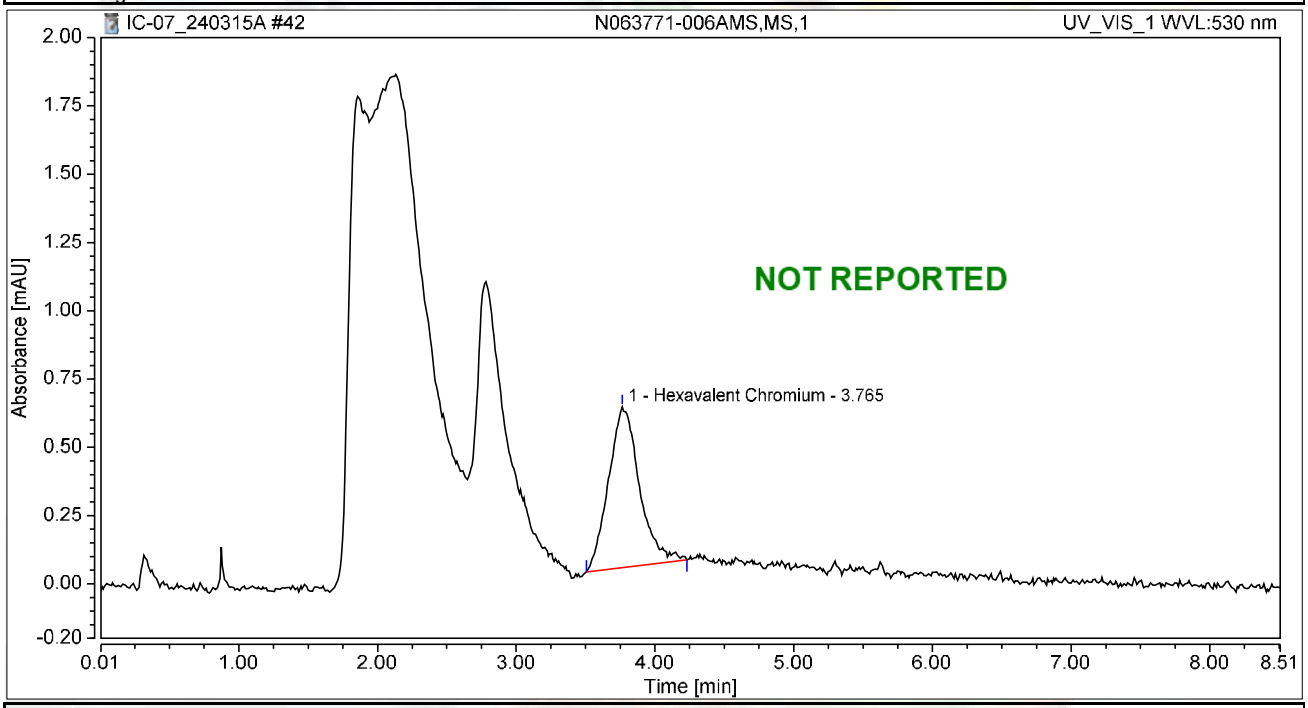
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 15:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

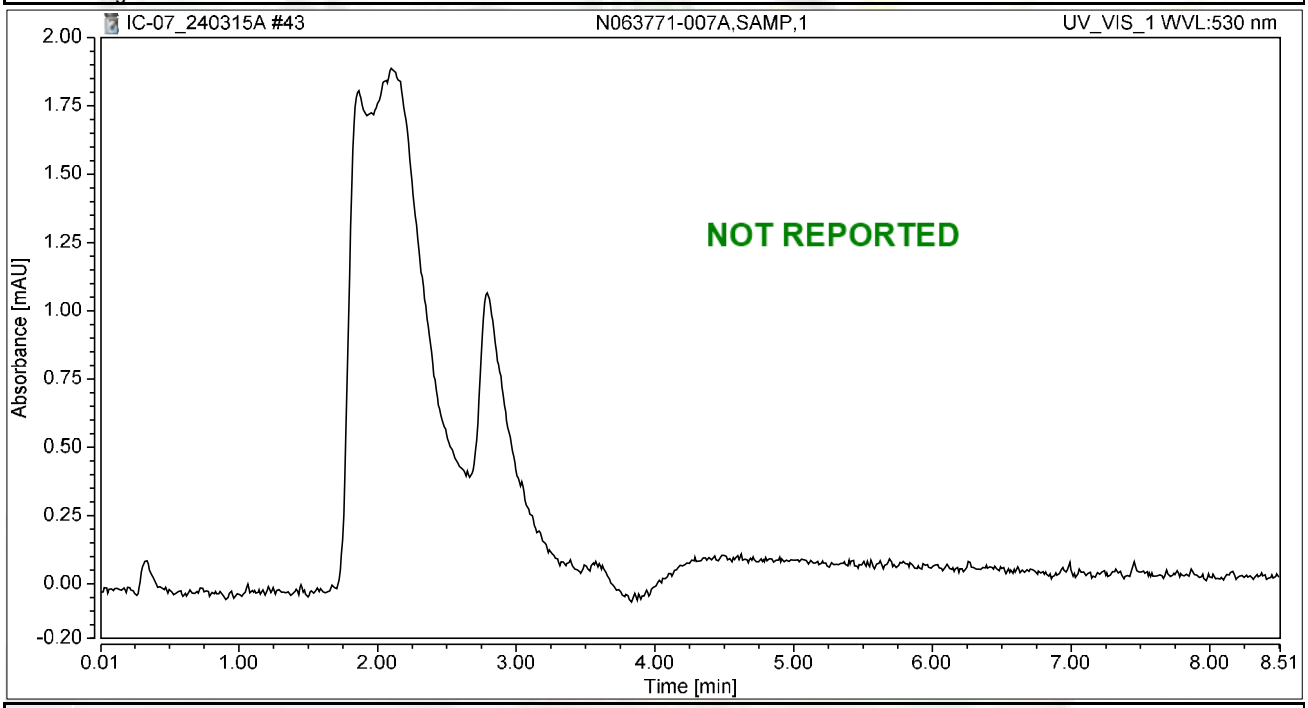
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.765	0.152	0.589	100.00	100.00	0.7126
Total:			**0.152**	**0.589**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-007A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 15:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

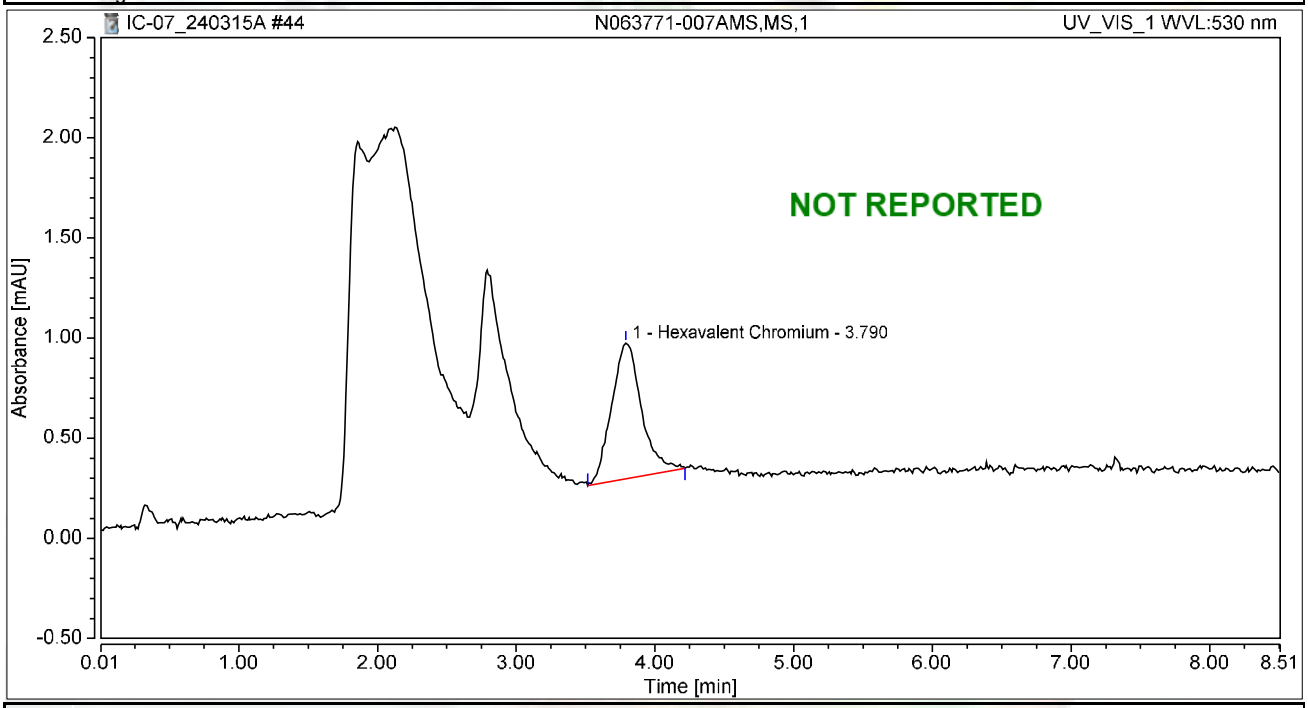
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 16:02**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

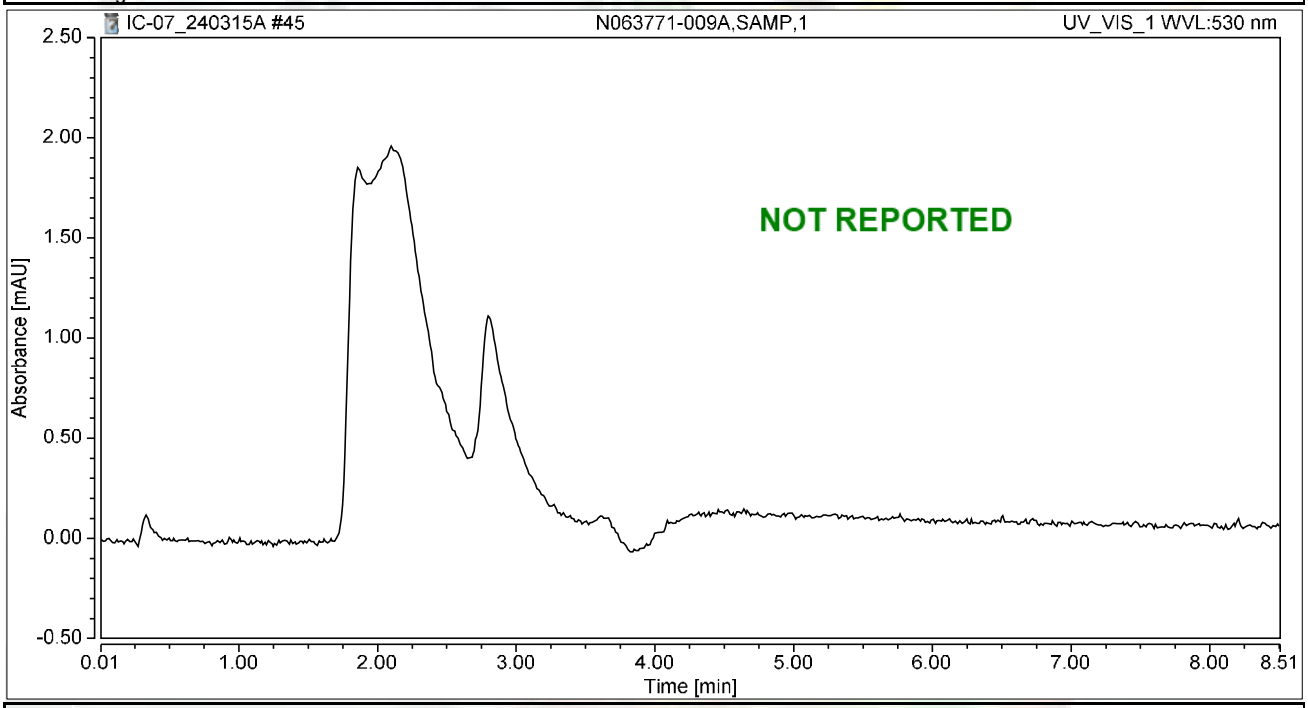
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.169	0.676	100.00	100.00	0.7931
Total:			**0.169**	**0.676**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-009A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 16:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

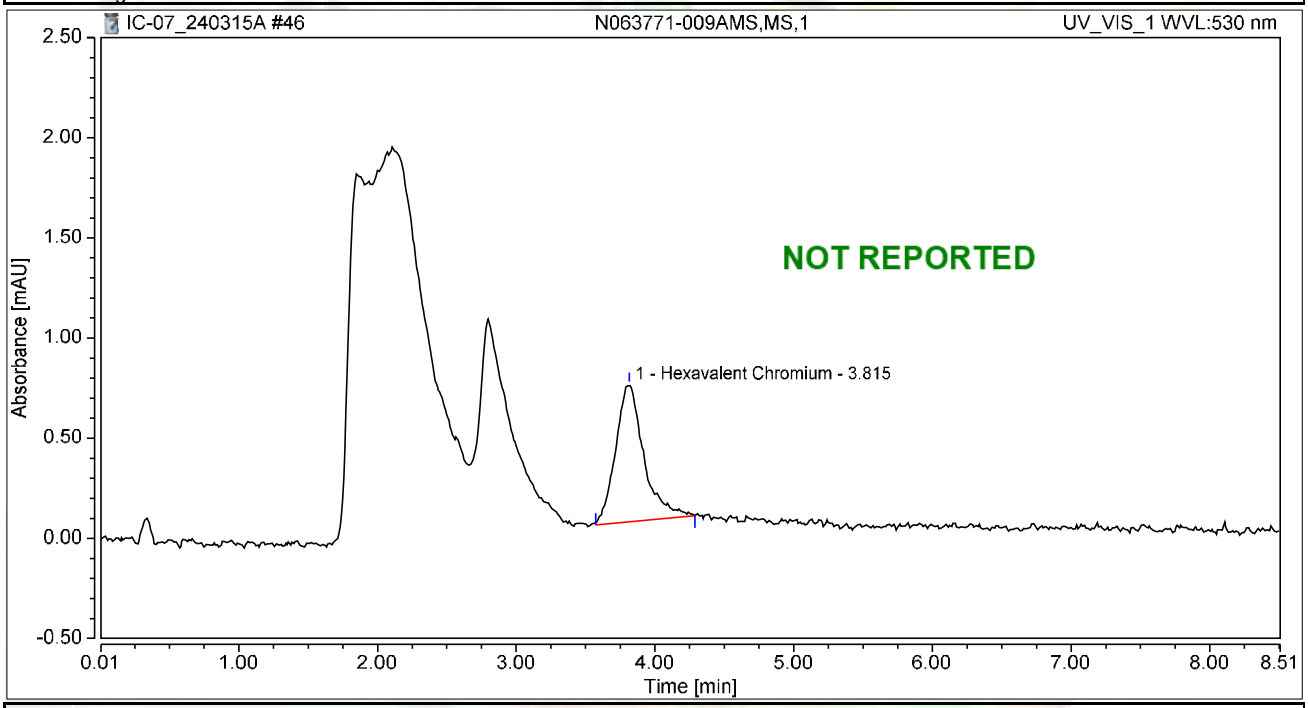
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 16:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

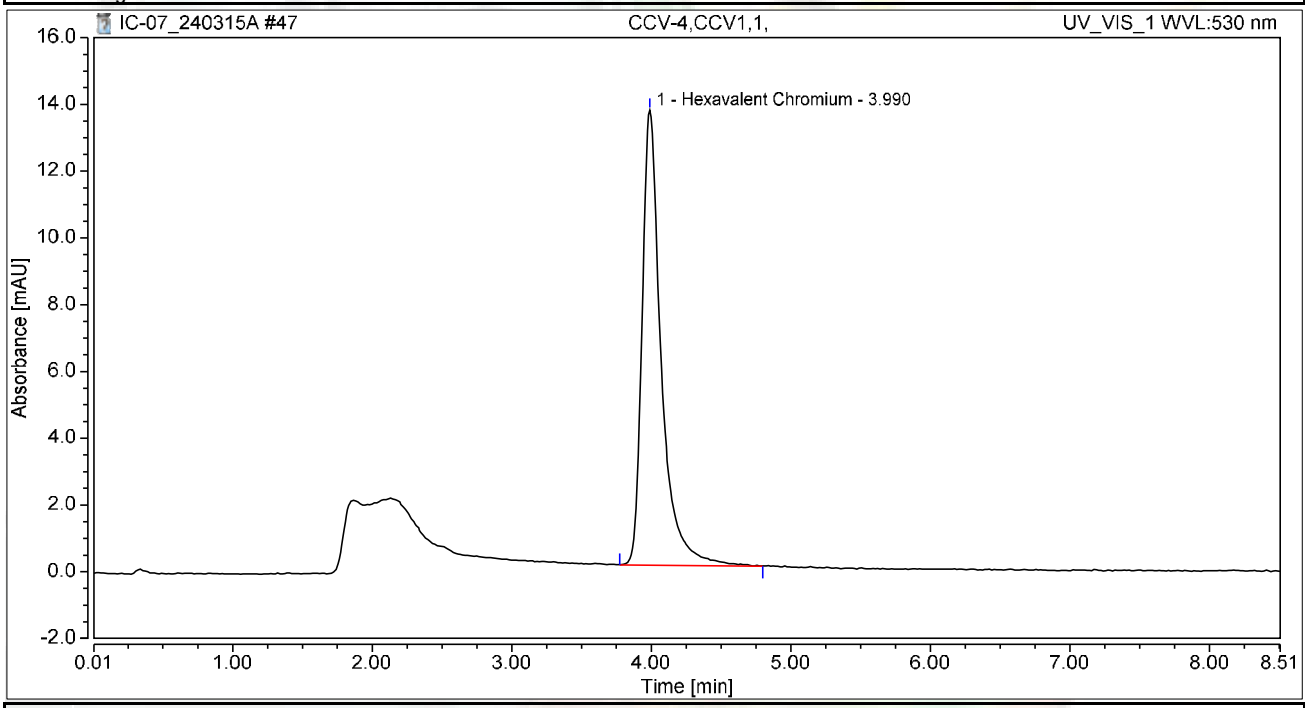
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.815	0.162	0.685	100.00	100.00	0.7605
Total:			**0.162**	**0.685**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 16:33**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

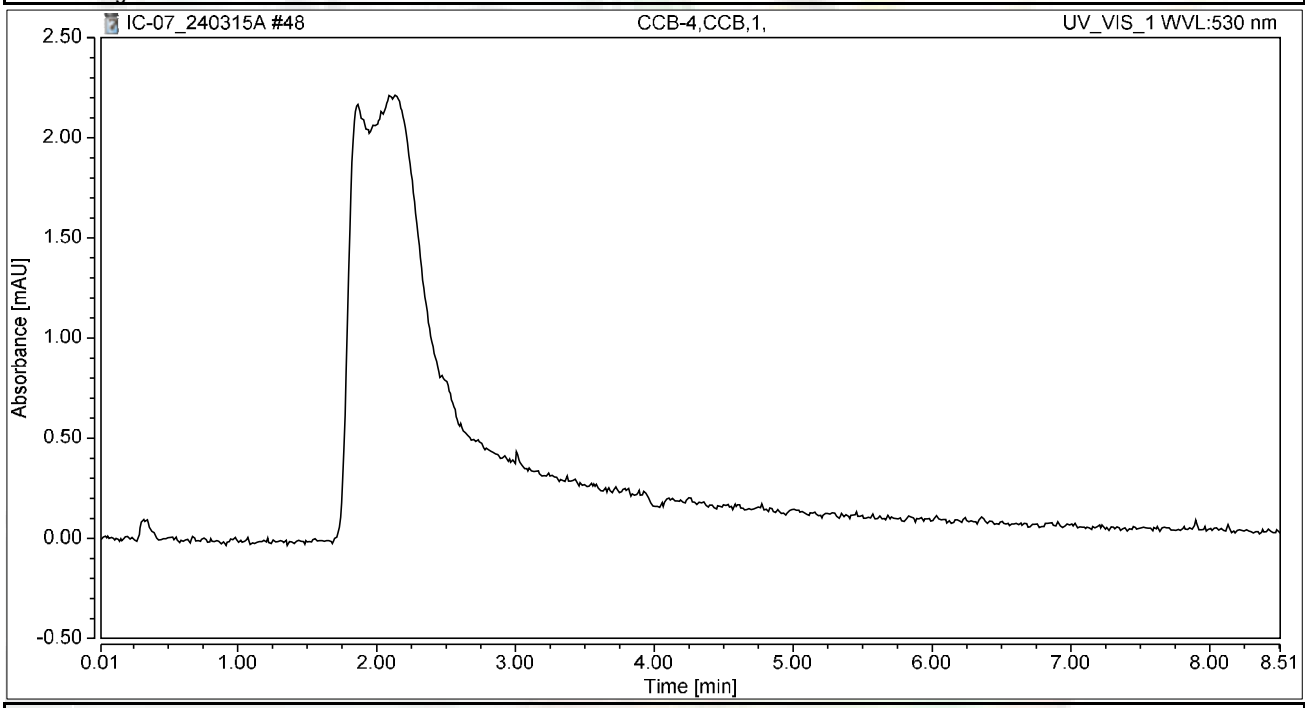
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	2.176	13.636	100.00	100.00	10.2256
Total:			**2.176**	**13.636**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 16:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

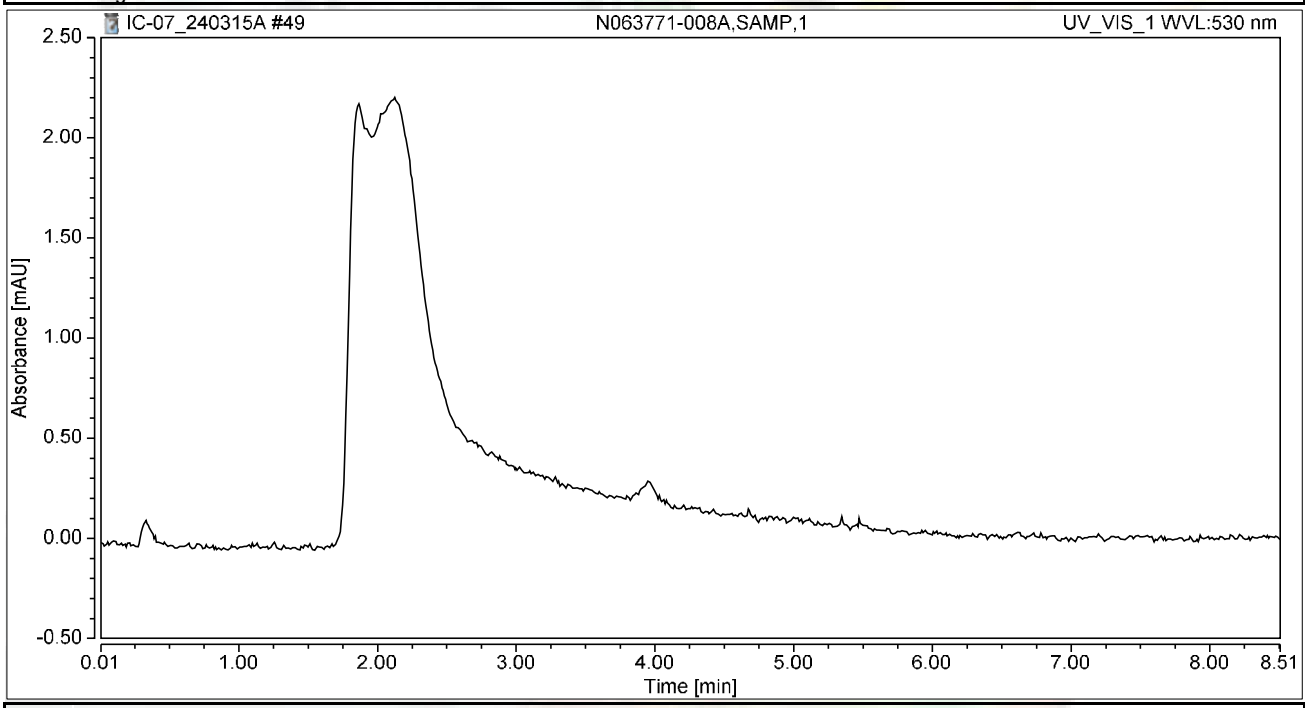
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 16:52**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

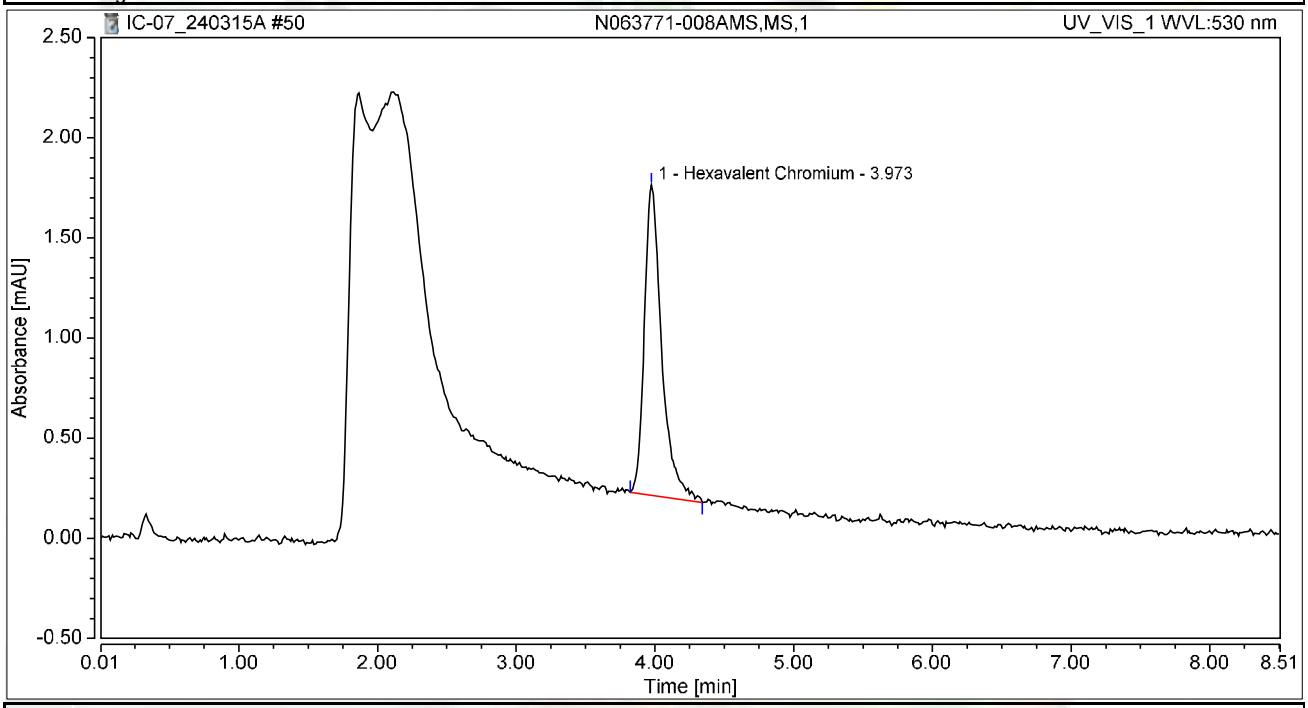
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-008AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 17:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

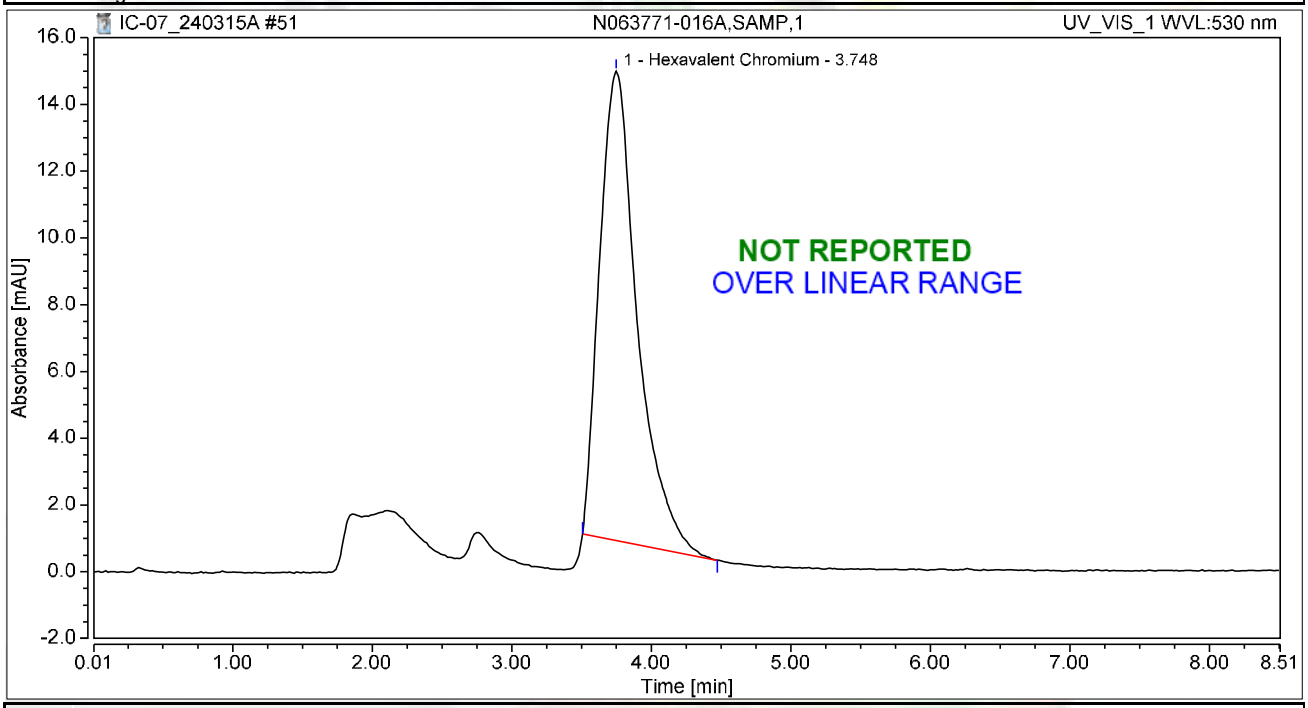
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.225	1.551	100.00	100.00	1.0549
Total:			**0.225**	**1.551**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-016A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 17:11**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

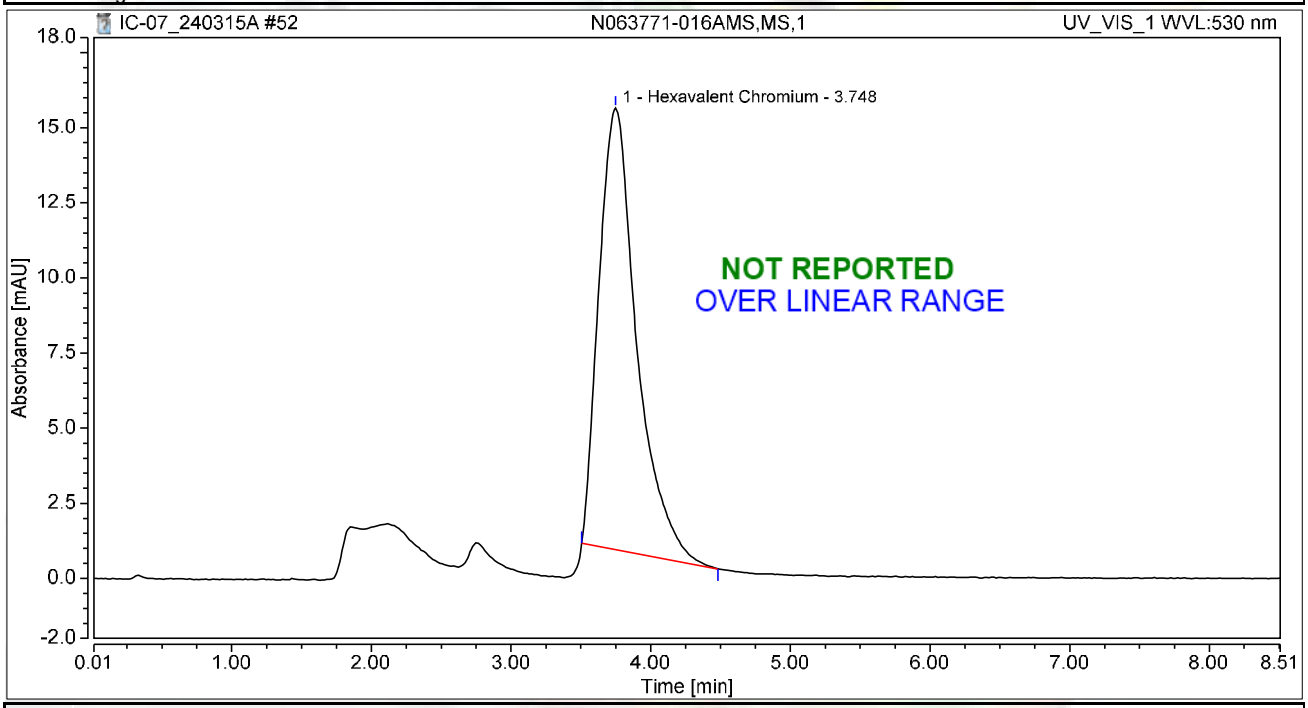
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.748	4.401	14.060	100.00	100.00	20.6778
Total:			**4.401**	**14.060**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-016AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 17:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

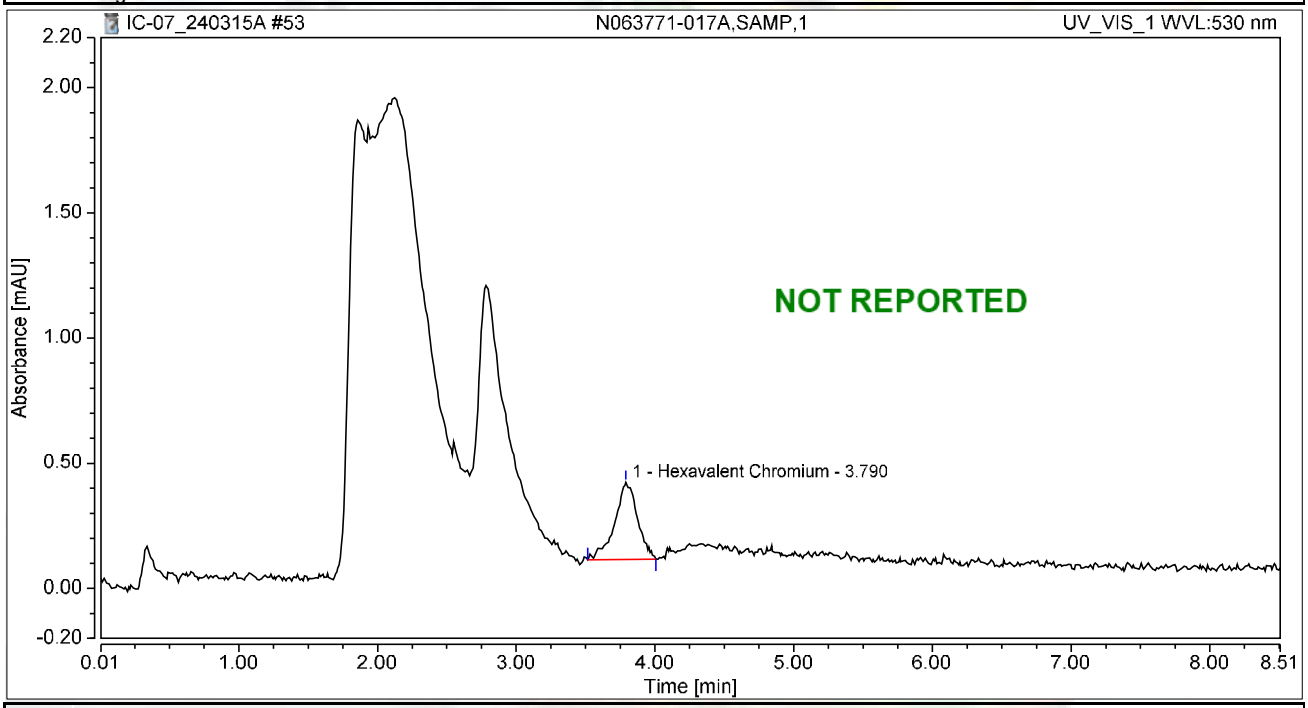
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.748	4.600	14.694	100.00	100.00	21.6128
Total:			**4.600**	**14.694**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-017A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 17:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

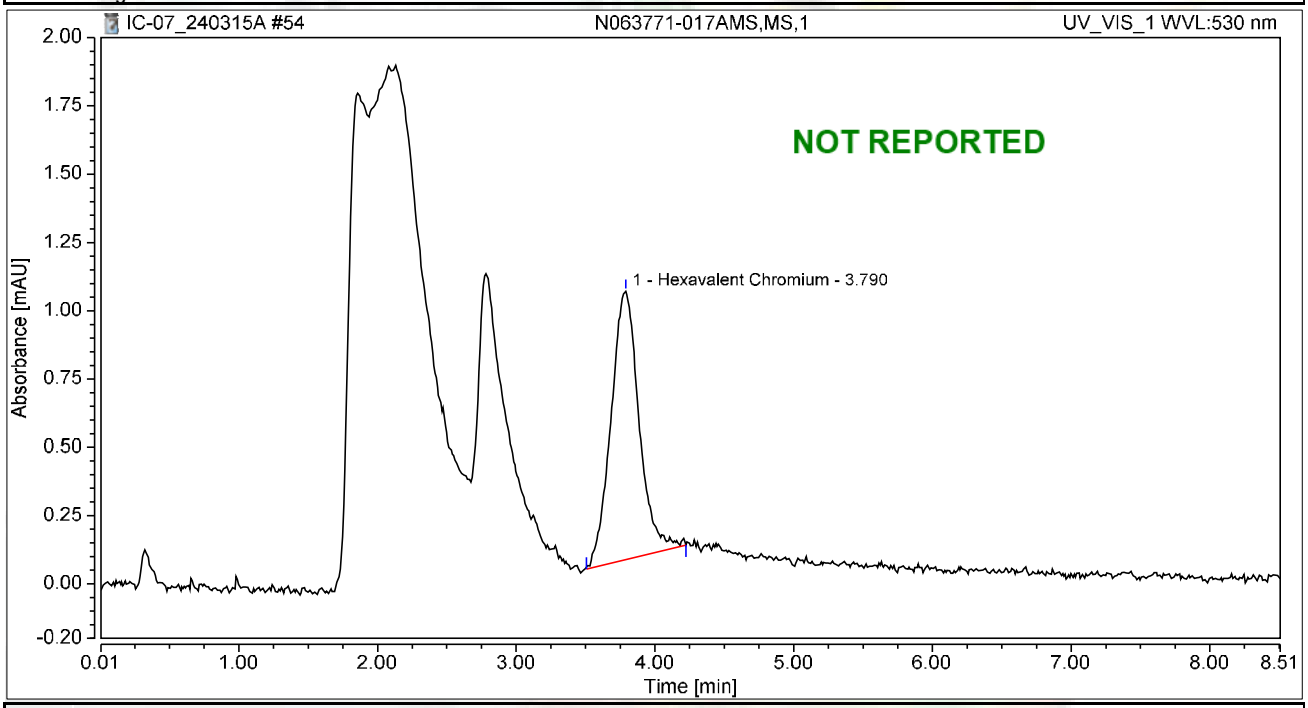
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.058	0.307	100.00	100.00	0.2746
Total:			**0.058**	**0.307**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-017AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 17:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

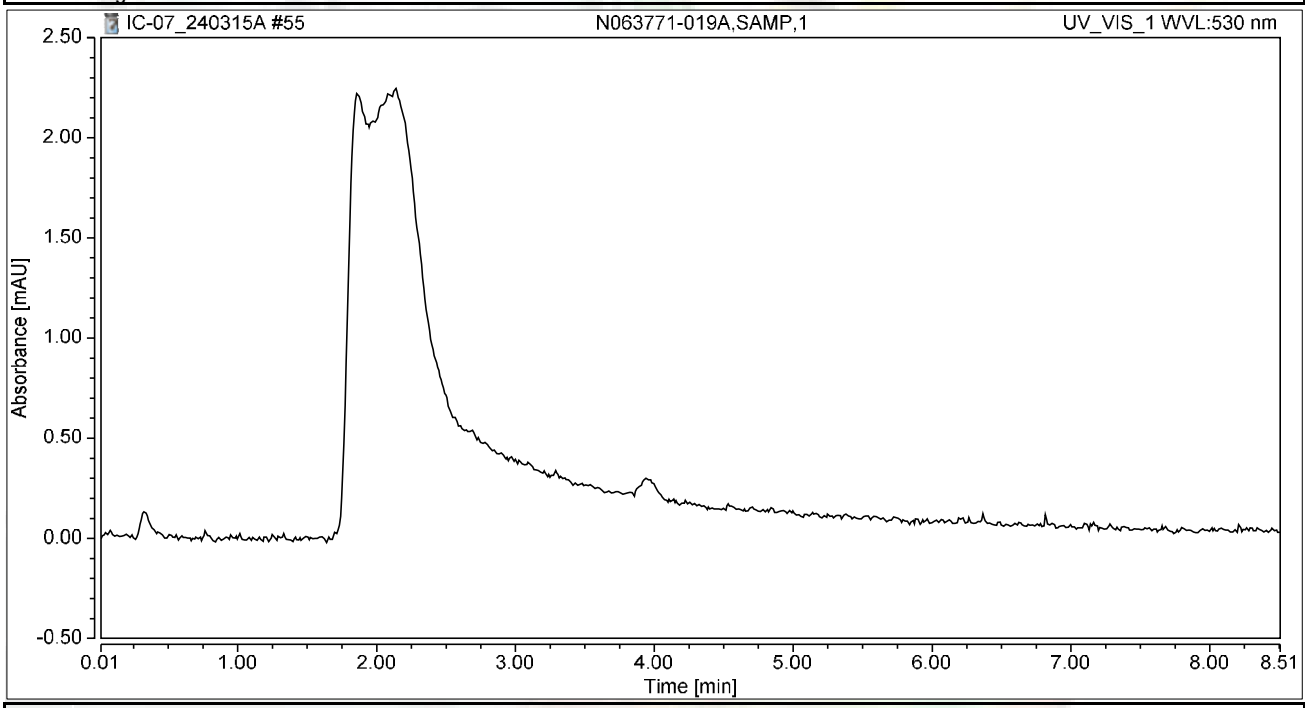
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.231	0.983	100.00	100.00	1.0840
Total:			**0.231**	**0.983**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-019A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 17:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

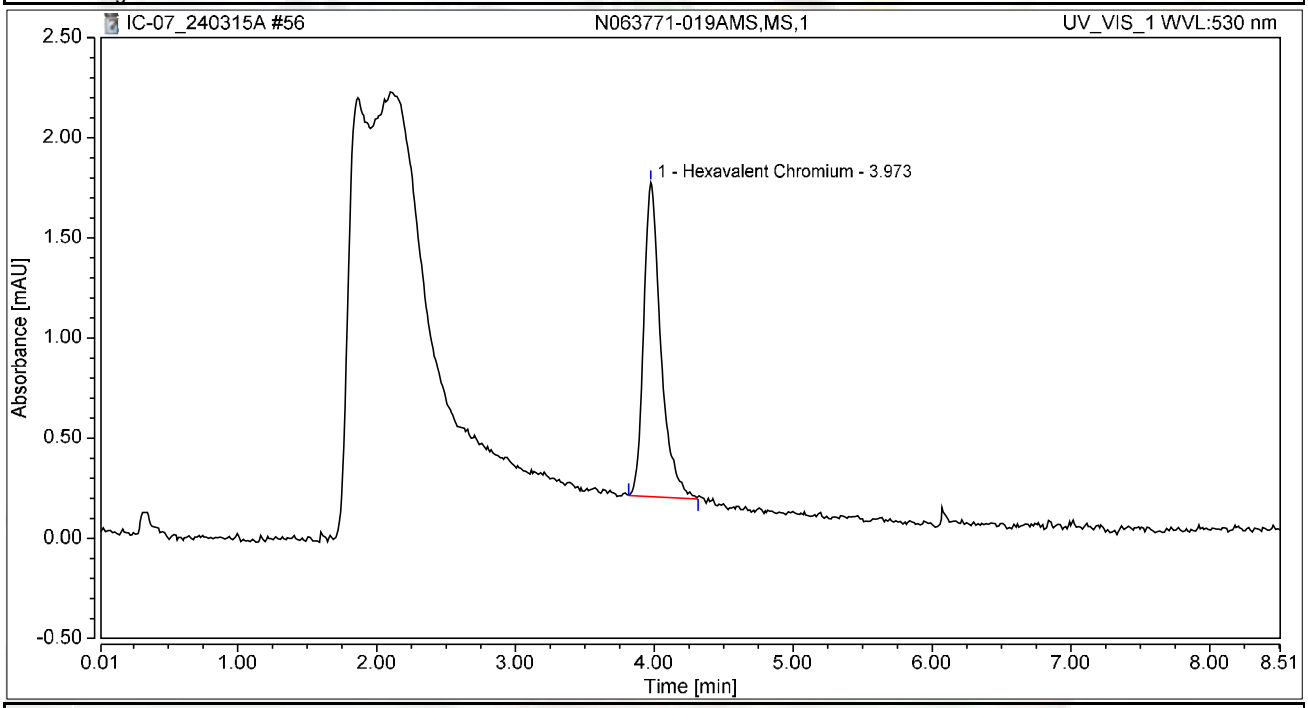
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-019AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 17:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

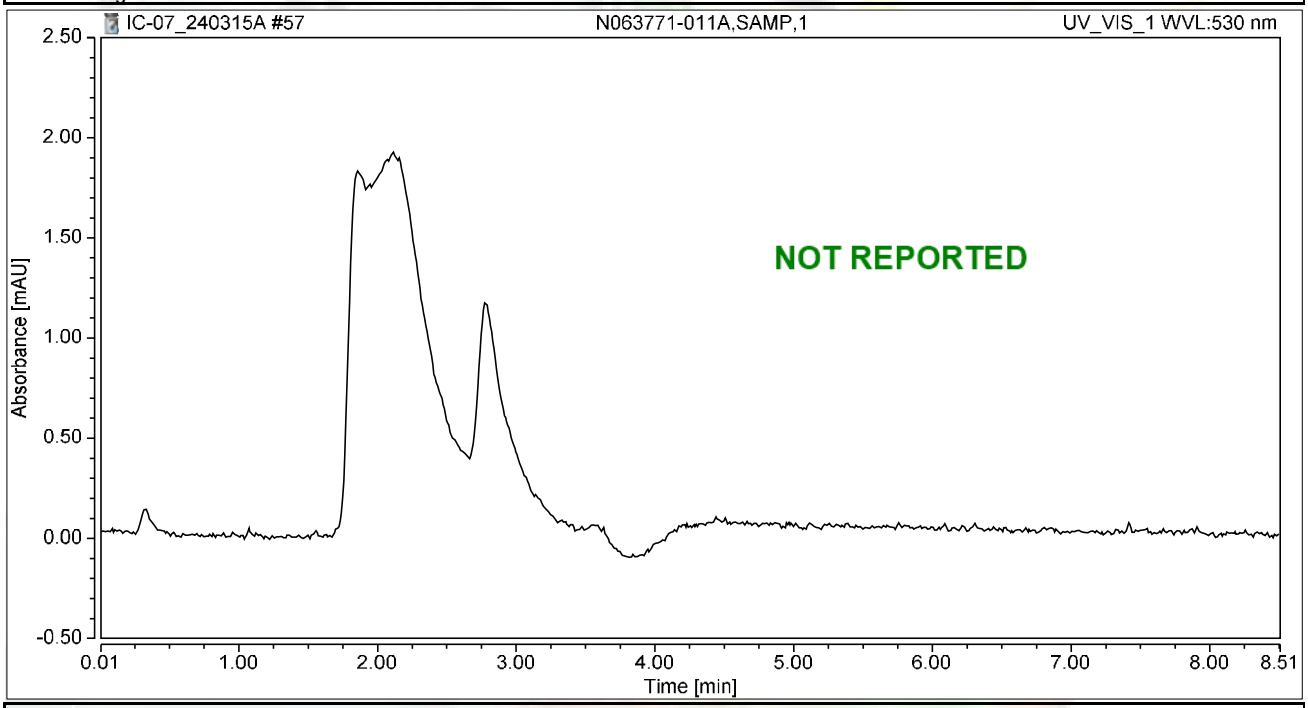
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.224	1.568	100.00	100.00	1.0544
Total:			**0.224**	**1.568**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-011A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 18:08**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

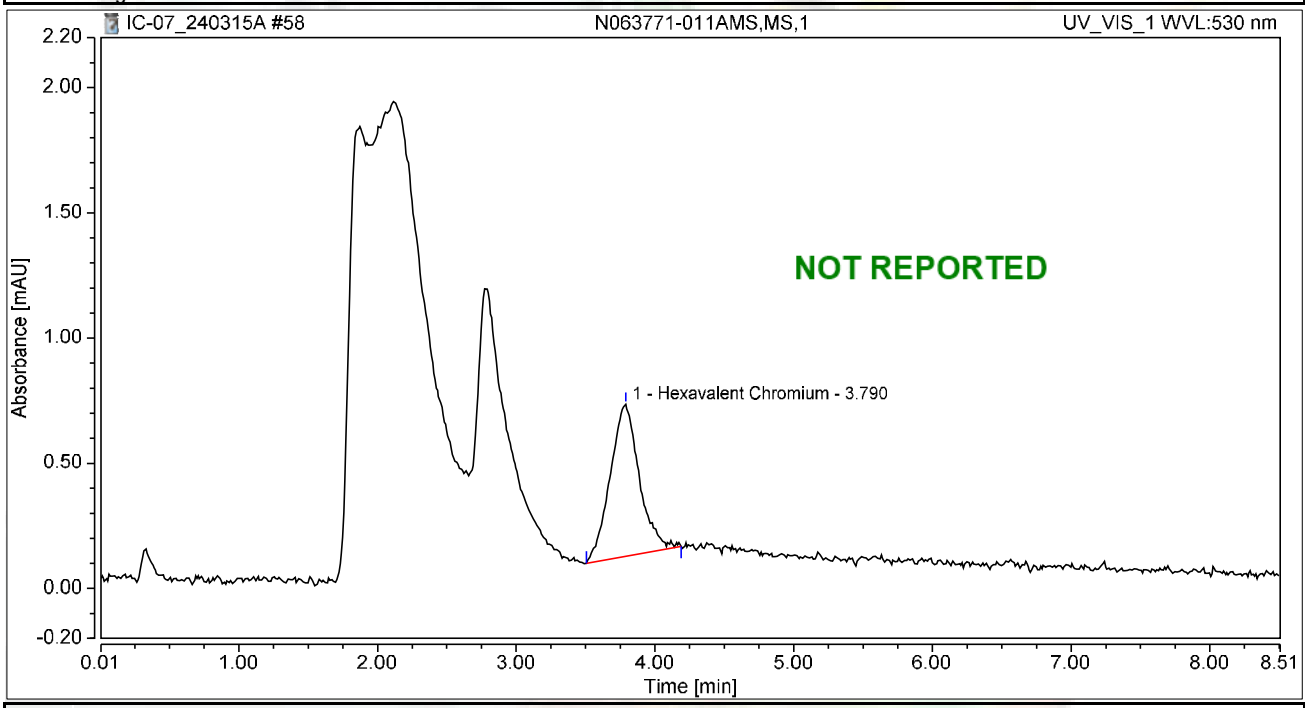
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-011AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 18:17**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

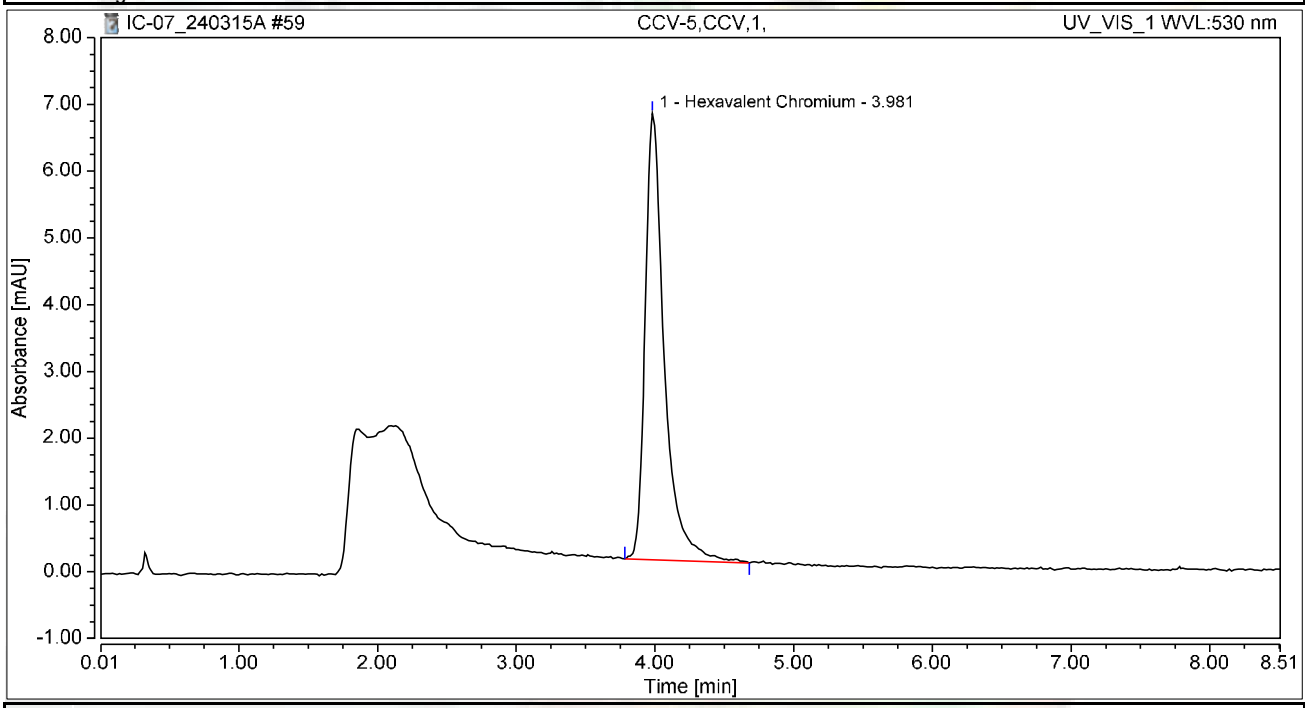
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.148	0.607	100.00	100.00	0.6959
Total:			**0.148**	**0.607**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 18:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

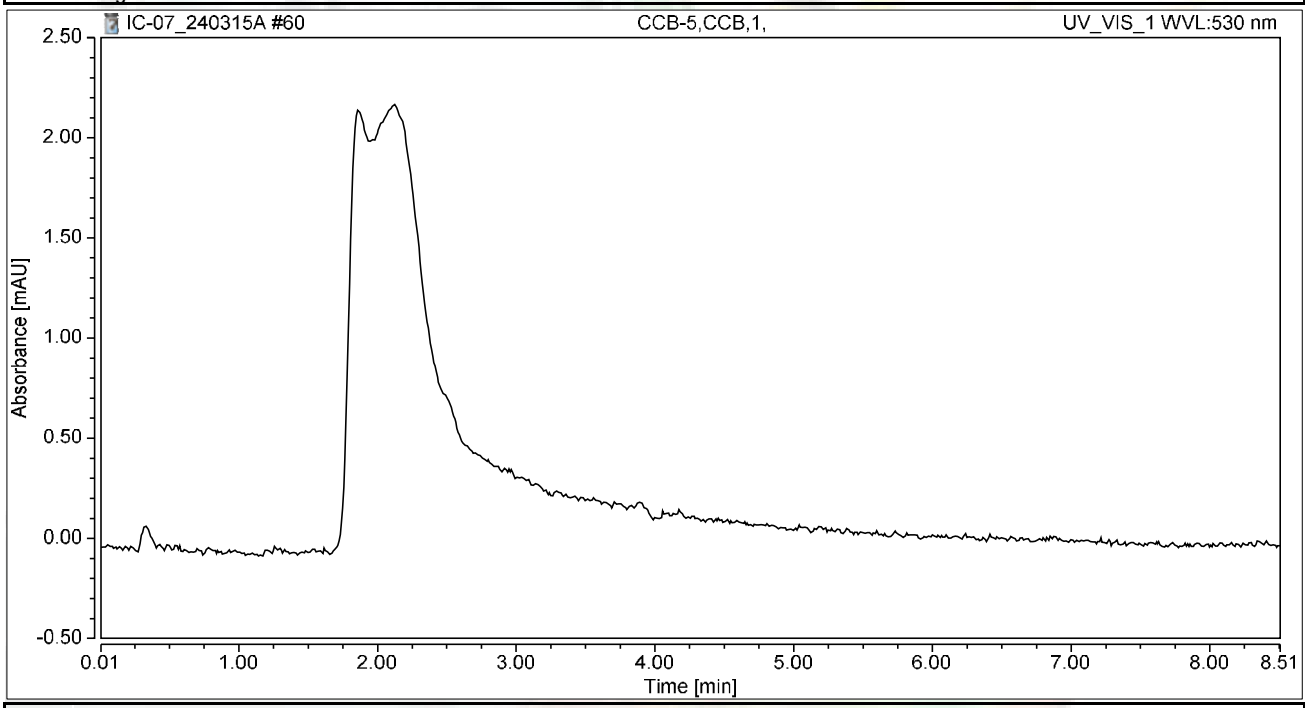
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.072	6.686	100.00	100.00	5.0371
Total:			**1.072**	**6.686**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 18:36**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

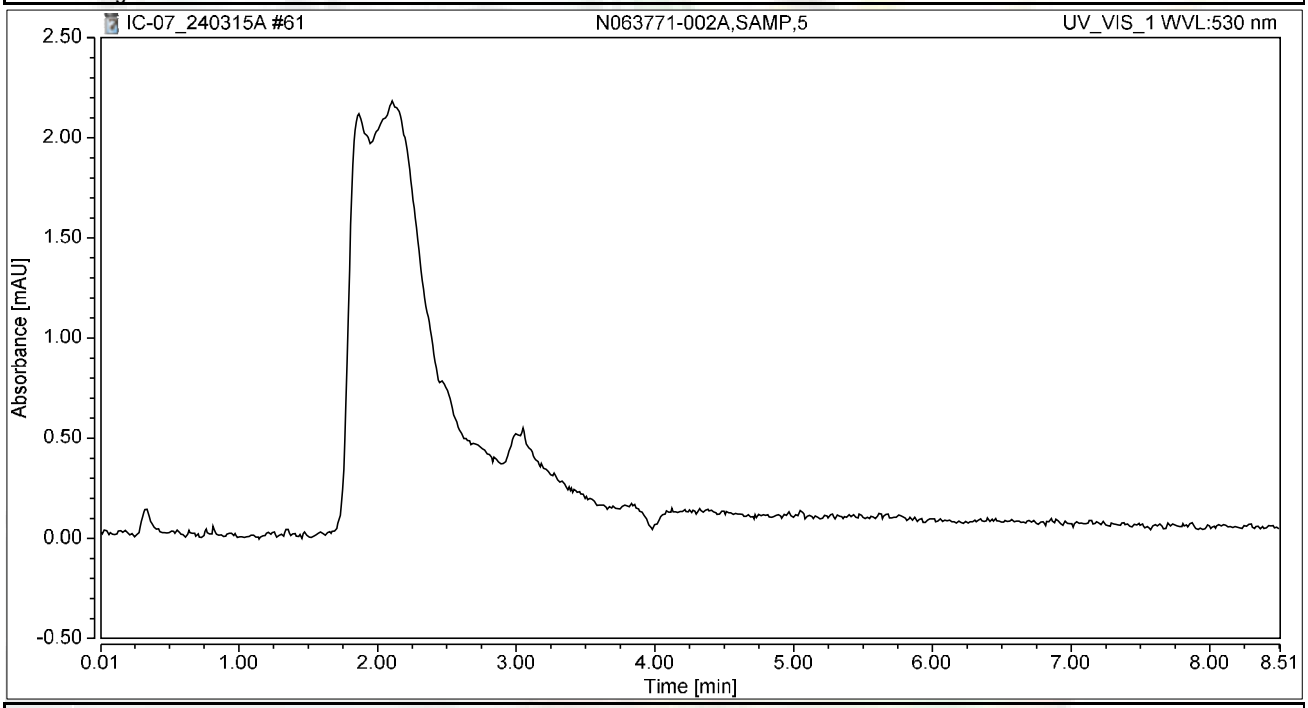
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-002A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 18:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

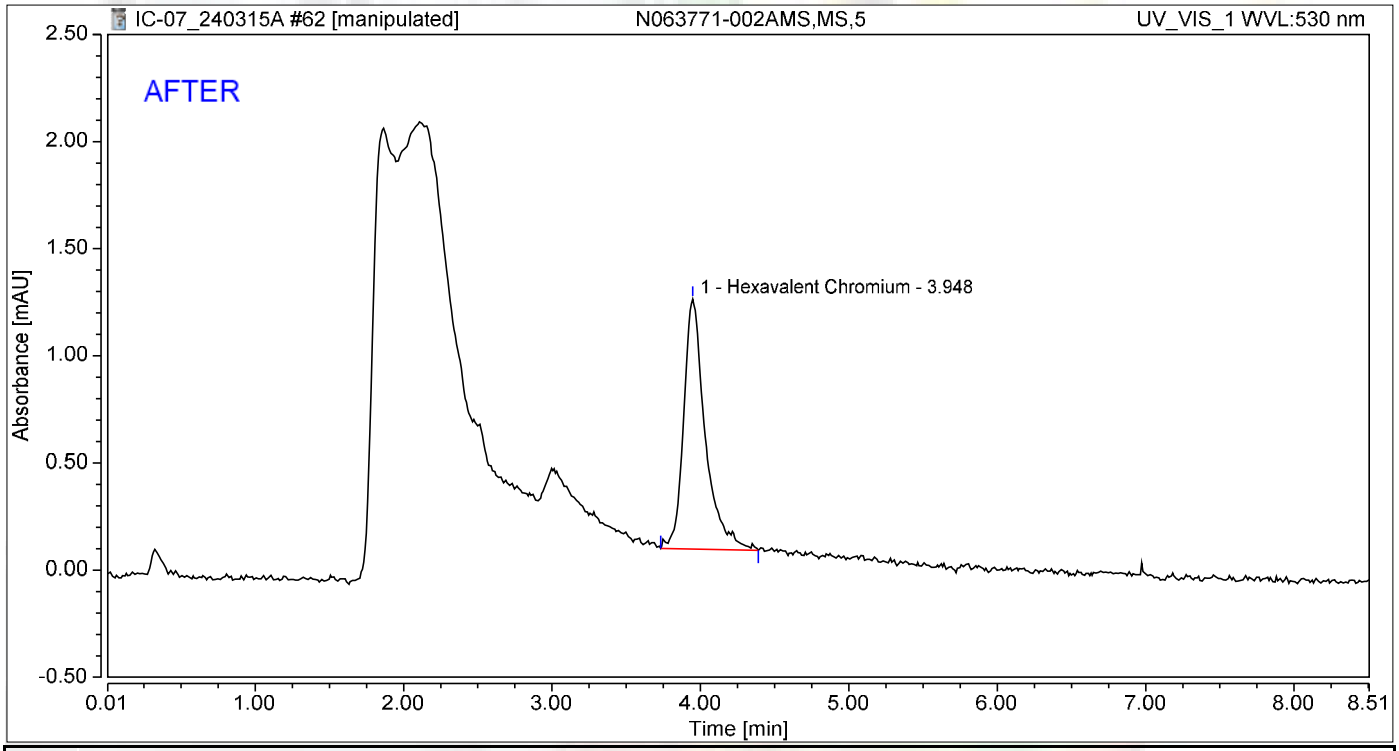
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 18:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.197	1.167	100.00	100.00	0.9270
Total:			**0.197**	**1.167**	**100.00**	**100.00**	

Reviewed by:

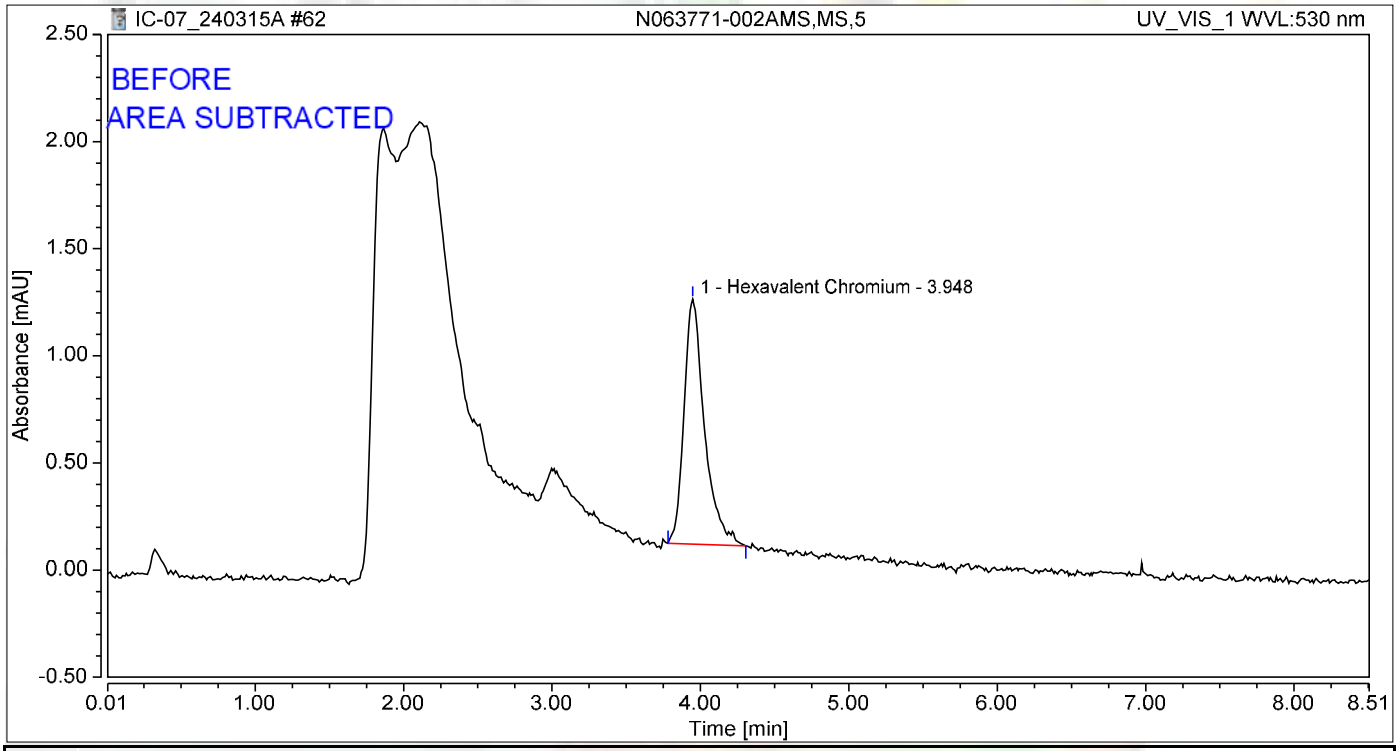
dMocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063771-002AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 18:55**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

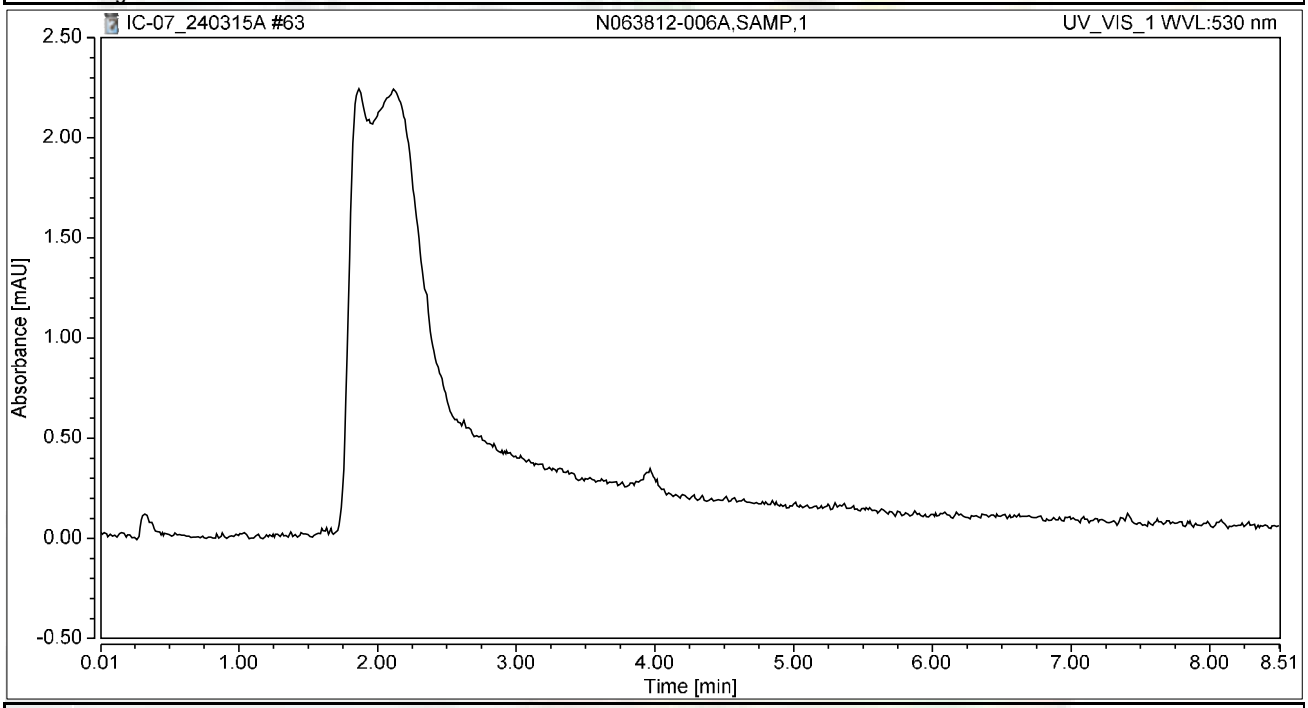
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.183	1.144	100.00	100.00	0.8594
Total:			**0.183**	**1.144**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-006A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 19:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

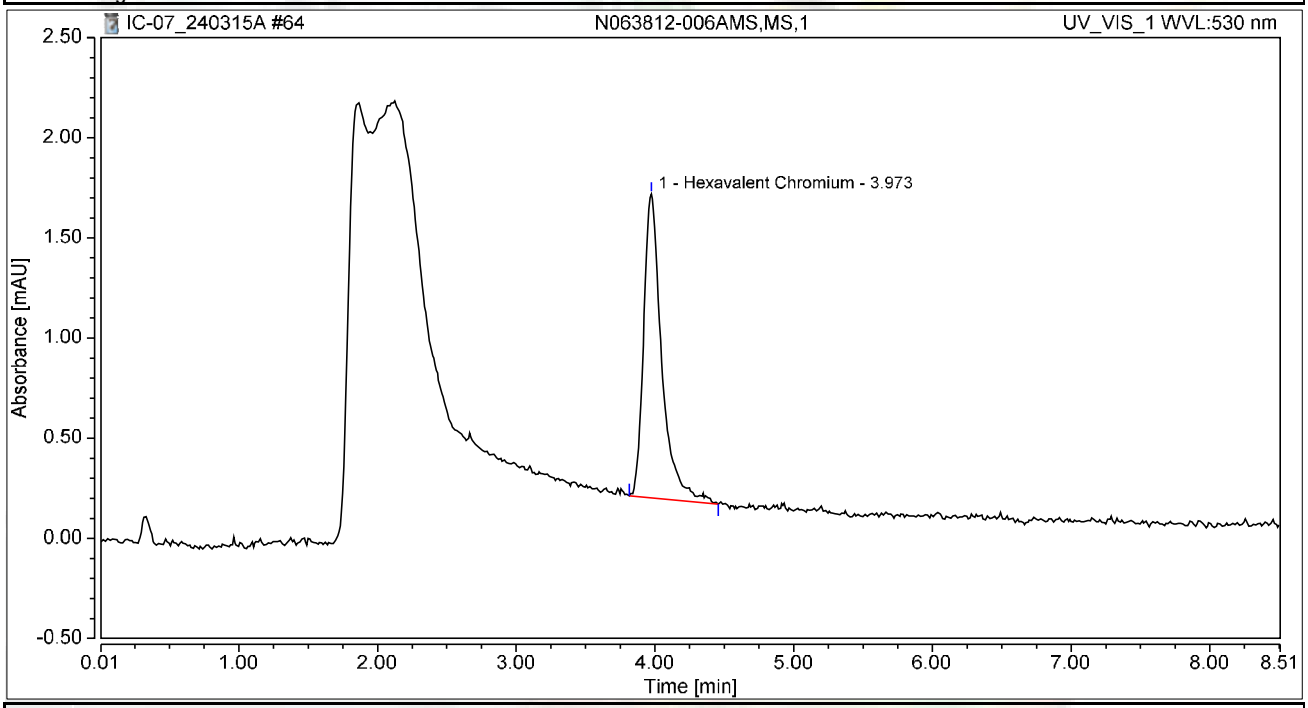
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-006AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 19:14**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

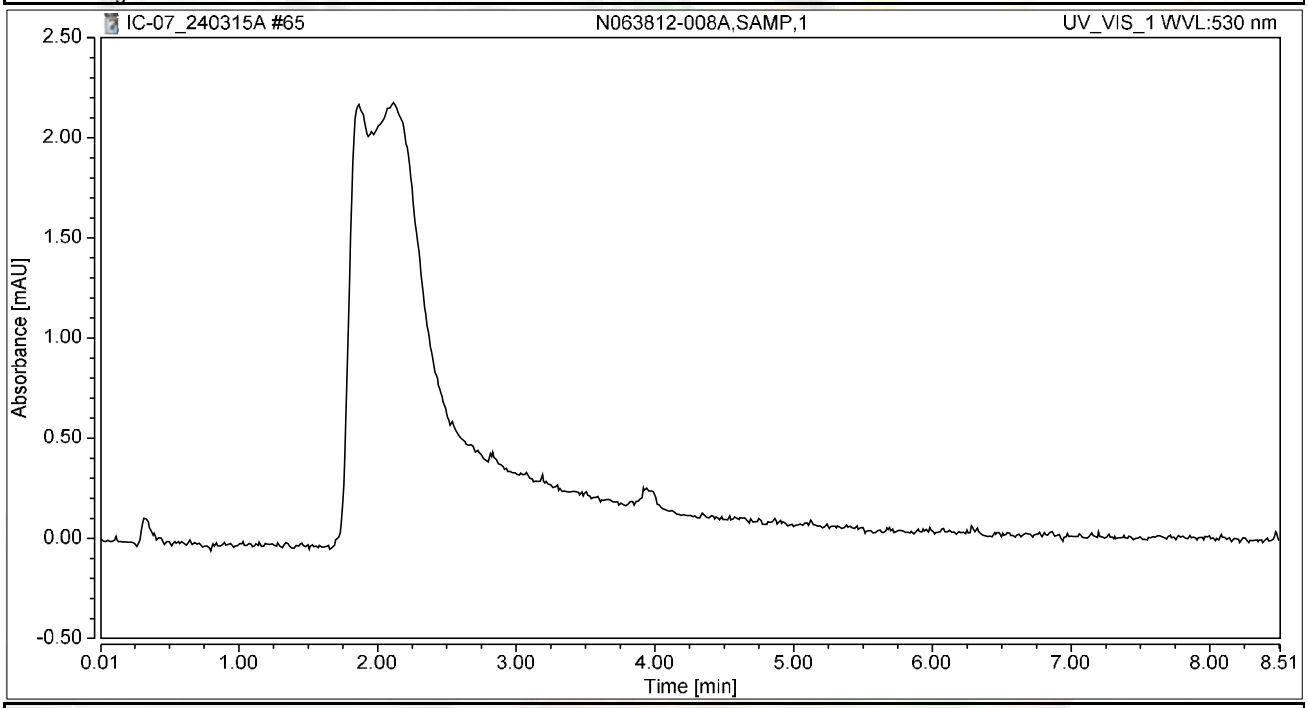
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.229	1.516	100.00	100.00	1.0759
Total:			**0.229**	**1.516**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-008A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 19:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

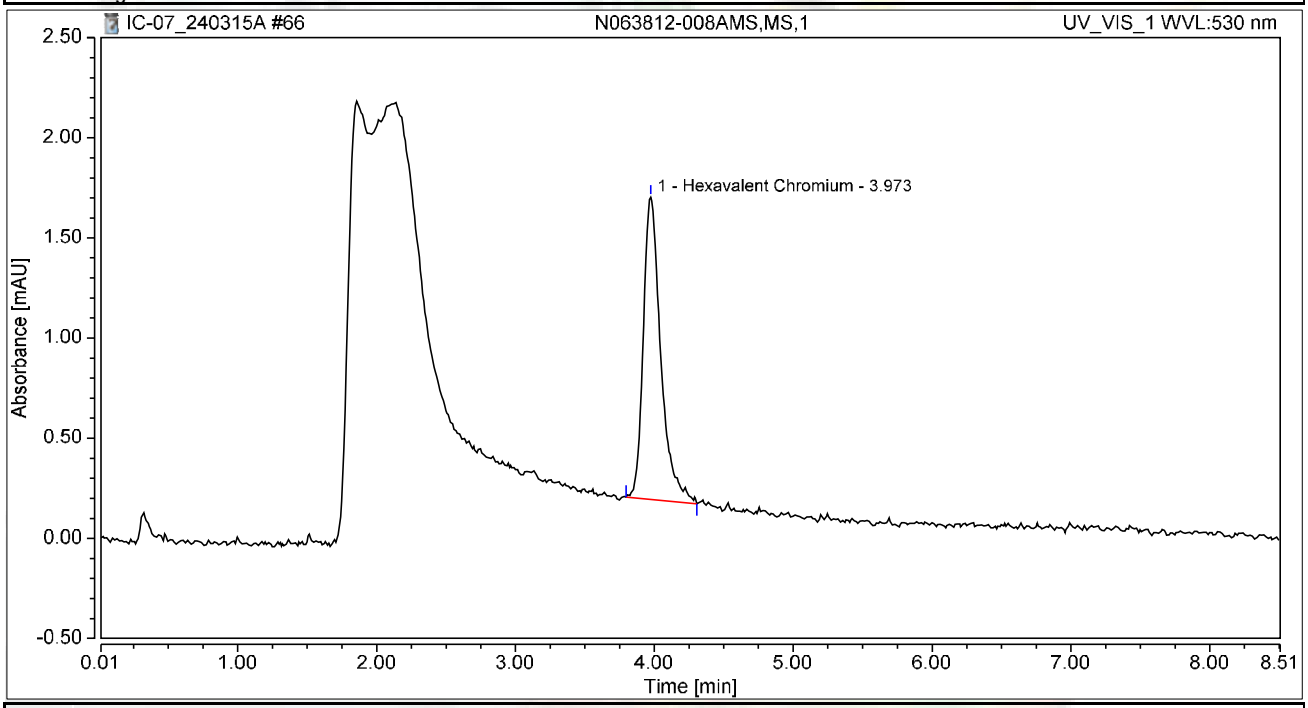
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-008AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 19:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

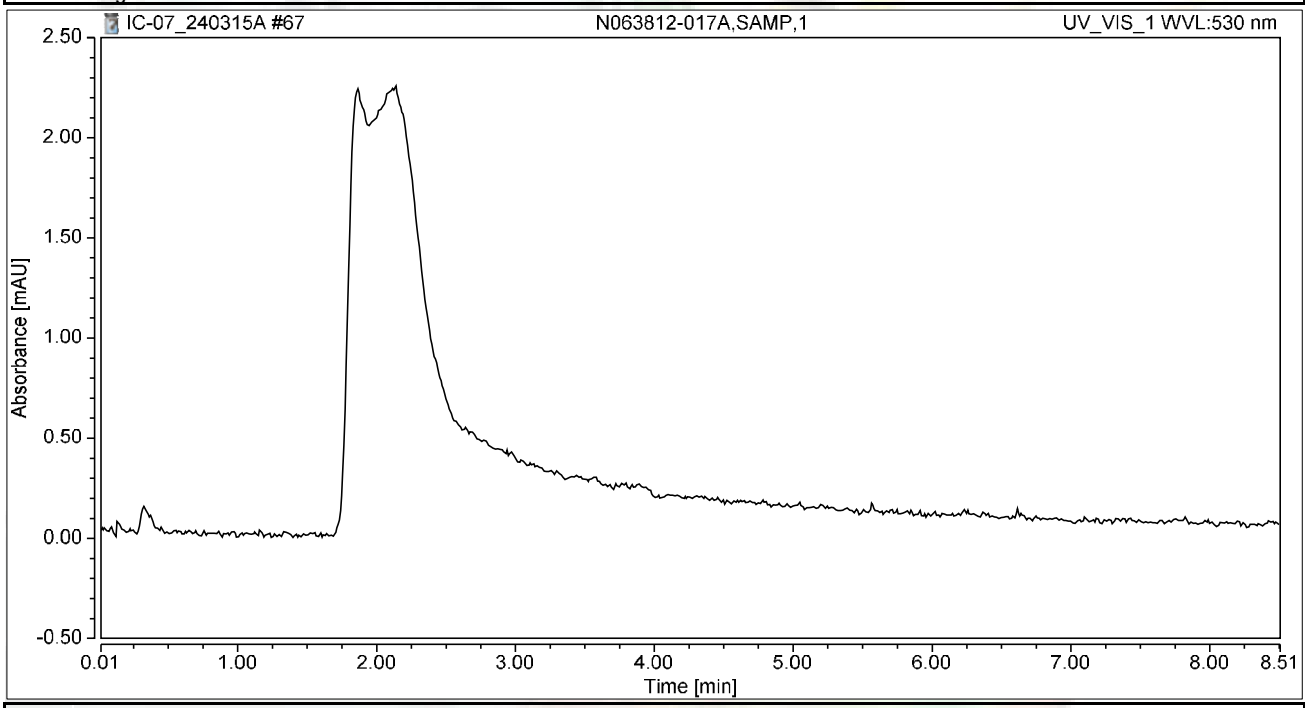
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.221	1.510	100.00	100.00	1.0366
Total:			**0.221**	**1.510**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-017A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 19:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

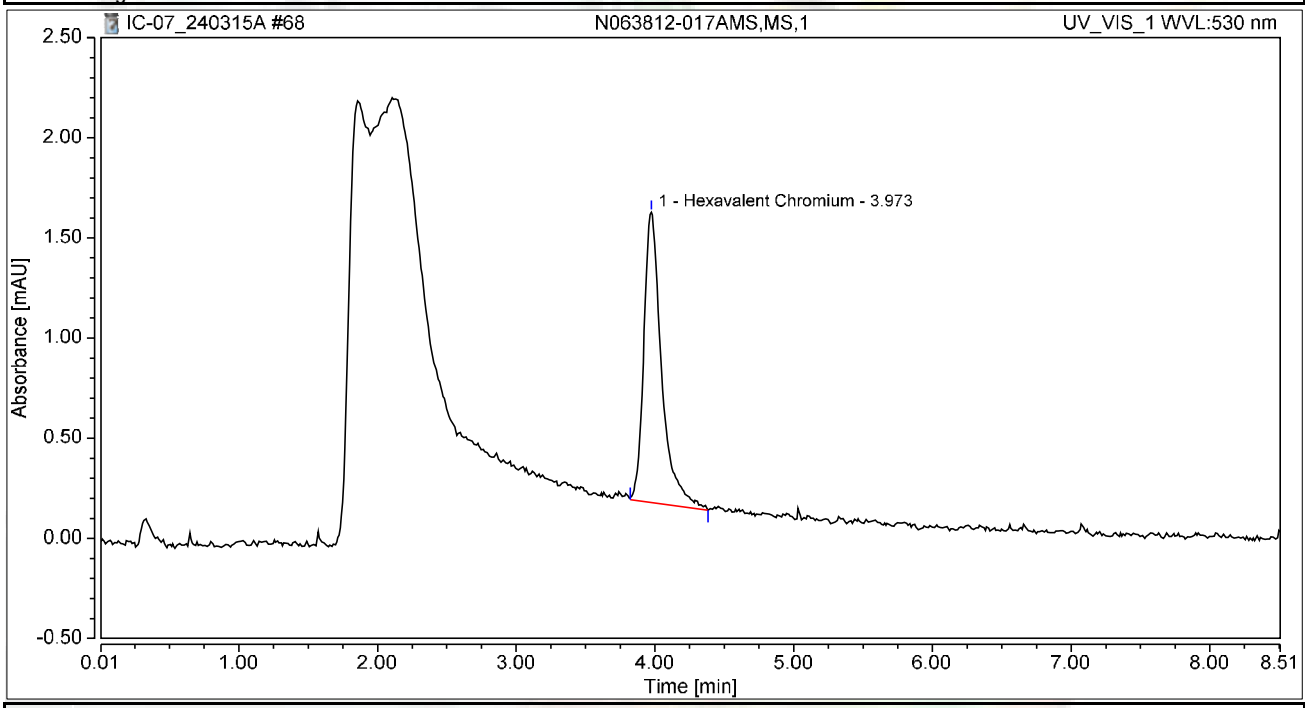
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-017AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 19:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

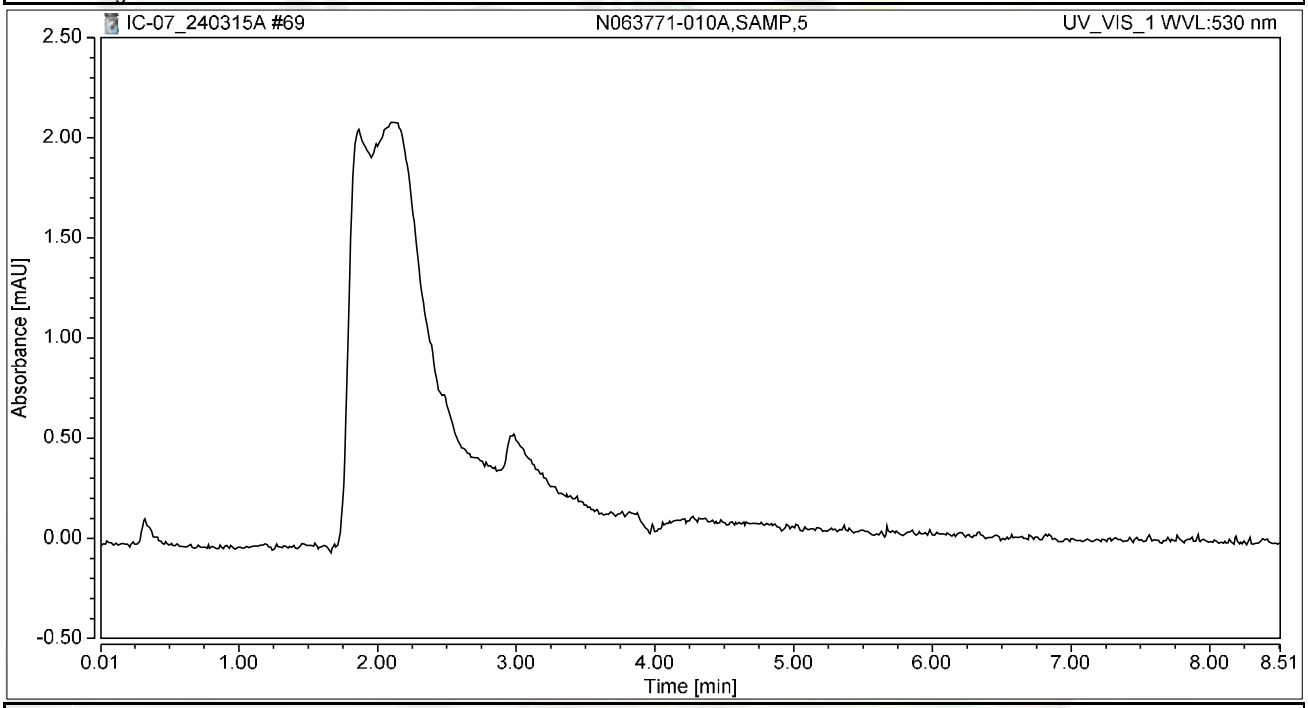
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.215	1.449	100.00	100.00	1.0098
Total:			**0.215**	**1.449**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-010A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

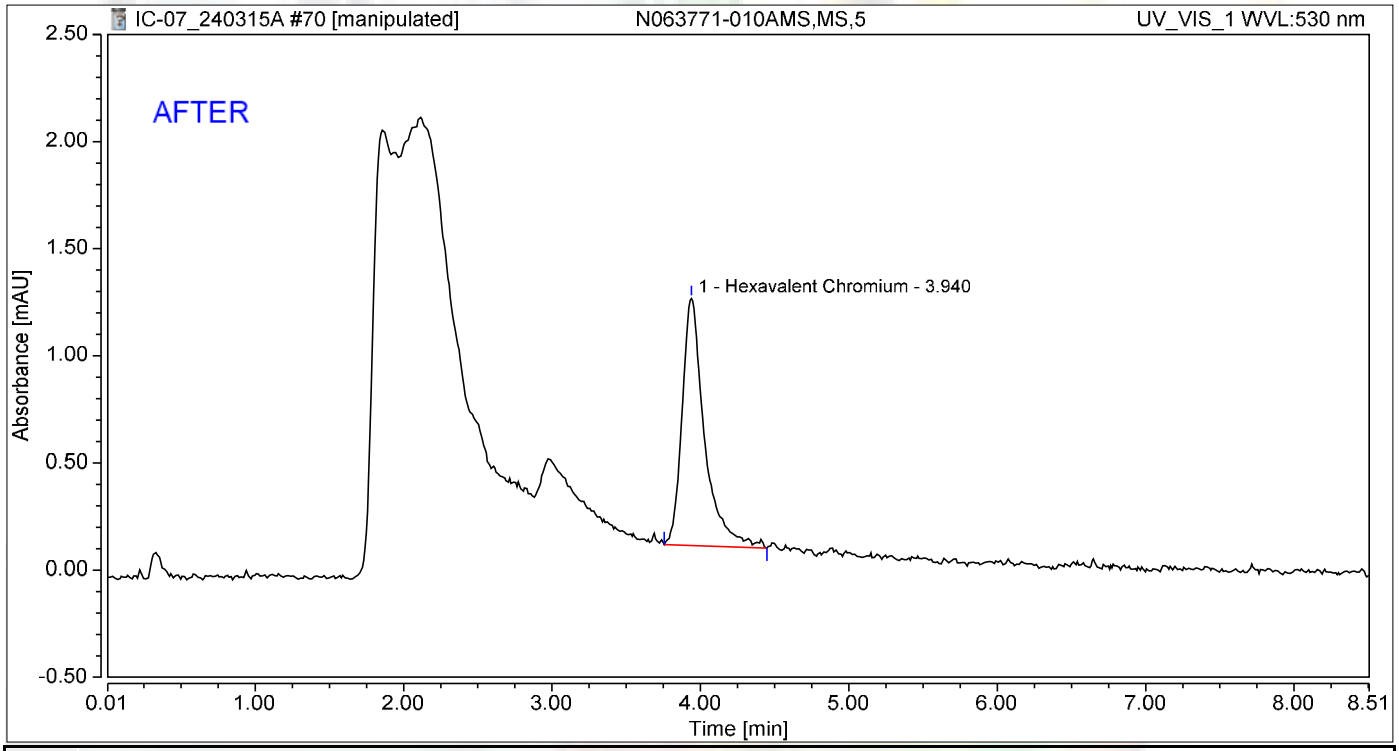
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-010AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.202	1.153	100.00	100.00	0.9506
Total:			**0.202**	**1.153**	**100.00**	**100.00**	

Reviewed by:

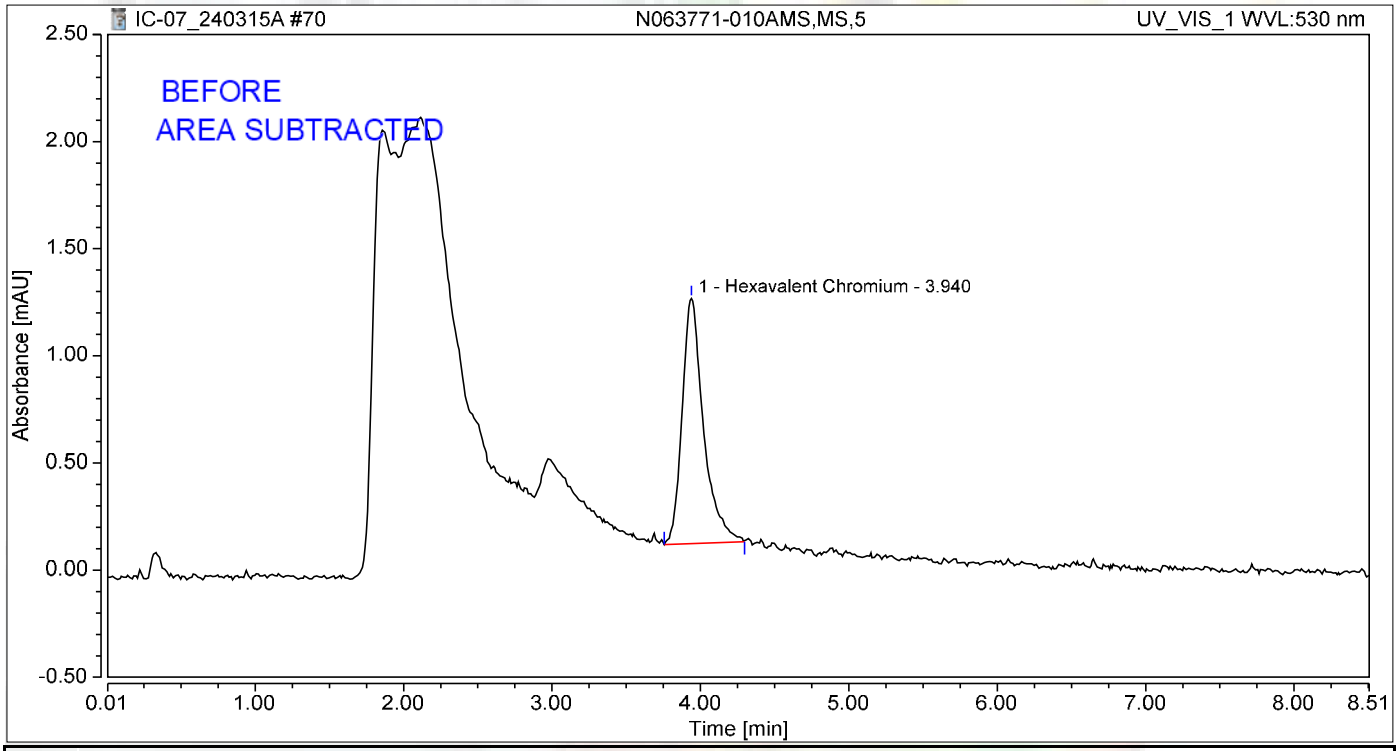
dMocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063771-010AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

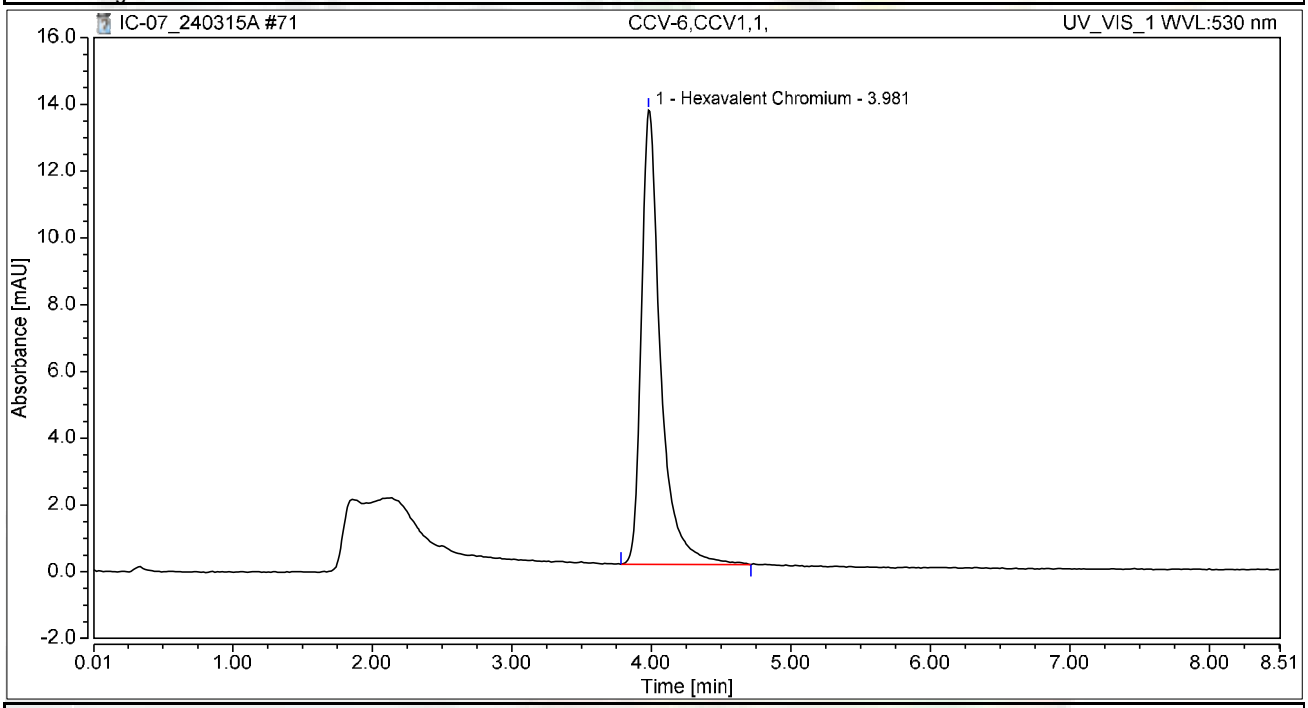
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.191	1.144	100.00	100.00	0.8977
Total:			**0.191**	**1.144**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

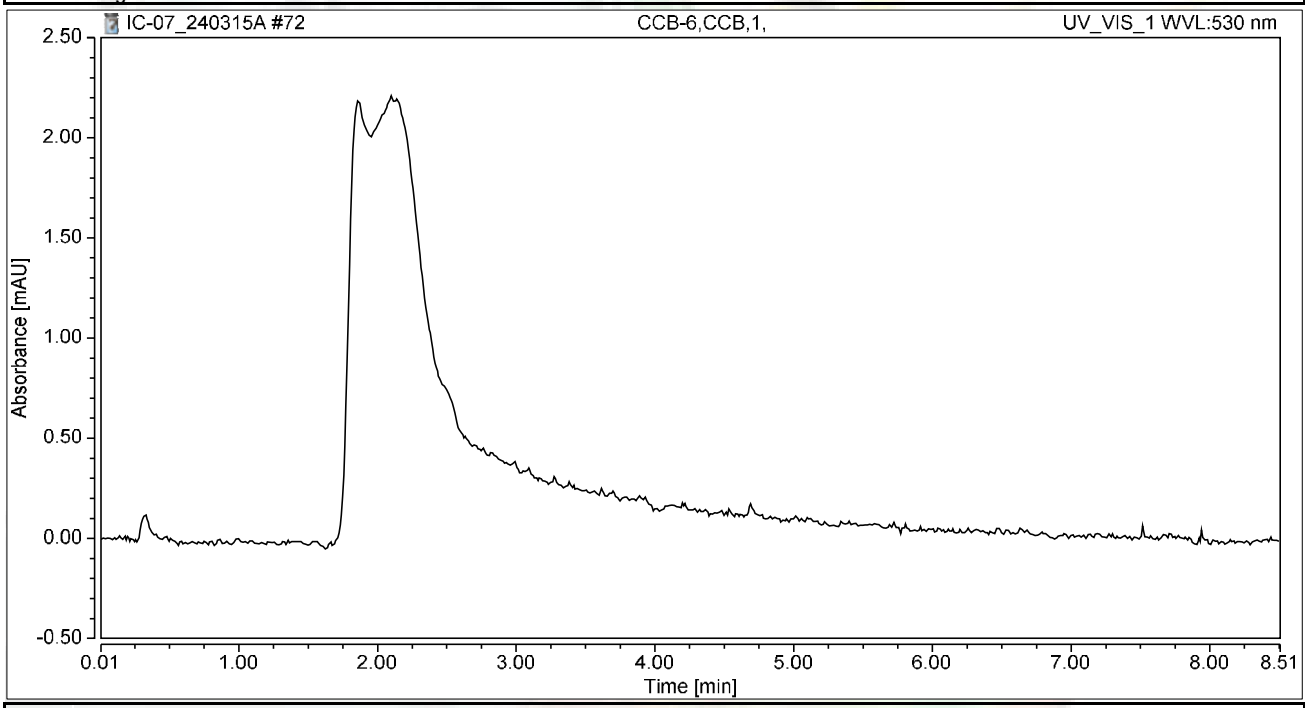
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	2.177	13.608	100.00	100.00	10.2280
Total:			**2.177**	**13.608**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

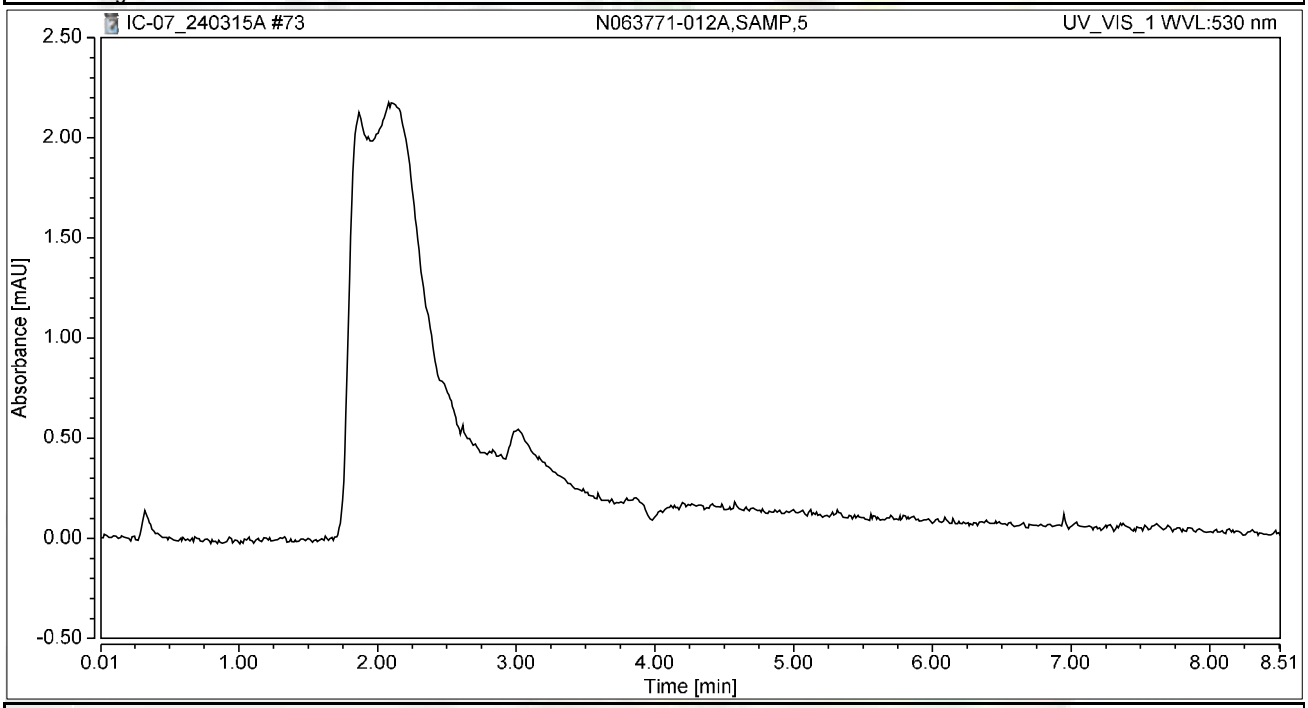
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-012A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

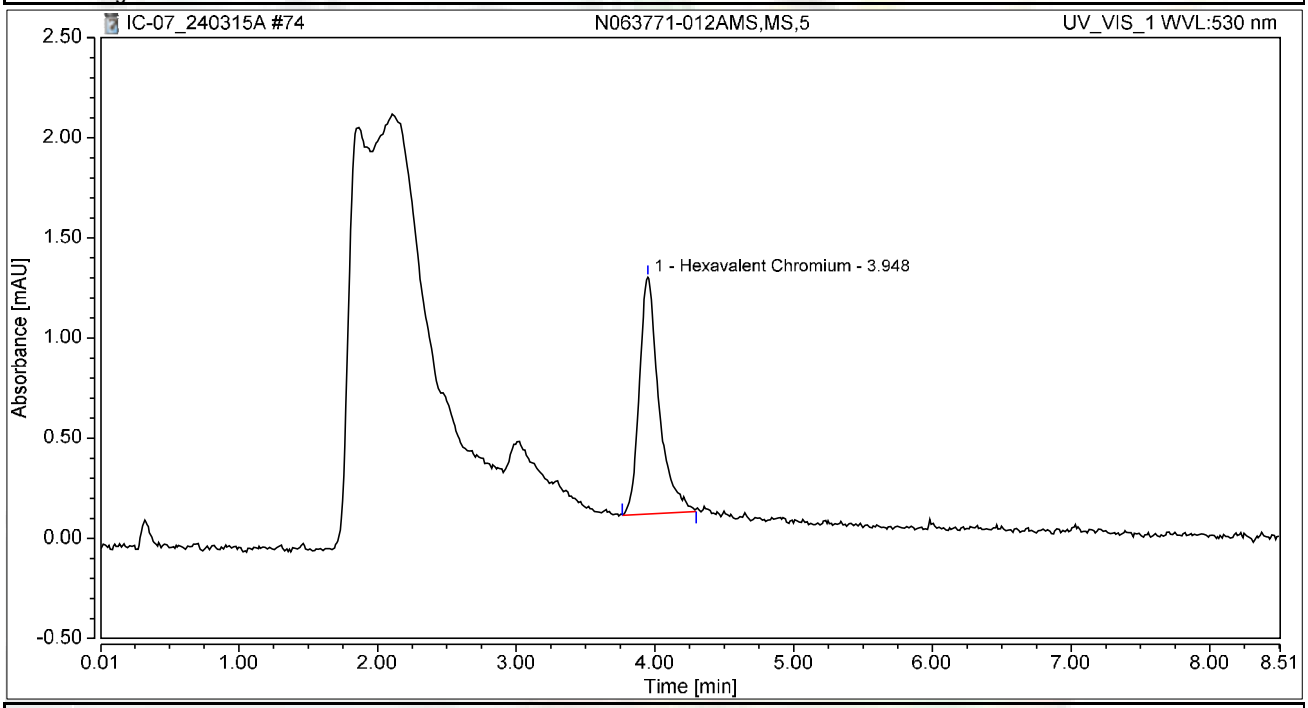
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-012AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

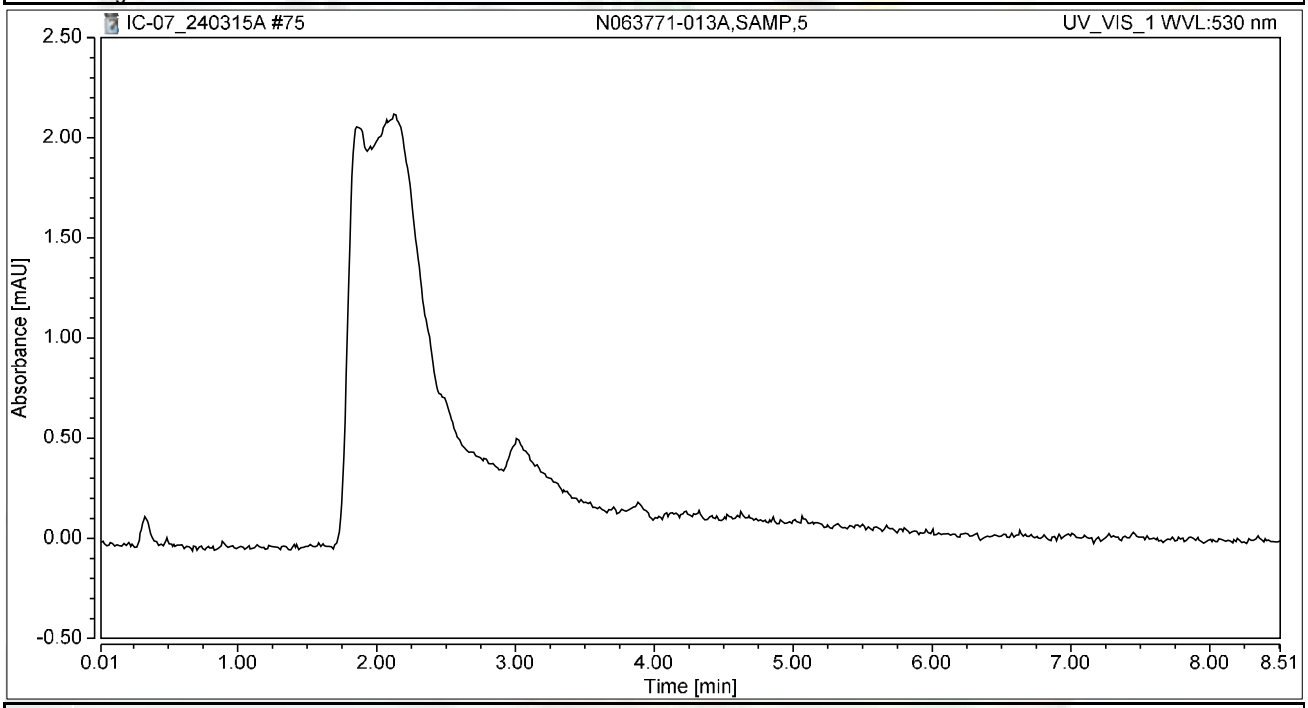
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.194	1.182	100.00	100.00	0.9112
Total:			**0.194**	**1.182**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-013A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 20:58**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

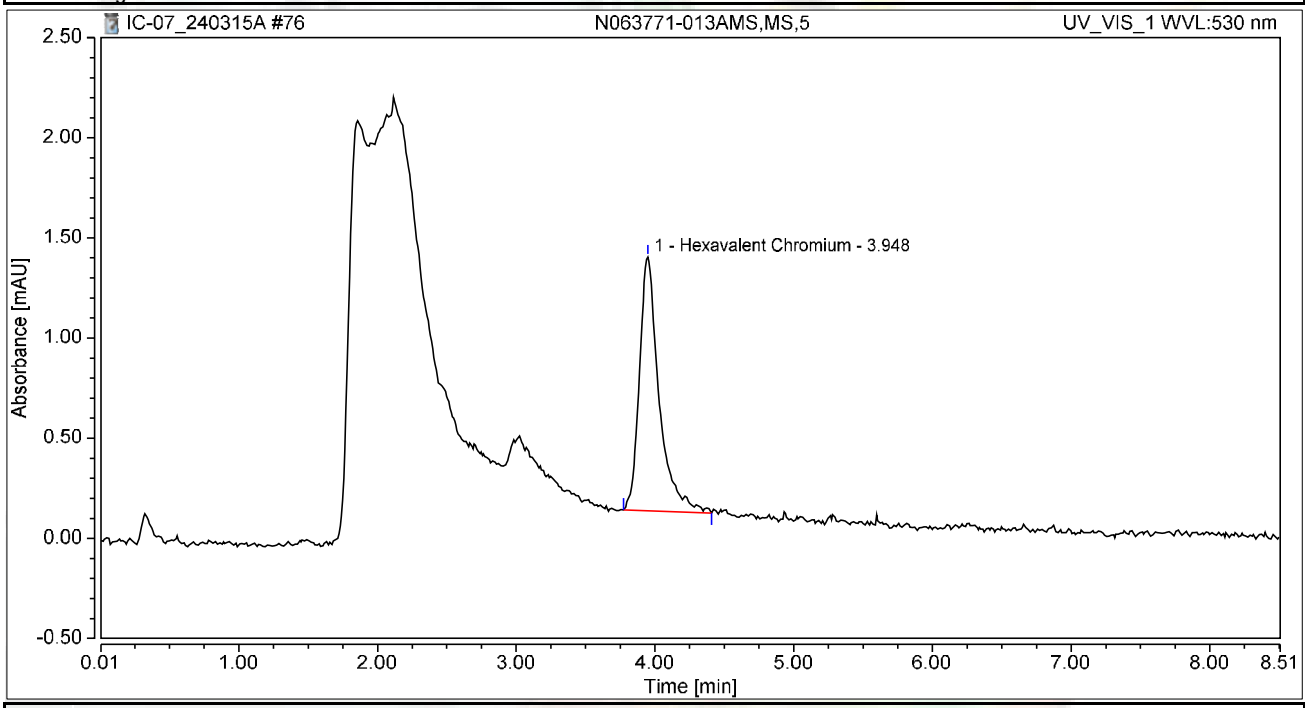
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-013AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 21:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

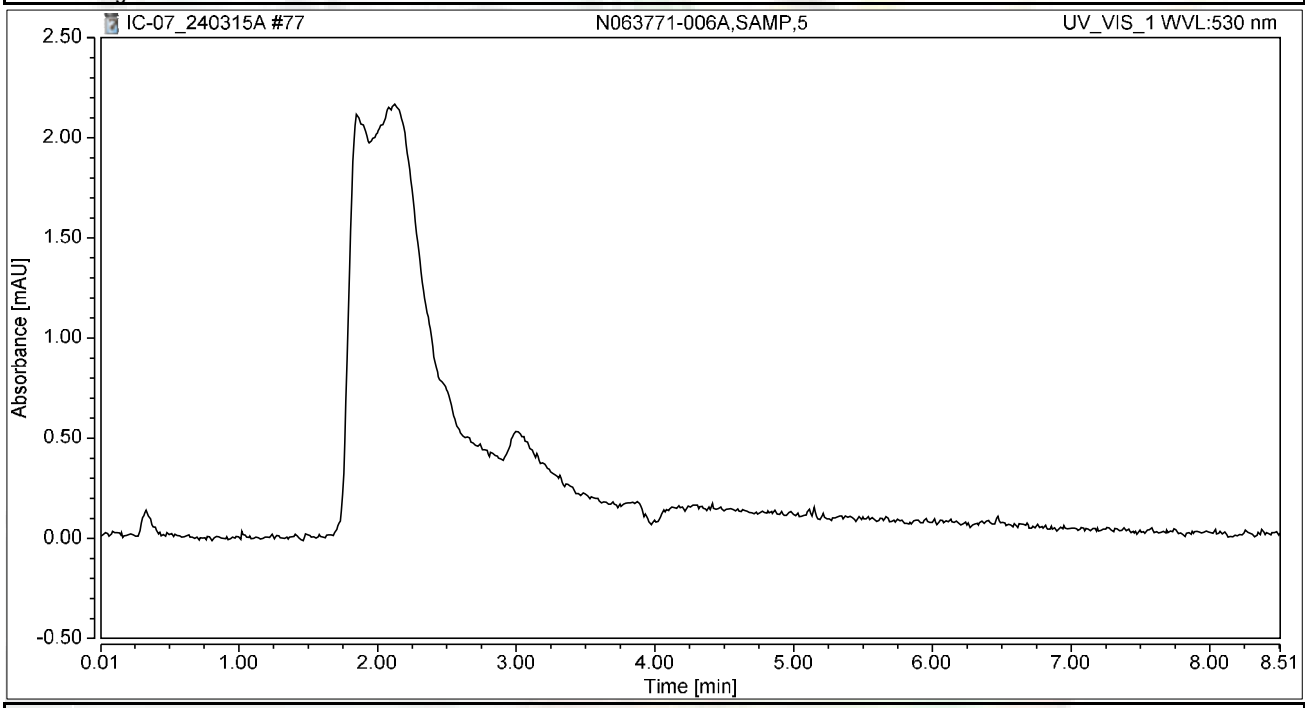
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.208	1.268	100.00	100.00	0.9776
Total:			**0.208**	**1.268**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-006A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 21:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

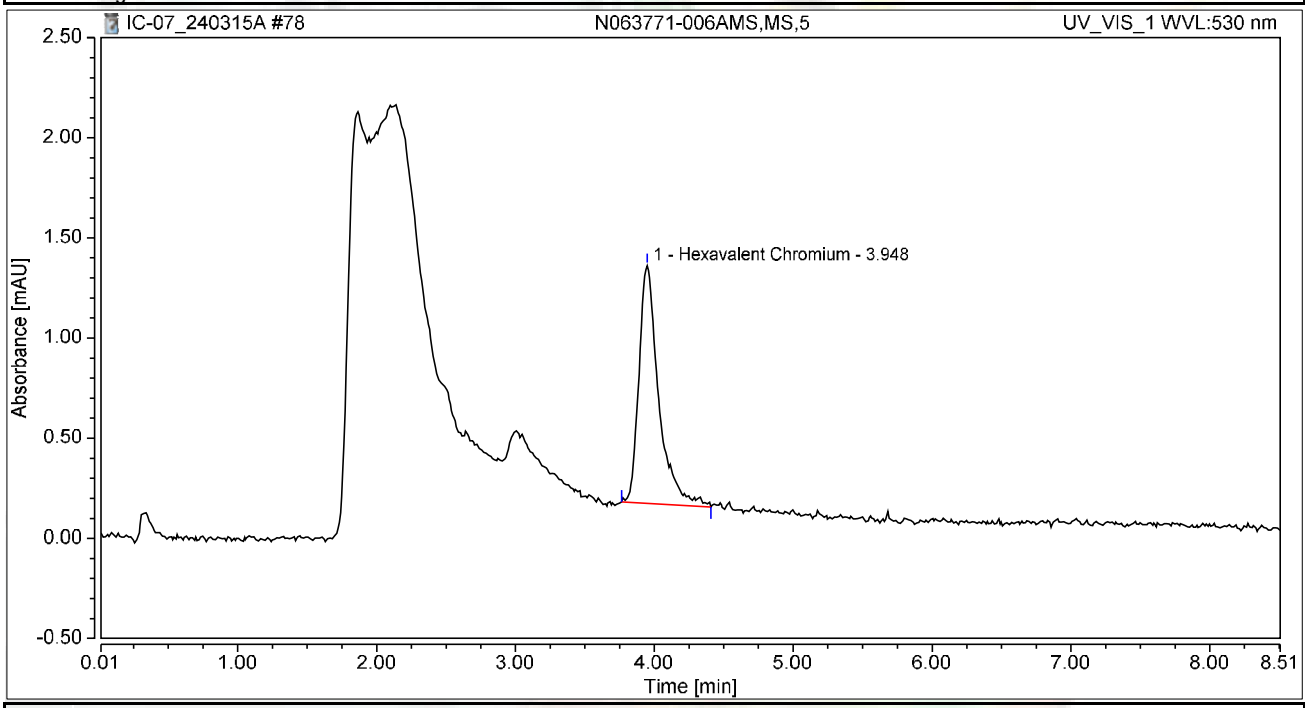
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-006AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 21:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

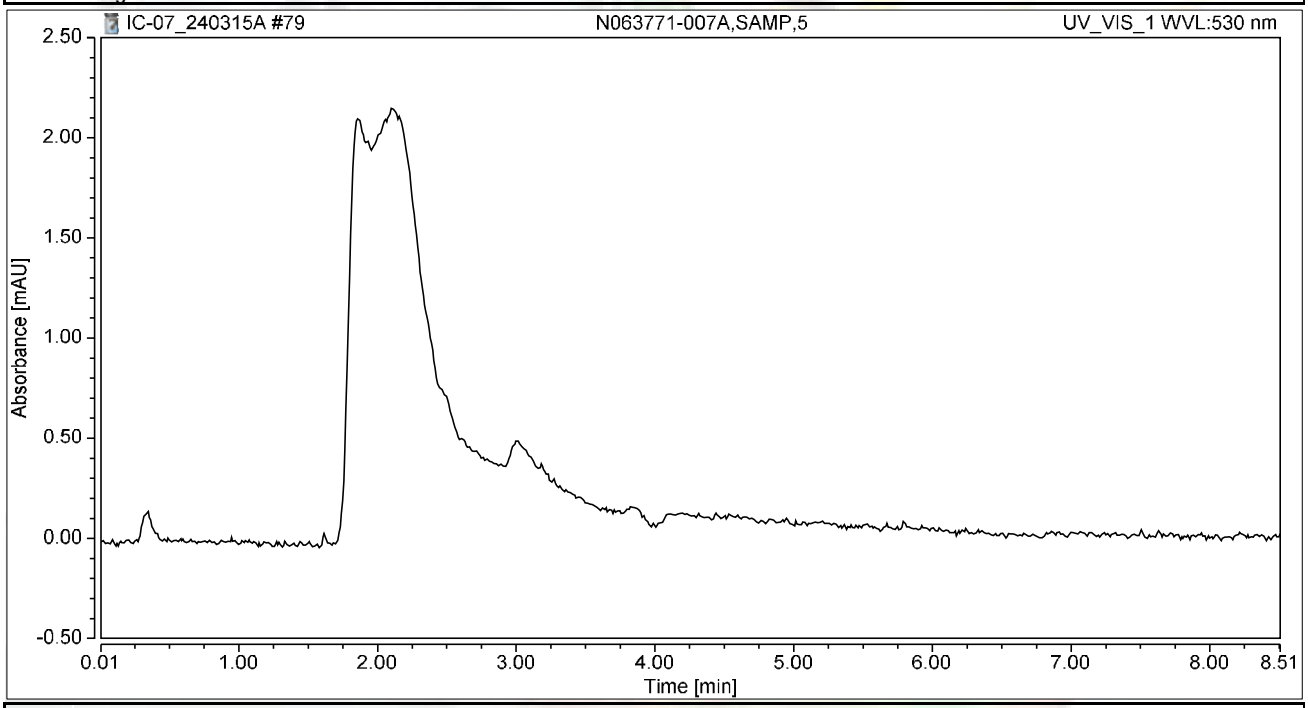
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.196	1.188	100.00	100.00	0.9229
Total:			**0.196**	**1.188**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-007A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 21:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

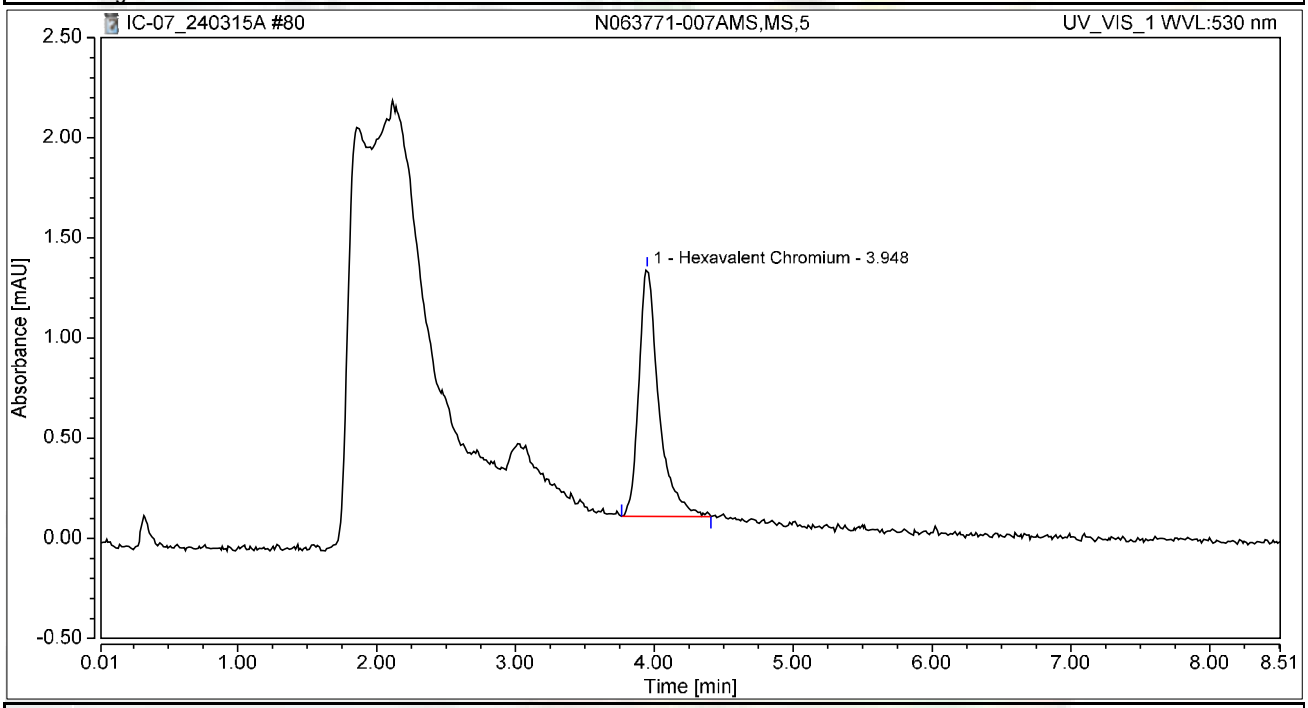
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-007AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 21:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

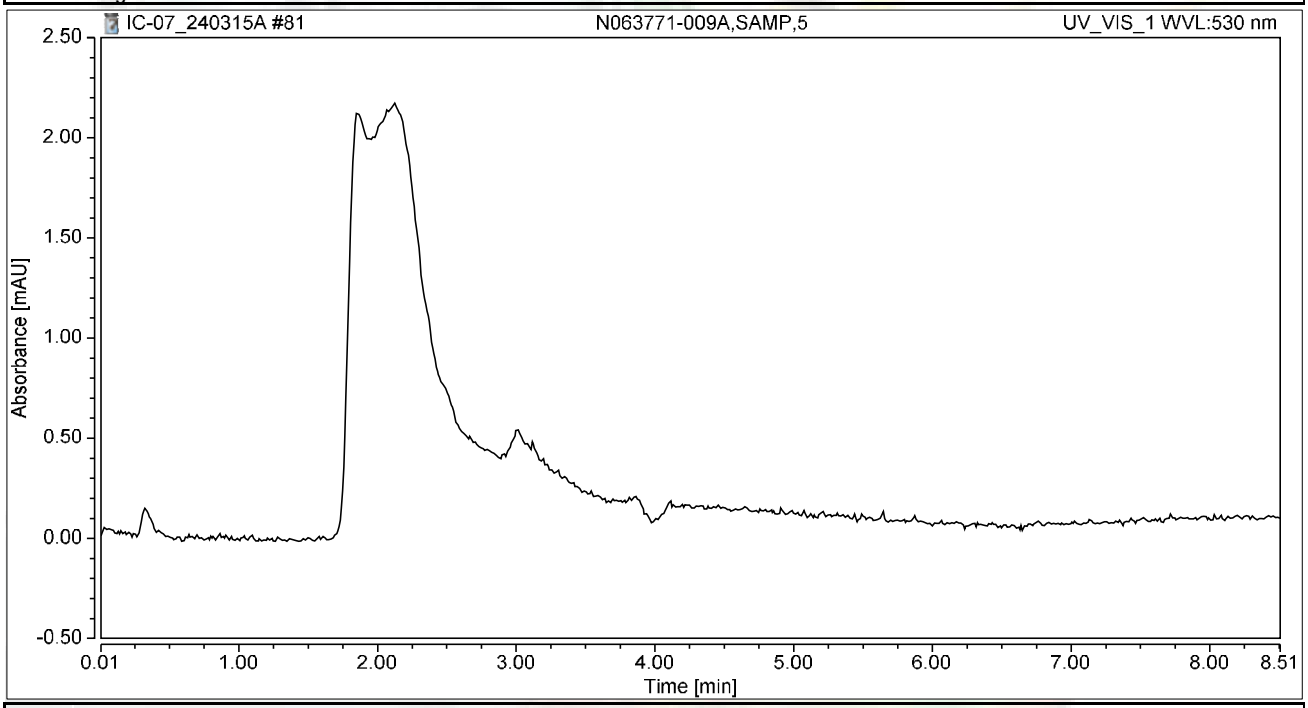
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.207	1.235	100.00	100.00	0.9730
Total:			**0.207**	**1.235**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-009A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 21:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

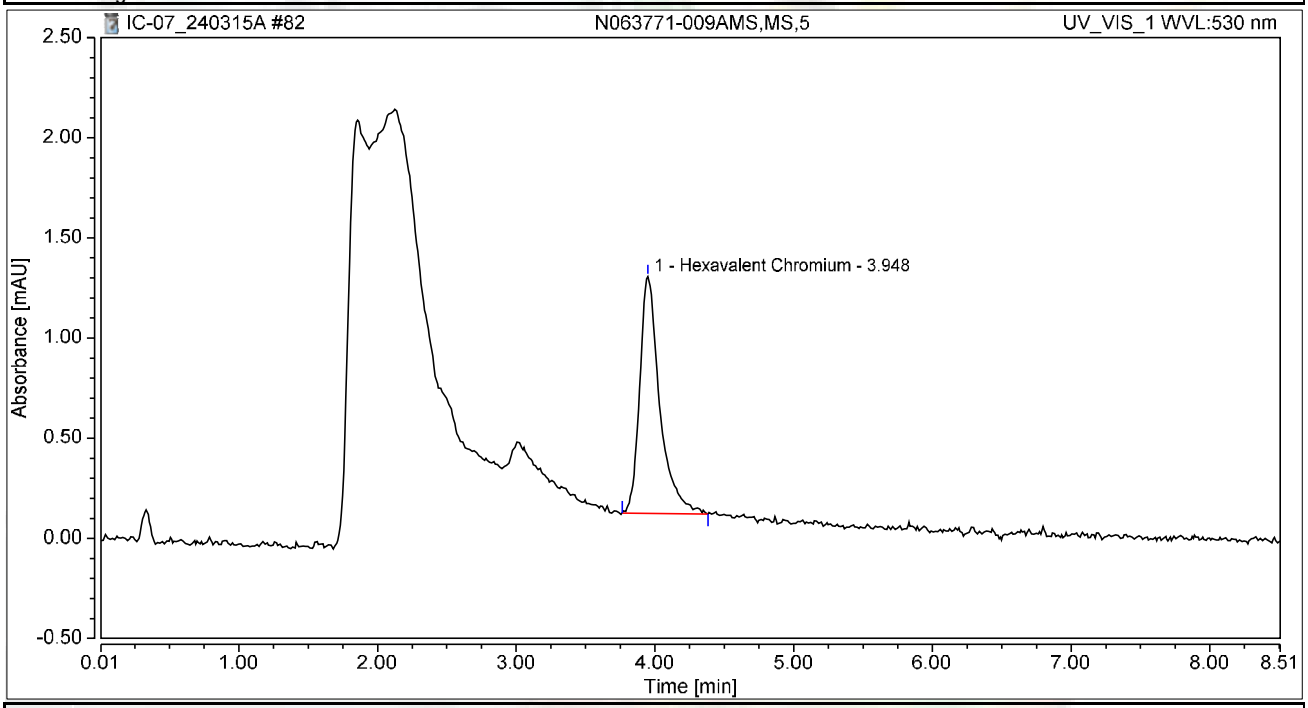
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-009AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 22:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

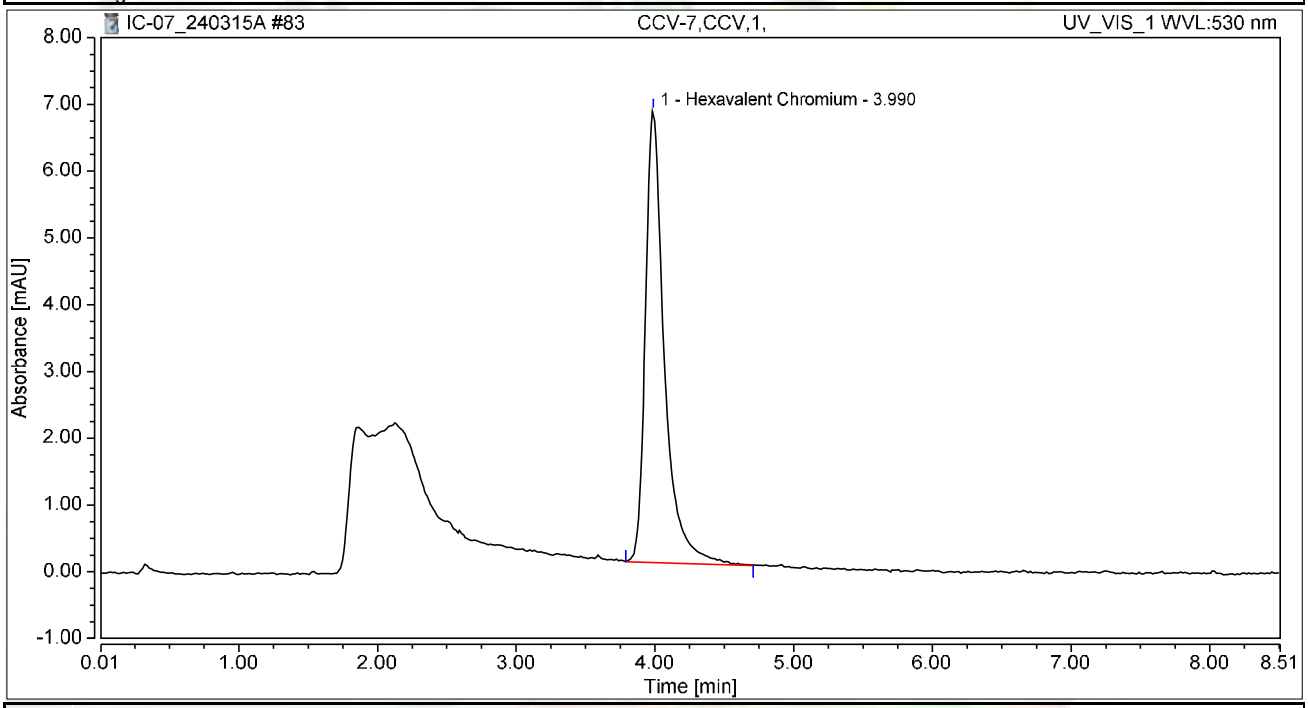
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.199	1.183	100.00	100.00	0.9340
Total:			**0.199**	**1.183**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 22:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

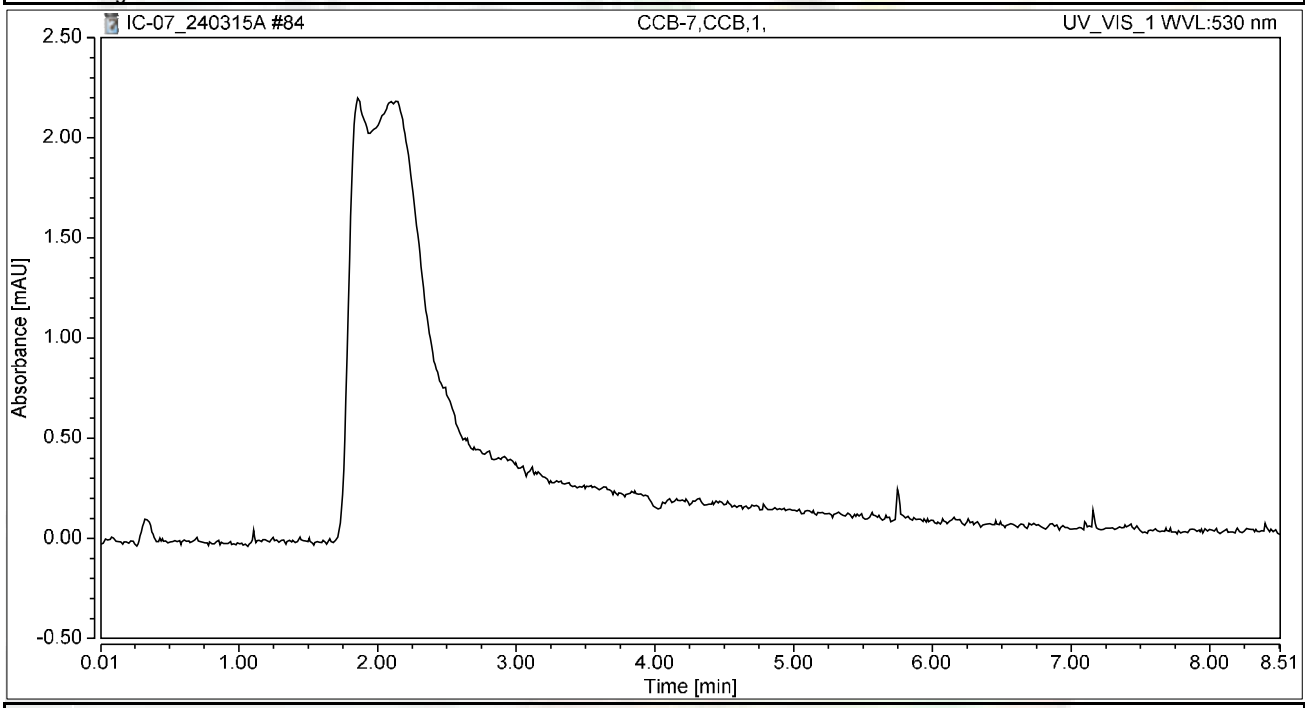
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.990	1.074	6.771	100.00	100.00	5.0464
Total:			**1.074**	**6.771**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 22:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

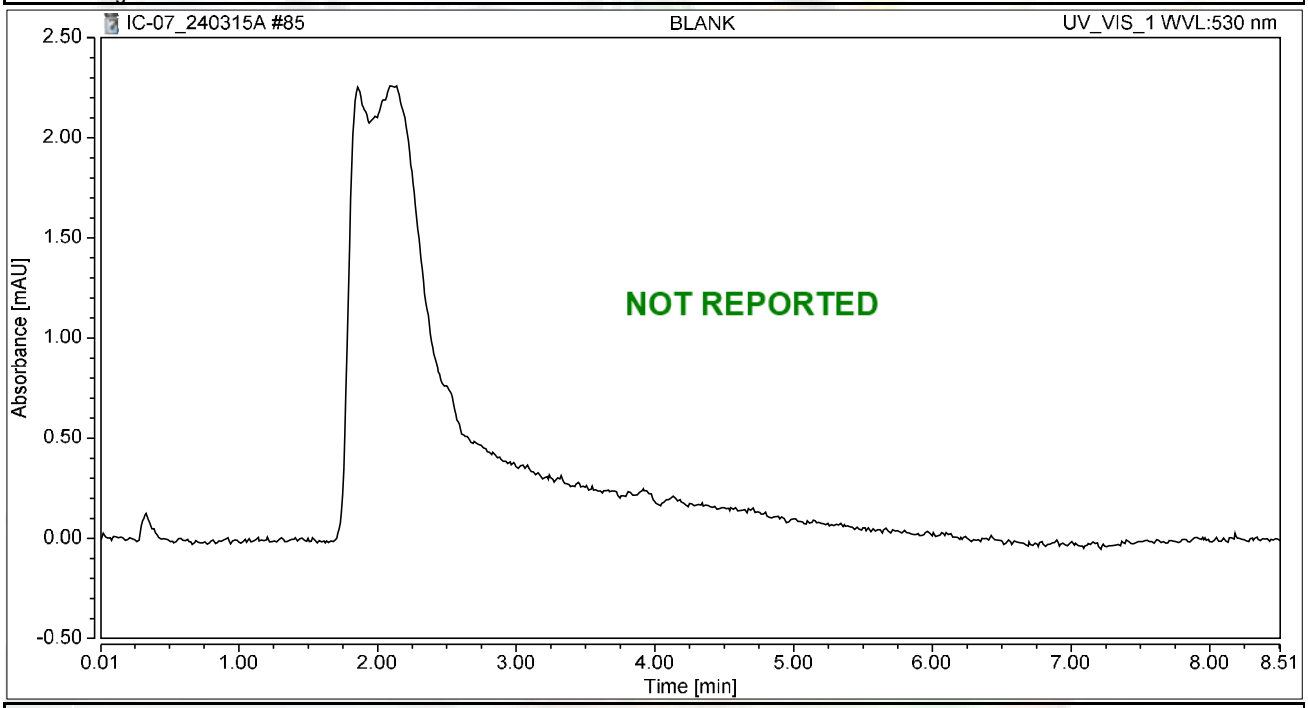
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**15/Mar/24 22:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240318A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/18/24 11:42 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/18/24 11:57 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/18/24 12:06 PM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/18/24 12:15 PM	Reported
13	MB-R183736	MBLK	1	Hexavalent Chromium	03/18/24 12:25 PM	Reported
14	LCS-R183736	LCS	1	Hexavalent Chromium	03/18/24 12:34 PM	Reported
15	N063812-011A	SAMP	5	Hexavalent Chromium	03/18/24 12:44 PM	Reported
16	N063812-011AMS	MS	5	Hexavalent Chromium	03/18/24 12:53 PM	Reported
17	N063812-016A	SAMP	1	Hexavalent Chromium	03/18/24 1:03 PM	Not Reported
18	N063812-016AMS	MS	1	Hexavalent Chromium	03/18/24 1:12 PM	Not Reported
19	N063812-005A	SAMP	1	Hexavalent Chromium	03/18/24 1:22 PM	Not Reported
20	N063812-005AMS	MS	1	Hexavalent Chromium	03/18/24 1:31 PM	Not Reported
21	N063812-009A	SAMP	1	Hexavalent Chromium	03/18/24 1:41 PM	Reported
22	N063812-009AMS	MS	1	Hexavalent Chromium	03/18/24 1:50 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/18/24 1:59 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/18/24 2:09 PM	Reported
25	N063812-014A	SAMP	1	Hexavalent Chromium	03/18/24 2:18 PM	Reported
26	N063812-015A	SAMP	1	Hexavalent Chromium	03/18/24 2:28 PM	Reported
27	N063812-014AMS	MS	1	Hexavalent Chromium	03/18/24 2:37 PM	Not Reported
28	N063812-015AMS	MS	1	Hexavalent Chromium	03/18/24 2:47 PM	Reported
29	N063812-011ADUP	DUP	5	Hexavalent Chromium	03/18/24 2:59 PM	Reported
30	N063812-011AMSD	MSD	5	Hexavalent Chromium	03/18/24 3:10 PM	Reported
31	N063812-012A	SAMP	50	Hexavalent Chromium	03/18/24 3:20 PM	Not Reported
32	N063812-012AMS	MS	50	Hexavalent Chromium	03/18/24 3:29 PM	Not Reported
33	N063812-013A	SAMP	5	Hexavalent Chromium	03/18/24 3:39 PM	Not Reported
34	N063812-013AMS	MS	5	Hexavalent Chromium	03/18/24 3:48 PM	Not Reported
35	CCV-3	CCV	1	Hexavalent Chromium	03/18/24 3:57 PM	Reported
36	CCB-3	CCB	1	Hexavalent Chromium	03/18/24 4:07 PM	Reported
37	N063812-001A	SAMP	100	Hexavalent Chromium	03/18/24 4:16 PM	Reported
38	N063812-001AMS	MS	100	Hexavalent Chromium	03/18/24 4:26 PM	Reported
39	N063812-002A	SAMP	500	Hexavalent Chromium	03/18/24 4:35 PM	Reported
40	N063812-002AMS	MS	500	Hexavalent Chromium	03/18/24 4:45 PM	Reported
41	N063812-003A	SAMP	500	Hexavalent Chromium	03/18/24 4:54 PM	Reported
42	N063812-003AMS	MS	500	Hexavalent Chromium	03/18/24 5:04 PM	Reported

INJECTION LOG: 240318A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
43	N063812-004A	SAMP	500	Hexavalent Chromium	03/18/24 5:13 PM	Reported
44	N063812-004AMS	MS	500	Hexavalent Chromium	03/18/24 5:23 PM	Reported
45	N063812-007A	SAMP	1	Hexavalent Chromium	03/18/24 5:32 PM	Reported
46	N063812-007AMS	MS	1	Hexavalent Chromium	03/18/24 5:42 PM	Reported
47	CCV-4	CCV1	1	Hexavalent Chromium	03/18/24 5:51 PM	Reported
48	CCB-4	CCB	1	Hexavalent Chromium	03/18/24 6:00 PM	Reported
49	N063812-007A	SAMP	5	Hexavalent Chromium	03/18/24 6:10 PM	Not Reported
50	N063812-007AMS	MS	5	Hexavalent Chromium	03/18/24 6:19 PM	Not Reported
51	N063771-016A	SAMP	5	Hexavalent Chromium	03/18/24 6:29 PM	Reported
52	N063771-016AMS	MS	5	Hexavalent Chromium	03/18/24 6:41 PM	Reported
53	N063771-011A	SAMP	5	Hexavalent Chromium	03/18/24 6:51 PM	Reported
54	N063771-011AMS	MS	5	Hexavalent Chromium	03/18/24 7:01 PM	Reported
55	N063812-016A	SAMP	5	Hexavalent Chromium	03/18/24 7:10 PM	Reported
56	N063812-016AMS	MS	5	Hexavalent Chromium	03/18/24 7:19 PM	Reported
57	N063812-016AMSD	MSD	5	Hexavalent Chromium	03/18/24 7:29 PM	Reported
58	N063771-016ADUP	DUP	5	Hexavalent Chromium	03/18/24 7:38 PM	Reported
59	CCV-5	CCV	1	Hexavalent Chromium	03/18/24 7:48 PM	Reported
60	CCB-5	CCB	1	Hexavalent Chromium	03/18/24 7:57 PM	Reported
61	N063812-005A	SAMP	5	Hexavalent Chromium	03/18/24 8:07 PM	Reported
62	N063812-005AMS	MS	5	Hexavalent Chromium	03/18/24 8:16 PM	Reported
63	N063812-009A	SAMP	5	Hexavalent Chromium	03/18/24 8:25 PM	Not Reported
64	N063812-009AMS	MS	5	Hexavalent Chromium	03/18/24 8:35 PM	Not Reported
65	N063812-010A	SAMP	100	Hexavalent Chromium	03/18/24 8:44 PM	Reported
66	N063812-010AMS	MS	100	Hexavalent Chromium	03/18/24 8:54 PM	Reported
67	N063812-014A	SAMP	5	Hexavalent Chromium	03/18/24 9:03 PM	Not Reported
68	N063812-014AMS	MS	5	Hexavalent Chromium	03/18/24 9:13 PM	Not Reported
69	N063771-017A	SAMP	5	Hexavalent Chromium	03/18/24 9:22 PM	Reported
70	N063771-017AMS	MS	5	Hexavalent Chromium	03/18/24 9:32 PM	Reported
71	CCV-6	CCV1	1	Hexavalent Chromium	03/18/24 9:41 PM	Reported
72	CCB-6	CCB	1	Hexavalent Chromium	03/18/24 9:51 PM	Reported
73	N063812-014AMS	MS	1	Hexavalent Chromium	03/18/24 10:00 PM	Reported
74	N063812-011ADUP	DUP	5	Hexavalent Chromium	03/18/24 10:10 PM	Not Reported
75	CCV-7	CCV	1	Hexavalent Chromium	03/18/24 10:19 PM	Reported
76	CCB-7	CCB	1	Hexavalent Chromium	03/18/24 10:28 PM	Reported
77	BLANK	BLANK	1	Hexavalent Chromium	03/18/24 10:38 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240318A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**18/Mar/24 23:08:39**
No. of Injections:	**80**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/18/2024 11:42	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/18/2024 11:57	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/18/2024 12:06	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/18/2024 12:15	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/18/2024 12:25	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/18/2024 12:34	Finished	LCS @5ppb, IWST-231228B
15	N063812-011A,SAMP	7	1000	Unknown		03/18/2024 12:44	Finished	SAMP,2>10 mL
16	N063812-011AMS,MS	8	1000	Unknown		03/18/2024 12:53	Finished	MS (5ppb), IWST-231228B,2>1
17	N063812-016A,SAMP	9	1000	Unknown		03/18/2024 13:03	Finished	SAMP,10 mL
18	N063812-016AMS,MS	10	1000	Unknown		03/18/2024 13:12	Finished	MS (1ppb), IWST-231228B,10r
19	N063812-005A,SAMP	11	1000	Unknown		03/18/2024 13:22	Finished	SAMP,10 mL
20	N063812-005AMS,MS	12	1000	Unknown		03/18/2024 13:31	Finished	MS (1ppb), IWST-231228B,10r
21	N063812-009A,SAMP	13	1000	Unknown		03/18/2024 13:41	Finished	SAMP,10 mL
22	N063812-009AMS,MS	14	1000	Unknown		03/18/2024 13:50	Finished	MS (1ppb), IWST-231228B,10r
23	CCV-2,CCV1,1,	15	1000	Unknown		03/18/2024 13:59	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		03/18/2024 14:09	Finished	CCB R240129C
25	N063812-014A,SAMP	17	1000	Unknown		03/18/2024 14:18	Finished	SAMP,10 mL
26	N063812-015A,SAMP	18	1000	Unknown		03/18/2024 14:28	Finished	SAMP,10 mL
27	N063812-014AMS,MS	19	1000	Unknown		03/18/2024 14:37	Finished	MS (5ppb), IWST-231228B,10r
28	N063812-015AMS,MS	20	1000	Unknown		03/18/2024 14:47	Finished	MS (1ppb), IWST-231228B,10r
29	N063812-011ADUP,D	1	1000	Unknown		03/18/2024 14:59	Finished	DUP,2>10 mL
30	N063812-011AMSD,M	2	1000	Unknown		03/18/2024 15:10	Finished	MS (5ppb), IWST-231228B,2>1
31	N063812-012A,SAMP	3	1000	Unknown		03/18/2024 15:20	Finished	SAMP,0.2>10 mL
32	N063812-012AMS,MS	4	1000	Unknown		03/18/2024 15:29	Finished	MS (5ppb), IWST-231228B,0.2
33	N063812-013A,SAMP	5	1000	Unknown		03/18/2024 15:39	Finished	SAMP,2>10 mL
34	N063812-013AMS,MS	6	1000	Unknown		03/18/2024 15:48	Finished	MS (5ppb), IWST-231228B,2>1
35	CCV-3,CCV,1,	7	1000	Unknown		03/18/2024 15:57	Finished	CCV @10ppb, IWST-231228A
36	CCB-3,CCB,1,	8	1000	Unknown		03/18/2024 16:07	Finished	CCB R240129C
37	N063812-001A,SAMP	9	1000	Unknown		03/18/2024 16:16	Finished	SAMP,0.1>10 mL
38	N063812-001AMS,MS	10	1000	Unknown		03/18/2024 16:26	Finished	MS (5ppb), IWST-231228B,0.1
39	N063812-002A,SAMP	11	1000	Unknown		03/18/2024 16:35	Finished	SAMP,0.02>10 mL
40	N063812-002AMS,MS	12	1000	Unknown		03/18/2024 16:45	Finished	MS (5ppb), IWST-231228B,0.0
41	N063812-003A,SAMP	13	1000	Unknown		03/18/2024 16:54	Finished	SAMP,0.02>10 mL
42	N063812-003AMS,MS	14	1000	Unknown		03/18/2024 17:04	Finished	MS (5ppb), IWST-231228B,0.0
43	N063812-004A,SAMP	15	1000	Unknown		03/18/2024 17:13	Finished	SAMP,0.02>10 mL
44	N063812-004AMS,MS	16	1000	Unknown		03/18/2024 17:23	Finished	MS (5ppb), IWST-231228B,0.0
45	N063812-007A,SAMP	17	1000	Unknown		03/18/2024 17:32	Finished	SAMP,10 mL
46	N063812-007AMS,MS	18	1000	Unknown		03/18/2024 17:42	Finished	MS (1ppb), IWST-231228B,10r
47	CCV-4,CCV1,1,	19	1000	Unknown		03/18/2024 17:51	Finished	CCV @10ppb, IWST-231228A
48	CCB-4,CCB,1,	20	1000	Unknown		03/18/2024 18:00	Finished	CCB R240129C
49	N063812-007A,SAMP	21	1000	Unknown		03/18/2024 18:10	Finished	SAMP,2>10 mL
50	N063812-007AMS,MS	22	1000	Unknown		03/18/2024 18:19	Finished	MS (1ppb), IWST-231228B,2>1
51	N063771-016A,SAMP	23	1000	Unknown		03/18/2024 18:29	Finished	SAMP,2>10 mL
52	N063771-016AMS,MS	24	1000	Unknown		03/18/2024 18:41	Finished	MS (5ppb), IWST-231228B,2>1
53	N063771-011A,SAMP	25	1000	Unknown		03/18/2024 18:51	Finished	SAMP,2>10 mL
54	N063771-011AMS,MS	26	1000	Unknown		03/18/2024 19:01	Finished	MS (1ppb), IWST-231228B,2>1
55	N063812-016A,SAMP	27	1000	Unknown		03/18/2024 19:10	Finished	SAMP,2>10 mL
56	N063812-016AMS,MS	28	1000	Unknown		03/18/2024 19:19	Finished	MS (1ppb), IWST-231228B,2>1
57	N063812-016AMSD,M	29	1000	Unknown		03/18/2024 19:29	Finished	MSD (1ppb), IWST-231228B,2>
58	N063771-016ADUP,D	30	1000	Unknown		03/18/2024 19:38	Finished	DUP,2>10 mL
59	CCV-5,CCV,1,	31	1000	Unknown		03/18/2024 19:48	Finished	CCV @5ppb, IWST-231228A
60	CCB-5,CCB,1,	32	1000	Unknown		03/18/2024 19:57	Finished	CCB R240129C

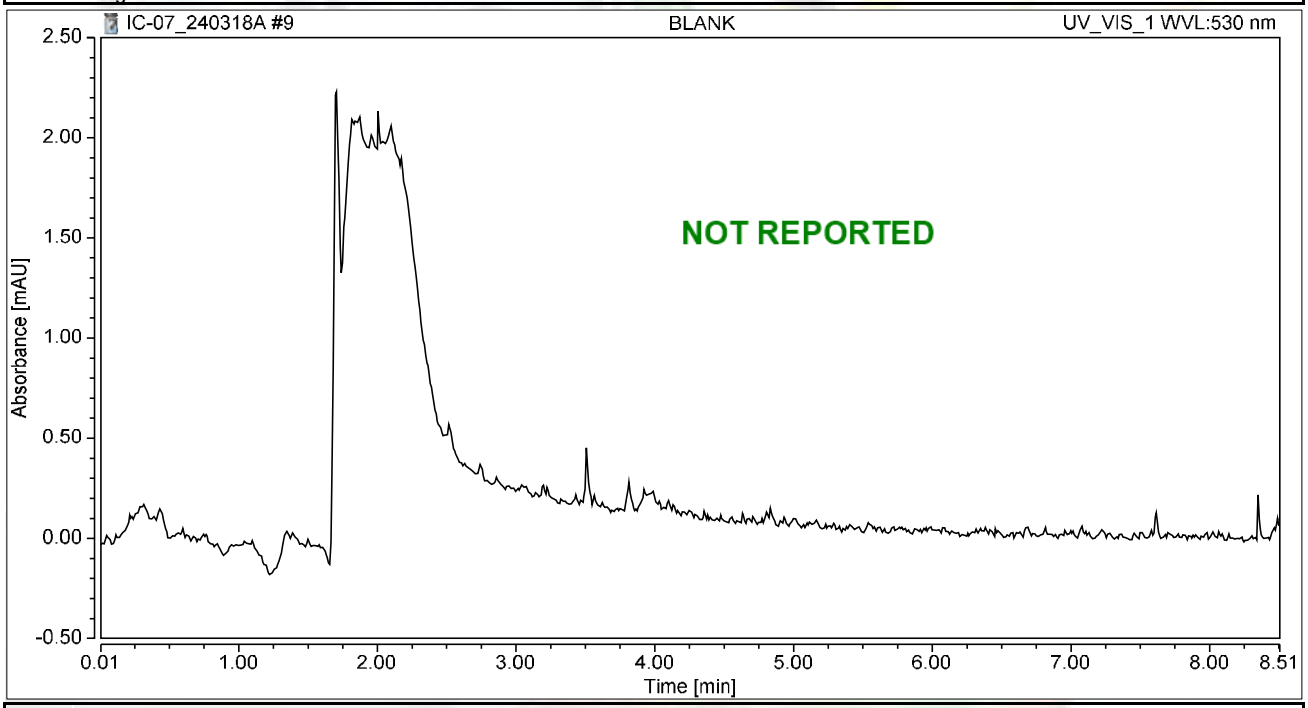
61	N063812-005A,SAMP	33	1000	Unknown		03/18/2024 20:07	Finished	SAMP,2>10 mL
62	N063812-005AMS,MS	34	1000	Unknown		03/18/2024 20:16	Finished	MS (1ppb), IWST-231228B,2>
63	N063812-009A,SAMP	35	1000	Unknown		03/18/2024 20:25	Finished	SAMP,2>10 mL
64	N063812-009AMS,MS	36	1000	Unknown		03/18/2024 20:35	Finished	MS (1ppb), IWST-231228B,2>
65	N063812-010A,SAMP	37	1000	Unknown		03/18/2024 20:44	Finished	SAMP,0.1>10 mL
66	N063812-010AMS,MS	38	1000	Unknown		03/18/2024 20:54	Finished	MS (5ppb), IWST-231228B,0.1
67	N063812-014A,SAMP	39	1000	Unknown		03/18/2024 21:03	Finished	SAMP,2>10 mL
68	N063812-014AMS,MS	40	1000	Unknown		03/18/2024 21:13	Finished	MS (1ppb), IWST-231228B,2>
69	N063771-017A,SAMP	41	1000	Unknown		03/18/2024 21:22	Finished	SAMP,2>10 mL
70	N063771-017AMS,MS	42	1000	Unknown		03/18/2024 21:32	Finished	MS (1ppb), IWST-231228B,2>
71	CCV-6,CCV1,1,	43	1000	Unknown		03/18/2024 21:41	Finished	CCV @10ppb, IWST-231228A
72	CCB-6,CCB,1,	44	1000	Unknown		03/18/2024 21:51	Finished	CCB R240129C
73	N063812-014AMS,MS	45	1000	Unknown		03/18/2024 22:00	Finished	MS (1ppb), IWST-231228B,10
74	N063812-011ADUP,D	46	1000	Unknown		03/18/2024 22:10	Finished	DUP,2>10 mL
75	CCV-7,CCV,1,	47	1000	Unknown		03/18/2024 22:19	Finished	CCV @5ppb, IWST-231228A
76	CCB-7,CCB,1,	48	1000	Unknown		03/18/2024 22:28	Finished	CCB R240129C
77	BLANK	49	1000	Unknown		03/18/2024 22:38	Finished	BLANK
78	SHUTDOWN	50	1000	Unknown		03/18/2024 22:47	Finished	
79	Eluent: R240318A	51	1000	Unknown		n.a.	Finished	
80	PCR: R240318B	CurrentVial	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 11:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

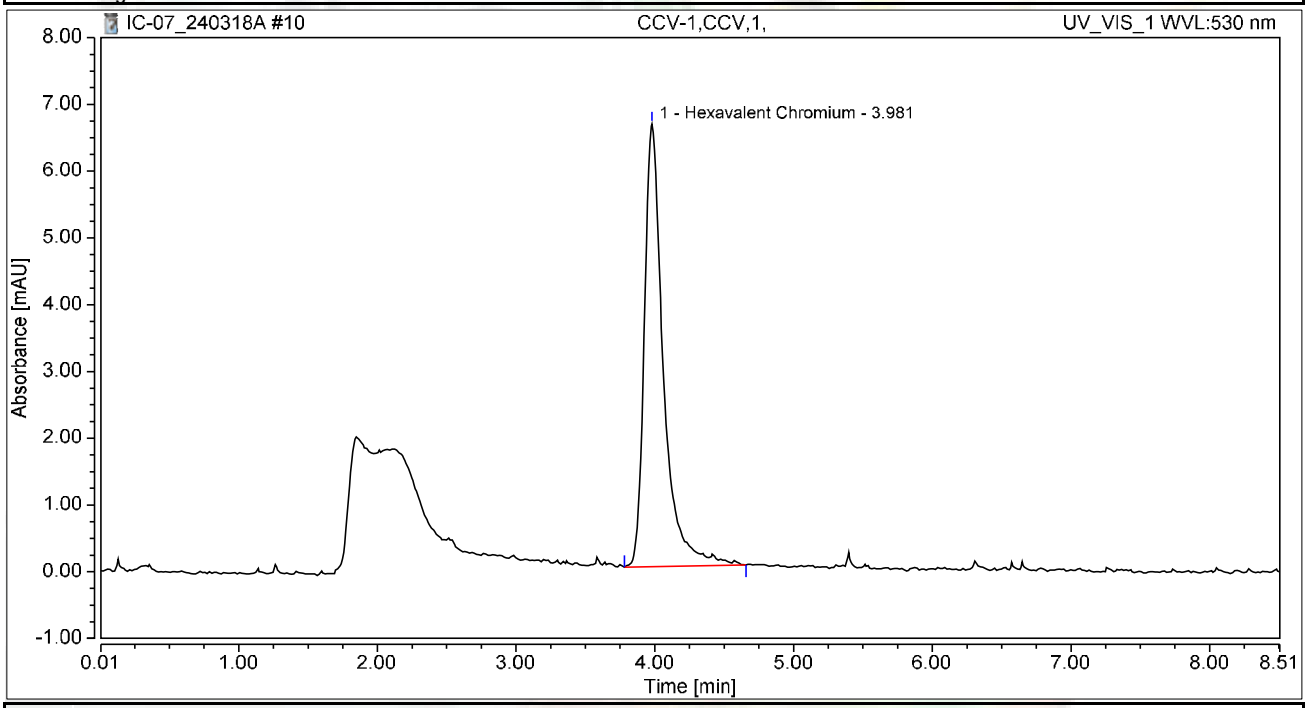
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 11:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.058	6.633	100.00	100.00	4.9728
Total:			**1.058**	**6.633**	**100.00**	**100.00**	

Reviewed by:

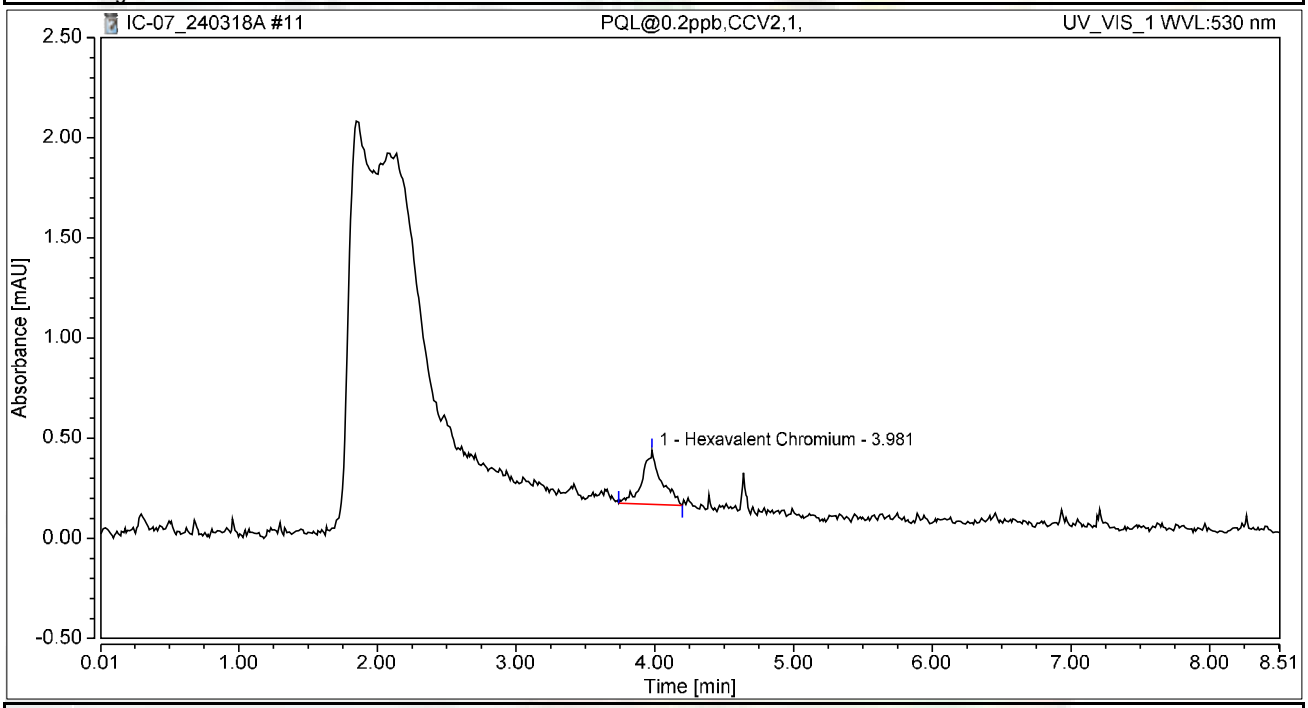
dMocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 12:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

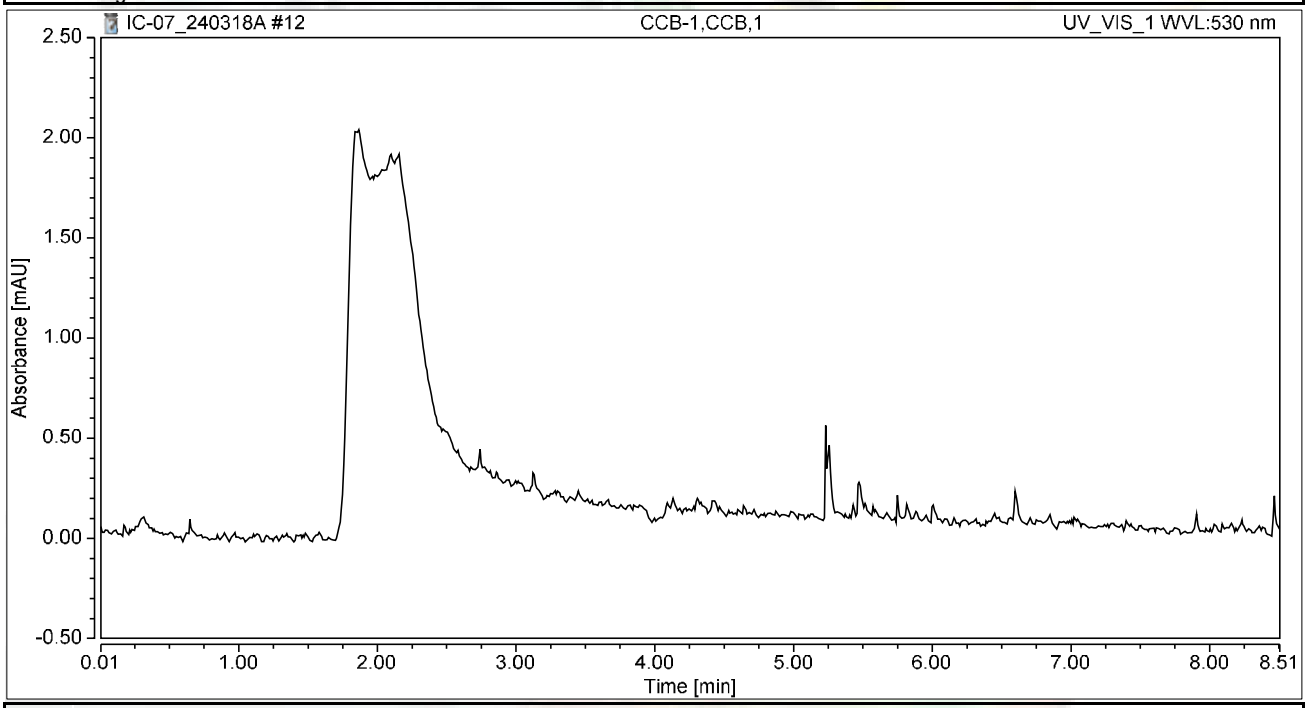
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.042	0.269	100.00	100.00	0.1995
Total:			**0.042**	**0.269**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 12:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

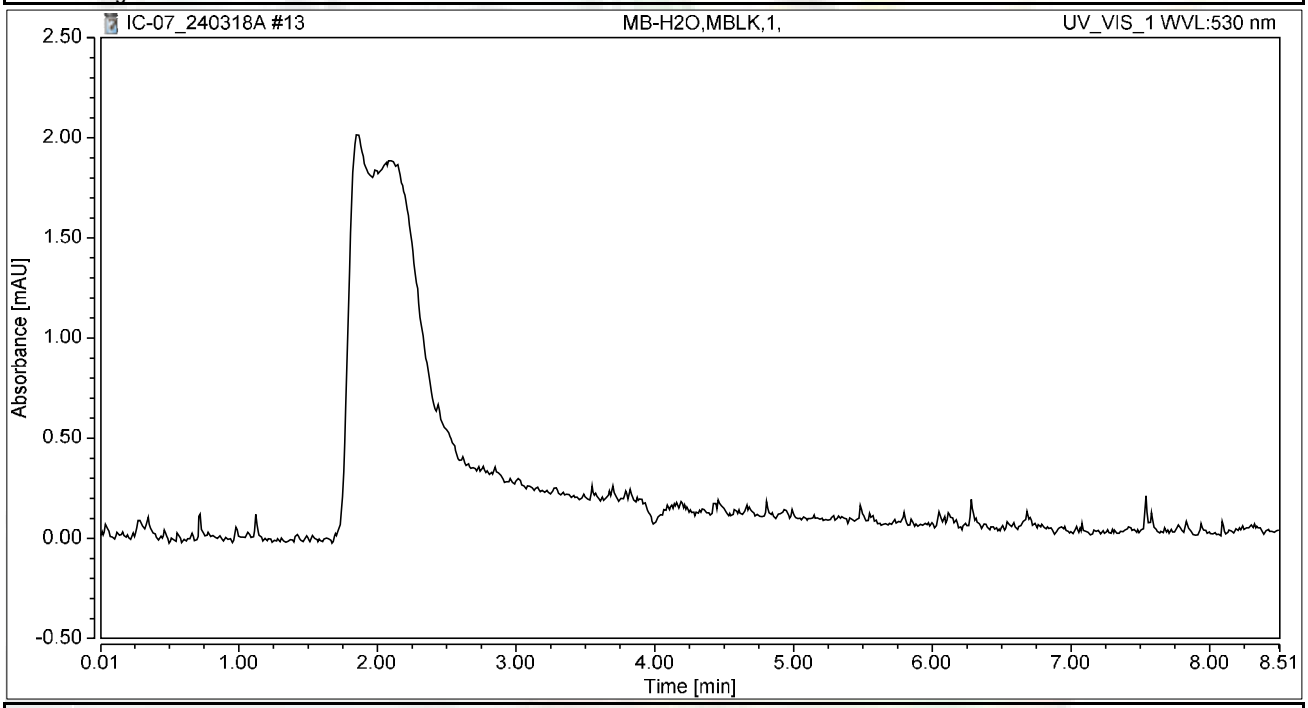
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 12:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

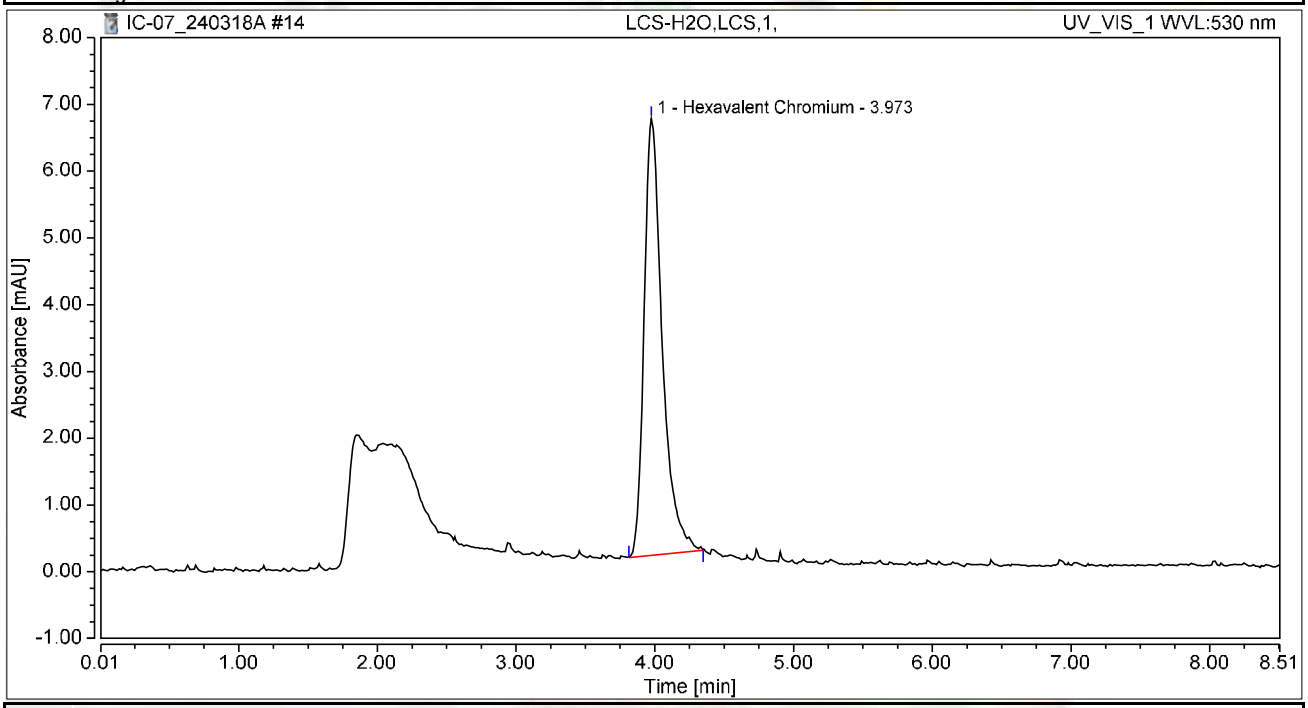
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 12:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

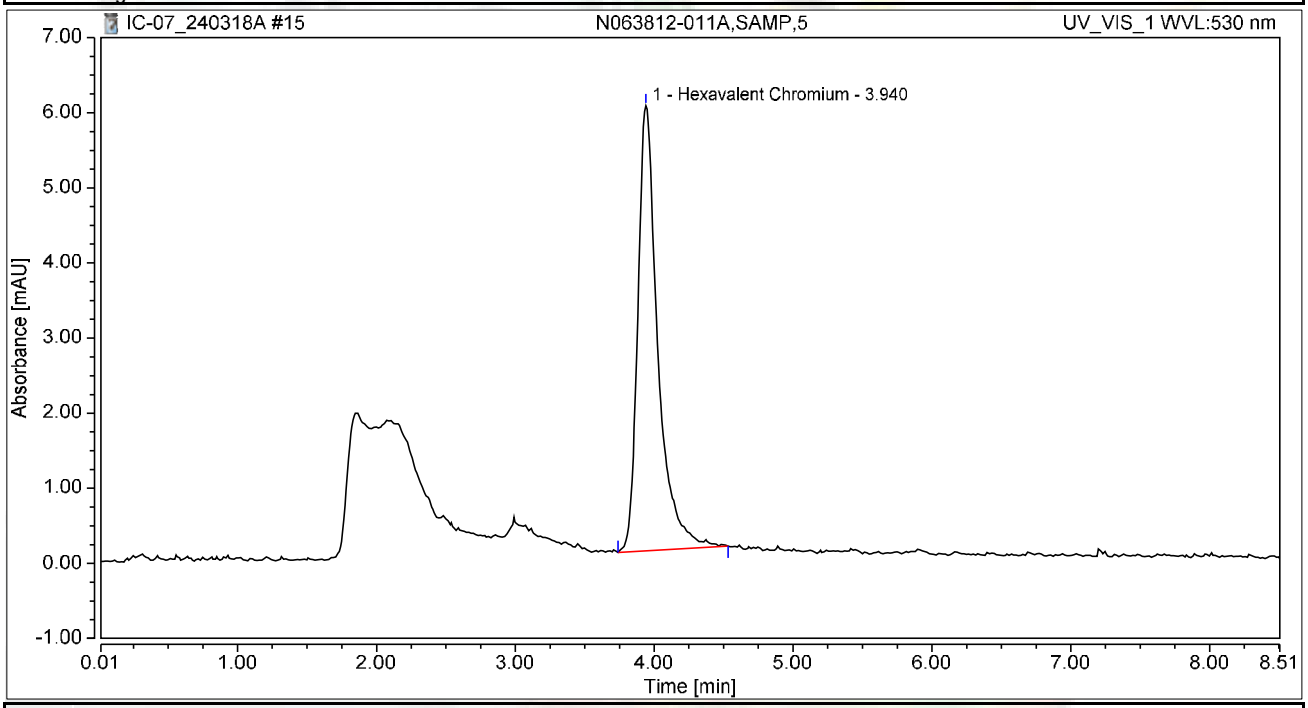
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.991	6.545	100.00	100.00	4.6569
Total:			**0.991**	**6.545**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-011A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 12:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

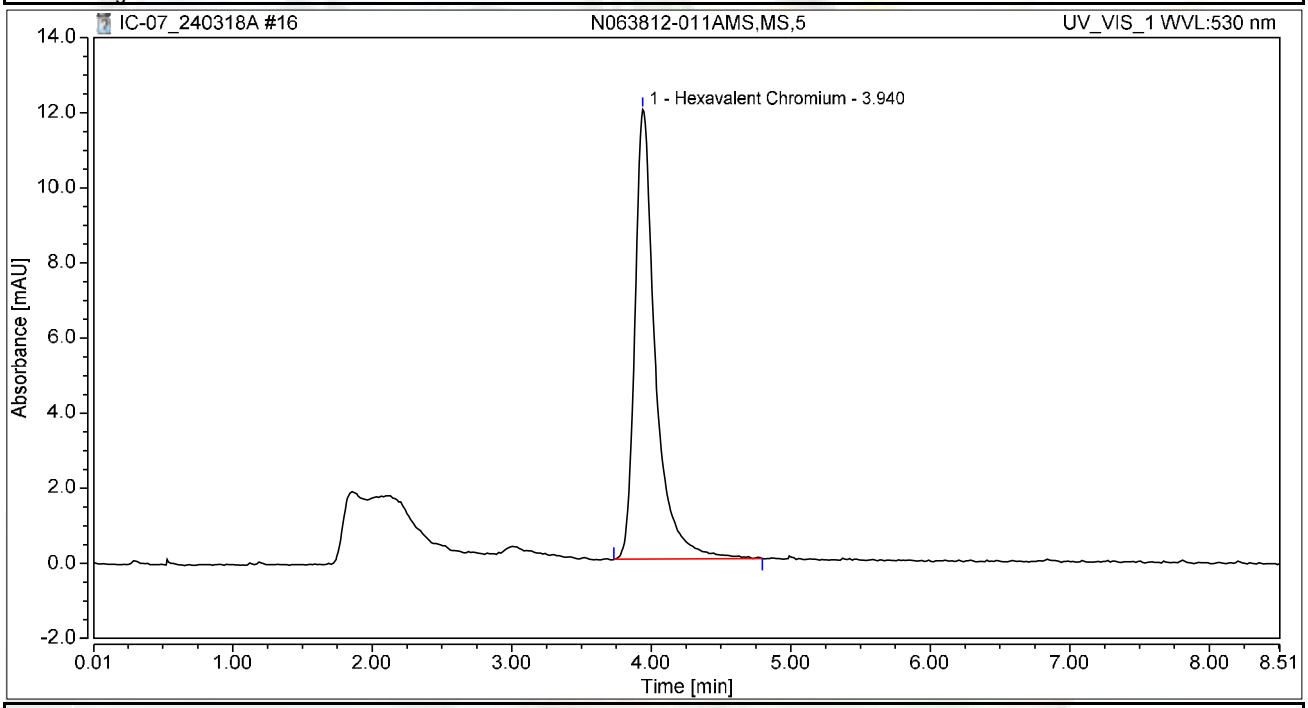
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.990	5.925	100.00	100.00	4.6523
Total:			**0.990**	**5.925**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-011AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 12:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

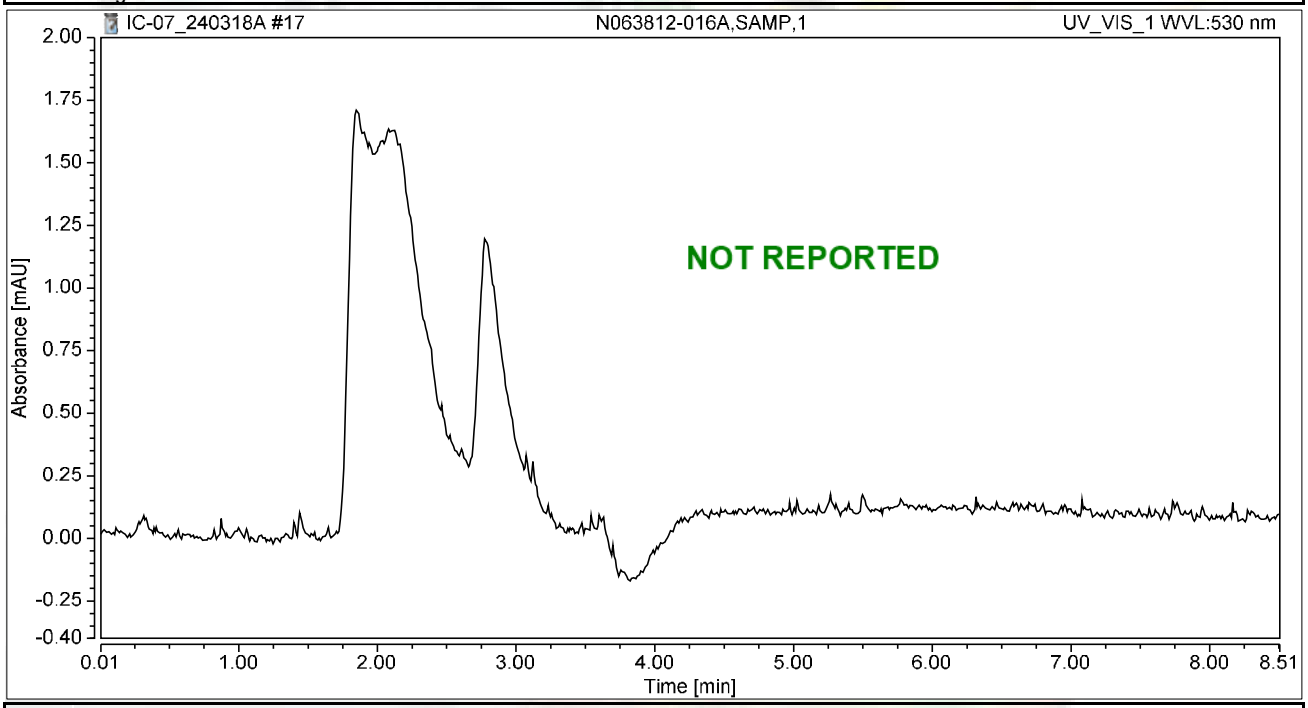
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	2.041	11.975	100.00	100.00	9.5908
Total:			**2.041**	**11.975**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-016A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 13:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

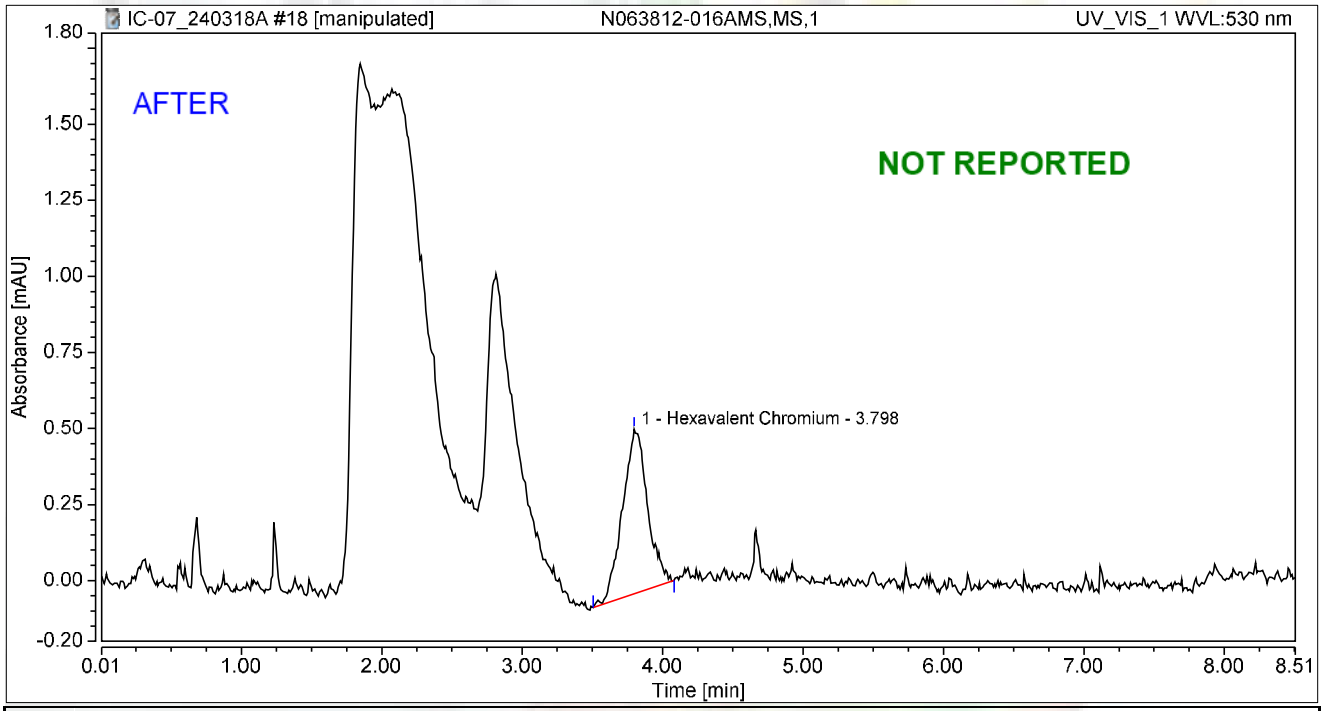
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-016AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 13:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.798	0.111	0.541	100.00	100.00	0.5214
Total:			**0.111**	**0.541**	**100.00**	**100.00**	

Reviewed by:

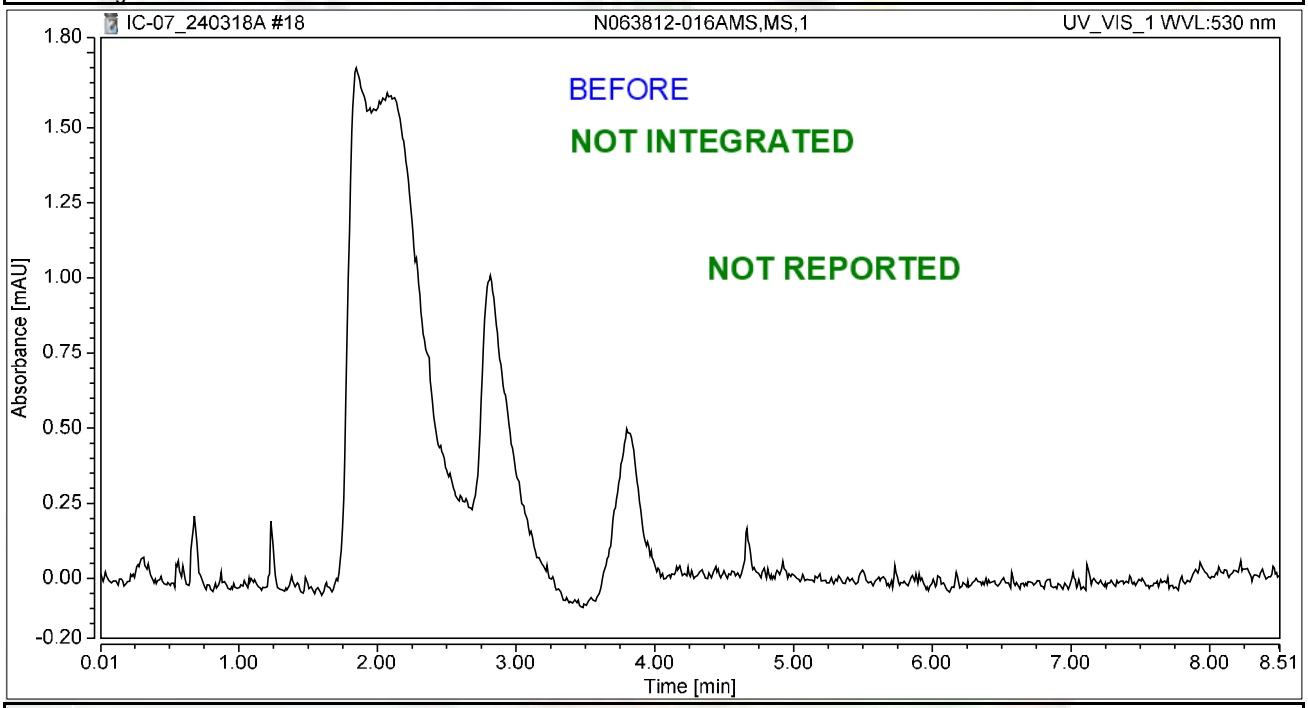
dMocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063812-016AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 13:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

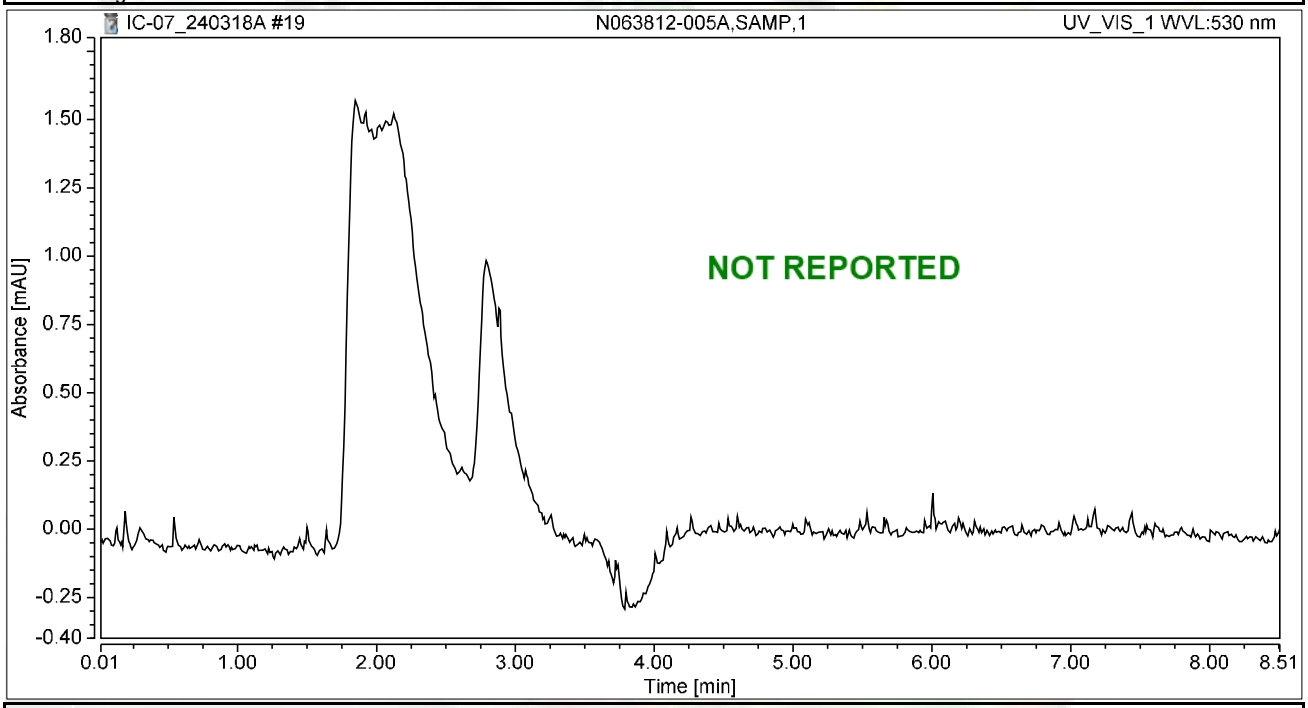
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-005A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 13:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

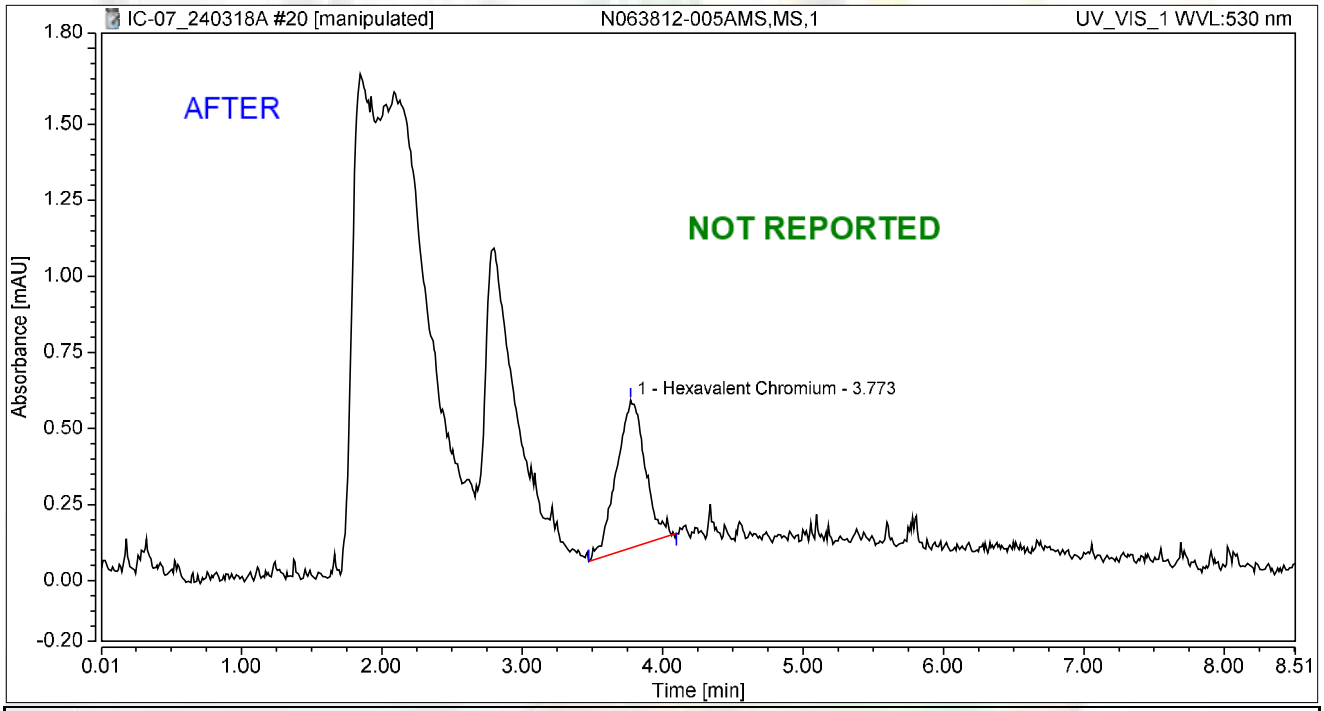
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 13:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.773	0.115	0.486	100.00	100.00	0.5415
Total:			**0.115**	**0.486**	**100.00**	**100.00**	

Reviewed by:

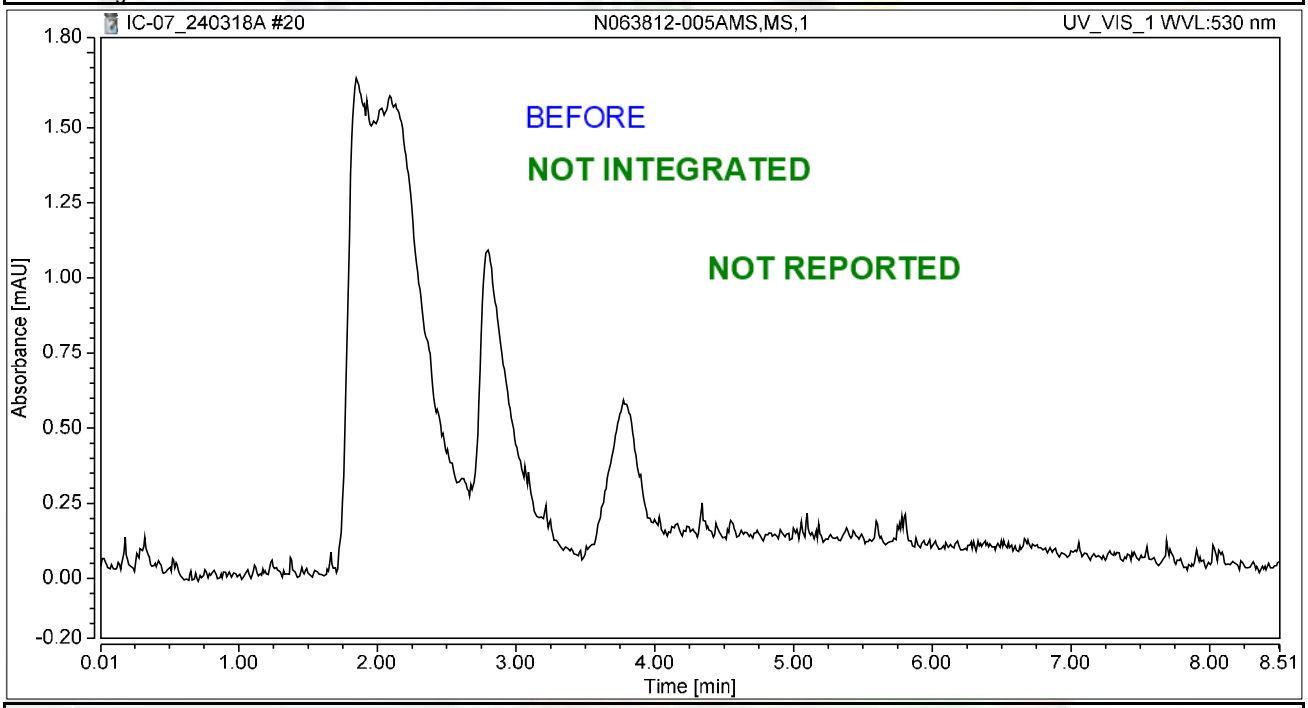
dMocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063812-005AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 13:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

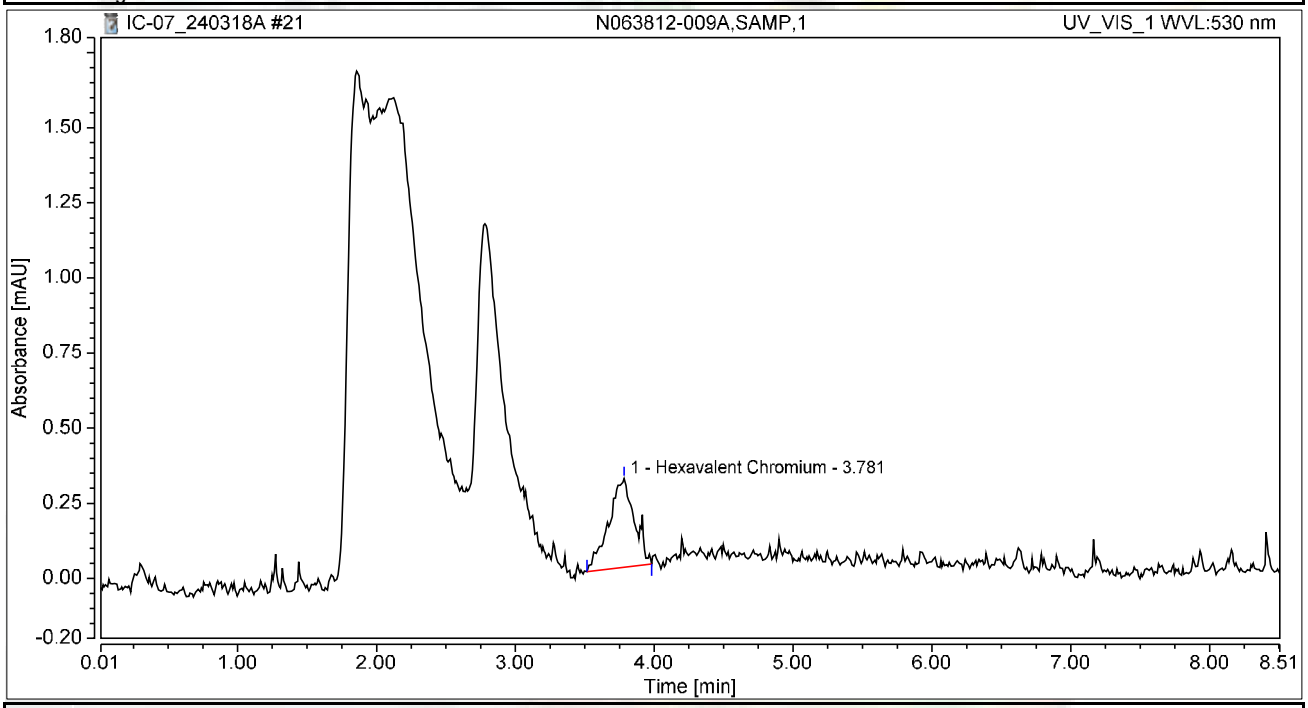
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-009A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 13:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

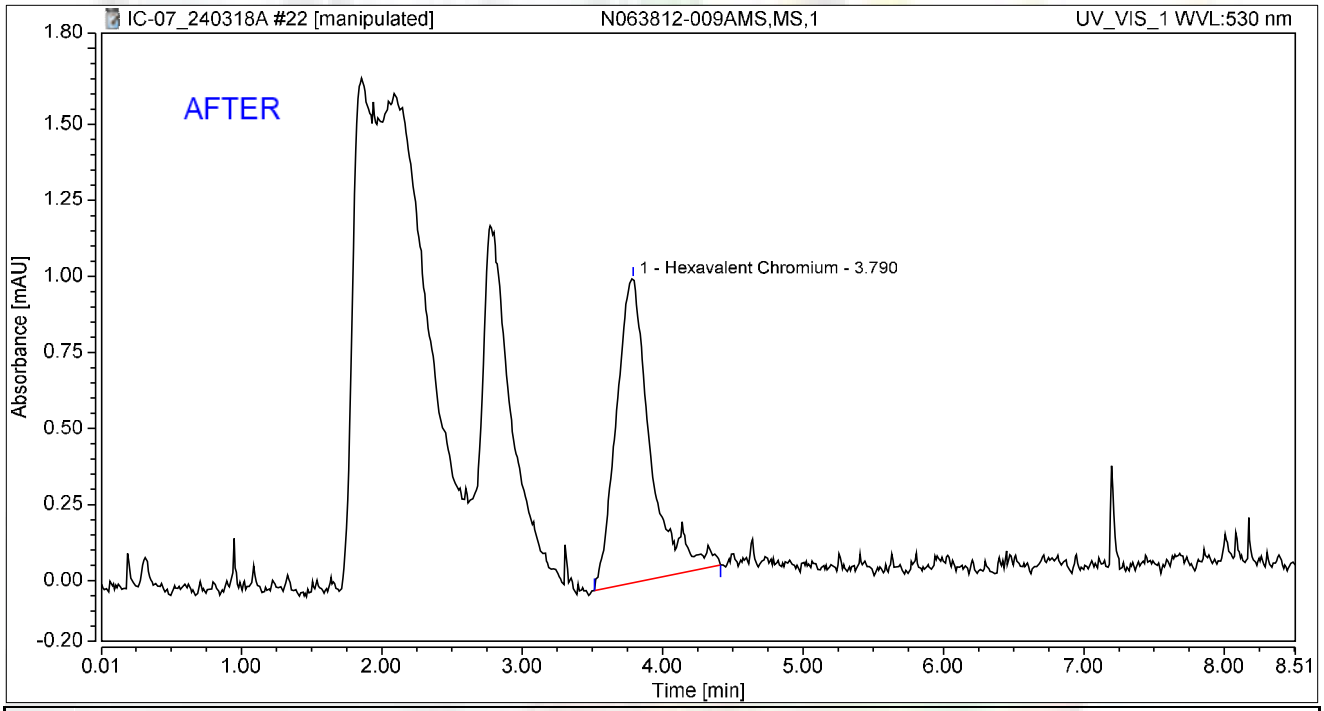
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.781	0.063	0.295	100.00	100.00	0.2967
Total:			**0.063**	**0.295**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 13:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.282	0.999	100.00	100.00	1.3271
Total:			**0.282**	**0.999**	**100.00**	**100.00**	

Reviewed by:

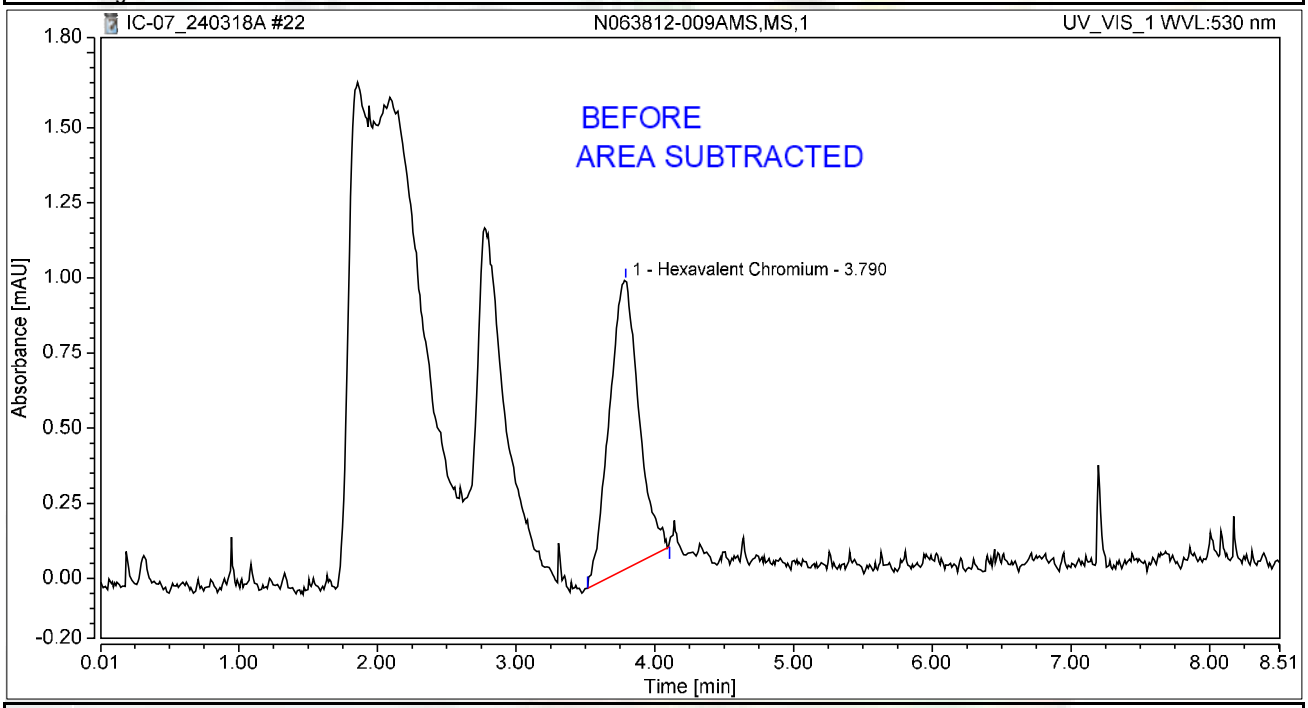
dlRocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063812-009AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 13:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

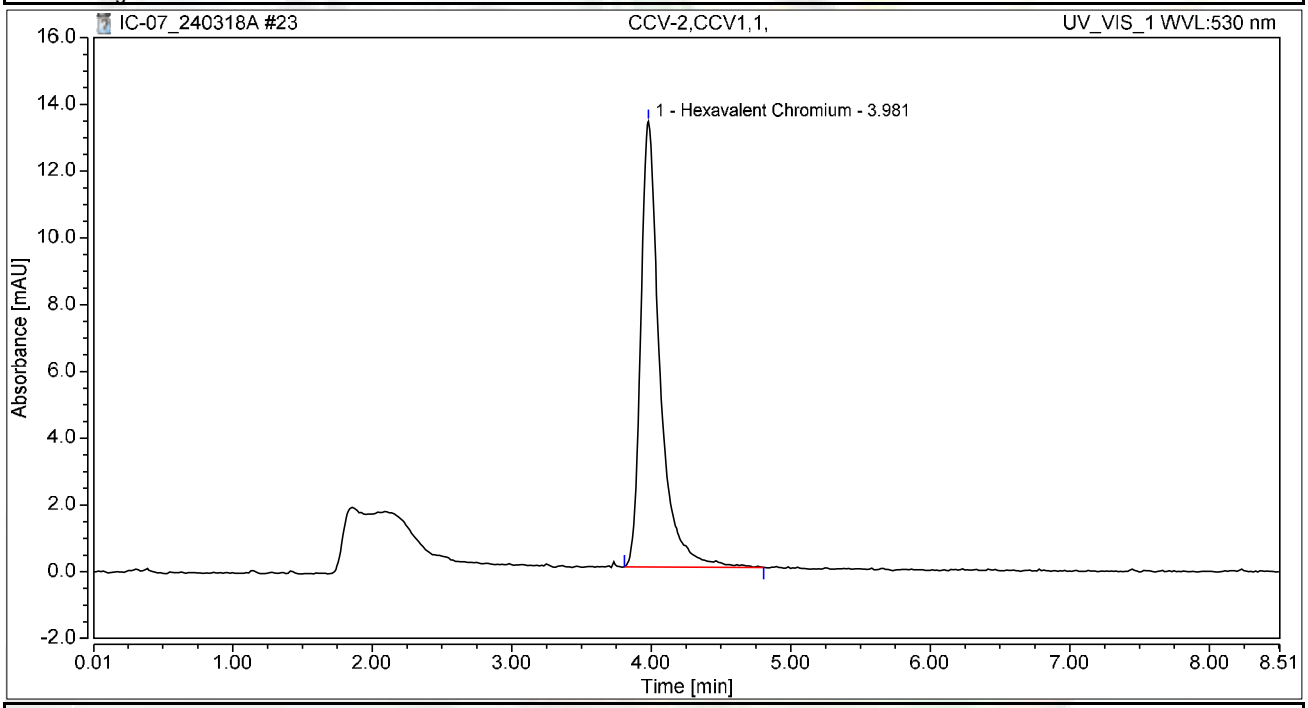
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.239	0.961	100.00	100.00	1.1218
Total:			**0.239**	**0.961**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 13:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

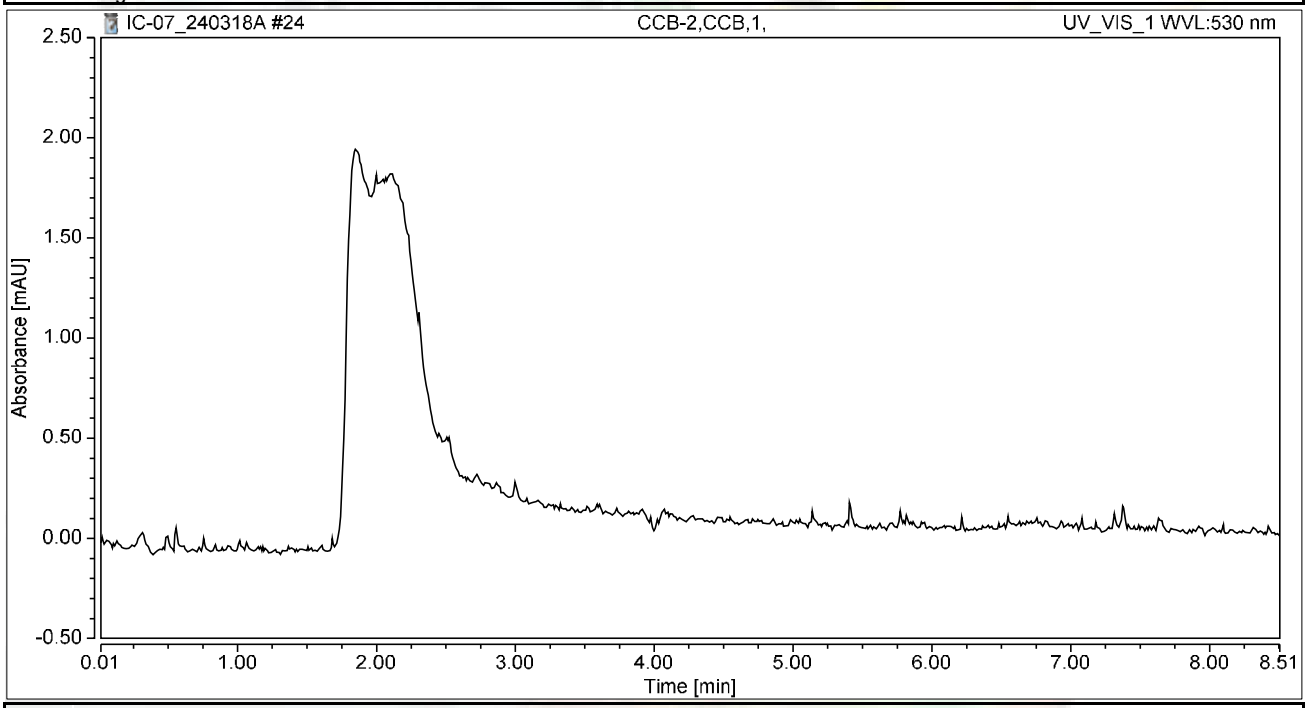
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	2.127	13.347	100.00	100.00	9.9946
Total:			**2.127**	**13.347**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 14:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

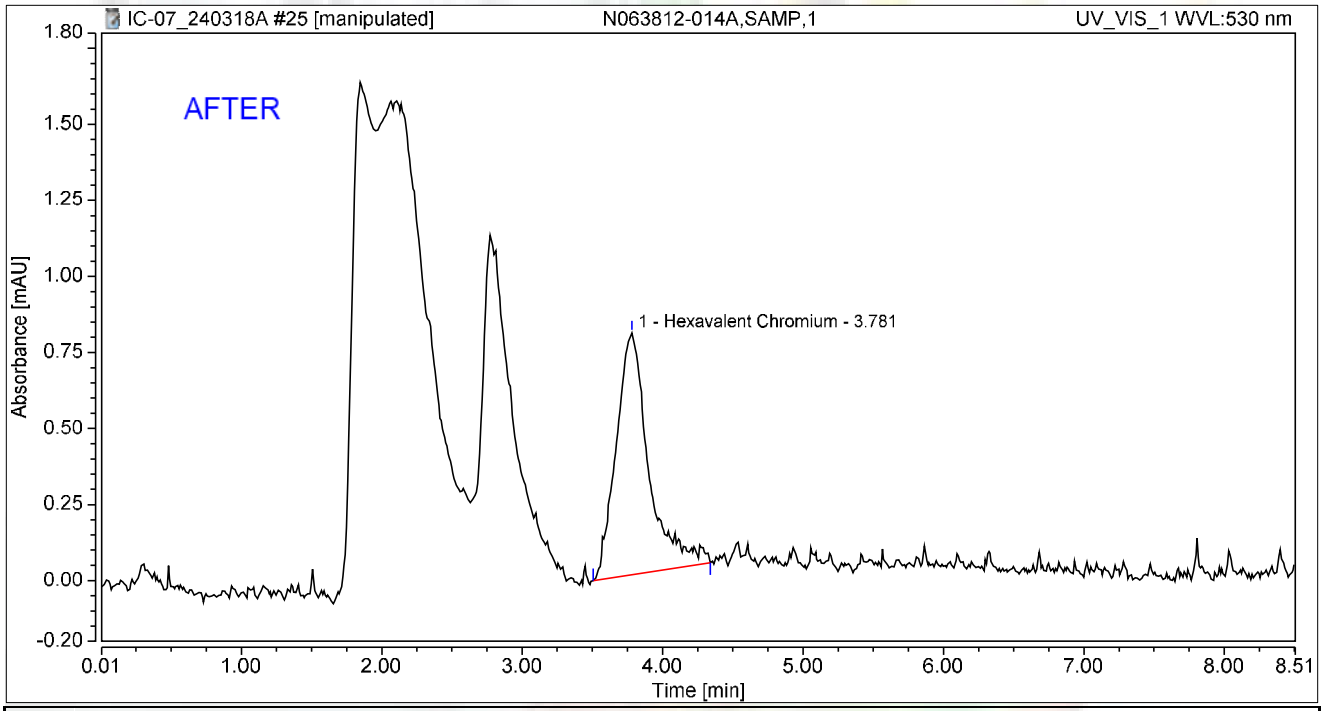
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-014A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 14:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.781	0.215	0.796	100.00	100.00	1.0116
Total:			**0.215**	**0.796**	**100.00**	**100.00**	

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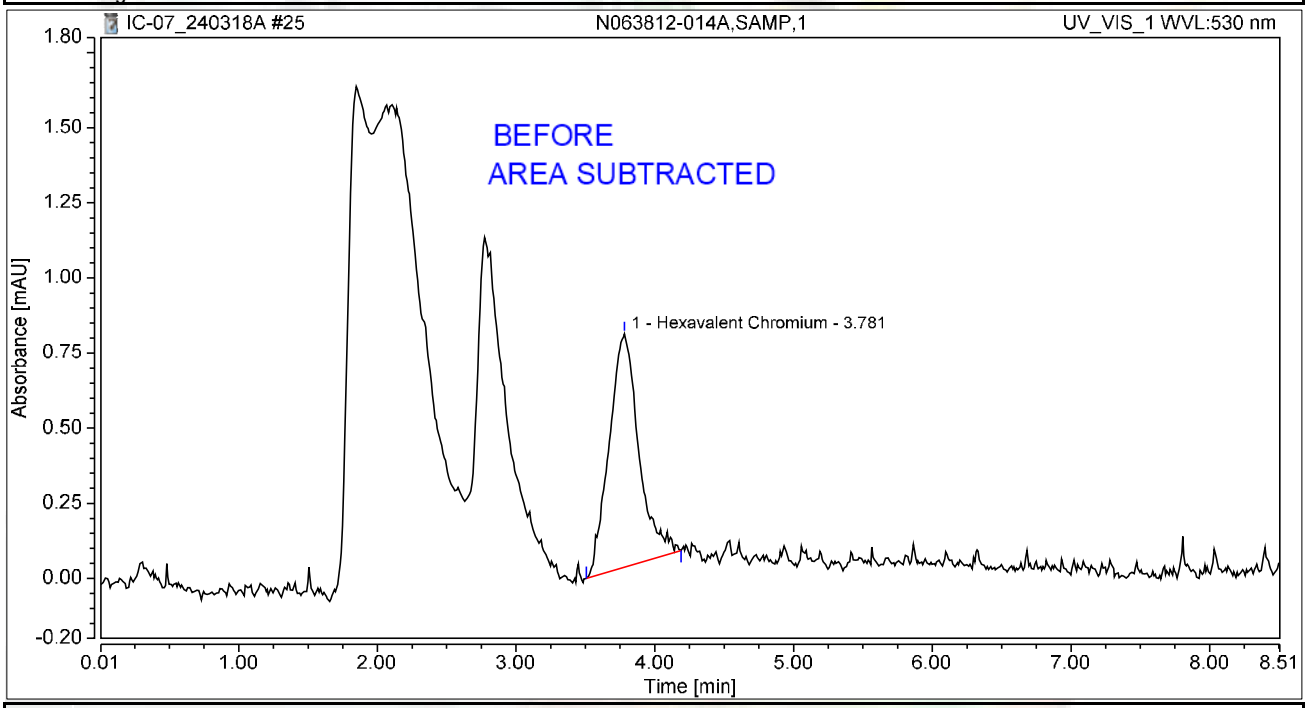
Chromatogram and Results

Injection Details

Injection Name:	**N063812-014A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 14:18**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

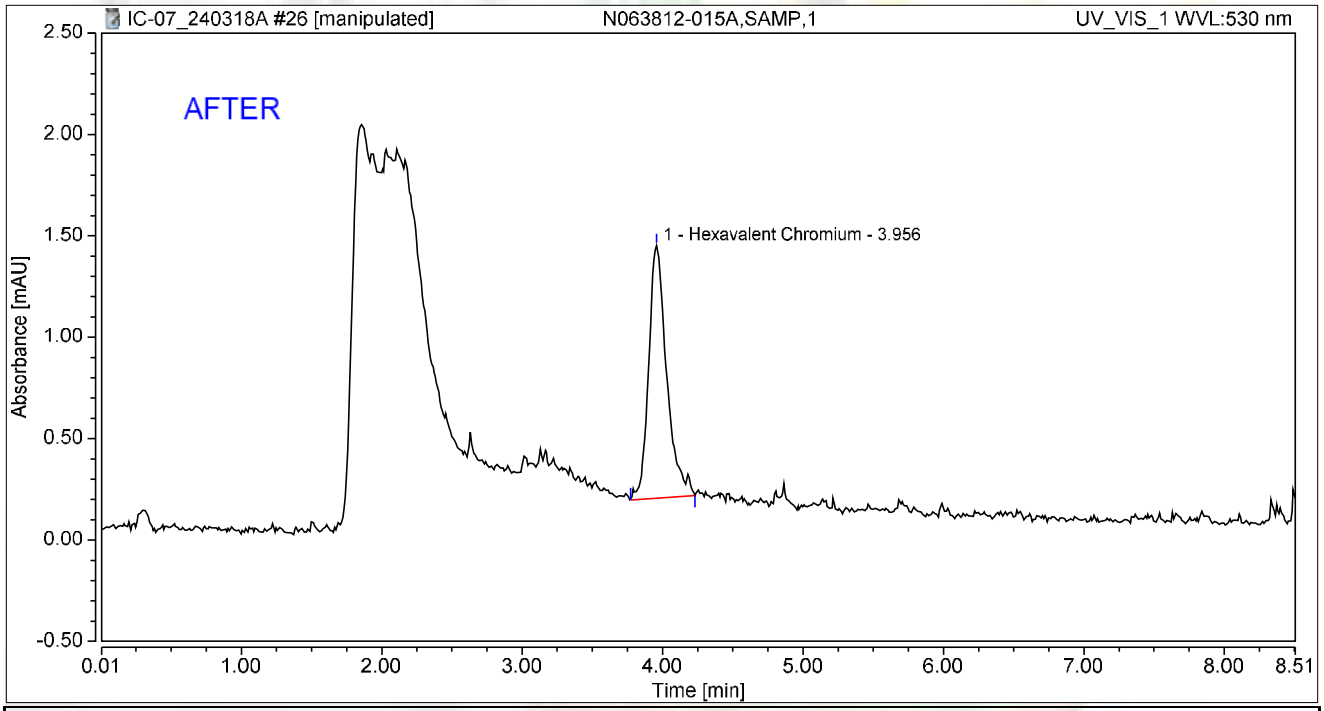
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.781	0.193	0.778	100.00	100.00	0.9083
Total:			**0.193**	**0.778**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-015A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 14:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.186	1.246	100.00	100.00	0.8727
Total:			**0.186**	**1.246**	**100.00**	**100.00**	

Reviewed by:

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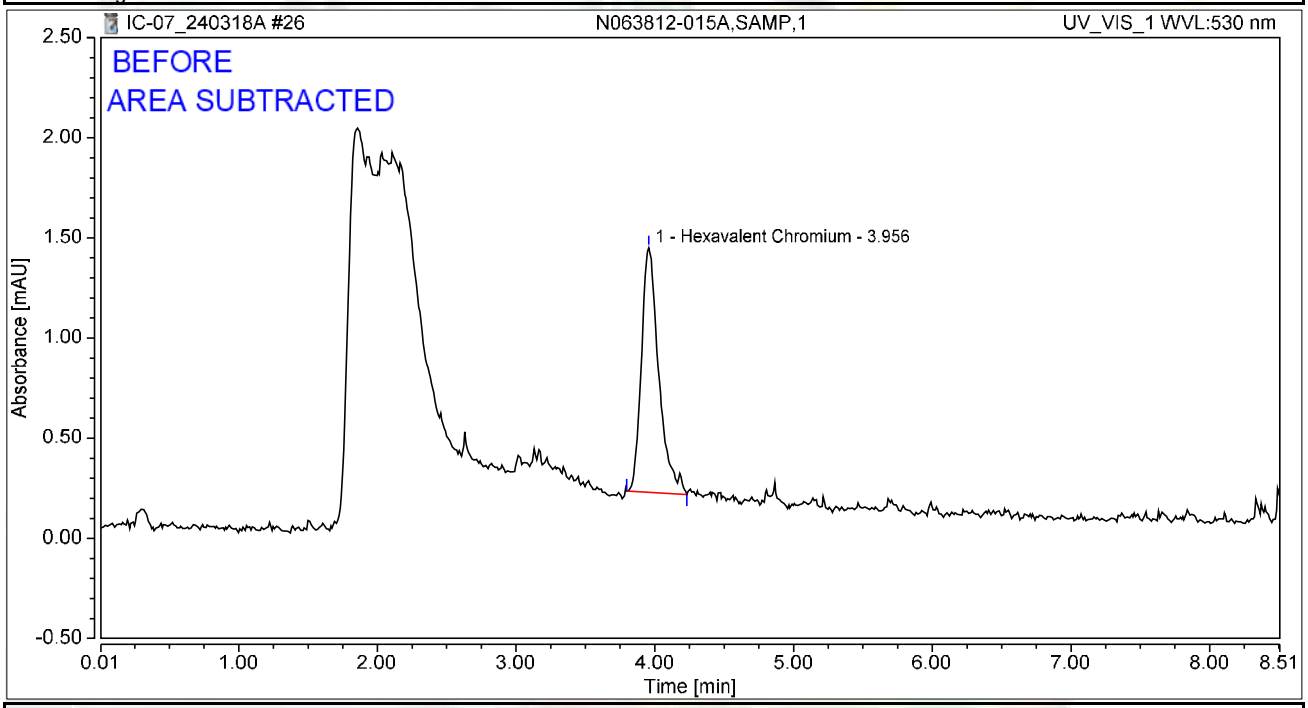
Chromatogram and Results

Injection Details

Injection Name:	**N063812-015A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 14:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

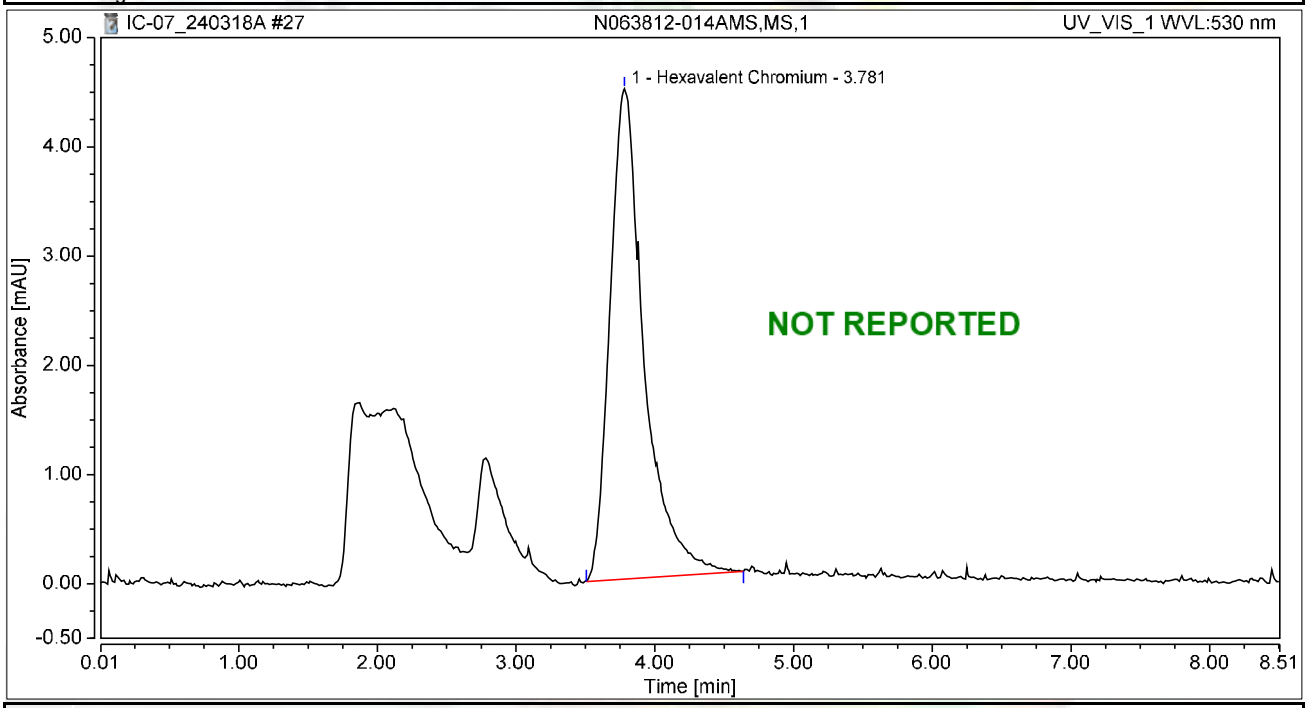
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.176	1.221	100.00	100.00	0.8286
Total:			**0.176**	**1.221**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-014AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 14:37**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

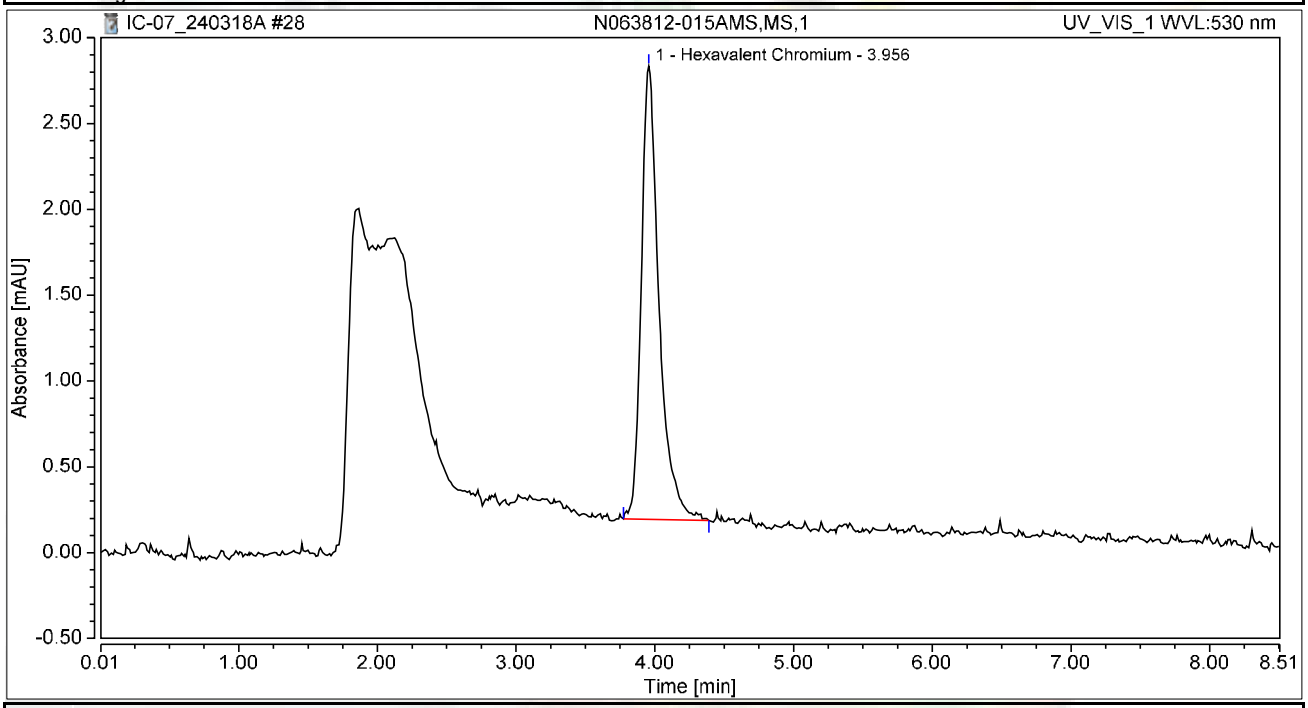
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.781	1.281	4.488	100.00	100.00	6.0185
Total:			**1.281**	**4.488**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-015AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 14:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

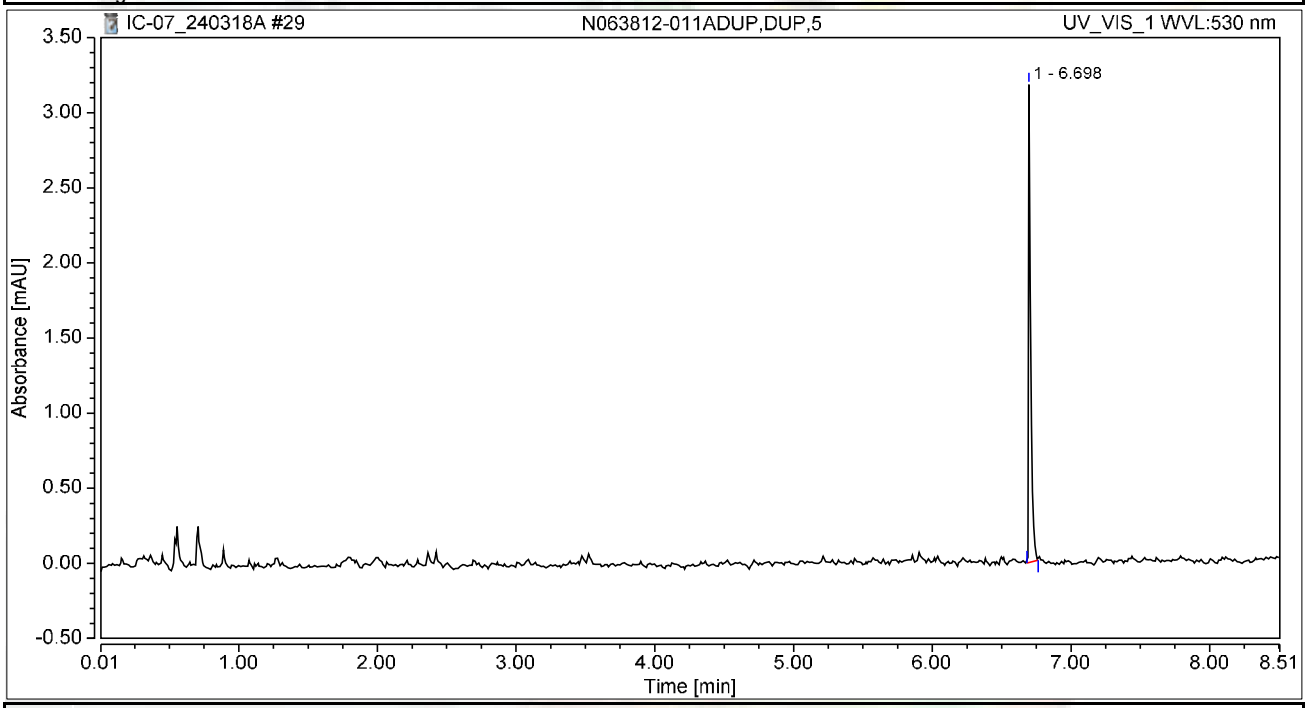
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.393	2.642	100.00	100.00	1.8454
Total:			**0.393**	**2.642**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-011ADUP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 14:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

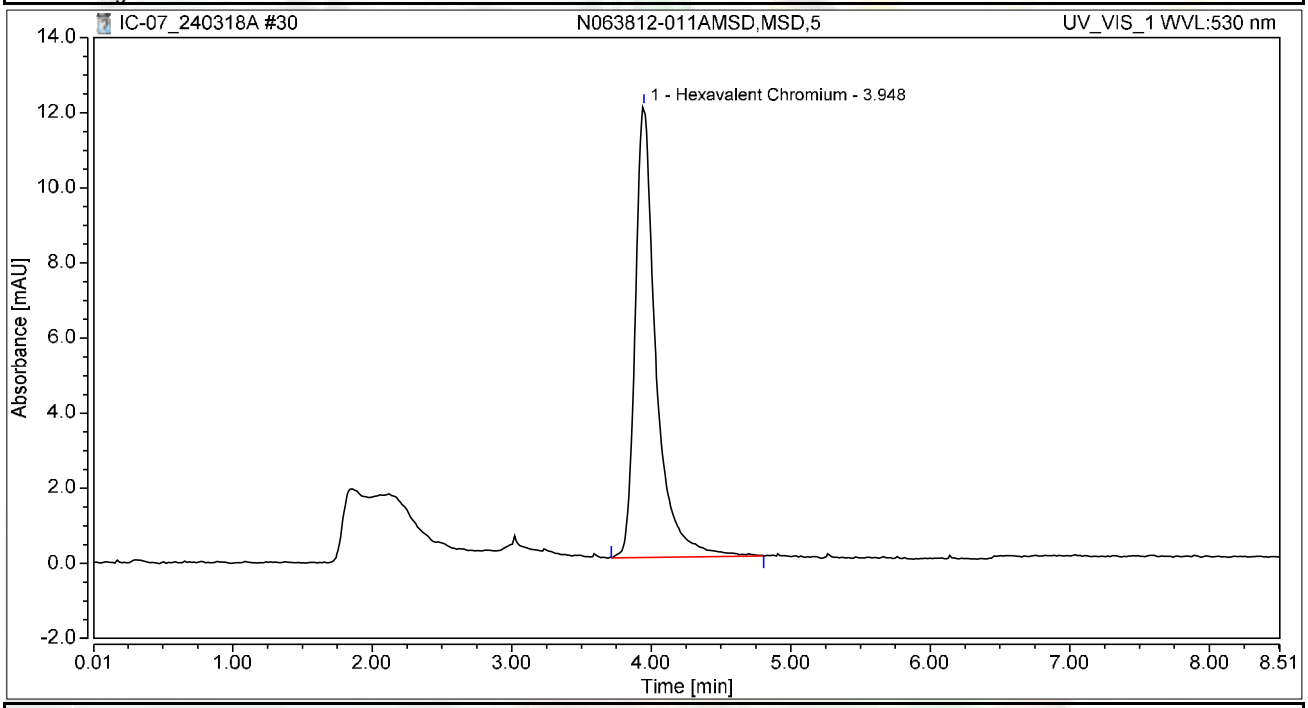
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		6.698	0.057	3.182	100.00	100.00	n.a.
Total:			**0.057**	**3.182**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-011AMSD,MSD,5**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 15:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

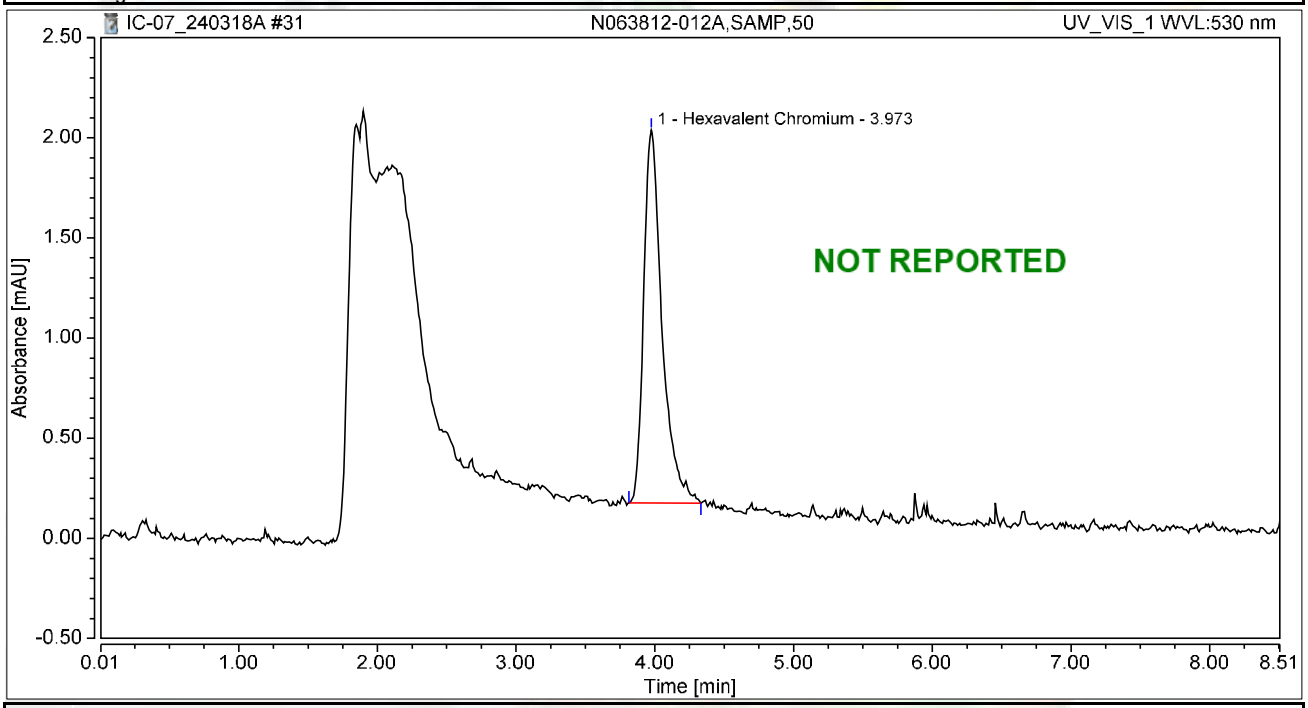
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	2.074	12.014	100.00	100.00	9.7440
Total:			**2.074**	**12.014**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-012A,SAMP,50**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 15:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

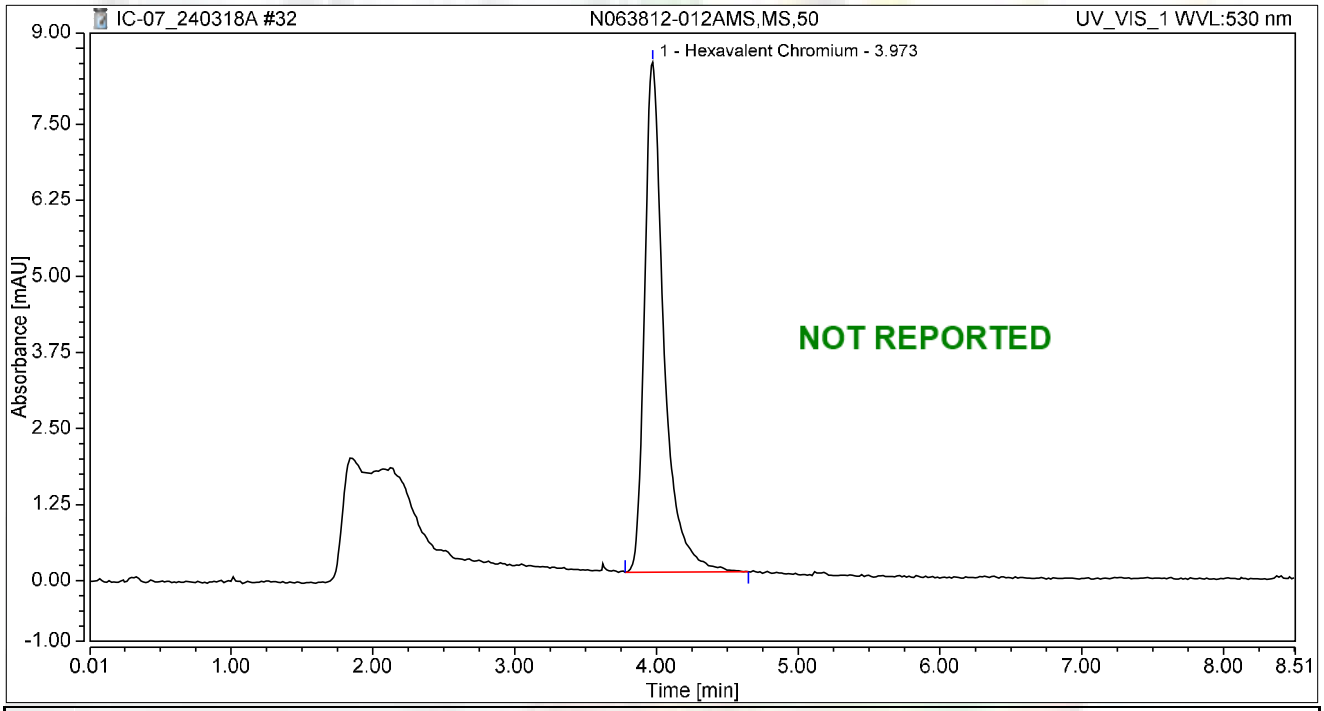
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.285	1.861	100.00	100.00	1.3395
Total:			**0.285**	**1.861**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-012AMS,MS,50**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 15:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

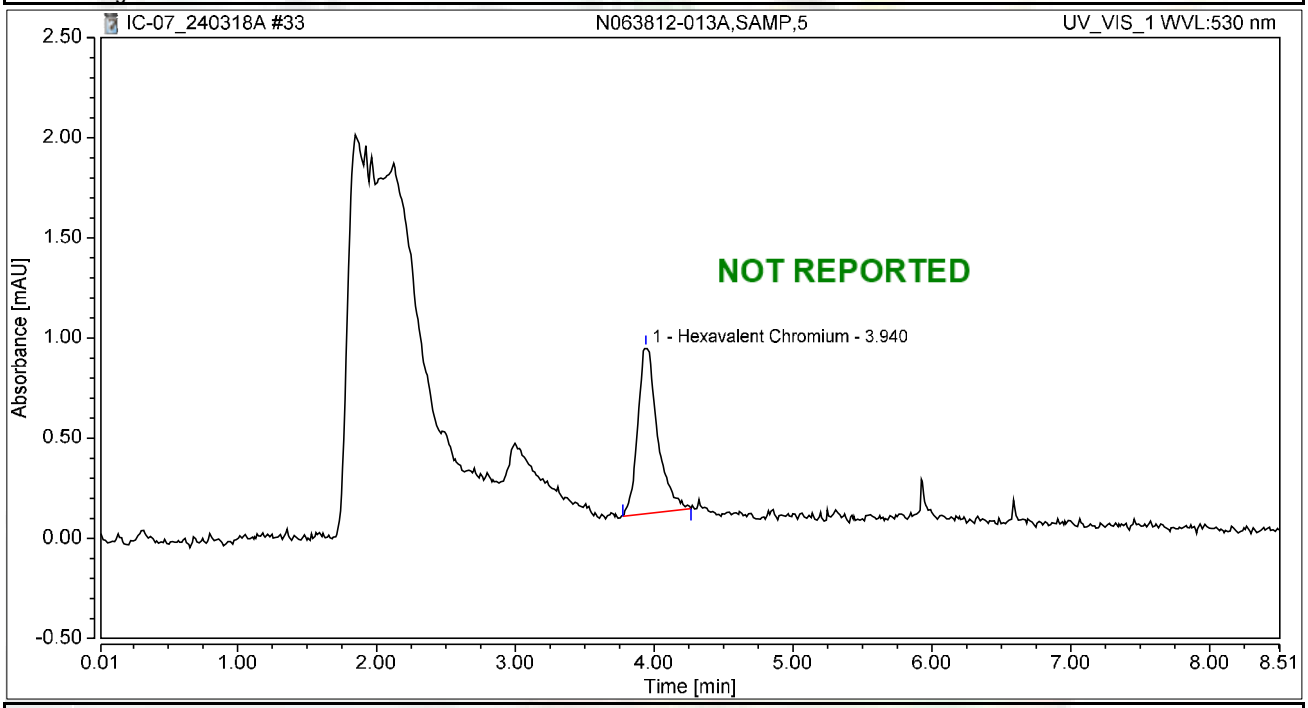
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	1.328	8.381	100.00	100.00	6.2384
Total:			**1.328**	**8.381**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-013A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 15:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

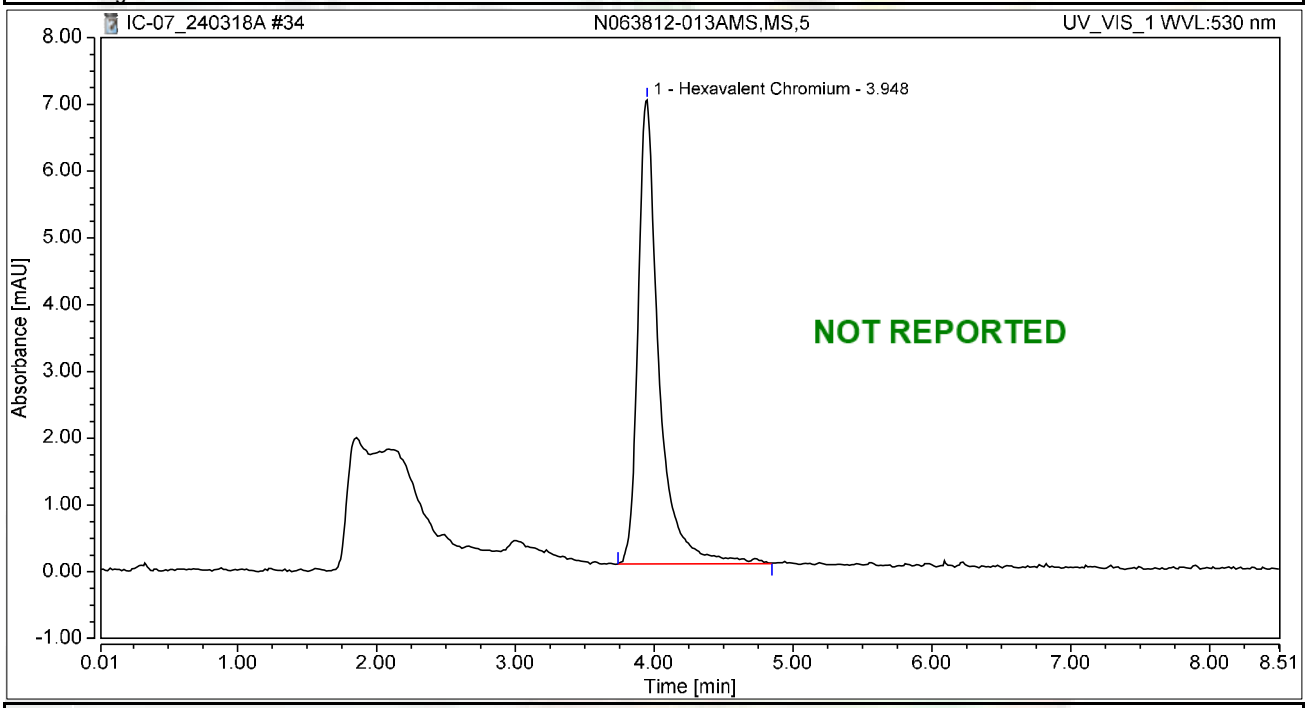
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.137	0.829	100.00	100.00	0.6438
Total:			**0.137**	**0.829**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-013AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 15:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

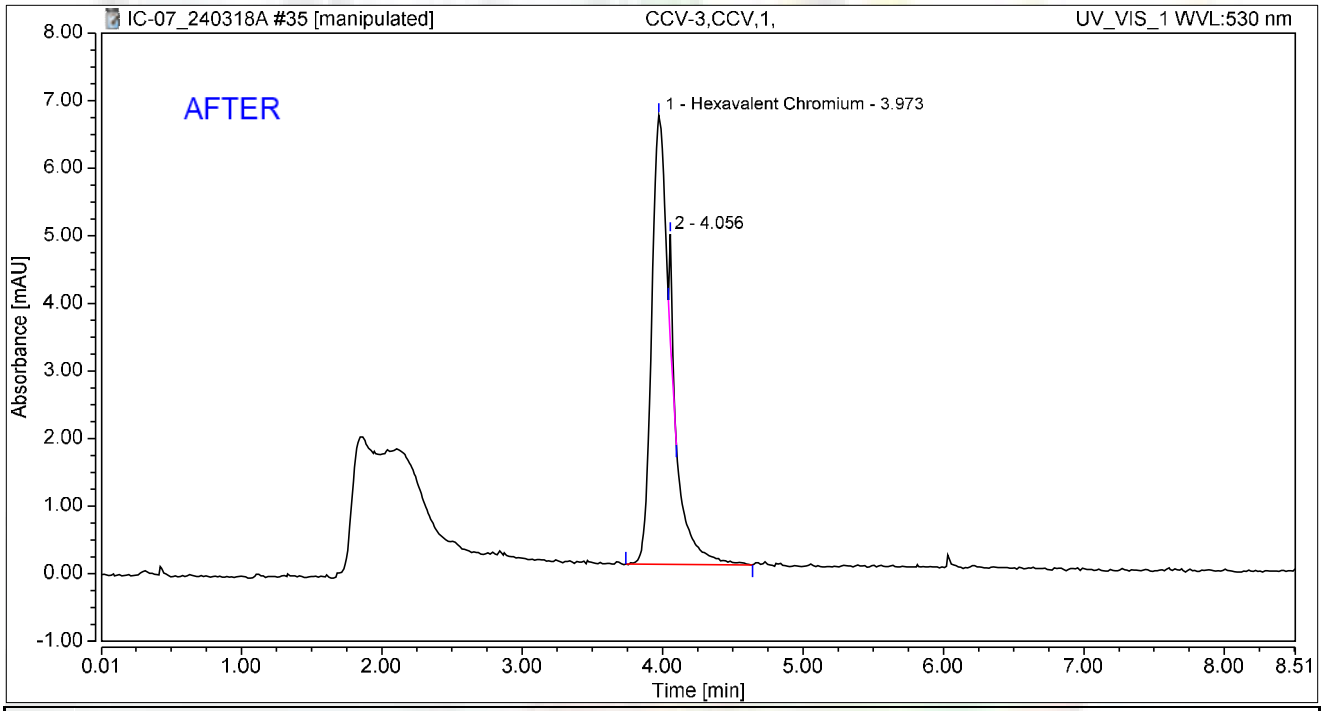
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	1.209	6.950	100.00	100.00	5.6823
Total:			**1.209**	**6.950**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 15:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	1.064	6.644	97.33	80.74	4.9972
2		4.056	0.029	1.585	2.67	19.26	n.a.
Total:			**1.093**	**8.229**	**100.00**	**100.00**	

Reviewed by:

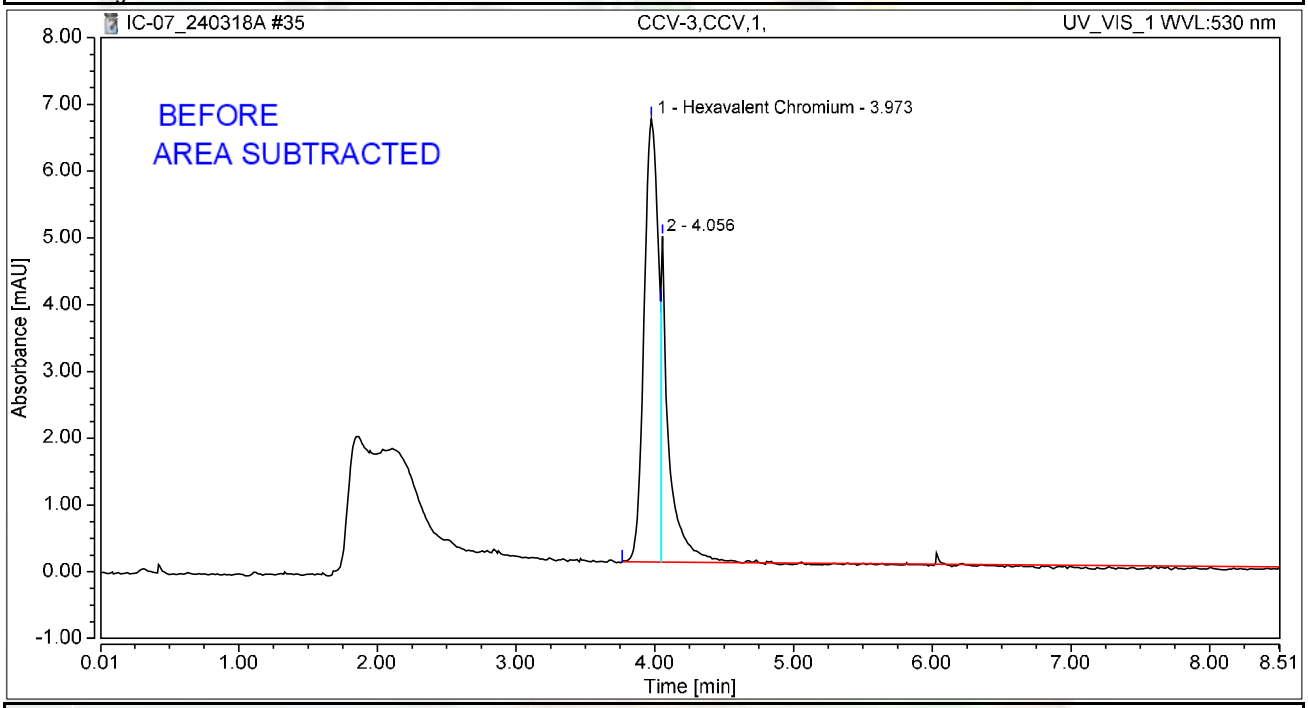
dMocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 15:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

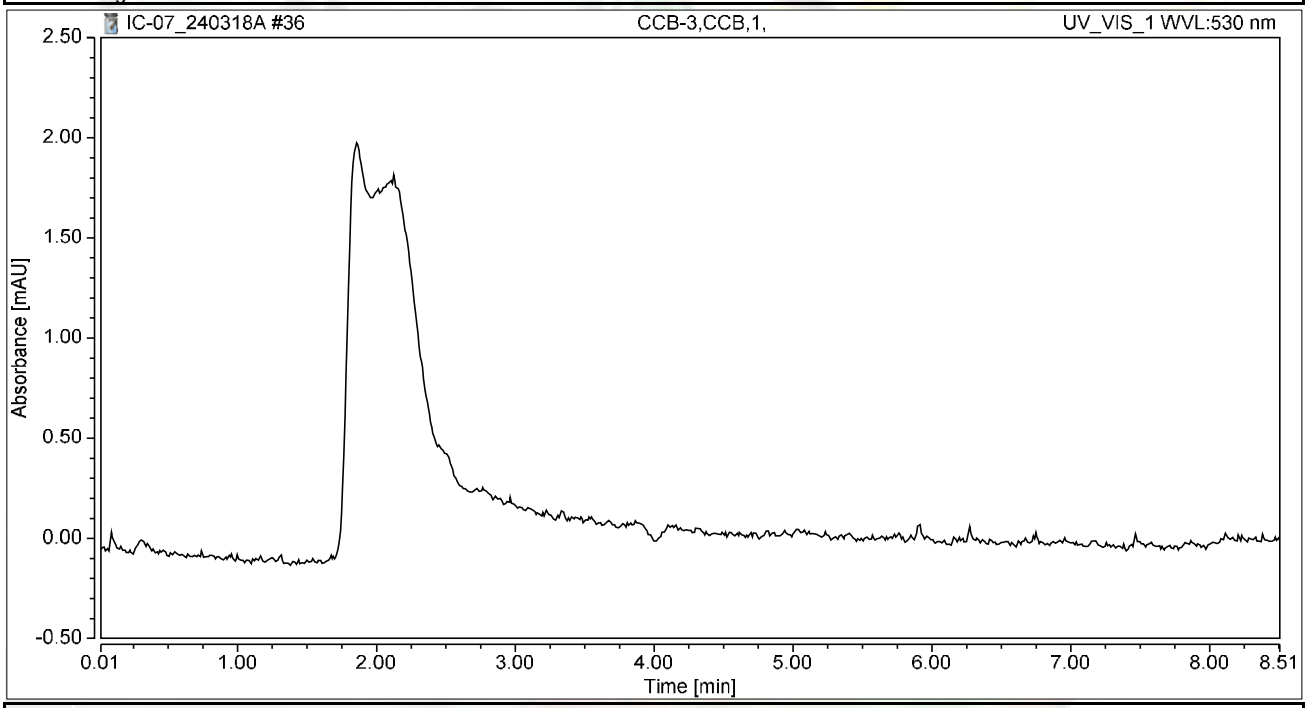
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.790	6.641	77.70	57.65	3.7114
2		4.056	0.227	4.879	22.30	42.35	n.a.
Total:			**1.017**	**11.520**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 16:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

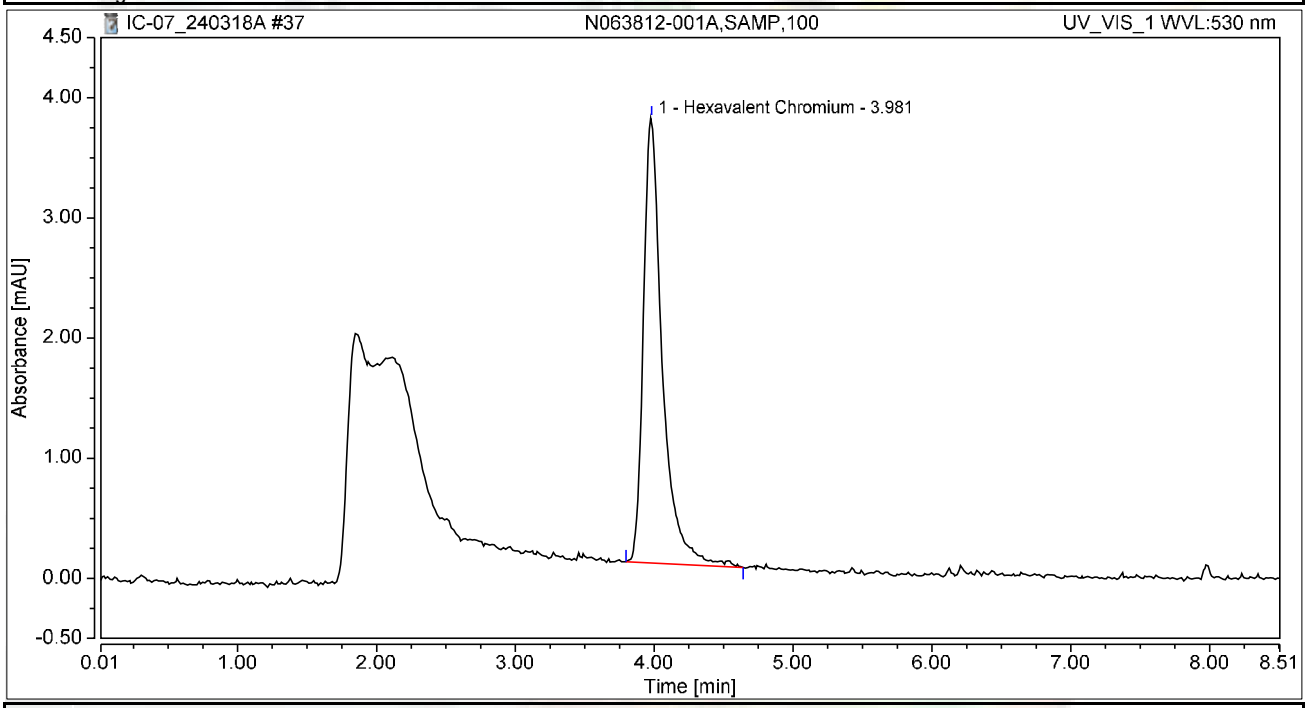
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-001A,SAMP,100**	*Run Time (min):*	**8.49**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 16:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

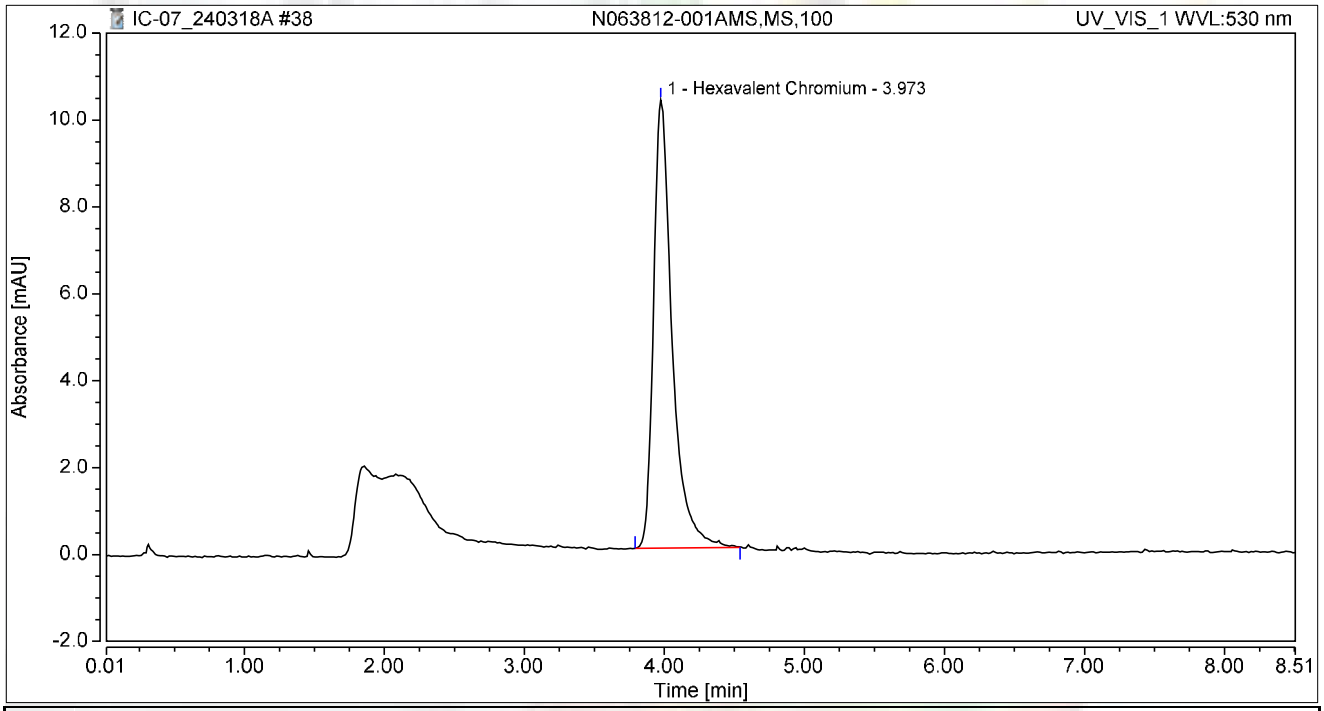
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.586	3.701	100.00	100.00	2.7518
Total:			**0.586**	**3.701**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-001AMS,MS,100**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 16:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

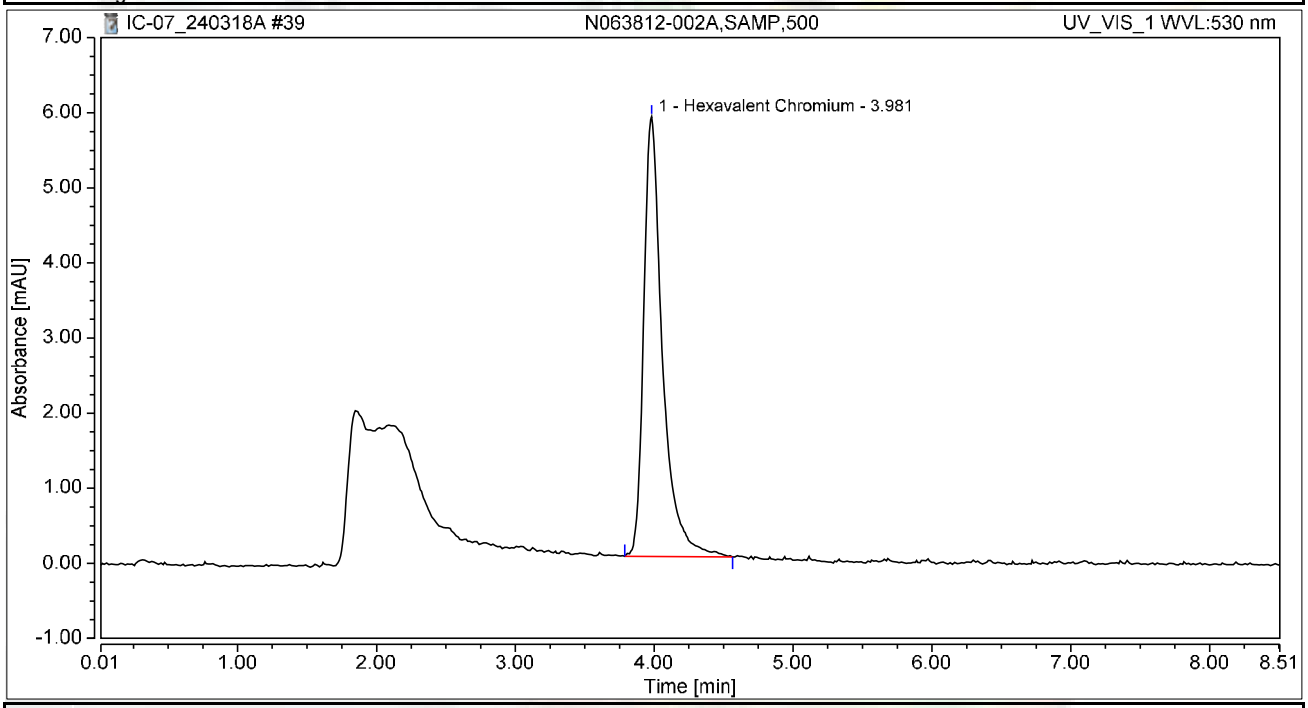
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	1.595	10.316	100.00	100.00	7.4961
Total:			**1.595**	**10.316**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-002A,SAMP,500**	*Run Time (min):*	**8.49**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 16:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

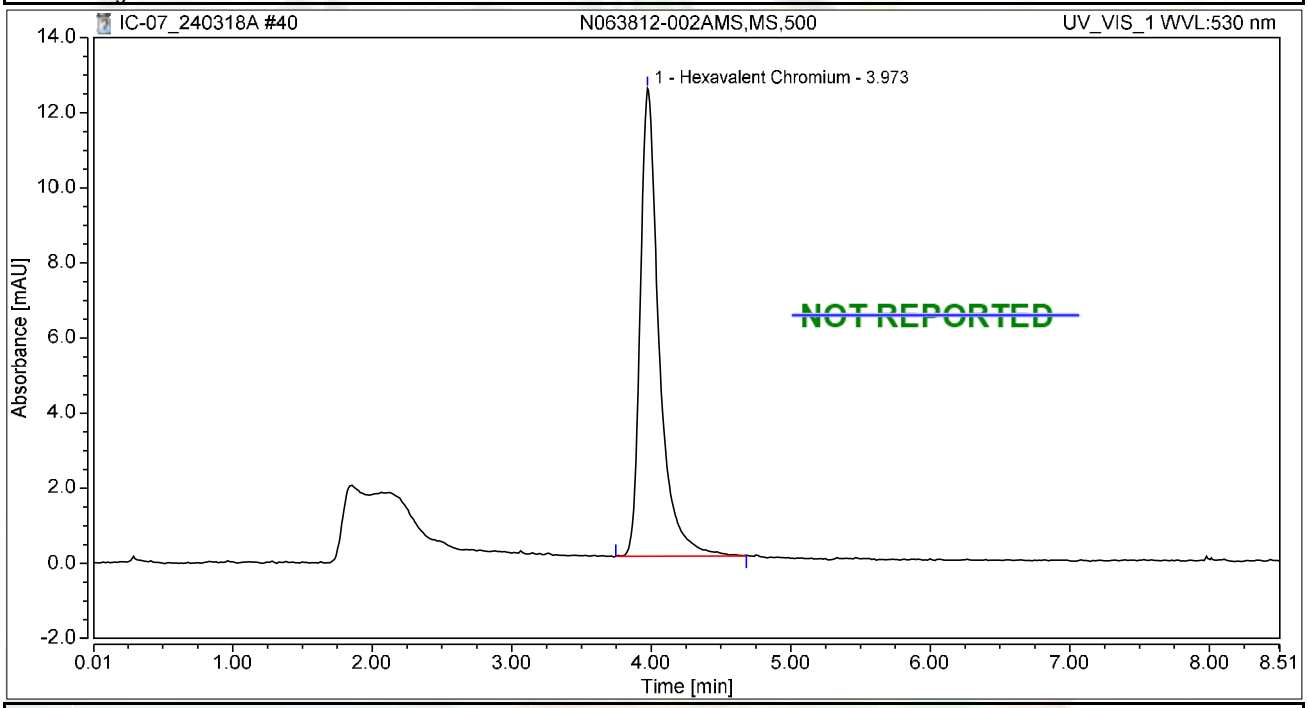
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	0.922	5.855	100.00	100.00	4.3307
Total:			**0.922**	**5.855**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-002AMS,MS,500**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 16:45**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

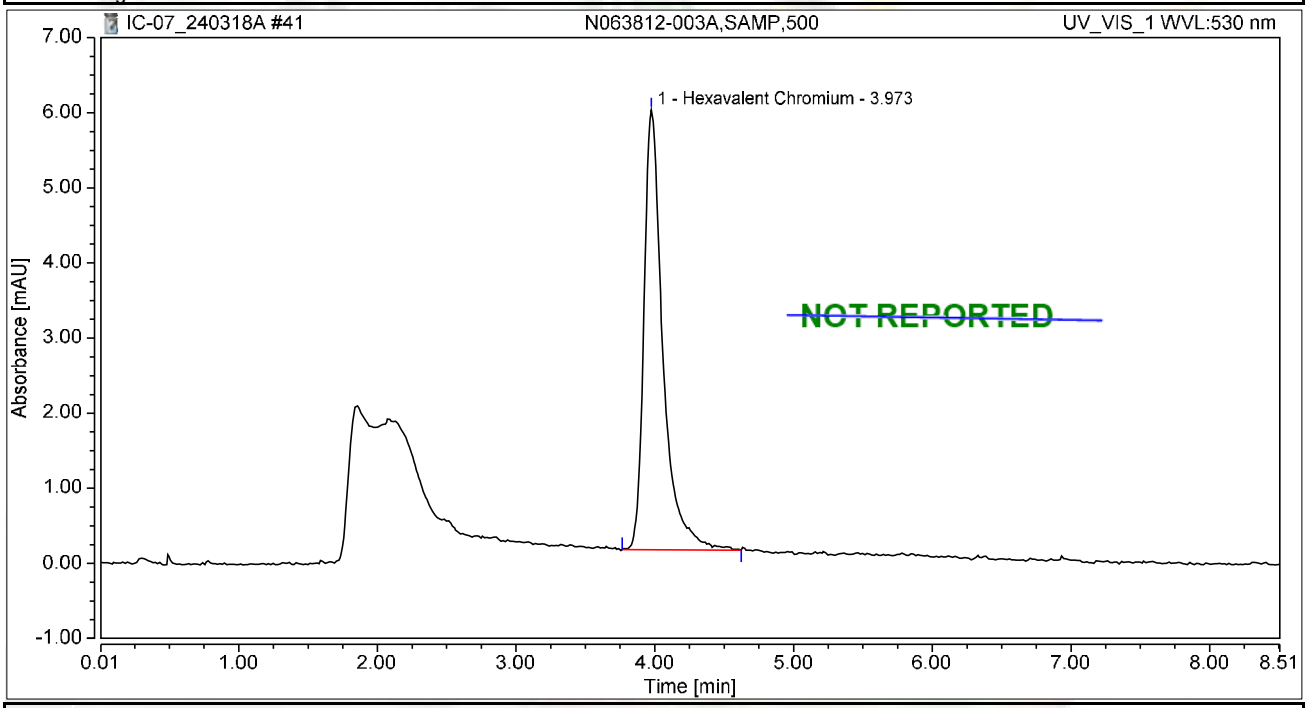
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	1.963	12.456	100.00	100.00	9.2240
Total:			**1.963**	**12.456**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-003A,SAMP,500**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 16:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

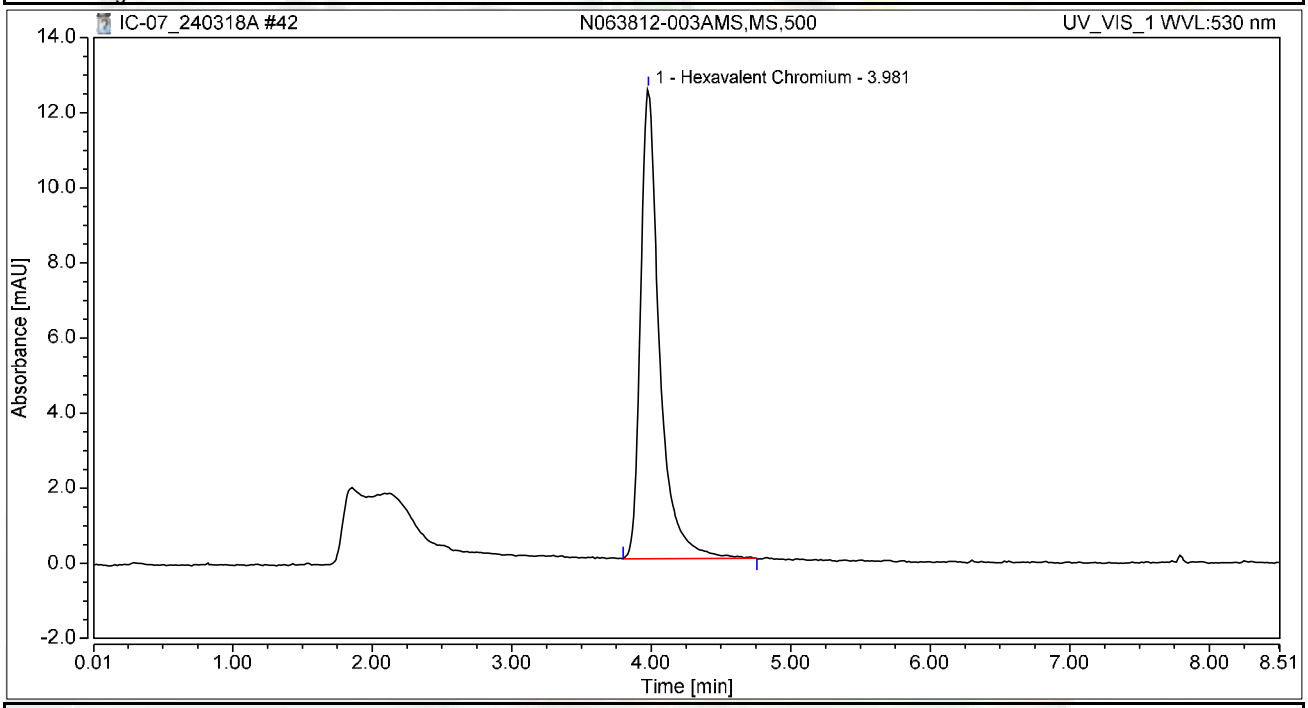
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.926	5.855	100.00	100.00	4.3488
Total:			**0.926**	**5.855**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-003AMS,MS,500**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 17:04**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

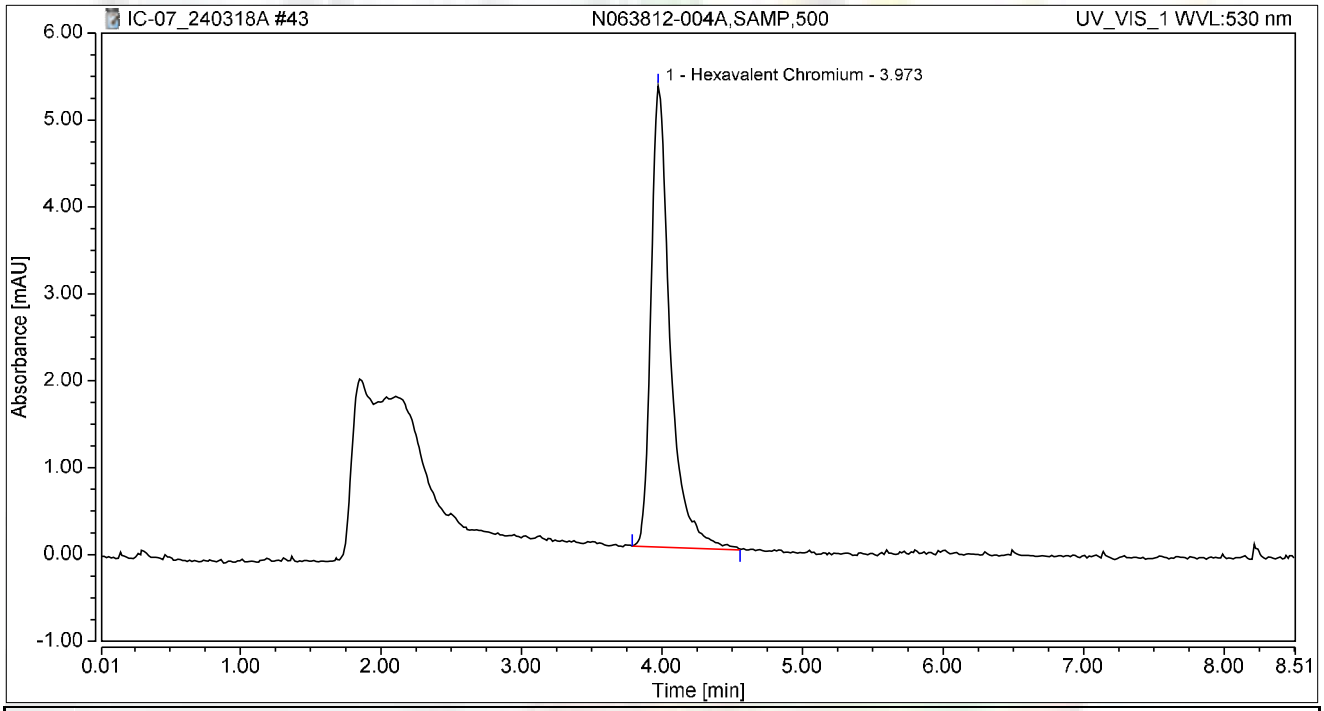
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.977	12.520	100.00	100.00	9.2872
Total:			**1.977**	**12.520**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-004A,SAMP,500**	*Run Time (min):*	**8.49**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 17:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

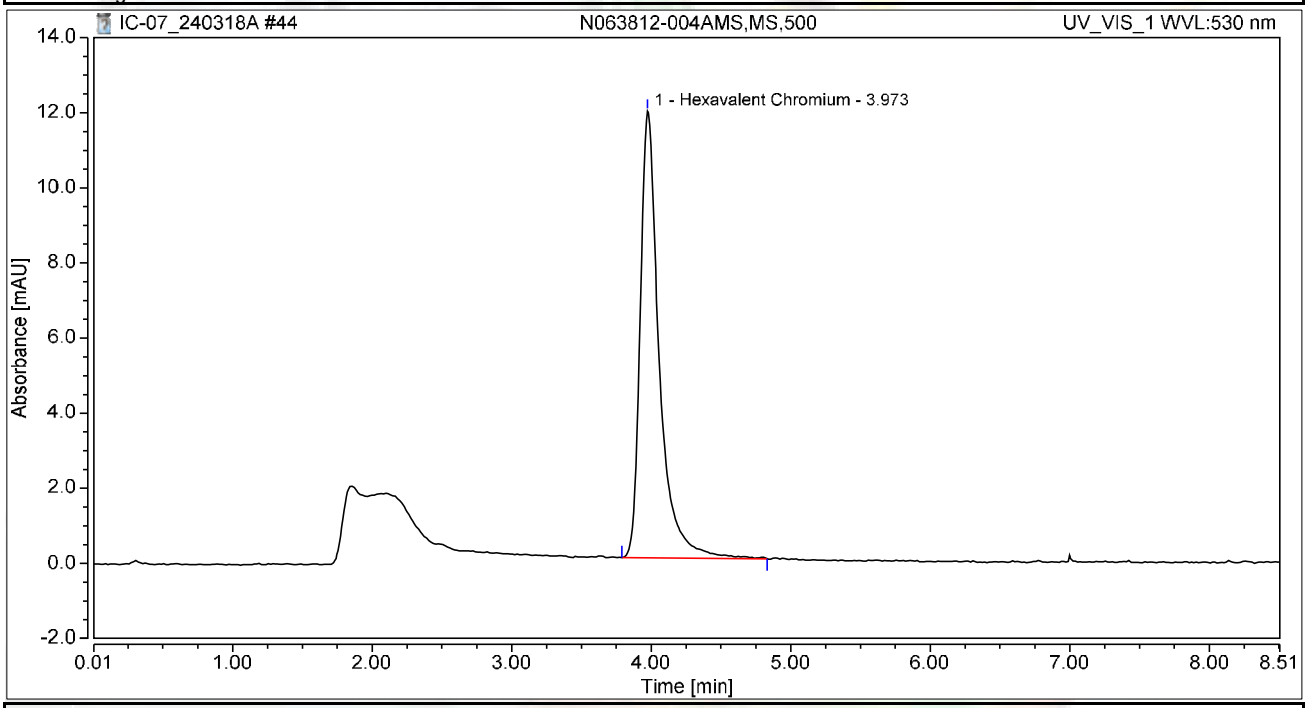
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.840	5.308	100.00	100.00	3.9462
Total:			**0.840**	**5.308**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-004AMS,MS,500**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 17:23**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

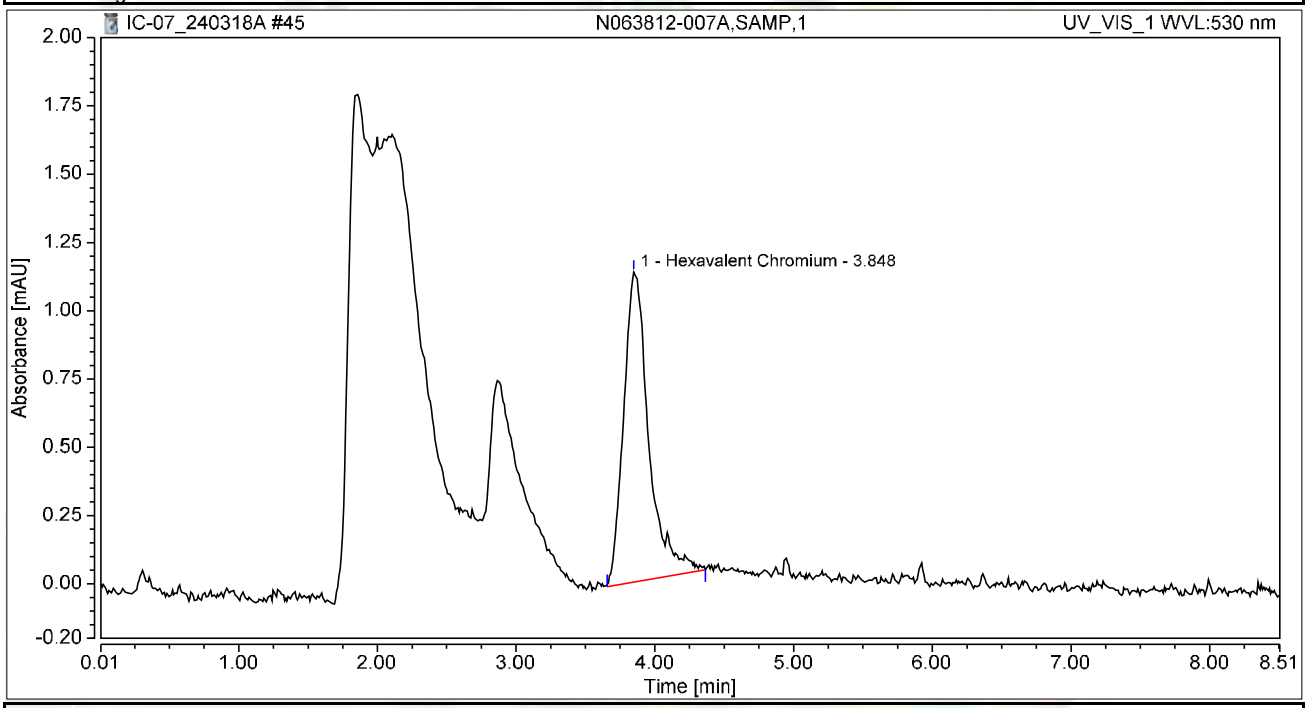
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	1.885	11.897	100.00	100.00	8.8588
Total:			**1.885**	**11.897**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-007A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 17:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

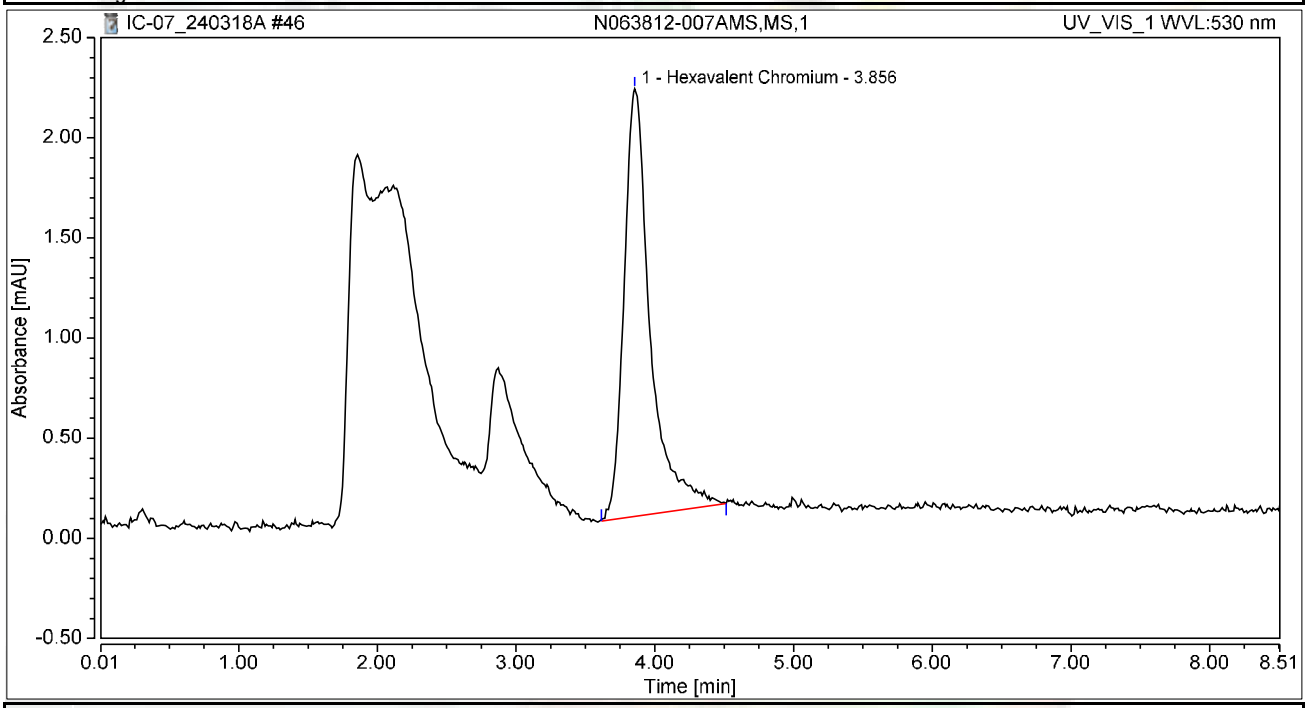
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.848	0.239	1.135	100.00	100.00	1.1232
Total:			**0.239**	**1.135**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-007AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**18**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 17:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

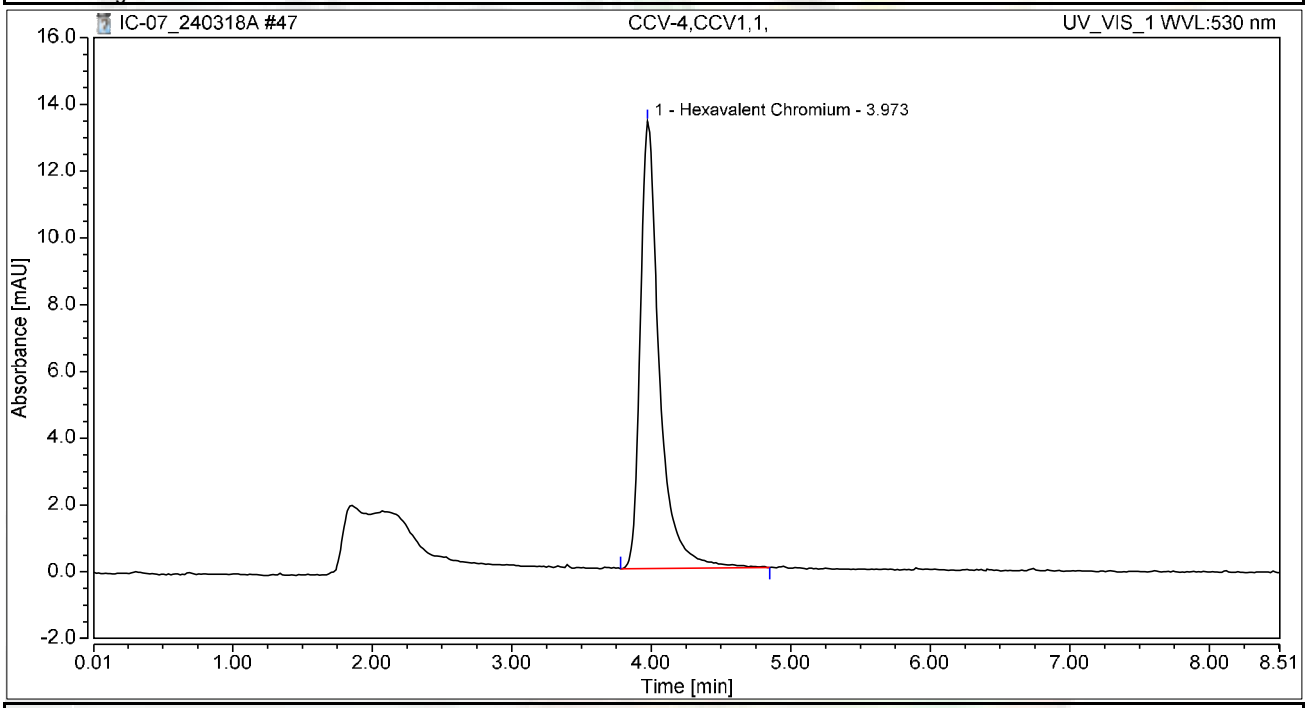
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.856	0.468	2.136	100.00	100.00	2.1970
Total:			**0.468**	**2.136**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-4,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**19**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 17:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

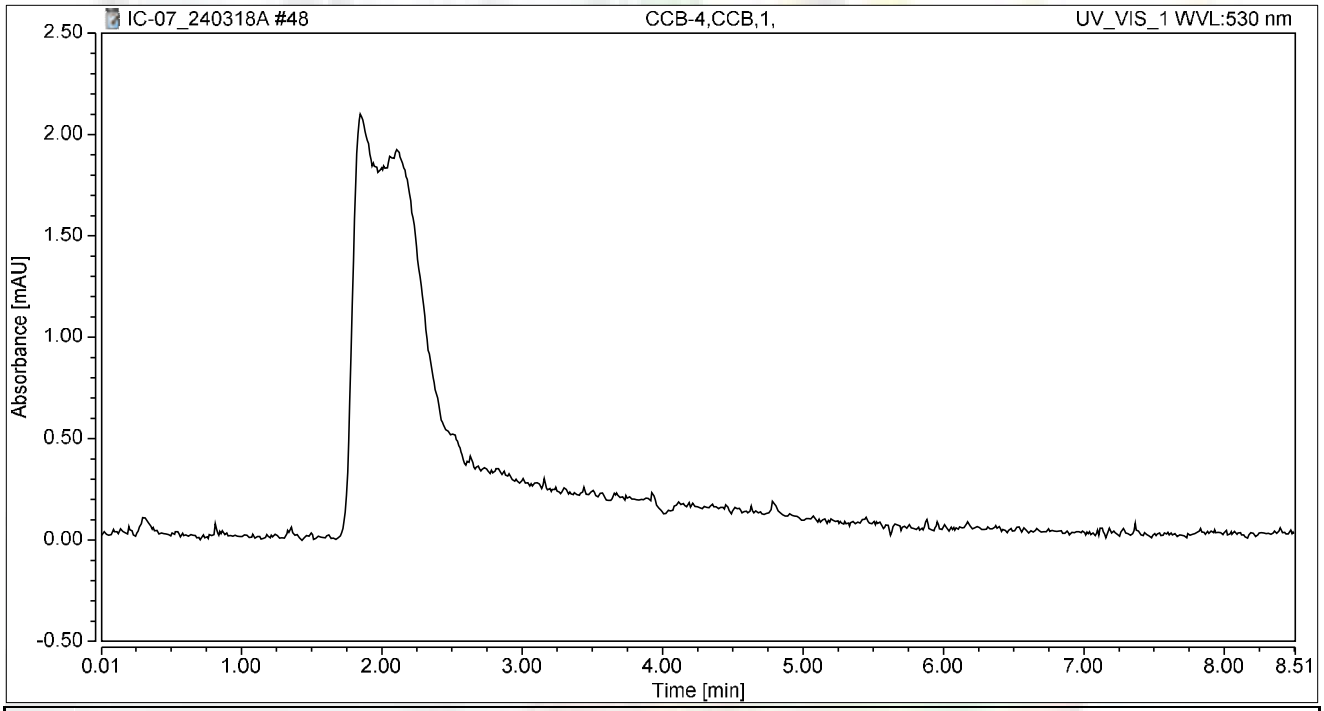
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	2.134	13.392	100.00	100.00	10.0277
Total:			**2.134**	**13.392**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-4,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**20**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 18:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

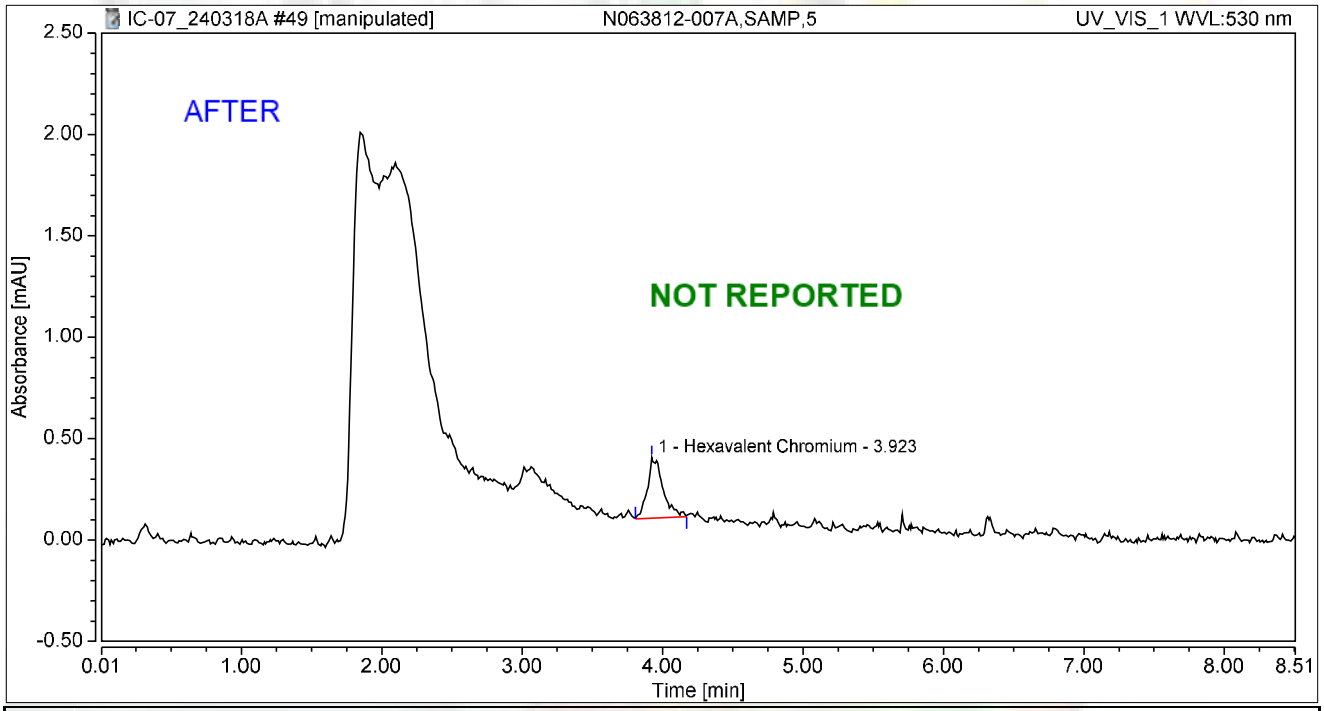
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-007A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 18:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.923	0.039	0.299	100.00	100.00	0.1832
Total:			**0.039**	**0.299**	**100.00**	**100.00**	

Reviewed by:

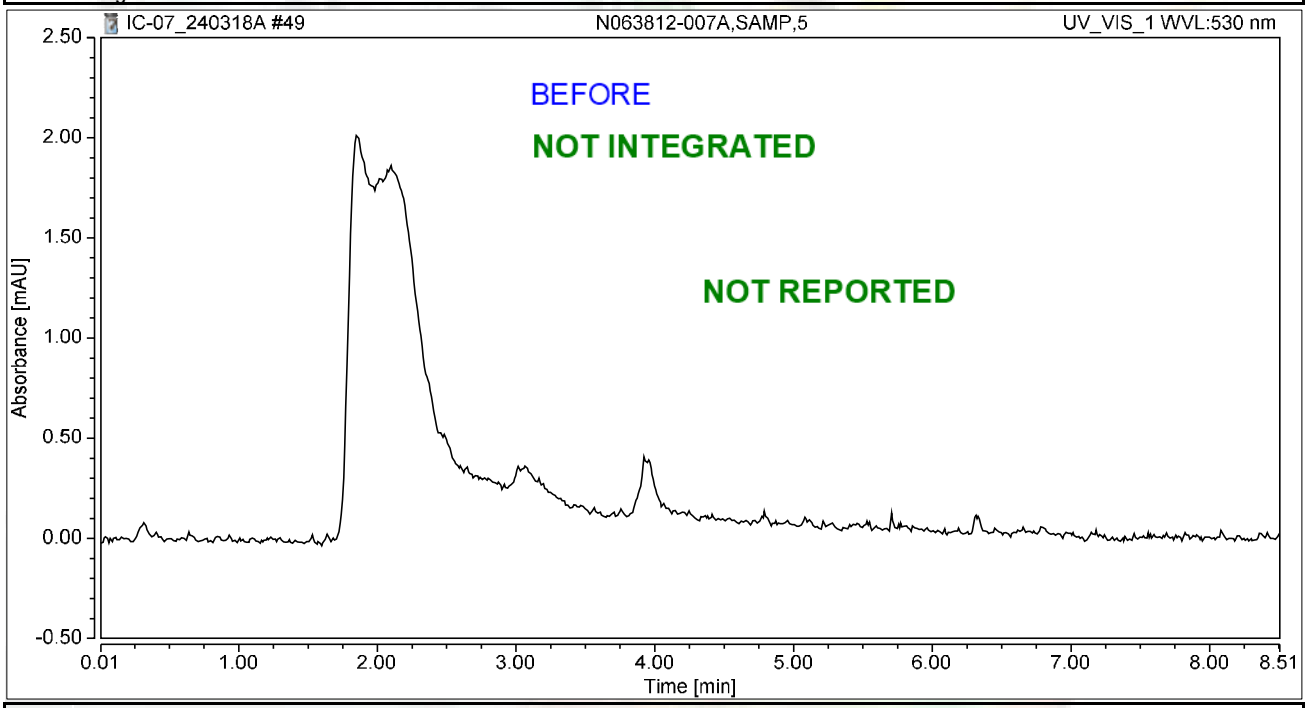
dMocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063812-007A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**21**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 18:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

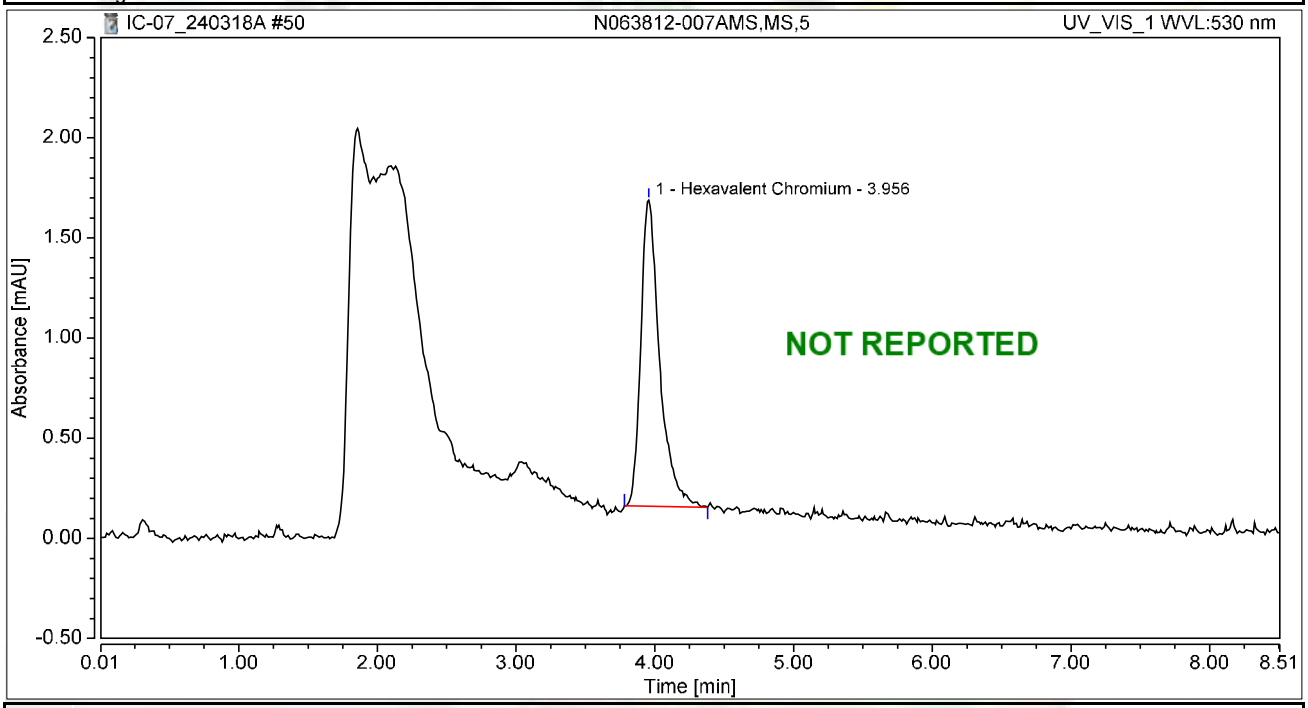
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-007AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**22**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 18:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

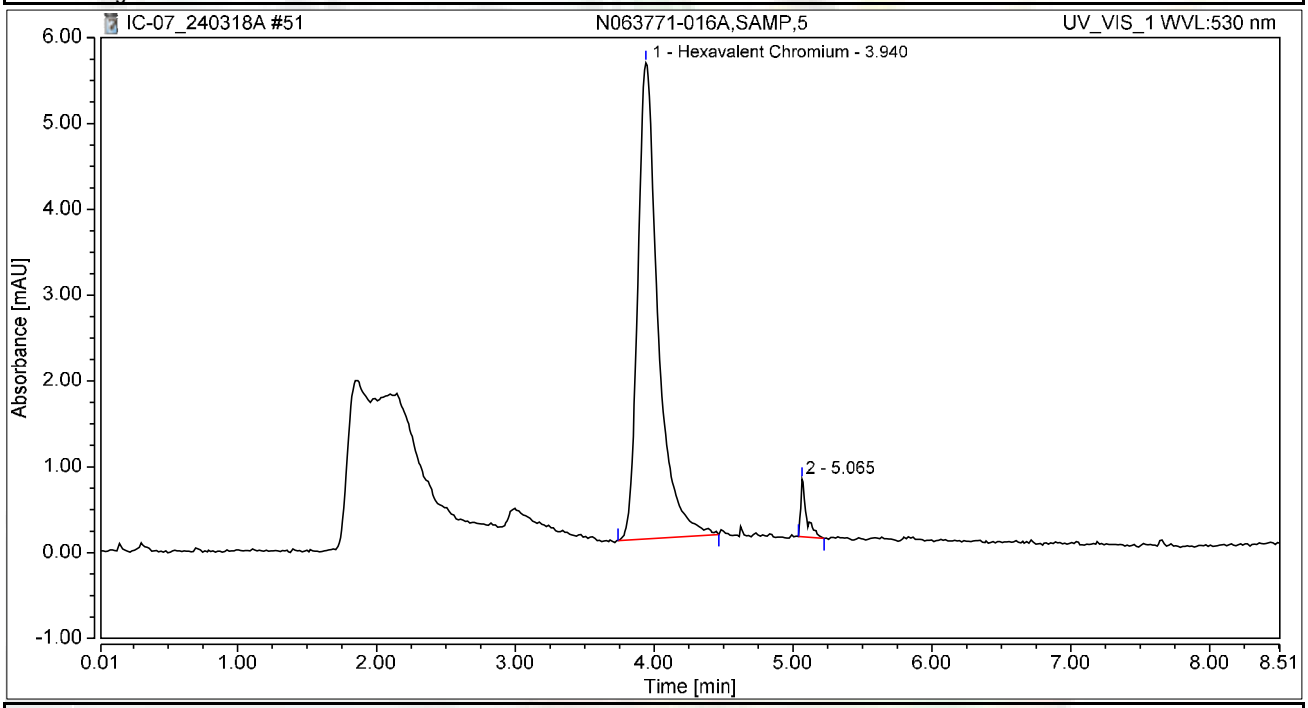
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	0.241	1.530	100.00	100.00	1.1339
Total:			**0.241**	**1.530**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-016A,SAMP,5**	*Run Time (min):*	**8.49**
Vial Number:	**23**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 18:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

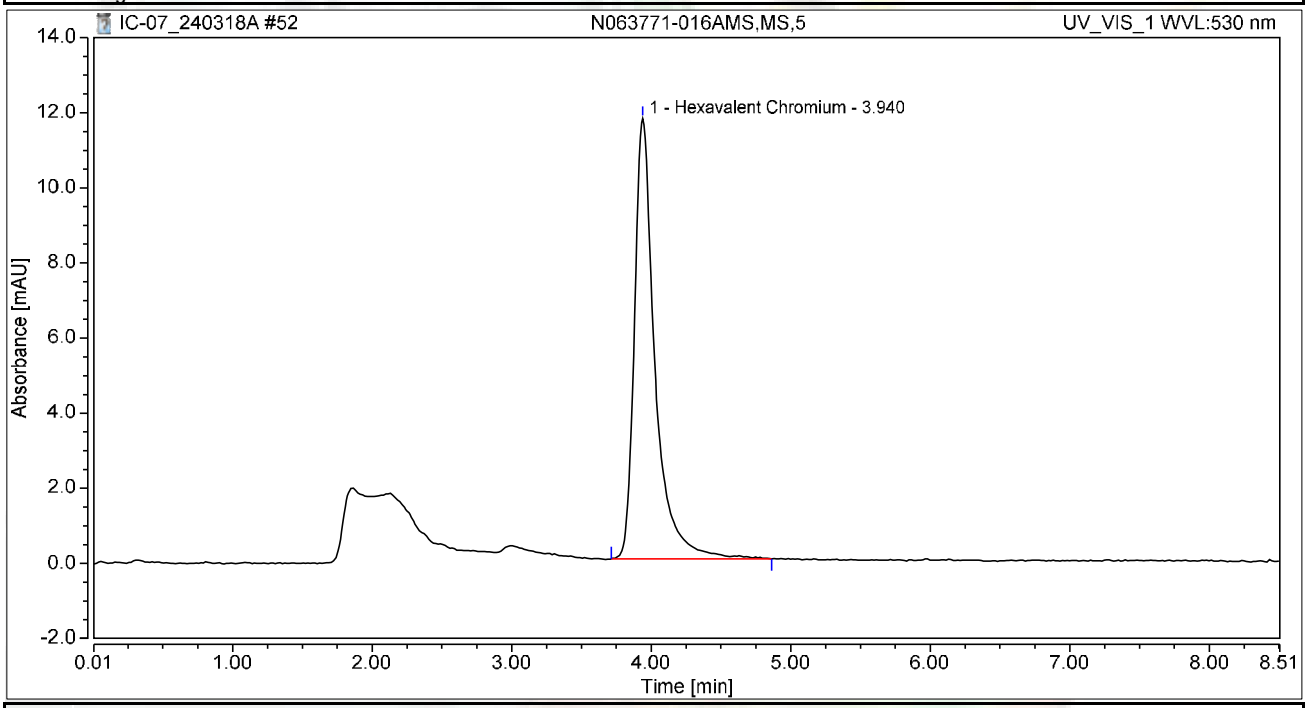
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.938	5.546	96.58	89.24	4.4074
2		5.065	0.033	0.669	3.42	10.76	n.a.
Total:			**0.971**	**6.214**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-016AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**24**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 18:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

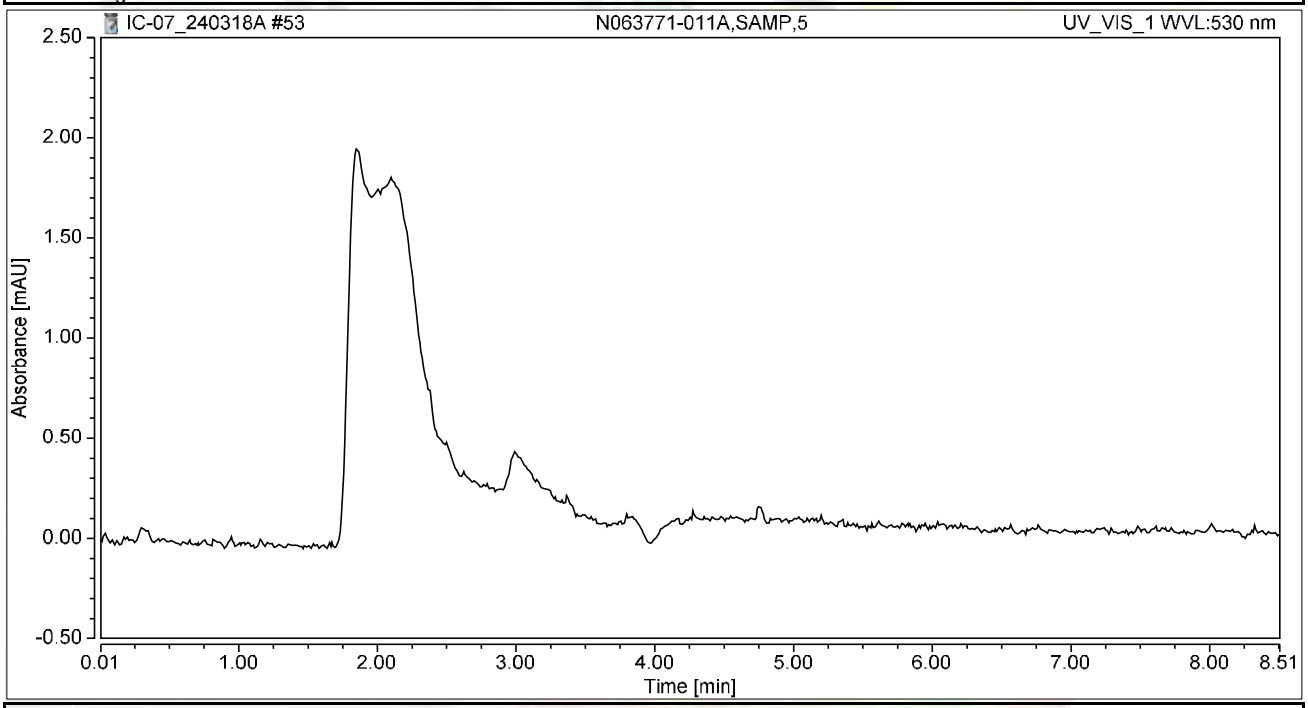
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	2.011	11.727	100.00	100.00	9.4476
Total:			**2.011**	**11.727**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-011A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**25**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 18:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

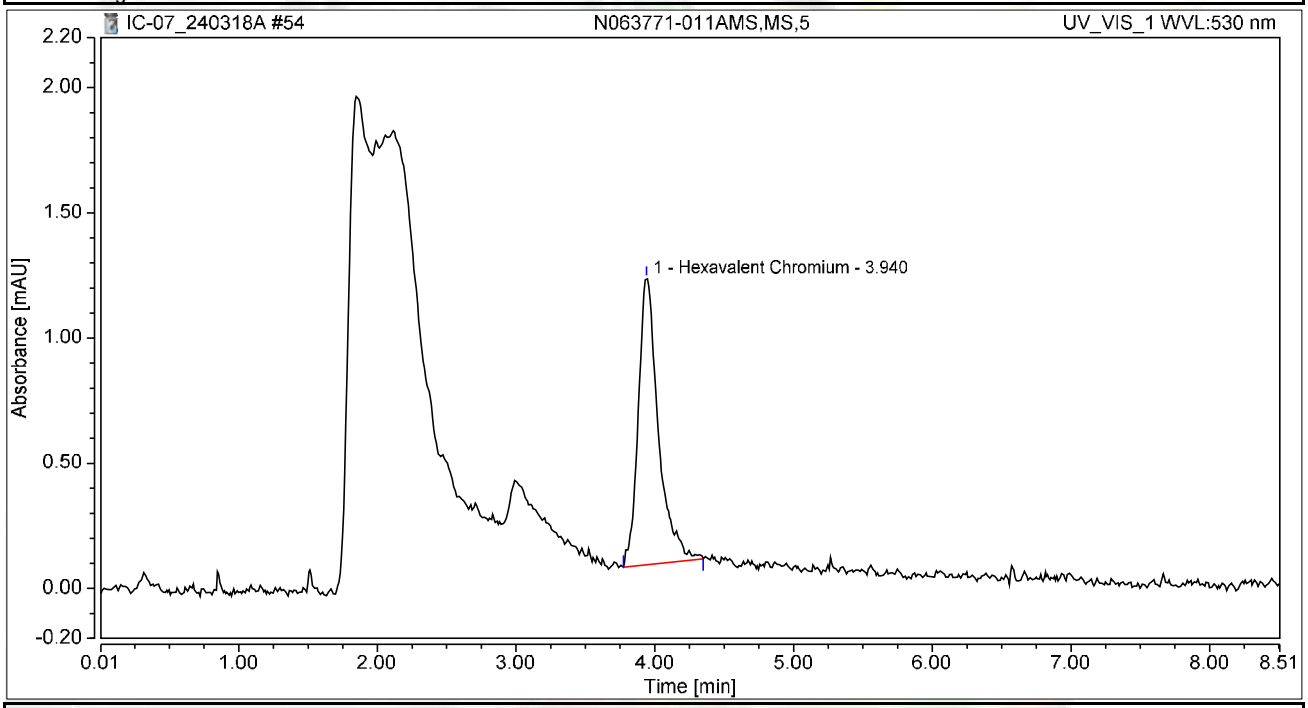
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-011AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**26**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 19:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

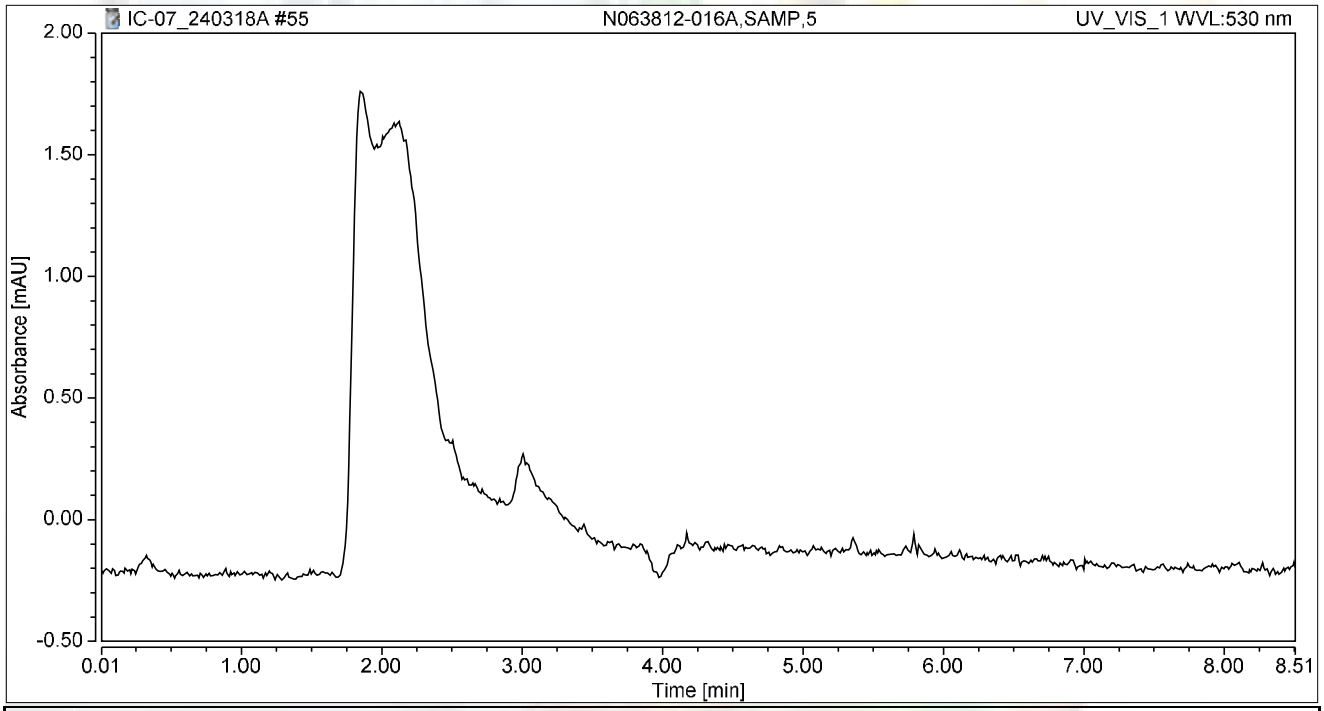
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.192	1.143	100.00	100.00	0.9036
Total:			**0.192**	**1.143**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-016A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**27**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 19:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

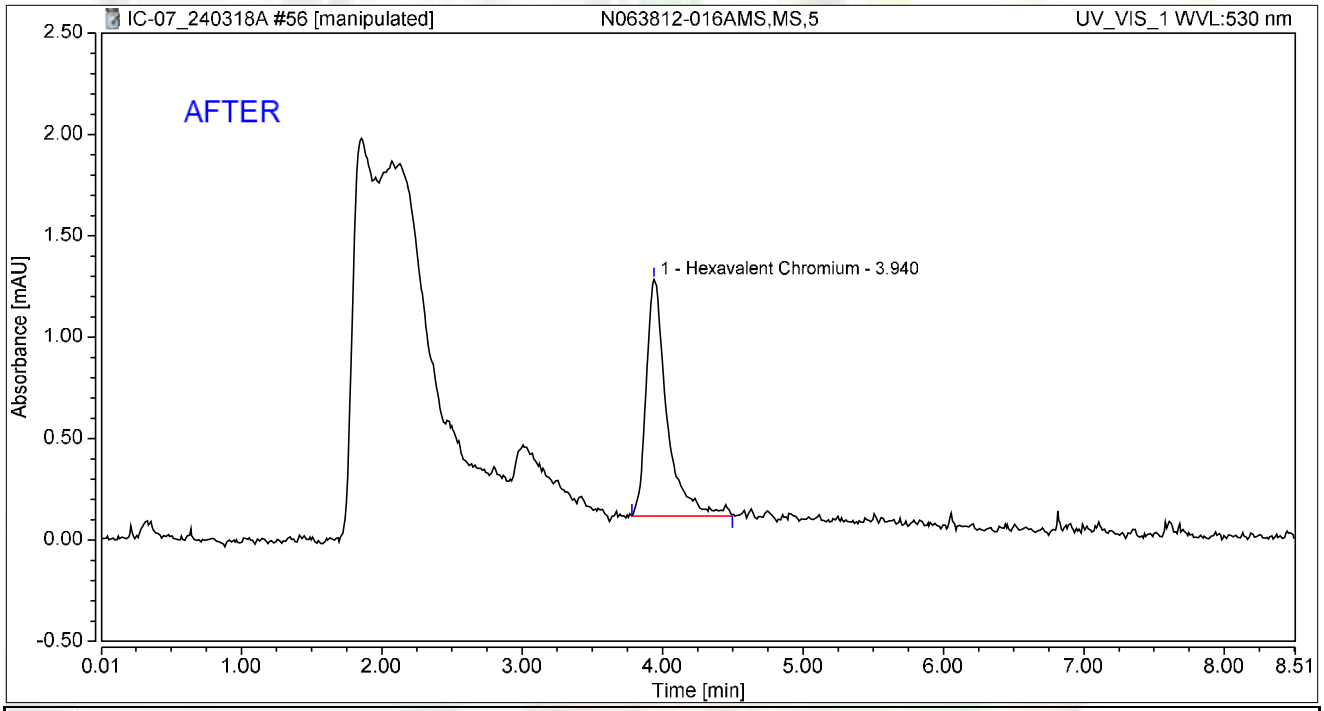
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-016AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 19:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.200	1.166	100.00	100.00	0.9394
Total:			**0.200**	**1.166**	**100.00**	**100.00**	

Reviewed by:

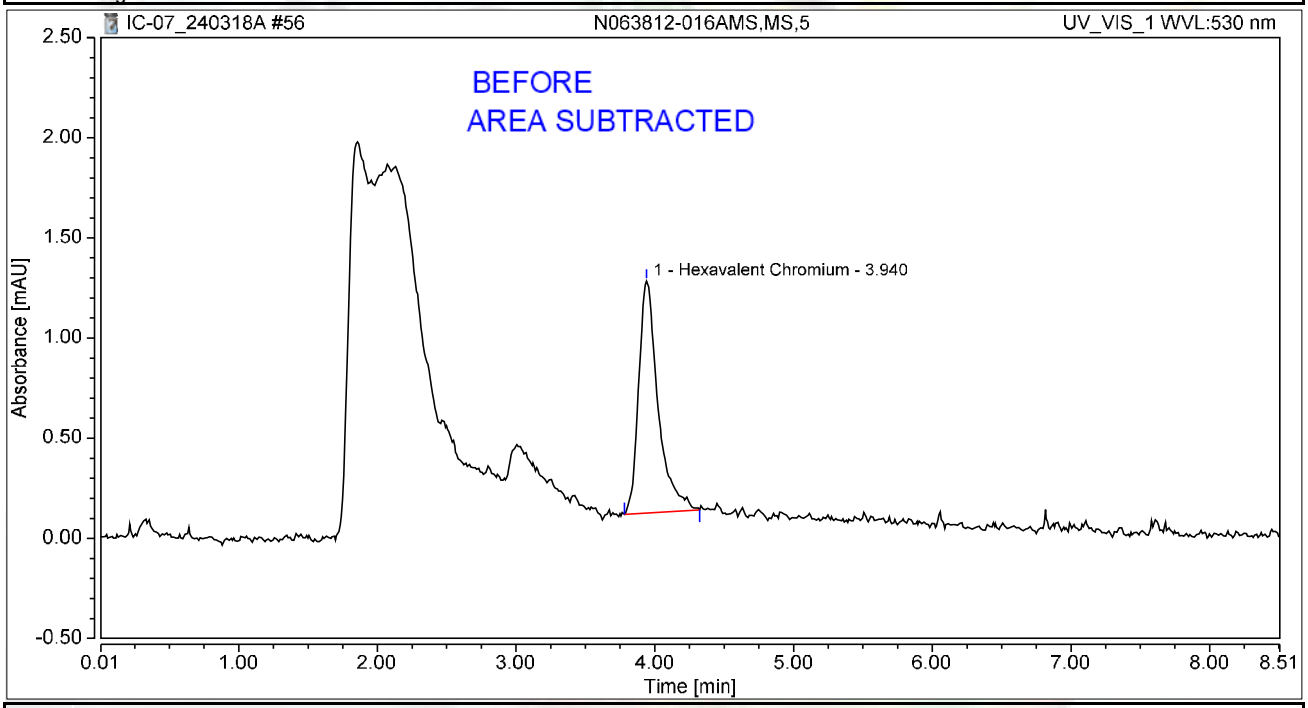
dMocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063812-016AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**28**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 19:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

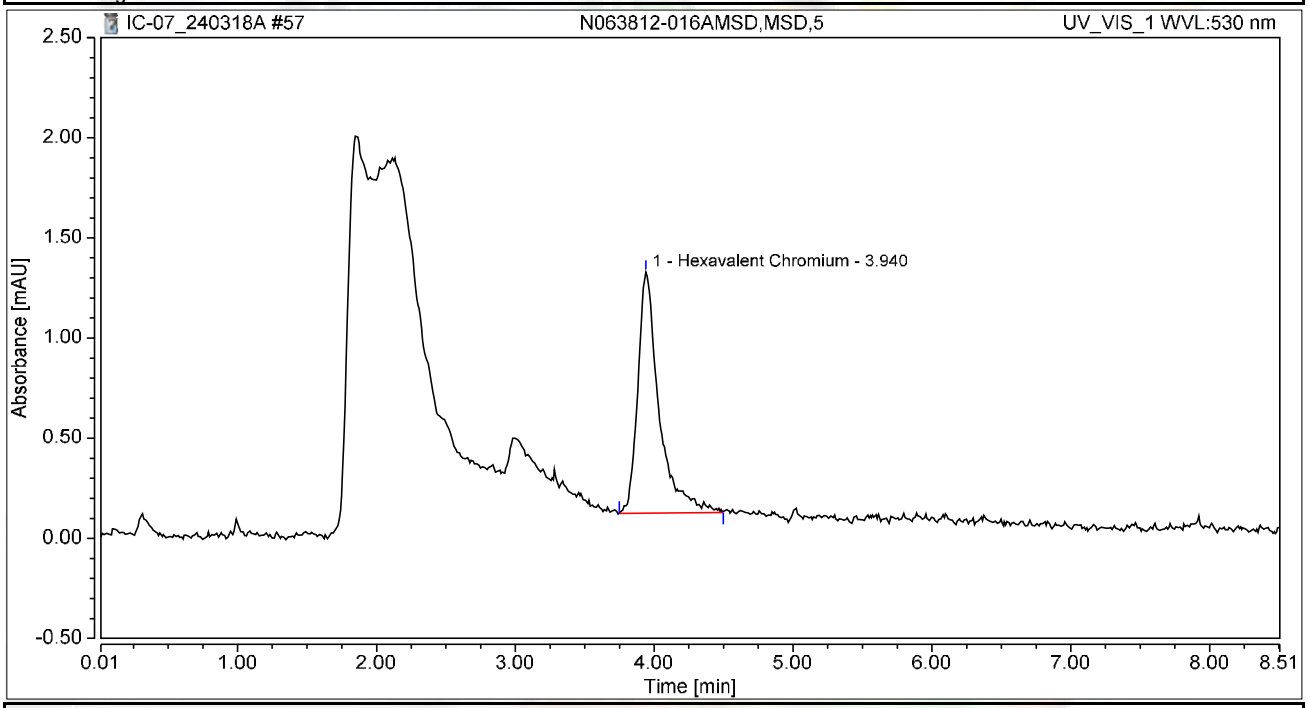
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.188	1.159	100.00	100.00	0.8848
Total:			**0.188**	**1.159**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-016AMSD,MSD,5**	*Run Time (min):*	**8.49**
Vial Number:	**29**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 19:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

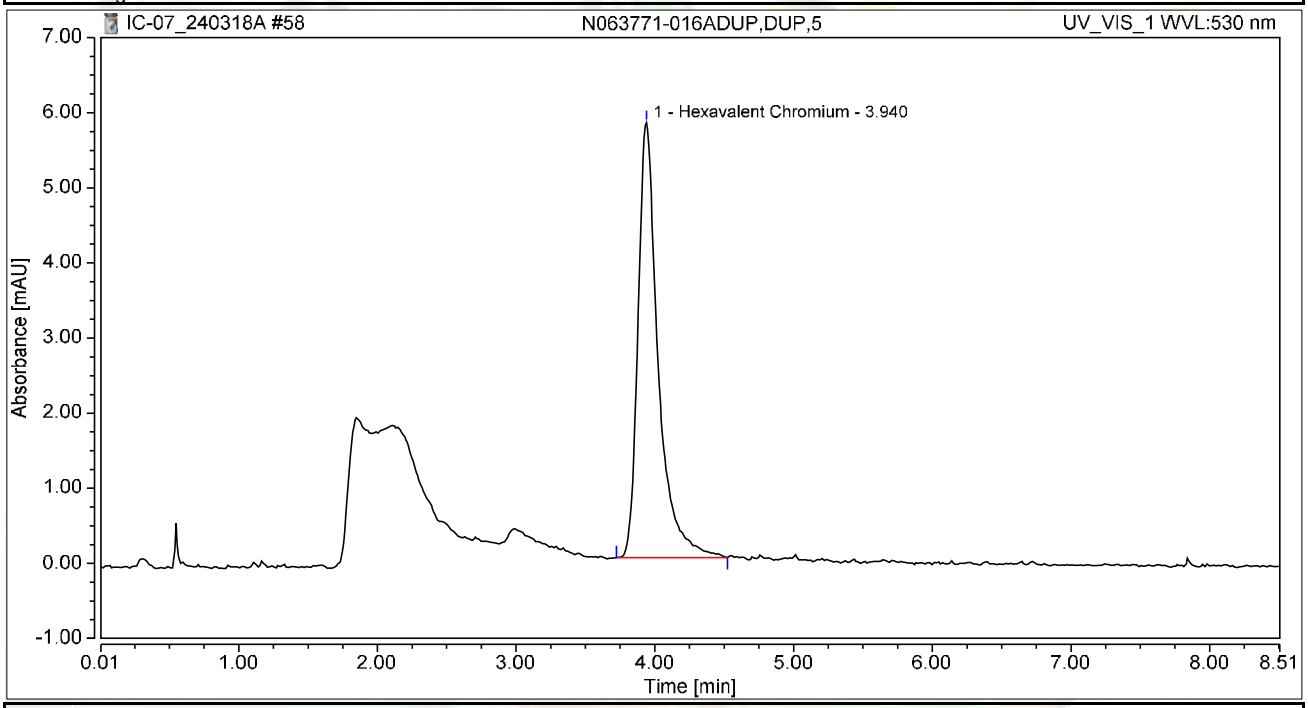
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.213	1.203	100.00	100.00	1.0025
Total:			**0.213**	**1.203**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-016ADUP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**30**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 19:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

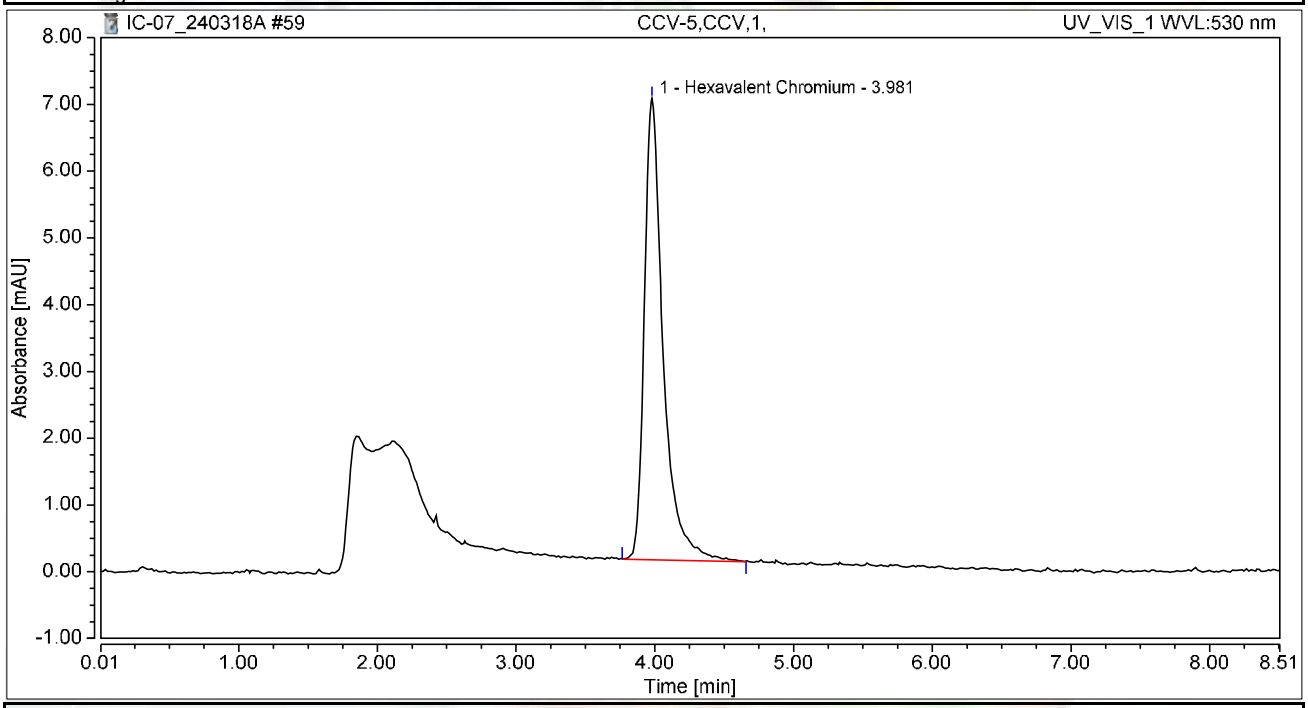
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.973	5.791	100.00	100.00	4.5705
Total:			**0.973**	**5.791**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-5,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**31**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 19:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

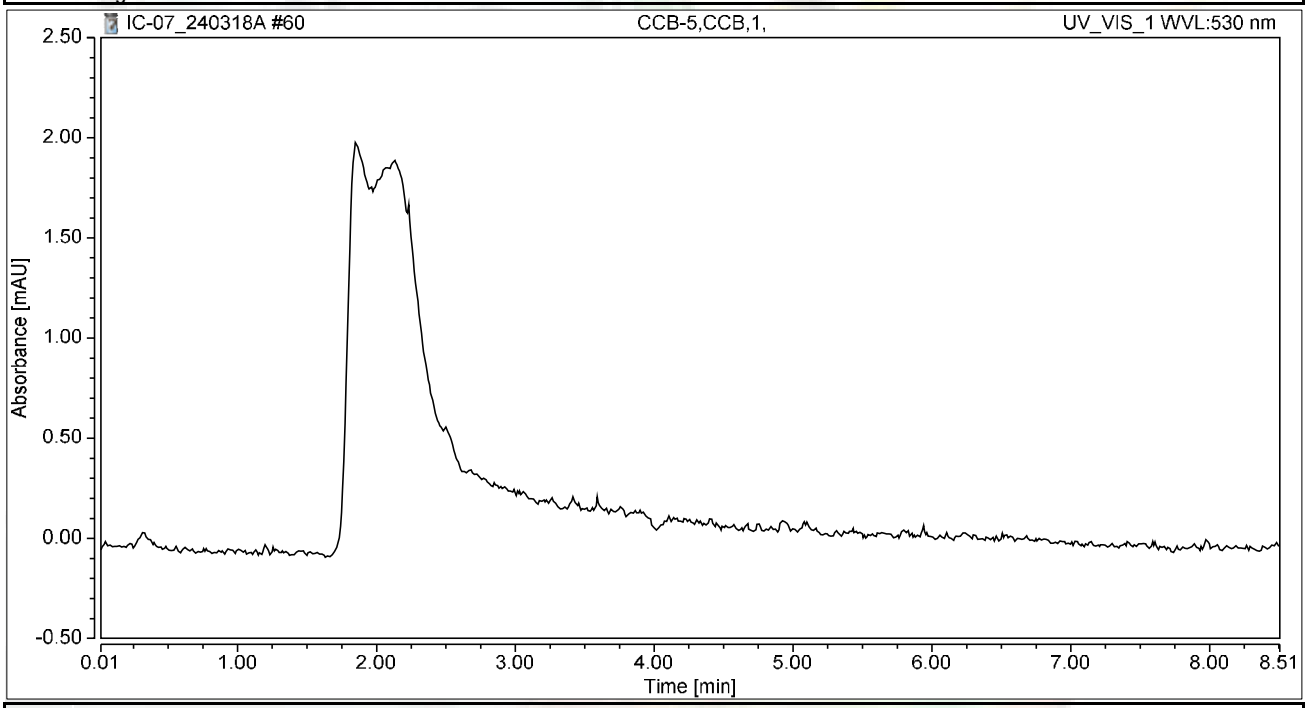
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.090	6.911	100.00	100.00	5.1195
Total:			**1.090**	**6.911**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-5,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**32**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 19:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

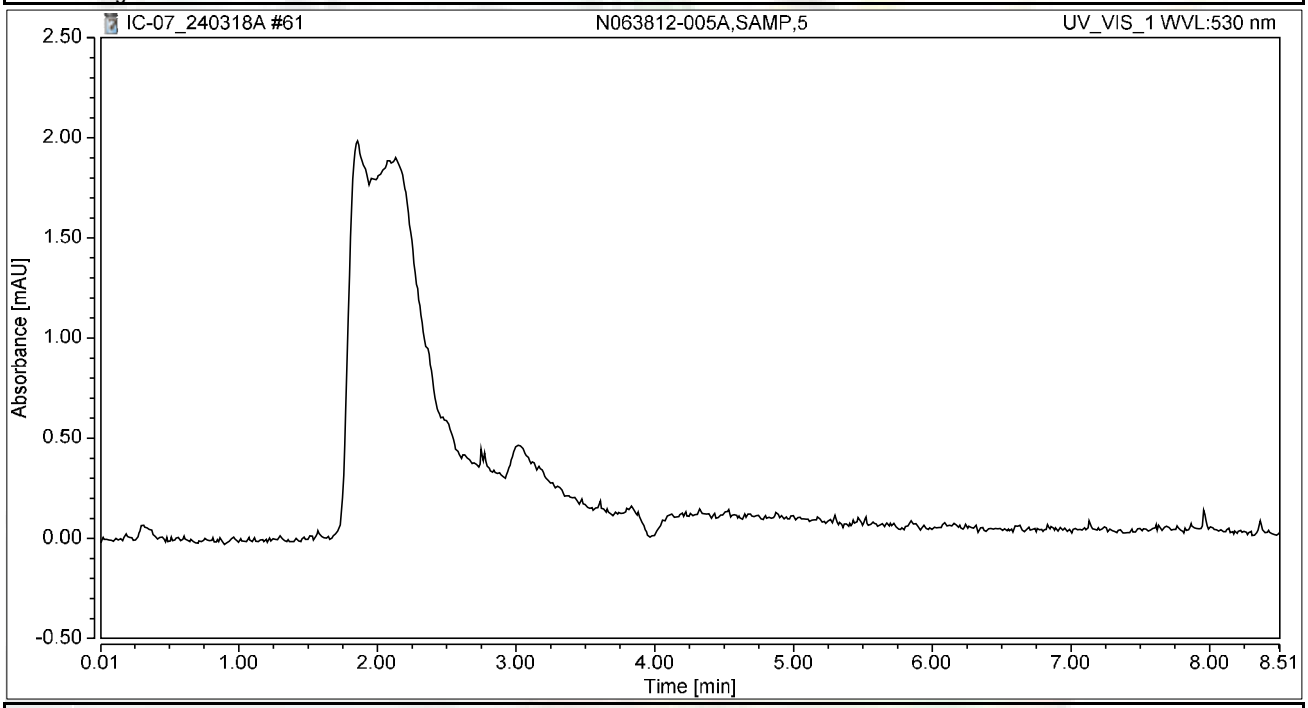
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-005A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**33**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 20:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

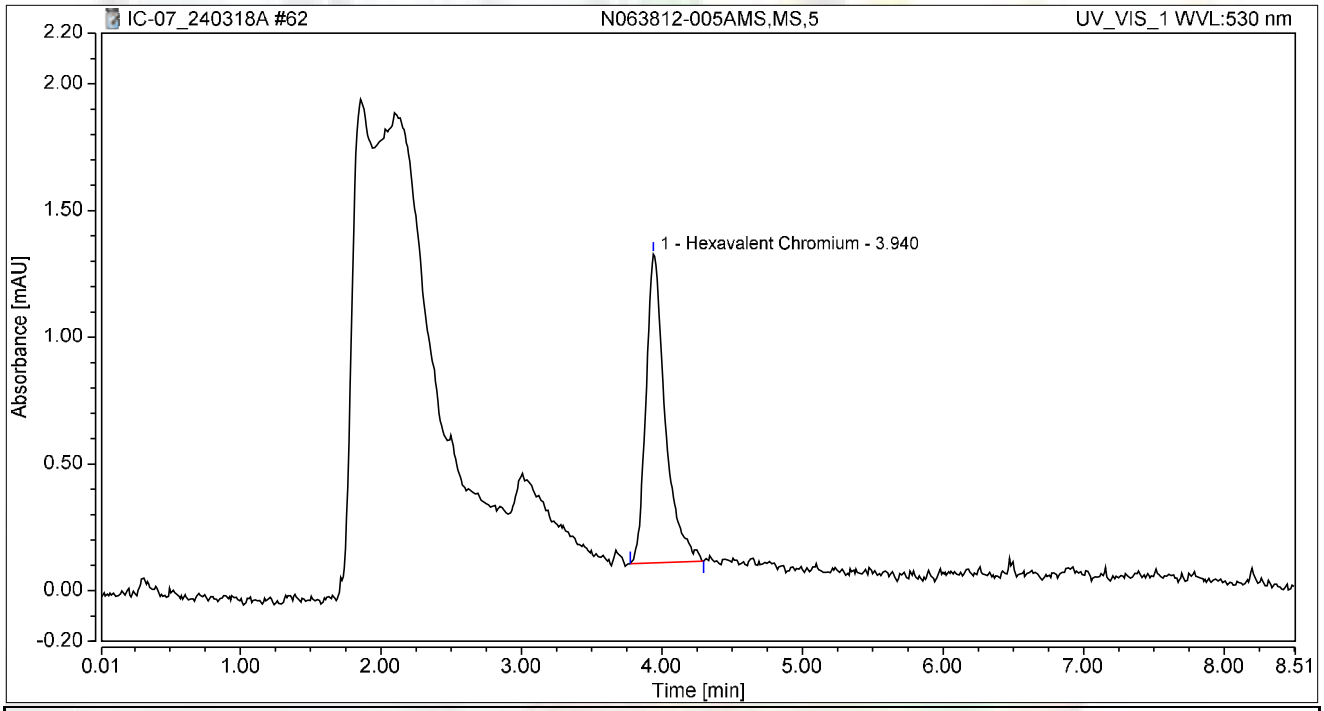
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-005AMS,MS,5**	*Run Time (min):*	**8.49**
Vial Number:	**34**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 20:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

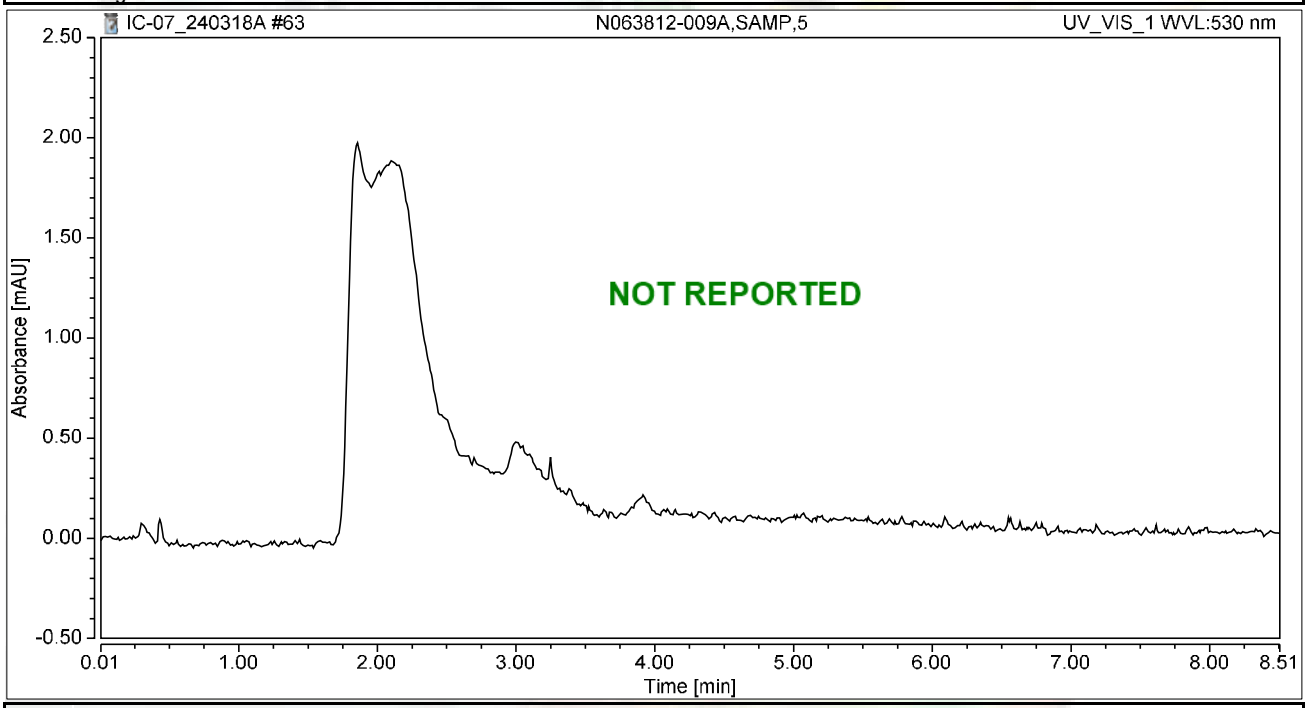
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.194	1.218	100.00	100.00	0.9123
Total:			**0.194**	**1.218**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-009A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**35**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 20:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

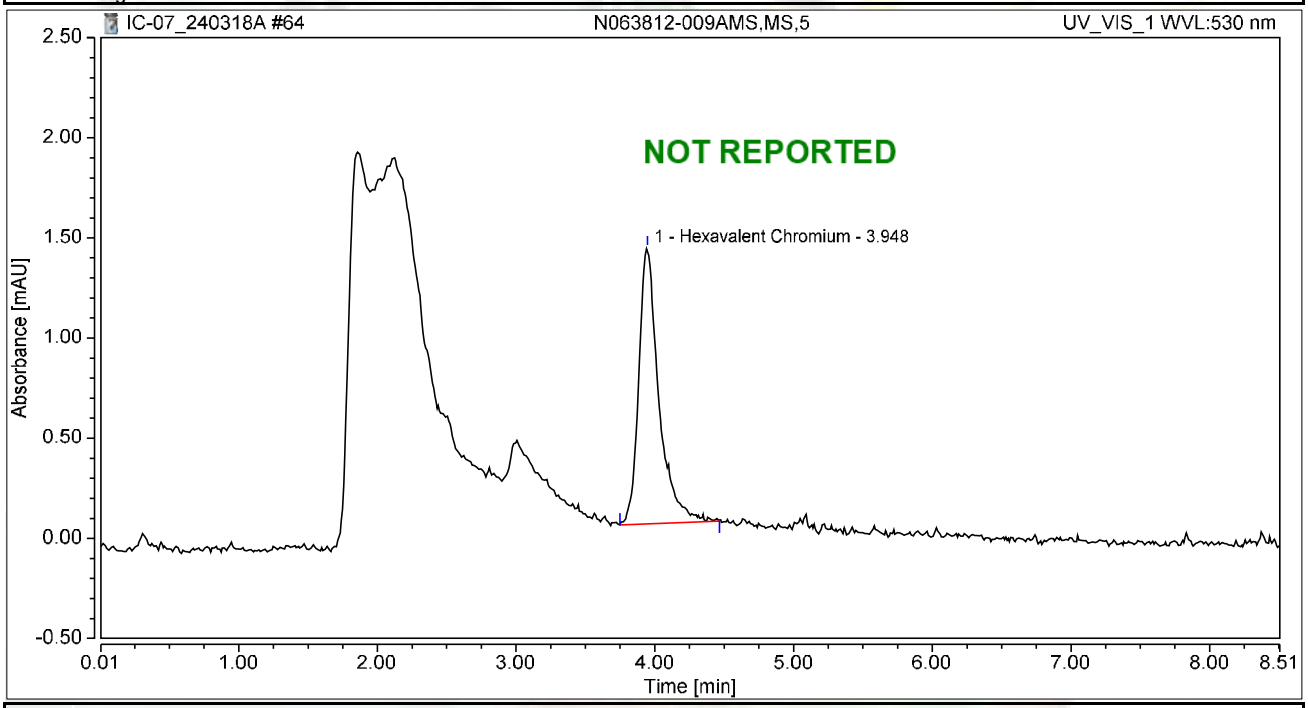
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-009AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**36**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 20:35**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

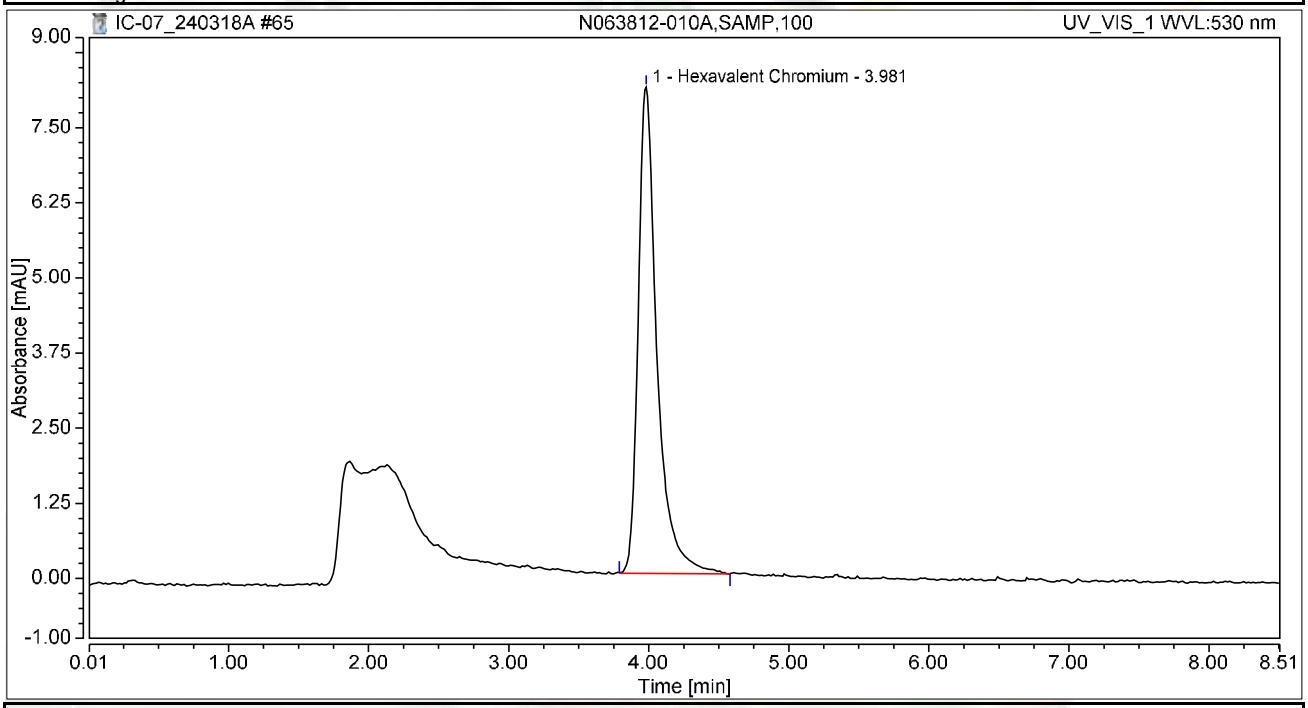
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.232	1.378	100.00	100.00	1.0893
Total:			**0.232**	**1.378**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-010A,SAMP,100**	*Run Time (min):*	**8.50**
Vial Number:	**37**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 20:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

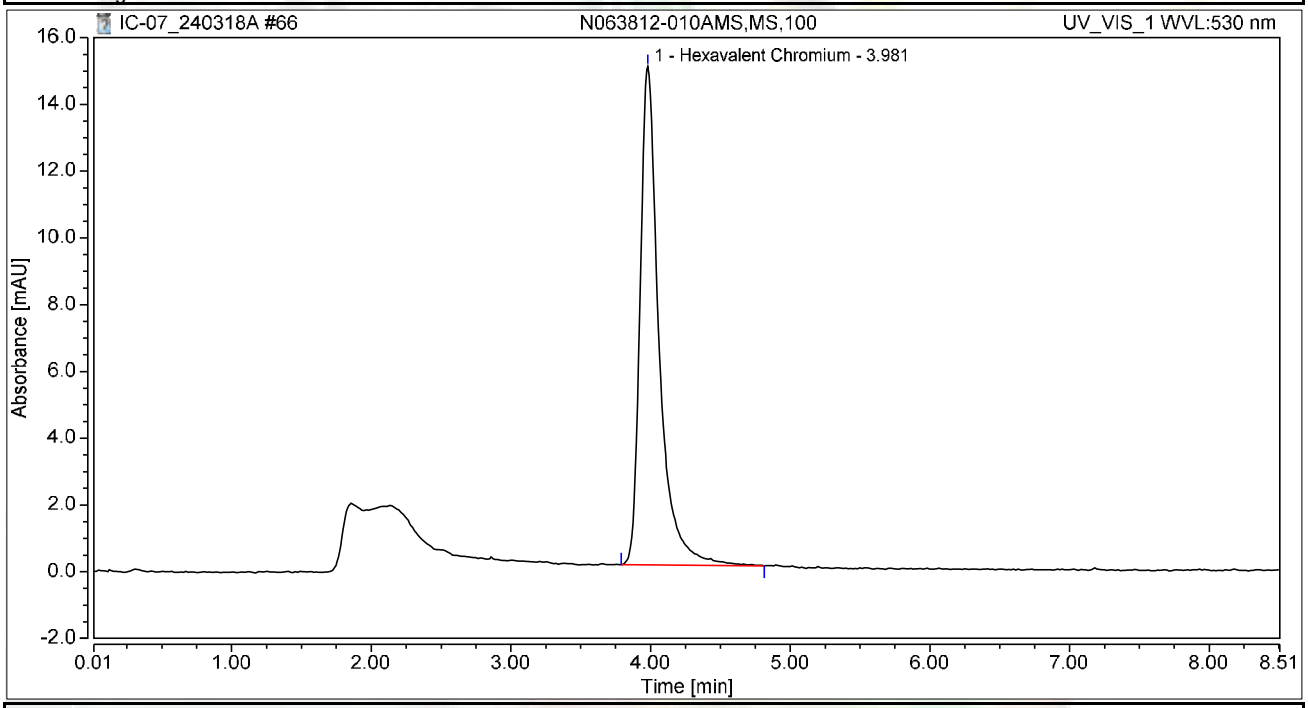
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.260	8.091	100.00	100.00	5.9187
Total:			**1.260**	**8.091**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-010AMS,MS,100**	*Run Time (min):*	**8.49**
Vial Number:	**38**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 20:54**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

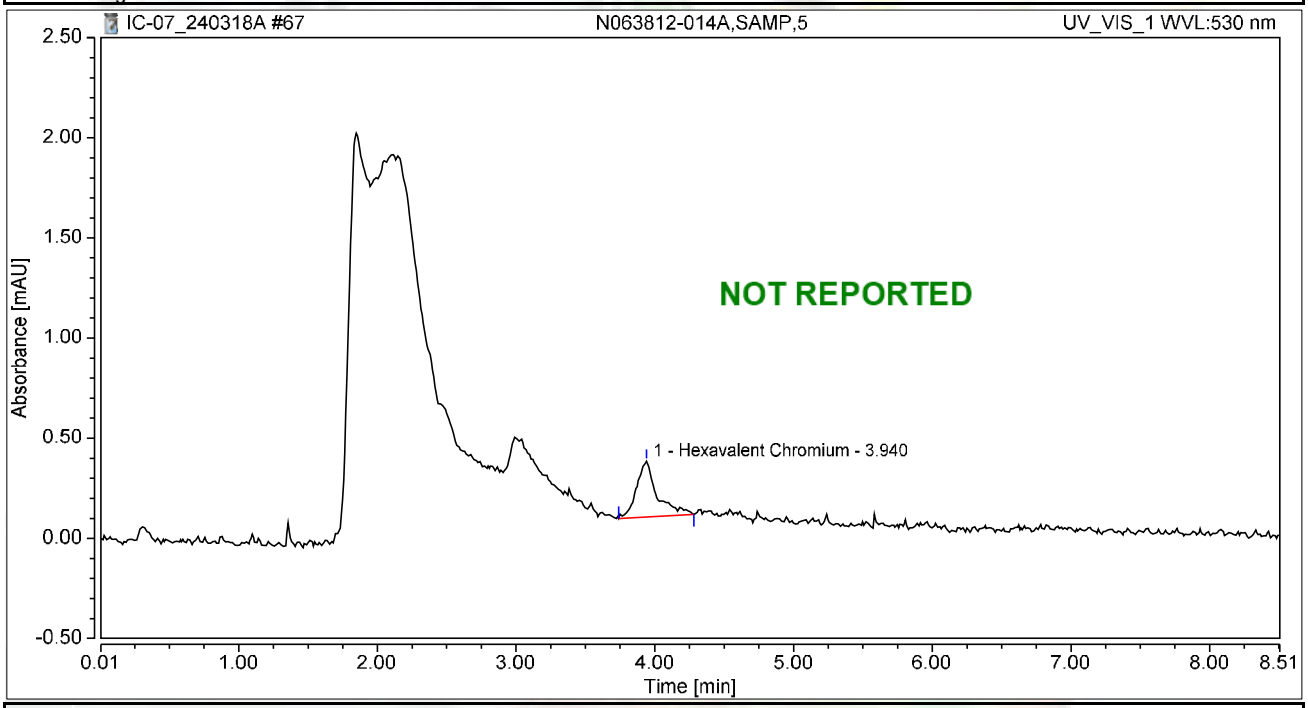
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	2.350	14.929	100.00	100.00	11.0424
Total:			**2.350**	**14.929**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-014A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**39**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 21:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

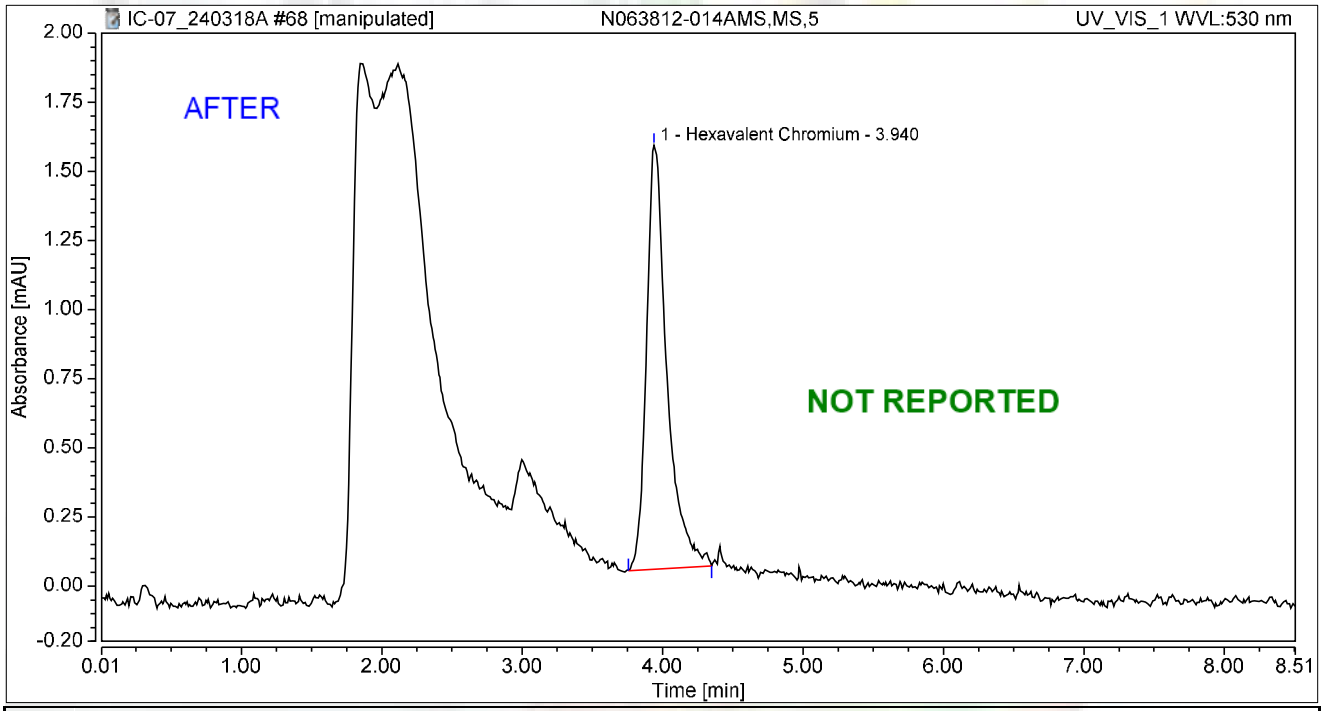
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.048	0.278	100.00	100.00	0.2257
Total:			**0.048**	**0.278**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-014AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 21:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.259	1.533	100.00	100.00	1.2162
Total:			**0.259**	**1.533**	**100.00**	**100.00**	

Reviewed by:

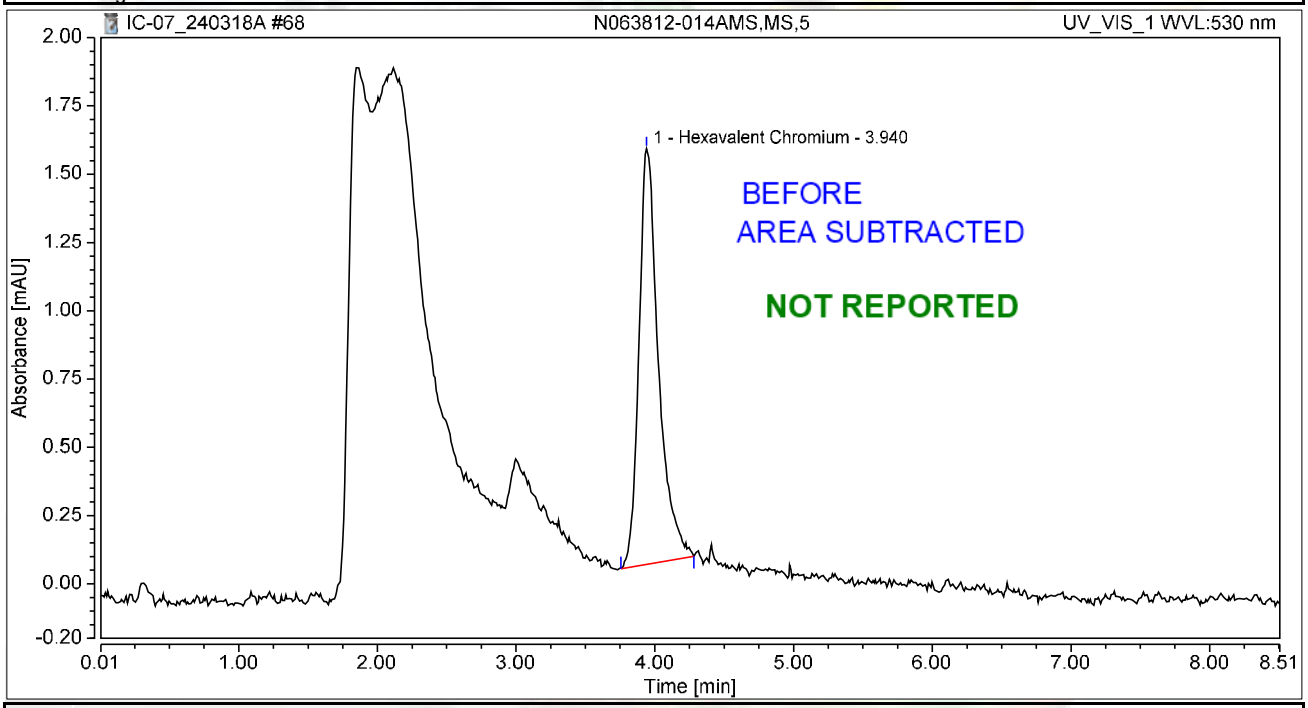
dRocha 3/24/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063812-014AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**40**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 21:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

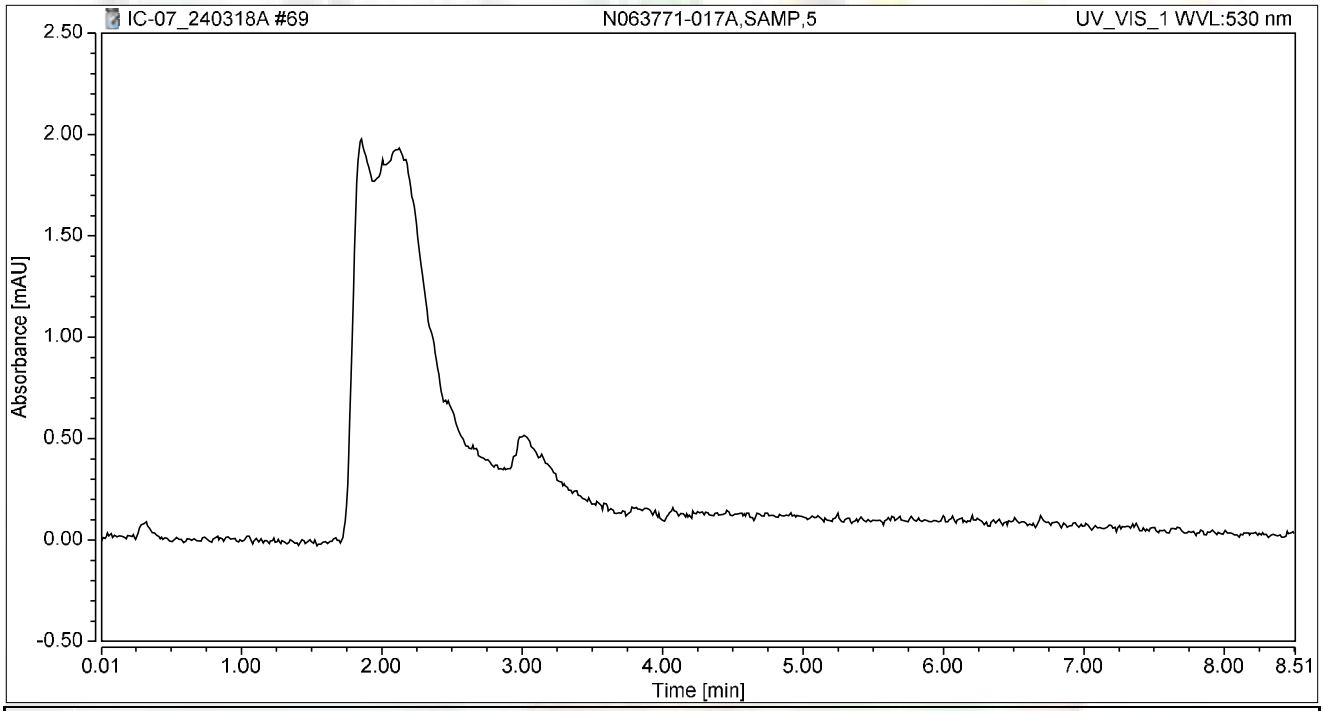
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.249	1.523	100.00	100.00	1.1685
Total:			**0.249**	**1.523**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-017A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**41**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 21:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

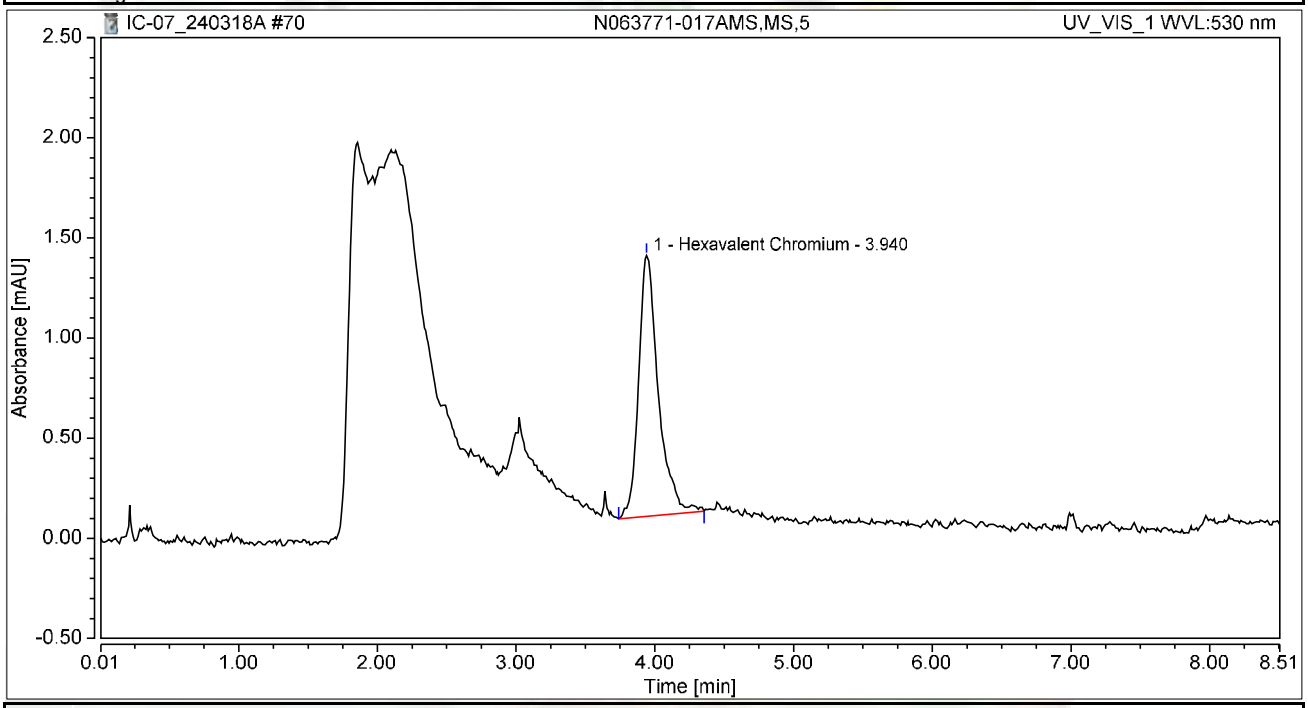
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063771-017AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**42**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 21:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

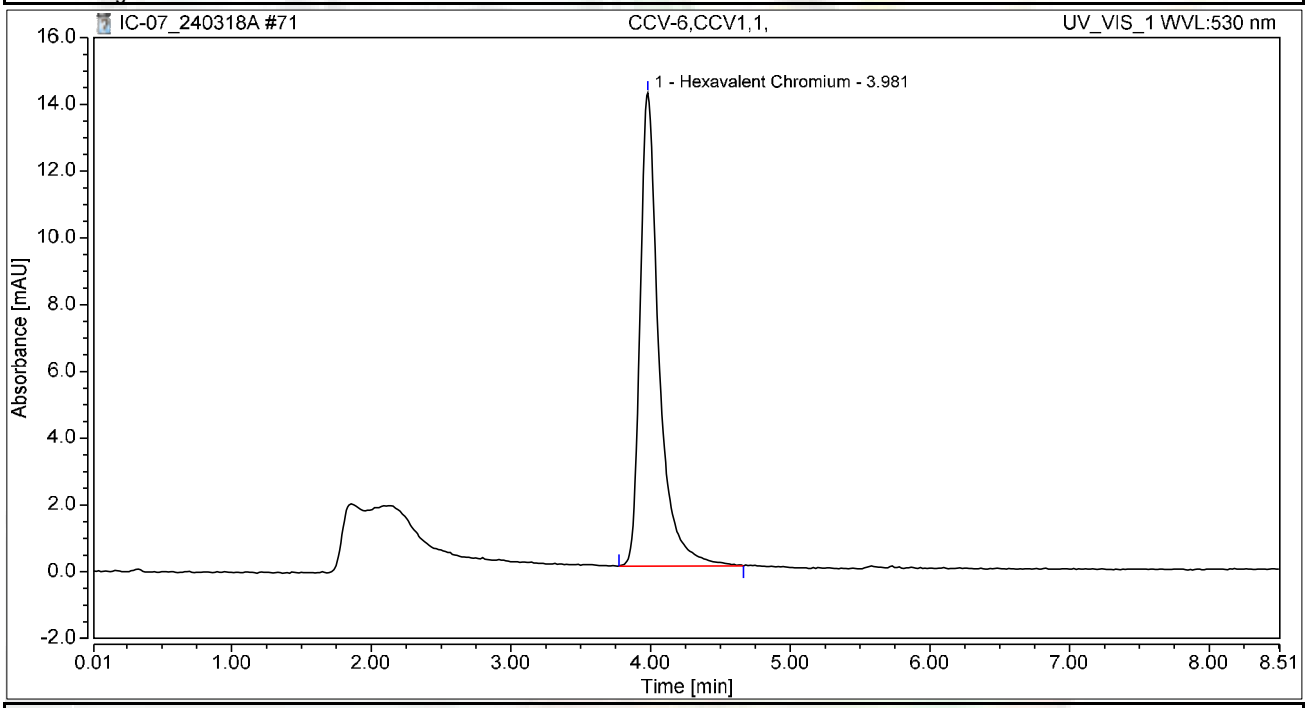
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.215	1.303	100.00	100.00	1.0095
Total:			**0.215**	**1.303**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-6,CCV1,1,**	*Run Time (min):*	**8.49**
Vial Number:	**43**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 21:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

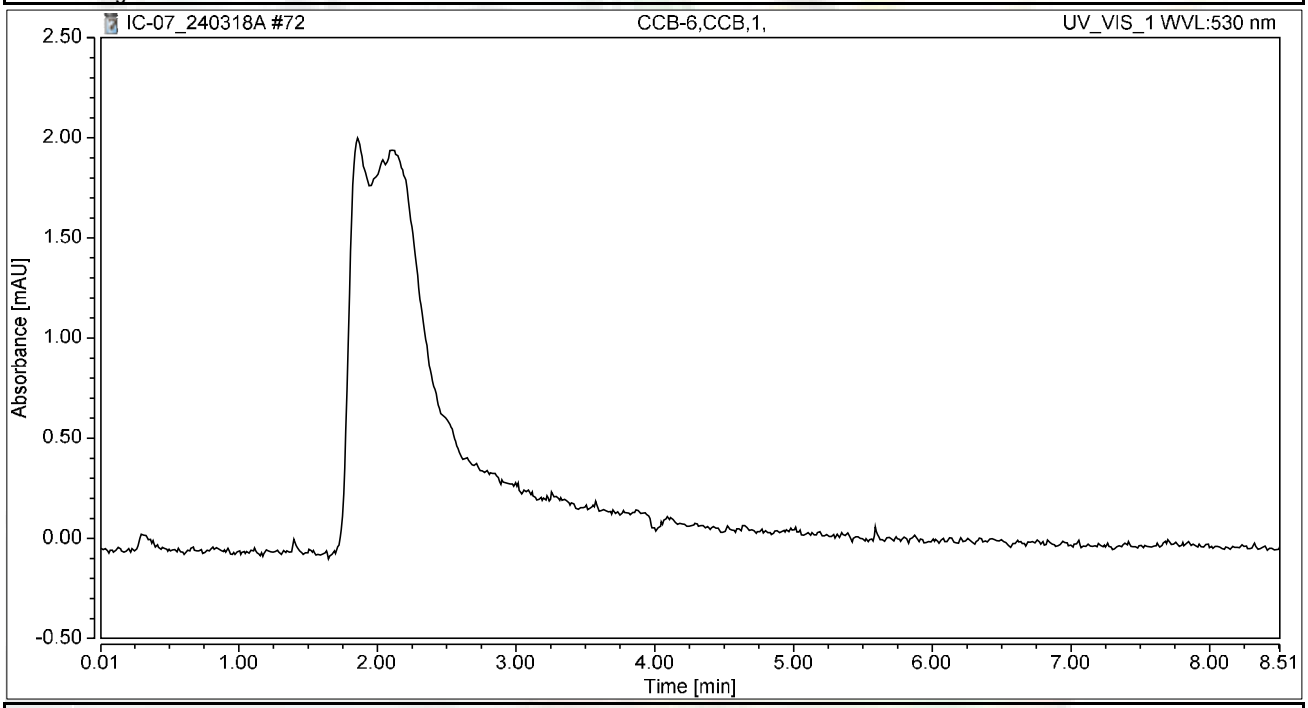
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	2.223	14.175	100.00	100.00	10.4461
Total:			**2.223**	**14.175**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-6,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**44**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 21:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

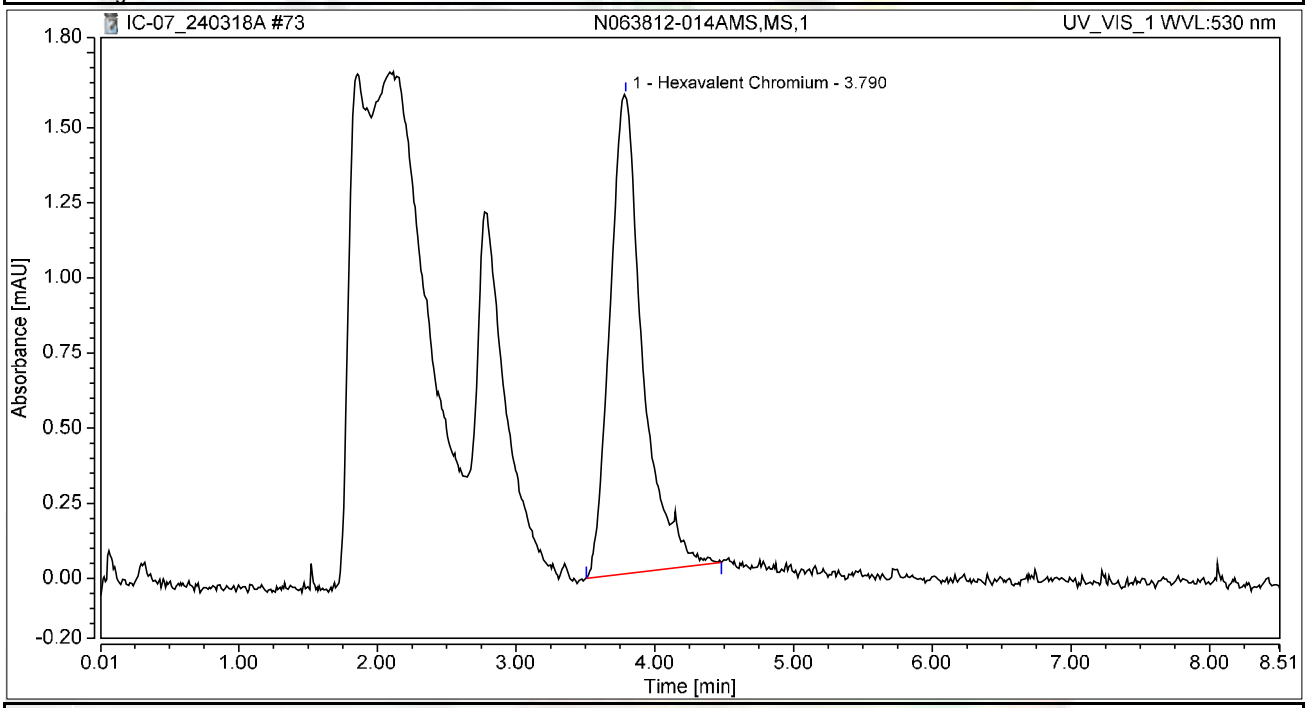
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-014AMS,MS,1**	*Run Time (min):*	**8.50**
Vial Number:	**45**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 22:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

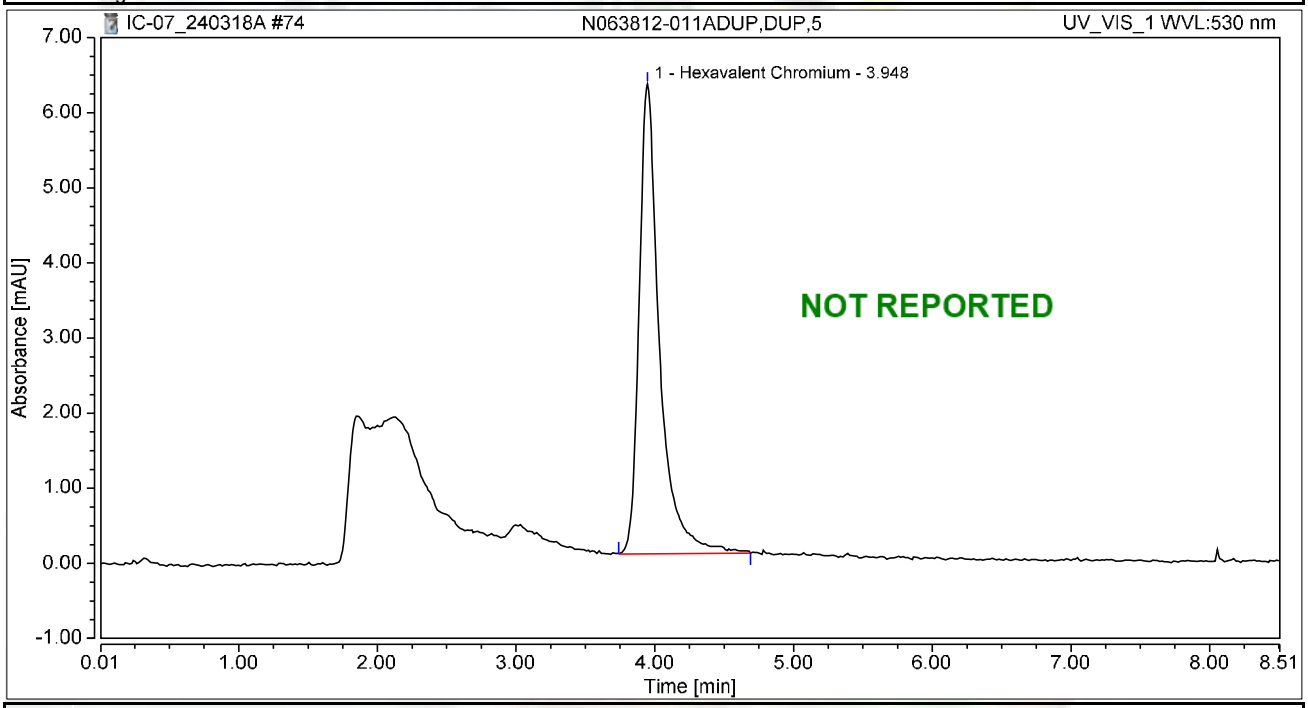
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.436	1.597	100.00	100.00	2.0474
Total:			**0.436**	**1.597**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-011ADUP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**46**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 22:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

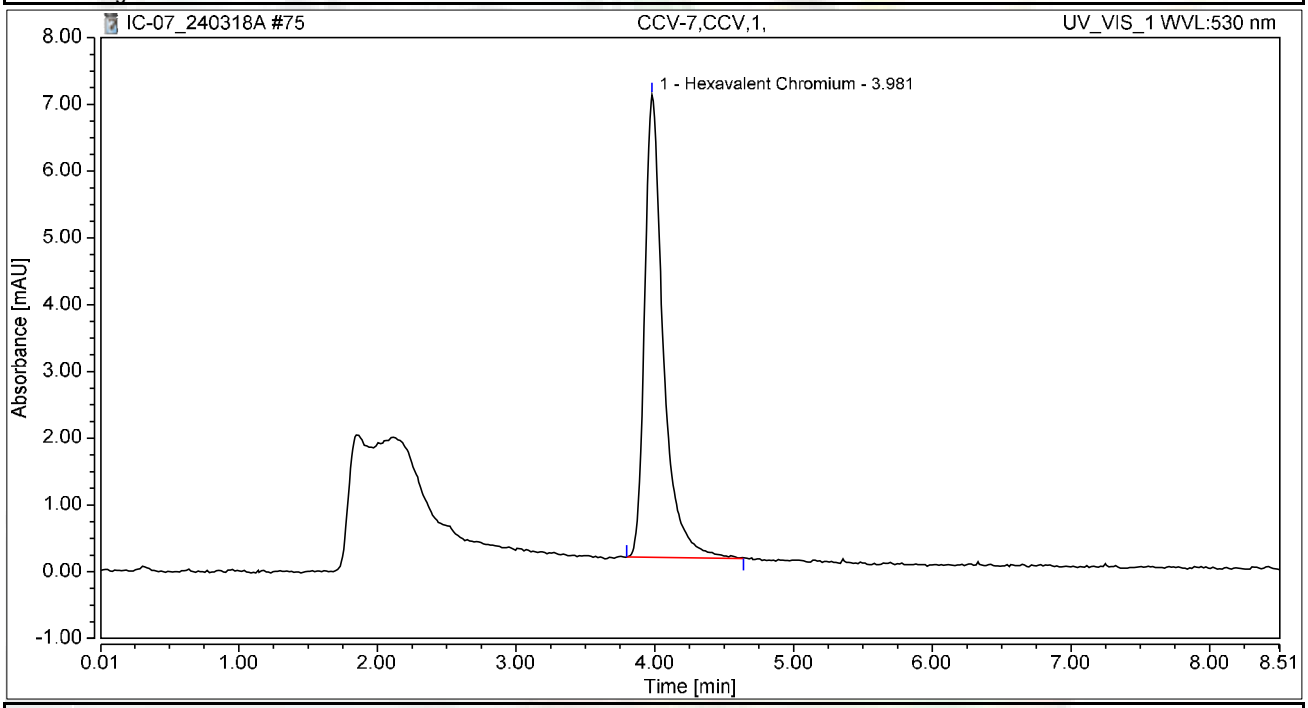
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	1.067	6.256	100.00	100.00	5.0146
Total:			**1.067**	**6.256**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-7,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**47**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**n.a.**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 22:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

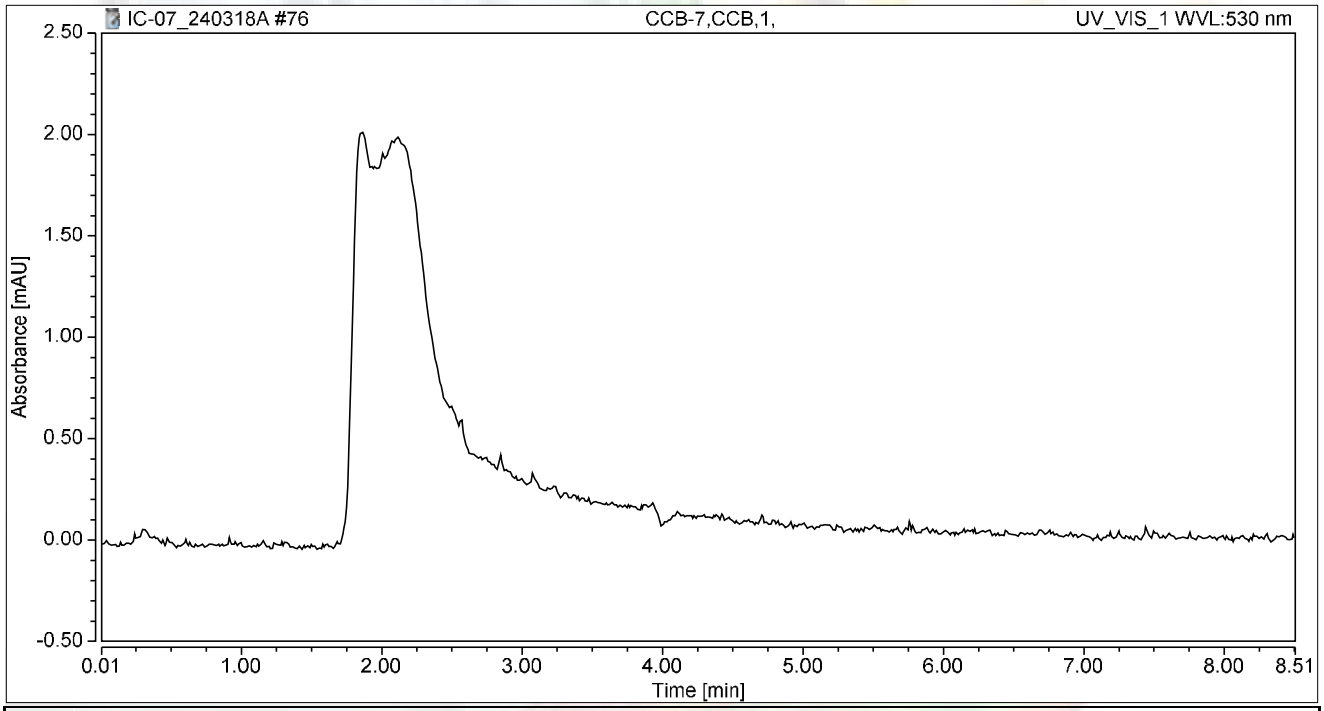
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.081	6.928	100.00	100.00	5.0809
Total:			**1.081**	**6.928**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-7,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**48**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 22:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

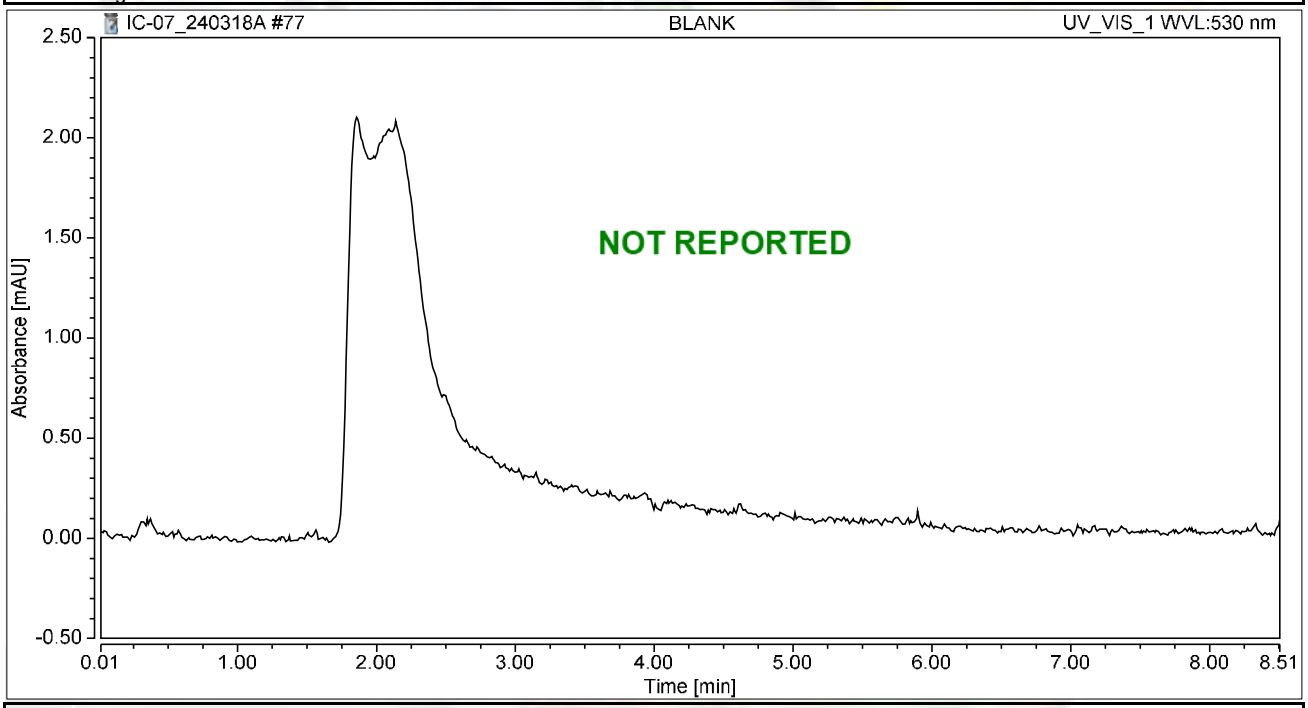
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.49**
Vial Number:	**49**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**18/Mar/24 22:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240319A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/19/24 10:15 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/19/24 10:28 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/19/24 10:38 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/19/24 10:47 AM	Reported
13	MB-R183788	MBLK	1	Hexavalent Chromium	03/19/24 10:56 AM	Reported
14	LCS-R183788	LCS	1	Hexavalent Chromium	03/19/24 11:06 AM	Reported
15	N063812-012A	SAMP	10	Hexavalent Chromium	03/19/24 11:15 AM	Reported
16	N063812-012ADUP	DUP	10	Hexavalent Chromium	03/19/24 11:25 AM	Reported
17	N063812-012AMS	MS	10	Hexavalent Chromium	03/19/24 11:34 AM	Reported
18	N063812-012AMSD	MSD	10	Hexavalent Chromium	03/19/24 11:44 AM	Reported
19	N063812-013A	SAMP	1	Hexavalent Chromium	03/19/24 11:53 AM	Reported
20	N063812-013AMS	MS	1	Hexavalent Chromium	03/19/24 12:03 PM	Reported
21	N063812-013A	SAMP	5	Hexavalent Chromium	03/19/24 12:12 PM	Not Reported
22	N063812-013AMS	MS	5	Hexavalent Chromium	03/19/24 12:22 PM	Not Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/19/24 12:31 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/19/24 12:41 PM	Reported
25	BLANK	BLANK	1	Hexavalent Chromium	03/19/24 12:50 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240319A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**19/Mar/24 13:20:47**
No. of Injections:	**28**	*Updated By:*	**ics 5000**

Injection Details

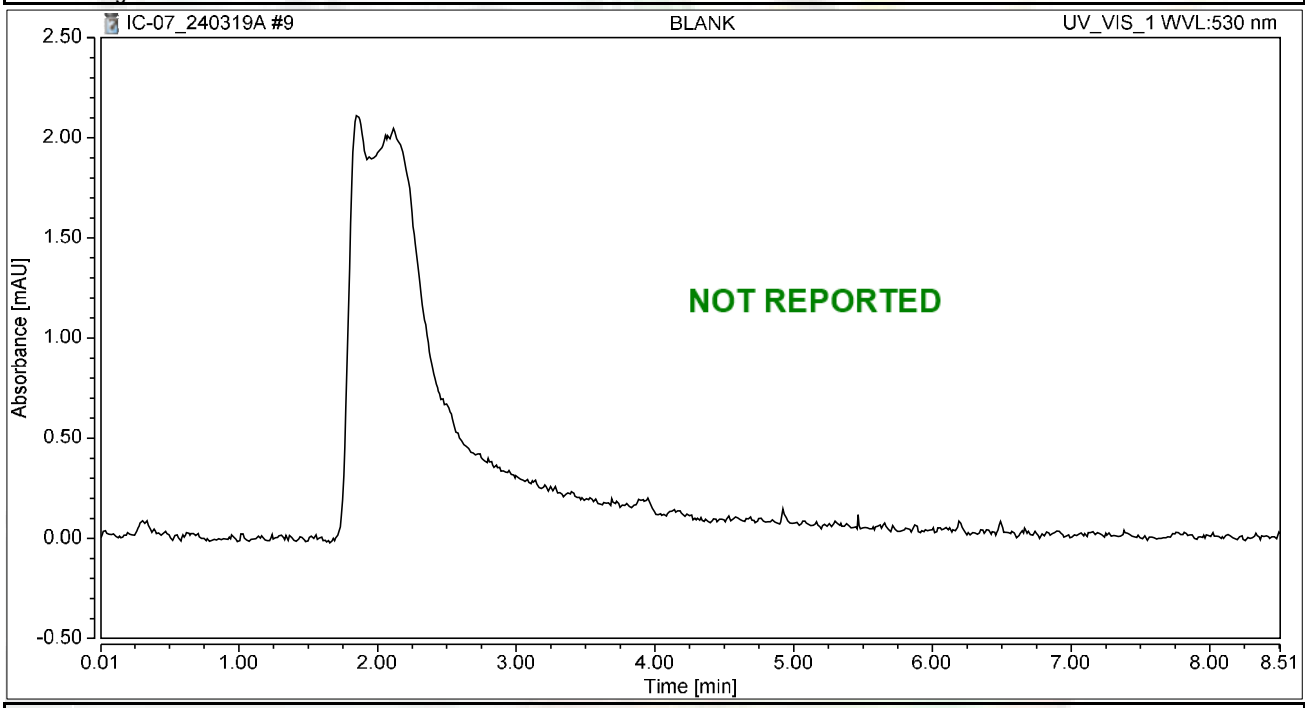
No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/19/2024 10:15	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/19/2024 10:28	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/19/2024 10:38	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/19/2024 10:47	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/19/2024 10:56	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/19/2024 11:06	Finished	LCS @5ppb, IWST-231228B
15	N063812-012A,SAMP	7	1000	Unknown		03/19/2024 11:15	Finished	SAMP,1>10 mL
16	N063812-012ADUP,D	8	1000	Unknown		03/19/2024 11:25	Finished	DUP,1>10 mL
17	N063812-012AMS,MS	9	1000	Unknown		03/19/2024 11:34	Finished	MS (5ppb), IWST-231228B,1>1
18	N063812-012AMSD,M	10	1000	Unknown		03/19/2024 11:44	Finished	MSD (5ppb), IWST-231228B,1
19	N063812-013A,SAMP	11	1000	Unknown		03/19/2024 11:53	Finished	SAMP,10 mL
20	N063812-013AMS,MS	12	1000	Unknown		03/19/2024 12:03	Finished	MS (1ppb), IWST-231228B,10r
21	N063812-013A,SAMP	13	1000	Unknown		03/19/2024 12:12	Finished	SAMP,2>10 mL
22	N063812-013AMS,MS	14	1000	Unknown		03/19/2024 12:22	Finished	MS (1ppb), IWST-231228B,2>1
23	CCV-2,CCV1,1,	15	1000	Unknown		03/19/2024 12:31	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	16	1000	Unknown		03/19/2024 12:41	Finished	CCB R240129C
25	BLANK	17	1000	Unknown		03/19/2024 12:50	Finished	BLANK
26	SHUTDOWN	18	1000	Unknown		03/19/2024 12:59	Finished	
27	Eluent: R240318A	19	1000	Unknown		n.a.	Finished	
28	PCR: R240318B	20	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Mar/24 10:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

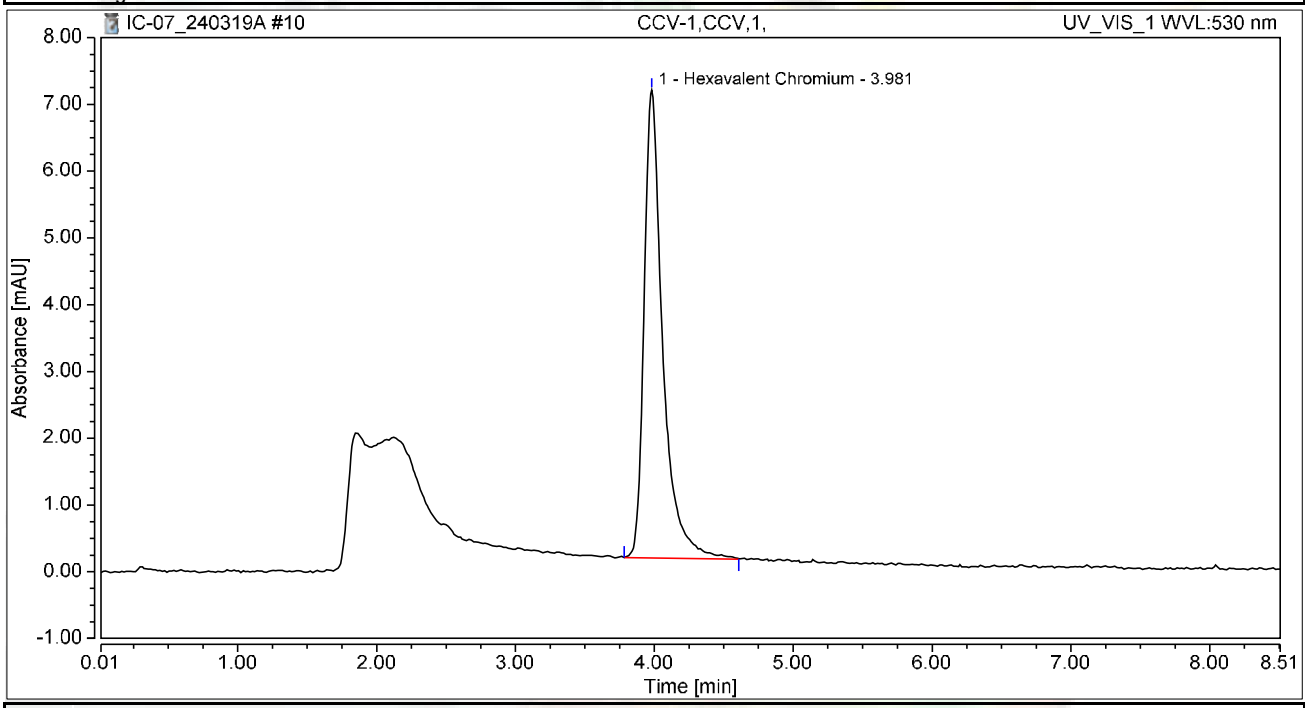
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Mar/24 10:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.981	1.094	7.010	100.00	100.00	5.1418
Total:			**1.094**	**7.010**	**100.00**	**100.00**	

Reviewed by:

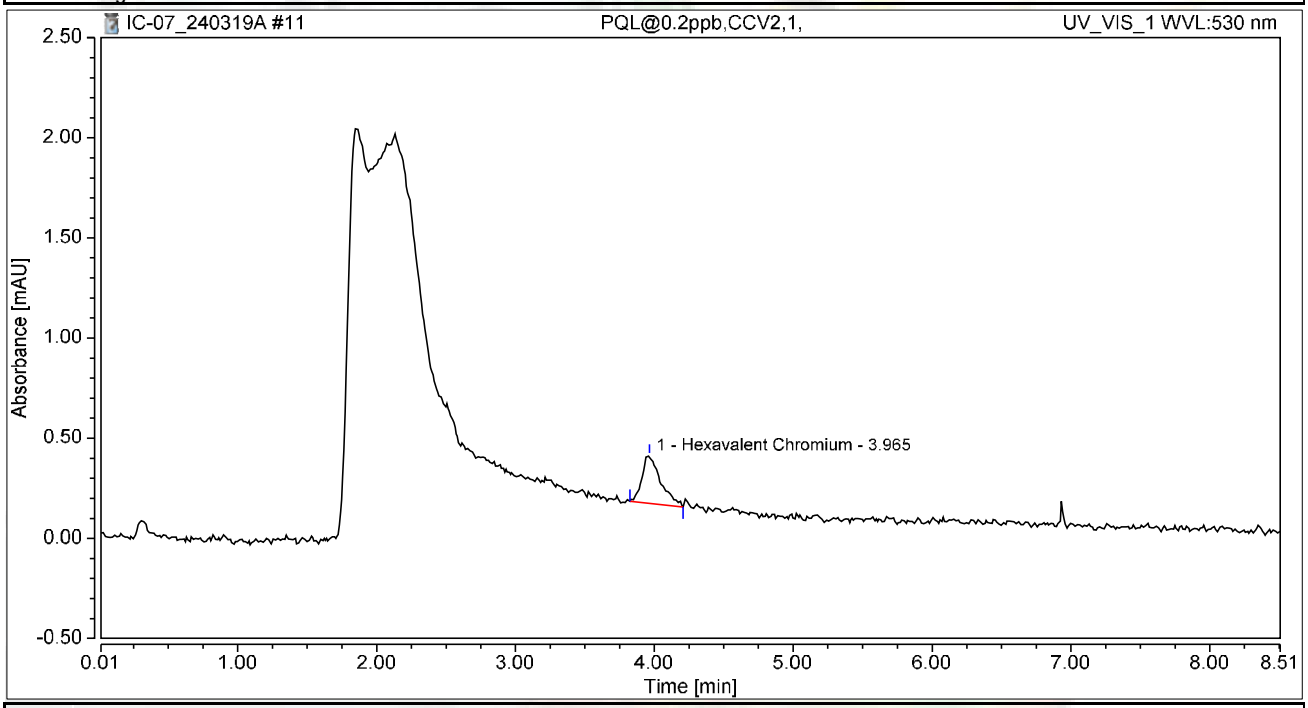
dMocha 3/25/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.49**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Mar/24 10:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

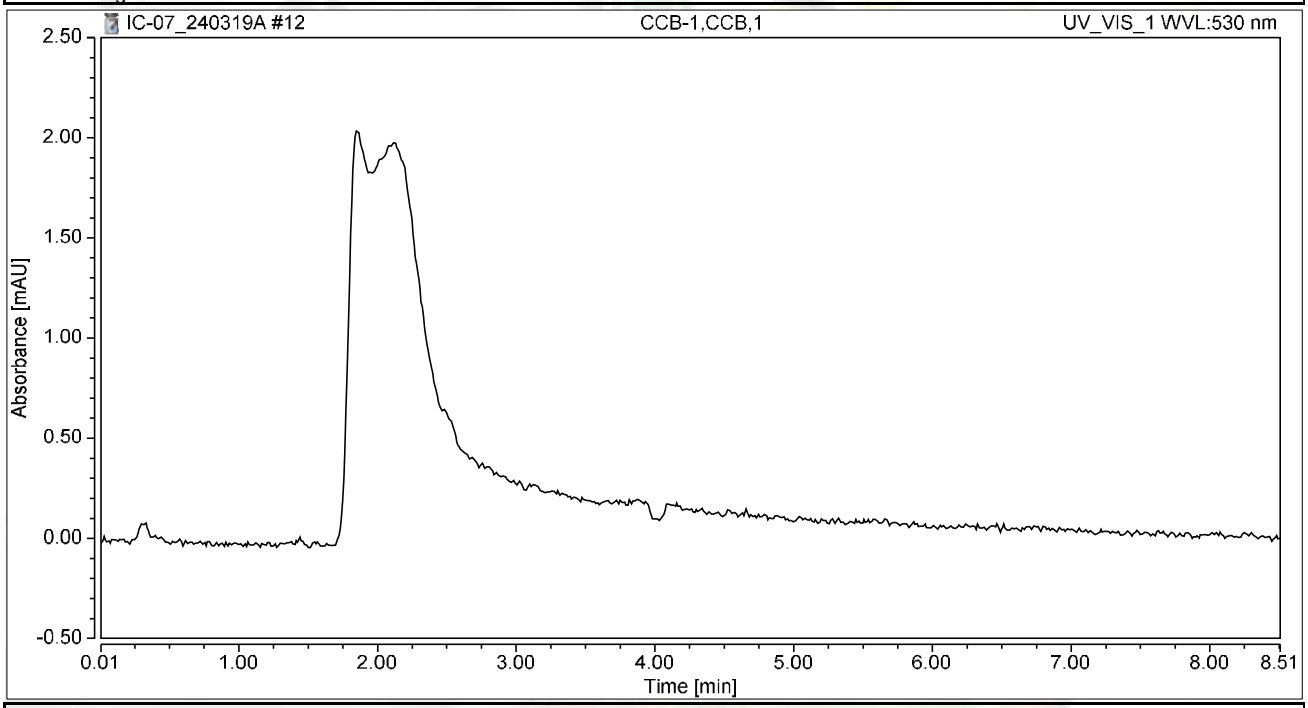
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.038	0.237	100.00	100.00	0.1782
Total:			**0.038**	**0.237**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Mar/24 10:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

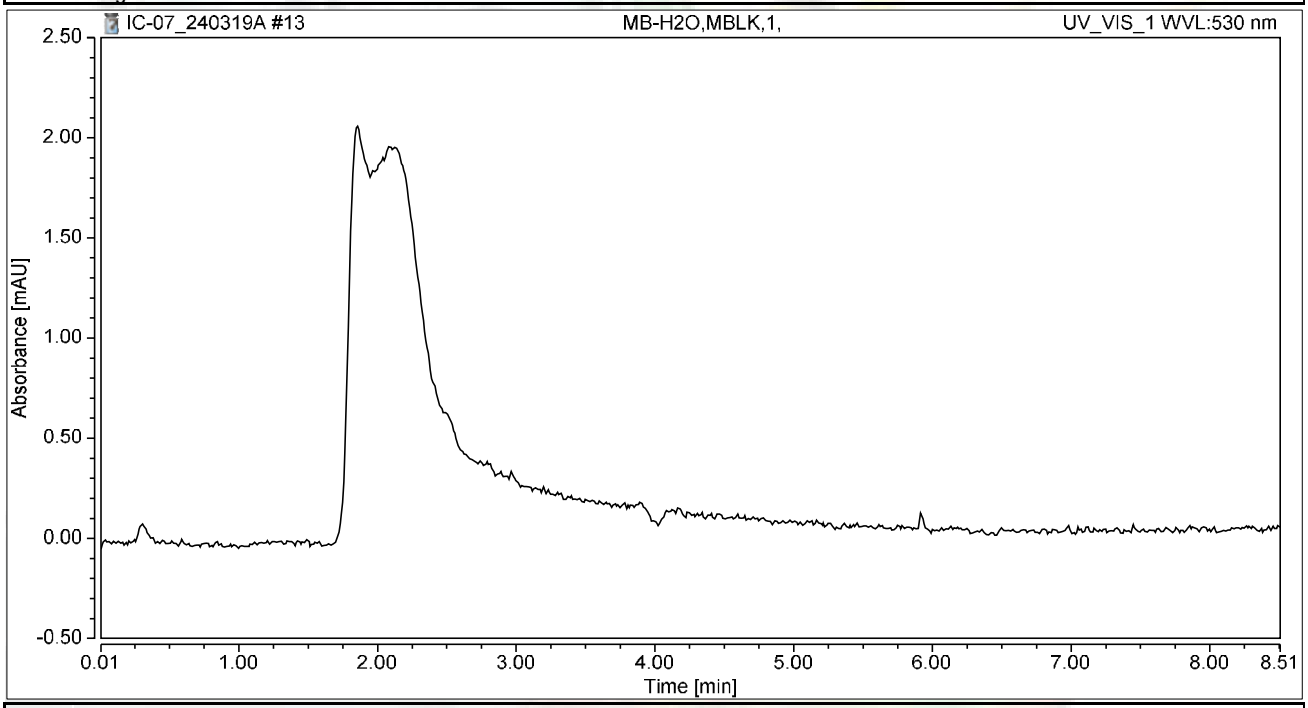
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Mar/24 10:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

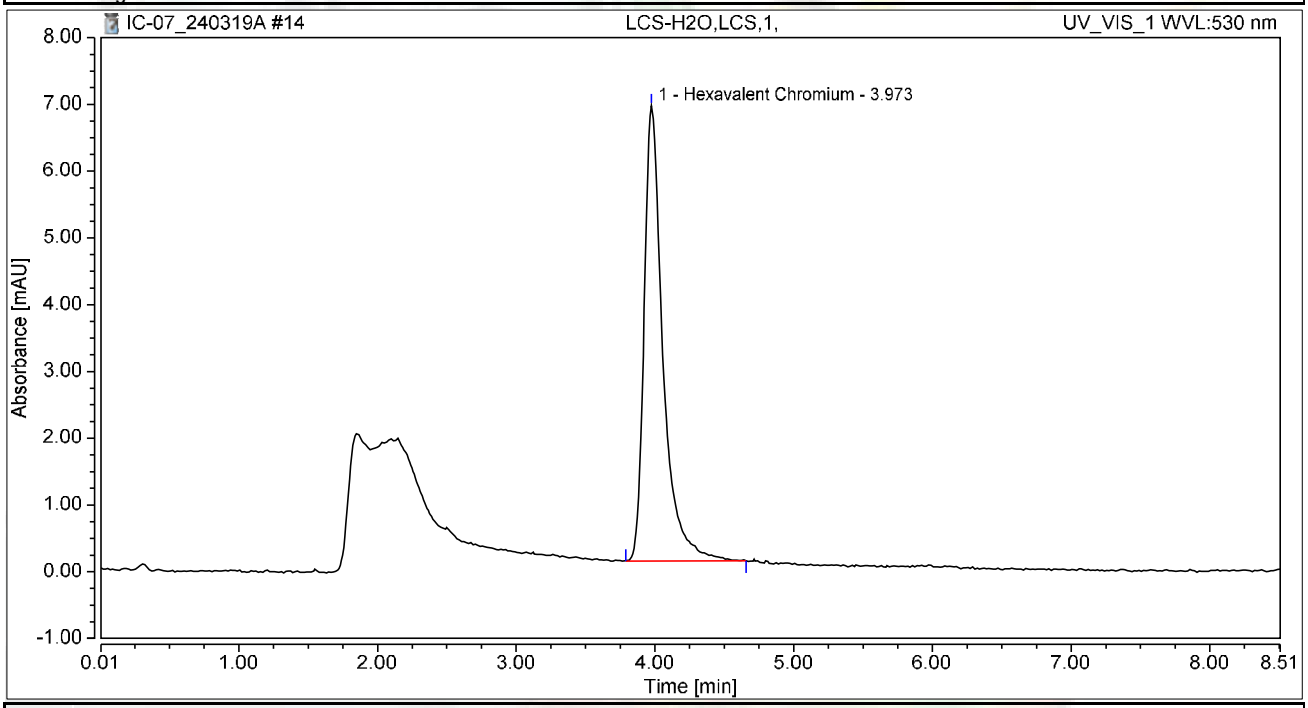
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Mar/24 11:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

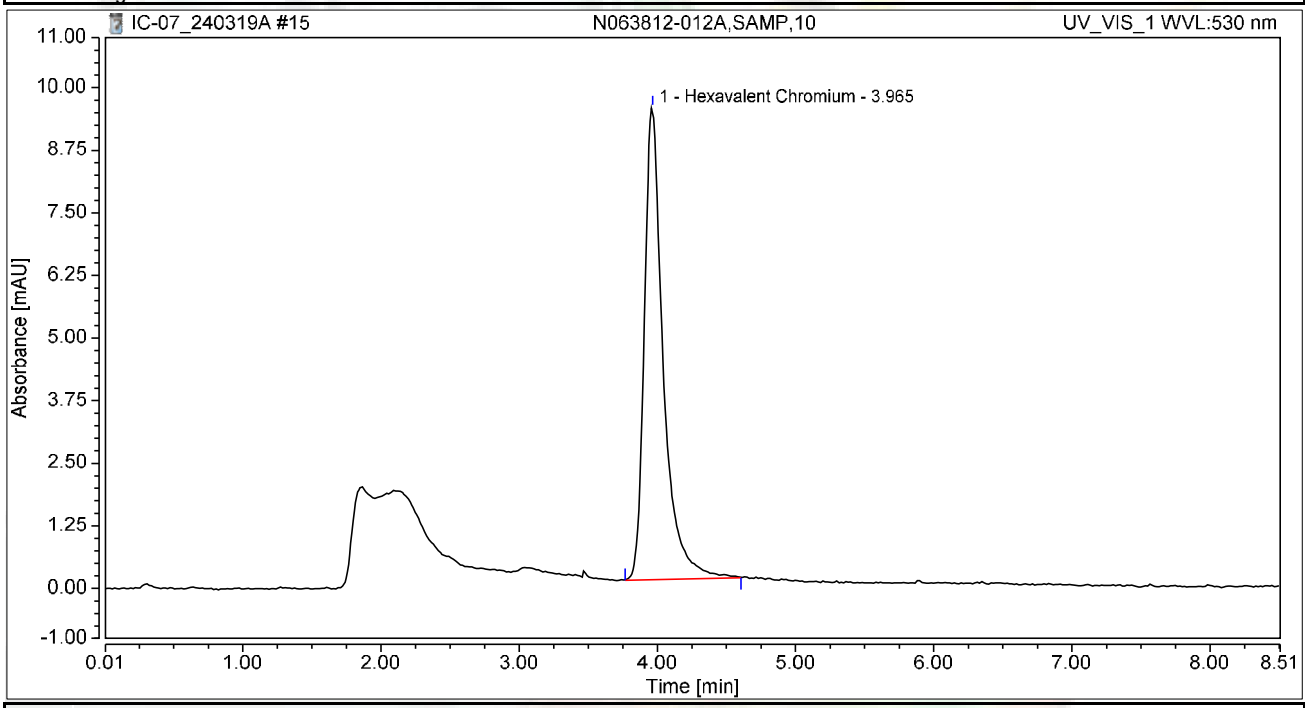
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	1.071	6.817	100.00	100.00	5.0328
Total:			**1.071**	**6.817**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-012A,SAMP,10**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Mar/24 11:15**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

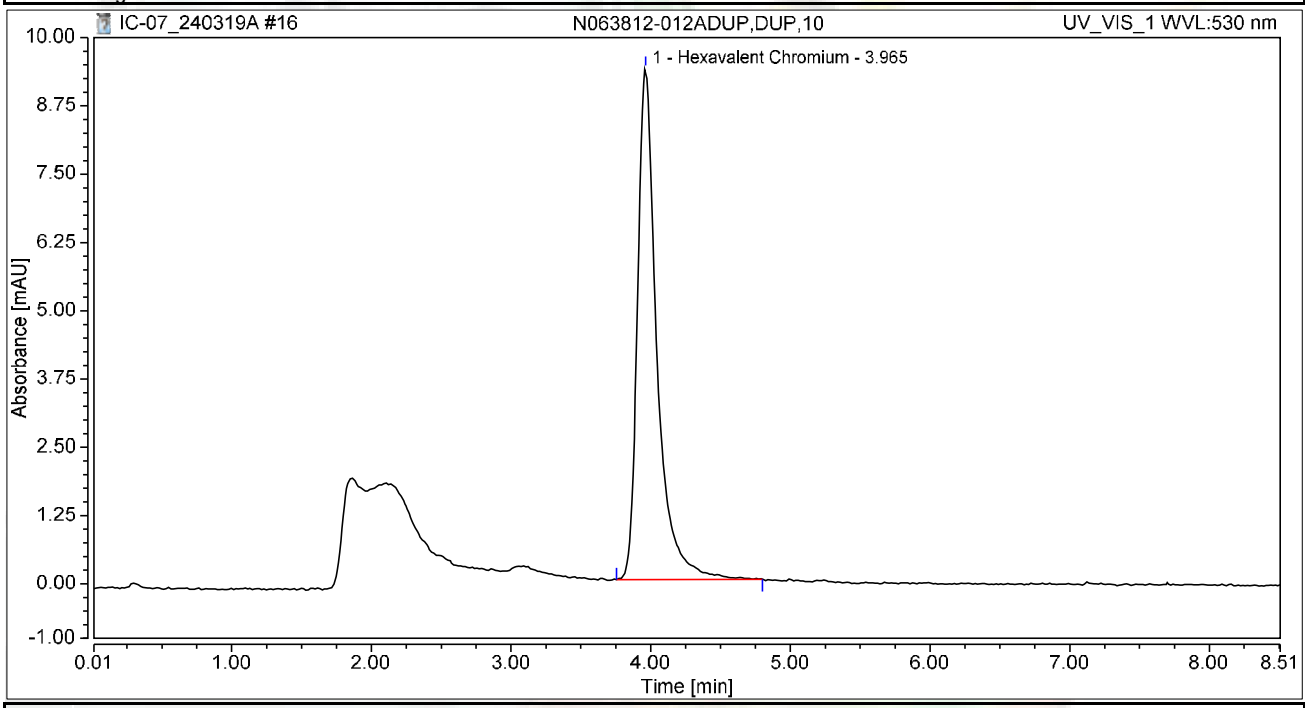
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	1.500	9.426	100.00	100.00	7.0497
Total:			**1.500**	**9.426**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-012ADUP,DUP,10**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Mar/24 11:25**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

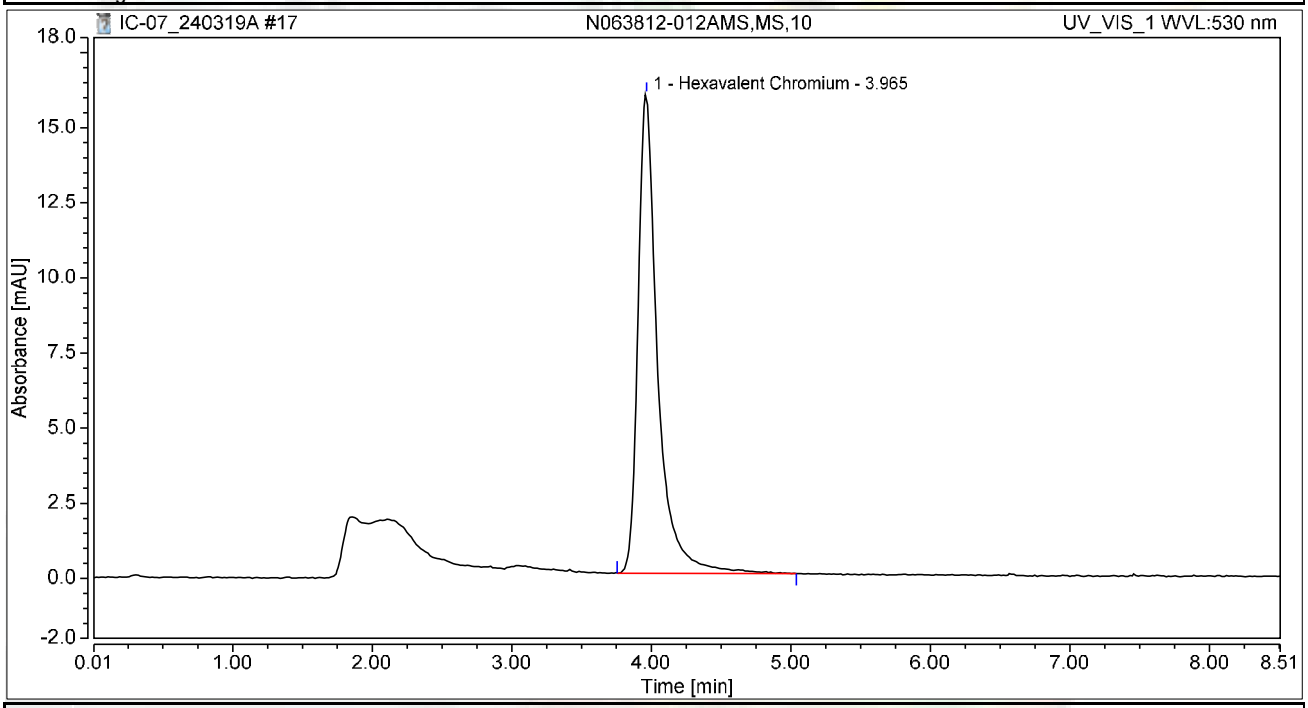
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	1.513	9.359	100.00	100.00	7.1080
Total:			**1.513**	**9.359**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-012AMS,MS,10**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Mar/24 11:34**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

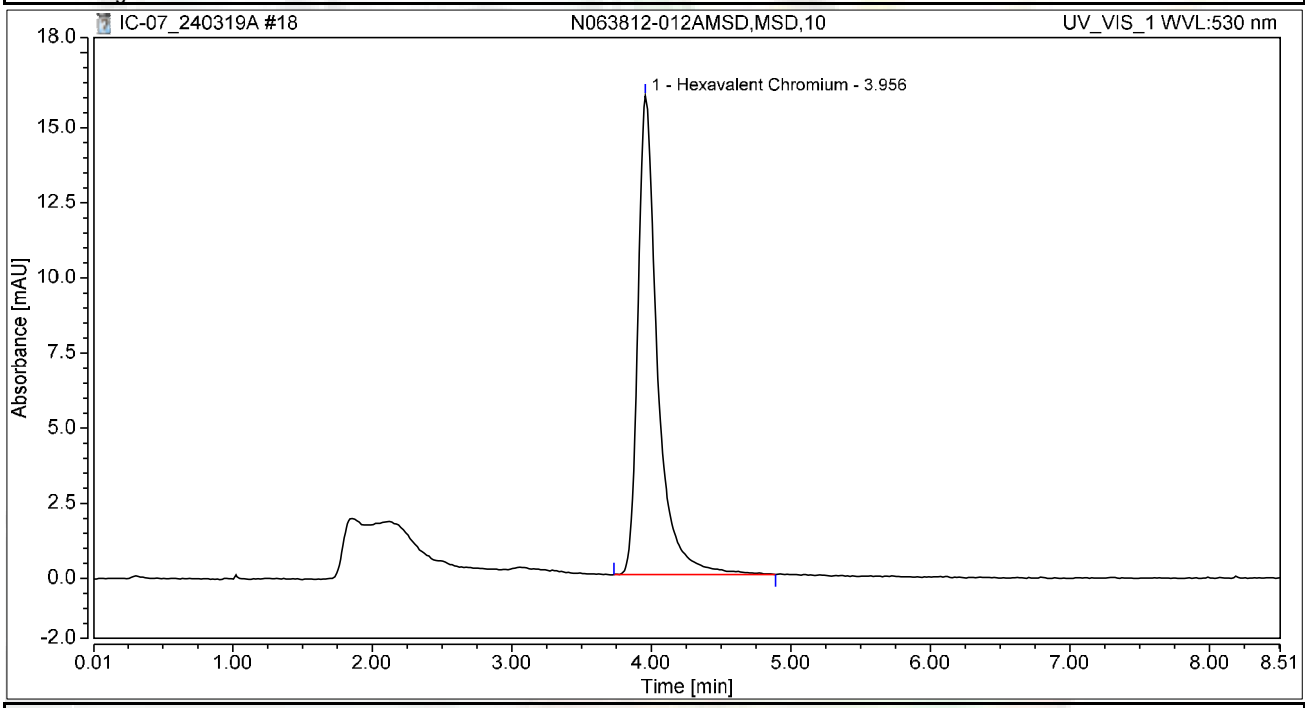
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	2.609	15.943	100.00	100.00	12.2596
Total:			**2.609**	**15.943**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-012AMSD,MSD,10**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Mar/24 11:44**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

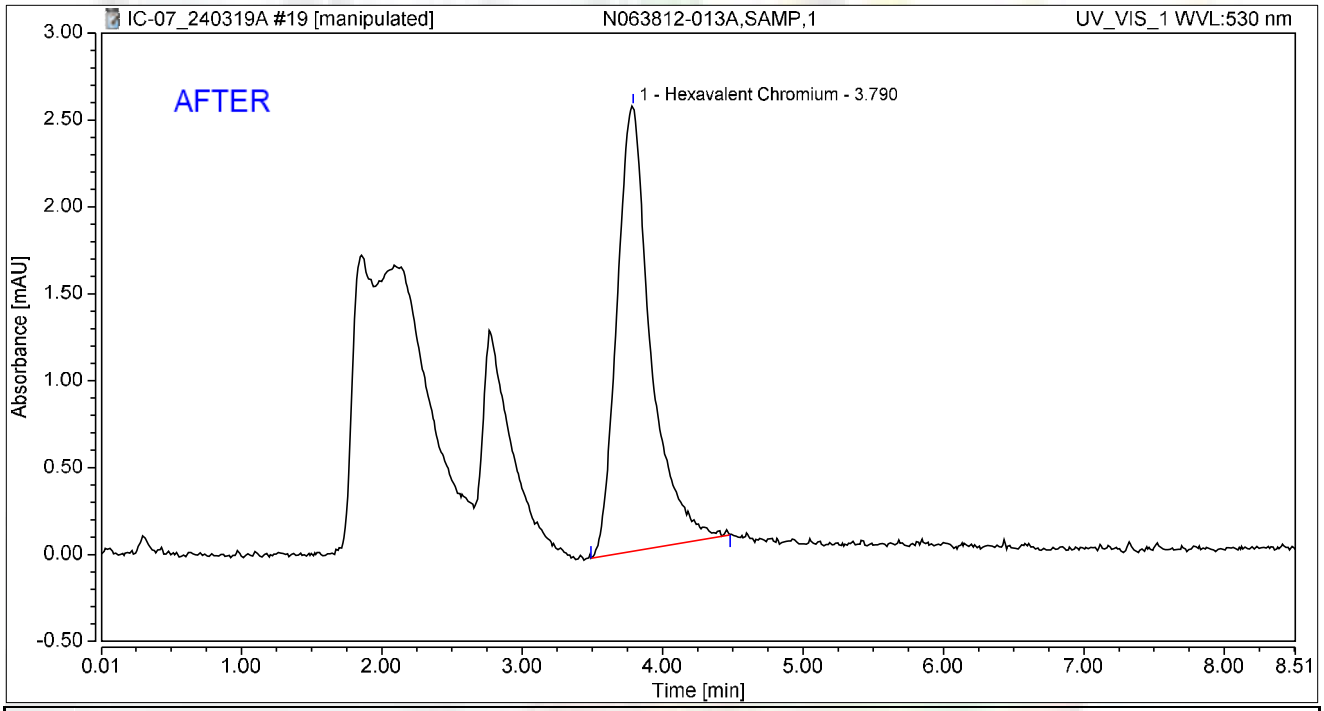
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.956	2.602	15.939	100.00	100.00	12.2270
Total:			**2.602**	**15.939**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-013A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Mar/24 11:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

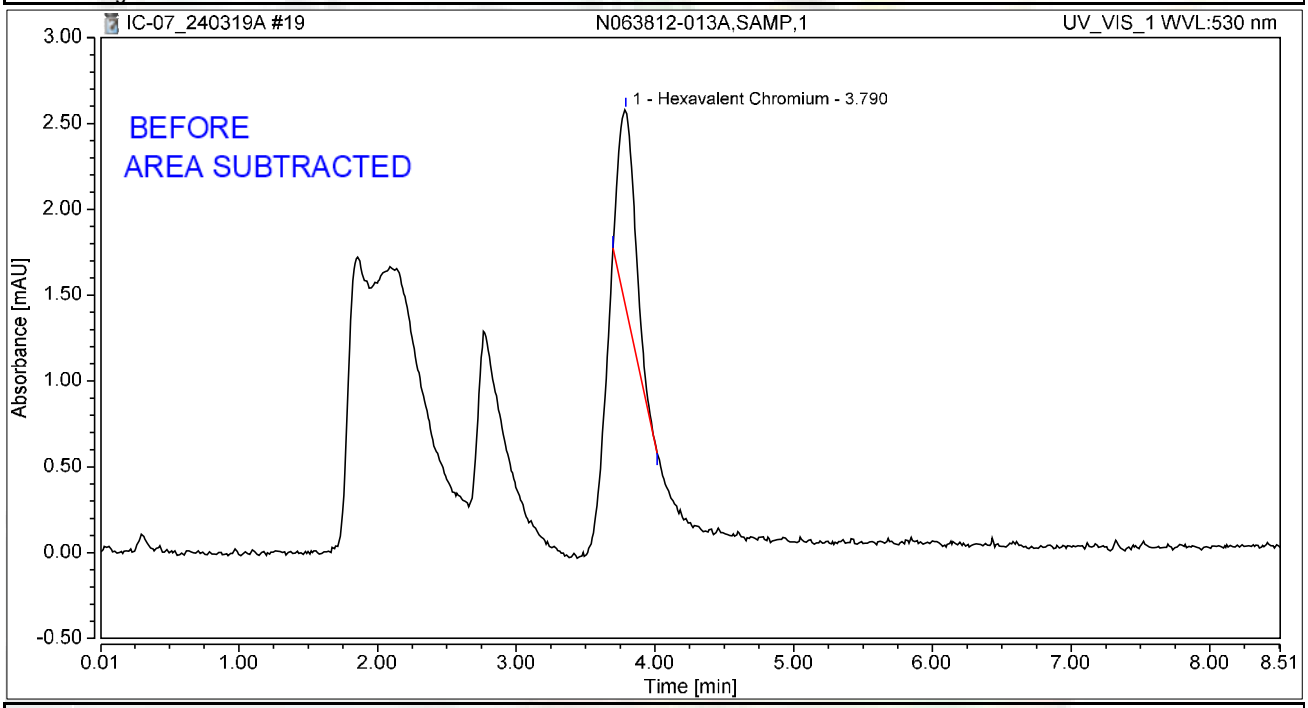
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.715	2.562	100.00	100.00	3.3572
Total:			**0.715**	**2.562**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-013A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Mar/24 11:53**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

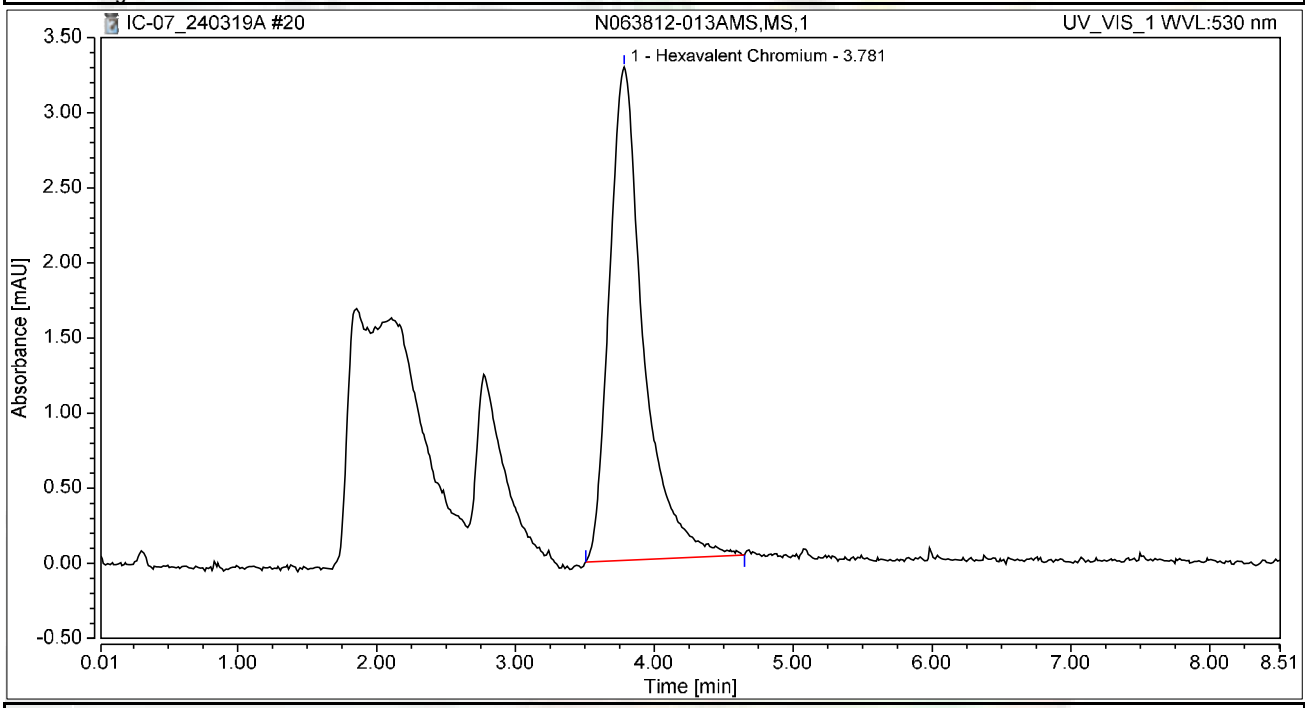
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.790	0.162	1.152	100.00	100.00	0.7626
Total:			**0.162**	**1.152**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-013AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Mar/24 12:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

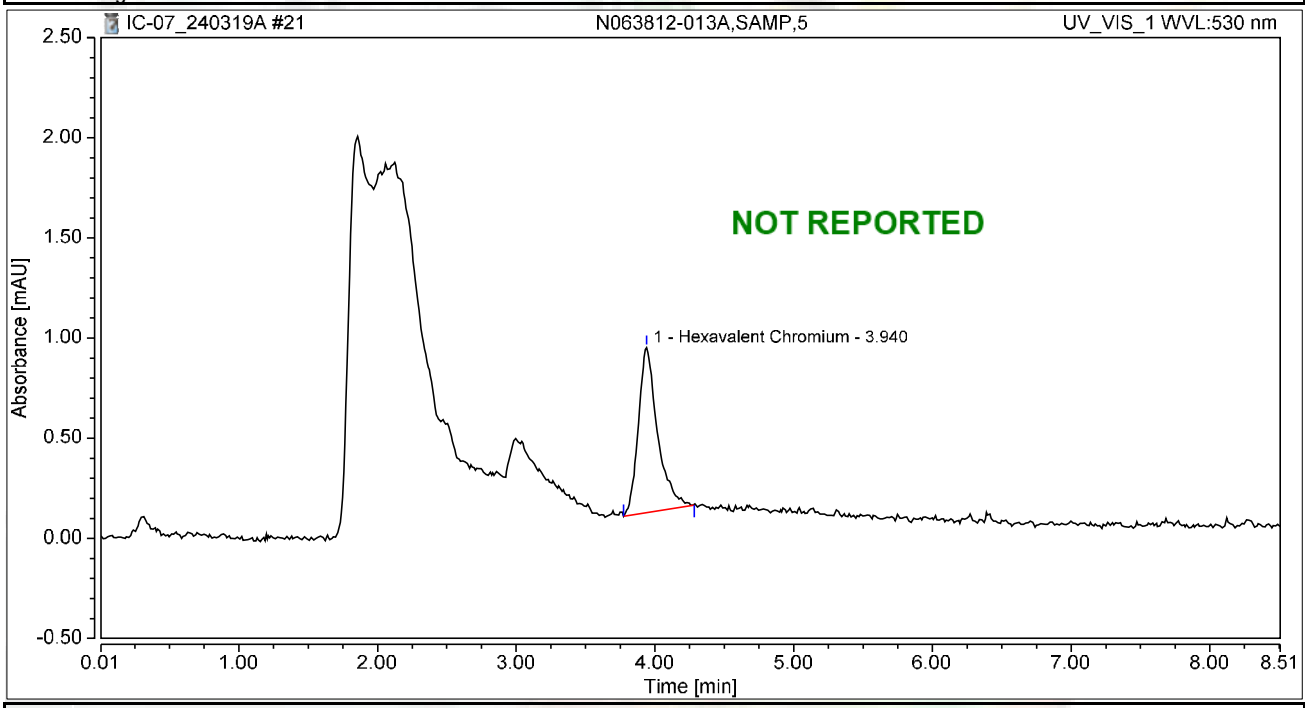
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.781	0.937	3.284	100.00	100.00	4.4027
Total:			**0.937**	**3.284**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-013A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Mar/24 12:12**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

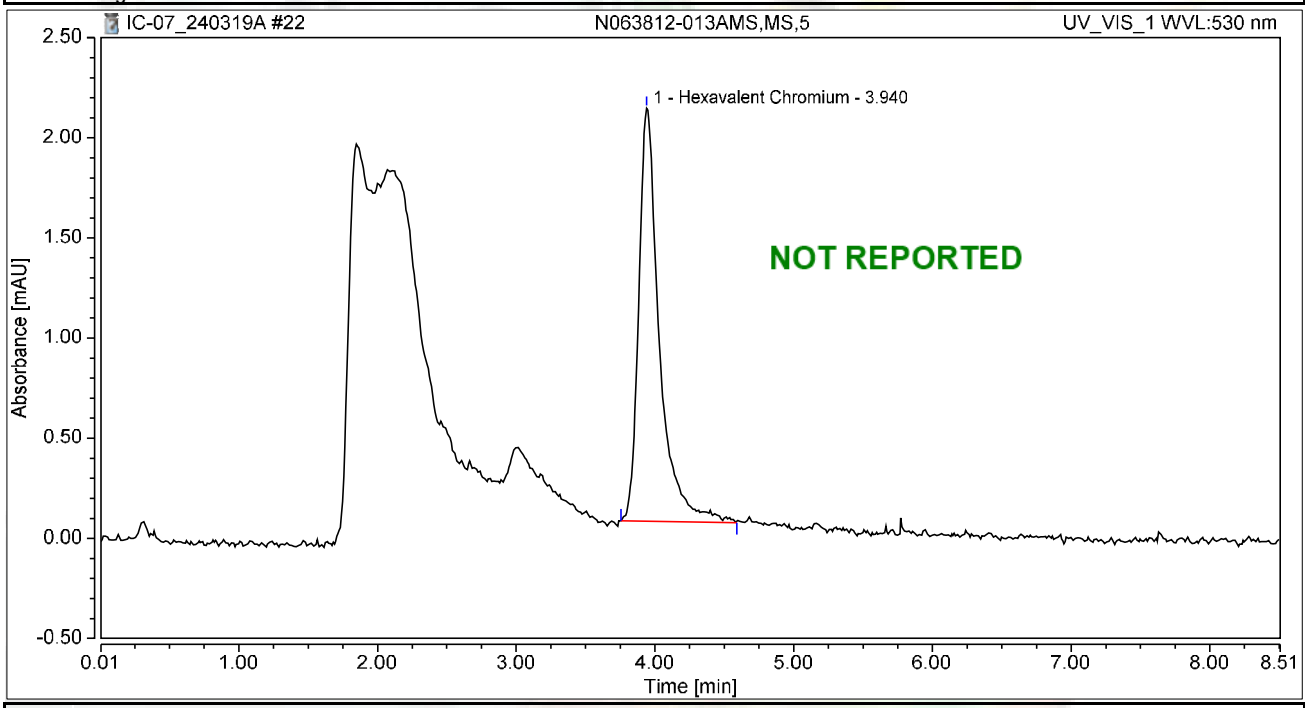
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.133	0.825	100.00	100.00	0.6245
Total:			**0.133**	**0.825**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063812-013AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Mar/24 12:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

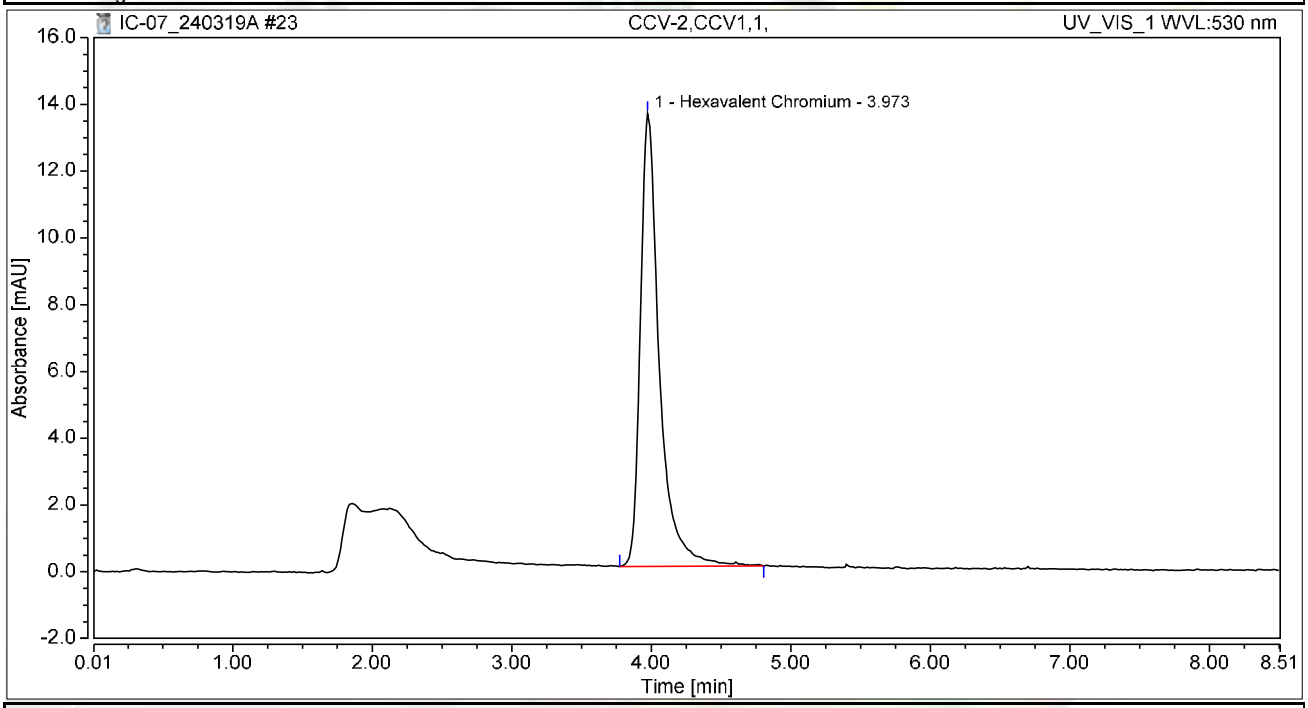
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.940	0.355	2.060	100.00	100.00	1.6671
Total:			**0.355**	**2.060**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Mar/24 12:31**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

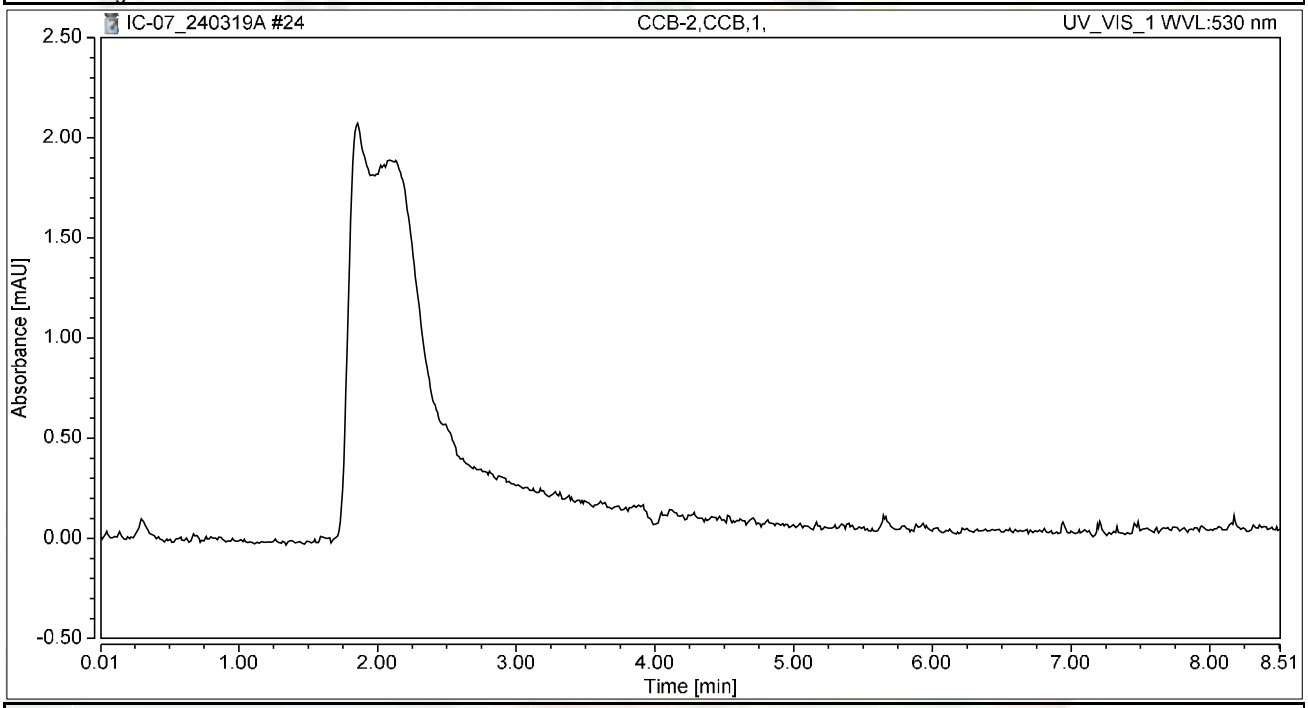
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	2.143	13.572	100.00	100.00	10.0705
Total:			**2.143**	**13.572**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Mar/24 12:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

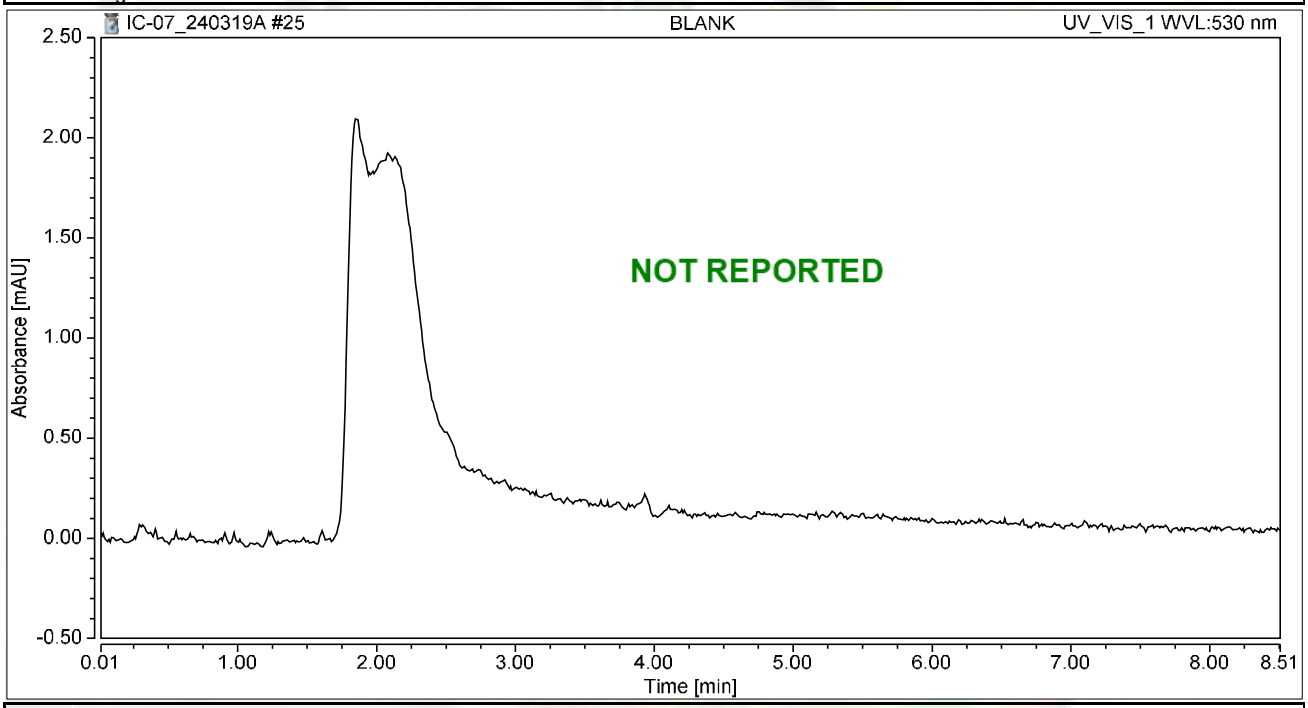
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.49**
Vial Number:	**17**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**19/Mar/24 12:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

EPA 300.0

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

QC Batch Number: R183637
ASSET #: N063812

Instrument ID: IC-08
Analyst: RBA
Date Analyzed: 3/15/2024

Method:

[X] EPA 300.0
[ ] EPA 7199

[ ] EPA 218.6/EPA 218.7
[ ] EPA 218.6/EPA 218.7 LL
[ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)			X			X
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?			X			X
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?			X			X
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)			X			X
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)			X			X
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X			X		
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X			X
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X			X		
28. Extraction log complete and included in package (if applicable)			X			X
29. All manual integrations initialed, date and reasons included.	X			X		
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer RBA Date: _____

2nd Level Reviewer JRB 3/21/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 300
TEST NAME: INORGANIC ANIONS BY IC
MATRIX: GROUNDWATER

FORMULA:

Calculate the Nitrate concentration, in mg/L, in the orignal sample as follows:

Nitrate, mg/L = A * DF

where:

A = mg/L, IC calculated concentration
DF = dilution factor

For **N063812-001B** concentration in mg/L is calculated as follows:

Nitrate, mg/L = 0.9628 * 10

= 9.628

Reporting result in two significant figures,

Nitrate, mg/L = 9.6

Reviewed by:

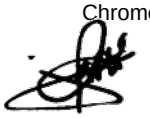
dMocha 4/17/2024

ANALYSIS RUN LOG

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240223	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240223	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240223	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240223	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240223	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240223	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240223	Finished
8	ICV,ICV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240223	Finished
9	ICB,ICB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240223	Finished
10	MB-H2O,MBLK,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240223	Finished
11	LCS-H2O,LCS,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240223	Finished
12	N063297-001B,SAMP,10	Unknown	7	1000.0	Anions Default	EPA 300_0_240223	Finished
13	N063297-001BDUP,DUP,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240223	Finished
14	N063297-001BMS,MS,10	Unknown	9	1000.0	Anions Default	EPA 300_0_240223	Finished
15	N063297-001BMSD,MSD,10	Unknown	10	1000.0	Anions Default	EPA 300_0_240223	Finished
16	N063252-001C,SAMP,2000	Unknown	11	1000.0	Anions Default	EPA 300_0_240223	Finished
17	N063252-001CMS,MS,2000	Unknown	12	1000.0	Anions Default	EPA 300_0_240223	Finished
18	N063248-005B,SAMP,1000	Unknown	13	1000.0	Anions Default	EPA 300_0_240223	Finished
19	N063248-006B,SAMP,2000	Unknown	14	1000.0	Anions Default	EPA 300_0_240223	Finished
20	CCV-1,CCV,1	Unknown	15	1000.0	Anions Default	EPA 300_0_240223	Finished
21	CCB-1,CCB,1	Unknown	16	1000.0	Anions Default	EPA 300_0_240223	Finished
22	N063248-007B,SAMP,2000	Unknown	17	1000.0	Anions Default	EPA 300_0_240223	Finished
23	N063248-008B,SAMP,2000	Unknown	18	1000.0	Anions Default	EPA 300_0_240223	Finished
24	N063248-010C,SAMP,100	Unknown	19	1000.0	Anions Default	EPA 300_0_240223	Finished
25	N063248-011C,SAMP,1000	Unknown	20	1000.0	Anions Default	EPA 300_0_240223	Finished
26	N063248-005B,SAMP,100	Unknown	21	1000.0	Anions Default	EPA 300_0_240223	Finished
27	N063248-006B,SAMP,100	Unknown	22	1000.0	Anions Default	EPA 300_0_240223	Finished
28	N063248-007B,SAMP,100	Unknown	23	1000.0	Anions Default	EPA 300_0_240223	Finished
29	N063248-008B,SAMP,100	Unknown	24	1000.0	Anions Default	EPA 300_0_240223	Finished
30	N063248-010C,SAMP,20	Unknown	25	1000.0	Anions Default	EPA 300_0_240223	Finished
31	N063248-011C,SAMP,100	Unknown	26	1000.0	Anions Default	EPA 300_0_240223	Finished
32	CCV-2,CCV,1	Unknown	27	1000.0	Anions Default	EPA 300_0_240223	Finished
33	CCB-2,CCB,1	Unknown	28	1000.0	Anions Default	EPA 300_0_240223	Finished
34	N063295-005B,SAMP,2000	Unknown	29	1000.0	Anions Default	EPA 300_0_240223	Finished
35	N063295-006B,SAMP,2000	Unknown	30	1000.0	Anions Default	EPA 300_0_240223	Finished
36	N063295-007B,SAMP,2000	Unknown	31	1000.0	Anions Default	EPA 300_0_240223	Finished
37	N063295-008B,SAMP,2000	Unknown	32	1000.0	Anions Default	EPA 300_0_240223	Finished
38	N063295-005B,SAMP,100	Unknown	33	1000.0	Anions Default	EPA 300_0_240223	Finished
39	N063295-006B,SAMP,100	Unknown	34	1000.0	Anions Default	EPA 300_0_240223	Finished
40	N063295-007B,SAMP,100	Unknown	35	1000.0	Anions Default	EPA 300_0_240223	Finished
41	N063295-008B,SAMP,100	Unknown	36	1000.0	Anions Default	EPA 300_0_240223	Finished

Processed by:
Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)



2/25/2024

IC8 RBA 2/25/2024 4:51:54 PM

reviewed by:

2/27/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:07:15 AM	BLANK
2	Std - 0	2/23/2024 9:22:33 AM	IBLANK
3	Std - 1	2/23/2024 9:53:29 AM	STD-LOW
4	Std - 2	2/23/2024 10:08:47 AM	STD
5	Std - 3	2/23/2024 10:24:06 AM	STD
6	Std - 4	2/23/2024 10:39:24 AM	STD
7	Std - 5	2/23/2024 10:54:42 AM	STD-HIGH
8	ICV,ICV,1	2/23/2024 11:10:00 AM	ICV, IWST-240216B
9	ICB,ICB,1	2/23/2024 11:25:18 AM	ICB
10	MB-H2O,MBLK,1	2/23/2024 11:40:36 AM	MB
11	LCS-H2O,LCS,1	2/23/2024 11:55:54 AM	LCS, IWST-240216B
12	N063297-001B,SAMP,10	2/23/2024 1:45:16 PM	SAMP,1>10mL,
13	N063297-001BDUP,DUP,10	2/23/2024 2:00:34 PM	DUP,1>10mL,
14	N063297-001BMS,MS,10	2/23/2024 2:15:52 PM	MS,1>10mL,
15	N063297-001BMSD,MSD,10	2/23/2024 2:31:10 PM	MSD,1>10mL,
16	N063252-001C,SAMP,2000	2/23/2024 2:46:27 PM	SAMP,0.005>10mL,
17	N063252-001CMS,MS,2000	2/23/2024 3:01:45 PM	MS,0.005>10mL,
18	N063248-005B,SAMP,1000	2/23/2024 4:06:07 PM	SAMP,0.01>10mL,
19	N063248-006B,SAMP,2000	2/23/2024 4:21:25 PM	SAMP,0.005>10mL,
20	CCV-1,CCV,1	2/23/2024 4:36:43 PM	CCV, IWST-240216A
21	CCB-1,CCB,1	2/23/2024 4:52:01 PM	CCB
22	N063248-007B,SAMP,2000	2/23/2024 5:07:19 PM	SAMP,0.005>10mL,
23	N063248-008B,SAMP,2000	2/23/2024 5:22:37 PM	SAMP,0.005>10mL,
24	N063248-010C,SAMP,100	2/23/2024 5:37:54 PM	SAMP,0.1>10mL,
25	N063248-011C,SAMP,1000	2/23/2024 5:53:13 PM	SAMP,0.01>10mL,
26	N063248-005B,SAMP,100	2/23/2024 6:08:32 PM	SAMP,0.1>10mL,
27	N063248-006B,SAMP,100	2/23/2024 6:23:50 PM	SAMP,0.1>10mL,
28	N063248-007B,SAMP,100	2/23/2024 6:39:07 PM	SAMP,0.1>10mL,
29	N063248-008B,SAMP,100	2/23/2024 6:54:26 PM	SAMP,0.1>10mL,
30	N063248-010C,SAMP,20	2/23/2024 7:09:45 PM	SAMP,0.5>10mL,
31	N063248-011C,SAMP,100	2/23/2024 7:25:03 PM	SAMP,0.1>10mL,
32	CCV-2,CCV,1	2/23/2024 7:40:21 PM	CCV, IWST-240216A
33	CCB-2,CCB,1	2/23/2024 7:55:39 PM	CCB
34	N063295-005B,SAMP,2000	2/23/2024 8:10:57 PM	SAMP,0.005>10mL,
35	N063295-006B,SAMP,2000	2/23/2024 8:26:16 PM	SAMP,0.005>10mL,
36	N063295-007B,SAMP,2000	2/23/2024 8:41:34 PM	SAMP,0.005>10mL,
37	N063295-008B,SAMP,2000	2/23/2024 8:56:52 PM	SAMP,0.005>10mL,
38	N063295-005B,SAMP,100	2/23/2024 9:12:11 PM	SAMP,0.1>10mL,
39	N063295-006B,SAMP,100	2/23/2024 9:27:28 PM	SAMP,0.1>10mL,
40	N063295-007B,SAMP,100	2/23/2024 9:42:47 PM	SAMP,0.1>10mL,
41	N063295-008B,SAMP,100	2/23/2024 9:58:05 PM	SAMP,0.1>10mL,

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	N063253-001C,SAMP,5000	Unknown	37	1000.0	Anions Default	EPA 300_0_240223	Finished
43	N063253-001C,SAMP,10000	Unknown	38	1000.0	Anions Default	EPA 300_0_240223	Finished
44	CCV-3,CCV,1	Unknown	39	1000.0	Anions Default	EPA 300_0_240223	Finished
45	CCB-3,CCB,1	Unknown	40	1000.0	Anions Default	EPA 300_0_240223	Finished
46	N063256-001C,SAMP,100	Unknown	41	1000.0	Anions Default	EPA 300_0_240223	Finished
47	N063254-001C,SAMP,10000	Unknown	42	1000.0	Anions Default	EPA 300_0_240223	Finished
48	N063255-001C,SAMP,10000	Unknown	43	1000.0	Anions Default	EPA 300_0_240223	Finished
49	N063257-001C,SAMP,10000	Unknown	44	1000.0	Anions Default	EPA 300_0_240223	Finished
50	N063258-001C,SAMP,10000	Unknown	45	1000.0	Anions Default	EPA 300_0_240223	Finished
51	CCV-4,CCV,1	Unknown	46	1000.0	Anions Default	EPA 300_0_240223	Finished
52	CCB-4,CCB,1	Unknown	47	1000.0	Anions Default	EPA 300_0_240223	Finished

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 52
Created: 2/23/2024 9:05:35 AM by IC-05
Last Update: 2/23/2024 4:34:12 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	N063253-001C,SAMP,5000	2/23/2024 10:13:23 PM	SAMP,0.002>10mL,
43	N063253-001C,SAMP,10000	2/23/2024 10:28:42 PM	SAMP,0.001>10mL,
44	CCV-3,CCV,1	2/23/2024 10:43:59 PM	CCV, IWST-240216A
45	CCB-3,CCB,1	2/23/2024 10:59:17 PM	CCB
46	N063256-001C,SAMP,100	2/23/2024 11:14:35 PM	SAMP,0.1>10mL,
47	N063254-001C,SAMP,10000	2/23/2024 11:29:53 PM	SAMP,0.001>10mL,
48	N063255-001C,SAMP,10000	2/23/2024 11:45:11 PM	SAMP,0.001>10mL,
49	N063257-001C,SAMP,10000	2/24/2024 12:00:28 AM	SAMP,0.001>10mL,
50	N063258-001C,SAMP,10000	2/24/2024 12:15:46 AM	SAMP,0.001>10mL,
51	CCV-4,CCV,1	2/24/2024 12:31:04 AM	CCV, IWST-240216A
52	CCB-4,CCB,1	2/24/2024 12:46:23 AM	CCB

Sequence: IC-08_240315A
Operator: IC-05
Printed: 3/15/2024 10:31:24 PM

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 63
Created: 3/14/2024 11:28:31 AM by IC-05
Last Update: 3/15/2024 1:02:14 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240223	Finished
2	Std - 0	Standard	2	1000.0	Anions Default	EPA 300_0_240223	Finished
3	Std - 1	Standard	3	1000.0	Anions Default	EPA 300_0_240223	Finished
4	Std - 2	Standard	4	1000.0	Anions Default	EPA 300_0_240223	Finished
5	Std - 3	Standard	5	1000.0	Anions Default	EPA 300_0_240223	Finished
6	Std - 4	Standard	6	1000.0	Anions Default	EPA 300_0_240223	Finished
7	Std - 5	Standard	7	1000.0	Anions Default	EPA 300_0_240223	Finished
8	BLANK	Unknown	1	1000.0	Anions Default	EPA 300_0_240223	Finished
9	CCV-1,CCV,1	Unknown	2	1000.0	Anions Default	EPA 300_0_240223	Finished
10	CCB-1,CCB,1	Unknown	3	1000.0	Anions Default	EPA 300_0_240223	Finished
11	LCS-H2O,LCS,1	Unknown	4	1000.0	Anions Default	EPA 300_0_240223	Finished
12	MB-H2O,MBLK,1	Unknown	5	1000.0	Anions Default	EPA 300_0_240223	Finished
13	N063812-011B,SAMP,10	Unknown	6	1000.0	Anions Default	EPA 300_0_240223	Finished
14	N063812-016B,SAMP,10	Unknown	7	1000.0	Anions Default	EPA 300_0_240223	Finished
15	N063812-015B,SAMP,10	Unknown	8	1000.0	Anions Default	EPA 300_0_240223	Finished
16	N063812-001B,SAMP,10	Unknown	9	1000.0	Anions Default	EPA 300_0_240223	Finished
17	N063812-002B,SAMP,10	Unknown	10	1000.0	Anions Default	EPA 300_0_240223	Finished
18	N063812-003B,SAMP,10	Unknown	11	1000.0	Anions Default	EPA 300_0_240223	Finished
19	N063812-004B,SAMP,10	Unknown	12	1000.0	Anions Default	EPA 300_0_240223	Finished
20	N063812-005B,SAMP,10	Unknown	13	1000.0	Anions Default	EPA 300_0_240223	Finished
21	CCV-2,CCV,1	Unknown	14	1000.0	Anions Default	EPA 300_0_240223	Finished
22	CCB-2,CCB,1	Unknown	15	1000.0	Anions Default	EPA 300_0_240223	Finished
23	N063812-007B,SAMP,10	Unknown	16	1000.0	Anions Default	EPA 300_0_240223	Finished
24	N063812-009B,SAMP,10	Unknown	17	1000.0	Anions Default	EPA 300_0_240223	Finished
25	N063812-010B,SAMP,10	Unknown	18	1000.0	Anions Default	EPA 300_0_240223	Finished
26	N063787-002C,SAMP,20	Unknown	19	1000.0	Anions Default	EPA 300_0_240223	Finished
27	N063812-013B,SAMP,10	Unknown	20	1000.0	Anions Default	EPA 300_0_240223	Finished
28	N063812-014B,SAMP,10	Unknown	21	1000.0	Anions Default	EPA 300_0_240223	Finished
29	N063812-011BMS,MS,10	Unknown	22	1000.0	Anions Default	EPA 300_0_240223	Finished
30	N063812-011BMSD,MSD,10	Unknown	23	1000.0	Anions Default	EPA 300_0_240223	Finished
31	N063812-016BMS,MS,10	Unknown	24	1000.0	Anions Default	EPA 300_0_240223	Finished
32	N063812-016BMSD,MSD,10	Unknown	25	1000.0	Anions Default	EPA 300_0_240223	Finished
33	CCV-3,CCV,1	Unknown	26	1000.0	Anions Default	EPA 300_0_240223	Finished
34	CCB-3,CCB,1	Unknown	27	1000.0	Anions Default	EPA 300_0_240223	Finished
35	N063812-015BDUP,DUP,10	Unknown	28	1000.0	Anions Default	EPA 300_0_240223	Finished
36	N063812-012B,SAMP,10	Unknown	29	1000.0	Anions Default	EPA 300_0_240223	Finished
37	N063812-011B,SAMP,50	Unknown	30	1000.0	Anions Default	EPA 300_0_240223	Finished
38	N063812-011BMS,MS,50	Unknown	31	1000.0	Anions Default	EPA 300_0_240223	Finished
39	N063812-011BMSD,MSD,50	Unknown	32	1000.0	Anions Default	EPA 300_0_240223	Finished
40	N063812-016B,SAMP,50	Unknown	33	1000.0	Anions Default	EPA 300_0_240223	Finished
41	N063812-016BMS,MS,50	Unknown	34	1000.0	Anions Default	EPA 300_0_240223	Finished

Processed by:
Chromeleon © Dionex Corporation, Version 6.80 SR10 Build 2818 (166959)

reviewed by: 3/18/2024

3/15/2024

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 63
Created: 3/14/2024 11:28:31 AM by IC-05
Last Update: 3/15/2024 1:02:14 PM by IC-05

No.	Name	Inj. Date/Time	Comment
1	BLANK	2/23/2024 9:07:15 AM	BLANK
2	Std - 0	2/23/2024 9:22:33 AM	IBLANK
3	Std - 1	2/23/2024 9:53:29 AM	STD-LOW
4	Std - 2	2/23/2024 10:08:47 AM	STD
5	Std - 3	2/23/2024 10:24:06 AM	STD
6	Std - 4	2/23/2024 10:39:24 AM	STD
7	Std - 5	2/23/2024 10:54:42 AM	STD-HIGH
8	BLANK	3/15/2024 7:27:11 AM	BLANK
9	CCV-1,CCV,1	3/15/2024 7:42:29 AM	CCV, IWST-240308A
10	CCB-1,CCB,1	3/15/2024 7:57:46 AM	CCB
11	LCS-H2O,LCS,1	3/15/2024 8:13:04 AM	LCS, IWST-240308B
12	MB-H2O,MBLK,1	3/15/2024 8:57:56 AM	MB
13	N063812-011B,SAMP,10	3/15/2024 9:23:38 AM	SAMP,1>10mL,
14	N063812-016B,SAMP,10	3/15/2024 9:38:56 AM	SAMP,1>10mL,
15	N063812-015B,SAMP,10	3/15/2024 9:59:45 AM	SAMP,1>10mL,
16	N063812-001B,SAMP,10	3/15/2024 10:15:03 AM	SAMP,1>10mL,
17	N063812-002B,SAMP,10	3/15/2024 10:30:21 AM	SAMP,1>10mL,
18	N063812-003B,SAMP,10	3/15/2024 10:45:39 AM	SAMP,1>10mL,
19	N063812-004B,SAMP,10	3/15/2024 11:00:57 AM	SAMP,1>10mL,
20	N063812-005B,SAMP,10	3/15/2024 11:16:15 AM	SAMP,1>10mL,
21	CCV-2,CCV,1	3/15/2024 11:31:33 AM	CCV, IWST-240308A
22	CCB-2,CCB,1	3/15/2024 11:46:51 AM	CCB
23	N063812-007B,SAMP,10	3/15/2024 12:02:09 PM	SAMP,1>10mL,
24	N063812-009B,SAMP,10	3/15/2024 12:17:26 PM	SAMP,1>10mL,
25	N063812-010B,SAMP,10	3/15/2024 12:32:44 PM	SAMP,1>10mL,
26	N063787-002C,SAMP,20	3/15/2024 12:48:02 PM	SAMP,0.5>10mL,
27	N063812-013B,SAMP,10	3/15/2024 1:03:20 PM	SAMP,1>10mL,
28	N063812-014B,SAMP,10	3/15/2024 1:18:38 PM	SAMP,1>10mL,
29	N063812-011BMS,MS,10	3/15/2024 1:33:56 PM	MS,1>10mL,
30	N063812-011BMSD,MSD,10	3/15/2024 1:49:15 PM	MSD,1>10mL,
31	N063812-016BMS,MS,10	3/15/2024 2:04:33 PM	MS,1>10mL,
32	N063812-016BMSD,MSD,10	3/15/2024 2:19:51 PM	MSD,1>10mL,
33	CCV-3,CCV,1	3/15/2024 2:35:08 PM	CCV, IWST-240308A
34	CCB-3,CCB,1	3/15/2024 2:50:27 PM	CCB
35	N063812-015BDUP,DUP,10	3/15/2024 3:05:45 PM	DUP,1>10mL,
36	N063812-012B,SAMP,10	3/15/2024 3:21:03 PM	SAMP,1>10mL,
37	N063812-011B,SAMP,50	3/15/2024 3:36:22 PM	SAMP,0.2>10mL,
38	N063812-011BMS,MS,50	3/15/2024 3:51:40 PM	MS,0.2>10mL,
39	N063812-011BMSD,MSD,50	3/15/2024 4:06:58 PM	MSD,0.2>10mL,
40	N063812-016B,SAMP,50	3/15/2024 4:22:15 PM	SAMP,0.2>10mL,
41	N063812-016BMS,MS,50	3/15/2024 4:37:33 PM	MS,0.2>10mL,

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 63
Created: 3/14/2024 11:28:31 AM by IC-05
Last Update: 3/15/2024 1:02:14 PM by IC-05

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
42	N063812-016BMSD,MSD,50	Unknown	35	1000.0	Anions Default	EPA 300_0_240223	Finished
43	N063812-001B,SAMP,50	Unknown	36	1000.0	Anions Default	EPA 300_0_240223	Finished
44	N063812-002B,SAMP,50	Unknown	37	1000.0	Anions Default	EPA 300_0_240223	Finished
45	CCV-4,CCV,1	Unknown	38	1000.0	Anions Default	EPA 300_0_240223	Finished
46	CCB-4,CCB,1	Unknown	39	1000.0	Anions Default	EPA 300_0_240223	Finished
47	N063812-003B,SAMP,50	Unknown	40	1000.0	Anions Default	EPA 300_0_240223	Finished
48	N063812-004B,SAMP,100	Unknown	41	1000.0	Anions Default	EPA 300_0_240223	Finished
49	N063812-005B,SAMP,100	Unknown	42	1000.0	Anions Default	EPA 300_0_240223	Finished
50	N063812-007B,SAMP,100	Unknown	43	1000.0	Anions Default	EPA 300_0_240223	Finished
51	N063812-009B,SAMP,50	Unknown	44	1000.0	Anions Default	EPA 300_0_240223	Finished
52	N063812-010B,SAMP,50	Unknown	45	1000.0	Anions Default	EPA 300_0_240223	Finished
53	N063812-012B,SAMP,50	Unknown	46	1000.0	Anions Default	EPA 300_0_240223	Finished
54	N063812-013B,SAMP,50	Unknown	47	1000.0	Anions Default	EPA 300_0_240223	Finished
55	N063812-014B,SAMP,50	Unknown	48	1000.0	Anions Default	EPA 300_0_240223	Finished
56	N063787-002C,SAMP,50	Unknown	49	1000.0	Anions Default	EPA 300_0_240223	Finished
57	CCV-5,CCV,1	Unknown	50	1000.0	Anions Default	EPA 300_0_240223	Finished
58	CCB-5,CCB,1	Unknown	51	1000.0	Anions Default	EPA 300_0_240223	Finished
59	N063787-002CDUP,DUP,50	Unknown	52	1000.0	Anions Default	EPA 300_0_240223	Finished
60	N063787-002CMS,MS,50	Unknown	53	1000.0	Anions Default	EPA 300_0_240223	Finished
61	N063787-002CMSD,MSD,50	Unknown	54	1000.0	Anions Default	EPA 300_0_240223	Finished
62	CCV-6,CCV,1	Unknown	55	1000.0	Anions Default	EPA 300_0_240223	Finished
63	CCB-6,CCB,1	Unknown	56	1000.0	Anions Default	EPA 300_0_240223	Finished

Title:
Datasource: D1NZHKQ1_local
Location: IC-08_ANIONS\2_Data\2023_as of September_Anions
Timebase: IC-08_ANIONS
#Samples: 63
Created: 3/14/2024 11:28:31 AM by IC-05
Last Update: 3/15/2024 1:02:14 PM by IC-05

No.	Name	Inj. Date/Time	Comment
42	N063812-016BMSD,MSD,50	3/15/2024 4:52:52 PM	MSD,0.2>10mL,
43	N063812-001B,SAMP,50	3/15/2024 5:08:10 PM	SAMP,0.2>10mL,
44	N063812-002B,SAMP,50	3/15/2024 5:23:28 PM	SAMP,0.2>10mL,
45	CCV-4,CCV,1	3/15/2024 5:38:47 PM	CCV, IWST-240308A
46	CCB-4,CCB,1	3/15/2024 5:54:05 PM	CCB
47	N063812-003B,SAMP,50	3/15/2024 6:09:23 PM	SAMP,0.2>10mL,
48	N063812-004B,SAMP,100	3/15/2024 6:24:40 PM	SAMP,0.1>10mL,
49	N063812-005B,SAMP,100	3/15/2024 6:39:58 PM	SAMP,0.1>10mL,
50	N063812-007B,SAMP,100	3/15/2024 6:55:16 PM	SAMP,0.1>10mL,
51	N063812-009B,SAMP,50	3/15/2024 7:10:34 PM	SAMP,0.2>10mL,
52	N063812-010B,SAMP,50	3/15/2024 7:25:52 PM	SAMP,0.2>10mL,
53	N063812-012B,SAMP,50	3/15/2024 7:41:10 PM	SAMP,0.2>10mL,
54	N063812-013B,SAMP,50	3/15/2024 7:56:28 PM	SAMP,0.2>10mL,
55	N063812-014B,SAMP,50	3/15/2024 8:11:46 PM	SAMP,0.2>10mL,
56	N063787-002C,SAMP,50	3/15/2024 8:27:04 PM	SAMP,0.2>10mL,
57	CCV-5,CCV,1	3/15/2024 8:42:22 PM	CCV, IWST-240308A
58	CCB-5,CCB,1	3/15/2024 8:57:41 PM	CCB
59	N063787-002CDUP,DUP,50	3/15/2024 9:12:58 PM	DUP,0.2>10mL,
60	N063787-002CMS,MS,50	3/15/2024 9:28:17 PM	MS,0.2>10mL,
61	N063787-002CMSD,MSD,50	3/15/2024 9:43:36 PM	MSD,0.2>10mL,
62	CCV-6,CCV,1	3/15/2024 9:58:54 PM	CCV, IWST-240308A
63	CCB-6,CCB,1	3/15/2024 10:14:12 PM	CCB

INITIAL CALIBRATION DATA SUMMARY

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 2/23/2024

Initial Calibration:

Nitrate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.05	0.25	0.5	1.25	2.5	R^2
Area,mAU*min	0.0000	0.0201	0.0879	0.1672	0.4214	0.8656	1.000
Measured, in mg/L	0.000000	0.062700	0.259300	0.489100	1.225800	2.513100	
Relative Error (%RE)		25.4%		-2.2%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712E

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

(EPA 300) - INITIAL CALIBRATION

Instrument ID: IC-08
Date Calibrated: 2/23/2024

Initial Calibration:

Sulfate	STD0	STD1	STD2	STD3	STD4	STD5	
COMPOUND, in mg/L	0	0.5	2	4	10	20	R^2
Area,mAU*min	0.0000	0.0480	0.2008	0.4077	1.0415	2.1673	1.000
Measured, in mg/L	0.000000	0.632600	2.038000	3.940700	9.768100	20.120700	
Relative Error (%RE)		26.5%		-1.5%			

	Stock
Standard Concentration:	1000000 PPB
Standard ID:	ISST230712G

Calibration Acceptance Criteria: > 0.995 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.
The exact values are represented in the ICAL summary for calculation purposes.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **ICV**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5749159**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	4.049	0.50	4.000	0	101	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCV**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749161**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.900	0.50	4.000	0	97.5	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCV**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749166**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.820	0.50	4.000	0	95.5	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCV**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749168**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.830	0.50	4.000	0	95.8	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCV**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749178**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.823	0.50	4.000	0	95.6	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **CCV-5** SampType: **CCV** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **183637**
Client ID: **CCV** Batch ID: **R183637** TestNo: **EPA 300.0** Analysis Date: **3/15/2024** SeqNo: **5749189**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.858	0.50	4.000	0	96.5	90	110				

Sample ID: **CCV-6** SampType: **CCV** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **183637**
Client ID: **CCV** Batch ID: **R183637** TestNo: **EPA 300.0** Analysis Date: **3/15/2024** SeqNo: **5749191**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	3.840	0.50	4.000	0	96.0	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **ICV**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5749084**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.269	0.050	1.250	0	102	90	110				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCV**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749086**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.221	0.050	1.250	0	97.6	90	110				

Sample ID: **CCV-2**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCV**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749098**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.216	0.050	1.250	0	97.3	90	110				

Sample ID: **CCV-3**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCV**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749110**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.210	0.050	1.250	0	96.8	90	110				

Sample ID: **CCV-4**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCV**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749114**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.193	0.050	1.250	0	95.4	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **CCV-5**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCV**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749116**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.220	0.050	1.250	0	97.6	90	110				

Sample ID: **CCV-6**	SampType: **CCV**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCV**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749118**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	1.213	0.050	1.250	0	97.0	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **ICB**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5749160**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCB**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749162**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCB**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749167**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCB**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749169**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCB**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749179**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300_W_SO4PGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCB**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749190**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **300_W_SO4P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCB**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749192**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **ICB**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **2/23/2024**	SeqNo: **5749085**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCB**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749087**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCB**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749099**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCB**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749111**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-4**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCB**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749115**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 300WLLNO3PGE

Sample ID: **CCB-5**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCB**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749117**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Sample ID: **CCB-6**	SampType: **CCB**	TestCode: **300WLLNO3P**	Units: **mg/L**	Prep Date:	RunNo: **183637**
Client ID: **CCB**	Batch ID: **R183637**	TestNo: **EPA 300.0**		Analysis Date: **3/15/2024**	SeqNo: **5749119**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Nitrate as N	ND	0.050									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 3/15/2024

Sample Name		Retention Time	Evaluation
ICV	Nitrate	6.540	
CCV-1	Nitrate	6.433	
CCV-2	Nitrate	6.414	
CCV-3	Nitrate	6.397	
CCV-4	Nitrate	6.410	
CCV-5	Nitrate	6.433	
CCV-6	Nitrate	6.430	
	Average	6.420	
	Applied RT Window	6.220 - 6.620	
LCS-R183637_NO3	Nitrate	6.417	PASS
MB-R183637_NO3	Nitrate	N.A.	N.A.
N063812-011B	Nitrate	6.423	PASS
N063812-016B	Nitrate	N.A.	N.A.
N063812-015B	Nitrate	N.A.	N.A.
N063812-001B	Nitrate	6.420	PASS
N063812-002B	Nitrate	6.413	PASS
N063812-003B	Nitrate	6.420	PASS
N063812-004B	Nitrate	6.424	PASS
N063812-005B	Nitrate	6.407	PASS
N063812-007B	Nitrate	6.400	PASS
N063812-009B	Nitrate	N.A.	N.A.
N063812-010B	Nitrate	6.367	PASS
N063812-013B	Nitrate	6.377	PASS
N063812-014B	Nitrate	N.A.	N.A.
N063812-011BMS	Nitrate	6.384	PASS
N063812-011BMSD	Nitrate	6.374	PASS
N063812-016BMS	Nitrate	6.384	PASS
N063812-016BMSD	Nitrate	6.410	PASS
N063812-015BDUP	Nitrate	N.A.	N.A.
N063812-012B	Nitrate	N.A.	N.A.

Reviewed by:

dMocha 4/17/2024

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-08

Analytical Sequence

Date Analyzed: 3/15/2024

Sample Name		Retention Time	Evaluation
ICV	Sulfate	9.933	
CCV-1	Sulfate	9.710	
CCV-2	Sulfate	9.680	
CCV-3	Sulfate	9.670	
CCV-4	Sulfate	9.687	
CCV-5	Sulfate	9.713	
CCV-6	Sulfate	9.723	
	Average	9.697	
	Applied RT Window	9.497 - 9.897	
LCS-R183637_SO4	Sulfate	9.687	PASS
MB-R183637_SO4	Sulfate	N.A.	N.A.
N063812-015B	Sulfate	9.68	PASS
N063812-011B	Sulfate	9.704	PASS
N063812-011BMS	Sulfate	9.677	PASS
N063812-011BMSD	Sulfate	9.704	PASS
N063812-016B	Sulfate	9.677	PASS
N063812-016BMS	Sulfate	9.703	PASS
N063812-016BMSD	Sulfate	9.680	PASS
N063812-001B	Sulfate	9.690	PASS
N063812-002B	Sulfate	9.694	PASS
N063812-003B	Sulfate	9.677	PASS
N063812-004B	Sulfate	9.687	PASS
N063812-005B	Sulfate	9.704	PASS
N063812-007B	Sulfate	9.697	PASS
N063812-009B	Sulfate	9.670	PASS
N063812-010B	Sulfate	9.700	PASS
N063812-012B	Sulfate	9.704	PASS
N063812-013B	Sulfate	9.680	PASS
N063812-014B	Sulfate	9.714	PASS

Reviewed by:

dMocha 4/17/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): 10/5/2022, 12/14/2022, 3/22/2023,7/10/2023; 10/3/2023 & 11/14/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: mg/L

Instrument Name: **IC-08 & IC-09**

Datafile IC-08 221005A #24 IC-08 221214A #30 IC-08 230322A #35 IC-08 230710A #13 IC-09 231003A #14 IC-08 231114A #24 IC-09 231114A #19

Analyte	#1	#2	#3	#4	#5	#6	#7	Spike Conc., mg/L	SD	$t_{(n-1)}$ value	MDLs	MDL	PQL
Fluoride	0.100	0.103	0.108	0.118	0.110	0.098	0.126	0.10	0.0101	3.143	**0.0318**	**0.0318**	0.10
Chloride	0.480	0.418	0.472	0.653	0.624	0.587	0.622	0.50	0.0922	3.143	**0.2898**	**0.2898**	0.50
Nitrite	0.068	0.061	0.060	0.071	0.063	0.061	0.070	0.05	0.0047	3.143	**0.0149**	**0.0149**	0.05
Bromide	0.526	0.502	0.509	0.522	0.536	0.527	0.520	0.50	0.0116	3.143	**0.0364**	**0.0364**	0.50
Nitrate	0.073	0.058	0.059	0.073	0.074	0.068	0.073	0.05	0.0068	3.143	**0.0215**	**0.0240**	0.05
Phosphate	0.112	0.096	0.114	0.120	0.130	0.093	0.124	0.10	0.0138	3.143	**0.0433**	**0.0433**	0.10
Sulfate	0.501	0.609	0.638	0.401	0.704	0.620	0.697	0.50	0.1092	3.143	**0.3432**	**0.3432**	0.50

METHOD DETECTION LIMIT (Blanks)

Method Name: **INORGANIC IONS by Ion Chromatography**
Method Number: EPA 300.0
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Analyte	MDLb	# of Records
Fluoride	0	63
Chloride	0.1456	80
Nitrite	0.0147	64
Bromide	0	18
Nitrate	0.0240	132
Phosphate	0.0237	34
Sulfate	0.2579	107

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

EPA 6010B
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107567
ASSET #: N063812

Instrument ID: ICP-02
Analyst: DBJ
Date Analyzed: 3/15/2024

Method:

[X] EPA 6010B / 200.7
[ ] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

% Rec of Fe in N063812-011CMS/MSD failed, high bias. However, LCS passed criteria
% Rec of Fe in N063812-016C-PS/MS failed. However, LCS passed criteria

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 03302024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in ug/L , in the original sample as follows:

Iron , ug/L = A * DF * PF *CF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL
CF= Conversion Factor from mg/L to ug/L, 1000

For Sample **N063812-001C** , the concentration i ug/L is calculated as follows:

Iron , ug/L = 0.04616 * 1 * (25/25) * 1000

Iron , ug/L = 46.16

Reporting results in two significant figures,

Iron , ug/L = 46

Reviewed by:

dlRocha 4/12/2024

% RSD SUMMARY

RSD SUMMARY: 240315A

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	Fe	0	66.4	15	<PQL
Standard1	ICAL	1	Fe	0.02	28.15	15	NR!
Standard2	ICAL	1	Fe	0.05	3.69	15	PASS
Standard3	ICAL	1	Fe	2	0.25	15	PASS
Standard4	ICAL	1	Fe	5	0.13	15	PASS
Standard5	ICAL	1	Fe	7.5	0.23	15	PASS
Standard6	ICAL	1	Fe	10	0.09	15	PASS
Standard7	ICAL	1	Fe	20	0.23	15	PASS
ICV	ICV	1	Fe	10.66	0.12	15	PASS
ICB	ICB	1	Fe	0	55.86	15	<PQL
LLICV	CCV1	1	Fe	0.02	1.28	20	PASS
ICSA1	ICSA	1	Fe	188.12	0.08	15	PASS
ICSAB1	ICSAB	1	Fe	185.89	0.16	15	PASS
RINSE	RINSE	1	Fe	0.03	14.24	15	PASS
CCV1	CCV	1	Fe	10.46	0.2	15	PASS
CCB1	CCB	1	Fe	0	36.19	15	<PQL
CCV2	CCV	1	Fe	10.36	0.11	15	PASS
CCB2	CCB	1	Fe	0.01	19.42	15	<PQL
CCV3	CCV	1	Fe	10.38	0.13	15	PASS
CCB3	CCB	1	Fe	0	33.06	15	<PQL
ICSA2	ICSA	1	Fe	186.76	0.09	15	PASS
ICSAB2	ICSAB	1	Fe	184.18	0.13	15	PASS
RINSE	RINSE	1	Fe	0.05	10.37	15	PASS
RINSE	RINSE	1	Fe	0.03	27.28	15	NR!
MB-107567	MBLK	1	Fe	0	82.09	15	<PQL
LCS-107567	LCS	1	Fe	0.1	7.94	15	PASS
N063812-001C	SAMP	1	Fe	0.05	4.14	15	PASS
N063812-002C	SAMP	1	Fe	0.02	11.46	15	PASS
N063812-003C	SAMP	1	Fe	0.01	10.16	15	PASS
N063812-004C	SAMP	1	Fe	0.01	16.46	15	<PQL
N063812-005C	SAMP	1	Fe	0.04	0.71	15	PASS
N063812-007C	SAMP	1	Fe	0.06	1.99	15	PASS
CCV4	CCV	1	Fe	10.4	0.06	15	PASS
CCB4	CCB	1	Fe	0	67.38	15	<PQL
N063812-009C	SAMP	1	Fe	0.47	0.45	15	PASS
N063812-010C	SAMP	1	Fe	0.02	11.31	15	PASS
N063812-011C	SAMP	1	Fe	0.07	4.41	15	PASS
N063812-011C	SAMP	5	Fe	0.01	7.44	15	PASS
N063812-011C-PS	PS	1	Fe	0.16	1.19	15	PASS
N063812-011CMS	MS	1	Fe	0.26	0.84	15	PASS
N063812-011CMSD	MSD	1	Fe	0.27	0.58	15	PASS
N063812-012C	SAMP	1	Fe	0.05	5.05	15	PASS

RSD SUMMARY: 240315A

Instrument ID: ICP-02

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
N063812-013C	SAMP	1	Fe	0.12	0.63	15	PASS
N063812-014C	SAMP	1	Fe	0.04	3.19	15	PASS
CCV5	CCV	1	Fe	10.38	0.13	15	PASS
CCB5	CCB	1	Fe	0	33.67	15	<PQL
N063812-015C	SAMP	1	Fe	0.22	0.79	15	PASS
N063812-016C	SAMP	1	Fe	0.64	0.26	15	PASS
N063812-016C	SAMP	5	Fe	0.13	1.67	15	PASS
N063812-016C-PS	PS	1	Fe	0.71	0.91	15	PASS
N063812-016CMS	MS	1	Fe	0.8	0.8	15	PASS
N063812-016CMSD	MSD	1	Fe	0.76	0.11	15	PASS
CCV6	CCV	1	Fe	10.3	0.08	15	PASS
CCB6	CCB	1	Fe	0	28.92	15	<PQL
ICSA3	ICSA	1	Fe	184.78	0.09	15	PASS
ICSAB3	ICSAB	1	Fe	182.19	0.12	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240315A

Instrument ID: ICP-02

STANDARD CODE	
Standard1	MWST-240311M, 0.5<50mL
Standard2	MWST-240311N
Standard3	MWST-240311O, 5<50mL
Standard4	MWST-240311O,12.5<50mL
Standard5	MWST-240311O, 15<40mL
Standard6	MWST-240311O, 25<50mL
Standard7	MWST-243011O
ICV	MWST-240311AF
CCV	MWST-240311O, 25<50mL
ICSA/ICSAB	MWST-240311P / MWST-240311Q
Int. Std. (Y)	MWST-240311B
PS Spike	MWST-240311X/Y/Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	03/15/2024	01:31:20 PM
2	Standard1	ICAL	1	03/15/2024	01:35:26 PM
3	Standard2	ICAL	1	03/15/2024	01:39:31 PM
4	Standard3	ICAL	1	03/15/2024	01:43:35 PM
5	Standard4	ICAL	1	03/15/2024	01:48:11 PM
6	Standard5	ICAL	1	03/15/2024	01:52:48 PM
7	Standard6	ICAL	1	03/15/2024	01:56:58 PM
8	Standard7	ICAL	1	03/15/2024	02:01:05 PM
250	ICV	ICV	1	03/15/2024	02:09:05 PM
1	ICB	ICB	1	03/15/2024	02:13:17 PM
2	LLICV	CCV1	1	03/15/2024	02:17:21 PM
9	ICSA1	ICSA	1	03/15/2024	02:21:27 PM
10	ICSAB1	ICSAB	1	03/15/2024	02:27:09 PM
239	RINSE	RINSE	1	03/15/2024	02:39:43 PM
11	MB-107534	MBLK	1	03/15/2024	02:43:48 PM
11	MB-107534	MBLK	1	03/15/2024	02:55:01 PM
12	LCS-107534	LCS	1	03/15/2024	02:59:05 PM
13	N063771-001C	SAMP	1	03/15/2024	03:03:10 PM
14	N063771-001C	SAMP	5	03/15/2024	03:09:15 PM
15	N063771-001C-PS	PS	1	03/15/2024	03:13:21 PM
16	N063771-001C-MS	MS	1	03/15/2024	03:19:27 PM
17	N063771-001C-MSD	MSD	1	03/15/2024	03:25:33 PM
18	N063771-002C	SAMP	1	03/15/2024	03:31:39 PM
7	CCV1	CCV	1	03/15/2024	03:37:45 PM
1	CCB1	CCB	1	03/15/2024	04:04:57 PM
19	N063771-003C	SAMP	1	03/15/2024	04:09:05 PM
20	N063771-004C	SAMP	1	03/15/2024	04:15:14 PM
21	N063771-005C	SAMP	1	03/15/2024	04:19:22 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
22	N063771-006C	SAMP	1	03/15/2024	04:25:31 PM
23	N063771-007C	SAMP	1	03/15/2024	04:31:41 PM
24	N063771-009C	SAMP	1	03/15/2024	04:35:47 PM
25	N063771-010C	SAMP	1	03/15/2024	04:41:53 PM
26	N063771-011C	SAMP	1	03/15/2024	04:48:00 PM
27	N063771-012C	SAMP	1	03/15/2024	04:54:07 PM
28	N063771-013C	SAMP	1	03/15/2024	05:00:14 PM
7	CCV2	CCV	1	03/15/2024	05:04:21 PM
1	CCB2	CCB	1	03/15/2024	05:08:32 PM
29	N063771-014C	SAMP	1	03/15/2024	05:12:39 PM
30	N063771-015C	SAMP	1	03/15/2024	05:18:48 PM
31	N063771-016C	SAMP	1	03/15/2024	05:24:55 PM
32	N063771-017C	SAMP	1	03/15/2024	05:31:02 PM
33	N063771-018C	SAMP	1	03/15/2024	05:37:13 PM
7	CCV3	CCV	1	03/15/2024	05:40:16 PM
1	CCB3	CCB	1	03/15/2024	05:44:27 PM
9	ICSA2	ICSA	1	03/15/2024	05:48:34 PM
10	ICSAB2	ICSAB	1	03/15/2024	05:54:19 PM
239	RINSE	RINSE	1	03/15/2024	06:05:48 PM
239	RINSE	RINSE	1	03/15/2024	06:09:57 PM
35	MB-107567	MBLK	1	03/15/2024	06:16:23 PM
36	LCS-107567	LCS	1	03/15/2024	06:20:28 PM
37	N063812-001C	SAMP	1	03/15/2024	06:24:34 PM
38	N063812-002C	SAMP	1	03/15/2024	06:28:41 PM
39	N063812-003C	SAMP	1	03/15/2024	06:34:47 PM
40	N063812-004C	SAMP	1	03/15/2024	06:40:54 PM
41	N063812-005C	SAMP	1	03/15/2024	06:46:59 PM
42	N063812-007C	SAMP	1	03/15/2024	06:53:07 PM
7	CCV4	CCV	1	03/15/2024	06:59:15 PM
1	CCB4	CCB	1	03/15/2024	07:03:24 PM
43	N063812-009C	SAMP	1	03/15/2024	07:07:31 PM
44	N063812-010C	SAMP	1	03/15/2024	07:13:38 PM
45	N063812-011C	SAMP	1	03/15/2024	07:19:47 PM
46	N063812-011C	SAMP	5	03/15/2024	07:25:56 PM
47	N063812-011C-PS	PS	1	03/15/2024	07:30:05 PM
48	N063812-011CMS	MS	1	03/15/2024	07:36:12 PM
49	N063812-011CMSD	MSD	1	03/15/2024	07:42:18 PM
50	N063812-012C	SAMP	1	03/15/2024	07:48:24 PM
51	N063812-013C	SAMP	1	03/15/2024	07:54:31 PM
52	N063812-014C	SAMP	1	03/15/2024	08:00:38 PM
7	CCV5	CCV	1	03/15/2024	08:06:45 PM
1	CCB5	CCB	1	03/15/2024	08:10:56 PM
53	N063812-015C	SAMP	1	03/15/2024	08:15:03 PM
54	N063812-016C	SAMP	1	03/15/2024	08:37:52 PM
55	N063812-016C	SAMP	5	03/15/2024	08:43:59 PM
56	N063812-016C-PS	PS	1	03/15/2024	08:48:07 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
57	N063812-016CMS	MS	1	03/15/2024	08:53:46 PM
58	N063812-016CMSD	MSD	1	03/15/2024	08:59:24 PM
7	CCV6	CCV	1	03/15/2024	09:05:03 PM
1	CCB6	CCB	1	03/15/2024	09:09:14 PM
9	ICSA3	ICSA	1	03/15/2024	09:13:21 PM
10	ICSAB3	ICSAB	1	03/15/2024	09:19:06 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/15/2024 11:24:43 AM**
Prep End Date: **3/15/2024 4:00:00 PM**
Prep Batch **107567** Prep Code:**3010_W_DISS**

Reviewed/ Date: dRocha 4/12/2024
Initials/ Date: _____
Technician: **Jocelyn Rivera**

Prep Factor Units
mL / mL

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107567	Aqueous		25	☐	25	1.000		
MB-107567	Aqueous		25	☐	25	1.000		
N063812-001C	Groundwater	<2	25	☐	25	1.000		
N063812-002C	Groundwater	<2	25	☐	25	1.000		
N063812-003C	Groundwater	<2	25	☐	25	1.000		
N063812-004C	Groundwater	<2	25	☐	25	1.000		
N063812-005C	Groundwater	<2	25	☐	25	1.000		
N063812-007C	Groundwater	<2	25	☐	25	1.000		
N063812-009C	Groundwater	<2	25	☐	25	1.000		
N063812-010C	Groundwater	<2	25	☐	25	1.000		
N063812-011C	Groundwater	<2	25	☐	25	1.000		
N063812-011CMS	Groundwater	<2	25	☐	25	1.000		
N063812-011CMSD	Groundwater	<2	25	☐	25	1.000		
N063812-012C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15448	HYDROCHLORIC ACID
16152	NITRIC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240311X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240311Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240311Z	ICP Solution C	LCS,MS,MSD	0.5

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/15/2024 11:24:43 AM**
Prep End Date: **3/15/2024 4:00:00 PM**

Reviewed/ Date: dMocha 4/12/2024

Initials/ Date: _____

Prep Batch **107567** Prep Code:**3010_W_DISS**

Technician: **Jocelyn Rivera**

Prep Factor Units
mL / mL

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063812-013C	Groundwater	<2	25	☐	25	1.000		
N063812-014C	Groundwater	<2	25	☐	25	1.000		
N063812-015C	Groundwater	<2	25	☐	25	1.000		
N063812-016C	Groundwater	<2	25	☐	25	1.000		
N063812-016CMS	Groundwater	<2	25	☐	25	1.000		
N063812-016CMSD	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
15448	HYDROCHLORIC ACID
16152	NITRIC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240311X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240311Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240311Z	ICP Solution C	LCS,MS,MSD	0.5

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240315A

Instrument ID: ICP-02

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Units	R
Iron								
CalBlk	03/15/2024	01:31:20 PM	Fe	273.953	9	0.00	mg/L	
Standard1	03/15/2024	01:35:26 PM	Fe	273.953	148	0.0200	mg/L	
Standard2	03/15/2024	01:39:31 PM	Fe	273.953	312	0.050	mg/L	
Standard3	03/15/2024	01:43:35 PM	Fe	273.953	10350	2.000	mg/L	
Standard4	03/15/2024	01:48:11 PM	Fe	273.953	26960	5.000	mg/L	
Standard5	03/15/2024	01:52:48 PM	Fe	273.953	39390	7.500	mg/L	
Standard6	03/15/2024	01:56:58 PM	Fe	273.953	56047	10.000	mg/L	
Standard7	03/15/2024	02:01:05 PM	Fe	273.953	103609	20.000	mg/L	0.9995

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **ICV**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748703**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10665.368	20	10000	0	107	90	110				

Sample ID **LLICV**	SampType: **CCV1**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **ZZZZZZ**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748705**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	22.020	20	20.00	0	110	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCV**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748717**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10458.578	20	10000	0	105	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCV**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748729**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10355.487	20	10000	0	104	90	110				

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCV**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748736**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10380.071	20	10000	0	104	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCV**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748837**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10403.680	20	10000	0	104	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCV**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748849**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10380.792	20	10000	0	104	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCV**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748857**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10300.854	20	10000	0	103	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **ICB**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748704**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.383	20									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCB**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748718**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	3.599	20									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCB**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748730**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	5.294	20									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCB**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748737**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	3.308	20									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCB**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748838**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.269	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCB**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748850**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	0.927	20									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID: **CCB**	Batch ID: **R183634**	TestNo: **EPA 6010B**		Analysis Date: **3/15/2024**	SeqNo: **5748858**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	1.014	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **183634**
Client ID: **ICSA** Batch ID: **R183634** TestNo: **EPA 6010B** Analysis Date: **3/15/2024** SeqNo: **5748706**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	534133.715	50	500000	0	107	80	120				
Calcium	593135.884	500	500000	0	119	80	120				
Iron	188123.131	20	200000	0	94.1	80	120				
Magnesium	536157.389	100	500000	0	107	80	120				

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **183634**
Client ID: **ICSAB** Batch ID: **R183634** TestNo: **EPA 6010B** Analysis Date: **3/15/2024** SeqNo: **5748707**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	526060.234	50	500000	0	105	80	120				
Calcium	581000.447	500	500000	0	116	80	120				
Iron	185889.884	20	200000	0	92.9	80	120				
Magnesium	529473.754	100	500000	0	106	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **183634**
Client ID: **ICSA** Batch ID: **R183634** TestNo: **EPA 6010B** Analysis Date: **3/15/2024** SeqNo: **5748738**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	533139.499	50	500000	0	107	80	120				
Calcium	585895.120	500	500000	0	117	80	120				
Iron	186758.689	20	200000	0	93.4	80	120				
Magnesium	523505.370	100	500000	0	105	80	120				

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **183634**
Client ID: **ICSAB** Batch ID: **R183634** TestNo: **EPA 6010B** Analysis Date: **3/15/2024** SeqNo: **5748739**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	524477.338	50	500000	0	105	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID	ICSAB2	SampType:	ICSAB	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	183634
Client ID:	ICSAB	Batch ID:	R183634	TestNo:	EPA 6010B			Analysis Date:	3/15/2024	SeqNo:	5748739

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	573192.711	500	500000	0	115	80	120				
Iron	184177.050	20	200000	0	92.1	80	120				
Magnesium	515505.629	100	500000	0	103	80	120				

Sample ID	ICSA3	SampType:	ICSA	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	183634
Client ID:	ICSA	Batch ID:	R183634	TestNo:	EPA 6010B			Analysis Date:	3/15/2024	SeqNo:	5748859

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	530235.859	50	500000	0	106	80	120				
Calcium	582918.724	500	500000	0	117	80	120				
Iron	184779.921	20	200000	0	92.4	80	120				
Magnesium	518079.204	100	500000	0	104	80	120				

Sample ID	ICSAB3	SampType:	ICSAB	TestCode:	6010_WDPG	Units:	µg/L	Prep Date:		RunNo:	183634
Client ID:	ICSAB	Batch ID:	R183634	TestNo:	EPA 6010B			Analysis Date:	3/15/2024	SeqNo:	5748860

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	521712.344	50	500000	0	104	80	120				
Calcium	567315.675	500	500000	0	113	80	120				
Iron	182190.006	20	200000	0	91.1	80	120				
Magnesium	509205.400	100	500000	0	102	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240315A

Instrument ID: ICP-02

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	0.98	97.62	65-125	PASS
Standard2	ICAL	1	1	100.07	65-125	PASS
Standard3	ICAL	1	1.06	105.9	65-125	PASS
Standard4	ICAL	1	1.06	105.49	65-125	PASS
Standard5	ICAL	1	1.06	105.92	65-125	PASS
Standard6	ICAL	1	1.04	104.22	65-125	PASS
Standard7	ICAL	1	1.02	102.45	65-125	PASS
ICV	ICV	1	1.05	104.89	65-125	PASS
ICB	ICB	1	1.03	103.27	65-125	PASS
LLICV	CCV1	1	1	100.42	65-125	PASS
ICSA1	ICSA	1	0.91	90.51	65-125	PASS
ICSAB1	ICSAB	1	0.9	89.53	65-125	PASS
RINSE	RINSE	1	1.11	110.82	65-125	PASS
CCV1	CCV	1	1.05	104.52	65-125	PASS
CCB1	CCB	1	1.04	103.72	65-125	PASS
CCV2	CCV	1	1.06	105.54	65-125	PASS
CCB2	CCB	1	1.07	106.85	65-125	PASS
CCV3	CCV	1	1.06	105.78	65-125	PASS
CCB3	CCB	1	1.07	107.4	65-125	PASS
ICSA2	ICSA	1	0.93	92.76	65-125	PASS
ICSAB2	ICSAB	1	0.92	91.77	65-125	PASS
RINSE	RINSE	1	1.13	113.21	65-125	PASS
RINSE	RINSE	1	1.11	111.2	65-125	PASS
MB-107567	MBLK	1	1.04	103.76	65-125	PASS
LCS-107567	LCS	1	1.07	106.8	65-125	PASS
N063812-001C	SAMP	1	1.06	105.63	65-125	PASS
N063812-002C	SAMP	1	0.81	80.64	65-125	PASS
N063812-003C	SAMP	1	0.91	90.72	65-125	PASS
N063812-004C	SAMP	1	0.82	81.85	65-125	PASS
N063812-005C	SAMP	1	0.82	81.51	65-125	PASS
N063812-007C	SAMP	1	0.87	86.69	65-125	PASS
CCV4	CCV	1	1.08	107.53	65-125	PASS
CCB4	CCB	1	1.08	108.32	65-125	PASS
N063812-009C	SAMP	1	0.83	82.98	65-125	PASS
N063812-010C	SAMP	1	0.82	82.36	65-125	PASS
N063812-011C	SAMP	1	0.81	80.97	65-125	PASS
N063812-011C	SAMP	5	0.94	93.92	65-125	PASS
N063812-011C-PS	PS	1	0.79	78.56	65-125	PASS
N063812-011CMS	MS	1	0.83	83.21	65-125	PASS
N063812-011CMSD	MSD	1	0.82	82	65-125	PASS

INTERNAL STANDARD: 240315A

Instrument ID: ICP-02

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
N063812-012C	SAMP	1	0.84	84.18	65-125	PASS
N063812-013C	SAMP	1	0.84	83.63	65-125	PASS
N063812-014C	SAMP	1	0.91	91.01	65-125	PASS
CCV5	CCV	1	1.08	108	65-125	PASS
CCB5	CCB	1	1.08	108.29	65-125	PASS
N063812-015C	SAMP	1	1.02	101.63	65-125	PASS
N063812-016C	SAMP	1	0.76	76.49	65-125	PASS
N063812-016C	SAMP	5	0.92	91.73	65-125	PASS
N063812-016C-PS	PS	1	0.74	74.2	65-125	PASS
N063812-016CMS	MS	1	0.83	83.12	65-125	PASS
N063812-016CMSD	MSD	1	0.83	83.37	65-125	PASS
CCV6	CCV	1	1.07	107.16	65-125	PASS
CCB6	CCB	1	1.07	107.41	65-125	PASS
ICSA3	ICSA	1	0.93	93.04	65-125	PASS
ICSAB3	ICSAB	1	0.92	92.49	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063812
Test Method: EPA 6010B
Analysis Date: 3/15/2024

Matrix: Groundwater
Batch No.: 107567

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima 7300DV

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Fe. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063812-011C DT 5x	Iron	Fe	µg/L	0	NA	70.27643	100.00%	10

Reviewed by:

dMocha 4/12/2024

Note: NA - Not Applicable

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063812
Test Method: EPA 6010B
Analysis Date: 3/15/2024

Matrix: Groundwater
Batch No.: 107567

Instrument ID: ICP-02
Instrument Description: Perkin Elmer Optima 7300DV

Comments:

Analyzed By: Diane Jetajobe

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063812-016C DT 5x	Iron	Fe	µg/L	649.8998	PASS	639.8769	1.57%	10

Reviewed by:

dMocha 4/12/2024

Note: NA - Not Applicable

04/09/24 18:40

DT_EPA 6010B_N063812_107567

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID	**N063812-011C-PS**	SampType: **PS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID:	**ZZZZZZ**	Batch ID: **107567**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/15/2024**	SeqNo: **5748843**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	164.757	20	100.0	70.28	94.5	80	120				

Sample ID	**N063812-016C-PS**	SampType: **PS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **183634**
Client ID:	**ZZZZZZ**	Batch ID: **107567**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **3/15/2024**	SeqNo: **5748854**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	712.018	20	100.0	639.9	72.1	80	120				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

EPA 6020
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107566
ASSET #: N063812

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 3/15/2024

Method:

[ ] EPA 6010B / 200.7
[X] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.		X			X	
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)		X			X	
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

%Rec of Ba in N063812-011C-PS/MS/MSD failed, high bias. However, LCS passed criteria.
Mn is OLR in N063812-005C / 009C / 014C / 015C / 016C / N063812-016C-PS/MS/MSD. For dilution.
%RSD of As in N063812-002C and N063812-014C failed. For rerun.

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: –

2nd Level Reviewer KDG 3/29/2024 Date:

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107566
ASSET #: N063812

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 3/19/2024

Method:

[ ] EPA 6010B / 200.7
[ ] EPA 7470A / 7471A/245.1
[X] EPA 6020 / 200.8
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?			X			X
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.			X			X
24. LCS compounds within control limits.			X			X
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

As re run
Mn dilution
% Rec of Mn in N063812-016CMS/MSD failed. However, LCS passed criteria

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: –

2nd Level Reviewer KDG 3/29/2024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Groundwater

FORMULA:

Calculate the Barium concentration, in ug/L in the original sample as follows:

Barium , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063812-001C** , the concentration in ug/L is calculated as follows:

Barium , ug/L = 24.5251 * 1 *(25 / 25)

Barium , ug/L = 24.5251

Reporting results in two significant figures,

Barium , ug/L = 25

Reviewed by:

JRB 4/18/2024

% RSD SUMMARY

PERCENT RSD SUMMARY: 240315A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	5.81	15	PASS	0.11	23.956	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.51	10.383	15	PASS	0.51	6.279	15	PASS
Std3-5/50 ppb	ICAL	1	5.02	2.357	15	PASS	5.03	1.932	15	PASS
Std4-10/100 ppb	ICAL	1	9.89	0.522	15	PASS	10.13	2.123	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.56	1.187	15	PASS	19.63	1.475	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	40.02	2.886	15	PASS	39.77	1.44	15	PASS
Std7-100/1000 ppb	ICAL	1	99.61	0.976	15	PASS	99.54	1.82	15	PASS
Std8-200/2000 ppb	ICAL	1	200.24	0.899	15	PASS	200.3	0.993	15	PASS
ICV	ICV	1	10.13	1.829	15	PASS	102.02	0.787	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	0.01	76.032	15	<PQL
LLICV1	CCV1	1	0.98	7.658	20	PASS	0.57	5.536	20	PASS
LLICV1	CCV1	1	0.97	9.11	20	PASS	0.6	6.523	20	PASS
MLCCV	CCV	1	19.73	1.3	15	PASS	19.87	0.943	15	PASS
ICSA1	ICSA	1	0	294.624	15	<PQL	0.01	129.102	15	<PQL
ICSAB1	ICSAB	1	19.94	0.69	15	PASS	20.36	2.349	15	PASS
CCV1	CCV	1	19.34	0.8	15	PASS	19.57	0.906	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL	0.01	27.928	15	<PQL
CCV2	CCV	1	19.83	0.707	15	PASS	19.64	0.971	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	0.01	78.324	15	<PQL
ICSA2	ICSA	1	0	804.295	15	<PQL	0	205.018	15	<PQL
ICSAB2	ICSAB	1	20.12	0.717	15	PASS	20.25	2.581	15	PASS
CCV3	CCV	1	19.94	2.387	15	PASS	19.53	1.392	15	PASS
CCB3	CCB	1	0	89.946	15	<PQL	<0.000	N/A	15	<PQL
CCV4	CCV	1	20.18	2.441	15	PASS	19.41	0.647	15	PASS
CCB4	CCB	1	0	365.879	15	<PQL	0	166.632	15	<PQL
CCV5	CCV	1	19.84	1.388	15	PASS	19.84	0.573	15	PASS
CCB5	CCB	1	0	203.947	15	<PQL	0	102.271	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	0.01	62.067	15	<PQL
ICSAB3	ICSAB	1	20.53	0.759	15	PASS	20.42	1.689	15	PASS
CCV6	CCV	1	20.07	0.375	15	PASS	19.68	1.171	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL	0	730.447	15	<PQL
CCV7	CCV	1	20.03	0.809	15	PASS	19.66	1.077	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	0	101.114	15	<PQL
ICSA4	ICSA	1	0	429.339	15	<PQL	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.46	2.426	15	PASS	20.34	0.968	15	PASS
MB-107566	MBLK	1	0	212.429	15	<PQL	<0.000	N/A	15	<PQL
LCS-107566	LCS	1	10.09	0.976	15	PASS	99.21	0.878	15	PASS
N063812-001C	SAMP	1	24.53	0.471	15	PASS	1.01	6.353	15	PASS
N063812-002C	SAMP	1	28.1	0.48	15	PASS	<0.000	N/A	15	<PQL
N063812-003C	SAMP	1	28.82	2.048	15	PASS	0.21	20.729	15	<PQL

PERCENT RSD SUMMARY: 240315A

Instrument ID: ICPMS-03

Sample Name	Type	DF	137 Ba [3]				55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
N063812-004C	SAMP	1	26.32	0.362	15	PASS	1.03	12.672	15	PASS
N063812-005C	SAMP	1	64.81	0.309	15	PASS	179.73	1.132	15	PASS
N063812-007C	SAMP	1	43.51	0.701	15	PASS	29.03	1.157	15	PASS
N063812-009C	SAMP	1	133.78	1.344	15	PASS	540.28	0.596	15	PASS
CCV8	CCV	1	20.21	0.333	15	PASS	19.5	0.94	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
N063812-010C	SAMP	1	29.52	0.571	15	PASS	3.51	3.377	15	PASS
N063812-011C	SAMP	1	120.72	2.091	15	PASS	19.55	0.766	15	PASS
N063812-011C	SAMP	5	24.31	0.273	15	PASS	3.93	0.486	15	PASS
N063812-011C-PS	PS	1	134.36	0.092	15	PASS	114.28	0.485	15	PASS
N063812-011CMS	MS	1	137.07	1.295	15	PASS	113.2	1.73	15	PASS
N063812-011CMSD	MSD	1	138.66	0.391	15	PASS	112.23	0.78	15	PASS
N063812-012C	SAMP	1	59.6	0.869	15	PASS	60.5	0.6	15	PASS
N063812-013C	SAMP	1	92.4	1.217	15	PASS	27.98	1.164	15	PASS
N063812-014C	SAMP	1	58.05	1.769	15	PASS	603.25	1.807	15	PASS
CCV9	CCV	1	19.9	1.575	15	PASS	19.82	2.112	15	PASS
CCB9	CCB	1	0	721.427	15	<PQL	0	512.337	15	<PQL
N063812-015C	SAMP	1	77.49	0.576	15	PASS	313.32	1.44	15	PASS
N063812-016C	SAMP	1	124.53	0.607	15	PASS	1584.54	0.93	15	PASS
N063812-016C	SAMP	5	25.48	1.773	15	PASS	335.46	0.199	15	PASS
N063812-016C-PS	PS	1	135.91	1.892	15	PASS	1708.49	1.748	15	PASS
N063812-016CMS	MS	1	133.82	1.896	15	PASS	1649.88	2.386	15	PASS
N063812-016CMSD	MSD	1	134.3	1.449	15	PASS	1667.81	1.526	15	PASS
CCV10	CCV	1	20.16	1.366	15	PASS	19.64	1.298	15	PASS
CCB10	CCB	1	<0.000	N/A	15	<PQL	0.01	93.936	15	<PQL
ICSA5	ICSA	1	<0.000	N/A	15	<PQL	<0.000	N/A	15	<PQL
ICSAB5	ICSAB	1	20.8	0.73	15	PASS	20.45	1.809	15	PASS

PERCENT RSD SUMMARY: 240315A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.1	38.603	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.57	8.018	15	PASS
Std3-5/50 ppb	ICAL	1	4.9	3.284	15	PASS
Std4-10/100 ppb	ICAL	1	10.14	2.524	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	20.04	2.094	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	40.54	2.639	15	PASS
Std7-100/1000 ppb	ICAL	1	99.73	0.443	15	PASS
Std8-200/2000 ppb	ICAL	1	200.02	0.223	15	PASS
ICV	ICV	1	10.45	3.552	15	PASS
ICB	ICB	1	0	3043.851	15	<PQL
LLICV1	CCV1	1	0.15	27.867	20	<PQL
LLICV1	CCV1	1	0.11	22.283	20	<PQL
MLCCV	CCV	1	20.31	0.602	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.54	1.461	15	PASS
CCV1	CCV	1	20.17	2.544	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.77	1.485	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	0.01	220.784	15	<PQL
ICSAB2	ICSAB	1	20.59	2.779	15	PASS
CCV3	CCV	1	19.17	1.224	15	PASS
CCB3	CCB	1	0.01	203.625	15	<PQL
CCV4	CCV	1	18.62	2.333	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL
CCV5	CCV	1	19.49	1.242	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	0	1351.891	15	<PQL
ICSAB3	ICSAB	1	20.21	2.12	15	PASS
CCV6	CCV	1	19.88	0.623	15	PASS
CCB6	CCB	1	0.01	28.105	15	<PQL
CCV7	CCV	1	19.52	2.087	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	0.01	120.201	15	<PQL
ICSAB4	ICSAB	1	20.55	1.865	15	PASS
MB-107566	MBLK	1	0.01	320.366	15	<PQL
LCS-107566	LCS	1	10.36	1.928	15	PASS
N063812-001C	SAMP	1	1.53	12.555	15	PASS
N063812-002C	SAMP	1	0.82	16.789	15	NR!
N063812-003C	SAMP	1	0.97	6.886	15	PASS

PERCENT RSD SUMMARY: 240315A

Instrument ID: ICPMS-03

Sample Name	Type	DF	75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment
N063812-004C	SAMP	1	<0.000	N/A	15	<PQL
N063812-005C	SAMP	1	3.74	5.35	15	PASS
N063812-007C	SAMP	1	<0.000	N/A	15	<PQL
N063812-009C	SAMP	1	<0.000	N/A	15	<PQL
CCV8	CCV	1	19.9	1.618	15	PASS
CCB8	CCB	1	0	1113.009	15	<PQL
N063812-010C	SAMP	1	0.83	10.309	15	PASS
N063812-011C	SAMP	1	<0.000	N/A	15	<PQL
N063812-011C	SAMP	5	<0.000	N/A	15	<PQL
N063812-011C-PS	PS	1	8.55	2.48	15	PASS
N063812-011CMS	MS	1	8.31	6.696	15	PASS
N063812-011CMSD	MSD	1	8.41	4.321	15	PASS
N063812-012C	SAMP	1	<0.000	N/A	15	<PQL
N063812-013C	SAMP	1	<0.000	N/A	15	<PQL
N063812-014C	SAMP	1	0.6	45.526	15	NR!
CCV9	CCV	1	19.44	2.325	15	PASS
CCB9	CCB	1	<0.000	N/A	15	<PQL
N063812-015C	SAMP	1	2.22	3.068	15	PASS
N063812-016C	SAMP	1	2.01	6.906	15	PASS
N063812-016C	SAMP	5	0.46	23.505	15	NR!
N063812-016C-PS	PS	1	11.79	1.009	15	PASS
N063812-016CMS	MS	1	11.88	1.761	15	PASS
N063812-016CMSD	MSD	1	11.8	3.962	15	PASS
CCV10	CCV	1	19.43	1.845	15	PASS
CCB10	CCB	1	0	225.171	15	<PQL
ICSA5	ICSA	1	0	635.96	15	<PQL
ICSAB5	ICSAB	1	19.85	3.534	15	PASS

PERCENT RSD SUMMARY: 240319A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]				75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.1	18.171	15	<PQL	0.1	18.657	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.51	15.274	15	FAIL	0.45	16.615	15	FAIL
Std3-5/50 ppb	ICAL	1	4.95	3.673	15	PASS	4.89	1.631	15	PASS
Std4-10/100 ppb	ICAL	1	10.05	0.858	15	PASS	10.09	2.233	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.97	0.685	15	PASS	19.29	3.433	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.55	1.353	15	PASS	40.18	4.284	15	PASS
Std7-100/1000 ppb	ICAL	1	98.88	0.108	15	PASS	100.21	1.402	15	PASS
Std8-200/2000 ppb	ICAL	1	200.65	0.716	15	PASS	199.93	1.28	15	PASS
ICV	ICV	1	101.64	1.301	15	PASS	10.32	2.464	15	PASS
ICB	ICB	1	<0.000	N/A	15	<PQL	0.01	264.211	15	<PQL
LLICV1	LLICV	1	0.55	9.082	20	PASS	0.1	23.579	20	<PQL
MLCCV	CCV	1	19.75	2.439	15	PASS	19.43	1.044	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL	0	463.021	15	<PQL
ICSAB1	ICSAB	1	20.15	1.352	15	PASS	19.92	2.443	15	PASS
N063812-002C	SAMP	1	<0.000	N/A	15	<PQL	0.87	15.917	15	NR!
N063812-005C	SAMP	10	22.16	1.556	15	PASS	0.54	19.559	15	NR!
N063812-009C	SAMP	10	73.08	0.414	15	PASS	<0.000	N/A	15	<PQL
N063812-014C	SAMP	1	602.8	1.355	15	PASS	0.64	6.366	15	PASS
N063812-014C	SAMP	10	75.47	1.331	15	PASS	0.14	45.723	15	NR!
N063812-015C	SAMP	10	35.84	1.908	15	PASS	0.21	11.923	15	PASS
N063812-016C	SAMP	100	177.88	0.553	15	PASS	0.15	63.149	15	NR!
N063812-016C	SAMP	500	184.7	0.971	15	PASS	1.29	3.81	15	PASS
CCV1	CCV	1	19.78	1.267	15	PASS	19.7	2.811	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL	0.01	60.655	15	<PQL
N063812-016C	SAMP	100	21.51	1.664	15	PASS	0.5	20.81	15	NR!
N063812-016C	SAMP	500	66.44	0.371	15	PASS	<0.000	N/A	15	<PQL
N063812-016C-PS	PS	100	69.79	1.018	15	PASS	0.09	45.044	15	<PQL
N063812-016CMS	MS	100	34.7	1.775	15	PASS	0.28	24.71	15	NR!
N063812-016C	SAMP	100	17.88	1.214	15	PASS	0.01	469.33	15	<PQL
N063812-016C	SAMP	500	3.41	1.157	15	PASS	0.01	75.368	15	<PQL
N063812-016C-PS	PS	100	117.79	0.623	15	PASS	10.12	3.403	15	PASS
N063812-016CMS	MS	100	18.39	1.564	15	PASS	0.13	20.632	15	NR!
N063812-016CMSD	MSD	100	18.56	0.765	15	PASS	0.15	20.32	15	NR!
N063812-002C	SAMP	1	<0.000	N/A	15	<PQL	0.82	7.542	15	PASS
CCV2	CCV	1	19.65	1.148	15	PASS	19.46	1.36	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL	0.01	150.982	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL	0	506.849	15	<PQL
ICSAB2	ICSAB	1	20.04	2.382	15	PASS	20.38	1.435	15	PASS
CCV3	CCV	1	19.74	1.579	15	PASS	19.49	1.714	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL	0.02	117.302	15	<PQL

PERCENT RSD SUMMARY: 240319A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]				75 As [2]			
			Conc. [ppb]	RSD	Criteria	Comment	Conc. [ppb]	RSD	Criteria	Comment
CCV4	CCV	1	19.95	1.287	15	PASS	19.41	0.668	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL	0.01	261.229	15	<PQL
CCV5	CCV	1	19.53	1.199	15	PASS	19	1.932	15	PASS
CCB5	CCB	1	<0.000	N/A	15	<PQL	0	539.107	15	<PQL
CCV6	CCV	1	19.64	1.04	15	PASS	19.11	2.92	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL	0.01	68.714	15	<PQL
CCV7	CCV	1	19.8	1.464	15	PASS	19.81	1.456	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL	0	1837.053	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL	0	14.13	15	PASS
ICSAB3	ICSAB	1	20.18	1.217	15	PASS	19.49	4.083	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240315A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0315001.d	RINSE	ICAL	1	03/15/24 4:01 PM
A0315002.d	RINSE	ICAL	1	03/15/24 4:06 PM
A0315003.d	Cal Blk	IBLK	1	03/15/24 4:10 PM
A0315004.d	Std1-0.1/1 ppb	ICAL	1	03/15/24 4:15 PM
A0315005.d	Std2-0.5/5 ppb	ICAL	1	03/15/24 4:20 PM
A0315006.d	Std3-5/50 ppb	ICAL	1	03/15/24 4:25 PM
A0315007.d	Std4-10/100 ppb	ICAL	1	03/15/24 4:29 PM
A0315008.d	Std5-4.0/20/200 ppb	ICAL	1	03/15/24 4:34 PM
A0315009.d	Std6-8.0/40/400 ppb	ICAL	1	03/15/24 4:39 PM
A0315010.d	Std7-100/1000 ppb	ICAL	1	03/15/24 4:44 PM
A0315011.d	Std8-200/2000 ppb	ICAL	1	03/15/24 4:48 PM
A0315012.d	ICV	ICV	1	03/15/24 4:54 PM
A0315013.d	ICB	ICB	1	03/15/24 4:59 PM
A0315014.d	LLICV1	CCV1	1	03/15/24 5:04 PM
A0315015.d	LLICV1	CCV1	1	03/15/24 5:11 PM
A0315016.d	MLCCV	CCV	1	03/15/24 5:16 PM
A0315017.d	ICSA1	ICSA	1	03/15/24 5:20 PM
A0315018.d	ICSAB1	ICSAB	1	03/15/24 5:25 PM
A0315019.d	MB-107536	MBLK	1	03/15/24 5:30 PM
A0315020.d	LCS-107536	LCS	1	03/15/24 5:35 PM
A0315021.d	N063746-001A	SAMP	1	03/15/24 5:39 PM
A0315022.d	N063747-001A	SAMP	1	03/15/24 5:44 PM
A0315023.d	N063747-001A	SAMP	5	03/15/24 5:48 PM
A0315024.d	N063747-001A-PS	PS	1	03/15/24 5:53 PM
A0315025.d	N063747-001A-MS	MS	1	03/15/24 5:58 PM
A0315026.d	N063747-001A-MSD	MSD	1	03/15/24 6:02 PM
A0315027.d	N063748-001A	SAMP	1	03/15/24 6:07 PM
A0315028.d	CCV1	CCV	1	03/15/24 6:12 PM
A0315029.d	CCB1	CCB	1	03/15/24 6:16 PM
A0315030.d	MB-107537	MBLK	1	03/15/24 6:21 PM
A0315031.d	LCS-107537	LCS	1	03/15/24 6:25 PM
A0315032.d	N063711-001C	SAMP	1	03/15/24 6:30 PM
A0315033.d	N063711-001C	SAMP	5	03/15/24 6:35 PM
A0315034.d	N063711-001C-PS	PS	1	03/15/24 6:39 PM
A0315035.d	N063711-001C-MS	MS	1	03/15/24 6:44 PM
A0315036.d	N063711-001C-MSD	MSD	1	03/15/24 6:49 PM
A0315037.d	RINSE	ICAL	1	03/15/24 6:53 PM
A0315038.d	CCV2	CCV	1	03/15/24 6:58 PM
A0315039.d	CCB2	CCB	1	03/15/24 7:03 PM
A0315040.d	ICSA2	ICSA	1	03/15/24 7:07 PM
A0315041.d	ICSAB2	ICSAB	1	03/15/24 7:12 PM
A0315042.d	MB-107535	MBLK	1	03/15/24 7:17 PM

INJECTION LOG: 240315A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0315043.d	LCS-107535	LCS	1	03/15/24 7:21 PM
A0315044.d	N063771-001C	SAMP	1	03/15/24 7:26 PM
A0315045.d	N063771-002C	SAMP	1	03/15/24 7:31 PM
A0315046.d	N063771-002C	SAMP	5	03/15/24 7:35 PM
A0315047.d	N063771-002C-PS	PS	1	03/15/24 7:40 PM
A0315048.d	N063771-002C-MS	MS	1	03/15/24 7:45 PM
A0315049.d	N063771-002C-MSD	MSD	1	03/15/24 7:49 PM
A0315050.d	N063771-003C	SAMP	1	03/15/24 7:54 PM
A0315051.d	RINSE	ICAL	1	03/15/24 7:58 PM
A0315052.d	CCV3	CCV	1	03/15/24 8:03 PM
A0315053.d	CCB3	CCB	1	03/15/24 8:08 PM
A0315054.d	N063771-004C	SAMP	1	03/15/24 8:12 PM
A0315055.d	N063771-005C	SAMP	1	03/15/24 8:17 PM
A0315056.d	N063771-006C	SAMP	1	03/15/24 8:22 PM
A0315057.d	N063771-007C	SAMP	1	03/15/24 8:26 PM
A0315058.d	N063771-009C	SAMP	1	03/15/24 8:31 PM
A0315059.d	N063771-010C	SAMP	1	03/15/24 8:36 PM
A0315060.d	N063771-011C	SAMP	1	03/15/24 8:40 PM
A0315061.d	N063771-012C	SAMP	1	03/15/24 8:45 PM
A0315062.d	N063771-013C	SAMP	1	03/15/24 8:50 PM
A0315063.d	RINSE	ICAL	1	03/15/24 8:54 PM
A0315064.d	CCV4	CCV	1	03/15/24 8:59 PM
A0315065.d	CCB4	CCB	1	03/15/24 9:03 PM
A0315066.d	N063771-014C	SAMP	1	03/15/24 9:08 PM
A0315067.d	N063771-015C	SAMP	1	03/15/24 9:13 PM
A0315068.d	N063771-016C	SAMP	1	03/15/24 9:17 PM
A0315069.d	N063771-017C	SAMP	1	03/15/24 9:22 PM
A0315070.d	N063771-018C	SAMP	1	03/15/24 9:27 PM
A0315071.d	LCS-107535	LCS	1	03/15/24 9:31 PM
A0315072.d	N063771-005C	SAMP	10	03/15/24 9:36 PM
A0315073.d	N063771-009C	SAMP	10	03/15/24 9:41 PM
A0315074.d	N063771-017C	SAMP	10	03/15/24 9:45 PM
A0315075.d	RINSE	ICAL	1	03/15/24 9:50 PM
A0315076.d	CCV5	CCV	1	03/15/24 9:55 PM
A0315077.d	CCB5	CCB	1	03/15/24 9:59 PM
A0315078.d	ICSA3	ICSA	1	03/15/24 10:04 PM
A0315079.d	ICSAB3	ICSAB	1	03/15/24 10:08 PM
A0315080.d	MB-107565	MBLK	1	03/15/24 10:13 PM
A0315081.d	LCS-107565	LCS	1	03/15/24 10:18 PM
A0315082.d	N063734-001C	SAMP	1	03/15/24 10:23 PM
A0315083.d	N063734-001C	SAMP	5	03/15/24 10:27 PM
A0315084.d	N063734-001C	SAMP	10	03/15/24 10:32 PM

INJECTION LOG: 240315A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0315085.d	N063734-001C	SAMP	50	03/15/24 10:37 PM
A0315086.d	N063734-001C-PS	PS	1	03/15/24 10:41 PM
A0315087.d	N063734-001C-PS	PS	10	03/15/24 10:46 PM
A0315088.d	N063734-001C-MS	MS	1	03/15/24 10:51 PM
A0315089.d	N063734-001C-MS	MS	10	03/15/24 10:55 PM
A0315090.d	CCV6	CCV	1	03/15/24 11:00 PM
A0315091.d	CCB6	CCB	1	03/15/24 11:04 PM
A0315092.d	N063734-001C-MSD	MSD	1	03/15/24 11:09 PM
A0315093.d	N063734-001C-MSD	MSD	10	03/15/24 11:14 PM
A0315094.d	N063734-002C	SAMP	1	03/15/24 11:18 PM
A0315095.d	N063734-002C	SAMP	10	03/15/24 11:23 PM
A0315096.d	CCV7	CCV	1	03/15/24 11:28 PM
A0315097.d	CCB7	CCB	1	03/15/24 11:32 PM
A0315098.d	ICSA4	ICSA	1	03/15/24 11:37 PM
A0315099.d	ICSAB4	ICSAB	1	03/15/24 11:42 PM
A0315100.d	MB-107566	MBLK	1	03/15/24 11:46 PM
A0315101.d	LCS-107566	LCS	1	03/15/24 11:51 PM
A0315102.d	N063812-001C	SAMP	1	03/15/24 11:56 PM
A0315103.d	N063812-002C	SAMP	1	03/16/24 12:00 AM
A0315104.d	N063812-003C	SAMP	1	03/16/24 12:05 AM
A0315105.d	N063812-004C	SAMP	1	03/16/24 12:10 AM
A0315106.d	N063812-005C	SAMP	1	03/16/24 12:14 AM
A0315107.d	N063812-007C	SAMP	1	03/16/24 12:19 AM
A0315108.d	N063812-009C	SAMP	1	03/16/24 12:24 AM
A0315109.d	RINSE	ICAL	1	03/16/24 12:28 AM
A0315110.d	CCV8	CCV	1	03/16/24 12:33 AM
A0315111.d	CCB8	CCB	1	03/16/24 12:38 AM
A0315112.d	N063812-010C	SAMP	1	03/16/24 12:42 AM
A0315113.d	N063812-011C	SAMP	1	03/16/24 12:47 AM
A0315114.d	N063812-011C	SAMP	5	03/16/24 12:52 AM
A0315115.d	N063812-011C-PS	PS	1	03/16/24 12:56 AM
A0315116.d	N063812-011CMS	MS	1	03/16/24 1:01 AM
A0315117.d	N063812-011CMSD	MSD	1	03/16/24 1:06 AM
A0315118.d	N063812-012C	SAMP	1	03/16/24 1:10 AM
A0315119.d	N063812-013C	SAMP	1	03/16/24 1:15 AM
A0315120.d	N063812-014C	SAMP	1	03/16/24 1:20 AM
A0315121.d	RINSE	ICAL	1	03/16/24 1:24 AM
A0315122.d	CCV9	CCV	1	03/16/24 1:29 AM
A0315123.d	CCB9	CCB	1	03/16/24 1:34 AM
A0315124.d	N063812-015C	SAMP	1	03/16/24 1:38 AM
A0315125.d	N063812-016C	SAMP	1	03/16/24 1:43 AM
A0315126.d	N063812-016C	SAMP	5	03/16/24 1:48 AM

INJECTION LOG: 240315A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0315127.d	N063812-016C-PS	PS	1	03/16/24 1:52 AM
A0315128.d	N063812-016CMS	MS	1	03/16/24 1:57 AM
A0315129.d	N063812-016CMSD	MSD	1	03/16/24 2:01 AM
A0315130.d	RINSE	ICAL	1	03/16/24 2:06 AM
A0315131.d	CCV10	CCV	1	03/16/24 2:11 AM
A0315132.d	CCB10	CCB	1	03/16/24 2:16 AM
A0315133.d	ICSA5	ICSA	1	03/16/24 2:20 AM
A0315134.d	ICSAB5	ICSAB	1	03/16/24 2:25 AM
A0315135.d	RINSE	ICAL	1	03/16/24 2:29 AM
A0315136.d	RINSE	ICAL	1	03/16/24 2:34 AM
A0315137.d	RINSE	ICAL	1	03/16/24 2:39 AM
A0315138.d	RINSE	ICAL	1	03/16/24 2:43 AM

INJECTION LOG: 240319A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0319001.d	RINSE	ICAL	1	03/19/24 11:10 AM
A0319002.d	RINSE	ICAL	1	03/19/24 11:15 AM
A0319003.d	Cal Blk	IBLK	1	03/19/24 11:19 AM
A0319004.d	Std1-0.1/1 ppb	ICAL	1	03/19/24 11:24 AM
A0319005.d	Std2-0.5/5 ppb	ICAL	1	03/19/24 11:29 AM
A0319006.d	Std3-5/50 ppb	ICAL	1	03/19/24 11:34 AM
A0319007.d	Std4-10/100 ppb	ICAL	1	03/19/24 11:38 AM
A0319008.d	Std5-4.0/20/200 ppb	ICAL	1	03/19/24 11:43 AM
A0319009.d	Std6-8.0/40/400 ppb	ICAL	1	03/19/24 11:48 AM
A0319010.d	Std7-100/1000 ppb	ICAL	1	03/19/24 11:53 AM
A0319011.d	Std8-200/2000 ppb	ICAL	1	03/19/24 11:57 AM
A0319012.d	ICV	ICV	1	03/19/24 12:15 PM
A0319013.d	ICB	ICB	1	03/19/24 12:20 PM
A0319014.d	LLICV1	LLICV	1	03/19/24 12:25 PM
A0319015.d	MLCCV	CCV	1	03/19/24 12:29 PM
A0319016.d	ICSA1	ICSA	1	03/19/24 12:34 PM
A0319017.d	ICSAB1	ICSAB	1	03/19/24 12:38 PM
A0319018.d	N063771-005C	SAMP	10	03/19/24 12:52 PM
A0319019.d	N063812-002C	SAMP	1	03/19/24 12:57 PM
A0319020.d	N063812-005C	SAMP	10	03/19/24 1:01 PM
A0319021.d	N063812-009C	SAMP	10	03/19/24 1:06 PM
A0319022.d	N063812-014C	SAMP	1	03/19/24 1:11 PM
A0319023.d	N063812-014C	SAMP	10	03/19/24 1:15 PM
A0319024.d	N063812-015C	SAMP	10	03/19/24 1:20 PM
A0319025.d	N063812-016C	SAMP	100	03/19/24 1:25 PM
A0319026.d	N063812-016C	SAMP	500	03/19/24 1:29 PM
A0319027.d	CCV1	CCV	1	03/19/24 1:34 PM
A0319028.d	CCB1	CCB	1	03/19/24 1:39 PM
A0319029.d	N063812-016C	SAMP	100	03/19/24 1:43 PM
A0319030.d	N063812-016C	SAMP	500	03/19/24 1:48 PM
A0319031.d	N063812-016C-PS	PS	100	03/19/24 1:52 PM
A0319032.d	N063812-016CMS	MS	100	03/19/24 1:57 PM
A0319033.d	N063812-016C	SAMP	100	03/19/24 2:02 PM
A0319034.d	N063812-016C	SAMP	500	03/19/24 2:07 PM
A0319035.d	N063812-016C-PS	PS	100	03/19/24 2:11 PM
A0319036.d	N063812-016CMS	MS	100	03/19/24 2:16 PM
A0319037.d	N063812-016CMSD	MSD	100	03/19/24 2:20 PM
A0319038.d	N063812-002C	SAMP	1	03/19/24 2:25 PM
A0319039.d	CCV2	CCV	1	03/19/24 2:30 PM
A0319040.d	CCB2	CCB	1	03/19/24 2:35 PM
A0319041.d	ICSA2	ICSA	1	03/19/24 2:39 PM
A0319042.d	ICSAB2	ICSAB	1	03/19/24 2:44 PM

INJECTION LOG: 240319A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0319043.d	MB-107624	MBLK	1	03/19/24 2:49 PM
A0319044.d	LCS-107624	LCS	1	03/19/24 2:53 PM
A0319045.d	N063863-001A	SAMP	1	03/19/24 2:58 PM
A0319046.d	N063864-001A	SAMP	1	03/19/24 3:03 PM
A0319047.d	LCS-107624	LCS	1	03/19/24 3:17 PM
A0319048.d	N063863-001A	SAMP	1	03/19/24 3:21 PM
A0319049.d	N063864-001A	SAMP	1	03/19/24 3:26 PM
A0319050.d	N063864-001A	SAMP	5	03/19/24 3:30 PM
A0319051.d	N063864-001A-PS	PS	1	03/19/24 3:35 PM
A0319052.d	N063864-001A-MS	MS	1	03/19/24 3:40 PM
A0319053.d	CCV3	CCV	1	03/19/24 3:44 PM
A0319054.d	CCB3	CCB	1	03/19/24 3:49 PM
A0319055.d	N063864-001A-MSD	MSD	1	03/19/24 3:54 PM
A0319056.d	N063865-001A	SAMP	1	03/19/24 3:58 PM
A0319057.d	N063865-001A-MS	MS	1	03/19/24 4:03 PM
A0319058.d	N063865-002A	SAMP	1	03/19/24 4:08 PM
A0319059.d	N063865-003A	SAMP	1	03/19/24 4:12 PM
A0319060.d	N063865-004A	SAMP	1	03/19/24 4:17 PM
A0319061.d	N063865-005A	SAMP	1	03/19/24 4:21 PM
A0319062.d	N063865-006A	SAMP	1	03/19/24 4:26 PM
A0319063.d	N063865-007A	SAMP	1	03/19/24 4:31 PM
A0319064.d	N063865-008A	SAMP	1	03/19/24 4:35 PM
A0319065.d	CCV4	CCV	1	03/19/24 4:40 PM
A0319066.d	CCB4	CCB	1	03/19/24 4:45 PM
A0319067.d	N063865-009A	SAMP	1	03/19/24 4:49 PM
A0319068.d	N063865-010A	SAMP	1	03/19/24 4:54 PM
A0319069.d	N063865-011A	SAMP	1	03/19/24 5:02 PM
A0319070.d	N063865-012A	SAMP	1	03/19/24 5:06 PM
A0319071.d	N063865-013A	SAMP	1	03/19/24 5:11 PM
A0319072.d	N063865-014A	SAMP	1	03/19/24 5:15 PM
A0319073.d	N063863-001A	SAMP	1	03/19/24 5:20 PM
A0319074.d	N063864-001A	SAMP	1	03/19/24 5:25 PM
A0319075.d	N063864-001A	SAMP	5	03/19/24 5:29 PM
A0319076.d	CCV5	CCV	1	03/19/24 5:34 PM
A0319077.d	CCB5	CCB	1	03/19/24 5:39 PM
A0319078.d	N063864-001A-PS	PS	1	03/19/24 5:43 PM
A0319079.d	N063864-001A-MS	MS	1	03/19/24 5:48 PM
A0319080.d	N063864-001A-MSD	MSD	1	03/19/24 5:53 PM
A0319081.d	N063865-001A	SAMP	1	03/19/24 5:57 PM
A0319082.d	N063865-001A-MS	MS	1	03/19/24 6:02 PM
A0319083.d	N063865-002A	SAMP	1	03/19/24 6:06 PM
A0319084.d	N063865-003A	SAMP	1	03/19/24 6:11 PM

INJECTION LOG: 240319A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0319085.d	N063865-004A	SAMP	1	03/19/24 6:16 PM
A0319086.d	N063865-005A	SAMP	1	03/19/24 6:20 PM
A0319087.d	N063865-006A	SAMP	1	03/19/24 6:25 PM
A0319088.d	CCV6	CCV	1	03/19/24 6:30 PM
A0319089.d	CCB6	CCB	1	03/19/24 6:34 PM
A0319090.d	N063865-007A	SAMP	1	03/19/24 6:39 PM
A0319091.d	N063865-008A	SAMP	1	03/19/24 6:44 PM
A0319092.d	N063865-009A	SAMP	1	03/19/24 6:48 PM
A0319093.d	N063863-001A	SAMP	1	03/19/24 6:53 PM
A0319094.d	N063863-001A	SAMP	1	03/19/24 6:58 PM
A0319095.d	N063863-001A	SAMP	1	03/19/24 7:02 PM
A0319096.d	CCV7	CCV	1	03/19/24 7:07 PM
A0319097.d	CCB7	CCB	1	03/19/24 7:11 PM
A0319098.d	ICSA3	ICSA	1	03/19/24 7:16 PM
A0319099.d	ICSAB3	ICSAB	1	03/19/24 7:21 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/15/2024 11:24:19 AM**
Prep End Date: **3/15/2024 4:00:00 PM**

Reviewed/ Date: JRB 4/18/2024
Initials/ Date: for

Prep Batch **107566** Prep Code:**3010_W_MSDISS_TPK** Technician: **Diane Jetajobe**

Prep Factor Units
mL / mL

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107566	Aqueous		25	☐	25	1.000		
MB-107566	Aqueous		25	☐	25	1.000		
N063812-001C	Groundwater	<2	25	☐	25	1.000		
N063812-002C	Groundwater	<2	25	☐	25	1.000		
N063812-003C	Groundwater	<2	25	☐	25	1.000		
N063812-004C	Groundwater	<2	25	☐	25	1.000		
N063812-005C	Groundwater	<2	25	☐	25	1.000		
N063812-007C	Groundwater	<2	25	☐	25	1.000		
N063812-009C	Groundwater	<2	25	☐	25	1.000		
N063812-010C	Groundwater	<2	25	☐	25	1.000		
N063812-011C	Groundwater	<2	25	☐	25	1.000		
N063812-011CMS	Groundwater	<2	25	☐	25	1.000		
N063812-011CMSD	Groundwater	<2	25	☐	25	1.000		
N063812-012C	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/15/2024 11:24:19 AM**
Prep End Date: **3/15/2024 4:00:00 PM**

Reviewed/ Date: JRB 4/18/2024

Initials/ Date: for

Prep Batch **107566** Prep Code:**3010_W_MSDISS_TPK** Technician: **Diane Jetajobe**

Prep Factor Units
mL / mL

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
N063812-013C	Groundwater	<2	25	☐	25	1.000		
N063812-014C	Groundwater	<2	25	☐	25	1.000		
N063812-015C	Groundwater	<2	25	☐	25	1.000		
N063812-016C	Groundwater	<2	25	☐	25	1.000		
N063812-016CMS	Groundwater	<2	25	☐	25	1.000		
N063812-016CMSD	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16129	NITRIC ACID
16132	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240313A.b
Acq. Date-Time	2024-03-15 14:17:48
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

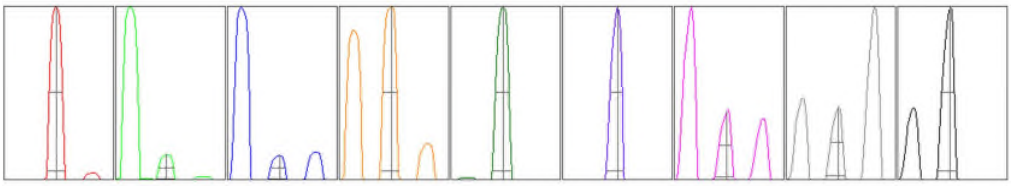
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	5363	53627.17	500.00		2.631	5.000
24	10.00	16622	166223.08	500.00		3.488	5.000
25	10.00	2221	22214.65	500.00		4.168	5.000
26	10.00	2634	26343.32	500.00		3.715	5.000
59	10.00	29754	297539.64	500.00		2.925	5.000
115	10.00	41927	419271.16	500.00		2.281	5.000
206	10.00	8374	83744.30	500.00		2.588	5.000
207	10.00	6955	69547.10	500.00		2.532	5.000
208	10.00	17139	171391.73	500.00		2.458	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.516 %
Doubly Charged	70 / 140 0.693 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	5237.12	8.95	8.90 - 9.10	
24	16478.98	23.90	23.90 - 24.10	
25	2217.52	24.95	24.90 - 25.10	
26	2560.01	25.95	25.90 - 26.10	
59	28723.01	58.95	58.90 - 59.10	
115	40469.42	115.05	114.90 - 115.10	
206	7838.92	205.95	205.90 - 206.10	
207	7095.68	206.95	206.90 - 207.10	
208	17104.73	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.488	0.900	
24	0.41	0.497	0.900	
25	0.40	0.495	0.900	
26	0.40	0.494	0.900	
59	0.38	0.531	0.900	
115	0.34	0.481	0.900	
206	0.35	0.511	0.900	
207	0.34	0.534	0.900	
208	0.35	0.533	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.2 mm	Torch V	1.3 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2525 V	Pulse HV	1600 V

[H2]

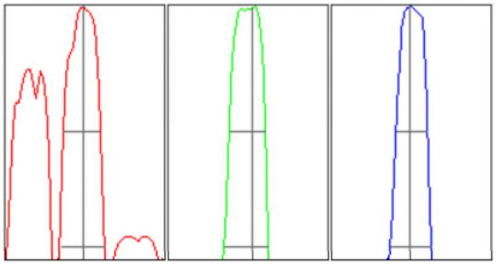
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		231	2314.56			6.735	
59		2938	29382.92			2.660	
115		41852	418518.13			2.431	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.478 %
Doubly Charged	70 / 140 0.266 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	256.28	26.00	25.90 - 26.10	
59	3067.67	59.10	58.90 - 59.10	
115	43467.83	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.70	0.836	0.900	
59	0.69	0.825	0.900	
115	0.60	0.774	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	0.9999	QP Bias	-15.0 V
Mass Offset	124	Axis Offset	0.05		

Hardware Settings

Torch

Torch H	1.2 mm	Torch V	1.3 mm		

EM

Discriminator	4.5 mV	Analog HV	2525 V	Pulse HV	1600 V

[He]

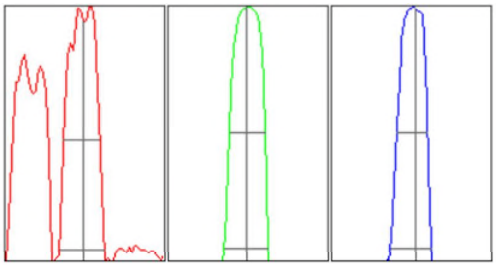
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		93	931.63			8.299	
59		8883	88828.45			2.271	
115		8420	84196.19			2.434	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.196 %
Doubly Charged	70 / 140 1.045 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	94.26	26.00	25.90 - 26.10	
59	8989.32	59.00	58.90 - 59.10	
115	8536.07	115.10	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.69	0.836	0.900	
59	0.68	0.823	0.900	
115	0.59	0.771	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	0.9999	QP Bias	-13.0 V
Mass Offset	124	Axis Offset	0.05		

Hardware Settings

Torch

Torch H	1.2 mm	Torch V	1.3 mm

EM

Discriminator	4.5 mV	Analog HV	2525 V	Pulse HV	1600 V

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240315A1.b
Acq. Date-Time	2024-03-19 11:06:23
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

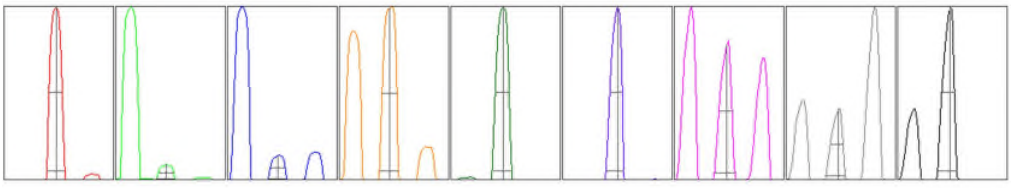
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	4900	48995.32	500.00		3.728	5.000
24	10.00	14644	146437.58	500.00		3.114	5.000
25	10.00	1944	19444.67	500.00		3.922	5.000
26	10.00	2267	22670.86	500.00		4.011	5.000
59	10.00	27647	276472.37	500.00		2.348	5.000
115	10.00	6731	67314.16	500.00		3.094	5.000
206	10.00	9748	97479.34	500.00		2.390	5.000
207	10.00	8109	81085.84	500.00		2.480	5.000
208	10.00	20112	201123.70	500.00		1.959	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.580 %
Doubly Charged	70 / 140 0.609 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	4879.50	8.95	8.90 - 9.10	
24	14817.78	23.90	23.90 - 24.10	
25	1991.23	24.90	24.90 - 25.10	
26	2298.37	25.90	25.90 - 26.10	
59	27679.58	58.95	58.90 - 59.10	
115	6620.50	115.05	114.90 - 115.10	
206	9098.87	205.95	205.90 - 206.10	
207	8142.31	206.95	206.90 - 207.10	
208	20282.76	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.37	0.487	0.900	
24	0.42	0.516	0.900	
25	0.41	0.496	0.900	
26	0.41	0.529	0.900	
59	0.39	0.532	0.900	
115	0.35	0.483	0.900	
206	0.36	0.570	0.900	
207	0.35	0.538	0.900	
208	0.35	0.534	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.4 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2526 V	Pulse HV	1598 V

[H2]

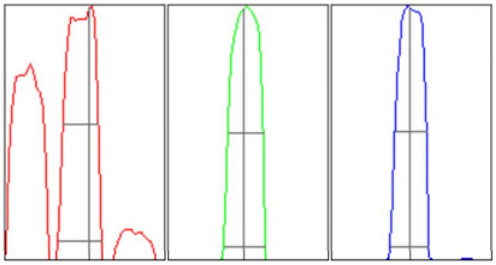
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		212	2120.73			7.347	
59		2526	25259.37			3.247	
115		6997	69969.93			2.756	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.545 %
Doubly Charged	70 / 140 0.214 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	226.52	26.10	25.90 - 26.10	
59	2662.99	58.95	58.90 - 59.10	
115	7446.12	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.67	0.816	0.900	
59	0.67	0.785	0.900	
115	0.60	0.732	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0000	QP Bias	-15.0 V
Mass Offset	125	Axis Offset	0.01		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.4 mm		

EM

Discriminator	4.5 mV	Analog HV	2526 V	Pulse HV	1598 V

[He]

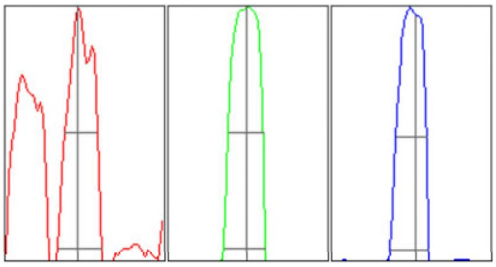
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		87	865.82			11.628	
59		8023	80225.50			2.118	
115		1386	13861.82			2.952	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.224 %
Doubly Charged	70 / 140 0.967 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	102.01	25.90	25.90 - 26.10	
59	8044.71	59.00	58.90 - 59.10	
115	1437.69	115.10	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.63	0.825	0.900	
59	0.66	0.784	0.900	
115	0.59	0.729	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	131	Axis Gain	1.0000	QP Bias	-13.0 V
Mass Offset	125	Axis Offset	0.01		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.4 mm

EM

Discriminator	4.5 mV	Analog HV	2526 V	Pulse HV	1598 V

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240315A

Instrument ID: ICPMS-03

Analyte	Data File	A0315003.d	A0315004.d	A0315005.d	A0315006.d	A0315007.d	A0315008.d	A0315009.d	A0315010.d	A0315011.d	
	Acq. Date-Time	03/15/2024 04:10 PM	03/15/2024 04:15 PM	03/15/2024 04:20 PM	03/15/2024 04:25 PM	03/15/2024 04:29 PM	03/15/2024 04:34 PM	03/15/2024 04:39 PM	03/15/2024 04:44 PM	03/15/2024 04:48 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	56928.8		57426.2	57220.9	57371.5	57222.2	57465.1	57486.3	57788.3	
55 Mn [2]	CPS	52.1		1105.2	10328.4	20795.9	40146.7	81638.7	204281.5	413307.3	1.0000
72 Ge (ISTD) [2]	CPS	35687.7	35623.1	35872.6	35840.3	35342.6	35731.1	35911.6	36177.7	36408.2	
75 As [2]	CPS	13.3	64.4	307.7	2544.6	5178.5	10334.2	20987.5	52010.4	104963.8	1.0000
159 Tb (ISTD) [3]	CPS	2050498.8		2070855.9	2050557.5	2060610.9	2075363.8	2054330	2084760.9	2094903.5	
137 Ba [3]	CPS	53.3		2183.5	20827.5	41177.9	81985.1	165933.6	419086.5	846495.6	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION SUMMARY: 240319A

Instrument ID: ICPMS-03

Analyte	Data File	A0319003.d	A0319004.d	A0319005.d	A0319006.d	A0319007.d	A0319008.d	A0319009.d	A0319010.d	A0319011.d	
	Acq. Date-Time	03/19/2024 11:19 AM	03/19/2024 11:24 AM	03/19/2024 11:29 AM	03/19/2024 11:34 AM	03/19/2024 11:38 AM	03/19/2024 11:43 AM	03/19/2024 11:48 AM	03/19/2024 11:53 AM	03/19/2024 11:57 AM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	2	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std1-0.1/1 ppb	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.1/1 ug/L	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	47952		47690.2	47870.6	47402.6	46500	47217.6	47027.1	47268.8	
55 Mn [2]	CPS	70.9		937.4	8587	17179.5	33430.8	67178.5	167155.1	340871.6	1.0000
72 Ge (ISTD) [2]	CPS	30741.1	30964.8	30900.3	30822.3	30153.3	30048.7	30189	29981.9	30422.7	
75 As [2]	CPS	7.7	51	211	2211.2	4456	8480.9	17732.6	43950.3	88959	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV** SampType: **ICV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ICV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751429**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.446	0.10	10.00	0	104	90	110				
Barium	10.129	1.0	10.00	0	101	90	110				
Manganese	102.021	0.50	100.0	0	102	90	110				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ZZZZZZ** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751431**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	0.981	1.0	1.000	0	98.1	80	120				
Manganese	0.567	0.50	0.5000	0	113	80	120				

Sample ID **LLICV1** SampType: **CCV1** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ZZZZZZ** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751432**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.110	0.10	0.1000	0	110	80	120				

Sample ID **MLCCV** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751433**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.307	0.10	20.00	0	102	90	110				
Barium	19.735	1.0	20.00	0	98.7	90	110				
Manganese	19.874	0.50	20.00	0	99.4	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV1** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751445**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.173	0.10	20.00	0	101	90	110				
Barium	19.335	1.0	20.00	0	96.7	90	110				
Manganese	19.566	0.50	20.00	0	97.8	90	110				

Sample ID **CCV2** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751454**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.769	0.10	20.00	0	98.8	90	110				
Barium	19.833	1.0	20.00	0	99.2	90	110				
Manganese	19.644	0.50	20.00	0	98.2	90	110				

Sample ID **CCV3** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751467**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.167	0.10	20.00	0	95.8	90	110				
Barium	19.935	1.0	20.00	0	99.7	90	110				
Manganese	19.529	0.50	20.00	0	97.6	90	110				

Sample ID **CCV4** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751478**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	18.621	0.10	20.00	0	93.1	90	110				
Barium	20.176	1.0	20.00	0	101	90	110				
Manganese	19.406	0.50	20.00	0	97.0	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV5** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751489**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.490	0.10	20.00	0	97.5	90	110				
Barium	19.840	1.0	20.00	0	99.2	90	110				
Manganese	19.839	0.50	20.00	0	99.2	90	110				

Sample ID **CCV6** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751503**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.883	0.10	20.00	0	99.4	90	110				
Barium	20.065	1.0	20.00	0	100	90	110				
Manganese	19.677	0.50	20.00	0	98.4	90	110				

Sample ID **CCV7** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751509**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.515	0.10	20.00	0	97.6	90	110				
Barium	20.027	1.0	20.00	0	100	90	110				
Manganese	19.658	0.50	20.00	0	98.3	90	110				

Sample ID **CCV8** SampType: **CCV** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCV** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/16/2024** SeqNo: **5751522**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.897	0.10	20.00	0	99.5	90	110				
Barium	20.208	1.0	20.00	0	101	90	110				
Manganese	19.501	0.50	20.00	0	97.5	90	110				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV9**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183672**
Client ID: **CCV**	Batch ID: **R183672**	TestNo: **EPA 6020**		Analysis Date: **3/16/2024**	SeqNo: **5751533**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.440	0.10	20.00	0	97.2	90	110				
Barium	19.895	1.0	20.00	0	99.5	90	110				
Manganese	19.821	0.50	20.00	0	99.1	90	110				

Sample ID **CCV10**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183672**
Client ID: **CCV**	Batch ID: **R183672**	TestNo: **EPA 6020**		Analysis Date: **3/16/2024**	SeqNo: **5751541**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.426	0.10	20.00	0	97.1	90	110				
Barium	20.163	1.0	20.00	0	101	90	110				
Manganese	19.635	0.50	20.00	0	98.2	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV**	SampType: **ICV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **ICV**	Batch ID: **R183805**	TestNo: **EPA 6020**		Analysis Date: **3/19/2024**	SeqNo: **5759280**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.317	0.10	10.00	0	103	90	110				
Manganese	101.641	0.50	100.0	0	102	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **ZZZZZZ**	Batch ID: **R183805**	TestNo: **EPA 6020**		Analysis Date: **3/19/2024**	SeqNo: **5759282**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.095	0.10	0.1000	0	95.3	80	120				
Manganese	0.546	0.50	0.5000	0	109	80	120				

Sample ID **MLCCV**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **CCV**	Batch ID: **R183805**	TestNo: **EPA 6020**		Analysis Date: **3/19/2024**	SeqNo: **5759283**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.435	0.10	20.00	0	97.2	90	110				
Manganese	19.752	0.50	20.00	0	98.8	90	110				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **CCV**	Batch ID: **R183805**	TestNo: **EPA 6020**		Analysis Date: **3/19/2024**	SeqNo: **5759295**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.699	0.10	20.00	0	98.5	90	110				
Manganese	19.783	0.50	20.00	0	98.9	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **CCV**	Batch ID: **R183805**	TestNo: **EPA 6020**		Analysis Date: **3/19/2024**	SeqNo: **5759307**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.461	0.10	20.00	0	97.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **CCV**	Batch ID: **R183805**	TestNo: **EPA 6020**		Analysis Date: **3/19/2024**	SeqNo: **5759307**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.650	0.50	20.00	0	98.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB** SampType: **ICB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ICB** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751430**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB1** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCB** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751446**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB2** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCB** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751455**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB3** SampType: **CCB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **CCB** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751468**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	CCB4	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	183672
Client ID:	CCB	Batch ID:	R183672	TestNo:	EPA 6020			Analysis Date:	3/15/2024	SeqNo:	5751479

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID	CCB5	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	183672
Client ID:	CCB	Batch ID:	R183672	TestNo:	EPA 6020			Analysis Date:	3/15/2024	SeqNo:	5751490

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID	CCB6	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	183672
Client ID:	CCB	Batch ID:	R183672	TestNo:	EPA 6020			Analysis Date:	3/15/2024	SeqNo:	5751504

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID	CCB7	SampType:	CCB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	183672
Client ID:	CCB	Batch ID:	R183672	TestNo:	EPA 6020			Analysis Date:	3/15/2024	SeqNo:	5751510

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB8**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183672**
Client ID: **CCB**	Batch ID: **R183672**	TestNo: **EPA 6020**		Analysis Date: **3/16/2024**	SeqNo: **5751523**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB9**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183672**
Client ID: **CCB**	Batch ID: **R183672**	TestNo: **EPA 6020**		Analysis Date: **3/16/2024**	SeqNo: **5751534**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **CCB10**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183672**
Client ID: **CCB**	Batch ID: **R183672**	TestNo: **EPA 6020**		Analysis Date: **3/16/2024**	SeqNo: **5751542**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICB**	SampType: **ICB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **ICB**	Batch ID: **R183805**	TestNo: **EPA 6020**		Analysis Date: **3/19/2024**	SeqNo: **5759281**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **CCB**	Batch ID: **R183805**	TestNo: **EPA 6020**		Analysis Date: **3/19/2024**	SeqNo: **5759296**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **CCB**	Batch ID: **R183805**	TestNo: **EPA 6020**		Analysis Date: **3/19/2024**	SeqNo: **5759308**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ICSA** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751434**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ICSAB** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751435**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.538	0.10	20.00	0	103	80	120				
Barium	19.940	1.0	20.00	0	99.7	80	120				
Manganese	20.365	0.50	20.00	0	102	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ICSA** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751456**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ICSAB** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751457**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.592	0.10	20.00	0	103	80	120				
Barium	20.123	1.0	20.00	0	101	80	120				
Manganese	20.246	0.50	20.00	0	101	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA3** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ICSA** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751491**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB3** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ICSAB** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751492**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.210	0.10	20.00	0	101	80	120				
Barium	20.527	1.0	20.00	0	103	80	120				
Manganese	20.424	0.50	20.00	0	102	80	120				

Sample ID **ICSA4** SampType: **ICSA** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ICSA** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751511**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB4** SampType: **ICSAB** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ICSAB** Batch ID: **R183672** TestNo: **EPA 6020** Analysis Date: **3/15/2024** SeqNo: **5751512**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.550	0.10	20.00	0	103	80	120				
Barium	20.458	1.0	20.00	0	102	80	120				
Manganese	20.342	0.50	20.00	0	102	80	120				

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA5**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183672**
Client ID: **ICSA**	Batch ID: **R183672**	TestNo: **EPA 6020**		Analysis Date: **3/16/2024**	SeqNo: **5751543**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Barium	ND	1.0									
Manganese	ND	0.50									

Sample ID **ICSAB5**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183672**
Client ID: **ICSAB**	Batch ID: **R183672**	TestNo: **EPA 6020**		Analysis Date: **3/16/2024**	SeqNo: **5751544**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.849	0.10	20.00	0	99.2	80	120				
Barium	20.801	1.0	20.00	0	104	80	120				
Manganese	20.446	0.50	20.00	0	102	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSA1**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **ICSA**	Batch ID: **R183805**	TestNo: **EPA 6020**		Analysis Date: **3/19/2024**	SeqNo: **5759284**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **ICSAB1**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **ICSAB**	Batch ID: **R183805**	TestNo: **EPA 6020**		Analysis Date: **3/19/2024**	SeqNo: **5759285**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	19.921	0.10	20.00	0	99.6	80	120				
Manganese	20.145	0.50	20.00	0	101	80	120				

Sample ID **ICSA2**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **ICSA**	Batch ID: **R183805**	TestNo: **EPA 6020**		Analysis Date: **3/19/2024**	SeqNo: **5759309**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.10									
Manganese	ND	0.50									

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **183805**
Client ID: **ICSAB**	Batch ID: **R183805**	TestNo: **EPA 6020**		Analysis Date: **3/19/2024**	SeqNo: **5759310**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.377	0.10	20.00	0	102	80	120				
Manganese	20.037	0.50	20.00	0	100	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240315A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	2050498.8	2050498.8	100	PASS	30-150	56928.8	56928.8	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	2058760.6	2050498.8	100.4	PASS	30-150	56976.9	56928.8	100.08	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	2070855.9	2050498.8	100.99	PASS	30-150	57426.2	56928.8	100.87	PASS	30-150
Std3-5/50 ppb	ICAL	1	2050557.5	2050498.8	100	PASS	30-150	57220.9	56928.8	100.51	PASS	30-150
Std4-10/100 ppb	ICAL	1	2060610.9	2050498.8	100.49	PASS	30-150	57371.5	56928.8	100.78	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	2075363.8	2050498.8	101.21	PASS	30-150	57222.2	56928.8	100.52	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	2054330	2050498.8	100.19	PASS	30-150	57465.1	56928.8	100.94	PASS	30-150
Std7-100/1000 ppb	ICAL	1	2084760.9	2050498.8	101.67	PASS	30-150	57486.3	56928.8	100.98	PASS	30-150
Std8-200/2000 ppb	ICAL	1	2094903.5	2050498.8	102.17	PASS	30-150	57788.3	56928.8	101.51	PASS	30-150
ICV	ICV	1	2063638.4	2050498.8	100.64	PASS	30-150	55980.1	56928.8	98.33	PASS	30-150
ICB	ICB	1	2061905.9	2050498.8	100.56	PASS	30-150	55843	56928.8	98.09	PASS	30-150
LLICV1	CCV1	1	2108637.6	2050498.8	102.84	PASS	30-150	56575.5	56928.8	99.38	PASS	30-150
LLICV1	CCV1	1	2119324.6	2050498.8	103.36	PASS	30-150	57313.4	56928.8	100.68	PASS	30-150
MLCCV	CCV	1	2087634.7	2050498.8	101.81	PASS	30-150	56656.8	56928.8	99.52	PASS	30-150
ICSA1	ICSA	1	2059683.1	2050498.8	100.45	PASS	30-150	56014.6	56928.8	98.39	PASS	30-150
ICSAB1	ICSAB	1	2078707	2050498.8	101.38	PASS	30-150	57378.1	56928.8	100.79	PASS	30-150
CCV1	CCV	1	2099511.5	2050498.8	102.39	PASS	30-150	57339	56928.8	100.72	PASS	30-150
CCB1	CCB	1	2044076.8	2050498.8	99.69	PASS	30-150	56951.1	56928.8	100.04	PASS	30-150
CCV2	CCV	1	2055126.4	2050498.8	100.23	PASS	30-150	56724.9	56928.8	99.64	PASS	30-150
CCB2	CCB	1	2060931.6	2050498.8	100.51	PASS	30-150	55727	56928.8	97.89	PASS	30-150
ICSA2	ICSA	1	2062157.9	2050498.8	100.57	PASS	30-150	55478.5	56928.8	97.45	PASS	30-150
ICSAB2	ICSAB	1	2064770	2050498.8	100.7	PASS	30-150	55873.1	56928.8	98.15	PASS	30-150
CCV3	CCV	1	1915973	2050498.8	93.44	PASS	30-150	61081.3	56928.8	107.29	PASS	30-150
CCB3	CCB	1	1884117	2050498.8	91.89	PASS	30-150	58818.8	56928.8	103.32	PASS	30-150
CCV4	CCV	1	1761399	2050498.8	85.9	PASS	30-150	61448.1	56928.8	107.94	PASS	30-150
CCB4	CCB	1	1782654.8	2050498.8	86.94	PASS	30-150	60170.2	56928.8	105.69	PASS	30-150
CCV5	CCV	1	1892130	2050498.8	92.28	PASS	30-150	58698.3	56928.8	103.11	PASS	30-150
CCB5	CCB	1	1885215.4	2050498.8	91.94	PASS	30-150	57895.7	56928.8	101.7	PASS	30-150
ICSA3	ICSA	1	1914658	2050498.8	93.38	PASS	30-150	57874.4	56928.8	101.66	PASS	30-150
ICSAB3	ICSAB	1	1957078.2	2050498.8	95.44	PASS	30-150	57238.8	56928.8	100.54	PASS	30-150
CCV6	CCV	1	1914310.5	2050498.8	93.36	PASS	30-150	58465.4	56928.8	102.7	PASS	30-150
CCB6	CCB	1	1893218	2050498.8	92.33	PASS	30-150	56873.1	56928.8	99.9	PASS	30-150
CCV7	CCV	1	1917389.3	2050498.8	93.51	PASS	30-150	58086.1	56928.8	102.03	PASS	30-150
CCB7	CCB	1	1909283.6	2050498.8	93.11	PASS	30-150	56715.9	56928.8	99.63	PASS	30-150
ICSA4	ICSA	1	1921866	2050498.8	93.73	PASS	30-150	56730.4	56928.8	99.65	PASS	30-150
ICSAB4	ICSAB	1	1970449.7	2050498.8	96.1	PASS	30-150	55855.3	56928.8	98.11	PASS	30-150
MB-107566	MBLK	1	1905105.4	2050498.8	92.91	PASS	30-150	54073.9	56928.8	94.99	PASS	30-150
LCS-107566	LCS	1	1941270.1	2050498.8	94.67	PASS	30-150	54324.7	56928.8	95.43	PASS	30-150
N063812-001C	SAMP	1	1811133.5	2050498.8	88.33	PASS	30-150	51025.6	56928.8	89.63	PASS	30-150
N063812-002C	SAMP	1	1770570	2050498.8	86.35	PASS	30-150	49749.5	56928.8	87.39	PASS	30-150
N063812-003C	SAMP	1	1789077.2	2050498.8	87.25	PASS	30-150	50789.2	56928.8	89.22	PASS	30-150

INTERNAL STANDARD: 240315A

Instrument ID: ICPMS-03

Sample Name	Type	DF	159 Tb (ISTD) [3]					45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
N063812-004C	SAMP	1	1530404.1	2050498.8	74.64	PASS	30-150	49611.2	56928.8	87.15	PASS	30-150
N063812-005C	SAMP	1	1500898.9	2050498.8	73.2	PASS	30-150	48660.7	56928.8	85.48	PASS	30-150
N063812-007C	SAMP	1	1592245.3	2050498.8	77.65	PASS	30-150	51341	56928.8	90.18	PASS	30-150
N063812-009C	SAMP	1	1528109.5	2050498.8	74.52	PASS	30-150	50262	56928.8	88.29	PASS	30-150
CCV8	CCV	1	1893273	2050498.8	92.33	PASS	30-150	58197.6	56928.8	102.23	PASS	30-150
CCB8	CCB	1	1880956.7	2050498.8	91.73	PASS	30-150	55966.6	56928.8	98.31	PASS	30-150
N063812-010C	SAMP	1	1505663.4	2050498.8	73.43	PASS	30-150	48683	56928.8	85.52	PASS	30-150
N063812-011C	SAMP	1	1512896.3	2050498.8	73.78	PASS	30-150	49324.8	56928.8	86.64	PASS	30-150
N063812-011C	SAMP	5	1726790.3	2050498.8	84.21	PASS	30-150	53927.9	56928.8	94.73	PASS	30-150
N063812-011C-PS	PS	1	1532164	2050498.8	74.72	PASS	30-150	49424	56928.8	86.82	PASS	30-150
N063812-011CMS	MS	1	1503163.6	2050498.8	73.31	PASS	30-150	49122	56928.8	86.29	PASS	30-150
N063812-011CMSD	MSD	1	1495786.9	2050498.8	72.95	PASS	30-150	49394	56928.8	86.76	PASS	30-150
N063812-012C	SAMP	1	1512757.6	2050498.8	73.78	PASS	30-150	49105.2	56928.8	86.26	PASS	30-150
N063812-013C	SAMP	1	1525132.1	2050498.8	74.38	PASS	30-150	49888.7	56928.8	87.63	PASS	30-150
N063812-014C	SAMP	1	1517835	2050498.8	74.02	PASS	30-150	49390.5	56928.8	86.76	PASS	30-150
CCV9	CCV	1	1886737	2050498.8	92.01	PASS	30-150	57579	56928.8	101.14	PASS	30-150
CCB9	CCB	1	1862688.8	2050498.8	90.84	PASS	30-150	56216.5	56928.8	98.75	PASS	30-150
N063812-015C	SAMP	1	1871924.5	2050498.8	91.29	PASS	30-150	54404.9	56928.8	95.57	PASS	30-150
N063812-016C	SAMP	1	1570474.7	2050498.8	76.59	PASS	30-150	49084.1	56928.8	86.22	PASS	30-150
N063812-016C	SAMP	5	1746881.2	2050498.8	85.19	PASS	30-150	53061.9	56928.8	93.21	PASS	30-150
N063812-016C-PS	PS	1	1519918.7	2050498.8	74.12	PASS	30-150	48282.9	56928.8	84.81	PASS	30-150
N063812-016CMS	MS	1	1533212.4	2050498.8	74.77	PASS	30-150	49592.2	56928.8	87.11	PASS	30-150
N063812-016CMSD	MSD	1	1537243.2	2050498.8	74.97	PASS	30-150	49874.3	56928.8	87.61	PASS	30-150
CCV10	CCV	1	1873579.7	2050498.8	91.37	PASS	30-150	57179.7	56928.8	100.44	PASS	30-150
CCB10	CCB	1	1864218	2050498.8	90.92	PASS	30-150	55237.6	56928.8	97.03	PASS	30-150
ICSA5	ICSA	1	1863005.9	2050498.8	90.86	PASS	30-150	54720.4	56928.8	96.12	PASS	30-150
ICSAB5	ICSAB	1	1899729.1	2050498.8	92.65	PASS	30-150	54520.8	56928.8	95.77	PASS	30-150

INTERNAL STANDARD: 240315A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	35687.7	35687.7	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	35623.1	35687.7	99.82	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	35872.6	35687.7	100.52	PASS	30-150
Std3-5/50 ppb	ICAL	1	35840.3	35687.7	100.43	PASS	30-150
Std4-10/100 ppb	ICAL	1	35342.6	35687.7	99.03	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	35731.1	35687.7	100.12	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	35911.6	35687.7	100.63	PASS	30-150
Std7-100/1000 ppb	ICAL	1	36177.7	35687.7	101.37	PASS	30-150
Std8-200/2000 ppb	ICAL	1	36408.2	35687.7	102.02	PASS	30-150
ICV	ICV	1	35328	35687.7	98.99	PASS	30-150
ICB	ICB	1	35256.8	35687.7	98.79	PASS	30-150
LLICV1	CCV1	1	35113.2	35687.7	98.39	PASS	30-150
LLICV1	CCV1	1	35655.4	35687.7	99.91	PASS	30-150
MLCCV	CCV	1	35184.4	35687.7	98.59	PASS	30-150
ICSA1	ICSA	1	34976.2	35687.7	98.01	PASS	30-150
ICSAB1	ICSAB	1	35501.8	35687.7	99.48	PASS	30-150
CCV1	CCV	1	35690	35687.7	100.01	PASS	30-150
CCB1	CCB	1	35480.6	35687.7	99.42	PASS	30-150
CCV2	CCV	1	35011.8	35687.7	98.11	PASS	30-150
CCB2	CCB	1	35235.6	35687.7	98.73	PASS	30-150
ICSA2	ICSA	1	34690	35687.7	97.2	PASS	30-150
ICSAB2	ICSAB	1	35206.7	35687.7	98.65	PASS	30-150
CCV3	CCV	1	37645.4	35687.7	105.49	PASS	30-150
CCB3	CCB	1	36433.8	35687.7	102.09	PASS	30-150
CCV4	CCV	1	37603.2	35687.7	105.37	PASS	30-150
CCB4	CCB	1	36394.9	35687.7	101.98	PASS	30-150
CCV5	CCV	1	36760.1	35687.7	103.01	PASS	30-150
CCB5	CCB	1	36413.8	35687.7	102.04	PASS	30-150
ICSA3	ICSA	1	36044.1	35687.7	101	PASS	30-150
ICSAB3	ICSAB	1	36186.6	35687.7	101.4	PASS	30-150
CCV6	CCV	1	36057.5	35687.7	101.04	PASS	30-150
CCB6	CCB	1	35770.2	35687.7	100.23	PASS	30-150
CCV7	CCV	1	36352.5	35687.7	101.86	PASS	30-150
CCB7	CCB	1	35299.1	35687.7	98.91	PASS	30-150
ICSA4	ICSA	1	35155.5	35687.7	98.51	PASS	30-150
ICSAB4	ICSAB	1	35060.8	35687.7	98.24	PASS	30-150
MB-107566	MBLK	1	34271.4	35687.7	96.03	PASS	30-150
LCS-107566	LCS	1	34069.8	35687.7	95.47	PASS	30-150
N063812-001C	SAMP	1	31893.3	35687.7	89.37	PASS	30-150
N063812-002C	SAMP	1	31301.1	35687.7	87.71	PASS	30-150
N063812-003C	SAMP	1	31493.6	35687.7	88.25	PASS	30-150

INTERNAL STANDARD: 240315A

Instrument ID: ICPMS-03

Sample Name	Type	DF	72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
N063812-004C	SAMP	1	30255.8	35687.7	84.78	PASS	30-150
N063812-005C	SAMP	1	29540	35687.7	82.77	PASS	30-150
N063812-007C	SAMP	1	31210.8	35687.7	87.46	PASS	30-150
N063812-009C	SAMP	1	30274.6	35687.7	84.83	PASS	30-150
CCV8	CCV	1	35940.5	35687.7	100.71	PASS	30-150
CCB8	CCB	1	35105.5	35687.7	98.37	PASS	30-150
N063812-010C	SAMP	1	29514.4	35687.7	82.7	PASS	30-150
N063812-011C	SAMP	1	29693.6	35687.7	83.2	PASS	30-150
N063812-011C	SAMP	5	32981	35687.7	92.42	PASS	30-150
N063812-011C-PS	PS	1	29658	35687.7	83.1	PASS	30-150
N063812-011CMS	MS	1	29659.1	35687.7	83.11	PASS	30-150
N063812-011CMSD	MSD	1	29483.2	35687.7	82.61	PASS	30-150
N063812-012C	SAMP	1	30143.3	35687.7	84.46	PASS	30-150
N063812-013C	SAMP	1	30227.9	35687.7	84.7	PASS	30-150
N063812-014C	SAMP	1	29882.8	35687.7	83.73	PASS	30-150
CCV9	CCV	1	36057.5	35687.7	101.04	PASS	30-150
CCB9	CCB	1	35193.3	35687.7	98.61	PASS	30-150
N063812-015C	SAMP	1	34305.9	35687.7	96.13	PASS	30-150
N063812-016C	SAMP	1	30492.9	35687.7	85.44	PASS	30-150
N063812-016C	SAMP	5	33268.2	35687.7	93.22	PASS	30-150
N063812-016C-PS	PS	1	29840.5	35687.7	83.62	PASS	30-150
N063812-016CMS	MS	1	30740	35687.7	86.14	PASS	30-150
N063812-016CMSD	MSD	1	31078.4	35687.7	87.08	PASS	30-150
CCV10	CCV	1	35461.7	35687.7	99.37	PASS	30-150
CCB10	CCB	1	35060.8	35687.7	98.24	PASS	30-150
ICSA5	ICSA	1	34946.1	35687.7	97.92	PASS	30-150
ICSAB5	ICSAB	1	34892.7	35687.7	97.77	PASS	30-150

INTERNAL STANDARD: 240319A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]					72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	47952	47952	100	PASS	30-150	30741.1	30741.1	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	48668.4	47952	101.49	PASS	30-150	30964.8	30741.1	100.73	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	47690.2	47952	99.45	PASS	30-150	30900.3	30741.1	100.52	PASS	30-150
Std3-5/50 ppb	ICAL	1	47870.6	47952	99.83	PASS	30-150	30822.3	30741.1	100.26	PASS	30-150
Std4-10/100 ppb	ICAL	1	47402.6	47952	98.85	PASS	30-150	30153.3	30741.1	98.09	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	46500	47952	96.97	PASS	30-150	30048.7	30741.1	97.75	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	47217.6	47952	98.47	PASS	30-150	30189	30741.1	98.2	PASS	30-150
Std7-100/1000 ppb	ICAL	1	47027.1	47952	98.07	PASS	30-150	29981.9	30741.1	97.53	PASS	30-150
Std8-200/2000 ppb	ICAL	1	47268.8	47952	98.58	PASS	30-150	30422.7	30741.1	98.96	PASS	30-150
ICV	ICV	1	46504.5	47952	96.98	PASS	30-150	29641.2	30741.1	96.42	PASS	30-150
ICB	ICB	1	45758.1	47952	95.42	PASS	30-150	29787.1	30741.1	96.9	PASS	30-150
LLICV1	LLICV	1	46378.6	47952	96.72	PASS	30-150	29629	30741.1	96.38	PASS	30-150
MLCCV	CCV	1	46552.5	47952	97.08	PASS	30-150	30039.7	30741.1	97.72	PASS	30-150
ICSA1	ICSA	1	45358.1	47952	94.59	PASS	30-150	29483.2	30741.1	95.91	PASS	30-150
ICSAB1	ICSAB	1	46997	47952	98.01	PASS	30-150	29787.1	30741.1	96.9	PASS	30-150
N063812-002C	SAMP	1	43443	47952	90.6	PASS	30-150	27279.4	30741.1	88.74	PASS	30-150
N063812-005C	SAMP	10	43434.1	47952	90.58	PASS	30-150	27566.5	30741.1	89.67	PASS	30-150
N063812-009C	SAMP	10	43844	47952	91.43	PASS	30-150	27853.7	30741.1	90.61	PASS	30-150
N063812-014C	SAMP	1	44125.9	47952	92.02	PASS	30-150	27316.2	30741.1	88.86	PASS	30-150
N063812-014C	SAMP	10	45100.7	47952	94.05	PASS	30-150	28745.2	30741.1	93.51	PASS	30-150
N063812-015C	SAMP	10	45992	47952	95.91	PASS	30-150	29967.4	30741.1	97.48	PASS	30-150
N063812-016C	SAMP	100	44903.5	47952	93.64	PASS	30-150	28526	30741.1	92.79	PASS	30-150
N063812-016C	SAMP	500	44945.9	47952	93.73	PASS	30-150	28645.1	30741.1	93.18	PASS	30-150
CCV1	CCV	1	48815.5	47952	101.8	PASS	30-150	31666.1	30741.1	103.01	PASS	30-150
CCB1	CCB	1	48319.7	47952	100.77	PASS	30-150	31663.9	30741.1	103	PASS	30-150
N063812-016C	SAMP	100	43997.8	47952	91.75	PASS	30-150	28426.9	30741.1	92.47	PASS	30-150
N063812-016C	SAMP	500	44812.2	47952	93.45	PASS	30-150	28657.3	30741.1	93.22	PASS	30-150
N063812-016C-PS	PS	100	45058.4	47952	93.97	PASS	30-150	29014.6	30741.1	94.38	PASS	30-150
N063812-016CMS	MS	100	45828.3	47952	95.57	PASS	30-150	29814.9	30741.1	96.99	PASS	30-150
N063812-016C	SAMP	100	45287.9	47952	94.44	PASS	30-150	29811.6	30741.1	96.98	PASS	30-150
N063812-016C	SAMP	500	46058.9	47952	96.05	PASS	30-150	29871.7	30741.1	97.17	PASS	30-150
N063812-016C-PS	PS	100	44629.4	47952	93.07	PASS	30-150	29209.4	30741.1	95.02	PASS	30-150
N063812-016CMS	MS	100	45252.3	47952	94.37	PASS	30-150	29436.4	30741.1	95.76	PASS	30-150
N063812-016CMSD	MSD	100	44733.1	47952	93.29	PASS	30-150	29181.6	30741.1	94.93	PASS	30-150
N063812-002C	SAMP	1	44583.9	47952	92.98	PASS	30-150	28764.2	30741.1	93.57	PASS	30-150
CCV2	CCV	1	49305.8	47952	102.82	PASS	30-150	31928.9	30741.1	103.86	PASS	30-150
CCB2	CCB	1	48975	47952	102.13	PASS	30-150	32129.3	30741.1	104.52	PASS	30-150
ICSA2	ICSA	1	47953.1	47952	100	PASS	30-150	31186.4	30741.1	101.45	PASS	30-150
ICSAB2	ICSAB	1	48824.4	47952	101.82	PASS	30-150	31161.8	30741.1	101.37	PASS	30-150
CCV3	CCV	1	48749.9	47952	101.66	PASS	30-150	31380	30741.1	102.08	PASS	30-150
CCB3	CCB	1	49698	47952	103.64	PASS	30-150	32032.4	30741.1	104.2	PASS	30-150

INTERNAL STANDARD: 240319A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]					72 Ge (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria	CPS	REF	%REC	Comment	Criteria
CCV4	CCV	1	51203.8	47952	106.78	PASS	30-150	32554.6	30741.1	105.9	PASS	30-150
CCB4	CCB	1	50810.3	47952	105.96	PASS	30-150	32551.2	30741.1	105.89	PASS	30-150
CCV5	CCV	1	50935.2	47952	106.22	PASS	30-150	32533.5	30741.1	105.83	PASS	30-150
CCB5	CCB	1	50682.2	47952	105.69	PASS	30-150	32995.4	30741.1	107.33	PASS	30-150
CCV6	CCV	1	51016.5	47952	106.39	PASS	30-150	32982.1	30741.1	107.29	PASS	30-150
CCB6	CCB	1	50898.3	47952	106.14	PASS	30-150	32945.3	30741.1	107.17	PASS	30-150
CCV7	CCV	1	52203.5	47952	108.87	PASS	30-150	33343.9	30741.1	108.47	PASS	30-150
CCB7	CCB	1	51678.5	47952	107.77	PASS	30-150	33303.8	30741.1	108.34	PASS	30-150
ICSA3	ICSA	1	51326.4	47952	107.04	PASS	30-150	33173.6	30741.1	107.91	PASS	30-150
ICSAB3	ICSAB	1	51911.5	47952	108.26	PASS	30-150	33281.6	30741.1	108.26	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.:	N063812
Test Method:	EPA 6020
Analysis Date:	3/15/2024
Matrix:	Groundwater
Batch No.:	107566
Instrument ID:	ICPMS-03
Instrument Description:	Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to As. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063812-011C DT 5x	Arsenic	As	µg/L	0	NA	0		10
N063812-011C DT 5x	Barium	Ba	µg/L	121.5254	PASS	120.7179	0.67%	10
N063812-011C DT 5x	Manganese	Mn	µg/L	19.67234	PASS	19.54574	0.65%	10

Reviewed by:

JRB 4/18/2024

Note: NA - Not Applicable

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.: N063812
Test Method: EPA 6020
Analysis Date: 3/15,19/2024

Matrix: Groundwater
Batch No.: 107566

Instrument ID: ICPMS-03
Instrument Description: Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to As. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063812-016C DT 5x	Arsenic	As	µg/L	2.312531	NA	2.005583	15.30%	10
N063812-016C DT 5x	Barium	Ba	µg/L	127.3867	PASS	124.5319	2.29%	10
N063812-016C DT 500x	Manganese	Mn	µg/L	1703.439	PASS	1788.193	4.74%	10

Reviewed by:

JRB 4/18/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063812
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **N063812-011C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ZZZZZZ** Batch ID: **107566** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/16/2024** SeqNo: **5751527**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	8.549	0.10	10.00	0	85.5	80	120				
Barium	134.363	1.0	10.00	120.7	136	80	120				S
Manganese	114.283	0.50	100.0	19.55	94.7	80	120				

Sample ID **N063812-016C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183672**
Client ID: **ZZZZZZ** Batch ID: **107566** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/16/2024** SeqNo: **5751538**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.788	0.10	10.00	2.006	97.8	80	120				
Barium	135.908	1.0	10.00	124.5	114	80	120				

Sample ID **N063812-016C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **183805**
Client ID: **ZZZZZZ** Batch ID: **107566** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/19/2024** SeqNo: **5759303**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	11779.193	50	10000	1788	99.9	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

ARCADIS

Project: PG&E Topock - PCM

Project No.: 30211191

ASSET Laboratories Work Order:

N063976

ANALYTICAL and QC RESULTS
SAMPLE RECEIVING ITEMS

PRIVILEGED AND CONFIDENTIAL

Table of Contents

ASSET Laboratories Work Order: N063976

Item	Page
Cover Page	1-6
Analytical Result/QC Summary Reports	7-18
Sample Receiving Items	19-22
List of Analysts	23
Raw Data	
EPA 218.6	24-94
EPA 6010B_Dissolved	95-123
EPA 6010B_Total	124-152
EPA 6020_Dissolved	153-193
EPA 6020_Total	194-234

April 10, 2024

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N063976

RE: PG&E Topock - PCM, 30211191

Attention: Dan Bush

Enclosed are the results for sample(s) received on March 21, 2024 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

for

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063976

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 218.6:

Dilution was necessary for sample N063976-001A due to matrix interference. Sample was analyzed at lower dilution however matrix spike recovery and/or retention time criteria was not met indicating possible matrix interference. Sample was reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Analytical Comments for EPA 6010B_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Iron in QC samples N063976-001B-MS and N063976-001B-MSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

RPD for Matrix Spike (MS)/Matrix Spike Duplicate (MSD) is outside criteria possibly for Iron in QC samples N063976-001B-MS and N063976-001B-MSD; however, the analytical batch was validated by the Laboratory Control Sample (LCS).

Analytical Comments for EPA 6010B_Total:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Iron in QC samples N063976-001C-MS and N063976-001C-MSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Manganese in QC samples N063976-001B-MS and N063976-001B-MSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Total:

Matrix Spike (MS) is outside recovery criteria for Manganese in QC sample N063976-001C-MS possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

ASSET Laboratories

Date: *10-Apr-24*

CLIENT: ARCADIS U.S., Inc. - California
Project: PG&E Topock - PCM, 30211191
Lab Order: N063976
Contract No:

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N063976-001A	PTI-1D-0324	Groundwater	3/20/2024 8:30:00 AM	3/21/2024	4/10/2024
N063976-001B	PTI-1D-0324	Groundwater	3/20/2024 8:30:00 AM	3/21/2024	4/10/2024
N063976-001C	PTI-1D-0324	Groundwater	3/20/2024 8:30:00 AM	3/21/2024	4/10/2024

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PTI-1D-0324
Lab Order:	N063976		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/20/2024 8:30:00 AM
Lab ID:	N063976-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALENT CHROMIUM BY IC							
			EPA 218.6				
RunID: **NV00922-IC7_240326A**	QC Batch: **R184050**			PrepDate:			Analyst: **RAB**
Hexavalent Chromium	3.2	0.19	1.0		µg/L	5	3/26/2024 11:13 AM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **MB-R184050**	SampType: **MBLK**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184050**
Client ID: **PBW**	Batch ID: **R184050**	TestNo: **EPA 218.6**		Analysis Date: **3/26/2024**	SeqNo: **5770936**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **LCS-R184050**	SampType: **LCS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184050**
Client ID: **LCSW**	Batch ID: **R184050**	TestNo: **EPA 218.6**		Analysis Date: **3/26/2024**	SeqNo: **5770937**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.957	0.20	5.000	0	99.1	90	110				

Sample ID: **N063976-001ADUP**	SampType: **DUP**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184050**
Client ID: **ZZZZZZ**	Batch ID: **R184050**	TestNo: **EPA 218.6**		Analysis Date: **3/26/2024**	SeqNo: **5770939**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	3.365	1.0						3.224	4.26	20	

Sample ID: **N063976-001AMS**	SampType: **MS**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184050**
Client ID: **ZZZZZZ**	Batch ID: **R184050**	TestNo: **EPA 218.6**		Analysis Date: **3/26/2024**	SeqNo: **5770940**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.418	1.0	5.000	3.224	104	90	110				

Sample ID: **N063976-001AMSD**	SampType: **MSD**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184050**
Client ID: **ZZZZZZ**	Batch ID: **R184050**	TestNo: **EPA 218.6**		Analysis Date: **3/26/2024**	SeqNo: **5770941**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	8.103	1.0	5.000	3.224	97.6	90	110	8.418	3.81	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PTI-1D-0324
Lab Order:	N063976		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/20/2024 8:30:00 AM
Lab ID:	N063976-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240402A**	QC Batch: **107967**			PrepDate:		**4/1/2024**	Analyst: **DJ**
Iron	120	13	20		µg/L	1	4/2/2024 02:34 PM
TOTAL METALS BY ICP							
	EPA 3010A			**EPA 6010B**			
RunID: **NV00922-ICP3_240402B**	QC Batch: **107965**			PrepDate:		**4/1/2024**	Analyst: **DJ**
Iron	120	13	20		µg/L	1	4/2/2024 03:23 PM

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference		Results are wet unless otherwise specified
DO	Surrogate Diluted Out		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **MB-107967**	SampType: **MBLK**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **4/1/2024**	RunNo: **184317**
Client ID: **PBW**	Batch ID: **107967**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **4/2/2024**	SeqNo: **5786979**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS-107967**	SampType: **LCS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **4/1/2024**	RunNo: **184317**
Client ID: **LCSW**	Batch ID: **107967**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **4/2/2024**	SeqNo: **5786980**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	101.485	20	100.0	0	101	85	115				

Sample ID: **N063976-001B-MS**	SampType: **MS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **4/1/2024**	RunNo: **184317**
Client ID: **ZZZZZZ**	Batch ID: **107967**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **4/2/2024**	SeqNo: **5786984**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	295.597	20	100.0	116.3	179	75	125				S

Sample ID: **N063976-001B-MSD**	SampType: **MSD**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date: **4/1/2024**	RunNo: **184317**
Client ID: **ZZZZZZ**	Batch ID: **107967**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **4/2/2024**	SeqNo: **5786985**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	444.638	20	100.0	116.3	328	75	125	295.6	40.3	20	SR

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID: **MB-107965**	SampType: **MBLK**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date: **4/1/2024**	RunNo: **184318**
Client ID: **PBW**	Batch ID: **107965**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **4/2/2024**	SeqNo: **5787051**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	ND	20									

Sample ID: **LCS-107965**	SampType: **LCS**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date: **4/1/2024**	RunNo: **184318**
Client ID: **LCSW**	Batch ID: **107965**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **4/2/2024**	SeqNo: **5787052**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	101.924	20	100.0	0	102	85	115				

Sample ID: **N063976-001C-MS**	SampType: **MS**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date: **4/1/2024**	RunNo: **184318**
Client ID: **ZZZZZZ**	Batch ID: **107965**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **4/2/2024**	SeqNo: **5787056**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	294.114	20	100.0	117.9	176	75	125				S

Sample ID: **N063976-001C-MSD**	SampType: **MSD**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date: **4/1/2024**	RunNo: **184318**
Client ID: **ZZZZZZ**	Batch ID: **107965**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **4/2/2024**	SeqNo: **5787057**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	289.083	20	100.0	117.9	171	75	125	294.1	1.73	20	S

Qualifiers:

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID: **N063976-001B-PS**	SampType: **PS**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **184317**
Client ID: **ZZZZZZ**	Batch ID: **107967**	TestNo: **EPA 6010B**	**EPA 3010A**	Analysis Date: **4/2/2024**	SeqNo: **5786983**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	211.127	20	100.0	116.3	94.9	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID: **N063976-001C-PS** SampType: **PS** TestCode: **6010_WPGE** Units: **µg/L** Prep Date: RunNo: **184318**
Client ID: **ZZZZZZ** Batch ID: **107965** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **4/2/2024** SeqNo: **5787055**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	214.452	20	100.0	117.9	96.6	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT:	ARCADIS U.S., Inc. - California	**Client Sample ID:**	PTI-1D-0324
Lab Order:	N063976		
Project:	PG&E Topock - PCM, 30211191	**Collection Date:**	3/20/2024 8:30:00 AM
Lab ID:	N063976-001	**Matrix:**	GROUNDWATER

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
DISSOLVED METALS BY ICP-MS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240327D**	QC Batch: **107861**			PrepDate:	**3/27/2024**		Analyst: **DJ**
Manganese	740	0.26	5.0		µg/L	10	3/27/2024 10:16 PM
TOTAL METALS BY ICPMS							
EPA 3010A			**EPA 6020**				
RunID: **NV00922-ICP8_240327E**	QC Batch: **107862**			PrepDate:	**3/27/2024**		Analyst: **DJ**
Manganese	700	0.26	5.0		µg/L	10	3/27/2024 11:31 PM

Qualifiers:

B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
S	Spike/Surrogate outside of limits due to matrix interference
	Results are wet unless otherwise specified
DO	Surrogate Diluted Out

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **MB-107861**	SampType: **MBLK**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **3/27/2024**	RunNo: **184114**
Client ID: **PBW**	Batch ID: **107861**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **3/27/2024**	SeqNo: **5775484**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID: **LCS-107861**	SampType: **LCS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **3/27/2024**	RunNo: **184114**
Client ID: **LCSW**	Batch ID: **107861**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **3/27/2024**	SeqNo: **5775485**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	98.656	0.50	100.0	0	98.7	85	115				

Sample ID: **N063976-001B-MS**	SampType: **MS**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **3/27/2024**	RunNo: **184114**
Client ID: **ZZZZZZ**	Batch ID: **107861**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **3/27/2024**	SeqNo: **5775496**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	800.991	5.0	100.0	737.5	63.5	75	125				S

Sample ID: **N063976-001B-MSD**	SampType: **MSD**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date: **3/27/2024**	RunNo: **184114**
Client ID: **ZZZZZZ**	Batch ID: **107861**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **3/27/2024**	SeqNo: **5775498**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	801.804	5.0	100.0	737.5	64.4	75	125	801.0	0.101	20	S

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_TPK

Sample ID: **MB-107862**	SampType: **MBLK**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date: **3/27/2024**	RunNo: **184120**
Client ID: **PBW**	Batch ID: **107862**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **3/27/2024**	SeqNo: **5775714**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID: **LCS-107862**	SampType: **LCS**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date: **3/27/2024**	RunNo: **184120**
Client ID: **LCSW**	Batch ID: **107862**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **3/27/2024**	SeqNo: **5775715**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	99.723	0.50	100.0	0	99.7	85	115				

Sample ID: **N063976-001C-PS**	SampType: **PS**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **ZZZZZZ**	Batch ID: **107862**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **3/27/2024**	SeqNo: **5775721**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	1108.699	5.0	1000	695.3	41.3	80	120				S

Sample ID: **N063976-001C-MS**	SampType: **MS**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date: **3/27/2024**	RunNo: **184120**
Client ID: **ZZZZZZ**	Batch ID: **107862**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **3/27/2024**	SeqNo: **5775723**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	697.469	5.0	100.0	695.3	2.19	75	125				S

Sample ID: **N063976-001C-MSD**	SampType: **MSD**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date: **3/27/2024**	RunNo: **184120**
Client ID: **ZZZZZZ**	Batch ID: **107862**	TestNo: **EPA 6020**	**EPA 3010A**	Analysis Date: **3/28/2024**	SeqNo: **5775727**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	771.158	5.0	100.0	695.3	75.9	75	125	697.5	10.0	20	

Qualifiers:

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID: **N063976-001B-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **184114**
Client ID: **ZZZZZZ** Batch ID: **107861** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/27/2024** SeqNo: **5775492**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	1526.706	5.0	1000	737.5	78.9	80	120				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_TPK

Sample ID: **N063976-001C-PS** SampType: **PS** TestCode: **6020_W_TPK** Units: **µg/L** Prep Date: RunNo: **184120**
Client ID: **ZZZZZZ** Batch ID: **107862** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/27/2024** SeqNo: **5775721**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	1108.699	5.0	1000	695.3	41.3	80	120				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SAMPLE RECEIVING ITEMS

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Arcadis	Report to: Dan Bush	Bill to: Marty Bloes	EDD Requirement	QA/QC	Sample Receipt Condition
Address: 101 Creekside Ridge Court, Suite 200	Company: Arcadis	Address:	Excel EDD	RTNE	Y N
Address: Roseville, CA 95678	Email: dan.bush@arcadis.com; daniel.moore@citigen.com	Address:	Geotracker	RWQCB ✓	1. Chilled
Phone: 916-786-3302 Fax:	Address: 101 Creekside Ridge Court, Roseville, CA 95678	Email to: mbloes@pivox.com P.O.#	Labspec	Cal Trans	2. Headspace
Submitted By: Kevin Ashley	Phone: 916-786-3302 Fax:	Phone: 949-727-1400. ext 200 Fax:	Others ✓	LEVEL III	3. Container Intact
Title: otm operator			Specify: RWQCB	LEVEL IV	4. Seal Present
Signature: Date: 3/20/24	Sampled By: Kevin Ashley		Global ID:	Regulatory	5. IR number 13
I hereby authorize ASSET Labs to perform the tests indicated below.	I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may			Specify State:	6. Method of Cooling: ICE
Project Name: PG&E Topock - PCM	Signature: Date: 3/20/24				Sample Temp: 2.1°C
Project Number: 30211191					Courier: ASET Tracking No.:

Matrix: Ground X | Sediment; Potable | Soil; NPDES | Other Solid; Surface

Item No.	Laboratory Work Order No.	Sample ID/Location	Sample Date	Sample Time	Others	Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly)	Nitrite, Nitrate, sulfate (EPA 300.0) (1 L poly)	Dissolved metals (SW6020) FF; HNO3 Iron, Manganese (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Total Dissolved Chromium, (500mL poly)	Dissolved metals (SW6020) FF; HNO3 Selenium, Molybdenum (500mL poly)	Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOA)	Total metals (SW6010) No filter; HNO3 Total Iron and manganese (500mL poly)	Nitrate/Nitrite as Nitrogen (SM4500NH3); H2SO4 (125 mL poly)	Nitrate, sulfate (EPA 300.0) (1 L poly)	Nitrate (EPA 300.0) (1 L poly)				Turn Around Time	No. of Container	Container Type	PRESERVATION	Remarks
1	N063976-001	PTI-1D-0324	3/20/24	0830		X		X				X							E	3	P	BNS	
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							
13																							
14																							

Relinquished by (Signature and Printed Name):	Date/Time:	Received by (Signature and Printed Name):	Date/Time:
Kevin Ashley	3/21/24 1544	Michael McCarten	3/21/24 1544
Michael McCarten	3/21/24 1902	Michael McCarten	3/21/24 1902

Turn Around Time (TAT)

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of reports needed.
9. For subcontracted analysis, TAT and Surcharges will vary.

White=Laboratory Copy

Preservatives:

H=HCL	N=HNO_3	S=H_2SO_4	C=4°C	
Z=$Zn(AC)_2$	O=NaOH	T=$Na_2S_2O_3$		
Others/Specify:	B	(NH4)2SO4/NH4OH		

Container Type:

T=Tube	V=VOA	P=Pint
J=Jar	B=Tedlar	G=Glass
M=Metal	M=Metal	C=Can

Yellow=Customer's Copy

ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On:	3/21/2024	Workorder:	N063976
Rep sample Temp (Deg C):	2.1	IR Gun ID:	3
Temp Blank:	☑ Yes ☐ No		
Carrier name:	ASSET		
Last 4 digits of Tracking No.:	NA	Packing Material Used:	None
Cooling process:	☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None		

Sample Receipt Checklist

1. Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
2. Custody seals intact, signed, dated on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
3. Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
4. Chain of custody present?	Yes ☑	No ☐	
5. Sampler's name present in COC?	Yes ☑	No ☐	
6. Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
7. Chain of custody agrees with sample labels?	Yes ☑	No ☐	
8. Samples in proper container/bottle?	Yes ☑	No ☐	
9. Sample containers intact?	Yes ☑	No ☐	
10. Sufficient sample volume for indicated test?	Yes ☑	No ☐	
11. All samples received within holding time?	Yes ☑	No ☐	
12. Temperature of rep sample or Temp Blank within acceptable limit?	Yes ☑	No ☐	NA ☐
13. Water - VOA vials have zero headspace?	Yes ☐	No ☐	NA ☑
14. Water - pH acceptable upon receipt? Example: pH > 12 for (CN,S); pH<2 for Metals	Yes ☑	No ☐	NA ☐
15. Did the bottle labels indicate correct preservatives used?	Yes ☑	No ☐	NA ☐
16. Were there Non-Conformance issues at login?	Yes ☐	No ☐	NA ☑
Was Client notified?	Yes ☐	No ☐	NA ☑

Comments:

Checklist Completed By: For: CC YRodriguez 3/25/2024

Reviewed By: for: MBC 3/26/2024

ASSET Laboratories

WORK ORDER Summary

26-Mar-24

WorkOrder: N063976

Client ID: ARCUS02

Project: PG&E Topock - PCM, 30211191 **QC Level:** Level IV **Date Received:** 3/21/2024 7:02 PM

Comments:

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N063976-001A	PTI-1D-0324	3/20/2024 8:30:00 AM	4/5/2024	Groundwater	EPA 218.6	Hexavalent Chromium by IC	☐	☐	☐	WW
N063976-001B			4/5/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			4/5/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			4/5/2024		EPA 6010B	DISSOLVED METALS BY ICP	☐	☐	☐	WW
			4/5/2024		EPA 6020	DISSOLVED METALS BY ICP-MS	☐	☐	☐	WW
N063976-001C			4/5/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			4/5/2024		EPA 3010A	AQPREP TOTAL METALS: ICP, FLAA	☐	☐	☐	WW
			4/5/2024		EPA 6010B	TOTAL METALS BY ICP	☐	☐	☐	WW
			4/5/2024		EPA 6020	TOTAL METALS BY ICPMS	☐	☐	☐	WW
N063976-002A	FOLDER	4/5/2024	4/5/2024		Folder	Folder	☐	☐	☐	LAB
			4/5/2024		Folder	Level IV Report	☐	☐	☐	LAB
			4/5/2024		Folder	Folder	☐	☐	☐	LAB

List of Analysts

ASSET Laboratories Work Order: N063976

NAME	TEST METHOD
Ria Abes	EPA 218.6
Diane Jetajobe	EPA 6010B_Dissolved, EPA 6010B_Total, EPA 6020_Dissolved, EPA 6020_Total

EPA 218.6

IC Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

IC ARCUS
REV 2.0
011416

184050

QC Batch Number: R183040
ASSET #: N063976

Instrument ID: IC-07
Analyst: RBA
Date Analyzed: 3/26/2024

Method:

- [ ] EPA 300.0
- [ ] EPA 7199
- [X] EPA 218.6/EPA 218.7
- [ ] EPA 218.6/EPA 218.7 LL
- [ ] Others _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. ICAL before initial sample analysis and is not more than 4 weeks old.	X			X		
2. Does correlation coefficient,r, meet criteria ?(r = 0.995, r =0.999 (Cr6+))	X			X		
3. ICV within ± 10% of expected value.	X			X		
Continuing Calibration						
4. CCV after every 10 injections and at the end of analysis sequence.	X			X		
5. CCV within ± 10% of expected value. (± 5% for EPA 218.6)	X			X		
6. Calibration blanks run after ICV and CCV?	X			X		
7. Is the buffer less than MDL? If not, discontinue analysis. (Cr6+ only)	X			X		
8. Do all calibration blanks (ICB and CCBs) meet criteria? (<1/2PQL for 300, <0.02 for Cr6+)	X			X		
9. Is low level check at PQL within ± 20% for 218.6/218.7/7199? ± 30% for 218.6/218.7LL?	X			X		
Sample Information						
10. All samples are within linear range.	X			X		
11. All samples pH within 9.3-9.7 when analyzed?	X			X		
12. Duplicate sample injections for every sample. (7199 only)			X			X
13. For Topock, matrix spike protocol performed on all samples? (Cr6+ only)	X			X		
14. For Hinkley DOM samples, matrix spike protocol performed on all samples ? (Cr6+ only)			X			X
15. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
16. For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
17. For samples that failed Cr vs Cr6+ criteria, is matrix spike protocol performed ?			X			X
18. For dilution and MS spike protocol, spike recovery within 90-110%? (Cr6+ only)	X			X		
19. EPA 3060A digestion performed on solid samples (7199 only)			X			X
20. Are all peaks within RT window, ± 0.2 min?	X			X		
21. Are all samples analyzed within hold time?	X			X		
22. For Hinkley projects (DOM & ATU only), are samples with result ≤ 0.2 ug/L analyzed by low level method? (Cr6+ only)			X			X
QC Items						
23. Method blank values meets criteria. (<1/2 PQL for 300, <0.02 for Cr6+)	X					
24. LCS compounds are within control limits.	X			X		
25. MS/MSD, RPD's are within control limits.	X			X		
26. Soluble and Insoluble matrix spike within control limits (7199 solids only)			X	X		
Raw Data and Miscellaneous Information						
27. Runlog complete and included in package.	X					
28. Extraction log complete and included in package (if applicable)			X	X		
29. All manual integrations initialed, date and reasons included.	X			X		X
30. Before and after manual integration chromatogram included in the package	X			X		
31. All samples and QC raw data present in package.	X			X		
Preliminary Report						
32. Does the raw data match the preliminary report?	X			X		
33. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
34 Is the QC summary report present and complete?	X			X		

Comments:

SECOND LEVEL REVIEW:

	Y	N	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Is QC present and complete?	X		
4. Are analytical results correct? (dilutions,calculations)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer: RBA Date: _____

2nd Level Reviewer: dMRocha 3/27/2024 Date: _____

SAMPLE CALCULATION

Sample Calculation

METHOD: EPA 218.6
TEST NAME: HEXAVALENT CHROMIUM BY IC
MATRIX: Groundwater

FORMULA:

Calculate the Hexavalent Chromium concentration, in µg/L, in the original sample as follows:

$$Cr^{+6}, \mu g/L = A * DF$$

where:

A = µg/L, IC Cr+6 calculated concentration
DF = dilution factor

For Sample **N063976-001A** , the concentration in µg/L is calculated as follows:

$$Cr^{+6}, \mu g/L = 0.6449 * 5$$

$$Cr^{+6}, \mu g/L = 3.2245$$

Reporting results in two significant figures,

$$\mathbf{Cr^{+6}, \mu g/L = 3.2}$$

Reviewed by:

dMocha 3/27/2024

ANALYSIS RUN LOG

INJECTION LOG: 240305A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	03/05/24 4:07 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/05/24 4:16 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	03/05/24 4:26 PM	Reported
12	MB-R183315	MBLK	1	Hexavalent Chromium	03/05/24 4:35 PM	Reported
13	LCS-R183315	LCS	1	Hexavalent Chromium	03/05/24 4:45 PM	Reported
14	MB-107277	MBLK	1	Hexavalent Chromium	03/05/24 4:54 PM	Reported
15	N063472-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:04 PM	Reported
16	N063472-001ADUP	DUP	1	Hexavalent Chromium	03/05/24 5:13 PM	Reported
17	N063535-006A	SAMP	1	Hexavalent Chromium	03/05/24 5:23 PM	Reported
18	N063535-006AMS	MS	1	Hexavalent Chromium	03/05/24 5:32 PM	Reported
19	N063535-006AMSD	MSD	1	Hexavalent Chromium	03/05/24 5:42 PM	Reported
20	N063534-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:51 PM	Reported
21	N063534-001AMS	MS	1	Hexavalent Chromium	03/05/24 6:00 PM	Reported
22	CCV-1	CCV1	1	Hexavalent Chromium	03/05/24 6:10 PM	Reported
23	CCB-1	CCB	1	Hexavalent Chromium	03/05/24 6:20 PM	Reported
24	N063534-002A	SAMP	1	Hexavalent Chromium	03/05/24 6:30 PM	Reported
25	N063534-002AMS	MS	1	Hexavalent Chromium	03/05/24 6:38 PM	Reported
26	N063534-003A	SAMP	1	Hexavalent Chromium	03/05/24 6:48 PM	Reported
27	N063534-003AMS	MS	1	Hexavalent Chromium	03/05/24 6:57 PM	Reported
28	N063535-001A	SAMP	1	Hexavalent Chromium	03/05/24 7:07 PM	Reported
29	N063535-002A	SAMP	1	Hexavalent Chromium	03/05/24 7:16 PM	Reported
30	N063535-003A	SAMP	1	Hexavalent Chromium	03/05/24 7:26 PM	Reported
31	N063535-004A	SAMP	1	Hexavalent Chromium	03/05/24 7:35 PM	Reported
32	N063535-005A	SAMP	1	Hexavalent Chromium	03/05/24 7:48 PM	Reported
33	CCV-2	CCV	1	Hexavalent Chromium	03/05/24 7:57 PM	Reported
34	CCB-2	CCB	1	Hexavalent Chromium	03/05/24 8:07 PM	Reported
35	N063535-007A	SAMP	1	Hexavalent Chromium	03/05/24 8:16 PM	Reported
36	N063535-008A	SAMP	1	Hexavalent Chromium	03/05/24 8:25 PM	Reported
37	CCV-3	CCV1	1	Hexavalent Chromium	03/05/24 8:35 PM	Reported
38	CCB-3	CCB	1	Hexavalent Chromium	03/05/24 8:46 PM	Reported
39	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 8:55 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240305A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**07/Mar/24 08:03:58**
No. of Injections:	**42**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	8	1000	Unknown		03/05/2024 16:07	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	9	1000	Unknown		03/05/2024 16:16	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	10	1000	Unknown		03/05/2024 16:26	Finished	ICB R240129C
12	MB-H2O,MBLK,1,	11	1000	Unknown		03/05/2024 16:35	Finished	MB R240129C
13	LCS-H2O,LCS,1,	12	1000	Unknown		03/05/2024 16:45	Finished	LCS @5ppb, IWST-231228B
14	MB-107277,MBLK,1,	13	1000	Unknown		03/05/2024 16:54	Finished	MB TCLP
15	N063472-001A,SAMP	14	1000	Unknown		03/05/2024 17:04	Finished	SAMP,10 mL
16	N063472-001ADUP,D	15	1000	Unknown		03/05/2024 17:13	Finished	REP,10 mL
17	N063535-006A,SAMP	16	1000	Unknown		03/05/2024 17:23	Finished	SAMP,10 mL
18	N063535-006AMS,MS	17	1000	Unknown		03/05/2024 17:32	Finished	MS (5ppb), IWST-231228B,10r
19	N063535-006AMSD,M	18	1000	Unknown		03/05/2024 17:42	Finished	MSD (5ppb), IWST-231228B,1
20	N063534-001A,SAMP	19	1000	Unknown		03/05/2024 17:51	Finished	SAMP,10 mL
21	N063534-001AMS,MS	20	1000	Unknown		03/05/2024 18:00	Finished	MS (1ppb), IWST-231228B,10r
22	CCV-1,CCV1,1,	21	1000	Unknown		03/05/2024 18:10	Finished	CCV @10ppb, IWST-231228A
23	CCB-1,CCB,1,	22	1000	Unknown		03/05/2024 18:20	Finished	CCB R240129C
24	N063534-002A,SAMP	23	1000	Unknown		03/05/2024 18:30	Finished	SAMP,10 mL
25	N063534-002AMS,MS	24	1000	Unknown		03/05/2024 18:38	Finished	MS (1ppb), IWST-231228B,10r
26	N063534-003A,SAMP	25	1000	Unknown		03/05/2024 18:48	Finished	SAMP,10 mL
27	N063534-003AMS,MS	26	1000	Unknown		03/05/2024 18:57	Finished	MS (1ppb), IWST-231228B,10r
28	N063535-001A,SAMP	27	1000	Unknown		03/05/2024 19:07	Finished	SAMP,10 mL
29	N063535-002A,SAMP	28	1000	Unknown		03/05/2024 19:16	Finished	SAMP,10 mL
30	N063535-003A,SAMP	29	1000	Unknown		03/05/2024 19:26	Finished	SAMP,10 mL
31	N063535-004A,SAMP	30	1000	Unknown		03/05/2024 19:35	Finished	SAMP,10 mL
32	N063535-005A,SAMP	31	1000	Unknown		03/05/2024 19:48	Finished	SAMP,10 mL
33	CCV-2,CCV,1,	32	1000	Unknown		03/05/2024 19:57	Finished	CCV @5ppb, IWST-231228A
34	CCB-2,CCB,1,	33	1000	Unknown		03/05/2024 20:07	Finished	CCB R240129C
35	N063535-007A,SAMP	34	1000	Unknown		03/05/2024 20:16	Finished	SAMP,10 mL
36	N063535-008A,SAMP	35	1000	Unknown		03/05/2024 20:25	Finished	SAMP,10 mL
37	CCV-3,CCV1,1,	37	1000	Unknown		03/05/2024 20:35	Finished	CCV @10ppb, IWST-231228A
38	CCB-3,CCB,1,	38	1000	Unknown		03/05/2024 20:46	Finished	CCB R240129C
39	BLANK	39	1000	Unknown		03/05/2024 20:55	Finished	BLANK
40	SHUTDOWN	40	1000	Unknown		03/05/2024 21:05	Finished	
41	Eluent: R240305B	41	1000	Unknown		n.a.	Finished	
42	PCR: R240305C	42	1000	Unknown		n.a.	Finished	

INJECTION LOG: 240326A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/26/24 9:21 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/26/24 9:32 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/26/24 9:42 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/26/24 9:51 AM	Reported
13	MB-R184050	MBLK	1	Hexavalent Chromium	03/26/24 10:01 AM	Reported
14	LCS-R184050	LCS	1	Hexavalent Chromium	03/26/24 10:10 AM	Reported
15	N063976-001A	SAMP	1	Hexavalent Chromium	03/26/24 10:50 AM	Not Reported
16	N063976-001AMS	MS	1	Hexavalent Chromium	03/26/24 11:03 AM	Not Reported
17	N063976-001A	SAMP	5	Hexavalent Chromium	03/26/24 11:13 AM	Reported
18	N063976-001ADUP	DUP	5	Hexavalent Chromium	03/26/24 11:22 AM	Reported
19	N063976-001AMS	MS	5	Hexavalent Chromium	03/26/24 11:32 AM	Reported
20	N063976-001AMSD	MSD	5	Hexavalent Chromium	03/26/24 11:41 AM	Reported
21	N063617-012A	SAMP	50	Hexavalent Chromium	03/26/24 11:51 AM	Not Reported
22	N063978-001A	SAMP	1	Hexavalent Chromium	03/26/24 12:00 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/26/24 12:09 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/26/24 12:19 PM	Reported
25	N063617-012AMS	MS	50	Hexavalent Chromium	03/26/24 12:28 PM	Not Reported
26	MB-107782	MBLK	1	Hexavalent Chromium	03/26/24 12:38 PM	Reported
27	N063978-001AREP	DUP	1	Hexavalent Chromium	03/26/24 12:47 PM	Reported
28	CCV-3	CCV	1	Hexavalent Chromium	03/26/24 12:57 PM	Reported
29	CCB-3	CCB	1	Hexavalent Chromium	03/26/24 1:06 PM	Reported
30	BLANK	BLANK	1	Hexavalent Chromium	03/26/24 1:16 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240326A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**26/Mar/24 13:46:27**
No. of Injections:	**33**	*Updated By:*	**ics 5000**

Injection Details

No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/26/2024 09:21	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/26/2024 09:32	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/26/2024 09:42	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/26/2024 09:51	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/26/2024 10:01	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/26/2024 10:10	Finished	LCS @5ppb, IWST-231228B
15	N063976-001A,SAMP	1	1000	Unknown		03/26/2024 10:50	Finished	SAMP,10 mL
16	N063976-001AMS,MS	2	1000	Unknown		03/26/2024 11:03	Finished	MS (1ppb), IWST-231228B,10r
17	N063976-001A,SAMP	3	1000	Unknown		03/26/2024 11:13	Finished	SAMP,2>10 mL
18	N063976-001ADUP,D	4	1000	Unknown		03/26/2024 11:22	Finished	DUP,2>10 mL
19	N063976-001AMS,MS	5	1000	Unknown		03/26/2024 11:32	Finished	MS (1ppb), IWST-231228B,2>1
20	N063976-001AMSD,M	6	1000	Unknown		03/26/2024 11:41	Finished	MSD (1ppb), IWST-231228B,2
21	N063617-012A,SAMP	7	1000	Unknown		03/26/2024 11:51	Finished	SAMP,0.2>10 mL
22	N063978-001A,SAMP	8	1000	Unknown		03/26/2024 12:00	Finished	SAMP,10 mL
23	CCV-2,CCV1,1,	9	1000	Unknown		03/26/2024 12:09	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		03/26/2024 12:19	Finished	CCB R240129C
25	N063617-012AMS,MS	11	1000	Unknown		03/26/2024 12:28	Finished	MS (5ppb), IWST-231228B,0.2
26	MB-107782,MBLK,1,	12	1000	Unknown		03/26/2024 12:38	Finished	MB TC DI
27	N063978-001AREP,D	13	1000	Unknown		03/26/2024 12:47	Finished	DUP,10 mL
28	CCV-3,CCV,1,	14	1000	Unknown		03/26/2024 12:57	Finished	CCV @10ppb, IWST-231228A
29	CCB-3,CCB,1,	15	1000	Unknown		03/26/2024 13:06	Finished	CCB R240129C
30	BLANK	16	1000	Unknown		03/26/2024 13:16	Finished	BLANK
31	SHUTDOWN	17	1000	Unknown		03/26/2024 13:25	Finished	
32	Eluent: R240326A	18	1000	Unknown		n.a.	Finished	
33	PCR: R240326B	19	1000	Unknown		n.a.	Finished	

SAMPLE PREPARATION LOG

Hexavalent Chromium Preparation and Runlog

Sample Preparation

Date Prepared: 3/22/24
Time Prepared: 1434 H
Prepared By: NA

Reagent ID:
Sulfuric Acid: 15405
Diphenylcarbazide: 15409
NH4OH + NH4SO4 eluent: RM03184
NH4OH + NH4SO4 buffer: RM01256

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MB 79776-1A	9.34	-	~250mL	~200mL		
2)							
3)							
4)							
5)							
6)							
7)							
8)							
9)							
10)							
11)							
12)							
13)							
14)							
15)							

Sample Preparation

Date Prepared: 3/26/24
Time Prepared: 1834 H
Prepared By: NA

Reagent ID:
Sulfuric Acid: RM05
Diphenylcarbazide: ~~15409~~ → RM 16094
NH4OH + NH4SO4 eluent: ~~RM03184~~ → RM 03284
NH4OH + NH4SO4 buffer: RM01456

	Sample ID.	pH of sample	pH after treatment	Initial Volume of sample	Final Volume after buffer add'n	Volume of buffer added	Comments
1)	MB-107782	7.85	9.49	~2L	~2L	+0.2mL RM01256 (10N)	JE
2)	MB 79778-1A	9.18	9.21	↓	1	↓	JE
3)							
4)							
5)							
6)							
7)							
8)							
9)							
10)							
11)							
12)							
13)							
14)							
15)							

Logbook No. 24

INITIAL CALIBRATION DATA SUMMARY

(EPA 218.6) - INITIAL CALIBRATION

Instrument ID: IC-07
Date Calibrated: 3/5/2024

Initial Calibration:

Hexavalent Chromium	STD1	STD2	STD3	STD4	STD5	STD6	
COMPOUND, in ug/L	0.2	1	5	10	15	20	R^2
Area,mAU*min	0.0412	0.2259	1.0754	2.1395	3.1834	4.2546	1.0000
Measured, in ug/L	0.193700	1.061600	5.052800	10.052000	14.957000	19.990000	
Relative Error (%RE)	-3.2%		1.1%				

	Stock	Working
Standard Concentration:	1,000,000 PPB	1,000 PPB
Standard ID:	ISST-220322A	IWST-231228A

Calibration Acceptance Criteria: > 0.999 Correlation

CALCULATION:

% Relative Error = {(B - A) / A} * 100

Where:
A = True value for the calibration standard
B = Measured concentration of the calibration standard

* Please note that the instrument printout for Area were represented in three decimal places.

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICV**	SampType: **ICV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184050**
Client ID: **ICV**	Batch ID: **R184050**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5770930**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	4.874	0.20	5.000	0	97.5	90	110				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184050**
Client ID: **ZZZZZZ**	Batch ID: **R184050**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5770931**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.219	0.20	0.2000	0	109	80	120				

Sample ID: **CCV-1**	SampType: **CCV**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184050**
Client ID: **CCV**	Batch ID: **R184050**	TestNo: **EPA 218.6**		Analysis Date: **3/26/2024**	SeqNo: **5770933**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	5.106	0.20	5.000	0	102	95	105				

Sample ID: **PQL@0.2ppb**	SampType: **CCV2**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184050**
Client ID: **ZZZZZZ**	Batch ID: **R184050**	TestNo: **EPA 218.6**		Analysis Date: **3/26/2024**	SeqNo: **5770934**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	0.168	0.20	0.2000	0	84.0	80	120				

Sample ID: **CCV-2**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184050**
Client ID: **ZZZZZZ**	Batch ID: **R184050**	TestNo: **EPA 218.6**		Analysis Date: **3/26/2024**	SeqNo: **5770943**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	9.984	0.20	10.00	0	99.8	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **CCV-3**	SampType: **CCV1**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184050**
Client ID: **ZZZZZZ**	Batch ID: **R184050**	TestNo: **EPA 218.6**		Analysis Date: **3/26/2024**	SeqNo: **5770947**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	10.075	0.20	10.00	0	101	95	105				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6_WPGE

Sample ID: **ICB**	SampType: **ICB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184050**
Client ID: **ICB**	Batch ID: **R184050**	TestNo: **EPA 218.6**		Analysis Date: **3/5/2024**	SeqNo: **5770932**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-1**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184050**
Client ID: **CCB**	Batch ID: **R184050**	TestNo: **EPA 218.6**		Analysis Date: **3/26/2024**	SeqNo: **5770935**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-2**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184050**
Client ID: **CCB**	Batch ID: **R184050**	TestNo: **EPA 218.6**		Analysis Date: **3/26/2024**	SeqNo: **5770944**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Sample ID: **CCB-3**	SampType: **CCB**	TestCode: **218.6_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184050**
Client ID: **CCB**	Batch ID: **R184050**	TestNo: **EPA 218.6**		Analysis Date: **3/26/2024**	SeqNo: **5770948**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	ND	0.20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

RETENTION TIME SUMMARY

RETENTION TIME (RT) SUMMARY

Instrument ID: IC-07

Analytical Sequence

Date Analyzed: 3/26/2024

Sample Name	Retention Time	Evaluation
ICV	4.015	
CCV-1	3.973	
CCV-2	3.973	
CCV-3	3.973	
Average	3.973	
Actual RT Window	3.893 - 4.053	
Applied RT Window	3.773 - 4.173	
MB-R184050	N.A.	N.A.
LCS-R184050	3.973	PASS
N063976-001A	3.931	PASS
N063976-001ADUP	3.931	PASS
N063976-001AMS	3.931	PASS
N063976-001AMSD	3.931	PASS
N063617-012A	3.973	PASS
N063978-001A	3.973	PASS
N063617-012AMS	3.973	PASS
MB-107782	N.A.	N.A.
N063978-001AREP	3.965	PASS

Reviewed by:

dMRocha 3/27/2024

MDL STUDY

METHOD DETECTION LIMIT (Spiked)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): 10/4/2022, 11/15/2022, 1/4/2023, 3/1/2023, 4/4/2023, 5/16/2023, 7/10/2023, 8/2/2023
Analyst: Ria Abes

Matrix: **WATER**
Unit: ug/L

Instrument Name: **IC-07**

Datafile 221004A D12 221115A D12 230104A D11 230301C D14 230404A D11 230516A D11 230710A D12 230802A D11

Analyte	#1	#2	#3	#4	#5	#6	#7	#8	Spike Conc., ug/L	SD	$t_{(n-1)}$ value	MDLs	PQL
Hexavalent Chromium	0.199	0.194	0.169	0.190	0.167	0.194	0.201	0.185	0.20	0.0129	2.998	**0.0387**	**0.20**

METHOD DETECTION LIMIT (Blanks)

Method Name: **HEXAVALENT CHROMIUM by Ion Chromatography**
Method Number: EPA 218.6 / EPA 7199
Analysis Date(s): Pooled from January 1, 2023 to July 31, 2023

Instrument Name: **IC-07**

Analyte	MDLb	#of Records
Hexavalent Chromium	**0.00**	166

Note: Higher value between **MDLs** and **MDLb** will be used.

Students' **t** Values at 99% CL

#	$t_{(n-1)}$
10	2.821
9	2.896
8	2.998
7	3.143

RAW DATA

INITIAL CALIBRATION

INJECTION LOG: 240305A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	ICV	ICV	1	Hexavalent Chromium	03/05/24 4:07 PM	Reported
10	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/05/24 4:16 PM	Reported
11	ICB	ICB	1	Hexavalent Chromium	03/05/24 4:26 PM	Reported
12	MB-R183315	MBLK	1	Hexavalent Chromium	03/05/24 4:35 PM	Reported
13	LCS-R183315	LCS	1	Hexavalent Chromium	03/05/24 4:45 PM	Reported
14	MB-107277	MBLK	1	Hexavalent Chromium	03/05/24 4:54 PM	Reported
15	N063472-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:04 PM	Reported
16	N063472-001ADUP	DUP	1	Hexavalent Chromium	03/05/24 5:13 PM	Reported
17	N063535-006A	SAMP	1	Hexavalent Chromium	03/05/24 5:23 PM	Reported
18	N063535-006AMS	MS	1	Hexavalent Chromium	03/05/24 5:32 PM	Reported
19	N063535-006AMSD	MSD	1	Hexavalent Chromium	03/05/24 5:42 PM	Reported
20	N063534-001A	SAMP	1	Hexavalent Chromium	03/05/24 5:51 PM	Reported
21	N063534-001AMS	MS	1	Hexavalent Chromium	03/05/24 6:00 PM	Reported
22	CCV-1	CCV1	1	Hexavalent Chromium	03/05/24 6:10 PM	Reported
23	CCB-1	CCB	1	Hexavalent Chromium	03/05/24 6:20 PM	Reported
24	N063534-002A	SAMP	1	Hexavalent Chromium	03/05/24 6:30 PM	Reported
25	N063534-002AMS	MS	1	Hexavalent Chromium	03/05/24 6:38 PM	Reported
26	N063534-003A	SAMP	1	Hexavalent Chromium	03/05/24 6:48 PM	Reported
27	N063534-003AMS	MS	1	Hexavalent Chromium	03/05/24 6:57 PM	Reported
28	N063535-001A	SAMP	1	Hexavalent Chromium	03/05/24 7:07 PM	Reported
29	N063535-002A	SAMP	1	Hexavalent Chromium	03/05/24 7:16 PM	Reported
30	N063535-003A	SAMP	1	Hexavalent Chromium	03/05/24 7:26 PM	Reported
31	N063535-004A	SAMP	1	Hexavalent Chromium	03/05/24 7:35 PM	Reported
32	N063535-005A	SAMP	1	Hexavalent Chromium	03/05/24 7:48 PM	Reported
33	CCV-2	CCV	1	Hexavalent Chromium	03/05/24 7:57 PM	Reported
34	CCB-2	CCB	1	Hexavalent Chromium	03/05/24 8:07 PM	Reported
35	N063535-007A	SAMP	1	Hexavalent Chromium	03/05/24 8:16 PM	Reported
36	N063535-008A	SAMP	1	Hexavalent Chromium	03/05/24 8:25 PM	Reported
37	CCV-3	CCV1	1	Hexavalent Chromium	03/05/24 8:35 PM	Reported
38	CCB-3	CCB	1	Hexavalent Chromium	03/05/24 8:46 PM	Reported
39	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 8:55 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240305A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**07/Mar/24 08:03:58**
No. of Injections:	**42**	*Updated By:*	**ics 5000**

Injection Details

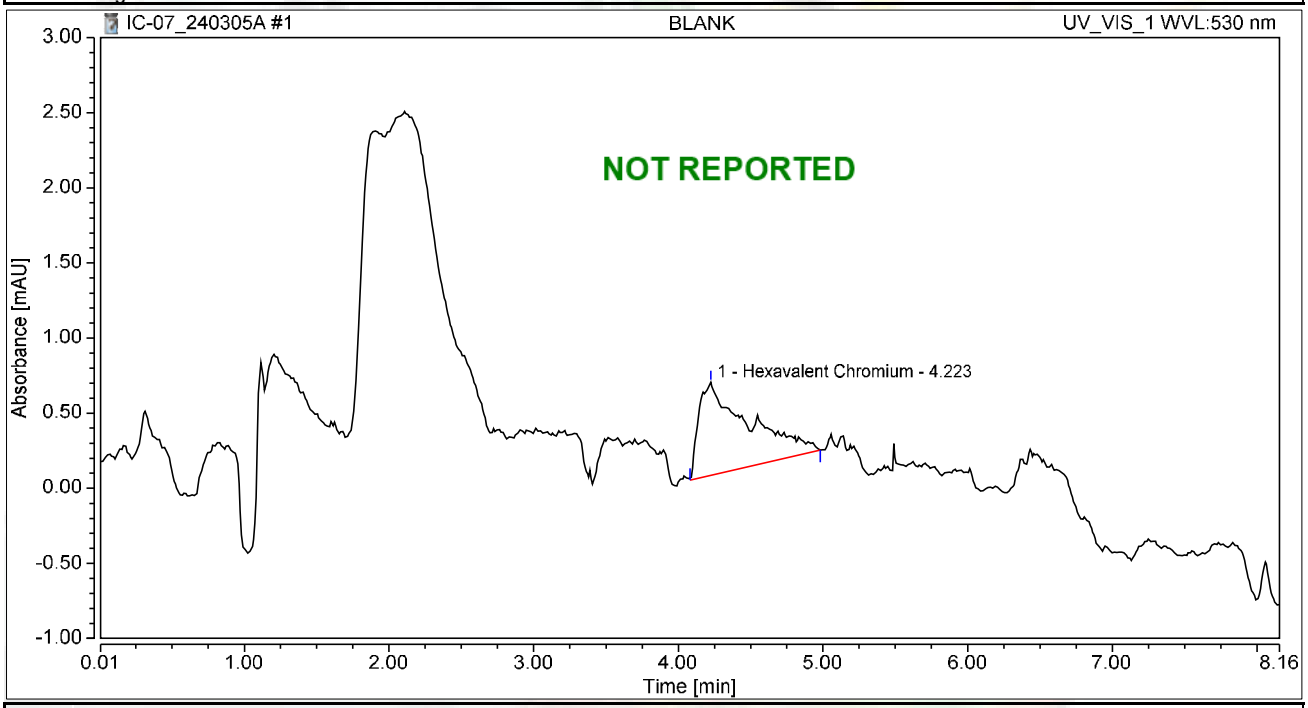
No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	ICV,ICV,1,	8	1000	Unknown		03/05/2024 16:07	Finished	ICV @5ppb, IWST-231228B
10	PQL@0.2ppb,CCV2,1	9	1000	Unknown		03/05/2024 16:16	Finished	PQL @ 0.2ppb
11	ICB,ICB,1	10	1000	Unknown		03/05/2024 16:26	Finished	ICB R240129C
12	MB-H2O,MBLK,1,	11	1000	Unknown		03/05/2024 16:35	Finished	MB R240129C
13	LCS-H2O,LCS,1,	12	1000	Unknown		03/05/2024 16:45	Finished	LCS @5ppb, IWST-231228B
14	MB-107277,MBLK,1,	13	1000	Unknown		03/05/2024 16:54	Finished	MB TCLP
15	N063472-001A,SAMP	14	1000	Unknown		03/05/2024 17:04	Finished	SAMP,10 mL
16	N063472-001ADUP,D	15	1000	Unknown		03/05/2024 17:13	Finished	REP,10 mL
17	N063535-006A,SAMP	16	1000	Unknown		03/05/2024 17:23	Finished	SAMP,10 mL
18	N063535-006AMS,MS	17	1000	Unknown		03/05/2024 17:32	Finished	MS (5ppb), IWST-231228B,10r
19	N063535-006AMSD,M	18	1000	Unknown		03/05/2024 17:42	Finished	MSD (5ppb), IWST-231228B,1(
20	N063534-001A,SAMP	19	1000	Unknown		03/05/2024 17:51	Finished	SAMP,10 mL
21	N063534-001AMS,MS	20	1000	Unknown		03/05/2024 18:00	Finished	MS (1ppb), IWST-231228B,10r
22	CCV-1,CCV1,1,	21	1000	Unknown		03/05/2024 18:10	Finished	CCV @10ppb, IWST-231228A
23	CCB-1,CCB,1,	22	1000	Unknown		03/05/2024 18:20	Finished	CCB R240129C
24	N063534-002A,SAMP	23	1000	Unknown		03/05/2024 18:30	Finished	SAMP,10 mL
25	N063534-002AMS,MS	24	1000	Unknown		03/05/2024 18:38	Finished	MS (1ppb), IWST-231228B,10r
26	N063534-003A,SAMP	25	1000	Unknown		03/05/2024 18:48	Finished	SAMP,10 mL
27	N063534-003AMS,MS	26	1000	Unknown		03/05/2024 18:57	Finished	MS (1ppb), IWST-231228B,10r
28	N063535-001A,SAMP	27	1000	Unknown		03/05/2024 19:07	Finished	SAMP,10 mL
29	N063535-002A,SAMP	28	1000	Unknown		03/05/2024 19:16	Finished	SAMP,10 mL
30	N063535-003A,SAMP	29	1000	Unknown		03/05/2024 19:26	Finished	SAMP,10 mL
31	N063535-004A,SAMP	30	1000	Unknown		03/05/2024 19:35	Finished	SAMP,10 mL
32	N063535-005A,SAMP	31	1000	Unknown		03/05/2024 19:48	Finished	SAMP,10 mL
33	CCV-2,CCV,1,	32	1000	Unknown		03/05/2024 19:57	Finished	CCV @5ppb, IWST-231228A
34	CCB-2,CCB,1,	33	1000	Unknown		03/05/2024 20:07	Finished	CCB R240129C
35	N063535-007A,SAMP	34	1000	Unknown		03/05/2024 20:16	Finished	SAMP,10 mL
36	N063535-008A,SAMP	35	1000	Unknown		03/05/2024 20:25	Finished	SAMP,10 mL
37	CCV-3,CCV1,1,	37	1000	Unknown		03/05/2024 20:35	Finished	CCV @10ppb, IWST-231228A
38	CCB-3,CCB,1,	38	1000	Unknown		03/05/2024 20:46	Finished	CCB R240129C
39	BLANK	39	1000	Unknown		03/05/2024 20:55	Finished	BLANK
40	SHUTDOWN	40	1000	Unknown		03/05/2024 21:05	Finished	
41	Eluent: R240305B	41	1000	Unknown		n.a.	Finished	
42	PCR: R240305C	42	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.15**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 13:56**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

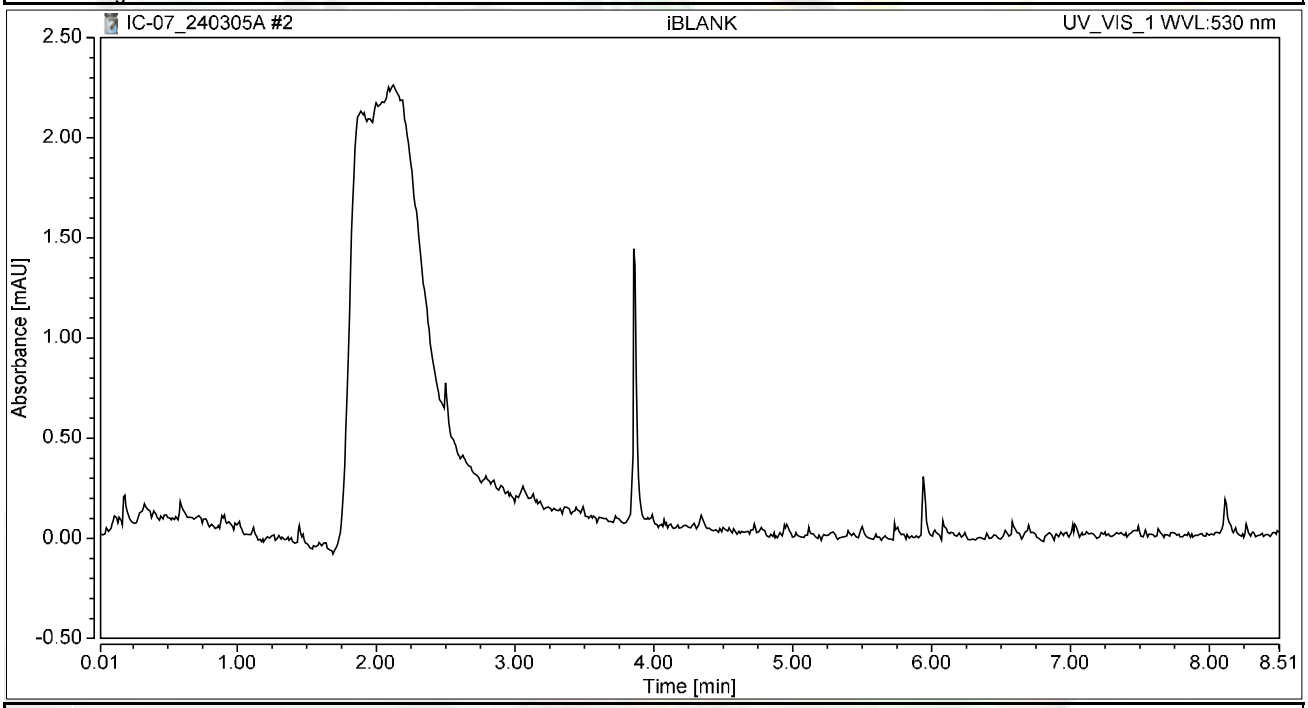
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.223	0.243	0.620	100.00	100.00	1.1440
Total:			**0.243**	**0.620**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**iBLANK**	*Run Time (min):*	**8.49**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 14:59**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

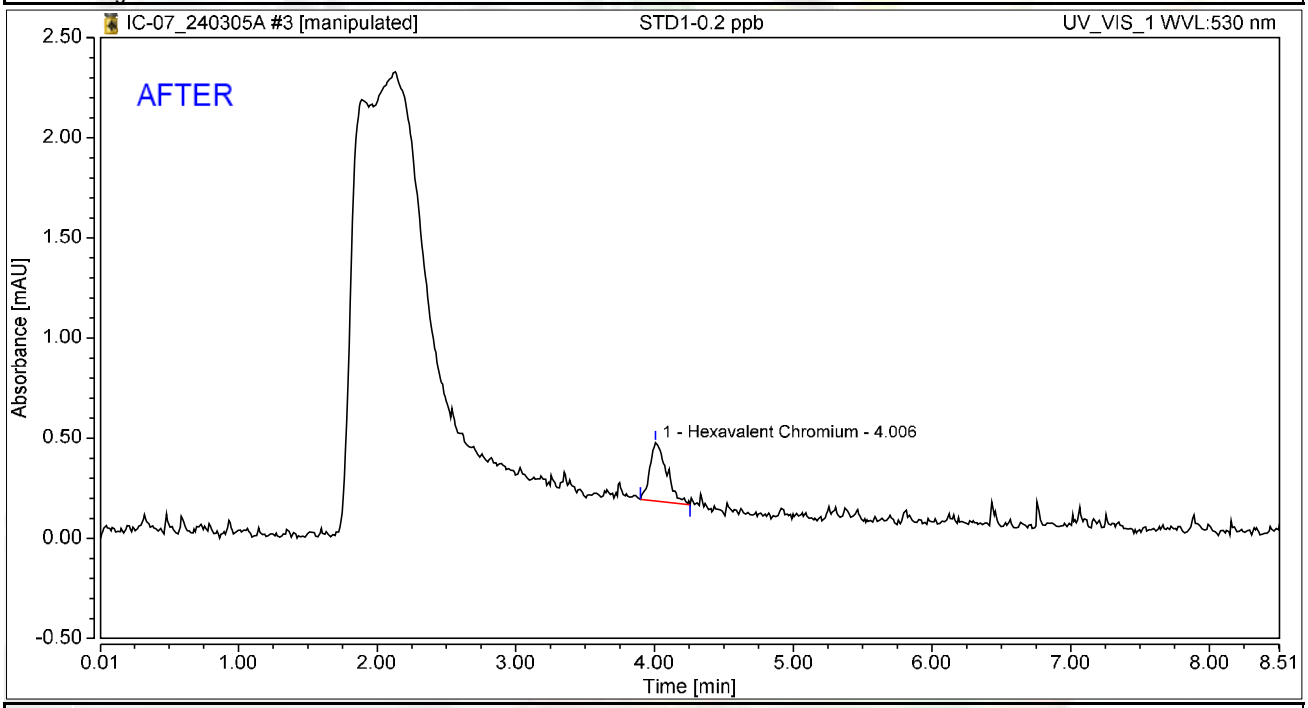
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.006	0.041	0.290	100.00	100.00	0.1937
Total:			**0.041**	**0.290**	**100.00**	**100.00**	

Reviewed by:

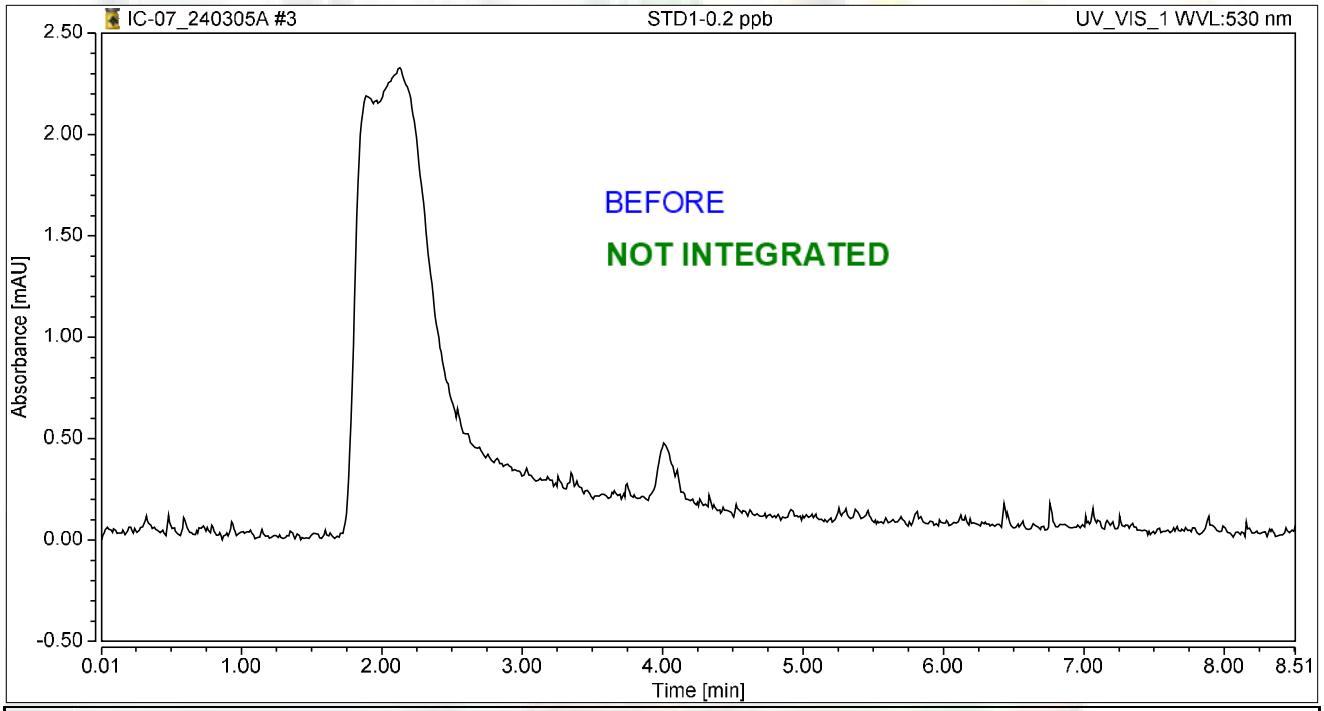
dMocha 3/11/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD1-0.2 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**01**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

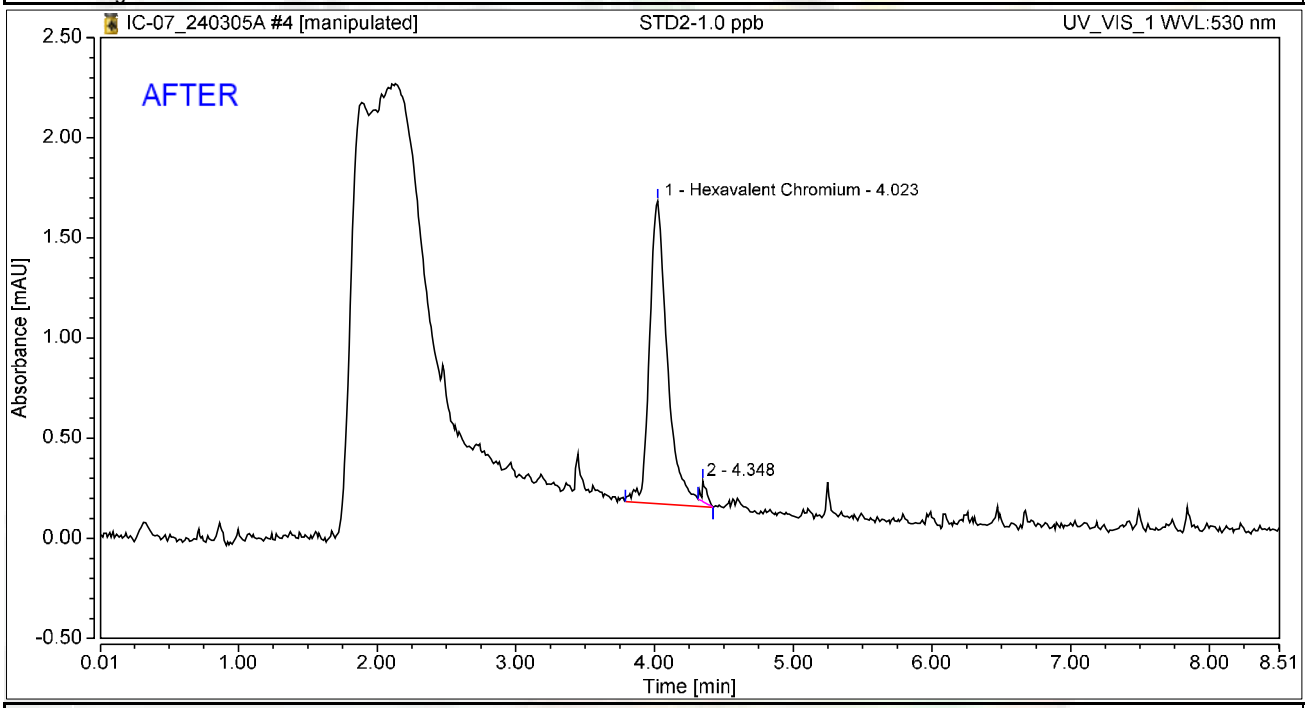
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.226	1.511	98.02	93.66	1.0616
2		4.348	0.005	0.102	1.98	6.34	n.a.
Total:			**0.231**	**1.614**	**100.00**	**100.00**	

Reviewed by:

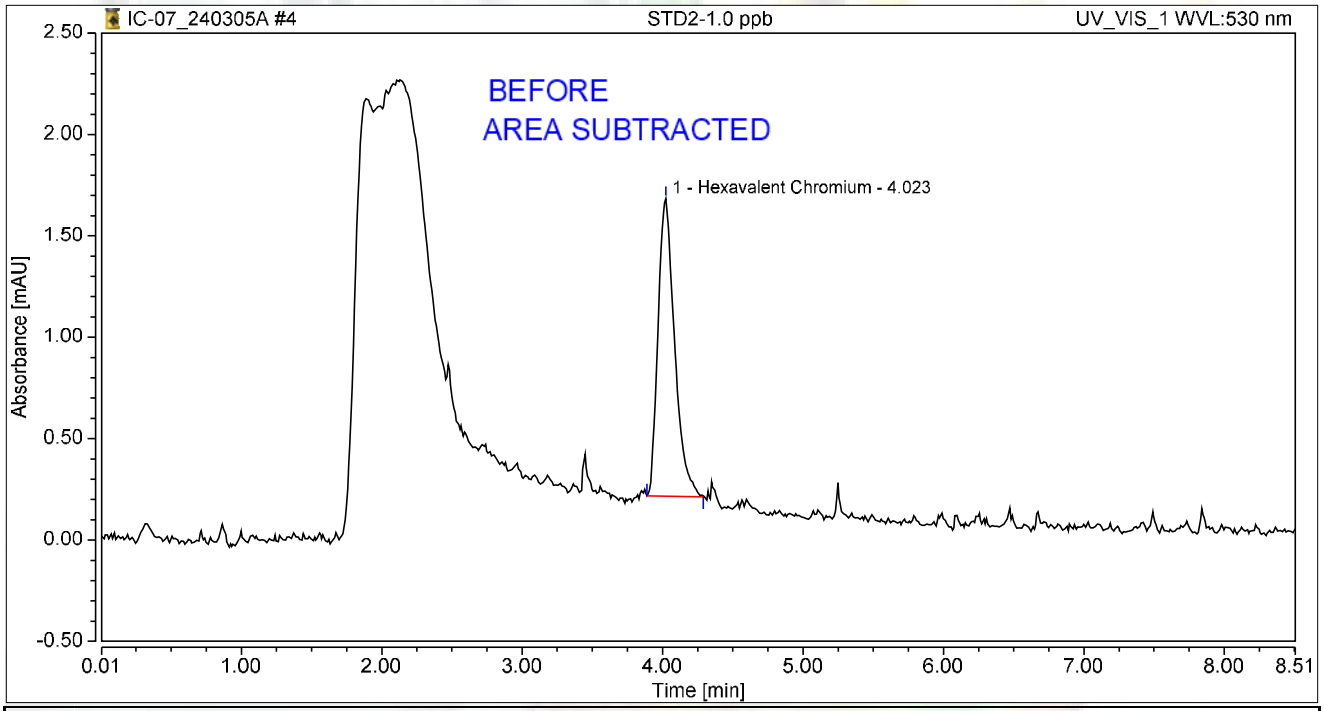
dlRocha 3/11/2024

Chromatogram and Results

Injection Details

Injection Name:	**STD2-1.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**02**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:20**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

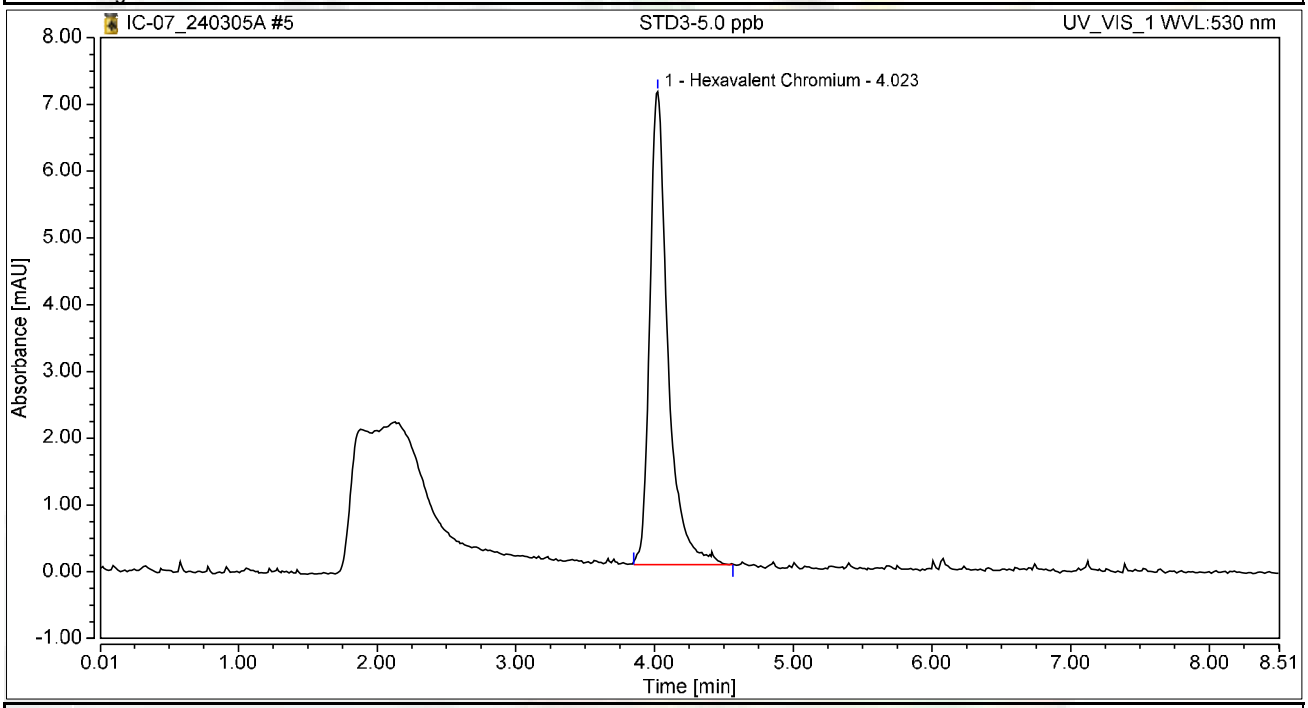
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.201	1.469	100.00	100.00	0.9426
Total:			**0.201**	**1.469**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD3-5.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**03**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:29**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

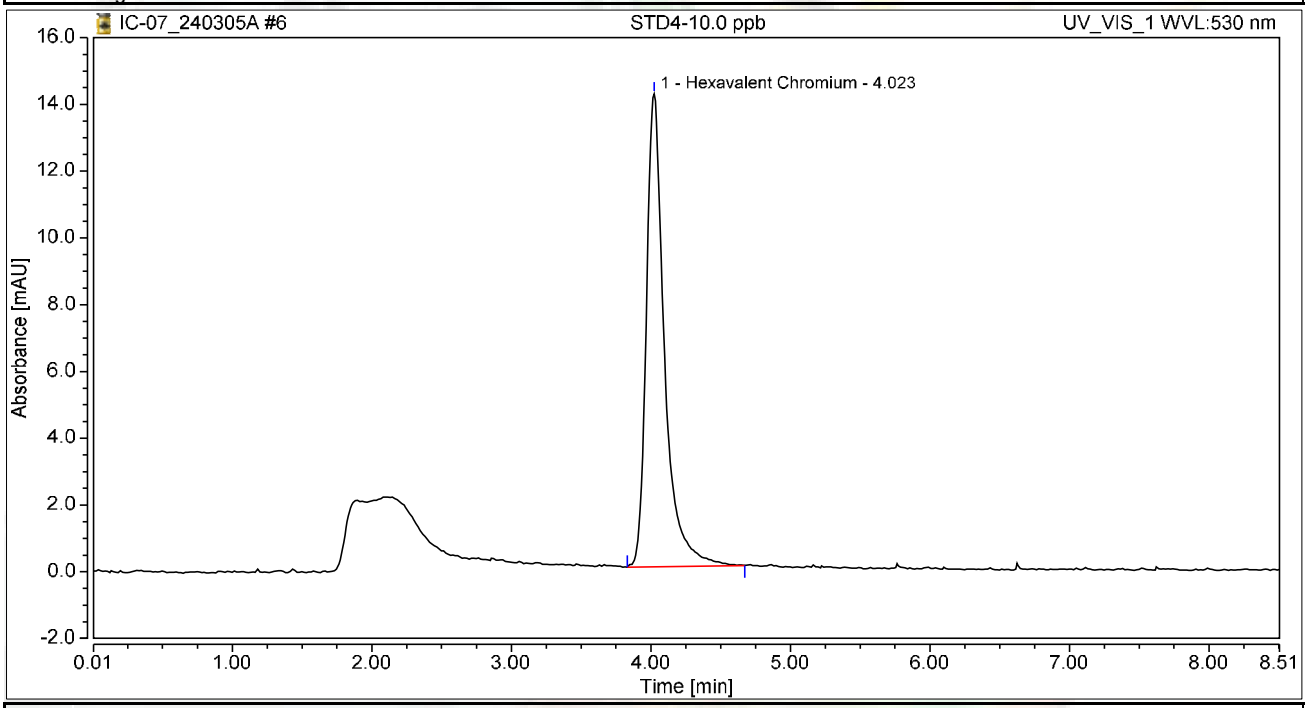
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	1.075	7.087	100.00	100.00	5.0528
Total:			**1.075**	**7.087**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD4-10.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**04**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:39**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

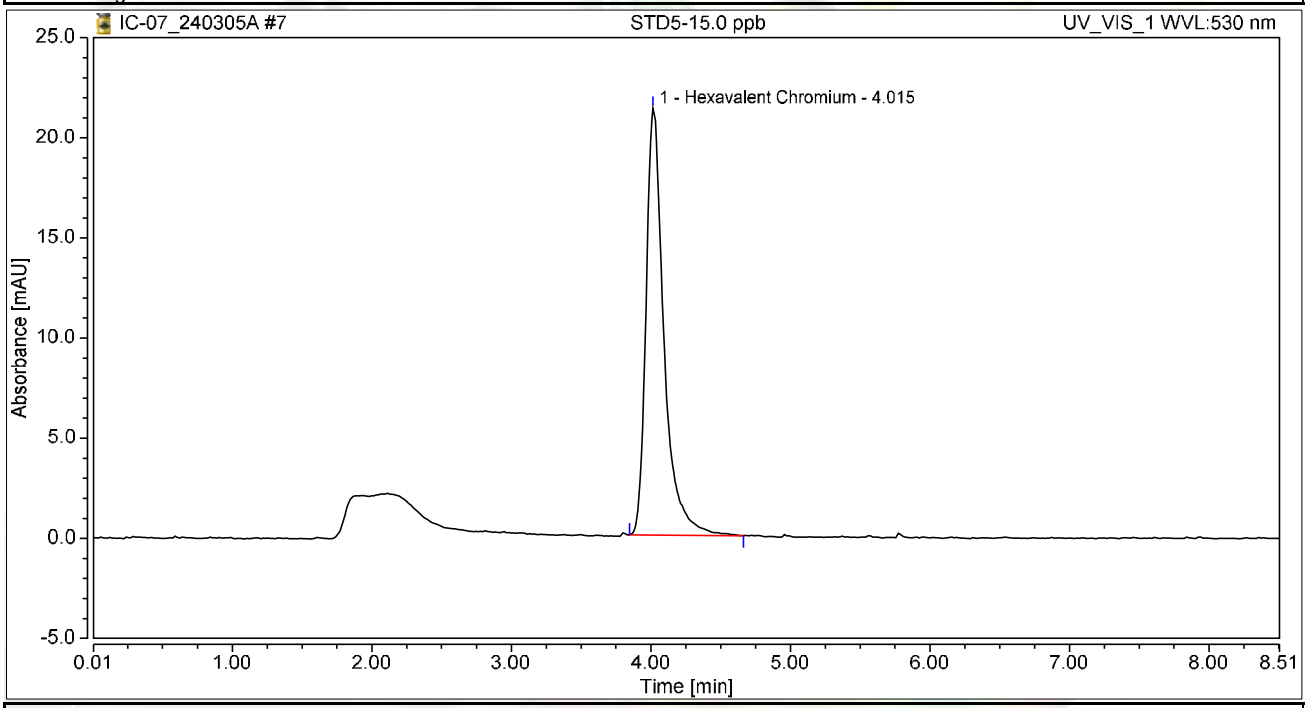
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	2.139	14.164	100.00	100.00	10.0520
Total:			**2.139**	**14.164**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD5-15.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**05**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:48**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

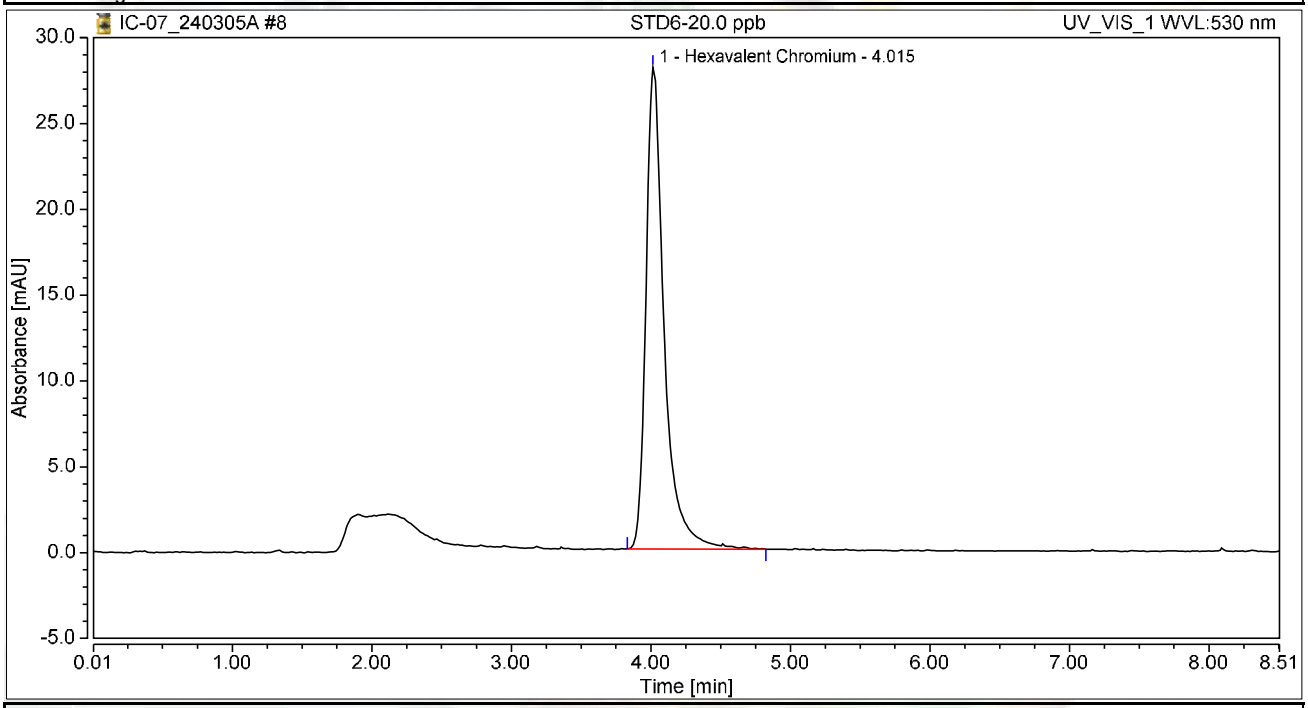
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	3.183	21.307	100.00	100.00	14.9570
Total:			**3.183**	**21.307**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**STD6-20.0 ppb**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Calibration Standard**	*Channel:*	**UV_VIS_1**
Calibration Level:	**06**	*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 15:58**	*Sample Weight:*	**1.0000**

Chromatogram



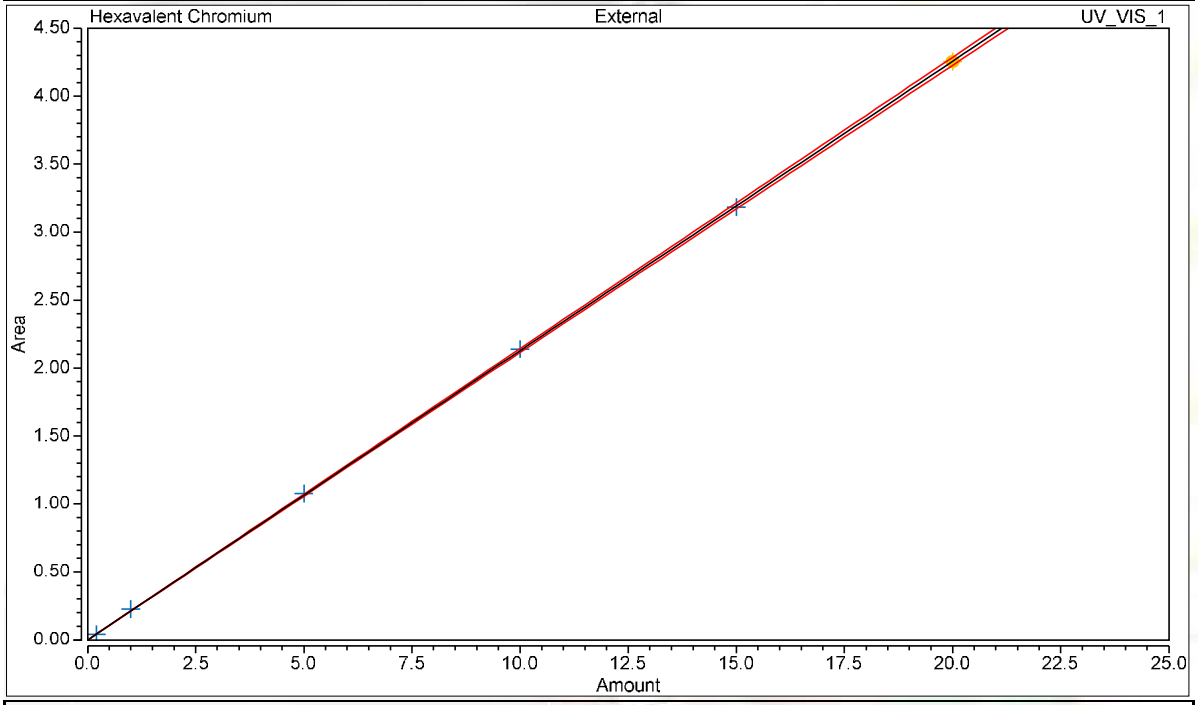
Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	4.255	28.050	100.00	100.00	19.9900
Total:			**4.255**	**28.050**	**100.00**	**100.00**	

Initial Calibration Summary

Calibration Details	Hexavalent Chromium		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	0.2128
Number of Calibration Points	6	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0.99996

Calibration Plot Hexavalent Chromium



Calibration Results Hexavalent Chromium

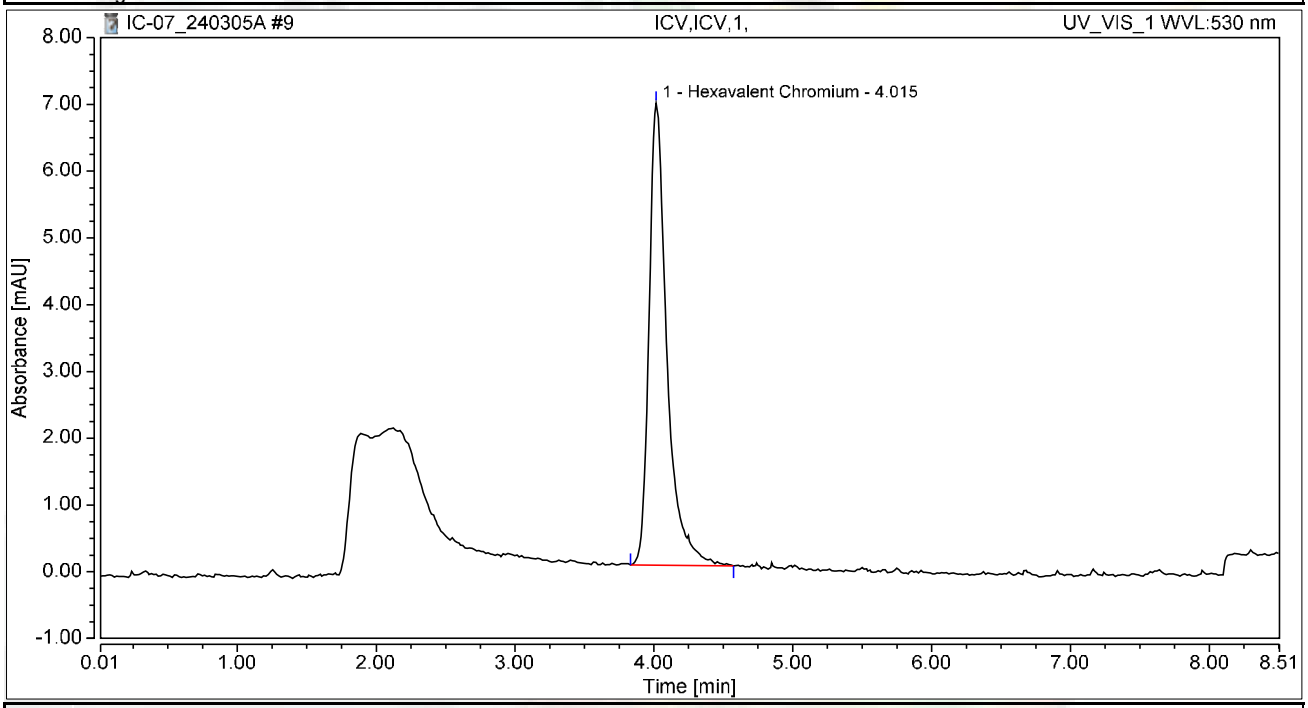
No.	Injection Name	Calibration Level	X Value	Y Value	Area mAU*min	Height mAU
3	STD1-0.2 ppb	01	0.2000	0.0412	0.041	0.290
4	STD2-1.0 ppb	02	1.0000	0.2259	0.226	1.511
5	STD3-5.0 ppb	03	5.0000	1.0754	1.075	7.087
6	STD4-10.0 ppb	04	10.0000	2.1395	2.139	14.164
7	STD5-15.0 ppb	05	15.0000	3.1834	3.183	21.307
8	STD6-20.0 ppb	06	20.0000	4.2546	4.255	28.050

Chromatogram and Results

Injection Details

Injection Name:	**ICV,ICV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:07**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

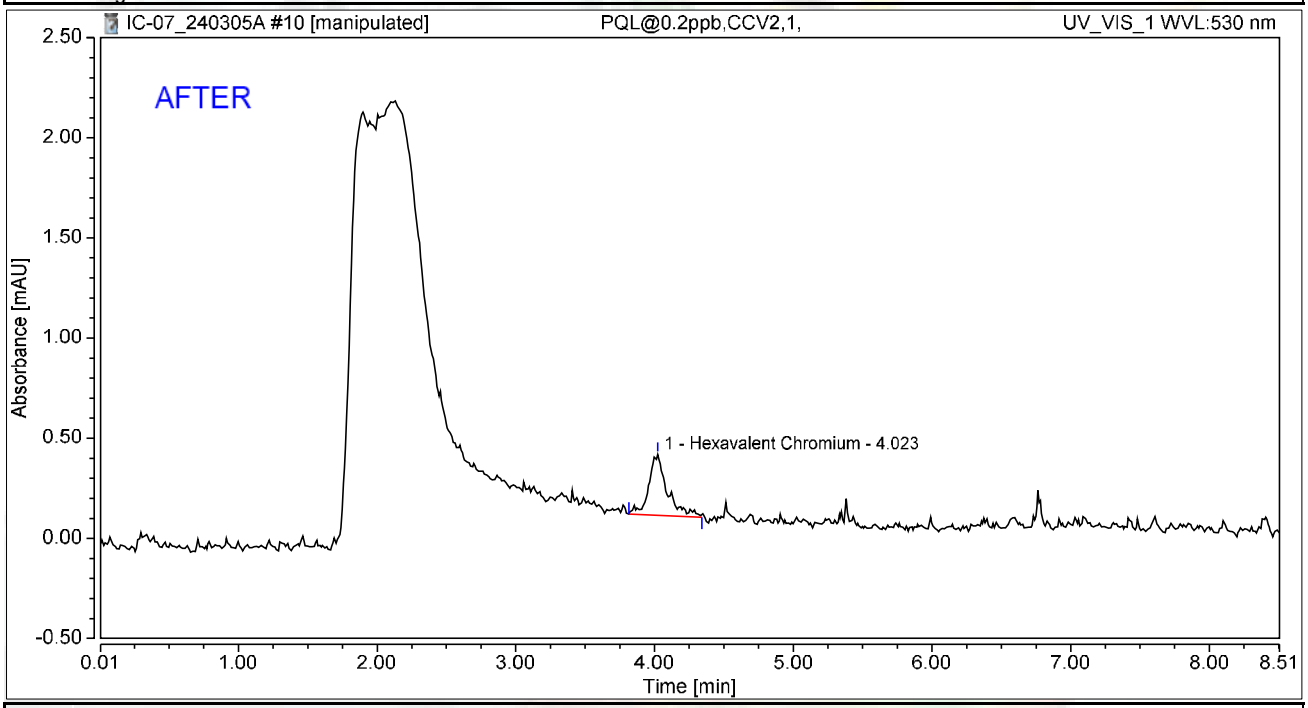
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.015	1.037	6.923	100.00	100.00	4.8744
Total:			**1.037**	**6.923**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.047	0.304	100.00	100.00	0.2189
Total:			**0.047**	**0.304**	**100.00**	**100.00**	

Reviewed by:

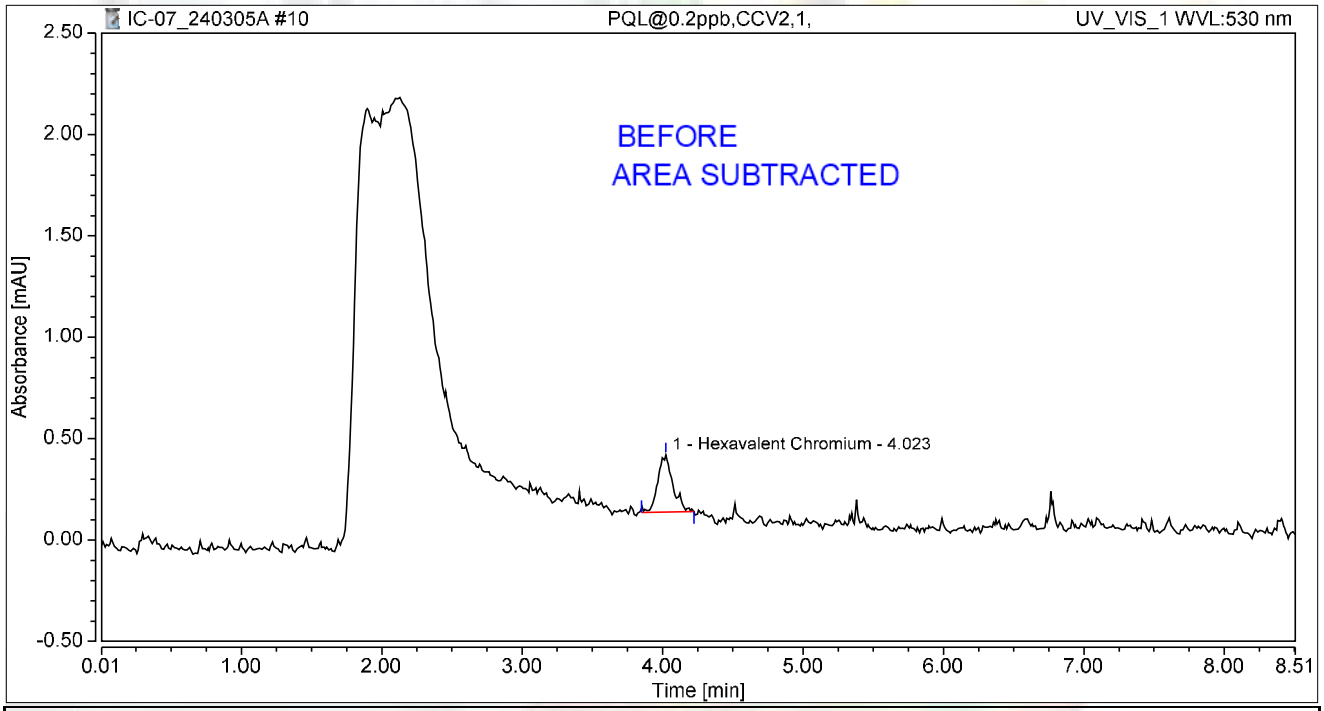
dMocha 3/11/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

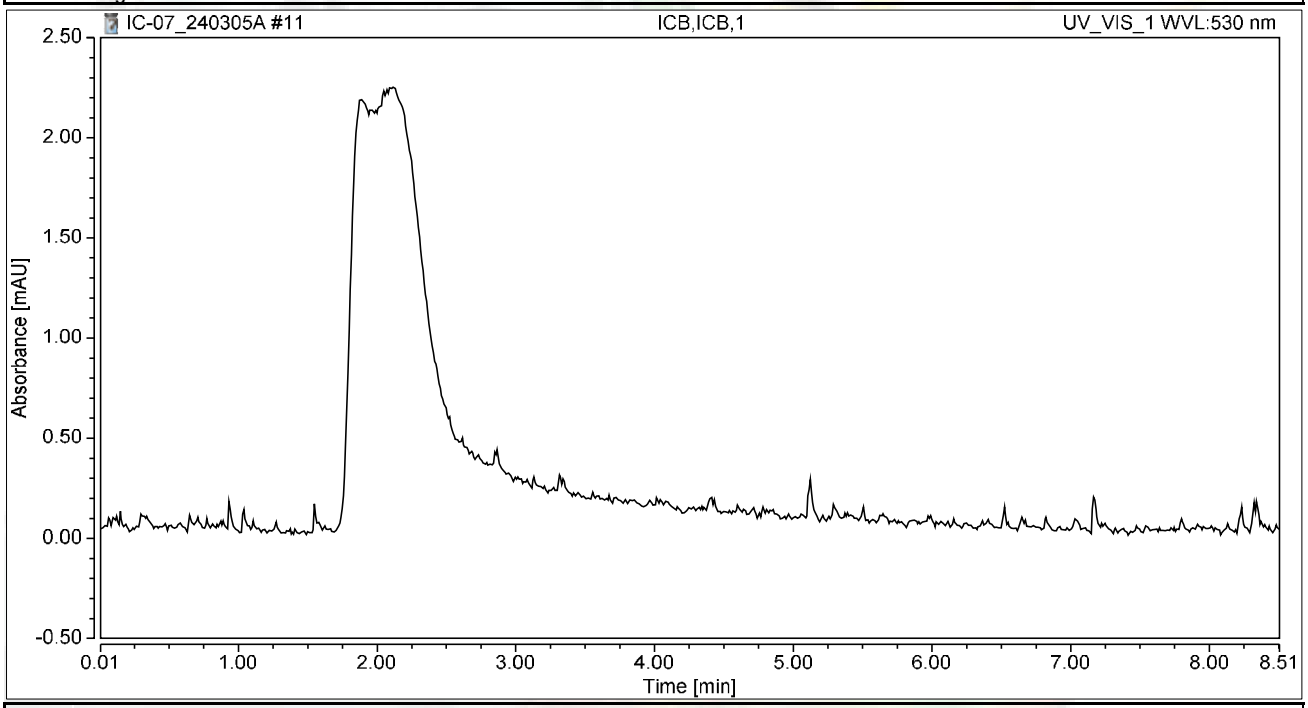
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	4.023	0.035	0.282	100.00	100.00	0.1646
Total:			**0.035**	**0.282**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**ICB,ICB,1**	*Run Time (min):*	**8.50**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**05/Mar/24 16:26**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

RAW DATA

INJECTION LOG: 240326A

Instrument ID: IC-07

Sample No	Sample Name	Type	DF	Peak Name	Injection Date/Time	Comments
1	BLANK	BLANK	1	Hexavalent Chromium	03/05/24 1:56 PM	Not Reported
2	iBLANK	iBLANK	1	Hexavalent Chromium	03/05/24 2:59 PM	Reported
3	STD-0.2 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:10 PM	Reported
4	STD-1.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:20 PM	Reported
5	STD-5.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:29 PM	Reported
6	STD-10.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:39 PM	Reported
7	STD-15.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:48 PM	Reported
8	STD-20.0 ppb	ICAL	1	Hexavalent Chromium	03/05/24 3:58 PM	Reported
9	BLANK	BLANK	1	Hexavalent Chromium	03/26/24 9:21 AM	Not Reported
10	CCV-1	CCV	1	Hexavalent Chromium	03/26/24 9:32 AM	Reported
11	PQL@0.2ppb	CCV2	1	Hexavalent Chromium	03/26/24 9:42 AM	Reported
12	CCB-1	CCB	1	Hexavalent Chromium	03/26/24 9:51 AM	Reported
13	MB-R184050	MBLK	1	Hexavalent Chromium	03/26/24 10:01 AM	Reported
14	LCS-R184050	LCS	1	Hexavalent Chromium	03/26/24 10:10 AM	Reported
15	N063976-001A	SAMP	1	Hexavalent Chromium	03/26/24 10:50 AM	Not Reported
16	N063976-001AMS	MS	1	Hexavalent Chromium	03/26/24 11:03 AM	Not Reported
17	N063976-001A	SAMP	5	Hexavalent Chromium	03/26/24 11:13 AM	Reported
18	N063976-001ADUP	DUP	5	Hexavalent Chromium	03/26/24 11:22 AM	Reported
19	N063976-001AMS	MS	5	Hexavalent Chromium	03/26/24 11:32 AM	Reported
20	N063976-001AMSD	MSD	5	Hexavalent Chromium	03/26/24 11:41 AM	Reported
21	N063617-012A	SAMP	50	Hexavalent Chromium	03/26/24 11:51 AM	Not Reported
22	N063978-001A	SAMP	1	Hexavalent Chromium	03/26/24 12:00 PM	Reported
23	CCV-2	CCV1	1	Hexavalent Chromium	03/26/24 12:09 PM	Reported
24	CCB-2	CCB	1	Hexavalent Chromium	03/26/24 12:19 PM	Reported
25	N063617-012AMS	MS	50	Hexavalent Chromium	03/26/24 12:28 PM	Not Reported
26	MB-107782	MBLK	1	Hexavalent Chromium	03/26/24 12:38 PM	Reported
27	N063978-001AREP	DUP	1	Hexavalent Chromium	03/26/24 12:47 PM	Reported
28	CCV-3	CCV	1	Hexavalent Chromium	03/26/24 12:57 PM	Reported
29	CCB-3	CCB	1	Hexavalent Chromium	03/26/24 1:06 PM	Reported
30	BLANK	BLANK	1	Hexavalent Chromium	03/26/24 1:16 PM	Not Reported

Injection Log Summary

Sequence Details

Name:	**IC-07_240326A**	*Created On:*	**24/Jul/12 17:17:21**
Directory:	**Instrument Data\IC-7\2023\IC7**	*Created By:*	**ics 5000**
Data Vault:	**ChromeleonLocal4**	*Updated On:*	**26/Mar/24 13:46:27**
No. of Injections:	**33**	*Updated By:*	**ics 5000**

Injection Details

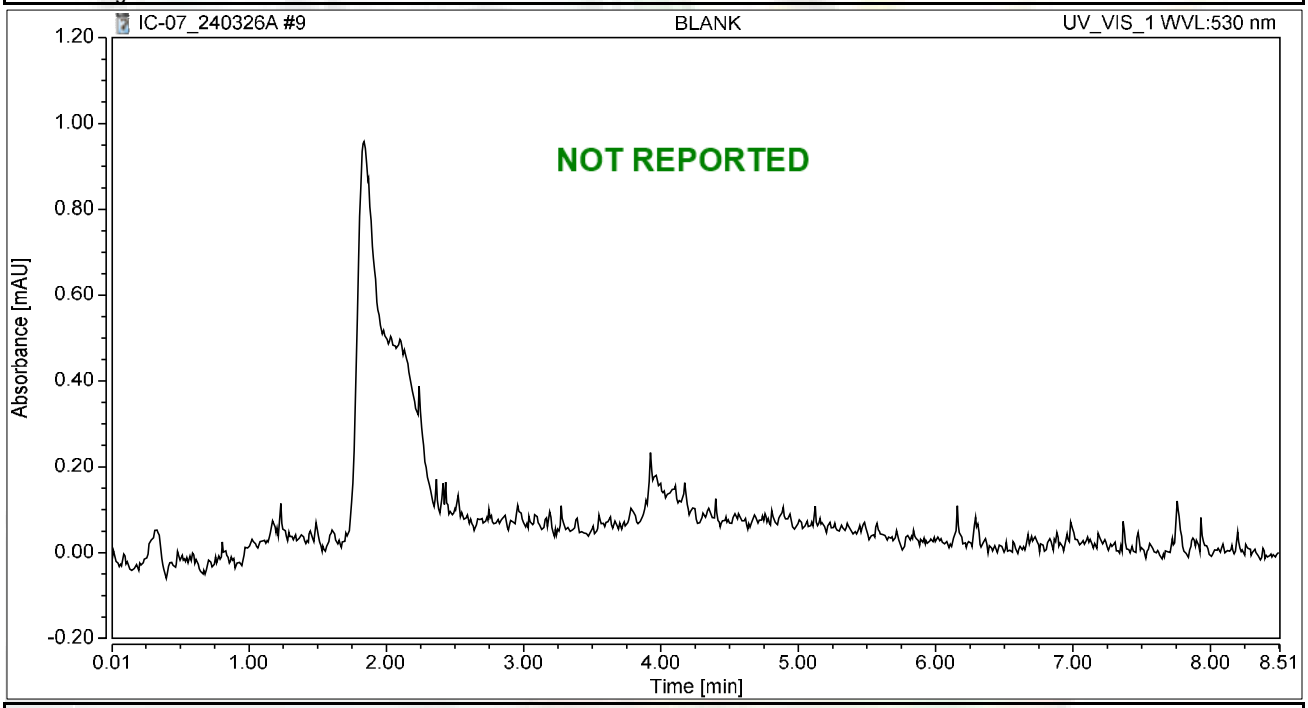
No.	Injection Name	Position	Volume µL	Type	Level	Inject Time	Status	Comment
1	BLANK	1	1000	Unknown		03/05/2024 13:56	Interrupted	BLANK
2	iBLANK	1	1000	Unknown		03/05/2024 14:59	Finished	INSTRUMENT BLANK
3	STD1-0.2 ppb	2	1000	Calibration Standard	01	03/05/2024 15:10	Finished	0.2 ppb, IWST-231228A
4	STD2-1.0 ppb	3	1000	Calibration Standard	02	03/05/2024 15:20	Finished	1.0 ppb, IWST-231228A
5	STD3-5.0 ppb	4	1000	Calibration Standard	03	03/05/2024 15:29	Finished	5.0 ppb, IWST-231228A
6	STD4-10.0 ppb	5	1000	Calibration Standard	04	03/05/2024 15:39	Finished	10 ppb, IWST-231228A
7	STD5-15.0 ppb	6	1000	Calibration Standard	05	03/05/2024 15:48	Finished	15 ppb, IWST-231228A
8	STD6-20.0 ppb	7	1000	Calibration Standard	06	03/05/2024 15:58	Finished	20 ppb, IWST-231228A
9	BLANK	1	1000	Unknown		03/26/2024 09:21	Finished	BLANK
10	CCV-1,CCV,1,	2	1000	Unknown		03/26/2024 09:32	Finished	CCV @5ppb, IWST-231228A
11	PQL@0.2ppb,CCV2,1	3	1000	Unknown		03/26/2024 09:42	Finished	PQL @ 0.2ppb
12	CCB-1,CCB,1	4	1000	Unknown		03/26/2024 09:51	Finished	ICB R240129C
13	MB-H2O,MBLK,1,	5	1000	Unknown		03/26/2024 10:01	Finished	MB R240129C
14	LCS-H2O,LCS,1,	6	1000	Unknown		03/26/2024 10:10	Finished	LCS @5ppb, IWST-231228B
15	N063976-001A,SAMP	1	1000	Unknown		03/26/2024 10:50	Finished	SAMP,10 mL
16	N063976-001AMS,MS	2	1000	Unknown		03/26/2024 11:03	Finished	MS (1ppb), IWST-231228B,10r
17	N063976-001A,SAMP	3	1000	Unknown		03/26/2024 11:13	Finished	SAMP,2>10 mL
18	N063976-001ADUP,D	4	1000	Unknown		03/26/2024 11:22	Finished	DUP,2>10 mL
19	N063976-001AMS,MS	5	1000	Unknown		03/26/2024 11:32	Finished	MS (1ppb), IWST-231228B,2>1
20	N063976-001AMSD,M	6	1000	Unknown		03/26/2024 11:41	Finished	MSD (1ppb), IWST-231228B,2
21	N063617-012A,SAMP	7	1000	Unknown		03/26/2024 11:51	Finished	SAMP,0.2>10 mL
22	N063978-001A,SAMP	8	1000	Unknown		03/26/2024 12:00	Finished	SAMP,10 mL
23	CCV-2,CCV1,1,	9	1000	Unknown		03/26/2024 12:09	Finished	CCV @10ppb, IWST-231228A
24	CCB-2,CCB,1,	10	1000	Unknown		03/26/2024 12:19	Finished	CCB R240129C
25	N063617-012AMS,MS	11	1000	Unknown		03/26/2024 12:28	Finished	MS (5ppb), IWST-231228B,0.2
26	MB-107782,MBLK,1,	12	1000	Unknown		03/26/2024 12:38	Finished	MB TC DI
27	N063978-001AREP,D	13	1000	Unknown		03/26/2024 12:47	Finished	DUP,10 mL
28	CCV-3,CCV,1,	14	1000	Unknown		03/26/2024 12:57	Finished	CCV @10ppb, IWST-231228A
29	CCB-3,CCB,1,	15	1000	Unknown		03/26/2024 13:06	Finished	CCB R240129C
30	BLANK	16	1000	Unknown		03/26/2024 13:16	Finished	BLANK
31	SHUTDOWN	17	1000	Unknown		03/26/2024 13:25	Finished	
32	Eluent: R240326A	18	1000	Unknown		n.a.	Finished	
33	PCR: R240326B	19	1000	Unknown		n.a.	Finished	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 09:21**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

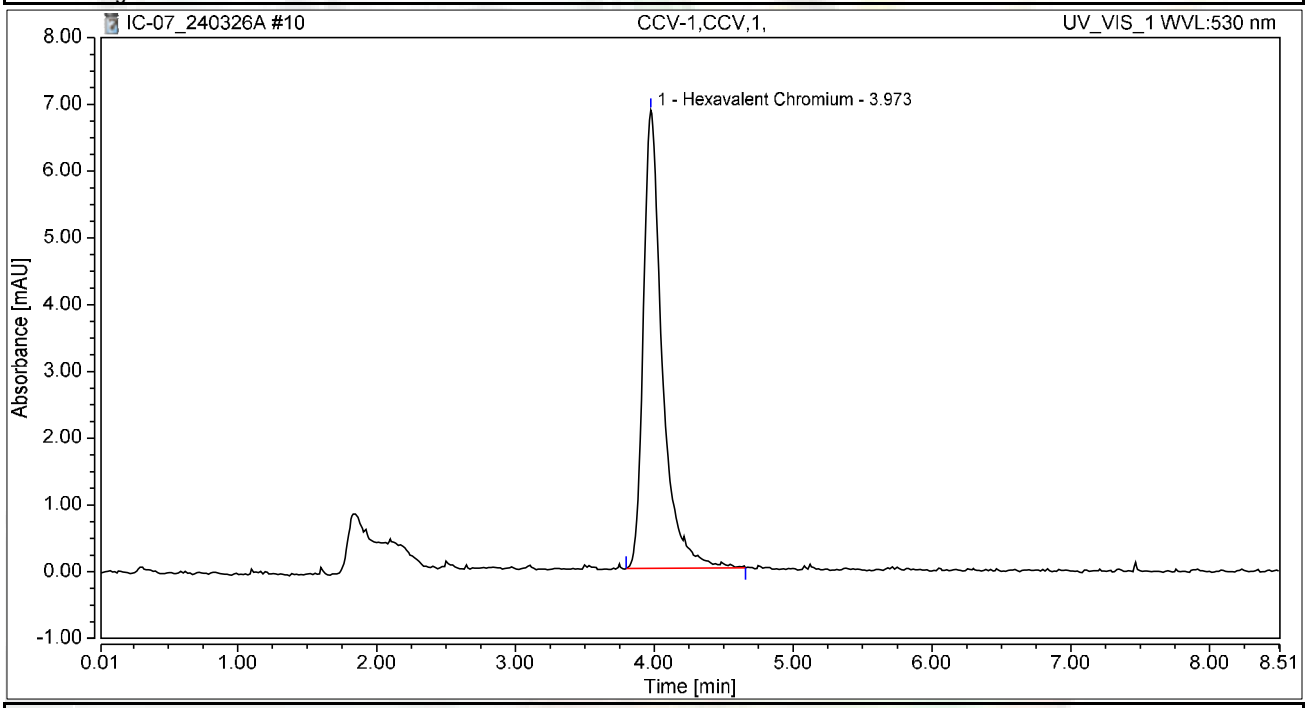
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-1,CCV,1,**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 09:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	1.087	6.859	100.00	100.00	5.1062
Total:			**1.087**	**6.859**	**100.00**	**100.00**	

Reviewed by:

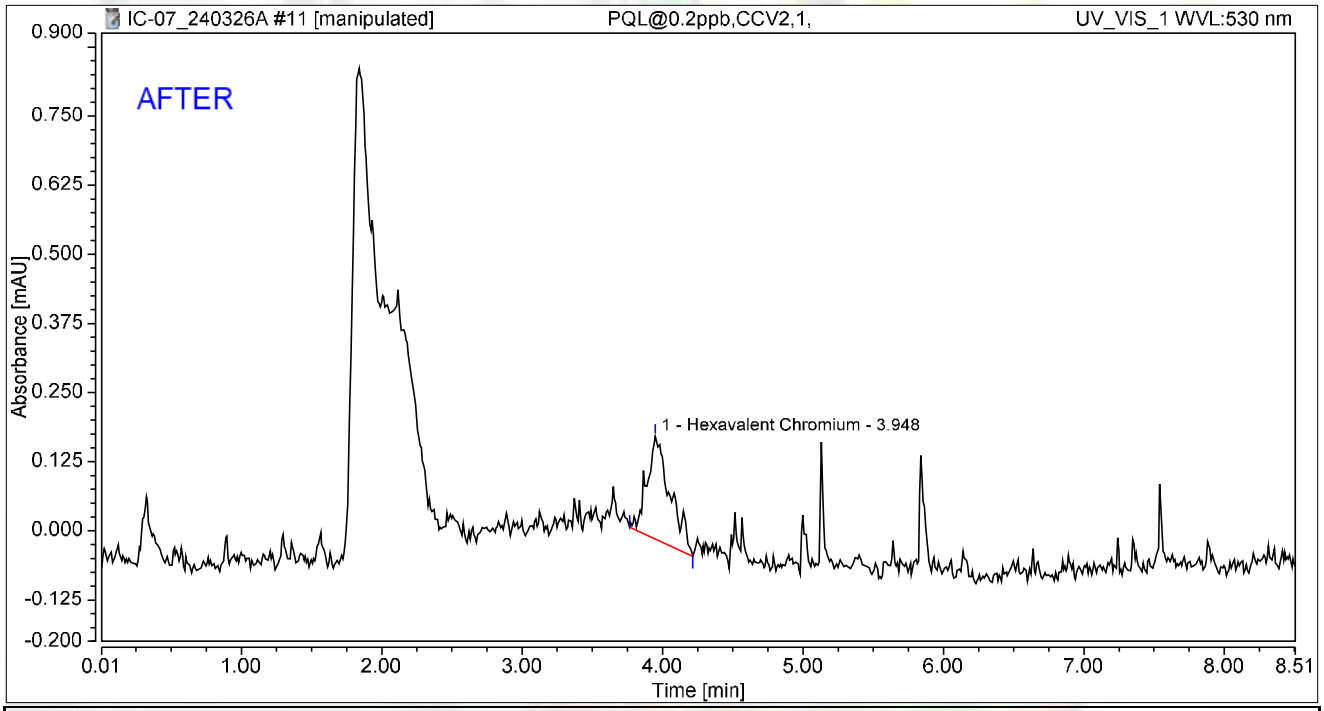
dMocha 3/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 09:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.948	0.036	0.186	100.00	100.00	0.1681
Total:			**0.036**	**0.186**	**100.00**	**100.00**	

Reviewed by:

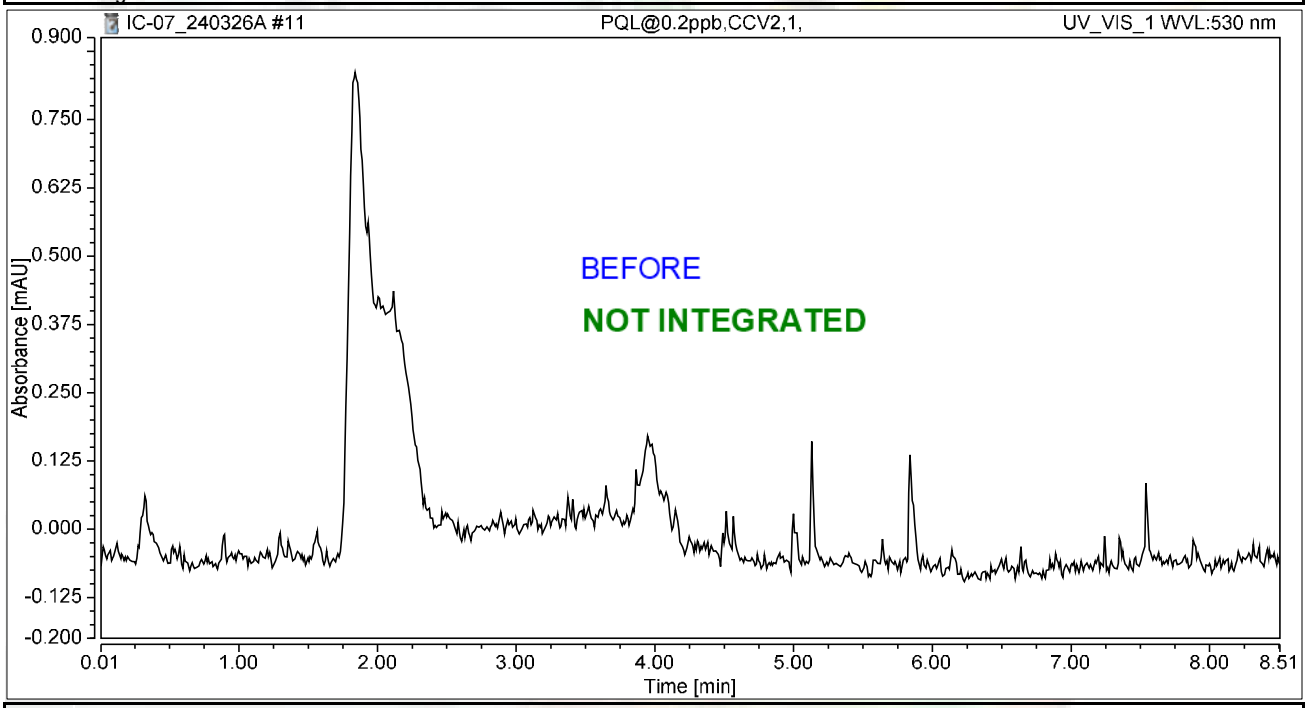
dMocha 3/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**PQL@0.2ppb,CCV2,1,**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 09:42**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

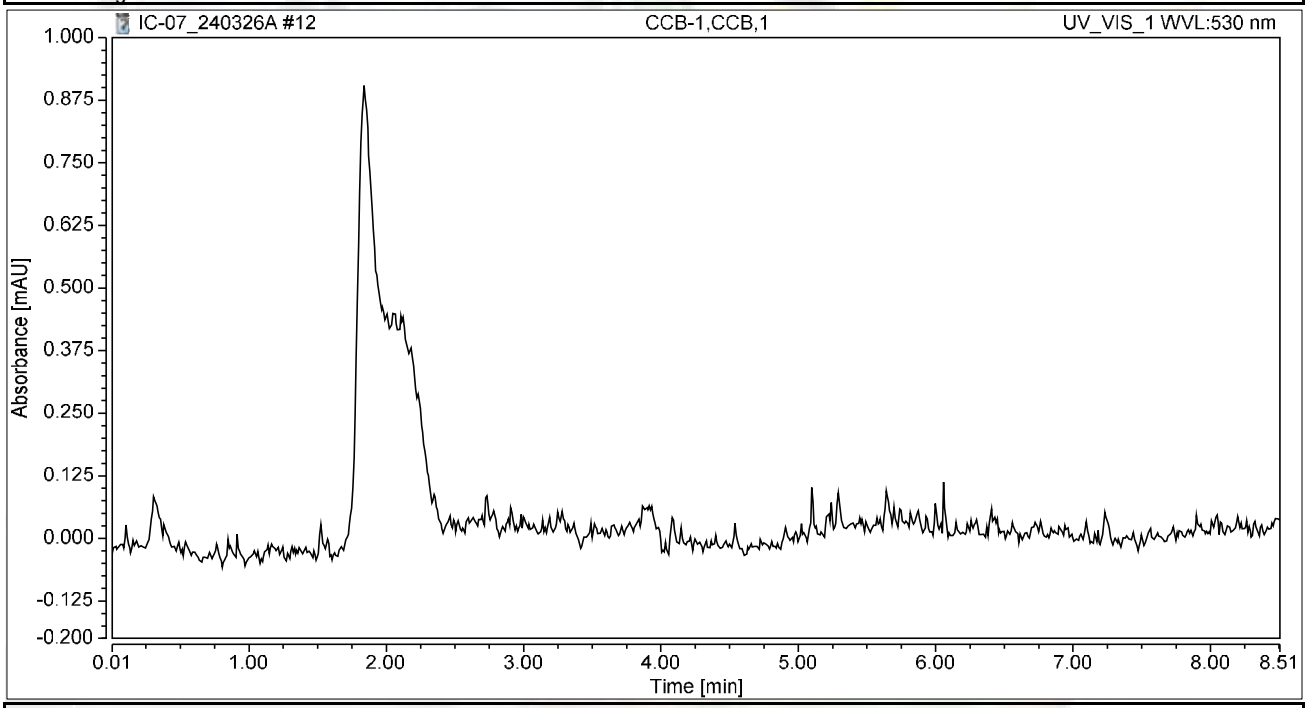
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-1,CCB,1**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 09:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

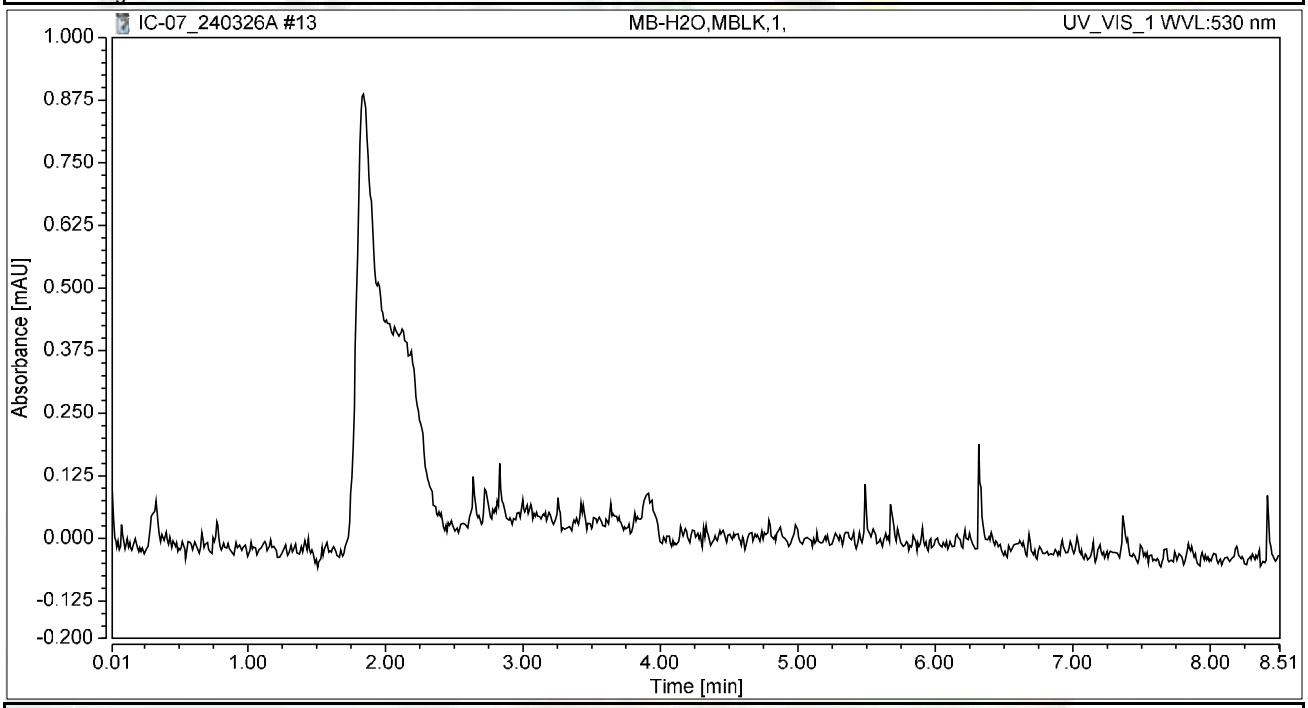
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-H2O,MBLK,1,**	*Run Time (min):*	**8.49**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 10:01**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

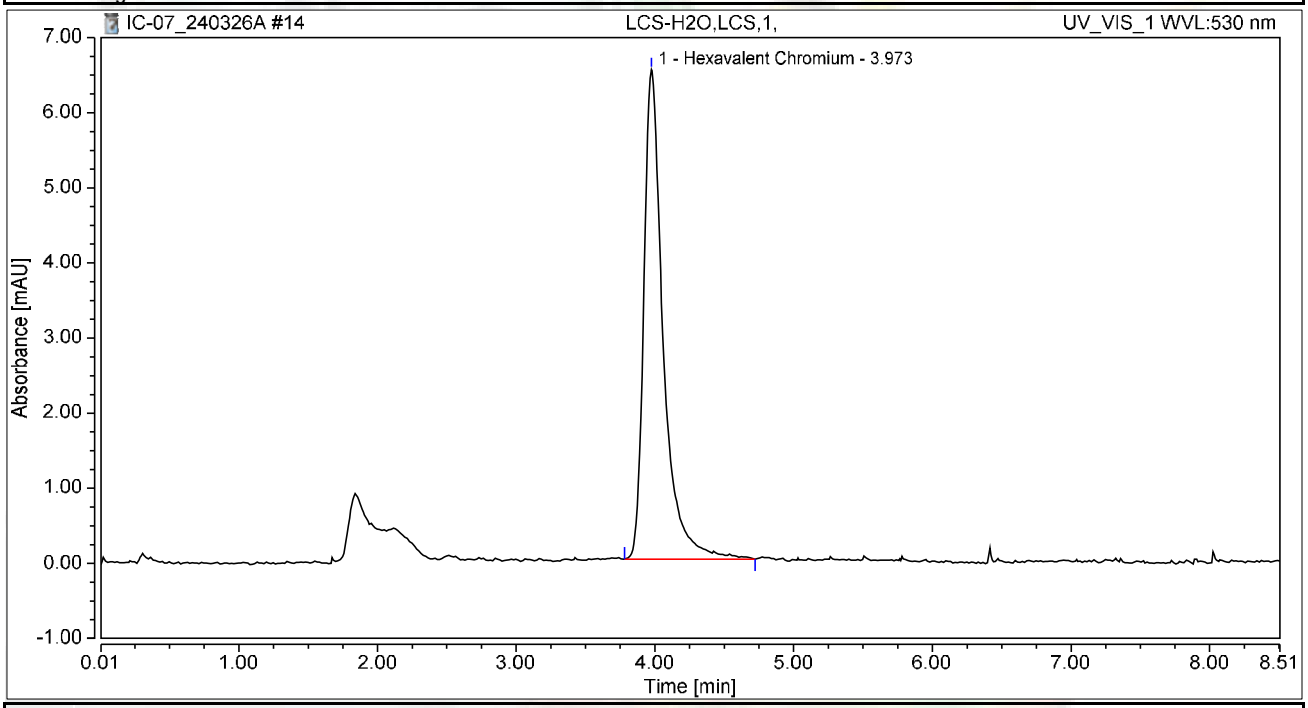
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**LCS-H2O,LCS,1,**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 10:10**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

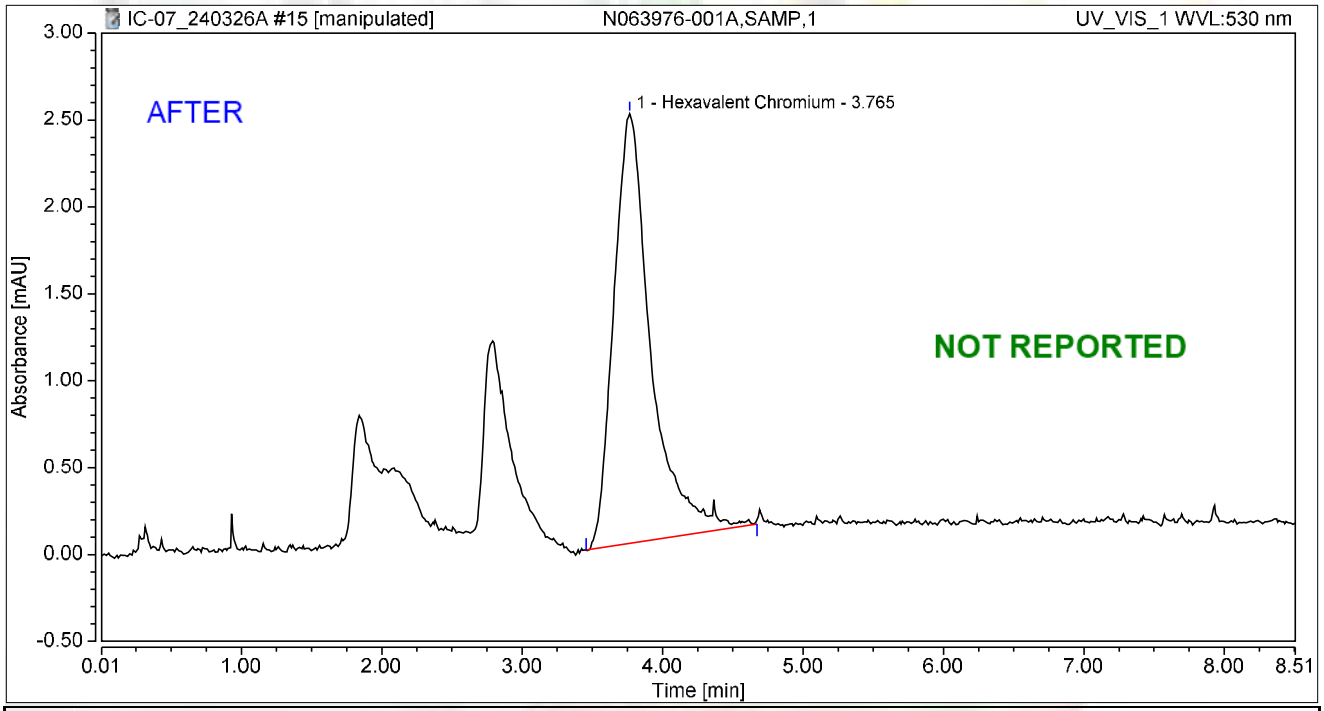
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	1.055	6.517	100.00	100.00	4.9569
Total:			**1.055**	**6.517**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063976-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 10:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.765	0.757	2.472	100.00	100.00	3.5564
Total:			**0.757**	**2.472**	**100.00**	**100.00**	

Reviewed by:

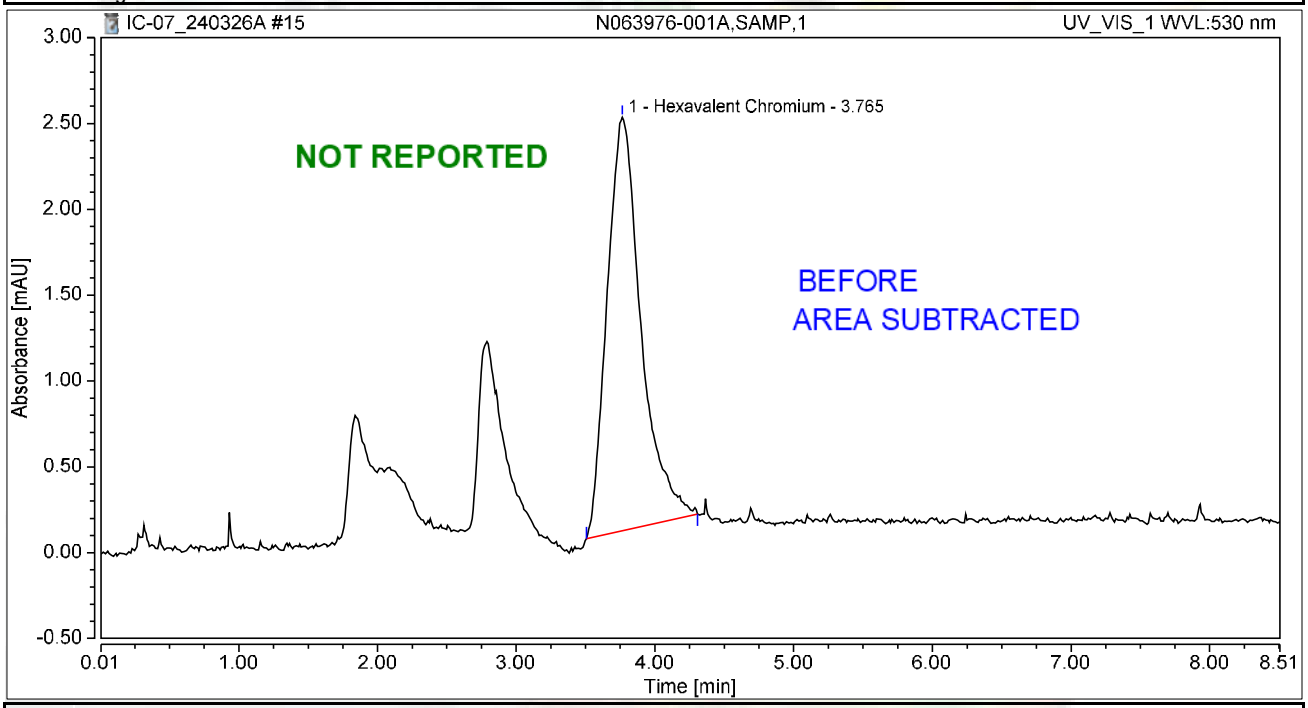
dMRocha 3/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063976-001A,SAMP,1**	*Run Time (min):*	**8.50**
Vial Number:	**1**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 10:50**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

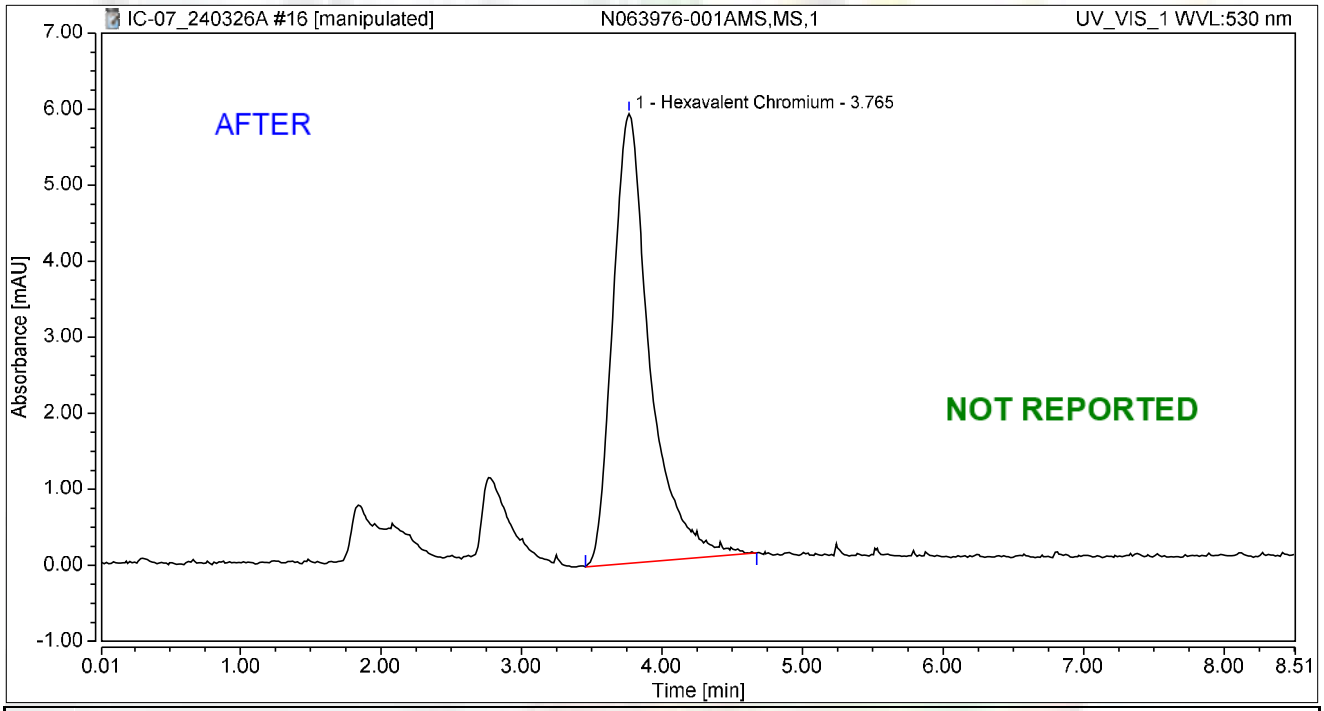
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.765	0.681	2.408	100.00	100.00	3.2015
Total:			**0.681**	**2.408**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063976-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 11:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.765	1.804	5.913	100.00	100.00	8.4776
Total:			**1.804**	**5.913**	**100.00**	**100.00**	

Reviewed by:

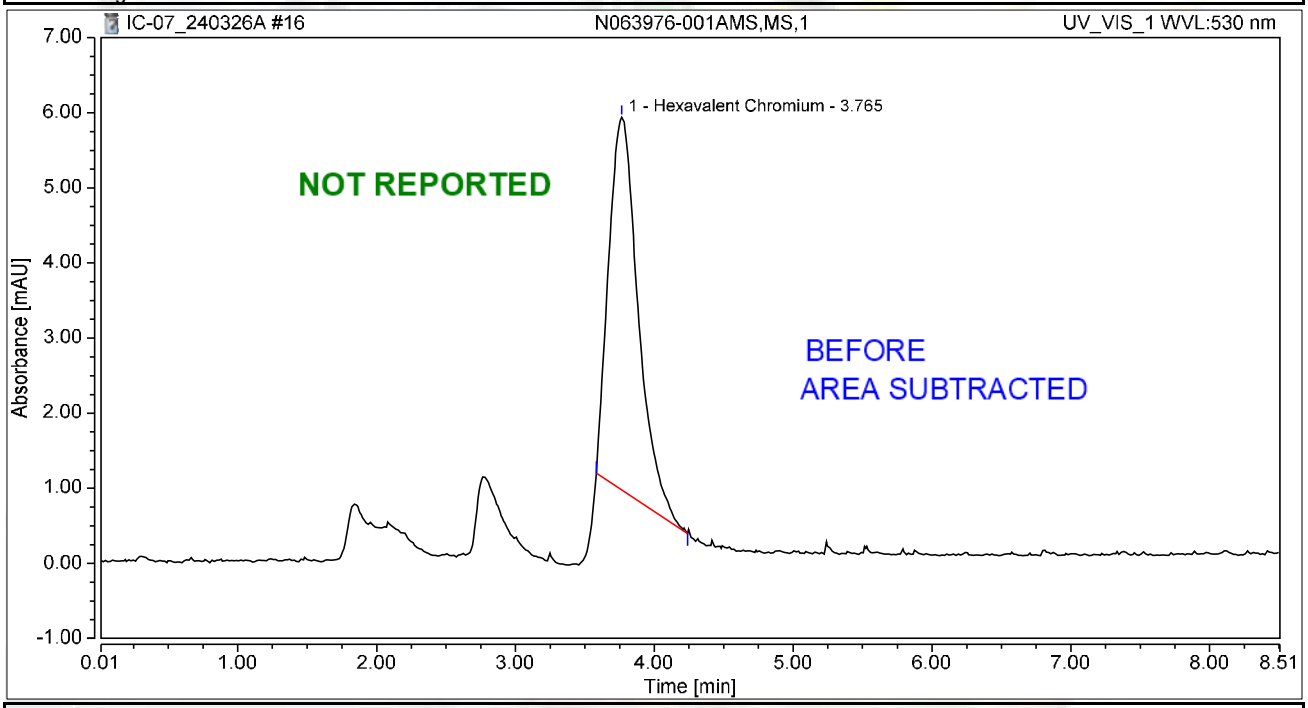
dMocha 3/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063976-001AMS,MS,1**	*Run Time (min):*	**8.49**
Vial Number:	**2**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 11:03**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

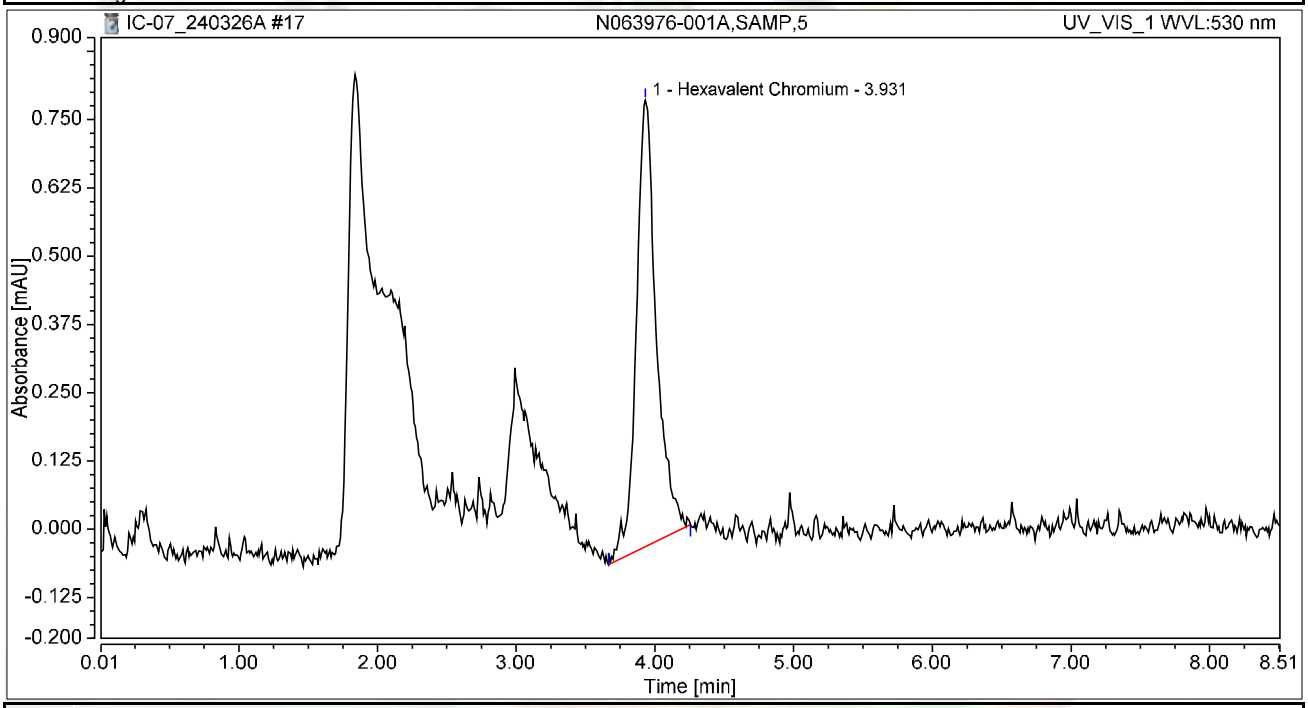
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.765	1.221	4.963	100.00	100.00	5.7386
Total:			**1.221**	**4.963**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063976-001A,SAMP,5**	*Run Time (min):*	**8.50**
Vial Number:	**3**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 11:13**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

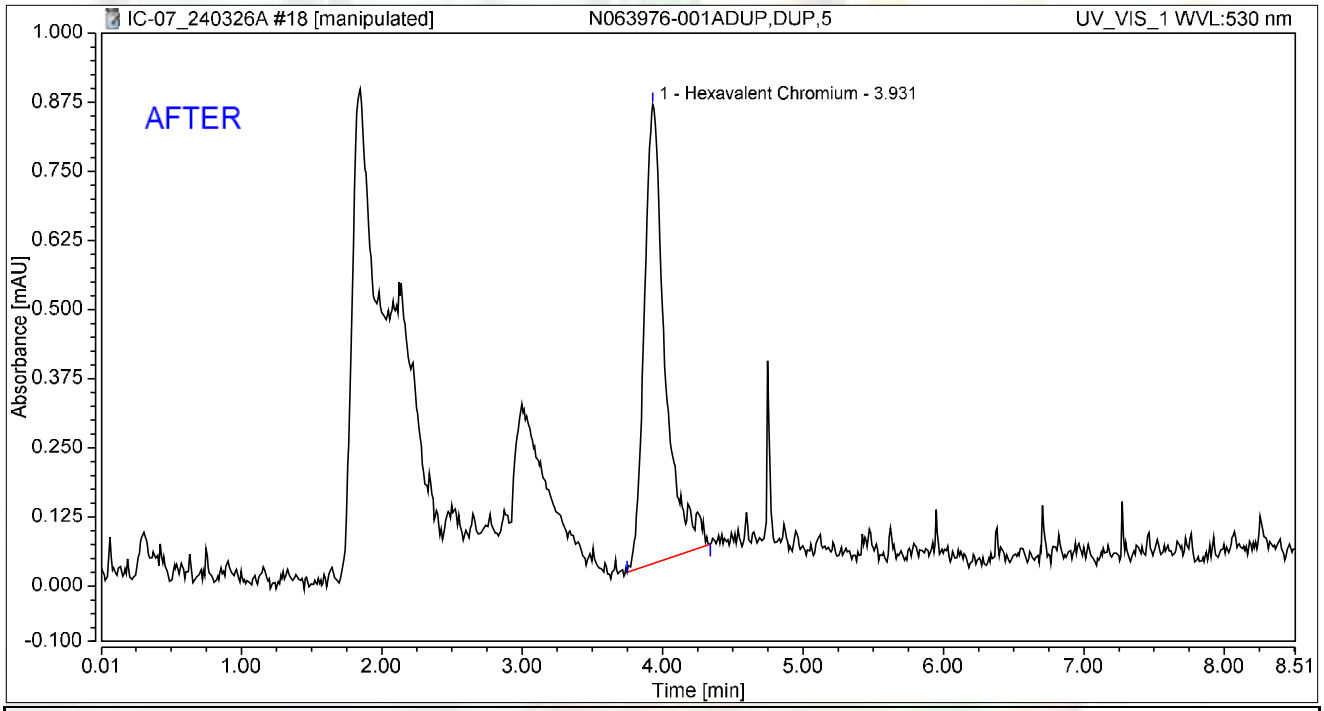
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.931	0.137	0.817	100.00	100.00	0.6449
Total:			**0.137**	**0.817**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063976-001ADUP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 11:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.931	0.143	0.830	100.00	100.00	0.6730
Total:			**0.143**	**0.830**	**100.00**	**100.00**	

Reviewed by:

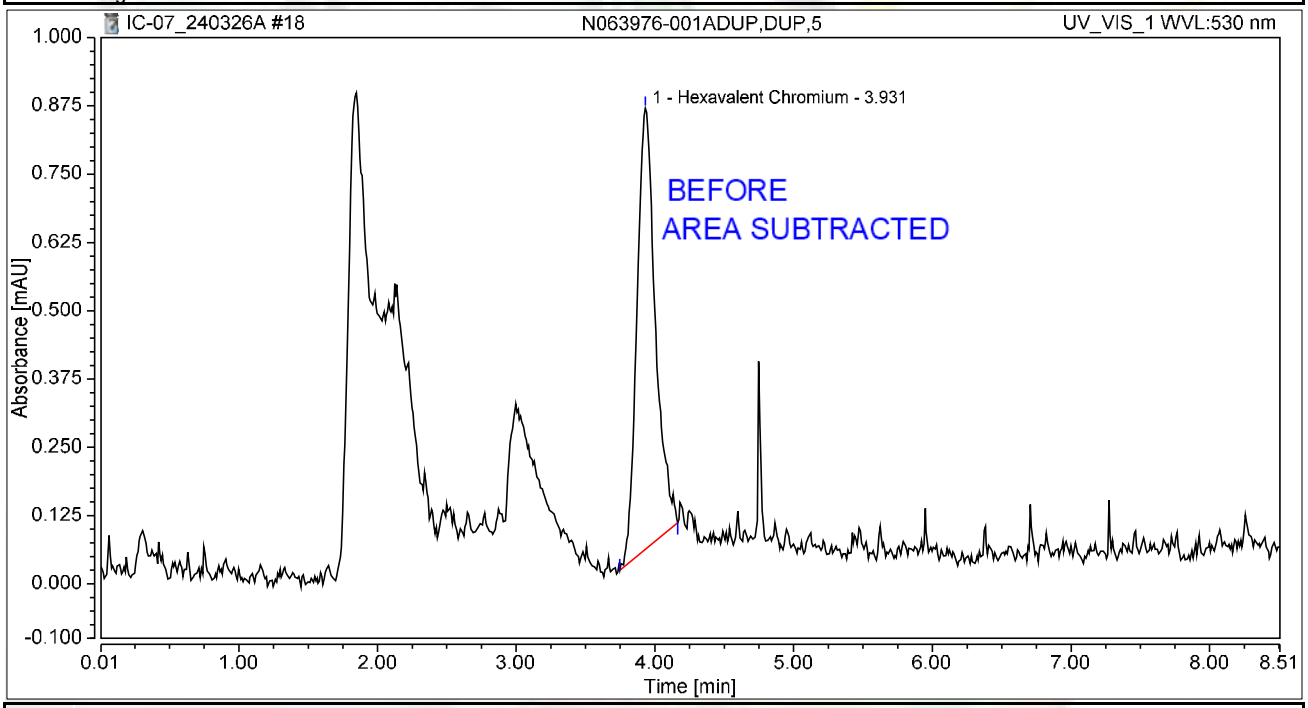
dMocha 3/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063976-001ADUP,DUP,5**	*Run Time (min):*	**8.50**
Vial Number:	**4**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 11:22**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

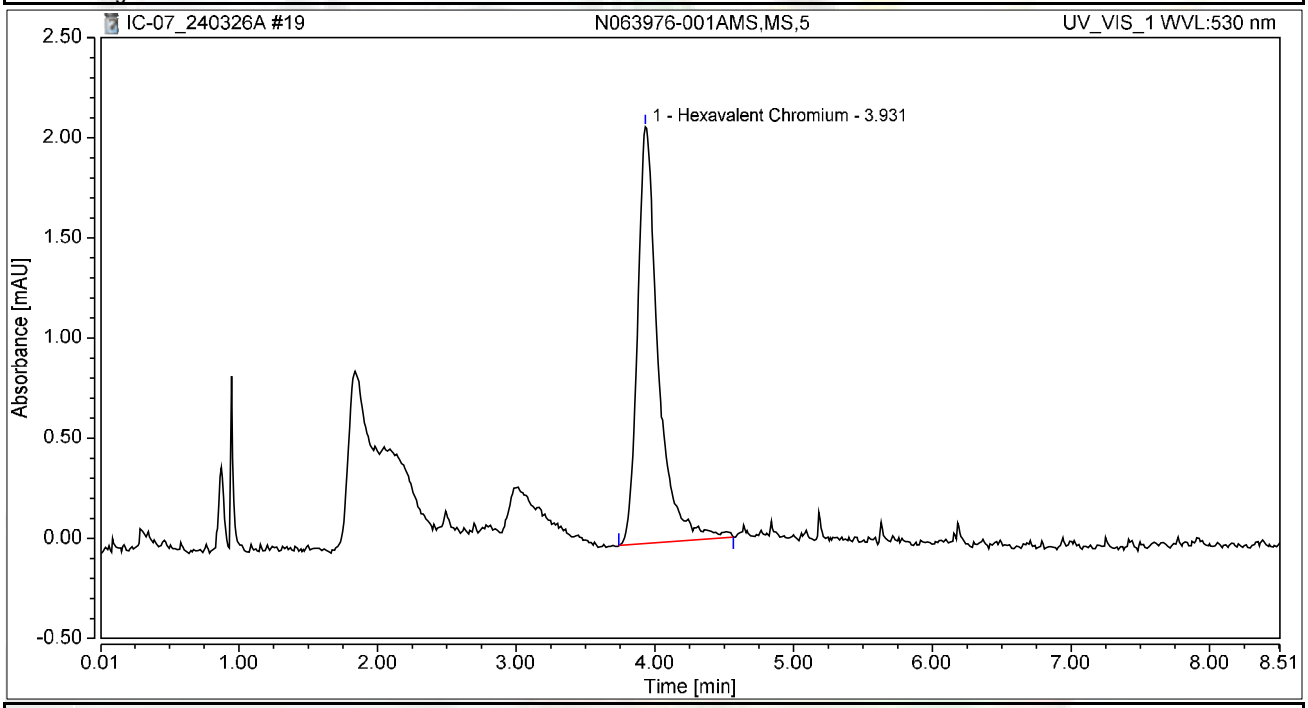
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.931	0.125	0.807	100.00	100.00	0.5854
Total:			**0.125**	**0.807**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063976-001AMS,MS,5**	*Run Time (min):*	**8.50**
Vial Number:	**5**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 11:32**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

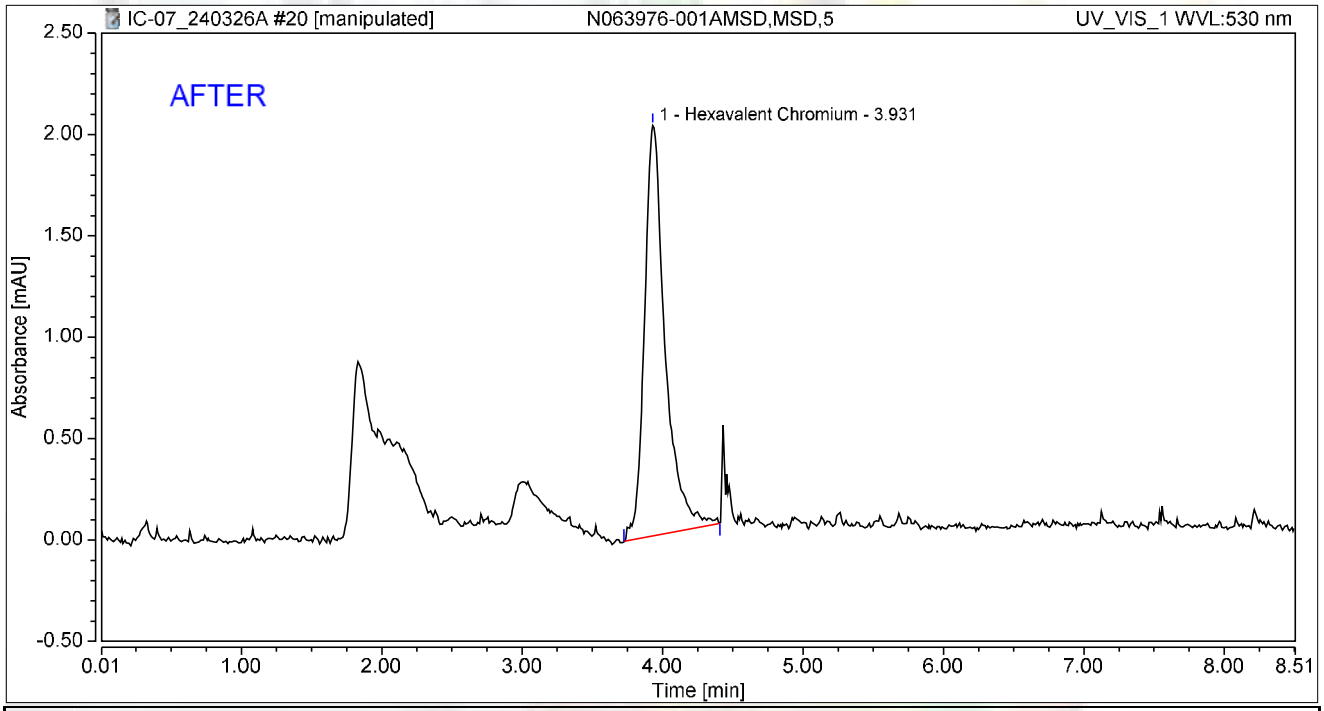
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.931	0.358	2.080	100.00	100.00	1.6835
Total:			**0.358**	**2.080**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063976-001AMSD,MSD,5**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 11:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.931	0.345	2.023	100.00	100.00	1.6205
Total:			**0.345**	**2.023**	**100.00**	**100.00**	

Reviewed by:

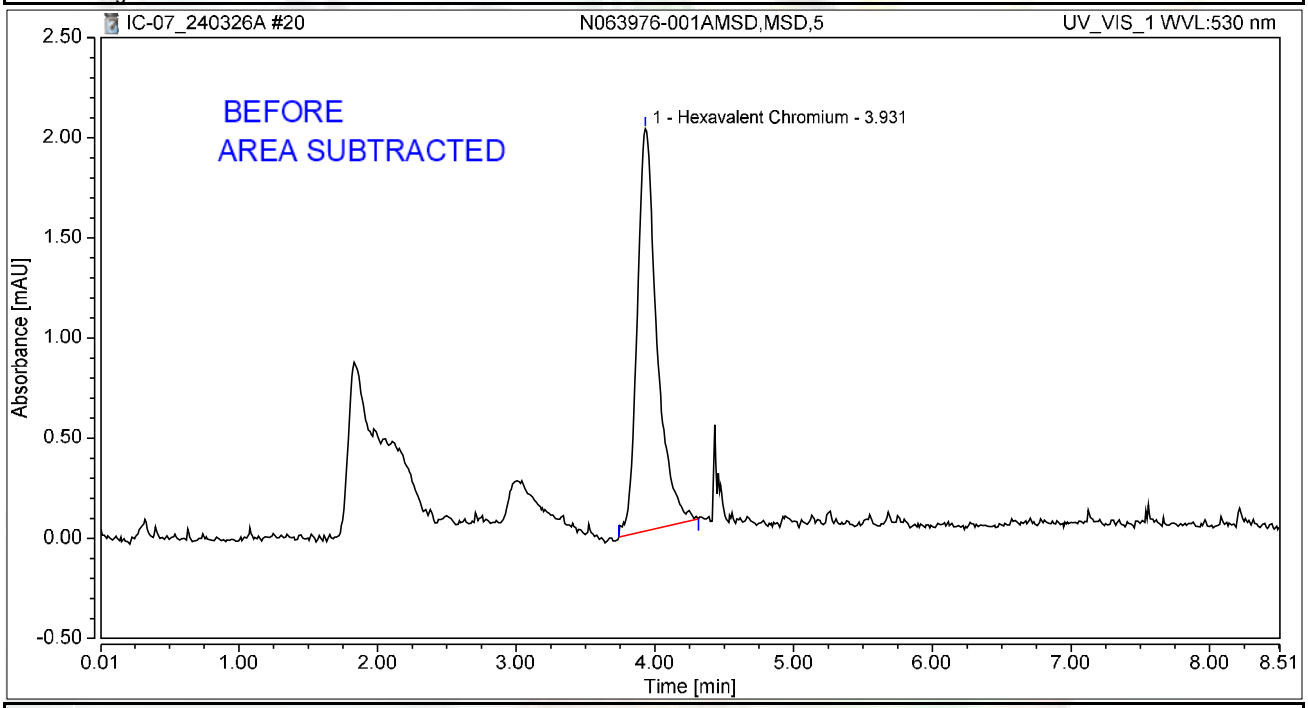
dMocha 3/27/2024

Chromatogram and Results

Injection Details

Injection Name:	**N063976-001AMSD,MSD,5**	*Run Time (min):*	**8.50**
Vial Number:	**6**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 11:41**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

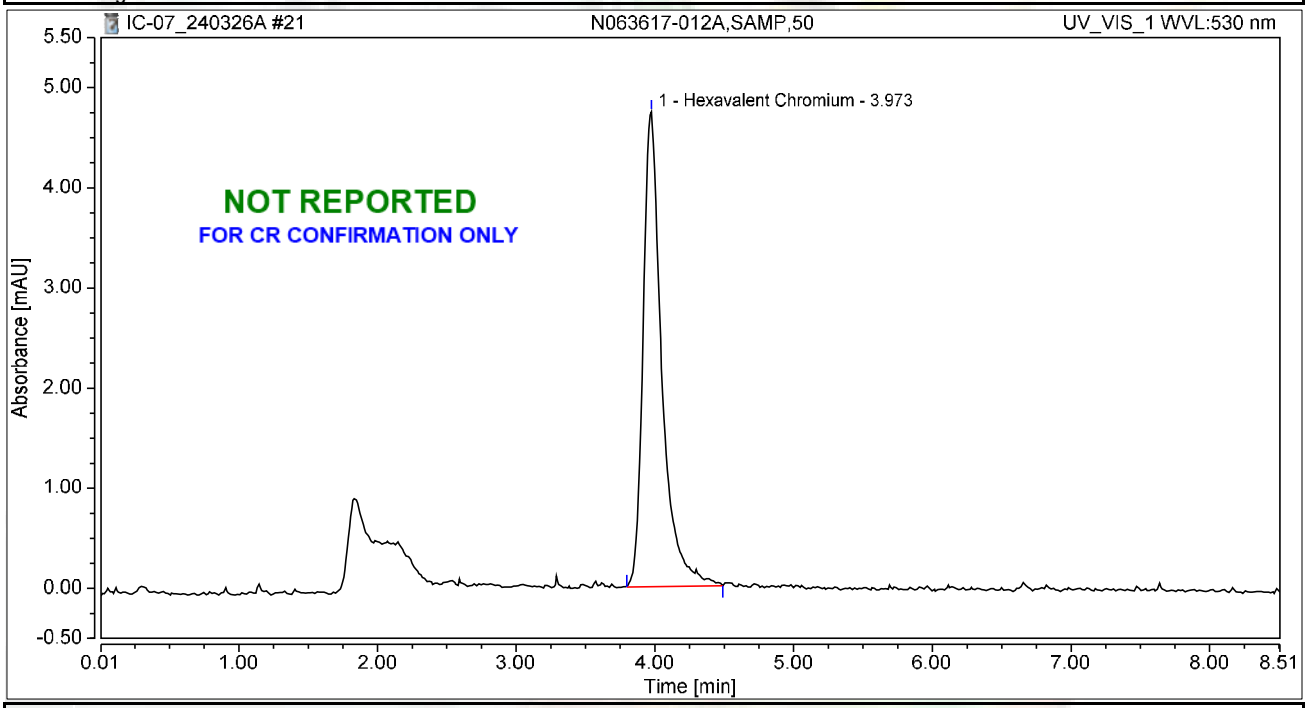
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.931	0.331	2.006	100.00	100.00	1.5575
Total:			**0.331**	**2.006**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-012A,SAMP,50**	*Run Time (min):*	**8.50**
Vial Number:	**7**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 11:51**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

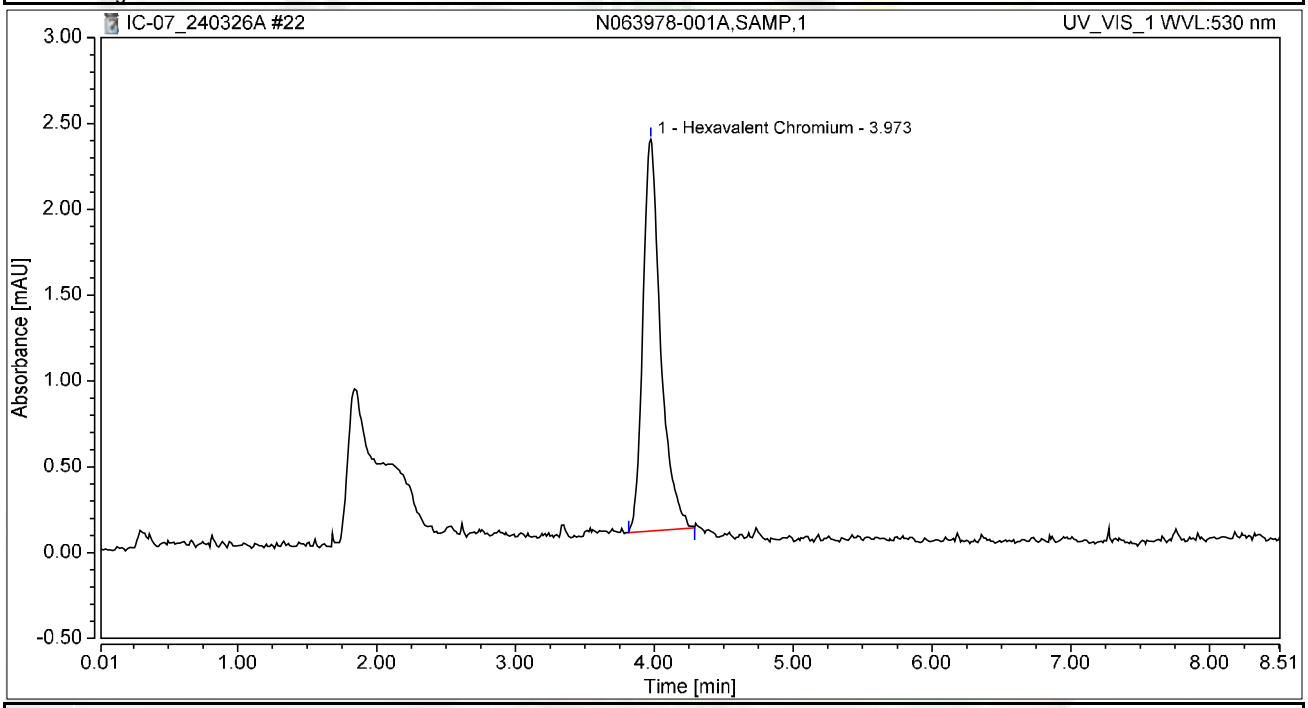
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.743	4.743	100.00	100.00	3.4899
Total:			**0.743**	**4.743**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063978-001A,SAMP,1**	*Run Time (min):*	**8.49**
Vial Number:	**8**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 12:00**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

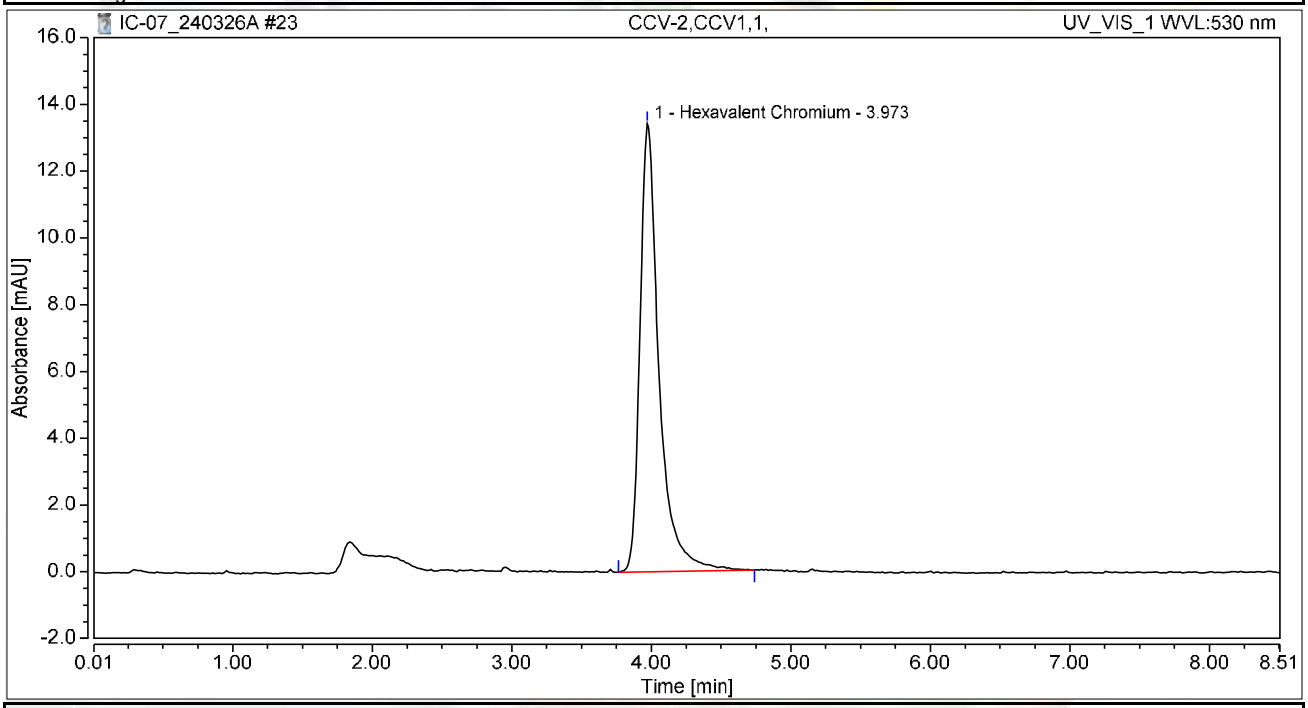
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	0.340	2.283	100.00	100.00	1.5956
Total:			**0.340**	**2.283**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-2,CCV1,1,**	*Run Time (min):*	**8.50**
Vial Number:	**9**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 12:09**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

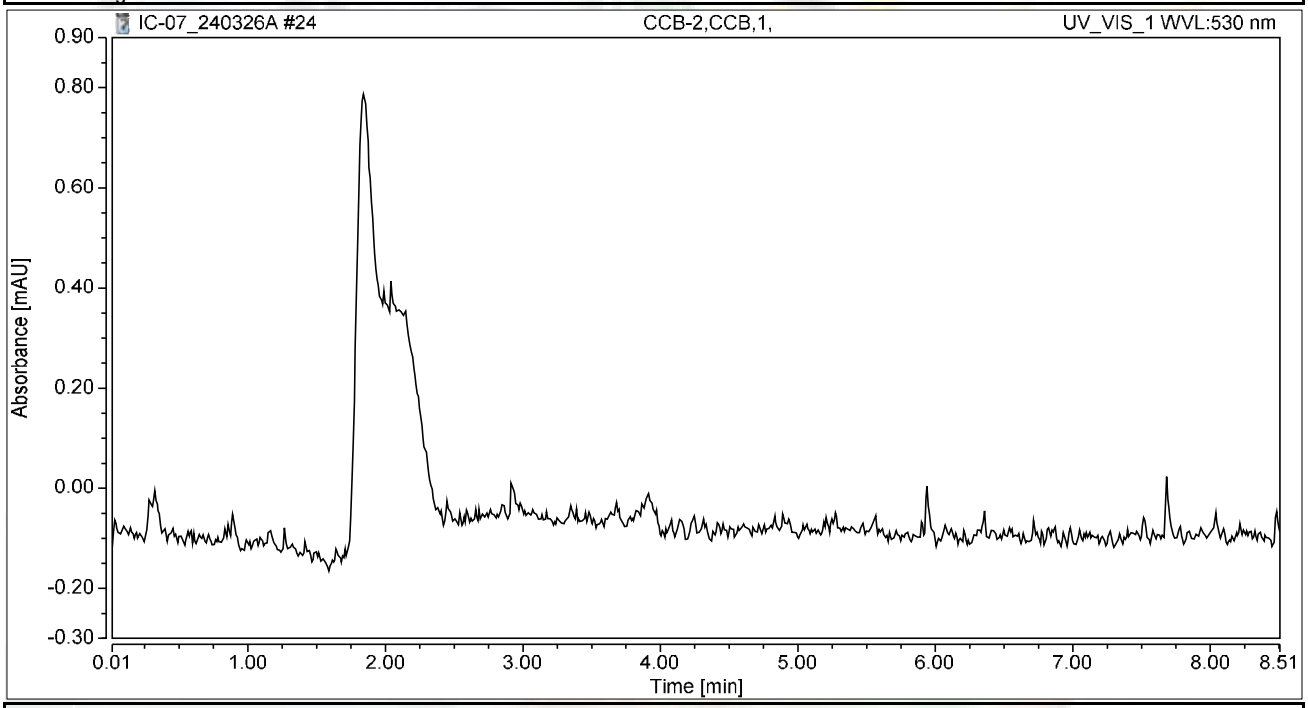
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	2.125	13.428	100.00	100.00	9.9835
Total:			**2.125**	**13.428**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-2,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**10**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 12:19**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

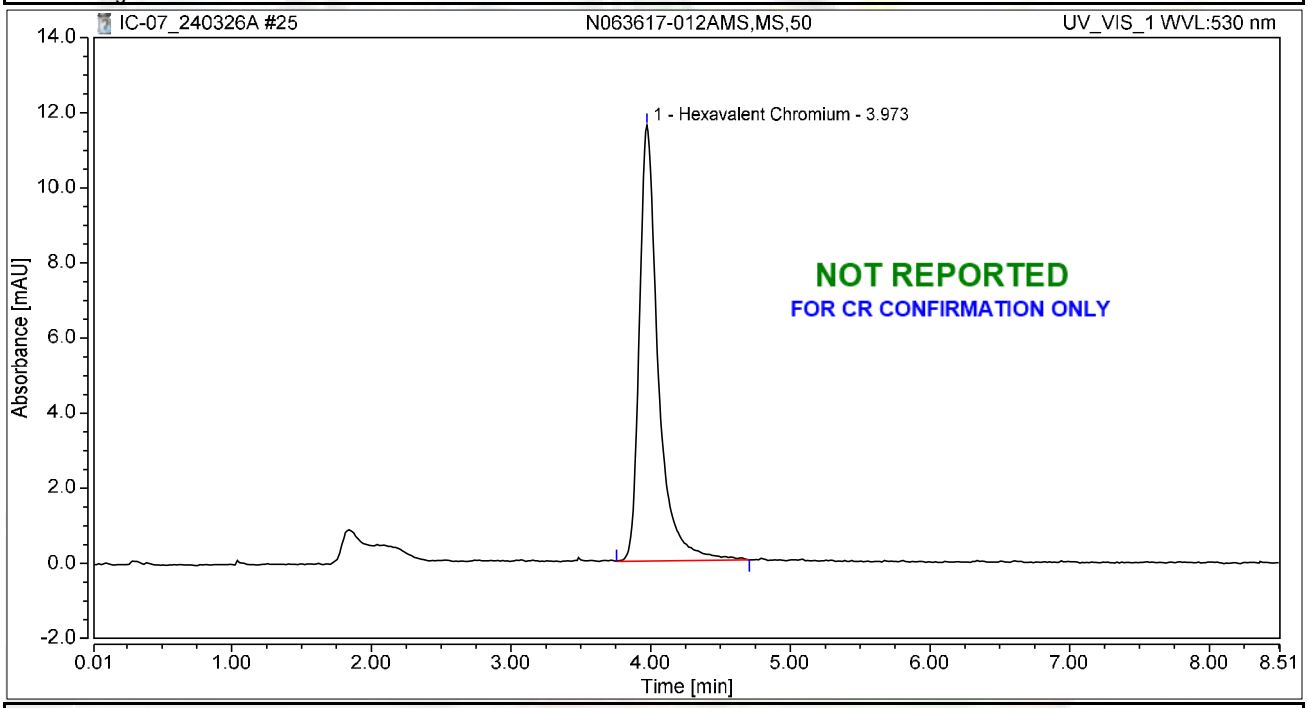
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063617-012AMS,MS,50**	*Run Time (min):*	**8.49**
Vial Number:	**11**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 12:28**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

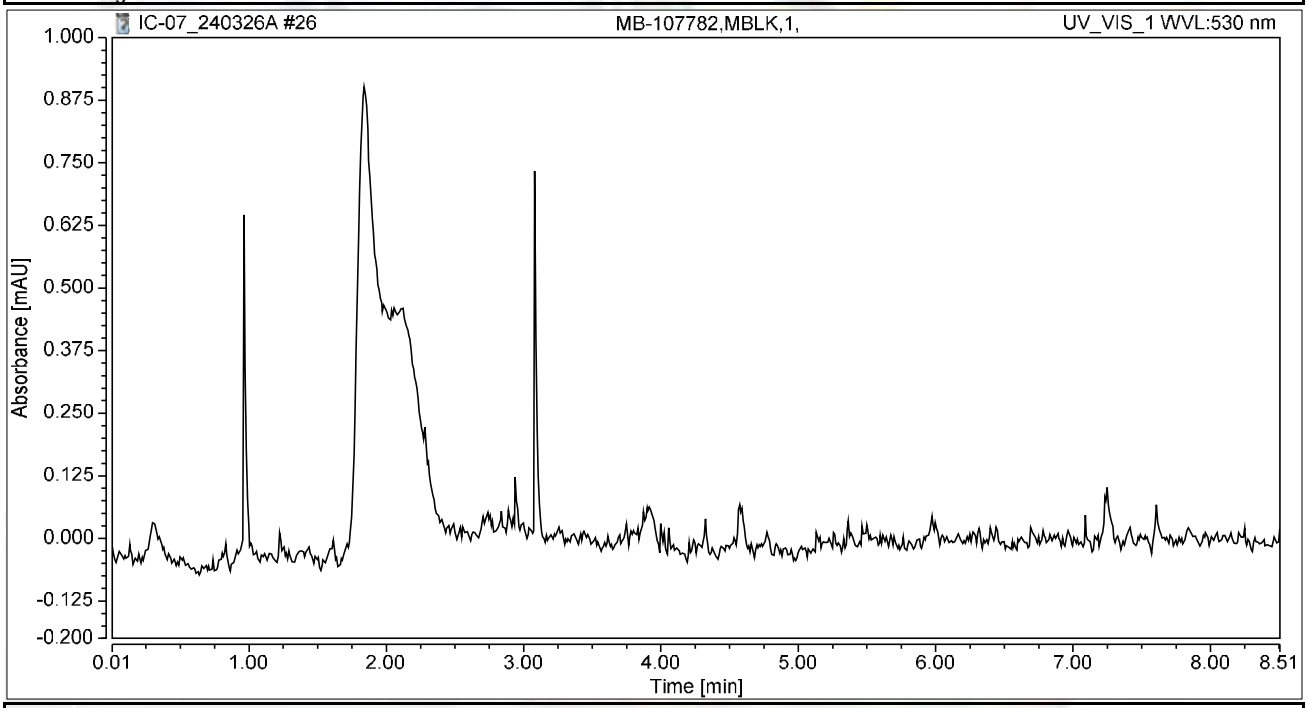
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	1.814	11.598	100.00	100.00	8.5251
Total:			**1.814**	**11.598**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**MB-107782,MBLK,1,**	*Run Time (min):*	**8.50**
Vial Number:	**12**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 12:38**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

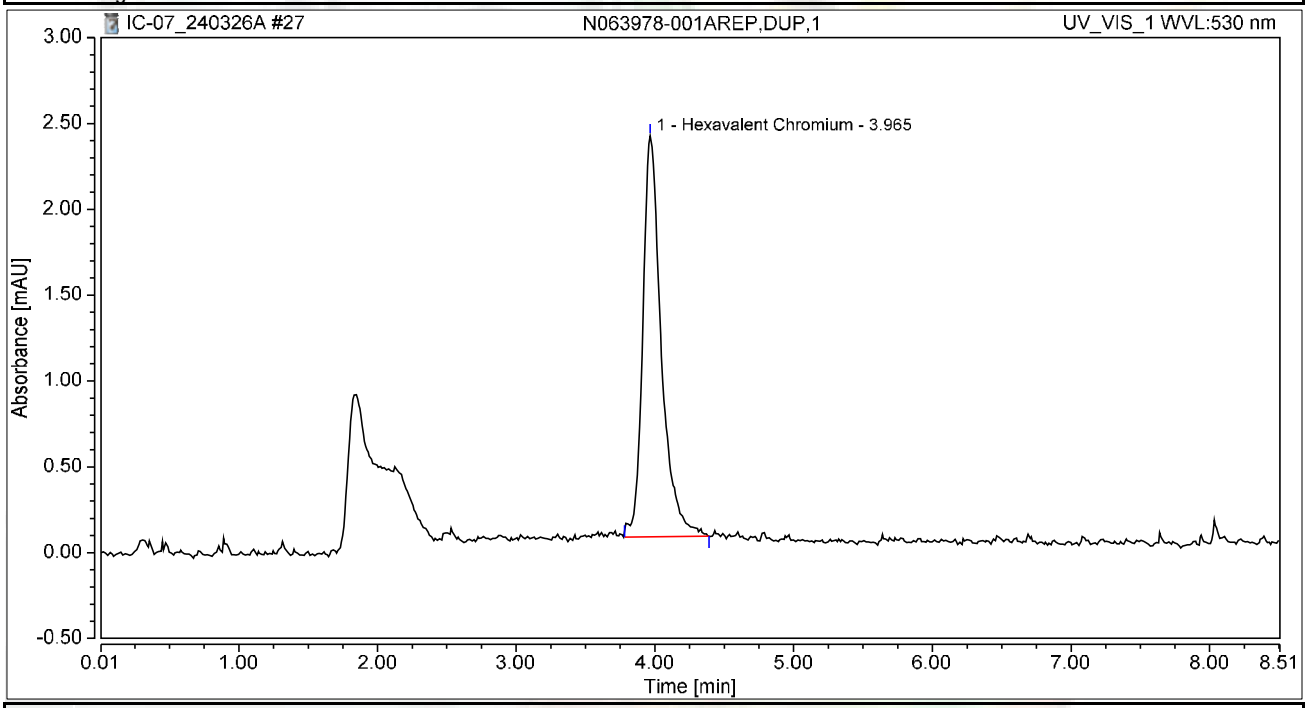
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**N063978-001AREP,DUP,1**	*Run Time (min):*	**8.50**
Vial Number:	**13**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 12:47**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

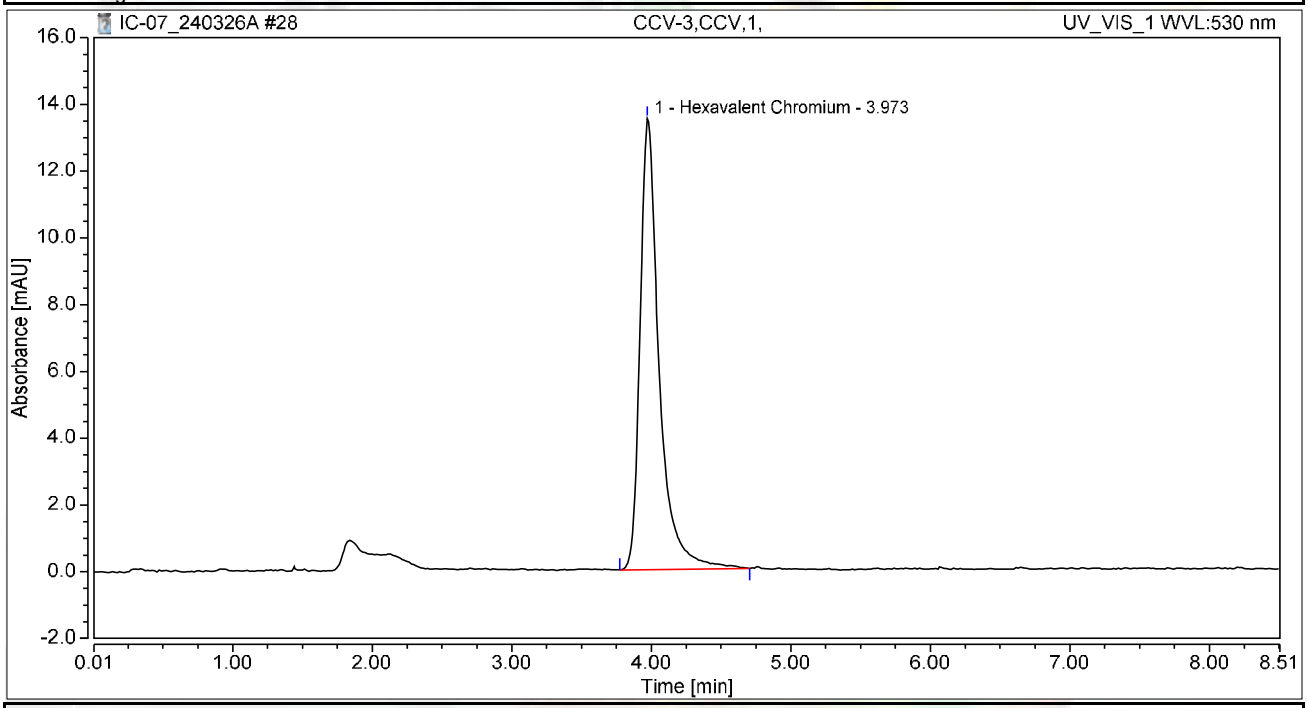
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.965	0.362	2.335	100.00	100.00	1.7011
Total:			**0.362**	**2.335**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCV-3,CCV,1,**	*Run Time (min):*	**8.50**
Vial Number:	**14**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 12:57**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

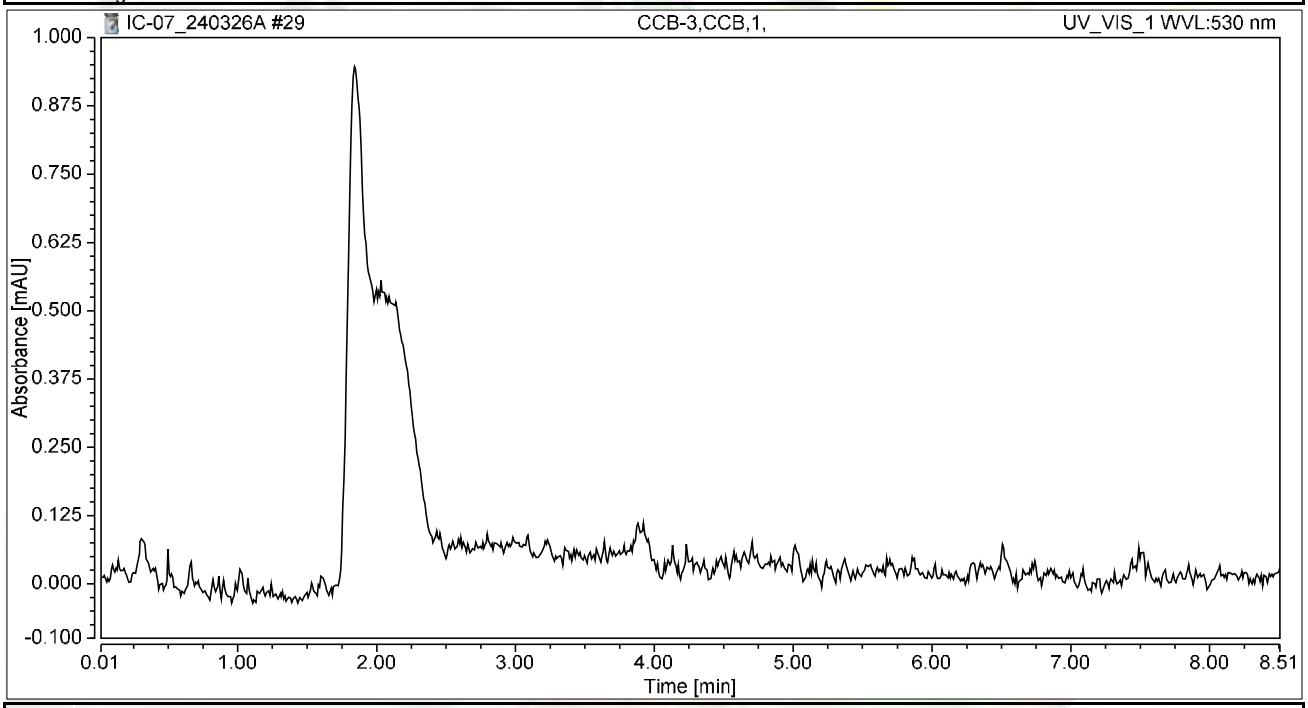
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
1	Hexavalent Chromium	3.973	2.144	13.518	100.00	100.00	10.0754
Total:			**2.144**	**13.518**	**100.00**	**100.00**	

Chromatogram and Results

Injection Details

Injection Name:	**CCB-3,CCB,1,**	*Run Time (min):*	**8.49**
Vial Number:	**15**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 13:06**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

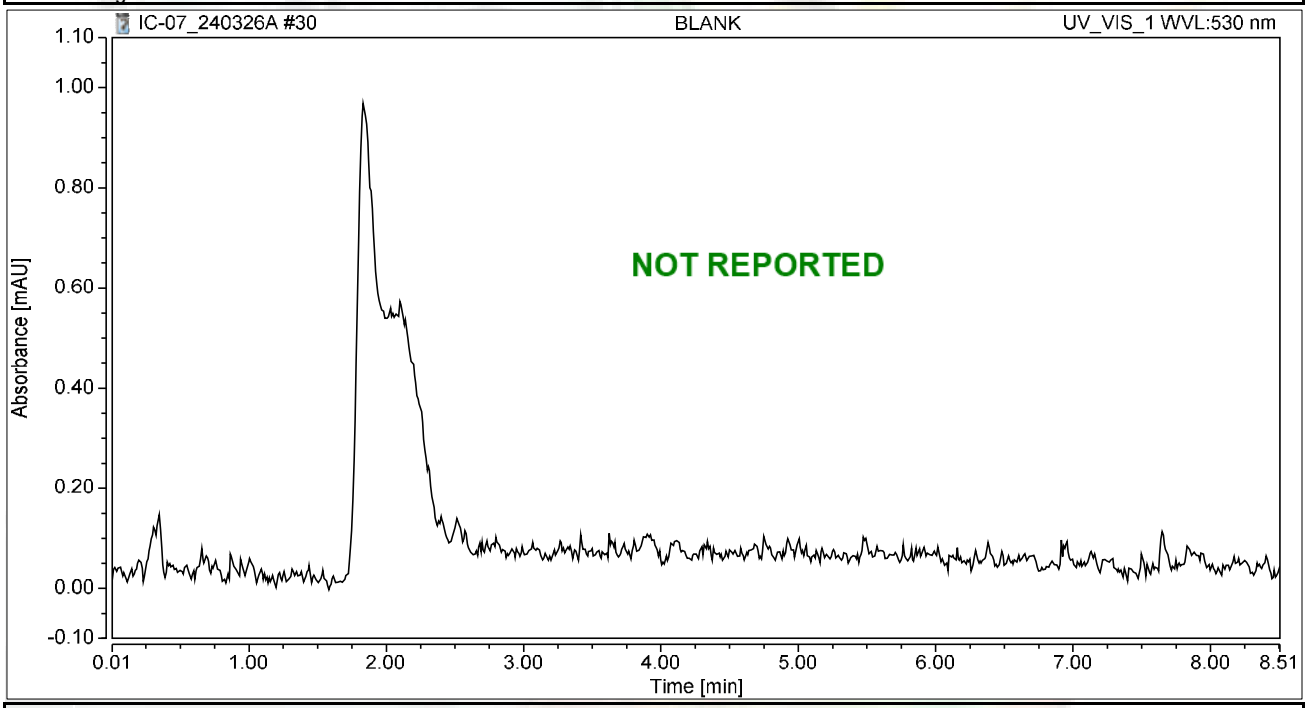
No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

Chromatogram and Results

Injection Details

Injection Name:	**BLANK**	*Run Time (min):*	**8.50**
Vial Number:	**16**	*Injection Volume:*	**1000.00**
Injection Type:	**Unknown**	*Channel:*	**UV_VIS_1**
Calibration Level:		*Wavelength:*	**530.0**
Instrument Method:	**Hex Chrom 4 mm**	*Bandwidth:*	**n.a.**
Processing Method:	**240305A_IC-07_Cr6_218_6_HIGH**	*Dilution Factor:*	**1.0000**
Injection Date/Time:	**26/Mar/24 13:16**	*Sample Weight:*	**1.0000**

Chromatogram



Integration Results

No.	Peak Name	Retention Time min	Area mAU*min	Height mAU	Relative Area %	Relative Height %	Amount ug/L
n.a.	Hexavalent Chromium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total:			**0.000**	**0.000**	**0.00**	**0.00**	

EPA 6010B
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107967
ASSET #: N063976

Instrument ID: ICP-03
Analyst: DBJ
Date Analyzed: 4/2/2024

Method: DISSOLVED

- [X] EPA 6010B / 200.7
- [ ] EPA 6020 / 200.8
- [ ] EPA 7470A / 7471A/245.1
- [ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?	X			X		
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments: Fe

% Rec of ~~several analytes~~ in N063976-001B-MS/MSD failed, high bias. However, LCS passed criteria
RPD of Fe in N063976-001B-MSD failed. However, LCS passed criteria.

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 04062024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in ug/L , in the original sample as follows:

Iron , ug/L = A * DF * PF *CF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL
CF= Conversion Factor from mg/L to ug/L, 1000

For Sample **N063976-001B** , the concentration i ug/L is calculated as follows:

Iron , ug/L = 0.11627 * 1 * (25/25) * 1000

Iron , ug/L = 116.27

Reporting results in two significant figures,

Iron , ug/L = 120

Reviewed by:

dMocha 4/28/2024

% RSD SUMMARY

RSD SUMMARY: 240402A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	Fe	0	1.75	15	PASS
Standard1	ICAL	1	Fe	0.02	3.44	15	PASS
Standard2	ICAL	1	Fe	0.05	2.3	15	PASS
Standard3	ICAL	1	Fe	2	1.11	15	PASS
Standard4	ICAL	1	Fe	5	0.53	15	PASS
Standard5	ICAL	1	Fe	7.5	0.92	15	PASS
Standard6	ICAL	1	Fe	10	0.36	15	PASS
Standard7	ICAL	1	Fe	20	0.23	15	PASS
ICV	ICV	1	Fe	10.24	0.73	15	PASS
ICB	ICB	1	Fe	0	25.02	15	<PQL
LLICV1	CCV1	1	Fe	0.02	2.03	20	PASS
ICSA1	ICSA	1	Fe	176.23	0.04	15	PASS
ICSAB1	ICSAB	1	Fe	172.66	0.12	15	PASS
MB-107967	MBLK	1	Fe	0	156.07	15	<PQL
LCS-107967	LCS	1	Fe	0.1	0.49	15	PASS
N063976-001B	SAMP	1	Fe	0.12	3.19	15	PASS
N063976-001B	SAMP	5	Fe	0.03	4.11	15	PASS
N063976-001B-PS	PS	1	Fe	0.21	0.7	15	PASS
N063976-001B-PS	MS	1	Fe	0.3	0.94	15	PASS
N063976-001B-MSD	MSD	1	Fe	0.44	0.18	15	PASS
CCV1	CCV	1	Fe	9.92	0.32	15	PASS
CCB1	CCB	1	Fe	0	18.12	15	<PQL
N064170-001B	SAMP	1	Fe	0.48	0.38	15	PASS
N064170-002B	SAMP	1	Fe	0.46	1.05	15	PASS
CCV2	CCV	1	Fe	9.93	0.58	15	PASS
CCB2	CCB	1	Fe	0	43.43	15	<PQL
ICSA2	ICSA	1	Fe	172.84	0.02	15	PASS
ICSAB2	ICSAB	1	Fe	169.77	0.04	15	PASS
RINSE	RINSE	1	Fe	0.01	2.1	15	PASS
CCV3	CCV	1	Fe	9.95	0.28	15	PASS
CCB3	CCB	1	Fe	0	16.57	15	<PQL
CCV4	CCV	1	Fe	9.97	0.76	15	PASS
CCB4	CCB	1	Fe	0	103.92	15	<PQL
ICSA3	ICSA	1	Fe	174.61	0.06	15	PASS
ICSAB3	ICSAB	1	Fe	172.28	0.08	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240402A

Instrument ID: ICP-03

STANDARD CODE	
Standard1	MWST-240311M, 0.5<50mL
Standard2	MWST-240311N
Standard3	MWST-240311O, 5<50mL
Standard4	MWST-240311O,12.5<50mL
Standard5	MWST-240311O, 15<40mL
Standard6	MWST-240311O, 25<50mL
Standard7	MWST-243011O
ICV	MWST-240311AF
CCV	MWST-240311O, 25<50mL
ICSA/ICSAB	MWST-240311P / MWST-240311Q
Int. Std. (Y)	MWST-240311B
PS Spike	MWST-240311X/Y/Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	04/02/2024	01:05:15 PM
2	Standard1	ICAL	1	04/02/2024	01:08:58 PM
3	Standard2	ICAL	1	04/02/2024	01:12:41 PM
4	Standard3	ICAL	1	04/02/2024	01:16:24 PM
5	Standard4	ICAL	1	04/02/2024	01:19:37 PM
6	Standard5	ICAL	1	04/02/2024	01:22:52 PM
7	Standard6	ICAL	1	04/02/2024	01:26:06 PM
8	Standard7	ICAL	1	04/02/2024	01:29:19 PM
310	ICV	ICV	1	04/02/2024	01:35:59 PM
1	ICB	ICB	1	04/02/2024	01:39:17 PM
2	LLICV1	CCV1	1	04/02/2024	01:42:59 PM
9	ICSA1	ICSA	1	04/02/2024	01:46:43 PM
10	ICSAB1	ICSAB	1	04/02/2024	01:51:24 PM
71	MB-107830	MBLK	1	04/02/2024	01:56:05 PM
72	MB-107784 TCLP	MBLK	1	04/02/2024	01:59:48 PM
22	N064035-012A	SAMP	5	04/02/2024	02:16:21 PM
11	MB-107967	MBLK	1	04/02/2024	02:23:46 PM
12	LCS-107967	LCS	1	04/02/2024	02:30:21 PM
13	N063976-001B	SAMP	1	04/02/2024	02:34:04 PM
14	N063976-001B	SAMP	5	04/02/2024	02:39:22 PM
15	N063976-001B-PS	PS	1	04/02/2024	02:43:36 PM
16	N063976-001B-MS	MS	1	04/02/2024	02:48:54 PM
17	N063976-001B-MSD	MSD	1	04/02/2024	02:54:13 PM
7	CCV1	CCV	1	04/02/2024	02:59:02 PM
1	CCB1	CCB	1	04/02/2024	03:02:16 PM
18	N064170-001B	SAMP	1	04/02/2024	03:05:58 PM
19	N064170-002B	SAMP	1	04/02/2024	03:10:48 PM
23	MB-107965	MBLK	1	04/02/2024	03:15:37 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
24	LCS-107965	LCS	1	04/02/2024	03:19:20 PM
25	N063976-001C	SAMP	1	04/02/2024	03:23:04 PM
26	N063976-001C	SAMP	5	04/02/2024	03:28:22 PM
27	N063976-001C-PS	PS	1	04/02/2024	03:32:37 PM
28	N063976-001C-MS	MS	1	04/02/2024	03:37:56 PM
29	N063976-001C-MSD	MSD	1	04/02/2024	03:43:14 PM
7	CCV2	CCV	1	04/02/2024	03:48:33 PM
1	CCB2	CCB	1	04/02/2024	03:51:47 PM
9	ICSA2	ICSA	1	04/02/2024	03:55:29 PM
10	ICSAB2	ICSAB	1	04/02/2024	04:00:10 PM
299	RINSE	RINSE	1	04/02/2024	04:24:50 PM
35	MB-108042	MBLK	1	04/02/2024	04:28:38 PM
36	LCS-108042	LCS	1	04/02/2024	04:32:21 PM
37	N064244-001B	SAMP	1	04/02/2024	04:36:04 PM
38	N064244-002B	SAMP	1	04/02/2024	04:39:48 PM
39	N064244-003B	SAMP	1	04/02/2024	04:43:32 PM
40	N064244-005B	SAMP	1	04/02/2024	04:47:47 PM
41	N064245-002D	SAMP	1	04/02/2024	04:52:01 PM
42	N064245-002D	SAMP	5	04/02/2024	04:57:20 PM
43	N064245-002D-PS	PS	1	04/02/2024	05:01:36 PM
7	CCV3	CCV	1	04/02/2024	05:06:56 PM
1	CCB3	CCB	1	04/02/2024	05:10:09 PM
44	N064245-002DMS	MS	1	04/02/2024	05:13:51 PM
45	N064245-002DMSD	MSD	1	04/02/2024	05:19:12 PM
46	N064245-003D	SAMP	1	04/02/2024	05:24:33 PM
47	N064245-004E	SAMP	1	04/02/2024	05:28:49 PM
48	N064245-005E	SAMP	1	04/02/2024	05:34:06 PM
49	N064246-001D	SAMP	1	04/02/2024	05:39:23 PM
50	N064246-002D	SAMP	1	04/02/2024	05:44:43 PM
51	N064246-003D	SAMP	1	04/02/2024	05:48:58 PM
52	N064246-004D	SAMP	1	04/02/2024	05:53:13 PM
7	CCV4	CCV	1	04/02/2024	05:57:28 PM
1	CCB4	CCB	1	04/02/2024	06:00:42 PM
9	ICSA3	ICSA	1	04/02/2024	06:04:24 PM
10	ICSAB3	ICSAB	1	04/02/2024	06:09:04 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **4/1/2024 11:15:00 AM**
Prep End Date: **4/1/2024 3:30:00 PM**
Prep Batch **107967** Prep Code:**3010_W_DISS**

Reviewed/ Date: dMocha 4/28/2024
Initials/ Date: _____
Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-4-21**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107967	Aqueous		25	☐	25	1.000		
50ML LOT# MP3971								
MB-107967	Aqueous		25	☐	25	1.000		
N063976-001B	Groundwater	<2	25	☐	25	1.000		
N063976-001B-MS	Groundwater	<2	25	☐	25	1.000		
N063976-001B-MSD	Groundwater	<2	25	☐	25	1.000		
N064170-001B	Groundwater	<2	25	☐	25	1.000		
N064170-002B	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16326	HYDROCHLORIC ACID
16332	NITRIC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240311X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240311Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240311Z	ICP Solution C	LCS,MS,MSD	0.5

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240402A

Instrument ID: ICP-03

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Measured	Units	% RE	R
Iron										
CalBlk	04/02/2024	01:05:15 PM	Fe	273.952	136	0.00		mg/L		
Standard1	04/02/2024	01:08:58 PM	Fe	273.952	161	0.02	0.02	mg/L	1.4	
Standard2	04/02/2024	01:12:41 PM	Fe	273.952	371	0.05	0.047	mg/L	-6.5	
Standard3	04/02/2024	01:16:24 PM	Fe	273.952	16255	2.0	2.051	mg/L	2.6	
Standard4	04/02/2024	01:19:37 PM	Fe	273.952	40324	5.0	5.089	mg/L	1.8	
Standard5	04/02/2024	01:22:52 PM	Fe	273.952	60181	7.5	7.595	mg/L	1.3	
Standard6	04/02/2024	01:26:06 PM	Fe	273.952	79681	10.0	10.056	mg/L	0.6	
Standard7	04/02/2024	01:29:19 PM	Fe	273.952	157762	20.0	19.909	mg/L	-0.5	1.0000

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **184317**
Client ID: **ICV**	Batch ID: **R184317**	TestNo: **EPA 6010B**		Analysis Date: **4/2/2024**	SeqNo: **5786971**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10242.372	20	10000	0	102	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **184317**
Client ID: **ZZZZZZ**	Batch ID: **R184317**	TestNo: **EPA 6010B**		Analysis Date: **4/2/2024**	SeqNo: **5786973**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	21.700	20	20.00	0	108	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **184317**
Client ID: **CCV**	Batch ID: **R184317**	TestNo: **EPA 6010B**		Analysis Date: **4/2/2024**	SeqNo: **5786986**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	9921.749	20	10000	0	99.2	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **184317**
Client ID: **CCV**	Batch ID: **R184317**	TestNo: **EPA 6010B**		Analysis Date: **4/2/2024**	SeqNo: **5786997**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	9931.170	20	10000	0	99.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **184317**
Client ID: **ICB**	Batch ID: **R184317**	TestNo: **EPA 6010B**		Analysis Date: **4/2/2024**	SeqNo: **5786972**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.701	20									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **184317**
Client ID: **CCB**	Batch ID: **R184317**	TestNo: **EPA 6010B**		Analysis Date: **4/2/2024**	SeqNo: **5786987**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	3.096	20									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **184317**
Client ID: **CCB**	Batch ID: **R184317**	TestNo: **EPA 6010B**		Analysis Date: **4/2/2024**	SeqNo: **5786998**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.689	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **184317**
Client ID: **ICSA** Batch ID: **R184317** TestNo: **EPA 6010B** Analysis Date: **4/2/2024** SeqNo: **5786974**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	560955.842	50	500000	0	112	80	120				
Calcium	453382.736	500	500000	0	90.7	80	120				
Iron	176234.321	20	200000	0	88.1	80	120				
Magnesium	482976.492	100	500000	0	96.6	80	120				

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **184317**
Client ID: **ICSAB** Batch ID: **R184317** TestNo: **EPA 6010B** Analysis Date: **4/2/2024** SeqNo: **5786975**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	548321.765	50	500000	0	110	80	120				
Calcium	442737.504	500	500000	0	88.5	80	120				
Iron	172657.959	20	200000	0	86.3	80	120				
Magnesium	472992.912	100	500000	0	94.6	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **184317**
Client ID: **ICSA** Batch ID: **R184317** TestNo: **EPA 6010B** Analysis Date: **4/2/2024** SeqNo: **5786999**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	569496.403	50	500000	0	114	80	120				
Calcium	441024.896	500	500000	0	88.2	80	120				
Iron	172842.900	20	200000	0	86.4	80	120				
Magnesium	476771.982	100	500000	0	95.4	80	120				

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **184317**
Client ID: **ICSAB** Batch ID: **R184317** TestNo: **EPA 6010B** Analysis Date: **4/2/2024** SeqNo: **5787000**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	559659.120	50	500000	0	112	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WDPG**	Units: **µg/L**	Prep Date:	RunNo: **184317**
Client ID: **ICSAB**	Batch ID: **R184317**	TestNo: **EPA 6010B**		Analysis Date: **4/2/2024**	SeqNo: **5787000**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	434945.486	500	500000	0	87.0	80	120				
Iron	169774.962	20	200000	0	84.9	80	120				
Magnesium	467377.843	100	500000	0	93.5	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240402A

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	1.01	100.66	65-125	PASS
Standard2	ICAL	1	1	100.27	65-125	PASS
Standard3	ICAL	1	1	99.92	65-125	PASS
Standard4	ICAL	1	0.98	98.42	65-125	PASS
Standard5	ICAL	1	0.98	97.81	65-125	PASS
Standard6	ICAL	1	0.97	97.33	65-125	PASS
Standard7	ICAL	1	0.98	98	65-125	PASS
ICV	ICV	1	1	99.89	65-125	PASS
ICB	ICB	1	1.02	102.08	65-125	PASS
LLICV1	CCV1	1	1.01	100.54	65-125	PASS
ICSA1	ICSA	1	0.9	90.13	65-125	PASS
ICSAB1	ICSAB	1	0.91	90.84	65-125	PASS
MB-107967	MBLK	1	0.99	98.53	65-125	PASS
LCS-107967	LCS	1	0.94	94.17	65-125	PASS
N063976-001B	SAMP	1	0.73	73.19	65-125	PASS
N063976-001B	SAMP	5	0.86	85.87	65-125	PASS
N063976-001B-PS	PS	1	0.71	70.67	65-125	PASS
N063976-001B-MS	MS	1	0.75	75.24	65-125	PASS
N063976-001B-MSD	MSD	1	0.75	75.43	65-125	PASS
CCV1	CCV	1	0.93	93.01	65-125	PASS
CCB1	CCB	1	0.95	94.73	65-125	PASS
N064170-001B	SAMP	1	0.74	73.67	65-125	PASS
N064170-002B	SAMP	1	0.75	74.69	65-125	PASS
CCV2	CCV	1	0.92	91.73	65-125	PASS
CCB2	CCB	1	0.93	93.47	65-125	PASS
ICSA2	ICSA	1	0.86	85.55	65-125	PASS
ICSAB2	ICSAB	1	0.86	86.39	65-125	PASS
RINSE	RINSE	1	1.09	109.12	65-125	PASS
CCV3	CCV	1	0.9	90.17	65-125	PASS
CCB3	CCB	1	0.92	91.59	65-125	PASS
CCV4	CCV	1	0.89	89.3	65-125	PASS
CCB4	CCB	1	0.91	90.61	65-125	PASS
ICSA3	ICSA	1	0.83	83.01	65-125	PASS
ICSAB3	ICSAB	1	0.85	84.64	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063976
Test Method: EPA 6010B
Analysis Date: 4/2/2024

Matrix: Groundwater
Batch No.: 107967

Instrument ID: ICP-03
Instrument Description: Perkin Elmer Avio 500Max

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Fe. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063976-001B DT 5x	Iron	Fe	µg/L	123.2193	NA	116.2743	5.97%	10

Reviewed by:

dRocha 4/28/2024

Note: NA - Not Applicable

04/18/24 00:46

DT_EPA 6010B_N063976_107967

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WDPGEPPB

Sample ID **N063976-001B-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **µg/L** Prep Date: RunNo: **184317**
Client ID: **ZZZZZZ** Batch ID: **107967** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **4/2/2024** SeqNo: **5786983**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	211.127	20	100.0	116.3	94.9	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

LOD & PQL VERIFICATION

Analytical Method: EPA 6010B
Digestion Method: EPA 3010A
Digestion Date: 5/7/23; 5/8/23; 5/10/23
Analysis Date: 5/7-23/23
Instrument Name: ICP-03
Analyst/Technician: Nancy Sibucao / Diane Jetajobe

Matrix: WATER
Units : ppm

Analyte	MDL	LOD	ACTUAL LOD	PQL	Actual PQL	%REC
Beryllium	0.000076	0.0005	0.00047	0.001	0.00098	98
Boron	0.0086	0.05	0.04899	0.1	0.089	89
Magnesium	0.0057	0.05	0.05152	0.1	0.10	102
Silicon	0.012	0.01	0.01312	0.02	0.023	113
Chromium	0.00051	0.0005	0.00056	0.001	0.0010	102
Manganese	0.00032	0.01	0.00534	0.01	0.011	110
Iron	0.0022	0.01	0.01180	0.02	0.021	106
Cobalt	0.001	0.0013	0.00096	0.0025	0.0025	100
Nickel	0.0034	0.0025	0.00417	0.005	0.0055	110
Copper	0.0042	0.0025	0.00434	0.005	0.0044	87
Zinc	0.0007	0.005	0.00624	0.01	0.011	106
Arsenic	0.0042	0.005	0.00461	0.01	0.010	104
Selenium	0.008	0.005	0.00829	0.01	0.010	102
Molybdenum	0.0013	0.0025	0.00307	0.005	0.0053	106
Silver	0.0024	0.0013	0.00419	0.0025	0.0033	134
Cadmium	0.0016	0.0013	0.00180	0.0025	0.0026	102
Tin	0.0076	0.005	0.00563	0.010	0.0099	99
Antimony	0.0038	0.005	0.00307	0.01	0.0096	96
Barium	0.0002	0.0013	0.00124	0.0025	0.0026	104
Thallium	0.0021	0.0075	0.00656	0.015	0.015	101
Lead	0.0039	0.0025	0.00337	0.005	0.0047	94
Calcium	0.011	0.1	0.11963	0.2	0.23	113
Vanadium	0.00017	0.0013	0.00126	0.0025	0.0025	100
Aluminum	0.0089	0.025	0.02576	0.05	0.048	95
Titanium	0.004	0.005	0.00612	0.01	0.01	101

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

EPA 6010B
Total

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107965
ASSET #: N063976

Instrument ID: ICP-03
Analyst: DBJ
Date Analyzed: 4/2/2024

Method: TOTAL

- [X] EPA 6010B / 200.7
- [ ] EPA 6020 / 200.8
- [ ] EPA 7470A / 7471A/245.1
- [ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)			X			X
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?	X			X		
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

% Rec of Fe in N063976-001C-MS/MSD failed, high bias. However, LCS passed criteria

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: _____

2nd Level Reviewer LG 04062024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6010B
TEST NAME: Heavy Metals by ICP
MATRIX: Groundwater

FORMULA:

Calculate the Iron concentration, in ug/L , in the original sample as follows:

Iron , ug/L = A * DF * PF *CF

where:

A = mg/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL
CF= Conversion Factor from mg/L to ug/L, 1000

For Sample **N063976-001C** , the concentration i ug/L is calculated as follows:

Iron , ug/L = 0.11787 * 1 * (25/25) * 1000

Iron , ug/L = 117.87

Reporting results in two significant figures,

Iron , ug/L = 120

Reviewed by:

dMocha 4/28/2024

% RSD SUMMARY

RSD SUMMARY: 240402A

Instrument ID: ICP-03

Sample Name	Type	DF	Analyte	Reported Conc	RSD	Criteria	Comment
CalBlk	IBLK	1	Fe	0	1.75	15	PASS
Standard1	ICAL	1	Fe	0.02	3.44	15	PASS
Standard2	ICAL	1	Fe	0.05	2.3	15	PASS
Standard3	ICAL	1	Fe	2	1.11	15	PASS
Standard4	ICAL	1	Fe	5	0.53	15	PASS
Standard5	ICAL	1	Fe	7.5	0.92	15	PASS
Standard6	ICAL	1	Fe	10	0.36	15	PASS
Standard7	ICAL	1	Fe	20	0.23	15	PASS
ICV	ICV	1	Fe	10.24	0.73	15	PASS
ICB	ICB	1	Fe	0	25.02	15	<PQL
LLICV1	CCV1	1	Fe	0.02	2.03	20	PASS
ICSA1	ICSA	1	Fe	176.23	0.04	15	PASS
ICSAB1	ICSAB	1	Fe	172.66	0.12	15	PASS
CCV1	CCV	1	Fe	9.92	0.32	15	PASS
CCB1	CCB	1	Fe	0	18.12	15	<PQL
MB-107965	MBLK	1	Fe	0	78.34	15	<PQL
LCS-107965	LCS	1	Fe	0.1	1.31	15	PASS
N063976-001C	SAMP	1	Fe	0.12	2.47	15	PASS
N063976-001C	SAMP	5	Fe	0.03	2.71	15	PASS
N063976-001C-PS	PS	1	Fe	0.21	0.37	15	PASS
N063976-001C-MS	MS	1	Fe	0.29	0.87	15	PASS
N063976-001C-MSD	MSD	1	Fe	0.29	0.19	15	PASS
CCV2	CCV	1	Fe	9.93	0.58	15	PASS
CCB2	CCB	1	Fe	0	43.43	15	<PQL
ICSA2	ICSA	1	Fe	172.84	0.02	15	PASS
ICSAB2	ICSAB	1	Fe	169.77	0.04	15	PASS
RINSE	RINSE	1	Fe	0.01	2.1	15	PASS
CCV3	CCV	1	Fe	9.95	0.28	15	PASS
CCB3	CCB	1	Fe	0	16.57	15	<PQL
CCV4	CCV	1	Fe	9.97	0.76	15	PASS
CCB4	CCB	1	Fe	0	103.92	15	<PQL
ICSA3	ICSA	1	Fe	174.61	0.06	15	PASS
ICSAB3	ICSAB	1	Fe	172.28	0.08	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240402A

Instrument ID: ICP-03

STANDARD CODE	
Standard1	MWST-240311M, 0.5<50mL
Standard2	MWST-240311N
Standard3	MWST-240311O, 5<50mL
Standard4	MWST-240311O,12.5<50mL
Standard5	MWST-240311O, 15<40mL
Standard6	MWST-240311O, 25<50mL
Standard7	MWST-243011O
ICV	MWST-240311AF
CCV	MWST-240311O, 25<50mL
ICSA/ICSAB	MWST-240311P / MWST-240311Q
Int. Std. (Y)	MWST-240311B
PS Spike	MWST-240311X/Y/Z

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
1	CalBlk	IBLK	1	04/02/2024	01:05:15 PM
2	Standard1	ICAL	1	04/02/2024	01:08:58 PM
3	Standard2	ICAL	1	04/02/2024	01:12:41 PM
4	Standard3	ICAL	1	04/02/2024	01:16:24 PM
5	Standard4	ICAL	1	04/02/2024	01:19:37 PM
6	Standard5	ICAL	1	04/02/2024	01:22:52 PM
7	Standard6	ICAL	1	04/02/2024	01:26:06 PM
8	Standard7	ICAL	1	04/02/2024	01:29:19 PM
310	ICV	ICV	1	04/02/2024	01:35:59 PM
1	ICB	ICB	1	04/02/2024	01:39:17 PM
2	LLICV1	CCV1	1	04/02/2024	01:42:59 PM
9	ICSA1	ICSA	1	04/02/2024	01:46:43 PM
10	ICSAB1	ICSAB	1	04/02/2024	01:51:24 PM
71	MB-107830	MBLK	1	04/02/2024	01:56:05 PM
72	MB-107784 TCLP	MBLK	1	04/02/2024	01:59:48 PM
22	N064035-012A	SAMP	5	04/02/2024	02:16:21 PM
11	MB-107967	MBLK	1	04/02/2024	02:23:46 PM
12	LCS-107967	LCS	1	04/02/2024	02:30:21 PM
13	N063976-001B	SAMP	1	04/02/2024	02:34:04 PM
14	N063976-001B	SAMP	5	04/02/2024	02:39:22 PM
15	N063976-001B-PS	PS	1	04/02/2024	02:43:36 PM
16	N063976-001B-MS	MS	1	04/02/2024	02:48:54 PM
17	N063976-001B-MSD	MSD	1	04/02/2024	02:54:13 PM
7	CCV1	CCV	1	04/02/2024	02:59:02 PM
1	CCB1	CCB	1	04/02/2024	03:02:16 PM
18	N064170-001B	SAMP	1	04/02/2024	03:05:58 PM
19	N064170-002B	SAMP	1	04/02/2024	03:10:48 PM
23	MB-107965	MBLK	1	04/02/2024	03:15:37 PM

A/S Loc	Sample Name	Type	DF	Acq Date	Acq Time
24	LCS-107965	LCS	1	04/02/2024	03:19:20 PM
25	N063976-001C	SAMP	1	04/02/2024	03:23:04 PM
26	N063976-001C	SAMP	5	04/02/2024	03:28:22 PM
27	N063976-001C-PS	PS	1	04/02/2024	03:32:37 PM
28	N063976-001C-MS	MS	1	04/02/2024	03:37:56 PM
29	N063976-001C-MSD	MSD	1	04/02/2024	03:43:14 PM
7	CCV2	CCV	1	04/02/2024	03:48:33 PM
1	CCB2	CCB	1	04/02/2024	03:51:47 PM
9	ICSA2	ICSA	1	04/02/2024	03:55:29 PM
10	ICSAB2	ICSAB	1	04/02/2024	04:00:10 PM
299	RINSE	RINSE	1	04/02/2024	04:24:50 PM
35	MB-108042	MBLK	1	04/02/2024	04:28:38 PM
36	LCS-108042	LCS	1	04/02/2024	04:32:21 PM
37	N064244-001B	SAMP	1	04/02/2024	04:36:04 PM
38	N064244-002B	SAMP	1	04/02/2024	04:39:48 PM
39	N064244-003B	SAMP	1	04/02/2024	04:43:32 PM
40	N064244-005B	SAMP	1	04/02/2024	04:47:47 PM
41	N064245-002D	SAMP	1	04/02/2024	04:52:01 PM
42	N064245-002D	SAMP	5	04/02/2024	04:57:20 PM
43	N064245-002D-PS	PS	1	04/02/2024	05:01:36 PM
7	CCV3	CCV	1	04/02/2024	05:06:56 PM
1	CCB3	CCB	1	04/02/2024	05:10:09 PM
44	N064245-002DMS	MS	1	04/02/2024	05:13:51 PM
45	N064245-002DMSD	MSD	1	04/02/2024	05:19:12 PM
46	N064245-003D	SAMP	1	04/02/2024	05:24:33 PM
47	N064245-004E	SAMP	1	04/02/2024	05:28:49 PM
48	N064245-005E	SAMP	1	04/02/2024	05:34:06 PM
49	N064246-001D	SAMP	1	04/02/2024	05:39:23 PM
50	N064246-002D	SAMP	1	04/02/2024	05:44:43 PM
51	N064246-003D	SAMP	1	04/02/2024	05:48:58 PM
52	N064246-004D	SAMP	1	04/02/2024	05:53:13 PM
7	CCV4	CCV	1	04/02/2024	05:57:28 PM
1	CCB4	CCB	1	04/02/2024	06:00:42 PM
9	ICSA3	ICSA	1	04/02/2024	06:04:24 PM
10	ICSAB3	ICSAB	1	04/02/2024	06:09:04 PM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **4/1/2024 11:00:00 AM**
Prep End Date: **4/1/2024 3:00:00 PM**
Prep Batch **107965** Prep Code:**3010_W**

Reviewed/ Date: dlRocha 4/28/2024
Initials/ Date: _____
Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-4-21**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107965	Aqueous		25	☐	25	1.000		
50ML LOT# MP3971								
MB-107965	Aqueous		25	☐	25	1.000		
N063976-001C	Groundwater	<2	25	☐	25	1.000		
N063976-001C-MS	Groundwater	<2	25	☐	25	1.000		
N063976-001C-MSD	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16326	HYDROCHLORIC ACID
16332	NITRIC ACID

Spk ID	Spike Name	SampType	AmtAdd
MWST-240311X	ICP Solution A	LCS,MS,MSD	0.5
MWST-240311Y	ICP Solution B	LCS,MS,MSD	0.5
MWST-240311Z	ICP Solution C	LCS,MS,MSD	0.5

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240402A

Instrument ID: ICP-03

Sample ID	Date	Time	Elem	Wavelength	Corrected Intensity	Concentration	Measured	Units	% RE	R
Iron										
CalBlk	04/02/2024	01:05:15 PM	Fe	273.952	136	0.00		mg/L		
Standard1	04/02/2024	01:08:58 PM	Fe	273.952	161	0.02	0.02	mg/L	1.4	
Standard2	04/02/2024	01:12:41 PM	Fe	273.952	371	0.05	0.047	mg/L	-6.5	
Standard3	04/02/2024	01:16:24 PM	Fe	273.952	16255	2.0	2.051	mg/L	2.6	
Standard4	04/02/2024	01:19:37 PM	Fe	273.952	40324	5.0	5.089	mg/L	1.8	
Standard5	04/02/2024	01:22:52 PM	Fe	273.952	60181	7.5	7.595	mg/L	1.3	
Standard6	04/02/2024	01:26:06 PM	Fe	273.952	79681	10.0	10.056	mg/L	0.6	
Standard7	04/02/2024	01:29:19 PM	Fe	273.952	157762	20.0	19.909	mg/L	-0.5	1.0000

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **ICV**	SampType: **ICV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184318**
Client ID: **ICV**	Batch ID: **R184318**	TestNo: **EPA 6010B**		Analysis Date: **4/2/2024**	SeqNo: **5787032**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	10242.372	20	10000	0	102	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184318**
Client ID: **ZZZZZZ**	Batch ID: **R184318**	TestNo: **EPA 6010B**		Analysis Date: **4/2/2024**	SeqNo: **5787034**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	21.700	20	20.00	0	108	80	120				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184318**
Client ID: **CCV**	Batch ID: **R184318**	TestNo: **EPA 6010B**		Analysis Date: **4/2/2024**	SeqNo: **5787047**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	9921.749	20	10000	0	99.2	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184318**
Client ID: **CCV**	Batch ID: **R184318**	TestNo: **EPA 6010B**		Analysis Date: **4/2/2024**	SeqNo: **5787058**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	9931.170	20	10000	0	99.3	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **ICB**	SampType: **ICB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184318**
Client ID: **ICB**	Batch ID: **R184318**	TestNo: **EPA 6010B**		Analysis Date: **4/2/2024**	SeqNo: **5787033**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.701	20									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184318**
Client ID: **CCB**	Batch ID: **R184318**	TestNo: **EPA 6010B**		Analysis Date: **4/2/2024**	SeqNo: **5787048**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	3.096	20									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184318**
Client ID: **CCB**	Batch ID: **R184318**	TestNo: **EPA 6010B**		Analysis Date: **4/2/2024**	SeqNo: **5787059**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	2.689	20									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **ICSA1** SampType: **ICSA** TestCode: **6010_WPGE** Units: **µg/L** Prep Date: RunNo: **184318**
Client ID: **ICSA** Batch ID: **R184318** TestNo: **EPA 6010B** Analysis Date: **4/2/2024** SeqNo: **5787035**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	560955.842	50	500000	0	112	80	120				
Calcium	453382.736	500	500000	0	90.7	80	120				
Iron	176234.321	20	200000	0	88.1	80	120				
Magnesium	482976.492	100	500000	0	96.6	80	120				

Sample ID **ICSAB1** SampType: **ICSAB** TestCode: **6010_WPGE** Units: **µg/L** Prep Date: RunNo: **184318**
Client ID: **ICSAB** Batch ID: **R184318** TestNo: **EPA 6010B** Analysis Date: **4/2/2024** SeqNo: **5787036**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	548321.765	50	500000	0	110	80	120				
Calcium	442737.504	500	500000	0	88.5	80	120				
Iron	172657.959	20	200000	0	86.3	80	120				
Magnesium	472992.912	100	500000	0	94.6	80	120				

Sample ID **ICSA2** SampType: **ICSA** TestCode: **6010_WPGE** Units: **µg/L** Prep Date: RunNo: **184318**
Client ID: **ICSA** Batch ID: **R184318** TestNo: **EPA 6010B** Analysis Date: **4/2/2024** SeqNo: **5787060**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	569496.403	50	500000	0	114	80	120				
Calcium	441024.896	500	500000	0	88.2	80	120				
Iron	172842.900	20	200000	0	86.4	80	120				
Magnesium	476771.982	100	500000	0	95.4	80	120				

Sample ID **ICSAB2** SampType: **ICSAB** TestCode: **6010_WPGE** Units: **µg/L** Prep Date: RunNo: **184318**
Client ID: **ICSAB** Batch ID: **R184318** TestNo: **EPA 6010B** Analysis Date: **4/2/2024** SeqNo: **5787061**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	559659.120	50	500000	0	112	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **ICSAB2**	SampType: **ICSAB**	TestCode: **6010_WPGE**	Units: **µg/L**	Prep Date:	RunNo: **184318**
Client ID: **ICSAB**	Batch ID: **R184318**	TestNo: **EPA 6010B**		Analysis Date: **4/2/2024**	SeqNo: **5787061**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Calcium	434945.486	500	500000	0	87.0	80	120				
Iron	169774.962	20	200000	0	84.9	80	120				
Magnesium	467377.843	100	500000	0	93.5	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240402A

Instrument ID: ICP-03

Sample Name	Type	DF	Yttrium, 1.0 mg/L			
			Reported Conc	%REC	Criteria	Comment
CalBlk	IBLK	1	1	100	65-125	PASS
Standard1	ICAL	1	1.01	100.66	65-125	PASS
Standard2	ICAL	1	1	100.27	65-125	PASS
Standard3	ICAL	1	1	99.92	65-125	PASS
Standard4	ICAL	1	0.98	98.42	65-125	PASS
Standard5	ICAL	1	0.98	97.81	65-125	PASS
Standard6	ICAL	1	0.97	97.33	65-125	PASS
Standard7	ICAL	1	0.98	98	65-125	PASS
ICV	ICV	1	1	99.89	65-125	PASS
ICB	ICB	1	1.02	102.08	65-125	PASS
LLICV1	CCV1	1	1.01	100.54	65-125	PASS
ICSA1	ICSA	1	0.9	90.13	65-125	PASS
ICSAB1	ICSAB	1	0.91	90.84	65-125	PASS
CCV1	CCV	1	0.93	93.01	65-125	PASS
CCB1	CCB	1	0.95	94.73	65-125	PASS
MB-107965	MBLK	1	0.93	93.42	65-125	PASS
LCS-107965	LCS	1	0.91	90.54	65-125	PASS
N063976-001C	SAMP	1	0.73	73.36	65-125	PASS
N063976-001C	SAMP	5	0.84	84.17	65-125	PASS
N063976-001C-PS	PS	1	0.71	71.28	65-125	PASS
N063976-001C-MS	MS	1	0.75	74.81	65-125	PASS
N063976-001C-MSD	MSD	1	0.74	73.71	65-125	PASS
CCV2	CCV	1	0.92	91.73	65-125	PASS
CCB2	CCB	1	0.93	93.47	65-125	PASS
ICSA2	ICSA	1	0.86	85.55	65-125	PASS
ICSAB2	ICSAB	1	0.86	86.39	65-125	PASS
RINSE	RINSE	1	1.09	109.12	65-125	PASS
CCV3	CCV	1	0.9	90.17	65-125	PASS
CCB3	CCB	1	0.92	91.59	65-125	PASS
CCV4	CCV	1	0.89	89.3	65-125	PASS
CCB4	CCB	1	0.91	90.61	65-125	PASS
ICSA3	ICSA	1	0.83	83.01	65-125	PASS
ICSAB3	ICSAB	1	0.85	84.64	65-125	PASS

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-Metals in Water

Dilution Test Summary

Work Order No.: N063976
Test Method: EPA 6010B
Analysis Date: 4/2/2024

Matrix: Groundwater
Batch No.: 107965

Instrument ID: ICP-03
Instrument Description: Perkin Elmer Avio 500Max

Comments:

Analyzed By: Diane Jetajobe

Dilution test is not applicable to Fe. The calculated concentration is <25RL.

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063976-001C DT 5x	Iron	Fe	µg/L	122.9128	NA	117.8708	4.28%	10

Reviewed by:

dMocha 4/28/2024

Note: NA - Not Applicable

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6010_WPGEPPB

Sample ID **N063976-001C-PS** SampType: **PS** TestCode: **6010_WPGE** Units: **µg/L** Prep Date: RunNo: **184318**
Client ID: **ZZZZZZ** Batch ID: **107965** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **4/2/2024** SeqNo: **5787055**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron	214.452	20	100.0	117.9	96.6	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

LOD & PQL VERIFICATION

Analytical Method: EPA 6010B
Digestion Method: EPA 3010A
Digestion Date: 5/7/23; 5/8/23; 5/10/23
Analysis Date: 5/7-23/23
Instrument Name: ICP-03
Analyst/Technician: Nancy Sibucao / Diane Jetajobe

Matrix: WATER
Units : ppm

Analyte	MDL	LOD	ACTUAL LOD	PQL	Actual PQL	%REC
Beryllium	0.000076	0.0005	0.00047	0.001	0.00098	98
Boron	0.0086	0.05	0.04899	0.1	0.089	89
Magnesium	0.0057	0.05	0.05152	0.1	0.10	102
Silicon	0.012	0.01	0.01312	0.02	0.023	113
Chromium	0.00051	0.0005	0.00056	0.001	0.0010	102
Manganese	0.00032	0.01	0.00534	0.01	0.011	110
Iron	0.0022	0.01	0.01180	0.02	0.021	106
Cobalt	0.001	0.0013	0.00096	0.0025	0.0025	100
Nickel	0.0034	0.0025	0.00417	0.005	0.0055	110
Copper	0.0042	0.0025	0.00434	0.005	0.0044	87
Zinc	0.0007	0.005	0.00624	0.01	0.011	106
Arsenic	0.0042	0.005	0.00461	0.01	0.010	104
Selenium	0.008	0.005	0.00829	0.01	0.010	102
Molybdenum	0.0013	0.0025	0.00307	0.005	0.0053	106
Silver	0.0024	0.0013	0.00419	0.0025	0.0033	134
Cadmium	0.0016	0.0013	0.00180	0.0025	0.0026	102
Tin	0.0076	0.005	0.00563	0.010	0.0099	99
Antimony	0.0038	0.005	0.00307	0.01	0.0096	96
Barium	0.0002	0.0013	0.00124	0.0025	0.0026	104
Thallium	0.0021	0.0075	0.00656	0.015	0.015	101
Lead	0.0039	0.0025	0.00337	0.005	0.0047	94
Calcium	0.011	0.1	0.11963	0.2	0.23	113
Vanadium	0.00017	0.0013	0.00126	0.0025	0.0025	100
Aluminum	0.0089	0.025	0.02576	0.05	0.048	95
Titanium	0.004	0.005	0.00612	0.01	0.01	101

Method Detection Limit

Method Name: **Metals by ICP**
Method Number **EPA 6010B / 200.7**
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	MDLs	MDLb	MDL
Beryllium	0.00015	0.00017	0.00017
Boron	0.03512	0.01726	0.03512
Magnesium	0.01676	0.00844	0.01676
Silicon	0.01615	0.00393	0.01615
Chromium	0.00138	0.00027	0.00138
Manganese	0.00267	0.00038	0.00267
Iron	0.01271	0.00241	0.01271
Cobalt	0.00077	0.00066	0.00077
Nickel	0.00430	0.00185	0.00430
Copper	0.00123	0.00129	0.00129
Zinc	0.00818	0.00113	0.00818
Arsenic	0.00799	0.00899	0.00899
Selenium	0.00935	0.00839	0.00935
Molybdenum	0.00324	0.00168	0.00324
Silver	0.00098	0.00117	0.00117
Cadmium	0.00046	0.00030	0.00046
Tin	0.00933	0.00433	0.00933
Antimony	0.00740	0.00842	0.00842
Barium	0.00050	0.00067	0.00067
Thallium	0.00843	0.00635	0.00843
Lead	0.00190	0.00105	0.00190
Calcium	0.18093	0.14705	0.18093
Vanadium	0.00027	0.00053	0.00053
Aluminum	0.02034	0.01114	0.02034
Titanium	0.00192	0.00025	0.00192
Potassium	0.07902	0.13882	0.13882
Sodium	0.06553	0.34000	0.34000
Strontium	0.00306	-0.00043	0.00306

Method Name: **Metals by ICP** **Matrix:** **WATER**
Method Number **EPA 6010B / 200.7** Unit: mg/L
Analysis Date: 9/14-10/20/20
Instrument Name: ICP-02
Analyst/Technician: MEI/DJ

Analyte	1	2	3	4	5	6	7	SD	MDLs	AMT SPIKED(ppm)	PQL
Beryllium	0.0011	0.0011	0.0011	0.0011	0.0011	0.0011	0.0010	0.00005	0.00015	0.0010	0.0010
Boron	0.1341	0.1177	0.1120	0.1196	0.1101	0.1179	0.0972	0.01119	0.03512	0.1000	0.1000
Magnesium	0.1003	0.1017	0.1022	0.1030	0.1022	0.1147	0.0982	0.00534	0.01676	0.1000	0.1000
Silicon	0.0165	0.0162	0.0212	0.0143	0.0145	0.0083	0.0061	0.00514	0.01615	0.0200	0.0200
Chromium	0.0012	0.0011	0.0011	0.0006	0.0009	0.0016	0.0019	0.00044	0.00138	0.0010	0.0010
Manganese	0.0114	0.0114	0.0119	0.0104	0.0132	0.0115	0.0112	0.00085	0.00267	0.0100	0.0100
Iron	0.0257	0.0250	0.0279	0.0234	0.0224	0.0346	0.0254	0.00405	0.01271	0.0200	0.0200
Cobalt	0.0025	0.0023	0.0023	0.0028	0.0024	0.0029	0.0027	0.00024	0.00077	0.0025	0.0025
Nickel	0.0062	0.0062	0.0060	0.0065	0.0061	0.0071	0.0099	0.00137	0.00430	0.0050	0.0050
Copper	0.0055	0.0049	0.0049	0.0054	0.0053	0.0055	0.0060	0.00039	0.00123	0.0050	0.0050
Zinc	0.0118	0.0115	0.0118	0.0111	0.0178	0.0103	0.0102	0.00261	0.00818	0.0100	0.0100
Arsenic	0.0172	0.0132	0.0120	0.0136	0.0145	0.0118	0.0089	0.00254	0.00799	0.0100	0.0100
Selenium	0.0070	0.0076	0.0074	0.0114	0.0074	0.0138	0.0131	0.00298	0.00935	0.0100	0.0100
Molybdenum	0.0064	0.0054	0.0043	0.0070	0.0055	0.0073	0.0057	0.00103	0.00324	0.0050	0.0050
Silver	0.0022	0.0024	0.0023	0.0019	0.0018	0.0027	0.0025	0.00031	0.00098	0.0025	0.0025
Cadmium	0.0030	0.0030	0.0030	0.0028	0.0027	0.0028	0.0027	0.00015	0.00046	0.0025	0.0025
Tin	0.0117	0.0114	0.0120	0.0103	0.0168	0.0076	0.0085	0.00297	0.00933	0.0100	0.0100
Antimony	0.0098	0.0115	0.0098	0.0142	0.0121	0.0163	0.0115	0.00236	0.00740	0.0100	0.0100
Barium	0.0031	0.0030	0.0030	0.0033	0.0030	0.0032	0.0034	0.00016	0.00050	0.0025	0.0025
Thallium	0.0134	0.0103	0.0095	0.0149	0.0153	0.0159	0.0159	0.00268	0.00843	0.0150	0.0150
Lead	0.0046	0.0055	0.0055	0.0058	0.0061	0.0063	0.0050	0.00061	0.00190	0.0050	0.0050
Calcium	0.2701	0.2125	0.2303	0.2106	0.1214	0.1336	0.1343	0.05762	0.18093	0.2000	0.2000
Vanadium	0.0025	0.0024	0.0024	0.0025	0.0026	0.0026	0.0026	0.00009	0.00027	0.0025	0.0025
Aluminum	0.0627	0.0613	0.0653	0.0533	0.0535	0.0698	0.0544	0.00648	0.02034	0.0500	0.0500
Titanium	0.0097	0.0097	0.0096	0.0096	0.0094	0.0108	0.0108	0.00061	0.00192	0.0100	0.0100

BLANK

Analyte	1	2	3	4	5	6	7	SD	MDLb	AMT SPIKED(ppm)	PQL
Beryllium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00003	0.00017	0.0000	0.001
Boron	0.004	0.002	-0.002	-0.008	-0.003	0.008	0.003	0.00530	0.01726	0.0020	0.100
Magnesium	0.003	0.002	0.001	0.002	-0.002	0.003	0.004	0.00203	0.00844	0.0020	0.100
Silicon	-0.006	-0.006	-0.006	-0.002	-0.007	-0.011	-0.013	0.00358	0.00393	0.0004	0.020
Chromium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00027	0.0000	0.001
Manganese	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00010	0.00038	0.0002	0.010
Iron	0.001	0.000	-0.001	0.001	0.000	0.000	-0.001	0.00072	0.00241	0.0004	0.020
Cobalt	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00023	0.00066	0.0001	0.003
Nickel	0.000	0.000	0.001	0.001	0.000	0.001	0.001	0.00038	0.00185	0.0001	0.005
Copper	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00029	0.00129	0.0001	0.005
Zinc	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.00032	0.00113	0.0002	0.010
Arsenic	0.004	0.004	0.004	0.001	0.001	-0.002	0.000	0.00229	0.00899	0.0002	0.010
Selenium	-0.005	-0.005	-0.005	-0.001	-0.001	0.001	0.003	0.00325	0.00839	0.0002	0.010
Molybdenum	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.00045	0.00168	0.0001	0.005
Silver	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.00038	0.00117	0.0001	0.003
Cadmium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00008	0.00030	0.0001	0.003
Tin	0.000	0.001	0.001	-0.001	-0.001	-0.003	-0.003	0.00160	0.00433	0.0002	0.010
Antimony	-0.004	0.000	0.000	0.004	-0.001	0.002	0.001	0.00260	0.00842	0.0002	0.010
Barium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00013	0.00067	0.0001	0.003
Thallium	-0.004	-0.003	-0.005	-0.002	0.000	0.001	0.001	0.00259	0.00635	0.0003	0.015
Lead	0.000	0.000	0.000	0.000	-0.001	0.000	0.000	0.00030	0.00105	0.0001	0.005
Calcium	0.080	0.004	0.031	0.008	-0.065	0.002	-0.031	0.04553	0.14705	0.0040	0.200
Vanadium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00016	0.00053	0.0001	0.003
Aluminum	0.004	0.005	0.002	0.000	-0.004	-0.002	-0.003	0.00353	0.01114	0.0010	0.050
Titanium	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00006	0.00025	0.0002	0.010

EPA 6020
Dissolved

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107861
ASSET #: N063976

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 3/27/2024

Method: DISSOLVED

[ ] EPA 6010B / 200.7
[X] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?	X			X		
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits	X			X		
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

% Rec of Mn in N063976-001B-PS/MS/ MSD failed, low bias. However, LCS passed criteria

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: —

2nd Level Reviewer LG 4/6/2024 Date: _____

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Groundwater

FORMULA:

Calculate the Manganese concentration, in ug/L in the original sample as follows:

Manganese , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063976-001B** , the concentration in ug/L is calculated as follows:

Manganese , ug/L = 73.7453 * 10 *(25 / 25)

Manganese , ug/L = 737.453

Reporting results in two significant figures,

Manganese , ug/L = 740

Reviewed by:

JRB 4/30/2024

% RSD SUMMARY

PERCENT RSD SUMMARY: 240327A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	17.783	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.47	6.401	15	PASS
Std3-5/50 ppb	ICAL	1	4.71	1.52	15	PASS
Std4-10/100 ppb	ICAL	1	9.66	2.959	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.13	1.027	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.45	1.452	15	PASS
Std7-100/1000 ppb	ICAL	1	98.91	0.464	15	PASS
Std8-200/2000 ppb	ICAL	1	200.76	0.438	15	PASS
ICV	ICV	1	102.17	1.294	15	PASS
ICB	ICB	1	0	300.835	15	<PQL
LLICV1	LLICV	1	0.55	4.481	20	PASS
MLCCV	CCV	1	19.32	0.885	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.31	0.117	15	PASS
LLICV1	LLICV	1	0.57	2.034	20	PASS
CCV1	CCV	1	19.3	0.552	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.43	0.461	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.24	0.753	15	PASS
CCV3	CCV	1	19.27	0.266	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL
CCV4	CCV	1	19.61	1.437	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.13	1.15	15	PASS
MB-107861	MBLK	1	<0.000	N/A	15	<PQL
LCS-107861	LCS	1	98.66	0.412	15	PASS
N063617-012D	SAMP	10	9.51	1.861	15	PASS
N063976-001B	SAMP	1	655.39	1.242	15	PASS
N063976-001B	SAMP	5	137.23	0.122	15	PASS
N063976-001B	SAMP	10	73.75	1.066	15	PASS
N063976-001B	SAMP	50	14.06	0.922	15	PASS
N063976-001B-PS	PS	1	729.08	0.951	15	PASS
N063976-001B-PS	PS	10	152.67	0.825	15	PASS
CCV5	CCV	1	19.13	0.306	15	PASS
CCB5	CCB	1	0	190.723	15	<PQL
N063976-001B-MS	MS	1	753.44	0.737	15	PASS
N063976-001B-MS	MS	10	80.1	0.957	15	PASS

PERCENT RSD SUMMARY: 240327A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment
N063976-001B-MSD	MSD	1	750.94	0.701	15	PASS
N063976-001B-MSD	MSD	10	80.18	1.196	15	PASS
CCV6	CCV	1	18.76	1.783	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL
CCV7	CCV	1	18.85	1.107	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL
CCV8	CCV	1	19.01	2.324	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.07	1.214	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240327A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0327001.d	RINSE	ICAL	1	03/27/24 4:39 PM
A0327002.d	RINSE	ICAL	1	03/27/24 4:44 PM
A0327003.d	Cal Blk	IBLK	1	03/27/24 4:49 PM
A0327004.d	Std1-0.1/1 ppb	ICAL	1	03/27/24 4:53 PM
A0327005.d	Std2-0.5/5 ppb	ICAL	1	03/27/24 4:58 PM
A0327006.d	Std3-5/50 ppb	ICAL	1	03/27/24 5:03 PM
A0327007.d	Std4-10/100 ppb	ICAL	1	03/27/24 5:08 PM
A0327008.d	Std5-4.0/20/200 ppb	ICAL	1	03/27/24 5:12 PM
A0327009.d	Std6-8.0/40/400 ppb	ICAL	1	03/27/24 5:17 PM
A0327010.d	Std7-100/1000 ppb	ICAL	1	03/27/24 5:22 PM
A0327011.d	Std8-200/2000 ppb	ICAL	1	03/27/24 5:27 PM
A0327012.d	ICV	ICV	1	03/27/24 5:42 PM
A0327013.d	ICB	ICB	1	03/27/24 5:46 PM
A0327014.d	LLICV1	LLICV	1	03/27/24 5:51 PM
A0327015.d	MLCCV	CCV	1	03/27/24 5:55 PM
A0327016.d	ICSA1	ICSA	1	03/27/24 6:00 PM
A0327017.d	ICSAB1	ICSAB	1	03/27/24 6:05 PM
A0327018.d	LLICV1	LLICV	1	03/27/24 6:10 PM
A0327019.d	MB-107859	MBLK	1	03/27/24 6:23 PM
A0327020.d	LCS-107859	LCS	1	03/27/24 6:28 PM
A0327021.d	N062306-022A	SAMP	1	03/27/24 6:33 PM
A0327022.d	N062306-022A	SAMP	5	03/27/24 6:38 PM
A0327023.d	N064071-001A	SAMP	1	03/27/24 6:43 PM
A0327024.d	N064072-001A	SAMP	1	03/27/24 6:48 PM
A0327025.d	N064073-001A	SAMP	1	03/27/24 6:52 PM
A0327026.d	N064092-001B	SAMP	1	03/27/24 6:57 PM
A0327027.d	N064092-001B	SAMP	5	03/27/24 7:02 PM
A0327028.d	CCV1	CCV	1	03/27/24 7:06 PM
A0327029.d	CCB1	CCB	1	03/27/24 7:11 PM
A0327030.d	N064092-001B-PS	PS	1	03/27/24 7:16 PM
A0327031.d	N064092-001B-MS	MS	1	03/27/24 7:20 PM
A0327032.d	N064092-001B-MSD	MSD	1	03/27/24 7:25 PM
A0327033.d	N064092-001B	SAMP	10	03/27/24 7:29 PM
A0327034.d	N064092-001B	SAMP	50	03/27/24 7:34 PM
A0327035.d	N064092-001B-PS	PS	10	03/27/24 7:39 PM
A0327036.d	N064092-001B-MS	MS	10	03/27/24 7:43 PM
A0327037.d	N064092-001B-MSD	MSD	10	03/27/24 7:48 PM
A0327038.d	LCS-107859	LCS	1	03/27/24 7:53 PM
A0327039.d	CCV2	CCV	1	03/27/24 7:57 PM
A0327040.d	CCB2	CCB	1	03/27/24 8:02 PM
A0327041.d	ICSA2	ICSA	1	03/27/24 8:06 PM
A0327042.d	ICSAB2	ICSAB	1	03/27/24 8:11 PM

INJECTION LOG: 240327A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0327043.d	MB-107860	MBLK	1	03/27/24 8:16 PM
A0327044.d	LCS-107860	LCS	1	03/27/24 8:20 PM
A0327045.d	N064070-001A	SAMP	1	03/27/24 8:25 PM
A0327046.d	N064070-001A	SAMP	5	03/27/24 8:30 PM
A0327047.d	N064070-001A-PS	PS	1	03/27/24 8:34 PM
A0327048.d	N064070-001A-MS	MS	1	03/27/24 8:39 PM
A0327049.d	N064070-001A-MSD	MSD	1	03/27/24 8:44 PM
A0327050.d	CCV3	CCV	1	03/27/24 8:48 PM
A0327051.d	CCB3	CCB	1	03/27/24 8:53 PM
A0327052.d	MB-107858	MBLK	1	03/27/24 8:58 PM
A0327053.d	LCS-107858	LCS	1	03/27/24 9:02 PM
A0327054.d	N063818-005A	SAMP	10	03/27/24 9:07 PM
A0327055.d	N063818-005A	SAMP	50	03/27/24 9:11 PM
A0327056.d	N063818-005A-PS	PS	10	03/27/24 9:16 PM
A0327057.d	N063818-005A-MS	MS	10	03/27/24 9:21 PM
A0327058.d	N063818-005A-MSD	MSD	10	03/27/24 9:25 PM
A0327059.d	N063820-003A	SAMP	10	03/27/24 9:30 PM
A0327060.d	CCV4	CCV	1	03/27/24 9:35 PM
A0327061.d	CCB4	CCB	1	03/27/24 9:39 PM
A0327062.d	ICSA3	ICSA	1	03/27/24 9:44 PM
A0327063.d	ICSAB3	ICSAB	1	03/27/24 9:49 PM
A0327064.d	MB-107861	MBLK	1	03/27/24 9:53 PM
A0327065.d	LCS-107861	LCS	1	03/27/24 9:58 PM
A0327066.d	N063617-012D	SAMP	10	03/27/24 10:03 PM
A0327067.d	N063976-001B	SAMP	1	03/27/24 10:07 PM
A0327068.d	N063976-001B	SAMP	5	03/27/24 10:12 PM
A0327069.d	N063976-001B	SAMP	10	03/27/24 10:16 PM
A0327070.d	N063976-001B	SAMP	50	03/27/24 10:21 PM
A0327071.d	N063976-001B-PS	PS	1	03/27/24 10:26 PM
A0327072.d	N063976-001B-PS	PS	10	03/27/24 10:31 PM
A0327073.d	CCV5	CCV	1	03/27/24 10:35 PM
A0327074.d	CCB5	CCB	1	03/27/24 10:40 PM
A0327075.d	N063976-001B-MS	MS	1	03/27/24 10:44 PM
A0327076.d	N063976-001B-MS	MS	10	03/27/24 10:49 PM
A0327077.d	N063976-001B-MSD	MSD	1	03/27/24 10:54 PM
A0327078.d	N063976-001B-MSD	MSD	10	03/27/24 10:58 PM
A0327079.d	CCV6	CCV	1	03/27/24 11:03 PM
A0327080.d	CCB6	CCB	1	03/27/24 11:08 PM
A0327081.d	MB-107862	MBLK	1	03/27/24 11:12 PM
A0327082.d	LCS-107862	LCS	1	03/27/24 11:17 PM
A0327083.d	N063976-001C	SAMP	1	03/27/24 11:22 PM
A0327084.d	N063976-001C	SAMP	5	03/27/24 11:26 PM

INJECTION LOG: 240327A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0327085.d	N063976-001C	SAMP	10	03/27/24 11:31 PM
A0327086.d	N063976-001C	SAMP	50	03/27/24 11:36 PM
A0327087.d	N063976-001C-PS	PS	1	03/27/24 11:40 PM
A0327088.d	N063976-001C-PS	PS	10	03/27/24 11:45 PM
A0327089.d	N063976-001C-MS	MS	1	03/27/24 11:49 PM
A0327090.d	N063976-001C-MS	MS	10	03/27/24 11:54 PM
A0327091.d	CCV7	CCV	1	03/27/24 11:59 PM
A0327092.d	CCB7	CCB	1	03/28/24 12:04 AM
A0327093.d	N063976-001C-MSD	MSD	1	03/28/24 12:08 AM
A0327094.d	N063976-001C-MSD	MSD	10	03/28/24 12:13 AM
A0327095.d	CCV8	CCV	1	03/28/24 12:17 AM
A0327096.d	CCB8	CCB	1	03/28/24 12:22 AM
A0327097.d	ICSA4	ICSA	1	03/28/24 12:27 AM
A0327098.d	ICSAB4	ICSAB	1	03/28/24 12:31 AM
A0327099.d	RINSE	ICAL	1	03/28/24 12:36 AM
A0327100.d	RINSE	ICAL	1	03/28/24 12:41 AM
A0327101.d	RINSE	ICAL	1	03/28/24 12:45 AM
A0327102.d	RINSE	ICAL	1	03/28/24 12:50 AM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/27/2024 10:49:30 AM**
Prep End Date: **3/27/2024 3:00:00 PM**
Prep Batch **107861** Prep Code:**3010_W_MSDISS_TPK**

Reviewed/ Date: JRB 4/30/2024
Initials/ Date: for
Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-4-18**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107861	Aqueous		25	☐	25	1.000		
50ML LOT# J583433-8247								
MB-107861	Aqueous		25	☐	25	1.000		
N063617-012D	Groundwater	<2	25	☐	25	1.000		
REDIGEST								
N063976-001B	Groundwater	<2	25	☐	25	1.000		
N063976-001B-MS	Groundwater	<2	25	☐	25	1.000		
N063976-001B-MSD	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16336	NITRIC ACID
16346	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240326A.b
Acq. Date-Time	2024-03-27 16:14:11
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

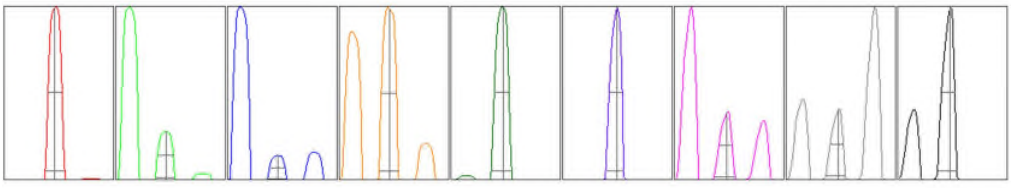
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	7538	75376.99	500.00		2.209	5.000
24	10.00	22350	223495.42	500.00		2.057	5.000
25	10.00	2955	29548.93	500.00		2.583	5.000
26	10.00	3400	33998.03	500.00		3.040	5.000
59	10.00	35306	353063.32	500.00		1.945	5.000
115	10.00	35779	357792.17	500.00		2.037	5.000
206	10.00	9790	97899.24	500.00		2.188	5.000
207	10.00	8158	81584.33	500.00		2.349	5.000
208	10.00	20224	202242.71	500.00		2.051	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.662 %
Doubly Charged	70 / 140 0.794 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	7554.92	8.90	8.90 - 9.10	
24	22882.50	23.90	23.90 - 24.10	
25	3097.15	24.90	24.90 - 25.10	
26	3554.80	25.90	25.90 - 26.10	
59	35647.12	58.95	58.90 - 59.10	
115	35423.26	115.00	114.90 - 115.10	
206	9445.92	205.95	205.90 - 206.10	
207	8309.68	206.95	206.90 - 207.10	
208	20689.38	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.39	0.530	0.900	
24	0.44	0.540	0.900	
25	0.43	0.539	0.900	
26	0.43	0.538	0.900	
59	0.41	0.570	0.900	
115	0.37	0.488	0.900	
206	0.37	0.578	0.900	
207	0.37	0.544	0.900	
208	0.37	0.540	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2517 V	Pulse HV	1596 V

[H2]

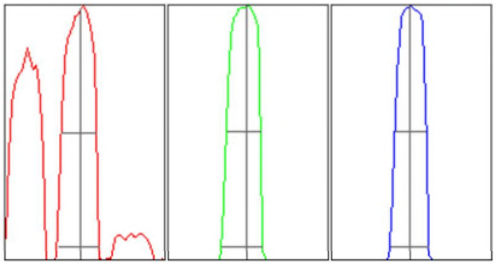
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		268	2683.41			7.417	
59		3072	30718.75			3.649	
115		34998	349976.66			2.512	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.585 %
Doubly Charged	70 / 140 0.309 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	291.78	25.95	25.90 - 26.10	
59	3193.17	59.00	58.90 - 59.10	
115	36701.30	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.67	0.788	0.900	
59	0.65	0.779	0.900	
115	0.60	0.735	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0004	QP Bias	-15.0 V
Mass Offset	126	Axis Offset	-0.03		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

EM

Discriminator	4.5 mV	Analog HV	2517 V	Pulse HV	1596 V

[He]

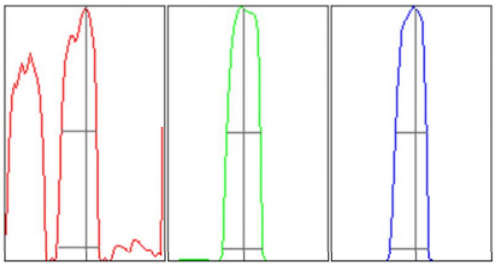
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		108	1079.23			9.102	
59		9524	95237.75			2.296	
115		7431	74308.64			2.164	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.254 %
Doubly Charged	70 / 140 1.039 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	113.01	26.05	25.90 - 26.10	
59	9545.13	58.95	58.90 - 59.10	
115	7551.85	115.10	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.67	0.787	0.900	
59	0.64	0.745	0.900	
115	0.59	0.731	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0004	QP Bias	-13.0 V
Mass Offset	126	Axis Offset	-0.03		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

EM

Discriminator	4.5 mV	Analog HV	2517 V	Pulse HV	1596 V

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240327A

Instrument ID: ICPMS-03

Analyte	Data File	A0327003.d	A0327005.d	A0327006.d	A0327007.d	A0327008.d	A0327009.d	A0327010.d	A0327011.d	
	Acq. Date-Time	03/27/2024 04:49 PM	03/27/2024 04:58 PM	03/27/2024 05:03 PM	03/27/2024 05:08 PM	03/27/2024 05:12 PM	03/27/2024 05:17 PM	03/27/2024 05:22 PM	03/27/2024 05:27 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	57212.1	56316.8	56841.8	57200.8	57017	56334.5	56308.9	55543	
55 Mn [2]	CPS	30	979.6	9650.6	19893	39257.4	79954.7	200310.8	401040.5	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICV**	SampType: **ICV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **184114**
Client ID: **ICV**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775432**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	102.170	0.50	100.0	0	102	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **184114**
Client ID: **ZZZZZZ**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775434**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	0.549	0.50	0.5000	0	110	80	120				

Sample ID **MLCCV**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **184114**
Client ID: **CCV**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775435**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.316	0.50	20.00	0	96.6	90	110				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **184114**
Client ID: **CCV**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775448**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.298	0.50	20.00	0	96.5	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **184114**
Client ID: **CCV**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775459**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.431	0.50	20.00	0	97.2	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **184114**
Client ID: **CCV**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775470**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.265	0.50	20.00	0	96.3	90	110				

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **184114**
Client ID: **CCV**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775480**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.609	0.50	20.00	0	98.0	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **184114**
Client ID: **CCV**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775493**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.127	0.50	20.00	0	95.6	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **184114**
Client ID: **CCV**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775499**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	18.761	0.50	20.00	0	93.8	90	110				

Sample ID **CCV7**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **184114**
Client ID: **CCV**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775511**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	18.847	0.50	20.00	0	94.2	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCV8**	SampType: **CCV**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **184114**
Client ID: **CCV**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/28/2024**	SeqNo: **5775515**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.006	0.50	20.00	0	95.0	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	SampType	TestCode	Units	Prep Date	RunNo
ICB	**ICB**	**6020_DIS_TP**	**µg/L**		**184114**
Client ID: **ICB**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775433**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID	SampType	TestCode	Units	Prep Date	RunNo
CCB1	**CCB**	**6020_DIS_TP**	**µg/L**		**184114**
Client ID: **CCB**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775449**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID	SampType	TestCode	Units	Prep Date	RunNo
CCB2	**CCB**	**6020_DIS_TP**	**µg/L**		**184114**
Client ID: **CCB**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775460**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID	SampType	TestCode	Units	Prep Date	RunNo
CCB3	**CCB**	**6020_DIS_TP**	**µg/L**		**184114**
Client ID: **CCB**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775471**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID	SampType	TestCode	Units	Prep Date	RunNo
CCB4	**CCB**	**6020_DIS_TP**	**µg/L**		**184114**
Client ID: **CCB**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775481**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **184114**
Client ID: **CCB**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775494**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **184114**
Client ID: **CCB**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775500**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB7**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **184114**
Client ID: **CCB**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/28/2024**	SeqNo: **5775512**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB8**	SampType: **CCB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **184114**
Client ID: **CCB**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/28/2024**	SeqNo: **5775516**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID	ICSA1	SampType:	ICSA	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	184114
Client ID:	ICSA	Batch ID:	R184114	TestNo:	EPA 6020			Analysis Date:	3/27/2024	SeqNo:	5775436

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID	ICSAB1	SampType:	ICSAB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	184114
Client ID:	ICSAB	Batch ID:	R184114	TestNo:	EPA 6020			Analysis Date:	3/27/2024	SeqNo:	5775437

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	20.313	0.50	20.00	0	102	80	120				

Sample ID	ICSA2	SampType:	ICSA	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	184114
Client ID:	ICSA	Batch ID:	R184114	TestNo:	EPA 6020			Analysis Date:	3/27/2024	SeqNo:	5775461

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID	ICSAB2	SampType:	ICSAB	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	184114
Client ID:	ICSAB	Batch ID:	R184114	TestNo:	EPA 6020			Analysis Date:	3/27/2024	SeqNo:	5775462

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	20.245	0.50	20.00	0	101	80	120				

Sample ID	ICSA3	SampType:	ICSA	TestCode:	6020_DIS_TP	Units:	µg/L	Prep Date:		RunNo:	184114
Client ID:	ICSA	Batch ID:	R184114	TestNo:	EPA 6020			Analysis Date:	3/27/2024	SeqNo:	5775482

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **184114**
Client ID: **ICSAB**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775483**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	20.134	0.50	20.00	0	101	80	120				

Sample ID **ICSA4**	SampType: **ICSA**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **184114**
Client ID: **ICSA**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/28/2024**	SeqNo: **5775517**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **ICSAB4**	SampType: **ICSAB**	TestCode: **6020_DIS_TP**	Units: **µg/L**	Prep Date:	RunNo: **184114**
Client ID: **ICSAB**	Batch ID: **R184114**	TestNo: **EPA 6020**		Analysis Date: **3/28/2024**	SeqNo: **5775518**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	20.074	0.50	20.00	0	100	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240327A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	57212.1	57212.1	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	56749.3	57212.1	99.19	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	56316.8	57212.1	98.44	PASS	30-150
Std3-5/50 ppb	ICAL	1	56841.8	57212.1	99.35	PASS	30-150
Std4-10/100 ppb	ICAL	1	57200.8	57212.1	99.98	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	57017	57212.1	99.66	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	56334.5	57212.1	98.47	PASS	30-150
Std7-100/1000 ppb	ICAL	1	56308.9	57212.1	98.42	PASS	30-150
Std8-200/2000 ppb	ICAL	1	55543	57212.1	97.08	PASS	30-150
ICV	ICV	1	55488.4	57212.1	96.99	PASS	30-150
ICB	ICB	1	55576.5	57212.1	97.14	PASS	30-150
LLICV1	LLICV	1	55643.4	57212.1	97.26	PASS	30-150
MLCCV	CCV	1	55483.9	57212.1	96.98	PASS	30-150
ICSA1	ICSA	1	54773.9	57212.1	95.74	PASS	30-150
ICSAB1	ICSAB	1	55790.5	57212.1	97.52	PASS	30-150
LLICV1	LLICV	1	55209.6	57212.1	96.5	PASS	30-150
CCV1	CCV	1	56495.2	57212.1	98.75	PASS	30-150
CCB1	CCB	1	56189.6	57212.1	98.21	PASS	30-150
CCV2	CCV	1	55213.1	57212.1	96.51	PASS	30-150
CCB2	CCB	1	54778.4	57212.1	95.75	PASS	30-150
ICSA2	ICSA	1	54944.4	57212.1	96.04	PASS	30-150
ICSAB2	ICSAB	1	55401.4	57212.1	96.84	PASS	30-150
CCV3	CCV	1	56772.7	57212.1	99.23	PASS	30-150
CCB3	CCB	1	55809.5	57212.1	97.55	PASS	30-150
CCV4	CCV	1	55020.2	57212.1	96.17	PASS	30-150
CCB4	CCB	1	54449.5	57212.1	95.17	PASS	30-150
ICSA3	ICSA	1	55576.4	57212.1	97.14	PASS	30-150
ICSAB3	ICSAB	1	56265.4	57212.1	98.35	PASS	30-150
MB-107861	MBLK	1	57043.7	57212.1	99.71	PASS	30-150
LCS-107861	LCS	1	58962.4	57212.1	103.06	PASS	30-150
N063617-012D	SAMP	10	56527.5	57212.1	98.8	PASS	30-150
N063976-001B	SAMP	1	54800.6	57212.1	95.78	PASS	30-150
N063976-001B	SAMP	5	56983.6	57212.1	99.6	PASS	30-150
N063976-001B	SAMP	10	57428.3	57212.1	100.38	PASS	30-150
N063976-001B	SAMP	50	57584.3	57212.1	100.65	PASS	30-150
N063976-001B-PS	PS	1	53538.8	57212.1	93.58	PASS	30-150
N063976-001B-PS	PS	10	57246.6	57212.1	100.06	PASS	30-150
CCV5	CCV	1	59473.1	57212.1	103.95	PASS	30-150
CCB5	CCB	1	57302.3	57212.1	100.16	PASS	30-150
N063976-001B-MS	MS	1	51047.8	57212.1	89.23	PASS	30-150
N063976-001B-MS	MS	10	56863.1	57212.1	99.39	PASS	30-150

INTERNAL STANDARD: 240327A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
N063976-001B-MSD	MSD	1	50941.9	57212.1	89.04	PASS	30-150
N063976-001B-MSD	MSD	10	56761.7	57212.1	99.21	PASS	30-150
CCV6	CCV	1	59516.6	57212.1	104.03	PASS	30-150
CCB6	CCB	1	57103.9	57212.1	99.81	PASS	30-150
CCV7	CCV	1	58335.9	57212.1	101.96	PASS	30-150
CCB7	CCB	1	57511.9	57212.1	100.52	PASS	30-150
CCV8	CCV	1	57963.5	57212.1	101.31	PASS	30-150
CCB8	CCB	1	56659	57212.1	99.03	PASS	30-150
ICSA4	ICSA	1	56438.3	57212.1	98.65	PASS	30-150
ICSAB4	ICSAB	1	56215.2	57212.1	98.26	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.: N063976
Test Method: EPA 6020
Analysis Date: 3/27/2024

Matrix: Groundwater
Batch No.: 107861

Instrument ID: ICPMS-03
Instrument Description: Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063976-001B DT 50x	Manganese	Mn	µg/L	702.8042	PASS	737.4534	4.70%	10

Reviewed by:

JRB 4/30/2024

Note: NA - Not Applicable

04/18/24 01:23

DT_EPA 6020_N063976_107861

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_DIS_TPK

Sample ID **N063976-001B-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **184114**
Client ID: **ZZZZZZ** Batch ID: **107861** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/27/2024** SeqNo: **5775492**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	1526.706	5.0	1000	737.5	78.9	80	120				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372

EPA 6020
Total

Metals Technical Batch Review Checklist (ARCUS02)

ASSET LABORATORIES - LAS VEGAS

FIRST LEVEL REVIEW:

QC Batch Number: 107862
ASSET #: N063976

Instrument ID: ICPMS-03
Analyst: DBJ
Date Analyzed: 3/27/2024

Method: TOTAL

[ ] EPA 6010B / 200.7
[X] EPA 6020 / 200.8
[ ] EPA 7470A / 7471A/245.1
[ ] Other _____

Initial Calibration and Initial Calibration Verification	1st Level Review			2nd Level Review		
	Y	N	N/A	Y	N	N/A
1. Does correlation coefficient,r, meet criteria ?(r = 0.995)	X			X		
2. For ICV, all analytes within ± 10% of expected value? (±5% for EPA 200.7)	X			X		
3. Does the ICP/MS meet tune criteria? (ICP/MS only)	X			X		
4. % RSD calculated from 3 injections?	X			X		
5. Is low level check at PQL within ± 20% of expected value? (ICP/ICPMS only)	X			X		
Interference Check						
6. ICS A and AB at the start and end of sequence or twice during an 8-hr period.	X			X		
7. Are ICSA and AB within ± 20% of expected value?	X			X		
Continuing Calibration						
8. CCV after every 10 samples and end of analysis sequence.	X			X		
9. For CCV, all analytes within ± 10% of expected value?	X			X		
10. Calibration blank after ICVand CCV analysis.	X			X		
11. Do all calibration blanks (ICB and CCBs) meet criteria? (< 1/2 PQL)	X			X		
12 Is low level check twice during 8 hr period or at end within ± 30% of expected value? (ICP/ICPMS only)	X			X		
Sample Information						
13. All samples are within linear dynamic range.	X			X		
14. All hits above PQL have %RSD of less than or equal to 15%? (ICP/ICPMS only)	X			X		
15. Are all samples analyzed/digested within hold time.	X			X		
16. Dilution test performed and within ± 10% of undiluted sample.	X			X		
17. When dilution test fails, post digestion spike recovery within 80-120% of expected value.			X			X
18. For samples < 4 ppb, does the Cr result differs with Cr6+ by no more than 0.7 ppb?			X			X
19 For samples > 4 ppb, does the Cr result differs with Cr6+ by no more than 20%?			X			X
20. For samples that failed Cr6 vs CrT criteria, are samples reanalyzed for confirmation?			X			X
21. For samples with Total and Dissolved analysis, is Total concentration higher or equal to Dissolved concentration?	X			X		
QC Items						
22. IS are within control limits (70-125% for ICPMS).	X			X		
23. Method blank values are below 1/2 the reporting limit.	X			X		
24. LCS compounds within control limits.	X			X		
25. MS/MSD, RPD's are within control limits		X			X	
Raw Data and Miscellaneous Information						
26. Are Non-Conformances documented			X			X
27. Runlog complete and included in package.	X			X		
28. Digestion log complete and included in package (if applicable)	X			X		
29. All sample raw data present in package.	X			X		
Preliminary Report						
30. Does the raw data match the preliminary report?	X			X		
31. Are analytical results correct?(Ex. dilutions, calculations.etc.)	X			X		
32. Are special instructions met?	X			X		

Comments:

% Rec of Mn in N063976-001C-PS/MS failed, low bias. However, LCS passed criteria

	Yes	No	N/A
1. All assigned sample(s) analyzed	X		
2. Matrix / units correct	X		
3. Does batch meet QC requirements?	X		
4. Are analytical results correct? (Ex. dilutions, calculations.etc.)	X		
5. Is first level review correct and complete?	X		

1st Level Reviewer DBJ Date: -

2nd Level Reviewer LG 4/6/2024 Date:

SAMPLE CALCULATION

SAMPLE CALCULATION

METHOD: EPA 6020
TEST NAME: Heavy Metals by ICP-MS
MATRIX: Groundwater

FORMULA:

Calculate the Manganese concentration, in ug/L in the original sample as follows:

Manganese , ug/L = A * DF * PF

where:

A = ug/L, calculated concentration
DF = Dilution Factor
PF = Final Volume of Digestate, mL / Amount of Sample, mL

For Sample **N063976-001C** , the concentration in ug/L is calculated as follows:

Manganese , ug/L = 69.5275 * 10 *(25 / 25)

Manganese , ug/L = 695.275

Reporting results in two significant figures,

Manganese , ug/L = 700

Reviewed by:

JRB 4/30/2024

% RSD SUMMARY

PERCENT RSD SUMMARY: 240327A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment
Cal Blk	IBLK	1	0	N/A	15	<PQL
Std1-0.1/1 ppb	ICAL	1	0.09	17.783	15	<PQL
Std2-0.5/5 ppb	ICAL	1	0.47	6.401	15	PASS
Std3-5/50 ppb	ICAL	1	4.71	1.52	15	PASS
Std4-10/100 ppb	ICAL	1	9.66	2.959	15	PASS
Std5-4.0/20/200 ppb	ICAL	1	19.13	1.027	15	PASS
Std6-8.0/40/400 ppb	ICAL	1	39.45	1.452	15	PASS
Std7-100/1000 ppb	ICAL	1	98.91	0.464	15	PASS
Std8-200/2000 ppb	ICAL	1	200.76	0.438	15	PASS
ICV	ICV	1	102.17	1.294	15	PASS
ICB	ICB	1	0	300.835	15	<PQL
LLICV1	LLICV	1	0.55	4.481	20	PASS
MLCCV	CCV	1	19.32	0.885	15	PASS
ICSA1	ICSA	1	<0.000	N/A	15	<PQL
ICSAB1	ICSAB	1	20.31	0.117	15	PASS
LLICV1	LLICV	1	0.57	2.034	20	PASS
CCV1	CCV	1	19.3	0.552	15	PASS
CCB1	CCB	1	<0.000	N/A	15	<PQL
CCV2	CCV	1	19.43	0.461	15	PASS
CCB2	CCB	1	<0.000	N/A	15	<PQL
ICSA2	ICSA	1	<0.000	N/A	15	<PQL
ICSAB2	ICSAB	1	20.24	0.753	15	PASS
CCV3	CCV	1	19.27	0.266	15	PASS
CCB3	CCB	1	<0.000	N/A	15	<PQL
CCV4	CCV	1	19.61	1.437	15	PASS
CCB4	CCB	1	<0.000	N/A	15	<PQL
ICSA3	ICSA	1	<0.000	N/A	15	<PQL
ICSAB3	ICSAB	1	20.13	1.15	15	PASS
CCV5	CCV	1	19.13	0.306	15	PASS
CCB5	CCB	1	0	190.723	15	<PQL
CCV6	CCV	1	18.76	1.783	15	PASS
CCB6	CCB	1	<0.000	N/A	15	<PQL
MB-107862	MBLK	1	<0.000	N/A	15	<PQL
LCS-107862	LCS	1	99.72	0.43	15	PASS
N063976-001C	SAMP	1	673.43	0.999	15	PASS
N063976-001C	SAMP	5	147.9	0.186	15	PASS
N063976-001C	SAMP	10	69.53	1.527	15	PASS
N063976-001C	SAMP	50	14.62	0.677	15	PASS
N063976-001C-PS	PS	1	725.35	1.133	15	PASS
N063976-001C-PS	PS	10	110.87	3.591	15	PASS
N063976-001C-MS	MS	1	749.24	0.81	15	PASS

PERCENT RSD SUMMARY: 240327A

Instrument ID: ICPMS-03

Sample Name	Type	DF	55 Mn [2]			
			Conc. [ppb]	RSD	Criteria	Comment
N063976-001C-MS	MS	10	69.75	1.25	15	PASS
CCV7	CCV	1	18.85	1.107	15	PASS
CCB7	CCB	1	<0.000	N/A	15	<PQL
N063976-001C-MSD	MSD	1	741.42	1.022	15	PASS
N063976-001C-MSD	MSD	10	77.12	2.33	15	PASS
CCV8	CCV	1	19.01	2.324	15	PASS
CCB8	CCB	1	<0.000	N/A	15	<PQL
ICSA4	ICSA	1	<0.000	N/A	15	<PQL
ICSAB4	ICSAB	1	20.07	1.214	15	PASS

ANALYSIS RUN LOG

INJECTION LOG: 240327A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0327001.d	RINSE	ICAL	1	03/27/24 4:39 PM
A0327002.d	RINSE	ICAL	1	03/27/24 4:44 PM
A0327003.d	Cal Blk	IBLK	1	03/27/24 4:49 PM
A0327004.d	Std1-0.1/1 ppb	ICAL	1	03/27/24 4:53 PM
A0327005.d	Std2-0.5/5 ppb	ICAL	1	03/27/24 4:58 PM
A0327006.d	Std3-5/50 ppb	ICAL	1	03/27/24 5:03 PM
A0327007.d	Std4-10/100 ppb	ICAL	1	03/27/24 5:08 PM
A0327008.d	Std5-4.0/20/200 ppb	ICAL	1	03/27/24 5:12 PM
A0327009.d	Std6-8.0/40/400 ppb	ICAL	1	03/27/24 5:17 PM
A0327010.d	Std7-100/1000 ppb	ICAL	1	03/27/24 5:22 PM
A0327011.d	Std8-200/2000 ppb	ICAL	1	03/27/24 5:27 PM
A0327012.d	ICV	ICV	1	03/27/24 5:42 PM
A0327013.d	ICB	ICB	1	03/27/24 5:46 PM
A0327014.d	LLICV1	LLICV	1	03/27/24 5:51 PM
A0327015.d	MLCCV	CCV	1	03/27/24 5:55 PM
A0327016.d	ICSA1	ICSA	1	03/27/24 6:00 PM
A0327017.d	ICSAB1	ICSAB	1	03/27/24 6:05 PM
A0327018.d	LLICV1	LLICV	1	03/27/24 6:10 PM
A0327019.d	MB-107859	MBLK	1	03/27/24 6:23 PM
A0327020.d	LCS-107859	LCS	1	03/27/24 6:28 PM
A0327021.d	N062306-022A	SAMP	1	03/27/24 6:33 PM
A0327022.d	N062306-022A	SAMP	5	03/27/24 6:38 PM
A0327023.d	N064071-001A	SAMP	1	03/27/24 6:43 PM
A0327024.d	N064072-001A	SAMP	1	03/27/24 6:48 PM
A0327025.d	N064073-001A	SAMP	1	03/27/24 6:52 PM
A0327026.d	N064092-001B	SAMP	1	03/27/24 6:57 PM
A0327027.d	N064092-001B	SAMP	5	03/27/24 7:02 PM
A0327028.d	CCV1	CCV	1	03/27/24 7:06 PM
A0327029.d	CCB1	CCB	1	03/27/24 7:11 PM
A0327030.d	N064092-001B-PS	PS	1	03/27/24 7:16 PM
A0327031.d	N064092-001B-MS	MS	1	03/27/24 7:20 PM
A0327032.d	N064092-001B-MSD	MSD	1	03/27/24 7:25 PM
A0327033.d	N064092-001B	SAMP	10	03/27/24 7:29 PM
A0327034.d	N064092-001B	SAMP	50	03/27/24 7:34 PM
A0327035.d	N064092-001B-PS	PS	10	03/27/24 7:39 PM
A0327036.d	N064092-001B-MS	MS	10	03/27/24 7:43 PM
A0327037.d	N064092-001B-MSD	MSD	10	03/27/24 7:48 PM
A0327038.d	LCS-107859	LCS	1	03/27/24 7:53 PM
A0327039.d	CCV2	CCV	1	03/27/24 7:57 PM
A0327040.d	CCB2	CCB	1	03/27/24 8:02 PM
A0327041.d	ICSA2	ICSA	1	03/27/24 8:06 PM
A0327042.d	ICSAB2	ICSAB	1	03/27/24 8:11 PM

INJECTION LOG: 240327A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0327043.d	MB-107860	MBLK	1	03/27/24 8:16 PM
A0327044.d	LCS-107860	LCS	1	03/27/24 8:20 PM
A0327045.d	N064070-001A	SAMP	1	03/27/24 8:25 PM
A0327046.d	N064070-001A	SAMP	5	03/27/24 8:30 PM
A0327047.d	N064070-001A-PS	PS	1	03/27/24 8:34 PM
A0327048.d	N064070-001A-MS	MS	1	03/27/24 8:39 PM
A0327049.d	N064070-001A-MSD	MSD	1	03/27/24 8:44 PM
A0327050.d	CCV3	CCV	1	03/27/24 8:48 PM
A0327051.d	CCB3	CCB	1	03/27/24 8:53 PM
A0327052.d	MB-107858	MBLK	1	03/27/24 8:58 PM
A0327053.d	LCS-107858	LCS	1	03/27/24 9:02 PM
A0327054.d	N063818-005A	SAMP	10	03/27/24 9:07 PM
A0327055.d	N063818-005A	SAMP	50	03/27/24 9:11 PM
A0327056.d	N063818-005A-PS	PS	10	03/27/24 9:16 PM
A0327057.d	N063818-005A-MS	MS	10	03/27/24 9:21 PM
A0327058.d	N063818-005A-MSD	MSD	10	03/27/24 9:25 PM
A0327059.d	N063820-003A	SAMP	10	03/27/24 9:30 PM
A0327060.d	CCV4	CCV	1	03/27/24 9:35 PM
A0327061.d	CCB4	CCB	1	03/27/24 9:39 PM
A0327062.d	ICSA3	ICSA	1	03/27/24 9:44 PM
A0327063.d	ICSAB3	ICSAB	1	03/27/24 9:49 PM
A0327064.d	MB-107861	MBLK	1	03/27/24 9:53 PM
A0327065.d	LCS-107861	LCS	1	03/27/24 9:58 PM
A0327066.d	N063617-012D	SAMP	10	03/27/24 10:03 PM
A0327067.d	N063976-001B	SAMP	1	03/27/24 10:07 PM
A0327068.d	N063976-001B	SAMP	5	03/27/24 10:12 PM
A0327069.d	N063976-001B	SAMP	10	03/27/24 10:16 PM
A0327070.d	N063976-001B	SAMP	50	03/27/24 10:21 PM
A0327071.d	N063976-001B-PS	PS	1	03/27/24 10:26 PM
A0327072.d	N063976-001B-PS	PS	10	03/27/24 10:31 PM
A0327073.d	CCV5	CCV	1	03/27/24 10:35 PM
A0327074.d	CCB5	CCB	1	03/27/24 10:40 PM
A0327075.d	N063976-001B-MS	MS	1	03/27/24 10:44 PM
A0327076.d	N063976-001B-MS	MS	10	03/27/24 10:49 PM
A0327077.d	N063976-001B-MSD	MSD	1	03/27/24 10:54 PM
A0327078.d	N063976-001B-MSD	MSD	10	03/27/24 10:58 PM
A0327079.d	CCV6	CCV	1	03/27/24 11:03 PM
A0327080.d	CCB6	CCB	1	03/27/24 11:08 PM
A0327081.d	MB-107862	MBLK	1	03/27/24 11:12 PM
A0327082.d	LCS-107862	LCS	1	03/27/24 11:17 PM
A0327083.d	N063976-001C	SAMP	1	03/27/24 11:22 PM
A0327084.d	N063976-001C	SAMP	5	03/27/24 11:26 PM

INJECTION LOG: 240327A

Instrument ID: ICPMS-03

Data File	Sample Name	Type	DF	Acq. Date-Time
A0327085.d	N063976-001C	SAMP	10	03/27/24 11:31 PM
A0327086.d	N063976-001C	SAMP	50	03/27/24 11:36 PM
A0327087.d	N063976-001C-PS	PS	1	03/27/24 11:40 PM
A0327088.d	N063976-001C-PS	PS	10	03/27/24 11:45 PM
A0327089.d	N063976-001C-MS	MS	1	03/27/24 11:49 PM
A0327090.d	N063976-001C-MS	MS	10	03/27/24 11:54 PM
A0327091.d	CCV7	CCV	1	03/27/24 11:59 PM
A0327092.d	CCB7	CCB	1	03/28/24 12:04 AM
A0327093.d	N063976-001C-MSD	MSD	1	03/28/24 12:08 AM
A0327094.d	N063976-001C-MSD	MSD	10	03/28/24 12:13 AM
A0327095.d	CCV8	CCV	1	03/28/24 12:17 AM
A0327096.d	CCB8	CCB	1	03/28/24 12:22 AM
A0327097.d	ICSA4	ICSA	1	03/28/24 12:27 AM
A0327098.d	ICSAB4	ICSAB	1	03/28/24 12:31 AM
A0327099.d	RINSE	ICAL	1	03/28/24 12:36 AM
A0327100.d	RINSE	ICAL	1	03/28/24 12:41 AM
A0327101.d	RINSE	ICAL	1	03/28/24 12:45 AM
A0327102.d	RINSE	ICAL	1	03/28/24 12:50 AM

SAMPLE PREPARATION LOG

ASSET Laboratories

PREP BATCH REPORT

Prep Start Date: **3/27/2024 10:50:49 AM**
Prep End Date: **3/27/2024 3:00:00 PM**
Prep Batch **107862** Prep Code:**3010_W_MS_TPK**

Reviewed/ Date: JRB 4/30/2024
Initials/ Date: for
Technician: **Diane Jetajobe**

Prep Factor Units	Temp. (°C):	Location:
mL / mL	**95**	**DB-4-18**

Sample ID	Matrix	pH	SampAmt	3 Replicates	Fin Vol	Factor	Clean Up Code	TURB Check
LCS-107862	Aqueous		25	☐	25	1.000		
50ML LOT# J583433-8247								
MB-107862	Aqueous		25	☐	25	1.000		
N063976-001C	Groundwater	<2	25	☐	25	1.000		
N063976-001C-MS	Groundwater	<2	25	☐	25	1.000		
N063976-001C-MSD	Groundwater	<2	25	☐	25	1.000		

Clean Up Code: A = ACID; F = FLORISIL; S = SILICA GEL; M = MERCURY; G = GPC

Number	Reagent Name
16336	NITRIC ACID
16346	HYDROCHLORIC ACID

Spk ID	Spike Name	SampType	AmtAdd
2MWST-231130C	ICV/MS/MSD/LCS/LCSD Solution A		0.25
2MWST-231130D	ICV/MS/MSD/LCS/LCSD Solution B		0.25
2MWST-231130E	ICV/MS/MSD/LCS/LCSD Solution C		0.25
2MWST-231130F	ICV/MS/MSD/LCS/LCSD Solution D		0.25

INSTRUMENT TUNING CHECK

US EPA Tune Check Report

Operator Name	Admin
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\240326A.b
Acq. Date-Time	2024-03-27 16:14:11
Report Comment	—
Instrument Name	G8421A SG19193757

[No Gas]

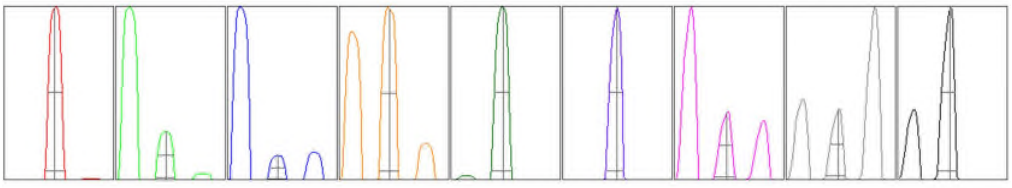
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	7538	75376.99	500.00		2.209	5.000
24	10.00	22350	223495.42	500.00		2.057	5.000
25	10.00	2955	29548.93	500.00		2.583	5.000
26	10.00	3400	33998.03	500.00		3.040	5.000
59	10.00	35306	353063.32	500.00		1.945	5.000
115	10.00	35779	357792.17	500.00		2.037	5.000
206	10.00	9790	97899.24	500.00		2.188	5.000
207	10.00	8158	81584.33	500.00		2.349	5.000
208	10.00	20224	202242.71	500.00		2.051	5.000

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Integration Time [sec]	0.1
Oxide	156 / 140 0.662 %
Doubly Charged	70 / 140 0.794 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	7554.92	8.90	8.90 - 9.10	
24	22882.50	23.90	23.90 - 24.10	
25	3097.15	24.90	24.90 - 25.10	
26	3554.80	25.90	25.90 - 26.10	
59	35647.12	58.95	58.90 - 59.10	
115	35423.26	115.00	114.90 - 115.10	
206	9445.92	205.95	205.90 - 206.10	
207	8309.68	206.95	206.90 - 207.10	
208	20689.38	207.95	207.90 - 208.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.39	0.530	0.900	
24	0.44	0.540	0.900	
25	0.43	0.539	0.900	
26	0.43	0.538	0.900	
59	0.41	0.570	0.900	
115	0.37	0.488	0.900	
206	0.37	0.578	0.900	
207	0.37	0.544	0.900	
208	0.37	0.540	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	47.0000000000001
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	12.6 V
Extract 2	-200.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0003	QP Bias	-3.0 V
Mass Offset	134	Axis Offset	-0.12		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

US EPA Tune Check Report

EM

Discriminator	4.5 mV	Analog HV	2517 V	Pulse HV	1596 V

[H2]

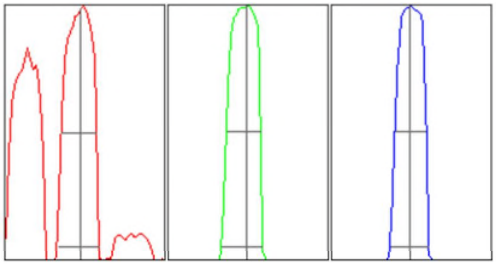
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		268	2683.41			7.417	
59		3072	30718.75			3.649	
115		34998	349976.66			2.512	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.585 %
Doubly Charged	70 / 140 0.309 %

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	291.78	25.95	25.90 - 26.10	
59	3193.17	59.00	58.90 - 59.10	
115	36701.30	115.00	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.67	0.788	0.900	
59	0.65	0.779	0.900	
115	0.60	0.735	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min

US EPA Tune Check Report

Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	-0.8 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	3.0 V
He Flow	0.0 mL/min	OctP Bias	-18.0 V		
H2 Flow	5.7 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0004	QP Bias	-15.0 V
Mass Offset	126	Axis Offset	-0.03		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

EM

Discriminator	4.5 mV	Analog HV	2517 V	Pulse HV	1596 V

[He]

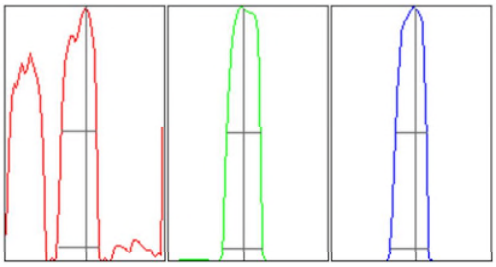
Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
26		108	1079.23			9.102	
59		9524	95237.75			2.296	
115		7431	74308.64			2.164	

Mass	RSD% (Flag)
26	
59	
115	

Integration Time [sec]	0.1
Oxide	156 / 140 0.254 %
Doubly Charged	70 / 140 1.039 %

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
26	113.01	26.05	25.90 - 26.10	
59	9545.13	58.95	58.90 - 59.10	
115	7551.85	115.10	114.90 - 115.10	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
26	0.67	0.787	0.900	
59	0.64	0.745	0.900	
115	0.59	0.731	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	22.34
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	Low Matrix	Nebulizer Gas	1.09 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	—	Auxiliary Gas	0.90 L/min
RF Matching	1.10 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	8.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	10.2 V	Deflect	0.4 V
Extract 2	-200.0 V	Cell Entrance	-40 V	Plate Bias	-55 V
Omega Bias	-100 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	Yes	3rd Gas Flow	—	Energy Discrimination	5.0 V
He Flow	3.8 mL/min	OctP Bias	-18.0 V		
H2 Flow	0.0 mL/min	OctP RF	180 V		

QP Parameters

Mass Gain	130	Axis Gain	1.0004	QP Bias	-13.0 V
Mass Offset	126	Axis Offset	-0.03		

Hardware Settings

Torch

Torch H	1.3 mm	Torch V	1.3 mm

EM

Discriminator	4.5 mV	Analog HV	2517 V	Pulse HV	1596 V

INITIAL CALIBRATION DATA SUMMARY

INITIAL CALIBRATION SUMMARY: 240327A

Instrument ID: ICPMS-03

Analyte	Data File	A0327003.d	A0327005.d	A0327006.d	A0327007.d	A0327008.d	A0327009.d	A0327010.d	A0327011.d	
	Acq. Date-Time	03/27/2024 04:49 PM	03/27/2024 04:58 PM	03/27/2024 05:03 PM	03/27/2024 05:08 PM	03/27/2024 05:12 PM	03/27/2024 05:17 PM	03/27/2024 05:22 PM	03/27/2024 05:27 PM	
	Type	CalBlk	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	CalStd	
	Level	1	3	4	5	6	7	8	9	
	Sample Name	Cal Blk	Std2-0.5/5 ppb	Std3-5/50 ppb	Std4-10/100 ppb	Std5-4.0/20/200 ppb	Std6-8.0/40/400 ppb	Std7-100/1000 ppb	Std8-200/2000 ppb	
	Concentration	0.00	0.5/5 ug/L	5/50 ug/L	10/100 ug/L	4.0/20/200 ug/L	8.0/40/400 ug/L	100/1000 ug/L	200/2000 ug/L	R
45 Sc (ISTD) [2]	CPS	57212.1	56316.8	56841.8	57200.8	57017	56334.5	56308.9	55543	
55 Mn [2]	CPS	30	979.6	9650.6	19893	39257.4	79954.7	200310.8	401040.5	1.0000

Standard Code
ICAL: 2MSST-231120D
ICAL: 2MSST-231120E
ICAL: 2MWST-231130K
IS Mix: 2MWST-231130A

Calibration Acceptance Criteria: > 0.995 Correlation

INITIAL CALIBRATION AND CONTINUING CALIBRATION VERIFICATION SUMMARY

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_TPK

Sample ID **ICV**	SampType: **ICV**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **ICV**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775645**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	102.170	0.50	100.0	0	102	90	110				

Sample ID **LLICV1**	SampType: **CCV1**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **ZZZZZZ**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775647**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	0.549	0.50	0.5000	0	110	80	120				

Sample ID **MLCCV**	SampType: **CCV**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **CCV**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775648**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.316	0.50	20.00	0	96.6	90	110				

Sample ID **CCV1**	SampType: **CCV**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **CCV**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775661**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.298	0.50	20.00	0	96.5	90	110				

Sample ID **CCV2**	SampType: **CCV**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **CCV**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775672**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.431	0.50	20.00	0	97.2	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_TPK

Sample ID **CCV3**	SampType: **CCV**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **CCV**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775683**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.265	0.50	20.00	0	96.3	90	110				

Sample ID **CCV4**	SampType: **CCV**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **CCV**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775693**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.609	0.50	20.00	0	98.0	90	110				

Sample ID **CCV5**	SampType: **CCV**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **CCV**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775706**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.127	0.50	20.00	0	95.6	90	110				

Sample ID **CCV6**	SampType: **CCV**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **CCV**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775712**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	18.761	0.50	20.00	0	93.8	90	110				

Sample ID **CCV7**	SampType: **CCV**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **CCV**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775724**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	18.847	0.50	20.00	0	94.2	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_TPK

Sample ID **CCV8**	SampType: **CCV**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **CCV**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/28/2024**	SeqNo: **5775728**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	19.006	0.50	20.00	0	95.0	90	110				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

SUMMARY OF INSTRUMENT BLANKS

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_TPK

Sample ID **ICB**	SampType: **ICB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **ICB**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775646**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB1**	SampType: **CCB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **CCB**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775662**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB2**	SampType: **CCB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **CCB**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775673**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB3**	SampType: **CCB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **CCB**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775684**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB4**	SampType: **CCB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **CCB**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775694**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_TPK

Sample ID **CCB5**	SampType: **CCB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **CCB**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775707**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB6**	SampType: **CCB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **CCB**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775713**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB7**	SampType: **CCB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **CCB**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/28/2024**	SeqNo: **5775725**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **CCB8**	SampType: **CCB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **CCB**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/28/2024**	SeqNo: **5775729**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
  Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

SUMMARY OF INSTRUMENT CHECK (ICSA & ICSAB)

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_TPK

Sample ID	**ICSA1**	SampType:	**ICSA**	TestCode:	**6020_W_TPK**	Units:	**µg/L**	Prep Date:		RunNo:	**184120**
Client ID:	**ICSA**	Batch ID:	**R184120**	TestNo:	**EPA 6020**			Analysis Date:	**3/27/2024**	SeqNo:	**5775649**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID	**ICSAB1**	SampType:	**ICSAB**	TestCode:	**6020_W_TPK**	Units:	**µg/L**	Prep Date:		RunNo:	**184120**
Client ID:	**ICSAB**	Batch ID:	**R184120**	TestNo:	**EPA 6020**			Analysis Date:	**3/27/2024**	SeqNo:	**5775650**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	20.313	0.50	20.00	0	102	80	120				

Sample ID	**ICSA2**	SampType:	**ICSA**	TestCode:	**6020_W_TPK**	Units:	**µg/L**	Prep Date:		RunNo:	**184120**
Client ID:	**ICSA**	Batch ID:	**R184120**	TestNo:	**EPA 6020**			Analysis Date:	**3/27/2024**	SeqNo:	**5775674**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID	**ICSAB2**	SampType:	**ICSAB**	TestCode:	**6020_W_TPK**	Units:	**µg/L**	Prep Date:		RunNo:	**184120**
Client ID:	**ICSAB**	Batch ID:	**R184120**	TestNo:	**EPA 6020**			Analysis Date:	**3/27/2024**	SeqNo:	**5775675**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	20.245	0.50	20.00	0	101	80	120				

Sample ID	**ICSA3**	SampType:	**ICSA**	TestCode:	**6020_W_TPK**	Units:	**µg/L**	Prep Date:		RunNo:	**184120**
Client ID:	**ICSA**	Batch ID:	**R184120**	TestNo:	**EPA 6020**			Analysis Date:	**3/27/2024**	SeqNo:	**5775695**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_TPK

Sample ID **ICSAB3**	SampType: **ICSAB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **ICSAB**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/27/2024**	SeqNo: **5775696**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	20.134	0.50	20.00	0	101	80	120				

Sample ID **ICSA4**	SampType: **ICSA**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **ICSA**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/28/2024**	SeqNo: **5775730**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	ND	0.50									

Sample ID **ICSAB4**	SampType: **ICSAB**	TestCode: **6020_W_TPK**	Units: **µg/L**	Prep Date:	RunNo: **184120**
Client ID: **ICSAB**	Batch ID: **R184120**	TestNo: **EPA 6020**		Analysis Date: **3/28/2024**	SeqNo: **5775731**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	20.074	0.50	20.00	0	100	80	120				

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

INTERNAL STANDARD SUMMARY

INTERNAL STANDARD: 240327A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
Cal Blk	IBLK	1	57212.1	57212.1	100	PASS	30-150
Std1-0.1/1 ppb	ICAL	1	56749.3	57212.1	99.19	PASS	30-150
Std2-0.5/5 ppb	ICAL	1	56316.8	57212.1	98.44	PASS	30-150
Std3-5/50 ppb	ICAL	1	56841.8	57212.1	99.35	PASS	30-150
Std4-10/100 ppb	ICAL	1	57200.8	57212.1	99.98	PASS	30-150
Std5-4.0/20/200 ppb	ICAL	1	57017	57212.1	99.66	PASS	30-150
Std6-8.0/40/400 ppb	ICAL	1	56334.5	57212.1	98.47	PASS	30-150
Std7-100/1000 ppb	ICAL	1	56308.9	57212.1	98.42	PASS	30-150
Std8-200/2000 ppb	ICAL	1	55543	57212.1	97.08	PASS	30-150
ICV	ICV	1	55488.4	57212.1	96.99	PASS	30-150
ICB	ICB	1	55576.5	57212.1	97.14	PASS	30-150
LLICV1	LLICV	1	55643.4	57212.1	97.26	PASS	30-150
MLCCV	CCV	1	55483.9	57212.1	96.98	PASS	30-150
ICSA1	ICSA	1	54773.9	57212.1	95.74	PASS	30-150
ICSAB1	ICSAB	1	55790.5	57212.1	97.52	PASS	30-150
LLICV1	LLICV	1	55209.6	57212.1	96.5	PASS	30-150
CCV1	CCV	1	56495.2	57212.1	98.75	PASS	30-150
CCB1	CCB	1	56189.6	57212.1	98.21	PASS	30-150
CCV2	CCV	1	55213.1	57212.1	96.51	PASS	30-150
CCB2	CCB	1	54778.4	57212.1	95.75	PASS	30-150
ICSA2	ICSA	1	54944.4	57212.1	96.04	PASS	30-150
ICSAB2	ICSAB	1	55401.4	57212.1	96.84	PASS	30-150
CCV3	CCV	1	56772.7	57212.1	99.23	PASS	30-150
CCB3	CCB	1	55809.5	57212.1	97.55	PASS	30-150
CCV4	CCV	1	55020.2	57212.1	96.17	PASS	30-150
CCB4	CCB	1	54449.5	57212.1	95.17	PASS	30-150
ICSA3	ICSA	1	55576.4	57212.1	97.14	PASS	30-150
ICSAB3	ICSAB	1	56265.4	57212.1	98.35	PASS	30-150
CCV5	CCV	1	59473.1	57212.1	103.95	PASS	30-150
CCB5	CCB	1	57302.3	57212.1	100.16	PASS	30-150
CCV6	CCV	1	59516.6	57212.1	104.03	PASS	30-150
CCB6	CCB	1	57103.9	57212.1	99.81	PASS	30-150
MB-107862	MBLK	1	57065.9	57212.1	99.74	PASS	30-150
LCS-107862	LCS	1	55977.8	57212.1	97.84	PASS	30-150
N063976-001C	SAMP	1	51126.9	57212.1	89.36	PASS	30-150
N063976-001C	SAMP	5	55204.3	57212.1	96.49	PASS	30-150
N063976-001C	SAMP	10	56626.7	57212.1	98.98	PASS	30-150
N063976-001C	SAMP	50	57022.4	57212.1	99.67	PASS	30-150
N063976-001C-PS	PS	1	51504.7	57212.1	90.02	PASS	30-150
N063976-001C-PS	PS	10	55611.1	57212.1	97.2	PASS	30-150
N063976-001C-MS	MS	1	49556.6	57212.1	86.62	PASS	30-150

INTERNAL STANDARD: 240327A

Instrument ID: ICPMS-03

Sample Name	Type	DF	45 Sc (ISTD) [2]				
			CPS	REF	%REC	Comment	Criteria
N063976-001C-MS	MS	10	61942.2	57212.1	108.27	PASS	30-150
CCV7	CCV	1	58335.9	57212.1	101.96	PASS	30-150
CCB7	CCB	1	57511.9	57212.1	100.52	PASS	30-150
N063976-001C-MSD	MSD	1	49264.6	57212.1	86.11	PASS	30-150
N063976-001C-MSD	MSD	10	63122.2	57212.1	110.33	PASS	30-150
CCV8	CCV	1	57963.5	57212.1	101.31	PASS	30-150
CCB8	CCB	1	56659	57212.1	99.03	PASS	30-150
ICSA4	ICSA	1	56438.3	57212.1	98.65	PASS	30-150
ICSAB4	ICSAB	1	56215.2	57212.1	98.26	PASS	30-150

SERIAL DILUTION/
POST DIGESTION SPIKE

ASSET Laboratories

ICP-MS-Metals in Water

Dilution Test Summary

Work Order No.: N063976
Test Method: EPA 6020
Analysis Date: 3/27/2024

Matrix: Groundwater
Batch No.: 107862

Instrument ID: ICPMS-03
Instrument Description: Agilent 7800

Comments:

Analyzed By: Diane Jetajobe

Sample ID	Analyte	Symbol	Units	Calc Val	Oqual	SAMPRefVal	%DIFF	%DIFFlimit
N063976-001C DT 50x	Manganese	Mn	µg/L	730.9373	PASS	695.2753	5.13%	10

Reviewed by:

JRB 4/30/2024

Note: NA - Not Applicable

04/18/24 01:12

DT_EPA 6020_N063976_107862

CLIENT: ARCADIS U.S., Inc. - California
Work Order: N063976
Project: PG&E Topock - PCM, 30211191

ANALYTICAL QC SUMMARY REPORT

TestCode: 6020_W_TPK

Sample ID **N063976-001C-PS** SampType: **PS** TestCode: **6020_W_TPK** Units: **µg/L** Prep Date: RunNo: **184120**
Client ID: **ZZZZZZ** Batch ID: **107862** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **3/27/2024** SeqNo: **5775721**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Manganese	1108.699	5.0	1000	695.3	41.3	80	120				S

Qualifiers:

B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit	R	RPD outside accepted recovery limits	S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out		Calculations are based on raw values		

MDL STUDY

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13, 9/14, 9/15/20
Digestion Date: 9/13, 9/14, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	MDLb	MDL	LOD	PQL
ANTIMONY	0.0376	0.2164	0.2164	0.30	0.50
ARSENIC	0.0496	0.0181	0.0496	0.05	0.10
BARIUM	0.0831	0.0302	0.0831	0.30	1.00
BERYLLIUM	0.0305	0.0083	0.0305	0.10	0.50
CADMIUM	0.0450	0.0019	0.0450	0.10	0.50
CHROMIUM	0.0353	0.0008	0.0353	0.10	1.00
COBALT	0.0169	0.0000	0.0169	0.05	0.50
COPPER	0.0458	0.0082	0.0458	0.10	1.00
IRON	0.2260	0.0939	0.2260	0.75	10.00
LEAD	0.0178	0.0087	0.0178	0.07	1.00
MANGANESE	0.0263	0.0026	0.0263	0.10	0.50
MOLYBDENUM	0.0372	0.1197	0.1197	0.25	0.50
NICKEL	0.0343	0.0041	0.0343	0.10	1.00
SELENIUM	0.0366	0.0438	0.0438	0.10	0.50
SILVER	0.0280	0.0006	0.0280	0.10	0.50
THALLIUM	0.1154	0.0282	0.1154	0.25	0.50
URANIUM	0.0364	0.0005	0.0364	0.10	0.50
VANADIUM	0.0672	0.0000	0.0672	0.25	1.00
ZINC	0.2626	0.0216	0.2626	1.00	10.00
ALUMINUM	0.3533	0.0372	0.3533	1.00	10.00

LOD & PQL Verification 2020

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/17/2020
Digestion Date: 9/18/2020
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Units: ug/L

Analyte	MDLs	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% RECOVERY
ANTIMONY	0.2164	0.30	0.157	0.50	0.586	117
ARSENIC	0.0496	0.05	0.028	0.10	0.111	111
BARIUM	0.0831	0.30	0.282	1.00	1.046	105
BERYLLIUM	0.0305	0.10	0.135	0.50	0.518	104
CADMIUM	0.0450	0.10	0.116	0.50	0.518	104
CHROMIUM	0.0353	0.10	0.276	1.00	1.008	101
COBALT	0.0169	0.05	0.129	0.50	0.515	103
COPPER	0.0458	0.10	0.271	1.00	1.020	102
IRON	0.2260	0.75	3.046	10.00	10.321	103
LEAD	0.0178	0.07	0.279	1.00	1.051	105
MANGANESE	0.0263	0.10	0.153	0.50	0.529	106
MOLYBDENUM	0.1197	0.25	0.123	0.50	0.518	104
NICKEL	0.0343	0.10	0.291	1.00	1.214	121
SELENIUM	0.0438	0.10	0.092	0.50	0.465	93
SILVER	0.0280	0.10	0.136	0.50	0.570	114
THALLIUM	0.1154	0.25	0.115	0.50	0.490	98
URANIUM	0.0364	0.10	0.137	0.50	0.551	110
VANADIUM	0.0672	0.25	0.264	1.00	1.018	102
ZINC	0.2626	1.00	3.066	10.00	10.362	104
ALUMINUM	0.3533	1.00	8.218	10.00	11.093	111

Method Detection Limit

Analytical Method: EPA 6020 / 200.8
Digestion Method: EPA 3010A
Date of Analysis: 9/13/20, 9/14/20, 9/15/20
Digestion Date: 9/13/20, 9/14/20, 9/15/20
Instrument Name: ICPMS2
Analysts: MEI

Matrix: Water
Amount of Sample: 25 mL
Units: ug/L

Analyte	AMT SPIKED, ppb	1	2	3	4	5	6	7	SD	MDL	LOD	ACTUAL LOD	PQL	ACTUAL PQL	% REC
ANTIMONY	0.50	0.560	0.559	0.537	0.553	0.577	0.562	0.560	0.0120	0.0376	0.100	0.157	0.50	0.586	117
ARSENIC	0.10	0.105	0.096	0.083	0.121	0.108	0.128	0.120	0.0158	0.0496	0.080	0.028	0.10	0.111	111
BARIUM	1.00	0.962	0.954	0.983	0.960	1.006	0.934	1.001	0.0265	0.0831	0.250	0.282	1.00	1.046	105
BERYLLIUM	0.50	0.487	0.472	0.468	0.477	0.480	0.488	0.496	0.0097	0.0305	0.100	0.135	0.50	0.518	104
CADMIUM	0.50	0.471	0.488	0.511	0.508	0.484	0.503	0.492	0.0143	0.0450	0.100	0.116	0.50	0.518	104
CHROMIUM	1.00	0.938	0.956	0.929	0.930	0.949	0.928	0.946	0.0112	0.0353	0.250	0.276	1.00	1.008	101
COBALT	0.50	0.476	0.482	0.486	0.480	0.469	0.479	0.477	0.0054	0.0169	0.100	0.129	0.50	0.515	103
COPPER	1.00	0.987	0.949	0.988	0.981	0.969	0.973	0.990	0.0146	0.0458	0.500	0.271	1.00	1.020	102
IRON	10.00	9.395	9.548	9.522	9.390	9.453	9.362	9.397	0.0720	0.2260	2.500	3.046	10.00	10.321	103
LEAD	1.00	0.967	0.972	0.968	0.966	0.964	0.976	0.979	0.0057	0.0178	0.250	0.279	1.00	1.051	105
MANGANESE	0.50	0.556	0.567	0.558	0.542	0.564	0.558	0.549	0.0084	0.0263	0.100	0.153	0.50	0.529	106
MOLYBDENUM	0.50	0.493	0.475	0.470	0.489	0.488	0.503	0.475	0.0118	0.0372	0.250	0.123	0.50	0.518	104
NICKEL	1.00	0.981	1.000	0.993	0.969	0.988	0.983	0.972	0.0109	0.0343	0.250	0.291	1.00	1.214	121
SELENIUM	0.50	0.479	0.475	0.492	0.466	0.478	0.471	0.455	0.0116	0.0366	0.400	0.092	0.50	0.465	93
SILVER	0.50	0.620	0.620	0.613	0.594	0.608	0.608	0.610	0.0089	0.0280	0.250	0.136	0.50	0.570	114
THALLIUM	0.50	0.478	0.405	0.406	0.477	0.407	0.478	0.419	0.0368	0.1154	0.250	0.115	0.50	0.490	98
URANIUM	0.50	0.594	0.591	0.607	0.579	0.574	0.602	0.593	0.0116	0.0364	0.100	0.137	0.50	0.551	110
VANADIUM	1.00	0.938	0.978	0.948	0.945	0.946	0.913	0.919	0.0214	0.0672	0.500	0.264	1.00	1.018	102
ZINC	10.00	9.701	9.527	9.642	9.695	9.497	9.696	9.644	0.0836	0.2626	2.500	3.066	10.00	10.362	104
ALUMINUM	10.00	9.415	9.220	9.282	9.234	9.507	9.303	9.203	0.1125	0.3533	0.100	8.218	10.00	11.093	111

MDL BLANK

Analyte		1	2	3	4	5	6	7	Mean	SD	MDL
ANTIMONY		0.133669	0.051403	0.03612	0.12283	0.04951	0.12493	0.05574	0.0820	0.0428	0.2164
ARSENIC		<0.000	<0.000	0.01035	0.00034	0.00312	<0.000	0.00102	0.0037	0.0046	0.0181
BARIUM		<0.000	<0.000	0.00085	0.01018	0.00756	0.01192	0.01865	0.0098	0.0065	0.0302
BERYLLIUM		0.002366	0.000513	<0.000	0.00421	0.0046	0.00405	0.00102	0.0028	0.0018	0.0083
CADMIUM		0.000699	0.000365	0.00076	<0.000	<0.000	0.00107	6.7E-06	0.0006	0.0004	0.0019
CHROMIUM		0	0	0.00059	0	0	0	0	0.0001	0.0002	0.0008
COBALT		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
COPPER		0.002351	0.004587	0.00295	<0.000	0.00025	<0.000	<0.000	0.0025	0.0018	0.0082
IRON		0.051023	0.040696	0.03201	0.04658	0.02249	0.07272	0.03432	0.0428	0.0162	0.0939
LEAD		0.004641	0.001836	0.0013	0.00571	0.00403	0.00444	0.002	0.0034	0.0017	0.0087
MANGANESE		<0.000	0.001528	0.00193	<0.000	<0.000	<0.000	0.00197	0.0018	0.0002	0.0026
MOLYBDENUM		0.065007	0.029611	0.01408	0.0689	0.02847	0.07342	0.03014	0.0442	0.0240	0.1197
NICKEL		<0.000	0.00196	0.00283	0.00108	0.00111	<0.000	0.00104	0.0016	0.0008	0.0041
SELENIUM		0.027254	0.013201	0.00812	0.02313	0.02686	0.01549	<0.000	0.0190	0.0079	0.0438
SILVER		0.000595	<0.000	<0.000	<0.000	<0.000	<0.000	<0.000	0.0006	0.0000	0.0006
THALLIUM		0.020258	0.010021	0.00738	0.01683	0.01051	0.01646	0.00889	0.0129	0.0049	0.0282
URANIUM		0.000287	3.89E-05	0.00011	0.00012	0.00012	0.00031	<0.000	0.0002	0.0001	0.0005
VANADIUM		0	0	0	0	0	0	0	0.0000	0.0000	0.0000
ZINC		0.009084	<0.000	<0.000	<0.000	<0.000	0.011	0.00244	0.0075	0.0045	0.0216
ALUMINUM		0.034605	<0.000	<0.000	<0.000	<0.000	0.03586	0.03492	0.0351	0.0006	0.0372